

12

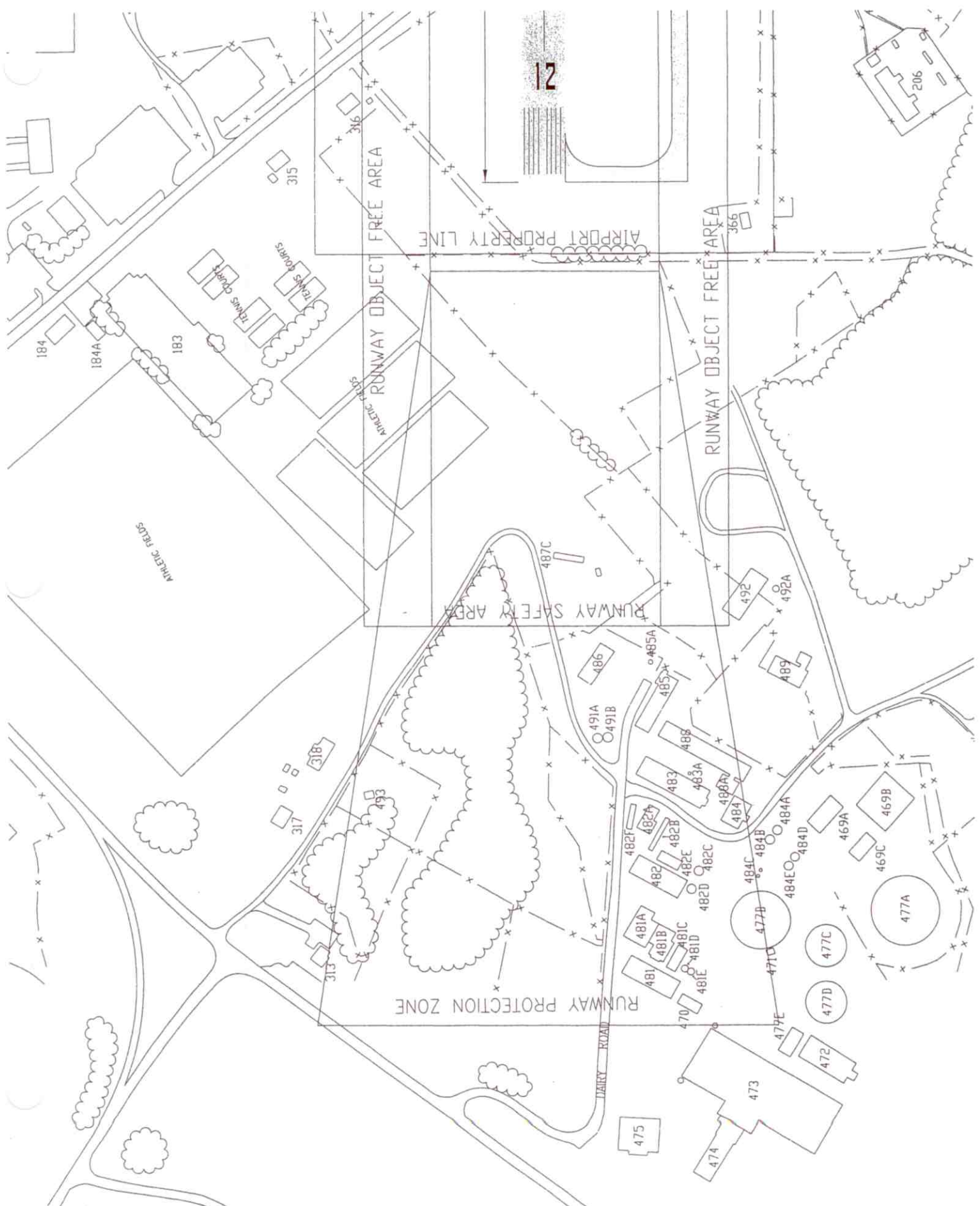
RUNWAY PROTECTION ZONE

TAXIWAY SAFETY AREA

ARCOP PROTECTIVE

ARCOP 031

NTS





CAMPBELL & PARIS ENGINEERS

MEMORANDUM

To: Dan McKinney

Copy to: _____

From: Andrew P. Kratzer

Date: February 14, 2007

Project: VTMEA

Re: Proposed Runway Centerline Profile

Urgent For Review Please Reply For Your Information For Your Records

Comments/Remarks:

Dan,

Attached are 4 sheets showing the existing and proposed runway centerline profile for the Virginia Tech/Montgomery Executive Airport. The proposed grades are per the approach category C requirements. An attempt was made to utilize existing grades, but as you can see significant grading will be required to meet the category C requirements.

There are three key requirements that the existing grades do not meet. First, the change in grade at the center of the runway can be no more than 1.5%. Second, the vertical curve at the center needs to be at least 1500 ft. Third, the grade at the end 1/4 of the runway must not exceed 0.8%.

To meet the category C requirements, it will be necessary to lower the grade from station 38+00 to the end of the proposed runway 30 at station 53+50. Approximately 8' of cut would be required at the end of the proposed runway 30. This also has implications for grading along the parallel taxiway. It is not feasible to regrade the existing apron at the airport. Therefore the proposed grade at the existing midfield taxiway, as shown on sheet 3, needs to remain very close to existing grade. It may be possible to retain an existing portion of the runway from station 20+00 to 29+00. This section appears to be at an acceptable grade, but this should be verified with a more precise centerline survey.



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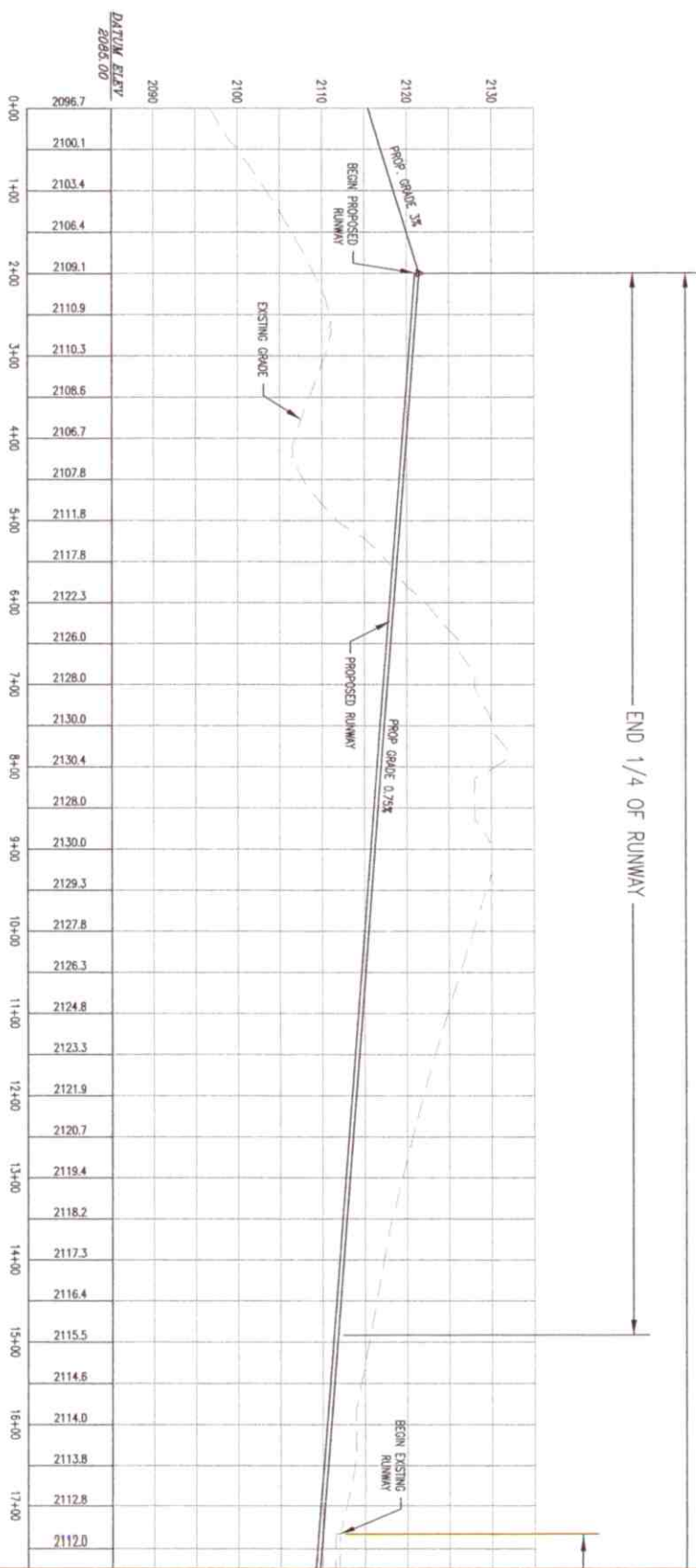
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Blacksburg, VA 24060
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VIRGINIA TECH/MONTGOMERY EXECUTIVE AIRPORT

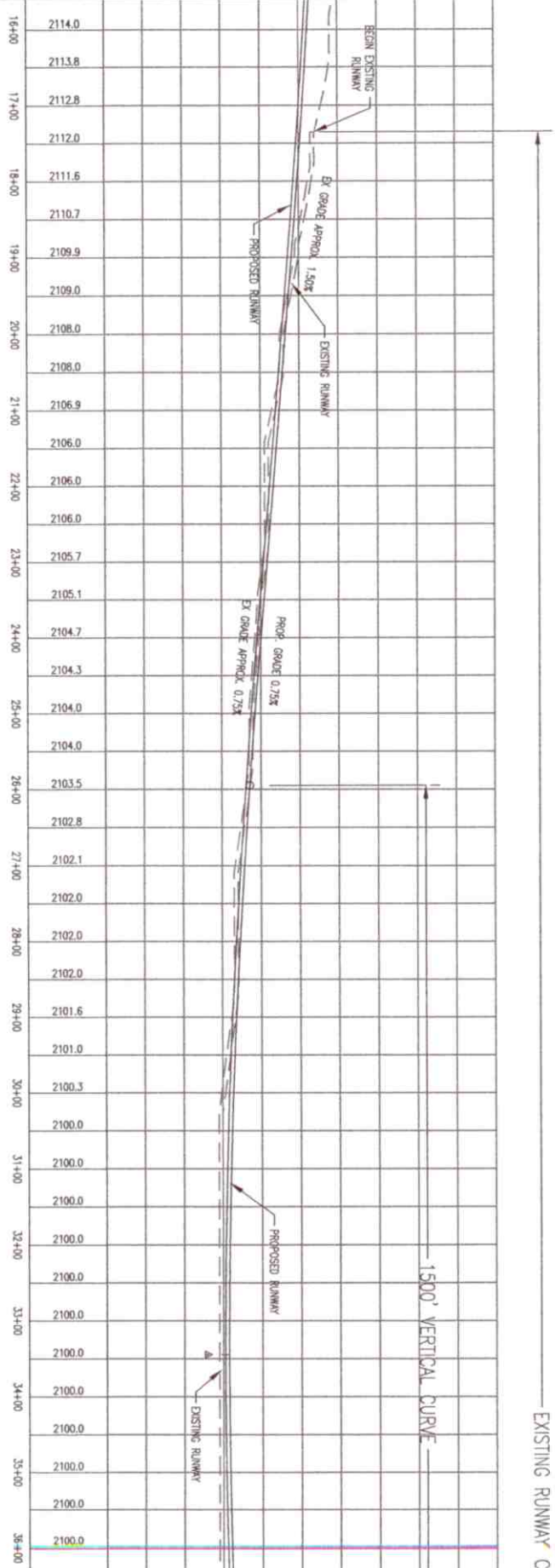
RUNWAY CENTERLINE PROFILE

EXISTING AND PROPOSED RUNWAY GRADES

DATE: 13 FEB 2007
BY: APK
SCALE: 1" = 200'
SHEET NO.: 4 OF 4



PROPOSED RUNWAY CL 5166'



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VIRGINIA TECH/MONTGOMERY EXECUTIVE AIRPORT
 RUNWAY CENTERLINE PROFILE
 EXISTING AND PROPOSED RUNWAY GRADES

DATE: 13 FEB 2007
 BY: APK
 SCALE: 1"=200'
 SHEET NO.: 2 OF 4



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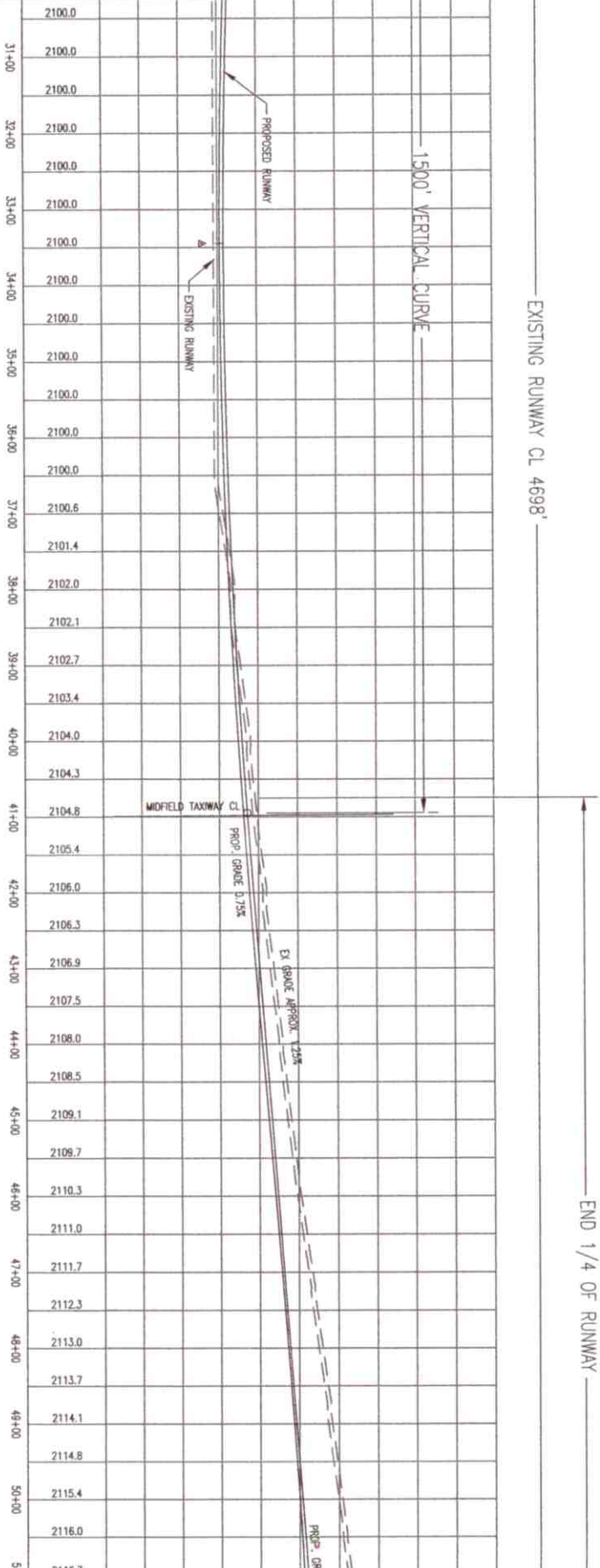
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VIRGINIA TECH/MONTGOMERY EXECUTIVE AIRPORT

RUNWAY CENTERLINE PROFILE

EXISTING AND PROPOSED RUNWAY GRADES

DATE: 13 FEB 2007
BY: APK
SCALE: 1"=200'
SHEET NO.: 4 OF 4





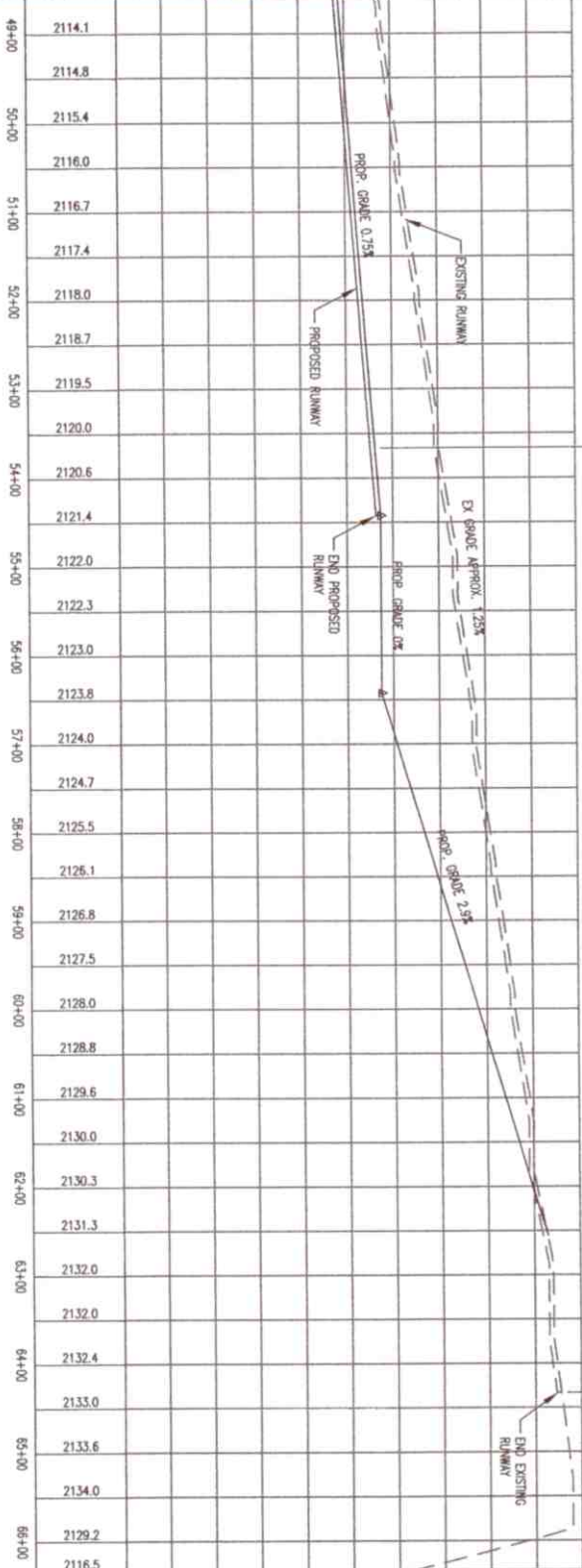
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VIRGINIA TECH/MONTGOMERY EXECUTIVE AIRPORT

RUNWAY CENTERLINE PROFILE

EXISTING AND PROPOSED RUNWAY GRADES



DATE: 13 FEB 2007
 BY: APK
 SCALE: 1"=200'
 SHEET NO.: 4 OF 4



George Paris

11/26/2007 05:43 PM

To: Patrick Hilt/C&P@campbell-paris
cc: Daniel E McKinney/C&P@campbell-paris, HD
Campbell/C&P@campbell-paris
Subject: Re: BCB Pavement Strength for MPU and ALP 

Not sure you need this much analysis

George T. Paris, P.E.
President, Campbell and Paris Engineers
4215 Lafayette Center Drive, Suite 2
Chantilly, Va. 20151
703-802-0093 Ext 226

Please take a minute and visit our website <http://www.campbell-paris.com>

Patrick Hilt



Patrick Hilt

11/26/2007 04:57 PM

To: HD Campbell/C&P@campbell-paris
cc: Daniel E McKinney/C&P@campbell-paris, George
Paris/C&P@campbell-paris
Subject: BCB Pavement Strength for MPU and ALP

H.D.

I have been working with the LEDFAA software today to help Dan address some of the comments he received on the MPU for BCB. Please see the attached input and output from LEDFAA. I'm not sure if I've done this right, but Dan needs to show a "Pavement Strength" value on the ALP sheet. We were assuming that we would include this as backup data in the report as an Appendix. I am interested in your thoughts/guidance.

BCB-LEDFAA.pd
Thanks,
Pat

LEDFAA - Layered Elastic Airport Pavement Design (V 1.3, June 2004)

Section NewFlexible in Job KBCB-2007MPU.
Working directory is C:\Program Files\Ledfaal3\

The structure is New Flexible.
Design Life = 20 years.
A design has not been completed for this section.

Pavement Structure Information by Layer, Top First

No.	Type	Thickness inches	Modulus psi	Poisson's Ratio	Strength R, psi
1	P-401 AC Surface	4.00	200,000	0.35	0
2	P-304 CTB	6.00	500,000	0.20	0
3	P-301 SCB	10.00	250,000	0.20	0
4	Subgrade	0.00	1,800	0.35	0

Total thickness to the top of the subgrade = 20.00 in

Aircraft Information

No.	Name	Gross Wt. lbs	Annual Departures	% Annual Growth
1	Skyhawk-172	2,558	6,714	2.20
2	Baron-E-55	5,424	708	1.50
3	SuperKingAir-350	15,100	1,032	2.90
4	Citation-V	16,500	300	4.80
5	Gulfstream-G-III	70,200	250	4.80
6	Falcon-50	38,800	199	4.80
7	Gulfstream-G-IV	75,000	50	4.80
8	Challenger-CL-604	48,200	50	4.80

Additional Aircraft Information

No.	Name	CDF Contribution	CDF Max for Aircraft	P/C Ratio
1	Skyhawk-172	0.00	0.00	3.14
2	Baron-E-55	0.00	0.00	3.00
3	SuperKingAir-350	0.00	0.00	2.19
4	Citation-V	0.00	0.00	2.96
5	Gulfstream-G-III	0.03	0.03	1.88
6	Falcon-50	0.00	0.00	2.05
7	Gulfstream-G-IV	0.01	0.01	1.87
8	Challenger-CL-604	0.00	0.00	1.85

NOTES

NewFlexible