

SCOPE OF WORK

THIS PROJECT WILL CONSIST OF CONSTRUCTING A 1,500' EXTENSION TO RUNWAY 12L/30R AND PROPOSED CROSS-OVER TAXIWAY "B7". ASSOCIATED WORK SHALL INCLUDE 6" P.C.C. PAVEMENT, 4" AGGREGATE BASE COURSE, 6" OVERSIZED AGGREGATE, MARKING, LIGHTING, GRADING, DRAINAGE, SEEDING, MULCHING AND INSTALLING PIPE ARCHES IN GOOSE LAKE DITCH.

AIRPORT SECURITY NOTE

AIRPORT SECURITY WILL BE MAINTAINED AT ALL TIMES. THE CONTRACTOR WILL CLOSE AND LOCK THE GATE IN THE HAUL ROUTE AT THE END OF EACH WORKING DAY. THE GATE WILL BE CLOSED AT ALL TIMES UNLESS CONTINUOUS HAULING OPERATIONS ARE IN PROGRESS.

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 SEMI TRUCK WITH TRAILER IN THE UP POSITION.

CONTRACTOR RESPONSIBILITIES

THE CONTRACTOR'S EQUIPMENT PARKING AND STORAGE AREA WILL BE AS SHOWN ON THIS SHEET. THE CONTRACTOR'S EMPLOYEES WILL PARK THEIR VEHICLES IN THIS AREA. 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 KEEP ONE RUNWAY OPEN AT ALL TIMES AND MAINTAIN CONTINUOUS TAXIWAY ACCESS TO 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.

BARRICADES AND TRAFFIC CONES

IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO PLACE AND MAINTAIN BARRICADES AND TRAFFIC CONES AS DIRECTED BY THE AIRPORT DIRECTOR. 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 CONSIDERED AS AN INCIDENTAL ITEM TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

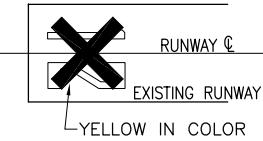
LEGEND

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

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.

BENCHMARK DATA				
NO.	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	CONCRETE MONUMENT	694968.540	2298934.635	405.14
2	NGS MONUMENT	691967.554	2302245.146	402.76



DETAIL OF CROSS FOR CLOSED RUNWAY
"NOT TO SCALE"

NOTE:

COST OF CONSTRUCTING, PLACING, MAINTAINING AND REMOVING CROSSES WILL BE CONSIDERED INCIDENTAL TO ITEM AR800430 "LIGHTED RUNWAY CLOSURE MARKER" AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED. THE CROSSES WILL BE AS SPECIFIED IN AR800430. THE CROSSES WILL BE PLACED OVER THE NUMERALS OR AS DIRECTED IN AR800430. 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. NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

J.U.L.I.E. INFORMATION

COUNTY _____ ST. CLAIR
 CITY _____ CAHOKIA
 TOWNSHIP _____ CENTERVILLE
 SECTION NO. _____ T.1N. - R.10W.
 ADDRESS _____ ST. LOUIS DOWNTOWN AIRPORT
 1680 SAUGET INDUSTRIAL PARKWAY
 SAUGET, ILLINOIS 62206

CRITICAL POINT DATA

LATITUDE: 38° 33' 52.93654"
 LONGITUDE: 90° 08' 37.13864"
 ELEVATION: 405.65 M.S.L.

PROPOSED SAFETY PLAN

GENERAL - THE ST. LOUIS DOWNTOWN AIRPORT IS COMPRISED OF THREE RUNWAYS. THE PROPOSED CONSTRUCTION WILL NECESSITATE CLOSING RUNWAY 12L-30R FOR THE DURATION OF THE PROJECT. ANY TIME THE CONTRACTOR IS WORKING WITHIN 200' OF THE RUNWAY CENTERLINE THE RUNWAY WILL BE CLOSED. WHEN A RUNWAY IS CLOSED IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE SHUTTING OFF THE RUNWAY LIGHTS AND CORRESPONDING NAVAIDS

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 (121.80 MHz.) WITH THE AIRPORT CONTROL TOWER. THIS WILL KEEP THE CONTRACTOR IN CONSTANT CONTACT WITH THE ST. LOUIS DOWNTOWN 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 JULY 1, 2004.

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

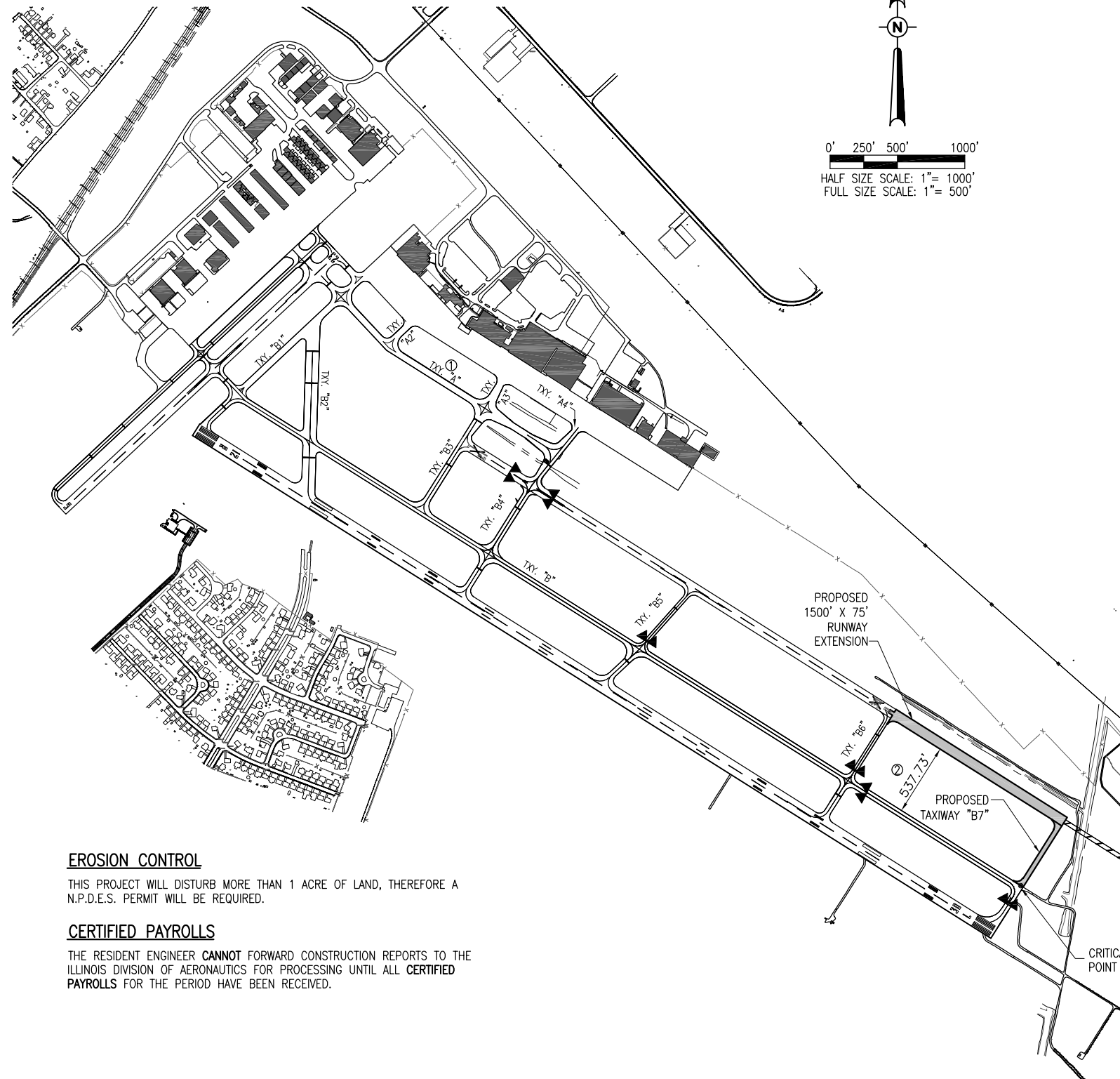
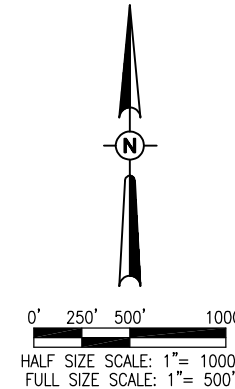
THE ENGINEERING FIRM WILL MAKE PAYMENT FOR ALL LONG DISTANCE TELEPHONE CALLS IN EXCESS OF ONE HUNDRED DOLLARS (\$100.00) PER MONTH.

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.

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.



EROSION CONTROL

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

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.

BY	REVISION	DATE

SAINT LOUIS DOWNTOWN AIRPORT
 A Division of Bi-State Development Agency
 ILL. PROJ.: 3-17-0039-B18

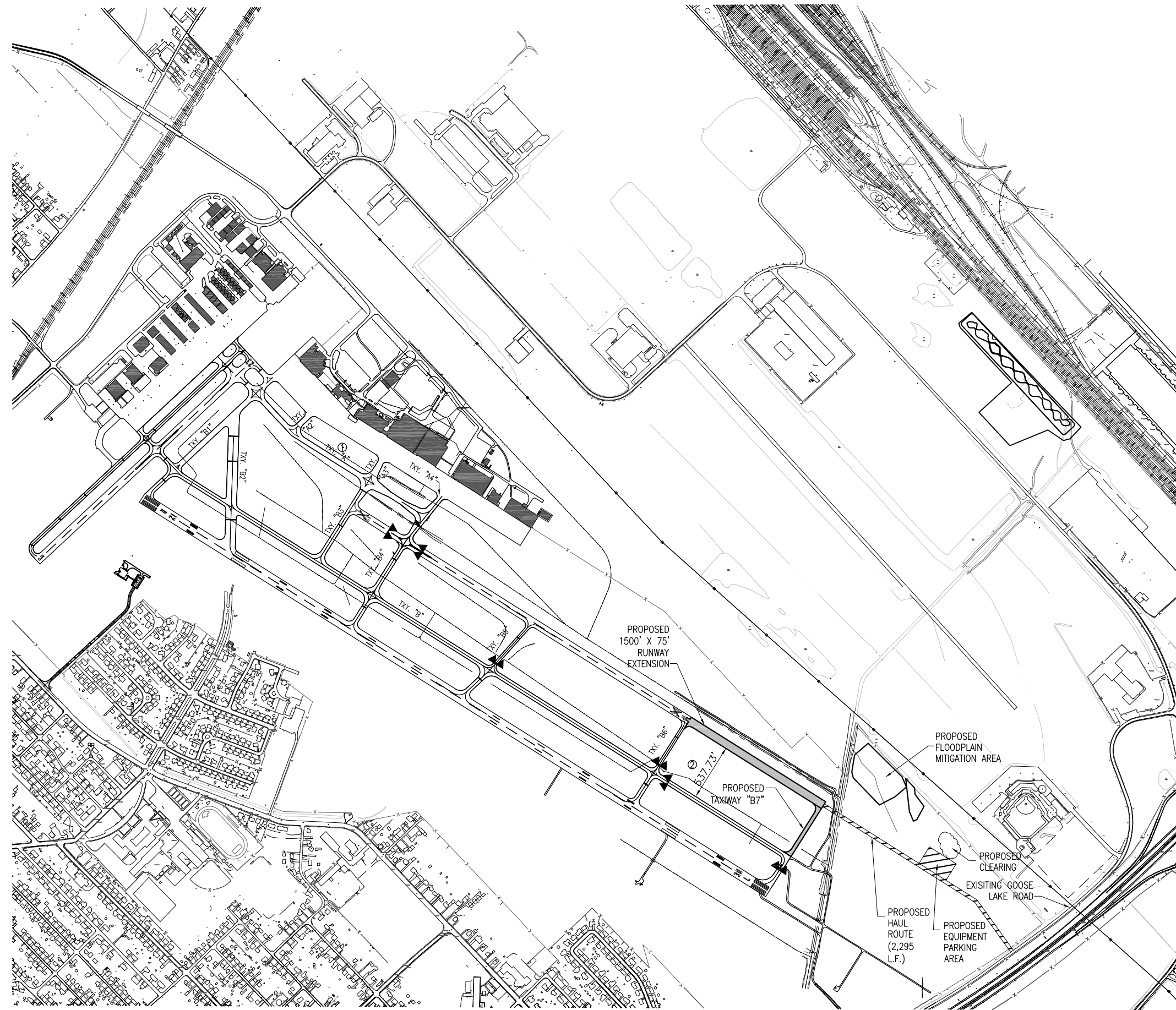
Project No. 84506RWYD_0800	JAC	02/05/07
Drawn R-003SEY.DWG	ZSH	02/05/07
Scale 1" = 500'	CAH	04/05/07
Date 02/05/07		

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 St. Louis, MO 63117
 Offices Nationwide

EXTEND RUNWAY END 30R 1500'

PROPOSED SAFETY PLAN

JUN 29, 2009 1:55 PM KINCAO0394
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HAUL ROUTE AND VEHICLE PARKING

THE CONTRACTOR WILL USE THE DESIGNATED HAUL ROUTE AND PARKING AREA AS SHOWN ON THIS SHEET. THE PROPOSED PARKING AREA WILL BE 185' X 300'. THE CONTRACTOR WILL BE REQUIRED TO MAINTAIN THE PROPOSED HAUL ROUTE AND PARKING AREA 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 ROUTE AND PARKING AREA AS NEEDED TO RESTORE IT TO ITS' ORIGINAL STATE. RESTORATION OF THE HAUL ROUTE AND PARKING AREA WILL BE PAID FOR UNDER ITEM "AR150540-HAUL ROUTE" PER L.S.

PROPOSED CLEARING NOTES

THE PROPOSED CLEARING AND GRUBBING AREA IS SHOWN ON THIS SHEET. THIS AREA WILL BE CLEARED OF ALL TREES, LOGS, ETC. THAT ARE LOCATED WITHIN THIS AREA. AFTER THE TREES HAVE BEEN CUT AND REMOVED FROM THE AREA, THE ROOTS WILL BE GRUBBED.

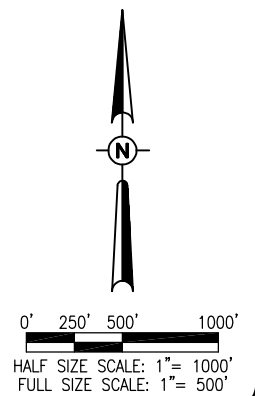
IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO DISPOSE OF THE TREES AND OTHER MATERIAL OFF THE AIRPORT SITE IN A LEGAL MANNER.

THE CLEARING AND GRUBBING OF THE PROPOSED AREA WILL BE PAID FOR UNDER:

AR151450 CLEARING AND GRUBBING _ _ _ 0.80 ACRES.

LEGEND

- EXISTING IMPROVEMENTS
- PROPOSED IMPROVEMENTS
- EXISTING BUILDINGS
- PROPOSED HAUL ROUTE AND EQUIPMENT PARKING AREA
- PROPOSED BARRICADES OR TRAFFIC CONES
- PROPOSED CLEARING AND GRUBBING



DATE	REVISION	BY

SAINT LOUIS DOWNTOWN AIRPORT
A Division of Bi-State Development Agency
A.I.P. PROJ.: 3-17-0039-B18

ILL. PROJ.: CPS-3665

Project No. 84506RWYD_0800	JAC	02/05/07
Drawn R-003SEY.DWG	ZSH	02/05/07
Scale 1" = 500'	CAH	04/05/07
Date 02/05/07		

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EXTEND RUNWAY
END 30R 1500'

PROPOSED
HAUL ROUTE

4

4 of 75 sheets

EROSION CONTROL NOTES

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

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

FILTER FENCE FOR STRUCTURE PROTECTION WILL BE PLACED AS SHOWN ON THIS SHEET.

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

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

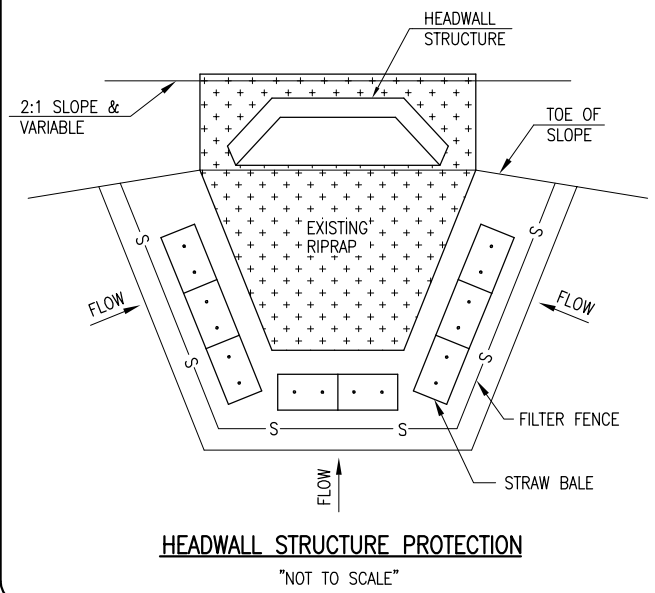
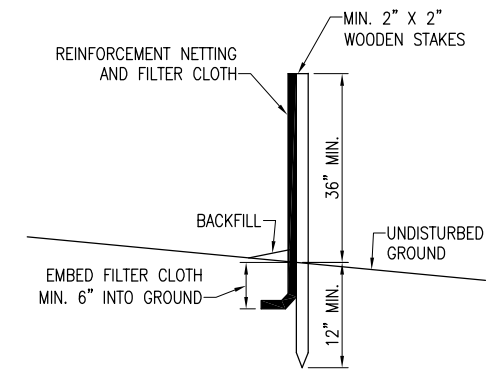
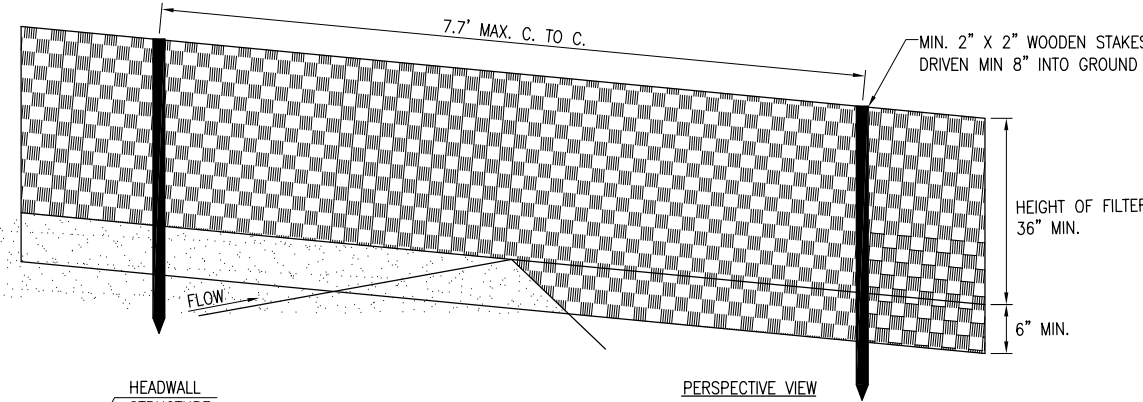
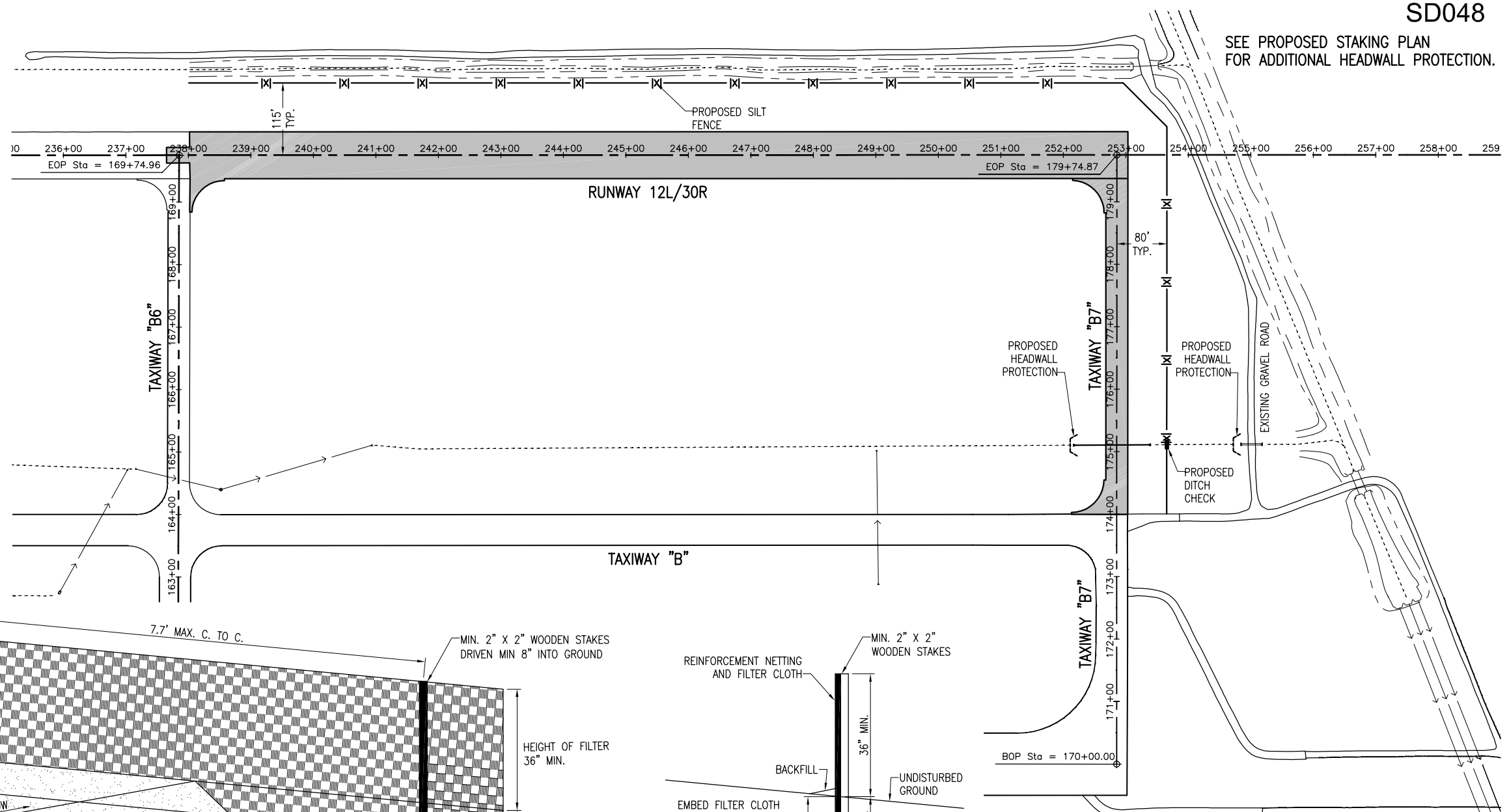
EROSION CONTROL FENCE SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM WATER DRAINAGE.

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

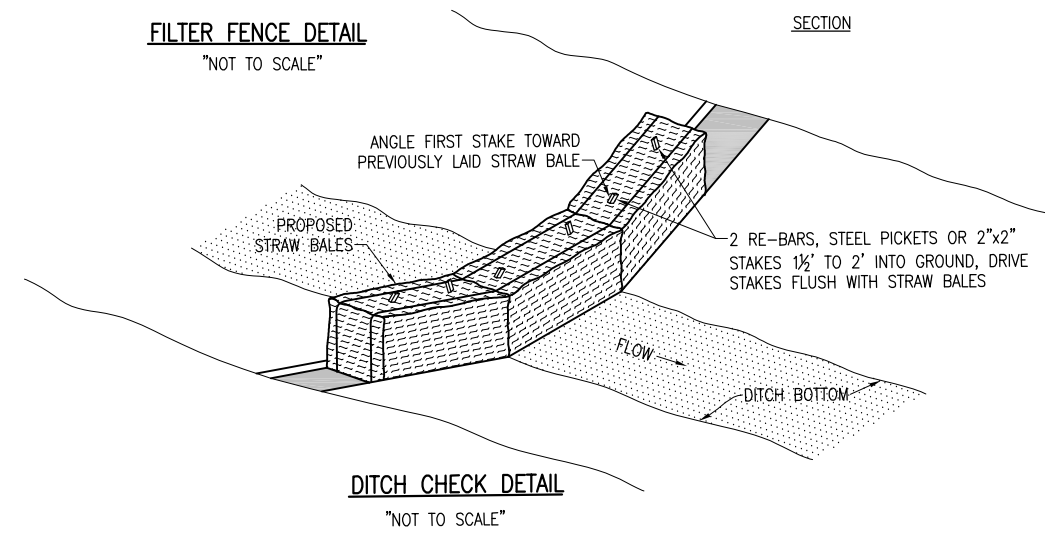
HEADWALL PROTECTION IS TO INCLUDE ALL INCIDENTALS NECESSARY TO CONSTRUCT THESE ITEMS AND WILL BE PAID FOR UNDER ITEM: AR156521 HEADWALL PROTECTION.

SD048

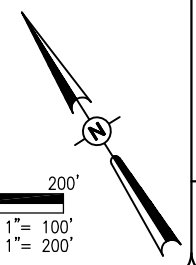
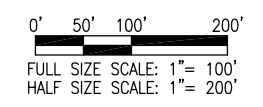
SEE PROPOSED STAKING PLAN FOR ADDITIONAL HEADWALL PROTECTION.



FILTER FENCE DETAIL
"NOT TO SCALE"



- LEGEND**
- EXISTING PAVEMENT
 - PROPOSED PAVEMENT
 - EXISTING DRAINAGE PIPE
 - EXISTING DRAINAGE DITCH
 - EXISTING INLET
 - EXISTING END SECTION
 - EXISTING MANHOLE
 - EXISTING HEADWALL
 - PROPOSED SILT FENCE
 - PROPOSED DITCH CHECK
 - PROPOSED HEADWALL PROTECTION



DATE	REVISION	BY

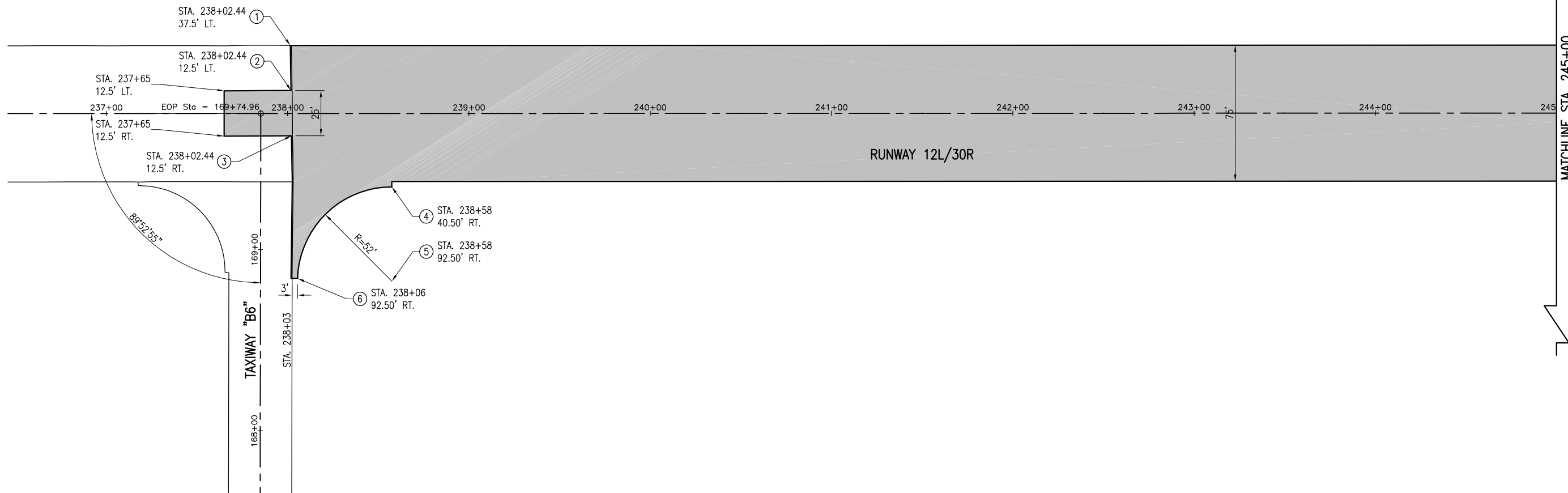
SAINT LOUIS DOWNTOWN AIRPORT
A Division of Bi-State Development Agency
A.I.P. PROJ.: 3-17-0039-B18
ILL. PROJ.: CPS-3665

Project No.	84506RWYD_0800
Revision	R=181SWP.DWG
Scale	1" = 100'
Date	02/08/07
LAYOUT	JAC 02/08/07
DRAWN	BAK 02/08/07
REVIEWED	CAH 04/05/07

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EXTEND RUNWAY END 30R 1500'
PROPOSED STORMWATER POLLUTION PREVENTION PLAN

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COORDINATE DATA - RUNWAY 12L/30R

NO.	STATION	OFFSET	NORTHING	EASTING
1	238+02.44	37.50' LT.	692,415.4096	2,302,235.6449
2	238+02.44	12.50' LT.	692,394.2712	2,302,222.7499
3	238+02.44	12.50' RT.	692,373.0225	2,302,209.5965
4	238+58.00	40.50' RT.	692,319.3457	2,302,241.8682
5	238+58.00	92.50' RT.	692,275.3514	2,302,214.1463
6	238+06.00	92.50' RT.	692,303.0732	2,302,170.1520

LEGEND

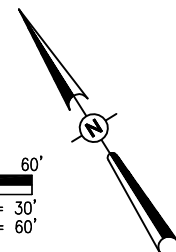
EXISTING PAVEMENT

PROPOSED PAVEMENT

0' 15' 30' 60'

FULL SIZE SCALE: 1" = 30'

HALF SIZE SCALE: 1" = 60'



DATE	REVISION	BY

SAINT LOUIS DOWNTOWN AIRPORT
A Division of Bi-State Development Agency

A.I.P. PROJ.: 3-17-0039-B18
ILL. PROJ.: CPS-3665

Project No. 84506RWYD_0800	JAC	02/05/07
R-121GEO.DWG	BAK	02/05/07
Scale 1" = 30'	CAH	04/05/07
Date 02/05/07		
LAYOUT		
DRAWN		
REVIEWED		

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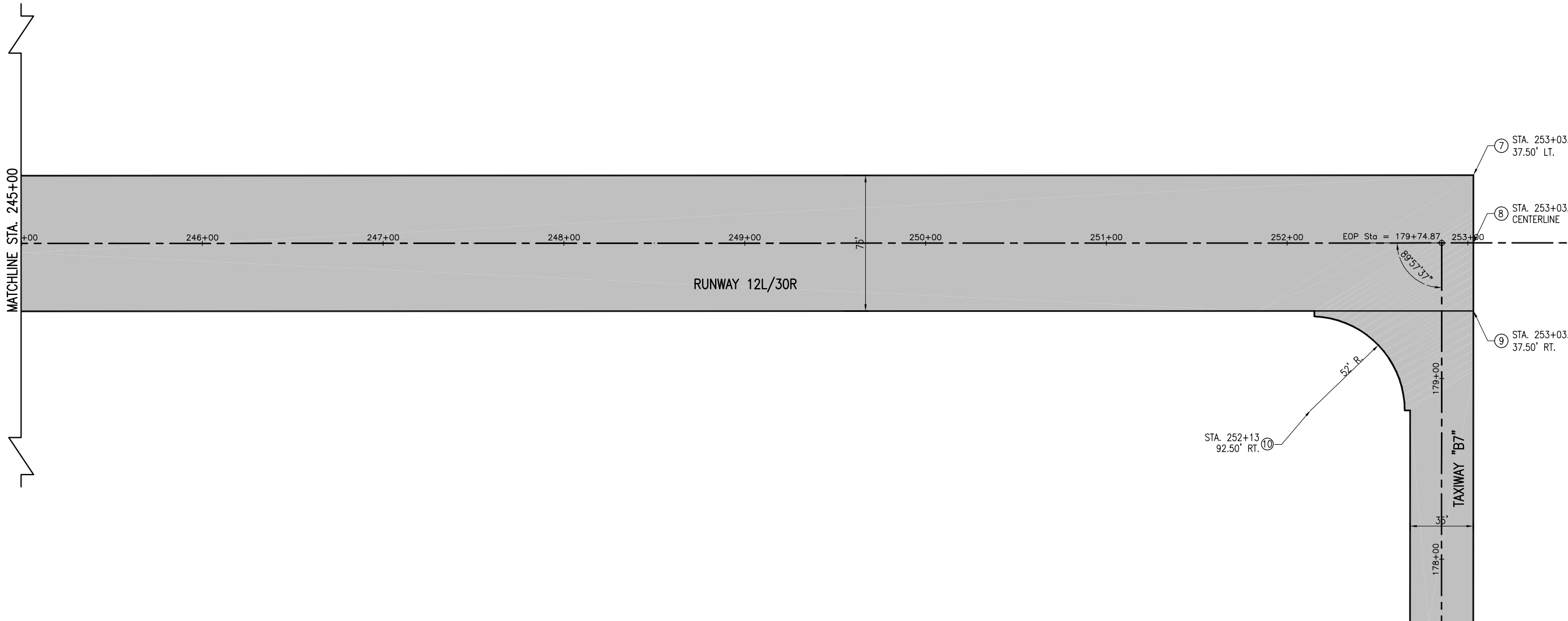
EXTEND RUNWAY END 30R 1500'

PROPOSED GEOMETRICS PLAN RUNWAY 12L/30R STA. 237+65 TO STA. 245+00

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SD048

MATCHLINE STA. 245+00

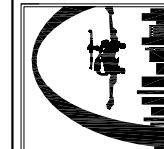


DATE

REVISION

BY

SAINT LOUIS DOWNTOWN AIRPORT
A Division of Bi-State Development Agency



Project No.	84506RWYD_0800
Revision	R-121GEO.DWG
Scale	1" = 30'
Date	02/05/07
LAYOUT	JAC 02/05/07
DRAWN	BAK 02/05/07
REVIEWED	CAH 04/05/07

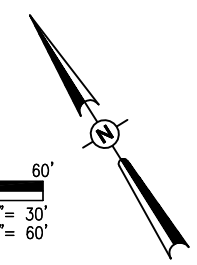
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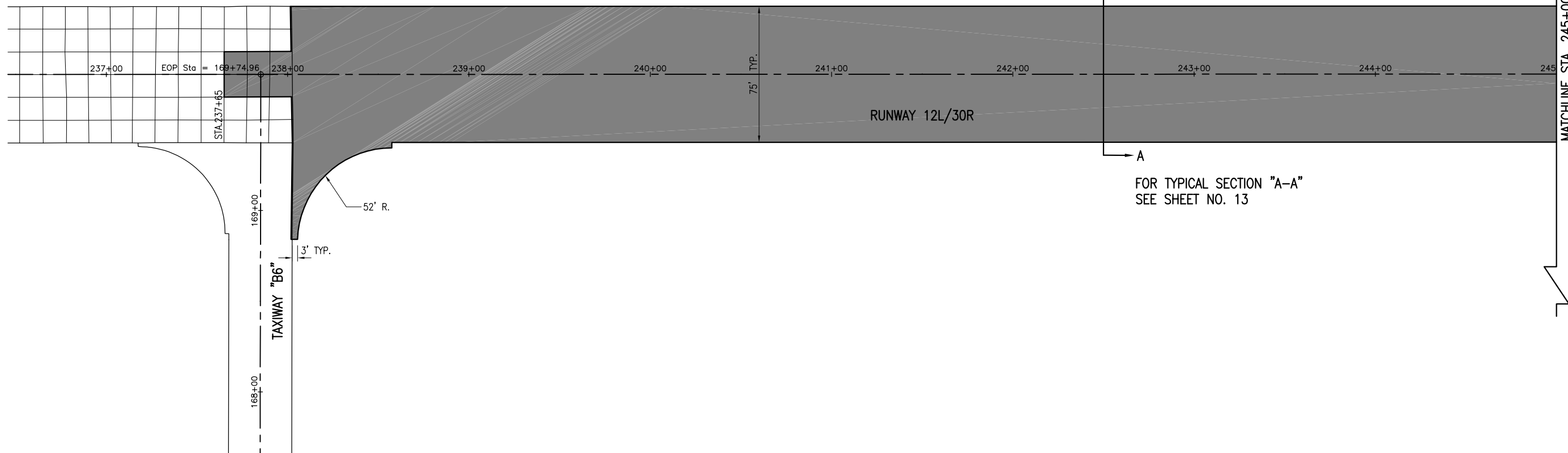
EXTEND RUNWAY
END 30R 1500'
PROPOSED GEOMETRICS PLAN
RUNWAY 12L/30R
STA. 245+00 TO STA. 253+03.10

NO.	STATION	OFFSET	NORTHING	EASTING
7	253+03.10	37.50' LT.	691,614.9387	2,303,506.0648
8	253+03.10	CENTERLINE	691,583.2259	2,303,486.0511
9	253+03.10	37.50' RT.	691,551.5028	2,303,466.5028
10	252+13.00	92.50' RT.	691,552.9812	2,303,360.5399

LEGEND
[Shaded Box] PROPOSED PAVEMENT

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





FOR TYPICAL SECTION "A-A"
SEE SHEET NO. 13

MATCHLINE STA. 245+00

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 PAVEMENT. THE CRUSHED AGGREGATE BASE COURSE MATERIAL WILL BE 4" IN DEPTH AND COMPACTED TO NOT LESS THAN 95 PERCENT DENSITY OF THE STANDARD PROCTOR.

THE BASE COURSE SHALL BE CONSTRUCTED WITH A PAVER AND IF REQUIRED TRIMMED TO A TOLERANCE OF PLUS OR MINUS 0.02'.

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 STANDARD PROCTOR CURVE SHOWING OPTIMUM DENSITY AND MOISTURE FOR THE SUPPLIED BASE COURSE MATERIAL.

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

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

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

156-SEPARATION FABRIC NOTES:

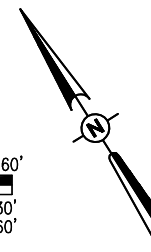
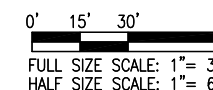
THE SEPARATION FABRIC (156) SHALL BE PLACED IN ACCORDANCE WITH ITEM AR156 "SEPARATION FABRIC" AS STATED ON PAGE 180 OF THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, ADOPTED JULY 1, 2004.

THE PROPOSED SEPARATION FABRIC SHALL BE PLACED ON THE SUBGRADE PRIOR TO THE PLACEMENT OF THE PROPOSED OVERSIZE AGGREGATE. THE SEPARATION FABRIC SHALL BE PLACED 2' BEYOND THE PROPOSED PAVEMENT EDGE AS SHOWN ON THE PROPOSED PAVEMENT TYPICAL SECTION.

THE PROPOSED SEPARATION FABRIC WILL BE PAID FOR UNDER ITEM:
AR156513 SEPARATION FABRIC _____ PER SQ. YDS.

LEGEND

- EXISTING PAVEMENT
- PROPOSED PAVEMENT



DATE	REVISION	BY

SAINT LOUIS DOWNTOWN AIRPORT
A Division of Bi-State Development Agency



Project No. 84506RWYD_0800	JAC	02/05/07
Drawn R-121CON.DWG	DPE	02/05/07
Scale 1" = 30'	CAH	04/05/07
Date 02/05/07		
LAYOUT		
DRAWN		
REVIEWED		

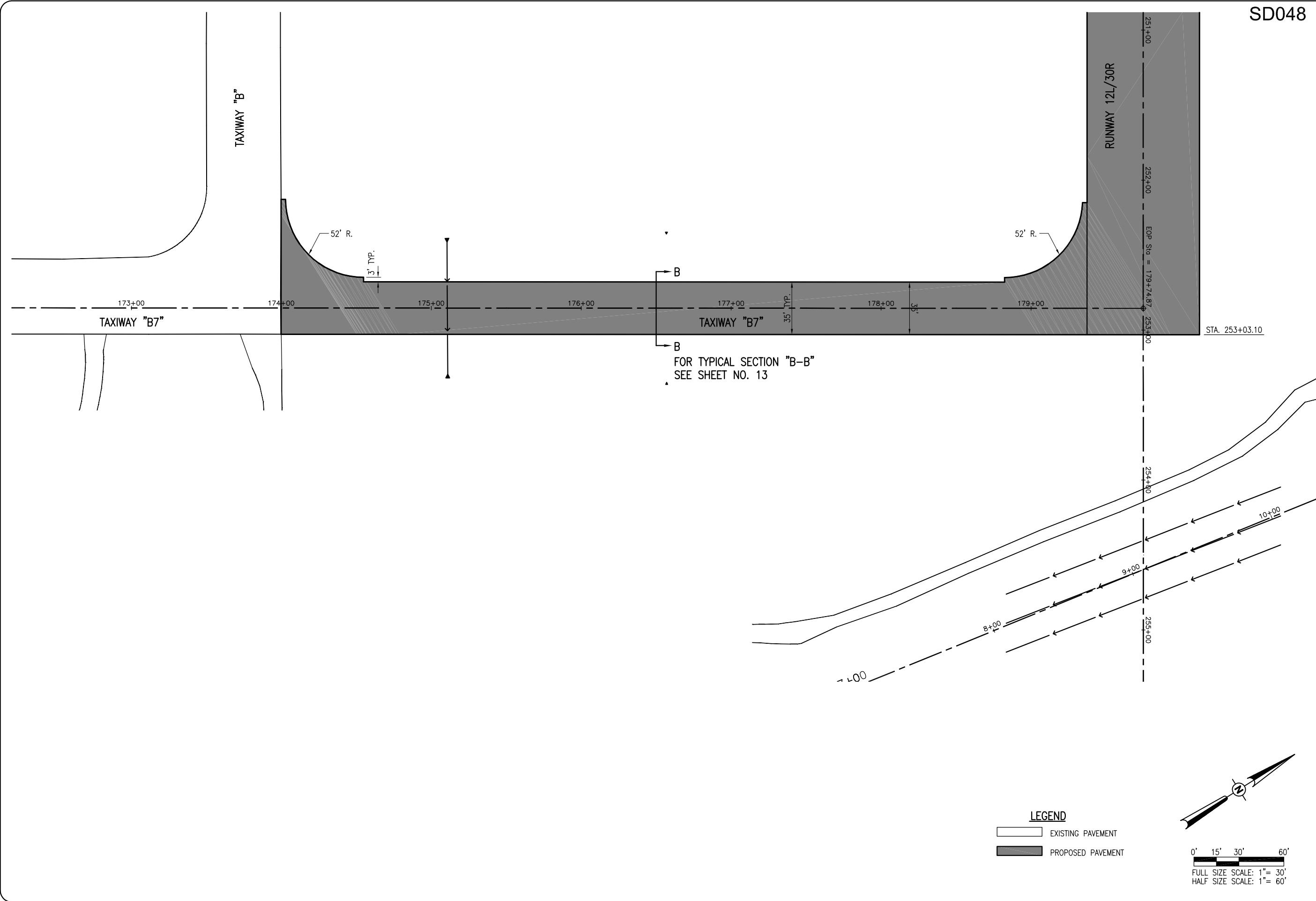
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4227 East City Expressway, Suite 130
St. Louis, MO 63136
Offices Nationwide

EXTEND RUNWAY
END 30R 1500'
PROPOSED
CONSTRUCTION PLAN
STA. 237+65 TO STA. 245+00

JUN 29, 2009 2:14 PM KINCA00394 I:\AIRPORTS\ST. LOUIS DOWNTOWN\84506RWY\AIRPORT\SHEETS\R-121CON.DWG - Runway 12L-30R (1)

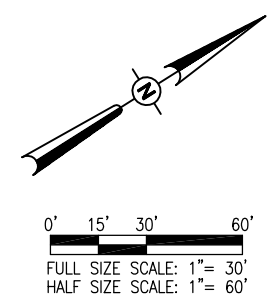
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SD048



FOR TYPICAL SECTION "B-B"
 SEE SHEET NO. 13

LEGEND
 [White Box] EXISTING PAVEMENT
 [Grey Box] PROPOSED PAVEMENT



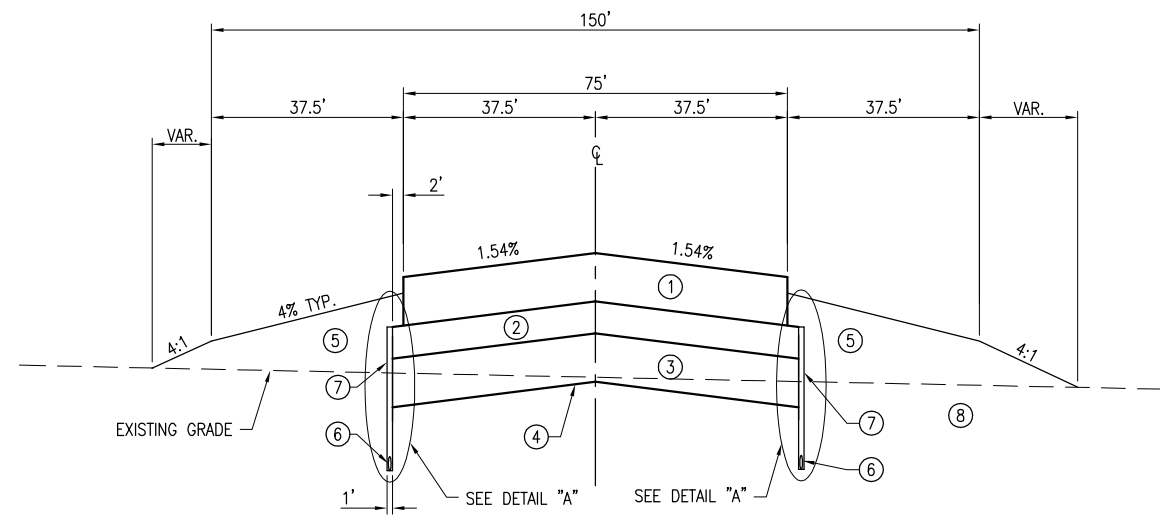
DATE	REVISION	BY

SAINT LOUIS DOWNTOWN AIRPORT
 A Division of Bi-State Development Agency
 A.I.P. PROJ.: 3-17-0039-B18

Project No.	84506RWYD_0800
Revision	R=121CON.DWG
Scale	1" = 30'
Date	02/05/07
LAYOUT	JAC 02/05/07
DRAWN	DPE 02/05/07
REVIEWED	CAH 04/05/07

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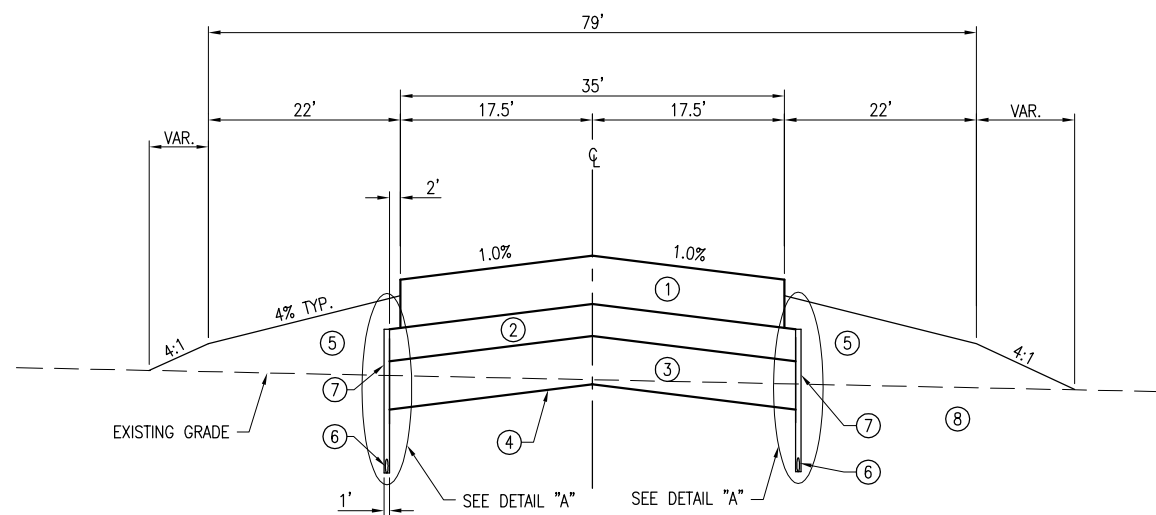
EXTEND RUNWAY
 END 30R 1500'
 PROPOSED
 CONSTRUCTION PLAN
 TAXIWAY "B7"



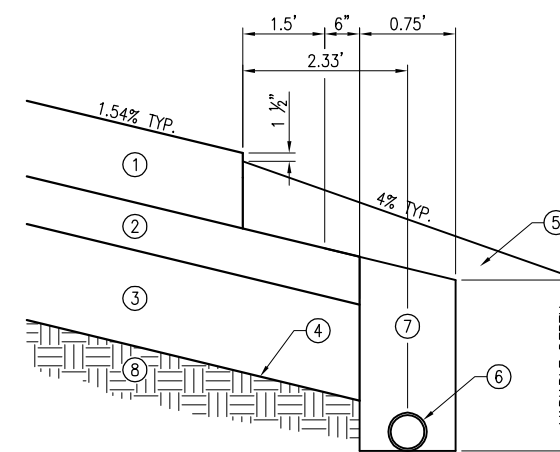
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"NOT TO SCALE"

LEGEND

- ① PROPOSED AR501506: PCC PAVEMENT - 6"
- ② PROPOSED AR209510: CRUSHED AGG. BASE COURSE - 4"
- ③ PROPOSED AR208540: OVERSIZED AGGREGATE - 6"
- ④ PROPOSED AR156513: SEPARATION FABRIC
- ⑤ PROPOSED EARTH FILLETS
- ⑥ PROPOSED AR705524: 4" PERFORATED UNDERDRAIN W/SOCK
- ⑦ PROPOSED AR705411: POROUS BACKFILL NO. 1
- ⑧ EXISTING SUBGRADE



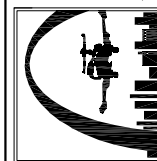
SECTION "B-B"
"NOT TO SCALE"



DETAIL "A"
"NOT TO SCALE"

DATE	REVISION	BY

SAINT LOUIS DOWNTOWN AIRPORT
A Division of Bi-State Development Agency



ILL. PROJ.: CPS-3665 A.I.P. PROJ.: 3-17-0039-B18

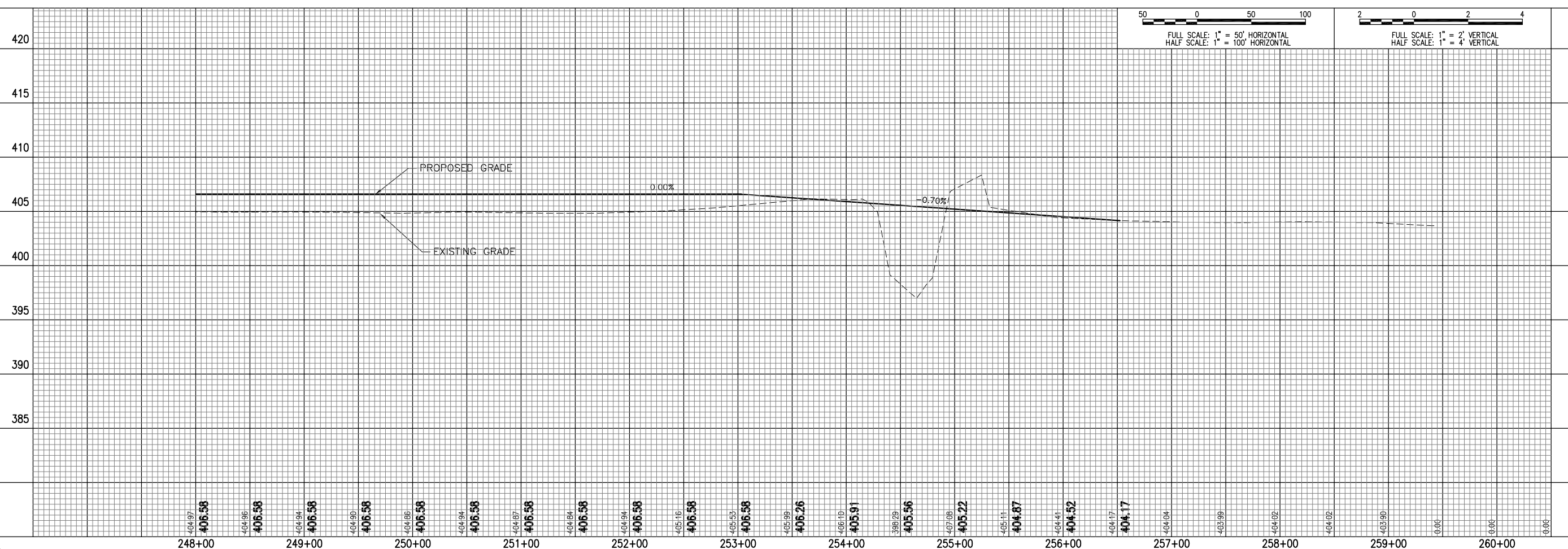
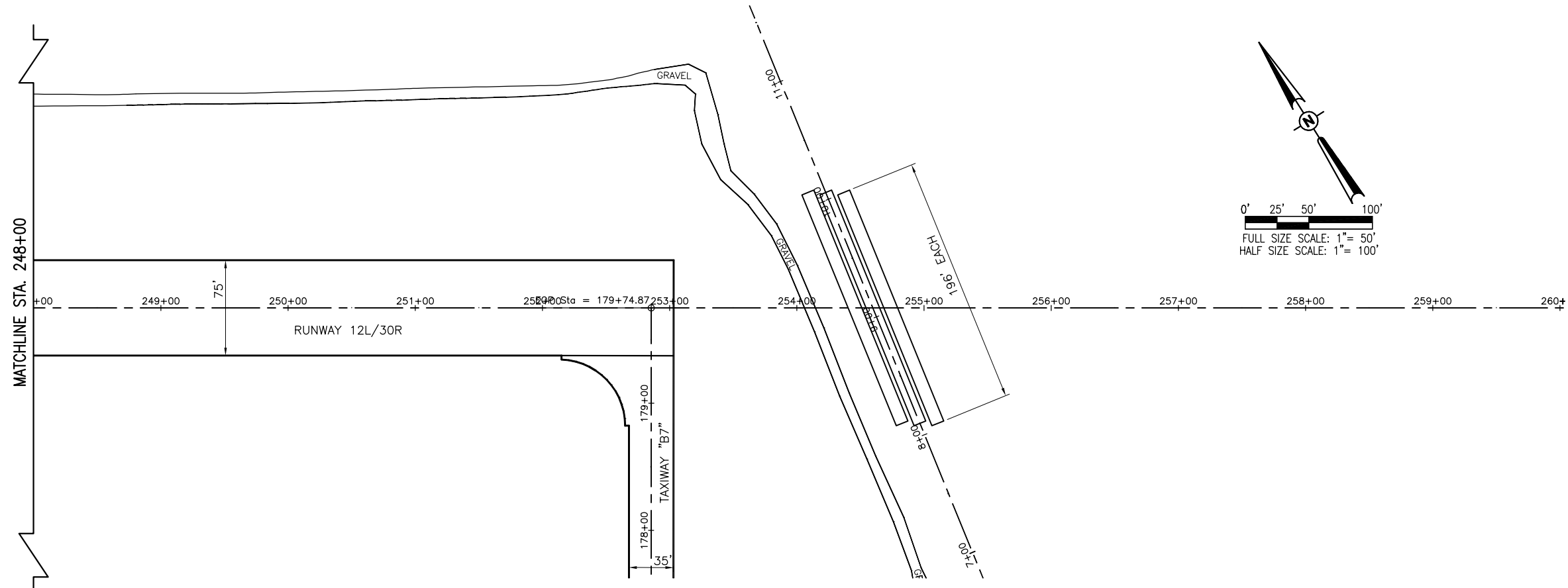
Project No. 84506RWYD_0800	LAYOUT	JAC	02/05/07
Revision R=121CON.DWG	DRAWN	DPE	02/05/07
Scale 1"=30'	REVIEWED	CAH	04/05/07
Date 02/05/07			



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EXTEND RUNWAY
END 30R 1500'

PROPOSED
TYPICAL
SECTIONS



JUN 29, 2009 2:22 PM KINCA00394
 I:\AIRPORTS\ST. LOUIS DOWNTOWN\84506RWY\AIRPORT\SHEETS\8-PROF2-RWY12L.DWG - Layout1

DATE	REVISION	BY

SAINT LOUIS DOWNTOWN AIRPORT
 A Division of Bi-State Development Agency
 ILL. PROJ.: CPS-3665
 A.I.P. PROJ.: 3-17-0039-B18

Project No. 84506RWYD_0800	Drawn	JBO	08/27/07
Plan Name R-PROF2-RWY12L.DWG	Scale	1" = 50'	08/27/07
Date	08/27/07	Reviewed	CAE

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EXTEND RUNWAY END 30R 1500'
 PROPOSED RUNWAY PROFILE
 STA. 248+00 TO STA. 257+00

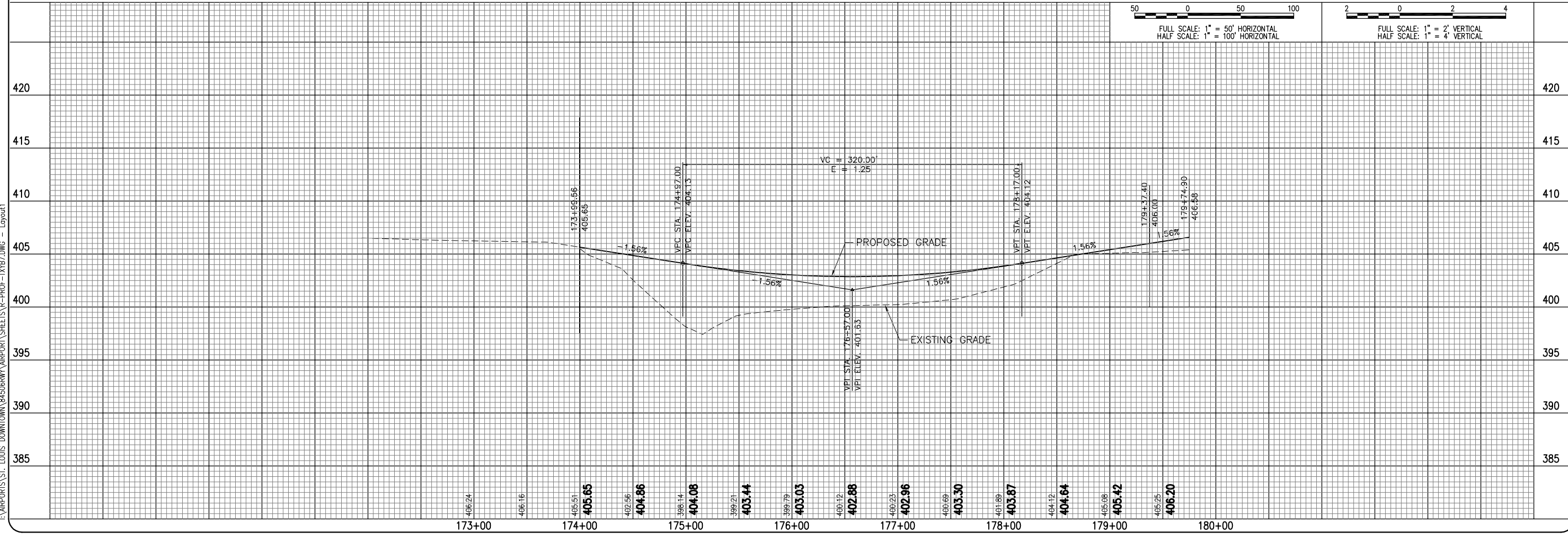
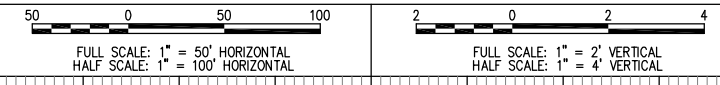
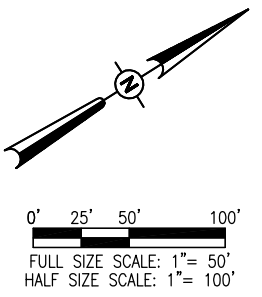
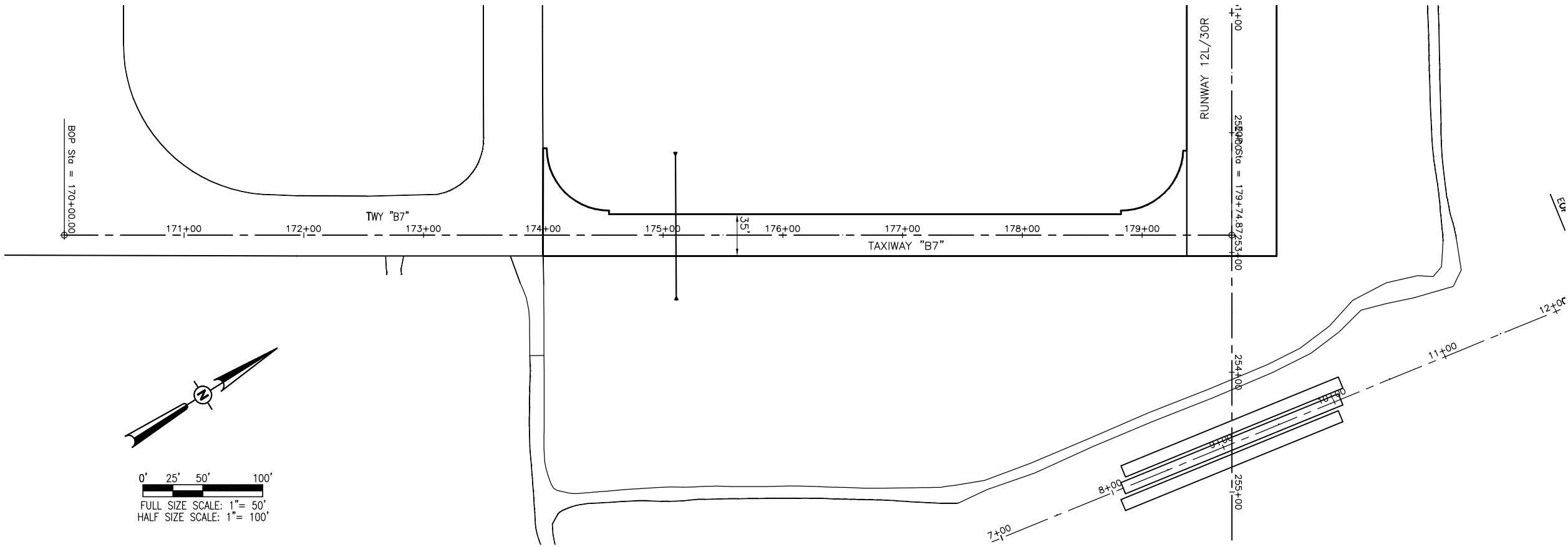
DATE	REVISION	BY

SAINT LOUIS DOWNTOWN AIRPORT
 A Division of Bi-State Development Agency
 ILL. PROJ.: CPS-3665
 A.I.P. PROJ.: 3-17-0039-B18

Project No.	84506RWDYD_0800
Plan Name	R-PROP-TXWB7.DWG
Scale	SCALE 1"=50'
Date	08/27/07
LAYOUT	JBO
DRAWN	JBO
REVIEWED	CAE
DATE	08/27/07
DATE	04/06/07

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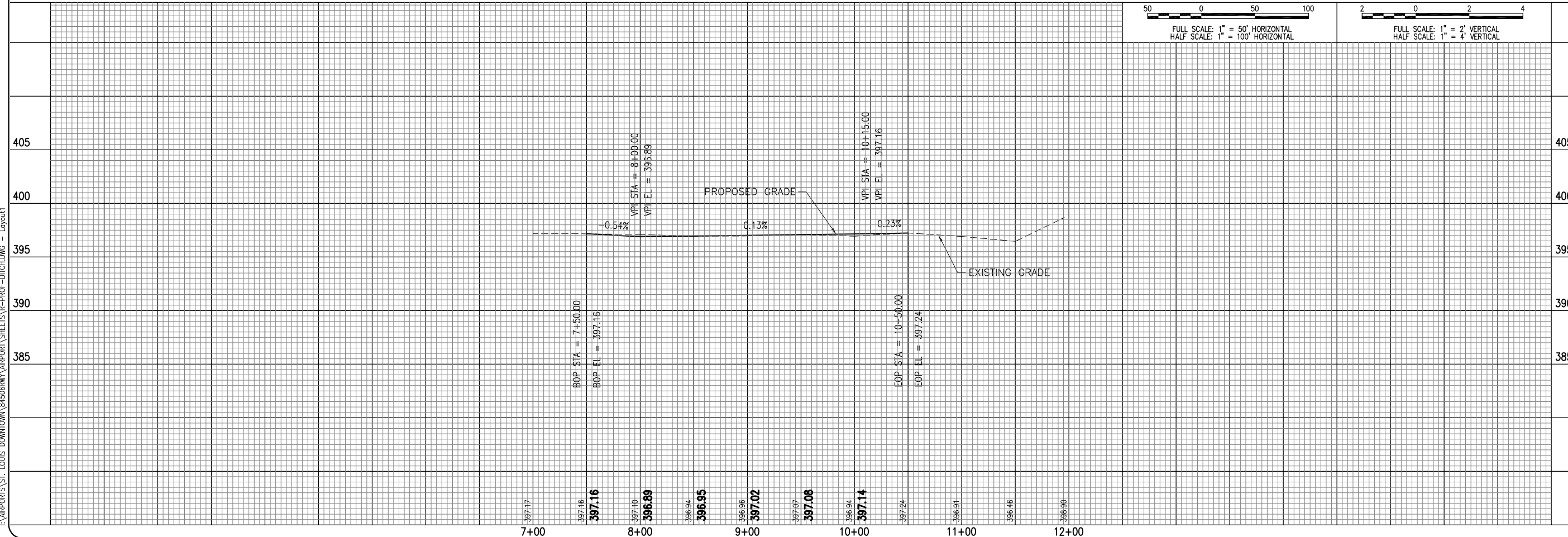
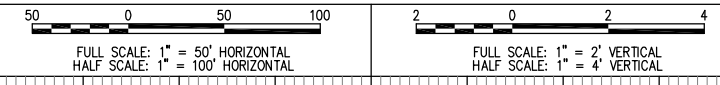
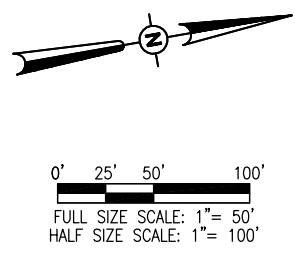
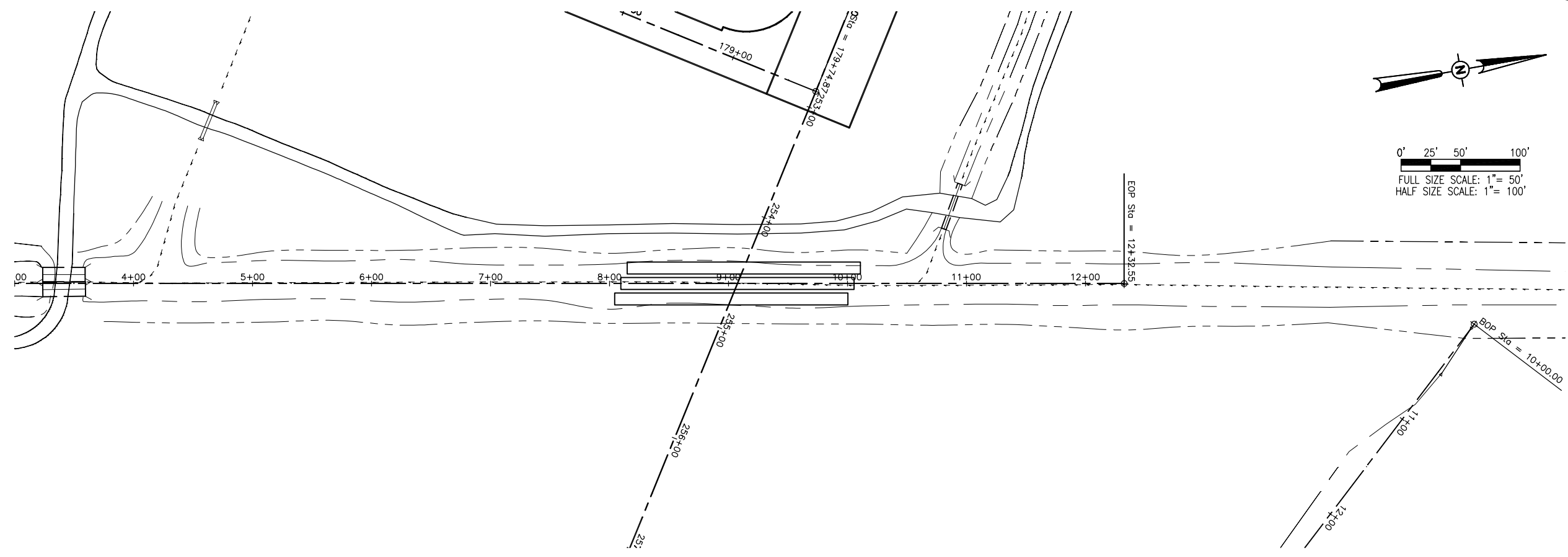
EXTEND RUNWAY
 END 30R 1500'
 PROPOSED
 TAXIWAY "B7"
 PROFILE



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SD048



DATE	REVISION	BY

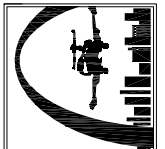
SAINT LOUIS DOWNTOWN AIRPORT
 A Division of Bi-State Development Agency
 ILL. PROJ.: CPS-3665
 A.I.P. PROJ.: 3-17-0039-B18

Project No.	84506RWYD_0800
Drawn	R-PROF-DITCH.DWG
Scale	SCALE 1"=50'
Date	08/27/07
LAYOUT	JBO
DRAWN	JBO
REVIEWED	CAE
DATE	08/27/07
DATE	08/27/07
DATE	04/06/07

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EXTEND RUNWAY
 END 30R 1500'
 PROPOSED
 PIPE ARCH
 PROFILE

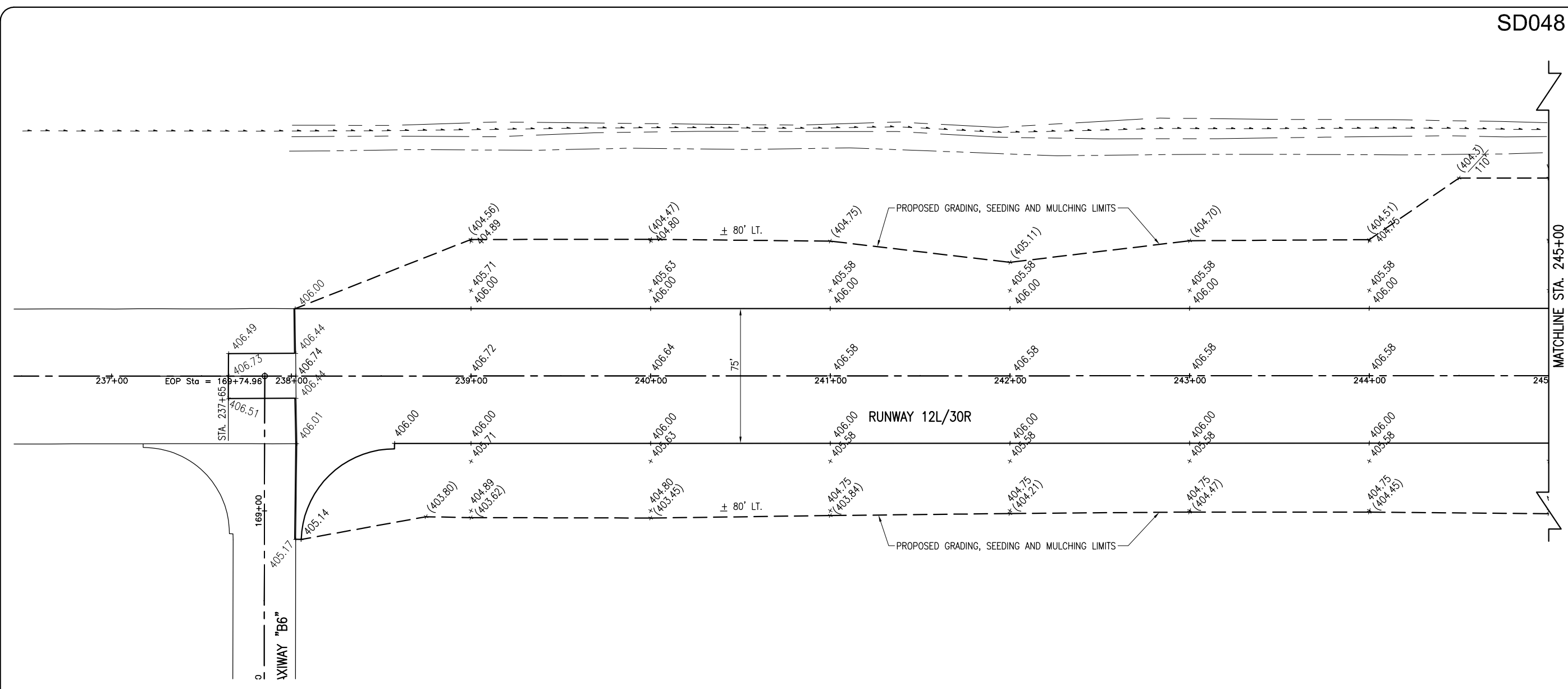
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




SAINT LOUIS DOWNTOWN AIRPORT
 A Division of Bi-State Development Agency

 I.L. PROJ.: CPS-3665
 A.I.P. PROJ.: 3-17-0039-B18

Project No. 84506RWYD_0800	JAC	02/05/07
R-191STK.DWG	DPE	02/05/07
Scale 1"=30'	CAH	04/05/07
Date 02/05/07		
LAYOUT		
DRAWN		
REVIEWED		

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EXTEND RUNWAY
 END 30R 1500'
 PROPOSED
 STAKING PLAN
 STA. 237+65 TO STA. 245+00



- LEGEND**
-  EXISTING PAVEMENT
 -  PROPOSED PAVEMENT
 -  EXISTING GRADE
 -  PROPOSED GRADE
 -  PROPOSED GRADING, SEEDING AND MULCHING LIMITS

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 SEEDDED IN ACCORDANCE WITH THE ABOVE NOTED SPECIFICATION. ALL AREAS DISTURBED OUTSIDE THE DESIGNATED GRADING AND SEEDING LIMITS WILL ALSO BE SEEDDED 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 AND TAXIWAY.

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 ITEMS: AR901510 SEEDING _____ 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.

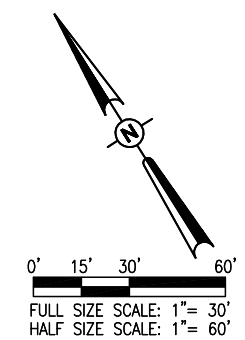
908-2.1 MULCH MATERIAL: THE CONTRACTOR MAY EITHER FURNISH STRAW OR HYDROMULCH AS THE TYPE OF MULCH MATERIAL TO BE USED ON THIS PROJECT.

908-3.1 MULCHING: 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 _____

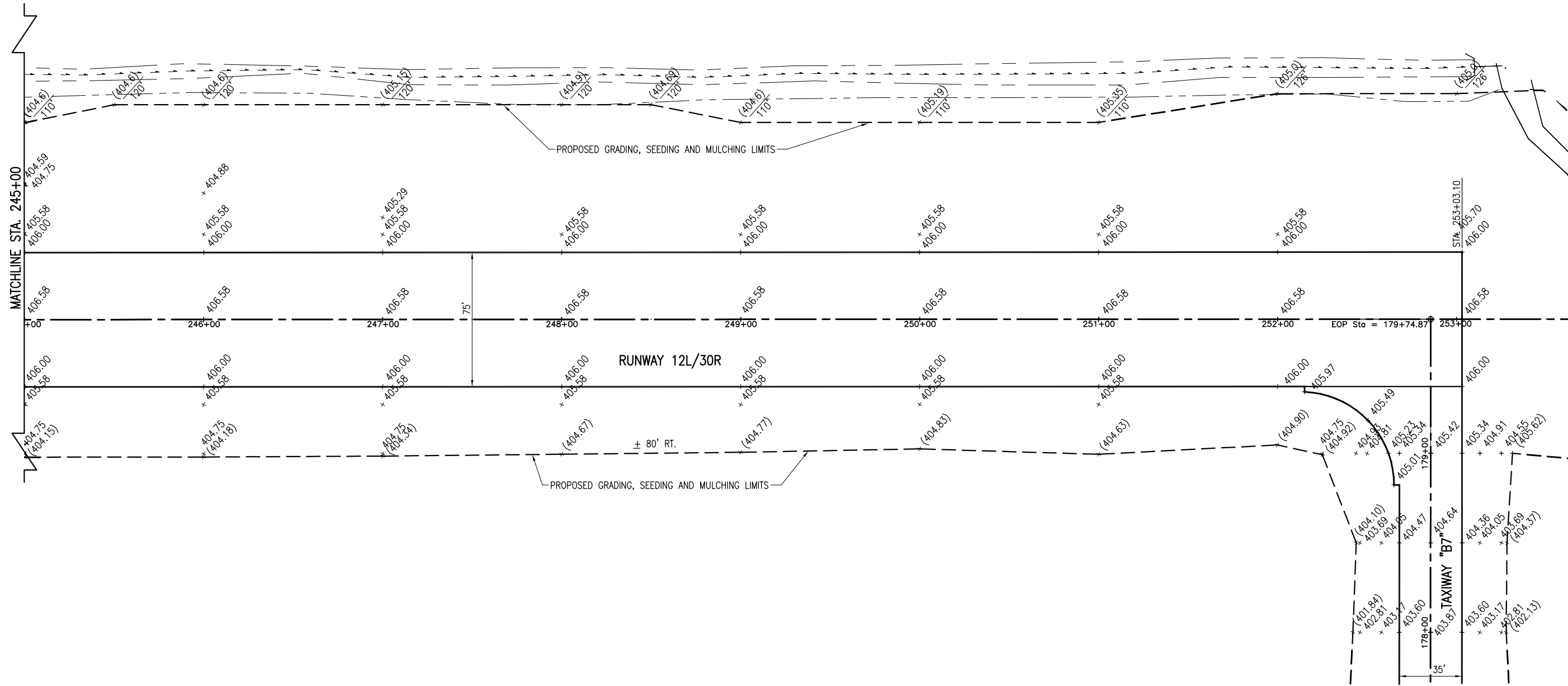
THE PROPOSED MULCHING WILL BE PAID FOR UNDER ITEMS:
 AR908510 MULCHING _____ PER ACRES








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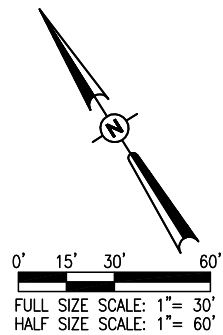
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SD048

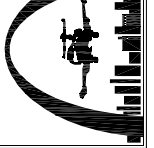


LEGEND

-  EXISTING PAVEMENT
-  PROPOSED PAVEMENT
-  EXISTING GRADE
-  PROPOSED GRADE
-  PROPOSED GRADING, SEEDING AND MULCHING LIMITS



DATE	REVISION	BY

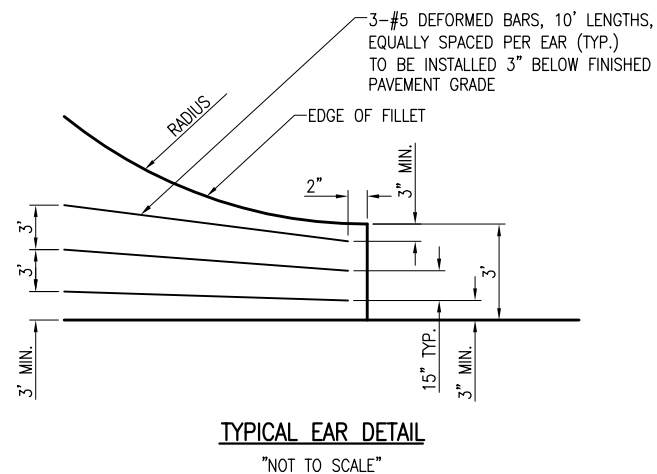
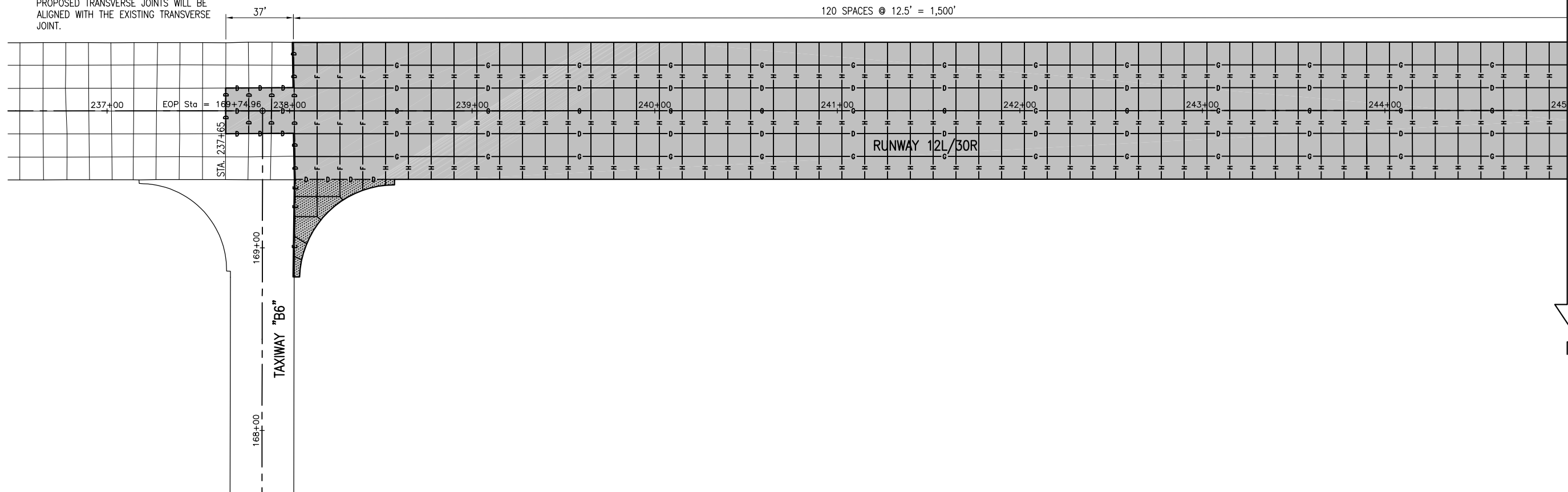
SAINT LOUIS DOWNTOWN AIRPORT
 A Division of Bi-State Development Agency

 I.L. PROJ.: CPS-3665
 A.I.P. PROJ.: 3-17-0039-B18

Project No.	84506RWYD_0800
Revision	R-191STK.DWG
Scale	1" = 30'
Date	02/05/07
LAYOUT	JAC 02/05/07
DRAWN	DPE 02/05/07
REVIEWED	CAH 04/05/07

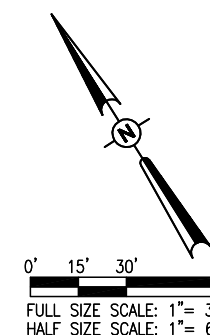
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EXTEND RUNWAY END 30R 1500'
 PROPOSED STAKING PLAN
 STA. 245+00 TO STA. 253+03.10

NOTE:
DIMENSIONING OF PROPOSED TRANSVERSE JOINTS ARE APPROXIMATE, BUT THE PROPOSED TRANSVERSE JOINTS WILL BE ALIGNED WITH THE EXISTING TRANSVERSE JOINT.



- LEGEND**
- EXISTING PAVEMENT
 - PROPOSED PAVEMENT
 - PAVEMENT AREA TO BE REINFORCED WITH WIRE MESH 6"x6" (W5xW5)
 - EXISTING JOINTS
 - D CONSTRUCTION JOINT WITH DOWELS - TYPE D
 - G LONGITUDINAL CONTRACTION JOINT WITH TIE BARS - TYPE G
 - H TRANSVERSE CONTRACTION JOINT WITHOUT DOWELS - TYPE H
 - F TRANSVERSE CONTRACTION JOINT WITH DOWELS - TYPE F
 - E THICKENED EDGE EXPANSION JOINT - TYPE E



DATE	REVISION	BY

SAINT LOUIS DOWNTOWN AIRPORT
A Division of Bi-State Development Agency

ILL. PROJ.: CPS-3665

Project No. 84506RWYD_0800	JAC	02/08/07
Drawn R-161JNT.DWG	BAK	02/08/07
Scale 1" = 30'	CAH	04/05/07
Date 02/08/07		

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EXTEND RUNWAY
END 30R 1500'

PROPOSED
JOINTING PLAN

STA. 237+65 TO STA. 245+00

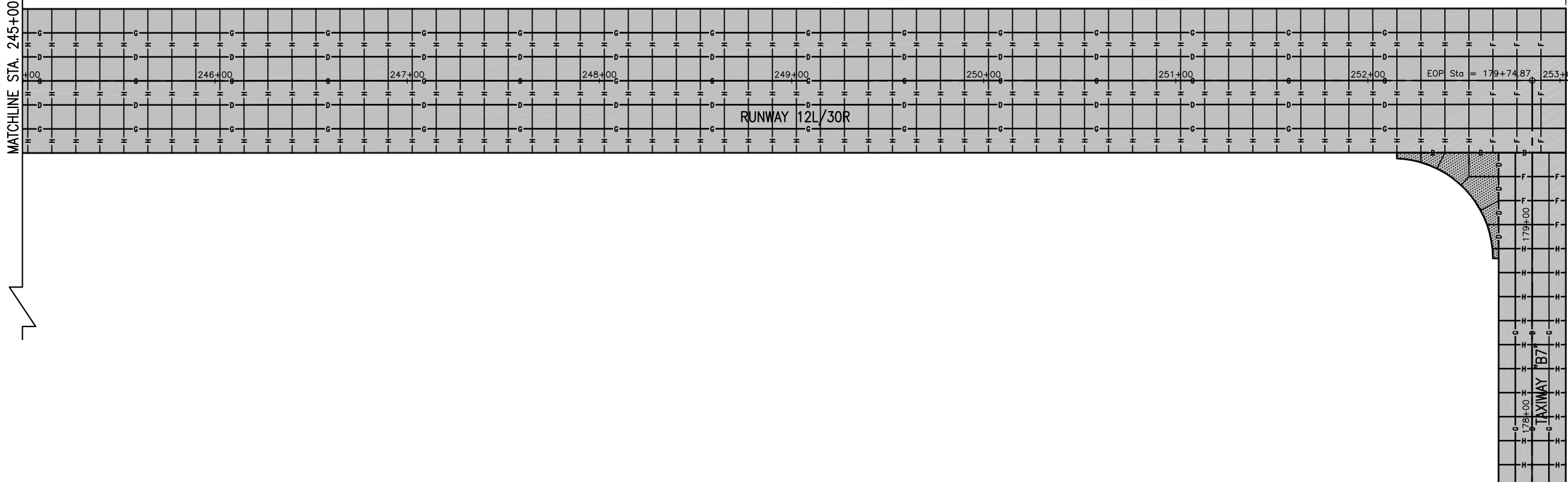
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MATCHLINE STA. 245+00

120 SPACES @ 12.5' = 1,500'

STA. 253+03.10









6 SPACES @ 12.5' = 75'

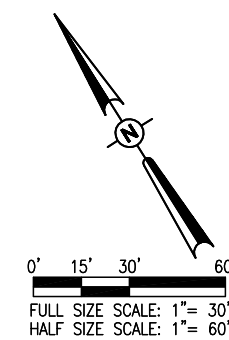


RUNWAY 12L/30R

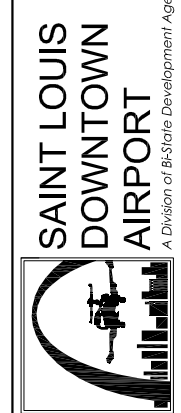
TAXIWAY B7

LEGEND

-  EXISTING PAVEMENT
-  PROPOSED PAVEMENT
-  PAVEMENT AREA TO BE REINFORCED WITH WIRE MESH 6"x6" (W5xW5)
-  D CONSTRUCTION JOINT WITH DOWELS - TYPE D
-  G LONGITUDINAL CONTRACTION JOINT WITH TIE BARS - TYPE G
-  H TRANSVERSE CONTRACTION JOINT WITHOUT DOWELS - TYPE H
-  F TRANSVERSE CONTRACTION JOINT WITH DOWELS - TYPE F
-  B THICKENED EDGE EXPANSION JOINT - TYPE B



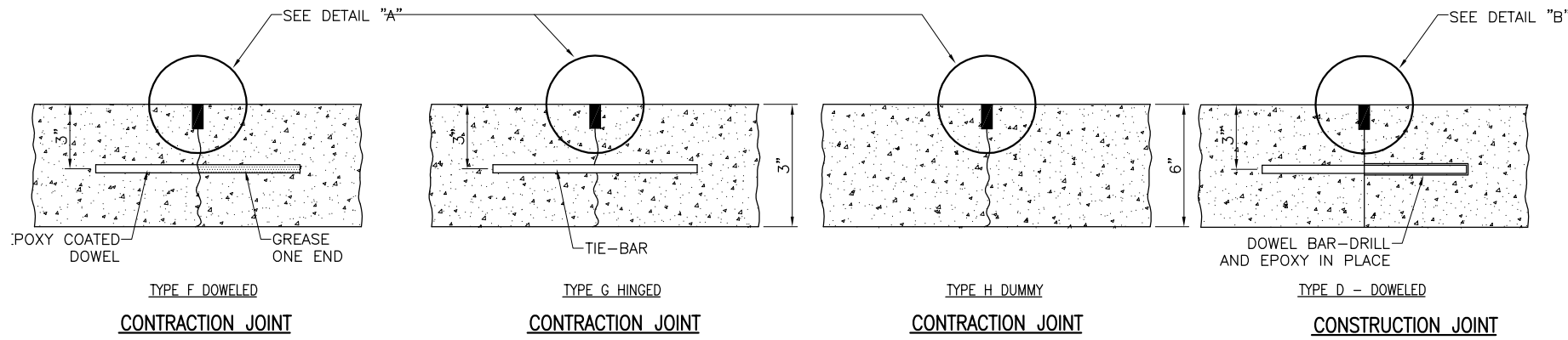
DATE	REVISION	BY



Project No.	84506RWYD_0800
Revision	R-16\INT.DWG
Scale	1" = 30'
Date	02/08/07
LAYOUT	JAC 02/08/07
DRAWN	BAK 02/08/07
REVIEWED	CAH 04/05/07



EXTEND RUNWAY
 END 30R 1500'
 PROPOSED
 JOINTING PLAN
 STA. 245+00 TO STA. 253+03.10



JOINTING NOTES

ALL EXPOSED JOINT EDGES SHALL BE CHAMFERED ACCORDING TO THE JOINT DETAILS ON THIS SHEET.

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

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

ALL DOWELS ARE TO BE PLACED AT A POINT NOT TO EXCEED 7-1/2 INCHES OR CLOSER THAN 6 INCHES FROM A LONGITUDINAL OR TRANSVERSE JOINT.

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. 4 DEFORMED BARS, 30" IN LENGTH.

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

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

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

THE COST OF ALL DOWEL BARS, TIE-BARS, PAVING MESH, SAWING, NEOPRENES 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 TO PRODUCE A SMOOTH AND STRAIGHT EDGE.

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

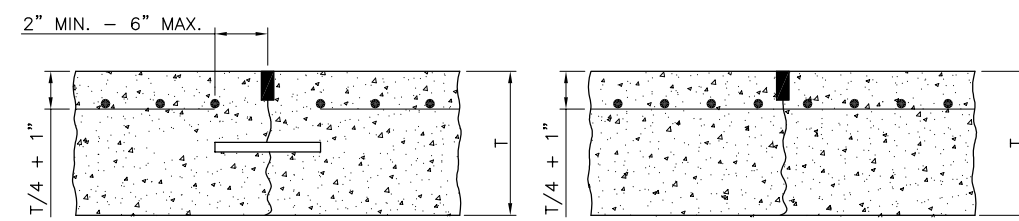
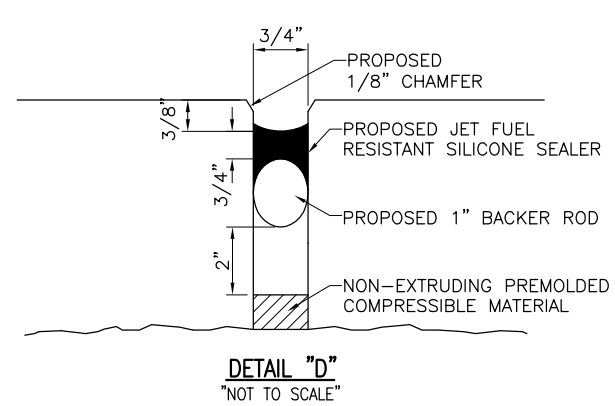
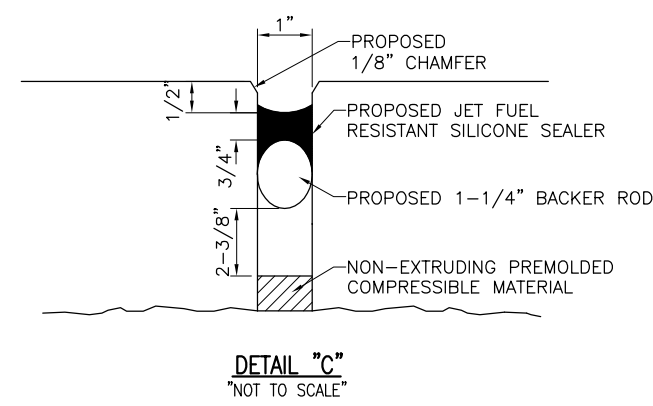
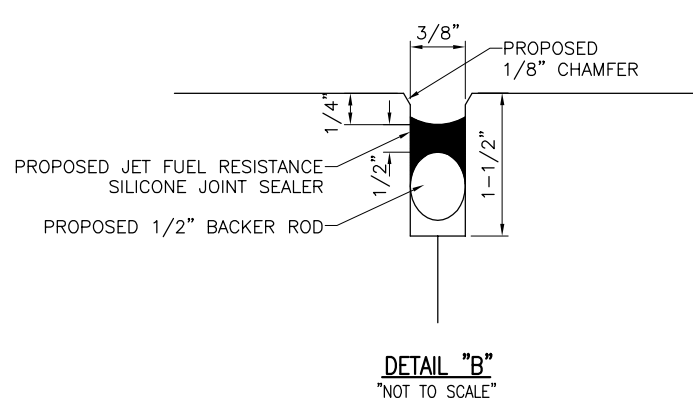
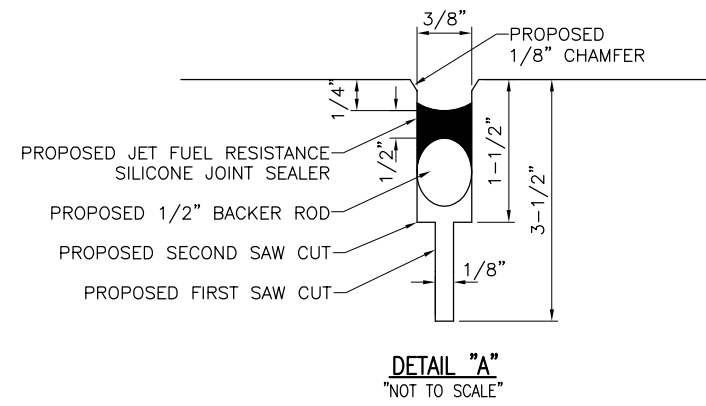
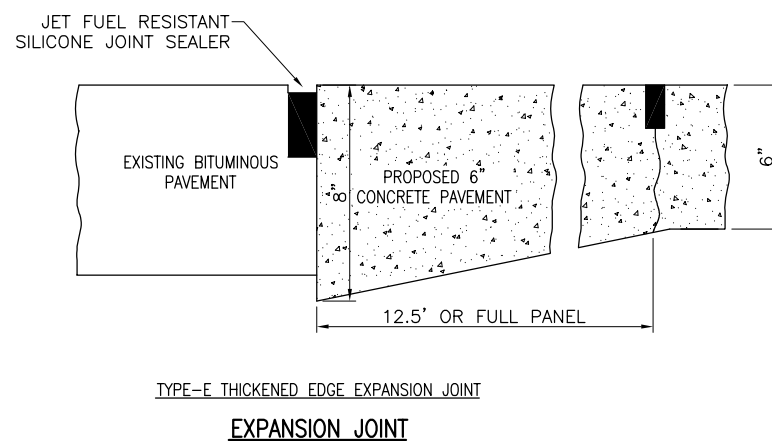
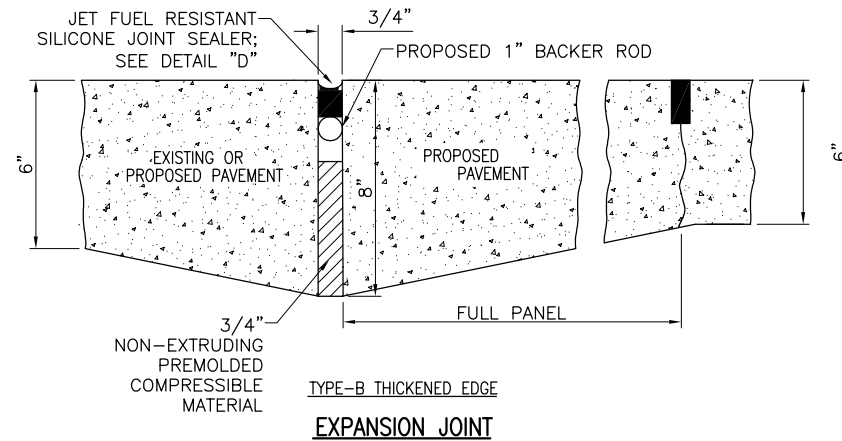
JOINT SEALANT SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS ITEM 501-2.5.

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

ALL NON-ALIGNED EDGES WILL BE SAWS FULL DEPTH.

WIRE MESH IS TO BE SECURELY HELD IN PLACE BY MEANS OF SUPPORT PINS OR OTHER METHODS TO PREVENT SHIFTING OR SAGGING DURING AND AFTER THE CONCRETE PLACEMENT. SUPPORT PINS ARE TO BE OF SUFFICIENT LENGTH TO PENETRATE AT LEAST 6 INCHES INTO THE SUBGRADE.

THE PREPARATION, TRANSPORTATION, CURING AND TESTING OF THE CYLINDERS ARE THE RESPONSIBILITY OF THE CONTRACTOR.



CONSTRUCTION OR CONTRACTION JOINTS WITH STEEL REINFORCEMENT

BY	
REVISION	
DATE	

SAINT LOUIS DOWNTOWN AIRPORT
 A Division of Bi-State Development Agency
 ILL. PROJ.: CPS-3665
 A.I.P. PROJ.: 3-17-0039-B18

Project No.	84506RWYD_0800
Revision	R-56.1-JNT.DWG
Date	NOT TO SCALE
Date	02/07/07
LAYOUT	JAC 02/07/07
DRAWN	BAK 02/07/07
REVIEWED	CAH 04/05/07

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 4227 East City Expressway, Suite 130
 St. Louis, Missouri 63106
 Offices Nationwide

EXTEND RUNWAY
 END 30R 1500'
 PROPOSED
 JOINTING
 DETAILS

JUN 29, 2009 2:37 PM KINCAID0394
 I:\AIRPORTS\ST. LOUIS DOWNTOWN\84506RWY\AIRPORT SHEETS\R-56.1.JNT.DWG - JOINTING DETAILS

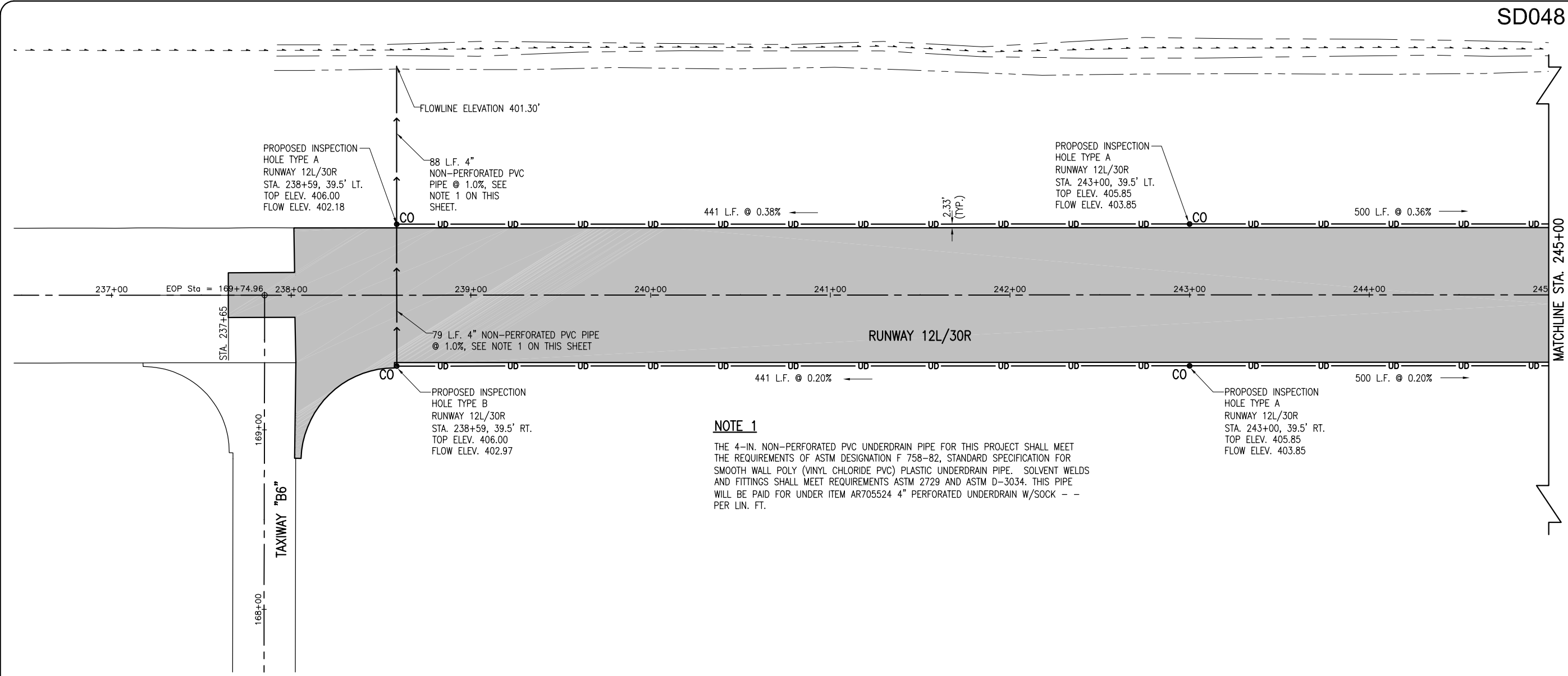
DATE	REVISION	BY

SAINT LOUIS DOWNTOWN AIRPORT
 A Division of Bi-State Development Agency
 A.I.P. PROJ.: 3-17-0039-B18
 I.L. PROJ.: CPS-3665

Project No.	84506RWYD_0800
Revision	R-131DRN.DWG
Scale	1" = 30'
Date	02/07/07
LAYOUT	JAC 02/07/07
DRAWN	BAK 02/07/07
REVIEWED	CAH 04/05/07

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 St. Louis, Missouri 63106
 Offices Nationwide

EXTEND RUNWAY
 END 30R 1500'
 PROPOSED
 DRAINAGE PLAN
 STA. 237+65 TO STA. 245+00



NOTE 1
 THE 4-IN. NON-PERFORATED PVC UNDERDRAIN PIPE FOR THIS PROJECT SHALL MEET THE REQUIREMENTS OF ASTM DESIGNATION F 758-82, STANDARD SPECIFICATION FOR SMOOTH WALL POLY (VINYL CHLORIDE PVC) PLASTIC UNDERDRAIN PIPE. SOLVENT WELDS AND FITTINGS SHALL MEET REQUIREMENTS ASTM 2729 AND ASTM D-3034. THIS PIPE WILL BE PAID FOR UNDER ITEM AR705524 4" PERFORATED UNDERDRAIN W/SOCK -- PER LIN. FT.

UNDERDRAIN NOTES

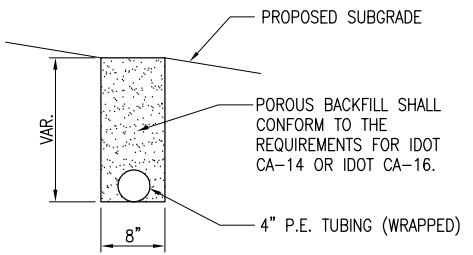
THE CONTRACTOR SHALL INSTALL THE PROPOSED 4" P.E. TUBING UNDERDRAINS TO THE DEPTH AND GRADES SHOWN ON THIS SHEET.

THE 4" P.E. TUBING SHALL BE CAPPED AT THE ENDS WHICH DO NOT CONNECT INTO STRUCTURES.

THE TRENCH SHALL BE BACKFILLED AND COMPACTED WITH POROUS BACKFILL NO. 1 MATERIAL. THE TRENCH LOCATED IN THE PROPOSED PAVEMENT AREAS WILL BE BACKFILLED AS SHOWN IN THE DETAIL ON THIS SHEET. THE TRENCH LOCATED IN TURF AREAS SHALL BE BACKFILLED UP TO WITHIN 1 FT. OF THE EXISTING GROUND ELEVATION. THE REMAINING 1 FT. OF TRENCH WILL BE BACKFILLED AND COMPACTED WITH EARTH MATERIAL.

THE POROUS BACKFILL SHALL CONFORM TO THE REQUIREMENTS FOR IDOT CA-14 OR IDOT CA-16.

THE PROPOSED UNDERDRAINS AND BACKFILL MATERIAL WILL BE PAID FOR UNDER THE FOLLOWING ITEMS:
 AR705411 "POROUS BACKFILL NO. 1" _____PER C.Y.
 AR705524 "4" PERFORATED UNDERDRAIN W/SOCK"____PER L.F.

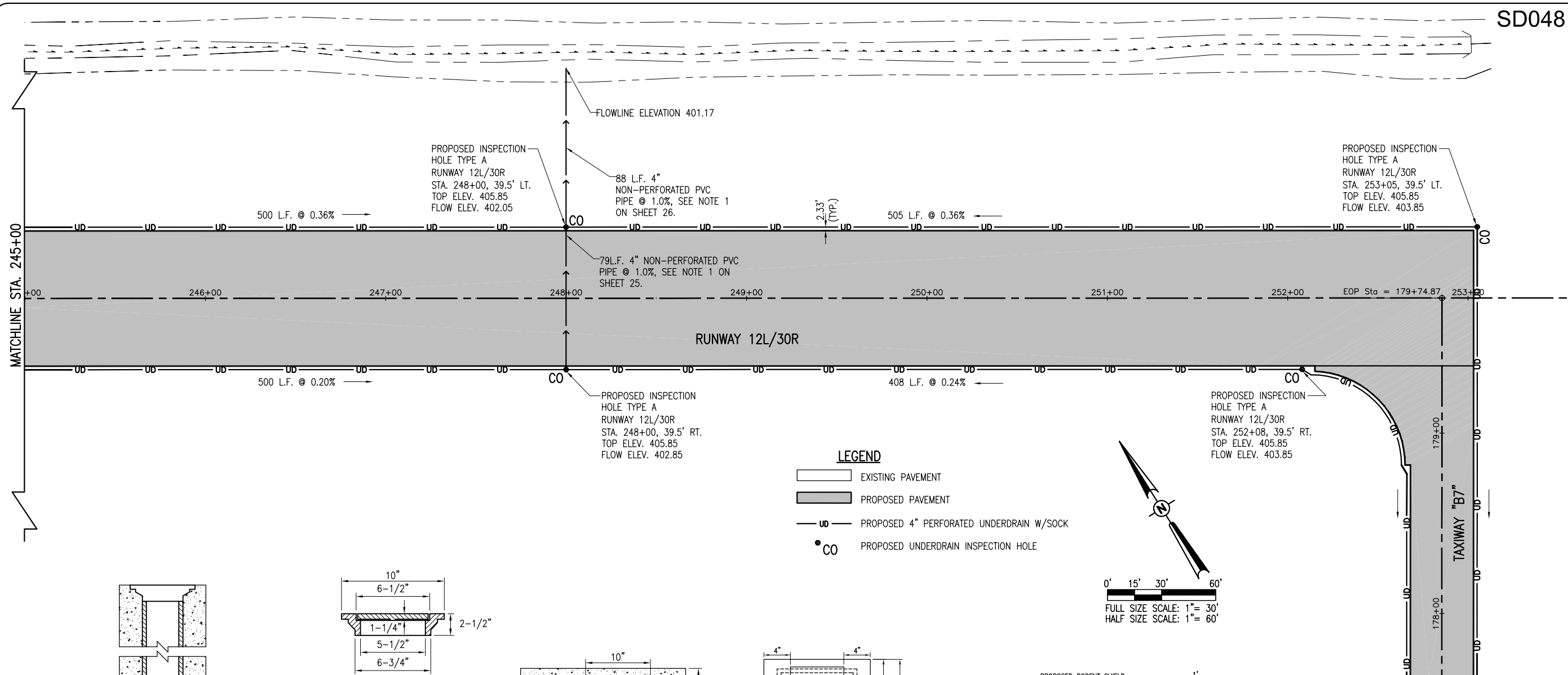


UNDERDRAIN DETAIL
 NOT TO SCALE

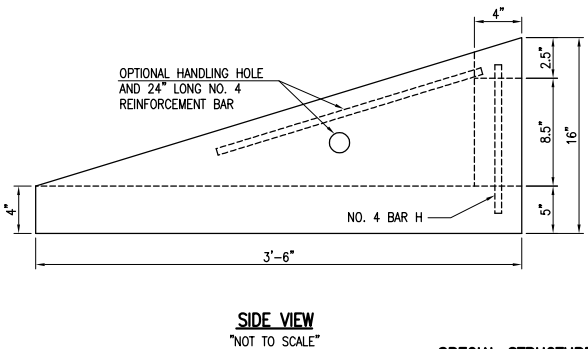
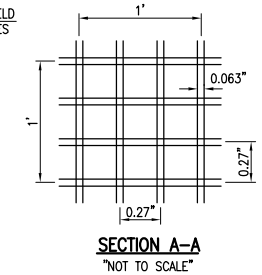
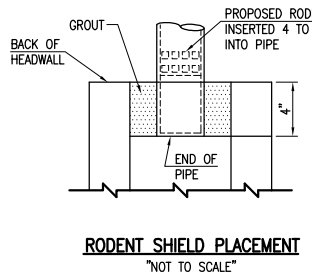
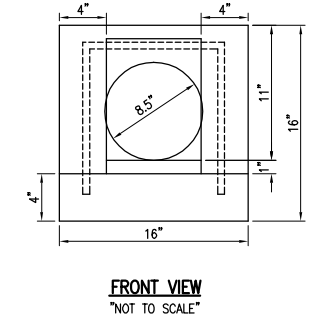
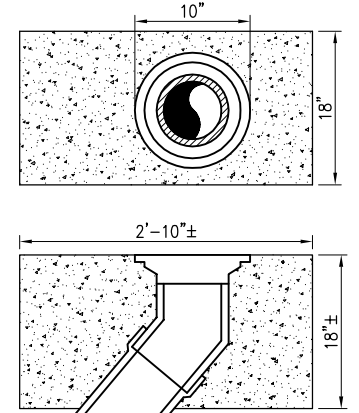
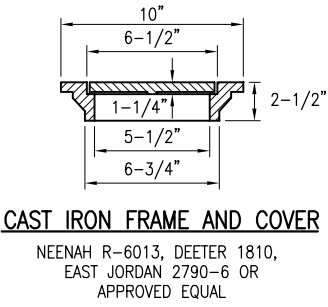
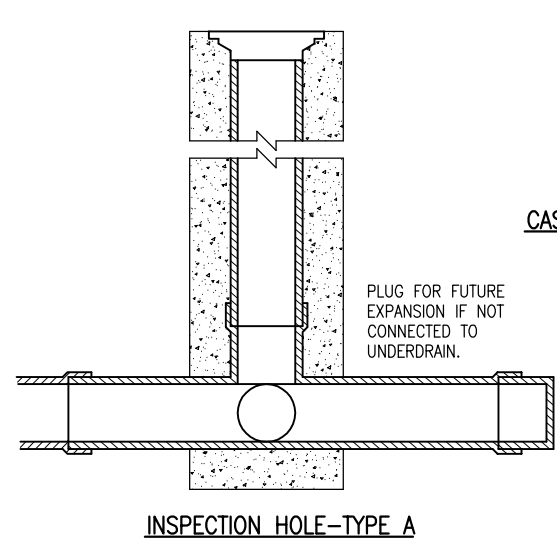
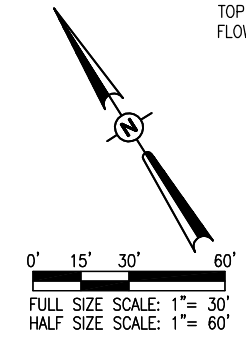
LEGEND

- EXISTING PAVEMENT
- PROPOSED PAVEMENT
- PROPOSED 4" PERFORATED UNDERDRAIN W/SOCK
- PROPOSED UNDERDRAIN INSPECTION HOLE

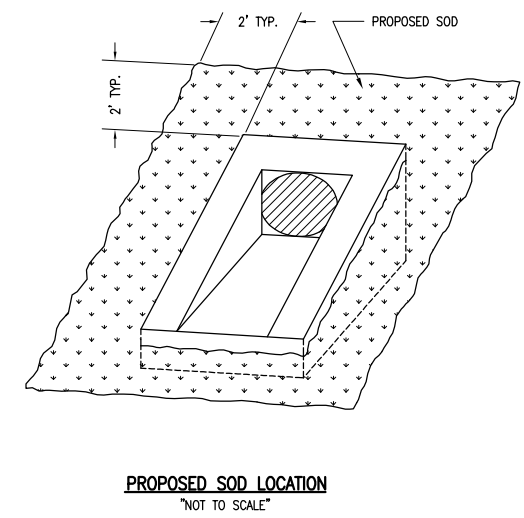
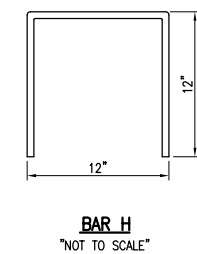
0' 15' 30' 60'
 FULL SIZE SCALE: 1" = 30'
 HALF SIZE SCALE: 1" = 60'



- LEGEND**
- EXISTING PAVEMENT
 - PROPOSED PAVEMENT
 - PROPOSED 4" PERFORATED UNDERDRAIN W/SOCK
 - PROPOSED UNDERDRAIN INSPECTION HOLE



SPECIAL STRUCTURE FOR UNDERDRAIN DETAIL
I.D.O.T. STANDARD 2362-4
"NOT TO SCALE"



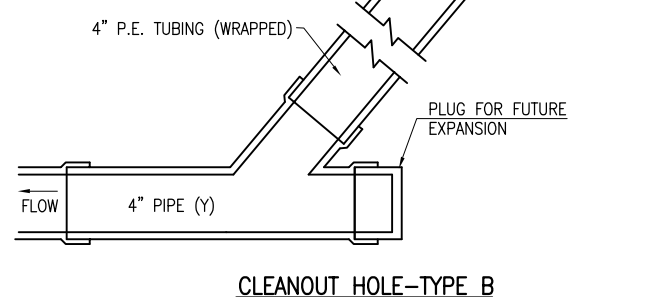
INSPECTION HOLE NOTES

DIAMETER OF PIPE AS SPECIFIED.

TOP OF INSPECTION HOLES SHALL BE 0.15' BELOW ADJACENT PAVEMENT EDGE.

1/2" CHAMFER TO BE USED ON ALL EXPOSED EDGES OF INSPECTION HOLES.

THE CONCRETE SHALL BE STRUCTURAL PORTLAND CEMENT CONCRETE (NON- REINFORCED)



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DATE	REVISION	BY

SAINT LOUIS DOWNTOWN AIRPORT
A Division of Bi-State Development Agency

A.I.P. PROJ.: 3-17-0039-B18
ILL. PROJ.: CPS-3665

FILE PROJECT No. 84506RWYD_0800	JAC	02/07/07
R-131DRN.DWG	BAK	02/07/07
Scale 1"=30'	CAH	04/05/07
Date 02/07/07		

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St. Louis, Missouri 63106
Offices Nationwide

EXTEND RUNWAY END 30R 1500'

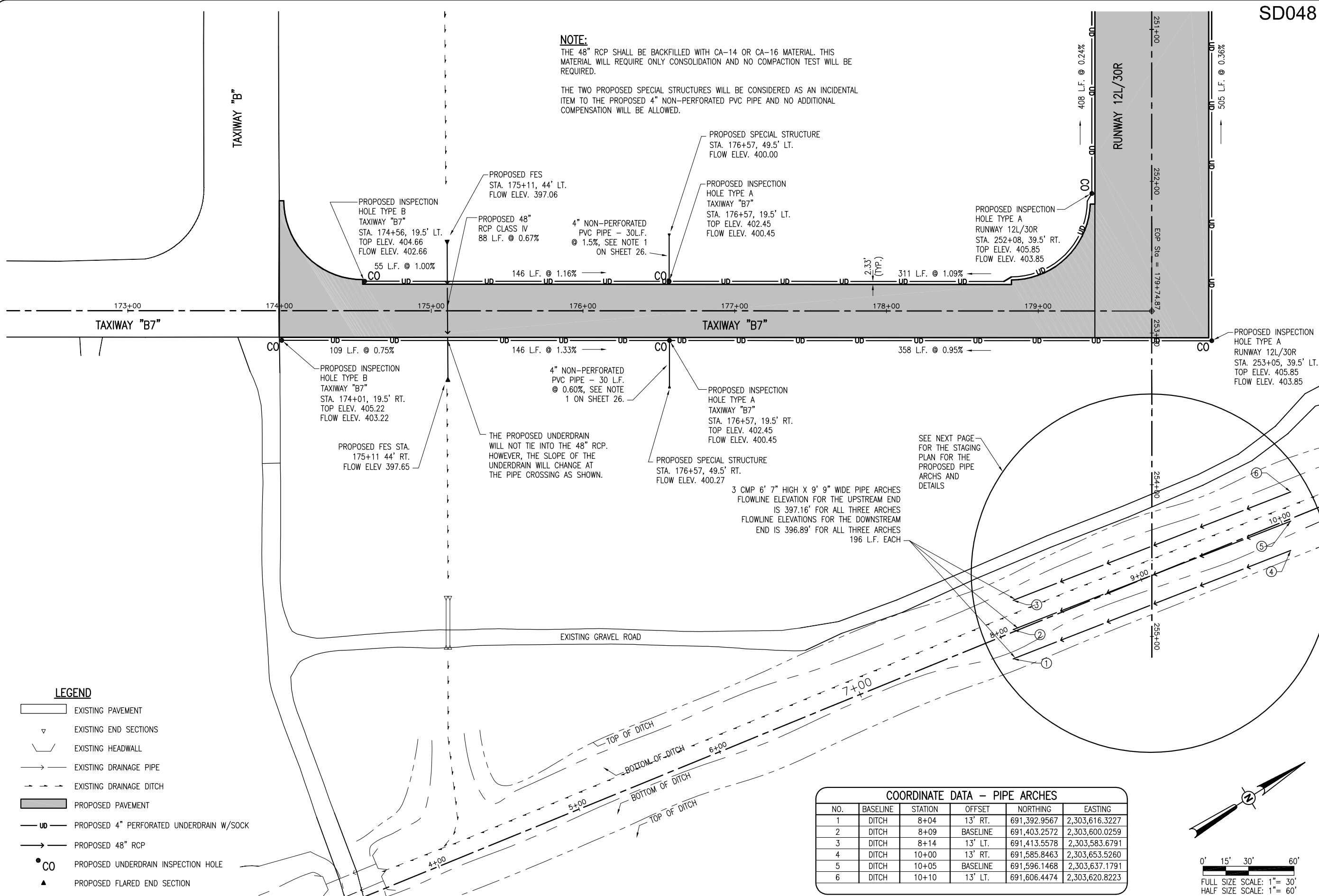
PROPOSED DRAINAGE PLAN

STA. 245+00 TO STA. 253+03.10

NOTE:

THE 48" RCP SHALL BE BACKFILLED WITH CA-14 OR CA-16 MATERIAL. THIS MATERIAL WILL REQUIRE ONLY CONSOLIDATION AND NO COMPACTION TEST WILL BE REQUIRED.

THE TWO PROPOSED SPECIAL STRUCTURES WILL BE CONSIDERED AS AN INCIDENTAL ITEM TO THE PROPOSED 4" NON-PERFORATED PVC PIPE AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.



3 CMP 6' 7" HIGH X 9' 9" WIDE PIPE ARCHES
 FLOWLINE ELEVATION FOR THE UPSTREAM END IS 397.16' FOR ALL THREE ARCHES
 FLOWLINE ELEVATIONS FOR THE DOWNSTREAM END IS 396.89' FOR ALL THREE ARCHES
 196 L.F. EACH

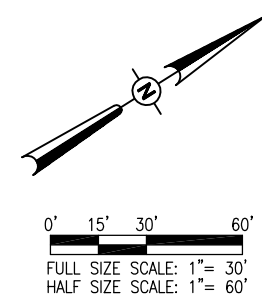
SEE NEXT PAGE FOR THE STAGING PLAN FOR THE PROPOSED PIPE ARCHES AND DETAILS

THE PROPOSED UNDERDRAIN WILL NOT TIE INTO THE 48" RCP. HOWEVER, THE SLOPE OF THE UNDERDRAIN WILL CHANGE AT THE PIPE CROSSING AS SHOWN.

LEGEND

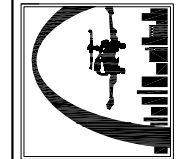
- EXISTING PAVEMENT
- EXISTING END SECTIONS
- EXISTING HEADWALL
- EXISTING DRAINAGE PIPE
- EXISTING DRAINAGE DITCH
- PROPOSED PAVEMENT
- PROPOSED 4" PERFORATED UNDERDRAIN W/SOCK
- PROPOSED 48" RCP
- PROPOSED UNDERDRAIN INSPECTION HOLE
- PROPOSED FLARED END SECTION

COORDINATE DATA - PIPE ARCHES					
NO.	BASELINE	STATION	OFFSET	NORTHING	EASTING
1	DITCH	8+04	13' RT.	691,392.9567	2,303,616.3227
2	DITCH	8+09	BASELINE	691,403.2572	2,303,600.0259
3	DITCH	8+14	13' LT.	691,413.5578	2,303,583.6791
4	DITCH	10+00	13' RT.	691,585.8463	2,303,653.5260
5	DITCH	10+05	BASELINE	691,596.1468	2,303,637.1791
6	DITCH	10+10	13' LT.	691,606.4474	2,303,620.8223



DATE	REVISION	BY

SAINT LOUIS DOWNTOWN AIRPORT
 A Division of Bi-State Development Agency

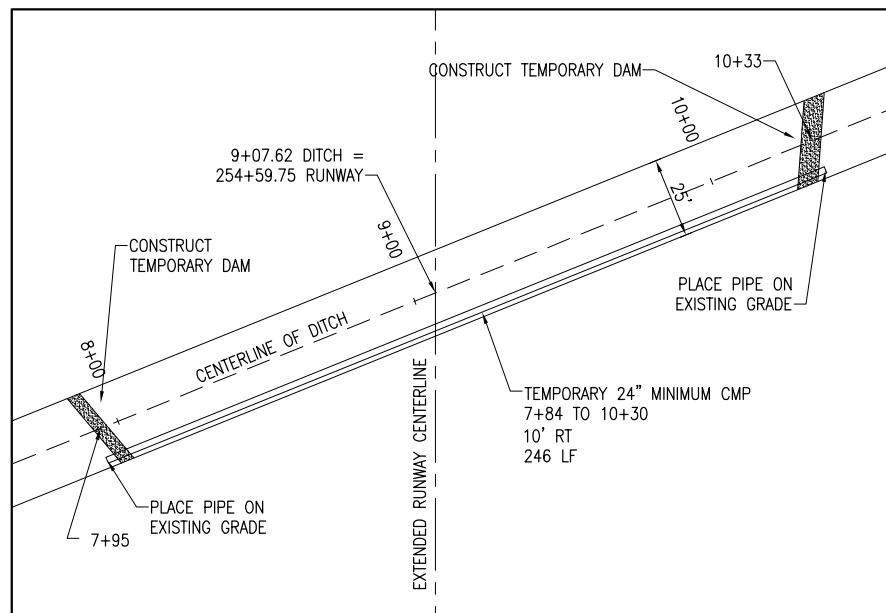


Project No.	84506RWYD_0800
Plan No.	R-131DRN.DWG
Scale	1" = 30'
Date	02/07/07
LAYOUT	JAC 02/07/07
DRAWN	BAK 02/07/07
REVIEWED	CAH 04/05/07

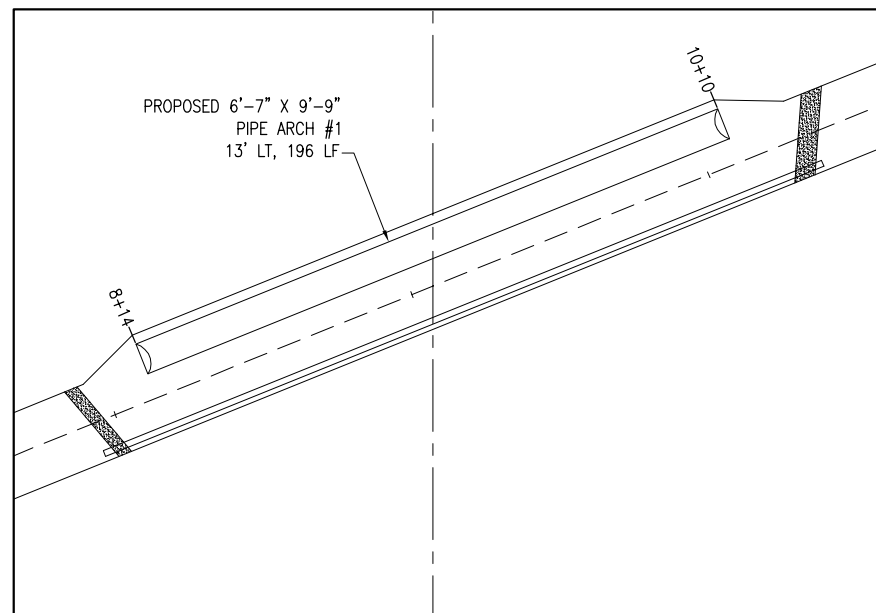
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EXTEND RUNWAY END 30R 1500'
 PROPOSED DRAINAGE PLAN TAXIWAY "B7"

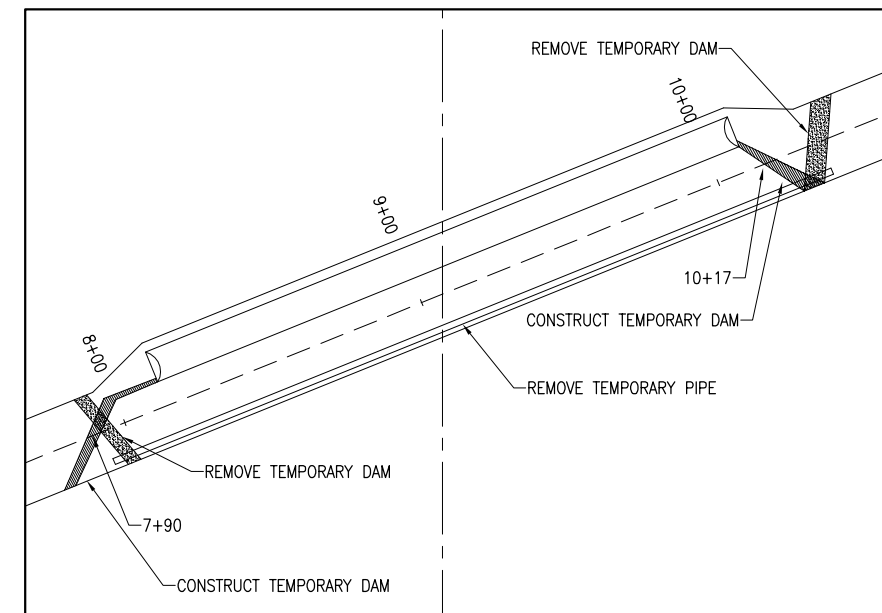
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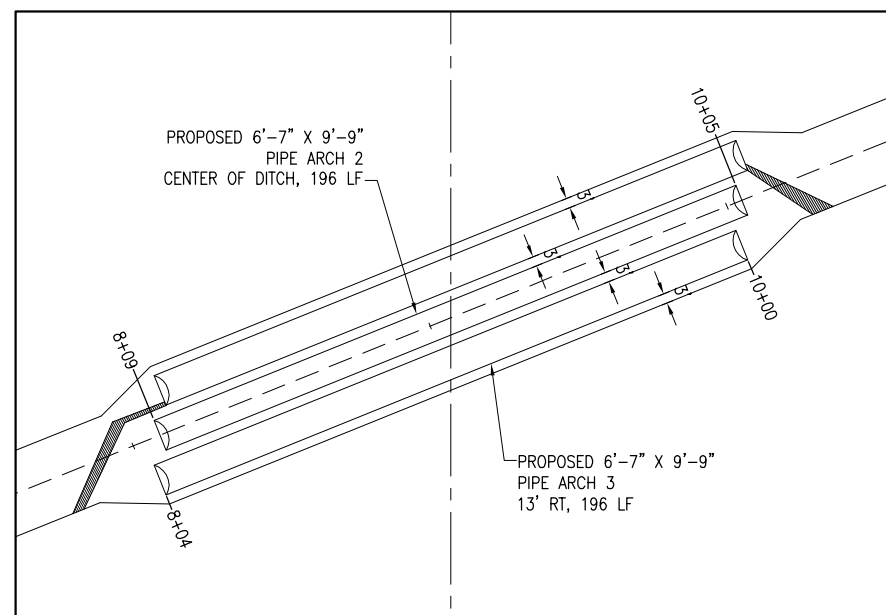
STAGE 1
CONSTRUCT TEMPORARY DAMS AND PIPE



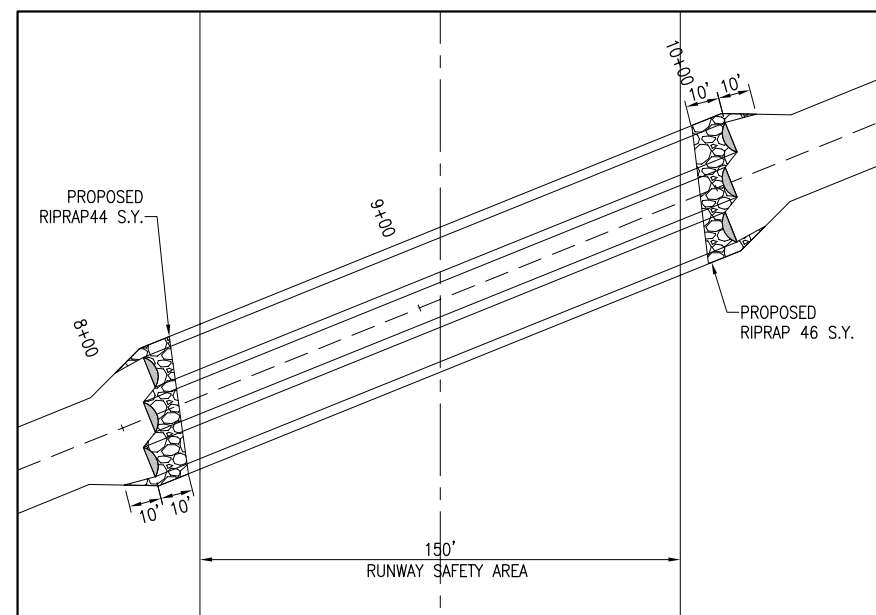
STAGE 2
CONSTRUCT PIPE ARCH 1



STAGE 3
CONSTRUCT TEMPORARY DAMS AND CHANGE WATER ROUTE



STAGE 4
CONSTRUCT PIPE ARCHES 2 & 3



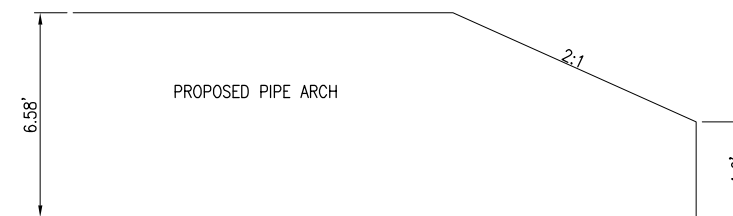
STAGE 5
REMOVE TEMPORARY DAMS

NOTES:

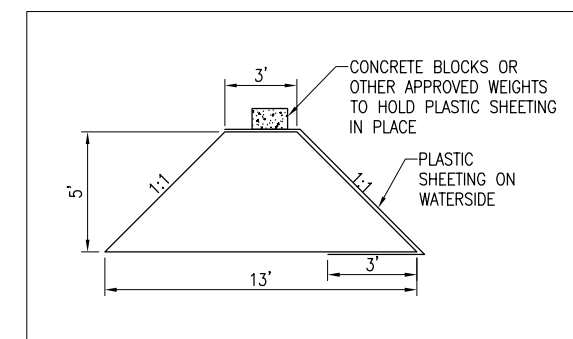
THE EXISTING GRADE UNDER THE PROPOSED ARCH PIPES WILL BE EXCAVATED TO A DEPTH OF 1'. A LAYER OF SEPERATION FABRIC WILL BE PLACED AND BACKFILLED WITH OVERSIZED AGGREGATE.

THE TEMPORARY EARTHEN DAMS WILL BE COMPACTED TO THE SATISFACTION OF THE RESIDENT ENGINEER. THE EXACT LOCATIONS OF THE TEMPORARY DAMS WILL BE MADE IN THE FIELD BASED ON EXISTING CONDITIONS. THE STATIONS GIVEN ARE APPROXIMATE.

THE TEMPORARY EARTHEN DAMS WILL BE 13' WIDE AT THE BASE AND 3' WIDE AT THE TOP. THE HEIGHT WILL BE APPROXIMATELY 5'.



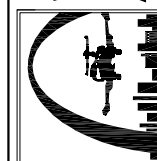
DETAIL FOR BEVEL CUT ON PIPE ARCH
"NOT TO SCALE"



TEMPORARY DAM SECTION
NOT TO SCALE

DATE	REVISION	BY

SAINT LOUIS DOWNTOWN AIRPORT
A Division of Bi-State Development Agency



ILL. PROJ.: CPS-3665 A.I.P. PROJ.: 3-17-0039-B18

Project No. 84506RWYD_0800	JAC	02/07/07
Plan No. R-132DRN.DWG	MDR	02/07/07
Scale 1"=30'	CAH	04/05/07
Date 02/07/07		



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EXTEND RUNWAY
END 30R 1500'

PROPOSED
STAGING PLAN
FOR DITCH

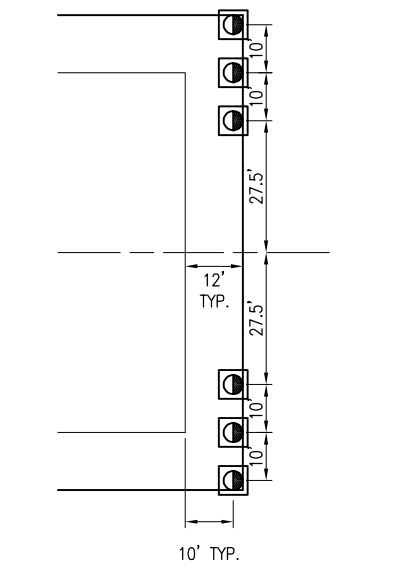
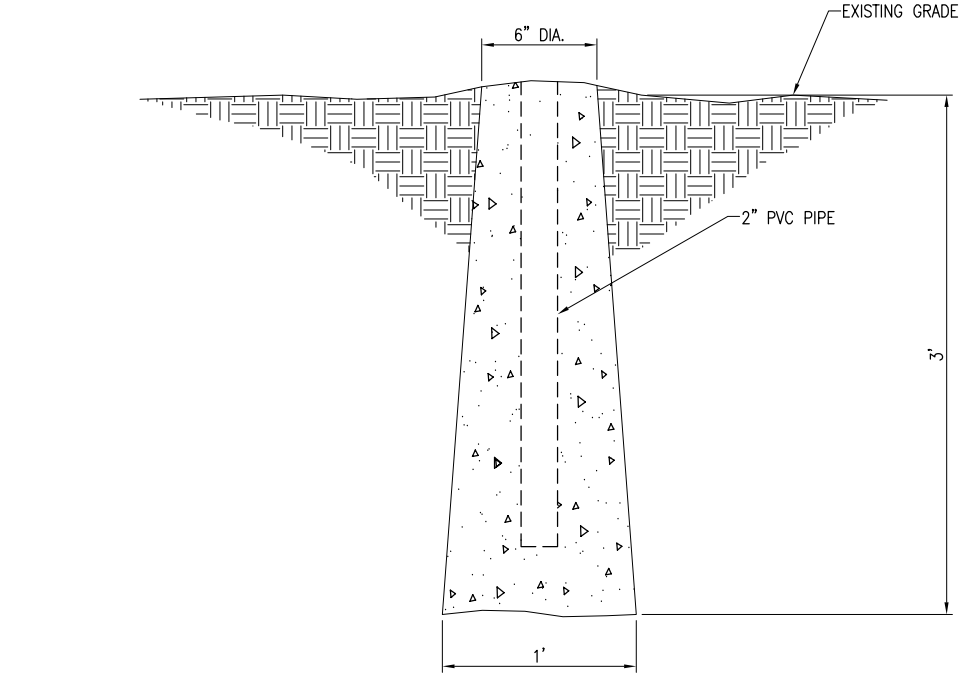
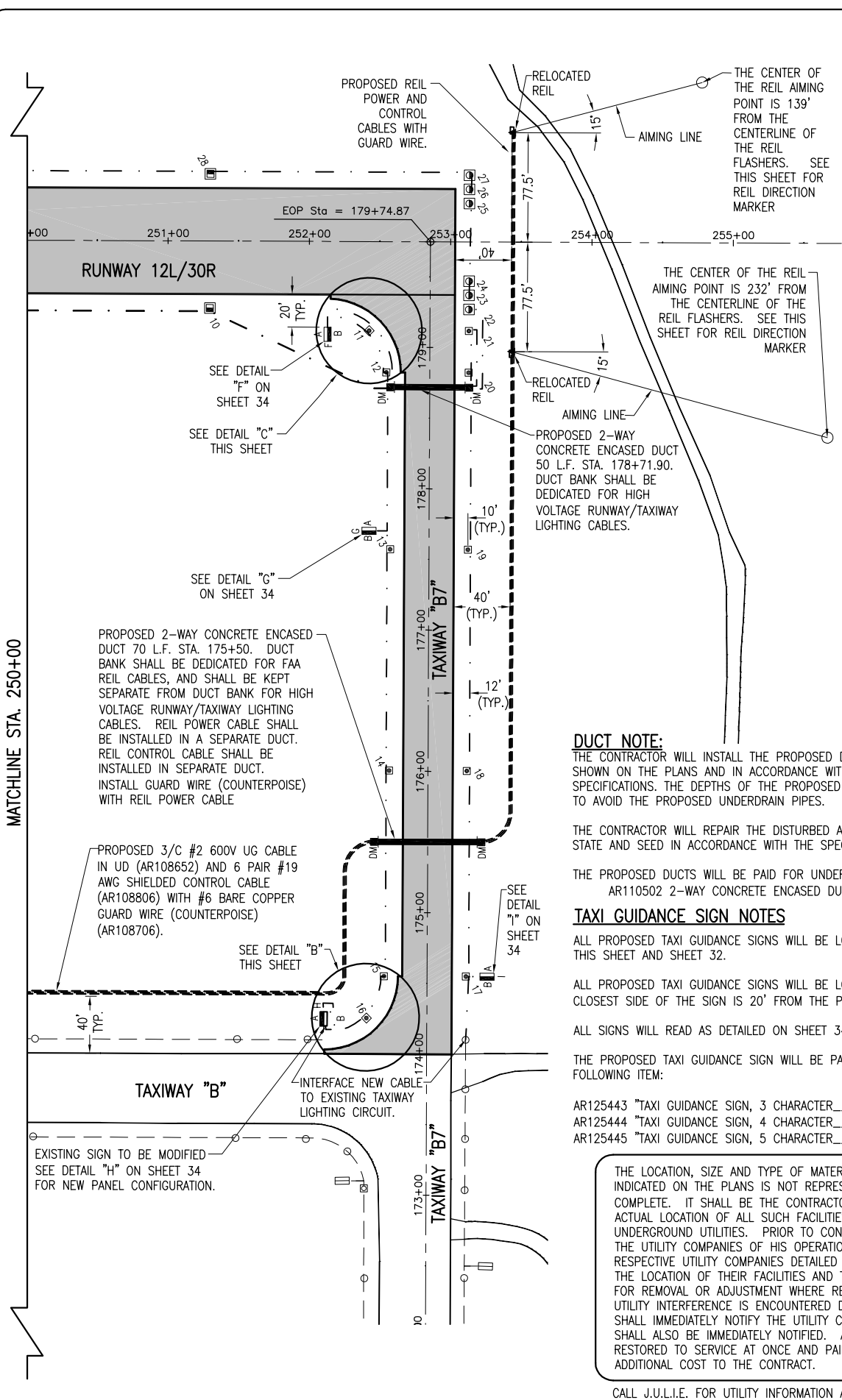
BY	
REVISION	
DATE	

SAINT LOUIS DOWNTOWN AIRPORT
 A Division of Bi-State Development Agency
 A.I.P. PROJ.: 3-17-0039-B18
 I.L. PROJ.: CPS-3665

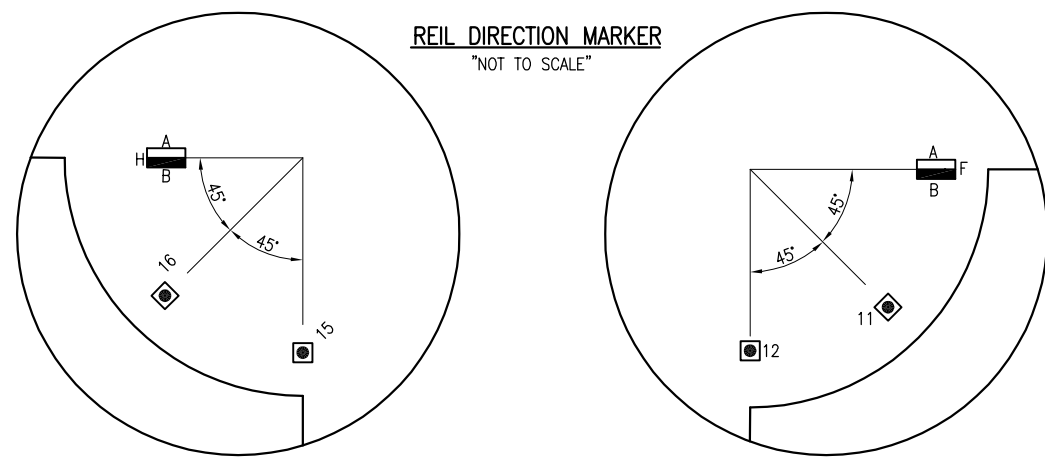
Project No.	84506RWYD_0800
Revision	R=142ELE.DWG
Scale	1"=50'
Date	02/05/07
LAYOUT	MDR 02/05/07
DRAWN	MDR 02/05/07
REVIEWED	CAH/KNL 04/05/07

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EXTEND RUNWAY
 END 30R 1500'
 PROPOSED ELECTRICAL PLAN
 TAXIWAY "B7"



PROPOSED THRESHOLD LIGHT DETAIL
 NOT TO SCALE



LIGHT LENS SCHEDULE

LIGHT NUMBERS	LENS	ORIENTATION
1,2,11-21	BLUE	360°
3-10 AND 28-35	CLEAR	360°
22-27	GREEN/RED	RED FACING WEST TOWARDS THE RUNWAY

- LEGEND**
- [Symbol] EXISTING PAVEMENT
 - [Symbol] PROPOSED PCC PAVEMENT
 - [Symbol] EXISTING ELECTRICAL CABLE
 - [Symbol] PROPOSED 1/C #8 5KV UG CABLE IN UD
 - [Symbol] PROPOSED REIL POWER AND CONTROL CABLES
 - [Symbol] EXISTING ELECTRICAL DUCT
 - [Symbol] PROPOSED ELECTRICAL DUCT
 - [Symbol] EXISTING STAKE MOUNTED TAXIWAY LIGHT
 - [Symbol] EXISTING BASE MOUNTED TAXIWAY LIGHT
 - [Symbol] PROPOSED BASE MOUNTED TAXIWAY LIGHT
 - [Symbol] PROPOSED BASE MOUNTED RUNWAY LIGHT
 - [Symbol] PROPOSED BASE MOUNTED THRESHOLD LIGHTS
 - [Symbol] PROPOSED RELOCATED REILS
 - [Symbol] EXISTING TAXI GUIDANCE SIGN
 - [Symbol] PROPOSED TAXI GUIDANCE SIGN
 - [Symbol] EXISTING DUCT MARKER
 - [Symbol] PROPOSED DUCT MARKER

DUCT NOTE:
 THE CONTRACTOR WILL INSTALL THE PROPOSED DUCT AT THE LOCATIONS SHOWN ON THE PLANS AND IN ACCORDANCE WITH THE DETAILS AND THE SPECIFICATIONS. THE DEPTHS OF THE PROPOSED DUCTS WILL BE ADJUSTED TO AVOID THE PROPOSED UNDERDRAIN PIPES.

THE CONTRACTOR WILL REPAIR THE DISTURBED AREAS TO THEIR ORIGINAL STATE AND SEED IN ACCORDANCE WITH THE SPECIFICATIONS.

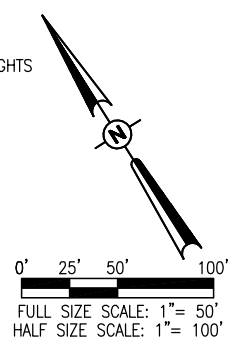
THE PROPOSED DUCTS WILL BE PAID FOR UNDER ITEM:
 AR110502 2-WAY CONCRETE ENCASED DUCT" _____ PER L.F.

TAXI GUIDANCE SIGN NOTES
 ALL PROPOSED TAXI GUIDANCE SIGNS WILL BE LOCATED AS SHOWN ON THIS SHEET AND SHEET 32.
 ALL PROPOSED TAXI GUIDANCE SIGNS WILL BE LOCATED SUCH THAT THE CLOSEST SIDE OF THE SIGN IS 20' FROM THE PAVEMENT EDGE.
 ALL SIGNS WILL READ AS DETAILED ON SHEET 34.
 THE PROPOSED TAXI GUIDANCE SIGN WILL BE PAID FOR UNDER THE FOLLOWING ITEM:

- AR125443 *TAXI GUIDANCE SIGN, 3 CHARACTER _____ PER EACH.
- AR125444 *TAXI GUIDANCE SIGN, 4 CHARACTER _____ PER EACH.
- AR125445 *TAXI GUIDANCE SIGN, 5 CHARACTER _____ 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.



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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.

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

LIGHTS:
ALL PROPOSED TAXIWAY LIGHTS WILL BE PLACED 10' FROM THE PAVEMENT EDGE UNLESS SHOWN OTHERWISE.

ALL PROPOSED TAXIWAY LIGHTS WILL BE CONSTRUCTED AT THE LOCATION SHOWN ON SHEET 32 AND 33 AND IN ACCORDANCE WITH THE DETAILS SHOWN ON SHEET 39 AND THE SPECIFICATIONS.

ALL PROPOSED TAXIWAY LIGHTS WILL USE 360° BLUE LENSES, RUNWAY LIGHTS WILL USE CLEAR LENSES, AND THE THRESHOLD LIGHTS WILL BE 1/2 GREEN-1/2 RED.

DUCT:
ALL PROPOSED 4-WAY CONCRETE DUCTS WILL BE CONSTRUCTED AT THE LOCATIONS SHOWN ON SHEET NO. 33 AND IN ACCORDANCE WITH THE DETAIL ON SHEET NO. 39 AND THE SPECIFICATIONS.

THE TOP OF THE PROPOSED 4-WAY DUCTS WILL BE LOCATED 32" BELOW THE FINISHED PAVEMENT GRADE.

DURING CONSTRUCTION, THE EXISTING RUNWAY AND TAXIWAY LIGHTING CIRCUITS MAY BE INOPERABLE DURING THE DAY. HOWEVER, THE CIRCUIT WILL BE FUNCTIONING AT THE END OF THE CONSTRUCTION DAY. THE CONTRACTOR WILL DO WHATEVER IS NECESSARY TO HAVE THE CIRCUITS ACTIVE AT THE END OF THE CONSTRUCTION DAY. THE WORK WILL BE CONSIDERED AS PART OF THE LIGHTING INSTALLATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

MARKER NOTES

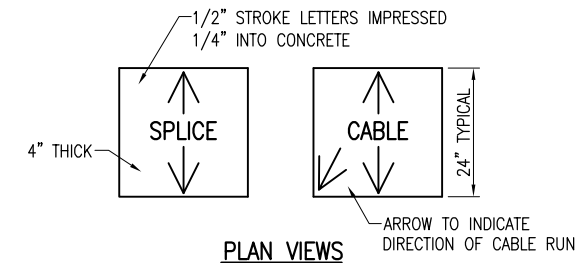
CABLE/SPLICE MARKERS SHALL BE PRECAST CONCRETE OF THE SIZE SHOWN. LETTERS/NUMBERS/ARROWS FOR THE LEGEND TO BE IMPRESSED INTO THE TOPS OF THE MARKERS SHALL BE PRE-ASSEMBLED AND SECURED IN THE MOLD BEFORE THE CONCRETE IS POURED. LEGEND INSCRIBED BY HAND IN WET CONCRETE SHALL NOT BE ACCEPTABLE.

ALL UNDERGROUND CABLE RUNS SHALL BE IDENTIFIED BY CABLE MARKERS AT 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 CABLE.

LOCATIONS OF ALL UNDERGROUND CABLE SPLICES/CONNECTIONS, EXCEPT THOSE AT ISOLATION TRANSFORMERS, SHALL BE IDENTIFIED BY MARKERS. SPLICE MARKERS SHALL BE PLACED IMMEDIATELY ABOVE THE SPLICE/CONNECTIONS.

MARKERS SHALL BE PLACED WHERE SHOWN ON PLANS AND ELECTRICAL NOTES.

COST OF CONCRETE MARKERS IS INCIDENTAL TO THE CABLE.



LIGHTING NOTES

ALL PROPOSED RUNWAY, TAXIWAY AND THRESHOLD LIGHTS WILL BE PLACED 10' FROM THE PAVEMENT EDGE UNLESS SHOWN OTHERWISE.

ALL PROPOSED RUNWAY, TAXIWAY AND THRESHOLD LIGHTS WILL BE CONSTRUCTED AT THE LOCATIONS SHOWN ON SHEET NOS. 32, 33 AND IN ACCORDANCE WITH THE DETAILS ON SHEET NO. 40 AND THE SPECIFICATIONS.

ALL PROPOSED RUNWAY LIGHTING CABLES WILL BE PLACED 12' FROM THE PAVEMENT EDGE UNLESS SHOWN OTHERWISE. ALL CABLES WILL BE PLACED A MINIMUM OF 18" BELOW FINISH GRADE.

THE PROPOSED RUNWAY AND TAXIWAY LIGHTING 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 TRENCHED INTO PLACE. ALL OTHER LOCATIONS THE PROPOSED CABLE MAY BE EITHER TRENCHED OR PLOWED INTO PLACE. TRENCHING AND/OR PLOWING WILL BE CONSIDERED INCIDENTAL TO THE PROPOSED CABLES AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

ALL PROPOSED RUNWAY LIGHTS, TAXIWAY LIGHTS AND TAXI GUIDANCE SIGNS WILL BE TAGGED IN ACCORDANCE WITH THE LIGHT'S NUMBER SHOWN ON THE PLANS.

THE PROPOSED TAXI GUIDANCE SIGNS WILL BE CONSTRUCTED AT THE LOCATIONS SHOWN ON SHEET NOS. 32, 33 AND IN ACCORDANCE WITH THE SPECIFICATIONS.

THE PROPOSED TAXI GUIDANCE SIGNS WILL READ AS DESCRIBED ON THIS SHEET.

THE PROPOSED TAXI GUIDANCE SIGNS WILL BE PLACED AT A DISTANCE OF 20' FROM THE PAVEMENT EDGE.

MODIFY EXISTING SIGN PANEL NOTES

ALL NEW SIGNS, ADD MODULES, AND RELOCATE MODULES WILL BE ACCOMPLISHED WITH NEW SIGN PANELS AS INCIDENTAL TO THAT ITEM OF WORK.

WHILE REPLACING THE EXISTING SIGN PANELS IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO USE AS MANY OF THE EXISTING SIGN PANELS AS POSSIBLE.

IF A SIGN PANEL CAN'T BE USED IN THE SIGN IT IS TAKEN FROM BUT CAN BE USED IN ANOTHER SIGN, THEN THE CONTRACTOR WILL INSTALL IT IN THAT SIGN.

THE CONTRACTOR WILL NOT BE PAID FOR MOVING AN EXISTING SIGN PANEL TO A DIFFERENT SIGN MODULE.

CONCRETE SIGN BASE EXTENSION NOTES

THE EXISTING TAXI GUIDANCE SIGNS DESIGNATED FOR BASE EXTENSIONS WILL HAVE THEIR CONCRETE BASES EXTENDED A SUFFICIENT DISTANCE TO PROVIDE A MINIMUM OF 2" OF CONCRETE BASE BEYOND THE EXTENDED SIGN.

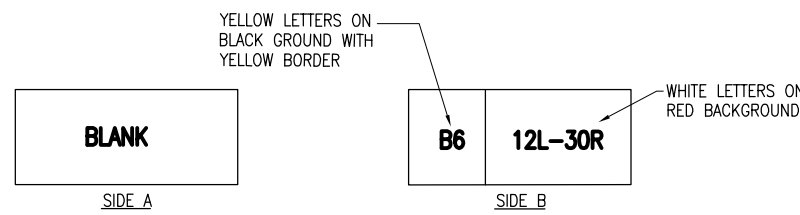
THE CONCRETE SHALL MEET THE REQUIREMENTS OF ITEM 610 "STRUCTURAL PORTLAND CEMENT CONCRETE".

THE CONTRACTOR WILL DRILL THREE NO. 3 RE-BAR (8" LONG) INTO THE FACE OF THE EXISTING CONCRETE PAD. ONE HALF OF THE RE-BAR WILL BE GROUTED INTO THE EXISTING CONCRETE PAD. THE RE-BAR WILL TIE THE EXISTING AND PROPOSED CONCRETE PADS TOGETHER.

6" X 6" NO. 6 WIRE MESH WILL ALSO BE PLACED IN THE EXTENDED CONCRETE BASE.

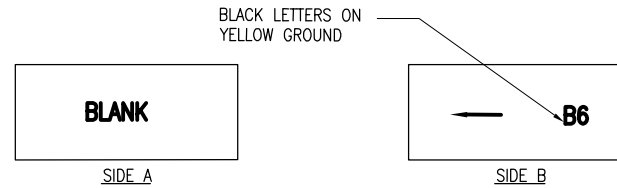
THE EXTENSION OF THE CONCRETE BASE WILL BE CONSIDERED AS AN INCIDENTAL ITEM TO ADDITION OF A MODULE TO THE EXISTING SIGN AND WILL BE PAID FOR UNDER ITEMS:

AR800402 "ADD 2 MODULE WITH SIGN BASE EXTENSION" _____EACH.



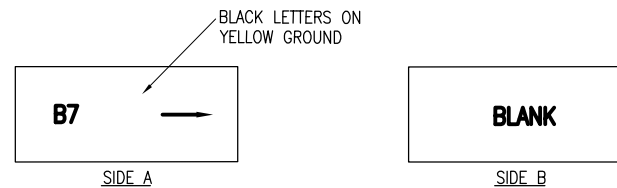
TAXI GUIDANCE SIGN DETAIL "D"

"NOT TO SCALE"



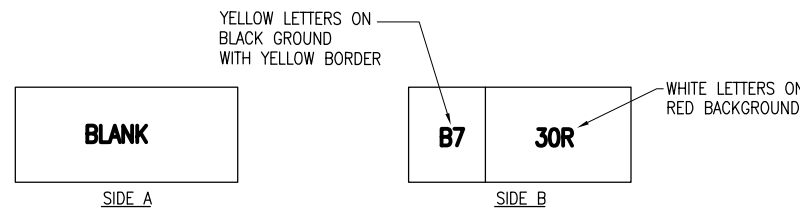
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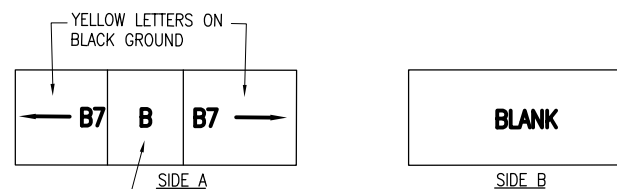
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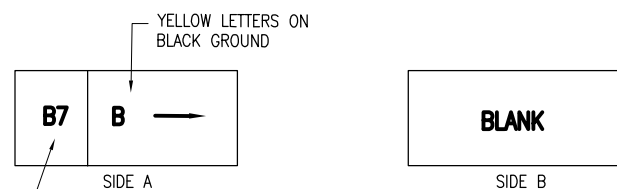
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"NOT TO SCALE"



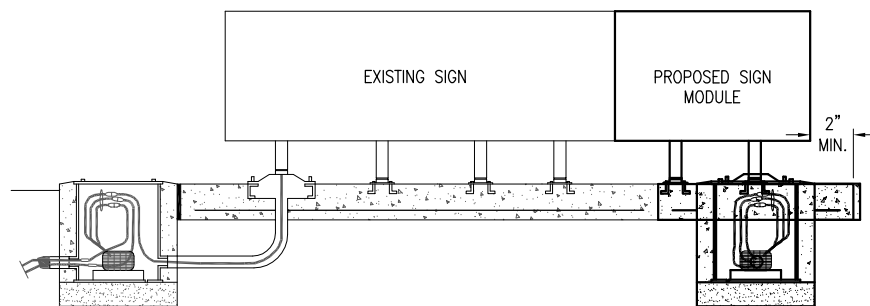
TAXI GUIDANCE SIGN DETAIL "H"

"NOT TO SCALE"



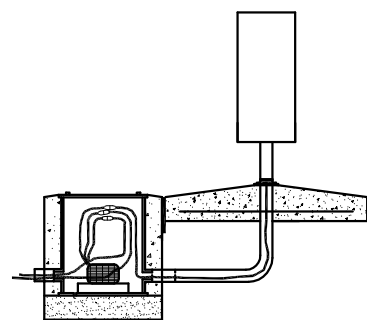
TAXI GUIDANCE SIGN DETAIL "I"

"NOT TO SCALE"



GUIDANCE SIGN MODIFICATION

(NOT TO SCALE)



(SIDE VIEW)

(NOT TO SCALE)

JUN 29, 2009 2:56 PM KINCA00394 I:\AIRPORTS\ST. LOUIS DOWNTOWN\84506RWY\AIRPORT\SHEETS\R-142ELE.DWG - SIGN DETAILS

BY	
REVISION	
DATE	

SAINT LOUIS DOWNTOWN AIRPORT
A Division of Bi-State Development Agency
A.I.P. PROJ.: 3-17-0039-B18
ILL. PROJ.: CPS-3665

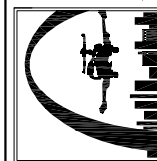
Project No.	84506RWYD_0800
Revision	R-142ELE.DWG
Scale	N/A
Date	02/05/07
LAYOUT	MDR 02/05/07
DRAWN	MDR 02/05/07
REVIEWED	CAH/KNL 04/05/07

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EXTEND RUNWAY END 30R 1500'
PROPOSED TAXI GUIDANCE SIGN DETAILS AND NOTES

BY	
REVISION	
DATE	

SAINT LOUIS DOWNTOWN AIRPORT
A Division of Bi-State Development Agency



A.I.P. PROJ.: 3-17-0039-B18
ILL. PROJ.: CPS-3665

FILE PROJECT NO.	84506RWYD_0800
FILE NAME	R-142ELE.DWG
DATE	02/05/10
LAYOUT	MDR 02/05/07
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REVIEWED	CAH/KNL 04/05/07

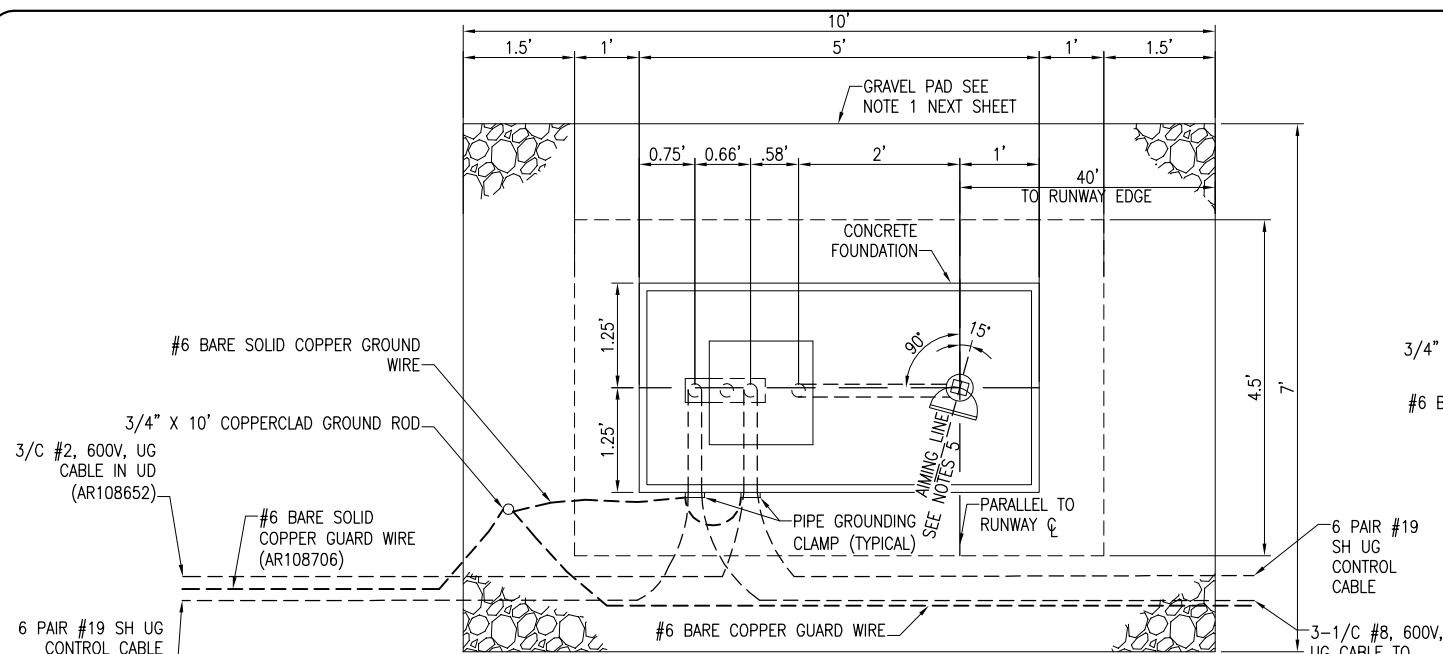


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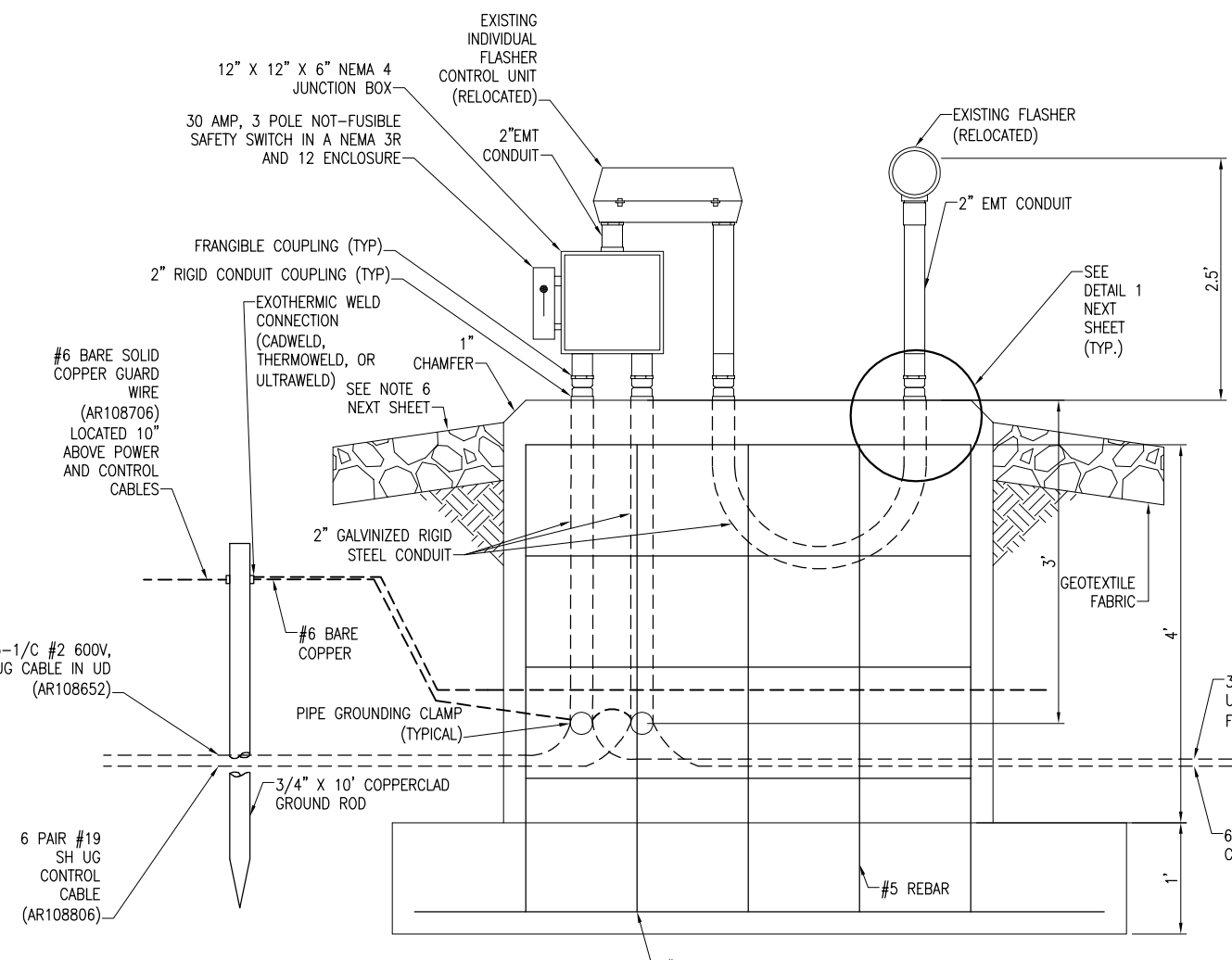
EXTEND RUNWAY
END 30R 1500'

PROPOSED
REIL RELOCATION
DETAILS

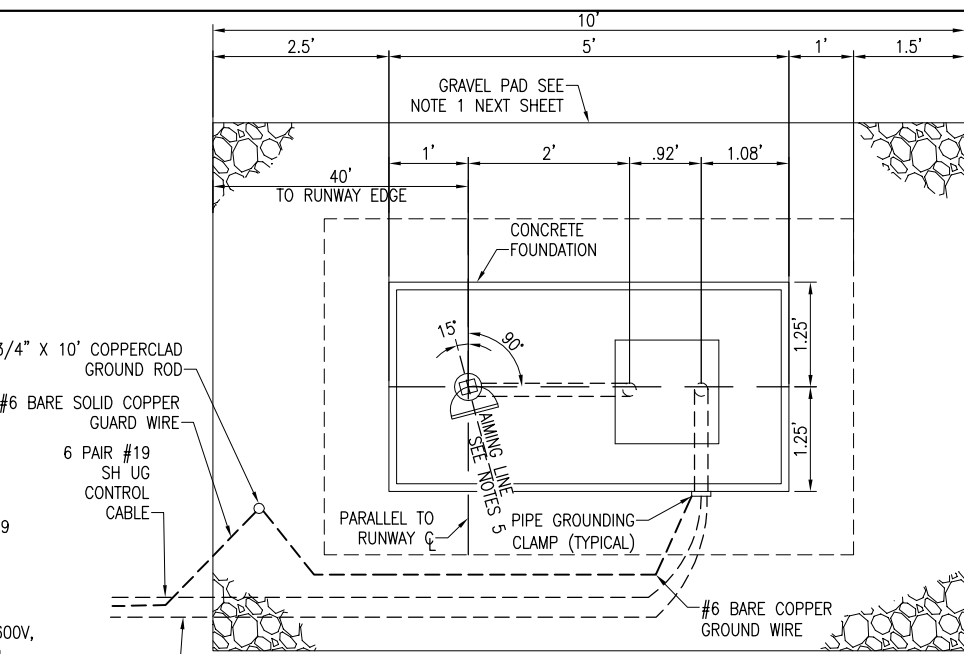
NOTE:
SEE NEXT SHEET FOR REIL RELOCATION NOTES



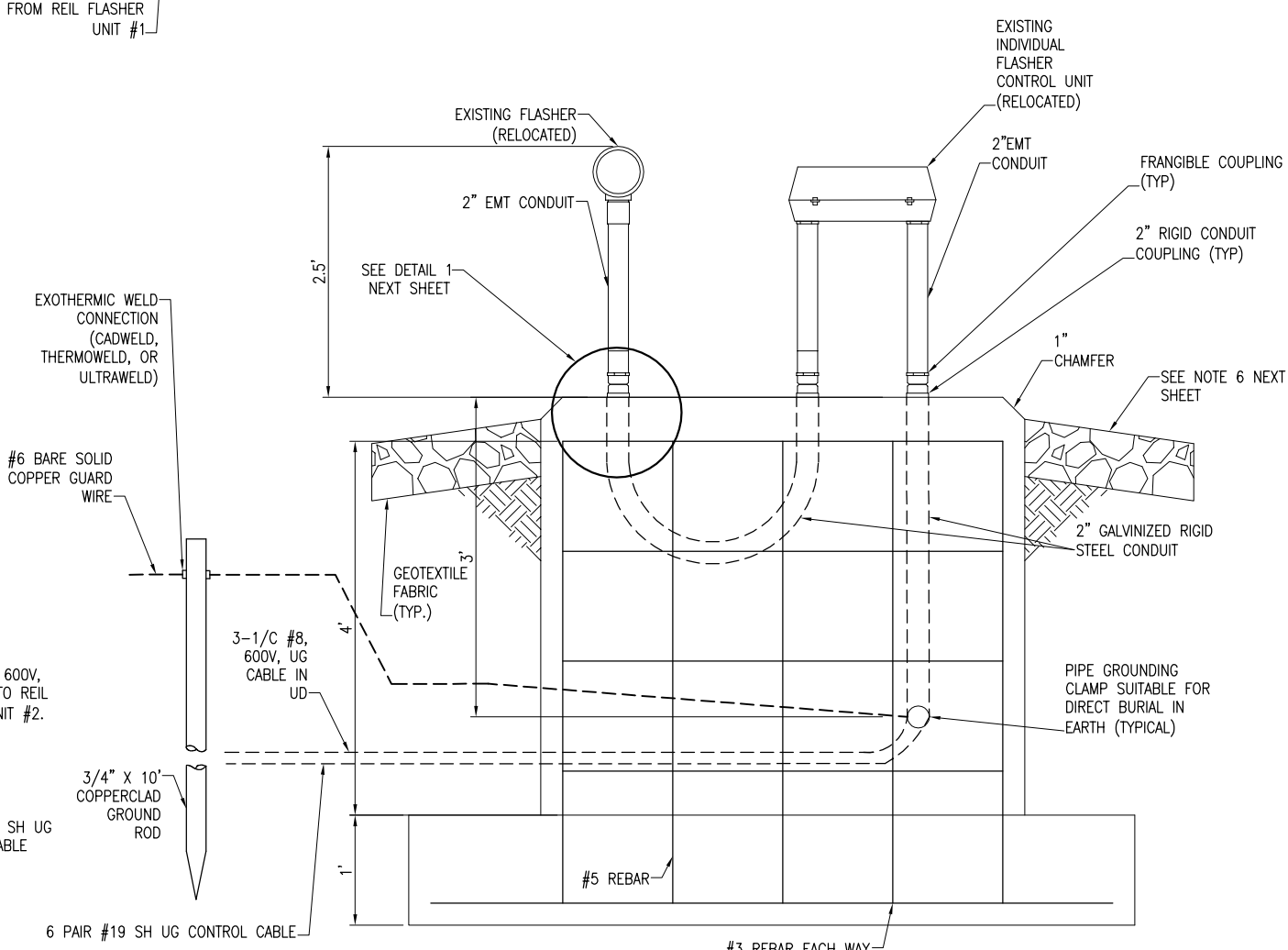
PLAN
"NOT TO SCALE"



ELEVATION
REIL FLASHER UNIT #1 INSTALLATION DETAILS
"NOT TO SCALE"

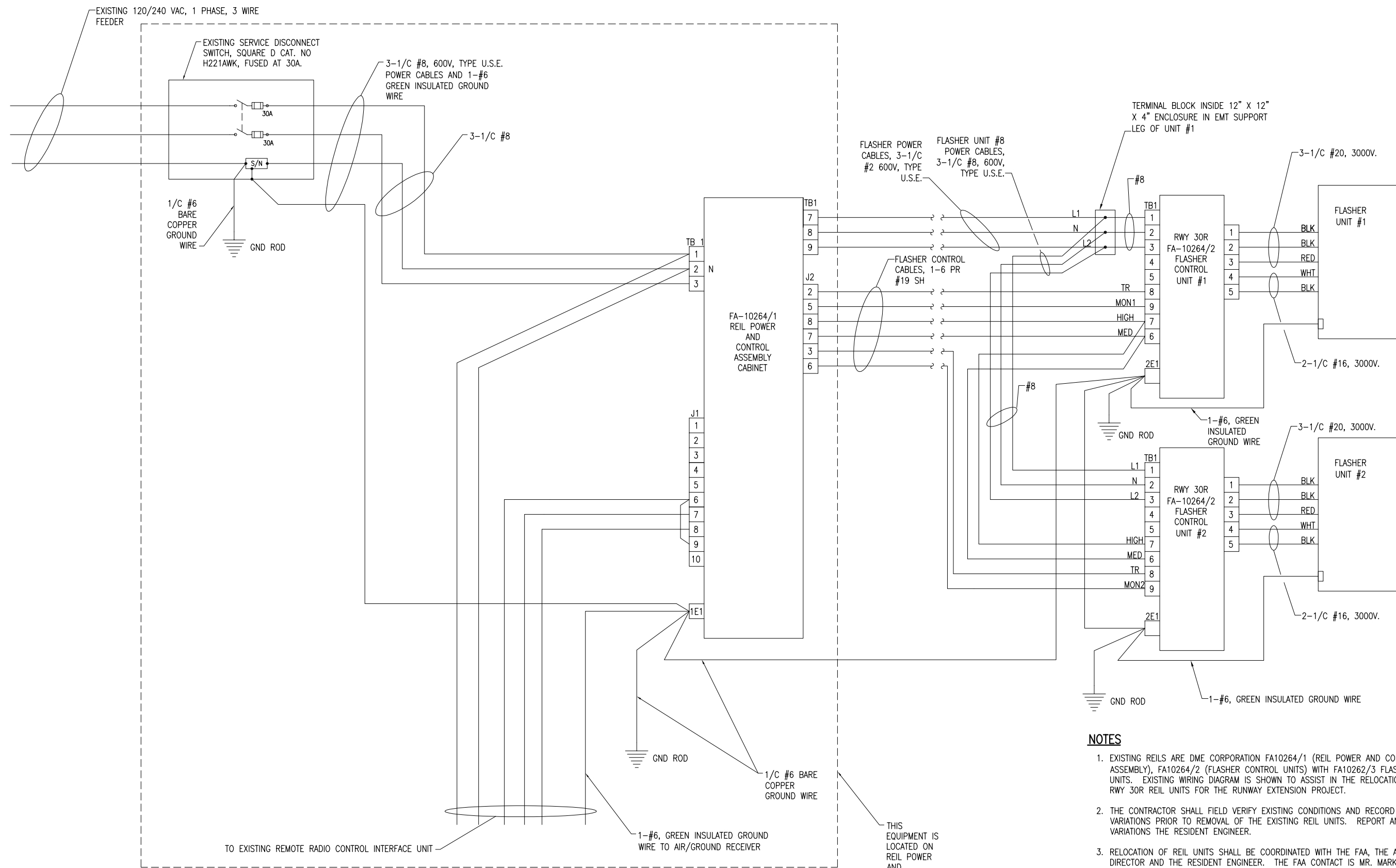


PLAN
"NOT TO SCALE"



ELEVATION
REIL FLASHER UNIT #2 INSTALLATION DETAILS
"NOT TO SCALE"

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I:\AIRPORTS\ST. LOUIS DOWNTOWN\84506RWY\AIRPORT SHEETS\R-142ELE.DWG - REIL DETAILS



EXISTING WIRING SCHEMATIC FOR RUNWAY 30R REILS

NOTES

- EXISTING REILS ARE DME CORPORATION FA10264/1 (REIL POWER AND CONTROL ASSEMBLY), FA10264/2 (FLASHER CONTROL UNITS) WITH FA10262/3 FLASHER UNITS. EXISTING WIRING DIAGRAM IS SHOWN TO ASSIST IN THE RELOCATION OF RWY 30R REIL UNITS FOR THE RUNWAY EXTENSION PROJECT.
- THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND RECORD ANY VARIATIONS PRIOR TO REMOVAL OF THE EXISTING REIL UNITS. REPORT ANY VARIATIONS THE RESIDENT ENGINEER.
- RELOCATION OF REIL UNITS SHALL BE COORDINATED WITH THE FAA, THE AIRPORT DIRECTOR AND THE RESIDENT ENGINEER. THE FAA CONTACT IS MR. MARK TIEN PHONE: 618-337-5660, CELL PHONE: 618-593-6898.

THIS EQUIPMENT IS LOCATED ON REIL POWER AND CONTROL RACK, LOCATED NEAR THE GLIDE SLOPE FACILITY FOR RUNWAY 30L

DATE	REVISION	BY

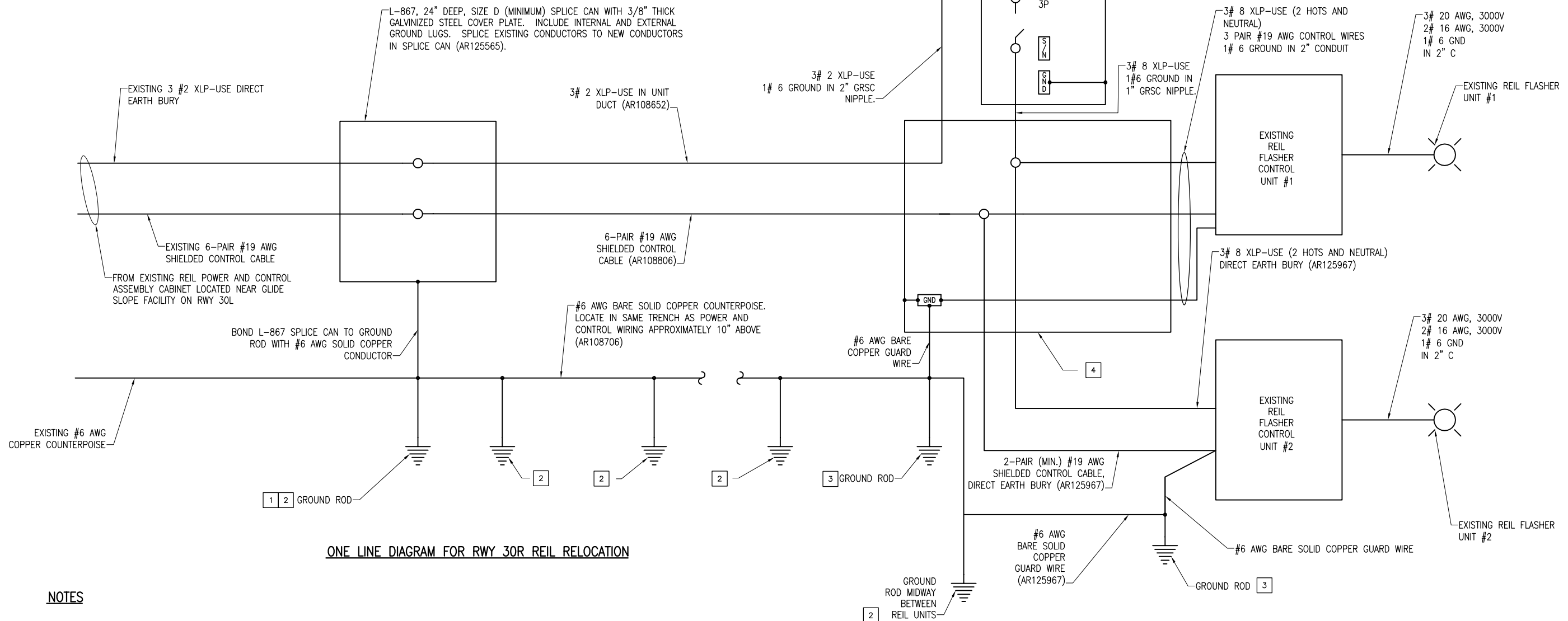
SAINT LOUIS DOWNTOWN AIRPORT
 A Division of Bi-State Development Agency
 A.I.P. PROJ.: 3-17-0039-B18

Project No.	84506RWYD_0800
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REVIEWED	KLN 04/05/07

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EXTEND RUNWAY END 30R 1500'
 EXISTING WIRING SCHEMATIC FOR RUNWAY 30R REILS

JUN 29, 2009 2:58 PM KINCAID0394
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ONE LINE DIAGRAM FOR RWY 30R REIL RELOCATION

NOTES

- REIL RELOCATION SHALL BE COORDINATED WITH THE FAA, THE AIRPORT DIRECTOR AND THE RESIDENT ENGINEER.
- ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70 (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.
- ALL EQUIPMENT NOT LABELED AS "EXISTING" IS NEW.
- RELOCATION OR REILS SHALL BE PAID FOR UNDER ITEM AR125967 RELOCATE REILS - PER PAIR. THIS ITEM SHALL INCLUDE SAFETY SWITCH, JUNCTION BOX, GROUND RODS, GROUND WIRES, GUARD WIRES AND ALL POWER AND CONTROL CABLES LOCATED AT THE REIL UNITS AND BETWEEN THE REIL UNITS.
- 3/C #2 XLP-USE IN UNIT DUCT FROM THE SPLICE CAN TO REIL UNIT #1 SHALL BE PAID FOR UNDER ITEM AR108652 3/C #2 600V UG CABLE IN UD PER L.F.
- 6 PAIR #19 AWG SHIELDED CONTROL CABLE FROM THE SPLICE CAN TO REIL UNIT #1 SHALL BE PAID FOR UNDER ITEM AR108806 6 PAIR CONTROL CABLE PER L.F.
- #6 AWG BARE SOLID COPPER COUNTERPOISE FROM THE SPLICE CAN TO REIL UNIT #1 SHALL BE PAID FOR UNDER ITEM AR108706, 1/C #6 COUNTERPOISE PER L.F. GROUND RODS INSTALLED WITH THE COUNTERPOISE SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM.
- PROVIDE NEMA 4 HUBS AT ALL CONDUIT ENTRIES TO NEMA 4 RATED ENCLOSURES TO MAINTAIN THE NEMA 4 RATING OF THE RESPECTIVE ENCLOSURE.
- 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. STANDARD COLORS FOR POWER WIRING AND BRANCH CIRCUITS SHALL BE AS FOLLOWS:

120/240 VAC, 1 PHASE, 3 WIRE	
PHASE A	BLACK
PHASE B	RED
NEUTRAL	WHITE
GROUND	GREEN

KEYED NOTES

- 3/4" DIA X 10' LONG UL LISTED COPPERCLAD GROUND ROD, LOCATED AT SPLICE CAN. BOND SPLICE CAN TO GROUND ROD AND CONNECT COUNTERPOISE CONDUCTORS TO GROUND ROD. CONNECTIONS TO GROUND ROD SHALL BE EXOTHERMIC WELD.
- COUNTERPOISE SHALL BE BONDED TO GROUND RODS AT APPROXIMATELY 90-FOOT INTERVALS. GROUND RODS SHALL BE 3/4" DIA X 10' LONG UL LISTED COPPERCLAD. THE SPACING OF GROUND RODS SHALL VARY BY 10% TO 20% TO PREVENT RESONANCE. INSTALL GROUND RODS 6 FEET ON EITHER SIDE OF THE TRENCH. ALL BELOW GRADE CONNECTIONS TO GROUND RODS AND COUNTERPOISE SHALL BE EXOTHERMIC WELD.
- 3/4" X 10' LONG UL LISTED COPPERCLAD GROUND ROD LOCATED AT EACH REIL UNIT. BOND EACH REIL UNIT TO GROUND ROD WITH #6 COPPER CONDUCTOR. GUARD WIRE SHALL TERMINATE AT EACH GROUND ROD LOCATED AT REIL UNITS.
- 12" X 12" X 6" NEMA 4 JUNCTION BOX WITH BACK PANEL, HOFFMAN CAT NO. A-1212CHNF WITH A-12P12 PANEL OR APPROVED EQUAL. INCLUDE POWER DISTRIBUTION BLOCK FOR POWER CONDUCTORS; SQUARE D CLASS 9080, TYPE LBA362104 OR APPROVED EQUAL. INCLUDE TERMINAL BLOCKS FOR CONTROL WIRING, SQUARE D CLASS 9080, TYPE GM6 OR APPROVED EQUAL. INCLUDE COPPER EQUIPMENT GROUND BAR ADEQUATELY SIZED FOR ALL GROUND WIRES TO OR FROM JUNCTION BOX, ILSCO CAT. NO. D167-12 OR APPROVED EQUAL.
- 30 AMP, 3 POLE, 600 VAC, UL LISTED HEAVY DUTY NOT FUSIBLE SAFETY SWITCH IN A NEMA 3R & 12 ENCLOSURE WITHOUT KNOCKOUTS, SQUARE D CLASS 3110, CAT. NO. HU361AWK WITH NEUTRAL ASSEMBLY, OR APPROVED EQUAL INCLUDE EQUIPMENT GROUND KIT. FEEDER CONDUIT ENTRY SHALL BE LOCATED NEAR SUPPLY SIDE LUGS TO ACCOMMODATE WIRE BENDING SPACE. USE OUTSIDE TWO POLES FOR SINGLE PHASE APPLICATIONS WITH TWO PHASE CONDUCTORS. LOCATE SWITCH AT JUNCTION BOX FOR REIL UNIT #1.

ELECTRICAL LEGEND - ONE-LINE DIAGRAM	
	CABLE TERMINATOR/LUG
	DISCONNECT SWITCH
	FUSIBLE DISCONNECT SWITCH
	FUSE
	TRANSIENT VOLTAGE SURGE SUPPRESSOR OR SURGE PROTECTOR DEVICE
	GROUND - GROUND ROD, GROUNDING ELECTRODE, OR AT EARTH POTENTIAL
	JUNCTION BOX WITH SPLICE
	EQUIPMENT, XXX = DEVICE DESCRIPTION
	GROUND BUS OR TERMINAL
	NEUTRAL BUS

BY	
REVISION	
DATE	

SAINT LOUIS DOWNTOWN AIRPORT
 A Division of Bi-State Development Agency
 A.I.P. PROJ.: 3-17-0039-B18
 I.L. PROJ.: CPS-3665

Project No.	84506RWYD_0800
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Date	04/04/07
LAYOUT	MDR 04/04/07
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EXTEND RUNWAY
 END 30R 1500'
 PROPOSED ELECTRICAL
 ONE LINE DIAGRAM FOR
 RUNWAY 30R REILS

JUN 29, 2009 2:59 PM KINCAID0394
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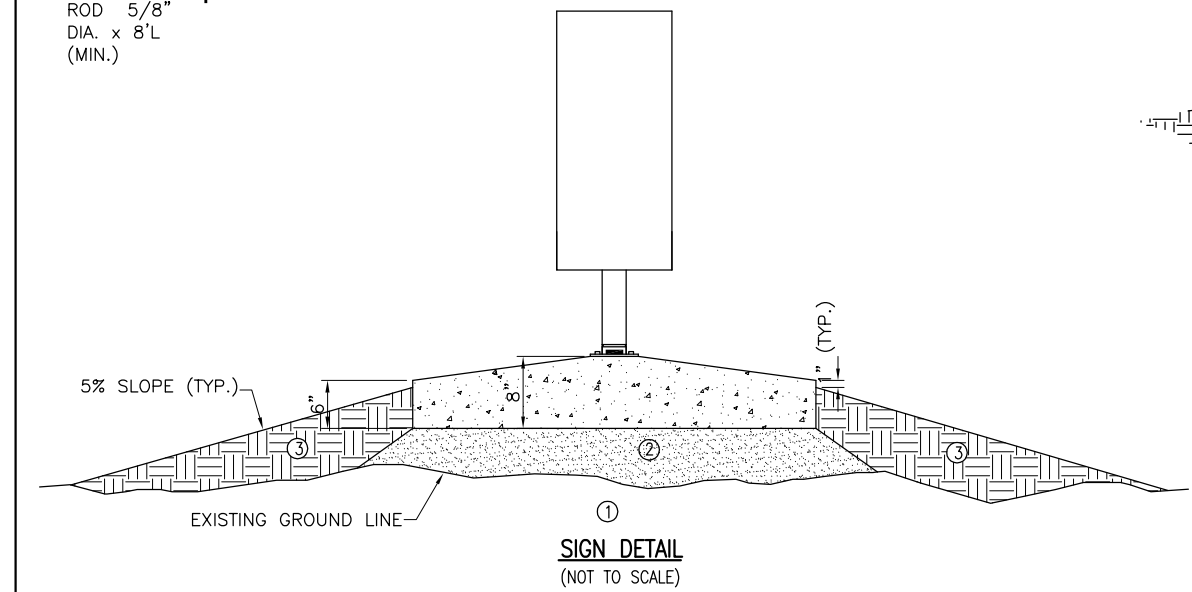
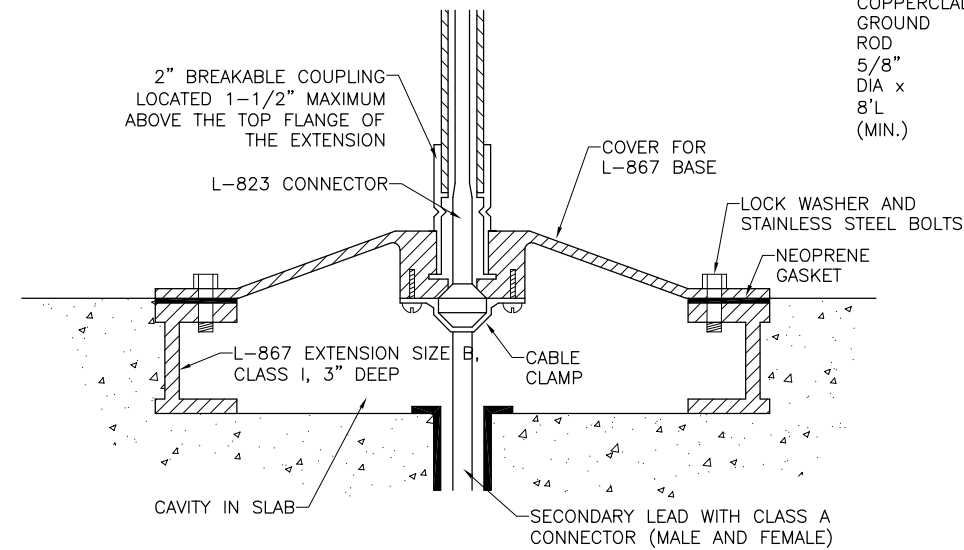
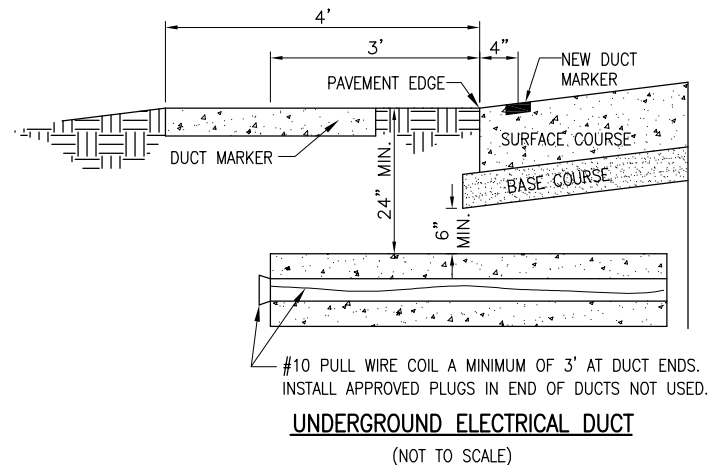
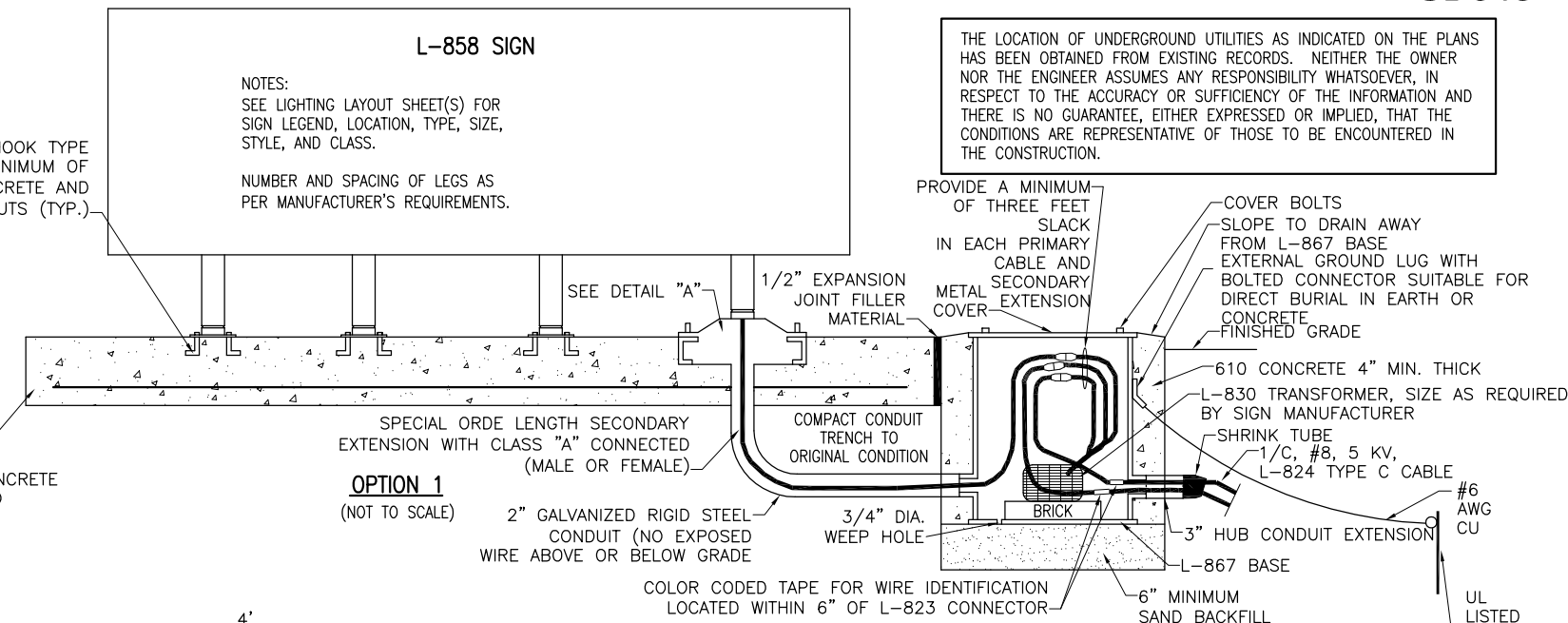
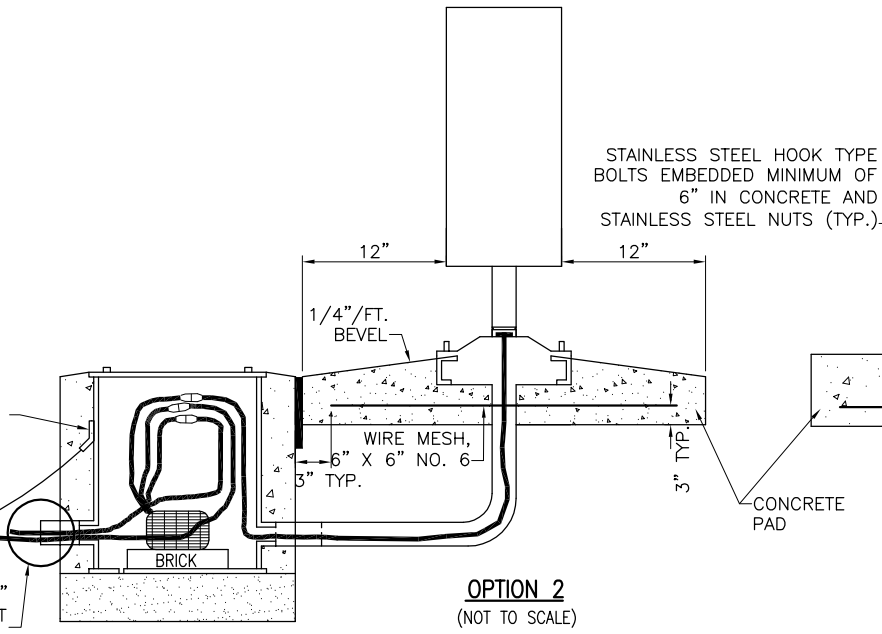
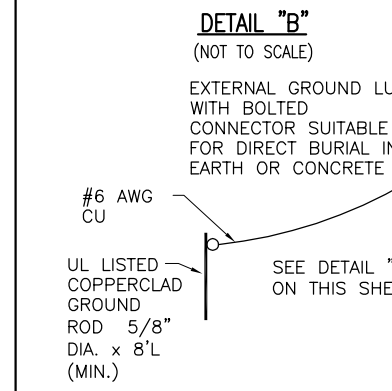
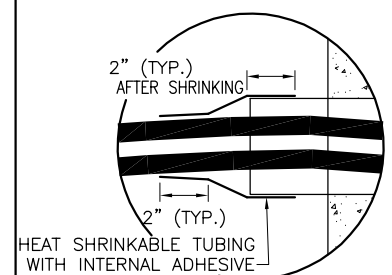
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REVISION	
DATE	

SAINT LOUIS DOWNTOWN AIRPORT
 A Division of Bi-State Development Agency

Project No.	84506RWYD_0800
Revision	R-541ELE.DWG
Author	N/A
Date	02/08/07
LAYOUT	JAC 02/08/07
DRAWN	BAK 02/08/07
REVIEWED	KLN 04/05/07

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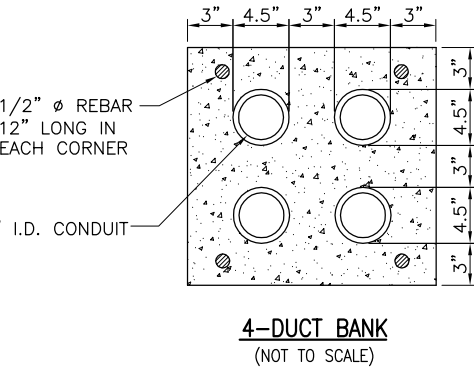
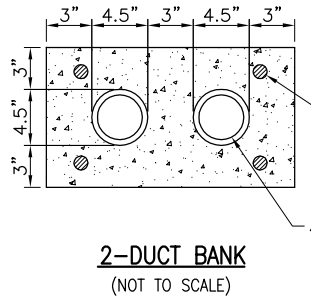
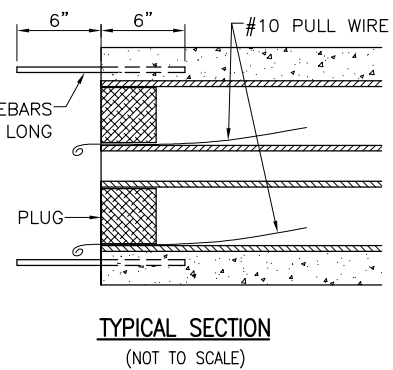
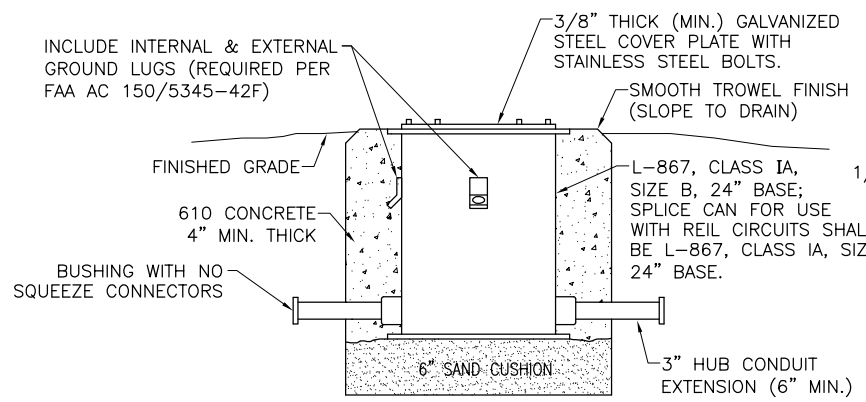
EXTEND RUNWAY END 30R 1500'
 PROPOSED ELECTRICAL DETAILS 1



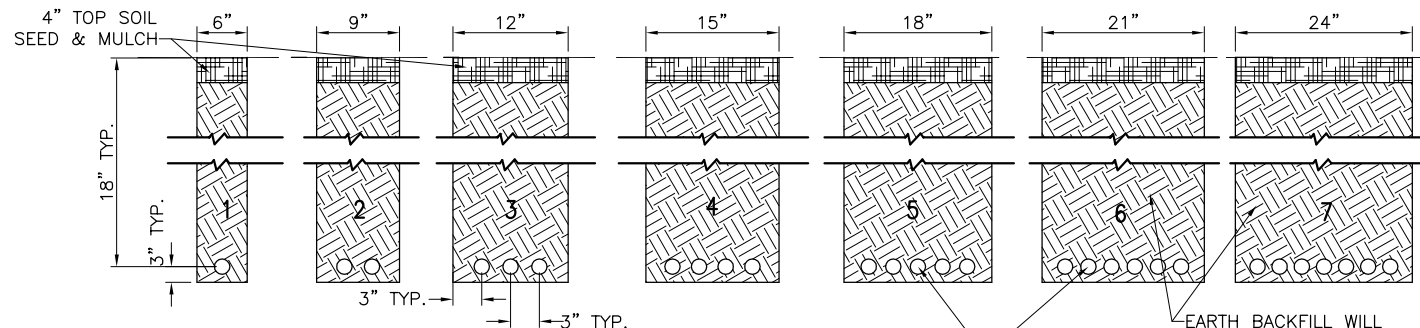
- ① EXISTING SOD TO BE STRIPPED AND REMOVED
- ② SAND BACKFILL, VARIABLE DEPTH
- ③ PROPOSED TOPSOIL BACKFILL MATERIAL

GENERAL NOTES
 SEE LIGHTING LAYOUT SHEET FOR SIGN LEGEND, LOCATION, TYPE, SIZE, STYLE, AND CLASS.
 SEE SHEETS 41 THROUGH 42 FOR ELECTRICAL NOTES.

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 5/8-INCH DIAMETER BY 8-FOOT LONG (MINIMUM) UL LISTED COPPER CLAD GROUND ROD.



JUN 29, 2009 3:00 PM KINCA00394 I:\AIRPORTS\ST. LOUIS DOWNTOWN\84506RWY\AIRPORT SHEETS\R-541ELE.DWG - ELECTRICAL DETAILS



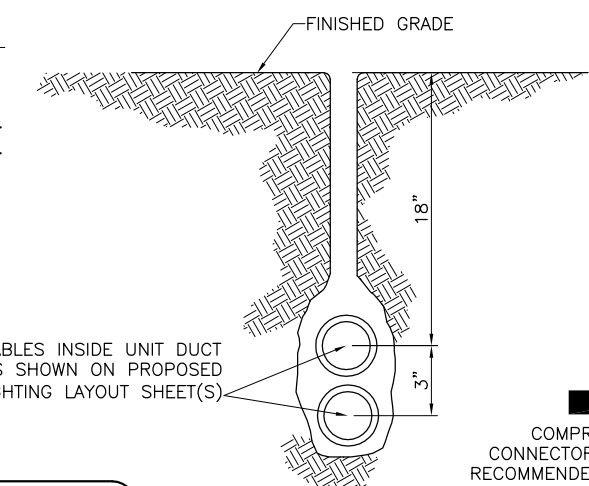
NOTES:
DETAIL NUMBERS INDICATE NO. OF CABLES.

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

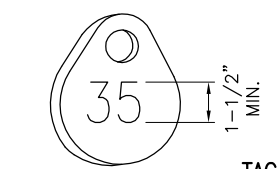
DEPTH OF TRENCHES SHALL BE AS SHOWN ABOVE UNLESS OTHERWISE SPECIFIED ON THE PLANS.

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

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

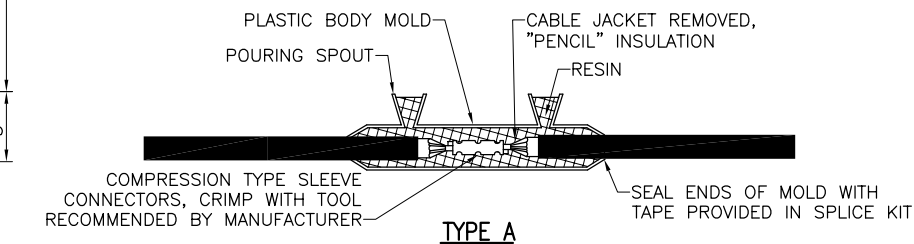


PLOWED CABLE (NOT TO SCALE)



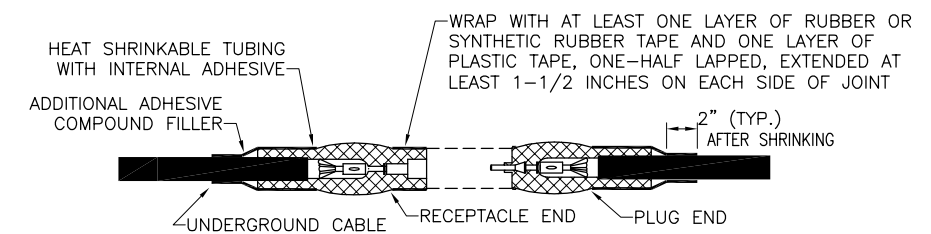
TAG DETAIL (NOT TO SCALE)

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



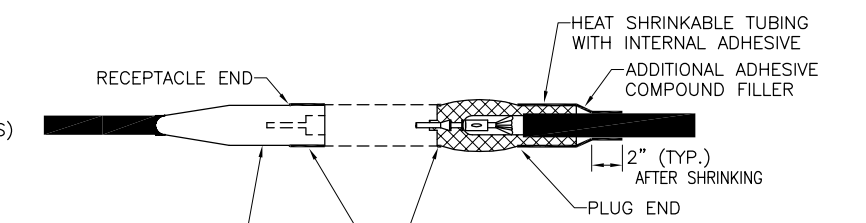
TYPE A

FOR SPLICES IN HOMERUNS FOR EXTENSIONS TO EXISTING CABLES ONLY



TYPE B

FOR SPLICES AT JUNCTION OF HOMERUN WITH LOOP CIRCUIT

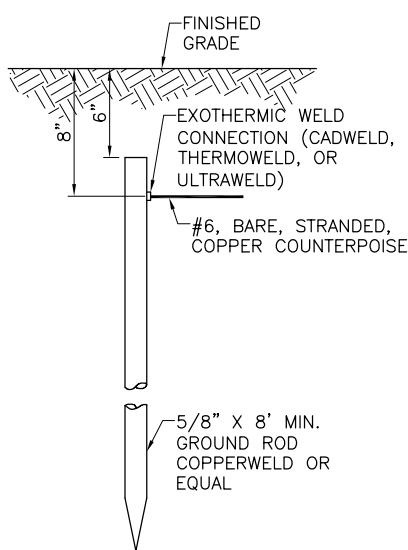


TYPE C

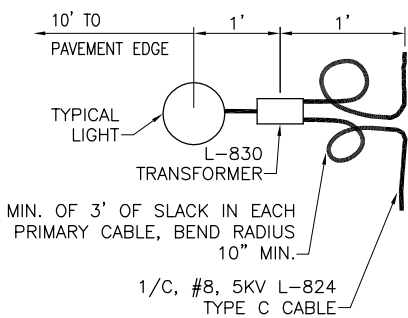
FOR SPLICES AT RUNWAY LIGHTS

NOTES:
SEE PROPOSED LIGHTING LAYOUT SHEET(S) FOR SPLICE TYPE.
(NOT TO SCALE)
INSIDE DIAMETER OF CONNECTOR SHALL PROPERLY MATCH THE OUTSIDE DIAMETER OF CABLE.

CABLE SPLICES

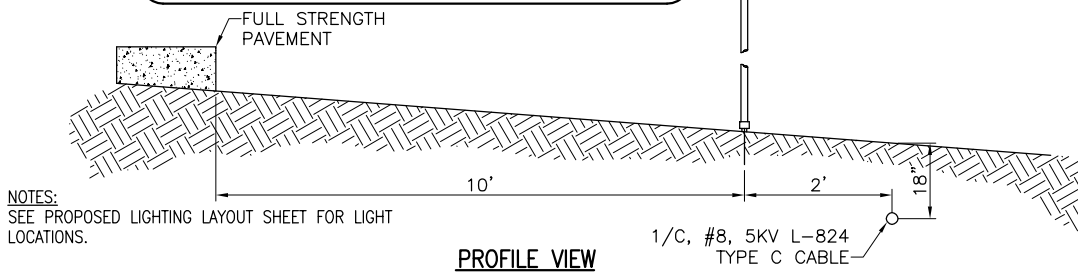


CABLE TRENCHES (NOT TO SCALE)



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 CONNECTED TO THE GROUND LUG ON THE RESPECTIVE L-867 TRANSFORMER BASE/LIGHT CAN OR MOUNTING STAKE AND A 3/8-INCH DIAMETER BY 8-FOOT LONG (MINIMUM) UL LISTED COPPER CLAD GROUND ROD.



PROFILE VIEW

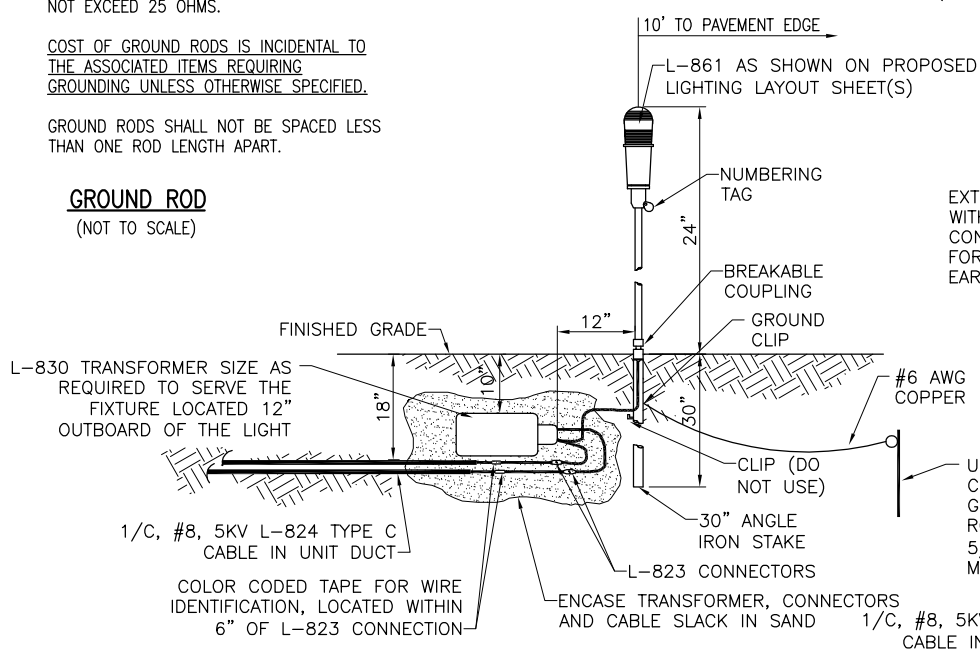
LIGHT AND CABLE INSTALLATION DETAIL (NOT TO SCALE)

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

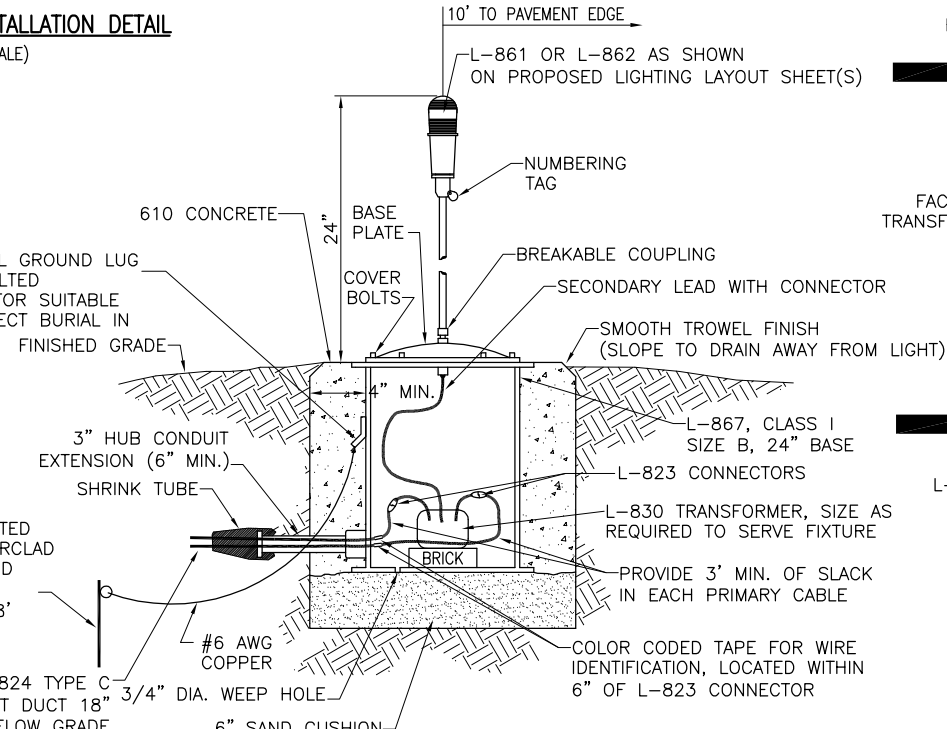
COST OF GROUND RODS IS INCIDENTAL TO THE ASSOCIATED ITEMS REQUIRING GROUNDING UNLESS OTHERWISE SPECIFIED.

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

GROUND ROD (NOT TO SCALE)



MEDIUM INTENSITY LIGHT - STAKE MOUNTED (NOT TO SCALE)



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

BY	
REVISION	
DATE	

SAINT LOUIS DOWNTOWN AIRPORT
A Division of Bi-State Development Agency

Project No.	84506RWDYD_0800
Revision	R-542ELE.DWG
Drawn	N/A
Check	02/08/07
LAYOUT	JAC 02/08/07
DRAWN	BAK 02/08/07
REVIEWED	KLN 04/05/07

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Offices Nationwide

EXTEND RUNWAY END 30R 1500'
PROPOSED ELECTRICAL DETAILS 2

JUN 29, 2009 3:00 PM KINCA00394 I:\AIRPORTS\ST. LOUIS DOWNTOWN\84506RWDYD\AIRPORT_SHEETS\R-542ELE.DWG - ELECTRICAL DETAILS

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 AND/OR SHUT DOWN OF SYSTEMS WITH THE RESPECTIVE FACILITY OWNER PERSONNEL AND THE AIRPORT MANAGER/DIRECTOR. 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 & 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).
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.
14. SUPPORT FOR EXTERIOR MOUNTED EQUIPMENT SHALL USE STAINLESS STEEL STRUT SUPPORT WITH STAINLESS STEEL HARDWARE.

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 MINIMUM.
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, PANELBOARD, & CONTROL PANEL TO WARN PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARDS, PER THE REQUIREMENTS OF NEC 110.16 “FLASH PROTECTION”.

DATE	REVISION	BY

SAINT LOUIS DOWNTOWN AIRPORT
A Division of Bi-State Development Agency



Project No. 84506RWDYD_0800			
Revision R-543ELE.DWG			
Date N/A	Date 02/08/07	JAC 02/08/07	BAK 02/08/07
LAYOUT			
DRAWN			
REVIEWED			

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**EXTEND RUNWAY
END 30R 1500'**
**PROPOSED
ELECTRICAL
NOTES 1**

JUN 29, 2009 3:01 PM KINCA00394 I:\AIRPORTS\ST. LOUIS DOWNTOWN\84506RWDYD\AIRPORT\ SHEETS\R-543ELE.DWG - ELECTRICAL NOTES

DATE	REVISION	BY

SAINT LOUIS DOWNTOWN AIRPORT
A Division of Bi-State Development Agency



A.I.P. PROJ.: 3-17-0039-B18
ILL. PROJ.: CPS-3665

Project No. 84506RWYD_0800			
Revision R-544ELE.DWG			
Date N/A	Date 02/08/07	Date 02/08/07	Date 02/08/07
LAYOUT	JAC	BAK	CLN
DRAWN			
REVIEWED			

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**EXTEND RUNWAY
END 30R 1500'**

**PROPOSED
ELECTRICAL
NOTES 2**

AIRFIELD LIGHTING NOTES

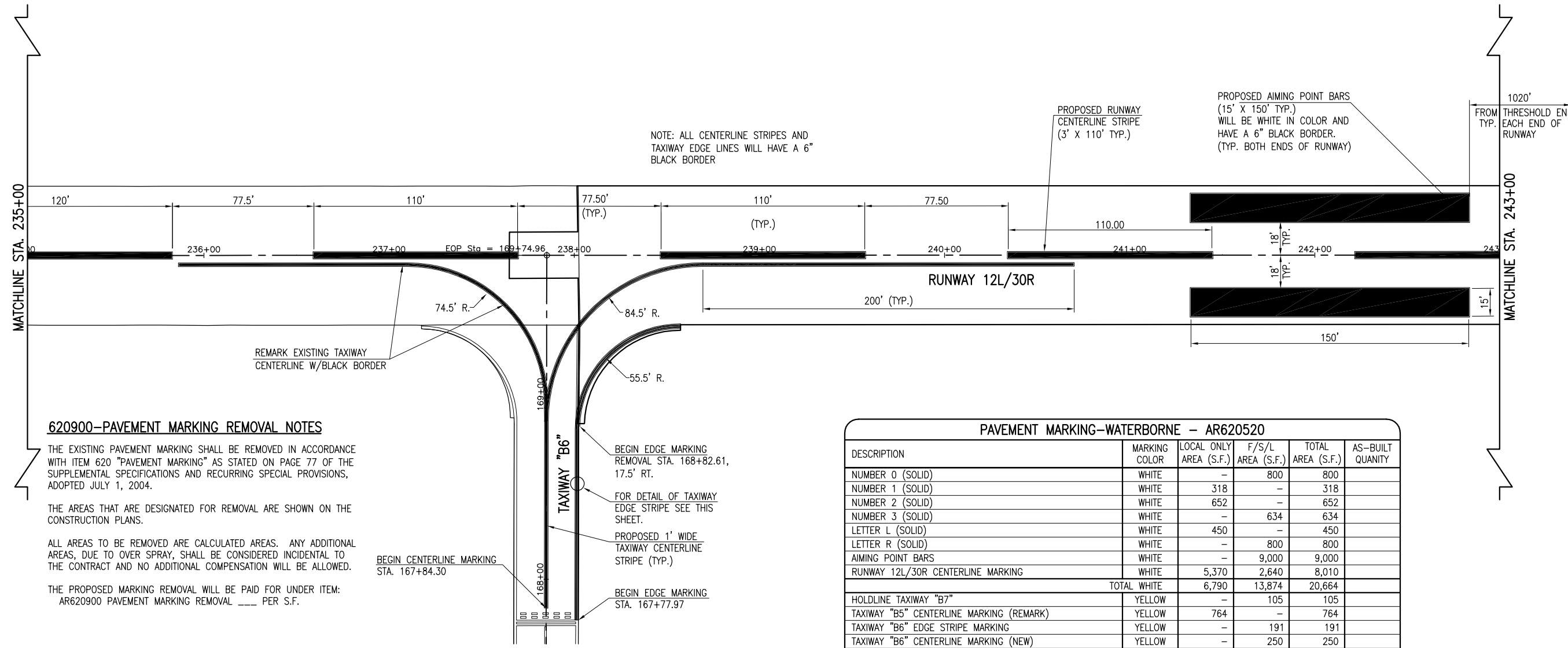
1. UNLESS OTHERWISE NOTED, ALL UNDERGROUND AIRFIELD LIGHTING SERIES CIRCUIT CONDUCTORS WHETHER DEB OR IN DUCT/CONDUIT SHALL BE FAA APPROVED 5000 VOLT L-824 TYPE. ALL UNDERGROUND FIELD POWER LOW VOLTAGE (600 VOLT & BELOW) CIRCUIT CONDUCTORS WHETHER DEB OR IN DUCT/CONDUIT SHALL BE UL LISTED 600 VOLT, TYPE 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. 20.
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. 20.
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 ON SHEET NO. 20.
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 B 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 CLASS SI CONCRETE.
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 UTILIT 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.

JUN 29, 2009 3:02 PM KINCAO0394
I:\AIRPORTS\ST. LOUIS DOWNTOWN\84506RWY\AIRPORT\ SHEETS\R-544ELE.DWG - ELECTRICAL NOTES



NOTE: ALL CENTERLINE STRIPES AND TAXIWAY EDGE LINES WILL HAVE A 6" BLACK BORDER

620900-PAVEMENT MARKING REMOVAL NOTES

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

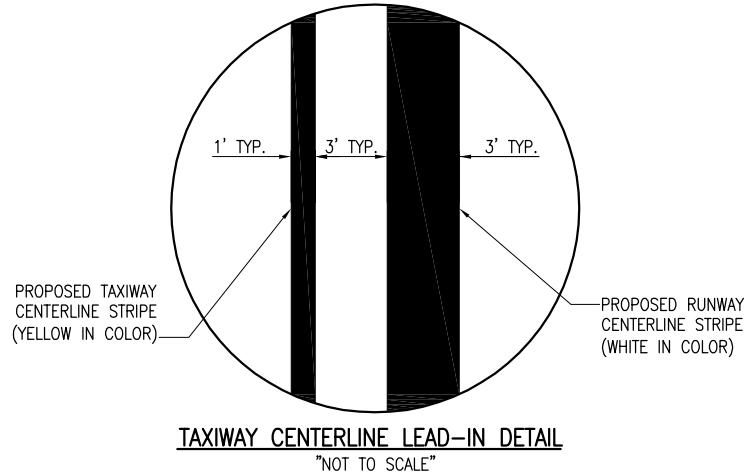
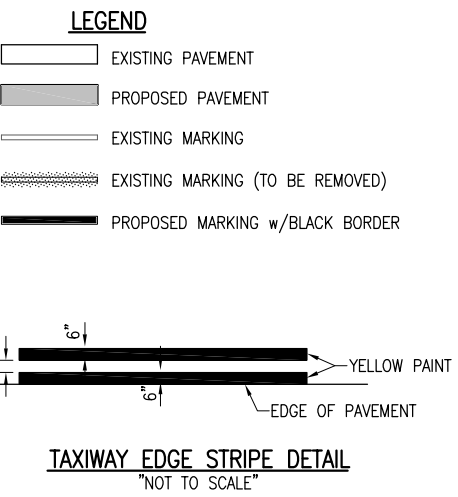
THE AREAS THAT ARE DESIGNATED FOR REMOVAL ARE SHOWN ON THE CONSTRUCTION PLANS.

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.

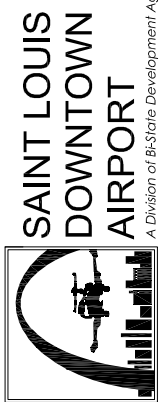
THE PROPOSED MARKING REMOVAL WILL BE PAID FOR UNDER ITEM: AR620900 PAVEMENT MARKING REMOVAL ___ PER S.F.

PAVEMENT MARKING-WATERBORNE - AR620520

DESCRIPTION	MARKING COLOR	LOCAL ONLY AREA (S.F.)	F/S/L AREA (S.F.)	TOTAL AREA (S.F.)	AS-BUILT QUANTITY
NUMBER 0 (SOLID)	WHITE	-	800	800	
NUMBER 1 (SOLID)	WHITE	318	-	318	
NUMBER 2 (SOLID)	WHITE	652	-	652	
NUMBER 3 (SOLID)	WHITE	-	634	634	
LETTER L (SOLID)	WHITE	450	-	450	
LETTER R (SOLID)	WHITE	-	800	800	
AIMING POINT BARS	WHITE	-	9,000	9,000	
RUNWAY 12L/30R CENTERLINE MARKING	WHITE	5,370	2,640	8,010	
TOTAL WHITE		6,790	13,874	20,664	
HOLDLINE TAXIWAY "B7"	YELLOW	-	105	105	
TAXIWAY "B5" CENTERLINE MARKING (REMARK)	YELLOW	764	-	764	
TAXIWAY "B6" EDGE STRIPE MARKING	YELLOW	-	191	191	
TAXIWAY "B6" CENTERLINE MARKING (NEW)	YELLOW	-	250	250	
TAXIWAY "B6" CENTERLINE MARKING (REMARK)	YELLOW	433	-	433	
TAXIWAY "B7" CENTERLINE MARKING	YELLOW	-	603	603	
TAXIWAY "B7" EDGE STRIPE MARKING	YELLOW	-	1,138	1,138	
TOTAL YELLOW		1,197	2,287	3,484	
NUMBER 0 (BORDER)	BLACK	-	130	130	
NUMBER 1 (BORDER)	BLACK	67	-	67	
NUMBER 2 (BORDER)	BLACK	106	-	106	
NUMBER 3 (BORDER)	BLACK	-	102	102	
LETTER L (BORDER)	BLACK	81	-	81	
LETTER R (BORDER)	BLACK	-	114	114	
AIMING POINT BARS (BORDER)	BLACK	-	664	664	
RUNWAY 12L/30R CENTERLINE MARKING (BORDER)	BLACK	1,850	912	2,762	
HOLDLINE TAXIWAY "B7" (BORDER)	BLACK	-	175	175	
TAXIWAY "B5" CENTERLINE MARKING (REMARK) (BORDER)	BLACK	764	-	764	
TAXIWAY "B6" EDGE STRIPE MARKING (BORDER)	BLACK	-	287	287	
TAXIWAY "B6" CENTERLINE MARKING (NEW) (BORDER)	BLACK	-	250	250	
TAXIWAY "B6" CENTERLINE MARKING (REMARK) (BORDER)	BLACK	433	-	433	
TAXIWAY "B7" CENTERLINE MARKING (BORDER)	BLACK	-	603	603	
TAXIWAY "B7" EDGE STRIPE MARKING (BORDER)	BLACK	-	1,708	1,708	
TOTAL BLACK		3,301	4,945	8,246	
PAVEMENT MARKING - WATERBORNE				24,148	
PAVEMENT MARKING - BLACK BORDER				8,246	



REVISION	DATE	BY

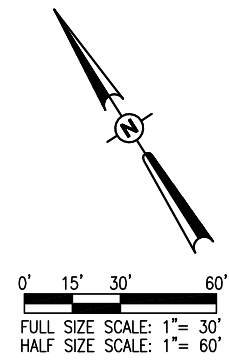


Project No. 84506RWYD_0800
 R-152MRK.DWG
 Scale: 1" = 30'
 Date: 02/05/07

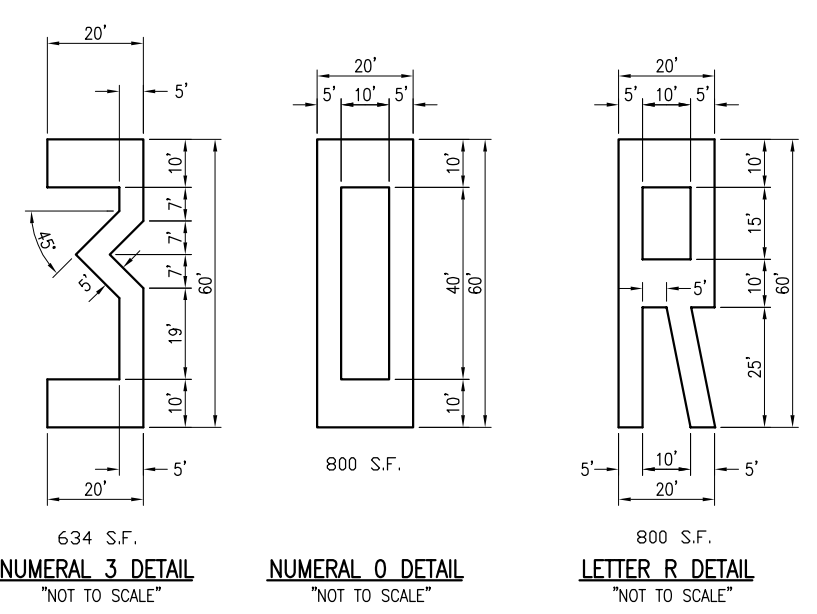
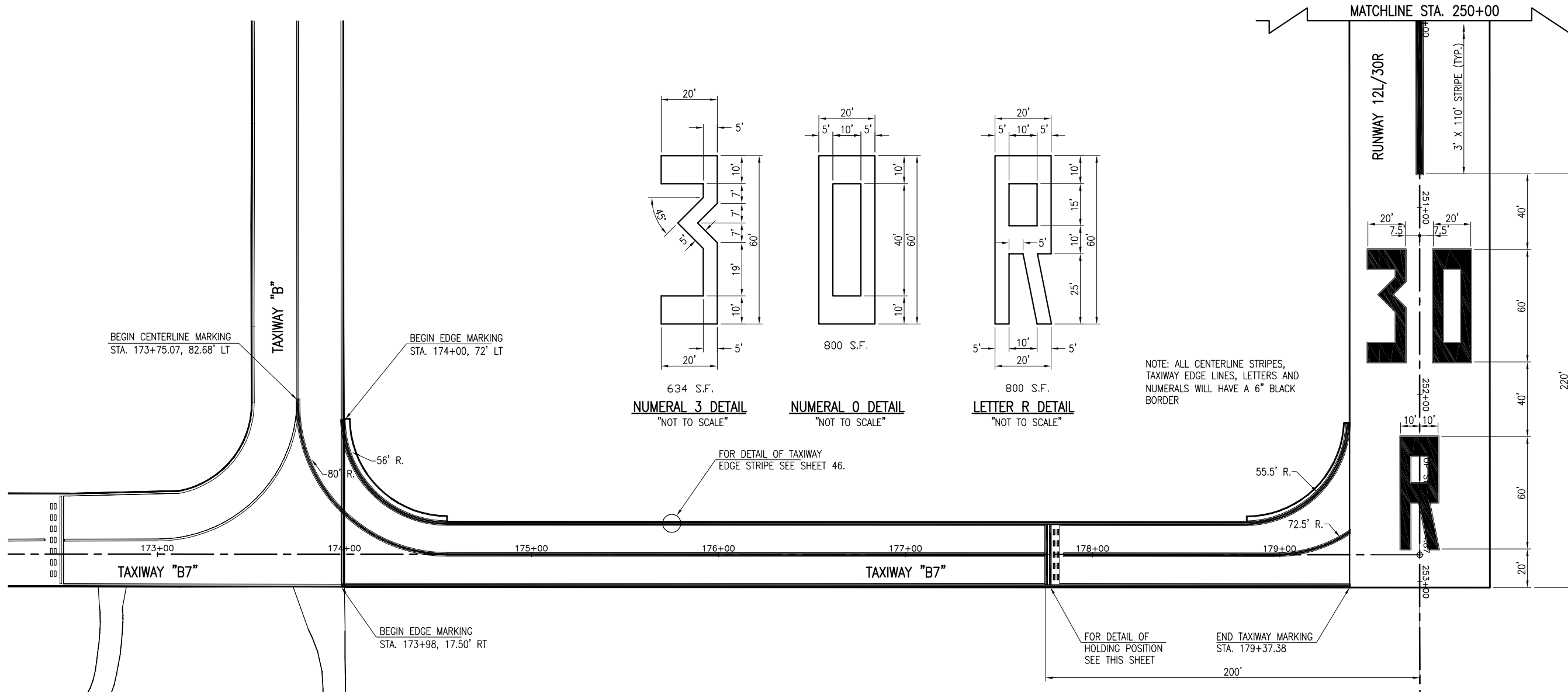
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DRAWN	MLB	02/05/07
REVIEWED	CAH	04/05/07



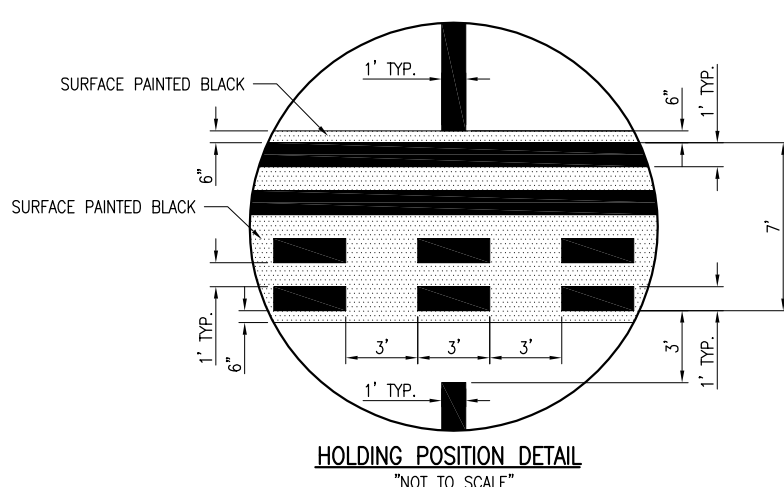
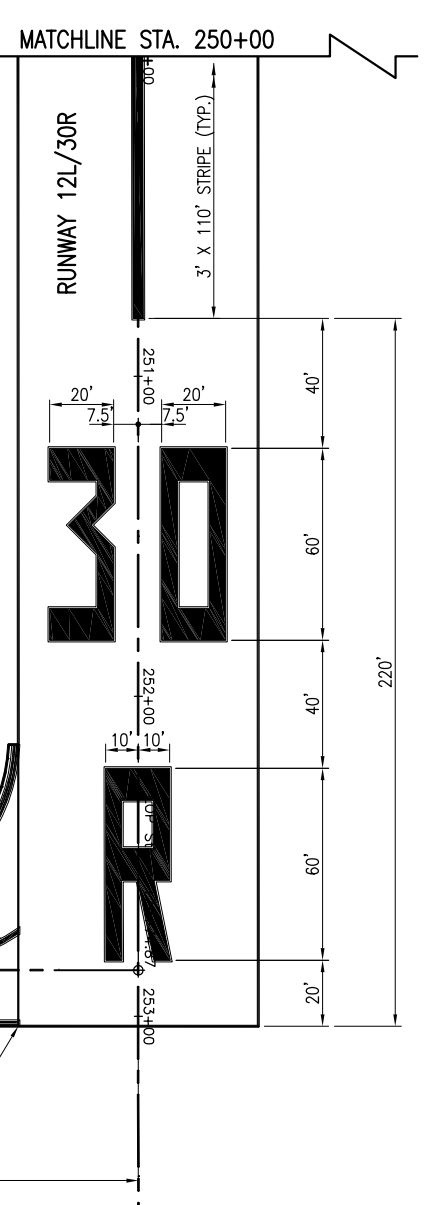
EXTEND RUNWAY END 30R 1500'
 PROPOSED MARKING PLAN
 STA. 235+00 TO STA. 243+00



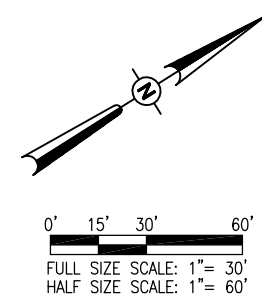
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NOTE: ALL CENTERLINE STRIPES, TAXIWAY EDGE LINES, LETTERS AND NUMERALS WILL HAVE A 6" BLACK BORDER



- LEGEND**
- EXISTING PAVEMENT
 - PROPOSED PAVEMENT
 - EXISTING MARKING
 - PROPOSED MARKING w/BLACK BORDER



DATE	REVISION	BY

SAINT LOUIS DOWNTOWN AIRPORT
 A Division of Bi-State Development Agency

 I.L. PROJ.: CPS-3665










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Plan No. R-152MRK.DWG	MLB	02/05/07
Scale 1" = 30'	CAH	04/05/07
Date 02/05/07		

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 4227 East City Expressway, Suite 130
 St. Louis, Missouri 63106
 Offices Nationwide

EXTEND RUNWAY
 END 30R 1500'
 PROPOSED
 MARKING PLAN
 TAXIWAY "B7"

JUN 29, 2009 3:05 PM KINCAID0394
 I:\AIRPORTS\ST. LOUIS DOWNTOWN\84506RWY\AIRPORT\SHEETS\R-152MRK.DWG - Taxiway B7

LEGEND

-  EXISTING PAVEMENT
-  EXISTING HEADWALL
-  EXISTING DRAINAGE PIPE
-  EXISTING DRAINAGE DITCH
-  EXISTING FENCE
-  PROPOSED PAVEMENT
-  PROPOSED 4" PERFORATED UNDERDRAIN W/SOCK
-  PROPOSED DRAINAGE PIPE
-  PROPOSED UNDERDRAIN INSPECTION HOLE

NOTE:

14,033 C.Y. OF MATERIAL WILL BE REMOVED FROM THE AREA SHOWN AS "FLOODPLAIN MITIGATION AND BORROW AREA". UPON REMOVAL OF THE REQUIRED EXCAVATION THE DISTURBED AREA WILL BE SEEDED AND MULCHED IN ACCORDANCE WITH THE APPLICABLE SPECIFICATIONS.

6,789 C.Y. OF THE ABOVE MATERIAL WILL BE PAID FOR AS BORROW EXCAVATION FOR THE RUNWAY/TAXIWAY PROJECT. THIS IS SHOWN AS "UNCLASSIFIED EXCAVATION FILL" ON THE CROSS-SECTIONS.

7,244 C.Y. OF THE ABOVE MATERIAL WILL BE PAID FOR AS UNCLASSIFIED EXCAVATION. THIS MATERIAL IS BEING PLACED OUTSIDE THE FLOOD PLAIN IN THE AREA SHOWN ON THIS SHEET AS THE FLOOD PLAIN MITIGATION EXCESS FILL AREA. THE MATERIAL PLACED IN THE FLOOD PLAIN MITIGATION EXCESS FILL AREA WILL BE GRADED SO THAT IT CAN BE MAINTAINED. IT SHALL ALSO BE SEEDED AND MULCHED IN ACCORDANCE WITH THE APPLICABLE SPECIFICATIONS.

AN ADDITIONAL 5,352 C.Y. OF MATERIAL WILL BE PAID FOR AS UNCLASSIFIED EXCAVATION. THIS MATERIAL IS LOCATED WITHIN THE RUNWAY/TAXIWAY EXTENSION AREA AND DITCH EXCAVATION AS SHOWN ON THE CROSS-SECTIONS FOR THE RUNWAY AND TAXIWAY.

THE GEOGRAPHIC BOUNDARY OF THE FLOODPLAIN MITIGATION EXCESS FILL AREA IS APPROXIMATE. THE CONTRACTOR SHALL CONDUCT A GRIDDED SURVEY OF THE BOUNDARY AREA SHOWN PRIOR TO DISTURBING THE SITE. THE PLACEMENT OF ALL FILL MATERIAL SHALL BE CONFINED TO AREAS WITHIN THE GEOGRAPHIC BOUNDARY WHERE THE EXISTING GROUND ELEVATION IS AT OR ABOVE ELEVATION 406.0 FT. AT THE TIME OF SURVEY.

BOP Sta = 10+00.00

N= 692,103.3424
E= 2,303,760.0925

FLOODPLAIN MITIGATION AND BORROW AREA

PROPOSED SILT FENCE (400 L.F.)

FLOODPLAIN MITIGATION EXCESS FILL AREA

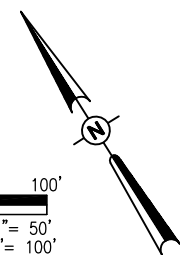
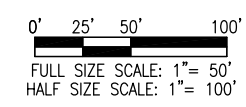
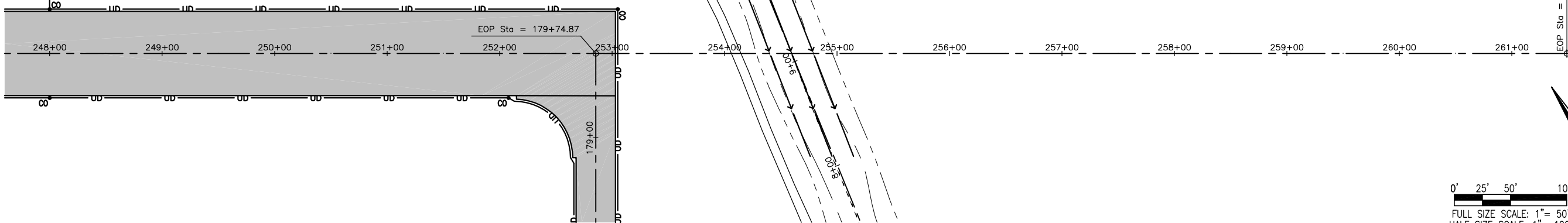
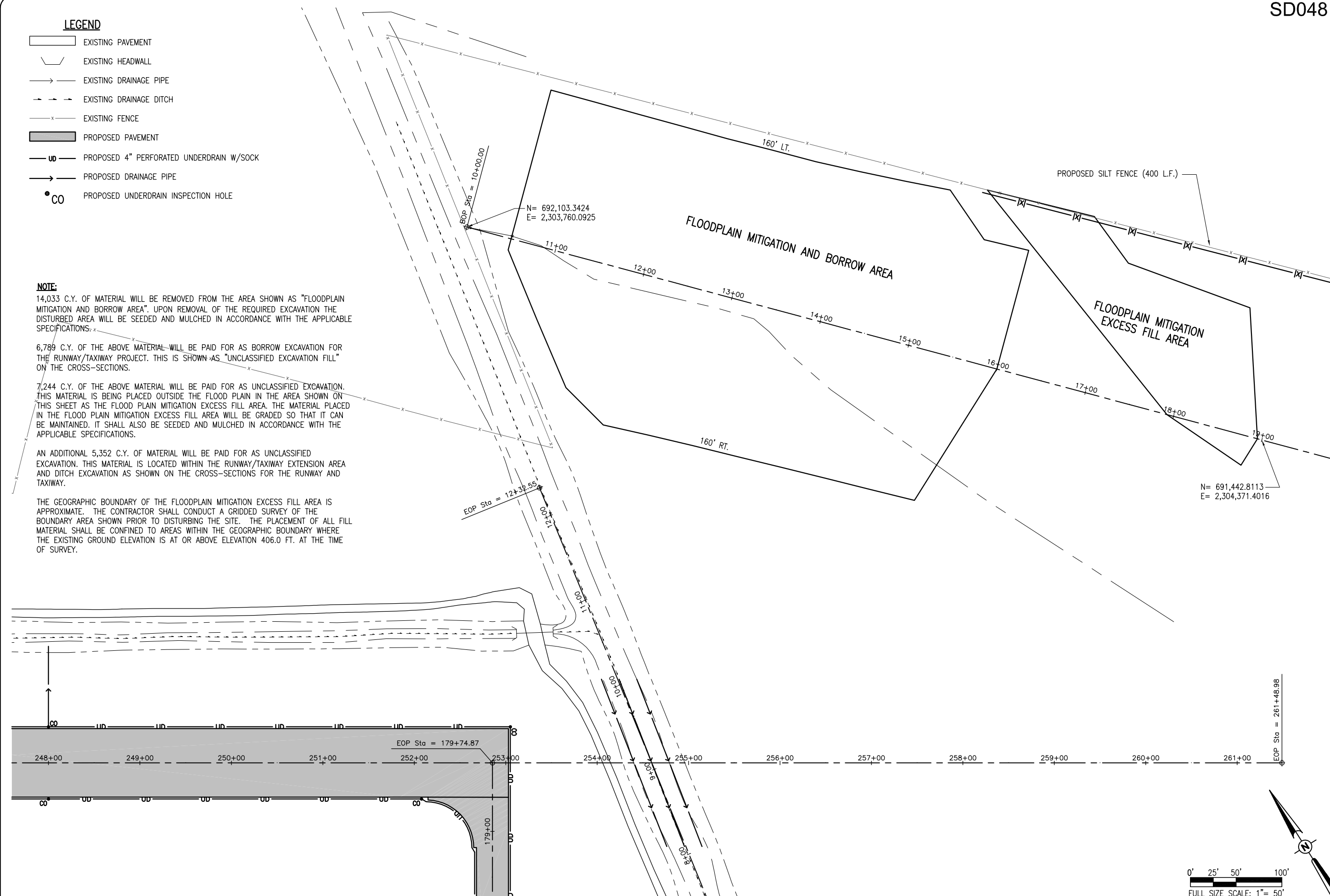
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E= 2,304,371.4016

EOP Sta = 12+32.55

EOP Sta = 179+74.87

EOP Sta = 261+48.98

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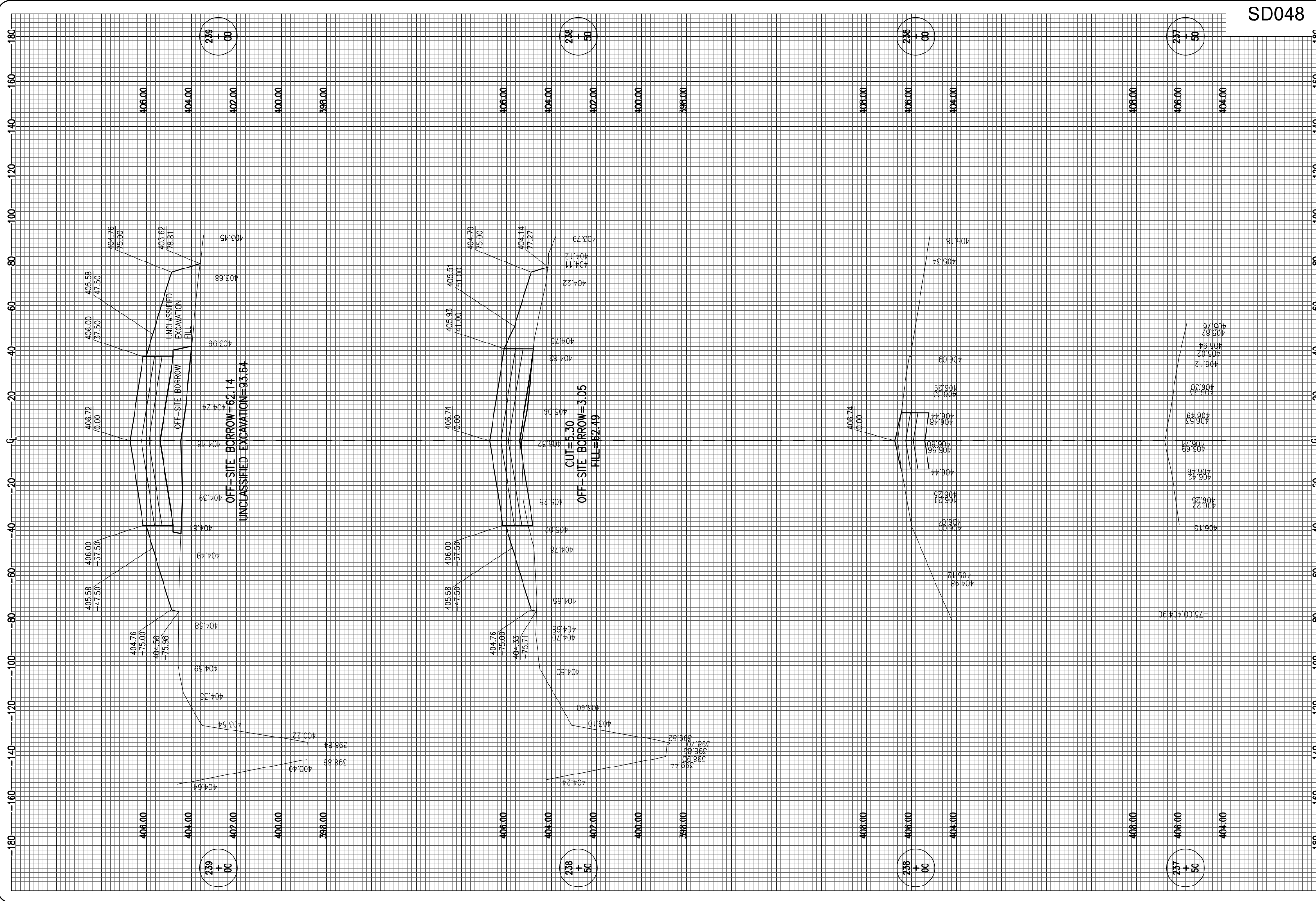
DATE	REVISION	BY

SAINT LOUIS DOWNTOWN AIRPORT
A Division of Bi-State Development Agency
ILL. PROJ.: CPS-3665 A.I.P. PROJ.: 3-17-0039-B18

Project No.	84506RWYD_0800
Revision	R-531DRN.DWG
Scale	1" = 50'
Date	11/30/07
LAYOUT	JAC 11/30/07
DRAWN	BAK 11/30/07
REVIEWED	CAH 04/05/07

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EXTEND RUNWAY
END 30R 1500'
FLOOD PLAIN
MITIGATION
AREA



SD048

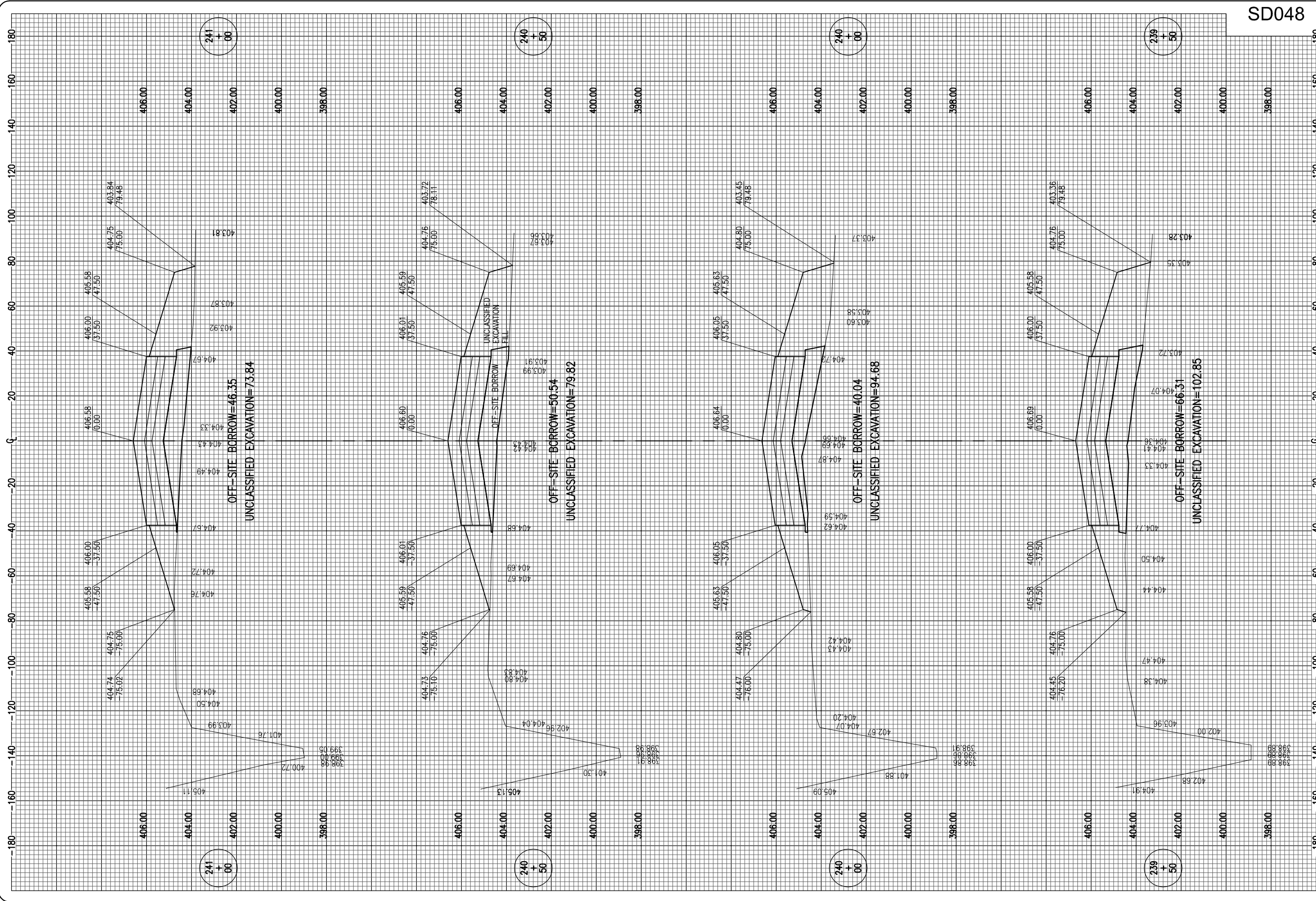
DATE	REVISION	BY

SAINT LOUIS DOWNTOWN AIRPORT
 A Division of B-State Development Agency
 A.I.P. PROJ.: 3-17-0039-B18

FILE Project No. 84506RWYD_0800	PLANS R-301XS-R.DWG
Scale 1" = 20' Horiz./2" Vert.	Date 03/28/07
LAYOUT JFO 03/27/07	DRAWN MDR 03/29/07
REVIEWED CAH 04/05/07	

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EXTEND RUNWAY
 END 30R 1500'
 PROPOSED RUNWAY
 CROSS-SECTIONS
 STA. 237+50 TO STA. 239+00



SD048

241
+
00

240
+
50

240
+
00

239
+
50

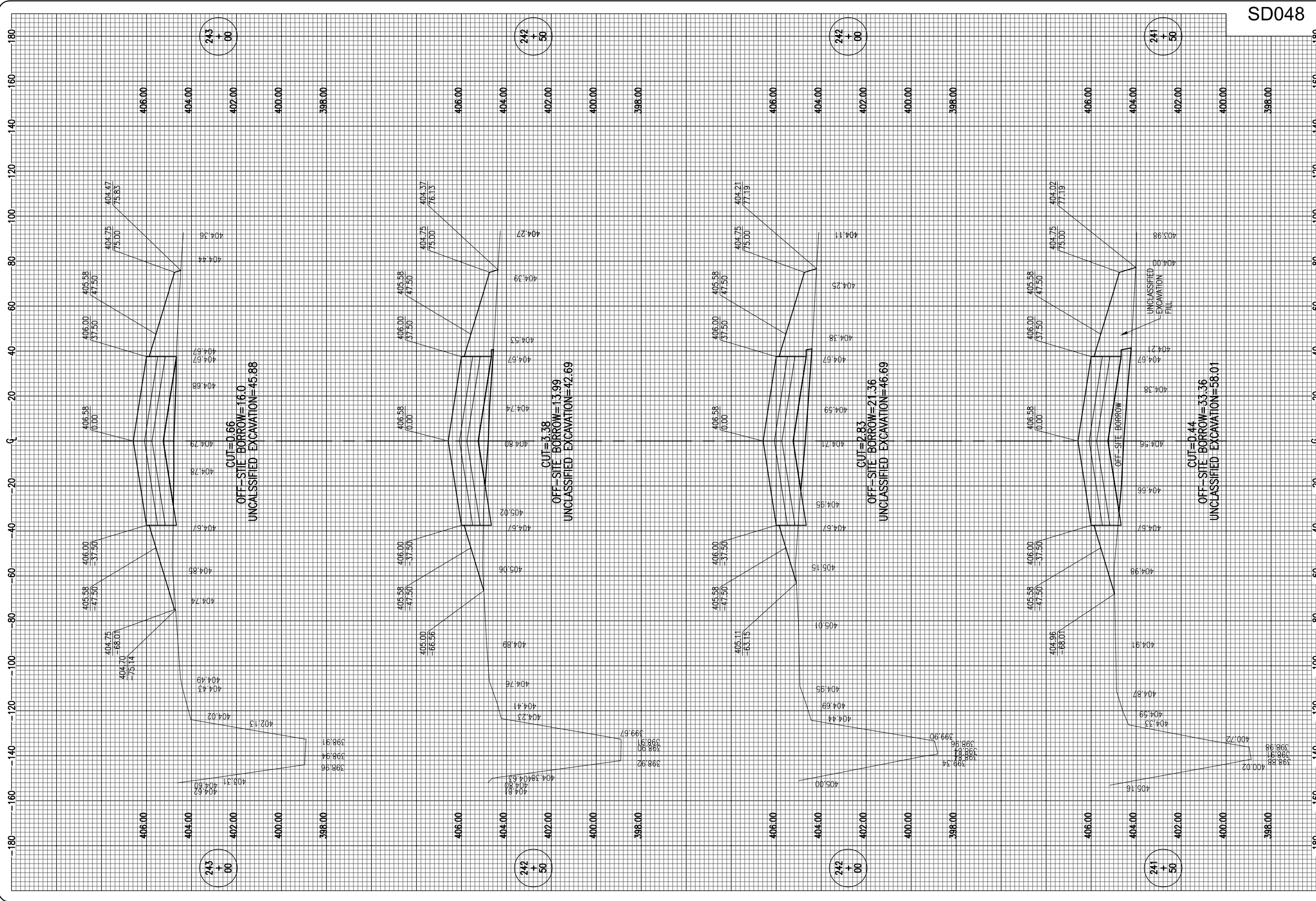
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SAINT LOUIS DOWNTOWN AIRPORT
 A Division of B-State Development Agency
 A.I.P. PROJ.: 3-17-0039-B18

FILE Project No.	84506RWD_0800
PLANS	R-302XS-R.DWG
Scale	1" = 20' Horiz./2" Vert.
Date	03/28/07
LAYOUT	JFO 03/27/07
DRAWN	MOR 03/29/07
REVIEWED	CAH 04/05/07

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**EXTEND RUNWAY
 END 30R 1500'**
**PROPOSED RUNWAY
 CROSS-SECTIONS
 STA. 239+50 TO STA. 241+00**



SD048

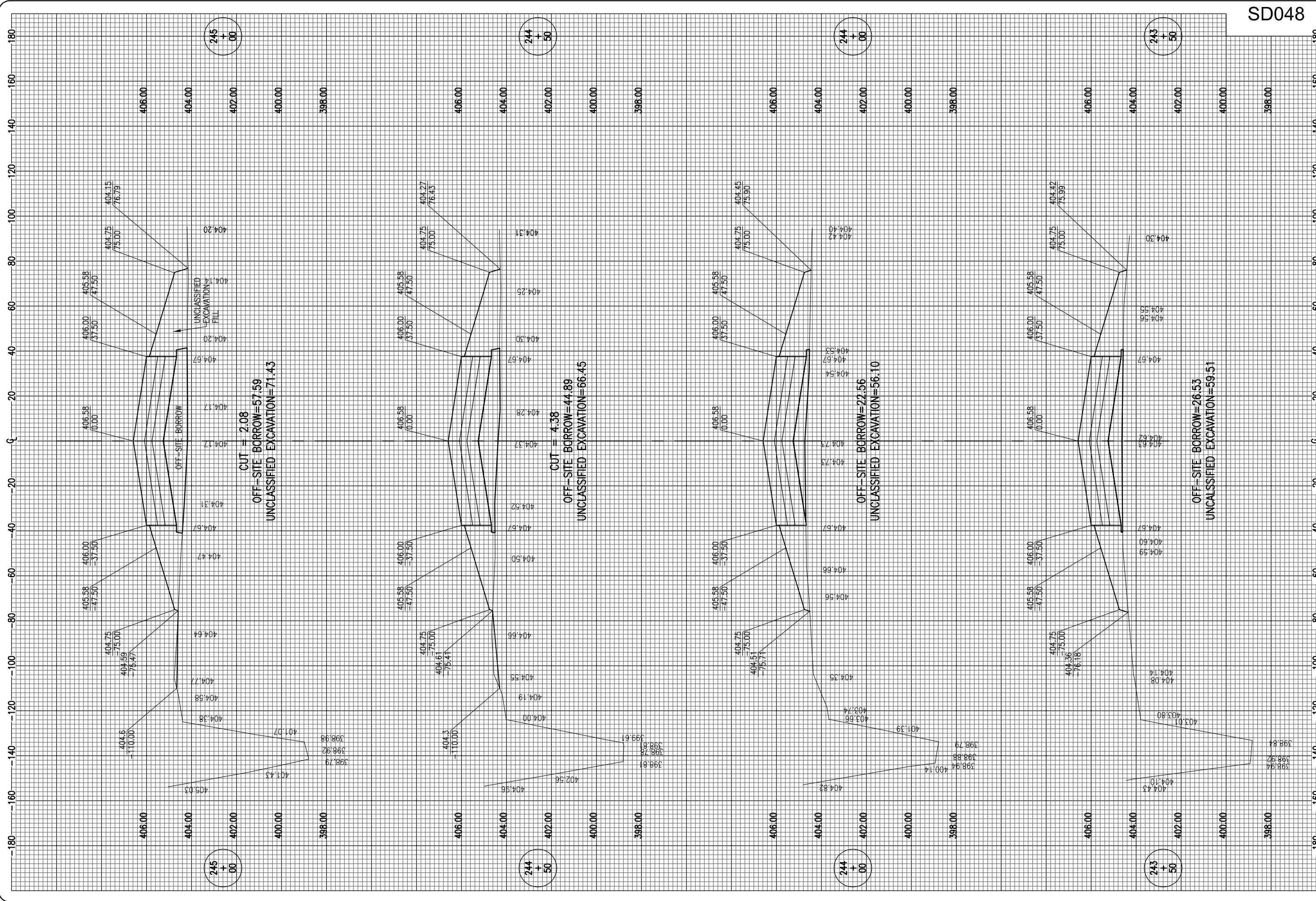
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SAINT LOUIS DOWNTOWN AIRPORT
 A Division of Bi-State Development Agency
 A.I.P. PROJ.: 3-17-0039-B18

FILE Project No. 84506RWD_0800	DATE 03/27/07
PLANS R-303XS-R.DWG	DATE 03/29/07
Scale 1" = 20' Horiz./2" Vert.	DATE 03/28/07
LAYOUT JFO	REVIEWED CAH
DRAWN MDR	DATE 04/05/07

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EXTEND RUNWAY
 END 30R 1500'
 PROPOSED RUNWAY
 CROSS-SECTIONS
 STA. 241+50 TO STA. 243+00



SD048

245
+
00

244
+
50

244
+
00

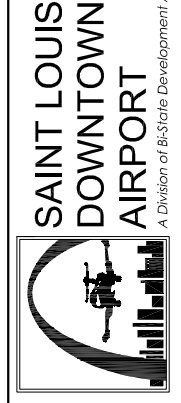
243
+
50

EXTEND RUNWAY
END 30R 1500'

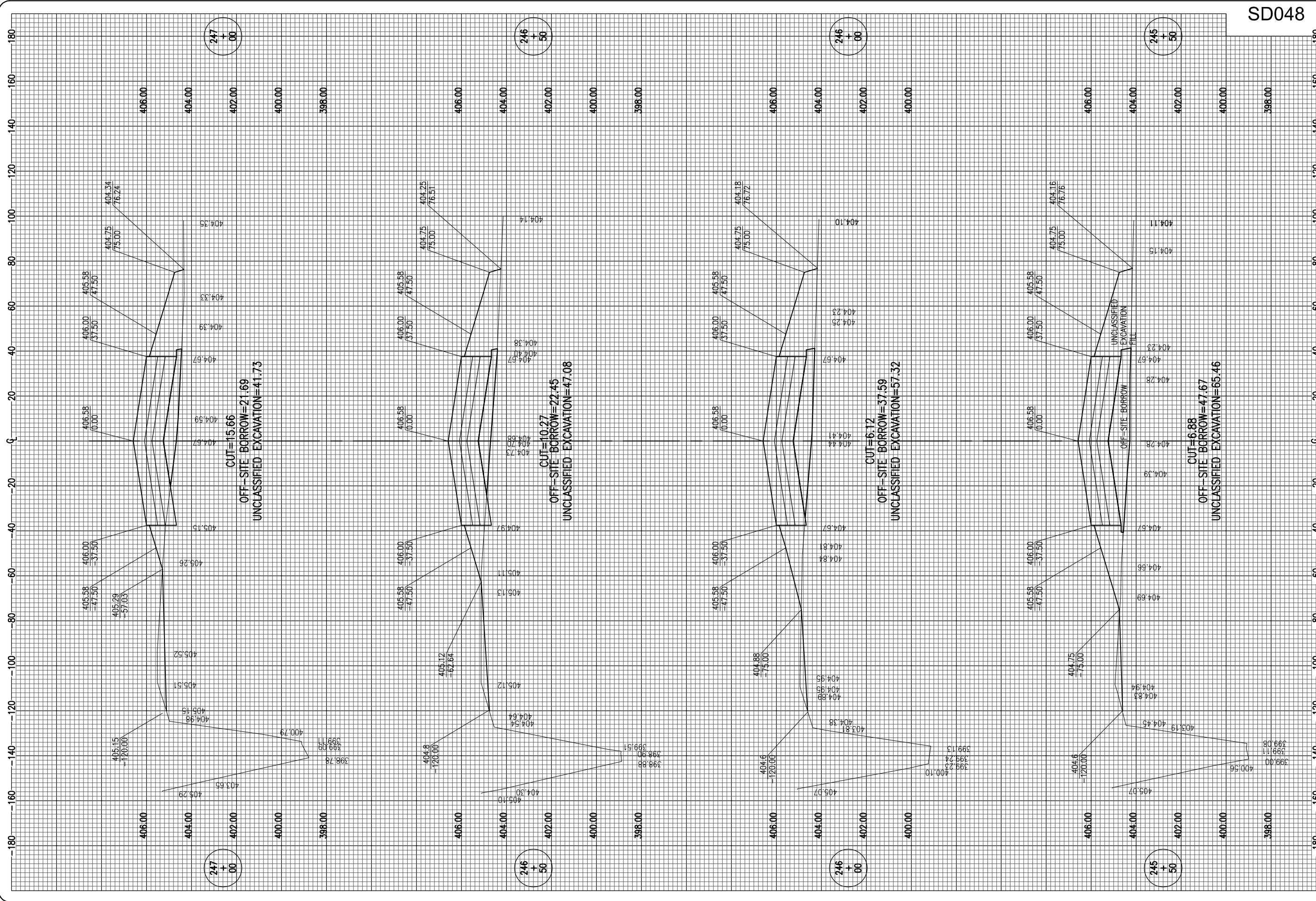
PROPOSED RUNWAY
CROSS-SECTIONS
STA. 243+50 TO STA. 245+00



FILE Project No.	84506RWD_0800
PLANS	R-304XS-R.DWG
Scale	1" = 20' Horiz./2' Vert.
Date	03/28/07
LAYOUT	JFO 03/27/07
DRAWN	MOR 03/29/07
REVIEWED	CAH 04/05/07



DATE	REVISION	BY



SD048

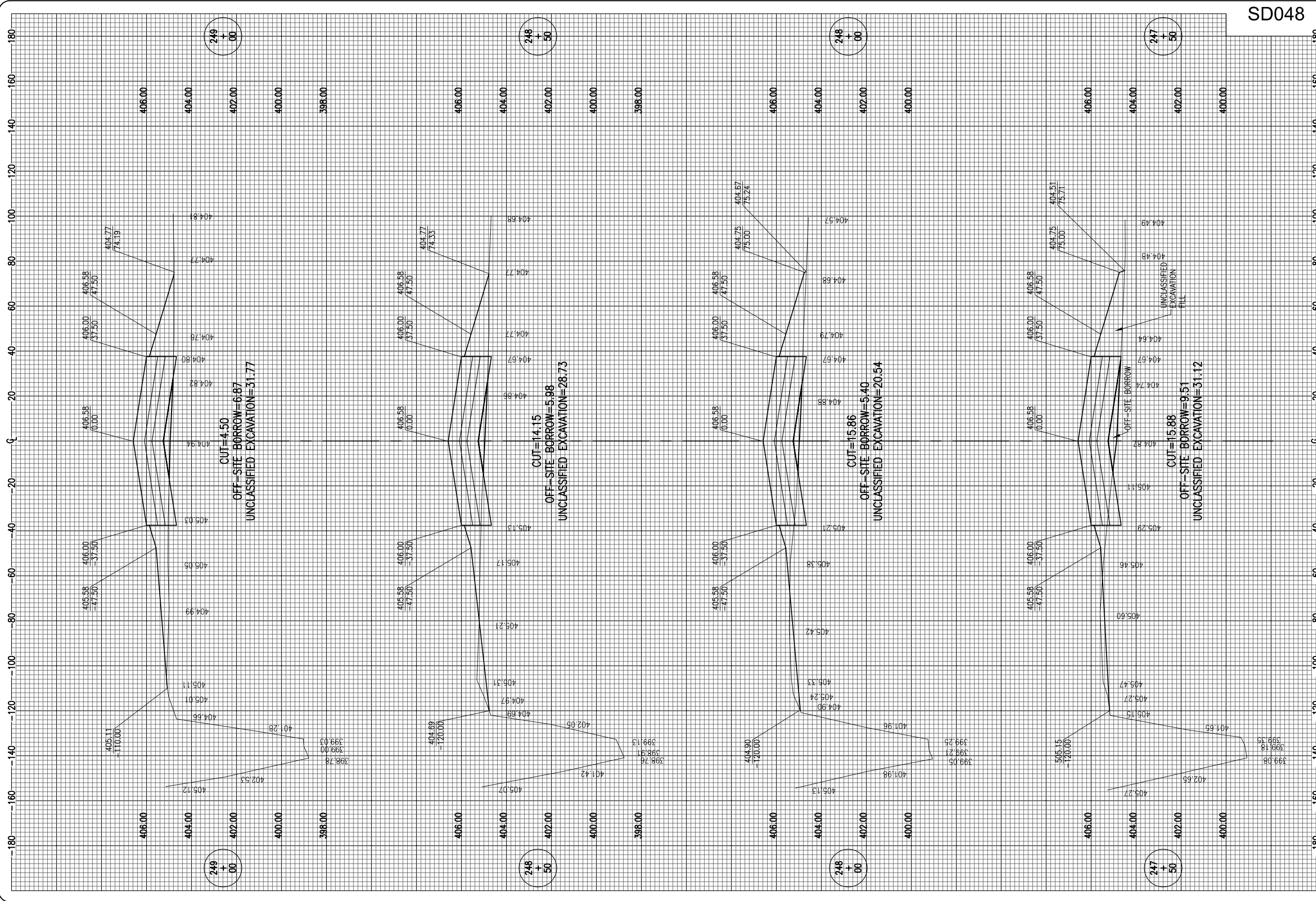
DATE	REVISION	BY

SAINT LOUIS DOWNTOWN AIRPORT
 A Division of B-State Development Agency
 A.I.P. PROJ.: 3-17-0039-B18

FILE Project No. 84506RWYD_0800	DATE 03/28/07
PLANS R-305XS-R.DWG	DATE 03/27/07
Scale 1" = 20' Horiz./2" Vert.	DATE 03/29/07
DATE 03/28/07	DATE 04/05/07
LAYOUT JFO	REVIEWED CAH
DRAWN MDR	

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EXTEND RUNWAY
 END 30R 1500'
 PROPOSED RUNWAY
 CROSS-SECTIONS
 STA. 245+50 TO STA. 247+00



SD048

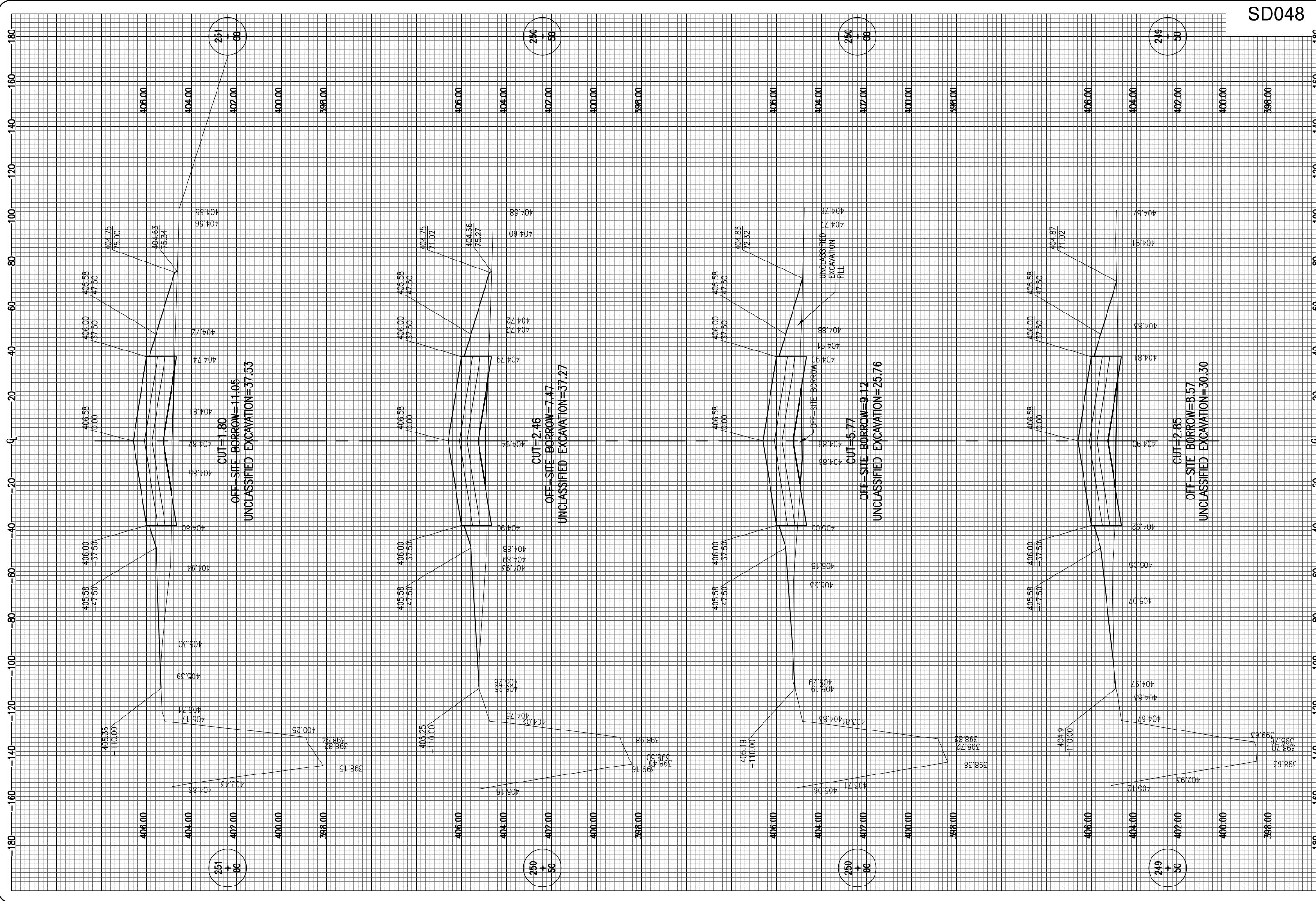
DATE	REVISION	BY

SAINT LOUIS DOWNTOWN AIRPORT
 A Division of B-State Development Agency
 A.L.P. PROJ.: 3-17-0039-B18

FILE Project No. 84506RWD_0800	DATE 03/27/07
PLANS R-306XS-R.DWG	DATE 03/29/07
Scale 1" = 20' Horiz./2" Vert.	DATE 03/28/07
LAYOUT JFO	REVIEWED CAH
DRAWN MDR	DATE 04/05/07

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EXTEND RUNWAY END 30R 1500'
PROPOSED RUNWAY CROSS-SECTIONS
 STA. 247+50 TO STA. 249+00



SD048

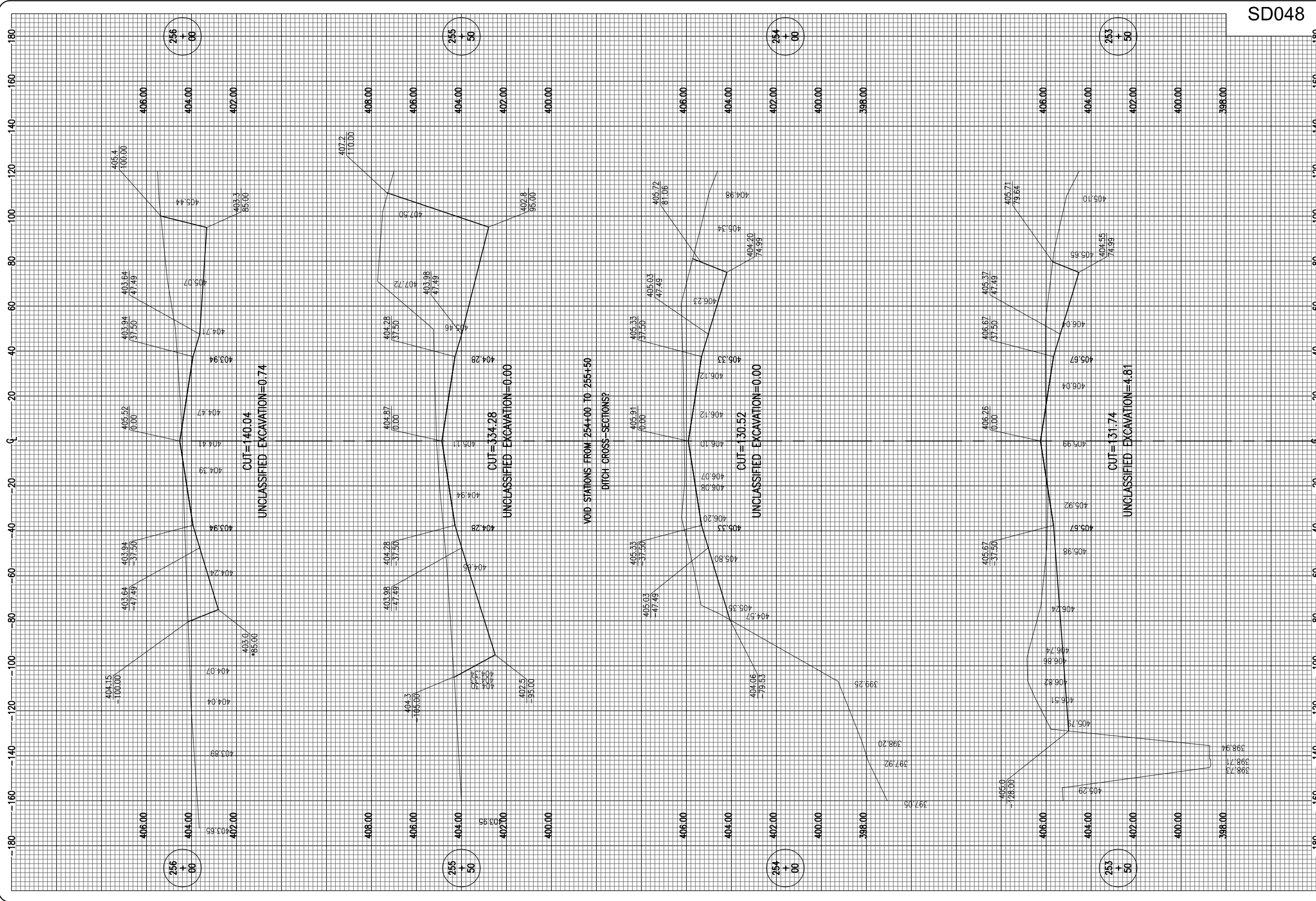
DATE	REVISION	BY

SAINT LOUIS DOWNTOWN AIRPORT
 A Division of B-State Development Agency
 A.I.P. PROJ.: 3-17-0039-B18

FILE Project No. 84506RMYD_0800	DATE 03/28/07
PLAN R-307XS-R.DWG	LAYOUT JFO
SCALE 1" = 20' Horiz./2" Vert.	DRAWN MDR
DATE 03/28/07	REVIEWED CAH
	DATE 04/05/07

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EXTEND RUNWAY
 END 30R 1500'
 PROPOSED RUNWAY
 CROSS-SECTIONS
 STA. 249+50 TO STA. 251+00



SD048

256
+
00

255
+
50

254
+
00

253
+
50

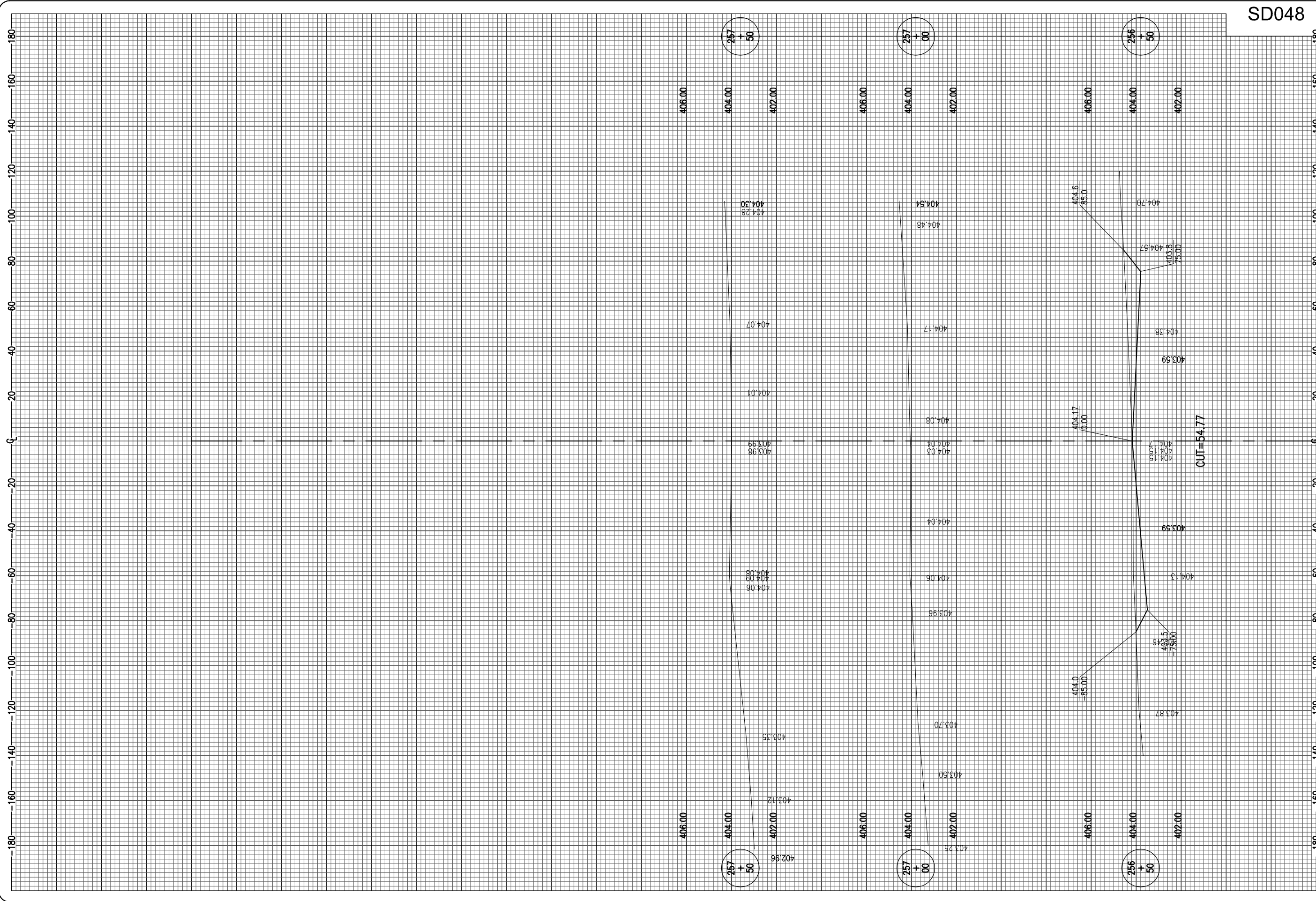
DATE	REVISION	BY

SAINT LOUIS DOWNTOWN AIRPORT
 A Division of B-State Development Agency
 A.I.P. PROJ.: 3-17-0039-B18

FILE Project No. 84506RMYD_0800	DATE 03/27/07
Drawn R-309XS-R.DWG	DATE 03/29/07
Scale 1" = 20' Horiz./2" Vert.	DATE 03/28/07
REVIEWED CAH	DATE 04/05/07
LAYOUT JFO	DATE 03/27/07
DRAWN MDR	DATE 03/29/07

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EXTEND RUNWAY
 END 30R 1500'
 PROPOSED RUNWAY
 CROSS-SECTIONS
 STA. 253+50 TO STA. 256+00



SD048

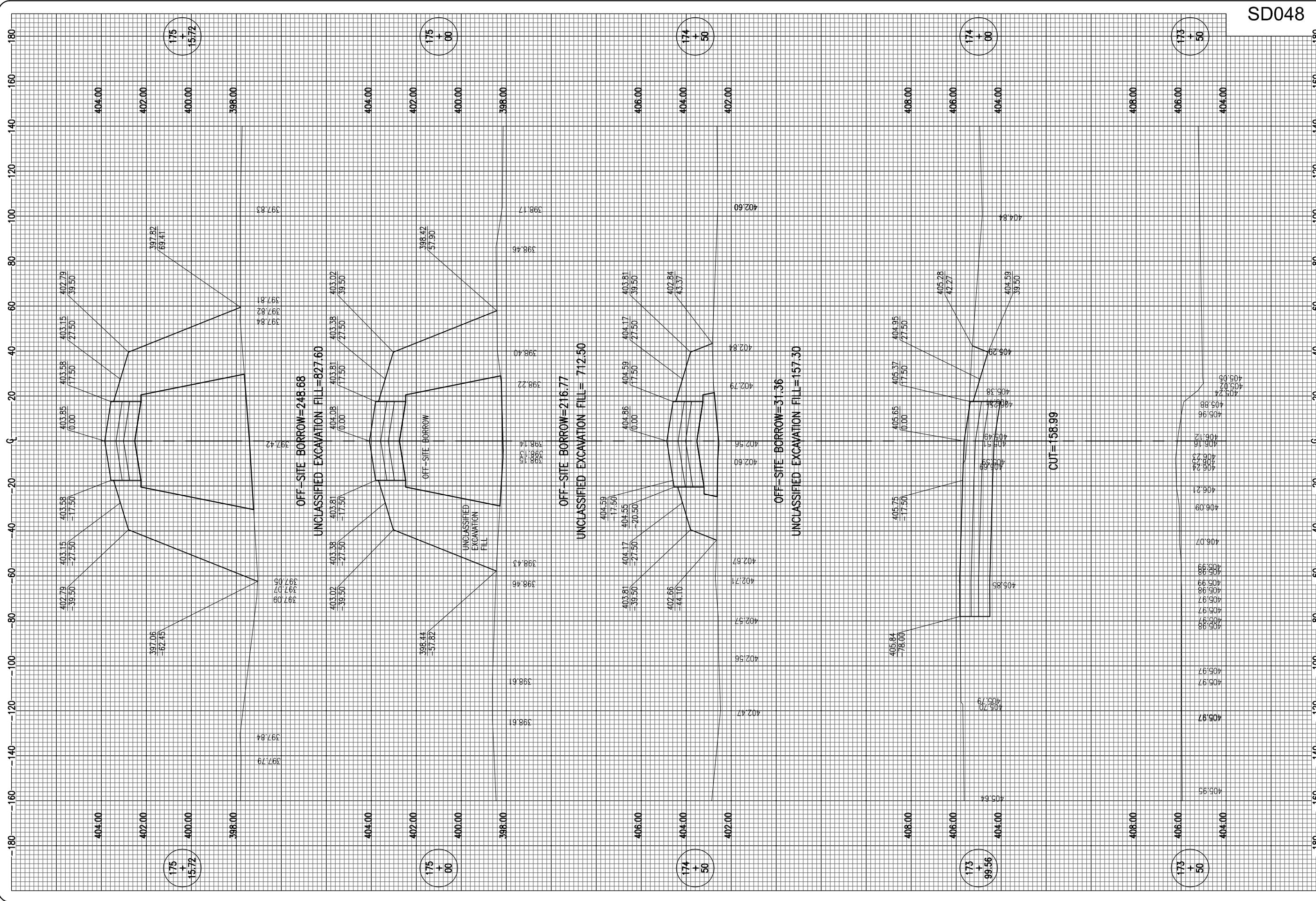
DATE	REVISION	BY

SAINT LOUIS DOWNTOWN AIRPORT
 A Division of B-Style Development Agency
 A.I.P. PROJ.: 3-17-0039-B18

FILE Project No. 84506RMYD_0800	PLANS R-310XS-R.DWG
Scale 1" = 20' Horiz./2" Vert.	Date 03/28/07
LAYOUT JFO 03/27/07	DRAWN MDR 03/29/07
REVIEWED CAH 04/05/07	

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EXTEND RUNWAY
 END 30R 1500'
 PROPOSED RUNWAY
 CROSS-SECTIONS
 STA. 256+50 TO STA. 257+50



SD048

175 + 15.72

175 + 00

174 + 50

174 + 00

173 + 50

175 + 15.72

175 + 00

174 + 50

173 + 99.56

173 + 50

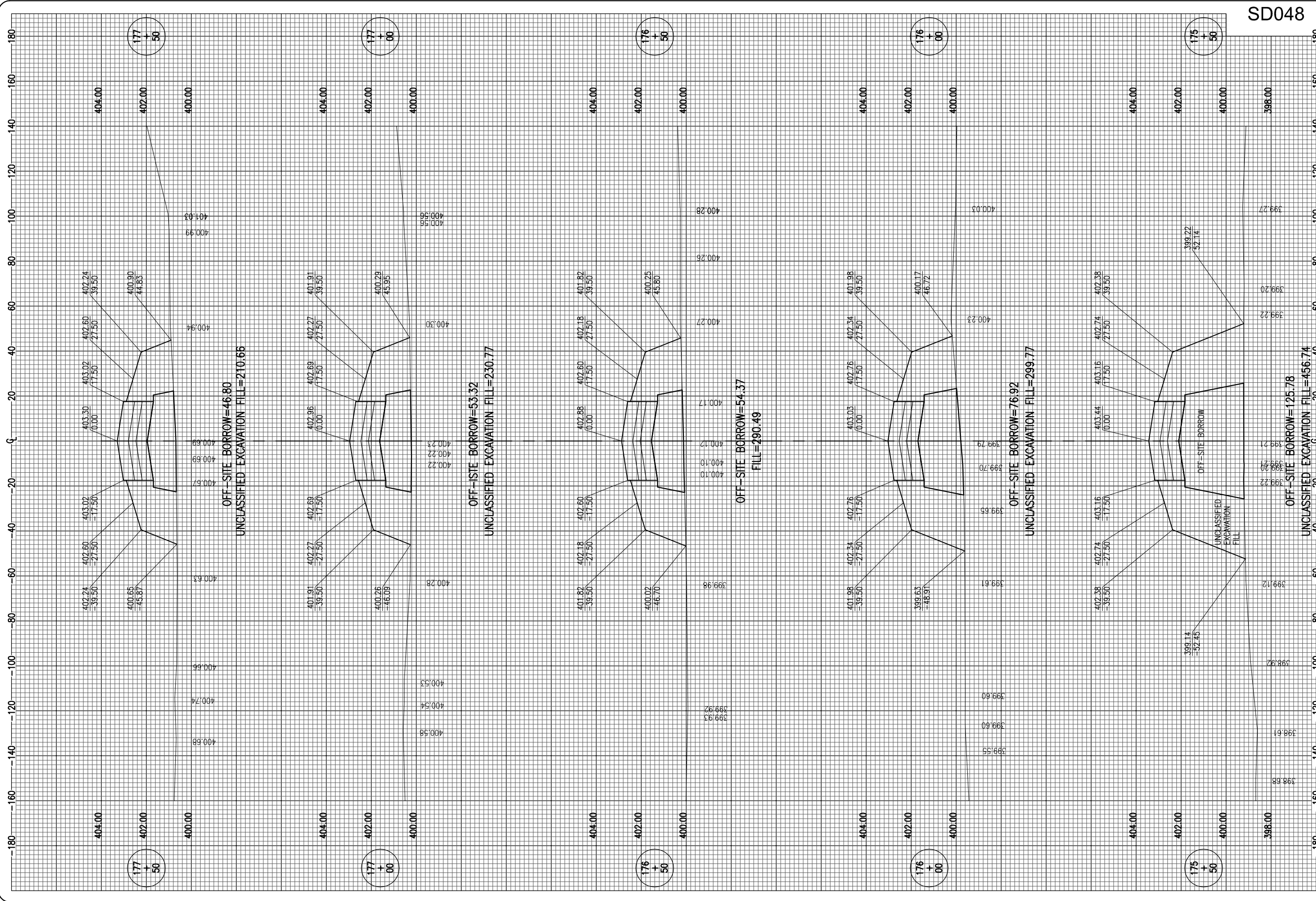
DATE	REVISION	BY

SAINT LOUIS DOWNTOWN AIRPORT
 A Division of B-State Development Agency
 A.I.P. PROJ.: 3-17-0039-B18

FILE Project No. 84506RWD_0800	
PLANS R-301XS-T.DWG	
Scale 1" = 20' Horiz./2" Vert.	
Date 03/28/07	
LAYOUT JFO 03/27/07	
DRAWN CCH 03/28/07	
REVIEWED CAH 04/05/07	
IL PROJ.: CFS-3665	

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EXTEND RUNWAY END 30R 1500'
PROPOSED TAXIWAY CROSS-SECTIONS
 STA. 173+50 TO STA. 175+15.72



SD048

177 + 50

177 + 00

176 + 50

176 + 00

175 + 50

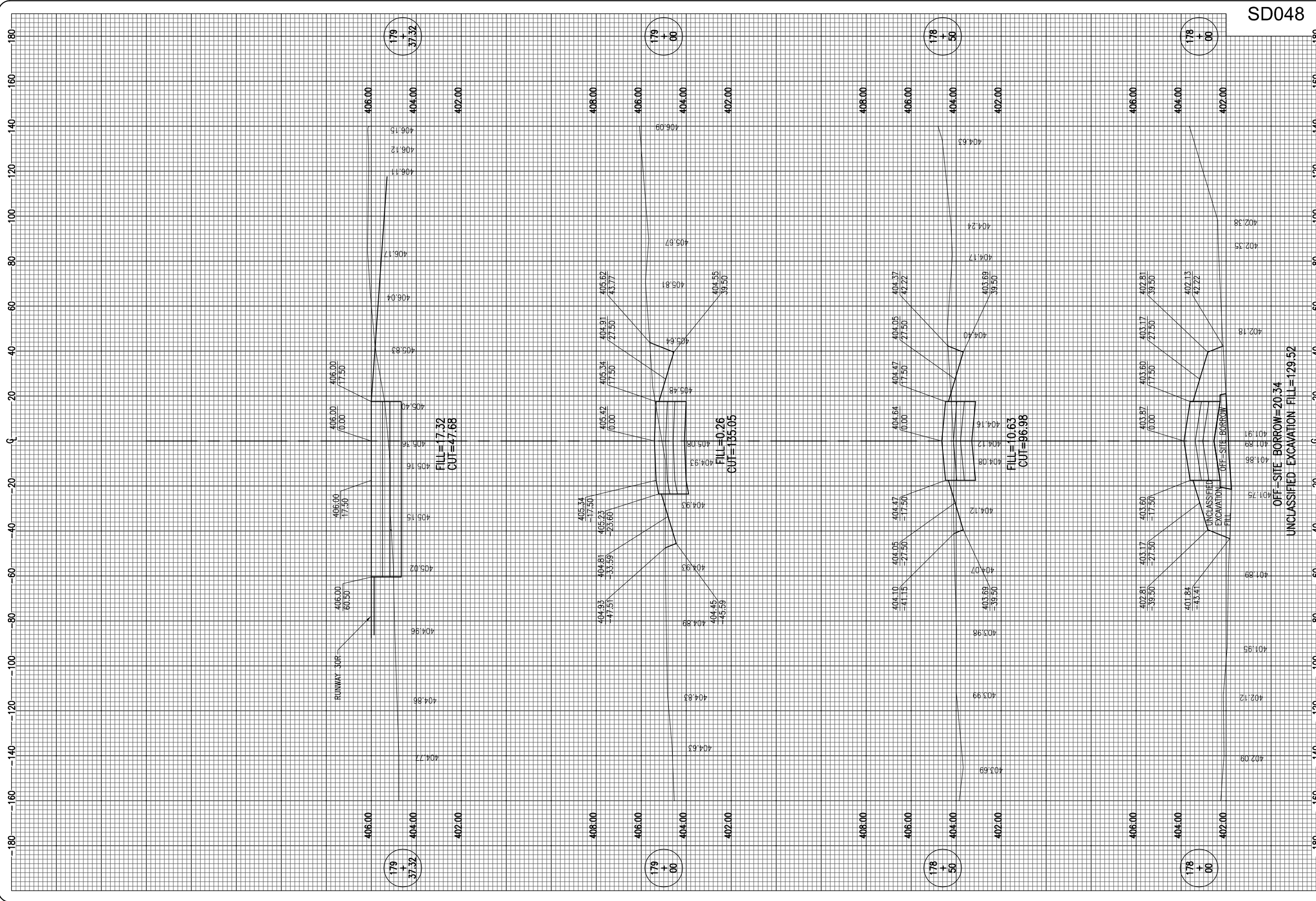
DATE	REVISION	BY

SAINT LOUIS DOWNTOWN AIRPORT
 A Division of B-State Development Agency
 A.I.P. PROJ.: 3-17-0039-B18

FILE Project No. 84506RMYD_0800	PLANNING R-302XS-T.DWG
Scale 1" = 20' Horiz./2' Vert.	Date 03/28/07
LAYOUT JFO 03/27/07	DRAWN CCC 03/28/07
REVIEWED CAH 04/05/07	

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EXTEND RUNWAY END 30R 1500'
PROPOSED TAXIWAY CROSS-SECTIONS
 STA. 175+50 TO STA. 177+50



SD048

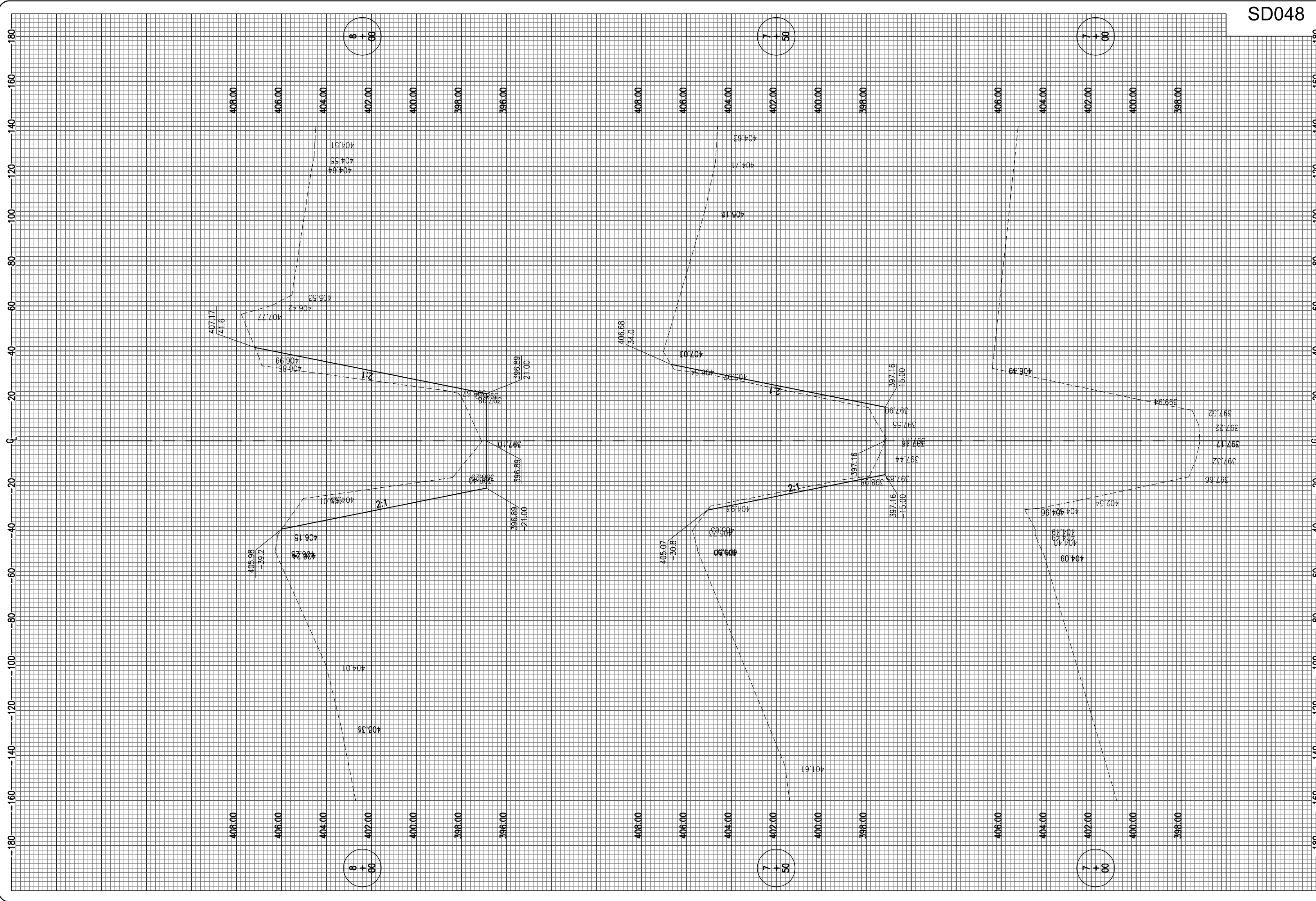
DATE	REVISION	BY

SAINT LOUIS DOWNTOWN AIRPORT
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 A.I.P. PROJ.: 3-17-0039-B18

Project No.	84506RMYD_0800
Revision	R-303XS-T.DWG
Scale	1" = 20' Horiz./2" Vert.
Date	03/28/07
LAYOUT	JFO 03/27/07
DRAWN	CCC 03/28/07
REVIEWED	CAH 04/05/07

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EXTEND RUNWAY END 30R 1500'
PROPOSED TAXIWAY CROSS-SECTIONS
 STA. 178+00 TO STA. 179+74.87



SD048

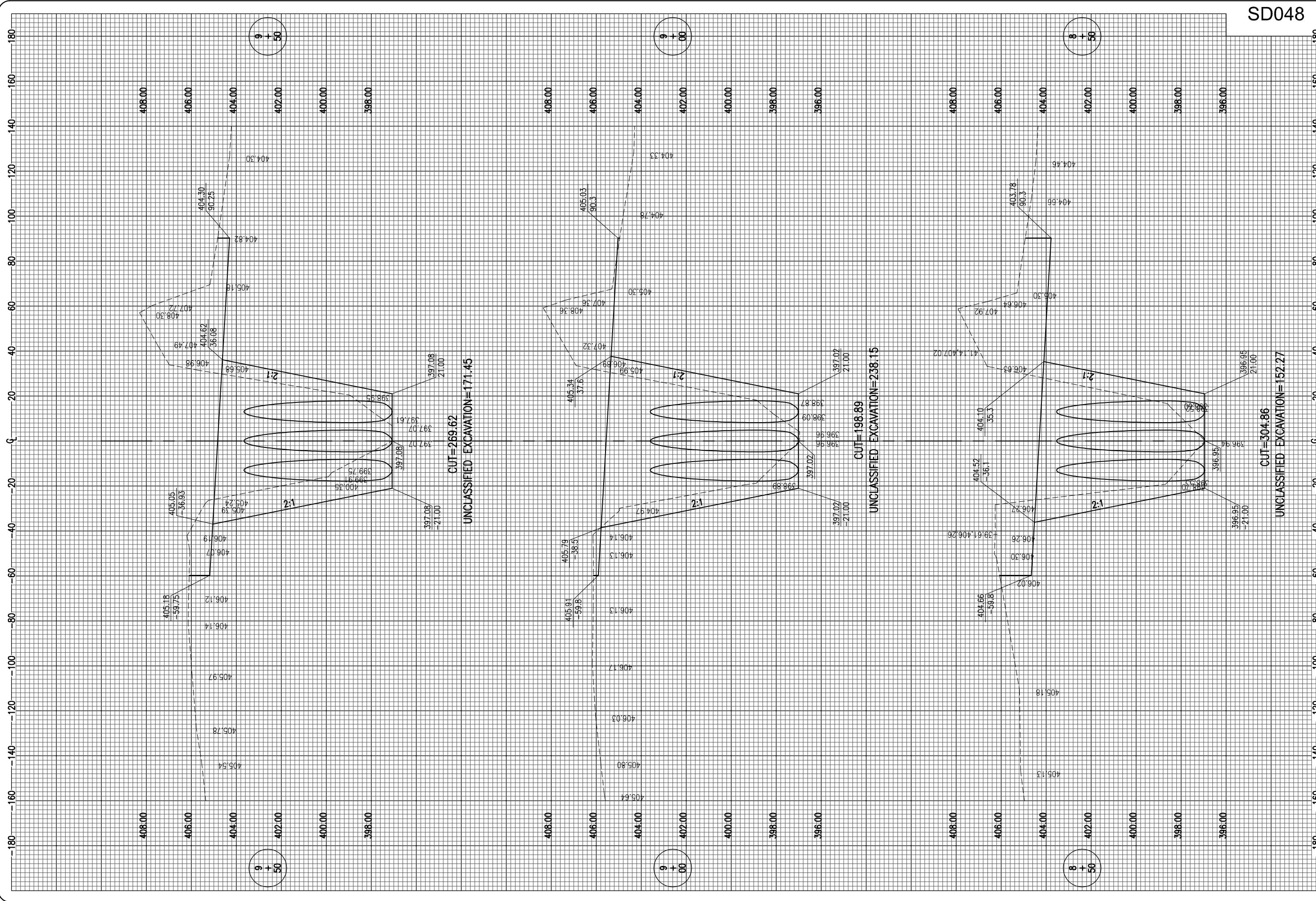
DATE	REVISION	BY

SAINT LOUIS DOWNTOWN AIRPORT
 A Division of Bi-State Development Agency
 A.I.P. PROJ.: 3-17-0039-B18

Project No.	84506RWYD_0800
Drawings	R-301XS-D.DWG
Scale	1" = 20' Horiz./2' Vert.
Date	03/28/07
LAYOUT	JFO 03/27/07
DRAWN	CCC 03/28/07
REVIEWED	CAH 04/05/07

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**EXTEND RUNWAY
 END 30R 1500'**
**PROPOSED DITCH
 CROSS-SECTIONS
 STA. 7+00 TO STA. 8+00**



SD048

9 + 50

9 + 00

8 + 50

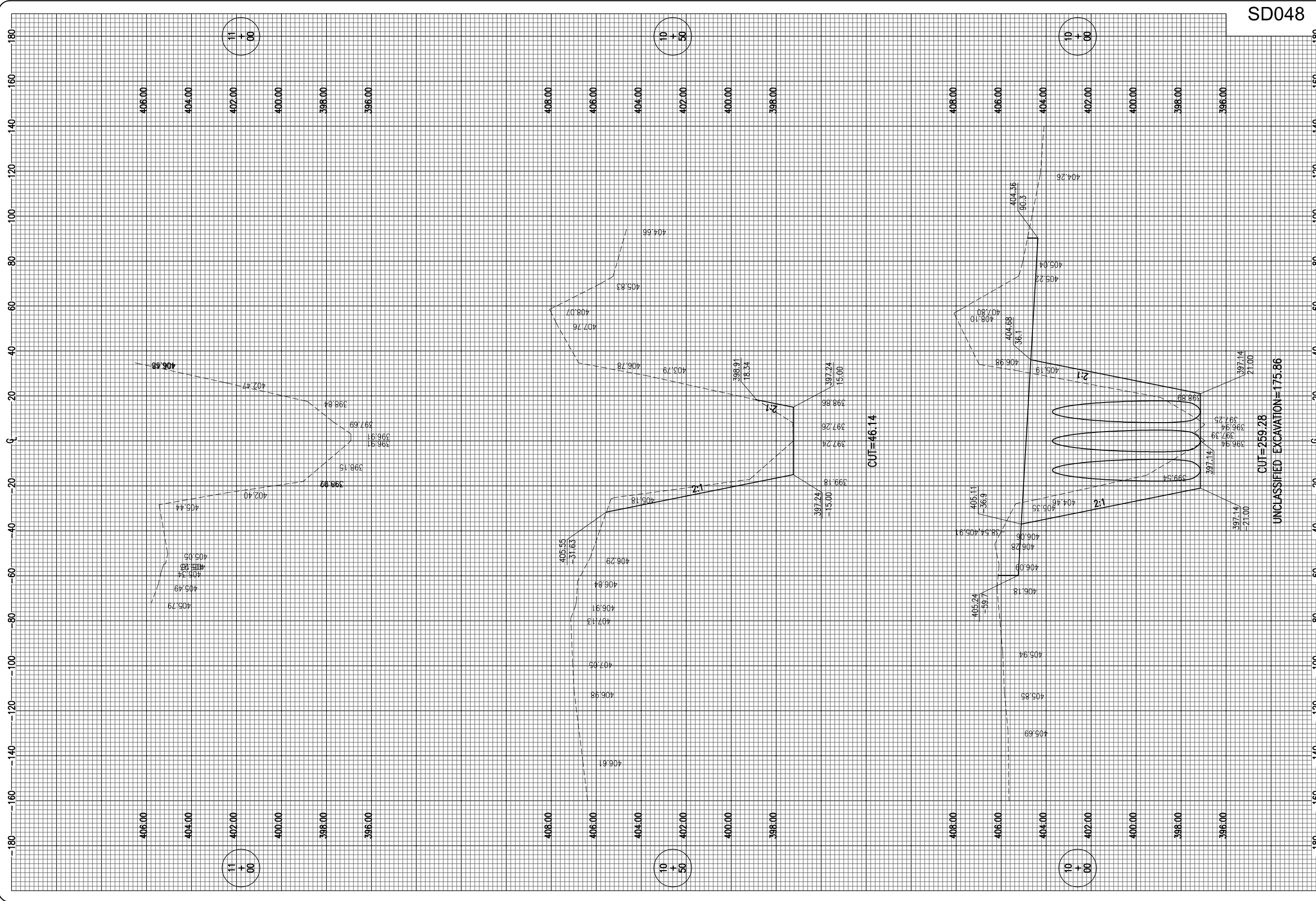
DATE	REVISION	BY

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 A Division of B-State Development Agency
 A.I.P. PROJ.: 3-17-0039-B18

FILE Project No. 84506RWYD_0800	PLANNING R-302XS-D.DWG	Scale 1" = 20' Horiz./2' Vert.
Date 03/28/07	LAYOUT JFO 03/27/07	DRAWN CCC 03/28/07
REVIEWED CAH 04/05/07		

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EXTEND RUNWAY
 END 30R 1500'
 PROPOSED DITCH
 CROSS-SECTIONS
 STA. 8+50 TO STA. 9+50



SD048

11
+
00

10
+
50

10
+
00

11
+
00

10
+
50

10
+
00

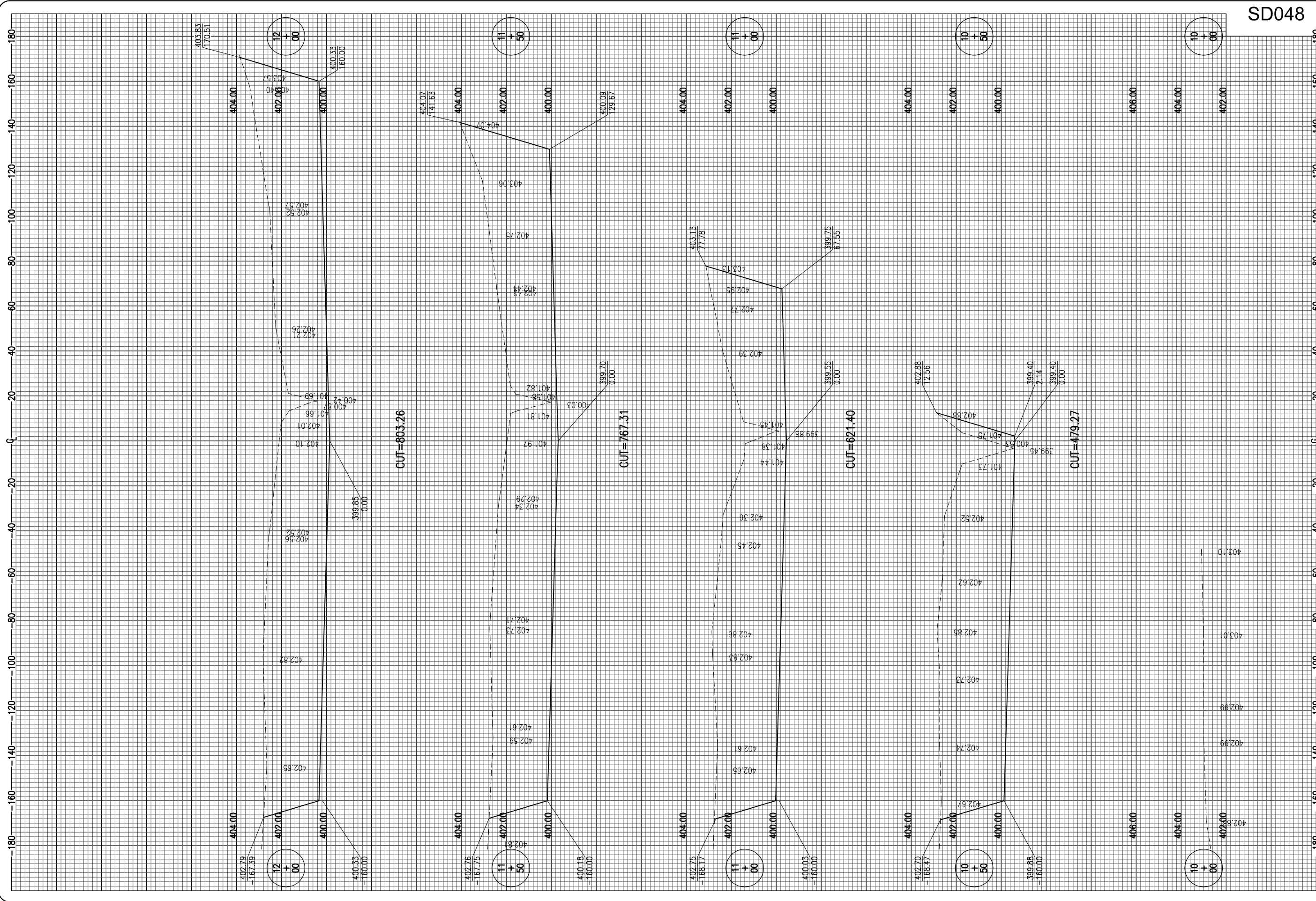
DATE	REVISION	BY

SAINT LOUIS DOWNTOWN AIRPORT
 A Division of Missouri State Development Agency
 A.I.P. PROJ.: 3-17-0039-B18

FILE Project No.	84506RMYD_0800
PLANS	R-303XS-D.DWG
Scale	1" = 20' Horiz./2' Vert.
Date	03/28/07
LAYOUT	JFO 03/27/07
DRAWN	CCC 03/28/07
REVIEWED	CAH 04/05/07

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EXTEND RUNWAY
 END 30R 1500'
 PROPOSED DITCH
 CROSS-SECTIONS
 STA. 10+00 TO STA. 11+00



SD048

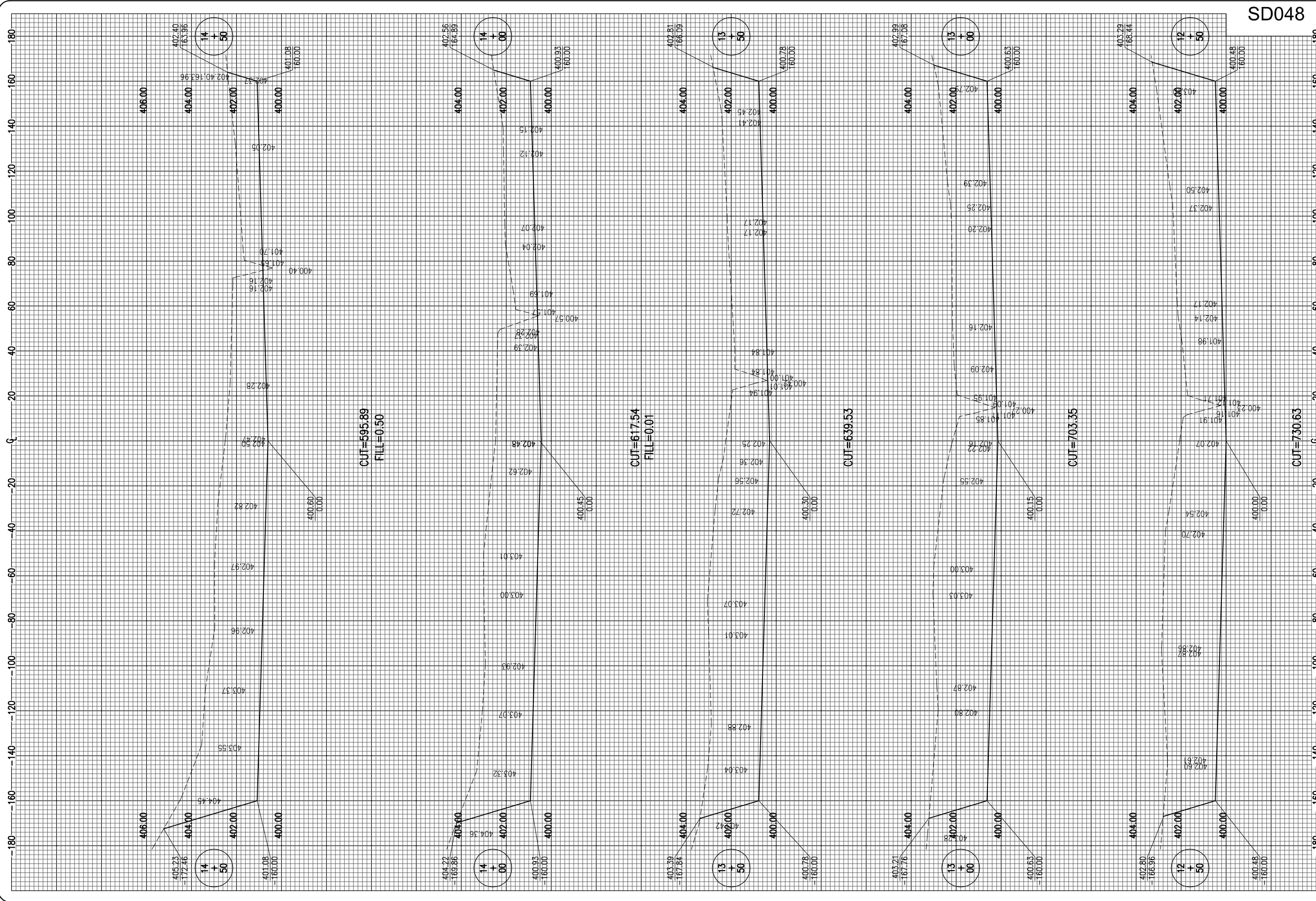
DATE	REVISION	BY

SAINT LOUIS DOWNTOWN AIRPORT
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 A.I.P. PROJ.: 3-17-0039-B18

FILE Project No. 84506RMYD_0800	PLANS R-301XS-FP.DWG
Scale 1" = 20' Horiz./2" Vert.	Date 03/28/07
LAYOUT JFO 03/27/07	DRAWN MDR 03/29/07
REVIEWED CAH 04/05/07	

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**EXTEND RUNWAY
 END 30R 1500'**
**PROPOSED FLOOD PLAIN
 MITIGATION AREA X-SECTIONS**
 STA. 10+00 TO STA. 12+00



SD048

DATE	REVISION	BY

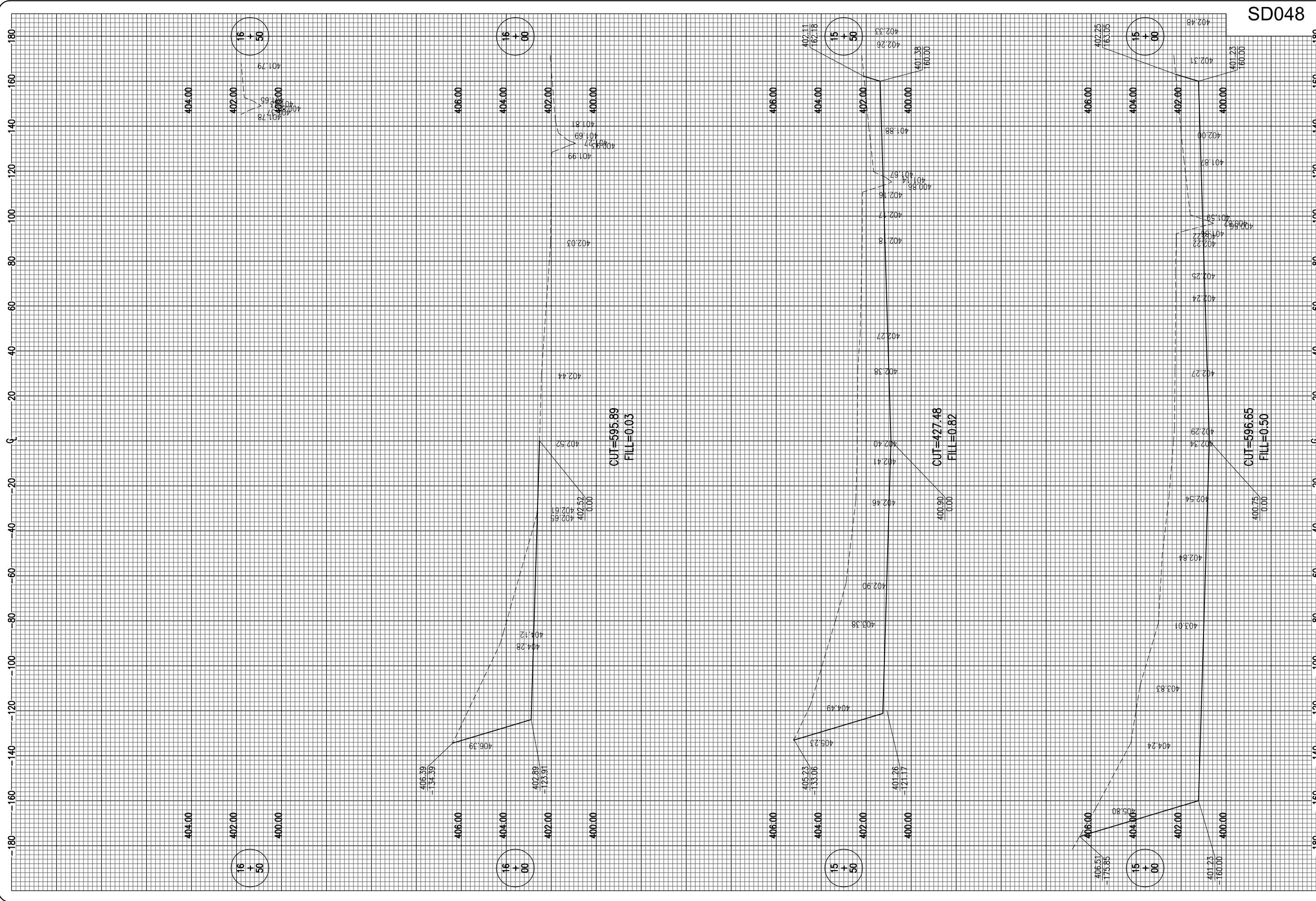
SAINT LOUIS DOWNTOWN AIRPORT
 A Division of Bi-State Development Agency
 A.I.P. PROJ.: 3-17-0039-B18

FILE Project No.	84506RMYD_0800
PLANS	R-302XS-FP.DWG
Scale	1" = 20' Horiz./2' Vert.
Date	03/28/07
LAYOUT	JFO 03/27/07
DRAWN	MDR 03/29/07
REVIEWED	CAH 04/05/07

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**EXTEND RUNWAY
END 30R 1500'**

**PROPOSED FLOOD PLAIN
MITIGATION AREA X-SECTIONS
STA. 12+50 TO STA. 14+50**



SD048

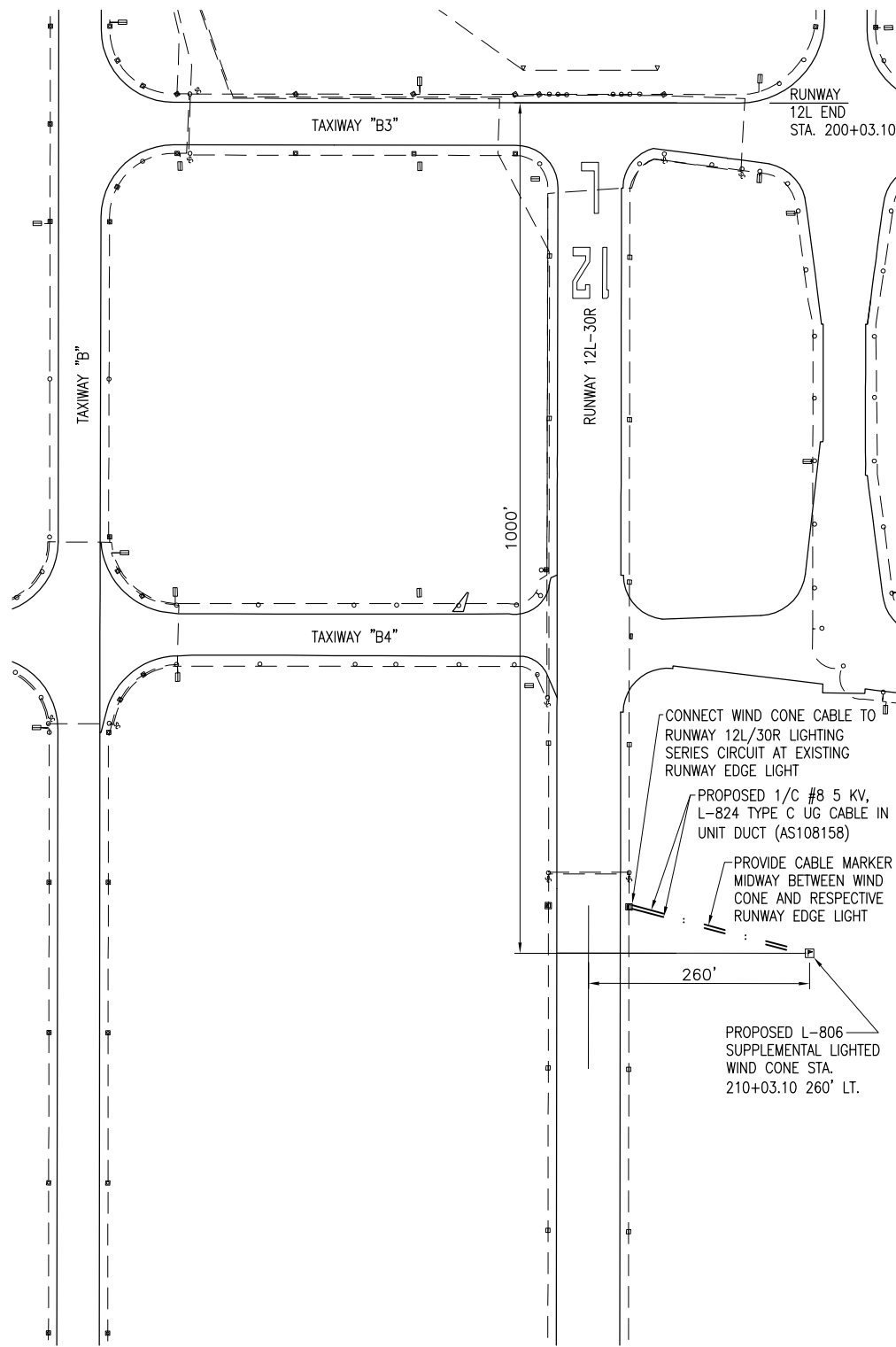
DATE	REVISION	BY

SAINT LOUIS DOWNTOWN AIRPORT
 A Division of Missouri State Development Agency
 A.I.P. PROJ.: 3-17-0039-B18

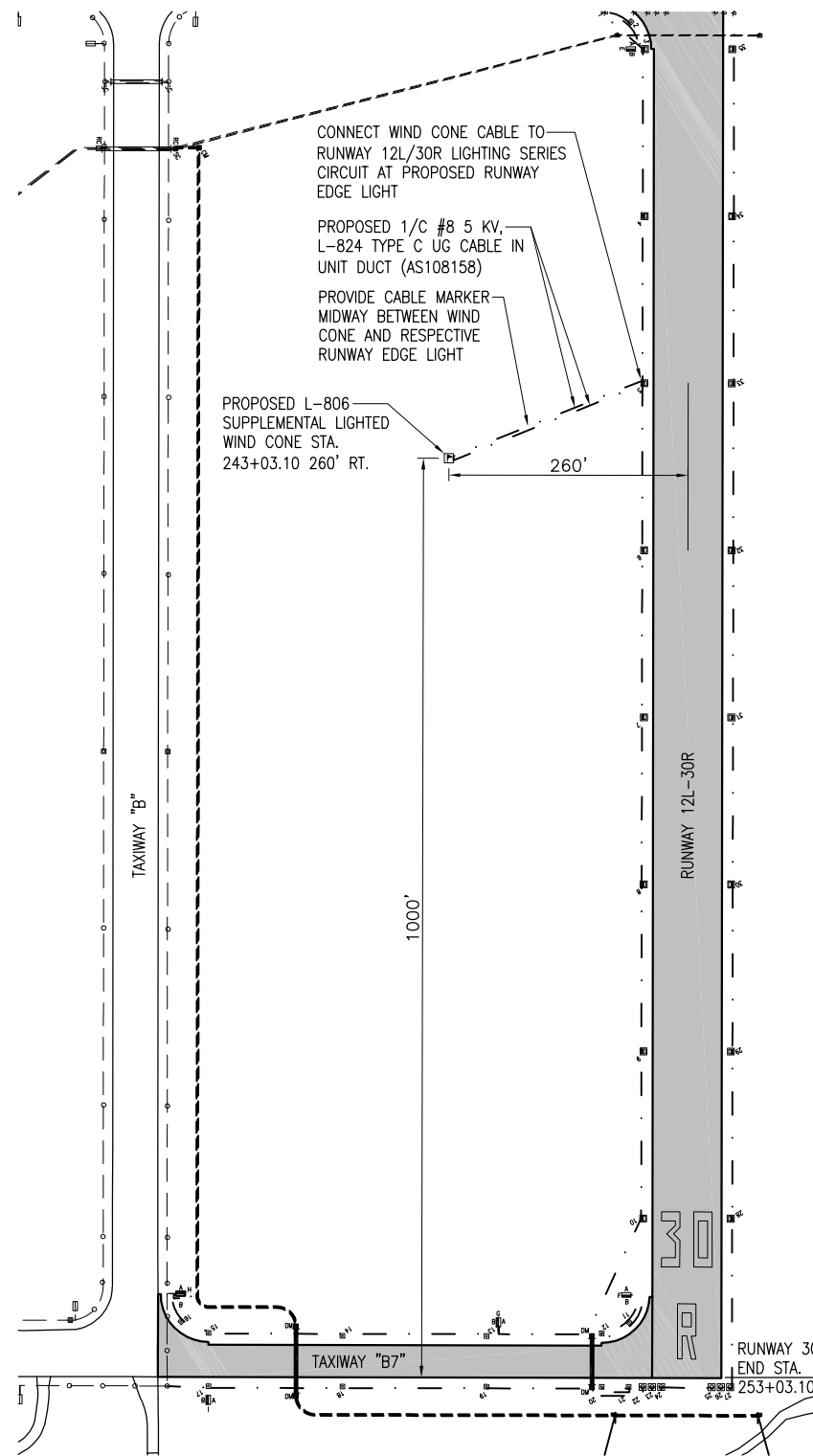
FILE Project No.	84506RMYD_0800
PLANS	R-303XS-FP.DWG
Scale	1" = 20' Horiz./2' Vert.
Date	03/28/07
LAYOUT	JFO 03/27/07
DRAWN	MDR 03/29/07
REVIEWED	CAH 04/05/07

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**EXTEND RUNWAY
 END 30R 1500'**
**PROPOSED FLOOD PLAIN
 MITIGATION AREA X-SECTIONS**
 STA. 15+00 TO STA. 16+50



RUNWAY END 12L



RUNWAY END 30R

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.

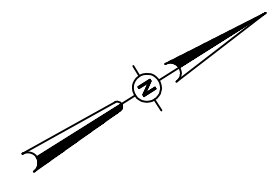
WORK SHOWN ON THIS SHEET IS FOR ADDITIVE ALTERNATE NO. 1

WIND CONE NOTES

1. THE PROPOSED WIND CONES SHALL BE INSTALLED AS SHOWN ON THIS SHEET, THE "L-806 WIND CONE ELEVATION DETAIL" SHEET, AND IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
2. WIND CONES WILL BE PAID FOR UNDER ITEM:
AS107408 L-806 WIND CONE-8' LIGHTED___ PER EACH.
3. 5000 V SERIES CIRCUIT CABLE IN UNIT DUCT TO WIND CONES WILL BE PAID FOR UNDER ITEM:
AS108158 1/C #8 5 KV UG CABLE IN UD___ PER L.F.
4. L-806 SUPPLEMENTAL LIGHTED WIND CONES AND ASSOCIATED #8, 5 KV CABLE IN UNIT DUCT ARE FOR ADDITIVE ALTERNATE NO. 1.

LEGEND

- EXISTING PAVEMENT
- PROPOSED PCC PAVEMENT
- EXISTING ELECTRICAL CABLE
- PROPOSED 1/C #8 5KV UG CABLE IN UD
- PROPOSED REIL POWER AND CONTROL CABLES
- EXISTING ELECTRICAL DUCT
- PROPOSED ELECTRICAL DUCT
- EXISTING STAKE MOUNTED TAXIWAY LIGHT
- EXISTING BASE MOUNTED TAXIWAY LIGHT
- PROPOSED BASE MOUNTED TAXIWAY LIGHT
- PROPOSED BASE MOUNTED RUNWAY LIGHT
- PROPOSED BASE MOUNTED THRESHOLD LIGHTS
- PROPOSED RELOCATED REILS
- EXISTING TAXI GUIDANCE SIGN
- PROPOSED TAXI GUIDANCE SIGN
- EXISTING DUCT MARKER
- PROPOSED DUCT MARKER
- PROPOSED L-806 SUPPLEMENTAL LIGHTED WIND CONE



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

DATE	REVISION	BY

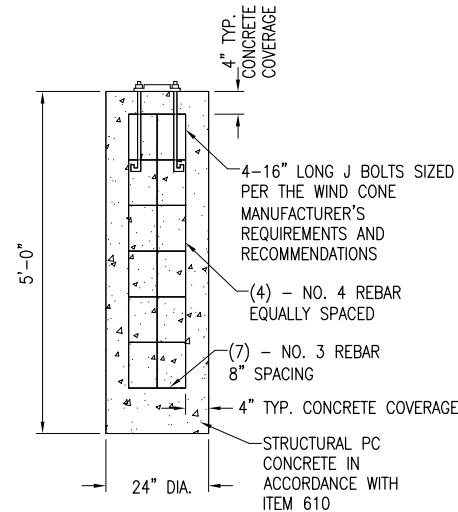
SAINT LOUIS DOWNTOWN AIRPORT
 A Division of Bi-State Development Agency
 A.I.P. PROJ.: 3-17-0039-B18
 ILL. PROJ.: CPS-3665

Project No. 84506RWYD_0800	10/07/08
Revision R-143ELE.DWG	10/07/08
Scale 1"= 100'	10/07/08
Date 10/07/08	xx/xx/xx
LAYOUT	KNL
DRAWN	BAK
REVIEWED	CAH

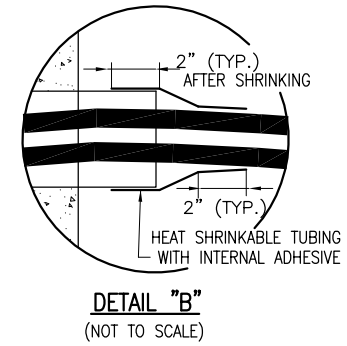
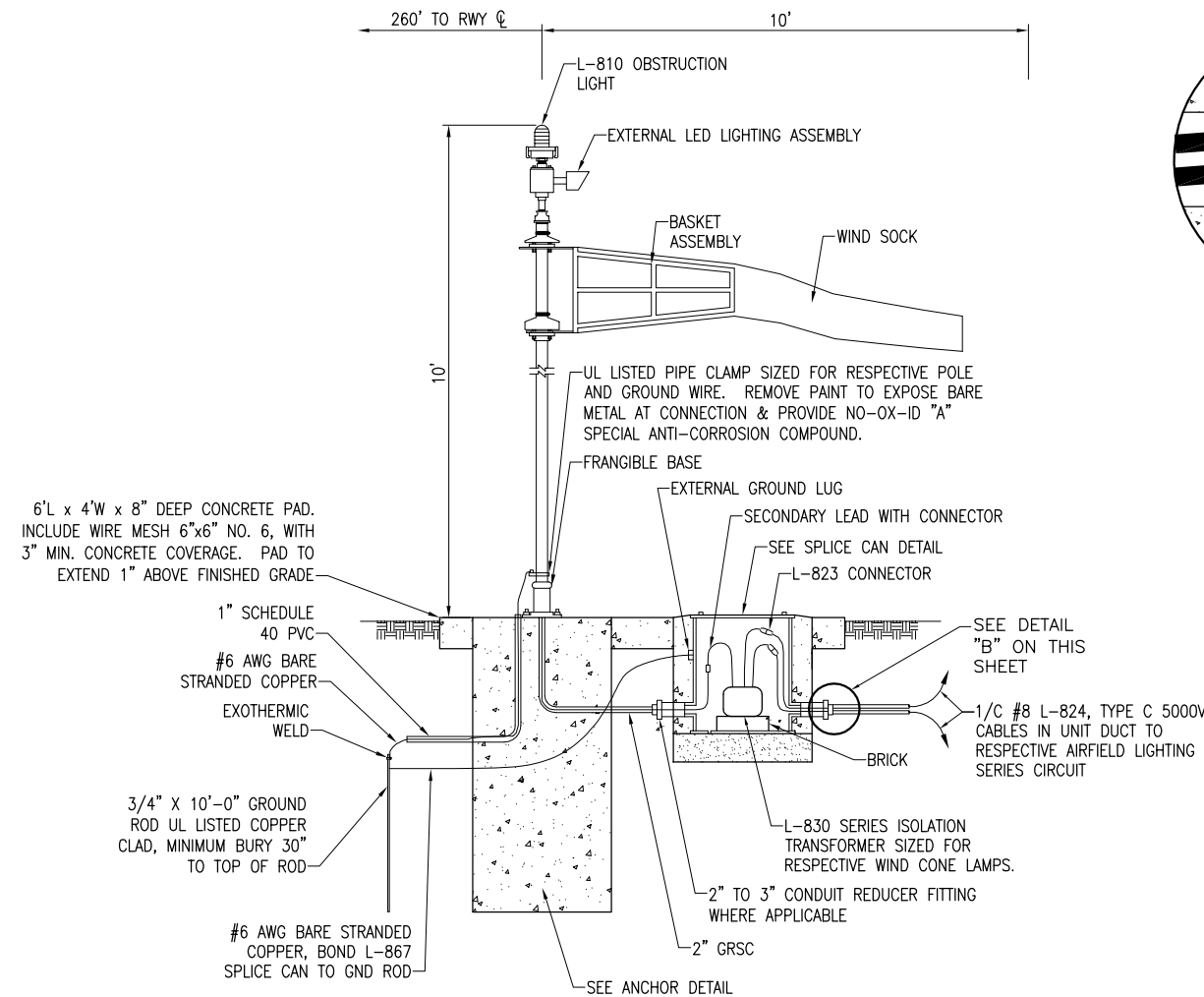
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EXTEND RUNWAY END 30R 1500'
 PROPOSED WIND CONE LAYOUT PLAN FOR RUNWAY 12L-30R

JUN 29, 2009 3:23 PM KINCA00394
 I:\AIRPORTS\ST. LOUIS DOWNTOWN\84506RWY\AIRPORT SHEETS\R-143ELE.DWG - Layout1



ANCHORING DETAIL
"NOT TO SCALE"



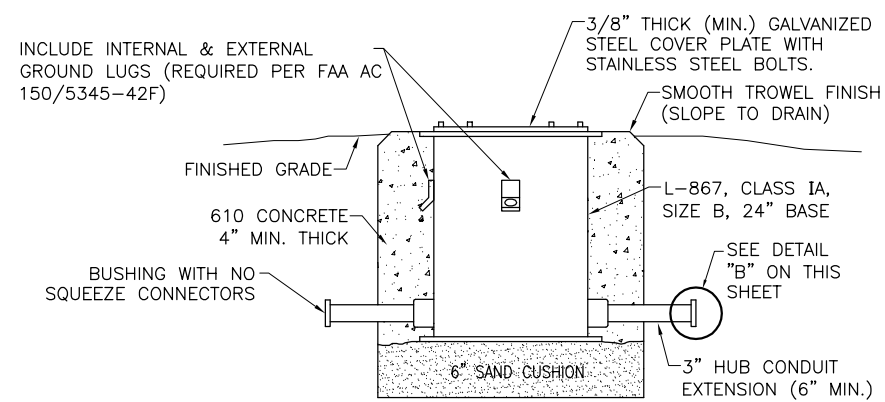
DETAIL "B"
"NOT TO SCALE"

**WORK & DETAILS SHOWN
ON THIS SHEET IS FOR
ADDITIVE ALTERNATE NO. 1**

NOTES

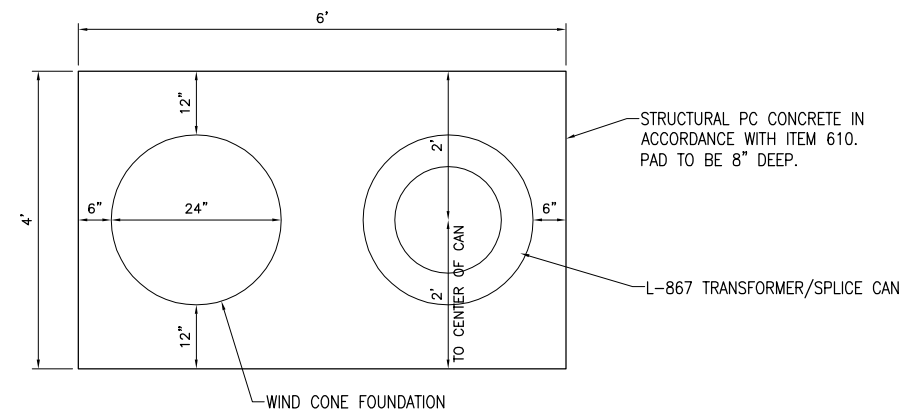
1. WIND CONES SHALL INCLUDE CONSTANT-BRIGHTNESS SERIES CIRCUIT POWER ADAPTER. SEE SPECIAL PROVISION SPECS.
2. WIND CONES WILL BE PAID FOR UNDER ITEM AS107408 L-806 WIND CONE - 8' LIGHTED PER EACH. SPLICE CANS FOR L-806 WIND CONE SERIES CIRCUIT TRANSFORMERS WILL BE INCIDENTAL TO ITEM AS107408.

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"

BY	
REVISION	
DATE	

SAINT LOUIS DOWNTOWN AIRPORT
A Division of Bi-State Development Agency
A.I.P. PROJ.: 3-17-0039-B18
ILL. PROJ.: CPS-3665

Project No.	84506RWDYD_0800
Drawn	E-507.DWG
Scale	NOT TO SCALE
Date	10/07/08
LAYOUT	KNL 10/07/08
DRAWN	BAK 10/07/08
REVIEWED	CAH **/**/08

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**EXTEND RUNWAY
END 30R 1500'**
L-806 WIND CONE
ELEVATION
DETAIL

JUN 29, 2009 3:24 PM KINCA00394 I:\AIRPORTS\ST. LOUIS DOWNTOWN\84506RWDYD\AIRPORT SHEETS\E-507.DWG - Layout1

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
	MOTOR
	LOAD, MOTOR, # = HORSEPOWER
	ELECTRIC UTILITY METER BASE
	JUNCTION BOX WITH SPLICE
	EQUIPMENT, XXX = DEVICE DESCRIPTION
	GROUND BUS OR TERMINAL
	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
	TRANSFER SWITCH
	ENGINE GENERATOR SET

ELECTRICAL LEGEND - SCHEMATIC	
	NORMALLY OPEN (N.O.) CONTACT
	NORMALLY CLOSED (N.C.) CONTACT
	STARTER COIL, * = STARTER NUMBER
	OVERLOAD RELAY CONTACT
	CONTROL RELAY, * = CONTROL RELAY NUMBER
	RELAY, * = RELAY NUMBER
	TOGGLE SWITCH / 2 POSITION SWITCH
	2-POSITION SELECTOR SWITCH
	3-POSITION SELECTOR SWITCH (H-O-A SHOWN)
	2 POLE DISCONNECT SWITCH
	3 POLE DISCONNECT SWITCH
	PHOTOCELL
	TERMINAL BLOCK, * = TERMINAL NUMBER
	DEVICE TERMINAL, * = DEVICE TERMINAL NUMBER
	INTERNAL PANEL WIRING
	FIELD WIRING
	FUSE
	GROUND BUS OR TERMINAL
	NEUTRAL BUS
	GROUND, GROUND ROD, GROUND BUS
	INDUSTRIAL CONTROL RELAY OR LIGHTING CONTACTOR
	S1 CUTOUT HANDLE REMOVED
	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 CIRCUAR 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:

- 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.
- ALL VAULT WORK, POWER OUTAGES, AND/OR SHUT DOWN OF EXISTING SYSTEMS SHALL BE COORDINATED WITH THE AIRPORT DIRECTOR. 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 & 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).
- 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:

120/240 VAC, 1 PHASE, 3 WIRE
PHASE A BLACK
PHASE B RED
NEUTRAL WHITE
GROUND GREEN
- SEE RESPECTIVE SITE PLANS FOR SITE LEGEND INFORMATION.
- 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	

SAINT LOUIS DOWNTOWN AIRPORT
A Division of Bi-State Development Agency

Project No.	84506RMYD_0800
Drawn	E-001.DWG
Scale	NONE
Date	11/26/08
LAYOUT	KNL 11/21/08
DRAWN	MV 11/21/08
REVIEWED	CAH 10/08/08

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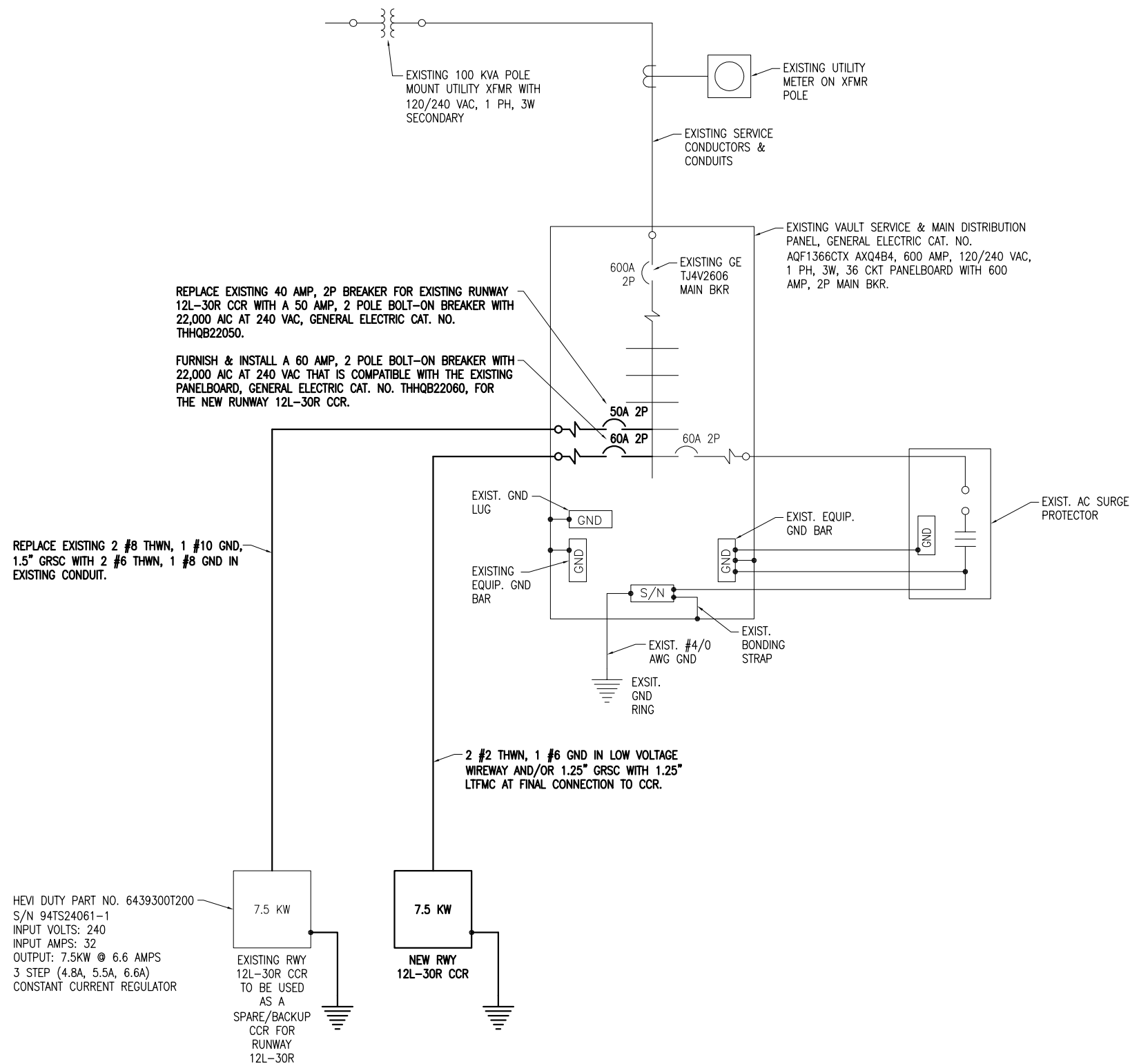
EXTEND RUNWAY END 30R 1500'

ELECTRICAL LEGEND AND ABBREVIATIONS

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NOTES

1. ALL VAULT WORK, POWER OUTAGES, AND/OR SHUT DOWN OF EXISTING SYSTEMS SHALL BE COORDINATED WITH THE AIRPORT DIRECTOR 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 & 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 CIRCUIT TO NEW REGULATOR SHALL BE INSTALLED IN THE RESPECTIVE LOW VOLTAGE WIREWAY/DUCT, WITH GRSC AT TRANSITIONS AND UL LISTED LIQUID TIGHT FLEXIBLE METAL CONDUIT AT FINAL CONNECTIONS TO THE REGULATOR. CONDUITS SHALL BE SIZED IN ACCORDANCE WITH NEC.
7. BOND NEW REGULATOR TO THE RESPECTIVE VAULT GROUND BUS WITH A DEDICATED #6 AWG BONDING JUMPER. CONNECTION TO THE VAULT GROUND BUS SHALL BE WITH TWO-HOLE TONGUE LONG BARREL, COPPER COMPRESSION LUG.
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 AS109200.



ELECTRICAL ONE-LINE DIAGRAM
FOR RUNWAY 12L-30R CCR'S

WORK & DETAILS SHOWN
ON THIS SHEET IS FOR
ADDITIVE ALTERNATE NO. 1

BY	REVISION	DATE

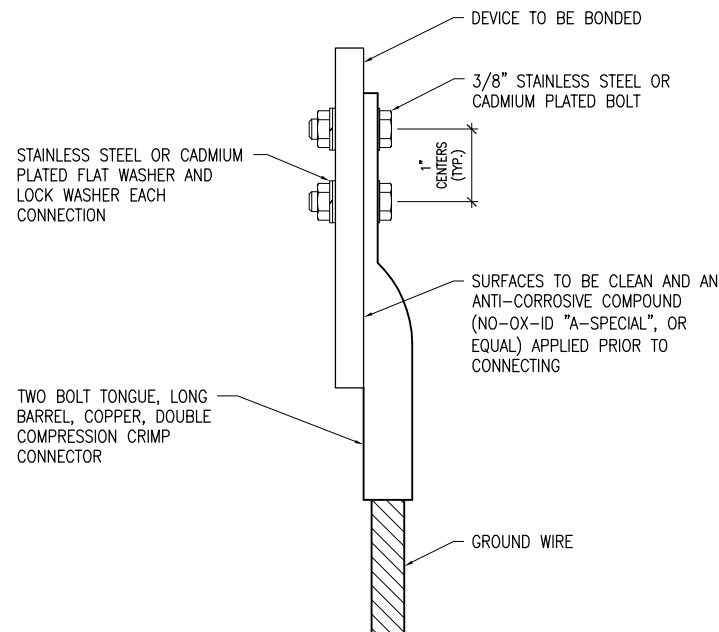
SAINT LOUIS DOWNTOWN AIRPORT
A Division of Bi-State Development Agency
A.I.P. PROJ.: 3-17-0039-B18
ILL. PROJ.: CPS-3665

Project No.	84506RWYD_0800
Drawn	E-603.DWG
Scale	NONE
Date	11/26/08
LAYOUT	KNL 11/21/08
DRAWN	MV 11/21/08
REVIEWED	CAH 10/08/08

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EXTEND RUNWAY
END 30R 1500'
ELECTRICAL ONE LINE
DIAGRAM FOR
RUNWAY 12L-30R CCR'S

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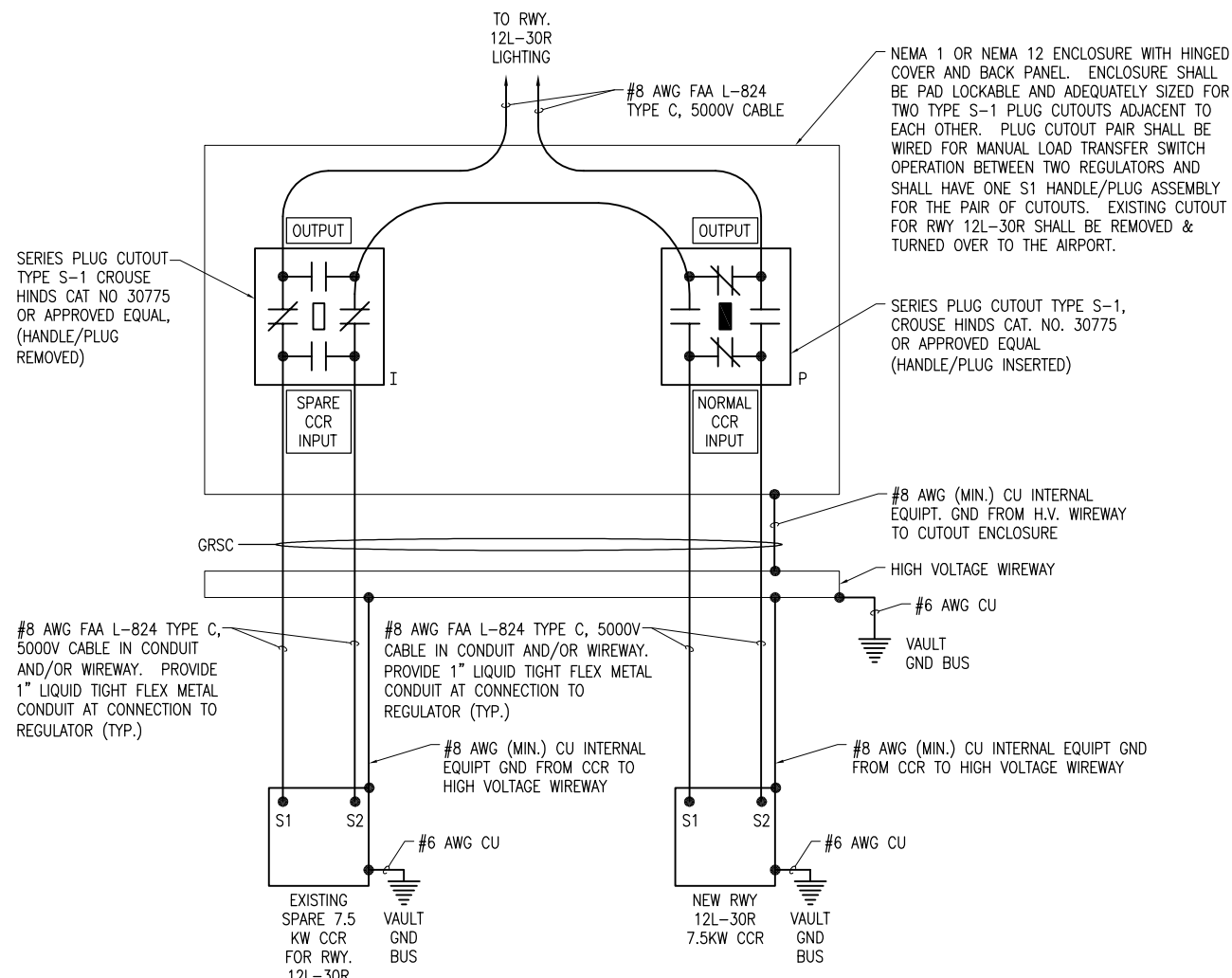


2 HOLE LONG BARREL COMPRESSION LUG TABLE			
WIRE SIZE	BURNDY CAT. NO.	THOMAS & BETTS CAT. NO.	PENN-UNION CAT. NO.
#6 AWG STRANDED	YA6C-2TC38	256-30695-1158	BBLU-6D-2TC38
#4 AWG STRANDED	YA4C-2TC38	256-30695-1159	BBLU-4D-2TC38
#2 AWG STRANDED	YA2C-2TC38	256-30695-1160	BBLU-2D-2TC38
#2 AWG SOLID	YA3C-2TC38	256-30695-1160	BBLU-3D-2TC38
#1/0 AWG STRANDED	YA25-2TC38	256-30695-1162	BBLU-1/0D-2TC38
#2/0 AWG STRANDED	YA26-2TC38	256-30695-1116	BBLU-2/0D-2TC38
#3/0 AWG STRANDED	YA27-2TC38	54816BE	BBLU-3/0D-2TC38
#4/0 AWG STRANDED	YA28-2TC38	256-30695-1117	BBLU-4/0D-2TC38

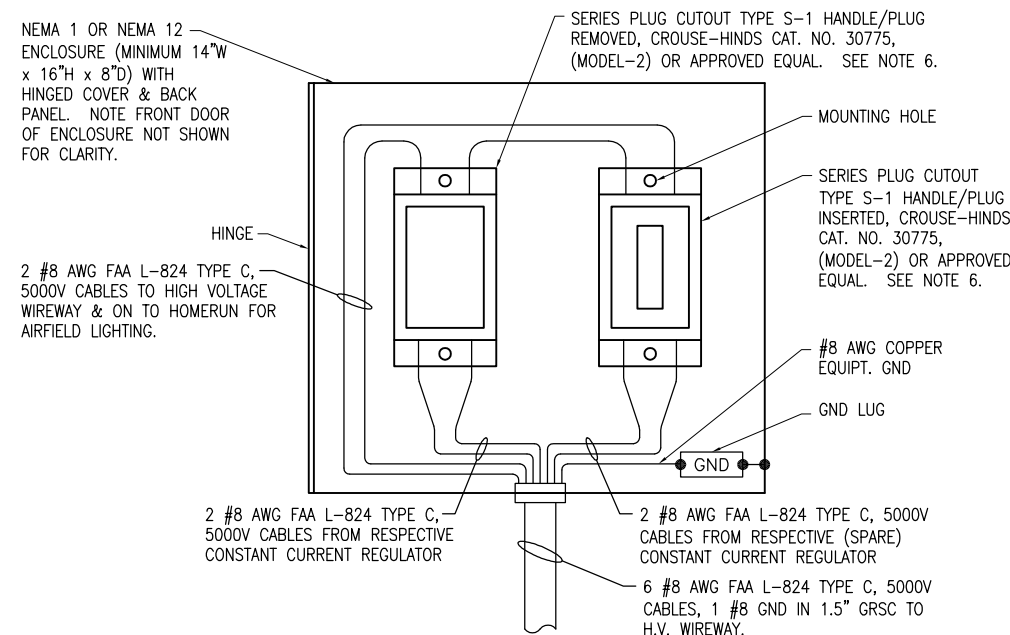
NOTES

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

GROUNDING LUG CONNECTION DETAIL



HIGH VOLTAGE WIRING SCHEMATIC



SERIES PLUG CUTOUT MOUNTING DETAIL FOR RUNWAY 12L-30R CIRCUIT

WORK & DETAILS SHOWN ON THIS SHEET IS FOR ADDITIVE ALTERNATE NO. 1

LEGEND

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

NOTES

- PROVIDE PHENOLIC ENGRAVED LEGEND PLATES FOR EACH CONSTANT CURRENT REGULATOR NOTING THE REGULATOR DESIGNATION AND THE RUNWAY OR TAXIWAY SERVED.
- EACH PLUG CUTOUT CABINET SHALL BE FURNISHED WITH A PHENOLIC ENGRAVED LEGEND PLATE THAT IDENTIFIES THE RESPECTIVE CIRCUIT OR REGULATOR. INCLUDE AN ADDITIONAL LEGEND PLATE LABELED "CAUTION OPERATE CUTOUTS WITH CCR SHUT OFF". FURNISH & INSTALL A WARNING LABEL FOR CUTOUT ENCLOSURE TO WARN PERSONS OF POTENTIAL ARC FLASH HAZARDS, PER THE REQUIREMENTS OF NEC 110.16 "FLASH PROTECTION".
- PROVIDE PHENOLIC ENGRAVED LEGEND PLATES FOR EACH CUTOUT TO IDENTIFY THE RESPECTIVE CUTOUT INPUT CONNECTION AND THE RESPECTIVE CUTOUT OUTPUT CONNECTION.
- PROVIDE ADEQUATE WORKING SPACE IN FRONT OF EACH CUTOUT ENCLOSURE TO MEET NEC CLEARANCE REQUIREMENTS.
- 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.
- 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.
- HIGH VOLTAGE & LOW VOLTAGE CIRCUITS SHALL NOT BE INSTALLED IN THE SAME WIREWAY.
- BOND ALL REGULATORS TO THE RESPECTIVE VAULT GROUND BUS WITH A DEDICATED #6 AWG BONDING JUMPER FOR EACH REGULATOR.

REVISION	DATE

SAINT LOUIS DOWNTOWN AIRPORT
A Division of St. Louis Development Agency
A.I.P. PROJ.: 3-17-0039-B18
IL PROJ.: CPS-3665

REV. Project No. 84506RWYD-0800	DATE	BY

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Hanson Professional Services, Inc.
4227 Fernside Court, Suite 130
St. Louis, MO 63045-3308
Offices Nationwide

EXTEND RUNWAY END 30R 1500'
HIGH VOLTAGE WIRING SCHEMATIC

JUN 29, 2009 3:27 PM KINC400394
I:\AIRPORTS\ST. LOUIS DOWNTOWN\84506RWY\AIRPORT\SHEETS\E-604.DWG - Work