

REVISION	DATE

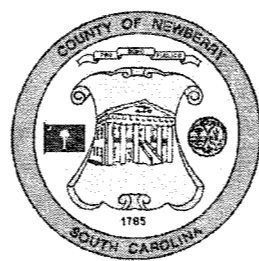
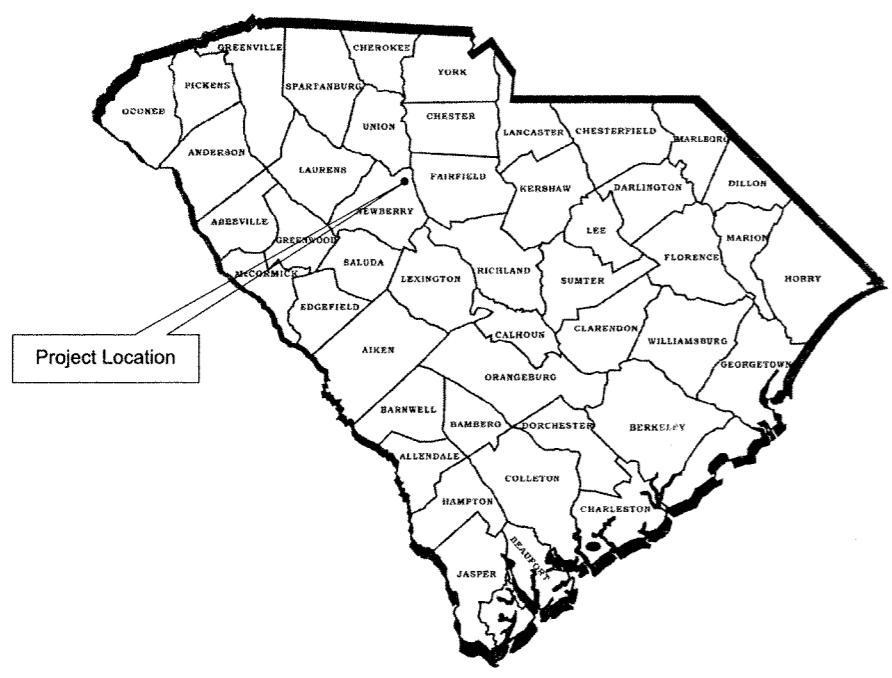
ALLIANCE CONSULTING ENGINEERS

ALLIANCE CONSULTING ENGINEERS, INC.
 POST OFFICE BOX 8147
 COLUMBIA, SOUTH CAROLINA 29202-8147
 PHONE (803) 779-2078
 FAX (803) 779-2079
 WWW.ALLIANCECE.COM

MAYBINTON BALL FIELD
 FOR
 NEWBERRY COUNTY
 NEWBERRY COUNTY SOUTH CAROLINA

APRIL 2009
 Project No. 08182-36
 DWG NO. 01.465-D09

MAYBINTON BALL FIELD FOR NEWBERRY COUNTY

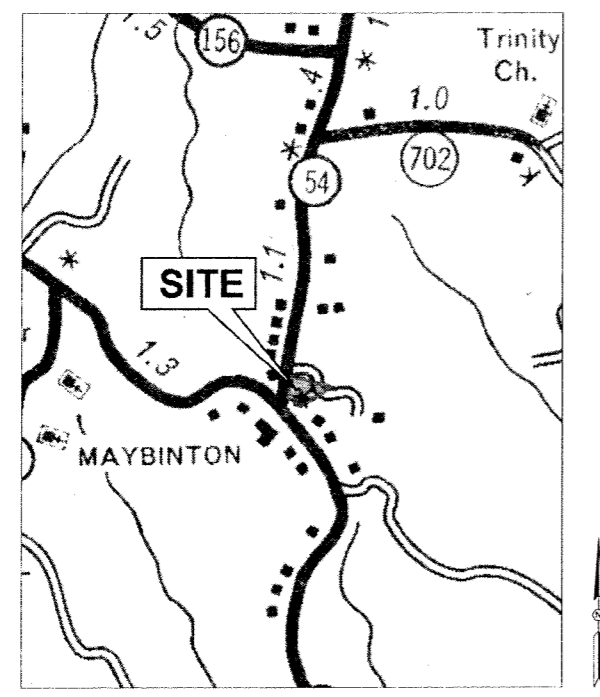


**NEWBERRY COUNTY
 COUNCIL MEMBERS**
 HENRY H. LIVINGSTON, III, CHAIRMAN
 WILLIAM D. "BILL" WALDROP, VICE-CHAIRMAN
 EDGAR BAKER
 STEVE STOCKMAN
 KIRKSEY KOON
 LES HIPP
 JOHN CALDWELL
 LAURIE RENWICK, CLERK TO COUNCIL
 WAYNE ADAMS, COUNTY ADMINISTRATOR

SHEET INDEX

SHEET	SHEET NO
EXISTING CONDITIONS AND DEMOLITION PLAN	C1
SITE PLAN	C2
GRADING AND STORM DRAINAGE PLAN	C3
STORM DRAINAGE DETAILS	C4
EROSION AND SEDIMENT CONTROL PLAN	C5
EROSION AND SEDIMENT CONTROL DETAILS (SHEET 1 OF 2)	C6
EROSION AND SEDIMENT CONTROL DETAILS (SHEET 2 OF 2)	C7

LOCATION MAP



(IN MILES)
 1 inch = 1/2 mile

Reference Notes:
 1. Reference is Made to a Boundary Survey Completed By Tom Abraham Land Surveying for Newberry County dated December 14, 2006 revised October 14, 2008.
 2. Reference is Made to a Topographic Survey Completed By Tom Abraham Land Surveying for Newberry County dated December 14, 2006.

PLEASE CALL
PALMETTO UTILITY PROTECTION SERVICE
 AT
1-888-721-7877
 AT LEAST 72 HOURS PRIOR TO BEGINNING
 LAND DISTURBING ACTIVITIES

Pipe	Invert in	Invert out	Type
Pipe "A"	495.81	495.67	15" RCP
Pipe "B"	495.65	495.64	15" RCP
Pipe "C"	495.84	495.79	15" RCP

Reference Notes:
 1. Reference is Made to a Boundary Survey Completed By Tom Aarham Land Surveying for Newberry County dated December 14, 2006 revised October 14, 2008.
 2. Reference is Made to a Topographic Survey Completed By Tom Aarham Land Surveying for Newberry County dated December 14, 2006.

Legend

	Proposed Contours
	Existing Contours
	Existing Overhead Power
	Existing Underground Power
	Limits of Disturbance
	Property Line
	Proposed Fence
	Proposed Grave
	Proposed Erosion Control Turf Reinforced Matting (Profile GreenArmor 7010 or approved equal)
	Proposed Erosion Control Fiber Reinforced Matting (Profile Flexterra or approved equal)

REVISION DATE	

APPROVALS

ENGINEER	JWF	DESIGNER	JCC/TAB	TECHNICIAN	TAB	CHECKED BY	JWF	APPROVED	JWF
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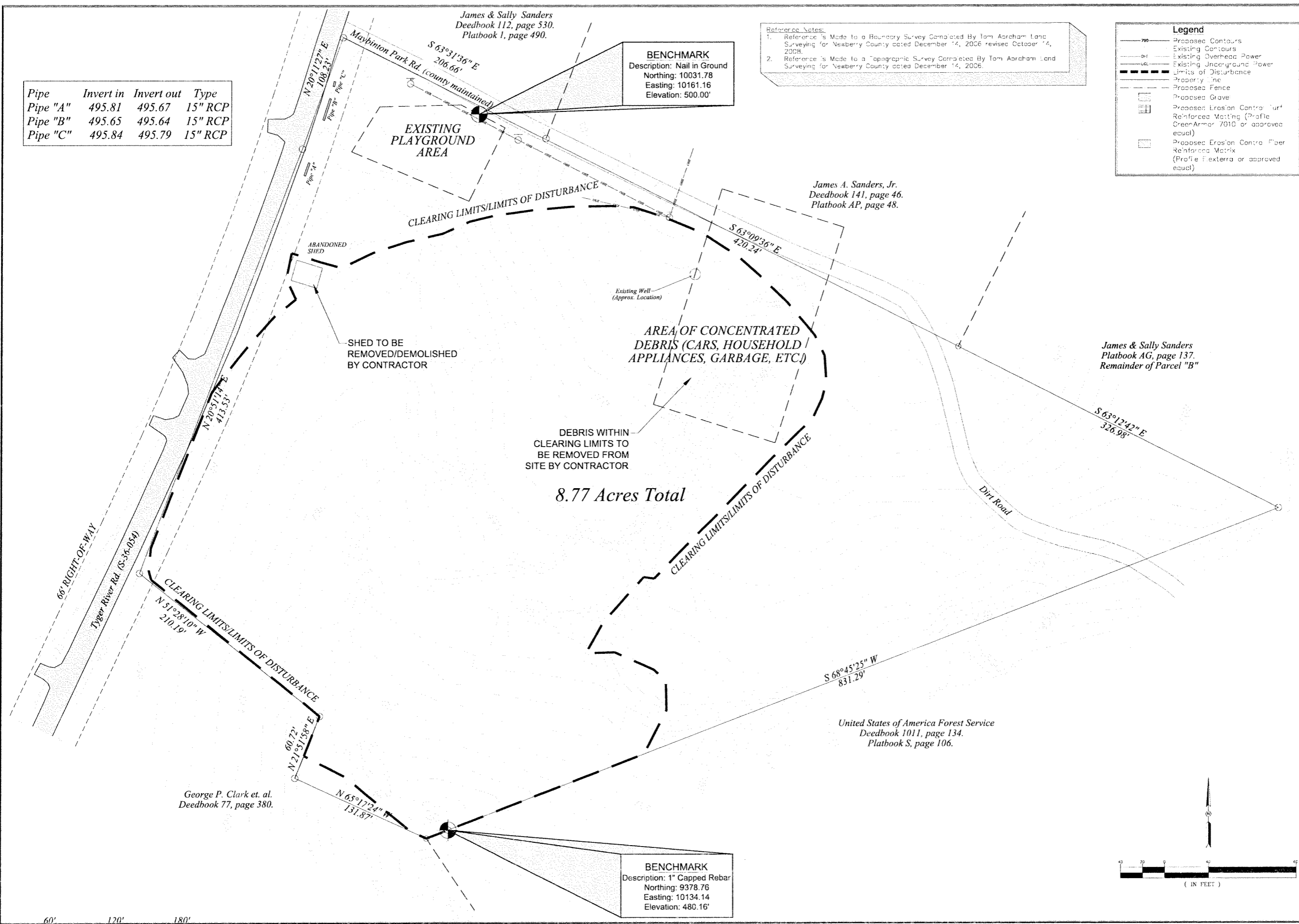
DATE: _____
 SIGNATURE: _____

ALLIANCE CONSULTING ENGINEERS
 Alliance Consulting Engineers, Inc.
 Post Office Box 8147, Columbia, South Carolina 29202-8147
 Phone: (803) 779-2078 • Fax: (803) 779-2079

EXISTING CONDITIONS AND DEMOLITION PLAN
 SCALE: 1"=40'

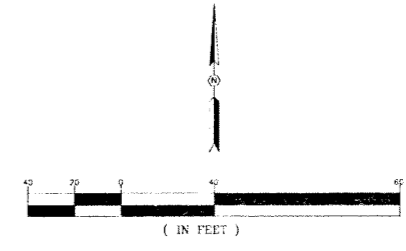
PROJECT: MAYBINTON BALL FIELD FOR NEWBERRY COUNTY
 SHEET: _____ OF _____

FILE NAME: CI.dwg
 REFERENCE FILE: Base.dwg
 PROJECT NO: 08182-36
 DWG NO. 01465-D09



BENCHMARK
 Description: Nail in Ground
 Northing: 10031.78
 Easting: 10161.16
 Elevation: 500.00'

BENCHMARK
 Description: 1" Capped Rebar
 Northing: 9378.76
 Easting: 10134.14
 Elevation: 480.16'

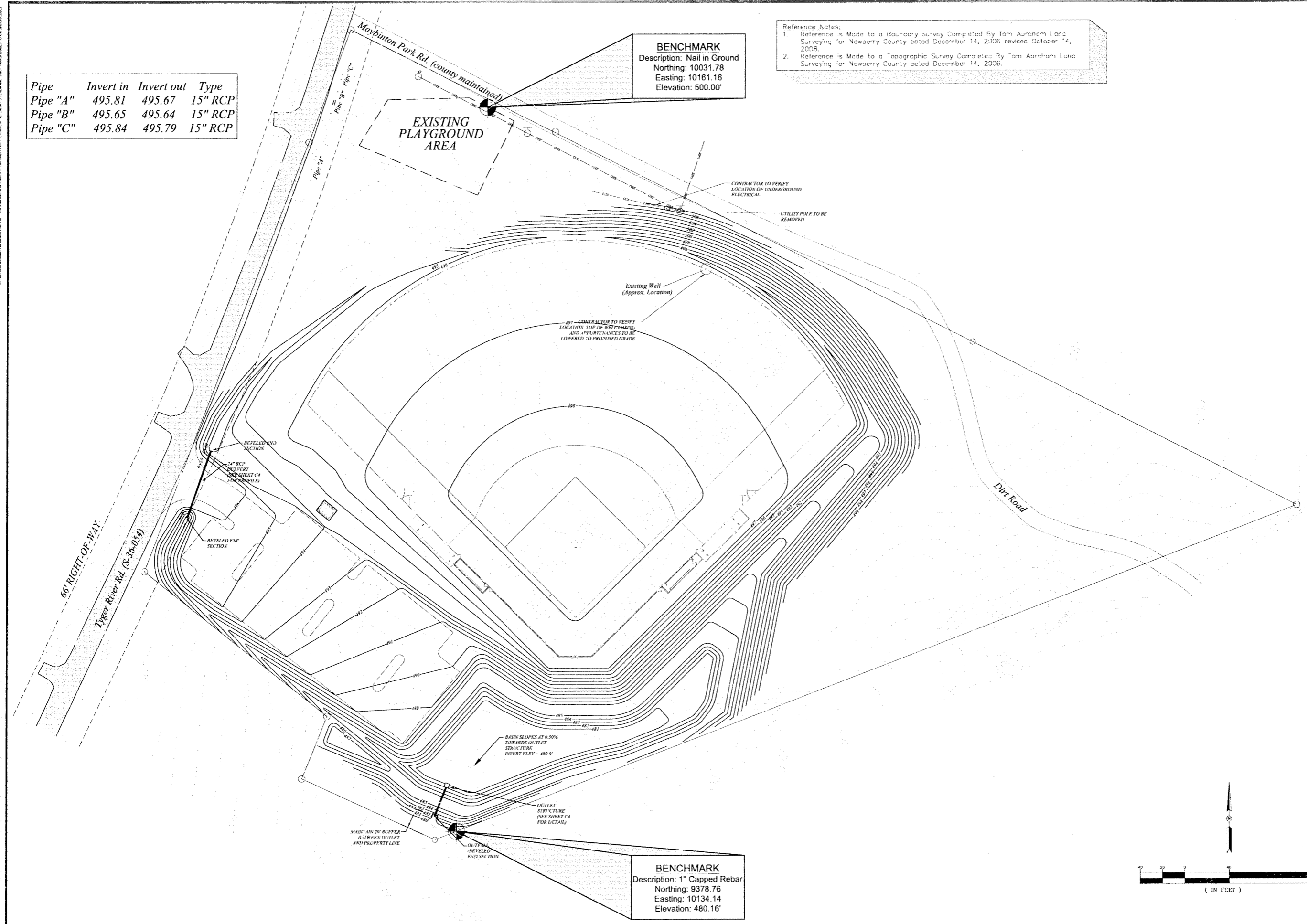


60' 120' 180'

Pipe	Invert in	Invert out	Type
Pipe "A"	495.81	495.67	15" RCP
Pipe "B"	495.65	495.64	15" RCP
Pipe "C"	495.84	495.79	15" RCP

BENCHMARK
 Description: Nail in Ground
 Northing: 10031.78
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 Elevation: 500.00'

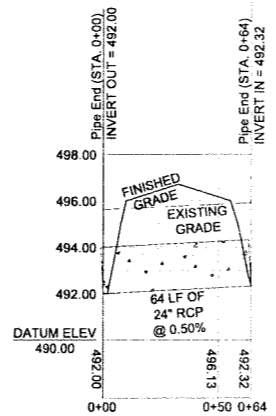
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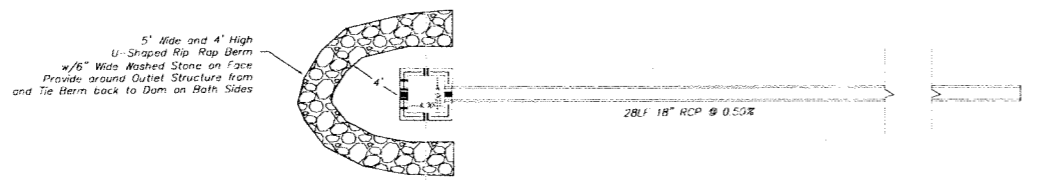
BENCHMARK
 Description: 1" Capped Rebar
 Northing: 9378.76
 Easting: 10134.14
 Elevation: 480.16'

REVISION DATE	
APPROVALS	DATE
ENGINEER JWF	
DRAWN BY JCC/TAB	
CHECKED BY TAB	
APPROVED BY JWF	
GRADING AND STORM DRAINAGE PLAN	
MAYBINTON BALL FIELD FOR NEWBERRY COUNTY	
FILE NAME: C3.dwg	SHEET C3
REFERENCE FILE: Base.dwg	OF 7
PROJECT NO. 08182-36	
DWG NO. 01.465-D09	

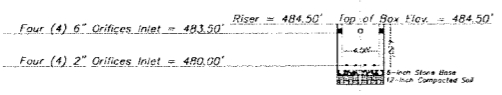
THE INFORMATION CONTAINED HEREIN IS THE PROPERTY OF ALLIANCE CONSULTING ENGINEERS, INC. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN. IT IS NOT TO BE REPRODUCED, COPIED, OR OTHERWISE TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF ALLIANCE CONSULTING ENGINEERS, INC.



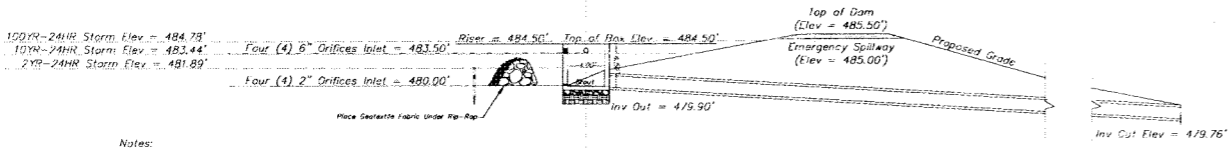
**STORM DRAINAGE PROFILE
 CULVERT (STA. 0+00-0+64.00)**
 SCALE: HORIZONTAL: 1"=40' / VERTICAL: 1"=4'



Top View



Front View



Side View

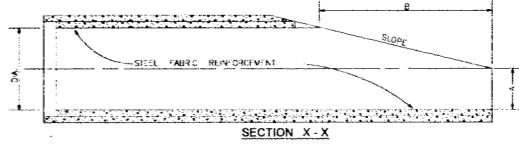
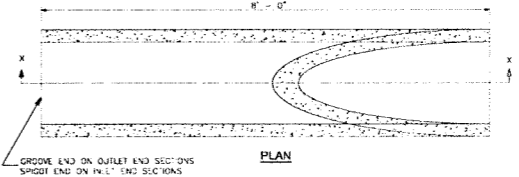
Outlet Structure Profile and Detail
 Scale: 1"=10'

Notes:
 1. Bottom of basin shall be graded to have a slope of not less than 0.5%.
 2. Clean-out slots to be installed and sediment to be cleaned around the outlet berm once sediment reaches a height of 6".

NOTES:

- BEVELED END SECTIONS WILL BE MANUFACTURED IN ACCORDANCE WITH SECTION 7-5 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION. THESE SPECIAL PIPE SECTIONS WILL BE MADE DURING THE MANUFACTURING OF OTHER STATE APPROVED REINFORCED CONCRETE PIPE.
- THE PIPE BEVEL MAY BE SAWS IN THE FIELD INSTEAD OF BEING MANUFACTURED. IN FIELD SAWING THE PIPE OPENING MAY COME TO A POINT AT THE PIPE CREST SAFTER THAN A RADIUS AS SHOWN ON THE DRAWING. ALTERNATE PIPE FOR SLOPES MUST HAVE EACH END BEVELED TO MATCH THE ADJACENT SLOPES. NO SEPARATE PAYMENT WILL BE MADE FOR PROVIDING THESE BEVELED ENDS.
- BEVELED ENDS ON ALUMINUM AND HDPE PIPE ARE TO CONFORM TO DIMENSIONS SHOWN FOR CONCRETE PIPE.
- WHEN AN ALTERNATE OF CORRUGATED ALUMINUM ALLOY PIPE IS SELECTED FOR USE, THE JOINTERS WILL BE ONE STANDARD PIPE SIZE LARGER THAN REINFORCED CONCRETE PIPE.
- TOTAL LINE LENGTH OF ALTERNATE ALUMINUM ALLOY PIPE MAY BE PLACED IN ONE OR TWO LENGTHS AT THE DISCRETION OF THE CONTRACTOR.
- PAYMENT FOR BEVELED END SECTIONS WILL BE AS SPECIFIED IN THE PLANS OR IN SPECIAL PROVISIONS. WHEN PAYMENT IS TO BE MADE, THE BID ITEM SHALL BE: 24" SIZE PIPE CULVERT BEVELED END SECTION CLASS OF THE 28" - 48" SIZE TYPE.

BEVELED END SECTION DIMENSIONS			
DIA.	A	B	SLOPE
15"	0' - 6"	3' - 0"	4 : 1
18"	0' - 9"	3' - 0"	4 : 1
24"	0' - 10"	4' - 8"	4 : 1
30"	1' - 0"	4' - 6"	3 : 1
36"	1' - 3"	5' - 3"	3 : 1
42"	1' - 8"	5' - 6"	3 : 1
48"	2' - 0"	6' - 0"	3 : 1



BEVELED END SECTIONS FOR CONCRETE PIPE CULVERT
 NOT TO SCALE

REVISION DATE
 APPROVALS
 ENGINEER: JWF
 DESIGNER: JCC/TAB
 TECHNICIAN: TAB
 CHECKED BY: JWF
 APPROVED: JWF

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER
 Alliance Consulting Engineers, Inc. No. 002884
 SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER
 James W. Fisher, Inc. No. 21813

DATE: _____
 SIGNATURE: _____

ALLIANCE CONSULTING ENGINEERS
 Alliance Consulting Engineers, Inc.
 Post Office Box 8147 Columbia, South Carolina 29202-8147
 Phone: (803) 779-2078 Fax: (803) 779-2079

PROJECT: MAYBINTON BALL FIELD FOR NEWBERRY COUNTY
 SHEET: STORM DRAINAGE DETAILS
 SCALE: NO SCALE
 DATE: APRIL 2009

PROJECT: MAYBINTON BALL FIELD FOR NEWBERRY COUNTY
 SHEET: STORM DRAINAGE DETAILS
 SCALE: NO SCALE
 DATE: APRIL 2009

FILE NAME: C4.dwg
 REFERENCE FILE: Basc.dwg
 PROJECT NO.: 08182-36
 SHEET: C4 OF 7
 DWG NO. 01.465-D09

Pipe	Invert in	Invert out	Type
Pipe "A"	495.81	495.67	15" RCP
Pipe "B"	495.65	495.64	15" RCP
Pipe "C"	495.84	495.79	15" RCP

BENCHMARK
Description: Nail in Ground
Northing: 10031.78
Easting: 10161.16
Elevation: 500.00'

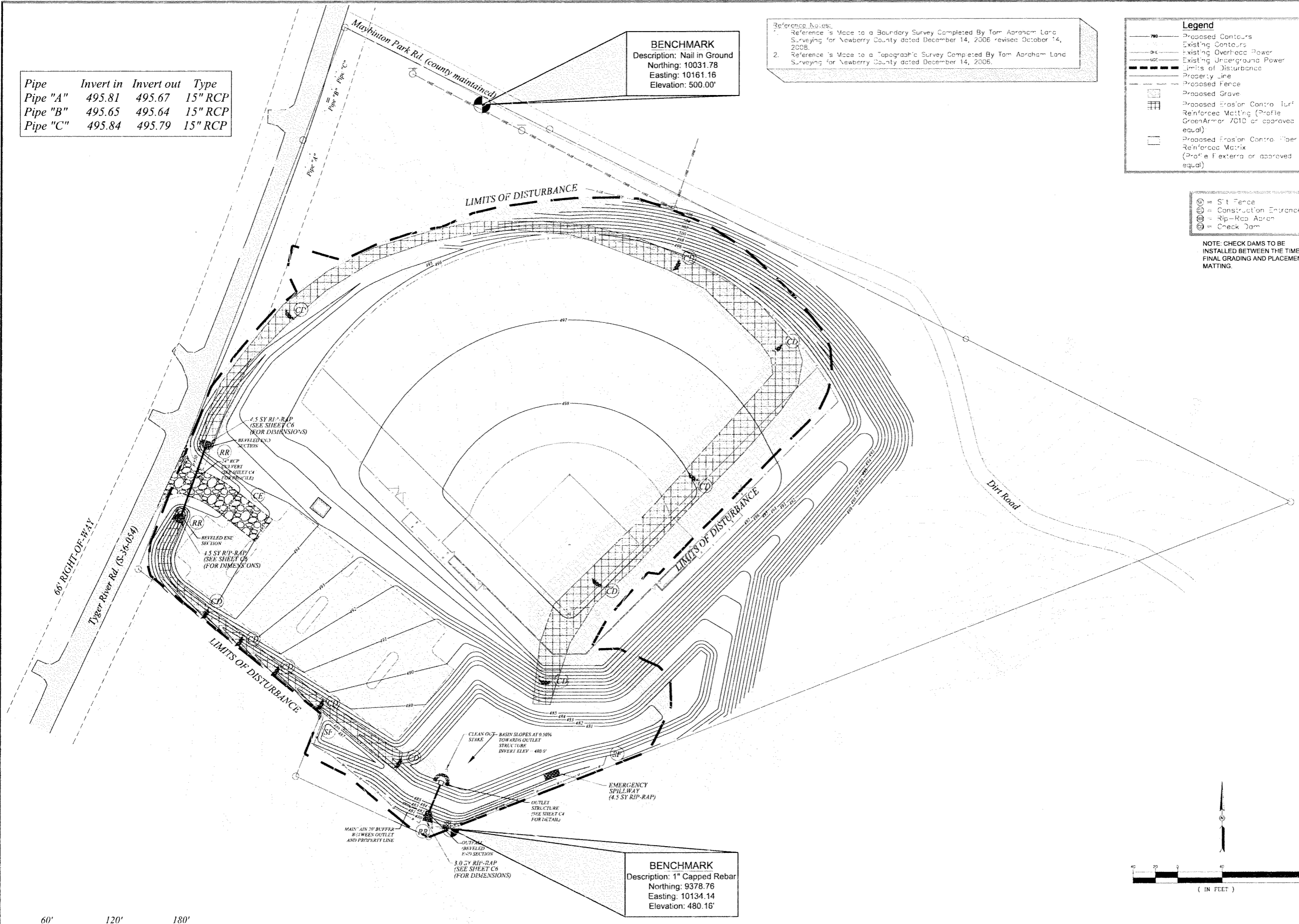
Reference Notes:
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2. Reference is Made to a Topographic Survey Completed By Tom Archam Land Surveying for Newberry County dated December 14, 2006.

Legend

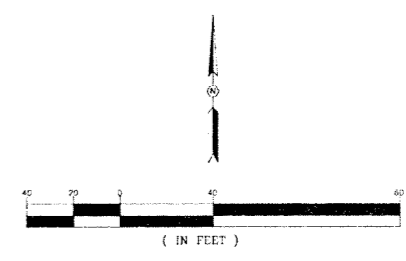
- Proposed Contours
- Existing Contours
- Existing Overhead Power
- Existing Underground Power
- Limits of Disturbance
- Property Line
- Proposed Fence
- Proposed Grave
- Proposed Erosion Control Turf Reinforced Matting (Profile GreenArmor 7010 or approved equal)
- Proposed Erosion Control Fiber Reinforced Matrix (Profile Flexterra or approved equal)

- = Sit Fence
- = Construction Entrance
- = Rip-Rap Apron
- = Check Dam

NOTE: CHECK DAMS TO BE INSTALLED BETWEEN THE TIME OF FINAL GRADING AND PLACEMENT OF MATTING.



BENCHMARK
Description: 1" Capped Rebar
Northing: 9378.76
Easting: 10134.14
Elevation: 480.16'



60' 120' 180'

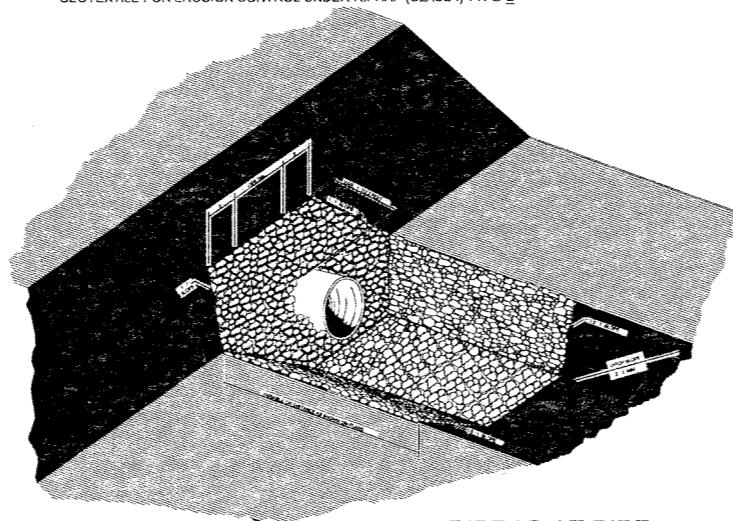
<p>REVISION DATE</p> <p>APPROVALS</p> <p>ENGINEER: JWF</p> <p>DESIGNER: JCC/TAB</p> <p>TECHNICIAN: TAB</p> <p>CHECKED BY: JWF</p> <p>APPROVED: JWF</p>	<p>DATE</p> <p>SIGNATURE:</p>
<p>ALLIANCE CONSULTING ENGINEERS</p>	
<p>EROSION AND SEDIMENT CONTROL PLAN</p>	
<p>MAYBINTON BALL FIELD FOR NEWBERRY COUNTY</p>	
<p>PROJECT: MAYBINTON BALL FIELD FOR NEWBERRY COUNTY</p>	
<p>SCALE: 1"=40'</p>	
<p>FILE NAME: C5.dwg</p> <p>REFERENCE FILE: Base.dwg</p> <p>PROJECT NO.: 08182-36</p> <p>DWG NO. 01465-D09</p>	<p>SHEET: C5 OF 7</p>

CONSTRUCTION SEQUENCE

Items must occur in the order listed, items cannot occur concurrently unless specifically noted.

1. Receive NPDES coverage from DHEC.
 2. Pre-construction meeting.
 3. Notify DHEC EQC Regional office 48 hours prior to beginning land-disturbing activities.
 4. Install construction entrance.
 5. Clearing and grubbing only as necessary for installation of perimeter controls.
 6. Install perimeter controls (e.g. silt fence).
 7. Clearing and grubbing only in areas of basins/traps/ponds.
 8. Install basins/traps/ponds and diversions to those structures (outlet structures completely installed as shown on the details before proceeding to next step; areas draining to these structures cannot be disturbed until the structure is completely installed.)
 9. Clearing & grubbing of site or demolition. (Sediment and erosion control measures for these areas must already be installed.)
 10. Begin Rough Grading.
 11. Install storm drain system and place inlet protection as each inlet is installed.
 12. Begin Fine Grading and Paving Operations
 13. Install appropriate permanent and final stabilization.
 14. Clean-out of detention basins that were used as sediment control structures and re-grading of detention pond bottoms; if necessary, modification of sediment basin riser to convert to detention basin outlet structure.
 15. Removal of temporary sediment and erosion control measures after entire area draining to the structure is finally stabilized (DHEC recommends that the Project Owner or Operator have the SWPPP Preparer or registration equivalent approve the removal of temporary structures).
 16. Perform as-built surveys of all detention structures and submit to DHEC or MS4 for acceptance.
 17. Submit Notice of Termination (NOT) to DHEC as appropriate.
- Note: If NPDES coverage is being issued after land-disturbing activities have already started (e.g. in response to a Notice to Comply, Notice of Violation, or enforcement action) then the construction sequence must specifically indicate the items that have already occurred and the items that will be occurring after NPDES coverage is issued.
 - Note: If flows from offsite areas will be diverted around the site and the on-site structures are not designed to handle flows from the offsite areas, then the diversions and piping for the offsite flows must be installed before land-disturbing activities begin on the site; include this in the sequence. Sediment and erosion control measures for the disturbed areas for the diversion and piping must be installed before those areas are disturbed and should be shown on the plans.
 - Note: If an existing detention / sediment basin is being modified to handle the flows from the proposed development, then it must be modified before land-disturbing activities begin on the site. This should be included in the sequence.
 - Note: Include individual lot development / construction in the sequence if the site will not be mass-graded.
 - Note: Installation of some permanent water quality devices should occur after the site is stabilized; include this in the sequence. Cleanout of other water quality devices that were used during construction should occur after site stabilization.
 - Note: Maintenance of sediment and erosion control measures must continue until the site is permanently stabilized and the controls are removed.

- NOTES:
1. GEOTEXTILE FABRIC TO BE USED UNDER RIPRAP WHEN INCLUDED IN THE PLANS.
 2. THE BID ITEMS SHALL BE:
RIPRAP CLASS B
GEOTEXTILE FOR EROSION CONTROL UNDER RIPRAP (CLASS I) TYPE B



**RIPRAP AT PIPE
END AND CHANNEL**
NOT TO SCALE

Sediment and Erosion Control Notes

Standard Notes:

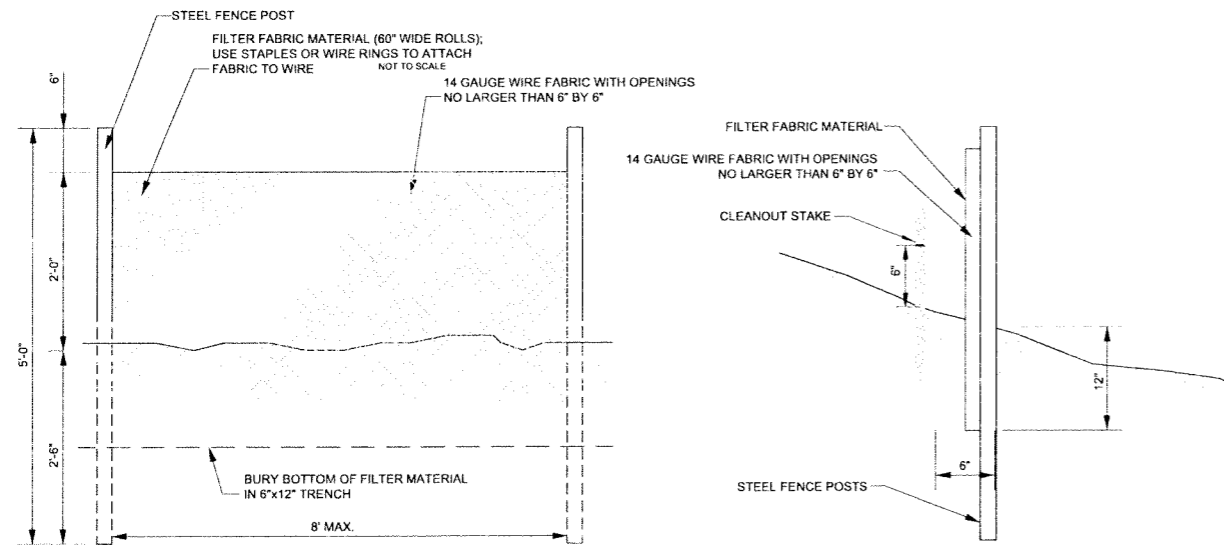
1. If necessary, slopes which exceed eight (8) vertical feet should be stabilized with synthetic or vegetative mats, in addition to hydroseeding. It may be necessary to install temporary slope drains during construction. Temporary berms may be needed until the slope is brought to grade.
2. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than fourteen (14) days after work has ceased, except as stated below.
 - > Where stabilization by the 14th day is precluded by snow cover or frozen ground conditions stabilization measures must be initiated as soon as practicable.
 - > Where construction activity on a portion of the site is temporarily ceased, and earth-disturbing activities will be resumed within fourteen (14) days, temporary stabilization measures do not have to be initiated on that portion of the site.
3. All sediment and erosion control devices shall be inspected every seven (7) days. If site inspections identify BMPs that are damaged or are not operating effectively, maintenance must be performed as soon as practical or as reasonably possible and before the next storm event whenever practicable.
4. Provide silt fence and/or other control devices, as may be required, to control soil erosion during utility construction. All disturbed areas shall be cleared, graded, and stabilized with grassing immediately after the utility installation. Fertilizer, cover, and temporary seeding at the end of each day are recommended. If water is encountered while trenching, the water should be filtered to remove any sediments before being pumped back into any waters of the State.
5. All erosion control devices shall be properly maintained during all phases of construction until the completion of all construction activities and all disturbed areas have been stabilized. Additional control devices may be required during construction in order to control erosion and/or offsite sedimentation. All temporary control devices shall be removed once construction is complete and the site is stabilized.
6. The contractor must take necessary action to minimize the tracking of mud onto paved roadway(s) from construction areas and the generation of dust. The contractor shall daily remove mud/soil from pavement, as may be required.
7. Residential subdivisions require erosion control features for infrastructure as well as for individual lot construction. Individual property owners shall follow these plans during construction or obtain approval of an individual plan in accordance with S.C. Reg. 72-300 et seq. and SCR100000.
8. Temporary diversion berms and/or ditches will be provided as needed during construction to protect work areas from up-slope runoff and/or to divert sediment-laden water to appropriate traps or stable outlets.
9. All waters of the State (WoS), including wetlands, are to be flagged or otherwise clearly marked in the field. A double row of silt fence is to be installed in all areas where a 50-foot buffer can't be maintained between the disturbed area and all WoS. A 10-foot buffer should be maintained between the last row of silt fence and all WoS.
10. Litter, construction debris, oils, fuels, and building products with significant potential for impact (such as stockpiles of freshly treated lumber) and construction chemicals that could be exposed to storm water must be prevented from becoming a pollutant source in storm water discharges.

Additional Notes:

- A. Install permanent vegetative cover and the long-term erosion protection measures or structures as soon as practical in the development process.
 - B. Provide for handling the increased runoff caused by changed soil and surface conditions. Use effective means to conserve existing on-site soil including the use of diversion ditches, grassed waterways and storm sewers.
 - C. Place silt fence barriers at locations shown on plan. Silt barriers shall be maintained in place and in good condition until ground cover is established.
 - D. All disturbed areas not paved shall be grassed. Use temporary plant cover, mulching, and/or structures to control runoff and protect areas subject to erosion during construction.
 - E. Sediment ponds are to be excavated to original grades upon the accumulation of 1' of sediment stake placed at outlet.
 - F. Provide a temporary stone splash pad at all fire hydrants or other points of discharge during testing of the water distribution system.
 - G. Should Permanent Grassing requirements conflict with Landscape Plans, Landscape Plans supercede Permanent Grassing requirements.
- Grassing Specifications:**
- A. All seed mixtures for the various seeding schedules shall be weighed and mixed to the proper proportions in the presence of the owner's representative.
 - B. Schedule No. 1 - Planting dates March to August:

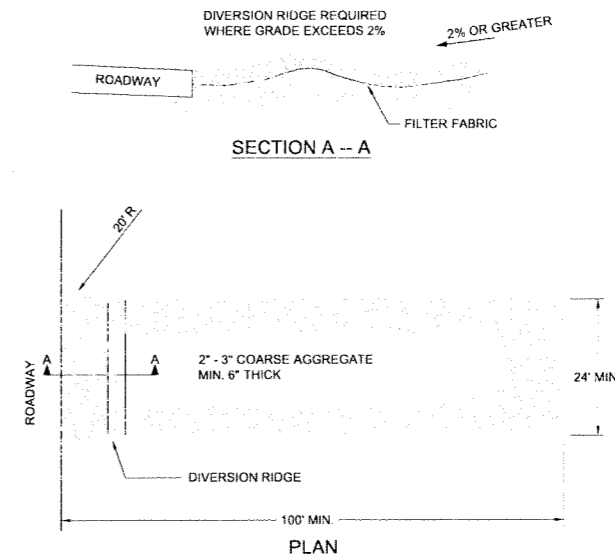
Common name of seed	Rate A (#/1000 sq ft)	Rate B (#/1000 sq ft)
Annual Rye Grass	10	8
Hulled Bermuda	3	2
Pensacola Bahia	2	0
Sericea Lespedeza (Clay soils)	2	0
Weeping Love Grass (Sandy soils)	2	0
 - C. Schedule No. 2 - Planting dates September to February:

Common name of seed	Rate A (#/1000 sq ft)	Rate B (#/1000 sq ft)
Annual Rye Grass	10	8
Hulled Bermuda	0	0
Brown Top Millet	5	0
Unhulled Bermuda	3	2
 - D. Utilize Rate A on slopes over 5:1 vertical in height but less than 3:1, and use Rate B on all bank slopes less than 5:1 vertical.
 - E. Double seed (Rate A) all grassed swales, waterways, and embankments from top of bank to bottom of bank on all bank slopes less than 3:1.
 - F. Provide osmotic limestone at 1 ton per acre and 16-4-12 fertilizer, at 0.5-ton per Acre and 12-4-8 fertilizer, at 0.5 ton per Acre.



NOTE: SEDIMENT TO BE CLEANED OUT WHEN SEDIMENT HEIGHT REACHES ONE-THIRD (1/3) THE SILT FENCE HEIGHT.

SILT FENCE
NOT TO SCALE



NOTES:

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR, AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
4. ROCK BAGS OR SANDBAGS SHALL BE PLACED SUCH THAT NO GAPS ARE EVIDENT.

CONSTRUCTION ENTRANCE/EXIT
NOT TO SCALE

REVISION DATE: _____

APPROVALS: ENGINEER: JWF, DRAINAGE: JCC/TAB, TECHNICIAN: TAB, CHECKED BY: JWF, APPROVED: JWF

ALLIANCE CONSULTING ENGINEERS, INC. No. 2813, JAMC

ALLIANCE CONSULTING ENGINEERS, INC. No. 2813, JAMC

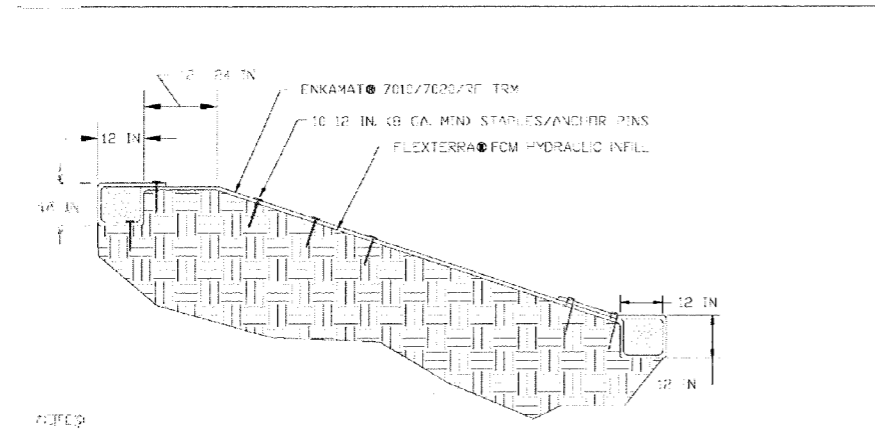
ALLIANCE CONSULTING ENGINEERS
Alliance Consulting Engineers, Inc.
Post Office Box 8147, Columbia, South Carolina 29202-8147
Phone: (803) 779-2078 • Fax: (803) 779-2079

EROSION AND SEDIMENT CONTROL DETAILS (SHEET 1 OF 2)

MAYBINTON BALL FIELD FOR NEWBERRY COUNTY

PROJECT: MAYBINTON BALL FIELD FOR NEWBERRY COUNTY, SOUTH CAROLINA, DATE: APRIL 2009, SCALE: NO SCALE

FILE NAME: C6.dwg, SHEET: C6 OF 7
REFERENCE FILE: Base.dwg
PROJECT NO.: 08182-36
DWG NO.: 01-465-D09



REFER TO FLEX TERRA FGM DETAIL DRAWINGS FOR FURTHER GUIDANCE ON HYDRAULIC INFILL

<p>PLEASE NOTE THAT THE INFORMATION PRESENTED HEREIN IS GENERAL INFORMATION ONLY. IT IS FOR CONCEPTUAL USE ONLY AND NOT INTENDED TO BE USED FOR CONSTRUCTION. WHILE EVERY EFFORT HAS BEEN MADE TO ENSURE THE ACCURACY, THIS INFORMATION SHOULD NOT BE USED FOR A SPECIFIC APPLICATION WITHOUT THE CONSULTATION OF A PROFESSIONAL ENGINEER AND VERIFICATION OF ITS SUITABILITY, APPLICABILITY AND ACCURACY.</p>		<p>FILE NAME: Green Armor Profile View Slope Detail.dwg</p>	
		<p>CONTACT NUMBER: 800-550-8681</p>	
<p>DATE: 4/26/09</p>	<p>SCALE: NOT TO SCALE</p>	<p>SHEET 1 OF 1</p>	<p>DATE: 4/26/09</p>

FLEX TERRA FGM HYDRAULICALLY APPLIED EROSION CONTROL PRODUCT (HECP)

SPECIFICATION

A hydraulically applied FLEX TERRA FGM is composed of long strand, thermally refined (within a pressure vessel) wood fibers from a natural fiber source, thermally treated to 80 - 85 psi (552 - 586 kPa) with steam and heat treated for 15 minutes at 200 - 240 degrees Fahrenheit (93 - 116 degrees Celsius) to produce a cross-linked, non-toxic, man-made fiber with a high tensile strength. The FGM requires no curing period and upon application forms an interlocking blanket of fibers which creates a continuous, porous, absorbent and flexible erosion resistant blanket that promotes and accelerates plant growth.

COMPOSITION

Thermally Processed (within a pressure vessel) wood fibers: 76% ± 3%
 Proprietary Crosslinked Hydrophilic Polymer: 15% ± 1%
 Proprietary Gimped, Interlocking Fibers: 9% ± 1%
 Moisture Content: 10% ± 3%

INSTALLATION

Strictly comply with equipment manufacturer's installation instructions and recommendations. Use approved hydraulic application equipment with a nozzle (50-degree tip). To achieve optimum soil surface coverage, apply FGM from opposing directions to soil surface. Rough surfaces (rocky terrain) may require higher application rates to achieve 100% cover. Slope interruption devices or water diversion techniques are recommended when slope lengths exceed 100' (30.5m). Adjust slope length for product applications on a 3H:1V slope. For application on steeper slopes, slope interruption lengths may need to be decreased based on natural site conditions. Not recommended for channels or areas with concentrated water flow. This product may be applied on saturated soils and does not require a curing period to be effective. No chemical additives with the exception of fertilizer, liming and biostimulant materials should be added to this product. To ensure proper application rates, measure and stake area. For maximum effectiveness, apply FGM in a two-step process as follows:

- Step One: Apply fertilizer with specified prescriptive agronomic formulations and 50% of seed with a small amount of topsoil.
- Step Two: Mix balance of seed and apply FGM at a rate of 50 lb per 125 gallons (23 kg/475 liters) of water. Confirm loading rates with equipment manufacturer. Do not leave seeded surfaces unprotected, especially if precipitation is imminent.

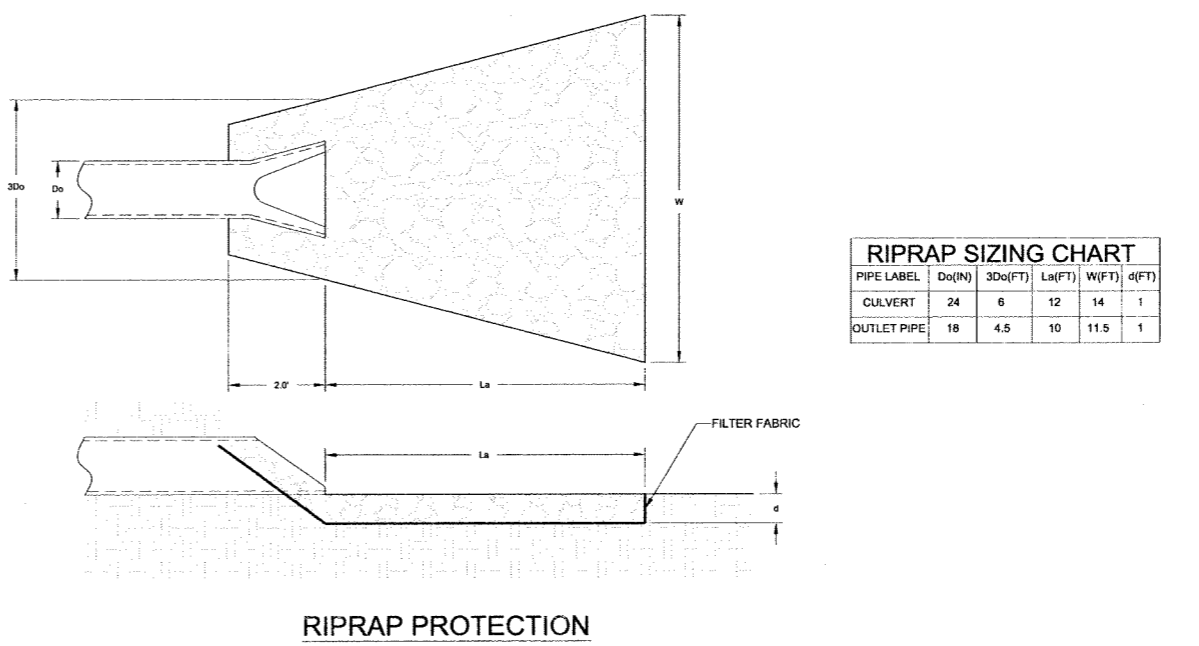
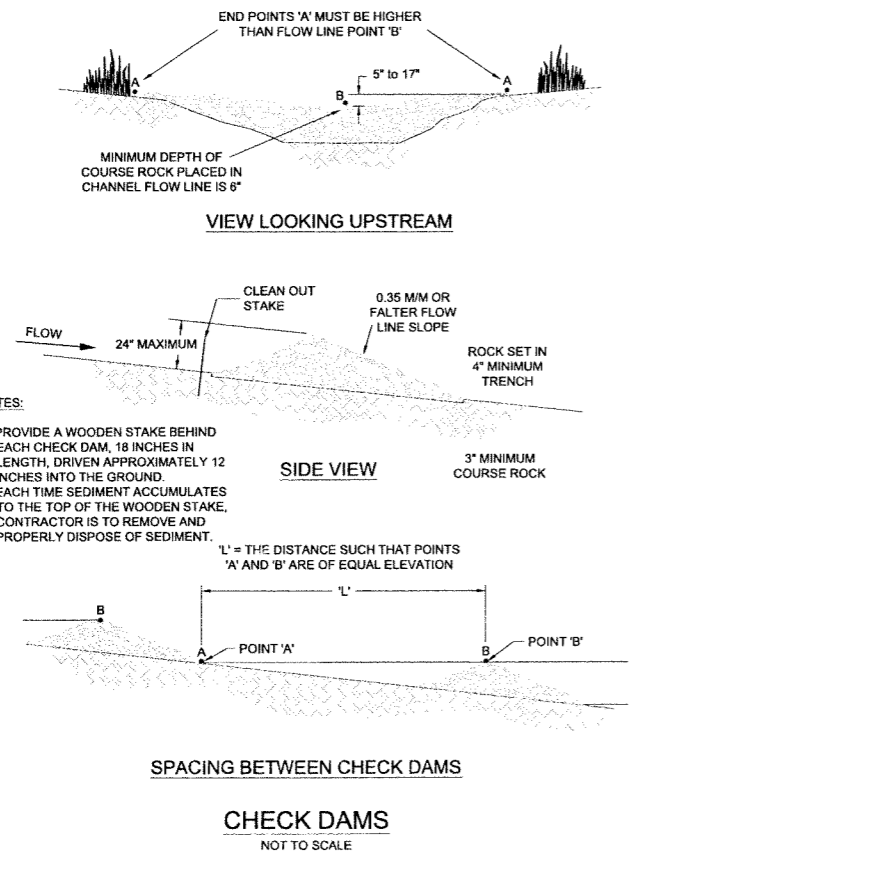
APPLICATION RATES: These application rates are for standard conditions. Designers may wish to reduce rates to establish or may need to increase application rates on rough surfaces. Consult application and loading charts to determine number of bags to be applied based on slope and application rate.

Slope Gradient / Condition	English	SI
≤ 4H to 1V	2500 lb/ac	2800 kg/ha
> 4H to 1V and < 2H to 1V	3000 lb/ac	3400 kg/ha
≥ 3H to 1V and ≤ 2H to 1V	3600 lb/ac	4000 kg/ha
> 2H to 1V and ≤ 1H to 1V	4000 lb/ac	4500 kg/ha
> 1H to 1V	4800 lb/ac	5100 kg/ha
Below ECB or TRM	1500 lb/ac	1700 kg/ha
As infill for TRM	3500 lb/ac	3900 kg/ha

PLEASE NOTE THAT THE INFORMATION PRESENTED HEREIN IS GENERAL INFORMATION ONLY. IT IS FOR CONCEPTUAL USE ONLY AND NOT INTENDED TO BE USED FOR CONSTRUCTION. WHILE EVERY EFFORT HAS BEEN MADE TO ENSURE THE ACCURACY, THIS INFORMATION SHOULD NOT BE USED FOR A SPECIFIC APPLICATION WITHOUT THE CONSULTATION OF A PROFESSIONAL ENGINEER AND VERIFICATION OF ITS SUITABILITY, APPLICABILITY AND ACCURACY.

Flexterra

FILE NAME: Flexterra FGM CAD Details Slope
 CONTACT NUMBER: 800-550-8681
 DATE: 4/26/09
 SCALE: NOT TO SCALE
 SHEET 1 OF 1



RIPRAP SIZING CHART

PIPE LABEL	Do(N)	3Do(FT)	La(FT)	W(FT)	d(FT)
CULVERT	24	6	12	14	1
OUTLET PIPE	18	4.5	10	11.5	1

REVISION DATE

APPROVALS

ENGINEER: JWF
 DESIGNER: JCC/TAB
 TECHNICIAN: TAB
 CHECKED BY: JWF
 APPROVED: JWF

DATE

SIGNATURE:

ALLIANCE CONSULTING ENGINEERS

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EROSION AND SEDIMENT CONTROL DETAILS (SHEET 2 OF 2)

MAYNINTON BALL FIELD FOR NEWBERRY COUNTY

NEWBERRY COUNTY, SOUTH CAROLINA

DATE: APRIL 2009

SCALE: NO SCALE

FILE NAME: C7.dwg
 REFERENCE FILE: Base.dwg
 PROJECT NO.: 08182-36

SHEET OF DWGNO. 01465-D09

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