4-24-09 Letting

Item 2A

SR085
TOTAL SHEETS: 81

CONSTRUCTION PLANS

FOR

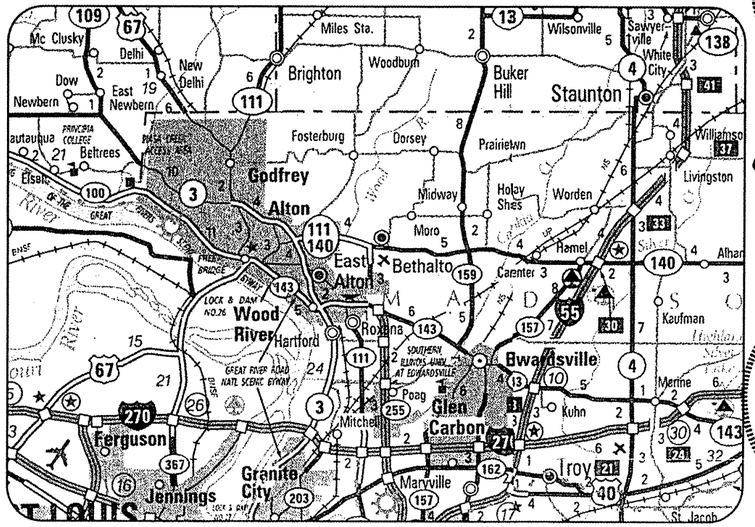
ST. LOUIS REGIONAL AIRPORT

EAST ALTON, MADISON COUNTY, ILLINOIS

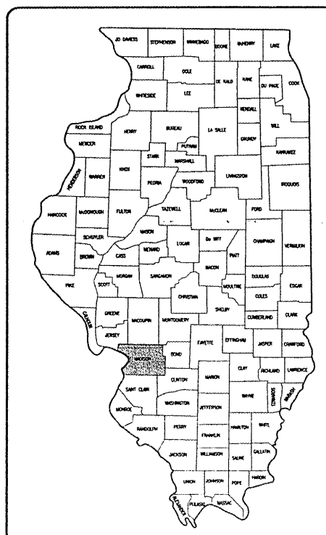
CONSTRUCT RUNWAY SAFETY AREA IMPROVEMENTS

SCOPE OF WORK

THIS PROJECT CONSISTS OF CONSTRUCTING A 303 FOOT EXTENSION TO RUNWAY END 35 AND THE REMOVAL OF 303 FOOT OF PAVEMENT FROM RUNWAY END 17 TO ALLOW FOR PROPER SAFETY AREA REQUIREMENTS. OTHER IMPROVEMENTS INCLUDE CONSTRUCTING TAXIWAYS TO THE NEW RUNWAY ENDS, UNCLASSIFIED EXCAVATION, ELECTRICAL, DRAINAGE, AND OTHER NECESSARY ITEMS TO COMPLETE THE PROJECT.



LOCATION



LOCATION OF COUNTY

ILL. PROJ.:	ALN-3825
A.I.P. PROJ.:	3-17-0002-B42
LATITUDE:	38° 53' 42"
LONGITUDE:	90° 02' 76"
ELEVATION:	544' M.S.L.
DATE:	JULY 29, 2008

LICENSED PROFESSIONAL ENGINEER
KEVIN N. LIGHTFOOT
062-047643
STATE OF ILLINOIS

COVERING ELECTRICAL DESIGN

LICENSED PROFESSIONAL ENGINEER
CHARLES A. HAGLOCH
062-37821
STATE OF ILLINOIS

HANSON
Hanson Professional Services Inc.
ELECTRICAL ENGINEER
Submitted by: Kevin N. Lightfoot ENG'R
Date Submitted 2/27/2009
Lics. Exp. Date NOVEMBER 30, 2009

HANSON
Hanson Professional Services Inc.
Submitted by: Charles A. Hagloch ENG'R
Date Submitted FEBRUARY 27, 2009
Lics. Exp. Date NOVEMBER 30, 2009

ST. LOUIS REGIONAL AIRPORT AUTHORITY
Approved Richard R Ball CHAIRMAN
Date FEB 20, 2009
Approved Jeffrey C Isom SECRETARY
Date FEB 20, 2009

DATE	REVISION	BY

ST. LOUIS REGIONAL AIRPORT
EAST ALTON, ILLINOIS
IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

HSI Project No. 837ORWYO 0800
Filename R-001CVR.DWG
Scale N/A
Date 02/06/08

LAYOUT	MDR	02/06/08
DRAWN	MDR	02/06/08
REVIEWED	CAH	07/11/08

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

RUNWAY SAFETY AREA IMPROVEMENTS

COVER SHEET

1

1 of 81 sheets

FEB 10, 2009 4:41 PM HAGLOOO382
I:\AIRPORTS\STLOUIS\837-08RWYO\AIRPORT\SHEETS\R-001CVR.DWG - COVER

SR085

SUMMARY OF QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	TOTAL QUANTITIES	AS BUILT QUANTITIES
AR107408	L-806 WIND CONE 8' LIGHTED	EACH	2	
AR107900	REMOVE WIND CONE	EACH	2	
AR108158	1/C #8 5 KV UG CABLE IN UD	L.F.	7,684	
AR109210	VAULT MODIFICATIONS	L.S.	1	
AR110502	2-WAY CONCRETE ENCASED DUCT	L.F.	112	
AR125410	MITL-STAKE MOUNTED	EACH	36	
AR125415	MITL-BASE MOUNTED	EACH	5	
AR125443	TAXI GUIDANCE SIGN, 3 CHARECTER	EACH	3	
AR125444	TAXI GUIDANCE SIGN, 4 CHARACTER	EACH	4	
AR125447	TAXI GUIDANCE SIGN, 7 CHARACTER	EACH	1	
AR125505	MIRL, STAKE MOUNTED	EACH	2	
AR125540	MI THRESHOLD LIGHT STAKE MTD	EACH	12	
AR125545	MI THRESHOLD LIGHT BASE MTD	EACH	4	
AR125901	REMOVE STAKE MOUNTED LIGHT	EACH	47	
AR125902	REMOVE BASE MOUNTED LIGHT	EACH	2	
AR125904	REMOVE TAXI GUIDANCE SIGN	EACH	2	
AR125965	RELOCATE RWY DISTANCE REMAIN SIGN	EACH	5	
AR150510	ENGINEER'S FEILD OFFICE	L.S.	1	
AR150530	TRAFFIC MAINTENANCE	L.S.	1	
AR150540	HAUL ROUTE	L.S.	1	
AR152410	UNCLASSIFIED EXCAVATION	C.Y.	6,643	
AR156511	DITCH CHECK	EACH	3	
AR156520	INLET PROTECTION	EACH	4	
AR156530	TEPORARY SEEDING	ACRE	8	
AR156540	RIPRAP	S.Y.	22	
AR201610	BITUMINOUS BASE COURSE	TON	2,143	
AR208540	OVERSIZE AGGREGATE	TON	3,389	
AR209510	CRUSHED AGGREGATE BASE COURSE	TON	3,178	
AR401610	BITUMINOUS SURFACE COURSE	TON	1,286	
AR401900	REMOVE BITUMINOUS PAVEMENT	S.Y.	4,251	
AR501510	10" PCC PAVEMENT	S.Y.	2,160	
AR501900	REMOVE PCC PAVEMENT	S.Y	3,129	
AR602510	BITUMINOUS PRIME COAT	GAL.	2,421	
AR603510	BITUMINOUS TACK COAT	GAL.	2,143	
AR620520	PAVEMENT MARKING-WATERBORNE	S.F.	62,965	
AR620525	PAVEMENT MARKING-BLACK BORDER	S.F.	31,965	
AR620900	PAVEMENT MARKING REMOVAL	S.F.	26,705	
AR701512	12" RCP, CLASS IV	L.F.	243	
AR701515	15" RCP, CLASS IV	L.F.	156	
AR701518	18" RCP, CLASS IV	L.F.	147	
AR701900	REMOVE PIPE	L.F.	398	
AR705410	POROUS BACKFILL	C.Y.	74	
AR705526	6" PERFORATED UNDERDRAIN W/SOCK	L.F.	2,996	
AR705630	UNDERDRAIN INSPECTION HOLE	EACH	12	
AR705900	REMOVE UNDERDRAIN	L.F.	1,866	
AR705903	REMOVE UNDERDRAIN INSP. HOLE	EACH	7	
AR705904	REMOVE UNDERDRAIN CLEANOUT	EACH	2	
AR751218	PRECAST REINFORCED CONC. FES 18"	EACH	1	
AR751411	INLET-TYPE A	EACH	4	
AR751540	MANHOLE 4'	EACH	2	
AR751900	REMOVE INLET	EACH	1	
AR751903	REMOVE MANHOLE	EACH	2	
AR901510	SEEDING	ACRE	8.0	
AR904510	SODDING	S.Y.	902	
AR908510	MULCHING	ACRE	7.7	

INDEX TO SHEETS

SHEET NO.	DESCRIPTION
73	PROPOSED CROSS-SECTIONS FOR TAXIWAY "B" STA. 59+25 TO STA. 59+50
74	PROPOSED CROSS-SECTIONS FOR TAXIWAY "B" STA. 59+75 TO STA. 60+00
75	PROPOSED CROSS-SECTIONS FOR TAXIWAY "B" STA. 60+25 TO STA. 60+50
76	PROPOSED CROSS-SECTIONS FOR TAXIWAY "B" STA. 60+75 TO STA. 61+00
77	PROPOSED CROSS-SECTIONS FOR TAXIWAY "B" STA. 61+25 TO STA. 61+77
78	PROPOSED CROSS-SECTIONS FOR TAXIWAY "B" STA. 62+02 TO STA. 62+42
79	PROPOSED CROSS-SECTIONS FOR TAXIWAY "B" STA. 62+75 TO STA. 63+00
80	PROPOSED CROSS-SECTIONS FOR TAXIWAY "B" STA. 63+25 TO STA. 63+50
81	PROPOSED CROSS-SECTIONS FOR TAXIWAY "B" STA. 63+75

INDEX TO SHEETS

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	SUMMARY OF QUANTITIES AND INDEX TO SHEETS
3	PROPOSED SAFETY PLAN
4	SUMMARY OF QUANTITIES FOR RUNWAY END 17
5	PROPOSED CONSTRUCTION PLAN FOR RUNWAY END 17
6	PROPOSED STORMWATER POLLUTION PREVENTION PLAN FOR RUNWAY END 17
7	PROPOSED STORMWATER POLLUTION PREVENTION DETAILS
8	PROPOSED PAVEMENT PREPARATION PLAN FOR RUNWAY END 17
9	PROPOSED PLAN AND PROFILE FOR TAXIWAY "C1"
10	PROPOSED DRAINAGE PLAN FOR RUNWAY END 17
11	PROPOSED DRAINAGE DETAILS AND NOTES
12	PROPOSED STAKING PLAN FOR RUNWAY END 17
13	PROPOSED JOINTING PLAN FOR RUNWAY END 17
14	PROPOSED JOINTING DETAILS
15	EXISTING ELECTRICAL PLAN FOR RUNWAY END 17
16	PROPOSED ELECTRICAL PLAN FOR RUNWAY END 17
17	PROPOSED ELECTRICAL DETAILS FOR RUNWAY END 17
18	PROPOSED ELECTRICAL DETAILS SHEET 1
19	PROPOSED ELECTRICAL DETAILS SHEET 2
20	PROPOSED ELECTRICAL DETAILS SHEET 3
21	PROPOSED ELECTRICAL NOTES SHEET 1
22	PROPOSED ELECTRICAL NOTES SHEET 2
23	PROPOSED CROSS-SECTIONS FOR RUNWAY END 17 STA. -6+25 TO STA. -6+00
24	PROPOSED CROSS-SECTIONS FOR RUNWAY END 17 STA. -5+75 TO STA. -5+50
25	PROPOSED CROSS-SECTIONS FOR RUNWAY END 17 STA. -5+25 TO STA. -5+00
26	PROPOSED CROSS-SECTIONS FOR RUNWAY END 17 STA. -4+75 TO STA. -4+50
27	PROPOSED CROSS-SECTIONS FOR RUNWAY END 17 STA. -4+25 TO STA. -4+00
28	PROPOSED CROSS-SECTIONS FOR RUNWAY END 17 STA. -3+75 TO STA. -3+50
29	PROPOSED CROSS-SECTIONS FOR TAXIWAY "C1" STA. 0+50 TO STA. 1+00
30	PROPOSED CROSS-SECTIONS FOR TAXIWAY "C1" STA. 1+25 TO STA. 1+50
31	PROPOSED CROSS-SECTIONS FOR TAXIWAY "C1" STA. 1+75 TO STA. 2+25
32	PROPOSED CROSS-SECTIONS FOR TAXIWAY "C1" STA. 2+50 TO STA. 3+00
33	PROPOSED CROSS-SECTIONS FOR TAXIWAY "C1" STA. 3+25 TO STA. 3+50
34	SUMMARY OF QUANTITIES FOR RUNWAY END 35
35	PROPOSED CONSTRUCTION PLAN FOR RUNWAY END 35
36	PROPOSED TYPICAL SECTION AND NOTES FOR RUNWAY END 35
37	PROPOSED STORMWATER POLLUTION PREVENTION PLAN FOR RUNWAY END 35
38	PROPOSED PAVEMENT PREPARATION PLAN FOR RUNWAY END 35
39	PROPOSED PLAN AND PROFILE FOR RUNWAY END 35
40	PROPOSED PLAN AND PROFILE FOR TAXIWAY "B"
41	PROPOSED PLAN AND PROFILE FOR TAXIWAY "B4"
42	PROPOSED DRAINAGE PLAN FOR RUNWAY END 35
43	PROPOSED STAKING PLAN FOR RUNWAY END 35
44	EXISTING ELECTRICAL PLAN FOR RUNWAY END 35
45	PROPOSED ELECTRICAL PLAN FOR RUNWAY END 35
46	PROPOSED ELECTRICAL PLAN FOR RUNWAY 17-35
47	PROPOSED WIND CONE LAYOUT PLAN FOR RUNWAY 17-35
48	PROPOSED ELECTRICAL DETAILS FOR RUNWAY END 35
49	ELECTRICAL LEGEND AND ABBREVIATIONS
50	VAULT ELECTRICAL ONE-LINE DIAGRAM
51	HIGH VOLTAGE WIRING SCHEMATIC
52	WIND CONE ELEVATION DETAIL
53	EXISTING PAVEMENT MARKING REMOVAL STA. -6+00 TO STA. 32+00
54	EXISTING PAVEMENT MARKING REMOVAL STA. 32+00 TO STA. 59+00
55	PROPOSED PAVEMENT MARKING PLAN STA. -2+97 TO STA. 14+00
56	PROPOSED PAVEMENT MARKING PLAN STA. 14+00 TO STA. 31+00
57	PROPOSED PAVEMENT MARKING PLAN STA. 31+00 TO STA. 48+00
58	PROPOSED PAVEMENT MARKING PLAN STA. 48+00 TO STA. 62+03
59	PROPOSED TAXIWAY ENHANCED MARKING DETAILS, SHEET 1
60	PROPOSED TAXIWAY ENHANCED MARKING DETAILS, SHEET 2
61	PROPOSED MARKING DETAILS AND NOTES
62	PROPOSED CROSS-SECTIONS FOR RUNWAY END 35 STA. 58+99 TO STA. 59+25
63	PROPOSED CROSS-SECTIONS FOR RUNWAY END 35 STA. 59+50 TO STA. 59+75
64	PROPOSED CROSS-SECTIONS FOR RUNWAY END 35 STA. 60+00 TO STA. 60+25
65	PROPOSED CROSS-SECTIONS FOR RUNWAY END 35 STA. 60+50 TO STA. 60+75
66	PROPOSED CROSS-SECTIONS FOR RUNWAY END 35 STA. 61+00 TO STA. 61+25
67	PROPOSED CROSS-SECTIONS FOR RUNWAY END 35 STA. 61+52 TO STA. 61+77
68	PROPOSED CROSS-SECTIONS FOR RUNWAY END 35 STA. 62+02 TO STA. 62+42
69	PROPOSED CROSS-SECTIONS FOR RUNWAY END 35 STA. 62+75 TO STA. 63+25
70	PROPOSED CROSS-SECTIONS FOR RUNWAY END 35 STA. 63+50 TO STA. 63+75
71	PROPOSED CROSS-SECTIONS FOR RUNWAY END 35 STA. 64+00 TO STA. 64+25
72	PROPOSED CROSS-SECTIONS FOR TAXIWAY "B" STA. 58+75 TO STA. 58+99

BY	REVISION	DATE

ST. LOUIS REGIONAL AIRPORT

St.LouisRegional AIRPORT

EAST ALTON, ILLINOIS

IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

HSI Project No. 8370BRWYD.0800

Filename R-002FLP.DWG

Scale N/A

Date 02/06/08

LAYOUT	MDR	02/06/08
DRAWN	MDR	02/06/08
REVIEWED	CAH	07/11/08

HANSON

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

RUNWAY SAFETY AREA IMPROVEMENTS

SUMMARY OF QUANTITIES AND INDEX TO SHEETS

2

2 of 81 sheets

FEB 10, 2009 4:42 PM HAGLOOO352
J:\AIRPORTS\STLOUIS\8370-06RWYD\AIRPORT\SHEETS\R-002FLP.DWG - Layout1

SCOPE OF WORK

THIS PROJECT CONSISTS OF CONSTRUCITNG A 303' EXTENSION TO RUNWAY END 35 AND REMOVAL OF 303' OF PAVEMENT FROM RUNWAY END 17 TO ALLOW FOR PROPER SAFETY AREA REQUIREMENTS. OTHER IMPROVEMENTS INCLUDE CONSTRUCTING TAXIWAYS TO THE NEW RUNWAY ENDS, UNCLASSIFIED EXCAVATION, ELECTRICAL, DRAINAGE AND OTHER NECESSARY ITEMS TO COMPLETE THE PROJECT.

AIRPORT SECURITY NOTE

AIRPORT SECURITY WILL BE MAINTAINED AT ALL TIMES. THE CONTRACTOR WILL CLOSE AND LOCK THE EXISTING GATES IN THE HAUL ROUTES AT THE END OF EACH WORKING DAY.

UTILITY NOTE

THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES AND AGENCIES WHICH HAVE LINES OR CONDUITS IN THE PROPOSED WORK AREA. ALL LINES AND CONDUITS SHALL BE LOCATED AND IDENTIFIED FOR DEPTH BEFORE ANY EXCAVATION BEGINS. THE CONTRACTOR WILL CALL J.U.L.I.E. (1-800-892-0123) TO ACCOMPLISH THE ABOVE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO IDENTIFY ALL UNDERGROUND NON-JULIE UTILITIES LOCATED WITHIN THE PROPOSED CONSTRUCTION LIMITS. THESE UNDERGROUND IMPROVEMENTS WILL BE LOCATED AT THE CONTRACTOR'S OWN EXPENSE PRIOR TO THE START OF CONSTRUCTION ACTIVITIES.

HEIGHT OF CONSTRUCTION EQUIPMENT

THE MAXIMUM ANTICIPATED HEIGHT OF THE CONSTRUCTION EQUIPMENT WILL BE 25 FEET. THE TALLEST EQUIPMENT IS EXPECTED TO BE A CONCRETE TRUCK.

HAUL ROUTE AND VEHICLE PARKING

THE CONTRACTOR WILL USE THE DESIGNATED HAUL ROUTES AND PARKING AREAS AS SHOWN ON THIS SHEET. THE PROPOSED PARKING AREAS WILL BE 200' X 200'. THE CONTRACTOR WILL BE REQUIRED TO MAINTAIN THE PROPOSED HAUL ROUTES AND PARKING AREAS THROUGHOUT THE COURSE OF THE PROJECT. ANY AREAS DAMAGED OUTSIDE OF THESE AREAS WILL BE REPAIRED BY THE CONTRACTOR AND AT THE CONTRACTOR'S OWN EXPENSE. AT THE CONCLUSION OF THE PROJECT THE CONTRACTOR WILL GRADE, FERTILIZE, SEED AND MULCH THE HAUL ROUTES AND PARKING AREAS AS NEEDED TO RESTORE THEM TO THEIR ORIGINAL STATES. RESTORATION OF THE HAUL ROUTES AND PARKING AREAS WILL BE CONSIDERED INCIDENTAL TO THE PROJECT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

CONTRACTOR RESPONSIBILITIES

THE CONTRACTOR'S EQUIPMENT PARKING AND STORAGE AREAS WILL BE AS SHOWN ON THIS SHEET. THE CONTRACTOR'S EMPLOYEES WILL PARK THEIR VEHICLES IN THESE AREAS. ONLY CONTRACTOR VEHICLES WILL BE ALLOWED OUTSIDE THIS AREA.

THE CONTRACTOR AND HIS EMPLOYEES WILL BE RESTRICTED TO THE WORK AREA AND ALL OTHER AREAS OF THE AIRPORT ARE "OFF LIMITS" TO THEM.

THE CONTRACTOR SHALL MAINTAIN CONTINUOUS TAXIWAY ACCESS TO RUNWAY 11-29 AND ALL HANGARS AND ADMINISTRATIVE AREAS.

ALL WORK PERFORMED SHALL BE DONE IN A ORDERLY AND EFFECTIVE MANNER TO MINIMIZE RUNWAY CLOSURE.

NO TRENCHES OR HOLES WILL REMAIN OPEN OVERNIGHT.

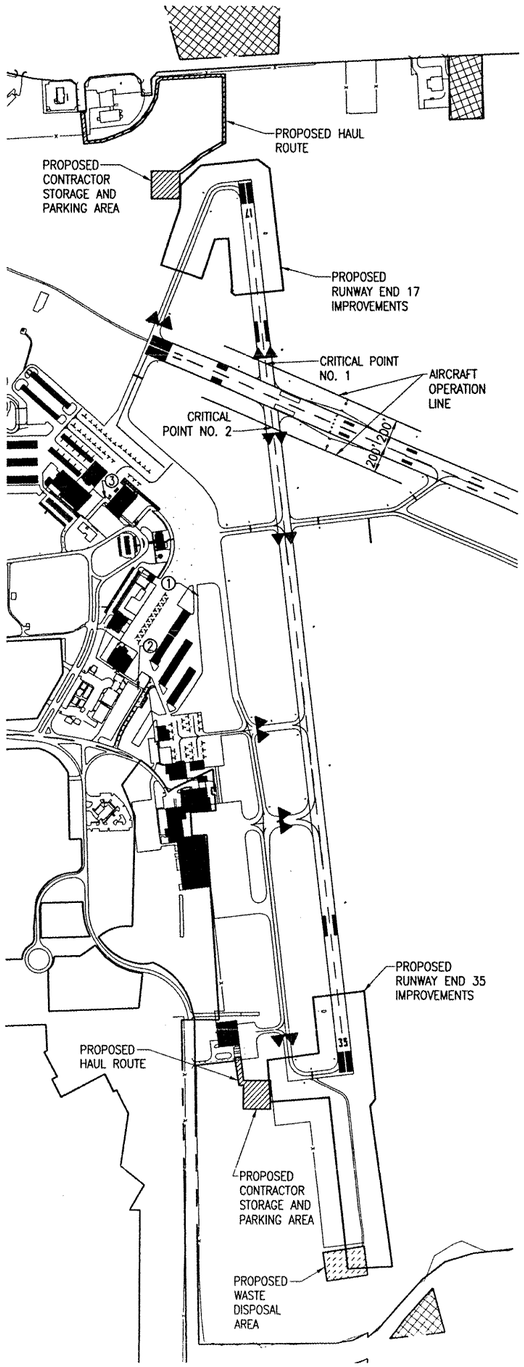
RUNWAY 11-29 SHALL NOT BE CLOSED OVERNIGHT.

BARRICADES AND TRAFFIC CONES

IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO PLACE AND MAINTAIN BARRICADES AND TRAFFIC CONES AS DIRECTED BY THE AIRPORT MANAGER. THE BARRICADES WILL BE EQUIPPED WITH RED FLASHING OR RED STEADY-BURN LIGHTS AND 20" SQUARE ORANGE FLAGS. THE BARRICADES, THEIR MAINTENANCE, PLACEMENT AND REMOVAL WILL BE PAID FOR UNDER ITEM AR150540 TRAFFIC MANTENANCE_____ PER LUMP SUM AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

LEGEND

- EXISTING IMPROVEMENTS
- PROPOSED IMPROVEMENTS
- EXISTING BUILDINGS
- PROPOSED HAUL ROUTE AND EQUIPMENT PARKING AREA
- ① PROPOSED BENCHMARK
- ▲▲ PROPOSED BARRICADES OR TRAFFIC CONES



BENCHMARK DATA

NO.	DESCRIPTION	ELEV.
1	CHISLED '□' FOUNDATION N.W. CORNER OF HANGAR #12	540.40
2	MAG NAIL IN ASPHALT	541.72
3	N.E. BOLT OF BEACON	539.88

CRITICAL POINT NO. 1 DATA

LATITUDE: 38° 53' 41.39"
LONGITUDE: 90° 03' 07.14"
ELEVATION: 538.0 M.S.L.

CRITICAL POINT NO. 2 DATA

LATITUDE: 38° 53' 36.85"
LONGITUDE: 90° 03' 06.46"
ELEVATION: 539.20 M.S.L.

CERTIFIED PAYROLLS

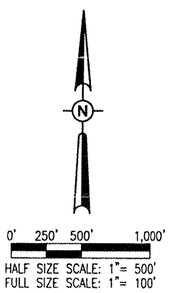
THE RESIDENT ENGINEER **CANNOT** FORWARD CONSTRUCTION REPORTS TO THE ILLINOIS DIVISION OF AERONAUTICS FOR PROCESSING UNTIL ALL **CERTIFIED PAYROLLS** FOR THE PERIOD HAVE BEEN RECEIVED.

MATERIAL CERTIFICATION

COMPLETED WORK **CANNOT** BE PLACED ON A CONSTRUCTION REPORT UNTIL ALL MATERIAL CERTIFICATIONS FOR THAT PAY ITEM HAVE BEEN RECEIVED, REVIEWED AND ACCEPTED BY THE RESIDENT ENGINEER.

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.

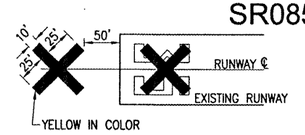
CALL J.U.L.I.E. FOR UTILITY INFORMATION AT 1-800-892-0123.



0' 250' 500' 1,000'

HALF SIZE SCALE: 1"= 500'
FULL SIZE SCALE: 1"= 100'

SR085



DETAIL OF CROSS FOR CLOSED RUNWAY

"NOT TO SCALE"

NOTE:

COST OF CONSTRUCTING, PLACING, MAINTAINING AND REMOVING CROSSES WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED. THE CROSSES WILL BE YELLOW IN COLOR AND SHALL BE MADE OF A SUITABLE MATERIAL AS APPROVED BY THE AIRPORT MANAGER. THE CROSSES WILL BE PLACED OVER THE NUMERALS AND SECURED IN A MANNER APPROVED BY THE MANAGER. THE PROPOSED CROSSES WILL BE PLACED EACH DAY THE RUNWAY IS CLOSED AND REMOVED WHEN THE RUNWAY IS RE-OPENED. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE PLACEMENT AND REMOVAL OF THE CROSSES. FURNISHING, PLACING, MAINTAINING AND REMOVING THE CROSSES WILL BE PAID FOR UNDER ITEM AR150540 TRAFFIC MAINTENANCE.

J.U.L.I.E. INFORMATION

COUNTY_____MADISON
CITY_____BETHALTO
TOWNSHIP_____ALTON - WOODRIVER
SECTION NO._____13 & 18
ADDRESS_____ST. LOUIS REGIONAL AIRPORT
8 TERMINAL DRIVE
EAST ALTON, ILLINOIS 62024

PROPOSED SAFETY PLAN

GENERAL - THE ST. LOUIS REGIONAL AIRPORT IS COMPRISED OF TWO RUNWAYS. THE PROPOSED CONSTRUCTION WILL NECESSITATE CLOSING RUNWAY 17-35 FOR THE DURATION OF THE PROJECT. RUNWAY 11-29 WILL BE CLOSED FOR 2 HOURS TO REMOVE THE EXISTING RUNWAY 17-35 MARKING THAT IS LOCATED WITHIN 200' OF RUNWAY 11-29 CENTERLINE AND AN ADDITIONAL 2 HOURS TO REMARK RUNWAY 17-35 WITHIN 200' OF RUNWAY 11-29 CENTERLINE. ALL WORK INCLUDED IN OPENING AND CLOSING THE RUNWAYS WILL BE CONSIDERED INCIDENTAL TO THE PROJECT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

IDENTIFICATION - WHEN THE CONTRACTORS VEHICLES AND EQUIPMENT ARE ON THE AIRPORT THEY SHALL BE PROPERLY MARKED WITH THREE (3') FOOT SQUARE CHECKERED FLAGS (INTERNATIONAL ORANGE AND WHITE). THE CONTRACTOR WILL ALSO PROVIDE WORKERS WITH SOME TYPE OF TAG OR GARMENT TO IDENTIFY THE PERSON AS BEING PART OF THE CONSTRUCTION CREW.

RADIO CONTROL - THE CONTRACTOR WILL BE REQUIRED TO BE IN TWO-WAY RADIO CONTACT (120.20 MHz.) WITH THE AIRPORT UNICOM. THIS WILL KEEP THE CONTRACTOR IN CONSTANT CONTACT WITH THE ST. LOUIS REGIONAL AIRPORT AND ENABLE THE AIRPORT TO IMMEDIATELY CONTACT THE CONTRACTOR IN CASE OF AN AERONAUTIC EMERGENCY THAT WOULD REQUIRE ACTION BY THE CONTRACTOR AND/OR HIS PERSONNEL.

150-ENGINEER'S FIELD OFFICE NOTES

THE PROPOSED ENGINEER'S FIELD OFFICE WILL BE FURNISHED, MAINTAINED, AND REMOVED IN ACCORDANCE WITH ITEM AR150510 "ENGINEER'S FIELD OFFICE" AS STATED ON PAGE 168 OF THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, ADOPTED JANUARY 1, 2004.

THE LOCATION OF THE PROPOSED ENGINEER'S FIELD OFFICE WILL BE DETERMINED AT THE PRE-CONSTRUCTION MEETING.

THE ENGINEERING FIRM WILL MAKE PAYMENT FOR ALL LONG DISTANCE TELEPHONE CALLS IN EXCESS OF ONE HUNDRED DOLLARS ($100.00) PER MONTH.

THE CONTRACTOR WILL FURNISH A CELL PHONE TO THE RESIDENT ENGINEER FOR HIS EXCLUSIVE USE FOR THE DURATION OF THIS PROJECT. THE RESIDENT ENGINEER WILL USE THIS PHONE FOR PROJECT BUSINESS ONLY. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL CHARGES ASSOCIATED WITH THIS CELL PHONE.

THE PROPOSED ENGINEER'S FIELD OFFICE WILL BE PAID FOR UNDER ITEMS:
AR150510 ENGINEER'S FIELD OFFICE _____ 1 L.S.

EROSION CONTROL

THIS PROJECT WILL DISTURB MORE THAN 1 ACRE OF LAND, THEREFORE A N.P.D.E.S. PERMIT WILL BE REQUIRED.

AIRCRAFT OPERATION LINE

THE CONTRACTOR WILL LOCATE THIS LINE AT THE START OF CONSTRUCTION AND WILL PLACE FLAGGED LATHE EVERY 150' ALONG IT. THIS LINE WILL BE THE LIMITS THAT ALL CONTRACTOR PERSONNEL MAY VENTURE WHEN A RUNWAY IS NOT CLOSED. THE CONTRACTOR WILL MAINTAIN THE LATHE LINE FOR RUNWAYS.

BY	REVISION	DATE

ST. LOUIS REGIONAL AIRPORT
St. Louis Regional Airport
EAST ALTON, ILLINOIS
A.I.P. PROJ.: 3-17-0002-B42
IL. PROJ.: ALN-3825

HEI Project No. 8370GRWYD 0800
Filename R-003SFY.DWG
Scale 1"= 500'
Date 02/06/08

LAYOUT	MDR	02/06/08
DRAWN	MDR	02/06/08
REVIEWED	CAH	07/11/08

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

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED SAFETY PLAN

3
3 of 81 sheets

FEB 10, 2009 4:43 PM HAGLOOO382
J:\AIRPORTS\STLOUIS\8370GRWYD\AIRPORT\SHEETS\R-003SFY.DWG - Layout1

SR085

RECONSTRUCTION OF RUNWAY END 17

SUMMARY OF QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	AS AWARDED QUANTITIES	AS BUILT QUANTITIES
AR108158	1/C #8 5 KV UG CABLE IN UD	L.F.	2,257	
AR110502	2-WAY CONCRETE ENCASED DUCT	L.F.	56	
AR125410	MITL - STAKE MOUNTED	EACH	13	
AR125415	MITL - BASE MOUNTED	EACH	2	
AR125443	TAXI GUIDANCE SIGN, 3 CHARACTER	EACH	1	
AR125444	TAXI GUIDANCE SIGN, 4 CHARACTER	EACH	1	
AR125447	TAXI GUIDANCE SIGN, 7 CHARACTER	EACH	1	
AR125540	MI THRESHOLD LIGHT STAKE MTD	EACH	6	
AR125545	MI THRESHOLD LIGHT BASE MTD	EACH	2	
AR125901	REMOVE STAKE MOUNTED LIGHT	EACH	31	
AR125902	REMOVE BASE MOUNTED LIGHT	EACH	2	
AR125904	REMOVE TAXI GUIDANCE SIGN	EACH	2	
AR152410	UNCLASSIFIED EXCAVATION	C.Y.	1,312	
AR156511	DITCH CHECK	EACH	2	
AR156520	INLET PROTECTION	EACH	2	
AR156530	TEMPORARY SEEDING	ACRE	3.9	
AR208540	OVERSIZED AGGREGATE	TON	831	
AR209510	CRUSHED AGGREGATE BASE COURSE	TON	791	
AR401900	REMOVE BITUMINOUS PAVEMENT	S.Y.	3,351	
AR501510	10" PCC PAVEMENT	S.Y.	2,160	
AR501900	REMOVE PCC PAVEMENT	S.Y.	3,129	
AR701512	12" RCP, CLASS IV	L.F.	243	
AR701900	REMOVE PIPE	L.F.	398	
AR705410	POROUS BACKFILL	C.Y.	21	
AR705526	6" PERFORATED UNDERDRAIN W/SOCK	L.F.	863	
AR705630	UNDERDRAIN INSPECTION HOLE	EACH	4	
AR705900	REMOVE UNDERDRAIN	L.F.	1,389	
AR705903	REMOVE UNDERDRAIN INSP. HOLE	EACH	3	
AR705904	REMOVE UNDERDRAIN CLEANOUT	EACH	2	
AR751411	INLET-TYPE A	EACH	2	
AR751540	MANHOLE 4'	EACH	2	
AR751900	REMOVE INLET	EACH	1	
AR751903	REMOVE MANHOLE	EACH	2	
AR901510	SEEDING	ACRE	3.9	
AR904510	SODDING	S.Y.	261	
AR908510	MULCHING	ACRE	3.8	

DATE | REVISION | BY

ST. LOUIS REGIONAL AIRPORT

St.LouisRegional AIRPORT

EAST ALTON, ILLINOIS

IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-842

MO. Project No. 3706RWYD 0800
Filename R-003FLP.DWG
Scale N/A
Date 02/07/08

LAYOUT	MDR	02/07/08
DRAWN	MDR	02/07/08
REVIEWED	CAH	07/11/08

HANSON

Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2866
Offices Nationwide

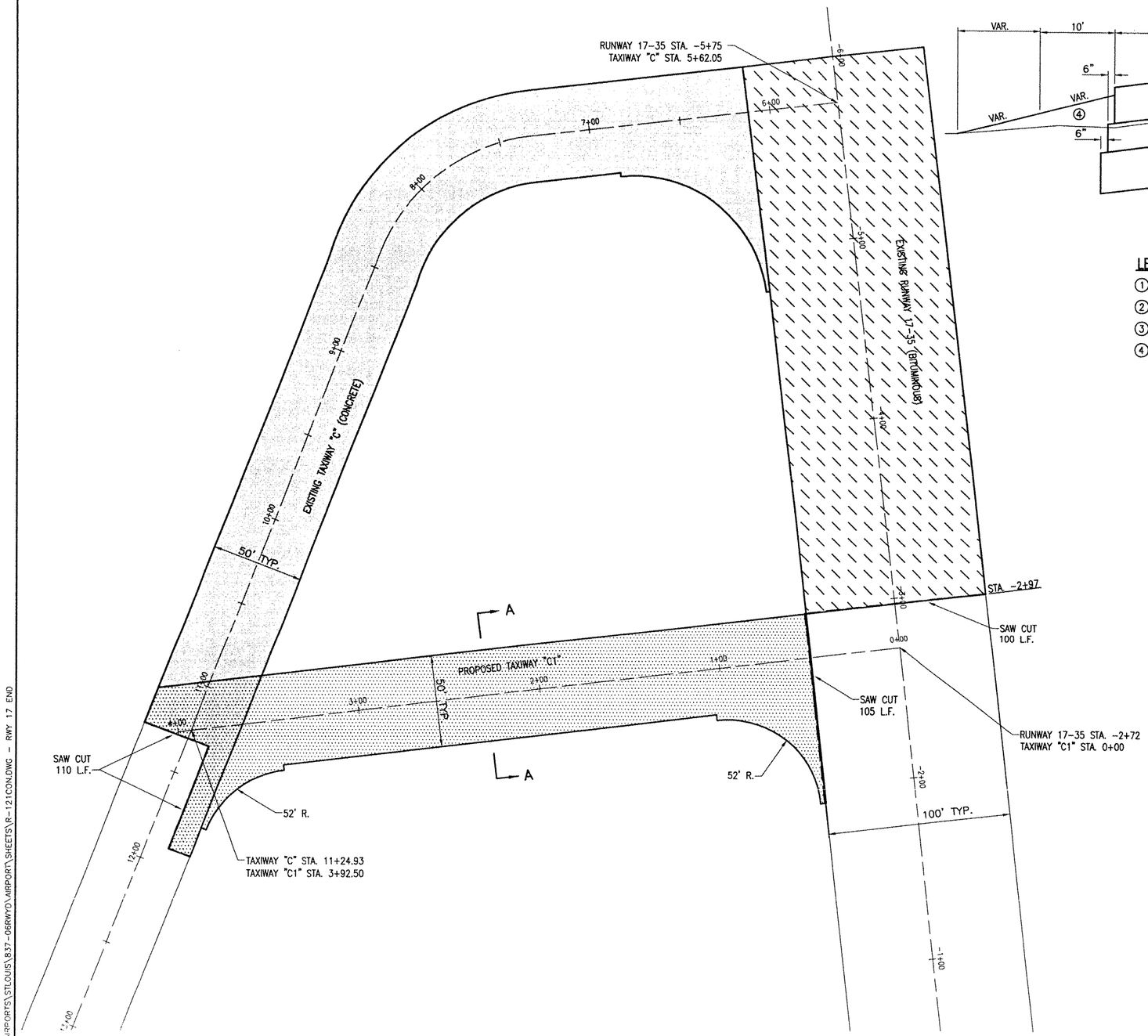
RUNWAY SAFETY AREA IMPROVEMENTS

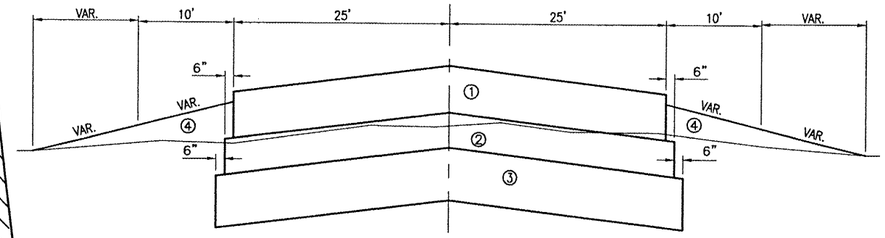
SUMMARY OF QUANTITIES FOR RUNWAY END 17

4

4 of 81 sheets

FEB 10, 2009 4:43 PM HAGLOOO382
J:\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\R-003FLP.DWG - Layout1





PROPOSED TYPICAL SECTION "A-A"

"NOT TO SCALE"

LEGEND FOR TYPICAL SECTION "A-A"

① PROPOSED AR501: PORTLAND CEMENT CONCRETE (10" DEPTH)

② PROPOSED AR209: CRUSHED AGGREGATE BASE (4" DEPTH)

③ PROPOSED AR208: OVERSIZED AGGREGATE BASE (6" DEPTH)

④ PROPOSED AR152: EARTH SHOULDERS

BITUMINOUS PAVEMENT EDGE SAWING

THE EXISTING EDGE OF THE BITUMINOUS RUNWAY WILL BE SAWED (AS SHOWN ON THIS SHEET) TO ELIMINATE ANY PAVEMENT EDGE ROLL DOWN AND PROVIDE A STRAIGHT EDGE TO MATCH AGAINST.

THE EXISTING EDGE WILL BE SAWED (FULL DEPTH) AND THE WASTE MATERIAL WILL BE REMOVED AND DISPOSED OF IN THE DESIGNATED AIRPORT WASTE AREA.

THE RESIDENT ENGINEER WILL LOCATE WHERE THE EDGE OF THE BITUMINOUS WILL BE SAWED.

THE SAWING OF THE EXISTING BITUMINOUS PAVEMENT WILL BE CONSIDERED AS AN INCIDENTAL ITEM TO THE BITUMINOUS PAVEMENT REMOVAL AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

CONCRETE PAVEMENT SAWING

THE EXISTING CONCRETE WILL BE SAWED (AS SHOWN ON THIS SHEET) ALONG THE EXISTING JOINT IN ORDER TO SEVERE ANY RE-INFORCING BARS.

THE EXISTING JOINT WILL BE SAWED (2/3 DEPTH) IN ORDER TO SAW COMPLETELY THROUGH ANY EXISTING RE-INFORCING BARS.

THE RESIDENT ENGINEER WILL LOCATE WHERE THE CONCRETE WILL BE SAWED.

THE SAWING OF THE EXISTING CONCRETE PAVEMENT WILL BE CONSIDERED AS AN INCIDENTAL ITEM TO THE CONCRETE PAVEMENT REMOVAL AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

LEGEND

EXISTING IMPROVEMENTS

PROPOSED PCC PAVEMENT REMOVAL

PROPOSED BITUMINOUS PAVEMENT REMOVAL

PROPOSED CROSS-OVER TAXIWAY "C1"

N

0' 15' 30' 60'

HALF SIZE SCALE: 1"= 60'
FULL SIZE SCALE: 1"= 30'

DATE	REVISION	BY

ST. LOUIS REGIONAL AIRPORT

St.LouisRegional AIRPORT

EAST ALTON, ILLINOIS

IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-842

MS Project No. 83706RWYD_0800
Filename R-121CON.DWG
Scale 1"=30'
Date 02/08/08

LAYOUT	MDR	02/06/08
DRAWN	MDR	02/08/08
REVIEWED	CAH	07/11/08

HANSON

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

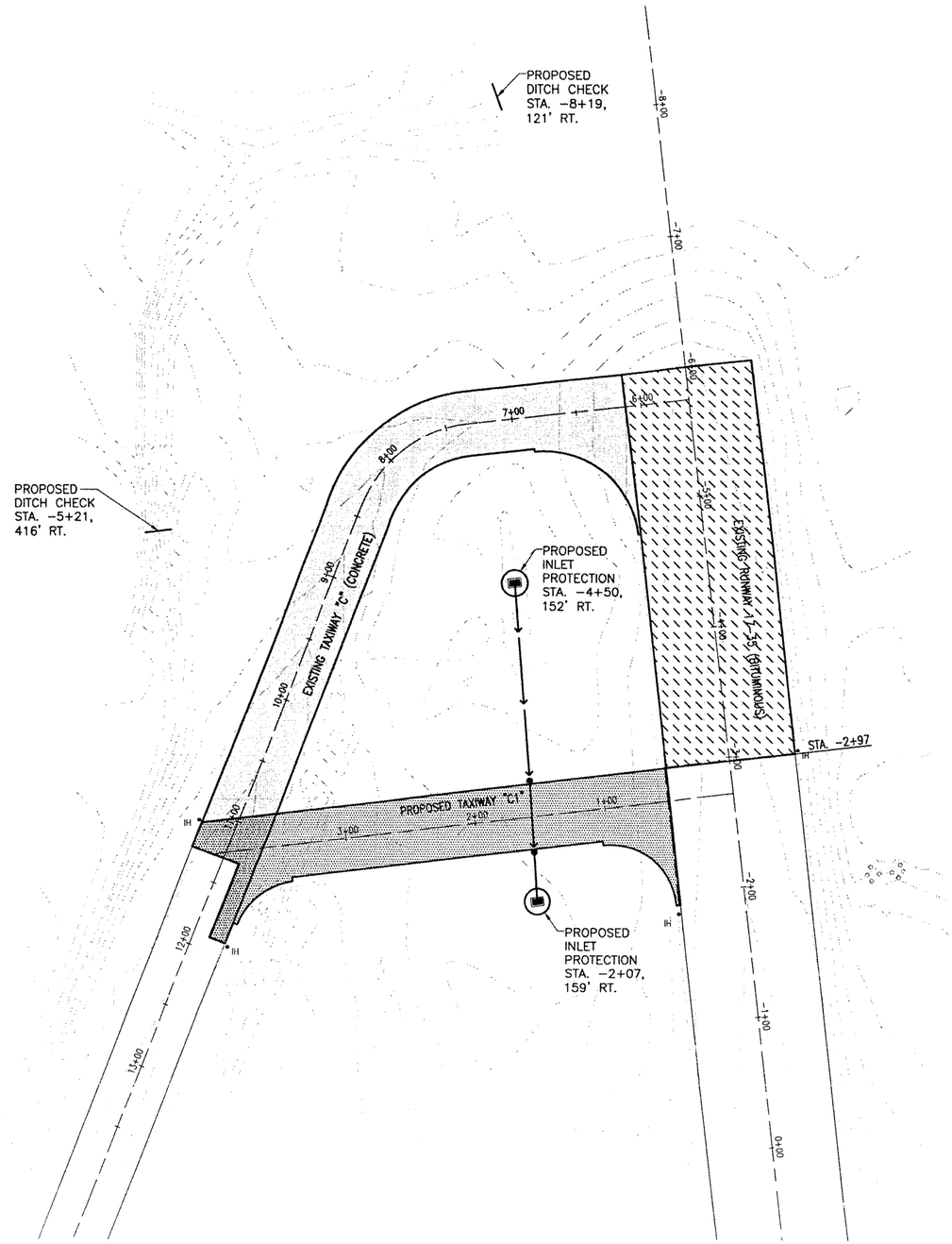
RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED CONSTRUCTION PLAN FOR RUNWAY END 17

5

5 of 81 sheets

FEB 10, 2009 4:44 PM HAGL0000362
\\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\R-121CON.DWG - RWY 17 END



QUANTITIES THIS SHEET			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
AR156511	DITCH CHECK	EACH	2
AR156520	INLET PROTECTION	EACH	2
AR156530	TEMPORARY SEEDING	ACRE	3.9

LEGEND

- EXISTING IMPROVEMENTS
- PROPOSED PCC PAVEMENT REMOVAL
- PROPOSED BITUMINOUS PAVEMENT REMOVAL
- PROPOSED CROSS-OVER TAXIWAY "C1"
- PROPOSED UNDERDRAIN INPECTION HOLES
- PROPOSED MANHOLES
- PROPOSED INLET
- PROPOSED RCCP
- PROPOSED INLET PROTECTION
- PROPOSED DITCH CHECK

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

DATE	REVISION	BY

ST. LOUIS REGIONAL AIRPORT

St.LouisRegional AIRPORT

EAST ALTON, ILLINOIS

A.I.P. PROJ.: 3-17-0002-B42

IL. PROJ.: ALN-3825

HSI Project No. 837068RWYD_0800
Filename R-181SWP.DWG
Scale 1"= 50'
Date 02/08/08

LAYOUT	MDR	02/08/08
DRAWN	MDR	02/08/08
REVIEWED	CAH	07/11/08

HANSON

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

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED STORMWATER POLLUTION PREVENTION PLAN FOR RUNWAY END 17

6

6 of 81 sheets

FEB 10, 2009 4:45 PM HAGLOOO362
I:\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\R-181SWP.DWG - RWY 17 END

EROSION CONTROL NOTES

ALL PROPOSED EROSION CONTROL MEASURES SHALL BE COMPLETED AS DETAILED ON THE 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 EROSION AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL.

FILTER FENCE FOR STRUCTURE PROTECTION AS SHOWN ON THE PROPOSED STORMWATER POLLUTION PREVENTION PLAN SHEETS.

THE PROPOSED INLET PROTECTION WILL BE PLACED AT THE LOCATIONS SHOWN ON THE PROPOSED STORMWATER POLLUTION PREVENTION PLAN SHEETS.

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

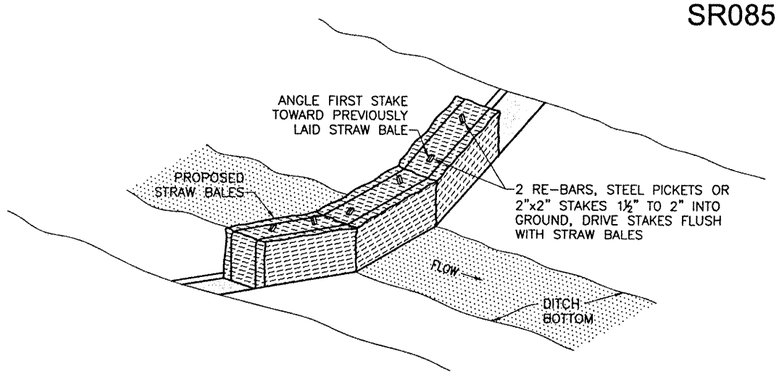
EROSION CONTROL FENCE SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM WATER DRAINAGE.

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.

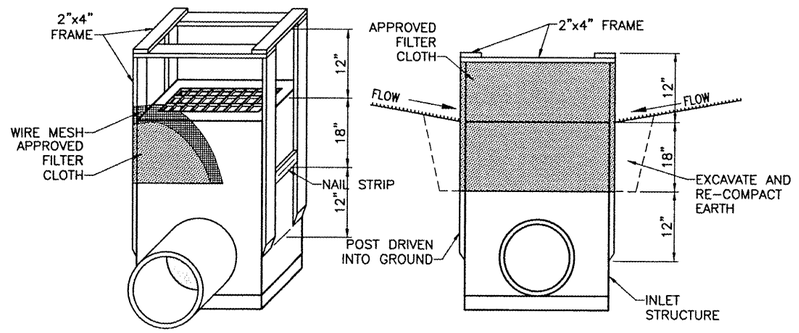
THE PROPOSED DITCH CHECKS IS TO INCLUDE ALL INCIDENTALS NECESSARY TO CONSTRUCT THESE ITEMS AND WILL BE PAID FOR UNDER ITEM: AR156511 DITCH CHECKS.

THE PROPOSED DITCH CHECKS WILL BE PLACED AT THE LOCATIONS SHOWN ON THE STORMWATER POLLUTION PREVENTION PLAN SHEETS.



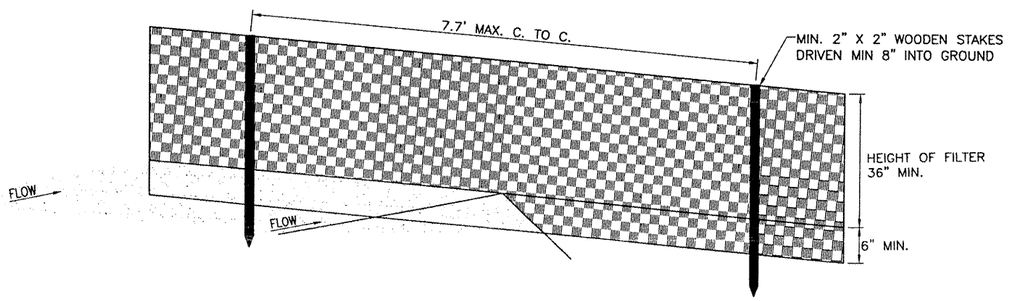
DITCH CHECK DETAIL

"NOT TO SCALE"

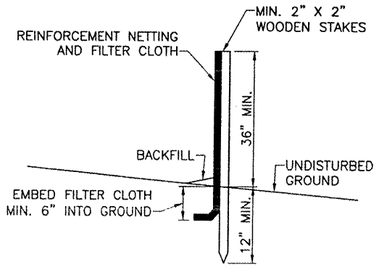


INLET PROTECTION DETAIL

"NOT TO SCALE"



PERSPECTIVE VIEW



SECTION

FILTER FENCE DETAIL

"NOT TO SCALE"

DATE	REVISION	BY

ST. LOUIS REGIONAL AIRPORT

EAST ALTON, ILLINOIS

St.LouisRegional AIRPORT

IL PROJ.: AUN-3825 A.I.P. PROJ.: 3-17-0002-B42

HS Project No. 83706RWYD.0800
Filename R-581SWP.DWG
Scale NOT TO SCALE
Date 02/08/08

LAYOUT	MDR	02/08/08
DRAWN	MDR	02/08/08
REVIEWED	CAH	07/11/08

HANSON
Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2866
Offices Nationwide

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED STORMWATER POLLUTION PREVENTION DETAILS

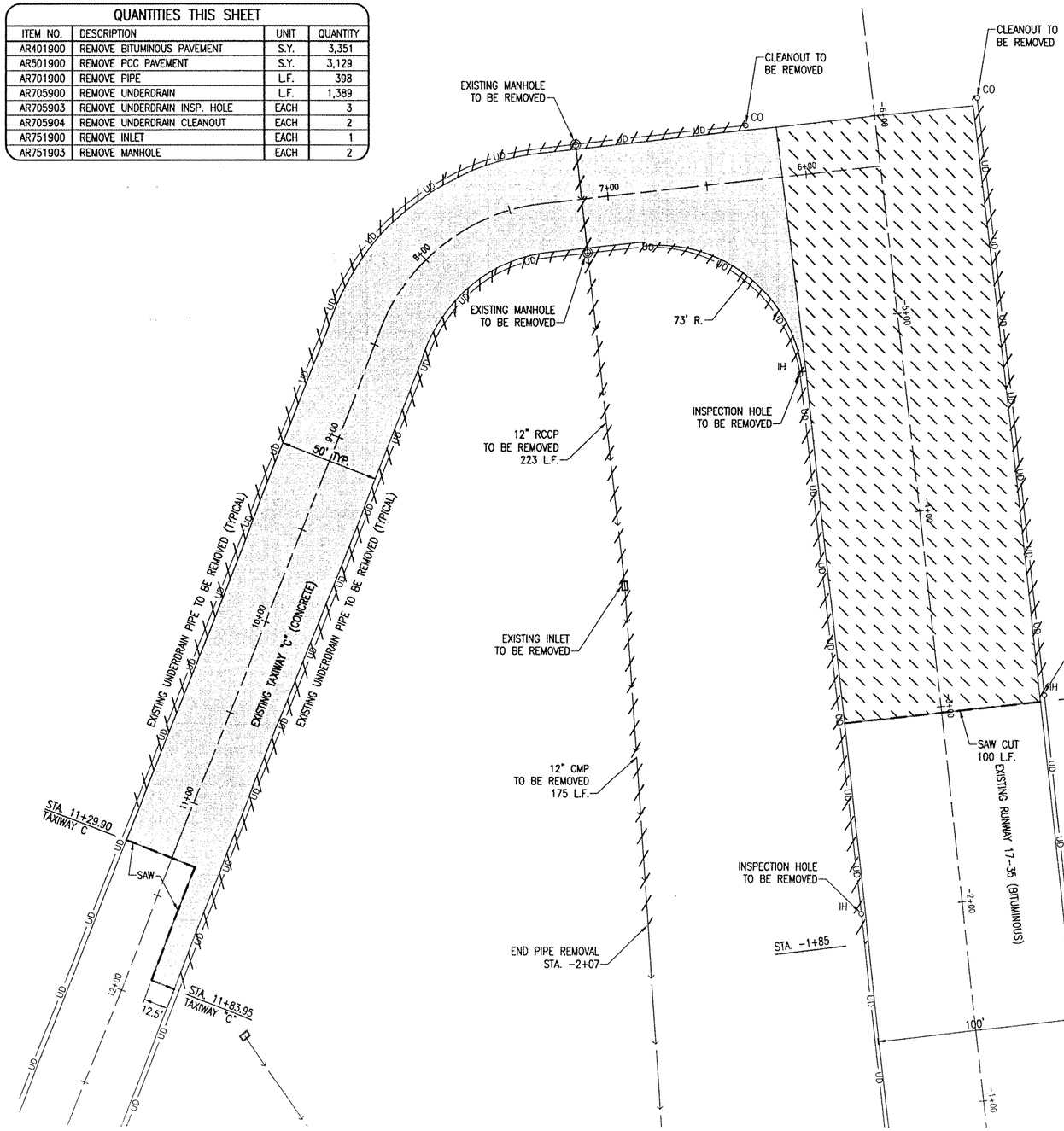
7

7 of 81 sheets

FEB 10, 2009 4:46 PM HAGLOOO382
I:\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\R-581SWP.DWG - Layout1

QUANTITIES THIS SHEET

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
AR401900	REMOVE BITUMINOUS PAVEMENT	S.Y.	3,351
AR501900	REMOVE PCC PAVEMENT	S.Y.	3,129
AR701900	REMOVE PIPE	L.F.	398
AR705900	REMOVE UNDERDRAIN	L.F.	1,389
AR705903	REMOVE UNDERDRAIN INSP. HOLE	EACH	3
AR705904	REMOVE UNDERDRAIN CLEANOUT	EACH	2
AR751900	REMOVE INLET	EACH	1
AR751903	REMOVE MANHOLE	EACH	2



DRAINAGE REMOVAL NOTES

THE EXISTING 12" RCCP, 12" CMP, EXISTING INLET, EXISTING MANHOLES, EXISTING UNDERDRAIN CLEANOUTS, EXISTING UNDERDRAIN INSPECTION HOLES AND EXISTING UNDERDRAIN AS SHOWN ON THIS SHEET WILL BE EXCAVATED, REMOVED AND DISPOSED OF OFF THE AIRPORT SITE.

THE HOLES LEFT FROM THE PROPOSED REMOVALS WILL BE FILLED USING UNCLASSIFIED EXCAVATION MATERIAL FROM ON SITE. THE MATERIAL WILL BE COMPACTED TO THE SATISFACTION OF THE RESIDENT ENGINEER.

THE REMOVAL OF THESE ITEMS SHALL BE PAID FOR UNDER:

AR701900 REMOVE PIPE_____ PER L.F.
AR705900 REMOVE UNDERDRAIN_____ PER L.F.
AR705903 REMOVE UNDERDRAIN INSP. HOLE _____ PER EACH
AR705904 REMOVE UNDERDRAIN CLEANOUT _____ PER EACH
AR751900 REMOVE INLET_____ PER EACH
AR751903 REMOVE MANHOLE_____ PER EACH

REMOVE BITUMINOUS PAVEMENT

THE AREA(S) DESIGNATED AS ▨ ON THIS SHEET WILL HAVE THE EXISTING BITUMINOUS PAVEMENT REMOVED (FULL DEPTH). AS PART OF THIS ITEM SHALL BE THE REMOVAL OF THE AGGREGATE BASE COURSE MATERIAL (FULL DEPTH). ALL REMOVED MATERIAL WILL BE DISPOSED OF ON THE AIRPORT SITE AT THE LOCATION SHOWN ON SHEET NO. 3.

THE EXISTING PAVEMENT CONFIGURATION IS 9" BITUMINOUS ON 11" AGGREGATE BASE COURSE.

WHERE THE PROPOSED REMOVAL AREA ABUTS 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 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.

THIS ITEM OF WORK SHALL BE PAID FOR UNDER ITEM:
AR401900 "REMOVE BITUMINOUS PAVEMENT" – PER S.Y.

REMOVE P.C.C. PAVEMENT

THE AREA(S) DESIGNATED AS ▭ ON THIS SHEET WILL HAVE THE EXISTING P.C.C. PAVEMENT REMOVED (FULL DEPTH). AS PART OF THIS ITEM SHALL ALSO BE THE REMOVAL OF THE AGGREGATE BASE COURSE MATERIAL (FULL DEPTH). ALL REMOVED MATERIAL WILL BE DISPOSED OF ON THE AIRPORT SITE AT THE LOCATION SHOWN ON SHEET NO. 3.

THE EXISTING PAVEMENT CONFIGURATION IS 10" P.C.C. PAVEMENT ON 10" AGGREGATE BASE COURSE.

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 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.

THIS ITEM OF WORK SHALL BE PAID FOR UNDER ITEM:
AR501900 "REMOVE PCC PAVEMENT" – PER S.Y.

LEGEND

- EXISTING IMPROVEMENTS
- PROPOSED BITUMINOUS PAVEMENT REMOVAL
- PROPOSED PCC PAVEMENT REMOVAL
- PROPOSED DRAINAGE REMOVAL
- UD —— EXISTING UNDERDRAIN
- ○ EXISTING INSPECTION HOLE/CLEANOUT
- — — — PROPOSED PAVEMENT SAW CUT

N

0' 15' 30' 60'
HALF SIZE SCALE: 1"= 60'
FULL SIZE SCALE: 1"= 30'

DATE	REVISION	BY

ST. LOUIS REGIONAL AIRPORT
EAST ALTON, ILLINOIS
A.I.P. PROJ.: 3-17-0002-B42
IL. PROJ.: ALN-3825

HG Project No. 83706RWYD 0800
Filename R-111PRP.DWG
Scale 1"=30'
Date 02/08/08

LAYOUT	MDR	02/08/08
DRAWN	MDR	02/08/08
REVIEWED	CAH	07/11/08

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

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED PAVEMENT PREPARATION PLAN FOR RUNWAY END 17

8
8 of 81 sheets

FEB 10, 2009 4:46 PM HAGLOOD362
N:\AIRPORTS\STLOUIS\83706RWYD\AIRPORT\SHEETS\R-111PRP.DWG - RWY 17 END

SR085

EXISTING RUNWAY6 17-35

-2+00

0+00

-3+00

52' R.

PROPOSED TAXIWAY "C1"

1+00

2+00

3+00

52' R.

EXISTING TAXIWAY "C"

+00

RWY. 17-35 STA. -2+72
TXY. "C1" STA. 0+00

TXY. "C" STA. 11+24.93
TXY. "C1" STA. 3+92.50

SCALES:
1" = 20' HOR
1" = 2' VER

LEGEND

EXISTING IMPROVEMENTS

PROPOSED CROSS-OVER TAXIWAY "C1"

FULL SCALE: 1" = 20' HORIZONTAL
HALF SCALE: 1" = 40' HORIZONTAL

FULL SCALE: 1" = 2' VERTICAL
HALF SCALE: 1" = 4' VERTICAL

542
540
538
536
534
532
530
528
526

VC = 200.00'
E = 0.44

VPC STA. 0+50
VPC ELEV. 533.10

VPI STA. 1+50
VPI ELEV. 532.01

VPT STA. 2+50
VPT ELEV. 532.72

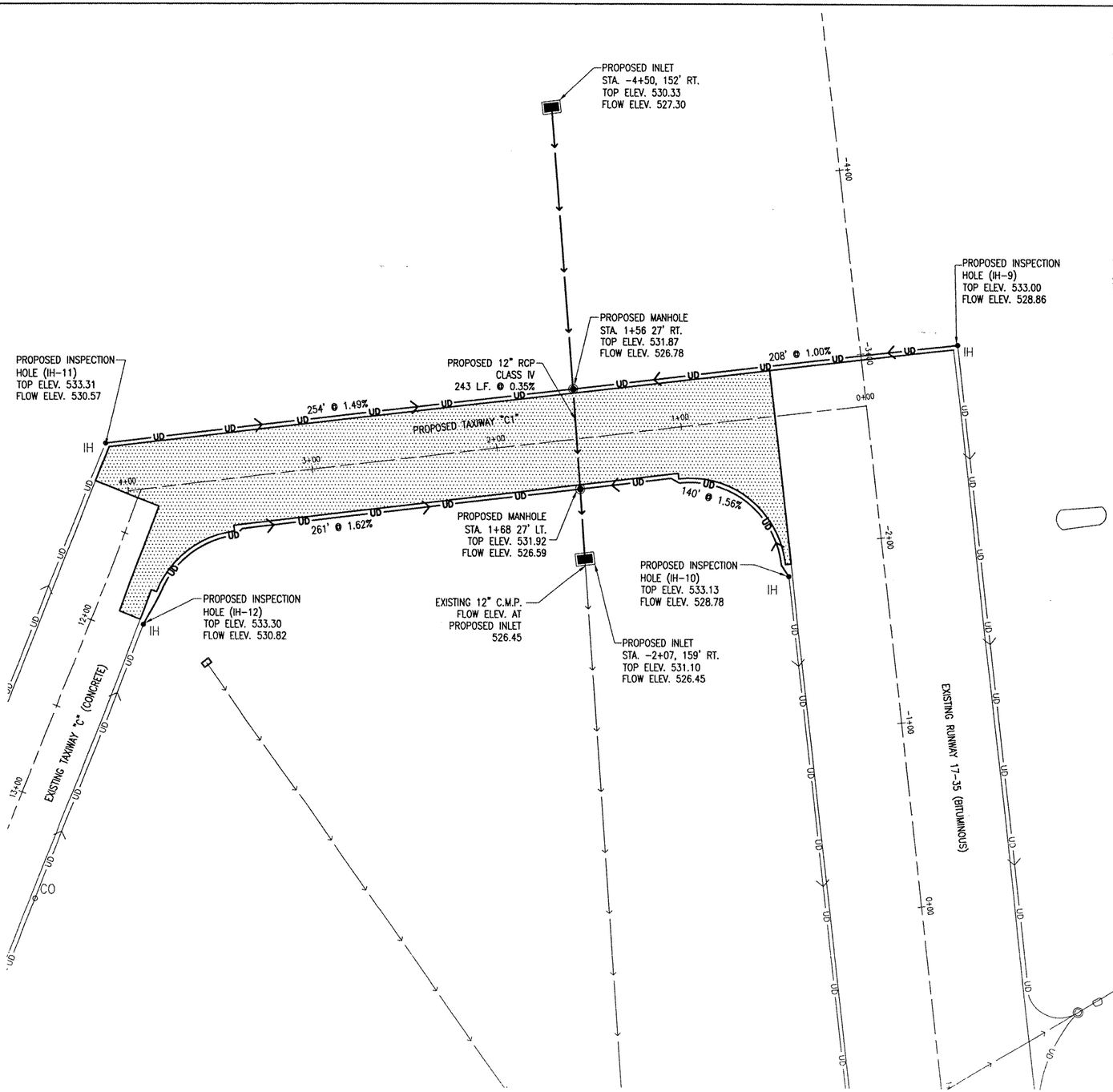
-.06%

0.71%

0.71%

3+93.18
533.72

| | | |



701 – RCP NOTES:

701-3.6 PIPE JOINTS. ADD THE FOLLOWING TO THIS SECTION:

"RUBBER GASKET JOINT SEALS OR BITUMINOUS MASTIC COMPOUND IS PERMITTED. IF BITUMINOUS MASTIC COMPOUND IS USED, IT WILL MEET THE FOLLOWING REQUIREMENTS:

MASTIC JOINT SEALER FOR PIPE. COLD-APPLIED BITUMINOUS SEALER FOR CULVERT AND SEWER PIPE JOINTS SHALL BE A BITUMINOUS MATERIAL OF SUCH CONSISTENCY THAT IT CAN BE APPLIED TO THE JOINTS WITH A TROWEL WHEN THE TEMPERATURE OF THE AIR IS BETWEEN 20° AND 100° F. THE BITUMINOUS MATERIAL SHALL ADHERE TO THE CONCRETE SO AS TO MAKE A WATER-TIGHT SEAL AND SHALL NOT FLOW, CRACK, OR BECOME BRITTLE WHEN EXPOSED TO THE ATMOSPHERE.

THE BITUMINOUS SEALER SHALL MEET THE FOLLOWING SPECIFIC REQUIREMENTS:

PENETRATION, 77°F, 150 G., 5 SEC., WITH CONE	175_300
LOSS OF HEATING, 325F, 5 HR., 50 G., PERCENT	20 MAX.
INORGANIC CONTENT (COMPLETE BURN 1200° TO 1400° F) PERCENT	15 _ 20
FLOW AT 140° F, CENTIMETERS	0
PLIABLE AT 0°F	YES

THE BITUMINOUS SEALER SHALL BE DELIVERED TO THE PROJECT IN SUITABLE CONTAINERS FOR HANDLING, AND SHALL BE SEALED OR OTHERWISE PROTECTED FROM CONTAMINATION. THE CONTAINER SHALL SHOW THE BRAND NAME, NET VOLUME, OR WEIGHT AND THE REQUIREMENTS FOR APPLICATION.

PROPOSED DRAINAGE STRUCTURES

STRUCTURE	TYPE	STATION	OFFSET	BASELINE
IH-9	A	-2+19	52' LT.	RUNWAY 17-35
IH-10	A	0+51	87' LT.	TAXIWAY C1
IH-11	A	4+00	72' LT.	TAXIWAY C1
IH-12	A	4+10	27' LT.	TAXIWAY C1
INLET 3	A	-4+50	152' RT.	RUNWAY 17-35
INLET 4	A	-2+07	159' RT.	RUNWAY 17-35
MH-1		1+56	27' RT.	TAXIWAY C1
MH-2		1+68	27' RT.	TAXIWAY C1

QUANTITIES THIS SHEET

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
AR701512	12" RCP, CLASS IV	L.F.	243
AR705410	POROUS BACKFILL	C.Y.	21
AR705526	6" PERFORATED UNDERDRAIN W/ SOCK	L.F.	863
AR705530	UNDERDRAIN INSPECTION HOLE	EACH	4
AR751411	INLET - TYPE A	EACH	2
AR751540	MANHOLE 4'	EACH	2

LEGEND

- EXISTING IMPROVEMENTS
- PROPOSED IMPROVEMENTS
- EXISTING STORM SEWER
- UD — EXISTING UNDERDRAIN
- CO — EXISTING INSPECTION HOLE/CLEANOUT
- EXISTING INLET
- EXISTING MANHOLE
- PROPOSED STORM SEWER
- UD — PROPOSED UNDERDRAIN (6" PERF. PVC)
- IH — PROPOSED INSPECTION HOLE
- PROPOSED MANHOLE
- PROPOSED INLET

0' 15' 30' 60'
HALF SIZE SCALE: 1"= 60'
FULL SIZE SCALE: 1"= 30'

DATE	REVISION	BY

ST. LOUIS REGIONAL AIRPORT
EAST ALTON, ILLINOIS
A.I.P. PROJ.: 3-17-0002-B42
IL. PROJ.: ALN-3825

HG Project No. 837.06RWYD.0800
Filename R-131DRN.DWG
Scale 1"=30'
Date 02/08/08

LAYOUT	MDR	02/08/08
DRAWN	MDR	02/08/08
REVIEWED	CAH	07/11/08

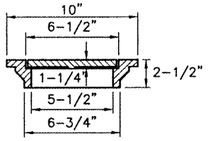
HANSON
Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2886
Offices Nationwide

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED DRAINAGE PLAN FOR RUNWAY END 17

10
10 of 81 sheets

FEB 10, 2009 4:47 PM HAGLOOO382
I:\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\R-131DRN.DWG - RWY 17 END



CAST IRON FRAME AND COVER

NEENAH R-6013, DEETER 1810, EAST JORDAN 2790-6 OR APPROVED EQUAL

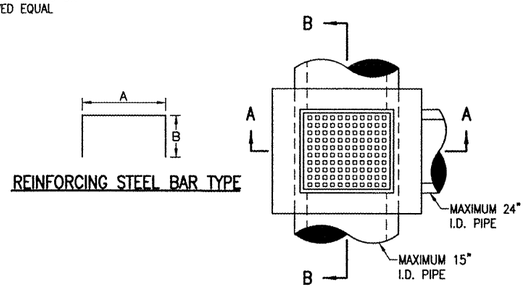
INSPECTION HOLE NOTES

DIAMETER OF PIPE AS SPECIFIED.

TOP OF INSPECTION HOLES SHALL BE 2" ABOVE FINISH GROUND LINE 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 (NON- REINFORCED)



REINFORCING STEEL BAR TYPE

REINFORCING BARS SCHEDULE					
TYPE	QUANTITY PER INLET	DIMENSIONS A	DIMENSIONS B	SIZE	APPROX. WT. OF BARS IN INLET
A	2	3'-4"	2'-4"	#5	16.7

INLET NOTES

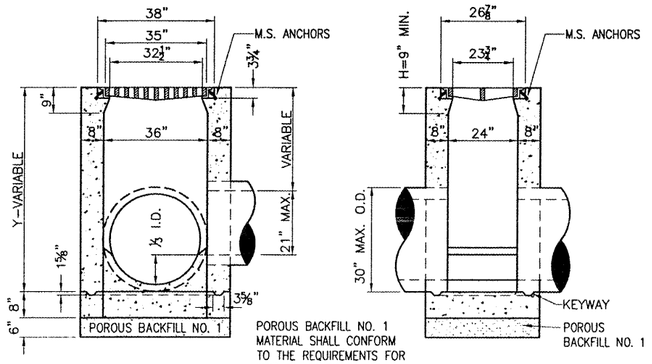
INLET TO BE CONSTRUCTED OF STRUCTURAL P.C. CONCRETE. THE CONTRACT UNIT PRICE PER INLET SHALL INCLUDE THE FRAME, GRATE AND STEPS IN PLACE AND COMPLETE PER UNIT.

1/2" CHAMFER TO BE USED ON ALL EXPOSED CORNERS OF INLETS. BARS TO BE INSTALLED 2" FROM FACE OF WALLS.

THE FRAME AND GRATE SHALL BE NEENAH R-3475-A, DEETER 2425-E.

"H" SHALL BE EQUAL TO THE PROPOSED PAVEMENT THICKNESS AND NOT LESS THAN THE ATTACHED MINIMUMS. TYPE A_____ 9" MINIMUM.

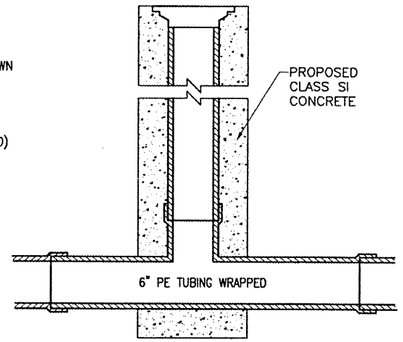
INLET STEPS SHALL BE NEENAH R-1980-1. 12" TO 15" C.C. STEPS TO BE INSTALLED WHEN Y IS GREATER THAN 5' COST. THE COST OF THE STEPS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR EACH INLET.



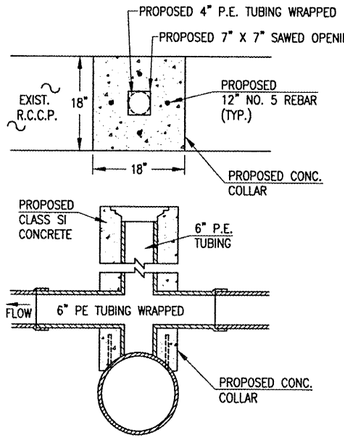
SECTION A-A

SECTION B-B

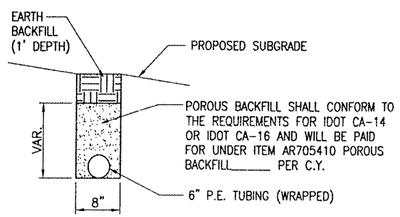
INLET TYPE A



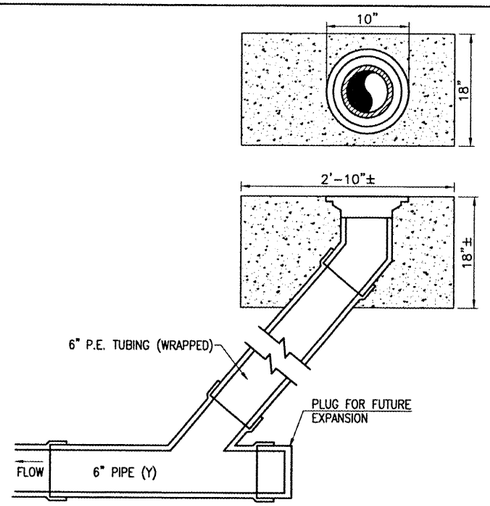
INSPECTION HOLE-TYPE A



TYPE B
INSPECTION HOLE DETAIL
"NOT TO SCALE"



UNDERDRAIN DETAIL
NOT TO SCALE



CLEANOUT HOLE

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 6" 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 IN ACCORDANCE WITH THE DETAIL ON THE CONSTRUCTION PLANS. THE POROUS BACKFILL WILL BE COMPACTED IN ACCORDANCE WITH THE SPECIFICATION SET FORTH FOR GRANULAR MATERIAL BACKFILL."

THE PROPOSED UNDERDRAIN PIPE WILL BE PAID FOR UNDER ITEMS:
AR705410 POROUS BACKFILL_____ PER C.Y.
AR705526 6" PERFORATED UNDERDRAIN W/SOCK___ PER L.F.
AR705530 UNDERDRAIN INSPECTION HOLE_____ PER EACH

DATE	REVISION	BY

ST. LOUIS REGIONAL AIRPORT
St. Louis Regional Airport
EAST ALTON, ILLINOIS
IL PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-842

HS Project No. 8370GRWYD.0800
Filename R-13.1DRN.DWG
Scale N/A
Date 05/12/08

LAYOUT	MDR	02/08/08
DRAWN	DPE	05/11/08
REVIEWED	CAH	07/11/08

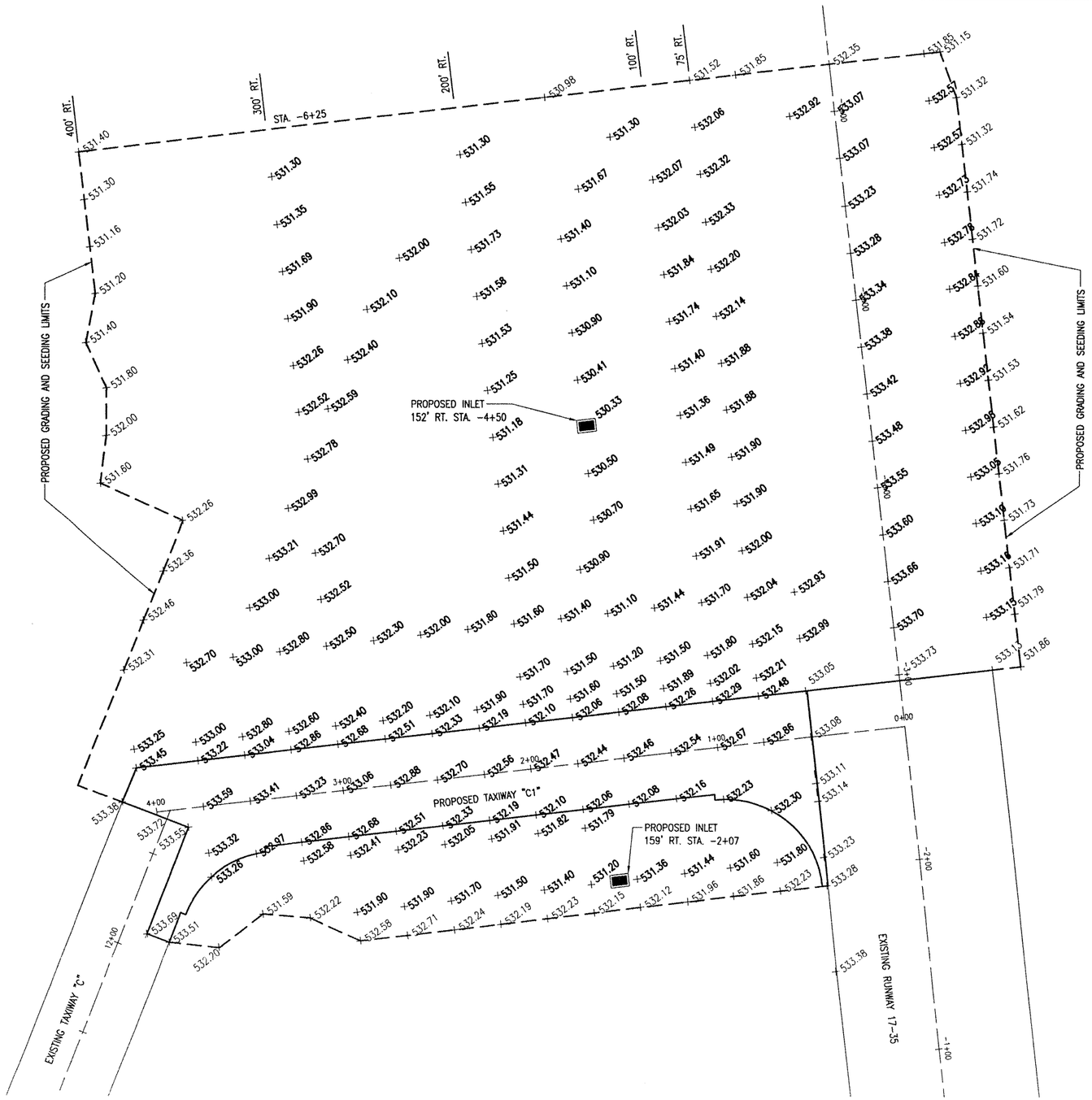
HANSON
Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2886
Offices Nationwide

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED DRAINAGE DETAILS AND NOTES

11
11 of 81 sheets

FEB 10, 2009 4:48 PM HAGLOOO382
I:\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\R-131DRN.DWG - DETAILS



901 SEEDING NOTES

THE PROPOSED SEEDING SHALL BE ACCOMPLISHED IN ACCORDANCE WITH ITEM 901 "SEEDING" AS STATED ON PAGE 120 OF THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, ADOPTED JULY 1, 2004.

ALL DISTURBED AREAS LOCATED WITHIN THE PROPOSED GRADING AND SEEDING LIMITS WILL BE SEEDED IN ACCORDANCE WITH THE ABOVE NOTED SPECIFICATION. ALL AREAS OUTSIDE THE DESIGNATED GRADING AND SEEDING LIMITS WILL ALSO BE SEEDED BUT AT THE CONTRACTOR'S OWN EXPENSE.

ALL MATERIALS AND/OR DEBRIS RESULTING FROM THE SEEDING OPERATIONS WILL BE REMOVED FROM THE PAVEMENTS AND MISCELLANEOUS STRUCTURES PRIOR TO OPENING THE RUNWAY.

901-3.4 MAINTENANCE OF SEEDED AREAS. DELETE THE SECOND PARAGRAPH OF THIS SECTION AND ADD THE FOLLOWING:

"THE CONTRACTOR WILL BE REQUIRED TO ESTABLISH A GOOD STAND OF GRASS OF UNIFORM COLOR AND DENSITY TO THE SATISFACTION OF THE RESIDENT ENGINEER. IF AT THE TIME WHEN THE CONTRACT HAS BEEN OTHERWISE COMPLETED, IT IS NOT POSSIBLE TO MAKE AN ADEQUATE DETERMINATION OF COLOR, DENSITY, AND UNIFORMITY OF SUCH STAND OF GRASS, THE ITEM OF WORK WILL BE REVIEWED AT A LATER DATE DETERMINED BY THE ILLINOIS DIVISION OF AERONAUTICS."

DATE SEEDING COMPLETED_____.

THE PROPOSED SEEDING WILL BE PAID FOR UNDER ITEM:
AR901510 SEEDING ____ 3.9 PER ACRES

908 MULCHING NOTES

THE PROPOSED MULCHING SHALL BE ACCOMPLISHED IN ACCORDANCE WITH ITEM 908 "MULCHING" AS STATED ON PAGE 127 OF THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, ADOPTED JULY 1, 2004.

THIS ITEM SHALL CONSIST OF THE FURNISHING, TRANSPORTING, AND PLACING MULCH OVER THE SEEDED AREA. DISTURBED AREAS OUTSIDE THE GRADING LIMITS SHALL ALSO BE MULCHED AND PARTICIPATION WILL BE THE SAME AS FOR SEEDED AREAS.

908-2.1 MULCH MATERIAL: THE CONTRACTOR MAY EITHER FURNISH STRAW OR HYDROMULCH AS THE TYPE OF MULCH MATERIAL TO BE USED ON THIS PROJECT.

908-3.1 MULCHING: REVISE THE THIRD SENTENCE OF THE SECOND PARAGRAPH TO READ AS FOLLOWS: THE HYDRAULIC MULCH SHALL BE APPLIED AS A SLURRY OF 2,500 POUNDS OF MULCH AND NOT LESS THAN 2,500 GALLONS OF WATER PER ACRE.

908-3.4 STRUCTURE CLEANING: AFTER THE PROPOSED MULCH HAS BEEN APPLIED, THE CONTRACTOR WILL CLEAN THE MULCH OFF ALL STRUCTURES (DRAINAGE, ELECTRICAL, LIGHTS, ETC.).

DATE MULCHING COMPLETED_____.

THE PROPOSED MULCHING WILL BE PAID FOR UNDER ITEM:
AR908510 MULCHING _____ 3.9 PER ACRES

LEGEND

- EXISTING IMPROVEMENTS
- PROPOSED IMPROVEMENTS
- +540.22 EXISTING GRADE
- -540.55 PROPOSED GRADE
- PROPOSED GRADING AND SEEDING LIMITS

0' 15' 30' 60'
HALF SIZE SCALE: 1"= 60'
FULL SIZE SCALE: 1"= 30'

DATE	REVISION	BY

ST. LOUIS REGIONAL AIRPORT
St.LouisRegional AIRPORT
EAST ALTON, ILLINOIS
IL PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

HQ Project No. 83706RWY0 0800
Filename R-191STK.DWG
Scale 1"=30'
Date 02/08/08

LAYOUT	MDR	02/08/08
DRAWN	MDR	02/08/08
REVIEWED	CAH	07/11/08

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

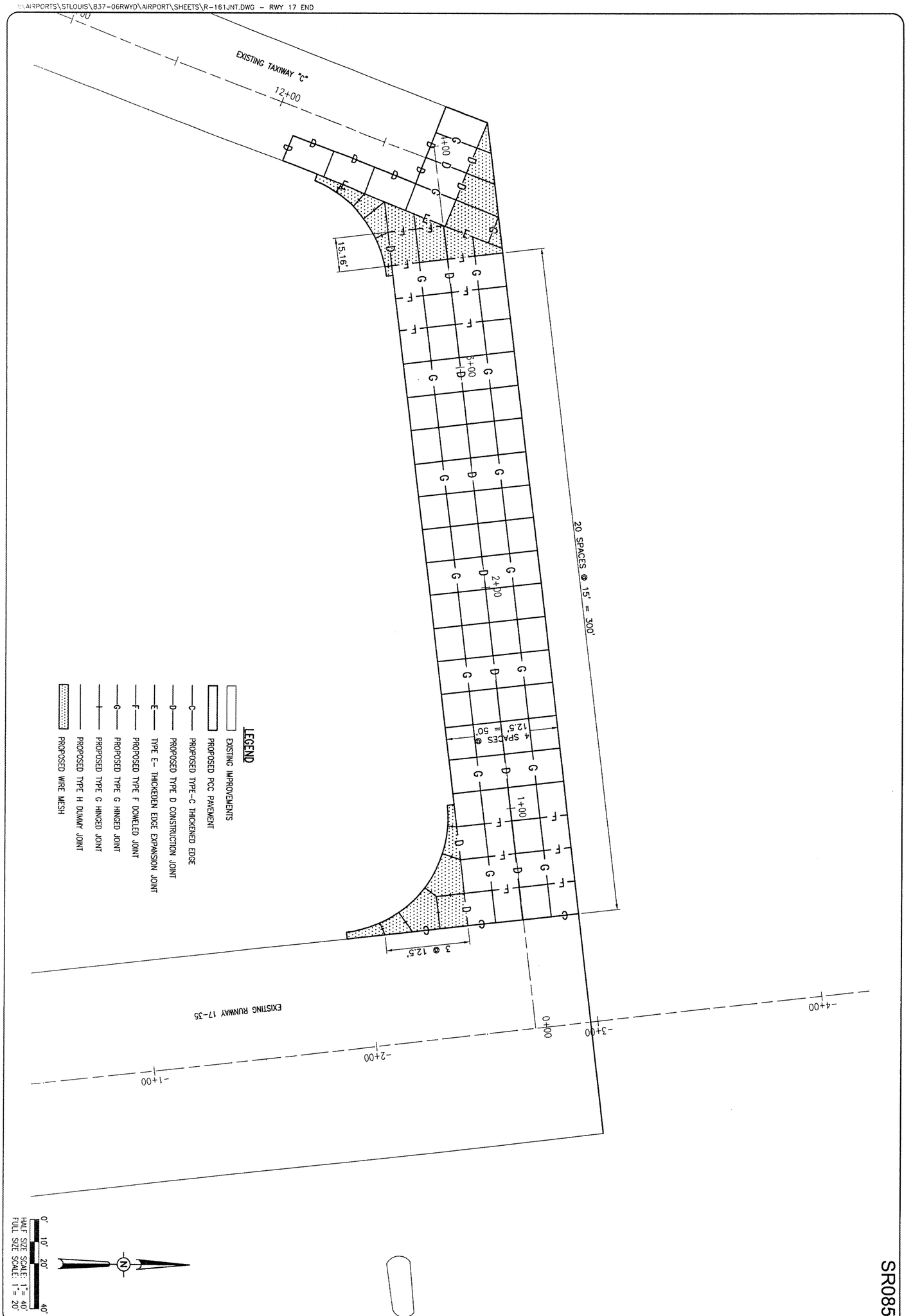
RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED STAKING PLAN FOR RUNWAY END 17

12
12 OF 81 SHEETS

FEB 10, 2009 4:48 PM HAGL000382
...\AIRPORTS\STLOUIS\837-06RWY0\AIRPORT\SHEETS\R-191STK.DWG - RWY 17 END

FEB 10, 2009 4:49 PM HAGL000382
I:\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\R-161JNT.DWG - RWY 17 END



SR085

13 of 81 sheets

13

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED JOINTING PLAN FOR RUNWAY END 17

HANSON

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

HPI Project No.	83706RWYD 0800
Filename	R-161JNT.DWG
Scale	1"=20'
Date	02/08/08

LAYOUT	MDR	02/08/08
DRAWN	MDR	02/08/08
REVIEWED	CAH	07/11/08

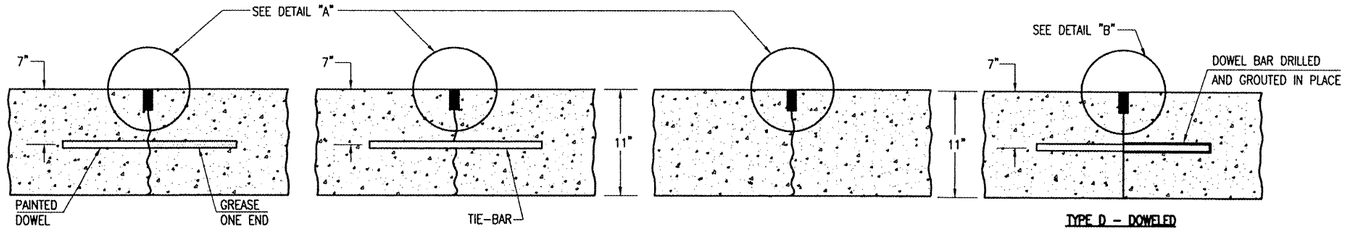
ST. LOUIS REGIONAL AIRPORT

St.LouisRegional AIRPORT

EAST ALTON, ILLINOIS

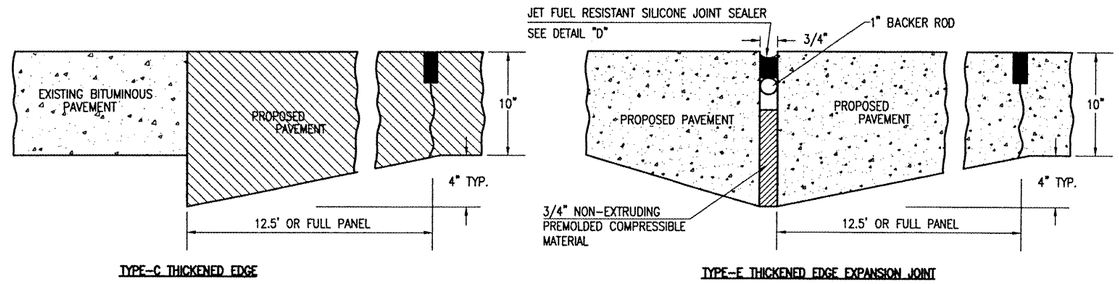
IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

DATE	REVISION	BY



TYPE F DOWELED | TYPE G HINGED | TYPE H DUMMY | TYPE D – DOWELED

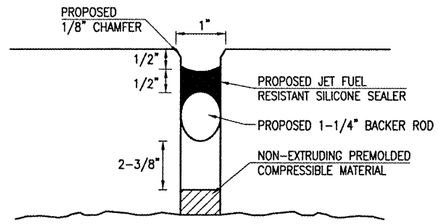
CONTRACTION JOINTS



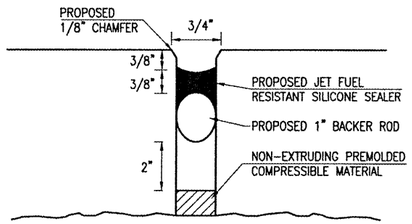
TYPE-C THICKENED EDGE

TYPE-E THICKENED EDGE EXPANSION JOINT

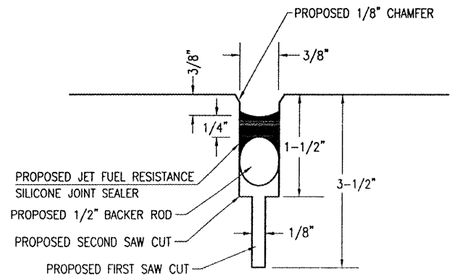
EXPANSION JOINTS



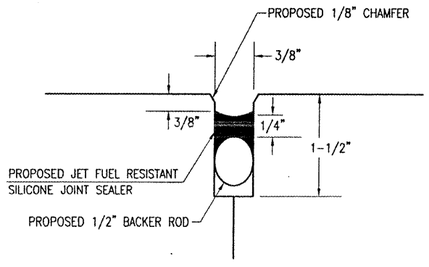
DETAIL "C"
NOT TO SCALE



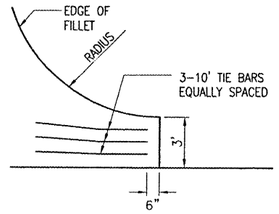
DETAIL "D"
NOT TO SCALE



DETAIL "A"
NOT TO SCALE



DETAIL "B"
NOT TO SCALE



FILLET DETAIL
"NOT TO SCALE"

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 SAWED.

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 10" PAVEMENT SHALL BE 1" DIA., 19" LENGTH AND 12" SPACING. ALL DOWELS SHALL CONFORM TO AASHTO M254 GRADES 70 THROUGH 80.

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 COATED WITH A RUSTPROOFING COMPOUND 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.

DOWELS LOCATED IN THE CONSTRUCTION JOINTS WILL BE DRILLED AND SECURED IN ACCORDANCE WITH ITEM 501-2.11.

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 6" 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 CRAFCO 34902 OR APPROVED EQUAL AS SPECIFIED IN 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 SAWED FULL DEPTH.

DATE	REVISION	BY

ST. LOUIS REGIONAL AIRPORT
EAST ALTON, ILLINOIS
IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

HEI Project No. 8370BRWYD.0800
Filename R-16.JNT.DWG
Scale N/A
Date 02/08/08

LAYOUT	MDR	02/08/08
DRAWN	MDR	02/08/08
REVIEWED	CAH	07/11/08

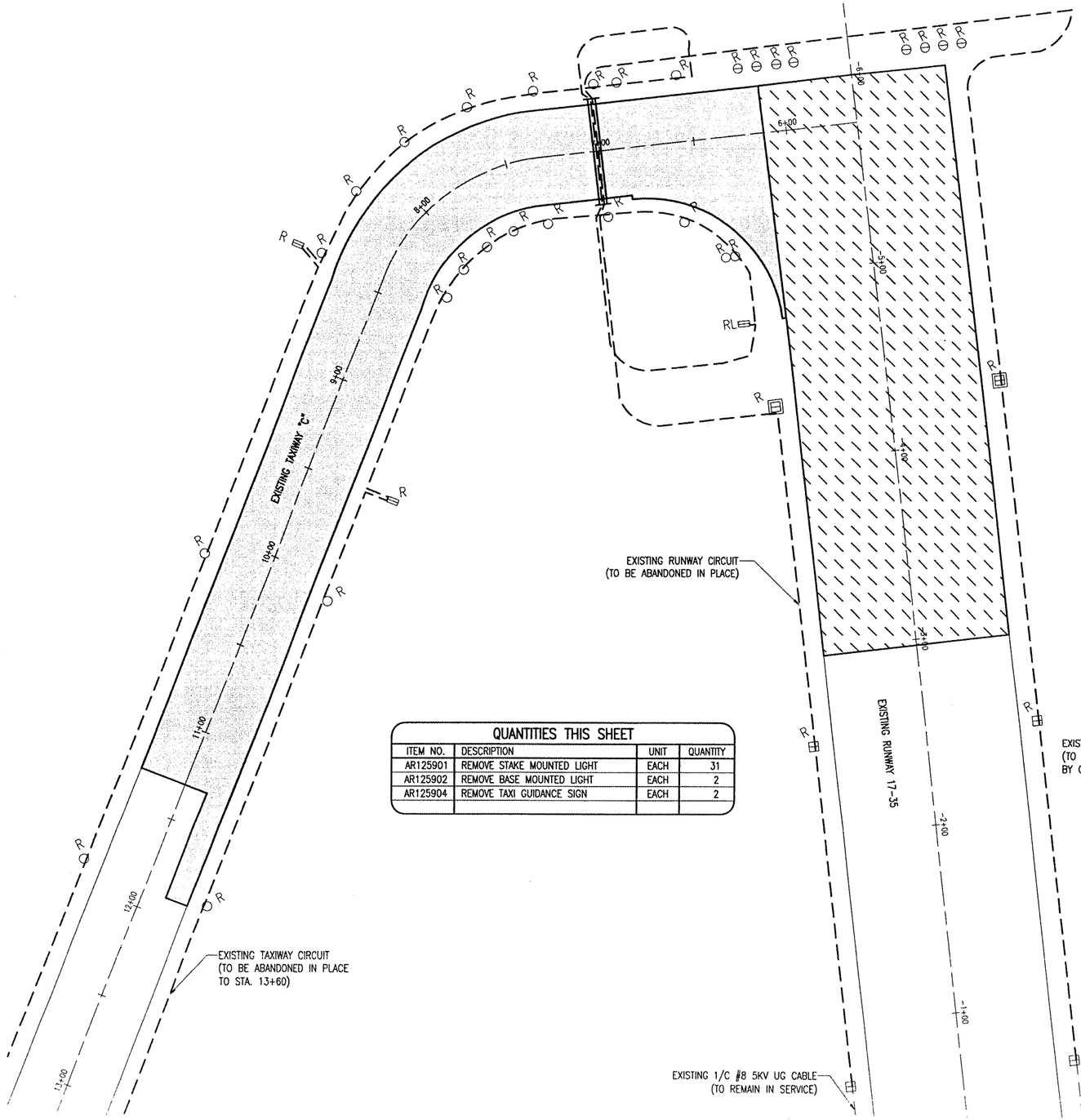
HANSON
Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2886
Offices Nationwide

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED JOINTING DETAILS

14
14 of 81 sheets

FEB 10, 2009 4:49 PM HAGLOOO382
K:\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\R-16.JNT.DWG - JOINT DETAILS



LIGHT REMOVAL NOTES

ALL EXISTING RUNWAY, THRESHOLD, TAXIWAY LIGHTS AND TAXI GUIDANCE SIGNS THAT ARE DESIGNATED FOR REMOVAL WILL BE REMOVED. THE LIGHTS AND THEIR ISOLATING TRANSFORMER WILL BE TURNED OVER TO THE AIRPORT MANAGER. THE LIGHT STAKES/BASES WILL BE REMOVED AND DISPOSED OF OFF THE AIRPORT SITE.

THE LENSES FROM THE FOUR RUNWAY LIGHTS BEING REMOVED WILL BE SWAPPED FOR THE 360° CLEAR LENSES OF THE RUNWAY LIGHTS THAT ARE WITHIN 2000 FEET OF THE PROPOSED END OF RUNWAY 17. THE AMBER END WILL FACE TOWARD THE SOUTH. THE SWAPPING OF THE LENSES WILL BE CONSIDERED AS AN INCIDENTAL ITEM TO THE PROPOSED LIGHT REMOVAL AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

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 ABANDONED IN PLACE UNLESS IT CONFLICTS WITH THE INSTALLATION OF A PROPOSED LIGHT OR CABLE, THEN IT WILL BE REMOVED AT NO ADDITIONAL COST TO THE CONTRACT.

REMOVAL OF THE EXISTING LIGHTS AND ISOLATING TRANSFORMERS WILL BE PAID FOR UNDER ITEMS:

AR125901 "REMOVE STAKE MOUNTED LIGHT" PER EACH AND
AR125902 "REMOVE BASE MOUNTED LIGHT" PER EACH AND
AR125904 "REMOVE TAXI GUIDANCE SIGN" 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.

QUANTITIES THIS SHEET

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
AR125901	REMOVE STAKE MOUNTED LIGHT	EACH	31
AR125902	REMOVE BASE MOUNTED LIGHT	EACH	2
AR125904	REMOVE TAXI GUIDANCE SIGN	EACH	2

LEGEND

- EXISTING IMPROVEMENTS
- PROPOSED PCC PAVEMENT REMOVAL
- PROPOSED BITUMINOUS PAVEMENT REMOVAL
- EXISTING 1/C #8 5KV UG CABLE
- E — EXISTING UNDERGROUND ELECTRIC
- EXISTING 1/C #8 5KV UG CABLE (TO BE ABANDONED IN PLACE)
- EXISTING BASE MOUNTED RUNWAY LIGHT (TO BE REMOVED)
- EXISTING STAKE MOUNTED RUNWAY LIGHT (TO BE REMOVED)
- EXISTING STAKE MOUNTED RUNWAY LIGHT
- EXISTING STAKE MOUNTED TAXIWAY LIGHT
- EXISTING STAKE MOUNTED TAXIWAY LIGHT (TO BE REMOVED)
- EXISTING STAKE MOUNTED RUNWAY THRESHOLD LIGHT (TO BE REMOVED)
- EXISTING TAXIWAY GUIDANCE SIGN (TO BE REMOVED)
- EXISTING V.A.D.I'S (TO BE RELOCATED BY OTHERS)
- EXISTING ELECTRICAL DUCT (TO BE ABANDONED IN PLACE)

0' 15' 30' 60'
HALF SIZE SCALE: 1"= 60'
FULL SIZE SCALE: 1"= 30'

DATE	REVISION	BY

ST. LOUIS REGIONAL AIRPORT
EAST ALTON, ILLINOIS
IL PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

HS Project No. 83706RWYD 0800
Filename R-14 1ELE.DWG
Scale 1"=30'
Date 02/11/08

LAYOUT	MDR	02/11/08
DRAWN	MDR	02/11/08
REVIEWED	CAH	07/11/08

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

RUNWAY SAFETY AREA IMPROVEMENTS

EXISTING ELECTRICAL PLAN FOR RUNWAY END 17

15
15 of 81 sheets

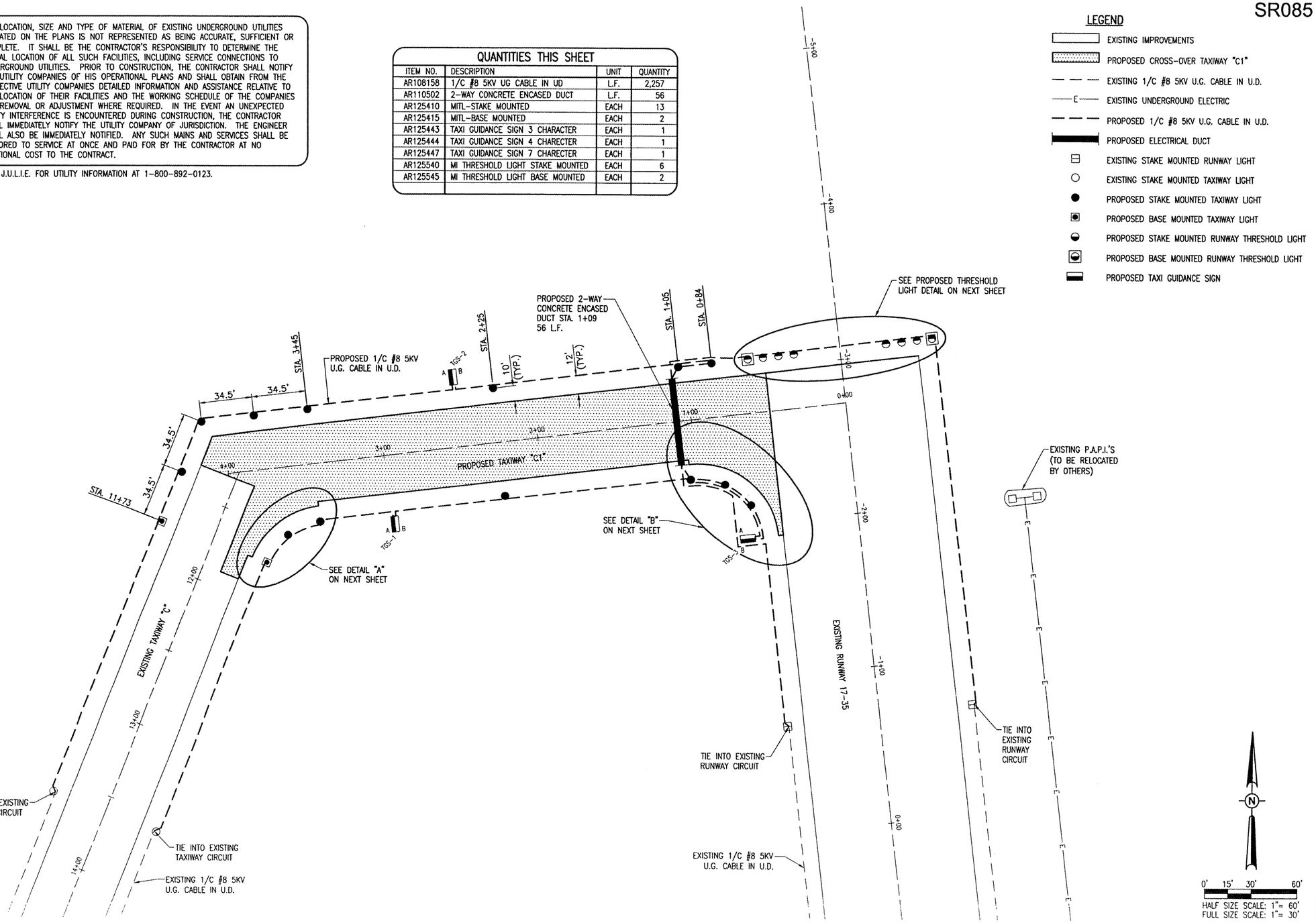
FEB 10, 2009 4:50 PM HAGLOOO382
I:\AIRPORTS\STLOUIS\837-06RWY0\AIRPORT\SHEETS\R-14 1ELE.DWG - RWY 17 END

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.

QUANTITIES THIS SHEET

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
AR108158	1/C #8 5KV UG CABLE IN UD	L.F.	2,257
AR110502	2-WAY CONCRETE ENCASED DUCT	L.F.	56
AR125410	MITL-STAKE MOUNTED	EACH	13
AR125415	MITL-BASE MOUNTED	EACH	2
AR125443	TAXI GUIDANCE SIGN 3 CHARACTER	EACH	1
AR125444	TAXI GUIDANCE SIGN 4 CHARECTER	EACH	1
AR125447	TAXI GUIDANCE SIGN 7 CHARECTER	EACH	1
AR125540	MI THRESHOLD LIGHT STAKE MOUNTED	EACH	6
AR125545	MI THRESHOLD LIGHT BASE MOUNTED	EACH	2



LEGEND

- EXISTING IMPROVEMENTS
- PROPOSED CROSS-OVER TAXIWAY "C1"
- EXISTING 1/C #8 5KV U.G. CABLE IN U.D.
- E EXISTING UNDERGROUND ELECTRIC
- PROPOSED 1/C #8 5KV U.G. CABLE IN U.D.
- PROPOSED ELECTRICAL DUCT
- EXISTING STAKE MOUNTED RUNWAY LIGHT
- EXISTING STAKE MOUNTED TAXIWAY LIGHT
- PROPOSED STAKE MOUNTED TAXIWAY LIGHT
- PROPOSED BASE MOUNTED TAXIWAY LIGHT
- PROPOSED STAKE MOUNTED RUNWAY THRESHOLD LIGHT
- PROPOSED BASE MOUNTED RUNWAY THRESHOLD LIGHT
- PROPOSED TAXI GUIDANCE SIGN

DATE	REVISION	BY

ST. LOUIS REGIONAL AIRPORT
St.LouisRegional AIRPORT
EAST ALTON, ILLINOIS
A.I.P. PROJ.: 3-17-0002-B42
IL. PROJ.: ALN-3825

HEI Project No. 8370BRWY0 0800
Filename R-142ELE.DWG
Scale 1"=30'
Date 02/11/08

LAYOUT	CAH	02/11/08
DRAWN	BAK	02/11/08
REVIEWED	CAH	07/11/08

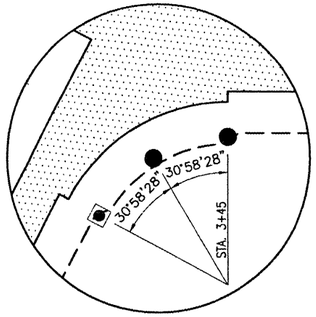
HANSON
Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2886
Offices Nationwide

RUNWAY SAFETY AREA IMPROVEMENTS

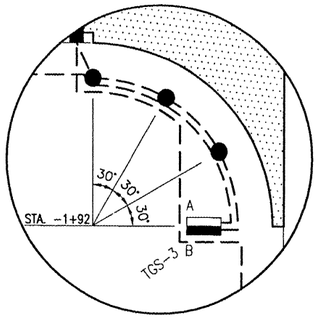
PROPOSED ELECTRICAL PLAN FOR RUNWAY END 17

16
16 of 81 sheets

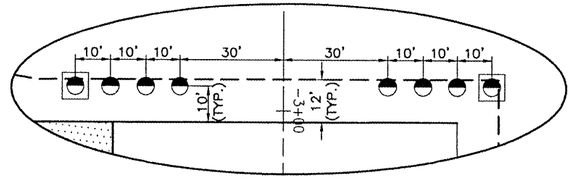
FEB 10, 2009 4:50 PM HAGLOOO382
J:\AIRPORTS\STLOUIS\837-06RWY0\AIRPORT\SHEETS\R-142ELE.DWG - RWY 17 END



DETAIL "A"
"NOT TO SCALE"



DETAIL "B"
"NOT TO SCALE"



PROPOSED RUNWAY END 17 THRESHOLD LIGHT DETAIL
"NOT TO SCALE"

ELECTRICAL NOTES

CABLES:
ALL PROPOSED CABLE WILL BE LOCATED 12' FROM THE PAVEMENT EDGE UNLESS OTHERWISE STATED BY THE RESIDENT ENGINEER.

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 AND THRESHOLD LIGHTS WILL BE PLACED 10' FROM THE PAVEMENT EDGE UNLESS SHOWN OTHERWISE.

ALL PROPOSED TAXIWAY AND THRESHOLD LIGHTS WILL BE CONSTRUCTED AT THE LOCATION SHOWN ON THIS SHEET AND IN ACCORDANCE WITH THE DETAILS SHOWN ON SHEET 19 AND THE SPECIFICATIONS.

ALL PROPOSED TAXIWAY LIGHTS WILL USE 360° BLUE LENSES.

ALL PROPOSED THRESHOLD LIGHTS WILL HAVE 180° RED/180° GREEN LENSES. THE GREEN SIDE WILL FACE AWAY FROM THE PAVEMENT AND THE RED SIDE WILL FACE THE PAVEMENT.

DUCT:
ALL PROPOSED 2-WAY CONCRETE DUCTS WILL BE CONSTRUCTED AT THE LOCATIONS SHOWN ON SHEET NO. 16 AND IN ACCORDANCE WITH THE DETAIL ON SHEET NO. 20 AND THE SPECIFICATIONS.

THE TOP OF THE PROPOSED 2-WAY DUCTS WILL BE LOCATED 22" BELOW THE FINISHED PAVEMENT GRADE.

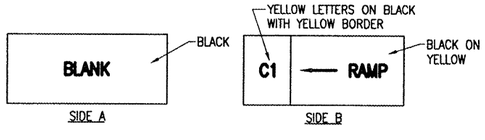
110-DUCT NOTES:

THE PROPOSED CONCRETE ENCASED ELECTRICAL DUCT WILL BE CONSTRUCTED IN ACCORDANCE WITH ITEM 110 "INSTALLATION OF AIRPORT UNDERGROUND ELECTRICAL DUCT" AS STATED ON PAGE 148 OF THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, ADOPTED JULY 1, 2004.

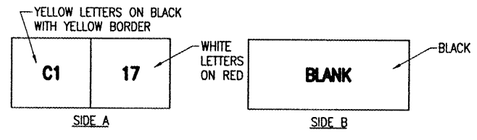
THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING 2-WAY CONCRETE ENCASED ELECTRICAL DUCTS AT THE LOCATIONS SHOWN ON THE CONSTRUCTION PLANS.

THE DUCTS WILL BE PLACED PRIOR TO EARTH GRADING AND THE TOPS OF THE PROPOSED DUCTS WILL BE PLACED 12" BELOW THE BOTTOM OF THE PROPOSED AGGREGATE BASE.

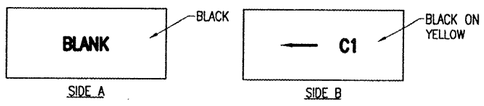
THE PROPOSED ELECTRICAL DUCT WILL BE PAID FOR UNDER ITEMS:
AR110502 2-WAY CONCRETE ENCASED DUCT ____ PER L.F.



TAXI GUIDANCE SIGN DETAIL TGS-1
"NOT TO SCALE"



TAXI GUIDANCE SIGN DETAIL TGS-2
"NOT TO SCALE"



TAXI GUIDANCE SIGN DETAIL TGS-3
"NOT TO SCALE"

ST. LOUIS REGIONAL AIRPORT
EAST ALTON, ILLINOIS
A.I.P. PROJ.: 3-17-0002-B42
IL PROJ.: ALN-3825

DATE	REVISION	BY

HS Project No. 8370GRWYD.0800
Filename R-541ELE.DWG
Scale NOT TO SCALE
Date 02/11/08

LAYOUT	CAH	02/11/08
DRAWN	BAK	02/11/08
REVIEWED	CAH	07/11/08

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

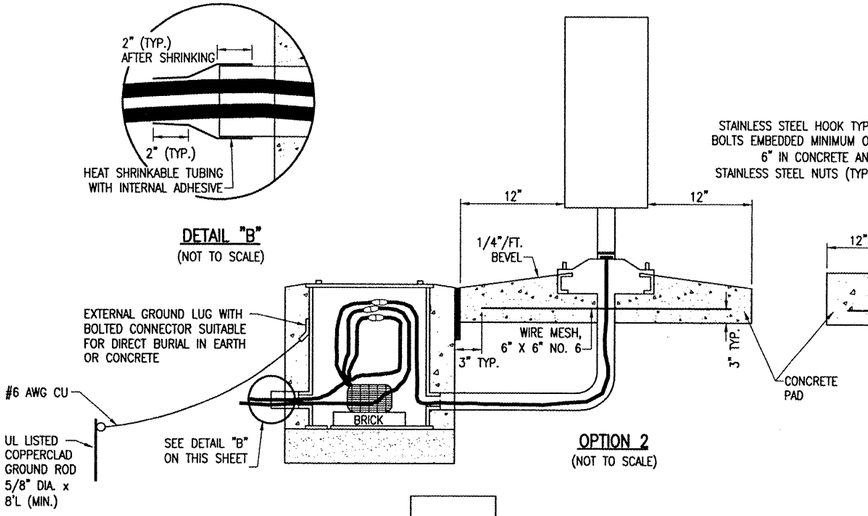
RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED ELECTRICAL DETAILS FOR RUNWAY END 17

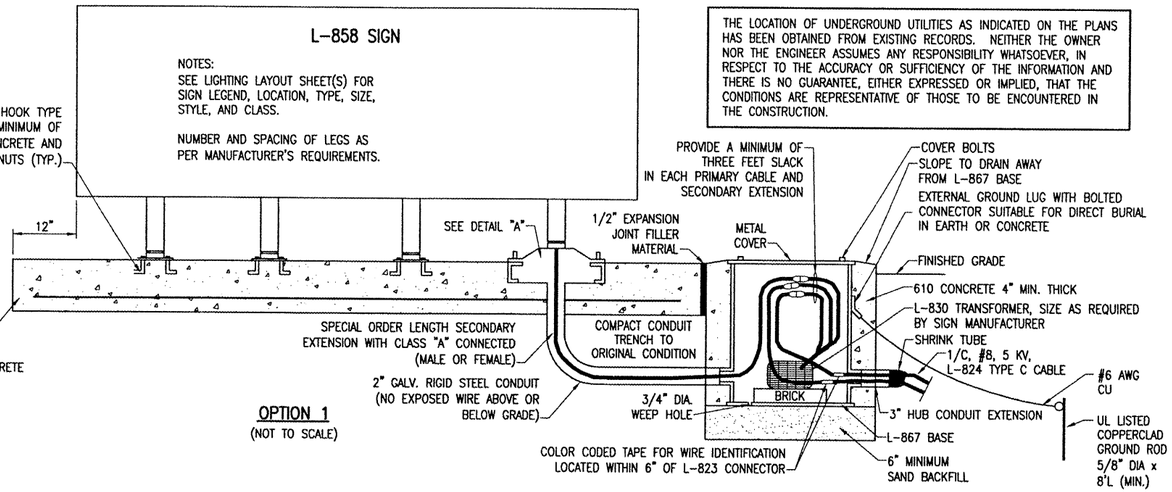
17
17 of 81 sheets

FEB 10, 2009 4:51 PM HAGLOOO382
J:\AIRPORTS\STLOUIS\837-08RWYD\AIRPORT\SHEETS\R-541ELE.DWG - RWY 17 END

DETAIL "B"
(NOT TO SCALE)



OPTION 2
(NOT TO SCALE)



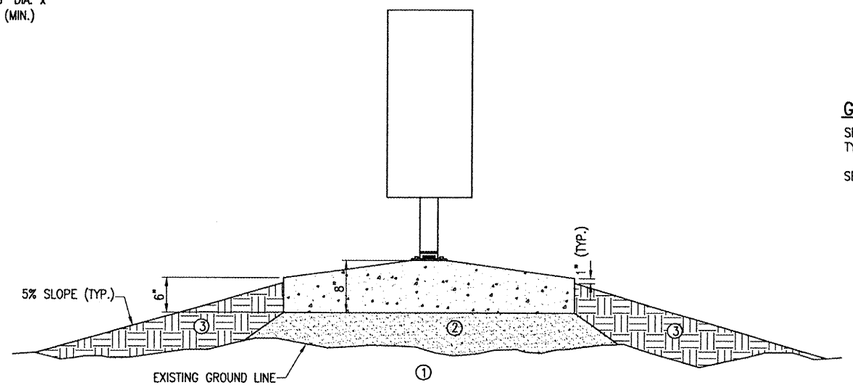
OPTION 1
(NOT TO SCALE)

THE LOCATION OF UNDERGROUND UTILITIES AS INDICATED ON THE PLANS HAS BEEN OBTAINED FROM EXISTING RECORDS. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY WHATSOEVER, IN RESPECT TO THE ACCURACY OR SUFFICIENCY OF THE INFORMATION AND THERE IS NO GUARANTEE, EITHER EXPRESSED OR IMPLIED, THAT THE CONDITIONS ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED IN THE CONSTRUCTION.

GENERAL NOTES

SEE LIGHTING LAYOUT SHEET FOR SIGN LEGEND, LOCATION, TYPE, SIZE, STYLE, AND CLASS.

SEE SHEETS 21 THROUGH 22 FOR ELECTRICAL NOTES.



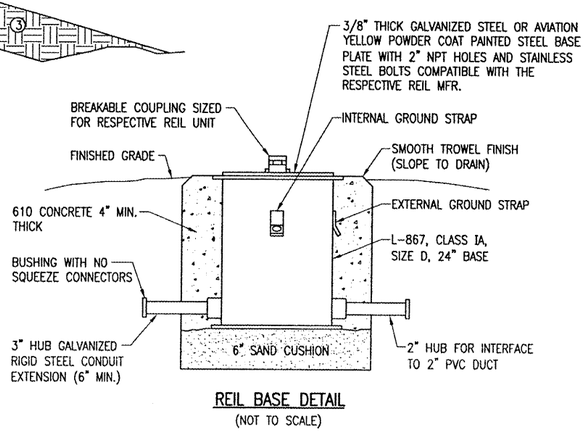
SIGN DETAIL
(NOT TO SCALE)

① EXISTING SOD TO BE STRIPPED AND REMOVED

② SAND BACKFILL, VARIABLE DEPTH

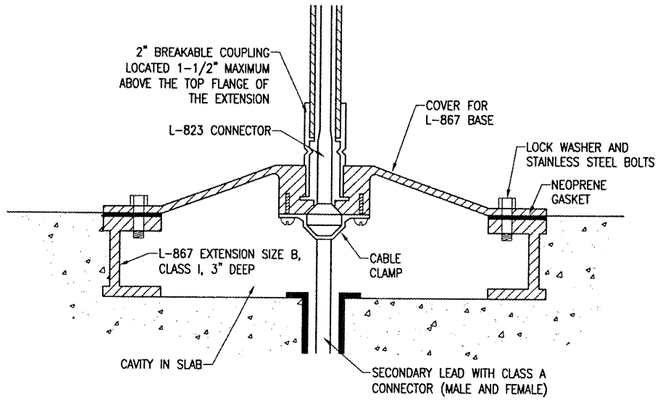
③ PROPOSED TOPSOIL BACKFILL MATERIAL

PER FAA AC 150/5340-30C DESIGN AND INSTALLATION DETAILS FOR AIRPORT VISUAL AIDS, A SAFETY GROUND MUST BE INSTALLED AT EACH LIGHT FIXTURE. A SAFETY GROUND SHALL BE INSTALLED AT EACH STAKE MOUNTED LIGHT AND EACH TRANSFORMER BASE/LIGHT CAN ASSOCIATED WITH RUNWAY LIGHTS, TAXIWAY LIGHTS, AND LIGHTED TAXI GUIDANCE SIGNS. 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 ⅝-INCH DIAMETER BY 8-FOOT LONG (MINIMUM) UL LISTED COPPER CLAD GROUND ROD.

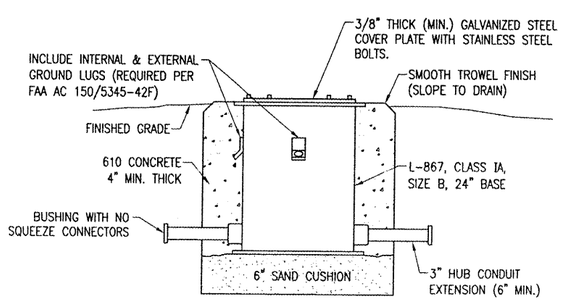


REIL BASE DETAIL
(NOT TO SCALE)

NOTE:
FOR THE PURPOSE OF ENHANCING SAFETY, EACH BASE MUST HAVE INSTALLED, BY THE MANUFACTURER, AN INTERNAL AND EXTERNAL GROUND STRAP THAT IS AVAILABLE FOR THE PURPOSE OF ATTACHING A GROUND LUG THAT IS CONNECTED TO AN EARTH GROUND OR A SAFETY GROUND CONDUCTOR INSTALLED WITH THE RESPECTIVE CIRCUIT. FOR AIRPORT PROJECTS RECEIVING FEDERAL FUNDS THIS REQUIREMENT IS MANDATORY PER FAA AC 150/5345-42F.



DETAIL "A"
(NOT TO SCALE)



TRANSFORMER BASE/SPLICE CAN DETAIL
(NOT TO SCALE)

ST. LOUIS REGIONAL AIRPORT
EAST ALTON, ILLINOIS
IL PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

DATE	REVISION	BY

HD Project No. 83706RWYD 0800
Filename R-542ELE.DWG
Scale NOT TO SCALE
Date 02/11/08

LAYOUT	CAH	02/11/08
DRAWN	BAK	02/11/08
REVIEWED	CAH	07/11/08

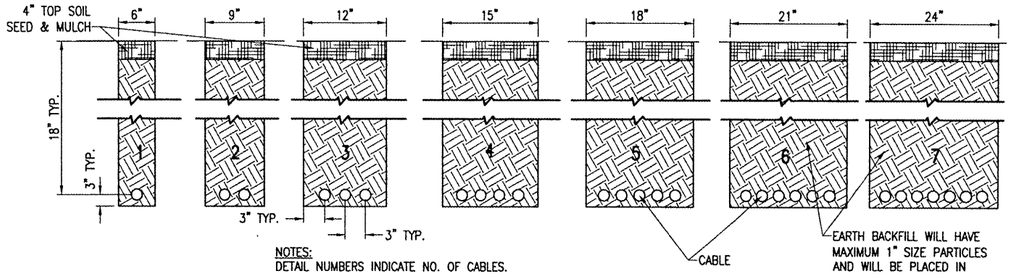
HANSON
Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2886
Offices Nationwide

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED ELECTRICAL DETAILS SHEET 1

18
18 of 81 sheets

FEB 10, 2009 4:52 PM HAGLOOO382
J:\AIRPORTS\STLOUIS\837-06RWY0\AIRPORT\SHEETS\R-542ELE.DWG - Layout1



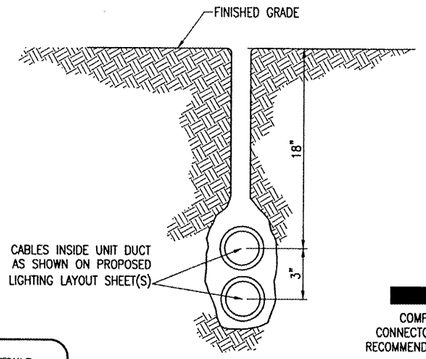
NOTES:
DETAIL NUMBERS INDICATE NO. OF CABLES.

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.

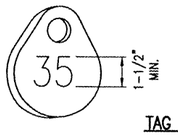
DEPTH OF TRENCHES SHALL BE AS SHOWN ABOVE UNLESS OTHERWISE SPECIFIED ON THE PLANS.

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

CABLE TRENCHES
(NOT TO SCALE)

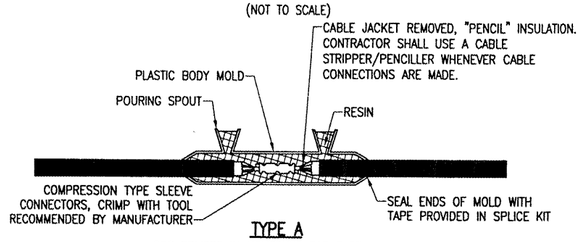


PLOWED CABLE
(NOT TO SCALE)

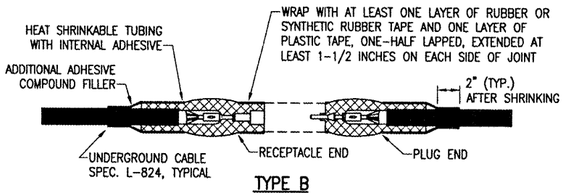


NOTE:
AFFIX NON-CORROSIVE TAG TO FIXTURE FACING RUNWAY WITH SET SCREW, WIRE TIE, OR METAL BAND. NUMERALS SHALL BE ENGRAVED FOR PERMANENT READABILITY.

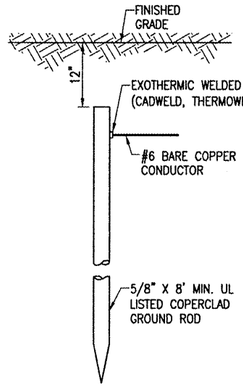
TAG DETAIL
(NOT TO SCALE)



TYPE A
FOR SPLICES IN HOMERUNS FOR EXTENSIONS TO EXISTING CABLES ONLY



TYPE B
FOR SPLICES AT JUNCTION OF HOMERUN WITH LOOP CIRCUIT

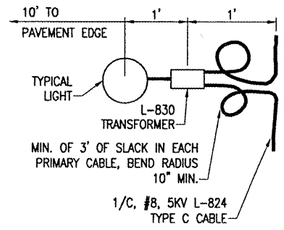


NOTES:
TYPE AND MINIMUM NUMBER OF GROUND RODS SHALL BE AS SPECIFIED ON THE PLAN.

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

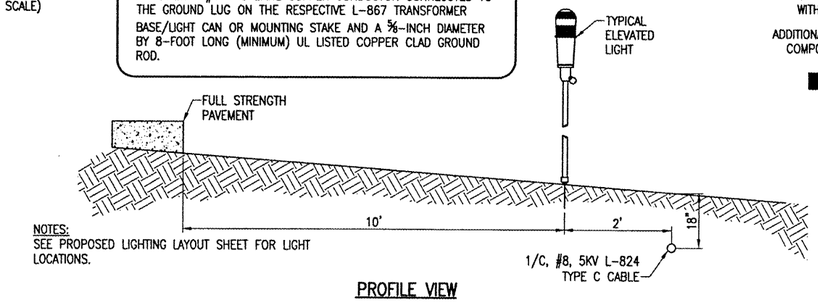
COST OF GROUND RODS IS INCIDENTAL TO THE ASSOCIATED ITEMS REQUIRING GROUNDING UNLESS OTHERWISE SPECIFIED.

GROUND ROD
(NOT TO SCALE)



PLAN VIEW

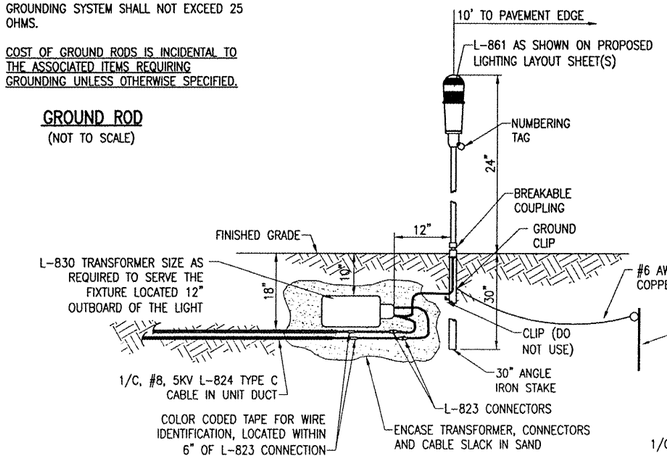
PER FAA AC 150/5340-30C DESIGN AND INSTALLATION DETAILS FOR AIRPORT VISUAL AIDS, A SAFETY GROUND MUST BE INSTALLED AT EACH LIGHT FIXTURE. A SAFETY GROUND SHALL BE INSTALLED AT EACH STAKE MOUNTED LIGHT AND EACH TRANSFORMER BASE/LIGHT CAN ASSOCIATED WITH RUNWAY LIGHTS, TAXIWAY LIGHTS, AND LIGHTED TAXI GUIDANCE SIGNS. THE SAFETY GROUND SHALL BE A #6 AWG BARE COPPER CONDUCTOR CONNECCTED TO THE GROUND LUG ON THE RESPECTIVE L-867 TRANSFORMER BASE/LIGHT CAN OR MOUNTING STAKE AND A ⅝-INCH DIAMETER BY 8-FOOT LONG (MINIMUM) UL LISTED COPPER CLAD GROUND ROD.



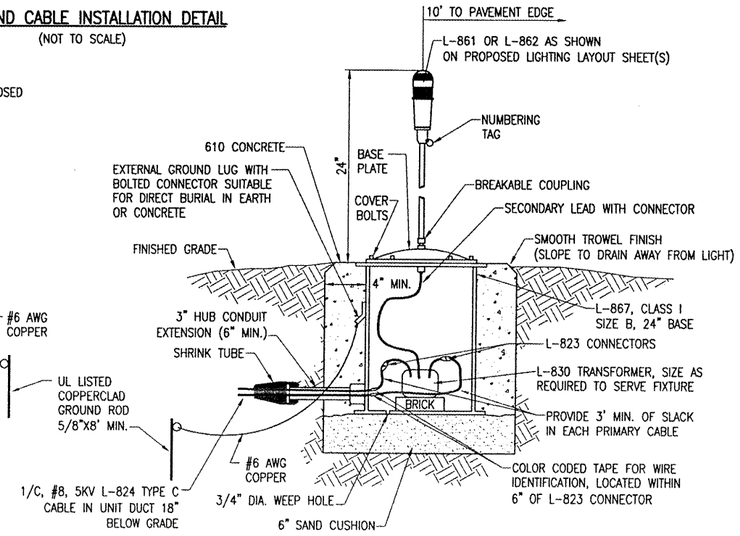
NOTES:
SEE PROPOSED LIGHTING LAYOUT SHEET FOR LIGHT LOCATIONS.

PROFILE VIEW

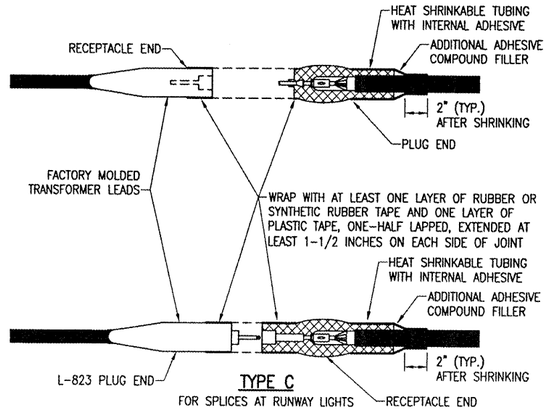
LIGHT AND CABLE INSTALLATION DETAIL
(NOT TO SCALE)



MEDIUM INTENSITY LIGHT - STAKE MOUNTED
(NOT TO SCALE)



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



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)

DATE	REVISION	BY

ST. LOUIS REGIONAL AIRPORT
EAST ALTON, ILLINOIS
IL PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-842

HS Project No. 83706RWYD 0800
Filename R-543ELE.DWG
Scale NOT TO SCALE
Date 02/11/08

LAYOUT	CAH	02/11/08
DRAWN	BAK	02/11/08
REVIEWED	CAH	07/11/08

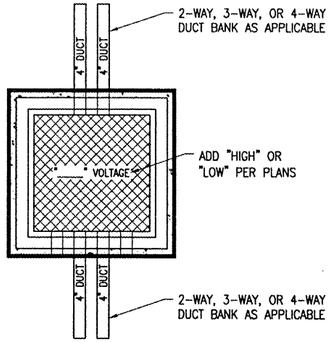
HANSON
Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2886
Offices Nationwide

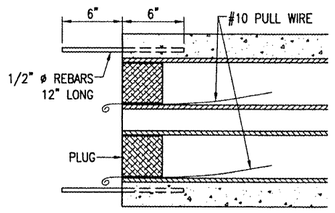
RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED ELECTRICAL DETAILS SHEET 2

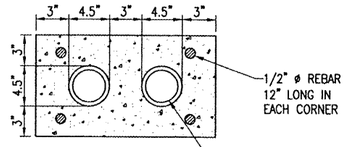
19

FEB 10, 2009 4:53 PM HAGLOOO382
I:\AIRPORTS\STLOUIS\83706RWYD\AIRPORT\SHEETS\R-543ELE.DWG - Layout2

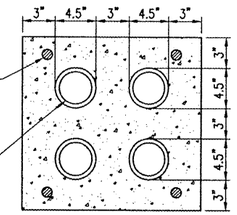




TYPICAL SECTION
(NOT TO SCALE)



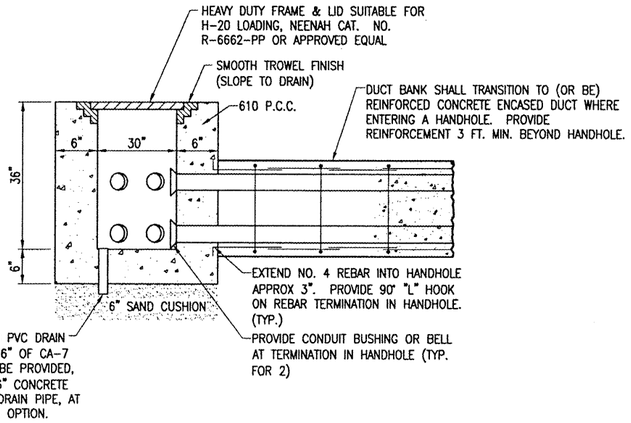
2-DUCT BANK
(NOT TO SCALE)



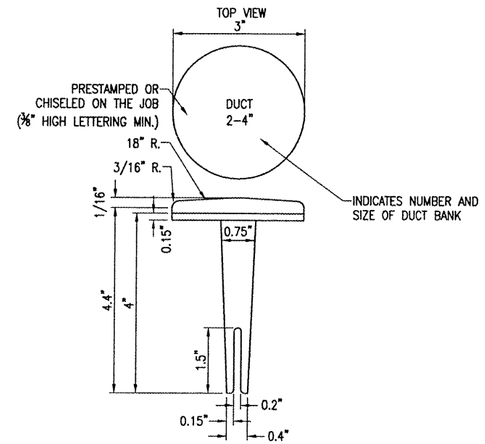
4-DUCT BANK
(NOT TO SCALE)

NOTES:

1. THE COST OF ALL TURF AND PAVEMENT DUCT MARKERS SHALL BE INCIDENTAL TO THE DUCT. THE COST OF ALL CABLE MARKERS SHALL BE INCIDENTAL TO THE CABLE.
2. BITUMINOUS PAVEMENT DUCT MARKER OR CONCRETE DUCT MARKER TO BE PROVIDED AT EACH END OF EACH DUCT AS SHOWN ON THE LOCATION PLAN. FOR CONCRETE PAVEMENT, THE LETTER "D" SHALL BE IMPRESSED IN THE PAVEMENT INSTEAD OF THE MARKER. THE LETTER SHALL BE AS DESCRIBED IN NOTE 4.
3. CABLE MARKERS SHALL BE PLACED AT CHANGES OF DIRECTION AND APPROXIMATELY EVERY 200' ALONG CABLE RUNS.
4. CONCRETE CABLE MARKERS AND DUCT MARKERS SHALL HAVE LETTERS 4" HIGH, 3" WIDE WITH WIDTH OF STROKE ½" AND ¼" DEEP. ALL LETTERS, NUMBERS AND ARROWS TO BE IMPRESSED.

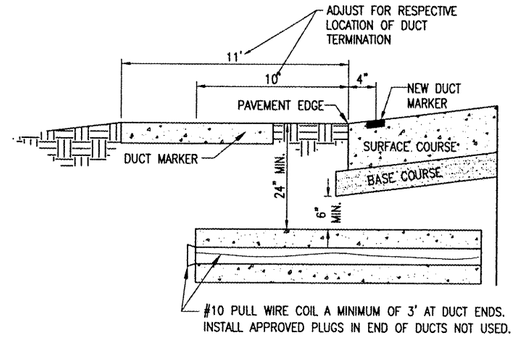


NOTE:
1. LIDS FOR LOW VOLTAGE HANDHOLES SHALL BE LABELED "LOW VOLTAGE". LIDS FOR HIGH VOLTAGE HANDHOLES SHALL BE LABELED "HIGH VOLTAGE". COORDINATE LETTERING WITH MFR.
2. HANDHOLE MAY BE CAST IN PLACE OR PRECAST.
3. SEE SPECIAL PROVISIONS.

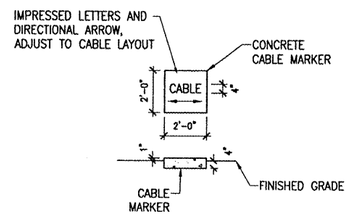


BITUMINOUS PAVEMENT DUCT MARKERS
"NOT TO SCALE"

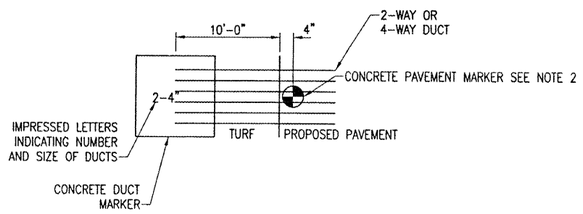
NOTE:
TOP OF MARKER SHALL BE FLUSH WITH FINISHED PAVEMENT SURFACE. MARKER MAY BE INSTALLED IN A DRILLED HOLE AND SECURED WITH EPOXY GLUE.



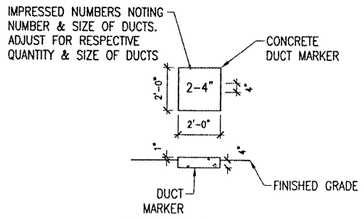
UNDERGROUND ELECTRICAL DUCT
(NOT TO SCALE)



TURF CABLE MARKERS
"NOT TO SCALE"



DUCT MARKER DETAIL
"NOT TO SCALE"



TURF DUCT MARKERS
"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.

ST. LOUIS REGIONAL AIRPORT
EAST ALTON, ILLINOIS
IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

BY	REVISION	DATE

HSI Project No. 8370BRWYD_D800
Filename R-544ELE.DWG
Scale NOT TO SCALE
Date 02/11/08

LAYOUT	CAH	02/11/08
DRAWN	BAK	02/11/08
REVIEWED	CAH	07/11/08

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

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED ELECTRICAL DETAILS SHEET 3

20
20 of 81 sheets

FEB 10, 2009 4:53 PM HAGLOOO382
\\AIRPORTS\STLOUIS\837-08RWYD\AIRPORT\SHEETS\R-544ELE.DWG - Layout2

GENERAL NOTES

1. 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.

2. CONTRACTOR SHALL KEEP A COPY OF THE LATEST NEC IN FORCE ON SITE AT ALL TIMES DURING CONSTRUCTION FOR USE AS A REFERENCE.

3. CONTRACTOR SHALL COORDINATE WORK AND ANY POWER OUTAGES WITH THE RESPECTIVE FACILITY OWNER PERSONNEL AND THE AIRPORT MANAGER.

4. THE CONTRACTOR SHALL ASCERTAIN THAT ALL LIGHTING SYSTEM COMPONENTS FURNISHED BY HIM, INCLUDING FAA APPROVED EQUIPMENT, ARE COMPATIBLE IN ALL RESPECTS WITH EACH OTHER AND THE REMAINDER OF THE NEW/EXISTING SYSTEM. ANY NONCOMPATIBLE COMPONENTS FURNISHED BY THIS CONTRACTOR SHALL BE REPLACED BY HIM AT NO ADDITIONAL COST TO THE AIRPORT SPONSOR WITH A SIMILAR UNIT, APPROVED BY THE ENGINEER (DIFFERENT MODEL OR DIFFERENT MANUFACTURER) THAT IS COMPATIBLE WITH THE REMAINDER OF THE AIRPORT LIGHTING SYSTEM.

5. IN CASE THE CONTRACTOR ELECTS TO FURNISH AND INSTALL AIRPORT LIGHTING EQUIPMENT REQUIRING ADDITIONAL WIRING, TRANSFORMERS, ADAPTORS, MOUNTINGS, ETC., TO THOSE SHOWN ON THE DRAWINGS AND/OR LISTED IN THE SPECIFICATION, ANY COST FOR THESE ITEMS SHALL BE INCIDENTAL TO THE EQUIPMENT COST.

6. THE CONTRACTOR INSTALLED EQUIPMENT (INCLUDING FAA APPROVED) SHALL NOT GENERATE ANY ELECTROMAGNETIC INTERFERENCE IN THE EXISTING AND/OR NEW COMMUNICATIONS, WEATHER, AIR NAVIGATION, AND AIR TRAFFIC CONTROL EQUIPMENT. ANY EQUIPMENT GENERATING SUCH INTERFERENCE SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST WITH THE EQUIPMENT MEETING THE APPLICABLE SPECIFICATIONS AND NOT GENERATING ANY INTERFERENCE.

7. WHEN A SPECIFIC TYPE, STYLE, CLASS, ETC. OF FAA APPROVED EQUIPMENT IS SPECIFIED ONLY THAT TYPE, STYLE, CLASS, WILL BE ACCEPTABLE, EVEN THOUGH EQUIPMENT OF OTHER TYPES STYLES, CLASSES, ETC. MAY BE APPROVED.

8. ANY AND ALL INSTRUCTIONS FROM THE ENGINEER TO THE CONTRACTOR REGARDING CHANGES IN OR DEVIATIONS FROM THE PLANS AND SPECIFICATIONS SHALL BE IN WRITING WITH COPIES SENT TO THE AIRPORT SPONSOR AND THE FAA FIELD OFFICE (ADO/AFO). THE CONTRACTOR SHALL NOT ACCEPT ANY VERBAL INSTRUCTIONS FROM THE RESIDENT ENGINEER REGARDING ANY CHANGES FROM THE PLANS AND SPECIFICATIONS.

9. A MINIMUM OF THREE COPIES OF THE INSTRUCTION BOOK SHALL BE SUPPLIED WITH EACH DIFFERENT TYPE OF EQUIPMENT. THE BOOKS DESCRIBING A MORE SOPHISTICATED TYPE OF EQUIPMENT, SUCH AS REGULATORS, PAPI, REIL, ETC. AS A MINIMUM SHALL CONTAIN THE FOLLOWING:

   A. A DETAILED DESCRIPTION OF THE OVERALL EQUIPMENT AND ITS INDIVIDUAL COMPONENTS.

   B. THEORY OF OPERATION INCLUDING THE FUNCTION OF EACH COMPONENT.

   C. INSTALLATION INSTRUCTION.

   D. START-UP INSTRUCTIONS.

   E. PREVENTATIVE MAINTENANCE REQUIREMENTS.

   F. CHART FOR TROUBLE-SHOOTING.

   G. COMPLETE POWER AND CONTROL DETAILED WIRING DIAGRAM(S), SHOWING EACH CONDUCTOR/CONNECTION/COMPONENT – "BLACK" BOXES ARE NOT ACCEPTABLE. THE DIAGRAM OF THE NARRATIVE SHALL SHOW VOLTAGE/CURRENTS/WAVE SHAPES AT STRATEGIC LOCATIONS TO BE USED WHEN CHECKING AND/OR TROUBLE-SHOOTING THE EQUIPMENT. WHEN THE EQUIPMENT HAS SEVERAL MODES OF OPERATION, SUCH AS SEVERAL BRIGHTNESS STEPS, THESE PARAMETERS SHALL BE INDICATED FOR ALL DIFFERENT MODES.

   H. PARTS LIST WHICH WILL INCLUDE ALL MAJOR AND MINOR COMPONENTS SUCH AS RESISTORS, DIODES, ETC. IT SHALL INCLUDE A COMPLETE NOMENCLATURE OF EACH COMPONENT AND, IF APPLICABLE, THE NAME OF ITS MANUFACTURER AND THE CATALOG NUMBER.

   I. SAFETY INSTRUCTIONS.

POWER AND CONTROL NOTES

1. PROVIDE LEGEND PLATES FOR ALL ELECTRICAL EQUIPMENT TO IDENTIFY FUNCTION, CIRCUIT VOLTAGE AND PHASE. WHERE THE EQUIPMENT CONTAINS FUSES, ALSO IDENTIFY THE FUSE OR FUSE LINK AMPERE RATING. WHERE THE EQUIPMENT DOES NOT HAVE SUFFICIENT AREA TO INSTALL LEGEND PLATES, THE LEGEND PLATES SHALL BE INSTALLED ON THE WALL NEXT TO THE UNIT. 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.

2. COLOR CODE ALL PHASE WIRING BY THE USE OF COLORED WIRE INSULATION AND/OR COLORED TAPE. WHERE TAPE IS USED, THE WIRE INSULATION SHALL BE BLACK. BLACK AND RED SHALL BE USED FOR SINGLE-PHASE, THREE WIRE SYSTEMS AND BLACK, RED AND BLUE SHALL BE USED FOR THREE-PHASE SYSTEMS. NEUTRAL CONDUCTORS, SIZE NO. 6 AWG OR SMALLER, SHALL BE IDENTIFIED BY A CONTINUOUS WHITE OR NATURAL GRAY OUTER FINISH ALONG ITS ENTIRE LENGTH. NEUTRAL CONDUCTORS LARGER THAN NO. 6 AWG SHALL BE IDENTIFIED EITHER BY A CONTINUOUS WHITE OR NATURAL GRAY OUTER FINISH ALONG ITS ENTIRE LENGTH OR BY THE USE OF WHITE TAPE AT ITS TERMINATIONS AND INSIDE ACCESSIBLE WIREWAYS. INSULATED GROUND CONDUCTORS SHALL HAVE GREEN COLORED INSULATION FOR ALL CONDUCTOR SIZES (AWG OR KCMIL).

3. ALL BRANCH CIRCUIT CONDUCTORS CONNECTED TO A PARTICULAR PHASE SHALL BE IDENTIFIED WITH THE SAME COLOR. THE COLOR CODING SHALL BE EXTENDED TO THE POINT OF UTILIZATION.

4. IN CONTROL WIRING THE SAME COLOR SHALL BE USED THROUGHOUT THE SYSTEM FOR THE SAME FUNCTION, SUCH AS 10%, 30%, 100% BRIGHTNESS CONTROL, ETC.

5. LOW VOLTAGE (600 V.) AND HIGH VOLTAGE (5000 V.) CONDUCTORS SHALL BE INSTALLED IN SEPARATE WIREWAYS.

6. NEATLY LACE WIRING IN DISTRIBUTION PANELS, WIREWAYS, SWITCHES AND JUNCTION/PULL BOXES.

7. THE MINIMUM SIZE OF PULL/JUNCTION BOXES, REGARDLESS OF THE QUANTITY AND SIZE OF THE CONDUCTORS SHOWN, SHALL BE AS FOLLOWS:

   A. IN STRAIGHT PULLS THE LENGTH OF THE BOX SHALL NOT BE LESS THAN EIGHT TIMES THE TRADE DIAMETER OF THE LARGER CONDUIT. THE TOTAL AREA (INCLUDING THE CONDUIT CROSS-SECTIONAL AREA) OF A BOX END SHALL BE AT LEAST 3 TIMES GREATER THAN THE TOTAL TRADE CROSS-SECTIONAL AREA OF THE CONDUITS TERMINATING AT THE END.

   B. IN ANGLE PULLS OR 'U' PULLS THE DISTANCE BETWEEN EACH CONDUIT ENTRY INSIDE THE BOX AND THE OPPOSITE WALL OF THE BOX SHALL NOT BE LESS THAN SIX (6) TIMES THE TRADE DIAMETER OF THE LARGEST CONDUIT. THIS DISTANCE SHALL BE INCREASED FOR ADDITIONAL ENTRIES BY THE AMOUNT OF THE SUM OF THE DIAMETERS OF ALL OTHER CONDUIT ENTRIES ON THE SAME WALL AS THE BOX. THE DISTANCE BETWEEN CONDUIT ENTRIES ENCLOSING THE SAME CONDUCTOR SHALL NOT BE LESS THAN SIX TIMES THE TRADE DIAMETER OF THE LARGEST CONDUIT.

8. A RUN OF CONDUIT BETWEEN TERMINATIONS AT EQUIPMENT ENCLOSURES, SQUARE DUCTS AND PULL/JUNCTION BOXES, SHALL NOT CONTAIN MORE THAN THE EQUIVALENT OF FOUR QUARTER BENDS (360 DEGREES TOTAL), INCLUDING THOSE BENDS LOCATED IMMEDIATELY AT THE TERMINATIONS, CAST, CONDUIT TYPE OUTLETS SHALL NOT BE TREATED AS PULL/JUNCTION BOXES.

9. EQUIPMENT CABINETS SHALL NOT BE USED AS PULL/JUNCTION BOXES. ONLY WIRING TERMINATING AT THE EQUIPMENT SHALL BE BROUGHT INTO THESE ENCLOSURES.

10. SPLICES AND JUNCTION POINTS SHALL BE PERMITTED ONLY IN JUNCTION BOXES, DUCTS EQUIPPED WITH REMOVABLE COVERS, AND AT EASILY ACCESSIBLE LOCATIONS.

11. CIRCUIT BREAKERS IN POWER DISTRIBUTION PANEL(S) SHALL BE THERMAL-MAGNETIC MOLDED CASE, PERMANENT TRIP WITH 100 AMPERE, MINIMUM FRAME.

12. DUAL LUGS SHALL BE USED WHERE TWO (2) WIRES, SIZE NO. 6 OR LARGER, ARE TO BE CONNECTED TO THE SAME TERMINAL.

13. ALL INTERIOR WALL MOUNTED EQUIPMENT ENCLOSURES SHALL BE MOUNTED ON HOT DIPPED GALVANIZED STEEL STRUT SUPPORT, OR STAINLESS STEEL STRUT SUPPORT, WITH CORROSION RESISTANT HARDWARE.

14. SUPPORT FOR EXTERIOR MOUNTED EQUIPMENT SHALL USE HOT DIPPED GALVANIZED STEEL STRUT SUPPORT OR STAINLESS STEEL STRUT SUPPORT WITH STAINLESS STEEL HARDWARE. PROVIDE ZINC RICH PAINT APPLIED TO FIELD CUTS OF GALVANIZED STEEL SUPPORT TO MINIMIZE THE POTENTIAL FOR CORROSION PER THE RESPECTIVE STRUT SUPPORT MANUFACTURER'S RECOMMENDATIONS.

15. CONDUITS FOR ELECTRIC SERVICE ENTRANCE AND FEEDERS SHALL BE AS DETAILED HEREIN ON THE PLANS. WHERE GALVANIZED RIGID STEEL CONDUIT IS SPECIFIED IT SHALL HAVE THREADED FITTINGS. SET SCREW TYPE FITTINGS WILL NOT BE ACCEPTABLE. CONDUITS FOR UNDERGROUND APPLICATIONS SHALL BE AS DETAILED HEREIN. CONDUITS FOR GROUNDING ELECTRODE CONDUCTORS OR INDIVIDUAL GROUNDING CONDUCTORS SHALL BE SCHEDULE 40 OR SCHEDULE 80 PVC.

16. PROVIDE LIQUID TIGHT FLEXIBLE METAL CONDUIT AT CONNECTIONS TO EQUIPMENT SUBJECT TO VIBRATION OR WHERE FLEXIBILITY IS REQUIRED. LIQUID TIGHT FLEXIBLE METAL CONDUIT AND ASSOCIATED FITTINGS SHALL BE U.L. LISTED TO MEET THE REQUIREMENTS OF NEC 350.6, SUITABLE FOR GROUNDING, SUNLIGHT RESISTANT, AND RESISTANT TO OIL, GASOLINE, AND GREASE. LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS USED FOR FLEXIBILITY (INCLUDING CONNECTIONS TO MOTORS, TRANSFORMERS, & CONSTANT CURRENT REGULATORS) SHALL REQUIRE AN EXTERNAL BONDING JUMPER OR INTERNAL EQUIPMENT GROUNDING CONDUCTOR PER NEC 350.60. DO NOT INSTALL LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS NOT UL. LISTED.

17. UNLESS OTHERWISE SHOWN, ALL EXPOSED CONDUITS SHALL BE RUN PARALLEL TO OR AT RIGHT ANGLES WITH THE LINES OF THE STRUCTURE.

18. ALL STEEL CONDUITS, FITTINGS, NUTS, BOLTS, ETC. SHALL BE GALVANIZED.

19. USE CONDUIT BUSHINGS AT EACH CONDUIT TERMINATION. WHERE NO. 4 AWG OR LARGER UNDERGROUND WIRE IS INSTALLED, USE INSULATED BUSHINGS.

20. USE DOUBLE LOCK NUTS AT EACH CONDUIT TERMINATION.

21. WRAP ALL PRIMARY AND SECONDARY POWER TRANSFORMER CONNECTIONS WITH SUFFICIENT LAYERS OF INSULATING TAPE (3M SCOTCH 23 ALL-VOLTAGE SPLICING TAPE, 3M SCOTCH 130C LINERLESS RUBBER SPLICING TAPE, OR APPROVED EQUAL) AND COVER WITH VINYL ELECTRICAL TAPE (3M SCOTCH 88 VINYL ELECTRICAL TAPE OR APPROVED EQUAL) FOR FULL VALUE OF CABLE INSULATION VOLTAGE.

22. UNLESS OTHERWISE NOTED, ALL SINGLE CONDUCTOR CONTROL WIRING SHALL BE NO. 12 AWG. COPPER MINUMUM.

23. THE FOLLOWING SHALL APPLY TO RELAY/CONTACTOR PANELS/ENCLOSURES:

   A. FOR INTERIOR LOCATIONS ALL COMPONENTS SHALL BE MOUNTED IN NEMA 12 (DUST TIGHT) ENCLOSURE(S) WITH VERTICALLY HINGED COVERS. FOR EXTERIOR/OUTDOOR LOCATIONS ALL COMPONENTS SHALL BE MOUNTED IN NEMA 4X STAINLESS STEEL ENCLOSURE(S) WITH VERTICALLY HINGED COVERS. ALL CONDUIT ENTRIES INTO NEMA 4, 4X ENCLOSURES SHALL HAVE NEMA 4 HUBS LISTED SUITABLE FOR THE RESPECTIVE ENCLOSURE TO MAINTAIN THE NEMA 4, 4X RATING OF THE ENCLOSURE.

   B. THE ENCLOSURE(S) SHALL HAVE AMPLE SPACE FOR THE CIRCUIT COMPONENTS, TERMINAL BLOCKS AND INCOMING AND INTERNAL WIRING.

   C. ALL CONTROL CONDUCTOR TERMINATIONS SHALL BE OF THE OPEN-EYE CONNECTOR/SCREW TYPE. SOLDERED CLOSED-EYE TERMINATIONS, OR TERMINATIONS WITHOUT CONNECTORS ARE NOT ACCEPTABLE.

   D. WHEN THE ENCLOSURE COVER IS OPENED, ALL CIRCUIT COMPONENTS, WIRING AND TERMINALS SHALL BE EXPOSED AND ACCESSIBLE WITHOUT REMOVAL OF ANY PANELS, COVERS, ETC., EXCEPT THOSE COVERING HIGH VOLTAGE COMPONENTS.

   E. ACCESS TO, OR REMOVAL OF A CIRCUIT COMPONENT OR TERMINAL BLOCK WILL NOT REQUIRE THE REMOVAL OF ANY OTHER CIRCUIT COMPONENT OR TERMINAL BLOCK.

   F. EACH CIRCUIT COMPONENT SHALL BE CLEARLY IDENTIFIED INDICATING ITS CORRESPONDING NUMBER SHOWN ON THE DRAWINGS AND ITS FUNCTION.

   G. A COMPLETE WIRING DIAGRAM SHALL BE MOUNTED ON THE INSIDE OF THE COVER. THE DIAGRAM SHALL REPRESENT EACH CONDUCTOR BY A SEPARATE LINE.

   H. THE DIAGRAM SHALL IDENTIFY EACH CIRCUIT COMPONENT AN NUMBERING AND COLOR OF EACH TERMINAL CONDUCTOR AND TERMINAL.

   I. ALL WIRING SHALL BE NEATLY TRAINED AND LACED.

   J. MINIMUM WIRE SIZE SHALL BE NO. 12 AWG.

24. FURNISH & INSTALL A WEATHERPROOF WARNING LABEL FOR EACH METER SOCKET, SERVICE DISCONNECT, SAFETY SWITCH, CUTOUT, PANELBOARD, & CONTROL PANEL TO WARN PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARDS, PER THE REQUIREMENTS OF NEC 110.16 "FLASH PROTECTION".

DATE | REVISION | BY

ST. LOUIS REGIONAL AIRPORT
EAST ALTON, ILLINOIS
IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-842

HSI Project No. 8370GRWYD.0800
Filename R-545ELE.DWG
Scale NOT TO SCALE
Date 02/11/08

LAYOUT	CAH	02/11/08
DRAWN	BAK	02/11/08
REVIEWED	CAH	07/11/08

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

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED ELECTRICAL NOTES SHEET 1

21
21 of 81 sheets

FEB 10, 2009 4:53 PM HAGLOOO382
J:\AIRPORTS\STLOUIS\8370-06RWYD\AIRPORTSHEETS\R-545ELE.DWG - Layout1

AIRFIELD LIGHTING NOTES

1. 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.
2. NO COMPONENTS OF PRIMARY CIRCUIT SUCH AS CABLE, CONNECTORS AND TRANSFORMERS SHALL BE BROUGHT ABOVE GROUND AT EDGE LIGHTS, SIGNS, REIL, PAPI, ETC.
3. 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.
4. 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. 19.
5. 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. 19.
6. L-823 TYPE II, TWO-CONDUCTOR SECONDARY CONNECTORS SHALL BE CLASS 'A' (FACTORY MOLDED).
7. 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.
8. ELECTRICAL INSULATING GREASE SHALL BE APPLIED WITHIN THE L-823, SECONDARY, TWO CONDUCTOR CONNECTORS TO PREVENT WATER ENTRANCE. THESE CONNECTORS SHALL NOT BE TAPED.
9. 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.
10. 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.
11. 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.
12. L-867 BASES SHALL BE SIZE B, 24" DEEP, CLASS I, UNLESS OTHERWISE NOTED.
13. 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.
14. 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.
15. 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.
16. TOPS OF THE STAKES SUPPORTING LIGHT FIXTURES SHALL BE FLUSH WITH THE SURROUNDING GRADE.
17. PLASTIC LIGHTING FIXTURE COMPONENTS, SUCH AS LAMP HEADS, STEMS, BREAKABLE COUPLINGS, BASE COVERS, BRACKETS, STAKES, SHALL NOT BE ACCEPTABLE.
18. 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.
19. 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.
20. 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. 19.
21. GALVANIZED/PAINTED EQUIPMENT/COMPONENT SURFACES SHALL NOT BE DAMAGED BY DRILLING, FILING, ETC. DRAIN HOLES IN METAL TRANSFORMER HOUSINGS SHALL BE MADE BEFORE GALVANIZING.
22. EDGE LIGHT NUMBERING TAGS SHALL BE FACING THE PAVEMENT.
23. 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.
24. ALL UNDERGROUND CABLE RUNS SHALL BE IDENTIFIED BY CABLE MARKERS AT 200 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.
25. THERE SHALL BE NO SPLICES BETWEEN THE ISOLATION TRANSFORMERS. L-823 CONNECTORS ARE ALLOWED AT TRANSFORMER CONNECTIONS ONLY, UNLESS OTHERWISE SHOWN.
26. APPLY AN OXIDE INHIBITING, ANTI-SEIZING COMPOUND TO ALL SCREWS, NUTS AND BREAKAGE COUPLING THREADS.
27. LOCATIONS OF ENDS OF ALL UNDERGROUND DUCTS SHALL BE IDENTIFIED BY DUCT MARKERS.
28. WHERE A PARALLEL, CONSTANT VOLTAGE PAPI SYSTEM IS PROVIDED, THE "T" SPLICES SHALL BE OF THE CAST TYPE.
29. CONCRETE USED FOR SLABS, FOOTINGS, BACKFILL AROUND TRANSFORMER HOUSINGS, MARKINGS, ETC. SHALL BE 3000 PSI, AIR-ENTRAINED.
30. 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.
31. 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.
32. WHEN PREPARING CABLE FOR SPLICES, THE CONTRACTOR SHALL USE A CABLE STRIPPER/PENCILLER WHENEVER CABLE CONNECTIONS ARE MADE.

GROUNDING NOTES FOR AIRFIELD LIGHTING

1. 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.
2. 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.
3. 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.

DATE	REVISION	BY

ST. LOUIS REGIONAL AIRPORT

St.LouisRegional AIRPORT

EAST ALTON, ILLINOIS

IL. PROJ.: AUN-3825 A.I.P. PROJ.: 3-17-0002-842

MO Project No. 83706RWYD.0800
Filename R-546ELE.DWG
Scale NOT TO SCALE
Date 02/11/08

LAYOUT	CAH	02/11/08
DRAWN	BAK	02/11/08
REVIEWED	CAH	07/11/08

HANSON

Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2888
Offices Nationwide

RUNWAY SAFETY AREA IMPROVEMENTS

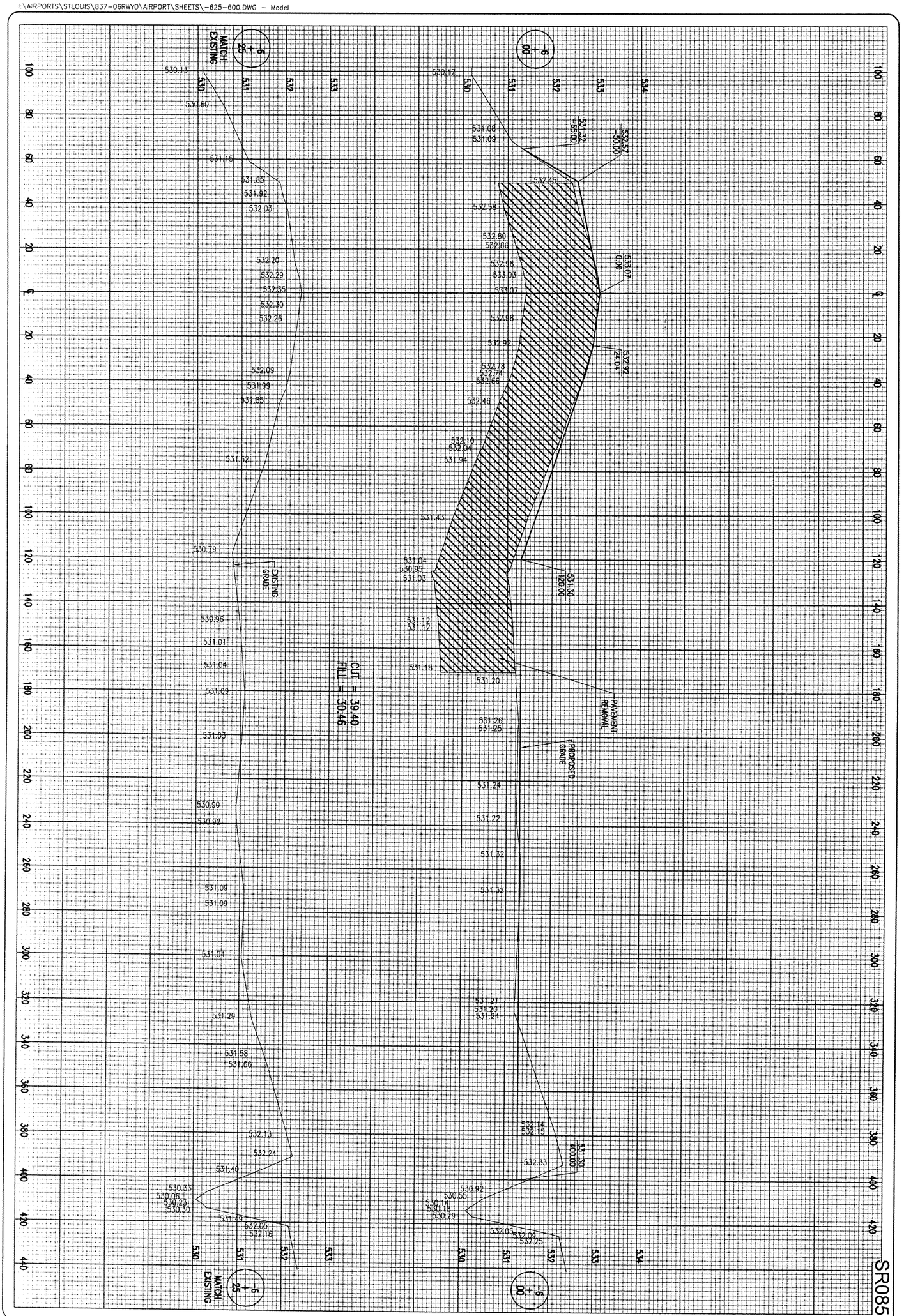
PROPOSED ELECTRICAL NOTES SHEET 2

22

22 of 81 sheets

FEB 10, 2009 4:54 PM HAGLOOO382
I:\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\R-546ELE.DWG - Work

FEB 11, 2009 7:36 AM HAGL000382
I:\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\-625-600.DWG - Model



23 of 81 Sheets

23

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED CROSS-SECTIONS FOR RUNWAY END 17
STA. -6+25 TO STA. -6+00

HANSON

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

HPI Project No.	83706RWYD 0800
Filename	-625-600.DWG
Scale	H. 1"=20', V. 1"=1'
Date	07/03/08

LAYOUT	MDR	07/03/08
DRAWN	MDR	07/03/08
REVIEWED	CAH	07/11/08

ST. LOUIS REGIONAL AIRPORT

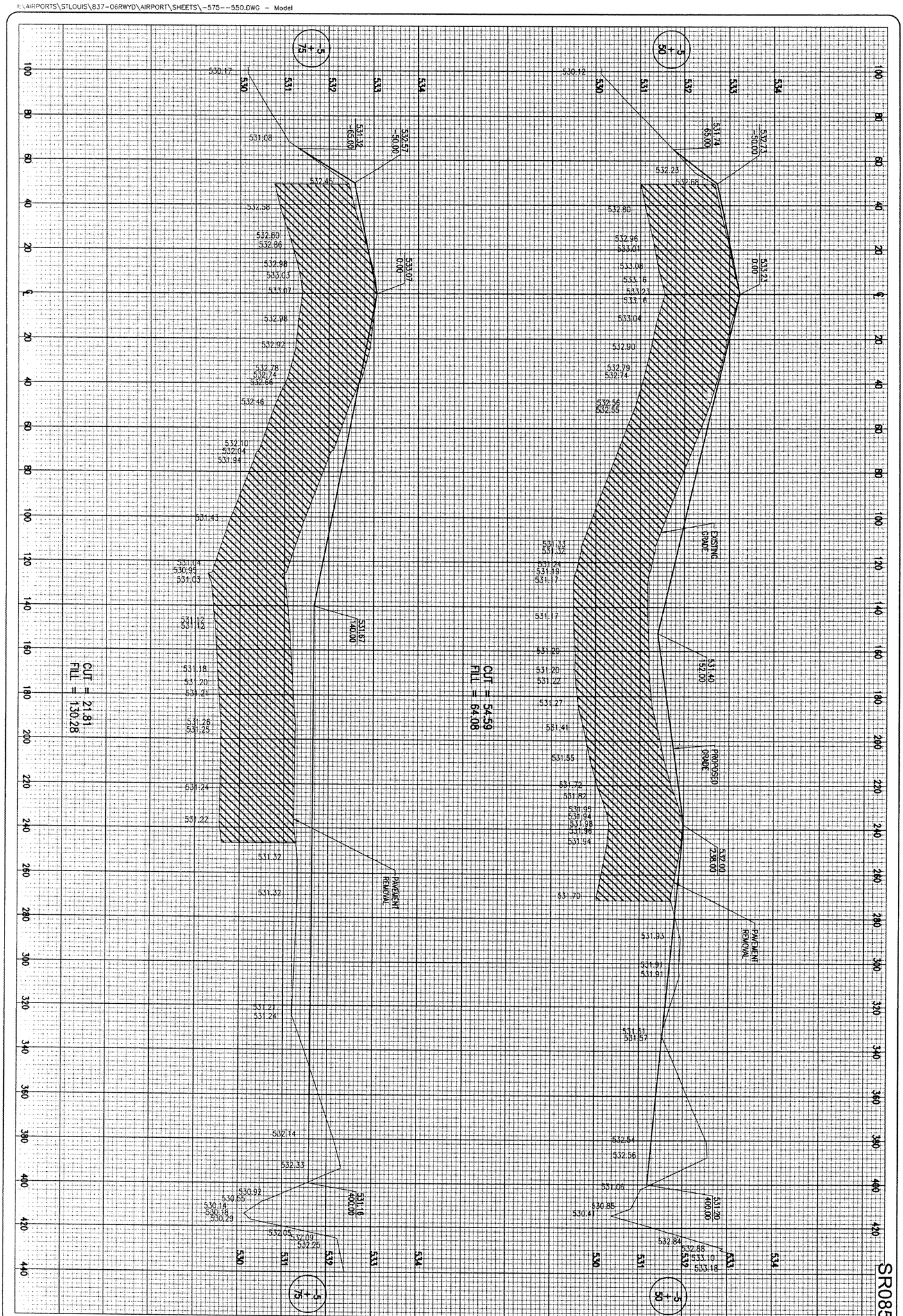
St.LouisRegional AIRPORT

EAST ALTON, ILLINOIS

IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

DATE	REVISION	BY

FEB 11, 2009 7:38 AM HAGL000382
I:\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\-575--550.DWG - Model



24 of 81 sheets

24

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED CROSS-SECTIONS
FOR RUNWAY END 17
STA. -5+75 TO STA. -5+50

HANSON

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

HD Project No.	83706RWYD 0800
Filename	-575--550.DWG
Scale	H. 1"=20', V. 1"=1'
Date	07/03/08

LAYOUT	MDR	07/03/08
DRAWN	MDR	07/03/08
REVIEWED	CAH	07/11/08

ST. LOUIS REGIONAL AIRPORT

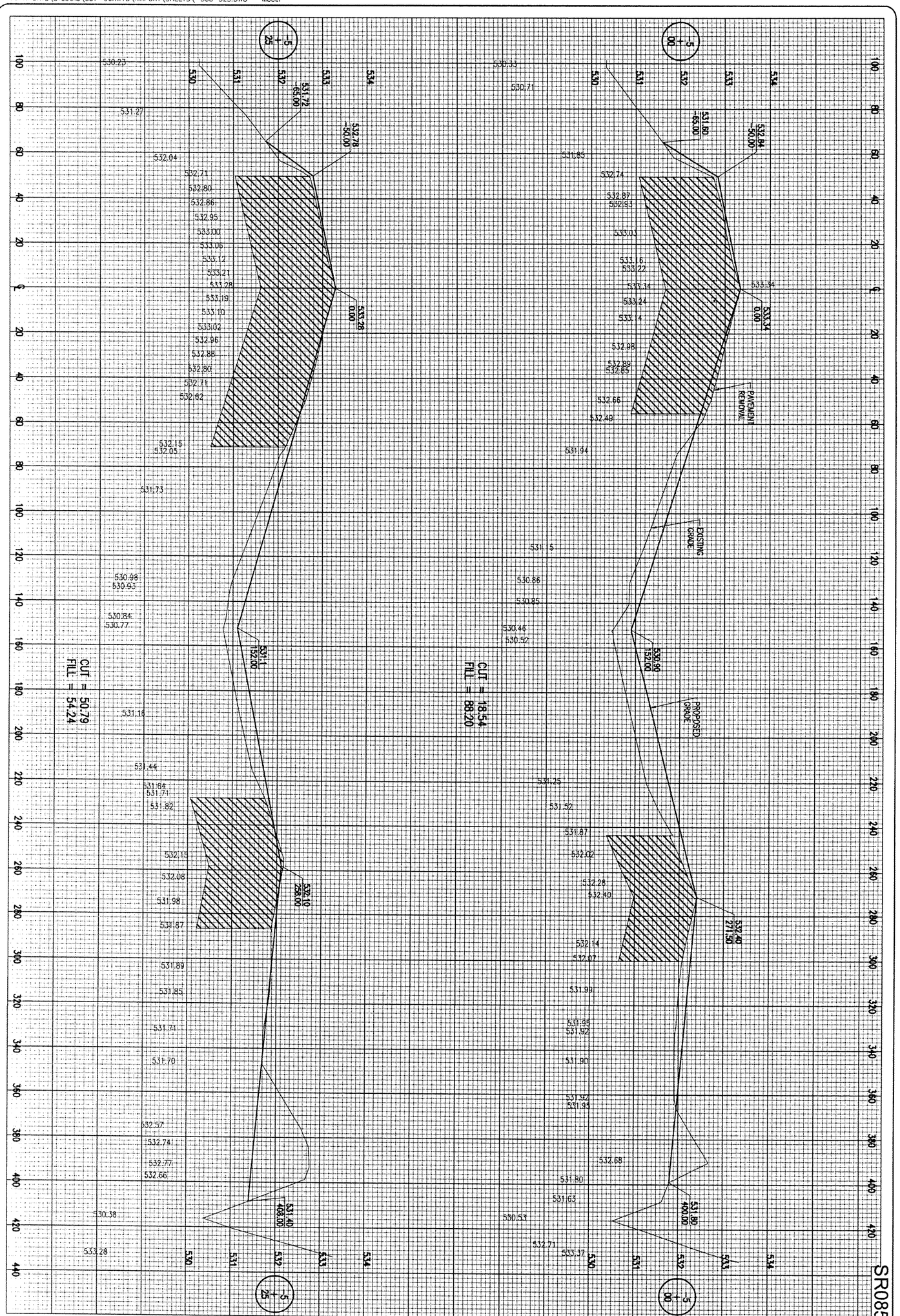
St.LouisRegional AIRPORT

EAST ALTON, ILLINOIS

IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

DATE	REVISION	BY

FEB 11, 2009 7:41 AM HAGL000382
K:\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\-500-525.DWG - Model



25 of 81 Sheets

25

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED CROSS-SECTIONS FOR RUNWAY END 17
STA. -5+25 TO STA. -5+00

HANSON

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

HPI Project No.	83706RWYD 0800
Filename	-500-525.DWG
Scale	H. 1"=20', V. 1"=1'
Date	02/08/08

LAYOUT	MDR	02/08/08
DRAWN	MDR	02/08/08
REVIEWED	CAH	07/11/08

ST. LOUIS REGIONAL AIRPORT

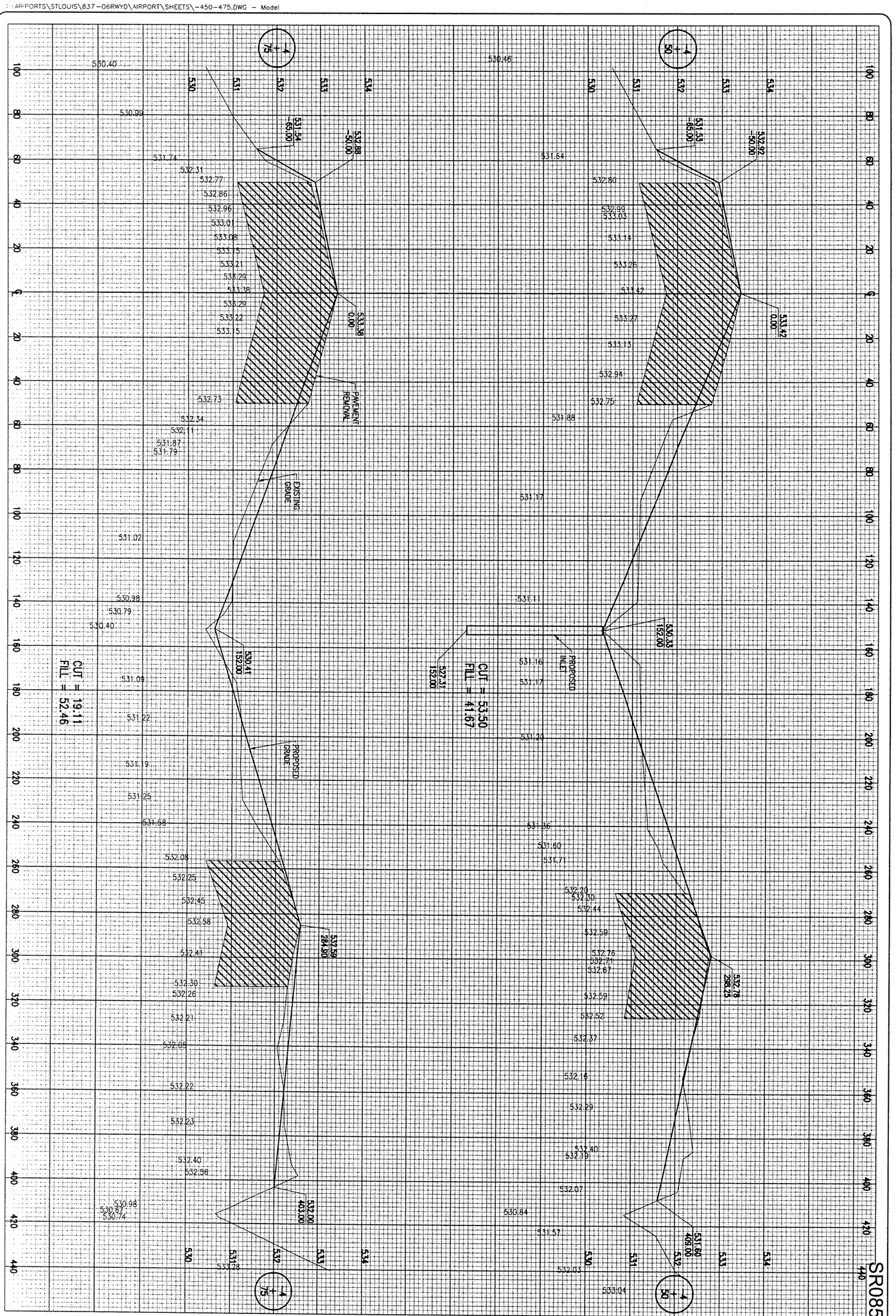
St.LouisRegional AIRPORT

EAST ALTON, ILLINOIS

IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

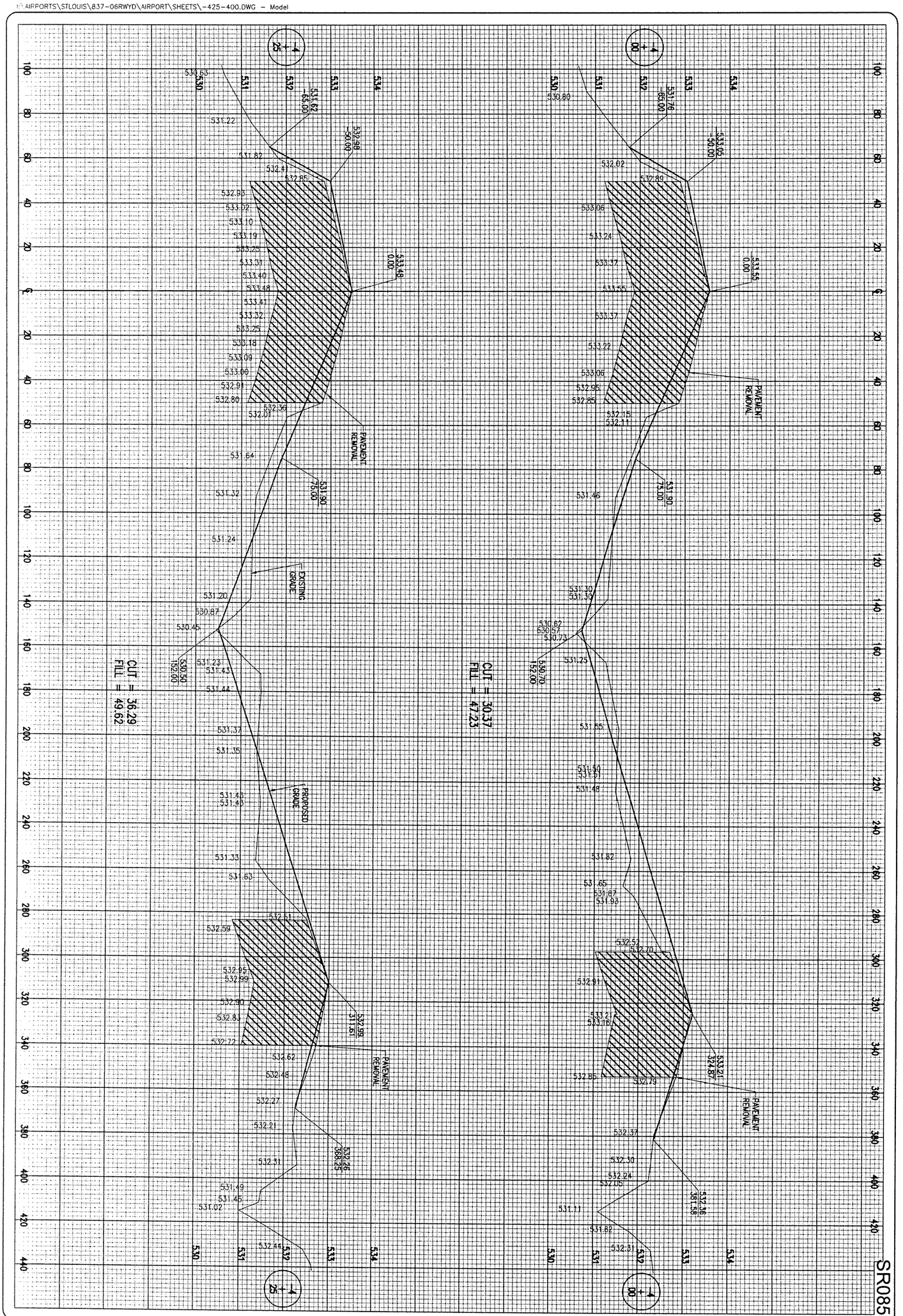
DATE	REVISION	BY

FEB 11, 2009 7:41 AM HAGL000382
I:\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\-450-475.DWG - Model



26	RUNWAY SAFETY AREA IMPROVEMENTS	HANSON	HEI Project No. 83706RWYD 0800		ST. LOUIS REGIONAL AIRPORT	DATE	REVISION	BY
26 of 81 sheets	PROPOSED CROSS-SECTIONS FOR RUNWAY END 17 STA. -4+75 TO STA. -4+50	Hanson Professional Services Inc. 1525 South Sixth Street Springfield, Illinois 62703-2886 Offices Nationwide	Filename -450-475.DWG		St.LouisRegional AIRPORT			
			Scale H. 1"=20', V. 1"=1'		EAST ALTON, ILLINOIS			
			Date 02/08/08		IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42			
			LAYOUT MDR 02/08/08					
			DRAWN MDR 02/08/08					
			REVIEWED CAH 07/11/08					

FEB 11, 2009 7:42 AM HAGL000382
N:\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\-425-400.DWG - Model



27 of 81 sheets

27

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED CROSS-SECTIONS FOR RUNWAY END 17
STA. -4+25 TO STA. -4+00

HANSON

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

HEI Project No.	83706RWYD 0800
Filename	-425-400.DWG
Scale	H. 1"=20', V. 1"=1'
Date	07/07/08

LAYOUT	MDR	07/07/08
DRAWN	MDR	07/07/08
REVIEWED	CAH	07/11/08

ST. LOUIS REGIONAL AIRPORT

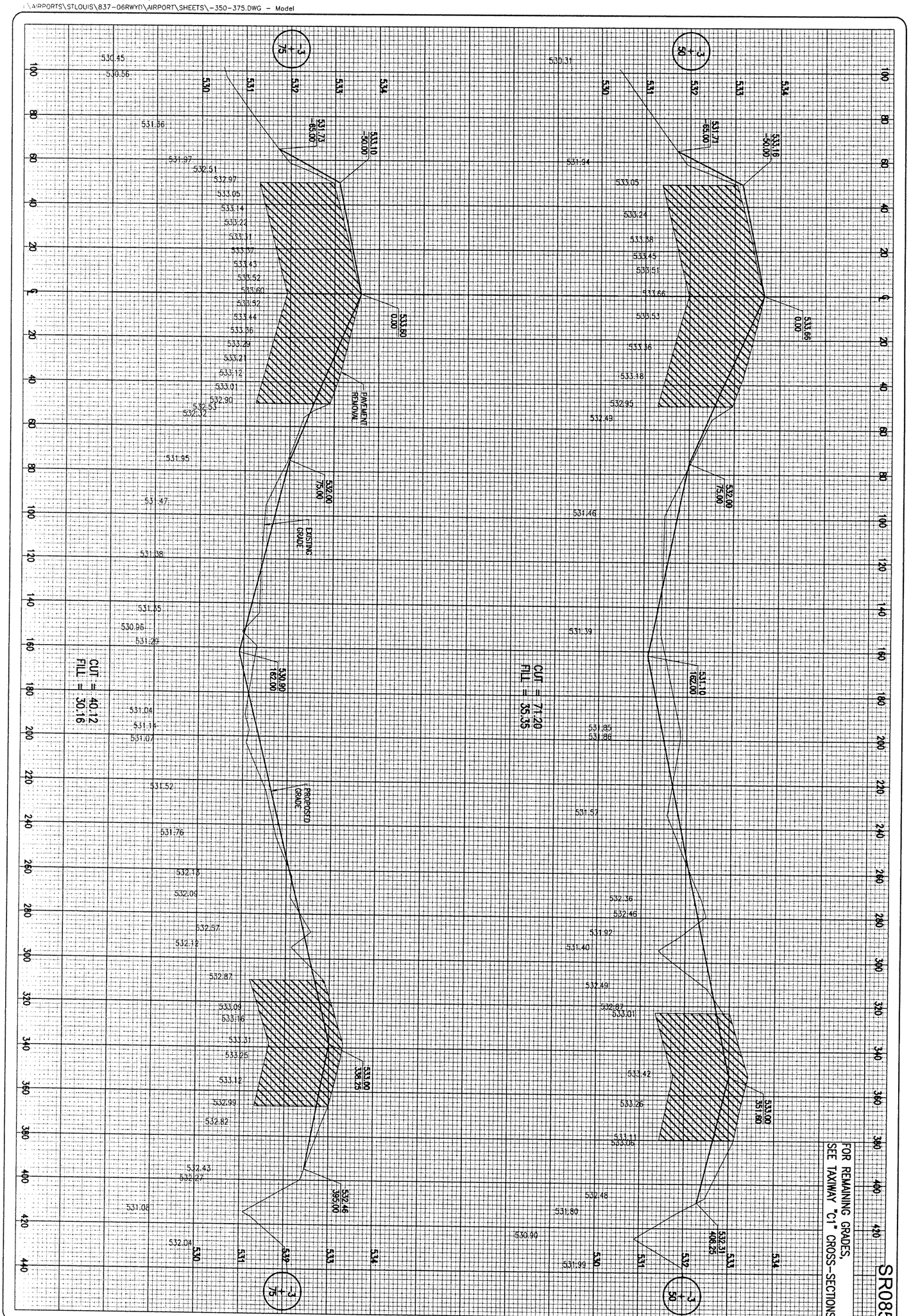
St.LouisRegional AIRPORT

EAST ALTON, ILLINOIS

IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

DATE	REVISION	BY

FEB 11, 2009 8:06 AM HAGL000382
I:\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\-350-375.DWG - Model



RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED CROSS-SECTIONS FOR RUNWAY END 17
STA. -3+75 TO STA. -3+50

28 of 81 sheets

28

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

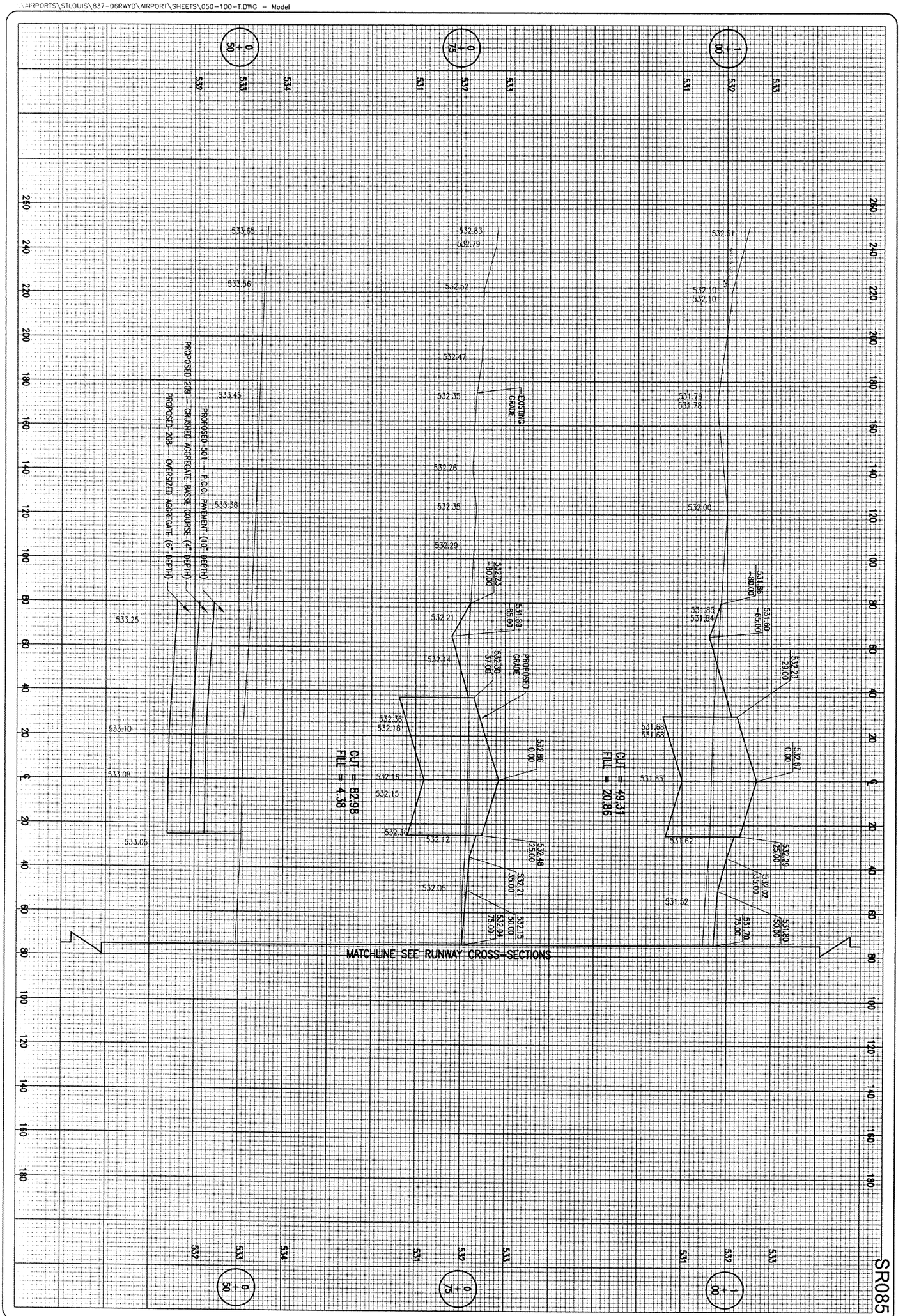
HPI Project No.	83706RWYD 0800
Filename	-350-375.DWG
Scale	H. 1"=20', V. 1"= 1'
Date	02/08/08

LAYOUT	MDR	02/08/08
DRAWN	MDR	02/08/08
REVIEWED	CAH	07/11/08

ST. LOUIS REGIONAL AIRPORT
St.LouisRegional AIRPORT
EAST ALTON, ILLINOIS
IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

DATE	REVISION	BY

FEB 11, 2009 7:43 AM HAGL000382
...AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\050-100-T.DWG - Model



29 of 81 sheets

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED CROSS-SECTIONS
FOR TAXIWAY "C1"
STA. 0+50 TO STA. 1+00

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

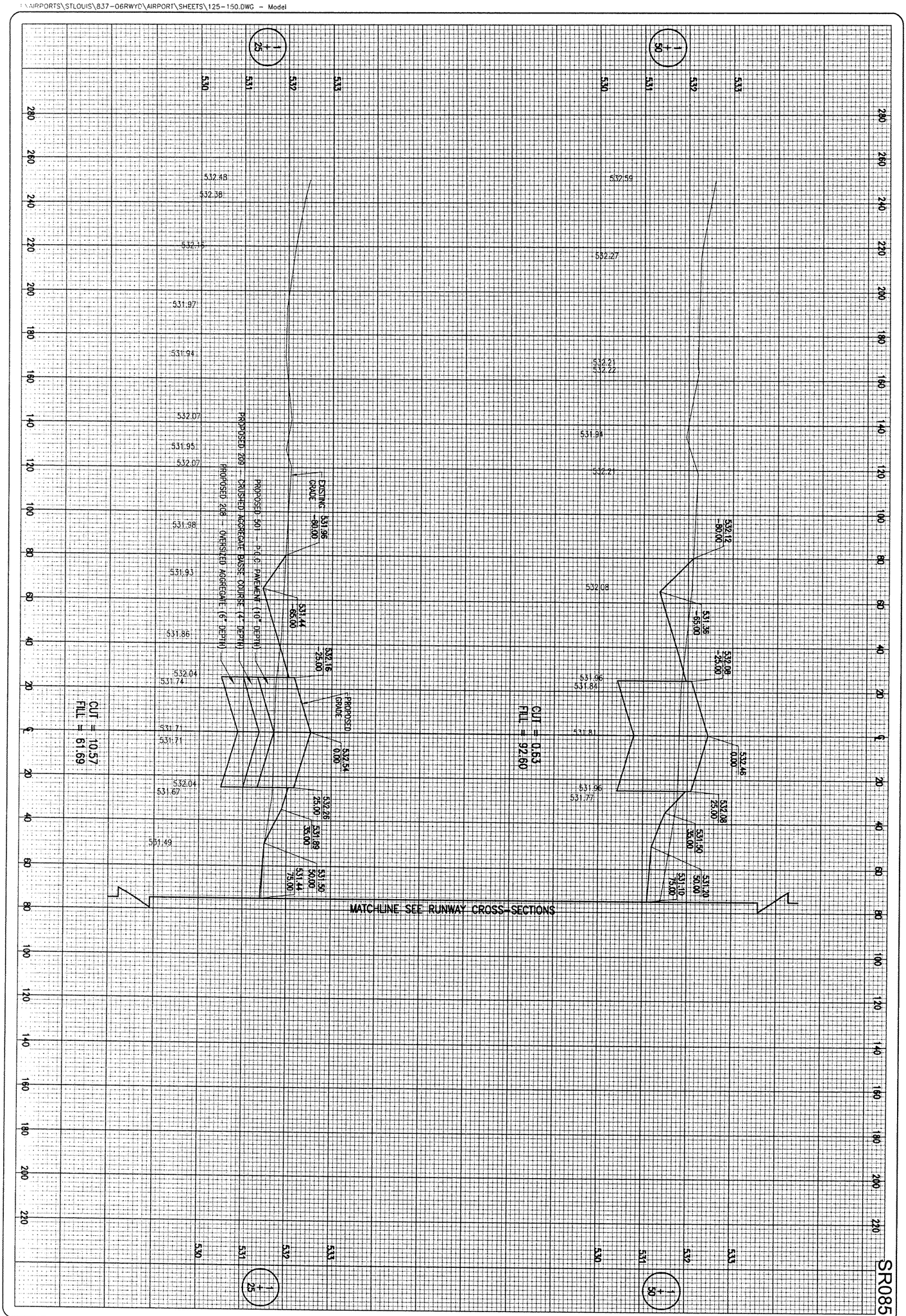
HEI Project No.	83706RWYD 0800
Filename	050-100-T.DWG
Scale	H. 1"= 20', V. 1"=1'
Date	07/07/08

LAYOUT	MDR	07/07/08
DRAWN	MDR	07/07/08
REVIEWED	CAH	07/11/08

ST. LOUIS REGIONAL AIRPORT
St.LouisRegional AIRPORT
EAST ALTON, ILLINOIS
IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

DATE	REVISION	BY

FEB 11, 2009 8:08 AM HAGL000382
I:\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\125-150.DWG - Model



SR085

30 of 81 Sheets

30

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED CROSS-SECTIONS FOR TAXIWAY "C1" STA. 1+25 TO STA. 1+50

HANSON

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

HPI Project No.	83706RWYD 0800
Filename	125-150.DWG
Scale	H. 1"=20' V. 1"=1'
Date	02/08/08

LAYOUT	MDR	02/08/08
DRAWN	MDR	02/08/08
REVIEWED	CAH	07/11/08

ST. LOUIS REGIONAL AIRPORT

St.LouisRegional AIRPORT

EAST ALTON, ILLINOIS

IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

DATE	REVISION	BY

SR085

CUT = 87.11
FILL = 1.96

CUT = 103.65
FILL = 0.77

CUT = 106.75
FILL = 0.35

MATCHLINE SEE RUNWAY CROSS-SECTIONS

EXISTING GRADE

PROPOSED GRADE

PROPOSED 501 - P.C.C. PAVEMENT (0" DEPTH)

PROPOSED 209 - CRUSHED AGGREGATE BASSE COURSE: 4" DEPTH)

PROPOSED 208 - OVERSIZED AGGREGATE: 6" DEPTH)

FEB 11, 2009 7:44 AM HAGLUND382
I:\AIRPORTS\ST.LOUIS\837-06RWY0\AIRPORT\SHEETS\175-2251.DWG - Model

ST. LOUIS REGIONAL AIRPORT

St.LouisRegional AIRPORT

EAST ALTON, ILLINOIS

IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

DATE	REVISION	BY

HSI Project No. 837060RWY0 0800
Filename 175-2251.DWG
Scale H. 1"=20', V. 1"=1'
Date 07/08/08

LAYOUT	MDR	07/08/08
DRAWN	MDR	07/08/08
REVIEWED	CAH	07/11/08

HANSON

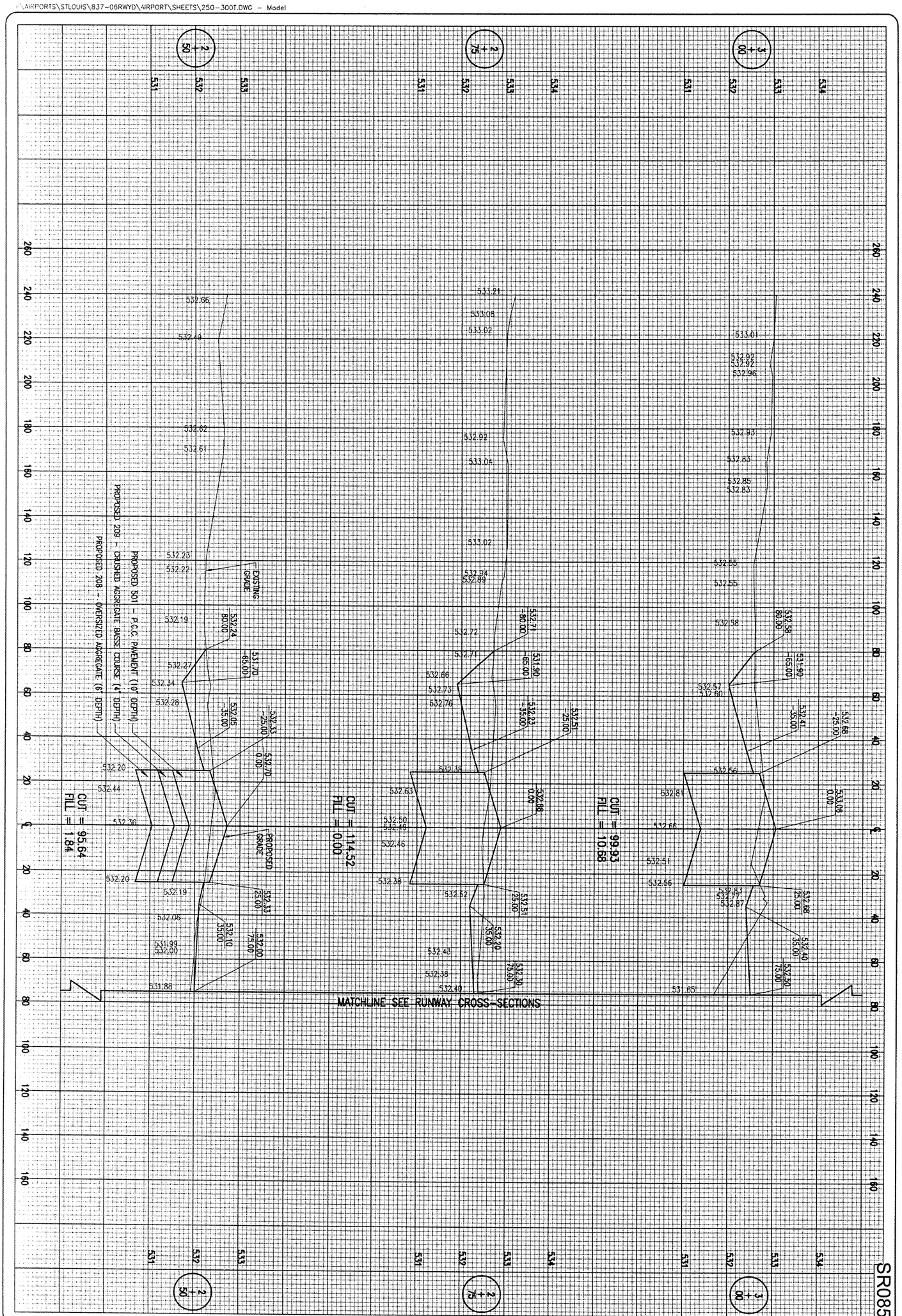
Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2886
Offices Nationwide

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED CROSS-SECTIONS FOR TAXIWAY "C1" STA. 1+75 TO STA. 2+25

31

FEB 11, 2009 7:45 AM HAGL000382
K:\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\250-300T.DWG - Model



32

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED CROSS-SECTIONS FOR TAXIWAY "C1" STA. 2+50 TO STA. 3+00

HANSON

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

HEI Project No. 83706RWYD 0800
Filename 250-300T.DWG
Scale H. 1"=20', V. 1"=1'
Date 07/08/08

LAYOUT	MDR	07/08/08
DRAWN	MDR	07/08/08
REVIEWED	CAH	07/11/08

ST. LOUIS REGIONAL AIRPORT

St.LouisRegional AIRPORT

EAST ALTON, ILLINOIS

IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

DATE	REVISION	BY

SR085

EXISTING GRADE

PROPOSED GRADE

PROPOSED 501 – P.C.C. PAVEMENT (10" DEPTH)

PROPOSED 209 – CRUSHED AGGREGATE BASSE COURSE (4" DEPTH)

PROPOSED 208 – OVERSIZED AGGREGATE (6" DEPTH)

MATCHLINE SEE RUNWAY CROSS-SECTIONS

CUT = 21.06
FILL = 70.49

CUT = 25.19
FILL = 36.09

DATE	REVISION	BY

ST. LOUIS REGIONAL AIRPORT

St. Louis Regional Airport

EAST ALTON, ILLINOIS

IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

HSI Project No. 837068RWYD 0800
Filename 325-350T.DWG
Scale H. 1"=20' V. 1"= 1'
Date 02/08/08

LAYOUT	MDR	02/08/08
DRAWN	MDR	02/08/08
REVIEWED	CAH	07/11/08

HANSON

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

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED CROSS-SECTIONS FOR TAXIWAY "C1" STA. 3+25 TO STA. 3+50

33

33 of 81 sheets

FEB 11, 2009 8:09 AM HAGLOOO382
\\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\325-350T.DWG - Model

RECONSTRUCTION OF RUNWAY END 35

SUMMARY OF QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	AS AWARDED QUANTITIES	AS BUILT QUANTITIES
AR107408	L-806 WIND CONE 8' LIGHTED	EACH	2	
AR107900	REMOVE WIND CONE	EACH	2	
AR108158	1/C #8 5 KV UG CABLE IN UD	L.F.	5,427	
AR109210	VAULT MODIFICATIONS	L.S.	1	
AR110502	2-WAY CONCRETE ENCASED DUCT	L.F.	56	
AR125410	MITL - STAKE MOUNTED	EACH	23	
AR125415	MITL - BASE MOUNTED	EACH	3	
AR125443	TAXI GUIDANCE SIGN, 3 CHARACTER	EACH	2	
AR125444	TAXI GUIDANCE SIGN, 4 CHARACTER	EACH	3	
AR125505	MIRL, STAKE MOUNTED	EACH	2	
AR125540	MI THRESHOLD LIGHT STAKE MTD	EACH	6	
AR125545	MI THRESHOLD LIGHT BASE MTD	EACH	2	
AR125901	REMOVE STAKE MOUNTED LIGHT	EACH	16	
AR125965	RELOCATE RWY DISTANCE REMAIN SIGN	EACH	5	
AR152410	UNCLASSIFIED EXCAVATION	C.Y.	5,331	
AR156511	DITCH CHECK	EACH	1	
AR156520	INLET PROTECTION	EACH	2	
AR156530	TEMPORARY SEEDING	ACRE	4.1	
AR156540	RIPRAP	S.Y.	22	
AR201610	BITUMINOUS BASE COURSE	TON	2,143	
AR208540	OVERSIZED AGGREGATE	TON	2,558	
AR209510	CRUSHED AGGREGATE BASE COURSE	TON	2,716	
AR401610	BITUMINOUS SURFACE COURSE	TON	1,286	
AR401900	REMOVE BITUMINOUS PAVEMENT	S.Y.	900	
AR602510	BITUMINOUS PRIME COAT	GAL.	2,535	
AR603510	BITUMINOUS TACK COAT	GAL.	2,143	
AR620520	PAVEMENT MARKING-WATERBORNE	S.F.	62,965	
AR620525	PAVEMENT MARKING-BLACK BORDER	S.F.	31,965	
AR620900	PAVEMENT MARKING REMOVAL	S.F.	26,705	
AR701515	15" RCP, CLASS IV	L.F.	156	
AR701518	18" RCP, CLASS IV	L.F.	147	
AR705410	POROUS BACKFILL	C.Y.	53	
AR705526	6" PERFORATED UNDERDRAIN W/SOCK	L.F.	2,133	
AR705630	UNDERDRAIN INSPECTION HOLE	EACH	8	
AR705900	REMOVE UNDERDRAIN	L.F.	477	
AR705903	REMOVE UNDERDRAIN INSP. HOLE	EACH	4	
AR751411	INLET-TYPE A	EACH	2	
AR752418	PRECAST REINFORCED CONC. FES 18"	EACH	1	
AR901510	SEEDING	ACRE	4.1	
AR904510	SODDING	S.Y.	641	
AR908510	MULCHING	ACRE	3.9	

DATE | REVISION | BY

ST. LOUIS REGIONAL AIRPORT

St. Louis Regional Airport

EAST ALTON, ILLINOIS

IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

HSI Project No. 837006RWYD 0800
Filename R-004FLP.DWG
Scale N/A
Date 02/07/08

LAYOUT	MDR	02/07/08
DRAWN	MDR	02/07/08
REVIEWED	CAH	07/11/08

HANSON

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

RUNWAY SAFETY AREA IMPROVEMENTS

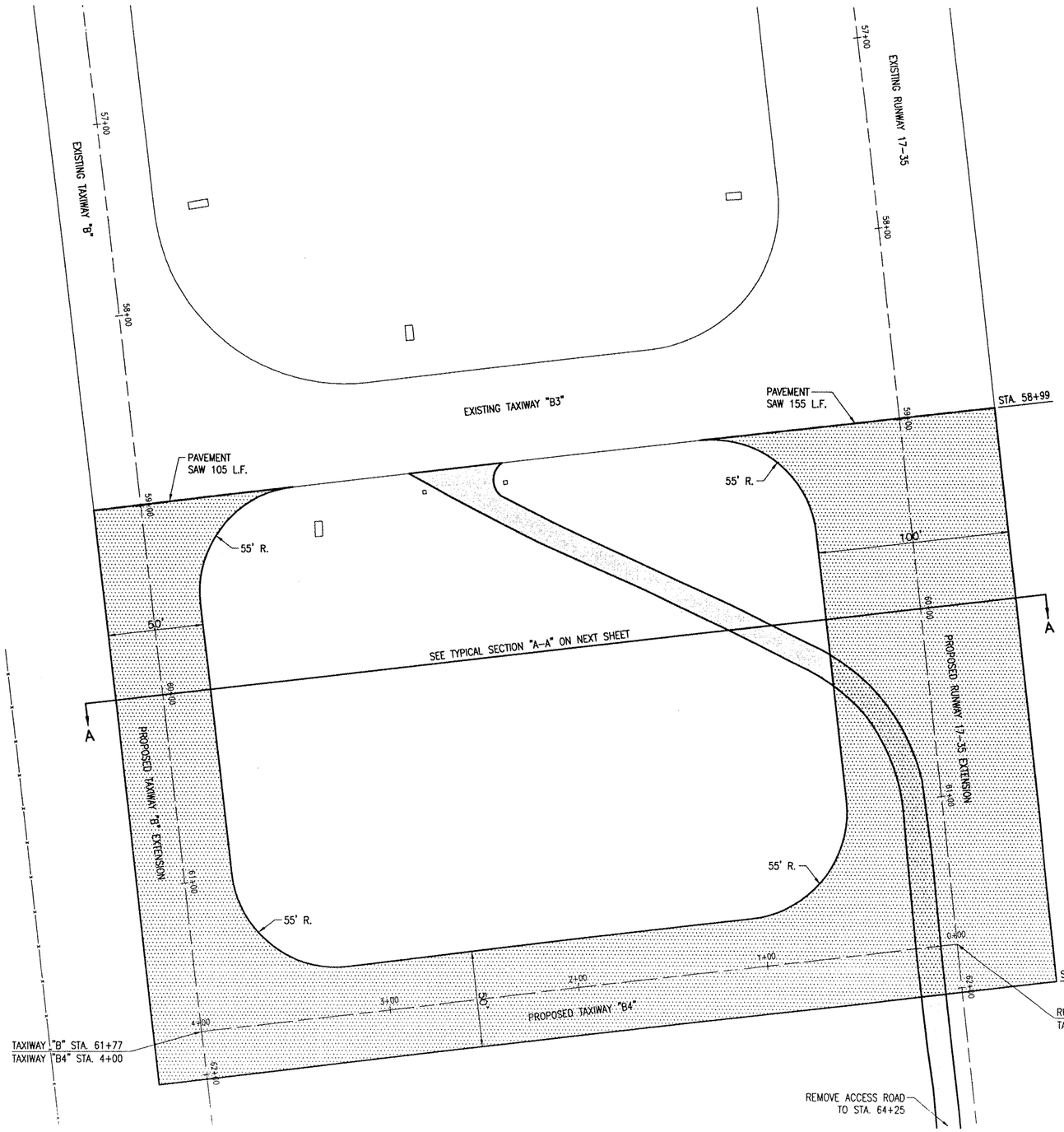
SUMMARY OF QUANTITIES FOR RUNWAY END 35

34

34 of 81 sheets

FEB 11, 2009 7:46 AM HAGLOOO382
\\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\R-004FLP.DWG - Layout1

SR085



NOTE
FOR BITUMINOUS
PAVEMENT EDGE SAWING
NOTE SEE SHEET NO. 5.

LEGEND

- EXISTING IMPROVEMENTS
- PROPOSED ACCESS ROAD REMOVAL
- PROPOSED IMPROVEMENTS

0' 15' 30' 60'
HALF SIZE SCALE: 1"= 60'
FULL SIZE SCALE: 1"= 30'

DATE	REVISION	BY

ST. LOUIS REGIONAL AIRPORT
St.LouisRegional AIRPORT
EAST ALTON, ILLINOIS
IL PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

HG Project No. 837066WYD 0800
Filename R-121CON.DWG
Scale 1"=30'
Date 02/08/08

LAYOUT	MDR	02/08/08
DRAWN	MDR	02/08/08
REVIEWED	CAH	07/11/08

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

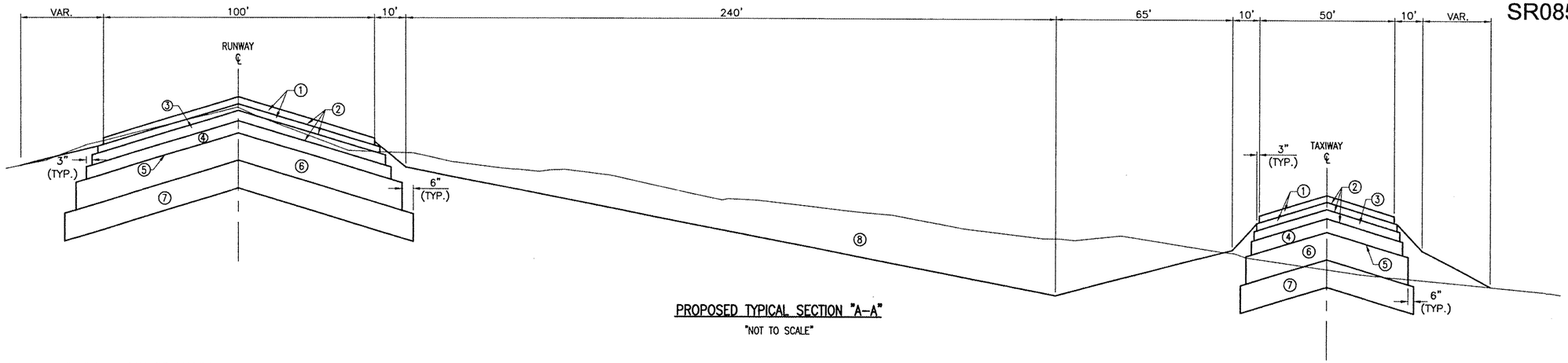
RUNWAY SAFETY
AREA IMPROVEMENTS

PROPOSED
CONSTRUCTION PLAN
FOR RUNWAY END 35

35
35 of 81 sheets

FEB 10, 2009 4:44 PM HAGLOOO382
I:\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\R-121CON.DWG - RWY 35 END

SR085



PROPOSED TYPICAL SECTION "A-A"

"NOT TO SCALE"

AR208-OVERSIZE AGGREGATE NOTES

THE OVERSIZE AGGREGATE (208) SHALL BE PLACED IN ACCORDANCE WITH ITEM 208 "OVERSIZE AGGREGATE" AS STATED ON PAGE 40 OF THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, ADOPTED JULY 1, 2004.

THIS ITEM OF WORK SHALL CONSIST OF INSTALLING A LAYER OF OVERSIZE AGGREGATE TO ESTABLISH A STABLE SUBBASE UNDER THE PROPOSED PAVEMENT. THE LAYER WILL BE 6 IN. THICK AND PLACED TO THE GRADES AND LOCATIONS AS SHOWN ON THE CONSTRUCTION PLANS AND THE CROSS-SECTIONS. THE OVERSIZE AGGREGATE SHALL BE INSTALLED IN ACCORDANCE TO THE STANDARD SPECIFICATIONS FOR THE CONSTRUCTION OF AIRPORTS, ITEM 208 PROCEDURES WITH THE FOLLOWING EXCEPTIONS BELOW.

THE OVERSIZE AGGREGATE MATERIAL SHALL BE A CA-2 COURSE AGGREGATE MEETING THE GRADATIONS, AS SPECIFIED UNDER ARTICLE 10004.01 IN THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, ADOPTED JANUARY 1, 2007. A 3-IN. TOP SIZE WILL BE ALLOWED FOR THE AGGREGATE MATERIAL.

THE OVERSIZE AGGREGATE MATERIAL MAY BE PLACED IN ONE LIFT. A MINIMUM OF THREE PASSES WITH A STEEL WHEEL ROLLER WILL BE MADE TO OBTAIN COMPACTION.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT BID PRICE PER TON OF OVERSIZE AGGREGATE, WHICH PRICE AND PAYMENT WILL CONSTITUTE FULL COMPENSATION FOR PREPARING SUBGRADE, FURNISHING, HAULING, AND PLACING THE MATERIALS; FOR SPREADING, COMPACTING, AND ROLLING; AND FOR FURNISHING ALL LABOR, EQUIPMENT, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.

THE PROPOSED OVERSIZE AGGREGATE WILL BE PAID FOR UNDER ITEM:
AR208540 OVERSIZE AGGREGATE_____ PER TON.

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 MORE 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 FOR TYPICAL SECTION "A-A"

① PROPOSED AR401: BITUMINOUS SURFACE COURSE (1.5" DEPTH)
② PROPOSED AR603: BITUMINOUS TACK COAT (0.10 GAL./S.Y.)
③ PROPOSED AR201: BITUMINOUS BASE COURSE (2" DEPTH)
④ PROPOSED AR201: BITUMINOUS BASE COURSE (3" DEPTH)
⑤ PROPOSED AR602: BITUMINOUS PRIME COAT (0.35 GAL./S.Y.)
⑥ PROPOSED AR209: CRUSHED AGGREGATE BASE COURSE (6" DEPTH)
⑦ PROPOSED AR208 OVERSIZED AGGREGATE (6" DEPTH)
⑧ PROPOSED AR152: UNCLASSIFIED EXCAVATION

602-BITUMINOUS PRIME COAT NOTES:

THE BITUMINOUS PRIME COAT (602) SHALL BE PLACED IN ACCORDANCE WITH ITEM AR602 "BITUMINOUS PRIME COAT" AS STATED ON PAGE 58 OF THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, ADOPTED JULY 1, 2004.

THE PROPOSED BITUMINOUS PRIME COAT SHALL BE PLACED ON THE PROPOSED AGGREGATE BASE COURSE PRIOR TO THE PLACEMENT OF THE FIRST LIFT OF PROPOSED BITUMINOUS BASE COURSE. THE PROPOSED AGGREGATE BASE COURSE SHALL HAVE A PRIME COAT OF BITUMINOUS MATERIAL APPLIED IN ACCORDANCE WITH THE REQUIREMENTS OF THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS.

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

603-BITUMINOUS TACK COAT NOTES:

THE BITUMINOUS TACK COAT (603) SHALL BE PLACED IN ACCORDANCE WITH ITEM AR603 "BITUMINOUS TACK COAT" AS STATED ON PAGE 62 OF THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, ADOPTED JULY 1, 2004.

THE PROPOSED BITUMINOUS TACK COAT SHALL BE PLACED ON THE PROPOSED BITUMINOUS PAVEMENT PRIOR TO THE PLACEMENT OF THE NEXT LIFT OF PROPOSED BITUMINOUS SURFACE COURSE. THE PROPOSED BITUMINOUS PAVEMENT SHALL HAVE A TACK COAT OF BITUMINOUS MATERIAL APPLIED IN ACCORDANCE WITH THE REQUIREMENTS OF THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS.

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

AR201003 BITUMINOUS BASE COURSE - METHOD II, SUPERPAVE

THE BITUMINOUS BASE COURSE (201) SHALL BE PLACED IN ACCORDANCE WITH ITEM AR201003 "BITUMINOUS BASE COURSE-METHOD II, SUPERPAVE" AS STATED ON PAGE 209 OF THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, ADOPTED JULY 1, 2004 AND THE INTERIM REVISION TO THE SUPPLEMENTAL AND RECURRING SPECIAL PROVISIONS ADOPTED MAY 11, 2007.

THIS ITEM OF WORK SHALL CONSIST OF CONSTRUCTING TWO LIFTS OF BITUMINOUS BASE COURSE THE FIRST LIFT WILL BE 3 INCHES AND THE SECOND WILL BE TWO INCHES (5 INCH DEPTH TOTAL) ON THE PROPOSED CRUSHED AGGREGATE BASE COURSE FOR THE PROPOSED TAXIWAY EXTENSION.

ALL BITUMINOUS PAVEMENT WILL BE PAVED IN ACCORDANCE WITH PAGE 209 OF THE RECURRING SPECIAL PROVISIONS.

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

THE PROPOSED BITUMINOUS BASE COURSE WILL BE DESIGNED TO A SUPERPAVE DESIGN OF (MORE) THAN 60,000 POUNDS FOR RUNWAY/TAXIWAY PAVEMENTS.

201-4.9 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.

201-4.11 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.

AR401611 BITUMINOUS SURFACE COURSE - METHOD 1, SUPERPAVE

THE BITUMINOUS SURFACE COURSE (401) SHALL BE PLACED IN ACCORDANCE WITH ITEM AR401003 "BITUMINOUS SURFACE COURSE-METHOD 1, SUPERPAVE" AS STATED ON PAGE 269 OF THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, ADOPTED JULY 1, 2004 AND THE INTERIM REVISION TO THE SUPPLEMENTAL AND RECURRING SPECIAL PROVISIONS ADOPTED MAY 11, 2007

THIS ITEM OF WORK SHALL CONSIST OF CONSTRUCTING TWO LIFTS OF BITUMINOUS SURFACE COURSE (1 1/2 INCH DEPTH) ON A BITUMINOUS BASE COURSE.

ALL BITUMINOUS PAVEMENT WILL BE PAVED IN ACCORDANCE WITH PAGE 269 OF THE RECURRING SPECIAL PROVISIONS.

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

THE PROPOSED BITUMINOUS SURFACE COURSE WILL BE DESIGNED TO A SUPERPAVE DESIGN OF (MORE) THAN 60,000 POUNDS FOR RUNWAY/TAXIWAY PAVEMENTS.

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.

FEB 10, 2009 4:44 PM HAGLOOO382
I:\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\R-121CON.DWG - TYP SEC & NOTES

DATE	REVISION	BY

ST. LOUIS REGIONAL AIRPORT
EAST ALTON, ILLINOIS
A.I.P. PROJ.: 3-17-0002-B42
IL PROJ.: ALN-3825

MO. Project No. 83706RWYD 0800
Filename R-121CON.DWG
Scale NOT TO SCALE
Date 02/11/08

LAYOUT	BAK	02/11/08
DRAWN	BAK	02/11/08
REVIEWED	CAH	07/11/08

HANSON
Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2866
Others Nationwide

RUNWAY SAFETY AREA IMPROVEMENTS

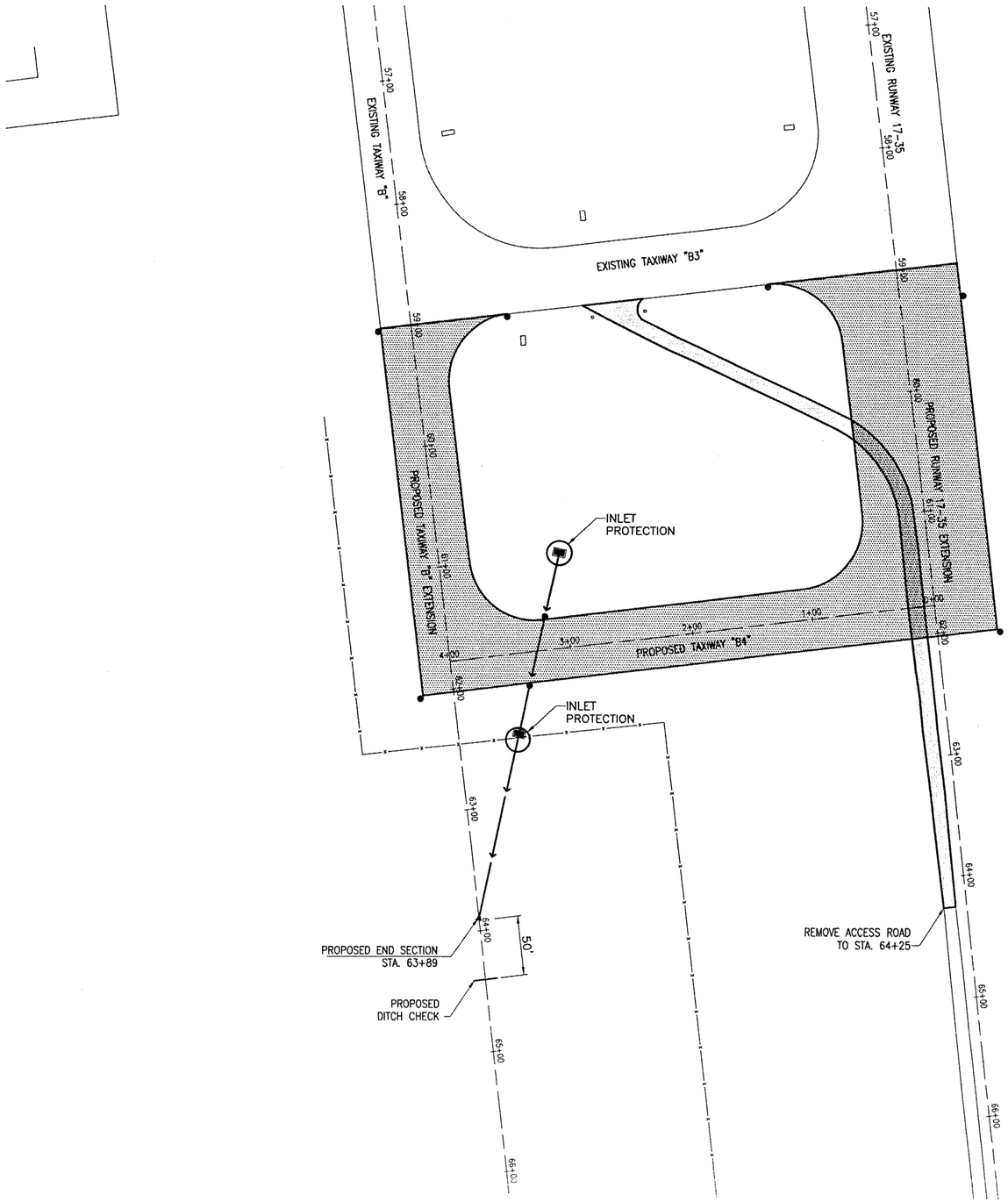
PROPOSED TYPICAL SECTION AND NOTES FOR RUNWAY END 35

36

36 of 81 sheets

QUANTITIES THIS SHEET			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
AR156511	DITCH CHECK	EACH	1
AR156520	INLET PROTECTION	EACH	2
AR156530	TEMPORARY SEEDING	ACRE	4.1

NOTE:
FOR STORMWATER POLLUTION PREVENTION DETAILS SEE SHEET NO. 7.



LEGEND

- EXISTING IMPROVEMENTS
- PROPOSED ACCESS ROAD REMOVAL
- PROPOSED IMPROVEMENTS
- PROPOSED UNDERDRAIN INSPECTION HOLES
- PROPOSED INLET
- PROPOSED RCCP
- PROPOSED INLET PROTECTION
- PROPOSED DITCH CHECK

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

DATE	REVISION	BY

ST. LOUIS REGIONAL AIRPORT
EAST ALTON, ILLINOIS
A.I.P. PROJ.: 3-17-0002-B42
IL. PROJ.: ALN-3825

HS Project No. 83706RWYD 0800
Filename R-181SWP.DWG
Scale 1"=50'
Date 02/08/08

LAYOUT	MDR	02/08/08
DRAWN	MDR	02/08/08
REVIEWED	CAH	07/11/08

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

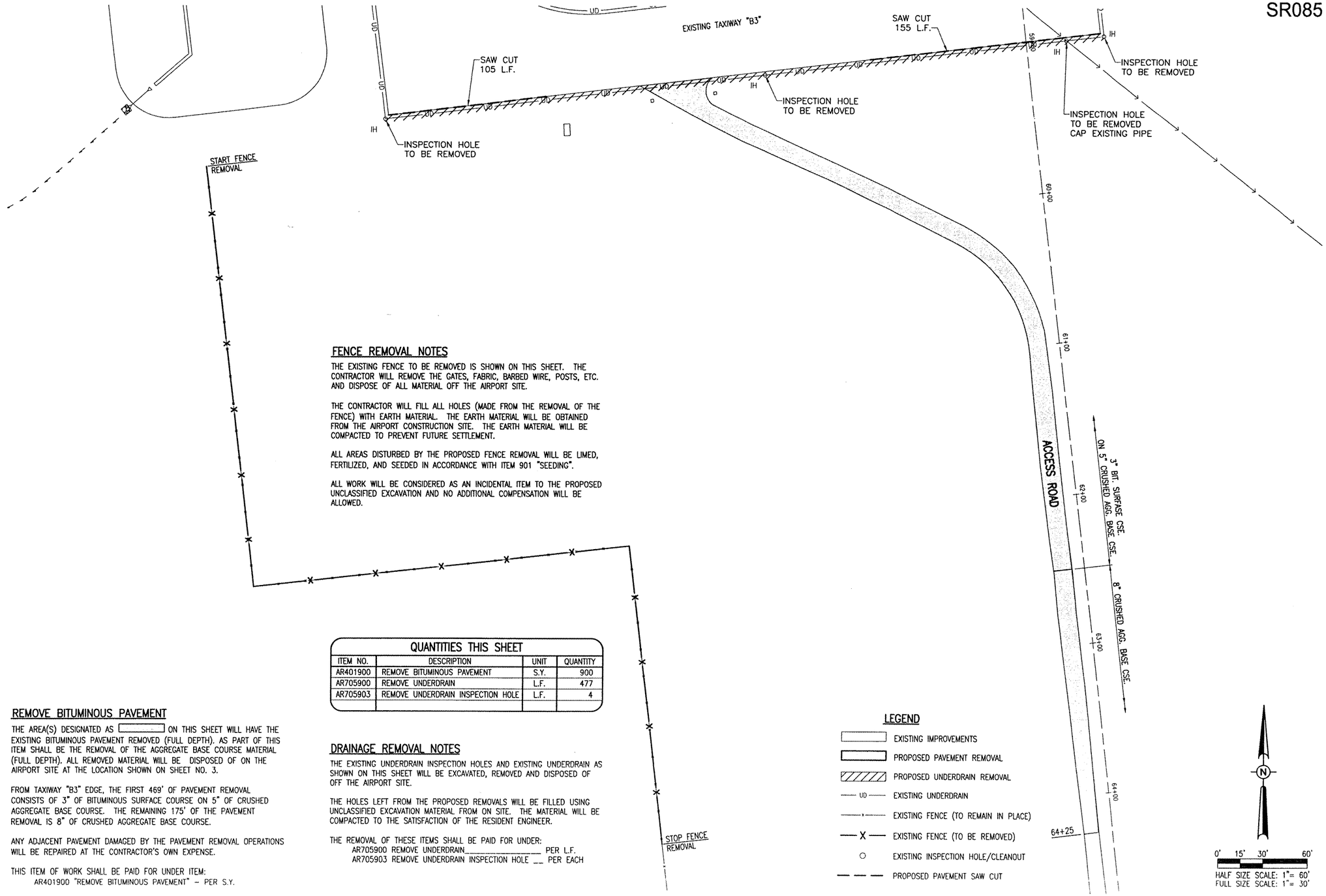
RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED STORMWATER POLLUTION PREVENTION PLAN FOR RUNWAY END 35

37
37 of 81 sheets

FEB 10, 2009 4:45 PM HAGLOOO382
L:\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\R-181SWP.DWG - RWY 35 END

SR085



FENCE REMOVAL NOTES

THE EXISTING FENCE TO BE REMOVED IS SHOWN ON THIS SHEET. THE CONTRACTOR WILL REMOVE THE GATES, FABRIC, BARBED WIRE, POSTS, ETC. AND DISPOSE OF ALL MATERIAL OFF THE AIRPORT SITE.

THE CONTRACTOR WILL FILL ALL HOLES (MADE FROM THE REMOVAL OF THE FENCE) WITH EARTH MATERIAL. THE EARTH MATERIAL WILL BE OBTAINED FROM THE AIRPORT CONSTRUCTION SITE. THE EARTH MATERIAL WILL BE COMPACTED TO PREVENT FUTURE SETTLEMENT.

ALL AREAS DISTURBED BY THE PROPOSED FENCE REMOVAL WILL BE LIMED, FERTILIZED, AND SEEDED IN ACCORDANCE WITH ITEM 901 "SEEDING".

ALL WORK WILL BE CONSIDERED AS AN INCIDENTAL ITEM TO THE PROPOSED UNCLASSIFIED EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

QUANTITIES THIS SHEET

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
AR401900	REMOVE BITUMINOUS PAVEMENT	S.Y.	900
AR705900	REMOVE UNDERDRAIN	L.F.	477
AR705903	REMOVE UNDERDRAIN INSPECTION HOLE	L.F.	4

REMOVE BITUMINOUS PAVEMENT

THE AREA(S) DESIGNATED AS [ ] ON THIS SHEET WILL HAVE THE EXISTING BITUMINOUS PAVEMENT REMOVED (FULL DEPTH). AS PART OF THIS ITEM SHALL BE THE REMOVAL OF THE AGGREGATE BASE COURSE MATERIAL (FULL DEPTH). ALL REMOVED MATERIAL WILL BE DISPOSED OF ON THE AIRPORT SITE AT THE LOCATION SHOWN ON SHEET NO. 3.

FROM TAXIWAY "B3" EDGE, THE FIRST 469' OF PAVEMENT REMOVAL CONSISTS OF 3" OF BITUMINOUS SURFACE COURSE ON 5" OF CRUSHED AGGREGATE BASE COURSE. THE REMAINING 175' OF THE PAVEMENT REMOVAL IS 8" OF CRUSHED AGGREGATE BASE COURSE.

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

THIS ITEM OF WORK SHALL BE PAID FOR UNDER ITEM:
AR401900 "REMOVE BITUMINOUS PAVEMENT" – PER S.Y.

DRAINAGE REMOVAL NOTES

THE EXISTING UNDERDRAIN INSPECTION HOLES AND EXISTING UNDERDRAIN AS SHOWN ON THIS SHEET WILL BE EXCAVATED, REMOVED AND DISPOSED OF OFF THE AIRPORT SITE.

THE HOLES LEFT FROM THE PROPOSED REMOVALS WILL BE FILLED USING UNCLASSIFIED EXCAVATION MATERIAL FROM ON SITE. THE MATERIAL WILL BE COMPACTED TO THE SATISFACTION OF THE RESIDENT ENGINEER.

THE REMOVAL OF THESE ITEMS SHALL BE PAID FOR UNDER:
AR705900 REMOVE UNDERDRAIN_____ PER L.F.
AR705903 REMOVE UNDERDRAIN INSPECTION HOLE __ PER EACH

LEGEND

- EXISTING IMPROVEMENTS
- PROPOSED PAVEMENT REMOVAL
- PROPOSED UNDERDRAIN REMOVAL
- UD — EXISTING UNDERDRAIN
- EXISTING FENCE (TO REMAIN IN PLACE)
- X — EXISTING FENCE (TO BE REMOVED)
- EXISTING INSPECTION HOLE/CLEANOUT
- PROPOSED PAVEMENT SAW CUT

FEB 10, 2009 4:46 PM HAGLOOO382
I:\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\R-111PRP.DWG – RWY 35 END

DATE | REVISION | BY

ST. LOUIS REGIONAL AIRPORT
St. Louis Regional Airport
EAST ALTON, ILLINOIS
IL PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-842

HSI Project No. 83706RWYD 0800
Filename R-111PRP.DWG
Scale 1"=30'
Date 02/08/08

LAYOUT	MDR	02/08/08
DRAWN	MDR	02/08/08
REVIEWED	CAH	07/11/08

HANSON

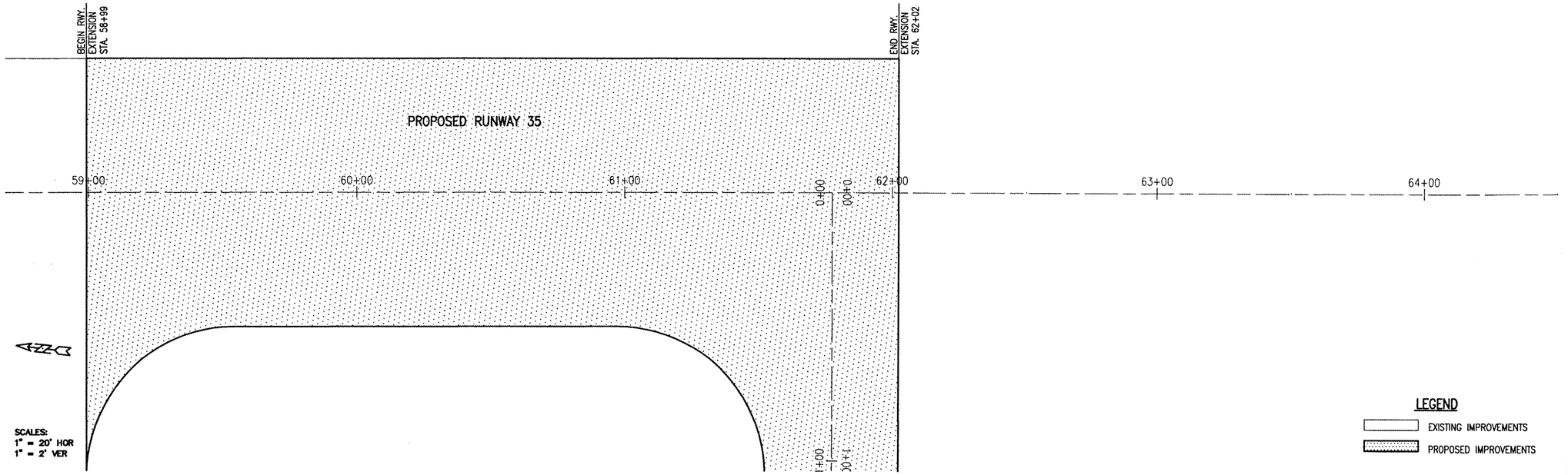
Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2886
Offices Nationwide

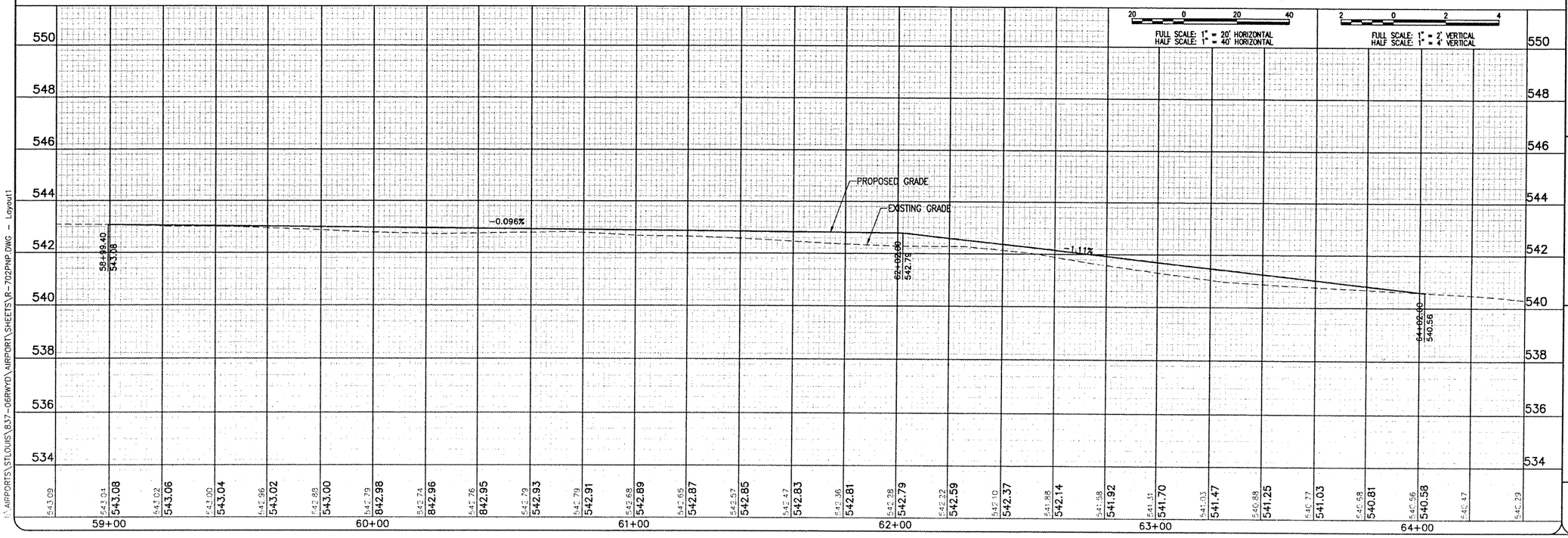
RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED PAVEMENT PREPARATION PLAN FOR RUNWAY END 35

38

SR085





DATE	REVISION	BY

ST. LOUIS REGIONAL AIRPORT

EAST ALTON, ILLINOIS

IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

HSI Project No. 83706RWYD_0800
Filename R-702PNP.DWG
Scale H. 1"=20' V. 1"=2'
Date 06/21/08

LAYOUT	JEO	06/21/08
DRAWN	JEO	06/21/08
REVIEWED	CAH	07/11/08

HANSON

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

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED PLAN AND PROFILE FOR RUNWAY END 35

39

39 of 81 sheets

FEB 11, 2009 7:47 AM HAGL000382
C:\AIRPORTS\STLOUIS\83706RWYD\AIRPORT\SHEETS\R-702PNP.DWG - Layout1

SR085

TAXIWAY "B3"

TAXIWAY "B"

TAXIWAY "B4"

-00 59+00 60+00 61+00 4+00 62+00 63+00

BEGIN TAXIWAY EXTENSION STA. 53+99

END TAXIWAY EXTENSION STA. 62+02

SCALES:
1" = 20' HOR
1" = 2' VER

LEGEND

EXISTING IMPROVEMENTS

PROPOSED IMPROVEMENTS

FULL SCALE: 1" = 20' HORIZONTAL
HALF SCALE: 1" = 40' HORIZONTAL

FULL SCALE: 1" = 2' VERTICAL
HALF SCALE: 1" = 4' VERTICAL

546 544 542 540 538 536 534 532 530 528

Original 0.0

PROPOSED GRADE

EXISTING GRADE

-0.046%

-5.0%

-3.66%

62+00.00 541.06

62+12 540.56

63+25.00 536.42

541.57 541.51 541.55 541.57 541.49 541.15 541.20 540.85 541.19 540.56 541.18 540.32 541.17 540.12 541.16 539.91 541.15 540.00 541.14 540.13 541.14 540.16 541.13 540.07 541.12 540.01 541.11 539.88 541.10 539.84 541.09 539.82 541.08 539.83 541.07 539.85 541.06 539.56 540.27 539.48 539.54 539.13 538.81 537.64 538.07 537.14 537.34 536.56 536.61 535.95 535.65 534.83 528

58+00 59+00 60+00 61+00 62+00 63+00

FEB 11, 2009 7:47 AM HAGLOO382
J:\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\R-703PNP.DWG - Layout1

HANSON

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

ST. LOUIS REGIONAL AIRPORT

St.LouisRegional AIRPORT

EAST ALTON, ILLINOIS

IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-842

DATE	REVISION	BY

HSI Project No. 837068RWYD.0800
Filename R-703PNP.DWG
Scale H. 1"=20' V. 1"=2'
Date 06/21/08

LAYOUT	JEO	06/21/08
DRAWN	JEO	06/21/08
REVIEWED	CAH	07/11/08

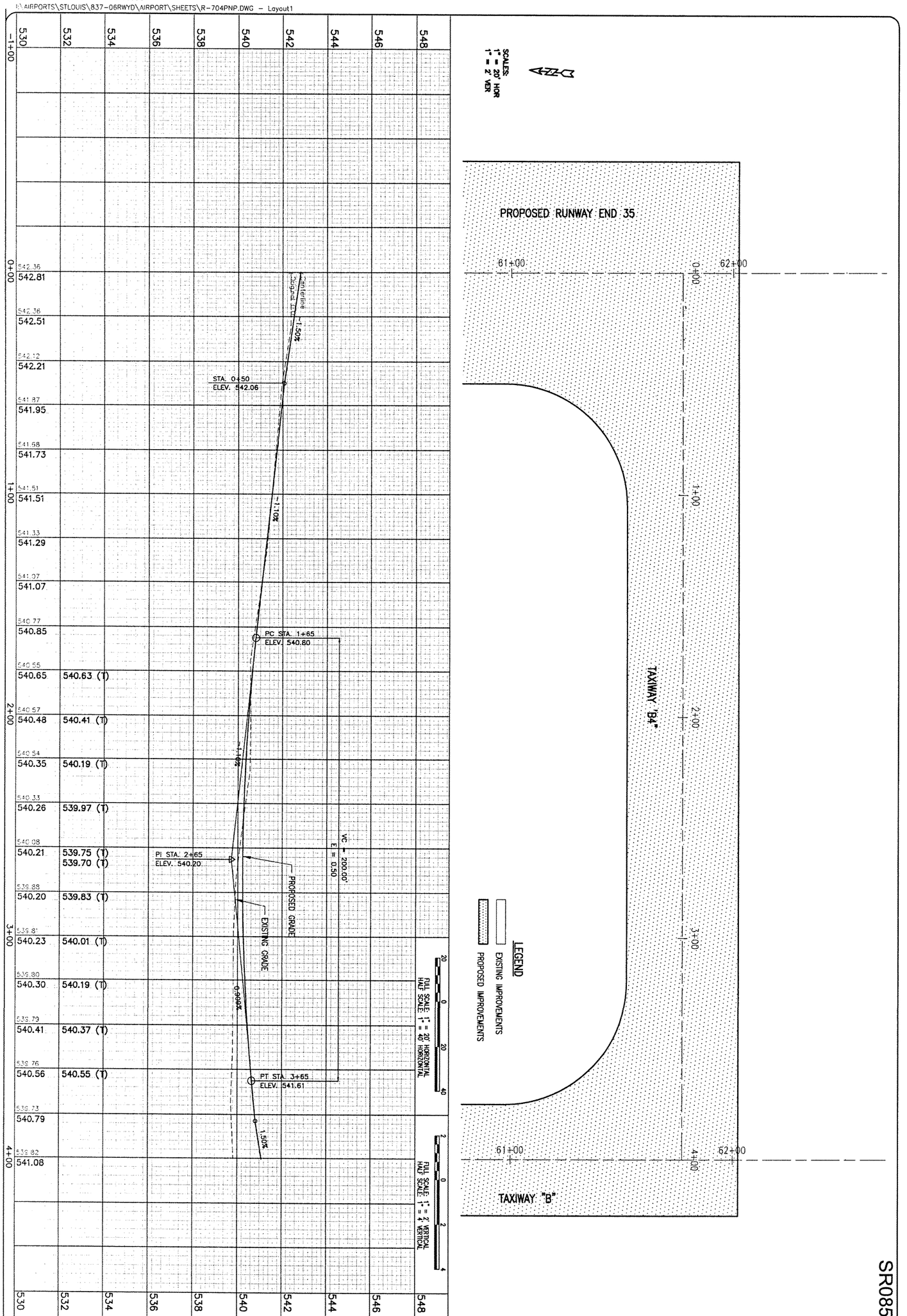
RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED PLAN AND PROFILE FOR TAXIWAY "B"

40

40 of 81 sheets

FEB 11, 2009 7:47 AM HAGL000382
I:\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\R-704PNP.DWG - Layout1



SR085

41 of 81 sheets

41

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED
PLAN AND PROFILE
FOR TAXIWAY "B4"

HANSON

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

HPI Project No.	83706RWYD 0800
Filename	R-704PNP.DWG
Scale	H. 1"=20' V. 1"=2'
Date	06/21/08

LAYOUT	JEO	06/21/08
DRAWN	JEO	06/21/08
REVIEWED	CAH	07/11/08

ST. LOUIS REGIONAL AIRPORT

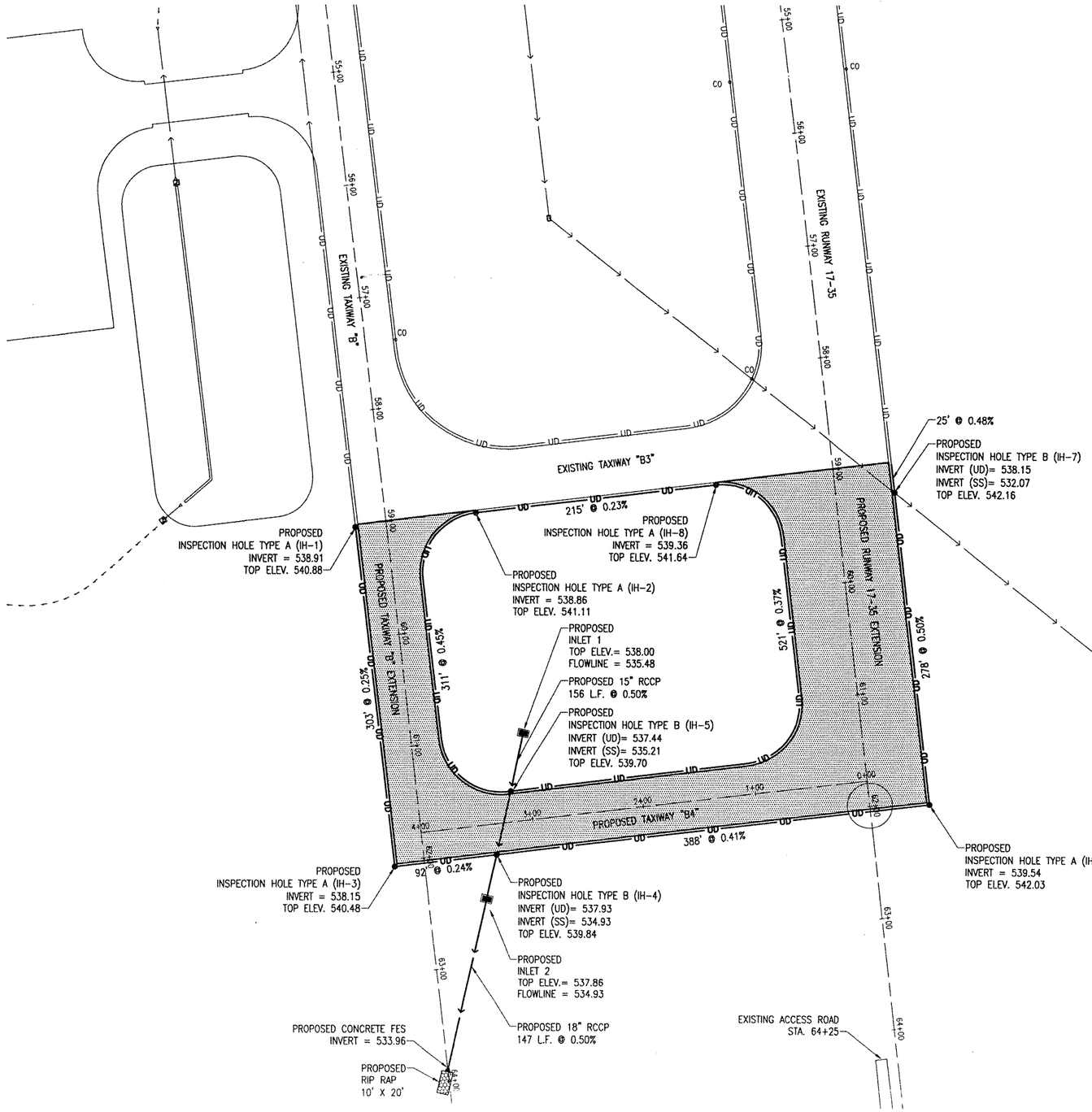
St.LouisRegional AIRPORT

EAST ALTON, ILLINOIS

IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

DATE	REVISION	BY

SR085



PROPOSED DRAINAGE STRUCTURES

STRUCTURE	TYPE	STATION	OFFSET	BASELINE
IH-1	A	59+02	27.5' RT.	TAXIWAY "B"
IH-2	A	59+02	80' LT.	TAXIWAY "B"
IH-3	A	62+05	27.5' RT.	TAXIWAY "B"
IH-4	B	3+36.15	27.5' LT.	TAXIWAY "B4"
IH-5	B	3+17.20	27.5' RT.	TAXIWAY "B4"
IH-6	A	62+05	52' LT.	RUNWAY 17/35
IH-7	B	59+27	52' LT.	RUNWAY 17/35
IH-8	A	59+02	105' RT.	RUNWAY 17/35
INLET 1	A	3+00	77' RT.	TAXIWAY "B4"
INLET 2	A	3+49	65' LT.	TAXIWAY "B4"
FES		63+86	1' LT.	TAXIWAY "B"

QUANTITIES THIS SHEET

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
AR156540	RIP RAP	S.Y.	22
AR701515	15" RCP, CLASS IV	L.F.	156
AR701518	18" RCP, CLASS IV	L.F.	147
AR705410	POROUS BACKFILL	C.Y.	53
AR705526	6" PERFORATED UNDERDRAIN W/ SOCK	L.F.	2,133
AR705530	UNDERDRAIN INSPECTION HOLE	EACH	8
AR751411	INLET - TYPE A	EACH	2
AR752418	PRECAST REINFORCED CONC. FES 18"	EACH	1

156540-RIPRAP NOTES:

THE PROPOSED RIPRAP SHALL BE PLACED IN ACCORDANCE WITH ITEM AR156540 "RIPRAP" AS STATED ON PAGE 182 OF THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, ADOPTED JULY 1, 2004.

THE PROPOSED RIPRAP WILL BE GRADATION RR3 AND PLACED TO THE DIMENSIONS AS SHOWN ON THIS SHEET AND IN ACCORDANCE WITH THE SPECIAL PROVISIONS.

A FILTER FABRIC WILL BE REQUIRED UNDER THE STONE RIPRAP. THE FILTER FABRIC MATERIAL WILL BE IN ACCORDANCE WITH THE REQUIREMENTS AS STATED ON PAGE 183 FOR A GRADATION 4 & 5 RIPRAP STONE. THE FILTER FABRIC WILL BE CONSIDERED AS AN INCIDENTAL ITEM TO THE RIPRAP AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

THE PROPOSED RIPRAP WILL BE PAID FOR UNDER ITEM:
AR156540 RIPRAP _____PER S.Y.

LEGEND

- EXISTING IMPROVEMENTS
- PROPOSED IMPROVEMENTS
- UD — EXISTING UNDERDRAIN
- EXISTING DRAINAGE PIPE
- EXISTING DRAINAGE DITCH
- CO — EXISTING INSPECTION HOLE/CLEANOUT
- EXISTING INLET
- EXISTING HEADWALL
- EXISTING END SECTION
- UD — PROPOSED UNDERDRAIN (6" PERF. PVC)
- PROPOSED DRAINAGE PIPE
- CO — PROPOSED INSPECTION HOLE
- PROPOSED INLET
- PROPOSED PRECAST CONC. FES 18"

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

DATE	REVISION	BY

ST. LOUIS REGIONAL AIRPORT
EAST ALTON, ILLINOIS
St.LouisRegional Airport
IL PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

HD Project No. 83706RWYD 0800
Filename R-131DRN.DWG
Scale 1"=50'
Date 05/12/08

LAYOUT	MDR	02/08/08
DRAWN	DPE	05/11/08
REVIEWED	CAH	07/11/08

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

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED DRAINAGE PLAN FOR RUNWAY END 35

42
42 of 81 sheets

FEB 10, 2009 4:48 PM HAGLOOO362
J:\AIRPORTS\STLOUIS\83706RWYD\AIRPORT\SHEETS\R-131DRN.DWG - RWY 35 END

SR085

EXISTING TAXIWAY "B3"

PROPOSED TAXIWAY "B" EXTENSION

PROPOSED TAXIWAY "B4"

PROPOSED RUNWAY 17-35 EXTENSION

PROPOSED GRADING AND SEEDING LIMITS

PROPOSED INLET
77' RT. STA. 3+00, TXY "B4"

PROPOSED INLET
65' LT. STA. 3+49, TXY "B4"

PROPOSED CONCRETE FLARED END SECTION
1' LT. STA. 63+86, TXY "B"

LEGEND

- EXISTING IMPROVEMENTS
- PROPOSED IMPROVEMENTS
- +540.22 EXISTING GRADE
- +540.55 PROPOSED GRADE
- PROPOSED GRADING AND SEEDING LIMITS
- PROPOSED INLET
- PROPOSED CONC. FLARED END SECTION

NOTE:
FOR SEEDING AND MULCHING NOTES SEE SHEET NO. 12.

EARTHWORK DISTRIBUTION

NORTH END	CUT	FILL
PAVEMENT REMOVAL		3600 C.Y.
RUNWAY	371 C.Y.	561 C.Y.
TAXIWAY "C1"	942 C.Y.	114 C.Y.
	1,313 C.Y.	4,275 C.Y.
SOUTH END RUNWAY & TWY.	5,331 C.Y.	312 C.Y.
TOTAL	6,644 C.Y.	4,587 C.Y.
SHRINKAGE 30%		1,376 C.Y.
		5,963 C.Y.
POSSIBLE WASTE	682 C.Y.	

ANY EXCESS UNCLASSIFIED EXCAVATION WILL BE WASTED IN THE DESIGNATED WASTE AREA.

0' 15' 30' 60'
HALF SIZE SCALE: 1"= 60'
FULL SIZE SCALE: 1"= 30'

DATE	REVISION	BY

ST. LOUIS REGIONAL AIRPORT
St.LouisRegional AIRPORT
EAST ALTON, ILLINOIS
A.I.P. PROJ.: 3-17-0002-842
IL PROJ.: ALN-3825

HSI Project No. 8370GRWYD 0800
Filename R-191STK.DWG
Scale 1"= 30'
Date 05/12/08

LAYOUT	MDR	02/06/08
DRAWN	DPE	05/11/08
REVIEWED	CAH	07/11/08

HANSON
Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2866
Offices Nationwide

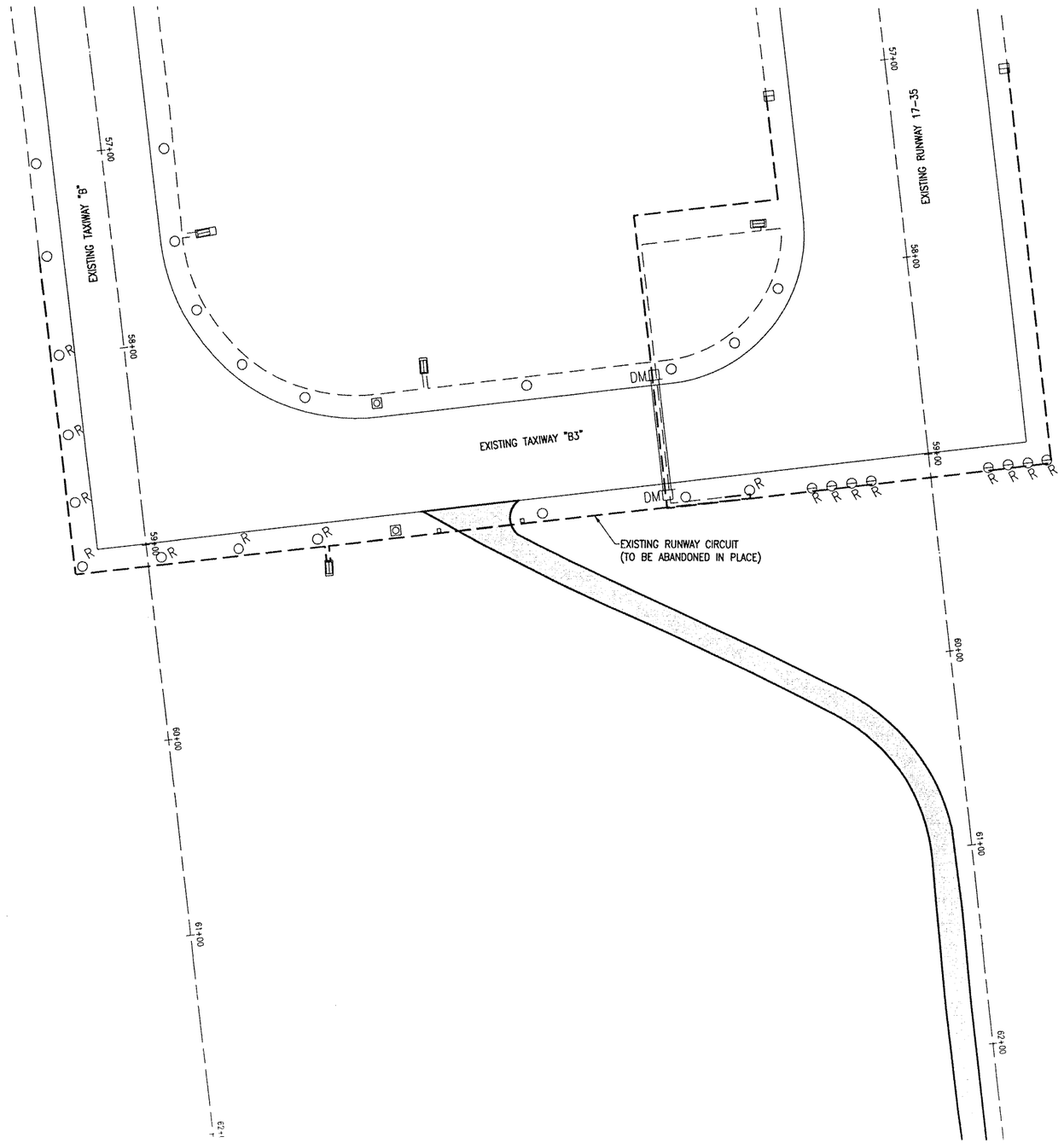
RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED STAKING PLAN FOR RUNWAY END 35

43
43 of 81 sheets

FEB 10, 2009 4:49 PM HAGLOOO382
I:\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\R-191STK.DWG - RWY 35 END

SR085



LEGEND

- EXISTING IMPROVEMENTS
- PROPOSED ACCESS ROAD REMOVAL
- EXISTING 1/C #8 5KV UG CABLE
- EXISTING 1/C #8 5KV UG CABLE (TO BE ABANDONED IN PLACE)
- EXISTING STAKE MOUNTED RUNWAY LIGHT
- EXISTING BASE MOUNTED TAXIWAY LIGHT
- EXISTING STAKE MOUNTED TAXIWAY LIGHT
- EXISTING STAKE MOUNTED TAXIWAY LIGHT (TO BE REMOVED)
- EXISTING STAKE MOUNTED RUNWAY THRESHOLD LIGHT (TO BE REMOVED)
- EXISTING TAXIWAY GUIDANCE
- EXISTING ELECTRICAL DUCT
- DM EXISTING ELECTRICAL DUCT MARKER

QUANTITIES THIS SHEET

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
AR125901	REMOVE STAKE MOUNTED LIGHT	EACH	16

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.

0' 15' 30' 60'

HALF SIZE SCALE: 1"= 60'
FULL SIZE SCALE: 1"= 30'

DATE	REVISION	BY

ST. LOUIS REGIONAL AIRPORT

St.LouisRegional Airport

EAST ALTON, ILLINOIS

IL PROJ.: AUN-3825 A.I.P. PROJ.: 3-17-0002-B42

HD Project No. 83706RWYD 0800
Filename R-141ELE.DWG
Scale 1"=30'
Date 02/11/08

LAYOUT	MDR	02/11/08
DRAWN	MDR	02/11/08
REVIEWED	CAH	07/11/08

HANSON

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

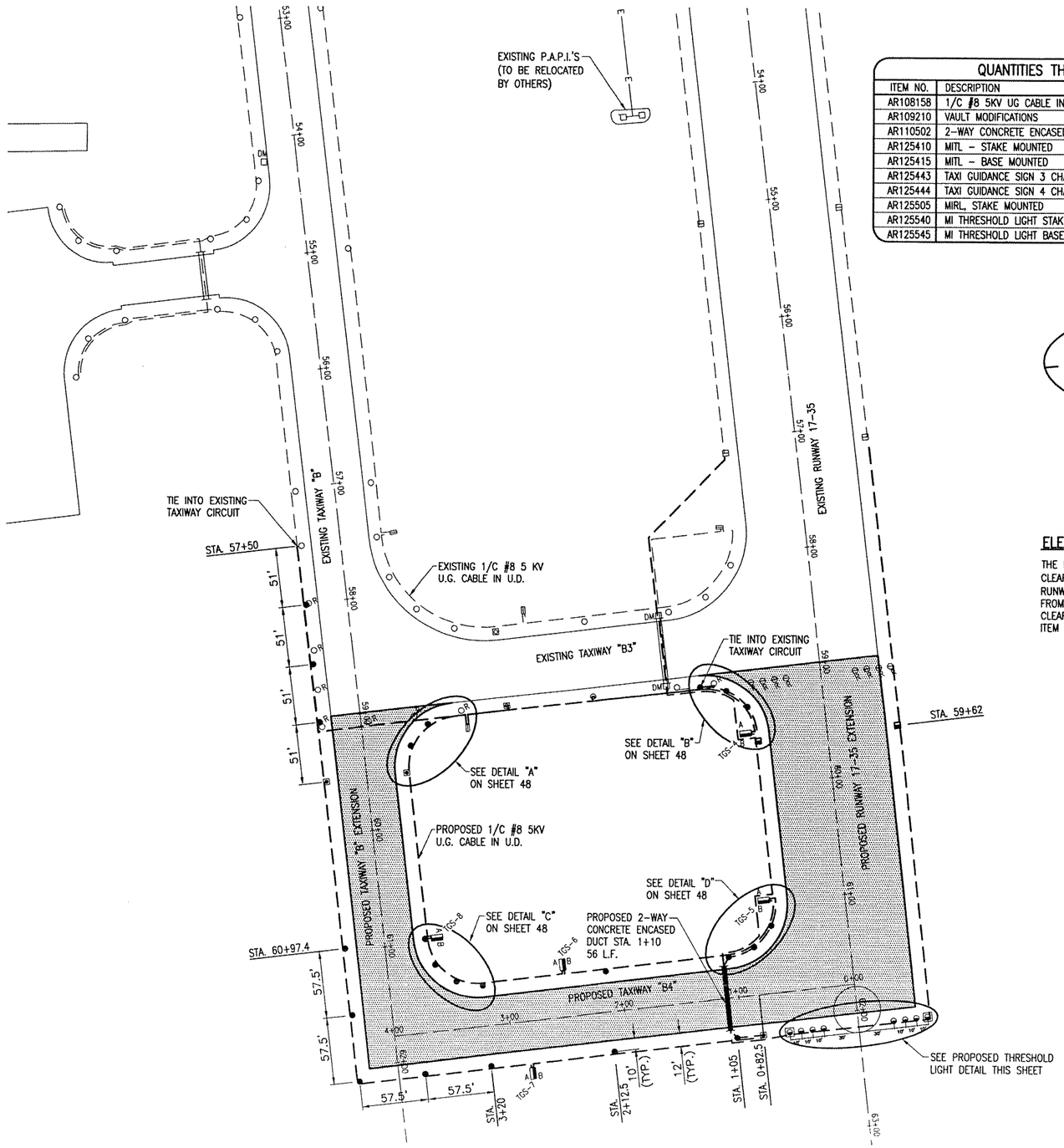
RUNWAY SAFETY AREA IMPROVEMENTS

EXISTING ELECTRICAL PLAN FOR RUNWAY END 35

44

44 of 81 sheets

FEB 10, 2009 4:50 PM HAGLOOO382
J:\AIRPORTS\STLOUIS\83706RWYD\AIRPORT\SHEETS\R-141ELE.DWG - RWY 35 END

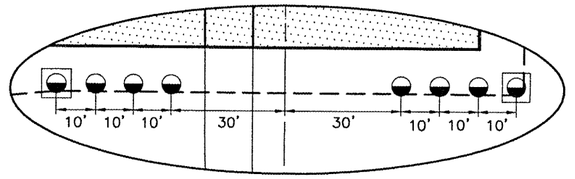


QUANTITIES THIS SHEET

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
AR108158	1/C #8 5KV UG CABLE IN UD	L.F.	3,723
AR109210	VAULT MODIFICATIONS	L.S.	1
AR110502	2-WAY CONCRETE ENCASED DUCT	L.F.	56
AR125410	MITL - STAKE MOUNTED	EACH	23
AR125415	MITL - BASE MOUNTED	EACH	3
AR125443	TAXI GUIDANCE SIGN 3 CHARACTER	EACH	2
AR125444	TAXI GUIDANCE SIGN 4 CHARACTER	EACH	3
AR125505	MIRL, STAKE MOUNTED	EACH	2
AR125540	MI THRESHOLD LIGHT STAKE MOUNTED	EACH	6
AR125545	MI THRESHOLD LIGHT BASE MOUNTED	EACH	2

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.



PROPOSED RUNWAY END 35 THRESHOLD LIGHT DETAIL
"NOT TO SCALE"

ELECTRICAL NOTES

THE PROPOSED LIGHTS BEING INSTALLED AT RUNWAY STA. 59+62 WILL BE EQUIPPED WITH 180° CLEAR/180° AMBER LENSES. THE AMBER SIDE WILL FACE TOWARD THE NORTH. ANY EXISTING RUNWAY LIGHT THAT HAS A SPLIT AMBER/CLEAR LENSE AND IS LOCATED FURTHER THAN 2000 FEET FROM THE PROPOSED END OF RUNWAY 35 WILL HAVE THEIR SPLIT LENSE REPLACED WITH A 360° CLEAR LENSE. THE REPLACEMENT OF THESE TWO LENSES WILL BE CONSIDERED AS AN INCIDENTAL ITEM TO THE LIGHT REMOVAL AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

LEGEND

- EXISTING IMPROVEMENTS
- PROPOSED IMPROVEMENTS
- EXISTING 1/C #8 5KV U.G. CABLE IN U.D.
- PROPOSED 1/C #8 5KV U.G. CABLE IN U.D.
- EXISTING ELECTRICAL DUCT
- PROPOSED ELECTRICAL DUCT
- EXISTING STAKE MOUNTED RUNWAY LIGHT
- EXISTING STAKE MOUNTED TAXIWAY LIGHT
- EXISTING BASE MOUNTED TAXIWAY LIGHT
- EXISTING TAXI GUIDANCE SIGN
- EXISTING ELECTRICAL DUCT MARKER
- PROPOSED STAKE MOUNTED TAXIWAY LIGHT
- PROPOSED BASE MOUNTED TAXIWAY LIGHT
- PROPOSED STAKE MOUNTED RUNWAY THRESHOLD LIGHT
- PROPOSED BASE MOUNTED RUNWAY THRESHOLD LIGHT
- PROPOSED TAXI GUIDANCE SIGN
- PROPOSED STAKE MOUNTED RUNWAY LIGHT

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

DATE	REVISION	BY

ST. LOUIS REGIONAL AIRPORT
EAST ALTON, ILLINOIS
A.I.P. PROJ.: 3-17-0002-B42
IL. PROJ.: ALN-3825

HS Project No. 83706RWYD.0800
Filename R-142ELE.DWG
Scale 1"= 50'
Date 02/11/08

LAYOUT	CAH	02/11/08
DRAWN	BAK	02/11/08
REVIEWED	CAH	07/11/08

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

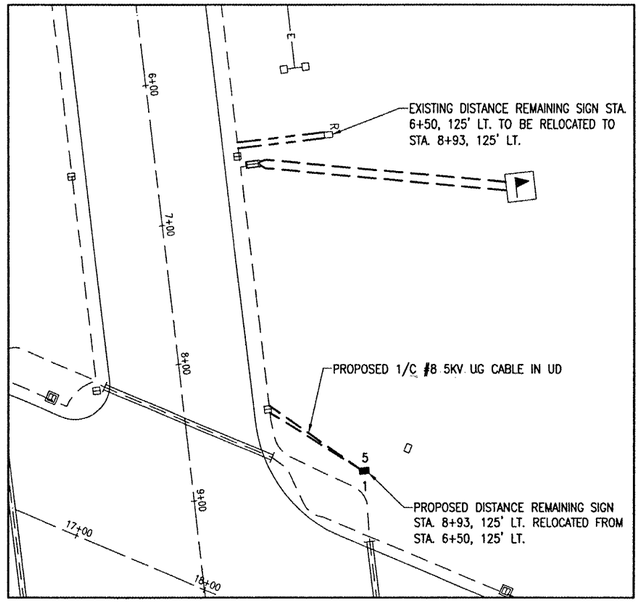
RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED ELECTRICAL PLAN FOR RUNWAY END 35

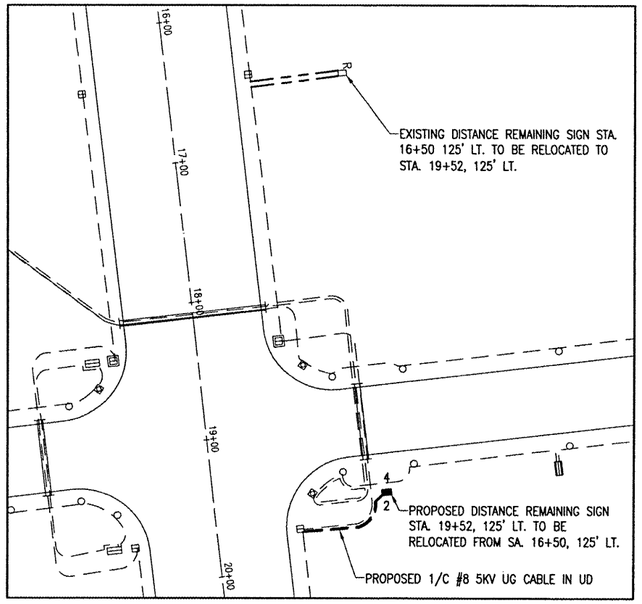
45
45 of 81 sheets

FEB 10, 2009 4:51 PM HAGLOOO382
I:\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\R-142ELE.DWG - RWY 35 END

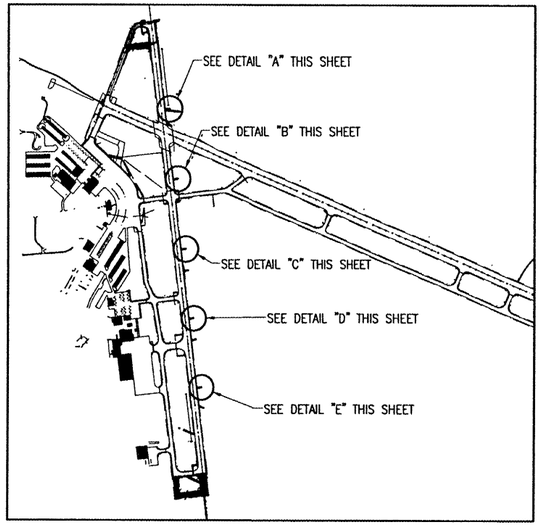
SR085

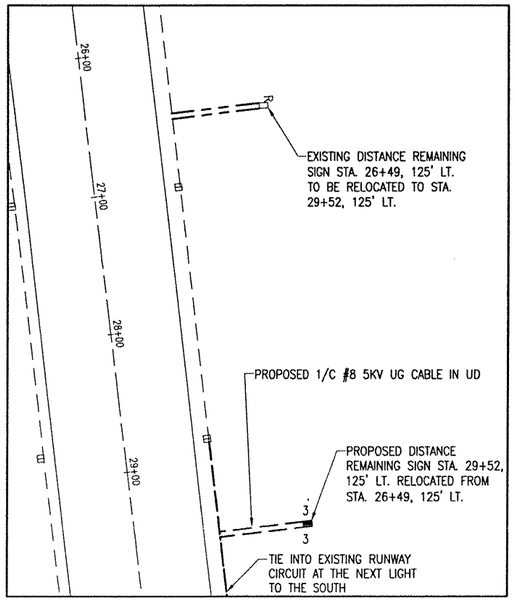


DETAIL "A"

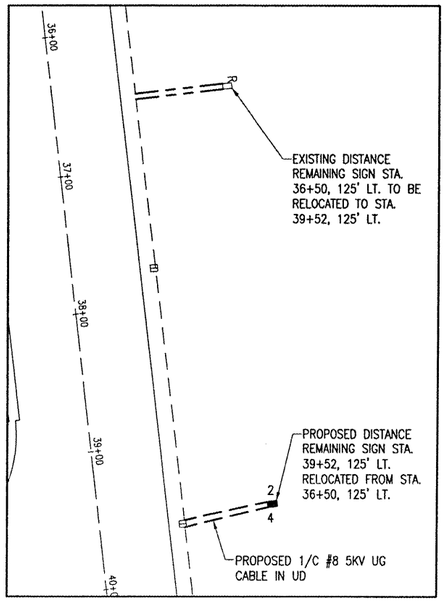


DETAIL "B"

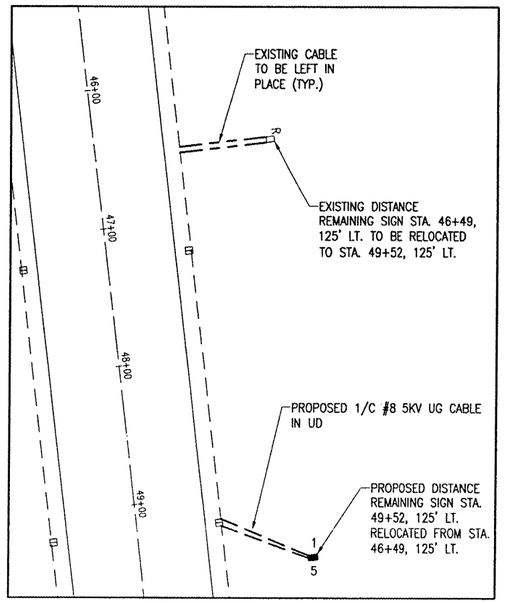




DETAIL "C"



DETAIL "D"



DETAIL "E"

QUANTITIES THIS SHEET

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
AR108158	1/C #8 5KV UG CABLE IN UD	L.F.	891
AR125965	RELOCATE RWY DISTANCE REMAIN SIGN	EACH	5

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 1/C #8 5KV U.G. CABLE IN U.D.
- E EXISTING UNDERGROUND ELECTRIC
- EXISITNG 1/C #8 5KV U.G. CABLE IN U.D. TO BE LEFT IN PLACE
- PROPOSED 1/C #8 5KV U.G. CABLE IN U.D.
- EXISTING ELECTRICAL DUCT
- EXISTING STAKE MOUNTED RUNWAY LIGHT
- EXISTING STAKE MOUNTED TAXIWAY LIGHT
- EXISTING BASE MOUNTED TAXIWAY LIGHT
- EXISTING TAXI GUIDANCE SIGN
- DM EXISTING ELECTRICAL DUCT MARKER
- R EXISTING DISTANCE REMAINING SIGN (TO BE RELOCATED)
- EXISTING FAA VASI
- PROPOSED DISTANCE REMAINING SIGN
- PROPOSED WIND CONE

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

DATE	REVISION	BY

ST. LOUIS REGIONAL AIRPORT
St.LouisRegional Airport
EAST ALTON, ILLINOIS
IL PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-842

HG Project No. 837068RWYD_0800
Filename R-142ELE.DWG
Scale 1"= 50'
Date 02/11/08

LAYOUT	CAH	02/11/08
DRAWN	MDR	02/11/08
REVIEWED	CAH	07/11/08

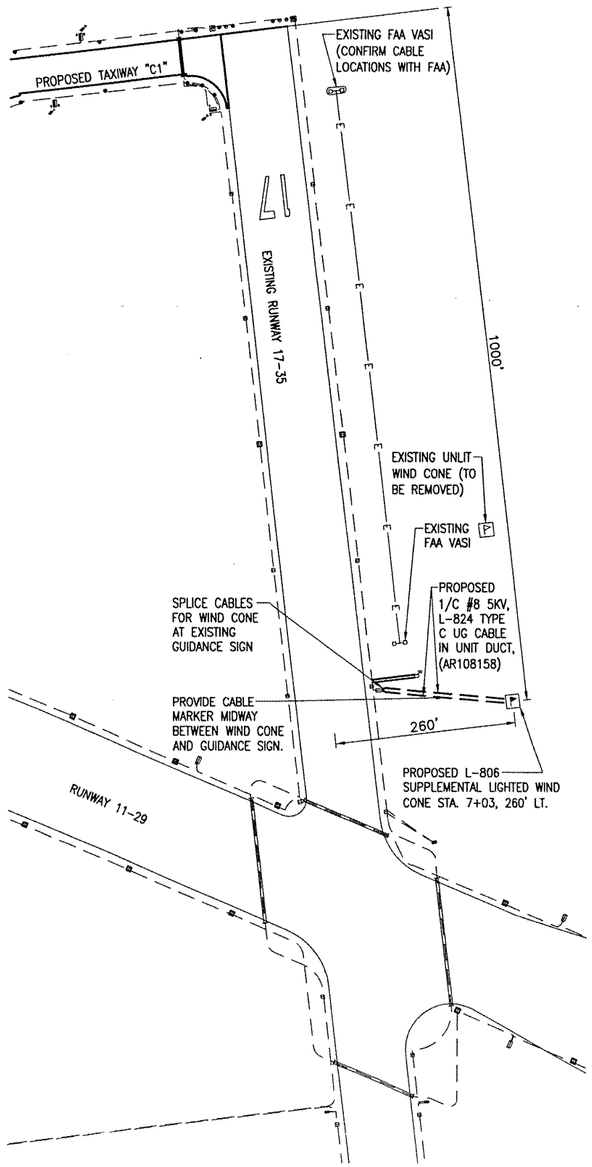
HANSON
Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2886
Offices Nationwide

RUNWAY SAFETY AREA IMPROVEMENTS

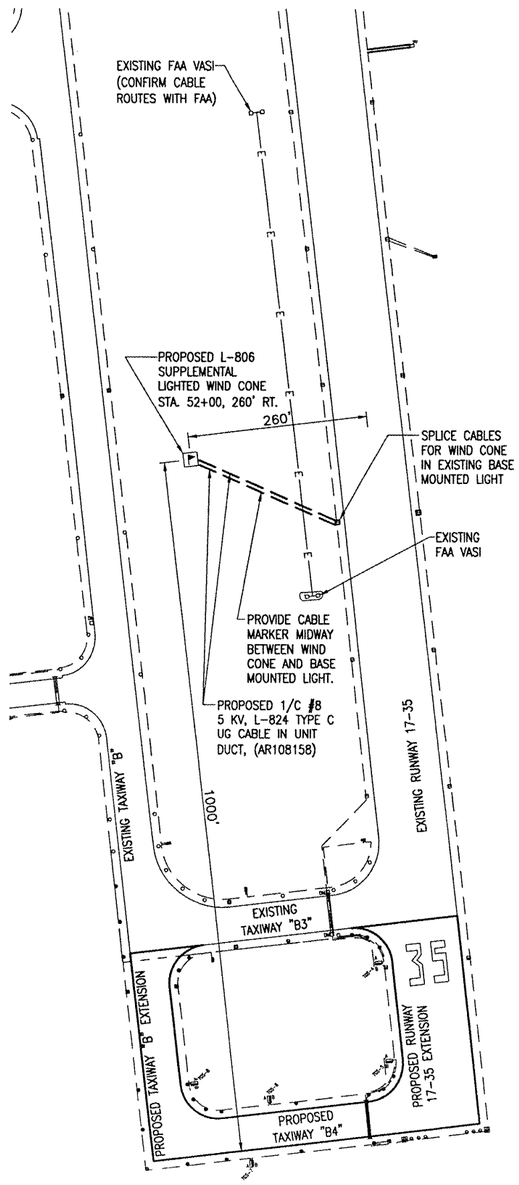
PROPOSED ELECTRICAL PLAN FOR RUNWAY END 17-35

46
46 of 81 sheets

FEB 10, 2009 4:51 PM HAGLOOO382
I:\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\R-142ELE.DWG - RWY 17-35



RUNWAY END 17



RUNWAY END 35

QUANTITIES THIS SHEET			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
AR107408	L-806 WIND CONE 8' LIGHTED	EACH	2
AR107900	REMOVE WIND CONE	EACH	2
AR108158	1/C #8 5KV UG CABLE IN UD	L.F.	813

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. CONTACT AIRPORT PERSONNEL FOR ASSISTANCE IN LOCATING AIRPORT CABLES. CONTACT FAA FOR ASSISTANCE IN LOCATING FAA CABLES.

WIND CONE REMOVAL NOTES

1. EXISTING UNLIT L-806 SUPPLEMENTAL WIND CONES ON RUNWAY 17/35 SHALL BE REMOVED. THE EXISTING UNLIT WIND CONE FOR RUNWAY 35 IS NOT SHOWN AND IS AT APPROXIMATELY STA. 34+00, 250' LT., FIELD VERIFY ACTUAL LOCATION. THE CONTRACTOR SHALL COORDINATE THE REMOVAL OF EXISTING UNLIT WIND CONES WITH THE INSTALLATION OF EACH NEW SUPPLEMENTAL LIGHTED WIND CONE TO MINIMIZE THE TIME WHEN THE AIRPORT IS WITHOUT A SUPPLEMENTAL WIND CONE AT THAT RESPECTIVE RUNWAY END. THE CONTRACTOR SHALL ALSO COORDINATE WITH AND NOTIFY THE AIRPORT MANAGER AND THE RESIDENT ENGINEER AND PROVIDE A SCHEDULE FOR WIND CONE REMOVAL AND THE INSTALLATION OF THE NEW SUPPLEMENTAL LIGHTED WIND CONES. THE CONTRACTOR WILL TURN EACH WIND CONE AND SUPPORT POLE OVER TO THE AIRPORT MANAGER. THE CONCRETE BASE/FOUNDATION WILL BE DISPOSED OF OFF THE AIRPORT SITE, IN A LEGAL MANNER, AT THE EXPENSE OF THE CONTRACTOR.
2. THE HOLES LEFT FROM THE BASE/FOUNDATION REMOVAL WILL BE FILLED WITH EARTH MATERIAL. THE EARTH MATERIAL WILL BE COMPACTED TO PREVENT ANY FUTURE SETTLEMENT. THE EARTH MATERIAL WILL BE OBTAINED FROM OFF THE AIRPORT SITE. THE DISTURBED AREA WILL BE RESTORED, GRADED, AND SEEDED TO THE SATISFACTION OF THE ENGINEER AND IS CONSIDERED INCIDENTAL TO THE REMOVAL OF THE WIND CONE.
3. THE EXISTING L-807 LIGHTED WIND CONE SHALL REMAIN IN PLACE. THE EXISTING UNLIT WIND CONE ON RUNWAY 29 SHALL REMAIN IN PLACE.
4. REMOVAL OF EXISTING UNLIT WIND CONES SHALL BE PAID FOR UNDER ITEM AR107900 REMOVE WIND CONE - PER EACH.

LEGEND

- EXISTING IMPROVEMENTS
- PROPOSED IMPROVEMENTS
- EXISTING 1/C #8 5KV U.G. CABLE IN U.D.
- E — EXISTING UNDERGROUND ELECTRIC
- PROPOSED 1/C #8 5KV U.G. CABLE IN U.D.
- EXISTING ELECTRICAL DUCT
- PROPOSED ELECTRICAL DUCT
- EXISTING STAKE MOUNTED RUNWAY LIGHT
- EXISTING STAKE MOUNTED TAXIWAY LIGHT
- EXISTING BASE MOUNTED TAXIWAY LIGHT
- EXISTING TAXI GUIDANCE SIGN
- DM EXISTING ELECTRICAL DUCT MARKER
- EXISTING FAA VASI
- PROPOSED STAKE MOUNTED TAXIWAY LIGHT
- PROPOSED BASE MOUNTED TAXIWAY LIGHT
- PROPOSED STAKE MOUNTED RUNWAY THRESHOLD LIGHT
- PROPOSED BASE MOUNTED RUNWAY THRESHOLD LIGHT
- PROPOSED TAXI GUIDANCE SIGN
- PROPOSED STAKE MOUNTED RUNWAY LIGHT
- P EXISTING UNLIT WIND CONE (TO BE REMOVED)
- P PROPOSED SUPPLEMENTAL LIGHTED WIND CONE

WIND CONE NOTES

1. THE PROPOSED WIND CONES SHALL BE INSTALLED AS SHOWN ON THIS SHEET, THE "WIND CONE ELEVATION DETAIL" SHEET, AND IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
2. WIND CONES SHALL BE PAID FOR UNDER ITEM: AR107408 L-806 WIND CONE-8' LIGHTED____ PER EACH.

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

DATE	REVISION	BY

ST. LOUIS REGIONAL AIRPORT
St.LouisRegional Airport
EAST ALTON, ILLINOIS
IL. PROJ.: A.I.P. PROJ.: 3-17-0002-B42 PROJ.: ALN-3825

HD Project No. 83706RWYD 0800
Filename R-14.3ELE.DWG
Scale 1"= 100'
Date 07/09/08

LAYOUT	CAH/KNL	07/09/08
DRAWN	BAK	07/09/08
REVIEWED	CAH	07/11/08

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

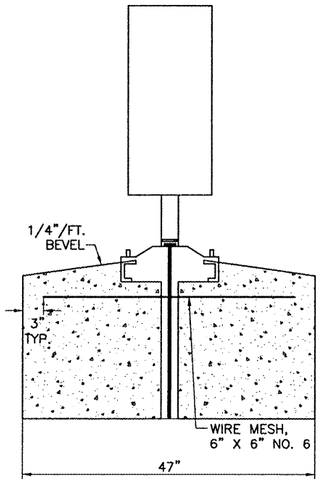
RUNWAY SAFETY AREA IMPROVEMENTS

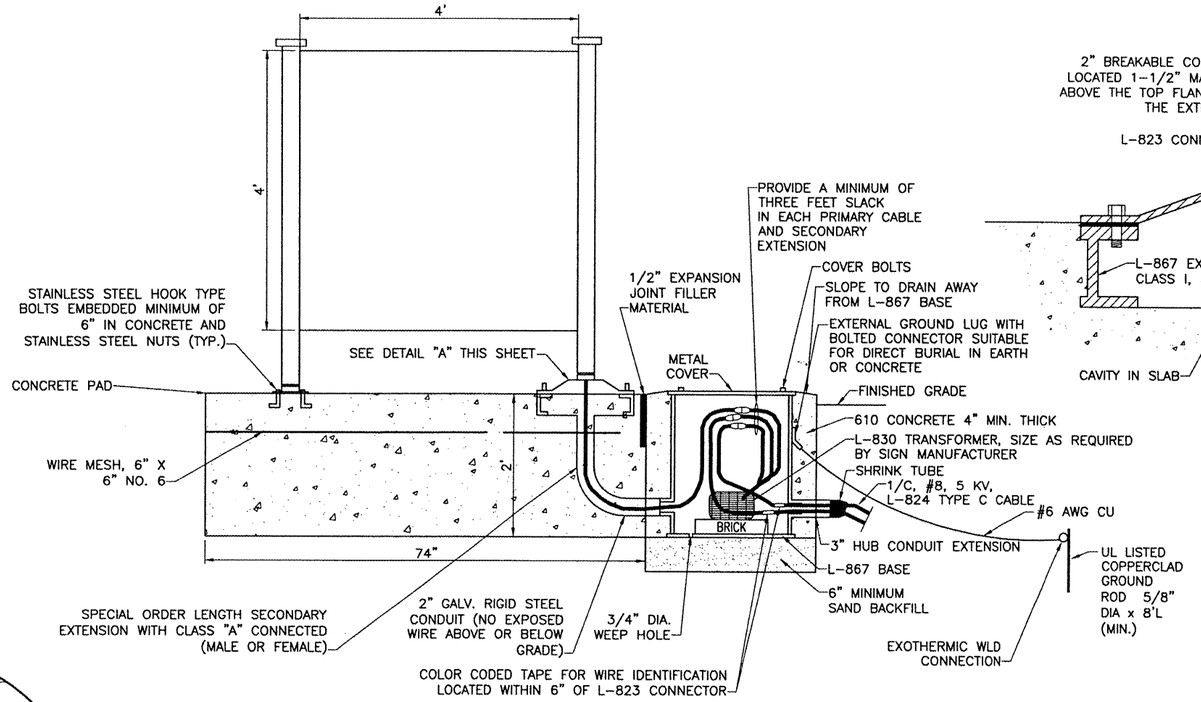
PROPOSED WIND CONE LAYOUT PLAN FOR RUNWAY 17-35

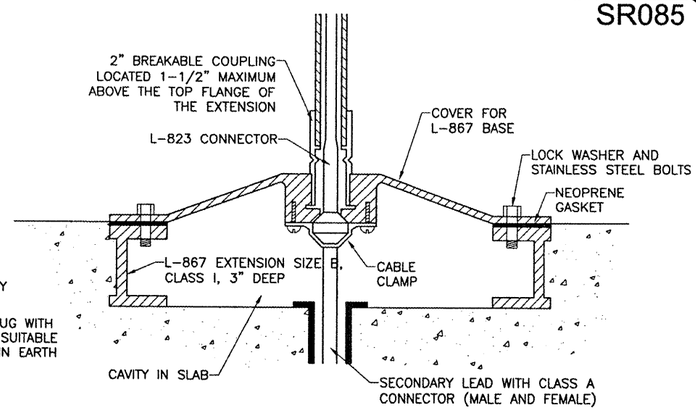
47
47 of 81 sheets

FEB 11, 2009 7:48 AM HAGLOOO382
J:\AIRPORTS\STLOUIS\83706RWYD\AIRPORT\SHEETS\R-14.3ELE.DWG - WIND CONE

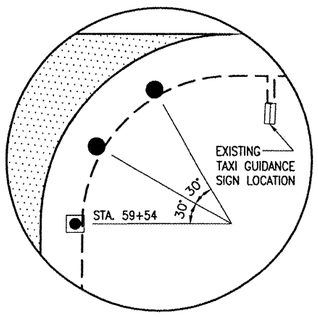
SR085





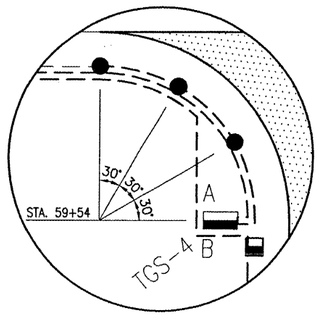


DETAIL "A"
(NOT TO SCALE)

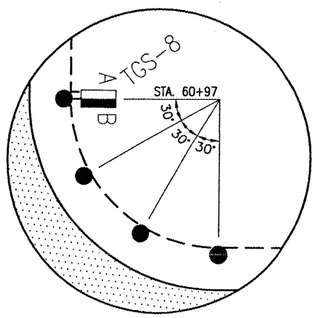


DETAIL "A"
"NOT TO SCALE"

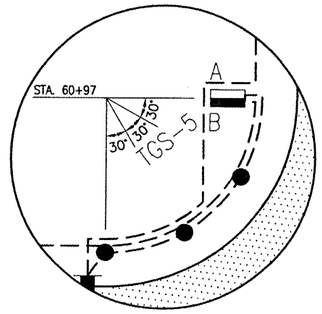
DISTANCE REMAINING SIGN DETAIL



DETAIL "B"
"NOT TO SCALE"



DETAIL "C"
"NOT TO SCALE"



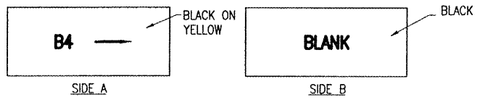
DETAIL "D"
"NOT TO SCALE"

TAXI GUIDANCE SIGN NOTES

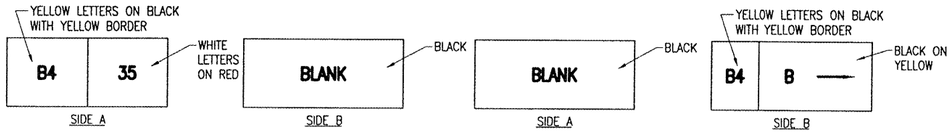
ALL PROPOSED TAXI GUIDANCE SIGNS WILL BE LOCATED AS SHOWN ON SHEET 45.

ALL PROPOSED TAXI GUIDANCE SIGNS WILL BE LOCATED SUCH THAT THE CLOSEST SIDE OF THE SIGN IS 15' FROM THE PAVEMENT EDGE.

ALL SIGNS WILL READ AS DETAILED ON THIS SHEET.

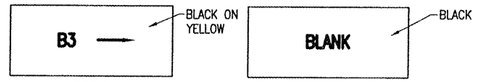


TAXI GUIDANCE SIGN DETAIL TGS-5
"NOT TO SCALE"

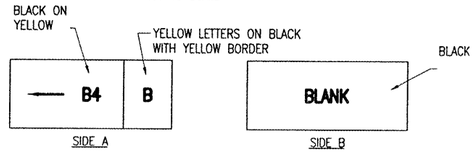


TAXI GUIDANCE SIGN DETAIL TGS-6
"NOT TO SCALE"

TAXI GUIDANCE SIGN DETAIL TGS-7
"NOT TO SCALE"



TAXI GUIDANCE SIGN DETAIL TGS-4
"NOT TO SCALE"



TAXI GUIDANCE SIGN DETAIL TGS-8
"NOT TO SCALE"

FEB 10, 2009 4:52 PM HAGLOOO362
J:\AIRPORTS\STLOUIS\837-06RWY0\AIRPORT\SHEETS\R-541ELE.DWG - RWY 35 END

ST. LOUIS REGIONAL AIRPORT
EAST ALTON, ILLINOIS
A.I.P. PROJ.: 3-17-0002-842
IL. PROJ.: ALN-3825

DATE	REVISION	BY

HEI Project No. 8370GRWY0 0800
Filename R-541ELE.DWG
Scale NOT TO SCALE
Date 02/11/08

LAYOUT	CAH	02/11/08
DRAWN	BAK	02/11/08
REVIEWED	CAH	07/11/08

HANSON
Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2866
Offices Nationwide

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED ELECTRICAL DETAILS FOR RUNWAY END 35

48

48 of 81 sheets

ELECTRICAL LEGEND – ONE-LINE DIAGRAM

	CABLE TERMINATOR/LUG
	TRANSFORMER
	DISCONNECT SWITCH
	FUSIBLE DISCONNECT SWITCH
	CIRCUIT BREAKER
	THERMAL MAGNETIC CIRCUIT BREAKER
	FUSE
	TRANSIENT VOLTAGE SURGE SUPPRESSOR OR SURGE PROTECTOR DEVICE
	GROUND – GROUND ROD, GROUNDING ELECTRODE, OR AT EARTH POTENTIAL
	INDICATING LIGHT
M	MOTOR
#	LOAD, MOTOR, # = HORSEPOWER
	ELECTRIC UTILITY METER BASE
	JUNCTION BOX WITH SPLICE
XXX	EQUIPMENT, XXX = DEVICE DESCRIPTION
GND	GROUND BUS OR TERMINAL
S/N	NEUTRAL BUS
	PANELBOARD WITH MAIN LUGS
	PANELBOARD WITH MAIN BREAKER
	FUSE PANEL WITH MAIN FUSE PULLOUT
	DUPLEX RECEPTACLE 120V SINGLE PHASE GROUNDING TYPE
	CONTROL STATION
N EM L	TRANSFER SWITCH
G	ENGINE GENERATOR SET

ELECTRICAL LEGEND – SCHEMATIC

	NORMALLY OPEN (N.O.) CONTACT
	NORMALLY CLOSED (N.C.) CONTACT
S*	STARTER COIL, * = STARTER NUMBER
OL	OVERLOAD RELAY CONTACT
CR*	CONTROL RELAY, * = CONTROL RELAY NUMBER
R*	RELAY, * = RELAY NUMBER
	TOGGLE SWITCH / 2 POSITION SWITCH
OFF AUTO OX	2-POSITION SELECTOR SWITCH
OFF HAND AUTO XOO OOX	3-POSITION SELECTOR SWITCH (H-O-A SHOWN)
	2 POLE DISCONNECT SWITCH
	3 POLE DISCONNECT SWITCH
PC	PHOTOCELL
	TERMINAL BLOCK, * = TERMINAL NUMBER
	DEVICE TERMINAL, * = DEVICE TERMINAL NUMBER
	INTERNAL PANEL WIRING
	FIELD WIRING
	FUSE
GND	GROUND BUS OR TERMINAL
S/N	NEUTRAL BUS
	GROUND, GROUND ROD, GROUND BUS
	INDUSTRIAL CONTROL RELAY OR LIGHTING CONTACTOR
P	S1 CUTOUT HANDLE REMOVED
L	S1 CUTOUT HANDLE INSERTED
	N.O. THERMAL SWITCH
	N.C. THERMAL SWITCH
	L-830 SERIES ISOLATION TRANSFORMER

ELECTRICAL ABBREVIATIONS

A.F.F.	ABOVE FINISHED FLOOR
A, AMP	AMPERES
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BKR	BREAKER
C	CONDUIT
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CR	CONTROL RELAY
CU	COPPER
DPDT	DOUBLE POLE DOUBLE THROW
DPST	DOUBLE POLE SINGLE THROW
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ENCL	ENCLOSURE
EP	EXPLOSION PROOF
ES	EMERGENCY STOP
ETL	INTERTEK – ELECTRICAL TESTING LABS
ETM	ELAPSE TIME METER
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
GRSC	GALVANIZED RIGID STEEL CONDUIT
HID	HIGH INTENSITY DISCHARGE
HOA	HAND OFF AUTOMATIC
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
J	JUNCTION BOX
KVA	KILOVOLT AMPERE(S)
KW	KILOWATTS
LC	LIGHTING CONTACTOR
LTFMC	LIQUID TIGHT FLEXIBLE METAL CONDUIT (UL LISTED)
LTG	LIGHTING
LP	LIGHTING PANEL
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MCM	THOUSAND CIRCULAR MIL
MDP	MAIN DISTRIBUTION PANEL
MFR	MANUFACTURER
MH	METAL HALIDE
MIN	MINIMUM
MLO	MAIN LUGS ONLY
NEC	NATIONAL ELECTRICAL CODE (NFPA 70)
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OHE	OVERHEAD ELECTRIC
OL	OVERLOAD

ELECTRICAL ABBREVIATIONS (CONTINUED)

PB	PULL BOX
PC	PHOTO CELL
PDB	POWER DISTRIBUTION BLOCK
PNL	PANEL
RCPT	RECEPTACLE
R	RELAY
S	STARTER
SPD	SURGE PROTECTION DEVICE
SPST	SINGLE POLE SINGLE THROW
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
TYP	TYPICAL
UG	UNDERGROUND
UGE	UNDERGROUND ELECTRIC
UL	UNDERWRITER'S LABORATORIES
V	VOLTS
W/	WITH
W/O	WITHOUT
WP	WEATHER PROOF
XFER	TRANSFER
XFMR	TRANSFORMER

AIRPORT EQUIPMENT/FACILITY ABBREVIATIONS

ASOS	AUTOMATED SURFACE OBSERVING SYSTEM
ATCT	AIR TRAFFIC CONTROL TOWER
AWOS	AUTOMATED WEATHER OBSERVING SYSTEM
CCR	CONSTANT CURRENT REGULATOR
DME	DISTANCE MEASURING EQUIPMENT
FAR	FEDERAL AVIATION REGULATION
GS	GLIDE SLOPE FACILITY
HIRL	HIGH INTENSITY RUNWAY LIGHT
ILS	INSTRUMENT LANDING SYSTEM
IM	INNER MARKER
LIR	LOW IMPACT-RESISTANT
LOC	LOCALIZER FACILITY
MALS	MEDIUM INTENSITY APPROACH LIGHTING SYSTEM
MALSR	MEDIUM INTENSITY APPROACH LIGHTING SYSTEM WITH RUNWAY ALIGNMENT INDICATING LIGHTS
MIRL	MEDIUM INTENSITY RUNWAY LIGHT
MITL	MEDIUM INTENSITY TAXIWAY LIGHT
NDB	NON-DIRECTIONAL BEACON
PAPI	PRECISION APPROACH PATH INDICATOR
PLASI	PULSE LIGHT APPROACH SLOPE INDICATOR
RAIL	RUNWAY ALIGNMENT INDICATING LIGHTS
REIL	RUNWAY END IDENTIFIER LIGHT
RVR	RUNWAY VISUAL RANGE
VADI	VISUAL APPROACH DESCENT INDICATOR
VASI	VISUAL APPROACH SLOPE INDICATOR
VOR	VERY HIGH FREQUENCY OMNIDIRECTIONAL RANGE FACILITY
WC	WIND CONE

NOTES:

1. 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.
2. CONTRACTOR SHALL COORDINATE WORK AND ANY POWER OUTAGES WITH THE RESPECTIVE FACILITY OWNER PERSONNEL AND THE AIRPORT MANAGER.
3. COLOR CODE PHASE AND NEUTRAL CONDUCTOR INSULATION FOR NO. 6 AWG OR SMALLER. PROVIDE COLORED INSULATION OR COLORED MARKING TAPE FOR PHASE AND NEUTRAL CONDUCTORS FOR NO. 4 AWG AND LARGER. INSULATED GROUND CONDUCTORS SHALL HAVE GREEN COLORED INSULATION FOR ALL CONDUCTOR AWG AND/OR KCMIL TO COMPLY WITH NEC 250.119. NEUTRAL CONDUCTORS SHALL HAVE WHITE COLORED INSULATION FOR NO. 6 AWG AND SMALLER TO MEET THE REQUIREMENTS OF NEC 200.6. STANDARD COLORS FOR POWER WIRING AND BRANCH CIRCUITS SHALL BE AS FOLLOWS:

   208Y/120 VAC, 3 PHASE, 4 WIRE

PHASE A	BLACK
PHASE B	RED
PHASE C	BLUE
NEUTRAL	WHITE
GROUND	GREEN

4. SEE RESPECTIVE SITE PLANS FOR SITE LEGEND INFORMATION.
5. 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.

BY	REVISION	DATE

ST. LOUIS REGIONAL AIRPORT
EAST ALTON, ILLINOIS
IL PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-842

HEI Project No. 837O6RWYD 0800
Filename E-001.DWG
Scale NOT TO SCALE
Date 07/09/08

LAYOUT	PJC	06/18/08
DRAWN	PJC	06/18/08
REVIEWED	KNL/CAH	07/11/08

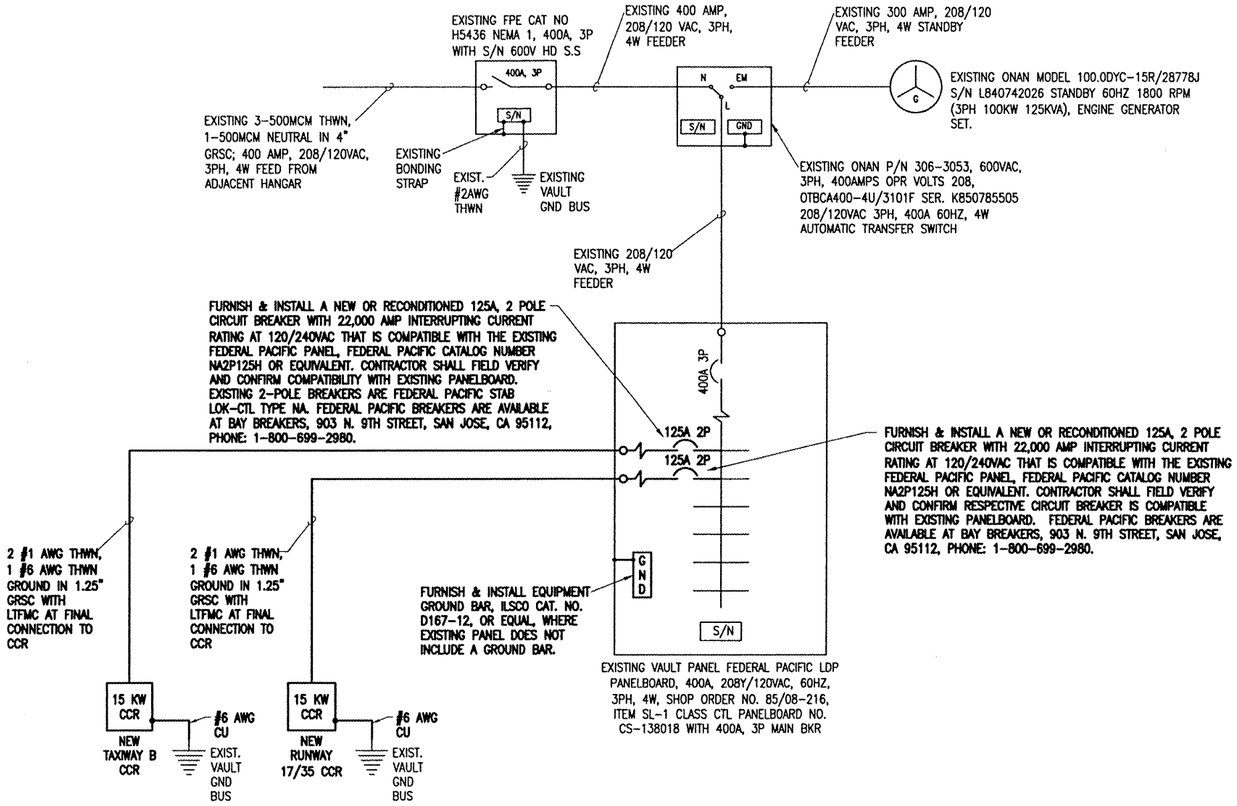
HANSON
Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2886
Offices Nationwide

RUNWAY SAFETY AREA IMPROVEMENTS

ELECTRICAL LEGEND AND ABBREVIATIONS

49
49 of 81 sheets

FEB 11, 2009 7:48 AM HAGL000382
I:\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\E-001.DWG - Work



NOTES

1. ALL VAULT WORK, POWER OUTAGES, AND OR/OR SHUT DOWN OF EXISTING SYSTEMS SHALL BE COORDINATED WITH THE AIRPORT MANAGER AND THE RESIDENT ENGINEER ONCE SHUT DOWN, THE CIRCUITS SHALL BE LABELED AS SUCH TO PREVENT ACCIDENTAL ENERGIZING OF THE RESPECTIVE CIRCUITS. ALL PERSONNEL SHALL FOLLOW U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) 29 CFR PART 1910 OCCUPATIONAL SAFETY AND HEALTH STANDARDS FOR ELECTRICAL SAFETY AND LOCKOUT/TAGOUT PROCEDURES INCLUDING, BUT NOT LIMITED TO, 29 CFR SECTION 1910.147 THE CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT).
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 CIRCUITS TO NEW REGULATORS 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 REGULATORS 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 AR109210.
10. EXISTING TAXIWAY B CCR AND RUNWAY 17/35 CCR SHALL BE DISCONNECTED, REMOVED & TURNED OVER TO THE AIRPORT. CONTRACTOR SHALL FIELD VERIFY AND RECORD EXISTING CONTROL WIRING CONNECTIONS TO EACH CCR PRIOR TO DISCONNECTION. RECONNECT EXISTING CONTROL WIRING TO THE RESPECTIVE NEW CONSTANT CURRENT REGULATORS. PROVIDE J-BOXES, SPLICES, & CONTROL WIRING AS APPLICABLE. PROVIDE LTFMC AT FINAL CONNECTIONS TO CCR'S. SEE NOTE 8.
11. EXISTING CIRCUIT BREAKERS TO BE REPLACED SHALL REMAIN AS PROPERTY OF AIRPORT.

VAULT ELECTRICAL ONE-LINE DIAGRAM WITH NEW TAXIWAY B CCR & NEW RWY 17-35 CCR

DATE	REVISION	BY

ST. LOUIS REGIONAL AIRPORT
EAST ALTON, ILLINOIS
A.I.P. PROJ.: 3-17-0002-842
IL PROJ.: ALN-3825

HS Project No. 837O6RWYD 0800
Filename E-601.DWG
Scale NOT TO SCALE
Date 07/09/08

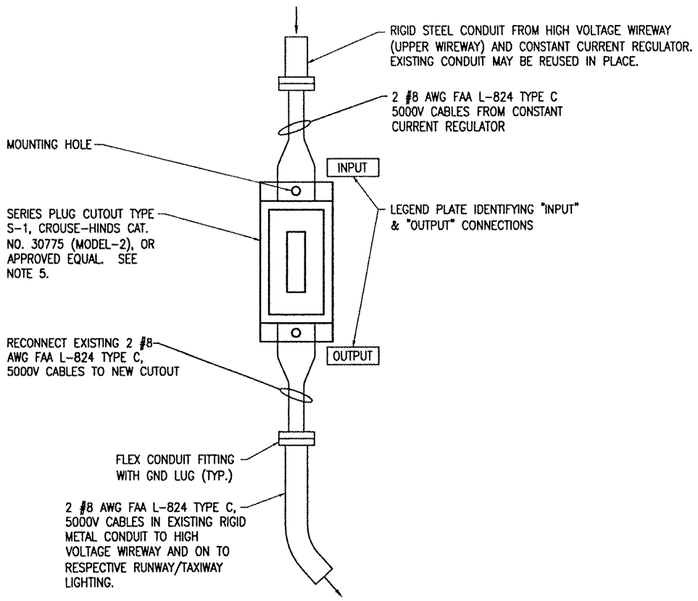
LAYOUT	PJG/KNL	06/18/08
DRAWN	PJG	06/18/08
REVIEWED	KNL/CAH	07/11/08

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

RUNWAY SAFETY AREA IMPROVEMENTS

VAULT ELECTRICAL ONE-LINE DIAGRAM

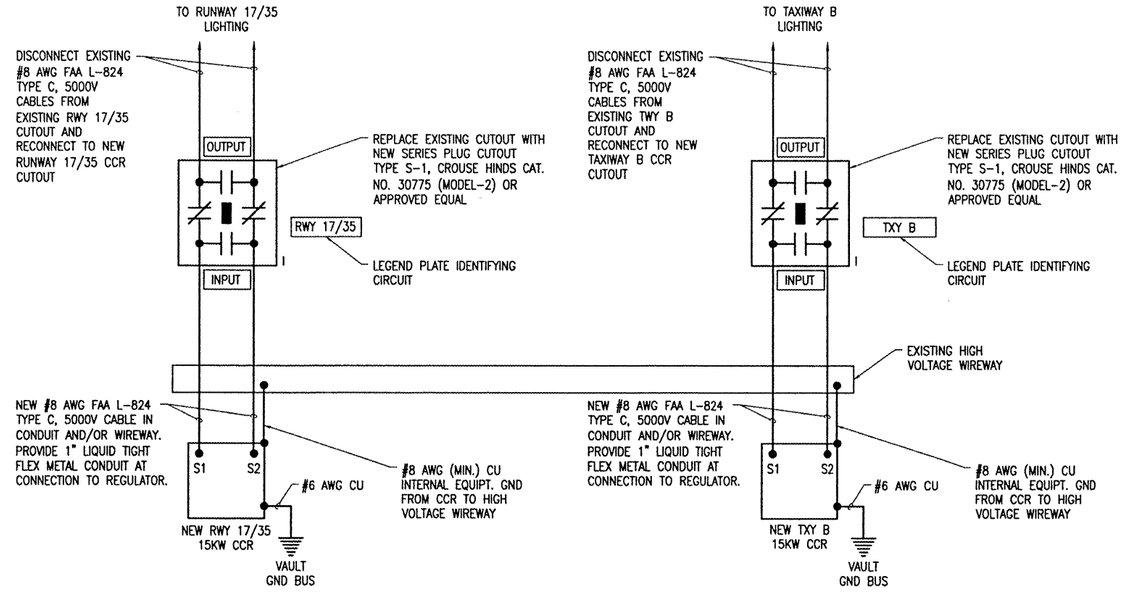
FEB 11, 2009 7:48 AM HAGLOOO382
N:\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\E-601.DWG - Work



SERIES PLUG CUTOUT MOUNTING DETAIL

NOT TO SCALE (TYPICAL FOR FOR TAXIWAY B CCR & RUNWAY 17/35 CCR)

PROVIDE WARNING SIGN ON EACH VAULT ROOM DOOR LABELED "DANGER – HIGH VOLTAGE – KEEP OUT" PER THE REQUIREMENTS OF NEC 110.34 (C). (PROVIDE 2 WARNING SIGNS).



HIGH VOLTAGE WIRING SCHEMATIC

NOTES

1. PROVIDE PHENOLIC ENGRAVED LEGEND PLATES FOR NEW CONSTANT CURRENT REGULATORS NOTING THE RESPECTIVE RUNWAY/TAXIWAY SERVED.
2. THE NEW PLUG CUTOUT SHALL BE FURNISHED WITH A PHENOLIC ENGRAVED LEGEND PLATE THAT IDENTIFIES THE RESPECTIVE RUNWAY/TAXIWAY CIRCUIT OR REGULATOR. INCLUDE AN ADDITIONAL LEGEND PLATE LABELED "CAUTION OPERATE CUTOUTS WITH CCR SHUT OFF".
3. PROVIDE ADEQUATE WORKING SPACE IN FRONT OF EACH CUTOUT ENCLOSURE TO MEET NEC CLEARANCE REQUIREMENTS.
4. 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.
5. 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.
6. HIGH VOLTAGE & LOW VOLTAGE CIRCUITS SHALL NOT BE INSTALLED IN THE SAME WIREWAY.

LEGEND

"I" DENOTES PLUG CUTOUT WITH PLUG INSERTED

"P" DENOTES PLUG CUTOUT WITH PLUG PULLED

"CCR" DENOTES CONSTANT CURRENT REGULATOR

DATE	REVISION	BY

ST. LOUIS REGIONAL AIRPORT
St.LouisRegional airport
EAST ALTON, ILLINOIS
IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-842

hgl Project No. 83706RWYD 0800
Filename E-602.DWG
Scale NOT TO SCALE
Date 07/09/08

LAYOUT	PJG/KNL	06/18/08
DRAWN	PJG	06/18/08
REVIEWED	KNL/CAH	07/11/08

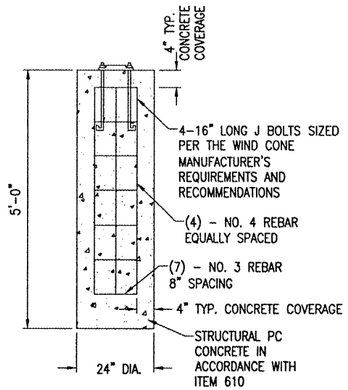
HANSON
Hanson Professional Services Inc.
1525 S. Sixth Street
Springfield, Illinois 62703-2886
Offices Nationwide

RUNWAY SAFETY AREA IMPROVEMENTS

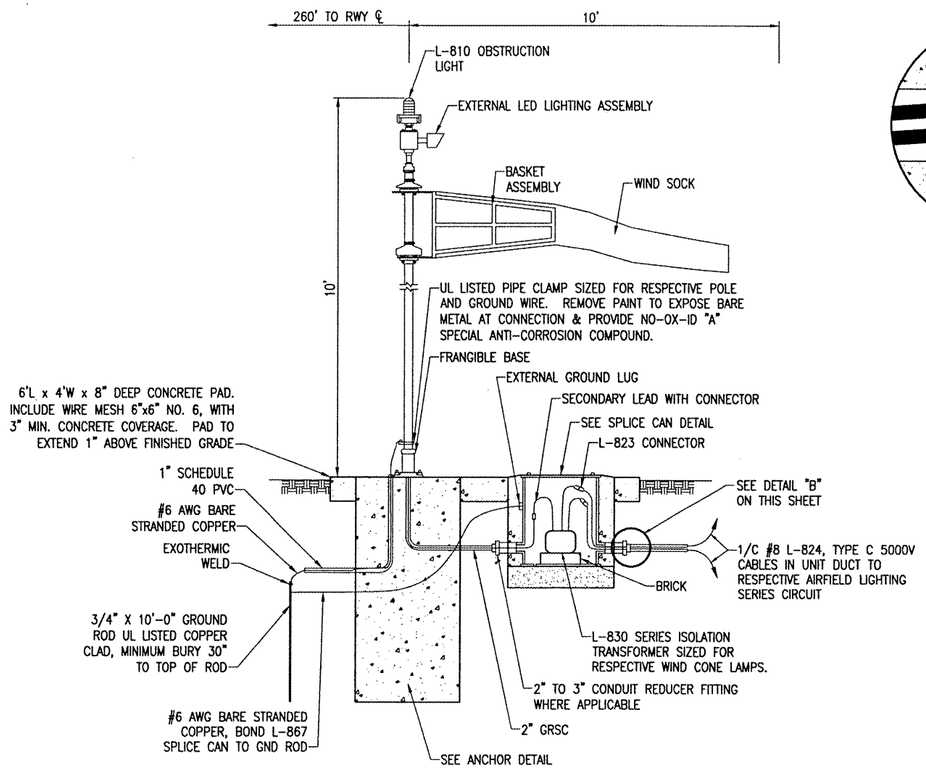
HIGH VOLTAGE WIRING SCHEMATIC

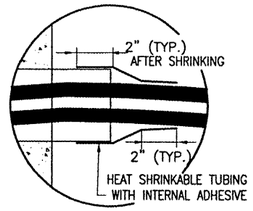
51
51 of 81 sheets

FEB 11, 2009 7:49 AM HAGLOOO382
J:\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\E-602.DWG - Work



ANCHORING DETAIL
"NOT TO SCALE"



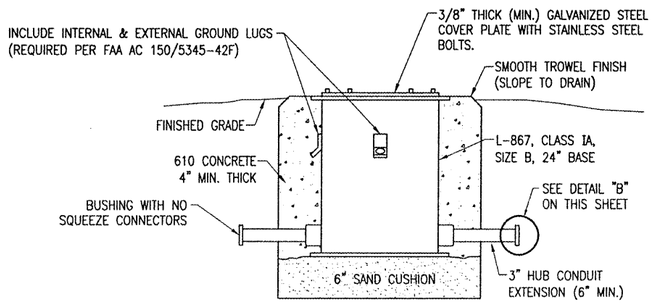


DETAIL "B"
(NOT TO SCALE)

NOTES

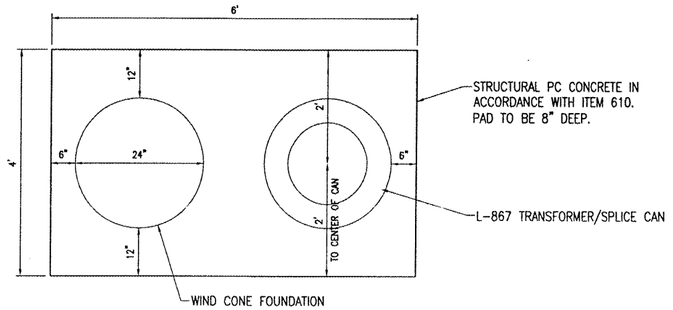
1. WIND CONES SHALL INCLUDE CONSTANT-BRIGHTNESS SERIES CIRCUIT POWER ADAPTER. SEE SPECIAL PROVISION SPECS.
2. WIND CONES SHALL BE PAID FOR UNDER ITEM AR107408 L-806 WIND CONE - 8' LIGHTED PER EACH.

EXTERNALLY LIGHTED L806 WIND CONE (SERIES CIRCUIT TYPE)
"NOT TO SCALE"



SPLICE CAN DETAIL
(NOT TO SCALE)

INCLUDE INTERNAL AND EXTERNAL GROUND LUGS



CONCRETE PAD PLAN VIEW
(NOT TO SCALE)

FEB 11, 2009 7:49 AM HAGLOOO382
I:\AIRPORTS\STLOUIS\837-06RMYO\AIRPORT\SHEETS\E-502.DWG - ELEC DETAILS

DATE	REVISION	BY

ST. LOUIS REGIONAL AIRPORT
EAST ALTON, ILLINOIS
IL PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

HSI Project No.	837068RMYO 0800	
Filename	E-502.DWG	
Scale	NOT TO SCALE	
Date	07/09/08	
LAYOUT	KNL	07/07/08
DRAWN	MV	07/07/08
REVIEWED	CAH	07/11/08

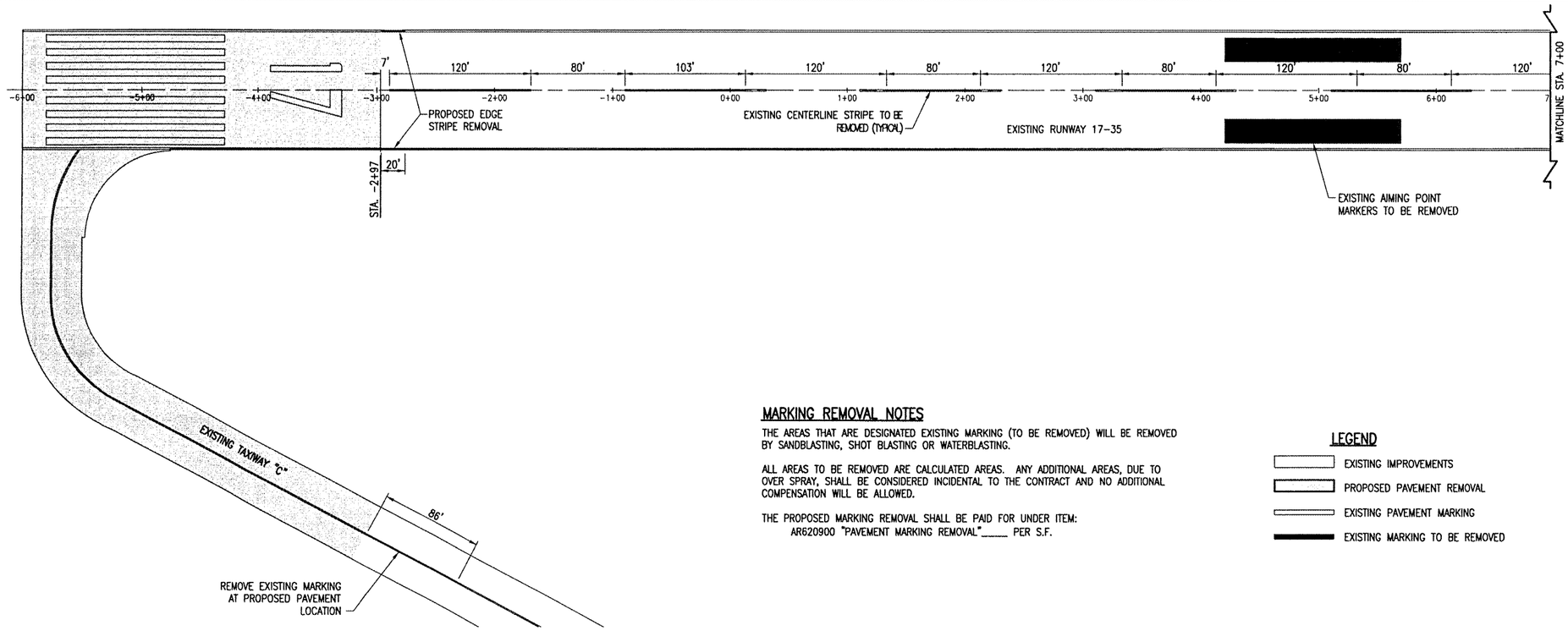
HANSON
Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2886
Offices Nationwide

RUNWAY SAFETY AREA INPROVEMENTS

WIND CONE ELEVATION DETAIL

52

SR085



MARKING REMOVAL NOTES

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

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.

THE PROPOSED MARKING REMOVAL SHALL BE PAID FOR UNDER ITEM:
AR620900 "PAVEMENT MARKING REMOVAL"____ PER S.F.

LEGEND

- EXISTING IMPROVEMENTS
- PROPOSED PAVEMENT REMOVAL
- EXISTING PAVEMENT MARKING
- EXISTING MARKING TO BE REMOVED

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

DATE	REVISION	BY

ST. LOUIS REGIONAL AIRPORT
St.LouisRegional AIRPORT
EAST ALTON, ILLINOIS
A.I.P. PROJ.: 3-17-0002-842
IL. PROJ.: ALN-3825

HSI Project No. 837060RWYD_0800
Filename R-151MRK.DWG
Scale 1"=50'
Date 02/12/08

LAYOUT	MDR	02/12/08
DRAWN	MDR	02/12/08
REVIEWED	CAH	07/11/08

HANSON
Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2866
Offices Nationwide

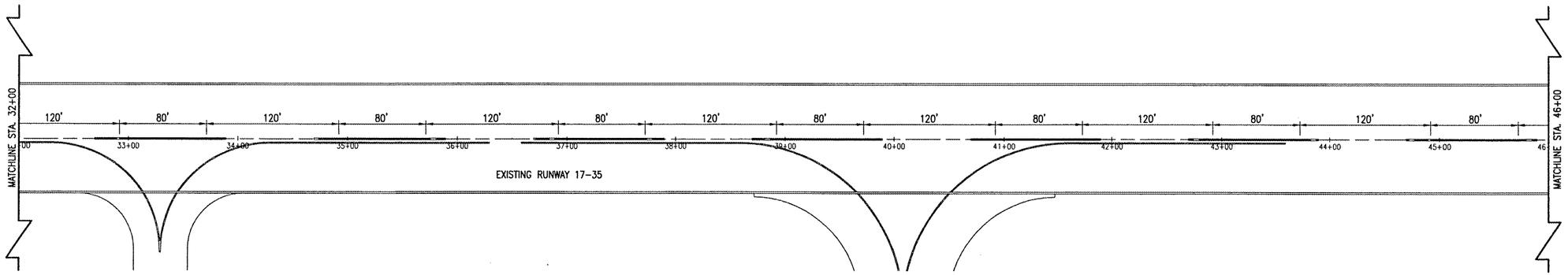
RUNWAY SAFETY AREA IMPROVEMENTS

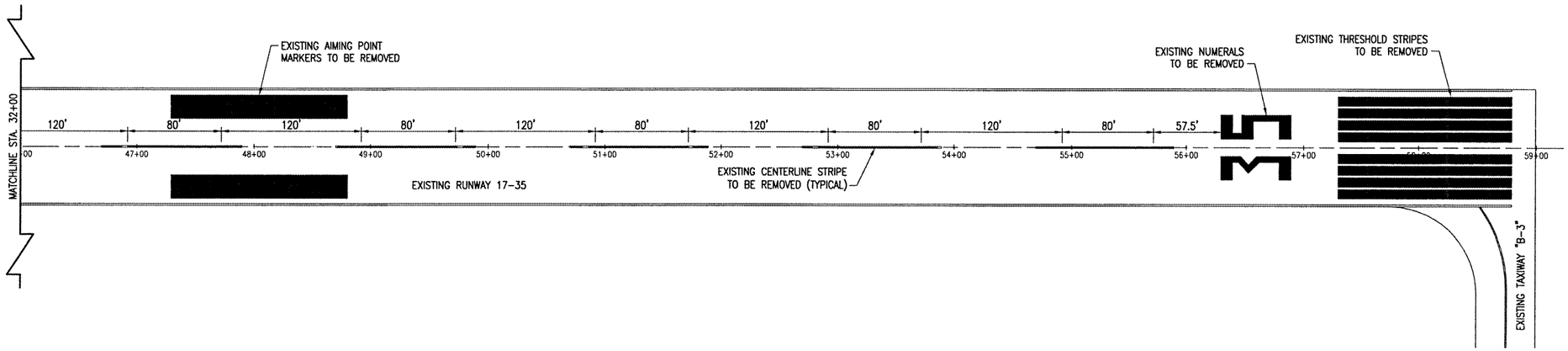
EXISTING PAVEMENT MARKING REMOVAL STA. -6+00 TO STA. 32+00

53
53 of 81 sheets

FEB 11, 2009 7:49 AM HAGLOOB382
I:\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\R-151MRK.DWG - STA. -6+00 TO STA. 20+00

SR085





MARKING REMOVAL QUANTITIES

DESCRIPTION	UNIT AREA	NO. REQUIRED	TOTAL AREA
THRESHOLD STRIPE	1,200	8	9,600
NUMERAL 3	634	1	634
NUMERAL 5	750	1	750
AIMING POINT MARKER	3,000	4	12,000
CENTERLINE STRIPE	120	27	3,240
CENTERLINE STRIPE	154.5	1	154.5
CENTERLINE STRIPE	180	1	180
EDGE STRIPE	30	2	60
		TOTAL WHITE	26,618.5 S.F.
TAXIWAY CENTERLINE	86	1	86
		TOTAL YELLOW	86 S.F.
		TOTAL MARKING	26,704.5 S.F.

LEGEND

- EXISTING IMPROVEMENTS
- PROPOSED PAVEMENT REMOVAL
- EXISTING PAVEMENT MARKING
- EXISTING MARKING TO BE REMOVED

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

DATE	REVISION	BY

ST. LOUIS REGIONAL AIRPORT
EAST ALTON, ILLINOIS
A.I.P. PROJ.: 3-17-0002-B42
IL. PROJ.: ALN-3825

HEI Project No. 837068RWYD 0800
Filename R-151MRK.DWG
Scale 1"=50'
Date 02/12/08

LAYOUT	MDR	02/12/08
DRAWN	MDR	02/12/08
REVIEWED	CAH	07/11/08

HANSON
Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2866
Offices Nationwide

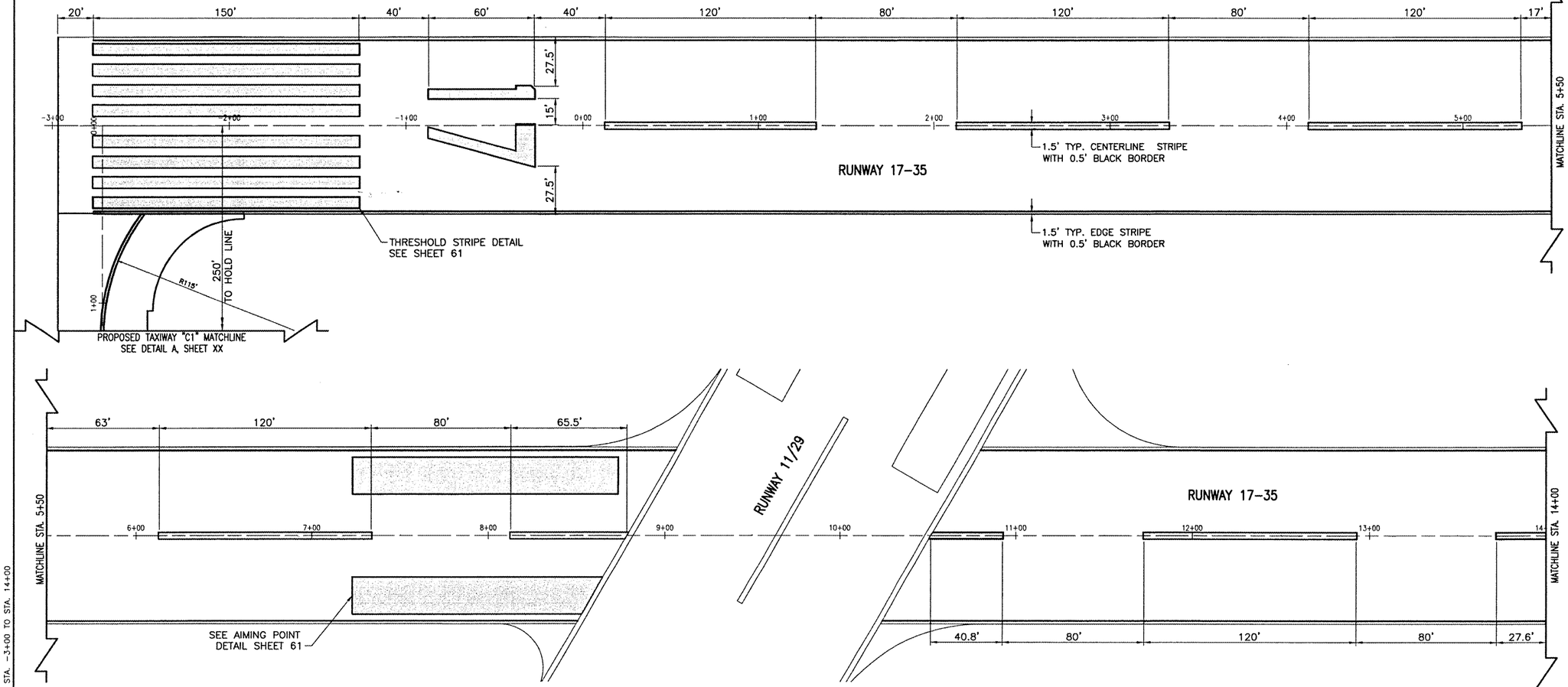
RUNWAY SAFETY AREA IMPROVEMENTS

EXISTING PAVEMENT MARKING REMOVAL
STA. 32+00 TO STA. 59+00

54
54 of 81 sheets

FEB 11, 2009 7:50 AM HAGLOOO382
I:\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\R-151MRK.DWG - STA. 32+00 TO STA. 59+00

SR085



620-PAVEMENT MARKING-WATERBORNE NOTES

THE PAVEMENT MARKING-WATERBORNE (620) SHALL BE PLACED IN ACCORDANCE WITH ITEM 620 "PAVEMENT MARKING" AS STATED ON PAGE 77 OF THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, ADOPTED JULY 1, 2004.

THIS ITEM SHALL CONSIST OF RUNWAY AND HOLDING LINE MARKING IN ACCORDANCE WITH THESE SPECIFICATIONS AND AT THE LOCATIONS SHOWN ON THE CONSTRUCTION PLANS. ALL RUNWAY MARKING WILL BE WHITE IN COLOR AND THE HOLDING LINE MARKING WILL BE YELLOW IN COLOR WITH A BLACK OUTLINE. THE PROPOSED PAVEMENT MARKING WILL BE APPLIED IN TWO APPLICATIONS.

ANY MATERIAL DELIVERED THAT FAILS TO MEET THE SPECIFICATIONS SHALL BE DISPOSED OF BY THE VENDOR AND IMMEDIATELY REPLACED WITH ACCEPTABLE MATERIAL ENTIRELY AT THE VENDOR'S EXPENSE, INCLUDING HANDLING AND TRANSPORTATION CHARGES.

ALL NUMERALS EXCEPT FOR THE NUMERAL ELEVEN ARE HORIZONTALLY SPACED 15 FEET APART.

DOUBLE DIGIT NUMERAL DESIGNATIONS ARE CENTERED ON THE RUNWAY PAVEMENT CENTERLINE BASED ON THE CENTER OF THE OUTER EDGES OF THE TWO NUMERALS.

ALL CURING COMPOUND WILL BE CLEANED FROM CONCRETE PAVEMENT PRIOR TO APPLYING PAINT. NO EXCEPTIONS.

ALL PROPOSED MARKING WILL BE COMPLETED IN ACCORDANCE WITH THE DETAILS SHOWN ON THE CONSTRUCTION PLANS.

GLASS BEADS SHALL BE REQUIRED ONLY ON THE SECOND APPLICATION.

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

THE PROPOSED MARKING WILL BE PAID FOR UNDER ITEM:
AR620520 PAVEMENT MARKING-WATERBORNE ____ PER S.F.

LEGEND

- EXISTING IMPROVEMENTS
- PROPOSED PAVEMENT
- PROPOSED PAVEMENT MARKING

0' 15' 30' 60'
HALF SIZE SCALE: 1"= 60'
FULL SIZE SCALE: 1"= 30'

DATE	REVISION	BY

ST. LOUIS REGIONAL AIRPORT
EAST ALTON, ILLINOIS
A.I.P. PROJ.: 3-17-0002-842
IL. PROJ.: ALN-3825

H:_Project No.: 837066RWY0_0800
Filename: R-152MRK.DWG
Scale: 1"=30'
Date: 02/12/08

LAYOUT	MDR	02/12/08
DRAWN	MDR	02/12/08
REVIEWED	CAH	07/11/08

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

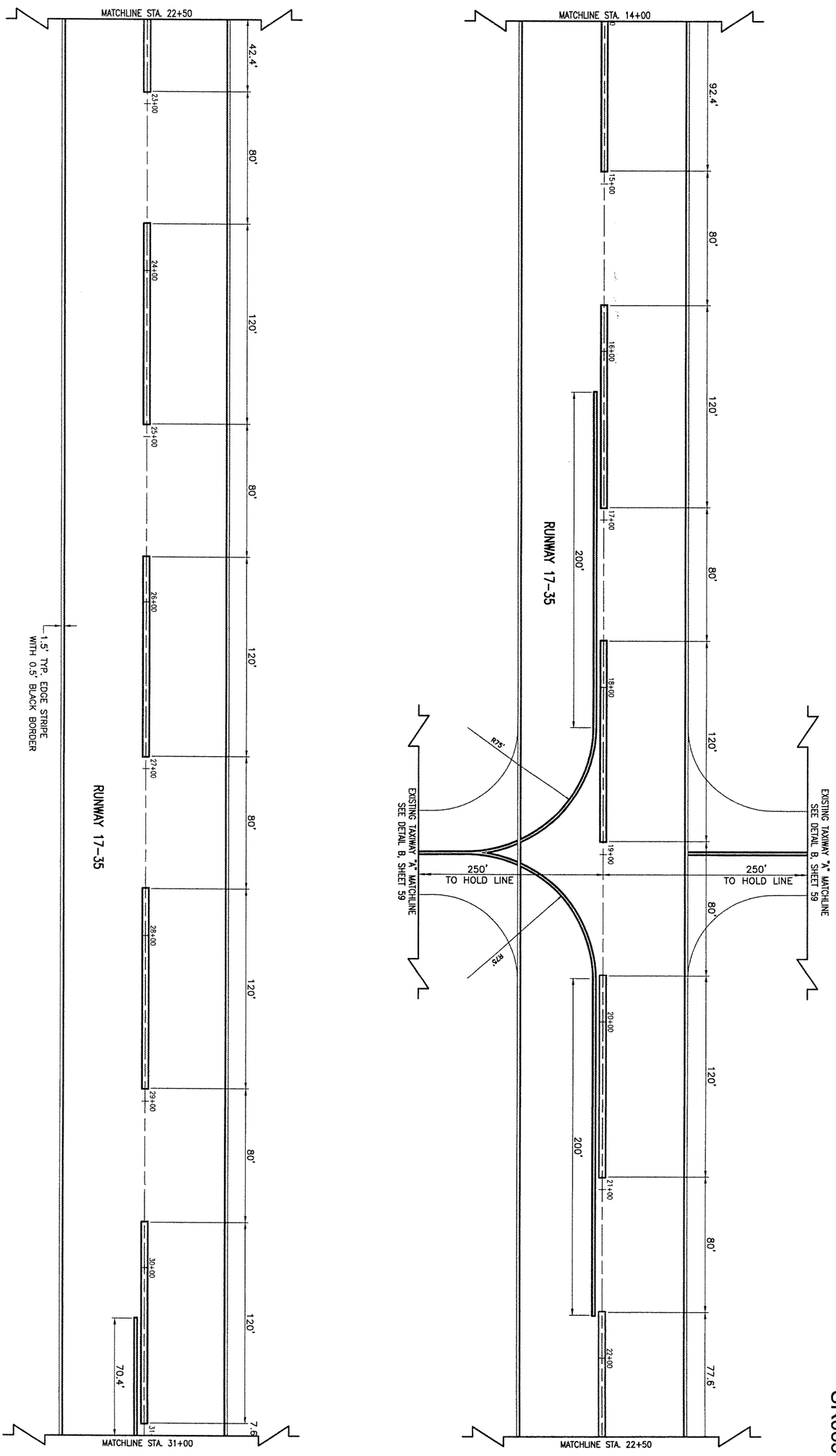
RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED PAVEMENT MARKING PLAN
STA. -2+97 TO STA. 14+00

55
55 of 81 sheets

FEB 11, 2009 7:50 AM HAGLOO382
J:\AIRPORTS\STLOUIS\837-06RWY0\AIRPORT\SHEETS\R-152MRK.DWG - STA. -3+00 TO STA. 14+00

FEB 11, 2009 7:50 AM HAGL000382
I:\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\R-152MRK.DWG - STA. 14+00 TO STA. 31+00



SR085

56 of 81 sheets

56

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED PAVEMENT MARKING PLAN
STA. 14+00 TO STA. 31+00

HANSON

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

HPS Project No.	83706RWYD 0800
Filename	R-152MRK.DWG
Scale	1"=30'
Date	02/12/08

LAYOUT	MDR	02/12/08
DRAWN	MDR	02/12/08
REVIEWED	CAH	07/11/08

ST. LOUIS REGIONAL AIRPORT

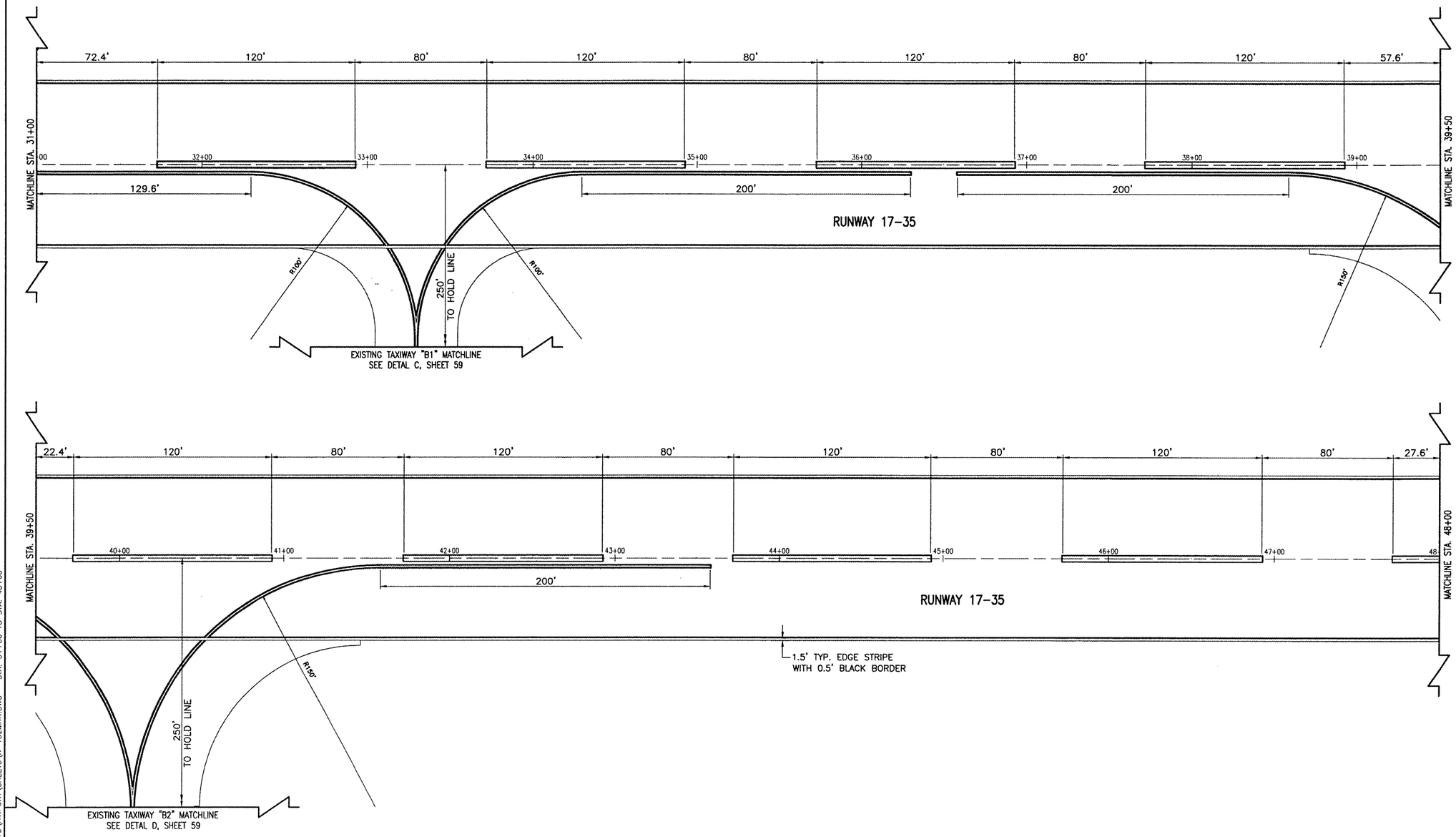
St.LouisRegional AIRPORT

EAST ALTON, ILLINOIS

IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

DATE	REVISION	BY

SR085



LEGEND

- EXISTING IMPROVEMENTS
- PROPOSED PAVEMENT
- PROPOSED PAVEMENT MARKING

0' 15' 30' 60'

HALF SIZE SCALE: 1"= 60'
FULL SIZE SCALE: 1"= 30'

FEB 11, 2009 7:50 AM HAGL000382
I:\AIRPORTS\STLOUIS\837-08RWY0\AIRPORT\SHEETS\R-152MRK.DWG - STA. 31+00 TO STA. 48+00

ST. LOUIS REGIONAL AIRPORT
EAST ALTON, ILLINOIS
IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

DATE	REVISION	BY

HSI Project No. 837.08RWY0.0800
Filename R-152MRK.DWG
Scale 1"=30'
Date 02/12/08

LAYOUT	MDR	02/12/08
DRAWN	MDR	02/12/08
REVIEWED	CAH	07/11/08

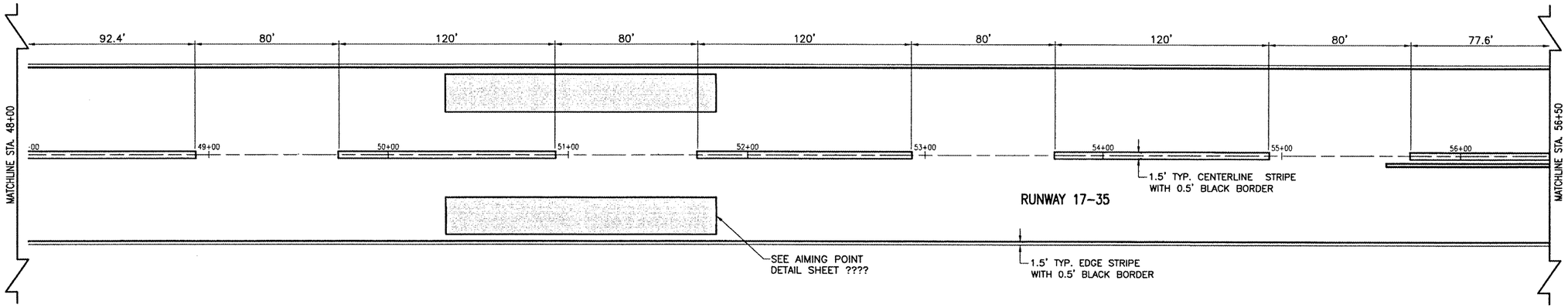
HANSON
Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2886
Offices Nationwide

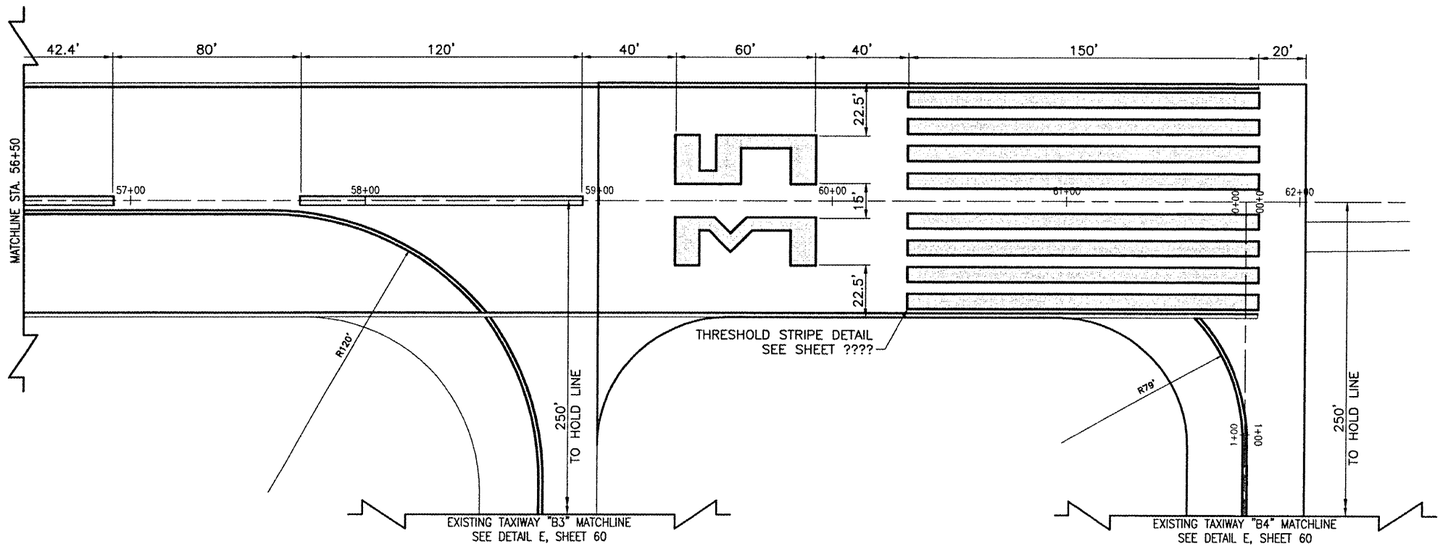
RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED PAVEMENT MARKING PLAN
STA. 31+00 TO STA. 48+00

57

SR085





LEGEND

- EXISTING IMPROVEMENTS
- PROPOSED PAVEMENT
- PROPOSED PAVEMENT MARKING

0' 15' 30' 60'

HALF SIZE SCALE: 1"= 60'
FULL SIZE SCALE: 1"= 30'

DATE	REVISION	BY

ST. LOUIS REGIONAL AIRPORT

St. Louis Regional Airport

EAST ALTON, ILLINOIS

IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

HG Project No. 8370GRWYD 0800
Filename R-15_2MRK.DWG
Scale 1"=30'
Date 02/12/08

LAYOUT	MDR	02/12/08
DRAWN	MDR	02/12/08
REVIEWED	CAH	07/11/08

HANSON

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

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED PAVEMENT MARKING PLAN
STA. 48+00 TO STA. 62+03

58

58 of 81 sheets

FEB 11, 2009 7:51 AM HAGLOOO382
J:\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\R-15_2MRK.DWG - STA. 48+00 TO STA. 62+02.41

SR085

DETAIL "A"
"NOT TO SCALE"

DETAIL "B"
"NOT TO SCALE"

DETAIL "C"
"NOT TO SCALE"

DETAIL "D"
"NOT TO SCALE"

DETAIL "I"
"NOT TO SCALE"

LEGEND

- EXISTING IMPROVEMENTS
- PROPOSED PAVEMENT
- PROPOSED PAVEMENT MARKING

DATE	REVISION	BY

ST. LOUIS REGIONAL AIRPORT

St.LouisRegional AIRPORT

EAST ALTON, ILLINOIS

IL PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-842

HG Project No. 837068RWYD 0800
Filename R-152MRK.DWG
Scale 1"=50'
Date 02/12/08

LAYOUT	MDR	02/12/08
DRAWN	MDR	02/12/08
REVIEWED	CAH	07/11/08

HANSON

Hanson Professional Services Inc.
1525 S. 6th Street, Suite 200
Springfield, Illinois 62703-2886
Offices Nationwide

RUNWAY SAFETY AREA IMPROVEMENTS

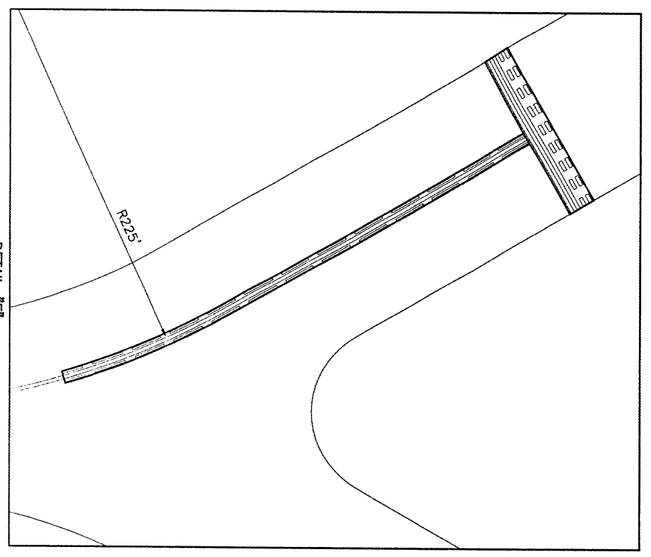
PROPOSED TAXIWAY ENHANCED MARKING DETAILS, SHEET 1

59

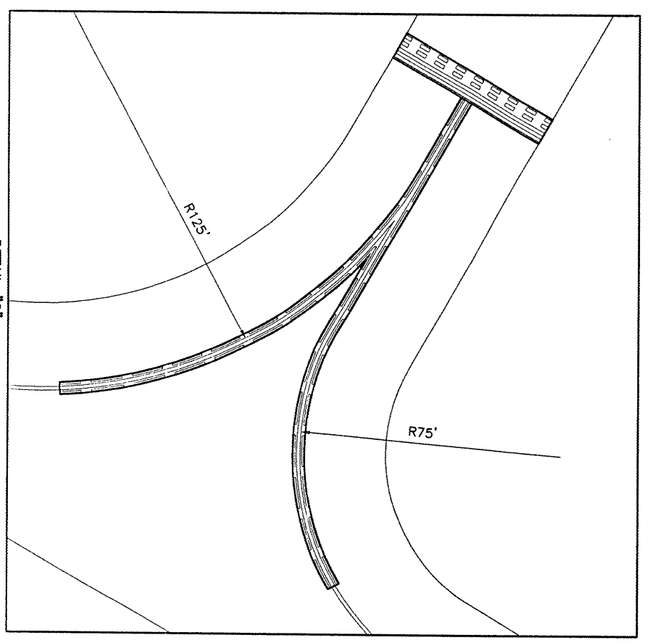
59 of 81 sheets

FEB 11, 2009 7:51 AM HAGLOOO382
N:\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\R-152MRK.DWG - TWY C AND A

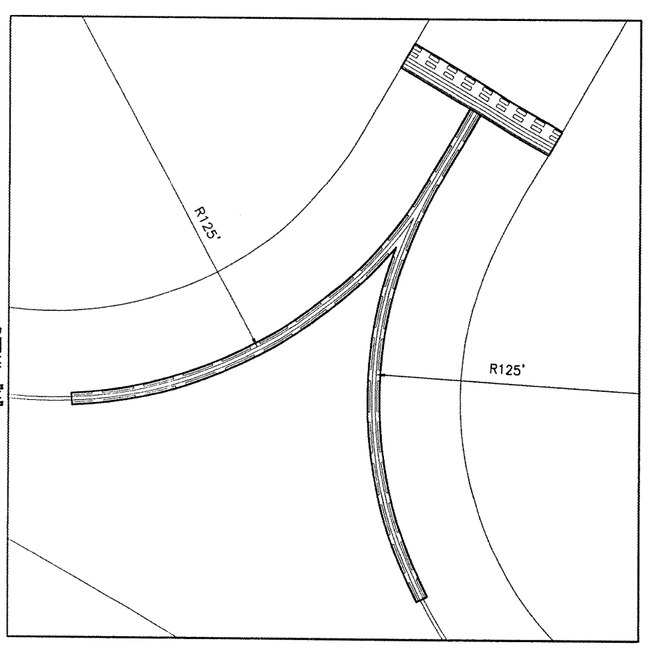
FEB 11, 2009 7:52 AM HAGLO00382
...AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\R-152MRK.DWG - TWY B



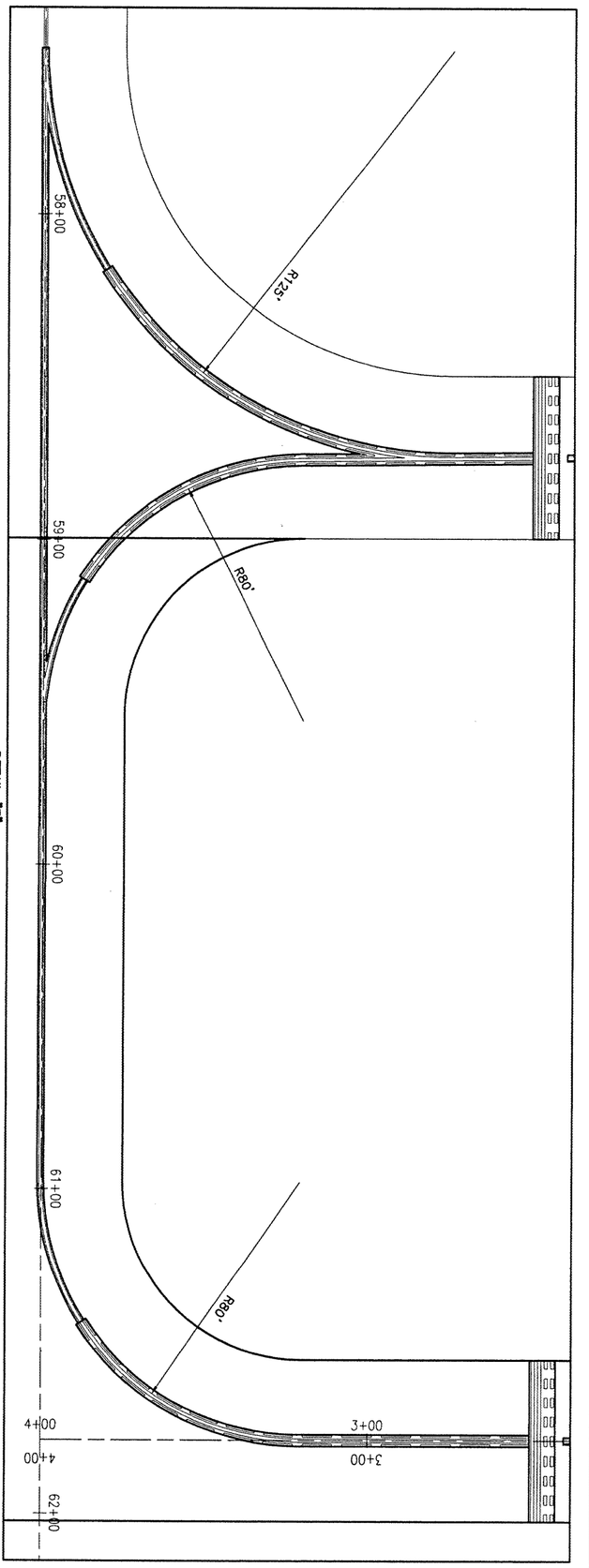
DETAIL "F"
"NOT TO SCALE"



DETAIL "G"
"NOT TO SCALE"



DETAIL "H"
"NOT TO SCALE"



DETAIL "E"
"NOT TO SCALE"

LEGEND

EXISTING IMPROVEMENTS

PROPOSED PAVEMENT

PROPOSED PAVEMENT MARKING

SR085

60 OF 81 SHEETS

60

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED TAXIWAY ENHANCED MARKING DETAILS, SHEET 2

HANSON

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

HD Project No.	83706RWYD 0800
Filename	R-152MRK.DWG
Scale	1"=50'
Date	02/12/08

LAYOUT	MDR	02/12/08
DRAWN	MDR	02/12/08
REVIEWED	CAH	07/11/08

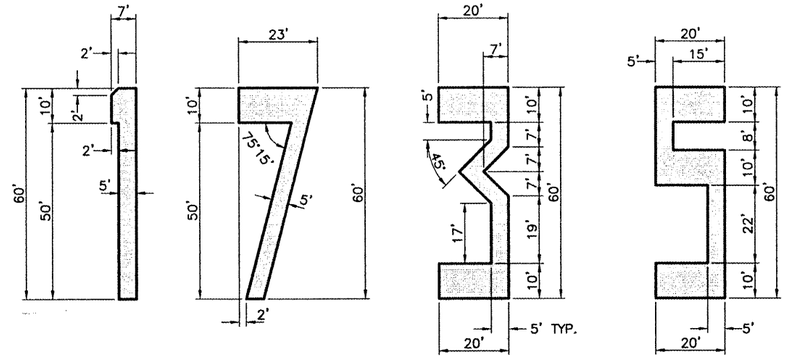
ST. LOUIS REGIONAL AIRPORT

St.LouisRegional AIRPORT

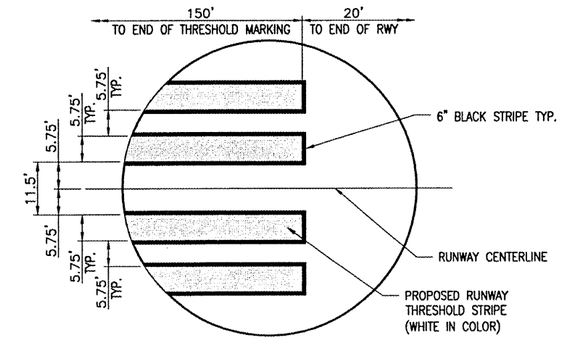
EAST ALTON, ILLINOIS

IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

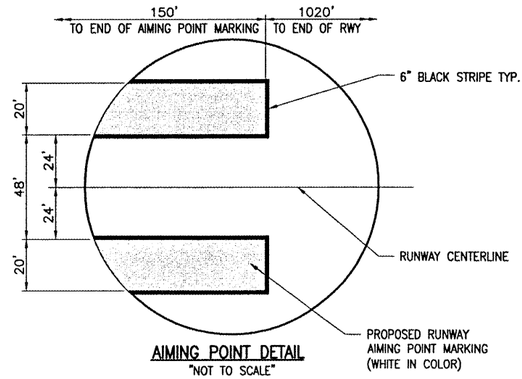
DATE	REVISION	BY



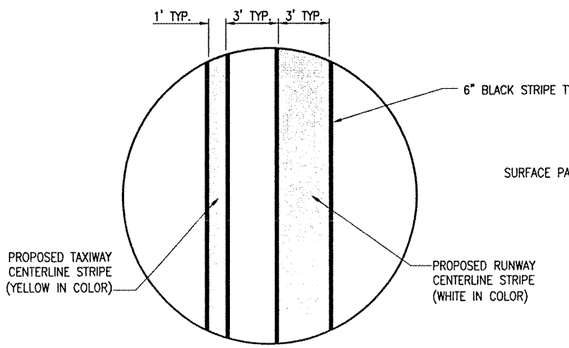
318 S.F. 473 S.F. 634 S.F. 750 S.F.



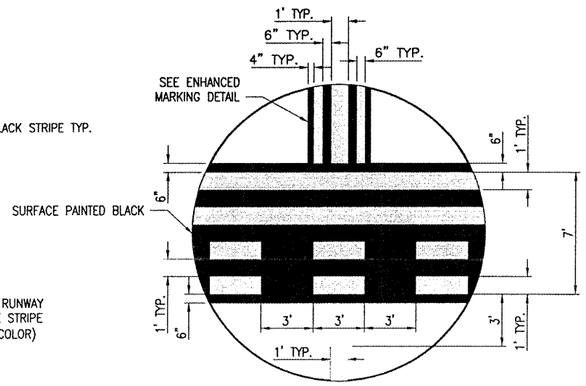
THRESHOLD STRIPE DETAIL
"NOT TO SCALE"



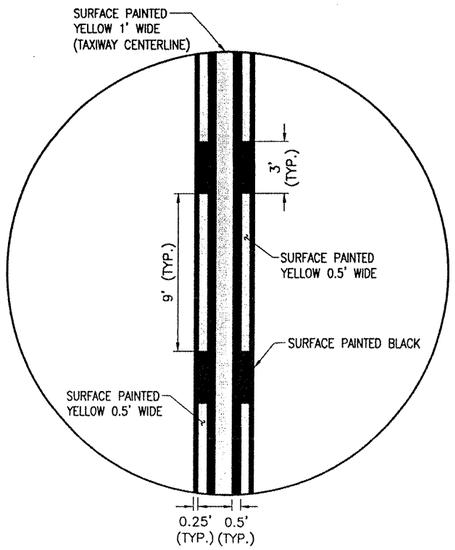
AIMING POINT DETAIL
"NOT TO SCALE"



TAXIWAY CENTERLINE LEAD-IN DETAIL
"NOT TO SCALE"



HOLDING POSITION DETAIL
"NOT TO SCALE"



ENHANCED TAXIWAY MARKING DETAIL
"NOT TO SCALE"

MARKING QUANTITIES

DESCRIPTION	UNIT AREA	NO. REQUIRED	TOTAL AREA
CENTERLINE STRIPE	180	28	5,040
CENTERLINE STRIPE	159	1	159
NUMBER 1	318	1	318
NUMBER 3	634	1	634
NUMBER 5	750	1	750
NUMBER 7	473	1	473
THRESHOLD STRIPE	862.5	16	13,800
AIMING POINT MARKER	3,000	4	12,000
EDGE STRIPE	9,430	2	18,860
		TOTAL WHITE	52,034
HOLDING LINE	150	11	1,650
HOLDING LINE	225	2	450
ENHANCED MARKING	4,692	1	4,692
TAXIWAY CENTERLINE	4,139	1	4,139
		TOTAL YELLOW	10,931
		TOTAL REFLECTIVE MARKING	62,965
CENTERLINE STRIPE	122.5	28	3,430
CENTERLINE STRIPE	110	1	110
NUMBER 1	67	1	67
NUMBER 3	102	1	102
NUMBER 5	111	1	111
NUMBER 7	87	1	87
THRESHOLD STRIPE	156.75	16	2,508
AIMING POINT MARKER	171	3.9	667
EDGE STRIPE	6,289.5	2	12,579
HOLDING LINE	250	11	2,750
HOLDING LINE	375	2	750
ENHANCED MARKING	4,665	1	4,665
TAXIWAY CENTERLINE	4,139	1	4,139
		TOTAL BLACK	31,965
		TOTAL MARKING	94,930

ENHANCED MARKING NOTE:

THE ENHANCED TAXIWAY MARKING WILL BE CONSTRUCTED TO THE DIMINSIONS AND COLORS AS SHOWN ON THE "ENHANCED TAXIWAY MARKING DETAIL" AS SHOWN ON THIS SHEET.

THE ENHANCED TAXIWAY MARKING WILL START AT THE EDGE OF THE ASSOCIATED HOLD LINE'S BLACK BORDER. THE ENHANCED MARKING WILL EXTEND FOR 150' FROM THIS POINT.

IN THE CASE WHERE THE TAXIWAY CENTERLINE FOLLOWS A RADIUS, THE ENHANCED MARKING WILL FOLLOW THE RADIUS AS SHOWN ON THE CORRESPONDING DETAILS. THE 150' WILL BE MEASURED ALONG THE CENTER OF THE TAXIWAY CENTER LINE AND WILL EXTEND FOR AN OVER ALL LENGTH OF 150'

DATE	REVISION	BY

ST. LOUIS REGIONAL AIRPORT
EAST ALTON, ILLINOIS
A.I.P. PROJ.: 3-17-0002-B42
IL PROJ.: AUN-3825

HG Project No. 837068RWYD 0800
Filename R-152MRK.DWG
Scale NOT TO SCALE
Date 02/12/08

LAYOUT	MDR	02/12/08
DRAWN	MDR	02/12/08
REVIEWED	CAH	07/11/08

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

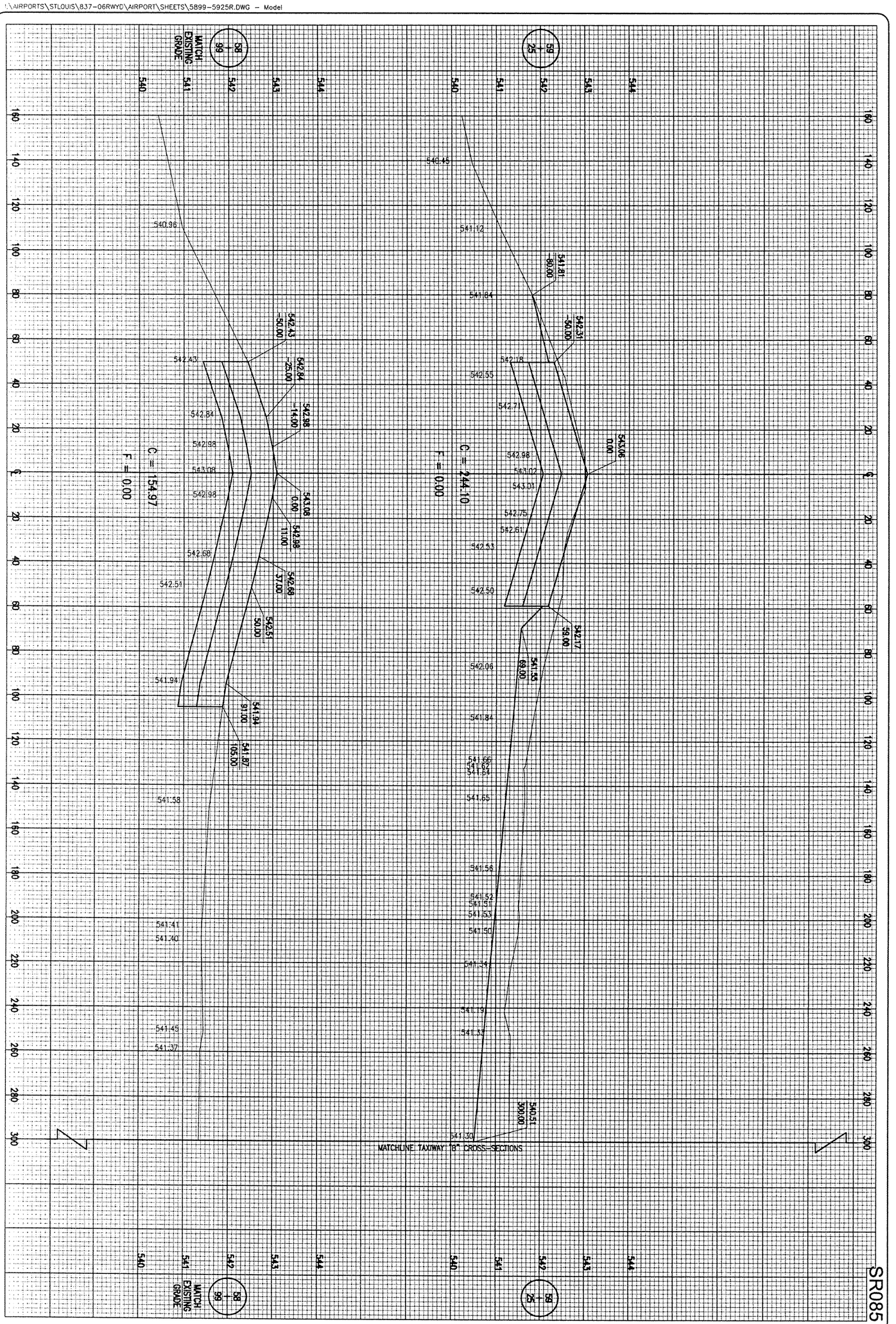
RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED MARKING DETAILS AND NOTES

61
61 of 81 sheets

FEB 11, 2009 7:52 AM HAGLOOO382
J:\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\R-152MRK.DWG -- DETAILS

FEB 11, 2009 7:52 AM HAGL000382
L:\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\5899-5925R.DWG - Model



62 of 81 sheets

62

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED CROSS-SECTIONS FOR RUNWAY END 35
STA. 58+99 TO STA. 59+25

HANSON

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

HEI Project No.	83706RWYD 0800
Filename	5899-5925R.DWG
Scale	H. 1"= 20' V. 1"= 1'
Date	05/19/08

LAYOUT	JEO	05/19/08
DRAWN	BAK	05/19/08
REVIEWED	CAH	07/11/08

ST. LOUIS REGIONAL AIRPORT

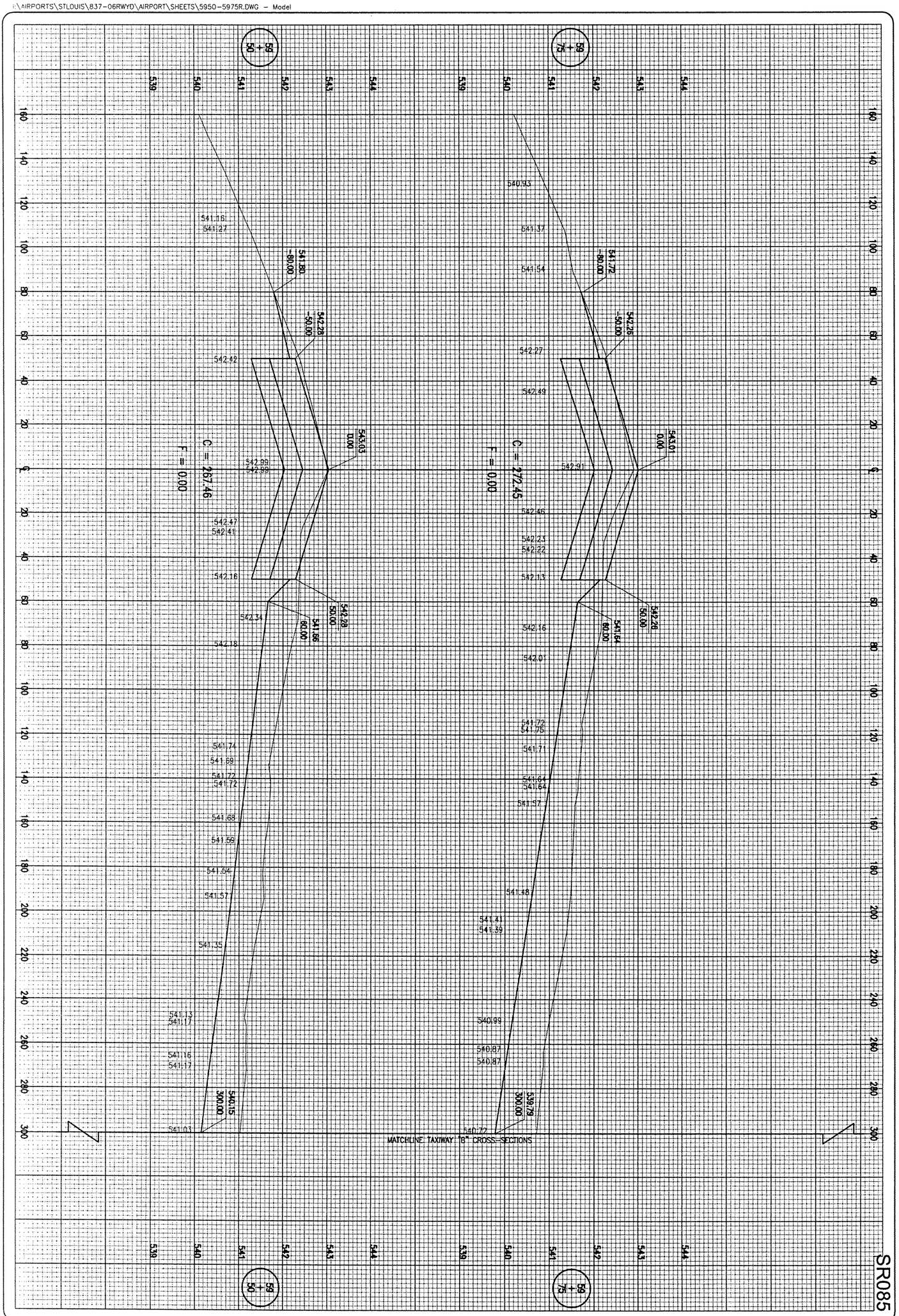
St.LouisRegional AIRPORT

EAST ALTON, ILLINOIS

IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

DATE	REVISION	BY

FEB 11, 2009 7:53 AM HAGL000382
I:\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\5950-5975R.DWG - Model



63 of 81 sheets

63

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED CROSS-SECTIONS FOR RUNWAY END 35 STA. 59+50 TO STA. 59+75

HANSON

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

HEI Project No.	83706RWYD 0800
Filename	5950-5975R.DWG
Scale	H. 1"= 20' V. 1"= 1'
Date	05/19/08

LAYOUT	JEO	05/19/08
DRAWN	BAK	05/19/08
REVIEWED	CAH	07/11/08

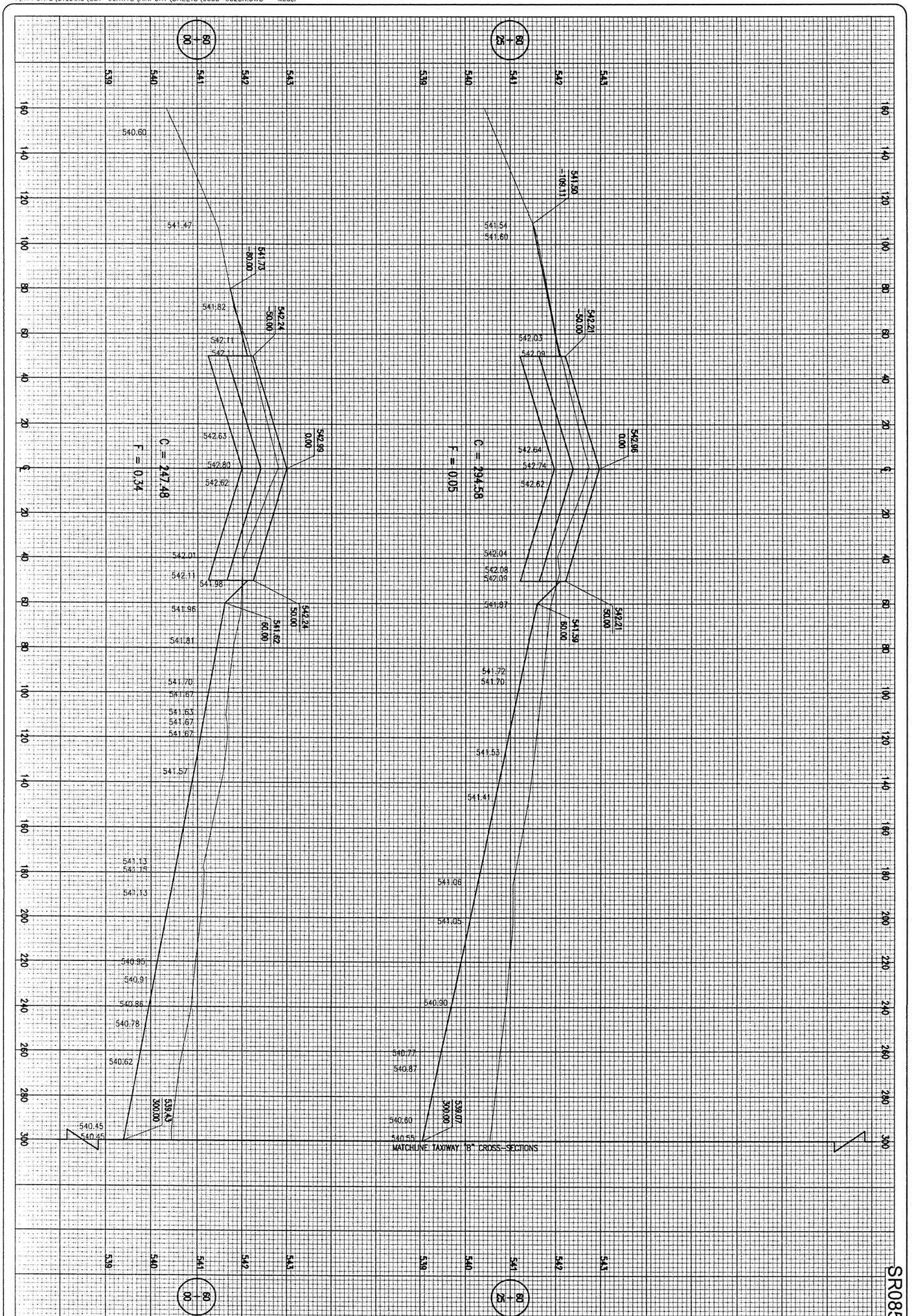
ST. LOUIS REGIONAL AIRPORT

St.LouisRegional AIRPORT

EAST ALTON, ILLINOIS

IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

DATE	REVISION	BY



SR085

64 of 81 sheets

64

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED CROSS-SECTIONS FOR RUNWAY END 35
STA. 60+00 TO STA. 60+25

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

HPI Project No.	83706RWYD 0800
Filename	6000-6025R.DWG
Scale	H. 1"= 20' V. 1"= 1'
Date	05/19/08

LAYOUT	JEO	05/19/08
DRAWN	BAK	05/19/08
REVIEWED	CAH	07/11/08

ST. LOUIS REGIONAL AIRPORT

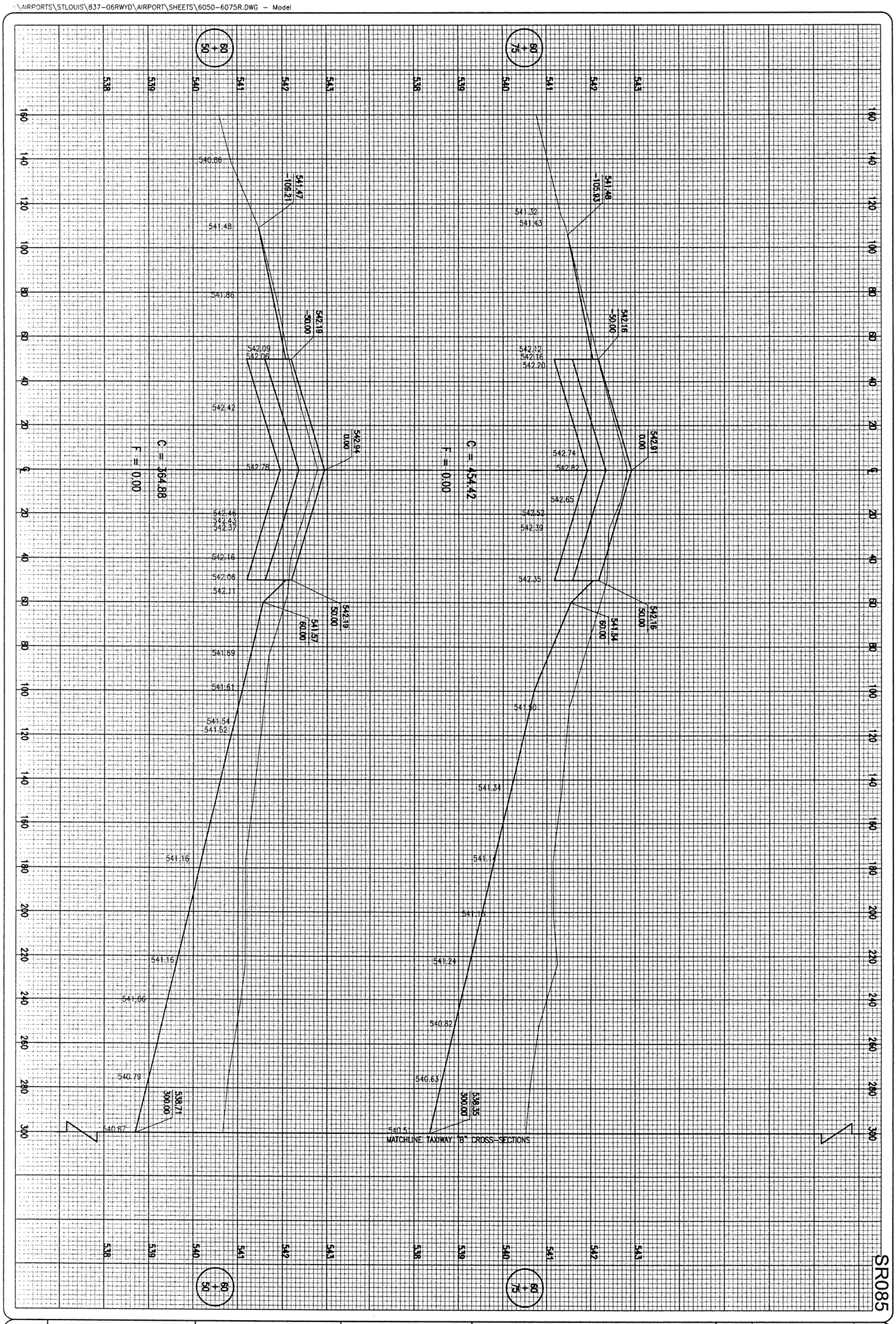
St.LouisRegional AIRPORT

EAST ALTON, ILLINOIS

IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

DATE	REVISION	BY

FEB 11, 2009 7:54 AM HAGL000382
\\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\6050-6075R.DWG - Model



65 of 81 Sheets

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED CROSS-SECTIONS
FOR RUNWAY END 35
STA. 60+50 TO STA. 60+75

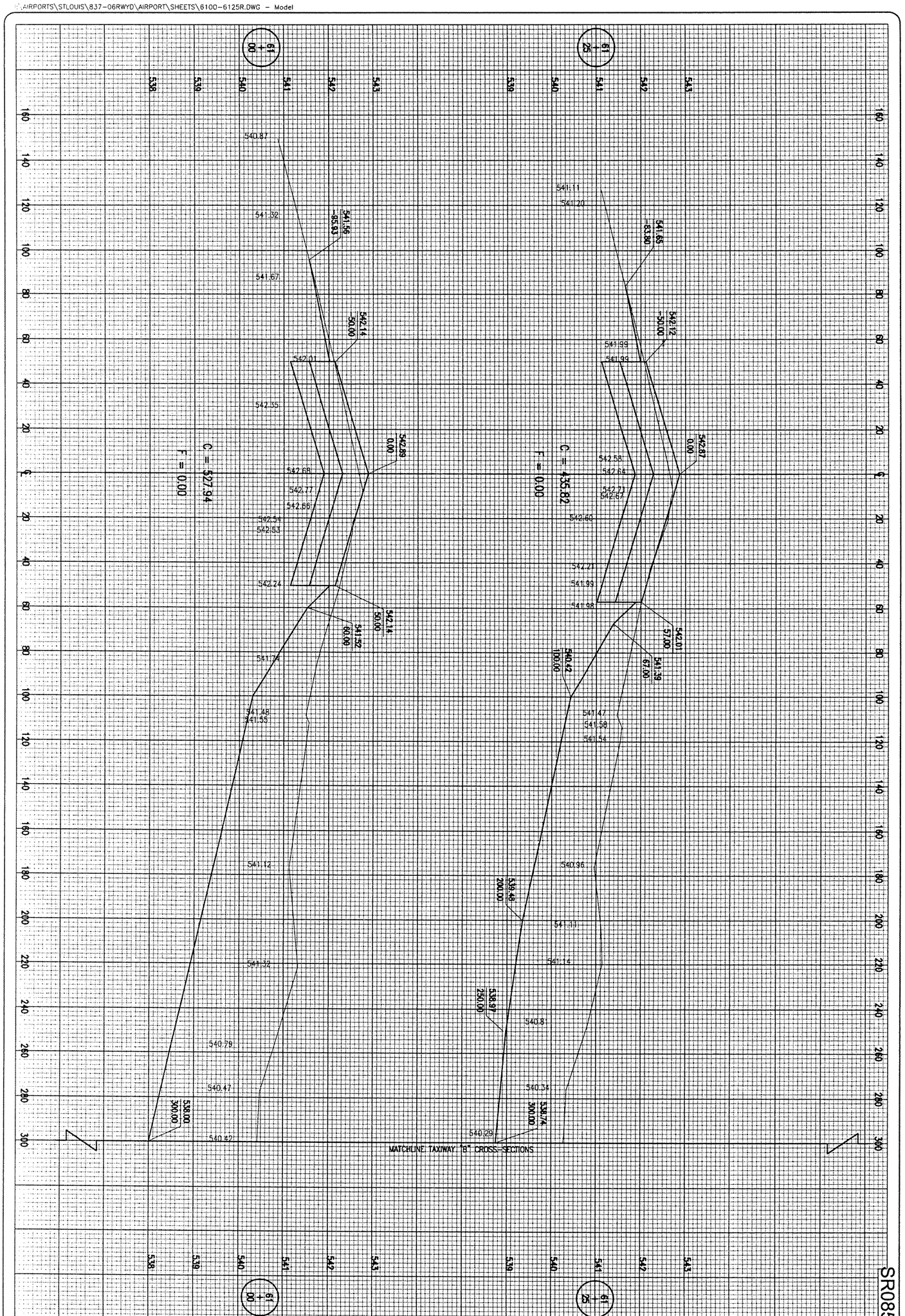
HANSON
Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2886
Offices Nationwide

HPS Project No.	83706RWYD 0800
Filename	6050-6075R.DWG
Scale	H. 1"= 20' V. 1"= 1'
Date	05/19/08

LAYOUT	JEO	05/19/08
DRAWN	BAK	05/19/08
REVIEWED	CAH	07/11/08

ST. LOUIS REGIONAL AIRPORT
St.LouisRegional AIRPORT
EAST ALTON, ILLINOIS
IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

DATE	REVISION	BY



66 of 81 sheets

66

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED CROSS-SECTIONS FOR RUNWAY END 35 STA. 61+00 TO STA. 61+25

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

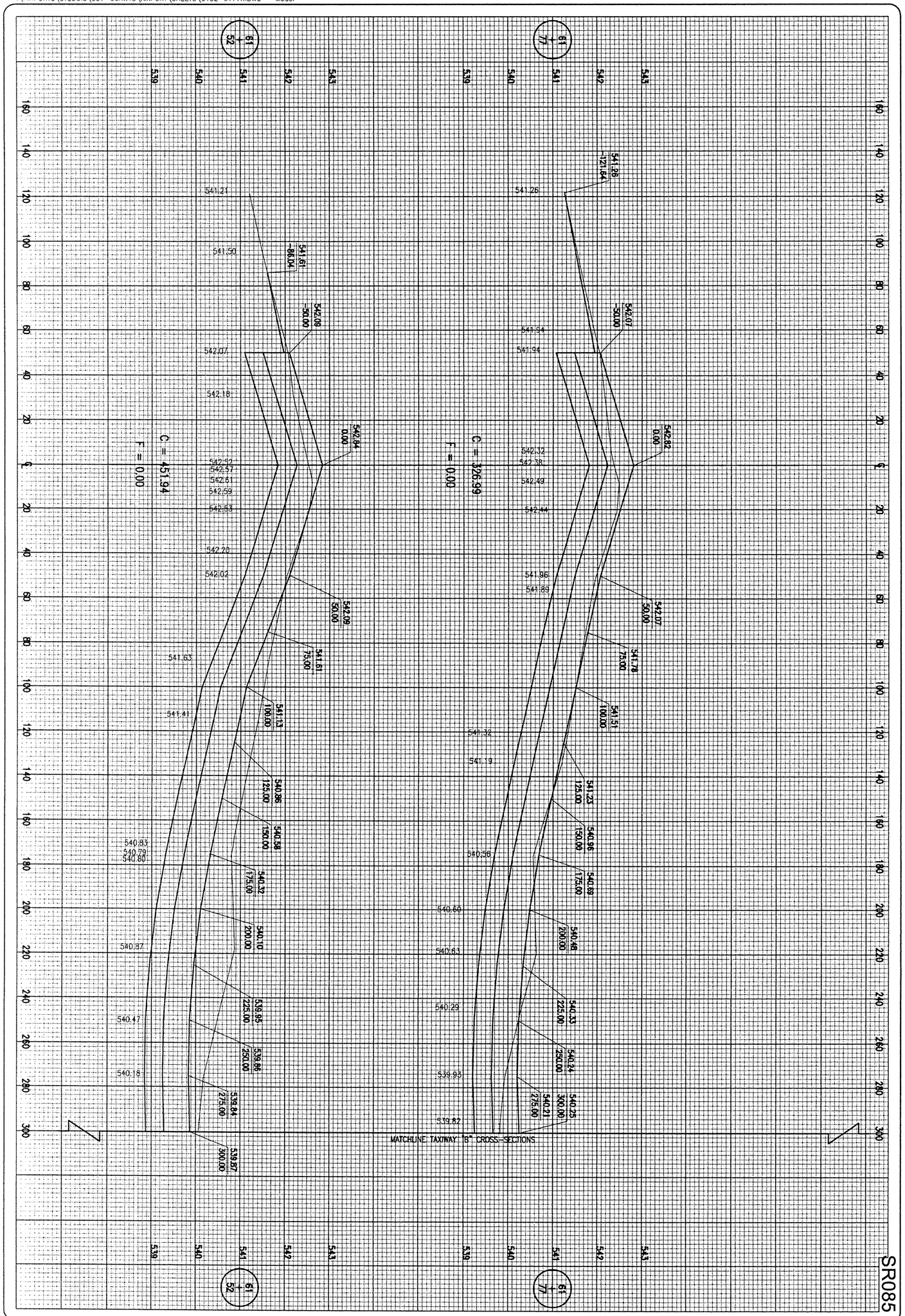
HEI Project No. 83706RWYD 0800
Filename 6100-6125R.DWG
Scale H. 1"= 20' V. 1"= 1'
Date 05/20/08

LAYOUT	JEO	05/20/08
DRAWN	BAK	05/20/08
REVIEWED	CAH	07/11/08

ST. LOUIS REGIONAL AIRPORT
St.LouisRegional AIRPORT
EAST ALTON, ILLINOIS
IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

DATE	REVISION	BY

FEE 11, 2009 7:55 AM HAGL000382
I:\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\6152-6177R.DWG - Model



67 of 81 sheets

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED CROSS-SECTIONS
FOR RUNWAY END 35
STA. 61+52 TO STA. 61+77

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

HPI Project No.	83706RWYD 0800
Filename	6152-6177R.DWG
Scale	H. 1"= 20', V. 1"= 1'
Date	05/20/08

LAYOUT	JEO	05/20/08
DRAWN	BAK	05/20/08
REVIEWED	CAH	07/11/08

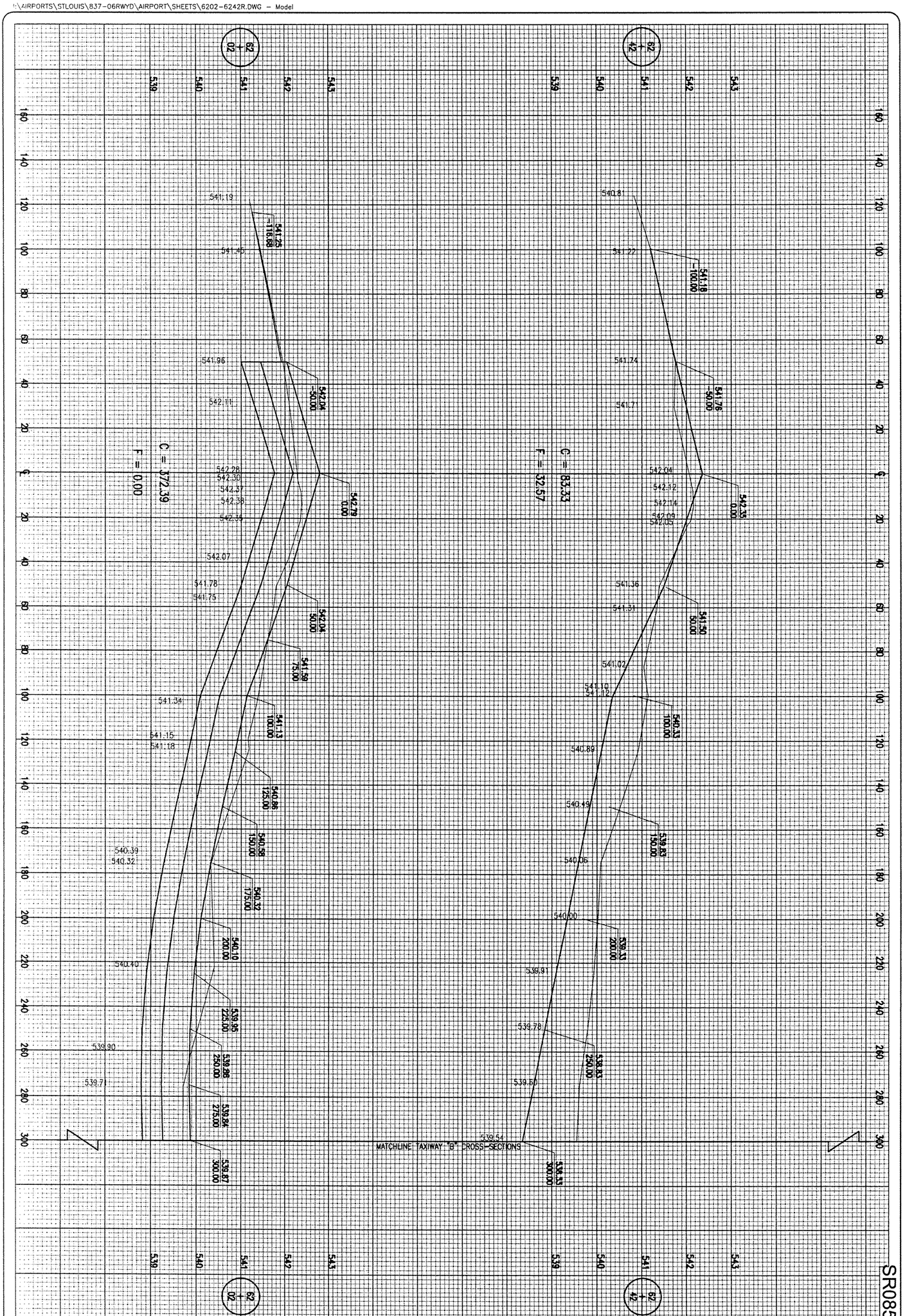
ST. LOUIS REGIONAL AIRPORT

St.LouisRegional AIRPORT

EAST ALTON, ILLINOIS

IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

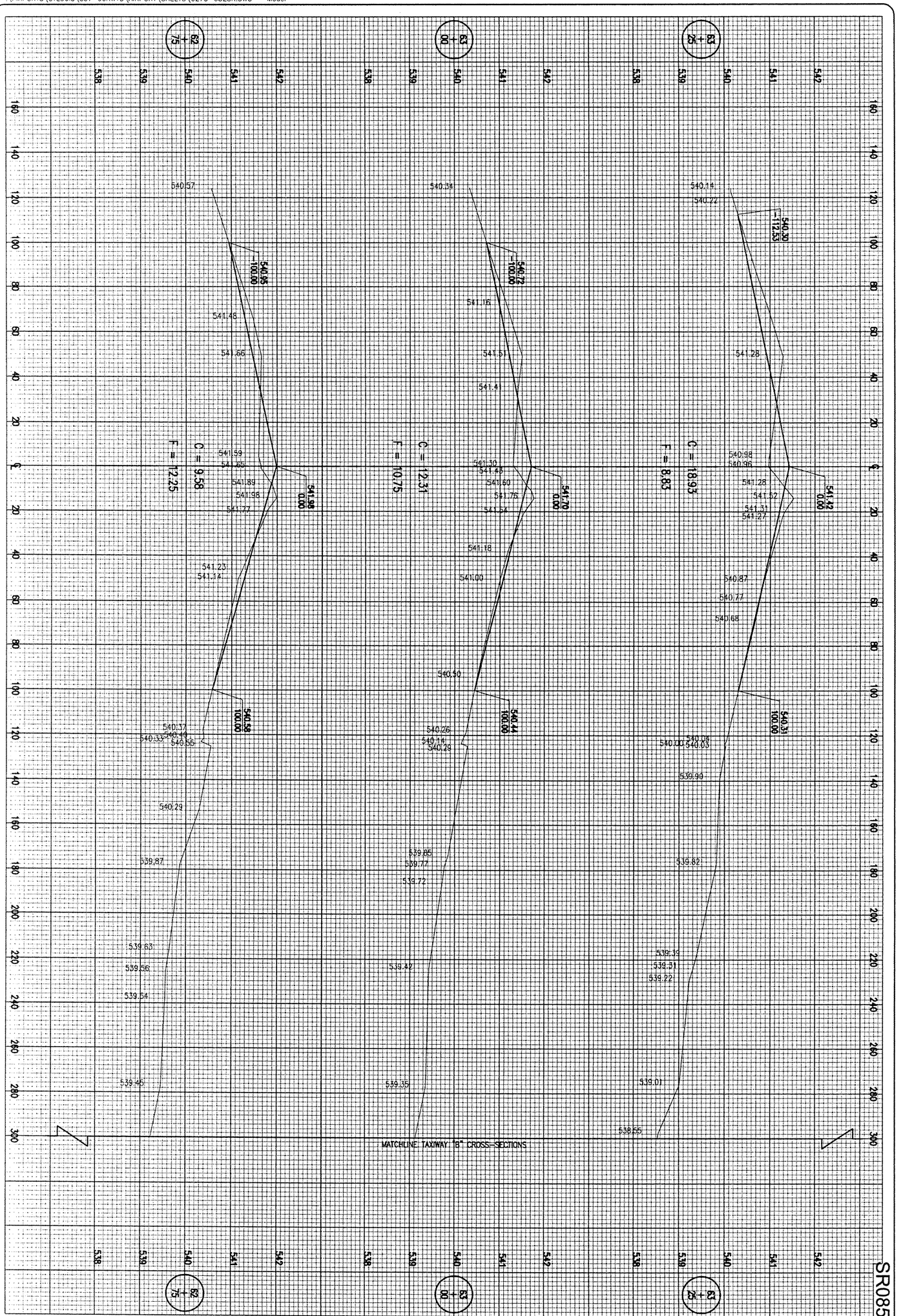
DATE	REVISION	BY



SR085

68 of 81 sheets	RUNWAY SAFETY AREA IMPROVEMENTS PROPOSED CROSS-SECTIONS FOR RUNWAY END 35 STA. 62+02 TO STA. 62+42	HANSON Hanson Professional Services Inc. 1525 South Sixth Street Springfield, Illinois 62703-2686 Offices Nationwide	HD Project No. 83706RWYD 0800 Filename 6202-6242R.DWG Scale H. 1"= 20', V. 1"= 1' Date 05/20/08 LAYOUT JEO 05/20/08 DRAWN BAK 05/20/08 REVIEWED CAH 07/11/08	ST. LOUIS REGIONAL AIRPORT St.LouisRegional AIRPORT EAST ALTON, ILLINOIS IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

DATE	REVISION	BY



69 of 81 sheets

69

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED CROSS-SECTIONS FOR RUNWAY END 35
STA. 62+75 TO STA. 63+25

HANSON

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

HEI Project No.	83706RWYD 0800
Filename	6275-6325R.DWG
Scale	H. 1"= 20', V. 1"= 1'
Date	05/20/08

LAYOUT	JEO	05/20/08
DRAWN	BAK	05/20/08
REVIEWED	CAH	07/11/08

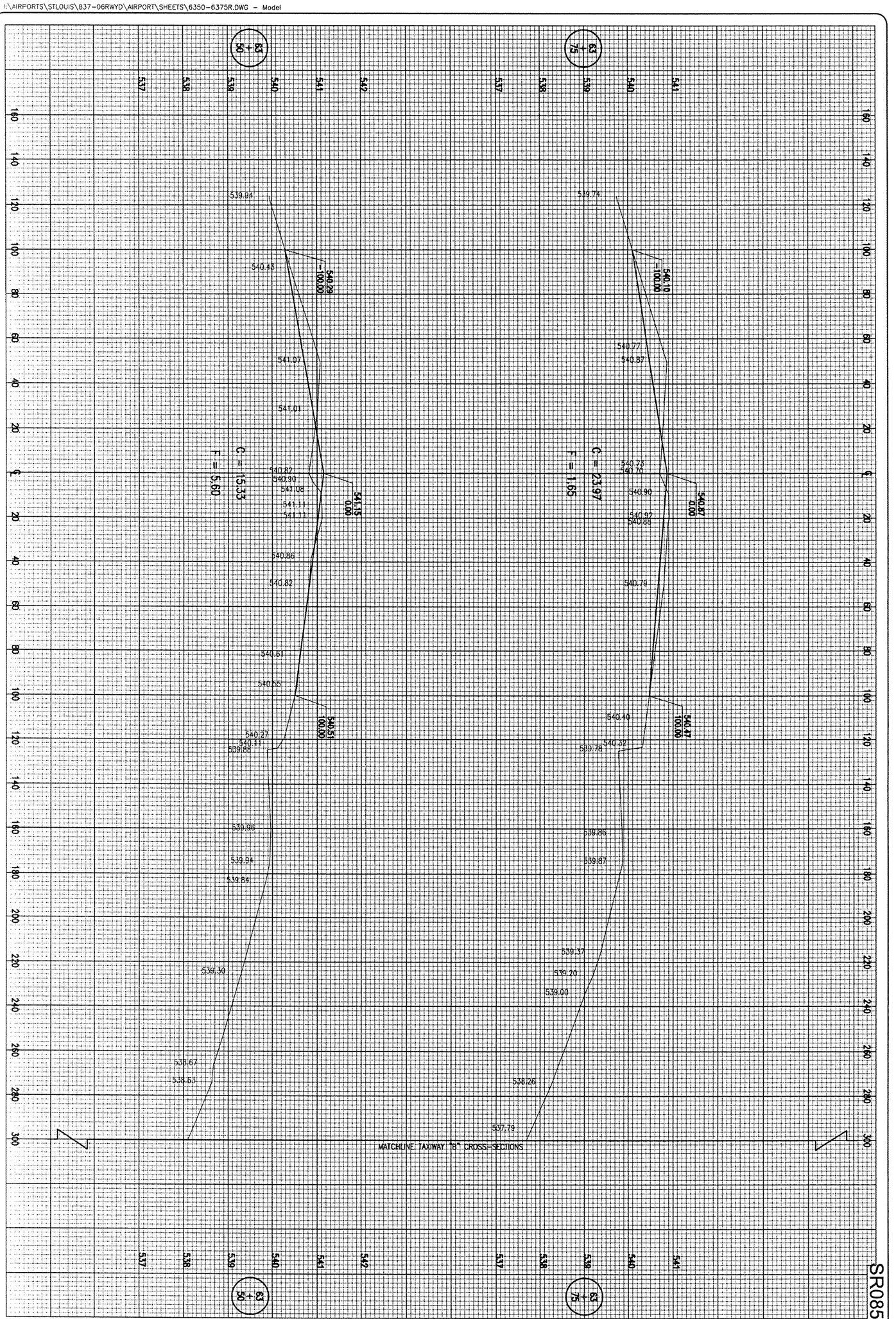
ST. LOUIS REGIONAL AIRPORT

St.LouisRegional AIRPORT

EAST ALTON, ILLINOIS

IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

DATE	REVISION	BY



70 of 81 sheets

70

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED CROSS-SECTIONS FOR RUNWAY END 35 STA. 63+50 TO STA. 63+75

HANSON

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

HEI Project No.	83706RWYD 0800
Filename	6350-6375R.DWG
Scale	H. 1"= 20', V. 1"= 1'
Date	05/20/08

LAYOUT	JEO	05/20/08
DRAWN	BAK	05/20/08
REVIEWED	CAH	07/11/08

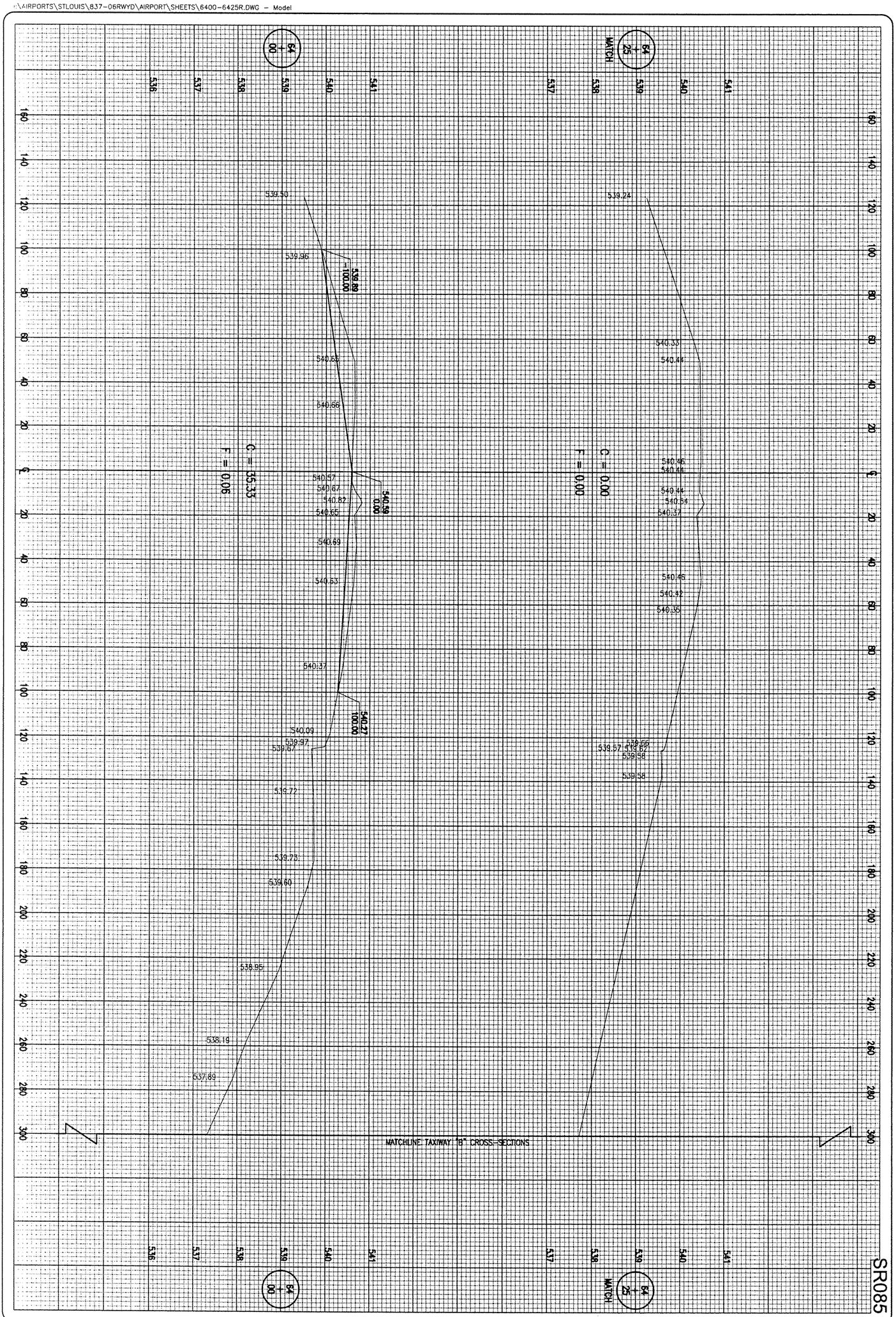
ST. LOUIS REGIONAL AIRPORT

St.LouisRegional AIRPORT

EAST ALTON, ILLINOIS

IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

DATE	REVISION	BY



SR085

71 of 81 sheets

71

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED CROSS-SECTIONS FOR RUNWAY END 35
STA. 64+00 TO STA. 64+25

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

HEI Project No.	83706RWYD 0800
Filename	6400-6425R.DWG
Scale	H. 1"= 20', V. 1"= 1'
Date	05/20/08

LAYOUT	JEO	05/20/08
DRAWN	BAK	05/20/08
REVIEWED	CAH	07/11/08

ST. LOUIS REGIONAL AIRPORT

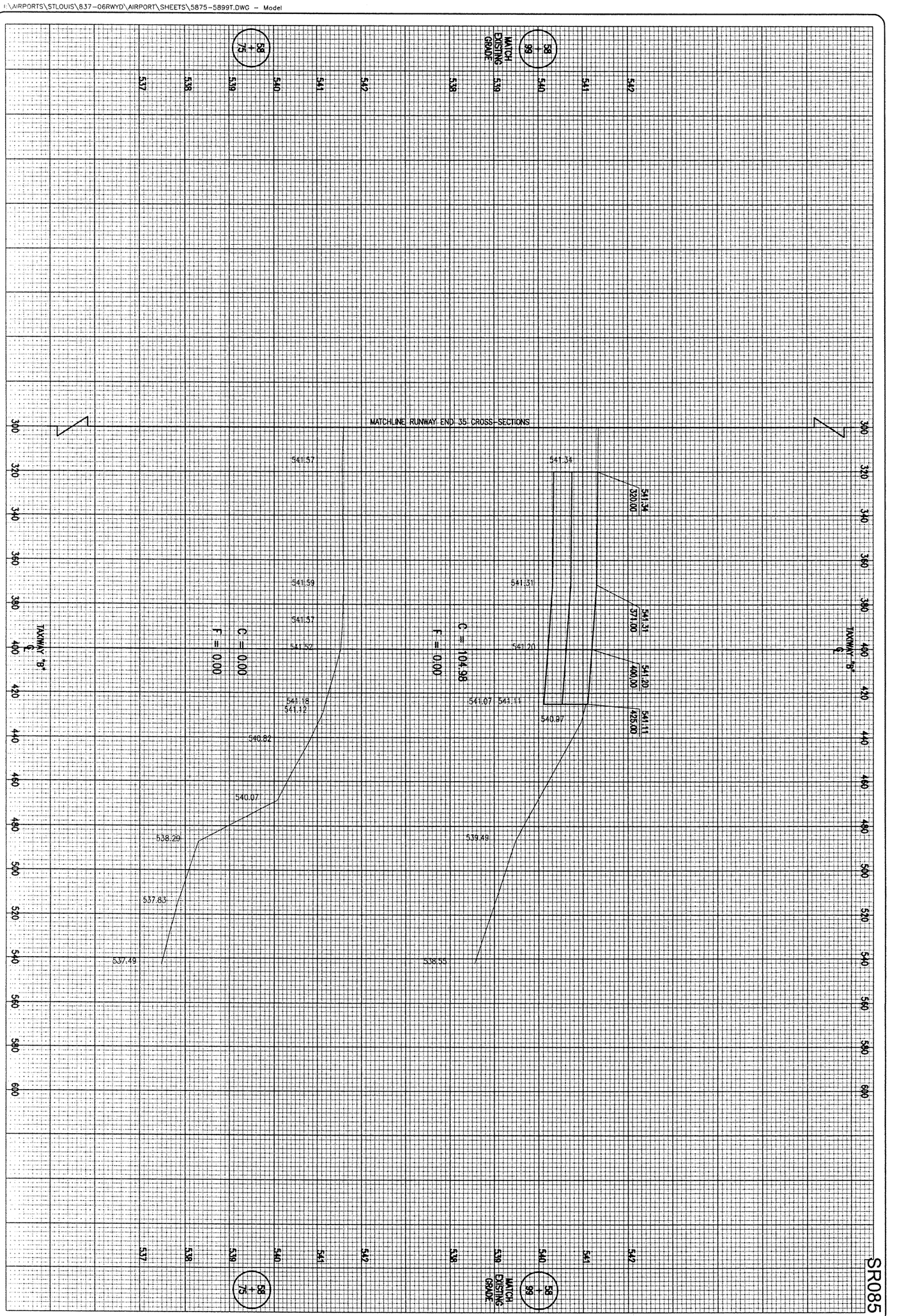
St.LouisRegional AIRPORT

EAST ALTON, ILLINOIS

IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

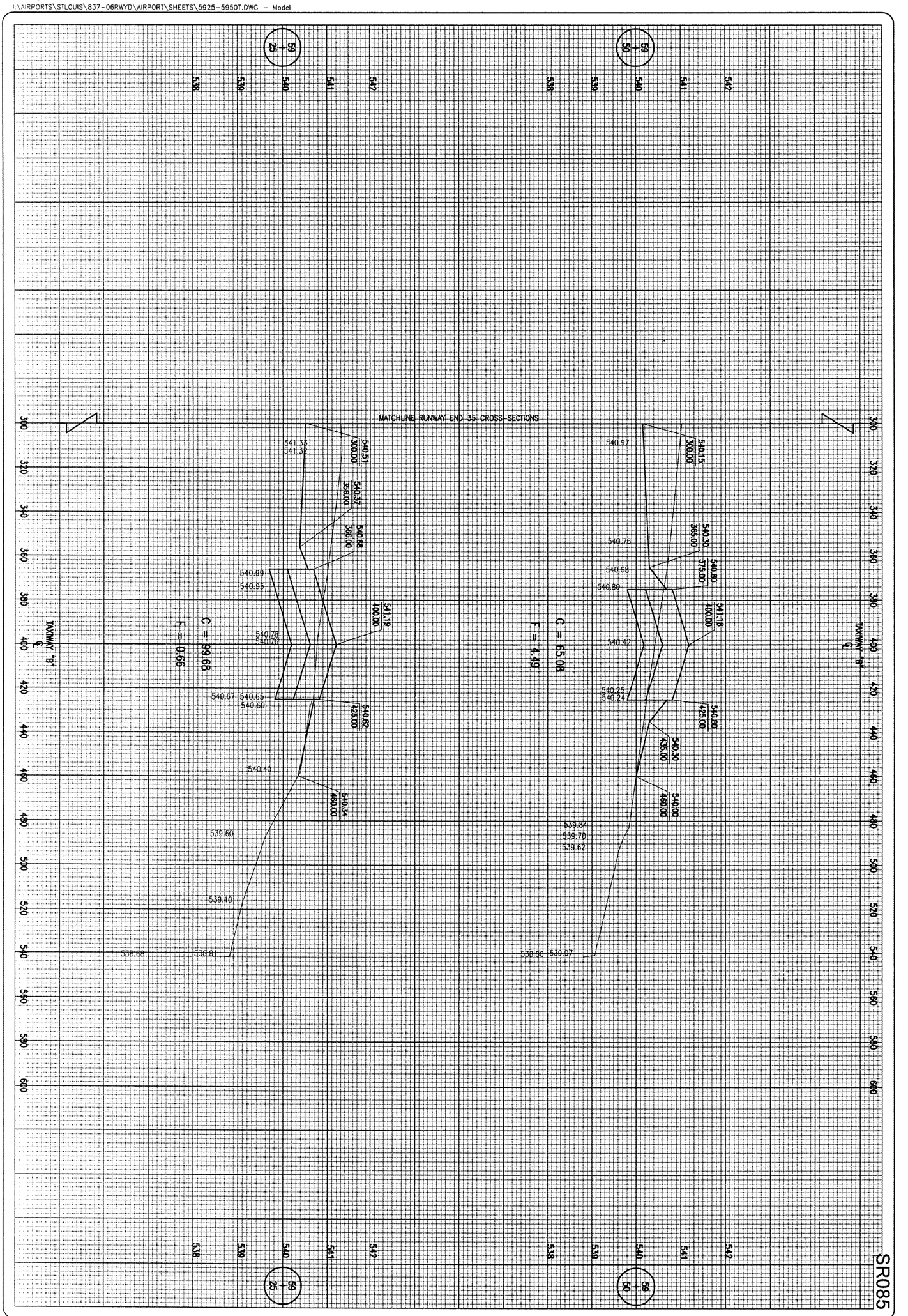
DATE	REVISION	BY

FEB 11, 2009 7:58 AM HAGL000382
I:\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\5875-5899T.DWG - Model



72	RUNWAY SAFETY AREA IMPROVEMENTS	HANSON	HEI Project No. 83706RWYD 0800	ST. LOUIS REGIONAL AIRPORT	DATE / REVISION / BY
72 of 81 Sheets	PROPOSED CROSS-SECTIONS FOR TAXIWAY "B" STA. 58+75 TO STA. 58+99	Hanson Professional Services Inc. 1525 South Sixth Street Springfield, Illinois 62703-2886 Offices Nationwide	Filename 5875-5899T.DWG Scale H. 1"= 20' V. 1"= 1' Date 05/20/08	St.LouisRegional AIRPORT EAST ALTON, ILLINOIS	
			LAYOUT JEO 05/20/08 DRAWN BAK 05/20/08 REVIEWED CAH 07/11/08	IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42	

FEB 11, 2009 7:58 AM HAGL000382
I:\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\5925-5950T.DWG - Model



73 of 81 sheets

73

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED CROSS-SECTIONS FOR TAXIWAY "B" STA. 59+25 TO STA. 59+50

HANSON

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

HEI Project No.	83706RWYD 0800
Filename	5925-5950T.DWG
Scale	H. 1"= 20' V. 1"= 1'
Date	05/21/08

LAYOUT	JEO	05/21/08
DRAWN	BAK	05/21/08
REVIEWED	CAH	07/11/08

ST. LOUIS REGIONAL AIRPORT

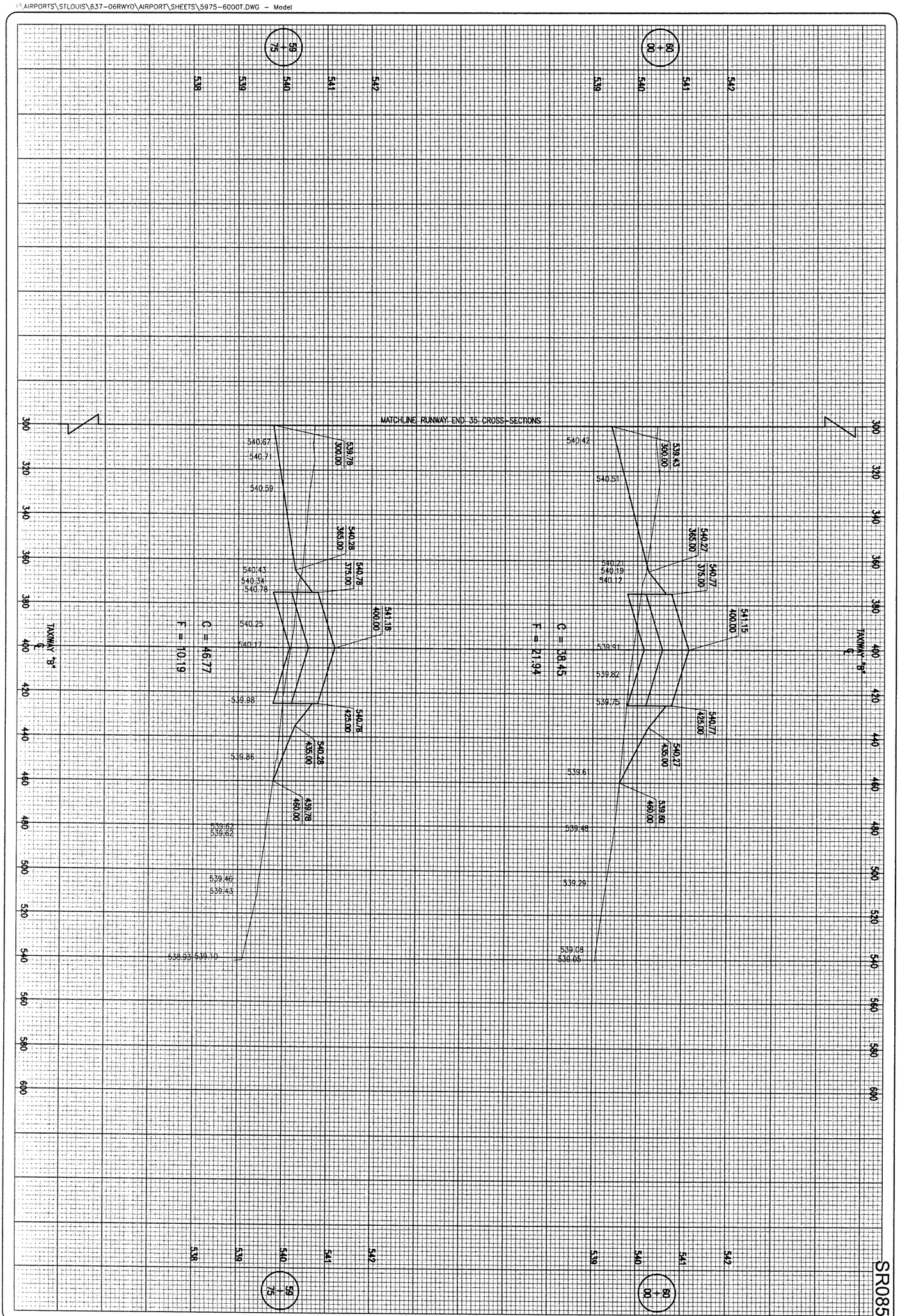
St.LouisRegional AIRPORT

EAST ALTON, ILLINOIS

IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

DATE	REVISION	BY

FEB 11, 2009 7:58 AM HAGL000382
H:\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\5975-6000T.DWG - Model



SR085

74 OF 81 SHEETS

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED CROSS-SECTIONS
FOR TAXIWAY "B"
STA. 59+75 TO STA. 60+00

HANSON

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

HBI Project No.	83706RWYD 0800
Filename	5975-6000T.DWG
Scale	H. 1"= 20' V. 1"= 1'
Date	05/21/08

LAYOUT	JEO	05/21/08
DRAWN	BAK	05/21/08
REVIEWED	CAH	07/11/08

ST. LOUIS REGIONAL AIRPORT

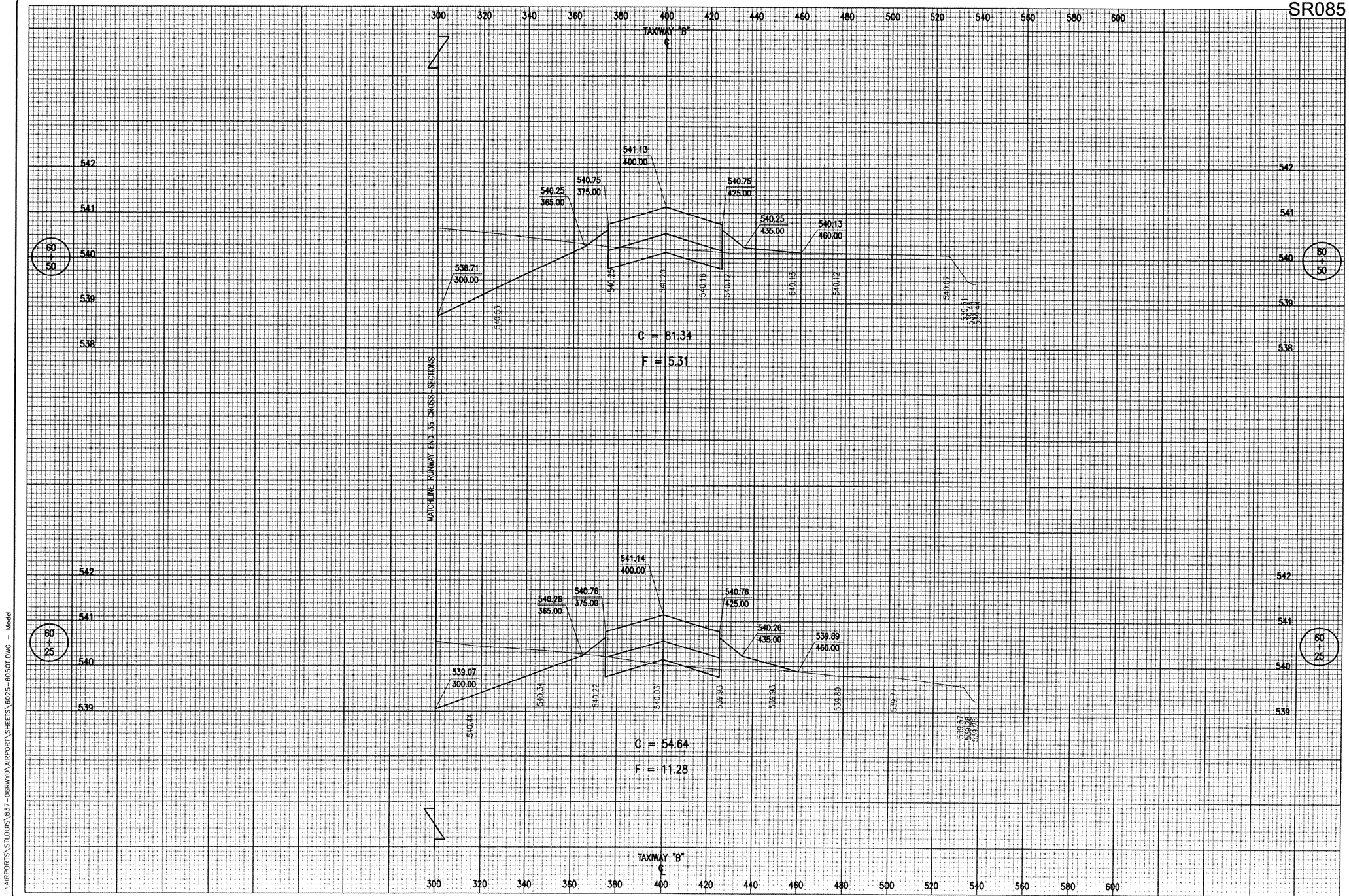
St.LouisRegional AIRPORT

EAST ALTON, ILLINOIS

IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

DATE	REVISION	BY

SR085



ST. LOUIS REGIONAL AIRPORT

EAST ALTON, ILLINOIS

IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

DATE	REVISION	BY

HSI Project No. 837061RWY0.0800

Filename 6025-60501.DWG

Scale H. 1"= 20' V. 1"= 1'

Date 05/21/08

LAYOUT	JEO	05/21/08
DRAWN	BAK	05/21/08
REVIEWED	CAH	07/11/08

HANSON

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

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED CROSS-SECTIONS FOR TAXIWAY "B" STA. 60+25 TO STA. 60+50

75

75 of 81 sheets

FEB 11, 2009 7:59 AM HAGL000382

...AIRPORTS\STLOUIS\837-06RWY0\AIRPORT\SHEETS\6025-60501.DWG - Model

SR085

TAXIWAY "B" ℄

MATCHLINE RUNWAY END 35 CROSS-SECTIONS

61 + 00

538.00 / 300.00 — 540.36
540.23 / 365.00 — 540.73 / 375.00 — 541.11 / 400.00 — 540.73 / 425.00 — 540.23 / 435.00 — 539.98 / 460.00

540.01 540.01 539.99 538.97 539.98 538.82 538.80

C = 83.38
F = 9.95

60 + 75

538.35 / 300.00 — 540.45
540.24 / 365.00 — 540.74 / 375.00 — 541.12 / 400.00 — 540.74 / 425.00 — 540.24 / 435.00 — 540.05 / 460.00

540.26 540.14 540.09 540.07 540.06 540.05 540.06 540.02 539.74 539.63 539.63

C = 82.02
F = 7.08

TAXIWAY "B" ℄

300 320 340 360 380 400 420 440 460 480 500 520 540 560 580 600

538 539 540 541 542

FEB 11, 2009 7:59 AM HAGL000382
L:\AIRPORTS\STLOUIS\837-06RWY01\AIRPORT\SHEETS\6075-6100T.DWG - Model

DATE	REVISION	BY

ST. LOUIS REGIONAL AIRPORT

St.LouisRegional AIRPORT

EAST ALTON, ILLINOIS

IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

HSI Project No. 8370GRWY0.0800
Filename 6075-6100T.DWG
Scale H. 1"= 20' V. 1"= 1'
Date 05/21/08

LAYOUT	JEO	05/21/08
DRAWN	BAK	05/21/08
REVIEWED	CAH	07/11/08

HANSON

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

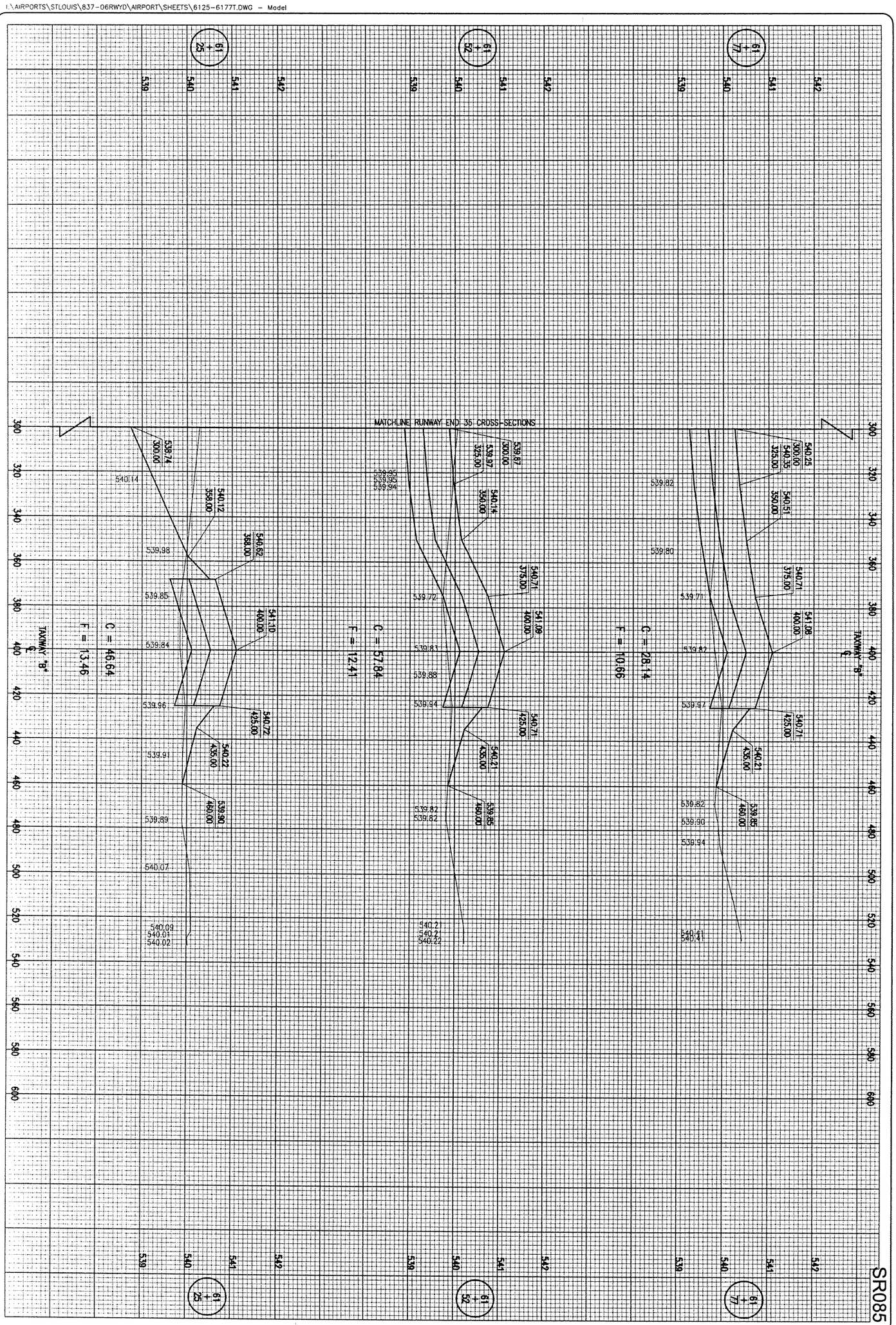
RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED CROSS-SECTIONS FOR TAXIWAY "B" STA. 60+75 TO STA. 61+00

76

76 of 81 sheets

FEB 11, 2009 8:00 AM HAGL000382
I:\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\6125-6177T.DWG — Model



77 of 81 sheets

77

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED CROSS-SECTIONS FOR TAXIWAY "B" STA. 61+25 TO STA. 61+77

HANSON

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

HEI Project No.	83706RWYD 0800
Filename	6125-6177T.DWG
Scale	H. 1"= 20' V. 1"= 1'
Date	05/21/08

LAYOUT	JEO	05/21/08
DRAWN	BAK	05/21/08
REVIEWED	CAH	07/11/08

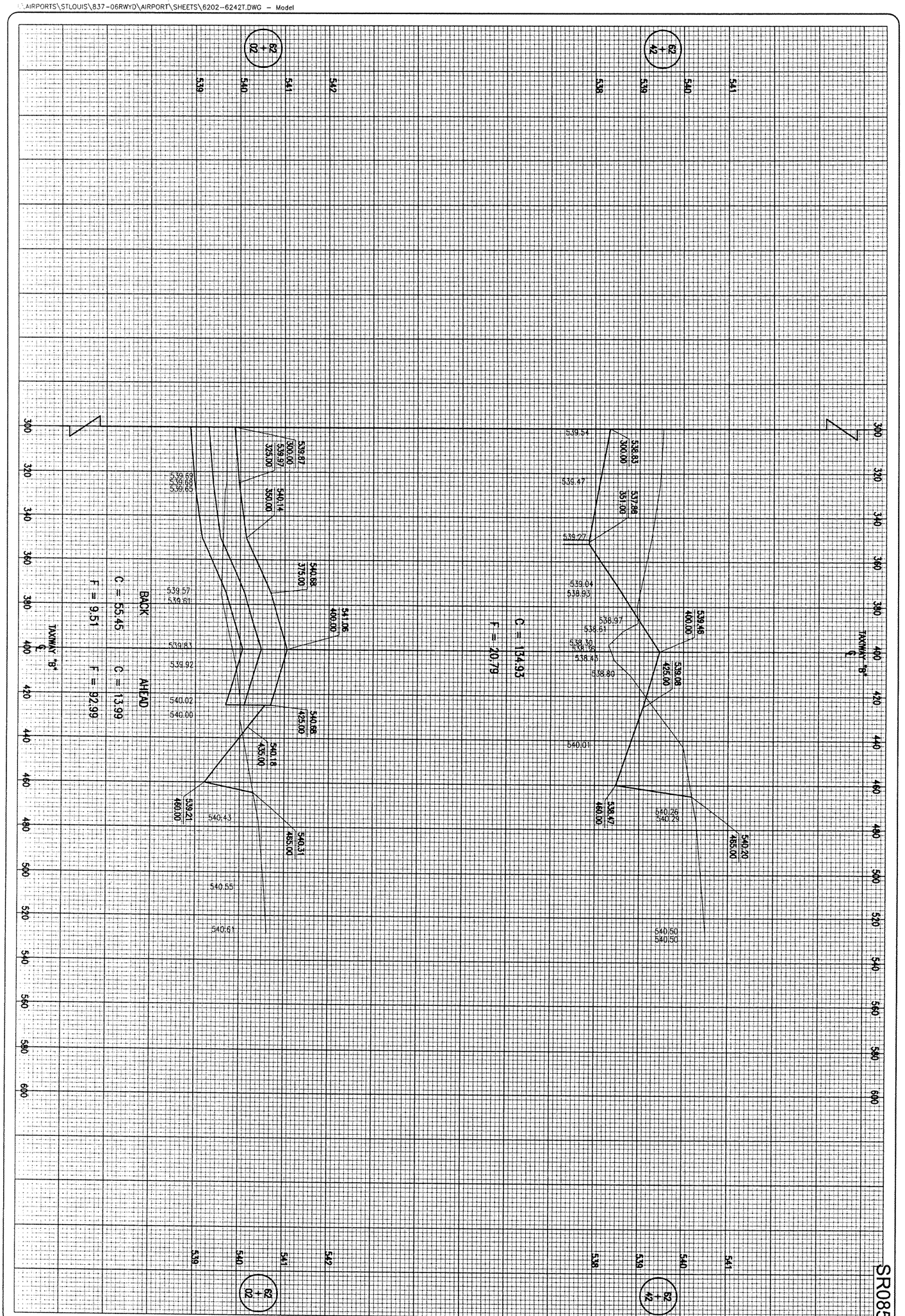
ST. LOUIS REGIONAL AIRPORT

St.LouisRegional AIRPORT

EAST ALTON, ILLINOIS

IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

DATE	REVISION	BY



78

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED CROSS-SECTIONS FOR TAXIWAY "B" STA. 62+02 TO STA. 62+42

HANSON

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

HEI Project No.	83706RWYD 0800
Filename	6202-6242T.DWG
Scale	H. 1"= 20' V. 1"= 1'
Date	05/22/08

LAYOUT	JEO	05/22/08
DRAWN	BAK	05/22/08
REVIEWED	CAH	07/11/08

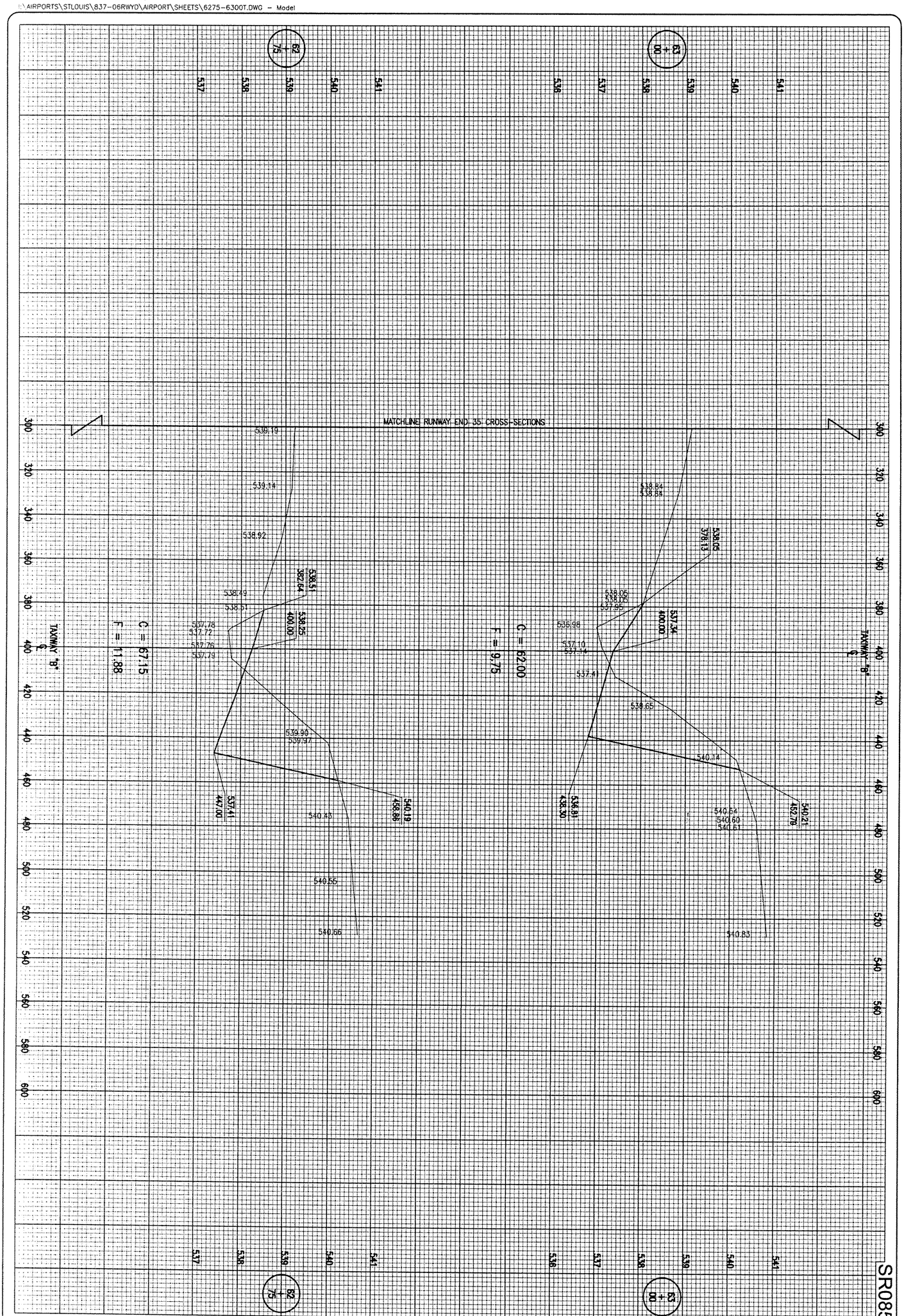
ST. LOUIS REGIONAL AIRPORT

St.LouisRegional AIRPORT

EAST ALTON, ILLINOIS

IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

DATE	REVISION	BY



79 of 81 sheets

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED CROSS-SECTIONS
FOR TAXIWAY "B"
STA. 62+75 TO STA. 63+00

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

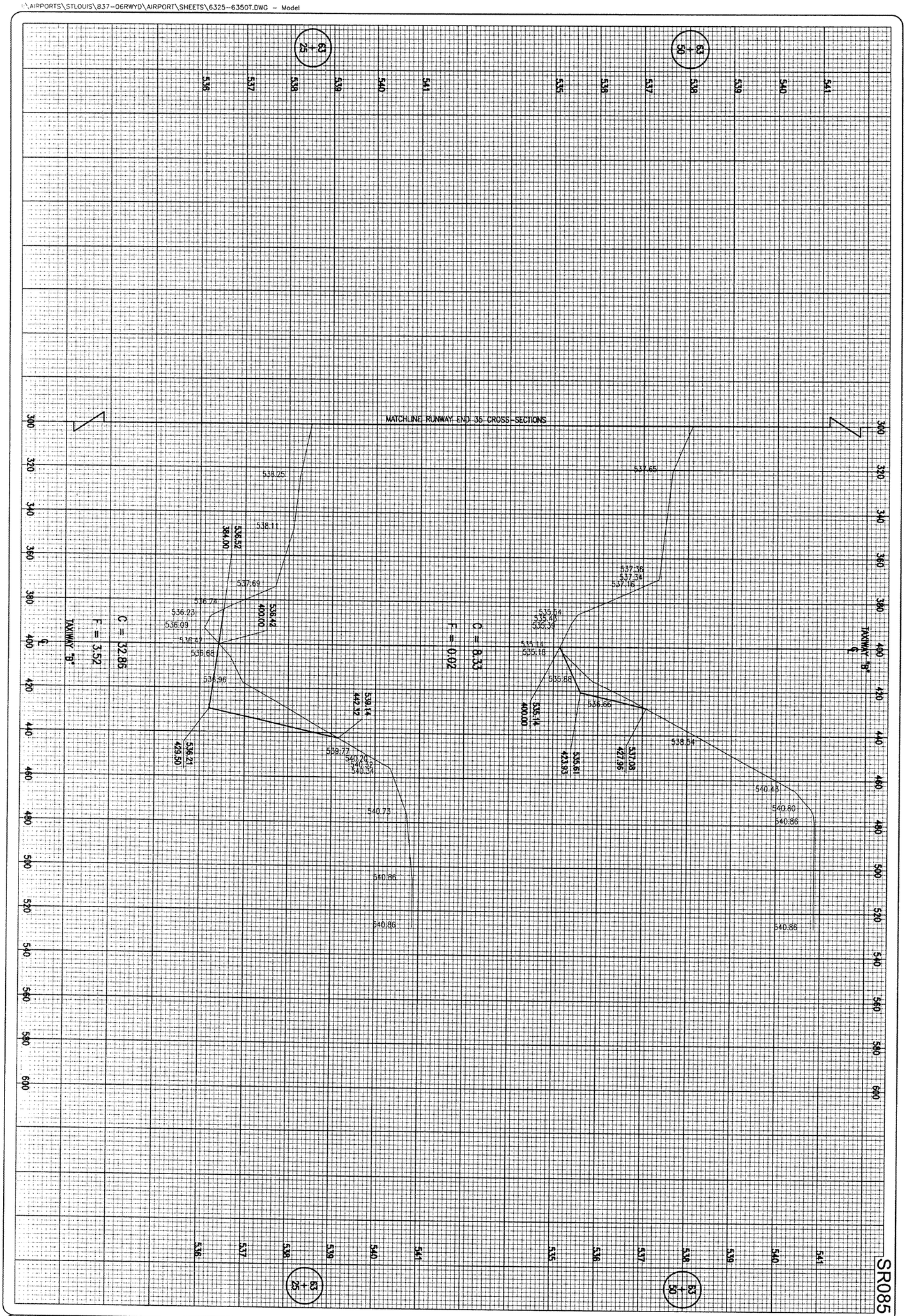
HSI Project No.	83706RWYD 0800
Filename	6275-6300T.DWG
Scale	H. 1"= 20' V. 1"= 1'
Date	05/21/08

LAYOUT	JEO	05/22/08
DRAWN	MDR	05/22/08
REVIEWED	CAH	07/11/08

ST. LOUIS REGIONAL AIRPORT
St.LouisRegional AIRPORT
EAST ALTON, ILLINOIS
IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

DATE	REVISION	BY

FEB 11, 2009 8:02 AM HAGL000382
\\AIRPORTS\STLOUIS\837-06RWYD\AIRPORT\SHEETS\6325-6350T.DWG - Model



80 of 81 Sheets

80

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED CROSS-SECTIONS FOR TAXIWAY "B" STA. 63+25 TO STA. 63+50

HANSON

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

HSI Project No.	83706RWYD 0800	
Filename	6325-6350T.DWG	
Scale	H. 1"= 20' V. 1"= 1'	
Date	05/21/08	
LAYOUT	JEO	05/22/08
DRAWN	MDR	05/22/08
REVIEWED	CAH	07/11/08

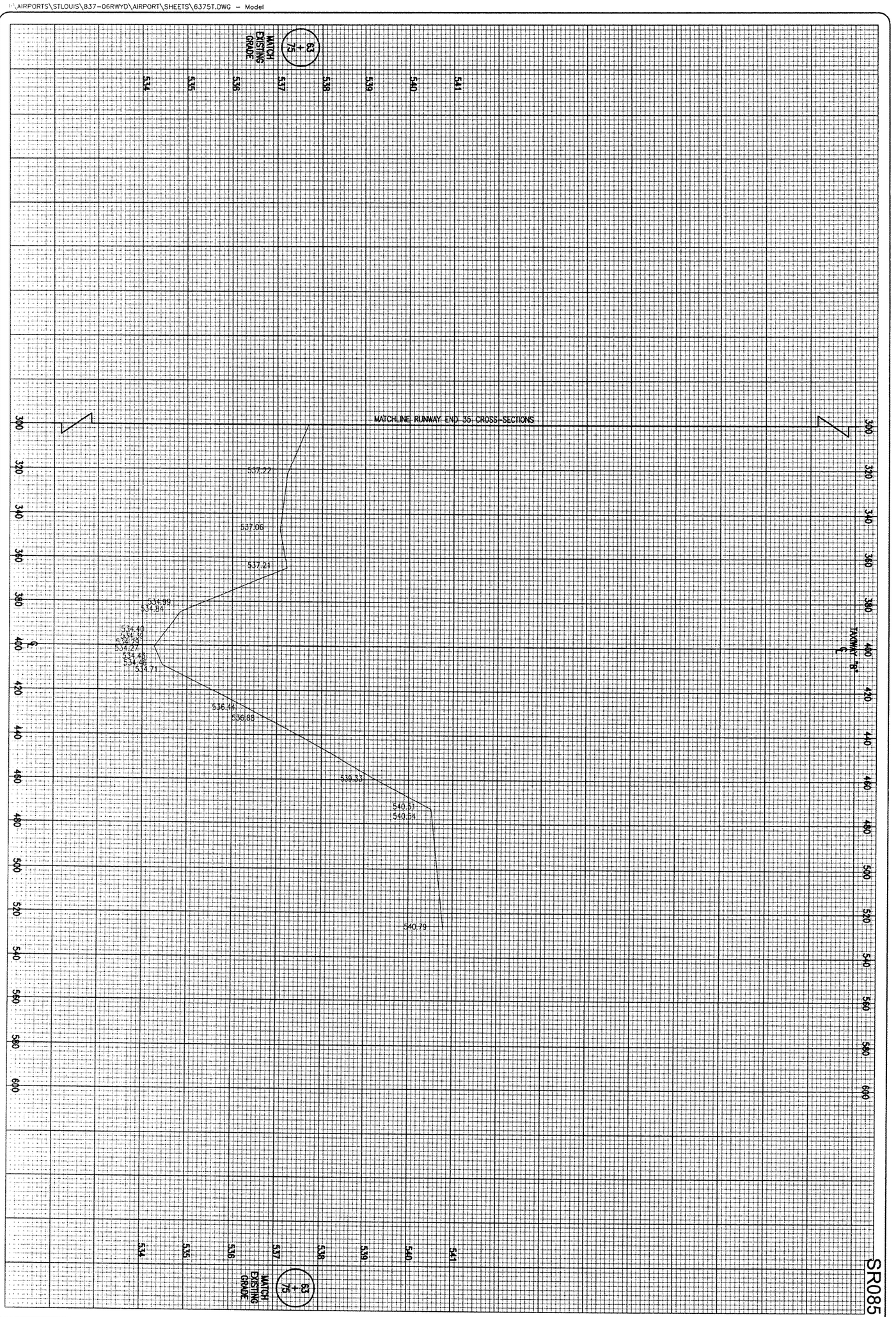
ST. LOUIS REGIONAL AIRPORT

St.LouisRegional AIRPORT

EAST ALTON, ILLINOIS

IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

DATE	REVISION	BY



81 of 81 sheets

81

RUNWAY SAFETY AREA IMPROVEMENTS

PROPOSED CROSS-SECTIONS FOR TAXIWAY "B" STA. 63+75

HANSON

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

HEI Project No.	83706RWYD 0800
Filename	6375T.DWG
Scale	H. 1"= 20' V. 1"= 1'
Date	05/21/08

LAYOUT	JEO	05/22/08
DRAWN	MDR	05/22/08
REVIEWED	CAH	07/11/08

ST. LOUIS REGIONAL AIRPORT

St.LouisRegional AIRPORT

EAST ALTON, ILLINOIS

IL. PROJ.: ALN-3825 A.I.P. PROJ.: 3-17-0002-B42

DATE	REVISION	BY