

THE STATE OF SOUTH CAROLINA
In The Supreme Court

APPEAL FROM RICHLAND COUNTY
Court of Common Pleas

John Hamilton Smith, Special Referee

Case No. 2010-CP-40-8943R
Appellate Case No. 2013-001067

Columbia Venture, LLC,

v.

Richland County,

Appellant,

Respondent.

**REVISED RECORD ON APPEAL
VOLUME 11 OF 13
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REVISED RECORD ON APPEAL¹

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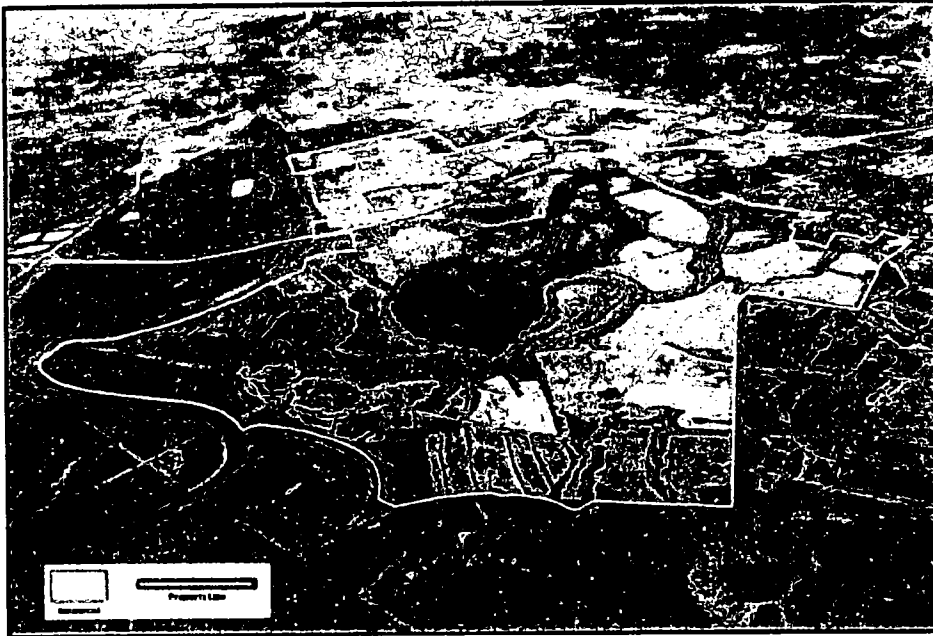
WINGARD AND ASSOCIATES

COLUMBIA, SOUTH CAROLINA

CV006098

PLTF TRIAL EXH 425

**COMPLETE, SELF-CONTAINED APPRAISAL REPORT
4,410.916 UNIMPROVED ACRES KNOWN AS THE GREEN DIAMOND PROJECT
LOCATED ON THE SOUTHWEST SIDE OF BLUFF ROAD (S.C. HIGHWAY 48)
NORTHEAST SIDE OF THE CONGAREE RIVER
COLUMBIA, RICHLAND COUNTY, SOUTH CAROLINA 29201**



PREPARED FOR

**MR. KENNETH A. GILES, MAI, CCIM
CAROLINA FIRST BANK
1501 MAIN STREET
LOC CODE SC 963-61
COLUMBIA, SOUTH CAROLINA 29201**

PREPARED BY

**THOMAS F. WINGARD, MAI, SRA
WINGARD AND ASSOCIATES, INC.
2711 MIDDLEBURG DRIVE
SUITE 207
COLUMBIA, SOUTH CAROLINA 29204-2413**

W&A File No. C05-09 (Green Diamond)

CV006099

PLTF TRIAL EXH 425

TELEPHONE 803.252.5193

REAL ESTATE APPRAISERS AND CONSULTANTS
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2711 MIDDLEBURG DRIVE, SUITE 207
COLUMBIA, SOUTH CAROLINA 29204-2413
E-MAIL ADDRESS thomaswing@aol.com

FACSIMILE 803.252.5197

March 14th, 2005

Mr. Kenneth A. Giles, MAI, CCIM
Carolina First Bank
1501 Main Street
Loc Code SC 963-61
Columbia, South Carolina 29201

**RE: Complete - Self Contained Appraisal Report of: 4,410.916 Unimproved Acres
Known as The Green Diamond Project, Located on the Southwest Side of Bluff
Road (S.C. Highway 48), Northeast Side of the Congaree River, Columbia,
Richland County, South Carolina 29201; W&A File No.: C05-09**

Dear Mr. Giles:

Pursuant to your request, I have inspected the above referenced property on March 1st, 2005. The purpose of this inspection and other required research was to estimate the market value of the fee-simple estate, as is, for the above referenced property.

After gathering and analyzing all pertinent data and applying the methods and techniques as prescribed by the Appraisal Institute, it is my opinion the subject property has an indicated market value of the fee-simple estate, as is, as of March 1st, 2005, of:

**FOURTEEN MILLION ONE HUNDRED FIFTEEN THOUSAND AND NO/100 DOLLARS
(\$14,115,000)**

The above stated value conclusion may be found in the attached appraisal report. Disclosure of the contents of this appraisal is governed by the by-laws and regulations of the Appraisal Institute. All information contained within is submitted for the sole use of the client and may not be used for any purpose by another party without the written consent of the appraiser.

It should be fully understood the client for which the appraisal assignment is undertaken is Carolina First Bank.

Every attempt has been made to ensure the appraisal report has been prepared in accordance with the appraisal guidelines of the Office of the Comptroller of the Currency, the Uniform Standards of Professional Appraisal Practice (USPAP), the Standards of Professional Appraisal Practice as prescribed by the Appraisal Institute, as well as, Carolina First Bank's appraisal guidelines.

CV006100

PLTF TRIAL EXH 425

Mr. Kenneth A. Giles, MAI, CCIM
March 14th, 2005
Page Two

The competency provision is being addressed in that the appraiser has the necessary expertise for the valuation of the subject property type.

The final value conclusion is representative of only real property and contains no non-realty items.

It has been a pleasure to have been of service. If I may be of assistance in other matters, please feel free to call.

Respectfully submitted,

WINGARD AND ASSOCIATES, INC.



Thomas F. Wingard, MAI, SRA

Certified General Real Estate Appraiser No. CG 89
State of South Carolina

TFWkbt
Enclosure(s)

CV006101

PLTF TRIAL EXH 425

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**SUMMARY OF SALIENT FACTS AND CONCLUSIONS
(EXECUTIVE SUMMARY)**

SUBJECT PROPERTY: 4,410.916 Unimproved Acres Known as The Green Diamond Project, Located on the Southwest Side of Bluff Road (S.C. Highway 48), Northeast Side of the Congaree River, Columbia, Richland County, South Carolina 29201

SITE SIZE: 4,410.916 Acres

ZONING: D-1, Development District
RU, Rural District
M-1, Light Industrial District
RS-3, Single-Family Residential District

HIGHEST AND BEST USE: Recreational/Agricultural Usage

TAX MAP PARCEL NO(S): Various (See Page 6)

FLOOD HAZARD PANEL NO(S): 45079C0160-G
45079C0178-G
45079C0190-G

Effective Date: February 20th, 2002

VALUE CONCLUSIONS:

SALES COMPARISON APPROACH: \$14,115,000

FINAL INDICATED MARKET VALUE: \$14,115,000

EFFECTIVE DATE OF APPRAISAL: March 1st, 2005

DATE OF THE APPRAISAL: March 14th, 2005

**ASSUMPTIONS AND
LIMITING CONDITIONS**

The certification of the appraiser appearing in the appraisal report is subject to the following conditions and to such other specific and limiting conditions as are set forth by the appraiser in the report.

1. The appraiser assumes no responsibility for matters of a legal nature affecting the property appraised or the title hereto, nor does the appraiser render any opinion as to the title, which is assumed to be good and marketable. The property is appraised as though under responsible ownership.
2. Any sketch in the report may show approximate dimensions and is included to assist the reader in visualizing the property. The appraiser has made no survey of the property.
3. The appraiser is not required to give testimony or appear in court because of having made the appraisal with reference to the property in question, unless arrangements have been previously made therefore.
4. Any distribution of the value in the report between land and improvements applies only under the existing program of utilization. The separate valuations for land and building must not be used in conjunction with any other appraisal and are invalid if so used.
5. The appraiser assumes that there are no hidden or unapparent conditions of the property, subsoil, or structures, which would render it more or less valuable. The appraiser assumes no responsibility for such conditions, or for engineering which might be required to discover such factors.
6. Information, estimates and opinions furnished to the appraiser and contained in the report, were obtained from sources considered reliable and believed to be true and correct. However, no responsibility for accuracy of such items furnished the appraiser can be assumed by the appraiser.
7. Disclosure of the contents of the appraisal report is governed by the bylaws and regulations of the professional appraisal organizations with which the appraiser is affiliated.
8. Neither all, nor any part of the contents of the report, or copy thereof (including conclusions as to the property value, the identity of the appraiser, professional designations, reference to any professional appraisal organization, or the firm with which the appraiser is connected), shall be used for any purposes by anyone but the client specified in the report, the borrower if appraisal fee is paid by same, the

mortgagee or its successors and assigns, mortgage insurers, consultants, professional appraisal organizations, any state or federally approved financial institution, any department, agency, or instrumentality of the United States or any state of the District of Columbia, without the previous written consent of the appraiser, nor shall it be conveyed by anyone to the public through advertising, public relations, news, sales, or other media, without the written consent and approval of the appraiser.

9. On all appraisals, subject to satisfactory completion, repairs, or alternatives, the appraisal report and value conclusion are contingent upon completion of the improvements in a workmanlike manner.

10. Unless otherwise stated in this report, the existence of hazardous material, which may or may not be present on the property, was not observed by the appraiser. The appraiser has no knowledge of the existence of such materials on or in the property. The appraiser, however, is not qualified to detect such substances. The presence of substances such as asbestos, urea-formaldehyde foam insulation, or other potentially hazardous materials may affect the value of the property. The value estimate is predicated on the assumption that there is no such material on or in the property that would cause a loss in value. No responsibility is assumed for any such conditions, or for any expertise or engineering knowledge required to discover them. The client is urged to retain an expert in this field, if desired.

11. Additional copies of this appraisal report will be available to the client at an additional expense, to be determined before delivery of said copies.

12. The Americans with Disabilities Act ("ADA") became effective January 26, 1992. I (we) have not made a specific compliance survey and analysis of this property to determine whether or not it is in conformity with the various detailed requirements of the ADA. It is possible that a compliance survey of the property together with a detailed analysis of the requirements of the ADA could reveal that the property is not in compliance with one or more of the requirements of the Act. If so, this fact could have a negative effect upon the value of the property. Since I (we) have no direct evidence relating to this issue, I (we) did not consider possible non-compliance with the requirements of ADA in estimating the value of the property.

13. This appraisal report has been prepared for the exclusive benefit of **Mr. Kenneth A. Giles, MAI, CCIM, Carolina First Bank, 1501 Main Street, Loc Code SC 963-61, Columbia, South Carolina 29201**, and may not be used or relied upon by any other party. Any party who uses or relies upon any information in this report, without the preparers' written consent, does so at his own risk.

**IDENTIFICATION OF
SUBJECT PROPERTY**

The subject property is identified as 4,410.916 unimproved acres located on the southwest side of Bluff Road (S.C. Highway 48), northeast side of the Congaree River which forms the boundary between the City of Columbia and the municipality of Cayce, South Carolina, and the northeast and southwest sides of Interstate 77 which extends through the subject property. The compilation of acreage is approximately one mile from the city limits of Columbia and approximately five miles from the State Capitol and Central Business District (CBD). The expanse of acreage comprises approximately 7.0± miles of shoreline extending along the Congaree River. The acreage is considered contiguous with several parcels located intermittently within the acreage, i.e., the Heathwood Hall School and the City of Columbia Waste Water Treatment Plant facility. Additionally, there is an expanse of acreage not considered part of the subject property located within the subject which is presently unimproved with the exception of the East Richland Waste Water Treatment Facility. The subject property had been commonly referred to as the *Green Diamond* property as there has been no prior definitive name associated with the property due to its currently unimproved status.

Due to the proximity of the Congaree River to the subject property, it has been protected over the years by a series of man-made, earthen levees. The prospect of future, developmental usage for the entirety of the subject property is predicated on the upgrading and subsequent certification of these levees to allow for such development. Also, the current zoning by Richland County reflects a combination of D-1, RU, M-1, and RS-3. The RU is a rural zoning designation while the D-1 District is intended to provide for large tracts of land located primarily on the fringe of urban growth and further recognizes future demand for developable land will generate requests for amendments in zoning designations to remove land from D-1 and place it into more intensively developed classifications as a natural consequence of urban expansion. The M-1 district represents light manufacturing while RS-3 is a single-family residential zoning area.

When the subject property was purchased several years ago, a developmental plan was implemented identified as Green Diamond. The vision elements and design model for Green Diamond were driven first by the extraordinary land features of the subject and the site location of the property and secondly the major mixed use community could be implemented on this subject site. The developmental plan included a high- tech research park, research campus, residential units, multi-family units, retirement housing, affordable housing, golf villas, highway commercial development, corporate office development, retail village development, a hotel and conference centers, open space, parks and golf courses, general commercial, light industrial and other miscellaneous land uses.

However, the proposed Green Diamond development met with obstacles with the letter of final determination by the Federal Emergency Management Agency (FEMA) on August 20th, 2001. Prior maps issued by FEMA, specifically in 1995, did not show any of the subject property contained in a floodway. After various iterations of proposed changes were produced by FEMA in 1998, in August, 1999, FEMA issued a preliminary FIRM which also indicated none of the subject property was in a floodway, as defined by FEMA. The map was contested by numerous parties and numerous hearings were held during the following two years and in August, 2001, a subsequent map produced by FEMA indicated a substantial portion of the subject property was contained in a floodway. As best as may be ascertained, the map put approximately 70.0% of the subject property in a floodway where development is severely limited.

At the present time, there is pending litigation relative to the final determination of the subject property within the floodway. The basis for the litigation as is in the judgment of the subject property owners, is whether FEMA used appropriate scientific methods and/or correct assumptions and data that was technically correct in the determination of the floodway. It is alleged FEMA ignored the presence of the Manning levees (a massive earthen structure) in this analysis and this also resulted in a floodway determination that was not scientifically and technically correct. However, at the present time and as of the effective date of this appraisal, the existing FEMA maps indicate a substantial portion, approximately 70.0% of the subject property, in a designated floodway with a substantial portion of the remaining acreage within a flood plain.

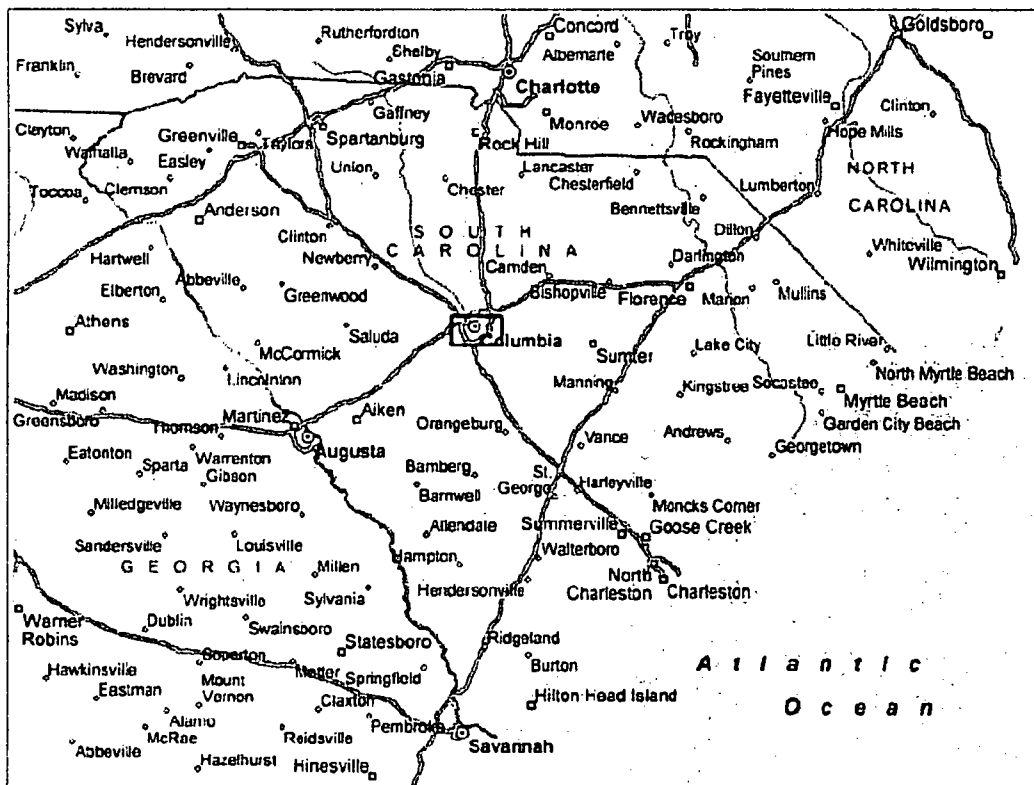
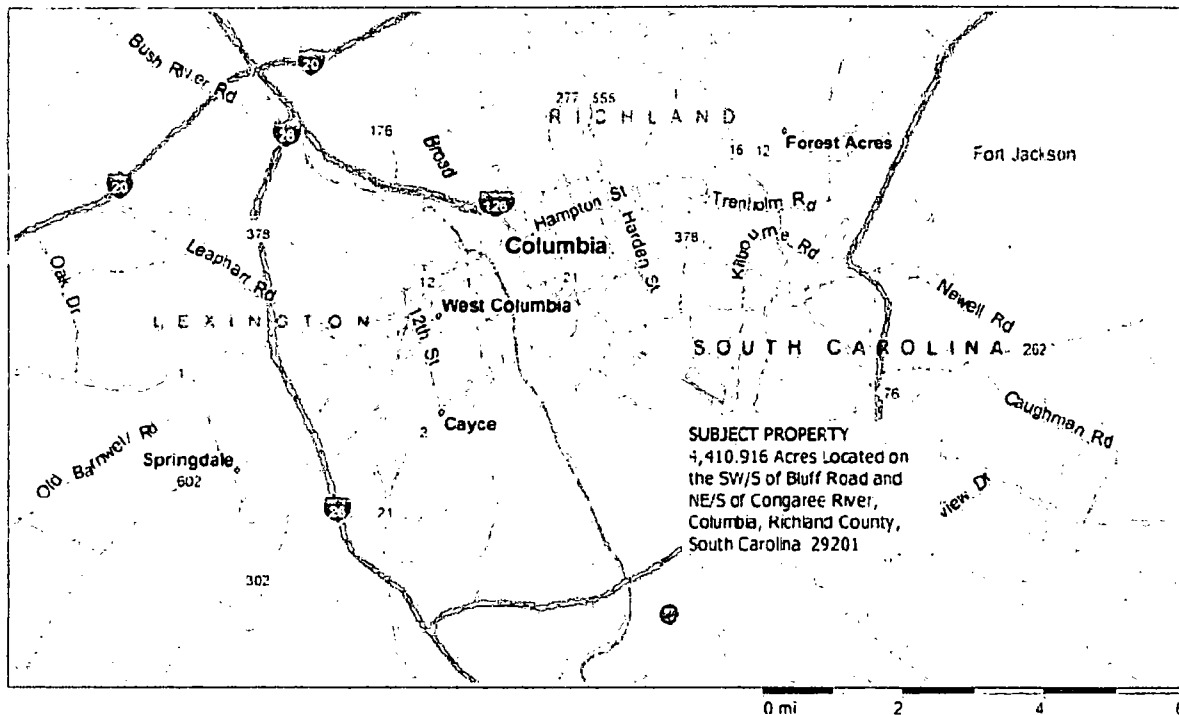
The subject property is identified by Richland County as 23 separate tax map identifications. The total size in acres from the tax maps indicates 4,422.82 acres while the actual size from the most recent available surveys indicates 4,410.916 acres.

SUBJECT TAX MAP IDENTIFICATIONS		
No.	TMS Number (Sheet, Block and Lot)	Lot Size (Acres)
1	10900-01-02	950.49
2	11000-01-01	11.89
3	11000-01-02	259.04
4	11000-01-06	254.80
5	11000-02-01	320.22
6	11100-01-07	15.00
7	11100-01-08	255.49
8	11100-01-09	76.61
9	11100-01-10	234.43
10	13300-01-01	284.00
11	13300-01-04	150.00
12	13300-01-05	544.00
13	13400-01-01	55.50
14	13400-01-02	50.00
15	13400-01-03	516.00
16	13400-02-01	35.96
17	13400-02-10	52.18
18	13400-02-16	254.80
19	13400-02-17	29.00
20	13415-01-10	13.47
21	13500-01-01	9.94
22	13500-05-01	40.00
23	13513-01-27	10.00
	TOTAL	4,422.82

LEGAL DESCRIPTION(S)

Due to the number of parcels comprising the subject property, individual legal descriptions for each of the parcels will be provided in the Addenda section of this appraisal report. Copies of the deeds and representative legal descriptions are provided as a result of the conveyance to the current property owner for each of the 23 conveyances which comprise the subject property assemblage.

LOCATION MAP OF SUBJECT PROPERTY



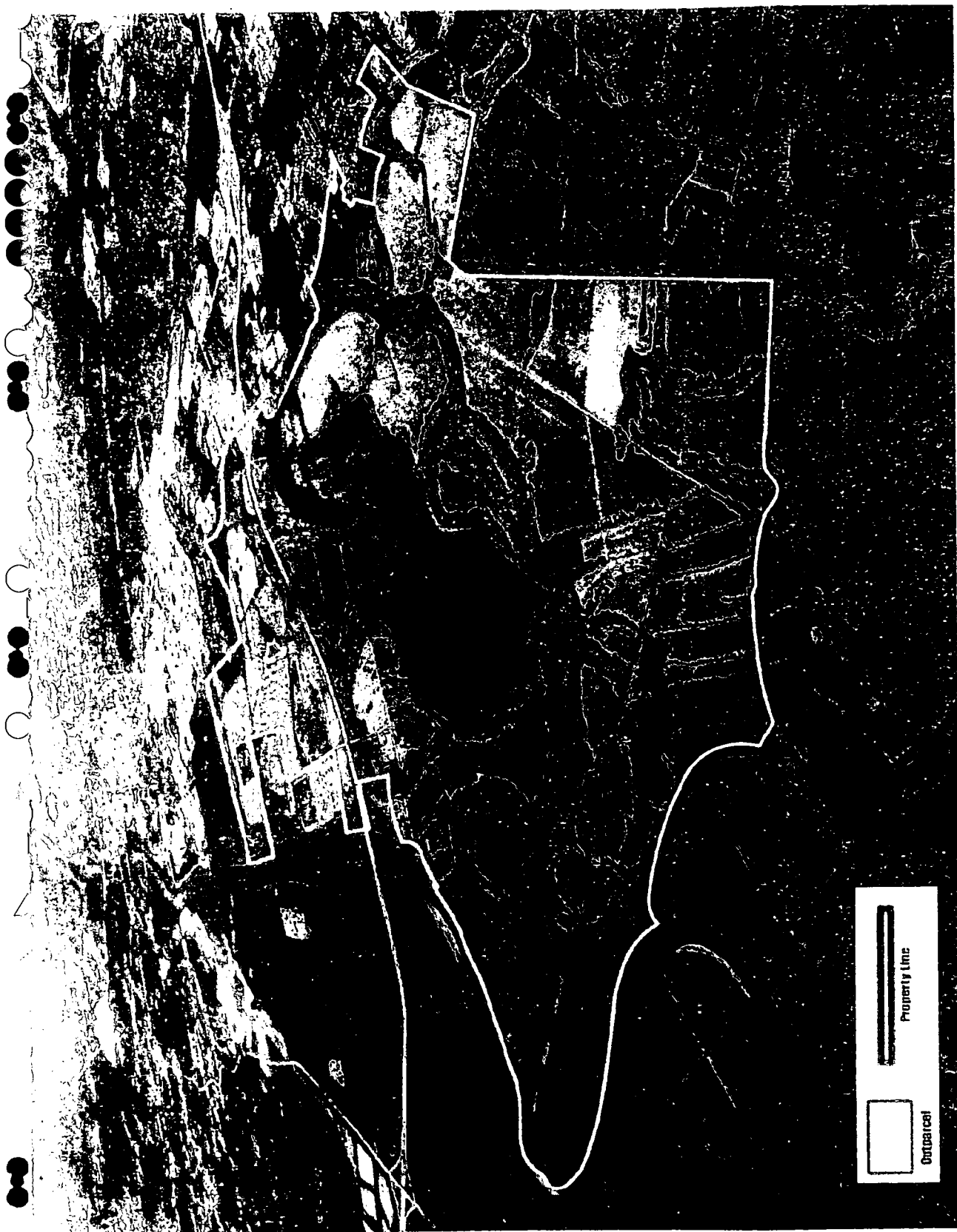
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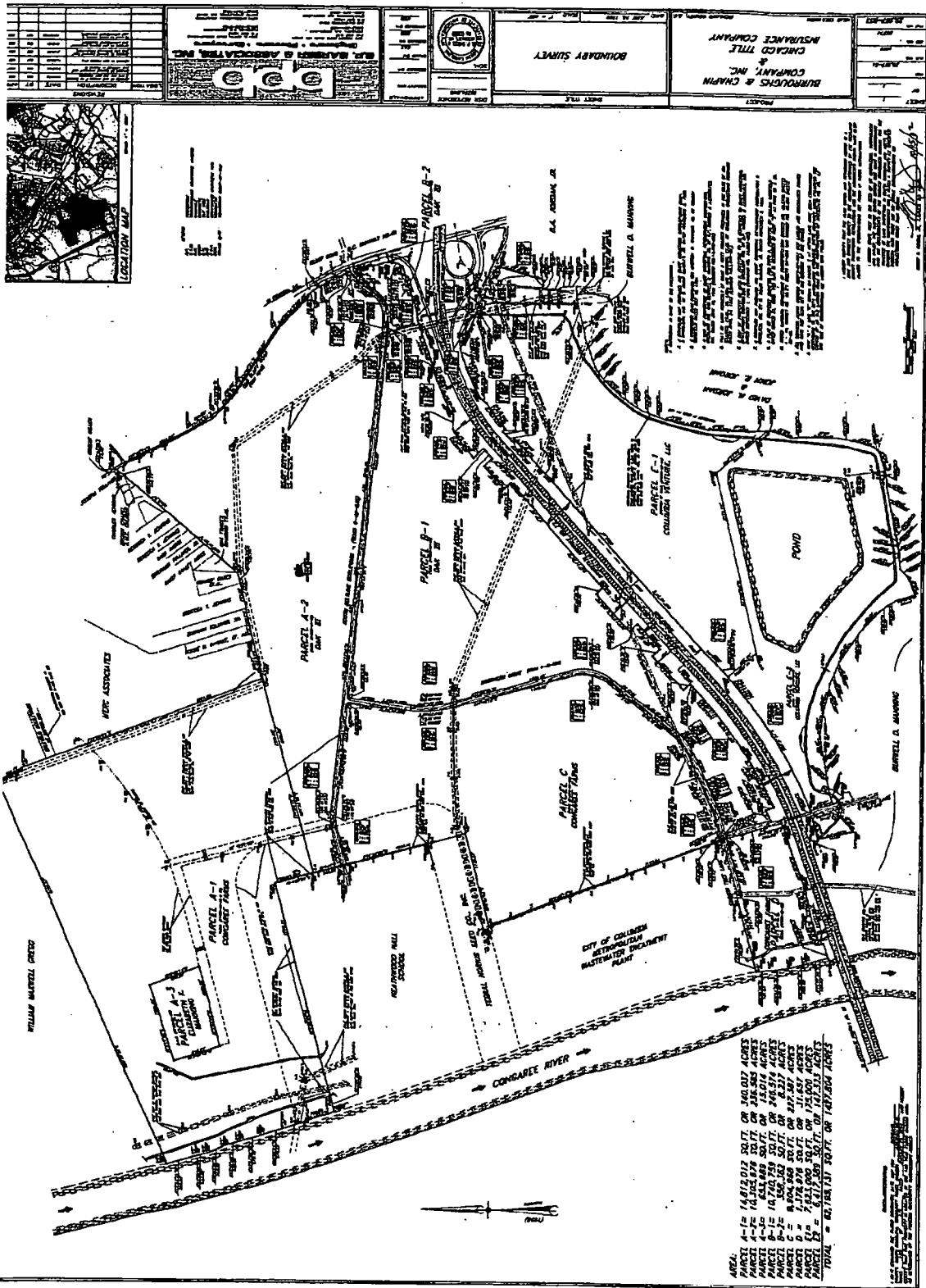
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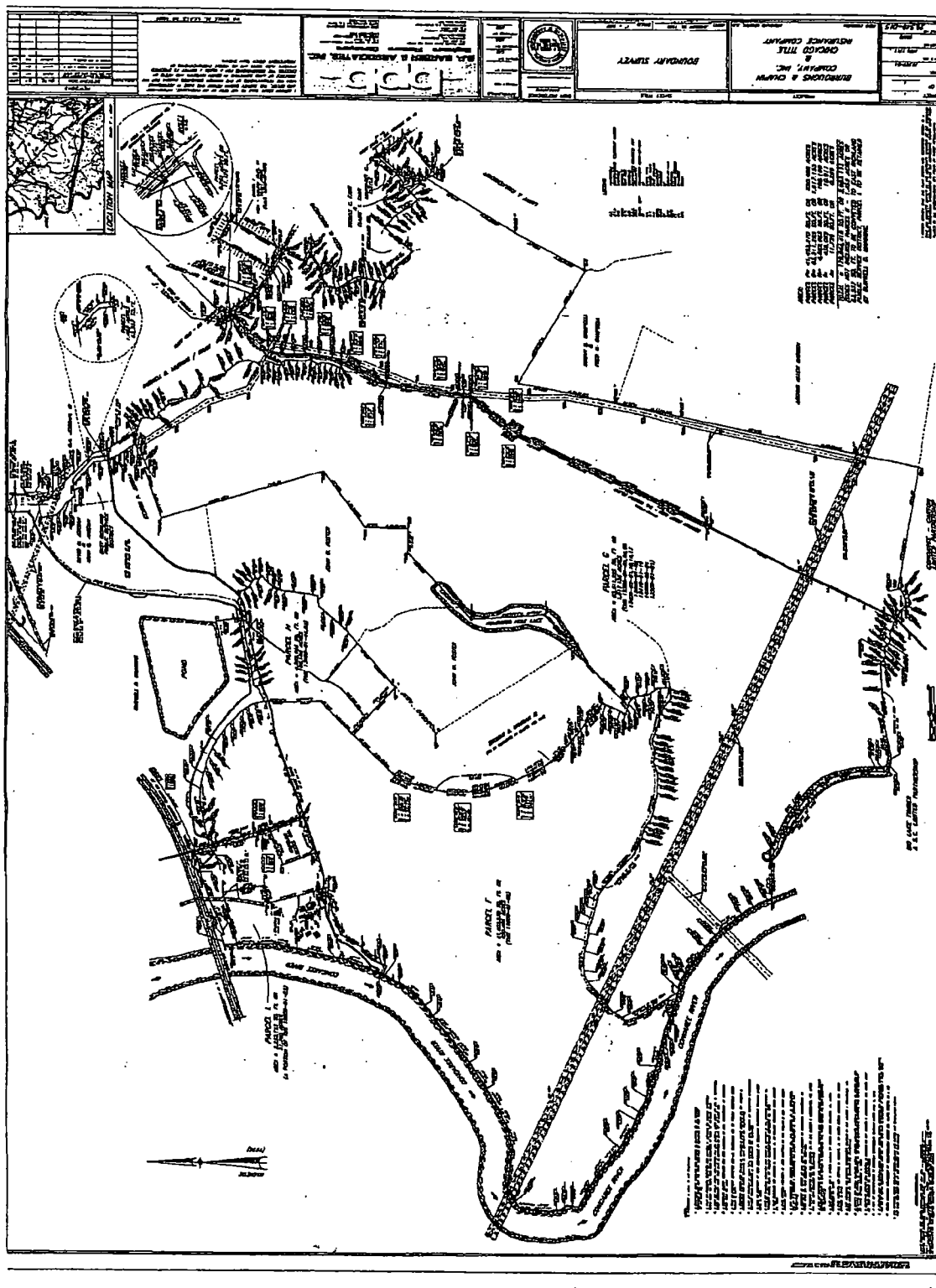
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PLTF TRIAL EXH 425





CV006113

PLTF TRIAL EXH 425

**OBJECTIVE (PURPOSE) OF
THE APPRAISAL**

The objective or purpose of this appraisal is to provide an estimate of the market value, as is, of the fee-simple estate of the subject property identified as 4,410.916 unimproved acres, a/k/a the Green Diamond Project. The subject property is comprised of 23 parcels totaling the aggregate 4,410.916 acres, considered unimproved.

The market value estimate is being indicated according to the definition of market value as provided by the Office of the Comptroller of the Currency which presently identifies market value as:

MARKET VALUE

Market Value means that most probable price which a property should bring in a competitive and open market under all conditions requisite to a fair sale. The buyer and seller each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus. Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:

- 1. Buyer and seller are typically motivated;**
- 2. Both parties are well informed or well advised, and acting in what they consider their own best interest;**
- 3. A reasonable time is allowed for exposure in the open market;**
- 4. Payment is made in terms of cash in U.S. dollars or in terms of financial arrangements comparable thereto; and**
- 5. The price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale.**

Source: Office of the Comptroller of the Currency, 12CFR, part 34

The market value determination will delineate the subject property as is. According to *The Dictionary of Real Estate*, Fourth Edition, Appraisal Institute, Chicago, Illinois, value, as is, is defined as:

"the value of specific ownership rights to an identified parcel of real estate as of the effective date of the appraisal; relates to what physically exists and is legally permissible and excludes all assumptions concerning hypothetical market conditions or possible re-zoning."

**PROPERTY RIGHTS
APPRAISED**

The subject property(s) is being valued according to the fee-simple estate. According to *The Dictionary of Real Estate*, Fourth Edition, The Appraisal Institute, Chicago, Illinois, a fee-simple estate is identified as:

"Absolute ownership unencumbered by any other interest or estate, subject only to the limitations imposed by the government powers of taxation, eminent domain, police and escheat."

The determined total acreage comprising the subject property is being valued in the fee-simple estate as determined by a boundary survey completed by B.P. Barber and Associates, Inc., dated January 22nd, 1999. Of the 23 parcels comprising the subject, identified as 4,410.916 acres, two of the parcels contained improvements which have little or no contributory value to the subject property. These are older improvements.

**INTENDED USE OF THE
APPRAISAL**

The function or intended use of this Complete, Self-Contained Appraisal Report is to provide the client, Carolina First Bank, c/o Mr. Kenneth A. Giles, MAI, CCIM, 1501 Main Street, Columbia, South Carolina 29202 with a Complete, Self-Contained Appraisal Report delineating the applicable approaches to value and utilizing all proper appraisal principles and techniques in order to derive a final market value conclusion of the fee-simple estate, as is, for the subject property identified as 4,410.916 acres.

According to the client, the intended use of this appraisal report will be the determination of collateral for a federally related loan transaction. The appraisal report will be completed with respect to and in compliance with the Uniform Standards of Professional Appraisal Practice (USPAP) as prescribed by the Appraisal Foundation and FIRREA and will reflect a Complete Report articulated within a Self-Contained format. Additionally, the appraisal report is intended to be in compliance with the Standards of Professional Appraisal Practice, as delineated by the Appraisal Institute, as well as, in full compliance with Carolina First Bank's appraisal guidelines.

**EFFECTIVE DATE OF THE
APPRAISAL**

This effective date or the date of the value estimate of the market value of the fee-simple estate, *as is*, of the subject property is March 1st, 2005. All 23 parcels comprising the subject property were inspected on this date, as well as, numerous dates prior to this effective date of appraisal. An *as is* valuation of the subject property was also completed on the subject in October, 2002.

Much of the data collection and preparation was performed subsequent to the official effective date of the market valuation for the subject property, *as is*, indicated as of March 1st, 2005. There was a delay in receiving the information on the potential sales transaction of the South Carolina State Farmers Market, located in proximity to the subject property. Verification on comparable unimproved land sales within the subject market area, as well as, within the State of South Carolina, was completed prior to and after the March 1st, 2005 effective date of value for the subject.

SCOPE OF WORK

The data collection utilized in this Complete, Self-Contained Appraisal Report includes all conventional methods of obtaining and verifying data within the greater Columbia and Richland County market areas. Public records were researched at the Richland County Register of Deeds for unimproved sites located within the subject market area although due to the size of the subject property, the search for sales data was extended throughout the entirety of the State of South Carolina.

Attempts were completed to verify all information pertaining to the unimproved land sale conveyances through grantors, grantees, and/or real estate brokers and appraisers party to the respective transactions.

Information specific to the subject property was primarily obtained from numerous physical inspections of the 4,410.916 acres, as well as, information previously supplied for the valuation completed in October, 2002. There were no extraordinary assumptions necessary for the completion of this assignment nor were there any hypothetical conditions identified for the completion and preparation of the appraisal report.

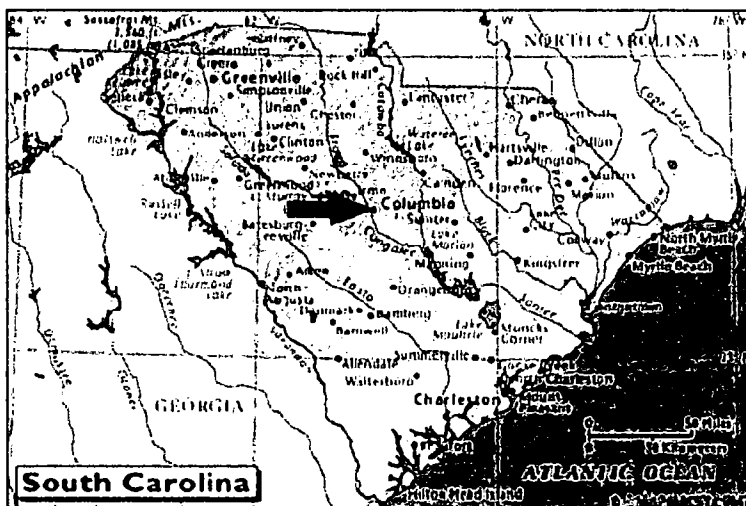
COLUMBIA AREA DATA

Columbia, the capital of South Carolina, is located at the geographical center of the state and is situated halfway between New York and Miami. At the fall line where the Lowcountry ends and Upcountry begins, Columbia, the first planned capital in America, is flanked by three major interstates and the busiest airport in the state. Even today, because of the farsightedness of the original planners, the width of Columbia streets is adequate for traffic and on-street parking. Downtown Columbia houses both the University of South Carolina and the State House, which landmarks General Sherman's historical march through the South. Cannon ball scars are still visible on the landmark. A historical marker at the University reminds the traveler that every student joined the Confederacy. Down the street, an old cotton mill has been beautifully converted into the State Museum. Fort Jackson, the largest United States Army training base in the country, can be found in Northeast Columbia.

As a growing city, Columbia features several theatrical companies, a symphony, and the Koger Center which hosts plays, concerts, and ballets. With more than 600 miles of shoreline, the majestic, man-

made Lake Murray, built in the 1940s, is thirty minutes away, as the sporting center of the Midlands, water skiers, fisherman, knee-boarders, and boating enthusiasts spend their weekends and holidays enjoying the lake.

While maintaining its Southern charm, Columbia is a progressive, modern city attractive to large-scale business and manufacturing entities. Surrounding Columbia are bustling little towns including Lexington, Newberry, Saluda and Swansea, which follow the Capital's lead to prosperity.



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PLTF TRIAL EXH 425

BRIEF HISTORY

For nearly a century before the creation of Columbia by the General Assembly in 1786, the site of Columbia was important to the overall development of the state.

The Congarees, a frontier fort on the west bank of the Congaree River, was the head of navigation in the Santee River system. A ferry was established by the colonial government in 1754 to connect the fort with the growing settlements on the higher ground of the east bank.

State Senator John Lewis Gervais of Ninety Six introduced a bill that was approved by the legislature on March 22nd, 1786 to create a new state capital.

There was considerable argument over the name for the new city. One legislator insisted on the name Washington, but Columbia won out by a vote of 11-7 in the state Senate.

The commissioners designed a town of 400 blocks in a two-mile square along the river. The blocks were divided into half-acre lots and sold to speculators and prospective residents. Buyers had to build a house at least 30 feet long and 18 feet wide within three years or face an annual 5.0% penalty.

The perimeter streets and two through streets were 150 feet wide. The remaining squares were divided by thoroughfares 100 feet wide. The width was determined by the belief the dangerous and pesky mosquito could not fly more than 60 feet without dying of starvation along the way. Columbians still enjoy most of the magnificent network of wide streets.

The commissioners comprised the local government until 1797 when a Commission of Streets and Markets was created by the General Assembly. Three main issues occupied most of their time: public drunkenness, gambling and poor sanitation.

As the second planned city in the United States, Columbia began to grow rapidly. Its population was nearing 1,000 shortly after the turn of the century.

THE 1800'S

Columbia received its first charter as a town in 1805. An intendent and six wardens would govern the town. John Taylor was the first elected intendent. He later served in both houses of the General Assembly, both houses of Congress and eventually as governor of the state.

By 1816, there were 250 homes in the town and a population over 1,000. The town's governing body was empowered to tax these citizens by up to 12 cents per \$100 of property. An extra five cent levy could be charged to those who wished to be exempt from patrol duty. Additional taxes could be levied for ownership of a carriage, \$5.00; a wagon, \$3.00; and \$4.00 for a mechanic's license.

For another \$2.00 per year, a citizen could become exempt from working on the streets. When the Legislature was in session, the town council constantly heard complaints about weeds and bushes growing in the streets.

One of the first municipal employees was the "Warner", someone who went through town warning citizens when it was their time to work on the public streets and roads.

In the early days of town, every citizen was required to keep one fire bucket for each chimney in his house. Five small fire brigades were organized in 1816 with each male citizen expected to serve. Volunteer departments later replaced these brigades.

Policing the new town was also a hit and miss proposition in the early 1800's. The legislature has appointed a marshall who walked through the town twice a day. An official town guard was created in 1824. Citizens could buy an exemption from serving in the guard for \$5.00.

Columbia became chartered in 1854, with an elected mayor and six aldermen. Two years later, they had a police force consisting of a full-time chief and nine patrolmen. The starting salary for the patrolmen was \$16.00 per month.

Abram Blanding, the town's first school teacher and attorney, built Columbia's first waterworks. Pumping water with a steam engine to a wooden tank, water was carried by cast iron and lead pipes to the homes and businesses of the city.

The city purchased the system from Blanding at a third of his investment in 1835. As tribute to Blanding, the town council later changed the name of Walnut Street to Blanding Street.

Growth continued, with the first annexations of the suburbs in 1870.

THE 1900'S

Columbia had no paved streets until 1908, when 17 blocks of Main Street were surfaced. There were, however, 115 publicly maintained street crossings at intersections to keep pedestrians from having to wade through a sea of mud between wooden sidewalks.

As an experiment, Washington Street was once paved with wooden blocks. This proved to be the source of much local amusement when they buckled and floated away during heavy rains. The blocks were replaced with asphalt paving in 1925.

The first paid fireman was hired in 1903. A car was purchased for the chief that same year, evidently the first vehicle owned by the city.

In 1934, the federal courthouse at Main and Laurel Street was purchased by the city for use as City Hall. Built of granite from nearby Winnsboro, Columbia City Hall is listed on the National Register of Historic Places.

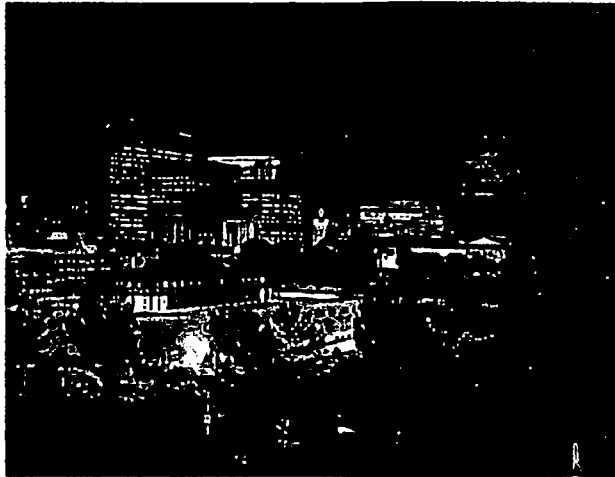
Designed by Alfred Bult Mullet, President Ulysses S. Grant's federal architect, the building was completed in 1876. Mullet, best known for his design of the Executive Office Building in Washington, D.C., had originally designed the building with a clock tower. Large cost overruns probably caused it to be left out. Copies of Mullet's original drawings can be seen on the walls of City Hall alongside historic photos of Columbia's beginnings.

GEOGRAPHIC CONSIDERATIONS

The central Midlands region includes Richland, Lexington, Fairfield and Newberry Counties. Among these counties, recent periods have demonstrated more vigorous growth in Richland and Lexington Counties, with Fairfield and Newberry Counties exhibiting slower growth.

The Columbia Metropolitan Area (MSA) is composed of Richland and Lexington Counties and encompasses 1,457.3 square miles. Columbia, the state capital of South Carolina, is geographically located on the fall line or division between the Coastal Plain and Piedmont sections of the state. Covering an area of 104 square miles, Columbia is situated on a bluff east of the confluence of the Broad and Saluda Rivers, which join to form the Congaree River. The Congaree is the northern-most point of the navigable portion of the largest river system in the state which extends southward to Charleston and the Atlantic Ocean.

Columbia, the geographic center of the State of South Carolina, is conveniently located approximately 945 miles south/southwest of New York City, New York; 611 miles north of Miami, Florida; 754 miles southeast of Chicago, Illinois; 730 miles east/northeast of Dallas, Texas; 211 miles east of Atlanta, Georgia; 95 miles south of Charlotte, North Carolina; 105 miles southeast of Greenville, South Carolina; and 110 miles northwest of Charleston, South Carolina. The mountains of western North Carolina, northwestern South Carolina, and eastern Tennessee are only several hours drive north/northwest. Likewise, residents can travel to the historic cities of Charleston, South Carolina and Savannah, Georgia, as well as the beautiful beaches along the Grand Strand of South Carolina, in a comparable amount of time.



Columbia is 332 feet above sea level, and its climate is characterized by mild, almost snow-free winters and long, moderate summers. It is possible to engage in a variety of outdoor recreations each day of the year. The Columbia area climate is quantified as follows in the table below:

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Avg. Daily Maximum Temperatures(°F) . . .	55	59	68	77	84	89	91	90	85	77	67	58
Avg Daily Minimum Temperatures(°F) . .	32	34	42	49	58	66	70	69	63	50	42	35
Annual Percent of Sunshine												64%
Heating Degree Days												2,629
Cooling Degree Days												2,033
Sky Cover												
Mostly Sunny Days (mean annual number)												219 days
Mostly Cloudy Days (mean annual number)												145 days
Annual Precipitation												49 inches
Average Chance of Precipitation												29.5%
Average Humidity												87%
Average annual snowfall												2 inches
Average growing season of frost-free days												252 days

* Source: Southeast Regional Climate Center

CV006123

PLTF TRIAL EXH 425

POPULATION

The Columbia MSA population growth is represented in the table below with projections of future growth as reported by the Census Bureau.

POPULATION BY YEAR						
Year	Population			% Change		
	Columbia	Richland County	Lexington County	Columbia	Richland County	Lexington County
1980	120,820	269,735	140,363	---	---	---
1990	116,404	286,321	167,611	-3.7%	6.1%	16.3%
2000	116,277	320,677	216,014	-0.1%	12.0%	29.0%
2004 (Estimate)	120,371	335,685	229,751	3.5%	4.7%	6.4%
2009 (Projections)	124,867	353,578	245,856	3.7%	5.3%	7.0%

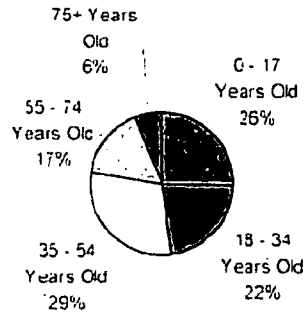
*Source: U.S. Census 2000 and Demographicsnow.com

The chart below shows the combined population for the Columbia MSA consisting of Richland and Lexington Counties, as well as, components of change.

COLUMBIA, S.C. MSA POPULATION AND COMPONENTS OF CHANGE					
Year	Population	% Change	Components of Change		
			Total Population Change	Births	Deaths
1995	496,912	1.7%	8,126	6,747	3,636
1996	505,315	1.7%	8,403	6,887	3,721
1997	514,377	1.8%	9,062	7,131	3,885
1998	523,710	1.8%	9,333	7,193	3,937
1999	531,277	1.4%	7,567	7,431	4,044
2000	536,691	1.0%	5,414	---	---
2001	544,113	1.4%	7,422	9,403	5,338
2002	551,100	1.3%	6,987	7,512	4,366
2003	558,632	1.4%	7,532	7,495	4,515

*Source: U.S. Census Bureau

The population is segmented in the chart below by the following age categories, noting over 50% of the population is within a working age classification. The median age in Columbia is 28.8, in Richland County 32.6 years and the median age in Lexington County is 35.7 years.



Columbia's per capita and median family incomes are higher than South Carolina as a whole and are comparable to the United States. Columbia also is included among the lowest cost of living indices in the United States of only 96.1, when compared to Charlotte, NC (98.5), Chicago, IL (107.1), Philadelphia PA (102.8) and the highest being Los Angeles (148.1).

LABOR AND EMPLOYMENT

South Carolina is a right-to-work state, which contributes to its high productivity levels. There are over 281,000 persons within the civilian labor force of the Columbia MSA area, an 8.6% increase in five years since 1995. The current labor force, which continues to grow, is segmented by industry as shown on the table on the following page:

COLUMBIA MSA LABOR FORCE SEGMENTATION	
Transportation/Public Utility	5.00%
Trade	25.00%
Services	23.00%
Construction/Mining	7.00%
Government	22.00%
F.I.R.E.	6.00%
Manufacturing	12.00%
	100.00%

The following chart will detail the labor force and unemployment for Columbia. As shown, the labor force has increased from 1998 with a slight increase in the unemployment rate.

CITY OF COLUMBIA LABOR AND UNEMPLOYMENT		
Annual Average	Unemployment Rate	Labor Force
1998	3.10%	48,020
1999	3.80%	48,270
2000	3.90%	48,230
2001	4.00%	49,040
2002	5.30%	48,797
2003	6.00%	50,016

*Source: SC Employment Security Commission, Labor Market Information Division

Accounting in part for this low unemployment rate is a work stoppage rate of .01 and job-producing entities in the area. The unionization rate is only 1.8%, the lowest in nation membership. Major employers in the Columbia MSA are delineated in the following table:

COLUMBIA MSA MAJOR EMPLOYERS	
South Carolina State Government	33,142
Fort Jackson Military Base	15,027
Local Government	13,062
Federal Government	8,256
Defender Industries	8,005
Blue Cross/Blue Shield of South Carolina	5,550
Palmetto Richland Health Hospital	4,542
South Carolina Electric and Gas Company	4,500
Lexington Medical Center	2,600
Myrd Corporation	2,300
Palmetto Health Baptist Hospital	2,000
BellSouth	1,923
United Parcel Service (UPS)	1,789
Wachovia Bank, N.A.	1,700
Providence Hospital	1,600
Louis Rich	1,600
E.I. DuPont Nemours and Company	1,550
Michelin Tire Corporation	1,350
Bose Corporation	1,038

GOVERNMENTAL CONSIDERATIONS

The Central Midlands Region of South Carolina is comprised of Richland, Lexington, Fairfield and Newberry Counties. Among these counties are a number of cooperative associations designed to mutually benefit the counties, one of which is the Central Midlands Regional Planning Council. The Central Midlands Regional Planning Council (CMRPC) analyzes statistics on population, population shifts, work force, construction and development and production. From this data, CMRPC projects the future needs of infrastructure and transportation and assesses the promotional needs of specific areas or sectors. The counties and local municipalities also maintain their individual governments.

Richland County, the largest county of the Midlands with an estimated 2004 population of 335,685, is governed by a council-administrative form of government under the provisions of the Home Rule Act



passed by the South Carolina General Assembly in 1975. The Council has an eleven member board and an administrator to manage various elements of the County Government on a daily basis.

Lexington County, the second largest in the Midlands with an estimated 2004 population of 229,751, is governed by a council-administrative form of government under the provisions of the Home Rule Act passed by the South Carolina General Assembly in

1975. The County Council has eleven members and an administrator.

The City of Columbia has a mayor-council form of government. The mayor and council members are elected, part-time, offices. The various departments of city government report to the Council. The mayor lends direction and focus to new or existing programs, however, the majority of time is entailed in promoting the City of Columbia. Currently, no formal consolidation of city and county governments has taken place. However, there have been numerous studies and conversations about possible consolidation of some governmental bodies in shared services and responsibilities.

TAXES

South Carolina has one of the lowest state and local per capita tax burdens in the nation. Corporate tax laws are designed to attract industry to the area. South Carolina's *No Situs Law* is designed especially for warehouse and distribution operations. It provides an exemption of all inventory taxes on stored goods moving into interstate commerce. The state has no wholesale sales tax and no manufacturer user inventory tax. South Carolinians and business concerns therein pay a variety of state taxes which support governmental functions. These include the following:

Personal Income Tax	2.5% - 7% of net taxable income
Average residential property tax	\$1.15 per \$100 of fair market value
Retail and Use Tax	5%
Corporate Tax	5%

Richland County has two types of taxes: taxes on real property and taxes on personal property. Real property includes land and all improvements such as homes or commercial buildings, however, it does not include the value of furnishings. Taxes on real property are calculated through correlation of the assessors appraised value of the property, the ratio of assessment set by State officials, and the millage set by county government officials. Richland County Council annually sets the millage for operating funds, and the county auditor sets the millage for construction bond payments.

Municipal taxes are based on assessments derived by the Richland and Lexington County Offices of Assessment and Equalization as combined with the millage set by the various city councils. The municipalities represented in the metropolitan Columbia area include the cities of Columbia, Forest Acres, Lexington and West Columbia; the towns of Arcadia Lakes, Cayce, Chapin, Irmo and Springdale; and the smaller municipalities of Ballentine, White Rock, Pineridge, Dixiana, Pontiac, Red Bank, South Congaree and Horrell Hill.

EDUCATION

Public education in the state is financed primarily through state, county, and city taxation systems. In 1984, the South Carolina General Assembly enacted what it considered the most comprehensive piece of education legislation in the State's history. This \$218 million education reform package was designed to achieve excellence in the state's public schools which have lagged behind in national Scholastic Aptitude Test (SAT) scores for years. This education reform act has apparently been, at least in part, successful, although the SAT scores have not dramatically improved in comparison to other states performance. This is partially due to other states also spending more to improve education, and their students improving comparably to South Carolina students where there is an average pupil-to-teacher ratio of only 15:1.

There are approximately 46 private schools in the greater Columbia area providing for the educational needs of children grades K-12. Nearly 95% of private school graduates go on to college.



The greater Columbia area is benefitted in higher education with nine colleges and universities. Preeminent among these is the main campus of the University of South Carolina in Columbia. USC, the largest higher education institution, had a 2004 enrollment of 32,567, of which 22,156 were undergraduate students, 9,421 were graduate students, 812 were law school students, 12 were pharmacy school doctoral students, and 166 were medical school students. Eighty percent of the student body were in-state residents,

the remaining twenty percent are from all regions of the United States and various regions of the world.

The university includes an Honors College where the average SAT score is 1250, which is within the top six percent nationally. The College of Business Administration of the University of South Carolina in Columbia includes a Masters in International Business graduate school program which has ranked No. 1 nationally for a consecutive number of years. This program has benefitted the university with an increased international awareness, and the Columbia area with increased inquiries from international businesses considering American developments.

Other colleges and universities in the Midlands include those detailed on the following chart below. Additionally, other trade schools and correspondence programs are available in the Columbia area.

Institution	No. of Students	Institution	No. of Students
Allen University	250	Columbia Junior College, ...	418
Benedict College	1,478	Lutheran Theological Seminary	161
Columbia Bible College	961	Midlands Technical College	7,546
Columbia College	1,190	Newberry College	709

TRANSPORTATION AND PUBLIC SERVICES

Provisions made in preceding years and foresight by governmental officials for the transportation requirements of a growing city can positively or negatively impact its potential to grow and prosper. The Columbia area has a full compliment of rail, highway, and airline services. Interstate 26 connects Columbia with Charleston to the southeast and the Greenville/Spartanburg area and Asheville, North Carolina to the north. Interstate 20 provides fast access to points east and west. Interstate 77 forms a direct route from Florida through Columbia and Charlotte, North Carolina to the popular Great Lakes region and other points north.

Two major railroads, Norfolk Southern and Seaboard Systems, and a combined 68 motor freight carriers serve the Columbia MSA area. There are three port facilities on the coast line of South Carolina; the closest is in Charleston, just 110 miles away. Passenger service is provided by Amtrak.

The Columbia Metropolitan Airport in Lexington County is approximately six miles southwest of Columbia's central business district. Passenger air service out of Columbia Metropolitan Airport is provided by six scheduled airlines, Delta, US Airways Express, Continental Airlines, Northwest Airlines, Independence Air

and United Express. Commercial cargo, package and courier services out of Columbia Metropolitan Airport are provided by ABX Air, Bankair, CC Air Delta, Emery Worldwide, Federal Express, Mountain Air Cargo, Piedmont, US Airways and United Parcel Service.

Columbia Metropolitan Airport opened a multi-level parking structure on October 16th, 2003. The project, which began in February, 2001, now has 1,837 parking spaces in the parking garage with 40 handicapped spaces and 1,668 spaces of uncovered parking available in the surface parking, which includes 15 handicapped spaces. Both parking areas combined gives the traveling public 3,505 available parking spaces.

In addition to these air flight offerings, the area of the Columbia Metropolitan Airport includes an adjoining Columbia Airport Enterprise Park and Foreign Trade Zone #127. These are duty-free, industrial development districts located on lands of the Columbia Metropolitan Airport which are leased primarily to prospective industrial and highly technical manufacturing tenants. A \$50 million terminal expansion has been completed to the Columbia Metropolitan Airport.

Other corporate and private airport facilities in the immediate Columbia Metropolitan area include Fairfield County Airport, Winnsboro, Fairfield County; Newberry Municipal Airport, Newberry, Newberry County; Owens Field, Municipal City Airport, Columbia, Richland County; and Pelion Corporate Airport, Pelion, Southwestern Lexington County.

UTILITIES AND ACCOMMODATIONS

These taxes provide for police and fire protection provided in the counties by the Richland and Lexington County Sheriff's offices and various city police and fire departments in the municipal areas. Fire protection in more rural areas is provided through a network of volunteer fire departments.

Public water is made available in the majority of these areas by municipally administered water authorities. Waste water and sewage disposal are also provided by authorities of the City of Columbia, East Richland Public Service District, and various local municipal authorities. Garbage collection is also handled by any number of public authorities and private collection companies. Electric and natural gas services are provided by several utilities providers. The largest, South Carolina Electric and Gas, is a public stock company which is allowed some monopolistic operational benefits at the bequest of the local government authorities. Still, several smaller cooperatives serve outlying areas with electricity.

Conventional telephone services are provided by numerous local telephone companies inclusive of Southern Bell Telephone and Telegraph and in conjunction with various long distance vendors. Cellular telephone services are provided by several companies inclusive of Bell South Mobility and Bell Atlantic Mobile and in conjunction with various microwave and optic fiber land line vendors.

HEALTHCARE

The primary health care centers of the region are located in the immediate Columbia area. The major hospitals of this area include Palmetto Baptist Medical Center, Columbia-Providence Hospital, Palmetto Richland Memorial Hospital, Newberry County Memorial Hospital, Fairfield Memorial Hospital, Kershaw County Medical Center, and the Lexington Medical Center. The University of South Carolina School of Medicine is also located in Columbia. Medical care is provided to military and veteran persons from the VA Hospital and the Moncrief Army Community Hospital. In addition, there are over 20 nursing homes in the region.

According to the Greater Columbia Chamber of Commerce, there are a total of 239 dentists serving the immediate Columbia area.

LODGING

The lodging needs of the immediate Columbia area are met by a growing number of lodging facilities. The most recent listings within the immediate greater Columbia area include 81 hotels, motels and bed and breakfast facilities which offer a total of approximately 7,243 rooms.

NEWSPAPER, TELEVISION AND RADIO

Columbia, and the central Midlands area of South Carolina, has one primary newspaper that is published daily, with approximately 22 smaller community, sector and special interest newspapers published on a daily, weekly, monthly or quarterly basis. *The State* paper, published in Columbia, is the largest newspaper in the state and has an average weekday circulation of 128,044 and an average weekend circulation of 165,289. Television stations include WIS Television, Channel 10, an NBC Affiliate, WLTX TV, Channel 19, a CBS Affiliate, WOLO TV, Channel 25, an ABC Affiliate, WRLK, Channel 35, a Public Broadcasting Affiliate, and WACH TV 57, Channel 57, a FOX Affiliate. The Columbia area also includes 23 radio stations serving her communications needs.

RECENT NEW/PROPOSED DEVELOPMENTS

Conceptual planning has been completed and consultants and architects are working to bring the Canal Front Development, located along the river in West Columbia, on-line with the completion of the children's museum. A new parking deck has been added for employees at the State Department of Revenue and the State Museum on Gervais Street.



▲ MAIN STREET

Streetscaping along Main Street began in early 2004 and is still continuing. The addition of the 14-story Meridian Building reinforces the commitment to Main Street where 110 new residential units have been completed in the last two years and more are currently being planned.

CONCLUSION

The State has encountered some recent private sector growth resulting from a BMW assembly plant being located in the up-state region. This has spurred a number of jobs throughout the state in related industries. As detailed above, the central Midlands region of South Carolina and the Columbia area have encountered job growth in both the private sector and military complex. Since Columbia is the State Capital and the home of the main campus of the University of South Carolina, the economic environment is also considered to be very stable. This is attested to by the unemployment in the area being lower than the other areas of the state.

In terms of the governmental impacts on the Columbia area, the government, as was discussed, has a major positive impact due to Columbia being the State Capital, the County seat of Richland County and being the home of the main campus of the University of South Carolina. Therefore, the government impacts the area with a variety of job availability for local residents.

The Columbia area is benefitted socially by the variety of citizens living in the area. Also, Columbia has advantages which result from being the State of South Carolina's center for such major employers as banks and insurance companies. As stated above, the University of South Carolina having her main campus here, results in a positive impact. These factors allow the area to have a rich array of fine arts offerings, a local zoological park, and sports venues made possible by the areas' diverse social makeup.

The Columbia area is benefitted by a pleasant climate and is geographically located in the center of the

state, making it a convenient traveling distance to both the SC beaches and the mountains of South and North Carolina. The area's proximity to Lake Murray, a large fresh water lake, provides residents with immediate access to a variety of recreational offerings including motor boating, sailing, water skiing, fishing and swimming. Columbia also benefits by its proximity to several rivers which provide residents with possibilities of canoeing and kayaking.

The Columbia area is therefore benefitted with a broad based, stable economy, which is positively impacted by government. The area includes a various social makeup with its related assortment of cultural and entertainment offerings, and the area has a pleasant climate and desirable location. Columbia has all the necessary municipal and private facilities necessary to make it very competitive with other areas of the state and nation. The economic, governmental, social and environmental considerations, which influence real estate, appear to be in balance in the Columbia area. When combined with the most recent the Columbia area, the area's future appears bright.

NEIGHBORHOOD DATA

The subject property is located in the southeast area of Richland County in Columbia (although outside the city limits), South Carolina. The most recent surveys and legal descriptions include the total area of the subject property as 4,410.916 acres and extends on both the north and south sides of Interstate 77, which extends through the northern portion of the subject property.

The western boundary of the subject property is the Congaree River which is also the boundary extending between Richland County to the east and Lexington County to the west. The eastern and northeastern boundary is Bluff Road (South Carolina Highway 48) which provides primary egress and ingress to the subject property via South Beltline Boulevard, White House Road, and Beckham Swamp Road. South Beltline Boulevard extends north of the intersection of Bluff Road and Interstate 77 with White House Road being accessible southeast of the intersection of Bluff Road and Interstate 77. Beckham Swamp Road (South Carolina Highway 519) extends from the south side of Bluff Road southeast of Bluff Road's intersection with Atlas Road and extends through the eastern and southern portion of the subject property in a southerly direction. There are other interior roads that traverse through the subject property as a result of providing egress and ingress to Heathwood Hall Episcopal School and the City of Columbia Waste Water Treatment facility.

A review of the tax maps comprising the subject property will delineate several parcels located within the interior of the subject property which are not included as part of the acreage.

Bluff Road is the primary access road to the subject property with egress and ingress from Bluff Road being provided via White House Road and Beckham Swamp Road with access to the northern portion of the subject property being accessed via South Beltline Boulevard that extends to Heathwood Hall School which is located adjacent to the northern portion of the subject, east of the Congaree River. In addition, as stated, other roads traverse through this northern portion to provide access to these improvements.

The area around Bluff Road, with its intersection with Interstate 77, is exemplary of primarily neighborhood commercial usage. The commercial uses reflect older, owner occupied retail facilities with some office/warehouse/distribution facilities. There are still some older single-family residential properties located on the east and west side of Bluff Road, south of its intersection with South Beltline Boulevard. Other developments in the general area is a former Burger King/convenience store/gasoline service facility developed on the north side of South Beltline Boulevard at its intersection with Bluff Road. This property was foreclosed in 2002 and has since reopened under new ownership. The foreclosure is not attributable

to the location but more to the former franchisee.

The northern portion of the subject property is contiguous to older warehouse facilities accessed via Bluff Road in an area highly concentrated with older industrial and warehouse facilities. The southeastern portion of the subject property is contiguous to older, single-family residential areas identified as Bluff Estates and Starlite Subdivisions. These older subdivisions are comprised of single-family residential properties, originally constructed 35 to 40 years ago and are moderately priced.

Although Interstate 77 (Southeastern Beltway) does extend through the northern portion of the subject property, the only access area from Interstate 77 is the interchange with Bluff Road near the northeastern portion of the subject property's location with Bluff Road. There is also a paved service road extending adjacent to the parcel not included as part of the subject on the north side of White House Road which extends northerly beneath Interstate 77 to the City of Columbia Waste Water treatment facility.

The large expanse of acreage afforded by the subject property, as well as, the attractive location relative to proximity to the Central Business District of Columbia, as well as, the seven+ miles of shoreline extending along the Congaree River renders the subject property ripe for developmental usage in the event the floodway delineation is revised to the former delineation in 1999. The removal of a large expanse of the property from the floodway would allow certain types of development, even the location of this area within the flood plain. The scarcity of available land for developmental uses has required developers to extend far out into the suburban area in northeast and northwest Columbia and even to the west in the Lexington, South Carolina market area.

There appears to be more diversity in the subject area as a result of recent developments to the south side of Bluff Road, west of the subject property. More specifically, two apartment complexes have been constructed for tenancy by University of South Carolina students. The apartment complex identified as College Suites Stadium is located closer to the subject property and consists of 264 units representing 924 available bedrooms. The apartment property was completed in 2004 and was 100% pre-leased beginning for the fall semester at USC. Similarly, Sterling University Oaks is located on the southeast side of National Guard Road and consists of 180 units or 660 potential residents. Like College Suites Stadium, Sterling University Oaks was also 100% pre-leased with construction completed in 2004, prior to the fall semester. With inclusion of these two new, multi-family residential properties, the area is beginning to show more diversity and potentially could represent more diversity if the potential sale of the South Carolina State Farmers Market to the University of South Carolina becomes a reality. According to *The*

State, Friday, March 4th, 2005, the State Budget and Control Board voted 3-2 to approve the move of the State Farmers Market to a 196.0 acre site at the intersection of Shop Road and Pineview Road. The present Farmers Market comprises roughly 50.0 acres and information obtained from the University of South Carolina reveals the offer to the State of South Carolina by the University of South Carolina for the purchase of the State Farmers Market is \$14,000,000. The \$14,000,000 has no relevancy to valuation of the 50.0 acres but is the required money by the State Department of Agriculture for the move to the new site. In conversations with Helen Zeigler with the University of South Carolina Planning Department, a valuation is being completed and the University will pay the State the larger of the valuation or the \$14,000,000. Assuming the University pays \$14,000,000 for the 50.0 acres, the acquisition would relate to \$280,000 per acre or \$6.43 per square foot for this acreage zoned as M-1, Light Industrial by Richland County. Based on prior sales of M-1 land, the \$280,000 per acre or \$6.43 per square foot does seem relatively pricy for the property. However, it is reiterated the \$14,000,000 potential acquisition price is not related to any existing valuation. The University of South Carolina plans on utilizing this 50.0± acres for the development of a spring sports complex and other venues.

A development presently planned for the area is the Spur Condominium project located at the intersection of Key Road and Bluff Road on a site presently occupied by the Stadium Restaurant.

**STATEMENT OF
HISTORY AND OWNERSHIP**

The subject property is presently under the ownership of Columbia Venture, LLC, as evidenced by numerous deeds on record in the Richland County Register of Deeds conveying the entirety of the 4,410.916 acres to Columbia

Venture, LLC.

The seven deeds conveying the 23 tax map parcels, totaling 4,410.916 acres, are identified below:

Deed	Date	Grantor	Grantee
281/1826	02/22/99	Congaree Farms, LLC	Columbia Venture, LLC
281/1845	02/22/99	Chapel Hill, LLC	Columbia Venture, LLC
281/1855	02/22/99	DAK III, LLC	Columbia Venture, LLC
281/1865	02/22/99	Burwell D. Manning, Jr.	Columbia Venture, LLC
281/1871	02/22/99	Elizabeth K. Manning	Columbia Venture, LLC
281/1877	02/22/99	Burwell D. Manning, Jr.	Columbia Venture, LLC
281/1882	02/22/99	Burwell D. Manning, Jr. Elizabeth K. Manning Overlook, Inc. Eastern Corn & Grain Company, Inc. Congaree Farms, LLC DAK III, LLC Chapel Hill, LLC	Columbia Venture, LLC

All seven deeds were conveyed on February 22nd, 1999 and conveyed from various grantors to Columbia Venture, LLC. As best as may be ascertained by the considerations represented on the Affidavits of Consideration, it appears the total conveyance is around \$12,000,000.

Individual legal descriptions for the parcels conveyed are not provided in this section due to the lengthy narratives involved in describing the numerous parcels which comprise the subject assemblage of 4,410.916 acres. As a result, all deeds and legal descriptions representing the subject property are provided in the Addenda section of this Complete, Self-Contained Appraisal Report.

Relative to an exposure time for the transaction in 1999, the subject property was actually not placed on

the market for subsequent disposition but was sold *in-house*.

Since the most recent conveyance in 1999, the subject property has remained under the ownership of Columbia Venture, LLC with the intent of implementing a land use plan for the Green Diamond project. However, with the delineation of the floodway by FEMA in 2001, the Green Diamond project has not come to fruition.

ZONING

The subject property is currently zoned under the auspices of Richland County and the 23 parcels comprising the subject presently have four separate zoning designations:

D-1, Development District; RU, Rural District; M-1, Light Industrial District; and RS-3, Single-Family Residential District.

Of the 23 separate tax map parcels comprising the subject property, 13 of the parcels reflect D-1 zoning, five are zoned RU, two zoned M-1, and three are zoned RS-3.

The D-1, Development District is intended to provide for large tracts of land located primarily on the fringe of urban growth where the predominant characteristic of urban development has not yet been fully established but where the current characteristics of use are primarily residential, agricultural or semi-developed, with scattered related uses. Certain structures and uses required to serve governmental, educational, religious, recreational, and other needs of such areas are permitted outright or are permissible by special exceptions subject to restrictions and requirements and intended to assure compatibility of uses within the D-1 district and areas that are adjacent. It is recognized future demand for developable land will generate requests for amendments in zoning designations to remove land from the D-1 classification and place it into more intensely developed classifications as a natural consequence of urban expansion.

The predominance of the D-1 zoning for the subject property is located on those tracts situated toward the northern area of the property, north of Interstate 77, as well as, southwest of Interstate 77 bordering the Congaree River. In addition, those parcels comprising the interior of the subject property are also zoned D-1. As stated previously, the predominance of the 23 parcels are zoned D-1, hinting the natural progression of urban expansion may necessitate a zoning change.

As indicated previously, a current dispute with the location of the floodway relative to the subject property remains problematic. The extension of the floodway to encompass approximately 70% of the subject property strictly prohibits developmental usage. The remaining portion of the property is located in a flood plain where certain allowable developmental usage by Richland County is permitted. In the event the subject property is removed from the floodway as a result of the re-certification of the levee system or improvements to the existing levee system, these modifications may allow for the development of the subject property.

ZONING DESIGNATIONS		
Tax Map Number	Size (Acres)	Zoning
10900-01-02	950.49	D-1
11000-01-01	11.89	D-1
11000-01-02	259.04	D-1
11000-01-06	254.80	D-1
11000-02-01	320.22	D-1
11100-01-07	15.00	D-1
11100-01-08	255.49	D-1
11100-01-09	76.61	M-1
11100-01-10	234.43	D-1
13300-01-01	284.00	RU
13300-01-04	150.00	RU
13300-01-05	544.00	RU
13400-01-01	55.50	D-1
13400-01-02	50.00	D-1
13400-01-03	516.00	D-1
13400-02-01	35.96	D-1
13400-02-10	52.18	RS-3
13400-02-16	254.80	RU
13400-02-17	29.00	RU
13415-01-10	13.47	RS-3
13500-01-01	9.94	D-1
13500-05-01	40.00	M-1
13513-01-27	10.00	RS-3

ASSESSMENT AND TAXES

There are 23 separate tax map parcels which comprise the Green Diamond property. The tax parcels extend over several tax map sheets with parcels sizes ranging from as low as 9.94 acres to the largest consisting of 950.49 acres.

The Richland County Assessor's Office is responsible for ad valorem valuation for Richland County, as well as, all municipalities contained within the county. At the present time, the 23 individual tax parcels comprising the entirety of the Green Diamond project are valued based on an agricultural use value with exception of one parcel. The lone parcel, identified as Tax Map Sheet 11000-01-01, comprises 11.89 acres and actually consists of the levee area which extends in front of Heathwood Hall School. As a result, the indicated market value, as determined by Richland County, only totals \$500. The remaining parcels are identified by Richland County with both a current value, as well as, an agricultural use value.

There are several differences between an indication of market value and agricultural use value. Primarily, there is a wide disparity in the valuation on a per unit basis for the agricultural use value as compared to the market value. Agricultural use values typically extend from \$100 to \$300 per acre as determined by the U.S. Department of Agriculture based on soil potential. The market values are more consistent but also vary according to size of the respective parcel and the location within the entirety of the Green Diamond assemblage of parcels. The second difference is the assessment ratio which affects the assessed value and ultimately the tax liability associated with each tax parcel. The assessment ratio for the market valuation of the subject parcels is 6.0% while an agricultural use value indicates a 4.0% assessment ratio. The only draw-back for the agricultural use valuation will be whenever the property reflects a change in property usage. Whenever the change in property usage occurs, the owner is responsible for *roll-back* taxes which represents a five year time frame of the difference between the agricultural use value assessment and the market value assessment times the applicable millage rate for each of the respective five years.

The chart on the following page will identify all 23 parcels which comprise the Green Diamond assemblage. In addition to the accompanying tax map number will be the size of the parcel, the current indicated market value, an indicated market value per acre as well as the agricultural use value and the agricultural use value per acre.

RICHLAND COUNTY MARKET VALUES/AGRICULTURAL USE VALUES						
No.	TMS Number	Size (Acres)	Market Value (\$)	Market Value/Acre	Agricultural Value	Agricultural Value /Acre
1	10900-01-02	950.49	\$1,140,600	\$1,200	\$158,700	\$167
2	11000-01-01	11.89	\$500	\$42	—	—
3	11000-01-02	259.04	\$310,800	\$1,199	\$78,900	\$305
4	11000-01-06	254.80	\$305,800	\$1,200	\$69,700	\$274
*5	11000-02-01	320.22	\$332,900	\$1,000	\$112,600	\$352
6	11100-01-07	15.00	\$18,000	\$1,200	\$2,900	\$193
7	11100-01-08	255.49	\$245,300	\$960	\$39,300	\$154
8	11100-01-09	76.61	\$1,532,200	\$20,000	\$20,700	\$270
9	11100-01-10	234.43	\$281,300	\$1,200	\$62,600	\$267
10	13300-01-01	284.00	\$340,800	\$1,200	\$76,800	\$270
11	13300-01-04	150.00	\$180,000	\$1,200	\$53,400	\$356
12	13300-01-05	544.00	\$652,800	\$1,200	\$89,400	\$164
13	13400-01-01	55.50	\$66,600	\$1,200	\$18,100	\$326
14	13400-01-02	50.00	\$60,000	\$1,200	\$18,900	\$378
15	13400-01-03	516.00	\$619,200	\$1,200	\$156,200	\$303
16	13400-02-01	35.96	\$43,200	\$1,201	\$6,000	\$167
**17	13400-02-10	52.18	\$126,800	\$1,384	\$15,800	\$303
18	13400-02-16	254.80	\$295,800	\$1,161	\$79,800	\$313
19	13400-02-17	29.00	\$34,800	\$1,200	\$4,300	\$148
20	13415-01-10	13.47	\$31,000	\$2,301	\$2,400	\$178
21	13500-01-01	9.94	\$17,900	\$1,800	\$3,800	\$382
22	13500-05-01	40.00	\$925,000	\$23,125	\$8,000	\$200
23	13513-01-27	10.00	\$69,000	\$6,900	\$1,700	\$170
	TOTAL	4,422.82				

* Includes \$13,000 in Improvements

** Includes \$54,600 in Improvements

CV006143

PLTF TRIAL EXH 425

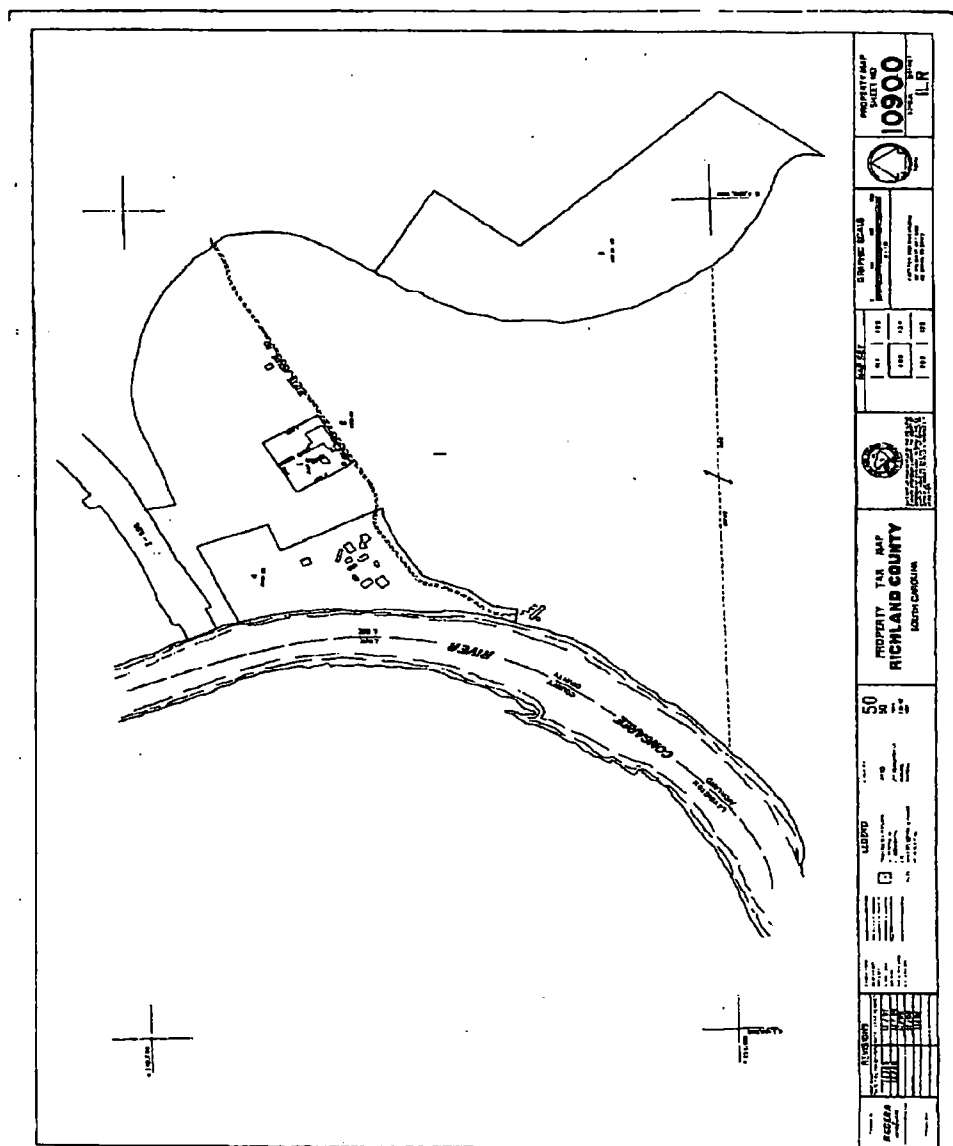
The estimated tax liabilities based on the agricultural use values do encompass 22 of the 23 parcels. The Assessor's value will be identified on the chart on the following page with an estimated tax liability based on the current millage rate and the subject tax districts, 1LR and 1UR. Presently, the millage rate is 384.5 mils for both tax districts and will be applied to the assessed value of each of the respective parcels. The chart will indicate the total estimated tax liability for those parcels valued as agricultural use properties is \$15,982.59. The total market valuation of the 23 parcels comprising the Green Diamond assemblage is \$7,630,300.

ESTIMATED TAX LIABILITY					
TMS Number	Tax District	Assessor's Value	Assessment Ratio	Millage Rate	Estimated Tax Liability
10900-01-02	1LR	\$158,700	4.0%	.3845	\$241.47
11000-01-01	1LR	\$500	6.0%	.3845	\$11.54
11000-01-02	1LR	\$78,900	4.0%	.3845	\$1,213.48
11000-01-06	1LR	\$69,700	4.0%	.3845	\$1,071.99
11000-02-01	1LR	\$112,600	4.0%	.3845	\$1,731.79
11100-01-07	1LR	\$2,900	4.0%	.3845	\$44.60
11100-01-08	1LR	\$39,300	4.0%	.3845	\$604.43
11100-01-09	1UR	\$20,700	4.0%	.3845	\$318.37
11100-01-10	1LR	\$62,600	4.0%	.3845	\$962.79
13300-01-01	1LR	\$76,800	4.0%	.3845	\$1,181.18
13300-01-04	1LR	\$53,400	4.0%	.3845	\$821.29
13300-01-05	1LR	\$89,400	4.0%	.3845	\$1,374.97
13400-01-01	1LR	\$18,100	4.0%	.3845	\$278.38
13400-01-02	1LR	\$18,900	4.0%	.3845	\$290.68
13400-01-03	1LR	\$156,200	4.0%	.3845	\$2,402.36
13400-02-01	1LR	\$6,000	4.0%	.3845	\$92.28
13400-02-10	1LR	\$15,800	4.0%	.3845	\$243.00
13400-02-16	1LR	\$79,800	4.0%	.3845	\$1,227.32
13400-02-17	1LR	\$4,300	4.0%	.3845	\$66.13
13415-01-10	1LR	\$2,400	4.0%	.3845	\$36.91
13500-01-01	1LR	\$3,800	4.0%	.3845	\$58.44
13500-05-01	1LR	\$8,000	4.0%	.3845	\$123.04
13513-01-27	1LR	\$1,700	4.0%	.3845	\$26.15
IMPROVEMENTS		\$67,600	6.0%		\$1,560
TOTAL TAX LIABILITY					\$15,982.59

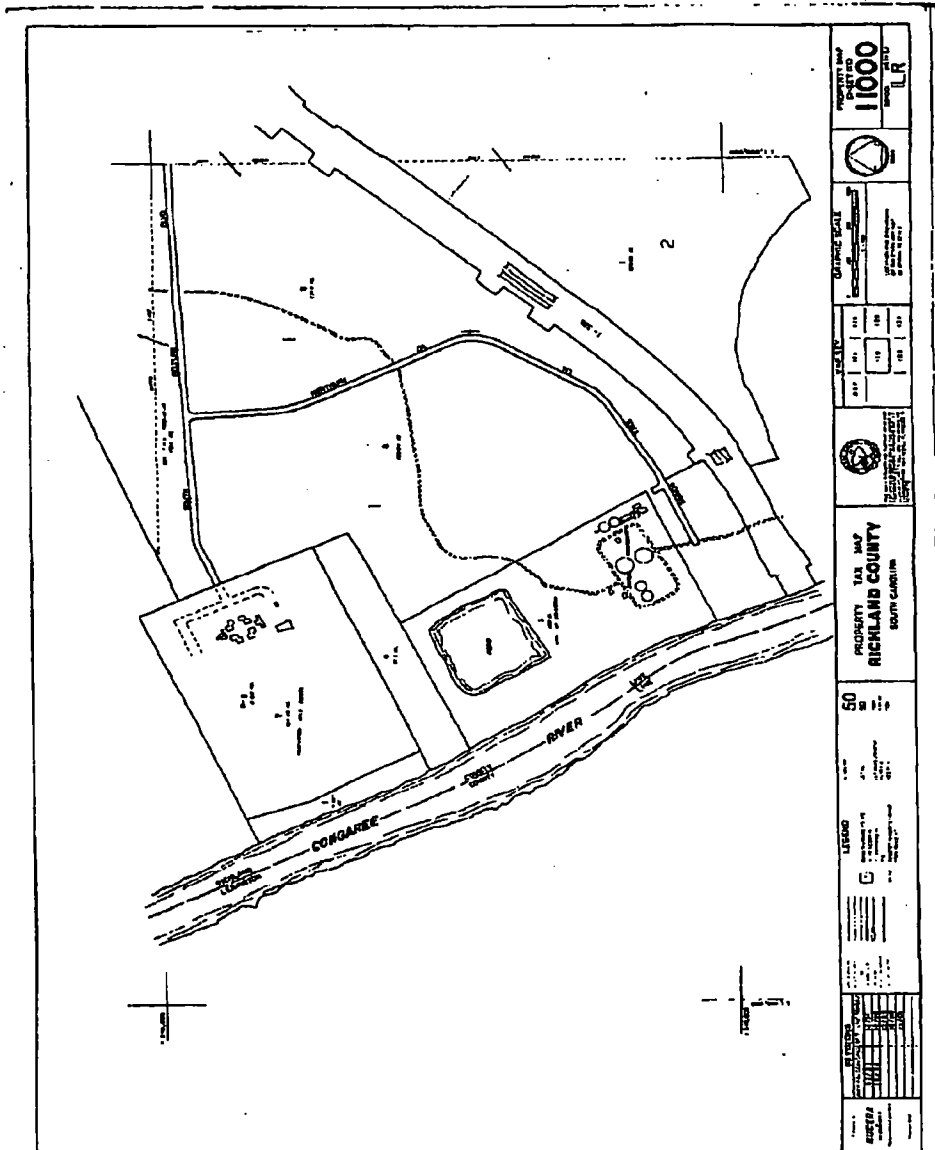
The determination of the total size of the Green Diamond assemblage varies slightly from the determination by Richland County as compared to the plats identifying the subject. According to the two plats, the total acreage contained in the subject property is 4,410.916 acres. Richland County, through the 23 separate parcels, identifies the subject property with a total of 4,422.82 acres. It is unknown as to where the disparity actually exists but it is believed the disparity may exist whenever the property was conveyed from one owner to the next during the transactions of the most recent conveyance to Columbia Ventures, LLC.

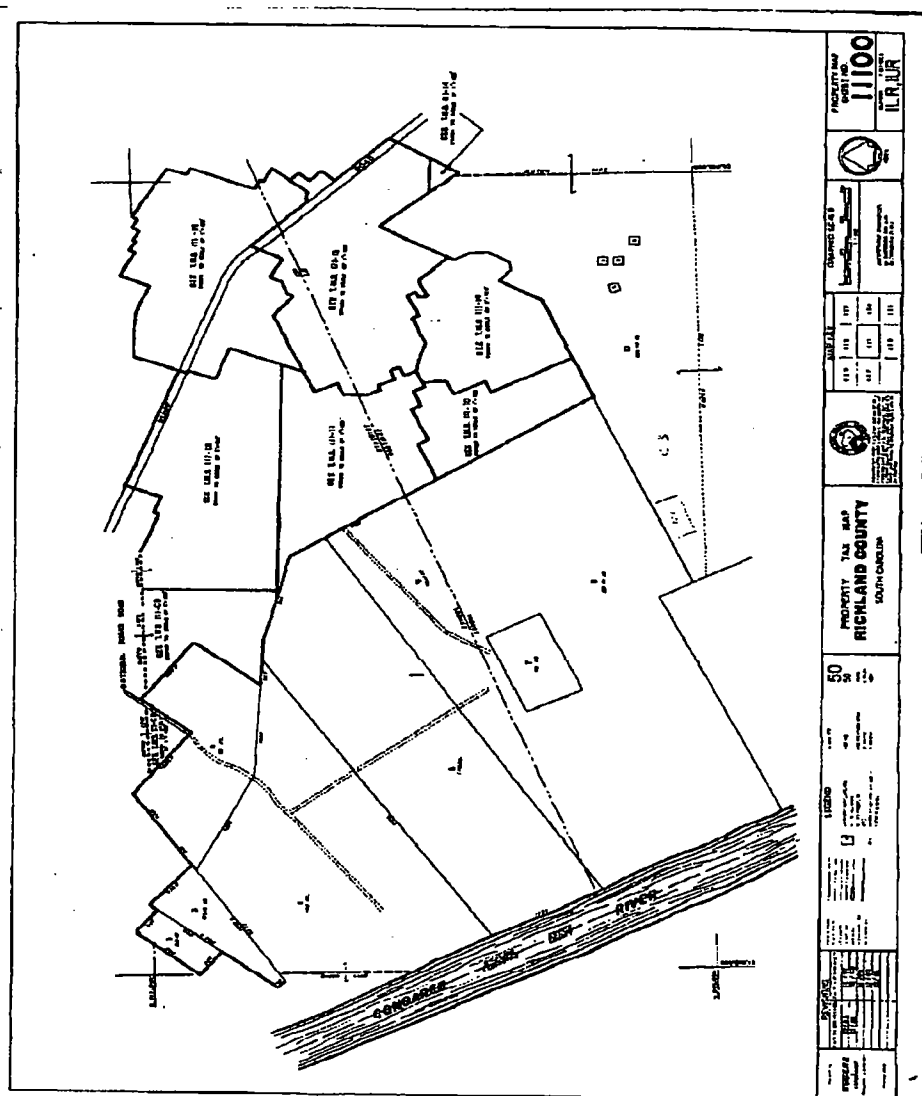
Of the 23 parcels, 22 are located in the same tax district, 1LR, with one parcel (TMS 11100-01-09) identified as Tax District 1-UR. Although there are two separate tax districts, the applicable millage rate for both tax districts is identical at 384.5 mils.

TAX MAP IDENTIFICATION FOR SUBJECT PROPERTY

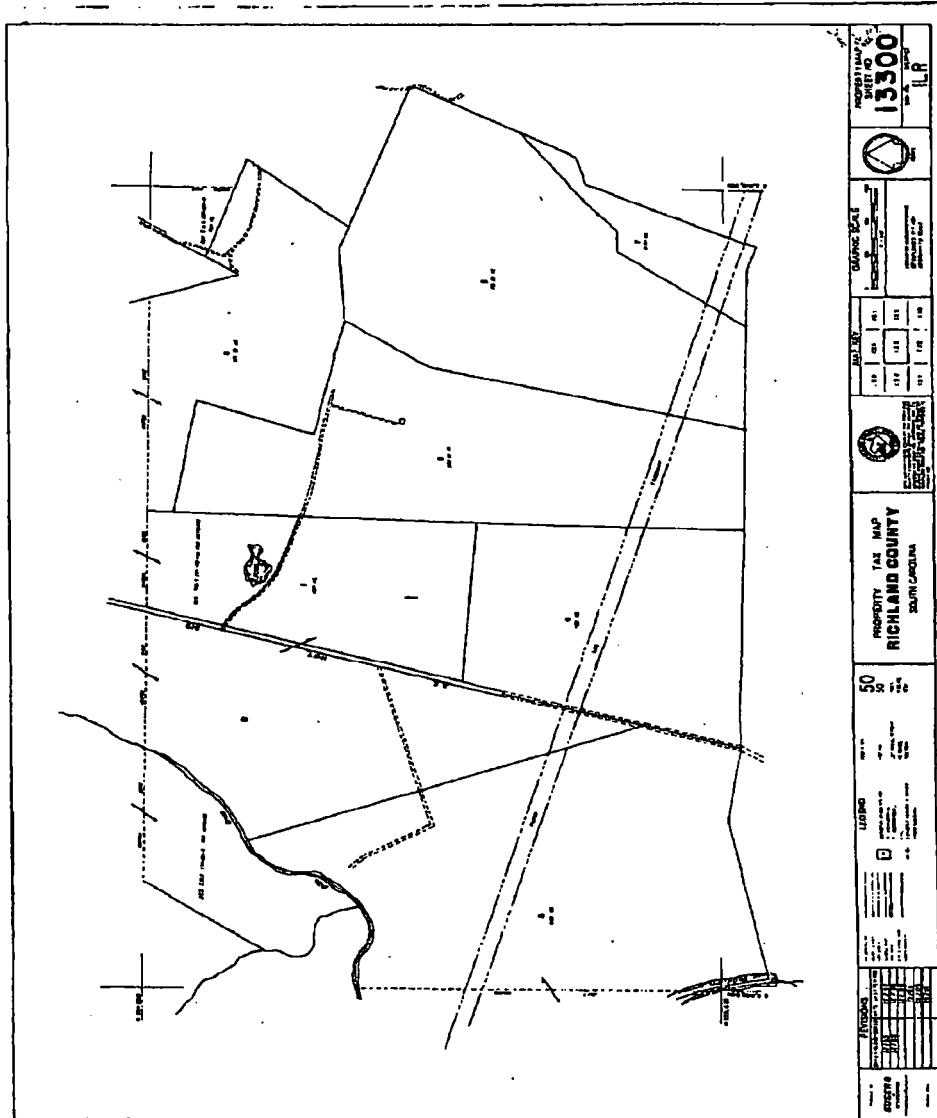


TAX MAP IDENTIFICATION FOR SUBJECT PROPERTY



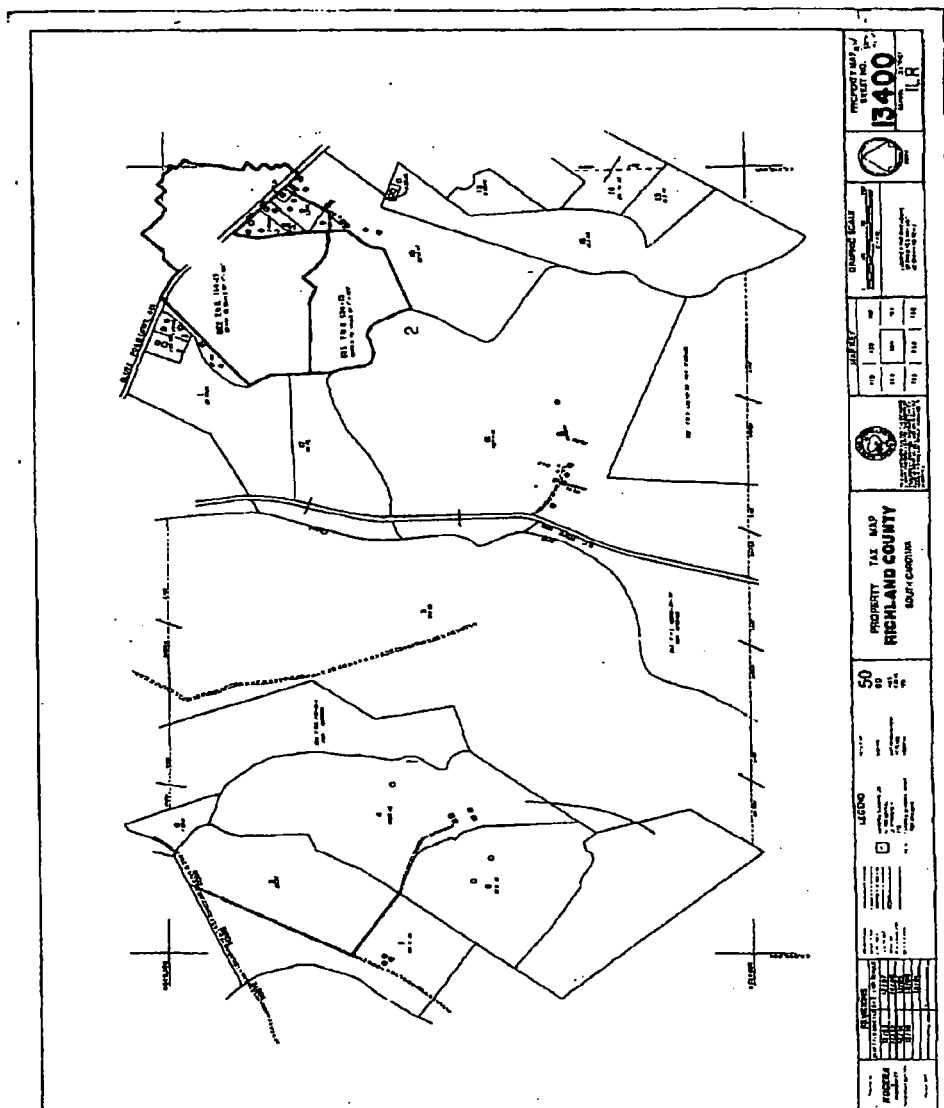


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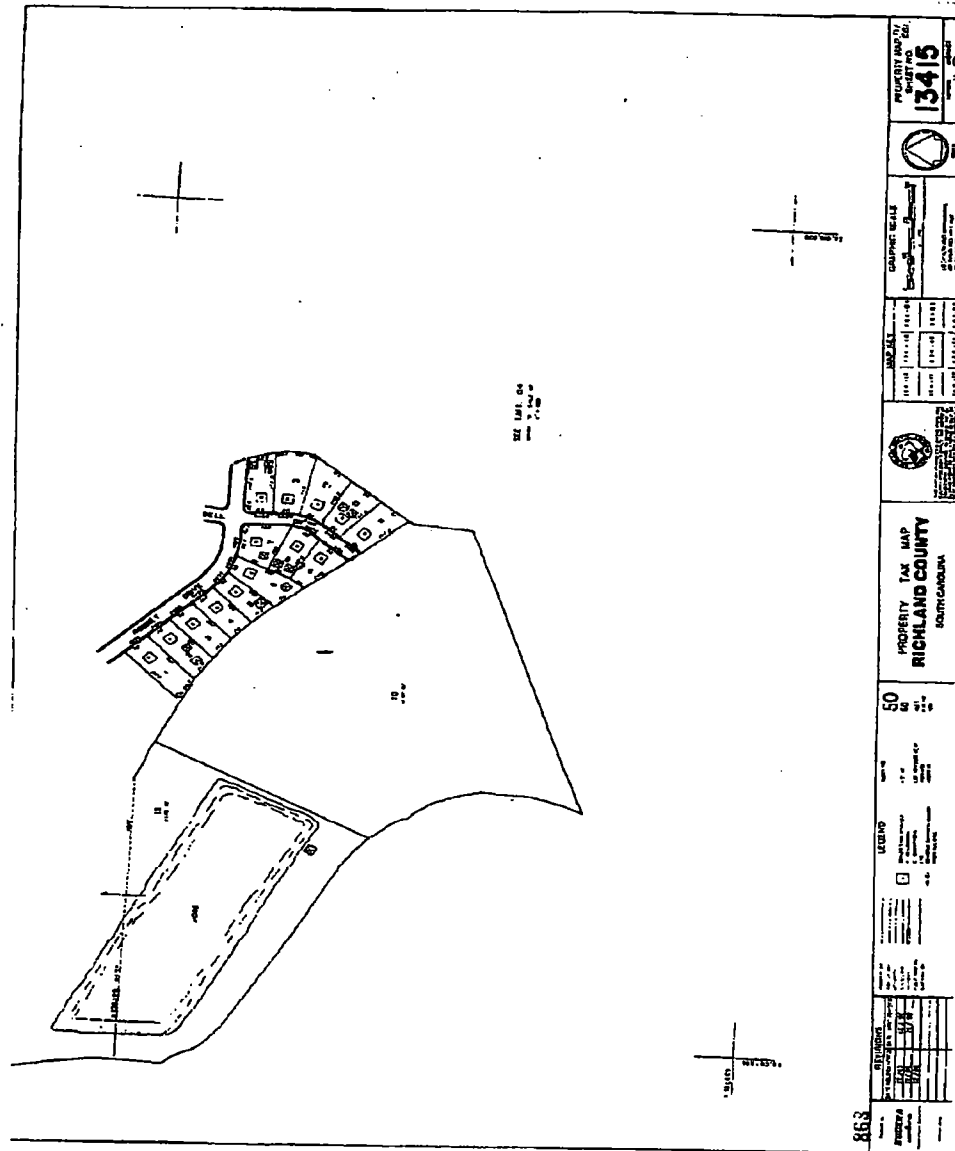


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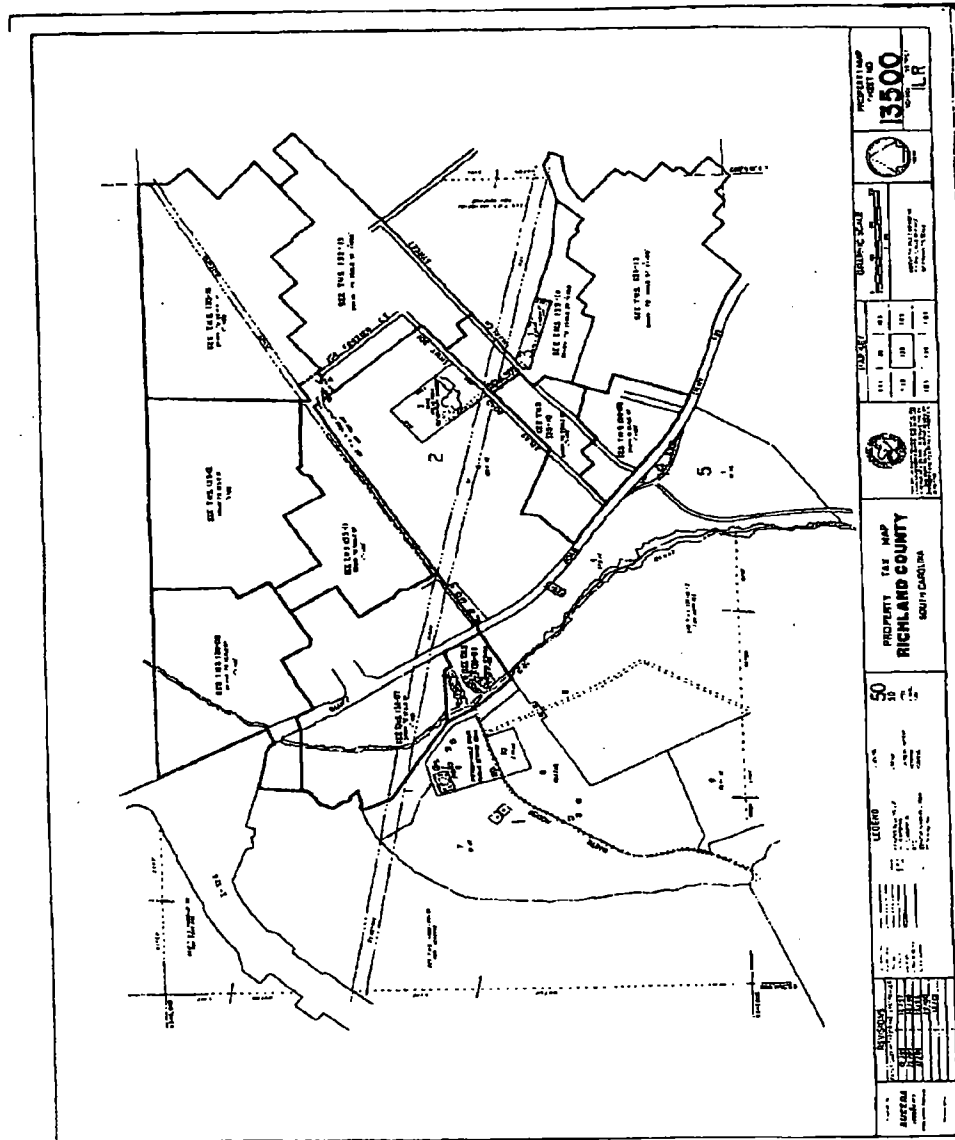
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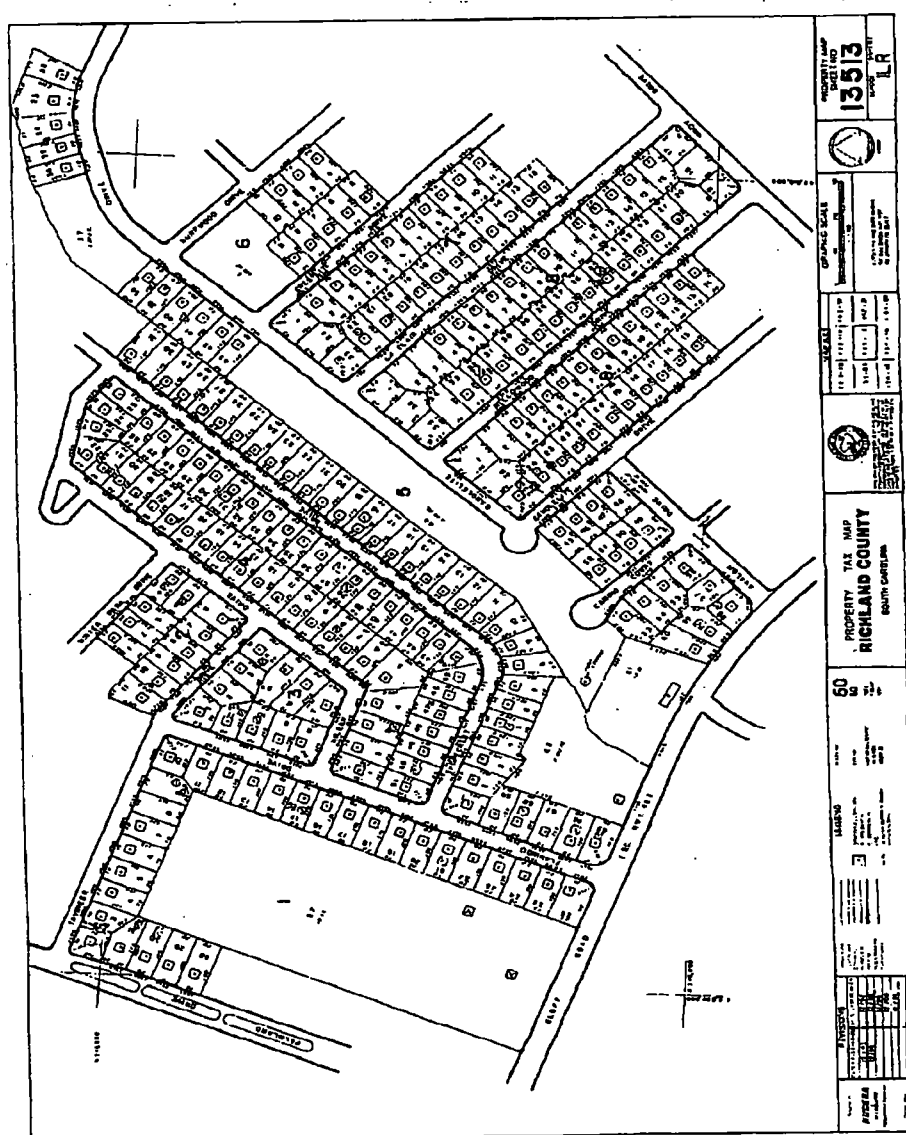
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TAX MAP IDENTIFICATION FOR SUBJECT PROPERTY



TAX MAP IDENTIFICATION FOR SUBJECT PROPERTY



SITE DESCRIPTION

The subject property comprises a total of 4,410.916 unimproved acres and is identified by two surveys/plats, completed by B.P. Barber and Associates, Inc., prepared for Burroughs and Chapin Company, Inc., dated June 26th, 1998. Copies of each of these plats/ surveys identifying the subject property were included at the conclusion of the Identification section.

• **SIZE AND SHAPE**

The total acreage contained within the subject property is 4,410.916 acres as identified on the plats. As a result of the 23 parcels comprising the aggregate acreage, the shape of the subject property is highly irregular as identifiable on the aerial photograph also provided at the conclusion of the Identification section.

• **ROAD FRONTAGE/ACCESS/VISIBILITY**

Access to the predominance of the subject property is via Bluff Road with two access areas providing egress and ingress through the central portion of the subject property as well as the central and southern portion. Beckham Swamp Road extends in a southerly direction from Bluff Road through the right central portion of the site as well as the extreme southern area. Beckham Swamp Road is a paved road which terminates to an unpaved area in the southern portion of the subject acreage at a power line extending across the southern portion of the property. The other primary access area is White House Road which extends from Bluff Road in a southwesterly direction, south of the intersection of Interstate 77 and Bluff Road. There are several paved access areas extending in northerly directions beneath Interstate 77 and intersecting with Simon Tree Lane and Northern Road to provide access to the City of Columbia Waste Water Treatment facility.

The other primary access through the subject property is via South Beltline Boulevard which extends west across Bluff Road and provides access to Heathwood Hall Episcopal School, located on the Congaree River, adjacent to the northwestern boundary of the subject property. South Beltline Boulevard is paved as well as Northern Road.

• **TOPOGRAPHY/ DRAINAGE**

By referencing the quadrangle maps for South Carolina, mapped and published by the Geological Survey and more specifically those maps identified as Fort Jackson South Quadrangle and Southwest Columbia Quadrangle, the subject property appears to be primarily open land which has been utilized agriculturally, although there are some areas of vegetation and tree growth primarily along the levees which extend along

Gills Creek that traverses through the south central portion of the subject property and eventually empties into the Congaree River in the extreme southwest corner of the subject property. In addition, the quadrangle maps will also indicate the relative level topography of the entirety of the subject property. There is only a moderate slope in the northern area of the property while the central and southern portions of the entire subject property are considered level. The quadrangle maps also depict the predominance of the acreage being open land with some scattered tree growth, predominantly around Gills Creek and the levees that extend through the central portion of the site. The aerial photograph provided at the conclusion of the Identification section depicts the predominance of the subject acreage being open land which has been used recreationally or agriculturally. The exact acreage amount of open land as compared to that portion of the site covered by available tree growth is unknown.

• **UTILITIES**

Municipal utilities presently existing to service the subject property and any subsequent developmental usage are available within the area with electricity and gas provided by SCE&G, water provided by the City of Columbia, as well as, sewer service being provided by the City of Columbia. Telephone service is provided by BellSouth.

Due to the size of the subject property comprising the large amount of acreage, sewer and water are available in different portions of the acreage. Water and sewer extend in a southeasterly direction along Bluff Road which benefits the subject property. There is only a small amount of frontage which extends along Bluff Road so therefore, the proximity to this thoroughfare only accommodates a small portion of the subject property. According to officials at the City of Columbia, there is a water and sewer line located in the northern portion of the subject property in proximity to Heathwood Hall Episcopal School and the City of Columbia Waste Water Treatment facility. This eight inch water line and sewer line extends along the aforementioned facilities beneath Interstate 77 and extends in a southerly direction to White House Road. At this juncture, the water line extends in an easterly direction to Bluff Road so therefore, the northern portion and that portion to the south of Interstate 77 are accommodated by water. The sewer line terminates below the City of Columbia Waste Water Treatment facility, so therefore, only the northern portion of the subject property is presently accommodated by water and sewer while there is no sewer that extends through the subject property south of Interstate 77, although water does extend to the northern portion. Therefore, any extension of utilities, in terms of water and sewer to the southern portion of the subject property, would have to be extended from Bluff Road or from the eight inch water line located in the northern portion of the subject property at White House Road.

• **EASEMENTS/ENCROACHMENTS**

According to the submitted plats, there are several discharge and drainage easements, as well as, access easements extending through the subject property. Obviously, with the size of the subject property totaling 4,410.916 acres and the numerous parcels comprising this assemblage, the easements are not considered adverse. Visual orientation to the plats should be completed in order to ascertain the location of the easements. As stated previously, none of the easements are considered adverse nor do they provide a detriment to subsequent developmental usage of the subject property. No encroachments were noted which were considered adverse by physical inspection of the subject property, as well as, indicated on the submitted surveys/plats.

• **FIRM (FLOOD INSURANCE RATE MAP) AND DETERMINATION OF FLOODWAY**

The subject property has been identified as being located within a floodway and flood plain as evidenced by the three maps compiled by the Federal Emergency Management Agency and identified as Community Panel Numbers: 45079C0160-G, 45079C0190-G, and 45079C0178-G, with an effective date of February 20th, 2002. However, there have been disputes resulting in the location of the subject within the floodway, not so much relative to the flood plain, but to the identification or determination of the floodway. In 1995, a new FEMA map was completed and the subject property was not included in the floodway. It was the intent of the subject property owner and developer to improve and certify the levees so as to remove the entirety of the subject property from the identified flood plain for subsequent developmental usage. In 1998, FEMA attempted to re-map the Congaree River with little or no success. The August, 1999 FEMA map showed no floodway relative to the subject property. However, there were appeals to the map by certain appellants although no credible scientific analysis provided. In August, 2001, FEMA issued a revised map indicating approximately 70% of the subject property in the floodway. The attached FIRM's will delineate the majority of the subject property (70%) in the floodway with the majority of the balance contained in the flood plain.

At the present time, litigation is pending regarding the authenticity of the revised map as provided by FEMA, specifically stating unscientific methodology in determining the location of the subject property within an identified floodway.

• **ENVIRONMENTAL HAZARDS**

No environmental studies were furnished to the appraisers, although at the time of a previous valuation on the subject property in October, 2002, an Environmental Base Line Documentation Report was being completed on the subject property by Wetlands and Environmental Services, Inc., Myrtle Beach, South

Carolina. In conversations with representatives of W.E.S.I. at that time, it appears there are no existing hazardous waste, environmental hazards, endangered species or any contamination on the site. No prior or present use of the subject property would suggest the existence of such hazardous contaminants or pollutants. The appraisal and subsequent appraised value are contingent there are no environmental hazards, hazardous waste, contamination, hazardous materials or endangered species on the subject property. If such conditions are found to exist, the value conclusions rendered within this Complete, Self-Contained Appraisal may be impacted. The property owners did not furnish any documentation relative to the environmental report completed by Wetlands and Environmental Services, Inc.

- **WETLANDS**

According to Michael M. Adamson with The Hughes Development Group, the subject property has recently received re-certification relative to the jurisdictional wetlands located on the subject property. According to a letter regarding this re-certification dated January 20th, 2005, the total wetlands acreage or area is identified within the levee sections comprising the subject property. The levee sections identified as No. 1, 2, and 3 are shown on the following chart with the letter date, total acreage, wetland acreage and certification expiration.

Levee Section	USACE File No	Letter Dated	Total Acreage	Wetland Acreage	Certification Expiration
1	SAC 81-2004-2009	11.22.04	1,512	116.0	11.21.09
2	SAC 81-2004-2007	12.02.04	1,530	125.3	12.01.09
3	SAC 81-2004-2008	12.02.04	1,419	122.0	12.01.09

According to the recent re-certification of the jurisdictional wetlands provided by Michael M. Adamson, the total wetland acreage contained within the subject property totals 363.30 acres or 8.24% of the total aggregate acreage.

- **SOIL**

No separate soil feasibility study was available. The identification of soils constituting the subject property was provided by the *Soil Survey of Richland County, South Carolina* as provided by the United States Department of Agriculture, Soil Conservation Service. With the location of the subject property in proximity to a major river like the Congaree River, as well as, Gills Creek Tributary, the subject soil reflects four soil

types identified as:

- 1) Co - Congaree Loam
- 2) Ce - Chewacla Loam
- 3) Cd - Chastain Silty Clay Loam
- 4) To - Toccoa Loam

The Congaree series consists of deep, well drained and moderately well drained, moderately permeable soils formed in loamy alluvial sediment washed from soils of the Piedmont Province. Congaree soils are closely associated on flood plains with Chastain, Chewacla, Tawcaw, and Toccoa soils. They are at slightly higher elevations of a better drain than Chastain, Chewacla, and Tawcaw soils which have gray colors above a depth of 20 inches.

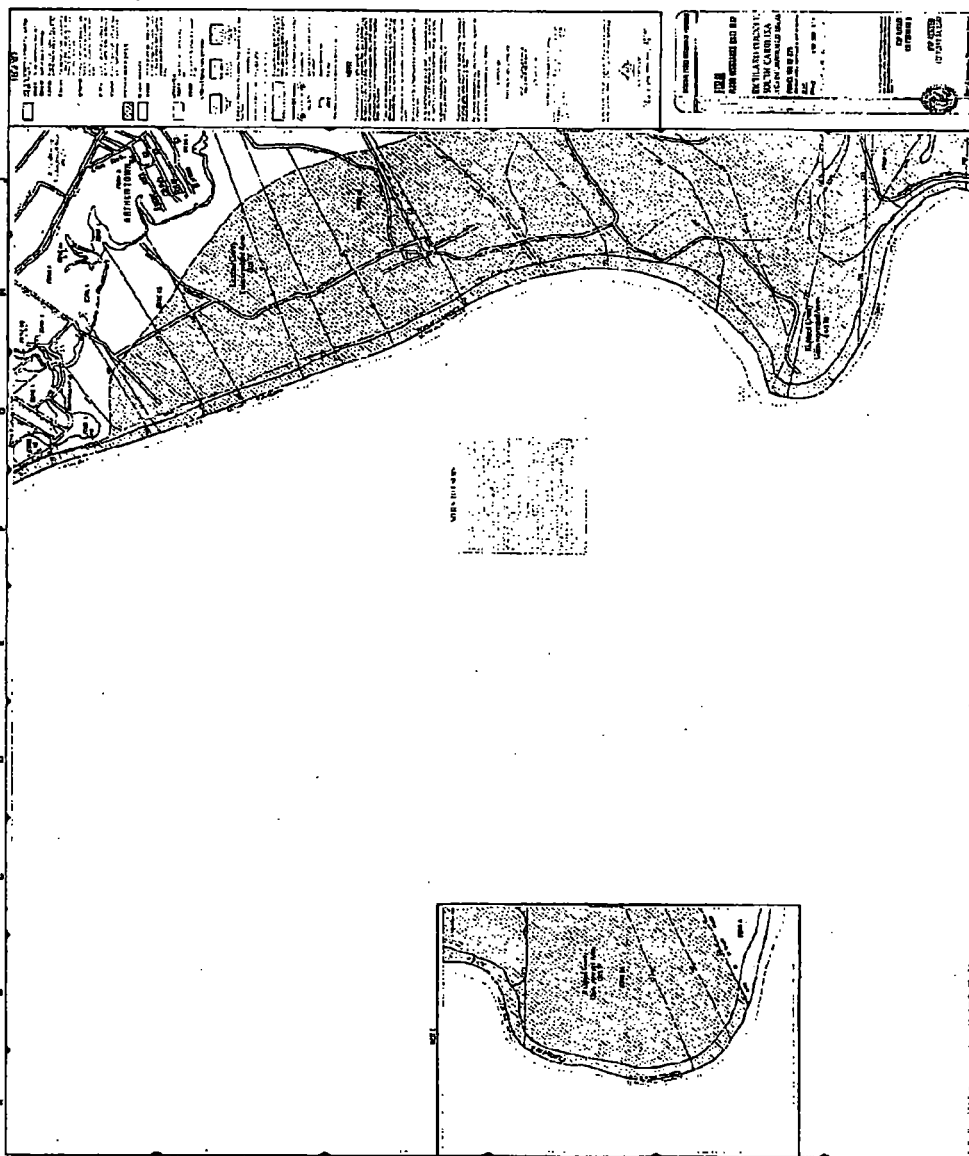
The Chewacla series consists of deep, nearly level, moderately permeable, somewhat poorly drained soils formed in loamy alluvial sediment washed from the Piedmont Province. Chewacla soils are also closely associated on flood plains with Chastain, Congaree, Tawcaw, Toccoa, and Dorovan soils.

The Chastain series consists of deep, nearly level, poorly drained, slowly permeable soils formed in clayey alluvial sediment.

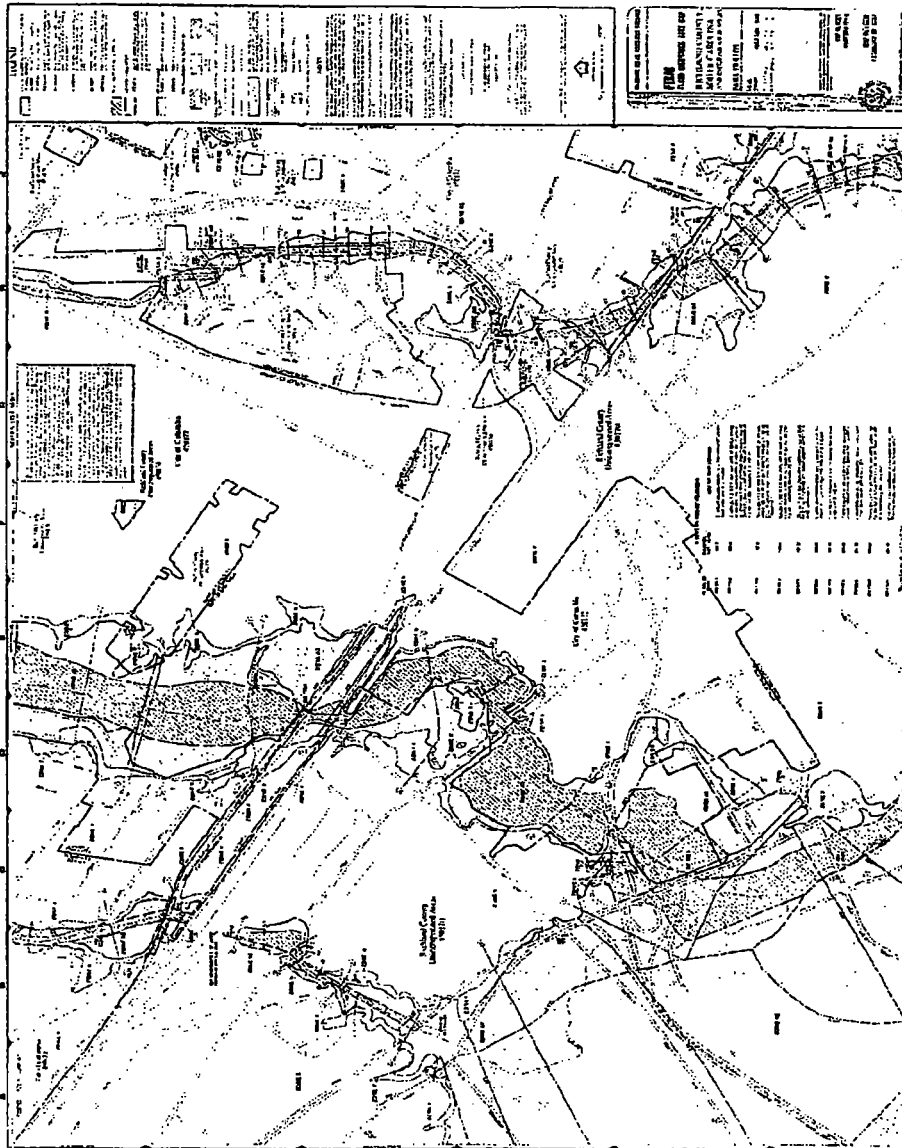
The Toccoa series consists of deep, well drained moderately rapidly permeable soils formed in thick loamy alluvium washed from the Piedmont Province.

The identification of the four soil types are indigenous to the subject located in proximity to the Congaree River.

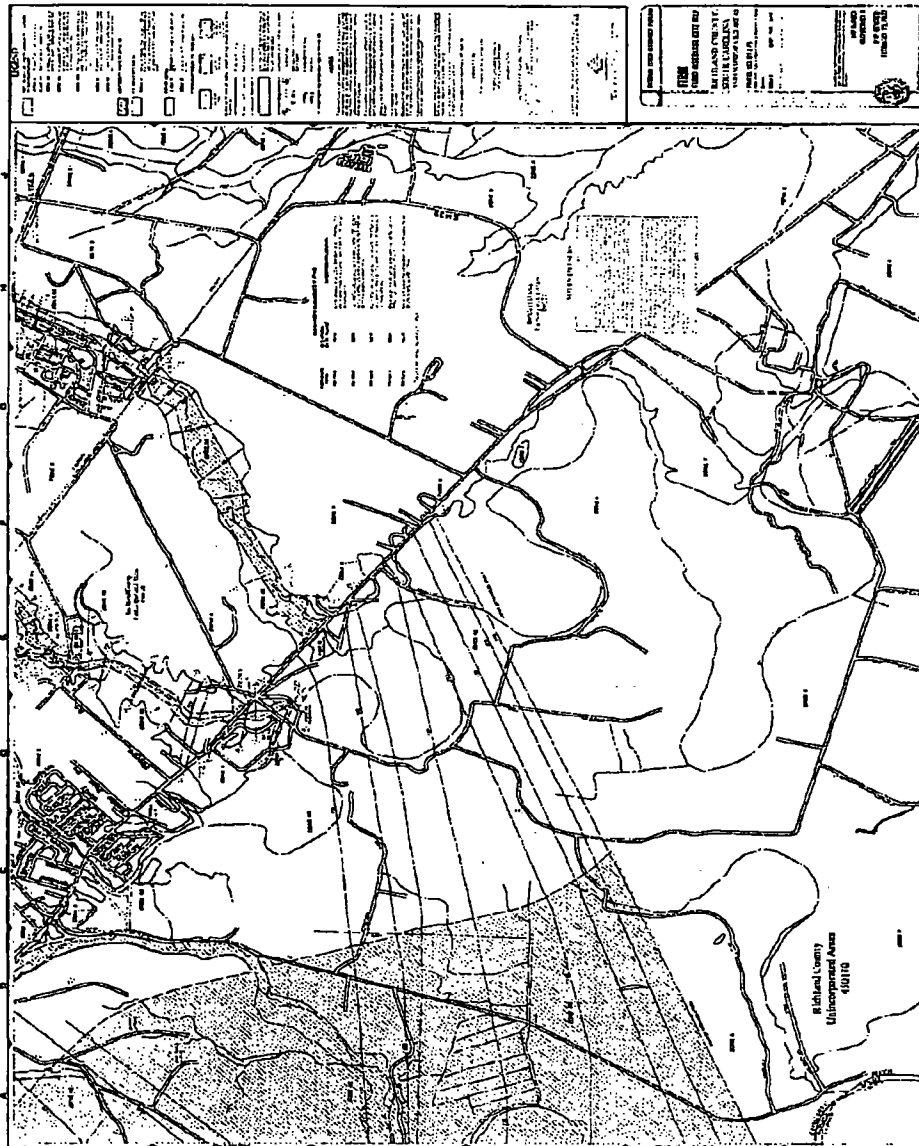
FLOOD INSURANCE RATE MAP (FIRM) IDENTIFICATION OF SUBJECT PROPERTY



FLOOD INSURANCE RATE MAP (FIRM) IDENTIFICATION OF SUBJECT PROPERTY



FLOOD INSURANCE RATE MAP (FIRM) IDENTIFICATION OF SUBJECT PROPERTY



MARKETABILITY ANALYSIS

The subject property, if exposed for sale in the aggregate 4,410.916 acres, may reflect an extended marketing time due to the immense size of the subject property. In addition, the current dispute, relative to the location of the predominance of the property in a floodway may impact the marketability as a result of uncertainty by a potential subsequent purchaser. The valuation contained within this appraisal report is predicated on the present determination of approximately 70% of the subject property contained within the floodway according to the flood insurance rate maps as compiled by FEMA and provided at the conclusion of the Site Description section.

None of the comparable sales utilized to compare to the subject property had sufficient data in order to provide an accurate marketing and exposure time associated with the comparable acreage parcel. The large parcel sold in Aiken which constituted almost 8,000 acres was purchased by an existing land owner who had also made a 902.0± acre purchase from the same property owner.

Also, surveys which typically provide marketing and exposure times for other real property types do not include large, unimproved acreage tracts like the subject. It is anticipated both the marketing time and exposure time may extend well between 18 to 24 months due to the sheer size of the subject property and the uncertainty relative to the final determination of a significant portion of the subject property contained within a floodway as presently identified by FEMA. However, with the determination of the subject property outside the floodway as previously delineated by FEMA, marketability could be significantly enhanced as a result of this strategic location of the subject property relative to proximity to the Central Business District of Columbia, as well as, the amenities afforded by the significant amount of water frontage extending along the Congaree River and Interstate 77 extending through a major portion of the subject property.

**HIGHEST AND BEST USE
ANALYSIS**

According to *The Appraisal of Real Estate*, Twelfth Edition, Appraisal Institute, Chicago, Illinois, Highest and Best Use is defined as:

"the reasonably probable and legal use of vacant land or an improved property, which is physically possible, appropriately supported, financially feasible, and that results in the highest value."

Highest and Best Use is one of the basic fundamentals that affects the value of all real estate. The concept was first pointed out in 1894 when the Supreme Court for the United States stated that:

"the value of property results from the use to which it is put and varies with the profitableness of that use."

The principle of Highest and Best Use may be applied to the land as though vacant and available for its highest and best use or to the property as improved.

When analyzing the Highest and Best Use of a property, the potential use must meet all four of the following tests:

Is the use:

- (a) legally permissible?**
- (b) physically possible?**
- (c) financially feasible?**
- (d) maximally productive?**

The Highest and Best Use Analysis in an appraisal report sets the stage of the analysis in the three approaches to value. In order to properly utilize these three approaches, the highest and best use must accurately be determined. To test the highest and best use of land as though vacant or a property as improved, an appraiser analyzes all feasible alternatives. Although the subject property contains some improvements, these improvements are not considered to be major contributors to the overall property value and therefore, the subject property is being analyzed as though vacant only. More specifically, a subsequent purchaser would not allocate any contributory value to the existing improvements as the subject property would be purchased with the determination of the entirety of the site as vacant.

• **AS VACANT - LEGALLY PERMISSIBLE**

The legally permissible use would suggest the present zoning which affects the subject property. At the present time, the 4,410.916 acres contain four separate zoning designations: D-1, M-1, RU, and RS-3. The largest number of acreage parcels constituting the subject property is zoned D-1, Development district. The D-1, Development District is intended to provide for large tracts of land located primarily on the fringe of urban growth where the predominant characteristics of urban development has not yet been fully established, but where the current characteristics of use are primarily residential, agricultural or semi-developed with scattered related uses. This is definitely the case with the D-1 zoned areas of the subject whereby there are primarily agricultural or recreational uses. The D-1 zoning encumbers 13 of the 23 parcels with the total acreage of 2,968.76 acres.

The RU District encompasses five parcels totaling 1,261.80 acres. The RU District is intended to protect and encourage agricultural endeavors and promote the wise use of prime agricultural and forest lands. The five parcels presently zoned as RU are situated primarily in the extreme eastern portion of the subject property or the southern portion below the areas designated as D-1 and adjacent to the Congaree River to the west and still reflect primarily agricultural use or recreational use.

The 40.0 acre tract with frontage on Bluff Road, as well as, Beckham Swamp Road is zoned M-1, Light Industrial District and is intended to accommodate wholesaling, distribution, storage, light manufacturing and general commercial uses. The M-1 zoning on this parcel is the direct result of frontage on Bluff Road whereby, adjacent properties reflect comparable wholesaling/distribution or light manufacturing usage. However, as part of the subject property, it is anticipated this area will reflect a continuation of agricultural and recreational use. M-1 zoning constitutes two of the 23 parcels and totals 116.61 acres.

The remaining zoning designation is identified as RS-3, a single-family designation which encompasses three of the 23 parcels totaling 75.65 acres. At the present time, with the predominance of the subject property identified as located within a floodway and the remaining residual acreage reflecting a large portion within the flood plain, it is highly unlikely subsequent residential development will be forthcoming without a change in the floodway determination. The 10.0 acre parcel situated between Palm Land Road and Flamingo Road in the Bluff Estates and Starlite Subdivision areas are located on the east side of Bluff Road with no immediate developmental demand for single-family residential usage within this area of Bluff Road.

There were no deed restrictions noted in the deeds of transfer which would limit developmental strategies

for the subject property other than those allowable under the present zoning for the respective 23 parcels comprising the aggregate subject acreage.

● **AS VACANT - PHYSICALLY POSSIBLE**

The subject site is attractively located due to the proximity to the City of Columbia and having frontage on Bluff Road, South Beltline Boulevard, as well as, exposure from Interstate 77. However, the physical possibility of the site is such that it is extremely large comprising 4,410.916 acres on the fringe of an urban area. There are no other large acreage tracts under the same ownership being utilized agriculturally or recreationally in proximity to the City of Columbia as is the subject. This expanse of acreage and the other physical attributes were the catalyst for the purchase by the present owner for a potential large development. However, the determination by FEMA of approximately 70% of the total acreage located in a floodway severely limited the developmental potential of the subject property. The present conflict with FEMA over the floodway determination has been chronicled earlier in this appraisal. The physical possibility of the site, relative to subsequent developmental usage, would change drastically with a revision of the floodway determination to the original 1999 determination.

Due to the level topography, the proximity to both the Congaree River and Gills Creek renders the subject property highly susceptible to flooding during high levels of precipitation. The levees that follow the tree line on the subject property does alleviate some flooding to protect the agricultural endeavors, as well as, the recreational usage.

The subject property is considered to have good accessibility from Bluff Road, South Beltline Boulevard, White House Road and Beckham Swamp Road. However, these roads are not considered heavily traveled with exception of Bluff Road on which the subject has minimal frontage. The aforementioned roads are utilized primarily for access into the expanse of the subject property acreage.

Municipal utilities presently existing to service the subject property are available within the area with electricity and gas provided by SCE&G, water provided by the City of Columbia, as well as, sewer service being provided by the City of Columbia. Telephone service is provided by BellSouth.

Due to the size of the subject property comprising a large amount of acreage, sewer and water are available in different portions of the subject property. Water and sewer extend in a southeasterly direction along Bluff Road which benefits the subject property. There is only a small amount of frontage which extends along Bluff Road so therefore, the proximity to this thoroughfare only accommodates a small

portion of the subject property. According to officials at the City of Columbia, there is a water and sewer line located in the northern portion of the subject property in proximity to Heathwood Hall Episcopal School and the City of Columbia Waste Water Treatment Facility. This eight inch water line and sewer line extends along the aforementioned facilities beneath Interstate 77 and extends in a southerly direction to White House Road. At this juncture, the water line extends in an easterly direction to Bluff Road so therefore, the northern portion and that portion to the south of Interstate 77 are accommodated by water. The sewer line terminates below the City of Columbia Waste Water Treatment Facility, so therefore, only the northern portion of the subject property is presently accommodated by water and sewer while there is no sewer that extends through the subject property south of Interstate 77, although water does extend to the northern portion. Therefore, any extension of utilities, in terms of water and sewer to the southern portion of the subject property, would have to be extended from Bluff Road or from the eight inch water line located in the northern portion of the subject property at White House Road. Obviously, the extension of facilities would only be necessary relative to potential subsequent developmental usage of the subject property. With the perceived highest and best use of the subject property as continuation as recreational and agricultural usage, there is limited demand for extension of these utilities at the present time.

• **AS VACANT - FINANCIALLY FEASIBLE**

In consideration of the financial feasibility aspects of highest and best use for the subject property as if unimproved, adjoining and competing properties within the area are typically considered. There are numerous light industrial and wholesaling facilities located to the northeast of the subject property along Bluff Road, but due to the limited amount of frontage on Bluff Road, the use of the site for such an endeavor is highly unlikely due to the physical attributes of the subject. That portion of the subject property zoned M-1 could be utilized as wholesaling and distribution although the location within the flood plain/floodway does impact developmental usage due to the construction requirement by Richland County for properties located within these designated areas. There has been no new developmental use of any portion of the subject property other than a grain and seed silo and distribution facility which has been located within the subject property, although under different ownership, for a significant time frame.

Heathwood Hall Episcopal School did build a school facility on the banks of the Congaree River but the selection of this location was driven more by the availability of free land more so than the physical characteristics of the area.

With the determination of the subject property by FEMA of approximately 70% of the subject acreage contained in a floodway with a large amount of the balance in a flood plain, it appears the financial

feasibility would remain as predominantly agricultural and recreational use until the final determination of the floodway location is settled. In the event the property reverts to the 1999 FEMA determination of not being located in a floodway, the developmental usage of the subject property is significantly enhanced. As a result of the location on the fringe of the Central Business District of Columbia, demand would dictate the subject property be developed to a higher concentration of more intense development, specifically resembling that proposed by the Green Diamond Project initiative.

Only when the disputes, relative to the floodway determination, are settled will a financially feasible use of the subject property be definitive. However, at the present time, the FEMA flood maps do place approximately 70% of the acreage or 3,087.64 acres within the designated floodway.

- **AS VACANT - MAXIMALLY PRODUCTIVE**

In terms of the maximum productive use of the subject site were it available for development, the contribution of the site in terms of return on investment is considered. The subject site, due to its size, does limit subsequent marketability in terms of securing a subsequent purchaser that would need this size of acreage. Additionally, the physical characteristic limitations relative to the FEMA floodway determination also limit maximum productive usage. The proximity to the City of Columbia does render the property highly desirable for recreational use in terms of leasing the property and selling the property to sportsmen such as physicians, attorneys or other professional groups that would desire such an expanse of acreage for hunting, fishing and other recreational usage, as well as, leasing a portion of the property for agricultural endeavors. The location of the property to the urban area of Columbia does suggest interested groups would opt for purchase of this property for recreational use as compared to the other areas of Richland and Lexington Counties due to the ease and reduced amount of time in accessing the area for recreational endeavors.

- **CONCLUSION OF HIGHEST AND BEST AS VACANT**

Based on an analysis of the four criteria, the highest and best use of the subject property, as unimproved, will be for the continued use of the subject for agricultural and recreational endeavors. This determination of highest and best use as unimproved is predicated on the location of the subject property, the expanse of the acreage associated with the subject and most importantly, the present determination by FEMA of approximately 70% of the subject located in a determined floodway.

Interested potential subsequent purchasers of the subject property may hedge on a more favorable court ruling relative to removal of the expanse of acreage from the floodway. At this point, the determined value

and obviously, the subsequent highest and best use relative to developmental usage, would change significantly.

**APPRAISAL METHODOLOGY/
VALUATION PROCEDURE**

The appraisal process is a systematic procedure in which the valuation problem is defined; the work organized; data assembled, analyzed and conclusions drawn to derive an estimate of value as of a particular time, the date of value.

The appraiser typically utilizes three approaches to value which include: the **Cost Approach**; the **Market Data or Sales Comparison Approach**; and the **Income Capitalization Approach**.

The **Cost Approach** is based on many principles but the primary appraisal principle is that an informed buyer or purchaser will pay no more than it cost to produce a substitute property with the same utility without undue delay. In the Cost Approach to Value, an appraiser commences with estimating the land or site by comparison of the subject land to other comparable sales or listing available within the general market. Reproduction or replacement costs new of the building and land improvements are estimated based on a recognized cost service or from local building contractors or cost engineers. All sources of neighborhood influences are deducted from the new cost estimates. The estimated land value is added to the indicated value by the Cost Approach. This approach is particularly useful in valuing new improvements which represent the highest and best use of the land or when specialized improvements are located on the site and there is insufficient comparable data within the market for proper analysis.

The **Sales Comparison Approach** compares the subject property to comparable or similar properties with the sales price paid and the actual transaction being analyzed. Comparable sales are adjusted to the subject property for dissimilarities which include time or changes in market conditions, age, location, physical characteristics and conditions of the sale to the subject property to indicate the probable value of the subject. The adjustments should reflect the market actions of typical buyers and sellers and are usually extracted from the market by use of the *matched pairs* concept.

In the **Income Approach**, the subject property is valued based on its propensity to generate income. Anticipated present and future income as well as future reversions on the sale of the property are discounted to a present worth value through the capitalization process. Market data produces current economic rents and expense levels, which after deduction of market derived vacancy and credit losses, the resulting income is termed Net Operating Income. After the extraction of a capitalization rate or a computation of a capitalization rate, as correlated based on current market data, the net operating income is converted into a final estimation of value.

The indicated values from the three approaches to value are correlated and then reconciled into a final

estimate of value. In this final analysis, the appraiser displays the weaknesses and strengths of each approach and weighs the relevance of each approach to the property being appraised. After all correlation and reconciling has been completed, a final value conclusion is derived for the subject property.

In the valuation of the subject property, the applicable approach to value will consist only of a Sales Comparison Approach with a comparative procedure completed for a final determination of market value, as is, for the subject property. The subject property is considered unimproved and therefore this comparative procedure will consist of larger, unimproved land parcels to compare to the subject property.

**SALES COMPARISON
APPROACH**

A Sales Comparison Approach was utilized to value the subject property consisting of an aggregate of 4,410.916 acres. Comparable unimproved land sales were obtained in order to render a comparative analysis. As anticipated, due to the subject property size, the selection and acquisition of unimproved comparable land sales in the immediate subject market area were limited. Therefore, the search for larger unimproved acreage sales, reflecting a similar highest and best use as that determined for the subject, were obtained from other areas of the state of South Carolina.

For this specific comparative procedure, eight unimproved land sales were obtained from the state of South Carolina with one sale utilized from the Columbia market area. As anticipated, the sizes of the unimproved land sales reflected a wide range, with the smallest constituting only 590.0 acres while the largest comprised an aggregate of 7,785.44 acres. This range of unimproved acreage sales would bracket the subject size of 4,410.916 acres. The sales occurred between January, 2003 and December, 2004, considered relatively recent conveyances. The indicated sales prices per acre (applicable unit of comparison) extended from a low of \$2,301 for the largest of the eight sales to the highest indication at \$8,390 per acre for the smallest of the eight sales.

The applicable unit of comparison utilized in the comparative procedure is a sales price/value per acre as this is the applicable unit of comparison utilized by knowledgeable sellers, purchasers, brokers and appraisers when referring to properties like the subject, specifically with the expanse of acreage totaling 4,410.916 acres.

The eight sales will be delineated on the following sales data sheets with all applicable physical characteristics and a plat or tax map inserted in order to provide a visual orientation to the respective land conveyances.

COMPARABLE LAND SALE NO. 1

LOCATION: N/S and S/S of Interstate 20 @ Bettis Academy Road,
Graniteville, Aiken County, South Carolina

TAX MAP NUMBER(S): 066-00-01-001; 47-00-01-001; 048-00-01-002; 087-
00-01-001

GRANTOR: PruTimber Fund Two and The Prudential Life
Insurance Company of America

GRANTEE: Sage Mill Development, LLC

SALES PRICE: \$17,916,770

DATE: December 16th, 2004

DEED BOOK/PAGE: 2474/304 and 2475/1

SIZE: 7,785.44 Acres

PRICE PER ACRE: \$2,301

FINANCING: Cash to Seller; No Concessions

UTILITIES: Water and Sewer Available to a Portion of the
Property(s)

VERIFIED: Grantee; Personal Inspection; Aiken County RMC

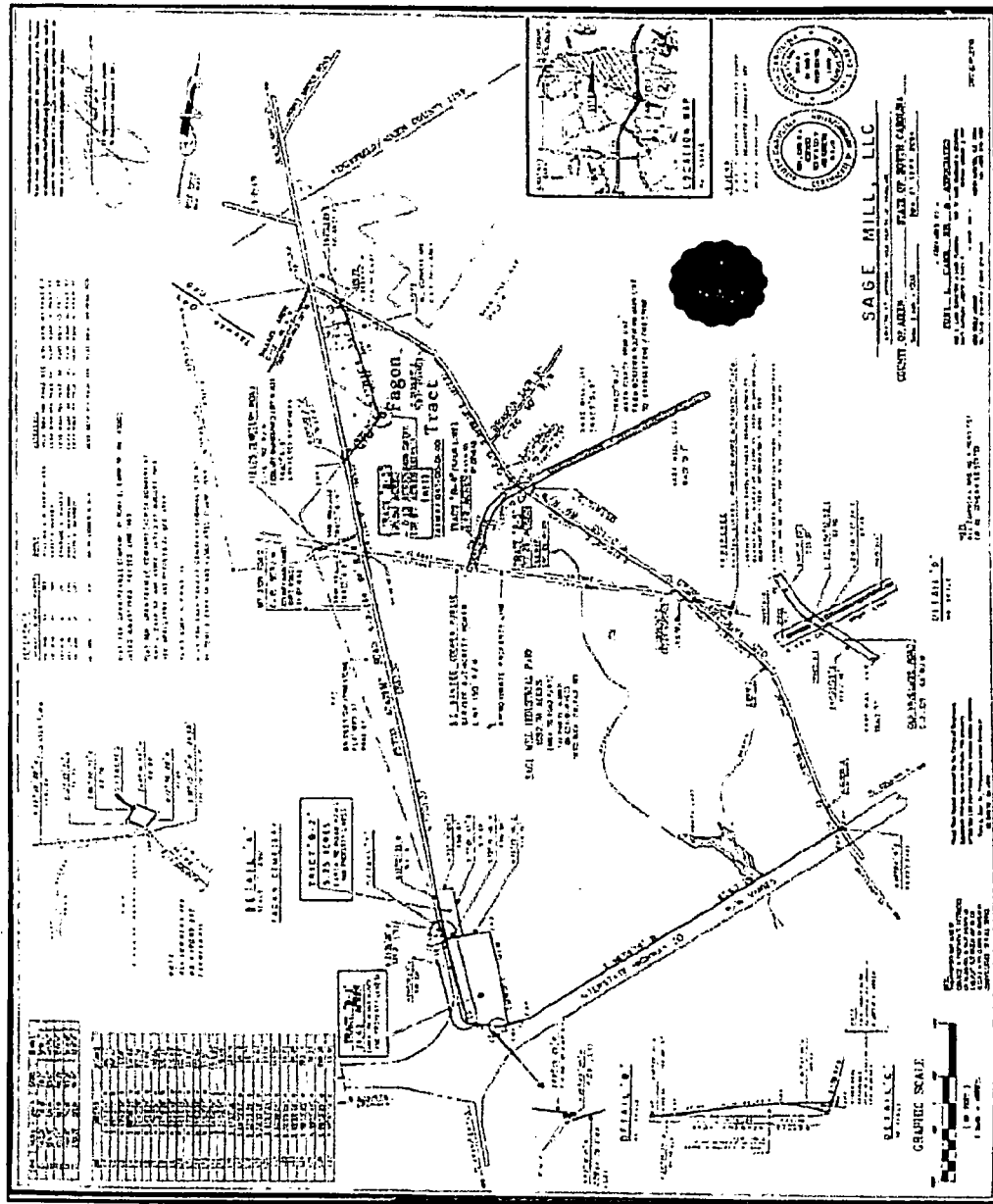
ZONING: RUD, Rural District

COMMENTS:

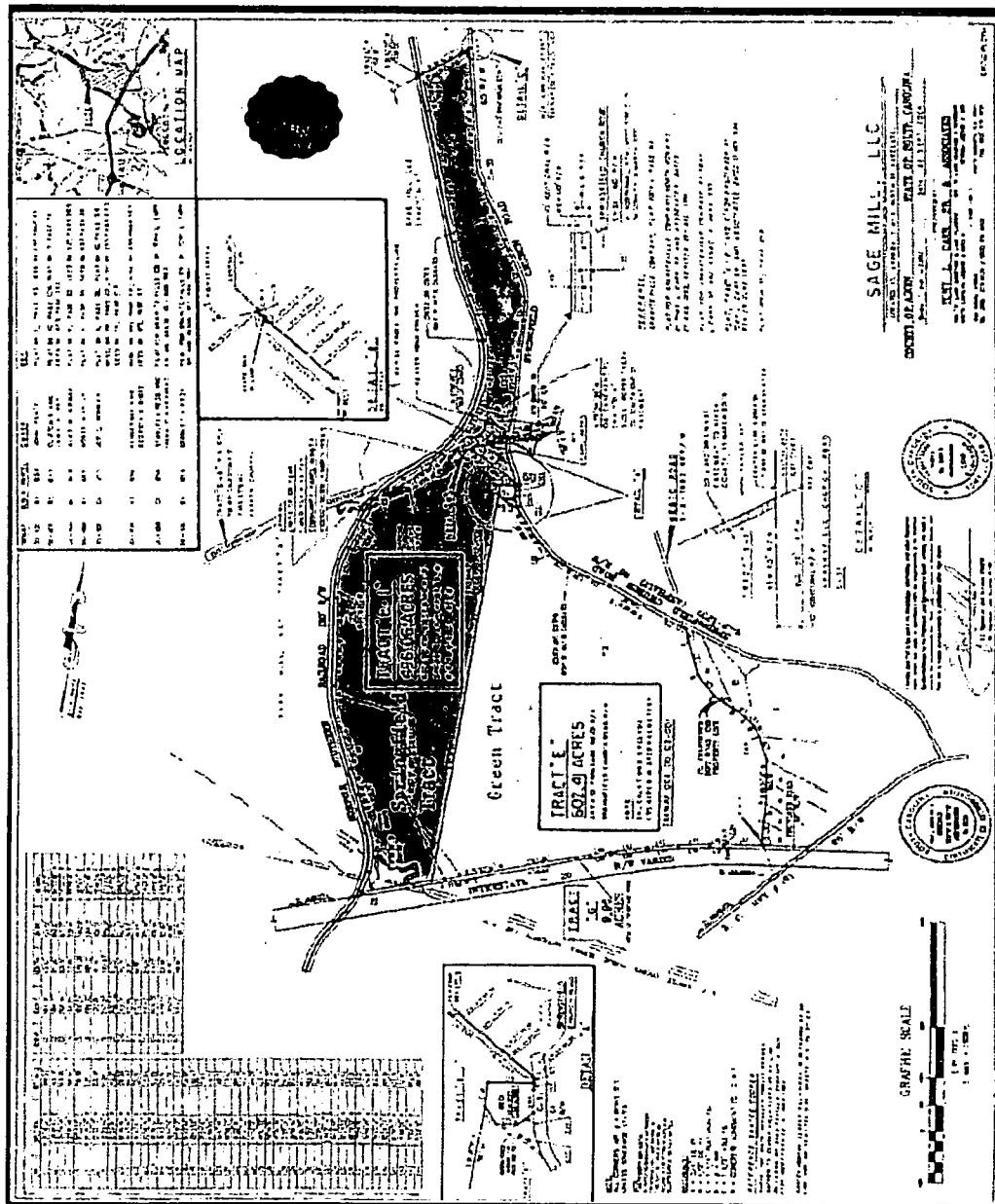
All 15 acreage parcels purchased under one contract although conveyed under two deeds as a result of the ownership. The purchaser is a related entity to the owner of Sage Valley Golf Club, an exclusive, private golf facility. Properties purchased for golf course buffering, as well as, future development, specifically on those tracts located on the N/S of Interstate 20. Topography varies although no severe slopes on any of the tracts. The plats will be delineate the size, shape and frontage on any thoroughfares.

COMPARABLE LAND SALE NO. 1 PARCEL(S) DELINEATION			
NO.	PROPERTY ID (NAME)	SIZE (ACRES)	PLAT ID
1	Fields Tract	43.75	A-4; A-2
2	McFerrin Tract	256.52	Tract "C"
3	Fagon Tract	275.87	B-3; B-5
4	Steeper Tract	428.21	D-1; D-3
5	Carey Tract	193.48	Tract "F"
6	Smith Tract	1,514.77	D and D-6
7	Springfield Tract	496.06	E-1
8	Green Tract	602.41	E
9	Pond Tract	445.16	H
10	Spring Branch Tract	696.44	J
11	Kelly Tract	138.19	K
12	Ridge Tract	1,144.47	L-1
13	Trolley Tract	712.20	M
14	Lagoon Tract	633.67	U
15	Pitt Tract	204.24	R
	TOTAL	7,785.44	

IDENTIFICATION OF THE FAGON TRACT



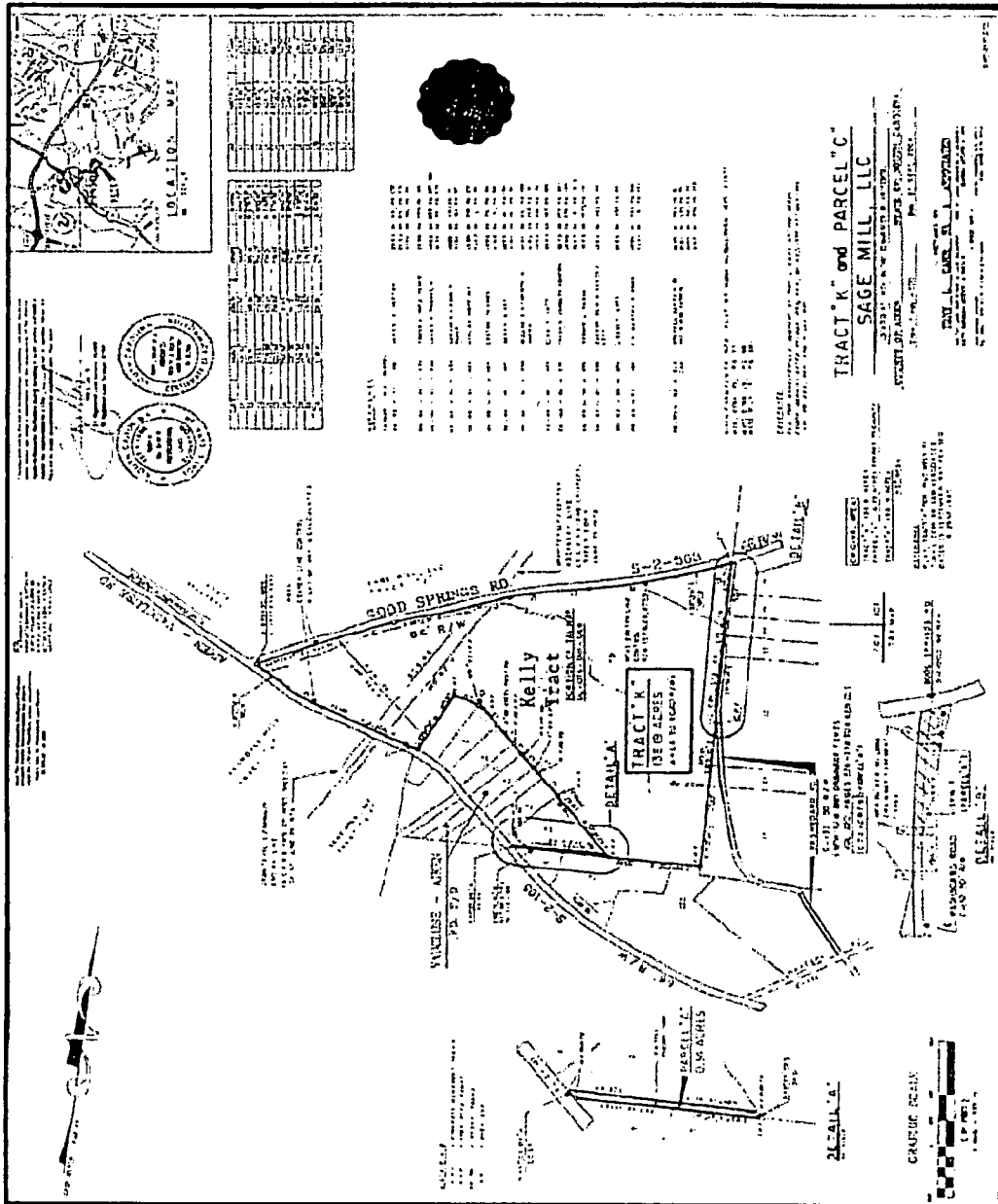
IDENTIFICATION OF THE GREEN AND SPRINGFIELD TRACTS



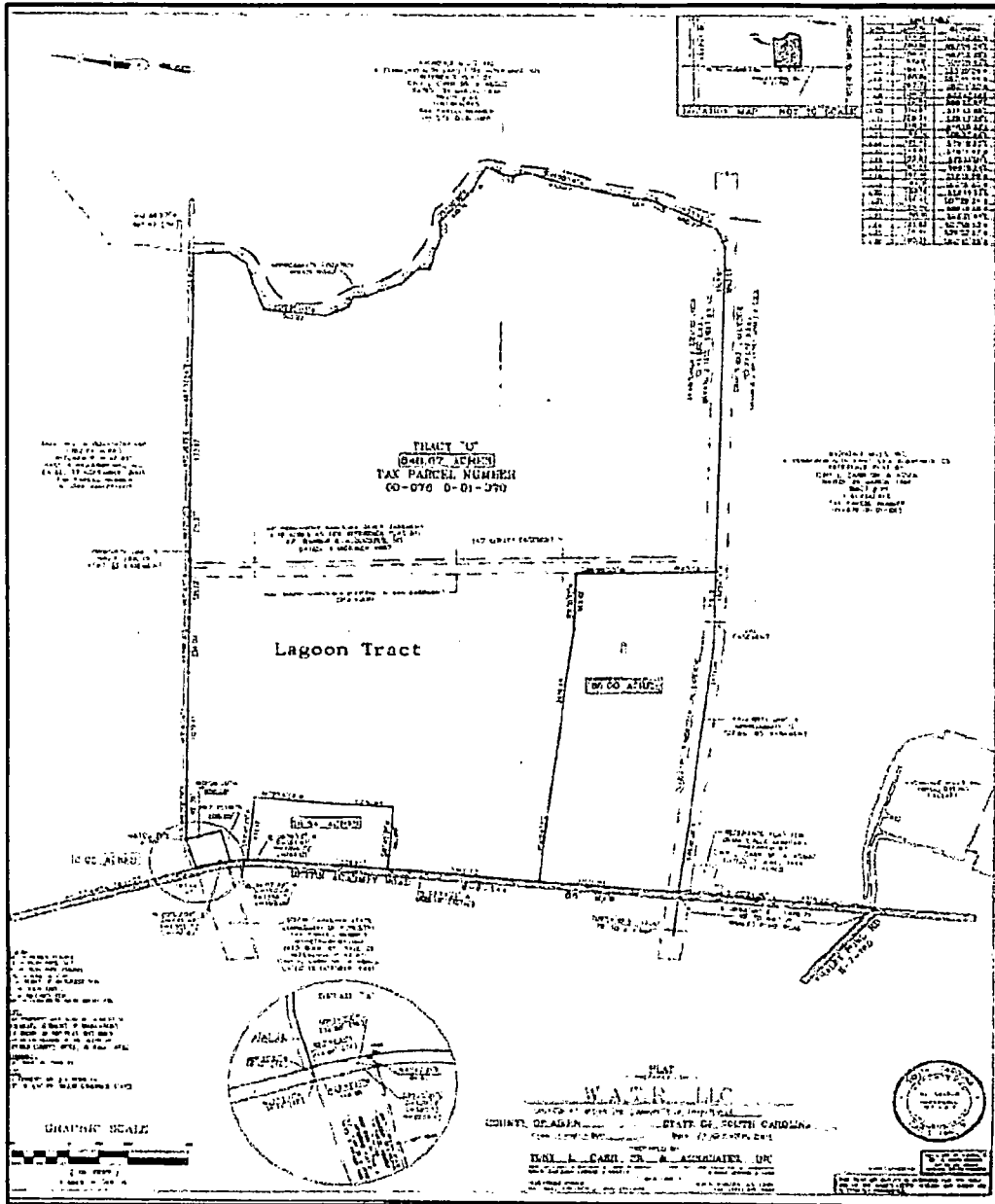
CV006177

PLTF TRIAL EXH 425

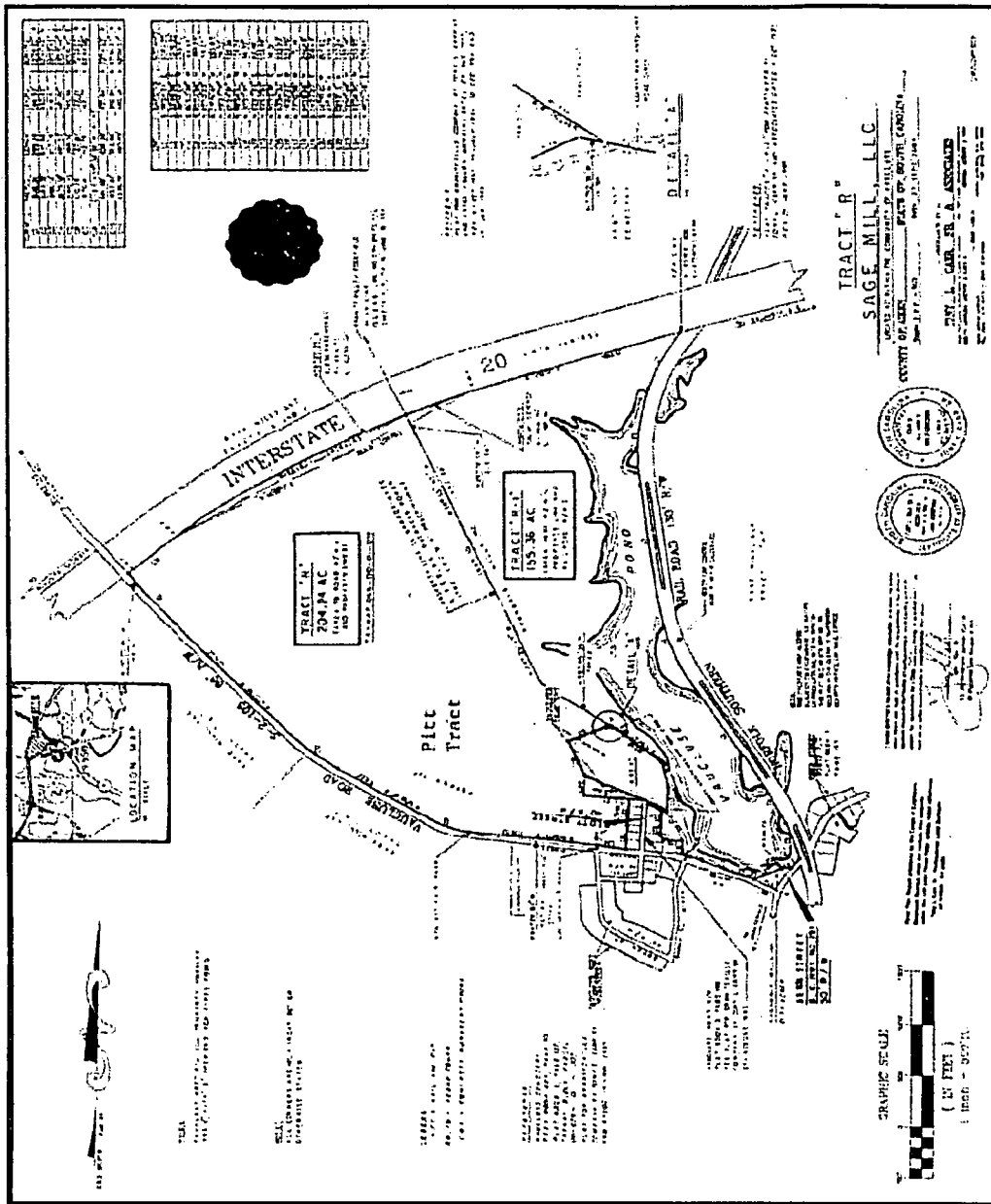
IDENTIFICATION OF THE KELLY TRACT



IDENTIFICATION OF THE LAGOON TRACT



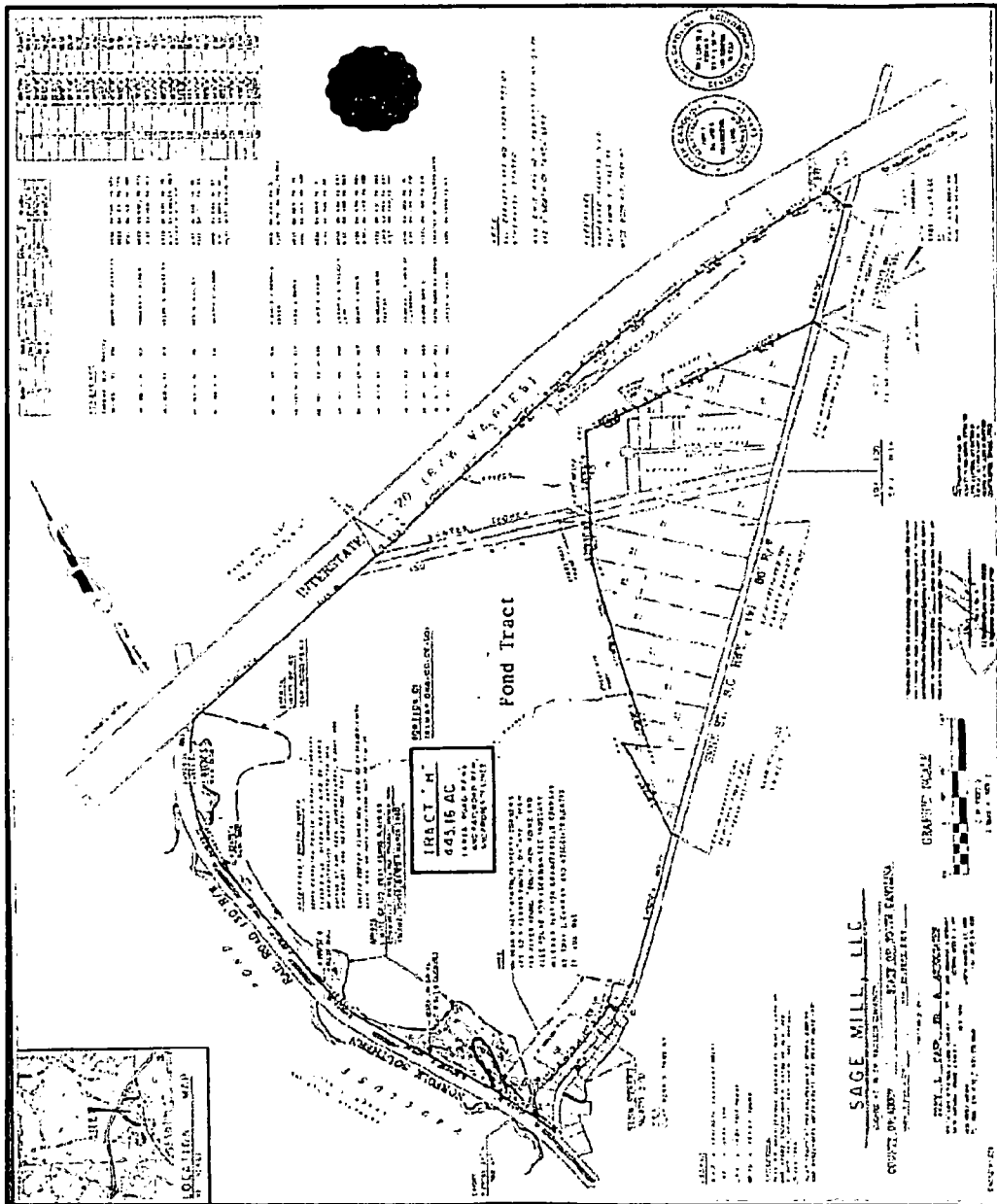
IDENTIFICATION OF THE PITT TRACT



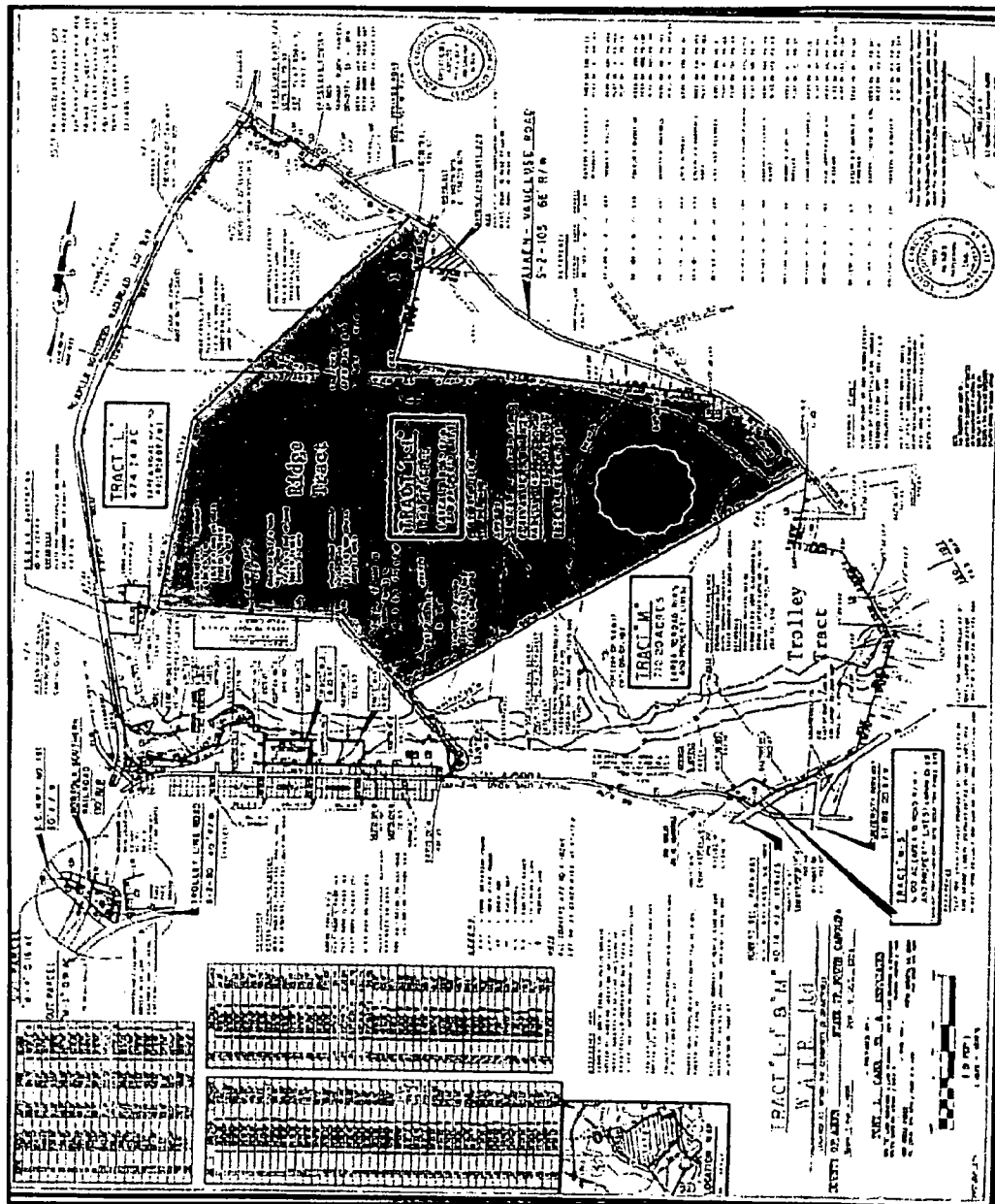
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PLTF TRIAL EXH 425

IDENTIFICATION OF THE POND TRACT



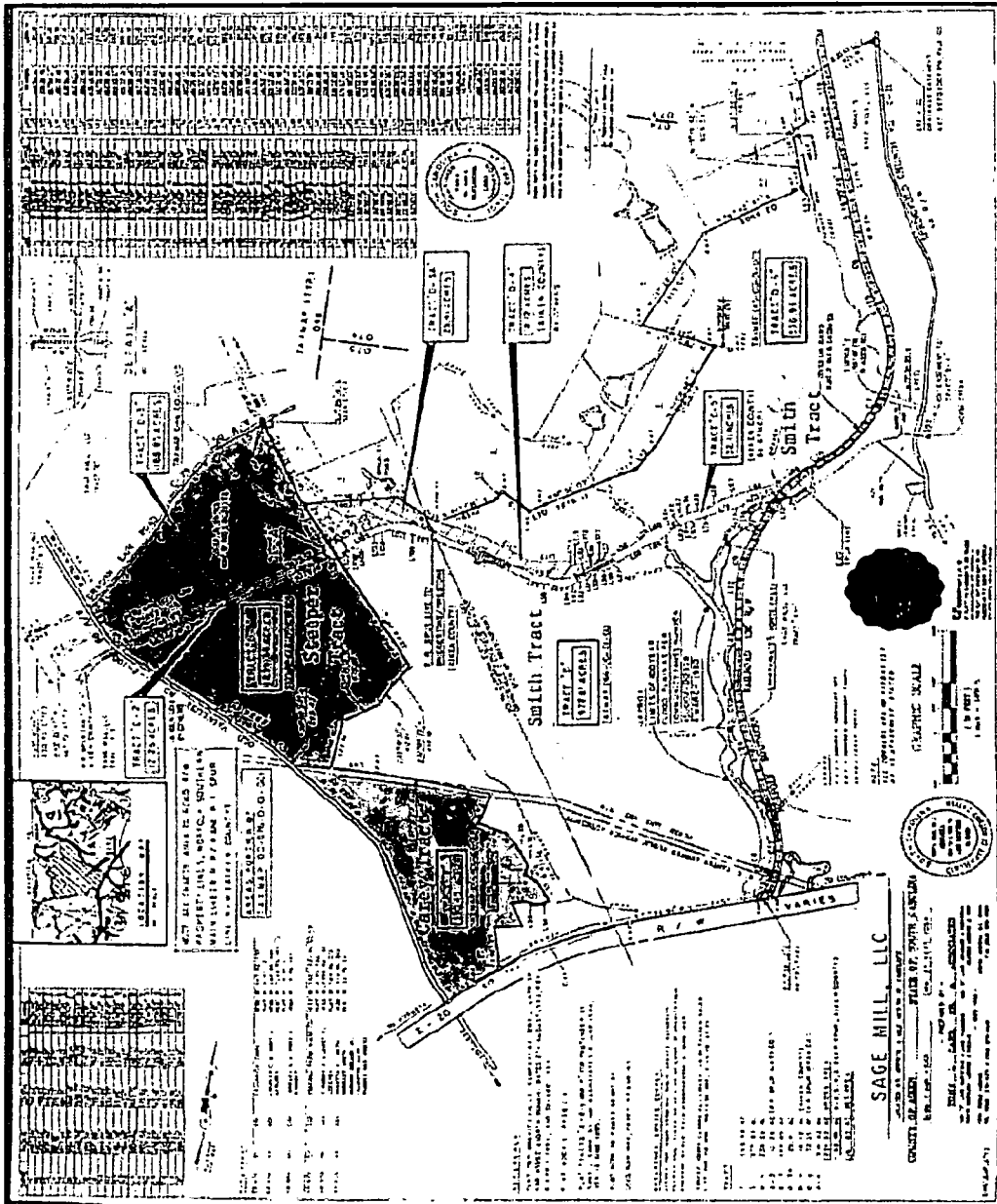
IDENTIFICATION OF THE RIDGE AND TROLLEY TRACTS



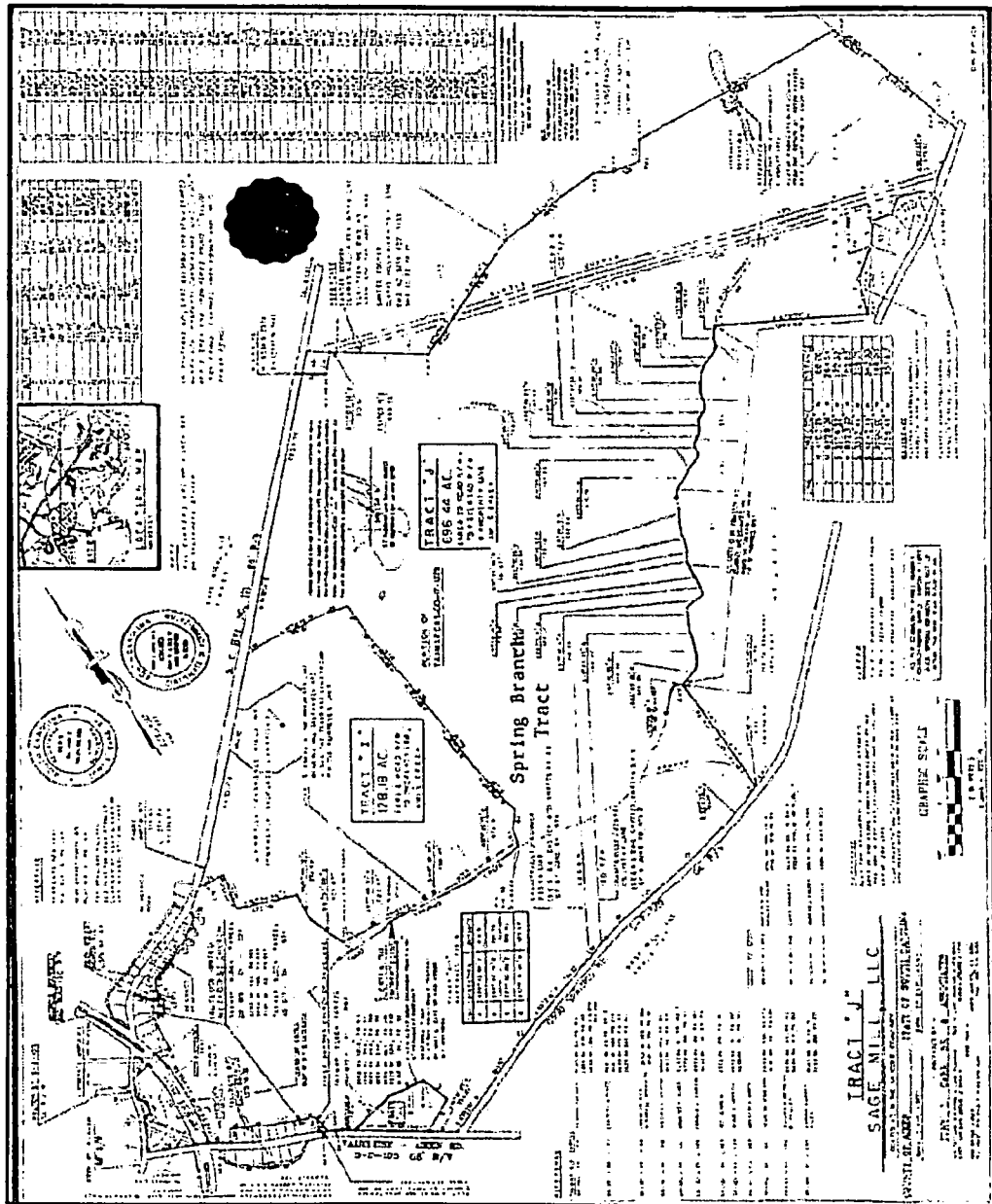
CV006183

PLTF TRIAL EXH 425

IDENTIFICATION OF THE SMITH, STEEPER AND CAREY TRACTS

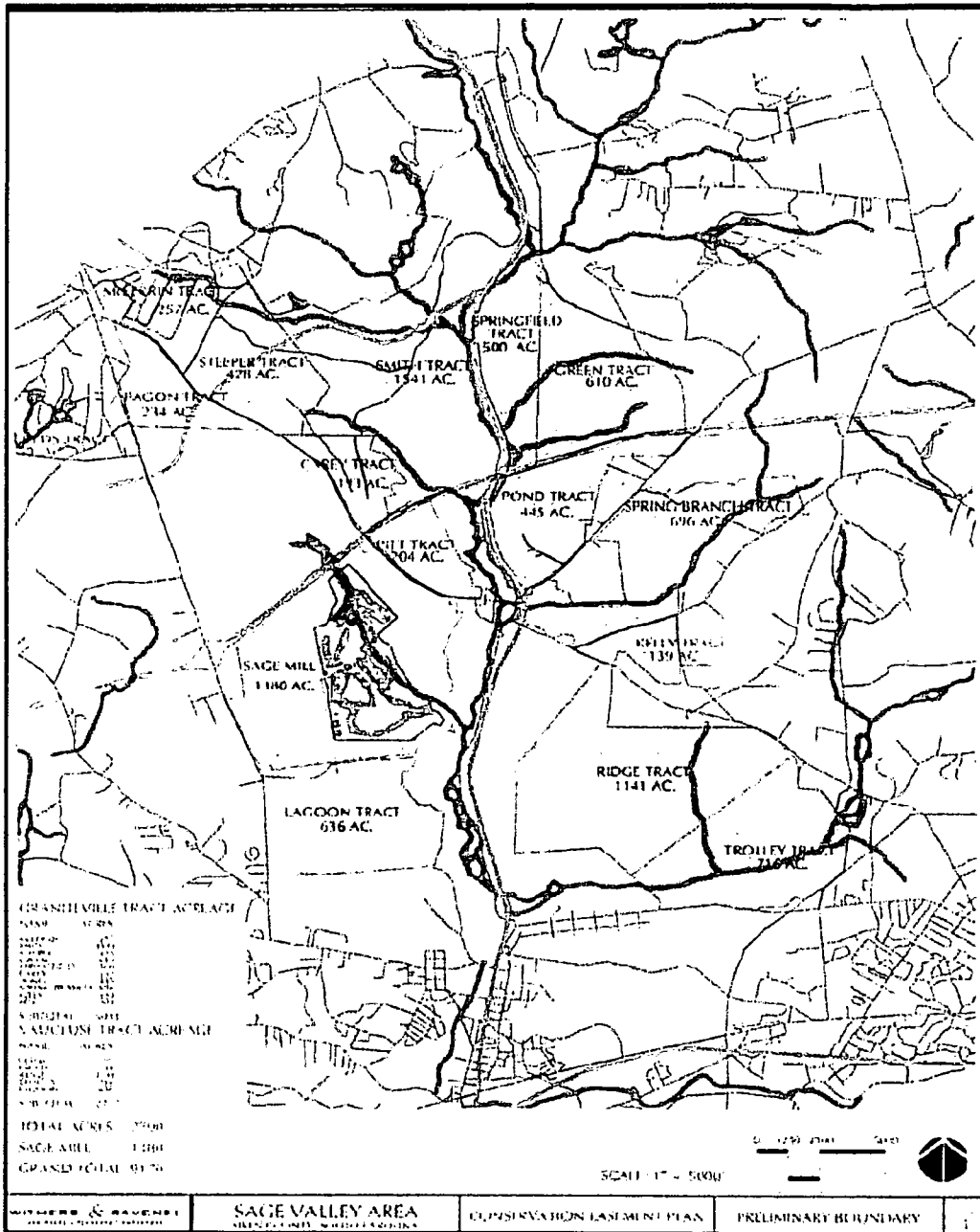


IDENTIFICATION OF THE SPRING BRANCH TRACT



CV006185

PLTF TRIAL EXH 425



COMPARABLE LAND SALE NO. 2

LOCATION: W/S of the Black River and the eastern side of U. S. Highway 701, Georgetown County, South Carolina

TAX MAP NUMBER: 02-1009-4.2.13,18,14,12, and 13

GRANTOR: Sarah J. Cahalan

GRANTEE: Mighty Mansfield, LLC

SALES PRICE: \$6,000,000

DATE: April 28th, 2004

DEED BOOK/PAGE: 1506/0218

SIZE: 858.572 Acres

PRICE PER ACRE: \$6,988

FINANCING: Cash to Seller; No Concessions

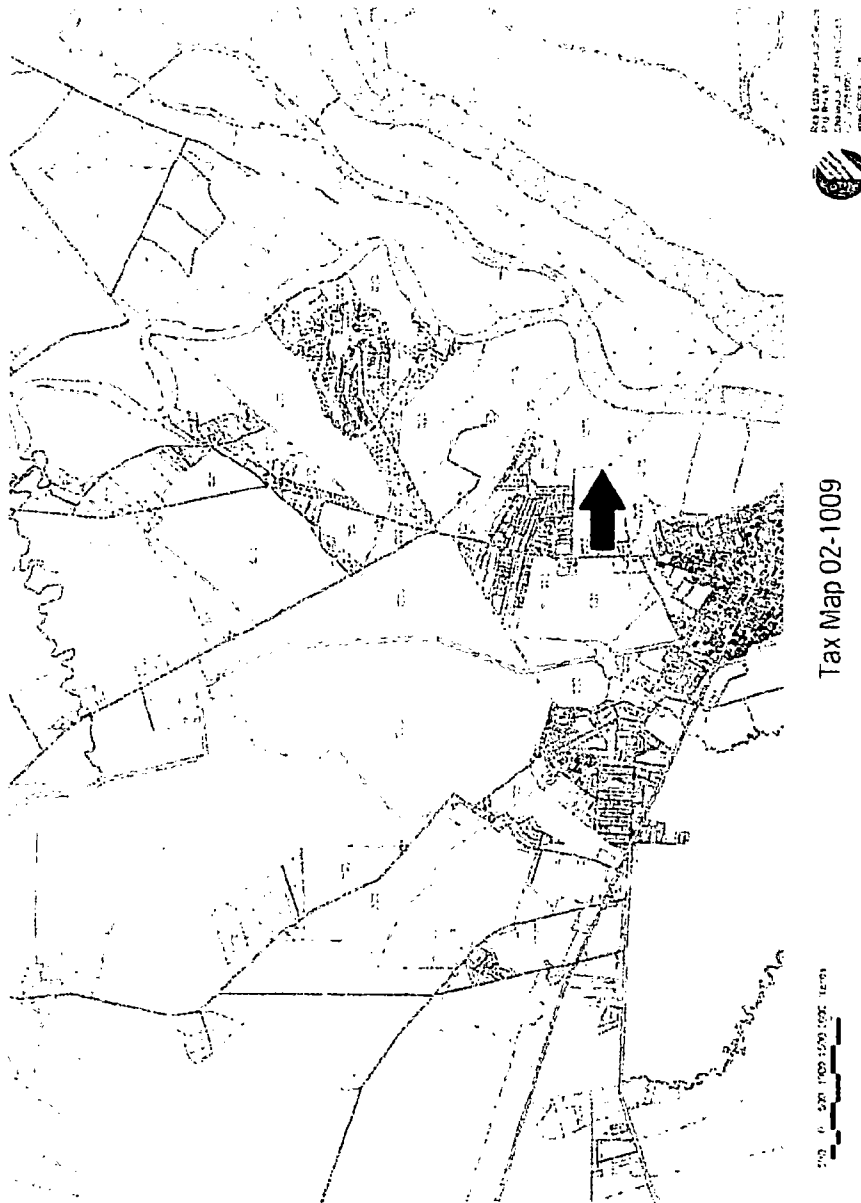
UTILITIES: None Available

VERIFIED: Georgetown County Register of Deeds

ZONING: FA: Forest Agriculture District

COMMENTS:

This somewhat irregular site has nearly 1.0 mile of frontage on the Black River, and contains 700 acres of uplands and 158.572 acres of either wetlands or rice fields. The site is bounded on the north by Wedgewood Plantation and Beneventum Plantation. Both access and visibility are good. The site has a generally level topography and the surrounding area is semi-rural with some residential development. This site is located approximately four miles east of Georgetown.



Tax Map 02-1009

COMPARABLE LAND SALE NO. 3

LOCATION: NW/S of the Combahee River and both sides of State Highway 15-162, Colleton County, South Carolina

TAX MAP NUMBER: 308-00-00-002

GRANTOR: TrincimII, LLC

GRANTEE: New Cut Properties, LLC

SALES PRICE: \$3,600,000

DATE: December 16th, 2003

DEED BOOK/PAGE: 01042/00161

SIZE: 730.76 Acres

PRICE PER ACRE: \$4,926

FINANCING: Cash to Seller; No Concessions

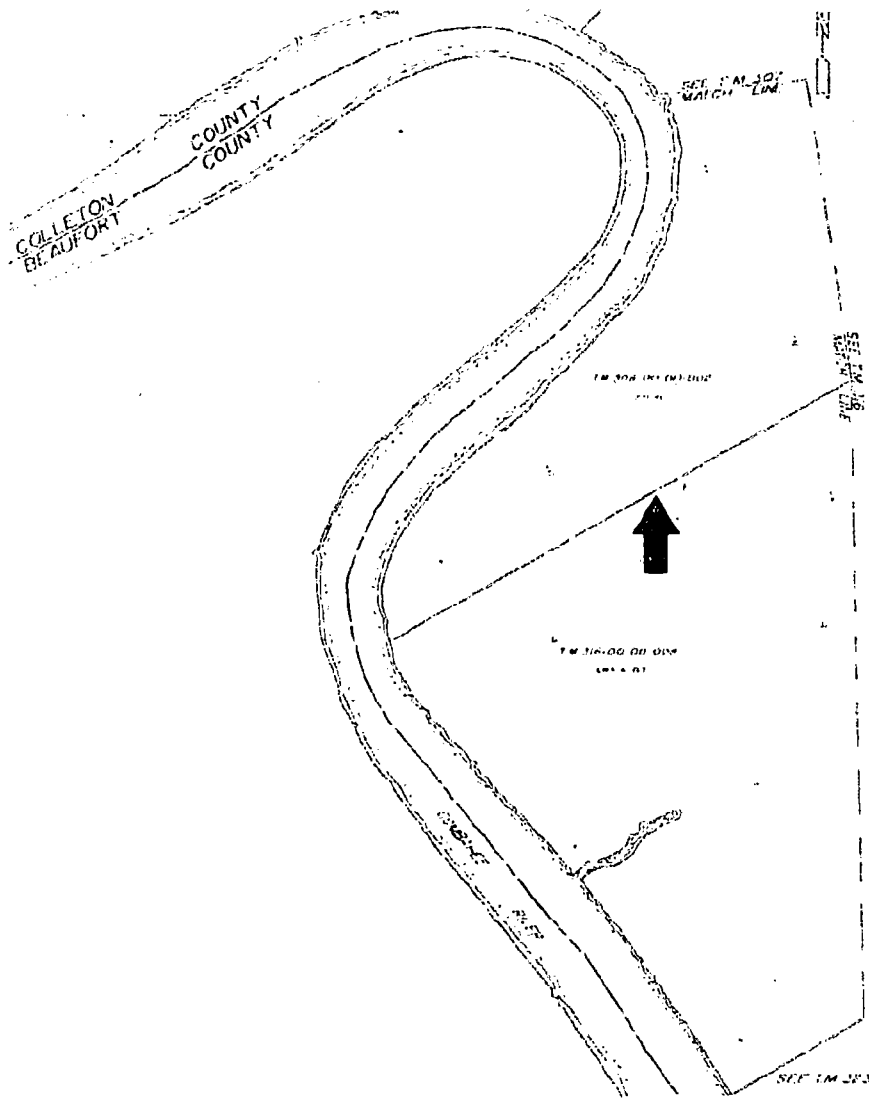
UTILITIES: None Available

VERIFIED: Colleton County Register of Deeds

ZONING: None

COMMENTS:

This somewhat irregular site has nearly 1.0 mile of frontage on the Combahee River, and contains 432.883 acres of highlands, 234.49 acres of rice fields, and 68.7 acres of wetlands. The site is commonly known as Long Brow Plantation. Both access and visibility are limited due to rural nature of the site. The site has a generally level topography and the surrounding area is rural with some scattered homesites. There is older wood structure on the site which is in generally poor condition.



CV006190

PLTF TRIAL EXH 425

COMPARABLE LAND SALE NO. 4

LOCATION: S/S Interstate 20 @ its intersection with Bettis Academy Road, Vaucluse, Aiken, Aiken County, South Carolina

TAX MAP NO.: 048-00-01-005

GRANTOR: The Prudential Insurance Company of America for its Separate Account Prutimber Fund Three

GRANTEE: Sage Mill Development, LP

SALE PRICE: \$3,000,000

DATE: December 12th, 2003

DEED BOOK/PAGE: 2378/0245

SIZE: 902.7392 Acres

PRICE PER ACRE: \$3,323

FINANCING: Cash to Seller; No Concessions

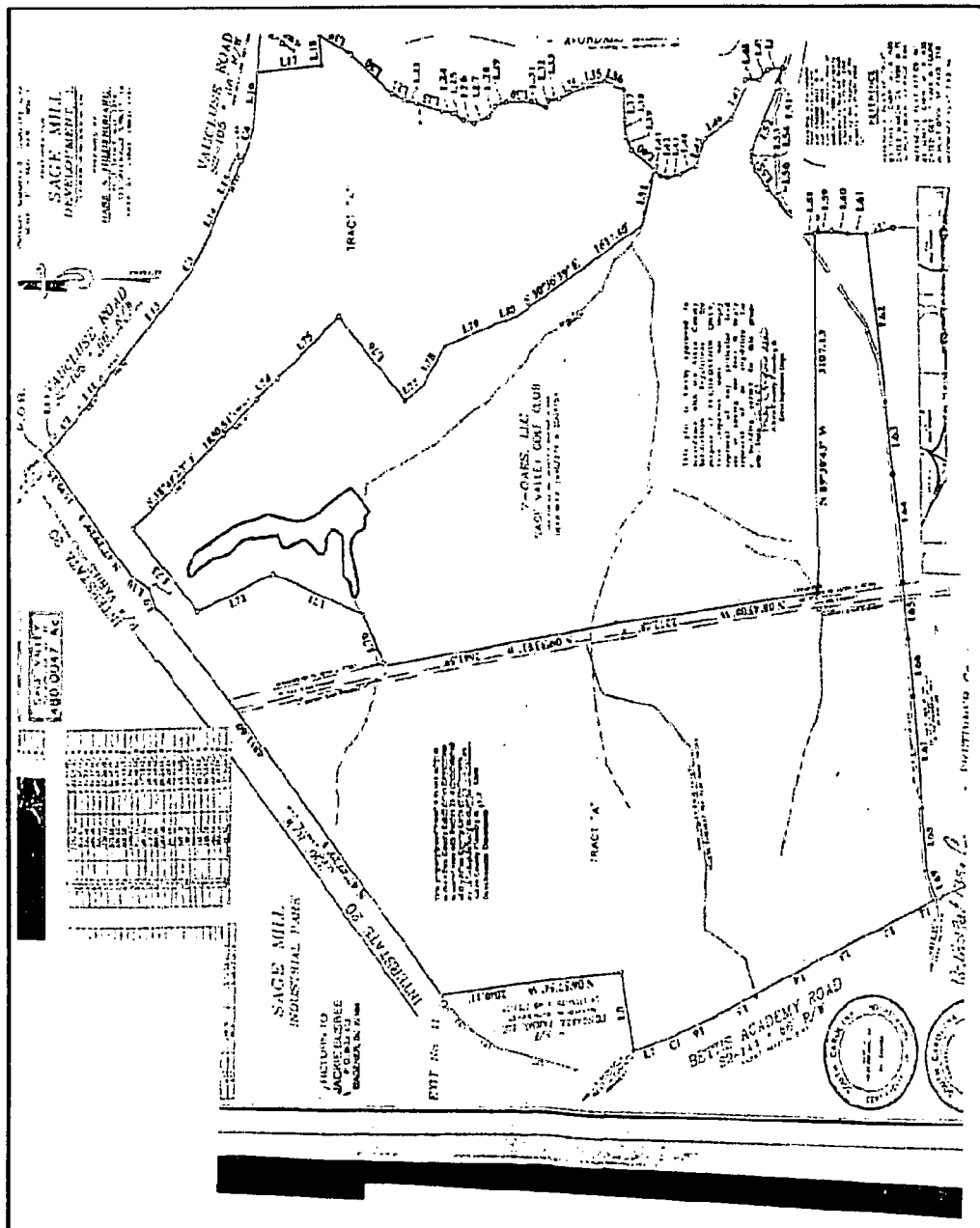
UTILITIES: All Public Available

VERIFIED: Weldon Wyatt, Grantee/Aiken County ROD/ Inspection

ZONING: RUD, Rural District - Aiken County

COMMENTS:

This sale was purchased to be utilized as a buffer around Sage Valley Golf Course to ensure and protect the privacy of the golf course. A portion of this site may have future residential development potential due to it's proximity to public utilities and the golf course. However, the majority of this site is best suited for passive recreational usage.

**CV006192**

PLTF TRIAL EXH 425

COMPARABLE LAND SALE NO. 5

LOCATION: E/S of the Waccamaw River and the western side of
U.S. Highway 17, near Surfside, Horry County, South
Carolina

TAX MAP NUMBER: 193-00-01-001

GRANTOR: Kaminski, LLC

GRANTEE: Longwood Island Investment, LLC

SALES PRICE: \$4,950,000

DATE: June 24th, 2003

DEED BOOK/PAGE: 2611/0416

SIZE: 590 Acres

PRICE PER ACRE: \$8,390

FINANCING: Cash to Seller; No Concessions

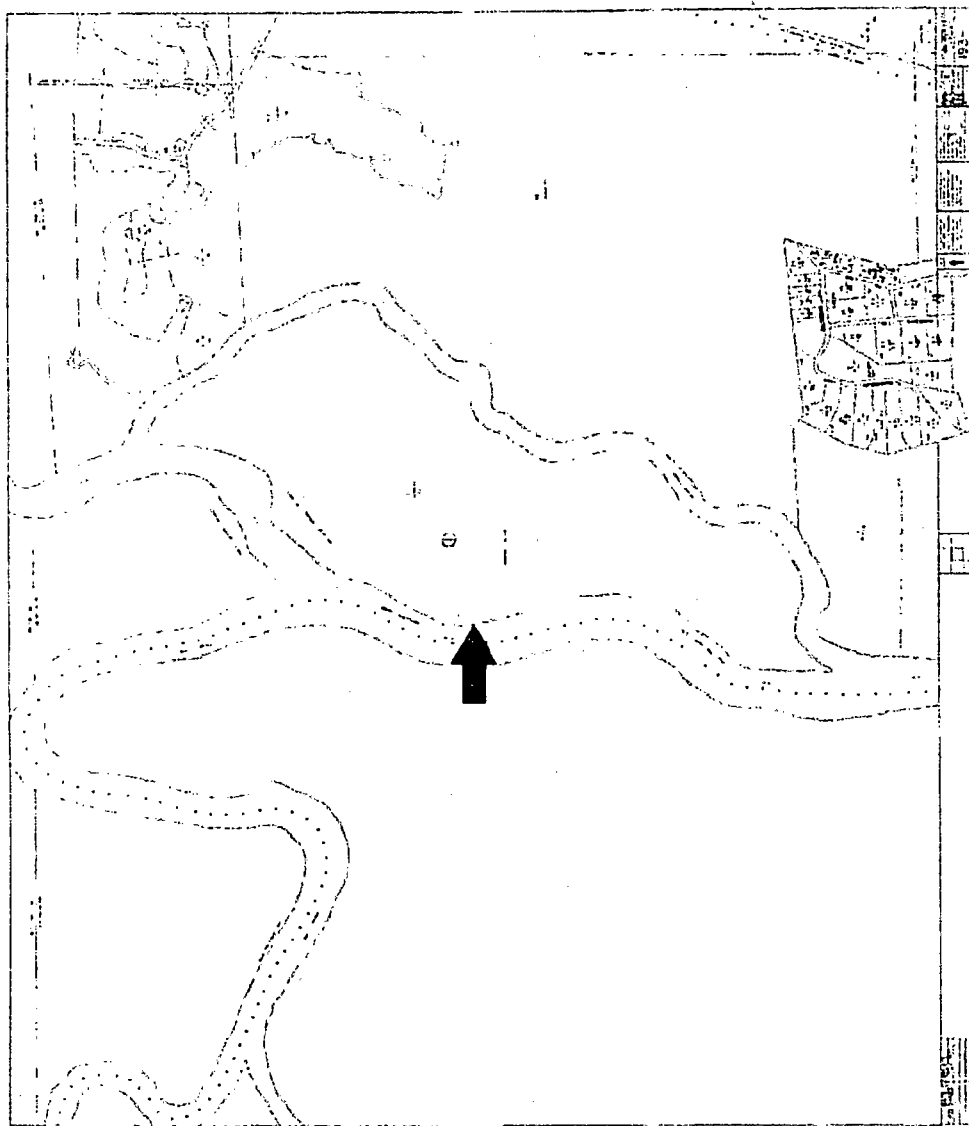
UTILITIES: None Available

VERIFIED: Horry County Register of Deeds

ZONING: RU/Residential: Rural/Residential

COMMENTS:

This irregular shaped parcel identified as Longwood Island is circumvented by Prince Creek on the eastern boundary and the Waccamaw River on the western boundary. Access is only via boat/ferry. Parcel contained no improvements and any contributory timber is unknown.



CV006194

PLTF TRIAL EXH 425

4801

COMPARABLE LAND SALE NO. 6

LOCATION: E/S of the Congaree River and the western side of Bluff Road, near Columbia, Richland County, South Carolina

TAX MAP NUMBER: 10700-01-01

GRANTOR: Anchor Timber Management and Big Lake Timber Partners, LLC

GRANTEE: Joe Edens, Jr

SALES PRICE: \$3,599,999

DATE: May 20th, 2003

DEED BOOK/PAGE: 0796/3664-3666

SIZE: 1,145.60 Acres

PRICE PER ACRE: \$3,142

FINANCING: Cash to Seller; No Concessions

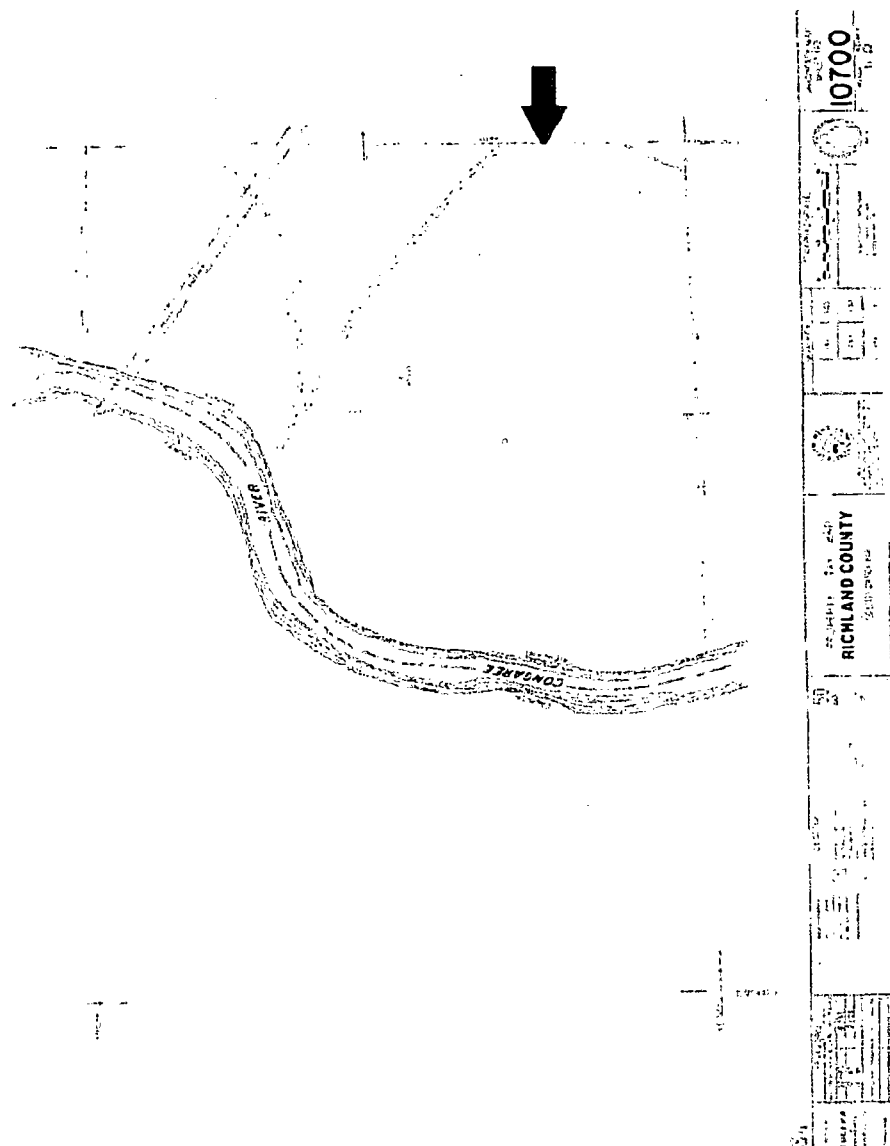
UTILITIES: None Available

VERIFIED: Purchaser - Joe Edens

ZONING: RU: Rural

COMMENTS:

This somewhat irregular site has nearly 2.0 miles of frontage on the Congaree River with the entire site situated in a designated Flood Way. The site is commonly known as Big Lake. Both access and visibility are limited due to rural and floodway. The site has a generally level topography and the surrounding area is rural.



COMPARABLE LAND SALE NO. 7

LOCATION: NW/S of the Combahee River and both sides of State Highway 15-162, Colleton County, South Carolina

TAX MAP NUMBER: 316-00-00-008

GRANTOR: Paul & Dalton Plantation

GRANTEE: New Cut Properties, LLC

SALES PRICE: \$7,800,000

DATE: February 7th, 2003

DEED BOOK/PAGE: 01004/0011

SIZE: 2,049.80 Acres

PRICE PER ACRE: \$3,806

FINANCING: Cash to Seller, No Concessions

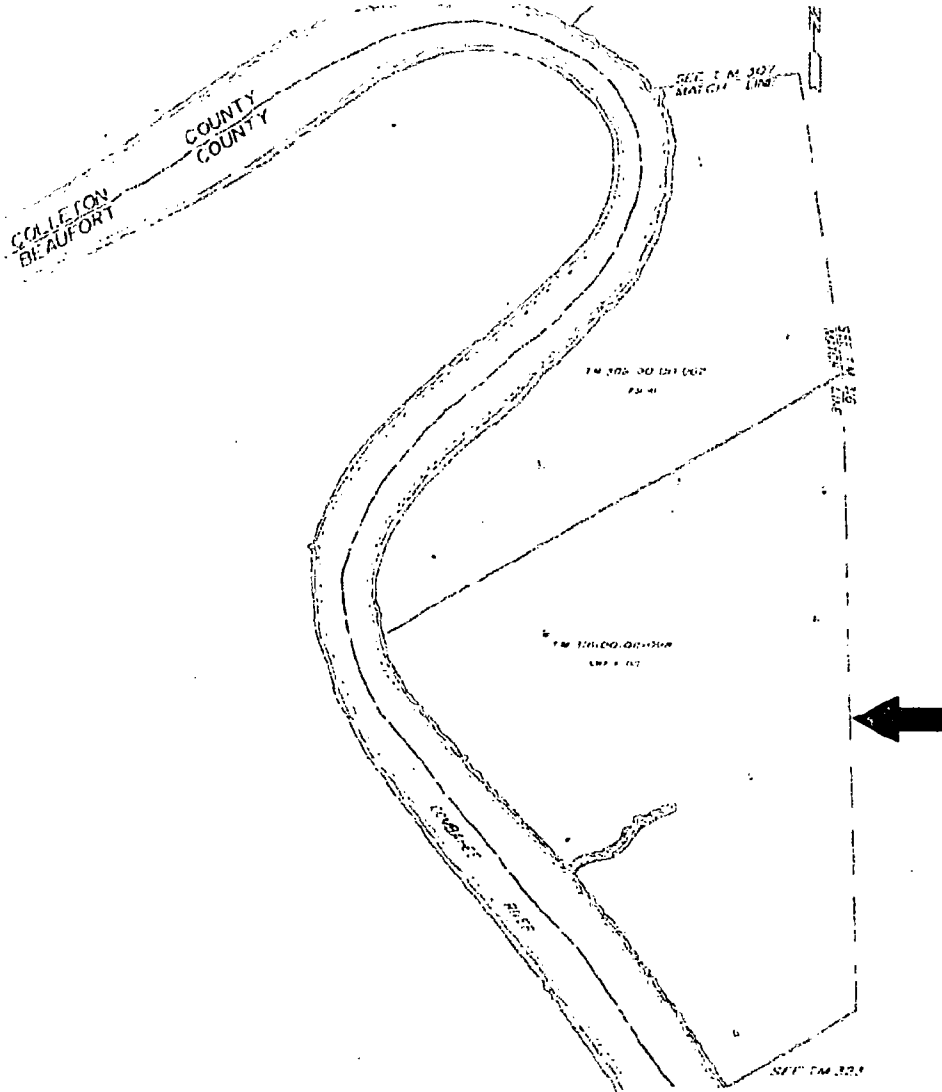
UTILITIES: None Available

VERIFIED: Colleton County Register of Deeds

ZONING: None

COMMENTS:

This somewhat irregular site has nearly 1.5 miles of frontage on the Combahee River. The site is commonly known as Paul Dalton Plantation. Both access and visibility are limited due to rural nature of the site. The site has a generally level topography and the surrounding area is rural with some scattered homesites.



COMPARABLE LAND SALE NO. 8

LOCATION: N/S Longtown Road, Near Blythewood, Richland County, South Carolina

TAX MAP NUMBER: 17400-02-04

GRANTOR: Longtown Associates, LLC

GRANTEE: Brickyard Longtown, LLC

SALES PRICE: \$7,500,000

DATE: January 9th, 2003

DEED BOOK/PAGE: 744/2644

SIZE: 1,000 Acres

PRICE PER ACRE: \$7,500

FINANCING: Cash to Seller; No Concessions

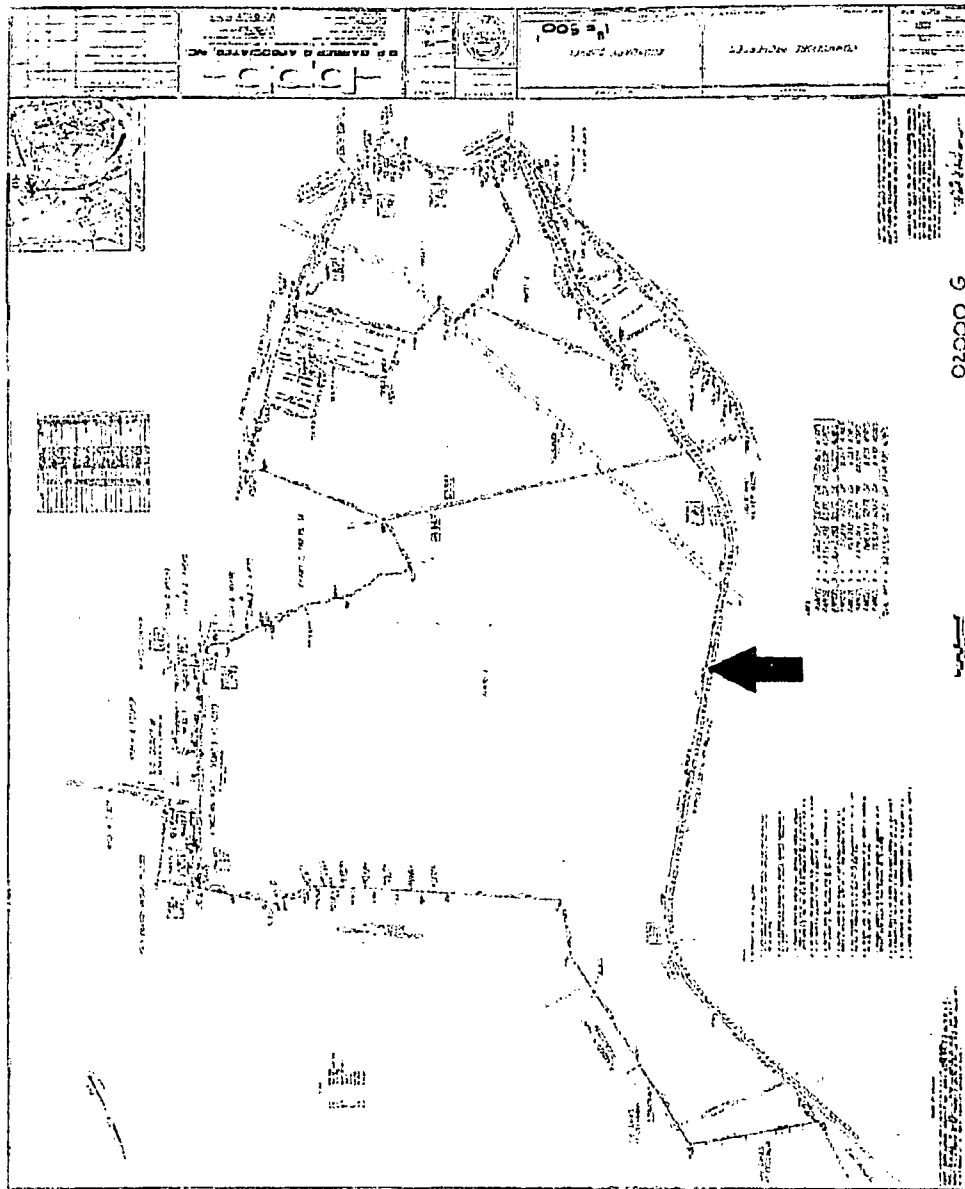
UTILITIES: All Available

VERIFIED: Richland County Register of Deeds; Purchaser, Stewart Mungo

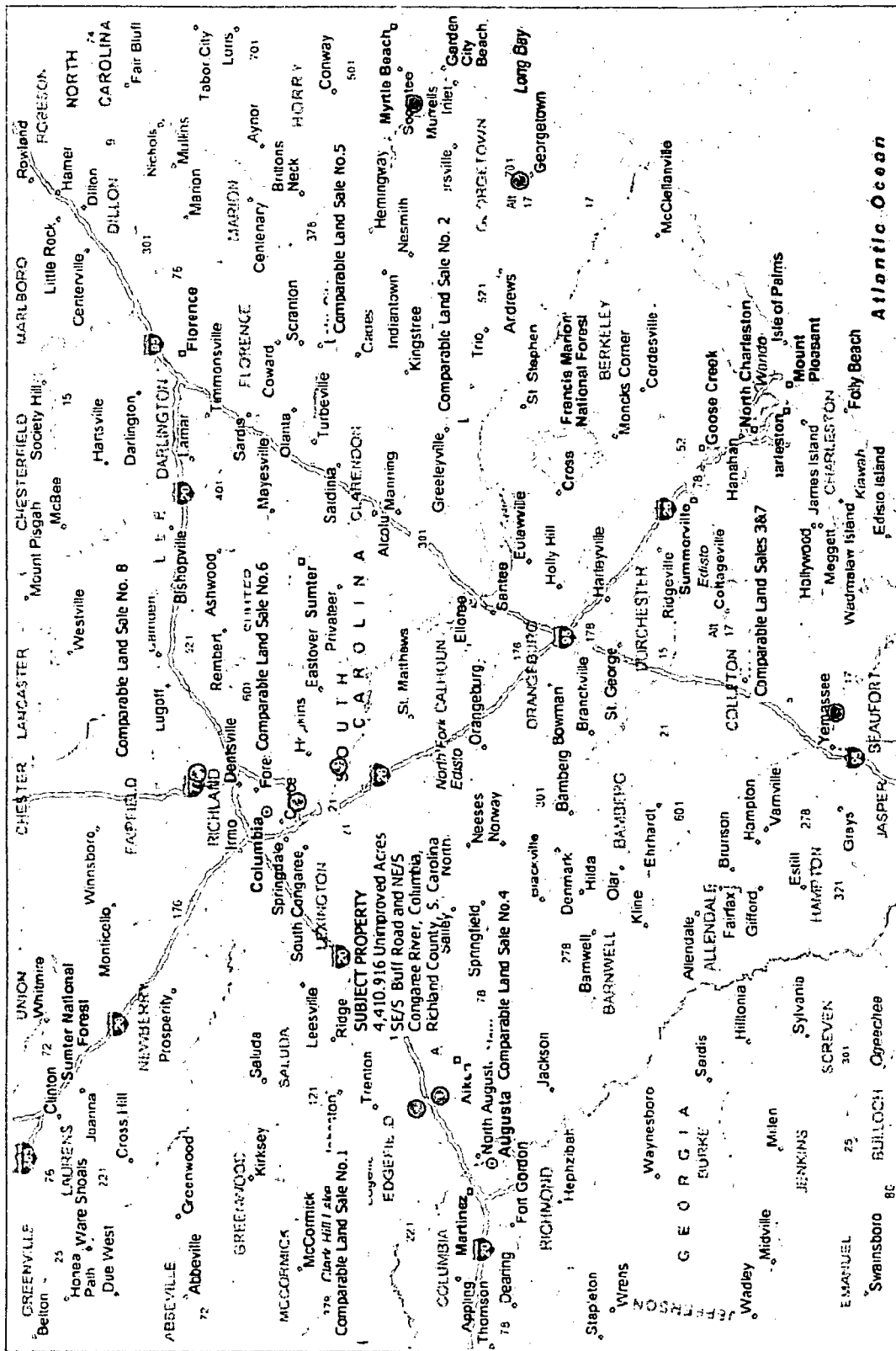
ZONING: M-1, Light Manufacturing/Industrial
RU- Rural District

COMMENTS:

This site was zoned both M-1 and RU, however, the site was purchased for single family residential development. The site contains 135.8 acres of wetlands. Thirty five (35.0) acres were delineated as M-1, Light Manufacturing and the balance of the site was zoned Rural.



LOCATION MAP OF COMPARABLE LAND SALES



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 Statistics Canada and/or Geomatics Canada all rights reserved.

CV006201

PLTF TRIAL EXH 425

COMPARABLE LAND SALES ADJUSTMENT CHART

ITEM	SUBJECT	SALE NO. 1	SALE NO. 2
ADDRESS	SW/S Bluff Road, NE/S Congaree River, Columbia, Richland County, South Carolina	N/S & S/S of I-20 @ Bettis Academy Road, Graniteville, Aiken County, South Carolina	W/S Black River and the Eastern side of U.S. Highway 701, Georgetown County, South Carolina
SALE PRICE	N/A	\$17,916,770	\$6,000,000
SALE DATE	N/A	December 16 th , 2004	April 28 th , 2004
SIZE	4,410.916 Acres	7,785.44 Acres	858.572 Acres
PRICE PER ACRE	N/A	\$2,301	\$6,988
ADJUSTMENTS			
PROPERTY RIGHTS CONVEYED	Fee-Simple	1.00	1.00
FINANCING	Typical	1.00	1.00
CONDITIONS OF SALE	Typical	1.00	1.00
TIME OR CHANGES IN MARKET CONDITIONS	Current	1.00	1.02
ADJUSTED SALES PRICE PER ACRE	N/A	\$2,301	\$7,128
ADJUSTMENTS FOR PHYSICAL CHARACTERISTICS			
LOCATION	I-77/Congaree River	+35%	+15%
SIZE/SHAPE	4,410.916Ac/Irregular	+10%	-45%
EGRESS/INGRESS	Good	-0-	-0-
ZONING	D-1/RU/M-1/RS-3	-0-	-0-
TOPOGRAPHY	Level/Flood Plain/ Floodway	-20%	-20%
AVAILABILITY OF UTILITIES	Water/Sewer	+5%	-0-
NET ADJUSTMENT	N/A	+30%	-50%
INDICATED VALUE OF SUBJECT/ACRE	N/A	\$2,991	\$3,564

CV006202

PLTF TRIAL EXH 425

COMPARABLE LAND SALES ADJUSTMENT CHART

ITEM	SUBJECT	SALE No. 3	SALE No. 4
ADDRESS	SW/S Bluff Road, NE/S Congaree River, Columbia, Richland County, South Carolina	NW/S Combahee River and Both Sides of State Highway 15-162, Colleton County, South Carolina	S/S I-20 @ Intersection with Bettis Academy Road, Vaulcluse, Aiken County, South Carolina
SALE PRICE	N/A	\$3,600,000	\$3,000,000
SALE DATE	N/A	December 16 th , 2003	December 12 th , 2003
SIZE	4,410.916 Acres	730.76 Acres	902.7392 Acres
PRICE PER ACRE	N/A	\$4,926	\$3,323
ADJUSTMENTS			
PROPERTY RIGHTS CONVEYED	Fee-Simple	1.00	1.00
FINANCING	Typical	1.00	1.00
CONDITIONS OF SALE	Typical	1.00	1.00
TIME OR CHANGES IN MARKET CONDITIONS	Current	1.03	1.03
ADJUSTED SALES PRICE PER ACRE	N/A	\$5,074	\$3,423
ADJUSTMENTS FOR PHYSICAL CHARACTERISTICS			
LOCATION	I-77/Congaree River	+25%	+35%
SIZE/SHAPE	4,410.916Ac/Irregular	-50%	-45%
EGRESS/INGRESS	Good	+10%	-0-
ZONING	D-1/RU/M-1/RS-3	-0-	-0-
TOPOGRAPHY	Level/Flood Plain/Floodway	-20%	-20%
AVAILABILITY OF UTILITIES	Water/Sewer	+ 5%	+ 5%
NET ADJUSTMENT	N/A	-30%	-25%
INDICATED VALUE OF SUBJECT/ACRE	N/A	\$3,552	\$2,567

CV006203

PLTF TRIAL EXH 425

COMPARABLE LAND SALES ADJUSTMENT CHART

ITEM	SUBJECT	SALE NO. 5	SALE NO. 6
ADDRESS	SW/S Bluff Road, NE/S Congaree River, Columbia, Richland County, South Carolina	E/S Waccamaw River and W/S of U.S. Highway 17, Near Surfside, Horry County, South Carolina	E/S of Congaree River and western side of Bluff Road, Near Columbia, Richland County, South Carolina
SALE PRICE	N/A	\$4,950,000	\$3,599,999
SALE DATE	N/A	June 24 th , 2003	May 20 th , 2003
SIZE	4,410.916 Acres	590.0 Acres	1,145.60 Acres
PRICE PER ACRE	N/A	\$8,390	\$3,142
ADJUSTMENTS			
PROPERTY RIGHTS CONVEYED	Fee-Simple	1.00	1.00
FINANCING	Typical	1.00	1.00
CONDITIONS OF SALE	Typical	1.00	1.00
TIME OR CHANGES IN MARKET CONDITIONS	Current	1.04	1.045
ADJUSTED SALES PRICE PER ACRE	N/A	\$8,726	\$3,283
ADJUSTMENTS FOR PHYSICAL CHARACTERISTICS			
LOCATION	I-77/Congaree River	-10%	+ 5%
SIZE/SHAPE	4,410.916Ac/Irregular	-55%	-40%
EGRESS/INGRESS	Good	+15%	+15%
ZONING	D-1/RU/M-1/RS-3	-0-	-0-
TOPOGRAPHY	Level/Flood Plain/ Floodway	-10%	+ 5%
AVAILABILITY OF UTILITIES	Water/Sewer	-0-	+ 5%
NET ADJUSTMENT	N/A	-60%	-10%
INDICATED VALUE OF SUBJECT/ACRE	N/A	\$3,490	\$2,955

CV006204

PLTF TRIAL EXH 425

COMPARABLE LAND SALES ADJUSTMENT CHART

ITEM	SUBJECT	SALE NO. 7	SALE NO. 8
ADDRESS	SW/S Bluff Road, NE/S Congaree River, Columbia, Richland County, South Carolina	NW/S of Combahee River and both sides of State Highway 15-162, Colleton County, South Carolina	N/S Longtown Road, Near Blythewood, Richland County, South Carolina
SALE PRICE	N/A	\$7,800,000	\$7,500,000
SALE DATE	N/A	February 7 th , 2003	January 9 th , 2003
SIZE	4,410.916 Acres	2,049.80 Acres	1,000 Acres
PRICE PER ACRE	N/A	\$3,806	\$7,500
ADJUSTMENTS			
PROPERTY RIGHTS CONVEYED	Fee-Simple	1.00	1.00
FINANCING	Typical	1.00	1.00
CONDITIONS OF SALE	Typical	1.00	1.00
TIME OR CHANGES IN MARKET CONDITIONS	Current	1.05	1.05
ADJUSTED SALES PRICE PER ACRE	N/A	\$3,996	\$7,875
ADJUSTMENTS FOR PHYSICAL CHARACTERISTICS			
LOCATION	I-77/Congaree River	+25%	+ 5%
SIZE/SHAPE	4,410.916Ac/Irregular	-30%	-40%
EGRESS/INGRESS	Good	+10%	-0-
ZONING	D-1/RU/M-1/RS-3	-0-	-0-
TOPOGRAPHY	Level/Flood Plain/ Floodway	-20%	-20%
AVAILABILITY OF UTILITIES	Water/Sewer	+ 5%	-0-
NET ADJUSTMENT	N/A	-10%	-55%
INDICATED VALUE OF SUBJECT/ACRE	N/A	\$3,596	\$3,544

CV006205

PLTF TRIAL EXH 425

**SALES COMPARISON
APPROACH/VALUATION
SUMMARY**

Prior to completing any physical characteristic dissimilarity adjustments, the proper sequencing of adjustments will address property rights conveyed, financing, conditions of sale, and time or changes in market conditions. There were no noted adjustments for property rights conveyed, financing or conditions of sale.

Changes in market conditions may typically relate to the passage of time, however, adjustments for conditions within the market reflect the influences of supply and demand and the economies of increasing and decreasing returns. There were no *paired* sales which would render a definitive change in property values from date of sale of the land conveyances to the effective date of value. A probable and reasonable change in property values is an upward 2.5% per year, paralleling the annual average increase in the Consumer Price Index (CPI) over the last ten years.

LOCATION

Relative to location, the subject property is located on the fringe of the City of Columbia in a superior location as compared to all but one of the eight sales. The lone sale which required a minus adjustment or an adjustment that would reflect superiority of the sale as compared to the subject is located in the Surfside area of Horry County. The attempt for the selection of the eight sales was to secure large acreage sales located on rivers, similar to that of the subject property. With exception of Comparable Sales No. 1, 4 and 8, the remaining five sales were all located on a river.

SIZE/SHAPE

An adjustment for size/shape was necessary as a result of the subject being larger than all of the sales with exception of Comparable Land Sale No. 1. The adjustment is predicated on the premise larger parcels typically sell for lesser units of comparison than their smaller counterparts.

EGRESS/INGRESS

Adjustments for egress/ingress were also completed with only Comparable Land Sales No. 3, 5, 6 and 7 reflecting dissimilarities.

ZONING

There were no necessary adjustments for zoning as the predominance of the zoning for the comparable sales allowed similar usages as that indicated for the subject property.

TOPOGRAPHY

Relative to topography, adjustments were necessary for all of the sales as a result of approximately 70% or 3,087.64 acres of the subject being determined to be located in the floodway. It has been noted on several occasions throughout this report there is pending litigation relative to the FEMA determination. Therefore, the majority of the sales did not contain similar portions of the respective site within a floodway and therefore the necessary adjustments.

AVAILABILITY OF UTILITIES

Adjustments for utilities were completed on all of the sales although the impact of the absence of utilities are not as severe as the present use of the subject does not necessarily require a substantial amount of available utilities. With the developmental usage of the subject property presently limited with the floodway determination, the existing utilities for the subject are more than inadequate.

SUMMARY

After completion of all physical characteristic adjustments, the range of concluded values per acre for the subject extended from a low of \$2,567 to a high of \$3,596.

Comparable Land Sale No. 1 is the largest conveyance and actually consisted of 15 parcels constituting the 7,785.44 acre transaction. The smallest conveyance comprised 590.0 acres but was utilized as a result of being located on the east side of the Waccamaw River. Comparable Land Sales No. 6 and 8 are the two sales utilized from the Columbia market and are the largest land sales to have occurred over the last several years in proximity. The 1,000 acre parcel was purchased for residential developmental usage and not limited by a substantial portion of the site located within a floodway.

A reasonable and justifiable correlation among the eight adjusted land sales may suggest \$3,200 per acre for the subject. The employment of statistical analysis reveals the \$3,200 per acre is reasonable as a result of the indicated arithmetic mean at \$3,282, a median at \$3,517 and a standard deviation of \$390.

With a correlated and reconciled value per acre for the subject determined at \$3,200 per acre, the indicated market value of the subject property, as is, containing 4,410.916 acres is \$14,114,931, rounded to \$14,115,000.

**FINAL RECONCILIATION
AND ESTIMATE OF VALUE**

As delineated in the Appraisal Methodology/Valuation Procedure section of this appraisal report, the only applicable valuation methodology employed within this appraisal for the subject property is a comparative procedure by means of a Sales Comparison Approach. The preceding Sales Comparison Approach yielded an estimated market value of the fee-simple estate of the existing subject property, comprising 4,410.916 unimproved acres. The estimated market value of the fee-simple estate, as is, as of March 1st, 2005, is:

FOURTEEN MILLION ONE HUNDRED FIFTEEN THOUSAND AND NO/100 DOLLARS
(\$14,115,000)

CERTIFICATION

I hereby certify:

1. I have personally inspected the property which is the subject of this appraisal.
2. I have no present or contemplated future interest in the real estate that is the subject of this appraisal report.
3. I have no personal interest or bias with respect to the subject matter of this appraisal report or the parties involved.
4. To the best of my knowledge and belief, the statements of facts contained in this appraisal report, upon which the analyses, opinions and conclusions expressed herein are based are true and correct.
5. This appraisal report sets forth all of the limiting conditions (imposed by the terms of my assignment or by the undersigned) affecting the analyses, opinions and conclusions contained in this report.
6. This appraisal report has been made in conformity with, and is subject to, the requirements of the Code of Professional Ethics and Standards of Professional Appraisal Practice of the Appraisal Institute.
7. That the use of this appraisal report is subject to the requirements of the Appraisal Institute relating to review by its duly authorized representatives.
8. No one other than the undersigned prepared the analyses, conclusions and opinions concerning real estate that are set forth in this appraisal report.
9. As of the date of this report, I, **Thomas F. Wingard, MAI, SRA**, have completed the requirements under the continuing education program of the Appraisal Institute.
10. My compensation is not contingent upon the reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value estimate, the attainment of a stipulated result, or the occurrence of a subsequent event. Additionally, the appraisal was not based on a requested minimum valuation, a specific valuation, or the approval of a loan.
11. The Americans with Disabilities Act ("ADA") became effective January 26, 1992. I have not made a specific compliance survey and analysis of this property to determine whether or not it is in conformity with the various detailed requirements of the ADA. It is possible that a compliance survey of the property together with a detailed analysis of the requirements of the ADA could reveal that the property is not in compliance with one or more of the requirements of the Act. If so, this fact could have a negative effect upon the value of the property. Since I have no direct evidence relating to this issue, I did not consider possible non-compliance with the requirements of ADA in estimating the value of the property.

12. The real property, subject of this Complete, Self-Contained Appraisal Report, has an indicated market value, as is, of the fee-simple estate, as of March 1st, 2005, of:

FOURTEEN MILLION ONE HUNDRED FIFTEEN THOUSAND AND NO/100 DOLLARS

\$14,115,000


Thomas F. Wingard, MAI, SRA

Certified General Real Estate Appraisal No. CG 89
State of South Carolina

COLUMBIA CHARLESTON FLORENCE GREENVILLE

Haynsworth
Sinkler Boyd, PA

ATTORNEYS AND COUNSELORS AT LAW

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WILLIAM C. BOYD
DIRECT DIAL NUMBER (803) 540-7800
EMAIL bboyd@hsblawfirm.com

June 10, 2005

RECEIVED

JUN 13 2005

Mr. Mitchell Willoughby
Willoughby & Hofer, P.A.
1022 Calhoun Street
Columbia, SC 29201

Willoughby & Hofer, P.A.

Re: Columbia Venture, LLC (CV)

Dear Mitch:

As discussed this morning, this letter is in partial response to our recent discussions and your letter to me dated June 2, 2005. It is written to set forth briefly our understanding of CV's responsibilities, duties and plans regarding maintenance of the levee (the Levee) presently protecting the City of Columbia Wastewater Treatment Plant and Heathwood Hall Episcopal School and to seek guidance from Richland County, through you, as to how to proceed. This section of CV's property is sometimes referred to as Levee Section 1 and the Levee is sometimes referred to as the Manning Levee.

CV is preparing to spend approximately \$150,000 to obtain new scientific models required to apply for permits to maintain the Levee encompassing Levee Section 1. CV believes it will be authorized by the new Richland County Land Development Code (the "Code") (effective July 1, 2005) to obtain these permits before initiating the maintenance project. However, before it spends this money, CV requests that you confirm that Richland County agrees with CV's interpretation of the Code and that, assuming CV meets the technical permit requirements, permits would be forthcoming.

Requirement to Maintain Levee

We believe that CV is required to maintain the Levee. Subsection §26-203(d)(1) of the stormwater management section of the Code provides:

Adequate levee maintenance is essential and cannot be overemphasized. Failure to properly maintain levees may render the levees inoperative during periods when their protection is needed. For safety in times of high water or floods, levee maintenance will be thorough and continuous. This requires a balanced maintenance program based on defined standards and procedures.

Haynsworth
Sinkler Boyd, PA

ATTORNEYS AND COUNSELORS AT LAW

Mr. Mitchell Willoughby
June 10, 2005
Page 2

These levee maintenance standards and procedures are specified in §26-203(d)(2)&(3), and the design criteria for levee improvements are contained in §26-203(b)(5)(d). Levees that protect residential or nonresidential structures "*shall be designed, constructed, and maintained to provide protection against the 500-year flood, plus three (3) feet of freeboard*". See §26-203(b)(2)(f).

Because the Levee and a portion of Levee Section 1 are presently mapped in a floodway, the area is subject to the additional regulations of a Floodplain Overlay District. Many of these regulations are identical to the stormwater management provisions, including the requirement that the levee provide protection against the 500-year flood, plus three feet of freeboard (§26-104(h)(1)), specific maintenance standards to which levees must be maintained (§26-104(h)(3)&(4)), and design criteria (§26-104(h)(2) (which states, "[o]wners of levees will perform the necessary and required maintenance and provide appropriate records to the county engineer." [emphasis added]) CV believes that these provisions require that it maintain the Levee to a 500 year flood protection, plus three (3) feet of freeboard.

Authorization to Maintain Levee

Subsection 26-104(d)(2)(i)(2) sets forth the following permitted uses in floodway areas.

[a] *Any existing or future facility that is or will be a part of or used by any public or private school. . . .*

[b] *Any existing or future facility that is or will be a part of or used by any publicly owned wastewater treatment facility*
[emphasis added]

The Levee protects Heathwood and the Wastewater Treatment Plant. Both "use" the Levee for flood protection of their facilities and Heathwood has notified CV that it relies upon CV for maintenance as successor to a contractual obligation entered into by Heathwood and CV's predecessor in title prior to the enactment of the recent Code amendments. Although Heathwood does not own the Levee, it depends upon the Levee for flood protection and this "use" by and need for proper levee maintenance is obvious.

Subsection 26-203(b)(2)(g) provides:

Notwithstanding any other provision of this chapter, no levees, dikes . . . that will impede the free flow of water during times of flood will be permitted in the regulatory floodway, unless:

Haynsworth
Sinkler Boyd, PA

ATTORNEYS AND COUNSELORS AT LAW

Mr. Mitchell Willoughby

June 10, 2005

Page 3

1. Such proposed impediment is a permitted use pursuant to Section 26-104(d)(2)(i)(2) of this chapter; (see above)

CV believes that it qualifies for the exception to this subsection because 1) the Levee maintenance is a "permitted use" and/or 2) the maintenance and repair of the Levee to the 500 year flood level plus three feet of freeboard is required by the Code.

Required Permits

The CV Levee does not currently satisfy the maintenance requirements set forth by the Code because the levee was constructed well prior to the adoption of such land use regulations. Therefore, CV is prepared to apply for the following permits and submit the necessary plans to initiate the levee maintenance project:

- Floodplain development permit;
- Land development permit;
 - Landscaping plan;
- Grading permit;
 - Erosion and sediment control plan; and
- Stormwater management design plan.

We believe that all of these can be completed to comply with the technical requirements of the Code. The expenses will be considerable, as noted above. Therefore, we ask that you confirm CV's interpretation of these legal requirements and authority and advise us of any other requirements before CV incurs these expenses.

Please contact me or Bob if you need any additional information. We will appreciate your assistance in resolving this issue at your very earliest convenience.

Very truly yours,



William C. Boyd

WCB:kdt

cc: Robert Hughes

I hereby certify that this is a true and correct copy of

the original document.

Certified By:

Michelle Odu
In the name of the County Council

Title:

Date: 9/14/12

BOOK

009

PAGE 971

STATE OF SOUTH CAROLINA
COUNTY COUNCIL FOR RICHLAND COUNTY
ORDINANCE NO. 041-06HR

**AN ORDINANCE EXTENDING THE MORATORIUM ON EITHER
THE APPROVAL OR DENIAL OF FLOODPLAIN MANAGEMENT
PERMITS FOR DEVELOPMENT OR CONSTRUCTION WITHIN A
PORTION OF THE CONGAREE RIVER FLOODPLAIN.**

WHEREAS, Richland County is a participating community in the National Flood Insurance Program ("NFIP") administered by the Federal Emergency Management Agency ("FEMA"); and

WHEREAS, FEMA must provide a participating community with data upon which floodplain management regulations shall be based pursuant to 44 C.F.R. § 60.3; and

WHEREAS, to be a participating community, Richland County is required by 44 C.F.R. § 60.2(h), to adopt and apply this data for enforcement of floodplain management regulations in unincorporated Richland County; and

WHEREAS, on November 18, 2005, the United States District Court, South Carolina Division, in the case of *Columbia Venture v. Federal Emergency Management Agency*, Case Number 3:01-4100-MBS, entered a written Order vacating the Congaree River base flood elevations as revised by the Federal Emergency Management Agency ("FEMA") on August 20, 2001 and effective on February 20, 2002; and

WHEREAS, the Court's Order rendered null and void the Congaree River base flood elevations as promulgated by FEMA on August 20, 2001 and effective February 20, 2002; consequently, pursuant to 44 C.F.R. § 60.3, FEMA must provide sufficient data upon which Richland County's floodplain regulations are to be based as they apply to the Congaree River Floodplain; and

WHEREAS, FEMA had not provided the required data when the Richland County Council enacted Ordinance No. 009-06HR on February 21, 2006, which imposed a sixty (60) day moratorium on the approval or denial of any permit submitted to Richland County for construction, development, zoning, building, disturbance of land, or for stormwater management purposes on property located in a flood-prone area within the Congaree River Floodplain; and to date, FEMA has still not provided the required data; and

WHEREAS, the Richland County Council desires to further extend the moratorium on the approval or denial of any permit submitted to Richland County for construction, development, zoning, building, disturbance of land, or for stormwater management purposes on property located in a flood-prone area within the Congaree River Floodplain to protect public health, safety and welfare, and to allow the County time to determine what actions may be needed to maintain compliance with the NFIP;

NOW, THEREFORE, pursuant to the authority granted by the Constitution and the General Assembly of the State of South Carolina, BE IT ENACTED BY THE COUNTY COUNCIL FOR RICHLAND COUNTY:

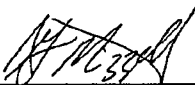
SECTION I. A moratorium on the approval or denial of any permit submitted to Richland County for construction, development, zoning, building, disturbance of land, or for stormwater management purposes on property located in a flood-prone area within the Congaree River Floodplain, first established on February 21, 2006, is hereby extended for an additional 60 days or until such time as the case of *Columbia Venture v. Federal Emergency Management Agency*, Case Number 3:01-4100-MBS is settled or until such time as Richland County adopts FEMA-approved maps for the Congaree or until such time as FEMA provides sufficient data upon which Richland County's floodplain regulations are to be based as they apply to the Congaree River Floodplain, whichever event shall occur first. This moratorium shall then expire of its own accord, and no further action of the Richland County Council shall be necessary to effectuate the expiry thereof.

SECTION II. If any section, subsection, or clause of this ordinance shall be deemed to be unconstitutional or otherwise invalid, the validity of the remaining sections, subsections, and clauses shall not be affected thereby.

SECTION III. All ordinances or parts of ordinances in conflict with the provisions of this ordinance are hereby repealed.

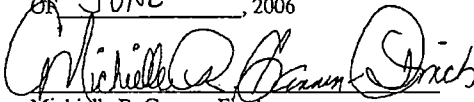
SECTION V. This ordinance shall be enforced from and after May 16, 2006.

RICHLAND COUNTY COUNCIL

BY: 
Anthony G. Mizzell, Chair

ATTEST THIS THE 6TH DAY

OF JUNE, 2006


Michelle R. Cannon-Finch
Clerk of Council

2006 JUN - 8, AM 9:33
BARBARA A. SCOTT
C.C.C. & G.S.

RICHLAND COUNTY ATTORNEY'S OFFICE


Approved As To LEGAL Form Only
No Opinion Rendered As To Content

First Reading: April 18, 2006
Public Hearing: May 2, 2006
Second Reading: May 2, 2006
Third Reading: May 16, 2006

I hereby certify that this is a true and correct copy of

BOOK 10 PAGE 37

the original document

Certified By:

Title:

Date:

STATE OF SOUTH CAROLINA
COUNTY COUNCIL FOR RICHLAND COUNTY
ORDINANCE NO. 069-06HR

**AN ORDINANCE EXTENDING THE MORATORIUM ON EITHER
THE APPROVAL OR DENIAL OF FLOODPLAIN MANAGEMENT
PERMITS FOR DEVELOPMENT OR CONSTRUCTION WITHIN A
PORTION OF THE CONGAREE RIVER FLOODPLAIN.**

WHEREAS, Richland County is a participating community in the National Flood Insurance Program ("NFIP") administered by the Federal Emergency Management Agency ("FEMA"); and

WHEREAS, FEMA must provide a participating community with data upon which floodplain management regulations shall be based pursuant to 44 C.F.R. § 60.3; and

WHEREAS, to be a participating community, Richland County is required by 44 C.F.R. § 60.2(h), to adopt and apply this data for enforcement of floodplain management regulations in unincorporated Richland County; and

WHEREAS, on November 18, 2005, the United States District Court, South Carolina Division, in the case of *Columbia Venture v. Federal Emergency Management Agency*, Case Number 3:01-4100-MBS, entered a written Order vacating the Congaree River base flood elevations as revised by the Federal Emergency Management Agency ("FEMA") on August 20, 2001 and effective on February 20, 2002; and

WHEREAS, the Court's Order rendered null and void the Congaree River base flood elevations as promulgated by FEMA on August 20, 2001 and effective February 20, 2002; consequently, pursuant to 44 C.F.R. § 60.3, FEMA must provide sufficient data upon which Richland County's floodplain regulations are to be based as they apply to the Congaree River Floodplain; and

WHEREAS, FEMA had not provided the required data when the Richland County Council enacted Ordinance No. 009-06HR on February 21, 2006, which imposed a sixty (60) day moratorium on the approval or denial of any permit submitted to Richland County for construction, development, zoning, building, disturbance of land, or for stormwater management purposes on property located in a flood-prone area within the Congaree River Floodplain; and

WHEREAS, FEMA had not provided the required data when the Richland County Council enacted Ordinance No. 041-06HR on May 16, 2006, which extended the moratorium on the approval or denial of any permit submitted to Richland County for construction, development, zoning, building, disturbance of land, or for stormwater management purposes on property located in a flood-prone area within the Congaree River Floodplain for an additional 60 days or until June 21, 2006; and to date, FEMA has still not provided the required data; and

WHEREAS, the Richland County Council desires to further extend the moratorium on the approval or denial of any permit submitted to Richland County for construction, development, zoning, building, disturbance of land, or for stormwater management purposes on property located in a flood-prone area within the Congaree River Floodplain to protect public health, safety and welfare, and to allow the County time to determine what actions may be needed to maintain compliance with the NFIP;

NOW, THEREFORE, pursuant to the authority granted by the Constitution and the General Assembly of the State of South Carolina, BE IT ENACTED BY THE COUNTY COUNCIL FOR RICHLAND COUNTY:

SECTION 1. A moratorium on the approval or denial of any permit submitted to Richland County for construction, development, zoning, building, disturbance of land, or for stormwater management purposes on property located in a flood-prone area within the Congaree River Floodplain, first established on February 21, 2006, and further extended

BUGK 10 Jul 30

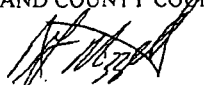
until June 21, 2006, is hereby extended for an additional 90 days or until such time as the case of *Columbia Venture v. Federal Emergency Management Agency*, Case Number 3:01-4100-MBS is settled or until such time as Richland County adopts FEMA-approved maps for the Congaree or until such time as FEMA provides sufficient data upon which Richland County's floodplain regulations are to be based as they apply to the Congaree River Floodplain, whichever event shall occur first. This moratorium shall then expire of its own accord, and no further action of the Richland County Council shall be necessary to effectuate the expiry thereof.

SECTION II. If any section, subsection, or clause of this ordinance shall be deemed to be unconstitutional or otherwise invalid, the validity of the remaining sections, subsections, and clauses shall not be affected thereby.

SECTION III. All ordinances or parts of ordinances in conflict with the provisions of this ordinance are hereby repealed.

SECTION V. This ordinance shall be enforced from and after July 11, 2006.

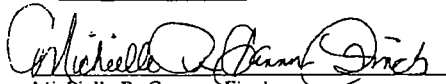
RICHLAND COUNTY COUNCIL

BY: 

Anthony G. Mizzell, Chair

ATTEST THIS THE 25TH DAY

OF JULY, 2006


Michelle R. Cannon-Finch
Clerk of Council

RICHLAND COUNTY ATTORNEY'S OFFICE


Approved As To LEGAL Form Only
No Opinion Rendered As To Content

First Reading: June 6, 2006
Second Reading: June 20, 2006
Public Hearing: July 11, 2006
Third Reading: July 11, 2006



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Monday, Dec 10, 2007

Posted on Fri, Nov. 30, 2007

Building Our City | Green Diamond project revived

Developers want city to annex Congaree River property

By CLIF LeBLANC and DAWN HINSHAW

cdeblanc@thestate.com dhinshaw@thestate.com

Developers who for a decade have pushed to build a \$1 billion community south of the capital city have launched a third attempt — this time by leapfrogging a river and trying to be annexed into the city of Cayce.

Columbia Venture petitioned Cayce within the last week to annex 3,000 acres in Richland County.

Cayce Mayor Avery Wilkerson said Thursday the city is poised to do just that.

A scaled-back version of the controversial Green Diamond development gained new life Nov. 2 when a federal judge clarified an earlier decision to open more land to development in the "city within a city."

The project has been attractive to some officials because it offered golf course homes, shopping and high-tech businesses to replace farmland prone to flooding.

But detractors worried about the risks of investing in flood-prone lowlands, the cost of bolstering levees and how a diverted Congaree River might flood homes in Cayce.

A lawsuit by Columbia Venture over how much of the property can be developed has not been resolved.

Wilkerson predicted Thursday the council unanimously will accept the request to enlarge Cayce by about one-third.

"My job is to provide for economic development for the city," said Wilkerson, a longtime backer of the Green Diamond proposal in Richland County. "It sounds like a good way to expand our city and control our own destiny."

Wilkerson said the developers have not laid out a full plan for the property and he has not pressed them for one. The annexation faces its first vote Dec. 17 and could become final as early as Dec. 27.

Efforts Thursday to reach executives of Columbia Venture and its partner, Burroughs & Chapin Co. of Myrtle Beach, were unsuccessful.

But Green Diamond opponents quickly attacked the annexation plan.

Blair Holman, an attorney representing Cayce residents who oppose the project, said Wilkerson has turned his back on them.

"The mayor, who's supposed to be looking out for their interests, has apparently struck some kind of deal with developers across the river," said Holman, a lawyer at North Carolina's Southern Environmental Law Center.

Wilkerson said he is looking out for his city. "It's totally the opposite."

Cayce businessman Chris Kueny, a longtime Green Diamond opponent, said the developers are shopping for a friendly government.

"Now, because Richland County would not let them do anything in there, they found a jurisdiction that would," Kueny said.

Columbia officials also did not accept an alternate development Columbia Venture proposed a year ago.

The plan has been stalled in part because of a half-dozen changes since 1999 in a federal flood map, which restricts where structures can be built.

In November 2005, federal Judge Margaret Seymour threw out a flood map devised in 2001 by the Federal Emergency Management Agency. That map placed 70 percent of Green Diamond's 4,500 acres in the floodway, where construction is banned.

After two years of legal wrangling, Seymour wrote a clarification earlier this month that reinstated a 1995 map. That opened more of Columbia Venture's land to development.

"It's kind of like 'Chuckie,' the movie," said Richland Councilwoman Kit Smith, a longtime critic. "They thought he was dead, and he keeps coming back."

UNANSWERED QUESTIONS

Wilkerson said the developers have offered general descriptions of their plans for the property — a mixture of residential and

<http://www.thestate.com/local/v-print/story/244021.html>

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commercial projects and greenways.

He and two supporters of the plan told a Wednesday night gathering of Riverland Park residents that new levees would be built 500 feet farther inland from the older levees, said Kueny, who attended.

People in that neighborhood, which is prone to flooding, worry that new Columbia-side levees would divert water into their homes during a major flood.

"All the science says it will raise the water levels and force water on our side of the river," said Kueny, whose riverfront yard floods during heavy rains.

The effectiveness of levees has been thrown into question because of climate change and the destructiveness of 2005's Hurricane Katrina, said David Conrad, a water resources specialist with the National Wildlife Federation in Washington, D.C.

"Katrina was a wake-up call for many communities, because it recognized that levees are not fail-safe," Conrad said.

Wilkerson said he has not pressed Columbia Venture for details or discussed who would build and maintain water and sewer lines or how police and fire service would work.

He said the city's zoning standards will be the primary method for controlling construction of the huge development.

The mayor said he hopes tax revenues from the project will pay for infrastructure. But its residents might have to pay user fees.

Developers said in 1999 that improving existing levees would cost between \$6 million and \$12 million.

Wilkerson added that developers have proposed using man-made wetlands to treat sewage rather than forcing costly expansions of Cayce's sewer treatment facilities.

Former Cayce Mayor Archie Moore said he wonders how the city will provide services across the river. But mostly, Moore said, he is concerned developers will not relent in their plans to build in flood-prone areas.

"The science of hydrology has not changed," Moore said. "It only changes when the money changes.

"Growth is a good thing sometimes," he said. "Sometimes it brings more problems than benefits."

He said he does not like what he has heard so far.

"I think it's a bad idea, notwithstanding the political ramifications of jumping the county line."

Using a public river as a connector to annex adjoining property is well established in the law, said Howard Duvall, director of the S.C. Municipal Association. For example, he said, Charleston annexed Daniel Island by crossing the Cooper River.

Bob Hughes, of Columbia Venture, told the Cayce-West Columbia News, "Our overall vision is to create an environment in which citizens and guests can live, work, play and shop while enjoying the beauty of nature."

Hughes did not return telephone messages Thursday.

A DISPUTED HISTORY

The public first learned of the ambitious Green Diamond plan in 1999 after Burroughs & Chapin spent \$11 million for the land along the Congaree River.

It was to include a high-technology park, a convention center and a hotel.

A month later, FEMA released a map that put much of the property in the floodway, where the highest and fastest water is expected to flow during a major flood. Development in a floodway is much more severely restricted than in a flood plain.

Six months later, FEMA released a new map, based on a Burroughs & Chapin study, that cleared the way for the company to upgrade levees and develop more property.

Richland County and others appealed the lines.

Another map in 2001 affirmed the previous flood lines. Columbia Venture later sued FEMA, and Seymour threw out that map in 2005.

After talks with Richland County fell through, Columbia Venture approached the city of Columbia in December 2006.

It asked the city to buy or lease up to 1,500 acres near the city's sewer plant there.

The developers argued Columbia could convert the land into a manmade wetland where wastewater would be cleansed through cattails and other plants.

Columbia Venture argued the city could make money from the deal by selling environmental tax credits. The city also would save millions because it would not have to upgrade its wastewater plant, developers said.

But city staffers disagreed. With the city facing a price tag of \$80 million or more for wetlands projects, talks stalled.

Staff writer Gina Smith contributed. Reach LeBlanc at (803) 771-8664 and Hinshaw at (803) 771-8641.

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SCANNED

No 1015/20

ENVIRONMENTAL SITING STUDY

FOR

OK, L.L.C.

COLUMBIA, SOUTH CAROLINA

RUST ENVIRONMENT & INFRASTRUCTURE

Project No. 202623

Prepared for:

Burwell Manning

Greg Tabar - Tee to Green, Inc.

June 5, 1998

PLTF TRIAL EXH 497

CV013556

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Appendix A - Aerial Photographs
Appendix B - USGS Topographic Maps
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1.0 INTRODUCTION

OK, L.L.C. is a 2500-acre tract located southeast of Columbia, South Carolina. The property is located between the intersection of Bluff Road (South Carolina 48) and Interstate 77 and the Congaree River. Surrounded by commercial, industrial, and residential areas, the tract is predominantly cropland and forested bottomlands. The property is bounded on the west by the Congaree River, on the south and east by Gills Creek, and on the east by SC 48. Two large inholdings, the City of Columbia Wastewater Treatment Plant and the Heathwood Hall School are located adjacent to the Congaree River, approximately 250 and 1,400 feet, respectively, upstream from I-77. Interstate I-77 runs northwest-southeast through the middle of the OK, L.L.C. property. Several small paved and gravel roads off Bluff Road provide access to the interior of the property.

The majority of the OK, L.L.C. Tract is located within the old floodplain of the Congaree River. Elevation on the property ranges from approximately 110 feet to just over 150 feet mean sea level (msl). Approximately 60 percent of the property is cropland, drained by ditches and protected from flooding by a complex system of levees. Forested wetlands are present along the Congaree River and along Gills Creek. Nonforested wetlands are scattered among the cultivated fields and along their edges. One deep water forested wetland complex is located near the eastern boundary of the property. Two large and several smaller impoundments are also present on the property.

In an effort to evaluate the potential for development on the OK, L.L.C. Tract, Rust Environment & Infrastructure (REI) and Dr. L.L. Gaddy conducted an Environmental Siting Study of the property. The study was conducted during March-April, 1998. The objective of the siting study was to identify major concerns or potential "fatal flaws" or "critical issues" that pose significant impacts to site development. Based on the results of the study, the feasibility for development can be evaluated and key issues can be identified for consideration in future planning efforts.

Specifically, project tasks included a hydrological assessment, sensitive habitat (wetlands and endangered species) evaluation, and Phase I Environmental Site Assessment. Information

pertinent to each task was identified through an examination of existing information, site visits, and inquiry via various agencies.

It should be noted that no soil borings, sampling, or analyses were conducted and that the conclusions of REI regarding the property are based solely on the observations of existing conditions, review of existing reports, and interpretations of the property history. REI assumes that there are no hidden, unapparent, or latent conditions or defects in or of the property, subsoil, or structure. REI assumes no responsibility for such conditions, or for the inspection, engineering, or repair which might be required to discover or correct such factors. REI and Dr. Gaddy have made every effort to verify the conclusions contained in this report; however, we do not certify, represent, or guarantee that all areas of concern have been identified.

This report is based upon the agreed upon Scope of Services between REI and OK, L.L.C., and is subject to the limitations and restrictions defined therein. It has been prepared for the exclusive use of OK, L.L.C. No other person or organization is entitled to rely upon any part of it without written consent of REI. OK, L.L.C. may release or authorize the release of all or part(s) of this report to third parties; however, such third party in using or relying on this report agrees that it shall have no legal recourse against REI or its parent or subsidiaries, and shall indemnify and defend them from and against all claims arising out of or in conjunction with such use or reliance.

2.0 METHODS

Knowledge of the hydrology of the Congaree River and its tributaries is critical to proper planning and evaluation of the feasibility of any development in this area. The hydrological assessment was performed through the review and evaluation of existing data and published reports.

Hydrologic data were obtained from the following sources:

- Federal Emergency Management Agency (FEMA) floodplain maps
- USGS topographical maps (Southwest Columbia and Fort Jackson South)
- Annual U.S. Geological Survey (USGS) data reports
- Water resources databases
- SC Department of Natural Resources (SCDNR) aerial photographs
- Lockwood Greene – topographical data

Preliminary surveys of sensitive habitats were conducted and included an assessment of wetlands and endangered species. Through the use of National Wetland Inventory maps, Soil Conservation Service maps, black and white aerial photographs, and false color infrared photographs, a potential wetland map was compiled. The map was field validated and revised to accurately portray jurisdictional wetlands. The preliminary endangered, threatened, and noteworthy species inventory included a review of state and federal information for the site, Richland County, and the Inner Coastal Plain region.

The Phase I Environmental Site Assessment was conducted in accordance with the procedures described in the American Society for Testing and Materials (ASTM) Standard E-1527, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. Specifically, the site assessment consisted of a visual inspection of the subject and surrounding properties, interviews with persons knowledgeable of the property, and review of available records. The primary focus of the property inspection was to identify areas on or adjacent to the property with the greatest potential for contamination through use or disposal of hazardous wastes or materials.

3.0 HYDROLOGICAL ASSESSMENT

A general evaluation of the hydrology of the surface water bodies in the study area was conducted to evaluate flood potential and define those areas most suitable for development. Information was obtained from USGS topographic maps, USDA soil survey maps, FEMA Flood

Insurance Rate Maps, and aerial photographs. Additional information was obtained from observations made during the field reconnaissance.

In general, land surface elevations at the site range from approximately 120 feet to just over 130 feet mean sea level (msl). The elevation of the Congaree River is approximately 110 feet msl. Both the Congaree River and Gills Creek, which runs through the southern part of the property, represent potential flood hazards.

As shown on the site map (Figure 1), a system of levees borders the western part of the site, protecting the area from floods associated with the Congaree River. Levees are also present along some portions of Gills Creek. The Congaree River levee, which is a major concern of this study, extends from approximately 1,000 feet north of the site south to Gills Creek. Based upon review of the USGS topographic map, it appears that the top of this levee is above an elevation of approximately 140 feet msl. Several survey shots were made by Lockwood Greene on the top of the Congaree River levee. The elevations ranged from 143.01 feet msl to 145.50 feet msl.

Review of FEMA flood hazard maps indicate that the study area lies within the 500 and 100-year floodplains. Based upon discussions with Richland County personnel, a new study of the flood hazard in this area has been completed. As a result of the study, the entire study area is proposed to be within the floodway (maps showing this new designation have not yet been published). In accordance with Federal regulations (44 CFR Section 60.3), no further building can occur on the property unless appropriate building requirements are followed and extensive hydraulic modeling is conducted.

In addition to the Federal requirements, Richland County Zoning Ordinance Section 6-12, *Floodway and Floodplain Protection* stipulates that no construction can occur in a floodway. As a result of this reclassification, therefore, no further building can take place within the proposed floodway. In effect, the property cannot be developed as long as it remains classified as "within the floodway". A ninety-day appeal period will be in effect in the near future. Figure 2 depicts the floodplain, the past floodway, and proposed floodway classifications. It must be pointed out, however, that based upon discussions with Richland County personnel, the potential effects from

existing levees were not considered during their new study (reportedly because they are not maintained by any government agency).

The presence of the levees, however, will have an effect on flooding; a further analysis of the Congaree River levee and its potential effect upon flooding was therefore conducted as part of this study. Historical data revealed that the Congaree River exceeded an elevation of 150 feet msl in 1908. During this flood, the Congaree reached an elevation of 152.82 feet msl at the gaging station located south of Highway 378. It must be noted that this gaging station is slightly more than a mile upstream of the northern end of the levee. The Congaree River is reported to have exceeded 140 feet msl ten times since 1903. However, all three of these floods were below the elevation of 143.01 feet msl. The frequency of these floods has decreased since 1940 (this is related to the construction of Lake Murray).

Figure 3a presents average daily flow data that were obtained from the Congaree River during the period from 1940 to 1995. Figure 3b shows peak flow data and the corresponding river elevation at the gaging station for selected flood events. The river elevations of the three highest flow rate floods ranges from 140.96 feet msl to 142.76 feet msl. None of these flood elevations are higher than the surveyed levee top. However, there is evidence that the flood that occurred in 1976 (reported elevation 142.76 feet msl) flooded a portion of the property. This resulted from a breach of the levee. This issue will be discussed below. Figure 3c is a graph of river elevation versus flow rate. The plot shows the major flood events from 1940 through 1994. The vast majority of these events are well below 140 feet msl. Note that this is a semilog plot, indicating that flow rate varies logarithmically with gage height.

Based upon review of the FEMA flood hazard maps, flood waters could reach elevations ranging from approximately 133 feet msl at the south end of the study area to 143 feet msl at the north end of the property. At the north end of the levee (approximately 1000 feet north of the study area), flood waters could reach an elevation of 150 feet msl. As a result of this review, it is likely that a 100-year flood would top the levee, particularly north of and adjacent to the northern property boundary. A 100-year storm event would most likely inundate the entire property.

Visual inspection of the Congaree River levee was conducted during the site reconnaissance. The levee appeared to be well maintained within the property boundaries. North of the property, particularly at the northernmost extent, the levee did not appear to be well maintained. A number of large trees are growing on the levee, and the top of the levee is narrow with signs of erosion evident. Therefore, based upon elevation and condition, it is likely that construction work on the levee will be required. This situation could be corrected by constructing a levee parallel to and at the northern Prosperity boundary.

Soils in the study area consist primarily of Congaree, Toccoa, and Chewacla soils. Congaree soils are well drained to moderately well drained and moderately permeable. Toccoa soils are well drained and moderately, rapidly permeable. Chewacla soils are somewhat poorly drained and moderately permeable. These floodplain soils are commonly wet, and as a result, drainage is often a problem and creating an effective drainage network is typically difficult.

The evaluation of storm-water management options will require consideration of the poorly drained soils located on the site. In addition, properly constructed levees will most likely require that runoff be routed to collection areas and pumped from the development to the river. Ground water elevations may also be a concern throughout the study area. If the river elevation remains high for an extended period of time, ground water elevations could rise both in response to precipitation, and to the hydraulic gradients created between the river and the ground water. The potential for ground water to rise to the land surface is possible within the boundaries of the study area.

OPTION TO PURCHASE AGREEMENT

THIS OPTION TO PURCHASE AGREEMENT ("Agreement") effective as of the ____ day of _____, 1998, is by and between BURROUGHS & CHAPIN COMPANY, INC. ("Buyer") and BURWELL D. MANNING, JR., EASTERN CORN & GRAIN COMPANY, INC. and OVERLOOK, INC. (collectively "Seller").

WHEREAS, Seller and Buyer desire to enter into an agreement whereby Buyer shall have the exclusive option to acquire Seller's rights to purchase the premises hereinafter described upon the terms and conditions hereinafter set forth.

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS that for and in consideration of the sum of Ten Dollars, of the mutual promises hereinafter set forth and other valuable consideration, Seller and Buyer agree as follows:

1. OPTION.

(a) Seller hereby bargains, grants, sells and conveys to Buyer the exclusive option to acquire Seller's rights to purchase certain real property, together with any improvements thereon, located in Richland County, South Carolina, as more fully described on Exhibit A attached hereto and incorporated herein by reference ("Premises"), on the terms and conditions set forth in this Agreement. This option shall be in effect and continue until the later of (i) February 17, 1999, or (ii) such time as Seller no longer has any rights to purchase or repurchase any portion of the Premises.

(b) Seller agrees, warrants and represents that the option granted and conveyed herein is and shall remain the only option or contract to purchase granted by it for the Seller's rights to purchase the Premises during the term of this Agreement, and that Seller is and shall remain the sole and exclusive owner of all rights to purchase the Premises throughout the term of this Agreement.

(c) In consideration of Seller's grant of the option provided herein, Buyer hereby pays and transfers the sum of One Hundred Dollars (\$100.00) which shall be nonrefundable and which shall compensate Seller for the granting of this option.

2. OWNERSHIP OF PREMISES. The Premises is currently owned of record by the owners listed on Exhibit A attached hereto, and is currently subject to rights to repurchase or purchase held by parties listed on Exhibit A attached hereto.

3. EXERCISE OF OPTION. The option granted to Buyer herein may be exercised, if at all, from time to time and as many times as Buyer may elect in order to acquire one or more parcels of the Premises as provided herein. Each exercise of the option, if any, shall occur by written notice (each such notice being a "Notice of Exercise") from Buyer to Seller stating (a) Buyer's intention to exercise the option, (b) the parcel or parcels of the Premises to be acquired (each an "Option Parcel"), (c) the applicable Option Parcel Price (as hereinafter

defined), (d) the intended date of closing of such acquisition, and (e) the Additional Conditions Precedent (as hereinafter defined), if any.

4. PURCHASE PRICE. If Buyer elects to exercise this option, the purchase price for each Option Parcel shall be determined based on the following:

<u>Tract</u>	<u>Price Per Acre</u>

[TO BE PROVIDED]

Notwithstanding the foregoing, the maximum price shall not exceed \$4,000 per acre of high ground and \$1,000 per acre of wetlands.

The "Option Parcel Price" shall be the sum of the number of acres in a particular Option Parcel multiplied by the applicable price per acre.

5. DESIGNATION OF OPTION PARCELS.

(a) Buyer shall have the right to designate the boundaries, configuration, acreage and dimensions of each Option Parcel as it may desire; provided, however, if any of the remaining portion of the Premises should be rendered land-locked as a result of such designation of an Option Parcel, an access easement shall be reserved over such Option Parcel.

(b) Notwithstanding anything to the contrary contained herein, at such time as full payment has been made as required by the Congaree Farms Agreement (as hereinafter defined) and/or the Chapel Hill/DAK Agreement (as hereinafter defined), all portions of the Premises, if any, remaining subject to the applicable agreement shall, at the request of Buyer, be conveyed to Buyer for no additional consideration.

6. ALTERNATIVE TO OPTION PARCEL PRICE. In lieu of payment of the full Option Parcel Price, Seller may elect to contribute its rights in an Option Parcel to Buyer or an entity designated by Buyer, in exchange for an up to ten percent (10%) interest in the project to be developed upon such Option Parcel. In this situation, the Option Parcel Price shall be equal to the price specified in the Congaree Farms Agreement or the Chapel Hill/DAK Agreement, as applicable, for repurchase of such Option Parcel.

7. OPTION ELECTION; RESPONSIBILITIES PRIOR TO EXERCISE. Buyer shall have the right to exercise the option granted herein from time to time as provided herein but shall have no obligation to do so. Until and unless Seller receives a Notice of Exercise from Buyer with regard to a specified Option Parcel, Seller shall be responsible for all costs and liabilities associated with the Premises, including but not limited to ad valorem property taxes.

8. SELLER'S REPRESENTATIONS, WARRANTIES AND AGREEMENTS. In order to induce Buyer to enter into this Agreement, and, upon exercise, if any, of the option granted herein, to purchase one or more Option Parcels, and in addition to representations, warranties and agreements contained elsewhere in this Agreement, Seller hereby makes the following representations, warranties and agreements, each of which is material and is relied upon by Buyer.

(a) Repurchase Rights. Seller is and shall remain the sole and exclusive owner of all rights to purchase the Premises during the term of this Agreement. Seller is the sole and exclusive owner of Seller's rights under the Congaree Farms Agreement and the Chapel Hill/DAK Agreement, and Seller's rights therein have not been sold, transferred, assigned, pledged, mortgaged or otherwise encumbered in any manner.

(b) Congaree Farms/DAK Agreements. The Congaree Farms Agreement and the Chapel Hill/DAK Agreement are unchanged, valid and enforceable against all parties thereto in accordance with their terms and are in full force and effect. No default or event which with the passing of time or the giving of notice or both could result in a default thereunder exists under the Congaree Farms Agreement or the Chapel Hill/DAK Agreement.

(c) Premises Ownership. The owners of the Premises are correctly identified on Exhibit A attached hereto.

(d) Encumbrances. There are and during the term of this Agreement shall be no mortgages on the Premises. There are and during the term of this Agreement shall be no encumbrances on the Premises which could adversely affect the proposed development of the Premises.

(e) No Other Agreements. No agreement, options, rights of first refusal or other contracts have been granted or entered into which are still outstanding giving any other party a right to purchase any interest in the Seller's rights to purchase the Premises.

(f) Authority. Seller has full power and authority to enter into this Agreement and to take all actions required herein.

(g) Pending Litigation. There is no claim, litigation or other proceeding, pending or threatened, before any court, commission or other body or authority relating to Seller or the Premises or any owner of the Premises identified on Exhibit A attached hereto.

(h) Hazardous Substances. Seller has not, and has no knowledge or reason to believe that any party has, used, stored or disposed of any materials on the Premises that would be classified by federal, South Carolina or local laws or regulations as hazardous substances. Seller agrees to indemnify and hold Buyer harmless from any and all claims or causes of action or losses or costs associated

with the existence or removal of toxic or hazardous substances from the Premises, including reasonable attorneys' fees.

(i) Continuing Obligation. Seller will not cause or permit any action to be taken which would cause any of the foregoing representations, warranties or agreements to be untrue as of any Settlement Date (as hereinafter defined).

(j) Additional Documents. On or before each Settlement Date, if any, Seller will do, make execute and deliver all such additional and further acts, deeds, instruments and documents as may be reasonably required by Buyer to completely vest in and assure to Buyer full rights in or to the Option Parcel(s) being conveyed.

9. CONDITIONS PRECEDENT TO BUYER'S OBLIGATIONS. Upon delivery by Buyer to Seller of a Notice of Exercise, the following shall be conditions precedent to the Buyer's obligation to purchase the Option Parcel(s) designated in the Notice of Exercise. Unless otherwise specified herein, if any of the conditions precedent set forth below are not resolved to the reasonable satisfaction of Buyer as of the applicable Settlement Date, the exercise of the option as to the designated Option Parcel(s) shall, at Buyer's option, be null and void, and Buyer shall have no further obligation with regard to the said Notice of Exercise or the designated Option Parcel(s); provided, however, that Buyer may subsequently designate such Option Parcel(s) or a portion thereof as the subject of a future Notice of Exercise and Option Parcel.

(a) Seller's Representations. The representations, warranties, covenants and agreements of Seller set forth herein shall continue to be true and in full force and effect.

(b) Title. Buyer may, at Buyer's expense, obtain a commitment for owner's title insurance in the full amount of the Option Parcel Price for the Option Parcel(s), by which binder the title company must agree to insure fee simple title to the Option Parcel(s), subject only to such exceptions as do not render the title unmarketable or which do not cause the Option Parcel(s) to be unable or impractical to be used for Buyer's intended use. Buyer shall review said commitment and submit to Seller notice in writing of its reasonable objections to title no later than the applicable Settlement Date. Seller shall have ten (10) days after receipt of Buyer's written objections to correct, at Seller's election and at Seller's expense, the title defects indicated. If, at the end of such period, Seller has not corrected to Buyer's reasonable satisfaction the objections to title, Buyer may, as its sole remedies, either (1) waive its objections and consummate the within transaction without a reduction in the Option Parcel Price, or (2) terminate its exercise of the option as to the designated Option Parcel(s), in which event Buyer shall have no further obligation hereunder with regard to the said Notice of Exercise or the designated Option Parcel(s); provided, however, that Buyer may subsequently designate such Option Parcel(s) or a portion thereof as the subject of a future Notice of Exercise and Option Parcel, or (3) continue this Agreement

with resolution of such objections to Buyer's reasonable satisfaction being a condition precedent to Buyer's obligation to purchase the Option Parcel(s). The Settlement Date shall be automatically extended as necessary to accommodate the foregoing time periods.

(c) Environmental Audit. Buyer may, at Buyer's expense, obtain an environmental audit or report or other information reasonably satisfactory to Buyer, which environmental audit or report, if obtained, shall indicate that no materials or substances classified as hazardous wastes or substances under any federal, state or local statute, regulation, ruling, ordinance or law are or have been located, stored, used or disposed of on the Option Parcel(s) and that the Option Parcel(s) are not otherwise contaminated or affected by any such hazardous substances, and that no underground tanks are located on the Option Parcel(s).

(d) Additional Conditions. Any additional conditions precedent ("Additional Conditions Precedent") to Buyer's obligations to purchase the Option Parcel(s) which were stated by Buyer in its Notice of Exercise shall have been and remain fulfilled to Buyer's satisfaction.

(e) Approval of Board of Directors. The approval of the Board of Directors of the Buyer.

10. FORM OF CONVEYANCE. On each Settlement Date, if any, the Seller shall (a) exercise its rights to acquire the designated Option Parcel(s) and (b), in consideration of the Option Parcel Price, convey such Option Parcel(s) to the Buyer or to an entity designated by the Buyer. Each Option Parcel, if purchased, will be conveyed by general warranty deed in proper form for recording with all documentary stamps/deed recording fees and transfer taxes paid and affixed by Seller so as to convey to Buyer fee simple title to such property, free of encumbrances except as provided in Section 9(b) herein.

11. SURVEY. The Buyer shall have the right to have prepared at Buyer's expense a survey or surveys of the Option Parcel(s) ("Survey(s)") indicating the true and correct legal description thereof and delineating the boundary lines of the Option Parcel(s), including delineation of the Option Parcel(s), all improvements, rights of way, roads, easements, contiguous public roads, the names of record owners of all contiguous property, wetlands, ponds, flood plains and floodways. The Survey(s) shall be relied upon in the preparation of the legal description(s) of the Option Parcel(s) to be contained in the deed(s) of conveyance, if any.

12. SETTLEMENT DATE. The purchase and sale, if any, of each Option Parcel shall be closed no later than the date designated by Buyer in the applicable Notice of Exercise (each a "Settlement Date").

All closings shall take place in Columbia, South Carolina, at such place as may be mutually agreed upon between Seller and Buyer.

13. RISK OF LOSS; CONDEMNATION.

(a) As between Buyer and Seller, the risk of loss to each Option Parcel shall be borne by Seller from the date hereof to the applicable Settlement Date, if any. In the event of substantial casualty loss to the Option Parcel occurring subsequent to a Notice of Exercise and, prior to the applicable Settlement Date, Buyer shall have the option of (i) closing at the agreed applicable Option Parcel Price, with Buyer receiving all insurance proceeds paid as the result of any casualty loss, or (ii) terminating its exercise of the option as to the designated Option Parcel and Buyer shall have no further obligations with regard to such Notice of Exercise or the designated Option Parcel(s); provided, however, that Buyer may subsequently designate such Option Parcel(s) or a portion thereof as the subject of a future Notice of Exercise and Option Parcel.

(b) In the event of condemnation or receipt of notice of condemnation or taking of a material portion of an Option Parcel by any governmental authority occurring subsequent to a Notice of Exercise and prior to the applicable Settlement Date, Buyer, at its option, shall have the right to (i) terminate its exercise of the option as to the designated Option Parcel and Buyer shall have no further obligations with regard to such Notice of Exercise or the designated Option Parcel(s); provided, however, that Buyer may subsequently designate such Option Parcel(s) or a portion thereof as the subject of a future Notice of Exercise and Option Parcel, or (ii) continue in accordance with this Agreement.

14. DELIVERY OF SETTLEMENT DATE DOCUMENTS. In addition to other conditions precedent set forth elsewhere in this Agreement, Seller shall deliver to Buyer at each applicable Settlement Date, if any, all of the following documents as to the applicable Option Parcel(s), the delivery and accuracy of which shall further condition Buyer's obligations to consummate the purchase and sale herein contemplated:

(a) Deed. A General Warranty Deed reasonably satisfactory in form and substance to Buyer and Seller, conveying good and marketable fee simple title to the applicable Option Parcel(s), free and clear of all liens, encumbrances, easements and restrictions of every nature and description except as provided in Section 9(b) herein.

(b) Lien Waiver. An Owner's Affidavit or lien waiver satisfactory for the purpose of removing the mechanics lien exception from any title insurance policy to be issued in connection with the purchase.

(c) Other Documents. Such other documents as may be reasonably necessary to effectuate the agreements set forth herein.

15. BUYER'S DELIVERIES PRIOR TO AND AT EACH SETTLEMENT DATE. At each Settlement Date, if any, and after Seller has duly complied with the applicable provisions of Section 14, Buyer shall deliver to Seller the cash portion of the Option Parcel Price by wire transfer or cashier's check adjusted for the pro-rations provided above and reduced as otherwise provided herein.

16. PRO-RATED ITEMS AND ADJUSTMENTS.

(a) At each Settlement Date, if any, Seller shall pay for the cost of all deed stamps/deed recording fees and transfer taxes and Buyer shall pay for the recording fees of this transaction. Buyer and Seller shall each pay their own legal fees related to the transaction contemplated hereby. Real estate taxes and water, sewer and other utilities shall be pro-rated to the applicable Settlement Date. Seller shall be responsible for any roll-back taxes relating to the Premises and the amount thereof shall be paid at the Settlement Date by Seller.

(b) At each Settlement Date, Buyer shall receive a credit against the Purchase Price for its expenses (internal and out-of-pocket) in connection with its due diligence investigation of the Premises; provided, however, such credit on any particular Settlement Date shall not reduce the net Option Parcel Price below the amount to be paid by Seller to acquire the Option Parcel(s) from the owner(s).

17. REAL ESTATE COMMISSIONS. Seller and Buyer each agree to indemnify and hold harmless the other from and against any claims of any real estate broker or agent with which such party has engaged or dealt with in connection with this transaction. Buyer and Seller agree that upon the closing of the transaction contemplated by this agreement, Buyer and Seller will each pay the commissions due their respective real estate companies and agents. Without limiting the foregoing, Bill Sirmon is the broker for Seller and is not a broker for the Buyer and shall be compensated pursuant to a separate agreement between Seller and Bill Sirmon.

18. DEFAULT.

(a) By Buyer. Subsequent to the delivery of a Notice of Exercise and the designation of an Option Parcel(s), if all conditions and other events precedent to Buyer's obligation to consummate the purchase of the designated Option Parcel(s) have been satisfied or waived in writing by Buyer, and if Seller has performed its covenants and agreements hereunder, but Buyer has breached its covenants and agreements hereunder and has failed, refused, or is unable to consummate the applicable purchase and sale contemplated herein, then Seller shall give Buyer written notice of such circumstances and Seller shall be entitled to payment of Five Thousand and no/100 Dollars (\$ 5,000) as liquidated damages and as its sole remedy hereunder.

(b) By Seller. Subsequent to the delivery of a Notice of Exercise and the designation of an Option Parcel(s), if all conditions or other events precedent to Seller's obligation to consummate the purchase of the designated Option Parcel(s) have been satisfied or waived by Seller, and if Buyer has performed its covenants and agreements hereunder, but Seller has breached its covenants and agreements hereunder and has failed, refused or is unable to consummate the purchase and sale contemplated herein, then Buyer shall give Seller written notice of such event and Buyer shall be entitled to any and all remedies to which it is entitled at law and in equity.

19. AGREEMENTS AND COVENANTS OF SELLER. In order to induce Buyer to enter into this Agreement, and, upon exercise, if any, of the option granted herein, to purchase one or more Option Parcels, Seller does hereby agree and covenant as follows:

(a) Seller shall cooperate in any rezoning which may be necessary for the development of the Premises on an Option Parcel by Option Parcel basis.

(b) Seller shall cooperate in working to insure that the Premises is not designated by FEMA as a floodway.

(c) Seller agrees that there shall be no amendments, modifications, extensions, waivers, releases or other alterations of any type of (i) the Agreement dated June 25, 1997 between Manning and Congaree Farms, LLC, as amended by Addendum to Agreement dated July 16, 1997 (together the "Congaree Farms Agreement") and (ii) the Agreement dated July __, 1998 between Manning, Chapel Hill, LLC and DAK III, LLC (the "Chapel Hill/DAK Agreement") without the prior written consent of the Buyer in each instance.

(d) DAK; Chapel Hill. Seller agrees to utilize its best efforts to cause DAK III, LLC and Chapel Hill, LLC to extend Seller's rights to repurchase portions of the Property owned by, or subject to repurchase rights held by, them beyond February 17, 1999 for as long as possible to and including July 17, 1999. Upon any such extension, the option granted herein by Seller to Buyer shall automatically extend through the extended date of expiration of Seller's rights.

20. ASSIGNMENT. This Agreement may be assigned by Buyer to any individual, partnership, limited liability company or corporation without the prior written consent of Seller. 

21. COMPLETENESS AND MODIFICATION. This Agreement constitutes the entire agreement between the parties hereto with respect to the transactions contemplated herein and it supersedes all prior discussions, undertakings or agreements between the parties. This Agreement shall not be modified except by a written agreement executed by both parties.

22. BINDING EFFECT. This Agreement shall be binding upon and inure to the benefit of the parties hereto, and their respective successors and assigns.

23. SURVIVAL OF WARRANTIES. It is the express intention and agreement of the parties to this Agreement that all covenants, agreements, statements, representations, warranties and indemnities made by the parties in this Agreement (which shall be deemed to include the matters and information disclosed in any document or instrument delivered by Seller pursuant to the provisions of this Agreement or at or in connection with the applicable closing) shall survive each and every closing, if any, of a purchase of an Option Parcel(s).

24. WAIVER. Failure by Buyer or Seller to insist upon or enforce any of its rights hereunder shall not constitute a waiver thereof.

25. GOVERNING LAW. This Agreement shall be governed by and construed under the laws of the State of South Carolina.

26. HEADINGS. The paragraph headings as herein used are for convenience or reference only and shall not be deemed to vary the content of this Agreement or the covenants, agreements, representations, and warranties herein set forth or limit the provisions or scope of any provision.

27. PRONOUNS. All pronouns and any variations thereof shall be deemed to refer to the masculine, feminine, neuter, singular or plural, as the identity of the person or entity may require.

28. TIME OF ESSENCE. Both parties hereto specifically agree that time is of the essence to this Agreement.

29. COUNTERPARTS. To facilitate execution, this Agreement may be executed in as many counterparts as may be required.

30. NOTICES. All notices, requests, consents and other communications hereunder, including the Notice of Exercise, shall be in writing and shall be personally delivered or mailed by First Class, Registered or Certified Mail, return receipt requested, postage prepaid, or sent by a national overnight courier service, as follows:

(a) If to Buyer:

Burroughs & Chapin Company, Inc.
2411 Oak Street, Suite 402
Myrtle Beach, South Carolina 29577
Attn: Mr. George Gregory

(b) If to Seller:

Any such notice, request, consent or other communication shall be deemed received at such time as it is personally delivered or on third business day after it is mailed, whichever is earlier.

31. INVALID PROVISIONS. In the event any one or more of the provisions contained in this Agreement shall be for any reason held invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provision of this Agreement; this Agreement shall be construed as if such invalid, illegal or unenforceable

provision had never been continued herein or therein.

32. MEMORANDUM OF OPTION. Buyer and Seller, upon the execution of this Agreement, agree to execute a memorandum of option to be recorded in Richland County, South Carolina, to evidence and give notice of the existence of this Agreement.

33. CONFIDENTIALITY. Seller agrees that this Agreement and any and all information and materials related thereto shall be kept confidential by it and not disclosed or disseminated except to its legal and financial advisors.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the day and year first above written.

WITNESSES:

BUYER:

BURROUGHS & CHAPIN COMPANY, INC.

By: _____

Its: _____

SELLER:

By: _____

Burwell D. Manning, Jr.

EASTERN CORN & GRAIN COMPANY, INC.

By: _____

Its: _____

OVERLOOK, INC.

By: _____

Its: _____

EXHIBIT A

Property	Owner	Repurchase/Purchase Rights
I. Levy Section I (1418 acres)		
A. Parcel B-1 (246.57 acres) Parcel B-2 (8.227 acres) Parcel E (320.2 acres)	DAK III, LLC	Manning has right to repurchase for \$2,097,600 by February 17, 1999.
B. Balance	Congaree Farms, LLC	Manning has right to repurchase for \$1,800 per acre net by February 17, 1999; DAK has right to purchase from February 18, 1999 to July 17, 1999; further assigned to Chapel Hill subject to DAK's rights.
II. Levy Section II (1640 acres)		
A. Rutledge Tract (516 acres) Tokunaga Tract (55.5 acres) Truesdale Tract (11.44 acres)	Chapel Hill, LLC	Manning has right to repurchase for \$2,502,400 by February 17, 1999.
B. Whitehouse Tract Martin Tract Baron II Tract	Congaree Farms, LLC	Manning has right to repurchase for \$1,400 per acre net by February 17, 1999; Chapel Hill has right to purchase from February 18, 1999 to July 17, 1999; further assigned to DAK subject to Chapel Hill's rights.
III. Levy Section III (1352 acres)		
A. Guignard Tract (544 acres) Parcel B of Shull and Miller Chappell Tract (279 acres)	Chapel Hill, LLC	Included in Manning's right to repurchase Levy Section II above.
B. Remainder of Shull and Miller Chappell Tract Manning Lux Chappell I Chappell II Baron I Kirkland McCrae-Kirkland Drucilla Chappell	Congaree Farms, LLC	Manning has right to repurchase for \$1,200 per acre net by February 17, 1999; Chapel Hill has right to purchase from February 18, 1999 to July 17, 1999; further assigned to DAK subject to Chapel Hill's rights.
IV. Section IV (30 acres)	Congaree Farms, LLC	Manning has right to repurchase for \$3,000 per acre net by July 17, 1999
V. Section V (10 acres)	Congaree Farms, LLC	Manning has right to repurchase for \$7,000 per acre net by July 17, 1999
VI. Bluff Estates (10 acres)	Congaree Farms, LLC	Manning has right to repurchase for \$3,000 per acre net by July 17, 1999

Columbia Venture, LLC v. Richland County
Richland County Case No. 2010-CP-40-8943R

Acres and Zoning Designation of Columbia Venture, LLC Property at Time of Purchase (February 19, 1999)

<u>Zoning Designation¹</u>	<u>Parcel (Acreage)²</u>	<u>Total Acreage</u>
D-1 Development District (§ 26-62.1): "This district is intended to provide for large tracts of land located primarily on the fringe of urban growth where the predominant character of urban development has not yet been fully established, but where the current characteristics of use are predominantly residential, agricultural, or semideveloped, with scattered related uses. . . . It is further recognized that future demand for developable land will generate requests for amendments in zone designations to remove land from the D-1 classification and place it into other more intensely developed classifications as a natural consequence of urban expansion."	10900-01-02 (1,008.50) 11000-01-02 (954.84) 11000-02-01 (141.80) 11100-01-07 (15.00) 11100-01-08 (76.61) 13400-01-01 (55.30) 13400-01-02 (50.00) 13400-01-03 (516.00) 13400-02-01 (35.96) 13500-01-01 (11.262) 11100-01-09 (255.49)	3,120.762 acres
RU Rural District (§ 26-61.1): "This district is intended to (1) protect and encourage agricultural endeavors and promote the wise use of prime agricultural and forest lands, (2) protect and encourage the integrity of existing rural communities, (3) protect valuable natural and cultural resources, (4) maintain open space and scenic areas contiguous to development areas."	13300-01-01 (45.00) 13300-01-04 (394.00) 13300-01-05 (502.50) 13400-02-10 (52.18) 13400-02-16 (254.80) 13400-02-17 (29.00)	1,277.48 acres
M-1 Light Industrial (§ 26-68.1): "This district is intended to accommodate wholesaling, distribution, storage, processing, light manufacturing, and general commercial or agricultural uses. . . ."	13500-05-01 (40.00)	40 acres
RS-3 Single Family Residential (§ 26.63.1): "These districts are intended as single family residential areas with low to medium population densities. . . ."	13513-01-27 (10.00)	10 acres
	Total Acreage	4,448.242 acres

¹ All Zoning Designation descriptions are from the Richland County Zoning Ordinance, as amended through January 1999. Exhibit P230. (DEF-00012743.002).

² All Parcel Acreage TMS references and acreage are from CVMcNair000877, CVMcNair000211, and CV016518. Exhibits P257, P274, and P434.

MEMORANDUM

TO: Columbia Venture LLC File

FROM: George T. Gregory, III *G.T.G.*

DATE: February 8, 1999

RE: Dike Upgrade

This memorandum is provided to document the fact that I had a telephone conversation with the Honorable Mayor, Bob Coble regarding the upgrading of the Dikes to Corps of Engineer Standards on the Manning property area.

The City of Columbia owns a portion of the Dike and the Mayor assured me via telephone at approximately 10:30 a.m. on February 5, 1999 that the City would cooperate fully in all aspects allowing our proposed development group to enter and upgrade the dikes as necessary.

Columbia: 538625

CVMcNair002528

PLTF TRIAL EXH 500

PURCHASE OF APPROXIMATELY 4400 ACRES
NEAR COLUMBIA, RICHLAND COUNTY, SOUTH
CAROLINA BY COLUMBIA VENTURE, LLC
FROM BURWELL MANNING, JR., EASTERN
CORN AND GRAIN AND OVERLOOK, INC.

FEBRUARY 19, 1999

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D. Protected Species Habitat Assessment dated January 1999 and prepared by Environmental Permitting Consultants (complete report can be located in a separate binder in file 10366.00294)	

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PLTF TRIAL EXH 501

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CVMcNair000725

PLTF TRIAL EXH 501

**COLUMBIA VENTURE, LLC
KICK-OFF MEMBERS MEETING
MARCH 10, 1999 – 10:00 A.M. – 2:00 P.M.**

DRAFT

- I. GENERAL INTRODUCTION**
 - A. Member Backgrounds**
 - B. Member Business Interests**
 - C. Project Level of Interest (Active, Passive, etc.)**
- II. CURRENT STATUS OF DEVELOPMENT PROCESS**
 - A. Flooding/Floodplain – Efforts to Evaluate the Levee System**
 - 1. Additional Work Required**
 - 2. Best Cost Estimates**
 - 3. Soils Analysis**
 - 4. Timing Issues**
 - 5. Responsible Parties**
 - B. Business and Development Master Planning Efforts/Activities**
 - 1. Larry Best Initial Plan**
 - 2. Contact with the University**
 - 3. Contact with Richland County**
 - 4. Contact with the City of Columbia**
 - 5. Contact with Neighboring Land Owners**
 - 6. Potential End Users Identified**
 - 7. Levee Section III Discussions**
 - 8. Positive Press To Date**
 - C. Environmental Issues**
- III. FUTURE NEEDS OF DEVELOPMENT PROCESS**

CV005079

PLTF TRIAL EXH 502

2. Construction Manager

3. Administrative

g. Designation of Officers

h. Operating Procedures

1. Meetings

2. Communications

i. Office Facilities

j. Project Name

B. Future Objectives

1. Commerce development and sale of land as appropriate

2. Make members whole as soon as practicable

3. Find group make-up

4. Appreciate land values via infrastructure investment, development activities and marketing.

C. Overall Objectives

1. Maximize Profits

2. Develop a quality project of which all members will be proud

3. Be a good corporate citizen in the Columbia area

CV005080

PLTF TRIAL EXH 502

CARY MCSWAIN

From: CARY MCSWAIN
 To: Monday, March 22, 1999 7:27 PM
 Subject: MARY WILLIAMS
 RE: FORMAT AND AGREED INTENT OF MARCH 24th MEETING

Mary:

Please send cc of this to Deas Manning, Lisa Holland at DNR, and Wilson Tillotson at Lockwood-Greene; Mike Bierman, & Harry Reed.

Cary

-----Original Message-----

From: Cary McSwain [mailto:cmcswain@logicsouth.com]
 Sent: Monday, March 22, 1999 7:20 PM
 To: 'bel.marquez@fema.gov'
 Subject: FORMAT AND AGREED INTENT OF MARCH 24th MEETING

Dear Ms. Marquez

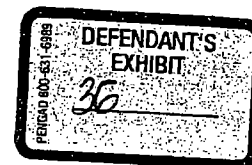
Although our telephone discussions previously and today have reaffirmed my original request for an informal meeting to share information regarding the data upon which the revised preliminary maps are based, the letter of March 8, 1999 from Clayton Saudier continues to confuse our agreed upon format. The problems are excerpts as follows: ..meeting to present the revised preliminary FIS Study; ..meeting conducted by Ms. Bel-Marquez;..purpose of meeting to present and review revised Countywide Preliminary FIS;..community is responsible for notice;..beyond the legal notices published by FEMA;..consider publicizing the meeting;..provided a model news release or your use.

The terminology indicates a FEMA meeting. This a Richland County meeting at which we will share information, discuss any points of divergence based on methodology, data or other relevant points. The tone, format, and process of the meeting is to be informal and give ample opportunity to raise questions and rationally share information. If any substantive issues are determined, then I expect we can enumerate these, give explicit and specific time frames to remedy any problems with the data used, the map generation, or with the methodology. This is not intended to be the start-up of the FEMA formal 90 day period for input. It is intended to remove any residual distaste, mistrust, or doubt previously and somewhat continually expressed by those in attendance at the first meeting with FEMA.

Hopefully and responsibly, we can together resolve enough issues through this process and through this meeting that we can agree upon a date at which the formal FEMA process for the revised preliminary maps introduction can begin. It makes no sense for FEMA to impose maps without knowing and understanding the available technical information in our community. It makes no sense for Richland County to be at loggerheads with FEMA when a full effort at understanding and discourse can resolve any standing issues.

Thank you for coming to Richland and for the willingness to carry through with this informal meeting. Please let me know if there is anything you need for the meeting or if I can do anything to help the meeting be as productive as possible.

Cary McSwain
 County Administrator
 Richland County, S.C.



MEETING OF THE MEMBERS OF COLUMBIA VENTURE, LLC

Columbia, South Carolina
March 24, 2000

A meeting of the members of Columbia Venture, LLC was held at the Carolina First building on Forest Drive in Columbia, South Carolina on March 24, 2000.

The meeting was called to order by Doug Wendel, President of Burroughs and Chapin Company, Inc. In attendance when the meeting began were Mr. Wendel, Dowdell Brown, George Gregory, Barry Spivey, Jim Wiseman, and Amanda Floyd, representing Burroughs and Chapin; Lane Fowler, representing Lockwood Greene, Inc.; and Burwell Manning, Bea Manning, Deas Manning, and John Kerr representing Green Diamond, LLC. Also in attendance when the meeting began were Judith McInnis and Jim Siokos of McNair Law Firm, P.A. Mr. Wendel presided at the meeting.

Mr. Wendel began the meeting by welcoming the attendees and giving a brief overview of the company's status. He then introduced Dowdell Brown, who recently joined Burroughs and Chapin and was made project manager for the Columbia Venture development.

Mr. Brown gave a brief history of his background before joining Burroughs and Chapin and then reported on the status of the Columbia Venture project. He distributed two preliminary alternative site plans for the project development. One alternative was based on Columbia Venture's acquiring property now owned by John Foster's family or by Kirkman Finlay situated approximately in the center of the proposed development, property now owned by Bill Gregg, and the current State Farmers' Market site located on the northwest side of the development. The other alternative was based on the outparcels' not being acquired. Mr. Brown also discussed other possible acquisitions of adjacent land from Norfolk-Southern and Bill Gregg.

During Mr. Brown's presentation, Lowell Ball and Bill Diffenderfer, representing Fort Carson Family Housing, LLC, and Mack Whittle, representing Carolina First Corporation, joined the meeting. Mr. Brown quickly recapped the items he had covered and proceeded with his report. The meeting adjourned for a lunch break during Mr. Brown's report, at which time Mr. Whittle left the meeting.

Mr. Brown then continued his report by presenting a timetable of the various tasks to be performed in developing the project, which included refining the site plans, obtaining required FEMA approvals and constructing levees as required, obtaining flexible zoning restrictions for the development, preparing restrictive covenants to apply in the development, making infrastructure improvements, and commencing sales efforts. A discussion of the likelihood of meeting the deadlines in the timetable ensued, during which it was agreed that some of the tasks could be performed simultaneously at little added expense in order to save time. Mr. Brown stated that the timetable was subject to

continuing review and refinement and that he welcomed any suggestions on ways to improve efficiency.

Mr. Gregory next reported on the status of his discussions with various governmental entities, including the City of Columbia, Richland County Council, the State of South Carolina, and the University of South Carolina, with respect to zoning and other issues facing the project and the prospects for locating facilities such as athletic and research facilities for the University in or near the project development. Mr. Gregory also reported on the prospects for relocating the State Farmers' Market from its current location adjacent to the project site, which would create areas for expansion of the project development, as well as the prospects for purchasing outparcels that would enhance the value of the project development. Mr. Whittle returned to the meeting during Mr. Gregory's report.

After Mr. Gregory completed his report, Mr. Wendel and Mr. Spivey reported on the company's finances.

Following the financial report, Mr. Wendel stated that the last major item of business was to discuss the redemption of Green Diamond's interest in Columbia Venture. Mr. Wendel stated that, due to the FEMA approval process' taking longer than expected, the company would like to get an extension of the lock-up on Green Diamond's membership interest. Burwell Manning stated that he was not opposed in principle to such an extension, but that he would like to have the company redeem a \$2 million portion of Green Diamond's interest before the expiration of the original lock-up period. Burwell Manning, Bea Manning, Deas Manning, and John Kerr then left the meeting to allow the other members of the company to discuss the matter. Following the discussion, it was agreed that Mr. Wendel would attempt to reach an agreement with Burwell Manning with respect to the extension before the expiration of the original lockup, but that if an agreement could not be reached, the company would redeem Green Diamond's entire interest before the expiration of the original lockup period. Mr. Whittle stated that he believed that Carolina First Bank would be able to finance some or all of the redemption. Burwell Manning, Bea Manning, Deas Manning, and John Kerr then returned to the meeting and were informed of the results of the discussion.

There being no further business, Mr. Wendel thanked everyone for their attendance, and the meeting was adjourned.

Respectfully submitted,

TOTAL P.03

CV000874

PLTF TRIAL EXH 506

Columbia Venture, LLC

Meeting Minutes

January 26, 2001

A meeting of the members of Columbia Venture, LLC was held at the Carolina First Building on Forest Drive in Columbia, South Carolina on January 26, 2001 at 10:00 a.m.

In attendance were Douglas P. Wendel, J. Egerton Burroughs, Dowdell Brown, Jim Wiseman, Tony Cox, and Barry Spivey, representing Burroughs & Chapin Company, Inc.; Wilson Tillotson on behalf of Lane Fowler, representing Lockwood Greene Engineers, Inc.; Mac Whittle and Justin Strickland, representing Carolina First Corporation; Bill Diffenderfer, representing Regent Columbia; Wade Nichols representing NLBF, LLC; Burwell Manning, Deas Manning, and Bea Manning, representing Green Diamond, LLC; and Martin Becker, FEMA Consultant. Mr. Wendel presided at the meeting.

The agenda was unanimously approved as distributed. The minutes of the previous meeting were unanimously approved as distributed (see attached).

The meeting began by Mr. Wendel welcoming the attendees. Mr. Wendel then introduced George Gregory to speak of the FEMA mapping process and the anticipated outcome. Mr. Gregory briefly discussed the result of the latest map and explained that the time schedule of the public comment period had been extended by FEMA. The ninety day comment period ended on January 2, 2001 and comments were posted on the FEMA website. February 15, 2001 will be the deadline for commenting on the January 2, 2001 information.

Martin Becker, FEMA consultant, then reviewed the methods of approach discussed in the November 3, 2000 meeting. He advised of the technical, political, and mitigation approaches in order to have Lexington County support the project. Mr. Becker also discussed the comments that were posted on the FEMA website. He stated he did not see anything that would hinder the process. Mr. Becker then talked about the issue regarding Lexington County and the resolution that they passed in November supporting the technical position. He explained the City of Cayce was similarly affected and they endorsed the resolution by a resolution for their city. It was noted the City of Columbia has come to realize they would be better off with Columbia Venture, LLC upgrading the Congaree River levee rather than attempting a ring levee around the Waste Water Treatment Plant.

Mr. Becker also discussed a meeting to be held in Atlanta between FEMA, representatives of Columbia, Richland County, Cayce, Lexington, and Columbia Venture, LLC. He felt the key element was illustrating local support.

The last point Mr. Becker talked about concerned the inability to build within a floodway in Richland County. He explained that this was incorrect and information was provided to Richland County in this regard. Mr. Becker was also encouraged that end processes with FEMA were near.

PLTF TRIAL EXH 507

CV009803

During questioning, Mr. Becker was asked if Richland County was incorrect and if building in a floodway was permitted. Mr. Becker explained that when there is a conflict between local and federal regulations, the stricter would prevail. He explained that the attorney for Richland County feels that Richland County is the stricter; however, Mr. Becker went on to explain that in 1988 FEMA clarified their language on the encroachment issue and specifically stated their new language was to be automatically incorporated into all of local ordinances around the country. Richland County never updated their ordinance. He noted that as long as construction did not create a rise situation to the base flood elevation, then encroachment in the floodway was allowed. Richland County's attorney has not acknowledged this, however, Mr. Wiseman is currently working on the situation.

Mr. Becker was also asked how much of the land plan would be able to be developed under the proposed September 2000 map. Mr. Becker replied all of it based on his interpretation of the Richland County ordinance. He went on to further explain that if the levee was upgraded to a certified levee, all of the land would be taken out of the floodway.

Mr. Becker also described "Plan B". He explained that the plan was in the final stages and would demonstrate FEMA's Map #4 should have been used. Mr. Becker explained the error found in the technical process by FEMA. Mr. Becker felt it was realistic to expect a resolution from FEMA by April 1, 2001.

Wilson Tillotson and Jim Wiseman then discussed the anticipated infrastructure cost and construction schedule. Mr. Wiseman explained that once FEMA has approved an acceptable map, infrastructure work could begin. He explained the adoption of a Development Agreement and Multi County Business Park Agreement would take at least 90 days and construction could be underway by the end of 2001. He explained that the actual construction period would be 8 to 10 months and an additional 30 days to have the levee certified. Mr. Wiseman then briefly discussed the Multi County Business Park agreement. He explained he had been working with Bernice Scott, who has been very supportive. He then discussed the political strategy and explained it was being implemented.

Next, Mr. Wendel discussed the status of potential investors. He talked about the letter sent to Tracy McGee of Top Box, Inc. requesting an escrow of the funds and an agreement to close the deal once an acceptable FEMA map was approved. Charles McCallum also discussed a second potential investor, Jefferson Development Corporation of Houston, Texas. It was agreed that Jefferson Development Corporation would be an advantageous investor considering their experience and credibility.

Mr. Wendel then discussed potential exit plans and alternative ideas on use of the property. Tony Cox of Burroughs & Chapin was assigned to develop exit plans.

Mr. Wendel then briefly discussed options for renewing outstanding notes, which will be coming due soon. He discussed approaching the bank and paying down the line of credit in sufficient amounts to secure a renewal and a credit line until the end of the year. He noted approximately 1 million dollars would be needed to meet cash flow needs. A

detailed discussion ensued and all members were asked to determine the extent of their ability/interest reference paying down the notes and guarantees.

Mr. Wendel then asked whether there was any other business which any member would like to have discussed at the meeting. There being no further business, Mr. Wendel thanked everyone for their attendance and the meeting was adjourned.

Minutes submitted by: Shawna L. Stearns

Columbia Venture, LLC

**Meeting Minutes
March 9, 2001**

A meeting of the members of Columbia Venture, LLC was held at the Carolina First Building on Forest Drive in Columbia, South Carolina on March 9, 2001 at 10:00 a.m.

In attendance were Mr. Doug Wendel and Egerton Burroughs, Dowdell Brown, Jim Wiseman, Tony Cox, Barry Spivey, George Gregory and Dr. Peter Barr representing Burroughs & Chapin Company, Inc.; Wilson Tillotson on behalf of Lane Fowler, representing Lockwood Greene Engineers, Inc.; Wade Nichols representing NLBF, LLC; Bill Diffenderfer, representing Regent Columbia; Bea Manning and Deas Manning representing Green Diamond, LLC; an effort was made to connect Mr. Mac Whittle via telephone speakerphone without success; Justin Strickland, lender of Carolina First Corporation; Charles McCallum representing McCallum Company, Inc.; Martin Becker, FEMA consultant; Tim Rogers of Austin, Lewis & Rogers; Bill Boyd of Sinkler & Boyd. Mr. Wendel presided at the meeting.

The agenda was distributed and was unanimously approved. The minutes of the previous meeting were reviewed (see attached) and Mr. Bill Diffenderfer felt the minutes needed to have more detail to help the members report to their superiors. Mr. Wendel agreed and requested that more detailed key reports be attached as addendums to the minutes in order to clarify major items of importance. A motion was made to adopt the minutes as presented and unanimously approved.

Mr. Wendel briefly discussed a letter of endorsement for the University of South Carolina. He spoke of the importance the project has to the University and stated that it would benefit to partner with the University. He discussed setting aside acreage for the University and to have the staff authorized to discuss this with the University. Mr. Wendel also discussed the possibility of inducements for the University and stated there were several different options available. Mr. Wendel believed USC's involvement would renew a positive image for the project as well as dramatically increase the size of USC's campus. Mr. Wendel explained this would be a future discussion after a meeting had taken place with USC to commence the design approach and the structure of the relationship.

Mr. Wendel then introduced Mr. George Gregory and Mr. Martin Becker to discuss the FEMA flood mapping process, the status report and the anticipated resolution and related schedule. Mr. Gregory advised of the progress made relative to FEMA since the last meeting occurred. He stated that the primary issue had been the February 15, 2001 deadline for submittal of all technical data that was relative to the September 2000 map. Mr. Gregory also explained the situation with McNair Law Firm's conflict due to representing two parties, a landowner, Mr. Branchard, and Columbia Venture, LLC.

CV009795

PLTF TRIAL EXH 508

Once the situation was realized, Mr. Bill Boyd of Sinkler & Boyd was hired to take McNair's place. Mr. Gregory explained how Mr. Boyd and Lockwood Greene Engineers created a detailed booklet for submittal to FEMA.

Mr. Martin Becker, FEMA consultant, then reviewed the details relative to the submittal to FEMA. Mr. Becker stated Columbia Venture had taken a more sophisticated approach in trying to define there was no floodway behind the levee on the Richland side of the river as was the case with the September 1999 map. He stated this was the central focus of the submittal. Mr. Becker explained if the September 2000 map prevailed the main hurdle was simply how to present the map in a manner that shows no floodway from a regulatory standpoint rather than an engineering standpoint. Mr. Becker was confident the September 2000 map was usable in two ways: 1) With the Lexington County and the City of Cayce resolutions, which analyzed the ability to go forward with the levee retrofit using the more conservative Lexington BFE. This would put the floodway on the Lexington side of the river so the project could move forward with levee upgrade/construction. 2) He did not believe we met the threshold for the mitigation requirement (65.12) if the levee is retrofitted. With those two facts, Mr. Becker felt very comfortable that the project could proceed based on local cooperation. Bill Boyd agreed and felt there should be a way to work through the FEMA process.

Mr. Becker then briefly discussed a situation in Los Angeles, California, in which FEMA designated an area as a temporary flood protected zone allowing the levees to be upgraded within five years. Mr. Becker explained that he was currently studying this option.

Mr. Wendel then discussed the detailed booklet that was submitted for the February 15, 2001 deadline. He explained the booklet indicated if the levees were breached and water entered into the property behind the levee, there would be little to no flooding on the property. Mr. Wendel also stated FEMA indicates they will release its letter of determination within 45-60 days. Mr. Wendel then began discussion on the Washington status. He explained that with the change in administration, he felt there would be a more objective appraisal of the scientific data. Columbia Venture was making an effort to secure the South Carolina Delegation's support for a fair and timely analysis by FEMA. A brief discussion ensued regarding which map would be better to have approved. Mr. Becker felt the September 2000 map would be the best due to timing.

Mr. Becker then discussed the process if the September 2000 map were to be approved. He explained there is a two-month window in which anyone has the right to sue. He stated the map would not be official for six months from the letter of final determination. During that period, Mr. Becker explained the local communities have to adopt the map within their flood control ordinance. He stated that building permits could be obtained in the interim. He also stated the strategy would then be to go to Lexington County and the City of Cayce and have the map formally adopted in accord with their resolutions; then CLUMR should be able to move forward.

CV009796

PLTF TRIAL EXH 508

Mr. Wendel then discussed how staff was pursuing a parallel course, presuming the project was approved by FEMA. Mr. Wendel explained how Dowdell Brown, Dr. Peter Barr, Bill Prichard, Jim Wiseman, Tim Rogers, George Gregory and others, were working on development, multi-county business and annexation agreements. He indicated that he was optimistic that Columbia, Richland County, and Richland School Board's approval of these documents with hard work could be secured while the FEMA process was proceeding. Thus, when a positive FEMA map is secured, everything would be in place to move ahead with levee and infrastructure work.

Mr. Wendel then introduced Mr. Dowdell Brown. Mr. Brown explained that the development master plan was finished and a location for the University of South Carolina research campus had been established. Mr. Brown stated the development and annexation documents would be ready for submittal by the end of the month.

Dr. Peter Barr then discussed the MCBP. He felt the primary concerns were the revenue that would be generated and the costs that would be necessary for the city, county and school district to undertake. Dr. Barr explained the total improved acreage of commercial and residential is approximately 3,300 acres and involve a total investment over a 30-year period of approximately \$4.2 billion. Dr. Barr then explained the comparison he had taken from other markets with research parks to be sure estimates on assimilation were reasonable. He stated he had taken three research parks and compared them to the Green Diamond project in terms of aggregate population over a 30-year period. He explained the commercial end would generate \$1.5 billion from tax revenues, \$551 million from the county, \$361 million from the city, \$757 million from the school district, and \$509.3 million from residential taxes. Dr. Barr explained this was based on the existing milage rate with no increases in milage. Dr. Barr also explained he is currently working with Wilbur, Smith & Associates on the costs to provide City services, if annexed, as well as the costs to County to fund government services. Dr. Barr stated that after you deduct costs of services, there should be significant funds remaining for other needs (e.g. infrastructure, enhanced services, or reduced taxes).

Mr. Jim Wiseman was then introduced to discuss the local political framework. Mr. Wiseman briefly discussed efforts made and being made to gain support from the Richland County and Columbia Councils. Mr. Wiseman also spoke of the support from the African American Community and how the community has been an advocacy group for the project.

Mr. Tim Rogers, consultant with Columbia Venture, then also reviewed the political environment and stated he felt efforts to secure approvals for the project were proceeding very favorably.

Mr. Mack Whittle of Carolina First was connected via speakerphone.

Mr. Barry Spivey was then introduced to discuss the financial status of the project. He reviewed and distributed an audit statement for the year 2000, February 2001

CV009797

PLTF TRIAL EXH 508

Financial Statements, and status of efforts to secure favorable note renewal terms and conditions. (See attachments.)

Mr. Wendel then discussed options for note renewal and how refinancing of the \$7.5 and \$3.0 Million notes would proceed under different scenarios. A call was then put through to Mr. Jim Seokis regarding a fee to be paid for those who guaranteed notes if some of the members would not step forward since "guarantecs" were not addressed in the *Operating Agreement*. Mr. Seokis explained it was not uncommon for a guarantee fee, such as 3%, to be paid. Mr. Seokis also explained for B&C as managing partner to consult the board is advisory, however, it is up to the managing partner to make the decision regarding the fee upon a called vote on a guarantee fee. Mr. Bill Diffenderfer and Mr. Wilson Tillotson both voted against the fee with all others voting in favor. Mr. Diffenderfer and Mr. Tillotson also indicated they would not be willing to participate in providing any additional capital to meet ongoing financial needs. The other members indicated they would. Mr. Wendel then asked all to further consider loan requirements and capital needs and that a conference call meeting would be held for all to have time to discuss these issues with their superiors and to make a final decision. It was agreed the members would have a conference call Wednesday, March 14, 2001 at 10:30 a.m. J. Egerton Burroughs, B&C Chairman of the Board, made a motion to reconcile all McNair Law Firm invoices and to make payment on all due. The motion was unanimously carried.

Mr. Wendel then introduced Mr. Tony Cox to discuss possible exit plans. Mr. Cox explained two scenarios: 1) If the current flood map stays the same, the property could then be subdivided into parcels outside of the levee sections and sold off for approximately \$16.5 million. Within the levee sections the property could be sold off at approximately \$9.6 million, totaling \$26.1 million. 2) If the current flood line is moved, Mr. Cox felt the \$26.1 million could be doubled. Mr. Cox felt the current \$3,000 per acre could go up to \$10,000 to \$15,000 per acre if the flood line is moved.

Mr. Cox also explained the possibility of placing an environmental conservation easement on a portion of the property. Mr. Cox stated he had met with consultants two weeks ago and it was felt that with the conservation easements, \$108 million in tax credits could be generated. Mr. Cox then stated he was continuing to work on different scenarios and would have more information at the next meeting.

Mr. Wendel then discussed the possibility of bringing in new members to purchase tax credits generated by "conservation easements". Mr. Wendel stated that if new members were to be brought on board, timing is an issue. Mr. Wendel explained the situation with Top Box, a possible investor. He stated they had not met established deadlines and were no longer under consideration. Mr. Wendel then discussed another possible investor, the Jefferson Group. Mr. Wendel stated he had received a strong letter of interest from the Jefferson Group, but had not had time to evaluate it. Mr. McCallum agreed that the Jefferson Group was very interested and had expressed their intent. Mr. Wendel stated he would speak with the Jefferson Group on various purchase/investment opportunities and have more information at the next meeting.

CV009798

PLTF TRIAL EXH 508

Mr. Wendel then asked whether there was any other business which any member would like to have discussed at the meeting. A discussion ensued regarding the next meeting of the members. It was agreed the next meeting would be held Friday, April 20, 2001 at 10:00 a.m. There being no further business, Mr. Wendel thanked everyone for their attendance and the meeting was adjourned.

Minutes submitted by: Shawna L. Stearns

TOTAL P.06

CV009799

PLTF TRIAL EXH 508

Columbia Venture, LLC

DRAFT

Meeting Minutes
April 20, 2001

A meeting of the members of Columbia Venture, LLC was held at the Carolina First Building on Forest Drive in Columbia, South Carolina on April 20, 2001 at 10:00 a.m.

In attendance were Mr. Doug Wendel and Egerton Burroughs, Jim Wiseman, Barry Spivey, Dr. Peter Barr and George Gregory representing Burroughs & Chapin Company, Inc.; Wilson Tillotson, representing Lockwood Greene Engineers, Inc.; Wade Nichols representing NLBF, LLC; Bill Diffenderfer, representing Regent Columbia; Bea Manning and Deas Manning representing Green Diamond, LLC; Charles McCallum representing McCallum Company, Inc.; Rick Silver of Chernoff/Silver & Associates. Mr. Wendel presided at the meeting.

The agenda was distributed and was unanimously approved. The minutes of the previous meeting were reviewed and approved of unanimously. At this time Mr. Wilson Tillotson joined the meeting.

Mr. Wendel then introduced George Gregory to discuss the FEMA flood mapping process status report and anticipated resolutions. Mr. Gregory explained a private meeting had been requested with FEMA and the technical consultants, however, FEMA choose to have a public hearing. Mr. Gregory explained that they were focusing on the 2D model used by FEMA, which they felt was outdated (approximately 20 years old). Mr. Gregory stated that they would have individuals testifying that the software used by Burroughs & Chapin's consultants was far superior to that of FEMA's. Mr. Gregory also explained that the meeting would not be held to submit new information, but to clarify what had already been turned in on February 15, 2001 and during the review process. Mr. Gregory stated he felt very confident about the upcoming meeting on April 27, 2001. Mr. Wendel then stated he was hoping for contact by DOT and others who have a vested interest in seeing the FEMA flood map issue positively resolved. He also noted a wide variety of contact was and would be made to encourage a timely, fair, and scientifically based decision by FEMA.

Mr. Wendel then discussed the suggestion made by FEMA regarding a minor adjustment of approximately 100 feet to the levee on the north end of the levee system, which would pull the levee back slightly. Mr. Wendel handed out information pertaining to the levee. He explained that the adjustment should result in no mitigation on the Lexington and Cayce side and minimize a negative impact of any levee system adjustments as well as having a minimal cost impact. Mr. Wendel explained that this would all be funded under the MCBP. Mr. Wendel stated he felt very good about

CV007987

PLTF TRIAL EXH 509

Columbia Venture's position that was being taken at the hearing with FEMA. He also stated a decision by FEMA should be reached between 15-30 days after the meeting.

Mr. Wendel then explained that they were working diligently in coming up with strong, strategic initiatives to secure approval of the development agreement and the MCBP. He stated a request had been made for approximately \$77 million for infrastructure and approximately \$10 million for the levee upgrade, which would include adjustment/refinement of the levee. The balance would go to infrastructure for the research park. He stated there would be approximately \$15 million for the research inducements and the remaining would be for the storm water, sewage, water, etc. He also explained that there would be \$10.5 million for improvements in surrounding communities, \$6-\$7 million would be funded immediately; the balance would come as the project matures and evolves. Mr. Wendel also stated that as part of the development agreement, there would be a requirement to offer beneficial benefits back to the city in order for them to freeze the zoning and lock in all the ordinances that would regulate how the parcel can be developed. He explained that as a result, Columbia Venture would be donating, under the proposal, certain areas for parks, recreation, police stations, etc. amounting to around 600 acres. He stated the project, over a thirty (30) year period, would generate approximately \$1.2 million in excess revenues, which they would be proposing that 80% go towards Richland School District One to enhance the education, 10% to the City of Columbia and 10% to Richland County. Mr. Wendel stated he believed this would be important to selling the project as beneficial to the community and that the response to date has been very enthusiastic.

Mr. Wendel then introduced Rick Silver of Chernoff/Silver & Associates to discuss how public relations had been developing. Mr. Silver explained how the next 30-90 days would become proactive and positive. He stated that the ad campaigns, as relates to the levee and safety issues, were instituted using five other major, prominent cities protected by levees. Mr. Silver stated they were working on setting up a high-level community event and having Mr. Dyhouse, an engineer consultant, answer any questions. Mr. Silver believed the key was revealing the plans and showing the "simple truth of Green Diamond". He stated there would be a two-step proactive, advertising campaign; the first would be the environment and the safety of the levees and the second, the economic benefits of the program.

Mr. Wendel then briefly discussed the status of the potential investors, Jefferson Development Company. He stated the Jefferson Company was still considering their options at this time.

Mr. Barry Spivey was then introduced to discuss the financial status of the project. He reviewed and distributed the financial statements. Mr. Spivey also handed out an agreement regarding guarantees. He believed this would be a safe way to have all the members protected against a default on the loan.

CV007988

PLTF TRIAL EXH 509

Mr. Wendel then asked whether there was any other business, which any member would like to have discussed at the meeting. There being no further business, Mr. Wendel thanked everyone for his or her attendance and the meeting was adjourned.

Minutes submitted by: Shawna L. Stearns

CV007989

PLTF TRIAL EXH 509

Columbia Venture, LLC

**Meeting Minutes
June 29, 2001**

A meeting of the members of Columbia Venture, LLC was held at the Carolina First Building on Forest Drive in Columbia, South Carolina on June 29, 2001 at 10:00 a.m.

In attendance were Mr. Doug Wendel and Egerton Burroughs, Jim Wiseman, Barry Spivey, Dr. Peter Barr and George Gregory representing Burroughs & Chapin Company, Inc.; Michael McKelvy and Wilson Tillotson representing Lockwood Greene Engineers, Inc.; Justin Strickland, lender of Carolina First Corporation; Wade Nichols representing NLBF, LLC; Bill Diffenderfer, representing Regent Columbia; Bea Manning, Burwell Manning and Deas Manning representing Green Diamond, LLC; Charles McCallum representing McCallum Company, Inc. Mr. Wendel presided at the meeting.

The agenda was distributed and was unanimously approved. The minutes of the previous meeting were reviewed and approved of unanimously.

Mr. Wendel then briefly updated the members on current items. He explained that the public relations campaign had become more aggressive with newspaper ads, television commercials, mailings, and questionnaires. Mr. Wendel then discussed the situation regarding FEMA. He stated that Columbia Venture had asked FEMA for a meeting between FEMA and Columbia Venture scientists to discuss and resolve scientific data (supplemental data and additional consideration was requested as well as a private meeting with consultants); however, FEMA was reluctant to meet with consultants, but finally did agree to have an open meeting in the city of Columbia. Mr. Wendel explained that at the meeting, supplemental data and information was submitted to buffer our position that there was no floodway on Columbia Venture's property. The date seemed to be well received by both the politicians and the public. Shortly after the meeting, a letter was received from FEMA stating that they would not recognize the data submitted because the earlier deadline had passed. In addition to this, Mr. Wendel told of a letter written to FEMA by the State Department of Transportation that stated that the State Department of Transportation model used by FEMA was out of date, inaccurate, and was not designed to evaluate or construct levees. The letter also stated that the information Burroughs & Chapin's consultants were using was extremely accurate and scientific. However, Mr. Wendel stated that FEMA has also ignored this letter. After some discussions with FEMA and other authorities, Mr. Wendel explained that FEMA had made a decision to delay the maps and invite all appellants and FEMA experts to meet to explain their positions. FEMA requested briefing papers, which, Mr. Wendel stated, is in the final stage of development and due by July 6, 2001. The meeting is to be held in Atlanta, Georgia on July 24, 2001 and is to be closed to the public and press. Mr.

CV006754

PLTF TRIAL EXH 510

Wendel explained that FEMA has committed to present their finding and a new map two weeks after the meeting. He stated he saw this as a positive movement by FEMA and he also felt very confident about the situation because of the overwhelming scientific data Columbia Venture had submitted indicating no floodway existed.

Mr. Wendel then discussed the current Columbia and Richland County political environment and the plans to secure a formal approval of a development agreement and annexation. Mr. Wendel stated that the development agreement and the annexation were issues to be addressed with the city. Eventually, it would be necessary for the city to request a CLOMR ready map. Mr. Wendel then handed out information based on a questionnaire done by Richard Quinn & Associates. He explained that through the aggressive public relations, educational programs, newspaper ads, and television commercials, the questionnaire resulted in a 70% approval rate for the project.

Mr. Wendel then discussed some pertinent currently projected dates:

July 9, 2001	City, County, & School Board Task Force Hearing re: feasibility of the project and basic data review
September 1, 2001	1 st vote on Annexation
September 4, 2001	1 st Reading of the MCBP
October 3, 2001	Annexation should be in place
November 1, 2001	1 st Hearing and vote on zoning and development agreement and MCBP
November 30, 2001	Zoning and development agreement should be in place

Mr. Wendel then asked Mr. Wiseman to discuss the Green Diamond Task Force meeting that was held June 25, 2001. Mr. Wiseman also stated that several presentations had been made to rotary clubs and other public forums. Mr. Wiseman briefly discussed the city's involvement. He explained that the Mayor was behind the project 100%, however, he was being very cautious and methodical. Mr. Wiseman then discussed the MCBP and the negotiations with the County. He stated he felt the votes were there to pass the MCBP, assuming the annexation goes through as planned. Mr. Wiseman did not have a time frame, however, he stated the negotiations looked very positive. Mr. Wiseman felt the project was on track and felt confident the project would secure the approvals necessary to proceed assuming an appropriate FEMA map was secured.

Mr. Wendel then handed out a Q&A that was put together for the Green Diamond Task Force meeting that was held Monday, June 25, 2001. Mr. Tillotson stated that the meeting was very positive and it seemed as if the opposition had shifted their focus from the technical aspect to the financial funding. Mr. Tillotson was very pleased with the overall outcome of the meeting.

Mr. Wendel then introduced Mr. Barry Spivey to review the financial statements. Mr. Spivey distributed the financial statements. (See attached.) A discussion ensued

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about the cash needs of the Company to meet prior expenditures and those anticipated. Although all members expressed their support for the project and appreciation for the job done by the managing partner, there were some reservations from Lockwood and Regents for loaning any money to fund the \$1M needed to meet cash demands through September 2001. It was decided that all members would evaluate the cash request and a conference call would be held on July 6, 2001, at 9:00 a.m. to determine who would participate in meeting the additional cash needs and how it would be handled.

Mr. Wendel then briefly discussed the status of a potential purchaser/investor, Jefferson Development Company. He stated that the Jefferson Company was extremely interested in the project and that a contract was being finalized for Jefferson's review.

Mr. Wendel then asked whether there was any other business which any member would like to have discussed at the meeting. A discussion ensued regarding the next meeting of the members. It was agreed the next meeting would be held Friday, August 24, 2001 at 10:00 a.m. There being no further business, Mr. Wendel thanked everyone for his and her attendance and the meeting was adjourned.

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PLTF TRIAL EXH 510

AGENDA
MEETING OF THE MEMBERS OF COLUMBIA VENTURE, LLC
4875 Forest Drive Office
Columbia, SC 29206

December 13, 2001 at 10:00 a.m.

- I **Call to Order & Introduction of Participants** Douglas P. Wendel
- II **Approval of Agenda** Douglas P. Wendel
- III **Review & Approval of Minutes, August 31, 2001 Meeting (attachment)** Douglas P. Wendel
- IV **Review & Discussion of Current Status Greater Columbia Political Environment and Status of FEMA Map Appeal and Potential Levee Upgrade** Jim Wiseman
- V **Review of November 2001 Financials, Loan & Warrant Agreements and Projected 2002 Budget** Barry Spivey
- VI **Review & Discussion of Exit Strategy Options:**
 - Conservation Easement
 - Mining
 - Land Sale of Property Outside Floodway George Gregory, Jim Wiseman, Tony Cox, and Larry Kohler
- VII **Establishment of next meeting date** Douglas P. Wendel
- VIII **Other Business**
- IX **Adjournment**

Columbia Venture, LLC

**Meeting Minutes
August 31, 2001**

A meeting of the members of Columbia Venture, LLC was held at the Carolina First Building on Forest Drive in Columbia, South Carolina on August 31, 2001 at 10:00 a.m.

In attendance were Mr. Doug Wendel and Egerton Burroughs, Jim Wiseman, Barry Spivey, Dr. Peter Barr and George Gregory representing Burroughs & Chapin Company, Inc.; Michael McKelvy and Wilson Tillotson representing Lockwood Greene Engineers, Inc.; Justin Strickland, lender of Carolina First Corporation; Wade Nichols representing NLBF, LLC; Mack Whittle representing South Financial Group; Bill Diffenderfer, representing Regent Columbia; Bea Manning, Burwell Manning and Deas Manning representing Green Diamond, LLC; Mr. Wendel presided at the meeting.

The agenda was distributed and was unanimously approved. The minutes of the previous meeting were reviewed and approved unanimously.

Mr. Wendel briefly updated the members on current items. He explained that Martin Becker would no longer be acting as a consultant for Columbia Venture, LLC. He stated the consultants now working on the FEMA process would be Doug Hamilton of Exponent, Inc. and Mark Hester of Lockwood Green Engineers, Inc. Mr. Wendel then discussed the FEMA map, which was released on August 20, 2001. He stated it was a disappointment to see the results, given the evidence and data submitted appeared to be adequate and more comprehensive. Mr. Wendel felt the August 20, 2001 map was a political decision, however, he felt the project could still come to a conclusion that would make Green Diamond a reality.

Mr. Wendel then introduced John Napier of Winston & Strawn to discuss confidential matters regarding the project. All staff was excused except Jim Wiseman and Barry Spivey as the meeting went into executive session.

Mr. Wendel then discussed the finer points of a meeting with Mr. Robert Shea, of FEMA. He stated he proposed three questions to Mr. Shea: 1. Will FEMA be objective? 2. Will FEMA allow the use of the Lexington model? 3. Can FEMA give Columbia Venture, LLC a review in 60 days? Mr. Shea responded to the inquiry and stated that FEMA would be fair and objective with the analysis and he would personally oversee it. Mr. Shea also stated the use of the Lexington model would be allowed and a consultation would be given in the next 60 days. Mr. Wendel then discussed the situation with the City of Columbia's Mayor Coble. Mr. Wendel stated that discussions were being held with Mayor Coble concerning mutual interests between Columbia Venture, LLC and the City of Columbia concerning the FEMA map. Mr. Wendel stated that it would be

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imperative for the City of Columbia to support a plan for upgrading the levee for it to occur.

Mr. Wendel then introduced Bill Boyd of Sinclair & Boyd to inform the members of the legal matters. Mr. Boyd explained the importance of showing a no rise with the Lexington/Cayce resolutions as well as continuing dialog with the city in order to file a CLOMR. Mr. Boyd stated he was very confident with the situation and felt there were three reasons why the city should support the project. 1. Economic opportunity for Richland School District One, the city and the community. 2. City of Columbia Sewer Plant. 3. Transfer ownership to the levee district.

Mr. Boyd also discussed the course of action needed for CLOMR. He stated a no rise would have to be shown as well as continuing to work with the City of Columbia.

Mr. Boyd stated that to protect the rights of Columbia Venture, LLC an appeal had to be filed within a sixty-day period after the final map was released. He strongly recommended filing this appeal. This is necessary to stay the implementation of the FEMA map while Columbia Venture, LLC evaluates all the exit strategies and determines what direction the City of Columbia may take. The members unanimously consented to pursue the appeal based on Mr. Boyd's recommendation. Mr. Boyd also explained that the appeal could be dropped at any time in the future; however, if it was not filed within the sixty days, Columbia Venture would be in an untenable position for any future discussions with FEMA, therefore, severely damaging the value of the property.

Mr. Wendel then introduced Lary Kohler of Green Stripe to discuss the conservation easement options. Mr. Kohler explained the process of developing a conservation easement and the relationship between the landowner and a qualified organization. Mr. Wendel commented on having a conservation easement put in place before the new maps were adopted by local governments to protect property values. He stated the preliminary appraisal was \$109 million of approximately 800 acres of dense development area. Mr. Kohler stated that in his opinion, this value would allow new investors to be brought in and generate approximately \$24 million for the existing members of the partnership.

Mr. Kohler was excused and discussion about the conservation easement ensued. Mr. Manning brought up that Mr. Kohler was in the process of doing a similar easement on another piece of property that Mr. Manning owned. Mr. Manning said he thought the easement was a good idea but Mr. Kohler had been slow in getting his work done. Mr. Wendel asked if anyone else knew other consultants that may be used for this same purpose. Mr. Whittle stated he would check with Tommy Wyche and report back. All the members unanimously consented to pursue the concept of a conservation easement with a further report and discussion at the next meeting. Mr. Wendel also stated that any tax benefits would be first offered to the members prior to any new investors sought out.

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Mr. Wendel then introduced Mr. Barry Spivey to review the financial statements. Mr. Spivey distributed the financial statements. (See attached).

Mr. Wendel then handed out a motion (see attached). Mack Whittle and Wade Nichols approved the motion.

Mr. Wendel then asked whether there was any other business which any member would like to have discussed at the meeting. There being no further business, Mr. Wendel thanked everyone for his and her attendance and the meeting was adjourned.

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MOTION

Authorize Manager to pursue a sixty (60) day strategy to explore FEMA, Corps of Engineers and City of Columbia and tie down unequivocal support to allow the Manning Levee to be upgraded with little or no impact on the Lexington side of the river (requiring little mitigation), while simultaneously putting together a "conservation easement" plan for Member's consideration. Report to be ready for presentation no later than November 15, 2001.

Manager should also explore in more detail liquidation plans defining timeframe and dollar expectation and how they could be best implemented.

Budget for the levee upgrade, consultation and feasibility study, conservation easement preparation and liquidation plan is set at \$1,000,000. Funding for the budget to come from another loan of the Members willing to participate.

Further, an effort should be made in exploring these options to work with the City of Columbia, University of South Carolina, Heathwood Hall and the County of Richland to determine if possible interest exists to purchase all or a portion of the land for Wastewater Plant expansion, research park, conservation or recreation and/or expansion of Heathwood Hall School at a value necessary to secure sufficient funds to repay Columbia Venture Members back their investment and expenditures to date, and a reasonable profit, if possible.

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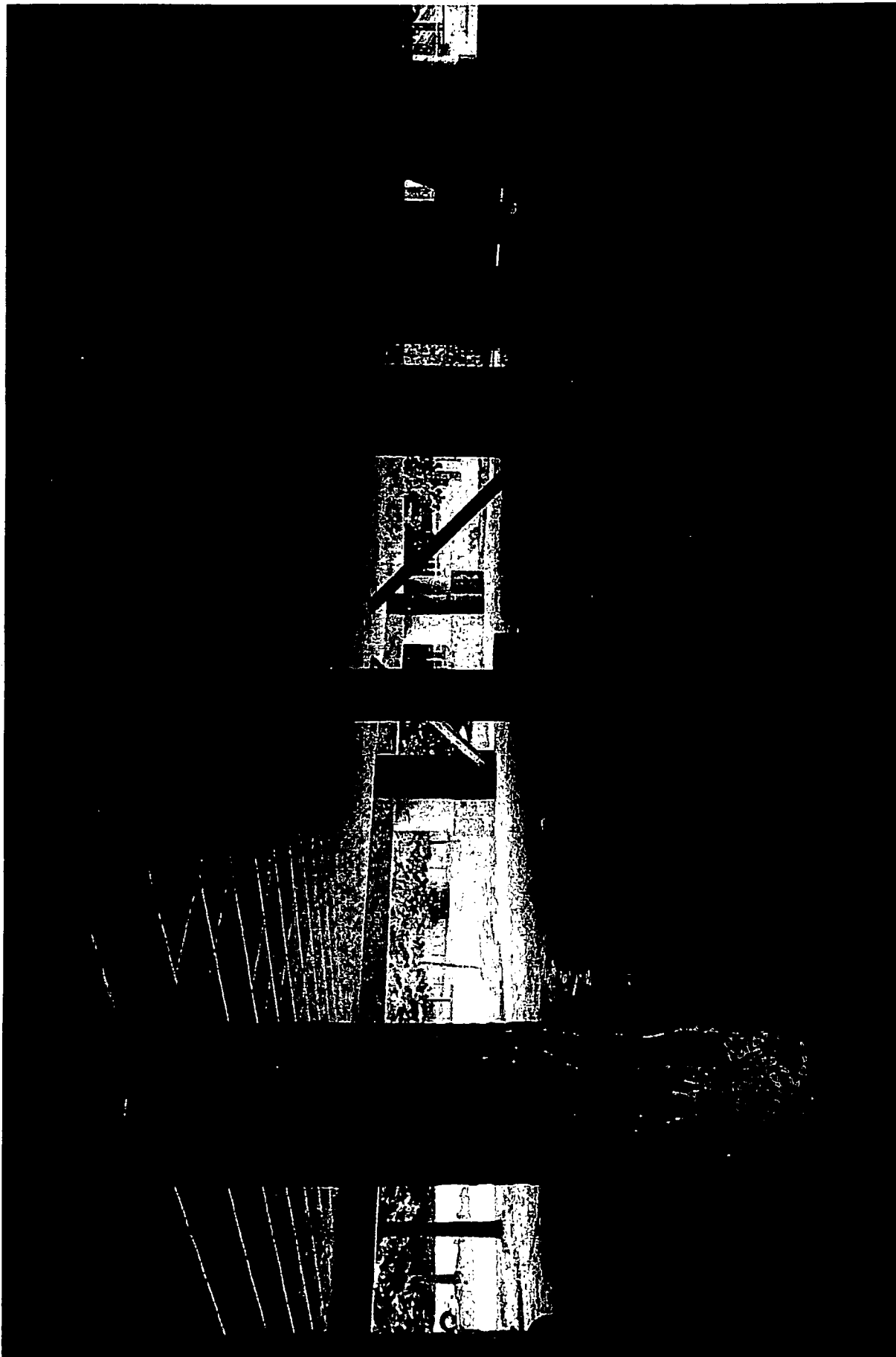


PLAINTIFF'S
EXHIBIT
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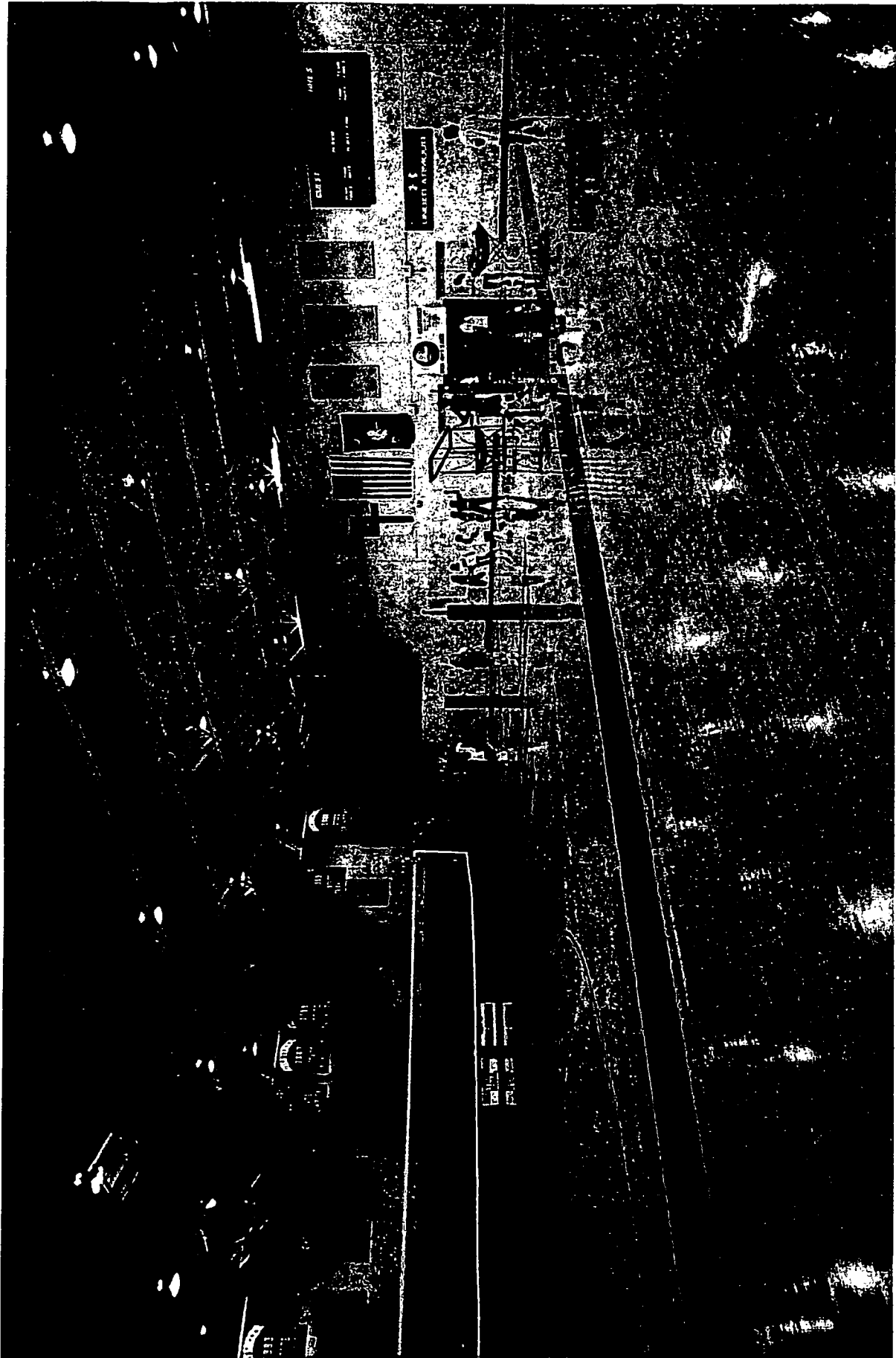








PLAINTIFF'S
EXHIBIT
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STATE OF SOUTH CAROLINA)
COUNTY OF RICHLAND)

TITLE TO REAL ESTATE



KNOW ALL MEN BY THESE PRESENTS, That I, Burwell D. Manning, Jr., in the State aforesaid, for and in consideration of the sum of One hundred Fifty thousand (\$150,000.00) Dollars to me paid by the City of Columbia, South Carolina, in the State aforesaid, receipt of which is hereby acknowledged, have granted, bargained, sold and released, and by these presents do grant, bargain, sell and release unto the said

CITY OF COLUMBIA, SOUTH CAROLINA, its Successors and Assigns

All that certain piece, parcel or tract of land situate, lying and being on the east bank of the Congaree River in Richland County, south of the City of Columbia, South Carolina, containing One hundred twenty (120.0) acres and delineated as Parcel "A" on a plat of property of Burwell D. Manning, Jr. by B. P. Barber & Assoc., dated May 3, 1967 and recorded in the office of the Clerk of Court for said County in Plat Book X at page 261 and having the following metes and bounds, to wit: BEGINNING at a point on the east bank of the Congaree River Two thousand (2,000') ft. S. 23 deg. 46 min. E. of the property line dividing the property between Burwell D. Manning, Jr. and Overlook, Inc., formerly Forsythe; thence running N. 66 deg. 14 min. E. Seventeen hundred (1,700.00') ft. to a point; thence turning and running S. 29 deg. 38 min. E. Thirty-one hundred twenty-eight and 83/100 (3,128.83') ft. to a point; thence turning and running S. 66 deg. 14 min. W. Seventeen hundred twenty-one (1,721.00') ft. to a point on the east bank of the Congaree River; thence turning and running in a northwesterly direction along the eastern bank of the Congaree River to the point of beginning. Said property being bounded on the West by the Congaree River; on the North, East and South by property of the Grantor.

In addition, with respect to the present or subsequent ownership of any right, title or interest in the property designated as Parcel "B" on said plat constituting a strip Seven hundred (700') ft. wide on the three land sides of the property herein conveyed, the Grantor covenants and agrees that neither the Grantor, his heirs, executors, administrators, successors, assigns, under-tenants, or lessees shall or will maintain or enforce or attempt to enforce any complaint about or objection to the existence and operation and maintenance of said sewage treatment plant on premises herein conveyed to the City of Columbia, South Carolina so long as said plant is maintained in accordance with existing sanitation standards, rules and requirements. This restriction shall run with the title to Parcel "B" hereinabove described, shall be binding upon Burwell D. Manning, Jr., his heirs, executors, administrators, successors, assigns, under-tenants, or lessees, and shall constitute an absolute bar to any legal proceedings against the City of Columbia, South Carolina, its Successors or Assigns to enforce any such complaints by Burwell D. Manning, Jr., his heirs, executors, administrators, successors, assigns, under-tenants or lessees.

This conveyance is made subject to the following reservations, restrictions, covenants and conditions specifically agreed to by the City of Columbia, South Carolina, as evidenced by its acceptance of this deed:

1. Air Space Restrictions

(a) The City of Columbia, South Carolina, its successors and assigns may not erect any structure into or conduct any activity in the air space above the heights described below which air space is specifically excluded

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PLAINTIFF'S
EXHIBIT
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State of South Carolina
I certify that this is a true and correct copy
Dated 9/13/2013
Register of Deeds
Richland County

from this conveyance:

(i) An imaginary inclined plane situated at an elevation of 151 ft. mean sea level along the northern boundary of the property herein conveyed and which slopes upward toward the southern boundary of said property at a rate of two feet vertical for each 100 ft. horizontal until the southern boundary is reached; said plane to extend 500 ft. either side of the extension of the center line of an airport runway at the northern boundary and 875 ft. at the southern boundary, in such a manner that every line in the plane at right angles to the extended runway center line is horizontal; the location of said center line of said airport and its point of intersection, if extended, with the northern boundary to be oriented in such manner to allow the construction of a sludge incinerator stack at any point 1550 ft. or more south of the north boundary, and being inside a 200 foot wide zone approximately 1568.83 ft. in length extending in a north-south direction, and lying west of and adjacent to the east boundary of the property. The elevation of said stack to be not more than EL 203.0' MSL.

(ii) Imaginary inclined planes at either side of the above described plane which intersects the above described plane, each of which slopes upward and outward at a ratio of one foot vertical for each seven feet horizontal until reaching an elevation of 288 ft. mean sea level.

(iii) Nothing in the above restrictions shall prohibit the installation of structures to the elevation of the glide angle at any point on the property; specifically to EL. 153.0 MSL to within 100 feet of the north and east boundaries and to EL. 158 MSL to within 350 feet of the north boundary and 100 feet of the east boundary, regardless of the orientation of the airport.

(b). The City of Columbia, South Carolina, its successors and assigns shall not permit any facilities erected on said property to create any hazards to aerial aviation in the above described excluded air space such as, but not limited to, smoke, heat currents and noxious odors.

(c) In the event an airport facility is constructed adjacent to the property conveyed herein the Grantor shall assign the right to enforce or release these air space restrictions to the owner thereof.

2. Dike Maintenance

The City of Columbia, South Carolina, its successors and assigns will maintain at its sole expense, in perpetuity, all existing dikes on the property conveyed, and not re-purchased under Par. 5 herein, to the height at the time of this conveyance or to such height to which the dikes may later be raised by the Grantor at his expense, and the Grantor shall have the right to enter onto the property for such purpose. The Grantor may also excavate dirt from said property for such purpose, in a manner not to interfere with improvements.

3. Access

The Grantor will grant to the City of Columbia, South Carolina reasonable easements for access roads and sewage lines to the property conveyed, as needed, provided, that the location of said easements will be mutually agreeable.

4. Crops

The City of Columbia, South Carolina, its successors and assigns will not grow, on the property conveyed, any corn or other crops which could have a damaging effect on crops grown on the land owned by the Grantor, or corporations in which he is a substantial stockholder.

5. Re-purchase

Fifty years from the date of this deed the Grantor shall have the

right to re-purchase from the City of Columbia, South Carolina, its successors and assigns, those parts and parcels of the property conveyed not then being used (in connection with) for the operation of a sewage treatment plant, at the price of One thousand two hundred fifty (\$1,250.00) Dollars per acre. This option shall be exercisable by written notice to the City of Columbia, South Carolina, its successors and assigns, within 30 days after the expiration of said period, said notice to be given by the Grantor, if living, or, if he then be deceased, by his oldest living heir as determined under the laws of South Carolina as if the Grantor had died intestate and unmarried. This option shall apply only to contiguous parcels larger than one acre which are 200 ft. or more from any structure on the sewage treatment plant site which is a part of sewage treatment plant. All interior dikes erected by the City of Columbia, South Carolina, to the extent necessary, be relocated by the City of Columbia, South Carolina, its successors or assigns so as to place such then unused parcels over which this option is exercised outside the perimeter of any interior system of dikes maintained by the City of Columbia, South Carolina, its successors or assigns.

6. These restrictions shall be binding upon and enure to the benefit of the Grantor and the City of Columbia, South Carolina, their heirs, successors and assigns.

TOGETHER with all and singular, the rights, members, hereditaments and appurtenances to the said premises belonging or in anywise incident or appertaining.

TO HAVE AND TO HOLD all and singular the premises before mentioned unto the said City of Columbia, South Carolina, its successors and assigns forever.

And I do hereby bind myself and my heirs, executors and administrators to warrant and forever defend all and singular the said premises herein conveyed unto the said City of Columbia, South Carolina, its successors and assigns, against me and my heirs and against every person whomsoever lawfully claiming, or to claim, the same or any part thereof.

IN WITNESS WHEREOF I have hereunto set my hand and seal this 14th day of June, 1967.

Burwell D. Manning, Jr. (LS)

WITNESS:

David W. Robinson, II
Frances B. Tomlinson

STATE OF SOUTH CAROLINA)
COUNTY OF RICHLAND)

Personally appeared before me David W. Robinson, II and made oath that he saw the within-named Burwell D. Manning, Jr., sign, seal and, as his act and deed, deliver the within-written Deed for the uses and purposes therein mentioned and that he with Frances B. Tomlinson witnessed the execution thereof.

Sworn to before me this 14 day of June, 1967.

David W. Robinson, II (LS)
Notary Public for S. C.

NO DOWER - GRANTOR UNMARRIED

Columbia Venture
Inception to Date as of 12/31/00

Job Cost Detail by Vendor

Vendor	Cost Code	Category	Date	Description	Amount
AUSTIN, LEWIS	20-080	Legal - General	9/15/00	Austin, Lewis: July-Sept legal	28,782.27
AUSTIN, LEWIS	20-080	Legal - General	9/15/00	Austin, Lewis: Retainer	10,000.00
AUSTIN, LEWIS	20-080	Legal - General	10/19/00	Sept legal service	11,531.29
AUSTIN, LEWIS	20-080	Legal - General	12/18/00	Austin: Sept-Dec legal	86,331.89
	20-080 Total				116,645.45
AUSTIN, LEWIS Total					116,645.45
BLUE STAR COMMUNICATIONS	20-300	Master Planning	7/21/00	BLUE STAR COMMUNICATIONS-DL router/firewall	1,103.98
BLUE STAR COMMUNICATIONS	20-300	Master Planning	8/25/00	BlueStar-FireLine SDSL	136.74
BLUE STAR COMMUNICATIONS	20-300	Master Planning	8/31/00	Posted in July thru Elliot Dav	(1,103.98)
	20-300 Total				136.74
BROCKINGTON & ASSOCIATES	20-145	Wetlands Study	9/4/00	BROCKINGTON & ASSOCIATES-cultural rease survey	40,811.87
BROCKINGTON & ASSOCIATES	20-145	Wetlands Study	9/4/00	Cultural-cultural rease survey	18,649.32
BROCKINGTON & ASSOCIATES	20-145	Wetlands Study	9/4/00	Cultural-cultural rease survey	14,485.41
BROCKINGTON & ASSOCIATES	20-145	Wetlands Study	9/4/00	Cultural-cultural rease survey	11,422.81
BROCKINGTON & ASSOCIATES	20-145	Wetlands Study	9/4/00	Brockington-Jen perfom assessm	6,140.00
	20-145 Total				91,489.41
BROCKINGTON & ASSOCIATES Total					91,489.41
BURROUGHS & CHAPIN	20-080	Legal - General	12/29/00	B&C exp on McNair #213153	(927.50)
BURROUGHS & CHAPIN	20-080	Legal - General	12/29/00	B&C exp on McNair #214816	(1,852.50)
BURROUGHS & CHAPIN	20-080	Legal - General	12/29/00	B&C exp on McNair #216019	(2,389.00)
	20-080 Total				(5,289.00)
BURROUGHS & CHAPIN	20-300	Master Planning	7/31/00	B&C - Walmar - Signs	41.37
BURROUGHS & CHAPIN	20-300	Master Planning	7/31/00	B&C - postage	19.36
	20-300 Total				60.73
BURROUGHS & CHAPIN	21-040	Project Mgmt - Off Site	8/31/99	G Gregory Project mgmt	26,801.76
BURROUGHS & CHAPIN	21-040	Project Mgmt - Off Site	9/30/99	G Gregory Proj mgmt	17,834.60
BURROUGHS & CHAPIN	21-040	Project Mgmt - Off Site	11/20/99	G Gregory Proj mgmt	17,834.60
BURROUGHS & CHAPIN	21-040	Project Mgmt - Off Site	12/1/99	G Gregory Proj mgmt	8,484.16
BURROUGHS & CHAPIN	21-040	Project Mgmt - Off Site	12/31/99	G Gregory Proj mgmt FICA adj	(808.66)
BURROUGHS & CHAPIN	21-040	Project Mgmt - Off Site	1/31/00	G Gregory salary/exp	8,971.11
BURROUGHS & CHAPIN	21-040	Project Mgmt - Off Site	2/28/00	G Gregory salary/exp	8,971.12
BURROUGHS & CHAPIN	21-040	Project Mgmt - Off Site	4/30/00	G Gregory salary/exp	(1,413.55)
BURROUGHS & CHAPIN	21-040	Project Mgmt - Off Site	7/31/00	B&C offsite mgmt salaries/ben	44,855.00
BURROUGHS & CHAPIN	21-040	Project Mgmt - Off Site	9/29/00	Aug B&C offsite mgmt	8,971.12
BURROUGHS & CHAPIN	21-040	Project Mgmt - Off Site	9/29/00	Sept B&C Offsite mgmt	8,971.12
BURROUGHS & CHAPIN	21-040	Project Mgmt - Off Site	10/31/00	B&C Off-Site Mgmt - October	8,971.12
BURROUGHS & CHAPIN	21-040	Project Mgmt - Off Site	11/28/00	B&C: Nov Off-site mgmt	8,971.12
BURROUGHS & CHAPIN	21-040	Project Mgmt - Off Site	12/29/00	B&C: Dec Off-Site Payroll	8,971.12
	21-040 Total				170,658.14
BURROUGHS & CHAPIN	21-045	Project Mgmt - On Site	7/31/00	B&C On-site mgmt sal/ben	49,210.16
BURROUGHS & CHAPIN	21-045	Project Mgmt - On Site	7/31/00	4 mos auto Wiscman	2,300.00
BURROUGHS & CHAPIN	21-045	Project Mgmt - On Site	9/29/00	Aug B&C Onsite mgmt	10,702.00
BURROUGHS & CHAPIN	21-045	Project Mgmt - On Site	9/29/00	Sept B&C Onsite mgmt	10,702.00
BURROUGHS & CHAPIN	21-045	Project Mgmt - On Site	10/31/00	B&C On-Site Mgmt - October	10,702.00
BURROUGHS & CHAPIN	21-045	Project Mgmt - On Site	11/28/00	B&C: Nov On-site mgmt	10,702.00
BURROUGHS & CHAPIN	21-045	Project Mgmt - On Site	12/29/00	B&C: Dec On-Site payroll	10,702.00
	21-045 Total				105,028.16
BURROUGHS & CHAPIN Total					276,476.03
BURROUGHS & CHAPIN	21-085	Interest	8/30/00	R/C LOC int prnts & B&C int prnt	27,426.10
	21-085 Total				27,426.10
CAROLINA FIRST	20-180	Public Relations	12/19/99	CHERNOFF/SILVER & ASSOC PR	13,407.66

CV004405

JobDetail by Vendor / Sorted by Vendor

PLTF TRIAL EXH 521

1/19/01 10:59 AM

Columbia Venture
Inception to Date as of 12/31/00

Job Cost Detail by Vendor

Vendor	Cost Code	Category	Date	Description	Amount
CHERNOFF/SILVER & ASSOC	20-180	Public Relations	2/10/00	CHERNOFF/SILVER & ASSOC/Silver PR	30,634.00
CHERNOFF/SILVER & ASSOC	20-180	Public Relations	2/28/00	Silver/Silver PR	8,802.70
CHERNOFF/SILVER & ASSOC	20-180	Public Relations	2/28/00	CHERNOFF/SILVER & ASSOC: February Services	7,500.00
CHERNOFF/SILVER & ASSOC	20-180	Public Relations	5/31/00	Silver/Silver PR	4,083.35
CHERNOFF/SILVER & ASSOC	20-180	Public Relations	9/28/00	CHERNOFF/SILVER & ASSOC PR	10,637.85
CHERNOFF/SILVER & ASSOC	20-180	Public Relations	7/28/00	Chernoff: June PR	8,721.25
CHERNOFF/SILVER & ASSOC	20-180	Public Relations	7/31/00	CHERNOFF/SILVER & ASSOC public relations	10,637.85
CHERNOFF/SILVER & ASSOC	20-180	Public Relations	8/31/00	Posted in July thru Elliot Dav	(10,637.85)
CHERNOFF/SILVER & ASSOC	20-180	Public Relations	9/22/00	Chernoff: July PR	4,830.57
CHERNOFF/SILVER & ASSOC	20-180	Public Relations	9/28/00	August services	7,500.00
CHERNOFF/SILVER & ASSOC	20-180	Public Relations	10/27/00	CHERNOFF/SILVER & ASSOC: PR thru Sept	7,481.25
CHERNOFF/SILVER & ASSOC	20-180	Public Relations	11/30/00	CHERNOFF/SILVER & ASSOC: Coming Out Event	27,888.12
CHERNOFF/SILVER & ASSOC	20-180	Public Relations	11/30/00	Chernoff: Public Relations	7,788.11
CHERNOFF/SILVER & ASSOC	20-180	Public Relations	12/21/00	CHERNOFF/SILVER & ASSOC: Nov PR	20,426.25
	20-180 Total				165,802.30
CHERNOFF/SILVER & ASSOC Total					165,802.30
COMPUTER DESIGN	20-300	Master Planning	1/25/00	Computer Application design	2,037.50
	20-300 Total				2,037.50
ECO PLAN SOUTH	20-300	Master Planning	10/13/00	Sept services	2,700.00
ECO PLAN SOUTH	20-300	Master Planning	10/31/00	ECO PLAN: Oct design developmt	4,410.00
ECO PLAN SOUTH	20-300	Master Planning	11/30/00	ECO-Design Development	3,600.00
ECO PLAN SOUTH	20-300	Master Planning	12/28/00	ECO-Doc research/Review	4,500.00
	20-300 Total				15,210.00
EDSA	20-085	Professional/Consulting	7/17/00	Professional service	15,893.78
EDSA	20-085	Professional/Consulting	8/31/00	Posted in July thru Elliot Dav	(15,593.78)
	20-085 Total				
EDSA	20-300	Master Planning	2/16/00	EDSA	30,327.20
EDSA	20-300	Master Planning	2/28/00	EDSA	18,354.35
EDSA	20-300	Master Planning	3/9/00	EDSA	14,377.51
EDSA	20-300	Master Planning	4/13/00	EDSA	31,985.00
EDSA	20-300	Master Planning	6/30/00	EDSA	1,985.78
EDSA	20-300	Master Planning	7/31/00	EDSA	17,807.17
EDSA	20-300	Master Planning	7/31/00	EDSA	15,683.78
EDSA	20-300	Master Planning	8/14/00	EDSA July services	80.31
EDSA	20-300	Master Planning	8/14/00	Aug fees & expenses	20,180.81
EDSA	20-300	Master Planning	10/16/00	EDSA: Prof svc + expenses	4,309.61
EDSA	20-300	Master Planning	10/16/00	EDSA: Prelim MP for Phase 1	4,882.41
EDSA	20-300	Master Planning	11/14/00	EDSA: Prelim MP for Phase 1	9,070.00
EDSA	20-300	Master Planning	12/8/00	EDSA: Nov professional svc	4,191.04
	20-300 Total				171,155.03
FEDEX	20-300	Master Planning	7/31/00	Federal Express	76.48
FEDEX	20-300	Master Planning	7/31/00	Federal Express	14.44
	20-300 Total				90.92
GARY R. DYHOUSE	20-145	Wetlands Study	6/30/00	Travel-Dyhouse/hydro engineer	847.00
GARY R. DYHOUSE	20-145	Wetlands Study	7/27/00	Review mtg: FEMA	2,500.00
GARY R. DYHOUSE	20-145	Wetlands Study	7/31/00	G. Dyhouse hydro engineer	2,500.00
GARY R. DYHOUSE	20-145	Wetlands Study	8/31/00	Posted in July thru Elliot Dav	(2,500.00)
GARY R. DYHOUSE	20-145	Wetlands Study	9/22/00	DYHOUSE: wetlands	4,100.00
GARY R. DYHOUSE	20-145	Wetlands Study	9/28/00	Hydrology study	7,340.00

JobDetail by Vendor / Sorted by Vendor

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Columbia Venture
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Job Cost Detail by Vendor

Vendor	Cost Code	Category	Date	Description	Amount
GARY R. DYHOUSE	20-145	Wetlands Study	10/27/00	Dyhouse: Draft Report	2,200.00
GARY R. DYHOUSE	20-145	Wetlands Study	11/28/00	Dyhouse: report preparation	5,614.00
GARY R. DYHOUSE	20-145	Wetlands Study	12/22/00	Dyhouse: Final Report	3,046.00
	20-145 Total				25,947.00
GRANT GROUP	20-085	Professional/Consulting	12/5/00	December Retainer	2,500.00
GRANT GROUP	20-085	Professional/Consulting	12/5/00	November Retainer	2,500.00
GRANT GROUP	20-085	Professional/Consulting	12/20/00	Grant: Jun D1 Retainer	2,500.00
	20-085 Total				7,500.00
HADDOW	20-300	Master Planning	7/14/99	Haddow Real Estate Consultant	16,976.42
HADDOW	20-300	Master Planning	9/8/99	Haddow Real Estate Consultant	20,990.25
	20-300 Total				43,558.67
KHAREFOWLER INC	20-180	Public Relations	6/30/99	KHAREFOWLER, INC retainer & expenses	4,070.73
KHAREFOWLER INC	20-180	Public Relations	7/31/99	KHAREFOWLER, INC retainer & expenses	4,182.60
KHAREFOWLER INC	20-180	Public Relations	8/1/99	KHAREFOWLER, INC retainer & expenses	4,236.98
KHAREFOWLER INC	20-180	Public Relations	8/30/99	KHAREFOWLER, INC retainer & expenses	4,180.95
KHAREFOWLER INC	20-180	Public Relations	10/31/99	KHAREFOWLER, INC retainer & expenses	4,020.41
KHAREFOWLER INC	20-180	Public Relations	11/30/99	KHAREFOWLER, INC retainer & expenses	4,315.17
KHAREFOWLER INC	20-180	Public Relations	12/31/99	KHAREFOWLER, INC retainer & expenses	4,240.09
KHAREFOWLER INC	20-180	Public Relations	1/31/00	FowlerFowler PR	4,181.50
KHAREFOWLER INC	20-180	Public Relations	2/29/00	FowlerFowler PR	4,105.88
KHAREFOWLER INC	20-180	Public Relations	3/31/00	FowlerFowler PR	4,237.85
KHAREFOWLER INC	20-180	Public Relations	4/30/00	FowlerFowler PR	4,334.00
KHAREFOWLER INC	20-180	Public Relations	5/31/00	FowlerFowler PR	4,385.48
KHAREFOWLER INC	20-180	Public Relations	7/31/00	FowlerFowler	4,405.67
KHAREFOWLER INC	20-180	Public Relations	7/31/00	Retainer + exp	4,222.23
KHAREFOWLER INC	20-180	Public Relations	8/25/00	Retainer + exp	4,222.23
KHAREFOWLER INC	20-180	Public Relations	8/31/00	KHAREFOWLER, INC Aug retainer	4,535.89
KHAREFOWLER INC	20-180	Public Relations	8/31/00	Posted in July line, Elliot Daw	(4,222.23)
KHAREFOWLER INC	20-180	Public Relations	9/30/00	KHAREFOWLER, INC: Sept retainer + exp	4,221.41
KHAREFOWLER INC	20-180	Public Relations	10/31/00	KHAREFOWLER, INC: Oct retainer	4,329.73
KHAREFOWLER INC	20-180	Public Relations	11/30/00	KHAREFOWLER, INC: Nov retainer	4,782.68
	20-180 Total				76,950.97
KHAREFOWLER, INC Total					76,950.97
KINKOS	20-300	Master Planning	8/25/00	Kinko's - copies EDSA	39.90
	20-300 Total				39.90
KOSOSKI	20-085	Professional/Consulting	10/24/00	KOSOSKI:tax assumptions	4,290.00
	20-085 Total				4,290.00
LOCKWOOD GREENE	20-170	Engineering Fees	12/31/99	Lockwood Greene eng svc	639,657.80
LOCKWOOD GREENE	20-170	Engineering Fees	9/1/00	Lockwood Greene eng Jan-Aug	404,531.05
LOCKWOOD GREENE	20-170	Engineering Fees	12/31/00	Lockwood Greene: Oct services	49,381.31
LOCKWOOD GREENE	20-170	Engineering Fees	12/31/00	Lockwood Greene: Sept services	46,246.65
LOCKWOOD GREENE	20-170	Engineering Fees	12/31/00	Lockwood Greene: Nov services	45,272.13
LOCKWOOD GREENE	20-170	Engineering Fees	12/31/00	Dec Lockwood Greene services	24,728.04
	20-170 Total				1,108,784.89
LOCKWOOD GREENE Total					1,108,784.89
MCHAIR LAW FIRM	20-080	Legal - General	8/31/99	McNair (May-July invoices)	18,620.99
MCHAIR LAW FIRM	20-080	Legal - General	9/24/99	McNair legal	857.89
MCHAIR LAW FIRM	20-080	Legal - General	10/4/99	McNair legal	876.32

JobDetail by Vendor / Sorted by Vendor

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Columbia Venture
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Job Cost Detail by Vendor

Vendor	Cost Code	Category	Date	Description	Amount
MCNAIR LAW FIRM	20-080	Legal - General	10/4/98	McNair legal	175.50
MCNAIR LAW FIRM	20-080	Legal - General	11/22/98	McNair legal	868.18
MCNAIR LAW FIRM	20-080	Legal - General	12/18/98	McNair legal	1,305.00
MCNAIR LAW FIRM	20-080	Legal - General	12/20/98	McNair-general	3,780.04
MCNAIR LAW FIRM	20-080	Legal - General	1/20/00	McNair-Burwell-Manning	263.60
MCNAIR LAW FIRM	20-080	Legal - General	3/1/00	McNair	8,875.88
MCNAIR LAW FIRM	20-080	Legal - General	3/1/00	McNair	3,545.53
MCNAIR LAW FIRM	20-080	Legal - General	3/16/00	McNair	8,148.76
MCNAIR LAW FIRM	20-080	Legal - General	3/24/00	McNair-Burwell-Manning	6,629.41
MCNAIR LAW FIRM	20-080	Legal - General	4/14/00	McNair: Lobby	3,520.00
MCNAIR LAW FIRM	20-080	Legal - General	4/14/00	McNair: Lobby support	1,387.50
MCNAIR LAW FIRM	20-080	Legal - General	6/13/00	McNair: Burwell-Manning prop	8,486.86
MCNAIR LAW FIRM	20-080	Legal - General	6/27/00	McNair: Lobby Flood Provision	3,560.00
MCNAIR LAW FIRM	20-080	Legal - General	7/14/00	McNair: Lobbying	132.00
MCNAIR LAW FIRM	20-080	Legal - General	7/31/00	McNair: Lobbying	5,035.00
MCNAIR LAW FIRM	20-080	Legal - General	7/31/00	Organization costs (to be exp)	26,897.74
MCNAIR LAW FIRM	20-080	Legal - General	8/1/00	McNair: Lobby Flood Provision	6,376.00
MCNAIR LAW FIRM	20-080	Legal - General	8/1/00	McNair: Lobby Flood Provision	3,560.00
MCNAIR LAW FIRM	20-080	Legal - General	8/1/00	McNair: Lobby Flood Provision	132.00
MCNAIR LAW FIRM	20-080	Legal - General	8/1/00	McNair: JME Drafting file	5,035.00
MCNAIR LAW FIRM	20-080	Legal - General	8/18/00	McNair: JME Drafting file	10,283.80
MCNAIR LAW FIRM	20-080	Legal - General	8/21/00	McNair: local govt relations	6,155.64
MCNAIR LAW FIRM	20-080	Legal - General	8/21/00	McNair: Non-Lobby	6,320.00
MCNAIR LAW FIRM	20-080	Legal - General	8/21/00	McNair: Lobby	2,862.77
MCNAIR LAW FIRM	20-080	Legal - General	8/22/00	McNair: Burwell-Manning prop	556.85
MCNAIR LAW FIRM	20-080	Legal - General	8/25/00	McNair: Burwell-Manning	15,855.07
MCNAIR LAW FIRM	20-080	Legal - General	8/31/00	McNair: Burwell-Manning	8,155.64
MCNAIR LAW FIRM	20-080	Legal - General	8/31/00	Correction was made in July	42,826.11
MCNAIR LAW FIRM	20-080	Legal - General	8/31/00	Correction was made in July	362.48
MCNAIR LAW FIRM	20-080	Legal - General	8/31/00	Posted in July thru Elliot Dav	(132.00)
MCNAIR LAW FIRM	20-080	Legal - General	8/31/00	Move McNair rent to expense	(362.48)
MCNAIR LAW FIRM	20-080	Legal - General	8/31/00	Posted in July thru Elliot Dav	(3,660.00)
MCNAIR LAW FIRM	20-080	Legal - General	8/31/00	Posted in July thru Elliot Dav	(6,035.00)
MCNAIR LAW FIRM	20-080	Legal - General	8/31/00	Posted in July thru Elliot Dav	(6,155.64)
MCNAIR LAW FIRM	20-080	Legal - General	8/31/00	Move McNair: Manning to expense	(16,351.81)
MCNAIR LAW FIRM	20-080	Legal - General	8/31/00	Move McNair: Manning to expense	(26,474.20)
MCNAIR LAW FIRM	20-080	Legal - General	8/15/00	McNair: Non-lobby	1,361.86
MCNAIR LAW FIRM	20-080	Legal - General	8/19/00	McNair: JME Drafting file	10,246.85
MCNAIR LAW FIRM	20-080	Legal - General	8/19/00	McNair: Local govt relations	4,400.31
MCNAIR LAW FIRM	20-080	Legal - General	8/22/00	McNair: Burwell-Manning prop	7,482.55
MCNAIR LAW FIRM	20-080	Legal - General	10/11/00	McNair: Burwell-Manning prop	17,201.68
MCNAIR LAW FIRM	20-080	Legal - General	10/20/00	McNair: Gm Diamond Trademark	977.02
MCNAIR LAW FIRM	20-080	Legal - General	10/25/00	McNair: Non-lobby	463.22
MCNAIR LAW FIRM	20-080	Legal - General	10/31/00	McNair: Local govt relations	3,832.50
MCNAIR LAW FIRM	20-080	Legal - General	10/31/00	McNair: JME Drafting file	3,213.60
MCNAIR LAW FIRM	20-080	Legal - General	11/19/00	McNair: Burwell-Manning prop	3,786.48
MCNAIR LAW FIRM	20-080	Legal - General	11/27/00	McNair: JME Drafting file	18,222.20
MCNAIR LAW FIRM	20-080	Legal - General	11/30/00	McNair: Non-Lobby	2,865.43
MCNAIR LAW FIRM	20-080	Legal - General	12/1/00	McNair: Lobby	575.00
MCNAIR LAW FIRM	20-080	Legal - General	12/14/00	McNair: Burwell-Manning prop	3,837.33
MCNAIR LAW FIRM	20-080	Legal - General	12/14/00	McNair: JME Drafting file	1,328.36
MCNAIR LAW FIRM	20-080	Legal - General	12/18/00	McNair: Local Govt Relations	54,834.80
20-080 Total					245,670.83

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JobDetail by Vendor / Sorted by Vendor

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Columbia Venture
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Job Cost Detail by Vendor

Vendor	Cost Code	Category	Date	Description	Amount
MCNAIR LAW FIRM	20-082	Legal - Golf Course	12/16/99	McNair-Elita Sport/golf course	787.50
	20-082	Legal - Golf Course	1/20/00	McNair - Elita Sport/golf crse	105.00
	20-082	Legal - Golf Course	2/18/00	McNair - Elita Sport/golf crse	7,748.89
	20-082	Legal - Golf Course	2/18/00	McNair-Elita Sport/golf crse	1,650.50
	20-082 Total				10,291.65
OFFICE TEAM	21-040	Project Mgmt - OFF Site	3/15/00	Temp Labor	74.25
	21-040	Project Mgmt - OFF Site	3/20/00	Temp Labor	610.60
	21-040	Project Mgmt - OFF Site	3/26/00	Temp Labor	660.00
	21-040	Project Mgmt - OFF Site	8/25/00	Temp: Sitans, S.	627.00
	21-040 Total				1,971.75
PHOTOS BY CREWE	20-300	Master Planning	2/14/00	Photos by Crewe-video photogra	2,177.83
	20-300	Master Planning	7/6/00	aerial prints	134.83
	20-300	Master Planning	8/25/00	aerial prints	134.83
	20-300	Master Planning	8/31/00	Posted in July thru Elliot Daw	(134.93)
	20-300 Total				2,312.56
QUINN	20-180	Public Relations	9/30/00	Richard Quinn & Assoc Jan-Sep	31,500.00
	20-180	Public Relations	10/31/00	B&C-R. Quinn & Assoc Octabr	4,500.00
	20-180	Public Relations	11/30/00	B&C: Nov Quinn PR	6,750.00
	20-180	Public Relations	12/29/00	B&C: Dec Quinn Invoice	5,750.00
	20-180 Total				47,500.00
RICHLAND COUNTY TREASURER	21-080	Current Property Taxes	12/31/99	Richtland County Property Taxes	11,811.36
	21-080	Current Property Taxes	3/9/00	Property Tax refund	(352.38)
	21-080	Current Property Taxes	1/8/01	2000 Property Taxes	13,718.05
	21-080 Total				25,177.03
SIGN IT FAST	20-300	Master Planning	7/31/00	Sign	786.00
	20-300	Master Planning			786.00
	20-300	Master Planning			
	20-300 Total				1,572.00
SUNRISE	20-085	Professional/Consulting	8/11/00	Initiation of contracts	3,000.00
	20-085	Professional/Consulting	8/31/00	Posted in July thru Elliot Daw	(3,000.00)
	20-085	Professional/Consulting			
	20-085 Total				
SUNRISE	20-180	Public Relations	7/31/00	Sunrise mtg consultants	3,000.00
	20-180	Public Relations	8/9/00	Sunrise PR mtg consulting	3,032.00
	20-180	Public Relations	8/10/00	SUNRISE: 8/15-8/15 svc	3,000.00
	20-180	Public Relations	10/10/00	9/15 - 10/15 Service	3,000.00
SUNRISE	20-180	Public Relations	11/10/00	Sunrise:PR 10/15-11/15	4,000.00
	20-180	Public Relations	11/14/00	Sunrise: Cater 10/23 mtg	321.28
	20-180	Public Relations	11/30/00	Sunrise: 11/15-12/15 PR	5,000.00
	20-180	Public Relations	12/31/00	Sunrise Ent Nov-Dec Actual	6,500.00
	20-180 Total				27,853.28
SURVEY & MAPPING SERVICES	20-140	Surveys	8/31/00	Boundary survey, casking	3,480.00
	20-140	Surveys			3,480.00
	20-140	Surveys			
	20-140 Total				6,960.00
SURVEY & MAPPING SERVICES	20-145	Wetlands Study	8/1/99	Wetland mapping & surveying	22,184.00
	20-145	Wetlands Study	8/31/99	Wetland mapping & surveying	16,562.80
	20-145	Wetlands Study	10/29/99	Wetland mapping & surveying	53,034.20
	20-145	Wetlands Study	11/1/99	Wetland mapping & surveying	22,184.00
	20-145 Total				114,965.00
					295,892.48
					1,971.75
					47,500.00
					36,177.03
					786.00
					3,000.00
					(3,000.00)
					27,853.28
					27,853.28

JobDetail by Vendor / Sorted by Vendor

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CV004409

Columbia Venture
Inception to Date as of 12/31/00

Job Cost Detail by Vendor

Vendor	Cost Code	Category	Date	Description	Amount
TAYLOR	20-310	SURVEY & MAPPING SERVICES Total	12/31/99	Taylor Bros-Loader & Tractor	19,046.60
TAYLOR	20-310	Drainage/Stormwater Retention	12/31/99	Taylor Bros-Loader & Tractor	4,285.00
	20-310 Total				23,913.60
TOMMY H. WINDSOR	20-085	TAYLOR Total			23,913.60
	20-085	Professional/Consulting	1/5/01	Windser: Consulting	1,275.00
	20-085 Total				1,275.00
VIRTIS 3D IMAGING	20-142	TOMMY H. WINDSOR Total	12/15/99	Virtus 3D mapping	35,000.00
	20-142	3D Imaging			35,000.00
	20-142 Total				35,000.00
WEED GOLF COURSE DESIGN	20-300	VIRTIS 3D IMAGING Total			5,234.38
	20-300	Master Planning	8/28/00	WEED: course design	2,146.82
	20-300	Master Planning	10/31/00	WEED: golf course consulting	7,381.21
	20-300 Total				7,381.21
WEED GOLF COURSE DESIGN	20-145	WEED GOLF COURSE DESIGN Total	7/30/98	Welland delineation	53,316.61
	20-145	Wellands Study	8/31/98	Welland delineation	28,823.44
	20-145	Wellands Study	12/28/98	Welland delineation	288,605.67
	20-145	Wellands Study	4/18/00	Welland delineation	16,050.00
	20-145	Wellands Study	4/18/00	Welland delineation-permit den	14,910.00
	20-145	Wellands Study	4/18/00	Welland delineation-permit den	11,120.00
	20-145	Wellands Study	4/18/00	Welland delineation-permit den	3,840.00
	20-145	Wellands Study	7/31/00	WESI	34,719.63
	20-145	Wellands Study	7/31/00	WESI	25,462.50
	20-145	Wellands Study	7/31/00	WESI	23,625.00
	20-145	Wellands Study	7/31/00	WESI	10,333.00
	20-145	Wellands Study	8/1/00	WESI-permit design/appl	8,006.25
	20-145	Wellands Study	8/1/00	WESI-welland delineation	6,600.00
	20-145	Wellands Study	8/1/00	WESI-Gregg Tract screening	9,712.50
	20-145	Wellands Study	9/22/00	WESI-permit design/appl	6,955.25
	20-145	Wellands Study	10/8/00	WESI: permit design appl	10,237.60
	20-145	Wellands Study	10/8/00	WESI: Final Env Site assessment	8,269.75
	20-145	Wellands Study	10/8/00	WESI: Draft Report	661,886.10
	20-145 Total				561,986.10
WINSTON & STRAWN	20-080	WESI Total	11/30/00	Winston: FEMA	22,141.05
	20-080	Legal - General	12/21/00	Winston: Nov Legal	11,995.61
	20-080 Total				34,136.66
WINSTON & STRAWN	20-480	WINSTON & STRAWN Total			34,136.66
	20-480	Grand Total			3,346,136.30
	20-480	Job Total			3,346,136.30

Job Detail by Vendor / Sorted by Vendor

PLTF TRIAL EXH 521

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CV004410



Federal Emergency Management Agency

Washington, D.C. 20472

October 10, 2000

Ms. Kit Smith
Richland County Council Chairperson
2020 Hampton Street
P.O. Box 192
Columbia, South Carolina 29202

Mr. Johnny Jeffcoat
Lexington County Council Chairman
212 South Lake Drive
Lexington, South Carolina 29072

The Honorable Robert D. Coble
Mayor of the City of Columbia
1737 Main Street
Columbia, South Carolina 29201

Dear Ms. Smith, Mr. Jeffcoat, and Mayor Coble:

This letter is in follow-up to a meeting held on October 4, 2000, at the Federal Emergency Management Agency's (FEMA's) headquarters in Washington, D.C. Representatives of FEMA, Lexington County, Richland County, the City of Columbia, and Columbia Venture attended this meeting. A list of attendees with telephone and facsimile numbers is enclosed with this letter. Many important questions were asked in this meeting; this letter serves as a record of these questions and FEMA's formal responses. In addition, this letter provides an opportunity for clarification. The questions and answers are listed below in approximately the order that they occurred in the meeting.

1. *If we proposed construction in the Richland County floodway landward of Manning's dike, which hydraulic model should we use to evaluate impacts on water-surface elevations, i.e., to demonstrate "no-rise"? (Wilson Tiltorson)*

Impacts of proposed construction within the Richland County floodway landward of Manning's dike should be evaluated using the HEC-2 hydraulic model used to compute Base Flood Elevations (BFEs) landward of Manning's dike. This model reflects conveyance in the Richland County floodplain and is named CongRC2k.dat in the September 26, 2000, report and CD. Please note that this model shows lower elevations than the model used to compute BFEs riverward of Manning's dike. It should be pointed out that while minimum National Flood Insurance Program (NFIP) requirements allow "no rise" construction in the floodway, Richland County regulations may be more prohibitive of construction in a floodway. Where local restrictions exceed minimum NFIP requirements, the local criteria take precedence.

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DEF-00001688

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2. *The 2-dimensional models consider several dike failures, which would have to occur sequentially. How was the time-dependent nature of this sequential failure considered? (Wilson Tillotson)*

The 2-dimensional model was run in steady-state mode, which is a "snapshot" of the peak of the flood along the Congaree River. Because none of the dikes in the Richland County floodplain meet the requirements in Section 65.10 of the NFIP, they were considered completely removed for analysis purposes. When we evaluated likely breach scenarios, we considered the lower Gill's Creek ring dike completely removed because it is overtopped by downstream flooding from the Congaree River. The time required for multiple failures to occur was considered in that we know the 1976 flood, an approximately 10% annual chance (10-year) flood, maintained a high stage for nearly four days. A 1% annual chance (100-year) flood should maintain a high stage for at least as long, thus providing adequate time for multiple failures to occur. Also, the failures would not necessarily occur sequentially.

3. *Why was a discharge of 364,000 cfs used in some of the RMA-2 2-dimensional models? What other discharges were used? (Wilson Tillotson)*

The hydrologic and hydraulic analyses were developed simultaneously; therefore, a discharge of 364,000 cfs, the same as the 1908 flood, was used in the early development of the hydraulic model to determine ineffective flow areas. Once the 1% annual chance discharge was finalized, the 1% annual chance discharge of 292,000 cfs was used in all other RMA-2 models and was used to determine flow paths and velocities. We have verified that using a discharge of 292,000 cfs generates the same ineffective flow areas.

4. *What percentage of flow behind Manning's dike is reflected in the floodway and BFE computations? (Martin Becker)*

Two-dimensional model results indicate that this is as much as 25% of the total Congaree River discharge. However, as per standard NFIP mapping guidelines, the floodway and BFE computations are based on flow that would occur in Richland County if no dikes were present.

5. *The South Carolina Department of Transportation (SCDOT)/U.S. Geological Survey (USGS) reports on development of the 2-dimensional model indicate that no flow occurs landward of Manning's dike. How and why does FEMA's model differ? (Martin Becker)*

SCDOT and USGS developed their models with a different objective than FEMA. SCDOT and USGS were sizing bridge crossings over the Congaree River floodplain, with the objective of designing Interstate Route 77 to be passable for emergency services and evacuations in a very large flood. Their approach results in very large openings. FEMA's objective is to accurately determine 1% annual chance flood hazards based on existing conditions for flood insurance and floodplain management applications. In addition, limitations in computers at the time of the SCDOT/USGS study in the late 1970s, forced them to divide the floodplain into three models: one for the Richland

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County floodplain, one for the Lexington County floodplain, and one for the main channel. SCDOT/USGS ran the entire discharge of 364,000 cfs through each model. FEMA combined these into one model for the entire floodplain and ran the 1% annual chance discharge through the entire floodplain.

6. *Lake Murray Dam has been retrofitted several times since 1940. Were historical flood data adjusted to take this into account? (Martin Becker)*

No. While the dam has been modified since its construction, FEMA has not received a definitive operating plan for Lake Murray Dam, nor any calculations of the downstream discharge during the 1% annual chance flood, based on a definitive operating plan. The peak flows prior to 1929 were adjusted to account for the regulating effect of Lake Murray Dam as it was operated during the period 1930 to 1983.

7. *Did FEMA perform library research into historical flood peaks prior to the USGS systematic record? (Martin Becker)*

No. The only data reviewed by FEMA were provided by appellants. These data indicated that the 1908 flood was the largest since at least 1852. The historical peak flows were not used in the frequency analysis. This conclusion was cross-checked to the longer systematic record for the Savannah River. The pre-1892 newspaper accounts of flooding indicate a period of significant flows and support the importance of considering recorded flows prior to the installation of Lake Murray Dam.

8. *Please clarify the meaning of Figure 2 in the September 26, 2000, report. (John Carrigg)*

The yellow highlighted sections are sections where a failure is likely. This figure is not intended to indicate that all yellow highlighted sections will fail.

9. *Manning's dike has been in place since the turn of the century. Why does FEMA assume that it will fail now? (John Carrigg)*

NFIP regulations Section 65.10 specifies criteria that FEMA must consider when certifying a dike or levee; any dike or levee that cannot be certified must not be considered as providing protection from the 1% annual chance flood in analyses and mapping. Among these criteria is that the top of a dike or levee must be at least 3.0 feet above the BFE; this is called freeboard. Freeboard is important because of uncertainty inherent in hydrologic and hydraulic analyses and because debris can cause increases in water surface elevations, leading to overtopping not predicted by the BFE. Manning's dike does not meet these criteria.

10. *The Upper Mississippi River study currently being formulated by the U.S. Army Corps of Engineers (USACE) assumes that no levee breaches occur until overtopping occurs, and that the breach will constitute ineffective flow. Why aren't these assumptions used in the Congaree River study? (Martin Becker)*

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The USACE study was initiated for reasons other than NFIP mapping. FEMA is investigating funding options to build on the Upper Mississippi River study for NFIP mapping purposes. However, when the study is used to produce updated NFIP maps for the impacted communities, dikes and levees will be evaluated for compliance with Section 65.10 of the NFIP regulations. Those that cannot be certified will be mapped as if they were not there. Assessment of ineffective flow potential will be based on hydraulic conditions at the site of specific levees.

11. *To clarify, the intent of assuming dike failure is to provide BFEs for the landward portion of Richland County. (Wilson Tillotson)*

Yes, that is correct. Because the dike does not meet Section 65.10 requirements, the area behind it must be mapped as floodplain so that those at risk will be aware when making building plans and flood insurance purchase decisions.

12. *Would a levee system based on 3 feet of freeboard on top of the 500-year flood elevation be enough to protect developments landward of the levee? (Jim Wiseman)*

If all other aspects of Section 65.10 of the NFIP regulations were met, this system would meet the NFIP minimum requirements to be shown as providing protection on the Flood Insurance Rate Maps (FIRMs). However, this is a matter of risk management. All levee systems have a possibility of failure. The developer and the affected communities must decide the acceptable level of risk.

13. *Procedurally, what do we need to do to improve the dikes? (Jim Wiseman)*

Because it is the responsibility of the impacted jurisdiction to manage all development within its floodplains, Richland County would have to approve any physical modifications to the dike. Additionally, because the dike is in an adopted floodway, any modifications will have to comply with the requirements of Section 60.3(d)(3), or a floodway revision would have to be made to remove the area from the floodway. These changes would also need to be coordinated with any other impacted jurisdictions, such as Lexington County, and the cities of Cayce, Columbia and West Columbia.

Floodway revisions can be made if engineering analysis supports an alternative floodway configuration that meets surcharge and other engineering requirements, and all affected jurisdictions agree to this modification.

14. *How should Richland County use the September 26, 2000, revised preliminary FIRM along with the effective FIRM for floodplain management purposes? (Kit Smith)*

According to the NFIP regulations, a community may use its effective FIRM for floodplain management purposes until FEMA issues a Letter of Final Determination finalizing the preliminary FIRM. After that, the community should use the FIRM defined by the Letter of Final Determination as best available data for floodplain management. As explained at the meeting, there is a 6-month period between the date of the Letter of

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Final Determination and the effective date of the new FIRM. After the 6-month period, flood insurance applications of the program will be based on the new FIRM.

15. *If the September 26, 2000, revised preliminary FIRM becomes finalized, how should Richland County deal with variances, such as for expansion to Heathwood Hall School or the City of Columbia wastewater treatment plant? (Kit Smith)*

There are several possibilities. First, upgrades or direct replacements can be made on a 1:1 ratio of building footprint area. Second, building standards could mandate that buildings do not impede flood flow, such as construction elevated on piles to allow flow under the buildings. Third, the floodway configuration could be altered, as discussed in the answer to question number 13. Variances and exceptions are further discussed in Section 60.6 of the NFIP regulations.

16. *Are there any provisions requiring the retrofitting of existing structures in the floodway?*

Buildings construction prior to adoption of the new FIRM would not be subject to new standards unless a structure is substantially improved, or repaired after being substantially damaged. Substantial improvement is defined as any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which exceeds 50% of the market value of the structure before the "start of construction" of the improvement. Substantial damage is defined as damage of any origin sustained by a structure whereby the cost of restoring the structure to its pre-damage condition would equal or exceed 50% of the market value of the structure before the damage occurred. In these cases, full compliance with the elevation requirements must be met.

17. *Does shifting the floodway require making physical changes to the floodplain, or is it simply a matter of computer modeling? (George Wolf)*

No physical changes are required. The floodway may be modified as discussed in the answer to question number 13.

18. *Is the 30-day comment period regulatory? (George Wolf)*

No, this comment period is not regulatory, but is a courtesy period extended to communities to provide an opportunity to review and comment on appeal resolutions.

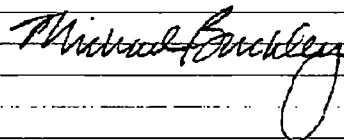
I am also enclosing a document that was prepared in response to questions raised by Mr. Martin Becker.

While reviewing our files, we discovered that the final version of the calibration HEC-2 model was inadvertently excluded from the compact disc distributed on September 26, 2000, and from FEMA's website. This file will be added to FEMA's website today. This file may be accessed by going to http://www.fema.gov/nit/tsd/ST_comp.htm, and following the links for HEC-2 model downloads.

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I wanted to again thank the attendees for their participation in the meeting and to emphasize the importance of remaining involved and engaged in this process. FEMA is committed to working with you in exploring alternative floodway configurations that meet FEMA's minimum standards and that provide a sound basis for the consideration of potential future construction in the flood fringe areas of the Congaree River. A meeting to discuss the floodway configuration has been scheduled for October 18, 2000, at 11:00 am at FEMA's Regional Office in Atlanta, Georgia. Any further questions or clarifications should be submitted in writing. We are committed to finalizing the FIRMs for your communities in an expeditious manner and will respond to your inquiries quickly. You may contact me at (202) 646-2756, or by facsimile at (202) 646-4596.

Sincerely,



Michael K. Buckley, P.E., Director
Technical Services Division
Mitigation Directorate

Enclosures

cc: The Honorable Avery B. Wilkerson, Mayor of the City of Cayce
The Honorable Wyman M. Rish, Mayor of the City of West Columbia
All meeting attendees via facsimile

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DEF-00001693

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Paul Smith	Richland		

Shelley Hill - Reporter - The State paper 803-777-8462

CHRONOLOGY OF ACTIVITIES CARRIED OUT FOR LOCKWOOD GREENE INTERNATIONAL by S&ME
RE: IMPROVEMENT TO CONGAREE LEVEES SECTIONS I & II
S&ME Project No. 1611-99-438

Prepared by John C. Lessley, PE
September 13, 2012

March 10, 1999 – John Lessley, Dan Marks and Ron Calsing of S&ME travel to Lockwood Greene office in Spartanburg to meet with Wilson Tilotson, Carol Walker and Mark Hester of Lockwood Greene regarding levee project. Discuss scope and geotechnical approach to project. Given verbal notice to proceed with visual inspection pending preparation of a drilling and sampling plan.

March 12, 1999 – John Lessley visits levee site to assess difficulty in performing site walkover. JCL recollection is that we were accompanied by Carol Walker or Wilson Tilletson. Took photographs of several accessible areas. Visited SCDOT and obtained cross section drawing of I-77 bridge over Congaree River showing boring data. Near end of day was provided by Lockwood Greene with a topographical drawing of Levee I area which was based on USGS quadrangle maps.

March 13, 1999 – John Lessley and Dan Marks walk the first section of levee. Cross section lines by Surveying and Mapping Inc. are used as the basis for describing conditions at different locations along the levee. Lockwood Greene provides aerial photograph of the WWTP area including Levee I.

March 14, 1999 - John Lessley downloaded COE Manual EM 1110-2-1903, Design and Construction of Levees and EM 1110-1-1804, Geotechnical Investigations, from the website "Publications of the Headquarters, USACE." John Lessley also downloaded Engineering Technical Letter ETL 1110-2-555, Design Guidance for Levees, and Engineer Regulation ER 1110-1-1807, Procedures for Drilling in Earth Embankments, from the same site.

March 15, 1999 - A second day of walkover and inspection of the existing levees by John Lessley and Dan Marks. Completed visual inspection.

March 15, 1999 – First boring begun by BLE. (Note: drilling subcontractor is Metro Drilling)

March 16, 1999 – Last of 8 borings complete by BLE.

Tues, March 23, 1999 - Provided proposal for drilling sampling and analysis to LGI.

Wed, March 24, 1999 – S&ME received verbal notice to proceed with drilling from LGI.

Thurs, March 25, 1999 – S&ME received CAD layout plan file with elevation points called out by cross section. Plan also shows locations of borings B-1 through B-8. Also received CAD file with profiles depicted in BLE report.

Fri, March 26, 1999 - S&ME receives written notice to proceed.

Mon, March 29, 1999 – BLE Preliminary report completed – marked “received” by LGI on March 31. First S&ME drill rig arrives at site in afternoon.

Tues, March 30, 1999 – S&ME begins boring B-101. S&ME Levee I borings are numbered B-101 to B-143. Surveying and Mapping Inc. drawing with all levee profiles.

April 5, 1999 – S&ME published “Embankment Evaluation Report” and provided to LGI. This report summarized the visual inspection of the levee by Messrs. John Lessley and Dan Marks.

April 8, 1999 – S&ME completes boring B-137, 43rd and last boring in Levee I section. S&ME used two drill crews plus one rig from Metro Drilling. Metro performed 9 borings for S&ME plus the 8 borings for BLE.

April 13, 1999 – first laboratory classification tests for Atterberg Limits completed and entered into Excel. Completed soil data summary sheet with classification tests for borings B-101 – B-113.

April 14, 1999 – Carol Walker with LGI visits office. Asks S&ME to provide technical proposal for Levee Section 2.

April 21, 1999 – Test pits TP-1 through TP-9 completed and bulk samples obtained from borrow areas, all 9 on same day.

April 22, 1999 – Soil data summary sheet with classification tests for B-114 – B-142 complete.

April 26, 1999 – completed CAD cross sections “A” and “B” showing boring data.

April 27, 1999 - First triaxial shear strength test on levee foundation materials is complete.

April 28, 1999 – Billed LGI \$51,730 for services through April 17, including 1454 feet of drilling and sampling and just over 250 engineering hours for supervision and analysis. Three more triaxial shear strength tests completed.

April 29, 1999 – Completed sixth (of 8) laboratory triaxial shear strength test. At this point all lab tests done except two triaxial shear tests that were running long.

May 2, 1999 – Stability analyses of representative cross sections is performed. Published “Preliminary Evaluation of Levee Stability, Congaree Levee Section I” and provided to LGI. This report discusses the levee sections fronting the Congaree River and their impacts on flood routing. The first part of the report summarizes the Phase I visual inspection of the levees. The second part describes the soils in the levee reaches fronting the river. Summary by reach sections provides estimated factor of safety against failure of the levee and the report references procedures in the COE manual.

May 3, 1999 – John Bale of S&ME begins initial walkover inspection of Levee Section 2.

May 5, 1999 – Provided written scope and proposal for geotechnical exploration of Levee Section 2.

May 13, 1999 – LGI provides verbal notice to proceed on Levee Section 2. (job #1611-99-474).

May 15, 1999 – Drafting complete on all 13 cross section drawings showing remedial repairs by section.

May 18, 1999 – Received 8th triaxial shear strength test report complete.

May 17, 1999 – First boring on Levee II.

May 21, 1999 – Published complete “Report of Geotechnical Evaluation – Levee Section I” with appendices. Total document is about 250-300 pages.

May 26, 1999 – Billed LGI \$41,897 for services through May 15, including \$8200 in laboratory testing charges for soil analyses, and about 485 engineering hours for analysis and report preparation.

June 10, 1999 – Completed last boring on Levee II. CAD X sections and profiles for Levee II received from LGI June 29, 1999.

August 10, 1999 – Report of Geotechnical Exploration for Levee Section I and II using 100-year flood submitted to LGI (Project No. 1611-99-474).

September 7, 1999 – Submitted proposal 1611-1116-99 to LGI for revising August 10, 1999 report recommendations from the 100-year flood to the 500-year flood. Revisions would be in Chapter 8 reflecting changes to analyses and remedial sections resulting from increase from 100-year to 500-year flood elevations. For the moment we were to assume that 500-year flood elevations would be 4 feet higher than the 100-year flood.

September 13, 1999 – Submitted Plan of Quality Control/Documentation of Construction Improvements to Levees 1 and 2, for Carroll Walker at LGI.

September 13, 1999 – Submitted proposal 1611-1120-99 to Wilson Tillotson at LGI for drilling, sampling and engineering evaluation of a short levee section north of I-77, which had been omitted previously.

September 15, 1999 – Submitted budget for Quality Control/Documentation of Construction Improvements for Levees 1 and 2 to LGI.

September 17, 1999 – Submitted revised proposal 1611-1116-99(rev 1). Difference between this proposal and September 7 proposal is that now the new report would be a stand-alone report rather than simply the August 10, 1999 report with revisions in Chapter 8 reflecting a change from the 100-year flood to 500-year flood.

September 17, 1999 – Submitted revised proposal 1611-1120-99(rev 1) to Wilson Tillotson at LGI for drilling, sampling and engineering evaluation of a short levee section north of I-77, which had been omitted previously. (No separate report generated for this work, work was incorporated into November 16, 1999 report).

October 12, 1999 – Received Purchase Order from LGI to perform additional exploration north of I-77 along Old Bluff Road addressed by Proposal 1611-1120-99(rev 1).

October 13, 1999 – Meeting at site with LGI to discuss issues related to revising the geotechnical report of August 10, 1999 to accommodate 500-year flood (said to be 4 feet higher than 100-year flood) and clarification of some issues pertaining to this work.

November 16, 1999 – Submitted report for Project 1611-99-611, Geotechnical Report for Levee Sections I and II addressing 500-year flood, to LGI.

**PRELIMINARY GEOTECHNICAL REPORT
LEVEE SECTION 1
COLUMBIA, SOUTH CAROLINA**

S&ME PROJECT 1611-99-438

Prepared For:
Lockwood Greene Engineers, Inc.
Post Office Box 491
Spartanburg, South Carolina 29304

Prepared By:
S&ME, Inc.
400 Northeast Drive, Suite A
Columbia, South Carolina

May 1999

PLTF TRIAL EXH 528



May 21, 1999

Mr. Wilson Tillotson
Lockwood Greene Engineers, Inc.
Post Office Box 491
Spartanburg, South Carolina 29304

Subject: Report of Geotechnical Exploration - Levee Section 1
Burroughs & Chapin Development
Columbia, South Carolina
S&ME Project No. 1611-99-438

Dear Sir:

S&ME, Inc. has completed the authorized investigation of Levee Section 1 of the proposed approximately 5000-acre Burroughs & Chapin Development in Richland County, three miles south of Columbia, South Carolina. The purpose of the investigation was to evaluate existing agricultural land protection levees to determine required remediation, rehabilitation, and modification design and construction necessary for levee protection of commercial/residential development.

To briefly summarize our findings, the site is within the flood plain of the Congaree River and is generally bounded on the westward side by the "Fall Line" and on the eastward side by the Congaree River. The surficial soils of the site are typically Congaree Loam and Toccoa Loam which are comprised of silty clays, sandy silts, and silty sands. The primary portion of the existing levee system was constructed in the period of about 1965 to 1970 by dragline and crawler tractor/dozer fill placement techniques. As such the levee embankments typically consist of a mixture of silty clays, sandy silts and silty sand which are typically of similar consistency (density) as the natural soils.

In 1970, the existing Levee Section 1 was deemed adequate for protection of agricultural lands by the U.S. Army Corps of Engineers (USACE). The existing levee system remains in that condition currently and would likely be adequate for protection of agricultural lands. However, in order to meet current Federal Emergency Management Agency (FEMA) requirements for protection of commercial/residential developments, the Levee Section 1 must be remediated, rehabilitated, and modified to be compatible with geotechnical engineering stability analyses considerations.

Our investigation and analyses indicate the following remediation and modification of the existing Levee Section 1 will be required:

- 1) flattening the outside embankment slopes to 2:1 (horizontal to vertical, providing a minimum twelve-foot to maximum fifteen-foot crest width, flattening the inside embankment slope to

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- 2) 2:1 to 3:1 (horizontal to vertical), and installing a pervious drainage system at the toe of the inside embankment slope.
- 3) Along major portions of the Levee Section 1 embankments, the existing crest elevation is substantially above the design crest elevation of three feet above the maximum anticipated 100-year, 24-hour duration return frequency storm event. As such, the design and construction recommendations typically consist of excavation, cutting the outside slope and filling the inside slope with a comparable volume of material.
- 4) On-site soils are expected to be suitable for use in flattening the existing slopes. An on-site source of clean medium to coarse sand similar to ASTM C-33 concrete sand will be identified for use in the inside embankment toe drainage blanket. Additional borrow material for remediation of the existing levee embankments will be needed in areas where the existing levee crest is below the design crest elevation which constitutes a relatively small segment of the overall Levee Section 1 embankment.
- 5) Significant remedial repairs will be required at penetration locations. All existing drainage structures, pipes, and conduits must be removed and replaced with engineered structures to reduce the potential for internal erosion (soil piping) along the levee penetration structures. Unlike dam embankment structure penetrations, levee penetration structures are subject to internal erosion from both directions. Excessive outflows from inside the levee can cause internal erosion toward the outlet while excess head during flood events can cause internal erosion toward the inlet of the drainage structures.

The recommended remedial, rehabilitation, and modification design and construction measures for Levee Section 1 are relatively minor when considering upgrade of the existing levee system from protection of agricultural land to protection of residential/commercial development. The change in category from low-hazard to high-hazard structure is of such significance that recommended design and construction details for remediation, rehabilitation, and modification are warranted.

We appreciate working with Lockwood Greene on this project and look forward to continuing our association in subsequent places. Please do not hesitate to contact us if you have any questions or if we may be of any assistance in any way.

Sincerely,

S&ME, Inc.

John C. Lessley, P.E.
Chief Engineer

B. Dan Marks Ph.D., P.E.
Corporate Consultant

Ronald L. Calsing, P.E.
President

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Appendix B-1- Soil Test Boring Logs- S&ME March-April, 1999

Appendix B-2- Bunnell-Lammons Soil Test Borings- S&ME March - April, 1999

Appendix B-3- Borrow Areas A-1, A-2, & A-3

Source Test Pit Logs/Borrow Source Boring Logs by Bunnell- Lammons

Appendix C- Laboratory Data

Appendix D- Photographs

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1.0 INTRODUCTION

1.1 Authorization

The condition and requirements for improvements to existing levees adjacent to the Congaree River south of Columbia, South Carolina were first discussed with S&ME, Inc. by Mr. Carroll Walker of Lockwood Greene Engineers, Inc. on March 10, 1999. In a meeting at the Lockwood Greene Engineers, Inc. offices in Spartanburg, South Carolina on March 14, 1999, maps of the boundaries and profiles of the proposed levees were made available to S&ME, Inc. for preparation of a proposal for a complete investigation of the levee area designated as Levee 1.

On March 13 and 15, 1999, Mr. John C. Lessley of the S&ME Columbia office inspected the condition of Levee 1 from accessible points. Recommendations for a proposed subsurface exploration program were presented with the comprehensive Levee I evaluation investigation on March 23, 1999. This proposal was accepted by Lockwood Greene Engineers, Inc. on March 26, 1999.

1.2 Purpose

The purpose of this investigation is to present an overall evaluation of the existing Congaree River Levee Section 1 relative to potential flood protection and impact upon flood routing on the associated reach of the Congaree River. Specific attention has been directed to conditions affecting freeboard, levee protection, levee stability, and settlement as outlined in 44CFR65.10 "Mapping of Areas Protected by Levee Systems". We have concentrated on evaluating reaches facing the Congaree River north of I-77 and the South Intermediate Levee, lying south of I-77 which forms the south margin of the Levee 1 region as indicated in Figure 1.

Chapter 4.1 of this report presents a brief description of the procedures used in visual inspection of the Congaree River Levee Section 1. Findings of the initial inspection relative to condition of the levee, significance to flood protection and flood routing, and conclusions relative to evidence of breaching and potential breaching of the earthfilled levees are discussed for each levee segment or reach in Chapter 6.1. Chapter 6.2 presents a description of the subsurface exploration and laboratory testing conducted on the principal soil layers subsequent to the visual inspection. Chapter 8 describes conditions encountered in each reach, along with recommended remedial actions.

1.3 Scope of Exploration

Accomplishment of the purpose of this investigation was achieved by the following phases of work.

1. A thorough visual inspection of the Congaree River Levee Section 1 embankment was performed. Geometry, visual stability and current conditions of the levee were evaluated by established inspection criteria. Inspection criteria data were tabulated for each reach of levee identified by survey sections.

2. Comprehensive subsurface exploration and laboratory testing programs were developed and conducted to obtain critical geotechnical engineering data. Subsurface exploration program field operations were conducted under the direction of Mr. Thomas Tank, P.E.
3. Identification, classification and correlation tests on samples recovered from soil test borings were performed. Results of the subsurface exploration program and characterization laboratory testing have been utilized to represent subsurface conditions at boring locations.
4. Laboratory tests to determine the physical and engineering properties of representative soil strata have been performed. Results of these tests have been utilized in geotechnical engineering analyses of levee seepage, stability, and settlement. Recommendations for remediation and modification of existing levee sections have been based upon results of the geotechnical engineering analyses.
5. This report presents the finding of subsurface and laboratory testing programs, results of geotechnical engineering analyses, visual inspection observations and recommendations for remediation and rehabilitation of Levee Section 1.

1.4 Limitation of Investigation

The geotechnical investigation is intended to provide information for use in remedial work on the Levee 1 Section. During this investigation, soil test borings were performed at widely spaced intervals. Subsurface conditions may vary substantially between boring locations. Specific recommendations for detailed design purposes will be formulated or modified as necessary on the basis of soil conditions exposed during remedial work which is to be performed at a later date.

The proposed alignment crosses or borders several areas designated as wetlands by the U.S. Army Corps of Engineers (USACE). This report addresses remediation and rehabilitation of Levee Section 1 relative to geotechnical engineering considerations and does not attempt to address wetlands and other environmentally related issues, except where specifically required in relevant sections of this report.

Remedial work on the east side of the protected area north of I-77 is not addressed in this report. This region will require a new levee for protection against the 100-year return frequency flood event. A separate investigation will be made for the levee section designated as Levee 2. Remedial and/or rehabilitation work related to Levee Section 2 will be addressed in an independent geotechnical report. Exploration of potential sources of borrow material for remedial and rehabilitation construction of Levee Section 1 has not been performed, but will be performed at completion of a preliminary master site plan for this area.

The assessment of site environmental conditions and/or the presence of potential contaminants in the soil, rock, surface water or groundwater of the site is beyond the scope of this investigation.

8.0 RECOMMENDED FINAL CROSS SECTIONS

Recommended final profiles for critical sections representing major levee reaches are shown in Figures 21 through 30. Included below are the major design and construction issues of each reach. Specific construction methods and requirements for surface preparation, fill placement and compaction, and consideration of levee penetrations are discussed in chapter 9.0.

The revised profiles incorporate a toe drain of free-draining sands with a reshaped inside slope comprised of borrow soils which are more sandy and pervious than the existing levee materials. This is necessary to allow infiltration of seepage to the toe drain without significant pore pressure build up near the face of the inside slope. We believe this approach will provide adequate stability and protection against seepage filtration without the requirement for constructing more costly internal chimney drains.

8.1 Profile Sections #1A-#1D (North Tributary Levee)

Profile #1A was taken as representative of the North Tributary Levee leading from the bluff near the State Farmer's Market to the north end of the river levee. The levee height is two to three feet higher than required for the design flood, but both inside and outside slopes and the crest have been badly rutted by construction equipment. There is an evident borrow pit about forty feet inside the levee over a portion of this reach. A sanitary sewer line of unknown size passes below the levee near section #1A. Soils underlying the levee are firm silty sands with moderate permeability.

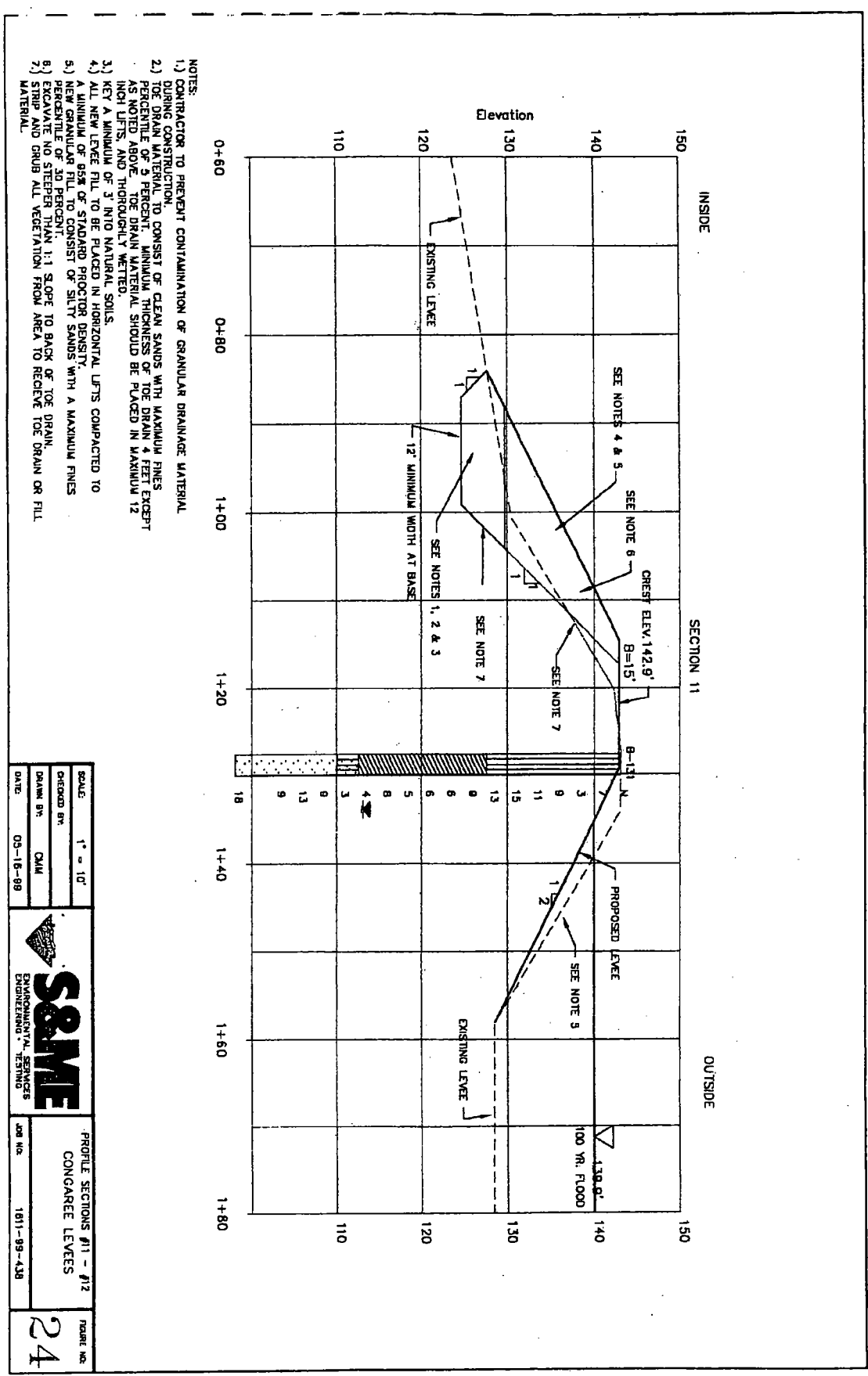
The recommended final profile for this reach is shown in Figure 21. Slope stability and seepage analyses indicate that the required factors of safety against instability can be attained by resloping the outer face to 2H:1V and inner face to 3H:1V, lowering the crown elevation to 144.5 feet as required to provide a three-foot freeboard for the design flood. A toe drain of free-draining soils should be constructed as illustrated in Figure 21 to intercept seepage through the levee and underlying sands.

Riprap face protection should be provided for the outside slope where storm discharge pipes from neighboring properties enter a ditch near the outside of the levee.

The sanitary sewer pipe and any poorly compacted backfill soils near Profile #1A should be excavated below the levee and replaced as described in report section 9.3.

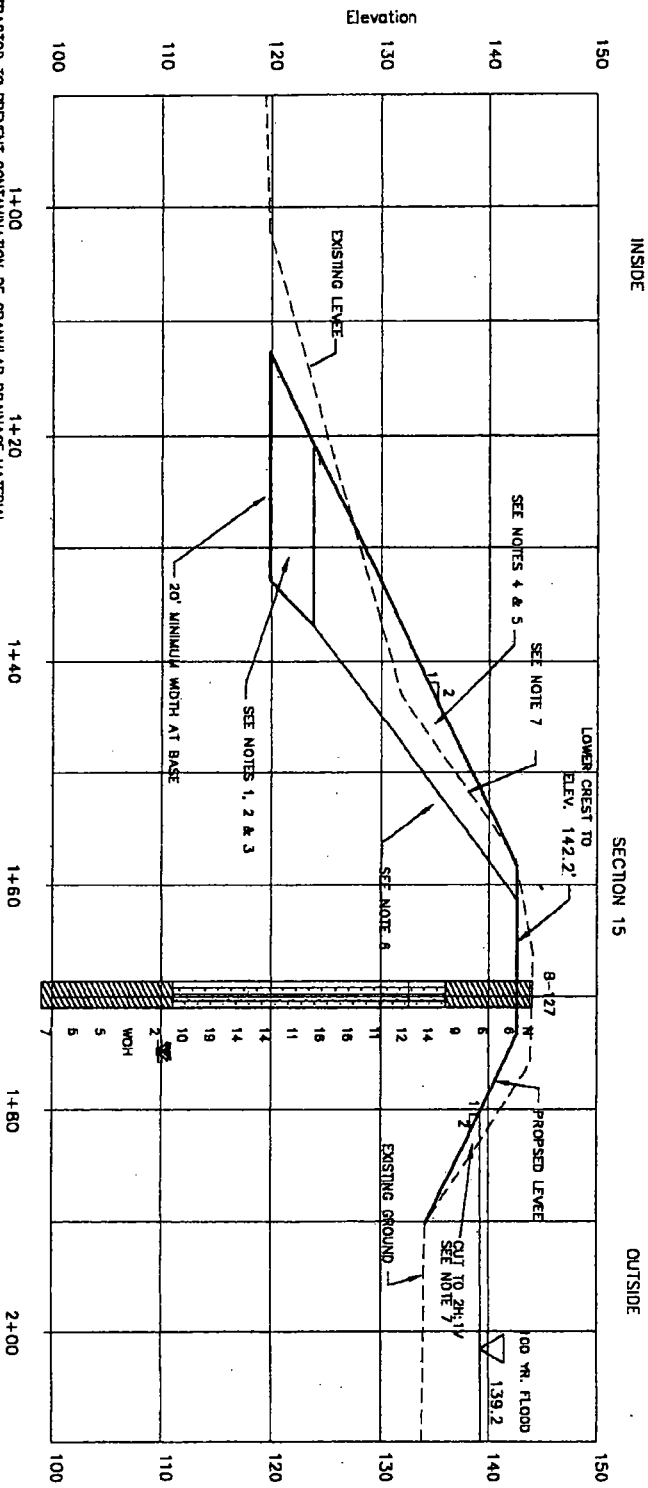
8.2 Profile Sections #1-#3

Profile #2 is illustrated in Figure 22 as representative of this reach. At profile #2, about 500 feet south of the north end of the river levee, there is a shallow borrow pit immediately inside the levee where soil has been excavated, but nearly all of the apparent inside slope of the levee at this location consists of fill. The fill in this reach, which extends from the north end of the river levee south about 1500 feet, is six to ten feet higher than required for the design flood.

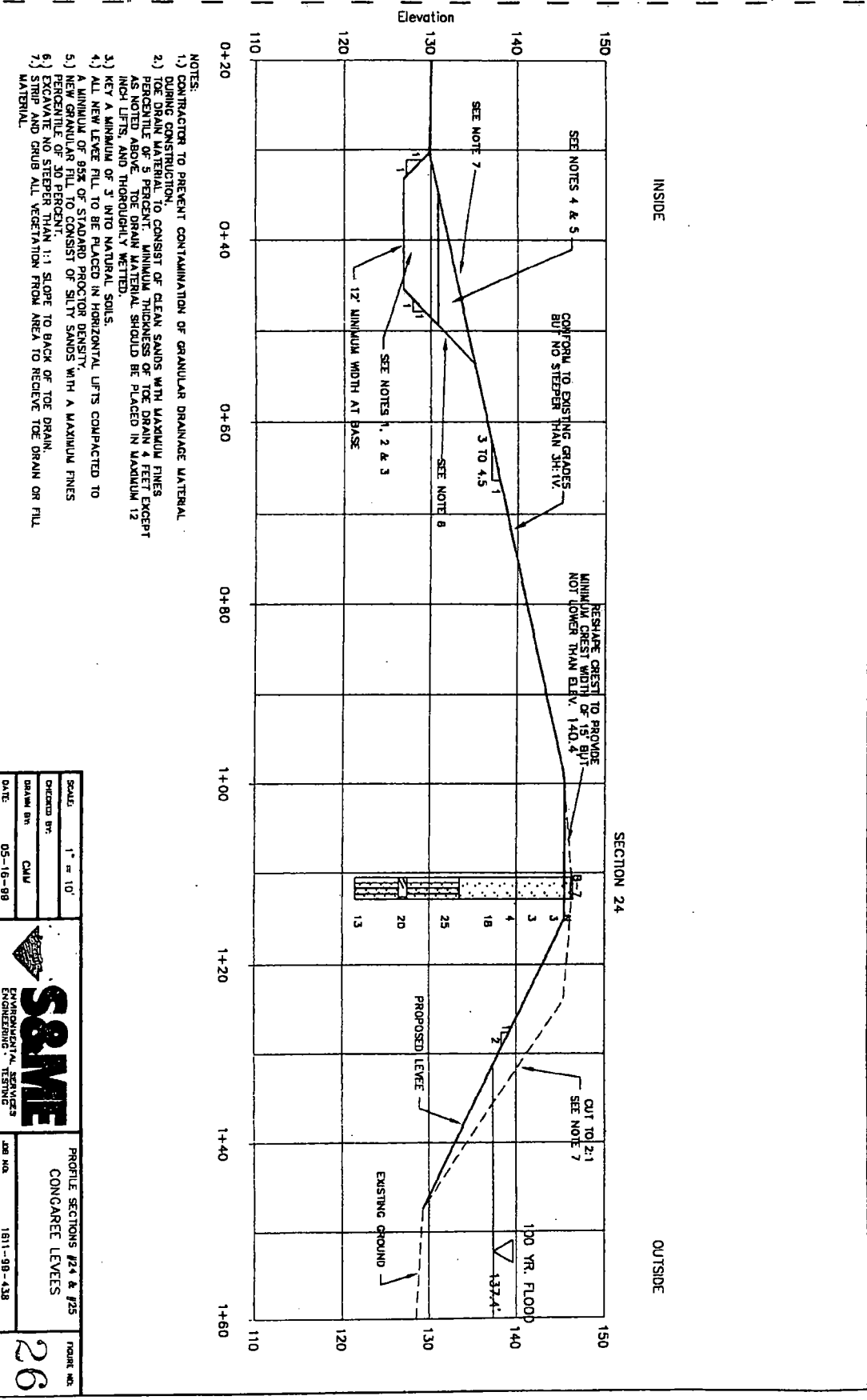


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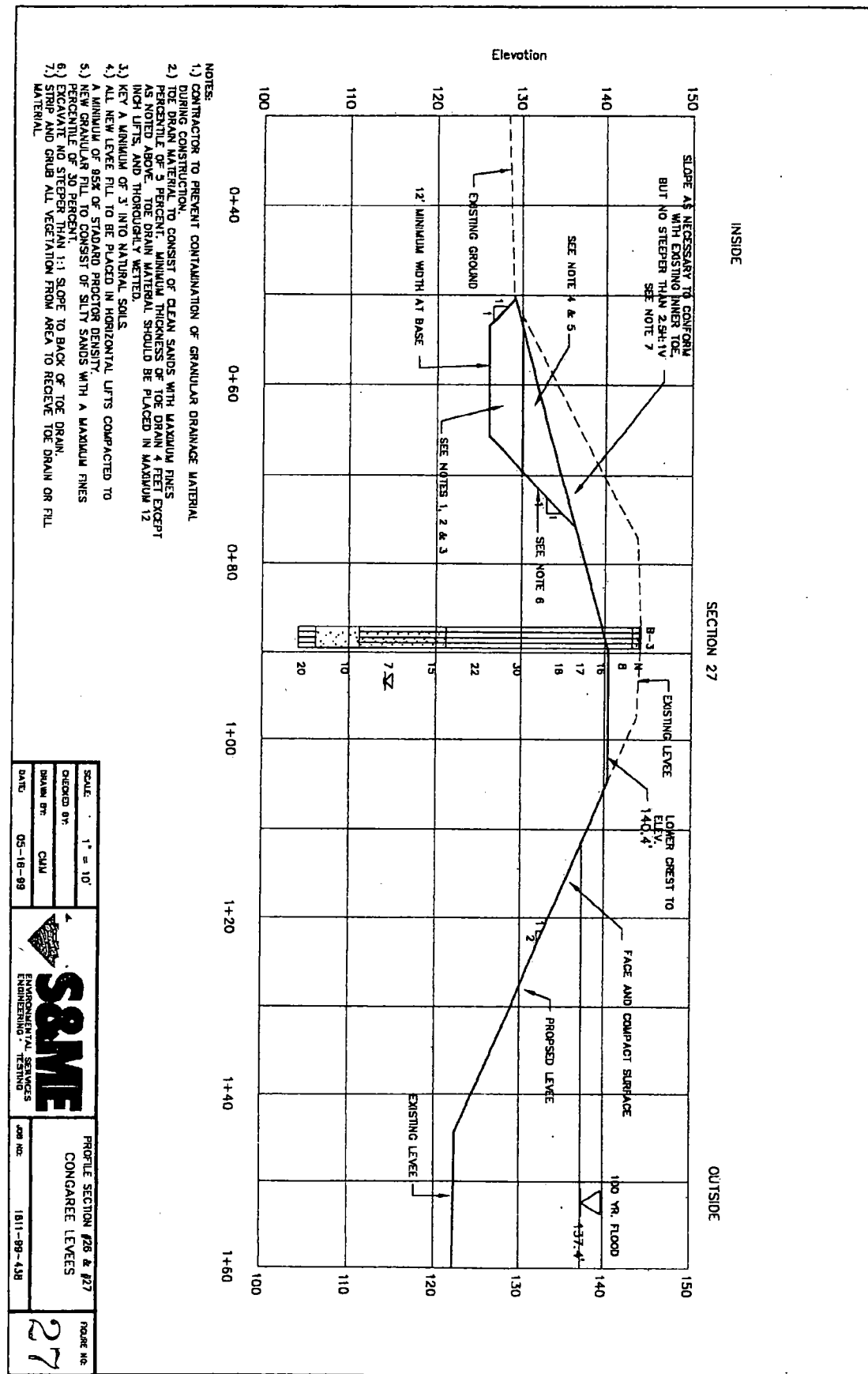
- NOTES:
- 1) CONTRACTOR TO PREVENT CONTAMINATION OF GRANULAR DRAINAGE MATERIAL DURING CONSTRUCTION.
 - 2) TOE DRAIN MATERIAL TO CONSIST OF CLEAN SANDS WITH MAXIMUM FINES PERCENTILE OF 5 PERCENT. MINIMUM THICKNESS OF TOE DRAIN 4 FEET EXCEPT AS NOTED ABOVE. TOE DRAIN MATERIAL SHOULD BE PLACED IN MAXIMUM 12 INCH LIFTS, AND THOROUGHLY WETTED.
 - 3) KEY A MINIMUM OF 3" INTO NATURAL SOILS.
 - 4) ALL NEW LEVEE FILL TO BE PLACED IN HORIZONTAL LIFTS COMPACTED TO A MINIMUM OF 95% OF STANDARD PROCTOR DENSITY.
 - 5) NEW GRANULAR FILL TO CONSIST OF SILTY SANDS WITH A MAXIMUM FINES PERCENTILE OF 30 PERCENT.
 - 6) EXCAVATE NO STEEPER THAN 1:1 SLOPE TO BACK OF TOE DRAIN.
 - 7) STRIP AND GRUB ALL VEGETATION FROM AREA TO RECEIVE TOE DRAIN OR FILL MATERIAL.



SCALE: 1" = 10'	S&ME ENGINEERING SERVICES ENGINEERING - TESTING	PROFILE SECTIONS #13 - #17	PLANT NO. 25
DRAWN BY: CAJ		CONGAREE LEVEES	
DATE: 05-18-99		JOB NO. 1611-99-438	

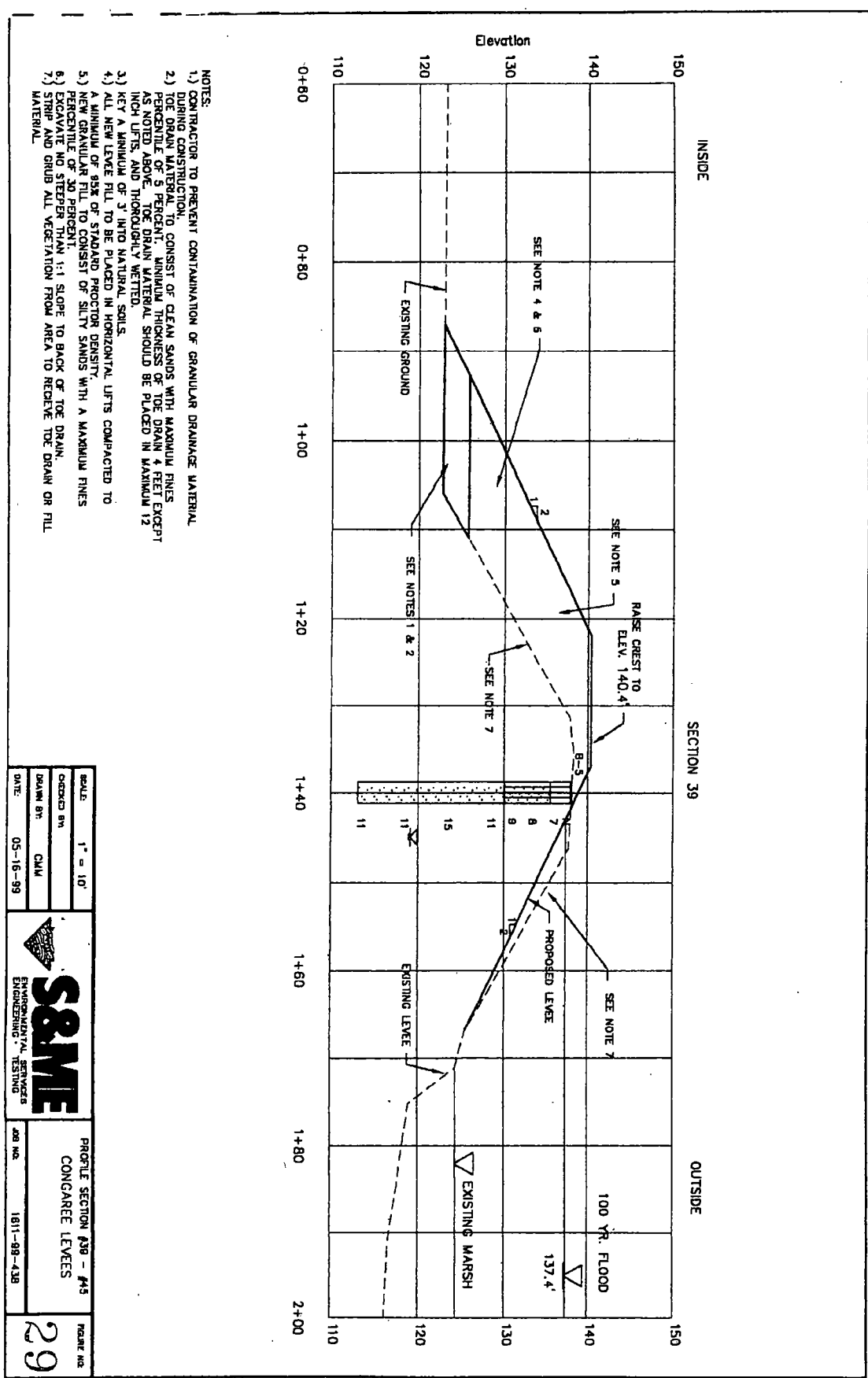


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Revised Flood Insurance Study* July 17, 1995 Effective FIRM – January 19, 1994				Revised Preliminary Flood Insurance Study* August 12, 1999 Effective FIRM – January 19, 1994				Revised Preliminary Flood Insurance Study* September 26, 2000 Effective FIRM – January 19, 1994			
Table 3 – Congaree River				Table 5 – Congaree River				Table 5 – Congaree River			
Flooding Source	Base Flood Water Surface Elevation			Flooding Source	Base Flood Water Surface Elevation			Flooding Source	Base Flood Water Surface Elevation		
Cross Section	Regulatory	Without Floodway	With Floodway	Cross Section	Regulatory	Without Floodway	With Floodway	Cross Section	Regulatory	Without Floodway	With Floodway
(FEET NGVD)				(FEET NGVD)				(FEET NGVD)			
Congaree River				Congaree River				Congaree River			
A	134.6	134.6	135.6	A	133.2	133.2	133.7	A	132.5/131.7 ⁶	131.7	132.3
B	138.5	138.5	139.4	B	134.8	134.8	135.3	B	135.0/133.7 ⁶	133.7	134.3
C	140.2	140.2	140.8	C	138.4	138.4	139.1	C	139.8/137.4 ⁶	137.4	138.3
D	141.9	141.9	142.6	D	140.1	140.1	140.9	D	141.5/138.1 ⁶	138.1	139.0
E	141.9	141.9	142.6	E	141.5	141.5	142.5	E	141.8/139.9 ⁶	139.9	140.9
F	145.6	145.6	146.6	F	143.5	143.5	144.4	F	142.8	142.8	143.5
G	150.1	150.1	150.8	G	144.6	144.6	145.4	G	144.4	144.4	145.1
H	150.7	150.7	151.4	H	147.9	147.9	148.9	H	148.7	148.7	149.2
I	154.1	154.1	155.0	I	149.0	149.0	149.9	I	150.1	150.1	150.5
J	154.4	154.4	155.3	J	149.3	149.3	150.2	J	150.4	150.4	150.9
K	155.2	155.2	156.1	K	149.8	149.8	150.7	K	150.9	150.9	151.4
L	155.6	155.6	156.5	L	149.9	149.9	150.8	L	151.1	151.1	151.4
M	155.9	155.9	156.7	M	149.9	149.9	150.8	M	151.1	151.1	151.6
N	157.4	157.4	158.3	N	150.5	150.5	151.4	N	151.9	151.9	152.5
O	157.5	157.5	158.5	O	150.5	150.5	151.4	O	151.9	151.9	152.5
				P	151.2	151.2	152.1	P	152.6	152.6	153.2
				Q	151.2	151.2	152.1	Q	152.7	152.7	153.2
				R	151.6	151.6	152.5	R	153.1	153.1	153.7
				S	152.0	152.0	152.8	S	153.5	153.5	154.1
*Excerpted from PLTF TRIAL EXH 003				*Excerpted from PLTF TRIAL EXH 305				*Refer to Section 3.2 of this FIS report.			
								*Excerpted from PLTF TRIAL EXH 336			

PLTF TRIAL EXH 533



A. CARROLL BARKER, SR.

Principal & Director, Water Resources Services

Mr. Barker is a principal and co-founder of Genesis Consulting Group and directs the firm's water resources services for both public- and private-sector clients. In this role, he provides corporate commitment for individual water resources projects, in addition to performing various hydraulic/hydrologic tasks. Mr. Barker possesses over 30 years of experience in water resources and holds a BS in Civil Engineering from the University of South Carolina. Over his career, he has gained extensive hands-on experience in hydraulic/hydrologic system engineering and design. Mr. Barker's specific areas of expertise include project management, stormwater management, BMP design, floodplain analysis/design, hydrologic analysis and computer modeling. Other specialties include reservoir operational modeling, dam break and flood forecasting modeling, probable maximum precipitation computation, watershed management, drainage/culvert design, and coastal flooding and hurricane storm surge modeling.

Prior to co-founding Genesis Consulting Group, Mr. Barker served as vice president and director of Wilbur Smith Associates' water resources division. In that role, his experience included numerous storm water management plan and design projects throughout South Carolina and Georgia. Previous to then, Mr. Barker also held positions with Piedmont Olsen Hensley, as well as Post Buckley Schuh and Jernigan, Inc., and the United States Geological Survey (USGS). In 2007, Mr. Barker served on the Board of Directors (Member-at-Large) of the South Carolina Association of Stormwater Managers (SCASM).

Genesis Consulting Group - 2006 to present
Hydrology/Hydraulics, Stormwater Management:

- **No Impact Certification for Pedestrian Bridges in Congaree River Floodplain (City of Cayce, SC) 2012** - Project Manager/Hydraulic Specialist - Conducted No Impact hydraulic analysis for two bridges over the Congaree Creek but located within the Congaree River floodplain. The bridges are part of the Timmerman Trail. The Richland County and Lexington County HEC-2 models were used in the analyses.
- **Inspection and Maintenance Plan for Levee I at the Congaree River and Gills Creek (Columbia, SC) 2011-12** - Project principal/lead technical manager for levee inspection services to provide a plan for maintenance.
- **Congaree River Flood Frequency (Columbia, SC) 2011** - Project principal/lead technical specialist. Conducted flood frequency for private client using the Maintenance of Variance Extension statistical method to compute the 1% annual chance flood.

Years of Experience:

30 Years

Education:

BS, Civil Engineering
University of South Carolina, 1982

Specialized Training:

HEC-5, Reservoir Hydropower and Flood Control Operations, University of California, 1990

Certificate of Training, National Highway Institute, Storm Water Detention Basin Design, 1991

Professional Registrations & Affiliations:

American Society of Civil Engineers

South Carolina Association of Stormwater Managers
2007 Board of Directors
(Member-at-Large)

Technical Specialties:

Floodplain Analysis & Management
FEMA Flood Insurance Studies & Analysis
Reservoir Operational Modeling, Dam Break & Flood Forecasting Modeling, Probable - Maximum Precipitation Computation, Storm Water Management, Watershed Management, Drainage/Culvert Design, Coastal Flooding & Hurricane Storm Surge Model

Employment History:

Genesis Consulting Group, LLC
Columbia, SC 2006 to Present

Wilbur Smith Associates, Inc.
Columbia, SC 1996 to 2006

Piedmont Olsen Hensley
Chattanooga, TN 1994 to 1996

Wilbur Smith Associates, Inc.
Columbia, SC 1991 to 1994

Post Buckley Schuh and Jernigan, Inc.
Columbia, SC 1988 to 1991

US Geological Survey
Water Resources Division
Columbia, SC 1983 to 1988

US Army Test and Evaluation Command
Aberdeen Proving Ground, MD
1982 to 1983



Genesis Consulting Group, LLC

- **Congaree River Flood Frequency Analysis (Columbia, SC) 2011** – Project principal/lead technical specialist. Conducted flood frequency for private client using a blended method of statistical methods.
- **FEMA Flood Map Appeal for Darlington County/City of Hartsville (Darlington County, SC) 2010 – 2011** – Project principal/lead technical manager. Lead a team to submit a technical study in support of a map appeal on Black Creek. The appeal was accepted by FEMA and resulted in reduction in the extent of the 100-year floodplain that affected numerous residences and businesses.
- **City of Rock Hill Storm Water Management Plan Updates (Rock Hill, SC) 2011-2012** – Hydrology/hydraulics support. Served as senior technical resource for a Rock Hill engineering firm to assist in the plan update.
- **Contech Systems Underground Stormwater Detention System Hydraulic Modeling at Lexington One HS (Lexington County, SC) 2010** – Project principal/lead technical design. Modeled and verified storm drainage system for high school in Lexington School District One.
- **Monster.com Building Drainage Design (Columbia, SC) 2010** – Project principal/lead technical manager. Reviewed a drainage system design to correct problems for a private client.
- **SCE&G Huger Street Site – Storm Drainage Pipe Relocation & Sheet Pile Retaining Wall (Columbia, SC) 2010** – Lead hydrology/hydraulics manager. Provided modeling for a alternate system design for drainage culvert.
- **ToTest Stormwater Pollution Prevention Plan (SWPPP) Preparation and Construction Inspection for Military Family Housing Demolition (Shaw AFB, SC) 2009-2010** – Project principal/project manager. Oversaw permitting for storm water handling during demolition of buildings.
- **Lake Elizabeth Phase III – Cumbess Creek Stabilization & Water Quality Improvement (Richland County, SC) 2008-2009** – Project principal/project manager. Developed water quality systems for developments along a stream.
- **Fullard Environmental Stormwater Pollution Prevention Plan (SWPPP) Preparation for Military Family Housing Demolition (Shaw AFB, SC) 2009** – Project principal/project manager. Developed permitting strategy for housing demolition on military base.
- **BAM Contractors Stormwater Pollution Prevention Plan (SWPPP) Preparation for Military Family Housing Demolition (Seymour Johnson AFB, NC) 2009** – Project principal/project manager. Developed permitting strategy for housing demolition on military base.
- **BAM Contractors Stormwater Pollution Prevention**

Models:

- HEC-1/HEC-HMS Hydrograph Routing Model, Corps of Engineers (COE)
- HEC-2/HEC-RAS Water Surface Profiles COE
- TR-55 NRCS
- Hydrflow Hydrographs
- HEC-5 Reservoir Operational Model COE
- DAMBRK Dam Break Flood Forecasting Model, National Weather Service
- DWOPER Dynamic Wave Operational Model, NWS
- BRASS Basin Runoff and Streamflow Simulation, USA COE
- HMR 52 Probable Maximum Storm Computation Model, COE/NWS
- SWMM Storm Water Management Model, USEPA
- XP-SWMM Storm Water Management Model, XP Software
- WMM Watershed Management Model, USEPA
- SMS (RMA-2) Surface Water Modeling System, Brigham Young University Research Lab
- HYDRAIN Culvert Design Model, FHWA

Publications:

"Flow Characteristics of the Lower Saluda River, South Carolina," Proceedings of the American Fisheries Society Symposium on the Lower Saluda River, Columbia, South Carolina, March, 1988.

"Base Flow Measurements at Partial Record Sites on Small Streams in South Carolina," U.S. Geological Survey Open File Report 86-143, 1986.

"Gage Effectiveness of the Stream Gaging Program in South Carolina," U.S. Geological Survey Water Resources Investigation Report 85-4210, 1985.

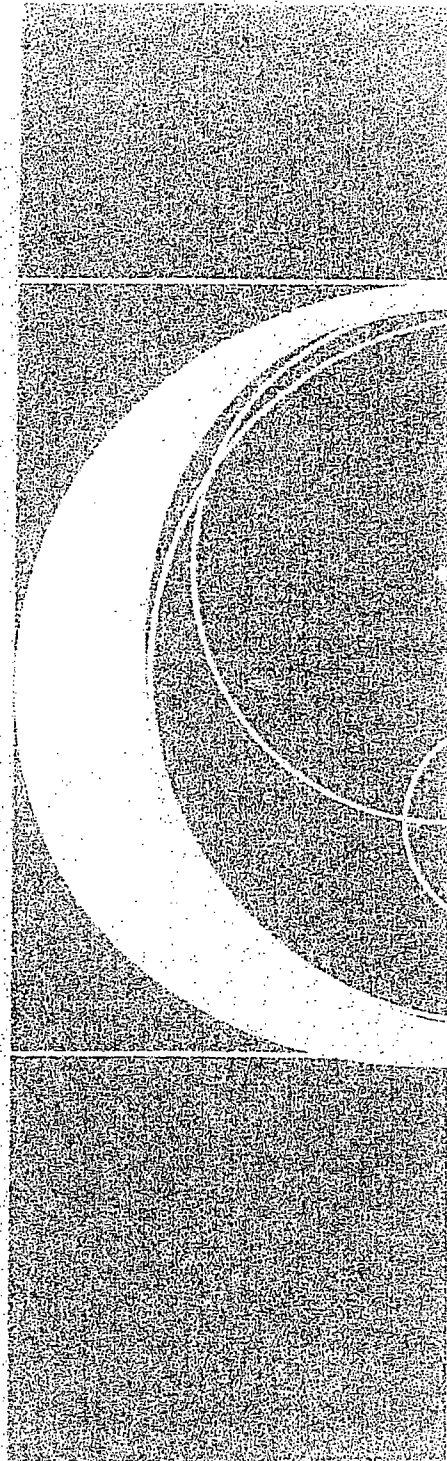
Presentations:

Distinguished Faculty for Seminar "Current Issues in Storm Water Regulation" May 6, 2008

A. CARROLL BARKER, SR.

Genesis Consulting Group, LLC

**Plan (SWPPP) Preparation for Military Family
Housing Demolition (Shaw AFB, SC) 2009** – Project
principal/project manager. Developed permitting
strategy for housing demolition on a military base.



Genesis Consulting Group, LLC

- **401/404 Permitting for Stream Relocation at the Haile Gold Mine (Lancaster County, SC) 2008 - 2009** – Project hydrologist. Developed strategy to analyze streamflow data for frequency analysis for channel design.
- **Lake Elizabeth Phase II – Crane Creek Stabilization & Water Quality Improvement (Richland County, SC) 2008-2009** – Project principal/project manager. Developed water quality systems for developments along a stream.
- **SC Department of Natural Resources – Campbell Fish Hatchery Stormwater Design (Lexington County, SC) 2008** – Project principal. Managed pond design project in Lexington County. Enlarged ponds for fish hatchery.
- **Lake Katherine Emergency Spillway Improvement Design (Columbia, SC) 2007 – 2008** – Project principal. Provided enhanced spillway design oversight for private developer.
- **Engineering Design for Columbia Venture Levees – Phase II – Gills Creek Levee in Congaree River Basin (Cayce, SC) 2008** – Project principal/project manager for proposed levee upgrades to meet 40 CFR 65.10 criteria for certification for the 100-year storm event.
- **Ring Levee Design Modification in Congaree River Basin (Richland County, SC) 2008** – Project principal/project manager. Assisted project engineer in the design of levee upgrade to meet FEMA's 40 CFR 65.10 criteria for levee certification for the 100-year storm event.
- **Congaree River Basin RMA-2 Modeling Project (Richland County, SC) –2007 – 2009** – Project principal. Modeled the Congaree River with a 2-dimensional model to analyze the result of levee failure scenario in lawsuit. Acted a expert witness for the plaintiff. Defendant settled out of court (before trial onset).
- **Master Agreement for On-Call Engineering Services (Myrtle Beach, SC) 2006 to 2011** – Project principal/Project Manager for on-call engineering services for various projects in Myrtle Beach.
- **Cardinal Lake Dam – Facility Rehabilitation Design (Whispering Pines, NC) 2007** – Project principal. Assisted project manager on project that investigate dam rehabilitation.
- **Lake Katherine Sediment Remediation & Lake/Stream Restoration – Preliminary Cost Estimates, FEMA No Impact Study, Permitting, and Construction Plans (Columbia, SC) 2007** – Project principal. Assisted project engineer on project that used HEC-2 for hydraulic analysis.
- **Bent Oaks Neighborhood Drainage Improvements Designs (Myrtle Beach, SC) 2006** – Project principal for residential drainage design to improve flood conditions along the coast.
- **SCPRT – Huntington Beach State Park Culvert Causeway Improvements Design (Georgetown County, SC) 2006** – Project principal. Design for wooden gates that are actuated by hydraulic head.
- **Vought Industries Bird Strike Investigations – Stormwater Handling/Facilities & Industrial Permitting (North Charleston, SC) 2006** – Project principal. Investigated airline supplier bird strikes potential for industrial site near Charleston, SC.

Wilbur Smith Associates 1996 – 2006
Columbia, SC

- **Caw Caw Creek Floodplain Analysis, Orangeburg County, South Carolina – Project Principal/Analyst – 2006:** Served as Project Principal and Analyst for the determination of the 100-year floodplain limits for a FEMA-studied stream for development. The USACE HEC-RAS model was used to for H&H computations for the C.F. Evans Co.
- **Statler Road Drainage Improvements, Richland County, South Carolina – Project Principal/Analyst – 2005:** Served as Project Principal for drainage improvements for a subdivision experiencing severe erosion and drainage system flooding. Assisted in the neighborhood meetings and overall project coordination for nearly 3,000 ft of improvements.
- **Deephead Swash Stormwater Ocean Outfall, Myrtle Beach, South Carolina – Project Principal – 2004:** Served as Project Principal for a stormwater deep ocean outfall using Horizontal Directional Drilling (HDD) for three 48-inch HDPEs. The XP-SWMM model was used to determine HDPE sizes and locations for the outfall which is to be drilled under the beach and outfall approximately 1200 ft. offshore.

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- **Shaw Air Force Base Stormwater Master Plan Update, Shaw AFB, South Carolina – Project Principal – 2004:** Phase 1 of the stormwater master plan update using XP-SWMM model for hydrologic and hydraulic computations for storm water system on a military base. The original study was also conducted by project principal in 1990. Modeling the 5, 10, 25 and 50 year storm events based on the associated rainfall amounts.
- **Little Lake Katherine Sediment Transport Study, City of Columbia, South Carolina – Project Principal – 2004:** Provided oversight for a sediment transport study for an urban watershed. Determined jurisdictional portion of sediment delivery to downstream lake and provided remedial measures and costs.
- **Pen Branch FEMA CLOMR, City of Columbia, South Carolina – Project Principal – 2003:** Assisted project manager on Conditional Letter of Map Revision (CLOMR) as Project Principal for urban stream. Used HEC-RAS model to determine hydraulics for bridge crossing designed by the SCDOT.
- **Ring Levee for City of Columbia WWTP in Richland County, SC – Project Principal – 2001:** Assisted in the hydraulic analyses that investigated three proposed ring levees scenarios that would protect WWTP and/or Heathwood Hall School from the 100-year base flood. The FEMA effective HEC- 2 model was used as the base model in the analyses.
- **Pinewood Road Drainage Design, City of Myrtle Beach, South Carolina – Project Principal – 2003:** Served as Project Principal for drainage project in built out urban section of a resort area. Roadway crossing and channel improvements were designed using TR-55 methods and XP-SWMM model for hydraulics.
- **Storm Water Master Plan for Myrtle Beach International Airport, Myrtle Beach, South Carolina – Project Manager – 2003:** Development of a SWMP for a new terminal complex along the coast. Conducted detailed modeling of the existing and proposed systems using the XP-SWMM version of the EPA's Storm Water Management Model for the 10-, 25-, and 100-year storm events.
- **Hydrologic Analysis for Proposed Island Crossings over the Congaree River, Columbia, South Carolina – Project Manager – 2002:** A statistical hydrologic analyses of the Congaree River to determine the minimum deck height of 3 low level bridge structures that would permit use for over 80% of the time without overtopping.
- **Beach City/Airport Road Study – Phase I, Town of Hilton Head, South Carolina – Project Manager – 2002:** Supervised watershed study of flooding problems in commercial development and surrounding areas utilizing the SWMM model to predict drainage system response to various storm events.
- **Deep Head Swash Storm Water Master Plan, City of Myrtle Beach, South Carolina – Project Manager/Project Engineer – 2002:** Development of a stormwater master plan to provide remedial design for water quantity and quality problems. Used SCS TR-55 and XP-SWMM for modeling. Modeled for the 25-year and 100-year 24-hour storm events.
- **Storm Water Master Plan for the 165th AW and CRTG, Georgia Air National Guard, Savannah, Georgia – Project Manager/Project Engineer – 2001:** Developed a base-wide stormwater master plan to alleviate existing flooding problems and provided design alternatives for future development on Base. The study was conducted using the EPA-based Storm Water Management Model (SWMM) for the 25-year and 100-year storm events. A prioritization plan/cost estimate was developed.
- **Storm Water Master Plan for Manchester Creek Basin, City of Rock Hill, South Carolina – Project Manager/Project Engineer – 2001:** Developed a stormwater master plan for a 9 square mile drainage basin that encompasses part of the City. The 10-, 20-, and 100-year 24-hour storm event was used in the analyses. Existing and future conditions were modeled using SCS TR-55 and HEC-RAS to determine the needed improvements for both conditions.
- **Storm Water Feasibility Study for Burton Hill Development, City of Beaufort, South Carolina – Project Manager/Project Engineer – 2001:** Study to determine if a regional, stormwater detention facility would be preferred when compared to individual site detention. Used SCS TR-55 and CHEC-RAS models for project.
- **Withers Swash Detention Analysis, City of Myrtle Beach, South Carolina – Project Manager/Project Engineer – 2000:** Conducted a feasibility study to determine if multiple detention structures, as proposed by the City, would reduce the flooding downstream of the Grissom Parkway

A. CARROLL BARKER, SR.

Genesis Consulting Group, LLC

using the XP-SWMM model. Modeled the system using the 25-year and 100-year 24-hour storm events.

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- **Porcher Drive Basin Storm Drainage Design, City of Myrtle Beach, South Carolina – Project Manager/Project Engineer – 2000:** Provided design of a drainage system for a small watershed on the coast using the XP-SWMM model. Design included a new outfall to Canepatch Swash and abandonment of the existing ocean outfall. The culvert system was upgraded to convey the 25-year 3-hour storm event. The estimated project cost was 2.5 million dollars.
- **Storm Water Master Plan for Taylors Creek Basin, City of Rock Hill, South Carolina – Project Manager/Project Engineer – 2000:** Developed a stormwater master plan for an 18 square mile drainage basin that encompasses part of the City. The 10-, 20-, and 100-year 24-hour storm event was used in the analyses. Existing and future conditions were modeled using SCS TR-55 & HEC-RAS.
- **Socastee Creek Hydraulic Analysis, SC Dept. of Transportation, Columbia, South Carolina – Project Engineer – 1999:** Conducted hydraulic analysis using USGS regional frequency data and HEC-RAS model to determine the effects of a proposed bridge in Horry County. This study was used for a "No-Rise" certification submittal.
- **Drainage Design for Wherry Housing, Shaw Air Force Base, South Carolina – Project Manager / Project Engineer – 1999:** Conducted drainage study and design for on-base housing area. Three separate drainage systems were analyzed using XP-SWMM for the 10-year 24-hour storm event. Plans and specifications were prepared.
- **Reedy River Hydraulic Analysis for the Southern Connector, Interwest Carolina Transportation Group, LLC, South Carolina – Project Engineer – 1998:** Conducted hydraulic analysis using USGS regional frequency data and HEC-RAS model to determine the effects of a proposed bridge in Greenville County. This study was used for a "No-Impact" certification for FEMA submittal.
- **Storm Water Master Plan for Wildcat Creek Basin, City of Rock Hill, South Carolina – Project Manager / Project Engineer – 1998:** Developed a stormwater master plan for a 24 square mile drainage basin that encompasses part of the City. The 10-, 20-, and 100-year 24-hour storm event was used in the analyses. Existing and future conditions were modeled using SCS TR-55 and HEC-RAS to determine the needed improvements for both conditions.
- **Storm Water Master Plan for Dutchman Creek Basin, City of Rock Hill, South Carolina – Project Manager / Project Engineer – 1998:** Developed a stormwater master plan for a 17 square mile drainage basin that encompasses part of the City. The 10-, 20-, and 100-year 24-hour storm event was used in the analyses. Existing and future conditions were modeled using SCS TR-55 and HEC-RAS to determine the needed improvements for both conditions.
- **Floodplain Analysis of the Tellico River, Tellico Plains, Tennessee – Project Engineer – 1998:** A floodway was developed along the Tellico River to define the potential land development mass at a proposed 1400 acre residential/commercial/golf community. The existing flood insurance study HEC-2 model data was imported in the HEC-RAS model and used in the analysis. The site included archeological sites and wetlands.
- **Storm Water Utility, Rock Hill, South Carolina – Project Manager / Project Engineer – 1997:** Stormwater utility study for medium-sized municipality. Conducted statistical analysis on parcel characteristics for the City for the utility development.
- **Drainage Study for the Upper Basin of Withers Swash, Myrtle Beach, South Carolina – Project Manager / Project Engineer – 1997:** Coastal basin study for the South Carolina Department of Transportation (SCDOT). The XP-SWMM model was used to determine the effects of the proposed Central Parkway in Myrtle Beach for the 25-year storm event. A regional storm detention lake was proposed and preliminary cost estimates were provided.

Piedmont Olsen Hensley 1994 – 1995
Chattanooga, TN

- **Hydraulic Study for the Little Pigeon River, Sevierville, Tennessee – Project Engineer – 1996:** Hydraulic study to certify No Impact from the effects of a proposed bridge across the Little Pigeon River (a major river in Tennessee and a FEMA studied stream with a broad floodplain). The 100-year floodplain and regulatory floodway were analyzed using the USACE HEC-RAS model to determine if the bridge would impact the river.

Genesis Consulting Group, LLC

- **FEMA Flood Insurance Study for Hamilton County, Tennessee – Project Manager - 1996:** Served as project manager for a flood insurance study for FEMA Region IV. Study was performed using HEC-1 to determine hydrology and HEC-2 for hydraulic modeling. The regulatory floodplain and floodway were delineated and mapped. Study covered 11 streams totaling over 37 miles. Five separate communities were involved in the study, including the Town of Signal Mountain, Town of Red Bank and City of Chattanooga.
- **Storm Water Management Plan, East Ridge, Tennessee – Project Engineer- 1996:** Conducted hydrologic and hydraulic analyses to determine existing flooding conditions and proposed structural and non-structural alternatives to alleviate flooding. A prioritized plan was developed to provide guidance to the City. A fee system was used to fund the plan.
- **Low-Flow Frequency Analysis for Bush River, Laurens County Water & Sewer Authority, Laurens County, South Carolina – Project Engineer – 1995:** Conducted low-flow frequency analysis to determine the 7-day 10-year low flow for Bush River using USGS techniques to calculate. Data was used to compute assimilative stream capacity for proposed wastewater treatment upgrade.
- **Flood Inundation Mapping for Fairfield Pumped-Storage Facility Dambreak Analysis, South Carolina Electric & Gas Co., Project Engineer – 1996:** Prepared inundation mapping for dambreak scenarios through 4 counties in South Carolina. Mapping was based on sunny day & PMF failure scenarios under FERC guidelines and encompassed the Broad, Saluda and Congaree Rivers.
- **Water Supply Storage Analysis of the Sequatchie River, Bledsoe County, Tennessee – Project Engineer – 1995:** Analyzed the Sequatchie River for water supply storage required for future development. Storage was determined using estimated draft rates, gaged streamflow data, and USGS techniques.
- **Flood Plain Analysis for Chattanooga Creek Sewer Interceptor, City of Chattanooga, Tennessee – Project Engineer – 1994:** Prepared flood plain analysis using HEC-2 for proposed St. Elmo sewer interceptor crossing. The analysis was used to defend a Certificate of No Rise for the project.
- **Bradley Memorial Hospital Storm Drainage Design, Cleveland, Tennessee – Project Engineer – 1994:** Provided site drainage design including detention facility for hospital expansion for the 10- and 100-year storm event. Detention facility required water quality as well as quantity. The entire 100-year storm event was contained within the facility because of no space for emergency spillway.

Wilbur Smith Associates 1991 – 1994
Columbia, SC

- **Charleston County Flood Insurance Study (FIS), South Carolina for FEMA Region IV – Project Engineer – 1994:** FIS was performed using USGS Regional frequency equations to determine hydrology and HEC-2 for hydraulic modeling. The City of Charleston was included in the coastal analysis and the Town of Ravenel for the riverine portion along with areas of unincorporated Charleston County.
- **Black Creek Flood Liability Study, Chesterfield and Darlington Counties – Project Engineer – 1994:** Responsible for project coordination, data collection, and hydrologic/hydraulic modeling for October 1990 flood using the Basin Runoff and Streamflow Simulation (BRASS) Model unsteady flow model.
- **Water Quality Wet Detention Pond Design for U.S. Route 138, Jamestown, Rhode Island – Project Engineer – 1993:** Designed detention ponds to comply with the Rhode Island standards associated with roadway design using SCS TR-55 and Haestad Methods Pond Pack software.
- **Horry County Flood Insurance Study (FIS), South Carolina for FEMA Region IV – Project Engineer – 1993:** FIS was performed using the USGS regional frequency equations to determine hydrology and HEC-2 for hydraulic modeling. The Waccamaw River and tributaries were included in the study. The City of Conway was a part of the areas studied. No coastal analyses were conducted.
- **Flood Plain Analysis of the Saluda River at the Proposed Riverbanks Zoo Bridge, Riverbanks Zoo Commission, Columbia, SC – Project Engineer – 1993:** Conducted a No Impact flood plain analysis for certification on the Saluda River to determine the effects of the proposed Riverbanks Zoo Bridge using the HEC-2 model.

Genesis Consulting Group, LLC

- **Berkeley County Flood Insurance Study (FIS), South Carolina for FEMA Region IV – Project Engineer – 1992:** FIS was performed using HEC-1 to determine hydrology and HEC-2 for hydraulic modeling. Study covered 14 streams totaling over 42 miles.
- **Stormwater Management Study for Shaw Air Force Base, Sumter, South Carolina, - Project Engineer – 1991:** Analyzed existing drainage system base-wide and developed design alternatives to alleviate flooding using the SWMM Model EXTRAN BLOCK for the 10, 25, and 50-year storm events. Design alternatives included retention/detention ponds, retrofitting and enlargement of storm sewer system.

Post-Buckley Schuh & Jernigan 1988 – 1991
Columbia, SC

- **Lowflow Analysis for Fork Creek Reservoir, City of Jefferson, Chesterfield County – Project Engineer – 1991:** Performed lowflow frequency and probability analyses for Lynches River and Fork Creek to determine joint probability of draft rates for Fork Creek Reservoir.
- **Stormwater Design Project for City of Tampa, Florida – Project Engineer – 1990:** Evaluated existing conditions of the storm sewer systems for several frequency storms and proposed design to alleviate stormwater flooding problems in the Drew Park Area of Tampa using the USEPA SWMM Model.
- **Floodplain Design Project for The Manning Company, Columbia, South Carolina – Project Engineer – 1990:** Conducted hydrologic and hydraulic analyses for Lightwood Knot Branch in Richland County, for FEMA Letter of Map Revision (LOMR) to encroach into the floodway for proposed development using the HEC-2 Model.
- **Feasibility Study for North Augusta, South Carolina Golf Course, Bennett-Thomas Associates – Project Engineer – 1990:** Assisted in feasibility study for golf course to be located on the Savannah River using HEC-2 Model to determine the impacts of the development during the 100-year base flood.
- **Guajataca Dam DamBreak Analyses, Puerto Rico Electric Power Authority – Project Engineer – 1989:** Assisted Project Manager in conducting DamBreak analyses to satisfy Federal Requirements for safety using the NWS DAMBRK Model.
- **Fairfield Dam Safety Analyses for South Carolina Electric and Gas Company – Project Engineer – 1988:** Performed Dam Break Analyses for Fairfield Pumped Storage Facility in Fairfield County using the Basin Runoff and Streamflow Simulation Model (BRASS). The analyses were conducted on the Broad, Saluda and Congaree River floodplains.
- **Flood Insurance Study for Cobb County, GA for FEMA Region IV – Project Engineer – 1990 - 1991:** Assisted in modeling for county-wide FIS in Ga. This was part of an overall study that used the HEC-2 model for hydraulics. Developed floodplain maps for study.
- **Flood Insurance Study for Pasco County, FL for FEMA Region IV – Project Engineer – 1990:** Conducted county-wide flood insurance study using HEC-2 hydraulic model for several rivers. Hydrology was previously developed.
- **Flood Insurance Study for Lexington County, SC for US Army Corps of Engineers – Project Engineer – 1989 :** Assisted the US Army Corps of Engineers in the Charleston District by setting up a preliminary HEC-2 model for and FIS update for several streams in Lexington County. These included Senn Branch, Knley Creek, Rawls Creek and others.
- **Flood Insurance Study for Blount County, AL for FEMA Region IV – Project Engineer – 1988 - 1989:** Conducted county-wide FIS for streams/rivers using the USGS flood frequency method for hydrology and HEC-2 model for hydraulics. Also developed mapping.
- **Flood Insurance Study for Darlington and Chesterfield Counties, SC for FEMA Region IV – Project Engineer – 1988 - 1989:** Conducted two (2) county-wide flood insurance studies using HEC-1 for hydrology and HEC-2 model for hydraulics. Floodplain mapping was also developed.
- **NPDES Industrial Stormwater Permits – Project Engineer – 1988 – 1991:** Modeled stormwater runoff for permit applications for SUNOX, Inc., TEEPAC, PDRTA, and Edgefield Water and Sewer Authority.

US Geological Survey 1983 – 1986

A. CARROLL BARKER, SR.

Genesis Consulting Group, LLC

Columbia, SC

- **Flow Characteristics of the Lower Saluda River, South Carolina – Project Hydrologist – 1987-88:** Conducted flow frequency analysis for the 10-mile segment below Lake Murray to the Congaree River. Proceedings of the American Fisheries Society Symposium on the Lower Saluda River, Columbia, South Carolina.
- **Base-Flow Measurements at Partial-Record Sites on Small Streams in South Carolina – Project Hydrologist – 1985-86:** Conducted flow measurements at selected streams over the State. Documented in a U.S. Geological Survey Open-File Report 86-143.
- **Cost Effectiveness of the Stream-Gaging Program in South Carolina – Project Hydrologist – 1983-85:** Conducted Kalman Filtering analysis for gaging station data in South Carolina. Project documented in a U.S. Geological Survey Water Resources Investigation Report, 85-4210.

US Army Test & Evaluation Command 1982 – 1983
Aberdeen Proving Ground, MD

- **Aircraft Cargo Loader – Test Engineer – 1982-83:** Conducted destructive testing of a prototype aircraft cargo loader for the US Air Force. Tests included operation of hydraulic components during 60 degree below freezing conditions, hydraulic stress test and endurance.
- **Mobile Refrigeration Unit – Test Engineer – 1982-83:** Conducted destructive testing of a mobile refrigeration unit. Tests included endurance on vehicle test track while under operation, calorimeter test and start/stop operations.

APPRAISER'S QUALIFICATIONS

THOMAS FRANKLIN WINGARD, MAI, SRA

WINGARD AND ASSOCIATES, INC.
2711 MIDDLEBURG DRIVE, SUITE 207
COLUMBIA, SOUTH CAROLINA 29204
TELEPHONE (803) 252-5193
FACSIMILE (803) 252-5197
EMAIL: thomaswing@aol.com

EDUCATION:

University of South Carolina
Columbia, South Carolina
Bachelor of Arts, Government and Public Administration, 1973

ASSOCIATION MEMBERSHIPS (PROFESSIONAL):

- MAI - *Member of Appraisal Institute, American Institute of Real Estate Appraisers, (MAI Certificate No. 7943), 1988
- SRPA - *Senior Real Property Appraisal, International Society of Real Estate Appraisers, 1988
- SRA - *Senior Residential Appraiser, Society of Real Estate Appraisers, International Society of Real Estate Appraisers, 1981
- RM - *Residential Member, American Institute of Real Estate Appraisers, (RM Certificate No. 1600), 1981

* As of January 1st, 1991, the Society of Real Estate Appraisers and the American Institute of Real Estate Appraisers merged to form the Appraisal Institute.

Appraisal Institute - National Board of Directors (1994-1997)

Appraisal Institute - Region IX - Regional Chair

State of South Carolina Certified General Real Estate Appraiser No. CG 89

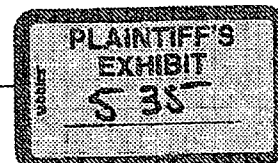
State of North Carolina Certified Real Estate Appraiser No. A 2040

REAL ESTATE APPRAISAL EDUCATION:

SOCIETY OF REAL ESTATE APPRAISERS

Course 101, An Introduction to Appraising Real Property,
University of South Carolina, Columbia, 1975

Course 201, Principles of Income Property Appraising,
University of Alabama, Tuscaloosa, 1976



Course 202, Applied Income Property Valuation,
Hershey, Pennsylvania, 1988

R-2 Examination, 1979

APPRAISAL INSTITUTE

Valuation of Conservation Easements, Appraisal Institute and The American Society of Farm Managers and Rural Appraisers, American Society of Appraisers, and Land Trust Alliance, December, 2007, Little Rock, Arkansas

AMERICAN INSTITUTE OF REAL ESTATE APPRAISERS

Highest and Best Use/Marketability Analysis, Appraisal Institute, (2004)

Course VIII, Single Family Residential Appraisal (1979)

Course I-A, Basis Appraisal Principles, Methods, and Techniques (1981)

Course I-B, Capitalization Theory and Techniques (1981)

Course II, Urban Properties (1979)

Course SPP, Standards of Professional Practice (1995)

Course IV, Litigation Valuation (1983)

RECENT EDUCATION

Appraising the Appraisal: Appraisal Review General, Appraisal Institute, January 26th, 2012, Columbia SC

Overview: The Role of the Appraiser in Eminent Domain Acquisitions, January 27th, 2012, Columbia, SC

Business Practices and Ethics, Appraisal Institute, May 13th, 2011, Columbia, SC

Advanced Spreadsheet Modeling for Valuation Applications, , Appraisal Institute, April 28th - April 29th, 2011, Mt. Pleasant, SC

Online Small Hotel/Motel Valuation, Appraisal Institute, July 15th, 2010

USPAP Review and Update, December 30th, 2009

Appraisal Curriculum, Appraisal Institute, Appraisal, March 6th - 7th, 2009, Columbia, SC

Property Tax Reform Act of 2006 - Its Effect on Market Value, January 22nd, 2009, Columbia, SC

INSTRUCTOR

Residential Appraising - Institute of Financial Education

Residential Appraising - Midlands Technical College

Level I & II - Licensing and Certification for State of South Carolina

Commercial Appraising - Community of Financial Institutions

Appraisal Interpretations - Community of Financial Institutions

WORK EXPERIENCE:

1973	Sloan Construction Company Columbia, South Carolina Cost Estimator
1973 - 1977	Richland County Board of Assessment Control Columbia, South Carolina Appraisal Supervisor
1977 - 1979	South Carolina Federal Savings and Loan Association Columbia, South Carolina Staff Appraiser
1979 - 1980	Mid-South Appraisal Company Columbia, South Carolina Senior Appraiser
1980 - 1982	Thomas F. Wingard, Real Estate Appraiser 1911 Barnwell Street, Suite C Columbia, South Carolina
1982 - 1994	Dozier, Wingard and Associates 1321 Lady Street, Suite 600 Columbia, South Carolina Partner, Real Estate Appraiser & Consultant
1995 - Present	Wingard and Associates, Inc. 2711 Middleburg Drive, Suite 207 Columbia, South Carolina Owner, Real Estate Appraiser & Consultant

TYPES OF PROPERTY:

RESIDENTIAL: Single family, condominiums, P.U.D.'s, vacant lots, multi-family residential (duplex, etc.).

COMMERCIAL: Single tenant and multi-tenant office facilities; retail neighborhood shopping facilities; regional malls; medical office buildings; automobile dealerships; hotels; motels; branch banking facilities; rental assisted elderly apartment projects; combination office/warehouse facilities; mini-storage projects; day/childcare facilities; Industrial properties; apartment complexes; restaurants (fast food and sit down).

SPECIAL PURPOSE: Churches, nursing homes, racquetball and fitness facilities and marinas.

EXPERT WITNESS:

U.S. Federal Court, Richland and Lexington County Court, South Carolina State Court, U.S. Federal Court-Philadelphia, Alabama State Court

HARTNETT REALTY COMPANY, INC.

**Qualifications of the Appraiser
Thomas F. Hartnett, GAA, CRB**

Biographical

Born in Charleston, South Carolina (1941)
Graduated from local elementary and high schools
Attended the College of Charleston 1960-1962

Designations

GAA - General Accredited Appraiser, NAR Appraisal Section
CRB - Certified Real Estate Brokerage Manager, NAR Marketing Institute

Business and Professional Affiliations

The Appraisal Institute - General Associate Member
The Appraisal Section - National Association of Realtors
Brokerage Council of the Realtors National Marketing Institute
Licensed Real Estate Broker - State of South Carolina
Certified General Appraiser - State of South Carolina # CG558
Certified General Real Estate - State of Georgia # 3355

Employment History

After leaving the College of Charleston in 1962, I joined my family real estate firm (Hartnett Realty Company, Inc.) as a real estate salesman and broker.

In 1963, I spent six months in the U.S. Air Force Reserves. From 1964-1980 I served in the South Carolina State House of Representatives and the South Carolina State Senate. In 1968, I became active in the real estate appraisal field and was designated a qualified appraiser for the Veterans Administration. I have continued in the real estate appraisal business since that time.

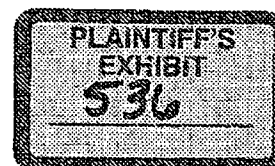
From January 1981 until December 1986, I served in the United States House of Representatives from the First Congressional District of South Carolina. I retired from the Congress and returned to South Carolina in 1986.

Appraisal Experience

Forty years active experience in the field of real estate and real estate appraisal
Qualified in U.S. District Court as an expert in real estate valuation. Qualified in the U.S. Bankruptcy Court as an expert in real estate valuation
Qualified in the S.C. Circuit Courts as an expert in real estate and related fields
Qualified as Expert Witness in Federal Tax Court, New York, NY

REAL ESTATE APPRAISALS

P.O. Box 221, Charleston, South Carolina 29402



HARTNETT REALTY COMPANY, INC.

Partial List of Clients Served

The United States Navy
 South Carolina Department of Transportation
 Medical University of South Carolina
 South Carolina Electric and Gas Company (SCANA)
 The Veterans Administration
 The Federal Housing Administration
 The Levi Strauss
 The City of Charleston
 The County of Charleston
 Harbor National Bank
 Wachovia Bank
 First Federal of Charleston
 CNS Federal Credit Union
 First National Bank of Orangeburg
 Rosen, Rosen and Hagood, Attorneys at Law
 Pratt-Thomas & Walker, P.A.
 Young Clement and Rivers, Attorneys at Law
 Godney M. Howe, III, Attorney at Law
 Haynsworth Sinkler Boyd, P.A.
 The Beach Company
 United States Attorneys Office
 The United States Justice Department
 Ducks Unlimited
 The Lowcountry Open Land Trust
 Exxon Corporation
 Lockheed, Marietta Georgia
 International Paper Company
 Patriots Point Development Authority
 Mount Pleasant Water and Sewer Commission
 The Hood Law Firm
 The McNair Law Firm
 Pearlman & Pearlman, Attorneys at Law
 Clawson & Staubes, Attorneys at Law
 The Richter Firm, Attorneys at Law
 St. John's Water Company, Inc.
 Smith, Bundy, Bybee and Barnett, P. A.
 King and Spalding, Attorneys at Law, Atlanta, GA
 Kilpatrick Stockton, LLP, Atlanta, GA
 Town of Hilton Head Island, SC
 Harvey and Battey, P.A.
 The Town of Mt. Pleasant, SC

REAL ESTATE APPRAISALS

P.O. Box 221, Charleston, South Carolina 29402

HARTNETT REALTY COMPANY, INC.

Palumbo vs. Hollingsworth

Rosen Law Firm
Susan Rosen

Gressette, et. al. v. SCANA & SCE & G

Willis & Massalon
John MassalonJames M. Loftis, Sr., et. al. v.
Southern Structures, ICF Builders, et. al.The Chakeris Law Firm
John T. ChakerisWoodale Partnership, LLC, et. al.
v. City of Charleston, et. al.Willis & Massalon
John A. MassalonGettschlich, et. al. v.
Strimpfel, et. al.Ellis, Lawhorne & Sims, P.A.
John D. Hudson, Jr.Various Property Owners vs.
South Carolina Public Service AuthoritySmith Bundy Bybee & Bantgen
Ellison D. Smith, IV

REAL ESTATE APPRAISALS

P.O. Box 221, Charleston, South Carolina 29402



County of Lexington

County Council
212 South Lake Drive
Lexington, South Carolina 29072
TELEPHONE: (803) 359-8103 FAX: (803) 359-8101

November 16, 2000

Bruce E. Rucker
District 1

William C. Billy Derrick
District 2

George Smokey Davis
District 3

Jacob R. Wilkerson
District 4

Joel B. Player, Jr.
District 5

Johnny W. Jeffcoat
District 6
Chairman

John W. Carrigg, Jr.
District 7
Vice Chairman

William B. Banning, Sr.
District 8

David S. James
District 9

VIA FACSIMILE (202) 646-4596 & US MAIL

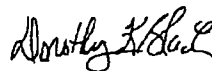
Mr. Michael Buckley
c/o FEMA
500 C Street SW, Room 423
Washington, DC 20472

RE: Resolution Regarding Lexington County Floodway

Dear Mr. Buckley:

Enclosed is a copy of the Resolution adopted by Lexington County Council at its meeting on Tuesday, November 14, 2000.

Cordially,


Dorothy K. Black
Clerk
Lexington County Council

/b

Enclosure

FEMA-001-000952

PLTF TRIAL EXH 542

RESOLUTION

WHEREAS, Lexington County Council has considered the long range economic implications of the floodway elevations and the models prepared by FEMA configuring the proposed floodway as it affects Lexington County and the economic development opportunities; and

WHEREAS, Lexington County Council has considered the critical impact, both commercially and residentially, of these elevations and floodways on the wastewater treatment facilities serving Lexington County and this region and desires that the remapping process by FEMA be completed.

NOW, THEREFORE, BE IT RESOLVED, with the stipulation that the base flood elevations (BFEs) and the configuration for the floodway will not change in Lexington County from those shown in the September 26, 2000 study, Lexington County Council requests that FEMA's Notice of Final Determination reflect a floodway for property in and on the Lexington County side of the Congaree River that is determined using the Lexington BFE HEC 2 model.

Adopted: November 14, 2000

FEMA-001-000953

PLTF TRIAL EXH 542



CITY OF CAYCE

Mark

December 5, 2000

Mayor
Avery B. Wilkerson, Jr.

Mayor Pro-tem
J. Hammond Pound

Council Members
Andrew J. Burnette
Kenneth D. Jumper
Richard N. Myers

City Manager
John C. Sharpe

Public Safety
Charles E. McNair

VIA FACSIMILE (202) 646-4596 & U.S. MAIL

Mr. Michael Buckley
C/o FEMA
500 C Street SW, Room 423
Washington, DC 20472

RE: Resolution regarding Lexington County Floodway

Dear Mr. Buckley:

The City of Cayce joins the Lexington County Council in requesting that FEMA use the Lexington BFE HEC 2 Model to reflect the floodway configuration in its Notice of Final Determination.

It is hoped that the attached resolution will assist or expedite FEMA's ability to render a Notice of Final Determination that satisfies property owners along the Congaree River.

Sincerely,

Avery B. Wilkerson, Jr.
Mayor

ABWjr/tb

Enclosure

cc: Members of Cayce City Council
Mr. John C. Sharpe, City Manager
Mr. Johnny Jeffcoat, Lexington County Council

1800 TWELFTH STREET • POST OFFICE BOX 2004 • CAYCE, SOUTH CAROLINA 29171-2004
TEL. (803) 796-9020 • FAX (803) 796-9072
NET WEBSITE ADDRESS: WWW.CAYCE-SC.NET

FEMA-001-000927

PLTF TRIAL EXH 543

STATE OF SOUTH CAROLINA)
COUNTY OF LEXINGTON) RESOLUTION
CITY OF CAYCE)

WHEREAS, the City of Cayce has considered the long range economic implications of the floodway elevations and the models prepared by FEMA configuring the proposed floodway as it affects the City of Cayce and the economic development opportunities available on both sides of the Congaree River, and

WHEREAS, the City of Cayce has considered the critical impact, both commercially and residentially, of these elevations and floodways and desires that the remapping process by FEMA be completed.

NOW, THEREFORE, with the stipulation that the base flood elevations (BFE's) and the configuration for the floodway will not change in Lexington County from those shown in the September 26, 2000 study. The City of Cayce requests that FEMA's Notice of Determination reflect a floodway for property in and on the Lexington County side of the Congaree River that is determined using the Lexington BFE HEC 2 model.

Adopted this 5th day of December, 2000.


Avery B. Wilkerson, Jr., Mayor

FEMA-001-000928

PLTF TRIAL EXH 543

FEDERAL EMERGENCY MANAGEMENT AGENCY
 TECHNICAL SERVICES DIVISION
 HAZARDS STUDY BRANCH
 ROOM 421, FEDERAL CENTER PLAZA
 500 C STREET, SW
 WASHINGTON, DC 20472

TRANSMITTAL

TO:	FROM:
Ms. Lisa Holland	Matthew B. Miller, P.E.
COMPANY:	DATE:
State Coordinator, Flood Mitigation Program, SCDNR	January 26, 1999
FAX NUMBER:	TOTAL NO. OF PAGES INCLUDING COVER:
803/734-9200	2
PHONE NUMBER:	SENDER'S REFERENCE NUMBER:
803/734-9100	
RE:	COPY TO:
Revision to Richland Co., SC, FEMA	Bel Marquez and Doug Bellomo

☐ URGENT ☐ FYI ☐ PLEASE COMMENT ☐ PLEASE REPLY ☒ AS REQUESTED

NOTES/COMMENTS:

Dear Lisa:

Attached is the letter you requested yesterday.

Take Care,

Matt



PHONE: 202/646-3461 FAX: 202/646-0303 E-MAIL: MATT.MILLER@FEMA.GOV

CV014034



Federal Emergency Management Agency

Washington, D.C. 20472

January 26, 1999

Ms. Lisa Holland
State Coordinator, Flood Mitigation Program
South Carolina Department of Natural Resources
2221 Devine Street, Suite 222
Columbia, South Carolina 29205

Dear Lisa:

This is in response to your letter dated January 22, 1999, to Michael Buckley of the Federal Emergency Management Agency (FEMA). Your letter transmitted a letter dated January 20, 1999, from Mr. H. Wilson Tillotson, Jr., P.E., requesting confirmation from you that if certain actions were taken by the owners of the levee on the Manning property adjacent to the Congaree River in lower Richland County, that FEMA would revise the applicable Flood Insurance Rate Map to remove the Special Flood Hazard Area designation and floodway.

If the aforementioned levee is upgraded to meet in total the applicable portions of 44CFR, Part 65.10, and the construction necessary for it to meet said requirement is in compliance with State and local floodplain management requirements, then FEMA would revise the applicable FIRM to remove the Special Flood Hazard Area designation and floodway. As you are aware, should the structural modifications necessary to bring the levee into compliance with 44CFR, Part 65.10 result in any increase in base flood elevations as a result of construction within the existing regulatory floodway of the Congaree River, the requirements at 44CFR, Part 65.12 would also have to be met. In addition, any change in the configuration of the floodway as a result of the levee modifications will have to be done with the approval of the impacted communities.

Please call me at 202/646-3461 if you have any questions or comments.

Sincerely,

A handwritten signature in dark ink, reading "Matthew B. Miller".

Matthew B. Miller, P.E., Chief
Hazards Study Branch
Mitigation Directorate

CV014035

CV

Columbia Venture, LLC

April 2, 2001

The Honorable Bernice G. Scott, Chair
Development and Services Committee
Richland County Council
2020 Hampton Street
Columbia, South Carolina 29201

Re: Green Diamond Meeting

Dear Ms. Scott:

Thank you, first of all, for your leadership in convening the special D&S Committee meeting, and for your encouragement and support for Green Diamond.

As we discussed, I am submitting to you, under cover of this letter, a compilation of requested information regarding our proposed Green Diamond development.

This submittal is intended to be responsive to inquiries referenced in Mullen Taylor's correspondence of December 4, 2000 and January 17, 2001, to the extent that requested information has not previously been provided. Much of the information is preliminary in nature. Some modification may be appropriate, based upon possible subsequent actions by FEMA. Other changes might be indicated, based upon discussions or negotiations with Richland County and/or other local government entities.

Material requested and submitted includes:

- a) Environmental Assessments, Phase I and Phase II. We have submitted executive summaries and a separate set of source data supporting assessments.
- b) Environmental analysis performed as part of any due diligence. This material is included in item (a) above and in item (d) below.
- c) Reports dealing with wetlands located on property. This material is included in item (a) above. (I understand that Mr. Wolfe's office previously obtained this information.)
- d) Soils analysis conducted by S&ME. We have submitted executive summaries and a separate set of source data supporting assessments.

Carolina First Building
4876 Forest Drive, Suite 202
Columbia, South Carolina 29206
(803) 743-0672 (803) 743-0673 Fax

PLAINTIFF'S
EXHIBIT
550

DEF-00002945

- e) Transportation study performed by Wilbur Smith & Associates.
- f) Copy of Columbia Venture's proposed levee design. This material is included in item (d) above. (The levee design will be modified based upon data obtained in the Letter of Final Determination (LFD) issued by FEMA).
- g) Cost estimates for levee construction and maintenance.
- h) Copy of Texas statute pertaining to Levee Improvement Districts. (Columbia Venture does not contemplate that the Texas levee district would be a model for Green Diamond).

We are working very hard to finalize a comprehensive development proposal for Green Diamond. Our goal is to have the proposal ready for submittal by mid April. It is our intention that the document be the basis for extensive discussions and to reach agreement on how the project should proceed. Our proposal will incorporate other information requested or referenced by correspondence received from Ms. Taylor, including:

- i. baseline data and resulting fiscal or economic impact analysis;
- ii. Columbia Venture's proposed means of financing and carrying out levee construction, maintenance and repairs; and
- iii. Columbia Venture's proposal/contemplation as to legal title to parcels of Green Diamond property, and specifically the property on which the levees are located, as well as related maintenance, oversight and liability issues.

Ms. Taylor also inquired about a CLOMR application from Columbia Venture. A CLOMR cannot be prepared until FEMA has finished its remapping process. Columbia Venture would prepare and submit the CLOMR application following issuance by FEMA of its Letter of Final Determination. The application will reflect whatever the jurisdictional status of the Green Diamond property may be at that time.

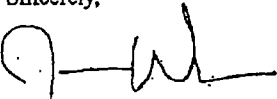
The information presented this evening is a product of extensive due diligence, which was undertaken prior to the purchase of the property, and much additional research, and planning that came later. This data addresses important considerations related to the appropriateness for development of the Green Diamond site. To date, however, our careful assessment of environmental issues, wetlands, soils, threatened and endangered species, archeological sites, and other critical considerations has concluded that the development of Green Diamond can be done safely and economically in an environmentally sensitive manner.

We at Columbia Venture look forward to working with Council in the days ahead. We hope this information we are submitting today is responsive to your requests. We stand ready to respond to such questions and requests for information as may be forthcoming.

We look forward to submitting our development proposal, which will address a number of other issues, as indicated above. Again, I appreciate very much your leadership and all the courtesies you and your colleagues have extended to me throughout this process.

In the meantime, please let me know how I can be helpful to you and other members of Council as you consider issues pertaining to Green Diamond. As we have stated previously, our ambition is to build a world-class development in partnership with Richland County, the City of Columbia, and Richland School District One. We look forward to working with you toward that end.

Sincerely,



James E. Wiseman

CC: Members, Richland County Council and Staff
Members, Columbia City Council and Staff
Members, Richland School District One and Staff

**Historical Narrative
And
Executive Summary
On Congaree Levee
And Fema Mapping**

Historical Milestones

Levee History

- 1860's - Portions of the existing levee system were constructed somewhere around the date of the Civil War.
- 1908 - The existence of the levee is documented through engineering documents from the United States Department of Agriculture.
- 1960's - Landowner modified levees to provide a higher level of protection.

Historical Floodway

- 1981 - Two dimensional finite-element surface water model prepared by the United States Geological Survey for I-77 (I-326 at that time) indicated the area behind the levee as non-flowing (ineffective).
- 1984 - Revised 1981 study indicated that area behind the levee as non-flowing (ineffective).
- 1990 - Revised the 1984 study indicated the area behind the levee as non-flowing (ineffective).
- 1995 - FEMA mapping indicated that floodway was *not* located behind levee. This was consistent with all other studies to date.

Actions Changing Floodway

- 1994 (April) - The South Carolina Department of Transportation filed a floodway modification to begin 12th Street construction based on removing the existing levee system from the hydraulic computations.
- FEMA approved the request to remove floodway from Lexington County and push the floodway into Richland County by removal of the existing levee. This allowed 12th Street construction.
- Notification of affected landowners in Richland County was *not* performed per the requirements of FEMA regulations.

P:\352060 floodway\Summary Document\Summary Document.doc
FN 35.02-006217.01

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Map I - Baseline Map (1995)

- Floodway remained on the riverside of the existing levee despite changes made for 12th Street.

Map II - 1998

- Floodway expanded (9000'+) to consume land from the Congaree River to Bluff Road. This was the entire width of property in Richland County.

Map III - 1999 (March)

- Floodway expanded (2500'+) from 1995 Baseline Map to consume major structures in the area including City of Columbia Wastewater Treatment Plant and Heathwood Hall School.

Map IV - 1999 (August)

- After submittal of significant technical calculations and face-to-face meetings with FEMA, Map IV had the floodway in Richland County restated back to the same location as the 1995 Baseline map.

Map V - 2000 (September)

- Floodway expanded (6000'+) from 1995 Baseline Map consuming the majority of land between the Congaree River and the bluff (high ground).

Exponent

**EXPANDED TWO DIMENSIONAL FLOW ANALYSIS AND
DETERMINATION OF NO FLOODWAY FOR THE CONGAREE RIVER
FLOODPLAIN IN RICHLAND COUNTY, SOUTH CAROLINA**

February 12, 2001

Finding:

Based on the definition and purpose of a floodway, and the results of an expanded two dimensional flow analysis, this study concludes that there is no floodway on the Richland County, South Carolina side of the Congaree River downstream of the City of Columbia. No change to the Lexington County floodway delineation as shown in the September 26, 2000 map by FEMA occurs as a result of this study. The floodplain on the Richland County side of the river is not an unobstructed waterway. The only way for water to enter the floodplain is via a flood-caused levee breach. Considering worst-case conditions, the flow patterns are divergent, and the floodplain areas with flow velocities greater than one foot per second are discontinuous. No coherent corridor to convey floodwaters exists on the Richland County side of the Congaree River.

Executive Summary:

On September 26, 2000, FEMA issued an Appeal Resolution Report for the Congaree River in Richland and Lexington Counties, South Carolina. The Appeal Resolution Report presents an analysis of two-dimensional flow patterns in the Congaree River assuming certain levee breach scenarios. The computer program RMA-2 is used for their analysis. The Appeal Resolution report uses a finite element mesh developed in 1981 by the USGS for the purpose of analyzing the effects of the Interstate Highway on flood flows. The report states that the RMA-2 approach was chosen because of the complexity of flooding patterns in the Congaree River floodplain. Furthermore, the computed results would be used to identify areas in the floodplain that have point velocities that exceed 1 foot per second. The floodplain areas that meet this criterion would be considered effective flow and preserved as floodway. Based on the RMA-2 analysis, the Appeal Resolution report designates as floodway most of the area in Richland County behind the uncertified Manning Levee.

The purpose of this study is to prepare an expanded two-dimensional flow model that is based on existing land use conditions, more accurate topography, extensive field investigation of floodplain physical features, and a more realistic treatment of model boundary conditions. This analysis considers the potential for a series of levee breaches that would enable water to flow through the floodplain on the

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Richland County side of the river during a peak 100-year flood and evaluates the appropriateness of this floodplain to serve as a floodway under existing conditions.

By including all of the existing features in the floodplain as required by FEMA in the conduct of Flood Insurance Studies, by expanding the finite element mesh, and by using the levee breach scenarios adopted in the Appeal Resolution Report, this study concludes that there are no significant continuous areas with flow velocities greater than 1 foot per second on the Richland County floodplain and that this area should not be designated as a floodway. Even by assuming that a series of levee breaches occur in a manner to achieve the worst-case flow through, the flow direction generally diverges to the east rather than flowing parallel to the main stem of the Congaree River. Based on the high roughness characteristics of the floodplain, low water velocity magnitudes, and divergent flow directions caused by obstructions in the Congaree River floodplain on the Richland County side of the river, it is not realistic to require the community to reserve a floodway here even if the worst-case series of levee breaches occur during the base flood.

Page 5-1 FEMA Document No. 37, the Study Contractor Guidelines states:

It is extremely important that roughness coefficients in overbank areas be selected to carefully represent the effective flow in those areas. There is a general tendency to overestimate the amount of flow occurring in overbank areas, particularly in broad, flat floodplains.

Considering the extent, size, and historical precedence of the levees, berms, forests, and other obstructions in the floodplain, it is not realistic to assume that a significant amount of flow would be conveyed through the Richland County floodplain either for purposes of calculating the Base Flood Elevations or for the designation of a floodway. On page 5-2 of the FEMA Study Contractor Guidelines document, floodway determination is discussed.

A floodway is defined as the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water-surface elevation by more than a designated height. Floodways are developed by the [Study Contractor] SC as unobstructed waterways to convey floodwaters. The floodway, developed by the SC, is coordinated with the community, Regional [Project Officer] PO, and, if applicable, with the State Coordinating Agency. The community is responsible for maintaining the conveyance of flooding sources to mitigate flood hazards.

In order for any floodwaters to pass through the Richland County floodplain, at least four major levee breaches must occur. The first breach is to let water into the floodplain. The second breach is through the ring levee south of the Interstate Highway, and the third and fourth are through the Gills Creek levees. The second, third, and fourth breaches are necessary in order to let water out of the floodplain creating a flow through condition. FEMA's analysis did not consider this, but it is included in this study to analyze the worst-case scenario. Without the three downstream breaches, there is no conveyance through the floodplain. Water will merely pond. Even if this worst-case flow through condition happens, this area should not be characterized as a floodway.

The Appeal Resolution Report claims that the RMA-2 computer program has no floodway determination tools and that revising the model may prove too challenging for the affected communities. Based on these factors, a HEC-2 one-dimensional analysis was developed and calibrated to the RMA-2 results. The HEC-2 analysis was used to delineate FEMA's recommended floodway. FEMA's HEC-2 results, however, show significantly more water flowing through the Richland County floodplain than do their RMA-2 results. This means that the suggested floodway is not based on an accurate depiction of the existing characteristics of the Richland County floodplain. Page 5-5 of the FEMA Study Contractor Guidelines address the use of two-dimensional models as follows:

Two-dimensional (2-D) computer models may be used to determine the water-surface elevations in two directions in the horizontal plane, where one-dimensional computer models may have difficulty analyzing these situations.

2-D computer models may be used for shallow flooding areas, split flow situations, and at complex bridge sites. Although it is not recommended because of the complexities involved and the costs that would be incurred, 2-D models can be used in areas subject to alluvial fan flooding.

These models will only be requested where 1-D models, current accepted techniques, and engineering judgment will not provide satisfactory information for floodplain management and flood insurance purposes. All 2-D models must meet the criteria as specified in 44 CFR 65.6 (a)(6).

Floodways must be developed through an interactive trial-and-error procedure and must be based on equal conveyance reduction.

The guidelines state that if a two-dimensional flow analysis is required, the reason is that a one-dimensional analysis does not provide satisfactory information. Furthermore, the two-dimensional model can be used to determine a floodway, it is just not an automatic procedure like it is for HEC-2. It is unlikely that during a 100-year flood, levee breaches would develop to such an extent that FEMA's suggested floodway would convey the amount of water assumed in their HEC-2 analysis because FEMA's analysis incorrectly assumes an unobstructed waterway (no levee).

Because a floodway is to be an unobstructed waterway, the proposed designation puts the community in a difficult situation. To expect or rely upon any significant amount of flow conveyance behind the levee systems in the Richland County floodplain during an actual flood is inconsistent with both the purpose of a floodway designation and with sound floodplain management.

Based on the definition and purpose of a floodway and the results of the expanded two dimensional flow analysis that includes existing floodplain features, this study concludes that there is no floodway on the Richland County side of the Congaree River within the area studied.

Exponent

Introduction

Two-dimensional finite element models for shallow water flow models are currently one of the most useful tools for the analysis of overbank flood flows. While one-dimensional models are still widely used to reproduce some of the features of real flood phenomena (the propagation and diffusion of the flood wave, for example), they cannot represent the spatially complex flow patterns that characterize a river overbank. One-dimensional models limit topographic information to the channel bed slope and channel cross-section information, lumping into the model friction parameterization, the effects of hydraulic processes in the meandering channel and limiting the effects of the floodplain to simple storage and routing schemes.

Two-dimensional models can more realistically represent the different hydraulic conditions of the main channel and of the overbank by being able to spatially vary topography and friction. Some combining of processes is still applied in the depth averaging process but to a lesser degree than for one-dimensional models. Important processes such as the lateral transfer of momentum between the main channel and the floodplain fluid, can also be represented in a two-dimensional formulation if correct parameterization is used.

Several one and two-dimensional computer programs were developed during the past 15 years to analyze the complex topography that is characteristic of the Congaree River situation. The USGS and FEMA have applied RMA-2 to the Congaree River floodplain. The USGS studied the area in 1981 for the purposes of analyzing the effects of the construction of Interstate 77 which crosses the Congaree River. FEMA obtained and used the USGS finite element mesh for their recent floodway analysis.

The analysis in this report uses the RMA-2 two-dimensional computer program. Because of recent detailed topographic surveys available in both Richland and Lexington Counties, and access to the USGS digital elevation data, we have been able to significantly expand and refine the mesh. The boundary conditions on the USGS/FEMA model were too close to the area of interest and affected the computed results. Recent aerial photography and field investigation was used to specify up-to-date land use conditions. The RMA-2 model with the expanded mesh is used to analyze a number of overbank flow scenarios considering different breach conditions.

Preparers' Qualifications

This study was prepared by Douglas Hamilton of Exponent, Inc. Mr. Hamilton is a registered civil engineer with extensive experience applying hydrodynamic computer programs for the analysis of flood hazards, and for the development of Flood Insurance Studies. He has analyzed leveed flood control systems, reservoirs, and channels in both alluvial and coastal environments. While in graduate school, Mr. Hamilton studied with Dr. Ian King, the developer of computer program RMA-2. While at the Hydrologic Engineering Center of the U.S. Army Corps of Engineers, he worked with the application of RMA-2 to the Fisherman's Wharf Breakwater in San Francisco, California. Mr. Hamilton has authored more than 40 journal articles, chapters in several published texts on water resources issues, and has served on the National Research Council's Committee on Alluvial Fan Flooding, which was sponsored by FEMA.

Exponent

Andrea Cattarossi of Exponent, Inc. was a key technical contributor. He has a Dr. of Engineering from the University of Padova, Italy. He has done extensive analysis applying two-dimensional flow models to riverine and coastal flooding including the Venice Lagoon, Italy; and Morongo Creek, California.

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State, The (Columbia, SC)

July 16, 1998

Section: FRONT

Edition: FINAL

Page: A1

Memo:Related story, page A14

Correction: * PUBLISHED WEDNESDAY, JULY 22, 1998

An evaluation of the flood-risk designation for 5,300 acres near I-77 in Richland County is on hold while the Federal Emergency Management Agency studies levees in the area. A headline in Thursday's editions incorrectly said the flood-risk designation had been changed.

FLOODWAY: FEDERAL AGENCY DESIGNATES 5,300 ACRES IN RICHLAND CO. AS FLOOD-PRONE, WORRYING DEVELOPERS ALONG THE CONGAREE RIVER

AMANDA MAYS
and JEFF WILKINSON
Staff Writers

Richland County officials are howling over a federal study that says 5,300 acres along the Congaree River are at a greater risk of flooding, a decision that jeopardizes the land's development.

Changing the flood-risk designation near Interstate 77 would put two sewage treatment plants, Heathwood Hall Episcopal School and 4,200 acres of a farmer's land in a "floodway."

Nothing has changed with those pieces of land - they're certainly not under water. Government officials simply want to label them differently because they're worried about the safety of levees near the river designed to hold back floodwaters.

The designation would prevent property owners from expanding - or even rebuilding if their structures were destroyed by fire or some other disaster.

The land is in a "floodplain," a designation that means the risk of flooding is smaller than in a floodway.

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Richland Co. 0037

PLTF TRIAL EXH 551

The city of Cayce, meanwhile, emerges as a big winner under the proposed flood-risk designations. The federal government says 360 acres should no longer be considered at great risk for flooding, putting the land back into use. That's a potential boon for the city's southern side.

Richland and Columbia both stand to lose millions of tax dollars if their mostly prime acreage is shackled from future development.

How much?

"You can't count that high," said Richland County Councilman Steve Morris, a commercial real-estate broker. "Fifty-three hundred acres on the edge of the city with water and sewer . . . the industrial development, the housing, the commercial development, all of that. It's a terrific amount of taxes."

U.S. Sen. Fritz Hollings said Wednesday that the Federal Emergency Management Agency had agreed to delay a final designation.

"There will be ongoing discussion on how to proceed with this issue," said Hollings, D-S.C.

The FEMA study was requested by Lexington County after officials there learned Cayce would not be able to develop land around the interchange nearing completion at I-77 and 12th Street. Lexington officials argued that earlier flood assessments are out of date. Some of them included information gathered before the Lake Murray Dam was built upstream nearly 70 years ago.

FEMA agreed, so now Cayce can count on adding millions of dollars of development to its tax rolls.

But FEMA's new analysis pushed more of the potential flooding burden onto the Richland County side of the Congaree River.

Federal officials say they don't know if the area's levees are up to standard. But Richland County leaders point to a FEMA study that says the levees are considered a flood protection system.

"The levees don't protect the land from the 100-year flood - they have never met our levee criteria," said Bel Marquez, senior engineer for the FEMA regional office in Atlanta. "It has always been in the floodplain. But as a result of the review, we looked at that area again and determined that the floodway needed to be re-delineated."

A "100-year flood" is the most severe flood that can be expected over 100 years.

A 1994 FEMA flood insurance study says a levee built along the east side of the Congaree River between Gills Creek and the city of Columbia is higher than the 100-year flood level.

The 5,300 acres are now in a "floodplain," a designation that says the property is not as prone to flooding as a floodway. Land in a floodplain can be developed with proper preparations, such as using dirt to raise the property level, according to Ken Knudsen, Richland County's planning administrator. If land is designated as being in a floodway, severe restrictions apply, making large-scale development such as shopping centers impossible.

The restrictions are in place to give floodwater a place to go, Knudsen said.

But if the property was filled in for development, "it's like putting an ice cube in a glass," Knudsen said. "Of course it's going to raise the water level."

Should the floodway designation stick, the land could be developed if Richland County relaxes its

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restrictions for building in a floodway.

Richland County's regulations are more stringent than FEMA's. If the county changed those regulations to allow development in a floodway, the cost of flood insurance could increase for all county residents who have it.

'Hopefully they'll reconsider.' The majority of the land affected by the new study - 4,200 acres - is owned by longtime farmer Burwell Manning and is considered prime for retail development. Manning refused to speculate Wednesday about development on his land.

He built the levees nearly 40 years ago. During construction of I-77, the state Transportation Department built levees within its right of way and some outside its right of way with Manning's permission.

Manning drove a visitor Tuesday over miles of the earthen levees that rise 15 to 20 feet above the ground. One levee sits 37 feet above the edge of the Congaree River. Manning pointed out that even with all the heavy rain last year, the river never rose to that levee's base.

Manning isn't the only one who would be affected by the change.

The floodway designation would prevent any substantial improvement to the city of Columbia's sewage treatment plant in the area, and that puts a big dent in the city's plans, City Manager Mike Biernan said.

"We have a \$150 million plant we want to expand in the future," he said. "If we're in the floodway, we'd have trouble expanding."

John Dooley, director of utilities, said the city owns 150 acres at the site and operates three 20 million-gallon tanks with room for one more.

Biernan said the evaluation process "does not make sense at all."

"We're concerned at how they arrived at what they did," he said. "The explanation was, 'We discounted the levees there.' FEMA acted as if they did not exist for us."

The East Richland County Public Service District, which serves 55,000 residents, including WildeWood and Spring Valley, would also be affected. East Richland's plant, located on 10 acres on Gills Creek, serves a 38-square-mile area in the northeast.

"We're very much in opposition to it," said engineer Gena Edwards. "Hopefully, they'll reconsider it and the dikes will be re-evaluated."

Edwards noted that East Richland was looking to purchase additional acreage for expansion. But if the plant location were to be designated in a floodway, there could be no expansion.

Heathwood Hall Episcopal School would also be in the proposed floodway. The 780-student school, which moved to the Bluff Road site in 1974, was not even in the current floodplain until 1976, when the levee west of the sewage plant was breached in two places and the area flooded. The city was responsible for that levee's upkeep.

Heathwood Headmaster Bob Shirley doesn't see any red flags for his school's \$20 million, 130-acre campus.

"It's all very premature," he said. "I have very little understanding of it because I'm not an engineer. I'm waiting to hear more about it."

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Richland Co. 0039

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Frank Ellerbe, chairman of Heathwood's board, wants a little breathing room.

"We think FEMA needs to slow down and give the people who would be affected by FEMA's proposed changes time to study them and respond to them," he said.

Amanda Mays can be reached at (803) 771-8385, Jeff Wilkinson at (803) 771-8495.

Illustration: PHOTO: Color, MAP/CHART: Color

1. This aerial view shows part of the 5,300 acres along the Congaree River that are now designated a floodway. The zone covers areas of southern Richland and Lexington counties. Pictured here on the Richland side is Heathwood Hall School at bottom left, the Columbia Sewage Treatment Plant at right and I-77. LINDA STELTER/THE STATE 2. CHART/MAP: Proposed floodways. Under recently suggested new flood designations Cayce would have 360 acres taken out of the floodway while Richland would have 5,300 put in. SCOTT FARRAND/THE STATE (map not available in this database.)

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Richland Co. 0040

PLTF TRIAL EXH 551

PRELIMINARY MASTER PLAN
FOR THE
COLUMBIA VENTURE

Prepared for Burroughs & Chapin
by
J. D. S. A.
J. D. S. A.
J. D. S. A.

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Feet

MANA PROPERTY

PLTF TRIAL EXH 553

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DANIEL S. LEWIS
(1940-1981)

June 28, 2001

The Honorable Kit Smith
Richland County Council
120 Edisto Ave.
Columbia, SC 29205

RE: Green Diamond Task Force Educational Forum
June 25, 2001

Dear Kit:

On behalf of my client, Columbia Venture, I want to thank the members of the Green Diamond Task Force for the opportunity to participate in the Educational Forum June 25.

As promised, I am enclosing copies of written materials pertaining to each presentation by Columbia Venture.

Making presentations were:

Levee Issues

- a. Gary Dyhouse, PE
- b. Wilson Tillotson, PE (Lockwood Greene)
- c. Hanif Chaudhry, Ph.D.
- d. Bill Boyd, Esq.

Economic Development and
Infrastructure Financing Issues

- a. Gary Morris, Esq.
- b. Ty Campbell (Wilbur Smith)
- c. Jerry Witherspoon (McMillan Associates)
- d. Peter Barr, Ph.D.
- e. Dan Hargett (Lockwood Greene)

P.O. BOX 11716, COLUMBIA, SOUTH CAROLINA 29211

CV004929

PLTF TRIAL EXH 554

Several key points were made in the presentations:

- ♦ The proposed upgraded Green Diamond levee, if designed, constructed, and maintained properly, will enable the project to be developed safely.
- ♦ Preparation for and design of the levee upgrade have been painstaking and thorough, and have provided for a high-quality flood control system that meets and in most cases exceeds quality control standards.
- ♦ Sophisticated computer modeling confirms that strengthening existing levees on the Green Diamond property will adversely affect neither Lexington County property owners nor the Congaree Swamp National Monument.
- ♦ Risk management strategies are available to mitigate or eliminate liability exposure to the City of Columbia pertaining to levee construction and maintenance.
- ♦ Multi-County Business Park financing for infrastructure related to the Green Diamond Technology Village will not expose the County or City to any potential financial liability, because private investors will assume all responsibility.
- ♦ Studies of cost impacts on Richland School District One, the City and the County were performed by expert consultants, utilizing methodologies designed in close consultation with staff of each local government body, and resulting in very conservative assessments against which to measure benefits of the Green Diamond proposal.
- ♦ Absorption analysis comparisons with the experiences of other communities support development and tax revenue projections contained in the Green Diamond proposal.
- ♦ Columbia Venture has the experience and expertise through its partners, including Lockwood Greene, to spearhead the successful recruitment of "new economy" ventures to the Green Diamond Technology Village.

Columbia Venture looks forward to continued dialogue with local decision-makers in the public and private sector. We are committed to the success of the Green Diamond project; but more importantly, we realize that success is possible only as result of a collaborative effort including local government and civic and business leaders.

CV004930

PLTF TRIAL EXH 554

Whenever we can provide additional information, or in any way facilitate your participation with this issue, please let me know so that I can ensure a full, prompt response. As a former elected official, I know how much you value access to reliable information. We certainly want to live up to our responsibility to be responsive to you.

Thank you again for your leadership. I look forward to working with you in the days ahead.

Sincerely,

AUSTIN, LEWIS & ROGERS, P. A.



Timothy F. Rogers

TFR/tyc

Enclosures

cc: Members, Richland County Council
Members, Columbia City Council
Members, Columbia City Planning Commission
Members, Richland District One School Board
Mr. Milton Pope
Ms. Mullen Taylor
Mr. Mike West
Mr. Chip Land
Mr. Ronald Epps
Mr. Bob Chestnut
Mr. Doug Wendel
Mr. Jim Wiseman ✓
Bill Boyd, Esquire

CV004931

PLTF TRIAL EXH 554

CV

Columbia Venture, LLC

September 7, 2000

Richland County Administrator's Office
Attn: Mullen Taylor
2020 Hampton Street, Suite 4058
Columbia, South Carolina 29202

Dear Mullen:

As you requested, I am pleased to provide you with the attached disk study relating to topographics, the boundary survey, and wetlands delineation. While Columbia Venture, LLC is sharing this information with Richland County to facilitate the county's consideration of the proposed development and related contracts, Columbia Venture, LLC considers the information to be confidential and proprietary and not subject to disclosure pursuant to the South Carolina Freedom of Information Act. Moreover, the release of the information to the general public might cause harm to the competitive position of Columbia Venture, LLC. If the county believes the attached information should be provided to third parties or the general public, we will be glad to work with you to determine what, if any, of the information should be released.

If you should have any questions or need additional information, please do not hesitate to contact me.

Sincerely,



James E. Wiseman

JEW/sls

Carolina First Building
4875 Forest Drive, Suite 202
Columbia, South Carolina 29206
(803) 743-0672 (803) 743-0673 Fax

PLTF TRIAL EXH 555

DEF-00001601



Columbia Venture, LLC

February 27, 2001

The Honorable Kit Smith, Chair
Richland County Council
2020 Hampton Street
Columbia, SC 29202

Dear Ms. Smith:

Thank you for your letter of February 20.

More than anything, I have wanted and asked for a process that would be open and fair, with rules and mutual trust and respect.

We began that process, and prior to September 26, had made good progress. Then I was informed that the process would be suspended indefinitely. With no rules, and no forum to discuss how to proceed, I was reluctant to share preliminary information as we had planned prior to September 26. I was reluctant because of what I have been told by many folks about the active role you have personally taken in opposition to our proposal. I was fearful that whatever information we might supply to the County would be quickly diverted to the use of those who are opposed to Green Diamond. What happened on February 5, only confirmed my worst fears.

Cary McSwain's letter to me of February 16, emphatically states that his office was not responsible for this incident. I agreed and outlined my position in my February 12 letter to the Council. Your letter of February 20 makes no mention of the incident, but you do infer that I have not returned your phone calls. I regret both these circumstances, because I have earnestly attempted to be open, accessible and cooperative throughout this matter, and in return, I don't believe that you have offered me the same consideration.

For the record, I have no knowledge of any phone call you have made to me that has not been promptly returned. I am certainly available to talk with you, at any time convenient to you, and of course the same goes for any other member of Council. Please feel free to call me at my office at 743-0672, or on my mobile phone at 446-8400.

I understand that Councilwoman Scott has proposed the creation of a (County, City of Columbia, Richland School District I, Columbia Venture) working group in response to my letter of February 10, to Mullen Taylor. This group will be a good forum for ideas and questions

Caroline First Building
4875 Forest Drive, Suite 202
Columbia, South Carolina 29206
(803) 743-0672 (803) 743-0573 Fax

February 27, 2001

Page 2

to be discussed and disseminated. Consistent with our repeated requests ever since September 26, we welcome this proposal. We would hope that, once the group could be organized, mutually agreeable procedural rules could be adopted. Columbia Venture would then finalize a submittal to members of County and City Councils and the Richland District I School Board, which would include a comprehensive proposal and supporting data. Our intent is for this submittal to be responsive to each request for information which we have received, in detail.

One very important principal for the new process would be that each member of County and City Councils should be kept informed about all proceedings. I understood, prior to September 26, that each member of County Council was regularly briefed about what was happening in our working group, but I have learned subsequently that this did not always occur.

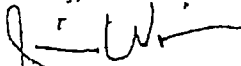
I want to close this letter by urging you to keep an open mind about Green Diamond. If Council agrees to Mrs. Scott's proposal, please give this new process a fair chance to work. In my opinion it is very important that the entire Council be kept intimately informed as the process moves forward.

We want nothing less than to build a world-class development that will be a major asset to our community. We are committed to new standards of excellence in enhanced economic and educational opportunities. We are committed to producing a development that meets high standards of safety and environmental sensitivity. Hopefully, all groups can work together to achieve this goal.

Please give our proposals a fair chance to be judged on their merits. That is all we ask.

Thank you for your leadership and for your commitment to a better future for our community and our state. With a spirit of optimism, I look forward to our cooperative relationship in the days ahead.

Sincerely,


Jim Wiseman

cc: Members, Richland County Council
Cary McSwain
Mullen Taylor
Larry Smith, Esquire
George Wolfe, Esquire

Richland County Council

KIT SMITH
CHAIR
DISTRICT FIVE

L. GREGORY PEARCE, JR.
VICE-CHAIRMAN
DISTRICT SIX

JOAN B. BRADY
DISTRICT EIGHT

SUSAN BRILL
DISTRICT NINE

PAUL LIVINGSTON
DISTRICT FOUR

JOSEPH MCEACHERN
DISTRICT SEVEN

J. D. "BUDDY" MEETZE
DISTRICT ONE

ANTHONY MIZZELL
DISTRICT ELEVEN

BERNICE G. SCOTT
DISTRICT TEN

THELMA M. TILLIS
DISTRICT THREE

JAMES TUTEN
DISTRICT TWO

April 30, 2001

Mayor Bob Coble
City of Columbia
Post Office Box 147
Columbia, South Carolina

Mr. Vince Ford, Chairman
Richland county School District #1
1616 Richland Street
Columbia, South Carolina 29201

Dear Bob and Vince:

Now that the Congaree River Flood Insurance Rate Map will soon be finalized, Columbia Venture is providing to the County, City and School District One information requested by the County, and will submit a proposal for development, including an economic incentive package. We recommend that the City, County and School District One now formally establish a "Green Diamond Task Force" and recommit to a holistic decision making model. This will engender open communications among us and to provide a venue for sharing and discussing information.

Our goal would be to avoid making piecemeal decisions, and instead, agree to work together to consider all issues in relation to one another before any formal actions are taken by any governing body. Since there are many policy decisions to make concerning the Green Diamond Project, some having significant public policy ramifications on other jurisdictions, it is vital that we avoid making decisions in isolation of one another. These issues include such items as approving levee upgrades, development incentives, annexation and zoning.

Post Office Box 192 * Columbia, South Carolina 29202 * (803) 748-4616 * TDD (803) 748-4999

DEF-00008314

PLTF TRIAL EXH 557

Green Diamond Task Force
April 30, 2001
Page Two

If you agree that we should make such decisions in collaboration, please appoint members of your Council and staff to represent you on the Task Force. We expect to convene an organizational meeting sometime in May to identify issues and establish a process that will result in sound, sensible decisions that will further the public interest.

Sincerely,

A handwritten signature in cursive script, appearing to read "Kit Smith".

Kit Smith,
Chairperson
Richland County Council

CC: Richland County Council
Columbia City Council
Attorney Jim Wiseman

DEF-00008315

PLTF TRIAL EXH 557

From: KitSalley@aol.com

Sent: Thursday, September 23, 2004 10:41 AM

To: Blen Holman

Subject: Re: Green Diamond/Chuckie

Tomorrow at 10 I'll be expecting your call. Kit

SELC000018

PLTF TRIAL EXH 560



CITY OF CAYCE

Mayor
Avery B. Wilkerson, Jr.

Mayor Pro-Tem
Kenneth D. Jumper

Council Members
Andrew J. Blumstein
Robert E. Milpau
Richard N. Myers

City Manager
John C. Sharpe

Public Safety
Charles E. McNair

FAX TRANSMITTAL

MPA
2-26-01

Doug

Case File

TO: Fema

FAX: 770-220-5406

FROM: _____

DATE: _____

SUBJECT: _____

No. of Pages: 3, including cover sheet

COMMENTS:

1800 TWELFTH STREET • POST OFFICE BOX 2004 • CAYCE, SOUTH CAROLINA 29171-2004
TEL (803) 796-9020 • FAX (803) 796-9072 • WWW.CAYCE-SC.NET

FEMA-001-000798

PLTF TRIAL EXH 567



CITY OF CAYCE

February 15, 2001

Mayor
Avery B. Wilkerson, Jr.

Mayor Pro-Tem
Kenneth D. Jumper

Council Members
Andrew J. Burnette
Robert E. Malpass
Richard N. Myers

City Manager
John C. Sharpe

Public Safety
Charles E. McNair

FAXED (202) 646-4596

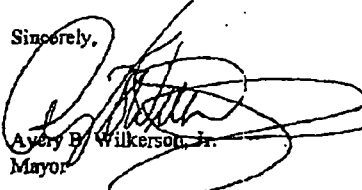
Mr. Michael P. Buckley, P.E.
Director of Technical Service Division
Mitigation Director
Federal Emergency Management Agency
Washington, DC 20472

Dear Mr. Buckley:

This letter is in response to your letter of February 12, 2001, concerning resolutions adopted by the City of Cayce and Lexington County with respect to the Lexington County HEC-2 BFE. Your purported basis for rejecting the Lexington and Cayce resolutions is your opinion that such could potentially result in increased flood hazards beyond those acceptable under 44 CFR 60.3(d)(2) [for local determination of floodways]. Also, you made the general statement that the resolutions do not meet minimum floodplain management requirements of the NFIP. In neither case, however, did you provide any specific computations of how we would not be consistent with the floodplain management requirements of FEMA as established in its regulations.

Therefore, we affirm our request to FEMA dated December 5, 2000, for mapping of the Lexington/Cayce floodway.

Sincerely,


Avery B. Wilkerson, Jr.
Mayor

ABWjrb

cc: (See attached list)

1800 TWELFTH STREET • POST OFFICE BOX 2004 • CAYCE, SOUTH CAROLINA 29171-2004
TEL. (803) 796-9020 • FAX (803) 796-9072
NET WEBSITE ADDRESS: www.caycesc.net

FEMA-001-000799

PLTF TRIAL EXH 567

Page 2
February 15, 2001

Distribution List

VIA FAX

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Ms. Kit Smith	803-254-4241
The Honorable Wyman M. Rish	803-739-6231
Mr. T. Cary McSwain	803-748-4644
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Mr. Martin Becker	404-876-5725
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Ms. Deborah Hottel	803-799-9804
Dr. Paul Sandifer	803-734-3056
Ms. Lisa Holland	803-734-9106
FEMA Region IV	770-220-5406
Mr. Allen Groover	578-530-0044
FEMA HQ File	202-646-4596

VIA US MAIL

Mr. Wilson Tillotson, P.E.
Lockwood Greene Engineers, Inc.
P.O. Box 491
Spartanburg, SC 29304

Mr. Frank Ellerbe III
Columbia, SC 29202

Ms. Sara A. Brown, Hydraulic Engineer
US Army Corps of Engineers, Charleston District
4600 Goer Dr.
N. Charleston, SC 29406

Mr. William H. Hulbert
SC DOT
P.O. Box 191
Columbia, SC 29202

Mr. J. Blanding Holman
Southern Environmental Law Center
200 W. Franklin St., Suite 330
Chapel Hill, NC 27516-2520

Mr. Thomas H. Yorks, Chief
Office of Surface Water
US Geological Survey
Reston, VA

Mr. Michael Soukup, Associate Director
National Park Service
1849 C Street, NW
Washington, DC 20240

Ms. Martha Bogle, Superintendent
Congaree Swamp National Monument
200 Caroline Sims Road
Hopkins, SC 29061

Ms. Marjorie S. Davenport, District Chief
US Geological Survey
Stephenson Center, Suite 129
720 Gracern Rd.
Columbia, SC 29210-7651

Columbia, SC 29205

Mr. Mel Jenkins, Director
The Neighborhood Project
P.O. Box 50706
Columbia, SC 29250

Dr. Mary Kelly
Columbia Area League of Women Voters
P.O. Box 12541
Columbia, SC 29211

Mr. Thomas McCutcheon
McCutcheon, Blanton, Johnson, Rhodes & Johnson
P.O. Drawer 11209
Columbia, SC 29211-1209

Ms. Ruth Thomas, President
Environmentalists, Inc.
1339 Sinkler Rd.
Columbia, SC 29206

Ms. Christine Thompson, President
South Carolina Wildlife Federation
2711 Middleburg Dr., Suite 104
Columbia, SC 29204

Ms. Angela Vinay, Executive Director
South Carolina Wildlife Federation
2711 Middleburg Dr., Suite 104
Columbia, SC 29204

FEMA-001-000800

PLTF TRIAL EXH 567

Columbia Venture, LLC
Purchase of Property & Development Costs
1999

Cash Paid Per Closing Statement		\$10,806,539
Burroughs & Chapin Contract Assignment	\$6,000,000	
Green Diamond Membership Interest	\$6,650,000	
Subtotal membership interests	\$12,650,000	
Subtotal Purchase Price		\$23,456,539
Attorneys Fees and Closing Costs – Paid outside closing	\$126,452	
TOTAL Purchase Price paid by Columbia Venture, LLC		\$23,582,991
Land Development Costs Paid	\$701,620	
Lockwood Greene Contribution (Dev. Costs)	\$603,164	
Subtotal		\$1,304,784
TOTAL		\$24,887,775



COLUMBIA VENTURE, LLC
LAND and DEVELOPMENTAL COSTS SUMMARY
1999 to 2002

	<u>CASH</u>		<u>CONTRIBUTED/CAPITALIZED</u>	
	<u>Current</u>	<u>Cumulative</u>	<u>Current</u>	<u>Cumulative</u>
<u>Totals</u>				
<u>2002</u>	\$ 2,348,810 ^{1a}	\$ 8,937,820 ^{1a}	\$ (2,550,000) ²	\$ 15,142,970 ²
		10,806,539 ³		
		126,452 ⁴		
	\$ 35,013,781			
Pledged	(53,645) ⁵			
	\$ 34,960,136 ¹			
 <u>2001</u>	 \$ 3, 834,561	 \$ 6,589,010	 410,903	 17,692,970
		10,806,539 ³		
		126,452 ⁴		
	\$ 35,214,971			
 <u>2000</u>	 \$ 2,052,829	 \$ 2,754,449	 4,028,903	 17,282,067
		10,806,539 ³		
		126,452 ⁴		
	\$ 30,969,507			
 <u>1999</u>	 \$10,806,539	 \$10,806,539 ³	 \$ 13,253,164 ⁶	 13,253,164 ⁶
	126,452	126,452 ⁴		
	701,620	701,620		
	\$ 24,887,775			

¹ - Balance per audited balance sheet; ^{1a} - See cash flows statement in financial statements

² - Supplemental data with cash flows explains; ³ - original closing statement purchase price

⁴ - Additional closing costs paid outside closing (POC); ⁵ - Pledged to East Bluff Community

⁶ - Green Diamond Property Contribution @ \$ 6,650,000 + B&C Manning Property @ \$ 6,000,000
+ \$ 603,164 of capitalized costs.



COLUMBIA VENTURE, LLC
STEP-UP IN BASIS
12/31/00

Member	12/31/1999 Capital	4/14/2000 Loss	6/5/2000 Loss	6/5/2000 Capital	Step-Up	6/5/2000 Adjusted	Sale	12/31/2000 Loss	12/31/2000 Capital
Burroughs & Chapin	8,994,635.30	6,438.51	3,651.65	8,984,545.14	1,068,435.89	10,052,981.03		19,948.04	10,033,032.99
NLBF	2,997,317.65	3,219.26	1,825.83	2,992,272.56	355,838.98	3,348,111.54		9,974.02	3,338,137.52
Regent	1,997,764.71	2,682.71	1,521.52	1,993,560.48	237,072.83	2,230,633.31		8,311.68	2,222,321.63
Green Diamond	6,642,355.30	9,174.88	3,434.38	6,629,746.04	788,404.81	7,418,150.85	7,418,150.85	0.00	0.00
Carolina First	2,997,317.65	3,219.26	1,825.83	2,992,272.56	355,838.98	3,348,111.54		9,974.02	3,338,137.52
Lockwood	1,998,658.83	1,609.62	912.91	1,996,136.30	237,379.15	2,233,515.45		4,987.31	2,228,528.14
	<u>25,628,049.44</u>	<u>26,344.24</u>	<u>13,172.12</u>	<u>25,588,533.08</u>	<u>3,042,970.64</u>	<u>28,631,503.72</u>	<u>7,418,150.85</u>	<u>53,195.07</u>	<u>21,160,157.80</u>

* Adjusted each account up proportionately to the FMV sale price of Green Diamond's units.



COLUMBIA VENTURE, LLC
GREEN DIAMOND SALE
12/31/00

<u>Sale Date</u>	<u>Shares</u>	<u>Sale Price</u>	<u>Book Value</u>	<u>Step-Up</u>
4/14/00	2907	2,500,502.79	2,255,281.34	245,221.45
6/5/00	5643	4,917,648.06	4,374,464.70	543,183.36
	<u>8550</u>	<u>7,418,150.85</u>	<u>6,629,746.04</u>	<u>788,404.81</u>
4/14/2000	Capital	6,642,355.30		
	Loss	(9,174.88)		
		<u>6,633,180.42</u>		
	Shares	8,550		
		<u>775.8105754</u>		
	Sale	2,907		
	Book Value	<u>2,255,281.34</u>		
6/5/2000	Capital	6,633,180.42		
	Sale	(2,255,281.34)		
	Loss	(3,434.38)		
	Book Value	<u>4,374,464.70</u>		

WP12 Green Diamond Sale



**THE GREEN DIAMOND LEVEE PROJECT
COLUMBIA, SOUTH CAROLINA**

BY GARY R. DYHOUSE, PE

DECEMBER 2000

PLTF TRIAL EXH 576

CV000286

Executive Summary

Earthen levees have been successfully used as a flood damage reduction measure for centuries. The United States, in particular, has employed levees throughout the country to protect agricultural and urban properties. Levees can range from locally constructed farm levees only a few feet high to massive earth or concrete structures protecting billions of dollars in property. The design, maintenance and inspection of these structures are paramount for their successful operation.

Levees have received much bad press in recent years with many people having the impression that they don't work and just make floods worse. Such is not the case. The vast majority of levees performed as designed during flood events. Levees prevented huge areas from flooding in the Lower Mississippi floods of 1973 and 1974, in the California floods of 1986 and 1997 and the great Midwest flood of 1993. The levees seen on the nightly news being breached or overtopped were almost always farm levees designed for floods much lower than the actual event. These structures were never intended to withstand rare floods.

The Green Diamond Levee Project features a well engineered and designed levee along the Congaree River that will give protected lands a 500-year average return interval level of protection plus freeboard. Potential concerns on the part of local officials and citizens about the impact of levees gave rise to this report. The author was requested by the Columbia Venture LLC to report on

- the use of levees,
- how levees function,
- what are the positive and negative impacts of these structures,
- evaluation of the Green Diamond Levee Project
- successful and unsuccessful urban levee projects
- comparison of Green Diamond Levee to other similar levee projects

Levees can fail to prevent flooding of their protected area through four scenarios. Levees can collapse from excessive seepage/piping under the levee or through the levee. If the levee is near the river, the erosive forces of the river's current could unravel the levee and cause a breach. Finally, the flood could rise higher than the levee crown and overtop the levee. The first three possibilities may be nearly eliminated with proper siting of the levee and a good geotechnical analysis and design. This work has already been performed for the Green Diamond Levee project. The overtopping of a levee is possible when a flood occurs that is greater than that for which the levee was designed. However, the greater the levee design flood, the less likely this is to happen. Very few levees are designed for a greater flood than is the Green Diamond Levee Project.

The Green Diamond Levee Project will give a high level of protection, comparable to nearly any other urban levee project in the United States. It exceeds the design necessary to receive certification approval from the Federal Emergency Management Agency. With good inspection and maintenance practices after the project is placed in operation, it should give many years of service to the protected areas. While no flood reduction structure is expected to give absolute protection, the residual risk of flooding for the Green Diamond Levee is very small, less than the danger of fire, hail, wind and other natural disasters to structures behind the levee. The level of protection offered by the Green Diamond Levee Project is similar to that of Kansas City, St. Louis, New Orleans and other major river cities. Investigation of similar levee projects around the United States, compared to the Green Diamond Levee's design, has found none that have failed to properly protect the area behind the levees. In fact, few urban-type levees have been breached or overtopped by actual floods in recent history. Those that have can generally be characterized as providing a significantly lower level of protection, as having an inadequate seepage design or lack of inspection during a flood emergency, or as subject to unforeseeable changed conditions during a major flood. None of these exceptions should apply to the Green Diamond Levee Project.

The Green Diamond Levee will have no measurable impact on flooding. The existing levee is nearly as high as the proposed levee over much of its length and has been in place since the 1960's. The new levee would therefore not have any impact on floods similar to any that have occurred in the past 30-40 years. Extensive hydraulic computations have shown that there is no change in the base flood (100-year) elevation for Richland County, or to the floodway in force for the county. Even larger floods would be little affected by the Green Diamond Levee Project, as the levee design is primarily for a larger and more stable cross section, than for a much higher levee. A stronger levee may also have a positive influence on the transportation network during major floods. The existing levee is likely to be undermined and breached during major floods, possibly cutting I-77 and halting vehicular traffic. A modern, certifiable levee would prevent this negative impact and would increase the Columbia's opportunities for economic growth.

The levee owners must be aware of the need for periodic maintenance of the levee and to have a well-prepared flood plan in place prior to any need for floodfighting. The greater danger to a levee may well be from a lack of proper maintenance of drains, pumps and other structures, as well as from unwanted vegetation or burrowing animals weakening the levee. The best-designed structure can be only as good as the maintenance it receives.

About the Author

Gary R. Dyhouse is a private consultant in the field of hydrology and hydraulics. His career has spanned 32 years with the U. S. Army Corps of Engineers, primarily in the St. Louis District and included a one-year assignment with the Corps' Hydrologic Engineering Center in Davis, California. He was Chief of Hydrologic Engineering for most of his career at the St. Louis District, in charge of a variety of water resource projects, which included numerous levees. Mr. Dyhouse authored all or part of four Corps of Engineers hydraulic publications used throughout the Corps, and has published more than 25 technical papers on a variety of hydrology, hydraulic and sediment topics. He has been a frequent lecturer at the Corps' Waterways Experiment Station and Hydrologic Engineering Center, and at several universities. He was the St. Louis District's chief technical spokesman to the national and inter-national media during and following the 1993 Midwest flood, especially dealing with the impacts of levees on flooding. He retired from the Corps of Engineers in 1999.

Mr. Dyhouse has been an Associate Professor on the faculty of Washington University of St. Louis since 1986 and on the graduate faculty of the University of Missouri-Rolla's graduate engineering center since 1987. He has Master's Degrees in Civil Engineering and in Engineering Management.

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1 LEVEES

1.1 General. Reducing flood risk by construction of levees is a flood reduction scenario applied throughout the world. Levees were used in China more than 2,000 years ago and have been built along European and North American rivers during the last few centuries. Levees along the lower Mississippi River at and upstream of New Orleans have been in place since the early 1700's. In fact, the City of New Orleans could only be habitable with levee protection from the Mississippi River. However only in the past 100 years has levee construction become extensive throughout the continental United States. Prior to 1900, levee construction was largely limited to the Sacramento and Lower Mississippi Valleys. Despite numerous farm levees constructed in the Sacramento Valley, severe flooding, due largely to hydraulic mining debris, led to the formation of the California Debris Commission in 1893 and a major flood protection project featuring higher and stronger levees following World War I. Similarly, a catastrophic flood to the Lower Mississippi River Valley in 1927 resulted in Congress directing the Corps of Engineers to study and recommend flood reduction methods for the lower valley. The resulting project (Mississippi River and Tributaries) prominently features an extensive levee system that protects the great majority of the Mississippi Delta from a reoccurrence of the 1927 flood. The flood of record on the Ohio River occurred in 1937 and caused Congress to extend the study and construction of flood reduction measures by the Corps to the entire country. Today, the majority of significant river systems throughout the United States have at least partial flood protection through several structural features. Structural flood reduction measures include reservoirs, levees, channelization and diversions. Larger river systems almost always have flood reduction reservoirs that reduce flood levels throughout the downstream river reach and levees to minimize flood damages at specific locations. These measures exist or are planned for the Congaree River.

1.2 Flood Reduction with Levees. A levee is simply an earthen barrier that prevents floodwaters from entering the protecting area behind it; at least until the levee crown elevation is exceeded. A levee height is normally determined by hydraulic analysis of river stages, both actual floods and synthetic or hypothetical events like the 1% annual chance event, normally referred to as the "100-year flood". Unfortunately, to most people, the 100-year flood means that it only happens once every one hundred years, which is not true. Even if the 100-year flood occurs this

year, the chance that it will occur next year is still 1%. Floods of this magnitude have been recorded at the same river location in consecutive years, although obviously this is rare. Although the term 100-year flood or 500-year flood will be used in this report, it really means that a one percent annual chance or 0.2% annual chance, respectively, exists that a flood of this magnitude will occur in a given year. Most levees are designed for a hypothetical flood event, based on the level of protection desired for the type of land use being protected. Levees protecting farmland are often designed for the 10-year to 50-year floods, while levees protecting urban areas are typically designed for at least the 100-year flood, but preferably for the 500-year, or rarer, event. For Federal levee projects, this level of protection is often determined through economic analysis and a comparison of benefits and costs. The economic optimum level of protection for most Federal urban levee projects is for the 100- to 300-year recurrence interval flood.

1.3 What Constitutes A Good Levee? A "good" levee can be defined as one that protects the area, at least through the occurrence of its design flood. The overtopping of a levee does not mean it has "failed", or that it is a poor levee. Rather it indicates that the design adopted for the levee still carried a significant risk of flooding to the protected area. If floods greater than the levee design occur, the levee is liable to overtop or breach. For (say) a 10-year farm levee, the annual risk (10%) is high, however if a flood overtops the levee only every 10 years or so, the farmer enjoys flood free farming in the other years. As the design flood becomes larger, this residual risk becomes smaller, but some risk always remains, even for high levees. A levee designed for even a 500-year flood has some residual risk of having the design exceeded.

1.3.1 Purpose. The purpose of a levee has already been stated. All floods up through the design event should not cause any damages to the protected area. Higher floods will crest in the levee freeboard or above the levee crown. Even these events are often successfully floodfought by the levee district, preventing damages from floods exceeding the levee design. However, a successful flood fight against floods exceeding the levee design cannot be guaranteed.

1.3.2 Cross Section. The levee is trapezoidal in cross section with a base width that can be 200 feet wide or more. Figure 1-1 shows a typical levee cross section along the Lower Mississippi River.

- The levee crown is normally a minimum of 10 feet wide, but can be 20 feet or more. These widths allow vehicular movement on the crest during floodfight activities and room for emergency raises of the levee when the flood level is forecast to exceed the top of the levee during a flood.

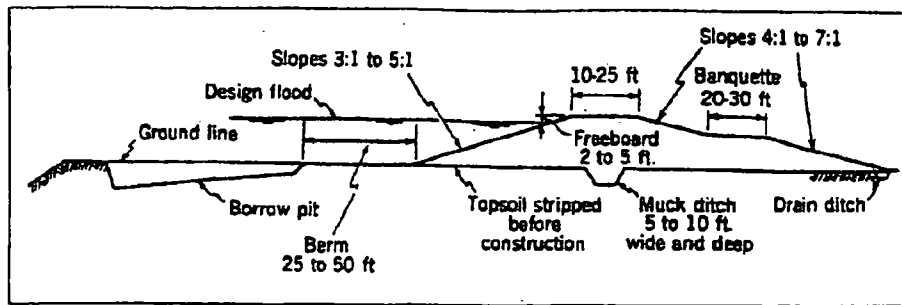


Figure 1-1, Levee Cross Section

- Levee side slopes can vary, but are usually at least 1V:3H on the riverside and at least 1V:2H on the landside of the levee. Berms, sometimes also called banquettes, on one or both sides of the levee toe are often used for levee stability and/or to control levee seepage.
- Levee heights are predicated on design flood elevations and are typically from 10-25 feet above the floodplain elevations adjacent to the levee. The height of a levee is determined using an analytical computer model, like the Corps of Engineers HEC-2 or HEC-RAS computer packages, to compute a design water surface elevation. A specified freeboard is then added.
- Levee freeboard is added to the design water surface elevation to allow for unquantifiable factors and may be thought of as a factor of safety. The amount of freeboard should be a designed quantity and is based on several considerations, including temporary shifts in the stage-discharge relationship, buildup of debris at bridges, etc. Normal freeboard for a levee protecting an urban area is three feet minimum. The Flood Emergency Management Agency will accept levee certification that shows that a levee has at least three feet of freeboard above the 100-year flood. Additional height may be required to allow for the inclusion of variable freeboard and/or for levee settlement.
- The levee is constructed typically from available materials. A levee constructed of solid clay would be preferable, but this quantity of clay is seldom available. Consequently, the levee may be constructed of mixtures of clay, silt and sands, and faced with clay to give adequate imperviousness to the levee. Federal levee standards include five feet of clay on the riverside face of the levee to minimize problems with through seepage.

1.4 How Do Levees Work? By preventing floodwaters from entering the protected area, flood damages are eliminated or minimized. Thus the levee has to be designed sufficiently high to prevent the river from overtopping it for all events through design, and impervious enough to prevent significant though seepage from occurring. The latter can also cause levees to fail at flood events less than design. When floodwaters are on the levee, the normal evacuation of interior water (from rainfall runoff or from seepage) is via gravity flow through pipes is prevented. Therefore, levee projects include an interior flood protection system to remove these waters. Interior ditching, ponding areas, drains through the levees and pumping plants are required, depending on site and river characteristics. Levee projects must handle direct flooding from the river and also indirect flooding from interior runoff under both blocked and non-blocked drainage conditions (Figure 1-2).

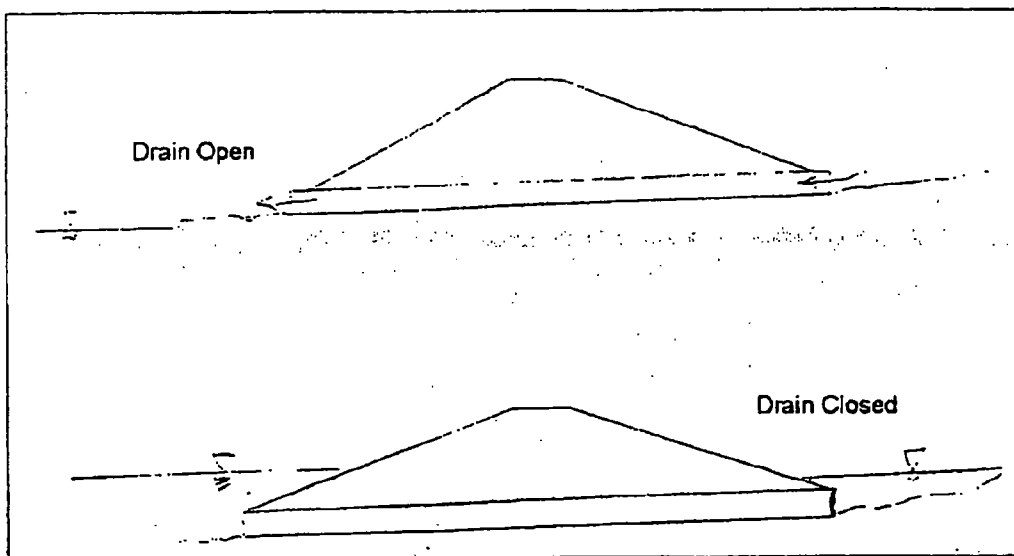


Figure 1-2, Blocked and Non-Blocked Drain Conditions through Levee

1.5 What Causes Levees to Fail? Although the term levee "failure" is commonly used to describe the condition where the interior area protected by a levee becomes flooded, a failure would only truly occur when the levee allowed the area to be flooded by an event less than that for which it was designed. There are four different ways (Figure 1-3) that a levee would not be successful:

- **Levee Overtopping.** To overtop the levee, a flood must exceed the elevation of the levee design event plus the levee freeboard plus any additional height due to floodlighting. There is a risk of overtopping for any levee ever built. Since the Green Diamond Levee will be designed for the 500-year flood plus three feet of

freeboard, this risk will be extremely small (less than a 0.2% annual chance).

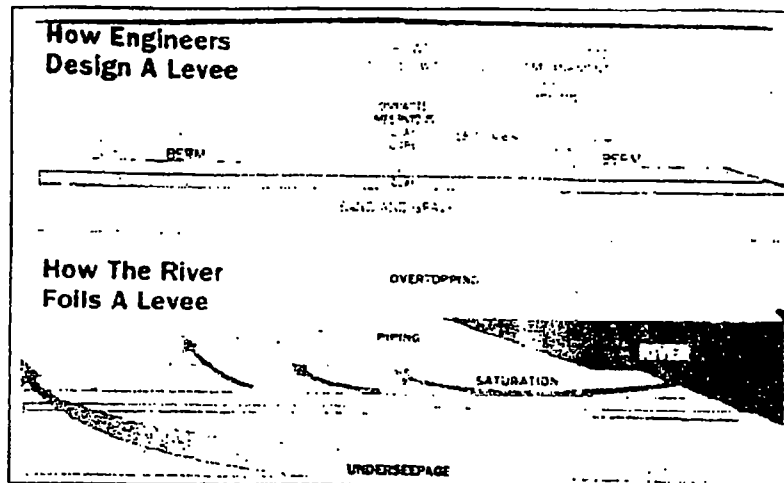


Figure 1-3, Failure Modes of a Levee

- Seepage under the Levee.** When floodwater rests against a levee for an extended period of time, the water pressure on the levee and the adjacent floodplain builds, forcing water into and under the levee. The soils at depths many feet below the levee are often more porous than those in or just below the levee itself and water can slowly pass through these porous materials. This seepage can surface on the landside of the levee, forming damp areas and possibly so-called sand boils. A sand boil is the culmination of a tiny tunnel connecting the river and the landside of the levee. As long as the velocity through the tunnel is small and erosion does not occur, the sand boil is no threat to the levee, assuming proper observation and reaction by the levee owners. However, when piping action occurs and the water flowing from the sand boil carries eroded material, a definite threat to the levee can quickly develop. If the levee owner does not properly address the sand boil, it can result in a levee breach. This is the most common form of levee failure for floods that are less than the levee crown. The usual means of designing for levee underseepage include stability berms on the landside to lengthen the underseepage flow path and to give added weight to combat the uplift pressures, and/or seepage wells to allow the water to surface in a controlled location without bringing soil with it. The need for these items is predicated on the duration of flooding and the height of the water on the levee. If the flood will not be on the levee for more than a few days to a week, the underseepage paths may not have time to set up and threaten the levee.

- *Seepage/Piping through the Levee.* This scenario is very similar to the previous situation, except that the seepage moves directly through rather than under the levee. Seepage could be augmented by passages created partial through the levee by vegetation roots or burrowing animals. As the water's path through the levee is much shorter than for underseepage, good levee design, engineering and maintenance should minimize these threats. Constructing the levee with clay, or at least facing the levee with several feet of clay, will prevent significant through-seepage. Again, the duration that the flood is on the levee will directly impact any resulting problems of seepage through the levee.
- *Levee Erosion.* A levee failure from erosion results when the levee is close to the riverbank and exposed directly to the river currents. This situation may occur during a flood, when severe channel erosion shifts the channel into the levee. A grass-covered levee will not normally erode unless velocities against the levee exceed at least five feet per second and for a significant duration. Tree screens in front of the levee are often used to slow the rate of channel erosion and prevent high velocities from quickly attacking the levee slopes.

1.6 Levee Impacts, Both Positive and Negative. A levee is designed to prevent flooding of its protected area and this fact can result in both positive and negative consequences. The positive consequences can be obvious—a better utilization of the protected area with the threat of flooding greatly reduced. However others are not. Given that flood protection is needed, a levee causes the least environmental impact to the adjacent area. Whereas reservoirs greatly impact the river hydrology and channelization greatly changes the channel hydraulics, a levee does not impact either. Only during the relatively infrequent periods of flooding does the levee have any impact on river elevations or area flooded. Therefore, a levee is the least environmentally objectionable of any structural flood reduction project.

On the negative side, by preventing floodwaters from entering the protected area, a levee can cause higher flood stages for a short distance upstream of the protected area. The magnitude of this problem can be easily addressed by hydraulic modeling, comparing the flood heights for the same flood event for the existing condition against the proposed condition. The difference could be essentially zero to as much as one foot, based on FEMA criteria. A less obvious impact could be slightly increased flood levels for a short distance downstream, due to a loss of floodplain storage. A hydrologic analysis of existing versus with project conditions would be able to address the magnitude of this impact. However, unless hundreds of thousands of acres are now behind levees, this impact is usually so small as to be immeasurable. The presence of a major levee can result in different interior land uses, which can be viewed as positive or negative, depending on the

individual. Especially important is the loss of any wetlands currently existing. These wetlands would be preserved, or mitigated for by the creation of additional wetlands.

2 The Green Diamond Levee Project

2.1 Project Site. The proposed Green Diamond Levee will provide about 5,000 acres with a high level of protection from Congaree River floods and from lesser streams entering the Congaree adjacent to the project. The proposed levee project is located about three miles downstream of Columbia, South Carolina. The Congaree River's drainage area is 7,850 square miles at Columbia and flooding has been a periodic problem. Records maintained by the U. S. Geological Survey for the gage at Columbia include both stage and discharge data since 1892. The flood of record on the Congaree occurred in 1908 when a peak stage of 39.8 feet on the gage was recorded for an estimated discharge of 364,000 cubic feet per second (cfs). Floods exceeding 300,000 cfs also occurred in 1928 and 1929. A dam was built just upstream of Columbia and the Lake Murray Reservoir, created by the dam, began to fill in late 1929. Since completion of Lake Murray, the largest flood in the past 70 years was a peak discharge of 231,000 cfs (peak stage of 33.34 ft.) in 1936. No other floods have exceeded a peak discharge of 200,000 cfs or a stage of 30 ft. since 1930. While Lake Murray does not offer complete flood protection, it does significantly reduce the frequency of large discharges at the project site.

2.2 Existing Levee. The project will follow the alignment of an existing farm levee for several miles along the left bank of the Congaree River and along both sides of Gills Creek, a tributary of the Congaree. The current farm levee dates from the early 1900's, however the existing levee height was not attained until the 1960's. The height of the farm levee is generally sufficient to exclude floods up through the 100-year event, although the levee cross section is not adequate to be certified to protect against this event. The side slopes are too steep for levee stability at high river stages and much of the levee is, or has been, covered with extensive vegetative growth, including trees. However, the levee has served its purpose over the years, with only one flooding incident due to a levee breach since it reached the current height over 30 years ago. The only breaks were at the wastewater treatment plant during the 1976 flood. Levee seepage along a drain is suspected of undermining the levee and causing the breach when the exterior water level was about eight feet high on the levee (a stage of nearly 30-ft. at the Columbia gage). One incident of flooding over a period of several decades for a farm levee that did not have any engineering design or include modern construction techniques is not unusual.

2.3 Proposed Project. The proposed project would give protection from all floods through the 0.2-% annual chance event (500-year average return interval flood) plus three feet of freeboard minimum. The total area protected would lie within three independent levee units, however only two are scheduled for initial construction. Both of the initial levee units will be built on the alignment of the existing levees. Levee Section 1 would protect about 2300 acres and be the furthest upstream. The levee would follow the left bank of the Congaree River until it ties into the I-77 embankment. Levee Section 1 is about 13,600 feet in length. Levee Section 2 would protect 1200 acres and would extend from the I-77 embankment along the Congaree to Gills Creek. It parallels Gills Creek, eventually tying into high ground at the bluff line. A secondary levee separates Section 1 from Section 2 roughly paralleling the highway. Levee Section 2 is about 32,000 feet in length. Figure 2-1 shows the plan view of the project. Levee Section 3 would be



Figure 2-1, Green Diamond Levee, Sections 1 and 2

downstream of Levee Section 2, on the opposite side of Gills Creek, and protect the remaining 1500 acres. The project will incorporate the clearing and grubbing of the existing levee to remove all vegetation and surface material, replacing it with

proper soils, and greatly increasing the levee cross section for proper design and for seepage control. The crown width will be increased to 10 feet minimum and the new levee cross section will be an estimated 25-100% greater than existing. Typical levee cross sections are shown in Figure 2-2. An interior flood control

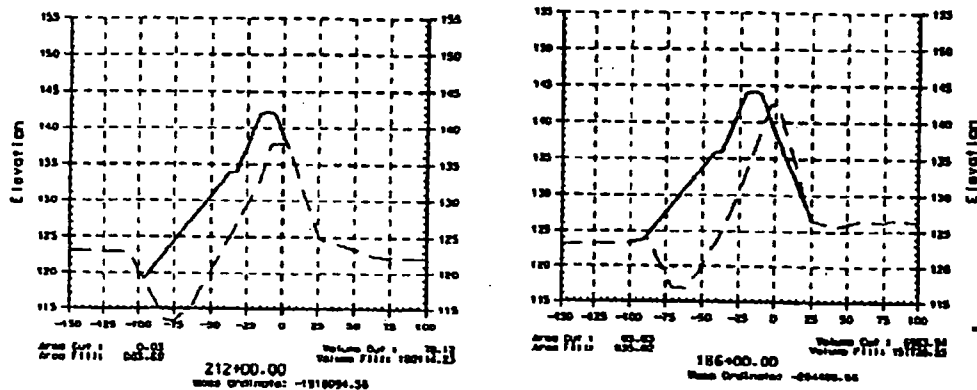


Figure 2-2, Typical Levee Cross Sections, Green Diamond

system is included to carry interior runoff to the levee line. Interior water will be evacuated via several new drains through the levee or will be pumped over the levee during high river conditions. The levee has been designed based on extensive hydraulic and geotechnical analyses. Certification of the proposed levee was submitted to FEMA and is still under evaluation at the time of this report. The constructed levee will give a fully appropriate level of protection for the proposed interior land use. A design flood of a 500-year event plus three feet of freeboard will give the protected area a level of protection similar to that of the best levees anywhere in the United States.

2.4 Project Impacts. Possibly the most important impact of levee projects is the impact on flood levels outside of the levee. The Green Diamond Levee will have essentially no adverse impact on flood levels. Since the existing farm levee is shown as effective in the development of Richland County flood maps and the current floodway, the improvements incorporated into the new levee will not result in an impact to either the base flood level of the 100-year event or to the existing floodway. Concerns have been expressed about any impact to unique environmental areas several miles downstream of the proposed Green Diamond Project. A levee almost never causes any measurable impact on flood levels or flood discharge downstream of the project location. This is the case for Green Diamond, which will have no adverse impact on this unique natural area. Any loss of wetland areas within the project boundary will be mitigated through the creation of new wetland areas in the project vicinity.

2.5 Remaining Levee Features To Be Considered. While the design of the Green Diamond Levee Project is in the final stages, this review has identified several

items that could be considered during the balance of the engineering, design, and construction processes.

- 2.5.1 *Variable Freeboard/Levee Reliability.* While the proposed levee meets all criteria for a well-engineered project and its certification exceeds FEMA requirements, the proposed freeboard could be further evaluated. A variable freeboard is often incorporated to insure that any levee overtopping does so at the least damaging location, often at the downstream end of the riverfront levee. This design usually incorporates a variable freeboard, such that the initial overtopping point has three feet of freeboard and the rest of the levee unit has 3.5 ft. or more. Similarly, the upstream flank of Levee Unit 3 along Gills Creek should have more freeboard than the downstream flank of Levee Unit 2 along the creek. This levee superiority insures that an overtopping of Levee Unit 2 will not overtop Levee Unit 3 and flood it. Incorporation of levee superiority in freeboard between adjacent levee units prevents the so-called "domino effect", whereby the failure of the upstream levee unit does not then result in overtopping the next unit downstream.

The whole concept of freeboard could be considered further, in that Federal levees no longer include a fixed freeboard quantity. The levee height results from risk and uncertainty analyses to determine the levee reliability for various large hypothetical floods. The end result of these studies is an expression of the reliability of the levee as to its ability to provide protection against various hypothetical flood events. For instance, a specific levee crown elevation would then give a certain percent chance that the levee would provide protection against a specific flood. These reliability studies take into account the uncertainties in the discharge-frequency and stage-discharge relationships for the levee project. Federally-designed levees of a certain height would (for instance) provide (say) a 93% reliability that it would protect from the 100-year flood. FEMA will accept certification if a levee gives 90-95% reliability for the 100-year event. These reliability studies could be considered for Green Diamond Levee.

- 2.5.2 *Seepage Design.* The levee cross section for Green Diamond has been designed for seepage expected at design river stage. No seepage/stability berms or seepage wells have been determined as necessary. Recent large floods in the United States have resulted in significant seepage inflow to protected areas behind levees occurring sooner and with a higher inflow volume than experienced in earlier floods. Seepage tends to follow the paths of least resistance under or through the levee and these paths often seem to remain in place following the recession of a flood. When the next large flood occurs, possibly decades later, these flow paths may be partially in place to allow more seepage at earlier times in the flood. Mississippi River and Sacramento River levees have experienced these phenomena in recent floods. The Corps of Engineers has been forced to redesign some reaches, incorporating stability berms on the landside of some levee locations and/or to add a series of seepage

wells to control the seep process at fixed exit points on the landside. Depending on sub-surface conditions throughout the Green Diamond site, additional consideration could be given as to the increase in seepage with time and the need for additional measures to combat this phenomena.

- 2.5.3 *Gravity Drain Design.* Gravity drain design is based on an interior flood reduction analysis, usually for one or more design floods. The drains are often designed to pass interior runoff from a 10-year to a 100-year event with a minimum of interior ponding. Drains should incorporate a positive closure, usually a slide gate operable on the riverside of the levee. A flap gate could be utilized as a backup, in case of debris blockage of the slide gate. Access from the levee crown to open or close the gate during a Congaree flood is required. This access could be via a raised ramp or walkway from the levee crown to the gate-operating platform. Staff gages on either side of the levee at each drain would be useful to determine the head differential upon which the drain should be opened. Practices vary depending on river characteristics, with drains opened at positive head differentials as low as 0.1 ft to other requirements that a foot or more of positive differential must exist prior to opening the gate and draining the interior. The speed with which river elevations change at the drain site is the basis for drain open or not decisions.
- 2.5.4 *Interior Flood Protection.* When drains are blocked by high river stages, an interior flood protection system is needed to prevent inundation by local rainfall. The system often incorporates interior ponding, or local runoff storage areas, interior drainage channels to direct the water to or from the ponding areas, and one or more pumping plants to evacuate interior water during prolonged high river stages that block gravity flow through the drains. Period of record simulations or coincident frequency analyses are often performed to determine an optimum system for interior flood damage prevention under blocked drainage conditions. Prevention of damages from interior floods ranging from 10- to 100-year return period is typical of urban interior systems. For Federal levee projects, these interior systems typically require a separate economic analysis to determine an economic optimum.
- 2.5.5 *Flood preparedness planning.* Although a very high level of protection will exist for the Green Diamond Levee project, a workable flood plan is still necessary. This plan would be included in an operation and maintenance manual developed for the levee owner. Pertinent information would include: key river stages when specified actions should or must take place, when any closure structures must be operated, when roads must be closed, where to obtain river forecasts, evacuation routes, and the process of obtaining floodfight materials such as sandbags, sheeting, etc.
- 2.5.6 *Regular levee inspection/maintenance.* The best-designed levee may not function without regular and proper inspection and maintenance. These functions would include

- regular mowing of the levee,
- detection and elimination of borrowing animals in the levee,
- removing unwanted vegetation at the levee site, especially tree growth,
- repairing any levee slumps or slides,
- maintaining a good grass cover on the levee,
- repairing and protecting any eroded areas,
- preventing channel shifting into the levee by the Congaree or Gills Creek,
- keeping the drains and pumps in good operating condition and
- keeping interior channels cleared of debris or abnormal amounts of vegetation.

2.5.7 Floodfight Measures. These measures would be identified in the earlier referenced flood preparedness planning measure, but would include:

- Required manpower for 24 hour, 7 day levee inspections and patrols
- Critical river elevations for taking various actions
- Identifying any low points in the levee crown for bringing these locations up to grade
- Implementing gate closures of gravity drains and any other openings through the levee.
- Having adequate materials on site (sandbags, etc.)
- Close and frequent inspection for the formation of sand boils at high river stages and the means to immediately address this threat
- Assistance from the Corps of Engineers and other Federal or State agencies

2.5.8 Flood Insurance. The high level of protection enjoyed by the Green Diamond Levee project results in no requirement for flood insurance for the protected structures. However, it would be highly desirable to have flood insurance in the event of a catastrophic flood on the Congaree. Flood insurance premiums on structures protected by a 500-year return period flood are very low. While few owners of structures behind the levee would probably opt for the insurance, the levee district or levee owners could include the premiums in the overall taxation rate on the protected properties and pay the premiums directly. The inclusion of this feature would insure that there are no future non-reimbursable flood losses to any properties, even in the event of a flood exceeding the levee design.

2.6 General Comparison of Green Diamond Levee to Other Projects. The levee planned for the Green Diamond Levee project compares favorably with successful levee and floodwall designs around the country. Protection to a 500-year average return interval flood plus three feet of freeboard is similar to the protection afforded New Orleans, St. Louis, Kansas City and other major river cities. While not absolute protection, only a small risk of residual flooding remains and this risk is

less than that from fire, wind, hail, and other natural disasters that can occur. The next section describes ten levee projects around the United States, both successful and unsuccessful. Those projects that did not prevent flooding can be characterized as providing less than 500-year protection or that did not address serious seepage problems, either from an initial engineering design aspect or from adequate inspection during flood conditions. These problems are not reflected in the Green Diamond Levee Project.

3 Case Studies

- 3.1 Successful Levees. Numerous levees around the United States have successfully prevented flooding throughout their project life, which goes back many decades for several case studies. Of the many examples, six have been selected to describe in this report.

3.1.1 *Riverport, MO Flood Protection Project*. The project was conceived and built in the mid-1980's entirely through private funding and development. It is located in the community of Maryland Heights in northwest St. Louis County, adjacent to the Interstate 70 crossing of the Missouri River. Completed in the late 1980's, the levee project provides protection from an estimated 0.2% annual chance (500-year recurrence interval) to about 500 acres. The project successfully withstood the flood of record in 1993 and another major event in 1995.

3.1.1.1 *Project Description*. The levee project is located across the Missouri River from the City of St. Charles and about 30 miles upstream from the mouth of the Missouri River. Figure 3-1 shows the location for the Riverport project. Drainage area of the Missouri at the levee site is about 530,000 square miles. The levee provides protection against Missouri River floods through the once in 500-year event (peak discharge of 820,000 cfs). It was designed and constructed by the Sverdrup Corporation and features an earthen levee, relief wells, pumping plant and interior runoff collector systems. Sverdrup followed Corps of Engineers guidelines in designing and constructing the Riverport levee. Riverport levee is an upstream extension of the Earth City levee, built in the 1970's, also by Sverdrup. Earth City is 1800 acres of office and industrial park. At its upstream end, the Earth City levee tied into the I-70 embankment, however the roadway fill was lower than the design flood protection. Upon the completion of the Riverport project, the entire area, including I-70, was protected from all floods up through the 500-year event. This fact became extremely important during the Great Flood of 1993, estimated as a 300-year average recurrence interval event. It crested with a peak discharge of 750,000 cfs, less than the design discharge for the levee, with a water surface well below the design river elevation for which the levee was built. The Riverport/Earth City levee was one of only three levees on the Missouri River from Kansas City to St. Louis that

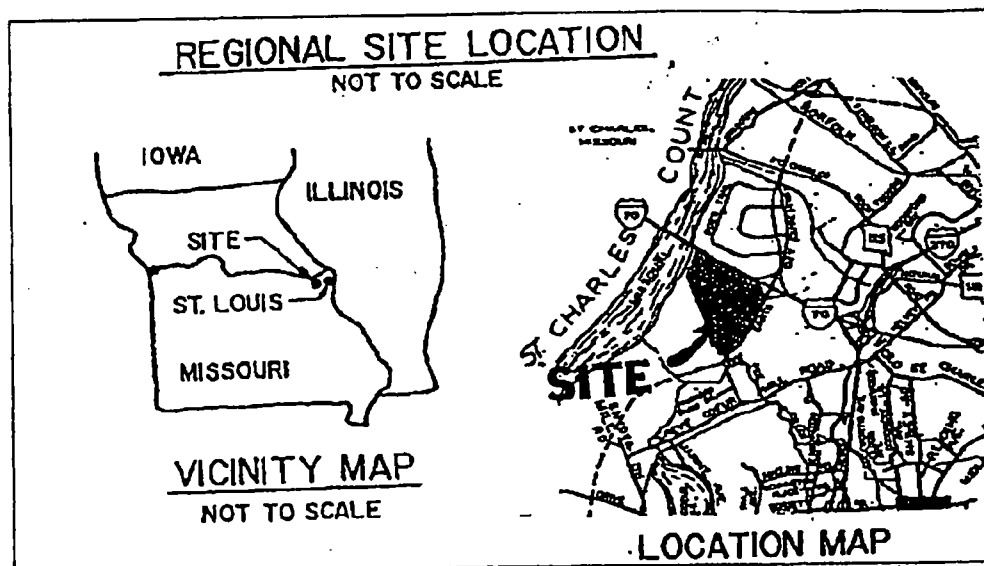


Figure 3-1, Site Map, Riverport Levee Project

withstood this great event (Figure 3-2). It continued to allow over 170,000 vehicles/day to cross the river on I-70, which was the only crossing of the Missouri River downstream of Kansas City still open at the height of the Great Flood.

To meet Corps of Engineers requirements for permitting, extensive studies were required, including:

- A cultural resources study for artifacts.
- An ecological study of vegetation and animal life in the area and the impact of the project on those life forms.
- A flood plain study of the impacts of the levee on Missouri River flood stages.



**Figure 3-2
Riverport during 1993 Flood**

- Geotechnical studies for the levee and relief well design.
- Traffic studies for impacts on the surrounding roadway network.

- Internal stormwater studies to coordinate flows and water levels within existing wetlands.

3.1.1.2 Project Features. The main feature of the project consists of about 8800 feet of levee extending from the I-70 roadway embankment to high ground upstream. The levee dimensions include a 10 feet wide crown, an average height of 24 feet and an average base width of 170 feet. The levee crown is a minimum of three feet above the level of the estimated 500-year recurrence interval flood. Engineering certification of the levee has been approved by FEMA.

The interior design of the project incorporates three pumps with a total capacity of 42,600 gpm (95 cfs) for pumping interior water to the Missouri River when gravity drainage is blocked by high river stages. The pumps are automatically activated based on rising interior ponding levels. The interior collector ditches and ponding areas are sized to store up to a 100-year runoff without pumping. Interior ditches range from 5 to 65 feet in width and are up to seven feet deep. A total of 72 relief wells, each 65 feet deep, are included for underseepage control and to maintain levee stability.

The project has been operated and maintained with private funds from its completion to date.

3.1.1.3 Project Impacts. The project has been an economic boon to the area and has created numerous business opportunities. The design firm, Sverdrup Corporation, maintains its corporate headquarters in Riverport (Figure 3-3). The



Figure 3-3, Riverport Development

protected area is an office, industrial, restaurant and entertainment complex. The Riverport outdoor amphitheater, located adjacent to the levee, is the site of nightly summer concerts for thousands by national and international entertainment groups. Harrah's Casino developed a large hotel, restaurant, and gambling facility adjacent to Riverport in the mid-1990's. The project has been a complete success since its construction, with nearly all interior space developed.

The project was well conceived, planned and has resulted in few problems in the years following its development. The negative impacts are minor. The

protected area was marginal farmland that flooded frequently prior to the levee project. Construction of the levee resulted in the loss of 3.5 acres of wetlands, however an additional 13 acres were created on the riverside of the levee. The levee itself has little adverse impacts on upstream flood heights, since the I-70 roadfill already limited flood flows to the bridge opening.

3.1.1.4 Comparison with Green Diamond Levee. The two projects are very similar. They are both privately developed to Corps of Engineers design standards, provide a similar level of protection, and are well planned and designed. Adverse impacts are minor for both projects. The Green Diamond Levee project should expect the same level of success as the Riverport project.

3.1.2 Mankato, MN Flood Protection Project. The project that was authorized by Congress in 1958 and the project that was completed by the St. Paul District, Corps of Engineers in 1988 are similar in name only. While occasional flooding to the communities of Mankato, North Mankato and Le Hillier had always been a problem, the authorized project was placed in an inactive status in 1961 due to lack of cooperation from the local sponsor. However, the project was reactivated following the flood of record in April 1965. Another major flood in 1969 added urgency to the effort. The project was reformulated to provide a greater level of protection and construction commenced in 1971. The last of 24 separate construction contracts was completed and the project dedicated in October 1989. The levee and floodwall project is located in Nicollet and Blue Earth Counties along the Minnesota and Blue Earth Rivers, in south central Minnesota (Figure 3-4). Mankato is about 80 miles southwest of Minneapolis-St. Paul. The completed flood system protects against the Standard Project Flood, the worst flood event reasonably characteristic of the region. This flood would likely be in the range of a 500-year event, or rarer. The project has been completely successful, withstanding large floods in 1993 and 1997.

3.1.2.1 Project Description. Project levees are located on the right and left banks of the Minnesota River, between river miles 103.5 and 109.5 above its mouth, and on the right and left banks of the Blue Earth River. The Minnesota River is a major tributary of the Upper Mississippi River. The drainage area of the Minnesota at the levee site is about 14,900 square miles. The levee provides protection against Minnesota River floods having a peak discharge of 150,000 cfs, an event far rarer than the 1-% annual chance (100-year) flood event. It was designed by the Corps of Engineers, St. Paul District and features an earthen levee, floodwalls, interior flood control facilities, pumping plant and major bridge relocations. The project includes separate protection for each of the three communities: Mankato on the right bank of the Minnesota and Blue Earth Rivers, North Mankato on the left bank of the Minnesota, and Le Hillier, which is bounded by both the Minnesota and Blue Earth Rivers. Total project cost was \$101,000,000.

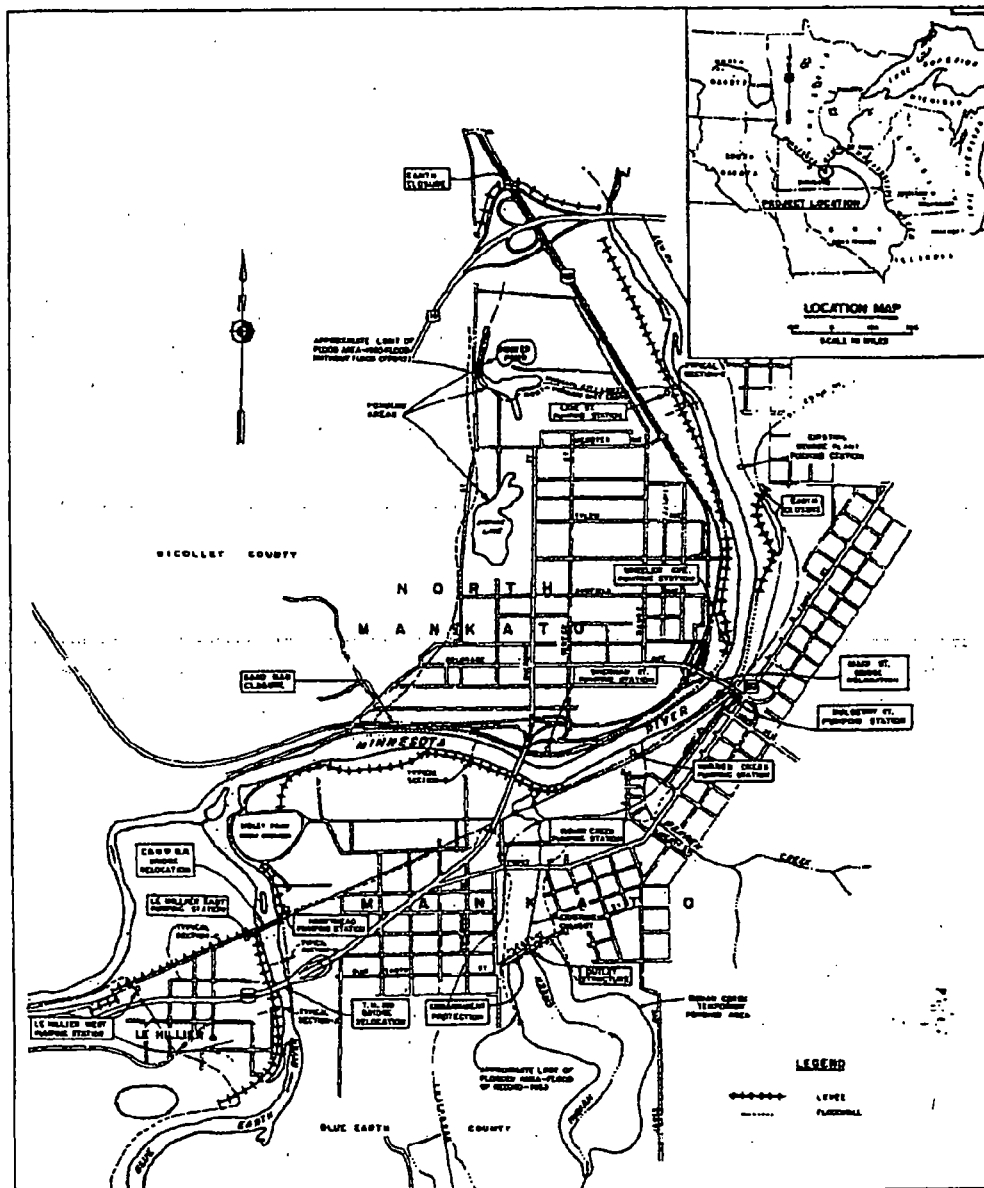


Figure 3-4, Mankato Flood Reduction Project

3.1.2.2 Project Features. The main features of the project consist of about 4.7 miles of levee, 2.5 miles of concrete floodwall, a 3000 ft. diversion channel, 9 pumping stations, 5 miles of storm water interceptors, 2 new highway bridges, a new railroad bridge and recreational facilities. The levee crown/top of floodwall is

a minimum of one foot above the Standard Project Flood level and several feet above the 100-year flood level. The flood protection system meets the requirements of FEMA for certification.

The interior design of the project incorporates nine pumps with a total capacity of 630,000 gpm (1,405 cfs) for pumping interior water to the Minnesota River when gravity drainage is blocked by high river stages. The pumps are activated based on rising interior ponding levels when gravity flow to the river is blocked by high river stages. The interceptor sewers collect the storm runoff and bring it to the pump stations.

Since completion of construction, the project has successfully prevented flooding from all subsequent flood events. The 1993 flood peaked at 75,600 cfs, about 19,000 cfs less than the 1965 record event. Although the discharge was lower, the stages of the 1993 flood were higher than those of the flood of record, due to higher vegetation associated with a summer flood, compared to the normal late winter/early spring events on the Minnesota. Figure 3-5 shows a portion of the project under construction. The project has been operated and maintained by the three communities since its completion.



Figure 3-5, Mankato Project, Floodwall Under Construction in Foreground

3.1.2.3 Project Impacts. The project has been an economic boon to the area and has revitalized the communities. The completed project has removed Mankato, North Mankato and Le Hillier from the floodplain, allowing better use of

land in the incorporated area. The replacement of the major highway bridges crossing the river has modernized transportation through the communities and also facilitated their growth. The associated hiking/biking trails along the river have improved recreational opportunities, while interior ponding storage for flood runoff has been incorporated into recreational and swimming areas for citizens throughout the entire region.

The constraints caused by the levee and floodwalls on the Minnesota River resulted in increased flood heights upstream of the project for a few miles. However, no communities are impacted and no significant induced flood damages resulted. The existing flood mapping of this area will prevent any unwise development in flood prone areas.

The project has been well designed, with few problems in the years following its completion. All environmental and public concerns were met, including the conflicting desires of Mankato and North Mankato.

3.1.2.4 Comparison with Green Diamond Levee. The Green Diamond Levee project will be providing a similar level of protection and will be built to the standards of the Corps of Engineers. The Green Diamond Levee project will be far less difficult and challenging, however. Adverse impacts are far lower than would be the case for the Mankato project. The Green Diamond Levee project should expect the same level of success as Mankato.

3.1.3 Augusta, GA Flood Protection Project. The project grew out of a disastrous flood experienced by Augusta in 1908. The Savannah River inundated a large portion of the city, resulting in a call for protection against future floods. The City started construction on the project in 1908 and completed the initial levee between 1914 and 1916. Following significant damage to the levee by a flood in 1929, the City rebuilt portions of the levee to protect against rarer floods. The Flood Control Act of 1936 authorized the U. S. Army Corps of Engineers to further improve the levee system. This work was completed in 1941. Since 1941, three large upstream reservoirs have been constructed and Augusta is now protected from all but the rarest floods. Augusta has not experienced any significant flood damage since 1929.

3.1.3.1 Project Description. The levee protecting the city is located in Richmond County, Georgia, in the northeastern portion of the state. The Savannah River is the boundary between the States of Georgia and South Carolina. The levee project is located about 200 miles upstream of the mouth of the river. The drainage area of the Savannah at the levee site is about 7,508 square miles. Three major reservoirs—Thurmond, Russell and Hartwell—are located upstream of Augusta and offer additional flood protection (Figure 3-6). A total of 6,144 square miles of the basin lie upstream of one or more reservoirs, thus about 81% of the basin is partially controlled by reservoirs. The levee and reservoirs provide

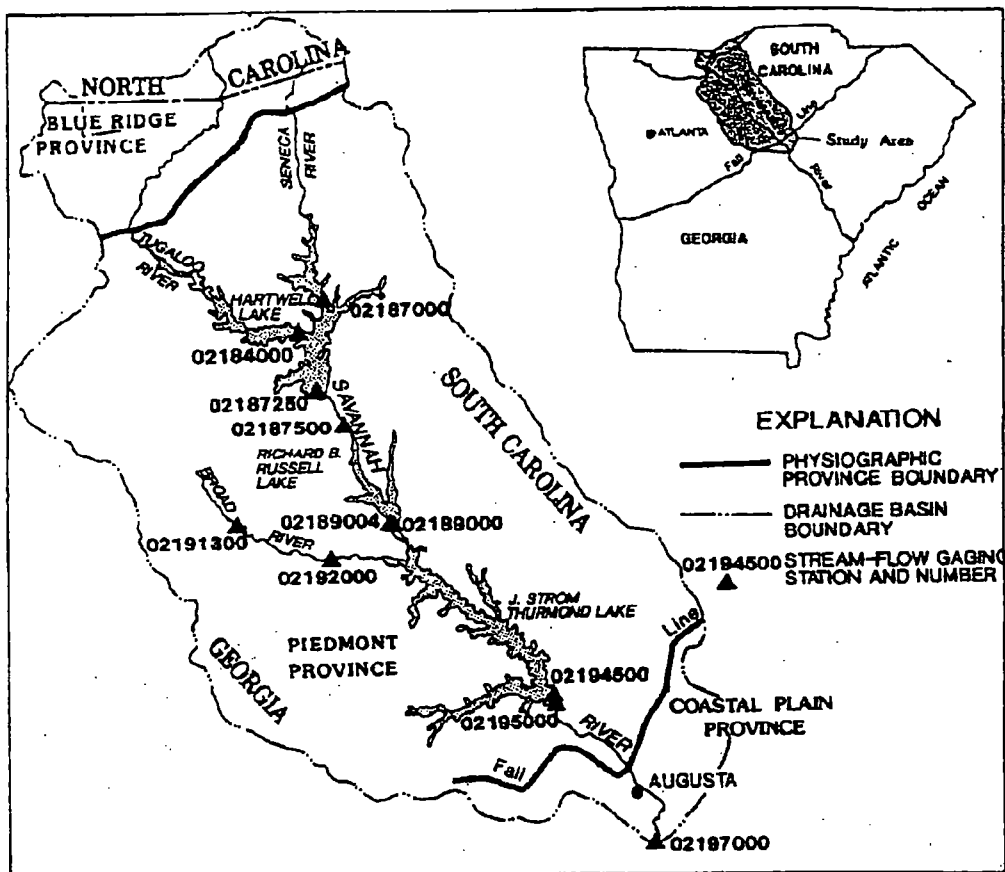


Figure 3-6, Savannah River Basin at Augusta, GA

protection to Augusta against Savannah River floods well in excess of the 1-% annual chance (100-year recurrence interval) flood event, or a peak discharge of 170,000 cfs. The Savannah District, Corps of Engineers, estimates the levee would likely be overtopped by a discharge of 500,000 cfs, an event estimated to be at least a 500-year flood. Prior to the upstream reservoir construction, peak discharges at Augusta ranging from 250,000 to 350,000 cfs were not uncommon. However, with the completion of the reservoirs, much of the upstream flood runoff is stored and released after the downstream water levels have peaked. If the three large reservoirs upstream of Augusta had been in place throughout the historical period, only two flood events—1930 and 1936—would have exceeded the estimated 100-year recurrence interval discharge. The greatest event (1930) would have peaked at 252,000 cfs with today's reservoir control. As seen, the City of Augusta enjoys a high level of flood protection.

3.1.3.2 Project Features. The main feature of the project consists of about 61,125 feet of levee running from Raes Creek at the upstream end to high ground at New Savannah Bluff on the south. The levee dimensions include at least an eight feet wide crown, an average height of 15-20 feet and levee side slopes of 1V:2.5-3H, except in sections which include floodwalls. The riverside of the levee is covered with stone paving to protect against the river's currents.

The interior runoff from the protected area passes through any of several gravity drains under the levee. No pumping of interior runoff is required. Several closure structures are incorporated in the levee to allow highway and railway traffic through the embankment. Closures include both gates and stoplogs.

3.1.3.3 Project Impacts. The project has been a stabilizing influence for Augusta property development since before World War II. Adequate flood protection has allowed for an orderly development in the city and protected both existing and new construction. The project has been a complete success since the Corps of Engineers completed the upgrade in 1941.

Any negative impacts of the levee project are believed to be minor. While no hydraulic analysis of the levee impacts is known, any induced flooding caused by the levee would have more than been offset by the flood discharge reductions of upstream reservoirs.

3.1.3.4 Comparison with Green Diamond Levee. The two projects are similar. Each levee was first constructed by local entities. While each was initially effective, the Corps of Engineers provided the final design and strengthening of the Augusta levee and, with the upstream flood protection reservoirs, brought the protection up to an appropriate level for an urban area. Similarly, the Green Diamond Levee project is incorporating Corps design standards in raising the existing levee to provide a high level of urban protection. Reservoirs operate upstream of both levee projects and greatly increase each project's flood protection capability.

3.1.4 City of St. Louis, MO Flood Protection Project. For more than 150 years, the St. Louis riverfront experienced frequent flooding to the properties lining the Missouri side of the Mississippi River, with the first known flood occurring in 1785. The areal extent of flooding was not large for the City, since the flood plain of the river is predominately on the Illinois side. The few thousand acres subject to flooding along the Missouri shore however, resulted in extensive damages to the commercial and industrial properties, which required a location near the river for transportation purposes. Newspaper reports described the 1844 flood of record and its great impact on commerce along the riverfront. While the 1844 was the flood of record for over 125 years, other major floods occurred in 1883, 1892, 1903, 1908, 1909, 1927, 1943, 1944, 1947 and 1951. The floods of 1947 and 1951 led the City of St. Louis to petition the Corps of Engineers to conduct a study for the feasibility of flood protection to the city's waterfront. Study results were favorable, and engineering and design were carried out in the mid- to

late 1950's. Construction was started on a floodwall and levee system in 1959. The protection was largely in place by the time of a major flood in 1973. The system prevented an estimated 160 million dollars in damages in that event. Several times this total was prevented during the Great Flood of 1993, which dwarfed all previous flood events.

3.1.4.1 Project Description. The City of St. Louis Project was the largest single flood control project of its kind, when it was authorized in 1955. Although flood protection was evaluated for five separate reaches of the Mississippi River from the mouth of the Missouri River to the mouth of the River des Peres, 23 miles downstream, economic justification was only found for Reaches 3 and 4. These reaches are just north and south of downtown St. Louis and separated by high ground, now the site of the Gateway Arch. Figure 3-7 shows the extent of the St. Louis Project. Reach 4 is south of downtown St. Louis and extends from Mile 176.3-179.2 (above the mouth of the Ohio River), while Reach 3 extends from Mile 180.2-187.2. The majority of the protected area is located in Reach 3. This reach gives protection to 2,530 acres subject to flooding. A total of about 16,000 acres drains to the Mississippi River in this reach. Reach 4 gives protection to 630 acres and has a total of about 7,418 acres draining to the Mississippi in the reach. Both reaches protect long, narrow tracts of land, with the distance from the line of protection to high ground varying from a few hundred to 2,000 feet. The Mississippi River at St. Louis has a drainage area of 697,000 square miles, draining all or part of 14 states and a portion of Canada.

The project was originally designed to provide protection against a reoccurrence of the 1844 flood, which had a peak discharge estimated at 1,300,000 cfs. With the upstream reservoir control, which came on line throughout the period from the mid- 1950's through the 1980's, this discharge is estimated as at least the 0.2% annual chance (500-year recurrence interval) flood event. At the time of construction, the design flood was estimated to cause \$270,000,000 in damages, with average annual damages of \$11,000,000. The project is estimated to have saved over \$160,000,000 in damages during the 1973 flood alone. This flood was the equivalent of a 30-year recurrence interval event. Damages prevented during only the 1973 flood are far greater than the entire first cost of the project. This total does not compare, however, with the estimated 900 million dollars in damages prevented during the Great Flood of 1993, an estimated 150-200 year recurrence interval flood. Figure 3-8 gives a view of the project shortly before the crest of the 1993 flood. Significant damages were also prevented from floods occurring in 1969, 1979, 1982, 1983, 1986 and 1995. The St. Louis Project is a demonstrated success. It has performed satisfactorily for eight moderate to major floods and has won several engineering and design awards.

3.1.4.2 Project Features. The only reasonable solution to the flood problem was a levee/floodwall plan. The concentrated damages along the riverfront and the high cost of the required real estate also emphasized the need

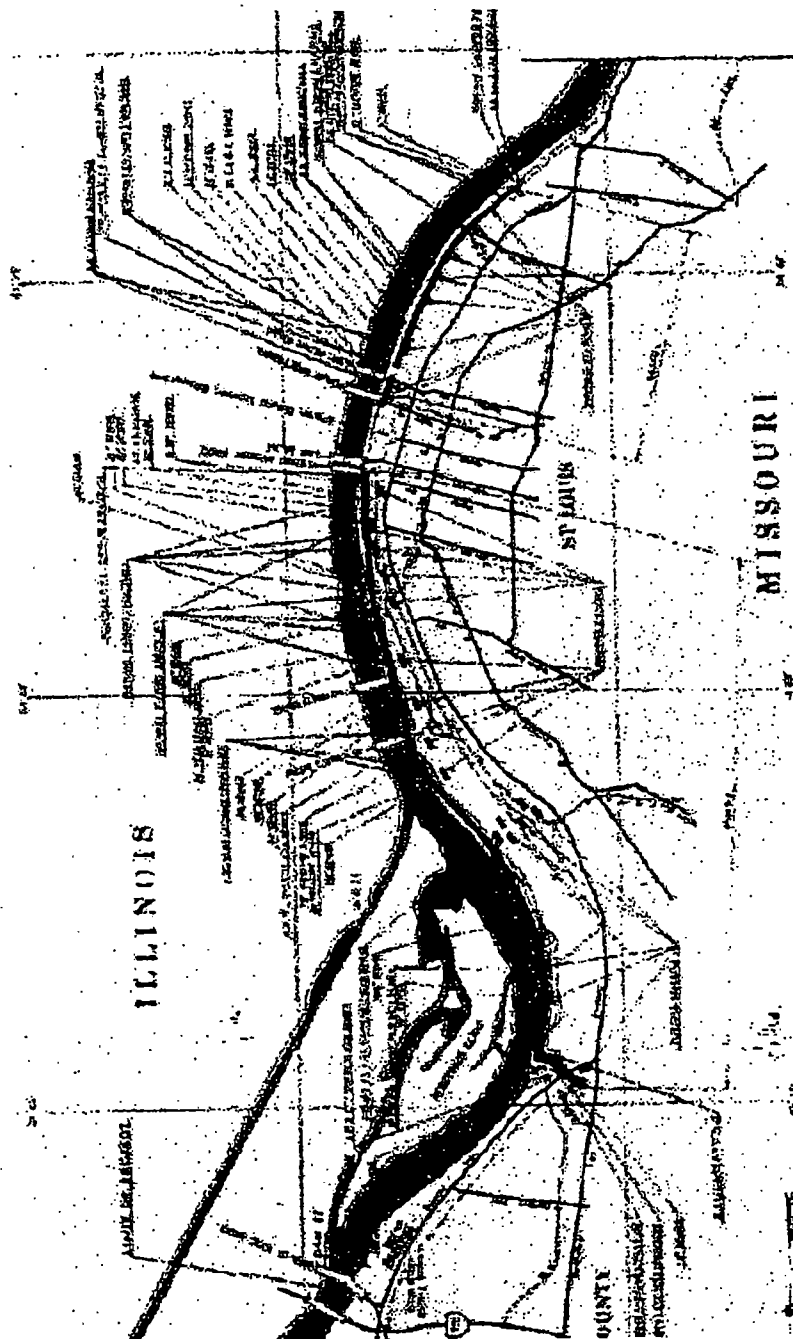


Figure 3-7, St. Louis Flood Protection Project

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for floodwalls through much of the two reaches, rather than earth levees. The line of protection gives an estimated 500-1000 year average recurrence interval flood protection plus two feet of freeboard to the area landward of the levee/floodwall.

The completed project includes seven miles of concrete floodwall; 4 miles of earth levees; 38 closure structures for roads and railroads through the line of protection; 44 separate sewer systems of which 22 were diverted or pressurized to minimize pumping requirements; 28 pumping stations, ranging from 44 cfs to 4,000 cfs (average capacity of 400 cfs); 44 gravity outlets, ranging in size from 15 inches to a 23 feet horseshoe-shaped tunnel; about 11 miles of replacement sewers, ranging from 8 inches to 20 feet in diameter; and about 6,600 feet of pressurized sewers. Figure 3-9 shows typical cross sections of the floodwall and the levee.

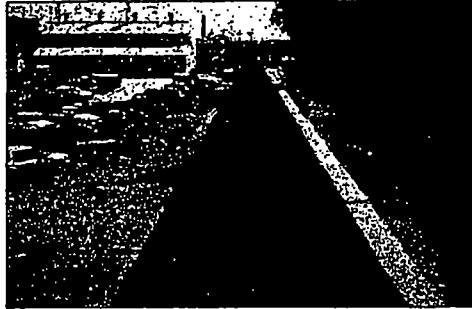


Figure 3-8, Floodwall with 1993 Flood

The project has fully performed to expectations on several occasions in the past three decades. Even prior to completion, the project prevented extensive damages during floods in 1969 and 1973. Prior to 1993, the 1973 flood was the flood of record, cresting over 13 feet above flood stage. This event occurred prior to the start of construction of the last pumping plant. A 300 feet long gap existed in the Reach 4 floodwall, which was successfully sandbagged to prevent flooding. The 1993 flood crested 19.5 feet over flood stage, about 2.5 feet lower than the design flood of the project. The system prevented nearly one billion dollars in damages for this event. Additional damages were prevented during floods in 1979, 1982, 1983, 1986 and 1995; all of which crested at 7-11 feet above flood stage.

The total cost of the project was \$79,505,200, including about 2.3% non-Federal funds. The authorizing document included a cost estimate of \$123,000,000; thus the project was constructed for less than two-thirds of the original cost estimate, a resulting cost savings of \$43,500,000.

3.1.4.3 Project Impacts. The impacts of the City of St. Louis Flood Protection Project have been minimal. Very little floodplain flow area was lost after the levee and floodwall construction; consequently no measurable induced flooding has occurred upstream from the project. The protected area was nearly 100% in commercial and industrial development at the start of construction and no wetlands were present. The project has allowed the area to be more

intensely developed, since the threat of flooding has been nearly eliminated. The physical barrier of the levee or floodwall with the river is the main negative impact. The protected area is largely removed from the river, minimizing the aesthetics of the reach. Access to the river is only through openings for roads or railroads. Hiking trails on the levee and exterior to the floodwall, along with attempts at beautification of the reach, are being actively pursued to improve the usability of the area by the general public.

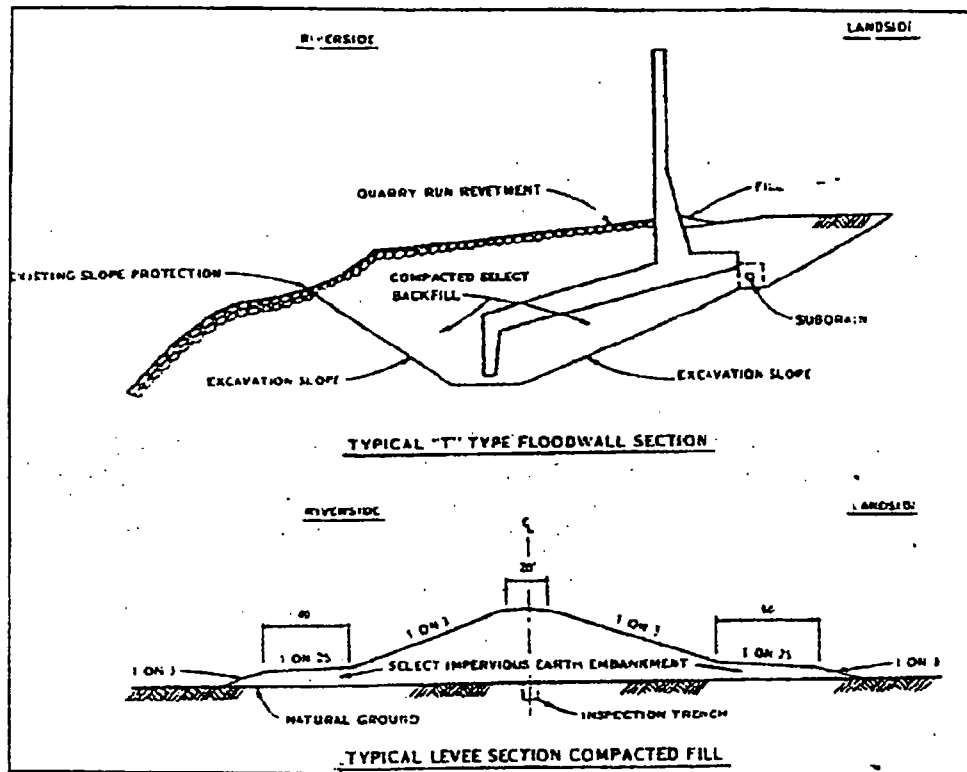


Figure 3-9, Typical Levee/Floodwall Cross Sections

3.1.4.4 Comparison with Green Diamond Levee. The projects are similar in terms of the engineering design and level of protection given to the protected area. Both received a state of the art engineering analysis and have appropriate designs for successful project functioning. The level of protection (500-year flood minimum) is comparable and entirely appropriate for the type of development behind each project. The St. Louis Project has successfully functioned for over 30 years and, with proper maintenance and inspection, is expected to do so indefinitely. The Green Diamond Levee Project should perform in a similar manner.

3.1.5 Sacramento Metro Area, CA Flood Protection Project. Flooding in Sacramento was a common problem throughout the city's early history. Founded shortly after the start of the California gold rush of 1849, the city was flooded several times in the 1800's. The current levees protecting Sacramento were originally built by private interests for agricultural protection and were gradually lengthened and raised over the years. By 1894, many miles of levees existed throughout the Sacramento Valley. No consistent engineering or design was included with the levee construction, however. In 1910, the California Debris Commission proposed a valley-wide flood reduction plan featuring levees, diversions, floodways and storage areas with the design flood based on the March 1907 event, the first large event for which records were collected. This plan was modified in 1913 and authorized by Congress in the Flood Control Act of 1917. Over the following decades into the 1950's, the overall project was constructed incrementally with levees in the Sacramento area upgraded as part of the Sacramento River Flood Control Plan (SRFCP). With the completion of several large reservoirs in the years during and following World War II, notably Shasta, Folsom and Oroville, the Sacramento Metro area enjoyed protection against at least the 1% annual chance (100-year return interval) flood. The system was tested by several major during the balance of the 20th century. Especially damaging were the 1955, 1964, 1986 and 1997 events. The 1986 flood was the flood of record on the American River (Figure 3-10) and stressed the Sacramento levees to the danger point. Even though the peak discharge of



Figure 3-10, 1986 Flood on the American River at Sacramento, CA

130,000 cfs was less than the levee design, water levels came within a foot of overtopping the levee protecting the northern portion of the Sacramento urban area (Notomas). Following this event, hydrologic studies determined that the protection afforded by the system was not as high as previously thought. An even larger event on the Sacramento River in January 1997 gave further emphasis towards improving Sacramento's flood protection. Considerable effort has gone into restoring the system to regain at least an adequate level of protection.

3.1.5.1 Project Description. Sacramento, the capitol of California, is located about 80-90 miles east and north of San Francisco, at the junction of the American and Sacramento Rivers. The drainage area of the American River at its mouth is about 2,100 square miles and is comprised mainly of hilly to mountainous terrain. Folsom Reservoir, located 29 miles upstream, provides flood storage to partially regulate runoff. The Sacramento River at Sacramento drains about 27,000 square miles and incorporates a complex system of reservoirs, diversions, weirs and floodways to manage floodwater. The Sacramento Metro Area is protected by two major and separate levee projects: one for the Notomas area and a second for the Sacramento area. The American River, flowing from east to west until it enters the Sacramento River, bisects these two leveed areas. The Notomas area is protected by a continuous ring levee comprised of numerous segments to prevent flooding from the American and Sacramento Rivers, as well as numerous smaller streams and canals. The Sacramento Metro Airport and the Arco Arena are located in this area, along with extensive residential and commercial development. Most of the remaining developable urban land in the Sacramento area is located within the Notomas unit. South of the American River, the older section of the Sacramento Metro Area is protected by levees extending from high ground along the American River to the mouth, then south along the Sacramento River, then back to the east to high ground. About 54,900 acres lie in the Notomas unit, while about 55,100 acres are in the Sacramento unit.

Prior to the 1986 flood, the levees were estimated to protect against a flood peak discharge of 130,000 cfs, greater than the 100-year recurrence interval flood. Following that event, the protection to the Notomas area was revised to about a 65-70 year event, with Sacramento having somewhat higher protection, but still less than the 1% chance flood.

3.1.5.2 Project Features. The Notomas Unit incorporates about 29.7 miles of levees, along with numerous interior channels to bring trapped runoff to the levee alignment. Here it is passed through or over the levee by gravity drains or pumps. The levees average 15-20 feet in height, have 20 feet wide crowns, and generally have riverside slopes of 1V:3H and landside slopes of 1V:2H. The Sacramento Unit includes over 25 miles of earthen levees and an extensive interior collector system to funnel the urban runoff to drains and pumps. Levee design is similar to the Notomas levee dimensions.

3.1.5.3 Project Impacts. Following the 1986 flood, FEMA initially placed a moratorium on new construction in the Notomas unit, as the levee could no longer be certified as providing a minimum of 100-year protection. The Corps of Engineers, Sacramento District, the State of California and the Notomas District investigated and determined an optimum modification of the existing project to regain a minimum level of protection. The problems were from both inadequate levee height and geotechnical inadequacies. The levees were originally constructed from less than suitable materials and with little consideration for seepage problems. The recommended plan calls for construction of slurry cutoff walls and other seepage control facilities over several miles of the Notomas levee and raises to selected low reaches of the levee. This construction was carried out in the late 1990's and the Notomas unit now has flood protection to an estimated 400-year return interval. The impacts of this work were thoroughly studied to assess the need for mitigation. While the levee raise causes a slight increase in water levels on a reach of the Sacramento River, the revised operation of Folsom Reservoir to gain more flood control storage compensates for this increase.

Engineering studies have been completed for the Sacramento Unit and construction is scheduled to begin in the near future. The Sacramento Unit will require a raised stability berm (about two feet) for 1.7 miles and a levee and stability berm raise of nearly two feet for another 10 miles of levee. These modifications will give the unit protection to an event slightly greater than the 1% annual chance flood, however additional studies are scheduled to further evaluate additional upstream storage on the American River. Additional flood control storage would give the Sacramento Metro Area a more appropriate level of protection.

3.1.5.4 Comparison with Green Diamond Levee. Like Sacramento, the Green Diamond Levee utilizes an existing farm levee as a foundation for the project. However, the geotechnical studies for Green Diamond Levee were far more sophisticated and detailed than what was required for the original Sacramento project. The underseepage problems experienced at Sacramento should not be repeated for the Green Diamond Levee. Both projects benefit by upstream flood control storage reservoirs, however far more storage exists at Lake Murray than at Folsom Reservoir on the American. The Green Diamond Levee project is starting with flood protection to the 500-year event, while Sacramento had far less. Even with the proposed improvements to the Sacramento levee unit, the level of protection is likely to be well below that of the Green Diamond Levee.

3.1.6 Mississippi River and Tributaries Flood Protection Project. In 1543, the Spanish explorer Hernando de Soto and his men came upon the Mississippi at a point south of the present day location of Memphis, Tennessee. Shortly after his arrival, the mighty river went into flood, forcing de Soto's party back to the east to

escape the rising waters. De Soto was the first European to witness the power of the Mississippi. The Lower Mississippi River extends over a thousand miles, from the mouth of the Ohio River to the Gulf of Mexico. It was a vital transportation link to early settlers and to the new nation of the United States. Communities were located near its banks and landowners developed large plantations in the 35,000 square mile lower valley. The City of New Orleans was founded in early 1700's and could only grow by being protected from the river by its fledgling levee system. As the valley grew in population and activity, floods became more harmful. Besides the damages to structures and crops, river navigation would be shut down for weeks and months during prolonged and severe flooding. Large floods occurred in 1849 and 1850. With more floods in following years, it became apparent by 1879 that the United States had to do something to reduce the risk of Mississippi floods on cities, agriculture and navigation along the lower river. The Mississippi River Commission was formed in that year, with an aim towards controlling, or at least lessening the impacts, of future floods. Levees were chosen to do this, with the main aim being to keep the river within its channel during flood events. It was believed then that this design would force the floodwaters to scour a deeper channel, thus developing additional carrying capacity, thereby preventing overflow onto farmlands and improving navigation depths in the river. While ludicrous today, this theory was widely believed throughout the late 1800's and early 1900's when many miles of levee were constructed by local landowners in the lower valley. The theory exploded with the 1927 flood of record, far greater than any other event in recorded history over the previous 150 years. Over 26,000 square miles of the lower valley were flooded after levees were overtopped and breached. Over 600,000 inhabitants of the valley were displaced, with death totals estimated from 200 to more than one thousand people. Crops were destroyed, bridges washed out and transportation paralyzed. Out of this disaster grew the Flood Control Act of 1928, which basically put the Corps of Engineers into the flood control business. This legislation authorized the Mississippi River and Tributaries (MR&T) Project, the first comprehensive flood control and navigation act in the country. Figure 3-11 shows the overall MR&T project from Memphis, TN to the Gulf of Mexico.

Rather than levees only, a comprehensive plan of levees, diversions, floodways, tributary reservoirs and bank stabilization was identified to reduce flood risk on the Lower Mississippi. Construction of the project started in the early 1930's. While most of the major features are complete, the bank stabilization program continues. With a river as dynamic as the Mississippi, this latter feature will likely continue indefinitely. The MR&T Project has been a complete success. Several major floods during the past three decades have been passed by the project, while keeping the lands behind the levees safe. The 1927 flood was the last to cause widespread damages to the Lower River.

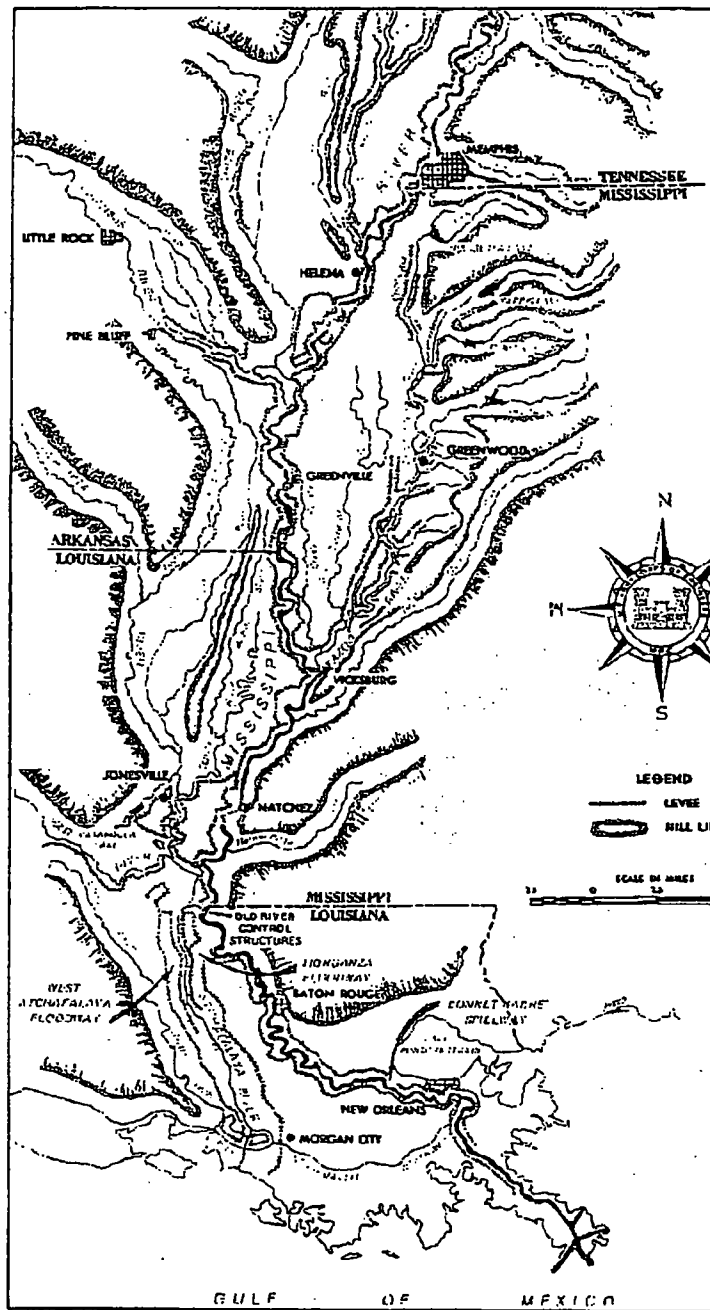


Figure 3-11, MR&T Project, Mississippi River

3.1.6.1 Project Description. The project was authorized in 1928 and is the largest flood control project in the world. It is commensurate with the size of the Mississippi, the world's third largest river in area and length, measuring along the

Missouri River. The Mississippi at the mouth of the Ohio is nearly one million square miles, draining much of the upper Midwest from the Appalachians to the Rockies and a part of Canada. At the mouth, the drainage area is over 1,250,000 square miles with an average daily discharge of about 500,000 cfs. The project was designed to protect against a flood about 11-29% greater than that of the 1927 flood of record. The design peak discharge of the river is over 3,000,000 cfs at the first of three major flow diversions, about 60 miles below Natchez, Mississippi. The design peak is 1,250,000 cfs at New Orleans, after the last diversion is made.

The project gives a high level of protection to the 35,000 square mile lower valley. The Project Design Flood is estimated to exceed the 500-year recurrence interval event. All land behind the MR&T levees is shown as not flood prone on maps, indicating that it has protection in excess of the FEMA standard of the 100-year flood. The project consists of levees, floodways, diversions, flood control reservoirs, and channel stabilization. The latter incorporates bank revetment, dikes, cutoffs and maintenance dredging.

3.1.6.2 Project Features. To manage the flood risk in the lower valley, a variety of techniques were required. The four major elements of the MR&T Project are:

- levees for containing flood flows. Figure 3-12 shows a typical levee along the Lower Mississippi;
- floodways for the passage of excess flows past critical reaches of the Mississippi;
- channel improvement and stabilization for stabilizing the channel to provide an efficient navigation alignment, increase the flood capacity of the river and for protection of the levee system;
- diversions to reallocate much of the flood discharge away from New Orleans and;
- tributary basin improvements for major drainage and for flood control, including dams and reservoirs, pumping plants, and auxiliary channels.

The need for levees was obvious and more than 2,303 miles of levees, floodwalls and various control structures have been built. Some 1,607 miles lie along the Mississippi River itself and 596 miles lie along the south banks of the Arkansas and Red Rivers and in the Atchafalaya Basin. Floodways are needed to obtain additional flow area to pass the flood discharge through critical areas. Floodways exist at Birds Point (in the Missouri bootheel), at Morganza and West Atchafalaya, Louisiana.

Channel improvements and stabilization are required to keep the Mississippi in a proper alignment for both flood passage and for navigation. Most

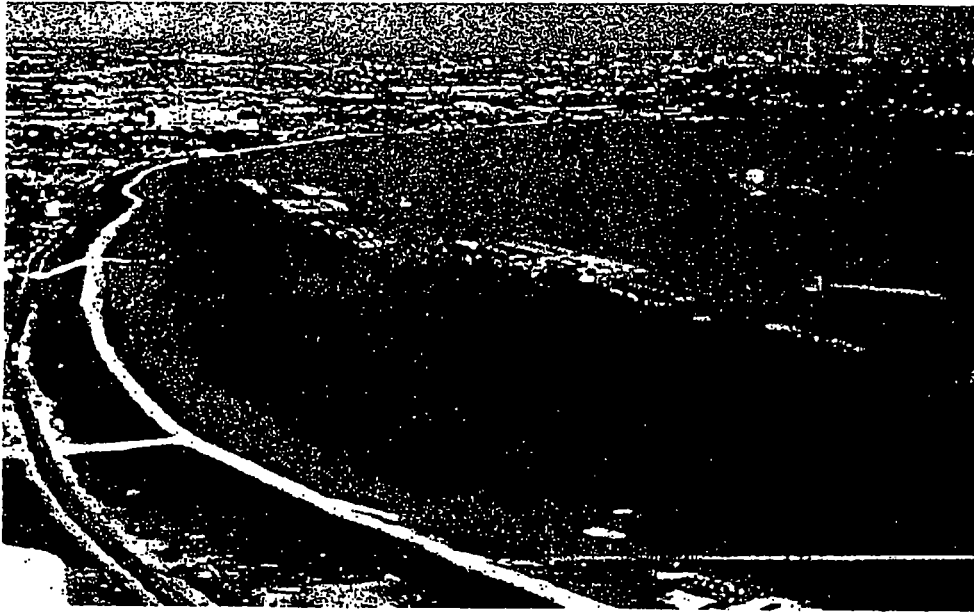


Figure 3-12, Mississippi River Levee near Carrollton Bend

of the 1000 miles of the lower river include channel stabilization features like riprap, articulated concrete mattresses, dikes and other river training structures. Diversions allow flow to leave the main channel of the Mississippi and reach the Gulf of Mexico via a different path. These features prevent flooding of the City of New Orleans and other municipal areas. Major diversions at Morganza and Old River (Louisiana) divert 1,500,000 cfs to the Atchafalaya River (half the design discharge) out of the Mississippi. A third diversion at Bonnet Carre, just upstream of New Orleans, diverts 250,000 cfs to Lake Pontchartrain, leaving just 1,250,000 cfs to pass New Orleans.

Tributary improvements are needed to further reduce flows to the Mississippi River. The Yazoo River Basin in Mississippi has four flood control reservoirs and the St. Francis River in Missouri has one. These structures reduce the discharge that can reach the Mississippi during flood events. While not a part of the MR&T project, dozens of reservoirs in the Missouri and Ohio River Basins also work to reduce flood discharges reaching the Lower Mississippi.

3.1.6.3 Project Impacts. The project impacts are tremendously positive. Flood reduction and navigation have greatly benefited by the MR&T project and billions of dollars in potential flood damages have been prevented. No floods since 1927 have approached the magnitude of that record event, but the project has operated successfully throughout that time with few problems. Negative impacts have never been documented, since design and construction took place long

before today's environmental concerns became critical. With the problems of the Lower Mississippi, however, it is doubtful if a different project could have been recommended or served as well as the current one, regardless of negative concerns.

3.1.6.4 Comparison with Green Diamond Levee. There is no comparison of the two projects in regard to size of area or project magnitude. However, the protection is mainly by levees and reservoirs in both cases and both have at least a level of flood protection of 500-year frequency. The Green Diamond Levee Project will benefit by more modern engineering design techniques and can be expected to offer the same high level of safety and flood reduction benefits as does the MR&T project.

3.2 Unsuccessful Levees. Although TV pictures of broken levees and water pouring into a protected area make wonderful video for the nightly news, levees, in fact, do a good job of protection from floods up through the levee design. Many people have a firm belief that levees don't work and only make floods worse. Such is not the case. The vast majority of breached or overtopped levees protects agricultural lands and are designed for floods from a 5-year up to about a 50-year event. The overtopping or breaking of a levee reported by the media for nearly any event of the last decade or so fall into this category, even for those levees protecting small towns. One has to look hard to find levees designed for a 100-year flood or greater that were unable to prevent flooding, even by floods exceeding the levee design. The Great Flood of 1993 in the Midwest is a case in point. All levees designed for an event of this magnitude did their job and prevented flooding. Even some farm levees designed for a 25- to 50- year flood prevented the 1993 flood (greater than the 100-year event in most cases) from inundating the protected area through massive floodfight efforts on the part of local citizens. This fact was seldom reported in the media.

Of the many levee overtoppings or breaches in the past 10-15 years, only a relative few included levee structures estimated as providing a 100-year protection or greater. Four case studies are included in this section.

3.2.1 Chesterfield-Monarch, MO Flood Protection Project. The Monarch Levee was originally constructed by local landowners, in stages beginning in the early 1940's, to protect farmland from frequent flooding by the Missouri River. The levee is located between Missouri River Miles 38-46, upstream from the mouth of the Missouri River (Figure 3-13). The drainage area of the Missouri River is about 530,000 square miles at the levee site. US Highway 40 (now Interstate-64) bisects nearly the entire length of the protected area and crosses the Missouri River at mile 44.7. By the late 1970's, the farm levee was substantial, giving up to an estimated 50-year level of protection. The recently incorporated community of Chesterfield, in western St. Louis County, annexed most of the protected area and viewed it as having a high potential for commercial development, especially since the Spirit of St. Louis Airport, a large private commercial field, was already sited there. Consequently, the City had the levee

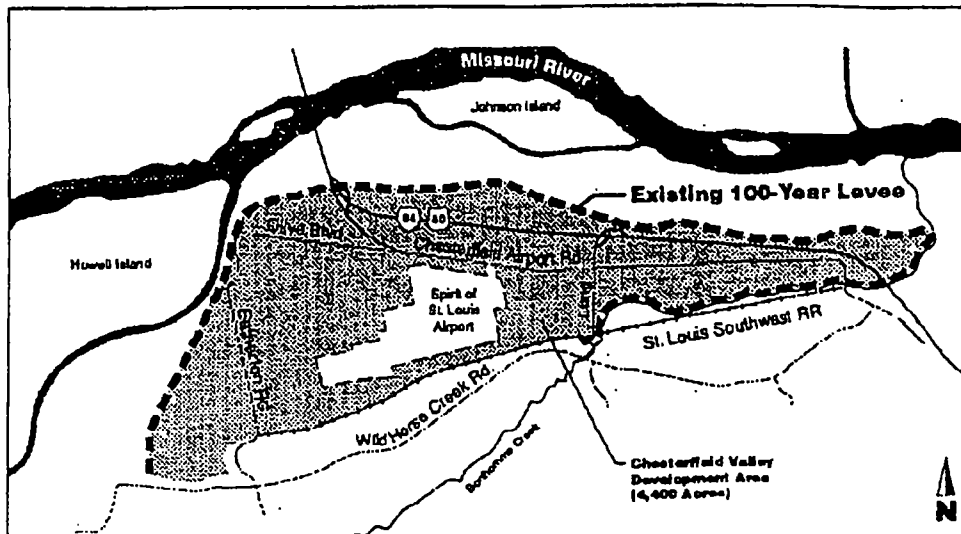


Figure 3-13, Chesterfield-Monarch Levee Project

upgraded in the mid-1980's to give protection against the 1% chance flood event (100-year average recurrence interval), thereby meeting the minimum FEMA requirements. Significant development took place over the next ten years, with about 1/3rd of the area in commercial properties by 1993. On July 30, the Great Flood of 1993 breached the levee near its upstream end, just prior to its overtopping. Missouri River flow diverted through the breach and into the interior area, overtopping the downstream levee from the inside and flowing back out to the river. I-64 was closed for over one month. The interior area was totally flooded, causing estimated damages of at least 200 million dollars. This flooded area resulted in the largest concentration of damages anywhere in the Midwest for the 1993 flood. Peak discharge on the Missouri River was determined as 750,000 cfs, with a frequency estimate of about once in 300 years average return interval.

3.2.1.1 Project Description. The levee project provides protection to about 4700 acres against Missouri River floods through the once in 100-year event (peak discharge of 620,000 cfs) with three feet of freeboard. At the time of the 1993 event, about two-thirds of the area was in crops, with the balance consisting of commercial properties, restaurants, the previously mentioned airport and a county prison. The project features an earthen levee, a short reach of floodwall, three highway or railroad closures, gravity drains and interior ditching. The interior flood protection system was less than satisfactory, since no pumping capacity existed to provide removal of interior runoff during high river conditions. Protection to the 100-year flood level was achieved by an additional levee raise along certain reaches and adding the closure structures. Engineering

certification of the levee was provided to FEMA shortly after construction was complete and FEMA accepted the certification.

3.2.1.2 Project Features. The levee project incorporated about 11.7 miles of levee. Prior to the 1993 flood, the levee averaged about 15 feet in height and had side slopes of 1V:2-3H. No significant stability berms or seepage wells were present. The levee crown was three feet above the level of the estimated 100-year recurrence interval flood. Figure 3-14 shows cross sections of the pre- and post-1993 flood levee. The improvement of the levee to gain FEMA acceptance concentrated mainly on height, rather than levee cross section. Engineering certification of the levee was approved by FEMA. Maintenance was rather sporadic, with only limited mowing of the levees performed and no formal programs to control the impacts of burrowing animals into the levee.

Control of interior runoff was through several small gravity drains through the levee and the associated interior ditching to collect runoff and bring it to the drains. No interior flood runoff analysis was performed for the levee certification.

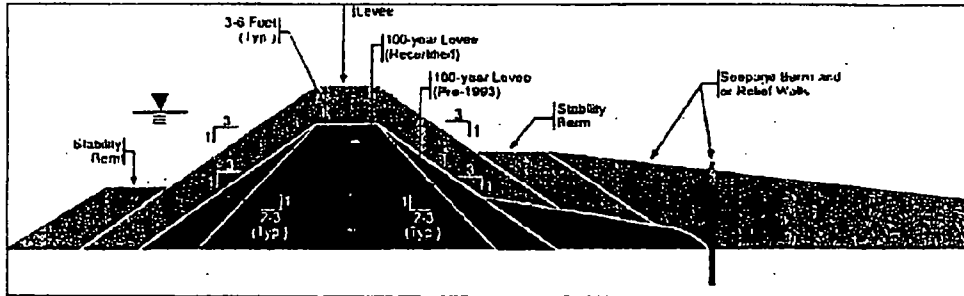


Figure 3-14, Chesterfield-Monarch Levee Cross Section

3.2.1.3 Post 1993 Flood. Many thought the 1993 flood would sound the death-knell for the Chesterfield-Monarch levee project. No less an authority than James Lee Witt, Director of FEMA, questioned the continued development within the Chesterfield Monarch levee following the 1993 flood. However, the City quickly decided to support the repair and upgrade of the levee immediately following the flood. The City engaged the engineering firm of Sverdrup Civil to perform a full engineering analysis of the existing project and prepare design documents to correct the problems. Repairs included additional freeboard, erosion repair, increasing the factor of safety for slope-stability, mitigating damage caused by burrowing animals, and the institution of improved levee maintenance procedures. All repairs were made to the levee to regain certification. A re-certification was supplied to FEMA in 1996 and approved in August 1997. Figure 3-15 shows a view of the existing levee. At the time of this report, construction is underway by contractors for the City of Chesterfield to further improve the levee to a 500-year average recurrence interval level of protection. Coincident with this

effort, an independent engineering feasibility and design effort is ongoing by the US Army, Corps of Engineers to evaluate a raise of the levee to 500-year protection. The levee protection will be increased to provide a 500-year level of protection, through either the City or the Corps. Since the 1993 flood, three pumping stations have been built, along with new gravity drains and ditching. Development has continued strongly throughout the protected area, with more



Figure 3-15, Chesterfield-Monarch Levee

than one-half the area now in commercial properties. The area is booming, with more activity now than prior to 1993.

3.2.1.4 Project Impacts. In many ways, the jury is still out on the impact of the Chesterfield Monarch project. Locating valuable properties in a floodplain, should be done cautiously and only if a high level of protection against flooding exists. At the time of the 1993 flood, the levee gave the minimum protection allowable under FEMA requirements, based primarily on levee height. The levee cross section, underseepage controls and maintenance practices were all less than desired. The conditions were ripe for a potential disaster and it occurred in 1993. Since the 1993 flood, the levee has been properly engineered and designed to today's standards. With the raise to the 500-year level, the project will give an adequate level of protection commensurate with the level of development. Although engineering computations to ascertain the impact of the pre-1993 levee had never been accomplished, similar analyses on the impact of a raise to provide a 500-year level of protection found a maximum increase of 0.8 ft. for the 500-year event at one location. There would be no unfavorable impact at the 100-year event and no encroachment into the existing floodway would result from the new construction. The project is actively opposed by residents of St. Charles

County, across the river, and is held up as a prime example of the adverse impacts of flood plain development by environmentalists and others. The actual impacts of improving the current levee to a higher level of protection are small and there is no reason to doubt that the raised and strengthened levee will not be completed during the next few years.

The entire protected area will likely be 100% built out over the next 10 years. The existing concentrations of businesses (Wal-Mart, Lowe's, cinemas, hotels, and many other operations) will benefit the economic development of the overall area in both St. Louis and St. Charles counties.

3.2.1.5 Comparison to Green Diamond Levee. Both projects started initially from farm levees having a reasonably adequate height, but a substandard cross section and little proper maintenance. However, here the similarities end. The original Chesterfield-Monarch levee did not receive an adequate engineering and design analysis until after the 1993 flood. The Green Diamond Levee project has already included a proper engineering and design analysis prior to any development. The Green Diamond Levee project will provide a 500-year level of protection initially, while Chesterfield-Monarch was only a 100-year design. The Green Diamond Levee project is proceeding in the proper fashion to build a major urban levee for residential-commercial property development in the protected area.

3.2.2 Princeville, NC Flood Protection Project. The Princeville levee was constructed by the Corps of Engineers, Wilmington District, from 1965-67 to protect the community of Princeville from frequent flooding by the Tar River. The levee is located between Tar River Miles 50-52, upstream from the mouth. The drainage area of the river at Princeville is about 2,200 square miles. The original design of the levee met FEMA requirements as providing protection against the 100-year average recurrence interval flood. On September 5-6, the Tar River Basin was hit by the remnants of Hurricane Dennis, which resulted in significant flooding and thoroughly saturated the watershed. Just ten days later, Hurricane Floyd followed a similar path, dropping up to 22 inches of rain on the Tar Basin on September 15-16. The resulting runoff caused the flood of record for the basin, with a peak discharge at nearby Tarboro of 70,600 cfs. The 0.2% annual chance event (500-year average recurrence flood) at this site has an estimated peak discharge of 61,500 cfs. On September 17, the levee protecting Princeville was overtopped by as much as five feet, causing the inundation of the entire community. Figure 3-16 shows the breach in the Princeville levee.

3.2.2.1 Project Description. Congress authorized the original levee project in 1964 and construction was completed in September 1967. The project provided protection to about 1000 acres against Tar River floods through the once in 300-year event with 2 feet of freeboard. At the time of the 1999 event, the land use within the leveed area was primarily residential. The project features an earthen levee with 1 sandbag filled gap at railroad closure structures, gravity drains and

interior ditching. Because of the short duration of river flooding, an interior flood protection system was not required. Engineering certification of the levee was provided to FEMA and was accepted.

3.2.2.2 Project Features. The project incorporated about 2.89 miles of levee with a levee crown elevation of 48 ft., NGVD. The levee averaged about 15 feet in height and had side slopes of 1V:3H. Stability berms were located along highest sections of levee and no seepage wells were needed. The levee crown was four feet above the level of the estimated 100-year recurrence interval flood. Maintenance of the project consisted of mowing, erosion repairs and flapgate cleaning and lubrication.

Control of interior runoff was via three small gravity drains (with flapgates) through the levee and the associated interior ditching to collect runoff and bring it to the drains. No pumping was necessary.



Figure 3-16, Princeville Levee Breach

3.2.2.3 Post 1999 Flood. The City had the option to have the Corps of Engineers repair the levee to its original condition following the flood, or to abandon the site and relocate the town to higher ground. The community of Princeville opted for the former solution and the repair and restoration of the levee commenced shortly after the flood. The Wilmington District completed the engineering study to rebuild the levee in October 1999 and let the construction contract early in 2000. Construction was substantially completed by August 2000. A re-certification (to FEMA) of the levee as providing a minimum of 100-year protection is planned. The Wilmington District is underway with a feasibility study to ascertain if it is justified to increase the level of protection of the Princeville levee to protect against a recurrence of a Hurricane Floyd-type event (500-year frequency). Although the flood produced a disaster for Princeville, the rebuilding process is underway and its citizens plan to stay in the community.

3.2.2.4 Project Impacts. Project impacts caused by the original levee were minor. Increased flood heights upstream of the project were less than one inch. Wetland concerns were not an issue in 1965 when the project was constructed, however existing wetlands were not significant. With the additional protection to Princeville, the community thrived, roughly doubling in population over the 30 plus years following completion of construction.

3.2.2.5 Comparison to Green Diamond Levee. The original Princeville levee was the result of a proper engineering and design analysis, representing the standards at the time of design (about 35 years ago). The Green Diamond Levee project benefits by the greatly enhanced engineering design standards developed over the last three decades, especially in the geotechnical engineering field and in the hydrologic and hydraulic analysis categories. The Green Diamond Levee cross section is much more substantial. Corps of Engineers standards were utilized in the Green Diamond Levee project design. The level of protection for Princeville was certainly adequate, but still is several feet less than that of Green Diamond Levee.

3.2.3 Missouri River Levee Unit R-460-471 Flood Protection Project, Elwood, KS. The 1952 flood along the Upper Missouri River was the flood of record until 1993. The 1952 flood cut through a large meander loop at St. Joseph, Missouri, leaving the St. Joseph airport on the Kansas side of the river (Figure 3-17). The destruction caused by the 1951 flood resulted in a

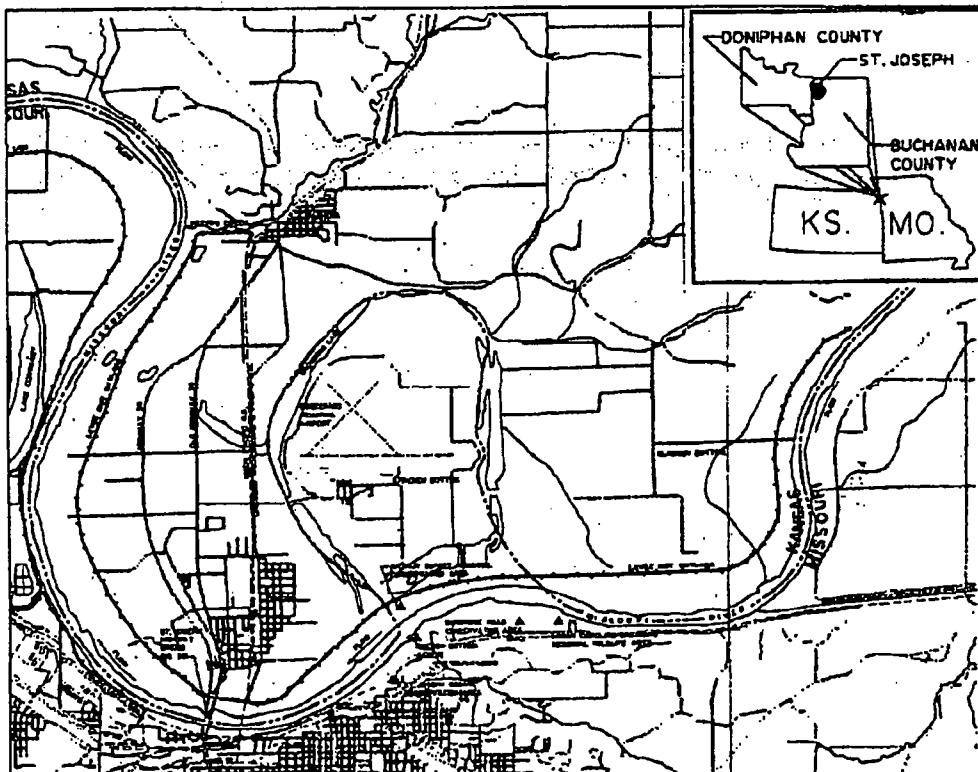


Figure 3-17, Missouri River Levee R-460-471

Federally-constructed levee project opposite St. Joseph to protect the airport and the communities of Elwood and Wathena, KS. The levee project was initiated in 1966 and completed in June 1968. The project protected the airport and communities, along with over 13,000 acres of farmland. The levee unit was designated R-460-471, for Right bank (Kansas side), Missouri River Miles 460-471, upstream of the mouth. The drainage area of the Missouri River at St. Joseph is about 424,300 square miles. US Highway 36 bisects the levee unit, from east to west and crosses the Missouri River to St. Joseph. The completed levee project was built to prevent a reoccurrence of flooding by a comparable flood to 1952 flood of record. The design profile was for a peak discharge of 325,000 cfs with a minimum of two feet freeboard and an additional freeboard allowance to account for the dynamic wave effects of the rising hydrograph. The design flood was estimated to be between the 100- and 500-year recurrence interval flood event. Although certification had not been submitted to FEMA, the area protected by R-460-471 was shown as not flood prone on maps, indicating that it was protected to a minimum of the 1% annual chance flood event plus freeboard.

However, during the early morning hours of July 26, the Great Flood of 1993 overtopped and breached the levee in three places in the reach upstream from St. Joseph. The Missouri River diverted flow through the breaches and into the interior area, overtopping the downstream levee from the inside and flowing back out to the river. The airport and the communities of Elwood and Wathena, KS were completely inundated. So also was 10,800 acres of farmland. Total estimated damages of nearly 100 million dollars were suffered. At the time of the breaks, the peak discharge on the Missouri River was later estimated as 335,000 cfs, with a frequency estimate of nearly once in 500 years average return interval. Although the peak discharge was only about 10,000 cfs more than the design event, the 1993 flood passed along portions of the leveed reach at elevations up to five feet higher than expected. Much of this increase is attributed to the negative impacts of an old railroad bridge just upstream of Highway 36 and to dense vegetation in the floodway upstream of the railroad crossing.

3.2.3.1 Project Description. The levee project is located in eastern Doniphan County, Kansas and a portion of western Buchanan County, Missouri. It protects about 13,500 acres of rural and urban lands. The rural area comprises about 10,000 acres, primarily cropland and farmsteads. Urban lands include Elwood and Wathena, each having populations of about 1100. The Rosecrans Memorial Airport for St. Joseph and the Missouri Air National Guard Base are located within the levee unit's protected area. The project features an earthen levee, five highway or railroad closures, gravity drains, pumping plant and interior ditching. The entire protected area was shown on FEMA mapping as not subject to flooding through at least the 100-year average recurrence interval event. Figure 3-17 shows a map of the project area.

3.2.3.2 Project Features. The levee project incorporates about 13.8 miles of levee. Prior to the 1993 flood, the levee averaged 14-15 feet in height and had side slopes of 1V:3H. No significant stability berms or seepage wells were present, as seepage was not a problem due to the short duration of Missouri River floods. The levee crown was a minimum of two feet above the level of the 1952 event, an estimated 100- to 500-year flood, prior to the construction of numerous upstream flood reduction reservoirs. Five highways or railroad lines passed through the levee, with highway or rail elevations from 1.4 to 5 feet below the top of the levee. These openings varied in width from 20-76 feet and were sandbagged during high river stages. The levee district was responsible for this operation as well as for normal maintenance, such as mowing of the levees, inspection for burrowing animals, and insuring the operation of pumping plant and gravity drains through the levee.

Control of interior runoff was through several gravity drains through the levee and the associated interior ditching to collect runoff and bring it to the drains. One pumping station at Brown's Branch was operated to evacuate interior runoff during periods of blocked drainage.

3.2.3.3 Post 1993 Flood. Levee repairs were quickly made following the recession of the 1993 flood. Repairs included the rebuilding of access ramps, filling of scour holes through the levee breaches and restoration of the pumping station. These repairs returned the levee to its pre-flood condition.

Following the 1993 flood, the Kansas City District of the Corps of Engineers started a study, completed in 1996, for R-460-471 to determine the economic feasibility of providing a higher level of protection. Economic justification was found for raising the levee to provide flood protection for a recurrence of the 1993 event. Detailed engineering design is proceeding with a construction start for the project anticipated within the next year or two.

The area is recovering. The airport and National Guard base have rebuilt. The communities of Elwood and Wathena are returning to the pre-flood conditions. Although Elwood lost its major employer after the flood, other businesses have returned.

3.2.3.4 Project Impacts. The Missouri River floodplain is largely protected by levees throughout its length, although this protection is not uniform from project to project. The repair of the levee to its pre-flood condition or the future raising of the levee to protect against a recurrence of the 1993 event would not cause any adverse impact, based on detailed studies conducted by the Kansas City District.

3.2.3.5 Comparison to Green Diamond Levee. Both projects are designed to Corps of Engineers standards and provide reasonable protection to the interior

areas. The Green Diamond Levee project will provide a 500-year level of protection initially, while levee R-460-471 was initially designed for a lesser event. The increasing trend of the stage-discharge relationship has been a problem for much of the Missouri River and a direct contributor to overtopping the levee unit. This situation does not exist for Green Diamond Levee.

3.2.4 Marysville-Yuba City-Linda, CA Flood Protection Project. The communities of Yuba City and Marysville, along with the smaller satellite towns of Linda and Olivehurst, are located in central Sacramento River Valley of northern California, about 40 miles north of Sacramento. The communities are situated near the junction of the Yuba and Feather Rivers, with the surrounding area being the floodplain of both streams as well as the Sacramento River. The Yuba has a drainage area of 1,350 square miles, with the Feather River draining about 4,000 square miles. Both rivers have upstream reservoirs to partially control floods, with Oroville Reservoir on the Feather River being the most critical in terms of downstream flood reductions. The towns at the junction of the Feather and Yuba, and the entire Sacramento River valley, have a long history of flooding dating to the early 1800's. Major floods occurred regularly in the past century, with the worst events being 1950, 1955, 1964, 1986 and 1997. The flood problem was often complicated by the extensive hydraulic mining operations that continued unregulated throughout much of the 19th century, until brought under the control of the California Debris Commission in 1891. The massive erosion caused by mining operations moved downstream for decades, exacerbating the flood problems in the Yuba City and Marysville region. The Flood Control Act of 1917 authorized the Sacramento River Flood Control Project, sponsored by the State Reclamation Board. The project consists of a comprehensive system of levees, overflow weirs, outfall gates, pumping plants, leveed bypass floodways, overbank floodway areas, enlarged and improved channels and dredging in the lower reach of the Sacramento River. About 170 miles of levees were built in or near the Yuba/Marysville area. In addition to this work, several reservoirs were constructed for debris control and flood reduction. The more important reservoirs were built in the last four decades of the 20th century, especially the Shasta and Oroville Reservoirs. The City of Marysville was protected by a ring levee, while the towns of Yuba City, and Olivehurst and Linda were protected by separate levee systems (Figure 3-18). The communities have been flooded by historical events with the worst flood occurring in December 1955, prior to the construction of upstream reservoirs. The Feather River levee at Yuba City broke, inundating 100,000 acres of land, including about 95% of Yuba City. Thirty-eight people were killed in the area and over 3300 homes were flooded. The Marysville levee and the levee protecting Linda and Olivehurst were severely threatened. Oroville and Shasta Reservoirs were constructed in the years following the 1955 flood and these works reduced potential flood damages. However, damaging floods occurred in both 1986 and 1997, with the Reclamation District 784 levee that protects Linda and Olivehurst breaching or overtopping during each event. One life was lost in 1986 and both towns suffered extensive damage. The break

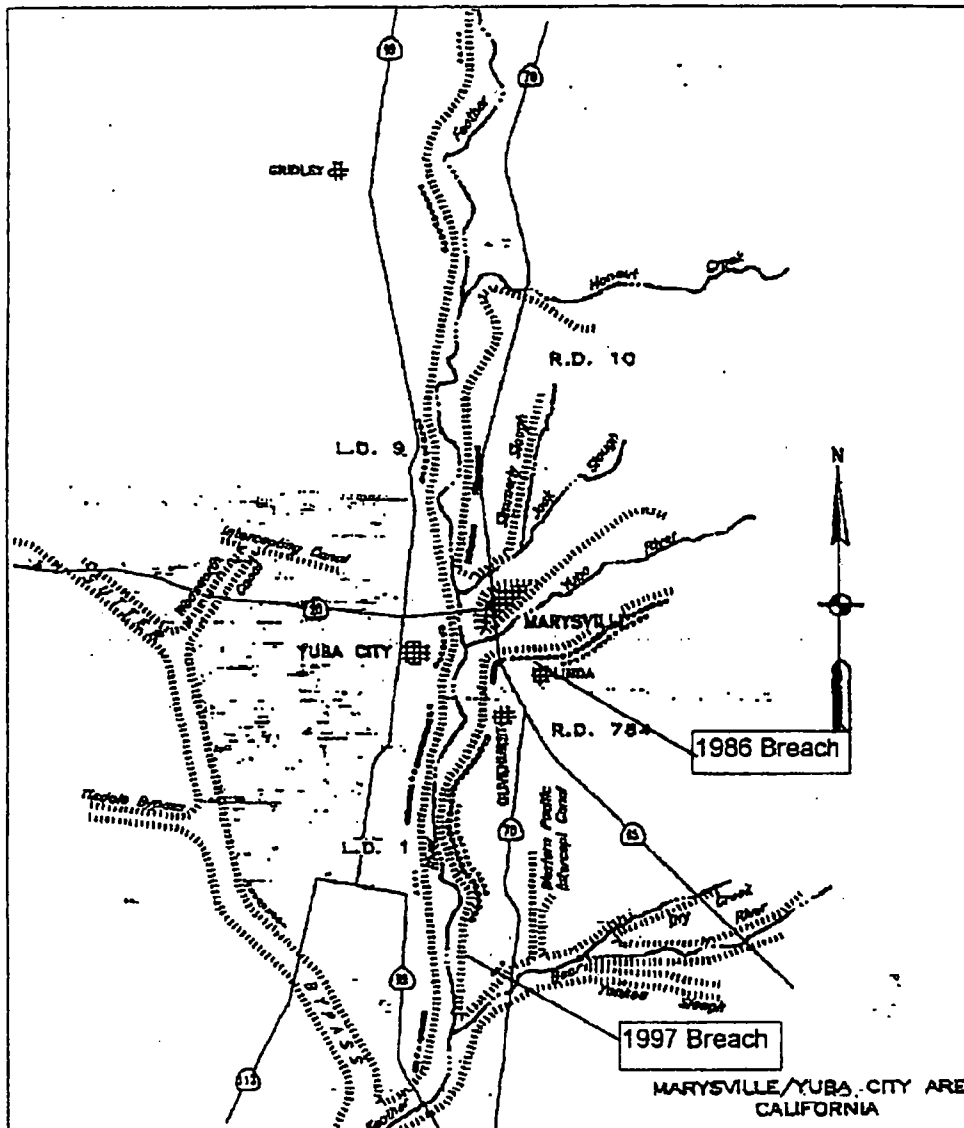


Figure 3-18, Marysville and Vicinity Area Map

during 1997 was several miles downstream, and caused little damage to either town, although both were evacuated

3.2.4.1 Project Description. The levee projects in the area were initially built between the World Wars and periodically improved in the following years. With the completion of upstream reservoirs, levee heights in the area were believed to provide protection to at least the 1% annual chance (100-year recurrence

interval) flood event. Flood plain mapping in the early 1980's showed the areas behind levees as not flood prone, although no certification for FEMA is known to have occurred. At the time of the 1986 flood, the levees protected the previously named communities plus a large area in agricultural usage. Each project features an earthen levee, gravity drains, pumping plants and interior canals and ditching. The 1986 flood crested well below the top of all the levees and was estimated as about a 30-year recurrence interval flood in the Marysville reach. However, about 24 hours after the crest, a sudden failure to the levee occurred with nearly no warning. The resulting breach flooded both communities and inundated almost 4,000 homes and 300 businesses, along with several thousand acres of crops. While the levees had adequate height, it was determined that the under-seepage design was insufficient. Studies performed by Sacramento District, Corps of Engineers following the 1986 event found that many levees in the Sacramento Valley were deficient in terms of providing a high level of protection. While the height of the levees was often adequate, the levee cross section, levee materials, stability berms, seepage wells, etc. were often lacking to insure the levees were operable to their full height.

3.2.4.2 Project Features. The three levee projects combined incorporated over 100 miles of levee. At the time of the 1986 flood, the levees averaged about 18-20 feet in height and had side slopes of 1V:2-3H. No significant stability berms or seepage wells were present.

3.2.4.3 Following the 1986 flood, many levees comprising the Sacramento Valley Project were reevaluated. The System Evaluation of the Sacramento River flood control system examined 134 miles of project levees along the Feather and Yuba Rivers and tributaries. The studies indicated that about 25 miles of levees required reconstruction to restore the design level of flood protection. Figure 3-19 shows the site of the Linda-Olivehurst levee breach after the rehabilitation and repair work was completed. This reconstruction included seepage wells, stability berms, cross section improvement, slurry cutoff walls, but no raises to the levees. Most all of this work was constructed in the mid-1990's, and the second phase initiate actually raising levees at 13 sites which were too low to provide the original project protection. This work was completed in 1999. The Corps of Engineers, Sacramento District is performing detailed engineering and design for the Yuba City, Marysville, Linda and Olivehurst levees to further improve the level of protection. The feasibility report, completed in 1998, indicated the project economics allowed levee raises for these communities, giving a 200- to 300-year level of protection. Construction of these raises is anticipated to be complete by the end of this decade.

3.2.4.4 Project Impacts. Project impacts caused by the original levee construction as well as the planned levee raises are negligible. The hydraulic mining of the 19th century caused so many hydraulic modifications to the rivers, as well as environmental damage, that the impacts of any levee construction

were very small, in comparison. Studies conducted by the Sacramento District for the reconstruction of existing levees, as well as the future raises of selected reaches, also found no measurable impacts.

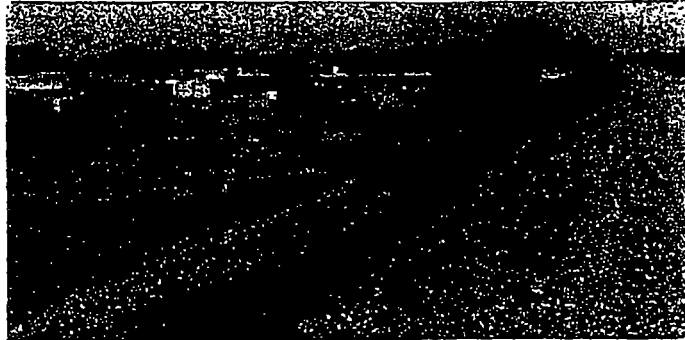


Figure 3-19, Site of 1986 Levee Breach

3.2.4.5 Comparison to Green Diamond Levee. Both projects started initially from locally constructed levees having a reasonably adequate height, but sub-standard seepage measures and little formal maintenance. Whereas the limited underseepage controls were not discovered for the Marysville-Yuba City-Linda projects until after the Linda levee breach during the 1986 flood, the Green Diamond Levee project will be initially design and constructed with these measures in place. The Green Diamond Levee project will provide a 500-year level of protection initially, while the California levees will give a 200- to 300-year level of protection, even after the future levee raises.

4 Summary and Conclusions

4.1 Summary. This report discusses levees in general, the proposed Green Diamond Levee in particular and describes the performance of ten actual levees, both positive and negative, in a series of case studies. Levees have been employed to limit flood damages for centuries and have been very successful in the majority of instances. The use of any flood reduction methods, including levees, must recognize that flood protection is not guaranteed or absolute; a small residual risk of design exceedance will always remain. For levees protecting urban areas, it is desirable to have a design that gives at least a 0.2% annual chance (500-year frequency) flood protection. No instances of levee failure are known to have occurred in the United States for this level of protection. Besides the height of levee, the levee cross section and its design for seepage is very important. The operation and maintenance performed during both flood and non-flood times are critical to the levee's overall performance. The Green Diamond Levee project incorporates state of the art engineering design, using Corps of Engineers methods of analysis. Its construction is expected to provide a fully adequate level of protection against Congaree floods and its design is compatible with major, and successful, flood projects on the Mississippi and Missouri Rivers.

4.2 Conclusions. The major conclusions concerning the Green Diamond Levee include:

- The proposed 500-year level of protection is fully appropriate for the type of development planned for the protected area.
- The levee design and engineering are appropriate for a high levee along a major river.
- There are no significant adverse impacts on flooding. There are no adverse impacts to the downstream environmental areas of concern.
- The levee exceeds all requirements for certification.
- The levee will give similar to better protection than most of the levees described in the case studies, both successful and unsuccessful. The Green Diamond Levee's protection is similar to that of major levees protecting St.

Louis, Kansas City, and Omaha. The project will give a significantly greater protection than do the successful projects for Sacramento and Augusta.

- Proper operation and maintenance, as well as a well-defined flood preparedness plan, is important for a successful project.
- For any levee, some residual risk of flood exceedance will remain. Individuals and businesses locating in an area protected by a levee should be aware of this fact. The acquisition of flood insurance for the protected properties is still a good practice.

From: MULLEN TAYLOR [mullentaylor@richlandonline.com]

Sent: Tuesday, January 23, 2001 2:11 PM

To: 'bholman@selcnc.org'

Subject: Levee Liability Memo

PLTF TRIAL EXH 577

SELC000029

Nelson Mullins Riley & Scarborough, L.L.P.

Memorandum

To: Kit Smith, Chair, Richland County Council

cc: Mr. Cary McSwain
Larry Smith, Esquire
Ms. Mullen Taylor

From: George B. Wolfe, Esquire
C. Mitchell Brown, Esquire

Date: January 23, 2001

Re: Memorandum on Potential for County Liability to Third Parties Based on
County's Involvement With Levees Relating to Proposed Congaree Vista
Project

**(NOTE: THIS MEMORANDUM IS PROTECTED BY THE
ATTORNEY-CLIENT AND WORK PRODUCT PRIVILEGE)¹**

I. **PURPOSE OF MEMORANDUM:** This Memorandum provides an analysis of the potential liability of Richland County (the "County") to third parties if the County participates in a request to change the flood maps by taking responsibility for maintenance of certain levees. Under current Federal Emergency Management Agency ("FEMA") criteria, certain land located in the County and owned by Columbia Venture, LLC ("Columbia Venture") is categorized for FEMA purposes as located in a floodway and/or a 100-year floodplain. The National Flood Insurance Act's ("NFIA") accompanying regulations (the National Flood Insurance Program ("NFIP") regulations) allow for, among other things, a Conditional Letter of Map Revisions ("CLOMR") to be sought. Columbia Venture would like to seek a CLOMR in order to make improvements to the levees located on certain land along the Congaree River in order, among other things, to obtain a flood map revision that would remove the land behind the improved levees from its present floodplain/floodway categorization.

The CLOMR and the NFIP regulations provide, in relevant part:

(d) Maintenance plans and criteria. For levee systems to be recognized as providing protection from the base flood ...[a]ll maintenance activities must be under the jurisdiction of a Federal or State agency, an agency created by Federal or State law, or an agency of a community participating in the NFIP that must assume ultimate responsibility for maintenance.

44 C.F.R. § 65.10(d).

Under the NFIP regulations and in accordance with the factual scenario assumed for purposes of this Memorandum, the "community" referenced in the above-quoted regulatory language would be the County. A "community" must, pursuant to NFIP regulations, be ultimately responsible for

¹ This Memorandum is being transmitted to Richland County for its sole benefit and use.

PLTF TRIAL EXH 577

SELC000030

From: MULLEN TAYLOR [mullentaylor@richlandonline.com]

Sent: Tuesday, January 23, 2001 2:13 PM

To: 'bholman@selcnc.org'

Subject: Stormwater legal opinion

PLTF TRIAL EXH 578

SELC000063

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Nelson Mullins Riley & Scarborough, L.L.P.
A REGISTERED LIMITED LIABILITY PARTNERSHIP

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January 2, 2000

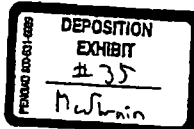
Development and Services Committee
Richland County Council
c/o Ms. Mullen Taylor
2020 Hampton Street
Columbia, South Carolina 29202

Ladies and Gentlemen:

You have requested an analysis regarding certain proposed provisions of the Richland County (the "County") Code of Ordinances, Chapter 8, Stormwater Management, Erosion and Sediment Control (the "Ordinance"). First, you have requested an interpretation of how to collectively interpret Subsections (g), (h) and (i) of proposed Section 8-27 (Primary Drainage Channel Requirements) of the Ordinance (which are the same as existing Section 8-62, Subsections (7), (8) and (9)). In this connection, you have also asked (a) about the meaning of the words "that will impede the free flow of water" which appear in Subsection (h); and (b) whether, from a legal standpoint, there are any suggestions for changes or clarifications concerning these subsections. Second, you have requested legal input concerning proposed Section 8-25 (Variances) of the Ordinance, and whether a section providing for variances is legally required. I address these matters below.

A. Section 8-27 (g), (h) and (i). Taken together, and for the reasons set forth below, it appears that Subsections (g), (h) and (i) of Section 8-27 collectively provide as follows:

1. All levees protecting residential structures or non-residential structures which are not floodproofed shall be designed, constructed and maintained to provide protection against the 500-year flood plus three feet of freeboard (Subsection (g));



SELC000064

PLTF TRIAL EXH 578

Development and Services Committee
Richland County Council
c/o Ms. Mullen Taylor
January 2, 2000
Page 2

2. No levees, dikes, fill materials, structures or obstructions that will interfere with or slow the free flow of water during times of flooding will be permitted in the regulatory floodway (Subsection (i)); and

3. All applicable regulations of the National Flood Insurance Program (44 CFR §§ 59-79) ("NFIP") are incorporated by reference into the Ordinance (Subsection (i)), except to the extent that the Ordinance imposes stricter or additional standards than the NFIP.

The analysis supporting this view is straightforward. This analysis is based in part upon two provisions—one located in the Ordinance and one located in the NFIP—which indicate that in the case of more than one provision addressing the same subject matter, the provision imposing the stricter standards shall control.

Section 8-43 (Relationship with Other Laws, Regulations, and Ordinances) of the Ordinance (existing Section 8-70) provides as follows:

Whenever the provisions of this Chapter [the Ordinance] impose more restrictive standards than are required in or under any other law, regulation or ordinance, the requirements herein contained shall prevail. Whenever the provisions of any other law, regulation, or ordinance require more restrictive standards than are required herein, the requirements of such law, regulation, or ordinance shall prevail.

Although the NFIP has been incorporated in the Ordinance and is therefore not technically "any other" regulation, the fact that the NFIP is a separate regulatory scheme from the Ordinance suggests that the better reading of Section 8-43 is that any specific provision of the Ordinance imposing more restrictive standards than a comparable provision of the NFIP should be viewed as controlling over such comparable provision.

The NFIP at 44 CFR § 60.1(d) provides in relevant part as follows:

The criteria set forth in this subpart are minimum standards for the adoption of flood plain management regulations by flood-prone, mudslide (i.e., mudflow)-prone and flood-related erosion-prone communities. Any community may exceed the minimum criteria under this part by adopting more comprehensive flood plain management regulations [A]ny flood plain management regulations adopted by a State or a community which are more restrictive than the criteria set forth in this part [60.1] are encouraged and shall take precedence. (Emphasis added.)

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Thus, there are provisions in both the Ordinance and the NFIP which indicate that any provision of the Ordinance that imposes more restrictive standards than the standards set forth in NFIP Part 60 should be viewed as controlling over such standards.

With this background, I turn first to Subsection (g), which requires all levees protecting residential structures or non-residential structures which are not floodproofed to be designed, constructed and maintained to provide protection against the 500-year flood (plus three feet of freeboard). The most closely comparable provision of the NFIP provides that where a flood map revision is sought based on a levee system, the levee system must provide protection to the area in question against the 100-year flood (plus a variable amount of freeboard). 44 CFR § 65.10.

Because 44 CFR § 65.10 is not located in NFIP Part 60, the rules of construction set forth in 44 CFR § 60.1(d) may not be applicable. However, based upon Ordinance Section 8-43 alone, it would appear that the better reading is that the 500-year flood-protection requirement of Subsection (g) would take precedence over the 100-year flood-protection requirement of the NFIP. On a separate note, it might be argued that Subsection (g) is sufficiently different from the NFIP standard so as to constitute a separate standard in addition to the NFIP standard.

Second, Subsection (h) provides as follows:

No levees, dikes, fill materials, structures or obstructions that will impede the free flow of water during times of flood will be permitted in the regulatory floodway.

The comparable NFIP provision, 44 CFR § 60.3(d) provides in relevant part as follows:

[1]The community shall:

(3) Prohibit encroachments, including fill, new construction, substantial improvements, and other development within the adopted regulatory floodway unless it has been demonstrated, through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in flood levels within the community during the occurrence of the base flood [i.e., 100-year flood] discharge;

(4) Notwithstanding any other provisions of § 60.3, a community may permit encroachments within the adopted regulatory floodway that would result in an increase in base flood

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elevations, provided that the community first applies for a conditional FIRM [Flood Insurance Rate Map] and floodway revision, fulfills the requirements for such revisions as established under the provisions of § 65.12, and receives the approval of the [Federal Insurance] Administrator.

It is instructive at this point, as requested, to address the meaning of the words "that will impede the free flow of water" as set forth in Subsection (h). Applicable law provides that words should be given their plain and ordinary meaning without resorting to subtle or forced construction to limit or expand an ordinance's or statute's operation. "Impede" has been defined to mean "to interfere with or slow the progress of," Merriam-Webster's Collegiate Dictionary 580 (10th ed. 2000), and "to obstruct; hinder; check; delay." Black's Law Dictionary 733 (6th ed. 1990).

Thus, Subsection (h) would appear to prohibit any structure which would interfere with or slow the free flow of water during times of flooding, while the comparable NFIP provision would appear to allow such a structure if it would not result in any increase in flood levels during a 100-year flood. Because 44 CFR § 60.3(d) is in Part 60 together with 44 CFR § 60.1(d), both the NFIP and Ordinance provide that the more restrictive standard should control over the less restrictive standard. Because Subsection (h) is more restrictive than the comparable NFIP provision, it appears that Subsection (h) would control. And, as with Subsection (g), it might be argued that Subsection (h) is sufficiently different from the NFIP standard so as to constitute a separate standard in addition to the NFIP standard.

Third, as noted above, Subsection (i) of Section 8-27 simply incorporates by reference all applicable regulations of the NFIP. Accordingly, the County standards for floodplain management and use would appear to be the same as those set forth in the NFIP, except to the extent that the Ordinance or any other County ordinance impose stricter standards than does the NFIP, or additional standards.

In connection with the above discussion, please note that the NFIP and the Ordinance would appear to allow existing structures located in areas that are reclassified from a less to a more restrictive classification to be left in existence. For example, existing structures reclassified into a 100-year floodplain can be maintained, repaired and improved based upon the area's prior classification, so long as the structure is not improved or destroyed beyond 50% of its market value. 44 CFR § 63(c). However, if such existing structures are reclassified into the regulatory floodway portion of a 100-year floodplain, the ability to repair and improve a structure is much more restricted, particularly if a repair or improvement might impede the free flow of water during times of flood. Ordinance Section 8-27(h); 44 CFR § 63(d).

You have also asked for any suggestions for changes concerning Section 8-27 (g), (h) and (i). I defer to County Council to determine whether any substantive changes should be made to these

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subsections. However, the generic nature of these subsections would appear to make them a better fit for Ordinance Section 8-30 (Design Criteria for Improvements) than for Section 8-27. In addition, if the interpretation of these subsections set forth above is in accordance with the view of County Council, then it may be useful for County Council to clarify Subsection (i) by revising it to add the following words at the beginning: "Subject to any more restrictive or additional standards set forth in this Chapter." In addition, the Council may wish to consider an amendment to Section 8-43 to include a provision such as the following:

Whenever any provision of this Chapter imposes more restrictive standards than another provision of this Chapter, the provision imposing more restrictive standards shall prevail.

If the view of the County Council is that the NFIP standards rather than the above-referenced Ordinance standards should control, then the County Council should (i) either eliminate the stricter standards of the Ordinance or modify those provisions to conform to the applicable NFIP standards, and also (ii) provide in the Ordinance that when there is a conflict between the provisions of the Ordinance and the provisions of the NFIP, the provisions of the NFIP shall control.

B. Section 8-25 (Variances). You have also requested legal input concerning proposed Section 8-25 (Variances), and whether a section providing for variances is legally required. In this connection, I would make the following points.

To the extent the variance provision would allow or require the County Engineer to approve development in a regulatory floodway that increased flood levels during the base flood, it would appear to be inconsistent with the requirements of the NFIP. 44 CFR § 60.6(a)(1) specifically prohibits variances if any increase in flood levels during the base flood discharge would result. Such a decision by the County Engineer under the proposed variance provisions would also appear to be in conflict with § 60.6(n)(3), which allows a variance only upon:

(i) a showing of good and sufficient cause, (ii) a determination that failure to grant the variance would result in exceptional hardship to the applicant and (iii) a determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances; (Emphasis added.)

From the above language and other language within § 60.6, it appears that variances which would allow any increase in flood height are not allowed by the NFIP.

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Section 8-25 of the Ordinance allows for applications for variances and sets forth five criteria for the County Engineer to use in making his/her determination "that practical difficulties or unnecessary hardships exist." While the five criteria are not strictly in conflict with the NFIP, the application of the criteria could result in the granting of variances that are in conflict with the NFIP. In particular there could be an issue with the NFIP "no increase" requirement.

A community that fails to adequately enforce the requisite floodplain management regulations through its decisions for variances may be subject to program probation or suspension. 44 CFR § 60.6(a) provides: "The [Federal] Insurance Administrator may review a community's findings justifying the granting of variances, and if that review indicates a pattern inconsistent with the objectives of sound flood plain management, the Administrator may take appropriate action under § 59.24(b) of this subchapter." Under § 59.24(b) a community may be placed on probation and ultimately suspended from participation in the NFIP under § 59.24(c) if the issues for which probation was imposed are not adequately addressed in a timely manner. Upon suspension, members of the community could no longer obtain federal flood insurance.

Council may wish to consider whether a variance should be considered and decided initially by a member of staff, such as the County Engineer, or by a board or committee. While a variance is not precisely in the nature of an appeal, it is a request for relief from the rules due to hardship or other legitimate conditions. In addition, the Ordinance requires the County Engineer to grant a variance if he believes the variance is justified in accordance with Section 8-25. If the Council is attempting to provide the County Engineer with the discretion to grant variances, it should remove or modify this requirement. Please note, however, that such delegation of discretionary authority raises certain legal issues - in particular whether this would constitute a delegation of policymaking decisions typically reserved to a county council.

Based on the above discussion, the County may wish to give further consideration to the proposed variance provision. And to answer your question, there is no requirement under the NFIP that the County have a variance provision in its floodplain management or other ordinances, nor is there such a requirement under state law except for a delegated stormwater program (pursuant to S.C. Code § 48-14-50). The NFIP does address variances in a way that contemplates that a community may include a variance provision in its floodplain management regulations. 44 C.F.R. § 60.6. If the County wished to adopt a variance provision that would be least likely to come into conflict with the NFIP variance provisions, the County could simply adopt a variance provision authorizing the designated person or group to grant variances that are consistent with the provisions of 44 C.F.R. § 60.6.

I hope that this letter is responsive to your request. Please contact me if you need any further work or clarification concerning this matter.

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Sincerely,

George B. Wolfe

GBW:amcleod
cc: Ms. Kit Smith
Mr. Cary McSwain
Larry Smith, Esq.
1/29/2000

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MEMORANDUM

To: County/City/School District One Green Diamond Task Force
From: Columbia Venture, LLC
Date: June 22, 2001
Re: Initial Request for Information

This memorandum is in response to the Initial Request for Information Regarding Green Diamond Proposal from the Green Diamond Task Force dated May 24, 2001. For convenience, we have set forth the questions of the Task Force verbatim in bold with our responses below each such question. References to the tab numbers are references to the tabs of the Governmental Briefing Book previously delivered to you. All figures provided herein are obviously estimates and subject to adjustment.

DEFINITIONS:

"Project" = the entire 4,400+ acre Green Diamond development.

"Research Village" or "Technology Village" = the approximately 700 acres for high tech industry which consists of the Research Campus for the University of South Carolina, a portion of the Highway Commercial property, Corporate Office property, Retail Village property, and Commercial property.

"Light Industrial" = the approximately 197 acres designated for light industrial development outside the Technology Village.

"MCBP" = the Multi County Business Park of approximately 1,276 acres encompassing the Research Village, plus the additional Highway Commercial property, Corporate Office property, Retail Village property and Commercial property not included in the Research Village, Light Industrial property, and the hotel and golf course.

1. **Assumptions and calculations made to determine public (federal, state and local) operating and capital costs, including, but not limited to:**

- a. **All new capital costs for public vehicles, heavy equipment, etc., and related increases in operating costs, with corresponding millage rates over the life of the project phase-in.**

The methodology used by Wilbur Smith Associates is a per capita approach using population projections and municipal and county budget projections which includes capital costs of the County and City. It is broken down between residential per capita cost and non-residential per capita cost. This approach tends to overstate the real costs for most land users. We refer you to the Wilbur Smith Associates study for further analysis and detail. Please note that the costs to the

City and County were calculated by Wilbur Smith Associates using the methodology previously discussed with the staff for the County and the City.

The methodology used by McMillan & Associates is not based on cost but rather on revenue per pupil determined by dividing total revenues received by the School District by the average daily membership in the School District. The average percentage increase in revenue per student over the last 10 years is then used to extrapolate the cost per pupil. We refer you to the McMillan & Associates study for further analysis. Please note that the costs to the schools were calculated by McMillan & Associates using the methodology discussed with the staff of the School District.

b. Inflation rate.

3% for all costs, except school costs which are inflated at 6.06%.

Please note that the Wilbur Smith Associates study uses a 1.5% historic inflation rate. However, in order to be conservative, the calculations used to determine the match between revenues and costs in the Economic Impact chapter under tab 3 further inflates the costs to the 3% inflation factor.

c. Net present value (discount rate assumed).

The following are the estimated total costs stated in today's dollars without regard to inflation:

County = \$40,120,389

City = \$280,612,566

Richland School District I = \$95,523,608

The inflation rate used is 3%.

d. Estimated number of households resulting from development, and what percentage of households would be new or shifted from other parts of the County.

It is very difficult to predict what percentage of households will be shifted from other parts of the County. Therefore, to be conservative for purposes of conducting the cost analysis, we have assumed the following: (i) all households are new households, and (ii) half of such households will be located within 10 years. The number of new residents the Project is expected to add is 14,669 over a 25-30 year period. Assuming 2.7 persons inhabit a single dwelling on average, this would mean approximately 5,433 new dwellings both inside and outside the Project.

- e. **Student population increase specific to School District One resulting from development, and what percentage of these students would be new or shifted from other parts of the County.**

See Exhibit D in the McMillan & Associates study for additional projected school age children over the 30-year life of the Project. Using a conservative approach, all students are assumed to be new students.

- f. **Any local or state match for federal transportation funding.**

The interchange at the existing Metro Lane underpass is the only structure anticipated to use federal funding.

The interchange will cost between \$12-15 million and would be proposed as a demonstration project so as not to affect any amounts of money SCDOT would get for a specific area, i.e., be outside the normal budget and not affect other road project funding. This is normally an 80-20 match Federal dollars to State/Local dollars. It is anticipated that 10% will come from the MCBP, while 10% would be State funds. State funds are available from a variety of sources for matching including the Commerce Department.

- g. **Transportation costs to improve Bluff Road and other impacted arterials.**

Approximately \$1.2 million will be used from MCBP monies to pay for acceleration and deceleration lanes and traffic signalization on Bluff Road.

- h. **Build-out schedule by land use, with market feasibility analysis.**

See tab no. 3, Appendix A for build-out schedule by acreage and units (residential) and square footage (commercial). Please note that the category "other" is primarily the golf course. See Tables I, II, and III of tab no. 3 for market feasibility analysis.

2. **Assumptions and calculations made to determine property and other tax revenue, including, but not limited to:**

- a. **Build-out schedule by land use, with market feasibility analysis.**

See item 1(h) above.

- b. **Investment amounts made by commercial businesses and technology companies.**

See tab no. 3, Appendix B. The assumption is made that all commercial components are constructed at \$100 per square foot.

c. Investment amount made by Columbia Venture.

Considerable sums have been invested by Columbia Venture to this date. Except for the amount equal to the fee revenues used to repay the Special Source Revenue Bonds, all other investments will be made by private parties. This is estimated to be \$4,193,192,951 over the life of the Project.

d. Depreciation schedule.

The following are the estimated depreciation amounts as a result of commercial activity in the first five years of the Project:

Year	Amount
1	\$0
2	\$1,484,763
3	\$5,078,169
4	\$7,741,691
5	\$9,470,128

e. Net present value (discount rate assumed).

The total estimated tax revenues in today's dollars without regard to inflation:

Commercial	\$609,252,076	Residential	\$268,124,227

f. Breakdown of real and personal property investments.

We have assumed 10% of the value of the commercial property invested is personal property.

Real property has been depreciated over 40 years, personal property over 9 years.

g. Inflation rate.

See language in item 1(b). This also applies to revenues.

h. Estimated household increase resulting from development, and what percentage of households would be new or shifted from other parts of the County.

See item 1(d) above.

- i. **Student population increase specific to School District One resulting from development, and what percentage of these students would be new or shifted from other parts of the County.**

See language in item 1(e). Student population increase would not affect revenue of the County and the City. Student population increase will result in increased revenues to School District One in State Educational Aid under the Education Finance Act as indicated in the McMillan & Associates Study on page 14-17 for the first 3 years of the Project. Upon request, this information can be provided for the entire life of the Project.

- j. **Building permit fees and business license fees.**

See tab 3, Appendix E.

- k. **Estimated market value of housing units (by type) in Green Diamond.**

The value of the average housing unit is approximately \$175,578. See below.

Units	Cost
259 @	\$60,000
352 @	100,000
488 @	115,000
714 @	125,000
396 @	140,000
114 @	145,000
383 @	150,000
366 @	170,000
579 @	200,000
863 @	250,000
420 @	<u>350,000</u>
Average Price =	\$ 175,578

3. **Detailed methodology of studies.**

We refer you to the individual studies in the Governmental Briefing Book and items 1 and 2 above.

As far as calculation of the fees generated within the MCBP is concerned, to be conservative, these calculations do not include the additional revenue generated by rollback taxes as a result of the changes in use of the property.

4. **Copies of spreadsheets found within Green Diamond proposal on a disk.**

These will be provided to you.

5. **Schedule of the items in which Columbia Venture needs bond proceeds for infrastructure, tied to the development schedule, for the entire term of the Multi County Business Park.**

See tab 5, tables I and VI and tab 3, Appendix A, (Columbia Ventures Summary Statement).

6. **Details of Bluff Road area improvements proposed for bond funding.**

A total of approximately \$10,750,000 should be available for this. Neighborhood organizations have been requested to prioritize needed community improvements.

7. **Impact of construction activity (soft costs, C&D Landfill).**

Average construction costs in the Park reflects approximately \$52,873,695 in annual labor costs (Current Dollars) as follows:

62 Managers	@	\$76,491
233 Supervisors and Engineers	@	\$53,453
483 Technical and Operators	@	\$34,969
688 Laborers	@	\$27,275

8. **Fiscal scenario without annexation.**

Annexation is the most appropriate method to insure sufficient revenue to support the bond issue. Therefore, the analysis without annexation was not conducted.

9. **More specific detail on the 250-acre Research Park.**

Research Campus set aside for the University of South Carolina. Specific details are currently being discussed with the University of South Carolina and will be provided later. Please see the letter from Dr. Palms under tab 2 for a general description.

10. **More information about the anti-terrorism and international security center.**

This matter is currently being discussed and will be provided at a later date.

11. **Please provide draft articles of incorporation and other necessary documents for the creation of a 501(c)(3) organization to own and manage the levees.**

These will be provided when available.

QUESTIONS:

1. Does the government cost estimates include costs of services within Technology Park?

Yes. The Wilbur Smith Associates Study estimates the costs of services regardless of where such services are performed. The McMillan & Associates Study estimates the cost of services based on additional students regardless of where such students are located within the Project.

2. Do the motor vehicle tax revenue estimates take into account the phased reduction in assessment ratio as enacted by the General Assembly?

No. Please note, however, that all residents in the Project are assumed to be new residents. Assuming that private vehicles comprise 10% of the total projected revenue stream, residential property taxes listed in item 2e above would decrease by approximately 6.8% or approximately \$18,000,000.

3. Can Columbia Venture guarantee high technology tenants in the Technology Park?

Like any other high tech or industrial park, it is impossible to guarantee tenants in the Technology Village. Columbia Venture is, however, confident that once the infrastructure is in place high technology tenants can be attracted to the Technology Village. We refer you also to tab 3, tables II and III showing absorption rates. Columbia Venture has access to extensive experience and knowledge about high tech Parks through its partners who include Lockwood Greene, and Regent Partners and plans to fully utilize this experience and expertise in marketing the Technology Village to prospective tenants.

4. What is Columbia Venture's definition of high technology? It is an incubator site for in-state growth of knowledge base? Is it recruiting big firms from out-of-state to locate in office park? What kind of technology (semi-conductors, fiber optics, computer software and hardware, biotech, e-commerce, etc)? Is there a "Plan B" if efforts to recruit technology companies are not successful?

Considering the size of the Technology Village, Columbia Venture views high technology in the broadest sense of the word leaving room for all types of technology companies including those identified in the March 9, 2001 letter from Dr. Palms. In addition, Columbia Venture does not want to initially limit itself to only certain types of technology companies. As the Park develops, a more focused marketing may occur. We are currently working with the University, and certain private technology companies and consultants to recruit high technology business to the Technology Village.

5. **Is Columbia Venture willing to take part in a regional strategy for developing the new economy in the Midlands?**

Columbia Venture is willing to cooperate with all local and state entities in developing such a regional strategy. Columbia Venture considers the Technology Village to be a part of such a strategy.

6. **What is the estimated number of new jobs to be created within the Technology Park? How was this number estimated? What are the estimated salary ranges and payroll for these jobs? What is the estimated number of new jobs to be created through commercial development in Green Diamond? What are the estimated salary ranges and payroll for these jobs?**

See Wilbur Smith Study, pages 2-7 and 2-8 for the total number of jobs estimated. We estimate an average rate of pay between \$45,000 and \$50,000 per job.

7. **What is the cost breakdown for each infrastructure project?**

Specific costs for each item of infrastructure will be provided at a later date.

8. **Describe Columbia Venture's role in the Technology Park development and recruitment.**

The partners comprising Columbia Venture are fully prepared to draw upon their expertise and experience in the successful completion of this Project. As will be demonstrated in the presentation, Lockwood Greene has extensive experience in the placement of high technology firms throughout the world.

9. **What is the University's role and capital investment in the Technology Park?**

See letter dated March 9, 2001 from Dr. Palms which states that USC is interested in the development of a Bicentennial Campus – a new high technology campus focused on information science and technology, materials research, nanoscience and technology, biotechnology, and business. We are having ongoing discussions with the University of South Carolina. We expect it to be involved extensively but its actual role has not yet been defined.

10. **Describe the Company's basis for its assumption that the Technology Park and commercial space will fill in a timely way.**

See item 3 above and tab 3, table I.

11. **Has Columbia Venture considered the prospect of creating a tier one internet hub as part of the development?**

Yes. Although the partners of Columbia Venture do not currently engage in this technical commercial activity, they do recognize the value that a tier one internet hub would bring to the Project and are considering recruitment and/or possible joint ventures.

12. **Does Columbia Venture plan to request additional odor control measures from the City of Columbia Wastewater Treatment Plant and the East Richland Wastewater Treatment Plant?**

We anticipate working with the City to use best management practices to eliminate any odor control issues.

13. **Does Columbia Venture plan on asking the City of Columbia to relocate or reconfigure its wastewater treatment plant? Does Columbia Venture oppose any expansion of the plant? Will Columbia Venture commit land for the plant's expansion?**

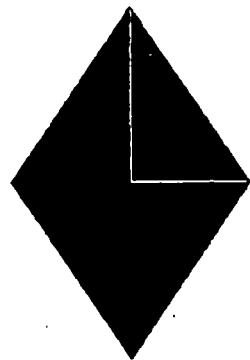
We do not plan to ask for reconfiguration or relocation of the plant. We do not oppose any reasonable expansion of the plant. We are exploring new technologies together with the City to accommodate any expansion. We have participated in and continue to have discussion with the City regarding the sewer plant.

14. **What degree of involvement is the County/City expected to assume in the issuance and management of the infrastructure bonds?**

The involvement of the County/City would be similar to the involvement of a county in the issuance of an Industrial Revenue Bond for a private company. We expect this involvement to be relatively minimal as the mechanics of receipt of revenues and payment of bondholders will be assigned to a trustee.

THE SIMPLE TRUTH ABOUT GREEN DIAMOND

April 2001



GREEN
DIAMOND

DOUG WENDEL

PLTF TRIAL EXH 581

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THE SIMPLE TRUTH ABOUT GREEN DIAMOND

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THE SIMPLE TRUTH ABOUT GREEN DIAMOND

Forward

The purpose of this governmental briefing book is three-fold:

- To communicate an understanding of the extraordinary vision and the transforming energy of the Green Diamond project.
- To articulate the key elements of the project: its financing, its development agreement issues, its zoning issues, its environmental issues and its public policy issues, in such a way so that the Green Diamond vision and concept can become an active process.
- To begin the all-important dialogue with the governmental entities and agencies which will share in the shaping of the future of Columbia, the Midlands region and the state of South Carolina.

Rarely has such a transformational opportunity occurred in South Carolina. The enormity of the positive impact will be felt for generations on the quality of life, on the public education system and in the acceleration of economic expansion.

This briefing book, however, is not intended to be the final word, nor the complete text, but it is a first, initial, momentous step. It is the initial directional effort to start the productive dialogue. It is the forum in which to begin the mutually advantageous exchange on issues like: land reservations for parks, public services and schools, affordable housing, sources and uses of bond revenue, development form and flexibility, community improvements and other key issues.

No one can foresee all of the potential development and approval issues that must be addressed in the months and years to come. That comprehensive effort must come from meaningful dialogue and creative minds. This briefing book is the first step toward a future that holds dramatic promise for all of the people of South Carolina.

This briefing book does not include the following material previously submitted to Richland County Council:

- Soils analysis
- Traffic analysis
- Environmental analysis
- Preliminary levee design

Executive Summary

The following executive summary is intended to present the simple truth about Columbia Venture's Green Diamond.

The simple truth is that our vision is for a modern, environmentally sensitive community involving residential, commercial, light industrial, recreational and high technology features.

The simple truth is that Green Diamond will be safe and environmentally secure for all its residents and workers, the taxpayers of Richland County and all the citizens of the Midlands.

The simple truth is that this project will change the economic future of the Midlands forever.

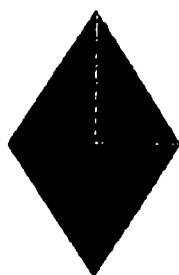
Economic Impact

Green Diamond will revolutionize our area's economy, creating the biggest economic boon to this area in over a century. The research and technology park at the heart of Green Diamond will transport us to the forefront of the new economy, put the state's high-tech research efforts into overdrive and provide dynamic new opportunities for K-12 education in Richland School District One.

The numbers you see here are ambitious – and some critics will argue that Columbia will never achieve the kind of growth we are projecting. The simple truth is these critics are right — only *if* we are satisfied with the status quo; *if* we are satisfied with being an afterthought to Atlanta, Charlotte, Raleigh-Durham and even Greenville and Charleston; *if* we do not dare to dream.

This plan can be achieved only with the collaborative efforts of the private sector, the research institutions of the state (University of South Carolina, Clemson University, the Medical University of South Carolina, South Carolina State University and the S.C. Research Authority), the City of Columbia, Richland County, Richland School District One and the State of South Carolina.

The following table summarizes the projected economic impact of Green Diamond.



**GREEN
DIAMOND**

ESTIMATED ECONOMIC IMPACT

Total Direct Investment (over 30 years)	\$4.19 billion
Overall Economic Impact	\$6.7 billion
Local Property Taxes (commercial)	\$1.1 billion
Local Property Taxes (residential)	\$385.59 million
Annual Property Taxes In Year 30 (commercial)	\$92.9 million
Annual Property Taxes In Year 30 (residential)	\$26.1 million
Annual Sales & Admission Taxes in Year 30	\$24.4 million

Research and Technology Village

At the heart of Green Diamond is a research and technology village that will transform the economy of the Midlands. Key facts include:

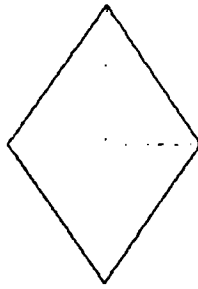
- The technology village and research park will encompass approximately 450 acres.
- In addition, an adjacent 250 acres have been identified for a research campus for the state's universities and other institutions.
- Village facilities will encompass approximately 8.5 million square feet of space, including research facilities, office centers, corporate campuses and a hotel/conference center.
- 35 acres will be set aside for a public school site for Richland School District One.

The overall quality of life of any successful community is closely intertwined with a strong educational foundation. This, in turn, stimulates a growing economy and generates strong private investment. The proposed research/data park embodies a planned diversity of high-tech commercial activities, educational facilities, diverse housing, governmental, environmental, recreation, and sports facilities.

The village will also have a significant impact on K-12 education, offering unlimited opportunities for partnerships for Richland School District One. Opportunities will exist for innovative new programs in which students and teachers will be able to draw upon the resources and unique talents of the private sector to demonstrate and illustrate potential career paths for the future. In essence, the entire community will experience tremendous gains from the enhanced economic and related educational activities and resources.

Key Components

- Residential: 4,394 units encompassing a variety of designs and uses: single family, multi-family, villas, retirement and affordable housing units
- Office Space: 2,405,000 square feet
- Retail Space: 979,000 square feet
- Research & Development Space: 8,582,500 square feet
- Light Industrial Space: 3,860,620 square feet
- Hotel and Conference Center
- Other: 377,000 square feet



GREEN
DIAMOND

LAND USE

Type of Development	Acres
High Tech Research Park	442
Research Campus	250
Residential	377
Multi-Family	92
Retirement Housing	177
Affordable Housing	26
Golf Villas	19
Highway Commercial	39
Corporate Office	141
Retail Village	21
Hotel & Conference Center	19
Open Space, Parks & Golf	786
Commercial	81
Light Industrial	197
Miscellaneous	28
Roads	334
Levee Section III	1370
Total (approximate)	4400

PLTF TRIAL EXH 581

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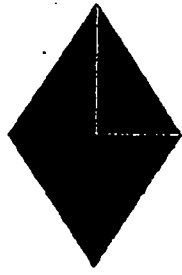
Public Land Use Set Asides

Green Diamond will offer a unique environment in which residents can live, work, play and study, often without even needing to get in a car. Columbia Venture, LLC will donate approximately 237 acres of land for a variety of purposes as outlined below. This land will provide ready access to recreation centers, public parks and walkways, as well as essential governmental buildings and schools. In keeping with this vision of the project, Green Diamond is committed to the following:

- A donation of approximately 120-130 acres of land to create a 9-mile linear pedestrian park along the levees – This public park, unlike any other in South Carolina, will offer spectacular views of the river as well as public river access. Residents and visitors can therefore enjoy boating, canoeing and kayaking in addition to leisurely strolls along the waterfront.
- A donation of approximately six acres of land for a circular public park within the heart of the community – This civic space is intended for active and passive use of the community with benches, fountains, areas for public events and performances and plenty of green space. This park will serve as the hub of the Green Diamond project.
- A donation of approximately 60 acres of land for a community recreation center, which will provide Midlands residents with access to new public recreation facilities with athletic fields, ample public parking and convenient access.
- A donation of approximately 16 acres of land for governmental and emergency facilities – Land located adjacent to the community recreation center will provide sites for building any needed police stations, fire stations and other governmental and emergency facilities.
- A donation of approximately 35 acres of land for a school or school sites – Land for a public school or schools will be reserved within the educational research campus, creating an exceptional learning environment for our students.

In addition, Columbia Venture has proposed setting over 350 acres for an environmental center. This guarantees that 350 acres of green space in the most sensitive area of the property will be preserved for opportunities for eco-tourism, environmental research, river access and team building and outdoor recreation activities such as hiking, camping, canoeing and kayaking.

Columbia Venture, LLC is not required to provide this space; in fact, the project well exceeds the requisite 10% green space. However, with a firm belief that South Carolina's natural assets are her greatest assets, Columbia Venture, LLC is pleased to have the chance to save this space for future generations of residents to learn from and enjoy.



**GREEN
DIAMOND**

PUBLIC BENEFITS

- **Donating a 9-mile linear pedestrian park along the levees (approximately 120 acres of land)**
- **Donating a circular public park within the heart of the community (approximately 6 acres of land)**
- **Donating a community recreation center and athletic fields (approximately 60 acres of land)**
- **Donating governmental and emergency facilities (approximately 16 acres of land)**
- **Donating public school site (approximately 35 acres of land)**
- **Preserving 350 acres for a public environmental area**

Multi-County Business Park

The Multi-County Business Park (MCBP) concept is well grounded in the South Carolina Constitution. In late 1988, the question of whether a business park should be established in South Carolina was put before the voters statewide and passed by an overwhelming majority. In 1989, the General Assembly amended South Carolina's Constitution to allow Multi-County Business Parks. Overall, several Governors and five General Assemblies have supported the concept.

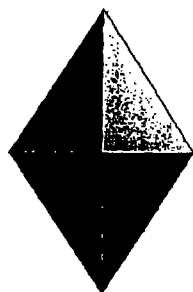
In recent years, Richland County has approved more than 30 economic development projects that have included a multi-county business park component.

Key issues involved in the multi-county business park:

- The multi-county business park provides funding for the research park infrastructure components and benefits for the existing adjacent communities.
- The multi-county business park is self-financing. All needed infrastructure, such as new roads, levee upgrade and water and wastewater systems, will be entirely funded through the taxes generated by the project.
- Not one dollar from property, residents or businesses which are not located within the 4,400 acres of Green Diamond will be required.
- Only commercial tax revenues from the Green Diamond project are used to fund the multi-county business park.

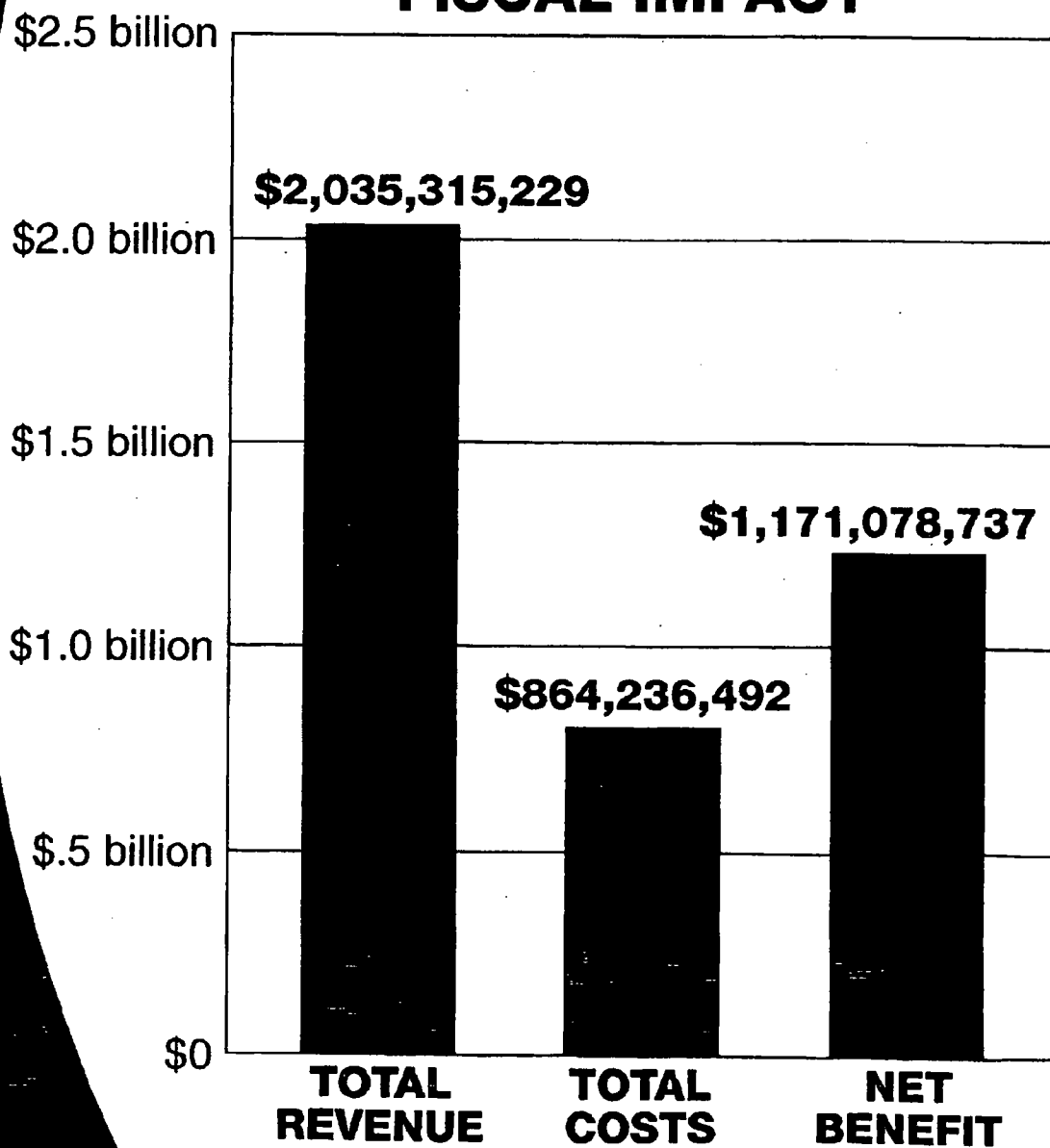
Over 30 years, the project will:

- Generate over \$2 billion in public revenues.
- Include total public costs of approximately \$864 million.
- Create approximately \$1.1 billion in net public benefits for the City of Columbia, Richland County and Richland School District One.
- It is recommended that 10.5% of the fee-in-lieu-of-taxes go to Richland County, 10.5% to the City of Columbia and 79% to Richland School District One.



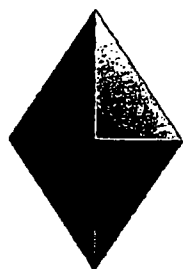
GREEN
DIAMOND

GREEN DIAMOND FISCAL IMPACT



PLTF TRIAL EXH 581

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DIAMOND

MULTI-COUNTY BUSINESS PARK 30-YEAR PUBLIC BENEFIT

REVENUE	
Commercial Revenue Stream	\$1,112,894,836
Residential Revenue Stream	\$385,588,182
Personal Property	\$93,693,157
Business License & Permits	\$371,383,905
Additional Revenue	\$71,755,149
TOTAL REVENUE	\$2,035,315,229
COSTS	
Cost of Services	\$651,035,571
Infrastructure	\$192,716,731
Other Costs	\$11,128,948
Hold Harmless	\$9,355,242
TOTAL COSTS	\$864,236,492
NET TOTAL EXCESS PUBLIC REVENUE	\$1,171,078,737



**MULTI-COUNTY
BUSINESS PARK
RICHLAND COUNTY
30-YEAR PUBLIC BENEFIT**

Residential Property Taxes	\$84,016,745
Personal Property & Motor Vehicle	\$20,415,029
Direct Revenue	\$104,431,774
Cost of Services	\$71,284,530
Direct Revenue - Cost of Services	\$33,147,244
Distribution of Fee in Lieu of Taxes	\$91,261,723
NET PUBLIC BENEFIT	\$124,408,967



**MULTI-COUNTY
BUSINESS PARK
CITY OF COLUMBIA
30-YEAR PUBLIC BENEFIT**

Residential Property Taxes	\$97,349,376
Personal Property & Motor Vehicle	\$23,654,694
Business Licenses & Permits	\$371,383,905
Additional Revenue	\$71,755,149
Direct Revenue	\$564,143,124
Cost of Services	\$427,049,170
Direct Revenue - Cost of Services	\$137,093,954
Distribution of Fee in Lieu of Taxes	\$91,261,723
NET PUBLIC BENEFIT	\$228,355,677

PLTF TRIAL EXH 581

CV005595



**MULTI-COUNTY
BUSINESS PARK
RICHLAND SCHOOL DISTRICT ONE
30-YEAR PUBLIC BENEFIT**

Residential Property Taxes	\$204,222,061
Personal Property & Motor Vehicle	\$49,623,434
Direct Revenue	\$253,845,495
Cost of Services	\$152,640,482
Direct Revenue – Cost of Services	\$101,205,013
Distribution of Fee in Lieu of Taxes	\$686,635,819
NET PUBLIC BENEFIT	\$787,840,832

PLTF TRIAL EXH 581

CV005596

Infrastructure

A total of \$55,007,753 is requested for basic infrastructure within Green Diamond. These funds will be used for such things as levee upgrade; fiber optic work; water, wastewater and storm water systems; and road infrastructure required for that portion of the project associated with the research park.

In addition, the following funds are requested:

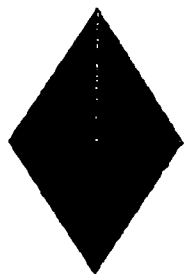
- \$10.75 million for improvements in the existing adjacent communities
- \$14 million for a special economic development account to be administered jointly by the City of Columbia, Richland County and Columbia Venture LLC to attract additional new investment in the technology park

Funds requested for basic infrastructure represent less than three percent of the total public revenue generated by the Green Diamond project.

Not one dime of taxpayer money generated outside of the Green Diamond project will be used or put at risk in the development.

Public infrastructure will be financed via special source revenue bonds. The bonds will be funded solely through revenues generated by the development. Consequently, there is no financial exposure to taxpayers outside the project. Also, it has been demonstrated that the full cost associated with the provision of governmental services will be covered by taxes generated by Green Diamond. No subsidy is required by City or County taxpayers outside the project boundaries.

Only commercial and industrial tax revenues will be used for retirement of special source revenue bonds. No residential taxes will be used. Residential taxes will go directly to the appropriate governing body for use as they deem appropriate.



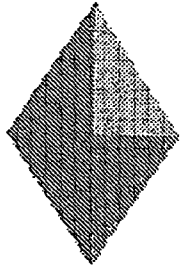
GREEN
DIAMOND

FUNDS REQUESTED FOR INFRASTRUCTURE

INFRASTRUCTURE	PROJECTED COSTS
Levee Upgrade	\$8,102,378
Levee Maintenance & Insurance Financing Fund	\$6,000,000
Roadways	\$17,030,195
Bridges	\$6,461,102
Water System	\$3,764,113
Natural Gas Distribution System	\$949,114
Waste Water System	\$3,511,522
Electrical & Fiber Optic Systems	\$5,399,414
Wetland & Environmental Mitigation	\$1,076,755
Engineering Geotech	\$2,713,168
Adjacent Community Improvements	\$10,750,000
Economic Development Account	\$14,000,000
TOTAL	\$79,757,793

PLTF TRIAL EXH 581

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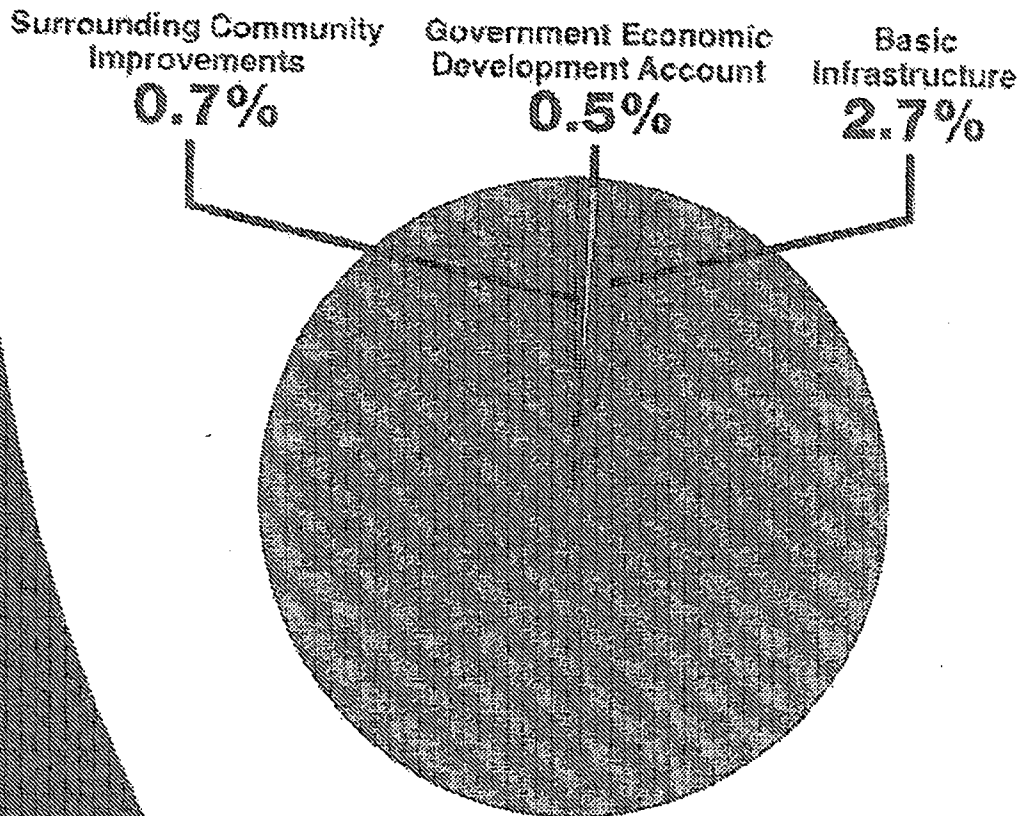
**Basic infrastructure costs
represent 2.7% of the
total revenue generated by
the multi-county business park.**

TOTAL REVENUE: \$2,035,315,229

BASIC INFRASTRUCTURE: \$55,000,000

COMMUNITY IMPROVEMENTS: \$10,750,000

ECONOMIC DEVELOPMENT ACCOUNT: \$14,000,000



PLTF TRIAL EXH 581

CV005599

Annexation Into the City of Columbia

Columbia Venture, LLC will request that the 4,400 acres of Green Diamond be annexed into the City of Columbia. There are numerous reasons for this request, but the most salient reason is to increase net income for enhanced government services.

If annexed, the development will be taxed by both Richland County and the City of Columbia. This creates a larger revenue stream. It is recommended that the principle use of this revenue stream be to enhance K-12 education programs in Richland School District One. Other major beneficiaries will be the City of Columbia and Richland County. Using a recommended 79%-10.5%-10.5% distribution of fees-in-lieu-of-taxes, the school district would receive a net total of over \$787 million; Richland County, over \$124 million; and the City of Columbia, over \$228 million.

Annexation into the city in no way means that Richland County is ceding control over the project. Only County Council has the authority to create a multi-county business park. The multi-county business park is an integral part of the successful completion of the project. Therefore, Richland County retains substantial influence in deciding the scope and nature of the project.

Levees

Upgrading the levees will provide protection to the city's wastewater treatment facility, Heathwood Hall School and the Green Diamond property. It will allow the Green Diamond property to be developed. This will in turn increase the current annual property taxes of \$13,718 to \$123,469,101 at build-out.

The levees would be improved to meet certification standards for a 500-year levee plus three feet.

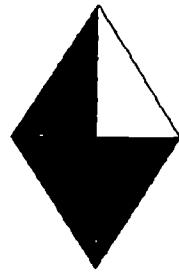
This means the levees would be designed so that flood levels expected only once in 500 years would not breach the levees. FEMA only requires certification to the 100-year level. FEMA considers a certified levee to be sufficiently safe that all property behind the levee is designated as not within the floodway or flood plain and fully buildable (including Green Diamond, the expansion of the city's wastewater treatment plant and Heathwood Hall School).

The substantial nature of a 500-year certified levee is the first and most important factor in assuring against the risk of flooding. As noted in the attached executive summary by Gary R. Dyhouse, Professional Engineer and former U.S. Army Corps of Engineers official, levees have been successfully used for centuries, and the proposed levee will give a high level of protection comparable to nearly any other urban levee project in the United States.

No levee certified to the 500-year level has ever failed!

Other methods designed to eliminate and/or reduce any levee liability to the City of Columbia or Richland County include:

- The levees could be conveyed to a 501(c)(3) non-profit corporation in order to qualify for tax exempt bond financing as part of the Multi-County Business Park. This corporation would be responsible for improving the levees to FEMA's 500-year standard, maintaining the levees and obtaining insurance as described below. The corporation's board would be appointed by the City, with perhaps some members appointed by Columbia Venture or a succeeding property owner's association, if applicable. Separate ownership of the levees by this corporation should insulate the City from liability stemming from ownership, if any. State law protects the board members of the 501(c)(3) corporation from liability.
- Maintenance of the levee system could be outsourced to a qualified, credit-worthy contractor. This could provide another layer of protection and liability insurance to the owner of the levees and the City.
- The properties protected by the levees could be designated as a separate tax special assessment district with extra property tax millage designated to pay for maintenance and insurance (this tax might kick in a number of years down the road, with bond proceeds funding maintenance and insurance in the interim).



GREEN
DIAMOND

Opportunities

- Total direct investment of over \$4 billion
- \$6.7 billion economic impact
- 20,000 jobs
- \$1.1 billion in net benefits for public revenue.
- A self-financing MCBP representing less than 4% of total revenue
- A guarantee that not one dime of existing taxpayer money will be used or put at risk for this project
- Local government and taxpayers effectively protected against liability risks
- An opportunity for almost \$800 million in public revenue for our children in Richland School District One
- Nearly 600 acres of land within the property for public use



Columbia Venture, LLC

April 2, 2001

The Honorable Kit Smith, Chair
Richland County Council
2020 Hampton Street
Columbia, South Carolina 29202

Dear Ms. Smith:

As you know, tonight Columbia Venture is meeting with the development and services committee in response to Chairwoman Scott's invitation.

As requested, we will be submitting a report containing a substantial amount of data on environmental issues, soils studies, wetlands and other important considerations pertaining to the proposed Green Diamond development. We will also be asking for specific questions and concerns any council members may have about Green Diamond. We wish to proceed with an open dialogue of information that guarantees you receive the data you need to allow Columbia Venture to move forward.

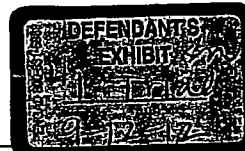
We are working very hard on completing our formal development proposal, and our goal is to submit the proposal by mid April.

While we continue to have concerns over the proposed amendment to the stormwater ordinance you are currently considering, Columbia Venture has decided that at this time our focus should be squarely on producing our formal development proposal and working toward a development agreement with Richland County, Richland School District One, and possibly the City of Columbia.

We also appreciate your assurance, reiterated most recently at the last council meeting, that if we can reach an agreement on the development of Green Diamond, and if modifications are needed in your stormwater ordinance in order for the project to proceed, you would support appropriate modifications at that time.

For these reasons, and because of your statements that votes on the stormwater ordinance should not be viewed as up or down votes on Green Diamond, we are withdrawing any active opposition to the amendment currently before you.

Carolina First Building
4876 Forest Drive, Suite 202
Columbia, South Carolina 29206
(803) 743-0672 (803) 743-0673 Fax



April 2, 2001

Page 2

We greatly appreciate the consideration you have given to our concerns on this matter. Even more so, we appreciate the opportunity to begin substantive work together on the proposal to make the potential positive economic, social and educational impact of Green Diamond a reality in the near future.

I am also available to meet or talk with anyone about questions, concerns, or observations you have about Green Diamond. Please call me at 743-0672.

Sincerely,

A handwritten signature in black ink, appearing to be 'J. Wiseman', written over a horizontal line.

James E. Wiseman

CC: Members, Richland County Council and staff
Members, Richland School District One and staff
Members, City of Columbia and staff

CV013369

LOCKWOOD GREENE
Consulting • Design • Construction

Lockwood Greene Engineers, Inc.
1500 International Drive
P.O. Box 491, Spartanburg, SC 29304
Main (864) 578-2000 Fax (864) 599-0436

27 May, 1999

Mr. George Gregory
Burroughs and Chapin
P. O. Box 2095
Myrtle Beach, SC 29578-2095

Dear George:

Subject: FEMA FIRM Submittal

This letter will summarize the strategy to be used in commenting on FEMA's Flood Insurance Rate Maps (FIRM) and associated modeling. Lockwood Greene in conjunction with our consultants, Martin Becker, Leo Beard, S&ME, and the John R. McAdams Company, have performed extensive hydrologic, hydraulic and physical studies including topology and geotechnical investigations in the floodplain in the area of the Manning Farm.

Our comments on FEMA's model and any revised model that we present to FEMA must be in the context of the "existing conditions." One of the existing conditions that we will be held to is the condition of the existing levees. As we have pointed out from the beginning, the existing levee system does not meet the criteria outlined in 44CFR65.10 for a certified protective structure; therefore, our "existing conditions" model must reflect an uncertified levee. After significant negotiations with FEMA and review of their previously submitted models, we have developed the following path forward.

1. Lockwood Greene will develop an "existing conditions" model for presentation. This model will depict:

- Base flood elevations on the river side of the levee assuming the levee is in place.
- Base flood elevations (BFE) on the farm side of the levee ignoring the levee.
- Floodway will be developed ignoring the presence of the existing levee. This is significant in that it will result in the floodway limit on the Richland County side being on the farm side of the levee in Richland County but will show no impact on Lexington County (except for some data entry corrections).

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YOUR GLOBAL BUSINESS PARTNER



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CV013370

Mr. George Gregory
27 May 1999
Page 2 of 4

2. Lockwood Greene will develop simultaneously a conditional letter of map revision (CLOMR) model and map requesting remapping assuming a certified levee and remove the area protected by this levee from the flood prone area. This model will:
 - Indicate no increase in BFE on the river side of the levee.
 - Limited flood prone area on the land side (flood prone area on the land side will be a result of flooding due to internal drainage only and will be limited to area along drainage ditches and internal storage ponds).
 - Floodway will be revised to the river side toe of the levee on the Richland County side.
 - No impact on the floodway on the Lexington County side (other than as a result of incorrect data entry).

FEMA will present the revised "existing conditions" model in the public hearing which kicks off the public comment period in late July. Lockwood Greene will submit the Conditional Letter Of Map Revision (CLOMR) model and associated maps through Richland County to FEMA in early July. FEMA will allow these maps to be presented during the public comment period.

We agreed to the following basic target schedule during the meeting that took place in FEMA's office on 24 May 1999. Present at this meeting were Todd Davison of FEMA, Alan Groover of Dewberry and Davis, Wilson Tillotson and Martin Becker.

- The preliminary "existing conditions" model will be submitted to FEMA on 3 June 1999.
- FEMA will provide comments to Lockwood Greene regarding the "existing conditions" model between 16 June and 23 June 1999.
- Lockwood Greene will incorporate comments and resubmit the final "existing conditions" model on 30 June 1999 (assuming no radical changes are required by FEMA from the original submittal).
- Lockwood Greene will present the CLOMR within a day or two of submittal of the final "existing conditions" model.
- FEMA, assuming they agree with the "existing conditions" final model, will issue a letter of notification to the communities during the early part of July. The

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Mr. George Gregory
27 May 1999
Page 3 of 4

notification will indicate a public meeting date in late July possibly as early as the third week of July, which will kick off the 90-day public comment period.

- At the conclusion of the public comment period, approximately two weeks will be required to issue a Letter of Final Determination (LFD) directing the communities to use the "existing conditions" model as the basis of the floodplain management along this area.

During this meeting on May 24, FEMA agreed that Richland County/Burroughs and Chapin/Lockwood Greene would be allowed to present the CLOMR model and maps during the public meeting in late July. FEMA agreed that it would be beneficial to have as much support as possible of the adjacent communities such as City of Columbia, City of Cayce, and Lexington County prior to the public comment kick-off meeting.

There are several comments regarding this strategy:

1. The "existing conditions" model does not consider the presence of the levee system on the Manning Farm at all in calculation of the Richland County BFEs and floodway. This does not, in Lockwood Greene's opinion, accurately reflect the correct theoretical floodway since it ignores the presence of a major topographical feature. This "existing conditions" model will describe the "regulatory" floodway which is FEMA's only concern.
2. The "existing conditions" model will provide a basis from which we can demonstrate the impact on the floodway or BFE for the adjacent communities.
3. It allows FEMA to present a final "existing conditions" model and map which reflects minor changes from those presented in March, 1999. It is recognized that this may result in some bad press for our team, but it should result in having Lexington County and Cayce to more readily accept this map as the final base maps, since they had already acknowledged their acceptance of the March, 1999, maps.
4. There is always the risk during the public comment period that some additional information will be brought out that will challenge either our numbers or our strategy for development. Although our data is well researched and defensible, it is important to note that there are different opinions regarding the variables involved in developing the hydrological and hydraulic data used as input for the model.

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Mr. George Gregory
27 May 1999
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In summary, we believe this is the best approach to achieving the desired goal of realigning the floodway. Although it is not possible to get any commitments from FEMA prior to the submittal of our final data, they are in agreement with this approach. We believe this approach will yield the quickest resolution.

Sincere regards,

LOCKWOOD GREENE



H. Wilson Tillotson

cc: Mr. Lane Fowler
Mr. Doug Wendell
Mr. Martin Becker
Mr. Bill Diffenderfer
Mr. Carroll Walker
Mr. Perry Holcombe

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CV013372

BURROUGHS & CHAPIN COMPANY, INC.
Board of Directors Meeting
January 26, 1999

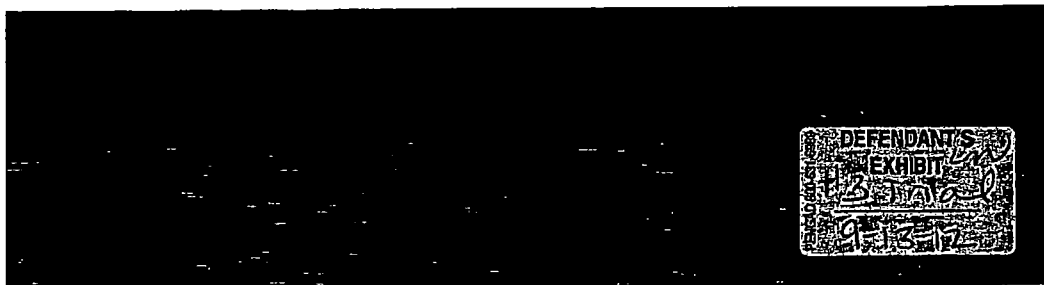
A meeting of the Directors of Burroughs & Chapin Company, Inc. was held in the boardroom at the Corporate office in Myrtle Beach, South Carolina, on Tuesday, January 26, 1999 at approximately 10:00 a.m.

Present were:

J. Egerton Burroughs, Chairman
Larry L. Biddle
Timothy E. Bryant
Henry B. Burroughs, Jr.
Claire C. Cook
Timothy G. Dargan
Harold Hartshorne, Jr., Director Emeritus
Hal B. Holmes, Jr.
David L. Maynard
Edward G. Menzie
Clifford E. Roemer
W. J. Smith, Jr.
Randall A. Bossé, Senior Leader Commercial Real Estate
Sandra T. Brown, Executive Assistant
Patrick Dowling, Senior Leader Image & Identity
George T. Gregory, III, Senior Leader Image & Identity
Richard Hair, Senior Leader Amusements & Attractions
Franklin J. Long, Senior Leader Real Estate Administration,
Corporate Secretary
Elwin Miles, Senior Leader Resorts
William F. Pritchard, Senior Leader Building Capacity to Move/Support
Marshall C. Smith, Senior Leader Real Estate
Barry R. Spivey, Vice President Finance & Accounting
Tom Tobin, The Tobin Group, Inc.
James J. Walker, Senior Leader Budget, Audit & Proformas
Douglas P. Wendel, President & CEO
Thomas M. Wheatley, Senior Leader Building Capacity to Move/Support,
Corporate Treasurer

Douglas P. Wendel, presiding, called the meeting to order at approximately 10:00 a.m. and stated a quorum was represented.

Following a brief review, Dr. Hal B. Holmes, Jr. made a motion, seconded by David L. Maynard, duly passed, to adopt the Board of Directors Meeting Minutes of December 22, 1998 as presented.



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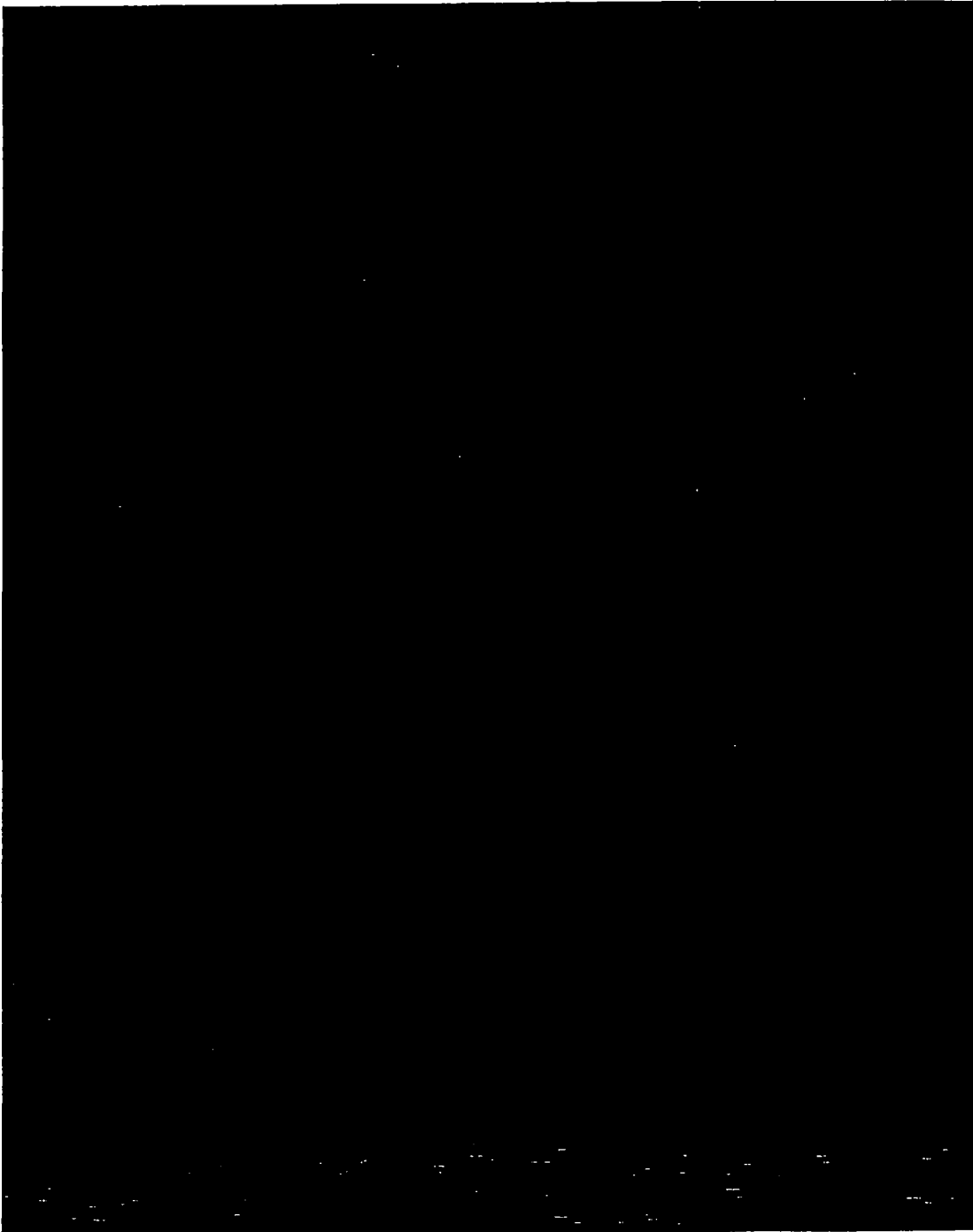
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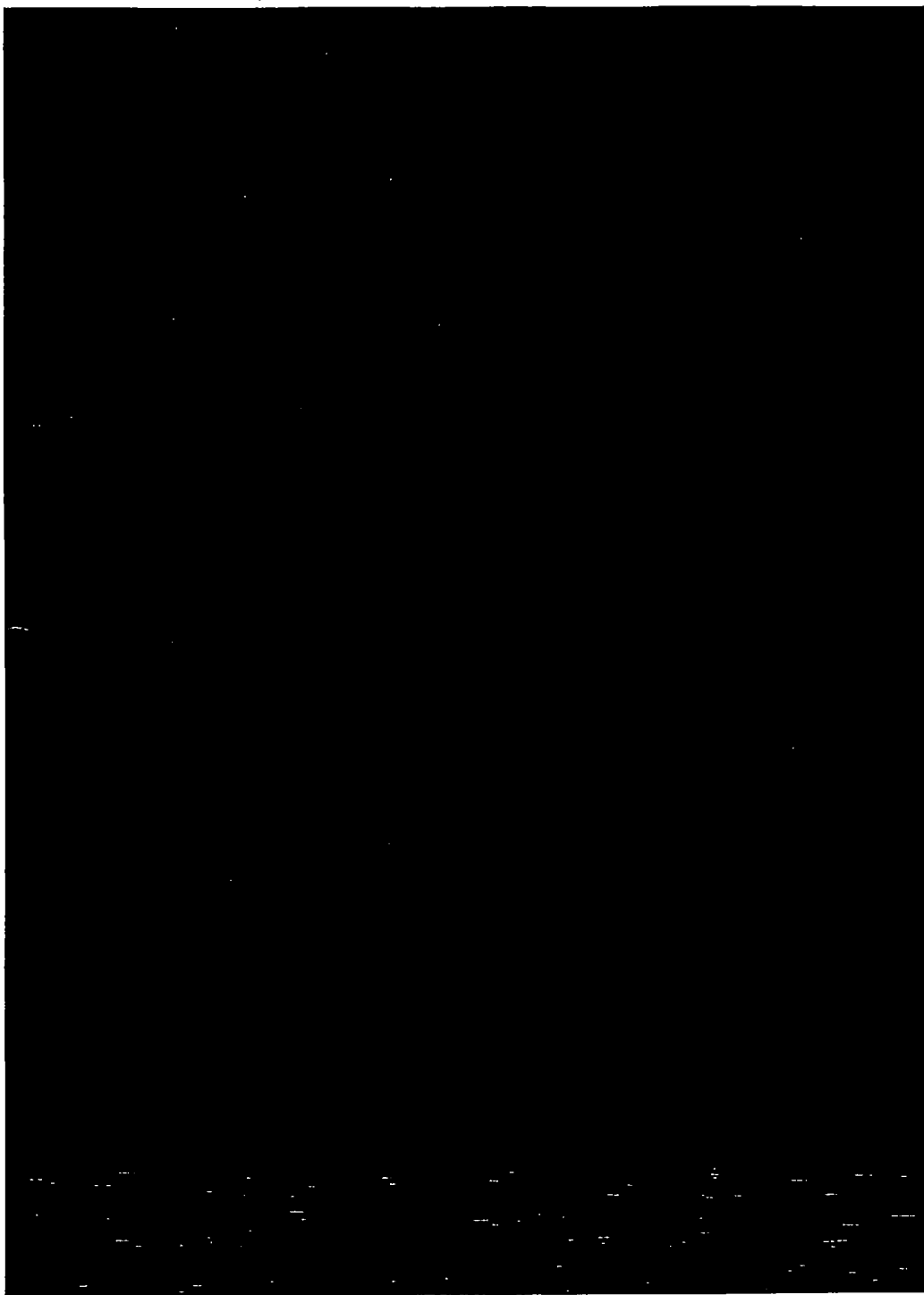
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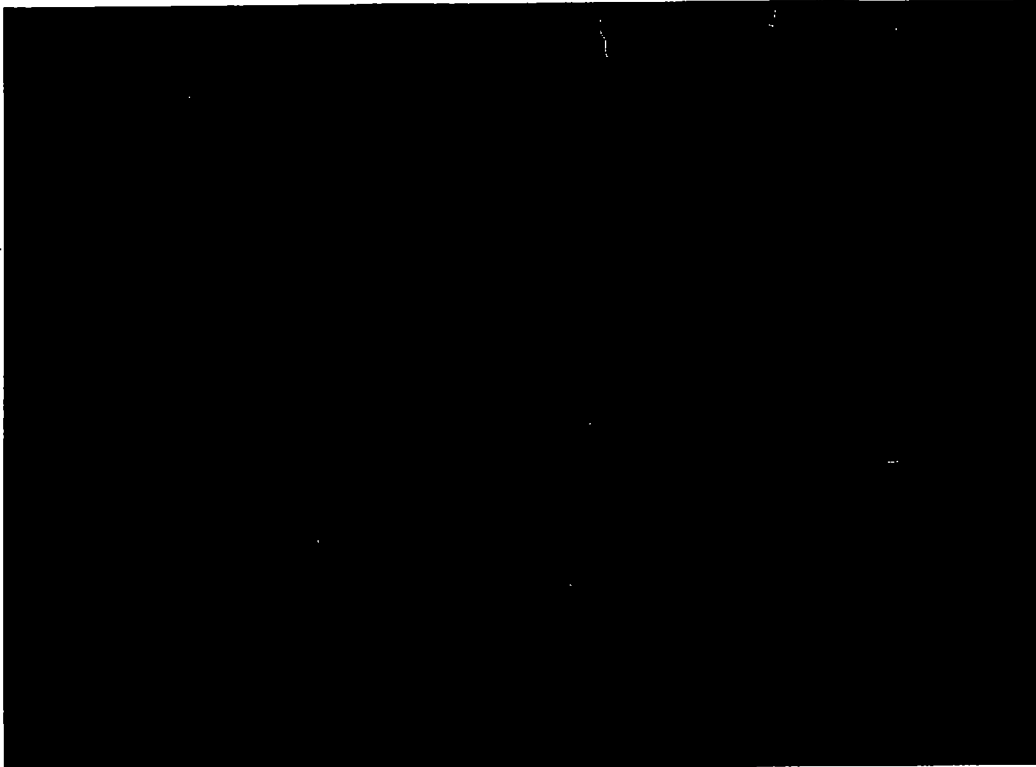
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■ Major Legal Activities . . . George Gregory

Following a detailed presentation by Mr. George T. Gregory on the Columbia property purchase and Board discussion, Timothy G. Dargan made a motion, seconded by David L. Maynard, duly passed, to authorize and empower the company to proceed with the purchase of approximately 4800 acres located at the Intersection of I-77 and Bluff Road, Columbia, South Carolina based on the following criteria. Director Edward G. Menzie abstained due to a possible conflict of interest.

- Burroughs & Chapin would secure a 20% ownership interest without a cash contribution as a result of it putting the project together. The balance of the funds would come from a minimum of four investors totaling \$20,000,000.
- Burroughs & Chapin will serve as the lead developer and manage the project for a 5% fee of the net profits generated on the project above and beyond the initial investment of the development group.
- A commitment is obtained from FEMA to take the property out of the floodway classification upon dike improvements and an ongoing maintenance agreement.
- That an agreement can be negotiated with Richland County to

assume the maintenance of the dike system, to insure proper zoning can be achieved to implement a mixed-use project and obtain assurance that Richland County will be receptive to a development agreement, which will include some infrastructure funding via incremental tax growth grants.



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There being no further business, the meeting was adjourned.

J. Egerton Burroughs
Chairman Of The Board

Franklin J. Long
Corporate Secretary

Board Mtg. Min. 1-99

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BURROUGHS & CHAPIN COMPANY, INC.
Board of Directors Telephonically Conferenced Meeting
February 9, 1999

A meeting via telephone conference of the Directors of Burroughs & Chapin Company, Inc. was held at the Corporate office in Myrtle Beach, South Carolina, on Tuesday, February 9, 1999 at approximately 12:30 p.m.

Present were:

J. Egerton Burroughs, Chairman
Henry B. Burroughs, Jr.
Larry L. Biddle
Timothy E. Bryant
Claire C. Cook
Timothy G. Dargan
Hal B. Holmes, Jr.
David L. Maynard
Edward G. Menzie
Clifford E. Roemer
W. J. Smith, Jr.
Sandra T. Brown, Executive Assistant
George T. Gregory, III, Corporate Counsel
Douglas P. Wendel, President & CEO
Thomas M. Wheatley, CFO
Mike Ey, McNair Law Firm
Judith McInnis, McNair Law Firm
James Moore, McNair Law Firm

Douglas P. Wendel, presiding, welcomed the Directors and presented the following prefatory comments reference the Board approved purchase of approximately 4,800 acres located at the Intersection of I-77 and Bluff Road, Columbia, South Carolina. Mr. Wendel stated that good progress had been made toward closing on the Columbia property tract. George Gregory has worked to pull the package together relying heavily on the McNair Law Firm staff in Columbia, South Carolina, in particular Attorneys Judith McInnis, Mike Ey and Jimmy Moore with the assistance of numerous others for the due diligence work.

Mr. Wendel stated the teleconference meeting was being held to update the Board on the progress made to date. Mr. Gregory then presented the following overview assisted by Attorneys Judith McInnis, Mike Ey and Jimmy Moore:



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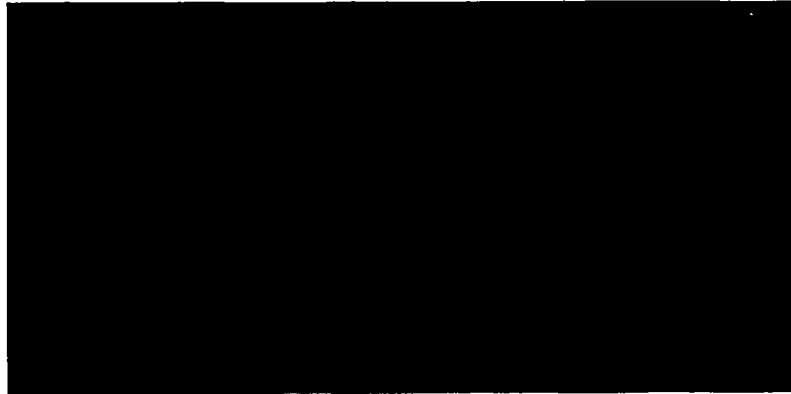
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Mr. Wendel stated some of the partners had expressed concern that Burroughs & Chapin Company, Inc. did not have a monetary investment in the purchase of the property. The Board expressed their understanding. Mr. Wendel stated, as a result, he is recommending Burroughs & Chapin Company acquire an additional 10% interest for \$3,000,000. This would give the company a 30% ownership. Mr. Wendel noted he felt the additional 10% interest provided the company with a unique opportunity to secure a "rainy day" fund that could be used to maintain a dividend stream or payment of debt service should it be necessary in the future. Mr. Wendel also noted he had conferred with Tom Wheatley and asked him to give consideration to which projects the company could pull back on to accommodate the additional expenditure. Following a review and Board discussion, Dr. Hal B. Holmes, Jr. made a motion, seconded by Timothy G. Dargan, duly passed, to authorize management to secure an additional ten percent (10%) ownership interest for a \$3,000,000 cash contribution. Director Edward G. Menzie abstained due to a possible conflict of interest.

Attached is the resulting amended Resolution reflecting the Board's authorization to secure an additional ten (10%) percent interest for Three (\$3) Million Dollars contingent upon management meeting other Board conditions for purchase.

Be it therefore resolved at the Board of Directors Meeting of BURROUGHS & CHAPIN COMPANY, INC. and MYRTLE BEACH FARMS COMPANY, INC., a corporation organized and existing under the laws of the State of South Carolina (the "Company") held on January 26, 1999, that Timothy G. Dargan made a motion, seconded by David L. Maynard, duly passed (Director Edward G. Menzie abstained due to a possible conflict of interest), and via a teleconferenced meeting on February 9, 1999 on a motion by Timothy G. Dargan, seconded by Dr. Hal B. Holmes, Jr., duly passed (Director Edward G. Menzie abstained due to a possible conflict of interest), to authorize and empower the Company, by its authorized officers to proceed with the purchase of approximately four thousand eight hundred (4,800) acres located at the Intersection of I-77 and Bluff Road, Columbia, South Carolina based on the following criteria:

Burroughs & Chapin would secure a 20% ownership interest without a cash contribution as a result of it putting the project together, and an additional ten percent (10%) ownership interest for a Three Million Dollar (\$3,000,000) cash contribution. The balance of the funds to purchase the tract would come from a minimum of four investors totaling \$17,000,000 in cash.

Burroughs & Chapin will serve as the lead developer and manage the project for a 5% fee of the net profits generated on the project above and beyond the initial investment of the development group.

A commitment is obtained from FEMA to take the property out of the floodway classification upon dike improvements and an ongoing maintenance agreement.

That an agreement can be negotiated with Richland County to assume the maintenance of the dike system, to insure proper zoning can be achieved to implement a mixed-use project and obtain assurance that Richland County will be receptive to a development agreement, which will include some infrastructure funding via incremental tax growth grants.

RESOLVED, FURTHER, that in connection with the above referenced transaction, the authorized officers, are hereby authorized, empowered and directed to execute and deliver all other instrument or documents as may be necessary or appropriate in the sole discretion of the Authorized Officers to effectuate and consummate the transaction above described; and

RESOLVED, FURTHER, that the Authorized Officers are authorized to take such further action as is necessary or advisable to carry out the purpose and intent of the foregoing resolution.

Mr. Wendel thanked the Directors for their time and stated he would update them as events transpired. He reassured the Board when the deadline neared, he would closely examine the status of all the components of the transaction and make a decision within the guidelines established by the Board for purchase of the property.

There being no further business, the meeting was adjourned at approximately 1:15 p.m.

Douglas P. Wendel
President & CEO

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J. Egerton Burroughs
Chairman Of The Board

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BURROUGHS & CHAPIN COMPANY, INC.
Board of Directors Telephonically Conferenced Meeting
February 15, 1999

A meeting via telephone conference of the Directors of Burroughs & Chapin Company, Inc. was held at the corporate office in Myrtle Beach, South Carolina, on Monday, February 15, 1999 at approximately 9:30 a.m.

Present were:

J. Egerton Burroughs, Chairman
Henry B. Burroughs, Jr.
Larry L. Biddle
Timothy E. Bryant
Claire C. Cook
Timothy G. Dargan
Hal B. Holmes, Jr.
David L. Maynard
Edward G. Menzie
W. J. Smith, Jr.
Randall A. Bossé, Vice President Leasing & Development
Sandra T. Brown, Executive Assistant
George T. Gregory, III, Corporate Counsel
Franklin J. Long, Vice President Real Estate Administration & Corporate Secretary
Marshall C. Smith, Senior Vice President Residential Development, Land Management, Community & Government Relations
Barry R. Spivey, Vice President Finance & Accounting
Tom Tobin, The Tobin Group, Inc.
Douglas P. Wendel, President & CEO
Thomas M. Wheatley, Senior Vice President Support Services & CFO
Robert Calliham, Smith, Sapp, Bookhout, Crumpler, Calliham, PA
Mike Ey, McNair Law Firm
Judith McInnis, McNair Law Firm
James Moore, McNair Law Firm

Douglas P. Wendel, presiding, welcomed the Directors and presented the following prefatory comments reference the February 9, 1999 Board approved Resolution (as follows) to purchase approximately 4,800 acres located at the Intersection of I-77 and Bluff Road, Columbia, South Carolina. Mr. Wendel stated the conference call was being held to provide the Board with three options for consideration to revive the purchase of the Columbia property following a February 12, 1999 memorandum stating efforts to purchase the tract were terminated.



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Be it therefore resolved at the Board of Directors Meeting of BURROUGHS & CHAPIN COMPANY, INC. and MYRTLE BEACH FARMS COMPANY, INC., a corporation organized and existing under the laws of the State of South Carolina (the "Company") held on January 26, 1999, that Timothy G. Dargan made a motion, seconded by David L. Maynard, duly passed (Director Edward G. Menzie abstained due to a possible conflict of interest), and via a teleconferenced meeting on February 9, 1999 on a motion by Timothy G. Dargan, seconded by Dr. Hal B. Holmes, Jr., duly passed (Director Edward G. Menzie abstained due to a possible conflict of interest), to authorize and empower the Company, by its authorized officers to proceed with the purchase of approximately four thousand eight hundred (4,800) acres located at the Intersection of I-77 and Bluff Road, Columbia, South Carolina based on the following criteria:

Burroughs & Chapin would secure a 20% ownership interest without a cash contribution as a result of it putting the project together, and an additional ten percent (10%) ownership interest for a Three Million Dollar (\$3,000,000) cash contribution. The balance of the funds to purchase the tract would come from a minimum of four investors totaling \$17,000,000 in cash.

Burroughs & Chapin will serve as the lead developer and manage the project for a 5% fee of the net profits generated on the project above and beyond the initial investment of the development group.

A commitment is obtained from FEMA to take the property out of the floodway classification upon dike improvements and an ongoing maintenance agreement.

That an agreement can be negotiated with Richland County to assume the maintenance of the dike system, to insure proper zoning can be achieved to implement a mixed-use project and obtain assurance that Richland County will be receptive to a development agreement, which will include some infrastructure funding via incremental tax growth grants.

RESOLVED, FURTHER, that in connection with the above referenced transaction, the authorized officers, are hereby authorized, empowered and

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directed to execute and deliver all other instrument or documents as may be necessary or appropriate in the sole discretion of the Authorized Officers to effectuate and consummate the transaction above described; and

RESOLVED, FURTHER, that the Authorized Officers are authorized to take such further action as is necessary or advisable to carry out the purpose and intent of the foregoing resolution.

Mr. Wendel stated the following three options for Board consideration and a revised term sheet were faxed to the Directors prior to the conference call.

B & C OPTIONS/COLUMBIA PROPERTY

I. Possibility be where was before financially with Alex Boone replacing Roddy Jones

<u>Joint Venture Partners</u>	<u>Contribution</u>	<u>LLC Interest</u>	<u>Misc.</u>
B & C	\$ 3 M	30% + 5% Mgmt. Fee	
Lockwood Green	\$ 2 M Cash (+ 2 M eng. work)	20%	
Regents	\$ 3 M	10%	
Alex Boone	\$ 6 M	20%	
Larry Elliott Group	\$ 6 M	20%	
Subtotal	\$20 M	100%	

Manning (\$12 M Cash/\$2 M - 6-month note/\$4 M - 2-year note)

II. Another Possible Scenario

<u>Joint Venture Partners</u>	<u>Contribution</u>	<u>LLC Interest</u>
B & C	\$ 6 M	80%

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Larry Elliott Group	\$ 6 M	20%
Total	\$12 M	100%

Manning (\$12 M Cash/\$2 M - 6-month note/\$4 M - 2-year note)

III. Another Possible Scenario

<u>Joint Venture Partners</u>	<u>Contribution</u>	<u>LLC Interest</u>
B & C	\$ 6 M	60%
Larry Elliott Group	\$ 6 M	20%
Lockwood Green	\$ 2M (+\$2 M fees)	20%
	<u>\$14M Cash</u>	<u>100%</u>

Manning (\$12 M Cash/\$2 M - 6-month note/\$4 M - 2-year note)

IV. Need Authority In Extreme Case, Should Other Partners Drop Out At Closing, for Burroughs & Chapin to Secure 100% Initial Interest in the Property and Take Down as Follows:

B & C	\$12 M	\$ 4.5 M 1031
		\$ 2.0 M 1033
		\$ 5.5 M draw on credit line
		<u>\$12.0 TOTAL</u>

Manning (\$12 M Cash/\$2 M - 6-month note/\$4 M - 2-year note)

(B & C to sell interests in the property for up to 70% to pay off credit draw and Manning notes and have working capital).

Prior to Mr. Wendel's review of the above-stated three purchase options, Director W. J. Smith, Jr., made a motion, seconded by David L. Maynard, duly passed, to decline all options presented. The Board of Directors voted as follows:

Directors Voted in Favor of the Motion

J. Egerton Burroughs, Chairman
Larry L. Biddle
Timothy E. Bryant
Henry B. Burroughs, Jr.

Directors Voted Against The Motion

Timothy G. Dargan
Dr. Hal B. Holmes, Jr.

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Claire C. Cook
David L. Maynard
W. J. Smith, Jr.

Director Edward G. Menzie abstained due to a possible conflict of interest.

Director David L. Maynard had to leave the conference call at this point due to a previously scheduled business meeting.

Mr. Wendel then reviewed the three options to purchase and further Board discussion resulted. Then, Timothy G. Dargan, made a motion, seconded by Dr. Hal B. Holmes, Jr., duly passed, to authorize and empower the Company, by its authorized officers to proceed with the purchase of approximately four thousand eight hundred (4,800) acres located at the Intersection of I-77 and Bluff Road, Columbia, South Carolina based on the approved criteria with the exception that any replacement of joint venture partners would be approved by the Board of Directors. Also, Chairman J. Egerton Burroughs requested the following Directors serve on an Ad-Hoc Committee should it be necessary to review a replacement joint venture partner: Timothy E. Bryant, Timothy G. Dargan, David L. Maynard and W. J. Smith, Jr.

Directors Voted
in Favor of the Motion

J. Egerton Burroughs, Chairman
Larry L. Biddle
Timothy E. Bryant
Henry B. Burroughs, Jr.
Claire C. Cook
Timothy G. Dargan
Dr. Hal B. Holmes, Jr.

Director Voted
Against The Motion

W. J. Smith, Jr.

Director Edward G. Menzie abstained due to a possible conflict of interest.

The decision was made to have an additional conference call at 5:30 p.m. on February 15, 1999 to provide President & CEO time to secure requested background information on any replacement joint venture partners.

There being no further business, the meeting was adjourned at approximately 10:30 a.m.

Douglas P. Wendel
President & CEO

J. Egerton Burroughs
Chairman Of The Board

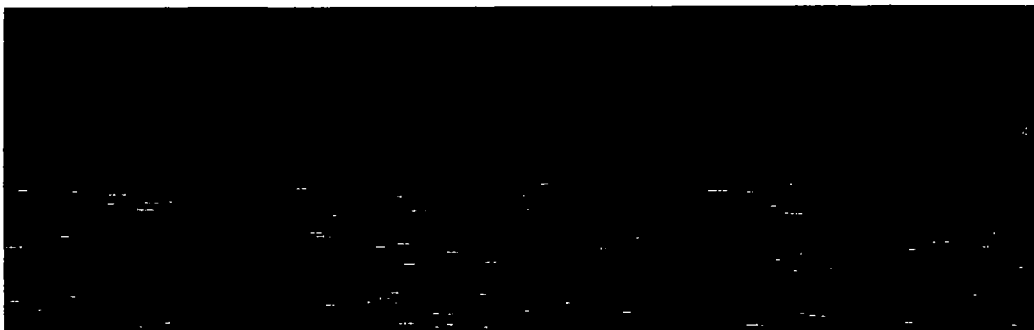
BURROUGHS & CHAPIN COMPANY, INC.
Board of Directors Telephonically Conferenced Meeting
February 15, 1999

A meeting via telephone conference of the Directors of Burroughs & Chapin Company, Inc. was held at the Corporate office in Myrtle Beach, South Carolina, on Monday, February 15, 1999 at approximately 5:30 p.m.

Present were:

J. Egerton Burroughs, Chairman
Larry L. Biddle
Timothy E. Bryant
Claire C. Cook
Timothy G. Dargan
Hal B. Holmes, Jr.
David L. Maynard
Edward G. Menzie
W. J. Smith, Jr.
Sandra T. Brown, Executive Assistant
George T. Gregory, III, Corporate Counsel
Barry R. Spivey, Vice President Finance & Accounting
Douglas P. Wendel, President & CEO
Thomas M. Wheatley, Senior Vice President Support Services & CFO
Mike Ey, McNair Law Firm
Judith McInnis, McNair Law Firm
James Moore, McNair Law Firm

Douglas P. Wendel, presiding, welcomed the Directors and stated Franklin J. Long had two Resolutions for Board discussion and action prior to discussing the purchase of approximately 4,800 acres located at the Intersection of I-77 and Bluff Road, Columbia, South Carolina.



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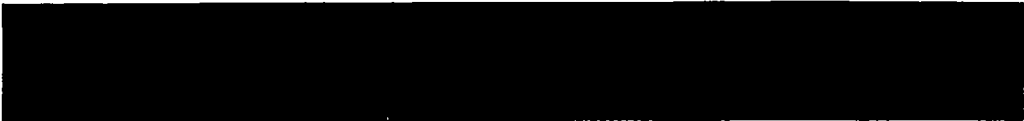
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Mr. Wendel then presented brief information secured since the 9:30 a.m. conference call on potential replacement joint venture partners and noted he expected to receive additional detailed information on February 16, 1999. Following Board discussion, the decision was made for President & CEO to continue to pursue replacement joint venture partners and schedule a conference call when he had additional information to provide the Board.

There being no further business, the meeting adjourned at approximately 6:00 p.m.

Douglas P. Wendel
President & CEO

J. Egerton Burroughs
Chairman Of The Board

BURROUGHS & CHAPIN COMPANY, INC.
Board of Directors Telephonically Conferenced Meeting
February 16, 1999

A meeting via telephone conference of the Directors of Burroughs & Chapin Company, Inc. was held at the Corporate office in Myrtle Beach, South Carolina, on Tuesday, February 16, 1999 at approximately 4:30 p.m.

Present were:

J. Egerton Burroughs, Chairman
Henry B. Burroughs, Jr.
Larry L. Biddle
Timothy E. Bryant
Claire C. Cook
Timothy G. Dargan
Hal B. Holmes, Jr.
David L. Maynard
Edward G. Menzie
W. J. Smith, Jr.
Sandra T. Brown, Executive Assistant
George T. Gregory, III, Corporate Counsel
Barry R. Spivey, Vice President Finance & Accounting
Douglas P. Wendel, President & CEO
Thomas M. Wheatley, CFO
Judith McInnis, McNair Law Firm
James Moore, McNair Law Firm

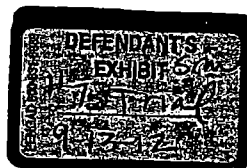
Douglas P. Wendel, presiding, welcomed the Directors and stated the purpose of the conference call was to provide the Board with additional information on potential joint venture replacement partners for the Board approved purchase of approximately 4,800 acres located at the Intersection of I-77 and Bluff Road, Columbia, South Carolina. Mr. Wendel then reviewed the following proposal to allow closing on the tract:

- \$18 Million Sales Price for Entire Tract
- Raise as much as can for Wednesday, February 17, 1999, closing and have Burwell Manning agree to accept this amount and take the balance as a joint venture partner in the LLC with an option to sell his interest to "An Acceptable Joint Venture Partner" to the Manager (Veto Right) and other joint venture partners or at his option take sale proceeds for his equity in the project.

For Example:

Joint Venture	Equity	Percent

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<u>Partner</u>	<u>Contribute</u>	<u>Interest</u>
Burroughs & Chapin	\$3	30%
Lockwood-Groene	\$2	20%
Regents	\$3	10%
Wade Nichols	\$3	10%
Sub-Total	\$11	70%
Manning Share	\$ 7	30%
TOTAL	\$18	100%

Manning has the right to sell his 30% to an acceptable JVP for up to \$9 Million for his 30% share or accept \$8 Million (One Million Bonus) from sale proceeds (one time option to be exercised upon first major sale(s) up to \$4 Million Dollars). Once decision is made follows the Operating Agreement.

Thus: 1) Mr. Manning receives a \$2 Million Bonus for Staying In (e.g. 30% interest valued at \$9M for \$7M equity share investment)

2) Mr. Manning also receives a \$2M bonus for up to \$9M to an acceptable JV Partner

or

2) If he wishes to take proceeds from sale of parcels of the property to cash out. He would receive a \$1M bonus or \$8M in proceeds.

• Other Operating Agreement components as drafted remain in tact.

• Another option could be for Burwell Manning to take notes secured by property for his \$7M share. He would agree to release property for sale of parcels to pay off notes or, at his option at sale of first parcel, can decide to stay in the deal at 30% partner.

Mr. Wendel noted he felt it would be difficult for the joint venture partners replacement issue to be resolved by the scheduled closing date of February 17, 1999, but that Mr. Manning had verbally indicated he would give an extension on this date.

Following Board discussion, J. Egerton Burroughs made a motion, seconded by Dr. Hal B. Holmes, Jr., unanimously approved, to adopt the following Resolution reference the purchase of approximately 4800 ± acres located at the Intersection of I-77 and Bluff Road, Columbia, South Carolina:

BOARD OF DIRECTORS MEETING

OF BURROUGHS & CHAPIN COMPANY, INC. AND
MYRTLE BEACH FARMS COMPANY, INC.

Be it therefore resolved at the Board of Directors Meeting of BURROUGHS & CHAPIN COMPANY, INC. and MYRTLE BEACH FARMS COMPANY, INC., a corporation organized and existing under the laws of the State of South Carolina (the "Company") via a teleconference meeting on February 16, 1999, that J. Egerton Burroughs made a motion, seconded by Dr. Hal B. Holmes, Jr., unanimously passed, (Director Edward G. Menzie abstained due to a possible conflict of interest), to authorize and empower the President & CEO to proceed with the purchase of approximately four thousand eight hundred (4,800) acres located at the Intersection of I-77 and Bluff Road Columbia, South Carolina based on the following criteria:

Myrtle Beach Farms, Inc. to contribute Three Million Dollars in cash and other good and valuable consideration for a thirty (30%) percent interest with the Burroughs & Chapin Management Company L.L.C. becoming the Manger, of the newly formed L.L.C. owning the property under the basic provisions of the proposed operating agreement

Additional acceptable investors contributing a minimum of Eight Million Dollars

Burwell Manning becoming an investor for the balance of the sales price, with Mr. Manning's interest being redeemable

The undersigned, Franklin J. Long, duly sworn, deposes and says that he is the Secretary of Burroughs & Chapin Company, Inc. and Myrtle Beach Farms Company, Inc., and has possession of the books and records of same and that the foregoing is an accurate excerpt of the Minutes as reflected corporate books.

Following a brief discussion reference conferring with attorneys on the use of 1031 funds, J. Egerton Burroughs made a motion, seconded by Henry B. Burroughs, Jr., unanimously approved, to authorize management to pursue use of 1031 funds for the equity investment for the purchase of the above described property.

Chairman J. Egerton Burroughs stated he had given great consideration to the idea of selling acreage of the Columbia property to an environmentalist group and felt it was not in the best interest of the company.

Mr. Wendel stated he would continue to keep the Board up to date on developments of the closing of the property.

There being no further business, the meeting was adjourned at approximately 4:50 p.m.

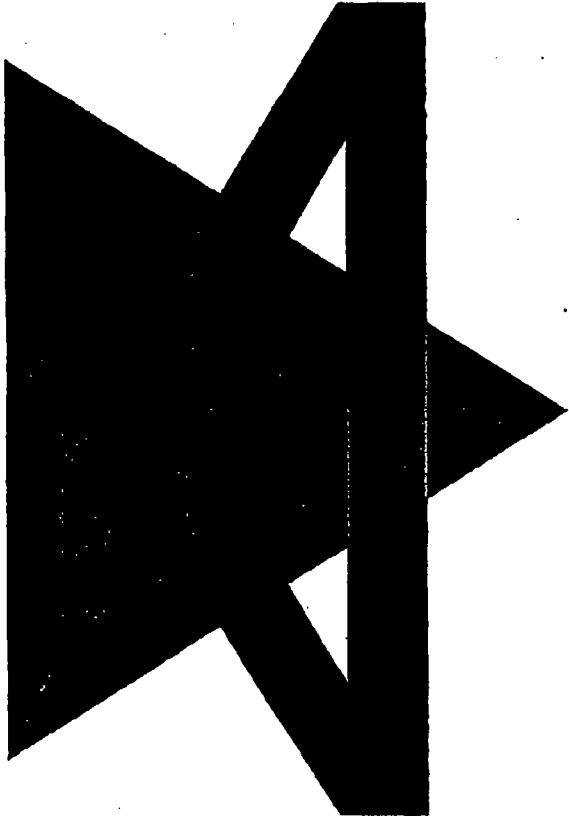
Douglas P. Wendel
President & CEO

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J. Egerton Burroughs
Chairman Of The Board

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Burroughs & Chapin, Co., Inc.

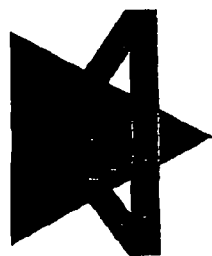
Columbia Venture Exit Strategy Presentation



Parameters

1. Having the exit from Columbia be done in a professional and responsible manner
2. Irrespective of our involvement or not, the project is a good one for the midlands and our state. To that end, we should protect the following:
 - a) The city of Columbia's ability to get additional land for expansion;
 - b) Heathwood Hall's ability to expand and grow
 - c) The University of South Carolina's ability to anchor a major research park
 - d) The State of South Carolina's interest regarding anti-terrorism centers

Details for the protection of these interests will be discussed throughout the presentation.



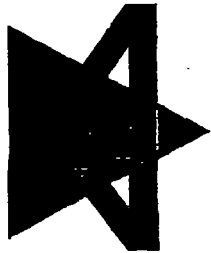
Parameters

- Being able to exit in as quick a manner as reasonably possible
- Keep in mind our fiduciary responsibilities to our other CV members as well as Burroughs & Chapin shareholders to try to return a reasonable exit value
- Keep costs controlled



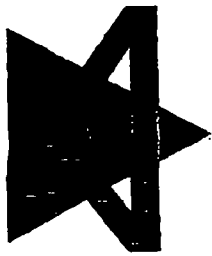
City of Columbia Status

- The City of Columbia is on official notice that their WWTP is in need of protection.
 - 1. Cannot Expand
 - 2. No Permitting/Building
- Mayor Coble is in favor of the River Levee upgrade.
- The City had Dr. Ken Humphries and Wilbur Smith and Associates review their options.
- Two scenarios of “no rise” were presented to the mayor and his council at a recent retreat.
 - 1. Ring levee around the WWTP
 - 2. Upgrade the River Levee (modified Coble Plan)
- City to vote on desired option December 12, 2001.



Pending Lawsuit

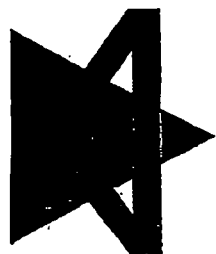
- The filing of the appeal was crucial to our ability to create a viable exit strategy
- FEMA has 60 days from the appeal filing (which was October 19, 2001) to answer
- We have yet to receive an answer
- Judge Matthew Pery has been assigned the case
- We will need to continue it until we have completed our exit
- Suit may change complexion



Columbia Venture LLC

Ownership By Class

<u>All Participating</u>	<u>Class A</u>	<u>Class C</u>	<u>Class B</u>	<u>Total</u>	<u>Ownership %</u>	<u>Voting %</u>
Burroughs & Chapin	3,000		6,000	9,000	42.0%	45.4%
NLFB	3,000			3,000	14.0%	15.1%
Regent Columbia	2,000	1,000		3,000	14.0%	15.1%
Green Diamond	450			450	2.1%	2.3%
Carolina First	1,375	1,625		3,000	14.0%	6.9%
Lockwood			3,000	3,000	14.0%	15.1%
Total Shares By Class	<u>9,825</u>	<u>1,625</u>	<u>10,000</u>	<u>21,450</u>	<u>100.0%</u>	
			<u>1,625</u>			
Total Voting Shares 19,825						

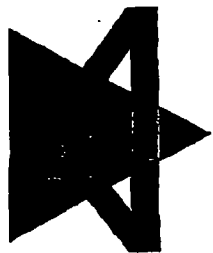


General Return Requirements

➤ Cash Requirements For Loans, Credit Lines, Payables
\$14,000,000

➤ Cash Needed To Make Partners Whole
\$20,000,000

➤ Total Cash Required
\$34,000,000



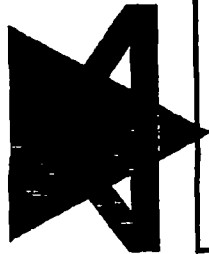
Options

- Breakdown of the property/map
- Straight Land Sale
- Quarry
- Conservation Easements

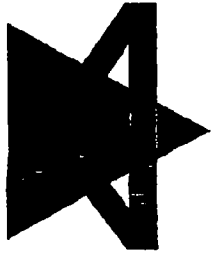
Columbia Venture Project

Breakdown of Area Inside and Outside of Floodway

20 November 2001



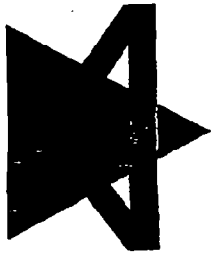
Location	Outside Floodway	Inside Floodway
North of I-77	450	675
Gills to I-77	360	1510
South of Gills	415	990
Total	1225	3175
North of Intermediate levee- Levee Section 1	590	840
South of Intermediate to Gills-Levee Section 2	220	1345
South of Gills-Levee Section 3	415	990
Total	1225	3175



Straight Property Sale

<u>Pro's</u>	
4400 acres	"Quick Out"
<u>x\$2000 acre</u>	
\$8,800,000 yield	<u>Con's</u>
<704,000>less commission	"Last Resort"
\$8,096,000	"Low Yield"
	"Politically Damaging"

Assessment – not really a viable option.

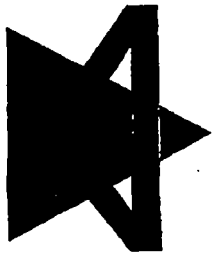


Granite Quarry

There is a considerable pocket of granite located on the Green Diamond property.

We have contacted the Florida Rock Company and they have expressed a strong interest in looking at the property. Their chief real estate and acquisition expert, Mr. Scott McCaleb was in Columbia on November 28th and 29th to see the property and review exhaustive detail of granite borings of the site that Columbia Venture has via the property's prior owner.

We will follow this lead and report the prospects to the Board at the appropriate time.



Conservation Easements

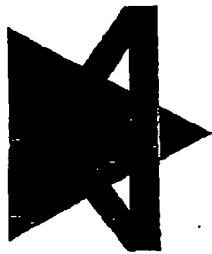
➤ What is a Conservation Easement?

➤ What is required?

➤ Who can challenge it?

➤ Two basic tests:

1. The "Conservation Purposes" Test – The more significant the land is, the more it adds to the public good and the more likely it will meet the test for the deduction. If you are protecting a large tract of undeveloped property with scenic and open spaces with potential animal and plant habitat located by a scenic river, then you are likely to qualify.
2. The "Value" Test – For tax purposes, easements can be valued at a price where you could sell it if it were put to its most valuable economic use that is possible under the circumstances. The basic rule is that the value of the gift is equal to the difference between the value of the property before the easement and the value of the property after the easement.



The Appraisal

- Marty Van Sant
- Requirements from CV and Bill Boyd
- Used the Developmental Approach (Built-Out)
- Accepted IRS methodology
 - Valued each individual parcel using the "Federal Rule" which is referred to as the "before value" analysis. The built-out numbers are discounted back to today's numbers because we would have had a time-line development over a number of years. (Time Value Analysis)
- Used the EDSA land use plan (not sight specific)
- Used peer review on numbers and methodologies.
Additional sign-off by certified appraiser



The Appraisal

- Actually site visited other areas for R & D portions of the plan in places like Raleigh, N.C. at the triangle research area. This was done to get more comfort on research piece.
- Very comfortable on the residential portion and the projected absorption rate.
- Letter of Restricted Valves (qualifiers, sales, analysis) meets South Carolina state law and IRS code requirements.
- Next step is "Highest and Best" use analysis. Have to define and give a complete description of each unit. Engineering details will come into this phase. (Yield Plan)
- Top of the line analysis. No room to have values questioned. (Probable higher yield)

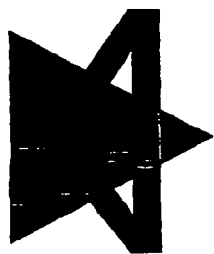
Levee Section II

Gross Acreage: 1,405

Parcels: 40 thru 59, 61 thru 63 and 65

<u>Conservation Easement</u>	<u>Residual Use</u>	<u>Retained Development Rights</u>
“Before” Single Family Residential Allocated to Levee I. Golf Course Acreage, and 1st Upscale Hunt Club		Recreation, Agriculture, Hunt Club
“After” Encumbered Against Active Development		None
<u>Estimated</u> <u>Contribution:</u>	Net Easement Value: \$6, 432, 044	Net Income: \$-0-

Strategy:



Levee Section III

Observations:

- Unlikely to be Approved for Proposed Uses
- Existing Market for the Residual Use

Levee Section II

Gross Acreage: 1,565

Parcels: 16, 17, 19, 20, 23, 27 thru 29



Strategy:

<u>Conservation Easement</u>	<u>Residual Use</u>	<u>Retained Development Rights</u>
"Before" Mixed-Use Residential, Commercial, Research & Dev and 2nd Phase of Upscale Hunt Club		Recreation and Agriculture
"After" Encumbered Against Active Development		None
<u>Estimated Contribution:</u> Net Easement Value: \$54, 235, 021	Net Residual Value: \$3,130,000	Net Income: \$-0-



Levee Section II

Observations:

- Existing Market for the Residual Use

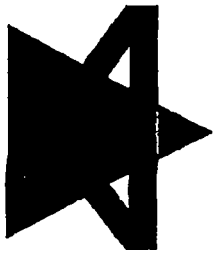


Levee Section I

Gross Acreage: 1,430

Parcels: 1 thru 9, 11 thru 15, 18, 21, 22 and 24

Strategy:	<u>Conservation Easement</u>	<u>Residual Use</u>	<u>Retained Development Rights</u>
	"Before" Mixed-Use Residential, Commercial, Golf Course "After" Encumbered Against Active Development		Recreation and Agriculture None
Conservation Easement:	Net Easement Value: \$64, 480, 500	Net Residual Value \$2,860,000	Net Income: \$-0-



Levee Section I

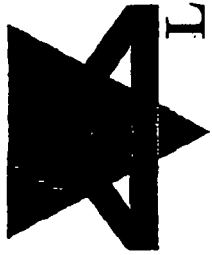
Observations:

- Gives us flexibility if the levees are upgraded
- Can be sold at development property prices
- Bulk of value for easement purposes
- Cannot wait forever on the City of Columbia
- Have to work around future needs of Columbia, Heathwood Hall, University and State

Summary

Estimated Contribution

	Net Easement Value	Net Residual Income	Net Development Income	Totals
Levee Section I	\$64,480,500	\$2,860,000	\$ -0-	\$64,480,500
Levee Section II	\$58,590,750	\$3,130,000	\$ -0-	\$62,946,479
Levee Section III	\$6,432,044	\$2,810,000	\$ -0-	\$9,242,044
Estimated Easement Totals	\$129,503,394		\$ -0-	\$138,033,394
Estimated Cash Value @ 25%	\$32,375,848	\$8,800,000	\$ -0-	\$41,175,848
Per Gross Acre Value				\$9,358/Acre

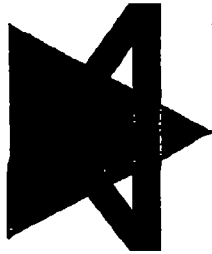


General Assumptions

Levee Sections I & II

Income:

- Mixed Use Residential: 4,067 Units with a Blended Retail Land Value of \$37,500/DU
- Mixed Use Research Park: 310 Acres Valued at \$217,800 per Acre
- Highway Commercial: 56 Acres Valued at \$108,900 per Acre
- 2nd Phase of Hunt Club – 60 members
- Residual Use: Recreation and Agriculture blended price 2,000/acre
- Balance of Products: Gross Value of \$11,344,474



General Assumptions

Levee Section III

Income:

- Single Family Residential: 540 Units (Allocated to Levee I Golf Acreage) with a Blended Retail Land Value of \$30,000/DU
- First Phase of Hunt Club: 60 members

Expenses:

- Direct Development Costs: 20% of Residential Retail Values and "Netted-Out" of All Other Products
- Sales & Marketing Costs: 6-8% Product Specific and Based on Recent Conservation Easement Appraisals
- Real Estate Tax and POA Fees: Not Addressed
- General & Administration: 2% Based on Recent Conservation Easement Appraisals
- Entrepreneurial Profit: 15% Based on Recent Conservation Easement Appraisals
- Discounting Factor: 12% Based on Recent Conservation Easement Appraisals



Tax and Legal Considerations

- Frank Cureton (Certified tax specialists with Haynsworth Sinkler Boyd)
- These are four statutorily defined conservation purposes for property. The one that most likely will be used by CV is:
 - The preservation of open space (including farmland and forest land) where such preservation is for the scenic enjoyment of the public, or pursuant to a clearly delineated Federal, State or local government conservation policy and will yield a significant public benefit.



Tax and Legal Considerations

Legal Issues

- Columbia Venture's current classes of membership (A,B, & C shares), create one new class of D shares
- Change from a manager-managed LLC to a member managed LLC
- All new LLC members have to be in place at the time of the easement
- Minimize securities law problems
 1. New members should make all decisions concerning post closing transactions (including the conservation easements themselves)
 2. Better to have 1 or 2 larger purchasers
 3. Disclosures – remember, all IRS approved methods used
- Documents:
 1. Amended Articles and Operating Agreements
 2. Subscription Agreements
 3. Disclosure Documents
 4. Easement Documents



Tax and Legal Considerations

Structure

➤ Resolution Abandoning Development

Plans

➤ Marketing of Interests

➤ Subscription Agreements

➤ Closing

➤ Post-Closing



Tax and Legal Considerations

Tax Considerations

- Distribution vs. Disguised sale (current member of CV)
- Distribution vs. Disguised sale (new members)
- Individuals – 30% of AGI
- Corporations – 10% of AGI
- Any unused amount carried forward for the five (5) succeeding years

Other

- Holding Periods
- Property held for investment as opposed to inventory like a dealer



Marketing

- Why would anyone want to buy such an animal?
- Sphere of Influence
- Big Game Hunting
- Banks, CPA Firms
- Is there a market?



Illustrative Sales Analysis

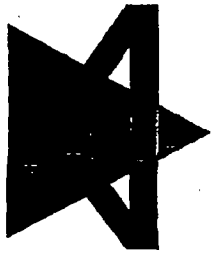
Return on Investment

Assumptions	Line Item Description	Investment Amount	Out of Pocket	1 st qrt	2 nd qrt	3 rd qrt	4 th qrt	Totals
25% of Gross Deduction Amount \$4,000,000 Deduction=\$1,000,000 Investment	Investment	1,000,000						1,000,000
90% of Investment	Loan Proceeds Equity (10%)	900,000	(100,000)					900,000 (100,000)
10% of Investment	Loan Costs (7%)							(63,000)
7% of Loan Proceeds Paid Quarterly	Loan Repayment			(15,750)	(15,750)	(15,750)	(15,750)	(63,000)
Fourth Quarter Recapture of Equity	Equity Recapture					(800,000)	(100,000)	(300,000)
						(100,000)		(100,000)
40% of Gross Tax Deduction Amount (Individual)	Tax Benefits			400,000	400,000	400,000	400,000	1,600,000
Sum of Equity, Loan Costs, and Loan Repayment	Net Cash Position		(100,000)	384,250	384,250	384,250	615,750	437,000
Cumulative Net Cash Position	Cumulative		(100,000)	284,250	668,500	1,052,750	437,000	
Annualized Internal Rate of Return	IRR-	376.19%						



Potential Options

1. Jefferson Development
2. SCANA
3. Hinson



Sale Out of the Floodway

Above the FEMA Line

	Est. "Before" Value	Est. "After" Value	Easement
Parcels 2 thru 5E, 6A thru 6E	\$13,857,000		
Parcels 15A thru 21D, 22A & 22B	<u>\$15,225,000</u>		
	<u>\$29,082,000</u>	\$1,531,000	<u>\$27,551,000</u>
			<u>25%</u>
			\$6,887,750/1,225 Acres = \$5,622/acre



Cash Out Scenario

Loans, Credit Lines, Payables	\$14,000,000
Cash Back To Members	<u>\$13,500,000</u>
	\$27,500,000



Illustrative Distribution

Scenario

Easement Sale Target	\$40,000,000
Loans, Credit Lines, Payables	< \$14,000,000 >
Subtotal	\$26,000,000
Goal – Partners made whole + 10%	
	\$20,000,000
	x 10%
	\$2,000,000
Subtotal	22,000,000
Available	\$26,000,000
Goal	< \$22,000,000 >
Balance to B & C	\$4,000,000



Illustrative Member

Distribution

Available		\$22,000,000
B & C	42%	<\$9,240,000>
NLFB	14%	<\$3,080,000>
Regent	14%	<\$3,080,000>
Green Diamond	2.1%	<\$440,000>
Carolina First	14%	<\$3,080,000>
Lockwood Greene	<u>14%</u>	<u><\$3,080,000></u>
	100%	\$ 0

CONFIDENTIAL MEMORANDUM

OUTLINE OF OPERATING & DEVELOPMENT ACTIVITIES FINANCING PLAN FOR COLUMBIA VENTURE LLC

I. INITIAL PLAN

Burroughs & Chapin Company, Inc., as manager partner for Columbia Venture, LLC and in consultation and agreement with the membership, devised a sound financial plan for Columbia Venture to implement. As you may recall, the basic concept of the plan is as follows:

1. Purchase the land at the right price
(Purchase Price = \$18,000,000)
(Appraisal Price at time of Purchase = 30,000,000)
2. Secure appropriate flood lines from FEMA that would allow Columbia Venture, LLC to retrofit the levees where appropriate, to satisfy the requirements for a certifiable levee at the 500 year flood level.
3. Devise a development plan for the property based on a comprehensive "high technology park" village.
4. Leverage assets to secure non-recourse financing to fund on-going operating budgets until land can be sold at enhanced price to create a revenue stream based upon the working model for the high tech park.
5. Secure state and federal grant funds and/or tax incentive funds to upgrade levees and install basic infrastructure (water, wastewater, stormwater and roads, as well as possible other required improvements) required to jump start the research technology village and related support projects.
6. Sell a majority of Burwell Manning's interest to a future investor/investors at the increased value to provide an infusion of working capital and/or retire prior financing.
7. Develop the project selling off tracts to existing members or qualified outside investors and using proceeds to reduce debt and/or pay out profits.

12/7/00

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CV010679

II. REVISED PLAN

Delays in securing an acceptable map from FEMA have caused some financing problems/adjustments. Currently, it is hoped major adjustments won't be necessary to the above plan. We are aggressively pursuing strategies and options to get a clear ready map as soon as possible. As an owner, B&C should and must make decisions based on maximizing the return on its investment and managing the risk associated with achieving that return. However, in addition to our ownership duty, B&C, as manager of the Venture with broad discretion under the operating agreement, must make decisions on behalf of all the owners. We do not anticipate that any decision or action we anticipate making will be contrary to our partner's interest, but we must keep in mind our fiduciary duty in formulating our actions or decisions.

To date Columbia Venture LLC has borrowed \$2,000,000 to finance operating expenses and \$7,800,000 to finance the purchase of the Manning shares (in anticipation these shares could be resold when a favorable FEMA map was released in September 2000). The note on the Manning Share Purchase comes due March 30, 2001.

The current plan for retiring the Manning Note with Carolina First is the reissue of the units as contemplated under the original Manning repurchase. The original amount of the Manning Note totaled \$7,500,000. As of the first renewal in November, an additional interest amount of \$300,000 was funded through the Credit Line also with Carolina First. This was required due to the delay in resolving the FEMA issue which delayed the reissue of the Manning Units. The current Note will mature on March 30, 2001. Additional interest at the time of maturity is estimated at \$240,000 to bring the total invested in the Manning repurchase to \$8,040,000 at that date.

Below I have outlined the existing equity structure assuming the additional required land contribution from Mr. Manning is finalized.

Existing Equity	Shares	%	Investment	
			Cash	Other
Burroughs & Chapin	9,000	42.0%	3,000,000	-
NLBF, LLC	3,000	14.0%	3,000,000	-
Regent Columbia	3,000	14.0%	2,000,000	-
Green Diamond, LLC	450	2.1%	-	350,000
Carolina First	3,000	14.0%	3,000,000	-
Lockwood Green	3,000	14.0%	-	-
Total	21,450	100.0%	11,000,000	350,000

Below is a forecasted equity structure assuming the reissue of Manning units for the previously suggested value of \$10,000,000.

12/7/00

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CV010680

Forecasted Equity	Shares	% Ownership	Investment	
			Cash	Other
Burroughs & Chapin	9,000	30.0%	3,000,000	-
NLBF, LLC	3,000	10.0%	3,000,000	-
Regent Columbia	3,000	10.0%	2,000,000	-
Green Diamond, LLC	450	1.5%	-	350,000
Carolina First	3,000	10.0%	3,000,000	-
New Partner	8,550	28.5%	10,000,000	-
Lockwood Green	3,000	10.0%	-	-
Total	30,000	100.0%	21,000,000	350,000

The best solution for retiring the Note continues to be the reissue of new equity to provide the funds necessary. However, if the timing of this reissue should exceed March 30 the Credit Line balance will approach the maximum limit and provide no additional availability. Due to this fact, resolving the FEMA approval and reissuing the units before this date will be important. If this reissue is not accomplished by this date, the following three options will be available.

Guarantee of Loans

In our previous negotiations with Carolina First, they voiced a potential unwillingness to extend the Notes past the March maturity on a non-recourse basis. In current discussions with Justin Strickland of Carolina First, he has left the door open for negotiations based on the existing facts as we approach the next maturity date (i.e. he has not ruled out an extension under the existing non-recourse basis). If the reissue of the shares extends past this date or the bank is not willing to extend under the current terms, a guarantee or credit enhancement from the partners may be required.

The operating agreement does not address this situation, which will necessitate a unanimous vote by the partners. Without the operating agreement addressing this issue, there is no way to compel a partner to provide a guarantee. This could be an issue if the partners are not united which may only be resolved by Section 2.4 of the operating agreement which allows new equity issuance. This section does give the existing partners preemptive rights to the new units issued, but the partners must exercise their rights or have their ownership diluted.

If all the partners agree, then a partial guarantee can be negotiated. In my discussions with Linda Woodside of Bank of America, she indicated that a \$7,500,000 loan could be supported with a \$15,000,000 appraisal and \$2,000,000 guarantee. She also indicated that B & C's guarantee would be acceptable, but other partners would need to post a Letter of Credit. This scenario could occur if Carolina First was willing to carry the Credit Line separate from the Manning Mortgage. If the loan amounts were increased, the requirements for appraisal and guarantee would increase proportionally.

12/7/00

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CV010681

Please note also that the level of guarantee is directly related to the rate charged on the notes, which are currently at Prime Rate.

	Shares	% Ownership	Share of Guarantee	
			2,000,000	4,000,000
Burroughs & Chapin	9,000	42.0%	839,181	1,678,322
NLBF, LLC	3,000	14.0%	279,720	559,441
Regent Columbia	3,000	14.0%	279,720	559,441
Green Diamond, LLC	450	2.1%	41,958	83,916
Carolina First	3,000	14.0%	279,720	559,441
Lockwood Green	3,000	14.0%	279,720	559,441
Total	21,450	100.0%	2,000,000	4,000,000

Select Land Sales

As an alternative, selective land sales can be accomplished to reduce the debt amount and fund additional cash flow needs. However, a quick sale will diminish the potential sales price and may take more time than allowable before the maturity of the Note. The two areas of potential are in Levee 3 natural area and frontage along Bluff Road.

Cash Call

An additional alternative would be a cash contribution from each of the partners on a prorata basis to retire all or a portion of the debt. The operating agreement does not have a cash call requirement to compel a partner to fund a call. A unanimous vote of the partners will be required or Section 2.4 noted above will be the only option. This provision allows for the issuance of new equity with the preemptive right of existing partners. Below is an example of the amounts required to retire the Manning Note and to retire the entire current debt.

	Shares	% Ownership	Share of Contribution	
			7,500,000	10,500,000
Burroughs & Chapin	9,000	42.0%	3,146,853	4,405,594
NLBF, LLC	3,000	14.0%	1,048,951	1,468,531
Regent Columbia	3,000	14.0%	1,048,951	1,468,531
Green Diamond, LLC	450	2.1%	157,343	220,280
Carolina First	3,000	14.0%	1,048,951	1,468,531
Lockwood Green	3,000	14.0%	1,048,951	1,468,531
Total	21,450	100.0%	7,500,000	10,500,000

Our revised plan is to attempt to have a decision by FEMA to allow upgrading of the Levees prior to the March 30, 2001, due date. If this can be done it is felt an extension of this note can be secured with minimal additional collateral. Once this is done, Top Box has informed us they are ready to purchase the Manning Shares for \$10,000,000 leaving us with additional working capital once our debt is paid down.

12/7/00

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CV010682

Our revised plan perceives completion of negotiations with the City of Columbia and Richland County for an incentive package and a Development Agreement within a similar timeframe. This will allow floating of bonds to upgrade the Levees and install infrastructure for Phase I of the High Technology Village around the middle of 2001. This infrastructure will allow sale of parcels of land to developers to generate additional capital to pay off remaining loans and/or generate dividends or profits to investors.

III. FALL BACK STRATEGY

Although the March 2001 FEMA goal is possible, it could slip but by then it should be clear if the strategy can be implemented. If it is felt it is not possible, an exit plan can be pursued. A variety of exit plans are now being refined. All of them will include selling conservation credits or tracts of land in floodway/flood plain for agriculture, recreational and/or passive activities (e.g. parks, golf, playing fields, hunt clubs, eco-tourism, etc.). The remaining property (approximately 1,135 acres) lying outside of the flood plain/way would be parceled up and sold for residential, commercial or compatible industrial uses at an estimated value of \$16,550,000. The balance or 3,465 acres could also be sold for agriculture, recreation or conservation use for an estimated value of \$9,600,000. This totals \$26,150,000. It is hoped that the exit strategies will allow paying off outstanding debt and out-of-pocket investments made by investors with some profit remaining.

As you are aware, FEMA has granted Columbia Venture status as an Appellant. This was key in that we wanted to make sure that all rights Columbia Venture had in its dealings with FEMA were preserved. FEMA has opened up the process for Appellants to present new information by January 2, 2001, and for final comments on submitted information to be due by February 15, 2001, after which a decision should be reached.

As meetings and these timeframes occur, we will keep you informed as to strategies and results.

Thank you for your perseverance and patience as we pursue the negotiations with FEMA. Don't hesitate to call me with any questions or concern.

12/7/00

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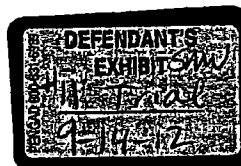
CV010683

Executive Briefing on Grassroots Campaign

Our Green Diamond Grassroots Campaign has worked out to be very well-timed. Fortunately, our opposition (the Congaree Task Force) peaked months ago. Now that we are building our case, they have nothing new to say. In brief outline, here is what we have done:

1. The first week in May, a letter signed by the chairman and the president of Burroughs & Chapin was mailed (on Columbia Venture letterhead) to all active voters in Richland County explaining the vision of Green Diamond, with a response sheet citizens could use to communicate their support or to request more information.
2. We received nearly 1,000 responses. Personal letters have been mailed to all respondents, thanking them for their support with additional fact sheets about Green Diamond, with a request that they communicate their support to their city and county council members.
3. A comprehensive benchmark survey was conducted of all voters in Richland County to measure intensity of opposition and/or support for Green Diamond and to test which arguments (pro and con) carried the most persuasive power. We found that core opposition to the project is limited to a relatively small group of approximately 13%. However, the vast majority was found to support the development once they understood heard three key arguments: 1. That the development would bring 20,000 new jobs and several billion dollars in new private investment to the South Carolina midlands; 2. That the development company would have the levees certified by FEMA as safe to the 500 year flood level; and 3. That the development company was willing to provide liability insurance. Given those arguments, support for the project rose to nearly 70%. The Mayor and selected members of county council were given private briefings on poll results.
4. We conducted an advocacy phone bank/petition drive asking voters for permission to add their names to a petition in support of Green Diamond to be presented to their representatives on city and county council. Nearly 900 permissions were secured.
5. We sent a letter to members of city and county council signed by a group of CEO's, including the CEO's of BellSouth and SCANA stating strong support for Green Diamond.
6. Literally hours before we were scheduled to announce the formation of a business support group, the Greater Columbia Chamber of Commerce offered to issue an endorsement of the Green Diamond concept if we would agree not to proceed with forming a separate organization and work more closely with them. We agreed.
7. We are now assisting a group of mothers in the formation of a Green Diamond support group focused on public education and the need for the revenues the project will generate to support schools improvements.


Richard Quinn, President, Richard Quinn & Associates



BandC000496

Hendrix & Gandy, LLC
Certified Public Accountants
4702 Oleander Drive - Suite 200
Myrtle Beach, South Carolina 29577

Phone # 843-497-7028

Fax # 843-497-5399

March 27, 2003

To: Dr. Wade Nichols
From: Ron E. Hendrix
Subj: Columbia Ventures, LLC/Green Diamond Project under FEMA
Limitations

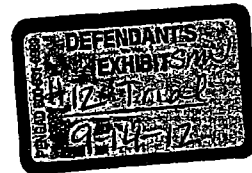
The attached analysis is a take off from the original projections based on the restrictions placed on the development by the FEMA rulings in place in November of 2000. The purpose of the abbreviated projections was to show the feasibility of developing a limited number of acres of the property and selling the remainder acres in a bulk or some type bulk use.

Please be advised that the assumptions used in the attached projections are based on information available about November 1, 2000 and may need to be adjusted for the passage of time. Also, the land use assumptions used were based on the land uses assignment in the land use plan that had been developed at that time. These land use assumptions may not represent the highest and best use of the various land parcels under a restricted land use effort.

Please give me a call if you have questions concerning the attached analysis.

Best regards,


Ron E. Hendrix



Web Site - www.hendrixgandy.com
E-Mail - rehendrix@sc.rr.com

CV009900

Hendrix & Gandy, LLC
Certified Public Accountants
4702 Oleander Drive - Suite 200
Myrtle Beach, South Carolina 29577

Phone # 843-497-7028

Fax # 843-497-5399

To: George Gregory

From: Ron E. Hendrix

Subj: Columbia Ventures, LLC Projections Under FEMA Limitations (Floodway)

Be aware that the flood line that I used in developing the attached projections is an estimate that leaves 994.75 acres available for vertical development. The balance of the land is assumed to be used for non-vertical facilities such as a golf course. The other assumption is that the non-vertical development land might be sold or handled in other ways to maximize profits.

Also, the land use assumptions follow along those developed through EDSA; changes were not made that might be advisable under a restricted land use situation. For example, there are no hotel sites in the attached analysis because these sites were lost to FEMA limitations.

The setup of the cash flow shows a new loan of \$13,000,000 to pay off existing debt and provide for operating capital that would carry Columbia Ventures through the summer and into its land closings. The \$23,025,000 is infrastructure loans that are repaid through land closings. There is no "tax program" for reimbursement of infrastructure costs in this analysis.

These projections are based on current dollar principles. That is, sales prices increase with the passage of time, as do development costs. (The analysis that Pete has for the full-blown development effort is done on a current dollar basis at this time.)

If you review the summary sheets and the supporting detail, I think that you should be able to present reasonable opinions concerning the viability of the FEMA restricted project. I have not done this, but if you did a net present value of the projected cash flows comparing the short version with the long version I am of the opinion that the two values would not vary substantially.

Best regards,

Ron E. Hendrix

Web Site - www.hendrixgandy.com
E-Mail - hendrixandgandy@beachaccess.net

CV009901

**Columbia, S. C. Project
Notes and Assumptions for
Sales and Expenditure Projections
For Restricted Land Use Under Proposed FEMA Map**

1. The revenue assumptions are based on information using land use assumptions prepared by EDSA Land Planners as restricted by proposed FEMA Map. The purpose of these projections is to provide an overview of the project's potential. The overview is based on assumptions relating to future events and; therefore, the actual results of development may vary and those variations could be material.

The timing of various sales of tracts is allocated over twelve (12) years. The projected land uses for various years are preliminary and are subject to change.

The projected land sales assumes that year 2002 is the base year and that sales prices will increase at 6.5% compounded annually and that development costs will increase at 3.5% compounded annually.

2. The land cost is approximately \$18,000,000.
3. The infrastructure cost is based on calculations determined by Lockwood Greene adjusted for the restricted land use under the proposed FEMA Map and is estimated to be approximately \$23,025,000. The schedule titled Development Cost By Levee Section reflects Lockwood Greene's cost estimates in current dollars and the projected costs include an inflation factor of 3%.
4. The marketing and/or commission cost associated with the sell of land is estimated to average 5% of the projected sales value of the various tracts.
5. An overhead allowance is included and is estimated to be approximately 5% of gross sales.
6. Changes in the land use assumptions or the average price per acre assumptions could have a material impact on the projected results contained in the attached projections.

COLUMBIA VENTURES, LLC
RESTRICTED LAND USED
UNDER FEMA PROPOSED MAP
November 11, 2000

11-Nov-00

Description	Year	# ACRES	Type of Property
PARCEL 41	2006	14.92	AFF. HOUSING
PARCEL 40	2011	11.5	AFF. HOUSING
		<u>26.42</u>	
L. SECTION 3 (Bulk)	2002	1370.1	BULK
Future Devel. or Bulk Sale	2012	687	BULK SALE
		<u>2057.1</u>	
PARCEL 8B	2002	21.6	CLB & OTHER
		<u>21.6</u>	
PARCEL 1	2003	42.49	COMM VILL
PARCEL 6A	2003	6.5	COMM VILL
PARCEL 6B	2003	5.4	COMM VILL
PARCEL 6C	2003	5	COMM VILL
PARCEL 6I	2003	5.5	COMM VILL
PARCEL 6D	2005	6.2	COMM VILL
PARCEL 6E	2005	4.7	COMM VILL
PARCEL 6J	2005	5.1	COMM VILL
PARCEL 5H	2005	7.8	COMM VILL
PARCEL 5I	2005	3.6	COMM VILL
PARCEL 5J	2005	2.8	COMM VILL
PARCEL 21A	2006	3.75	COMM VILL
PARCEL 21B	2006	4.8	COMM VILL
PARCEL 21C	2006	6.15	COMM VILL
PARCEL 21D	2006	8.1	COMM VILL
PARCEL 3D	2007	4.89	COMM VILL
PARCEL 6F	2007	3.4	COMM VILL
PARCEL 6G	2007	7.7	COMM VILL
PARCEL 6H	2007	7.4	COMM VILL
PARCEL 25	2012	4	COMM VILL
		<u>145.28</u>	
PARCEL 42	2004	15.94	FARMER.S MT
PARCEL 43	2004	65.33	FARMER.S MT
		<u>81.27</u>	
18 HOLE GOLF	2002	285.45	GOLF
		<u>285.45</u>	
PARCEL 8A	2004	18.99	GOLF VILLAS
		<u>18.99</u>	

1 of 3

03/27/2003

CV009903

COLUMBIA VENTURES, LLC
RESTRICTED LAND USED
UNDER FEMA PROPOSED MAP
November 11, 2000

PARCEL 21E	2012	<u>5.2</u>	Hotel Park
		<u>5.2</u>	
PARCEL 4A	2002	6.6	HWY COMM
PARCEL 4B	2002	7.8	HWY COMM
PARCEL 2	2009	30.33	HWY COMM
PARCEL 15A	2009	6.6	HWY COMM
PARCEL 15B	2009	5.58	HWY COMM
PARCEL 15C	2009	<u>4.6</u>	HWY COMM
		<u>61.51</u>	
PARCEL 44	2011	<u>196.95</u>	INDUSTRIAL
		<u>196.95</u>	
PARCEL 7	2004	28.25	MULTI-FAMILY
PARCEL 9B	2006	<u>19.89</u>	MULTI-FAMILY
		<u>48.14</u>	
PARCEL 3A	2004	23.34	R & D
PARCEL 3F	2004	7.23	R & D
PARCEL 5B	2005	6.8	R & D
PARCEL 5C	2005	7.9	R & D
PARCEL 5D	2005	6.15	R & D
PARCEL 5E	2005	7.7	R & D
PARCEL 3B	2008	4.1	R & D
PARCEL 3C	2008	4.55	R & D
PARCEL 3E	2008	5.29	R & D
PARCEL 18A	2010	4.9	R & D
PARCEL 18B	2010	4.8	R & D
PARCEL 18C	2010	4.2	R & D
PARCEL 18D	2010	4.5	R & D
PARCEL 18E	2010	3.6	R & D
PARCEL 22D	2011	4	R & D
PARCEL 24A	2011	6	R & D
PARCEL 24B	2011	4.77	R & D
PARCEL 24C	2011	3.8	R & D
PARCEL 24H	2011	4.9	R & D
PARCEL 5F	2011	5.8	R & D
PARCEL 5G	2011	5.6	R & D
PARCEL 5A	2012	5.2	R & D
PARCEL 22A	2012	5.7	R & D
PARCEL 22B	2012	6.8	R & D
PARCEL 22C	2012	<u>4.4</u>	R & D
		<u>152.03</u>	
PARCEL 9A	2002	45.66	RESIDENTIAL
PARCEL 9C	2002	<u>54.68</u>	RESIDENTIAL
		<u>100.34</u>	

CV009900

COLUMBIA VENTURES, LLC
RESTRICTED LAND USED
UNDER FEMA PROPOSED MAP
November 11, 2000

PARCEL 17	2008	90.35	RETIREMENT
PARCEL 19	2012	19	RETIREMENT
		<u>108.35</u>	
PARCEL 16	2011	27.67	SCH & MED
		<u>27.67</u>	
			(Balance of property - Roads,
Total Allocated Acreage		<u>3337.3</u>	Improvements & Wetlands.)
Developed for Resale		<u>994.75</u>	

Columbia Ventures, LLC
Projected Sales By Year
(Adjusted for FEMA Map)
03/27/2003

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Columbia Ventures, LLC
Projected Sales By Year
(Adjusted for FEMA Map)
03/27/2003

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Columbia Ventures, LLC
 Projected Sales By Year
 (Adjusted for FEMA Map)
 03/27/2003

PARCEL 3D	2007	4.89	CONM VILL	\$205,513	\$1,004,959	99,000	\$118	\$	12,763,053	\$	1,276,306	\$	14,039,359	\$0	PARCEL 3D
PARCEL 6F	2007	3.4	CONM VILL	\$205,513	\$598,744	60,000	\$119	\$	7,824,662	\$	782,468	\$	8,607,130	\$0	PARCEL 6F
PARCEL 6G	2007	7.7	CONM VILL	\$205,513	\$1,582,450	60,000	\$119	\$	8,708,568	\$	870,857	\$	9,579,425	\$0	PARCEL 6G
PARCEL 6H	2007	7.4	CONM VILL	\$205,513	\$1,520,786	108,000	\$119	\$	14,347,808	\$	1,434,781	\$	15,782,589	\$0	PARCEL 6H
SUB-TOTAL		23.39			\$4,804,949	327,000			\$43,844,291	\$	\$4,384,429	\$44,008,720	\$0	SUB-TOTAL	
PARCEL 3B	2008	4.1	R & D	\$109,436	\$448,686	64,000	\$123	\$	8,315,920	\$	831,592	\$	9,147,512	\$0	PARCEL 3B
PARCEL 3C	2008	4.56	R & D	\$109,436	\$467,832	90,000	\$123	\$	11,961,230	\$	1,196,123	\$	12,717,353	\$0	PARCEL 3C
PARCEL 3E	2008	5.28	R & D	\$109,436	\$579,913	108,000	\$123	\$	13,954,872	\$	1,385,487	\$	15,340,359	\$0	PARCEL 3E
PARCEL 17	2008	80.35	RETIREMENT	\$72,957	\$8,591,075				\$101,843,873	\$	10,184,387	\$	112,028,261	\$0	PARCEL 17
SUB-TOTAL		104.29			\$8,117,209	262,000			\$135,573,896	\$	\$13,597,590	\$149,133,486	\$0	SUB-TOTAL	
PARCEL 2	2009	30.33	HVY CONM	\$310,787	\$9,426,482				\$84,021,302	\$	8,402,130	\$	92,423,432	\$0	PARCEL 2
PARCEL 15A	2009	6.6	HVY CONM	\$310,787	\$2,091,282	128,000			\$18,339,437	\$	1,833,644	\$	20,170,080	\$69,140,699	PARCEL 15A
PARCEL 15B	2009	5.58	HVY CONM	\$310,787	\$1,734,248	128,000			\$17,764,958	\$	1,776,487	\$	19,541,444	\$64,122,873	PARCEL 15B
PARCEL 15C	2009	4.6	HVY CONM	\$310,787	\$1,429,668	108,000			\$15,170,264	\$	1,517,028	\$	16,687,312	\$54,982,464	PARCEL 15C
SUB-TOTAL		47.11			\$14,661,661	362,000			\$135,282,890	\$	\$13,529,289	\$144,812,179	\$184,228,037	SUB-TOTAL	
PARCEL 18A	2010	4.9	R & D	\$124,125	\$609,211	97,500	\$132	\$	9,814,059	\$	1,344,710	\$	14,791,809	\$0	PARCEL 18A
PARCEL 18B	2010	4.8	R & D	\$124,125	\$595,798	70,000	\$132	\$	9,133,462	\$	981,346	\$	10,794,808	\$0	PARCEL 18B
PARCEL 18C	2010	4.2	R & D	\$124,125	\$521,324	78,000	\$132	\$	10,529,072	\$	1,052,907	\$	11,581,977	\$0	PARCEL 18C
PARCEL 18D	2010	4.5	R & D	\$124,125	\$556,561	90,000	\$132	\$	12,409,842	\$	1,240,984	\$	13,650,827	\$0	PARCEL 18D
PARCEL 18E	2010	3.6	R & D	\$124,125	\$448,849	72,000	\$132	\$	9,927,874	\$	992,787	\$	10,920,661	\$0	PARCEL 18E
SUB-TOTAL		22			\$2,700,743	405,500			\$56,127,349	\$	\$5,612,735	\$61,740,084	\$0	SUB-TOTAL	
PARCEL 22D	2011	4	R & D	\$132,183	\$528,771	84,000	\$136	\$	11,877,108	\$	1,187,711	\$	13,064,820	\$0	PARCEL 22D
PARCEL 40	2011	11.5	AFV HOUSING	\$28,438	\$304,043		\$0	\$	18,782,861	\$	1,878,289	\$	20,661,136	\$0	PARCEL 40
PARCEL 44	2011	196.95	INDUSTRIAL	\$13,865,530	\$3,660,614		\$136	\$	540,047,576	\$	54,004,758	\$	594,052,334	\$0	PARCEL 44
PARCEL 24A	2011	6	R & D	\$132,183	\$789,157	128,000	\$136	\$	18,238,243	\$	1,823,824	\$	20,062,067	\$0	PARCEL 24A
PARCEL 24B	2011	4.77	R & D	\$132,183	\$820,560	108,000	\$136	\$	14,640,982	\$	1,464,098	\$	16,105,080	\$0	PARCEL 24B
PARCEL 24C	2011	3.8	R & D	\$132,183	\$502,333	88,000	\$136	\$	12,485,829	\$	1,248,583	\$	13,734,412	\$0	PARCEL 24C
PARCEL 24H	2011	4.9	R & D	\$132,183	\$644,745	104,000	\$136	\$	14,821,877	\$	1,482,188	\$	16,304,065	\$0	PARCEL 24H
PARCEL 5F	2011	5.8	R & D	\$132,183	\$766,718	116,000	\$136	\$	16,576,327	\$	1,657,633	\$	18,233,960	\$0	PARCEL 5F
PARCEL 5G	2011	5.8	R & D	\$132,183	\$740,280	120,000	\$136	\$	17,095,048	\$	1,709,505	\$	18,804,553	\$0	PARCEL 5G
PARCEL 16	2011	27.87	SCH 8 MED	\$88,129	\$2,438,516	482,000	\$138	\$	68,130,169	\$	6,813,017	\$	74,943,186	\$0	PARCEL 16
SUB-TOTAL		278.99			\$21,227,651	8,087,814			\$749,186,011	\$	\$74,010,601	\$823,196,612	\$0	SUB-TOTAL	

Columbia Ventures, LLC
Projected Sales By Year
(Adjusted for FEMA Map)
03/27/2003

PARCEL 5A	2012	6.2	R & D	\$140,785	\$732,084	112,000		\$141	\$ 16,530,790	\$ 1,653,079	\$ 18,183,869	\$0	PARCEL 5A
PARCEL 21E	2012	6.2	Hotel Park	\$140,785	\$732,084	98,000		\$141	\$ 14,273,832	\$ 1,427,383	\$ 15,701,215	\$13,083,815	PARCEL 21E
PARCEL 22A	2012	6.7	R & D	\$140,785	\$802,476	120,000		\$141	\$ 17,729,691	\$ 1,772,969	\$ 19,502,679	\$0	PARCEL 22A
PARCEL 22B	2012	6.8	R & D	\$140,785	\$857,346	144,000		\$141	\$ 21,269,982	\$ 2,126,998	\$ 23,396,980	\$0	PARCEL 22B
PARCEL 22C	2012	4.4	R & D	\$140,785	\$519,455	84,000		\$141	\$ 12,468,485	\$ 1,246,848	\$ 13,715,333	\$0	PARCEL 22C
PARCEL 19	2012	18	RETIREMENT	\$83,857	\$1,783,281		383		\$ 88,741,477	\$ 8,874,148	\$ 97,615,624	\$0	PARCEL 19
Future Devel.													
or Bulk Sale	2012	687	BULK SALE	5000	\$3,435,000	0	0	0	\$3,435,000	\$ 0	\$ 3,435,000	\$0	Bulk Sale
PARCEL 25	2012	4	COMM VILL	\$281,571	\$1,126,282	73,000		\$132	\$ 11,002,350	\$ 1,100,235	\$ 12,102,585	\$10,221,750	PARCEL 25
SUB-TOTAL		737.3			\$10,188,002	631,000	383		\$186,451,597	\$18,301,656	\$201,318,213	\$21,305,345	SUB-TOTAL
TOTALS		3337.3			\$104,600,248	11,186,614	2,698		\$2,019,284,435	\$201,585,944	\$2,217,445,379	\$1,053,180,696	TOTALS
Description	Year	ACRES	Type of Property	Average Sales	Land Market Value	Square Footage	Total Dwellings	Cost Per Sq foot	Improv. Value	Personal Property	Total Tax Value	TOT SALES/ ADMISSIONS	Description
Develop for resale		884.78											

[illegible]

Columbia Ventures, LLC
Projected Cash Flows
(Adjusted for FEMA Map)
03/27/2003

COLUMBIA VENTURES, LLC
DEVELOPMENT COST BY LEVEE SECTION
(Adjusted for Proposed FEMA Map)
11-Nov-00

SIGNAGE & INTERSEC. LIGHTING																TOTALS
LEVEE	ROADWAYS	BRIDGES	BLUFF ROAD/BLUFF ROAD	ROADWAY LIGHTING	WATER PIPING	TANKS AND GRAVITY PUMP STS.	FORCE MAIN	NATURAL GAS	ELECTRICAL DISTRIBUTION	LANDSCAPE/EROSION MITIGATION	WETLAND	ENGINEER	GEOTECH	CONTINGENCY		
LEVEE SECTION I	\$0	\$3,878,332	\$702,000	\$243,648	\$178,750	\$409,681	\$1,206,777	\$211,280	\$828,800	\$288,720	\$1,417,731	\$418,010	\$87,250	\$712,400	\$957,775	\$11,111,595
LEVEE SECTION B	\$0	\$3,374,149	\$2,891,000	\$0	\$0	\$348,871	\$397,419	\$211,290	\$1,077,280	\$238,700	\$1,417,731	\$290,168	\$113,750	\$712,400	\$897,775	\$11,814,264
LEVEE SECTION III	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
CURRENT DOLLAR TOTALS	\$0	\$7,252,481	\$2,891,000	\$243,648	\$178,750	\$758,552	\$1,554,196	\$422,570	\$1,844,080	\$528,420	\$2,835,462	\$708,178	\$189,000	\$1,424,800	\$1,855,550	\$22,925,859
INFLATION FACTOR	0.008	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035

NOTES AND ASSUMPTIONS:

- I. The above cost estimates by type and levee section have been extracted from cost estimates prepared by Lockwood-Greene.
- II. The above costs are stated in current value dollars and do not reflect the estimated increase in costs associated with the passage of time.

0007-1226

BURROUGHS & CHAPIN COMPANY, INC.

MINUTES

Annual Stockholder Meeting

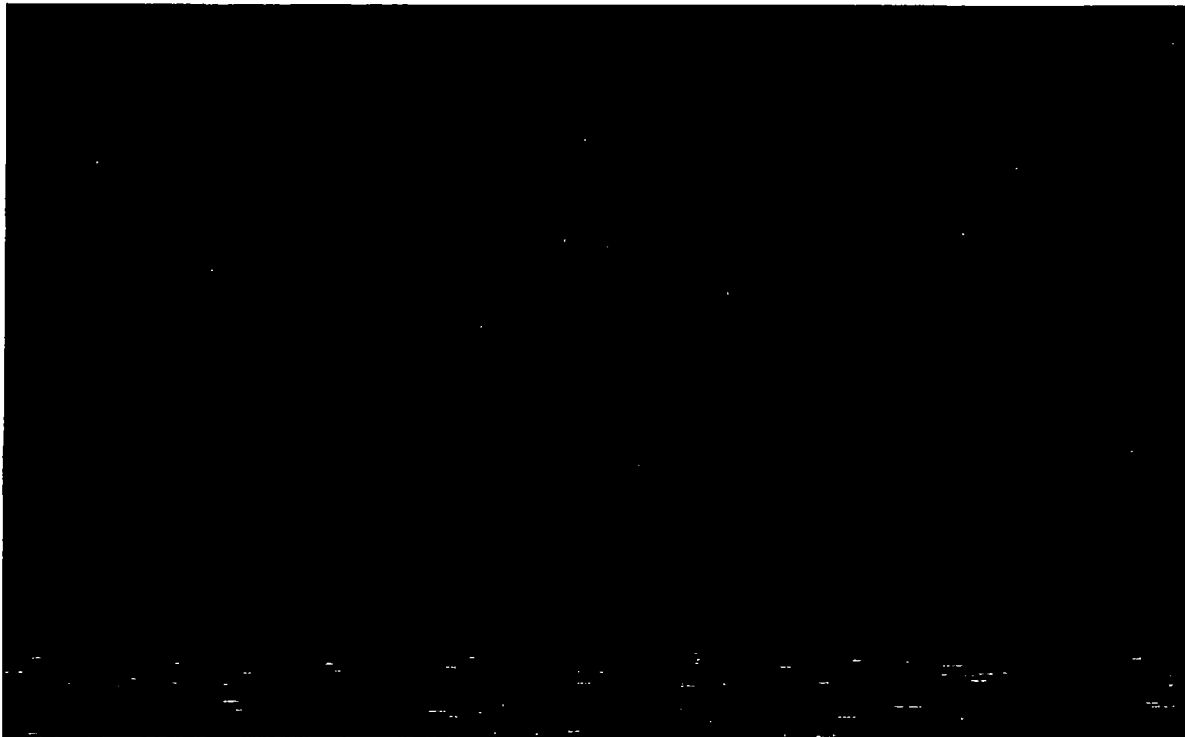
May 31, 2003

The Annual Stockholder Meeting of Burroughs & Chapin Company, Inc. was held at 9:30 a.m., Saturday, May 31, 2003, at the Grande Dunes Ocean Club, Myrtle Beach, South Carolina.

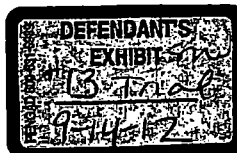
As an official part of these Minutes, included is a copy of the Stockholders' Attendance Summary of the Annual Stockholder Meeting of Burroughs & Chapin Company, Inc., held May 31, 2003, representing stockholders of record as of April 22, 2003.

Stock Represented by Holder	669,295.67	84.7%
Stock Represented by Proxy	50,855.83	6.4%
Subtotal	720,151.50	91.1%
Absent:	70,324.50	8.9%
TOTAL SHARES:	790,476.00	100.0%

Douglas P. Wendel, President & CEO, called the meeting to order and welcomed the Shareholders and their guests to the 2003 Stockholder Meeting and to the Grande Dunes Ocean Club. Franklin J. Long opened the meeting with prayer.



5/31/03

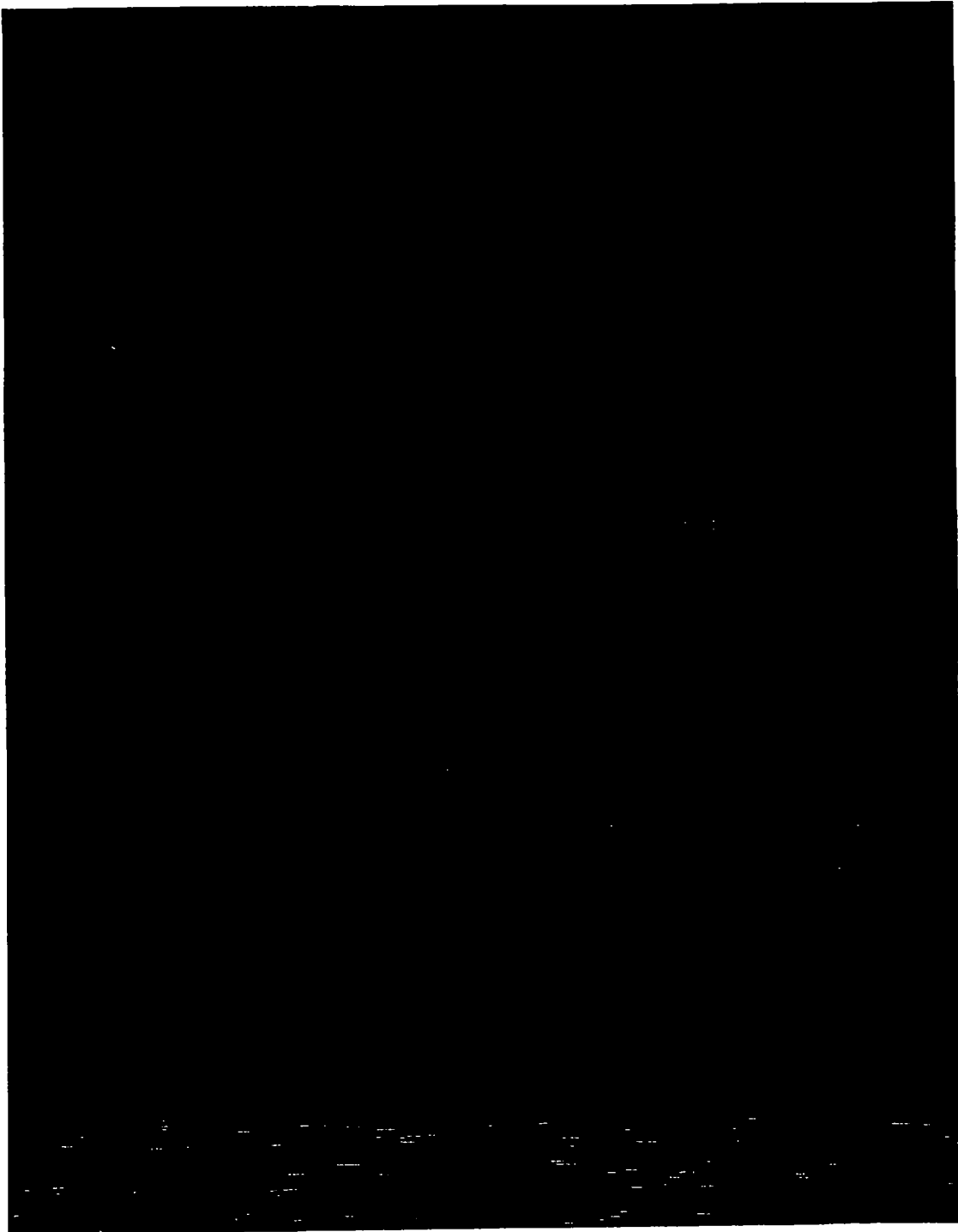


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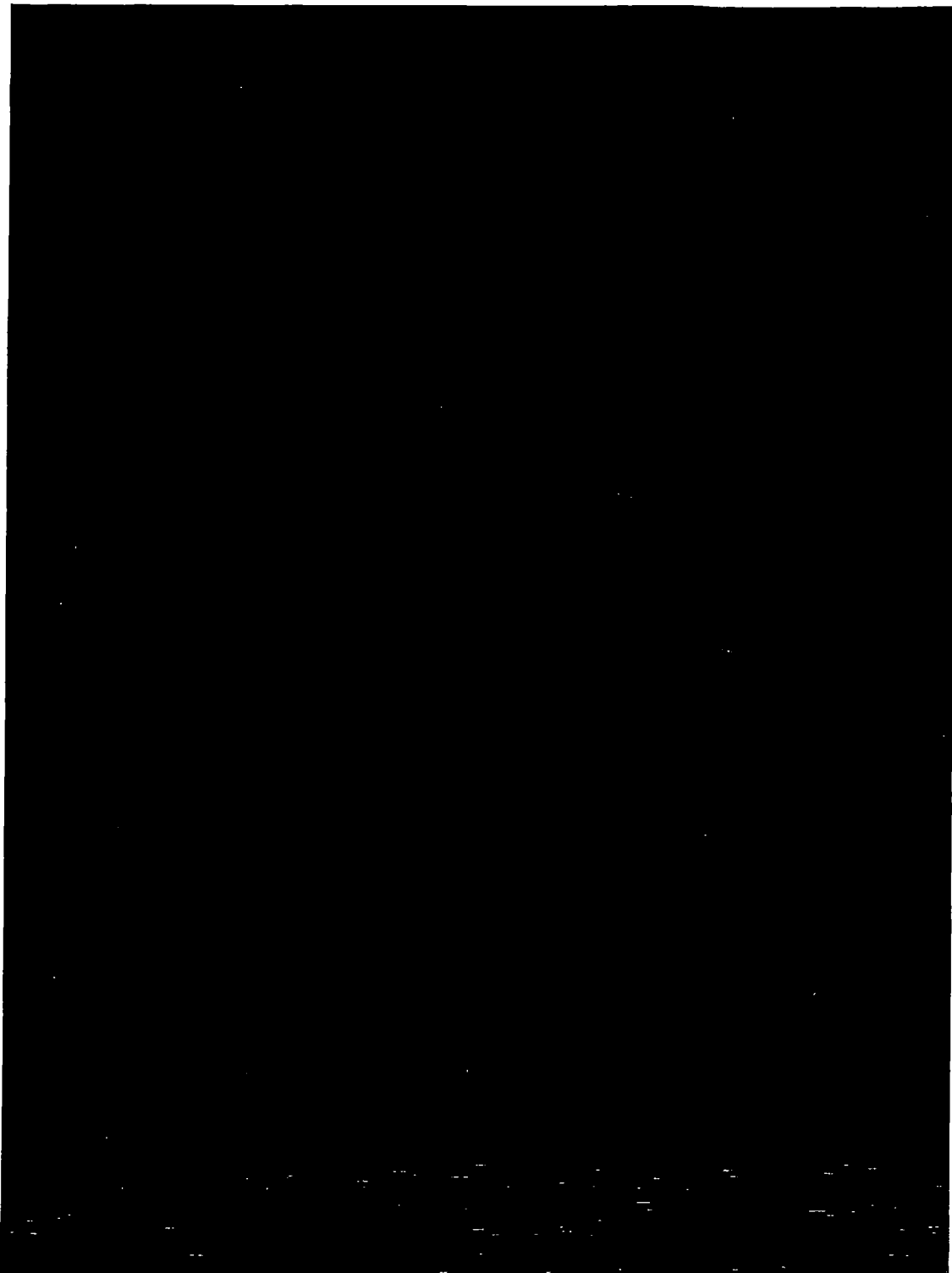
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Mr. Wendel then indicated that the theme for the 2002 Annual Report is "Poised for an Expansive Future". Looking back on what has been accomplished in the last year, were:



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5/31/03

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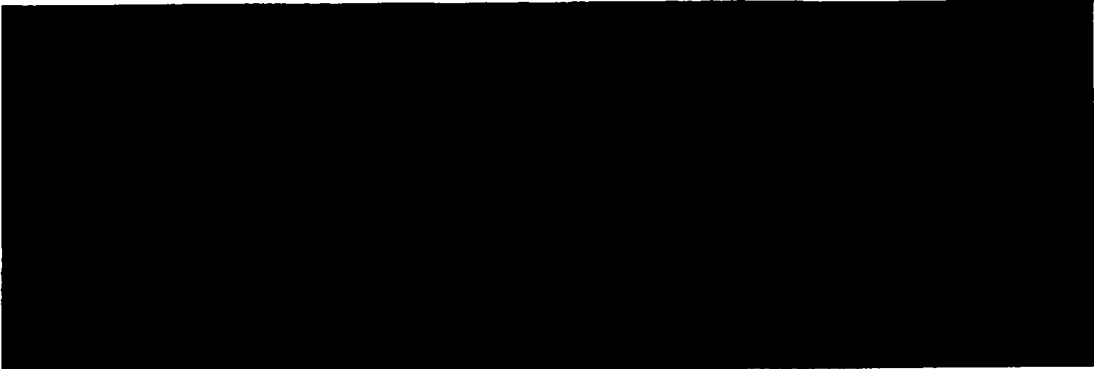


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After a thorough analysis by Staff and the Board, which included an agreement with the Federal Emergency Management Agency (FEMA) that their flood plain and floodway maps would be changed to allow upgrading of the levies to allow for the 4200 acres adjacent to them to be developed, B&C decided to purchase what has become known as the Green Diamond property as part of a 5-member joint venture, Columbia Venture, LLC. The Board's vote was just shy of unanimous to purchase the property, with only one Board Member voting to the contrary. This was the Company's first major new project to achieve geographic diversification.

Upon an appeal by the South Carolina Department of Natural Resources (DNR) and with vocal protest from numerous anti-growth environmental groups, FEMA changed its position.

Columbia Venture still has a case pending in Court appealing FEMA's ultimate decision to change its position. Although we believe that Columbia Venture's (Green Diamond's) science will win the case in the long run, B&C and its partners recognize that the case could go on for an indefinite period of time, and Columbia Venture decided to pursue an exit plan in an orderly and community sensitive manner. This would liquidate B&C's 37% ownership. This exit plan is being implemented and, it is believed with a little more patience, B&C will in the end recoup its equity and maybe more. The exit strategy under implementation is expected to generate funds sufficient to repay third party lenders and vendors, member loans and B&C's original equity investment. However, the Company has elected to provide an allowance of \$3,000,000 towards its total investment of \$7,100,000 in Columbia Venture as an expense in the 2002 fiscal year. B&C, after deliberation with its auditors and other tax consultants, felt a conservative financial position was the prudent course of action. When the assets are sold, a greater income will be reflected on the sale as this adjustment has the affect of reducing the basis of the investment and loans on B&C's books.

Also the first major initiative outside the area has not been the success hoped for and results in negative press coverage, it was a valuable learning experience. Although there were many lessons learned, the three major lessons were:

- Where there is a questionable environmental issue associated with any major project outside our immediate area, the project should not be pursued.
- If there is not a very strong pro-business environment within the community where a project is being considered, the project should not be pursued.
- When a project is purely speculative in nature, it should not be pursued.

Although we currently do not have a new, large project planned outside of our Myrtle Beach home area, Staff and the Board continues to evaluate those that appear to be attractive. For the time being, however, we will continue to pursue smaller projects aimed at accomplishing our geographic diversity objective.



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5/31/03

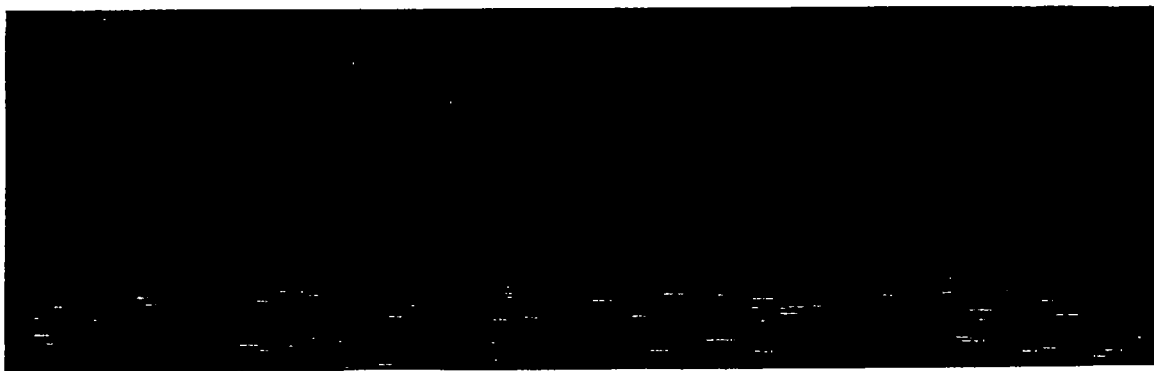
Page 8

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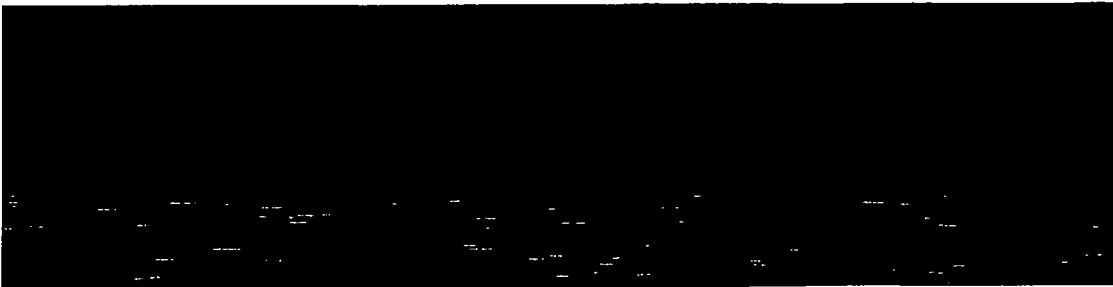
Following Green Diamond, we began the outreach process anew utilizing a different strategy. We have begun to partner with successful, well-positioned companies that share our corporate values and objectives.





Mr. Wendel indicated he would welcome any questions from the shareholders.

Ridge Cook asked how Staff proposed to make something out of nothing as far as Green Diamond. Mr. Wendel indicated Staff was looking at conservation easements which provide tax incentives. The concept was to sell the property to someone with significant tax consequences who could use it as a write off. It is hoped that such a sale can be consummated by the end of the year. Columbia Venture has also brought in local people who might be interested in developing the site.





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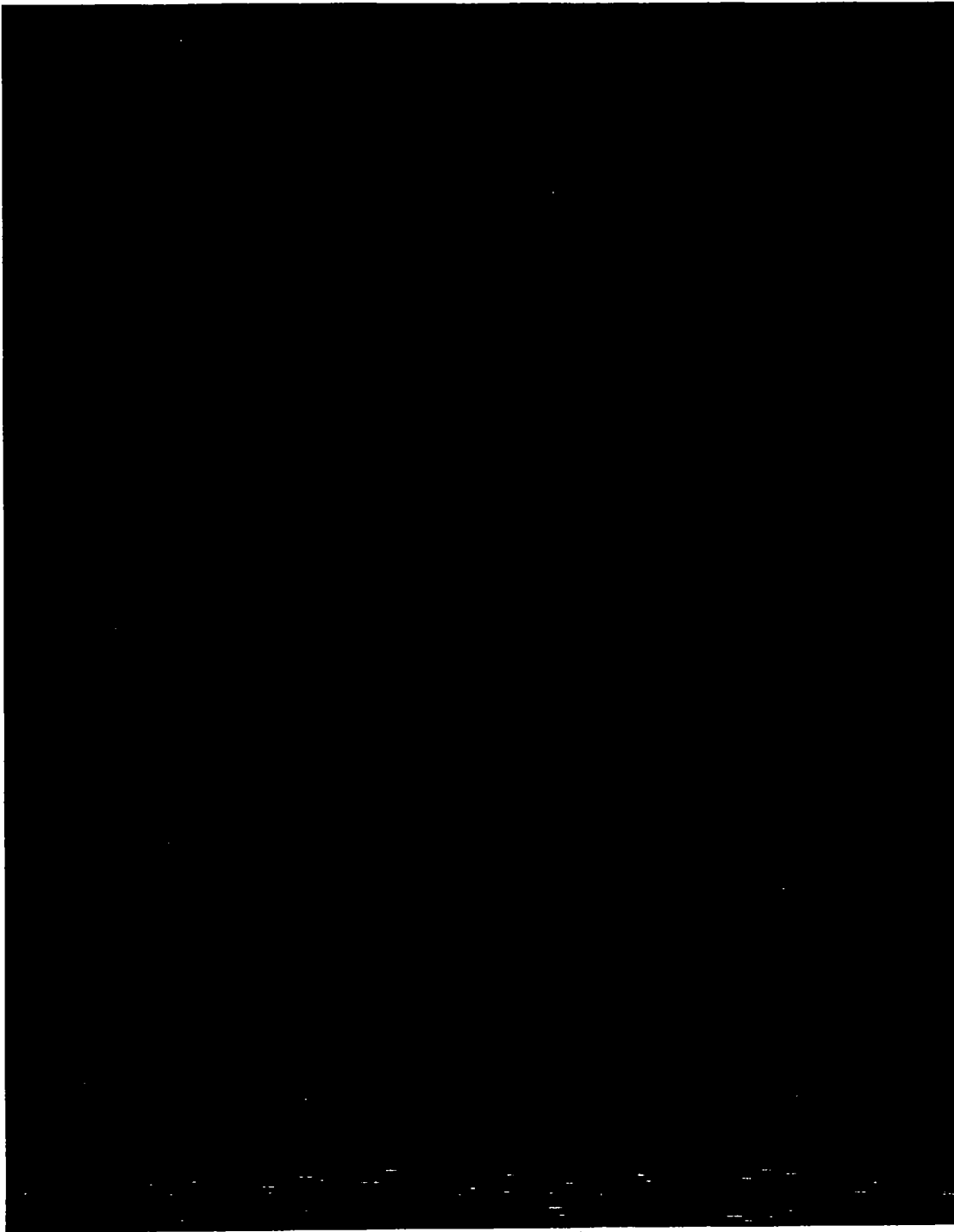
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There being no further business to come before the meeting, it was adjourned at 11:40 a.m.

Douglas P. Wendel, President & CEO

Franklin J. Long, Corporate Secretary

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I, FRANKLIN J. LONG, CORPORATE SECRETARY, FOR BURROUGHS & CHAPIN COMPANY, INC., HEREBY CERTIFY THAT I HAVE REVIEWED THE ABOVE REFERENCED DRAFT MINUTES AND TO THE BEST OF MY KNOWLEDGE, AGREE TO THEIR CORRECTNESS.

FRANKLIN J. LONG, Corporate Secretary

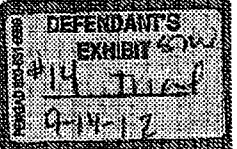
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White House Plantation/Green Diamond Strategy Matrix

03/24/04

State/County	Total Acreage	Value per Acre	Qualifying Acreage	Presumed Value	Probability of Success	Date of Completion	Rate	Present Value of Probable Outcome	Cost to Acquire	Probable Net Return
A. Levee Section 1	1,105									
Developable Acreage per appraisal - 888										
1. Wetlands	888	\$ 65,988,000	888	\$ 58,667,000	50.00%	07/01/09	8.00%	\$ 21,001,200	\$ (500,000)	\$ 20,501,200
2. Conservation Easement	888	\$ 29,394,960	888	\$ 29,394,960	55.00%	01/01/04	8.00%	\$ 14,569,556	\$ (300,000)	\$ 14,269,556
3a. Wetlands Mitigation Bank	246	\$ 5,958,000	246	\$ 5,958,000	70.00%	07/01/05	8.00%	\$ 3,567,222	\$ (250,000)	\$ 3,317,222
3b. Wastewater Treatment	532	\$ 18,620,000	532	\$ 18,620,000	80.00%	07/01/05	8.00%	\$ 13,792,593	\$ (250,000)	\$ 13,542,593
3c. Hunting Lease*	327	\$ 881,000	327	\$ 881,000	80.00%	07/01/05	8.00%	\$ 817,500	\$	\$ 817,500
4. Big Residental Lots	380	\$ 19,000,000	380	\$ 19,000,000	70.00%	12/31/08	8.00%	\$ 12,314,315	\$ (1,000,000)	\$ 11,314,315
B. Levee Section 2	1,293									
Developable Acreage per appraisal - 888										
1. Wetlands	888	\$ 88,067,000	888	\$ 88,067,000	50.00%	07/01/09	8.00%	\$ 20,424,789	\$ (500,000)	\$ 19,924,789
2. Conservation Easement	488	\$ 28,584,140	488	\$ 28,584,140	55.00%	07/01/04	8.00%	\$ 14,558,775	\$ (300,000)	\$ 14,258,775
3a. Wetlands Mitigation Bank	488	\$ 11,247,000	488	\$ 11,247,000	70.00%	07/01/05	8.00%	\$ 7,289,722	\$ (400,000)	\$ 6,889,722
3b. Wastewater Treatment	517	\$ 18,025,000	517	\$ 18,025,000	80.00%	07/01/05	8.00%	\$ 13,403,704	\$ (250,000)	\$ 13,153,704
3c. Hunting Lease*	292	\$ 876,000	292	\$ 876,000	90.00%	07/01/05	8.00%	\$ 730,000	\$	\$ 730,000
4. Big Residental Lots	370	\$ 18,500,000	370	\$ 18,500,000	70.00%	12/31/08	8.00%	\$ 11,950,741	\$ (1,000,000)	\$ 10,950,741
C. Levee Section 3	1,895									
Developable Acreage per appraisal - 302										
1. Wetlands	302	\$ 4,021,000	302	\$ 4,021,000	50.00%	07/01/09	8.00%	\$ 1,206,576	\$ (200,000)	\$ 1,006,576
2. Conservation Easement	302	\$ 1,688,620	302	\$ 1,688,620	55.00%	07/01/04	8.00%	\$ 660,047	\$ (60,000)	\$ 600,047
3a. Wetlands Mitigation Bank	1,000	\$ 20,000,000	1,000	\$ 20,000,000	70.00%	07/01/05	8.00%	\$ 12,992,953	\$ (800,000)	\$ 12,192,953
3b. Wastewater Treatment	182	\$ 3,344,000	182	\$ 3,344,000	80.00%	07/01/05	8.00%	\$ 2,477,037	\$ (150,000)	\$ 2,327,037
3c. Hunting Lease*	843	\$ 2,529,000	843	\$ 2,529,000	90.00%	07/01/05	8.00%	\$ 2,107,500	\$	\$ 2,107,500
Grand Total	4,386									
Feasible Combinations										
1. Wetlands	A1+B1+C1		2,048.00	\$ 142,079,000	50.00%	07/01/05	8.00%	\$ 42,632,945	\$ (1,200,000)	\$ 41,432,945
2. Conservation Easement	A2+B2+C2		2,048.00	\$ 58,671,820	55.00%	07/01/04	8.00%	\$ 30,388,476	\$ (650,000)	\$ 29,738,476
3. Wetlands Wastewater Hunting*	A3+B3+C3		4,386.00	\$ 81,350,000	70.00%	07/01/05	8.00%	\$ 52,728,852	\$ (1,900,000)	\$ 50,828,852
Residential/Wetlands/Hunting*	A4+B4+A3+B3+C3		4,386	\$ 80,144,000	70.00%	08/30/08	8.00%	\$ 51,945,185	\$ (2,350,000)	\$ 49,595,185
* Hunting Lease might be expanded over wetlands for more money										