Farmer, 1965

Landscape Design

for

Enota Elementary School

Gainesville, Georgia

by

Robert E. Farmer

Robert Elman Farmer

A Terminal Problem Presented For

Degree of Bachelor of Landscape Architecture

Department of Landscape Architecture

University of Georgia

Athens, Georgia

May, 1965

H.B. Owens Resource Center
School of Environmental Design
Caldwell Hall
University of Georgia

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PROBLEM STATEMENT

Development Plan for Enota Elementary School Grounds - Park

Members of the Board of Education of the City Schools of Gainesville, Georgia, voted to secure professional assistance in the preparation of a landscape development plan for the grounds of Enota Elementary School and an adjacent park site of three and one-half acres.

Following a meeting with Mr. Revis Blakeney, Superintendent of Gainesville City Schools, Mr. E..L. Hughes, Principal of Enota Elementary School, and Mrs. Clarence Johnson, President of Enota Elementary School PTA, it was decided to develop a small park adjoining the school. This park is to be designed not only for recreation for the school, which includes grades one through six, but it will also be used as a recreation area for the neighborhood.

The site is located at the corner of Enota Street and Cumberland Drive. Enota Elementary School is on the north side of the site and Cumberland Drive is on the south side. To the east is a new residential subdivision and to the west is Enota Street with residential housing. The park site, which adjoins the level school grounds has considerable topography. There is a difference of fifty-two feet in elevation from the lowest to the highest point, with a variation of slope ranging from 1% to 50%. The site is covered with a growth of hardwood and pines.

The proposed plan will include the following drawings and documents:

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1. Master Plan, which will include
   a. Pedestrian circulation
   b. Vehicular circulation
   c. Parking (automobiles, bicycles)
   d. Recreation areas
   e. Open lawn areas
   f. Planted areas
2. Grading and Staking Plan
3. Planting Plans and Lists
   a. Drawings
4. Construction Details for
   a. Walls
   b. Curbing
   c. Benches
   d. Play equipment
   e. Road paving
   f. Walks
   g. Masonry planters
   h. Steps and ramps
5. Perspective Sketches
6. Specifications
7. Written Report

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HISTORICAL ANALYSIS

The Enota School is located in the northern section of Gainesville, which includes the best homes of the town and is the most prosperous residential district.

Gainesville itself is the leading trade center for Northeast Georgia. It is a city with progressive industries, growing residential sections, excellent educational and recreational facilities. The city and county now have thriving industries producing a variety of products.

Gainesville is also the center of the world's second largest poultry production area and has earned the right to call itself the "World's Broiler Capital".

The city of Gainesville is also well-known as a cultural center, due particularly to Brenan College and Academy, and Riverside Military Academy, two schools with national and international recognition. Many outstanding musical attractions as well as art exhibits and similar opportunities are available to all who are interested.

Educational, civic, recreational, and cultural facilities are expanding with the expanding population.

The section around the Enota School especially has seen rapid growth within the past year, as there are many new homes and developments in this area.

Enota School is a new school, which was completed in the late summer of 1956. It was built according to the latest plans for good lighting, radiant heating, and proper ventilation. All rooms are on the ground floor, and there is a spacious lunchroom, as well as a fully equipped audio-visual room, library, and art room combined.

In 1960, the landscaping for the main building was completed and a new wing was added in 1961.

The School was originally located on a site of 45 acres. However, 29.5 acres had been sold leaving the school with only 15.5 acres. Three and one half acres of this land is being set aside for a school park, this being the present site for the present project.

ENOTA ELEMENTARY SCHOOL

INTRODUCTION

The development of child psychology has played a major role in creating an interesting play environment for elementary school children, for the last ten years. Recreation had been considered unimportant in elementary schooling, however, today school authorities, including child psychologists, agree that recreation greatly contributes to child development. There is also a transition of the school and surroundings being used for recreation after school hours.

The landscape architect is responsible for the development of outdoor space. With a major part of recreational activities occurring outdoors, a great deal of emphasis should be placed on spacial development. The service of a landscape architect is to develop these spaces into a utilitarian and pleasing design so that they will contribute to the development of character and imagination of children.

The Enota Elementary School's P. T. A. requested to be chosen as a senior terminal problem design project. The school is of pleasing contemporary design. It consists of approximately fifteen acres of land which allows for adequate recreational development, drive, automobile parking, etc., with three and one half acres of this being used for a park.

The landscape architect, who is designing an area of this nature, must consider many factors which include circulation, drainage, recreational facilities, automobile and parking facilities, maintainance, orientation, and plant materials. Each of these factors are important in themselves, but one cannot distinguish the importance of one over

another. Each factor must be carefully considered and work with the other to form a unity of expression.

GENERAL ANALYSIS

Before any design conclusions can be made the Landscape Architect must consider the existing conditions on a site. The existing environment will disclose many solutions to design problems. The existing recreational facilities, the circulation problems, existing plantings, and the maintenance problems are among many conditions that should be studied.

The site of the Enota Elementary School consist of approximately (15½), fifteen and one half acres, of sparsely wooded land. The basic foliage types consist of pine, oak and assorted shrubs and wild grasses. On the east side of the site there is a large wooded area consisting of oaks and pines. There is a good coverage of small planting on the site but because of poor conservation measures they are in very poor condition.

The soil types range from clay to clay-loam. The present condition of the soil is poor since it has been subject to large amounts of erosion. Drainage problems are evident and will require extensive study. When the recreational facilities are located, the problem of reducing surface water will be eliminated. At present, the drainage water runs to the limit of work line and dispurses.

Recreational facilities are inadequate at the present time. The school has constructed some play equipment East of the school which temporarily has reached the need for recreation for the large proportion of the children. However, there is a great need for further expansion of facilites and an organized arrangement for playing fields.

The parking facilities for service vehicles, buses, and automobiles are sufficient. The faculty parking in the South side is sufficient

for present parking and for future needs. A number of students ride bicycles to school. There is a sufficient bicycle ramp in the rear. The service facilities are also sufficent for present conditions.

Circulation is of major concern to the Landscape Architect and is an important design problem at Enota Elementary School. In order for the students to get to the main portion of the park a system of steps will be necessary. The park site itself is very steep and therefore provides many circulation problems.

The Enota Elementary School is contemporary in design. This circumstance affords an excellent opportunity for the landscape architect to develop interesting contemporary spaces for children which will help to develop their character and imagination through visual and active participation in outdoor activities in an attractive setting.

JUSTIFICATION AND DESIGN

CONCLUSIONS

The Landscape Architect should after careful consideration of the existing site, formulate certain design decisions. Many areas that exist will be changed for the betterment of the total design. Justification for changes must be viewed on a total, rather than singular, study of an area.

This proposed design for the Enota Elementary School has many interesting and logical aspects. The land is molded to create spaces in the play areas which provide shelter as well as a feeling of spatial freedom. In most schools today, a student rarely has the opportunity to sit away from his fellow students and study the outdoors. By providing open areas and passive study and reading areas in the park the student may have the opportunity of enjoying the true beauty of nature.

When children go to school, they seek the opportunity to "get away" from the classroom. The recess period provides the student with this opportunity. This allows the possibilities for the student to do what he desires the most. If he seeks quiet, the passive areas are available; if he seeks active recreation such as football or baseball, the facilities specified an amply supply to his needs on the plan.

In this design an attempt has been made to apply many features that the students requested by submitting questionnaries to them. Based on the knowledge received from the questionnaries, it was realized that the students had a great desire to be outdoors. The students were familiar with the many advantages of plants and expressed desire to come into a close contact with nature. The natural areas massed with trees

will provide an opportunity for the student to see and experience a touch of nature. These tree masses will serve as needed cover for birds and small animals because the surrounding residential areas are developing so rapidly.

The recreational facilities that have been added are not only for use by the school children but are designed such that they may provide recreation for the adults after school hours. The tennis court and other such facilities are an example of this.

Selection of a suitable site is of primary importance. Essential qualifications for the site are good acoustical properties and a quiet location away from the noise of traffic. It is with these ideas in mind that the center of the site was chosen for the amphitheater.

The amphitheater has been designed for not only the use of the children during the day but for the parents and children to use at night. This facility will provide the community with an opportunity to greatly increase culturally. It is also felt that the amphitheater has been located in the best possible location on the site in relation to topography.

Masses of trees have been planted around the perimeter of the property to provide a separation and buffer strips from the residential areas. The trees are inexpensive since they are pine and oak and are visually more effective than fencing. The tree masses on the East side flow into the naturalistic landscape and help contribute to the land forms.

The children's play area is especially designed for the small child. The children are given areas to play in that will allow their imagination to exercise itself. There is a sitting area for the parents and

teachers to sit as the children are enjoying themselves. The small walk in the center is designed for children tricycles and toy cars.

1. The Master Plan shall include an introduction into the scope of the study of the design. It shall give a guide to the orderly development of existing and proposed areas. This will also include the selection and development of new areas and facilities to meet existing and future needs. The design attempts to propose a comprehensive program to serve all age groups, and for all hours of the day, all seasons of the year. There is also consideration given to the maximum functional use of each recreation area and facilities. The master plan should also be a practical plan for immediate and long-range action with respect to program, areas, facilities and finances.

2. The Grading Plan, based on the original topographic survey, establishes grades for all buildings, roads, pools, steps, and other surface areas. It also indicates the locations and grades of all surface drainage structures.

3. The Staking Plan, indicates the locations of all buildings, walks, recreational facilities and radii of walks and paving. All structures are accurately located by dimensions.

4. The Planting Plan will locate and identify all items of plant material to be used. The plant list will identify all items of plant material, including size, quantity, variety of material and whether it should be balled and burlapped or bare root.

5. The construction details will provide plans, sections, and elevations of structures on the site plan such as roads, walks, and steps.

6. The specifications cover all types of materials to be used and will set forth explicit and concise methods of construction and/or installation.

SCHOOL RESEARCH TEST

(Boy)
(Girl)

1. Which do you like to do best?

   a. swing
   b. slide
   c. climb a tree

2. What do you like to do best

   a. play ball
   b. fish
   c. play in the woods
   d. play with dolls

3. What do you like best in school?

4. Would you like to grow vegetables and flowers as part of your school work? Yes No

5. Have you ever helped to plant a tree? Yes No

6. Have you ever planted seeds? Yes No

7. Do you like to grow gardens? Yes No

8. What kind of tree do you like best?

9. Do you like flowers? Yes No

10. Do you like to go to the park? Yes No

11. What is your favorite animal?

12. Does your mother grow plants inside your house? Yes No

13. Which do you like best

    a. grass
    b. trees
    c. flowers

14. Where do you like to play best
    inside outside

15. Why do you like spring?

MASTER PLAN

FOR A SCHOOL PARK

TERMINAL PROBLEM

LANDSCAPE ARCHITECTURE DEPARTMENT UNIVERSITY OF GEORGIA

ENOTA ELEMENTARY SCHOOL

GAINESVILLE GEORGIA

ENOTA ELEMENTARY SCHOOL
GAINESVILLE GEORGIA

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ENOTA ELEMENTARY SCHOOL PARK
DALTON, GEORGIA
SCALE 1" = 100'-0"
JUNE 1965
TERMINAL PROBLEM
UNIVERSITY OF GEORGIA
PREPARED BY
ROBERT T. FARMER
SITE ANALYSIS
SHEET 1 OF 10
PRELIMINARY
LEGEND
DRAINAGE
EXISTING CONTOURS
TRAFFIC FLOW
TREES
SLOPE
VIEWS
DUNN DRIVE
ENOTA DRIVE
BURNS DRIVE
RESIDENTIAL HOUSING
PARKING 20 CARS
FLAG POLE
LOADING
ENOTA ELEMENTARY SCHOOL
SERVICE
EXISTING PLAYGROUND
PINE TREES
FACULTY PARKING
30 CARS
PINES
OPEN AREA
SCATTERED OAKS AND PINES
WOODED LOT
VACANT
POOR VIEW
FRAME HOUSE
CUMBERLAND DRIVE
RESIDENTIAL HOUSING
NORTH
SCALE IN FEET
40 20 0 40 80 160
LOCATION PLAN
SCALE IN FEET
1000 500 0 1000 2000
DALTON
CITY LIMITS
CITY PARK
BRENNAN LAKE
CLIMATE JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC ANN
AVERAGE TEMP 48.6 48.7 50.9 61.2 70.3 77.1 79.2 76.6 73.0 62.7 51.6 43.9 61.7
AVERAGE RELATIVE HUMIDITY 44.1 46.8 51.8 61.6 69.7 77.1 79.2 76.6 73.0 62.7 51.6 43.9 61.7
TEMP. HIGH 54.2 57.5 62.9 73.5 81.4 89.5 89.7 89.3 85.2 74.7 62.9 53.8 72.8
TEMP. LOW 34.0 36.1 40.7 49.7 57.9 66.7 68.7 67.9 62.7 51.2 42.4 33.9 50.7
WIND SPEED 9.4 9.6 9.3 10.3 6.1 6.1 5.0 4.8 5.5 5.4 6.1 8.9 7.2
DIRECTION W W W W NE W S-W N-E N N N-NE S W

DUNN DRIVE
ENOTA DRIVE
PARKING
FLAG POLE
ENOTA ELEMENTARY SCHOOL
SERVICE
BICYCLE RACK
EXISTING PLAYGROUND
LIMIT OF WORK
FACULTY PARKING
BADMINTON COURTS
TENNIS COURT
NORTH
SCALE IN FEET
40 20 0 40 80 120 160
ENOTA ELEMENTARY SCHOOL PARK
PRELIMINARY PROBLEM
GEORGIA INSTITUTE OF TECHNOLOGY OF GEORGIA
DRWN BY ROBERT E. FARMER
MASTER PLAN
SHEET 2 OF 10
N.O.T.E.S:
• BY USING PORTABLE NETSTANDARDS, AREA CAN BE CLEARED FOR VARIOUS ACTIVITIES SUCH AS ROLLER SKATING AND SQUARE DANCING OR BADMINTON COURTS
RESIDENTIAL HOUSING
LITTLE LEAGUE BASEBALL
FOOTBALL
AMPHITHEATER
EXISTING WOODED AREA
OPEN AREA
ENOTA DRIVE
CUMBERLAND DRIVE
RESIDENTIAL HOUSING

ENOTA ELEMENTARY SCHOOL PARK
GAINESVILLE
GEORGIA

DRAWN BY: ROBERT E. FARMER

SCALE: 1" = 20'-0"	TERMINAL PROBLEM
JUNE 1965	UNIVERSITY OF GEORGIA

DETAIL OF MASTER PLAN

revisions:

SHEET 3 OF 10

SCALE IN FEET

20 10 0 20 40 60 80

NORTH

EXISTING WOODED AREA

AMPHITHEATER
SEATING CAPACITY 450

STAGE

WALK

OPEN AREA

PLAY AREA

SAND PIT

TUNNEL

SLIDE

SWINGS

CUMBERLAND DRIVE

NATURALISTIC AREA

FOOTBALL
27yds. X 50 yds.

LITTLE LEAGUE BASEBALL

ENOTA DRIVE

LEGEND

- EXISTING TREES
- DECIDUOUS TREES
- EVERGREEN TREES

NOTES:

FOR COMPLETION OF GRADING AND STAKING SEE SHEET 5 AND 6.

BADMINTON COURT TO BE PAVED WITH 6" CONCRETE USING NO. 12 WIRE MESH.

PLANTS ARE INCLUDED IN PLANT LIST ON PLANTING PLAN.

NORTH

SCALE IN FEET
40 20 0 40 80 120 160

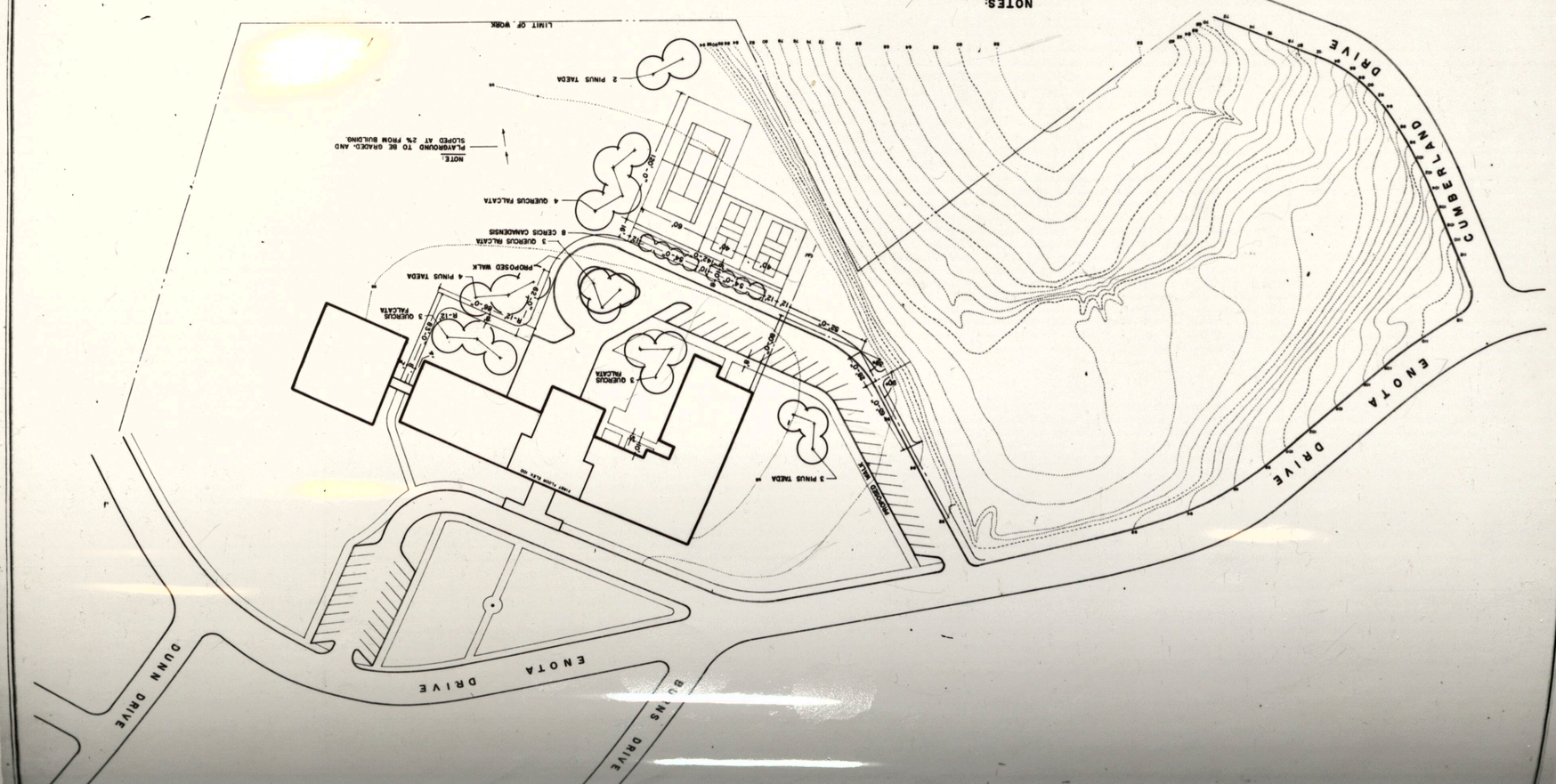
ENOTA ELEMENTARY SCHOOL PARK
GAINESVILLE GEORGIA

SCALE 1"= 40'-0"	TERMINAL PROBLEM	DRAWN BY
JUNE 1965	UNIVERSITY OF GEORGIA	ROBERT E. FARMER

GRADING AND STAKING PLAN

REVISIONS:

SHEET 4 OF 10



ENOTA ELEMENTARY SCHOOL PARK
GAINESVILLE GEORGIA

SCALE 1" = 20'-0"	TERMINAL PROBLEM	HW b7
JUNE 1965	UNIVERSITY OF GEORGIA	ROBERT E. FARMER

GRADING PLAN FOR DETAIL-MASTER PLAN

REVISIONS:

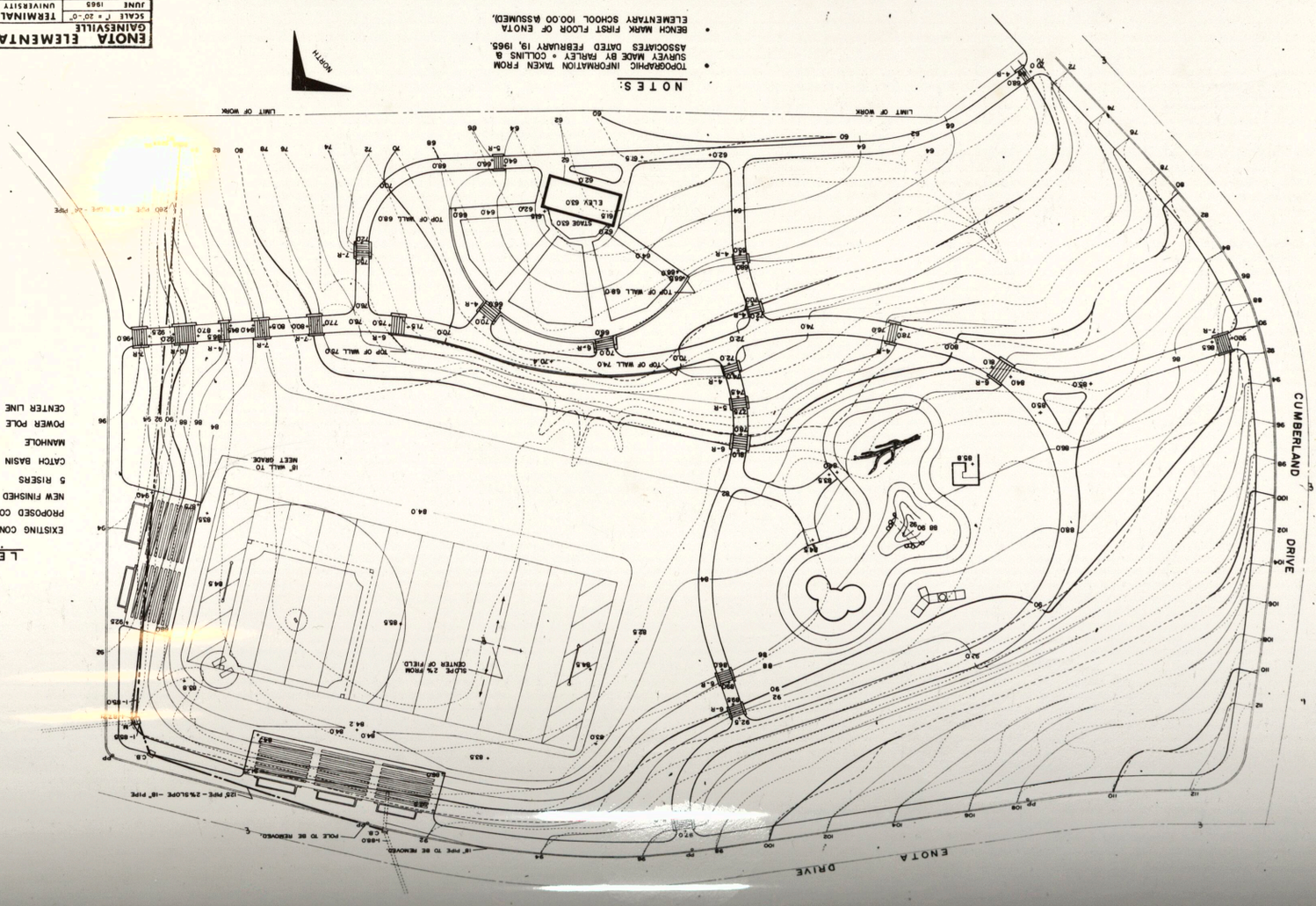
SHEET 5 OF 10

SCALE IN FEET
20 10 0 20 40 60 80

NORTH

NOTES:
- TOPOGRAPHIC INFORMATION TAKEN FROM SURVEY MADE BY FARLEY + COLLINS & ASSOCIATES DATED FEBRUARY 19, 1965.
- BENCH MARK FIRST FLOOR OF ENOTA ELEMENTARY SCHOOL 100.00 ASSUMED.

LEGEND
- EXISTING CONTOURS
- PROPOSED CONTOURS
- NEW FINISHED SPOT ELEV. 770
- 5 RISERS 5-R
- CATCH BASIN C.B.
- MANHOLE M
- POWER POLE PP
- CENTER LINE ℄



ENOTA ELEMENTARY SCHOOL PARK
GAINESVILLE GEORGIA

SCALE	1" = 20'-0"	TERMINAL PROBLEM	PLAN BY
JUNE	1965	UNIVERSITY OF GEORGIA	ROBERT E. FARMER

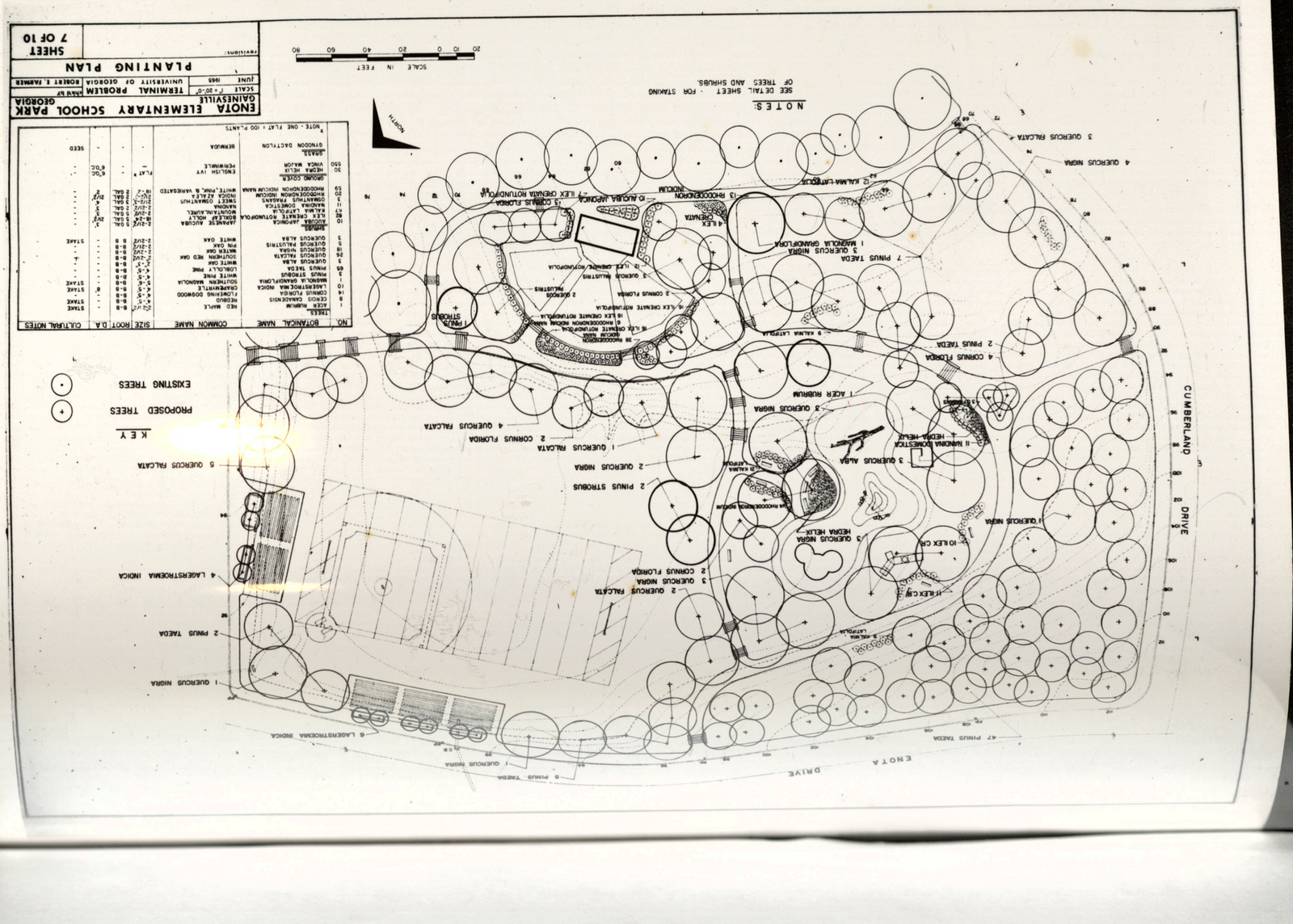
PLANTING PLAN

REVISIONS:

SHEET 7 OF 10

NOTE - ONE FLAT = 100 PLANTS

NO	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	D.A	CULTURAL NOTES
	TREES					
1	ACER RUBRUM	RED MAPLE	2"-2½"	B-B	-	STAKE
8	CERCIS CANADENSIS	REDBUD	4'-5'	B-B	-	STAKE
14	CORNUS FLORIDA	FLOWERING DOGWOOD	4'-5'	B-B	8'	
1	MAGNOLIA GRANDIFLORA	SOUTHERN MAGNOLIA	5'-6'	B-B	-	STAKE
10	LAGERSTROEMIA INDICA	CRAPEMYRTLE	4'-5'	B-B	8'	
3	PINUS TAEDA	LOBLOLLY PINE	4'-5'	B-B	-	
3	PINUS STROBUS	WHITE PINE	4'-5'	B-B	-	
65	QUERCUS ALBA	WHITE OAK	2'-3'	B-B	-	
3	QUERCUS NIGRA	SOUTHERN RED OAK	2"-2½"	B-B	4'	
26	QUERCUS FALCATA	WATER OAK	2"-2½"	B-B	-	
18	QUERCUS NIGRA	PIN OAK	2"-2½"	B-B	-	
5	QUERCUS PALUSTRIS	WHITE OAK	2"-2½"	B-B	-	STAKE
3	QUERCUS ALBA	WHITE OAK	2"-2½"	B-B	-	STAKE
	SHRUBS					
10	AZALEA JAPONICA	JAPANESE AZUCUBA	2-2½"	5 GAL	25'	
82	ILEX CRENATA ROTUNDIFOLIA	BOXLEAF HOLLY	18"-24"	5 GAL	25'	
71	ILEX OPACA	MOUNTAIN LAUREL	2-2½"	5 GAL	5'	
20	RHODODENDRON INDICUM	INDICA AZALEA	12"-2"	2 GAL	4'	
11	OSMANTHUS FRAGRANS	SWEET OSMANTHUS	2½"-3"	3 GAL	4'	
41	KALMIA LATIFOLIA	MANDANA	2-2½"	5 GAL	5'	
50	RHODODENDRON INDICUM KAMA	WHITE PINK & VARIEGATED	18"-2"	2 GAL	2½"	
30	HEDRA HELIX	ENGLISH IVY	FLAT	-	6"OC	-
550	VINCA MAJOR	PERIWINKLE	-	-	6"OC	-
	GROUND COVER					
	GYNODON DACTYLON	BERMUDA				SEED



ENOTA ELEMENTARY SCHOOL PARK
GAINESVILLE GEORGIA

SCALE AS SHOWN	TERMINAL PROBLEM	DRAWN BY
JUNE 1965	UNIVERSITY OF GEORGIA	ROBERT E. RAMSER

CONSTRUCTION DETAILS

REVISIONS:

SHEET 8 OF 10

ELEVATION "A"
SCALE 1/2"=1'-0"

ELEVATION "B"
SCALE 1/2"=1'-0"

PLAN OF FORT
SCALE 1/2"=1'-0"

SECTION THRU WALKS
SCALE 3/4"=1'-0"

PLAN VIEW OF STEPS
NO SCALE

TYPICAL SECTION STEPS
NO SCALE

DETAIL OF PLANTER BOX
SCALE 1"=1'-0"

DETAIL - CORNER OF PLANTER BOX
SCALE 1"=1'-0"

BARE-ROOT SHRUB
NO SCALE

BALLED AND BURLAPED SHRUB
NO SCALE

TYPICAL CROSS-SECTION OF GRANDSTANDS
SCALE 3/8"=1'-0"

DETAIL - TRIPLE GUYING OF TREES 2 1/2" OR MORE.
NO SCALE

DETAIL - STAKING OF TREES IN PLANTER BEDS 2" CALIPER
NO SCALE

ENOTA ELEMENTARY SCHOOL PARK
GAINESVILLE GEORGIA
SCALE AS SHOWN | TERMINAL PROBLEM | DATE
JUNE 1965 | UNIVERSITY OF GEORGIA | ROBERT E. RAMMER

CONSTRUCTION DETAILS

SHEET 9 OF 10

REVISIONS:

NOTES:
BENCHES ARE TO BE STAINED WITH EXTERIOR REDWOOD.
PAVING OF AMPHITHEATER TO BE SOIL CEMENT.

PLAN
SCALE 1" = 5'-0"

FRONT ELEVATION
SCALE 1" = 1'-0"

SEAT DETAIL
SCALE 1" = 1'-0"

SIDE ELEVATION
SCALE 1" = 4'-0"

FRONT ELEVATION
SCALE 1" = 4'-0"

CROSS SECTION A-A'
SCALE 1" = 4'-0"

* * * *

APPENDIX

* * * *

CONTENTS

SPECIFICATIONS

FOR

ENOTA ELEMENTARY SCHOOL

GAINESVILLE, GEORGIA

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Professor
Department of Mathematics
University of Georgia
Athens, Georgia

Professor
Department of Mathematics
University of Georgia
Athens, Georgia

SPECIFICATIONS FOR

LABOR AND MATERIALS REQUIRED AND TO BE FURNISHED

FOR

ENOTA ELEMENTARY SCHOOL

ENOTA DRIVE

GAINESVILLE, GEORGIA

Date: June 3, 1965

Robert Farmer
Landscape Architect
University of Georgia
Athens, Georgia

PLANTING PLAN
dated June 3, 1965

Approved by:

Mr. Revis Blakeney
Superintendent of Gainesville
City Schools
Gainesville, Georgia

NOTICE TO BIDDERS

Mr. Revis Blakeney
Superintendent of Gainesville City Schools
Gainesville, Georgia

Notice is hereby given for the construction of Amphitheater, Stadium, Play Areas, and Equipment, and installation of plant materials at Enota Elementary School. The site is located on Enota Drive, Gainesville, Georgia. Sealed bids shall be received by Mr. Revis Blakeney, Superintendent of Gainesville City Schools, Gainesville, Georgia.

The work will comprise the following:

SUPPLYING AND INSTALLING ALL PLANT MATERIALS, ESTABLISHING FINISHED GRADE AND LAWN, CONSTRUCTION OF PAVED AREAS, BENCHES, RETAINING WALLS AND STEPS, DRAINAGE SYSTEM, CONSTRUCTION OF AMPHITHEATER STAGE AND SEATING, CONSTRUCTION OF STADIUM AND INSTALLATION OF PLAYGROUND EQUIPMENT.

The contract shall be awarded to the lowest responsible bidder, subject, however, to the discretionary right reserved by the Owner to waive any informalities in, reject any or all proposals and to request new proposals, if, in his opinion the best interest of Enota Elementary School shall thereby be promoted.

Each bidder must deposit with his bid, security in an amount not less than five (5%) percentum of the bid, in the form and subject to the conditions provided in the Information to Bidders.

Date: June, 1965

INFORMATION FOR BIDDERS

FOR THE
PLANTING WORK
FOR

ENOTA ELEMENTARY SCHOOL
GAINESVILLE, GEORGIA

1. RECEIPT AND OPENING OF BIDS

(a) Mr. Revis Blakeney, Superintendent of Gainesville City Schools, Gainesville, Georgia, (herein after called the Owner) invites separate sealed bids for the:

SUPPLY AND INSTALLATION OF ALL PLANT MATERIAL, ESTABLISHING FINISHED GRADE AND LAWN, CONSTRUCTION OF PAVED AREAS, BENCHES, RETAINING WALL AND STEPS, DRAINAGE SYSTEM, CONSTRUCTION OF AMPHITHEATER STAGE AND SEATING, CONSTRUCTION OF STADIUM AND INSTALLATION OF PLAYGROUND EQUIPMENT.

at the Enota Elementary School.

(b) Bids shall be received by Mr. Revis Blakeney, Superintendent of Gainesville City Schools, Gainesville, Georgia.

(c) Any bids received after the time and date specified will not be considered. No bids will be withdrawn pending the decision of the Owner.

2. PREPARATION OF PROPOSAL

(a) Proposals must be submitted on the prescribed form, two copies of which are attached hereto, all blanks filled by printing, in ink, in both words and figures. The Contractor shall remove proposal from Specifications, and submit as his bid one copy, and keep the other copy for his records.

(b) All proposals must be submitted in sealed envelopes, bearing on the outside the name of the Bidder, his address, the name of the project, and the Contract bid upon.

(c) Proposals so enclosed shall be delivered to the aforementioned place on or before the hour and the date noted above.

3. OBLIGATION OF BIDDERS

(a) At the time of the opening of bids, each Bidder shall be presumed to have inspected the site and to have examined and to be thoroughly familiar with the drawing. General Conditions, General Requirements of the Contract, and Specifications (including all addenda thereto). The failure of or omission of any Bidder to receive or examine any drawings, form, instruction or document shall in no wise relieve such Bidder from any obligation in respect to his bid.

(b) Each Bidder shall, by careful examination of the site, satisfy himself as to the location of the work, the character, the quality and quantity of the work to be performed and materials to be furnished, the character of equipment and facilities needed preliminary to and during prosecution of the work, the general and local conditions and all other matters which in any way effect the work specified herein.

(c) After the contract has been entered into, no consideration shall be given for any misunderstanding as to work and materials set forth herein and shown on any of the accompanying drawings, details and schedules, it being mutually understood that the tender of a bid carries with it an agreement to this and other obligations set forth in the Contract or Specifications, and further implies a full understanding of the Specifications, Drawings and Details, notes, indications and requirements.

4. AWARDS

Contract will be awarded to the lowest responsible Bidder, subject, however, to the discretionary right reserved by the Owner to waive any informalities in or to reject any or all proposals and to advertise for new proposals if, in his opinion, the best interests of Enota Elementary School shall thereby be promoted.

5. ADDENDA AND INTERPRETATION

(a) Bidders are expressly notified that their proposals shall be based upon materials, products, and methods specified. For the purpose of estimate, no deviation from the drawings and specifications will be considered, except as provided. No interpretation of the meaning of the drawings, specifications, or other Contract documents shall be made to any Bidder orally. Every request for such interpretation should be in writing addressed to Mr. Revis Blakeney, Superintendent of Gainesville City Schools, and to be given consideration must be received at least five (5) days prior to the date fixed for the openi

of bids. Any and all such interpretations and any supplemental drawings which, if issued, shall be mailed to all prosective Bidders (at the respective addresses furnished for such purposes) not later than three (3) days prior to the date fixed for the opening of bids. Failure of any Bidder to receive any such addends or interpretation shall not relieve any bidder from any obligation, under his bid as submitted.

6. TIME FOR COMPLETION

The Contractor shall state in the bid form the number of days required for him to complete the project.

7. BID SECURITY

Each bid must be accompanied by the certified check of the Bidder, or by a Bid Bond duly executed by the Bidder as principal, and having as surety thereon a surety company approved by the Owner, in an amount not less than five (5) percentum of the amount of the bid. Such check or Bid Bond shall be returned to all except the successful Bidder within 48 hours after the Owner and the accepted Bidder have executed the Contract, or if no Contract has been executed within fifteen (15) days after the opening of bids, upon demands of the Bidder, or anytime thereafter, so long as he has not been notified of the acceptance of his bid.

8. SECURITY OF FAITHFUL PERFORMANCE

(a) Simultaneously with the delivery of the executed Contract, the successful Bidder must deliver to the Owner an executed Performance Bond of a corporate surety licensed to do business in the State of Georgia in the amount of one hundred percent (100%) of the accepted bid for the faithful performance of the terms, covenants, and conditions of the Contract and a further separate labor and material payment Bond, in the amount of fifty percent (50%) of the accepted bid guaranteeing the prompt payment of all indebtedness incurred by the Contractor or Subcontractor for supplies, materials or labor furnished, used or consumed in connection with or in or about the construction of the project, including fuels, lubricants, power, etc. The forms of both Performance Bond and Labor and Material Payment Bond shall be as per form No. 107 (AIA).

(b) The Broker for the Bond and the Surety Company shall be approved by the Owner.

(c) The premium on all bonds shall be paid for by the Contractor.

9. LIQUIDATED DAMAGES FOR FAILURE TO ENTER INTO CONTRACT

(a) The successful Bidder, upon failure to enter into or refusal to execute the Contract, and the Bond required within eight (8) days after he has received notice of the acceptance of his bid, shall forfeit to the Owner as liquidated damages for such failure or refusal, the security with bond.

10. INSURANCES

(a) The successful Contractor shall not commence work or allow his sub-contractors to commence work until the following insurances have been obtained, approved and certificates delivered to the Owner.

(b) Workmans' Compensation Insurance.

(c) Public Liability Insurance shall be furnished in amounts of $100,000/300,000, and Property Damage Insurance in amounts of $50,000.

(d) Before final payment is made, this Contractor will provide an affidavit stating all costs for labor and materials have been paid, and that the Owner is indemnified against any lien.

GENERAL CONDITIONS

Art. I. Definitions.

(a) The Contract Documents consist of the Agreement, the General Conditions of the Contract, the Drawings, and Specifications, including all modifications thereof incorporated in the documents before their execution. These form the Contract.

(b) The term Subcontractor as employed herein, includes only those having a direct contract with the Contractor and it includes on who furnishes material worked to a special design according to the plans or specifications of this work, but does not include one who merely furnishes material not so worked.

(c) The term "work" of the Contractor or Subcontractor includes labor or materials or both.

Art. II. Execution, Correlation, and Intent of Documents.
The Contract Documents will be signed in duplicate by the Owner and the General Contractor. The Contract is complementary, and what is called for by anyone will be as binding as if called for by all. The intention of the documents is to include all labor and materials, equipment, and transportation necessary for the proper execution of the work. Recognized standards will apply to materials or work with well-known technical or trade meaning.

Art. III. Detail Drawings and Instructions.
If necessary the Architect will furnish additional instructions, by means of drawings or otherwise, for the proper execution of the work. The work will be executed in conformity with the drawings and instructions. The Contractor will do no work without proper drawings and instructions.

Art. IV. Copies Furnished.
Unless otherwise provided in the Contract Documents, the Architect will furnish to the Contractor, free of charge, all copies of drawings and specifications necessary for the execution of the work.

Art. V. Drawings and Specifications on the work.
The Contractor will keep one copy of drawings and specifications on the work, in good order, available to the Architect.

Art. VI. Ownership of Drawings.
The drawings and specifications furnished by the Architect are his property. They are not to be used on other work and are to be returned to him on request, at the completion of the work.

Art. VII. Materials, Appliances, Employees.
Unless otherwise stipulated, the Contractor will provide and pay for all materials, labor, water, tools, equipment, light, power, transportation, and other facilities necessary for the execution and completion of the work.

Art. VIII. Surveys, Permits, and Regulations.
The Owner shall furnish all surveys unless otherwise specified. Permits and licenses of a temporary nature necessary for the prosecution of the work will be secured and paid for by the Contractor. Permit, licenses, and easements for permanent structures or permanent changes in existing facilities will be secured and paid for by the Owner, unless otherwise specified.

Art. IX. Protection of Work and Property.
The Contractor will maintain adequate protection of all his work from damage and will protect the Owner's property from injury or loss arising in connection with the Contract. He will make good any such damage, injury, or loss, except such as may be directly due to errors in the Contract Documents or caused by agents or employees of the Owner. He will make good any such damage, injury, or loss, except such as may be directly due to errors in the Contract Documents or caused by agents or employees of the Owner. He will adequately protect adjacent property as provided for by law.

The Contractor will take all necessary precautions for the safety of employees on the work, and will comply with all applicable provisions of Federal, State, and Municipal safety laws to prevent accidents or injury to person on, about, or adjacent to the premises where the work is being performed. He will erect and properly maintain at all times, as required by the conditions and progress of the work, all necessary safeguards for the protection of workmen and the public.

Art. X. Inspection of Work.
The Architect will at all times have access to the work wherever it is in progress, and the Contractor will provide proper facilities for such access and for inspection. Re-examination of questioned work may be ordered by the Architect, and if so order the work must be uncovered by the Contractor. The Contractor will pay the cost of re-examination and replacemtn if such work is not in accordance with the Contract Documents.

Art. XI. Superintendence: Supervision.
The Contractor will keep on his work, during its progress, a competent superintendent, satisfactory to the Architect.

The contractor will give efficient supervision to the work, using his best skill and attention. He will carefully study and compare all drawings, specifications and will at once report to the Architect any error, inconsistency, or omission which he may discover, but he will not be held responsible for their existence or discovery.

Art. XII. Changes in the Work.
The Owner, without invalidating the Contract, may order extra work or make changes by altering, adding to, or deducting from the work, the Contract sum being adjusted accordingly. All such work will be executed under the conditions of the original Contract. In giving instructions, the Architect will have authority to make minor changes in the work not involving extra cost.
The value of any extra work or change will be determined in one

of the following ways:

(a) By estimate and acceptance in a lump sum.
(b) By unit prices named in the contract or subsequently agreed upon.
(c) By cost and percentage or by cost and fixed fee.

Art. XIII. Claims for Extra Cost.
If the Contractor claims that any instructions by drawings or otherwise involve extra cost under this contract, he will give the Architect written notice thereof within a reasonable time after the receipt of such instructions, and in any event before proceeding to execute the work, except in emergency endangering life or property, and the procedure will then be as provided for changes in the work.

Art. XIV. Correction of Work Before Final Payment.
If the Contractor does not remove from the premises all work condemned by the Architect as failing to conform to the Contract within a reasonable time, fixed by written notice, the Owner may remove it and may store the material at the expense of the Contractor. If the Contractor does not pay the expenses of such removal within ten days' time thereafter, the Owner may, upon ten days' notice, sell such materials at auction or at private sale and shall account for the net proceeds thereof, after deducting all the cost and expenses that should have been borne by the Contractor.

Art. XV. Correction of Work After Final Payment.
Neither the final certificate nor payment nor any provision in the Contract Documents will relieve the Contractor of responsibility for faulty materials or workmanship, and, unless otherwise specified, he will remedy any defects due thereto, and pay for damage to other work resulting therefrom, which will appear within a period of one year from the date of substantial completion. The Owner will give notice of observed defects with reasonable promptness. All questions arising under this article will be decided by the Architect subject to arbitration.

Art. XVI. The Owner's Right to Do Work.
If the Contractor should neglect to prosecute the work properly or fail to perform any provisions of this contract, the Owner, after three days' written notice to the Contractor may, without prejudice to any other remedy he may have, make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due the Contractor, provided, however, that the Architect will approve both such action and the amount charged to the Contractor.

Art. XVII. Owner's Right to Terminate Contract.
If the Contractor should be adjudged a bankrupt or if he should make a general assignment for the benefit of his creditors, or if a receiver should be appointed on account of his insolvency, or if he should persistently or repeatedly refuse or should fail to supply enough properly skilled workmen or proper materials, or if he should fail to make prompt payment to subcontractors or for material or labor, or persistently disregard laws, ordinances, or the instructions of the Architect,

or otherwise be guilty of a substantial violation of any provision of the contract, then the Owner, upon the certificate of the Architect that sufficient cause exists to justify such action, may, without prejudice to any other right or remedy and after giving the Contractor seven days' written notice, terminate the employment of the Contractor and take possession of the premises and of all materials, tools, and appliances thereon and finish the work by whatever method he may deem expedient. In such case the Contractor will not be entitled to receive any further payment until the work is finished. If the unpaid balance of the contract price shall exceed the expense of finishing the work including compensation for additional managerial and administrative services, such excess will be paid to the Contractor. If such expenses shall exceed such unpaid balance, the Contractor will pay the difference to the Owner. The expense incurred through the Contractor's default, will be certified by the Architect.

Art. XVII. Contractor's Right to Stop Work or Terminate Contract. If the work should be stopped under an order of any court, or other public authority, for a period of three months, through no act or fault of the Contractor of of anyone employed by him, or if the Architect should fail to issue any certificate for payment within seven days after it is due, or if the Owner should fail to pay to the Contractor within seven days after of its maturity and presentation, any sum certified by the Architect or awarded by arbitrators, then the Contractor may, upon seven days' written notice to the Owner and the Architect, stop work or terminate this contract and recover from the Owner payment for all work executed and any loss sustained upon any plant or materials and reasonable profit and damages.

Art. XIX. Applications for Payment. The Contractor will submit to the Architect an application for each payment, and, if required, receipts or other vouchers, showing his payments for materials and labor, including payments to subcontractors as required by article XXXI.

If payments are made on valuation of work done, such application will be submitted at least ten days before each payment falls due, and, if required, the Contractor will, before the first application, submit to the Architect a schedule of values of the various parts of the work, including quantities, aggregating the total sum of the divided so as to facilitate payments to subcontractors in accordance with article XXXI (e), made out in such form as the Architect and the Contractor may agree upon, and, if required, supported by such evidence as to its correctness as the Architect may direct. This schedule, when approved by the Architect, will be used as a basis for certificates of payment, unless it be found to be in error. In applying for payments, the Contractor will submit a statement based upon this schedule, and, if required, itemized in such form and supported by such evidence as the Architect may direct, showing his right to the payment claimed.

If payments are made on account of materials delivered and suitably stored at the site, but not incorporated in the work, they will, if required by the Architect, be conditional upon submission by the Contract of bills of sale or such other procedure as will establish the

Owner's title to such material or otherwise adequately protec the Owner's interest.

Art. XX. Certificates of Payments.
If the Contractor has made application as above, the Architect will, not later than the date when each payment falls due, issue to the Contractor a certificate for such amount as he decides to be properly due, or state in writing his reasons for withholding a certificate.

No certificate issued nor payment made to the Contractor, nor partial or entire use or occupancy of the work by the Owner, will be any acceptance of any work or materials not in accordance with this contract. The making and acceptance of the final payment will constitute a waiver of all claims by the Owner, other than those arising from unsettled liens, from faulty work appearing after final payment or from requirement of the specifications, and of all claims by the Contractor, except those previously made and still unsettled.

Should the Owner fail to pay the sum named in any certificate of the Architect or in any award by arbitration, upon demand when due, the Contractor will receive, in addition to the sum named in the certificate, interest thereon at the legal rate in force at the place of building.

Art. XXI. Payments Withheld. The Architect may withhold or, on account of subsequently discovered evidence, nullify the whole or a part of any certificate to such extent as may be necessary to protect the Owner from loss on account of:

(a) Defective work not remedied.
(b) Claims filed or reasonable evidence indicating probable filing of Claims.
(c) Failure of the Contractor to make payments properly to subcontractors or for material or labor.
(d) A reasonable doubt that the contract can be completed for the balance then unpaid.
(e) Damage to another Contractor.

When the above grounds are removed, payment will be made for amounts withheld because of them.

Art. XXII. Contractor's Liability Insurance.
The Contractor will maintain such insurance as will protect him from claims under workmen's compensation acts and from claims for damages because of bodily injury, including death, which may arise from and during operations under this Contract, whether such operations by by himself or by any subcontractor or anyone directly or indirectly employed by either of them. This insurance will be written for not less than any limits of liability specified as part of this contract.

Art. XXIII. Owner's Liability Insurance.
The Owner will be responsible for and at his option may maintain such insurance as will protect him from his contingent liability to others for damages because of bodily injury, including death, which may ar

from operations under this contract, and any other liability for damages which the Contractor is required to insure under any provision of this contract.

Art. XXIV. Fire Insurance.
The Owner will effect and maintain fire insurance on all structures on property that the work of this contract is to be done to 100 per cent of the insurable value, including items of materials connected therewith whether in or adjacent to the structure insured, materials in place or to be used as part of the permanent construction including surplus materials in place or to be used as part of the work, and such structures, miscellaneous materials and supplies incident to the work. The loss, if any, is to be made adjustable with and payable to the Owner as Trustee for the insureds as their interests may appear, except in such cases as may require payment of all or proportion of said insurance to be made to a mortgagee as his interest may appear.

The Contractor and all subcontractors shall be named or designated in such capacity as insured jointly with the Owner in all policies. If the Owner fails to effect or maintain insurance as above and so notifies the Contractor, the Contractor may insure his own interest and that of the subcontractors and charge the cost thereof to the Owner.

Art. XXV. Guaranty Bonds.
The Owner will have the right, prior to the signing of the Contract, to require the Contractor to furnish bond covering the faithful performance of the Contract and the payment of all obligations arising thereunder, in such form as the Owner may prescribe and with sureties as he may approve. If such bond is required by instructions given previous to the submission of bids, the premium will be paid by the Contractor; if subsequent thereto, it will be paid by the Owner.

Art. XXVI. Damages.
If either to this Contract should suffer damage in any manner because of any wrongful act or neglect of the other party or of anyone wrongful act or neglect of the other party or of anyone employed by him, then he will be reimbursed by the other party for such damage, provided the Owner will be responsible for and at his option insure against loss of use of any of his existing property, due to fire or otherwise, however caused.

Claims under this clause will be made in writing to the party liable within a reasonable time of the first observance of such damage and not later than the time of final payment, except as expressly stipulated otherwise in the case of faulty work or materials, and will be adjusted by agreement or arbitration.

The Contractor is relieved of responsibility for damages to the work due to causes beyond the control of and without fault or negligence of the Contractor.

Art. XXVII. Liens.
Neither the final payment nor any part of the retained percentage will become due until the Contractor, if required, will deliver to the Owner a complete release of all liens arising out of this Contract, or receipts in full lieu thereof, and, if required in either case, an affidavit that so far as he has knowledge or information the releases and receipts include all the labor and material for which a lien could be filled; but the Contractor may, if any subcontractor refuses to finish a release or receipt in full, furnish a bond satisfactory to the Owner, to indemnify him against any lien. If any lien remain unsatisfied after all payments are made, the Contractor will refund to the Owner all money that the latter may be compelled to pay in discharging such a lien, including all costs and a reasonable attorn's fee.

Art. XXVIII. Assignment.
Neither party to the Contract will assign the Contract or sublet it as a whole without the written consent of the other, nor will the Contractor assign any money due or to become due to him hereunder, without the previous written consent of the Owner.

Art. XXIX. Mutual Responsibility of Contractors.
Should the Contractor cause damage to any separate contractor on the work the Contractor agrees, to settle with such contractor by agreement or arbitration, if he will so settle. If such separate contractors sue the Owner on account of any damage alleged to have been so sustained, the Owner will notify the Contractor, who will defend such proceedings at the Owner's expense, and, if any judgment against the Owner arise therefrom, the Contractor will pay or satisfy it and pay all costs incurred by the Owner.

Art. XXX. Separate Contracts.
The Owner reserves the right to let other contracts in connection with this work. The Contractor will afford other contractors reasonable opportunity for introduction and storage of their materials and the execution of their work, and will properly connect and coordinate his work with theirs.

Art. XXXI. Subcontractors.
The Contractor will as soon as practicalbe after the execution of the contract, notify the Architect in writing of the names of subcontractors proposed for the principal parts of the work and for such others as the Architect may direct and will employ any that the Architect may within a reasonable time object to as incompetent or unfit.

If the Contractor has submitted before execution of the contract a list of subcontractors and the change of any name on such a list is required in writing by the Owner after such execution, the contract price will be increased or diminished by the difference in cost occasioned by such changes.
The Architect will, on request, furnish to any subcontractor,

wherever practicable, evidence of the amounts certified on his account.

The Contractor agrees that he is as fully responsible to the Owner for the acts of his subcontractors and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him.

Nothing contained in the contract document will create any contractual reaction between any subcontractor and the Owner.

Art. XXXII. Relations of Contractor and Subcontractor.
The Contractor agrees to bind every Subcontractor and every Subcontractor agrees to be bound by the terms of the Agreement, the General Conditions, the Drawings, and Specifications as far as applicable to his work, including the following provisions of this article.

The Subcontractor agrees--

(a) To be bound to the Contractor by the terms of the Agreement, General Conditions, Drawings, and Specifications, and to assume toward him all the obligations and responsibilities that he assumes toward the Owner.

(b) To submit to the Contractor applications for payment in such reasonable times as to enable the Contractor to apply for payment under Art. XIX of the General Conditions.

(c) To make claims for extras to the Contractor in the manner provided in the General Conditions for like claims by the Contractor upon the Owner, except that the time for making claims for extra cost is one week.

The Contractor agrees--

(d) To be bound to the Subcontractor by all the obligations that the Owner assumes to the Contractor under the Agreement, General Conditions, Drawings, Specifications and by all the provisions thereof affording remedies to the Contractor from the Owner.

(e) To pay the Subcontractor, upon the payment of certificates, if issued under the schedule of values in Art. XIX of the General Conditions, the amount allowed to the Contractor on account of the Subcontractor's work to the extent of the Subcontractor's interest therein.

(f) To pay the Subcontractor, upon the payment of certificates, if issued otherwise than as in (e), so that at all times his total payments will be as large in proportion of the value of the work done by him.

(g) To pay the Subcontractor to such extent as may be provided by the Contract Documents or the subcontract, if either of these provides for earlier or larger payments than the above.

(h) To pay the Subcontractor on demand for his work or materials as far as executed and fixed in place, less the retained percentage, at the time the certificate is issued.

(i) To pay the Subcontractor a just share of any fire insurance money received by him, the Contractor.

(j) To make no demand for liquidated damages or penalty for delay in any sum in excess of such amount as may be specified in the contract.

(k) That no claim for services rendered or materials furnished by the Contractor to the Subcontractor will be valid unless written notice thereof is given by the Contractor to the Subcontractor during the first ten days of the calendar month following that in which the claim originated.

(l) To give the Subcontractor an opportunity to be present and to submit evidence in any arbitration involving his rights.

(m) To name as arbitrator as provided for in the General Conditions the person nominated by the Subcontractor, if the sole cause of dispute is the work, materials, rights, or responsbilities of the Subcontractor.

The Contractor and Subcontractor agree—

(n) In the matter of arbitration, their rights and obligations and all procedure will be analogous to those set forth in this contract. Nothing in this article will create any obligation on the part of the Owner to pay or to see to the payment of any sums to any subcontractor.

Art. XXXIII. Architect's Status.
He is the agent of the Owner as provided in the Contract Documents.
The Architect will side neither with the Owner nor with the Contractor, but will use his power under the contract to enforce its faithful performance by both.

Art. XXXIV. Architect's Decisions.
The Architect will, within a reasonable time, make decisions on all claims of the Owner or Contractor and on all other matters relating to the execution and progress of the work or the interpretation of the Contract Documents.

Art. XXXV. Arbitration.
All disputes, claims, or questions subject to arbitration under this contract will be submitted to arbitration in accordance with the provisions, then obtaining, of the Standard Form of Arbitration Procedure of The American Institute of Architects.

Art. XXXVI. Cash Allowances.
The Contractor will include in the contract sum all allowance named in the Contract Documents and will cause the work so covered to be done by such contractors and for such sums as the Architect may direct, the contract sum being adjusted in convormity therewith.
The Contractor will not be required to employ for any such work persons against whom he has a reasonable objection.

Art. XXXVII. Use of Premises.
The Contractor will confine his apparatus, the storage of materials, and the operations of his workmen to the limits indicated by law, ordinances, permits, or directions of the Architect and will not unreasonably encumber the premises with his materials.

Art. XXXVIII. Cleaning Up.
The Contractor will dispose of, on the site or as directed by the Architect, all subsoil excavated from his work. All other debris including branches, paper and rubbish resulting from his work will be removed from the site as work proceeds.

All areas will be kept in a neat and orderly condition at all times. Prior to final acceptance theContractor will clean up his work areas to the satisfaction of the Architect.

SPECIFICATIONS
FOR
PLANTING WORK

GENERAL

(a) Work under this division is indicated on drawings entitled "Landscape Planting Plan" prepared by Robert E. Farmer, Landscape Architect.

(b) Each Bidder will familiarize himself with the Contract documents and shall visit the site of proposed work to acquaint himself with existing conditions pertinent to the execution of all work described herein.

(c) Should a Bidder find a discrepency or omission in the meaning of any portion of them, he shall notify the Architect who shall then instruct all Bidders in the matter by an Addendum.

(d) This Contractor shall protect, and guard against damage to existing work. Any work already completed, that is disturbed or in any way damaged or changed shall be replaced to original condition, or as shown on the drawings.

WORK INCLUDED

(a) The work covered by this Specification consists of furnishing all labor, materials, equipment and appliances necessary for Planting of Major and Minor Plants, as shown on drawings and schedules and as specified herein, including but not limited to the following:

Excavating for all tree shrub and ground cover pits and beds.

Furnishing and preparing of topsoil for backfilling of all shrub trees and ground cover pits and beds.

Furnishing and incorporating fertilizer and peat.

Furnishing and planting trees and plants as shown.

Furnishing and spreading topsoil, as needed beyond that furnished on site.

Mulching.

Maintenance inspection.

Replacements of unsatisfactory plant material.

Installation of lawn area.

(b) All labor, materials, and equipment necessary in establishing lawn areas, as specified herein, include but not limited to the following:

Testing soil for content.

Furnishing and incorporating fertilizer and soil conditioner.

Establishing a grade.

Furnishing and installing sprigs.

Watering area as specified.

PROTECTION OF EXISTING UTILITIES

(a) The Contractor shall ascertain the location of all electrical cables, utility lines, cesspools, and supply lines.

(b) The Contractor shall be held responsible for any damage to existing utilities incurred during the process of work under this Contract.

INSPECTION

(a) Plants shall be subject to inspection and approval at place of growth, or upon delivery, for quality, size, variety, and health.

FERTILIZER

(a) Fertilizer for trees, shrubs, and lawn area shall be complete, shall bear manufacturer's guaranteed statement of analysis, and will meet the following minimum requirements:

(Six) 6% Nitrogen

(Twelve) 12% Super Phosphate

(Twelve) 12% Potash

(b) Commercial fertilizer shall be thoroughly incorporated with topsoil and loam planting mixture at the rate of three (3) lbs. per inch caliper of tree (approximately three shovels per tree.)

(c) Fertilizer shall be applied on lawn areas at the rates that follow:

(1) Six (6), Twelve (12), Twelve (12) fertilizer shall be applied at the rate of thirty (30) pounds per thousand (1000) square feet.

(2) Ammonium Nitrate shall be applied at the rate of three (3) pounds per thousand (1000) square feet every six (6) weeks during the growing season.

(d) Contractor shall provide weather-proof storage space for fertilizer until its use.

(e) The Contractor shall use a fine mist when watering.

(f) These specifications are based on warm season plantings. Adjustments will be necessary for earlier and later plantings, temperature and rainfall variations.

SOIL CONDITIONER

(a) Peat moss shall be domestic, incorporated into soil planting mixture to sufficient quantity to provide a friable planting mixture.

(b) Agriculture limestone, dolemetric limestone recommended, shall be incorporated into the fifty soil mixture for lawn area at the rate of fifty (50) pounds per thousand (1000) square feet.

TOPSOIL AND LOAM

(a) Mixture to be used in plantings shall consist of 50% clean topsoil and 50% clay loam. 50% of clay loam will consist of clay. To this mixture add prescribed amounts of peat moss and fertilizer.

LAWN INSTALLATION

(a) Gynodon Dactylon. Bermuda shall be installed by using the broadcasting method.

(b) The soil shall be disturbed by discing.

(c) Lime and fertilizer shall be applied and mixed into soil before planting aforementioned.

WATERING

(a) The contractor shall make three (3) light waterings per day at the rate one-eighth (1/8) inch per day.

(b) If soil is dry at planting time the contractor shall apply one-half (1/2) of water the first day.

(c) After a period of four (4) days the frequency of applications of water may be cut in half. As the grass gets established the irrigation frequency can again be reduced, but the amount of water per application should be increased.

GUARANTEE OF PLANT GROWTH

(a) All plants shall be typical of their species of variety and shall have a normal habit of growth.

(b) All plants and plant material shall be guaranteed by the Planting Contractor to be true to name and size, and in vigorous growing condition. All plant material shall be guaranteed for at least one year after acceptance. Replacements shall be made at the beginning of the first succeeding planting season.

EXCAVATION, HANDLING AND PLANTING OPERATIONS

(a) All plants shall be handled so that roots are adequately protected at all times. During shipment they shall be protected by tarpaulin or other suitable covering. All balled and burlapped plants which cannot be planted immediately upon delivery shall be set on the ground and be well protected with soil.

(b) All trees shall be planted as shown on the plan according to the standards of the Georgia State Nurserymen's Association.

(c) No planting shall be done during unfavorable weather conditions.

PREPARATION OF TOPSOIL FOR PLANT PITS AND BEDS

(a) Topsoil for planting pits and beds, except ericaceous plants shall be prepared by mixing with peat moss in the proportions of one (1) of peat moss to seven (7) of topsoil by volume. The mixture will be thoroughly blended before use.

(b) Topsoil for beds of ericaceous plants shall be prepared by mixing topsoil with peat moss in the proportion of one (1) of peat to five (5) parts topsoil by volume, thoroughly mixed.

MULCHING

(a) A 2" mulch of peat shall be applied on all planting beds, tree pits and shrub pits after planting.

(b) All evergreens, broadleaved evergreens, ground cover plants and ericaceous material shall be mulched to a depth of 2" with a mixture consisting of 50% leaf mold, and 50% peat moss. A portion of this will be scratched into the top 1 1/2" of soi

PLANTING SEASON

(a) Planting of plant materials shall be done during the season or seasons which are normal for such work as determined by weather conditions and by accepted practice in the locality.

(b) At the option of and on responsibility of the Contractor, planting of plant material may be done under unseasonable conditions, without extra compensation, subject to approval as to time or work and methods of operation.

STAKING, BUYING, WRAPPING

(a) All trees over 3" caliper shall be guyed by wire guys encased in water hose at the trunk. Guys will be securely staked or anchored to "deal man" or otherwise secured in an approved manner. All wire will be pliable iron of ga. shown on guying sketches.

(b) Stakes for supporting trees shall be of sound wood of uniform size, capable of standing in ground at least two years. They will be at least 2" actual dimension and not less than 8' in length, unless otherwise specified.

(c) Stakes shall be placed a minimum of 12" from the trunk of the tree, taking care to clear the roots. They shall be driven into the ground to the depth shown.

(d) Wrapping material shall be first quality burlap or waterproofed crepe paper not less than 6" or more than 10" in width, and of suitable length.

(e) The trunks of all trees of three inch caliper or greater shall be wrapped, and the material securely tied at top and bottom, and at two foot intervals. Bandaging will start at base, and will cover theentire surface of the trunk to the first branches.

(f) All guying, staking and wrapping shall be done immediately after planting. All plants shall stand plumb after guying and staking.

MAINTENANCE OF PLANTING UNTIL ACCEPTANCE

(a) Areas around trees shall be kept cultivated, free of weeds and grass, and properly watered until acceptance. Replacement will be done as soon as dead material appears. If any tree, shrub or plant bed settles more than three (3) inches below the established grade, it shall be raised to the proper level, and not merely filled with additional topsoil.

CLEANING UP

(a) The Contractor shall dispose of, on the site or as directed by the Architect, all subsoil excavated from his work. All other debris including branches, paper and rubbish resulting from his work shall be removed from the site as work proceeds.

(b) All areas shall be kept in a neat and orderly condition at all times. Prior to final acceptance the Contractor will clean up his work areas to the satisfaction of the Architect.

INSPECTION FOR ACCEPTANCE

(a) Inspection by the Architect shall be made upon completion of all work, at the notification of the contractor.

(b) Payment shall be made after acceptance by the Architect. Such payment shall not relieve Contractor of responsibility of guarantees, or of conformance with provisions for plant replacement as specified below.

GUARANTEE OR WARRANTY

(a) This Contractor warrants that all work executed under this division shall be free from defective plant material or workmanship for a period of one year after Architect's acceptance of the work.

(b) This Contractor shall guarantee to replace all defective plants and workmanship by approved methods and at his own expense whensoever such defects may appear prior to the conclusion of this guarantee.

REPLACEMENTS

(a) Any trees, shrubs or vines not found to be in a healthy growing condition at any time during the period of guarantee, shall be removed from the site and replaced, as soon as weather and seasonal conditions permit, as determined by the Architect.

(b) Plant replacements shall be the same kind and size as specified in the itemized plant list, all replacements shall be furnished, planted, and mulched as specified, at the Contractor's expense.

(c) The Contractor shall be liable for any damage to property including lawns, sprinkler systems, pavements, curbs, etc. caused by replacing operations.

COOPERATION

(a) This Contractor shall agree to complete cooperation and coordination with the General Contractor engaged in all adjacent work.

SEQUENCE OF THE WORK

(a) **The Contractor shall do the work specified in the following order:**

(1) Sub. grade (1-2 inches)
(2) Construction work and Planting work
(3) Spread topsoil
(4) Spreading of seed

SPECIFICATIONS FOR CONSTRUCTION WORK

GENERAL

(a) Refer to Planning Work for information concerned with general provisions.

WORK INCLUDED

(a) The work covered by this specification consist of furnishin labor and materials, equipment and appliances necessary for establishing finished grade and for construction of paved areas, benches, retaining wall, and drainage system as specified herein, including but not limited to the following:

(1) General excavation of the site.
(2) Grading and establishing base for paved areas.
(3) Furnishing materials used in base.
(4) Furnishing lumber, thread rods, concrete bench supports, steel bench supports, and all other necessary materials for the construction of benches. (If Contractor constructs cast concrete supports, the necessary ingredients shall be furnished by the Contractor)
(5) Furnishing Asphalt for surface coarse.
(6) Furnishing forms, temperature rods, reinforment rods, tie rods, concrete bricks and all other materials necessary for the construction of the reatining wall. (If Contractor constructs forms, the necessary materials shall be furnished by Contractor)
(7) Furnishing drainage tile for drainage system.
(8) Furnishing the necessary materials for the construction of manholes.
(9) Furnishing the necessary materials for the construction of all atheletic facilities.

MATERIALS

CONCRETE

(a) All cement shall be Portland cement and shall be dry and shall be in its original container.

(b) Fine aggregate shall consist of clean washed sand, ninety-five (95) percent which shall pass through a number four (4) seive. Not less than fifty (50) percent shall be retained

on a number thirty (30) seive, and not more than five (5) percent shall pass a one hundred (100) mesh seive.

(c) Coarse aggregate shall consist of well graded, uniformly mixed broken stone, crushed gravel, screened gravel, or broken slag. Coarse aggregate coated with or containing mud, clay, dirt, stone dust, or other objectionable materials shall be washed to the satisfaction of the Landscape Architect. Coarse aggregate shall consist of a misture of number one (1) and number (2) size particles, provided that not more than fifty (50) per cent or less than thrity (30) percent shall be of number one (1) size and more than seventy (70) percent or less than fifty (50) percent shall be of number two (2) size.

(d) All water used shall be clean filtered drinking water containing no alkalines, acids, vegetable matter or other chemicals objectionable to concrete.

(e) All concrete shall have an ultimate compressive strength of three thousand (3000) pounds per square inch at the end of twenty-eight (28) days.

REINFORCED STEEL

(a) All rods for concrete reinforcement shall be perpormed rods, rolled of new brillet steel, conforming to the specifications of the American Society for Testing Materials.

MASONARY WORK

(a) All bricks used shall be new, sound and hard, burned throughout, and of uniform size and quality.

(b) Masonary units shall be laid in the best manner, well bonded with the joints and corners true and laid in a full bed of mortar with joints slushed full. Care must be taken during the course of work to keep this work free from injurious strains. After completion of masonary work, all exposed work shall be washed down and left clean and in every way acceptable to the Owner.

WOOD WORK

(a) Lumber used shall be pre-seasoned and shall meet specified standards.

EARTH WORK

(a) The Contractor shall excavate or fill, as the case may be, to grades as shown on the drawings.

(b) Excavation for walks, walls, and footings shall be cut full size as shown on the drawings.

PAVED AREAS

(a) The Contractor shall construct paved areas as shown on the drawings as folbws:

(1) The contractor shall have the responsibility of installing Asphalt walks, bicycle parking area, curbs, roads, and play area according to the Asphalt Institute specifications 1 (SS-1) Asphalt Institute, College Park, Maryland, March, 1962.

RETAINING WALL

(a) The Contractor shall construct a retaining wall as shown on drawings as follows:

(1) Concrete structure shall be a total length of one hundred and thirty feet (130) and have a width of one (1) foot.

(2) The concrete used for the construction of the retaining wall shall be mixed in the proportions of one (1) part of Portland Cement, three (3) parts sand, and five (5) parts gravel or crushed stone.

(3) Form work shall be constructed as the contractor so desires as long as the strength and appearance meet the previous specifications.

(4) Concrete shall be poured in continuous layers, six (6) to eight (8) inches deep.

(5) Number three (3) reinforcing rods, eleven and one half (11 1/2) inches on center shall be wire tied to the tie rods.

(6) Number seven temperature rods shall be laid on top of tie rods and fastened with wire as shown on drawings.

BENCH

(a) The contractor shall establish benches as follows:

(b) Benches located in sitting areas as shown on drawings shall be constructed as follows:

(1) Each bench section shall be constructed of eight 1 1/4 " x 2" dense Douglas Fir slats their length as indicated on plan.

(2) Bench shall be painted with high quality exterior stain.

(3) Bench supports shall be located as specified in drawings.

(4) Form work plans shall be submitted by contractor and approved by Landscape Architect before being used on the work, no special remuneration shall be made for form work, the cost of such work being included in the price tendered for concrete.

(5) The concrete shall be mixed in the proportions of one (1) part Portland cement, two (2) parts sand and (3) parts gravel or crushed stone.

(6) One quarter (1/4) reinforcement rods shall be placed in bench supports as shown on drawings.

(7) After all forms have been removed, all exposed surfaces shall be rubbed with carborundum bricks and clean water only to a uniform color and finish satisfactory to the Landscape Architect.

(8) After the cast standards have been removed from the forms, they shall be cured for a period of at least seven (7) days before being removed from the original pallet. Curing shall be done in a closed room which can be maintained at an even temperature. Cast standards shall be moistened every four (4) hours during the curing period.

MANHOLES

(a) The Contractor shall build manholes of the size called for on the plans, where indicated on the plans or ordered by the Landscape Architect, in accordance with the plans and specifications, and the directions of the Landscape Architect.

(b) The Contractor shall construct manholes as follows:

(1) The concrete shall be mixed in the proportions of one (1) part Portland cement, two (2) parts fine aggregate and four (4) parts coarse aggregate with the maximum size of stone limited to one (1) inch.

(2) Mortar shall be composed of one (1) part Portland cement and two (2) parts fine aggregate, with not more than five (5) percent of the cement content of hydrated lime or lime putty.

(3) Ladder rungs for manhole shall be constructed of wrought iron and shall be hot-dipped galvanized after bending.

(4) Frames and covers shall be of the type shown on plans or as directed by Landscape Architect.

(5) Frames shall be adjusted to the final grades by the use of cement mortar or by brick masonary set in cement mortar.

(6) The Contractor shall furnish materials for and do all incidental work to complete the structure, including the work of setting and adjusting frames and plastering.

No additional payment will be allowed for the aforesaid, but the cost thereof will be deemed to have been included in all the prices bid for all the items, for which prices are named in the contract.

FORM OF PROPOSAL FOR THE

PLANTING WORK

AT

ENOTA ELEMENTARY SCHOOL

GAINESVILLE, GEORGIA

TO: Mr. Revis Blakeney
Superintendent of Gainesville City Schools
Gainesville, Georgia

Dear Sir:

Pursuant to and in compliance with plans and specifications and documents related thereto, the undersigned hereby offers to furnish all labor, materials, supplies, equipment and other facilities and things necessary and proper for or incidental to the completion of the work as required by and in strict accordance with the applicable provisions of the Contract Documents, including the Drawings, the Specifications and all Addenda issued by the Owner prior to the date of the opening of bids, whether received by the undersigned or not, for the following sum:

_____

_____ Dollars, ($_____)

TIME OF COMPLETION

If awarded the Contract, the undersigned agrees to complete the work within _____ Calendar days from the date of the award of the Contract.

COST ESTIMATE

Robert E. Farmer

PROJECT: Enota Elementary School
Gainesville, Georgia

COMPUTED BY: Robert E. Farmer

CHECKED BY: Robert E. Farmer

JOB DESCRIPTION: To landscape the park area for the ultimate design of the said school.

PLANT MATERIALS:

Quan.	Botanical and Common Name	Size	Unit Price	Total
	Trees			
1	*Acer Rubrum Red Maple	2-2½" cal.	$9.75	$9.75
8	Cercis Canadensis Red Bud	4-5'	7.00	56.00
14	*Cornus Florida Flowering Dogwood	4-5'	2.75	38.50
10	Lagerstroemia Indica Crape Myrtle	4-5'	5.00	50.00
1	Magnolia Grandiflora Southern Magnolia	5-6'	15.00	15.00
3	Pinus Strobus White Pine	4-5'	6.00	18.00
65	Pinus Taeda Loblolly Pine	4-5'	1.50	97.50
3	Quercus Alba White Oak	2-2½" cal.	10.50	31.50
26	Quercus Falcata Southern Red Oak	2-2½" cal.	10.50	273.00
18	Quercus Nigra Water Oak	2-2½" cal.	10.50	189.00
5	Quercus Palustris Pin Oak	2-2½" cal.	10.50	52.

Quan.	Botanical and Common Name	Size	Unit Price	Total
	Shrubs			
10	Aucuba Japonica Japanese Aucuba	2-2½'	$3.00	$130.00
82	Ilex Crenate Rotundifola Boxleaf Holly	18-24"	1.50	123.00
67	Kalmio Latifolia Mountain Laurel	2-2½'	2.00	134.00
11	Nandina Domestica Nandina	2-2½'	1.50	16.50
3	Osmanthus Fragans Sweet Osmanthus	2½-3'	3.00	9.00
20	Rhododendron Indicum Indica Azalea	2½-3'	2.00	40.00
59	Rhododendron Indicum Nana White, Pink and Varigated	18"-2'	1.50	88.50
	Ground Cover			
30	Hedra Helix English Ivy	Flat	1.00	30.00
550	Vinca Major Periwinkle	--	2.50/100	13.75
	Grass			
	Gynodon Dactylon Bermuda		.02 sq. ft.	2,848.00

Special Equipment

Material List	Unit Cost	Total Quantity	Cost
6-12-12 Fertilizer	$4.00/100	2,000 lbs.	$80.00
Ammonium Nitrate	$3.75/100	400 lbs.	15.00
Tree Wrap	$ .70/roll	5	3.50
Rubber Hose (For Staking)	$ .09/ft.	200'	18.00
Wire	$ .01/ft.	500'	5.00
Stakes	$ .04/stake	200'	8.00
Auger Bit and Tractor	$50/day	4	200.00
Tractor and Disc	$50/day	2	100.00
Rototiller	$5.00/day	2	10.00

*Excavation of soil for trees, shrubs, and beds to be relocated on property.

Labor

Installation of trees, shrubs, lawn, and ground cover.

Classification	No.	Rate	Unit Hours	Total Cost
Foreman	1	$3.00	200	$600.00
Labor	7	1.25	1200	$1500.00
Tractor Operator	1	1.75	80	140.00

TOTALS

Items	Sub-totals	Grand Totals
Contingencies	$ 300.00	
Overhead	800.00	
	1600.00	
Totals	$2600.00	$2,600.00
1. Planting Materials	$4163.50	
2. Soil	$1500.00	
3. Special Equipment	$1218.00	
4. Labor	$2240.00	
Sales Tax	183.38	
Totals	$8526.38	$8,526.38
Grand Total		$11,130.00

ACKNOWLEDGEMENTS

To Mrs. Clarence Johnson, President of Enota Elementary School P. T. A., Gainesville, Georgia, for introducing the problem to us and assisting in obtaining the necessary material to complete the problem.

To Mr. E. L. Hughes, Principal of Enota Elementary School, Gainesville, Georgia, for his time and assistance in obtaining information for the project.

To Mr. Revis Blakeney, Superintendent of Gainesville City Schools, Gainesville, Georgia, for his assistance in the project.

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