Since 1850, Los Angeles County has become the most populated County in the United States with eighty-eight incorporated cities, including the 468.90 square miles City of Los Angeles. The political solutions have been described in terms of the existing fragmentation in the metropolitan urban area and any efforts for consolidation into city and county jurisdiction. Substantial regional and inter-local cooperation exists by state law, by counties, city and county, and amongst clusters of cities. The basic issues, establishing goals for the ongoing process of municipal consolidation through boundary decisions, also provide the rationale for attempts for Los Angeles consolidation of county territory through annexation (of San Pedro in 1909 and the San Fernando Valley, 1915), city-county consolidation (1915-1927), the failure to annex or incorporate East Los Angeles (1931-present), and the more recent initiatives for municipal secession of the San Fernando Valley, Hollywood, the L.A. Harbor Area, Rancho San Vincente–West Los Angeles, and the former cities of Venice Beach & Eagle Rock. Given the size of the areas, the proliferation of neighborhood councils throughout the City provides yet another populist indication of support for both Mayoral initiatives and city and county led coordination through decentralization of some advisory functions. More so than most communities, city planning remains a central function of local jurisdiction, in a state-reorganized county that contained federal land grants in rural territory, with a spatial history of locally organized precinct-townships and legislative-municipal districts. The status quo of a city plan evolved from a square area, similar to San Antonio Texas, with land grants surrounding the City boundaries for town development. The formation of California counties begins after statehood, with boundary reorganization, township formation for electing Supervisors, and separation of rural county territory and imposition of the Ord plan for the extension of municipal jurisdiction.

1

As a formal model of city planning, the Ord Plan provides for rectangular extensions from the status quo, a square central district, into what was organized by mission districts and land grants, similar to Bexar County (Texas to Colorado). The irregular shape of the land grants, in Los Angeles County territory, generated non-convex precinct-townships and legislative-municipal districts. Unlike any other city and county in the United States, the formation of townships occurred by rectangular extension for the purposes of town sectional development. This organization of townships provides for election districts and is frequently the basis for town or village development of county territory and therefore municipal incorporation. The use of townships as precincts resulted in the classification of these as federal (election) townships for administration of elections and apportionment of State Assembly Districts and County Supervisor Districts.

In subsequent incorporation and annexation campaigns, the successful municipal incorporation of township sections of county territory, produced cities and an incorporated lattice of town development and public goods provision from the central district to the peripheral areas of the Los Angeles County. Where these municipal consolidation campaigns failed, Los Angeles County separately provides municipal services to these remainder areas of townships, by town sections of unincorporated County territory. Some of these separate areas are covered by adjacent, incorporated cities, others are governed directly as town(ship) sections or "islands" of County public goods provision. The contracting relationship between Los Angeles County and both unincorporated municipal service areas and incorporated cities produces both fragmentation of service areas in addition to municipal provision by charter or special act incorporation, and an alternative to municipal provision of public goods.

2

The local campaigns for territorial secession from Los Angeles, and simultaneous reincorporation of these areas into independent city status, presented another alternative to the current structure with municipal consolidation of Los Angeles county territory into a few major service providers: the City and County of Los Angeles and the remaining Charter Cities. The 1915 Study favored consolidation amongst Los Angeles City and County, and the other five charter cities (Alhambra, Long Beach, Pasadena, Pomona, Santa Monica) and described municipal formation from 1850 to 1910 as having produced major competitors to the City of Los Angeles, and therefore an unnecessary fragmentation into thirty-eight cities by incorporation of local jurisdiction. The success of Los Angeles City annexations, based on the extension of municipal water and street car service, to consolidate county territory with the City of Los Angeles boundaries was increasingly blocked by the incorporation of separate municipal jurisdictions. Some of these other major public goods providers currently include the other independent charter cities and Los Angeles County through inter-local cooperation. The primary contrasts are between the incorporated status of the six Los Angeles City Planning Districts in the San Fernando Valley with public goods provision by the San Gabriel Valley League of Cities, versus bilateral sphere of influence agreements between any of the 88 cities and the County, or between cities, for providing municipal services too either the unincorporated service areas or areas incorporated by general law. In terms of city planning, had it succeeded, the secession proposal would have created five cities, reincorporating the annexed or merged cities of Hollywood and Venice–Ocean Beach in addition to forming a Farm Valley (San Fernando Valley), Harbor (City), and a Residential City (of West Los Angeles) from former metropolitan planning areas within the City of Los Angeles.

The politics of land development and formation of Los Angeles County has generally favored incorporation, and therefore reorganization of local jurisdiction. This support for progress required extension of municipal services into county territory organized by land grant, and not by township, and thereafter 1915, by municipal consolidation through annexation and incorporation procedures. Even through town sectional development produced a municipal lattice for public utilities, the town sections did not all incorporate into cities, and those that did involved specific goals for municipal consolidation established by either annexation decision or incorporation campaign. Although there are multiple instances of village mergers with larger adjacent cities, these annexations were motivated by more than inadequate municipal services, including city dissolutions through bankruptcy and being surrounded by the larger city so as to reduce the potential for tax base expansion.

By 1891, county reorganization reduced the size of Los Angeles County, eliminating San Bernardino, Kern, Orange, and Riverside from Los Angeles territory. Even so, the weakness of the township system, the formation of independent cities from town sections, the incorporation of small (villages or) cities, and the successful campaigns for municipal status each contributed to the irregular boundaries and non-convex areas consolidated into Los Angeles Cities. The failure to organize County territory by both square townships and incorporate towns by square sections produced irregular precinct-township and municipal boundaries throughout Los Angeles County, town and village incorporation of non-convex small cities, corridor development extending the Ord Plan from the central to harbor and valley districts, and lastly, a mixture of city-county contract cities, unincorporated county-managed municipal service areas, spheres of influence areas provided services by fragmented municipal jurisdictions and isolated service islands.

4

Point Pattern Analysis of Fragmented Territorial Representation

Given the organizational structure of Los Angeles County territory, the use of territorial subdivision, for the purposes of legislative apportionment by county unit, involved decentralization of assembly, supervisor, and ward districts to precinct-townships and incorporated municipal districts. After 1927, no California county was apportioned more than one Senate District. Under this provision, multi-county Senate and House districts existed, allowing for some consolidation of county territory, but no county division and no more than a single senate district was allocated per-county. Under this allocation, Assembly Districts followed either county boundaries or city and township boundaries within counties allocated more than a single seat. With subdivision not based on square or rectangular local jurisdictions, the *district plan boundaries were irregularly shaped and contained non-convex areas bounded by municipal district, precinct-townships, and what may be described as an incorporated town or village*. In the absence of an organized county-township (sub)division of Los Angeles County, the extension of the City of Los Angeles into the County (by the Ord Plan), produced string annexation with village and town incorporation blocking additional annexation of the most densely developed corridors into County territory and therefore non-compact Assembly Districts. In these string districts, the city annexed territories extending from the status quo, square allotment of territory for a municipal district, south to the Harbor, northwest to the San Fernando Valley, and generally in a westerly direction to the Pacific Palisades Coastline. The relatively small number of Assembly Districts, were allocated to the municipal district of the City of Los Angeles, with a one or fewer districts apportioned to the other cities and Los Angeles County remainder areas surrounding the county territory annexed to the City of Los Angeles.

As a consequence of municipal incorporation, the county territory outside of the City of Los Angeles contained irregularly shaped municipal district and unincorporated county territory boundaries. The formation of municipal districts resembled the irregular boundaries of New England Towns, where counties were not organized by township division. Examples of these villages blocking Los Angeles annexation, have included the small cities of *Wilmington*, *San Pedro*, *Hollywood*, *Eagle Rock*, San Fernando, Santa Monica, *Sawtelle*, Burbank, Beverly Hills, *Eagle Rock*, *Venice-Ocean Beach*, *Barnes City*, *Tujunga*, Lomita, Culver City, Rolling Hills, Inglewood, Calabasas, Torrence, Palos Verdes, El Segundo, Hawthorne, Carson, West Hollywood, and Vernon. Some of these Ord Plan villages have merged with the City of Los Angeles, while others have either supported annexation for portions of a territory or opposed complete merger with the City. On this basis, the urban areas adjacent to the City of Los Angeles involved both city annexation and municipal district incorporation, consisting of rectangular extensions of the Los Angeles City grid to County territory. The spatial history of these boundary decisions produced annexation, incorporation, and areas remaining in unincorporated town sections of Los Angeles County.

Where small cities did form in Los Angeles County, on the basis of convex town sections, the construction of the additional municipal districts consolidated rectangular sectional land development instead of incorporations of a whole township, a single town section or sets of symmetrically balanced (2x2, 3x3, ..., NxN) town sections. Using the year of the City & County of Los Angeles Consolidation Report, there were 47 incorporation decisions in Los Angeles County, between 1850 and 1915. With the exception of the 9 merged Ord Plan villages, there were 2 villages annexed to the City of Long Beach, producing 36 still incorporated cities.

The incorporations of these town sectional cities, resulted in the peripheral development of suburbs from the status quo, core area of the City of Los Angeles. The spatial history of these boundary decisions produced the current pattern of municipal fragmentation in Los Angeles County. The success of incorporation campaigns, in what may be considered suburban cities, involves a long sequence of city formation in a county that did not impose township division on municipal boundaries. As a consequence, any point-pattern analysis of municipal districts implies a fragmentation solution based on town sectional incorporation and extensions of the Los Angeles city grid. The combination of the annexation blocking villages and the separate, and usually non-adjacent, town incorporation of smaller cities generates a fragmentation solution equal to 88 incorporated cities and 122 to 140 or more unincorporated municipal service areas.

Even so, the numbers of city annexation and incorporation decisions are insufficient to describe the influence of regular county subdivision by the Ord Plan, the absence of township division for the purposes of territorial representation, and the existence of rectangular village and multi-town municipal district incorporation. Los Angeles County contains more than 4,000 square miles of territory (in 2015), with 468.91 square miles in the City of Los Angeles ($> 10\%$ of County territory), and 2653.5 squares miles in Unincorporated Areas ($> 65\%$ of County territory) with the ($< 25\%$) remainder contained in the other 87 incorporated municipal districts. Inasmuch some of the Censuses reported the then unincorporated area population by Assembly Districts (House Districts); district plans divided the County by municipal districts instead of precinct-townships, villages or town incorporation. Because the State law imposed single member districts throughout California in 1883, Los Angeles County subdivision into SMDS preceded the formation of 87 of the currently existing municipal districts.

In summary, the 1927 California legislative apportionment consolidated Senate representation to the county level. It did so in a state with federal (precinct) townships, and a few urban counties with increasing numbers of boundary decisions that resulted in fragmentation of county territory and non-compact municipal districts with irregular boundaries and therefore non-convex organization of county territory by municipal annexation, incorporation, and consolidation decisions. The effort to regulate the fragmentation of local jurisdiction produced additional requirements for annexation and incorporation campaigns, including establishing Local Area Boundary Formation Commissions (Knox-Nisbet, 1963) and deliberating boundary decisions at the county level (Cortese-Knox-Hertzberg, 2000). After 1883, the use of single member districts required county subdivision in the few counties with urbanized areas. The design of Assembly Districts provided for county subdivision in a county without organized townships, square town sectional incorporation, or convex village formation. In the absence of regular county-township subdivision, legislative apportionment produced non-convex local district plans, with non-compact district boundaries containing the City and County of Los Angeles, municipal districts, and the remaining unincorporated townships, towns, or villages classified as county territory.

Apportionment of the Board of Supervisor's Districts also required single member district plans. From 1852 onwards, these five member boards were apportioned separately from State Assembly Districts. Designed at the county level, these local legislatures varied by use of minor civil divisions, such as precinct-townships, small city districts, and city wards, in apportionment and district planning. Similar to the L.A. Assembly Districts, the use of SMDS required implementing county subdivision by partitioning county territory into five Supervisors' Districts.

8

The existence of municipal districts also implies adoption of some form of city council election, by either at-large city district or city subdivision by ward district. *Given the incompleteness of the county-township system covering of Los Angeles County, any (population or jurisdictional) classification of cities may not describe the fragmentation solution generated by formation of municipal districts.* The fragmentation solution is unique to Los Angeles County because of the existence of the status quo, San Antonio municipal district plan, and the absence of square townships producing square town sectional organization of county territory. Even where organized townships existed, such as Redondo Beach Township, the division of this Township into three beach towns, Redondo Beach (1892), Hermosa Beach (1912), and Manhattan Beach (1912), produced fragmentation into small cities instead of resulting in the incorporation of the whole township into a single city. This fragmentation generated three rectangular shaped town-cities, where these villages blocked both municipal consolidation into a single South Bay City and city annexation by Long Beach (1888), Los Angeles (1850), Venice Beach–Ocean Park (1903), and Santa Monica (1917). A similar fragmentation of the aptly named San Antonio Township occurred with the city incorporation of the small towns of Bell (1927), Bell Gardens (1950), Bellflower (1961), Maywood (1924), South Gate (1923), and Cudahy (1960). Lastly, both the city formation of the charter cities of Alhambra (1903), Long Beach (1888), Pasadena (1886), Ponoma (1887), Santa Monica (1886) and some of the larger town incorporations, such as Monrovia (1887), Compton (1888), South Pasadena (1888), Whittier (1898), Covina (1901), Arcadia (1903), Hollywood (1903), and Glendale (1905) followed town sectional lines in forming municipal boundaries, producing relatively compact municipal districts with some convexity in the areas contained within municipal boundaries.

9

These examples confirm the fragmentation of Los Angeles County by the extension of municipal districts into county territory by incorporation and annexation decisions. Any concurrent influence on this fragmentation solution, from legislative apportionment and district plans, also produced non-compact districts and non-convex areas contained with district boundaries at both the state and county levels. These examples also indicate there was no potential for incorporating either whole townships into single cities, or providing for boundary decisions generating town sectional accumulation of territory into compact districts contained within convex incorporated areas. The proliferation of small cities was permitted to allow for a larger number of municipal districts by vote on a charter and under provisions of general law that subsequently (from 1911 onwards) required county involvement (and county regulation, 1963) instead of special acts of the Legislature. The conflicting tendencies toward county consolidation into Senate Districts, and county subdivision into Assembly Districts and Supervisor's Districts, suggested that territorial representation by single member district produced additional fragmentation of both municipal and legislative districts by partitioning townships and cities into single member district plans by county and delegation. By doing so, the extension of municipal services produced incorporation of a larger number of smaller and irregularly-shaped cities under Local Government Law in California.

Most of cities in Los Angeles' elect a city council by municipal district, in citywide primary and general elections. The sizes of the city councils vary, but many California cities have five council members, elected At-Large, with *no* separately elected Mayor. The rotation of Council members, by staggered election, is sufficient to produce a legislative cycle in leadership, from Council Presidency and Mayor to other positions created by city.

10

Unlike other metropolitan districts in the United States, the fragmentation solution created in Los Angeles implies that there is no possibility of forming city wards by annexation of urban areas within the sphere of influence adjacent to municipal district boundaries. In Los Angeles County, cities may annex and maintain services for County territory through City and County agreements. By extending municipal district territory, the City of Los Angeles has responsibility for 13 spheres of influence territories remaining unincorporated in Los Angeles County territory, but adjacent to the City of Los Angeles. Other cities also maintain contractual agreements with Los Angeles County to provide services to unincorporated areas, and more generally, to receive municipal services from Los Angeles County government. In some cases, the general law cities have reduced functional responsibilities for providing municipal services to the point that additional contractual provisions may provide a rationale for dis-incorporation and therefore consolidations of what are now fragmented municipal areas into unincorporated municipal service areas. Whether any cities are dis-incorporated by bankruptcy, dissolution, or other procedures remain to be specified, since the (2000) Local Government Reorganization Act and the secession campaigns from the City of Los Angeles. Nonetheless, dis-incorporation or merger has been discussed at the State Legislative and County levels concerning several of the least populated cities (Industry, Vernon, Avalon, Westlake Village, and Rolling Hills Estates), city annexation has been proposed locally for other unincorporated areas, and there have been highly criticized efforts to merge city services through inter-local cooperation amongst the South Bay-Coastal cities & unincorporated communities. By changing the circular market areas for public goods provision, these potential boundary adjustments have implications for the number of jurisdictions competing to provide undifferentiated municipal services in Los Angeles County.

11

Boundary Decision Analysis of Territorial Representation in Local Legislatures

Any territorial representation system, including at-large municipal district election, involves legislative apportionment and district planning that may require the formation of either single or multi-member districts. The extension of municipal services into county territory also implies incorporation and inter-local cooperation. In order to reduce fragmentation, territorial representation can provide for coordination of public goods provision at the State, County, or Municipal levels.   Even so, county subdivision implies greater fragmentation into single member districts, municipal districts with wards, and remainder areas governed by either minor civil jurisdictions (towns, townships, and villages) or service island contracts.

Recent proposals to annex (to Santa Clarita), incorporate (Hacienda Heights), merge municipal services (Bell, Maywood, & South Gate), and extend (City of Los Angeles) spheres of influence represent efforts to reduce fragmentation of municipal functions and to create more financially viable municipal districts. With the exception of the Harbor area, the reorganization efforts to separate San Fernando Valley, Hollywood, the Harbor District (consisting of San Pedro, Wilmington, part of the Los Angeles Shoestring Annexation, and unincorporated Los Angeles County service areas), Venice Beach–Ocean Park, and Eagle Rock would have resulted in at least 93 if not more independent cities incorporated in Los Angeles County. The Valley vote and Hollywood Independence campaigns to secede from the City of Los Angeles, the let's incorporate East Los Angeles campaign (and therefore secede from Los Angeles County territory), and any additional efforts to either annex or incorporate unincorporated Los Angeles County may therefore have been seen as promoting greater fragmentation of the tax base and functional responsibility to provide services.

On the two ballot proposals, the 2002 Los Angeles' Citywide vote was against secession of the Valley District and the East-Hollywood and Hollywood areas, with the town of Hollywood also voting no and the San Fernando Valley voting yes favoring reincorporation as an independent city. The campaigns to incorporate Hacienda Heights have also failed, twice, in 1992 and 2003. At the same time, the proposal for reorganization of East Los Angeles, under the new local government law, was also rejected and not placed on the ballot. This most recent analysis of East Los Angeles described tax base and municipal service provision issues as the rationale for earlier rejection of ballot initiatives and votes against incorporation (1931, 1933, 1961, 1965, and 1972).

Given the city planning goals for municipal consolidation and reducing fragmentation, is there a political incorporation solution to fragmentation caused by municipal district formation and incorporation? City planning has an agenda through local legislatures, and these may involve requirements for single member districts. In the case of the City and County of Los Angeles, however, ward districts evolve consistently with the Ord Plan, extending territorial representation of municipal districts. They did not evolve from townships, or merged cities, villages, and towns. In the status quo plan for a municipal district, 7 seats were elected citywide to cover the square area, between 1850-1869, when the City of Los Angeles replaced at-large District Election with first 3, then 5, then 9 wards. Inasmuch the ward system evolved from 1870-1908 to single member districts, city annexation from 1850 to 1925 greatly changed the size of the municipal district and ended the aldermanic ward-district system.

The ward plans that existed, from 1870 to 1908, were contained within the status quo--municipal district, and these followed the major north-south, and westerly main streets in what is today the core, Los Angeles downtown area. As a result, city annexation created the potential for increasing the size of the City Council from 9 to 15, but these boundary decisions also limited any possibility of the extension of wards into annexed territory, instead producing a necessary change from ward-districts to at-large election. As a consequence, city annexation paths, in the Los Angeles municipal situation, produced far greater municipal consolidation than what frequently occurred in the expansion of other large cities.

But why 15 single member districts, and where did a ward plan come from?   Amongst the original three wards, there was a northwest, southwest, and southeastern city subdivisions of the status quo plan. The eastern and northeastern side of the downtown remained county territory, and arguably incorporated as the old town, similar to the old town, a city plan that predated county government in Albuquerque, New Mexico. The subdivision of the City of Los Angeles into three wards existed from 1870-1877, replaced by a five-ward system incorporating additions and extensions of the status quo plan. This five-ward plan lasted from 1878 to 1889, and then was replaced by a nine-member single member district ward plan. Descriptions of the ward district plans indicated the concentration of seats within the municipal district area, with a division by city planning function in buildings and blocks by, for example, industrial, commercial, financial, residential, hotel and transportation. After the initial subdivision, the two ward district plans redistricted these downtown wards in north-south corridors, with of the municipal district south and westward into residential areas and along what would become a boulevard system with public utilities.

The evolution of subdivision progressed in a rapid manner, accelerating with land additions and extensions bringing election precinct-townships within the City, with basic services provided to these urban areas. City annexation promoted extensions of municipal services to the various towns and villages developing on the municipal district boundaries, producing relatively brief periods of time between town and village incorporation and the votes on decisions to merge with the City of Los Angeles. Where neighborhood councils exist today, covering residential and commercial areas, these are generally distinct from both the formerly incorporated towns or villages merged and the rural county districts associated with various federal precinct-township. Some subareas resemble these sections, but they generally do not contain the same territory as the historic towns and townships. In some instances, the previous Assembly Districts are better descriptions of the neighborhood council areas, because these include both the historic precincts and a more sizeable area than ward districts limited to the status quo and the small city incorporations now merged with Los Angeles. The covering generated by the ward district plans and small city incorporations does not provide for a complete city subdivision into neighborhoods, nor an exact correspondence with county townships and Assembly District boundaries. Given the substantial redistricting in each of the three ward plans enacted between (1870-1908), and the size of the areas annexed from 1850-1909, reveals the limitations of extending the Ord Plan and downtown wards fast enough to provide municipal services. Had they followed the 1878-1908 ward plans, these districts would have consisted of small corridors from downtown to the Los Angeles Harbor area, some of which have been included in the Alameda empowerment district under federal legislation. These string ward districts would be parallel to the 1909 shoestring annexation, connecting downtown with the Harbor area.

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The period of time between 1909 and 1925 represents an end of ward planning, with the major transition toward the development of the metropolitan district area within Los Angeles County. The emphasis on building an economy from the mountains to the harbor changed, with the exception of additions and extensions into the industrial areas to the south of the downtown municipal district. The city annexation policy moved the municipal boundaries in north and westerly directions, and would have continued toward the South Bay communities and coastlines had the City of Los Angeles not been blocked in SW and SE directions by incorporated municipalities. With the cession of ward district planning, the municipal boundary decisions extended to the Harbor, south for commercial and transportation purposes, to extend the electric rail and street system to the southern part of the county, and into the Valley, north by northwest to provide water and electricity. These successful annexations added more territory to the municipal district than what could be represented by two additional seats on the City Council. In the same way that progress revealed the potential for creating a very large local legislature, based on ward representation, the Harbor and Valley District annexations implied failure for a nine-member council adding annexation district representation to the council. The deliberations on the size of the city council indicate suggestions for a temporary two-seat increase with eventually fifteen to twenty-one person boards with the proposal for City-County consolidation. Instead of adding the five members of the County Board of Supervisors that had been elected countywide, the City chooses to add six members in 1925 and elect by single member district. The potential for adding at least one Harbor District member, and then a Valley District member, was preferred too either adding two members and then the five Supervisors to the City Council or adding the five Supervisors and designing an additional district.

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In the City of Los Angeles, the transition from at-large District election was from 9 to 15 districts and from a municipal district too city subdivision back into ward-districts. In this instance, city annexation and town and city mergers with the City were either too large or too small produce additional wards. The addition of the Harbor (1909) and Valleys (1915) were too large to add single districts to the City Council: an addition of two seats, which would have expanded the Council from 9 to 11 seats. Instead, the City changed from ward election to a single At-Large District in 1908, electing all 9 members citywide with the inclusion of first the Harbor District, and then maintaining at-large elections through the annexation of the Valley District and other smaller Los Angeles county territories (1909-1925). The unified city district was then replaced in 1925, and continues to the present, with 15 single member districts.

As a result, the formation of the 15 ward districts generally followed the city planning for various areas in the Los Angeles metropolitan-municipal district. In what would today be described as a regional city, with perhaps independent status from a county, these districts included the farm valley, financial-commercial, residential, industrial, and harbor-transportation districts. The decision in 1925 to have 15 city council districts therefore produced a significantly smaller local legislature than cities with a ward plan, given the size of the municipal district. Whereas the use of at-large, district election promoted greater consolidation, city subdivision into single member district ward elections provided for a more complete covering of the metropolitan district area. The statewide response was to limit counties to a single State Senate District, in 1927, meant that Los Angeles had only one State Senate District from the 1927 to 1965. This limited reapportionment and district planning to the single member State Assembly and City Council Ward Districts, from 1909 to 1965.

In the larger suburban cities the spatial history of town sectional formation allowed for combining separate precinct-townships into a single, consolidated, municipal district. By maintaining at-large elections, these generally larger cities also favor municipal provision, and therefore greater consolidation of services than what would be provided by a smaller city or to an unincorporated township area. The ward district plans in either the town or village incorporated suburban cities are more recent than city wards formed in other metropolitan areas, and in this instance, the City of Los Angeles is no exception to this suburban pattern. In other areas ward district plans may predate county organization, existing as ward-districts in county territory prior to incorporation of any municipal districts, but this was not the case in greater Los Angeles.

Whereas in Los Angeles County, the other local legislatures generally range from the 5 single members' districts, County Board of Supervisors Plan, to 7 and 8 member city councils for 87 cities. Thus, to implement convex county subdivision through municipal district formation, these smaller cities would have had to have been incorporated from regularly shaped towns and townships. Instead, annexation and town incorporation evolved under the Ord Plan by general law, produced elongated precinct-townships, village districts, and multiple town sections incorporated as a single town. With population growth, these incorporation decisions produced larger municipal districts, with boundaries distinctly forming single town sections or whole townships. Because whole townships did exist, but resemble New England-town villages–precincts, these did not produce district boundaries similar to incorporation of town intersections, symmetrically balanced town sections, or whole townships. What is important is that city districts were formed, and these cities have continued to elect citywide.

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A Political Incorporation Solution with a City Planning Agenda

The predominance of the city planning agenda for the metropolitan district of Los Angeles City and County implies not only municipal extension and consolidation of services but *political incorporation* through boundary decisions. Political incorporation is related to the construction of majority coalitions, formed for the purposes of electing a majority in local legislatures. In the city and county setting, this involves electing a district majority, under similar voting rules and procedures for municipal districts and urban (charter) county structures. The structures may be important in comparisons of the Ward Plan or Supervisor District versus single member district representation systems that may produce urban majorities instead of some form of majorities of local jurisdictions. In most cases home rule produces dominant majority coalitions, in city and county legislatures, but there are also coalitions of minorities forming majorities in local politics with individual members and minority groups varying in vote power.

An alternative to vote power indices was proposed by Browning, Marshall, and Tabb (1983) measuring the degree of political incorporation through the assignment of points for minority candidates successfully contesting elections. First, one point is assigned for each minority council member. Second, two additional points are given for inclusion of the minority elected official in a dominant council coalition, with membership in the dominant coalition determined through on-site interviews and an analysis of some roll call voting data, for each city. Third, three points are added for winning the mayoral office, regardless to whether the mayor is separately elected. Thus, this model of political incorporation depends on winning offices; the values of minority coalitions are then determined as a linear function:

Definition 1.1 $v = 1*m + 2*(d_i) + 3*(d_j);$

where m refers to the number of minority city council members;

Definition 1.2 $d_i = 1$, if m% > 50% and $d_i = 0$, if m% # ≤ 50%;

Definition 1.3 $d_j = 1$, if M = m or $d_j = 0$, if M ≠ m.

The first variable is a count of the number of elected officials multiplied by a slope coefficient equal to one. The second two variables are dummy variables, based on whether a minority group coalition is in the majority and/or control's the mayor's office.

Like the Banzhaf value, this index can be normalized to scale for different sized legislatures. To determine the potential total level of political incorporation, it is necessary to compute:

Definition 1.4 $T = 1*m + 5$.

This total is invariant to the method for electing mayor's, so that the computations are the same under a form of government with mayors that serve as members of a council or for those election systems with separately elected officials. Oddly enough, there are instances with separately elected mayors that serve as members of the city council, so that separate election alone does not preclude the possibility that a mayor has a vote on the council. The ratio of

Definition 1.5 $v / T = pi$

is a measure of the proportional value of political incorporation. The degree to which political incorporation is attained, given the size of the legislature and the strength of the minority group voting coalitions. Both the total index v, and the proportional index v/T, are based on the number of minority elected officials. Like the Banzhaf and Shapley values for coalitions, this measures both the degree to which individual elected officials are pivot voters and the ability of council coalitions to form (decisive) majorities.

Theorem 1.0   The political incorporation index is uniquely valued, ranging from a minimum of zero to a coalition of minorities or minority-majority maximum, m^*.
Proof. $v = 1*m + 2*(d_i) + 3*(d_j)$. Setting m, d_i, and $d_j = 0 \Rightarrow v = 0$. If either m or $d_j \neq 0 \Rightarrow v \neq 0$. Define $T = m^* \Rightarrow v = m^*$. Setting $m = m^* = N \equiv$ size of the legislature, $m = N \Rightarrow d_i = 1$. Either $d_j = 1$ or 0. Assume $d_j = 1 \Rightarrow v = T = m^*$.

Definition 1.6 $N \equiv$ committee size of the local legislature.

Definition 1.7 $N = \{0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, ..., n\}$ is a countably large, finite integer set of sizes of the city and county legislatures.

Lemma 1.0   Given any finite integer set $I = \{0, ..., n\}$, N is a closed set.
Proof. Assume n is a greatest least upper bound. $glb(N) = n \leftrightarrow$ finite integer solution. Given a minimum size ≥ 0, the range $\sigma \leq N$.

Lemma 2.0   Given a fixed integer set, $N = \{0, ..., n\}$, N is a bounded set.
Proof. Define σ, $0 \leq \sigma \leq n$. $\sigma \leq n$. Set $\sigma < n$, $\sigma = \lambda$. Given $\sigma \geq I = \{0,1,2,3, ..., \lambda\}$. $glb(\sigma) \leq n$. $\lambda \leq n$. $\sigma \doteq N$.

Proposition 1.0   The size of local legislatures is a closed and bounded, finite integer set.

Lemma 3.0   The size of local legislatures is a closed and bounded, compact set.
Proof. Lemmas 2 & 3, Proposition 1.0.

Theorem 2.0   A voting equilibrium exists in the size of the local legislature.
Proof. $N = \{0, ..., n)$ is a closed and bounded set. Lemma 4.0. Any closed and bounded set $\Rightarrow$ compact set, $I = \{0, ..., N\}$. An equilibrium exists for any closed, bounded, and compact set $\Rightarrow I = \{1, ..., N)$ a finite integer solution exists (Proposition 1.0).

Theorem 3.0   An equal vote power solution exists for any size of the local legislature.
Proof. Theorem 2.0. Set $I = \{1, ..., n\} = N$, a fixed integer from the set of sizes of local legislatures. Given 1/n distribution of committee votes, establish voting rules and procedures for attaining a decision, using the method of majority voting. The voting rule procedure is equal to a decisiveness constraint, $I = \{1, ..., \lambda, ..., N\} = \lambda^*$. Given the definitions of the Banzhaf and Shapley-Shubik vote power indices (v), a computational equilibrium exists as an equal vote power solution for attaining any voting rule procedure in the form of a decisiveness constraint, $v^* = \Sigma 1/n = \lambda^*$.

Proposition 2.1	Coalition Decisiveness condition: decisive coalitions ⇔ pivot voters.
Proposition 2.2	Decisive (Voting) Structure condition: decisiveness constraint ⇔ pivot votes.

Lemma 4.1   A structure induced equilibrium exists for any decisiveness constraint satisfying the condition of upper-hemi continuity (UHC).

Lemma 4.2   A structure induced equilibrium exists for any voting rule or procedural constraint guaranteeing an upper-hemi continuous correspondence of votes in a decision space.

Lemma 4.3   A structure induced equilibrium exists for any UHC voting agenda.

Proposition 3.1   Any committee size constrains the size of local legislatures.
Proposition 3.2   The size of a local legislature constrains the number of electoral districts.

Theorem 4.0   A general equilibrium exists in the size of the local legislature.
Proof. For any fixed size (e.g., 5 seats), or constrain minimal and maximal sizes of a local legislature (e.g., 7 to 9 seats), the number of positions is a closed, bounded, compact, and UHC set of alternative structures or distribution of committee votes. Assuming only minor adjustments in the total numbers of seats, or electoral districts, any variation in the size of the local legislature (e.g., between 9 & 15 seats) may be considered a closed, bounded, compact, and UHC set of alternative structures, with the initial distribution of committee votes a contraction mapping (by apportionment and district plan) of the larger sized local legislature. An equilibrium exists for any closed, bounded, and compact set of alternatives, such as a complete metric space, the satisfies the condition of upper-hemi continuous correspondence. Because this correspondence is determined in the size of the local legislature and number of electoral-municipal districts, this equilibrium is a fragmentation solution in the number of major and minor (local) civil jurisdictions.

Lemma 5.0   The range bound on the political incorporation index is $[0, v^*]$.
Proof. Lemma 1.0. Set $m = T \Rightarrow v^* = m^*$.

Theorem 5.1   The political incorporation index (finite integer set) is a closed set.
Proof. Lemma 5.0. The range of the finite integer set is determined by the size of the local legislature and index formula. The finite integer set of political incorporation indices ranges from zero to the total possible for a fixed size of the local legislature, $I = \{0, ..., T\}$, $N < T$.
Theorem 5.2   The political incorporation index (finite integer set) is a bounded set.
Proof. Lemma 5.0.

Theorem 6.0   A voting equilibrium exists with political incorporation.
Proof. The index set is a closed, bounded, compact, and convex set representing a finite integer solution, $I = \{0, ..., T\}$. A local jurisdictional equilibrium exists for any distribution of votes and coalition sizes in the local legislature.

Theorem 7.1   The political incorporation index is a multivalued function.
Proof. Assume $N = 9$. Given Definition 1.1, $v = 1*m + 2*(d_i) + 3*(d_j)$. Set $m = 3$ or $d_j = 1$, then the political incorporation index equals three based on three members of the local legislature or control of the executive-mayor's position: $3 + 0 + 0 = 3$ and $0 + 0 + 3 = 3$. Set $m = 5$ or $d_j = 1$, then the political incorporation index equals seven for either simple majority control of the local legislature or minority representation in the local legislature and control of the executive-mayor's position: $5 + 2 + 0 = 7$ and $4 + 0 + 3 = 7$. $I = \{0, ..., T\} = \phi(T)$. $\phi(T) \neq \phi(v^*)$. $\phi(T) \neq \phi(v^*) \Rightarrow \phi(T) \neq \wp$. $\phi(T) \neq \wp$ does not satisfy the conditions of simple majority rule (SMR).

Theorem 7.2   The political incorporation index implies non-anonymous committee voters (& votes), differentiated voters, and weighted votes.
Proof. Definition 1.1. The political incorporation formula contains individual vote power, a decisiveness constraint, and a veto majority rule. First, the political incorporation index does not equal an individual vote power index, $v \neq \phi(v) \Rightarrow$ violation of the anonymity condition for SMR. Secondly, political incorporation formula assigns differential values to individual members, $m = 1$ or 0, $d_j = 1$ or 0, $\Rightarrow$ differentiated voters. Differentiated voters $\Rightarrow$ violation of the anonymity condition for SMR. Thirdly, a minority voting bloc in the local legislature is valued linearly, $1*m = m^*$, the number of minority representatives. A majority of the local legislature is indexed at $1*m + 2 = m^*$. And control of the executive position is valued at $m^* = 3$, versus a simple legislative majority $1*m + 2 = m^*$. $\phi(m^*) \neq \phi(m^*) \Rightarrow$ differentiated votes, $\phi(v) \neq \phi(v)$. Because it is possible to construct a weighted voting scheme, from Definition 1.1 that produces the same political incorporation valuation, $\phi(\lambda*v) = \phi(v) =$ weighted votes $\Rightarrow$ violation of the anonymity condition for SMR.

Hypothesis 1.0   The political incorporation index does not satisfy the conditions of SMR.
Theorem 7.3   Proof. Theorems 7.1 & 7.2.

Proposition 4.1   Equal vote power $\Rightarrow$ anonymous voters (& votes).
Proposition 4.2   Equal vote power $\Rightarrow$ undifferentiated voters.
Proposition 4.3   Equal vote power $\Rightarrow$ un-weighted votes.

Hypothesis 2.0	The political incorporation index does not satisfy the condition of equal vote power.
Theorem 7.4	Proof. Theorem 7.2. Propositions 4.1, 4.2, & 4.3.

Theorem 8.0 The political incorporation index is (a) weighted voting (game, formula, solution).

Proof. The political incorporation index is not a simple game because it is possible to win by attaining varying levels of representation, control of the legislature, or control of the executive-mayor's position, $\Gamma \neq \phi[0,1]$. The political incorporation index is a weighted voting game, placing greater valuation on winning the executive-mayor's positions than individual seats in the local legislature: $\Gamma = \phi[0,1*m] < \Gamma = \phi[0,1*m + 2] < \Gamma = \phi[0,1*m + 2 + 3], \Gamma = \phi[0,3] > \Gamma = \phi[0,1], \Gamma = \phi[0,6] > \Gamma = \phi[0, 4]$. There is more valuation to win the executive mayor's position than an individual seat on the city council and greater valuation to win a veto majority, three seats plus the mayor's office, than winning four seats out of nine. The political incorporation formula $\neq$ vote power index, $\phi(v) \neq \phi(v) \Rightarrow \Gamma = \phi[0, v] \neq \phi[0,1*m]$ for $m \neq 1$. For $m = 1$, political incorporation solution $\Rightarrow$ a vote power index. For $m \neq 1$, the political incorporation index equals a quota multiplied times a vote power index, $\phi(v) = \phi(\lambda*v(q))$, with $\phi(v) = q = \phi(v)$, a weighted q-rule. A weighted voting rule defined as $v = [q; \omega_1, \omega_2, \omega_3, ..., \omega_N] = v = [q; \omega_1, \omega_2, \omega_3, ..., \lambda, ..., \omega_k, ..., \omega_N] = [q; 1, 1, 1, ..., 2, ..., 3, ..., 1]$.

Theorem 9.1 (Q-rule I) SMR: The political incorporation index equals a vote power index multiplied times a quorum rule.

Proof. Assume the individual seat value is equal to the vote power for attaining a position in a simple majority of a local legislature, $v_i = v(q)$, $q = n/2 + 1$. The executive-mayor's position may or may not be a member of the local legislature, $v_j = \lambda* v(q)$ and either $v_j = I = \{1, ..., j, ..., N\}$ or $v_j \neq I = \{1, ..., N\} \Leftrightarrow v_j = \{0, 1, ..., n\}$. Then the political incorporation index equals a regular or normalized Banzhaf or Shapley-Shubik index multiplied times a weighted voting quota, $v = \lambda* v(q)$. This weighted voting rule approximates the political incorporation with convergence toward attaining a minimal winning coalition, coalition of minorities or minority-majority group, MWC $= v(\frac{1}{2}*N + 1) = q = \Sigma v_i = [v*(1*m^*)]$. As $\Sigma v_i \rightarrow q$, $\Sigma v_i \rightarrow v(\frac{1}{2}*N + 1)$ and $\Sigma v_i \rightarrow \lambda*\Sigma v(q)$, so that individual seat value converges to the vote power of attaining simple majority rule multiplied times the quota method of majority decision.

Theorem 9.2   (Q-rule II) Supra-Majority Rule: The political incorporation index equals a vote power index multiplied times a two-thirds quorum rule.
Proof. Assume the individual seat value is equal to the vote power for attaining a position in a simple majority of a local legislature, $v_i = v(q)$, q^* = [$(n/2 + 1) \leq q \leq (2/3*N)$]. $q^* = (n/2 + 1)$, Theorem 9.1. $q^* = $ [$(n/2 + 1) < q \leq (2/3*N)$] $\Rightarrow \lambda*\Sigma v(q^*) \to \Sigma v_i$. $\lambda*\Sigma v(q^*) \to \Sigma v_i \Rightarrow \Sigma v_i \cong [v*(1*m^*)]$. Under two-thirds majority rule, the political incorporation index is equal to a regular or normalized Banzhaf or Shapley-Shubik index multiplied times the q-rule necessary for an executive-mayoral veto override. The individual seat value equals the value of the vote power index multiplied times the quota required for supra-majority decision.

Theorem 9.3   (Q-rule III) Veto-Majority Rule (VMR): The political incorporation index equals a vote power index multiplied times a range from a quorum rule to a one-third quorum rule conditional upon the requirement for sustaining an executive veto, from SMR to a one-third minority of votes.
Proof. For $N = 9$, $m^* = 3 = 3*(d_j) = q$. For $N > 9$ and $d_j = 1$, the valuation of the executive-mayoral position is less than required to sustain a veto, [$3*(d_j) = 3$] < [$1*m = m^* = \lambda*N = q$]. Setting [$1/3*N$] $\leq \lambda \leq$ [$\frac{1}{2}*N + 1$] $\Rightarrow q = $ VMR, given $d_j = 1$ & $1*m = m^* = q$.

Theorem 9.4   (Political Incorporation Classification) $v \doteq q*v$.
- value of an individual seat
- value of individual seats
- value of a veto sustaining minority of seats (a veto majority)
- value of a simple majority
- value of a veto override majority
- value of a supra-majority = a veto override majority + 1
- value of a consensus majority
- value of a two-thirds majority

Theorem 9.5   (Political Incorporation Weighted Voting Game) $\Gamma = q*[0, T]$.
- value of no seats or positions in the local government
- value of an individual seat in the local legislature
- value of control of the local legislature
- value of control of the executive-mayor or council presidency position in the local legislature (a weak mayor, with simple majority q-rule requirements only) or not included in the local legislature (a strong mayor with veto power, supra-majority q-rule voting requirements).
- value of control of both the executive, agenda-setting position, and a simple majority of the seats in the local legislature.
- value of control of the both the executive and legislative branches of the local government by supra-majority rule, consensus voting requirements (e.g., 7 / 9 votes for consent), and a dominant coalition or minority-majority group.

Theorem 9.6   Political Incorporation Weighted Voting Formula
Proof. Define $v = [q; \omega_1, \omega_2, \omega_3, ..., \omega_N]$ equal to a weighted voting formula. This may also be termed a weighted voting scheme for the purposes of legislative apportionment and a district plan. The political incorporation weighted voting formula is defined as equal to $v = [q; \omega_1, \omega_2, \omega_3, ..., \lambda, ..., \omega_k, ..., \omega_N]$, with q = q-rule voting requirement for majority decision; ω = the individual seat values determined by group membership multiplied times a vote power index; λ = a decisiveness constraint generally equated to a q-rule; and, ω_k = the value of agenda setting in the local legislature. By definition 1.1, the political incorporation index equals: $v = 1*m + 2*(d_i) + 3*(d_j)$. In this formula, $m^* = \sigma(m)$, $\sigma = I = \{0, ..., N\}$, $d_i = \phi[0,1]$ and $d_j = \phi[0,1]$. Setting m = 1 $\Rightarrow \phi = 0$, m= 1 & $\phi = 0 \Rightarrow v = [q; \omega_1, \omega_2, \omega_3, ..., \omega_N]$. Setting $m = m^* = N$ $\Rightarrow \phi = 1$, m = N & $\phi = 1 \Rightarrow v = q*\nu$. $v = q*\nu \Leftrightarrow \Sigma v = \lambda*\nu(q) = q*\nu$.

Theorem 9.7   Political Incorporation Weighted Game Solutions
- $[5; 1, 1, 1, 1, 1, 1, 1, 1, 1]$ = equal vote power solution, $\frac{1}{2}*N + 1$, SMR
- $[6; 1, 1, 1, 1, 1, 1, 1, 1, 1]$ = equal vote power solution, 2/3 majority, VMR
- $[q; 1, 2, 3, 4, 5, 6, 7, 8, 9]$ = order of finish, weighted voting game
- $[q; 1, 1, 1, 1, 2, 2, 2, 2, 2]$ = political incorporation game
- $[q; 1, 1, 1, 1, 2, 2, 2, 2, 3]$ = council presidency, weak mayor
- $[q; 1, 1, 1, 1, 2, 2, 2, 2, 5]$ = strong mayor
- $[q; 1, 1, 1, 0, 0, 0, 0, 0, 3]$ = council presidency, strong mayor, veto majority
- $[q; 0, 0, 0, 0, 1, 1, 1, 1, 1]$ = minority-majority game
- $[q; 0, 0, 0, 0, 2, 2, 2, 2, 2]$ = coalition of minorities game
- $[q; 0, 0, 5, 5, 5, 5, 5, 5, 5]$ = local administration consensus majority, regime game
- simple majority rule game
- coalition of minorities game
- minority-majority rule gam
- urban (mayoral) regime game, veto proofness condition

Theorem 9.8   Political Incorporation Weighted Games versus Simple Voting Games.
- $v \neq \phi[0,1]$, not a single valued index function.
- $v = \phi[0,T]$, multi-valued, range-bounded index function.
- $v(n) = \phi(N)$, differentiates among voters.
- $v^* \neq v(m^*)$, violates anonymity condition.
- $\phi(m) \neq \phi[0,1]$, not a simple game.
- $\phi(m) = \lambda* \Sigma v_i = \lambda* v(q)$, weighted voting.

Lemma 6.0   The political incorporation index is a linear ordering satisfying the
condition of positive responsiveness.
Proof. Definition 1.1. Control of the Executive branch is an additive
constant, or zero in the index. Control of the Legislative branch is linearly
additive in the number of minority group members. A second constant is
additive for a decisive majority. These three index components produce
the same slope for different constants and therefore satisfy the condition of
positive responsiveness..

Lemma 7.0   The political incorporation index is a complete linear ordering.
Proof. The index is a closed and bounded set, $I = \{0, ..., T\}$. This finite
integer set generates an index from the weighted voting formula, in
definition 1.1, for each value of the size of the legislature. The index, $I =
\{0, ..., T\}$, is range bounded for any size of the local legislature, $I = \{0, ...,
j, ..., N\}$. The finite integer solution is a complete cover of the size of the
local legislature and control of the executive-mayoral, agenda setting
position.

Theorem 10.0   A voting equilibrium exists for any value of political incorporation.
Proof. Theorems 9.1, 9.2, 9.3, with classification by Theorem 9.4.

Theorem 11.0   A unique voting equilibrium exists for a value of political incorporation.
Proof. Definition 1.1 generates unique solutions for any given a fixed
configuration of votes, and size of the local legislature. Theorem 1.0.

Theorem 12.0   A political equilibrium exists for each value of political incorporation.
Proof. The index describes control of local jurisdiction, such as a
municipal or county district, by numbers of individual votes, decisive
coalitions, and control of any agenda setting position. Theorem 9.5 & 9.7.

Theorem 13.0   Separation of powers invariance theorem
Proof. $v = 1*m + 2*(d_i) + 3*(d_j)$. $d_i = 1$, if m% > 50% and $d_i = 0$, if
m% # $\leq$ 50%. $d_j = 1$, if M = m or $d_j = 0$, if M $\neq$ m. $T = 1*m + 5$.

Lemma 8.0   The political incorporation index satisfies the condition of ratio
responsiveness.
Proof. $v/T = pi$. $v = 1*m + 2*(d_i) + 3*(d_j)$. $\phi(v) = \phi(v/T)$.

Lemma 9.0   The political incorporation index satisfies the condition of decisiveness.
Proof. $v = 1*m + 2*(d_i) + 3*(d_j)$. $d_i = 1$, if m% > 50% and $d_i = 0$, if
m% # $\leq$ 50%.

Theorem 14.0   A general equilibrium exists for any value of political incorporation. Proof. The fragmentation solution is a range bounded set, consisting of a minimum and maximum, finite integer set, $I = \{0, ..., T\}$. This set of alternative coalition values forms a compact set in fragmentation of local jurisdiction, and is convex in the measure space. The linear ordering form a complete cover over the size of legislature, for any apportionment and municipal or county district plan. The district magnitude solution is for weighted voting, with coalition value determined a weighted voting formula. Individual vote power solutions exist for fixed sizes of the legislature and quorum voting requirements. Theorem 9.6, 9.7, & 9.8.

Theorem 15.0   A structured induced equilibrium exists for any value of political incorporation.
Proof. Theorem 8.0, and Theorems 9.1 through 9.8.

Theorem 16.1   Any coalition game associated with the political incorporation index is a weighted voting solution.
Proof. Theorem 1.0, Theorems 5.1, 5.2 & 6.0, Theorem 8.0, & Theorem 9.1 - 9.8.

Theorem 16.2   Any political incorporation coalition game implies weighted voting.
Proof. Theorem 16.1. Theorems 7.1 - 7.4.

Analysis of Vote Power & Political Incorporation, Los Angeles City & County

Beginning in 1852, Los Angeles County established a five-member Board of Supervisor's with a rotating chair-position, with some formal powers of agenda setting. This sized legislature became the model for what is now 81 of the 88 incorporated cities in Los Angeles County. The initial elections were held countywide, and thereafter evolved into the Supervisor District system of communities, consisting of single member districts. Amongst the cities, Los Angeles, Long Beach, Pasadena, Compton, Inglewood, Alhambra, Downey, Redondo Beach, and Pomona have single member district elections, with legislative apportionment and district plans adopted every ten years. As shown in **TABLE 1.1**, the cities of Los Angeles (7, 9, and then15), Long Beach (9), Pasadena (7), Santa Monica (7), Torrance (7), Pomona (6), and Redondo Beach (6) have larger legislatures than the five-seat County Board of Supervisor's.

After the annexation and incorporation campaigns, the City of Los Angeles contains slightly less than 469 square miles of county territory, and there are approximately 471 positions elected to the 89 local legislatures in Los Angeles County. The Supervisors Districts were initially a county district, and then evolved into single member district system based on representing communities in Los Angeles County. These communities included the incorporated towns and cities, and any township-precincts formed for the purposes of federal elections. These federal townships were merged into State Assembly Districts, and reported through the Federal Census as the minor civil jurisdictions organized in Los Angeles County territory. In some instance's townships were incorporated as municipal districts, but these were not the only municipal districts formed from County territory.

In many instances, corridor development from the City of Los Angeles produced annexation, town formation, and city incorporation as municipal services were extended from the town-square area toward the Harbor and Valley Districts. Within the City of Los Angeles the rapid expansion of population in the town square area, produced demands for municipal services that evolved into a ward-district beginning with 3 wards, then 5, and then a single member district plan for 9 wards. The addition of Harbor (1909) and Valley (1915) Districts consolidated a large amount of territory into the City of Los Angeles, requiring the extension of municipal services and ward-district representation (summarized in **TABLE 1.2**). Instead of extending the town-square wards, along the rectangular Alameda Corridor, from downtown to incorporate the Harbor District, the City adopted an At-Large, Municipal, District Plan for electing 9 members to a Common Council. The use of the municipal district as the citywide, at-large, election district is currently the form of election for 79 of the 89 local legislatures in Los Angeles County.

Based on the 2000 and 2010 Censuses, the population size of the largest 200 cities estimates a 28 member, Los Angeles City Council. The status quo 15, single-member, ward-districts, provide for a considerably smaller local legislature than six of the other top-ten largest cities. Even so, Phoenix, San Antonio, and San Diego also have smaller than expected or predicted City Council sizes based on population. The 15 ward district plans have evolved from the original 3 wards, and later on 9 member Common Councils, to the current single members' district plan. Beginning with the town square area covered by the 9 wards, the additional 6 districts describe the City annexations and mergers of County territory and towns consolidated into the City of Los Angeles. Sometimes referred to as Districts, these areas were formed for the purposes of planning, providing municipal services, and election administration.

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The use of Planning Districts continues to the present, throughout the City of Angeles. These dimensions describe blocks of the ward-districts designed under the Ord Plan, in the town square area, such as the financial district. Other districts include districts for commerce, industry, agricultural farm valley, harbor-transportation, and residential corridors of development. This district plan extends to subareas within these functions, such as those describing primarily residential or commercial (6) planning districts within the San Fernando Valley, and those covering areas in the town square area, the westside, the south side, and Harbor areas. In most cases, these planning districts are far larger than any of the precinct-townships of County territory annexed. They are also larger, but contain formerly incorporated towns, so that the boundaries of the planning districts are generally more encompassing than what was organized by county-township, town incorporation, and city annexation. The neighborhood or community council districts established within the City of Angeles are much smaller, residential districts. As a result, the community council district plan much more closely resembles the historic division of County territory into township-precincts.

Given the population of Los Angeles County, this fragmentation solution places greater emphasis on the five member Boards of Supervisor's, the Los Angeles Mayor's office, the 15 member Los Angeles City Council, and the 20 charter cities. Instead of an expansion in the size of these local legislatures, any reform efforts have generally involved either the transfer of functions from those cities incorporated by general law to the County Board of Supervisor's, or the extension of the City of Los Angeles into spheres of influence determined by the County Board of Supervisors. The emphasis on strong county government, with municipal district consolidation, appears to best describe the city planning agenda for the metropolis.

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In each local legislature, the vote power is distributed by the size of the committee and the quorum requirement for attaining a decision. Given a single vote assigned to each member, the vote power is determined by the number of times any member is a swing, pivot, or decisive vote. The number of swing-votes, per-member, is reported in **TABLE 1.3** for varying sizes of the local legislatures in Los Angeles County. This particular result demonstrates that the number of pivot votes increases non-linearly, in large positive amounts, with the size of local legislatures. Amongst the local legislatures, this result indicates the Los Angeles City Council, with 15 members, is the most complicated for determining the "decisive" or pivot vote. Inasmuch the quorum requirements vary, but this implies differences in voting power for members joining coalitions to attain 8, 9, and 10 vote requirements.

For most of the local legislatures, the vote power is .200 for attaining a simple majority. This result indicates an equal share, political incorporation solution for the County Board and 81 cities (= 79 + 2) with a local legislature consisting of five members, or four members (elected by ward-district) and a Mayor (elected by municipal, at-large, district). The other 7 local legislatures range from .167 to .067 voting power for the normalized Banzhaf and Shapley-Shubik indices. As indicated by these findings, the value of the vote power decreases more so with the addition of seats or ward-districts, even for sizes of the legislature ranging from 6 to 15 voters, than any marginal decreases in vote power from reducing the quorum rule from 2/3 majority rule to a simple majority. At issue is whether 8, 9, or 10 voting rules and procedures are required for enactment. In the 5-member local legislatures, the voting procedures may continue with 4 votes, whereas 5 may be required for consent in the 6 and 7 member councils. The consensus vote may require 7/9 and 11/15 for the Long Beach and Los Angeles City Councils.

Analysis of Coalition Voting Power & Political Incorporation in Los Angeles

The computation of the political incorporation index generates a measurable politics in terms of coalition structures and vote power varying by the sizes of the local legislatures. In Los Angeles County, the coalition structures vary generally from Anglo dominance, to minority-majority African-American, Asian, and Hispanic dominant coalitions. The existence of significant numbers of coalitions of minorities, majorities, provides additional information about the politics of coalition formation in the 88 cities and County of Los Angeles. In these local legislatures, the distribution of committee votes varies from simple majorities to all the seats and positions in the executive and legislative branches of local government.

The data for this computation is threefold. First, the Los Angeles City data is from municipal incorporation in 1850 to 2015, for the 7, 9, and 15 member City Councils. Second, the data on the Los Angeles County Board of Supervisor's rosters ranges from 1852, after County organization, to the current 2015 Board membership. Thirdly, data was collected for 87 cities, from 1991 to 2015. Inclusive of the City and County of Los Angeles, this latter roster of elected officials contains 5181 elected positions by the following years (1991, 1995, 2000, 2002, 2003, 2004, 2006, 2008, 2010, 2012, & 2014). The results for this data are reported in **Appendix II** for Greater Los Angeles and by municipal and county district.

The official rosters' summarize the number of City Council and County Supervisor's elected by the 88 cities in Los Angeles County. The Supervisor's Districts are administered at the County level and there is no separately elected County Mayor. Home Rule was adopted by Los Angeles County in 1913, and there have been times when information is available concerning the designation of President of the Board.

However this information is not available for all years, and the rotation of this position has been similar to those in the cities with a weak Mayor plan, where the mayor is elected as a member of the city council and generally serves a single-term before rotating to another designated position on the council. The elections are staggered to alternate when Supervisor's are elected, and their sessions do not quite coincide with the timing of the municipal district elections and legislative sessions. Since incorporation in 1913, and because the County administers municipal services for some of the unincorporated areas, the County Board is similar to a municipal district board for some purposes.

The findings indicate approximately a 65-35% division in Anglo majority and minority majority control of the 89 local legislatures, from 1991 to 2015. Asian or African-American, black representation is less than 5% of the seats, with Hispanic representation more than 25% of a decisive proportion of seats. There were 41 vacancies in the city legislatures and 5181 positions elected during this period.

The coalition structure was generally Anglo dominant, with a simple majority of the council or more, and control of the executive branch 68.8% of the time in the 88 cities, from 1991-2015. Coalitions of minorities formed at least a simple majority on city councils 6.5% of the time, with two or more groups represented. Lastly, minority majorities were elected slightly less than 25% of time, consisting of Hispanic, African-American, and Asian majority coalitions.

As reported in **TABLE 1.3**, individual members were generally elected as members of a majority coalition. For example, non-Latin white representatives were elected 92.9% of the time in cities with an Anglo dominant coalition. They were elected only 3.3% and 3.8% in situations with a coalition of minorities or minority majority coalition.

For minority elected officials, the patterns vary slightly by race and ethnicity. Hispanic councillors served in cities with a Hispanic majority 73% of time. They were also elected onto councils with an Anglo dominant coalition, 23% of the time. African-Americans were more likely to have been elected to serve in a few of the minority majority cities, 76.9%, and less likely (at 3.8%) to have been elected in situations with a coalition of minorities majority. Asian and Pacific Islander representatives, including those from South Asia, were not generally elected to majority coalitions, with a relatively even division of success being elected to councils with an Anglo dominant coalition, a minority majority, or coalition of minority majorities.

In the cities with an Anglo dominant coalition, only non-Latin white candidates were elected a 53.7% majority of the time. As reported in **TABLE 1.4**, the number of coalitions ranges from zero (non-Latin white only) to three, with coalitions of minorities consisting of at least two minority groups. The findings reveal Anglo dominant existed 37.4% of time in situations with one or two representatives from the same minority group. In comparison, minority majorities were elected where these coalitions consisted of only a single minority group, 82.4 % of the time. Lastly, the coalitions of minorities majorities comprised two minority groups 85.7% of the time.

The findings in **TABLE 1.5** indicate there were insignificant differences between electing non-Latin white and minority group candidates as mayor from individual members of these local legislatures. On this basis any indication of political incorporation is determined by the number of candidates elected, whether this forms a majority of the local legislatures. Any additional advantage from winning the mayoral position is therefore insignificantly different from the rate of electing members for these local legislatures.

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The previous finding suggests that pursuit of agenda control occurs at similar rates to those for attaining a minimal winning coalition. The comparison of the single group majorities, in **TABLE 1.6**, reports a 75.4% Anglo, 20.8% Hispanic, 2.3% non-Latin black, and 1.6% Asian division into decisive coalitions. These divisions describe the composite outcome for this period. The findings in **TABLE 2** report the trends in numbers of non-Latin white, non-Latin black, Latino or Hispanic, and Asian representatives by year of data collection from 1991 through 2015. These findings demonstrate a decrease in proportion of non-Latin white candidates from 81.8% to 58.3%. At the same time, non-Latin black representation increased from 2.0% to 4.5%, with Latino or Hispanic representation increasing from 14.4% to 31.1% of these elected positions. The proportion of Asian-American elected officials also increased from 1.8% to 6.2%. The timing of when minority majorities were elected is summarized in **TABLE 2.2** and reported by single group in **TABLES 2.3, 2.4, & 2.5**. These findings reveal decreasing Anglo dominance in the Greater Los Angeles area, Hispanic ascendancy in the control of municipal districts, stability in the number of African-American seats and minority majority dominant cities, and an increase in Asian-American representation in both the number of seats and minimal winning coalitions, consisting of either a minority-majority or participation in winning coalitions of minorities.

The findings in **TABLES 3.1 & 3.2** describe the vote power for these coalition results. In **TABLE 3.1**, the findings indicate the individual member's provide the swing vote in these local legislatures approximately 36% of the time. Given some variation in the size of local legislatures, from 5 to 15 positions, individual members are the pivot vote almost 19% of the time. The fact that this is below 1/5 or .200 may seem somewhat surprising given the large number of 5-member legislatures, but this is due to vote power in the 6, 7, 9, & 15 councils.

The political incorporation ratio (pi) is computed from a division of the political incorporation index by the total weighted votes possible. This ratio average .338 or 33.8 political incorporation for this panel data by year and municipal district. The distribution of this index generally contains a great amount of variation, it is positively skewed with greater frequencies of the data below the average, and the distribution is generally diffuse over the full range of political incorporation measured from 0 to 1. The non-standardized, political incorporation, indexes have an average equal to 3.46 or approximately a weighted vote majority of the 5 seat legislatures. The distribution of this index has similar properties to the findings estimated for the normalized political incorporation distribution. Lastly, two additional indices are included to measure the Banzhaf and Shapley-Shubik indices of minority elected officials only. These measures are constructed by weighting both the Banzhaf and Shapley-Shubik indices by minority group status and then summing this by the number of minority elected officials. This finding implies the political incorporation index produces vote power results similar to those based on the number of times a committee voter is the swing or pivot vote.

*The correlation results are reported in **TABLE 3.2** indicating strong positive correspondences of the Banzhaf, Shapley-Shubik, and political incorporation indices. Based on the empirical results for the coalitions, the analysis of these correlations strongly demonstrates the political incorporation index is not only a vote power index, but this index is consistent with the number of times a committee voter is either the pivot or swing vote for a decisive coalition. This basic finding generalizes the political incorporation as a weighted vote, where the weighted voting strength is determined by the amount of vote power. This finding places more emphasis on the decisiveness of a coalition, and less on the structure for agenda control.*

The last set of results, in **TABLES 4 & 5**, compares coalitions and the level of political incorporation in the City and County of Los Angeles. The findings in **TABLE 4.1** reveal the 15-member, ward-district council has had an Anglo dominant coalition 94.5% of the 1925-2015 period. Under the current single member district plan, there is the potential for a coalition of majorities majority, and the five years with this coalition structure comprise 5.5% of the 91-year duration of the 15 single member ward-districts. A similar result is reported in **TABLE 5.1**, where an Anglo dominant coalition has existed for 97.7% of the sessions of the County Board of Supervisors held from 1852-2015.

The number of coalitions varies between the City and County, with significantly greater diversity in the City versus County results. Given the length of the durations for a fixed size for each of these local legislatures, the findings imply some differences between voting and election structures that have been in existence 91 years for the City and 163 years for the County. The ESS for the City appears to be converging toward a Hispanic plurality of seats on the City Council. At the County level, there were two Hispanic, minority-majorities in the 19th Century, with greater diversity in 9.5% of the years, consisting of electing a Latino and non-Latin black representative beginning in 1991. The analysis of City vote power provides support for the Anglo dominance thesis implying a long-run Anglo dominant coalition from 1925 to 2015. Given varying durations in political careers, analysis of the individual 15-ward districts reveals important differences among the wards in terms of electing candidates for longer duration careers, Republican contestation for individual positions, and generally for minority candidates attaining election. Even so, there is some variation in turnover, and numbers of elected officials ranging from 6 to 16 elected to each of the 15-ward plan for the 1925-2015 period.

Analysis of the individual district results to some extent denies the fact that district plans have changed substantively during this 90-year period. Preliminary analysis of each of the 15 districts suggests significant differences in whether a single elected official dominated election during this time frame or control of the district was more diffusely held. Given some lengthy, 20 years or more political careers, it is possible to compute vote power indices based on individual elected officials control of a district in durations of years. Since none of these individuals' could have feasiblely controlled a majority of the years, there is generally no quorum requirement for a stable incumbency. Even so, using a majority of 46 years, produces strongly concentrated vote power indices in some of the 15 districts and not in others with more individuals elected that served fewer years and in some cases involved a group of officials serving similar time horizons. Inasmuch some districts had members elected for 25 years or longer, whereas others had 2-3 office holders elected to 15 year or so terms. The differences between evolving towardly a concentration of control in a single office holder versus several, produces significant differences in any vote power assigned to control for any duration of the 1925-2015, 15 ward-district period.

The findings also indicate differences in minority political incorporation by historical period (1850-1925 and 1925-2015) and City versus County. The index results confirm greater diversity in the 1925-2015 City Councils (3.57), in comparison to those from the previous 5 municipal voting and election structures (1.50) and those for the duration of organization for the County Board of Supervisors (.60). The standardized political incorporation indices for the City (.17857, T = 1850-2015) and County (.08640, T = 1852-2015) suggests approximately a 2:1 ratio in political incorporation. Additionally, the distribution of minority elected officials seat shares confirm the standardized political incorporation ratio with a similar distribution of results.

The last sets of findings pertain to other considerations such as partisan contestations and the role of agenda setting positions, such as the Los Angeles Mayor, the Presiding Officers of the Board of Supervisors and City Councils, and Council Presidency positions selected in cities with separately elected Mayor's. First, the individual district findings suggest a wide range of a partisan contestation across the ward-districts. From the 1940's onward the Republicans held a slowly diminishing base of first 4 seats, thereafter 2 to 3 seats to contest for, and then a single safe seat. The Republican majorities were held during the 1930's, and analysis of partisan political incorporation indicates either the absence of a decisive coalition in the City Council or the lack of agenda control from winning the Los Angeles Mayor's office.

Secondly, the dynamics in partisan competition and minority political incorporations are shown in **GRAPHS 1.0 & 2.0**. The first reports these findings for the unstandardized political incorporation index. The second provides a comparison using seat share proportions. The major difference in the results between these measures involves the duration for when the transition from one type of politics led to the replacement with another. The first sets of results suggest 1973 as critical year for beginning the current politics of minority incorporation. The second set of results indicates 1985 as a starting point for this transition from two political party organizations, if not competition for majority status, toward factional competition in seat shares.

Los Angeles Politics

This study analyzes incorporation politics finding this a simple game with weighted voting. The concept of political incorporation is proven to be a vote power index. As a result, the political incorporation indexes, in ratio form:

Theorem 16.3   pi = λ*Banzhaf index.
Theorem 16.4   pi = λ*Shapley-Shubik index.
Conjecture   pi / λ = Shapley-Shubik index = normalized Banzhaf index.

This result generalizes the pursuit of political incorporation to the existence of coalition structures and a measure of vote power based on decisive coalitions in local legislatures. Given the relatively small proportion of these local legislatures electing by single member district, this finding implies not only is the political incorporation index a weighted voting solution but this index summarizes local legislative apportionment and district plans that include municipal and ward-districts.

As a consequence, the weighted voting derived from any attempts to implement legislative apportionment or a district plan, on the basis of minority political incorporation, is a weighted voting solution. In this metropolitan setting, weighted voting has direct influence on general law provision of municipal incorporation and the importance of municipal districts in elections. Because local jurisdiction evolved from sometimes adoption of charters and votes on town or municipal incorporation, all of the local legislatures hold a greater status than those established by specific acts of the State Legislature or from County organization of towns, villages, and townships. As a result, the evolution of boundary decisions described in this study establishes the significance of local jurisdictional fragmentation to efforts at political incorporation through local coalition politics and individual elections.

The existence of a spatial history of boundary decisions is shown to produce local jurisdictional fragmentation. This fragmentation solution establishes a sequential pattern that increases in complexity of incorporated local jurisdiction. The fragmentation solution reported in **Appendix I**, specifically in **TABLE 7.2**, is more complicated that any analysis limited to the number of incorporated cities. The fact that the municipal service relationships vary between the County, unincorporated areas, and cities incorporated by general law or charter status is yet another indication of both a fragmentation solution and complexity in local jurisdiction. The relationship between the City and spheres of influence in the unincorporated areas versus those in municipally annexed territory, provides a second indication of the complications produced through ongoing boundary decisions in Los Angeles County. More generally, the role county reorganization, supervisors' districts, and the evolution of precinct-townships into small cities add yet a third complication to what is a sizeable, in land allocation and number of cities, planning agenda for the metropolitan area. Lastly, the existence of these boundary decisions implemented a large number of adjustments to local jurisdiction requiring extension, additions, mergers, incorporation, annexation, and other municipal consolidation decisions. Recent efforts at reorganization to establish independent city status generated city separation decisions for much larger populations that what would frequently be included in the detachment of territory and reorganization of municipal jurisdiction.

The status quo begins with federal townships, land grants, and rural towns. In Los Angeles City and County territory population growth produced small cities at village intersections, in a transportation corridor, from the town square area to various planning districts. These new cities were created by town sectional development and served the purpose of blocking

municipal annexation. On the boundaries of the City of Los Angeles, this created a politics in annexation and incorporation campaigns emphasizing the importance of municipal districts and consolidation of local jurisdiction. These campaigns provided for a differentiation of suburbs by economic sectors, morality and core beliefs favoring residential living, and in some case's support for social justice through the incorporation of minority communities. The politics of growth generated an ongoing city planning agenda for the purposes of extension of municipal services into County territory, including mergers with towns and villages adjacent to the City of Los Angeles. The goal for this extension of municipal services is to consolidate territory and provide for municipally incorporated jurisdiction.

Given the current status of local government reorganization law, this planning agenda implies opposition to increasing the number of cities, establishing cities from areas within existing cities, and either increasing the size of the local legislatures or electing additional positions such as separately elected, county executives or city mayors. As a consequence, the fragmentation attained within unincorporated areas implies a transition from County territory to consolidation of spheres of influence within municipal districts. These boundary adjustments in municipal service responsibilities are also occurring at the same time there is an increasing effort to reduce the number of municipal functions, by transferring some of the functions to the County or to adjacent, larger cities. In some cases, this may produce both additional voluntary and organized inter-local cooperation by establishing inter-city, county subareas or regional, districts that consolidate municipal district functions into a multi-city district.

Any consolidation of municipal functions into subarea districts may include pairings of adjacent incorporated cities, cities already voluntarily associated through regional planning, and

in some cases, unincorporated areas that are managed directly by Los Angeles County. Because there are fewer elective positions, and arguably, greater importance attached to some parts of the structure, the fragmentation solution established by boundary decisions produces fewer complications in terms of voting, but creates a sense that the system is more concentrated than politics in other metropolitan, city and county, districts. What is important in different areas of Los Angeles County varies by structure, with the 5 member County Board of Supervisors, Los Angeles Mayor and 15 member City Council, and then differentiates the cities incorporated by charter and general law, and those municipal districts electing by city or ward district plan.

Any remnants of unincorporated territory are also matters for deliberations concerning boundary decisions. The fact that Los Angeles County assigns some of these County territories to various cities, and in some cases to multiple neighboring cities, provides for still another option to extend municipal services without either an incorporation or annexation campaign. In Los Angeles, politics is often an evolving balance between both the pursuit of extending spheres of influence in a growth setting and a reallocation of seat shares to better incorporate ongoing changes in coalition structures. This politics is not typically about the formation of a metropolitan district, from city-county consolidation, yet these deliberations require extensions covering urban area(s) and providing for municipal districts and services in areas with no municipal organization. As a result, the spatial history of decisions describes a gradual evolution from the status quo-town square area and generally disorganized county territory to the remnant unincorporated areas that in some cases represent areas with failed boundary decisions to annex or incorporate.

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Appendix I Vote Power and Municipal Districts in Greater Los Angeles

TABLE 1.1   Legislative Apportionment and District Plans, City of Los Angeles

Duration	Size	District Plan	Apportionment	Period	% MMD
1780-1849				0	
1850-1869	7	7 At-Large	(7) 1	1	1.0000
1870-1877	9	3 Wards, 3 each	(3) 3	2	1.0000
1878-1889	15	5 Wards, 3 each	(5) 3	3	1.0000
1890-1908	9	9 Wards	(1) 9	4	0.0000
1909-1925	9	9 At-Large	(9) 1	5	1.0000
1925-2015	15	15 Wards	(1) 15	6	0.0000
T	165				0.3455
1991-2015	5	Compton, Inglewood, Los Angeles County	(1) 5		0.0000
1991-2015	5	At-Large (80 cities)	(5) 1		1.0000
1991-2015	6	Redondo Beach	(6) 1		1.0000
1991-2015	7	Santa Monica, Torrance	(7) 1		1.0000
1991-2015	7	Pasadena	(1) 7		0.0000
1991-2015	9	Long Beach	(1) 9		0.0000

TABLE 1.2   Los Angeles City Apportionment and Division

Year	Seats	Structure	Division	City Planning Agenda
1850	7	at-large	municipal district	Status Quo (Ord division to implement the Ord Plan)
1878	15	wards	city subdivision	sectional extension
1883		districts	districts	single member Senate & Assembly districts
1889	9	wards	city subdivision	reform I
1909	9	at-large	municipal district	reform II
1909	5	districts	borough plan	Central, Harbor, West Los Angeles, Hollywood, San Fernando Valley
1911		districts	Assembly	apportionment & district plan
1915-25	5	districts	supervisor	City-County consolidation
1922	11	at-large	municipal district	consolidation
1924	15	districts	city subdivision	territorial extension
1927		county	Senate	single county district plan
1947	5	districts	borough plan	Central, Harbor, West Los Angeles, (East, Central, West) Hollywood, San Fernando Valley
1963	9	seats	commission	Local Area Boundary Formation Commission
2000				Local Reorganization
2002	2 - 5	districts	municipal district	reorganization (separation and incorporation) plan San Fernando Valley, Hollywood, Harbor, Rancho San Vincenzo, Venice Beach, Eagle Rock
2012	1	district	municipal district	municipal incorporation (East Los Angeles & Hacienda Heights)

TABLE 1.3   Vote Power Indices by Size of the Local Legislature, Quota Rule, Number of Swings (Pivot Votes), absolute Banzhaf Index, normalized Banzhaf Index, Coleman's Power to Prevent Action, Coleman's Power to Initiate Action, Shapley-Shubik Index

5	3	6	.375000	.200000	.375000	.375000	.200000
5	4	4	.250000	.200000	.666667	.154000	.200000
6	4	10	.312500	.166667	.454545	.238095	.166667
7	4	20	.312500	.142857	.312500	.312500	.142857
7	5	15	.234375	.142857	.517241	.151515	.142857
9	5	70	.273438	.111111	.273438	.273438	.111111
9	6	56	.218750	.111111	.430769	.146597	.111111
15	8	3432	.209473	.066667	.209473	.209473	.066667
15	9	3003	.183289	.066667	.301839	.131601	.066667
15	10	2002	.122192	.066667	.404935	.071952	.066667

TABLE 1.4   Political Incorporation in a 5-member Local Legislature

Size of the Legislature	Individual Members	Decisiveness	Separate Election	Agenda Control	Political Incorporation
5	0	0	0	0	0
5	1	0	0	0	1
5	2	0	0	0	2
5	0	0	1	3	3
5	1	0	0	3	4
5	3	2	0	0	5
5	4	2	0	0	6
5	5	2	1	0	7
5	3	2	0	3	8
5	4	2	0	3	9
5	5	2	0	3	10

TABLE 2.0   Land Grant Allocations by Acres and County District

Calleguas	9998	Ventura
Canada de San Miguelito	8877	Ventura
Canada Larga o Verde	6659	Ventura
El Conejo (Los Angeles)	48672	Ventura
El Rincon (Arrellanes)	4460	Ventura
Gaudalasca	30594	Ventura
Las Posas	26623	Ventura
Lands of San Buenaventura	48823	Ventura
Lands of San Buenaventura	36	Ventura
Mission San Buenaventura	29	Ventura
Ojai	17717	Ventura
Rio de Santa Clara	44883	Ventura
San Francisco	48612	Ventura
San Miguel (Olivas&Lorenzana)	4694	Ventura
Santa Ana	21522	Ventura
Santa Clara del Norte	13989	Ventura
Santa Paula y Saticoy	17773	Ventura
Sespe	8881	Ventura
Simi	113009	Ventura
Temascal	13339	Ventura
Aguaje de la Centenilla	2219	Los Angeles
Cahuenga	388	Los Angeles
Azusa (Duarte)	6596	Los Angeles
Azusa (Dalton)	4431	Los Angeles
Boca de Santa Monica	6657	Los Angeles
Canada de los Nogales	1200	Los Angeles
Cienega o Paso de la Tijera	4481	Los Angeles
El Conejo (Ventura)	48672	Los Angeles
El Encino	4461	Los Angeles
El Escorpian	1110	Los Angeles
Santa Catalina	45820	Los Angeles
La Brea	4439	Los Angeles
Ballona	13920	Los Angeles
La Canada	5832	Los Angeles
La Habra	6699	Los Angeles
La Liebre (Kern)	48800	Los Angeles
La Merced	2364	Los Angeles
La Puente	48791	Los Angeles
Las Cienegas	4439	Los Angeles
Las Virgenes	8885	Los Angeles
Los Alamitos	28027	Los Angeles
Los Angeles City lands	17172	Los Angeles
Los Cerritos	27054	Los Angeles
Los Coyotes	48806	Los Angeles
Los Felis	6647	Los Angeles

Los Nogales	1004	Los Angeles
Los Palos Verdes	13629	Los Angeles
Topanga Malibu Sequit	13316	Los Angeles
Mission San Fernando	16858	Los Angeles
Mission San Fernando	77	Los Angeles
Mission San Fernando	190	Los Angeles
Paso de Bartolo (Guirado)	876	Los Angeles
Paso de Bartolo (Sepulveda)	208	Los Angeles
Paso de Bartolo (Pio Pico)	8991	Los Angeles
Potrero Chico	8346	Los Angeles
Potrero de Felipe Lugo	2042	Los Angeles
Potrero Grande	4432	Los Angeles
Providencia	4064	Los Angeles
Rincon de la Brea	4453	Los Angeles
Rincon del los Bueyes	3128	Los Angeles
San Antonio (Lugo)	29513	Los Angeles
San Antonio/Rodeo de las Aguas	4449	Los Angeles
San Francisco (Ventura)	48612	Los Angeles
San Francisco (Dalton)	8894	Los Angeles
San Jose addition	4431	Los Angeles
San Jose (Dalton)	22340	Los Angeles
San Jose de Buenas Aires	4439	Los Angeles
San Pascal (Garfias)	13694	Los Angeles
San Pascual (Wilson)	709	Los Angeles
San Pedro (Dominguez)	43119	Los Angeles
San Rafael	36403	Los Angeles
Santa Anita	13319	Los Angeles
Santa Gertrudes (McFarland/Downey)	17602	Los Angeles
Santa Gertrudes (Colima)	3696	Los Angeles
San Vincente y Santa Monica	30260	Los Angeles
Sausal Redondo	22459	Los Angeles
Simi (Ventura)	113009	Los Angeles
Tajauta	3560	Los Angeles
Temescal (Ventura)	13339	Los Angeles
Tujunga	6661	Los Angeles
Boca de la Playa	6607	Orange
Canada de los Alisos	10669	Orange
Canon de Santa Ana	13329	Orange
La Bolsa Chica	8107	Orange
La Habra (Los Angeles)	6699	Orange
La Puente (Los Angeles)	48791	Orange
Las Bolsas	33460	Orange
Lomas de Santiago	47227	Orange
Los Alamitos (Los Angeles)	28027	Orange
Los Coyotes (Los Angeles)	48806	Orange
Mission San Juan Capistrano	44	Orange
Mission San Juan Capistrano tract	7	Orange

Mission Viejo or La Paz	43433	Orange
Niguel	13316	Orange
Trabuco	22184	Orange
Santiago de Santa Ana	78941	Orange
San Juan Cajon de Santa Ana	35971	Orange
San Joaquin	48803	Orange
Rincon de la Brea (Los Angeles)	4453	Orange
Potreros de San Juan Capistrano	1168	Orange
El Rincon (San Bernardino)	4431	Riverside
Jurupa (Rubideaux)	6750	Riverside
Jurupa (Stearns)	33819	Riverside
La Laguna (Stearns)	13339	Riverside
Temecula	26609	Riverside
Land in in the Valley of Temecula	2233	Riverside
La Sierra (Sepulveda)	17774	Riverside
La Sierra (Yorba)	17787	Riverside
Pauba	26598	Riverside
San Jacinto Viejo	35503	Riverside
San Jacinto Nuevo y Potrero	48861	Riverside
San Jacinto y San Gorgonio	4440	Riverside
Santa Rosa (Morino)	47815	Riverside
Sobrante de San Jacinto	48847	Riverside
Canon de Santa Ana (Orange)	13329	San Bernardino
Cucamonga	13045	San Bernardino
El Rincon (Riverside)	4431	San Bernardino
Jurupa (Stearns) Riverside	32259	San Bernardino
Muscupiabe	30145	San Bernardino
Santa Ana del Chino	22234	San Bernardino
Santa Ana del Chino Addition	13366	San Bernardino
San Bernardino	35509	San Bernardino

Distribution of Sizes of the Land Grants in Acres

Land Area	N	Minimum	Maximum	Mean	Std. Error	Std. Deviation	Skewness	Kurtosis
ACRES	122	7	113009	19740.89	1890.02	20875.95	1.892	5.148

TABLE 3.1   Los Angeles Township & Town-Precincts

In Los Angeles, the extension of city wards and the sectional development of town precincts reorganized what had been land grant communities. The 1860 Census contains ten towns for the purposes of electing Township Supervisors (Azusa, El Monte, Los Angeles, Los Nietos, San Gabriel, San Jose, San Juan, San Pedro, Santa Ana, Tejon). At the time of the 1900 Census, county township organization and Los Angeles municipal annexation produced nine city ward and twenty-one township divisions (Burbank, Cahuenga, Catalina, Compton, Downey, El Monte, Fairmont, Long Beach, Los Nietos, Pasadena, Redondo, Rowland, San Antonio, San Fernando, San Gabriel, San Jose, Santa Monica, Soledad, South Pasadena, Wilsington = Wilmington & San Pedro). The 1911 County Senate Apportionment–District Plan was based on approximately one hundred and twenty town precincts in county territory in addition to the number of precincts in the City of Los Angeles. By the 1920 Census, county reorganization of Southern California and additional municipal annexation of county territory, produced fifteen municipal supervisor districts and thirty-four townships (Antelope, Azusa, Belvedere, Burbank, Cahuenga, Calabasas, Catalina, Compton, Covina, Downey, El Monte, Fairmont, Gardena, Inglewood, Lankershim, Lomita, Long Beach, Los Angeles, Malibu, Monrovia, Norwalk, Pasadena, Redondo, Rowland, San Antonio, San Dimas, San Fernando, San Gabriel, San Jose, Santa Monica, Soledad, South Pasadena, Venice, and Whittier). This fragmentation of towns and townships in Los Angeles provided for fifteen City Council Districts in comparison with the nine townships (Miami, Lemon City, Arch Creek, Coconut Grove, Larkins, Redland, Homestead, Perrine, Ojus, Miami Beach) and nine Dade County Commission Districts elected at-large throughout Greater Miami.

TABLE 3.2   1911 Los Angeles County Town-Precincts

Acton	El Porto	Monterey Park
Alamitos	El Segundo	Mount Lowe
Alhambra	Fruitland	Nadeau
Alhambra City	Gardena	Naples
Almonester	Glendale	Neenach
Altadena	Glendora	Newhall
Angeles Mesa	Glorietta Heights	Norwalk
Annadale	Green Meadows	Ocean Park Heights
Arbor Glen	Hermosa Beach	Palmdale
Arcadia	Howard	Pomona
Artesia	Hynes	Redman
Azusa	Inglewood	Redondo Beach
Baldwin Park	Inglewood Truck Farm	Rivera
Ballona	La Brea	Rowland
Bell	La Canada	San Antonio
Bellflower	La Cresenta	San Dimas
Belvedere	La Liebre	San Marino
Beverly Glen	La Mirada	San Rafael
Beverly Hills	La Rambla	Santa Monica
Bixby	La Verne	Santander
Calabasas	Laguna	Saugus
Canyon	Lamanda	Sherman
Carval	Lancaster	Sierre Madre
Catalina	Lasher	Signal Hill
Centinela	Lawndale	Snithsdale
Cerritos	Linda Vista	Spadra
Charter Oak	Little Rock	St. Francis
Chatsworth	Llano	Sterling
Claremont	Lomita	Sunland
Clearwater	Long Beach	Torrance
Covina	Los Nietos	Tweedy
Crescent	Lugo	Verdugo
Culver Heights	Machado	Vernon City
Del Sur	Malibu	Watts
Dominguez	Manhattan Beach	West Adams
Downey	Middle town	Whittier
Duarte	Midwich	Willowbrook
Eagle Rock	Moneta	Wilmington
East Whittier	Monrovia	Wilsona
El Monte	Montebello	Wiseburn

TABLE 3.3   39 Townships in Los Angeles County, 1930

Antelope
Aynet
Azusa
Belvedere
Beverly Hills
Bixby
Calabasas
Chaves
Covina
Catalina
Compton
Dominguez
Downey
El Monte
Fairmont
Gardena
La Brea
Glendale
Inglewood
La Crescenta
Lomita
Machado
Malibu
Monrovia
Montebello
Norwalk
Pasadena
Redondo
Rowland
San Dimas
San Antonio
Soledad
San Gabriel
San Jose
Talamantes
Universal
Whittier
Venice

TABLE 4.0   Town of Los Angeles, Ward-Electoral Districts

Ward	1889		Union Square	Center to the East town
1	El Centro San Antonio Pueblo	Centrum	Governors District Garvanza District **Central District 1**	West River Corridor Garvanza District towns of Highland Park Montecito Heights
2	North West Central San Fernando Civic Center	Central Cahuenga Central District	San Fernando District **Central District 2**	San Fernando Mission
3	Northeast Main Street Fort Street	West side/gate	Bunker Hill District #1 **Western District 1**	
4	West town	West side/gate	Bunker Hill District #2 **Western District 2**	Highland Park (Village) Hancock Park (Village/Ord Division) Doheny (Ord Division)
5	Northwest West town	West side/gate	Angelino Heights District **Western District 3**	towns of Silver Lake Echo Park
6	South Central West town	West side/gate	Jefferson Park District **Southern District** **Eastern District 3**	
7	East Central	East side/gate Fort Street	Greenfield District **Central District 3**	
8	East town	East side/gate	**Eastside 1** Mt. Washington District	
9	East town	East side 2 gate	**Eastside 2**	
			annexation	
10			Eagle Rock District **Central District 4**	Cypress Park District **Mt. Washington District**
11		**Western District 4**	**Coleshaw District** East Hollywood	Colegrove Western Addition Central Hollywood

12		**Western District 5**	**Wilshire District** (Wilshire Corridor District)	Wilshire Western Heights The Beaches (Venice Beach, Ocean Beach & Park, Marina) Fairfax Westchester (Sawtelle & Barnes City) Melrose, University
13		South west district	**Crenshaw District** **Southern District 3** South Central District	Exposition Park USC District
14		**Southern District 4**	**Harbour District**	Wilmington, *Shoestring*
15		North Central District	**Valley District** **Central District 5**	*San Fernando*
16		East gate	East Los Angeles District **Eastern District 4**	Eastern Heights **City Terrace** Boyle Heights Lincoln Heights
17		South gate	Southern & Central District Southern Extension South Central District	South Washington Garvanza (part) District Alameda (Corridor) **Vernon** **Southern District 5**

TABLE 5.0   **City of Los Angeles, Municipal District Boundary Decisions by Date of Decision, County Territory or Place Location, Boundary Decision, and Cumulative Area of the City Los Angeles**

Date	Place	Decision	Type	Area
01/01/1781	Los Angeles	passed	incorporation	28.01000
08/29/1859	Southern Extension	passed	annexation	29.21000
10/18/1895	Highland Park	passed	annexation	30.62000
04/02/1896	Southern and Western	passed	annexation	40.80000
06/12/1899	Garvanza	passed	annexation	41.49000
06/12/1899	University	passed	annexation	43.26000
12/26/1906	Shoestring	passed	annexation	61.90000
08/28/1909	Wilmington	passed	merger	71.83000
08/28/1909	San Pedro	passed	merger	76.44000
10/27/1909	Colegrove	passed	annexation	85.16000
02/07/1910	Hollywood	passed	merger	89.61000
02/28/1910	East Hollywood	passed	annexation	100.72000
02/09/1912	Arroyo Seco	passed	annexation	100.62000
05/22/1915	Eagle Rock	defeated	merger	.
05/22/1915	Palms	passed	annexation	114.92000
05/22/1915	San Fernando	passed	annexation	284.81000
06/10/1915	Bairdstown	passed	annexation	288.21000
06/14/1916	Westgate	passed	annexation	336.88000
06/14/1916	Occidental	passed	annexation	337.92000
02/26/1917	Owensmouth	passed	annexation	338.69300
06/15/1917	West Coast	passed	annexation	351.10300
06/15/1917	Santa Monica	defeated	merger	.
06/15/1917	Sawtelle	defeated	merger	.
02/03/1918	West Adams	passed	annexation	351.69300
02/16/1918	Griffith Ranch	passed	annexation	351.92300
04/11/1918	Hansen Heights	passed	annexation	360.22300
07/11/1918	Ostend	passed	annexation	360.22450
11/13/1918	Orange Grove	passed	annexation	360.45450
06/17/1919	West Lankersheim	passed	annexation	361.62450
07/23/1919	Dodson	passed	annexation	362.67450
08/06/1919	Fort MacArthur	passed	annexation	363.23400
09/10/1919	Peck	passed	annexation	363.68450
09/25/1919	Harbor View	passed	annexation	363.85950
02/26/1920	St Francis	passed	annexation	363.90950
09/10/1920	Hill	passed	annexation	364.01950
11/19/1920	Chatsworth	passed	annexation	364.35950
.	Burbank	defeated	merger	.
02/28/1922	La Brea	passed	merger	365.88950
03/02/1922	Manchester	passed	annexation	366.21950
06/16/1922	Melrose	passed	annexation	366.88950
07/13/1922	Sawtelle	passed	merger	368.70950
07/27/1922	Angeles Mesa	passed	annexation	369.69950
10/05/1922	Angeles Mesa No 2	passed	annexation	370.03950

10/05/1922	Rimpau	passed	annexation	370.17950
01/18/1923	Hancock	passed	annexation	370.43950
01/18/1923	Evans	passed	annexation	370.56950
05/16/1923	Ambassador	passed	annexation	373.19950
05/16/1923	Laurel Canyon	passed	annexation	386.76950
05/16/1923	Beverly Hills	defeated	merger	.
05/17/1923	Hyde Park	passed	merger	387.96550
05/17/1923	Eagle Rock	passed	merger	391.13950
05/17/1923	Vermont	passed	annexation	391.16450
05/17/1923	Laguna	passed	annexation	391.24450
05/17/1923	Carthay	passed	annexation	391.62450
12/20/1923	Rosewood	passed	annexation	392.24450
12/20/1923	Agoura\e	passed	annexation	392.26450
12/29/1923	Lankershim	passed	annexation	399.90450
02/03/1924	Providencia	passed	annexation	404.72450
02/13/1924	Cienega	passed	annexation	405.65450
02/21/1924	Annandale	passed	annexation	406.33450
05/31/1924	Clinton	passed	annexation	406.38450
09/08/1924	Wagner	passed	annexation	407.32450
09/08/1924	Fairfax	passed	merger	409.20450
09/08/1924	Santa Monica	defeated	merger	.
09/08/1924	Venice	defeated	merger	.
01/03/1925	Holabird	passed	annexation	409.21450
01/08/1925	Danziger	passed	annexation	409.33750
01/30/1925	Hamilton	passed	annexation	409.77750
04/28/1925	Martel	passed	annexation	410.00750
04/28/1925	Santa Monica Canyon	passed	annexation	410.17750
10/26/1925	Beverly Glen	passed	annexation	410.98750
11/25/1925	Venice	passed	merger	415.09250
.	Alhambra	defeated	merger	.
.	Burbank	defeated	merger	.
03/18/1926	Green Meadows	passed	annexation	418.66250
05/10/1926	Buckler	passed	annexation	418.86650
05/29/1926	Watts	passed	merger	420.55250
08/04/1926	Sunland	passed	merger	426.56250
11/18/1926	Tuna Canyon	passed	annexation	434.23250
03/05/1927	Mar Vista	passed	merger	439.21650
04/11/1927	Barnes City	passed	merger	441.02650
06/11/1927	Brayton	passed	annexation	441.10150
.	Tujunga	defeated	merger	.
02/10/1928	Wiseburn	passed	annexation	441.24150
11/27/1928	White Point	passed	annexation	441.25150
02/17/1929	Classification Yard	passed	annexation	441.66150
04/17/1930	View Park	passed	annexation	441.68150
08/01/1930	Sentney	passed	annexation	441.69150
12/22/1930	Tobias	passed	annexation	441.01500
.	Tujunga	defeated	merger	.

06/17/1931	Cole	passed	annexation	441.79150
06/17/1931	Tujunga	defeated	merger	.
03/07/1932	Tujunga	passed	merger	450.49150
01/31/1933	Lakeside Park addition	passed	annexation	450.62150
03/14/1935	Western Avenue-Highlands	passed	annexation	450.74150
08/16/1963	La Cienega Blvd. Olympic	passed	detachment	458.12250
08/15/1940	Crenshaw Manor addition 1	passed	annexation	450.79580
07/29/1941	Fairfax addition 2	passed	annexation	451.05880
08/14/1941	Crenshaw Manor Heights addition 2	passed	annexation	451.15180
09/17/1941	Woodland Heights addition	passed	annexation	451.16540
04/13/1942	Palos Verdos addition	passed	annexation	451.17840
04/13/1942	Fairfax addition 3	passed	annexation	451.19340
12/11/1942	Fairfax addition 4	passed	annexation	451.22440
04/30/1943	Dominguez addition	passed	annexation	451.66940
01/07/1944	Florence addition	passed	annexation	451.74440
09/25/1944	Fairfax addition 5	passed	annexation	451.76840
12/01/1944	Florence addition 2	passed	annexation	451.82540
12/01/1944	Florence addition 3	passed	annexation	451.84940
08/27/1945	Lomita	passed	annexation	451.86640
07/19/1946	Lomita addition 2	passed	annexation	451.87440
09/18/1946	Angeles Mesa addition 3	passed	annexation	451.97040
11/06/1946	Mar Vista addition 2	passed	annexation	451.99240
01/24/1947	Angeles Mesa addition 4	passed	annexation	452.40140
01/29/1947	Mar Vista addition 3	passed	annexation	452.60640
10/14/1947	Fairfax addition 6	passed	annexation	452.67940
03/01/1948	Burbank detachment	passed	detachment	452.23340
04/06/1948	Wiseburn addition 2	passed	annexation	452.23580
04/13/1948	Danziger addition 2	passed	annexation	452.23910
04/22/1948	Angeles Mesa addition 5	passed	annexation	453.22910
07/23/1948	Angeles Mesa addition 6	passed	annexation	453.29410
12/28/1948	Beverly Hills detachment 1	passed	detachment	453.28450
12/28/1948	Beverly Hills detachment 2	passed	detachment	453.28430
07/26/1949	Arnaz addition	passed	annexation	453.43010
11/04/1949	Fairfax addition 7	passed	annexation	453.44070
12/16/1949	Culver City exclusion	passed	detachment	453.43430
01/21/1950	San Fernando detachment	passed	detachment	453.38260
05/03/1950	Lomita addition 4	passed	annexation	453.46350
10/09/1950	Beverly Hills detachment 3	passed	detachment	453.45940
11/15/1950	Lomita additon 3	passed	annexation	453.46150
12/20/1950	Chatsworth addition 2	passed	annexation	453.47240
01/12/1951	Beverly Hills detach 4	passed	detachment	453.45900
10/22/1951	Belvedere addition	passed	annexation	453.46210
10/24/1951	Fairfax addition 8	passed	annexation	453.46790
10/24/1951	Melrose addition 2	passed	annexation	453.47060
11/07/1951	Lomita addition 5	passed	annexation	453.47690
06/04/1952	Norman addition	passed	annexation	453.55910
06/11/1952	Lomita addition 6	passed	annexation	453.57430

08/28/1952	Culver City detachment 1	passed	detachment	453.56130
10/14/1952	Mar Vista addition 4	passed	annexation	453.56890
01/07/1953	Westgate addition 2	passed	annexation	453.63200
06/03/1953	Rolling Hills addition	passed	annexation	453.75170
06/17/1953	Mar Vista addition 5	passed	annexation	453.76180
08/14/1953	Inglewood detachment 1	passed	detachment	453.73480
09/15/1953	Fairfax addition 9	passed	annexation	453.73670
09/28/1953	Keystone addition 1	passed	annexation	453.80910
10/26/1953	Rolling Hills addition 2	passed	annexation	453.86340
12/21/1953	Burbank detachment 2	passed	detachment	453.85470
04/26/1954	Glen Oaks addition	passed	annexation	453.85940
06/25/1954	Beverly Hills detachment 5	passed	detachment	453.85200
08/10/1954	Rolling Hills addition 4	passed	annexation	453.83330
08/11/1954	Rolling Hills addition 3	passed	annexation	454.13850
08/19/1954	Burbank exclusion 1	passed	detachment	454.01190
05/09/1955	Chatsworth addition 3	passed	annexation	454.09870
06/15/1955	Chatsworth addition 2	passed	annexation	454.13230
06/23/1955	Sunland addition 3	passed	annexation	454.14240
07/11/1955	Sunland addition 4	passed	annexation	454.15660
08/16/1955	Burbank detachment 3	passed	detachment	454.13770
08/24/1955	Rolling Hills addition 6	passed	annexation	454.33620
09/21/1955	Rolling Hills addition 7	passed	annexation	454.59520
10/05/1955	Tuna Canyon addition 2	passed	annexation	454.60970
10/19/1955	Burbank detachment 3	passed	detachment	454.59850
02/16/1956	Arroyo Seco addition 2	passed	annexation	454.59960
05/09/1956	Angeles Mesa addition 7	passed	annexation	454.63520
07/23/1956	Rolling Hills addition 8	passed	annexation	454.63560
09/13/1956	Sunland addition 5	passed	annexation	454.68060
12/12/1956	Calabasas	passed	annexation	454.70650
12/17/1956	Tuna Canyon addition 3	passed	annexation	454.71130
01/04/1957	Torrance detachment 1	passed	detachment	454.70960
04/17/1957	La Rambla addition	passed	annexation	454.71310
05/01/1957	Torrance addition 1	passed	annexation	454.71480
09/03/1957	Beverly Hills detachment 6	passed	detachment	454.70332
10/09/1957	Mar Vista addition 6	passed	annexation	454.76710
10/14/1957	Culver City detachment 2	passed	detachment	454.76410
05/19/1958	Wiseburn addition 3	passed	annexation	454.76580
05/22/1958	Palos Verdes addition 2	passed	annexation	454.76670
09/12/1958	Lomita addition 7	passed	annexation	454.76720
10/28/1958	Calabasas addition 5	passed	annexation	454.82810
11/06/1958	Calabasas addition 6	passed	annexation	454.57200
02/04/1959	Calabasas addition 2	passed	annexation	454.84160
02/04/1959	Calabasas addition 3	passed	annexation	457.23870
02/04/1959	Calabasas addition 4	passed	annexation	457.51530
02/04/1959	Burbank detachment 5	passed	detachment	457.46040
02/25/1959	Laurel Canyon addition 3	passed	annexation	457.46120
03/09/1959	Calabasas addition 7	passed	annexation	457.55680

03/11/1959	Laurel Canyon addition 2	passed annexation	457.57380
04/01/1959	Mar Vista addition 7	passed annexation	457.82500
09/14/1959	Sunland addition 6	passed annexation	457.92020
12/11/1959	El Segundo detachment	passed detachment	457.87890
02/29/1960	Fairfax addition 10	passed annexation	457.88040
02/29/1960	Beverly Hills detachment 8	passed detachment	457.87900
11/25/1960	Palms addition 2	passed annexation	457.88410
11/29/1960	Dominguez addition 2	passed annexation	457.88470
01/13/1961	Laurel Canyon addition 4	passed annexation	457.88490
03/17/1961	Fairfax addition 11	passed annexation	457.88540
06/01/1961	Calabasas addition 8	passed annexation	457.88620
07/07/1961	Fairfax addition 12	passed annexation	457.88700
08/16/1961	Laurel Canyon addition 5	passed annexation	457.88750
09/26/1961	Marina Del Rey Sm Cr Har	passed detachment	457.69240
10/04/1962	Hawthorne exclusion 1	passed detachment	457.68140
10/09/1962	Chatsworth addition 4	passed annexation	457.69240
10/18/1962	Dominguez addition 4	passed annexation	457.69250
10/18/1962	Dominguez addition 5	passed annexation	457.69300
10/18/1962	Mar Vista addition 9	passed annexation	457.74040
11/01/1962	Carson addition 4	passed annexation	457.74670
11/02/1962	Dominguez addition 3	passed annexation	457.74750
09/05/1962	Calabasas addition 10	passed annexation	457.82720
01/04/1963	Beverly Hills detachment 7	passed detachment	457.82140
01/04/1963	Sunland addition 8	passed annexation	457.86150
01/03/1963	Lomita addition 8	passed annexation	457.88420
01/25/1963	Culver City detachment 3	passed detachment	457.88390
03/29/1963	Sunland addition 9	passed annexation	457.88560
03/29/1963	Sunland addition 7	passed annexation	458.12290
08/16/1963	Blvd. Boundary relocation	passed annexation	458.12300
08/16/1963	Carson addition 1	passed annexation	458.12450
01/27/1964	Carson addition 2	passed annexation	458.12920
01/27/1964	Carson addition 3	passed annexation	458.12940
01/27/1964	Alhambra Hills	passed detachment	457.99470
02/06/1964	Calabasas addition 11	passed annexation	458.08470
03/20/1964	Mar Vista addition 11	passed annexation	458.50430
03/26/1964	Mar Vista addition 12	passed annexation	458.60520
06/19/1964	26 Street La Mesa Drive	passed detachment	458.60500
06/19/1964	Boundary relocation	passed annexation	458.60514
06/19/1964	Montana-Bristol	passed detachment	458.60471
06/19/1964	Boundary relocation	passed annexation	458.60578
09/17/1964	Pac Avenue Navy Street Boundary	passed detachment	458.60508
09/25/1964	E26 & E25 Street Boundary relocation	passed detachment	458.60448
10/15/1964	Mar Vista addition 10	passed annexation	458.63558
03/30/1965	Chatsworth addition 5	passed annexation	463.35038
05/27/1965	Santa Monica addition 1	passed annexation	463.35108
06/22/1965	San Fernando detachment	passed detachment	463.34608
09/03/1965	Sunland addition 10	passed annexation	463.39498

10/14/1965	64 St & La Tijera Blvd.	passed	detachment	463.39468
10/14/1965	Boundary relocation	passed	annexation	463.39468
10/18/1965	Laurel Canyon addition 6	passed	annexation	463.52848
12/02/1965	Mar Vista additon 8	passed	annexation	463.53038
04/22/1966	Bandini addition	passed	annexation	463.53988
08/16/1966	Boyle Heights detachment	passed	detachment	463.53828
05/05/1967	Belvedere addition 2	passed	annexation	463.53958
06/19/1967	West Hollywood addition 2	passed	annexation	463.54108
07/13/1967	Boyle Heights 2-65	passed	annexation	463.54388
08/11/1967	N Hollywood detachment 1-66	passed	detachment	463.35898
11/20/1967	Laurel Canyon addition 7	passed	annexation	463.35968
11/20/1967	Dominguez addition 6	passed	annexation	463.36654
12/28/1967	Beverly Hills detachment 10	passed	detachment	463.36497
04/29/1968	Carson addition 5	passed	annexation	463.37837
05/31/1968	Sunland addition 12	passed	annexation	463.40282
11/25/1968	Culver City detachment 4	passed	detachment	463.40252
03/10/1969	Palms addition 3	passed	annexation	463.40572
03/24/1969	Chatsworth addition 6	passed	annexation	463.63569
09/25/1969	Superior Oil addition	passed	annexation	463.64537
.	Mar Vista	defeated	annexation.	
.	Rolling Hills	defeated	annexation.	
04/27/1970	City - Santa Monica addition 6	passed	annexation	463.64137
05/27/1970	Mar Vista addition 2-69	passed	annexation	463.64517
05/27/1970	Calabasas addition 12\Hidden Hills	passed	annexation	463.69084
.	Mar Vista	defeated	annexation.	
.	Mar Vista	defeated	annexation.	
.	Avalon Gardens	defeated	annexation.	
04/30/1971	Summerland Reservoir	passed	annexation	463.69293
05/19/1971	Lankershim addition 2	passed	annexation	463.69483
12/02/1971	Mar Vista 1-70	passed	annexation	463.69809
.	Franklin Park	defeated	annexation.	
.	Laurel Canyon	defeated	annexation.	
.	Brentwood	defeated	annexation.	
.	Calabasas	defeated	annexation.	
.	Timex Addition	defeated	annexation.	
02/14/1973	Rolling Hills addition 1-72	passed	annexation	463.85809
10/29/1973	Laurel Canyon addition 1-70	passed	annexation	463.86249
.	Sunland	defeated	annexation.	
12/04/1974	Mar Vista addition 1-70	passed	annexation	463.87809
.	Arroyo Seco	defeated	annexation.	
02/24/1975	Calabasas addition 1-72	passed	annexation	463.87869
.	Angeles Mesa	defeated	annexation.	
.	Marina	defeated	annexation.	
12/13/1976	Sunland addition 1-73	passed	annexation	464.52669
.	Chatsworth	defeated	annexation.	
.	Mar Vista	defeated	annexation.	
.	Long Beach	defeated	annexation.	

.	Rolling Hills	defeated	annexation.
.	Long Beach Detachment	defeated	annexation.
.	Chatsworth	defeated	annexation.
03/07/1977	Vernon detachment 1-75	passed detachment	464.52469
05/20/1977	Vernon adjustment 1-75	passed annexation	464.52569
06/20/1977	Marina addition 1-74	passed annexation	464.53169
06/20/1977	Marina detachment 1-75	passed detachment	464.53162
07/26/1977	Angeles Mesa addition 1-75	passed annexation	464.55662
08/01/1977	Rolling Hills Boundary adjustment 1-75	passed annexation	464.55762
12/07/1977	Transfer to Beverly Hills detachment	passed detachment	464.55562
03/31/1977	Marina addition 1-75	passed annexation	464.59962
.	Fairfax	defeated	annexation.
.	Fairfax	defeated	annexation.
05/16/1978	Arroyo Seco addition 1-74	passed annexation	464.60262
06/12/1978	Chatsworth addition 1-76	passed annexation	464.73362
06/12/1978	West Hollywood detachment 1-78	passed annexation	464.73162
06/28/1978	Territory/Beverly Hills detachment 1-78	passed detachment	464.71162
09/08/1978	Long Beach adjustment 1-76	passed detachment	464.71232
.	West Hollywood	defeated	annexation.
.	West Hollywood	defeated	annexation.
.	Avalon Gardens	defeated	annexation.
.	Chatsworth	defeated	annexation.
.	Avalon Gardens	defeated	annexation.
.	Chatsworth	defeated	annexation.
01/09/1979	Santa Monica addition 7	passed detachment	464.68829
03/09/1979	Fairfax addition 1-77	passed annexation	464.68929
04/11/1979	Frederic St. to Burbank	passed annexation	464.67929
07/18/1979	Fairfax addition 1-75	passed annexation	464.68329
07/18/1979	Fairfax addition 3-75	passed annexation	.
.	La Rambla	defeated	annexation.
.	Danziger	defeated	annexation.
.	Rolling Hills	defeated	annexation.
.	Dominguez	defeated	annexation.
.	Calabasas	defeated	annexation.
.	Calabasas	defeated	annexation.
.	Gilmore	defeated	annexation.
.	Calabasas	defeated	annexation.
.	Chatsworth	defeated	annexation.
.	Rolling Hills	defeated	annexation.
.	Fairfax	defeated	annexation.
04/25/1980	Beverly Hills detachment 7	passed annexation	464.68365
12/29/1980	Chatsworth addition 1-78	passed annexation	464.71865
12/29/1980	Danziger addition 1-79	passed annexation	464.72115
12/29/1980	Rolling Hills addition 1-79	passed annexation	464.88215
.	Del Rey	defeated	annexation.
.	Del Rey	defeated	annexation.
.	Danziger	defeated	annexation.

	Chatsworth	defeated	annexation.	
	Sylmar	defeated	annexation.	
11/16/1981	Calabasas addition 1-79	passed	annexation	465.41615
01/25/1982	Chatsworth addition 1-80\Gilmore	passed	annexation	465.54615
09/12/1983	Sylmar addition 1-80	passed	annexation	465.80292
09/27/1983	Sylmar addition 2-80	passed	annexation	465.83969
	Del Rey	defeated	annexation.	
04/08/1985	Del Rey addition 1-84	passed	annexation	465.85069
12/30/1985	Woodland Hills detachment 1-85	passed	annexation	465.84203
02/10/1986	Del Rey addition	passed	annexation	467.25343
06/02/1986	NE Los Angeles detachment	passed	detachment	467.25293
06/02/1986	NE Los Angeles adjustment	passed	annexation	467.25343
	Playa Vista detachment	defeated	detachment.	
	Playa Vista detachment	defeated	detachment.	
	Playa Vista detachment	defeated	detachment.	
04/02/1987	Sylmar detachment 1-85	passed	annexation	467.25283
07/09/1987	Studio City addition 1-84	passed	annexation	467.27615
07/27/1987	Sylmar addition 1-83	passed	annexation	467.27274
11/10/1987	Westchester Playa Del Rey detachment1-86	passed	detachment	467.22215
11/30/1987	Chatsworth addition 1-84	passed	annexation	468.80215
11/20/1989	Angeles Mesa addition 1-87	passed	annexation	468.80315
05/07/1992	Frampton addition 1	passed	annexation	468.80615
03/09/1993	Westwood addition 1-91	passed	annexation	468.85076
06/26/1996	Vista Pacifica detachment 1	passed	detachment	468.83676
08/30/1996	Frampton addition 2	passed	annexation	468.83876
03/22/1999	Beverly Hills detachment 1-90	passed	detachment	468.83276
03/22/1999	Beverly Hills detachment 2-90	passed	detachment	468.83176
11/06/2000	Vista Pacifica detachment 2	passed	detachment	468.92240
01/18/2001	Dayton Canyon Estate 1-98	passed	annexation	468.95387
01/18/2001	121 1st Street & Broadway	passed	annexation	468.95552
09/06/2002	Calabasas detachment 1-98	passed	detachment	468.90540
03/09/2004	Westmount Drive 1-97	passed	annexation	468.90570

Distribution of Los Angeles Municipal Annexations by Year of City Annexation and Land Area in Acres and Square Miles

	N	Minimum	Maximum	Mean		Std. Deviation	Skewness	Kurtosis
Los Angeles Annexations	357	1850	2004	1953.82	1.30	24.61	-.618	.365
Acres	302	.00030	108732	1001.905	385.222	6694.444	14.329	225.84
SQ MILES	296	-.446	169.89	1.5867641	.6145016	10.572	14.156	220.69

Map 1.0   Town Square Area

Map 2.0   Town Sectional Extension of the Town Square Area
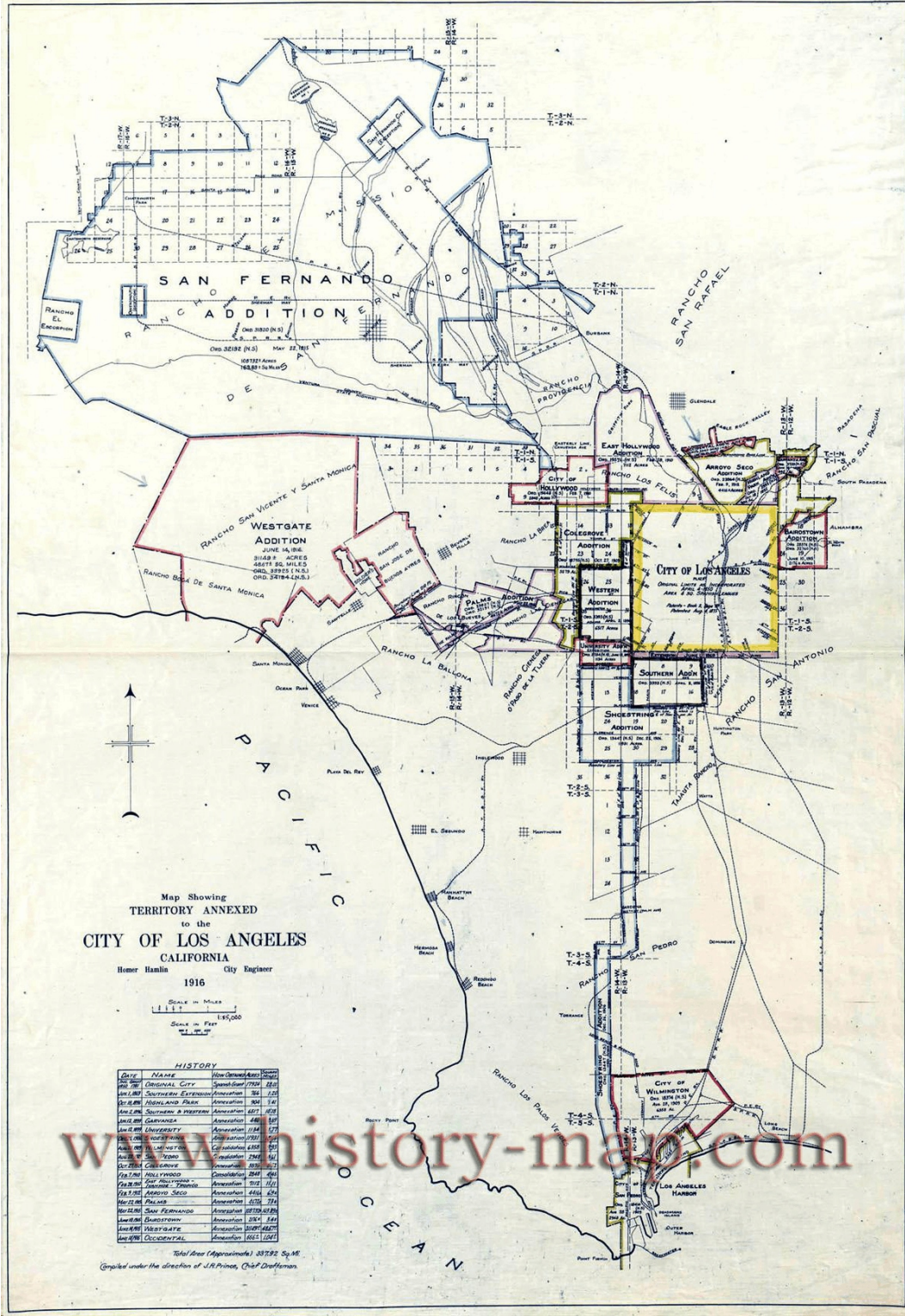
TABLE 6.0   Los Angeles County, City Incorporation Decisions by Year of Municipal District Incorporation, Vote in Favor, Vote Opposed, Vote % in Favor, Local Jurisdictional Status, Boundary Decision, and Municipal Incorporation

Los Angeles	1850	.	.	.	Charter	success 04/04/1850
Wilmington	1871	.	.	.	.	success .
Pasadena	1886	179	50	.782	Charter	success 06/19/1886
Santa Monica	1886	96	71	.575	Charter	success 12/09/1886
Monrovia	1887	109	1	.991	General Law	success 12/15/1887
Pomona	1887	415	101	.804	Charter	success 01/06/1888
Compton	1888	69	41	.627	Charter	success 05/11/1888
Long Beach	1888	163	3	.982	Charter	success 12/13/1897
San Pedro	1888	145	57	.718	.	success 03/01/1888
South Pasadena	1888	85	25	.773	General Law	success 02/29/1888
Redondo Beach	1892	177	10	.947	Charter	success 04/29/1892
Azusa	1898	91	70	.565	General Law	success 12/29/1898
Whittier	1898	169	89	.655	Charter	success 02/28/1898
Covina	1901	91	68	.572	General Law	success 08/14/1901
Alhambra	1903	82	62	.569	Charter	success 07/11/1903
Arcadia	1903	35	0	1.000	Charter	success 08/05/1903
Hollywood	1903	88	77	.533	.	success 11/09/1903
Venice\Ocean Park	1904	54	2	.964	.	success 02/17/1904
Glendale	1905	75	41	.647	Charter	success 02/15/1906
Vernon	1905	64	4	.941	General Law	success 09/22/1905
Wilmington	1905	92	4	.958	.	success 12/27/1905
Huntington Park	1906	72	17	.809	General Law	success 09/01/1906
Lordsburg/La Verne	1906	67	31	.684	General Law	success 09/11/1906
Sawtelle	1906	241	58	.806	.	success 11/26/1906
Claremont	1907	73	49	.598	General Law	success 10/03/1907
Hermosa Beach	1907	24	23	.511	General Law	success 01/10/1907
Sierra Madre	1907	71	25	.740	General Law	success 02/07/1907
Watts	1907	101	24	.808	.	success 05/23/1907
Belmont Heights	1908	59	33	.641	.	success 10/09/1908
Inglewood	1908	121	57	.680	Charter	success 02/14/1908
Belmont Heights	1909	.	.	.	.	success .
San Pedro	1909	726	277	.724	.	success .
Wilmington	1909	107	61	.637	.	success .
Hollywood	1910	409	18	.958	.	success .
Burbank	1911	80	51	.611	Charter	success 07/15/1911
Eagle Rock	1911	71	56	.559	.	success 03/01/1911
Glendora	1911	152	109	.582	General Law	success 11/13/1911
San Fernando	1911	123	115	.517	General Law	success 08/31/1911
Tropico	1911	157	110	.588	.	success 03/15/1911
El Monte	1912	100	83	.546	General Law	success 11/18/1912
Manhattan Beach	1912	95	32	.748	General Law	success 12/07/1912
Avalon	1913	132	88	.600	General Law	success 06/26/1913
San Gabriel	1913	161	112	.590	General Law	success 04/24/1913

San Marino	1913	126	5	.962	General Law	success 04/25/1913
Beverly Hills	1914	66	13	.835	General Law	success 01/28/1914
Tropico	1914	252	395	.389	.	failure .
Eagle Rock	1915	299	393	.432	.	failure .
Monterey Park	1916	678	102	.869	General Law	success 05/29/1916
Culver City	1917	59	0	1.000	Charter	success 09/20/1917
El Segundo	1917	333	8	.977	General Law	success 01/18/1917
Santa Monica	1917	1445	2652	.353	.	failure .
Sawtelle	1917	519	516	.501	.	success .
Tropico	1917	333	548	.378	.	failure .
Burbank	1920	92	847	.098	.	failure .
Montebello	1920	401	72	.848	General Law	success 10/15/1920
Newhall	1920	.	.	.	.	failure .
Hyde Park	1921	162	104	.609	.	success 05/12/1921
Lynwood	1921	214	49	.814	General Law	success 07/16/1921
Torrance	1921	355	11	.970	Charter	success 05/12/1921
Hawthorne	1922	369	344	.518	General Law	success 07/12/1922
Sawtelle	1922	1287	210	.860	.	success .
Beverly Hills	1923	337	507	.399	.	failure .
Eagle Rock	1923	1107	810	.577	.	success .
Hyde Park	1923	492	271	.645	.	success .
South Gate	1923	184	154	.544	General Law	success 01/15/1923
West Covina	1923	216	62	.777	General Law	success 02/17/1923
Maywood	1924	722	71	.910	General Law	success 09/02/1924
Santa Monica	1924	1573	3486	.311	.	failure .
Signal Hill	1924	342	211	.618	General Law	success 04/22/1924
Venice	1924	1503	1849	.448	.	failure .
Alhambra	1925	2863	6083	.320	.	failure .
Burbank	1925	645	1232	.344	.	failure .
Casa Verdugo	1925	242	260	.482	.	failure .
Tujunga	1925	457	354	.564	.	success 05/01/1925
Venice	1925	3130	2215	.586	.	success .
Barnes City	1926	140	126	.526	.	success 02/13/1926
Watts	1926	1226	606	.669	.	success .
Barnes City	1927	261	153	.630	.	success .
Bell	1927	792	726	.522	General Law	success 11/07/1927
Tujunga	1927	354	595	.373	.	failure .
Downey	1930	182	456	.285	.	failure .
Gardena	1930	502	237	.679	General Law	success 09/11/1930
Tujunga	1930	430	585	.424	.	failure .
City Terrace	1931	.	.	.	.	failure .
East Los Angeles	1931	5	416	.012	.	failure .
Tujunga	1931	575	610	.485	.	failure .
Tujunga	1932	719	569	.558	.	success .
East Los Angeles	1933	462	8439	.052	.	failure 06/26/1933
Garden City	1933	.	.	.	.	failure .
Garden City	1933	462	8429	.052	.	failure .

Palos Verdes Estates	1939	215	208	.508	General Law	success 12/20/1939
Willowbrook	1945	267	345	.436	.	failure .
Willowbrook	1946	339	448	.431	.	failure .
Baldwin Park	1950	1164	2016	.366	.	failure .
Bell Gardens	1950	768	1608	.323	.	failure .
Dominguez	1953	.	.	.	.	failure .
Lakewood	1954	7524	4868	.607	General Law	success 04/16/1954
Baldwin Park	1956	4512	2187	.674	General Law	success 01/25/1956
Cerritos/Dairy Valley	1956	442	396	.527	Charter	success 04/24/1956
Downey	1956	10124	3826	.726	Charter	success 12/17/1956
East Whittier	1956	.	.	.	.	failure .
Industry	1956	118	22	.843	Charter	success 06/18/1957
La Puente	1956	1416	912	.608	General Law	success 08/01/1956
Moneta Gardens	1956	.	.	.	.	failure .
Bellflower	1957	5203	2065	.716	General Law	success 09/03/1957
Bradbury	1957	160	69	.699	General Law	success 07/26/1957
Duarte	1957	1422	920	.607	General Law	success 08/22/1957
Irwindale	1957	133	20	.869	Charter	success 08/06/1957
La Mirada	1957	.	.	.	.	failure .
Norwalk	1957	6008	1372	.814	General Law	success 08/26/1957
Paramount	1957	1963	1766	.526	General Law	success 01/30/1957
Rolling Hills	1957	440	123	.782	General Law	success 01/24/1957
Rolling Hills Estates	1957	511	336	.603	General Law	success 09/18/1957
Santa Fe Springs	1957	1202	921	.566	General Law	success 05/15/1957
Covina Highlands	1958	.	.	.	.	failure .
Pico Rivera	1958	5070	3916	.564	General Law	success 01/29/1958
South El Monte	1958	460	260	.639	General Law	success 07/30/1958
Walnut	1958	241	22	.916	General Law	success 01/19/1959
Artesia	1959	897	342	.724	General Law	success 05/29/1959
Charter Oak	1959	.	.	.	.	failure .
La Mirada	1959	2307	1794	.563	General Law	success 03/23/1960
Lawndale	1959	1857	573	.764	General Law	success 12/28/1959
Rosemead	1959	2298	1282	.642	General Law	success 08/04/1959
Sun Oaks	1959	.	.	.	.	failure .
West Hollywood	1959	1395	1768	.441	.	failure 07/28/1959
West Whittier	1959	.	.	.	.	failure .
Carsolinguez	1960	.	.	.	.	failure .
Commerce	1960	898	285	.759	General Law	success 01/28/1960
Cudahy	1960	1062	470	.693	General Law	success 11/10/1960
Monte Villa	1960	.	.	.	.	failure .
San Dimas	1960	838	717	.539	General Law	success 08/04/1960
Temple City	1960	3952	2893	.577	Charter	success 05/25/1960
Walnut Park	1960	.	.	.	.	failure .
Bell Gardens	1961	1999	1067	.652	General Law	success 08/01/1961
East Los Angeles	1961	2563	2883	.471	.	failure 04/25/1961
Hahn-Alondra Park	1961	.	.	.	.	failure .
Hidden Hills	1961	358	71	.834	General Law	success 10/19/1961

La Colima	1961	.	.	.	.	failure	.
The Heights	1961	.	.	.	.	failure	.
West Hollywood	1961	3280	3621	.475	.	failure	06/07/1961
Moneta Park	1962	.	.	.	.	failure	.
Palmdale	1962	.	.	.	General Law	success	08/24/1962
Carson	1963	.	.	.	.	failure	.
South San Gabriel	1963	.	.	.	.	failure	.
Hawaiian Gardens	1964	192	90	.681	General Law	success	04/14/1964
Lomita	1964	.	.	.	General Law	success	06/30/1964
San Pedro Hills	1964	.	.	.	.	failure	.
East Los Angeles	1965	.	.	.	.	failure	.
Rowland Heights	1965	.	.	.	.	failure	.
Topanga	1967	.	.	.	.	failure	.
Carson	1968	6301	3834	.622	General Law	success	02/20/1968
Lennox	1968	.	.	.	.	failure	.
Westmont-West Athens	1968	.	.	.	.	failure	.
Newhall-Valencia	1970	.	.	.	.	failure	.
East Los Angeles	1972	.	.	.340	.	failure	.
Flintridge	1973	.	.	.	.	failure	.
La Crescenta	1973	.	.	.	.	failure	.
Rancho Palos Verdes	1973	.	.	.800	General Law	success	09/07/1973
Quartz Hill	1975	.	.	.	.	failure	.
Canyon Country	1976	.	.	.	.	failure	.
La Canada-Flintridge	1976	658	2	.997	General Law	success	12/08/1976
Lancaster	1977	.	.	.	General Law	success	11/02/1977
La Habra Heights	1978	1293	869	.598	General Law	success	12/04/1978
Las Virgenes	1981	.	.	.	.	failure	.
Westlake Village	1981	1353	366	.767	General Law	success	12/11/1981
Agoura Hills	1982	.	.	.680	General Law	success	12/08/1982
Diamond Bar	1983	3233	3463	.483	.	failure	.
Hacienda Heights	1983	.	.	.430	.	failure	.
West Hollywood	1984	.	.	.606	General Law	success	11/29/1984
Santa Clarita	1987	13680	5965	.672	General Law	success	12/15/1987
Diamond Bar	1989	7367	2270	.762	General Law	success	04/18/1989
Sunset Hills	1990	.	.	.	.	failure	.
Calabasas	1991	3891	369	.955	General Law	success	04/05/1991
Malibu	1991	.	.	.840	General Law	success	03/28/1991
Hacienda Heights	1992	.	.	.310	.	failure	.
Hollywood	2002	8143	17711	.315	.	failure	08/08/2002
San Fernando Valley	2002	124703	120943	.508	.	failure	08/08/2002
Hacienda Heights	2003	3990	6831	.369	.	failure	.

Distribution of Municipal Incorporation Decisions in Los Angeles County by Year of Incorporation Decision and Proportion in Support of Incorporation Proposal

	N	Minimum	Maximum	Mean	Std. Error	Std. Deviation	Skewness	Kurtosis
YEAR	180	1850	2008	1939.65	2.28	30.64	-.041	-.640
SUPPORT	140	.012	1.000	.62319	.0175	.20693	-.314	.258

TABLE 7.1   Spatial History of Sequential Decisions to Incorporate Municipal Districts by City District, Year of Incorporation, County District, and Land Area in Square Miles: ESS Fragmentation Solution in Numbers of Cities and Area Incorporated

Los Angeles	Los Angeles	1850	468.79
San Buenaventura	Ventura	1866	20.48
San Bernardino	San Bernardino	1869	55.03
Anaheim	Orange	1876	44.23
Riverside	Riverside	1883	77.59
Pasadena	Los Angeles	1886	22.98
Santa Monica	Los Angeles	1886	8.25
Santa Ana	Orange	1886	27.07
Monrovia	Los Angeles	1887	13.34
Colton	San Bernardino	1887	14.11
Compton	Los Angeles	1888	10.14
Pomona	Los Angeles	1888	22.79
South Pasadena	Los Angeles	1888	3.43
Orange	Orange	1888	23.29
Redlands	San Bernardino	1888	24.30
Lake Elsinore	Riverside	1888	23.41
San Jacinto	Riverside	1888	10.57
Ontario	San Bernardino	1891	36.71
Redondo Beach	Los Angeles	1892	6.29
Corona	Riverside	1896	28.46
Long Beach	Los Angeles	1897	49.94
Azuza	Los Angeles	1898	8.99
Whittier	Los Angeles	1898	12.53
Covina	Los Angeles	1901	6.90
Santa Paula	Ventura	1902	4.60
Alhambra	Los Angeles	1903	7.64
Arcadia	Los Angeles	1903	10.88
Oxnard	Ventura	1903	24.41
Fullerton	Orange	1904	22.10
Vernon	Los Angeles	1905	5.92
Glendale	Los Angeles	1906	30.58
Huntington Park	Los Angeles	1906	3.05
La Verne	Los Angeles	1906	7.79
Newport Beach	Orange	1906	14.00
Upland	San Bernardino	1906	15.08
Claremont	Los Angeles	1907	10.99
Hermosa Beach	Los Angeles	1907	1.43
Sierra Madre	Los Angeles	1907	3.01
Inglewood	Los Angeles	1908	9.18
Huntington Beach	Orange	1909	26.38
Chino	San Bernardino	1910	17.05
Hemet	Riverside	1910	17.55

Burbank	Los Angeles	1911	17.32
Glendora	Los Angeles	1911	19.44
San Fernando	Los Angeles	1911	2.39
Rialto	San Bernardino	1911	21.21
Perris	Riverside	1911	29.66
El Monte	Los Angeles	1912	9.49
Manhattan Beach	Los Angeles	1912	3.93
Avalon	Los Angeles	1913	1.18
Monterrey Park	Los Angeles	1913	7.64
San Gabriel	Los Angeles	1913	4.13
San Marino	Los Angeles	1913	3.78
Needles	San Bernardino	1913	29.77
Banning	Riverside	1913	18.43
Beaumont	Riverside	1913	7.50
Beverly Hills	Los Angeles	1914	5.67
Fillmore	Ventura	1914	2.62
Seal Beach	Orange	1915	11.72
Blythe	Riverside	1916	3.83
Culver City	Los Angeles	1917	5.09
El Segundo	Los Angeles	1917	5.55
Brea	Orange	1917	9.99
Montebello	Los Angeles	1920	8.25
Lynwood	Los Angeles	1921	4.86
Torrance	Los Angeles	1921	20.52
Ojai	Ventura	1921	4.40
Hawthorne	Los Angeles	1922	5.94
South Gate	Los Angeles	1923	7.33
West Covina	Los Angeles	1923	16.20
Maywood	Los Angeles	1924	1.16
Signal Hill	Los Angeles	1924	2.22
La Habra	Orange	1925	7.33
Placentia	Orange	1926	6.59
Bell	Los Angeles	1927	2.55
Laguna Beach	Orange	1927	8.68
Tustin	Orange	1927	11.26
San Clemente	Orange	1928	17.43
Gardena	Los Angeles	1930	5.28
Indio	Riverside	1930	17.01
Palm Springs	Riverside	1938	76.47
Palos Verdes Estates	Los Angeles	1939	4.82
Coachella	Riverside	1946	20.05
Barstow	San Bernardino	1947	22.87
Port Hueneme	Ventura	1947	4.43
Fontana	San Bernardino	1952	35.59
Buena Park	Orange	1953	10.61
Costa Mesa	Orange	1953	15.54
Lakewood	Los Angeles	1954	9.37

La Palma	Orange	1955	1.81
Baldwin Park	Los Angeles	1956	6.59
Cerritos	Los Angeles	1956	8.60
Downey	Los Angeles	1956	12.42
La Puente	Los Angeles	1956	3.47
Cypress	Orange	1956	6.59
Garden Grove	Orange	1956	17.93
Stanton	Orange	1956	3.12
Montclair	San Bernardino	1956	5.05
Bellflower	Los Angeles	1957	6.09
Bradbury	Los Angeles	1957	1.67
Duarte	Los Angeles	1957	7.21
Industry	Los Angeles	1957	11.56
Irwindale	Los Angeles	1957	9.32
Norwalk	Los Angeles	1957	9.76
Paramount	Los Angeles	1957	4.70
Rolling Hills	Los Angeles	1957	3.05
Rolling Hills Estates	Los Angeles	1957	3.54
Santa Fe Springs	Los Angeles	1957	8.68
Fountain Valley	Orange	1957	8.91
Westminster	Orange	1957	10.03
Pico Rivera	Los Angeles	1958	7.98
South El Monte	Los Angeles	1958	2.89
Artesia	Los Angeles	1959	1.62
Lawndale	Los Angeles	1959	1.97
Rosemead	Los Angeles	1959	5.13
Walnut	Los Angeles	1959	8.87
Commerce	Los Angeles	1960	6.52
Cudahy	Los Angeles	1960	1.12
La Mirada	Los Angeles	1960	7.83
San Dimas	Los Angeles	1960	15.50
Temple City	Los Angeles	1960	4.01
Los Alamitos	Orange	1960	4.01
Bell Gardens	Los Angeles	1961	2.51
Hidden Hills	Los Angeles	1961	1.62
San Juan Capistrano	Orange	1961	14.23
Palmdale	Los Angeles	1962	77.51
Villa Park	Orange	1962	2.10
Victorville	San Bernardino	1962	41.80
Desert Hot Springs	Riverside	1963	10.22
Hawaiian Gardens	Los Angeles	1964	0.96
Lomita	Los Angeles	1964	1.89
Norco	Riverside	1964	13.69
Camirillo	Ventura	1964	18.43
Thousand Oaks	Ventura	1964	49.52
Yorba Linda	Orange	1967	17.51
Indian Wells	Riverside	1967	13.36

Carson	Los Angeles	1968	18.82
Simi Valley	Ventura	1969	33.01
Adelanto	San Bernardino	1970	36.88
Loma Linda	San Bernardino	1970	6.98
Irvine	Orange	1971	42.27
Rancho Palos Verdes	Los Angeles	1973	13.65
Palm Desert	Riverside	1973	19.05
Rancho Mirage	Riverside	1973	23.49
La Canada-Flintridge	Los Angeles	1976	8.68
Lancaster	Los Angeles	1977	88.70
Rancho Cucumonga	San Bernardino	1977	37.75
La Habra Heights	Los Angeles	1978	6.37
Grand Terrace	San Bernardino	1978	3.47
Big Bear Lake	San Bernardino	1980	6.24
Westlake Village	Los Angeles	1981	5.21
Cathedral City	Riverside	1981	18.90
Agoura Hills	Los Angeles	1982	8.18
La Quinta	Riverside	1982	24.33
Moorpark	Ventura	1983	12.26
West Hollywood	Los Angeles	1984	1.89
Moreno Valley	Riverside	1984	49.09
Santa Clarita	Los Angeles	1987	40.42
Highland	San Bernardino	1987	13.54
Twentynine Palms	San Bernardino	1987	53.88
Mission Viejo	Orange	1988	17.43
Apple Valley	San Bernardino	1988	66.96
Hesperia	San Bernardino	1988	48.24
Diamond Bar	Los Angeles	1989	15.08
Dana Point	Orange	1989	6.63
Laguna Niguel	Orange	1989	14.65
Yucaipa	San Bernardino	1989	26.49
Temecula	Riverside	1989	26.38
Calimesa	Riverside	1990	14.85
Canyon Lake	Riverside	1990	3.93
Calabasas	Los Angeles	1991	12.90
Malibu	Los Angeles	1991	21.00
Laguna Hills	Orange	1991	10.73
Lake Forest	Orange	1991	4.00
Chino Hills	San Bernardino	1991	15.46
Yucca Valley	San Bernardino	1991	13.88
Murrieta	Riverside	1991	2.80
Laguna Woods	Orange	1999	14.50
Rancho Santa Margarita	Orange	2000	14.50

Distribution of Municipal Incorporation Decisions, N = 482 (all) California Cities by Year of Incorporation Decision and Land Area in Square Miles

	N	Minimum	Maximum	Mean	Std. Error	Std. Deviation	Skewness	Kurtosis
Year	482	1850	2011	1927.87	1.79	39.25	.045	-.946
Land Area	482	.31	468.67	16.832	1.4878	32.665	8.315	95.359

Distribution of Municipal Incorporation Decisions in Greater Los Angeles, N = 175 cities by Year of Incorporation Decision and Land Area in Square Miles

	N	Minimum	Maximum	Mean	Std. Error	Std. Deviation	Skewness	Kurtosis
Year	175	1850	2000	1940.48	2.63	34.73	-.228	-1.051
Land Area	166	.96	468.79	18.0663	2.9829	38.4317	10.008	116.049

TABLE 7.2 Unincorporated Municipal Services Areas in Los Angeles County (1990-2000) by Adjacent of Neighbor Municipal District, Los Angeles County Board of Supervisors District, County Service Island Status, Incorporation Status (City or County Territory)

Acton	santa clarita	5	no	county
Agoura	agoura hills	3	no	county
Agoura Hills		3	.	city
Agua Dulce	santa clarita	5	no	county
Alhambra		5	.	city
Alondra Park/El Camino	lawndale,hawthorne,gardena,torrance	2	no	county
Alpine		5	no	county
Altadena	pasadena	5	no	county
Antelope Acres		5	no	county
Arcadia		5	.	city
Artesia		4	.	city
Athens		2	no	county
Avalon		4	.	city
Avocado Heights	san gabriel	1	no	county
Azusa		1	.	city
Baldwin Hills	culver city	2	no	county
Baldwin Park		1	.	city
Bandini		1	yes	county
Bassett	san gabriel	1	no	county
Bell		1	.	city
Bell Gardens		1	.	city
Bellflower		4	.	city
Belvedere Gardens	los angeles	1	no	county
Beverly Hills		3	.	city
Big Pines		5	no	county
Bouquet Canyon	saugus	5	no	county
Bradbury		5	.	city
Burbank		5	.	city
Calabasas		3	.	city
Carson		2	.	city
Castaic	san gabriel mountains	5	no	county
Castaic Junction		5	no	county
Centinela	los angeles	4	yes	county
Cerritos		4	yes	county
Cerritos		4	.	city
Charter Oak	covina	5	yes	county
Citrus		5	yes	county
City Terrace	los angeles	1	no	county
Claremont		5	.	city
Commerce		1	.	city
Compton		2	.	city
Cornell		3	no	county

Covina		5	yes	county
Covina		5	.	city
Crystallaire	antelope valley	5	no	county
Cudahy		1	.	city
Culver City		2	.	city
Deer Lake Highlands		5	no	county
Del Aire	los angeles	2	no	county
Del Sur		5	no	county
Diamond Bar		4	.	city
Dominguez	carson	2	no	county
Downey		4	.	city
Duarte		5	.	city
East Azuza	azusa	1	yes	county
East Compton	compton	2	no	county
East Irwindale	irwindale	5	yes	county
East La Mirada	la mirada	1	no	county
East Los Angeles	los angeles	1	no	county
East Pasadena	pasadena	5	no	county
East San Gabriel	san gabriel	5	no	county
East Whittier	whittier	4	no	county
Eastmont	los angeles/watts	1	no	county
El Monte		1	.	city
El Segundo		4	.	city
Elizabeth Lake	palmdale	5	no	county
Fairmont		5	no	county
Fernwood	topanga canyon	3	no	county
Firestone	south gate	1	no	county
Firestone		2	no	county
Florence	los angeles	1	no	county
Florence		2	no	county
Forrest Park		5	no	county
Franklin Canyon	beverly hills	3	no	county
Gardena		2	.	city
Glendale		5	.	city
Glendora		5	.	city
Gorman		5	no	county
Graham	los angeles	1	no	county
Graham		2	no	county
Green Valley	antelope valley	5	no	county
Hacienda Heights	la puente	4	no	county
Hawaiian Gardens		4	.	city
Hawthorne		3	yes	county
Hawthorne		2	.	city
Hermosa Beach		4	.	city
Hi Vista		5	no	county
Hidden Hills		3	.	city
Huntington Park		1	.	city

Industry		1	.	city
Inglewood		2	.	city
Irwindale		1	.	city
Juniper Hills		5	no	county
Kagel Canyon	los angeles/san fernando	5	no	county
Kinneola Mesa	altadena/pasadena	5	no	county
La Canada Flintridge		5	.	city
La Crescenta	glendale/la canada-flintridge	5	no	county
La Habra Heights		4	.	city
La Mirada		4	.	city
La Puente		1	.	city
La Rambla		4	yes	county
La Verne		5	.	city
Ladera Heights	inglewood, culver city	2	no	county
Lake Hughes	san gabriel mountains	5	no	county
Lake Los Angeles		5	no	county
Lakeview	palmdale	5	no	county
Lakewood		4	.	city
Lancaster		5	.	city
Lang santa clarita		5	no	county
Lawndale		2	.	city
Lennox	los angeles	2	no	county
Leona Valley	palmdale	5	no	county
Little Rock	antelope valley	5	no	county
Llano	antelope valley	5	no	county
Lomita		4	.	city
Long Beach		4	yes	county
Long Beach		4	.	city
Longview		5	no	county
Los Angeles		1	.	city
Los Angeles		2	.	city
Los Angeles		3	.	city
Los Angeles		4	.	city
Los Angeles		5	.	city
Los Cerritos Wetland		4	no	county
Los Nietos	whittier	1	no	county
Los Nietos		2	no	county
Lynwood		2	yes	county
Lynwood		2	.	city
Malibu		3	.	city
Malibu Bowl	malibu	3	no	county
Malibu Highlands	malibu	3	no	county
Malibu Lake	malibu	3	no	county
Malibu Vista	malibu	3	no	county
Manhatten Beach		4	.	city
Marina Del Rey	santa monica, los angeles	4	no	county
Maywood		1	.	city

Mint Canyon		5	no	county
Monrovia		5	.	city
Monte Nido		3	no	county
Montebello		1	.	city
Monterey Park		1	.	city
Montrose	glendale	5	no	county
Neenach	lancaster	5	no	county
Newhall	santa clarita	5	no	county
North Claremont	claremont	5	yes	county
North El Monte	el monte	5	no	county
North Whittier	whittier	1	no	county
Northeast San Dimas	san dimas	5	yes	county
Norwalk		4	.	city
Oat Mountain		5	no	county
Palmdale		5	.	city
Palos Verdes Estates		4	.	city
Paramount		4	.	city
Pasadena		5	.	city
Pearblossum	antelope valley	5	no	county
Pico Rivera		1	.	city
Placerita Canyon	santa clarita	5	no	county
Playa Vista	los angeles	4	no	county
Pomona		1	.	city
Quartz Hill	lancaster	5	yes	county
Rancho Palos Verdes		4	.	city
Redman		5	no	county
Redondo Beach		4	.	city
Rolling Hills		4	.	city
Rolling Hills Estate		4	.	city
Roosevelt		5	no	county
Rosemead		1	.	city
Rowland Heights	la puente	1	no	county
Rowland Heights		4	no	county
San Clemente Island		4	no	county
San Dimas		5	.	city
San Fernando		3	.	city
San Gabriel		5	.	city
San Marino		5	.	city
San Pasqual		5	no	county
Santa Catalina Islan		4	no	county
Santa Clarita		5	.	city
Santa Fe Springs		1	.	city
Santa Monica		3	.	city
Seminole Hot Springs		3	no	county
Sierra Madre		5	.	city
Signal Hill		4	.	city
Soledad	antelope valley	5	no	county

South El Monte		1	yes	county
South El Monte		1	.	city
South Gate		1	.	city
South Monrovia	monrovia	5	yes	county
South Pasadena		5	.	city
South San Gabriel	rosemead	1	no	county
South San Gabriel		5	no	county
South San Jose Hills		1	no	county
South Whittier	whittier, la mirada	1	no	county
South Whittier		4	no	county
Stevenson Ranch		5	no	county
Sulphur Springs		5	no	county
Sun Village	antelope valley	5	no	county
Sunshine Acres		1	no	county
Sylmar los angles		5	yes	county
Sylvia Park		3	no	county
Temple City		5	.	city
Three Points		5	no	county
Topanga Canyon		3	no	county
Torrance		4	.	city
Triunfo Canyon		3	no	county
Twin Lakes		5	no	county
University City		3	no	county
Val Verde	green valley	5	no	county
Valencia	santa clarita	5	no	county
Valinda	la puente	1	no	county
Valinda		5	no	county
Valyemo	antelope valley	5	no	county
Vasquez Rocks	antelope valley	5	no	county
Vernon		1	.	city
Veterans Adm Center	los angeles	3	no	county
View Park	los angeles	2	no	county
Walnut		5	.	city
Walnut Park	huntington park	1	no	county
West Arcadia	arcadia	5	yes	county
West Carson	carson	2	no	county
West Chatsworth	los angeles	3	no	county
West Chatsworth		5	no	county
West Compton	compton	2	no	county
West Covina		5	.	city
West Fox Hills		2	yes	county
West Hollywood		3	.	city
West Pomona	pomona	5	yes	county
West Puente Valley		1	no	county
West Whittier	whittier	1	no	county
West Whittier		4	no	county
Westfield		4	yes	county

Westlake Village		3	.	city
Westmont		2	no	county
White Fence Farms		5	no	county
Whittier		4	.	city
Whittier Rec Area		1	no	county
Willowbrook	los angles/watts	2	no	county
Wilsona Gardens	los angeles	5	no	county
Windsor Hills	los angeles	2	no	county
Wrightwood	san dimas	5	no	county

Appendix II   *Analysis of Political Incorporation Coalitions by Municipal & County District*

TABLE 1.1   Background of Elected Official, 1991-2015, 89 Local Legislatures

Individual Member	Frequency	Percent	Valid Percent	Cumulative Percent
nlwrep	3347	64.6	65.1	65.1
nlbrep	220	4.2	4.3	69.4
latrep	1336	25.8	26.0	95.4
asnrep	237	4.6	4.6	100.0
Total	5140	99.2	100.0	
Vacancies	41	.8		
Total	5181	100.0		

TABLE 1.2   Coalition Structures, 1991-2015, 88 Local Legislatures

Coalition Structure	Frequency	Percent	Cumulative Percent
Anglo Dominant	665	68.8	68.8
Coalition of Minorities	63	6.5	75.4
Minority Majority	238	24.6	100.0
Total	966	100.0	

TABLE 1.3   Coalition Structure by Race and Ethnicity of Individual Member, 1991-2015, N = 458-471 Elected Officials

Coalition		nlwrep	nlbrep	latrep	asnrep	Total
Anglo Dominant	Count	589	5	52	15	661
	% within	92.9%	19.2%	20.3%	33.3%	68.8%
Coalition of Minorities	Count	21	1	24	17	63
	% within	3.3%	3.8%	9.4%	37.8%	6.6%
Minority Majority	Count	24	20	180	13	237
	% within	3.8%	76.9%	70.3%	28.9%	24.7%
Total	Count	634	26	256	45	961
	% within	100.0%	100.0%	100.0%	100.0%	100.0%

TABLE 1.4   Number of Groups or Coalitions by Coalition Structure, 1991-2015, 88 Local Legislatures

NUMCOAL		Coalition Structure			Total
		Anglo Dominant	Coalition of Minorities	Minority Majority	
0	Count	357			357
	% within	53.7%			37.0%
1	Count	249		196	445
	% within	37.4%		82.4%	46.1%
2	Count	54	54	42	150
	% within	8.1%	85.7%	17.6%	15.5%
3	Count	5	9		14
	% within	.8%	14.3%		1.4%
Total	Count	665	63	238	966
	% within	100.0%	100.0%	100.0%	100.0%

TABLE 1.5   Legislative & Executive Positions in by City Elected Officials

Race and Ethnicity		Council	Mayor	Total
nlwrep	Count	2713	634	3347
	% within POSITION	64.9%	65.9%	65.1%
nlbrep	Count	194	26	220
	% within POSITION	4.6%	2.7%	4.3%
latrep	Count	1079	257	1336
	% within POSITION	25.8%	26.7%	26.0%
asnrep	Count	192	45	237
	% within POSITION	4.6%	4.7%	4.6%
Total	Count	4178	962	5140
	% within POSITION	100.0%	100.0%	100.0%

TABLE 1.6   Coalition Structure by Minority Majority, 1991-2015, 88 Local Legislatures

Majority Coalition	Frequency	Percent	Cumulative Percent
Anglo	728	75.4	75.4
Hispanic	201	20.8	96.2
African American	22	2.3	98.5
Asian	15	1.6	100.0
Total	966		

TABLE 2.1   Race and Ethnicity of Individual Elected Official by Year, 1991-2015

YEAR		nlwrep	nlbrep	latrep	asnrep	Total
1991	Count	369	9	65	8	451
	% within YEAR	81.8%	2.0%	14.4%	1.8%	100.0%
1992	Count	3	1	1		5
	% within YEAR	60.0%	20.0%	20.0%		100.0%
1994	Count	3	1	1		5
	% within YEAR	60.0%	20.0%	20.0%		100.0%
1995	Count	348	15	90	8	461
	% within YEAR	75.5%	3.3%	19.5%	1.7%	100.0%
1996	Count	3	1	1		5
	% within YEAR	60.0%	20.0%	20.0%		100.0%
1998	Count	3	1	1		5
	% within YEAR	60.0%	20.0%	20.0%		100.0%
2000	Count	325	20	112	11	468
	% within YEAR	69.4%	4.3%	23.9%	2.4%	100.0%
2002	Count	309	20	121	19	469
	% within YEAR	65.9%	4.3%	25.8%	4.1%	100.0%
2003	Count	293	19	130	25	467
	% within YEAR	62.7%	4.1%	27.8%	5.4%	100.0%
2004	Count	286	19	128	25	458
	% within YEAR	62.4%	4.1%	27.9%	5.5%	100.0%
2006	Count	296	24	126	24	470
	% within YEAR	63.0%	5.1%	26.8%	5.1%	100.0%
2008	Count	289	22	130	28	469
	% within YEAR	61.6%	4.7%	27.7%	6.0%	100.0%
2010	Count	276	23	137	33	469
	% within YEAR	58.8%	4.9%	29.2%	7.0%	100.0%
2012	Count	270	24	147	27	468
	% within YEAR	57.7%	5.1%	31.4%	5.8%	100.0%
2014	Count	274	21	146	29	470
	% within YEAR	58.3%	4.5%	31.1%	6.2%	100.0%
TOTAL	Count	3347	220	1336	237	5140
	% within YEAR	65.1%	4.3%	26.0%	4.6%	100.0%

TABLE 2.2   Coalition Structure by Year, 1991-2015

YEAR		Anglo Dominant	Coalition of Minorities	Minority Majority	Total
1991	Count	78	1	7	86
	% within YEAR	90.7%	1.2%	8.1%	100.0%
1995	Count	70		18	88
	% within YEAR	79.5%		20.5%	100.0%
2000	Count	66	1	21	88
	% within YEAR	75.0%	1.1%	23.9%	100.0%
2002	Count	63	3	22	88
	% within YEAR	71.6%	3.4%	25.0%	100.0%
2003	Count	61	4	23	88
	% within YEAR	69.3%	4.5%	26.1%	100.0%
2004	Count	62	3	23	88
	% within YEAR	70.5%	3.4%	26.1%	100.0%
2006	Count	59	8	21	88
	% within YEAR	67.0%	9.1%	23.9%	100.0%
2008	Count	56	9	23	88
	% within YEAR	63.6%	10.2%	26.1%	100.0%
2010	Count	51	11	26	88
	% within YEAR	58.0%	12.5%	29.5%	100.0%
2012	Count	48	11	29	88
	% within YEAR	54.5%	12.5%	33.0%	100.0%
2014	Count	51	12	25	88
	% within YEAR	58.0%	13.6%	28.4%	100.0%
TOTAL	Count	665	63	238	966
	% within YEAR	68.8%	6.5%	24.6%	100.0%

TABLE 2.3   Hispanic Majority by Year, 1991-2015

YEAR		Latino other	Hispanic	Total
1991	Count	79	7	86
	% within YEAR	91.9%	8.1%	100.0%
1995	Count	73	15	88
	% within YEAR	83.0%	17.0%	100.0%
2000	Count	69	19	88
	% within YEAR	78.4%	21.6%	100.0%
2002	Count	69	19	88
	% within YEAR	78.4%	21.6%	100.0%
2003	Count	69	19	88
	% within YEAR	78.4%	21.6%	100.0%
2004	Count	69	19	88
	% within YEAR	78.4%	21.6%	100.0%
2006	Count	70	18	88
	% within YEAR	79.5%	20.5%	100.0%
2008	Count	69	19	88
	% within YEAR	78.4%	21.6%	100.0%
2010	Count	67	21	88
	% within YEAR	76.1%	23.9%	100.0%
2012	Count	64	24	88
	% within YEAR	72.7%	27.3%	100.0%
2014	Count	67	21	88
	% within YEAR	76.1%	23.9%	100.0%
TOTAL	Count	765	201	966
	% within YEAR	79.2%	20.8%	100.0%

TABLE 2.4   African-American Majority by Year, 1991-2015

YEAR		African-American other	black	Total
1991	Count	86		86
	% within YEAR	100.0%		100.0%
1995	Count	85	3	88
	% within YEAR	96.6%	3.4%	100.0%
2000	Count	86	2	88
	% within YEAR	97.7%	2.3%	100.0%
2002	Count	86	2	88
	% within YEAR	97.7%	2.3%	100.0%
2003	Count	86	2	88
	% within YEAR	97.7%	2.3%	100.0%
2004	Count	86	2	88
	% within YEAR	97.7%	2.3%	100.0%
2006	Count	86	2	88
	% within YEAR	97.7%	2.3%	100.0%
2008	Count	85	3	88
	% within YEAR	96.6%	3.4%	100.0%
2010	Count	86	2	88
	% within YEAR	97.7%	2.3%	100.0%
2012	Count	86	2	88
	% within YEAR	97.7%	2.3%	100.0%
2014	Count	86	2	88
	% within YEAR	97.7%	2.3%	100.0%
TOTAL	Count	944	22	966
	% within YEAR	97.7%	2.3%	100.0%

TABLE 2.5   Asian Majority by Year, 1991-2015

YEAR		Asian & Pacific Islander other	Asian	Total
1991	Count	86		86
	% within YEAR	100.0%		100.0%
1995	Count	88		88
	% within YEAR	100.0%		100.0%
2000	Count	88		88
	% within YEAR	100.0%		100.0%
2002	Count	87	1	88
	% within YEAR	98.9%	1.1%	100.0%
2003	Count	86	2	88
	% within YEAR	97.7%	2.3%	100.0%
2004	Count	86	2	88
	% within YEAR	97.7%	2.3%	100.0%
2006	Count	87	1	88
	% within YEAR	98.9%	1.1%	100.0%
2008	Count	87	1	88
	% within YEAR	98.9%	1.1%	100.0%
2010	Count	85	3	88
	% within YEAR	96.6%	3.4%	100.0%
2012	Count	85	3	88
	% within YEAR	96.6%	3.4%	100.0%
2014	Count	86	2	88
	% within YEAR	97.7%	2.3%	100.0%
TOTAL	Count	951	15	966
	% within YEAR	98.4%	1.6%	100.0%

TABLE 2.6   Number of Elected Officials by Municipal and County District, 1991-2015

City	nlwrep	nlbrep	latrep	asnrep	Total
Agoura Hills	55				55
Alhambra	31		18	5	54
Arcadia	40			13	53
Artesia	26		24	4	54
Avalon	46		9		55
Azusa	25		30		55
Baldwin Park	12		43		55
Bell	36		19		55
Bellflower	53		2		55
Bell Gardens	6		49		55
Beverly Hills	55				55
Bradbury	55				55
Burbank	51		4		55
Calabasas	50				50
Carson	21	16	16		53
Cerritos	37		2	15	54
Claremont	31	2	11	10	54
Commerce	4		51		55
Compton	2	46	4		52
Covina	45	6	1	2	54
Cudahy	7		48		55
Culver City	51		3		54
Diamond Bar	30		9	15	54
Downey	40		15		55
Duarte	25		29	1	55
El Monte	17		33	5	55
El Segundo	53		2		55
Gardena	14	8	6	26	54
Glendale	42		12		54
Glendora	49		5		54
Hawaiian Gardens	19		29	7	55
Hawthorne	40		15		55
Hermosa Beach	52			3	55
Hidden Hills	53		1		54
Huntington Park	7		48		55
Industry	32		23		55
Inglewood	1	39	12		52
Irwindale	1		54		55
La Canada Flintridge	39		13	2	54
La Habra Heights	54				54
La Mirada	52		2		54
La Puente	17		38		55
La Verne	45		10		55
Lakewood	46		8		54
Lancaster	48	7			55
Lawndale	54				54
Lomita	38		14	3	55
Long Beach	77	14	13	5	109
Los Angeles	89	38	47	1	175
Lynwood	13	7	35		55
Malibu	49				49
Manhatten Beach	55				55

Maywood	5		50		55
Monrovia	45	1	9		55
Montebello	19		36		55
Monterey Park	12		14	29	55
Norwalk	27		28		55
Palmdale	49		5		54
Palos Verdes Estates	55				55
Paramount	38		17		55
Pasadena	55	20	9	2	86
Pico Rivera	12		42		54
Pomona	36		38		74
Rancho Palos Verdes	54				54
Redondo Beach	64				64
Rolling Hills	54				54
Rolling Hills Estates	55				55
Rosemead	32		14	8	54
San Dimas	55				55
San Fernando	5		50		55
San Gabriel	30		18	7	55
San Marino	40			15	55
Santa Clarita	54		1		55
Santa Fe Springs	28		27		55
Santa Monica	75		2		77
Sierra Madre	51		3		54
Signal Hill	55				55
South El Monte	1		48	5	54
South Gate	11		44		55
South Pasadena	41	3	2	9	55
Temple City	34		12	8	54
Torrance	69			8	77
Vernon	33		21		54
Walnut	30		10	15	55
West Covina	43		6	5	54
West Hollywood	38		8	9	55
Westlake Village	55				55
Whittier	54		1		55
Los Angeles County	43	13	14		70
Total	3347	220	1336	237	5140

TABLE 3.1   Analysis of Vote Power Indices by Individual Members and Minority Elected Officials, 1991-2015

Vote Power Index	N	Minimum	Maximum	Mean	Std. Error of the Mean	Std. Deviation	Skewness	Kurtosis
BANZHAF	5181	.209	.375	.36270	.0005	.0358	-3.159	9.532
SHAPLEY	5181	.067	.200	.18975	.0004	.0296	-3.052	8.633
PI	966	.000	1.000	.33803	.0120	.3786	.687	-1.172
INDEX	966	0	14	3.46	.1200	3.86	.682	-1.147
BANZHAFPI	966	.000	1.885	.65956	.0210	.6596	.561	-1.057
SHAPLEYPI	966	.000	1.000	.34497	.0110	.3471	.601	-.970

TABLE 3.2   Correlation Analysis of Vote Power Indices, 1991-2015

Vote Power Index	Statistic	BANZHAF	SHAPLEY	PI	INDEX	BANZHAF PI	SHAPLEY PI
BANZHAF	Pearson Correlation	1.000	.996	.042	-.074	-.064	.030
	Sig. (2-tailed)	.	.000	.191	.022	.045	.353
	N	5181	5181	966	966	966	966
SHAPLEY	Pearson Correlation	**.996**	1.000	.038	-.077	-.070	.024
	Sig. (2-tailed)	.000	.	.243	.017	.029	.463
	N	5181	5181	966	966	966	966
PI	Pearson Correlation	.042	.038	1.000	.989	.953	.960
	Sig. (2-tailed)	.191	.243	.	.000	.000	.000
	N	966	966	966	966	966	966
INDEX	Pearson Correlation	-.074	-.077	**.989**	1.000	.959	.950
	Sig. (2-tailed)	.022	.017	.000	.	.000	.000
	N	966	966	966	966	966	966
BANZHAFPI	Pearson Correlation	-.064	-.070	**.953**	**.959**	1.000	.994
	Sig. (2-tailed)	.045	.029	.000	.000	.	.000
	N	966	966	966	966	966	966
SHAPLEYPI	Pearson Correlation	.030	.024	**.960**	**.950**	**.994**	1.000
	Sig. (2-tailed)	.353	.463	.000	.000	.000	.
	N	966	966	966	966	966	966

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

TABLE 4.1   Coalition Structure, 1925-2015, City of Los Angeles

	Frequency	Percent	Cumulative Percent
anglo dominant	86	94.5	94.5
coalition of minorities	5	5.5	100.0
Total	91	100.0	

TABLE 4.2   Number of Coalitions, 1925-2015, City of Los Angeles

	Frequency	Percent	Cumulative Percent
0	24	26.4	26.4
1	36	39.6	65.9
2	22	24.2	90.1
3	9	9.9	100.0
Total	91	100.0	

TABLE 4.3   Analysis of Vote Power Indices: Los Angeles City and County

	N	Minimum	Maximum	Mean	Std. Error	Std. Deviation	Skewness	Kurtosis
BANZHAF	91	.06667	.06667	.06667	.00000	.00000	.	.
ANGLO BANZHAF	91	.33333	1.00000	.96337	.01601	.15276	-3.972	14.085
ASIAN BANZHAF	91	.00000	.00000	.00000	.00000	.00000	.	.
BLACK BANZHAF	91	.00000	.33333	.01831	.00801	.07638	3.972	14.085
HISPANIC BANZHAF	91	.00000	.33333	.01831	.00801	.07638	3.972	14.085
MINORITY INDEX 1925-2015	91	0	14	3.57	.40	3.80	.901	-.202
MINORITY INDEX 1850-1925	58	0	9	1.50	.27	2.09	1.611	2.288
MINORITY INDEX 1852-2015	86	0	5	.60	.11	1.05	2.089	5.246
CITY PI	91	.000	.700	.17857	.01994	.19020	.901	-.202
COUNTY PI	86	.000	.714	.08640	.01620	.15068	2.089	5.246
MINORITY SEAT PCT	91	.00	.600	.16480	.01967	.18760	.949	-.623
REP SEAT	91	0	9	3.33	.31	2.91	.699	-.511
REP SEAT PCT	91	.00	.600	.22200	.02036	.1943	.699	-.511
PARTISAN INDEX	91	0	14	4.46	.40	3.84	1.168	.718
PID	91	.00	.70	.2231	.02011	.1918	1.168	.718
Valid N (listwise)	91							

GRAPH 1.0   Minority and Partisan Political Incorporation Indices, 1925-2015
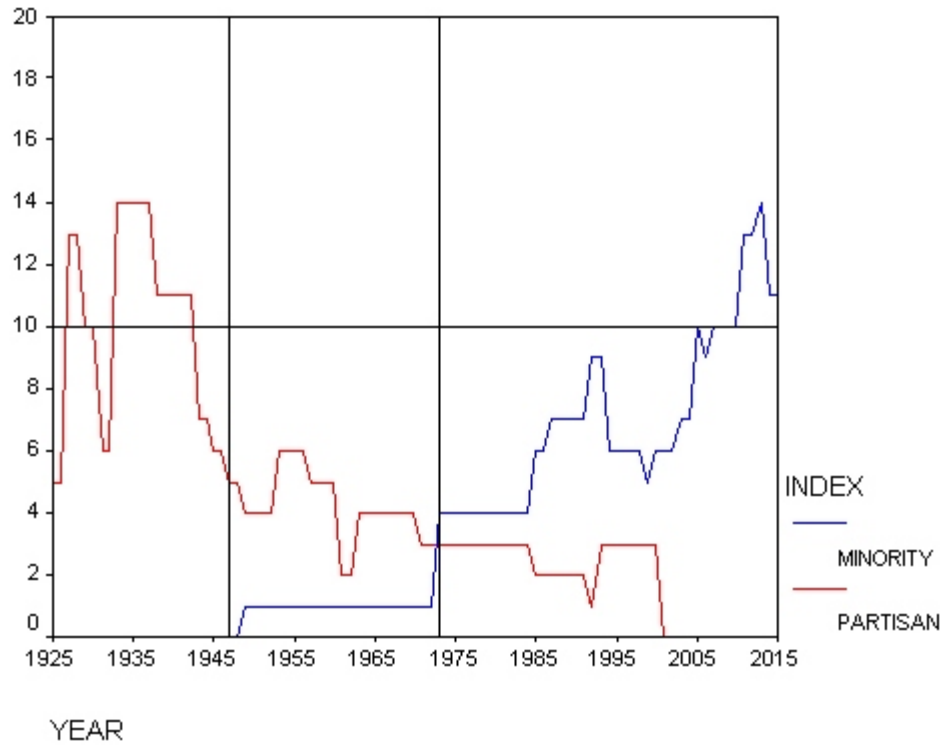
GRAPH 2.0   Minority and Partisan Seat Shares, Los Angeles City Council, 1925-2015
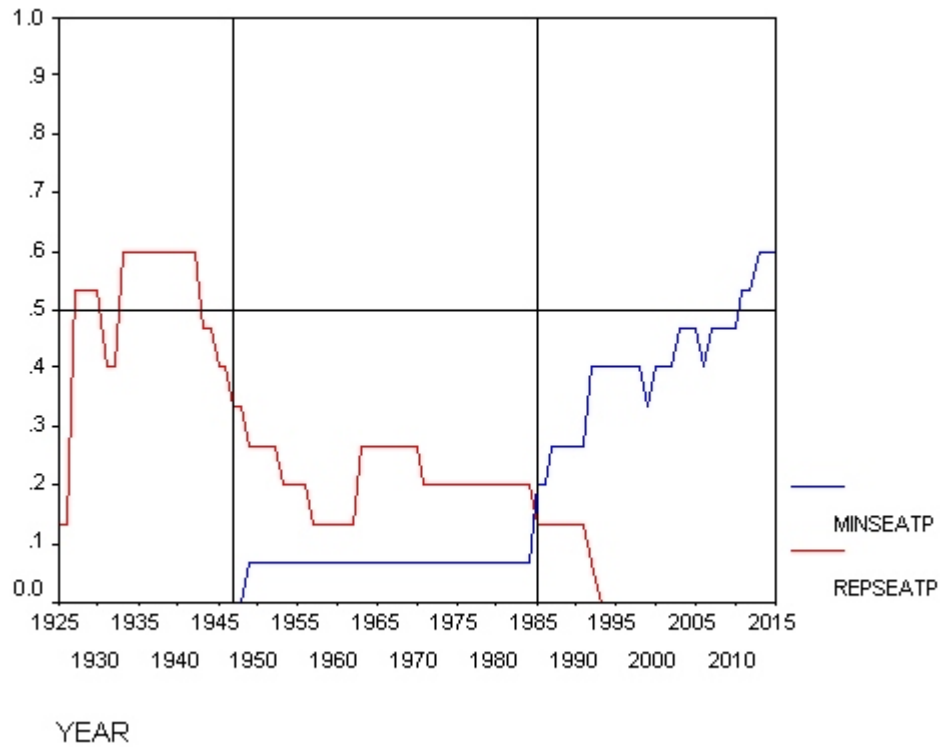
TABLE 4.4 Partisan Contestation, Minority Political Incorporation, Number of Elected Council Members (1925-2015), and Average Duration of Council Member by Los Angeles City Council District

District	R	%yrs	D	%yrs	Min	%yrs	Anglo	%yrs	# Elect	Mean
1	8	8.8	83	91.2	29	31.9	62	68.1	12	6.58
2	40	44.4	51	56.0	0	0	91	100.0	12	6.58
3	48	52.7	43	47.3	0	0	91	100.0	13	6.00
4	2	2.2	89	97.8	0	0	91	100.0	6	16.80
5	10	11.0	81	89.0	0	0	91	100.0	13	6.00
6	14	15.4	77	84.6	13	14.3	78	85.7	9	9.11
7	30	33.0	61	67.0	20	22.0	71	78.0	10	7.90
8	0	0.0	91	100.0	24	26.4	67	73.6	9	8.00
9	53	58.2	38	41.8	67	73.6	24	26.4	11	7.45
10	0	0.0	91	100.0	53	58.2	38	41.8	11	7.45
11	28	69.2	63	30.8	0	0	91	100.0	13	6.15
12	14	15.4	77	84.6	5	5.5	86	94.5	14	5.64
13	40	44.0	51	56.0	9	9.9	82	90.1	16	4.94
14	2	2.2	89	97.8	31	34.1	60	65.9	10	8.10
15	14	15.4	77	84.6	3	3.3	88	96.7	10	8.10

TABLE 5.1   Coalition Structure, County Board of Supervisor's, 1852-2015

Coalition Structure	Frequency	Valid Percent	Cumulative Percent
anglo dominant	84	97.7	97.7
minority majority	2	2.3	100.0
Total	86	100.0	

TABLE 5.2   Number of Coalitions, County Board of Supervisors, 1852-2015

Number of Coalitions	Frequency	Percent	Cumulative Percent
0	74	86.0	86.0
1	4	4.7	90.7
2	8	9.3	100.0
Total	86	100.0	

TABLE 5.3   Number of Coalitions by Coalition Structure, County Board of Supervisors, and by term from 1852-2015

Number of Coalitions		anglo dominant	minority majority	Total
0	Count	74		74
	% within	88.1%		86.0%
1	Count	2	2	4
	% within	2.4%	100.0%	4.7%
2	Count	8		8
	% within	9.5%		9.3%
Total	Count	84	2	86
	% within	100.0%	100.0%	100.0%

TABLE 5.4   Los Angeles Mayor, 1852-2015, T = same terms or time lengths as County Board of Supervisors and T = all years

	Frequency	Percent	Cumulative Percent	Frequency	Percent	Cumulative Percent
Anglo	70	81.4	81.4	130	79.75	79.75
Hispanic	6	7.0	88.4	13	7.98	87.73
African-American	10	11.6	100.0	20	12.3	100.00
Total	86	100.0		163	100.00	