



# **Town of Hilton Head Island Regular Design Review Board Meeting**

**Tuesday, May 22, 2012**

**1:15 p.m. – Benjamin M. Racusin Council Chambers**

## **AGENDA**

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**As a Courtesy to Others Please Turn Off All Cell Phones and Pagers during the Meeting.**

- 1. Call to Order**
- 2. Roll Call**
- 3. Freedom of Information Act Compliance**  
Public notification of this meeting has been published, posted, and mailed in compliance with the Freedom of Information Act and the Town of Hilton Head Island requirements
- 4. Approval of Agenda**
- 5. Approval of Minutes** – Meeting of March 27, 2012 and Meeting of April 24, 2012
- 6. Staff Report**
- 7. Board Business**
- 8. Unfinished Business**
  - A) DR120014- Airport Tree Mitigation
- 9. New Business**
- 10. Appearance by Citizens**
- 11. Adjournment**

**Please note that a quorum of Town Council may result if four (4) or more of Town Council members attend this meeting.**

**Town of Hilton Head Island**  
**Design Review Board**  
**Minutes of the Tuesday, March 27, 2012 Meeting**      **DRAFT**  
**1:15p.m – Benjamin M. Racusin Council Chambers**

Board Members Present:      Chairman Todd Theodore, Vice Chairman Scott Sodemann, Jake Gartner, Jennifer Moffett, Tom Parker, Galen Smith and Deborah Welch

Board Members Absent:      None

Council Members Present:      Mayor Pro Tem Ken Heitzke and Bill Ferguson

Town Staff Present:      Mike Roan, Urban Design Administrator  
Richard Spruce, Plans Administrator  
Rocky Browder, Environmental Planner  
Kathleen Carlin, Administrative Assistant

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**1. CALL TO ORDER**

Chairman Todd Theodore called the meeting to order at 1:15p.m.

**2. ROLL CALL**

**3. FREEDOM OF INFORMATION ACT COMPLIANCE**

**4. APPROVAL OF THE AGENDA**

The agenda was **approved** as presented by general consent.

**5. APPROVAL OF THE MINUTES**

The minutes of the March 13, 2012 meeting were **approved** as presented by general consent.

**6. STAFF REPORT**

None

**7. BOARD BUSINESS**

None

**8. UNFINISHED BUSINESS**

**Hilton Head Christian Academy** – Practice Gym – DR120004

Mr. Roan stated that the Board is reviewing this project for the fourth time. Mr. Roan described the progress of the application since its last review on March 13<sup>th</sup> including an update on plan t materials and details regarding the courtyard. The site plan remains unchanged. The applicant was asked to add a little more depth to the gable ends of the building and to bring some of the stucco elements further up into the gable. Altering the stucco finishes on the gable ends and extending the rake has

addressed some of the Board's previous concerns. The roof pitch has also been revised to the extent requested by the Board. Mr. Roan reviewed the elevations and stated that the Natural Resources Division has reviewed and approved the proposed tree removal and mitigation plan. All replacement trees will be field located and approved by Town staff.

The architect for this project, Mr. Greg Beste, was not present at today's meeting. Mr. Matt Skinner, Christian Academy High School Board Member, presented brief comments on behalf of the school.

The Board discussed their concerns with the trellis detail, the pilasters, and the louver stucco treatment. The Board encouraged the applicant to use as much stucco as possible particularly on the north and south elevations. The louver needs to fit into the wall a little better, and more trellis-like detail is recommended. The size of the column for the trellis needs to be made beefier. Following final comments by the Board, Chairman Theodore requested that a motion be made.

Mr. Parker made a motion to approve the Hilton Head Christian Academy – Practice Gym application with the following conditions: (1) the landscape trellises detail should be substantially beefier than what is indicated on architectural; and those trellises are not approved until that is submitted to the staff; (2) the pilasters that are indicated will be 4" – 6" proud of the face of the stucco consistent all the way around the building; (3) the gable end treatments that is a louver stucco treatment the louver shall be integrated into the geometric pattern of the gable end of this building so that it is an architectural element and not just an appliqué that the other trim just seems to randomly run into. The trim shall reflect the profile of the louver however the louver ends up. The louver may be taller or it may be wider, but a different profile than what is shown with a different kind of trim relationship. All of these conditions are to be submitted to the staff for their review. Ms. Welch **seconded** the motion and the motion **passed** with a vote of 7-0-0.

#### **Jenkins Island Cell Tower** – DR120007

Mr. Roan stated that all New Development applications require a second (Final) review by the Board. All of the specifications for this application are the same as the Conceptual Approval with the exception of reducing the total height of the tower including lightning rod to 150'-0", per the Board's conditions for Conceptual approval. The staff recommended approval. Following brief comments by the Board, Chairman Theodore requested that a motion be made.

Mr. Smith made a **motion** to **approve** the Jenkins Island Cell Tower – New Development Final application as submitted. Chairman Theodore **seconded** the motion and the motion **passed** with a vote of 7-0-0.

### **9. NEW BUSINESS**

#### **Airport Tree Mitigation** – DR120007

Mr. Roan began with a brief history of the application. The primary purpose of today's review is to address the buffer area along Beach City Road. Mr. Roan presented an in-depth overhead review of the application including the applicant's narrative, the existing site conditions, the proposed mitigation plan, and the plant schedule. Mr. Roan stated that the application meets very specific mitigation criteria as established by the Town and the County and as outlined in the applicant's narrative relative to vegetation type, flowering characteristics, and installation size. The Town would like to see as much native vegetation planted in the buffer as possible so that the buffer can re-establish itself. Staff recommended that the following four conditions be attached to approval of the application.

1. All fencing should be black vinyl-clad fencing;
2. The Design Review Board should visit the site following the installation of plant material for approval of the planting. The applicant should be required to supplement additional plant material in any sparse locations as deemed necessary by the Boards.
3. The applicant should consider an irrigation system for the first year following the planting of material in order to ensure the survivability of the new plant materials;
4. An on-going maintenance schedule, beyond the warranty period provided at the installation of plant materials, should be required.

Following the staff's presentation and discussion by the Board, Chairman Theodore requested that the applicant make his presentation. The following individuals spoke on behalf of this application:

Mr. Charles Stearns, Project Manager, CDM Smith, presented statements regarding the historic preservation areas of Mitchellville. The Board and the applicant discussed the mitigation schedule, the recommendation for a temporary irrigation system, and the need for a maintenance contract following the one-year warranty. Chairman Theodore stressed the importance of a temporary irrigation system for the survivability of the trees. This site is already in a parched condition and the summer season will soon compound the problem.

Mr. Gary Kubic, Beaufort County Administrator, presented statements in concern of the tight time line for installation of plant materials. The applicant stated that they are anxious to begin the mitigation planting process as soon as possible. Mr. Kubic and the Board discussed the importance of a maintenance schedule following the installation warranty. The applicant stated that they will hire a maintenance expert for development of a maintenance schedule. The maintenance schedule will be based on the advice of tree experts.

Mr. Paul Andres, Hilton Head Island Airport Director, discussed FAA safety concerns regarding the choices of plant material selected for the area. The FAA considers any vegetation that contains fruit to be an attractive nuisance because of birds being attracted to the fruit. The FAA takes safety concerns with birds very seriously. Mr. Andres recommended that the staff amend the LMO to allow the applicant to plant Bermuda grass in the area.

The Board discussed the statements presented by these speakers and Chairman Theodore discussed the importance of a temporary irrigation system for the site. It is highly unlikely that new trees will survive or be in a healthy condition without the benefit of a temporary irrigation system. A long-term maintenance commitment will also be required beyond the one-year warranty period. The applicant needs to take these commitments very seriously. Vegetation in this area will take more than a year to fill in and take care of itself. Who will maintain the vegetation then? Mr. Andres stated that this will be an operational expense and an appropriate maintenance schedule will be determined by their tree experts.

Chairman Theodore requested public comments and the following residents presented statements: Mr. Edward Tiscornia stated concern with the proposed mitigation plan because of its negative impact on property values and quality of life. The Board should consider a berm to shield the area from noise and fumes. A berm would help to mitigate the area visually and it would help protect the historic area of Mitchellville.

The Board discussed the option of a berm. Chairman Theodore stated that a berm would cause additional existing trees to be removed. In addition, a berm would probably not provide much visual mitigation. Several Board members stated that they are not in favor of a berm.

Mr. James Fisher, resident, stated that the proposed mitigation plan is unacceptable and is a violation of the LMO. More vegetation is needed because the existing 'stalks' are not trees. Adequate irrigation of the plan material will be crucial to its survival.

Residents, Mr. Dan Cleyart, Mrs. Karen Cleyart, and Mr. Fred Keever stated that the proposed mitigation plan is disrespectful of the philosophy and aesthetics of Hilton Head Island. The applicant needs to increase the density of the vegetation. A berm should be considered for the mitigation of noise and fumes.

Chester C. Williams, Esq., appearing on behalf of St. James Baptist Church, presented statements regarding the size (caliper inches) of the proposed mitigated trees. The proposed plan does not meet LMO requirements.

Residents, Mr. David Schwarz, Mr. Don Davis, Ms. Donna Lane, and Ms. Judith Shade all stated concern with the proposed plan based on aesthetics, excessive noise, excessive light, and jet fumes. A sound barrier such as a berm should be considered.

The Board further discussed the idea of a berm with the applicant. Mr. Andres stated that a berm was not considered as an option because a berm requires a change in land shape. A change in land shape is a violation of FAA requirements. In addition, there is no means to pay for a berm.

The Board, the applicant, and the staff discussed the idea of adding an existing 15-ft. sanitary sewer easement to the buffer (for a combined 75-ft. buffer from the property line). Ms. Teri Lewis presented statements regarding the location and legality of adding the 15-ft. easement. Staff discussed the airport buffer and the existing easement. The Board stated that making the buffer 15-foot wider for additional thickness would be a good starting point. The Board and the applicant discussed the planting of materials in the 15-foot easement.

The Board and the staff also discussed the FAA recommendation on the planting material (Bermuda grass) in the open area. The LMO requires that native materials be used. The Board stated concern that Bermuda grass will most likely not be cut or maintained properly.

At the completion of the discussion, the Board reported that they need additional information to reach a decision on this application. The Board stated that they would like to receive clarification on the types of native grasses and magnolia variety proposed. The Board stated that 75-ft. of plantings appears to be a very important issue. With regard to a berm, if a berm is approved, it will need to be placed inside of the easement.

The Board agreed with the importance of performing a visual inspection on site following the initial planting to ensure necessary thickness. The Board stressed that adequate irrigation will be crucial. After one year following installation, a three-year maintenance agreement will be necessary to monitor watering needs, clean up of vines, etc.

Following final comments, the Board recommended that the applicant withdraw today's application so that they can consider the idea of a berm as well as additional vegetative (including native grasses). The applicant agreed to withdraw today's application.

Mr. Joshua Gruber, Staff Attorney, presented statements regarding the issue of native grasses. Ms. Teri Lewis presented statements regarding the need for a change to the LMO if the applicant wants to plant only Bermuda grass. Currently the LMO states that the cleared area has to contain native vegetation.

Chairman Theodore stated that aesthetically the native grass option seems to be a good one. The Board and staff discussed the list of Category I trees (specifically dwarf-sized – appropriate for planting). In conclusion of today's review, the Board prepared the following list of items for the applicant:

1. The chain link fencing shall be black vinyl-clad fencing.
2. The buffer shall be 75-feet in total, taking the easement into consideration.
3. Look at the best way to get the full 75-foot vegetated buffer along this corridor (without a berm.)
4. In compliance with the LMO, this clear cut area with two grass bid alternates needs to be re-vegetated with native vegetation.
5. The Board recommends a temporary irrigation system be installed and that system be able to stay in place beyond the first year with a maintenance agreement that stays in place for three years beyond that time. Maintenance is critical as precedent for other areas in the future. A long-term maintenance program is very important.
6. After the initial installation is complete, the Design Review Board will conduct a site visit to ensure completeness.
7. The applicant should look into alternatives to the Little Gems – Hybrids of Magnolias that meet the Little Gem requirement. Broadleaf evergreen is recommended for variety and texture.

The applicant thanked the Board for their consideration. The applicant will resubmit his application at a later time.

**10. APPEARANCE BY CITIZENS**

None

**11. ADJOURNMENT**

The meeting was adjourned at 3:40p.m.

Submitted By:

Approved By:

May 8, 2012

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Kathleen Carlin  
Administrative Assistant

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Todd Theodore  
Chairman

**Town of Hilton Head Island**  
**Design Review Board**  
**Minutes of the Tuesday, April 24, 2012 Meeting**      **DRAFT**  
**1:15p.m – Benjamin M. Racusin Council Chambers**

Board Members Present:      Vice Chairman Scott Sodemann, Jennifer Moffett,  
   Galen Smith and Deborah Welch

Board Members Absent:      Chairman Todd Theodore, Tom Parker and Jack Gardner, *Excused*

Council Members Present:      Bill Ferguson

Town Staff Present:              Mike Roan, Urban Design Administrator  
   Rocky Browder, Environmental Planner  
   Kathleen Carlin, Administrative Assistant

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**1. CALL TO ORDER**

Acting Chairman Scott Sodemann called the meeting to order at 1:15p.m.

**2. ROLL CALL**

**3. FREEDOM OF INFORMATION ACT COMPLIANCE**

**4. APPROVAL OF THE AGENDA**

The agenda was **approved** as presented by general consent.

**5. APPROVAL OF THE MINUTES**

Approval of the minutes of the March 27, 2012 meeting is deferred to the May 8, 2012 meeting.

**6. STAFF REPORT**

None

**7. BOARD BUSINESS**

None

**8. UNFINISHED BUSINESS**

None

**9. NEW BUSINESS**

**First Presbyterian Church** – Courtyard Addition – Alteration/Addition – DR120015

Mr. Roan introduced the application and stated the location, 540 William Hilton Parkway. The applicant is proposing to reconfigure the courtyard area of the church and add a large courtyard privacy fence.

Mr. Roan presented a detailed description of the project including an overhead review of the site. Project photographs include the existing courtyard area showing the area to be renovated, and the

area that will receive a garden path and privacy fence. The proposed fence is a 6-foot wood screen fence with brick columns. The fence will close the gap between the existing Columbarium and the Sanctuary walls. All proposed colors and materials will match the existing. Mr. Roan also reviewed the landscape plan. A row of evergreen trees will be placed along the fence line to help mitigate the noise from William Hilton Parkway. The staff recommended that the application be approved approval pending final review by Natural Resources. Following staff's presentation, Chairman Sodemann requested that the applicant make his presentation.

Mr. Travis Tuck, with Wood + Partners, presented statements in support of the application. The Board and the applicant discussed the fence detail and the landscape plan. Following the Board's discussion, Chairman Sodemann requested that a motion be made.

Ms. Welch made a **motion to approve** the First Presbyterian Church Courtyard Addition application as presented by staff. Mr. Smith **seconded** the motion and the motion **passed** with a vote of 4-0-0.

**10. APPEARANCE BY CITIZENS**

None

**11. ADJO-URNMENT**

The meeting was adjourned at 1:35p.m.

Submitted By:

Approved By:

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Kathleen Carlin  
Administrative Assistant

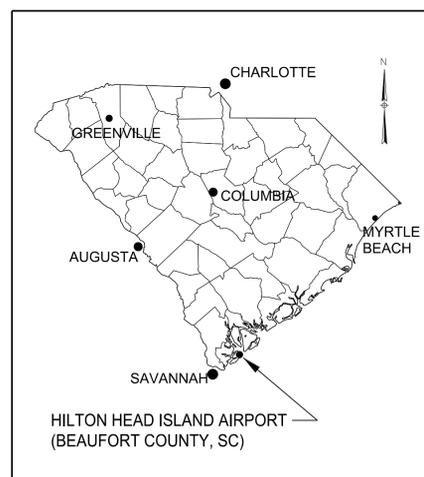
\_\_\_\_\_  
Scott Sodemann  
Vice Chairman

CONSTRUCTION PLANS  
FOR  
**ON-AIRPORT TREE MITIGATION PROJECT**  
**RUNWAY 21 APPROACH**

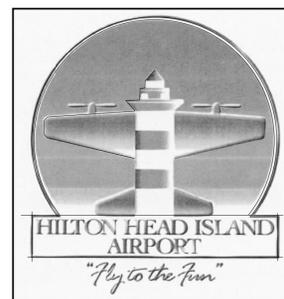
AT  
**HILTON HEAD ISLAND AIRPORT (HXD)**  
HILTON HEAD ISLAND, SOUTH CAROLINA

FAA A.I.P. NO. 3-45-0030-029-2010

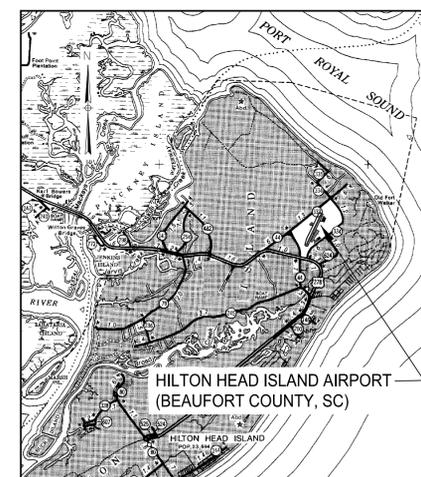
CDM Smith Project No. 86216.PLTBK



LOCATION MAP



PREPARED FOR  
**BEAUFORT COUNTY,**  
SOUTH CAROLINA



VICINITY MAP

DRAWING INDEX	
SHEET	TITLE
1	COVER SHEET
2	SAFETY PLAN
3	SURVEY CONTROL PLAN
4	STAKING AND FENCING PLAN AND GENERAL NOTES
5a, 5b	TREE MITIGATION PLANS
7	TREE PLANTING DETAILS AND NOTES
8	FENCING DETAILS AND NOTES

PLANS PREPARED BY

**CDM  
Smith**

1301 GERVAIS STREET COLUMBIA, SC 29201

Approximate Location of Project

LATITUDE 32°13'58" N  
LONGITUDE 80°41'32" W

NPDES Disturbed  
AREA = 0.00 ACRES

These plans issued for: \_\_\_\_\_ Date \_\_\_\_\_

- Design review 100 % \_\_\_\_\_
- Permitting \_\_\_\_\_
- Bidding \_\_\_\_\_
- Construction \_\_\_\_\_

3 DAYS BEFORE DIGGING IN  
SOUTH CAROLINA  
**CALL 811**  
PALMETTO UTILITY PROTECTION SERVICES, INC. (PUPS)  
ALL UTILITIES MAY NOT BE A MEMBER OF PUPS.



5-02-2012

May 2, 2012

SHEET NO. 1 OF 8

**Comment 01: Maintain plantings for three years**

*Response: The basic construction contract provides for a one-year warranty and maintenance period. An additional two years have been added to the maintenance requirements. Plans have been revised to reflect this change.*

**Comment 02: Consider installing an irrigation system for watering plants during the three-year maintenance period**

*Response: An irrigation system for 1,300+/- trees would require miles of irrigation line, multiple zones, trenching through root systems and would be very difficult to maintain because of planting density. Therefore we do not recommend installation of an irrigation system. Since the plants chosen are natural to the area and should survive naturally once established it is the intent of the County to cease maintenance after three years when plants will be established. We have added a plant maintenance and watering schedule to the plans and are requiring the contractor to comply with that requirement during the maintenance period. The contractor may water from a truck which can be filled from the airport's water system but must remain outside the buffers.*

**Comment 03: Address public comment asserting that the buffer parallel to Beach City Road should be 90' wide instead of 75' wide because a 15' wide PSD easement lies within**

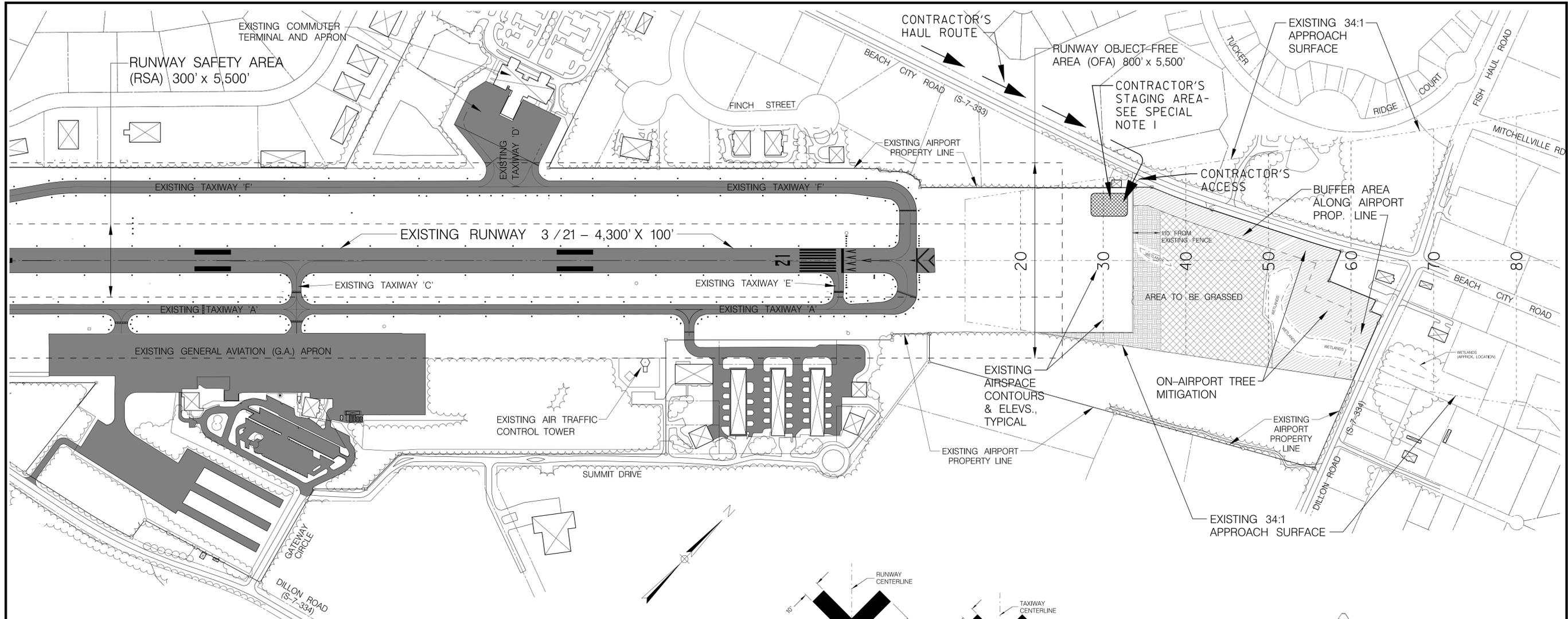
*Response: The Town maintains that the 75' width is correct and the Town is requiring that native grasses be planted within the easement, having obtained PSD permission to do so. Revised plans reflect this change.*

**Comment 04: Consider other Category I trees as alternatives to the Little Gem Magnolia if they meet all requirements**

*Response: The American Holly will also meet the project requirements and has been added to the planting schedule. 225 American Hollies will be planted thereby reducing the number of Magnolias by that number. Revised plans reflect this change.*

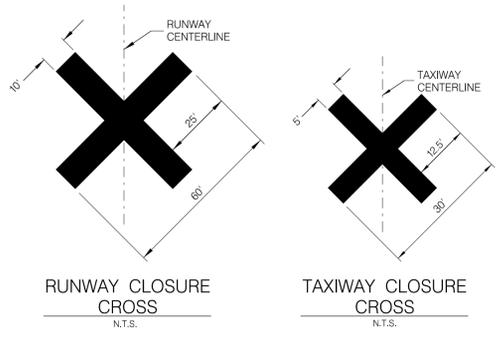
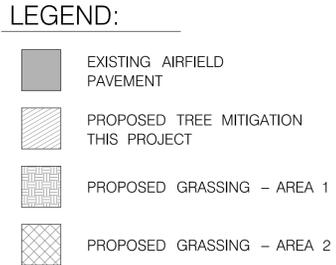
**Comment 05: The LMO stipulates that native grasses are to be planted within the non-buffer area but the plans call for Bermuda to be planted in part of that area**

*Response: There is currently a dispute between the LMO stipulation for native grasses and what is acceptable from a safety perspective to the Federal Aviation Administration. Since this is currently unresolved the plans have been revised to reflect alternative grassing materials (Bermuda or Native Grasses) for the portion in question and for the remainder of the non-buffer area. This is being done to establish a guaranteed bid price for each so when the issue is resolved the project can move ahead more expediently.*

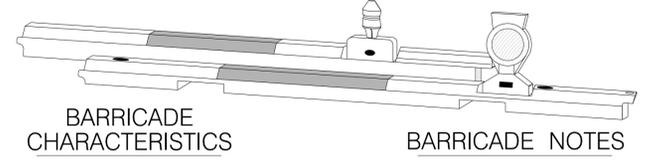


**SAFETY NOTES:**

- IN ORDER THAT "NOTICES TO AIRMEN" CAN BE APPROPRIATELY PUBLISHED, THE CONTRACTOR MUST NOTIFY THE ENGINEER AND AIRPORT MANAGER NOT LESS THAN 3 DAYS PRIOR TO COMMENCING THE CONSTRUCTION, PRIOR TO THE PERFORMING OF WORK IN AIRPORT OPERATIONS AREA, AND PRIOR TO THE CLOSING OF A RUNWAY OR TAXIWAY OR THE OPENING OF A RUNWAY OR TAXIWAY.
- THE CONTRACTOR SHALL BECOME KNOWLEDGEABLE OF THE SAFETY PROVISIONS CONTAINED IN FAA ADVISORY CIRCULAR (A.C.) 150/5370-2E - "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION", AND SHALL INCORPORATE THESE PROVISIONS INTO THEIR CONSTRUCTION PROCEDURES. A COPY IS PROVIDED IN THE PROJECT MANUAL.
- ALL ACTIVE AIRPORT OPERATIONAL SAFETY AREAS WHICH ARE ADJACENT TO A CONSTRUCTION WORK AREA SHALL BE SEPARATED BY BARRICADES. NO CONSTRUCTION TRAFFIC SHALL CROSS AIRPORT OPERATIONAL SAFETY AREAS EXCEPT AS APPROVED BY THE ENGINEER AND AIRPORT OWNER. NO BARRICADES WHICH ARE ADJACENT TO AIRPORT OPERATIONAL SAFETY AREAS MAY EXCEED 36 INCHES IN HEIGHT.
- ALL CONSTRUCTION TRAFFIC SHALL ENTER AND EXIT THE PROJECT AREA THROUGH THE PROJECT ACCESS ROUTES AND THESE SHALL BE COORDINATED WITH THE ENGINEER AND AIRPORT OWNER.
- ALL BARRICADES, ETC. SHALL BE FURNISHED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. NO SEPARATE MEASUREMENT AND PAYMENT WILL BE MADE FOR THESE ITEMS. ALL COSTS ASSOCIATED WITH THESE ITEMS MUST BE INCLUDED IN THE CONTRACT BID PRICE FOR MOBILIZATION.
- ALL CONSTRUCTION STAKEOUT IS TO BE PERFORMED BY THE CONTRACTOR IN ACCORDANCE WITH ARTICLE 50-06. THE ENGINEER SHALL FURNISH INITIAL SURVEY INFORMATION FOR HORIZONTAL CONTROL AND BENCHMARKS FOR VERTICAL CONTROL.
- THE CONTRACTOR SHALL PROVIDE SECURITY WITHIN THE CONSTRUCTION AREA AND SHALL KEEP ALL UNAUTHORIZED PERSONNEL OUT. THE PROJECT SUPERINTENDENT SHALL BE REQUIRED TO OBTAIN A SECURITY BADGE FROM THE AIRPORT OWNER AND SHALL ACT AS ESCORT FOR ALL CONTRACTOR AND SUBCONTRACTOR PERSONNEL.
- THE CONTRACTOR SHALL KEEP THE ACTIVE RUNWAYS AND TAXIWAYS CLEAN AND FREE FROM DEBRIS AND OBSTRUCTIONS DURING CONSTRUCTION OPERATIONS AND SHALL NOT PARK EQUIPMENT WITHIN 250 FEET OF A RUNWAY OR 100 FEET OF A TAXIWAY OR APRON AREA.
- HAUL ROADS AND CONTRACTOR'S GRAVEL ACCESS ROAD SHALL BE MAINTAINED BY THE CONTRACTOR DURING CONSTRUCTION.
- ALL CONTRACTOR STAGING AREAS AND HAUL ROADS THAT ARE DISTURBED BY THE CONTRACTOR'S WORK SHALL BE RESTORED TO THEIR ORIGINAL CONDITION. ANY DAMAGE TO EXISTING PAVEMENT RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. APPROVAL OF RESTORED OR REPAIRED AREAS SHALL BE MADE BY THE ENGINEER. THERE WILL BE NO SEPARATE PAYMENT FOR THIS WORK.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL UTILITIES ON THE SITE. THEY SHALL PROTECT ALL UTILITIES WHICH ARE TO REMAIN. ALL DAMAGE TO UTILITIES RESULTING DIRECTLY OR INDIRECTLY FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THAT ALL EXISTING CABLE LOCATIONS HAVE BEEN FLAGGED BY FAA AIRWAYS FACILITY.



- NOTES:**
- RUNWAY CLOSURE CROSSES SHALL BE MOBILE, LIGHTED STRUCTURES, AND SHALL BE PLACED AS DIRECTED BY THE OWNER / ENGINEER, AND SHALL BE ILLUMINATED FROM THE TIME OF RUNWAY CLOSURE TO TIME OF RUNWAY REOPENING, MINIMUM.
  - TAXIWAY CLOSURE CROSSES MAY BE CONSTRUCTED OF FABRIC, PLYWOOD, OR OTHER SUITABLE MATERIAL AND SHALL BE PAINTED AVIATION YELLOW.
  - PLACE RUNWAY CLOSURE CROSS OVER RUNWAY NUMERALS OR IMMEDIATELY OFF OF RUNWAY END AND SECURE IN PLACE TO PREVENT DISPLACEMENT BY WIND OR AIRCRAFT.
  - PLACE TAXIWAY CLOSURE CROSSES OVER ENDS OF TAXIWAY(S) OR AS DIRECTED BY OWNER / ENGINEER AND SECURE IN PLACE TO PREVENT DISPLACEMENT BY WIND OR AIRCRAFT.
  - INSTALLATION AND REMOVAL OF THESE ITEMS SHALL BE AS DIRECTED BY THE OWNER / ENGINEER. COST FOR INSTALLATION, MAINTENANCE AND REMOVAL OF THESE ITEMS SHALL BE INCIDENTAL TO BID ITEM FOR MOBILIZATION.



- BARRICADE CHARACTERISTICS**
- HEIGHT: 6" (36" MAX.)
  - WIDTH: 6"
  - LENGTH: 36" MIN. / VARIABLE MAX. (USUALLY 6 FEET)
  - WEIGHT EMPTY: 11 lbs.
  - WEIGHT FULL: 100 lbs. (S) / 58 lbs. (W)
  - GALLON CAPACITY: 5 GALLONS
  - TYPE OF FRAME: POLYTHENE PLASTIC
- BARRICADE NOTES**
- USED ON ALL AIRPORT MOVEMENT AREAS
  - HIGH VISIBILITY
  - FRANGIBLE
  - EACH BARRICADE IS MARKED WITH DIAGONAL ALTERNATING ORANGE AND WHITE HIGH REFLECTIVE GRADE TAPE WITH ONE 3-WAY APPROVED RED DOT (SOLAR / BATTERY) LIGHT.
  - CAN BE FILLED WITH WATER OR SAND
  - DESIGNED TO FAA AC 150 / 5370-2E SPECIFICATIONS AND PERFORMANCE STANDARDS

**LOW PROFILE BARRICADE DETAIL**  
N.T.S.

**SPECIAL NOTES :**

- FINAL LOCATION OF CONTRACTOR'S STAGING AREA AND AREA FOR TEMPORARY STOCKPILING OF MATERIAL SHALL BE COORDINATED BY THE CONTRACTOR WITH THE OWNER AND ENGINEER PRIOR TO BEGINNING OF CONSTRUCTION.
- SEE ADDITIONAL NOTES AND REQUIREMENTS ON SHEET 4.

REV. NO.	DATE	DESCRIPTION OF REVISION

0 200 400 600 800

DESIGNED BY: JES DATE: \_\_\_\_\_

DRAWN BY: JES DATE: \_\_\_\_\_

CHECKED BY: CFS DATE: 03-19-12

5-02-2012



PLANS PREPARED FOR  
**BEAUFORT COUNTY  
 HILTON HEAD ISLAND AIRPORT (HXD)  
 HILTON HEAD ISLAND, SC**

PROJECT NO. (CLIENT):  
 PROJECT NO. (WSA):  
 86216.PLTBK

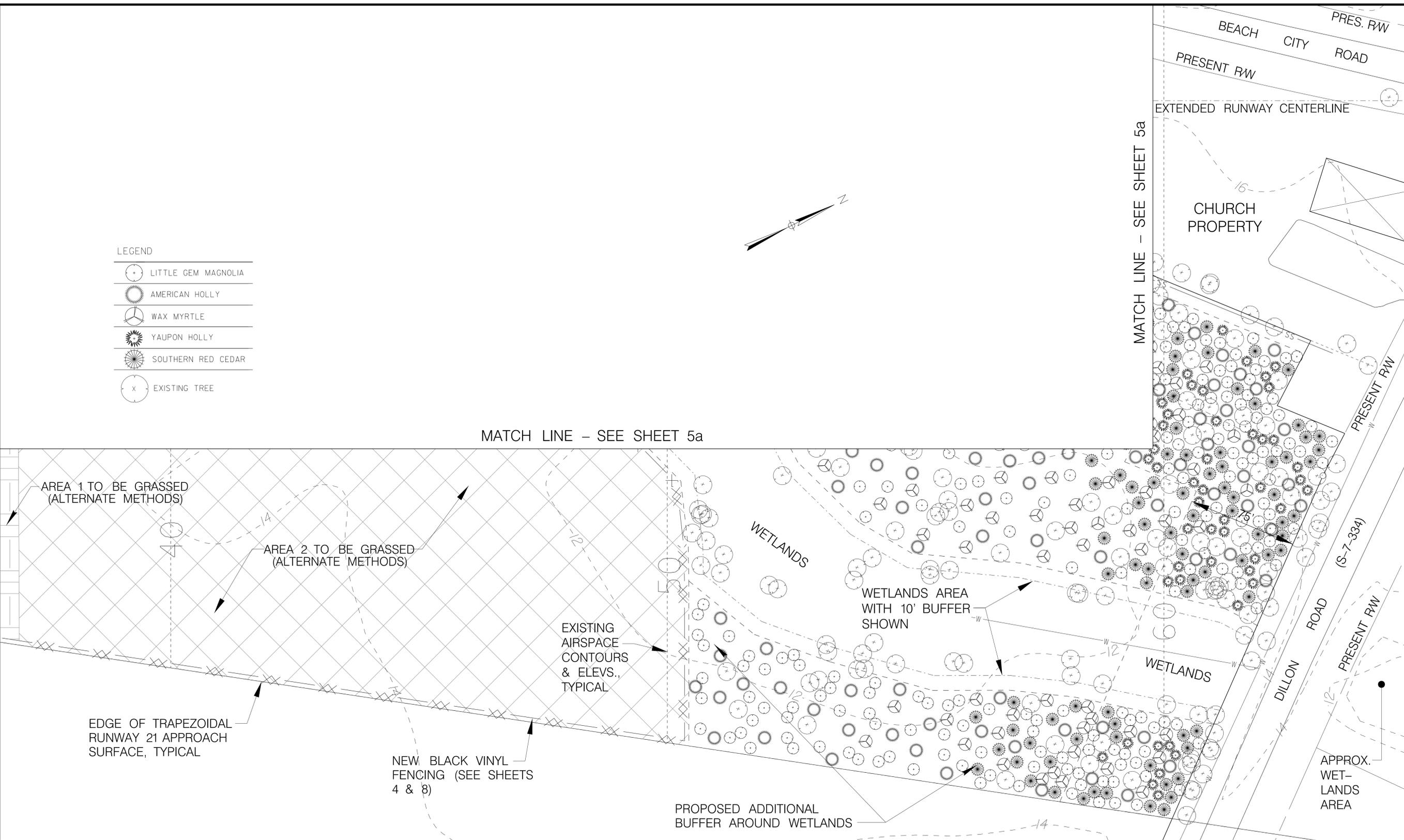






LEGEND

	LITTLE GEM MAGNOLIA
	AMERICAN HOLLY
	WAX MYRTLE
	YAUPON HOLLY
	SOUTHERN RED CEDAR
	EXISTING TREE



REVISIONS:		
REV. NO.	DATE	DESCRIPTION OF REVISION

DESIGNED BY	JES	DATE	
DRAWN BY	JES	DATE	
CHECKED BY	CFS	DATE	03-19-12



PLANS PREPARED FOR	
BEAUFORT COUNTY	
HILTON HEAD ISLAND AIRPORT (HXD)	
HILTON HEAD ISLAND, SC	
PROJECT NO. (CLIENT)	PROJECT NO. (WSA)
	86216.PLTBK

TREE MITIGATION PLAN (2 of 2)	
FAA A.I.P. 3-45-0030-029-2010	NO. 5b OF 8

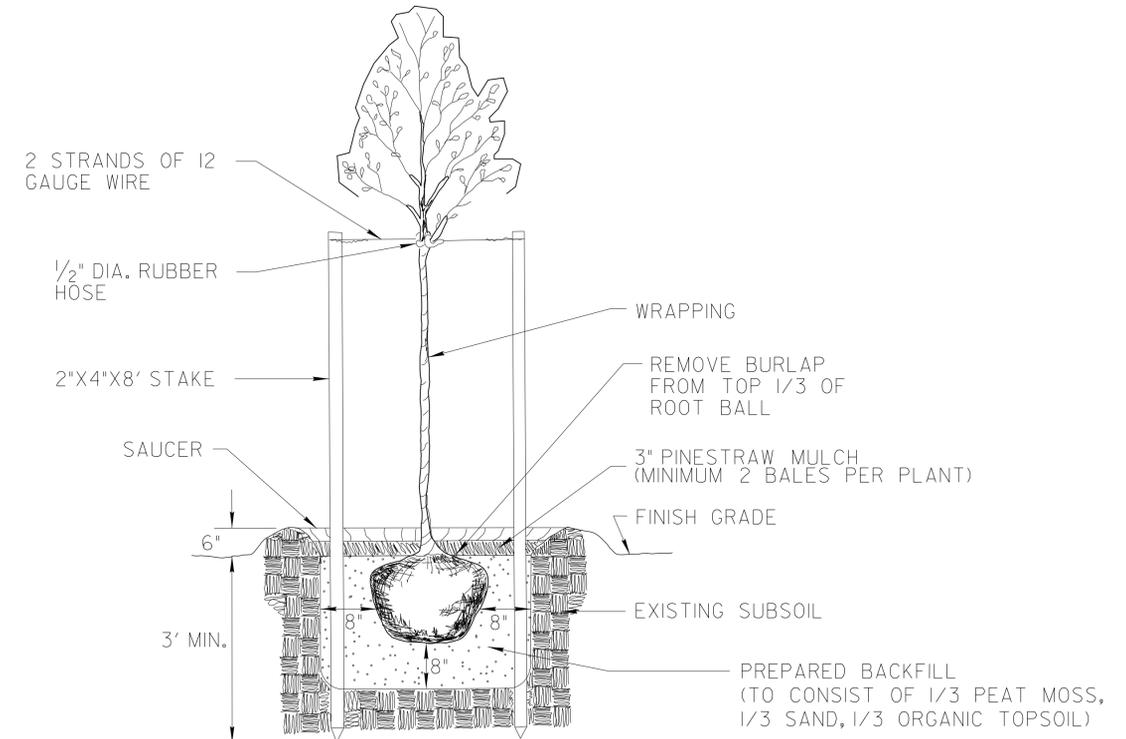
PLANT LIST

LEGEND	KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS	
	LG	565	MAGNOLIA GRANDIF. 'LITTLE GEM'	LITTLE GEM MAGNOLIA	10' (2" DBH)	8' ON CENTER (min.)	CATEGORY I
	AH	225	AMERICAN HOLLY	ILEX OPACA	10' (2" DBH)	8' ON CENTER (min.)	CATEGORY I
	WM	231	MYRICA CERIFERA	WAX MYRTLE	10' (2" DBH)	8' ON CENTER (min.)	CATEGORY II
	YH	219	ILEX VOMITORIA	YAUPON HOLLY	10' (2" DBH)	8' ON CENTER (min.)	CATEGORY II
	RC	107	JUNIPERUS SILICICOLA	SOUTHERN RED CEDAR	10' (1" DBH)	8' ON CENTER (min.)	CATEGORY III
	AREA 1	1.7 ACRE*	GRASSING - ALTERNATE	SEE PLAN SHTS. 5A, 5B			
	AREA 2	5.8 ACRE*	GRASSING - ALTERNATE	SEE PLAN SHTS. 5A, 5B			

\* NOTE : AREAS 1 AND 2 TO BE GRASSED SHALL BE BID AS 2 ALTERNATES:

ALTERNATE 1- GRASS AREA USING BERMUDA SPRIGGING.

ALTERNATE 2 - PLANT AREA WITH NATIVE GRASSES.  
(EQUAL MIXTURE OF SAND CORDGRASS, PINK MUHLY GRASS,  
AND BROOMSEGE. 4" POTS, 15' ON CENTER)



TREE PLANTING DETAIL

(WITH STAKING AND GUYING)  
NO SCALE

MAINTENANCE

- All plantings to be guaranteed and maintained for one year after Owner Acceptance of Work.
- Maintain plantings for an additional two years after one year warranty period.
  - Maintenance shall include pruning, weeding, watering, fertilizing, and application of appropriate insecticides, fungicides, and deer repellent necessary to maintain plants free of insects, disease, and damage by deer.
  - A. Re-set settled plants to proper grade and position. Restore planting saucer and adjacent material and remove dead material.
  - B. Tighten and repair guy wires and stakes as required.
  - C. Correct defective work as soon as possible after deficiencies become apparent and weather and season permit.
  - D. Water trees, plants, and groundcover beds within the first 24 hours of initial planting, and as necessary to maintain plants until the end of the one year warranty period, and thereafter until the end of the additional two-year maintenance period.
- Replacement of Plants: Any plants to be replaced prior to Acceptance of Work, or under terms of Guaranty shall be installed following procedures set forth in specifications.
- Contractor to submit a maintenance schedule to owner at beginning of warranty period. Schedule to include frequency of watering and fertilizing.
- Contractor will notify owner 48 hrs in advance prior to site visits for maintenance.
- Contractor will submit to Owner a written report for each site maintenance visit.
- Water supply to be coordinated with Owner.

NOTES:

- CONTRACTOR TO GUARANTEE ALL PLANT MATERIAL (TREES, SHRUBS, AND LAWNS), TO SURVIVE FOR ONE YEAR FROM TIME OF ACCEPTANCE BY OWNER.
- ALL PLANT MATERIAL TO CONFORM TO AMERICAN STANDARDS FOR NURSERY STOCK, LATEST EDITION, AND TO BE APPROVED BY OWNER AND ENGINEER'S REPRESENTATIVE BEFORE PLANTING.
- CONTRACTOR IS RESPONSIBLE FOR LAYOUT OF ALL PLANT MATERIAL IN ACCORDANCE WITH PLANS. MINOR CHANGES OR SUBSTITUTIONS MAY BE MADE IN THE FIELD WITH PRIOR APPROVAL OF OWNER AND ENGINEER'S REP.
- CONTRACTOR IS RESPONSIBLE FOR QUANTITIES OF ALL PLANTS SHOWN ON PLAN. PLANT LIST SHOWN IS FOR REFERENCE ONLY.
- THE AREA WITHIN THE 15' UTILITY EASEMENT SHOWN ON THE PLANS SHALL BE PLANTED WITH NATIVE GRASSES AS DESCRIBED IN ALTERNATE 2 ON THIS SHEET.

Hilton Head Island Airport (HXD)  
On-Airport Tree Obstruction Removal Runway 21  
Preliminary Mitigation Calculations  
May 2, 2012

Description	Unit	CAT I	CAT II	CAT III	CAT IV	Total
Pre-Removal (Existing Trees Prior to Removals)(CI) <sup>(1)</sup>	CI	9924	5381	1069	12	16386
Post-Removal (Remaining Trees after Removals)(CI) <sup>(1)</sup>	CI	2021	881	0	12	2914
Difference in Pre- and Post-Removal	CI	7903	4500	1069	0	13472
Replacement Trees Required (1 per 10" CI Removed) <sup>(2)</sup>	Each	790	450	107	0	1347

NOTES:

- Caliper Inches
- CAT I and CAT II Replacment Plants are 2" DBH; CAT III are 1" DBH

REMOVED 1,165 TREES OF 1,377 TREES

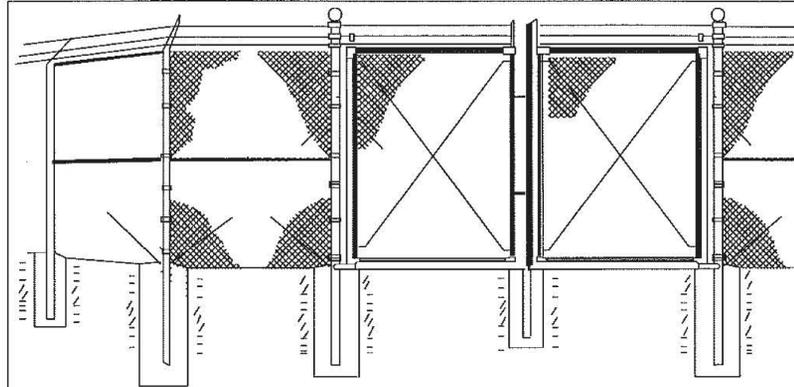
REV. NO.	DATE	DESCRIPTION OF REVISION

DESIGNED BY	HAP	DATE	05-11-2010
DRAWN BY	HAP	DATE	05-17-2010
CHECKED BY	JESCFS	DATE	05-20-2010

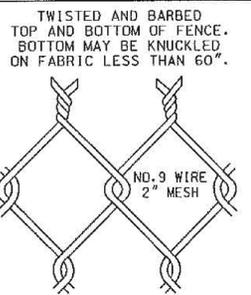


PLANS PREPARED FOR BEAUFORT COUNTY HILTON HEAD ISLAND AIRPORT (HXD) HILTON HEAD ISLAND, SC	
PROJECT NO. (CLIENT)	PROJECT NO. (WSA) 86216.PLTBK

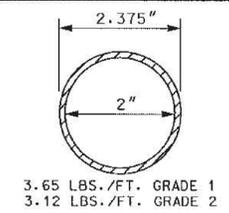
TREE PLANTING DETAILS AND NOTES	
FAA A.I.P. 3-45-0030-029-2010	NO. 7 OF 8



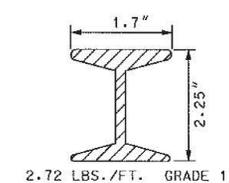
GATE CORNER AND BRACE POST CONSTRUCTION



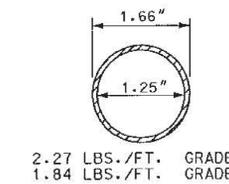
CHAIN LINK FENCING



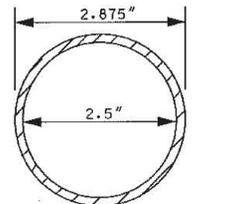
OPTION 1 TUBULAR LINE POST



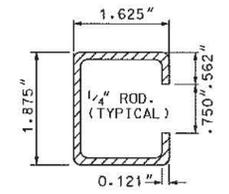
OPTION 2 SECTION "H" COLUMN LINE POST



TUBULAR BRACE BAR

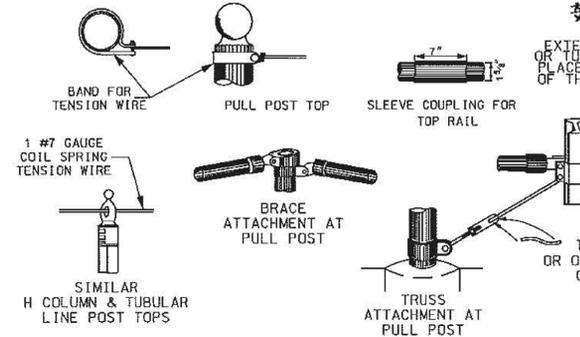


TUBULAR END CORNER OR PULL POST LINE POST OPTIONS

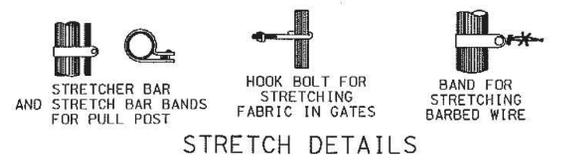


OPTION 3 SECTION "C" COLUMN LINE POST

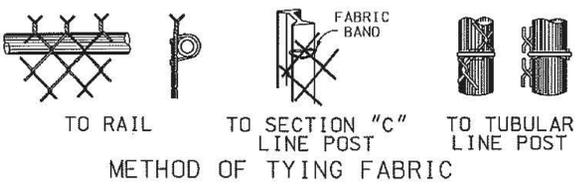
- NOTES:
- AS INDICATED HEREON, ALL CHAIN LINK FENCE METAL COMPONENTS SHALL BE IN ACCORDANCE WITH AASHTO M 181. CONCRETE FOR POST HOLES SHALL BE PORTLAND CEMENT CONCRETE. BARBED WIRE SHALL BE IN ACCORDANCE WITH SECTION 806 OF THE STANDARD SPECIFICATIONS.
  - CHAIN LINK FABRIC SHALL BE NO. 9 GAUGE STEEL WIRE IN ACCORDANCE WITH AASHTO M 181 TYPE 1, CLASS D, SECTION 14, OR TYPE 2, SECTION 14.
  - ALL END, CORNER POSTS AND BRACE BARS SHALL BE TUBULAR PIPE IN ACCORDANCE WITH AASHTO M 181 TYPE 1, GRADE 1, SECTION 32 OR TYPE 2, GRADE 2, SECTION 32 WITH DIMENSIONS AS SHOWN ON THE PLANS.
  - LINE POSTS SHALL BE TUBULAR POSTS, H SECTION POSTS, OR C SECTION POSTS SHOWN IN LINE POSTS OPTIONS NO. 1, NO. 2 OR NO. 3 BELOW. ONCE AN OPTION IS SELECTED IT SHALL BE USED THROUGHOUT THE ENTIRE CONTRACT.
  - OPTION 1 - LINE POSTS MAY BE TUBULAR POSTS WITH 2" INSIDE DIAMETER AND 2.375" OUTSIDE DIAMETER WITH WEIGHT PER FOOT AS SHOWN HEREON. THE POSTS SHALL BE IN ACCORDANCE WITH AASHTO M 181 TYPE 1, GRADE 1, SECTION 32 OR TYPE 2, GRADE 2, SECTION 32. CONCRETE FOOTINGS ARE REQUIRED.
  - OPTION 2 - LINE POSTS MAY BE H SECTION POSTS 2.25"x 1.7" WITH WEIGHT PER FOOT AS SHOWN HEREON. THE POSTS SHALL BE IN ACCORDANCE WITH AASHTO M 181 TYPE 1, GRADE 1, SECTION 32. CONCRETE FOOTINGS ARE REQUIRED.
  - OPTION 3 - LINE POSTS MAY BE C SECTION POSTS 1.875"x 1.625" WITH MINIMUM WALL THICKNESS 0.121" WITH WEIGHT PER FOOT AS SHOWN HEREON. THE POSTS SHALL BE IN ACCORDANCE WITH AASHTO M 181 TYPE 1, GRADE 1, SECTION 32 WITH STEEL IN ACCORDANCE WITH ASTM A 570, GRADE 45. ALL POSTS SHALL BE PRE-CUT AND THEN GALVANIZED AFTER THE CUT. STANDARD LINE POSTS SHALL BE DRIVEN TO A DEPTH OF 2'-9" WITH THE CONCRETE FOOTING OMITTED.
  - TUBULAR POST SHALL MEET SPECIFICATIONS AS SHOWN IN SECTION 806 OF THE STANDARD SPECIFICATIONS.
  - MISCELLANEOUS FITTING, BOLTS, AND OTHER HARDWARE SHALL BE STEEL OR CAST IRON WITH ZINC COATING IN ACCORDANCE WITH SECTION 29 OF AASHTO M 181. THE CONTRACTOR AT HIS OPTION MAY FURNISH EQUIVALENT ALUMINUM ALLOY HARDWARE FOR THESE ITEMS.
  - TENSION WIRE SHALL BE THE SIZE AND COATING AS DESCRIBED IN SECTION 23 AND 25 RESPECTIVELY OF AASHTO M 181. DIMENSION, WEIGHT AND PERMISSIBLE VARIATIONS ON METAL COMPONENTS AND COATINGS SHALL BE IN ACCORDANCE WITH SECTION 31 OF AASHTO M 181 WHEN NOT STATED HEREON. BRACE TENSION AND STRETCHER BARS, COMPLETE WITH ALL ASSEMBLIES ARE REQUIRED ON ALL END, CORNER OR PULL POSTS. PREPARATION FOR PLACING THE FENCE SHALL BE IN ACCORDANCE WITH SEC. 806 OF THE STANDARD SPECIFICATIONS. DIMENSIONS AND SIZE SHALL BE AS SHOWN HEREON. THE COST OF PERFORMING ANY GRADING OPERATION WHICH MAY BE NECESSARY TO INSTALL THE FENCE ON A UNIFORM GRADE WILL BE INCLUDED IN THE UNIT PRICE BID PER LINEAR FOOT OF FENCE AND NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS WORK.
  - ADDITIONAL POSTS, BARBED WIRE AND HARDWARE NEEDED TO COMPLETE INSTALLATION AS SHOWN HEREON WILL BE INCLUDED IN THE UNIT PRICE OF CHAIN LINK FENCE.
  - THE PAY ITEMS SHALL BE: SECURITY CHAIN LINK FENCE (SIZE) \_\_\_\_\_ L.F.



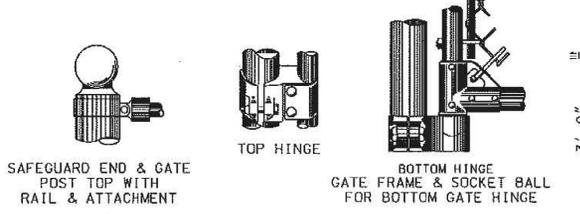
ATTACHMENTS AT LINE AND PULL POST



STRETCH DETAILS

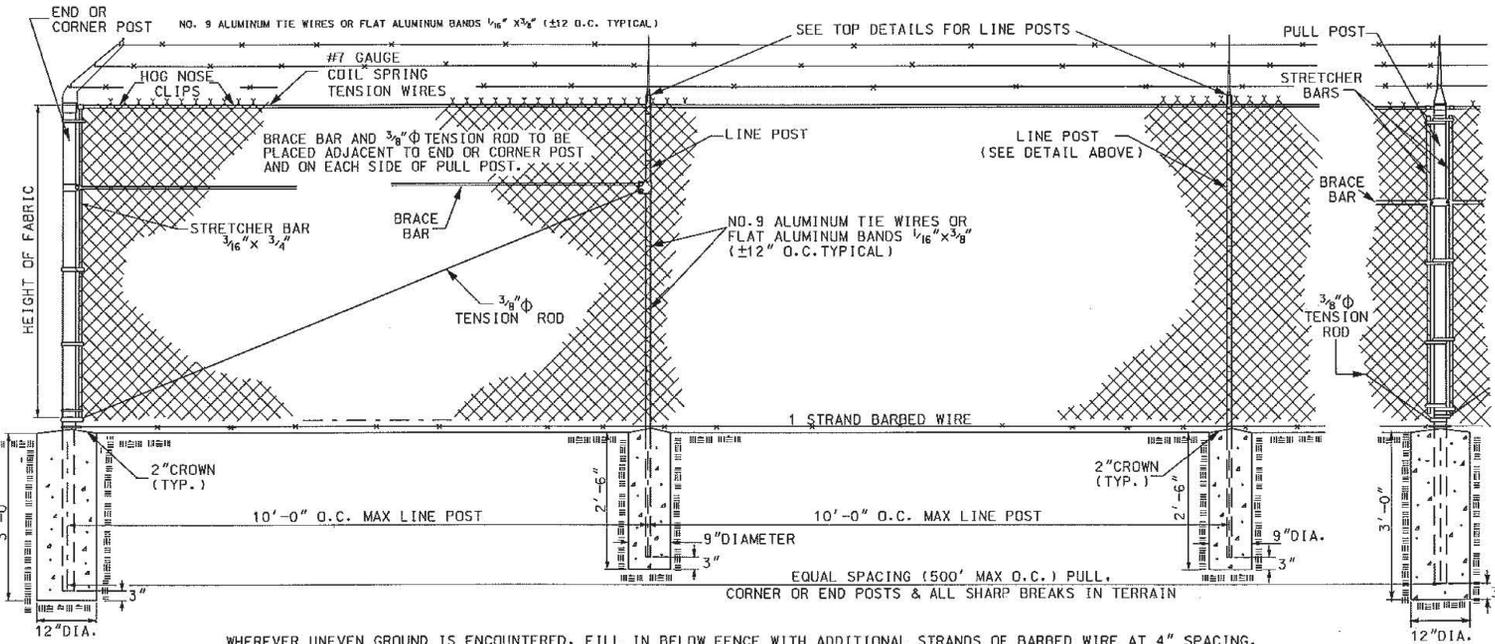


METHOD OF TYING FABRIC



GATE HINGES & TOP ATTACHMENT

THIS DRAWING IS NOT TO SCALE



WHEREVER UNEVEN GROUND IS ENCOUNTERED, FILL IN BELOW FENCE WITH ADDITIONAL STRANDS OF BARBED WIRE AT 4" SPACING.

FENCE TO BE BLACK VINYL

REFERENCES  
NATIONAL DOCUMENTS  
AASHTO M 181, ASTM A570

SCDOT DOCUMENTS

RELATED DRAWINGS & KEYWORDS

PRECONSTRUCTION SUPPORT ENGINEER

**SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER**  
NO. 8858  
SYLVESTER EARGLE, III

*[Signature]*  
SIGNATURE

MARCH 3, 2008  
DATE

6			
5			
4			
3			
2			
1			
0	3/2008	DSO	GENERAL REVISIONS
#	DATE	CHK	DESCRIPTION

**SCDOT**  
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION  
DESIGN STANDARDS OFFICE  
955 PARK STREET  
ROOM 405  
COLUMBIA, SC 29201

STANDARD DRAWING  
FENCE (SECURITY CHAIN LINK)

806-110-00  
EFFECTIVE LETTING DATE MAY 2008

REV. NO.	DATE	DESCRIPTION OF REVISION

DESIGNED BY	JES	DATE	
DRAWN BY	JES	DATE	
CHECKED BY	CFS	DATE	03-19-12




PLANS PREPARED FOR	
BEAUFORT COUNTY	
HILTON HEAD ISLAND AIRPORT (HXD)	
HILTON HEAD ISLAND, SC	
PROJECT NO. (CLIENT)	PROJECT NO. (WSA)
	86216.PLTBK

FENCING DETAILS AND NOTES (SCDOT STANDARD DRAWING)	
FAA A.I.P. 3-45-0030-029-2010	NO. 8 OF 8

## DESIGN TEAM/DRB COMMENT SHEET

*The comments below are staff recommendations to the Design Review Board (DRB)  
and do NOT constitute DRB approval or denial.*

PROJECT NAME: Airport Tree Mitigation

DRB#: DR120014

DATE: May 22, 2012

RECOMMENDATION:    Approval             Approval with Conditions             Denial

The applicant has met all the directives outlined by the Board in the first review, as outlined in the application materials. Staff would direct the Board's attention to the spacing proposal on the native grasses as 15'-0" on center. Spacing of 30-36" would be more appropriate, depending on the selected species.

The introduction of native grasses in the utility easement meets the criteria of the LMO, respective to buffer plantings.