ROCK CREEK PARK

REPORT BY

~OLMSTED BROTHERS~

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ROCK CREEK PARK

A report by

OLMSTED BROTHERS

December 1918.

FOREWORD

The dominant consideration, never to be subordinated to any other purpose in dealing with Rock Creek Park, is the permanent preservation of its wonderful natural beauty, and the making of that beauty accessible to the people without spoiling the scenery in the process.

Its preservation differs radically from the protection of any unchanging thing of beauty in a museum in that it involves an unending watchful struggle to neutralize destructive forces inevitably acting on the scenery; to reinforce and supplement its natural powers of resistance and recuperation; and patiently, skilfully, and humbly to restore the actual deterioration. The scenery of the Park cannot remain absolutely static; it is always changing for better or for worse. In many respects it has for years been deteriorating. The great problem of its

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management is to convert progressive deterioration into progressive restoration.

To clarify understanding of these basic principles, and to point out as far as possible appropriate ways and means of applying them is the prime endeavor of this report.

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The report is accompanied by the following drawings:-

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Note. Two prints of this plan are submitted:
1. A plain colored print without topography.
2. A colored print combined with topography.

Plan No. 29. A diagram (scale 1000' = 1") showing primary divisions of Landscape and Administration.

Plan No. 30. A diagram (scale 1000' = 1") showing proposed adjustments of boundaries.

Plan No. 31. A copy of the street map of the District of Columbia showing the relation of the proposed traffic lines across the park to the present and proposed street system of the District.

Plan No. 35. A detailed grading plan (Scale 40' = 1") for a park drive extending from Daniel Road at Rittenhouse Street to Beach Drive.

Plan No. 42. A profile to accompany grading plan No. 35.

Plan No. 36. A preliminary plan (scale 80' = 1") for the development of the area near the Brightwood Reservoir as a special recreation ground.

THE REPORT

1. THE JUSTIFYING VALUE OF THE PARK.

It is unnecessary to praise the very exceptional natural beauty of Rock Creek Park, because it is well known and widely appreciated.

But it is important to emphasize the fact that it is upon the subtle qualities of this essentially wild and natural beauty that the public value of the Park mainly depends. The real justification for this large park is unquestionably found in the recreative value of its natural qualities - large stretches of forest, the river valley, dark ravines, steep and rolling hills, and occasional meadow lands - and no use or exploitation or development of any sort can ever be right that is not based upon this fundamental conception. To recognize this fact may not make it easy to plan the proper development and use of the park, but will make it easier to appreciate what should <u>not</u> be done; and in the nature of the case that is the more important.

But no matter how perfect the scenery of the Park may be or may become, no matter how high its potential value, that value remains potential except

insofar as it is enjoyed by large and ever larger numbers of people, poor and rich alike.

This conception leads to three fundamental considerations in accordance with which the Park must be developed and upon which our study of the situation has necessarily been based. First, its interesting, varied, natural scenery must be saved intact insofar as possible, must in some respects be restored or perfected by intelligent, appreciative landscape development, and must not be replaced by other and more or less foreign types of "treatment". Second, the Park must be opened up to the driving, riding, and walking public; but the roads, paths, and other accompaniments of intensive use must be so located and so built that the essential qualities of the Park are impaired in the least possible degree. Third, adequate transportation must be provided to and into the Park for people dependent upon street car service.

Analysis of Scenery

What is the innate character of this natural landscape? What are those subtle qualities which give it a beauty so distinctive and so precious? Definition and analysis are not easy. Nevertheless it is a clear appreciation and understanding of those very qualities that must now and for all time guide the maintenance and development of the Park.

Fundamentally the scenery is of two sorts.

First are the larger landscape pictures made primarily by the ground forms - the topography - but supplemented and enriched by the masses of woods and stretches of open field. In these pictures the individual tree, the shrub, the boulder, the flowering plant, or the happy grouping of plants plays only a very secondary part; they are merely some of the countless elements which go to make the infinite diversity and beauty of the texture of the larger scene. The land forms of the Rock Creek Valley - and this valley with its ramifications furnishes nearly all of the larger scenery of the Park - are of considerable variety. Here the valley is narrow and gorge-like, with rocky forest-clad sides dropping abruptly to the Creek which breaks and tumbles along over a stony bed. Here the enclosing hillsides fall back and become less steep and rugged, the stream flows more slowly and quietly between overarching trees through a broader and more peaceful valley with an occasional open hillside or a bit of grassy meadow. The scenery becomes more restful and more simple in its beauty. Again there is the contrast of bold picturesqueness on one side and gentle slopes or open fields on the other. These types of scenery are found in endless variety and beauty of form and detail: they vary with every point of view and again with every season of the year and every hour of the day. Best of all they are pictures

within the Park - the everchanging landscape of a winding river valley and its tributaries, enclosed and guarded by the forest-covered hills on either side. This is the larger scenery of the Park.

The other is that more intimate and smaller scenery which is based not upon the major formations of hills and valleys, but rather upon the details of ground form and upon the character and beauty and happy combinations of the trees and shrubs and flowers that grow there. Rugged gray ledges softened with moss and contrasted with picturesque groups of Kalmia; a gnarly old plane tree or group of hornbeams or of river birches overhanging the water; the moist bank of a dark, wooded ravine carpeted with ferns; the spreading oak in the open field; the crooked form of a dogwood arching over a woodland trail; the sudden accents of the cedars and their pleasing combinations of color and form with sumac and sassafras and scrubby ground covers; and most important of all, the everchanging picture as one wanders through the forest; the forms and groupings of tree trunks, the variety and intricate detail of the under-growth of woodland shrubs and young trees, and the delicate forms and infinite variety of the ferns, mosses, creeping vines and woodland flowers, the natural ground cover of the forest - these make the more intimate scenery of the Rock

Creek valley. And because it is a large valley with many different topographical forms and situations, it offers a great and unusual variety in this smaller scenery, these very precious details of the natural landscape.

These two sorts of scenery are not peculiar to Rock Creek Park, but in this beautiful valley with its many ramifications they are found in a high degree of perfection and in almost unlimited variety. It is the extraordinary combination of this circumstance with the proximity of the valley to a great city that gives to the Park its unique value. This is the value which was first preserved by Act of Congress for the benefit of all people. It is now and always will be the only value that can justify the maintenance of this great natural park.

For Rock Creek Park represents a very large public investment, the size and importance of which are measured not alone by the great sums actually spent for land and improvements, but also by the steadily increasing economic burden of interrupting the convenient and normal movement of street traffic, and of withholding so vast an area of land within the city from residential and commercial use. It is held in trust for the purpose of securing to the people certain benefits obtainable by no other means. To justify this great investment it is

necessary first, to safeguard and restore its permanent productive value for the peculiar purposes of the trust, and second, to increase the current returns as much and as rapidly as practicable.

Progressive Deterioration versus Progressive Restoration.

Briefly there are four principal agencies which already have worked serious injury to the scenery, - and so to the permanent value - of this Park. They are (a) lumbering, (b) plant diseases and insect pests, (c) fires, and (d) weed growths. The first is no longer an active source of danger; but in the past, mature seedling forest has been cut off only to be replaced by a less interest- and shorter lived growth of coppice, or by thickets of quick-growing, short-lived or otherwise weedy trees like the scrub pine. The other three agencies, active or latent, are constant sources of danger, and incessant watchfulness and intelligent appreciative care will always be required in order to minimize their depredations and to repair, as far as may be, the losses incurred.

The damage which may be done by disease or insects is clearly illustrated by the effect of the chestnut blight, which has killed nearly all the chestnut in Rock Creek Park, and by the ravages of the gipsy moth in the parks about Boston. Probably little could have been done to check the chestnut blight in Rock Creek Park, but prompt removal of the dead trees and con-

trol of what is to replace them are extremely important. It was only untiring effort and almost unlimited funds that finally saved the trees of the Boston parks from destruction. A quicker recognition of the danger and a prompter effort to meet it would have greatly reduced both the damage and the expenditure of funds. Fortunately Rock Creek Park has so far escaped this pest; but when it does come, or another like it, the organization ought to be such as to assure its prompt discovery and the immediate inauguration of effective measures to stop it. The destruction even of a single tree may spoil the beauty of some choice bit of scenery, and every such loss is a step toward deterioration. The inroads of disease and insect pests are so insidious, they so easily attain dangerous proportions before they are recognized, that the importance of a constant, keen watchfulness cannot be over-emphasized.

The damage from fire is perhaps more readily understood, and yet the full extent of the losses is probably seldom appreciated. Directly, the damage may be measured by the destruction of all the living elements of the scenery. It is difficult to exaggerate the direct injury that is done even by the smaller fires which kill or scorch the shrubs and the groundcover; for after all, it is the endless variety and intricate beauty of these lesser plants that make the rare richness of the woodland

scenery. Indirectly, the damage from a fire, large or small, may be measured sometimes by the scorching and weakening of the forest trees, and always by the loss of humus. And that means a very serious handicap in rebuilding the scenery whether by the natural processes of reproduction or by planting. It is the twigs and bushes and smaller plants that hold the fallen leaves which protect the seedlings and, by retting, replenish the soil. Where fires have run, the leaves blow away and the ground tends to become increasingly dry and barren and bare.

There are many places in the Park where just this situation has developed; and a considerable effort and expense will be required to re-establish there the natural conditions of richness and beauty of the forest interior. The prevention and instant stoppage of fires will not only save the original beauty of the woodland scenery, but will also save the costly and tedious process of re-creating that beauty which made the original value of the Park.

A rather more subtle factor in the process of deterioration is the growth of weeds. Broadly speaking the weeds are of three classes. First, are the plants - trees, shrubs or herbaceous plants - which are undesirable because of their inherent character. A tree of short life and of relatively uninteresting appearance

like the scrub pine is a good example. Second, are the plants which are undesirable on account of the disproportionate quantity in which they appear. Some of the large areas of river birch in the northern part of the Park, or the large-growing oaks on the picturesque cedar-clad hill top around Fort De Russey are fair examples. Finally, there are the plants which, whatever their inherent value and individual character, are in the wrong place. Too many pines in a composition of cedar and sumac; the stiff row of evergreens screening one of the swimming holes - these are weeds because they intrude upon scenery that would be more beautiful without them.

The unchecked growth of weeds is not only a progressive form of loss to the beauty of the Park, but it retards the developing and perfecting of those qualities of scenery which comprise, in the last analysis, the real value of Rock Creek Park.

To stop the process of progressive deterioration of fundamental values, and to inaugurate a process of progressive restoration and conservation must be the basic purpose of any policy of control, and the first responsibility of those in charge of its administration.

2. PRIMARY LANDSCAPE AND ADMINISTRATIVE DIVISIONS.

With this analysis of the essential qualities of the scenery always in mind, and with full appreciation of the need for a far more intensive use of the Park, and for more ready accessibility, we have first attempted to determine the primary or fundamental divisions of the Park for landscape and administrative purposes. A clear definition of these major divisions and a statement of the essential uses or purposes of each are of fundamental importance, as defining the general policies of development and maintenance. For without the establishment of such a general plan and controlling policy, and without a consistent adherence to one plan and to one policy, the usefulness - the value - of the Park must inevitably suffer. Vacillation between two or more different purposes, no matter how good these purposes may be, means inevitably an unprofitable use of funds, and it may mean very serious or even irreparable damage to those qualities of landscape which constitute the essential value of the Park.

Assuming for the time being certain conclusions (to be described later) regarding thoroughfare crossings and points of access to the Park, we have been able to make at least a tentative definition of these major divisions and we have indicated them on the accompanying diagram No. 29. No hard and fast limits can be set for

these divisions as they must necessarily merge one into the other, but the outlines shown are intended to indicate approximately the regions where the requirements of one use or one fundamental value should give place to those of another. The divisions may be described as follows:

Division A
Valley Section

Of perhaps first importance is the Rock Creek Valley - Division "A" in the diagram. This is topographically and psychologically the backbone, as it were, of the Park, and it would be a great misfortune if any use should develop that would to the least appreciable degree injure the present charm and beauty of this valley scenery. Rock Creek Valley with its main tributaries - Piney Branch and Broad Branch valleys and the valley of the Military Road - forms an arterial system of most beautiful valley scenes or landscapes. This self-contained scenery has great variety and at the same time a happy unity of character. Its linear quality too adds to its charm by ever stimulating the desire to explore beyond the next turn. It is this conception - beautiful, varying, self-contained valley scenery - which should be paramount in controlling the development and use of Division A. Picnic groves by the creek, wading pools and the like are entirely permissable and desirable, for the water is a great drawing card for the

public; but such uses should always and unmistakably be incidental. Swimming holes, for instance, should probably not be permitted, for they inevitably require toilet and dressing rooms, and in some cases screens from the drive, all of which work distinct injury to the beauty of the valley scenery; while at best these "holes" can provide only inferior accommodations for swimming.

The next three divisions "B, "C", and "D" are each of a distinct type, but in all of them a decidedly intensive use by the general public should be the controlling consideration of development and administration.

Division B Plateau Recreation Ground.

Division B is a section of plateau land separated topographically from the rest of the Park, easily accessible from adjacent residential areas and, by car, from other parts of the District. It is admirably adapted for more or less intensive recreation - tennis, basket ball, baseball, cricket, football, and band concerts - and has already been tentatively allotted for this purpose. A preliminary plan for the development of this area accompanies this report.

Division C Woodland for Intensive Use

Division C, an area of about three hundred acres, is primarily a forest unit. Topographically it is roughly of the plateau type, but it is generally rolling and is intersected with several sharp ravines leading down to Rock Creek and furnishing added variety

and interest for the recreation seeker. In addition to possessing many of the recreative elements to be found in a woodland park of this sort, the area is particularly well adapted for exploration and enjoyment by pedestrians, for it is much less subdivided into abrupt hills and valleys than most parts of the Park, avoiding thus the constant expenditure of effort not often appreciated or desired by people not looking primarily for exercise. Lastly, but of fundamental importance, is the question of accessibility. Assuming a thoroughfare with car line crossing the Park probably along the ridge immediately south of the Military Road (to be discussed later), area "C" becomes ideally accessible.

We cannot now go far into the details of development and administration for a division of this type. Suffice it to say that roads and bridle paths should be minimized, and there should be many picnic groves, springs, unobtrusive seats, summer houses, and other local objectives of interest. The spaces free from undergrowth should be generally larger than in other forest areas; in fact they should be large and frequent enough to encourage and accommodate a more or less unrestricted movement of the people about the woodlands regardless of fixed paths. There should be a considerable local variety in the woodland landscape. In general no attempt should be made to keep here the more delicate

and intricate details of the natural sylvan scenery, especially in the matter of undergrowth, for they can best be preserved elsewhere in the Park. This section should fundamentally be adapted to a freer and more intensive use.

Division D
Open Hillside Section.

Division D, about 150 acres, is primarily a unit of open land. It has an interesting topography of rolling hills; and it affords a sense of freedom, breadth, and outlook found nowhere else in the Park. It is accessible either directly from the adjacent district to the east or, with comparatively little effort, from the proposed thoroughfare and car line just south of the Military Road. It is old farm land, in parts overgrown with scrub pine and more or less cut up by hedgerows - not now very attractive. And yet by some cutting of hedgerows and pines and by a little careful planting we believe it can be made beautiful and interesting. Because of its quality of openness it possesses a recreative value so different from that of other parts of the Park that no use or development in any way detracting from that quality should be permitted. For instance the arboretum which has been started here would, if allowed to remain, tend to defeat this very quality. The open hillsides would disappear, and the views and the sense of breadth and freedom would be no

more. An arboretum would be an exotic element, and hence a very undesirable one.

We have spoken of this division as one primarily for intensive use. Its accessibility and the distinctive quality of its recreative offering have led to that conclusion. And for this latter reason especially, a free use by all classes of patrons whether riding, driving or walking should be encouraged insofar as this can be done without materially marring the simple breadth and beauty of its grassy slopes, and the great charm of the varying landscape as seen from these slopes and hilltops. Occasional groups and specimen trees are needed for shade and landscape effect; walks on easy grades, occasional unobtrusive seats, groves or simple overlook terraces at points of commanding outlook, and such roads and bridle paths as are required to reveal the beauty of the landscape - these are needed. Further than that, simple rolling pasture or mowed grass-land should prevail. Few defined walks will be needed, as pedestrians should be encouraged to spread over the turf at will.

Division B
Wilder Woodland.

North of areas "C" and "D" the Park becomes less accessible from transportation lines; and topographically it becomes more or less a series of smaller hills and ridges separated by steep narrow valleys or ravines. The bulk of this area -

- some 450 acres - is included in section "E". Fundamentally it is a forest area, and the wild, natural character of its forests should be preserved to the highest degree. Inaccessibility and topographical character do not invite an intensive use by the walking public, and the preservation of the finer details of the natural woodland scenery requires that pedestrians be more or less restricted to the walks and other defined ways. Some picnic grounds and other objects of local interest will be needed, as in Division C; but essentially this division should be one where the wildness of the forest will be enjoyed from the paths, roads, and bridle paths, and shall remain unmarred by the wear and tear largely unavoidable in areas of more intensive use, such as Divisions B, C. and D.

It is not our thought to discourage the enjoyment of this or any other part of the Park by the general public. But an intensive use, no matter how well provided for, is sure to mean the sacrifice of some of the elements of wildness which now contribute and always should contribute so largely to the beauty and charm and value of this Park; and it would be clear folly to allow the sum total of park value to deteriorate for want of a little regulation that would insure ultimately a far higher degree of service to the public as a whole - the owners of the Park.

Division F
Meadow Park

Division F, the northernmost unit, might almost be considered a part of "A", but its size and its distinctive character would seem nevertheless to class it as a major division. It is, or is proposed to be, and irregular stretch of flat meadow land some four thousand feet long, varying from two hundred to eight hundred or nine hundred feet in width. Its value as a landscape unit, enclosed by woods, interesting in form and entirely self-contained, is very great and, in this park, unique. Like Division "D" (above) it should be defended jealously against any inharmonious encroachments upon the simplicity, breadth, and restfulness inherent in its very character. But any use of the meadow should be welcomed which does not disturb the simple broad stretch of greensward.

Regarding a National Arboretum and Botanic Garden in Rock Creek Park.

It seems best here to give attention to the proposition often put forward, to use the northern part of Rock Creek Park for a National Arboretum and Botanic Garden. The idea is in its very essence so full of danger to the fundamental purposes of the Park, that we take the liberty of quoting at length the arguments as set forth by the Commission of Fine Arts in their Report to the Committee on the Library, House of Representatives, U. S. dated September 18, 1917.

"If Rock Creek Park shall be given up as a park and used solely for a National Botanic Garden and Arboretum, much can be said in favor of this area, in spite of the predominance of excessively steep slopes. There are scattered areas of moderate slopes on the uplands and strips of level land subject to overflow in the bottom of the valley. There is a considerable variety of soils and exposures, and if every piece of land in the park physically adaptable to botanic garden purposes were to be regarded as available for such use, the total area would be ample. It is a serious practical objection, however, that the most available areas are so scattered and so separated from each other by deep ravines and steep hills as to make the layout and administration of a great botanic garden and arboretum on this site inconvenient and in the long run unduly costly.

" Again, it is not possible to disregard the value of the land for other purposes. Congress did not authorize the acquirement of Rock Creek Park simply in pursuance of a general theory that a growing capital city ought to have a large general reserve of land available for public recreation and for kindred uses, to be "improved" and made available from time to time as the need for various specific uses might become apparent.

"The land was bought because the valley of Rock Creek within the District of Columbia had certain peculiar and extraordinary characteristics which gave it a special value for one particular purpose, a value unattainable elsewhere, a value which would be destroyed if Congress did not act to preserve it, a value which if faithfully preserved would give incalculable enjoyment and healthful recreation to the people of the District in future generations. This special value was and is dependent on the peculiar beauty of the natural scenery of Rock Creek Valley.

"This is not the place to attempt any analysis of that beauty, but clearly it has its own distinctive qualities; very precious; very easily destroyed. It was primarily those qualities which justified the acquirement of the park and nothing ought to be permitted within its borders that will tend to subordinate or sacrifice them.

"The character of the native vegetation is one of the important factors in making this scenery what it is. In places the woods had been cleared before the park was acquired, the location of these clearings being wholly accidental as far as concerns their effect on the landscape. Some of these openings, left as simple

green fields, are an advantage to the scenery. Others might better be restored in time to a woodland condition, but that woodland should be absolutely harmonious with the native forest.

"If the attempt shall be made to create an arboretum here, even without the glittering glasshouses and formal beds of a complete botanic garden, conflicts of purpose are certain to arise which will defeat in a measure the original purpose of Rock Creek Park. It is essential in any arboretum or botanical park worthy of the name to introduce many plants which not only are not native of the locality but which produce effects radically different from those which make the Rock Creek scenery what it is.

"The danger is strikingly illustrated for any one who has an appreciation of the qualities of natural landscape by the planting which has actually been done on certain open lands in Rock Creek Park with the purpose of creating an arboretum. This planting, it is understood, was done by the Forest Service under permission from the Board of Control of Rock Creek Park. It can be seen near Camp Good Will. It does not now, and it never will, look like a part of the natural scenery. It is distinctly out of harmony with it. The sort of thing that has here been done on an open field is liable to be done almost anywhere in the park if the purpose of creating a varied botanical collection is placed side by side with that of preserving the natural scenery as one of the prime objects of the park.

"A National Botanic Garden, Arboretum or Botanical Park worthy of the United States Government can never be created unless those in charge are enthusiastically devoted to its special purposes and ready to serve those purposes at the expense of the peculiarities of the local natural scenery whenever the two purposes unavoidably conflict. If the Botanic Garden is established in Rock Creek Park the inevitable result will be the gradual frittering away of a priceless and self-consistent piece of natural scenery.

"It is not necessary to express an opinion as to whether the purposes of a National Botanic Garden are more or less important than those for which Rock Creek was acquired. The point is that both purposes cannot dominate the management of one piece of ground without conflict, and this piece of ground was set apart by Congress for the preservation of its natural scenery.

If the original intention of Congress in this instance is to be observed, the introduction of such a foreign element as a botanic garden is too dangerous to be ventured. Therefore, the use of Rock Creek Park for this purpose cannot be recommended."

3. DISTINCTIVE LANDSCAPE TYPES.

Definition of Essential Qualities.

After determining, at least tentatively, the primary landscape and administrative divisions as above described, we next studied the landscape units more or less in detail in order to fix, insofar as possible, wherein they should be maintained without essential change and wherein and to what degree their present condition should be modified. To a very large extent it has seemed unquestionably best to preserve and foster the existing growth or condition, but in many minor instances, and in some more important ones, we have proposed radical changes where the accidents of the past have produced conditions of lesser interest and beauty, and where there is opportunity to restore or create more appropriate and more beautiful types of landscape. These landscape units have been reduced to four fundamental types; and these findings have been embodied in a diagrammatic plan (No. 27) herewith submitted. The types may be briefly explained as follows:

Type I is natural forest, and has been indicated

by the number "I" on the plan. In most of the areas thus marked natural forest conditions now exist; but in a few, almost always near the Park borders where dense high screening plantations are desirable, they are proposed. Most of these forest areas are now and always should be a mixed deciduous wood composed chiefly of an extensive and interesting variety of oaks with undergrowth of young trees and dogwood, laurel, and redbud. Some hickory, tulip, maple, and beech are found with the oak, also a few pines and other evergreens, and occasionally small groves or groups of beech occurring in almost pure stands. These last are hardly frequent or extensive enough, to be indicated here as distinct types or subtypes. Tulip, however, often occurs in considerable stands in the bottom lands near Rock Creek and in the branch valleys. These areas have been marked "I-T", which indicates that tulip either predominates there now or should be encouraged by the gradual thinning out of other trees. "I-E" indicates evergreen forest growth; and for the most part these areas are now covered wholly or in large measure by scrub pine. In some instances the "E" areas have been extended into adjacent areas of poor hard-woods or into border areas now open, the purpose being to get ultimately a somewhat larger proportion of evergreen woodland as a contrast to the hard-wood forest and for its foliage effect

in winter. The present scrub pine should gradually be replaced by hemlocks and by better varieties of pine. A third subtype, "I-R", comprises the close-wood growth on the bottom land along the creek; it is composed mainly of river birch with now and then a slight admixture of tulip and sycamore and occasional tupelo, and with sometimes an understory of hornbeam.

Type II is a distinctly open type of woodland, or rather tree growth. In areas marked "II" it is intended that the trees should be in groves or groups or sometimes single specimens; they would, in the aggregate, shade perhaps from one-half to three-quarters of the ground, permitting light and air enough almost always to maintain grass as a ground cover. A somewhat special case, however, is found in the "II" areas along the creek; for here the sense of openness would often be secured by trimming off the lower branches of a bordering fringe of trees rather than by cutting the trees themselves. Trees growing practically in the open and without crowding will not be so tall as the forest trees; they will be low-branched and broad-spreading, furnishing an interesting contrast to the same trees growing nearby under forest conditions. The attached letters "E" and "R" signify evergreen or river subtypes as explained above.

Very few of the "II" areas exist as such now,

but in most cases the present growth is such as can easily be developed into the desired type by judicious cutting, and occasionally by supplementary planting. For the most part this type is indicated (a) on the edges of unwooded lands where it forms a sort of transition between the open fields on one side and the dense forest growth on the other; (b) on knolls or on flats near the creek where picnic groves will be appreciated; and (c) perhaps most important of all, on the edges of Rock Creek where more frequent glimpses of the water and occasional views up or down the creek from the nearby drive can be readily secured by thinning the present dense growth on the banks here and there into groves, groups, and specimens, or in some cases by leaving the trees close together and thinning out only their lower branches.

Type III is a growth composed primarily of cedar, but interspersed with sassafras, locust, and occasional pine, also with sumac and generally low bushy ground-cover. The type is well started on the ridge and slopes east and south from Fort de Russey. It is not a fast-growing type and it is not tolerant of shade and interference from other trees, so that systematic cuttings and weedings to remove inharmonious or injurious growth will be essential to its proper maintenance. This type of growth will contribute an interesting and valued varia-

tion in the general landscape of the Park.

Type IV is open grass land. There would be occasional trees singly or in groups, to provide shade and for effect in the landscape, but primarily the areas would be open mowed-lands or pastures. The Park as a whole is essentially a woodland park, but for that very reason occasional open areas of breadth and extent are needed if merely for contrast, to accentuate the wildness and beauty of the forest. Besides, they have a very real recreative value of their own; for in them one can feel and enjoy a sense of openness and freedom which is quite different from the call of the forest.

In general, except on or near the boundaries all present open lands should be kept open. It is proposed to extend some open lands near the creek clear to the water, and to enlarge others slightly on account of views. Besides these minor changes we have proposed to clear most of the woods on the plateau southwest from the Brightwood Reservoir as an extension of the present playfield. And in the northern end of the Park we have proposed restoring the open meadows in the bottom land north of the brook, from the most northerly drive, crossing to the District line, and slightly extending the present meadow land on the other side of the drive. These clearings in the northern part of the Park will

sacrifice only second-class, rather uninteresting growth, while they will provide a meandering meadow, some fifty acres, in extent bordered by the creek on one side and by dense forests on all sides - an element of extreme beauty and interest in the landscape.

Suggestions Relating to the Creation and Maintenance of Landscape Types.

Without going into elaborate detail regarding means and methods of securing and maintaining the types of landscape outlined above, it seems important, if only for explaining more clearly the effects we have in mind, to offer some more or less general suggestions as to the necessary operations. It is out of the question to depend upon written directions for detailed guidance in landscape forestry work of this sort, for after the general aims and methods have been determined comes the delicate and very important work of fitting these methods to the local detailed conditions as they exist. And this can be done only on the spot. In other words, the success of this sort of work must ultimately depend upon a thorough appreciation and understanding, on the part of those actually directing the work, of the essential character and quality of the effects sought after. Slight variations in the manner of doing the work, variations due even to the differing judgments of skilled men, are liable to make such immense differences in the quality of the results that a one-man control of this work seems a distinctly wise policy. Though much

of the most pressing work should be done within the next few years, every year as long as the Park is kept up, must call for a careful, intelligent, appreciative and above all consistent maintenance of the landscape details.

In type I, the normal forest conditions should be maintained insofar as possible; and that means primarily a policy of hands off. Dead and dying trees, however, should be removed instead of being permitted to accumulate, as at present, to the point of adding a distinct note of unhealthiness and neglect to a landscape which should by all rights be inspiring. Type I areas, not now covered with forest, should be planted. Further improvement cuttings or thinnings should be made only with caution, removing here and there an old, decrepit or uninteresting tree to give place to a more vigorous, valuable or interesting growth. By way of example we would cite the north slopes in Division "A" lying next the creek just north of Division "D". Here is Kalmia in great profusion; but much of it is already shadded out by the pine and other fast-growing trees that have sprung up amidst it, and some is from time to time being broken down and destroyed by the falling of dead trees. To save these wonderful Kalmia slopes - and they certainly should be saved - careful intelligent cutting is needed, and it

is needed soon. Where coppice or sprout growth occurs (it does not appear to be extensive) it should be gradually removed in favor of seedling trees; for the sprouts as a rule make less interesting and less healthy trees.

Undergrowth should in the main be kept intact, at least where it is not too dense. But careful reduction of the undergrowth is needed here and there, just enough to let the eye penetrate from the walks or roads into the wood. It is hard to say how extensive or how frequent these cuttings of undergrowth should be, but at present the effect of dense impenetrable walls of foliage, especially along the roads, is much too continuous. The driveway now is all too much like a tunnel passing <u>through</u> the forest, and too little like a way <u>within</u> it. Hardly ever should this cutting be extensive enough to open the view from one road or walk to another, but it should be carried far enough and <u>only</u> far enough to invite the eye - and so the interest - away from the path or road as such and into the surrounding woods. Without such subtle assistance the beauty and the value of these wonderful forests will remain only half known and less than half enjoyed. This opening should probably be carried farther in the areas of more intensive use (outlined above) than in the wilder parts; but in all cases it should be done little by little and with extreme caution. After all it is largely one of those matters

of detail which can be effectively determined and directed only by the skilled artist on the ground.

By way of further illustrating the qualities of woodland scenery so essential to a realization of the maximum fundamental value of a park like Rock Creek, we take the liberty of quoting the following paragraph from Mr. Frederick Law Olmsted's report of March 19, 1915 on "Conditions in Detroit - 1915", and relating to the woodland on Belle Isle:

> "In parts it has been allowed to grow up to a rather monotonous and woody-looking dense undergrowth which presents an uninviting barrier nearly uniform in quality wherever the eye seeks to penetrate the depths of the wood; while in other parts the undergrowth has been so completely removed that the eye ranges freely in every direction amongst a succession of bare trunks and through them to the open spaces or to the buildings that lie beyond. In either case there is a loss of that enticing mystery and that feeling of indefinite extension inviting one to wander from glade to opening glade which forms one of the most charming and refreshing qualities of sylvan scenery. Here and there strong suggestions of this quality are to be found, but they are too few and imperfect. Glades of turf with moss and other low ground-cover plants, free from bush and brambles that impede the foot and from foliage at a height that obstructs the vision, ought to lead into the woods like narrow extensions of the adjoining meadows, disappearing out of sight around the bend of denser undergrowth on either side in a manner to invite exploration, branching irregularly into other glades, widening here and there as the disposition of the larger trees may suggest, forming at some points dark shady tunnels that widen out beyond into sunny but secluded openings in the heart of the woods. There is need of skillfully developing intricacy, mystery and harmonious variety in the composition of glades and thickets, of sunlight and shadow, and of light within the shade; and at the same time and by the

same means of developing such conditions as will lead great numbers of people to wander in comfort and safety through the pleasant labyrinth.

In the subtypes - "I-T", "I-R", and "I-E" - in addition to the work above outlined, the development of the dominant species of each particular type should be encouraged by cuttings where necessary, and in some cases by plantings. It should be remembered, however, that tulip need not be the only tree in "I-T" areas, but it should largely predominate. Similarly with "I-R" and "I-E". In the evergreen areas a somewhat special condition exists. Where pine is already growing it is usually the local scrub pine (Pinus virginiana) of small growth and short life. Our advice would be to remove this tree gradually by clearing small areas each year and planting them with white pine, (Pinus strobus), short-leaf pine (Pinus echinata), and with both northern and southern hemlock (Tsuga canadensis and carolinana). The hemlocks should be used more especially on the north or cooler slopes. Where the evergreen areas are to be extended it will be necessary to cut the existing growth almost entire and to plant up with pines and hemlocks, though the latter could be started under a deciduous wood if the shade is not too heavy.

In Type II areas, where the present growth is comparatively dense woodland, radical cutting will be

needed. Groups and specimens comprising the most vigorous and well-branched young trees, or broad-branched old trees of specially good and interesting character, should be carefully selected - enough to shade in the aggregate, when grown, from one-half to three-quarters of the ground. The other trees and undergrowth should then be removed by successive cuttings, and the selected trees allowed to develop. In order to avoid the danger of too sudden exposure these cuttings should not be made all at once. Growth next to the selected trees should be removed first, then as these trees develop in spread more cuttings should be made each few years until the ultimate effect is attained.

In the "II-R" areas the basis of selection is somewhat different. Here the end to be secured is, primarily, better and more frequent views of the creek. The quality and picturesqueness of the trees and other creek-side growth are of course very important; but the aspects disclosed of the creek and of the creek valley are no less important, and should probably be the controlling factors in the determination of cuttings. And in many cases, especially where the creek gorge is narrow and abrupt, it will be found that cutting out some branches, or a bush or two, or removing an obstructing tree here and there, will secure the desired result.

better than thinning as outlined for other "II" areas. It should always be remembered that much of the present beauty of Rock Creek is due to the bordering and often overhanging foliage, and no cutting should be permitted which would perceptibly sacrifice this beauty. The point is, however, that much of this beauty of the creek is in effect latent - it is never seen. The cuttings suggested should be just enough to bring that beauty to light, and never enough to injure it.

In Type III, the work to be done both in making and maintaining is largely weeding out of foreign or inharmonious growth. Cedar should be the dominant tree, and with it might some sassafras, some locust, some persimmon, and some pine. Among these trees should be sumac, honeysuckle, barberry, wild roses, and other wild shrubs and ground covers of that general character. In extending or perfecting areas of this type occasional planting, and in some cases cutting, will be necessary. Elsewhere it is merely a matter of weeding out trees that are incompatible with the character desired. Most large-growing deciduous trees should be removed, and the scrub pines and other weed trees must be cut before they injure and then destroy the whole character of the type. Already much damage of this sort has been done, and prompt use of the axe is urged.

In Type IV, where woods now exist, it is

merely a matter of cutting the trees and removing the stumps. But even here the cutting should not be a clean sweep; occasional groups and specimen trees of good form or interesting character should be saved, or if necessary planted - the location and arrangement of plantings being determined with care and artistic skill. The general effect, however, must be that of open grass land. Where the areas are already open they must be guarded faithfully against encroachment.

4. CONSTRUCTION IN THE PARK.

Notes regarding Purposes and Essential qualities of Buildings, Bridges, Roads, Paths, etc.

It may not be out of place here to offer a word or two of caution and suggestion regarding buildings, bridges, seats, fences, and other park structures, as well as roads, bridle paths, and footways. A building of inharmonious, self-assertive design is apt to inflict almost incalculable injury upon the natural beauty of the scenery within which it is placed. This is obviously true if the self-assertive object be of inferior artistic quality in itself; but it is no less true of an object which in itself may have great artistic merit so long as that object distracts attention from the beauty of the landscape. This applies in varying degree to all park structures of whatever kind and size. They should be so designed and located as to fall naturally

into place as part and parcel of the scenery and should never stand out as objects complete in themselves with the surrounding landscape becoming merely a background. The split rail fences along the roadsides and many of the foot-bridges now found in the Park are happy examples of this fitness of design.

The roads, bridle paths, and especially the footways present similar though more subtle questions of design. For while serving their obvious purpose of enabling people to get about the Park, they should always and unmistakably fit into the landscape as harmonious and subordinate parts of the scenery through which they pass. Like other park construction they are primarily a means to an end - they merely enable the people to enjoy the refreshing beauty of the park scenery. If in the process they inflict injury upon that scenery or distract attention from it to their own assertive qualities, by just so much do they fail of their primary purpose.

These "ways" of travel, therefore, should first of all exhibit to the maximum the beauty and variety and charm of the scenery. Next, and no less important, they should be so planned and studied in detail as to "seem to belong" where they are. In the case of roads their lines and grades should harmonize with the major lines and forms of the scenery through which they pass; they are seldom beautiful in themselves, wherefore it is

doubly important that they take a congruous and subordinate place in the landscape. In the case of bridle and foot paths, they should be adjusted carefully and without apparent effort to existing rock formations, to the trees and tree groups, to the courses of brooks, to interesting groups of shrubs and other wild plants, in fact to the thousand and one details which make up the intricate beauty of the woodland scenery or the simpler beauty of the more open landscape. Because people travel slowly along the foot paths - and often along the bridle paths - they have opportunity to see and to appreciate these countless smaller details of beauty and fitness. Those who travel on foot are also free to follow or leave the paths at will, and are apt to follow the lines of least resistance. In locating paths, therefore, effort must always be exerted to make them inviting, to lead the pleasure-seeker along with the minimum of mental and physical effort on his part, to avoid steep grades and unnecessary ups and downs much more generally than has been done in the paths thus far opened, and to avoid indirect and circuitous lines except where they are apparently the lines of least resistance.

As the Park develops, these many and various artificial elements must of necessity increase; and the more numerous they become the greater is the danger

of serious injury to the landscape of the Park. It is of utmost importance, therefore, that such works be planned and carried out and maintained with a skill no less appreciative and intelligent and with a control no less consistent than that required for the landscape forestry work.

Tentative Scheme for Park Roads.

We have not been asked to study a system of park roads, but the roads bear such a close relation to the development of the landscape types that we have necessarily made numerous notes, during our general studies, regarding road locations, commanding view points, etc.; and for our own satisfaction these notes have been developed into the tentative road scheme which is indicated on the accompanying plan No. 27. Arrows here and there indicate points and angles of more or less important views, many of which cannot be fully realized without some slight cutting. The present roads are already becoming crowded and in many cases - along the creek and on steep hillsides - they cannot be widened without unreasonably serious injury to these very landscape beauties for the appreciation of which the roads are primarily built. This condition suggests at once narrow roads and more of them; a general policy which has influenced us in planning the system here presented. We have had in mind also that in many cases a one-way traffic regulation may sometime be necessary.

These road locations are, of course, only suggestive. It is essential to bear in mind that before construction they should be studied further with the aid of detailed surveys, and should be carefully adjusted to the details of the topography. We would emphasize this caution particularly regarding the new drive suggested along the east side of Rock Creek.

Only a few changes have been proposed in existing roads, the chief of which may be briefly described as follows: (1) The junction at the east end of Pierce's Mill Bridge is blind and dangerous; and we have suggested that this bridge, and the Pierce's Mill Road at either end of it, be abandoned and a new bridge built in a more open place some five hundred feet further down stream. As part of this change the approach from Tilden Street would be modified. (2) A slight change is suggested in Beach Drive just below the Military Road, the purpose being to provide an easier and safer connection with Morrow Road.* (3) Several slight realignments are proposed in Beach Drive north of Milk House Ford. From an engineering standpoint the present road is entirely satisfactory, but in several instances the line is not successfully fitted to the landscape through which it passes. Slight changes would

* Since this was written the change suggested has been in large measure carried out.

often make the lines far more harmonious, and besides, would bring the drive into closer and happier relation with the creek nearby. (4) Modifications in the northern entrance to the Park are proposed, but these are practically dependent upon the adjustments of boundaries recommended in this region.

5. RECTIFICATION OF PARK BOUNDARIES.

The question of boundaries has not required much special study except as part and parcel of our study of landscape and administrative units. The additional takings and boundary adjustments recommended in the Report of 1902 on "The Improvement of the Park System of the District of Columbia" are still desirable, but later developments have rendered some of them now impracticable, and some others, though still desirable, can hardly be considered essential to the value of the Park; and we are inclined to modify them in the interest of economy. The fundamental reason for rectification of boundaries - which usually means more takings - is the preservation of park scenery from intruding private property development. To accomplish that preservation means that park boundaries must be located on or outside the borders of landscape units so that

whatever goes on outside the boundary will not obtrude itself from any view-point where the park unit as such may be enjoyed. As an example, the wooded hill southwest of the junction of Broad Branch and Rock Creek forms one enclosing side of the main Rock Creek Valley. This hill is private property. What would be the effect on the Park were this hill to be covered not with rich forest but with the backs and back yards of apartment houses or rows of commonplace dwellings, not to mention worse possibilities of private development or neglect? It could not be hidden and would certainly be a very sore spot on the Rock Creek Valley drive. It would not merely ruin the considerable section of the Park in which these private lands form a conspicuous integral part of the landscape, but by interrupting the continuity of character between the portions of the valley above and below would seriously depreciate the cumulative value of the great Park as a whole.

There are four cases of this sort about the Park which it is highly important to rectify before it is too late. These and a few other lesser adjustments are indicated on the accompanying diagram No. 30, and are described briefly below in the order of their importance. All these recommended takings are such essential parts of the park landscape that they have been included in the general plans accompanying this Report.

1. The largest taking recommended is along the west boundary from just above where Broad Branch Road leaves the side of the Park south to the ridge just west of the old Klingle house. Here the more or less open slope west of the Pierce's Mill section, the hill northwest of Pierce's Mill, and the west bank of the Broad Branch valley are all now in private hands and are all essential parts of park landscape units. The new limits suggested are future streets proposed on the highway extension plan or tentatively studied out on the basis of the topography. In anticipation of possible serious difficulties in securing all this land, we have divided it into three parts marked "1a", "1b", and "1c" in the order of their importance. Though "1a" is by far the most essential of these takings, they all play large parts in guarding the value of this great park. The approximate areas of these proposed additions are: 1a - 15.5 acres; 1b - 32.7 acres; 1c - 59.6 acres; total 107.8 acres.

As a possible alternative to the "1b" taking (above proposed) it would be fairly satisfactory to secure simply a strip along the west side of Broad Branch Road to protect the chief valley scenery. A strip with a minimum width of about 175 feet would accomplish this. If such procedure were followed we would suggest that the adjacent proposed street system be re-

studied, partly with the idea of preserving a row of lots backing on this proposed new strip of park land, and partly to secure a better adjustment of proposed streets to topographical conditions and the requirements of good suburban developments.

2. East of Rock Creek in the vicinity of the old Blagden Mill the upper half, or more, of the bank of the creek valley is under private control. Enough property should be taken here to place the boundary at or near the top of the ridge. This is second in importance only to "1a" above. The area of the proposed addition is about 5.0 acres.

3. Much of the present irregular north boundary cuts into and across the large meadow unit ("F" on diagram 29) leaving parts of the low land and most of the wooded slopes which naturally enclose the unit in private hands. It is recommended that from a point near Holly Street around to the District line the park boundaries be extended at least to include the principal slopes enclosing this flat meadow unit, and preferably to Sixteenth Street and to the other proposed streets, Linden and Juniper, as indicated on the accompanying diagram. The area of this addition would be about 50.5 acres.

4. From the Military Road south to the proposed Madison Street thoroughfare the property line is irregular and comes well down into the bottom land of the Park.

It would be desirable to take this entire property out to Sixteenth Street, but it could hardly be called essential. Instead, therefore, we recommend making the Park boundary follow the line of Seventeenth Street extended, from Madison Street to Oregon Avenue. This adjustment would involve the addition of about 6.5 acres to the park lands and the release of about 0.5 acres.

5. The strip recently acquired along Piney Branch, from the Park Road entrance to Sixteenth Street, is not wide enough to control effectively the fine wooded hillsides enclosing the valley. On the south especially this park holding should be extended up the bank as far as existing developments will permit. As we have studied it out this addition would have an area of about 9.0 acres.

6. North of Piney Branch and extending around as far as the proposed Taylor Street thoroughfare we suggest that Randolph Street, slightly adjusted to the topography, become the Park boundary. This taking is subdivided into two parts, 6a and 6b, the former being by far the more important. This rectification involves the acquisition of about 9.0 acres of land (6a being 4.2 acres and 6b being 4.8 acres) and the release of about 4.7 acres. It is not necessary, of course, to abandon any of the present holdings, but if for any reason it should be desirable to do so the land here indicated could be aban-

doned without material loss to the Park.

7. The present park line between Klingle Road and Twentieth Street is very broken, and at two points the private property comes too far down into the valley. We suggest a revised line that will eliminate these salients and will provide a reasonable location for a possible boundary street. Land acquired would be about 0.6 acres, park land released about 0.6 acres.

6. THOROUGHFARE CROSSINGS.

The question of thoroughfares crossing the Park is a complex one, and even after thorough study it has been difficult to reach other than tentative conclusions. It is primarily a utilitarian traffic problem - to secure adequate and convenient cross-town thoroughfares between the portion of the District lying east and west of the Park. And the park area is so large that the obstruction to traffic is rapidly becoming serious. Looked at as a park problem there are two main requirements to be borne in mind; first, to carry the traffic across the Park in that manner and in that location which will obtrude least into the natural landscape; and second, to locate the thoroughfares so that the car lines may give the maximum of service as approaches to and into the Park.

On these premises many possible routes have been studied and the number of crossings to be needed has been carefully considered. Fortunately the length of the Park is radial, as it were, in relation to the city, and it forms practically no obstruction to radial traffic, but only to the less important cross-town traffic. On the whole, therefore, it seems likely that two thoroughfares, supplemented as they will be by the numerous park drive crossings for pleasure vehicles, will be sufficient. Granting this much, we next investigated the general street system of the District, existing and proposed, the present locations of car lines, and the proposed extensions, especially those recommended in the report of the District Commissioners entitled "Street Car Lines in the District of Columbia" dated March 20, 1912 and printed as Senate Document No. 441.

We have also considered carefully the pros and cons of low grade versus viaduct thoroughfare crossings. The grade crossings (climbing down into the valley and up again) would be cheaper, and in their role of park approaches would have the real merit of bringing people down and into the very heart of the Park - the region of the creek itself. On the other hand the obtrusion into the "very heart of the Park" of the noise and tangle of heavy trucks and electric cars - conditions of the city - would be a very serious detriment to the

Park. Furthermore, grade crossing routes would of necessity be more circuitous or of steeper gradient than high-level routes - conditions not desirable in District thoroughfares. A careful balancing of these arguments has led us finally to recommend the high-level viaduct type of crossing.

Regarding locations: a thorough consideration of the adjacent street systems present and proposed, of the established car lines, of the topographical conditions of the Park, and of our tentative studies for the park development, has led with little hesitation to the ridge immediately south of the Military Road as one thoroughfare location. On the west it connects with two important proposed thoroughfares, Utah Avenue and Keokuk Street; on the east it connects most easily and directly (as shown) with Madison Street at Sixteenth Street. Madison Street is narrow, but it could be widened as a cross-town thoroughfare. As an alternative route the thoroughfare might be deflected to Kennedy Street, which already has a car line to Fourteenth Street; but this location would be less direct and would work more injury to the Park. The Fourteenth Street car line when extended could branch into Madison Street, thence across the Park and out Utah Avenue, a street which is ideally located to serve the district on the west between the Park and Connecticut Avenue.

detailed plans for specific improvements within the Park.

Plan No. 35 is a detailed location and grading plan for a park road from Daniel Road at Rittenhouse Street down the valley to Beach Drive. This appeared to be a more or less urgent construction project; and we have prepared the accompanying plan after careful study of conditions on the ground and with the aid of a detailed topographical map which we have had prepared for the purpose. It is hoped that this plan will not only serve for this particular piece of construction but will be looked upon as a typical grading plan - the sort which should be prepared in the same way for all new roads and for all other grading or construction projects in the Park. For it is only by such careful adjustment to existing conditions and features, and careful preparation of detailed plans incorporating those adjustments, that park construction work can be carried out with the best results, with the maximum of harmony, and with the minimum sacrifice of park assets.

Plan No. 36 is a preliminary plan for the utilization, for certain play ground purposes, of the plateau about the Brightwood Reservoir. Unlike the grading plan above, it has not been carefully adjusted to grades, trees, and other topographical conditions; it presents merely an organization and arrangement of

recreation units adapted to the limits of space and condition. It should not be carried out, of course, until trees, grades, and other topographical details have been accurately determined and the general scheme carefully adjusted to them.

8. GENERAL NOTES AND RECOMMENDATIONS.

Priority of Projects.

The rectification of the Park boundaries is a matter which should not be delayed many years. It might be long before serious damage is done to the Park or before any rise in price or any development of private property occurs to jeopardize the recommended takings; but on the other hand one or the other of these things might happen any time, and then the damage would be done and in some cases it would be beyond repair.

But important as the matter of boundaries appears, it should not be permitted to interfere with the prompt undertaking of certain matters bearing upon the maintenance and improvement of the forest areas. First of all comes the removal of dead wood from the forests, and the general guarding against fire. For about two and one-half months each winter, for the last three or four years, almost the entire park maintenance force - about twenty men - has been used removing dead timber and doing a little incidental thinning of underbrush. But only some thirty-five or forty acres

of woodland have been cleaned each year. There appear to be about six hundred and fifty acres of park forest still to be cleaned - a job which at the present rate would take some fifteen years. As long as this dead timber remains it is a constant fire risk, a serious blemish to park landscape, and a drawback to the building up of new and vigorous forest. For the last few years, the average yearly expenditure for dead timber work has been about $1650, or about $44.00 per acre of woodland cleaned. At this rate it would require about $28,600 to complete the work. We would urge, therefore, that a special appropriation be made in order to have this work done without further delay.

In General, other landscape forestry works outlined in this report are not so pressingly urgent, though in some specific instances prompt action is much to be desired. One case is that of the Kalmia thickets north of Division "D" (mentioned above) which are being shaded out and broken down more and more each year. Only prompt action here will avoid a very serious loss of wooded beauty and interest. In Type "III" areas some weeding is already urgently needed: Scrub pines or large-growing deciduous, trees foreign to the character of the type, are now choking the cedars and other desirable growth, and in some cases even killing them. It would be a great pity not to begin the corrective cuttings in these areas promptly. In Type "II" also, the sooner

the groups and specimens can be selected, and their development started by the first cuttings of extraneous growth, the sooner and the better will the desired character be secured.

Direction and Execution of work.

With these exceptions the work of perfecting and maintaining the landscape units as outlined can be carried on gradually. But we cannot overemphasize the importance of (1) developing an organization of men specially trained for such work, and (2) using the same men on the same kind of work each year. For the success of this sort of work, as of most park maintenance work, depends to a very great degree upon the way it is done; and that in turn must largely depend upon the faithfulness, the intelligence, and the appreciation of the men on the job. To train these men and to direct their work, to decide the thousand and one questions of detail arising as the work progresses and to decide them to the best advantage of the Park, to ensure also faithful adherence from year to year to an established policy - it is, we believe, practically essential to have a man with a thorough knowledge of plants and forestry and above all with a keen artistic appreciation of the aims and possibilities of the work. So much depends upon the direction of this work in all its delicate details, that the selection of this man to have charge of it is a matter of paramount importance in the general question of park

management. The position is an important one and it should be made to satisfy a man of the desired ability.

Cost of Maintenance.

Regarding the general maintenance of Rock Creek Park, there is clearly need for more work than can be accomplished with the funds which have been available hitherto. The yearly cost has averaged, for the last few years, only about $6.75 per acre plus $1.00 per acre for dead timber work. It is impossible to figure out with accuracy what the maintenance charges should reasonably be; but the following figures relating to parks somewhat similiar in size, character, or location relative to population, should be at least suggestive.

Blue Hills Reservation, near Boston

Area	4,900 acres
Yearly maintenance cost about	$9.40 per acre
Yearly cost of fighting the gypsy and browntail moth pests, about	9.00 per acre

Middlesex Falls Reservation, near Boston

Area	1,898 acres
Yearly maintenance cost about	$18.15 per acre
Yearly cost fighting the gypsy and browntail moth pests, about	15.00 per acre

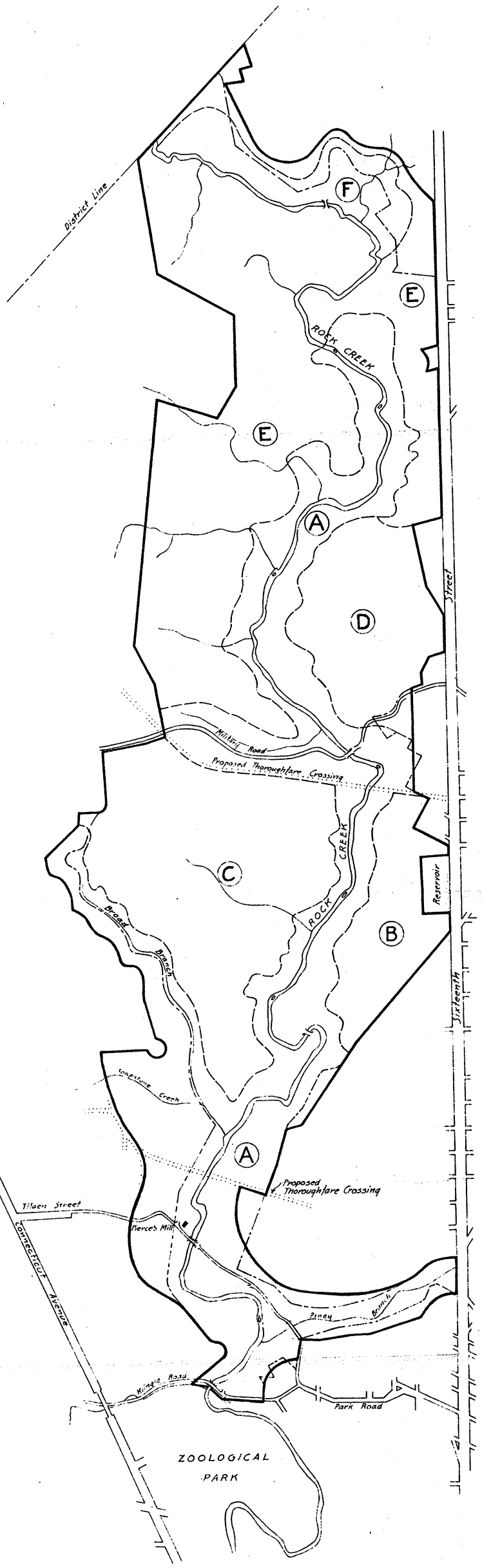
Blue Hills is a large forest reservation, more remote and less frequented than Rock Creek Park, very simple in character, and undeveloped, (like the "I" areas in Rock Creek Park) so the maintenance cost would tend to be low. Middlesex Falls, however, is not unlike Rock Creek Park in size, relation to population, and character of development; it would seem reasonable, therefore,

to expect the maintenance costs in the two parks ultimately to be more or less alike. In estimating present and future maintenance costs, however, it should be remembered that the above cited figures are averages for some years preceding 1917, and that substantial increases must be allowed for the rapid rise in wages since that period.

Appropriations. In Rock Creek Park there is immediate need for more adequate policing, partly for the protection of patrons, but chiefly for the protection of the Park itself from thoughtless and, in some cases, wilful vandalism, and from the very damaging effects of fires. There is immediate need for the complete removal of dead chestnut and other dead and diseased timber. There is immediate need for determining and carrying out, as above noted, numerous corrective cuttings of weed trees and the like. In reality these are extraordinary items of maintenance which have been accumulating for years because they could not be met out of the very inadequate annual appropriations. To make up for the neglect of the past therefore, and to stop at the earliest possible moment further deterioration of the special beauty of this Park, a substantial increase in appropriations is urgently needed. It would seem that these appropriations ought to be exceptionally large for the next few years or until the arrears of work have been attended to. After that they would reasonably be expected to return

still, however, in excess of the appropriations of the past.

In general we would not urge a sudden and large expansion of activities and "Improvements"; for it is conceivable that the Park development might easily be carried too fast and too far. The inherent value of the naturalistic "undeveloped" qualities of this Park cannot be overestimated. For in those qualities lies the essential justification for all that has been done and spent, for all that will be done and spent to give this great Park to the people. In its development the guiding policy should be distinctly one of restraint; in its maintenance the policy should be liberal, in order to meet the continuously increasing needs of the patrons and still more to protect and insure the permanent values of a great public investment.



ROCK CREEK PARK

WASHINGTON D.C.

DIAGRAM
SHOWING
PRIMARY DIVISIONS
OF
LANDSCAPE
AND
ADMINISTRATION

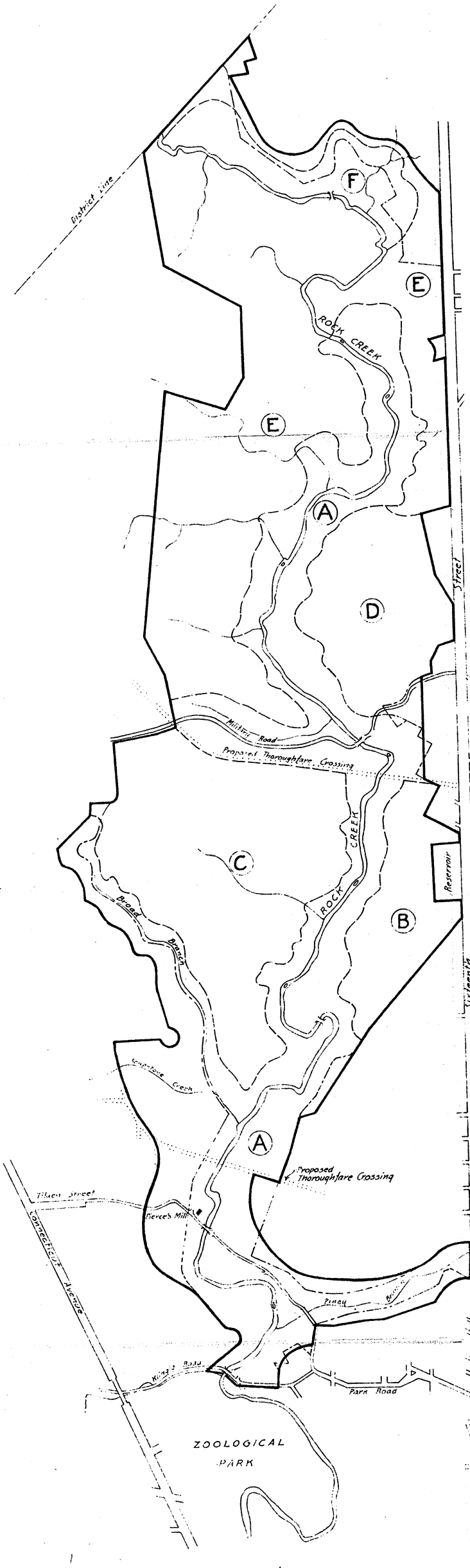
SCALE OF FEET

1000 0 1000 2000 3000

REPORT OF OLMSTED BROTHERS
SUBMITTED DECEMBER 1918

PLAN NO.29

NCP 55-5



ROCK CREEK PARK

WASHINGTON D.C.

DIAGRAM
SHOWING
PRIMARY DIVISIONS
OF
LANDSCAPE
AND
ADMINISTRATION

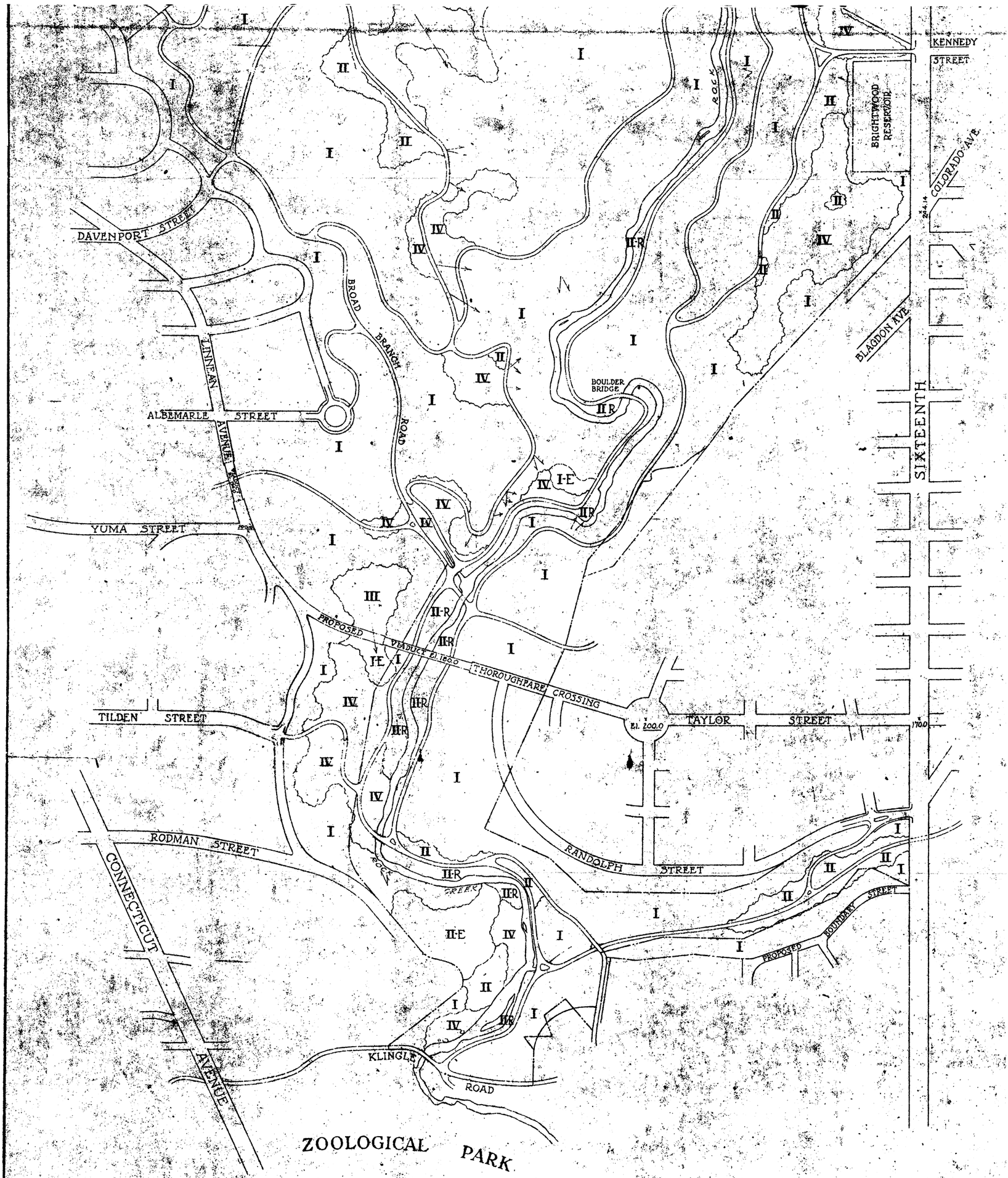
SCALE OF FEET

1000 0 1000 2000 3000

REPORT OF OLMSTED BROTHERS
SUBMITTED DECEMBER 1918

PLAN NO.29

NCP 55-5



ROCK CREEK PARK

WASHINGTON - D.C.

DIAGRAMATIC PLAN FOR LANDSCAPE UNITS

SHOWING ALSO

PROPOSED TRAFFIC THOROUGHFARES ACROSS THE PARK
AND A SYSTEM OF PARK DRIVES

SCALE OF FEET

100 0 400 800 1200 1600 2000 2400 2800

TO ACCOMPANY THE REPORT OF
OLMSTED BROTHERS - LANDSCAPE ARCHITECTS
DECEMBER 1918

PLAN No. 27

NCP 55-7

EXPLANATION

LANDSCAPE UNITS - *The Park area has been divided into four fundamental landscape types or units which are indicated on this plan by the numbers* **I, II, III,** *and* **IV.** *Subtypes are indicated by the affixed letters* -E, -T, *and* -R.

I *indicates areas where the general conditions and characteristics of the natural forest should prevail. Subtypes, in which certain special characteristics should be encouraged, are designated as follows:*
I-E *indicates areas where evergreen forest should predominate.*
I-T *indicates areas where tulip should be the predominating tree.*
I-R *indicates areas where the normal bottom land growth by the creek chiefly of river birch, hornbeam tulip and sycamore should prevail.*

II *indicates areas where an open tree growth with usually a grassy ground cover should prevail.*
II-E *indicates areas where evergreen should predominate.*
II-R *indicates areas where river bottom type should prevail.*

III *indicates areas where an upland semi-open type of growth characterized chiefly by cedar should prevail. A little sassafras, locust, pine and other trees of like characteristics should accompany the cedar; and the undergrowth should be sumac, wild roses, etc.*

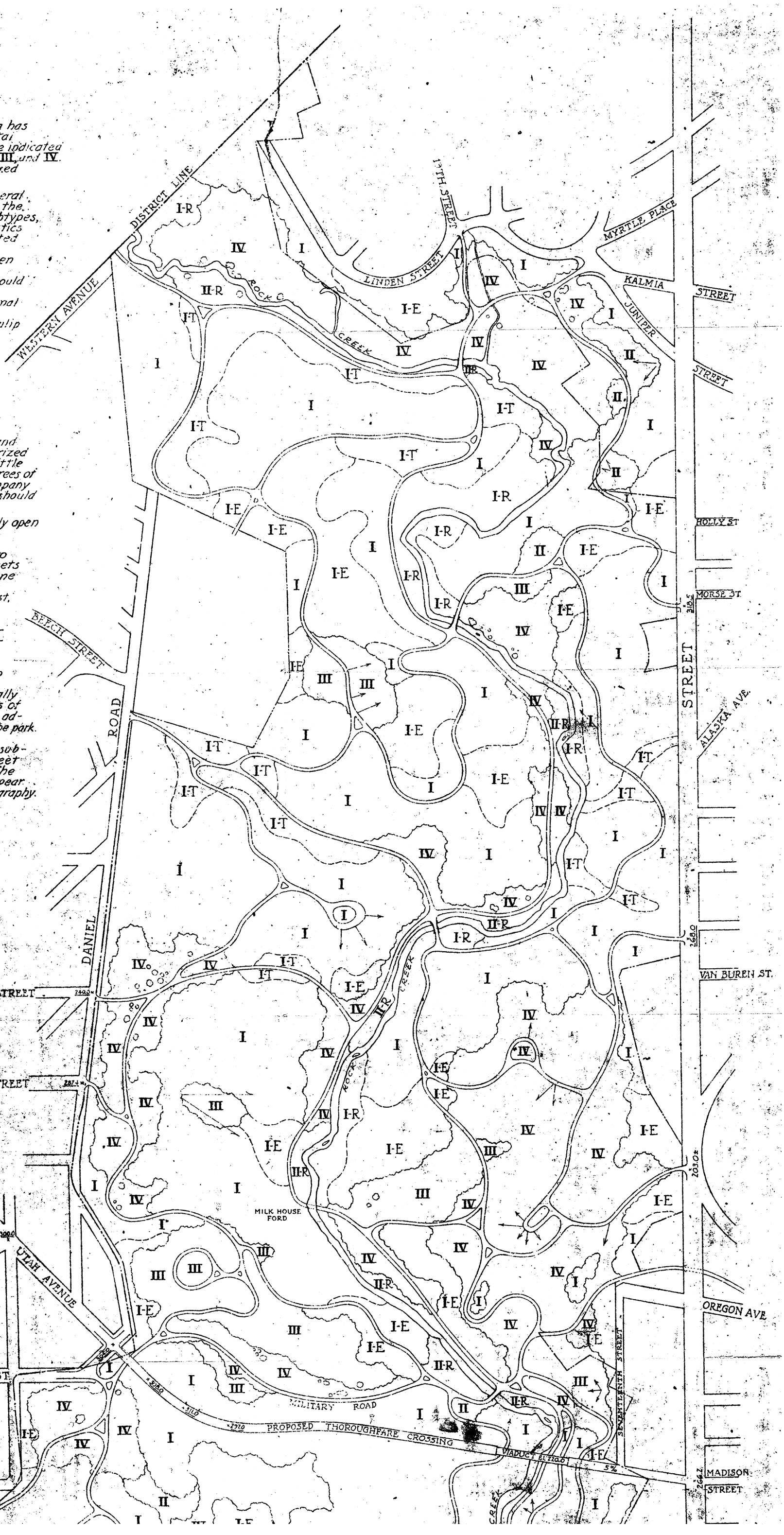
IV *indicates areas where generally open grass land should prevail.*

THOROUGHFARE CROSSINGS - *Two proposed high-level traffic streets are shown crossing the park, one between Madison Street on the east and Utah Avenue on the west, the other between Taylor Street on the east and Yuma Street and Linnean Avenue on the west. Tentative controlling grades are indicated on these thoroughfares.*

PARK DRIVES - *A tentative system of park drives is indicated on the plan. The roads have been generally located to serve the future needs of circulation and to reveal to best advantage the landscape beauty of the park.*

ADJACENT STREETS *are shown substantially as planned on the street extension map of the District. The variations from this map will appear on prints combined with the topography.*

Proposed elevations underlined.



LINE A

SEC. 3

SEC. 5

SEC. 7

LINE B

SEC. 19

SEC. 9

SEC. 21

SEC. 11

SEC. 23

SEC. 13

SEC. 25

SEC. 15

SEC. 27

SEC. 17

SEC. 29

SEC. 19

LINE C

SEC. 20

SEC. 31

SEC. 23

SEC. 32

DRIVE

BEACH

ROCK CREEK PARK

WASHINGTON - D.C.

GRADING PLAN FROM RITTENHOUSE ST. TO BEACH DRIVE

SCALE 40=1'

10 0 50 100 150 200 250

OLMSTED BROTHERS LANDSCAPE ARCHITECTS
BROOKLINE, MASS. - DECEMBER 1918

FILE No. 2837
PLAN No. 35

— LEGEND —

EXISTING CONTOURS SHOWN THUS
PROPOSED " " "
STORM WATER PIPES " " "
TREE WHICH IT IS PARTICULARLY IMPORTANT TO SAVE SHOWING KIND, SIZE AND ELEVATION AT BASE SHOWN THUS ⊙ T.&S
CONTOUR INTERVAL 2 FEET
D.C. DATUM. R.C.P. STONE No. 7 BEARINGS REFERRED TO LINE BETWEEN R.C.P. STONES 6 AND 7

DRAWN BY SLW-ECK APPROVED FOR ISSUE
TRACED BY HLP-SLW-ASC
CHECKED BY ASC BY

LINE A

SEC. 3

SEC. 5

SEC. 7

LINE B

SEC. 19

SEC. 9

SEC. 21

SEC. 11

SEC. 23

SEC. 13

SEC. 25

SEC. 15

SEC. 27

SEC. 17

SEC. 29

SEC. 19

LINE C

SEC. 31

SEC. 20

SEC. 32

SEC. 23

ROCK CREEK PARK

WASHINGTON, D. C.

PROFILE OF DRIVE FROM RITTENHOUSE ST TO BEACH DRIVE

(TO ACCOMPANY PLAN No 55)

SCALE { VERTICAL 1" = 10'
HORIZONTAL 1" = 100'

OLMSTED BROTHERS - LANDSCAPE ARCHITECTS
BROOKLINE MASS DECEMBER 1918

FILE No 2357
PLAN No 42

55.2-18

TRACED BY ECA
TRACED BY
CHECKED BY W.R.C.
APPROVED FOR SCALE
NCP 55.2-18

LINE 3

LINE 2

EXISTING GRADE

220

210

200

190

180

170

160

150

140

130

120

110

100

90

80

60%

GRADE

EL 1227.30

EL 1235.30

EL 1243.3

EL 1251.3

EL 1259.3

EL 1267.3

EL 1275.3

EL 1283.3

EL 1291.3

EL 1299.3

EL 1307.3

EL 1315.3

EL 1323.3

EL 1331.3

EL 1339.3

EL 1347.3

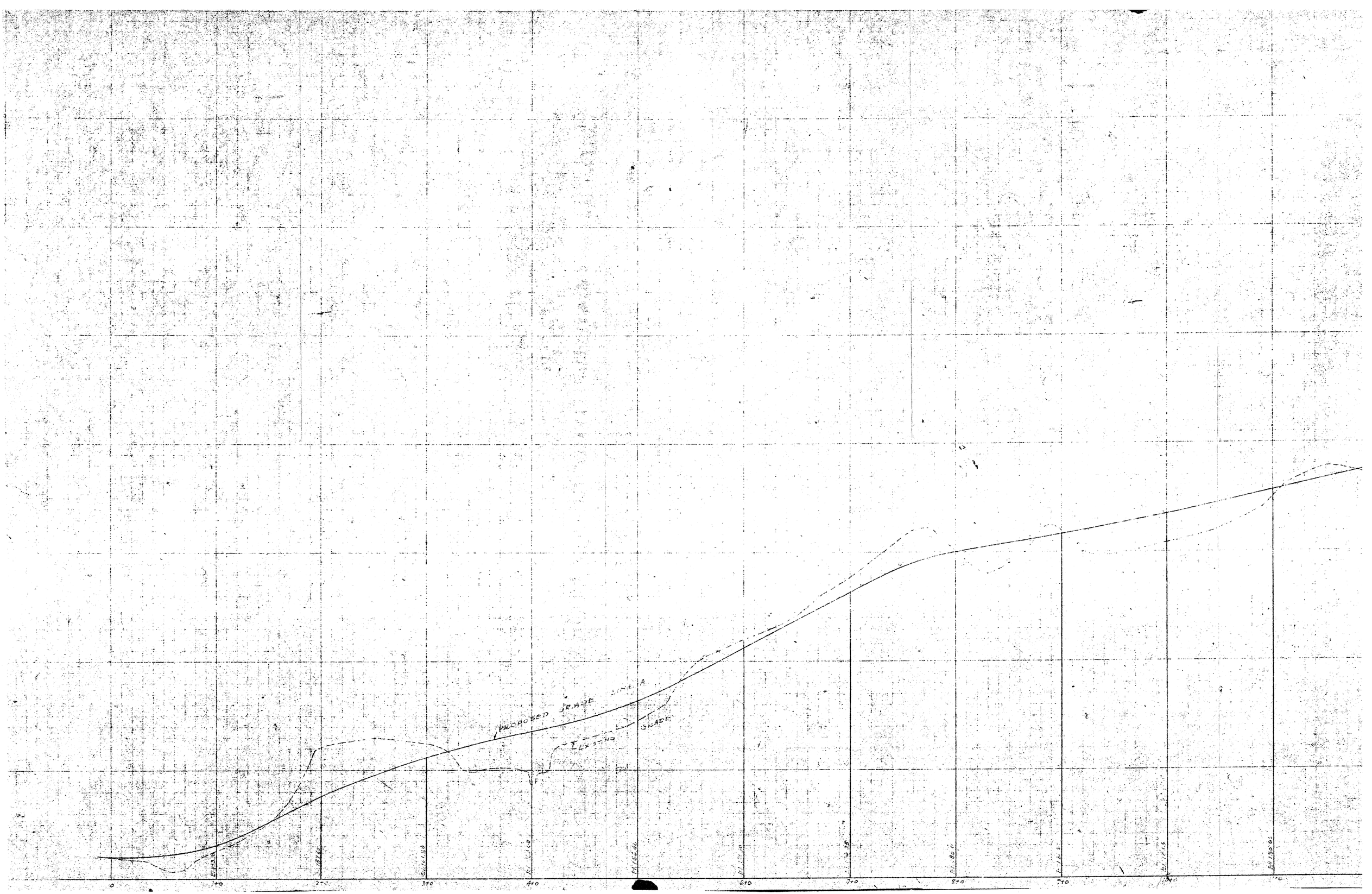
EL 1355.30

EL 1363.30

EL 1371.30

EL 1379.30

EL


PROPOSED GRADE LINE A
EXISTING GRADE
0
1+0
2+0
3+0
4+0
5+0
6+0
7+0
8+0
9+0
10+0

ROCK CREEK PARK

WASHINGTON D.C.

PRELIMINARY PLAN

FOR

BRIGHTWOOD RESERVOIR PLAYGROUND

SCALE 80 · 1"

80 0 80 160 240 320 400

TO ACCOMPANY THE REPORT OF
OLMSTED BROTHERS LANDSCAPE ARCHITECTS
DECEMBER · 1918
PLAN NO. 36.

PARK DRIVE

GROVE OF LARGE OAKS

TO MORROW DRIVE

SHELTER

FIELD HOUSE

WADING POOL

TENNIS COURTS

BRIGHTWOOD RESERVOIR

TENNIS COURTS

TENNIS COURTS

PROPOSED TRAFFIC STREET

SIXTEENTH STREET

COLORADO AVE

KENNEDY ST

LONGFELLOW ST

MADISON ST

NCP 55.9-17

ROCK CREEK PARK

WASHINGTON D.C.

PRELIMINARY PLAN

FOR

BRIGHTWOOD RESERVOIR PLAYGROUND

SCALE 80'-1"

80 0 80 160 240 320 400

TO ACCOMPANY THE REPORT OF
OLMSTED BROTHERS LANDSCAPE ARCHITECTS
DECEMBER-1918.
PLAN NO. 36.

PROPOSED PARK DRIVE

GROVE OF LARGE OAKS

PLAYSTEAD

TO MORROW DRIVE

×258.0

×238.0

×244.14

×267.36

SHELTER

265.0±

WADING POOL

FIELD HOUSE

BRIGHTWOOD

RESERVOIR

TENNIS COURTS

CROQUET COURTS

SIXTEENTH STREET

COLORADO AVE.

KENNEDY ST.