SITE ENGINEERING PLANS

FOR

Blackheath Park

FOR

Ken Dickens

10025 Sawgrass Drive East
Ponte Vedra, Florida 32097
(904) 225-8885

McCranie & Associates, Inc.

LAND DEVELOPMENT • ROADWAY DESIGN •PERMITTING
86002 CHRISTIAN WAY, • YULEE, • FLORIDA 32097
904/225-8885 - FAX: 904/225-8815

ISSUE DATE:
APRIL 21, 2005

REVISIONS
JUNE 16, 2005

MC PROJECT
No.: 05002

BLACKHEATH PARK
FOR
KEN DICKENS

RELEASED FOR CONSTRUCTION _____ BY _____

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GENERAL NOTES

SITE / GEOMETRY

1. ALL WORK SHALL BE PERFORMED IN A SAFE MANNER. ALL SAFETY RULES AND GUIDELINES OF O.S.H.A. SHALL BE FOLLOWED. THE CONTRACTOR SHALL BE WHOLLY RESPONSIBLE FOR ANY INJURIES OF HIS EMPLOYEES, AND ANY DAMAGE TO PRIVATE PROPERTY OR PERSONS DURING THE COURSE OF THIS PROJECT. ALL COSTS ASSOCIATED WITH COMPLYING WITH O.S.H.A. REGULATIONS AND THE FLORIDA TRENCH SAFETY ACT MUST BE INCLUDED IN THE CONTRACTOR'S PRICE FOR PERFORMING THE WORK.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE JOB SITE PRIOR TO PREPARING THE BID FOR THE PURPOSE OF FAMILIARIZING HIMSELF WITH THE NATURE AND THE EXTENT OF THE WORK AND LOCAL CONDITIONS, EITHER SURFACE OR SUBSURFACE, WHICH MAY AFFECT THE WORK TO BE PERFORMED, AND THE EQUIPMENT, LABOR AND MATERIALS REQUIRED. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF COMPLETE PERFORMANCE UNDER THIS CONTRACT. THE CONTRACTOR IS URGED TO TAKE COLOR PHOTOGRAPHS ALONG THE ROUTE OF THIS PROJECT TO RECORD EXISTING CONDITIONS PRIOR TO CONSTRUCTION, AND TO AID IN RESOLVING POSSIBLE FUTURE COMPLAINTS THAT MAY OCCUR DUE TO CONSTRUCTION OF THE PROJECT. ALL COSTS ASSOCIATED WITH PRELIMINARY INVESTIGATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

3. ALL IMPROVEMENTS SHOWN ARE TO BE WARRANTED BY THE CONTRACTOR TO THE DEVELOPER FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE .

4. ELEVATIONS ARE BASED ON U.S.C. & G. DATUM, N.G.V.D. 1929.

5. TOPOGRAPHIC AND BOUNDARY INFORMATION WAS PROVIDED BY: ALL-AMERICAN

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY BUILDING, RIGHT-OF-WAY PERMITS NOT PROVIDED BY THE OWNER, AND INSURANCE REQUIRED FOR THE PROJECT.

7. THE CONTRACTOR SHALL COORDINATE THE WORK WITHIN COUNTY OR STATE RIGHT-OF-WAY WITH THE PROPER AGENCIES FOR MAINTENANCE OF TRAFFIC AND METHOD OF CONSTRUCTION & REPAIR.

8. THE CONTRACTOR SHALL ADVISE THE AUTHORIZED REPRESENTATIVE DAILY OF PLANNED WORK SCEDULE. THE CONTRACTOR SHALL COORDINATE THEIR CONSTRUCTION WITH ALL OTHER CONTRACTORS. IN THE EVENT OF ANY CONFLICT WHATSOEVER, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD AND THE OWNER, PRIOR TO PROCEEDING WITH CONSTRUCTION.

9. "AS-BUILT" DRAWINGS - AS-BUILTS ARE REQUIRED TO BE SIGNED AND SEALED BY A FLORIDA REGISTERED LAND SURVEYOR. THEREFORE, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTRACT WITH A LAND SURVEYOR REGISTERED IN THE STATE OF FLORIDA FOR THE PREPARATION, FIELD LOCATIONS, CERTIFICATION, AND SUBMITTAL OF AS-BUILT DRAWINGS.

10. "AS-BUILT" RECORD DATA AND INFORMATION SHALL BE MAINTAINED BY THE CONTRACTOR. RECORD DRAWINGS SHALL BE SUPPLIED TO THE ENGINEER OF RECORD AND NASSAU COUNTY.

11. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL SURVEY AND PROPERTY MONUMENTS. IF A MONUMENT IS DISTURBED, THE CONTRACTOR SHALL CONTRACT WITH THE SURVEYOR OF RECORD FOR REINSTALLATION OF THE MONUMENT.

12. ALL DEBRIS RESULTING FROM ALL ACTIVITIES SHALL BE DISPOSED OF OFF-SITE BY CONTRACTOR ON A DAILY BASIS.

13. ALL EXCESS SUITABLE AND UNSUITABLE MATERIALS SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR UNLESS DIRECTED OTHERWISE BY THE ENGINEER.

14. ALL EXISTING TREES LISTED TO REMAIN SHALL BE PRESERVED AND PROTECTED.

15. THE LOCATION OF ALL EXISTING UTILITIES, STRUCTURES, AND IMPROVEMENTS ON THE DRAWINGS ARE BASED ON LIMITED INFORMATION AND MAY NOT HAVE BEEN FIELD VERIFIED. THE LOCATIONS ARE APPROXIMATE. THE CONTRACTOR SHALL NOTIFY RESPECTIVE UTILITY OWNERS AND FIELD VERIFY LOCATIONS OF EXISTING UTILITIES AND OTHER IMPROVEMENTS PRIOR TO COMMENCING ANY CONSTRUCTION. IF THE LOCATIONS SHOWN ARE CONTRARY TO ACTUAL FIELD LOCATIONS, THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER OF THE DISCREPANCY. THE DISCREPANCY SHOULD BE RESOLVED PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN WORKING IN AREAS NEAR EXISTING UTILITY IMPROVEMENTS AND SHALL BE RESPONSIBLE FOR REPAIRS OR PAYMENTS FOR ALL DAMAGE MADE TO EXISTING UTILITIES OR OTHER IMPROVEMENTS. PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL GRADES, INVERTS, AND TYPE OF MATERIAL OF EXISTING UTILITIES TO WHICH THEY SHALL CONNECT.

16. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER ON ALL MATERIALS, FOR REVIEW AND APPROVAL, PRIOR TO PURCHASE OR CONSTRUCTION OF ANY UTILITY OR STRUCTURE.

17. UNSUITABLE MATERIALS UNDER WATER, SEWER, OR STORM PIPE AND/OR STRUCTURES SHALL BE REMOVED AND REPLACED WITH SELECTED BACKFILL COMPACTED TO 98% OF IT'S MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED PROCTOR TEST (ASTM D1557).

18. ALL PIPE LENGTHS ARE APPROXIMATE DIMENSIONS, ALL DRAINAGE STRUCTURES SHALL BE CONSTRUCTED TO CONFORM WITH TYPICAL SECTIONS AND DETAILS AS SHOWN ON THE MISCELLANEOUS DETAILS SHEET AND IN ACCORDANCE WITH THE SPECIFICATIONS.

19. ALL UNDERGROUND UTILITIES MUST BE INSTALLED PRIOR TO PREPARATION OF SUBGRADE FOR PAVEMENT.

20. GRADES SHOWN ON PLANS ARE EDGE OF PAVEMENT FINISHED GRADES UNLESS OTHERWISE NOTED.

21. SHOULD THE SURFACE OR SUBSURFACE CONDITIONS VARY FROM WHAT IS SHOWN ON THE PLANS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER.

22. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE SEEDED AND MULCHED UNLESS OTHERWISE SPECIFICALLY STATED.

23. THE CONTRACTOR IS RESPONSIBLE FOR THE CONTROL OF SEDIMENT-LADEN RUNOFF RESULTING FROM STORM EVENTS DURING THE CONSTRUCTION PHASE. EROSION CONTROL FACILITIES SHOULD BE INSTALLED EARLY DURING THE CONSTRUCTION PERIOD SO AS TO PREVENT THE TRANSPORT OF SEDIMENT INTO SURFACE WATERS. RE-VEGETATION AND STABILIZATION OF DISTURBED AREAS SHOULD BE ACCOMPLISHED IMMEDIATELY TO REDUCE THE POTENTIAL FOR FURTHER SOIL EROSION.

24. ANY DISCREPANCIES ON THE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE COMMENCING WORK.

25. MINIMUM COVER OVER PIPES SHALL BE 36" UNLESS OTHERWISE INDICATED.

26. ALL UNDERGROUND UTILITY COMPANIES SHALL BE CONTACTED AT LEAST 48 HOURS PRIOR TO COMMENCING CONSTRUCTION.

27. IN ADDITION TO THE SPECIFICATIONS AND DETAILS PROVIDED FOR THIS CONTRACT, THE NASSAU COUNTY STANDARD DETAILS AND SPECIFICATIONS (LATEST REVISION) SHALL ALSO BE USED FOR ANY ITEMS NOT COVERED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN A SET OF STANDARD DETAILS AND SPECIFICATIONS FROM NASSAU COUNTY.

28. BACKFILL MATERIAL SHALL BE COMPACTED TO 100% (+/-2%) PER NASSAU COUNTY REQUIREMENTS UNDER EXISTING AND PROPOSED ROADWAYS.

29. NO FIELD CHANGES OR DEVIATIONS FROM DESIGN TO BE MADE WITHOUT PRIOR APPROVAL OF THE ENGINEER.

30. STATIONING REFERS TO THE CENTERLINE OF THE ROADWAY EXCEPT AS NOTED ON PLANS. WHERE PAVEMENT SPLITS, THE STATIONING FOLLOWS THE INSIDE EDGE OF PAVEMENT UNTIL ROADWAY TRANSITIONS BACK TO THE TYPICAL ROADWAY SECTION

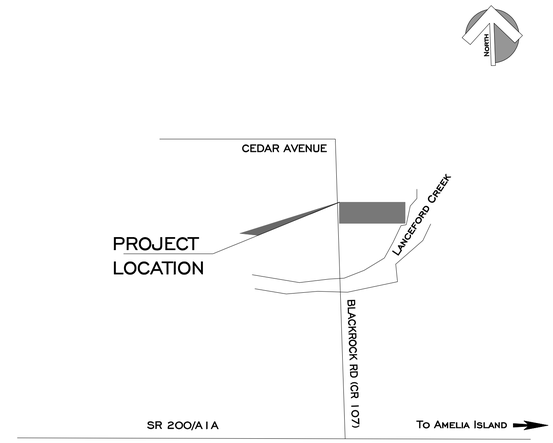
31. ALL CONSTRUCTION, MATERIAL, AND WORKMANSHIP ARE TO BE IN ACCORDANCE WITH NASSAU COUNTY SPECIFICATION AND STANDARDS.

LEGEND

15.0	PROPOSED CONTOUR
15	EXISTING CONTOUR
	PROPOSED R.O.W. LINE
	PROPOSED PROPERTY LINE
FM FM	PROPOSED SANITARY SEWER
SAN SAN	PROPOSED SANITARY SEWER
WM WM	PROPOSED WATER LINE
RW RW	PROPOSED RAW WATER LINE
	PROPOSED FIRE HYDRANT
	EXISTING EDGE OF PAVEMENT
	PROPOSED EDGE OF PAVEMENT

S-1	DRAINAGE STRUCTURE #
P-1	PIPE #

INDEX OF DRAWINGS



LOCATION MAP

No.	By	Date	Revision
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Project Mgr: B. Taylor
Designed by: D. McCranie
Drawn by: E. Schmalfeld
QA/QC: A. Desilet

McCranie & Associates, Inc. Engineers

McCranie & Associates, Inc.
86002 Christian Way, Suite 101 - Yulee, Florida 32097
Land Development - Roadway Design - Permitting

Dimensions and notes take preference.

Ken Dickens

Blackheath Park

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Registered Professional

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NORTHERLY LINE OF SECTION 45

POINT OF REFERENCE

S01°53'16"E 360.00'(DEED)
EASTERLY RIGHT-OF-WAY LINE

POINT OF BEGINNING

BENCHMARK:
TOP OF 4"X4" CONCRETE MONUMENT #7039, ELEVATION (20.50).

ELEVATIONS SHOWN THUS (20.50), AND REFER TO N.G.V.D. OF 1929.

FOUND 4"X4" P.R.M. # 7039

BLACKROCK ROAD
(CR 107)
100' RIGHT-OF-WAY

S01°53'16"E 400.00'(DEED)
(BEARING BASE)

LOTS 12-20 AND TRACT "B"
CAPTAINS POINTE
PLAT BOOK 7, PAGE 109

ZONED: RS-1
LAND USE: VACANT RES.
CAPTAIN'S POINTE PROPERTIES
641 BLACKROCK ROAD
YULEE, FL 32097

LOT 20 | LOT 19 | LOT 18 | LOT 17 | LOT 16 | LOT 15 | LOT 14 | LOT 13 | TRACT "B" | LOT 12

PROPERTY LINE

N89°46'23"W 1443.62'(DEED)

DRAINAGE BOUNDRY LINE

TIME OF CONCENTRATION

EXISTING DIRT DRIVEWAY

DA-PRE
14.32 Ac.

FLOOD ZONE "X"

WETLAND LINE

NOTE:
EXISTING WELL AND SEPTIC TO BE ABANDONED.
EXISTING DWELLING AND GARAGE TO BE DEMOLISHED.

75'R

EXISTING DWELLING

EXISTING WELL

EXISTING SEPTIC & DRAIN FIELD

EXISTING GARAGE

80'

FLOOD ZONE "X" (SHADED)

FLOOD ZONE "AE 11"

DRAINAGE AREA BOUNDRY LINE

WETLAND LINE

778.99'

N17°45'38"E

S54°51'39"E 628.97'(DEED)

N86°33'50"E 359'±(PLAT)

FOUND 4"X4" P.R.M. NO ID

BENCHMARK:
TOP OF 4"X4" CONCRETE MONUMENT NO ID, ELEVATION (8.55).

ELEVATION SHOWN THUS (8.55), AND REFER TO N.G.V.D. OF 1929.

DRAINAGE BOUNDRY LINE

PROPERTY LINE

N88°06'44"E 1000.00'(DEED)

FOUND 1/2" I.P. # 1375

FOUND 1/2" I.P. NO CAP

LOT 27 | LOT 26 | LOT 25 | LOT 24 | LOT 23 | LOT 22 | LOT 21 | LOT 20 | LOT 19 | LOT 18 | LOT 17 | LOT 16 | LOT 15

45-3N-28-12 IL-0027-0000
ZONED: RS-1
LAND USE: VACANT RES.
R.A. & C.R. BEAN
7779 EAST GREENWICHE CT.
JACKSONVILLE, FL 32277

45-3N-28-12 IL-0026-0000
ZONED: RS-1
LAND USE: VACANT RES.
BRANDON CANNONE
13303 CRYSTAL COVE
LOUISVILLE, KY 40223

45-3N-28-12 IL-0025-0000
ZONED: RS-1
LAND USE: VACANT RES.
PATRICIA A. GILROY
1001 SWEETBRIAR LANE S
YULEE, FL 32097

45-3N-28-12 IL-0024-0000
ZONED: RS-1
LAND USE: VACANT RES.
ARNETT PROPERTIES, INC.
2400 FLYING A RANCH DR.
YULEE, FL 32097

45-3N-28-12 IL-0023-0000
ZONED: RS-1
LAND USE: VACANT RES.
ARNETT PROPERTIES, INC.
2400 FLYING A RANCH DR.
YULEE, FL 32097

45-3N-28-12 IL-0022-0000
ZONED: RS-1
LAND USE: SINGLE-FAM. RES.
JOSEPH & MARY JOHNSON
96133 GRAVEL CREEK DRIVE
YULEE, FL 32097

45-3N-28-12 IL-0021-0000
ZONED: RS-1
LAND USE: SINGLE-FAM. RES.
RAY & FAITH VARRASSE
96133 GRAVEL CREEK DRIVE
YULEE, FL 32097

45-3N-28-12 IL-0020-0000
ZONED: RS-1
LAND USE: SINGLE-FAM. RES.
TONIE & NEIL FRANK
96133 GRAVEL CREEK DRIVE
YULEE, FL 32097

45-3N-28-12 IL-0019-0000
ZONED: RS-1
LAND USE: VACANT RES.
JOSEPH & DONNA MCELHAUGH
2019 HIGHLAND STREET
FERNANDINA BEACH, FL 32034

45-3N-28-12 IL-0018-0000
ZONED: RS-1
LAND USE: VACANT RES.
JAMES & BERNICE DENNER
365 OTTER RUN DRIVE
FERNANDINA BEACH, FL 32034

45-3N-28-12 IL-0017-0000
ZONED: RS-1
LAND USE: VACANT RES.
HERBERT & GLORIA ADAMS
38 MARSH CREEK RD.
FERNANDINA BEACH, FL 32034

45-3N-28-12 IL-0016-0000
ZONED: RS-1
LAND USE: VACANT RES.
RANDY & PATRICIA DESILET
2001 VERSAILLES CT.
TALLAHASSEE, FL 32308

45-3N-28-12 IL-0015-0000
ZONED: RS-1
LAND USE: VACANT RES.
BLACKROCK DEVELOPMENT, LLC
5472 FIRST COAST HWY
FERNANDINA BEACH, FL 32034

LANCEFORD
PLAT BOOK 6, PAGES 356-358

LANCEFORD CREEK

TIME OF CONCENTRATION COMPUTATION

-1083 LF OVER LAND FLOW @ 0.5'/SEC = 36.1 MIN
-252LF DITCH FLOW @ 2.0'/SEC = 2.1 MIN
TIME OF CONCENTRATION = 38.2 MIN

LEGAL DESCRIPTION

A PORTION OF THE MARGARET O'NEIL GRANT, SECTION 45, TOWNSHIP 3 NORTH , RANGE 28 EAST, NASSAU COUNTY, FLORIDA TOGETHER WITH A PORTION OF SECTION 38, TOWNSHIP 3 NORTH, RANGE 28 EAST NASSAU COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

FOR A POINT OF REFERENCE, COMMENCE AT A POINT WHERE THE EASTERLY RIGHT OF WAY LINE OF COUNTY ROAD NO. C-107, ALSO KNOWN AS BLACKROCK ROAD (HAVING A 100.0 FOOT RIGHT OF WAY) IS INTERSECTED BY THE NORTHERLY LINE OF SECTION 45 AFOREMENTIONED; RUN THENCE SOUTH 1°3'16" EAST ALONG SAID EASTERLY RIGHT OF WAY A DISTANCE OF 360.00 FEET TO THE POINT OF BEGINNING; THENCE FROM THE POINT OF BEGINNING THUS DESCRIBED CONTINUE SOUTH 01°53'16" EAST ALONG AFORESAID RIGHT OF WAY A DISTANCE OF 400.00 FEET; THENCE RUN NORTH 88°06'44" EAST A DISTANCE OF 1000.00 FEET; THENCE RUN SOUTH 54°31'39" EAST, A DISTANCE OF 683.19 FEET TO AN INTERSECTION WITH THE MEAN HIGH WATER LINE OF THE MARSHLANDS OF LANCEFORD CREEK, ELEVATION (3.46), AND THE NORTHEASTERLY LINE OF LANCEFORD, RECORDED IN PLAT BOOK 6, PAGES 356-358, OF THE PUBLIC RECORDS OF NASSAU COUNTY FLORIDA; THENCE NORTHERLY ALONG THE SAID MEAN HIGH WATER LINE THE NEXT 20 COURSES; COURSE No.1) NORTH 08°24'36" EAST, A DISTANCE OF 20.68 FEET; COURSE No.2) NORTH 15°58'44" WEST, A DISTANCE OF 55.46 FEET; COURSE No.3) NORTH 25°10'10" WEST, A DISTANCE OF 34.84 FEET; COURSE No.4) NORTH 13°32'12" EAST, A DISTANCE OF 48.15 FEET; COURSE No.5) NORTH 06°44'19" EAST, A DISTANCE OF 50.47 FEET; COURSE No.6) NORTH 01°26'13" EAST, A DISTANCE OF 58.32 FEET; COURSE No.7) NORTH 08°48'12" EAST, A DISTANCE OF 47.37 FEET; COURSE No.8) NORTH 11°40'16" EAST, A DISTANCE OF 43.47 FEET; COURSE No.9) NORTH 18°22'04" EAST, A DISTANCE OF 42.85 FEET; COURSE No.10) NORTH 25°15'15" EAST, A DISTANCE 49.52 FEET; COURSE No. 11) NORTH 37°08'14" EAST, A DISTANCE OF 57.79 FEET; COURSE No. 12) NORTH 37°49'03" EAST, A DISTANCE OF 33.67 FEET; COURSE No.13) NORTH 55°01'17" EAST, A DISTANCE OF 58.94 FEET; COURSE No.14) NORTH 57°13'49" EAST, A DISTANCE OF 48.40 FEET; COURSE No.15) NORTH 72°53'25" EAST, A DISTANCE OF 39.23 FEET; COURSE No.16) SOUTH 85°41'01" EAST, A DISTANCE OF 91.46 FEET; COURSE No.17) NORTH 09°13'06" WEST, A DISTANCE OF 65.38 FEET; COURSE No.18) NORTH 00°03'12" EAST, A DISTANCE OF 56.10 FEET; COURSE No.19) NORTH 08°11'01" EAST, A DISTANCE OF 26.54 FEET; COURSE No.20) NORTH 31°14'06" WEST, A DISTANCE OF 66.37 FEET TO THE SOUTHERLY LINE OF CAPTAINS POINTE, RECORDED IN PLAT BOOK 7, PAGE 109, OF THE PUBLIC RECORDS OF NASSAU COUNTY, FLORIDA; THENCE SOUTH 86°33'50" WEST ALONG SAID SOUTHERLY LINE, A DISTANCE OF 399.62 FEET TO ANGLE POINT OF SAID SOUTHERLY LINE; THENCE CONTINUE ALONG SAID SOUTHERLY LINE NORTH 89°46'23" WEST, A DISTANCE OF 1443.62 FEET TO THE POINT OF BEGINNING, CONTAINING 17.66 ACRES, MORE OR LESS.

N
W E
S

2

120 90 60 30 0 60 120
Scale in Feet

NOTES:
1. P.I.D.# 43-3N-28-0000-0001-0090
2. Site Contains: 17.66 Ac.
3. Project Contains 22 Lots
4. F.L.U.M.Designation: Medium Density Residential
5. Property Is Zoned: RS-1
6. Property Is Located within Flood Zones:
   X
   X Shaded
   AE(11)
   As determined by McCranie & Associates, Inc. per F.E.M.A. Flood Insurance Rate Map, Community Panel 120170 0219 C, Dated 5-4-88.
7. All elevations are based on NGVD 1929.

BEARINGS BASED ON THE EASTERLY RIGHT-OF-WAY LINE OF COUNTY ROAD No. 107, BEING S01°53'16"E.

No.	By	Date	Revision
2	DMc	08/05/05	Revised acreage, Legal Description
1	DMc	08/16/05	Revised acreage in Legal Description

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PROJECT MGR: B. TAYLOR
DESIGNED BY: D. McCRANIE
DRAWN BY: E. SCHMALFELD
QA/QC: A. DESILET

McCranie & Associates, Inc.
Engineers

McCranie & Associates, Inc.
86002 CHRISTIAN WAY, SUITE 101 - YULEE, FLORIDA 32097
LAND DEVELOPMENT - ROADWAY DESIGN - PERMITTING
DIMENSIONS AND NOTES TAKE PREFERENCE.

KEN DICKENS

BLACKHEATH PARK

PRE-DEVELOPMENT DRAINAGE SHEET

REGISTERED PROFESSIONAL

SHEET No.
PRE-1
3 OF 9
ISSUE DATE
APRIL 21, 2005
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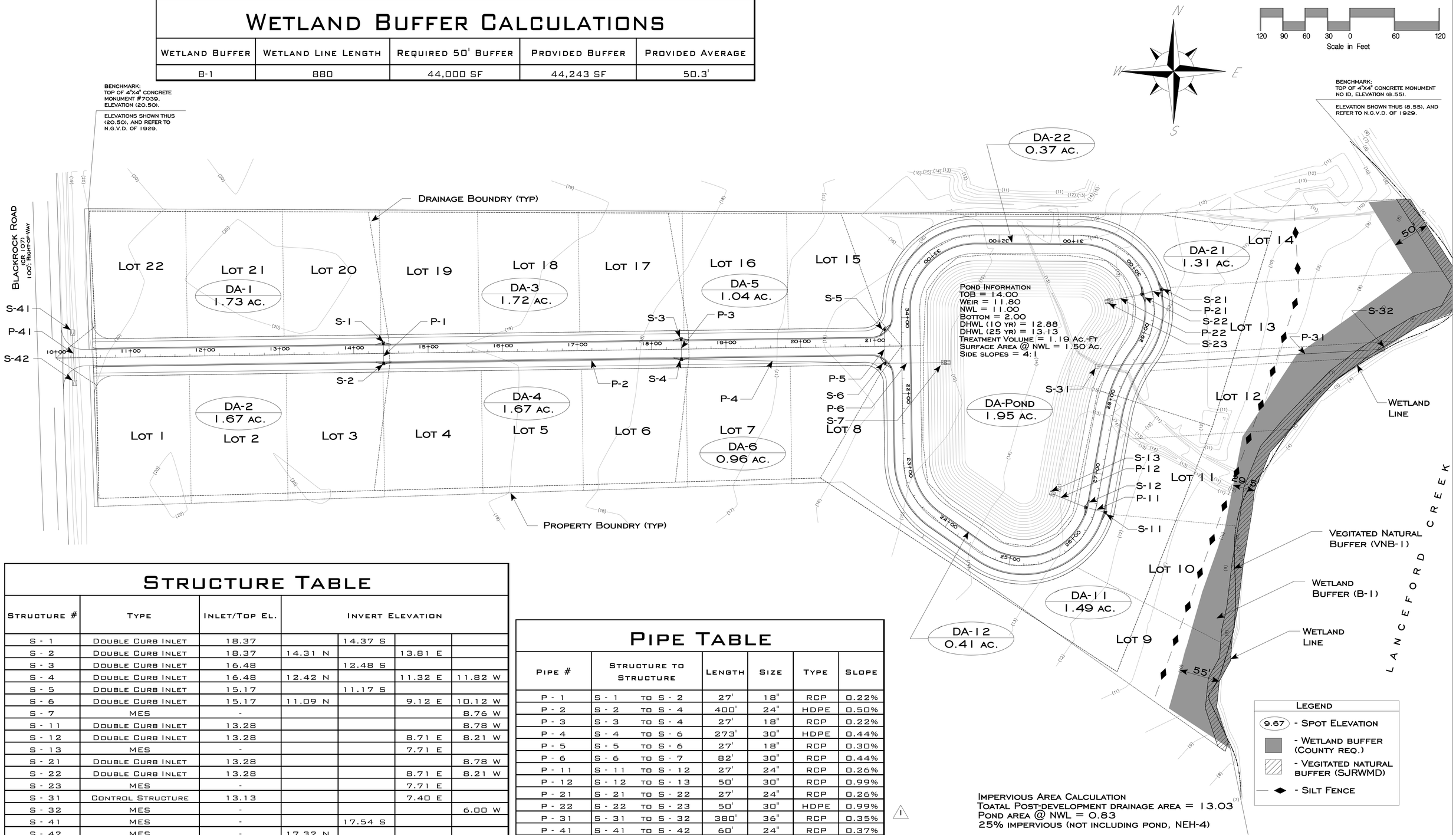
05002

Wetland Buffer Calculations

Wetland Buffer	Wetland Line Length	Required 50' Buffer	Provided Buffer	Provided Average
B-1	880	44,000 SF	44,243 SF	50.3'



Structure Table

Structure #	Type	Inlet/Top El.	Invert Elevation			
S - 1	Double Curb Inlet	18.37		14.37 S		
S - 2	Double Curb Inlet	18.37	14.31 N		13.81 E	
S - 3	Double Curb Inlet	16.48		12.48 S		
S - 4	Double Curb Inlet	16.48	12.42 N		11.32 E	11.82 W
S - 5	Double Curb Inlet	15.17		11.17 S		
S - 6	Double Curb Inlet	15.17	11.09 N		9.12 E	10.12 W
S - 7	MES	-				8.76 W
S - 11	Double Curb Inlet	13.28				8.78 W
S - 12	Double Curb Inlet	13.28			8.71 E	8.21 W
S - 13	MES	-			7.71 E	
S - 21	Double Curb Inlet	13.28				8.78 W
S - 22	Double Curb Inlet	13.28			8.71 E	8.21 W
S - 23	MES	-			7.71 E	
S - 31	Control Structure	13.13			7.40 E	
S - 32	MES	-				6.00 W
S - 41	MES	-		17.54 S		
S - 42	MES	-	17.32 N			

Pipe Table

Pipe #	Structure to Structure	Length	Size	Type	Slope
P - 1	S - 1 to S - 2	27'	18"	RCP	0.22%
P - 2	S - 2 to S - 4	400'	24"	HDPE	0.50%
P - 3	S - 3 to S - 4	27'	18"	RCP	0.22%
P - 4	S - 4 to S - 6	273'	30"	HDPE	0.44%
P - 5	S - 5 to S - 6	27'	18"	RCP	0.30%
P - 6	S - 6 to S - 7	82'	30"	RCP	0.44%
P - 11	S - 11 to S - 12	27'	24"	RCP	0.26%
P - 12	S - 12 to S - 13	50'	30"	RCP	0.99%
P - 21	S - 21 to S - 22	27'	24"	RCP	0.26%
P - 22	S - 22 to S - 23	50'	30"	HDPE	0.99%
P - 31	S - 31 to S - 32	380'	36"	RCP	0.35%
P - 41	S - 41 to S - 42	60'	24"	RCP	0.37%

1 Impervious Area Calculation
Toatal Post-development drainage area = 13.03
Pond area @ NWL = 0.83
25% impervious (not including pond, NEH-4)

No.	By	Date	Revision
10			
9			
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1	DMC	06/16/05	Revised P-31 length

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Project Mgr: B. Taylor
Designed by: D. McCranie
Drawn by: E. Schmalfeld
QA/QC: A. Desilet

McCranie & Associates, Inc. Engineers

McCranie & Associates, Inc.
86002 Christian Way, Suite 101 - Yulee, Florida 32097
Land Development - Roadway Design - Permitting

Dimensions and notes take preference.

Ken Dickens

Blackheath Park

Post-Development Drainage Sheet

Registered Professional

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Issue Date
April 21, 2005

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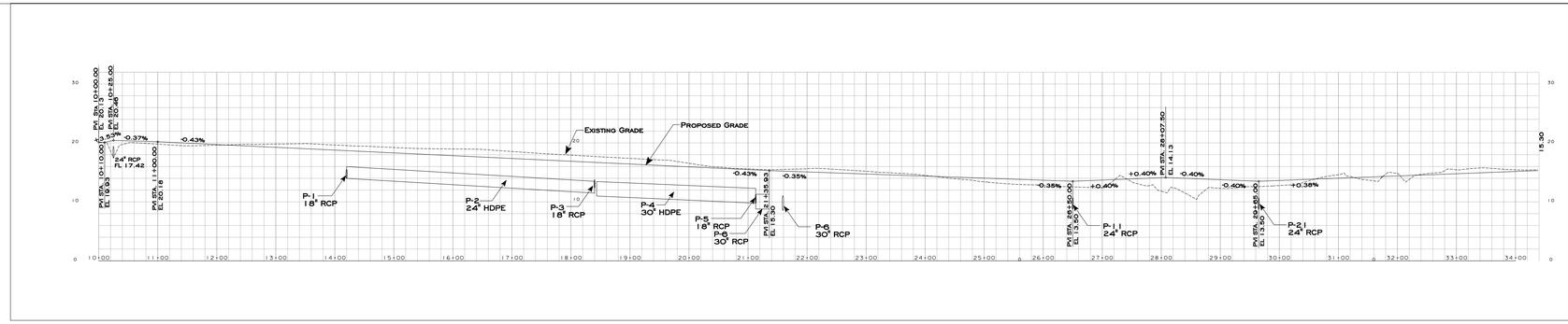

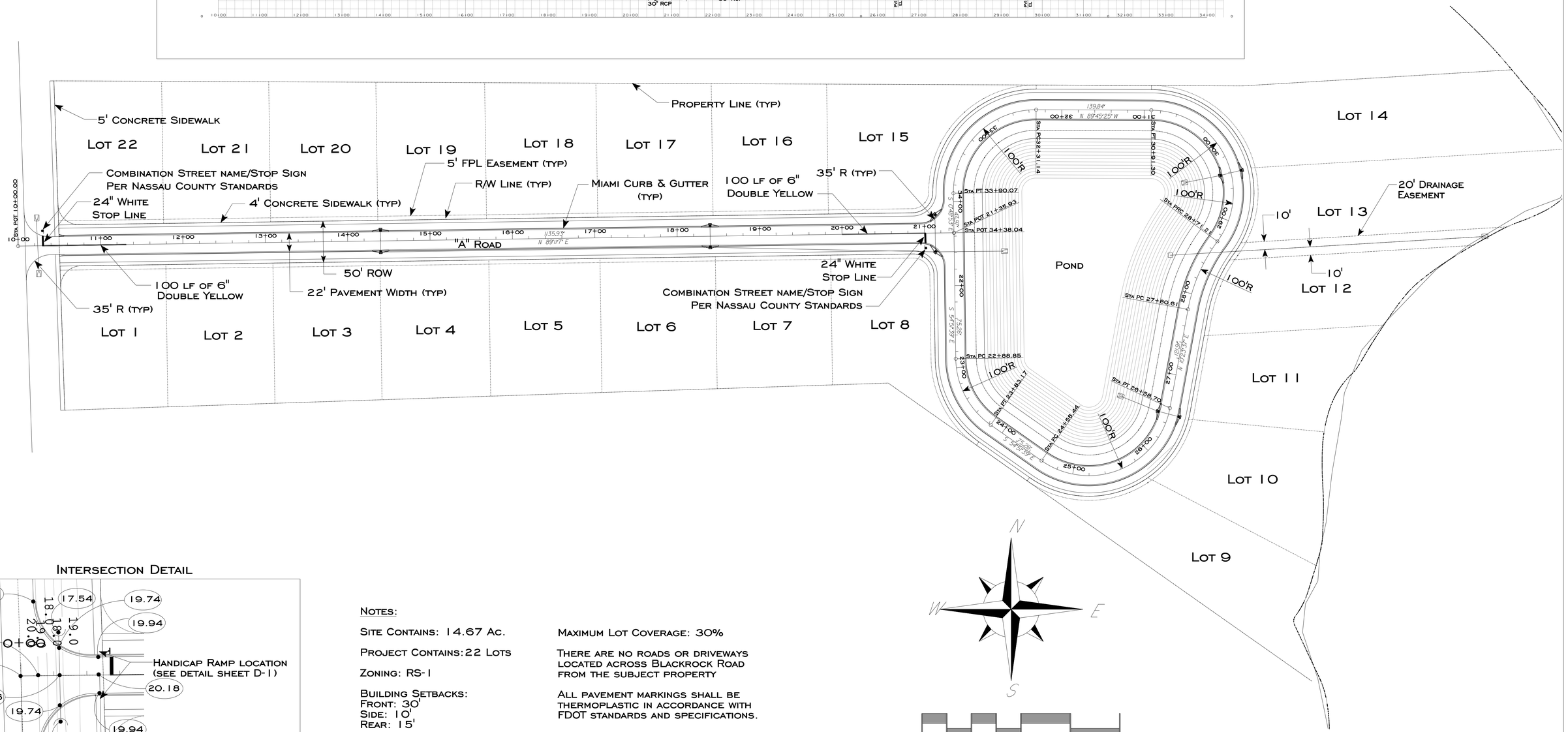

Intersection Detail

Notes:

Site Contains: 14.67 Ac.

Project Contains: 22 Lots

Zoning: RS-1

Building Setbacks:
Front: 30'
Side: 10'
Rear: 15'

Maximum Building Height: 35'

Maximum Lot Coverage: 30%

There are no roads or driveways located across Blackrock Road from the subject property

All pavement markings shall be thermoplastic in accordance with FDOT standards and specifications.

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Designed by: D. McCranie
Drawn by: E. Schmalfeld
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Dimensions and notes take preference.

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Blackheath Park

Paving & Grading Sheet

Registered Professional

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PD-1
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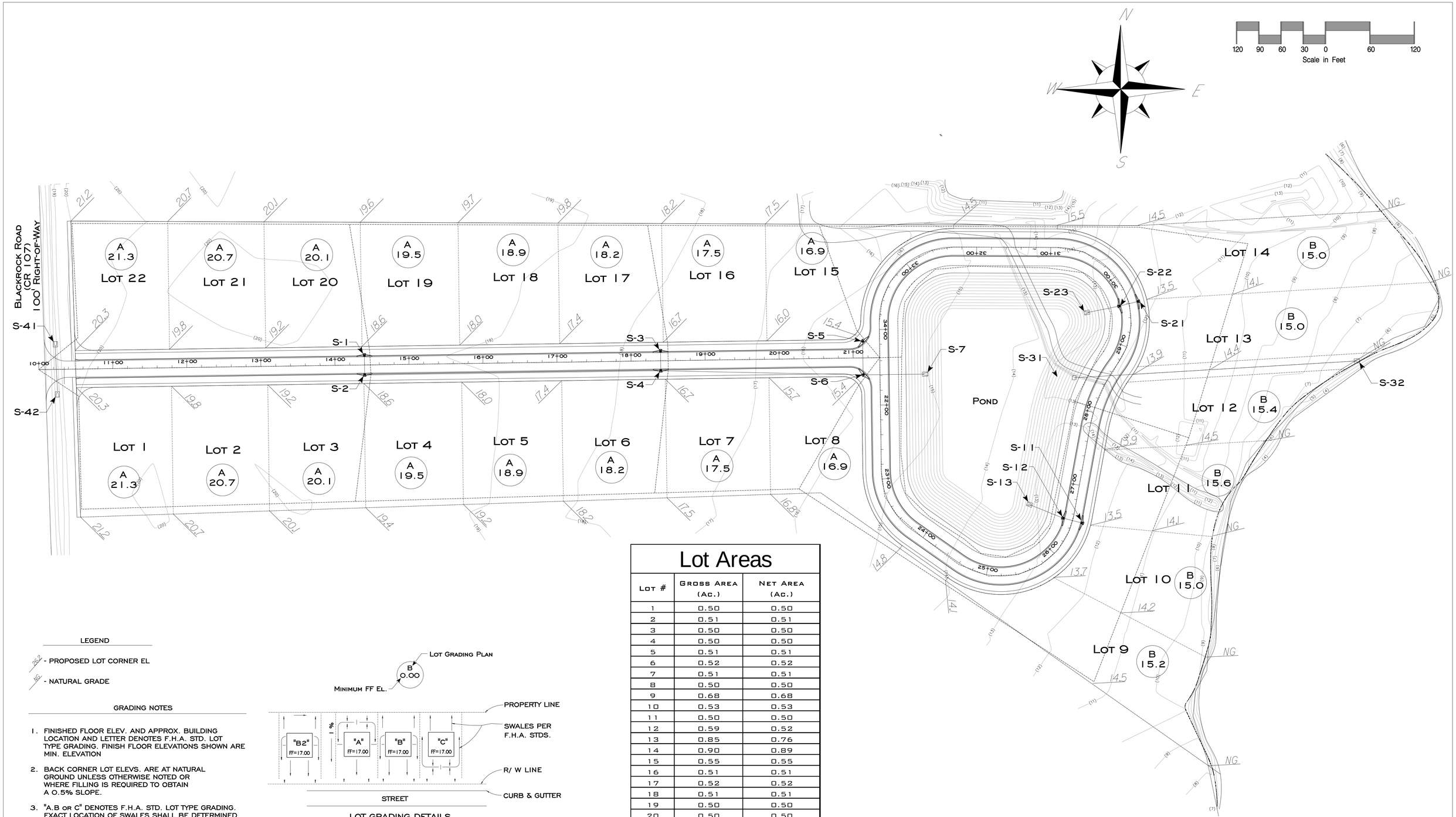
Issue Date
April 21, 2005

Project No.
05002



LEGEND

262 - PROPOSED LOT CORNER EL

NG - NATURAL GRADE

GRADING NOTES

1. FINISHED FLOOR ELEV. AND APPROX. BUILDING LOCATION AND LETTER DENOTES F.H.A. STD. LOT TYPE GRADING. FINISH FLOOR ELEVATIONS SHOWN ARE MIN. ELEVATION
2. BACK CORNER LOT ELEVS. ARE AT NATURAL GROUND UNLESS OTHERWISE NOTED OR WHERE FILLING IS REQUIRED TO OBTAIN A 0.5% SLOPE.
3. "A,B OR C" DENOTES F.H.A. STD. LOT TYPE GRADING. EXACT LOCATION OF SWALES SHALL BE DETERMINED WHEN THE SIZE AND LOCATION OF BUILDING IS SET (BY OTHERS).

LOT GRADING DETAILS

Lot Areas

LOT #	GROSS AREA (AC.)	NET AREA (AC.)
1	0.50	0.50
2	0.51	0.51
3	0.50	0.50
4	0.50	0.50
5	0.51	0.51
6	0.52	0.52
7	0.51	0.51
8	0.50	0.50
9	0.68	0.68
10	0.53	0.53
11	0.50	0.50
12	0.59	0.52
13	0.85	0.76
14	0.90	0.89
15	0.55	0.55
16	0.51	0.51
17	0.52	0.52
18	0.51	0.51
19	0.50	0.50
20	0.50	0.50
21	0.51	0.51
22	0.51	0.51

No.	By	Date	Revision
10			
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3			
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1			

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PROJECT MGR: B. TAYLOR
DESIGNED BY: D. MCCRANIE
DRAWN BY: E. SCHMALFELD
QA/QC: A. DESILET

McCranie & Associates, Inc.
Engineers

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LAND DEVELOPMENT - ROADWAY DESIGN - PERMITTING

DIMENSIONS AND NOTES TAKE PREFERENCE.

KEN DICKENS

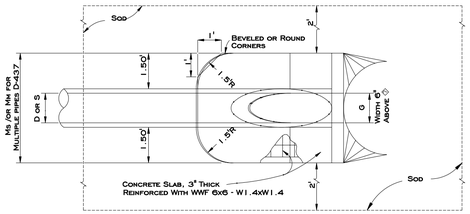
BLACKHEATH PARK

LOT GRADING SHEET

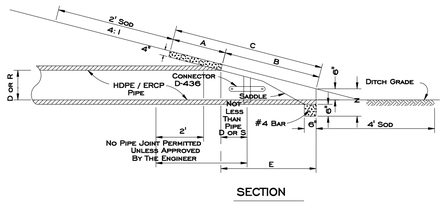
REGISTERED PROFESSIONAL

SHEET NO. LG-1
6 OF 9
ISSUE DATE APRIL 21, 2005
PROJECT NO. 05002

MITERED END SECTION FOR R.C.P. CROSS DRAIN TYPE B
TABLES OF DIMENSION FOR MITERED END SECTIONS TYPE B



TOP VIEW - SINGLE PIPE



SECTION

N.T.S.

* SLOPE:

4:1 Miter To 1/8 Of Pipe For Pipes 18" & Smaller
2:1 Miter For Pipes 24" & Larger, For RCP.

4:1 Miter To Major Axis For Pipes 24"x 38" & Smaller.
2:1 Miter For Pipes 29"x 45" & Larger, For ERCP.

DIMENSIONS FOR E.R.C.P.

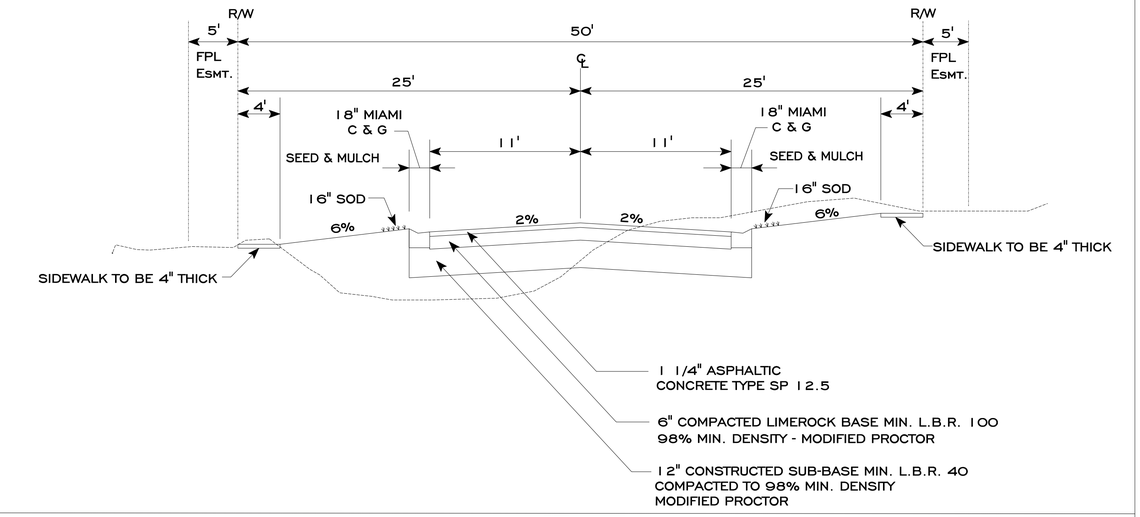
RISE R	SPAN S	X	A	B	C	E	F	G	Ms	N
12"	18"	2.83'	2.36'	3.06'	5.42'	3.03'	5'	1.50'	4.92'	1.21'
14"	23"	3.33'	2.44'	3.75'	6.19'	3.70'	6'	1.90'	5.38'	1.23'
19"	30"	4.00'	2.62'	5.47'	8.09'	5.36'	8'	2.37'	6.04'	1.27'
24"	38"	5.00'	2.79'	7.18'	9.97'	7.03'	10'	2.85'	6.79'	1.31'
29"	45"	5.92'	3.05'	8.90'	11.95'	8.70'	12'	3.19'	7.50'	1.38'
34"	53"	7.00'	3.22'	10.62'	13.84'	10.36'	13'	3.57'	8.25'	1.42'
38"	60"	7.83'	3.39'	11.99'	15.38'	11.70'	15'	3.95'	8.92'	1.46'
43"	68"	8.92'	3.56'	13.71'	17.27'	13.36'	17'	4.28'	9.67'	1.50'
48"	76"	9.92'	3.73'	15.43'	19.16'	15.03'	19'	4.59'	10.42'	1.54'
53"	83"	10.67'	3.91'	17.15'	21.06'	16.70'	20'	4.77'	11.08'	1.58'
58"	91"	11.67'	4.08'	18.87'	22.95'	18.36'	22'	5.01'	11.83'	1.63'

"X"=DISTANCE FROM CENTER OF PIPE TO CENTER OF PIPE.
"Ms"=DIMENSIONS FOR MULTIPLE PIPES.
FORMULA TO DETERMINE "Ms" FOR MULTIPLE PIPES = Ms+X (NO. OF PIPES -1)
FOR "Ms" AND "X" DIMENSIONS, SEE TABLE ABOVE.
• SPECIAL ORDER; NOT STANDARD SIZE

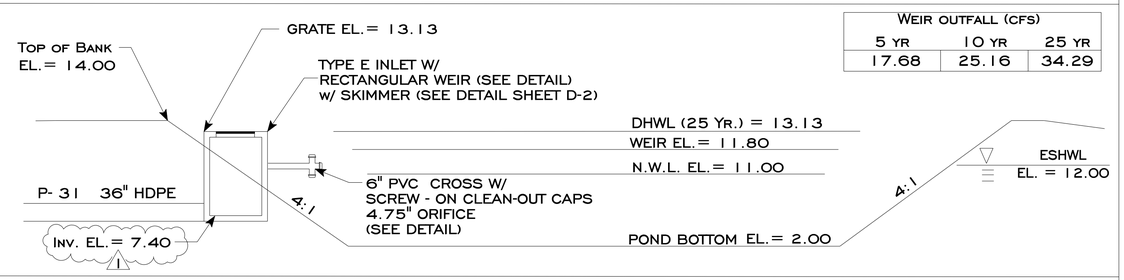
DIMENSIONS FOR HDPE

D	X	A	B	C	E	F	G	Ms	N
15"	2.58'	2.27'	4.09'	6.36'	4.03'	6'	1.22'	4.63'	1.19'
18"	2.83'	2.36'	5.12'	7.48'	5.03'	9'	1.41'	4.92'	1.21'
24"	3.42'	2.53'	7.18'	9.71'	7.03'	11'	1.73'	5.50'	1.25'
30"	4.25'	2.70'	9.25'	11.95'	9.03'	13'	2.00'	6.08'	1.29'
36"	5.08'	2.87'	11.31'	14.18'	11.03'	15'	2.24'	6.67'	1.33'
42"	6.00'	3.05'	13.37'	16.42'	13.03'	17'	2.45'	7.25'	1.38'
48"	6.75'	3.22'	15.43'	18.65'	15.03'	19'	2.63'	7.83'	1.42'
54"	7.67'	3.39'	17.49'	20.88'	17.03'	21'	2.83'	8.42'	1.46'
60"	8.50'	3.56'	19.55'	23.11'	19.03'	23'	3.00'	9.00'	1.50'

6.42' 6.25' DIMENSIONS PERMITTED TO ALLOW USE OF 8' STANDARD PIPE LENGTHS.
10.40' 10.10' DIMENSIONS PERMITTED TO ALLOW USE OF 12' STANDARD PIPE LENGTHS.
CONCRETE SLAB SHALL BE DEEPENED TO FROM BRIDGE ACROSS CROWN OF PIPE. SEE SECTION.

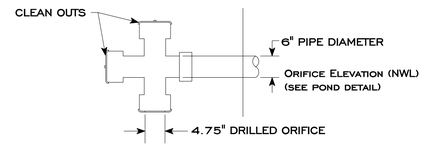


TYPICAL ROADWAY SECTION

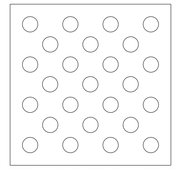


WEIR OUTFALL (CFS)		
5 YR	10 YR	25 YR
17.68	25.16	34.29

POND DETAIL



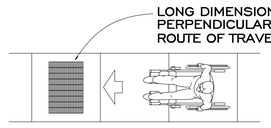
ORIFICE DETAIL



NOTE
ADAAG STANDARDIZES DETECTABLE WARNINGS AS RAISED TRUNCATED DOMES WITH A NOMINAL 0.9 IN. DIAMETER, 0.2 IN. HEIGHT, AND NOMINAL 2.35 IN. ON CENTER WHICH MUST CONTRAST VISUALLY WITH ADJOINING SURFACES.

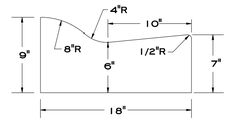
ALL SIDEWALK CURB RAMPS SHALL HAVE DETECTABLE WARNING SURFACES THAT EXTEND THE FULL WIDTH OF THE RAMP AND IN THE DIRECTION OF TRAVEL 24 INCHES FROM BACK OF CURB.

NOTE
SIDEWALK WIDTH: 36 IN.
(915 MM) MINIMUM

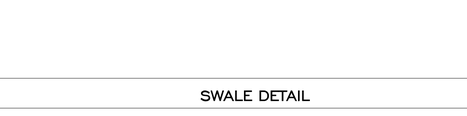


Note: All sidewalk ramps are to meet FDOT Index 0304 (rev. 7–24–02) See engineer or County for any clarifications.

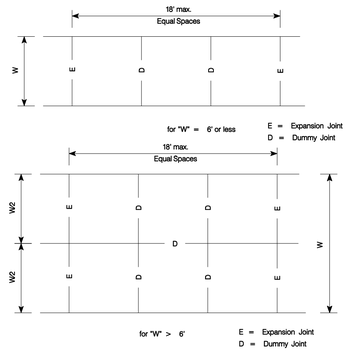
SIDEWALK DETAILS



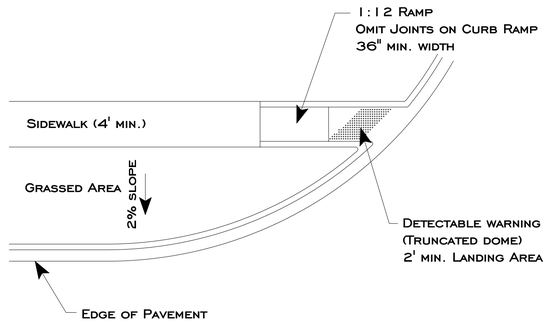
MIAMI CURB AND GUTTER



SWALE DETAIL



SIDEWALK JOINT LOCATION DETAILS



LINEAR SIDEWALK RAMP

No.	By	Date	Revision
1	DMc	06/15/05	Revised structure invert.
2			
3			
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Project Mgr: B. Taylor
Designed by: D. McCranie
Drawn by: E. Schmalfeld
QA/QC: A. Desilet

McCranie & Associates, Inc.
Engineers

McCranie & Associates, Inc.
86002 Christian Way, Suite 101 - Yulee, Florida 32097
Land Development - Roadway Design - Permitting

DIMENSIONS AND NOTES TAKE PREFERENCE.

Ken Dickens

Blackheath Park

Miscelaneous Details

Registered Professional

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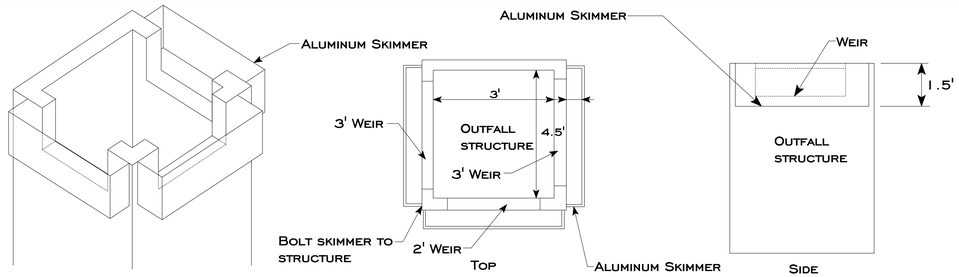
Issue Date: April 21, 2005
Project No. 05002

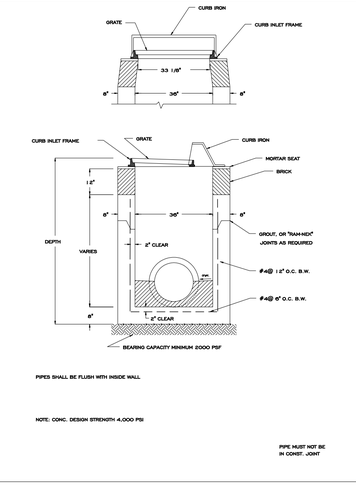


NOTE: SIMMER SHALL BE CONSTRUCTED OF 1/4" ALUMINUM

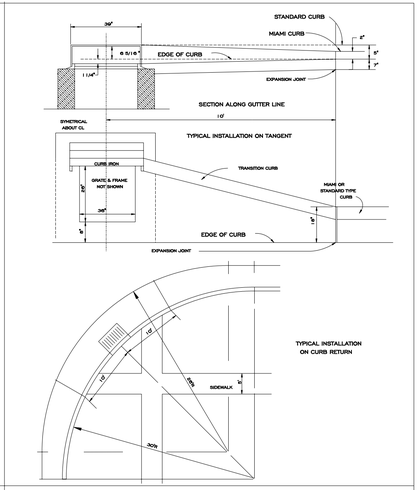
SKIMMER SHALL EXTEND FROM THE GRATE ELEVATION TO 3" BELOW THE WEIR ELEVATION (APPROXIMATELY 1.5')

CONTROL STRUCTURE SHALL BE MODIFIED TYPE "E" INLET

OUTFALL STRUCTURE SKIMMER DETAIL

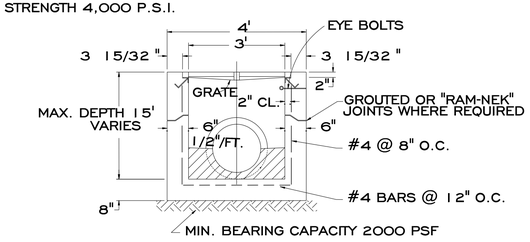


36" CURB INLET



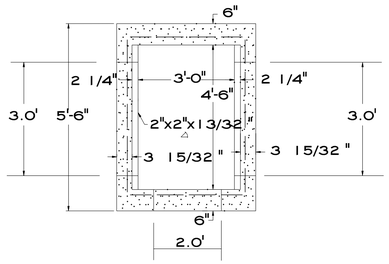
STANDARD CURB INLET INSTALLATION

NOTE: CONC. DESIGN STRENGTH 4,000 P.S.I.



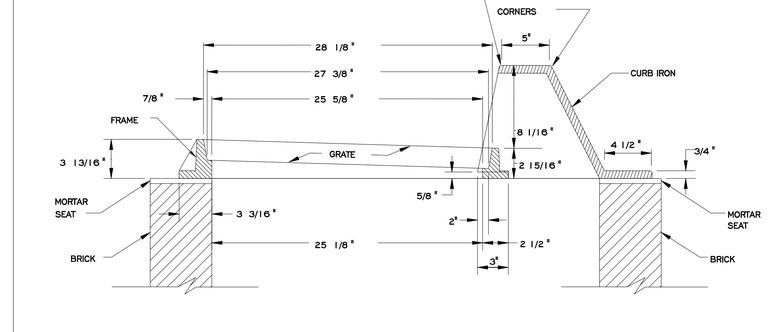
SECTION

PIPES SHALL BE FLUSH WITH INSIDE WALL
PIPES MUST NOT BE IN CONSTRUCTION JOINTS

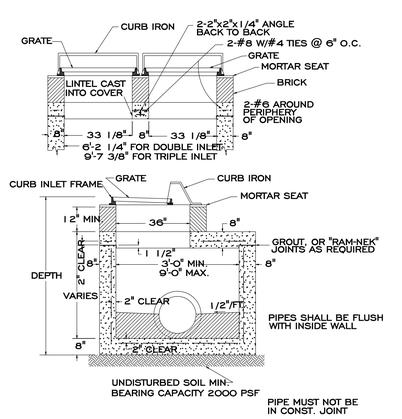


PLAN

OUTFALL STRUCTURE DETAILS

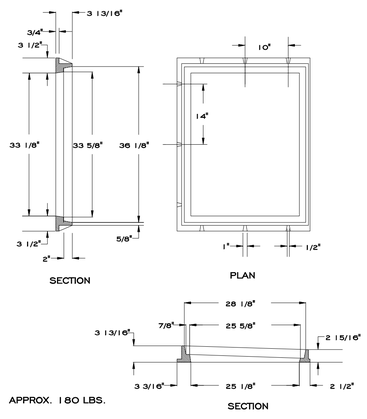


CURB IRON WITH GRATE & FRAME

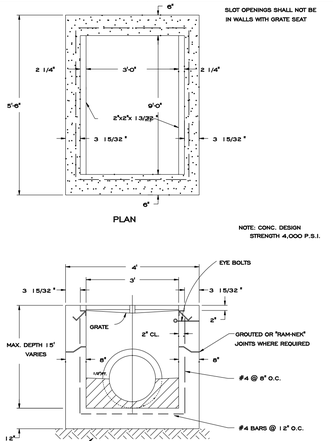


NOTE: FOR ADDITIONAL STRUCTURAL DETAIL REFER TO PLATE D-107, D-108, & D-109

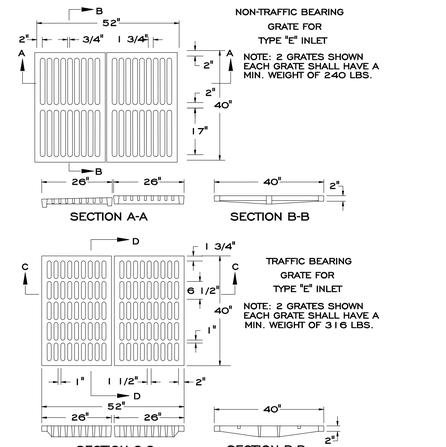
DOUBLE AND TRIPLE CURB INLET



CURB INLET FRAME



DOUBLE STORM SEWER TYPE "E" INLET



GRATE DETAIL FOR TYPE "E" INLET

No.	By	Date	Revision
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4			
3			
2	DMc		
1	DMc		

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Project Mgr: B. Taylor
Designed by: D. McCranie
Drawn by: E. Schmalfeld
QA/QC: A. Desilet

McCranie & Associates, Inc. Engineers

McCranie & Associates, Inc.
86002 Christian Way, Suite 101 - Yulee, Florida 32097
Land Development - Roadway Design - Permitting

DIMENSIONS AND NOTES TAKE PREFERENCE.

Ken Dickens

Blackheath Park

Miscelaneous Details

Registered Professional

Sheet No. D-2
8 of 9
Issue Date: April 21, 2005
Project No. 05002

1. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING SILT FROM SITE IF NOT REUSABLE ON-SITE AND ASSURING PLAN ALIGNMENT AND GRADE IN ALL DITCHES AND SWALES AT COMPLETION OF CONSTRUCTION.

2. THE SITE CONTRACTOR IS RESPONSIBLE FOR REMOVING THE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER COMPLETION OF CONSTRUCTION AND ONLY WHEN AREAS HAVE BEEN STABILIZED.

3. ADDITIONAL PROTECTION - ON-SITE PROTECTION MUST BE PROVIDED THAT WILL NOT PERMIT SILT TO LEAVE THE PROJECT CONFINES DUE TO UNFORSEEN CONDITIONS OR ACCIDENTS.

4. CONTRACTOR SHALL INSURE THAT ALL DRAINAGE STRUCTURES, PIPES, ETC., ARE CLEANED AND WORKING PROPERLY AT TIME OF ACCEPTANCE.

5. WIRE MESH SHALL BE LAID OVER THE TOP DROP INLET SO THAT THE WIRE EXTENDS A MINIMUM OF 1 FOOT BEYOND EACH SIDE OF THE INLET STRUCTURE. HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH 1/2-INCH OPENINGS SHALL BE USED. IF MORE THAN ONE STRIP OF MESH IS NECESSARY, THE STRIPS SHALL BE OVERLAPPED.

6. FDOT NO. 1 COARSE AGGREGATE SHALL BE PLACED OVER THE WIRE MESH AS INDICATED ON DETAIL. THE DEPTH OF STONE SHALL BE AT LEAST 12 INCHES OVER THE ENTIRE INLET OPENING. THE STONE SHALL EXTEND BEYOND THE INLET OPENING AT LEAST 18 INCHES ON ALL SIDES.

7. IF THE STONE FILTER BECOMES CLOGGED WITH SEDIMENT SO THAT IT NO LONGER ADEQUATELY PERFORMS ITS FUNCTION, THE STONES MUST BE PULLED AWAY FROM THE INLET, CLEANED AND REPLACED.

8. BALES SHALL BE EITHER WIRE-BOUND OR STRING-TIED WITH THE BINDINGS ORIENTED AROUND THE SIDES RATHER THAN OVER AND UNDER THE BALES.

9. BALES SHALL BE PLACED LENGTHWISE IN A SINGLE ROW SURROUNDING THE INLET, WITH THE ENDS OF ADJACENT BALES PRESSED TOGETHER.

10. THE FILTER BARRIER SHALL BE ENTRENCHED AND BACKFILLED. A TRENCH SHALL BE EXCAVATED AROUND THE INLET AND WIDTH OF A BALE TO A MINIMUM DEPTH OF FOUR INCHES. AFTER THE BALES ARE STACKED, THE EXCAVATED SOIL SHALL BE BACKFILLED AND COMPACTED AGAINST THE FILTER BARRIER.

11. EACH BALE SHALL BE SECURELY ANCHORED AND HELD IN PLACE BY AT LEAST TWO STAKES OR REBARS DRIVEN THROUGH THE BALE.

12. LOOSE STRAW SHOULD BE WEDGED BETWEEN BALES TO PREVENT WATER FROM ENTERING BETWEEN BALES.

13. STRAW BALE BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.

14. CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED BALES, END RUNS AND UNDERCUTTING BENEATH BALES.

15. NECESSARY REPAIRS TO BARRIERS OR REPLACEMENT OF BALES SHALL BE ACCOMPLISHED PROMPTLY.

16. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH RAINFALL. THEY MUST BE REMOVED WHEN THE LEVEL OF DEPOSITION REACHES APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.

17. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE STRAW BALE BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.

18. SILT FENCES AND FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.

19. SHOULD THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER IS STILL NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.

20. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.

21. SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-HALF THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.

22. THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING THE BEST EROSION AND SEDIMENT CONTROL PRACTICES AS OUTLINED IN THE PLANS, SPECIFICATIONS AND ST. JOHNS RIVER WATER MANAGEMENT DISTRICT

23. FOR ADDITIONAL INFORMATION ON SEDIMENT AND EROSION CONTROL REFER TO "THE FLORIDA DEVELOPMENT MANUAL - A GUIDE TO SOUND LAND AND WATER MANAGEMENT" FROM THE STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION (FDER), CHAPTER 6.

24. EROSION AND SEDIMENT CONTROL BARRIERS SHALL BE PLACED ADJACENT TO ALL WETLAND AREAS WHERE THERE IS POTENTIAL FOR DOWNSTREAM WATER QUALITY DEGRADATION. SEE DETAIL SHEET FOR TYPICAL CONSTRUCTION.

25. ALL DISTURBED AREAS SHALL BE GRASSED, FERTILIZED, MULCHED AND MAINTAINED UNTIL A PERMANENT VEGETATIVE COVER IS ESTABLISHED.

26. SOD SHALL BE PLACED IN AREAS WHICH MAY REQUIRE IMMEDIATE EROSION PROTECTION TO ENSURE WATER QUALITY STANDARDS ARE MAINTAINED.

27. ANY DISCHARGE FROM DEWATERING ACTIVITY SHALL BE FILTERED AND CONVEYED TO THE OUTFALL IN A MANNER WHICH PREVENTS EROSION AND TRANSPORTATION OF SUSPENDED SOLIDS TO THE RECEIVING OUTFALL.

28. CONTRACTOR SHALL OBTAIN CONSTRUCTION DEWATERING PERMIT FROM THE WATER MANAGEMENT DISTRICT. COPY OF THE PERMIT SHALL BE PROVIDED TO THE ENGINEER PRIOR TO THE START OF CONSTRUCTION.

29. ALL DISTURBED AREAS TO BE STABILIZED THROUGH COMPACTION, SILT SCREENS, HAY BALES AND GRASSING. ALL FILL SLOPES 3:1 OR STEEPER TO RECEIVE STAKED SOLID SOD.

30. ALL DEWATERING, EROSION, AND SEDIMENT CONTROL TO REMAIN IN PLACE AFTER COMPLETION OF CONSTRUCTION AND BE REMOVED ONLY WHEN AREAS HAVE BEEN STABILIZED.

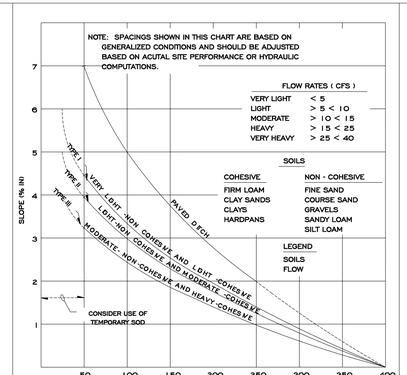
31. THIS PLAN INDICATES THE MINIMUM EROSION AND SEDIMENT CONTROL MEASURES REQUIRED FOR THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR MEETING ALL APPLICABLE RULES, REGULATIONS AND WATER QUALITY GUIDELINES AND MAY NEED TO INSTALL ADDITIONAL CONTROLS.

32. ALL EXCAVATIONS AND EARTHWORK SHALL BE DONE IN A MANNER TO MINIMIZE WATER TURBIDITY AND POLLUTION. DISCHARGE SHALL BE CONTROLLED AND REROUTED THROUGH HAY FILTERS, SILTATION DIAPERS AND SUMPS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PREVENTION, CORRECTION, CONTROL AND ABATEMENT OF EROSION AND WATER POLLUTION IN ACCORDANCE WITH CHAPTER 17-3, FLORIDA ADMINISTRATIVE CODE.

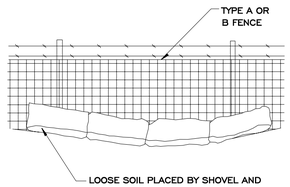
33. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL OF ANY SEDIMENT THAT LEAVES THE SITE AND CHANGES ANY DOWNSTREAM CONDITIONS BY RAISING CHANNEL BOTTOMS AND/OR CLOGGING OUTFALL CULVERTS.

34. THE CONTRACTOR SHALL PAY FOR ANY WATER QUALITY CONTROL VIOLATIONS FROM ANY AGENCY THAT RESULTS IN FINES BEING ASSESSED TO THE OWNER BECAUSE OF THE CONTRACTOR'S FAILURE TO ELIMINATE TURBID RUNOFF FROM LEAVING THE SITE AND RAISING BACKGROUND LEVELS ABOVE EXISTING BACKGROUND LEVEL.

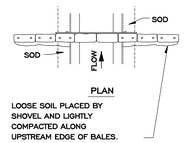
EROSION AND SEDIMENT CONTROL NOTES



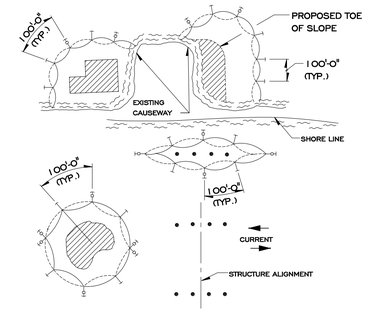
RECOMMENDED SPACING FOR TYPE I AND TYPE II HAY BALE BARRIERS, TYPE III SILT FENCES AND PAVED DITCH HAY BALE BARRIERS.



NOTE: BALES TO BE STAKED AT THE DIRECTION OF THE ENGINEER.

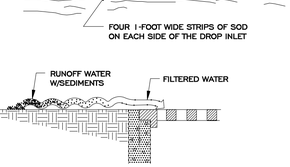


SPACING: BALE BARRIERS FOR PAVED DITCHES SHOULD BE SPACED IN ACCORDANCE WITH CHART 1.



NOTES:

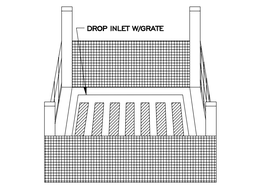
1. TURBIDITY BARRIERS ARE TO BE USED IN ALL PERMANENT BODIES OF WATER REGARDLESS OF WATER DEPTH.
2. NUMBER AND SPACING OF ANCHORS DEPENDENT ON CURRENT VELOCITIES.
3. DEPLOYMENT OF BARRIER AROUND PILE LOCATIONS MAY VARY TO ACCOMMODATE CONSTRUCTION OPERATIONS.
4. NAVIGATION MAY REQUIRE SEGMENTING BARRIER DURING CONSTRUCTION OPERATIONS.



SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE ONLY AT THE TIME OF PERMANENT SEEDING, TO PROTECT THE INLET FROM SEDIMENT AND MULCH MATERIALS UNTIL PERMANENT VEGETATION HAS BECOME ESTABLISHED.

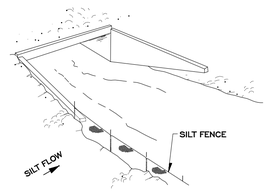
BURLAP INLET SEDIMENT FILTER



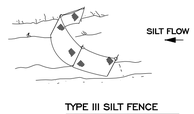
SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (SLOPES NO GREATER THAN 5%) WHERE SHEET OR OVERLAND FLOWS (NOT EXCEEDING 0.5 CFS) ARE TYPICAL. THE METHOD SHALL NOT APPLY TO INLETS RECIEVING CONCENTRATED FLOWS, SUCH AS IN STREET OR HIGHWAY MEDIANS.

BALES BACKED BY FENCE



TYPE III

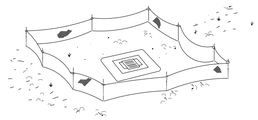


TYPE III SILT FENCE

NOTE: SPACING FOR TYPE III TO BE IN ACCORDANCE WITH CHART 1.

DO NOT DEPLOY IN A MANNER THAT SILT FENCES WILL ACT AS A DAM ACROSS PERMANENT FLOWING WATERCOURSES. SILT FENCES ARE TO BE USED AT UPLAND LOCATIONS AND TURBIDITY BARRIERS USED AT PERMANENT BODIES OF WATER.

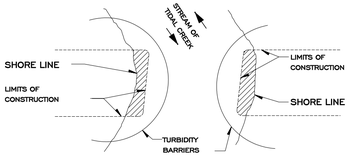
SLOPE DRAIN APPLICATIONS



SILT FENCE PROTECTION AROUND DITCH BOTTOM INLETS.

TYPE III

SLOPE DRAIN APPLICATIONS



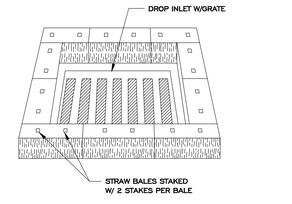
NOTES: TURBIDITY BARRIERS FOR FLOWING STREAMS AND TIDAL CREEKS MAY BE EITHER FLOATING OR STAKED TYPES OR ANY COMBINATION OF TYPES THAT WILL SUIT SITE CONDITIONS AND MEET EROSION CONTROL AND WATER QUALITY REQUIREMENTS. THE BARRIER TYPE(S) WILL BE AT THE CONTRACTOR'S OPTION UNLESS OTHERWISE SPECIFIED IN THE PLANS. POSTS IN STAKED TURBIDITY BARRIERS TO BE INSTALLED IN VERTICAL POSITION UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

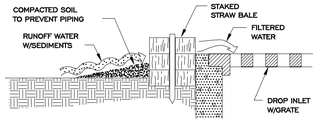
LEGEND

- PILE LOCATIONS
- DREDGE OR FILL AREA
- MOORING BUOY W/ ANCHOR
- ANCHOR
- BARRIER MOVEMENT DUE TO CURRENT ACTION

TURBIDITY BARRIER APPLICATIONS

SOD INLET SEDIMENT FILTER





SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (SLOPES NO GREATER THAN 5%) WHERE SHEET OR OVERLAND FLOWS (NOT EXCEEDING 0.5 CFS) ARE TYPICAL. THE METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS SUCH AS IN STREET OR HIGHWAY MEDIANS.

STRAW BALE INLET SEDIMENT FILTER

TURBIDITY AND DISCHARGE CONTROLS

1. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR MONITORING AND CONTROLLING ANY DISCHARGES TO EXISTING DITCHES, WETLANDS, PONDS, OR OTHER DRAINAGE CONVEYANCES.

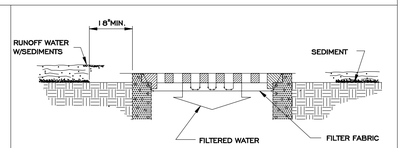
2. THE CONTRACTOR SHALL TEST SAMPLE ANY DISCHARGE LOCATION PRIOR TO START OF CONSTRUCTION TO ESTABLISH BACKGROUND LEVELS. CONTRACTOR SHALL MAINTAIN A DISCHARGE SAMPLING PROGRAM FOR THE EXTENT OF THE PROJECT.

3. CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR REVIEW HIS DISCHARGE MONITORING PROGRAM PRIOR TO THE START OF ANY CONSTRUCTION.

4. DISCHARGES MAY NOT RAISE TURBIDITY LEVELS OF THE DISCHARGING SITE BY MORE THAN 29 NTU's OVER BACKGROUND LEVELS.

5. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ANY VIOLATIONS AND/OR FINES ASSOCIATED WITH HIS WORK AND DISCHARGES FROM THE WORK SITE.

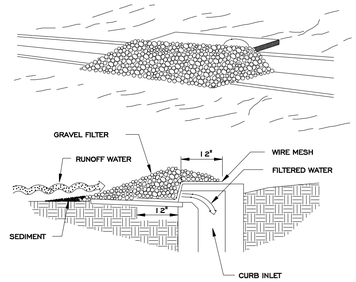
TURBIDITY AND DISCHARGE CONTROLS



SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY CONCENTRATED FLOWS ARE EXPECTED, BUT NOT WHERE PONDING AROUND STRUCTURE MIGHT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES OR UNPROTECTED AREAS.

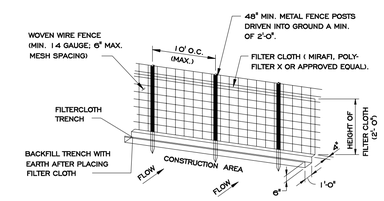
FILTER FABRIC INLET SEDIMENT FILTER



SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE AT CURB INLETS WHERE PONDING IN FRONT OF THE STRUCTURE IS NOT LIKELY TO CAUSE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES OR UNPROTECTED AREAS.

GRAVEL CURB INLET SEDIMENT FILTER



CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS BY USE OF WIRE TIES
2. FILTER CLOTH TO BE FASTEN SECURELY TO WOVEN WIRE FENCE BY USE OF WIRE TIES SPACED EVERY 24" x 24".
3. SILT FENCES TO BE INSTALLED IN LOCATIONS AS SHOWN ON THIS EROSION AND SEDIMENT CONTROL PLAN PRIOR TO BEGINNING OF CONSTRUCTION TO CONTROL SEDIMENT.
4. SILT FENCES TO BE MAINTAINED AND CLEANED AS NECESSARY TO MAINTAIN IN FUNCTIONAL CONDITION.
5. SILT FENCES TO BE REMOVED AND THE AREA TO BE RESTORED TO ITS NATURAL CONDITION WHEN PERMANENT EROSION AND SEDIMENT CONTROL PRECEDURES ARE EFFECTIVE.

FILTER FENCE

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No.	By	Date	Revision
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PROJECT MGR: B. TAYLOR
DESIGNED BY: D. McCRANIE
DRAWN BY: E. SCHMALFELD
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LAND DEVELOPMENT - ROADWAY DESIGN - PERMITTING

DIMENSIONS AND NOTES TAKE PREFERENCE.

KEN DICKENS

BLACKHEATH PARK

EROSION CONTROL DETAILS

REGISTERED PROFESSIONAL

SHEET NO. D-3
9 OF 9
ISSUE DATE: APRIL 21, 2005
PROJECT NO. 05002