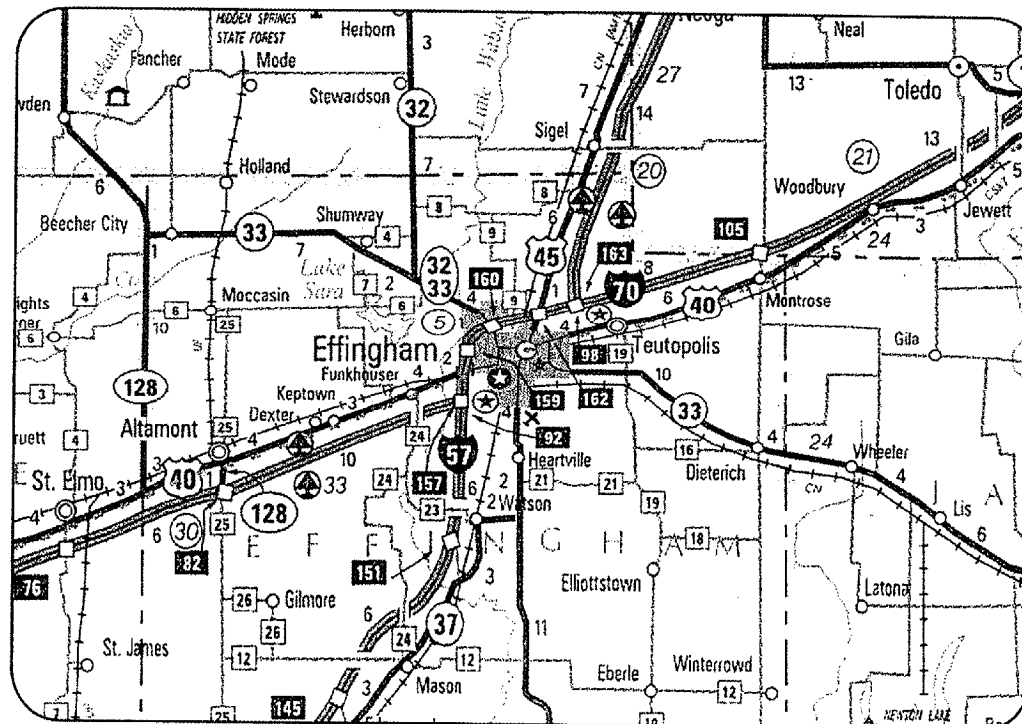


# CONSTRUCTION PLANS FOR EFFINGHAM COUNTY MEMORIAL AIRPORT EFFINGHAM, EFFINGHAM COUNTY, ILLINOIS WIDEN RUNWAY 11/29 AND REPLACE MEDIUM INTENSITY RUNWAY LIGHTS

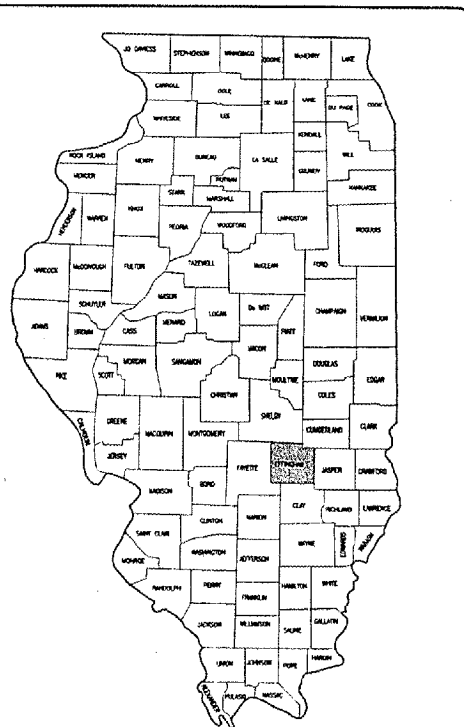
### SCOPE OF WORK

THIS PROJECT CONSISTS OF WIDENING THE PAVEMENT AND REPLACING THE M.I.R.L. SYSTEM ON RUNWAY 11/29. ASSOCIATED WORK ITEMS SHALL CONSIST OF 6" P.C.C. PAVEMENT, UNCLASSIFIED EXCAVATION, AGGREGATE BASE COURSE, INSTALLING UNDERDRAIN SYSTEM, REMOVE AND REPLACE M.I.R.L.'S, PAVEMENT MARKING, SEEDING AND MULCHING.

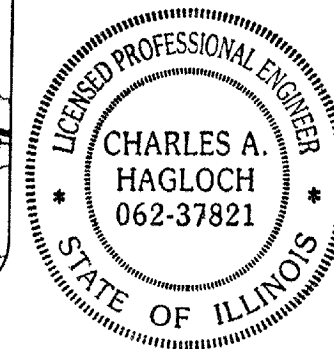


LOCATION

ILL. PROJ.: 1H2-3761  
A.I.P. PROJ.: 3-17-0040-B11  
LATITUDE: 39° 04' 15"  
LONGITUDE: 88° 32' 15"  
ELEVATION: 585.0' M.S.L.  
DATE: FEBRUARY 12, 2008



LOCATION OF COUNTY



REVISED 04/09/08

**HANSON**  
Hanson Professional Services Inc.  
ELECTRICAL ENGINEER  
Submitted by: *Kevin N. Lightfoot* ENG'R  
Date Submitted: 4/10/2008  
Lic. Exp. Date: 11/30/2009

**HANSON**  
Hanson Professional Services Inc.  
CIVIL ENGINEER  
Submitted by: *Charles A. Hagloch* ENG'R  
Date Submitted: APRIL 10, 2008  
Lic. Exp. Date: Nov. 30, 2009

EFFINGHAM COUNTY AIRPORT  
COMMISSION  
Approved: *[Signature]* CHAIRMAN  
Date: 3/13/2008

DATE	REVISION

EFFINGHAM COUNTY  
MEMORIAL AIRPORT  
EFFINGHAM, ILLINOIS  
A.I.P. PROJ.: 3-17-0040-B11  
ILL. PROJ.: 1H2-3761

FILE	DATE	BY
07A0143D_0800	11/28/07	RDM
R-001CVR.DWG	11/28/07	BAK
NOT TO SCALE	02/12/08	CAH

**HANSON**  
Hanson Professional Services Inc.  
1525 South Sixth Street  
Springfield, Illinois 62703-2686  
Offices Nationwide

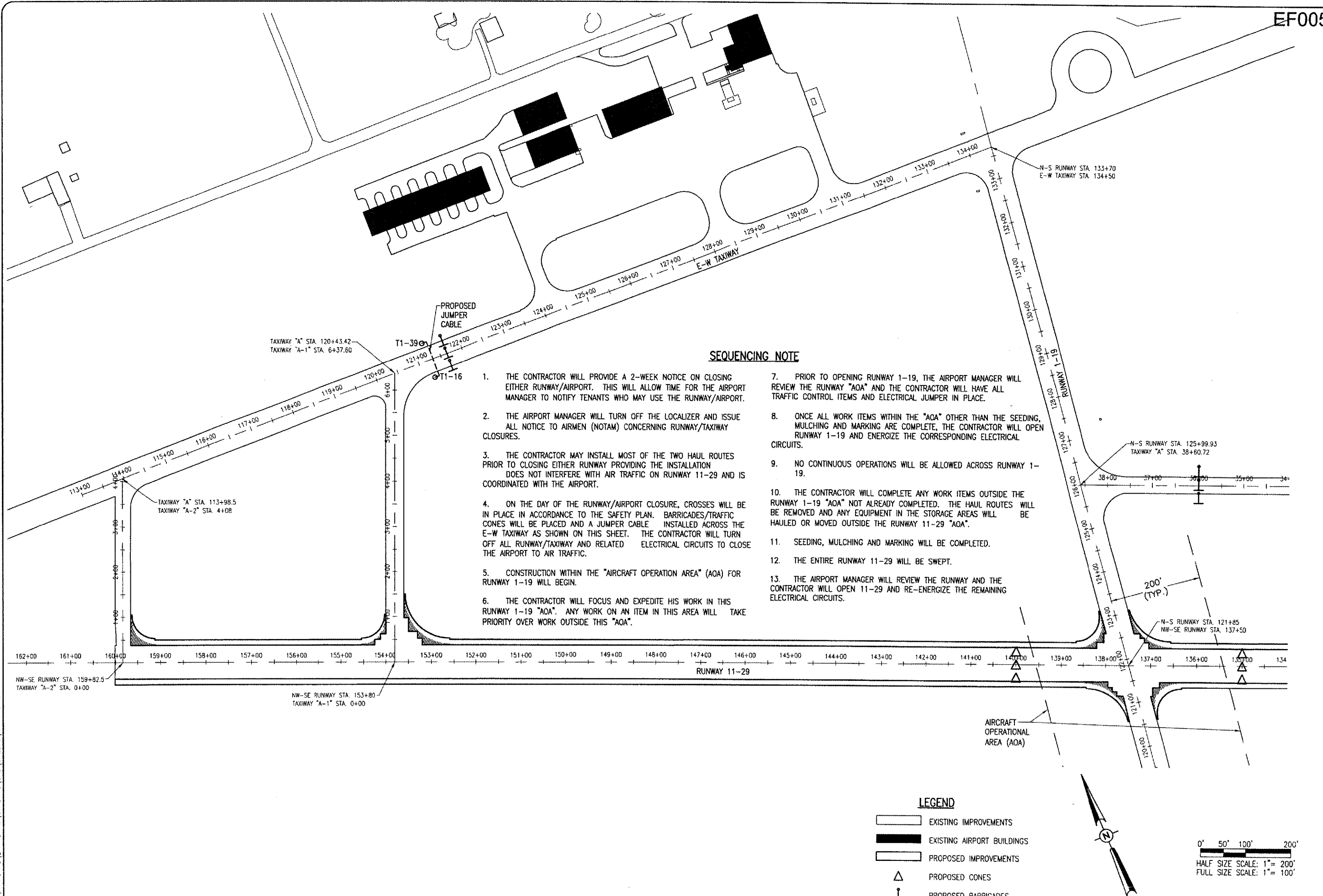
WIDEN RUNWAY 11/29  
AND REPLACE M.I.R.L.'S  
COVER SHEET

4:28:09 PM 2008 5:57 PM HAGLOCH0382  
C:\AIRPORTS\EFFINGHAM\07A0143\CAD\SHEETS\R-001CVR.DWG - COVER







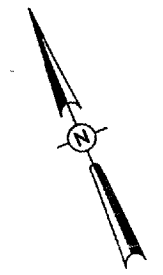


**SEQUENCING NOTE**

1. THE CONTRACTOR WILL PROVIDE A 2-WEEK NOTICE ON CLOSING EITHER RUNWAY/AIRPORT. THIS WILL ALLOW TIME FOR THE AIRPORT MANAGER TO NOTIFY TENANTS WHO MAY USE THE RUNWAY/AIRPORT.
2. THE AIRPORT MANAGER WILL TURN OFF THE LOCALIZER AND ISSUE ALL NOTICE TO AIRMEN (NOTAM) CONCERNING RUNWAY/TAXIWAY CLOSURES.
3. THE CONTRACTOR MAY INSTALL MOST OF THE TWO HAUL ROUTES PRIOR TO CLOSING EITHER RUNWAY PROVIDING THE INSTALLATION DOES NOT INTERFERE WITH AIR TRAFFIC ON RUNWAY 11-29 AND IS COORDINATED WITH THE AIRPORT.
4. ON THE DAY OF THE RUNWAY/AIRPORT CLOSURE, CROSSES WILL BE IN PLACE IN ACCORDANCE TO THE SAFETY PLAN. BARRICADES/TRAFFIC CONES WILL BE PLACED AND A JUMPER CABLE INSTALLED ACROSS THE E-W TAXIWAY AS SHOWN ON THIS SHEET. THE CONTRACTOR WILL TURN OFF ALL RUNWAY/TAXIWAY AND RELATED ELECTRICAL CIRCUITS TO CLOSE THE AIRPORT TO AIR TRAFFIC.
5. CONSTRUCTION WITHIN THE "AIRCRAFT OPERATION AREA" (AOA) FOR RUNWAY 1-19 WILL BEGIN.
6. THE CONTRACTOR WILL FOCUS AND EXPEDITE HIS WORK IN THIS RUNWAY 1-19 "AOA". ANY WORK ON AN ITEM IN THIS AREA WILL TAKE PRIORITY OVER WORK OUTSIDE THIS "AOA".
7. PRIOR TO OPENING RUNWAY 1-19, THE AIRPORT MANAGER WILL REVIEW THE RUNWAY "AOA" AND THE CONTRACTOR WILL HAVE ALL TRAFFIC CONTROL ITEMS AND ELECTRICAL JUMPER IN PLACE.
8. ONCE ALL WORK ITEMS WITHIN THE "AOA" OTHER THAN THE SEEDING, MULCHING AND MARKING ARE COMPLETE, THE CONTRACTOR WILL OPEN RUNWAY 1-19 AND ENERGIZE THE CORRESPONDING ELECTRICAL CIRCUITS.
9. NO CONTINUOUS OPERATIONS WILL BE ALLOWED ACROSS RUNWAY 1-19.
10. THE CONTRACTOR WILL COMPLETE ANY WORK ITEMS OUTSIDE THE RUNWAY 1-19 "AOA" NOT ALREADY COMPLETED. THE HAUL ROUTES WILL BE REMOVED AND ANY EQUIPMENT IN THE STORAGE AREAS WILL BE HAULED OR MOVED OUTSIDE THE RUNWAY 11-29 "AOA".
11. SEEDING, MULCHING AND MARKING WILL BE COMPLETED.
12. THE ENTIRE RUNWAY 11-29 WILL BE SWEEPED.
13. THE AIRPORT MANAGER WILL REVIEW THE RUNWAY AND THE CONTRACTOR WILL OPEN 11-29 AND RE-ENERGIZE THE REMAINING ELECTRICAL CIRCUITS.

**LEGEND**

- EXISTING IMPROVEMENTS
- EXISTING AIRPORT BUILDINGS
- PROPOSED IMPROVEMENTS
- PROPOSED CONES
- PROPOSED BARRICADES



0' 50' 100' 200'  
 HALF SIZE SCALE: 1" = 200'  
 FULL SIZE SCALE: 1" = 100'

DATE	REVISION	BY

EFFINGHAM COUNTY  
 MEMORIAL AIRPORT  
 EFFINGHAM, ILLINOIS

A.I.P. PROJ.: 3-17-0040-B11  
 I.L. PROJ.: 1H2-3761

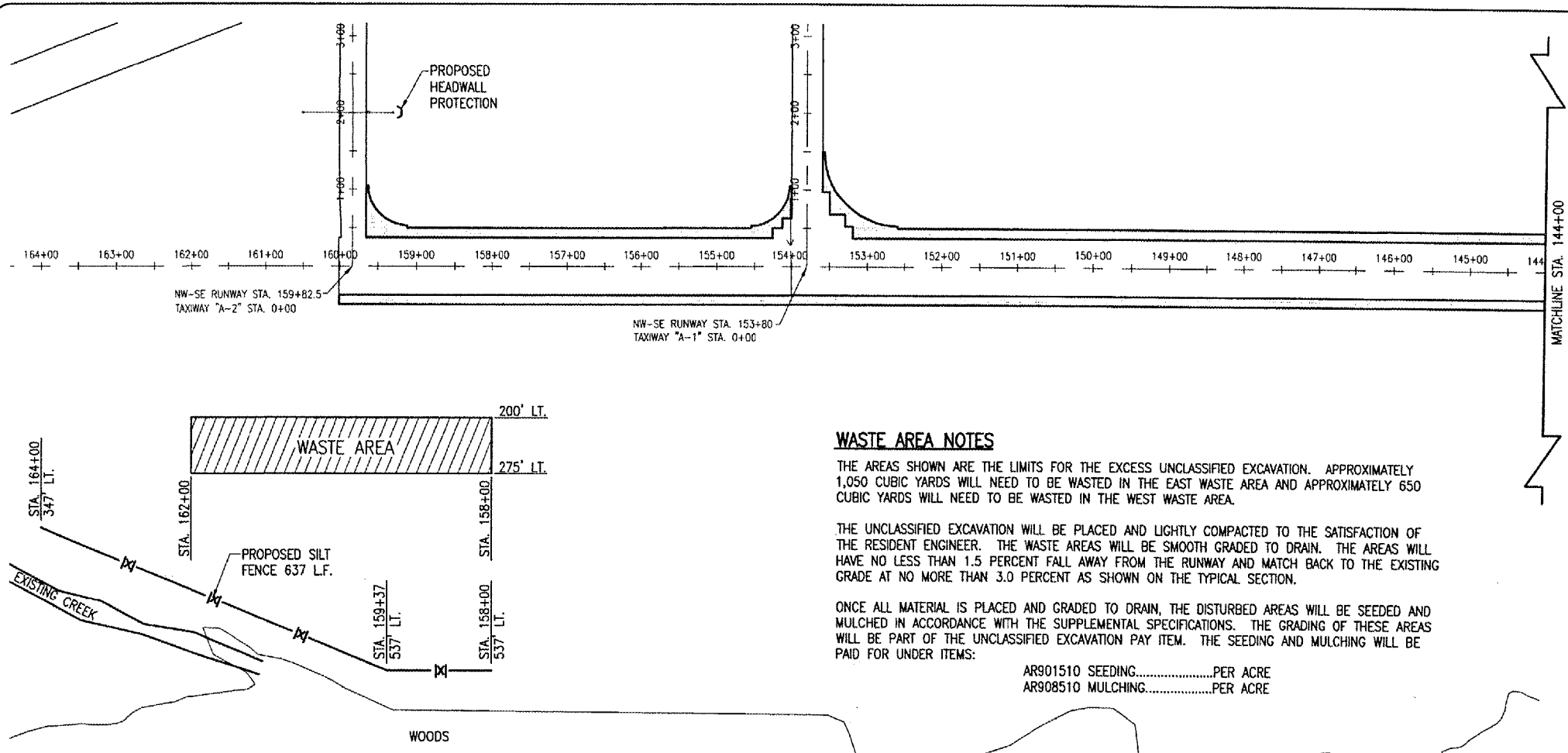
ILL. Project No. 07A0143D 0800 Client R-10.1STL.DWG Scale 1" = 100' Date 02/12/08	LAYOUT KDM 11/28/07 DRAWN BAK 11/28/07 REVIEWED CAH 02/12/08
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**HANSON**  
 Professional Services Inc.  
 6515  
 Springfield, Illinois 62703-2886  
 Offices Nationwide

WIDEN RUNWAY 11/29  
 AND REPLACE MRL'S

PROPOSED  
 SEQUENCING  
 PLAN

APR 03, 2008 5:58 PM HAGL000382  
 I:\AIRPORTS\EFFINGHAM\07A0143\CAD\SHEETS\R-101ST.DWG - STAGING 1



- LEGEND**
- EXISTING IMPROVEMENTS
  - PROPOSED IMPROVEMENTS
  - PROPOSED WASTE AREA
  - EXISTING DRAINAGE PIPE
  - PROPOSED SILT FENCE
  - EXISTING INLET
  - PROPOSED INLET PROTECTION
  - EXISTING HEADWALL
  - PROPOSED HEADWALL PROTECTION

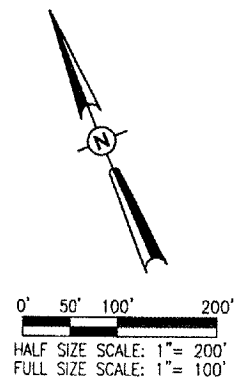
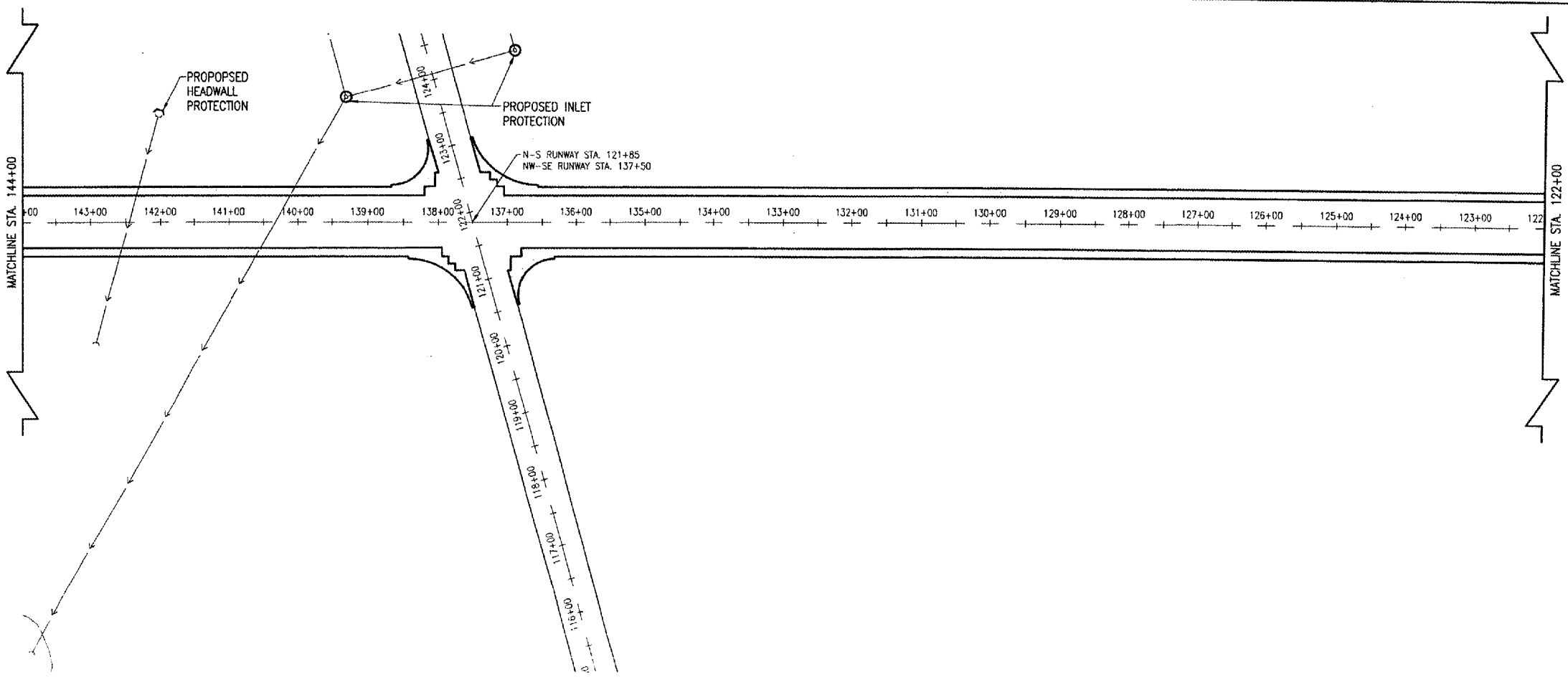
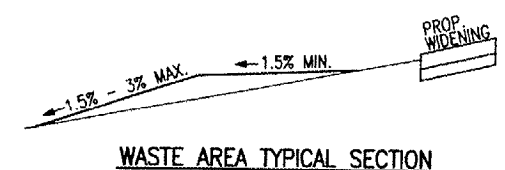
**WASTE AREA NOTES**

THE AREAS SHOWN ARE THE LIMITS FOR THE EXCESS UNCLASSIFIED EXCAVATION. APPROXIMATELY 1,050 CUBIC YARDS WILL NEED TO BE WASTED IN THE EAST WASTE AREA AND APPROXIMATELY 650 CUBIC YARDS WILL NEED TO BE WASTED IN THE WEST WASTE AREA.

THE UNCLASSIFIED EXCAVATION WILL BE PLACED AND LIGHTLY COMPACTED TO THE SATISFACTION OF THE RESIDENT ENGINEER. THE WASTE AREAS WILL BE SMOOTH GRADED TO DRAIN. THE AREAS WILL HAVE NO LESS THAN 1.5 PERCENT FALL AWAY FROM THE RUNWAY AND MATCH BACK TO THE EXISTING GRADE AT NO MORE THAN 3.0 PERCENT AS SHOWN ON THE TYPICAL SECTION.

ONCE ALL MATERIAL IS PLACED AND GRADED TO DRAIN, THE DISTURBED AREAS WILL BE SEEDED AND MULCHED IN ACCORDANCE WITH THE SUPPLEMENTAL SPECIFICATIONS. THE GRADING OF THESE AREAS WILL BE PART OF THE UNCLASSIFIED EXCAVATION PAY ITEM. THE SEEDING AND MULCHING WILL BE PAID FOR UNDER ITEMS:

AR901510 SEEDING.....PER ACRE  
 AR908510 MULCHING.....PER ACRE



DATE	REVISION	BY
04/09/08	REVISED AS PER IDA REVIEW	CAH

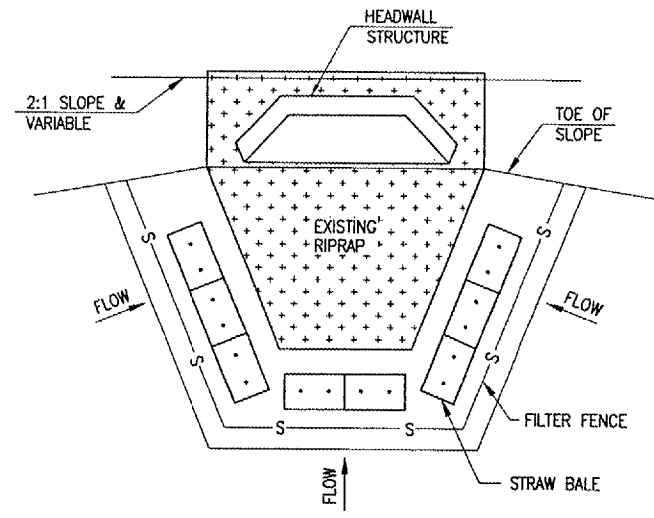
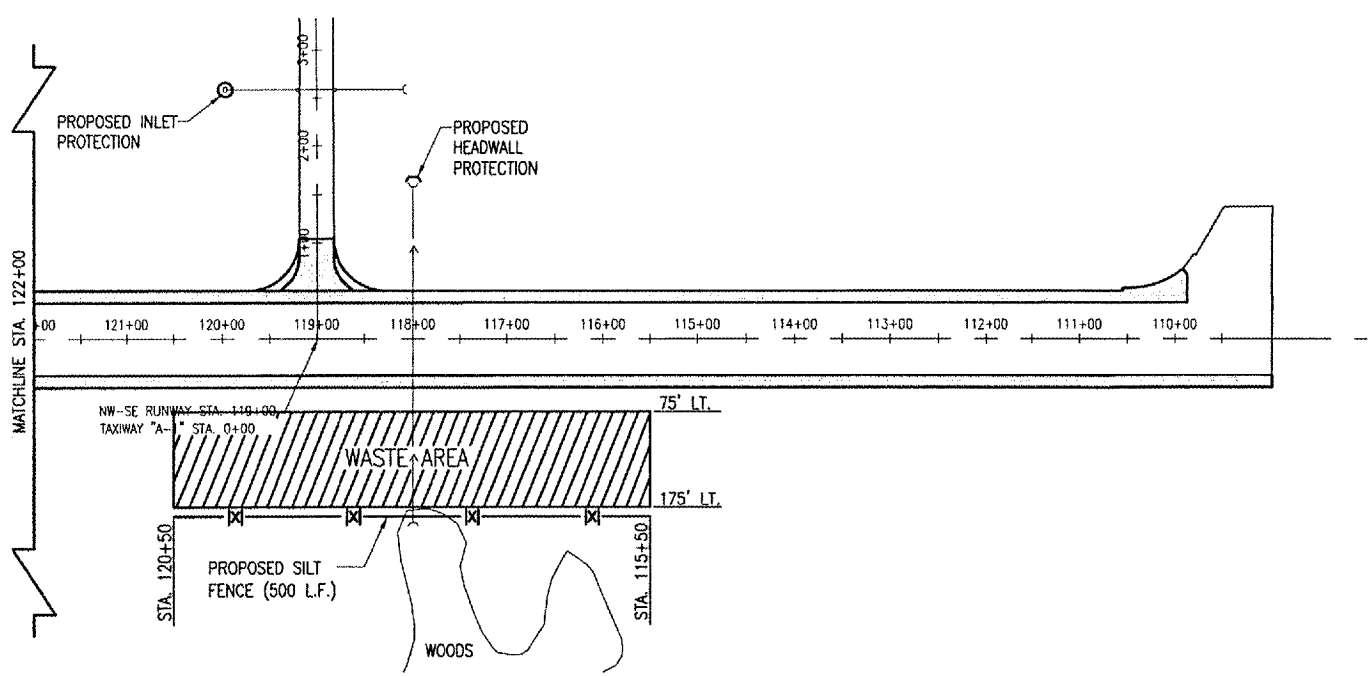
**EFFINGHAM COUNTY  
 MEMORIAL AIRPORT  
 EFFINGHAM, ILLINOIS**

IL PROJ.: 1H2-3761 A.I.P. PROJ.: 3-17-0040-B11

H&M Project No. 07A0143D_0800 Filename R-161SWP.DWG Scale 1" = 100' Date 02/12/08	LAYOUT KDM 11/28/07 DRAWN BAK 11/28/07 REVIEWED CAH 02/12/08
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**HANSON**  
 Hanson Professional Services Inc.  
 1525 South State Street  
 Springfield, Illinois 62703-2986  
 Offices Nationwide

**WIDEN RUNWAY 11/29  
 AND REPLACE MIRL'S  
 PROPOSED STORMWATER  
 POLLUTION PREVENTION PLAN  
 STA. 164+00 TO STA. 122+00**

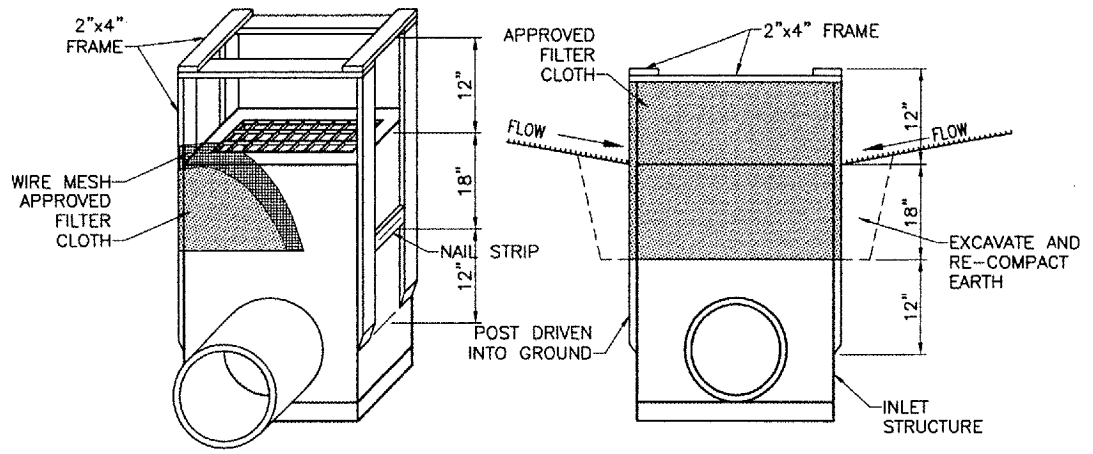


**HEADWALL STRUCTURE PROTECTION**  
"NOT TO SCALE"

**NOTE:**  
FOR ESTIMATING PURPOSES, EACH HEADWALL PROTECTION WILL REQUIRE 6-8 STRAW BALES AND 20 L.F. OF SILT FENCE.

**LEGEND**

- EXISTING IMPROVEMENTS
- PROPOSED IMPROVEMENTS
- PROPOSED WASTE AREA
- EXISTING DRAINAGE PIPE
- PROPOSED SILT FENCE
- EXISTING INLET
- PROPOSED INLET PROTECTION
- EXISTING HEADWALL
- PROPOSED HEADWALL PROTECTION



**INLET PROTECTION DETAIL**  
"NOT TO SCALE"

**EROSION CONTROL NOTES**

ALL PROPOSED EROSION CONTROL MEASURES SHALL BE COMPLETED AS DETAILED ON THIS EROSION CONTROL PLAN AND IN ACCORDANCE WITH THE SPECIFICATIONS.

EROSION CONTROL MEASURES ARE GOVERNED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY'S STANDARDS AND SPECIFICATIONS FOR SOIL EROSIONS AND SPECIFICATION FOR SOIL EROSIONS AND SEDIMENT CONTROL.

FILTER FENCE FOR STRUCTURE PROTECTION AS SHOWN ON THIS SHEET.

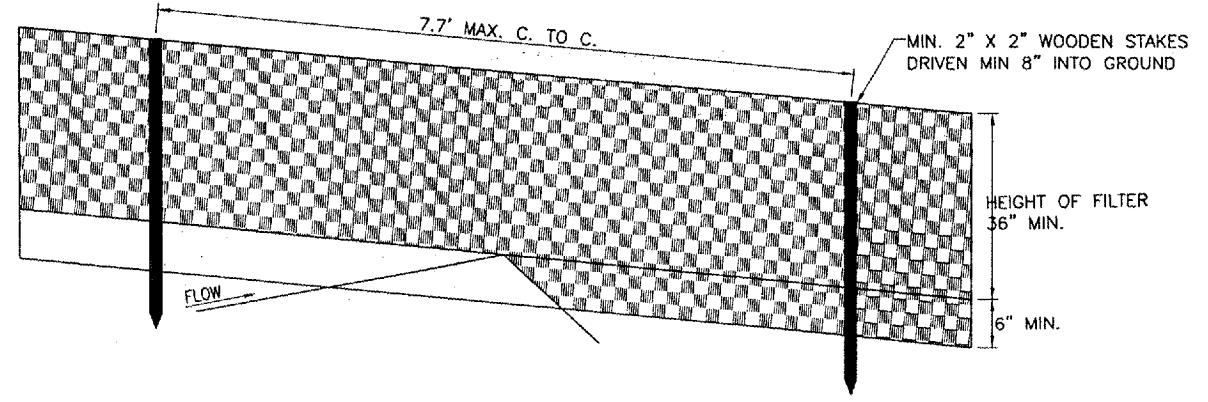
THE PROPOSED INLET PROTECTION WILL BE PLACED AT THE LOCATIONS SHOWN ON THIS SHEET.

INSPECTION OF THE INLET PROTECTION SHALL BE FREQUENT AND REPAIR/REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.

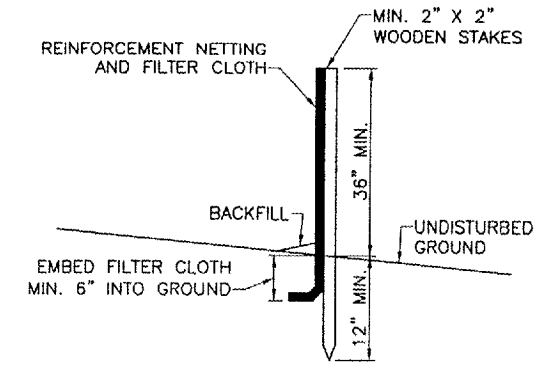
EROSION CONTROL FENCE SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM WATER DRAINAGE.

COST OF REMOVAL AND REPLACEMENT SHALL BE INCLUDED IN THE UNIT PRICE FOR ITEM AR156510 SILT FENCE.

INLET PROTECTION IS TO INCLUDE ALL INCIDENTALS NECESSARY TO CONSTRUCT THESE ITEMS AND WILL BE PAID FOR UNDER ITEM: AR156520 INLET PROTECTION.

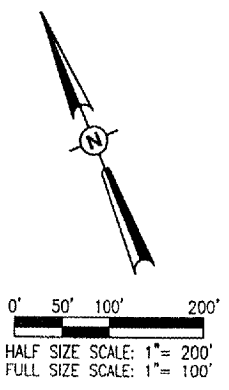


PERSPECTIVE VIEW



SECTION

**FILTER FENCE DETAIL**  
"NOT TO SCALE"



DATE	REVISION	BY

EFFINGHAM COUNTY  
MEMORIAL AIRPORT  
EFFINGHAM, ILLINOIS

IL PROJ.: 1H2-3761 A.I.P. PROJ.: 3-17-0040-B11

Project No. 07A0143D.0800	
File Name: R-181SWP.DWG	
Scale: 1" = 100'	
Date: 02/12/08	
LAYOUT: KDM 11/28/07	
DRAWN: BAK 11/28/07	
REVIEWED: CAH 02/12/08	



WIDEN RUNWAY 11/29  
AND REPLACE MIRL'S  
PROPOSED STORMWATER  
POLLUTION PREVENTION PLAN  
STA. 122+00 TO STA. 109+00

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I:\AIRPORTS\EFFINGHAM\07A0143\CAD\SHEETS\R-181SWP.DWG - SWPP 2

**PAVEMENT REMOVAL NOTE**

THE AREA(S) DESIGNATED AS [Hatched Pattern] ON THESE CONSTRUCTION PLANS WILL HAVE THE EXISTING PAVEMENT REMOVED (FULL DEPTH) TO A SUITABLE SUBGRADE. ALL REMOVED MATERIAL WILL BE DISPOSED OF OFF THE AIRPORT SITE.

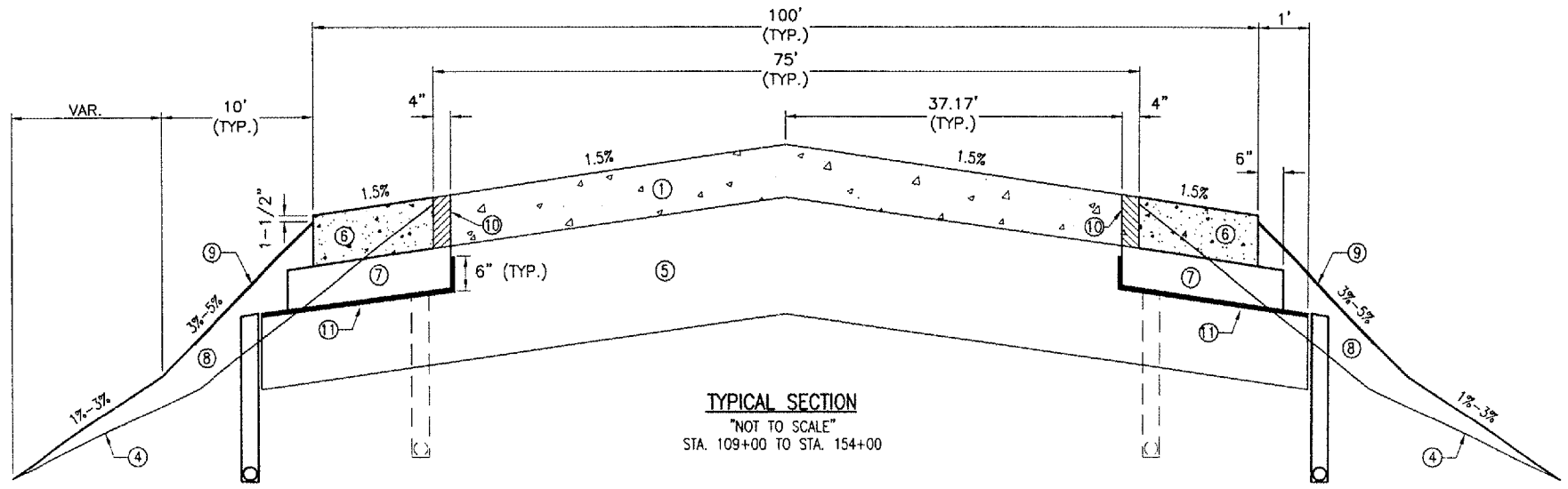
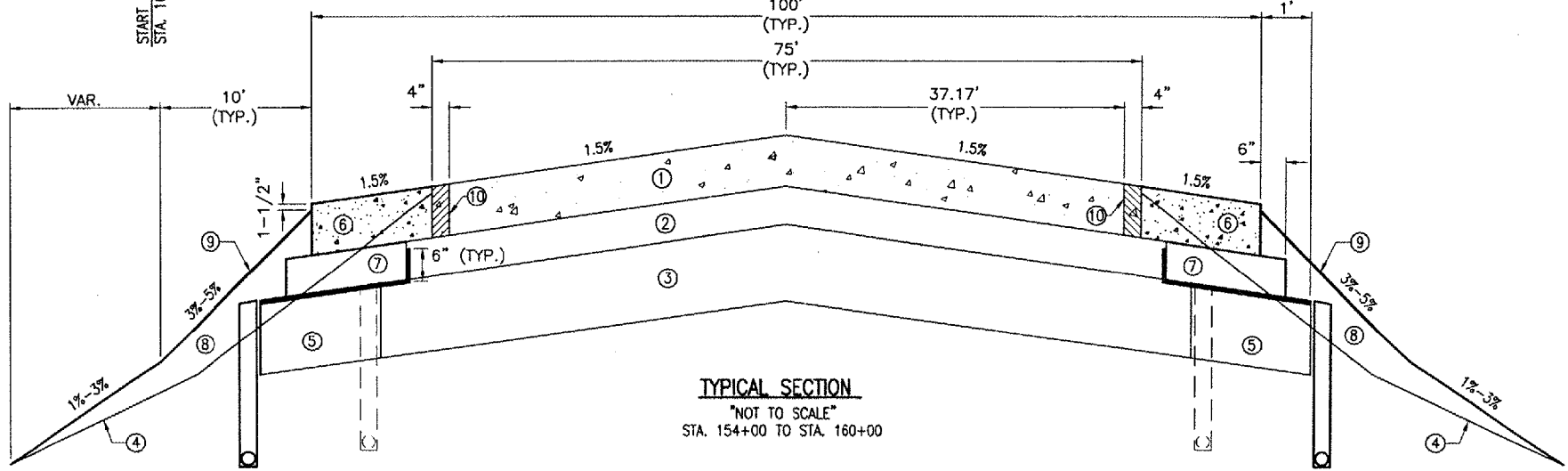
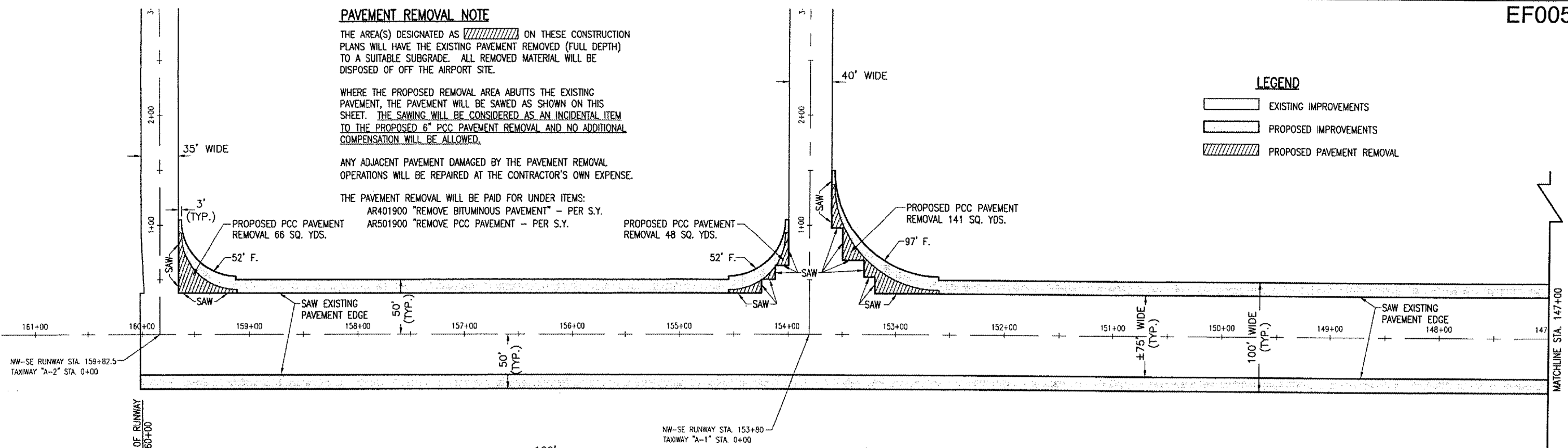
WHERE THE PROPOSED REMOVAL AREA ABUTTS THE EXISTING PAVEMENT, THE PAVEMENT WILL BE SAWED AS SHOWN ON THIS SHEET. THE SAWING WILL BE CONSIDERED AS AN INCIDENTAL ITEM TO THE PROPOSED 6" PCC PAVEMENT REMOVAL AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

ANY ADJACENT PAVEMENT DAMAGED BY THE PAVEMENT REMOVAL OPERATIONS WILL BE REPAIRED AT THE CONTRACTOR'S OWN EXPENSE.

THE PAVEMENT REMOVAL WILL BE PAID FOR UNDER ITEMS:  
 AR401900 "REMOVE BITUMINOUS PAVEMENT" - PER S.Y.  
 AR501900 "REMOVE PCC PAVEMENT - PER S.Y.

**LEGEND**

- [Solid Line] EXISTING IMPROVEMENTS
- [Dashed Line] PROPOSED IMPROVEMENTS
- [Hatched Pattern] PROPOSED PAVEMENT REMOVAL

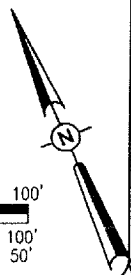
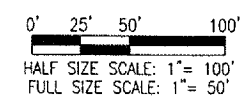


**PAVEMENT SAWING NOTES**

- THE EDGE OF THE EXISTING PAVEMENT WILL BE SAWED FULL DEPTH.
- THE PROPOSED SAWING WILL REMOVE THE TAPERED EDGE AND PROVIDE A STRAIGHT PAVEMENT EDGE TO BUTT AGAINST.
- THE CONTRACTOR WILL MARK THE PROPOSED SAW LINE IN THE FIELD.
- ANY CONCRETE PAVEMENT CUT FROM THE SAWING OPERATIONS WILL BE COLLECTED AND DISPOSED OF OFF THE AIRPORT SITE.
- THE SAWING AND DISPOSAL OF ANY WASTE MATERIAL WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

**LEGEND FOR TYPICAL SECTION "A-A"**

- ① EXISTING P.C. CONCRETE (6 INCH)
- ② EXISTING 4" OF 209 CRUSHED AGGREGATE BASE COURSE
- ③ EXISTING 12" LIME MODIFIED SUBGRADE
- ④ EXISTING EARTH SHOULDERS
- ⑤ EXISTING EARTH SUBGRADE
- ⑥ PROPOSED P.C. CONCRETE (6 INCH)
- ⑦ PROPOSED 209 CRUSHED AGGREGATE BASE COURSE (4 INCH)
- ⑧ PROPOSED EARTH SHOULDERS
- ⑨ PROPOSED EROSION CONTROL BLANKET
- ⑩ EXISTING CONCRETE EDGE (TO BE REMOVED)
- ⑪ PROPOSED SEPARATION FABRIC



DATE	REVISION	BY
04/09/08	REVISED AS PER IDA REVIEW	CAH

**EFFINGHAM COUNTY  
 MEMORIAL AIRPORT  
 EFFINGHAM, ILLINOIS**

IL PROJ.: 112-3761 A.I.P. PROJ.: 3-17-0040-B11

ILL. Project No. 07A0143D.0800 Drawings R-121CON.DWG Scale 1" = 50' Date 02/12/08	LAYOUT DRAWN KDM REVIEWED CAH	11/28/07 11/28/07 02/12/08
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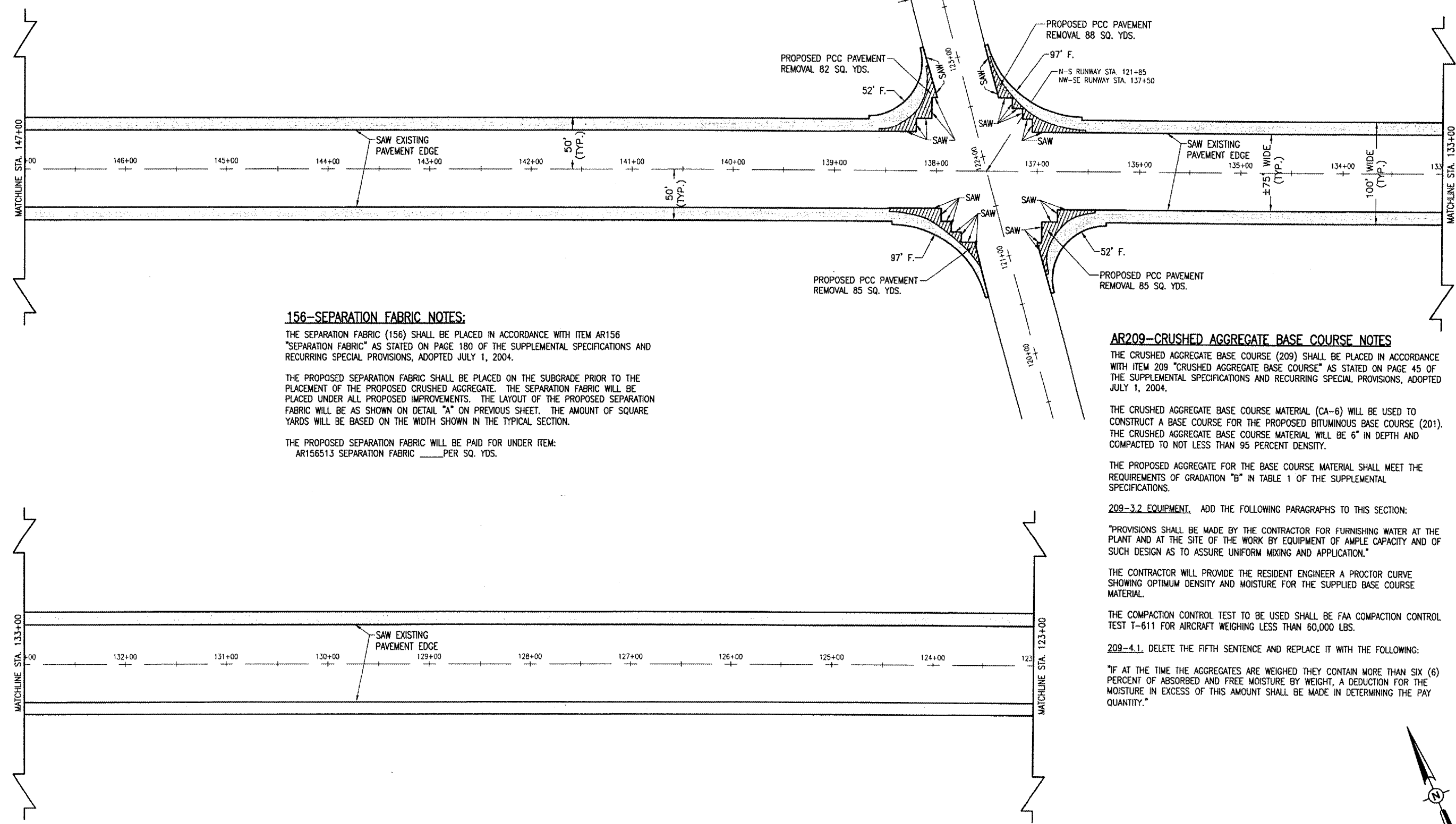
**HANSON**  
 Hanson Professional Services Inc.  
 1505 South Sixth Street  
 Springfield, Illinois 62703-2896  
 Offices Nationwide

**WIDEN RUNWAY 11/29  
 AND REPLACE MRL'S**

PROPOSED  
 CONSTRUCTION PLAN  
 STA. 160+00 TO STA. 147+00

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**156-SEPARATION FABRIC NOTES:**

THE SEPARATION FABRIC (156) SHALL BE PLACED IN ACCORDANCE WITH ITEM AR156 "SEPARATION FABRIC" AS STATED ON PAGE 180 OF THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, ADOPTED JULY 1, 2004.

THE PROPOSED SEPARATION FABRIC SHALL BE PLACED ON THE SUBGRADE PRIOR TO THE PLACEMENT OF THE PROPOSED CRUSHED AGGREGATE. THE SEPARATION FABRIC WILL BE PLACED UNDER ALL PROPOSED IMPROVEMENTS. THE LAYOUT OF THE PROPOSED SEPARATION FABRIC WILL BE AS SHOWN ON DETAIL "A" ON PREVIOUS SHEET. THE AMOUNT OF SQUARE YARDS WILL BE BASED ON THE WIDTH SHOWN IN THE TYPICAL SECTION.

THE PROPOSED SEPARATION FABRIC WILL BE PAID FOR UNDER ITEM:  
AR15613 SEPARATION FABRIC \_\_\_\_\_ PER SQ. YDS.

**AR209-CRUSHED AGGREGATE BASE COURSE NOTES**

THE CRUSHED AGGREGATE BASE COURSE (209) SHALL BE PLACED IN ACCORDANCE WITH ITEM 209 "CRUSHED AGGREGATE BASE COURSE" AS STATED ON PAGE 45 OF THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, ADOPTED JULY 1, 2004.

THE CRUSHED AGGREGATE BASE COURSE MATERIAL (CA-6) WILL BE USED TO CONSTRUCT A BASE COURSE FOR THE PROPOSED BITUMINOUS BASE COURSE (201). THE CRUSHED AGGREGATE BASE COURSE MATERIAL WILL BE 6" IN DEPTH AND COMPACTED TO NOT LESS THAN 95 PERCENT DENSITY.

THE PROPOSED AGGREGATE FOR THE BASE COURSE MATERIAL SHALL MEET THE REQUIREMENTS OF GRADATION "B" IN TABLE 1 OF THE SUPPLEMENTAL SPECIFICATIONS.

**209-3.2 EQUIPMENT.** ADD THE FOLLOWING PARAGRAPHS TO THIS SECTION:

"PROVISIONS SHALL BE MADE BY THE CONTRACTOR FOR FURNISHING WATER AT THE PLANT AND AT THE SITE OF THE WORK BY EQUIPMENT OF AMPLE CAPACITY AND OF SUCH DESIGN AS TO ASSURE UNIFORM MIXING AND APPLICATION."

THE CONTRACTOR WILL PROVIDE THE RESIDENT ENGINEER A PROCTOR CURVE SHOWING OPTIMUM DENSITY AND MOISTURE FOR THE SUPPLIED BASE COURSE MATERIAL.

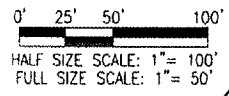
THE COMPACTION CONTROL TEST TO BE USED SHALL BE FAA COMPACTION CONTROL TEST T-611 FOR AIRCRAFT WEIGHING LESS THAN 60,000 LBS.

**209-4.1.** DELETE THE FIFTH SENTENCE AND REPLACE IT WITH THE FOLLOWING:

"IF AT THE TIME THE AGGREGATES ARE WEIGHED THEY CONTAIN MORE THAN SIX (6) PERCENT OF ABSORBED AND FREE MOISTURE BY WEIGHT, A DEDUCTION FOR THE MOISTURE IN EXCESS OF THIS AMOUNT SHALL BE MADE IN DETERMINING THE PAY QUANTITY."

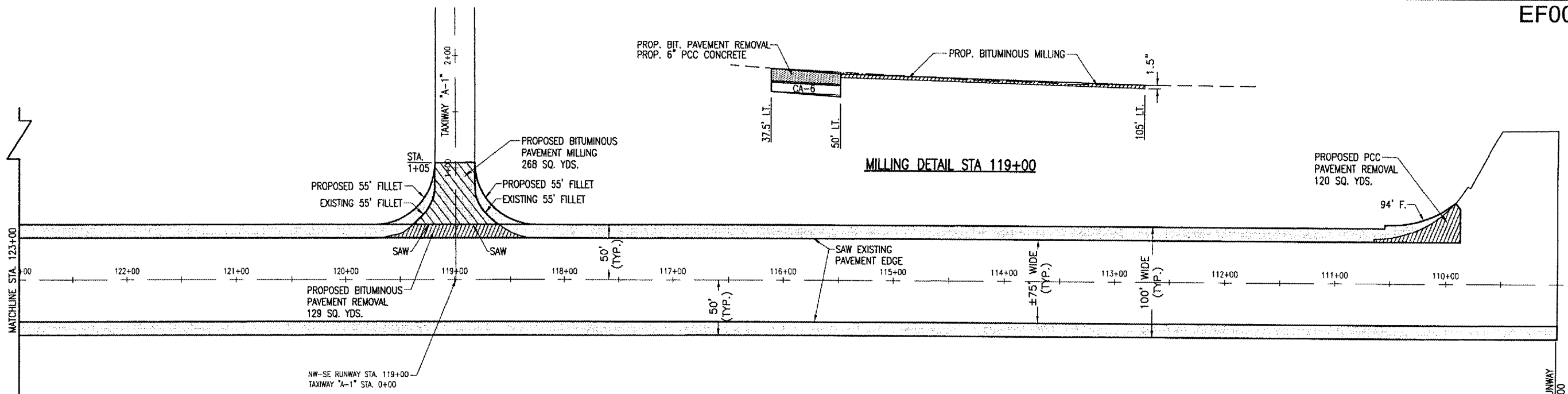
**LEGEND**

	EXISTING IMPROVEMENTS
	PROPOSED IMPROVEMENTS
	PROPOSED PAVEMENT REMOVAL



APR 09, 2008 6:20 PM H:\GLO00362 I:\AIRPORTS\EFFINGHAM\07A0143\CAD\SHEETS\R-121CON.DWG - CONST 2

DATE	REVISION	BY	
<p><b>EFFINGHAM COUNTY MEMORIAL AIRPORT EFFINGHAM, ILLINOIS</b></p> <p style="font-size: small;">ILL. PROJ.: 1H2-3761 A.I.P. PROJ.: 3-17-0040-B11</p>			
ILL. Project No. 07A0143D.0800 Revision R-121CON.DWG Scale 1" = 50' Date 02/12/08	LAYOUT DRAWN REVIEWED	KDM BAK CAH	11/28/07 11/28/07 02/12/08
<p style="font-size: x-small;">Hanson Professional Services Inc. 1326 South Sixth Street Springfield, Illinois 62703-2886 Chicago 84806046</p>			
<p><b>WIDEN RUNWAY 11/29 AND REPLACE MRL'S</b></p> <p style="text-align: center;">PROPOSED CONSTRUCTION PLAN</p> <p style="text-align: right;">STA. 147+00 TO STA. 123+00</p>			
<p style="font-size: 2em; font-weight: bold;">8</p> <p style="font-size: x-small;">8 of 78 sheets</p>			



**602-BITUMINOUS PRIME COAT NOTES:**

A PRIME COAT WILL BE APPLIED (0.35 GAL./S.Y.) ON THE CRUSHED AGGREGATE PRIOR TO PAVING THE BITUMINOUS SURFACE COURSE.

THE PROPOSED BITUMINOUS PRIME COAT WILL BE PAID FOR UNDER ITEM:  
AR602510 BITUMINOUS PRIME COAT \_\_\_\_\_ PER GAL.

**603-BITUMINOUS TACK COAT NOTES:**

A TACK COAT WILL BE APPLIED (0.10 GAL./S.Y.) ALONG THE BITUMINOUS EDGE AND BETWEEN LIFTS OF BITUMINOUS SURFACE COURSE.

THE PROPOSED BITUMINOUS TACK COAT WILL BE PAID FOR UNDER ITEM:  
AR603510 BITUMINOUS TACK COAT \_\_\_\_\_ PER GAL.

**AR401611 BITUMINOUS SURFACE COURSE - METHOD 1**

THE BITUMINOUS SURFACE COURSE (401) SHALL BE PLACED IN ACCORDANCE WITH ITEM AR401001 "BITUMINOUS SURFACE COURSE-METHOD 1" AS STATED ON PAGE 245 OF THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, ADOPTED JULY 1, 2004.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE QUALITY CONTROL IN THE PRODUCTION AND CONSTRUCTION OF THE BITUMINOUS SURFACE COURSE.

THIS ITEM OF WORK SHALL CONSIST OF CONSTRUCTING A BITUMINOUS WIDENING ADJACENT TO THE EXISTING AND PROPOSED PAVEMENT. THIS LIFT OF BITUMINOUS SURFACE COURSE SHALL MATCH THE ADJACENT BITUMINOUS GRADE. THE SUBSEQUENT LIFT SHALL BE CONSTRUCTED TO PROVIDE A SMOOTH TRANSITION FROM THE EXISTING PAVEMENT (STA. 1+05) TO THE PROPOSED CONCRETE PAVEMENT (STA. 0+50).

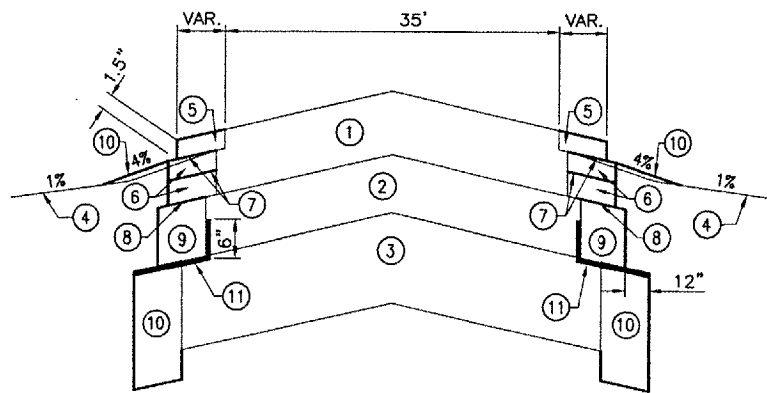
THE PROPOSED BITUMINOUS SURFACE COURSE WILL BE DESIGNED TO A MARSHALL DESIGN OF (LESS) THAN 60,000 POUNDS.

401-4.9 ADD THE FOLLOWING TO THIS SECTION:

WHEN HAND SPREADING IS PERMITTED, THE MIXTURE WILL BE DISTRIBUTED AND SPREAD USING HAND TOOLS. WHEN THE WORK IS COMPLETED, THE LAYER WILL HAVE THE REQUIRED THICKNESS AND CONFORM TO THE GRADE AND SURFACE CONTOUR SHOWN ON THE PLANS.

401-4.12 ADD THE FOLLOWING TO THIS PARAGRAPH:

ALL PAVEMENT EDGES (LONGITUDINAL, RADIUS, AND PAVEMENT ENDS) MUST BE LEFT IN PROPER ALIGNMENT AS SHOWN ON THE PLANS. THIS MAY BE ACCOMPLISHED BY THE TRIMMING METHOD OUTLINED ABOVE OR AT THE CONTRACTOR'S OPTION BY SAWING AFTER THE PAVING HAS BEEN COMPLETED. NO ADDITIONAL COMPENSATION WILL BE MADE IF THE SAWING METHOD IS USED.



TYPICAL SECTION FOR TAXIWAY "A-1"  
"NOT TO SCALE"

**LEGEND FOR TYPICAL SECTION**

- ① EXISTING BITUMINOUS (5-1/2")
- ② EXISTING CRUSHED AGGREGATE BASE COURSE (8" DEPTH)  
(REGRADE FOR 12.5' OF 6" CONCRETE PAVEMENT)
- ③ EXISTING SOIL PROCESSING (12" DEPTH)
- ④ EXISTING GRADE
- ⑤ PROPOSED BITUMINOUS SURFACE COURSE (1-1/2" LIFT)
- ⑥ PROPOSED BITUMINOUS SURFACE COURSE (2 @ 2" LIFTS)
- ⑦ PROPOSED TACK COAT (0.10 GAL./S.Y.)
- ⑧ PROPOSED PRIME COAT (0.35 GAL./S.Y.)
- ⑨ PROPOSED CRUSHED AGGREGATE BASE COURSE (8" DEPTH)
- ⑩ PROPOSED UNCLASSIFIED EXCAVATION
- ⑪ PROPOSED SEPARATION FABRIC

**BITUMINOUS PAVEMENT MILLING**

THE AREA(S) DESIGNATED AS [Hatched Box] ON THIS SHEET WILL BE CUT OR TRIMMED AS SHOWN. THE CUTTING OR TRIMMING WILL BE DONE BY ROTO-MILLING. THE TOLERANCE OF THE MILLING WILL BE AS STATED IN THE STANDARD SPECIFICATIONS. THE SURFACE WILL BE MILLED TO PROVIDE FOR A MINIMUM 1-1/2" SURFACE COURSE.

THE PROPOSED BUT JOINT WILL BE SAWED IF A STRAIGHT TRUE EDGE IS NOT ESTABLISHED. SAWING WILL BE CONSIDERED AS AN INCIDENTAL ITEM TO THE PROPOSED BITUMINOUS PAVEMENT REMOVAL AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

ALL MILLED MATERIAL WILL BE DISPOSED OF OFF THE AIRPORT SITE.

PRIOR TO APPLYING THE BITUMINOUS OVERLAY ALL MILLED MATERIAL WILL BE BROOMED AND BLOWN CLEAN AND A BITUMINOUS TACK COAT APPLIED (0.10 GAL./S.Y.). THE VERTICAL FACE OF ALL SAW CUTS WILL BE PAINTED WITH A LIQUID ASPHALT.

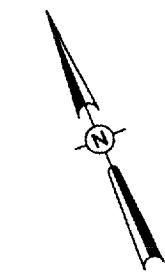
ANY ADJACENT PAVEMENT DAMAGED BY THE MILLING OPERATIONS WILL BE REPAIRED AT THE CONTRACTOR'S OWN EXPENSE.

ALL BITUMINOUS PAVEMENT MILLING AREAS WILL BE LOCATED AND MARKED BY THE RESIDENT ENGINEER.

THIS ITEM OF WORK SHALL BE PAID FOR UNDER ITEM:  
AR401650 "BITUMINOUS PAVEMENT MILLING" - PER S.Y.

**LEGEND**

- [Solid Box] EXISTING IMPROVEMENTS
- [Dotted Box] PROPOSED IMPROVEMENTS
- [Hatched Box] PROPOSED PAVEMENT REMOVAL
- [Cross-hatched Box] PROPOSED BITUMINOUS PAVEMENT MILLING



0' 25' 50' 100'  
HALF SIZE SCALE: 1" = 100'  
FULL SIZE SCALE: 1" = 50'

DATE	REVISION	BY

EFFINGHAM COUNTY  
MEMORIAL AIRPORT  
EFFINGHAM, ILLINOIS

A.I.P. PROJ.: 3-17-0040-811  
I.L. PROJ.: 1H2-3761

HE Project No. 07A0143D 0800	DATE 02/12/08
Filename R-121CON.DWG	SCALE 1" = 50'
LAYOUT	KOM 11/28/07
DRAWN	BAK 11/28/07
REVIEWED	CAH 02/12/08

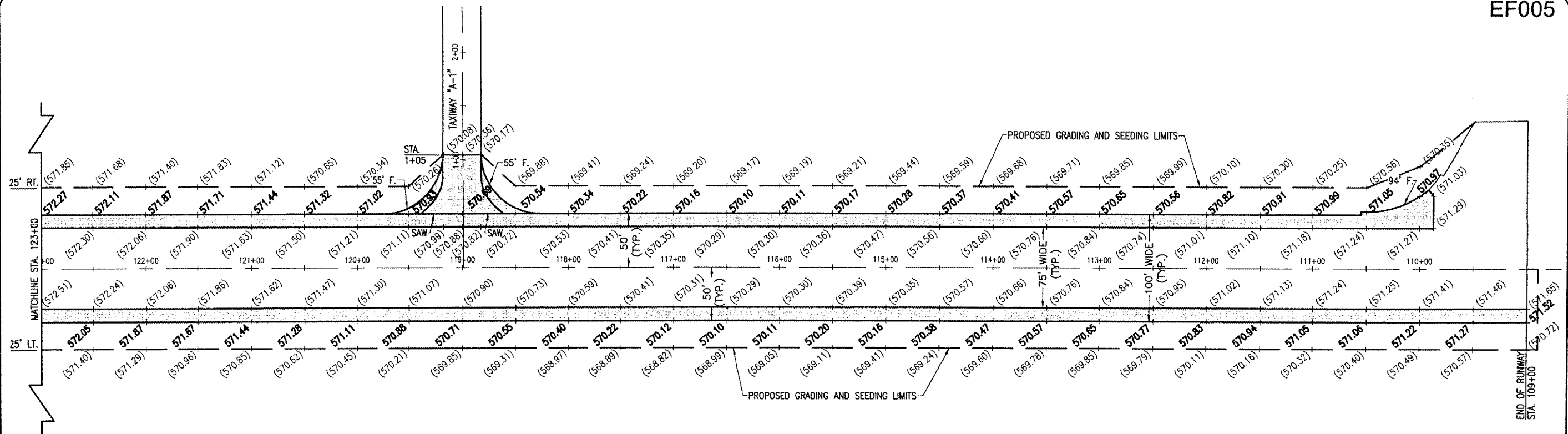
**HANSON**  
Hanson Professional Services Inc.  
1525 South Sixth Street  
Springfield, Illinois 62703-2886  
Offices Nationwide

WIDEN RUNWAY 11/29  
AND REPLACE MRL'S  
PROPOSED  
CONSTRUCTION PLAN  
STA. 123+00 TO STA. 109+00

APR 08, 2008 6:21 PM HAGL0003B2 I:\AIRPORTS\EFFINGHAM\07A0143\CAD\SHEETS\R-121CON.DWG - CONST 3





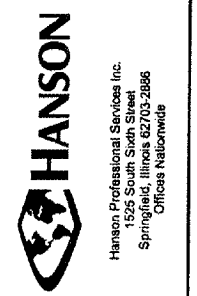


DATE	REVISION	BY

EFFINGHAM COUNTY  
MEMORIAL AIRPORT  
EFFINGHAM, ILLINOIS

IL PROJ.: 142-3761 A.I.P. PROJ.: 3-17-0040-811

10. Project No. 07A0143D_0800	11/28/07
Filename R-191STK.DWG	11/28/07
Scale 1" = 50'	02/12/08
Date 02/12/08	
LAYOUT KOM	
DRAWN BAK	
REVIEWED CAH	



WIDEN RUNWAY 11/29  
AND REPLACE MIRL'S

PROPOSED  
STAKING PLAN  
STA. 123+00 TO STA. 109+00

**152410-UNCLASSIFIED EXCAVATION NOTES:**

THE PROPOSED UNCLASSIFIED EXCAVATION SHALL BE PLACED IN ACCORDANCE WITH ITEM 152 "EXCAVATION AND EMBANKMENT" AS STATED ON PAGE 25 OF THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, ADOPTED JULY 1, 2004.

THE EARTH SUBGRADE WILL BE FIRST ROUGH CUT TO THE SPECIFIED ELEVATIONS, THE ELEVATIONS SHOWN ON THE STAKING PLAN ARE FOR FINISHED PAVEMENT. SUBGRADE ELEVATIONS WILL BE THE GRADE SHOWN MINUS THE PAVEMENT THICKNESS (INCLUDING BASE).

MATERIAL TO BE USED FOR SHOULDERING WILL BE STORED OUTSIDE OF THE PROPOSED PAVEMENT AREA AND WITHIN THE GRADING LIMITS.

THE MATERIAL TO BE USED FOR THE SHOULDERING WILL BE OBTAINED FROM THE UNCLASSIFIED EXCAVATION.

THE EXCAVATED AREAS WILL BE COMPACTED IN ACCORDANCE WITH PROCEDURES FOR AIRCRAFT WEIGHING LESS THAN 60,000 POUNDS.

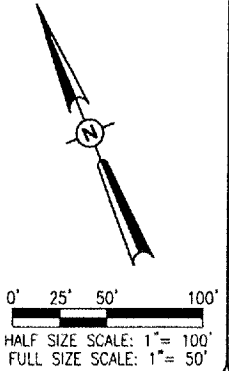
THE PROPOSED SHOULDER MATERIAL WILL ONLY REQUIRE "LIGHT COMPACTION" TO THE SATISFACTION OF THE RESIDENT ENGINEER.

ALL EARTHWORK WILL BE CLASSIFIED AS "UNCLASSIFIED EXCAVATION".

THE PROPOSED UNCLASSIFIED EXCAVATION WILL BE PAID FOR UNDER ITEM:  
AR152410 UNCLASSIFIED EXCAVATION \_\_\_\_\_ PER C.Y.

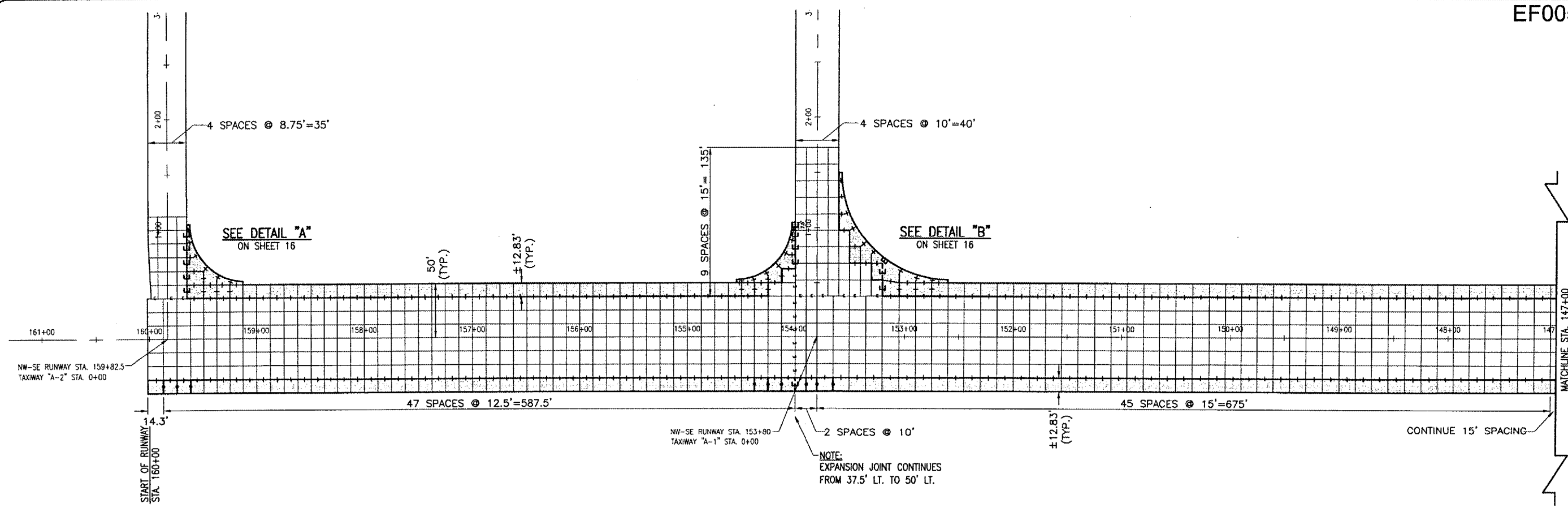
DESCRIPTION	CUT	FILL	SHRINK & LOSS	TOTAL FILL REQUIRED	EXCESS CUT
EAST OF N-S RT. SIDE	837	212	1.50	318	519
EAST OF N-S RT. SIDE	825	197	1.50	296	529
WEST OF N-S LT. SIDE	611	199	1.50	298	313
WEST OF N-S LT. SIDE	658	222	1.50	333	325
TOTALS	2,931	830		1,245	1,686

- LEGEND**
- EXISTING IMPROVEMENTS
  - PROPOSED IMPROVEMENTS
  - PROPOSED GRADING AND SEEDING LIMITS
  - EXISTING GRADE
  - PROPOSED GRADE



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C:\AIRPORTS\EFFINGHAM\07A0143\CAO\SHEETS\R-191STK.DWG - STAKING 3





NW-SE RUNWAY STA. 159+82.5  
TAXIWAY "A-2" STA. 0+00

NW-SE RUNWAY STA. 153+80  
TAXIWAY "A-1" STA. 0+00

NOTE:  
EXPANSION JOINT CONTINUES  
FROM 37.5' LT. TO 50' LT.

CONTINUE 15' SPACING

DATE	REVISION	BY

**EFFINGHAM COUNTY  
MEMORIAL AIRPORT  
EFFINGHAM, ILLINOIS**

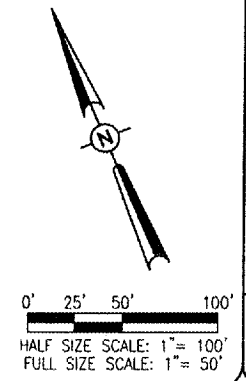
IL PROJ.: 1H2-3761 A.I.P. PROJ.: 3-17-0040-B11

HE Project No.	07A0143D_0800
Filename	R-161JINT.DWG
Scale	1" = 50'
Date	02/12/08
LAYOUT	KDM 11/28/07
DRAWN	BAK 11/28/07
REVIEWED	CAH 02/12/08

**HANSON**  
Hanson Professional Services Inc.  
1525 South Sixth Street  
Springfield, Illinois 62703-2686  
Offices Nationwide

**WIDEN RUNWAY 11/29  
AND REPLACE MRL'S**  
PROPOSED  
JOINTING PLAN  
STA. 160+00 TO STA. 147+00

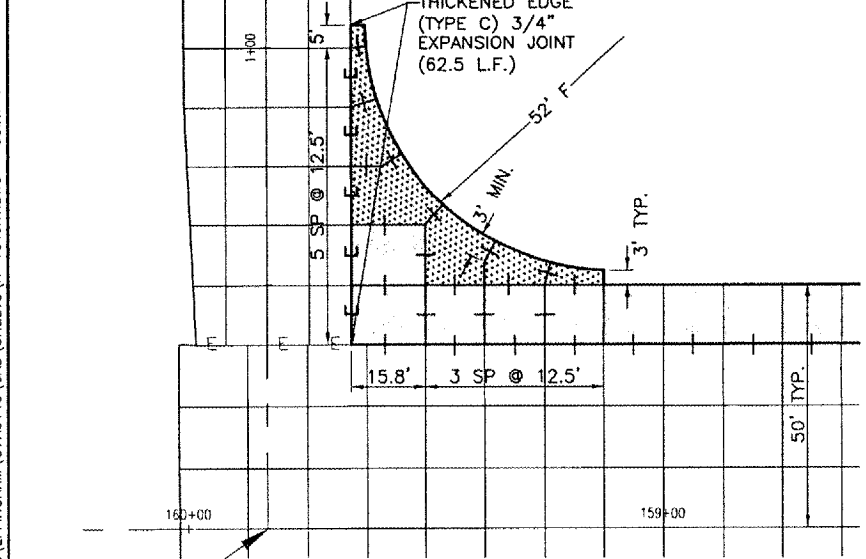
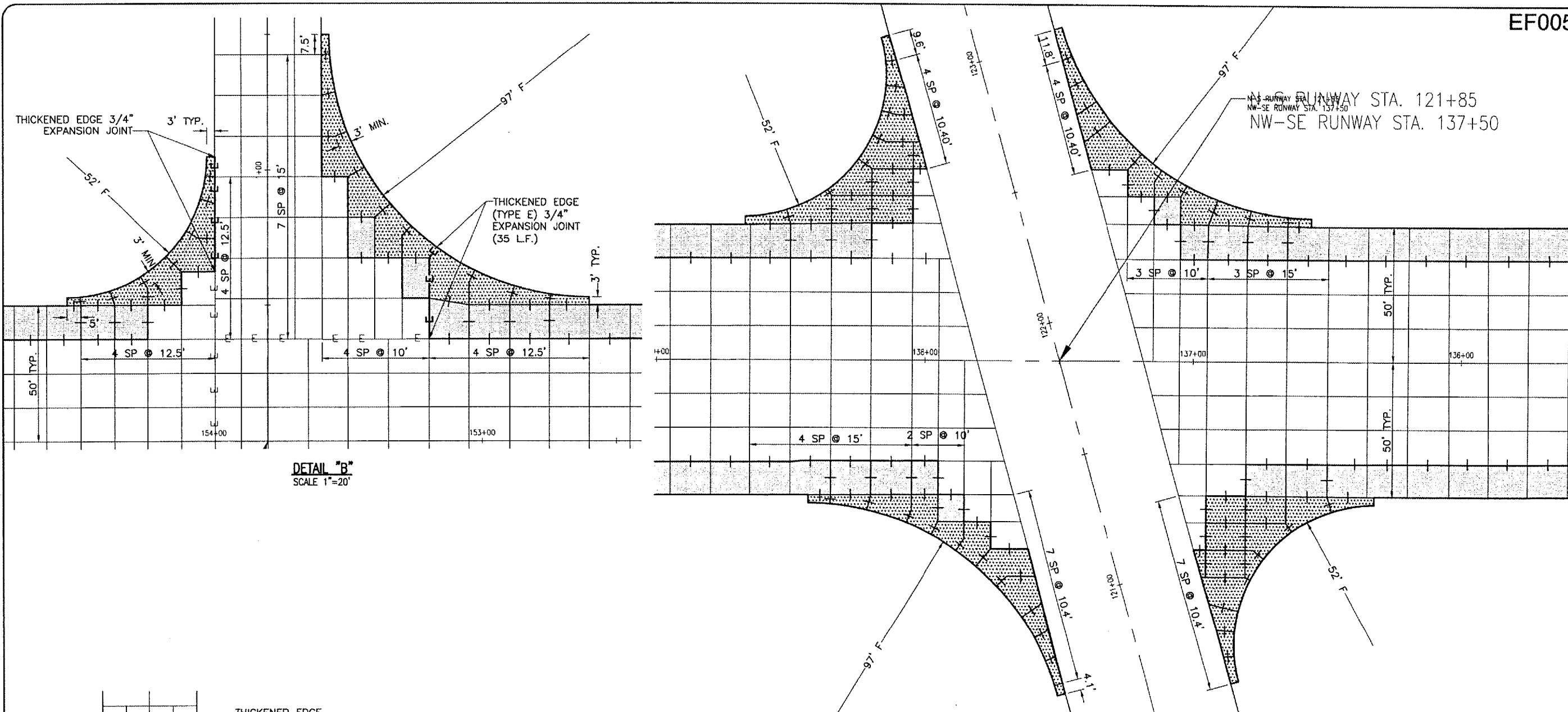
- LEGEND**
- EXISTING IMPROVEMENTS
  - EXISTING EXPANSION JOINT
  - PROPOSED IMPROVEMENTS
  - PROPOSED TIED JOINT (TYPE D)
  - PROPOSED TRANSVERSE DUMMY JOINT (TYPE H)
  - PROPOSED DOWELED JOINT (TYPE F)
  - PROPOSED EXPANSION JOINT (TYPE C)



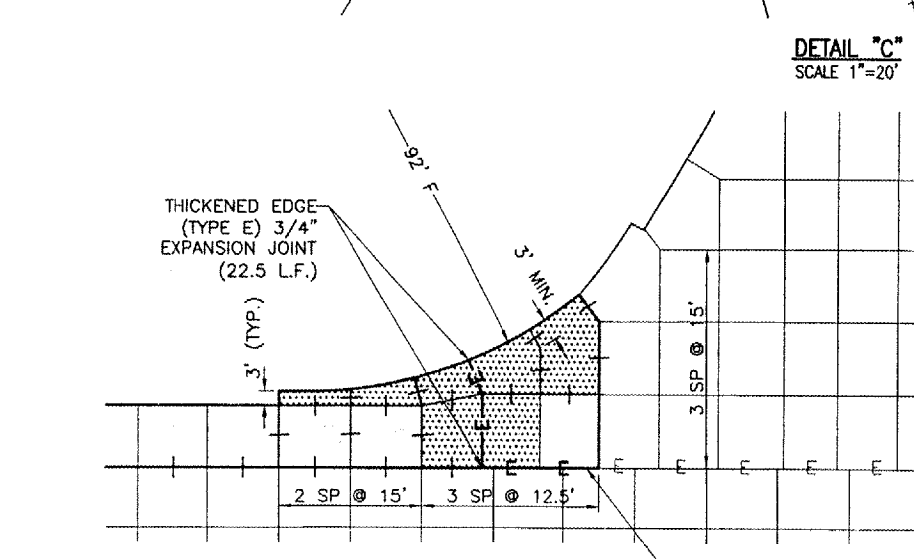




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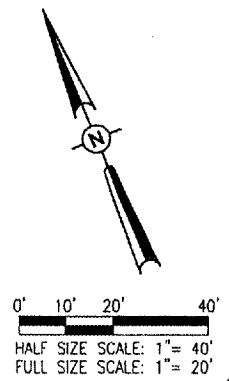
DETAIL "A"  
 SCALE 1"=20'



DETAIL "D"  
 SCALE 1"=20'

DETAIL "C"  
 SCALE 1"=20'

- LEGEND**
- EXISTING IMPROVEMENTS
  - EXISTING EXPANSION JOINT
  - PROPOSED IMPROVEMENTS
  - PROPOSED HINGED JOINTS
  - PROPOSED TRANSVERSE DUMMY JOINT
  - PROPOSED DOWELED JOINT
  - PROPOSED EXPANSION JOINT
  - PROPOSED MESH 6" X 6" (W4 X W5)



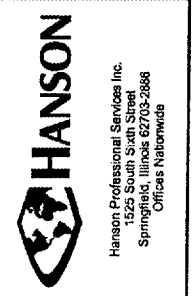
EF005

DATE	REVISION	BY
04/09/08	REVISED AS PER IDA REVIEW	CAH

**EFFINGHAM COUNTY  
 MEMORIAL AIRPORT  
 EFFINGHAM, ILLINOIS**

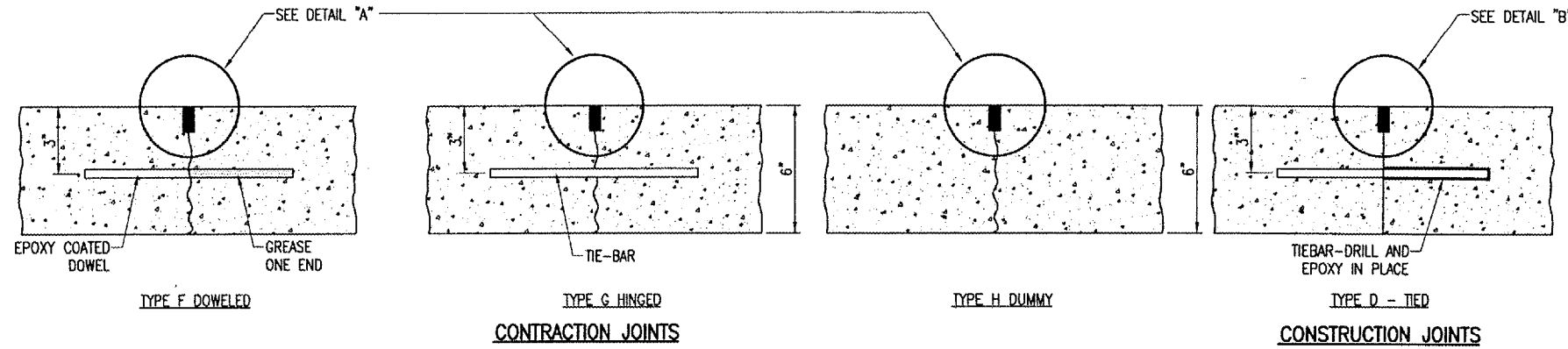
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Filename	R-16.1.JNT.DWG
Scale	1" = 50'
Date	02/12/08

LAYOUT	KDM	11/28/07
DRAWN	BAK	11/28/07
REVIEWED	CAH	02/12/08



**WIDEN RUNWAY 11/29  
 AND REPLACE MRL'S**  
 PROPOSED  
 INTERSECTION  
 JOINTING DETAILS

IL PROJ.: 1H2-3761 A.I.P. PROJ.: 3-17-0040-811



**JOINTING NOTES**

ALL EXPOSED JOINT EDGES SHALL BE EDGED WITH AN APPROVED TOOL HAVING A RADIUS OF 1/4" OR STONED TO PRODUCE THE 1/8" CHAMFER.

ALL LONGITUDINAL AND TRANSVERSE CONTRACTION AND CONSTRUCTION JOINTS SHALL BE SAWS.

ALL DOWEL BARS SHALL BE SECURELY HELD IN PLACE BY MEANS OF A DOWEL BAR ASSEMBLY WHICH WILL INSURE THAT THEY WILL REMAIN PARALLEL TO THE SURFACE OF THE PAVEMENT AND TO THE CENTERLINES OF THE PAVEMENT LANES. THE DOWEL BAR ASSEMBLIES SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. DOWELS FOR THE 6" PAVEMENT SHALL BE 3/4" DIA., 18" LENGTH AND 12" SPACING.

ALL TIE-BARS SHALL BE SECURELY HELD IN PLACE BY SUPPORT PINS OR OTHER METHODS TO PREVENT SHIFTING DURING AND AFTER CONCRETE PLACEMENT. SUPPORT PINS SHALL BE OF SUFFICIENT LENGTH TO PENETRATE AT LEAST 6" INTO THE SUBGRADE.

ALL TIE-BARS SHALL BE PLACED AT A POINT NOT EXCEEDING 15" OR CLOSER THAN 6" FROM A TRANSVERSE, CONTRACTION, EXPANSION, OR CONSTRUCTION JOINT AND SPACED 30" ON CENTERS AND SHALL BE NO. 5 DEFORMED BARS, 30" IN LENGTH.

DOWELS IN TRANSVERSE, CONTRACTION, AND CONSTRUCTION JOINTS SHALL BE EPOXY COATED AND HALF THE LENGTH GREASED WITH A HEAVY GREASE.

ALLOWABLE TOLERANCES FOR GROOVE DEPTH WILL BE +1/8" FOR CONSTRUCTION JOINTS AND +1/4" FOR CONTRACTION JOINTS.

REBAR & DOWELS LOCATED IN THE CONSTRUCTION JOINTS WILL BE DRILLED AND EPOXY IN PLACE. THE EPOXY MATERIAL MUST BE APPROVED BY THE ILLINOIS DIVISION OF AERONAUTICS

THE COST OF ALL DOWEL BARS, TIE-BARS, SAWING AND SEALING SHALL BE INCLUDED IN THE COST OF THE P.C.C. PAVEMENT.

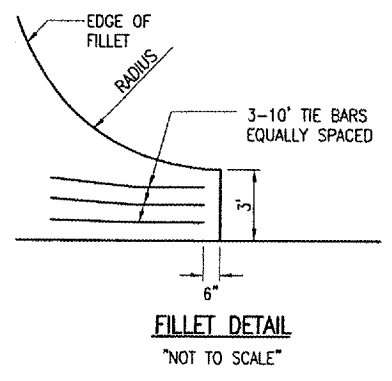
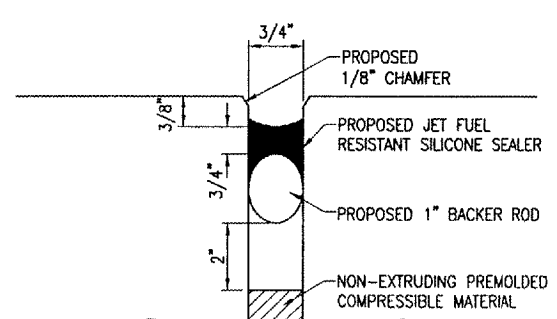
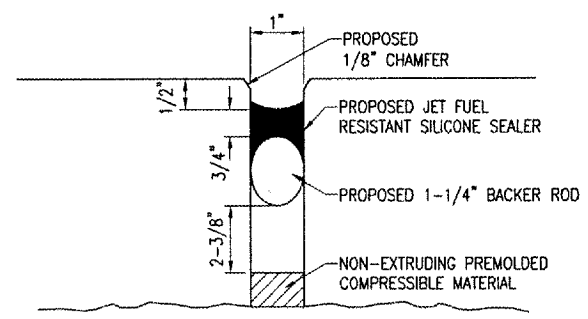
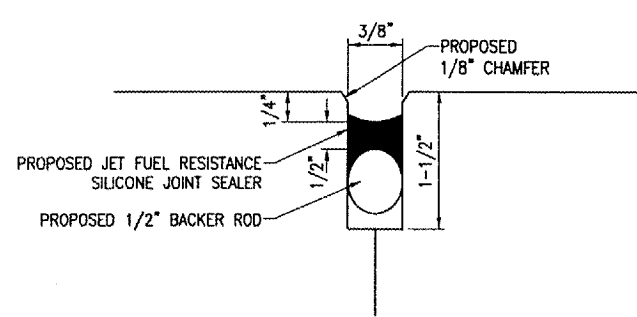
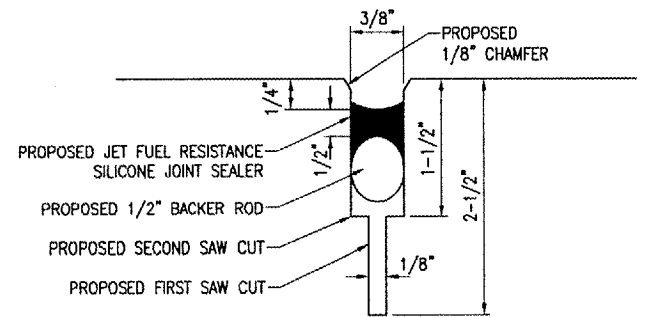
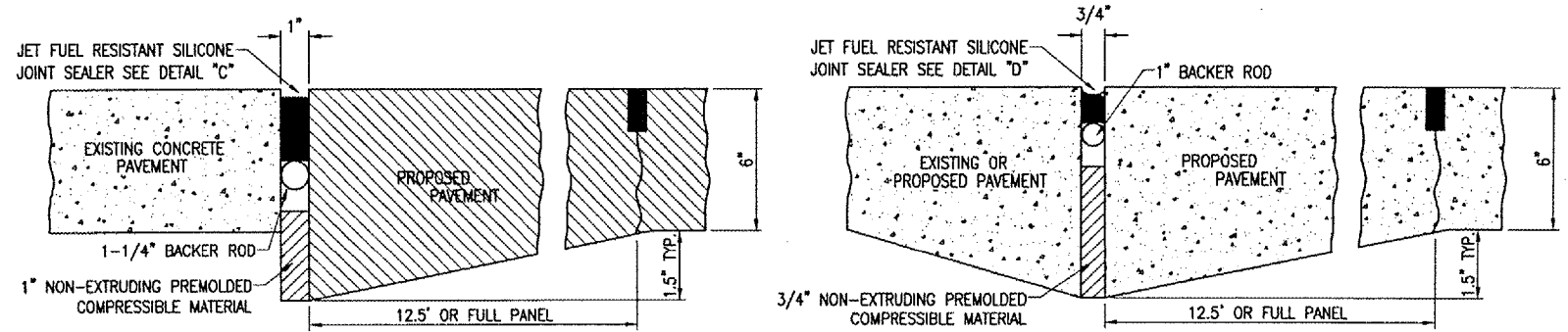
PRIOR TO PLACING ADJACENT PAVEMENT SECTIONS, THE VERTICAL EDGE SHALL BE CHECKED FOR TRUENESS IF THE FACE IS BURRED OR IRREGULAR, THE CONTRACTOR SHALL GRIND, STONE OR SAW THE FACE A MINIMUM OF 2" IN DEPTH TO PRODUCE A SMOOTH AND STRAIGHT EDGE.

WHEN CONSTRUCTING "FILL-IN" PAVEMENT LANES THE CONTRACTOR SHALL USE BELTING OR OTHER PROTECTIVE MATERIAL FOR THE PAVING MACHINE TO TRAVEL ON AND WILL ROPE THE TRANSVERSE JOINTS.

JOINT SEALANT SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS ITEM 501-2.5.

CURING COMPOUND WILL BE AS SPECIFIED IN THE SPECIFICATIONS, ITEM 501-3.17 AND SHALL BE APPROVED PRIOR TO THE PAVING OPERATION BY THE ENGINEER.

ALL NON-ALIGNED EDGES WILL BE SAWS FULL DEPTH.



DATE	REVISION	BY

EFFINGHAM COUNTY  
MEMORIAL AIRPORT  
EFFINGHAM, ILLINOIS

IL. PROJ.: 1H2-3761 A.I.P. PROJ.: 3-17-0040-B11

HEL Project No. 07A0143D 0800	FILENAME R-561UNT.DWG	DATE 02/12/08
SCALE NOT TO SCALE	LAYOUT KOM	01/16/08
DATE 02/12/08	DRAWN BAK	01/16/08
	REVIEWED CAH	02/12/08

**HANSON**  
Hanson Professional Services Inc.  
1525 South Sixth Street  
Springfield, Illinois 62703-2886  
Offices Nationwide

WIDEN RUNWAY 11/29  
AND REPLACE MRL'S

PROPOSED  
JOINTING  
DETAILS

APR 09 2008 6:33 PM HAGL000382  
I:\AIRPORTS\EFFINGHAM\07A0143\CAD\SHEETS\R-561UNT.DWG - Layout1



**UNDERDRAIN NOTES:**

THE EXISTING PVC PIPE LOCATED AT STA. 154+00 CURRENTLY DRAINS UNDER THE EXISTING RUNWAY AND EVENTUALLY INTO THE RCP DRAINAGE LINE. THE EXISTING INSPECTION HOLES ARE CONNECTED TO THIS PVC AND THE EDGEDRAINS. THE CONTRACTOR WILL CAREFULLY REMOVE THESE INSPECTION HOLES PRESERVING THE PVC PIPE. THE PVC PIPE WILL BE CUT SQUARE AND A COUPLING ATTACHED TO EXTEND THE PVC PIPE BEYOND THE PROPOSED PAVEMENT EDGE. ONCE EXTENDED, THE PVC PIPE AND THE TWO ENDS OF THE EDGEDRAIN WILL BE CONNECTED TOGETHER AND A PROPOSED INSPECTION HOLE INSTALLED AS SHOWN IN THE DETAIL BELOW.

THE PVC PIPE EXTENSIONS AND ASSOCIATED INSPECTION HOLE WILL BE PAID FOR UNDER:

- ITEM AR705631 UNDERDRAIN INSPECTION HOLE TYPE A - EACH
- ITEM AR705632 UNDERDRAIN INSPECTION HOLE TYPE B - EACH
- ITEM AR705633 UNDERDRAIN INSPECTION HOLE TYPE C - EACH

**NOTE:**  
EXISTING ELECTRICAL DUCT AT TAXIWAY STA. 1+38

TIE INTO EXISTING UNDERDRAIN (PLUG REMAINING END)  
FLOWLINE ELEV. 581.00

PROPOSED INSPECTION HOLE TYPE A STA. 152+60, 55' RT.  
TOP ELEV. 583.32  
W. FLOWLINE ELEV. 580.22  
E. FLOWLINE ELEV. 580.22

PROPOSED INSPECTION HOLE TYPE A STA. 154+02, 110' RT.  
TOP ELEV. 583.33  
N. FLOWLINE ELEV. ±580.85  
S. FLOWLINE ELEV. ±580.85  
W. FLOWLINE ELEV. ±580.85  
SEE DETAIL THIS SHEET

PROPOSED INSPECTION HOLE TYPE B STA. 159+10, 55' RT.  
TOP ELEV. 584.15  
FLOWLINE ELEV. 581.93

PROPOSED INSPECTION HOLE TYPE B STA. 160+03, 52' LT.  
TOP ELEV. 584.33  
FLOWLINE ELEV. 581.80

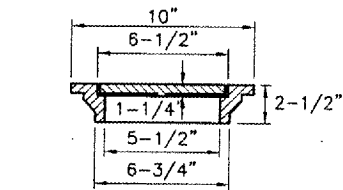
PROPOSED INSPECTION HOLE TYPE A STA. 154+00, 52' LT.  
TOP ELEV. 583.41  
N. FLOWLINE ELEV. 580.12  
W. FLOWLINE ELEV. 580.12  
E. FLOWLINE ELEV. 580.12  
SEE DETAIL THIS SHEET

**LEGEND**

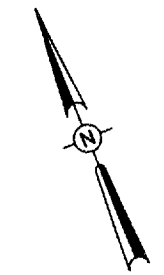
- EXISTING IMPROVEMENTS
- PROPOSED IMPROVEMENTS
- EXISTING DRAINAGE PIPE
- EXISTING 6" UNDERDRAINS
- EXISTING INSPECTION HOLE
- EXISTING FLARED END SECTION
- EXISTING UNDERDRAINS (TO BE REMOVED)
- EXISTING INSPECTION HOLE (TO BE REMOVED)
- PROPOSED UNDERDRAINS
- PROPOSED INSPECTION HOLE

**INSPECTION HOLE NOTES**

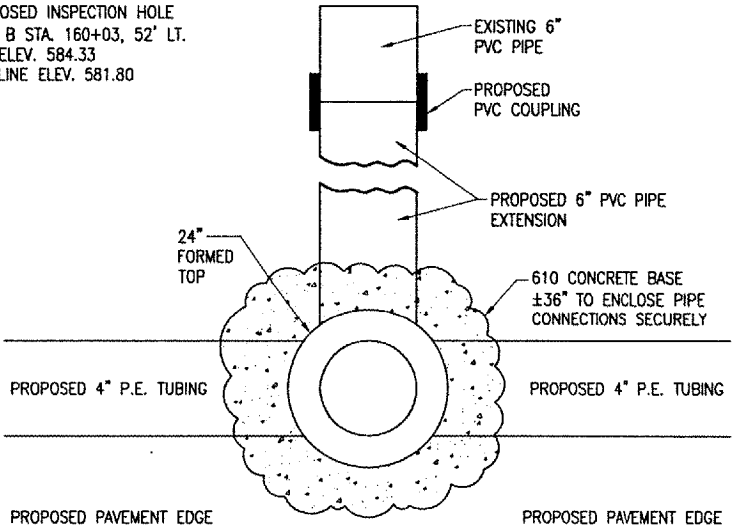
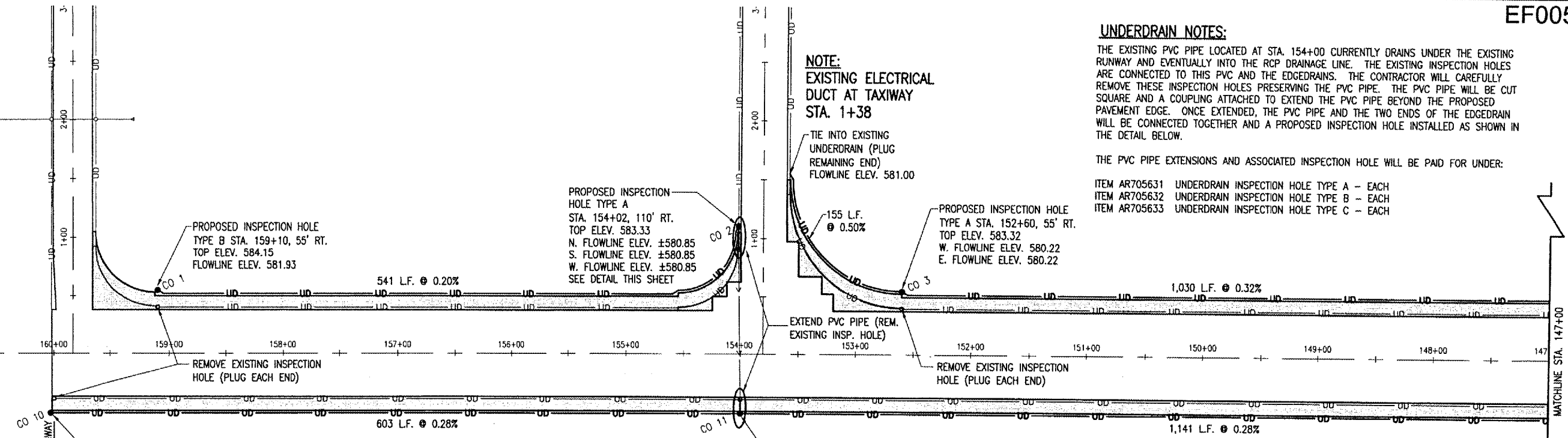
DIAMETER OF PIPE AS SPECIFIED.  
TOP OF INSPECTION HOLES SHALL BE 0.10' BELOW ADJACENT PAVEMENT AT LOCATION SHOWN ON PLANS.  
1/2" CHAMFER TO BE USED ON ALL EXPOSED EDGES OF INSPECTION HOLES.  
THE CONCRETE SHALL BE STRUCTURAL PORTLAND CEMENT CONCRETE.



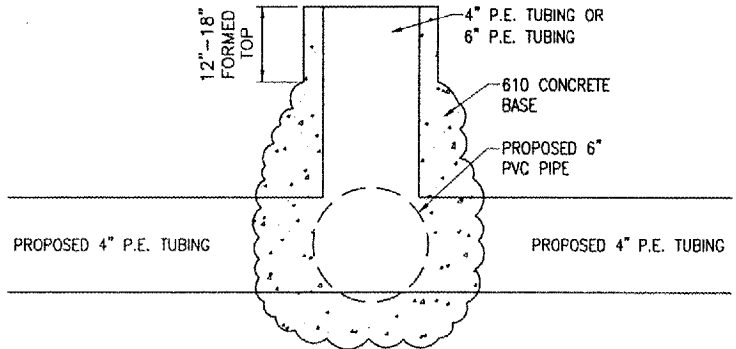
**CAST IRON FRAME AND COVER**  
NEENAH R-6013, DEETER 1810,  
EAST JORDAN 2790-6 OR  
APPROVED EQUAL



0' 25' 50' 100'  
HALF SIZE SCALE: 1" = 100'  
FULL SIZE SCALE: 1" = 50'

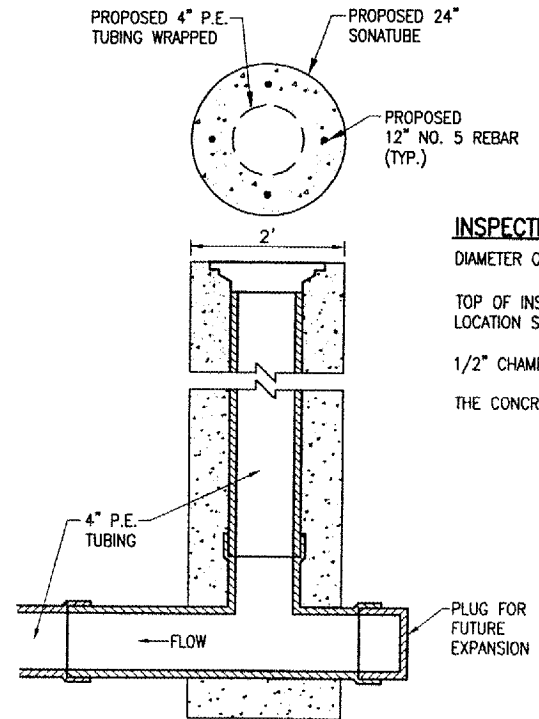


PLAN VIEW



SIDE VIEW

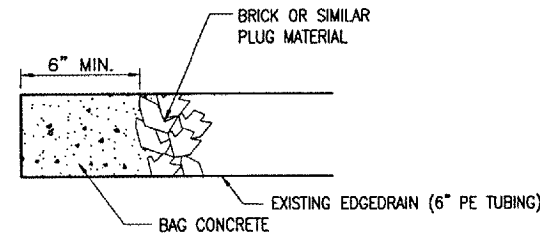
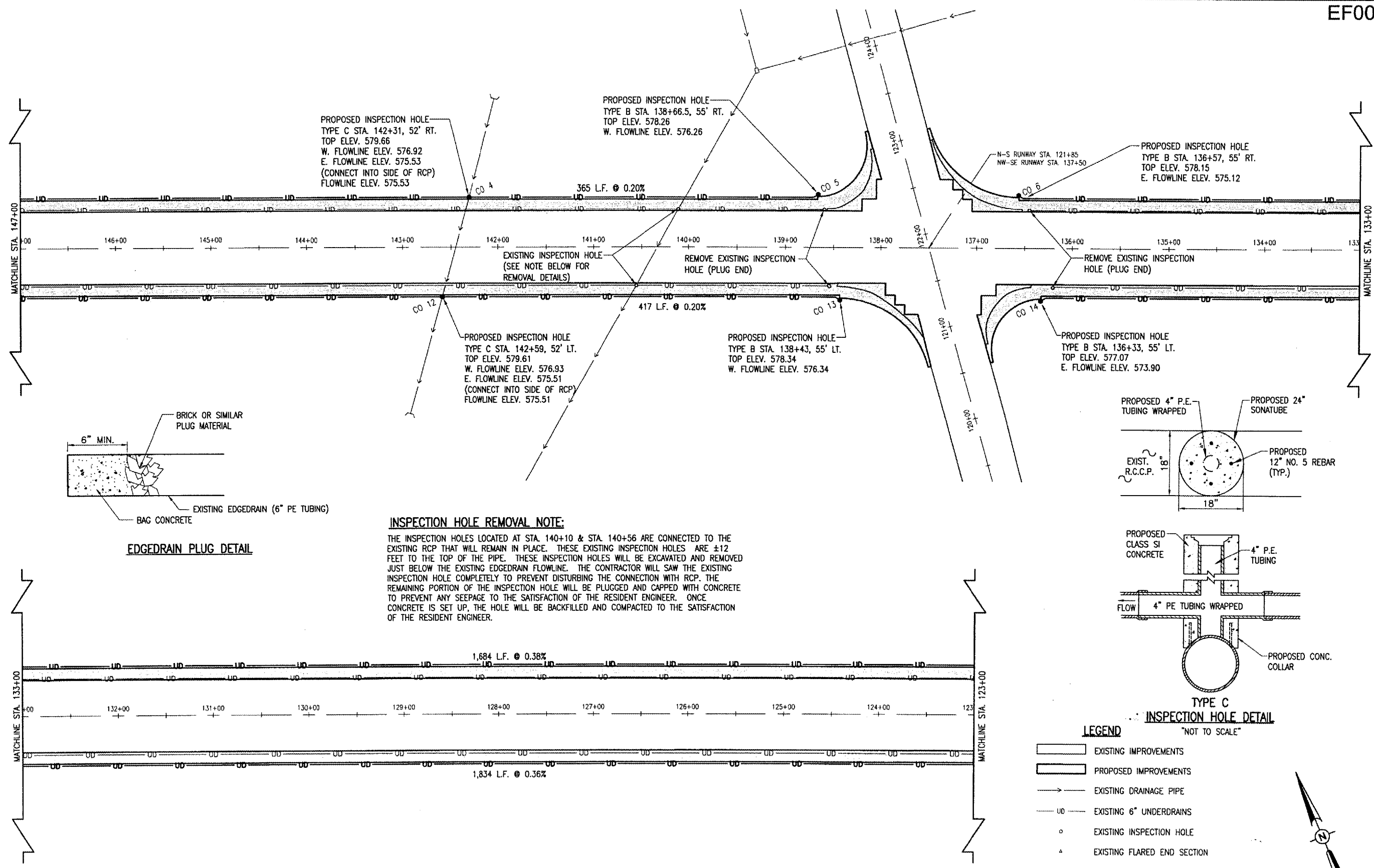
**INSPECTION HOLE-TYPE A**  
"NOT TO SCALE"



**INSPECTION HOLE-TYPE B**  
"NOT TO SCALE"

APR 09 2005 6:34 PM HAGL000382  
I:\AIRPORTS\EFFINGHAM\07A0143\CAD\SHEETS\R-131DRN.DWG - DRAIN 1

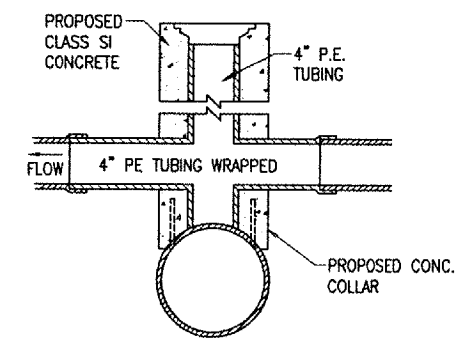
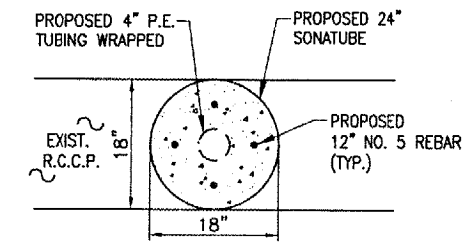
DATE		REVISION						
<p><b>EFFINGHAM COUNTY MEMORIAL AIRPORT EFFINGHAM, ILLINOIS</b></p> <p style="font-size: small;">A.I.P. PROJ.: 3-17-0040-811 IL PROJ.: 1H2-3761</p>								
I.E. Project No. 07A0143D.0800 File Name: R-131DRN.DWG Scale: 1" = 50' Date: 02/12/08	LAYOUT: KOM DRAWN: BAK REVIEWED: CAH	11/28/07 11/28/07 02/12/08	<p style="font-size: x-small;">Hanson Professional Services Inc. 1525 South Sixth Street Springfield, Illinois 62703-2886 Offices Nationwide</p>					<p><b>PROPOSED DRAINAGE PLAN</b> STA. 160+00 TO STA. 147+00</p>
<p><b>WIDEN RUNWAY 11/29 AND REPLACE MIRL'S</b></p>								
<p style="font-size: 2em; font-weight: bold;">18</p> <p style="font-size: x-small;">18 of 78 sheets</p>								



**EDGEDRAIN PLUG DETAIL**

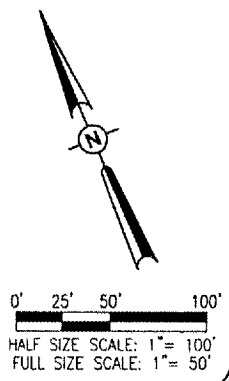
**INSPECTION HOLE REMOVAL NOTE:**

THE INSPECTION HOLES LOCATED AT STA. 140+10 & STA. 140+56 ARE CONNECTED TO THE EXISTING RCP THAT WILL REMAIN IN PLACE. THESE EXISTING INSPECTION HOLES ARE ±12 FEET TO THE TOP OF THE PIPE. THESE INSPECTION HOLES WILL BE EXCAVATED AND REMOVED JUST BELOW THE EXISTING EDGEDRAIN FLOWLINE. THE CONTRACTOR WILL SAW THE EXISTING INSPECTION HOLE COMPLETELY TO PREVENT DISTURBING THE CONNECTION WITH RCP. THE REMAINING PORTION OF THE INSPECTION HOLE WILL BE PLUGGED AND CAPPED WITH CONCRETE TO PREVENT ANY SEEPAGE TO THE SATISFACTION OF THE RESIDENT ENGINEER. ONCE CONCRETE IS SET UP, THE HOLE WILL BE BACKFILLED AND COMPACTED TO THE SATISFACTION OF THE RESIDENT ENGINEER.



**TYPE C INSPECTION HOLE DETAIL**  
"NOT TO SCALE"

- LEGEND**
- EXISTING IMPROVEMENTS
  - PROPOSED IMPROVEMENTS
  - EXISTING DRAINAGE PIPE
  - EXISTING 6" UNDERDRAINS
  - EXISTING INSPECTION HOLE
  - EXISTING FLARED END SECTION
  - EXISTING UNDERDRAINS (TO BE REMOVED)
  - EXISTING INSPECTION HOLE (TO BE REMOVED)
  - PROPOSED UNDERDRAINS
  - PROPOSED INSPECTION HOLE



DATE	REVISION	BY

EFFINGHAM COUNTY  
MEMORIAL AIRPORT  
EFFINGHAM, ILLINOIS

IL PROJ.: 1H2-3761 A.I.P. PROJ.: 3-17-0040-811

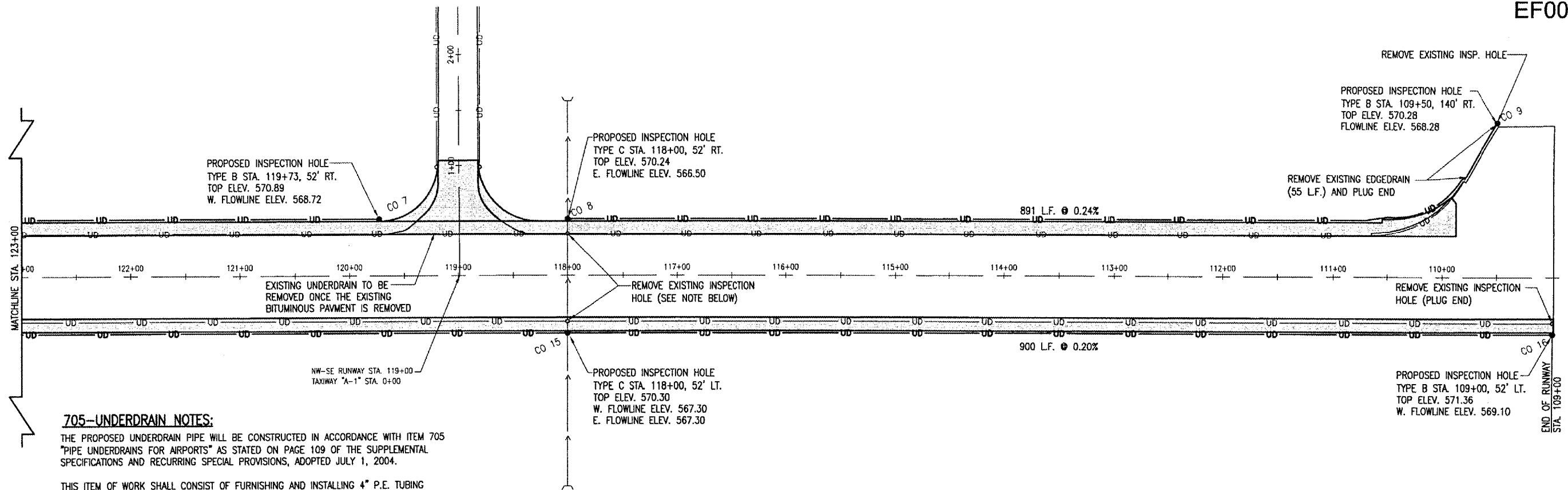
Project No. 07A0143D 0800	File Name R-131DRN.DWG	Scale 1" = 50'	Date 02/12/08
LAYOUT	KDM	11/28/07	11/28/07
DRAWN	BAK	11/28/07	11/28/07
REVIEWED	CAH	02/12/08	02/12/08

**HANSON**

Hanson Professional Services Inc.  
1000 W. Main Street, Suite 200  
Springfield, IL 62761  
Offices Nationwide

WIDEN RUNWAY 11/29  
AND REPLACE MRL'S  
DRAINAGE PLAN  
STA. 147+00 TO STA. 123+00

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**705-UNDERDRAIN NOTES:**

THE PROPOSED UNDERDRAIN PIPE WILL BE CONSTRUCTED IN ACCORDANCE WITH ITEM 705 "PIPE UNDERDRAINS FOR AIRPORTS" AS STATED ON PAGE 109 OF THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, ADOPTED JULY 1, 2004.

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING 4" P.E. TUBING (WRAPPED) AND UNDERDRAIN INSPECTION HOLES AT THE LOCATIONS AND TO THE GRADES SHOWN ON THE CONSTRUCTION PLANS.

705-3.3 LAYING AND INSTALLING PIPE. REVISE THIS SECTION AS FOLLOWS:

"PIPE DRAINS SHALL BE INSTALLED AT THE LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE RESIDENT ENGINEER. THE PIPE SHALL BE BEDDED IN THE UNDERLYING MATERIAL TO A DEPTH NOT LESS THAN 10 PERCENT OF THE EXTERNAL DIAMETER OF THE PIPE, AND WHERE TRENCHING IS REQUIRED, THE TRENCH SHALL HAVE A WIDTH OF NOT LESS 12 IN. THE BOTTOM OF THE TRENCH SHALL BE COMPACTED IN A MANNER MEETING THE APPROVAL OF THE ENGINEER.

JOINTS AND FITTINGS MAY BE ASSEMBLED WITHOUT GASKETS OR SOLVENT CEMENT IF THE JOINT IS SAND TIGHT AND THE SPIGOT ENTERS THE SOCKET NOT LESS THAN 1/3 OF THE SOCKET DEPTH FOR SOLVENT CEMENT JOINTS AND FULL-DEPTH FOR ELASTOMERIC GASKET JOINTS.

NO PIPE SHALL BE PLACED IN THE TRENCH UNTIL IT AND THE PREPARED FOUNDATION HAVE BEEN APPROVED BY THE RESIDENT ENGINEER. THE PIPE SHALL BE LAID SO THAT THE FLOWLINE WILL BE AT THE GRADE SHOWN ON THE PLANS OR ESTABLISHED BY THE RESIDENT ENGINEER. THE PERMISSIBLE MINIMUM COVER OVER A PIPE SHALL BE 6 IN.

LAYING OF PIPES SHALL COMMENCE AT THE OUTLET END AND PROCEED TOWARD THE INLET END WITH THE PIPES TRUE TO LINE AND GRADE.

THE ENDS OF THE PIPE SHALL BE CAREFULLY CLEANED BEFORE THEY ARE PLACED, AND SHALL BE PLACED TO AVOID UNNECESSARY HANDLING ON THE FOUNDATION. AS EACH LENGTH OF PIPE IS LAID, THE ENDS OF THE PIPE SHALL BE PROTECTED TO PREVENT THE ENTRANCE OF ANY MATERIAL.

LONGITUDINAL LAPS SHALL BE PLACED AT THE SIDES AND SEPARATE SECTIONS OF PIPE SHALL BE JOINED WITH TIGHTLY-DRAWN, APPROVED CONNECTING BANDS.

THE TRENCH SHALL BE BACKFILLED WITH SELECT MATERIAL, MEETING THE APPROVAL OF THE ENGINEER, PLACED IN 8 IN. LAYERS, LOOSE MEASUREMENT, AND COMPACTED TO THE ENGINEER'S SATISFACTION. THE PIPE UNDER PROPOSED PAVEMENT, PLUS 10 FT ON EITHER SIDE, WILL BE BACKFILLED WITH POROUS BACKFILL TO THE ORIGINAL GROUND ELEVATIONS OR TO THE SUBGRADE ELEVATION IF THE FILL HAS BEEN CONSTRUCTED PRIOR TO THE INSTALLATION."

705-3.6 BACKFILLING; ADD THE FOLLOWING TO THIS SECTION:

"THE EDGE DRAIN TRENCH WILL BE BACKFILLED WITH POROUS BACKFILL NO. 1 IN ACCORDANCE WITH THE DETAIL ON THE CONSTRUCTION PLANS. THE POROUS BACKFILL WILL BE CONSOLIDATED TO THE SATISFACTION OF THE RESIDENT ENGINEER TO PREVENT FUTURE SETTLEMENT."

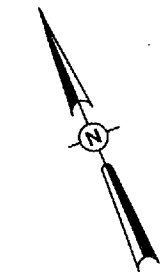
THE PROPOSED UNDERDRAIN PIPE WILL BE PAID FOR UNDER ITEMS:  
 AR705411 POROUS BACKFILL NO. 1 \_\_\_\_\_ PER C.Y.  
 AR705526 6" PERFORATED UNDERDRAIN W/SOCK \_\_\_\_\_ PER L.F.  
 AR705530 UNDERDRAIN INSPECTION HOLE \_\_\_\_\_ PER EACH

**INSPECTION HOLE NOTES:**

THE INSPECTION HOLES LOCATED STA. 118+00 LT. & RT. ARE CONNECTED TO THE EXISTING RCP THAT WILL REMAIN IN PLACE. THESE INSPECTION HOLES ARE ±6 FEET TO THE TOP OF THE PIPE. THESE INSPECTION HOLES WILL BE REMOVED COMPLETELY AND THE HOLES REMAINING IN THE RCP CAPPED WITH CONCRETE TO PREVENT ANY SEEPAGE. ONCE CAPPED AND CONCRETE IS SET UP, THE HOLE WILL BE BACKFILLED AND COMPACTED TO THE SATISFACTION OF THE RESIDENT ENGINEER.

**LEGEND**

- EXISTING IMPROVEMENTS
- PROPOSED IMPROVEMENTS
- EXISTING DRAINAGE PIPE
- EXISTING 6" UNDERDRAINS
- EXISTING INSPECTION HOLE
- EXISTING FLARED END SECTION
- EXISTING UNDERDRAINS (TO BE REMOVED)
- EXISTING INSPECTION HOLE (TO BE REMOVED)
- PROPOSED UNDERDRAINS
- PROPOSED INSPECTION HOLE



0' 25' 50' 100'  
 HALF SIZE SCALE: 1" = 100'  
 FULL SIZE SCALE: 1" = 50'

DATE	REVISION	BY

**EFFINGHAM COUNTY  
 MEMORIAL AIRPORT  
 EFFINGHAM, ILLINOIS**

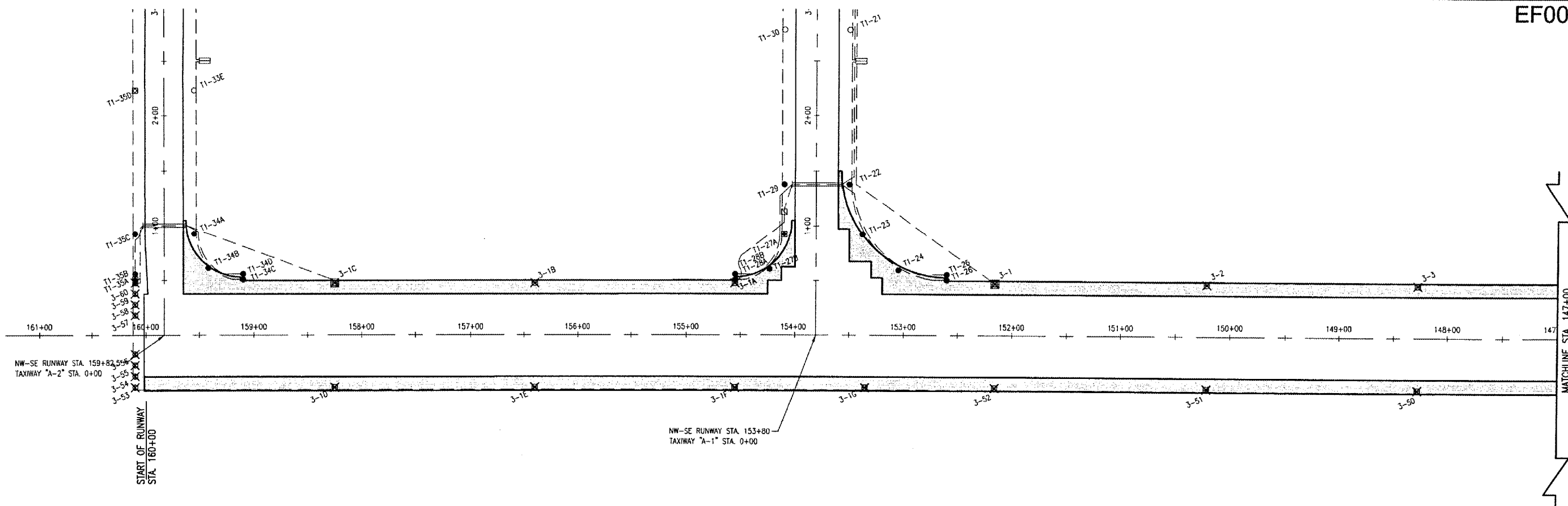
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159 Project No. 07A0143D_0800	11/28/07
File Name R-131DRN.DWG	KRM
Scale 1" = 50'	BAK
Date 02/12/08	CAH
LAYOUT	REVIEWED
DRAWN	



**WIDEN RUNWAY 11/29  
 AND REPLACE MRL'S  
 PROPOSED  
 DRAINAGE PLAN  
 STA. 123+00 TO STA. 109+00**

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**LIGHT REMOVAL NOTES**

ALL EXISTING RUNWAY AND THRESHOLD LIGHTS THAT ARE DESIGNATED FOR REMOVAL WILL BE REMOVED. THE LIGHTS AND THEIR ISOLATING TRANSFORMERS WILL BE TURNED OVER TO THE AIRPORT MANAGER. THE LIGHT BASES AND METAL STAKES WILL BE REMOVED AND DISPOSED OF OFF THE AIRPORT SITE.

THE HOLE LEFT FROM THE LIGHT REMOVAL WILL BE FILLED IN WITH EARTH AND COMPACTED TO PREVENT FUTURE SETTLEMENT.

THE EXISTING RUNWAY CABLES WILL BE REMOVED AT NO ADDITIONAL COST TO THE CONTRACT. THE AIRPORT HAS ALL SALVAGE RIGHTS TO THE LIGHTS, TRANSFORMERS AND CABLES.

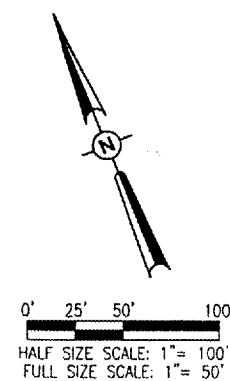
RUNWAY 11-29 AND RUNWAY 1-19 WILL BE CLOSED ON THE FIRST DAY OF CONSTRUCTION. THE CONTRACTOR WILL COORDINATE WITH THE RESIDENT ENGINEER AND THE AIRPORT MANAGER IN SHUTTING DOWN THE RUNWAY/TAXIWAY LIGHTING CIRCUITS. THE CONTRACTOR WILL LOCK OUT ANY CIRCUITS IN THE ELECTRICAL VAULT TO PREVENT ACCIDENTAL RE-ENERGIZING OF THAT CIRCUIT. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THIS WORK.

REMOVAL OF THE EXISTING LIGHTS, ISOLATING TRANSFORMERS AND EXISTING CABLE WILL BE PAID FOR UNDER ITEMS:  
 AR125901 "REMOVE STAKE MOUNTED LIGHT" \_\_\_PER EACH  
 AR125902 "REMOVE BASE MOUNTED LIGHT" \_\_\_PER EACH.

THE LOCATION, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ON THE PLANS IS NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.

CALL J.U.L.I.E. FOR UTILITY INFORMATION AT 1-800-892-0123.

- LEGEND**
- EXISTING IMPROVEMENTS
  - PROPOSED IMPROVEMENTS
  - EXISTING ELECTRICAL CABLES
  - EXISTING ELECTRICAL DUCT
  - EXISTING STAKE MOUNTED TAXIWAY LIGHT
  - EXISTING BASE MOUNTED TAXIWAY LIGHT
  - EXISTING TAXI GUIDANCE SIGN
  - EXISTING SPLICE CAN
  - EXISTING STAKE MOUNTED TAXIWAY LIGHT (TO BE RELOCATED)
  - EXISTING BASE MOUNTED TAXIWAY LIGHT (TO BE RELOCATED)
  - EXISTING STAKE MOUNTED THRESHOLD LIGHT (TO BE REMOVED)
  - EXISTING BASE MOUNTED THRESHOLD LIGHT (TO BE REMOVED)
  - EXISTING STAKE MOUNTED RUNWAY LIGHT (TO BE REMOVED)
  - EXISTING BASE MOUNTED RUNWAY LIGHT (TO BE REMOVED)

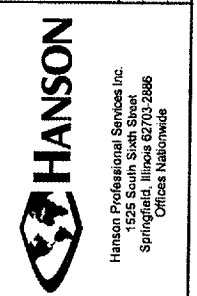


DATE	REVISION	BY

**EFFINGHAM COUNTY  
 MEMORIAL AIRPORT  
 EFFINGHAM, ILLINOIS**

ILL. PROJ.: 1H2-3761 A.I.P. PROJ.: 3-17-0040-B11

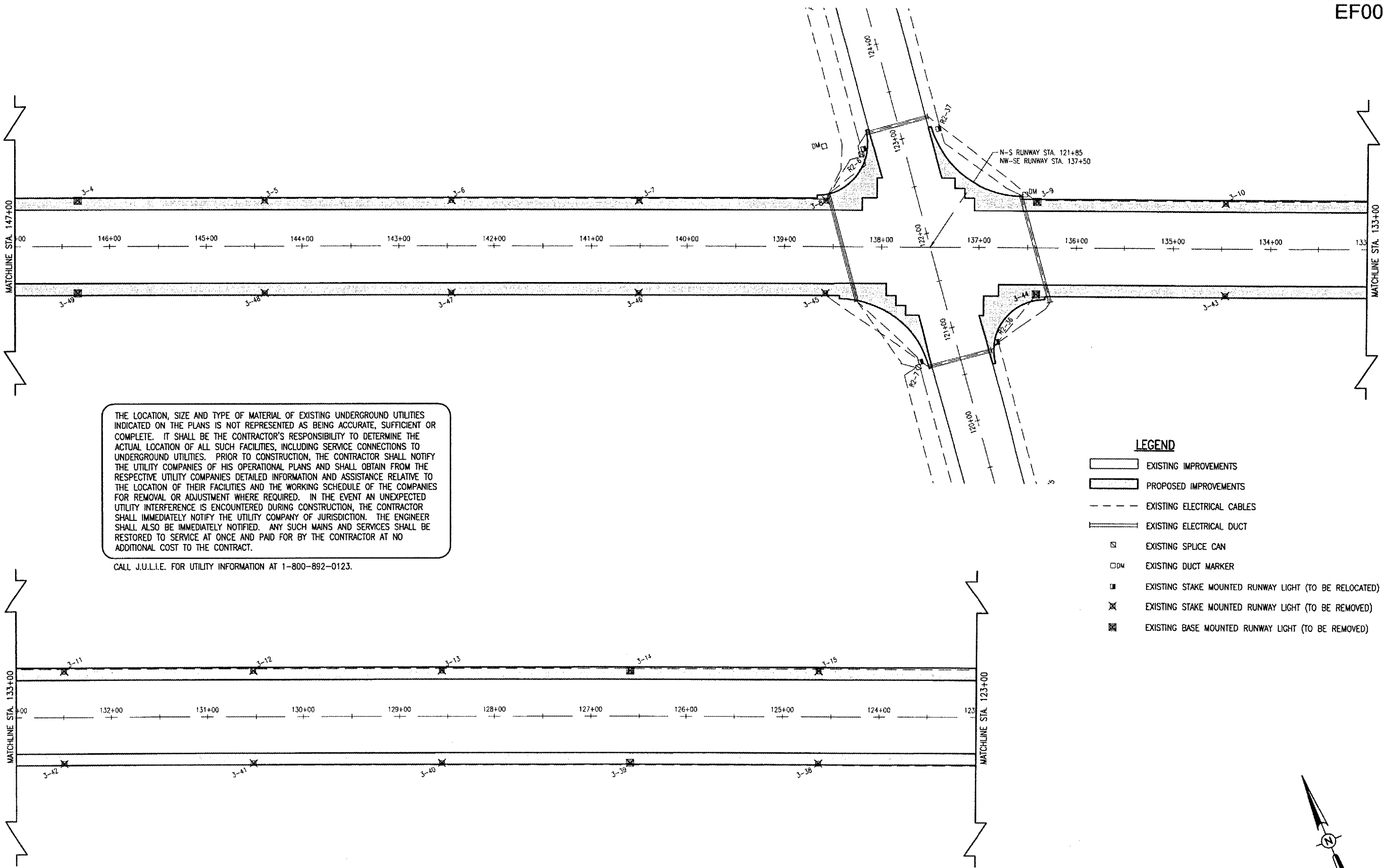
REV. PROJECT NO. 07A0143D_0800	DATE 02/12/08
DESIGNED BY R-141ELE.DWG	DRAWN BY BAK
SCALE 1" = 50'	REVIEWED BY CAH
DATE 02/12/08	DATE 11/28/07
LAYOUT	DATE 02/12/08
DRAWN	DATE 11/28/07
REVIEWED	DATE 02/12/08



**WIDEN RUNWAY 11/29  
 AND REPLACE MRL'S**

EXISTING  
 ELECTRICAL PLAN  
 STA. 160+00 TO STA. 147+00

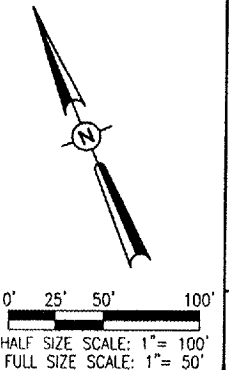
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THE LOCATION, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ON THE PLANS IS NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.

CALL J.U.L.I.E. FOR UTILITY INFORMATION AT 1-800-892-0123.

- LEGEND**
- EXISTING IMPROVEMENTS
  - PROPOSED IMPROVEMENTS
  - EXISTING ELECTRICAL CABLES
  - EXISTING ELECTRICAL DUCT
  - EXISTING SPLICE CAN
  - EXISTING DUCT MARKER
  - EXISTING STAKE MOUNTED RUNWAY LIGHT (TO BE RELOCATED)
  - EXISTING STAKE MOUNTED RUNWAY LIGHT (TO BE REMOVED)
  - EXISTING BASE MOUNTED RUNWAY LIGHT (TO BE REMOVED)



DATE	REVISION	BY

EFFINGHAM COUNTY  
MEMORIAL AIRPORT  
EFFINGHAM, ILLINOIS

IL PROJ.: 1H2-3761 A.I.P. PROJ.: 3-17-0040-B11

10. Project No. 07A0143D.0800	11/28/07
11. Revision R-14.1ELE.DWG	11/28/07
12. Scale 1" = 50'	11/28/07
13. Date 02/12/08	02/12/08
LAYOUT	KOM
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REVIEWED	CAH

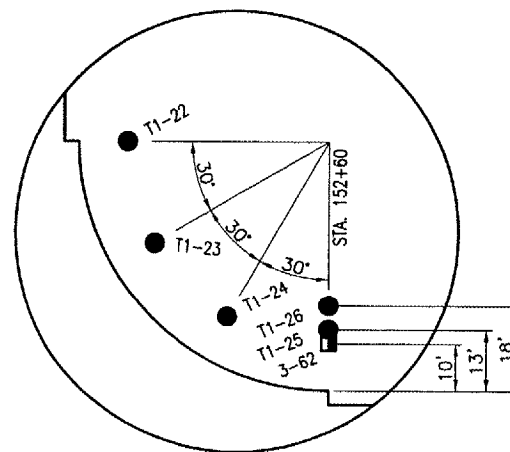
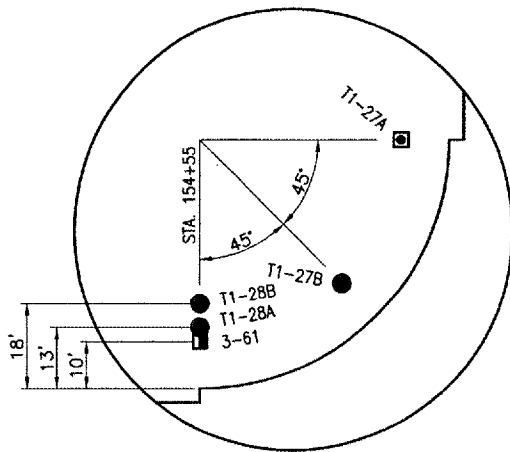
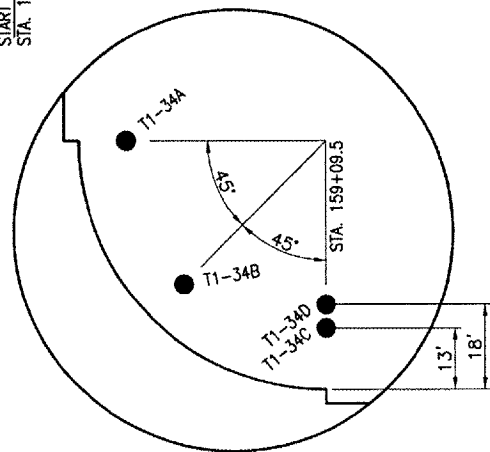
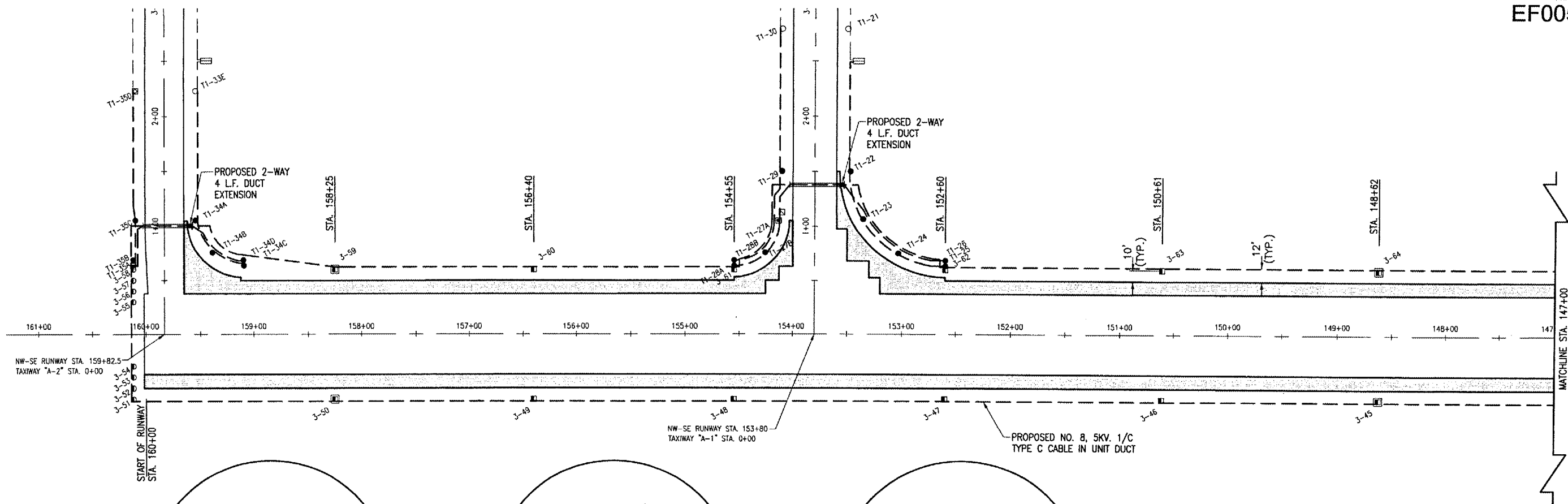
**HANSON**

Hanson Professional Services Inc.  
1525 South Sixth Street  
Springfield, Illinois 62703-2886  
Offices Nationwide

WIDEN RUNWAY 11/29  
AND REPLACE MRL'S  
EXISTING  
ELECTRICAL PLAN  
STA. 147+00 TO STA. 123+00







**RADIUS DETAILS**  
NOT TO SCALE

THE LOCATION, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ON THE PLANS IS NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.

CALL J.U.L.I.E. FOR UTILITY INFORMATION AT 1-800-892-0123.

**ELECTRICAL NOTES**

**CABLES:**

ALL PROPOSED CABLE WILL BE LOCATED 12' FROM THE PAVEMENT EDGE UNLESS OTHERWISE SHOWN.  
ALL PROPOSED CABLE WILL BE PLACED 18" BELOW THE PROPOSED GRADE.  
THE PROPOSED ELECTRICAL CABLE WILL BE NO. 8, 5000 V., 1/C, TYPE C UNDERGROUND CABLE IN UNIT DUCT.

IN AREAS WHERE THERE IS A CONGESTION OF CABLES OR WHERE THE PROPOSED CABLE CROSSES AN EXISTING CABLE, THE PROPOSED CABLE WILL BE HAND DUG INTO PLACE. AT ALL OTHER LOCATIONS, THE PROPOSED CABLE IN UNIT DUCT MAY BE EITHER TRENCHED OR PLOWED INTO PLACE. THE TRENCHING AND/OR PLOWING WILL BE CONSIDERED INCIDENTAL TO THE PROPOSED CABLE AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

ALL CABLE SHOWN BY A (---) DASHED LINE ARE EXISTING CIRCUITS THAT ARE NOT PART OF THIS CONTRACT. THE LOCATION OF THESE CABLES ARE APPROXIMATE AND FOR INFORMATIONAL PURPOSES ONLY. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE AND IDENTIFY THESE EXISTING CIRCUITS PRIOR TO THE INSTALLATION OF THE PROPOSED CABLE. ANY DAMAGE TO THE EXISTING CIRCUITS SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE RESIDENT ENGINEER AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

**LIGHTS:**

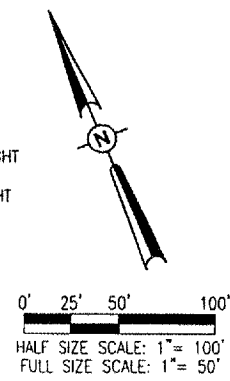
ALL PROPOSED TAXIWAY LIGHTS WILL BE PLACED 10' FROM THE PAVEMENT EDGE UNLESS SHOWN OTHERWISE.  
ALL PROPOSED TAXIWAY LIGHTS WILL BE CONSTRUCTED AT THE LOCATION SHOWN ON THIS SHEET AND IN ACCORDANCE WITH THE DETAILS SHOWN IN THESE CONSTRUCTION PLANS AND THE SPECIFICATIONS.  
ALL PROPOSED TAXIWAY LIGHTS WILL USE 360° BLUE LENSES.

**DUCT:**

ALL PROPOSED 2-WAY CONCRETE DUCTS WILL BE CONSTRUCTED AT THE LOCATIONS SHOWN IN THESE CONSTRUCTION PLANS AND IN ACCORDANCE WITH THE DETAIL IN THESE CONSTRUCTION PLANS AND THE SPECIFICATIONS.  
THE TOP OF THE PROPOSED DUCT EXTENSIONS WILL BE LOCATED A MINIMUM OF 22" BELOW THE FINISHED PAVEMENT GRADE.

**LEGEND**

- EXISTING IMPROVEMENTS
- PROPOSED IMPROVEMENTS
- EXISTING ELECTRICAL CABLES
- PROPOSED ELECTRICAL CABLES
- EXISTING ELECTRICAL DUCT
- EXISTING STAKE MOUNTED TAXIWAY LIGHT
- EXISTING BASE MOUNTED TAXIWAY LIGHT
- EXISTING TAXI GUIDANCE SIGN
- EXISTING SPLICE CAN
- PROPOSED RELOCATED STAKE MOUNTED TAXIWAY LIGHT
- PROPOSED RELOCATED BASE MOUNTED TAXIWAY LIGHT
- PROPOSED STAKE MOUNTED THRESHOLD LIGHT
- PROPOSED STAKE MOUNTED RUNWAY LIGHT
- PROPOSED BASE MOUNTED RUNWAY LIGHT



DATE	REVISION	BY

**EFFINGHAM COUNTY  
MEMORIAL AIRPORT  
EFFINGHAM, ILLINOIS**

A.I.P. PROJ.: 3-17-0040-B11  
ILL. PROJ.: 1H2-3761

IBD Project No. 07A0143D_0800	KOM	11/28/07
Filename R-142ELE.DWG	BAN	11/28/07
Scale 1" = 50'	CAH	02/12/08
Date 02/12/08		

Hanson Professional Services, Inc.  
1525 South Sixth Street  
Springfield, Illinois 62703-2886  
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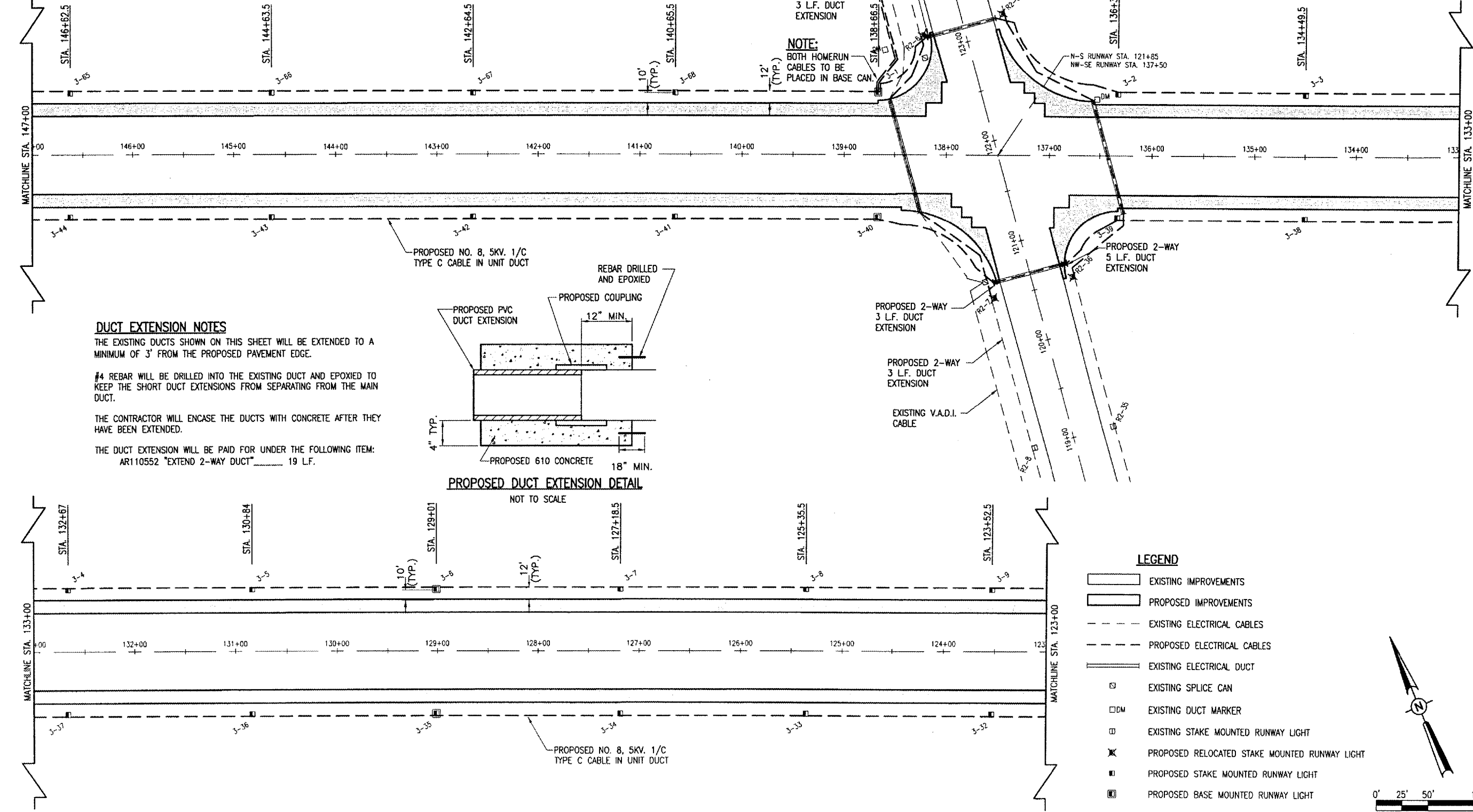
**WIDEN RUNWAY 11/29  
AND REPLACE MRL'S  
ELECTRICAL PLAN**

STA. 160+00 TO STA. 147+00

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THE LOCATION, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ON THE PLANS IS NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.

CALL J.U.L.I.E. FOR UTILITY INFORMATION AT 1-800-892-0123.



EF005

DATE	REVISION	BY

EFFINGHAM COUNTY  
MEMORIAL AIRPORT  
EFFINGHAM, ILLINOIS

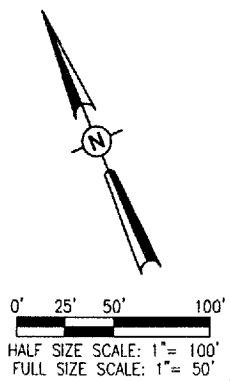
A.I.P. PROJ.: 3-17-0040-811  
IL PROJ.: 1H2-3761

Project No.: 07A0143D_0800	Element: R-142ELE.DWG	Scale: 1" = 50'	Date: 02/12/08
LAYOUT	KOM	11/28/07	
DRAWN	BAK	11/28/07	
REVIEWED	CAH	02/12/08	

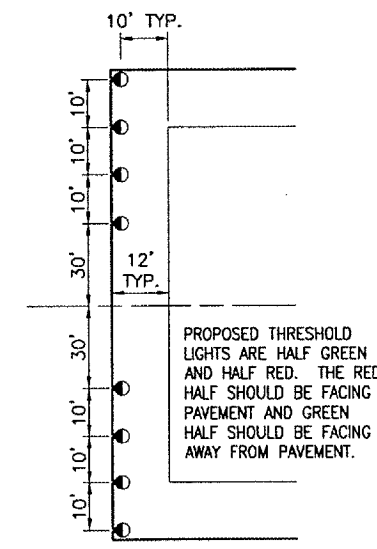
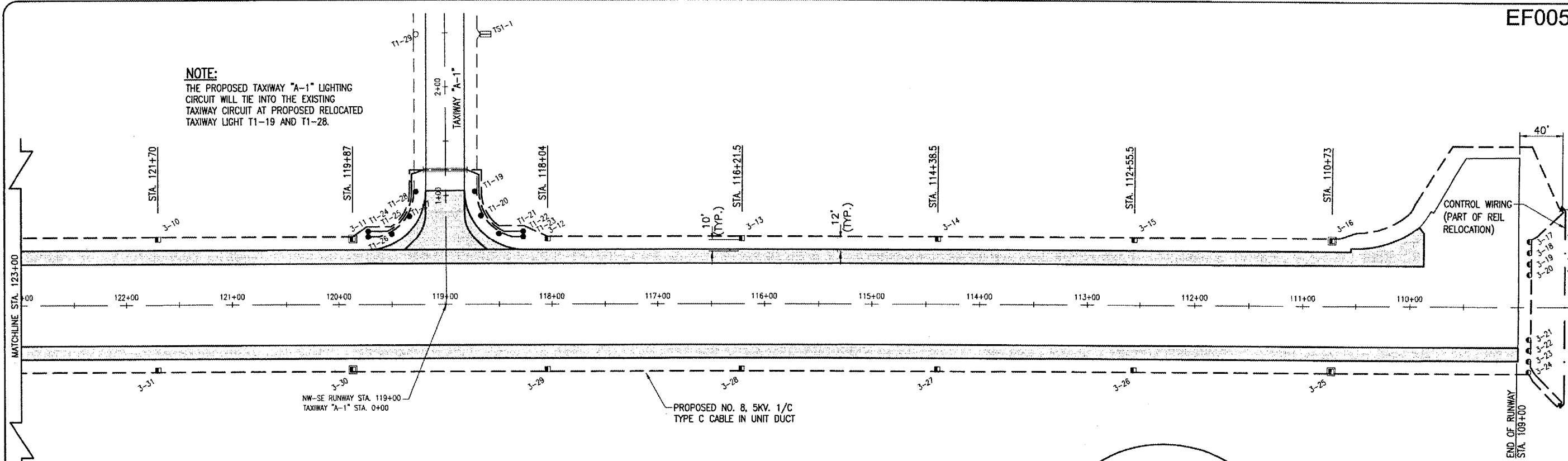


WIDEN RUNWAY 11/29  
AND REPLACE MRL'S  
PROPOSED  
ELECTRICAL PLAN  
STA. 147+00 TO STA. 123+00

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**NOTE:**  
THE PROPOSED TAXIWAY "A-1" LIGHTING CIRCUIT WILL TIE INTO THE EXISTING TAXIWAY CIRCUIT AT PROPOSED RELOCATED TAXIWAY LIGHT T1-19 AND T1-28.



**PROPOSED THRESHOLD LIGHT DETAIL**  
NOT TO SCALE

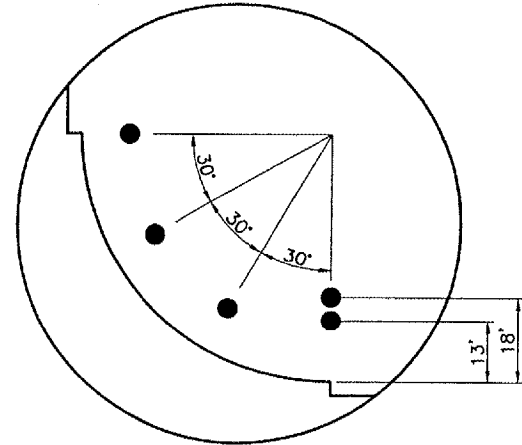
**REIL RELOCATION NOTES**

THE RELOCATED REIL'S WILL BE CONNECTED TO THE RUNWAY SERIES CIRCUIT USING 1/C #8 5KV UG CABLE IN UD.

THE CONTRACTOR SHALL FURNISH AND INSTALL THE CONTROL CABLES BETWEEN THE MASTER AND SLAVE UNITS. THE SIZE, TYPE AND NUMBER OF CABLES TO BE INSTALLED BETWEEN THE REIL UNITS WILL BE AS PER THE MANUFACTURER'S RECOMMENDATIONS.

THE CABLE TRENCH SHALL BE BACKFILLED, COMPACTED TO PREVENT FUTURE SETTLEMENT AND LIMED, FERTILIZED AND SEEDED IN ACCORDANCE WITH ITEM 901 "SEEDING".

THE RELOCATION OF THE EXISTING REIL UNITS WILL BE PAID FOR UNDER ITEM: AR125967 "RELOCATE REILS" PER PAIR.



**RADIUS DETAILS**  
NOT TO SCALE

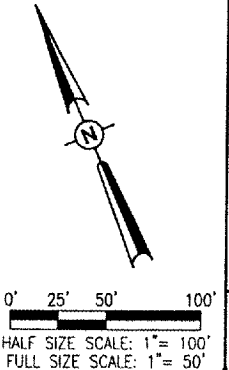
**LEGEND**

- EXISTING IMPROVEMENTS
- PROPOSED IMPROVEMENTS
- EXISTING ELECTRICAL CABLES
- PROPOSED ELECTRICAL CABLES
- PROPOSED REIL CONTROL CABLES
- EXISTING ELECTRICAL DUCT
- EXISTING STAKE MOUNTED TAXIWAY LIGHT
- EXISTING TAXI GUIDANCE SIGN
- PROPOSED RELOCATED REILS
- PROPOSED RELOCATED STAKE MOUNTED TAXIWAY LIGHT
- PROPOSED STAKE MOUNTED THRESHOLD LIGHT
- PROPOSED STAKE MOUNTED RUNWAY LIGHT
- PROPOSED BASE MOUNTED RUNWAY LIGHT

LIGHT LENS SCHEDULE		
LIGHT NUMBERS	LENS	ORIENTATION
3-1 TO 3-5	CLEAR/CLEAR	N/A
3-6 TO 3-16	AMBER/CLEAR	AMBER SIDE FACING NW
3-17 TO 3-24	GREEN/RED	GREEN SIDE FACING SE
3-25 TO 3-35	AMBER/CLEAR	AMBER SIDE FACING NW
3-36 TO 3-40	CLEAR/CLEAR	N/A
3-41 TO 3-50	CLEAR/AMBER	AMBER SIDE FACING SE
3-51 TO 3-58	GREEN/RED	GREEN SIDE FACING NW
3-59 TO 3-68	CLEAR/AMBER	AMBER SIDE FACING SE

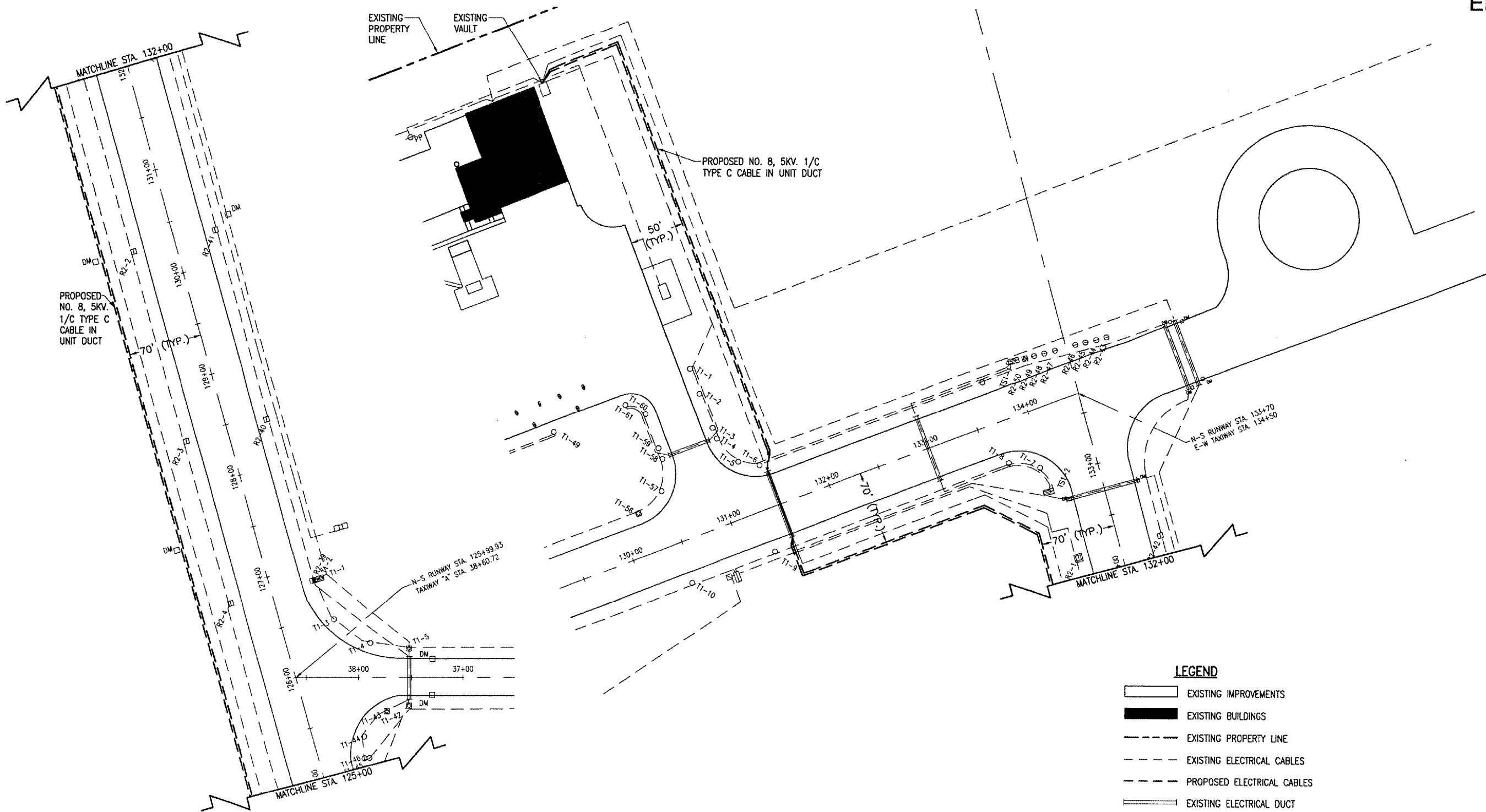
THE LOCATION, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ON THE PLANS IS NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.

CALL J.U.L.I.E. FOR UTILITY INFORMATION AT 1-800-892-0123.



REVISION DATE	BY	<b>EFFINGHAM COUNTY MEMORIAL AIRPORT EFFINGHAM, ILLINOIS</b>	A.I.P. PROJ.: 3-17-0040-B11 IL PROJ.: 1H2-3761
PROJECT: WIDEN RUNWAY 11/29 AND REPLACE MRL'S AND REPLACE MRL'S ELECTRICAL PLAN STA. 123+00 TO STA. 109+00			
HB Project No. 07A0143D-0800 Drawings R-142ELE.DWG Scale 1" = 50' Date 02/12/08		LAYOUT KDM 11/28/07 DRAWN BAK 11/28/07 REVIEWED CAH 02/12/08	HANSON Hanson Professional Services Inc. 1525 South Sixth Street Springfield, Illinois 62703-2886 Offices Nationwide
WIDEN RUNWAY 11/29 AND REPLACE MRL'S AND REPLACE MRL'S ELECTRICAL PLAN STA. 123+00 TO STA. 109+00		26	26 of 78 sheets

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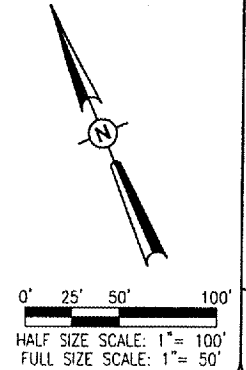


**NOTE:**  
FOR CONTINUATION OF HOME RUNS  
SEE SHEET 25

THE LOCATION, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ON THE PLANS IS NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.

CALL J.U.L.I.E. FOR UTILITY INFORMATION AT 1-800-892-0123.

- LEGEND**
- EXISTING IMPROVEMENTS
  - EXISTING BUILDINGS
  - EXISTING PROPERTY LINE
  - EXISTING ELECTRICAL CABLES
  - PROPOSED ELECTRICAL CABLES
  - EXISTING ELECTRICAL DUCT
  - EXISTING SPLICE CAN
  - EXISTING DUCT MARKER
  - EXISTING TAXI GUIDANCE SIGN
  - EXISTING STAKE MOUNTED TAXIWAY LIGHT
  - EXISTING BASE MOUNTED TAXIWAY LIGHT
  - EXISTING STAKE MOUNTED RUNWAY LIGHT
  - EXISTING BASE MOUNTED RUNWAY LIGHT
  - EXISTING STAKE MOUNTED THRESHOLD LIGHT
  - EXISTING BASE MOUNTED THRESHOLD LIGHT
  - EXISTING VADI



DATE	REVISION	BY

**EFFINGHAM COUNTY  
MEMORIAL AIRPORT  
EFFINGHAM, ILLINOIS**

IL PROJ.: 1H2-3761 A.I.P. PROJ.: 3-17-0040-B11

HEL. Project No. 07A0143D 0800	FILENAME R-142ELE.DWG	LAYOUT KDM	11/28/07
Scale 1" = 50'	Date 02/12/08	DRAWN BAK	11/28/07
		REVIEWED CAH	02/12/08

**HANSON**  
Hanson Professional Services Inc.  
1525 South Sixth Street  
Springfield, Illinois 62703-2886  
Offices Nationwide

**WIDEN RUNWAY 11/29  
AND REPLACE MRL'S  
ELECTRICAL PLAN  
FOR HOMERUNS**

APR 09, 2008 6:35 PM HAGL000382  
C:\AIRPORTS\EFFINGHAM\07A0143\CAO\SHEETS\R-142ELE.DWG - HOMERUN



NOTES

1. ALL VAULT WORK AND/OR POWER OUTAGES SHALL BE COORDINATED WITH THE AIRPORT MANAGER AND THE RESIDENT ENGINEER.
2. ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70 - NATIONAL ELECTRICAL CODE (NEC) MOST CURRENT ISSUE IN FORCE, THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCES AND REQUIREMENTS IN FORCE. ANY INSTALLATIONS WHICH VOID THE U.L. LISTING, ETL LISTING, (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE WILL NOT BE PERMITTED.
3. ALL EQUIPMENT SHOWN NOT LABELED AS EXISTING IS NEW.
4. CONTRACTOR SHALL CONFIRM POWER REQUIREMENTS WITH THE ACTUAL NAMEPLATE ON EACH CONSTANT CURRENT REGULATOR (OR OTHER RESPECTIVE EQUIPMENT) AND ADJUST CIRCUIT BREAKER, WIRE SIZES & CONDUIT SIZES TO CONFORM WITH NEC & MANUFACTURER'S RECOMMENDATIONS WHERE APPLICABLE. WIRE SIZES SHOWN ON THE PLANS ARE MINIMUM.
5. HIGH VOLTAGE & LOW VOLTAGE CIRCUITS SHALL NOT BE INSTALLED IN THE SAME WIREWAY.
6. BRANCH CIRCUIT TO NEW REGULATOR SHALL BE INSTALLED IN THE RESPECTIVE LOW VOLTAGE WIREWAY/DUCT, WITH GRSC AT TRANSITIONS AND UL LISTED LIQUID TIGHT FLEXIBLE METAL CONDUIT AT FINAL CONNECTIONS TO THE REGULATOR. CONDUITS SHALL BE SIZED IN ACCORDANCE WITH NEC.
7. BOND NEW REGULATOR TO THE RESPECTIVE VAULT GROUND BUS WITH A DEDICATED #6 AWG BONDING JUMPER.
8. LTFMC DENOTES LIQUID TIGHT FLEXIBLE METAL CONDUIT UL LISTED, SUNLIGHT RESISTANT, & SUITABLE FOR GROUNDING. LIQUID TIGHT FLEXIBLE METAL CONDUIT AND ASSOCIATED FITTINGS SHALL BE U.L. LISTED TO MEET THE REQUIREMENTS OF NEC 350.6. LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS USED FOR FLEXIBILITY (INCLUDING CONNECTIONS TO CCR'S & TRANSFORMERS) SHALL REQUIRE AN EXTERNAL BONDING JUMPER OR INTERNAL EQUIPMENT GROUNDING CONDUCTOR PER NEC 350.60. EXTERNAL BONDING JUMPERS USED WITH CCR INSTALLATIONS SHALL BE #6 AWG COPPER (MINIMUM). DO NOT INSTALL LTFMC THAT IS NOT UL LISTED.
9. VAULT WORK SHALL BE PAID FOR UNDER ITEM AR109200.

BY	REVISION	DATE

EFFINGHAM COUNTY  
MEMORIAL AIRPORT  
EFFINGHAM, ILLINOIS

A.I.P. PROJ.: 3-17-0040-B11  
IL PROJ.: 1H2-3761

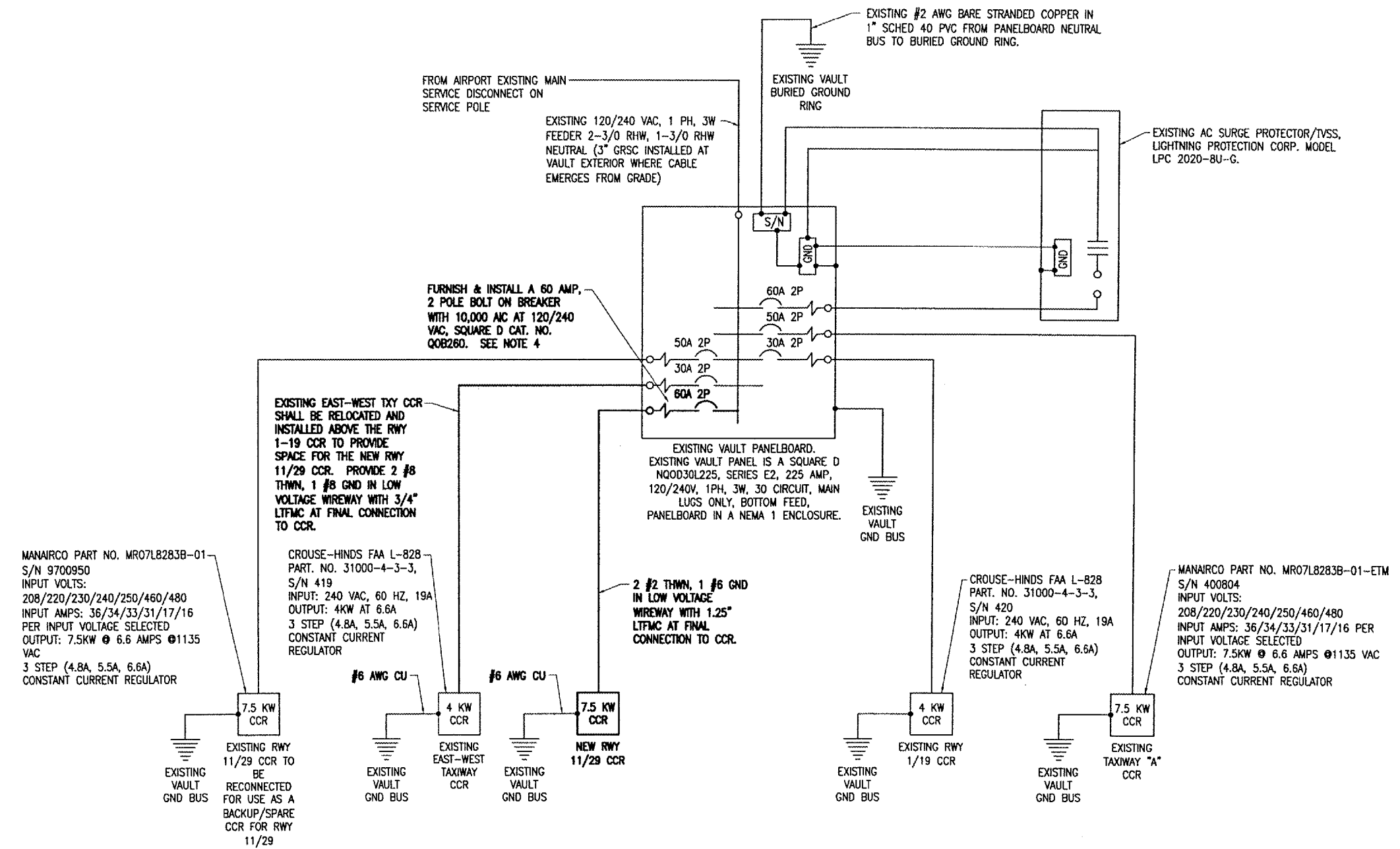
REV. Project No.	07A0143D_0800
Drawn	E-601.DWG
Scale	NONE
Date	02/12/08
LAYOUT	KNL 02/17/04
DRAWN	DMV 02/18/04
REVIEWED	CAH 02/12/08



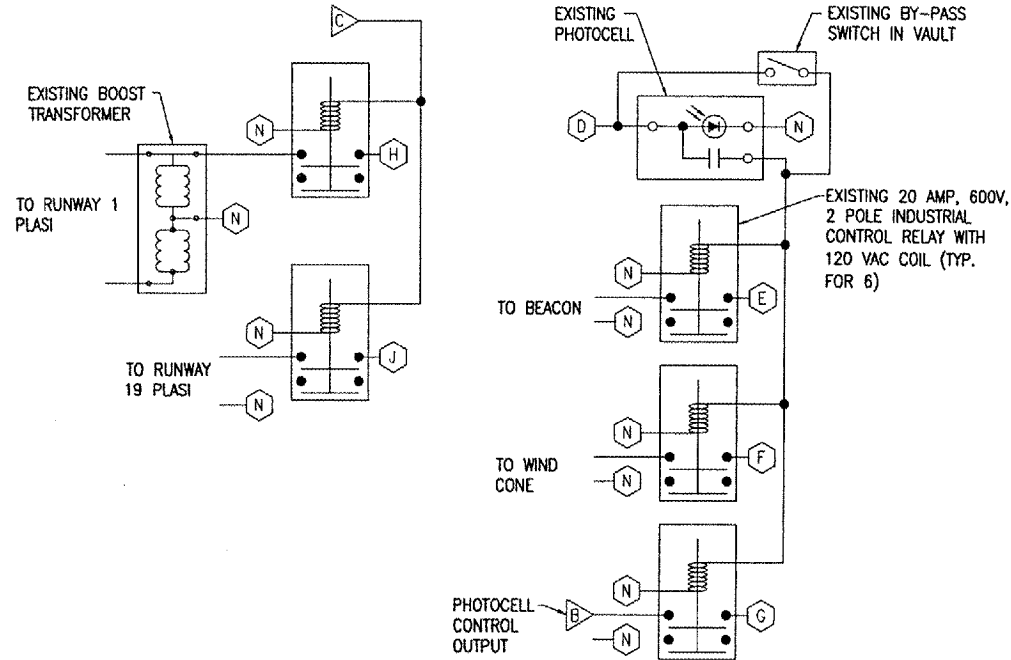
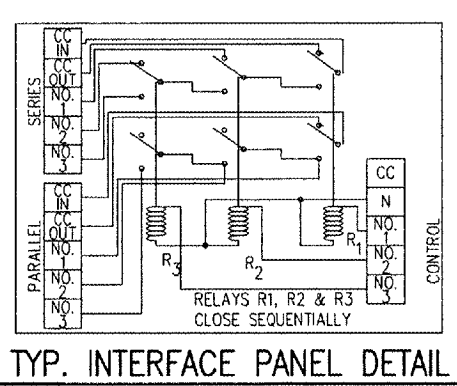
Hanson Professional Services Inc.  
1525 South Sixth Street  
Springfield, Illinois 62703-2886  
Offices Nationwide

WIDEN RUNWAY 11/29  
AND REPLACE MRL'S  
NEW ELECTRICAL ONE LINE  
FOR VAULT

NEW ELECTRICAL ONE LINE DIAGRAM FOR VAULT



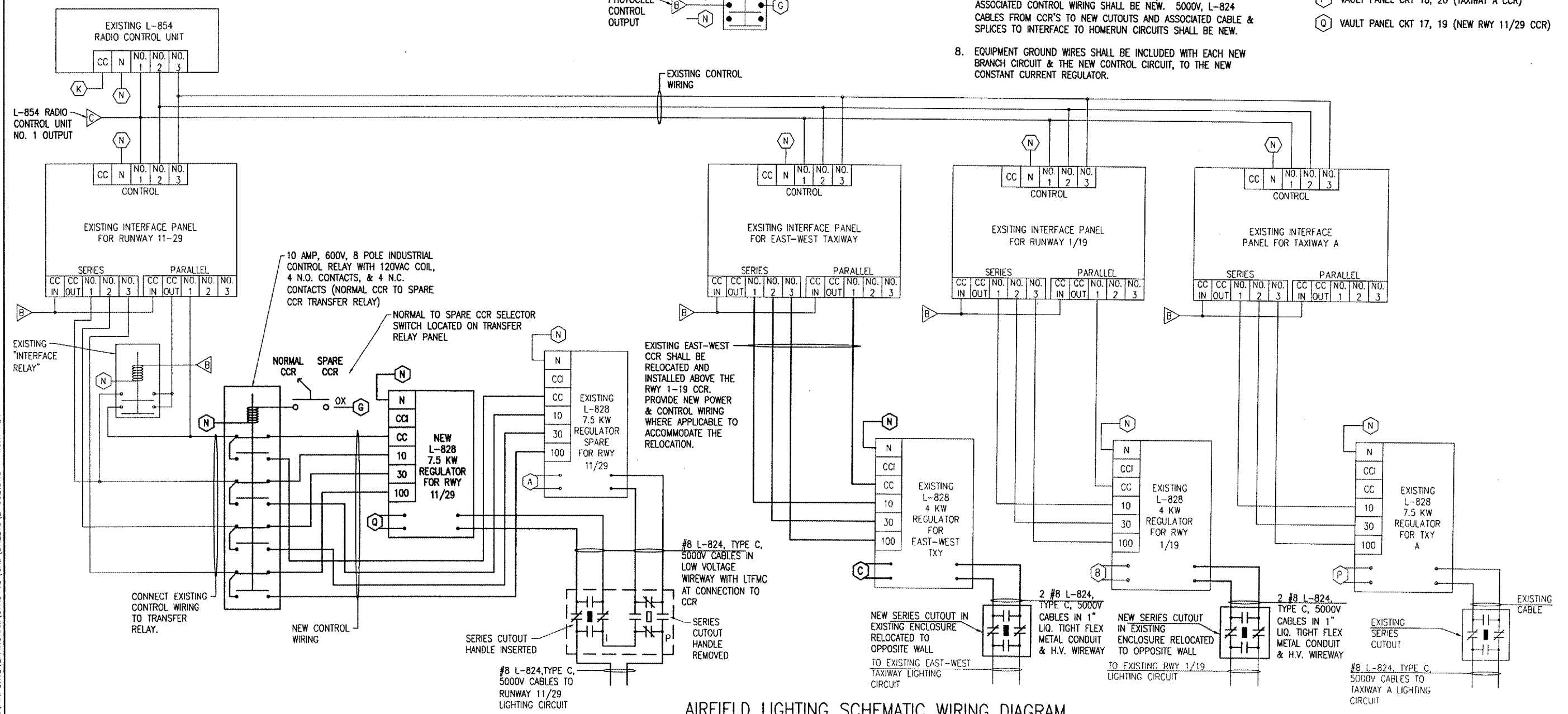




- NOTES**
1. ALL ELECTRICAL EQUIPMENT WILL BE WIRED IN ACCORDANCE WITH THE SCHEMATIC WIRING DIAGRAM AND ALL APPLICABLE CODES.
  2. ALL CONTROL CABLE WILL BE NO. 12 AWG, 600 VOLT CABLE.
  3. ALL ELECTRICAL EQUIPMENT WILL BE PROPERLY LABELED AND ALL ELECTRICAL CABLES WILL BE TAGGED.
  4. ALL ELECTRICAL CABLES INSIDE THE VAULT WILL BE IN CONDUIT OR DUCT.
  5. THE RUNWAY/TAXIWAY CIRCUITS WILL BE CONTROLLED BY THE L-854 RADIO CONTROL UNIT IN THE FOLLOWING MANNER:  
3 CLICKS - 10% BRIGHTNESS  
5 CLICKS - 30% BRIGHTNESS  
7 CLICKS - 100% BRIGHTNESS
  6. RADIO CONTROL UNIT, PHOTOCELL, INDUSTRIAL CONTROL RELAYS, SPARE CCR FOR RWY 11/29, CCR FOR EAST-WEST TAXIWAY, CCR FOR RWY 1/19, CCR FOR TXY A, AND THE 4 RESPECTIVE INTERFACE PANELS ARE EXISTING.
  7. 7.5 KW CONSTANT CURRENT REGULATOR FOR THE RUNWAY 11/29, AND ASSOCIATED TRANSFER RELAY PANEL SHALL BE NEW. THE FOUR CUTOUPS FOR RWY 11/29 CCR, SPARE CCR FOR RWY 11/29, RWY 1/19 CCR AND EAST-WEST TAXIWAY CCR SHALL BE NEW. 240 VAC POWER WIRING TO RWY 11/29 CCR, AND ASSOCIATED CONTROL WIRING SHALL BE NEW. 5000V, L-824 CABLES FROM CCR'S TO NEW CUTOUPS AND ASSOCIATED CABLE & SPLICES TO INTERFACE TO HOMERUN CIRCUITS SHALL BE NEW.
  8. EQUIPMENT GROUND WIRES SHALL BE INCLUDED WITH EACH NEW BRANCH CIRCUIT & THE NEW CONTROL CIRCUIT, TO THE NEW CONSTANT CURRENT REGULATOR.

**SHEET LEGEND**

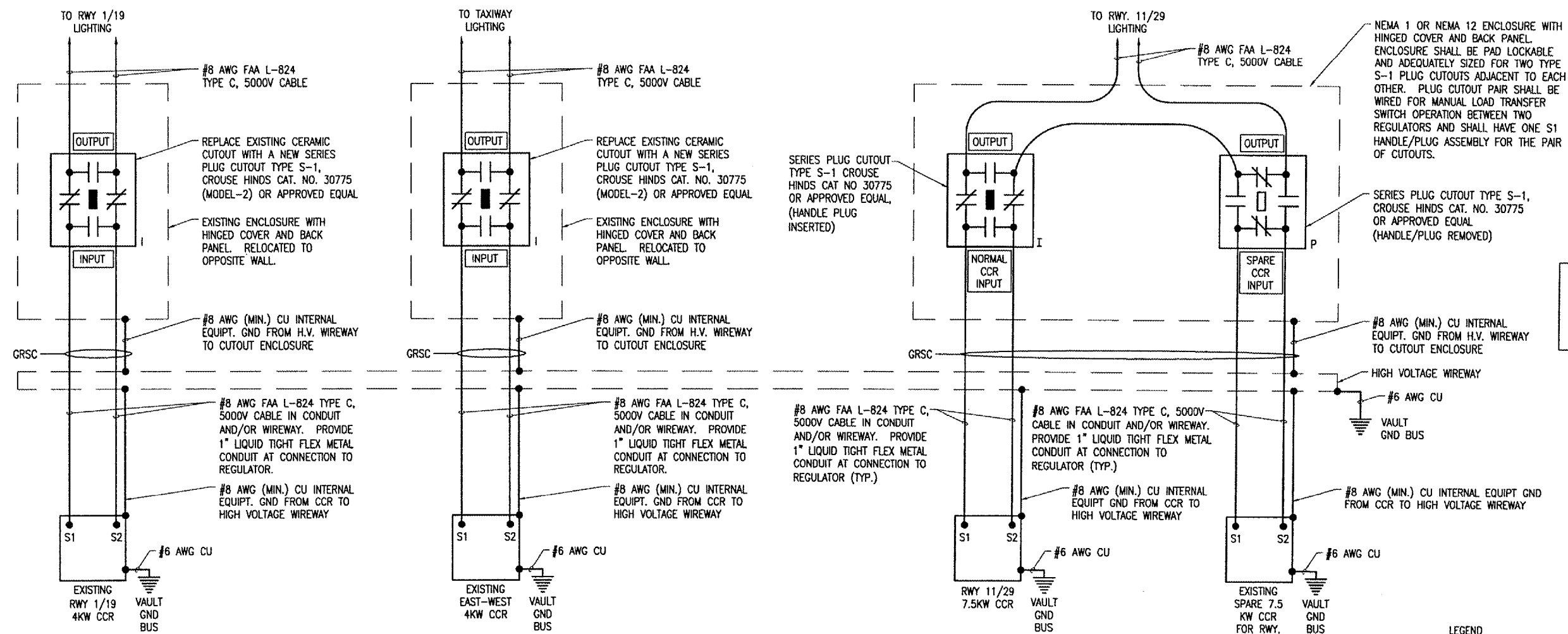
(A)	VAULT PANEL CKT 1, 3 (RWY 11/29 CCR)
(B)	VAULT PANEL CKT 2, 4 (SPARE RWY 1/19 CCR)
(C)	VAULT PANEL CKT 5, 7 (EAST-WEST TAXIWAY CCR)
(D)	VAULT PANEL CKT 6 (PHOTOCELL)
(E)	VAULT PANEL CKT 8 (BEACON)
(F)	VAULT PANEL CKT 9 (WIND CONE)
(G)	VAULT PANEL CKT 10 (INTERFACE POWER)
(H)	VAULT PANEL CKT 11 (RWY 1 PLASI)
(J)	VAULT PANEL CKT 12 (RWY 19 PLASI)
(K)	VAULT PANEL CKT 13 (RADIO CONTROL)
(N)	N DESIGNATES NEUTRAL FROM THE RESPECTIVE PANEL THAT POWERS THE DEVICE. FOR CONTROL CIRCUIT INPUTS TO CCR'S N SHALL BE FROM THE RESPECTIVE INTERFACE PANEL CIRCUIT NEUTRAL CONNECTION.
(P)	VAULT PANEL CKT 18, 20 (TAXIWAY A CCR)
(Q)	VAULT PANEL CKT 17, 19 (NEW RWY 11/29 CCR)



AIRFIELD LIGHTING SCHEMATIC WIRING DIAGRAM

APR 09, 2008 6:37 PM HAGL000382  
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<b>EFFINGHAM COUNTY MEMORIAL AIRPORT EFFINGHAM, ILLINOIS</b>	BY	
	REVISION	
	DATE	
A.I.P. PROJ.: 3-17-0040-B11		
I.L. PROJ.: 1H2-3761		
HEL Project No. 07A0143D_0800 Filename E-602.DWG Scale NONE Date 02/12/08	LAYOUT KNL 02/05/08 DRAWN DMV 02/05/08 REVIEWED CAH 02/12/08	
 Hanson Professional Services Inc. 1525 South Sixth Street Springfield, Illinois 62703-2885 Offices Nationwide	<b>WIDEN RUNWAY 11/29 AND REPLACE MRL'S</b> AIRFIELD LIGHTING WIRING SCHEMATIC	30 <small>30 of 78 sheets</small>



EAST-WEST TXY CCR SHALL BE RELOCATED AND INSTALLED ABOVE THE RWY 1/19 CCR.

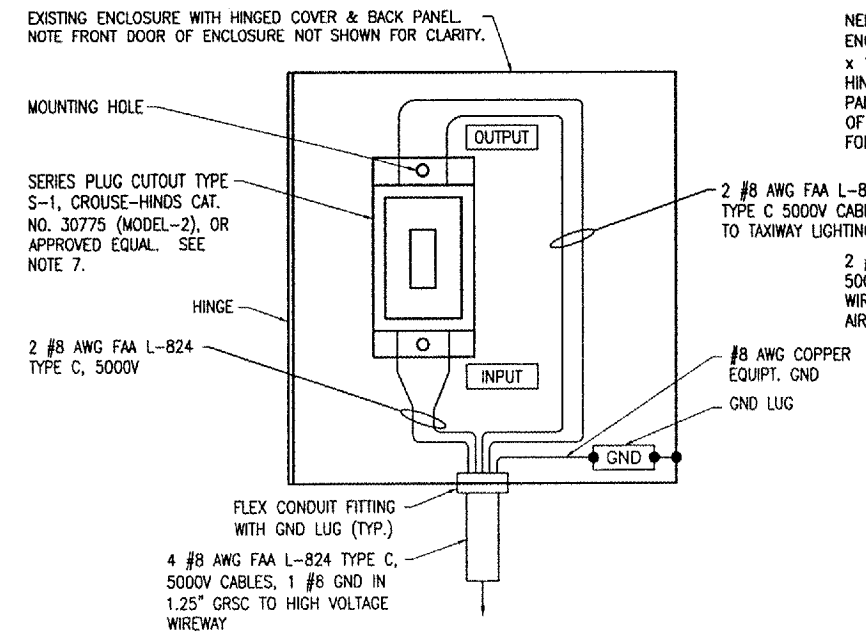
**HIGH VOLTAGE WIRING SCHEMATIC**

EXISTING TAXIWAY A CCR CIRCUIT NOT SHOWN

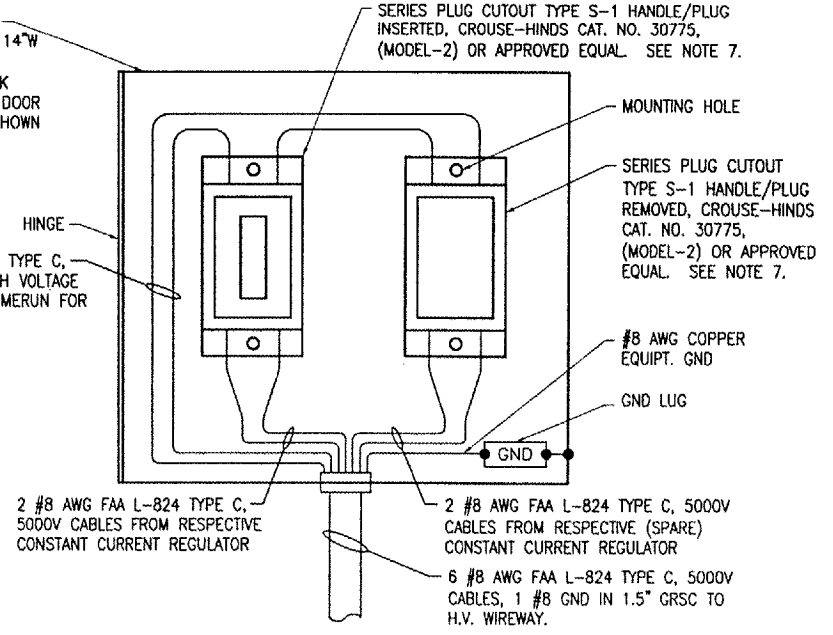
- LEGEND**
- "I" DENOTES PLUG CUTOUT WITH PLUG INSERTED
  - "P" DENOTES PLUG CUTOUT WITH PLUG PULLED
  - "CCR" DENOTES CONSTANT CURRENT REGULATOR

**NOTES**

1. PROVIDE PHENOLIC ENGRAVED LEGEND PLATES FOR EACH CONSTANT CURRENT REGULATOR NOTING THE REGULATOR DESIGNATION AND THE RUNWAY OR TAXIWAY SERVED.
2. EACH PLUG CUTOUT CABINET SHALL BE FURNISHED WITH A PHENOLIC ENGRAVED LEGEND PLATE THAT IDENTIFIES THE RESPECTIVE CIRCUIT OR REGULATOR. INCLUDE AN ADDITIONAL LEGEND PLATE LABELED "CAUTION OPERATE CUTOUTS WITH CCR SHUT OFF". FURNISH & INSTALL A WARNING LABEL FOR CUTOUT ENCLOSURE TO WARN PERSONS OF POTENTIAL ARC FLASH HAZARDS, PER THE REQUIREMENTS OF NEC 110.16 "FLASH PROTECTION".
3. PROVIDE PHENOLIC ENGRAVED LEGEND PLATES FOR EACH CUTOUT TO IDENTIFY THE RESPECTIVE CUTOUT INPUT CONNECTION AND THE RESPECTIVE CUTOUT OUTPUT CONNECTION.
4. PROVIDE ADEQUATE WORKING SPACE IN FRONT OF EACH CUTOUT ENCLOSURE TO MEET NEC CLEARANCE REQUIREMENTS.
5. PROVIDE WARNING SIGN ON VAULT DOOR LABELED "DANGER - HIGH VOLTAGE - KEEP OUT" PER THE REQUIREMENTS OF NEC 110.34 (C).
6. LIQUID TIGHT FLEXIBLE METAL CONDUIT AND ASSOCIATED FITTINGS SHALL BE U.L. LISTED TO MEET THE REQUIREMENTS OF NEC 350.6, SUITABLE FOR GROUNDING AND SUNLIGHT RESISTANT. LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS USED FOR FLEXIBILITY (INCLUDING CONNECTIONS TO CCR'S & TRANSFORMERS) SHALL REQUIRE AN EXTERNAL BONDING JUMPER OR INTERNAL EQUIPMENT GROUNDING CONDUCTOR PER NEC 350.60. EXTERNAL BONDING JUMPERS USED WITH CCR INSTALLATIONS SHALL BE #6 AWG COPPER (MINIMUM). DO NOT INSTALL LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS NOT UL LISTED.
7. CROUSE-HINDS CAT. NO. 30771, (MODEL-3) SERIES PLUG CUTOUTS ARE NOT ACCEPTABLE, BECAUSE THE HANDLE IS NOT REMOVABLE. OTHER CUTOUTS THAT DO NOT FUNCTION THE SAME AS CROUSE-HINDS CAT. NO. 30775 (MODEL-2) ARE NOT ACCEPTABLE.
8. HIGH VOLTAGE & LOW VOLTAGE CIRCUITS SHALL NOT BE INSTALLED IN THE SAME WIREWAY.
9. BOND ALL REGULATORS TO THE RESPECTIVE VAULT GROUND BUS WITH A DEDICATED #6 AWG BONDING JUMPER FOR EACH REGULATOR.



**INDIVIDUAL SERIES PLUG CUTOUT MOUNTING DETAIL**  
(TYPICAL FOR 2)



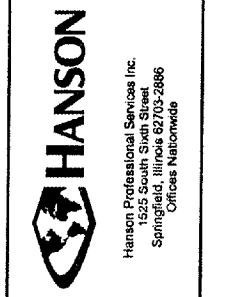
**SERIES PLUG CUTOUT MOUNTING DETAIL FOR RUNWAY 11/29 CIRCUIT**

BY	
REVISION	
DATE	

EFFINGHAM COUNTY  
MEMORIAL AIRPORT  
EFFINGHAM, ILLINOIS

A.I.P. PROJ.: 3-17-0040-B11  
ILL. PROJ.: 1H2-3761

PROJECT NO. 07A0143D 0800	DATE 02/12/08
DESIGNER E-603.DWG	LAYOUT KNL 01/28/08
SCALE NONE	DRAWN DMV 01/30/08
	REVIEWED CAH 02/12/08



WIDEN RUNWAY 11/29 AND REPLACE MRL'S  
HIGH VOLTAGE WIRING SCHEMATIC

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VAULT LEGEND PLATE SCHEDULE	
DEVICE	LABEL
RUNWAY 11-29 CCR	RUNWAY 11-29
SPARE RUNWAY 11-29 CCR	SPARE FOR RUNWAY 11-29
CUTOUT ENCLOSURE FOR RUNWAY 11-29	RUNWAY 11-29 CUTOUTS
EACH CUTOUT ENCLOSURE (PROVIDE 4 LEGEND PLATES)	CAUTION OPERATE CUTOUTS WITH CCR SHUT OFF
NORMAL CUTOUT INPUT SIDE CONNECTION (RWY 11-29)	NORMAL CCR INPUT
SPARE CUTOUT INPUT SIDE CONNECTION (RWY 11-29)	SPARE CCR INPUT
EACH CUTOUT OUTPUT SIDE CONNECTION	OUTPUT
RADIO INTERFACE PANEL FOR RUNWAY 11-29	RUNWAY 11-29
RADIO INTERFACE PANEL FOR RUNWAY 1-19	RUNWAY 1-19
RADIO INTERFACE PANEL FOR EAST-WEST TAXIWAY	EAST-WEST TAXIWAY
NEW HIGH VOLTAGE WIREWAY (PROVIDE 1 LEGEND PLATE 1/2" HIGH BLACK LETTERS WHITE BACKGROUND)	HIGH VOLTAGE

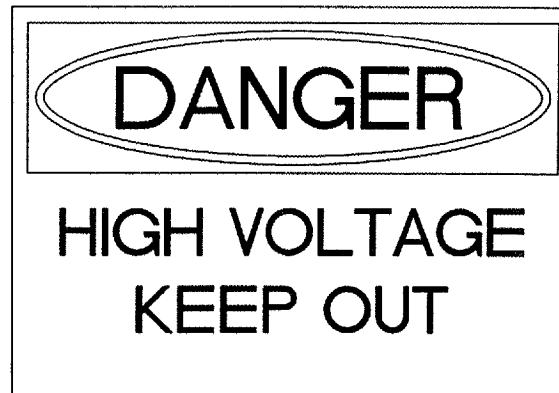
NOTE: LEGEND PLATES SHALL BE WEATHERPROOF ENGRAVED PLASTIC OR PHENOLIC MATERIAL, 1/4" HIGH BLACK LETTERS ON A WHITE BACKGROUND UNLESS NOTED OTHERWISE. SECURE WITH WEATHERPROOF ADHESIVE AND MACHINE SCREWS. FURNISH ADDITIONAL LEGEND PLATES WHERE REQUIRED BY CODE, FOR ADDITIONAL EQUIPMENT, AS DETAILED HEREIN ON THE PLANS, AND AS NOTED IN THE SPECIAL PROVISION SPECIFICATIONS.

FURNISH & INSTALL A WEATHERPROOF WARNING LABEL FOR EACH SAFETY SWITCH, PANELBOARD, LOAD CENTER, CUTOUT, & CONTROL PANEL TO WARN PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARDS, PER THE REQUIREMENTS OF NEC 110.16 "FLASH PROTECTION". LABELS SHALL BE HAZARD COMMUNICATION SYSTEMS, LLC (190 OLD MILFORD RD., BOX 1174, MILFORD, PA 18337, PHONE: 1-877-748-0244) PART NO. H6010-9VWHBJ OR APPROVED EQUAL.

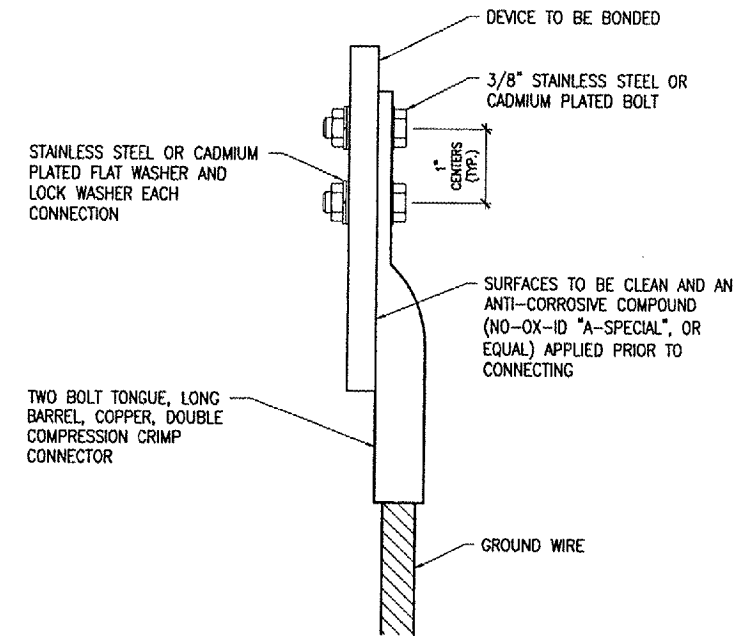
- DIRECTIONS TO TRANSFER RUNWAY 11-29 LIGHTING FROM NORMAL CCR TO SPARE CCR.
1. SHUT OFF INPUT POWER (CIRCUIT BREAKER) TO BOTH RWY 11-29 CCR'S & TURN CCR SELECTOR SWITCHES TO OFF.
  2. PULL CUTOUT HANDLE FROM NORMAL CCR UNIT & INSERT INTO SPARE CCR CUTOUT.
  3. TURN ON INPUT POWER (CIRCUIT BREAKER) TO SPARE RWY 11-29 CCR.
  4. GO TO CONTACTOR PANEL & TURN "RWY 11-29 CCR TRANSFER" SELECTOR SWITCH FROM "NORMAL" TO "SPARE" POSITION.
  5. TURN SELECTOR SWITCH ON SPARE CCR TO "REMOTE" POSITION.

PROVIDE PLACARD OR LEGEND PLATE FOR RUNWAY CONSTANT CURRENT REGULATOR PAIR AS NOTED ABOVE: LETTERING TO BE MIN. 1/4" HIGH, BLACK ON WHITE BACKGROUND. LOCATE PLACARD ABOVE CUTOUT ENCLOSURE.

**PLACARD DETAIL**



PROVIDE WARNING SIGN ON VAULT EXTERIOR DOORS LABELED "DANGER - HIGH VOLTAGE - KEEP OUT" PER THE REQUIREMENTS OF NEC 110.34 (C).



2 HOLE LONG BARREL COMPRESSION LUG TABLE			
WIRE SIZE	BURNDY CAT. NO.	THOMAS & BETTS CAT. NO.	PENN-UNION CAT. NO.
#6 AWG STRANDED	YA6C-2TC38	256-30695-1158	BBLU-6D-2TC38
#4 AWG STRANDED	YA4C-2TC38	256-30695-1159	BBLU-4D-2TC38
#2 AWG STRANDED	YA2C-2TC38	256-30695-1160	BBLU-2D-2TC38
#2 AWG SOLID	YA3C-2TC38	256-30695-1160	BBLU-3D-2TC38
#1/0 AWG STRANDED	YA25-2TC38	256-30695-1162	BBLU-1/0D-2TC38
#2/0 AWG STRANDED	YA26-2TC38	256-30695-1116	BBLU-2/0D-2TC38
#3/0 AWG STRANDED	YA27-2TC38	548168E	BBLU-3/0D-2TC38
#4/0 AWG STRANDED	YA28-2TC38	256-30695-1117	BBLU-4/0D-2TC38

**NOTES**

1. GROUND WIRE CONNECTIONS TO EQUIPMENT SHALL BE WITH 2 HOLE TONGUE LONG BARREL COMPRESSION LUGS BOLTED TO THE DEVICE OR WITH THE RESPECTIVE EQUIPT MANUFACTURER'S LUG OR TERMINAL WHERE APPLICABLE.
2. GROUNDING ELECTRODE CONDUCTORS, BONDING JUMPERS, & INDIVIDUAL GROUND WIRES SHALL NOT BE INSTALLED IN METAL CONDUIT. WHERE PLASTIC CONDUIT IS USED FOR INDIVIDUAL GROUND WIRES, DO NOT COMPLETELY ENIRCLE THE CONDUIT WITH FERROUS AND/OR MAGNETIC MATERIALS. WHERE METAL CLAMPS ARE INSTALLED USE NYLON BOLTS, NUTS, WASHERS, & SPACERS TO INTERRUPT A COMPLETE METALLIC PATH FROM ENCIRCLING THE CONDUIT.
3. ALL CONNECTIONS SHALL BE COATED WITH A CORROSION PREVENTATIVE COMPOUND (SANCHEM INC. NO-OX-ID "A-SPECIAL", BURNDY PENETROX E, OR EQUAL) BEFORE JOINING. ALL COPPER BUS BARS SHALL BE CLEANED PRIOR TO MAKING CONNECTIONS TO REMOVE SURFACE OXIDATION. CLEAN SURFACES, OF RESPECTIVE DEVICES TO BE BONDED, TO BARE METAL, PER NEC 250-12.

**GROUNDING LUG CONNECTION DETAIL**

DATE	REVISION	BY

EFFINGHAM COUNTY  
MEMORIAL AIRPORT  
EFFINGHAM, ILLINOIS

IL PROJ.: 1H2-3761 A.I.P. PROJ.: J-17-0040-811

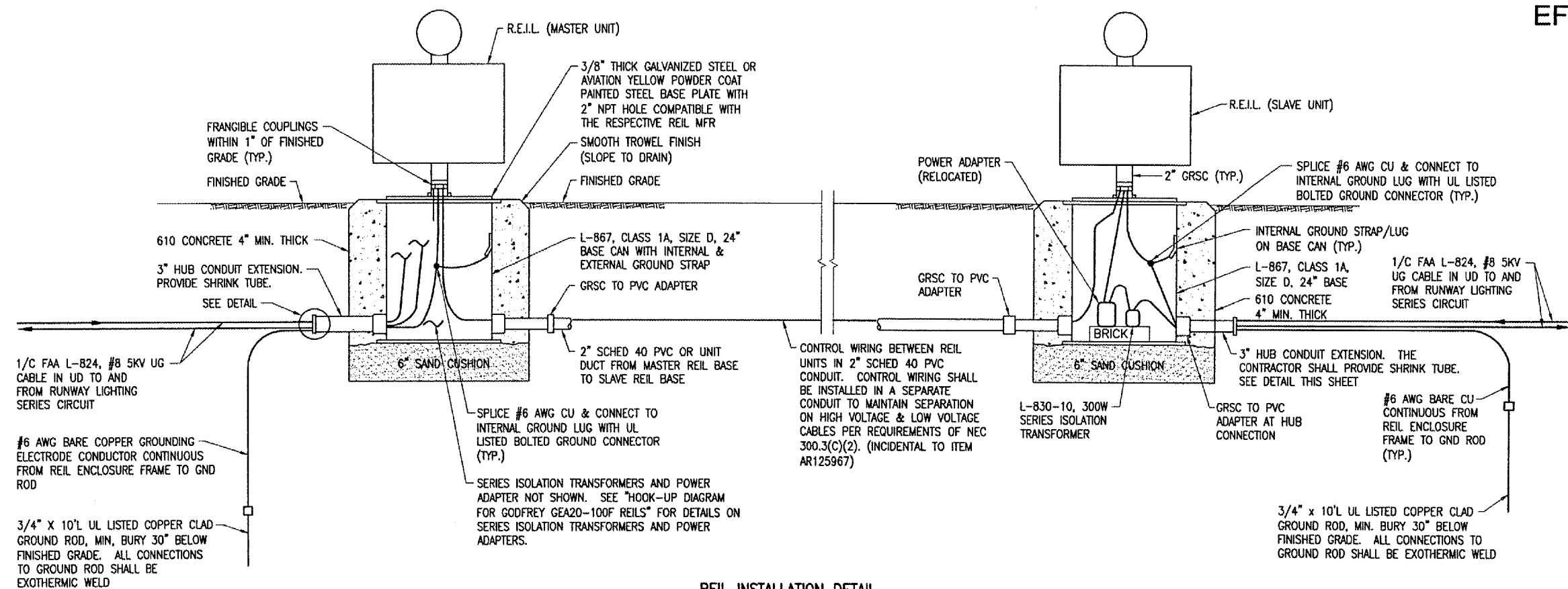
HEI Project No. 07A0143D_0800	DATE 02/12/08	LAYOUT	KNL 02/05/08
Estimate E-501.DWG	Scale NONE	DRAWN	DNV 02/05/08
		REVIEWED	CAH 02/12/08



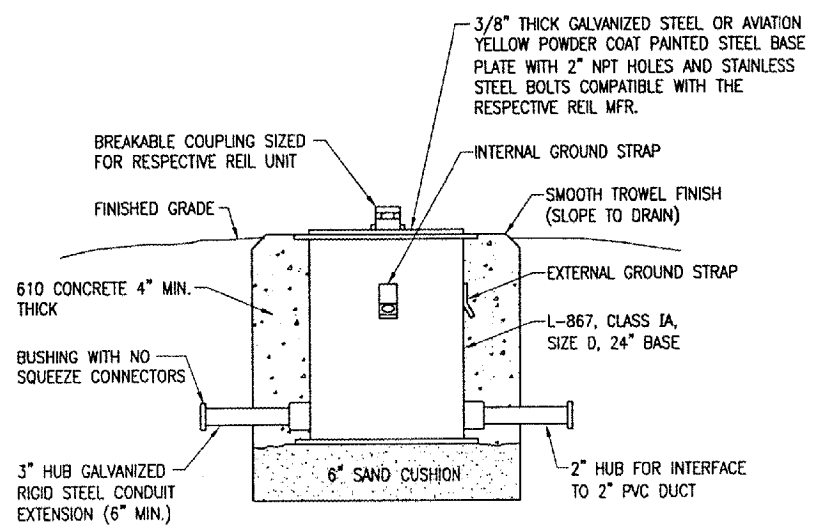
Hanson Professional Services Inc.  
1525 South Sixth Street  
Springfield, Illinois 62703-2898  
Offices Nationwide

WIDEN RUNWAY 11/29  
AND REPLACE MRL'S

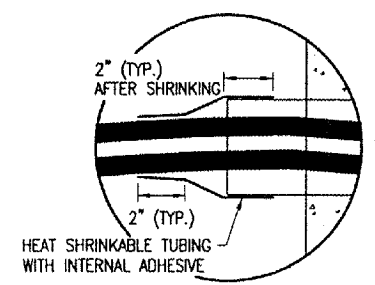
LEGEND PLATE  
SCHEDULE  
& GROUNDING DETAILS



REIL INSTALLATION DETAIL  
NOT TO SCALE



REIL BASE DETAIL  
(NOT TO SCALE)



SHRINK TUBE DETAIL  
(NOT TO SCALE)

REIL RELOCATION NOTES

1. THE EXISTING REILS ARE GODFREY ENGINEERING PART NO. GEA20-100F. THE MANUFACTURER IS NO LONGER IN BUSINESS. CONTRACTOR SHALL CONFIRM & RECORD EXISTING WIRING & CONNECTIONS PRIOR TO RELOCATING REIL UNITS. VERIFY INSTALLATION & WIRING REQUIREMENTS WITH THE RESPECTIVE REIL MANUFACTURER'S INSTRUCTIONS.
2. THE CONTRACTOR SHALL FURNISH AND INSTALL POWER AND CONTROL CABLES BETWEEN THE MASTER AND SLAVE REIL UNITS. CONTROL CABLES SHALL BE INSTALLED IN A SEPARATE DEDICATED CONDUIT BETWEEN THE REIL UNITS. THE SIZE, TYPE AND NUMBER OF CABLES TO BE INSTALLED BETWEEN THE REIL UNITS SHALL BE AS DETAILED HEREIN AND PER THE MANUFACTURER'S RECOMMENDATIONS. THE CABLE WILL BE TRENCHED AT A MINIMUM DEPTH OF 18". ALL POWER, CONTROL, & GROUNDING CONDUCTORS WILL BE INCIDENTAL TO ITEM AR125967 RELOCATE REILS.
3. ANY AND ALL TRENCHES AND DISTURBED AREAS WILL BE BACKFILLED AND RESTORED TO A SMOOTH GRADE AND SEEDED TO THE SATISFACTION OF THE ENGINEER. ALL TRENCH SETTLEMENT SHALL BE CORRECTED FOR A PERIOD OF ONE YEAR. RESTORATION, GRADING, AND SEEDING OF AREAS DISTURBED DURING THE REIL RELOCATION AND INSTALLATION OF THE PROPOSED CABLE WILL BE INCIDENTAL TO ITEM AR125967 RELOCATE REILS.
4. REILS SHALL BE AIMED AT ANGLE 10 DEGREES VERTICALLY AND TOED OUT 15 DEGREES FROM THE LINE PARALLEL TO THE RUNWAY CENTERLINE.
5. RELOCATION OF REILS SHALL BE PAID FOR UNDER ITEM AR125967 RELOCATE REILS - PER PAIR.

DATE	REVISION	BY

EFFINGHAM COUNTY  
MEMORIAL AIRPORT  
EFFINGHAM, ILLINOIS

IL PROJ.: 1H2-3761 A.I.P. PROJ.: 3-17-0040-B11

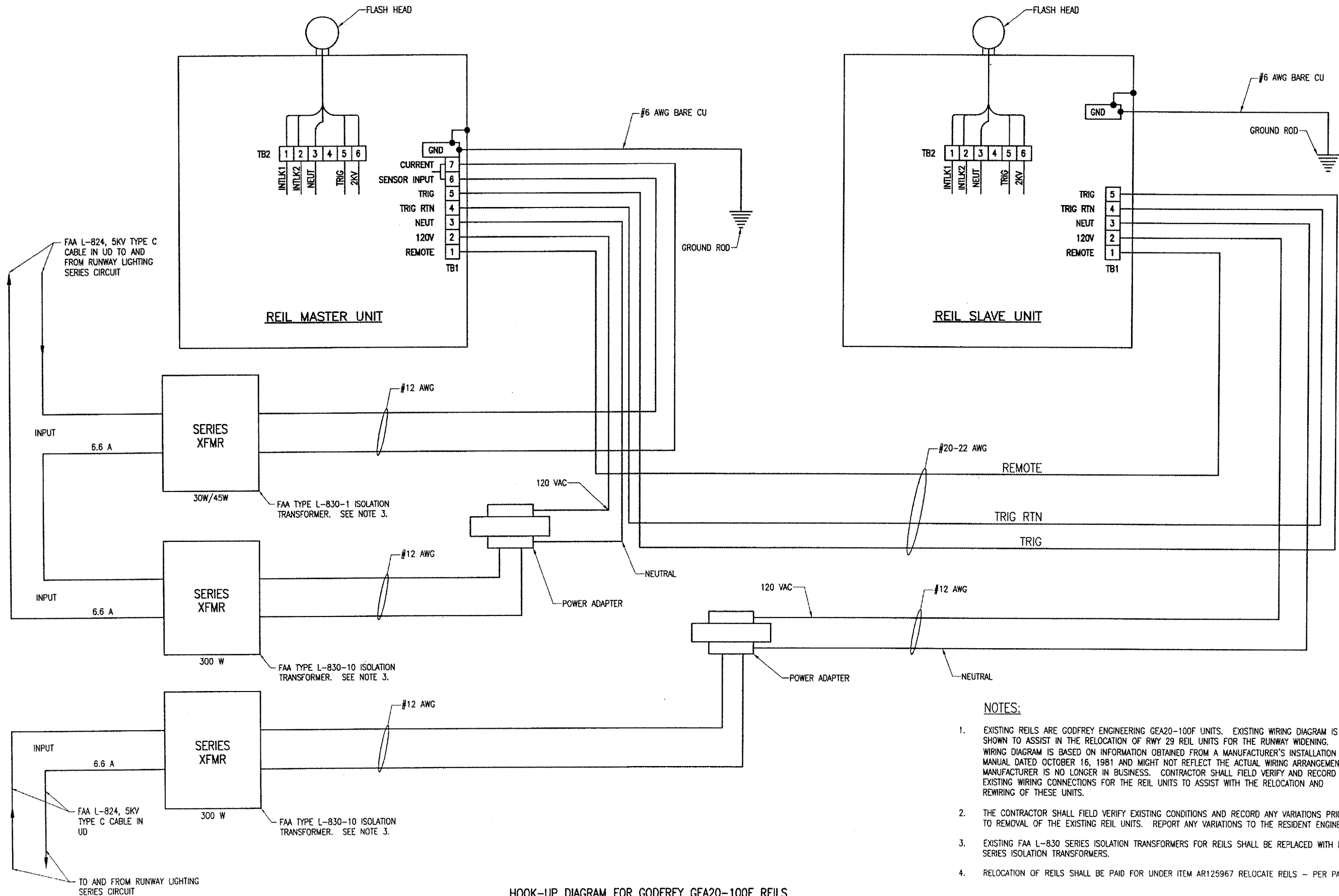
REVIEWED	DATE
CAH	02/12/08
DMV	02/03/08
KNL	02/03/08

REVISION: NOT TO SCALE  
DATE: 02/12/08

**HANSON**  
Hanson Professional Services Inc.  
1525 South Sixth Street  
Springfield, Illinois 62703-2886  
Offices Nationwide

WIDEN RUNWAY 11/29  
AND REPLACE MRL'S  
PROPOSED  
REIL  
DETAILS

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- NOTES:**
- EXISTING REILS ARE GODFREY ENGINEERING GEA20-100F UNITS. EXISTING WIRING DIAGRAM IS SHOWN TO ASSIST IN THE RELOCATION OF RWY 29 REIL UNITS FOR THE RUNWAY WIDENING. WIRING DIAGRAM IS BASED ON INFORMATION OBTAINED FROM A MANUFACTURER'S INSTALLATION MANUAL DATED OCTOBER 16, 1981 AND MIGHT NOT REFLECT THE ACTUAL WIRING ARRANGEMENT. MANUFACTURER IS NO LONGER IN BUSINESS. CONTRACTOR SHALL FIELD VERIFY AND RECORD THE EXISTING WIRING CONNECTIONS FOR THE REIL UNITS TO ASSIST WITH THE RELOCATION AND REWIRING OF THESE UNITS.
  - THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND RECORD ANY VARIATIONS PRIOR TO REMOVAL OF THE EXISTING REIL UNITS. REPORT ANY VARIATIONS TO THE RESIDENT ENGINEER.
  - EXISTING FAA L-830 SERIES ISOLATION TRANSFORMERS FOR REILS SHALL BE REPLACED WITH NEW SERIES ISOLATION TRANSFORMERS.
  - RELOCATION OF REILS SHALL BE PAID FOR UNDER ITEM AR125967 RELOCATE REILS - PER PAIR.

HOOK-UP DIAGRAM FOR GODFREY GEA20-100F REILS

DATE	REVISION	BY

EFFINGHAM COUNTY  
MEMORIAL AIRPORT  
EFFINGHAM, ILLINOIS

A.I.P. PROJ.: 3-17-0040-B11  
I.L. PROJ.: 1H2-3761

REI Project No. 07A0143D 0800	Drawn Date 02/12/08	Reviewed Date 02/12/08
Element E-604.DWG	State NOT TO SCALE	Scale
LAYOUT	KNL	02/03/08
DRAWN	DNY	02/03/08
REVIEWED	CAH	02/12/08

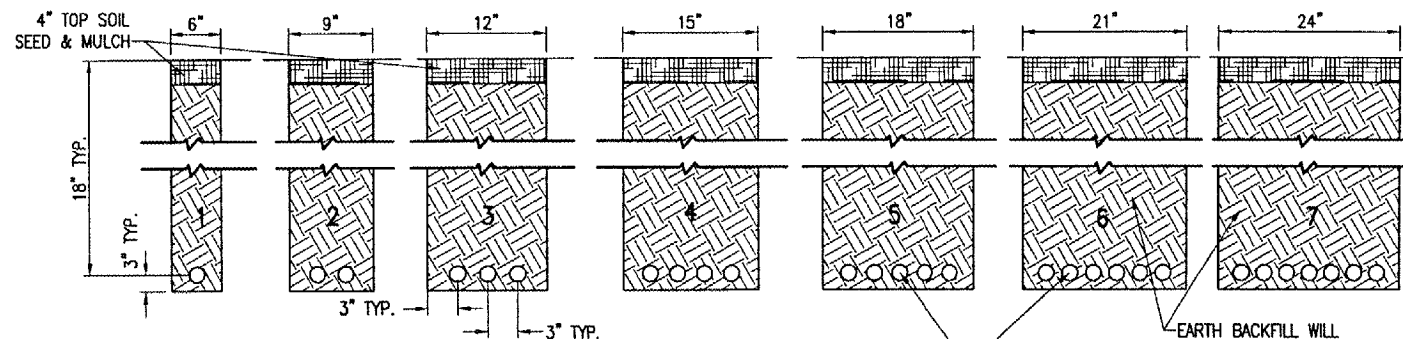


WIDEN RUNWAY 11/29  
AND REPLACE MRL'S  
EXISTING  
REIL  
WIRING DIAGRAM

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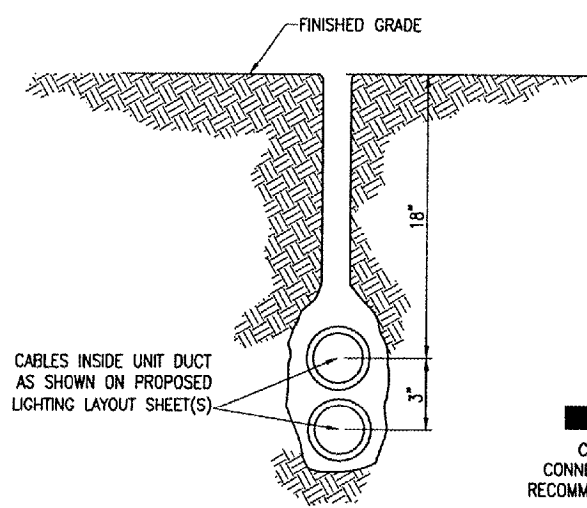
**NOTES:**  
DETAIL NUMBERS INDICATE NO. OF CABLES.

TRENCHES WITH MORE THAN SEVEN CABLES SHALL BE INCREASED 3" IN WIDTH FOR EACH ADDITIONAL CABLE; IF SPECIFIED ON PLANS TWO PARALLEL TRENCHES MAY BE CONSTRUCTED.

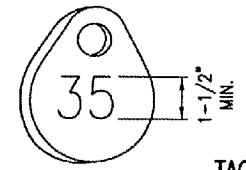
DEPTH OF TRENCHES SHALL BE AS SHOWN ABOVE UNLESS OTHERWISE SPECIFIED ON THE PLANS.

ALL DISTURBED SURFACES SHALL BE RESTORED TO THEIR ORIGINAL CONDITION. COST IS INCIDENTAL TO TRENCH.

EARTH BACKFILL WILL HAVE MAXIMUM 1" SIZE PARTICLES AND WILL BE PLACED IN TWO LIFTS AS APPROXIMATELY SHOWN (TYPICAL FOR ALL TRENCHES)

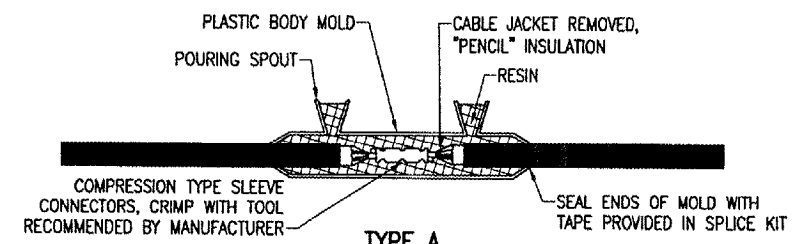


**PLOWED CABLE**  
(NOT TO SCALE)



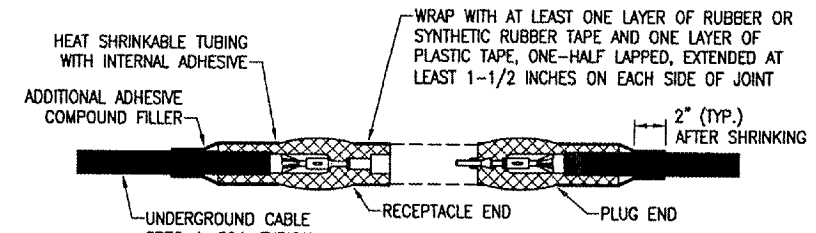
**TAG DETAIL**  
(NOT TO SCALE)

**NOTE:**  
AFFIX NON-CORROSIVE TAG TO FIXTURE FACING RUNWAY WITH SET SCREW, WIRE TIE, OR METAL BAND. NUMERALS SHALL BE ENGRAVED FOR PERMANENT READABILITY.



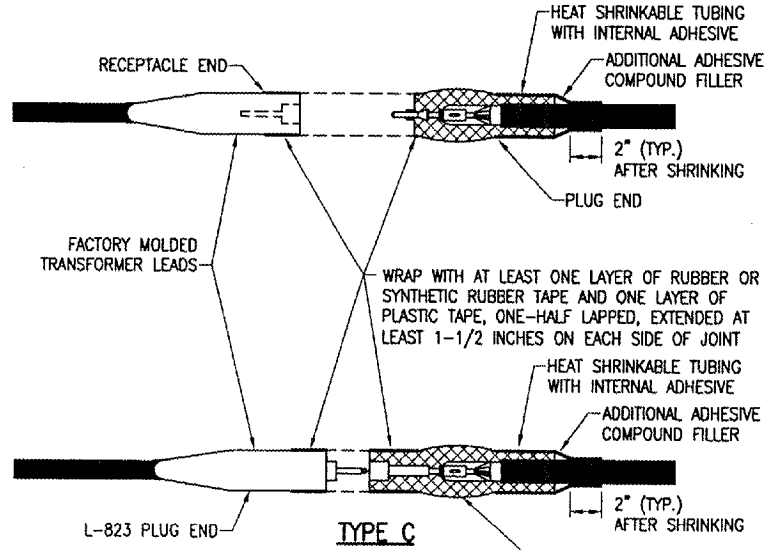
**TYPE A**

FOR SPLICES IN HOMERUNS FOR EXTENSIONS TO EXISTING CABLES ONLY



**TYPE B**

FOR SPLICES AT JUNCTION OF HOMERUN WITH LOOP CIRCUIT



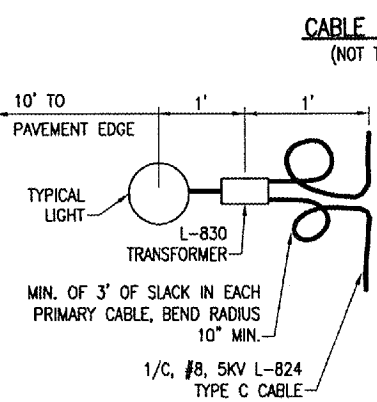
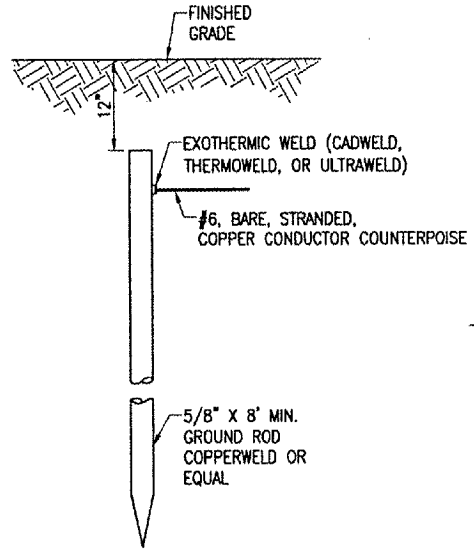
**TYPE C**

FOR SPLICES AT RUNWAY LIGHTS

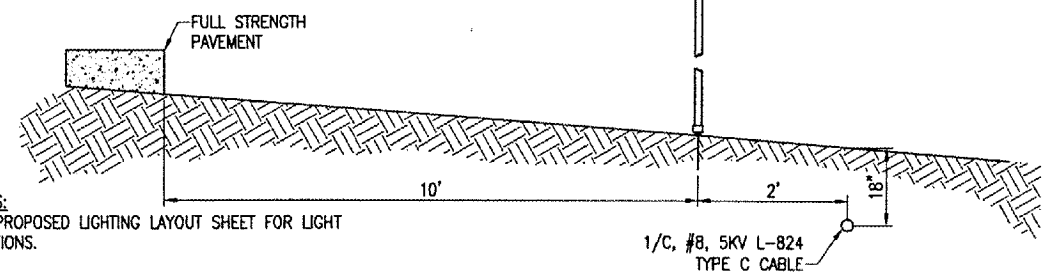
**NOTES:**  
SEE PROPOSED LIGHTING LAYOUT SHEET(S) FOR SPLICE TYPE.

INSIDE DIAMETER OF CONNECTOR SHALL PROPERLY MATCH THE OUTSIDE DIAMETER OF CABLE.

**CABLE SPLICES**  
(NOT TO SCALE)



**PLAN VIEW**



**PROFILE VIEW**

**NOTES:**  
SEE PROPOSED LIGHTING LAYOUT SHEET FOR LIGHT LOCATIONS.

**LIGHT AND CABLE INSTALLATION DETAIL**  
(NOT TO SCALE)

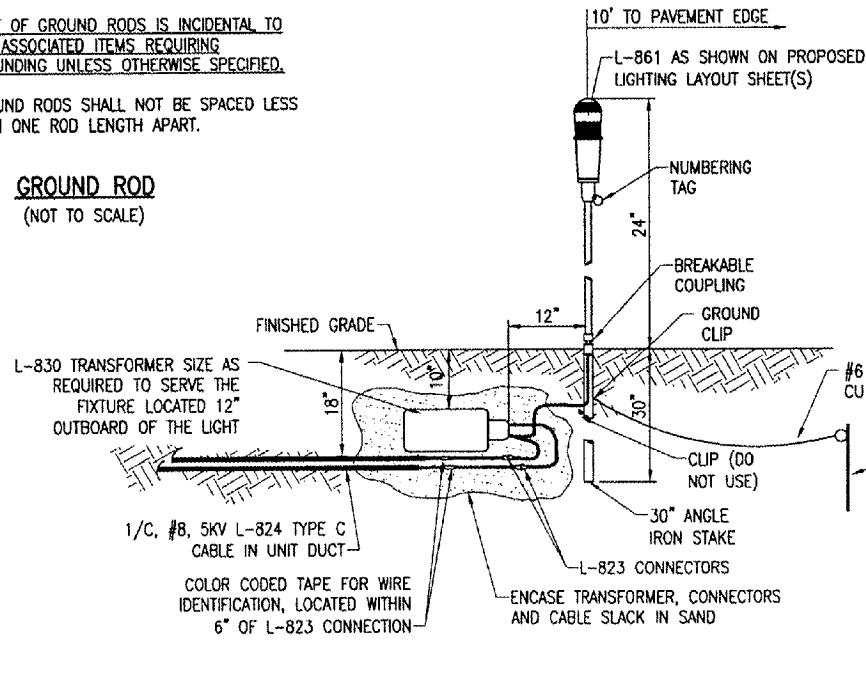
**NOTES:**  
TYPE AND MINIMUM NUMBER OF GROUND RODS SHALL BE AS SPECIFIED ON THE PLAN.

THE RESISTANCE TO GROUND OF THE COUNTERPOISE GROUNDING SYSTEM SHALL NOT EXCEED 25 OHMS.

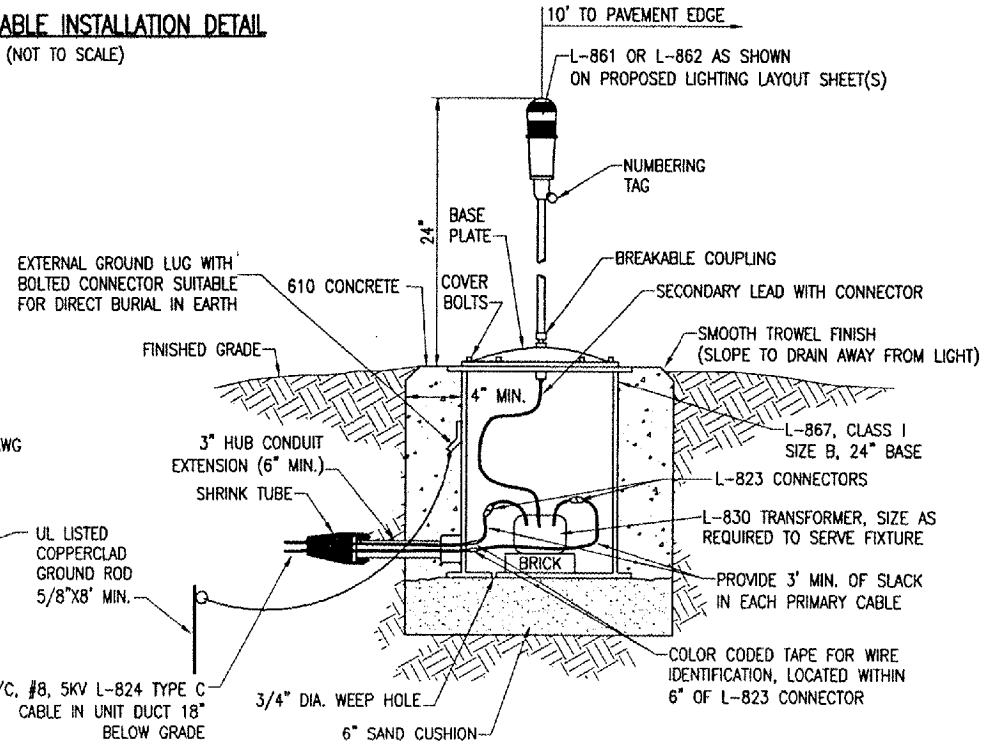
COST OF GROUND RODS IS INCIDENTAL TO THE ASSOCIATED ITEMS REQUIRING GROUNDING UNLESS OTHERWISE SPECIFIED.

GROUND RODS SHALL NOT BE SPACED LESS THAN ONE ROD LENGTH APART.

**GROUND ROD**  
(NOT TO SCALE)



**MEDIUM INTENSITY LIGHT - STAKE MOUNTED**  
(NOT TO SCALE)



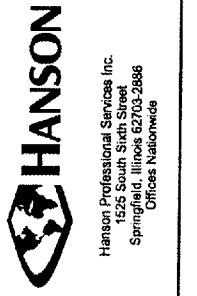
**MEDIUM/HIGH INTENSITY LIGHT - BASE MOUNTED**  
(NOT TO SCALE)

BY	
REVISION	
DATE	

EFFINGHAM COUNTY  
MEMORIAL AIRPORT  
EFFINGHAM, ILLINOIS

A.I.P. PROJ.: 3-17-0040-B11  
IL PROJ.: 1H2-3761

REV. PROJECT No. 07A01430.0800	
Drawn: R-542ELE.DWG	
Scale: NOT TO SCALE	
Date: 02/12/08	
LAYOUT	01/16/08
DRAWN	BHK
REVIEWED	CAH
	02/12/08



WIDEN RUNWAY 11/29  
AND REPLACE MRL'S  
PROPOSED  
ELECTRICAL  
DETAILS SHEET 2

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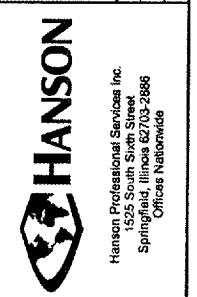


BY	
REVISION	
DATE	

EFFINGHAM COUNTY  
MEMORIAL AIRPORT  
EFFINGHAM, ILLINOIS

IL PROJ.: 1H2-3761 A.I.P. PROJ.: 3-17-0040-B11

ME Project No.	07A0143D_0800
Revision	R-544ELE.DWG
Scale	NOT TO SCALE
Date	02/12/08
LAYOUT	KDM 01/16/08
DRAWN	BAK 01/16/08
REVIEWED	CAH 02/12/08



WIDEN RUNWAY 11/29  
AND REPLACE MRL'S

ELECTRICAL  
NOTES  
SHEET 2

**AIRFIELD LIGHTING NOTES**

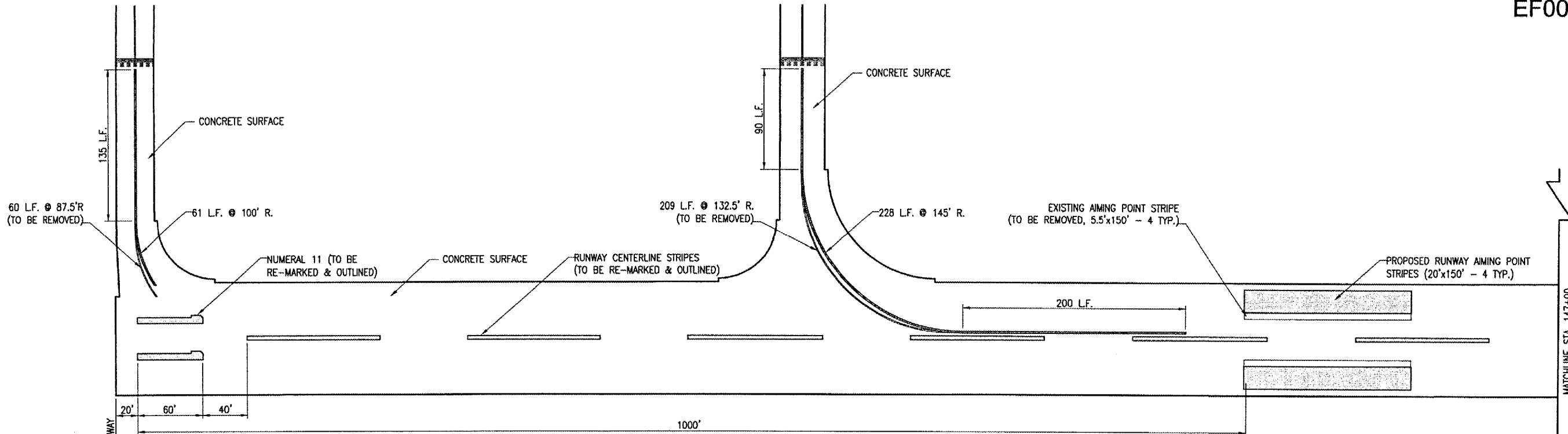
- UNLESS OTHERWISE NOTED, ALL UNDERGROUND AIRFIELD LIGHTING SERIES CIRCUIT CONDUCTORS WHETHER DEB OR IN DUCT/CONDUIT SHALL BE FAA APPROVED 5000 VOLT L-824 TYPE. ALL UNDERGROUND FIELD POWER LOW VOLTAGE (600 VOLT & BELOW) CIRCUIT CONDUCTORS WHETHER DEB OR IN DUCT/CONDUIT SHALL BE UL LISTED 600 VOLT, TYPE XLP-USE-2 COPPER CONDUCTORS. CONDUCTOR SIZES SHALL BE AS SPECIFIED, HEREIN.
- NO COMPONENTS OF PRIMARY CIRCUIT SUCH AS CABLE, CONNECTORS AND TRANSFORMERS SHALL BE BROUGHT ABOVE GROUND AT EDGE LIGHTS, SIGNS, REIL, PAPI, ETC.
- THERE SHALL BE NO EXPOSED POWER/CONTROL CABLES BETWEEN THE POINT WHERE THEY LEAVE THE UNDERGROUND (DEB OR L-867 BASES) AND WHERE THEY ENTER THE EQUIPMENT (SUCH AS TAXIWAY SIGNS, PAPI, REIL, ETC.) ENCLOSURES. THESE CABLES SHALL BE ENCLOSED IN RIGID CONDUIT OR IN FLEXIBLE, WATERTIGHT CONDUIT WITH BREAKABLE COUPLING(S) AT THE GRADE OR THE HOUSING COVER, AS SHOWN IN APPLICABLE DETAILS.
- THE JOINTS OF THE L-823 PRIMARY CONNECTORS SHALL BE WRAPPED WITH AT LEAST ONE LAYER OF RUBBER OR SYNTHETIC RUBBER TAPE AND ONE LAYER OF PLASTIC TAPE, ONE-HALF LAPPED, EXTENDING AT LEAST 1-1/2 INCHES ON EACH SIDE OF THE JOINT, AS SHOWN ON SHEET NO. 37.
- THE CABLE ENTRANCE INTO THE FIELD-ATTACHED L-823 CONNECTORS SHALL BE ENCLOSED BY A HEAT-SHRINKABLE TUBING WITH CONTINUOUS INTERNAL ADHESIVE, AS SHOWN ON SHEET NO. 37.
- L-823 TYPE II, TWO-CONDUCTOR SECONDARY CONNECTORS SHALL BE CLASS 'A' (FACTORY MOLDED).
- THERE SHALL BE NO SPLICES IN THE SECONDARY CABLE(S) WITHIN THE STEMS OF A RUNWAY/TAXIWAY EDGE/THRESHOLD LIGHTING FIXTURE AND THE WIREWAYS LEADING TO TAXIWAY SIGNS AND PAPI/REIL EQUIPMENT.
- ELECTRICAL INSULATING GREASE SHALL BE APPLIED WITHIN THE L-823, SECONDARY, TWO CONDUCTOR CONNECTORS TO PREVENT WATER ENTRANCE. THESE CONNECTORS SHALL NOT BE TAPED.
- DEB ISOLATION TRANSFORMERS SHALL BE BURIED AT A DEPTH OF TEN (10") INCHES ON A LINE CROSSING THE LIGHT AND PERPENDICULAR TO THE RUNWAY/TAXIWAY CENTERLINE AT A LOCATION TWELVE (12") INCHES FROM THE LIGHT OPPOSITE FROM THE RUNWAY/TAXIWAY.
- A SLACK OF THREE (3') FEET, MINIMUM, SHALL BE PROVIDED IN THE PRIMARY CABLE AT EACH TRANSFORMER/CONNECTOR TERMINATION. AT STAKE-MOUNTED LIGHTS, THE SLACK SHALL BE LOOSELY COILED IMMEDIATELY BELOW THE ISOLATION TRANSFORMER.
- DIRECTION OF PRIMARY CABLES SHALL BE IDENTIFIED BY COLOR CODING AS FOLLOWS: WHEN FACING LIGHT WITH BACK TO PAVEMENT, CABLE TO THE LEFT IS CODED RED AND CABLE TO RIGHT IS CODED BLUE. THIS APPLIES TO STAKE MOUNTED LIGHTS AND BASE MOUNTED LIGHTS WHERE THE BASE HAS ONLY ONE ENTRANCE.
- L-867 BASES SHALL BE SIZE B, 24" DEEP, CLASS I, UNLESS OTHERWISE NOTED.
- BASE MOUNTED BREAKABLE COUPLINGS SHALL NOT HAVE WEEP HOLES TO THE OUTSIDE. PLUGGED UP HOLES SHALL NOT BE ACCEPTABLE. IT SHALL BE A 1/4" DIAMETER, MINIMUM, OR EQUIVALENT OPENING FOR DRAINAGE FROM THE SPACE AROUND THE SECONDARY CONNECTOR INTO THE L-867 BASE.
- THE ELEVATION OF THE BREAKABLE COUPLING GROOVE SHALL NOT EXCEED 1-1/2" ABOVE THE EDGE OF THE COVER IN CASE OF BASE MOUNTED COUPLINGS, OR THE TOP OF THE STAKE IN CASE OF STAKE MOUNTED COUPLINGS.
- WHERE THE BREAKABLE COUPLING IS NOT AN INTEGRAL PART OF THE LIGHT FIXTURE STEM OR MOUNTING LEG, A BEAD OF SILICON SEAL SHALL BE APPLIED COMPLETELY AROUND LIGHT STEM OR WIREWAY AT BREAKABLE COUPLING TO PROVIDE A WATERTIGHT SEAL.
- TOPS OF THE STAKES SUPPORTING LIGHT FIXTURES SHALL BE FLUSH WITH THE SURROUNDING GRADE.
- PLASTIC LIGHTING FIXTURE COMPONENTS, SUCH AS LAMP HEADS, STEMS, BREAKABLE COUPLINGS, BASE COVERS, BRACKETS, STAKES, SHALL NOT BE ACCEPTABLE.
- THE TOLERANCE FOR THE HEIGHT OF RUNWAY/TAXIWAY EDGE LIGHTS SHALL BE: ONE (1) INCH. IN CASE OF STAKE MOUNTED LIGHTS, THE SPECIFIED LIGHTING FIXTURE HEIGHT SHALL BE MEASURED BETWEEN THE TOP OF THE STAKE AND THE TOP OF THE LENS. IN CASE OF BASE MOUNTED LIGHTS, THE SPECIFIED LIGHTING FIXTURE HEIGHT SHALL BE MEASURED BETWEEN THE TOP OF THE BASE FLANGE AND THE TOP OF THE LENS, THUS INCLUDING THE BASE COVER, THE FRANGIBLE COUPLING, THE STEM, THE LAMP HOUSING AND THE LENS.

**GROUNDING NOTES FOR AIRFIELD LIGHTING**

- GROUNDING FOR RUNWAY LIGHTS, TAXIWAY LIGHTS, AND LIGHTED TAXI GUIDANCE SIGNS SHALL BE AS DETAILED ON THE PLANS AND AS SPECIFIED HEREIN. PER FAA AC 150/5340-30C DESIGN AND INSTALLATION DETAILS FOR AIRPORT VISUAL AIDS, CHAPTER 12, PART 12.6; A SAFETY GROUND MUST BE INSTALLED AT EACH LIGHT FIXTURE. THE PURPOSE OF THE SAFETY GROUND IS TO PROTECT PERSONNEL FROM POSSIBLE CONTACT WITH AN ENERGIZED LIGHT BASE OR MOUNTING STAKE AS THE RESULT OF A SHORTED CABLE OR ISOLATION TRANSFORMER. A SAFETY GROUND SHALL BE INSTALLED AT EACH TRANSFORMER BASE/LIGHT CAN ASSOCIATED WITH RUNWAY LIGHTS, TAXIWAY LIGHTS, AND LIGHTED TAXI GUIDANCE SIGNS. A SAFETY GROUND SHALL ALSO BE INSTALLED AT EACH STAKE MOUNTED LIGHT FIXTURE. THE SAFETY GROUND SHALL BE A #6 AWG BARE COPPER CONDUCTOR CONNECTED TO THE GROUND LUG ON THE RESPECTIVE L-867 TRANSFORMER BASE/LIGHT CAN OR MOUNTING STAKE AND A 5/8-INCH DIAMETER BY 8-FOOT LONG (MINIMUM) UL LISTED COPPER CLAD GROUND ROD. CONNECTIONS TO GROUND LUGS ON THE L-867 TRANSFORMER BASE/LIGHT CAN OR MOUNTING STAKE SHALL BE WITH A UL LISTED GROUNDING CONNECTOR. CONNECTIONS TO GROUND RODS SHALL BE MADE WITH EXOTHERMIC WELD TYPE CONNECTORS, CADWELD BY ERICO PRODUCTS, INC., SOLON, OHIO, (PHONE: 800-248-9353), THERMOWELD BY CONTINENTAL INDUSTRIES, INC., TULSA, OKLAHOMA (PHONE: 918-663-1440) OR ULTRAWELD BY HARGER, GRAYSLAKE, ILLINOIS (PHONE: 800-842-7437). EXOTHERMIC WELD CONNECTIONS SHALL BE INSTALLED IN CONFORMANCE WITH THE RESPECTIVE MANUFACTURER'S DIRECTIONS USING MOLDS AS REQUIRED FOR EACH RESPECTIVE APPLICATION. BOLTED CONNECTIONS WILL NOT BE PERMITTED AT GROUND RODS. TOP OF GROUND RODS SHALL BE BURIED 12 INCHES MINIMUM BELOW GRADE, UNLESS SPECIFIED OTHERWISE HEREIN, FOR RESPECTIVE APPLICATIONS.
- CLEAN ALL METAL SURFACES BEFORE MAKING GROUND CONNECTIONS. METALLIC SURFACES TO BE JOINED SHALL BE PREPARED BY THE REMOVAL OF ALL NON-CONDUCTIVE MATERIAL PER 2008 NATIONAL ELECTRICAL CODE ARTICLE 250-12.
- PER FAA 150/5340-30C THE RESISTANCE TO GROUND OF THE RESPECTIVE MOUNTING STAKE OR LIGHT BASE (WITH GROUND ROD CONNECTED) MUST BE 25 OHMS OR LESS.
- GROUNDING FOR REILS. GROUNDING FOR REILS SHALL CONFORM TO THE RESPECTIVE REIL MANUFACTURER'S INSTALLATION INSTRUCTIONS, AS DETAILED ON THE PLANS, AND AS SPECIFIED HEREIN. FURNISH AND INSTALL A 3/4-INCH DIAMETER BY 10-FOOT LONG COPPER CLAD GROUND ROD AT EACH REIL UNIT. BOND EACH REIL UNIT HOUSING AND THE REIL BASE CAN TO THE RESPECTIVE GROUND ROD IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS WITH A #6 AWG BARE SOLID OR STRANDED (PER REIL MANUFACTURER REQUIREMENTS) COPPER GROUNDING ELECTRODE CONDUCTOR. TOP OF GROUND RODS SHALL BE BURIED 30 INCHES BELOW GRADE. ALL CONNECTIONS TO GROUND RODS SHALL BE EXOTHERMIC WELD AS MANUFACTURED BY CADWELD, THERMOWELD, OR ULTRAWELD. CONNECTIONS TO REIL UNIT FRAMES SHALL BE AS RECOMMENDED BY THE MANUFACTURER OR WITH UL LISTED GROUNDING CONNECTORS. CONTRACTOR SHALL CONFIRM COUNTERPOISE REQUIREMENTS AND/OR ADDITIONAL GROUNDING REQUIREMENTS WITH THE RESPECTIVE REIL MANUFACTURER'S INSTALLATION INSTRUCTIONS AND/OR RECOMMENDATIONS.

- THE TOLERANCE FOR THE LATERAL SPACING (LIGHT LANE TO RUNWAY/TAXIWAY CENTERLINE) OF RUNWAY/TAXIWAY EDGE LIGHTS SHALL BE ONE (1) INCH. THIS ALSO APPLIES AT INTERSECTIONS TO LATERAL SPACING BETWEEN LIGHTS OF A RUNWAY/TAXIWAY AND THE INTERSECTING RUNWAY/TAXIWAY.
- ENTRANCES INTO L-867 BASES SHALL HAVE CONDUIT COUPLINGS OR REDUCERS TO INTERFACE UNIT DUCT/CONDUIT TO L-867 BASE HUBS, OR SHALL BE SEALED WITH HEAT SHRINK AS SHOWN IN DETAIL "B" ON SHEET NO. 36.
- GALVANIZED/PAINTED EQUIPMENT/COMPONENT SURFACES SHALL NOT BE DAMAGED BY DRILLING, FILING, ETC. DRAIN HOLES IN METAL TRANSFORMER HOUSINGS SHALL BE MADE BEFORE GALVANIZING.
- EDGE LIGHT NUMBERING TAGS SHALL BE FACING THE PAVEMENT.
- CABLE/SPLICE/DUCT MARKERS SHALL BE PRECAST CONCRETE OF THE SIZE SHOWN. LETTERS/NUMBERS/ARROWS FOR THE LEGEND TO BE IMPRESSED INTO THE TOPS OF THE MARKERS SHALL BE PRE-ASSEMBLED AND SECURED IN THE MOLD BEFORE THE CONCRETE IS POURED. LEGEND INSCRIBED BY HAND IN WET CONCRETE SHALL NOT BE ACCEPTABLE.
- ALL UNDERGROUND CABLE RUNS SHALL BE IDENTIFIED BY CABLE MARKERS AT 400 FEET MAXIMUM SPACING, WITH AN ADDITIONAL MARKER AT EACH CHANGE OF DIRECTION OF THE CABLE RUN. CABLE MARKERS SHALL BE INSTALLED IMMEDIATELY ABOVE THE CABLES.
- THERE SHALL BE NO SPLICES BETWEEN THE ISOLATION TRANSFORMERS. L-823 CONNECTORS ARE ALLOWED AT TRANSFORMER CONNECTIONS ONLY, UNLESS OTHERWISE SHOWN.
- APPLY AN OXIDE INHIBITING, ANTI-SEIZING COMPOUND TO ALL SCREWS, NUTS AND BREAKAGE COUPLING THREADS.
- LOCATIONS OF ENDS OF ALL UNDERGROUND DUCTS SHALL BE IDENTIFIED BY DUCT MARKERS.
- WHERE A PARALLEL, CONSTANT VOLTAGE PAPI SYSTEM IS PROVIDED, THE "T" SPLICES SHALL BE OF THE CAST TYPE.
- CONCRETE USED FOR SLABS, FOOTINGS, BACKFILL AROUND TRANSFORMER HOUSINGS, MARKINGS, ETC. SHALL BE 3000 PSI, AIR-ENTRAINED.
- ALL POWER AND CONTROL CABLES IN MAN/HAND HOLES SHALL BE TAGGED. USE EMBOSSED COPPER STRIPS TO BE ATTACHED AT BOTH ENDS TO THE CABLE BY THE USE OF PLASTIC STRAPS. MINIMUM OF TWO TAGS SHALL BE PROVIDED ON EACH CABLE IN A MAN/HAND HOLE-ONE AT THE CABLE ENTRANCE AND ONE AT THE CABLE EXIT.
- THE LOCATION, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ON THE PLANS IS NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT. CALL J.U.L.I.E. FOR UTILITY INFORMATION AT 1-800-892-0123. ALSO CONTACT AIRPORT MANAGER AND/OR RESPECTIVE AIRPORT PERSONNEL FOR ASSISTANCE IN LOCATING UNDERGROUND AIRPORT CABLES AND/OR UTILITIES. CONTACT FAA FOR ASSISTANCE IN LOCATING THEIR CABLES.





START OF RUNWAY  
STA. 160+00

MATCHLINE STA. 147+00

**MARKING REMOVAL NOTES**

THE AREAS THAT ARE DESIGNATED EXISTING MARKING (TO BE REMOVED) WILL BE REMOVED BY WATER BLASTING, SANDBLASTING, OR SHOT BLASTING.

AREAS TO BE REMOVED ARE CALLED OUT ON THE PROPOSED MARKING PLAN SHEETS.

ALL AREAS TO BE REMOVED ARE CALCULATED AREAS. ANY ADDITIONAL AREAS, DUE TO OVER SPRAY, SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

ALL MARKING REMOVAL ITEMS WILL BE PAID FOR AS FOLLOWS:  
AR620800 "PAVEMENT MARKING REMOVAL" - PER SQ. FT.

**MARKING NOTES**

ALL PROPOSED MARKING WILL BE LOCATED AS SHOWN ON THE PROPOSED MARKING PLAN SHEETS.

ALL RUNWAY MARKING WILL BE SOLID AND WHITE IN COLOR.

ALL TAXIWAY MARKING WILL BE SOLID AND YELLOW IN COLOR.

ALL YELLOW & WHITE PROPOSED MARKING WILL HAVE A REFLECTIVE MEDIA APPLIED IN ACCORDANCE WITH THE SPECIFICATIONS.

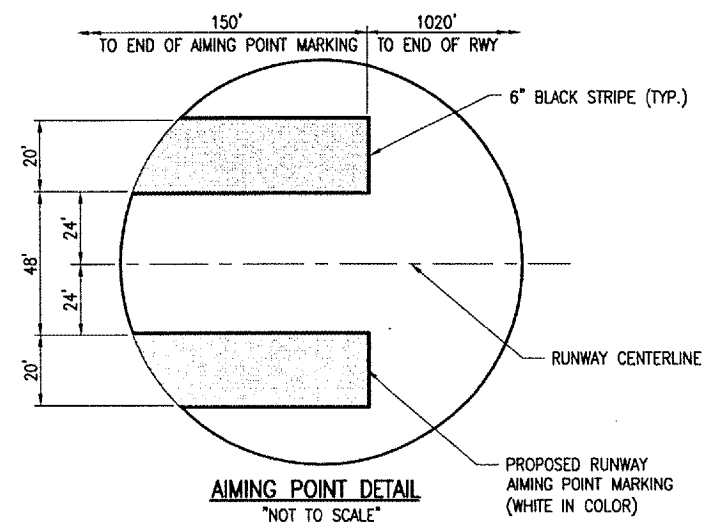
ALL PROPOSED MARKING WILL BE OUTLINED WITH A 6" WIDE (BLACK) OUTLINE STRIPE.

ALL PROPOSED MARKING LOCATED ON PROPOSED OR EXISTING CONCRETE WILL REQUIRE WATER, SAND OR SHOT BLASTING PRIOR TO INSTALLATION TO REMOVE ANY CURING COMPOUND. THIS DOES NOT APPLY TO MARKING ALREADY IN PLACE. BITUMINOUS AREAS ARE DESIGNATED ON THESE PROPOSED MARKING PLANS. THIS WILL BE A PART OF THE PROPOSED PAVEMENT MARKING AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

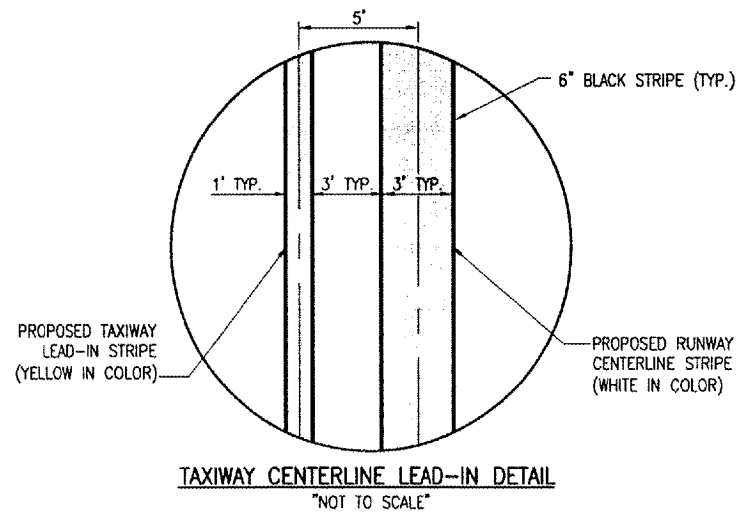
CUT-OFF SHEETS WILL BE REQUIRED TO INSURE STRAIGHT EDGES.

ALL PROPOSED MARKING ITEMS WILL BE PAID FOR AS FOLLOWS:  
AR620520 "PAVEMENT MARKING-WATERBORNE" - PER SQ. FT.

ALL PROPOSED BLACK MARKING ITEMS WILL BE PAID FOR AS FOLLOWS:  
AR620525 "PAVEMENT MARKING-BLACK BORDER" - PER SQ. FT.



AIMING POINT DETAIL  
"NOT TO SCALE"



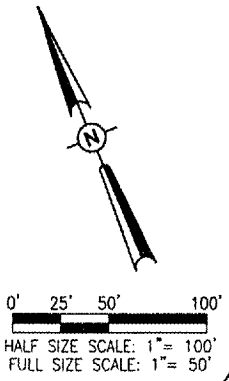
TAXIWAY CENTERLINE LEAD-IN DETAIL  
"NOT TO SCALE"

MARKING QUANTITIES	
YELLOW MARKING: AR620520	TOTAL AREA (S.F.)
TAXIWAY CENTERLINES & LEAD-IN STRIPES	1,333
<b>TOTAL YELLOW:</b>	<b>1,333</b>
WHITE MARKING: AR620520	TOTAL AREA (S.F.)
RUNWAY THRESHOLD STRIPE - 5.75'x150' (x8)	6,900
RUNWAY CENTERLINE STRIPE - 3'x120' (x24)	8,640
RUNWAY AIMING POINT STRIPE - 20'x150' (x4)	12,000
RUNWAY NUMERAL 1 (x2)	640
RUNWAY NUMERAL 2	652
RUNWAY NUMERAL 9	735
<b>TOTAL WHITE:</b>	<b>29,567</b>
<b>TOTAL MARKING:</b>	<b>30,900</b>
BLACK MARKING: AR620525	TOTAL AREA (S.F.)
TAXIWAY CENTERLINE	1,332
RUNWAY THRESHOLD STRIPE - (x8)	1,256
RUNWAY CENTERLINE STRIPE - (x24)	2,976
RUNWAY AIMING POINT STRIPE - (x4)	684
RUNWAY NUMERAL 1 (x2)	135
RUNWAY NUMERAL 2	108
RUNWAY NUMERAL 9	114
<b>TOTAL BLACK:</b>	<b>6,605</b>

MARKING REMOVAL QUANTITIES	
EXISTING MARKING: AR620900	TOTAL AREA (S.F.)
TAXIWAY CENTERLINE	508
RUNWAY AIMING POINT STRIPE	3,300
THRESHOLD STRIPE	3,000
<b>TOTAL REMOVAL:</b>	<b>6,808</b>

**LEGEND**

	PAVEMENT EDGE
	EXISTING MARKING
	PROPOSED MARKING

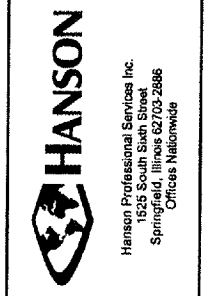


REVISION	DATE	BY

EFFINGHAM COUNTY  
MEMORIAL AIRPORT  
EFFINGHAM, ILLINOIS

IL. PROJ.: 1H2-3761 A.L.P. PROJ.: 3-17-0040-811

Project No. 07A0143D_0800	
Drawn By R-151MRK.DWG	
Scale 1" = 50'	
Date 02/12/08	
LAYOUT	01/21/08
DRAWN	01/21/08
REVIEWED	02/12/08



WIDEN RUNWAY 11/29  
AND REPLACE MIL'S  
PROPOSED  
MARKING PLAN  
STA. 160+00 TO STA. 147+00

APR 09, 2008 6:44 PM HAGL000382  
I:\ARPCRS\EFFINGHAM\07A0143\CAD\SHEETS\R-151MRK.DWG - CONST 1

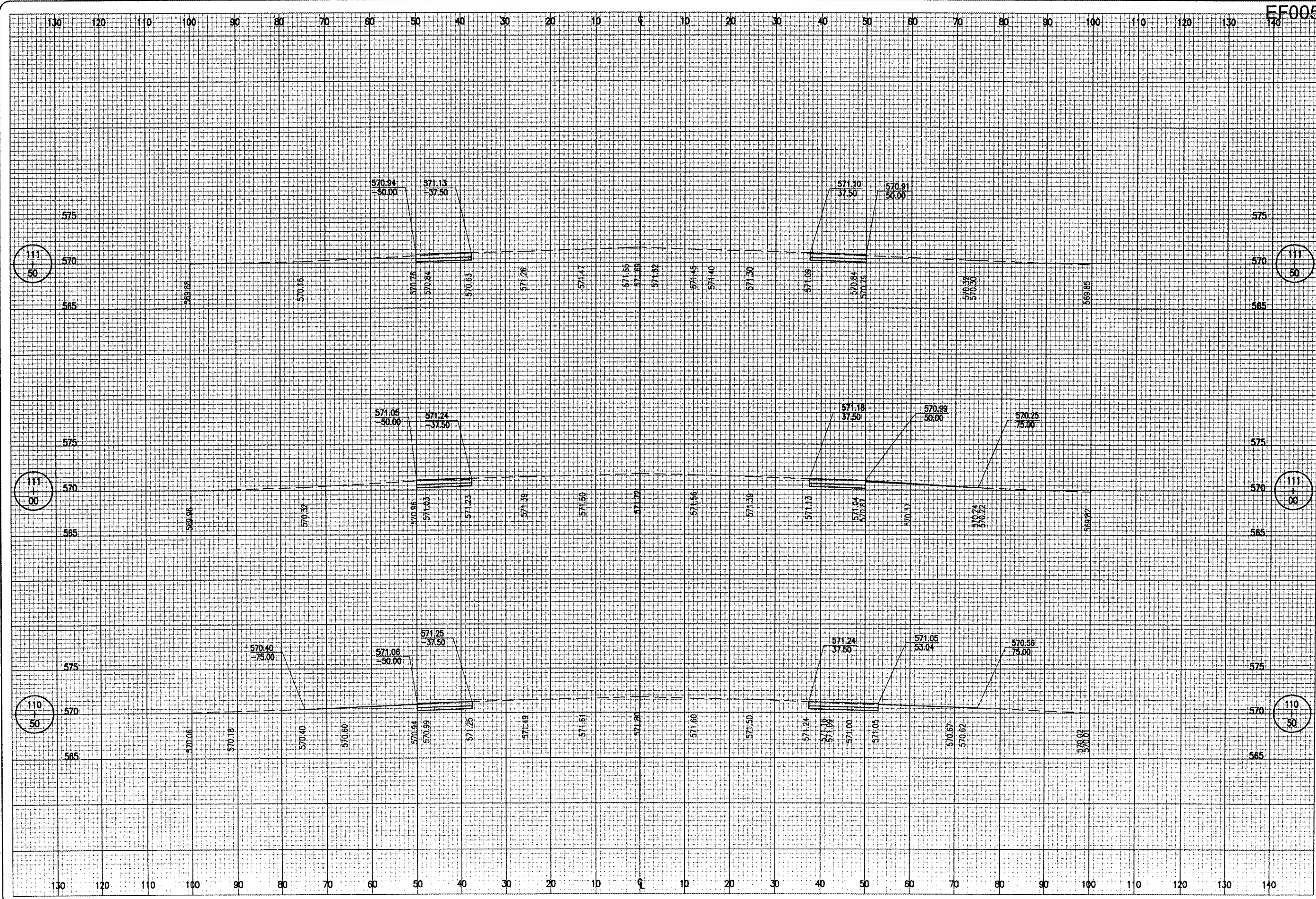












EF005

DATE	REVISION	BY

**EFFINGHAM COUNTY  
 MEMORIAL AIRPORT  
 EFFINGHAM, ILLINOIS**

IL PROJ.: 1H2-3761 A.I.P. PROJ.: 3-17-0040-B11

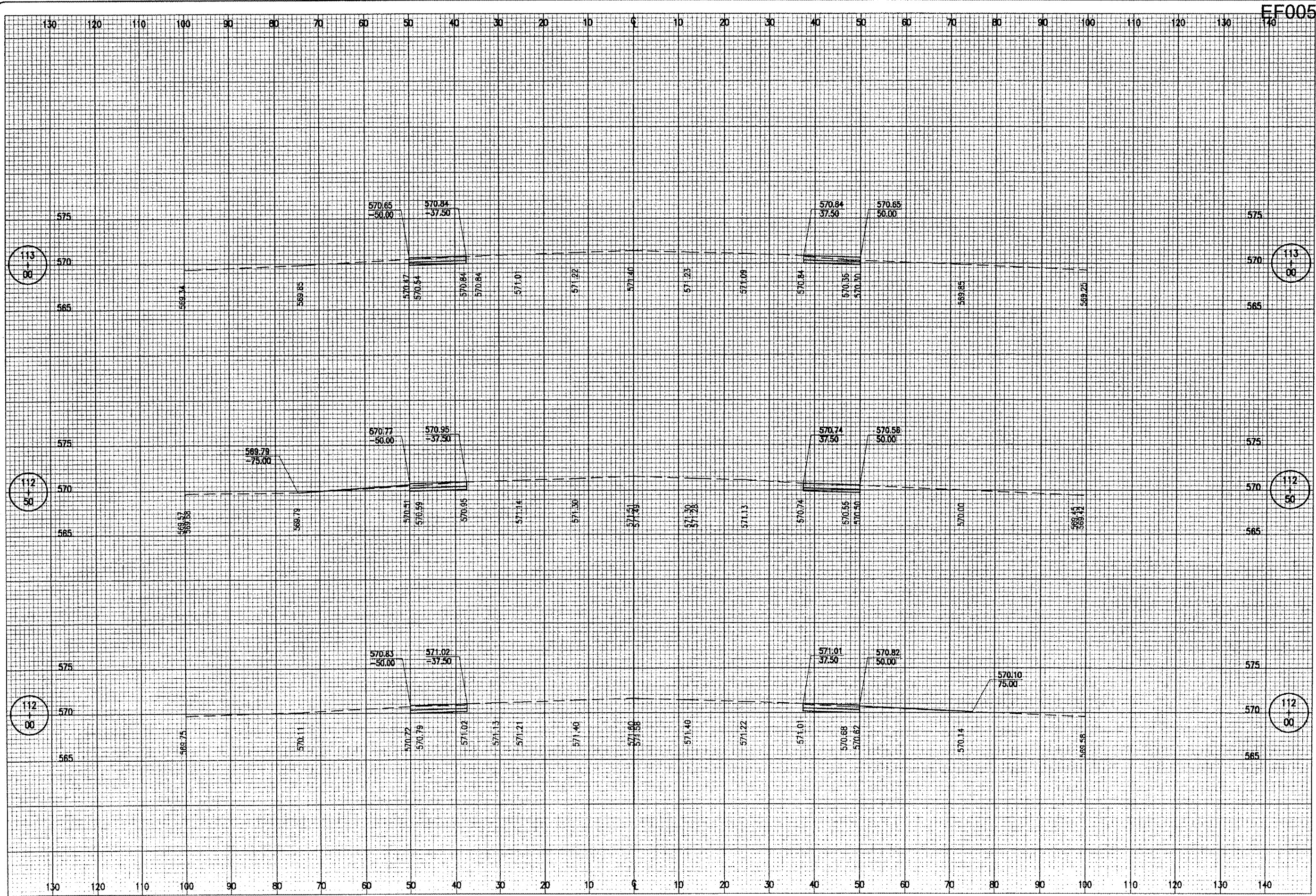
H.E. Project No. 07A0143D_0800 Filename R-302XS.DWG Scale H. 1"=10' V. 1"=5' Date 02/12/08	LAYOUT KDM 02/16/08 DRAWN MDR 02/16/08 REVIEWED CAH 02/12/08
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Hanson Professional Services Inc.  
 1525 South Sixth Street  
 Springfield, Illinois 62705-2886  
 Offices Nationwide

**WIDEN RUNWAY 11/29  
 AND REPLACE MRL'S  
 PROPOSED CROSS-SECTIONS  
 FOR RUNWAY 11/29 WIDENING  
 STA. 110+50 TO STA. 111+50**





DATE	REVISION

EFFINGHAM COUNTY  
 MEMORIAL AIRPORT  
 EFFINGHAM, ILLINOIS

ILL. PROJ.: 1H2-3761 A.I.P. PROJ.: 3-17-0040-B11

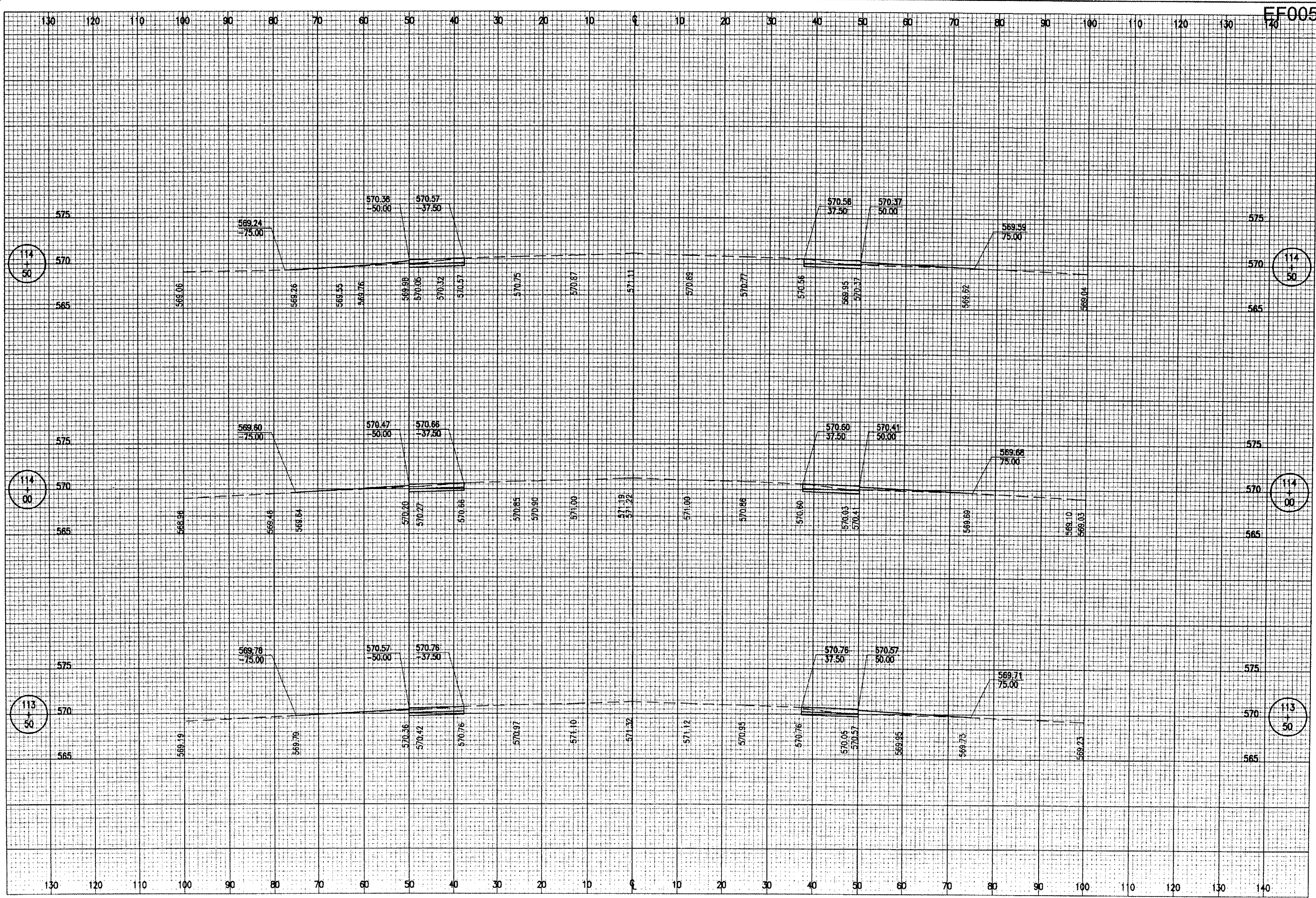
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---	--



WIDEN RUNWAY 11/29  
 AND REPLACE MRL'S

PROPOSED CROSS-SECTIONS  
 FOR RUNWAY 11/29 WIDENING  
 STA. 112+00 TO STA 113+00





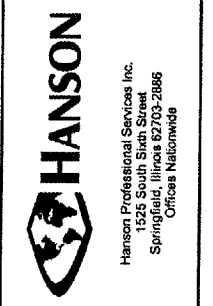
EF-005

DATE	REVISION	BY

EFFINGHAM COUNTY  
 MEMORIAL AIRPORT  
 EFFINGHAM, ILLINOIS

ILL. PROJ.: 1H2-3761 A.I.P. PROJ.: 3-17-0040-811

HE Project No. 07A0143D 0800	Drawn R-304XS.DWG	Scale H. 1"=10' V. 1"=5'	Date 02/12/08
LAYOUT	KDM	12/18/08	
DRAWN	MLB	12/18/08	
REVIEWED	CAH	12/18/08	

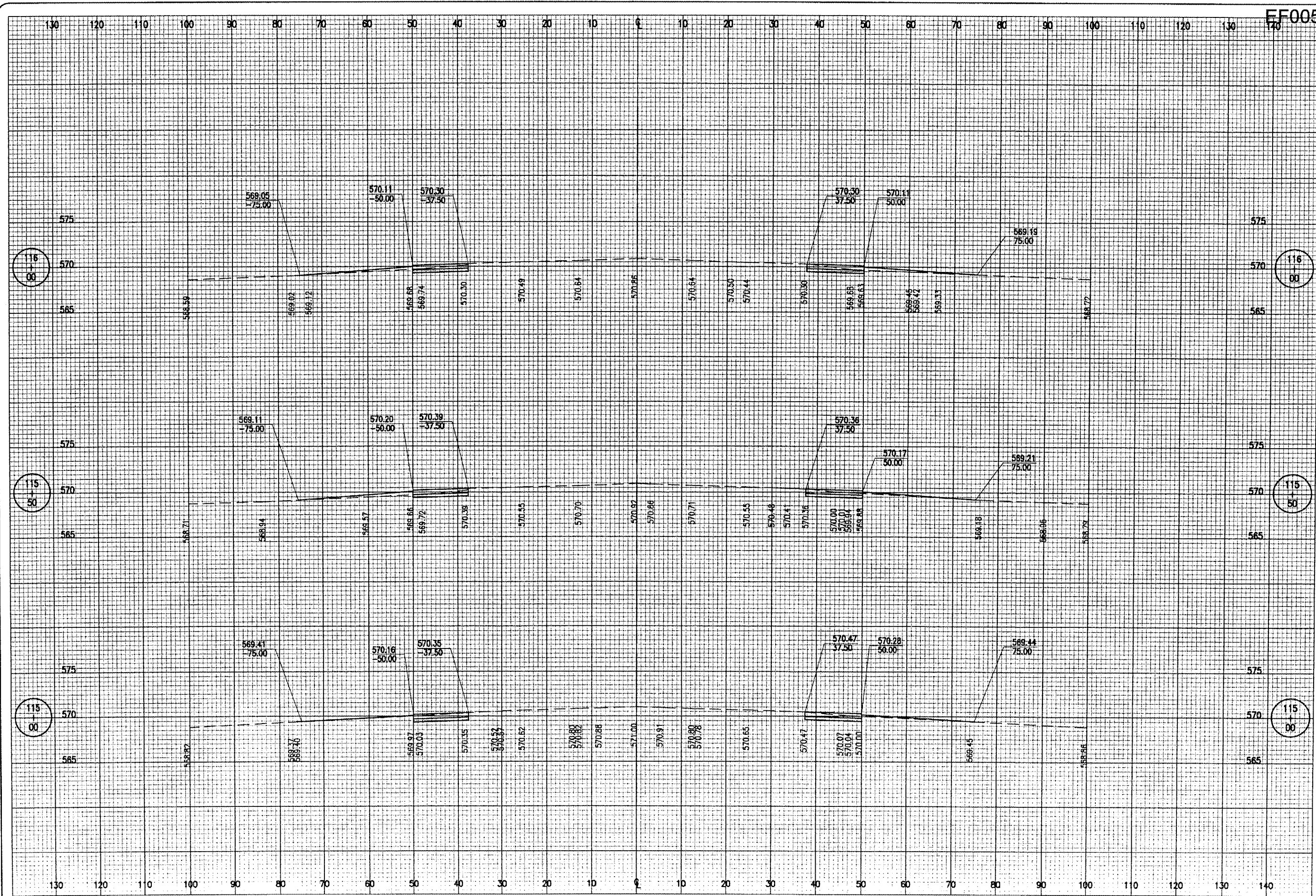


WIDEN RUNWAY 11/29  
 AND REPLACE MRL'S

PROPOSED CROSS-SECTIONS  
 FOR RUNWAY 11/29 WIDENING  
 STA. 113+50 TO STA. 114+50



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 I:\REPORTS\EFFINGHAM\07A0143\CA01\SHEETSR-305XS.DWG - Model



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EFFINGHAM COUNTY  
 MEMORIAL AIRPORT  
 EFFINGHAM, ILLINOIS

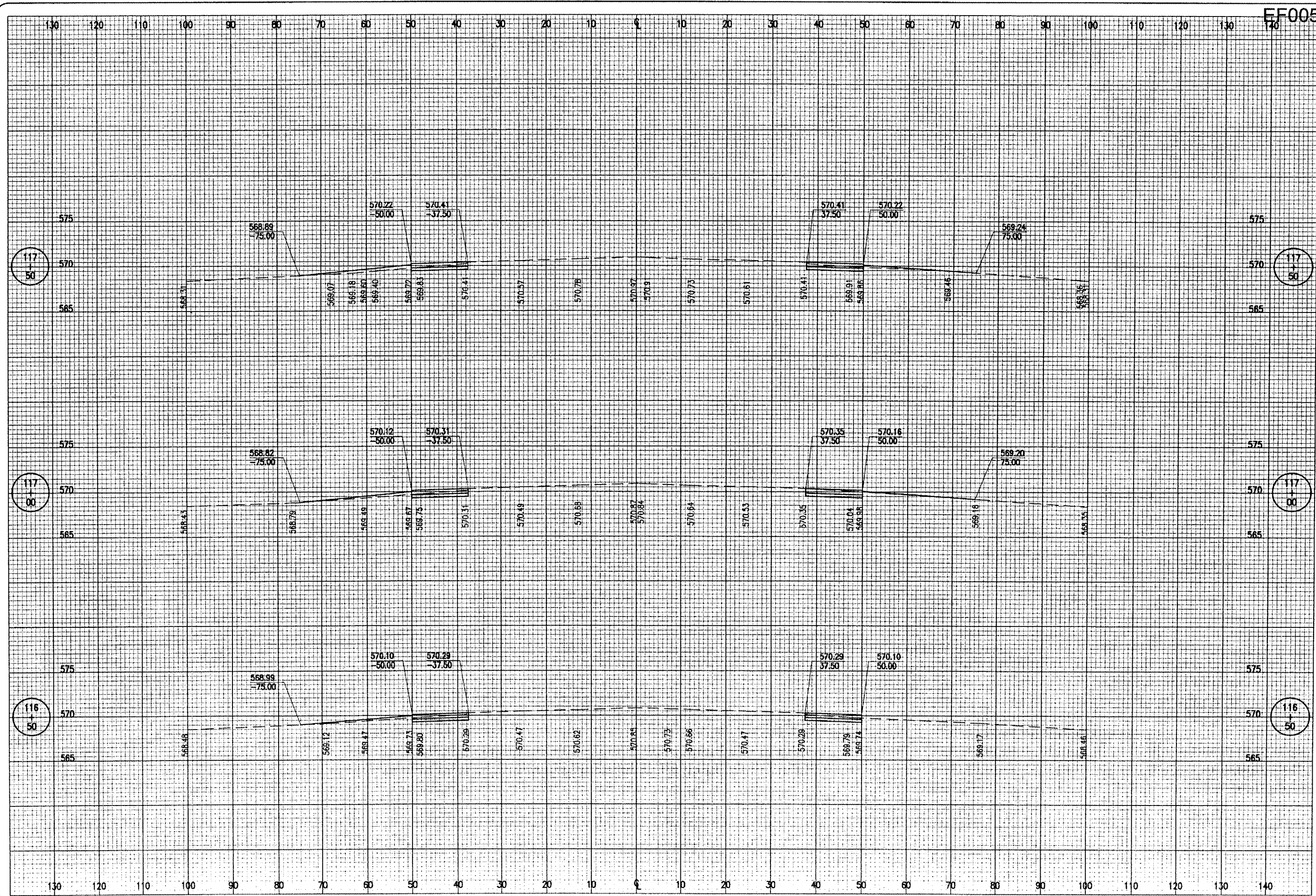
IL PROJ.: 1H2-3761 A.I.P. PROJ.: 3-17-0040-B11

HEI Project No.	07A0143D 0800
Filename	R-305XS.DWG
Scale	H, 1" = 10' V, 1" = 5'
Date	02/12/08
LAYOUT	KDM 02/18/08
DRAWN	BAK 02/18/08
REVIEWED	CAH 02/12/08



WIDEN RUNWAY 11/29  
 AND REPLACE MRL'S  
 PROPOSED CROSS-SECTIONS  
 FOR RUNWAY 11/29 WIDENING  
 STA. 115+00 TO STA. 116+00





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DATE	REVISION	BY

EFFINGHAM COUNTY  
 MEMORIAL AIRPORT  
 EFFINGHAM, ILLINOIS

ILL. PROJ.: 1H2-3761 A.I.P. PROJ.: 3-17-0040-B11

ILL. Project No. 07A0143D 0800 Drawings R-306XS.DWG Scale H, V = 10' V, 1" = 5' Date 02/12/08	LAYOUT KDM 02/19/08 DRAWN BAK 02/19/08 REVIEWED CAH 02/12/08
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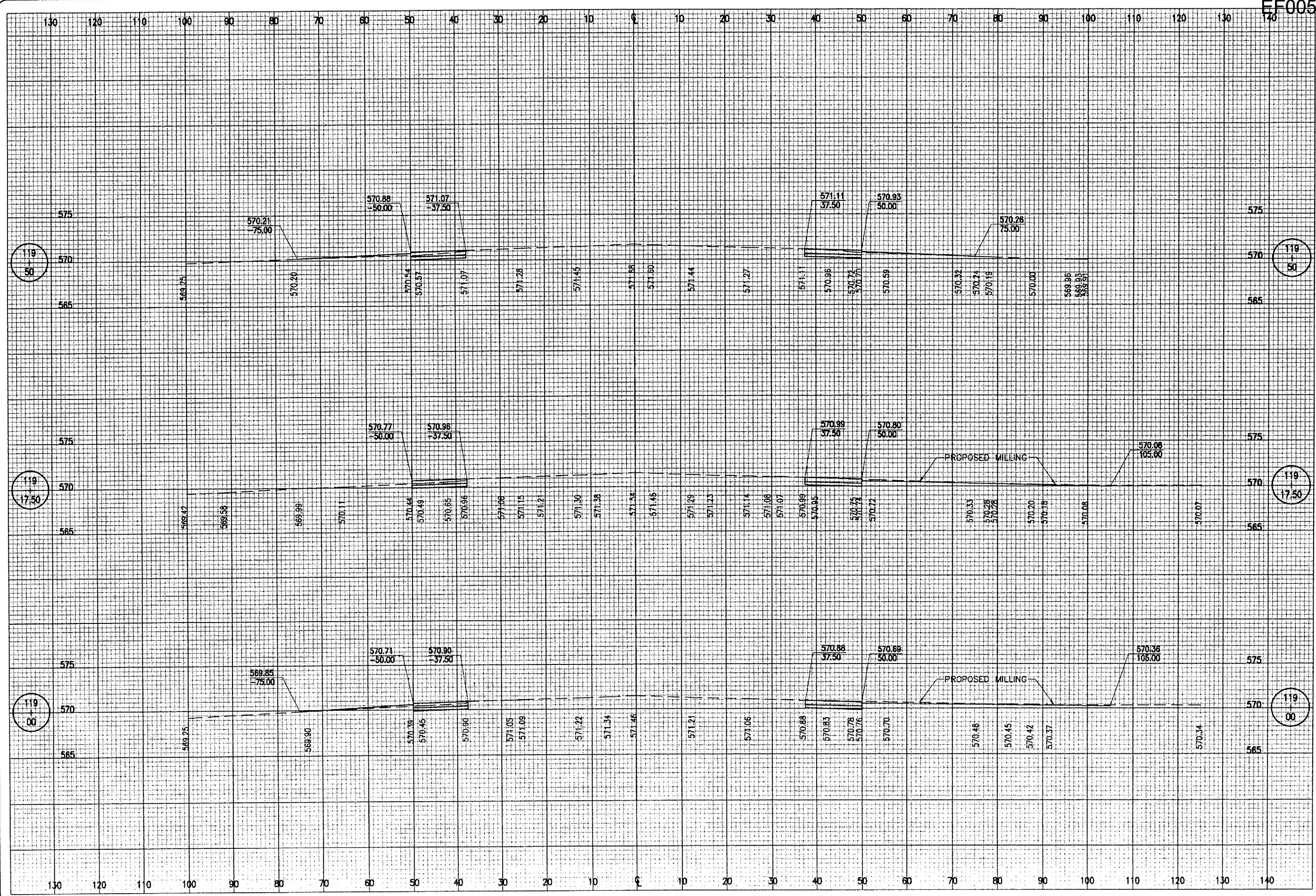
WIDEN RUNWAY 11/29  
 AND REPLACE MRL'S

PROPOSED CROSS-SECTIONS  
 FOR RUNWAY 11/29 WIDENING  
 STA. 116+50 TO STA. 117+50









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DATE	REVISION	BY

**EFFINGHAM COUNTY  
 MEMORIAL AIRPORT  
 EFFINGHAM, ILLINOIS**

IL PROJ.: 142-3761 A.I.P. PROJ.: 3-17-0040-811

HE Project No. 07A0143D\_0800  
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 Date: 02/12/08

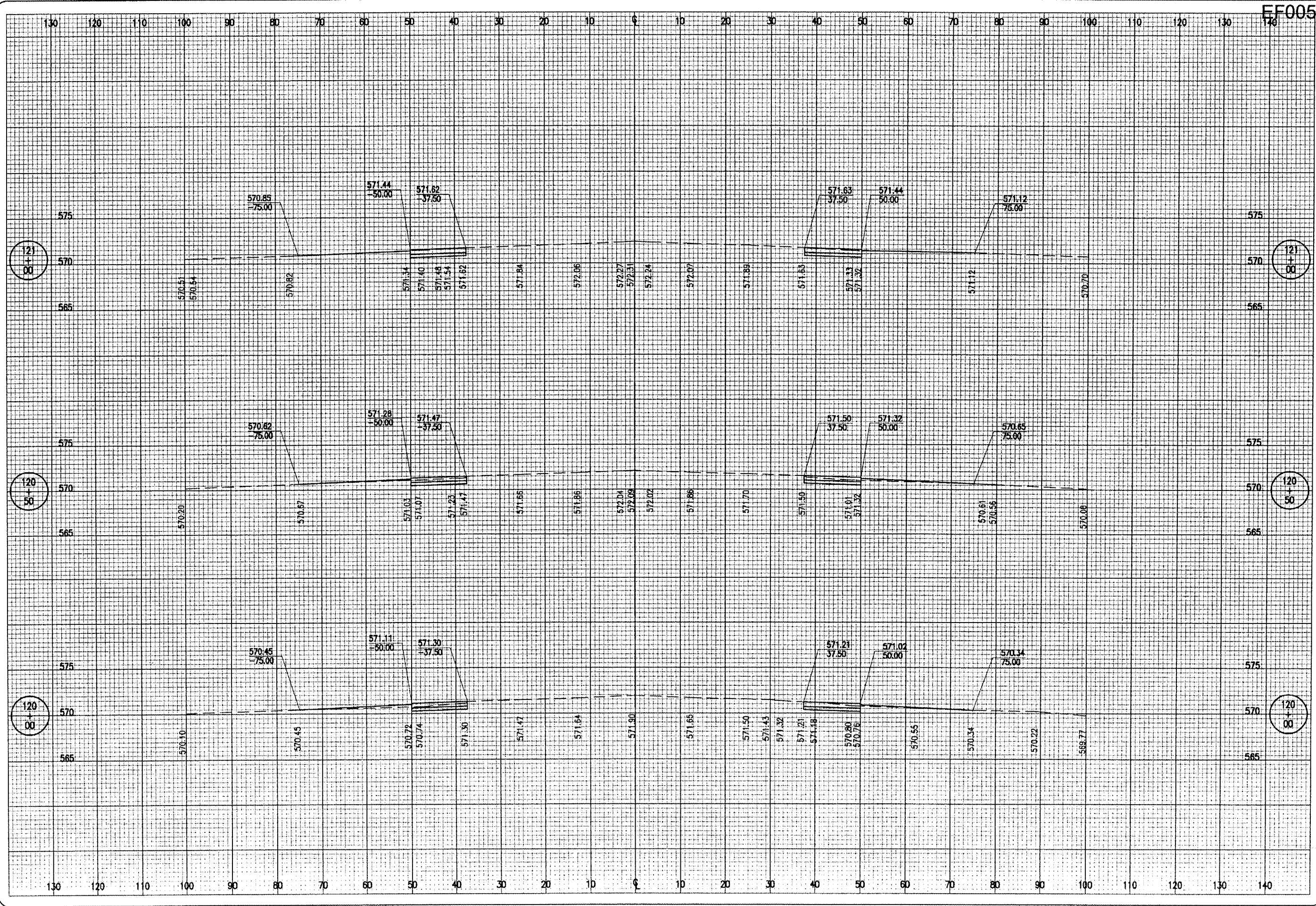
LAYOUT	KDM	02/19/08
DRAWN	BAK	02/19/08
REVIEWED	CAH	02/12/08



Hanson Professional Services Inc.  
 1829 South State Street  
 Springfield, IL 62766  
 Office: 218-288-2886

**WIDEN RUNWAY 11/29  
 AND REPLACE MRL'S**  
 PROPOSED CROSS-SECTIONS  
 FOR RUNWAY 11/29 WIDENING  
 STA. 119+00 TO STA. 119+50





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DATE	REVISION	BY

**EFFINGHAM COUNTY  
 MEMORIAL AIRPORT  
 EFFINGHAM, ILLINOIS**

IL PROJ.: 1H2-3761 A.I.P. PROJ.: 3-17-0040-B11

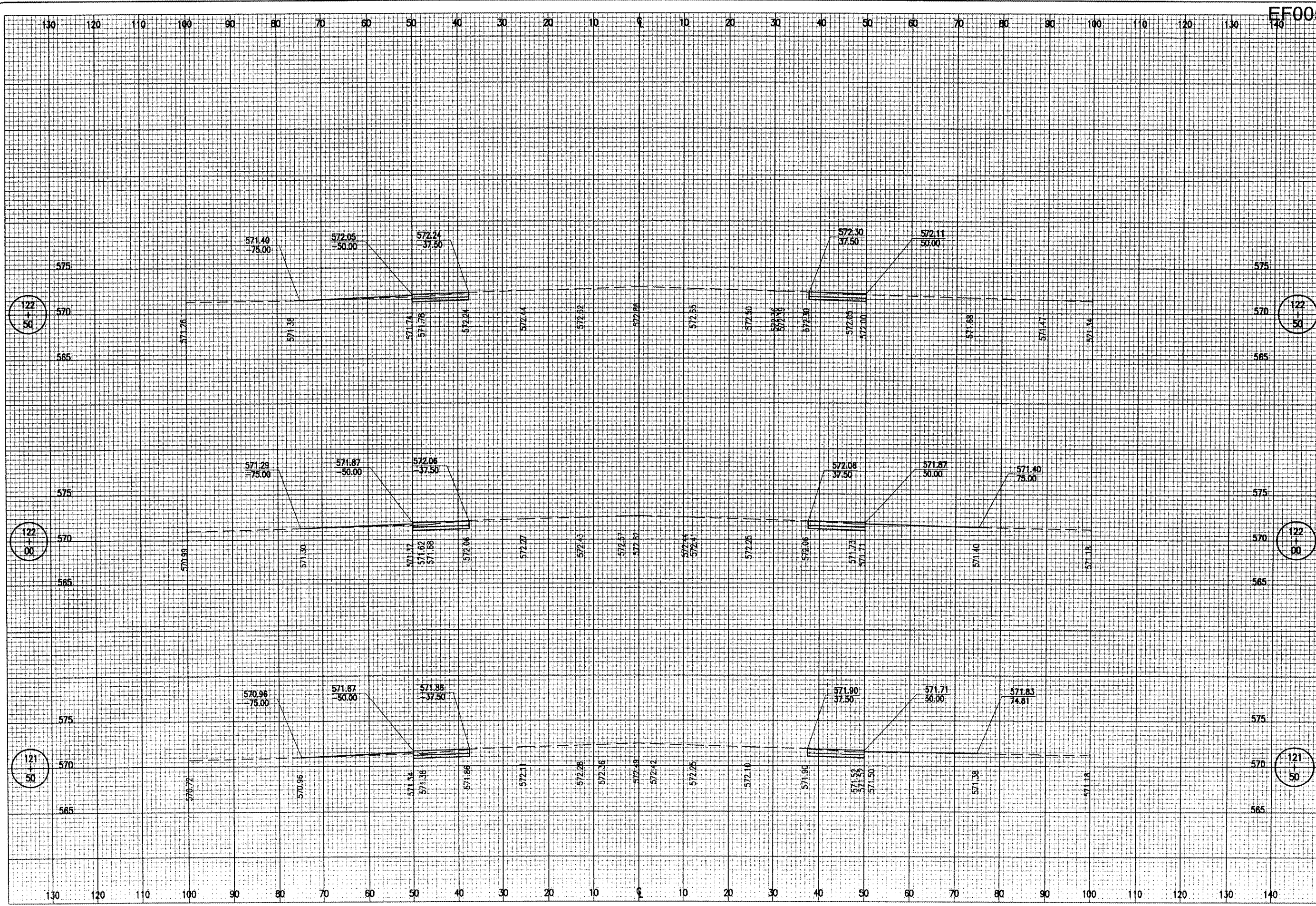
HS Project No. 07A0143D 0800	KOM	12/18/08
Filename R-309XS.DWG	MLB	12/18/08
Scale H. 1"=10' V. 1"=5'	CAH	12/18/08
Date 02/12/08		



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 1525 South Sixth Street  
 Springfield, Illinois 62703-2886  
 Offices Nationwide

**WIDEN RUNWAY 11/29  
 AND REPLACE MRL'S**  
 PROPOSED CROSS-SECTIONS  
 FOR RUNWAY 11/29 WIDENING  
 STA. 120+00 TO STA. 121+00





FF005

DATE	REVISION	BY

**EFFINGHAM COUNTY  
 MEMORIAL AIRPORT  
 EFFINGHAM, ILLINOIS**

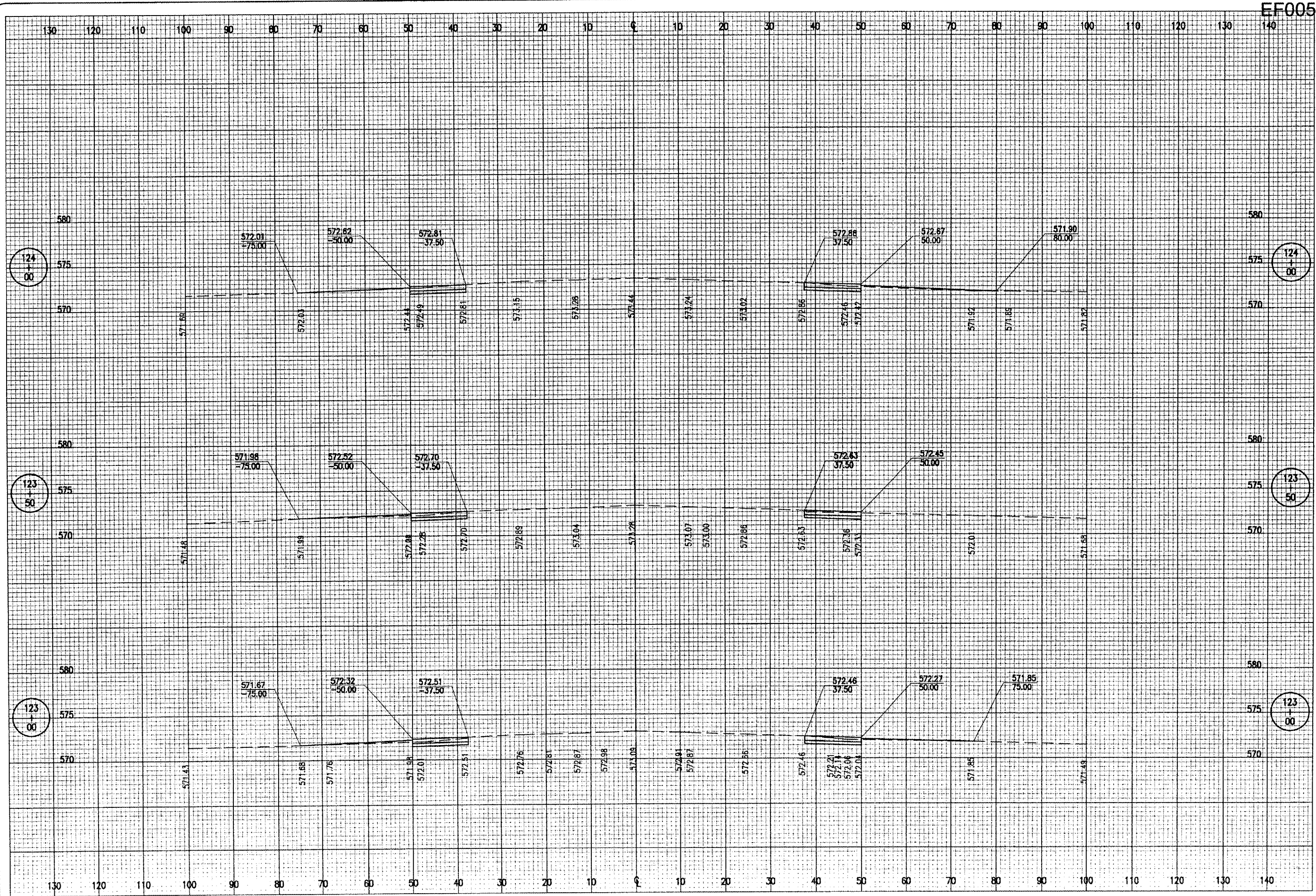
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HE Project No. 07A0143D.0800	DATE 02/12/08
Filename: R-310XS.DWG	LAYOUT
Scale: H. 1" = 10' V. 1" = 5'	DRAWN KOM
Date: 02/12/08	REVIEWED MDR
	CAH
	02/18/08
	02/19/08
	02/12/08



**WIDEN RUNWAY 11/29  
 AND REPLACE MIRL'S**  
**PROPOSED CROSS-SECTIONS  
 FOR RUNWAY 11/29 WIDENING  
 STA. 121+50 TO STA. 122+50**





DATE	REVISION	BY

EFFINGHAM COUNTY  
 MEMORIAL AIRPORT  
 EFFINGHAM, ILLINOIS

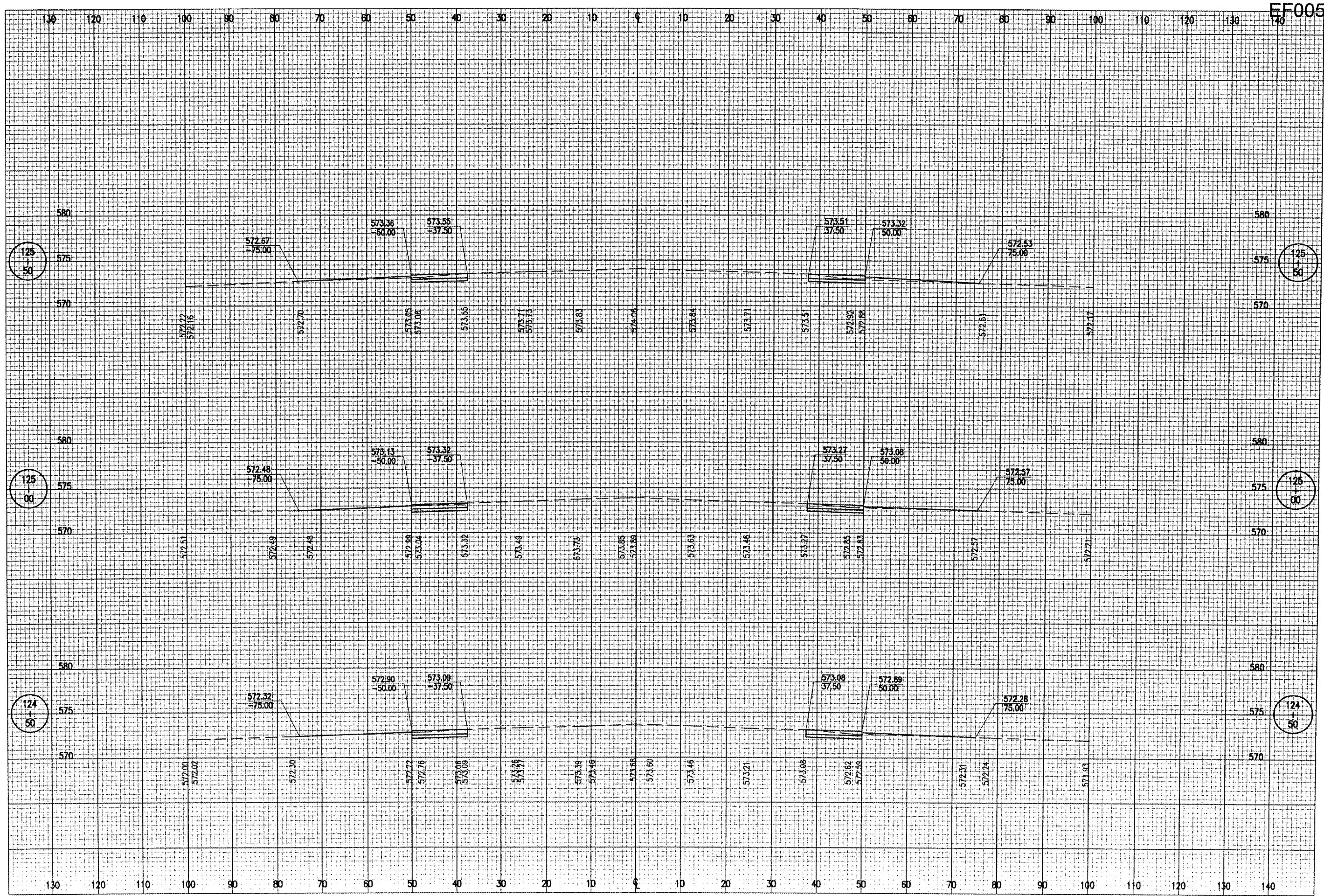
IL PROJ.: 1H2-3761 A.I.P. PROJ.: 3-17-0040-B11

ILL. Project No. 07A0143D 0800 File Name R-311XS.DWG Scale H. 1" = 10' V. 1" = 5' Date 02/12/08	LAYOUT KDM 02/18/08 DRAWN MDR 02/19/08 REVIEWED CAH 02/12/08
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WIDEN RUNWAY 11/29  
 AND REPLACE MRL'S  
 PROPOSED CROSS-SECTIONS  
 FOR RUNWAY 11/29 WIDENING  
 STA. 123+00 TO STA. 124+00





DATE	REVISION	BY

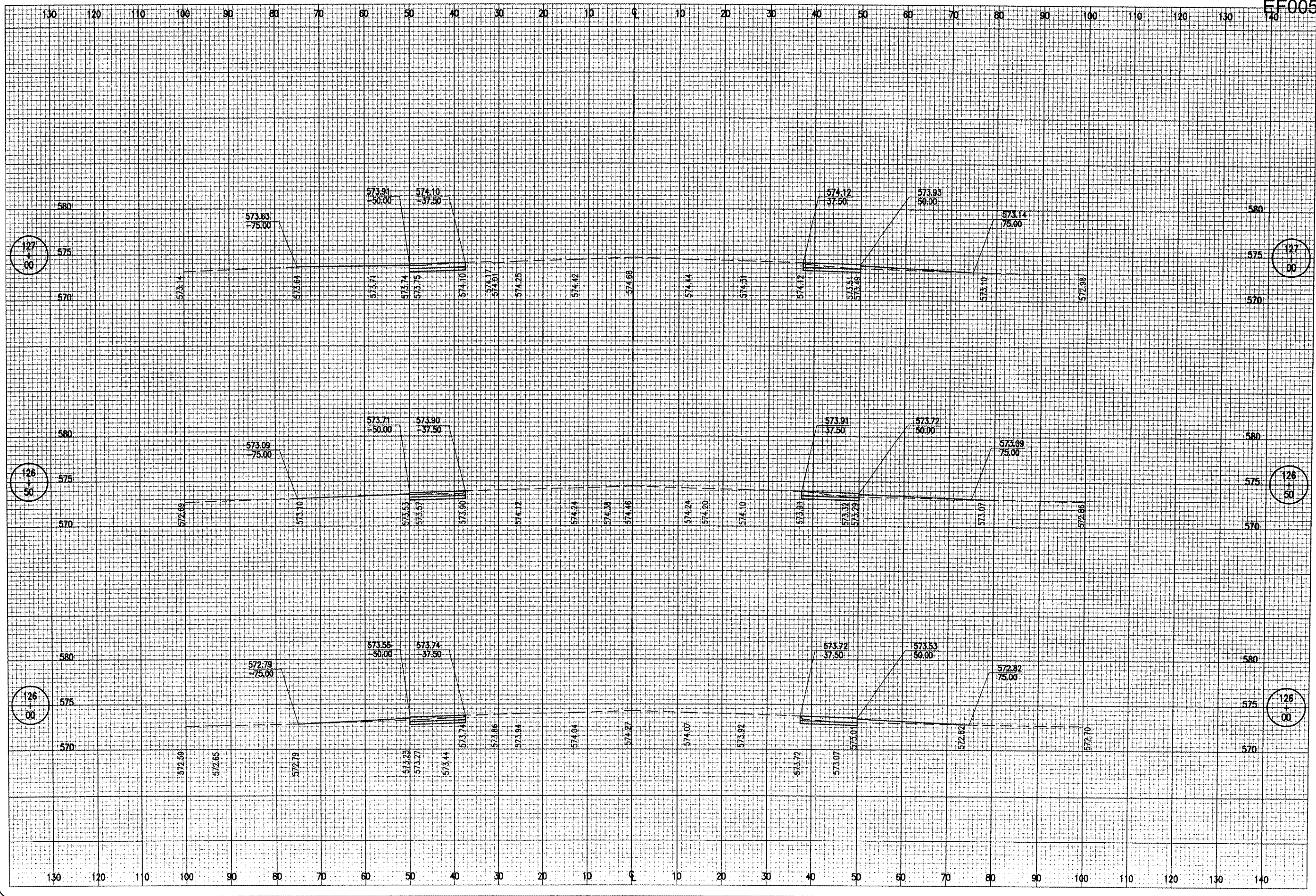
**EFFINGHAM COUNTY  
 MEMORIAL AIRPORT  
 EFFINGHAM, ILLINOIS**  
 I.L. PROJ.: 1H2-3761 A.I.P. PROJ.: 3-17-0040-B11

H&E Project No. 07A0143D_0800 Filename: R-312XS.DWG Scale: H. 1" = 10' V. 1" = 5' Date: 02/12/08	LAYOUT DRAWN REVIEWED	KDM BAK CAH	02/19/08 02/19/08 02/12/08
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**WIDEN RUNWAY 11/29  
 AND REPLACE MRL'S**  
 PROPOSED CROSS-SECTIONS  
 FOR RUNWAY 11/29 WIDENING  
 STA. 124+50 TO STA. 125+50





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EFFINGHAM COUNTY  
 MEMORIAL AIRPORT  
 EFFINGHAM, ILLINOIS

IL PROJ: 1H2-3761 A.L.P. PROJ: 3-17-0040-B11

HL Project No. 07A0143D_0800	
Filename R-313XS.DWG	
Scale H, 1"=10' V, 1"=5'	
Date 02/12/08	
LAYOUT	KDM 12/18/08
DRAWN	MLB 12/18/08
REVIEWED	CAH 12/18/08

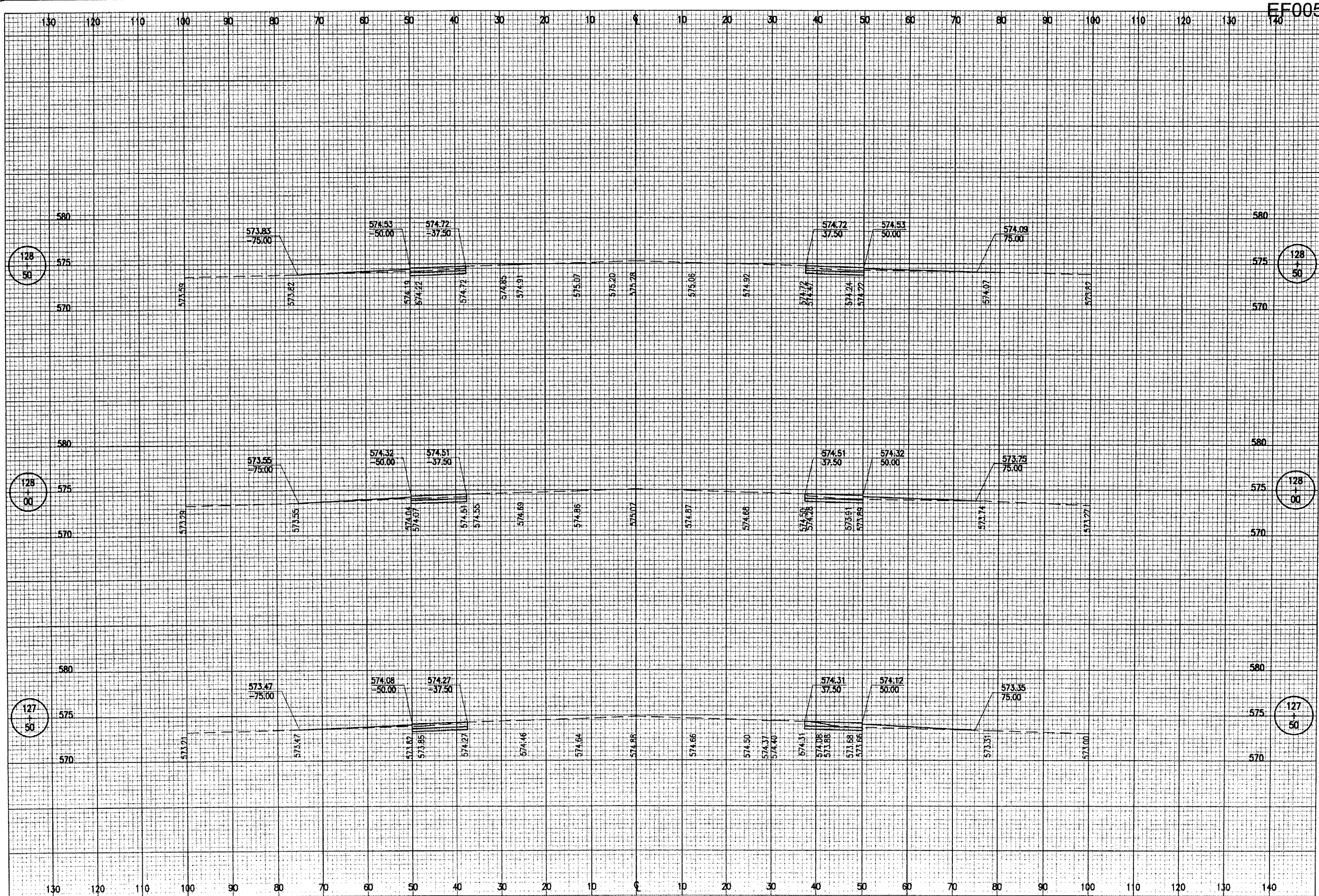


WIDEN RUNWAY 11/29  
 AND REPLACE MRL'S

PROPOSED CROSS-SECTIONS  
 FOR RUNWAY 11/29 WIDENING  
 STA. 126+00 TO STA. 127+00



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I:\AIRPORTS\EFFINGHAM\_07\AD143\CAD\SHEETS\R-314XS.DWG - Model



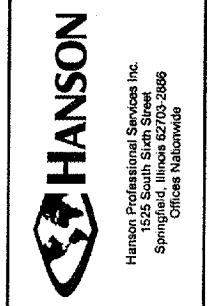
EF005

DATE	REVISION	BY

EFFINGHAM COUNTY  
MEMORIAL AIRPORT  
EFFINGHAM, ILLINOIS

IL. PROJ.: 1H2-3761 A.I.P. PROJ.: 3-17-0040-B11

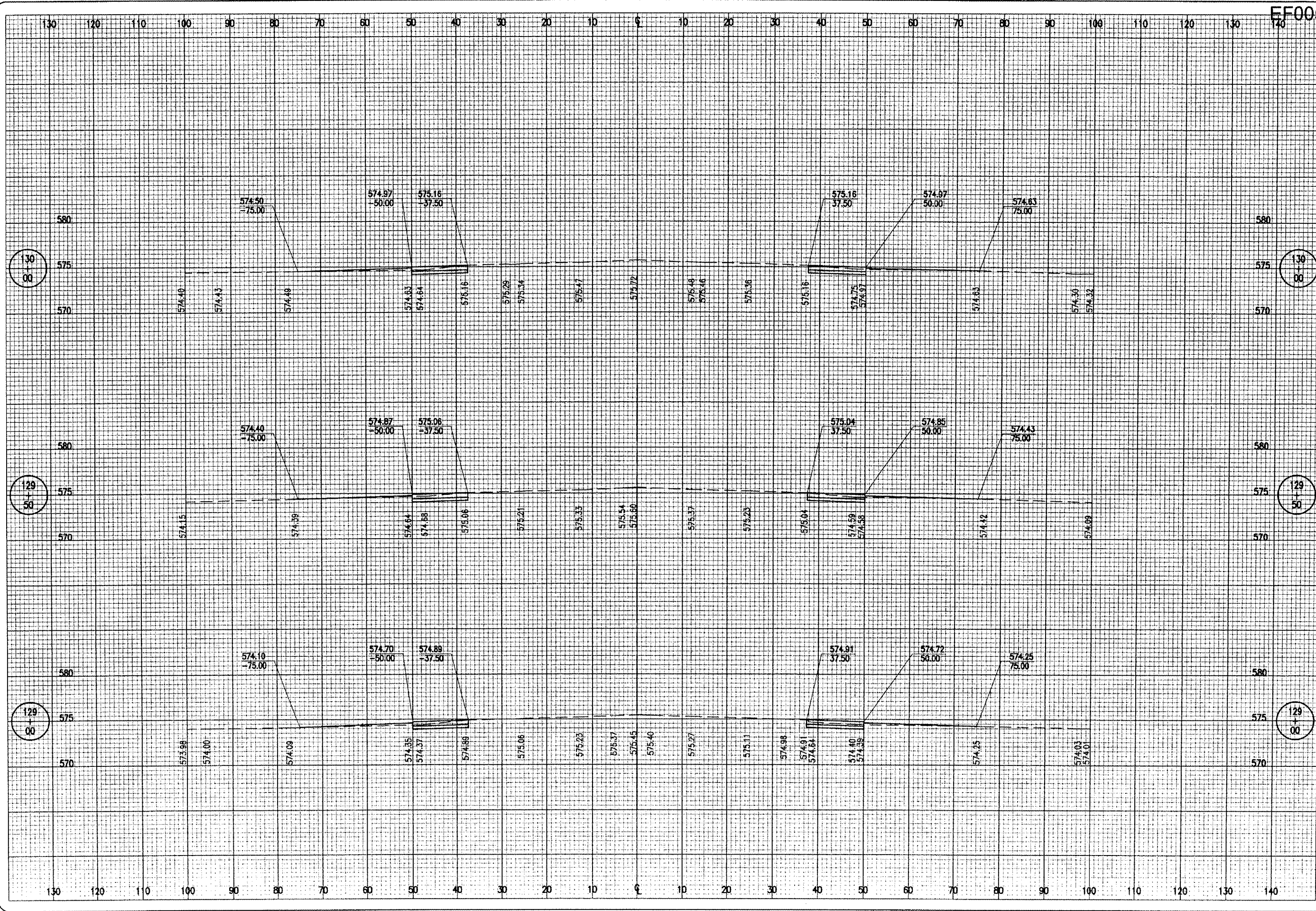
Project No. 07A0143D 0800	LAYOUT	KDM	02/20/08
Filename R-314XS.DWG	DRAWN	BAK	02/20/08
Scale H. 1" = 10' V. 1" = 5'	REVIEWED	CAH	02/12/08
Date 02/12/08			



WIDEN RUNWAY 11/29  
AND REPLACE MRL'S

PROPOSED CROSS-SECTIONS  
FOR RUNWAY 11/29 WIDENING  
STA. 127+50 TO STA. 128+50





FF005

DATE	REVISION	BY

**EFFINGHAM COUNTY  
 MEMORIAL AIRPORT  
 EFFINGHAM, ILLINOIS**

IL PROJ.: 1H2-3761 A.L.P. PROJ.: 3-17-0040-B11

HD Project No. 07A0143D.0800	
Element R-315XS-DWG	
Scale H. 1"=10' V. 1"=5'	
Date 02/12/08	
LAYOUT	KJM 12/18/08
DRAWN	MLB 12/18/08
REVIEWED	CAH 12/18/08



**WIDEN RUNWAY 11/29  
 AND REPLACE MRL'S**  
**PROPOSED CROSS-SECTIONS  
 FOR RUNWAY 11/29 WIDENING  
 STA. 129+00 TO STA. 130+00**

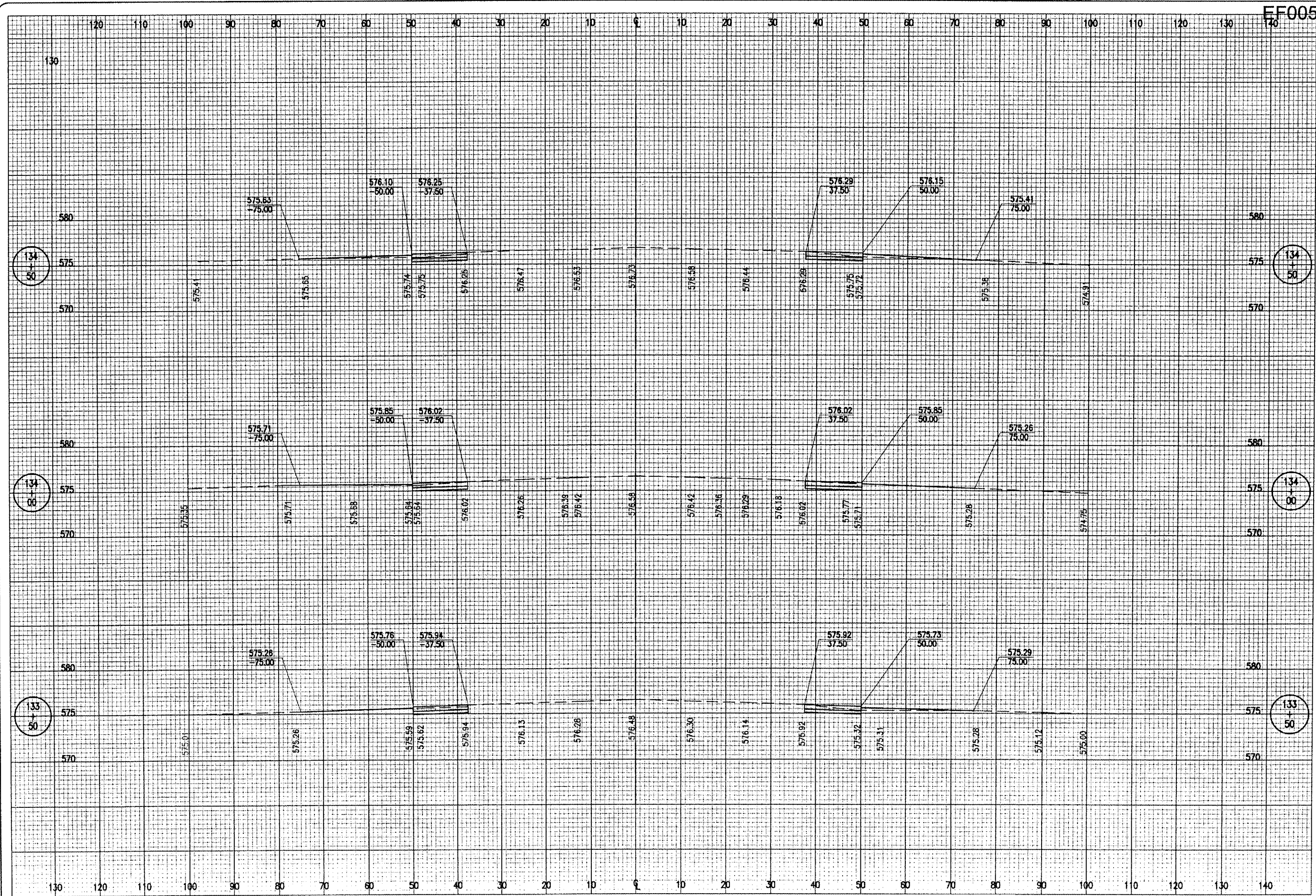












EF005

DATE	REVISION	BY

**EFFINGHAM COUNTY  
 MEMORIAL AIRPORT  
 EFFINGHAM, ILLINOIS**

IL PROJ.: 1H2-3761 A.I.P. PROJ.: 3-17-0040-811

IE: Project No. 07A0143D\_0800  
 Filename R-318XS.DWG  
 Scale H, 1"=10' V, 1"=5'  
 Date 02/12/08

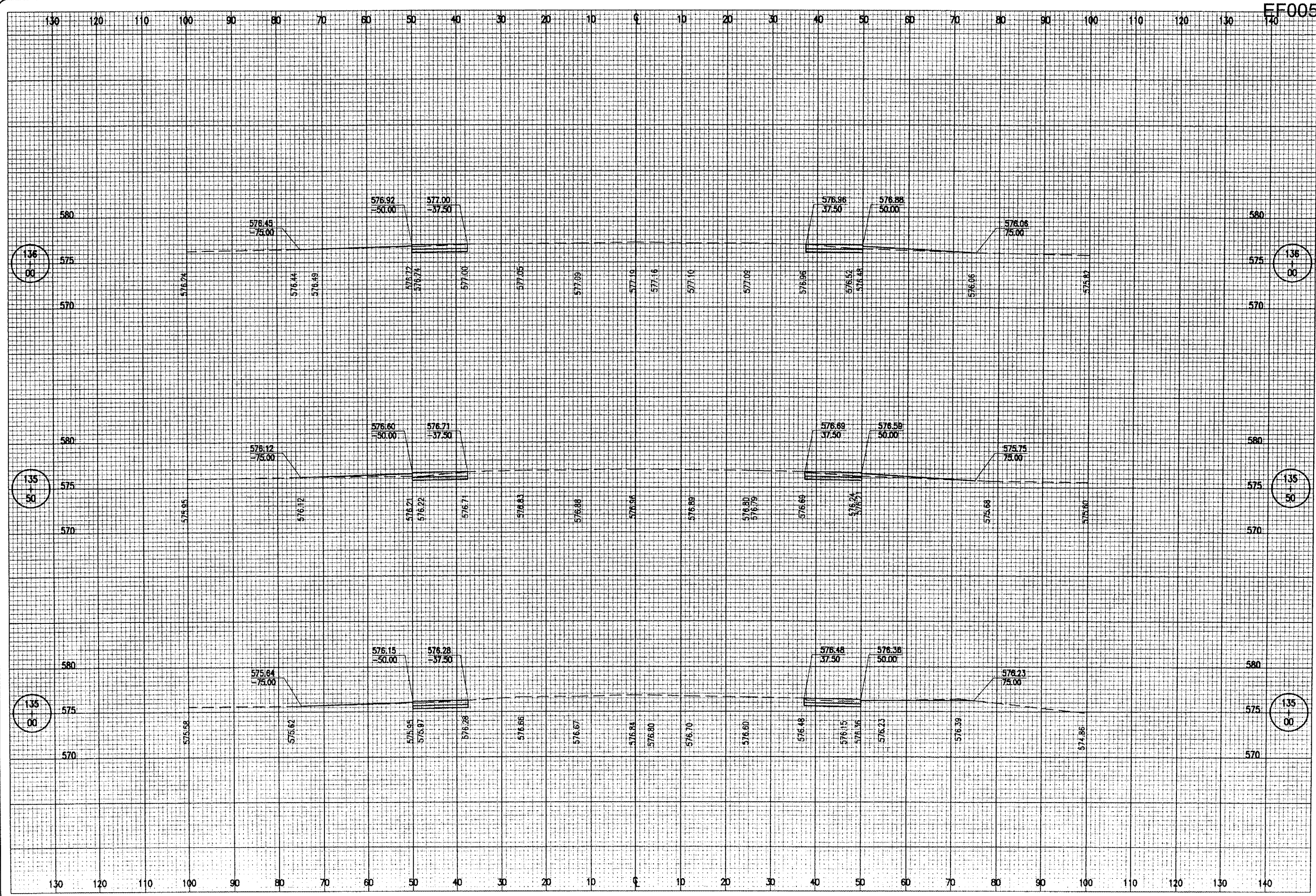
LAYOUT	KOM	12/18/08
DRAWN	MLB	12/18/08
REVIEWED	CAH	12/18/08



Hanson Professional Services Inc.  
 15215 S. Cass  
 Springfield, Illinois 62709-2886  
 Offices Nationwide

**WIDEN RUNWAY 11/29  
 AND REPLACE MRL'S**  
 PROPOSED CROSS-SECTIONS  
 FOR RUNWAY 11/29 WIDENING  
 STA. 133+50 TO STA. 134+50





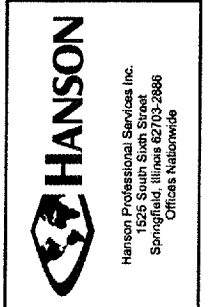
EF005

DATE	REVISION	BY

EFFINGHAM COUNTY  
 MEMORIAL AIRPORT  
 EFFINGHAM, ILLINOIS

IL PROJ.: 1H2-3761 A.I.P. PROJ.: 3-17-0040-811

ILL Project No. 07A0143D 0800	LAYOUT	KDM	02/20/08
Filename R-319XS.DWG	DRAWN	BAK	02/20/08
Scale: H, 1" = 10' V, 1" = 5'	REVIEWED	CAH	02/12/08
Date: 02/12/08			



WIDEN RUNWAY 11/29  
 AND REPLACE MRL'S  
 PROPOSED CROSS-SECTIONS  
 FOR RUNWAY 11/29 WIDENING  
 STA. 135+00 TO STA. 136+00

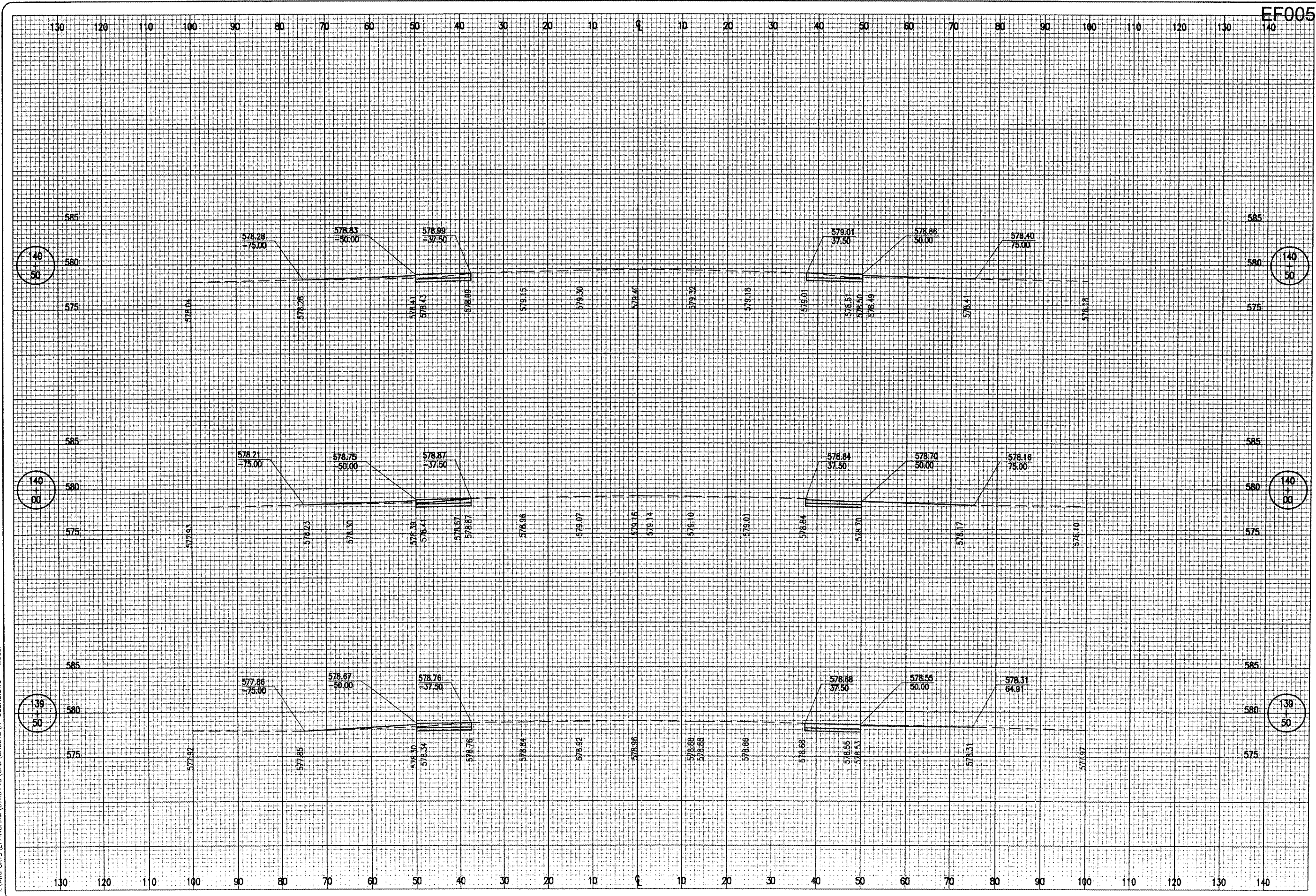












DATE	REVISION	BY

EFFINGHAM COUNTY  
 MEMORIAL AIRPORT  
 EFFINGHAM, ILLINOIS

IL PROJ.: 1H2-3761 A.I.P. PROJ.: 3-17-0040-811

HEC Project No. 07A0143D 0800	
Filename: R-322XS.DWG	
Scale: H. 1" = 10' V. 1" = 5'	
Date: 02/12/08	
LAYOUT	KDM 02/18/08
DRAWN	MDR 02/20/08
REVIEWED	CAH 02/12/08

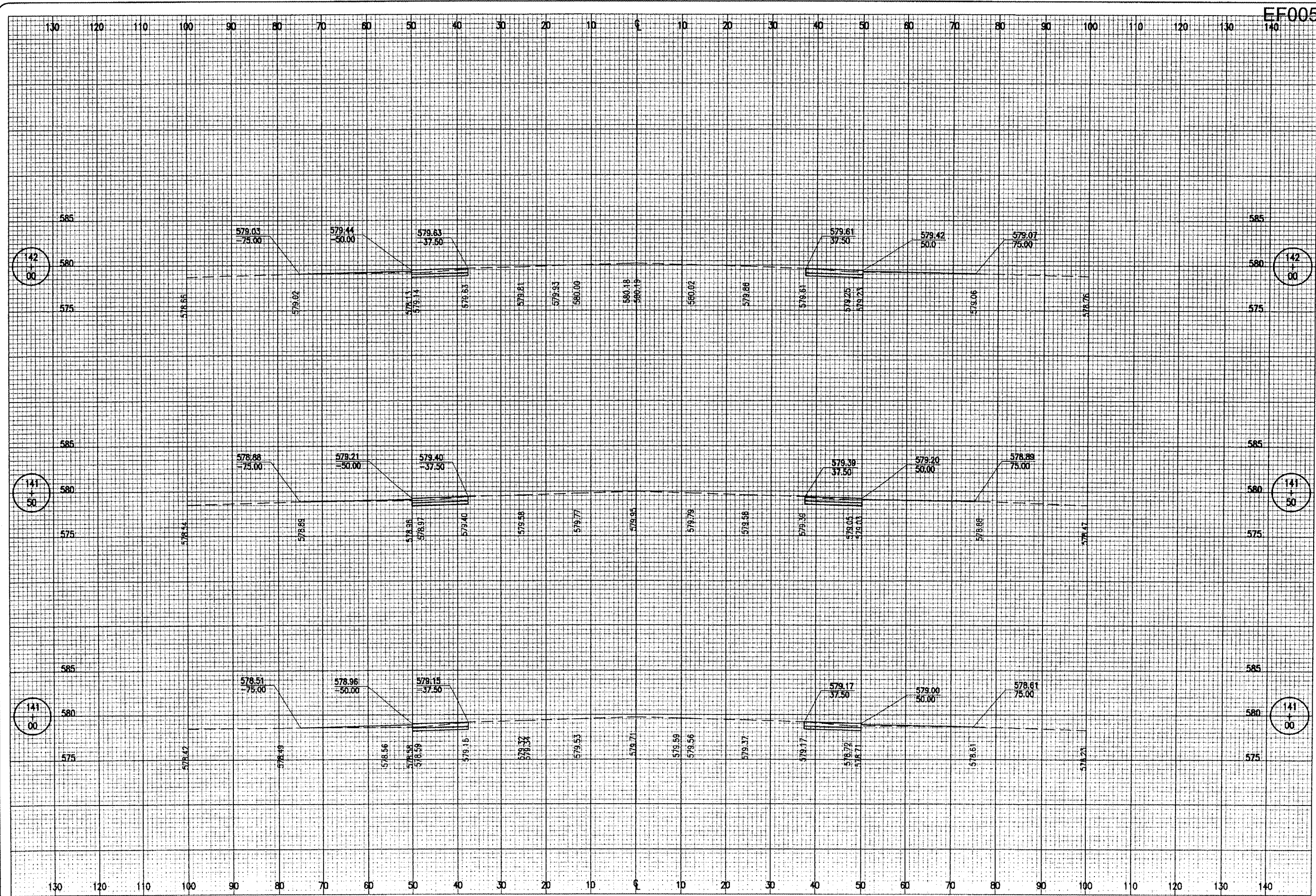


WIDEN RUNWAY 11/29  
 AND REPLACE MRL'S

PROPOSED CROSS-SECTIONS  
 FOR RUNWAY 11/29 WIDENING  
 STA. 139+50 TO STA. 140+50



APR 09 2008 6:52 PM HAGL000382  
 I:\AIRPORTS\EFFINGHAM\07A0143\CAD\SHEETS\R-323XS.DWG - Model



EF005

DATE	REVISION	BY

**EFFINGHAM COUNTY  
 MEMORIAL AIRPORT  
 EFFINGHAM, ILLINOIS**

ILL. PROJ.: 1H2-3761 A.I.P. PROJ.: 3-17-0040-B11

ILL. Project No. 07A0143D 0800 Element: R-323XS.DWG Scale: H. 1" = 10' V. 1" = 5' Date: 02/12/08	LAYOUT KDM 02/18/08 DRAWN MDR 02/20/08 REVIEWED CAH 02/12/08
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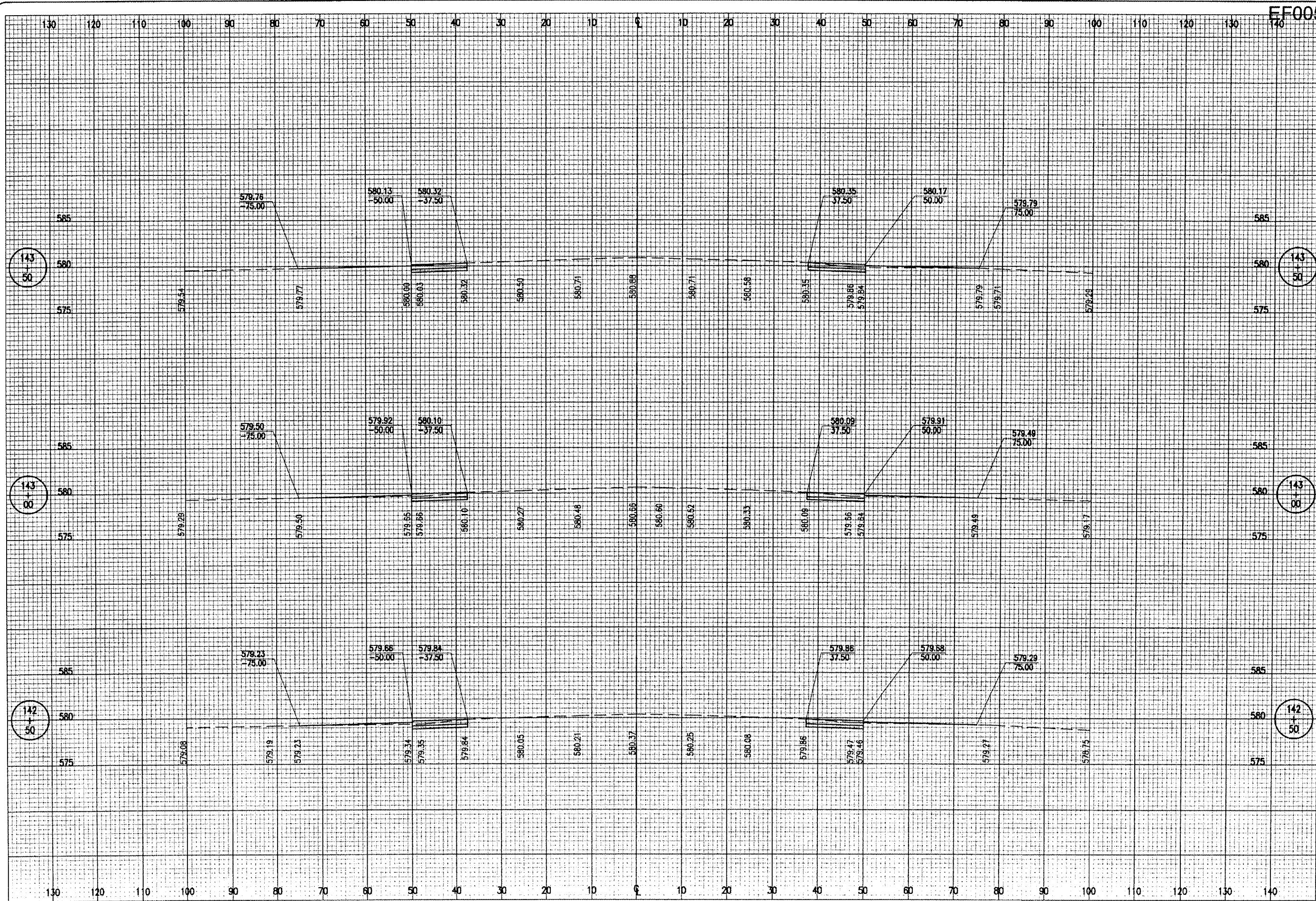


Hanson Professional Services Inc.  
 1525  
 Springfield, Illinois 62703-2886  
 Offices Nationwide

**WIDEN RUNWAY 11/29  
 AND REPLACE MILR'S**

**PROPOSED CROSS-SECTIONS  
 FOR RUNWAY 11/29 WIDENING  
 STA. 141+00 TO STA. 142+00**





FF005

DATE	REVISION

EFFINGHAM COUNTY  
 MEMORIAL AIRPORT  
 EFFINGHAM, ILLINOIS

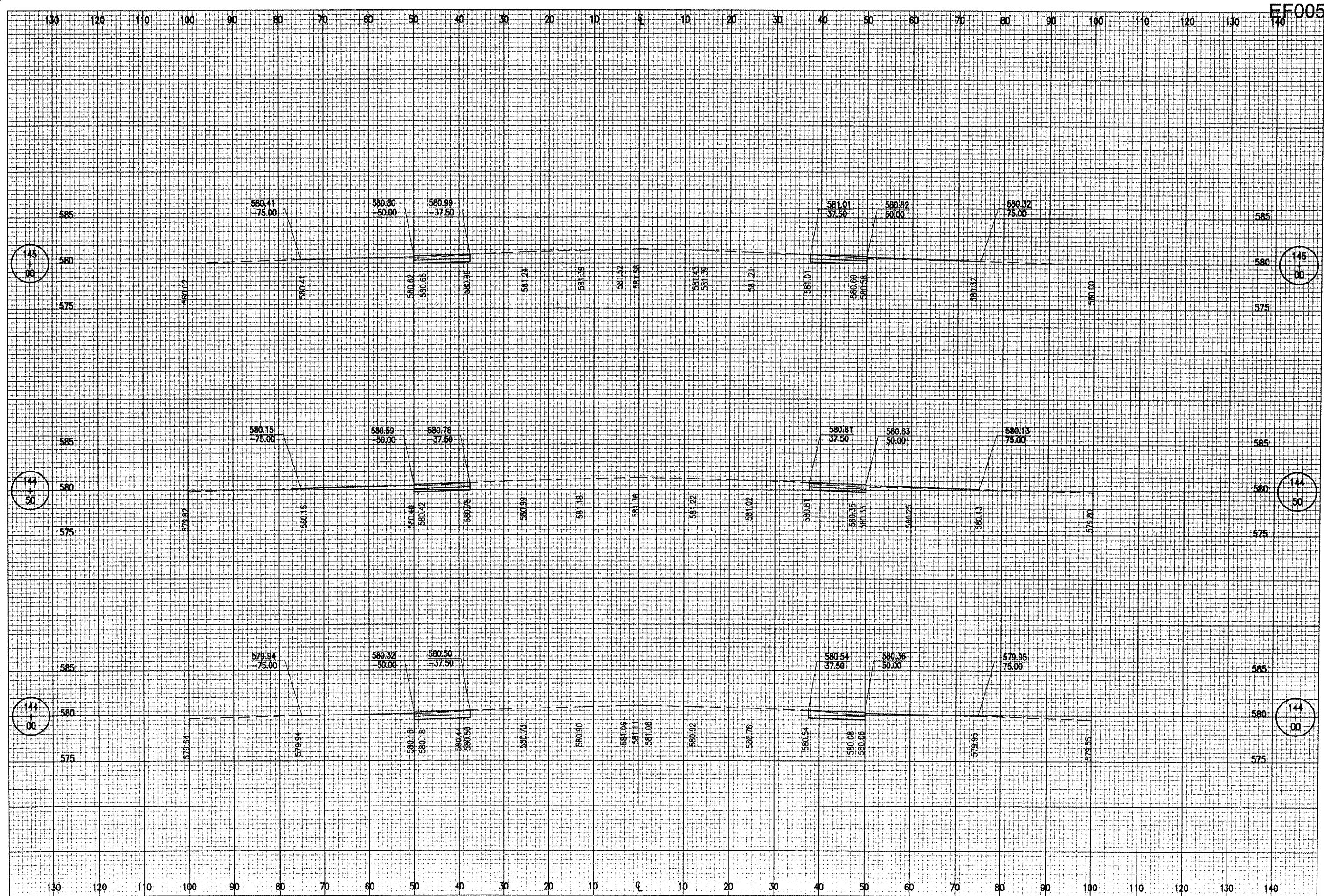
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RE: Project No. 07A0143D_0800 Filename: R-324XS.DWG Scale: H. 1"=10' V. 1"=5' Date: 02/12/08	LAYOUT KOM 12/18/08 DRAWN MLB 12/18/08 REVIEWED CAH 12/18/08
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**HANSON**  
 Hanson Professional Services Inc.  
 1525 South Sixth Street  
 Springfield, Illinois 62705-2686  
 Offices Nationwide

WIDEN RUNWAY 11/29  
 AND REPLACE MRL'S  
 PROPOSED CROSS-SECTIONS  
 FOR RUNWAY 11/29 WIDENING  
 STA. 142+50 TO STA. 143+50





DATE	REVISION	BY

EFFINGHAM COUNTY  
 MEMORIAL AIRPORT  
 EFFINGHAM, ILLINOIS

IL PROJ.: 1H2-3761 A.L.P. PROJ.: 3-17-0040-B11

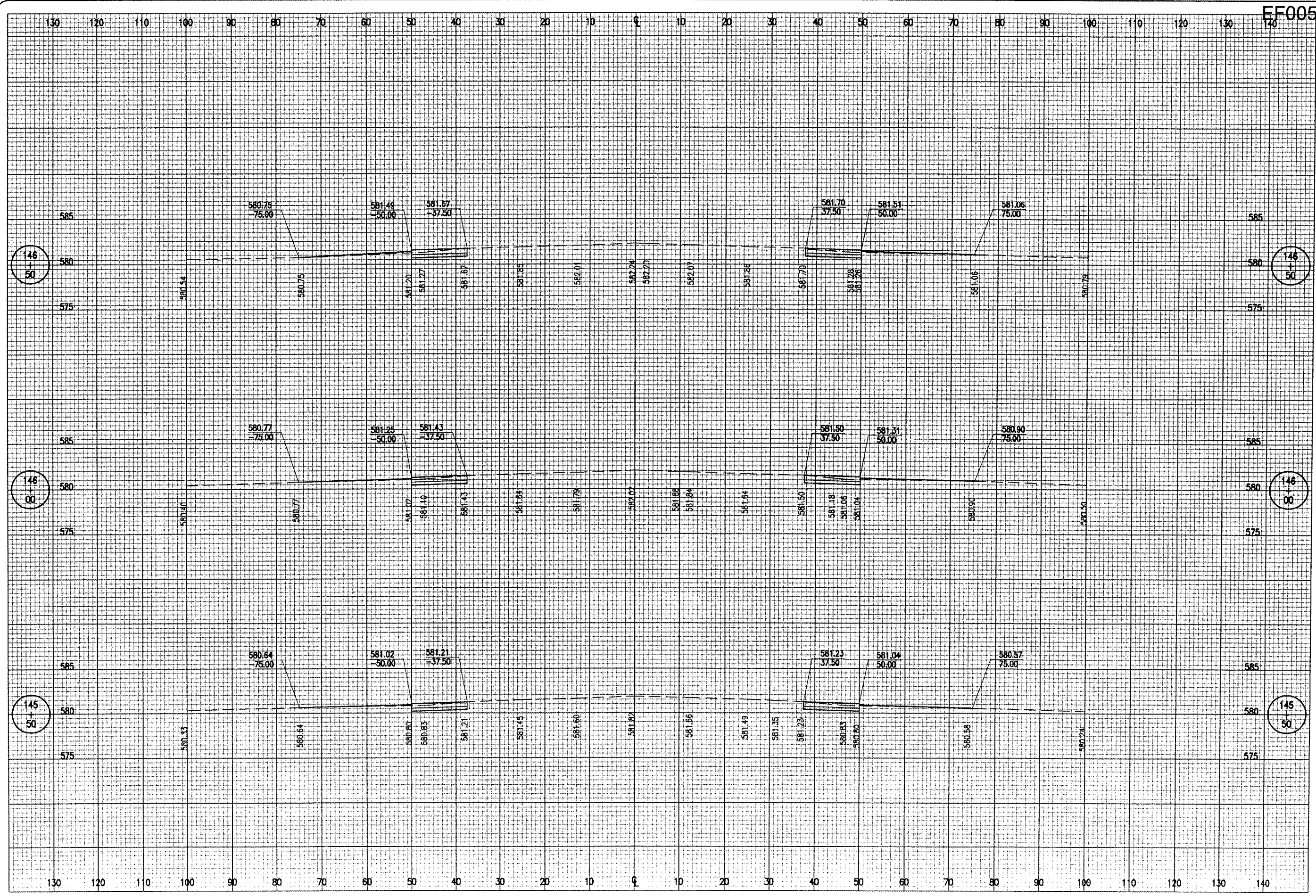
REVISION	DATE	BY

**HANSON**  
 Hanson Professional Services Inc.  
 1525 South Sixth Street  
 Springfield, Illinois 62702-2686  
 Offices Nationwide

WIDEN RUNWAY 11/29  
 AND REPLACE MRL'S

PROPOSED CROSS-SECTIONS  
 FOR RUNWAY 11/29 WIDENING  
 STA. 144+00 TO STA. 145+00





EF005

DATE	REVISION

**EFFINGHAM COUNTY  
 MEMORIAL AIRPORT  
 EFFINGHAM, ILLINOIS**

IL PROJ.: 1H2-3761 A.I.P. PROJ.: 3-17-0040-B11

IET Project No. 07A0143D_0800 File Name R-326XS.DWG Scale H 1" = 10' V 1" = 5' Date 02/12/08	LAYOUT KDM 02/18/08 DRAWN DPE 02/18/08 REVIEWED CAH 02/12/08
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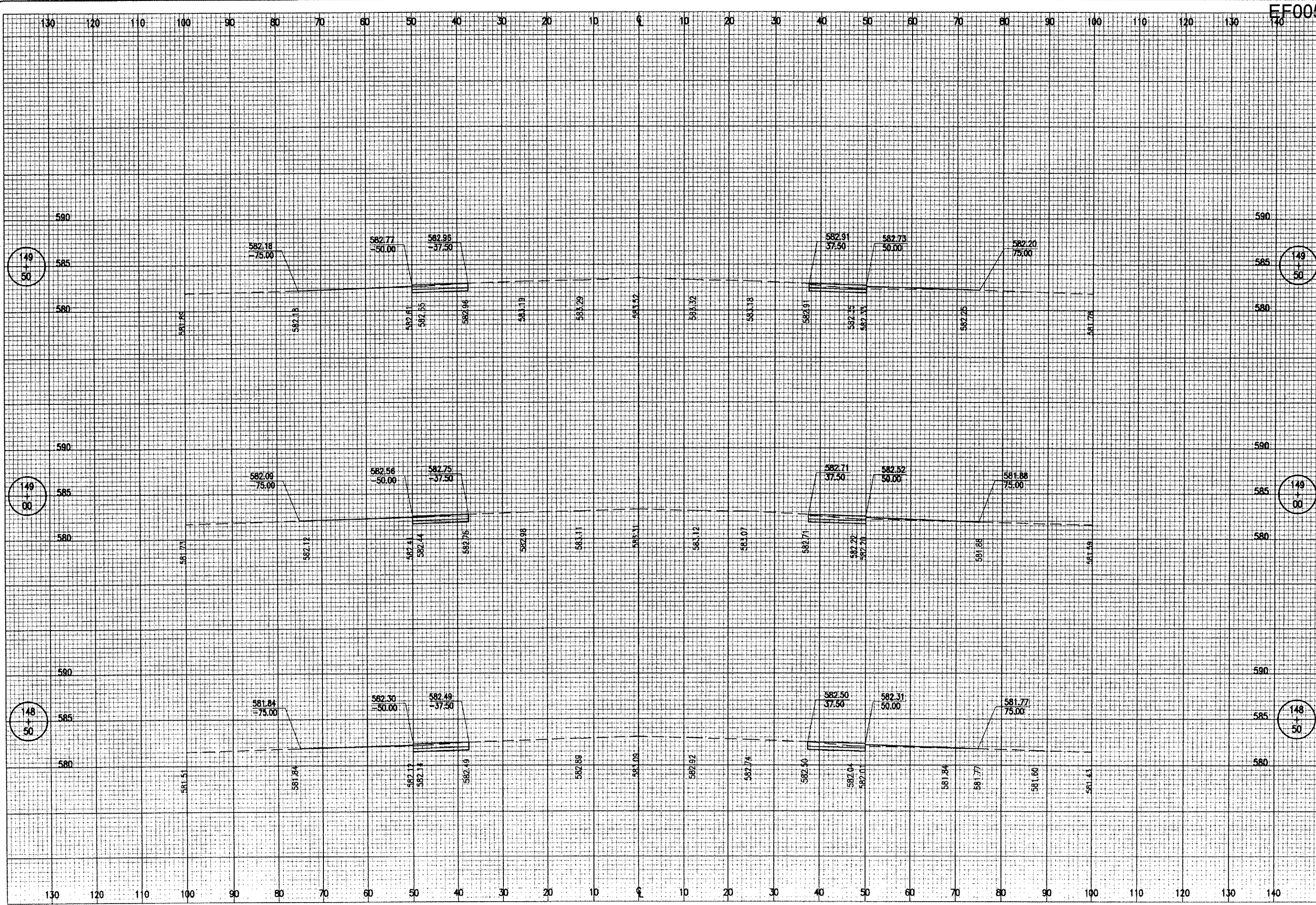


**WIDEN RUNWAY 11/29  
 AND REPLACE MRL'S**  
**PROPOSED CROSS-SECTIONS  
 FOR RUNWAY 11/29 WIDENING  
 STA. 145+50 TO STA. 146+50**









FF005

DATE	REVISION	BY

EFFINGHAM COUNTY  
MEMORIAL AIRPORT  
EFFINGHAM, ILLINOIS

IL PROJ.: 1H2-3761 A.I.P. PROJ.: 3-17-0040-B11

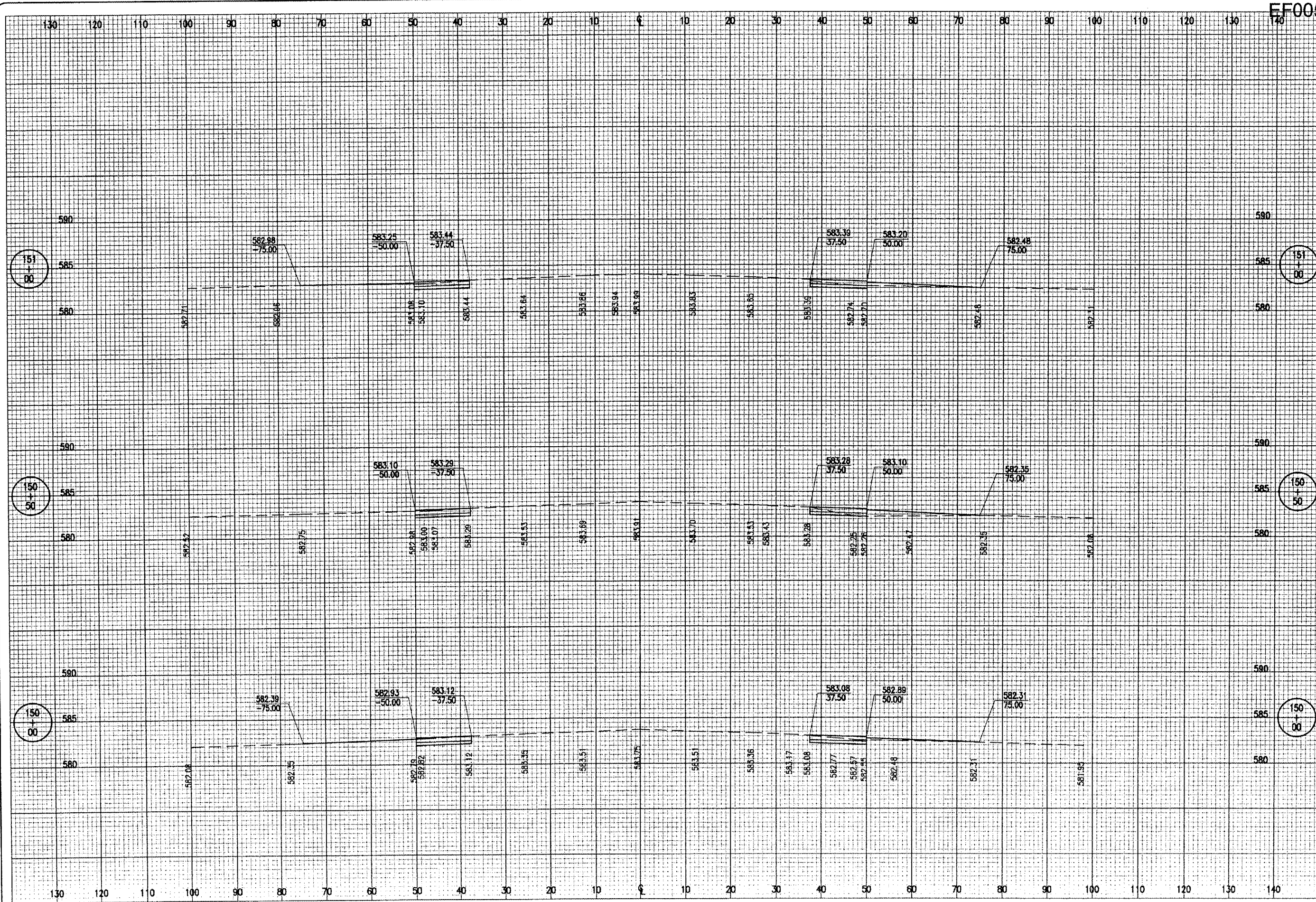
FILE	DATE	REVIEWED	BY
HAG Project No. 07A0143D_0800	02/18/08	COM	02/18/08
Filename R-328XS.DWG	02/18/08	DPE	02/18/08
Scale H 1" = 10' V 1" = 5'	02/12/08	CAH	02/12/08
Date 02/12/08			



WIDEN RUNWAY 11/29  
AND REPLACE MRL'S

PROPOSED CROSS-SECTIONS  
FOR RUNWAY 11/29 WIDENING  
STA. 148-50 TO STA. 149+50





FF005

DATE	REVISION	BY

**EFFINGHAM COUNTY  
 MEMORIAL AIRPORT  
 EFFINGHAM, ILLINOIS**

ILL. PROJ.: 1H2-3761 A.I.P. PROJ.: 3-17-0040-B11

HEI Project No. 07A0143D 0800	FILENAME R-329XS.DWG
Scale H, V = 1" = 10' V, 1" = 5'	DATE 02/12/08
LAYOUT KDM 02/18/08	DRAWN DPE 02/18/08
REVIEWED CAH 02/12/08	



**WIDEN RUNWAY 11/29  
 AND REPLACE MRL'S  
 PROPOSED CROSS-SECTIONS  
 FOR RUNWAY 11/29 WIDENING  
 STA. 150+00 TO STA. 151+00**











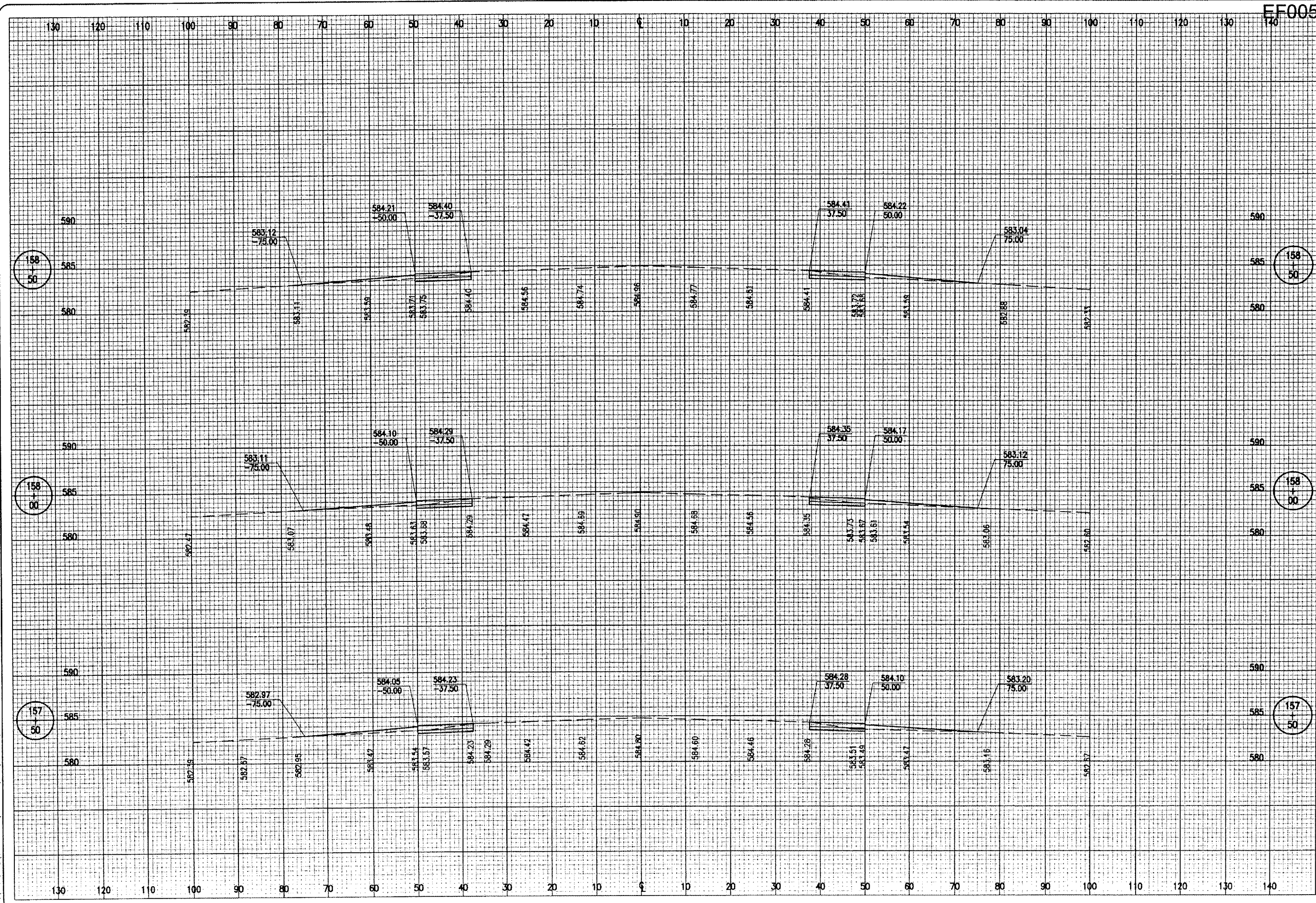








APR 09, 2008 6:54 PM HAGI000382  
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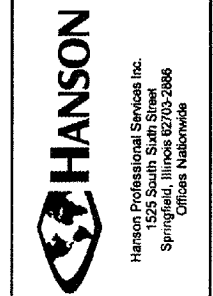
EF005

DATE	REVISION	BY

EFFINGHAM COUNTY  
 MEMORIAL AIRPORT  
 EFFINGHAM, ILLINOIS

IL PROJ.: 1H2-3761 A.I.P. PROJ.: 3-17-0040-B11

IEL Project No. 07A014.3D.0800 Filename R-334XS.DWG Scale H, 1" = 10' V, 1" = 5' Date 02/12/08	LAYOUT KDM 02/18/08 DRAWN DPE 02/18/08 REVIEWED CAH 02/12/08
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WIDEN RUNWAY 11/29  
 AND REPLACE MRL'S

PROPOSED CROSS-SECTIONS  
 FOR RUNWAY 11/29 WIDENING  
 STA. 157+50 TO STA. 158+50







EARTH VOLUMES EAST OF N-S RUNWAY

EARTHWORK VOLUME TABLES (RUNWAY LEFT)						EARTHWORK VOLUME TABLES (RUNWAY RIGHT)					
STATION	AREAS SQUARE FEET		VOLUMES CUBIC YARDS		CUMULATIVE COLUMNS CUBIC YARDS	STATION	AREAS SQUARE FEET		VOLUMES CUBIC YARDS		CUMULATIVE COLUMNS CUBIC YARDS
	CUT	FILL	CUT	FILL	CUT		FILL	CUT	FILL	CUT	FILL
108+00	0	0									
109+00	8.72	0.11	1.61	0.02	1.61	0.02					
109+50	9.72	0.00	17.07	0.10	18.69	0.12					
110+00	8.34	0.23	16.72	0.21	35.41	0.34	110+00	25.56	0.00	0.00	0.00
110+50	9.58	0.00	16.59	0.21	52.00	0.55	110+50	11.58	0.06	34.39	0.06
111+00	9.35	0.00	17.53	0.00	69.53	0.55	111+00	11.88	0.00	21.72	0.06
111+50	9.27	0.05	17.24	0.05	86.77	0.59	111+50	9.15	0.00	19.47	0.00
112+00	8.97	1.73	16.89	0.05	103.66	0.64	112+00	8.33	1.00	16.19	0.93
112+50	8.70	0.74	16.36	1.60	120.02	2.24	112+50	10.02	0.00	16.99	0.93
113+00	8.95	1.14	16.34	2.29	136.36	4.53	113+00	7.34	2.81	16.07	2.60
113+50	8.82	1.88	16.45	1.74	152.82	6.27	113+50	5.56	5.26	11.94	7.47
114+00	8.39	2.81	15.94	2.74	168.75	9.06	114+00	7.29	3.58	11.89	8.18
114+50	7.66	0.71	14.86	4.34	183.61	13.40	114+50	6.88	4.05	13.12	7.06
115+00	9.23	0.71	15.64	3.25	199.25	16.65	115+00	8.28	4.35	14.04	7.77
115+50	5.75	5.17	13.87	5.44	213.12	22.09	115+50	8.12	2.17	15.18	6.03
116+00	6.69	3.83	11.51	8.33	224.63	30.42	116+00	6.97	2.13	13.97	3.97
116+50	7.11	3.83	12.77	7.08	237.40	37.51	116+50	7.05	0.97	12.98	2.86
117+00	6.55	4.04	12.65	7.28	250.05	44.78	117+00	9.31	0.70	15.14	1.54
117+50	6.33	6.24	11.92	9.51	261.97	54.30	117+50	7.02	2.96	13.97	3.38
118+00	6.50	4.47	11.88	9.92	273.85	64.21	118+00	6.48	5.10	12.98	7.46
118+50	7.13	2.90	12.62	6.82	286.46	71.04	118+50	8.62	1.64	15.14	6.24
119+00	7.20	2.37	13.26	4.88	299.72	75.91	119+00	0.00	0.00	15.12	1.51
119+50	7.32	2.78	13.44	4.76	313.16	80.68	119+50	9.12	1.22	8.44	1.13
120+00	6.66	3.32	12.94	5.64	326.10	86.32	120+00	8.95	1.70	16.72	2.70
120+50	7.69	1.51	13.28	4.46	339.38	90.78	120+50	7.16	2.70	14.91	4.07
121+00	9.74	0.00	16.13	1.39	355.51	92.18	121+00	9.39	0.00	15.32	2.50
121+50	7.62	2.60	16.07	2.40	371.59	94.58	121+50	8.59	8.70	16.65	8.06
122+00	8.39	2.02	14.82	4.27	386.41	98.85	122+00	9.11	0.53	16.39	8.55
122+50	8.05	2.33	15.22	4.02	401.62	102.87	122+50	9.58	0.00	17.30	0.49
123+00	7.28	2.71	14.19	4.66	415.82	107.53	123+00	8.58	1.27	16.81	1.18
123+50	8.21	1.89	14.34	4.26	430.16	111.79	123+50	8.66	0.00	15.96	1.18
124+00	9.04	0.82	15.97	2.50	446.12	114.29	124+00	8.43	3.15	15.82	2.91
124+50	9.13	0.70	16.82	1.40	462.94	115.70	124+50	7.11	3.99	14.38	6.60
125+00	8.91	1.03	16.70	1.80	479.64	117.29	125+00	8.36	1.63	14.32	5.20
125+50	8.16	2.24	15.81	3.02	495.45	120.31	125+50	8.14	2.22	15.27	3.56
126+00	7.13	2.48	14.16	4.36	509.61	124.67	126+00	4.93	4.94	12.10	6.62
126+50	7.84	0.68	13.86	2.92	523.47	127.59	126+50	7.19	3.81	11.22	8.10
127+00	8.95	0.54	15.54	1.12	539.01	128.71	127+00	6.42	3.99	12.60	7.22
127+50	8.30	1.75	15.97	2.11	554.98	130.82	127+50	6.73	4.23	12.18	7.61
128+00	7.01	1.93	14.17	3.40	569.15	134.22	128+00	6.10	3.81	11.88	7.44
128+50	6.45	2.78	12.46	4.36	581.61	138.58	128+50	6.70	2.32	11.85	5.68
129+00	7.76	2.87	13.15	5.23	594.76	143.81	129+00	6.85	2.58	12.54	4.54
129+50	8.53	1.27	15.07	3.83	609.83	147.64	129+50	8.04	1.90	13.78	4.14
130+00	7.67	2.74	15.00	3.71	624.83	151.35	130+00	8.41	1.30	15.00	3.71
130+50	6.29	3.02	12.93	5.33	637.75	156.68	130+50	7.45	2.44	14.69	3.45
131+00	7.47	1.27	12.74	3.97	650.49	160.65	131+00	9.22	0.00	15.43	2.25
131+50	8.48	1.52	14.76	2.58	665.26	163.22	131+50	8.13	0.00	16.06	0.00
132+00	7.23	1.31	14.54	2.62	679.80	165.84	132+00	7.74	0.86	14.69	0.79
132+50	6.05	3.18	12.29	4.15	692.09	170.00	132+50	7.89	2.15	14.47	2.78
133+00	6.49	3.45	11.61	6.13	703.70	176.13	133+00	8.82	1.09	15.28	3.00
133+50	8.12	0.62	13.53	3.76	717.23	179.89	133+50	7.43	3.68	14.85	4.41
134+00	8.60	0.98	15.48	1.48	732.70	181.37	134+00	9.37	0.00	15.55	3.40
134+50	6.81	2.83	14.26	3.52	746.97	184.90	134+50	7.32	3.83	15.45	3.54
135+00	8.84	1.00	14.49	3.54	761.46	188.44	135+00	9.44	0.13	15.52	3.66
135+50	7.23	3.29	14.88	3.97	776.33	192.41	135+50	7.27	3.23	15.47	3.10
136+00	8.82	0.98	14.85	3.95	791.18	196.36	136+00	7.61	3.55	13.78	6.27
136+50	13.65	0.07	20.80	0.96	811.99	197.32	136+50	9.50	0.58	15.84	3.82
137+00	0.00	0.00	12.64	0.06	824.62	197.38	137+00	19.51	0.19	26.85	0.71
					<b>824.62</b>	<b>197.38</b>	137+50	0.00	0.00	18.06	0.18
							<b>TOTAL</b>			<b>836.31</b>	<b>211.80</b>

EARTH VOLUMES WEST OF N-S RUNWAY

EARTHWORK VOLUME TABLES (RUNWAY LEFT)						EARTHWORK VOLUME TABLES (RUNWAY RIGHT)					
STATION	AREAS SQUARE FEET		VOLUMES CUBIC YARDS		CUMULATIVE COLUMNS CUBIC YARDS	STATION	AREAS SQUARE FEET		VOLUMES CUBIC YARDS		CUMULATIVE COLUMNS CUBIC YARDS
	CUT	FILL	CUT	FILL	CUT		FILL	CUT	FILL	CUT	FILL
137+50	0.00	0.00	0.00	0.00	0.00	0.00					
138+00	18.56	1.57	17.19	1.45	17.19	1.45	138+00	0.00	0.00	0.00	0.00
138+50	6.29	5.46	23.01	6.50	40.19	7.95	138+50	12.71	0.00	11.77	0.00
139+00	7.04	3.46	12.34	8.25	52.53	16.20	139+00	9.03	0.62	20.13	0.57
139+50	7.85	3.04	13.78	6.02	66.31	22.22	139+50	11.56	0.00	19.06	0.57
140+00	7.63	2.77	14.33	5.38	80.64	27.60	140+00	8.63	0.97	18.69	0.89
140+50	6.94	3.65	13.48	5.94	94.13	33.54	140+50	7.62	2.81	15.04	3.49
141+00	7.43	3.16	13.30	6.30	107.43	39.84	141+00	8.12	2.12	14.57	4.56
141+50	8.30	1.49	14.56	4.30	121.99	44.13	141+50	8.53	0.52	15.41	2.44
142+00	7.44	2.23	14.56	3.44	136.55	47.57	142+00	8.85	0.90	16.08	1.31
142+50	7.83	2.41	14.13	4.29	150.69	51.86	142+50	8.70	1.17	16.24	1.91
143+00	7.85	1.78	14.51	3.87	165.20	55.73	143+00	8.21	1.61	15.65	2.57
143+50	9.37	0.00	15.94	1.64	181.14	58.91	143+50	7.81	2.46	14.83	3.76
144+00	9.06	0.39	17.06	0.36	198.20	60.22	144+00	8.12	1.92	14.75	4.05
144+50	8.91	0.88	16.63	1.18	214.83	61.79	144+50	7.71	2.07	14.65	3.69
145+00	8.58	0.54	16.19	1.31	231.03	64.02	145+00	8.58	1.45	15.08	3.26
145+50	8.48	1.15	15.79	1.56	246.82	67.19	145+50	8.36	1.35	15.68	2.59
146+00	8.67	1.26	15.88	2.23	262.69	64.02	146+00	8.06	1.66	15.20	2.78
146+50	8.31	2.17	15.72	3.18	278.41	67.19	146+50	8.01	1.55	14.88	2.97
147+00	7.30	3.37	14.45	5.13	292.86	72.32	147+00	8.24	1.96	15.05	3.25
147+50	8.30	2.06	14.44	5.02	307.30	77.34	147+50	8.60	0.00	15.59	1.81
148+00	8.37	2.11	15.43	3.86	322.73	81.20	148+00	8.99	0.67	16.28	0.62
148+50	9.02	0.75	16.10	2.65	338.83	83.85	148+50	8.04	2.21	15.76	2.66
149+00	9.22	0.34	16.88	1.01	355.71	84.86	149+00	7.49	2.47	14.38	4.33
149+50	9.19	0.53	17.04	0.80	372.75	85.66	149+50	6.69	2.98	13.13	5.05
150+00	9.47	0.15	17.27	0.63	390.01	86.29	150+00	7.54	2.72	13.18	5.28
150+50	9.39	0.56	17.45	0.65	407.47	86.94	150+50	3.88	9.06	10.57	10.90
151+00	8.51	8.51	16.57	8.39	424.04	95.33	151+00	5.83	4.58	8.99	12.63
151+50	9.61	0.00	16.78	7.88	440.81	103.21	151+50	6.74	4.54	11.64	8.44
152+00	9.07	0.00	17.29	0.00	458.11	103.21	152+00	6.33	4.42	12.10	8.29
152+50	3.79	1.00	11.90	0.92	470.00	140.13	152+50	8.29	2.07	13.53	6.00
153+00	8.26	1.35	11.15	2.17	481.16	106.30	153+00	19.41	0.00	25.65	1.92
153+50	8.00	2.38	15.05	3.44	496.21	109.75	153+50	0.00	0.00	17.97	0.00
154+00	8.26	1.87	15.05	3.93	511.25	113.68	154+00	0.00	0.00	0.00	0.00
154+50	6.42	4.31	13.58	5.72	524.84	119.40	154+50	7.55	4.49	6.99	4.16
155+00	7.14	3.63	12.55	7.35	537.38	126.75	155+00	6.88	4.17	13.36	8.02
155+50	6.55	4.21	12.67	7.26	550.05	134.01	155+50	6.46	3.95	12.35	7.52