

Memorandum

Government of the District of Columbia

TO: D.C. Zoning Commission

FROM: Fred L. Greene
Director

SUBJECT: Zoning Commission Case No. 86-26, Connecticut Avenue Corridor

Department,
Agency, Office: Planning

Date: January 11, 1988

INTRODUCTION

The Connecticut Avenue Corridor Study is the basic report of the Office of Planning (OP) in this case. It was prepared by OP staff in conjunction with traffic analysis by the Department of Public Works (DPW) and submitted to the Zoning Commission in September 1987. A task force of community and business representatives periodically met with government staff regarding the project as it progressed in 1987. On October 1, 1987, at a special meeting, the Zoning Commission acted favorably to schedule a public hearing on the recommended zoning map and text amendments which are the subject of the instant public hearing. This case also derives from community participation in the Ward Three planning process, especially the Ward Three Citizens Advisory Committee, and from petitions from several community organizations: the Chevy Chase Citizens Association, the Cleveland Park Historical Society and the Woodley Park Community Association. Advisory Neighborhood Commissions 3G and 3C have also been actively involved in the petitions and the planning process.

The Corridor Study focusses on the street frontage of Connecticut Avenue, the more intensively developed frontage passing through a number of lower density neighborhoods along the length of the Avenue from Chevy Chase Circle all the way to Florida Avenue. Approximately 80 squares were surveyed to determine existing and potential development conditions and implications of the Comprehensive Plan, plus a traffic assessment of conditions along the corridor.

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relating to existing conditions and certain Year 2000 land use scenarios. The transportation analysis is presented in Chapter V of the Corridor Study and in a separate report to the Zoning Commission for this public hearing.

The review of land use, zoning and Comprehensive Plan issues along the length of the corridor found only four locations -- but four important ones in need of rezoning. These are: the west frontage of Connecticut Avenue from Chevy Chase Parkway to Military Road (the Chevy Chase petition area); two major apartment complexes on the east side of the Avenue between Albemarle and Brandywine Streets, N.W.; the Cleveland Park commercial area; and the Woodley Park commercial area.

The remainder of this report represents further comments on the four areas in question, in the same order as in the Corridor Study, i.e., Chevy Chase, Albemarle-Brandywine, Cleveland Park, Woodley Park. A final section presents some further comments regarding the overlay zones proposed for Cleveland Park and Woodley Park.

CHEVY CHASE RESIDENTIAL (R-5-C to R-3)

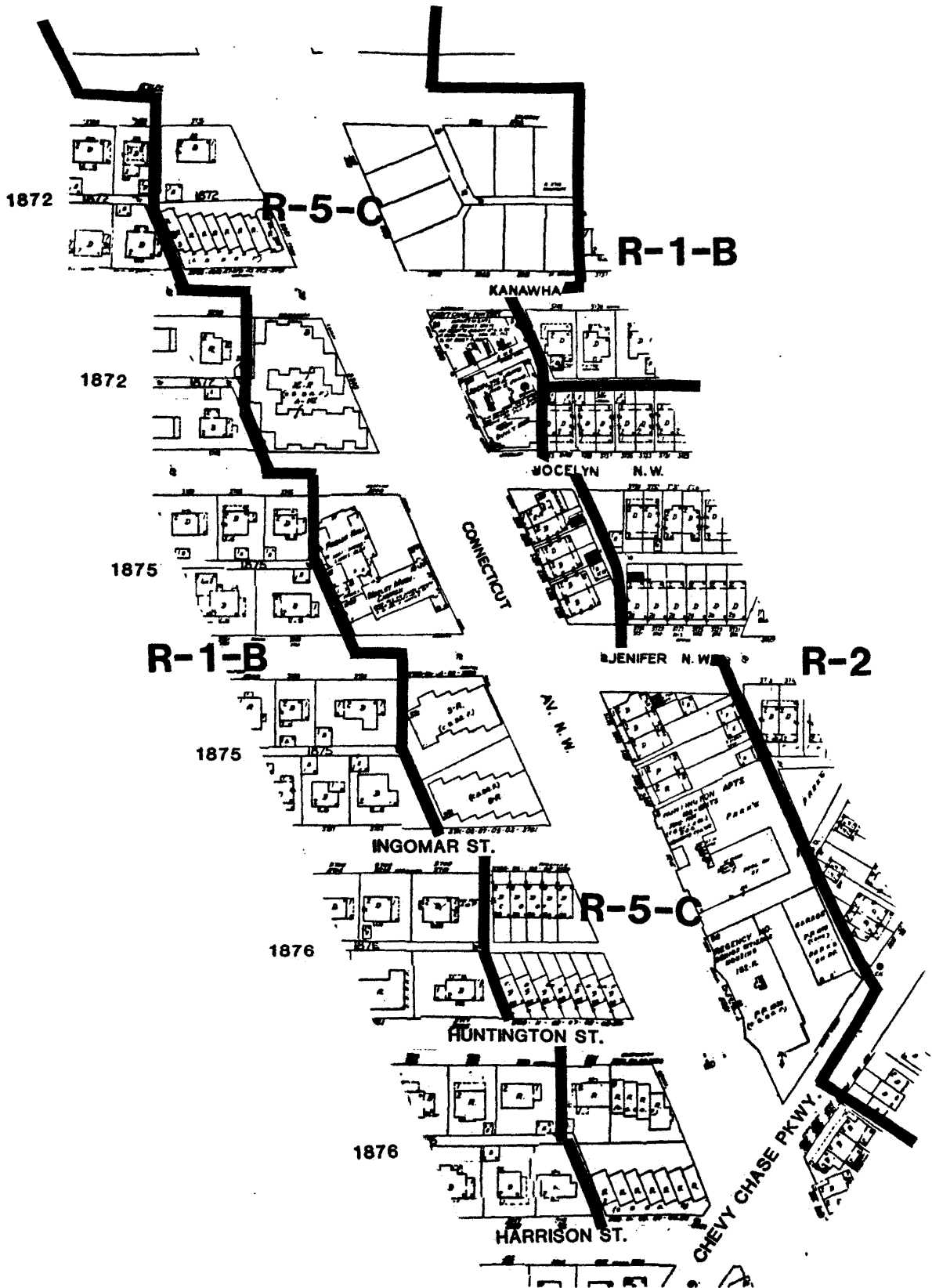
The Notice of Public Hearing advertises the R-5-C zoned portions of Squares 1872, 1875 and 1876 for rezoning to R-3 or to the intermediate zones, R-5-B, R-5-A, and R-4.

The area which is included in this portion of Case No. 86-26 is the R-5-C zoned land which extends from Military Road to Chevy Chase Parkway (which merges with Harrison Street where they intersect Connecticut Avenue) on the west side of Connecticut Avenue.

In the Connecticut Avenue corridor study, OP noted that the Comprehensive Plan Generalized Land Use Map designated this area for "moderate density residential land uses", defined as "Row houses and garden apartments are the predominate uses; may also include low density housing". The Council of the District of Columbia specifically amended the land use map from High Density Residential to Moderate Density, in order to reflect the scale and type of existing development, to lessen pressures for redevelopment of the recently constructed townhouses, and to ensure that any infill development or redevelopment would be generally in scale with the existing predominant development pattern.

This issue had previously been brought before the Zoning Commission by petition from the Chevy Chase Defense League, the Chevy Chase Citizens Association and Advisory Neighborhood Commission 3G, who requested a public hearing to consider and remap the area R-3 or some other low- to medium-density residential designation. The petitions made reference to a covenant in effect in this general neighborhood area restricting development to single family housing only as another basis for rezoning request.

In a report to the Zoning Commission on this matter dated October 27, 1986, prior to the Connecticut Avenue Corridor Study, the Office of Planning recommended a public hearing on the petition because of the Moderate Density Land Use designation in the Comprehensive Plan, but also noted: "In reference to the covenant, our view is that it is a restriction placed upon development of land as agreed upon by private parties and is independent and distinct from other applicable city regulations such as zoning. Private covenants are a vehicle mainly to protect private interests as perceived by the parties. The city regulations are, on the other hand, designed to promote policies and objectives to be applied uniformly on a city-wide basis and not selectively. We think that the covenant referred to ... does not relate to zoning". (p.1)



CONNECTICUT AVENUE WEST FRONTAGE REZONING

The Office of Planning reiterates its position here in regard to private covenants to make clear that our recommendation on this issue must be based upon planning, land use and zoning considerations and cannot rest upon restrictive covenants between private parties.

Area Description

The section of Connecticut Avenue advertised for rezoning in this portion of Case No. 86-26 includes the Connecticut Avenue frontages, with R-5-C zoning, of three Squares - 1872, 1875 and 1876. Each square is bisected by a street: Square 1872 is bounded by Connecticut Avenue, Jocelyn Street, 38th Street and Military Road, and is bisected by Kanawha Street; Square 1875 is bounded by Connecticut Avenue, Ingomar, 38th, and Jocelyn Streets, and is bisected by Jenifer Street; Square 1876 is bounded by Connecticut Avenue, Harrison, 38th (at Reno Road) and Ingomar Streets, with Huntington Street between.

The R-5-C district extends from Nebraska Avenue (one block south of Square 1876) to Livingston Street (two blocks north of Square 1872) on both sides of Connecticut Avenue. C-1 districts adjoin the R-5-C district south of Nebraska Avenue and north of Livingston Street to Chevy Chase Circle at the District line.

East and west of the R-5-C zoning along the avenue are R-1-B density and R-2 districts. This pattern - higher density apartment districts flanking Connecticut Avenue with low density, single family districts beyond - is typical of the Connecticut Avenue corridor.

The eastern side of Connecticut Avenue is developed with a combination of high density apartment buildings and three story row houses, all within the R-5-C district. The west side is developed principally with single family row houses. There is a large vacant lot on the southwest corner of Military Road and Connecticut Avenue and a church which occupies the entire frontage of Square 1875 between Jocelyn and Jenifer Streets.

Comprehensive Plan Land Use Designation

As noted in this report, the west side of Connecticut Avenue is designated for medium density residential land uses which is defined as having multiple-unit and mid-rise apartment buildings as predominant uses but may also include low and moderate density housing. This and a short stretch of medium density residential land uses at Woodley Park are the only non-high density residential or commercial land use designations between Calvert Street and Chevy Chase Circle.

In this instance the Comprehensive Plan land use designation was intended to more closely reflect existing development along this stretch of Connecticut Avenue, and does distinguish between the more densely developed (on average) east frontage of the avenue. Only the highest density residential zone districts (R-5-C and R-5-D) would likely be considered inconsistent with the land use designation of the Comprehensive Plan.

Zoning Considerations

The R-3 zone, which was advertised in this case, permits single family row dwellings, with a minimum lot area of 2,000 square feet a minimum lot width of 20 feet and a maximum height of 40 feet and 3 stories.

In Square 1872, of the 8 lots fronting the north side of Kanawha Street only one meets the minimum lot area and lot width requirements of the R-3 zone, Lot 40. This lot has an area of 2031 square feet and a lot width of 24.18 feet. The remaining 7 lots have widths of slightly more than 16 feet and lot areas of 1357 square feet.

South of Kanawha of the 18 developed lots none meet the minimum lot area and lot width requirements of the R-3 zone. Only three lots are greater than 1000 square feet in area. The remaining generally fall within an 830 to 840 square foot range.

The northern portion of Square 1875, between Jocelyn and Jenifer Streets, is the site of Wesley Methodist Church and Parish Hall. The southern portion of the Square between Jenifer and Ingomar Streets, is improved with 11 houses. Of these, only three have lot areas of 2000 square feet or more. The remaining eight lots each have an area of slightly more than 1400 square feet. Lot widths in this section are 20 to 21 feet an average which do meet the 20' minimum requirement for R-3 row dwellings.

The northern section of Square 1876, between Ingomar and Huntington Streets, has 12 row dwellings. Only one exceeds the minimum lot area requirements of the R-3 zone - lot 851 with an area of 2795 square feet. The majority of the remaining lots (8) are between 1675 and 1750 square feet in area while three fall outside this range at 1766, 1816 and 1947 square feet.

Of the 12 lots in the southern section of Square 1876, between Huntington Street and Harrison Street/Chevy Chase Parkway only two exceed the minimum lot area requirements of the R-3 zone. The same two (Lots 859 and 57) meet the lot width requirements. The remaining 10 have lot areas

ranging from 1677 square feet to 1770 square feet and lot widths of between $17\frac{1}{2}$ and $19\frac{1}{2}$ feet.

While it is self-evident that the R-3 zone would effectively enforce a single family use for the housing along this stretch of Connecticut Avenue, it is also clear that the lot area and lot width requirements of the R-3 zone would render all but 7 of the existing structures non-conforming. This, in our view, would be an undesirable situation.

As a practical matter, the Office of Planning does not want to create a situation where structures are so non-conforming that even the simplest modification may require variances from the Zoning Regulations. In this case our objective is to provide a sufficiently close match to the existing conditions which engenders the least non-conformity practicable, while ensuring that public policy considerations for this area are accounted for. The R-3 zone, because it renders nearly all of the existing structures non-conforming in one way or another is not an appropriate zone.

The same holds true for the R-4 district area requirements. While the minimum lot area requirement of 1800 square feet and minimum lot width requirement of 18 feet are less restrictive than those of the R-3 zone, only 7 of the lots meet or exceed the lot area minimum. The R-4 district, does not provide a sufficiently close match to existing conditions to be an appropriate zone.

The R-5 districts do not provide minimum area dimensions but rely on Floor Area Ratio standards to control density. In this regard, the R-5-A zone provides for a maximum FAR of 0.9 - a figure which is exceeded by the majority of structures in this case. Hypothetically, a three story dwelling which occupies 60% of a minimum R-3 lot (4000 square feet) would have an FAR of 1.8 - twice that allowed in the R-5-A district. The R-4 hypothetical example also yields an FAR of 1.8.

Most of the houses in the R-5-C sections of Squares 1872, 1875 and 1876 are either 2 or 3 stories, the latter predominating with relatively small lot sizes. It is highly unlikely that any of the existing structures fall within the 0.9 FAR maximum of the R-5-A district.

In regard to the most appropriate zoning "fit", OP believes that R-5-B will result in the least area non-conformity and most closely matches the conditions of the existing structures. It should be noted that new construction in R-5-B districts rarely utilizes the permitted 60-foot

building height because with an FAR as low as 1.8 the full density of the zone can be achieved in a most cost-effective three-to-four story building. Infill development at this scale would be fully consistent with the scale of existing development.

As to the use question, the R-3 zone is designed for single family use while the R-4 zone allows 2 unit structures and the R-5 zones permit multiple dwellings. The location of the property which is the subject of this application, in one of the city's major transportation corridors, with high density apartment buildings and multiple unit structures nearby, causes OP to believe that even though R-5-B allows multiple-unit structures it is not an inappropriate zone in this case. We believe that the area non-conformity considerations are significant and on balance find that the desire to minimize these aspects for present and future homeowners tends to favor R-5-B. The private covenants would ensure that the permitted scale of development would be devoted to single-family type units. However, as stated previously, the guidance of the Comprehensive Plan is achieved by the moderate density character of the R-5-B District.

ALBERMARLE-BRANDYWINE RESIDENTIAL (R-1-A TO R-5-C)

The Notice of Public Hearing advertises the R-1-A-zoned portions of Square 2039 for rezoning to R-5-C.

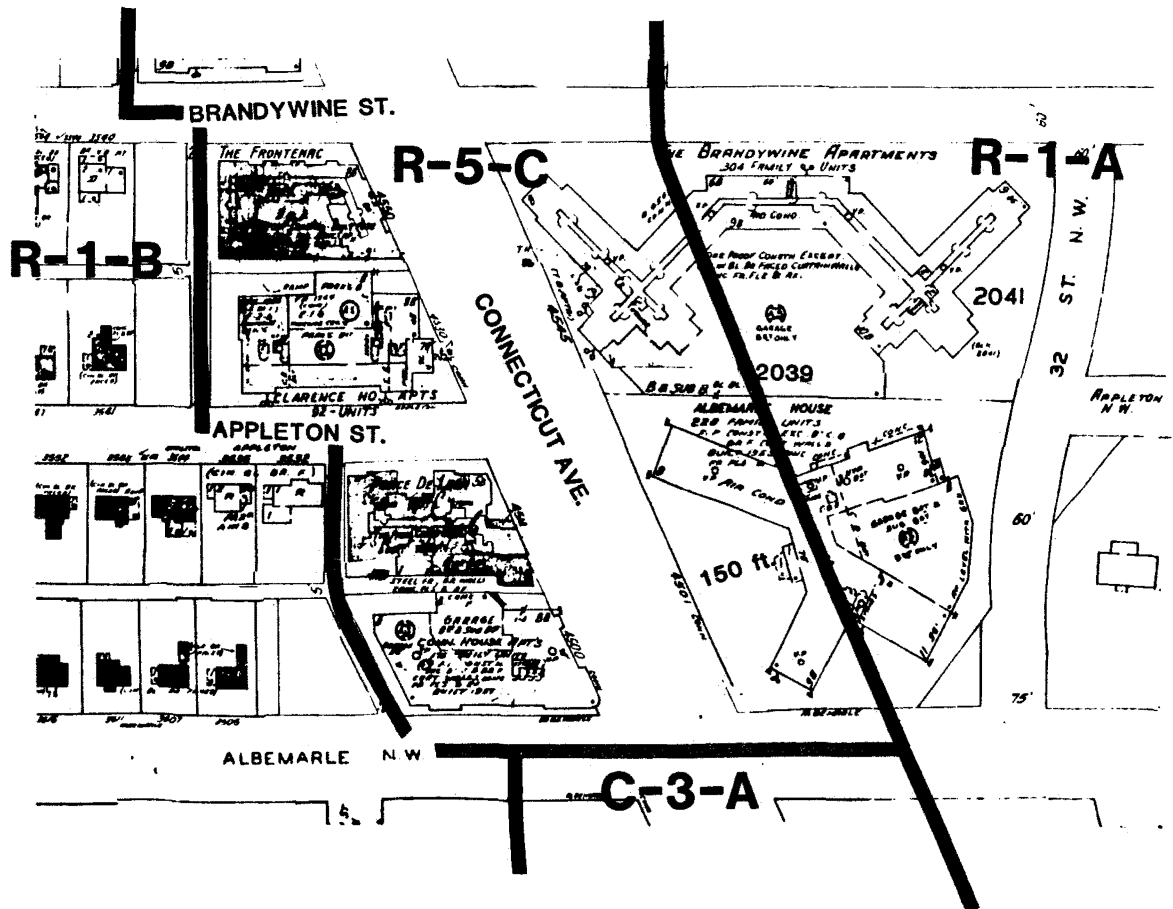
In the Connecticut Avenue special study prepared by the Office of Planning (Connecticut Avenue Corridor Study, 9/87) this site was identified as an area for possible rezoning (Study p. 49). Square 2039 is the entire block on the east side of Connecticut Avenue bounded by the avenue, Albermarle, 32rd and Brandywine Streets. Two apartment buildings, the Brandywine Apartments and Albermarle House, are the only buildings in this square. The Brandywine Apartments has approximately 300 units while the Albermarle House has approximately 230 units. Both buildings are fairly large buildings, constructed to the 90 feet allowed in the R-5-C zone and gaining some additional floor area due to the slope of the square which is lower at the eastern edge of the square. The Brandywine was constructed in 1954 and the Albermarle in 1958.

These two buildings are fairly typical of the medium to high density apartment buildings and apartment complexes along Connecticut Avenue. Although large buildings, each occupies a fairly large lot - just over 3 acres in the case of the case of the Brandywine and nearly 2½ acres for the Albermarle. Many high rise apartment buildings are constructed at a greater density than these in Square 2039 - 4600 Connecticut Avenue (between Brandywine and Chesapeake Streets) and the Connecticut House apartments at the southwest corner of Connecticut and Albermarle being two nearby examples.

Zoning Considerations

The R-5-C district in which the two apartment buildings are located extends from Fessenden Street to Albermarle Street on both sides of Connecticut Avenue. Above Fessenden Street is the small C-1 zone (Nebraska Avenue) and to the south is the C-3-A/Van Ness commercial zone. East of the R-5-C and C-3-A zones is a large R-1-A zone which extends to Rock Creek Park. West of the R-5-C and C-3-A are R-1-B and R-2 zones which extend to the commercial zones along Wisconsin Avenue.

The existing R-5-C zone in Square 2039 extends to a depth of 150 feet east of, and parallel to, Connecticut Avenue. The remainder of the Square is zoned R-1-A. Approximately one-fourth of the Brandywine and slightly less than one-half of the Albermarle, are within the R-5-C zone. The same proportions are true for the lot areas of each of the buildings. The Brandywine has a lot area of 132,710 square



SQUARE 2039 REZONING

feet and the Albermarle a lot area of 106,565 square feet. In each case the buildings far exceed the allowable FAR under existing zoning and approximately three-fourths of the Brandywine and one half of the Albermarle are located in the single family detached, R-1-A zone.

The juxtaposition of higher density apartment buildings and adjacent single family dwellings is not unusual. Indeed, such a pattern forms the predominant fabric along the Connecticut Avenue corridor. The depth of the high density zoning varies from less than 100 feet to 600 feet (The Broadmore). In the vicinity of Square 2039 the depth of the R-5-C zone averages around 200 feet but extends to a depth of 375 feet in Square 1981 (between Davenport and Ellicott Streets) and includes this entire square.

Square 2039 has a depth of 592 feet along Brandywine Street and a depth of 252 feet along Albermarle Street. Thus, if zoned entirely R-5-C, the depth of the zone would be greater than the average in the immediate vicinity but would not be unique within the larger context of zoning pattern along Wisconsin Avenue.

As noted in our Connecticut Avenue Study, it is the non-conforming nature of these two buildings with respect to the zoning of the properties, which is of concern. In the event of a major fire or other significant damage to either or both structures, the rebuilding or replacement of each could necessitate both use and area variances since the major portions of both buildings are located in the R-1-A zone. As stated in the Connecticut Avenue Study, the need to conserve the city's housing stock is of paramount importance and this office finds no compelling reason to maintain the existing zoning pattern on this site.

Effects of Rezoning

The effect of rezoning the R-1-A portion of Square 2039 to R-5-C would essentially reduce the non-conformity (both use and area, height and bulk) of the two existing apartment buildings. As the Commission is aware, it was in conjunction with a proposed Planned Unit Development just north of Square 2039 that the anomalous situation concerning the Brandywine Apartments and Albermarle House came to light. They were constructed prior to the adoption of the 1958 Zoning Regulations. The Office of Planning believes that the proposed rezoning is an appropriate one designed to conform the underlying zoning to a legitimate existing condition.

It is only in the event of a redevelopment of one or both buildings that the proposed action would have any impact whatsoever on surrounding properties. It is our view that

with this possibility in mind the re-zoning is warranted.

Across Brandywine Street from Square 2039 is a vacant lot (the PUD application) and The Chesapeake Apartments in the R-5-C zone. Adjacent to the rear is a playground and recreation center adjoined on the east by a large church. On the east side of 32nd Street, which borders Square 2039 are single family homes. There is one house which fronts on 32rd Street, while the rest face Brandywine, Appleton (between Brandywine and Albermarle) and Albermarle Street. South of Square 2039, across Albermarle Street, are a group of one and two story commercial structures and the small shopping center housing the WJLA Television facilities. These commercial establishments are located in the C-3-A zone which fronts Connecticut Avenue. Behind these establishments is Soapstone Valley Park and a row of single family homes on the south side of Albermarle Street. Thirty-Second Street, which extends only from Albermarle to Brandywine Street in this location, is directly opposite Soapstone Valley Park where the park adjoins Albermarle Street. Thus, there are no dwellings immediately south of Square 2039.

Both the Albermarle and the Brandywine buildings have parking garages unlike many pre-1958 apartment buildings in the corridor. Once again the proposed re-zoning would have no immediate impact on this situation. In the event of redevelopment of either property, parking would be required based upon the regulations in effect at that time.

It is OP's view that the proposed rezoning is not inconsistent with the Land Use Element of the Comprehensive Plan since the Generalized Land Use Map indicates high density residential uses for this area as well as in most residential stretches of upper Connecticut Avenue.

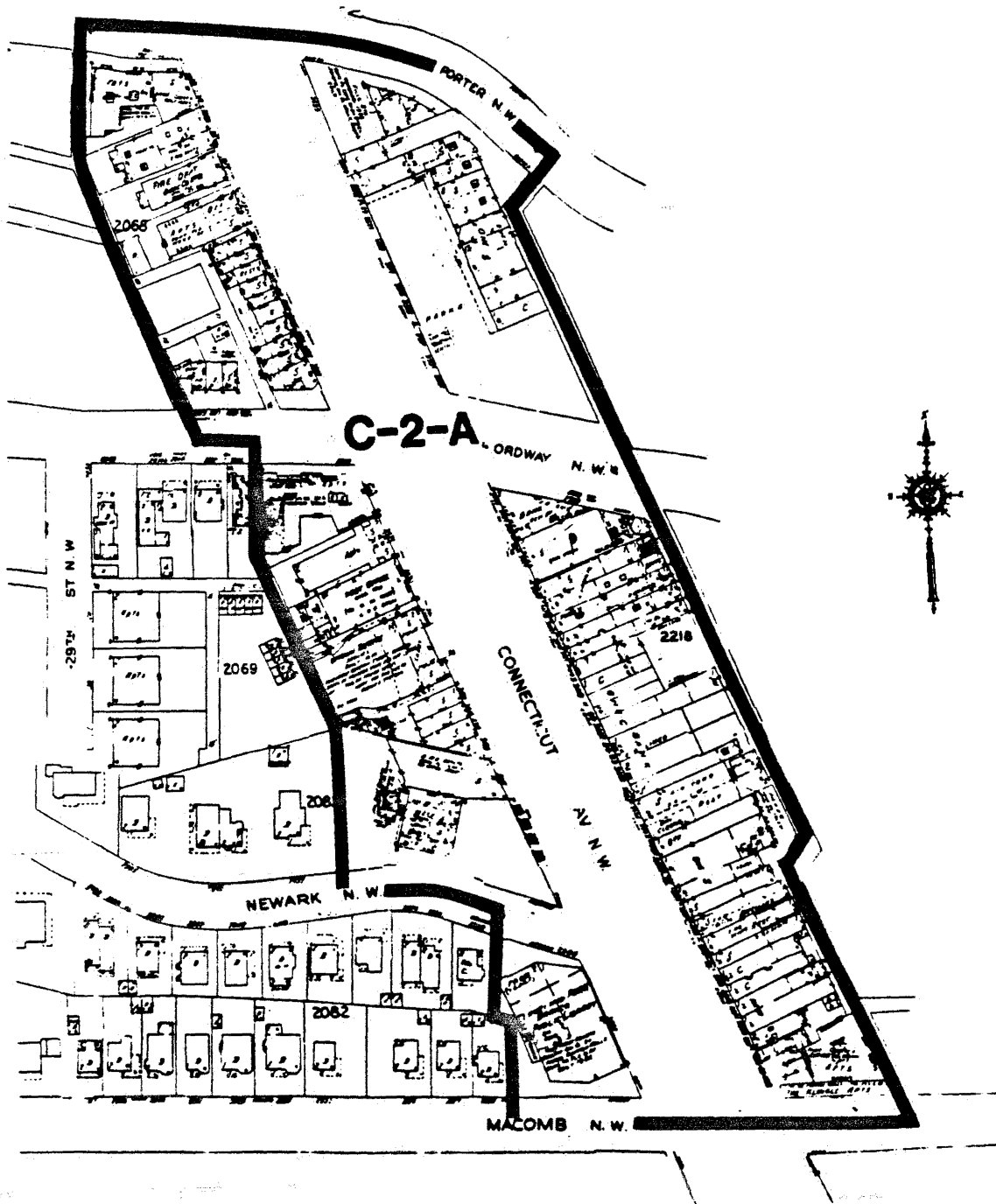
CLEVELAND PARK COMMERCIAL (C-2-A WITH OVERLAY)

The Cleveland Park commercial area, zoned C-2-A, extends three blocks from Porter to Macomb Streets on both frontages of Connecticut Avenue. It is developed with approximately 60 commercial buildings accommodating nearly 80 businesses, the majority of them being neighborhood-serving retail/service uses. The overall physical scale is unusually low even for a neighborhood commercial district. Approximately 70 percent of the buildings are one-story in height; an additional 20 percent are two stories; and only 10 percent are three stories or more in height. There are also five mid-rise (three-to five-story) apartment houses within the C-2-A District. Most of these have ground floor retail and service uses. A number of the small commercial buildings also have apartments on the upper stories. Thus, a significant amount of housing, approximately 129,740* square feet of floor area, exists within the commercial district itself, providing moderate- to middle-income housing.

Total commercial floor area is approximately 187,323 square feet of floor area. The resultant split between uses is approximately 41 percent residential and 59 percent commercial. This is a true mixed use commercial area with a substantial residential component. This extent of housing within the commercial area itself is quite unusual in Washington; it provides the shopping area with additional consumer support and a built-in presence of people on the street in evening hours. Physically, the pattern tends to be that the mid-rise apartment buildings are at the corners of blocks, with lower, retail buildings in between.

The fabric of the buildings is a reflection of its historic character and the very limited amount of redevelopment which has occurred in this area in recent years. The C-2-A area is included within the Cleveland Park Historic District, so that the important land use controls governing historic districts apply as well as zoning. Most importantly, the historic preservation controls include the ability to deny demolition permits, and a required public review of exterior design of new buildings and exterior alterations of existing buildings.

*The source of this land use information is Richard Ridley and Associates, architects/planners for the Cleveland Park Historical Society. Some information is also derived from documentation establishing the historic district.



CLEVELAND PARK COMMERCIAL AREA

Neighborhood-serving retail and service businesses are the predominant uses, including barber and beauty shops, drug store, grocery store, dry cleaners, florist, gasoline service station, liquor store, shoe repair, and a significant number of restaurants and bars. The Uptown movie theatre is one of the largest movie auditoriums in the region, with more than 2,000 seats. A fire station and a public library are also located within the strip. Parking overspill onto surrounding neighborhood streets is a frequent problem from the theatre and the combined effects of the other commercial establishments. The theatre plus the approximately 14 eating and drinking establishments represent a lively and significant concentration of evening activity and parking demand. The Cleveland Park Metrorail station is located between Ordway and Porter streets, with entrances on both sides of the avenue.

The Generalized Land Use Maps indicate this commercial area to remain a Low Density Commercial area and a Local Neighborhood Commercial Center.

Together these designations represent a policy of continuing a neighborhood commercial area that is characterized as low in building scale, offering convenience retail services plus a limited range of specialty shopping and entertainment uses and a limited amount of office space.

Community groups including Advisory Neighborhood Commission 3C and the Cleveland Park Historical Society have expressed concerns to the Office of Planning about the existing C-2-A zoning. These organizations formally petitioned the Zoning Commission in a memorandum dated July 6, 1987, regarding Case No. 86-26 (Connecticut Avenue Corridor), to consider rezoning the C-2-A strip to C-1 or to "a new zoning classification or overlay zone (district) which would more truly reflect, and be compatible with, the existing height, density, uses, and historic character of the subject area..." (p.1)

Petitioners indicate that their principal concern is redevelopment that would be out of scale with existing development and create adverse impacts on the commercial area and surrounding residential areas, such as traffic, noise, and parking overspill. "Already, one developer (Park and Shop site) has announced plans to request a PUD to construct a 65 foot, massive office building, a height, density and use which are clearly incompatible with the character of the existing historic district (to say nothing of the historic building which would be demolished in the process).

Moreover, another party has assembled the properties across Connecticut from the Park and Shop site and indicated her intention to request a PUD for intensive development" (p. 3, July 6 Memorandum). The general intent is to secure zoning which will help retain the local shopping orientation of the area as against office redevelopment which would replace older buildings and businesses and substitute commuters and a more limited range of retail services for the previous neighborhood-serving businesses.

The issues raised in the petition and other communications to the Office of Planning are discussed, point by point below in the context of Comprehensive Plan policies, existing conditions, and the relevant zone district controls.

- A. Height. The permitted building height of 50 feet in C-2-A is questioned as being too high in the context of a fabric of older buildings predominantly at 20 to 30 feet in height.

Comments: On small sites which utilize only the 1.5 commercial FAR will tend to be built structures of only two or three stories in order to keep construction costs down (no need for taller construction and elevator core), and to provide a small retail or office-retail building. The building height most likely to be used in this situation is in the 25 to 35 foot range rather than 50 feet. Also, the Historic Preservation Review Board (HPRB) has design review over new construction, including the power to mandate a lower height if this is necessary to achieve a design compatible with the historic district. Zoning normally provides a building "envelope" somewhat larger than the scale of historic buildings which enables the architect and HPRB to use this design flexibility to correlate design features such as cornices, fenestration or to provide some variety in building heights.

Despite the foregoing, the discrepancy between the existing height profile and permitted height in zoning should not be so great as to force HPRB to mandate major height reductions. The Office of Planning believes that building height is a serious concern, given the unusually low profile of existing building heights and the likelihood that most of these buildings are likely to remain in use for some years under historic preservation controls.

Therefore, the Office proposes a variable formula for maximum building height within a proposed overlay zone district. This height formula would provide for height transitions by establishing a special height limit for infill sites abutting low buildings. The formula would limit the height of new buildings to a maximum of twice the height of the immediately abutting building. If the new building would be attached on both sides, the maximum infill building height would be two times the height of the lowest abutting building. This approach would serve to modulate height variations in the area, and would not affect permitted FAR.

- B. FAR. Petitioners are also concerned that the 1.5 commercial FAR or the 2.5 residential or mixed use FAR may be sufficient economic incentive to result in redevelopment of existing small buildings, loss of neighborhood convenience stores and new construction out of scale with existing buildings.

Comment: Demolition and redevelopment of significant parcels of land (as against infill development of an occasional single commercial row low or pair of such lots) should be constrained by the goals and implementation of the historic preservation law. Virtually all of the existing buildings in the area are deemed "contributing" to the character of the historic district. Thus, the historic preservation process has specific responsibility to protect the physical integrity of the historic district against demolitions, especially those designed to make way for major redevelopment. Given the existing pattern of small lots (with a few exceptions, notably the Park and Shop) and the lack of significant land assemblies for new development, the potential for redevelopment should be adequately controlled by historic preservation within the C-2-A zoning envelope.

The Office of Planning believes that either C-1 or C-2-A zoning could, in various locations, be considered "not inconsistent" with the applicable designation of the Comprehensive Plan. In this particular location the C-2-A District is oriented to a Metrorail system and also has automobile access from two principal arterial streets -- Connecticut Avenue and Porter Street. In this context, it is difficult to argue that C-2-A is overzoning in terms of development density. This area can be a quite active area within a relatively low building profile.

However, the Office of Planning staff believes that some zoning provisions, specifically geared to this C-2-A District with its historic preservation objectives, can help the area achieve its design, neighborhood service, and economic objectives in a more fruitful way. These are as follows:

1. Retention of Housing. Prohibit the conversion of upper story residential uses to nonresidential use. This provision will help retain a significant amount of moderate-income housing which might otherwise be lost to commercial use over the years. This housing is in a location which helps provide consumer market support for neighborhood-serving businesses, an 18-hour presence of people on the street for greater safety and for the commercial area to provide more stores open in the evening. Note that a greater percentage of office workers in lieu of residents would tend to shift the retail market in the area more towards the services offered in office precincts and less towards residential neighborhood services.
2. Ground floor retail. Require the usable ground floor space of commercial buildings to be devoted to retail and service uses, not office space. This will avoid the creation of "dead spots" and fragmentation of retail services and instead will enhance the aesthetic and physical cohesiveness of the shopping district, ensure a wide range of services (rather than losing the ground floor to office use), and improve pedestrian accessibility to stores. Another practical effect is to limit the total size of office use in the area. Within the 1.5 FAR permitted for office and retail uses combined, if 0.05 to 0.75 FAR is utilized as ground floor retail, the office component automatically does not become a major development component contrary to the Plan.
3. Height Limit. Within the maximum, matter-of-right building height of 50 feet, establish a lesser height limit geared to the heights of abutting buildings. This will provide for suitable height transitions and avoid height extremes, especially in locations where abutting buildings are quite low, e.g., 16 and 18 feet.

The formula recommended would provide that the maximum height of a new building shall not exceed two times the height of the abutting building. If the new construction or enlargement is attached on two sides to existing buildings, then the maximum height would be twice the height of the lower of the two buildings. In this manner, infill buildings could have a flexible height based on the immediate design context. The HPRB would still have the opportunity and responsibility to require design changes, including height adjustments as needed. But the height discussion would start within more workable limits. Note that in a number of locations the maximum permitted height in zoning would still be 50 feet, in that the lowest abutting building would be 25 feet or more.

4. Drive-throughs, Curb Cuts. Restrictions are also proposed on drive-throughs as accessory uses and on curb cuts to provide access to driveways which would break up the principal block faces on Connecticut Avenue. The existing building fabric should be retained and automotive access should be via the alley systems to the rear of the buildings. Note that drive-through as accessory to a fast food restaurant is already prohibited in a C-2-A District. The effect of the proposed prohibition would be to prevent establishment of a drive-through as part of a bank, cleaning establishment or other principal use. The rationale for this is to minimize vehicular conflicts with pedestrian flows in a concentrated retail node at a Metrorail station; to avoid breaks in the physical fabric of buildings; and to avoid other aesthetic and vehicular circulation detriments.
5. Eating and Drinking Establishments. Finally, a restriction is also proposed on the percentage of street frontage of a block which may be devoted to eating and drinking establishments. The present group of 14 such businesses provides a lively component of the commercial area, serving the surrounding neighborhood, some Metro passengers and some destination customers. However, it is possible over a period of time for bars and restaurants to concentrate in certain locations, acquire a critical mass, and price out a number of neighborhood retail uses, so that the diversity

and function of the neighborhood shopping cluster is lost. What is proposed within the overlay zone is a ceiling on the percentage of street frontage that may be devoted to these uses. The specific percentage suggested will still allow a degree of expansion over what exists at present -- a level of such uses which may never in fact be achieved. However, should such a trend develop a ceiling would be in place to assure that a balanced mix of uses can continue.

6. Waivers. Over the long term, specific situations are likely to arise when businesses or others might need to request a waiver of one of the requirements for the area. The overlay zone text includes a provision for the Board of Zoning Adjustment to consider and decide such requests after a public hearing. Specific criteria are included in the text to ensure that waivers will only be granted in a manner which furthers the objectives of the overlay zone.

WOODLEY PARK COMMERCIAL (C-2-B, C-2-A WITH OVERLAY)

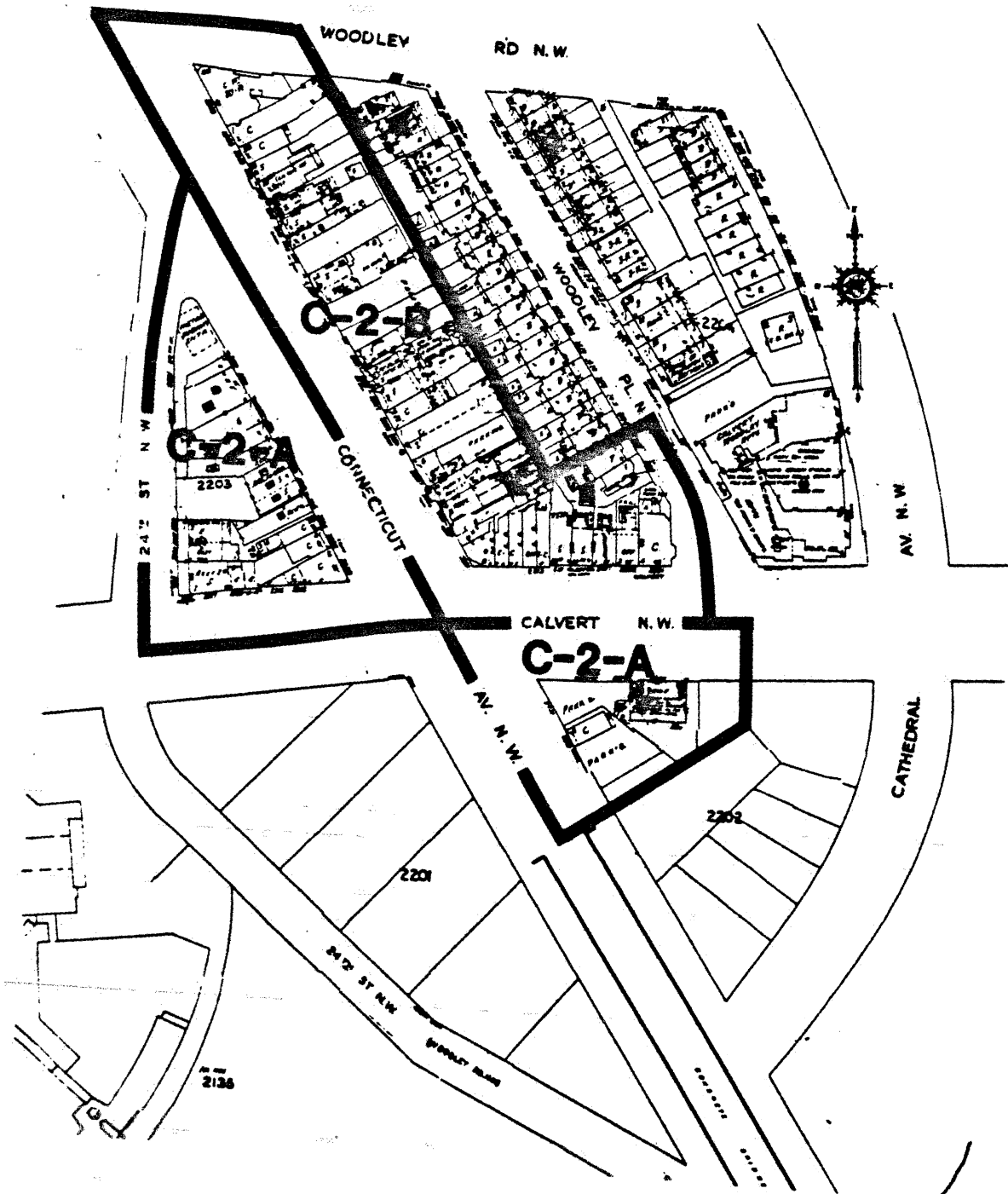
The area surrounding the Woodley Park/Zoo Metrorail station may be considered the second most intense development node on the Connecticut Avenue corridor. This is primarily because of the immediate proximity to the west and north of the Metro station (itself located between Calvert Street and Woodley Road) of two major hotels, the Shoreham and the Sheraton Washington. Both are large in number of rooms, and the Sheraton is also the largest convention hotel in the city, having a large quantity of space for exhibitions, banquets, entertainment and conventions. The presence of these 2,000-plus hotel rooms plus other facilities presents significant parking problems in adjacent neighborhood areas and create and bus and truck traffic. The hotels also represent major economic development for the city, in terms of tourist spending and related business support and sales taxes, including hotel taxes. Also, hotels are a prime source of blue collar jobs, a type of employment on which the city places a high priority because of its importance in diversifying the job base and reducing unemployment in a predominantly white collar economy.

The hotels are zoned R-5-B and R-5-C. Both were built at a time when hotels were a matter-of-right use in these zone districts. However, since 1980 hotels are no longer a permitted new use in R-5-B and R-5-C, but existing hotels are conforming uses which are not permitted to expand.

To the north of Woodley Road, high density apartments in the R-5-C strip extend to the immediate vicinity of the commercial area surrounding the Metro station. To the east is an area zoned R-4 and fully developed primarily with townhouses. East of the R-4 area is the National Zoological Park and Rock Creek Park, which create a natural eastern boundary to private development. Similarly, Rock Creek Park and the Taft Bridge form a physical southern boundary to this Metro station area.

In the middle of these areas is a small commercial area comprising parts of Squares 2202 and 2204 on the east side of Connecticut Avenue and Square 2203, a small triangular block, on the west side. The latter square is zoned C-2-A, contains the Metrorail entrance, and is developed with low-scale buildings of one to three stories, but with one-story structures being the greatest number. A combination of newer and older buildings is present, occupied by neighborhood retail stores, restaurants and a financial institution.

Diagonally across Connecticut Avenue and immediately south of Calvert Street is Square 2202, a small triangular portion



WOODLEY PARK COMMERCIAL AREA

of which is zoned C-2-A and developed with two low-rise structures occupied by a bank.

Square 2204 is zoned C-2-B on its Connecticut Avenue frontage from Calvert Street to Woodley Road and around the southern part of the block frontage on Calvert Street. Across a 15-foot-wide alley from the commercial district the remaining eastern and northern portion of the square is zoned R-4 and developed with townhouses. The commercial frontage on Connecticut Avenue and on Calvert Street is a mixture of two-, three- and four-story converted townhouses. Remarkably cohesive architecturally and with a consistent scale and rhythm, this group of structures is nearly intact and creates a handsome urban environment. Commercial uses include a significant concentration of restaurants plus a few commercial service establishments. A relatively small number of apartments are present, notably in the buildings at the corner of Woodley Road and Connecticut Avenue.

The built frontage on Connecticut Avenue is broken in one location by a surface parking lot of more than 16,000 square feet. Two matter-of-right developments for the site have been designed and considered by the owners. The first is a 65-foot, mixed use building with 52 condominium apartments and 23,604 s.f. of office retail space on the lower two floors. This project went through the large tract review process coordinated by OP. It was found to have an attractive design and favorable mixture of uses, but the proposed height became a critical issue. In response to requests to lower the height of development, the owners prepared a much lower height office-retail development proposal which would leave off the upper floors of apartments and, being smaller in square footage, is not subject to large tract review. The latter development appears more likely to be built.

The C-2-B District has not previously been described. It permits the same commercial FAR maximum of 1.5 as in the C-2-A District. The essential difference in scale is that total density for housing or mixed use buildings is 3.5 FAR and 65 feet in height, as against the 2.5 FAR and 50-foot height permitted in C-2-A. Uses permitted are nearly identical, one important exception being that fast food restaurant requires a special exception in C-2-A but is a matter-of-right use with buffering requirements from adjacent residential zones in C-2-B.

The land use designations for this area from the Comprehensive Plan are as follows. The small commercial core has the same designations as the Cleveland Park commercial area -- Low Density Commercial and Local Neighborhood Commercial Center. To the west of Connecticut Avenue is a large, nodal area indicated for High Density Residential use, which area encompasses areas developed with apartments and with the two hotels. To the east and north of the commercial area are locations indicated as Moderate Density and Medium Density Residential.

These designations seem to imply substantially a continuation of existing zoning and development patterns. The zoning of the existing housing is generally at scale, and numerous Plan policies encourage a continuation and expansion in housing supply. The hotels are permitted to continue indefinitely as conforming uses in the R-5-B and R-5-C Districts but without expansion. The commercial area, particularly the part zoned C-2-B, raises the principal policy issues.

The low density and Local Neighborhood Center designations suggest a continuation of generally low-scale commercial activity, even recognizing the existence of the Metrorail station. In effect, the policy is that the hotels, convention facilities and existing medium and high density housing constitute the economic development envelope for this Metrorail station. The small commercial area at the core is to continue its present function of providing services to hotel visitors, visitors to the National Zoo, and the surrounding neighborhood, but primarily within the physical scale of the existing buildings. The concentration of restaurants in the area, especially on the east frontage of Connecticut Avenue, reflects a service relationship to visitors, and a concentration of restaurants which have become a destination point for residents around the city as well as the neighborhood. The commercial designations in the Plan suggest that this area need not and should not become a significant location for development of office space by means of redeveloping the older, smaller buildings.

The existing C-2-A zoning would appear to accomplish these objectives in Squares 2202 and 2203, although the former would lend itself well to apartment house development with ground level retail. The principal issue has been the C-2-B zoning in Square 2204. In a July 27, 1987 memorandum, the Woodley Park Community Association, Advisory Neighborhood Commission 3C and two individual neighborhood residents petitioned the Zoning Commission to rezone the C-2-B area C-2-A and to rezone 2610 and 2612 Woodley Place from C-2-B to R-4. The latter two properties are townhouses which are

physically part of the row development of Woodley Place in the R-4 District, but because they are the nearest to the Calvert Street commercial frontage they were included in the C-2-B District. The existing zone boundary does follow an alley between the subject townhouses and the main row in the R-4 District. However, there is another alley between the two houses and the commercial buildings fronting on Calvert Street. Accordingly, the Office of Planning believes that these two properties should be rezoned to R-4.

The main issue is simply a concern that the C-2-B zoning could permit matter-of-right buildings that are out of scale with the cohesive row of commercial townhouse structures which make up nearly all of this C-2-B frontage. The predominant height range of these buildings is 25 to 35 feet, whereas C-2-B permits new buildings of up to 65 feet and with a 3.5 FAR. With a PUD development of up to 90 feet and with a 6.0 FAR is permitted. C-2-B tends to imply a degree of redevelopment, whereas C-2-A would tend to create less incentive for redevelopment. The petition also expresses concern that fast food restaurants are matter-of-right uses in C-2-B but require a special exception in C-2-A.

The Office of Planning believes that the strong and attractive cohesiveness of the commercial row along this frontage should generally be conserved rather than redeveloped, and that the narrowness of the alley separating the commercial area from adjacent townhouses (15 feet) is an additional constraint upon the scale of commercial development that should be permitted.

There is a serious access constraint -- the harmonious frontage should not be broken by demolition for driveways to serve larger commercial development, yet the alley system is below the current city standard of 20 feet and should not be overburdened with automobile and truck traffic.

The Office of Planning suggests that the advertised overlay district addresses the same issues as rezoning to C-2-A while also providing other incentives and controls addressing the other planning issues. The principal components of the zone are generally similar to those proposed previously for the Cleveland Park commercial area but with a few changes geared to the different issues here.

1. Mandatory retail use on ground floor. This is intended to assure that the total supply and variety of retail and service uses continues to be adequate. Also, ground floor retail use also

limits total office space that may be built within the 1.5 FAR maximum. If some redevelopment does occur, net retail loss is lessened in contrast with the potential of office use at ground level, which weakens the concentration and total quantity of retail.

2. Prohibition of drive-throughs and of curb cuts through designated street frontages. Driveways conflict with cohesive architectural character, and with access limitations in the area. Curb cut prohibition would apply to Connecticut Avenue frontages, as Square 2203 in particular is a small triangular square bounded by 24th Street and Calvert Street as well as Connecticut Avenue. It will need access from one or both of the former streets.
3. Limits on eating and drinking establishments. As previously stated regarding Cleveland Park, an excessive concentration of eating and drinking establishments can utilize commercial space which might otherwise be devoted to a more balanced mix of retail uses including many with a neighborhood orientation. Bars and restaurants can become a dominant use in a district and price out other uses. The existing concentration of restaurants in the Woodley Park area is a higher percentage of street frontage than in Cleveland Park. However, this is probably in keeping with the much greater visitor component here. Accordingly, the threshold percentage of street frontage for eating and drinking uses should probably be a higher percentage. In the San Francisco Neighborhood Commercial zones, from which this approach is derived, certain commercial areas such as North Beach are accorded a higher percentage due to the function of the area.
4. Height limit. A height limit of 55 feet would keep any new buildings more in scale with existing buildings than the current 65-foot height limit. This is only five feet more than the C-2-A maximum permitted height, and would allow for a 12 to 15-foot ground floor retail level plus four stories of approximately 10 feet each on upper levels. This limitation would have no practical effect on existing C-2-A areas, where the more restrictive 50-foot height maximum would apply.

5. Prohibition on fast food restaurants. This area already serves the immediate area and the city as a whole with a significant concentration of restaurants. These are "sit-down" restaurants in attractive, converted-townhouse settings, with several well-designed sidewalk cafes. In OP's opinion, it would be obtrusive to this setting and function, as well as unnecessary, to permit fast food restaurants. The two small C-2-A squares are both triangular in configuration, and the narrow alley system in the square zoned C-2-B both argue against the much higher automobile trip generation resulting from fast food restaurants as against other restaurants. (A drive-through accessory to a fast food restaurant is already prohibited in both C-2-A and C-2-B zone districts).
6. Prohibition on hotel use. The existing concentration of hotel rooms and related uses is by far the highest abutting a residential neighborhood of any in the city. As a conference center the Sheraton is the second largest in the city after the Convention Center itself, and the large number of hotel rooms has previously been mentioned. In Zoning Commission Case No. 79-1, when hotel use was removed from the apartment house zones as a new use, a complementary action was to remove impediments to hotel development in commercial uses. This was in part because so many hotels had been constructed in residential zones and only a limited number in commercial zones, including Downtown. Regarding the uptown commercial zones, the reason for permitting the guest room portion of hotels to go to the maximum density of the zone was to encourage a degree of tourist hotel development in view of the shortage of such hotels in the city. They would, of course, be in scale with the height and density of other buildings in the subject zone and area. OP believes this is still sound policy city-wide, as there continues to be only a small number of hotels around the city in zones such as C-2-A, C-2-B and C-3-A. However, in the Woodley Park/Zoo Metro station area, a prohibition on hotel use or development in the C-2-A/C-2-B area seems appropriate. The area already has more than its complement of hotel rooms, and there may be a market for some hotel development drawing upon the conference trade of the Sheraton, and the proximity to the Zoo, existing restaurants and the Metro station. Such a hotel, if built, would reduce the quantity of retail and restaurant uses

already in the area for a purpose of doubtful necessity here.

6. Waivers. Over the long term, specific situations are likely to arise when businesses or others might need to request a waiver of one of the provision for the Board of Zoning Adjustment to consider and decide such requests after a public hearing. Specific criteria are included in the text to ensure that waivers will only be granted in ways that further the objectives of the overlay zone and only to properties with exceptional circumstances justifying a waiver.

ADDITIONAL COMMENTS ON THE COMMERCIAL OVERLAY ZONES

1. Justification for the Overlay Approach. The Office of Planning has recommended an overlay approach in the Woodley Park and Cleveland Park commercial areas for several reasons. As noted in the the previous discussion, the existing zoning in both locations represents suitable land use controls consistent with the Comprehensive Plan, for the most part. However, certain distinct characteristics in each area warrant particular controls. The number and type of such distinct features is sufficiently limited that there is no alternative existing zone district in the Regulations which would represent better zoning than the existing C-2-A and C-2-B zoning. It is important to retain all of the myriad details of the existing zones while adding special provisions regarding only a few land development features. In this manner a degree of flexibility is utilized to address opportunities and problems of a specific nature, while the underlying zone plan is not disrupted.

Some examples will clarify the foregoing general statement. At Cleveland Park the presence of 41 percent of the floor area in residential use is unusually high for a C-2-A District. Having made this finding for a specific area, we believe the proposed prohibition on conversion of upper story residential use is reasonable. A text amendment to this effect for C-2-A properties citywide may not be justified at this time. In Woodley Park the extreme concentration of hotel rooms in the abutting residential area is unique in the city and unlikely to be replicated elsewhere in the city in the foreseeable future. There is no basis to map a different zone in this commercial area which precludes hotel development because the available zones would make much of the existing commercial development nonconforming in contravention of the Comprehensive Plan. Nor is there a citywide rationale to prohibit hotel use and development in C-2-A Districts, where very little hotel development has occurred.

In both commercial areas restrictions are also proposed on driveways and drive-throughs from Connecticut Avenue and on fast food restaurants. Such restrictions are proposed based on the specific circumstances of these areas. Citywide many C-2 properties need direct driveway access from the street and auto-oriented uses such as automobile dealerships are necessary and desirable businesses in appropriate locations.

Fast food restaurants in most locations are suitable controlled by the C-2-A and C-2-B provisions governing this use, but are justified by localized conditions. The same rationale applies to the moderate height restrictions proposed in each location. The mandatory ground floor

retail requirement and the controls on eating and drinking establishments are suitable, we believe, to these locations and could not be achieved by rezoning to C-1, for example, and might not be suitable as citywide text amendments in these zones.

We therefore believe that specific circumstances justify the specific controls proposed. We would also state that some of these provisions may later prove desirable on a modified basis as citywide amendments in some of the neighborhood commercial zones. Our case studies are proceeding in a separate effort to update the commercial zones generally. In the meantime we see nothing inconsistent in adopting overlay controls in a particular location which has been the subject of a special study, which controls may later prove desirable on a more general basis. The ultimate test is simply whether the overlay controls in combination with the existing zones serve public purposes in a reasonable manner which is superior to either existing zoning or alternative zones that could have been utilized.

2. Business Enhancement. We see the suggested overlay controls as long-term limits which will ensure continued business vitality over a period of years and avoid negative trends and developments which could easily arise. The Comprehensive Plan, as we interpret it, clearly calls for these areas to be active business centers but at a relatively low scale in terms of building bulk. There is room for reasonable debate over the precise scale of development intended in the Plan, but arguments that these areas should undergo major redevelopment to medium-high density because they are adjacent to Metrorail stations are essentially outside the scope of this zoning case and are instead arguments that the Comprehensive Plan should be amended.

Within the land use guidelines of the Plan, it seems clear to us that continuous ground level retail activity is desirable, that redevelopment projects involving a series of driveways off Connecticut Avenue serving freestanding, auto-oriented uses would be inimical to the future capability of these areas to provide a diversity of retail and entertainment services. Both commercial areas have a positive component of eating and drinking establishments.

At the same, we believe it is desirable to set outer limits now to prevent a potential "Georgetown effect" at some future time. It is important to note that this control does not create any economic penalty upon any existing bar or restaurant, and there is latitude for additional matter-of-right businesses of these types before the 25 percent limit is reached. It is equally important to note that the proposed height limitations are not of such

magnitude as to result in a loss of permitted commercial density or FAR except on a highly unusual site, if any. It is the leasable floor area of a building, not its height, which primarily generates total rents and building value. In this sense there is no "downzoning" involved.

In summary, the various controls are all intended to ensure businesses, property owners and the surrounding neighborhood and the general public that the long-term future of these areas will be economically sound and vital, even though they are not designated in the Comprehensive Plan to be major redevelopment areas during the time period in question, 1985-2000.

3. Planned Unit Development. As originally drafted, the overlay zones control only matter-of-right development and do not place special limits on planned unit developments. The rationale for excluding such special controls was that each PUD must be approved according to relatively stringent public interest criteria. However, it is also true that each of these areas has an unusual condition which suggests that special PUD limits on height and bulk should be considered. In the case of Cleveland Park, the commercial area lies within the historic district, wherein public policy indicates that new buildings should not be completely out of scale with the predominant height and bulk of existing buildings. In Woodley Park, the C-2-B zone presents the peculiar circumstance. The PUD guidelines for this zone provide for an unusually large increase in height and bulk of development with a PUD, namely, from 65 to 90 feet in permitted height and from 3.5 to 6.0 FAR. A development at 90 feet and 6.0 FAR would be severely out of scale with existing development and Comprehensive Plan development goals for the areas. OP does not have a specific proposal to make at this time but is considering alternatives and will comment further during the course of this case.

4. Administrative Error, Square 2082. Square 2082, in the Cleveland Park C-2-A area, was inadvertently omitted in retyping the Cleveland Park overlay district in the form in which it was submitted to the Commission for hearing action. Accordingly, this Square was not specifically advertised in the Notice of Public Hearing. The intent of the overlay zone is to include all of the subject C-2-A District. OP accordingly recommends that the Commission and the Zoning Secretariat take any further action regarding notice that is deemed legally necessary and desirable. We regret the omission.

RECOMMENDATION

Based on the analysis in this report and in the Connecticut Avenue Corridor Study, the Office of Planning recommends adoption of the advertised zoning amendments, with modifications as indicated and as further discussed in testimony at the hearing. The recommended actions would therefore include: rezoning affected lots in Squares 1872, 1875 and 1876 from R-5-C to R-5-B; rezoning affected lots in Square 2039 from R-1-A to R-5-C; rezoning lots 137 and 138 in Square 2204 from C-2-A to R-4; and adopting overlay provisions and potential PUD limitations in the Cleveland Park and Woodley Park commercial areas.

Attachments

SMS/NG:vpg

Memorandum

Government of the District of Columbia

TO: Fred L. Greene
Director
Office of Planning

FROM: *Wallace J. Cohen*
Wallace J. Cohen
Acting Administrator

Department, Public Works
Agency, Office: Policy and Planning

Date: January 7, 1988

SUBJECT: Zoning Commission Case No. 86-26 - Rezoning parts of
Connecticut Avenue, N.W.

We have reviewed the application and supporting material accompanying your December 16 memorandum. This memorandum addresses the transportation aspects of the proposal.

The Proposal

The specific proposal to amend the Zoning Map is to change the zone district classification of the following properties:

1. Change to R-3 those lots in Squares 1872, 1875 and 1876 which are currently zoned R-5-C;
2. Change to R-5-C those lots in 2039 which are currently zoned R-1-A;
3. Change to C-2-B/WP (Woodley Park Commercial Overlay) those lots in Square 2204 which are currently zoned C-2-B;
4. With respect to lots 137 and 138 in Square 2204, consider alternatively a change to R-4;
5. Change to C-2-A/WP (Woodley Park Commercial Overlay) those lots in Squares 2202 and 2203 which are currently zoned C-2-A; and
6. Change to C-2-A/CP (Cleveland Park Commercial Overlay) those lots in Squares 2218, 2219, 2222, 2068 and 2069 which are currently zoned C-2-A.

In addition, the Zoning Commission will review the traffic findings and conclusions of the Connecticut Avenue Corridor Study done by the Office of Planning with the assistance of this Department.

1986 JAN 1 PM 2 35
ZONING COMMISSION
DISTRICT OF COLUMBIA

The Impact of the Proposal

Each specific parcel rezoning proposal was reviewed as well as the following:

1. Creation of the Woodley Park Commercial Overlay and its regulations;
2. Creation of the Cleveland Park Commercial Overlay and its regulations; and
3. The Connecticut Avenue Corridor Study.

Rezoning Squares 1872, 1875 and 1876

This proposal would change the zoning of the subject Squares from R-5-C to R-3. This represents a rezoning to a less intense use as the R-5-C district allows medium/high density residential development while the R-3 District allows row dwellings. With the down zoning, we conclude that less traffic would be generated by potential development. Therefore, we have no objections to the proposal.

Rezoning Square 2039

This proposal represents an increase in the intensity of the land use for this Square. R-1-A allows single-family detached residential development while R-5-C allows medium/high density residential development. However, we do not foresee a decrease in the level-of-service indications for major intersections in the area. Therefore, we have no objections to the proposal.

Creation of Woodley Park (WP) Commercial Overlay and Rezoning of Parcels 137 & 138, Square 2204

Essentially, from a transportation viewpoint, creation of this Overlay District will make three important changes: (1) Restriction of curb cuts on Connecticut Avenue; (2) Restriction of retail uses to the ground floor of developments; and (3) Restriction in the range of retail uses allowed in this zoning District.

With regard to the Office of Planning's recommendation to restrict curb cuts on Connecticut Avenue, we have this proposal under review, however, we conclude that the restriction appears philosophically consistent with this Department's policy. As Connecticut Avenue is a major arterial, minimizing the number of curb cuts and therefore lessening the opportunity for vehicle turns, aids in the street's traffic flow.

Restricting retail uses to the ground floor of developments, lessens the square footage devoted to retail uses. This aids in decreasing the traffic generated by potential developments as retail use is usually a high traffic generator. In addition, the proposed restriction of retail uses to those uses which do not generate high traffic volumes as set forth in this proposal, also decreases potential development traffic. Therefore, we have no objections to these provisions.

Finally, we have no objections to the alternative rezoning of Lots 137 and 138, Square 2204 from C-2-B to R-4 as the permitted uses under the R-4 District will not generate as much traffic as the permitted uses in the C-2-B District.

Creation of Cleveland Park (CP) Commercial Overlay

Our comments concerning the creation of the Woodley Park Overlay District are applicable to the creation of this Overlay District.

Connecticut Avenue Corridor Study

A copy of this Department's original submittal to OP for this study is attached. It includes an overview of the design, methodology and findings of the study. The proposed zoning changes will not significantly alter the transportation impacts detailed in the study and in fact, will lessen them somewhat.

Attachment

V. Transportation Assessment

A. Introduction

This chapter of the Connecticut Avenue Study deals specifically with the traffic implications relating to existing and Year 2000 land use and development scenarios. Calculations also include anticipated traffic growth whether or not development occurs. This is referred to as natural growth. This chapter includes a summary of the traffic findings, a discussion of the study design, an analysis section and conclusions.

Although the transportation research and analysis provides good general analysis of present and future traffic conditions on Connecticut Avenue, inherent limitations need to be noted. Due to the restricted nature of the transportation analysis undertaken, the study was not able to:

- ° assess the impact of Metro on traffic conditions on Connecticut Avenue and the opportunity for increased transit use.
- ° perform a detailed analysis of the impacts of regional growth on the corridor. Growth rates were, however, extrapolated from historical trends.
- ° analyze potential changes in side street traffic.
- ° utilize the Metropolitan Council of Governments' (COG) long-range forecasting data to predict future traffic volumes on Connecticut Avenue and the arterial streets which cross it.
- ° analyze any options other than worst case development and through traffic growth.

B. Summary of Findings

This summary presents the findings of a traffic engineering study of the present and anticipated future quality of vehicular traffic flow along Connecticut Avenue. To provide a more accurate assessment of Connecticut Avenue with its varying land uses and

geometry from Western Avenue to Calvert Street, the Avenue was divided into four relatively homogeneous zones as follows:

- Zone 1: Western Avenue to Nebraska Avenue
- Zone 2: Nebraska Avenue to Tilden Street
- Zone 3: Tilden Street to Macomb Street
- Zone 4: Macomb Street to Calvert Street

The analysis consisted of determining the present and future levels of service (LOS) of traffic flow. Levels of service range from A to F, as detailed in a following section. Future for this study was determined to be the Year 2000.

Existing traffic volume data were collected and future traffic volumes (based on the existing traffic volume data, natural traffic growth factors, and the Year 2000 projected zoning/land use growth factors) were projected.

In general, the findings are shown below.

- Present rush hour traffic flow along all zones of Connecticut Avenue indicates levels of service ranging from A to E, with levels of service A, B, and C predominating.
- In Zone 1, most intersections exhibit a drop of one service level during rush hours before TSM measures are implemented. After implementation, service levels are restored to existing levels.
- In Zone 2, future typical rush hour levels of service are anticipated to decrease from B and C to C and D and the only problem intersection is at the Metro station at Van Ness Street in the PM peak.
- In Zone 3, the levels of service remain good at all intersections except Porter Street which will require Transportation System Management (TSM) measures to maintain the current level of service.
- In Zone 4, there are no intersections with current or projected serious level of service problems.
- The traffic growth on Connecticut Avenue due to development is localized and is not expected to

cause serious traffic congestion either on Connecticut Avenue or in the Connecticut Avenue Corridor.

- The implementation of Transportation System Management (TSM) techniques at intersections with projected low levels of service can improve the quality of flow at most intersections by one level of service.

C. Study Design

The ability of Connecticut Avenue to handle the existing and projected traffic was evaluated by the use of the nationally accepted Highway Capacity Manual* methods, specifically by the use of levels of service calculations.

"Level of service" is defined as follows: Level of service for signalized intersections is defined in terms of delay. Delay is a measure of driver discomfort, frustrations, fuel consumption and lost travel time. The inputs into the level of service (LOS) calculation are traffic volumes, turning traffic, number of lanes on each approach, traffic signal timing apportionment and percent of trucks and buses.

Six levels of service are defined for signalized intersections. They are given letter designations, from A to F, with level of service A representing the best operating conditions and level of service F the worst. The normal condition on major arterial routes in Washington are levels C and D.

Level of Service Definitions: In general, the various levels of service are defined as follows:

- Level of service A describes operations with very low delay, i.e., less than five seconds per vehicle. Most vehicles arrive during the green signal phase and do not stop at all. This generally occurs with extremely favorable signal progression and short cycle lengths.

*Highway Capacity Manual, Special Report 209, Transportation Research Board, 1985.

- Level of service B describes operations with delay in the range of five to 15 seconds per vehicle. More vehicles stop at traffic signals than for levels of service A but traffic movements are generally stable with a minimum of congestion.
- Level of service C describes operations with delays in the range of 15 to 25 seconds per vehicle. Individual cycle failures (all vehicles stopped for red signal not clearing intersection on next green signal) may begin to appear at this level. The number of vehicles stopping is significant although many still pass through the intersection without stopping.
- Level of service D describes operations with delay in the range of 25 to 40 seconds per vehicle. At level D the influence of congestion becomes more noticeable. Many vehicles stop and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
- Level of service E describes operations with delay in the range of 40 to 60 seconds per vehicle. This is considered to be the limit of acceptable delay. These high delays generally indicate high volume to capacity ratios and individual cycle failures are frequent occurrences.
- Level of service F describes operations with delay in excess of 60 seconds per vehicle. This is considered to be unacceptable to most drivers. This condition occurs when arrival flow rates exceed the capacity of the intersection.

The study was performed in two parts: one concentrated on the existing traffic and the other for target Year 2000. The methodology used to conduct each part is described below.

1. Existing Conditions

The current condition of traffic flow on Connecticut Avenue was determined by performing

peak and midday level of service analyses at a number of critical intersections within each study zone. These intersections are presented on Figure 1.

Current traffic volume information was gathered for each of these intersections from existing traffic counts or new counts conducted for this study. This traffic data consisted of hourly volumes for each leg of each intersection. This data also included the number of vehicles turning both left and right at each intersection.

Other data assembled to calculate levels of service was traffic signal phasing, roadway geometry, truck volumes and parking regulations for the approaches to each intersection.

All the data was inserted into a computer software package that generated a.m., p.m. and midday levels of service for the critical intersections. The results of these calculations are presented in Table 1.

2. Year 2000

The future traffic volumes for Connecticut Avenue and selected intersecting streets were developed considering both the natural growth in through traffic in the corridor and the increase in induced traffic generated by the development detailed in the Year 2000 plan. These two components were then combined to provide a percentage increase in traffic for each of the four study zones.

The following assumptions, based on time constraints, the availability of data and professional judgement were made for this analysis.

the growth in peak and midday through traffic is the same for all zones.

the growth in locally induced traffic is different for each of the four study zones.

through traffic accounts for 70 percent of the existing flows on Connecticut Avenue and

locally generated trips account for the remaining 30 percent during peak hours. During the nonpeak hours, the through traffic accounts for 50 percent of the volume on Connecticut Avenue and locally induced traffic generates the remaining 50 percent. These assumptions were based on data from the Washington Metropolitan Council of Governments. These splits in traffic are assumed to be constant for the entire area.

(a) Through Traffic Growth: An examination of traffic trends along Connecticut Avenue over the past 10 years shows little to no growth in peak period flows and small increases in nonpeak flows, although a 2 percent growth has occurred since 1982 along the avenue in the nonpeak hours. The determination of trends for Connecticut Avenue is complicated by the effects of gasoline shortages in the 70s and early 80s and the opening of Metrorail service to and beyond the D.C. line. For the purpose of this study, however, a one percent annual growth rate in through traffic, which is in excess of current trends, was assumed. For the midday periods and weekends, a 2 percent annual growth rate was assumed. This rate has only occurred for the past few years and is not a long-term trend. However, it will be representative of a worst case analysis.

(b) Local Traffic Growth: The technique for projecting local traffic increases on Connecticut Avenue was based upon the changes in land use in the four study zones. Numbers on existing and projected land use were obtained from the Office of Planning for each block along Connecticut Avenue. The data was then aggregated into the four study zones. Standard trip generation factors based upon the type and magnitude of each land use were utilized to generate total trips from uses within each zone for the existing situation and the Year 2000 scenario stipulated by the .

Office of Planning. The ratio of the Year 2000 trips to existing trips was factored to project local growth. For example, if the total trips generated from a zone in 1986 was 1,000 and the total trips generated in the Year 2000 was 1,500, the increase in local traffic would be 50 percent.

The increase in local traffic for the four zones generated by this technique are:

- Zone 1: 44 percent increase
- Zone 2: 32 percent increase
- Zone 3: 39 percent increase
- Zone 4: 14 percent increase

(c) Total Traffic Increase: The through and locally generated traffic was then combined to provide an overall peak and nonpeak traffic growth factor for each study zone. The growth factors were generated as in the following example:

- Existing Peak Hour Traffic Volume: 1,000 vehicles per hour
- Through Component: 700 vehicles per hour (see assumption #3)
- Local Component: 300 vehicles per hour
- Study Zone: #4

Formula for Obtaining Total Future Peak Hour Traffic:

700 (1.01)	[Through Traffic x 1% percent per year growth (1986-2000)]
+ <u>300 (1.14)</u>	[Local Traffic x Zone Increase]
Total	

The total growth in each zone by time period is listed below, as is the natural and induced component of the growth.

Zone	Total Percentage Increase		Natural Growth		Induced Growth	
	Peak	Nonpeak	Peak	Nonpeak	Peak	Nonpeak
1	24	36	15	32	44	44
2	20	32	15	32	32	32
3	22	34	15	32	39	39
4	14	27	15	32	14	14

These factors were applied to the existing traffic volumes along Connecticut Avenue. The resulting volumes were used to calculate the Year 2000 level of service at the selected study intersections on Connecticut Avenue for the peak and nonpeak periods.

The future levels of service for these intersections were also calculated considering the implementation of various TSM activities, including left turn restrictions, reversible lanes on Connecticut Avenue, minor roadway widening and the removal of permissive curb parking.

3. Treatment of Side Street Impacts

The staff reviewed the issue of potential side street impacts for the Year 2000 scenario. Although several methods of analysis were considered, it was concluded that no simple method of forecasting these changes exists. Time was not sufficient to review historical data to determine trends of the many streets crossing, and parallel to, the corridor. With more time, this could be done and general trends projected showing streets impacted due only to increasing traffic levels. However, the staff also lacks site-specific information (such as building uses and access points) which is necessary to predict individual street impacts from possible land use changes. The information available from the new large tract review process will provide the type of data necessary to this analysis in the future.

Despite these limitations, several assumptions can reasonably be made.

- (1) As development related traffic growth is minimal and Connecticut Avenue is expected to operate at an acceptable level, side street impacts are not anticipated to be a major problem.
- (2) Generally increasing traffic congestion along the corridor, described in the Analysis section of this chapter, may result in some drivers attempting to take alternate routes through the surrounding neighborhoods.
- (3) Traffic attracted to new development on the Avenue may also use local streets (the location of the development will largely determine which streets) to get to the corridor from points east and west.
- (4) Without physical changes to the road network in the area, the streets most likely to see the greatest impact from generally increasing traffic levels are those currently used as collectors and arterials.

Mitigation of many of the impacts that may occur is possible with advance planning and standard TSM measures.

D. Analysis

Table 2 shows the present and projected future weekday levels of service along Connecticut Avenue. There are two columns of future levels of service. The first column contains the levels anticipated with no traffic capacity improvements implemented throughout the corridor. The second column contains levels of service anticipated with the implementation of transportation system management (TSM) improvements at intersections with future levels of service of E or F. These improvements include the extension of the reversible lane operation on Connecticut Avenue in the peak periods, restricted parking at selected areas along Connecticut Avenue, turning restrictions and/or the addition of turning lanes at selected intersections and traffic signalization improvements.

The traffic projections for these levels of service were generated by zones and the analysis of impacts will, therefore, be summarized by the same zones.

Zone 1 - Western Avenue to Nebraska Avenue

The additional traffic expected due to natural growth and development related growth will not cause a serious degradation of traffic service during the peak periods.

Only two intersections, Military Road and Nebraska Avenue, exhibit levels of service E and/or F under the future case. The implementation of TSM techniques will improve the level of service at both intersections. All other intersections are projected to perform at good levels.

Midday levels of service decline only slightly and remain good at all intersections except Military Road which declines to level of service D.

Zone 2 - Nebraska Avenue to Tilden Street

The moderate development expected in this zone and the natural growth expected in through traffic do not have a serious impact upon service levels. The intersections projected to have service levels of E or F, Tilden and Van Ness Streets, are experiencing congestion at the present time and will require TSM techniques to maintain acceptable levels of service.

Midday traffic conditions are good at the present time and are not expected to decline significantly by the Year 2000.

Zone 3 - Tilden Street to Macomb Street

Minor peak period congestion occurs at present at Porter Street and will worsen in the future to service level E. TSM measures are necessary to bring the future levels back to existing conditions.

Midday levels of service remain good at all intersections in this zone.

Zone 4 - Macomb Street to Calvert Street

There is very little development induced growth in this zone and future traffic levels reflect this minimal growth. The normal projected growth in through traffic produces a decline of a maximum of only one level of service at most intersections throughout the day.

The overall minor decrease in levels of service in all four zones indicates that projected increased traffic levels within the Connecticut Avenue corridor will not be of a magnitude to cause serious levels of congestion. Development growth is minimal and transportation impacts will not be a cause for changes in development plans in the Connecticut Avenue corridor.

TABLE 1
EXISTING LEVELS OF SERVICE
CONNECTICUT AVENUE AT:

	AM PEAK	MID-DAY	PM PEAK
OLIVER STREET	A	A	B
MCKINLEY STREET	D	B	E
LIVINGSTON STREET	B	A	A
MILITARY ROAD	E	A	E
JENIFER STREET	A	A	A
HUNTINGTON STREET	A	A	A
NEBRASKA AVENUE	E	A	E
FESSENDEN STREET	B	A	A
DAVENPORT STREET	B	A	A
BRANDYWINE STREET	C	A	A
ALBEMARLE STREET	C	A	B
YUMA STREET	C	A	B
WINDOM STREET	C	B	C
WEAZEY STREET	C	B	C
VAN NESS STREET	C	B	E
TILDEN STREET	D	B	C
SEDGEWICK STREET	A	A	A
PORTER STREET	C	A	C
ORDWAY STREET	A	A	A
MACOMB STREET	A	A	B
DEVONSHIRE PLACE	A	A	A
ZOO ENTRANCE	A	A	B
CATHEDRAL AVENUE	B	A	C
WOODLEY ROAD	C	A	A
24TH STREET	A	A	A
CALVERT STREET	C	B	B

TABLE 2

EXISTING AND PROJECTED LEVELS OF SERVICE AT
INTERSECTIONS ALONG CONNECTICUT AVENUE - YEAR 2000

LOCATION	AM PEAK			MID-DAY			PM PEAK			TSM MEASURES
	E			E			E			
	X	FUTURE		X	FUTURE		X	FUTURE		
	I	N	T	I	N	T	I	N	T	
	S	O	S	S	O	S	S	O	S	
	T		M	T		M	T		M	
	I	T		I	T		I	T		
	N	S		N	S		N	S		
	G	M		G	M		G	M		
<u>Zone #1</u>										
Oliver	A	B	A	A	A	*	B	D	B	Reversible Lane No Left Turn
McKinley	D	E	D	B	D	*	E	E	D	
Livingston	B	C	B	A	B	*	A	C	B	
Military	E	E	E	A	D	*	E	E	E	
Jenifer	A	A	*	A	A	*	A	A	*	
Huntington	A	A	*	A	A	*	A	A	*	Parking Restrictions
Nebraska	E	F	E	A	C	B	E	E	E	
<u>Zone #2</u>										
Fessenden	B	C	*	A	A	*	A	B	*	
Davenport	B	C	*	A	A	*	A	B	*	
Brandywine	C	D	*	A	A	*	A	B	*	
Albemarle	C	D	*	A	B	*	B	C	*	
Yuma	C	D	*	A	B	*	B	C	*	
Windom	C	D	*	B	B	*	C	D	*	
Veazey	C	D	*	B	B	*	C	C	*	
Van Ness	C	C	*	B	C	*	E	F	E	
Tilden	D	E	C	B	D	B	C	D	C	
<u>Zone #3</u>										
Sedgewick	A	B	*	A	A	*	A	B	*	Turn Restrictions
Porter	C	E	E	A	A	*	C	E	D	
Ordway	A	A	*	A	A	*	A	B	*	
Macomb	A	B	*	A	A	*	B	C	*	
<u>Zone #4</u>										
Devonshire	A	B	*	A	A	*	A	B	*	Remove W/B Parking
Zoo	A	B	*	A	A	*	B	C	*	
Cathedral	B	C	B	A	B	*	C	D	D	
Woodley	C	C	*	A	A	*	A	A	*	

24th
Calvert

A B *
C D D

A A *
B C *

A A *
B C *

* - No TSM Measures Proposed

E. Conclusions

Based on the analyses conducted as part of this study, several conclusions may be drawn.

- ° Existing levels of service, with few exceptions, are good for all time periods throughout the length of Connecticut Avenue.
- ° The impact of the development proposed in this study upon future traffic levels is minimal and does not warrant any change in current development plans.
- ° Any side street impacts will be localized and should not be attributable to unacceptable levels of service on Connecticut Avenue.
- ° Future peak period levels of service at a few intersections will deteriorate to a point that TSM measures will be necessary to maintain existing service levels. These measures may include:
 - Parking restrictions near intersections
 - Turning restrictions
 - Bus bays
 - Extension of the current reversible lane operation