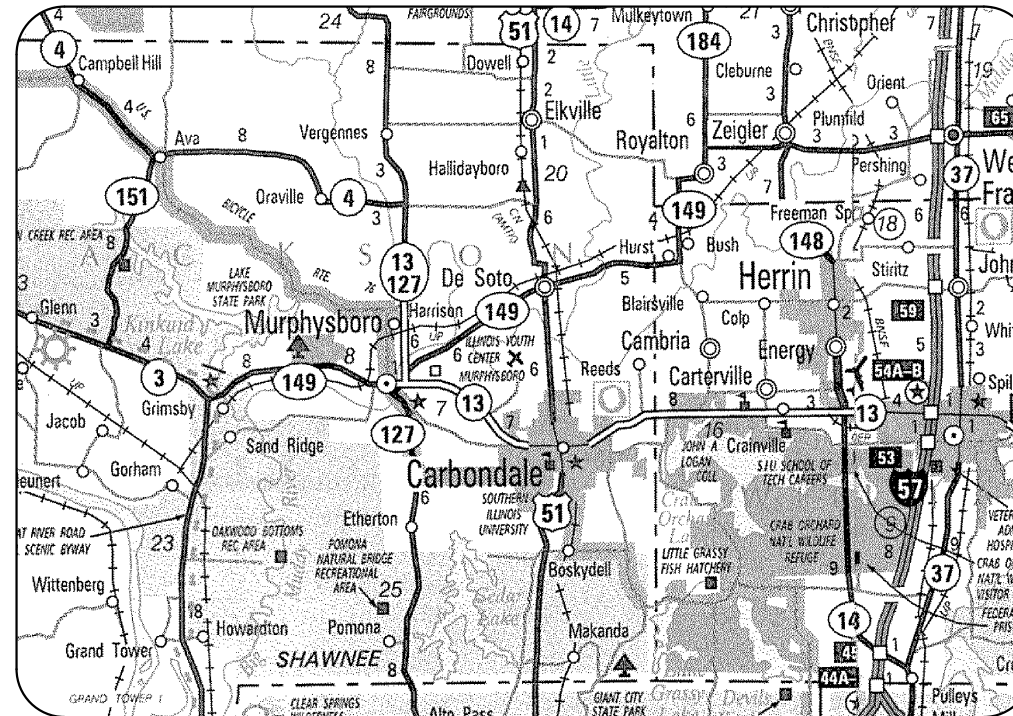
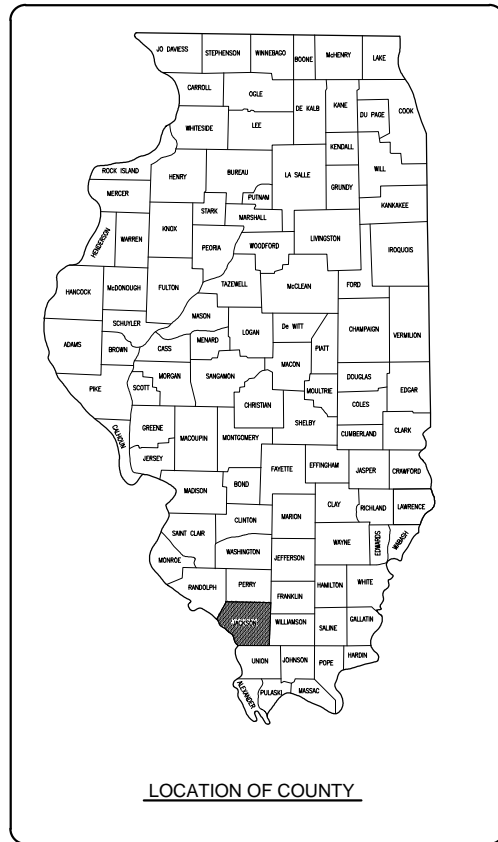


CONSTRUCTION PLANS FOR SOUTHERN ILLINOIS AIRPORT AUTHORITY MURPHYSBORO/CARBONDALE, JACKSON COUNTY, ILLINOIS

CONSTRUCT PERIMETER ROAD TO SUPPORT ARFF/SRE BUILDING.

SCOPE OF WORK

THIS PROJECT CONSISTS OF CONSTRUCTING A BITUMINOUS ROAD. ASSOCIATED WORK ITEMS INCLUDE AGGREGATE BASE, ELECTRICAL, DRAINAGE, SEEDING AND MULCHING.



LOCATION

IL. PROJ.:	MDH-4173
LATITUDE:	37° 46' 43"
LONGITUDE:	89° 15' 08"
ELEVATION:	411.0' M.S.L.
DATE:	APRIL 20, 2012



HANSON
Professional Services Inc.
CIVIL ENGINEER

Submitted by: *Jeffery S. Litherland* ENG'R

Date Submitted: 4-20-12

Lics. Exp. Date: Nov. 30, 2013

SOUTHERN ILLINOIS AIRPORT AUTHORITY

Approved: *C. T. G.* CHAIRMAN

Date: 4-11-12

DATE	REVISION

SOUTHERN ILLINOIS AIRPORT
MURPHYSBORO / CARBONDALE, ILLINOIS

ILL. PROJ.: MDH-4173

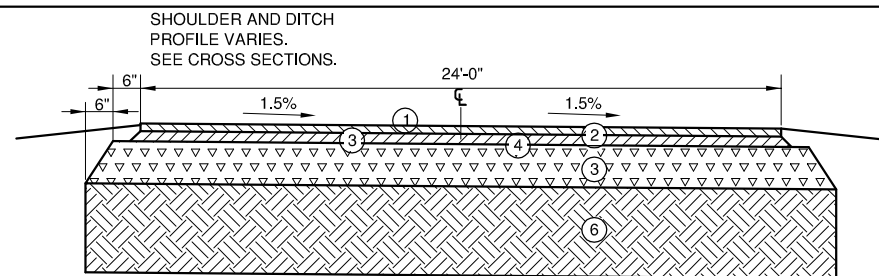
Hanson Project No. 11A0037D-0001	LAYOUT	JSL	03/12/2012
Filename: R-001CVR.DWG	DRAWN	CWS	03/12/2012
Scale: NOT TO SCALE	REVIEWED	JSL	04/16/2012
Date: 04/20/2012			

HANSON
Professional Services Inc.
3125 New Era Road
Murphysboro, Illinois 62966
Offices Nationwide

CONSTRUCT PERIMETER ROAD TO SUPPORT ARFF/SRE BUILDING

COVER SHEET

MAY 03, 2012 4:25 PM SCHUB01446 C:\AIRPORTS\SIA-CARBONDALE\11A0037\AIRPORT\SHEET\R-001CVR.DWG - COVER

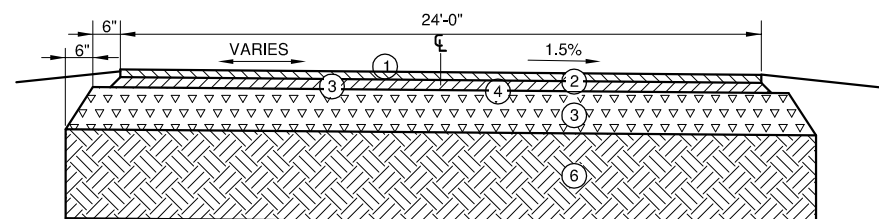


PERIMETER ROAD STA. 1+00 - 9+00

1. PROPOSED 1 1/2" BITUMINOUS SURFACE COURSE
2. PROPOSED BITUMINOUS TACK COAT
3. PROPOSED 2 1/2" BITUMINOUS BASE COURSE
4. PROPOSED BITUMINOUS PRIME COAT
5. PROPOSED 8" CRUSHED AGGREGATE BASE COURSE
6. PROPOSED 16" LIME MODIFIED SUB-GRADE

1 TYPICAL SECTION
2 N.T.S.

SHOULDER AND DITCH
PROFILE VARIES.
SEE CROSS SECTIONS.

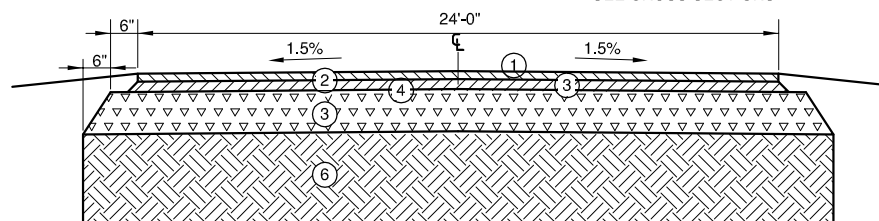


PERIMETER ROAD STA. 9+00 - 10+00

1. PROPOSED 1 1/2" BITUMINOUS SURFACE COURSE
2. PROPOSED BITUMINOUS TACK COAT
3. PROPOSED 2 1/2" BITUMINOUS BASE COURSE
4. PROPOSED BITUMINOUS PRIME COAT
5. PROPOSED 8" CRUSHED AGGREGATE BASE COURSE
6. PROPOSED 16" LIME MODIFIED SUB-GRADE

2 TYPICAL SECTION
2 N.T.S.

SHOULDER AND DITCH
PROFILE VARIES.
SEE CROSS SECTIONS.



PERIMETER ROAD STA. 10+00 - 15+00, 21+18.36 - 53+81

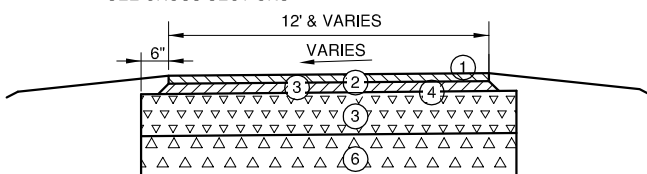
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2. PROPOSED BITUMINOUS TACK COAT
3. PROPOSED 2 1/2" BITUMINOUS BASE COURSE
4. PROPOSED BITUMINOUS PRIME COAT
5. PROPOSED 8" CRUSHED AGGREGATE BASE COURSE
6. PROPOSED 16" LIME MODIFIED SUB-GRADE

3 TYPICAL SECTION
2 N.T.S.

SUMMARY OF QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	TOTAL QUANTITIES	AS BUILT QUANTITIES
AR108108	1/C #8 5KV UG CABLE	L.F.	100	
AR110502	2-WAY CONCRETE ENCASED DUCT	L.F.	34	
AR125441	TAXI GUIDANCE SIGN 1 CHARACTER	E.A.	1	
AR125565	SPLICE CAN	E.A.	1	
AR125961	RELOCATE STAKE MOUNTED LIGHT	E.A.	1	
AR150530	TRAFFIC MAINTENANCE	L.S.	1	
AR152410	UNCLASSIFIED EXCAVATION	C.Y.	14,400	
AR155540	BY-PRODUCT LIME	TON	340	
AR155616	SOIL PROCESSING - 16"	S.Y.	13,465	
AR156510	SILT FENCE	L.F.	80	
AR156511	DITCH CHECK	EA.	46	
AR156532	EXCELSIOR BLANKET	S.Y.	2,524	
AR156544	RIPRAP-GRADATION NO. 4	S.Y.	160	
AR162960	RELOCATE CLASS E FENCE	L.F.	710	
AR208540	OVERSIZE CRUSHED AGGREGATE	TON	800	
AR209510	CRUSHED AGGREGATE BASE COURSE	TON	6,850	
AR401613	BIT. SURF. CSE. - METHOD I, SUPERPAVE	TON	1,200	
AR403613	BIT. BASE CSE. - METHOD I, SUPERPAVE	TON	2,000	
AR602510	BITUMINOUS PRIME COAT	GAL.	4,100	
AR603510	BITUMINOUS TACK COAT	GAL.	1,360	
AR620520	PAVEMENT MARKING - WATERBORNE	S.F.	4,159	
AR701512	12" RCP, CLASS IV	L.F.	122	
AR701515	15" RCP, CLASS IV	L.F.	48	
AR701518	18" RCP, CLASS IV	L.F.	245	
AR701536	36" RCP, CLASS IV	L.F.	48	
AR701548	48" RCP, CLASS IV	L.F.	128	
AR705524	4" PERFORATED UNDERDRAIN w/ SOCK	L.F.	785	
AR752412	PRECAST REINFORCED CONCRETE FES 12"	EA.	2	
AR752415	PRECAST REINFORCED CONCRETE FES 15"	EA.	2	
AR752436	PRECAST REINFORCED CONCRETE FES 36"	EA.	2	
AR752448	PRECAST REINFORCED CONCRETE FES 48"	EA.	4	
AR752536	GRATING FOR CONCRETE FES 36"	EA.	2	
AR752548	GRATING FOR CONCRETE FES 48"	EA.	4	
AR752846	INLET BOX STANDARD 542546	EA.	2	
AR800584	ADJUST SANITARY SEWER	L.S.	1	
AR901510	SEEDING	ACRE	10.5	
AR901520	TEMPORARY SEEDING	ACRE	10.5	
AR908510	MULCHING	ACRE	10.5	
AR910200	ROADWAY SIGN	EA.	4	

SHOULDER AND DITCH
PROFILE VARIES.
SEE CROSS SECTIONS.



PERIMETER ROAD STA. 15+00 - 21+18.36

1. PROPOSED 1 1/2" BITUMINOUS SURFACE COURSE
2. PROPOSED BITUMINOUS TACK COAT
3. PROPOSED 2 1/2" BITUMINOUS BASE COURSE
4. PROPOSED BITUMINOUS PRIME COAT
5. PROPOSED 8" CRUSHED AGGREGATE BASE COURSE
6. PROPOSED 8" OVERSIZE AGGREGATE

4 TYPICAL SECTION
2 N.T.S.

INDEX TO SHEETS

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	SUMMARY OF QUANTITIES, INDEX TO SHEETS AND PROPOSED TYPICAL SECTIONS
3	PROPOSED SAFETY PLAN
4	EXISTING CONDITIONS / UTILITIES PLAN
5	PROPOSED STORM WATER POLLUTION PREVENTION PLAN
6	PROPOSED STORM WATER POLLUTION PREVENTION DETAILS
7	PLAN AND PROFILE - STA. 0+00.00 TO STA. 13+00.00
8	PLAN AND PROFILE - STA. 13+00.00 TO STA. 24+00.00
9	PLAN AND PROFILE - STA. 23+50.00 TO STA. 35+00.00
10	PLAN AND PROFILE - STA. 35+00.00 TO STA. 46+00.00
11	PLAN AND PROFILE - STA. 46+00.00 TO STA. 58+00.00
12	PROPOSED DRAINAGE PLAN - STA. 18+00.00 TO STA. 33+00.00
13	PROPOSED DRAINAGE PLAN - STA. 53+00.00 TO TAXIWAY & DETAILS
14	PROPOSED DRAINAGE DETAILS
15	PROPOSED AIRFIELD ELECTRICAL, SIGNAGE & ELECTRICAL PLAN
16	ELECTRICAL DETAILS SHEET 1
17	ELECTRICAL DETAILS SHEET 2
18	ELECTRICAL NOTES SHEET 1
19	ELECTRICAL NOTES SHEET 2
20	ELECTRICAL LEGEND AND ABBREVIATIONS
21	PROPOSED PAVEMENT MARKINGS - STA. 0+00.00 TO STA. 1+50.00 AND DETAILS
22	PROPOSED PAVEMENT MARKINGS - STA. 13+50.00 TO STA. 18+00.00
23	PROPOSED PAVEMENT MARKINGS - STA. 18+00.00 TO STA. 22+00.00 AND DETAILS
24	PROPOSED PAVEMENT MARKINGS - STA. 52+50.00 TO STA. 54+00.00
25	CROSS SECTION STA. 0+50 TO STA. 1+77
26	CROSS SECTION STA. 2+00 TO STA. 3+50
27	CROSS SECTION STA. 4+00 TO STA. 6+50
28	CROSS SECTION STA. 7+00 TO STA. 9+00
29	CROSS SECTION STA. 9+50 TO STA. 12+00
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45	CROSS SECTION STA. 37+50 TO STA. 38+00
46	CROSS SECTION STA. 38+50 TO STA. 39+50
47	CROSS SECTION STA. 40+00 TO STA. 42+50
48	CROSS SECTION STA. 43+00 TO STA. 45+50
49	CROSS SECTION STA. 46+00 TO STA. 48+50
50	CROSS SECTION STA. 49+00 TO STA. 51+50
51	CROSS SECTION STA. 52+00 TO STA. 54+00

BY	REVISION	DATE

SOUTHERN ILLINOIS AIRPORT
MURPHYSBORO / CARBONDALE, ILLINOIS

Project No. 11A0037D_0001
File Name: R-002TYP.DWG
Scale: NOT TO SCALE
Date: 04/20/2012

LAYOUT	JSL	03/21/2012
DRAWN	CWS	03/21/2012
REVIEWED	JSL	04/16/2012

IL PROJ.: MDH-4173

HANSON
Hanson Professional Services Inc.
3125 New River
Murphysboro, IL 62966
Offices Nationwide

CONSTRUCT PERIMETER
ROAD TO SUPPORT
ARFF/SRE BUILDING

SUMMARY OF QUANTITIES
INDEX TO SHEETS AND
PROPOSED TYPICAL SECTIONS

SCOPE OF WORK

THIS PROJECT CONSISTS OF THE CONSTRUCTING A BITUMINOUS ROAD ASSOCIATED WORK ITEMS INCLUDE GRADING, DRAINAGE, SEEDING AND FENCING.

UTILITY NOTE

THE LOCATION, SIZE, AND TYPE OF MATERIAL OF EXISTING UNDERGROUND AND/OR ABOVEGROUND UTILITIES INDICATED ON THE PLANS ARE NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY WHATEVER IN RESPECT TO THE ACCURACY, COMPLETENESS, OR SUFFICIENCY OF THE INFORMATION. THERE IS NO GUARANTEE, EITHER EXPRESSED OR IMPLIED, THAT THE LOCATIONS, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED IN THE CONSTRUCTION. 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 OWNER'S REPRESENTATIVE AND/OR THE RESIDENT ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY DAMAGE TO SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT. ALL UTILITY CABLES AND LINES SHALL BE LOCATED BY THE RESPECTIVE UTILITY. **CONTACT JULIE (JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS) FOR UTILITY INFORMATION, PHONE: 1-800-892-0123.** CONTACT THE FAA (FEDERAL AVIATION ADMINISTRATION) FOR ASSISTANCE IN LOCATING FAA CABLES AND UTILITIES. LOCATION OF FAA POWER, CONTROL, AND COMMUNICATION CABLES SHALL BE COORDINATED WITH AND/OR LOCATED BY THE FAA. ALSO CONTACT AIRPORT DIRECTOR/MANAGER AND AIRPORT PERSONNEL FOR ASSISTANCE IN LOCATING UNDERGROUND AIRPORT CABLES AND/OR UTILITIES. ALSO COORDINATE WORK WITH ALL ABOVEGROUND UTILITIES.

J.U.L.I.E. INFORMATION

COUNTY _____ JACKSON
 CITY _____ CARBONDALE
 TOWNSHIP _____ 8 SOUTH
 RANGE _____ 1 WEST
 SECTION NO. _____ 31 & 32
 ADDRESS _____ P.O. BOX 1086
 CARBONDALE, ILLINOIS 62903-1086

CONTRACTOR RESPONSIBILITIES

THE CONTRACTOR'S EQUIPMENT PARKING AND STORAGE AREA WILL BE AS SHOWN. 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 MAINTAIN CONTINUOUS TAXIWAY ACCESS TO ALL HANGARS AND ADMINISTRATIVE AREAS.

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

NO TRENCHES OR HOLES WILL REMAIN OPEN OVERNIGHT WITHOUT PROPER PROTECTION. ANY HOLES LEFT OPEN WILL BE BARRICADED WITH APPROVED LIGHTED BARRICADES.

BARRICADES AND TRAFFIC CONES

IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO PLACE AND MAINTAIN BARRICADES, TRAFFIC CONES, SIGNS AND OTHER TEMPORARY BARRIERS TO SEPARATE AIRCRAFT TRAFFIC AND CONSTRUCTION TRAFFIC. BARRICADES USED ON THE AIRFIELD WILL BE EQUIPPED WITH 20" SQUARE ORANGE FLAGS AND RED FLASHING LIGHTS. THE RESPONSIBILITY OF AND COST OF ERECTION, MAINTENANCE AND REMOVAL OF ALL TRAFFIC CONTROL MEASURES USED BY THE CONTRACTOR SHALL BE CONSIDERED AS PART OF PAY ITEM AR150530 TRAFFIC MAINTENANCE. COORDINATE ALL CLOSURES WITH RESIDENT ENGINEER.

LEGEND

- EXISTING IMPROVEMENTS
- PROPOSED IMPROVEMENTS
- EXISTING BUILDINGS
- PROPOSED HAUL ROUTE AND EQUIPMENT PARKING AREA
- PROPOSED BARRICADES

HEIGHT OF CONSTRUCTION EQUIPMENT

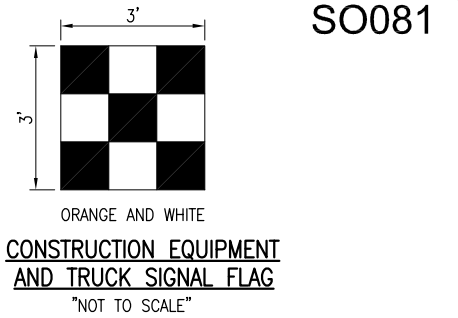
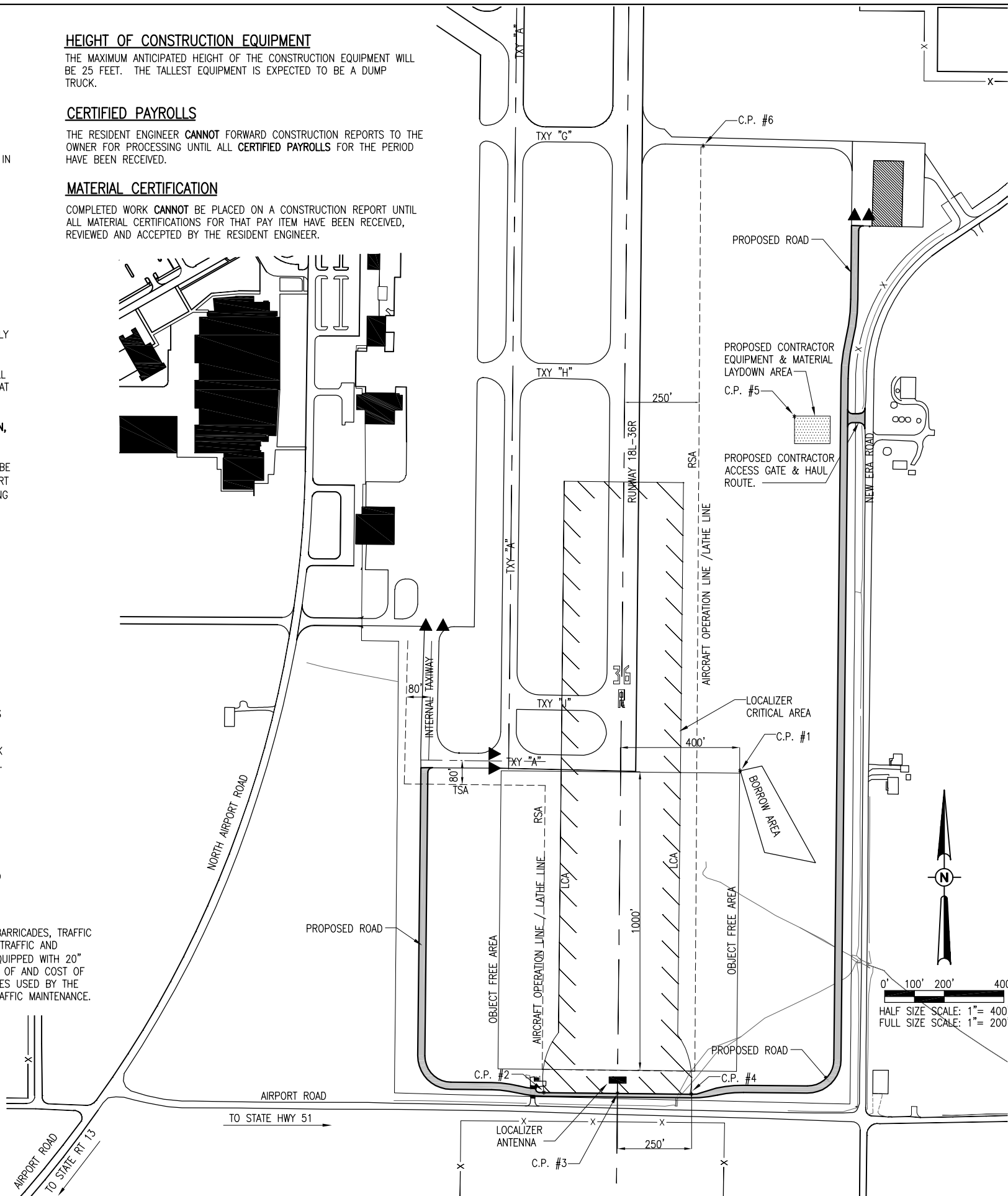
THE MAXIMUM ANTICIPATED HEIGHT OF THE CONSTRUCTION EQUIPMENT WILL BE 25 FEET. THE TALLEST EQUIPMENT IS EXPECTED TO BE A DUMP TRUCK.

CERTIFIED PAYROLLS

THE RESIDENT ENGINEER CANNOT FORWARD CONSTRUCTION REPORTS TO THE OWNER FOR PROCESSING UNTIL ALL CERTIFIED PAYROLLS FOR THE PERIOD HAVE BEEN RECEIVED.

MATERIAL CERTIFICATION

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



WHILE ON THE AIRPORT SITE, THE CONTRACTOR'S VEHICLES ARE TO BE PROPERLY MARKED. THE MARKINGS SHALL CONSIST OF A 3 FOOT SQUARE FLAG CONSISTING OF A CHECKERED PATTERN OF INTERNATIONAL ORANGE AND WHITE SQUARES (SEE DETAIL THIS SHEET) DISPLAYED IN FULL VIEW ABOVE THE VEHICLE.

CRITICAL POINT DATA

NO.	DESCRIPTION	LAT.	LONG.	ELEV.
1	EDGE OF BORROW AREA	37° 46' 14.64"	89° 14' 49.26"	393'
2	S.W. CORNER OF L.C.A.	37° 46' 03.93"	89° 14' 57.68"	398'
3	SOUTH C.L. OF L.C.A.	37° 46' 63.84"	89° 14' 54.55"	393'
4	S.E. CORNER OF L.C.A.	37° 46' 03.75"	89° 14' 51.44"	390'
5	N.W. CORNER OF LAYDOWN	37° 46' 26.49"	89° 14' 46.83"	397'
6	END OF UNDER DRAIN	37° 46' 35.26"	89° 14' 50.50"	400'

PROPOSED SAFETY PLAN

GENERAL - THE SOUTHERN ILLINOIS AIRPORT IS COMPRISED OF THREE RUNWAYS. THE PROPOSED CONSTRUCTION WILL NOT REQUIRE THE CLOSING OF ANY RUNWAY. ONLY THE INTERNAL TAXIWAY SHOWN ON THIS SHEET WILL BE CLOSED WHEN THE CONTRACTOR IS WITHIN THE TAXIWAY SAFETY AREA.

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.

THE CONTRACTOR SHALL BE REQUIRED TO RECEIVE FAR PART 139 TRAINING FOR ALL PERSONNEL WHO DRIVE VEHICLES INSIDE THE FENCED AREA OF THE AIRPORT. SEE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.

LOCALIZER CRITICAL AREA

WHEN WORKING IN THE LOCALIZER CRITICAL AREA, THE CONTRACTOR SHALL PROVIDE NOTIFICATION TO THE RESIDENT ENGINEER 2 DAYS PRIOR TO STARTING ANY WORK THAT WILL REQUIRE THE CONTRACTOR TO HAVE EQUIPMENT WITHIN 250 FEET OF THE LOCALIZER ANTENNA. WORK IN THIS AREA WILL BE LIMITED TO DAYTIME AND VFR CONDITIONS ONLY AND SHALL BE EXPEDITED TO MINIMIZE DISRUPTIONS TO AIR TRAFFIC.

THE CONTRACTOR SHALL MARK/IDENTIFY BY MEANS OF SIGNAGE, BARRICADES OR OTHER MEANS THE LOCALIZER CRITICAL AREA SO THAT WORKERS AND EQUIPMENT DO NOT INADVERTENTLY ENTER THE AREA. MACHINERY AND MATERIALS DISRUPT THE SIGNAL EMITTED BY THE LOCALIZER WHICH IS USED BY AIRPLANES TO PROVIDE GUIDANCE WHILE LANDING. THESE DISRUPTIONS CAN GIVE THE PILOTS ERRONEOUS COURSE INFORMATION AND POTENTIALLY CAUSE AN AIRPLANE CRASH.

EROSION CONTROL

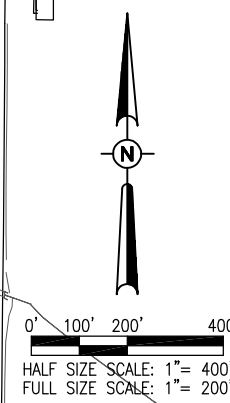
THIS PROJECT WILL DISTURB MORE THAN 1 ACRE OF LAND, THEREFORE A N.P.D.E.S. PERMIT WILL BE REQUIRED.

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 225' X 125'. THE CONTRACTOR WILL BE REQUIRED TO PROTECT AND 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. CLEANING AND MAINTENANCE OF THE HAUL ROUTE AND PARKING AREA WILL BE CONSIDERED INCIDENTAL TO THE PROJECT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED. THE CONTRACTOR SHALL EXERCISE CARE SO AS TO NOT MAR EXISTING PAVEMENTS. ANY DAMAGE DONE BY THE CONTRACTOR SHALL BE REPAIRED AT NO EXPENSE TO THE CONTRACT.

AIRCRAFT OPERATION LINE

THE CONTRACTOR WILL LOCATE THIS LINE AT THE START OF CONSTRUCTION AND WILL PLACE FLAGGED LATHE EVERY 150' ALONG IT. THIS LINE WILL BE USED TO IDENTIFY THE RUNWAY SAFETY AREA. THE CONTRACTOR WILL MAINTAIN THE LATHE LINE FOR RUNWAYS.



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BY _____

REVISION _____

DATE _____

SOUTHERN ILLINOIS AIRPORT
MURPHYSBORO / CARBONDALE, ILLINOIS

HANSON
Professional Services Inc.
3125 New River
Morton, IL 62450
Offices Nationwide

Project No. 11A0037D_0001
 Filename R-0035FY.DWG
 Scale 1"=200'
 Date 04/20/2012

LAYOUT	JSL	02/06/2012
DRAWN	CWS	02/06/2012
REVIEWED	JSL	04/16/2012

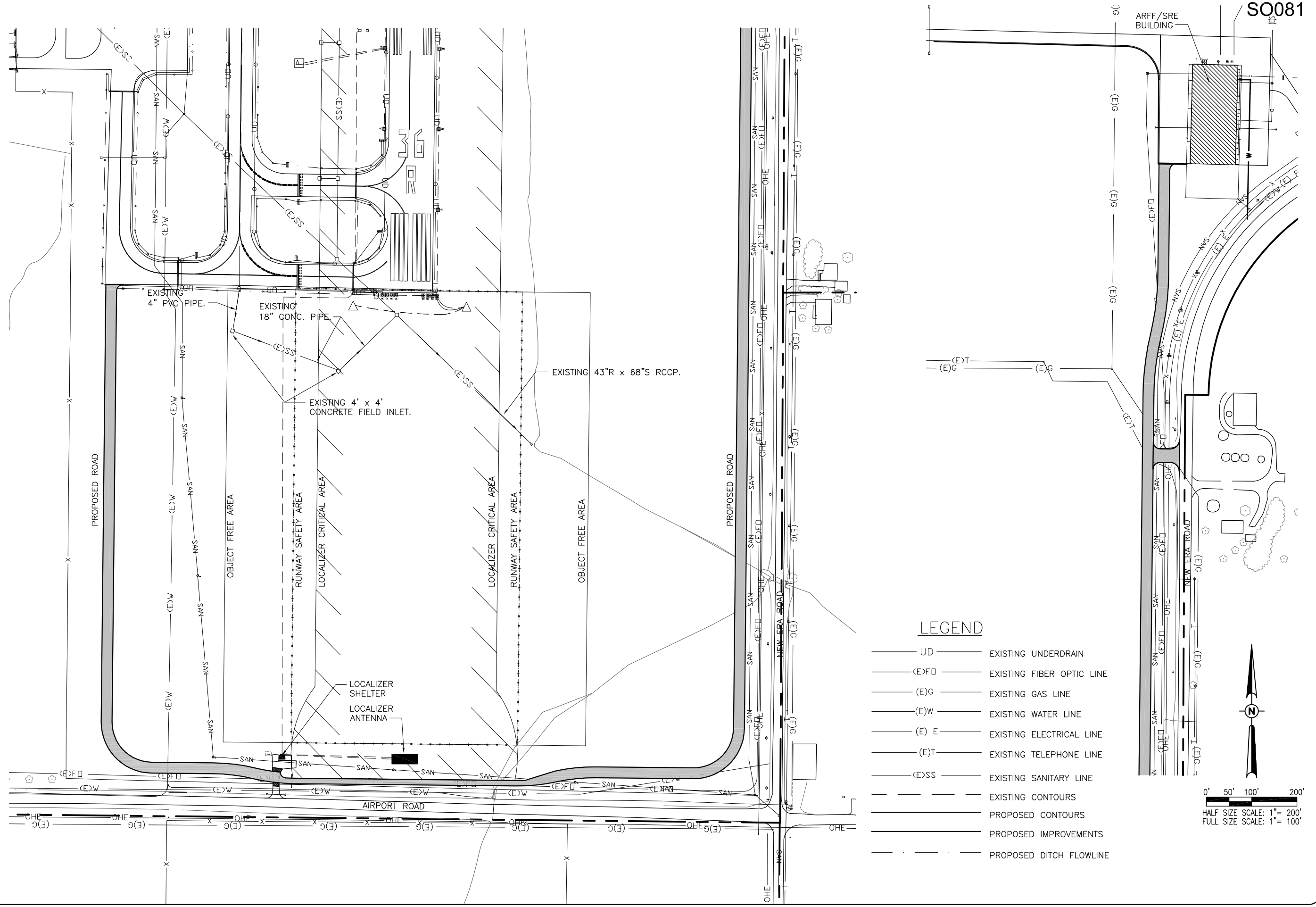
IL PROJ.: MDH-4173

CONSTRUCT PERIMETER ROAD TO SUPPORT ARFF/SRE BUILDING

PROPOSED SAFETY PLAN

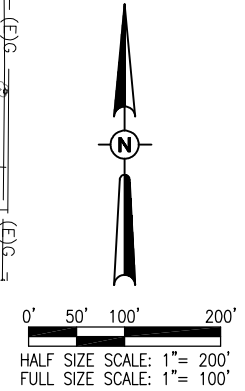
3

3 of 51 sheets

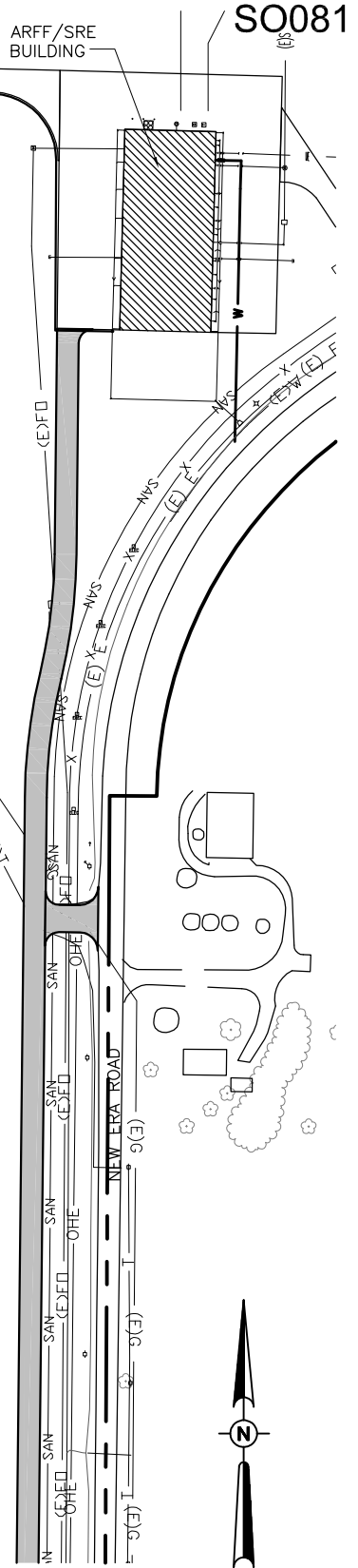




LEGEND

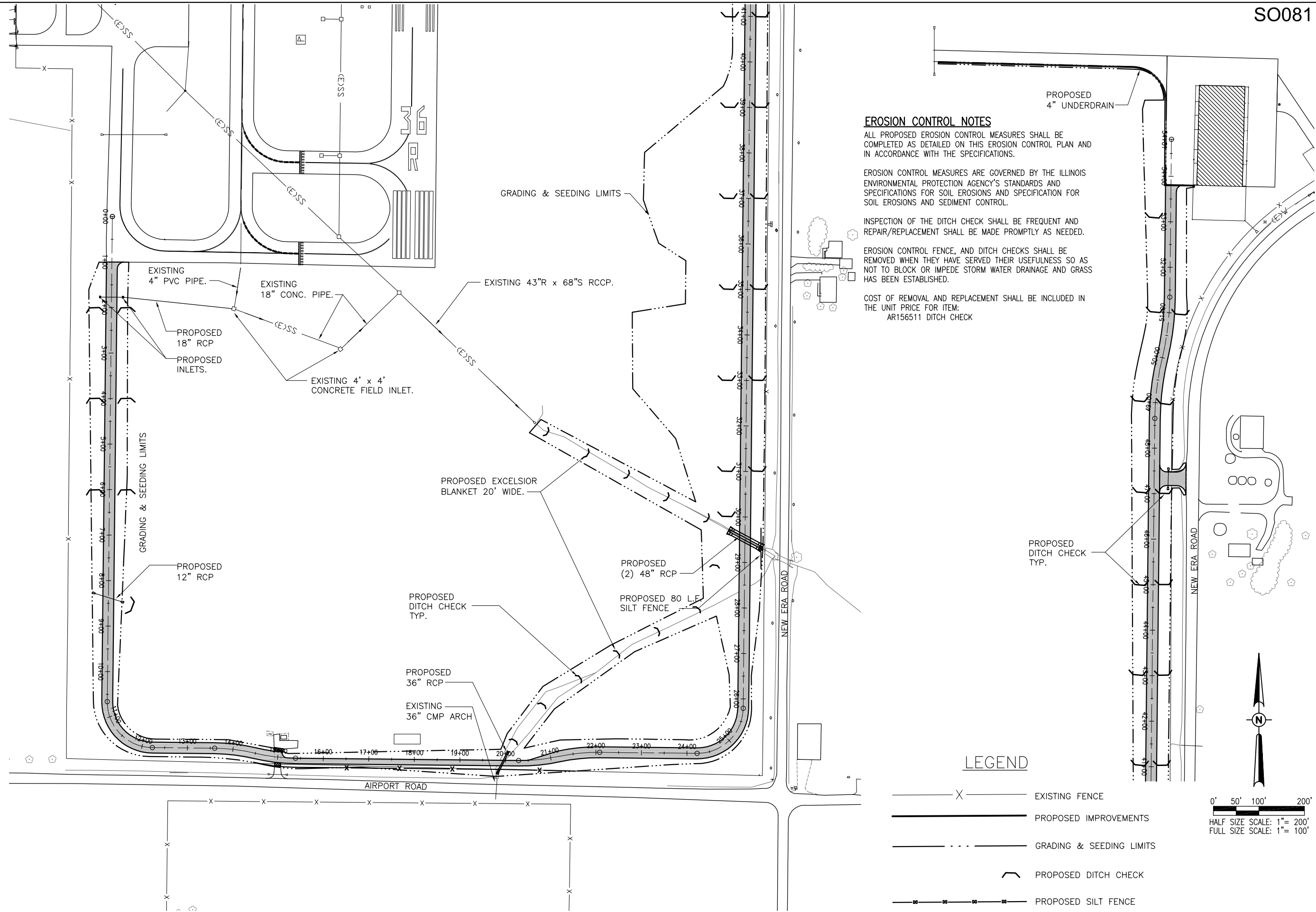
- UD — EXISTING UNDERDRAIN
- (E)FO — EXISTING FIBER OPTIC LINE
- (E)G — EXISTING GAS LINE
- (E)W — EXISTING WATER LINE
- (E)E — EXISTING ELECTRICAL LINE
- (E)T — EXISTING TELEPHONE LINE
- (E)SS — EXISTING SANITARY LINE
- - - EXISTING CONTOURS
- — — PROPOSED CONTOURS
- — — PROPOSED IMPROVEMENTS
- - - PROPOSED DITCH FLOWLINE



SO081



 <p>SOUTHERN ILLINOIS AIRPORT MURPHYSBORO / CARBONDALE, ILLINOIS</p>		DATE REVISION BY
Hanson Project No. 11A0037D_0001 Filename: R-004EXST.DWG Scale: NOT TO SCALE Date: 04/20/2012		
 <p>HANSON Hanson Professional Services Inc. 323 New Era Road Murphysboro, IL 62966 Offices Nationwide</p>		
<p>CONSTRUCT PERIMETER ROAD TO SUPPORT ARFF/SRE BUILDING</p>		
<p>EXISTING CONDITIONS/ UTILITIES PLAN</p>		
<p>4</p>		
4 of 51 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.

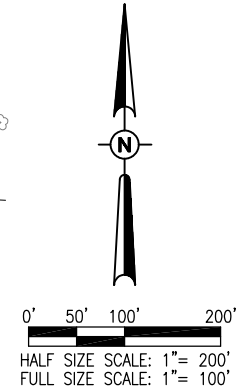
INSPECTION OF THE DITCH CHECK SHALL BE FREQUENT AND REPAIR/REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.



EROSION CONTROL FENCE, AND DITCH CHECKS SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM WATER DRAINAGE AND GRASS HAS BEEN ESTABLISHED.

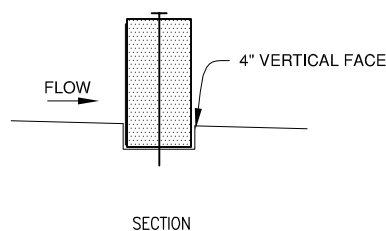
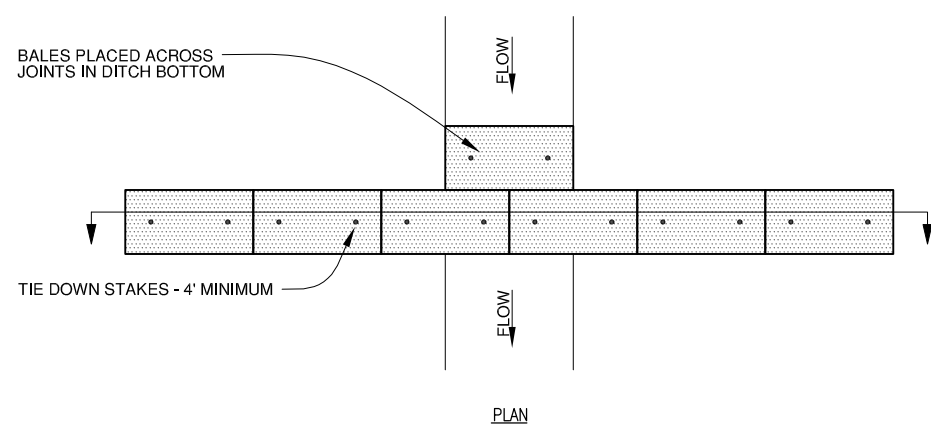
COST OF REMOVAL AND REPLACEMENT SHALL BE INCLUDED IN THE UNIT PRICE FOR ITEM:
 AR156511 DITCH CHECK

LEGEND

- X — EXISTING FENCE
- PROPOSED IMPROVEMENTS
- - - GRADING & SEEDING LIMITS
- PROPOSED DITCH CHECK
- PROPOSED SILT FENCE

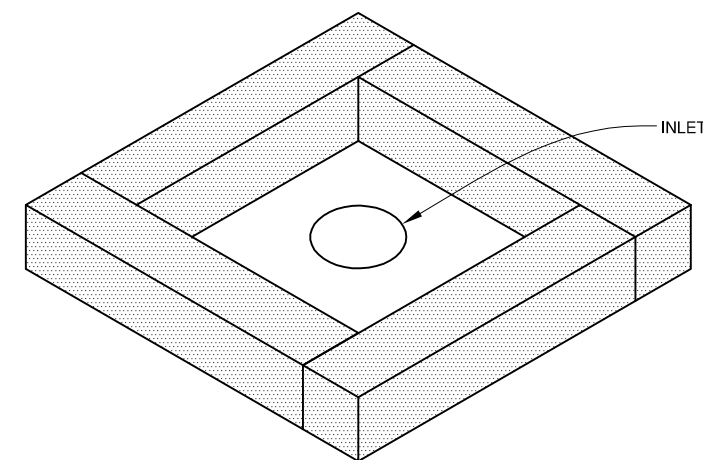
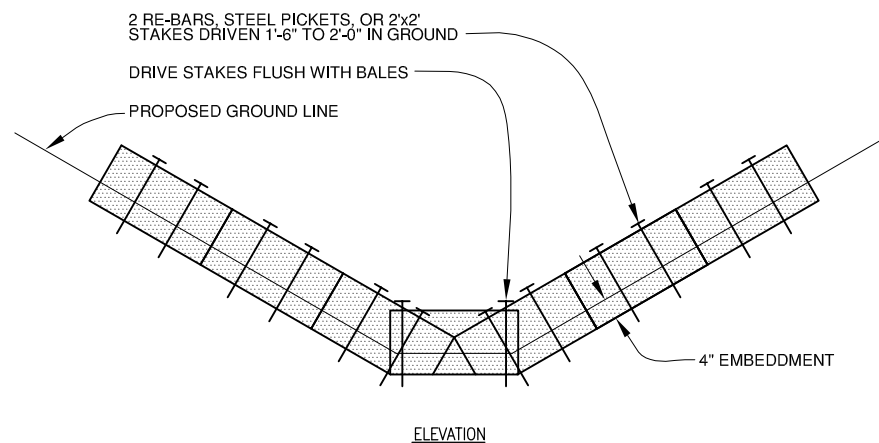


BY	
REVISION	
DATE	
 SOUTHERN ILLINOIS AIRPORT MURPHYSBORO / CARBONDALE, ILLINOIS ILL. PROJ.: MDH-4173	
Hanson Project No.	11A0037D_0001
Filename	R-005SWPPP.DWG
Scale	NOT TO SCALE
Date	04/20/2012
LAYOUT	USL 02/06/2012
DRAWN	CWS 03/06/2012
REVIEWED	USL 04/16/2012
 HANSON Professional Services Inc. 323 New Illinois Murphysboro, IL 62966 Offices Nationwide	
CONSTRUCT PERIMETER ROAD TO SUPPORT ARFF/SRE BUILDING	PROPOSED STORM WATER POLLUTION PREVENTION PLAN
5 5 of 51 sheets	



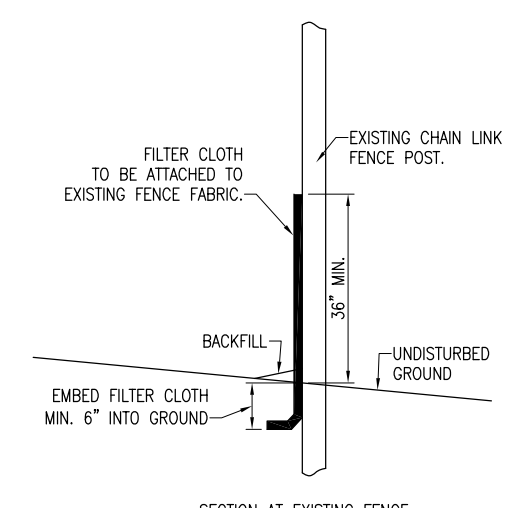
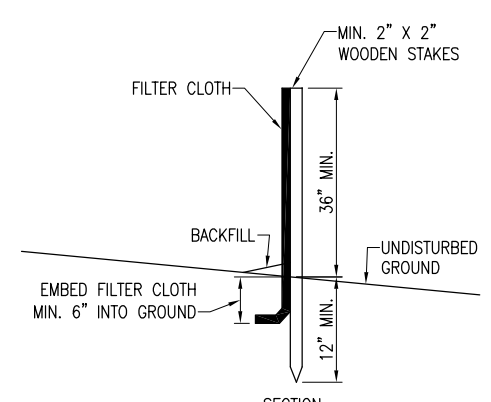
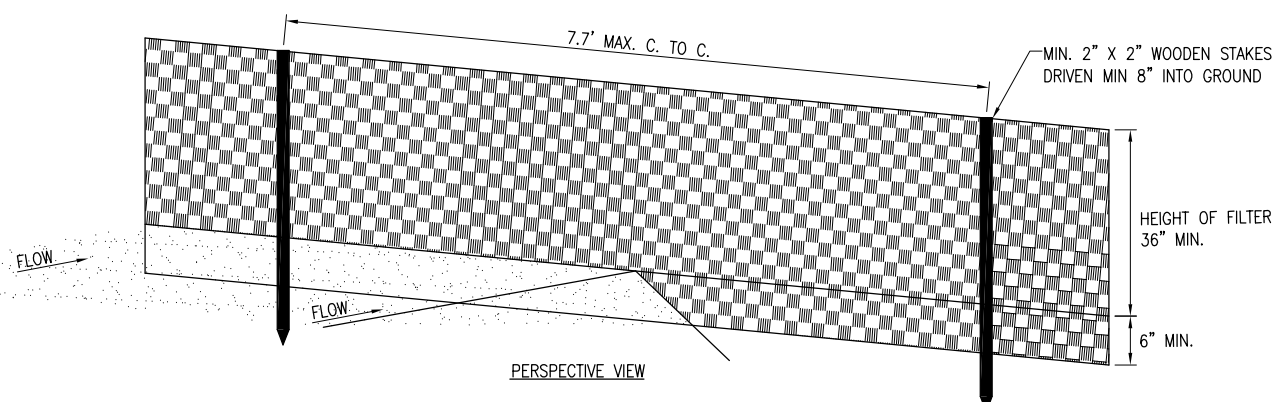
HAY BALE DETAIL

"NOT TO SCALE"



NOTES:

1. BALES SHALL BE PLACED AT THE TOE OF A SLOPE OR AS DIRECTED BY THE ENGINEER, AND IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
2. EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 4 INCHES AND PLACED SO THE BINDINGS ARE HORIZONTAL.
3. BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR RE-BARS DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE BALE.
4. INSPECTION SHALL BE FREQUENT AND REPAIR/REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
5. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS AND TURFING IS ESTABLISHED





SILT FENCE DETAIL

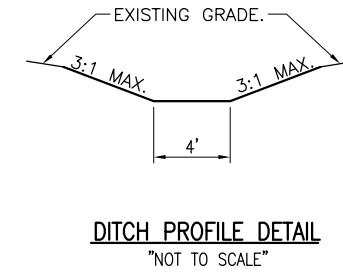
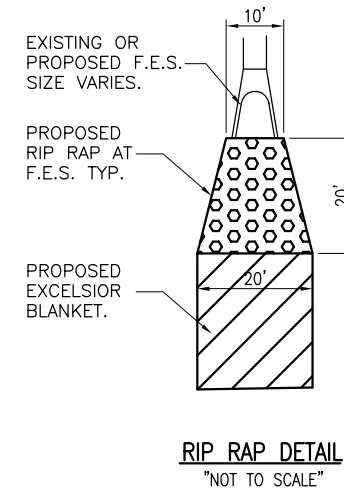
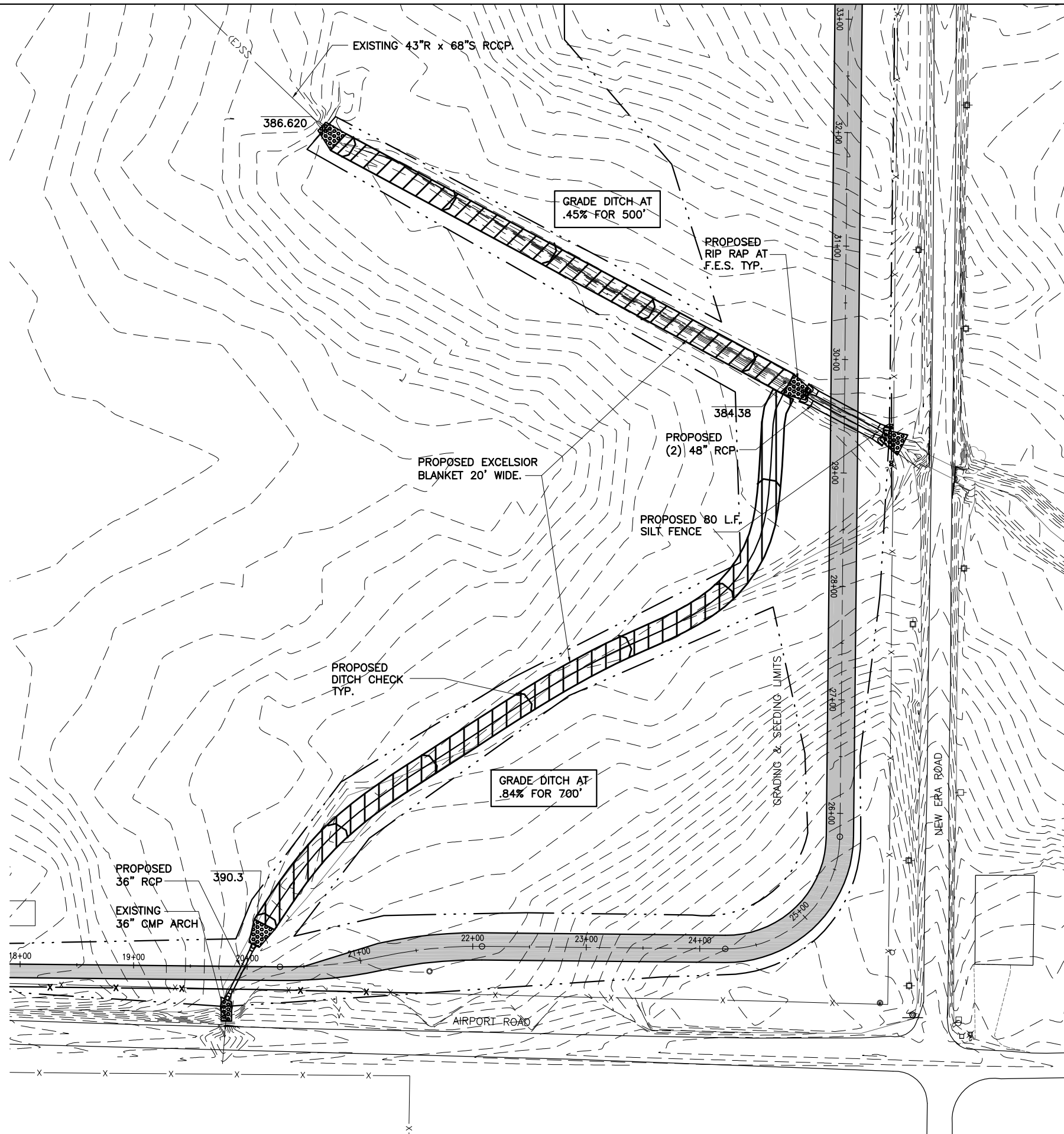
"NOT TO SCALE"

ADDITIONAL "T" POSTS WILL BE NEEDED TO SUPPORT SILT FENCE.

MAY 04, 2012 7:18 AM SCHUB01446 C:\AIRPORTS\SIA-CARBONDALE\11A0037\AIRPORT\SHEET\R-006SWPPPDET.DWG - TYPICALS

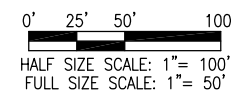
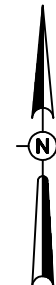
BY	
REVISION	
DATE	
 SOUTHERN ILLINOIS AIRPORT MURPHYSBORO / CARBONDALE, ILLINOIS ILL. PROJ.: MDH-4173	
Hanson Project No.	11A0037D_0001
Filename	R-006SWPPPDET.DWG
Scale	NOT TO SCALE
Date	04/20/2012
LAYOUT	JSL 03/21/2012
DRAWN	CWS 03/21/2012
REVIEWED	CAH 04/16/2012
 HANSON Hanson Professional Services Inc. 3123 New River Rd. Murphysboro, IL 62966 Offices Nationwide	
CONSTRUCT PERIMETER ROAD TO SUPPORT ARFF/SRE BUILDING STORM WATER POLLUTION PREVENTION DETAILS	
6	
6 of 51 sheets	

MAY 04, 2012 7:20 AM SCHUB01446
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LEGEND

- EXISTING CONTOURS
- EXISTING GRADES
- EXISTING FENCE
- PROPOSED IMPROVEMENTS
- EXCELSIOR BLANKET
- GRADING & SEEDING LIMITS
- PROPOSED DITCH CHECK
- PROPOSED SILT FENCE



SO081

DATE	REVISION	BY

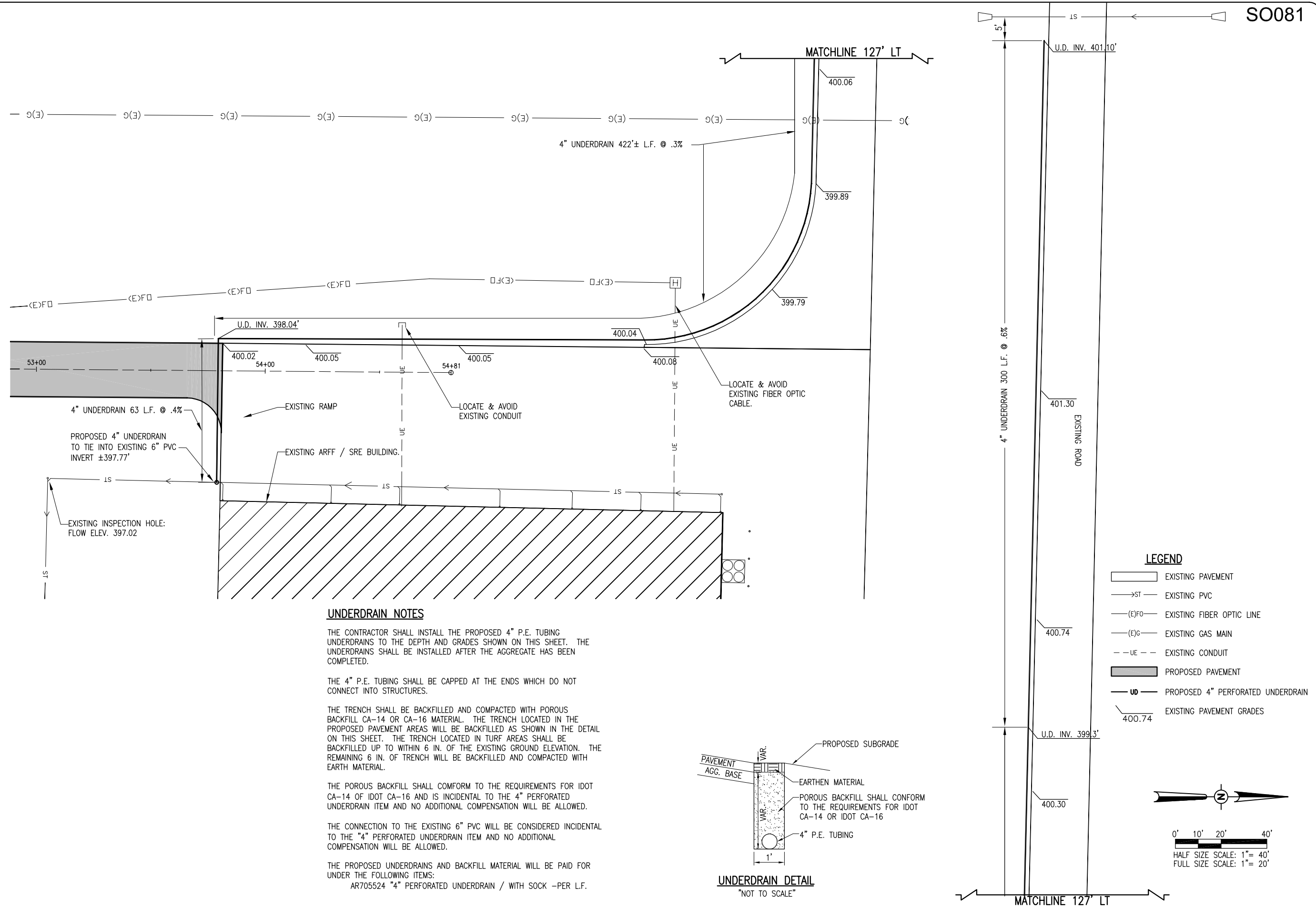
SIA
SOUTHERN ILLINOIS AIRPORT
MURPHYSBORO / CARBONDALE, ILLINOIS

IL PROJ.: MDH-4173

Hanson Project No. 11A0037D_0001	JSL	02/06/2012
Filename R-012GRD.DWG	CWS	03/06/2012
Scale NOT TO SCALE	JSL	04/16/2012
Date 04/20/2012	REVIEWED	
LAYOUT		
DRAWN		



CONSTRUCT PERIMETER ROAD TO SUPPORT ARFF/SRE BUILDING
 PROPOSED DRAINAGE PLAN
 STA. 18+00 TO 33+00



UNDERDRAIN NOTES

THE CONTRACTOR SHALL INSTALL THE PROPOSED 4" P.E. TUBING UNDERDRAINS TO THE DEPTH AND GRADES SHOWN ON THIS SHEET. THE UNDERDRAINS SHALL BE INSTALLED AFTER THE AGGREGATE HAS BEEN COMPLETED.

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

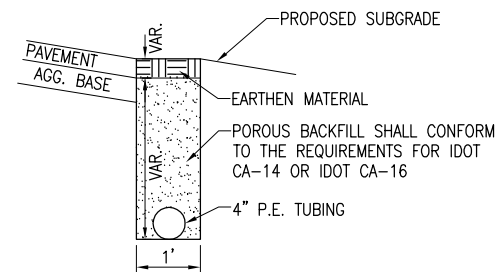
THE TRENCH SHALL BE BACKFILLED AND COMPACTED WITH POROUS BACKFILL CA-14 OR CA-16 MATERIAL. THE TRENCH LOCATED IN THE PROPOSED PAVEMENT AREAS WILL BE BACKFILLED AS SHOWN IN THE DETAIL ON THIS SHEET. THE TRENCH LOCATED IN TURF AREAS SHALL BE BACKFILLED UP TO WITHIN 6 IN. OF THE EXISTING GROUND ELEVATION. THE REMAINING 6 IN. OF TRENCH WILL BE BACKFILLED AND COMPACTED WITH EARTH MATERIAL.

THE POROUS BACKFILL SHALL COMFORM TO THE REQUIREMENTS FOR IDOT CA-14 OF IDOT CA-16 AND IS INCIDENTAL TO THE 4" PERFORATED UNDERDRAIN ITEM AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

THE CONNECTION TO THE EXISTING 6" PVC WILL BE CONSIDERED INCIDENTAL TO THE "4" PERFORATED UNDERDRAIN ITEM AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

THE PROPOSED UNDERDRAINS AND BACKFILL MATERIAL WILL BE PAID FOR UNDER THE FOLLOWING ITEMS:

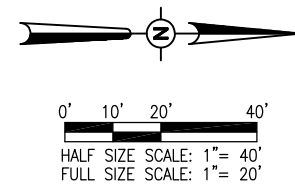
AR705524 "4" PERFORATED UNDERDRAIN / WITH SOCK -PER L.F.



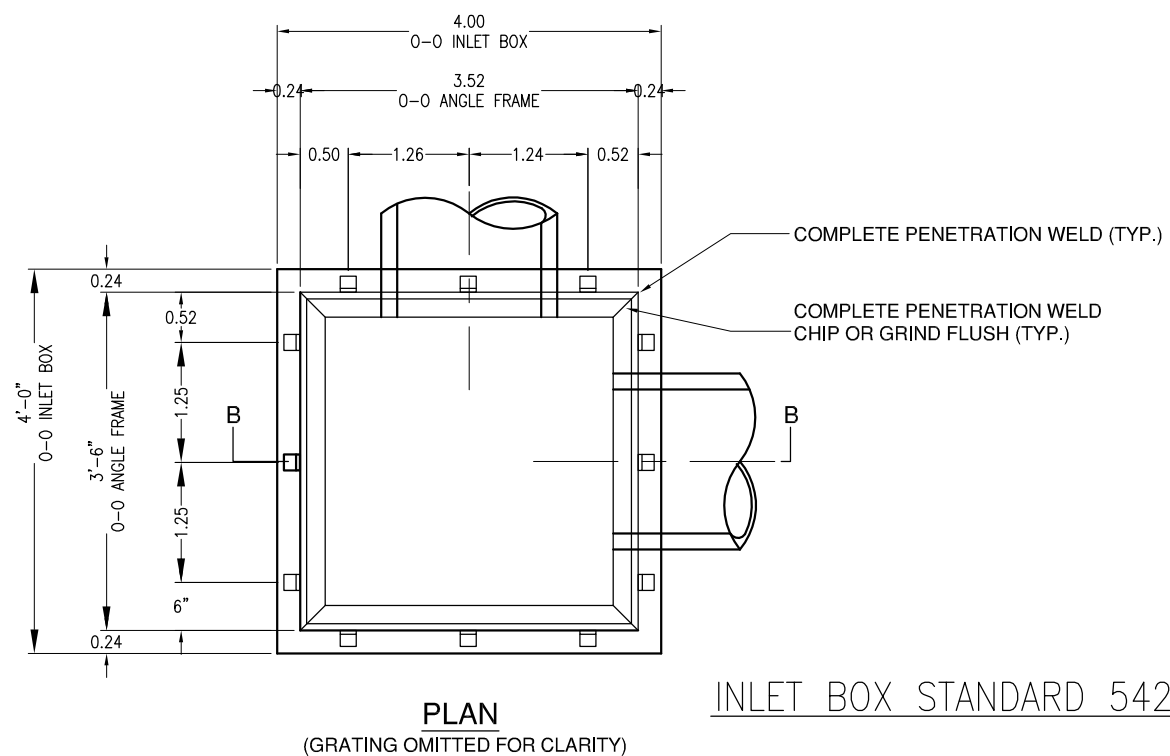
UNDERDRAIN DETAIL
 "NOT TO SCALE"

LEGEND

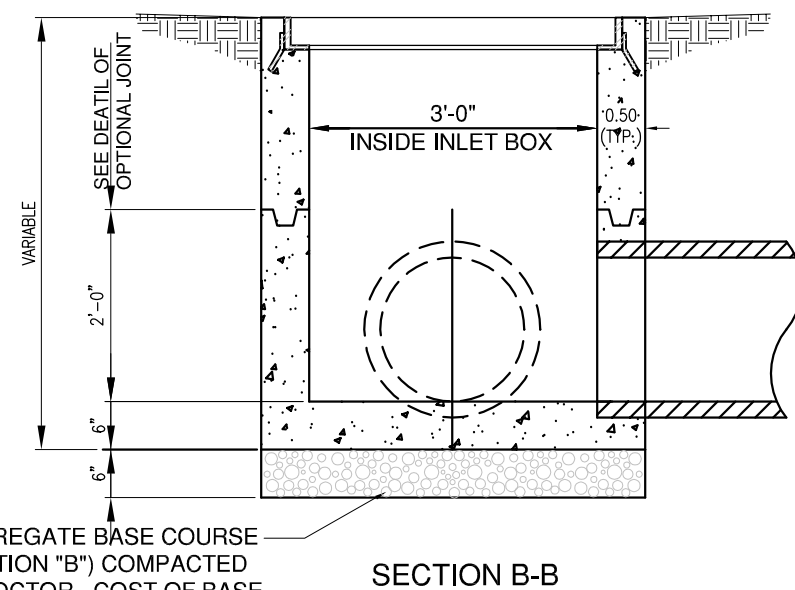
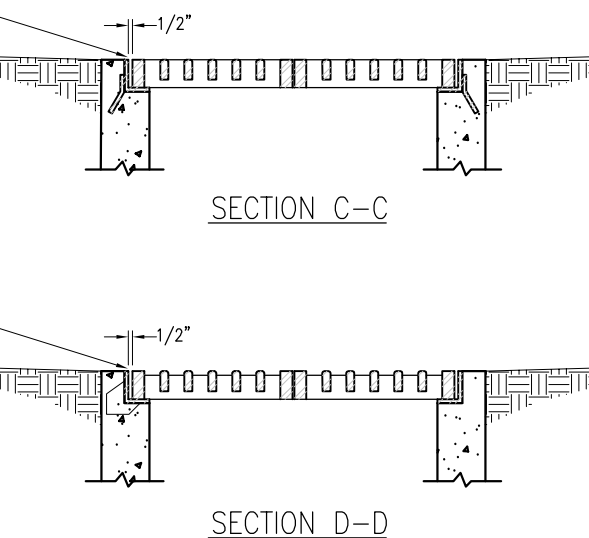
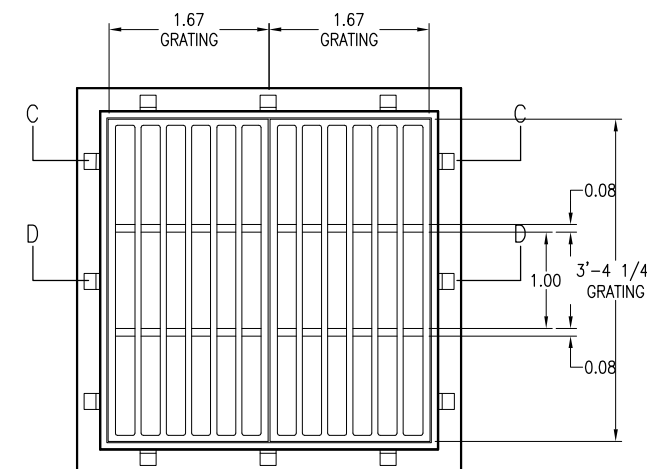
- EXISTING PAVEMENT
- EXISTING PVC
- EXISTING FIBER OPTIC LINE
- EXISTING GAS MAIN
- EXISTING CONDUIT
- PROPOSED PAVEMENT
- PROPOSED 4" PERFORATED UNDERDRAIN
- EXISTING PAVEMENT GRADES



SO081	BY CAH				
	REVISION	DATE	REVISION	DATE	REVISION
	04/01/08	04/01/08	REVISED	PIPE	NOTES
<p>SOUTHERN ILLINOIS AIRPORT MURPHYSBORO / CARBONDALE, ILLINOIS</p>					
<p>HANSON Professional Services Inc. 323 New North Murphysboro, IL 62966 Offices Nationwide</p>					
Hanson Project No. 11A0037D_0001 Filename: R-131DRN.DWG Scale: 1" = 30' Date: 04/20/2012		LAYOUT JSL 03/27/2012 DRAWN CWS 03/27/2012 REVIEWED CAH 04/16/2012			
CONSTRUCT PERIMETER ROAD TO SUPPORT ARFF/SRE BUILDING		PROPOSED DRAINAGE PLAN STA. 53+00 TO TAXIWAY			
13					
13 of 51 sheets					

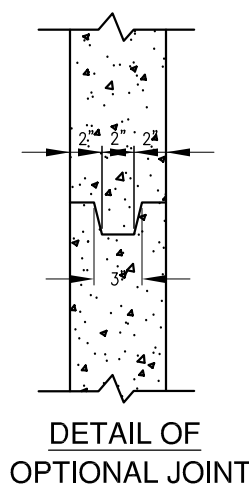


INLET BOX STANDARD 542546



6" CRUSHED AGGREGATE BASE COURSE (ITEM 209-GRADATION "B") COMPACTED TO 100% STD. PROCTOR. COST OF BASE COURSE SHALL BE INCIDENTAL TO CONSTRUCTION OF INLET SPECIAL.

INLET DETAILS
NOT TO SCALE



DATE	REVISION	BY

SIA
SOUTHERN ILLINOIS AIRPORT
MURPHYSBORO / CARBONDALE, ILLINOIS

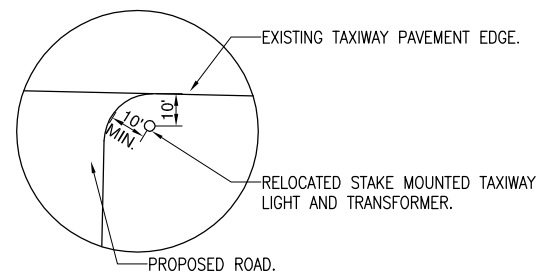
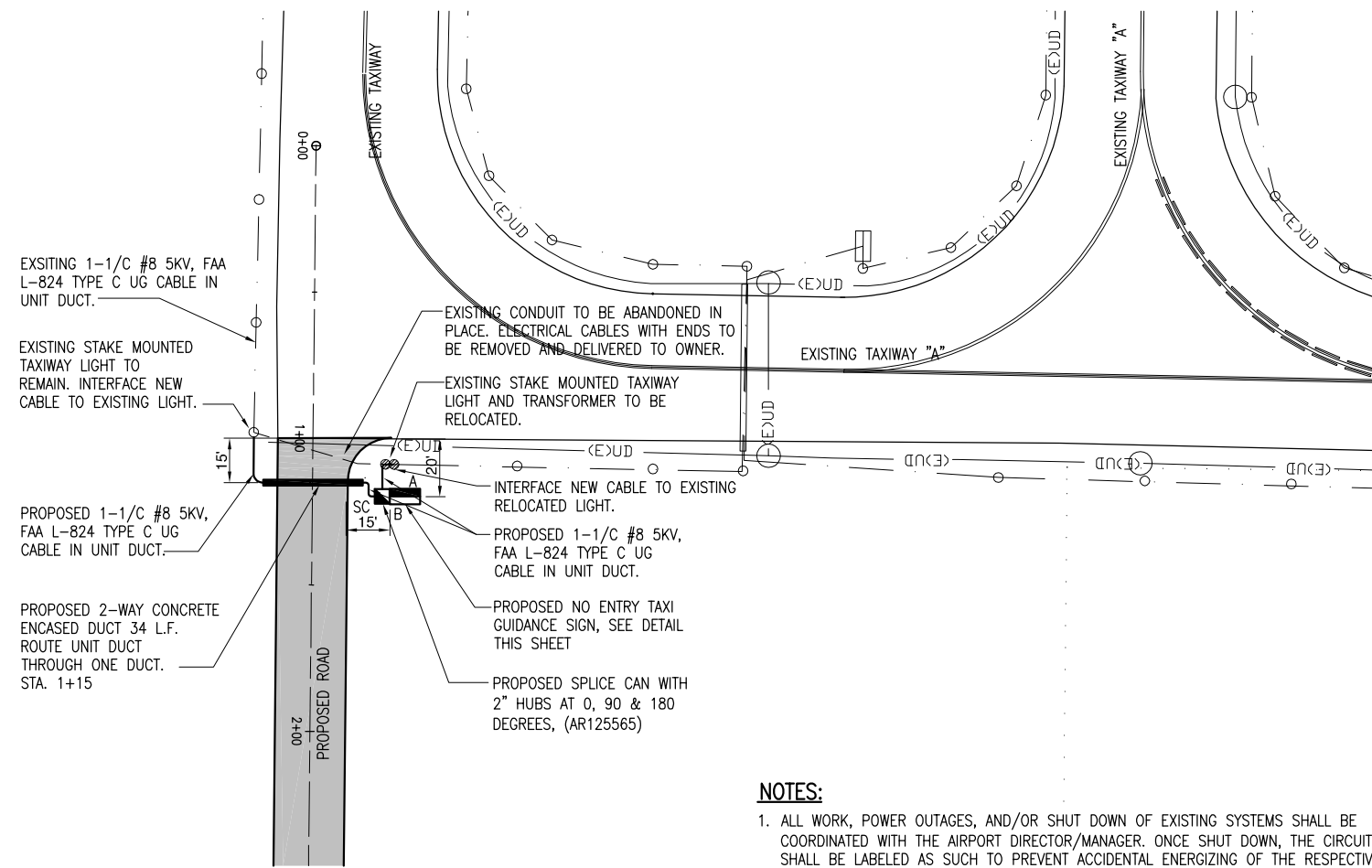
ILL. PROJ.: MDH-4173

Hanson Project No.	11A0037D_0001
File Name	R-133DRN.DWG
Scale	NO. SCALE
Date	04/20/2012
LAYOUT	JSL 03/21/2012
DRAWN	CWS 03/21/2012
REVIEWED	JSL 04/16/2012

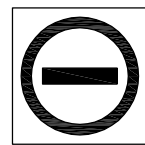
HANSON
Hanson Professional Services Inc.
1235 New Illinois
Offices Nationwide

CONSTRUCT PERIMETER
ROAD TO SUPPORT
ARFF/SRE BUILDING

PROPOSED
DRAINAGE DETAILS



TAXIWAY LIGHT RELOCATION



SIDE A



SIDE B

DETAIL - NO ENTRY TAXI GUIDANCE SIGN DETAIL

SCALE: NONE

TAXI GUIDANCE SIGN NOTES:

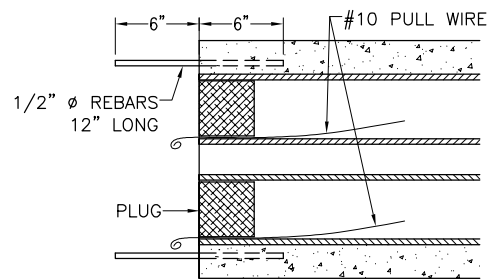
1. THE PROPOSED "NO ENTRY" GUIDANCE SIGN SHALL CONFORM TO ADVISORY CIRCULAR 150/5345 44J (OR LATEST ISSUE IN FORCE) AND BE FAA-APPROVED FOR TYPE L-858R MANDATORY INSTRUCTION SIGN (BLACK OUTLINE ON OUTSIDE EDGE OF WHITE LEGEND ON RED BACKGROUND); THE SIGN SHALL BE SIZE 1, 18-IN. SIGN FACE WITH A 12-IN. LEGEND; STYLE 3, POWERED FROM A 2.8 TO 6.6 AMP SERIES LIGHTING CIRCUIT; CLASS 2, FOR OPERATION FROM -40 DEGREES F TO 131 DEGREES F; MODE 2, TO WITHSTAND WIND LOADS OF 200 M.P.H., BASE-MOUNTED, DOUBLE-SIDED, AS SPECIFIED ON PLANS.

NOTES:

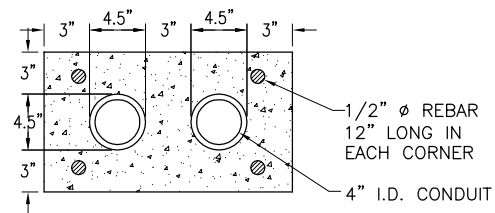
1. ALL WORK, POWER OUTAGES, AND/OR SHUT DOWN OF EXISTING SYSTEMS SHALL BE COORDINATED WITH THE AIRPORT DIRECTOR/MANAGER. ONCE SHUT DOWN, THE CIRCUITS SHALL BE LABELED AS SUCH TO PREVENT ACCIDENTAL ENERGIZING OF THE RESPECTIVE CIRCUITS. ALL PERSONNEL SHALL FOLLOW U.S. DEPARTMENT OF LABOR OCCUPATIONAL 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. CONTRACTOR SHALL FIELD VERIFY EXISTING SITE CONDITIONS.
3. PROPOSED GUIDANCE SIGN SHALL BE CONSTRUCTED AT THE LOCATION SHOWN ON THE PROPOSED AIRFIELD ELECTRICAL & SIGNAGE PLANS AND IN ACCORDANCE WITH THE DETAILS AND SPECIFICATIONS.
4. WHERE TEMPORARY WIRING IS REQUIRED, ALL ABOVE GROUND JUMPERS SHALL BE IN A DUCT WITH ALL CONNECTIONS SEALED. THE CONTRACTOR SHALL SECURE, IDENTIFY AND PLACE ALL TEMPORARY EXPOSED WIRING IN CONDUIT, DUCT OR UNIT DUCT TO PREVENT ELECTROCUTION AND FIRE IGNITION SOURCES AS PER THE REQUIREMENTS OF FAA 150/5370-2E, - OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION, PART 3-6, C.
5. NO CONNECTION TO AN ACTIVE LIGHTING CIRCUIT WILL BE BROKEN UNTIL THE CIRCUIT HAS BEEN TURNED OFF IN ACCORDANCE WITH NOTE 1.

LEGEND

- EXISTING PAVEMENT
- EXISTING ELECTRICAL CONDUIT TO BE ABANDONED IN PLACE
- EXISTING 1/2 #8 5KV, L-824 TYPE C UG CABLE IN 2" HDPE DUCT
- EXISTING UNDER DRAIN LOCATE AND AVOID.
- EXISTING TAXI GUIDANCE SIGN
- PROPOSED TAXI GUIDANCE SIGN
- PROPOSED ELECTRICAL DUCT
- PROPOSED 1/2 #8 5KV, L-824 TYPE C UG CABLE IN UNIT DUCT
- PROPOSED L-867 SPLICE CAN
- EXISTING TAXIWAY LIGHT
- RELOCATED TAXIWAY LIGHT



TYPICAL SECTION
(NOT TO SCALE)



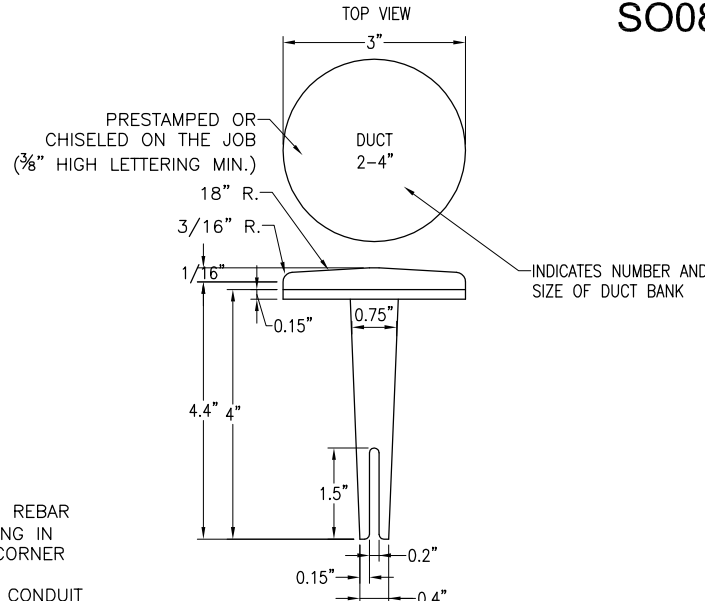
2-DUCT BANK
(NOT TO SCALE)

DUCT BANK NOTES:

1. ALL DIMENSION ARE MINIMUM.
2. INCLUDE DUCT SPACERS AS MANUFACTURED BY UNDERGROUND DEVICES INC., TO MAINTAIN PROPER SEPARATION OF CONDUITS.
3. REBAR IS REQUIRED TO ACCOMODATE FUTURE DUCT EXTENSIONS & INTERFACE AT DUCT BANK TERMINATIONS. DUCT BANKS TERMINATING IN MANHOLES DO NOT REQUIRE REBAR AT TERMINATIONS.
4. CONDUITS FOR CONCRETE ENCASED DUCT SHALL BE SCHEDULE 40 PVC CONFORMING TO ITEM 110.
5. MINIMUM DEPTH OF TOP OF DUCT ENCASEMENT SHALL BE 30" BELOW FINISHED GRADE.
6. HIGH VOLTAGE AND LOW VOLTAGE CIRCUITS SHALL NOT BE INSTALLED IN THE SAME RACEWAY, CONDUIT, DUCT, HANDHOLE, OR MANHOLE.
7. HOMERUN CABLES FOR A RESPECTIVE CIRCUIT SHALL BE INSTALLED IN THE SAME RACEWAY OR DUCT.

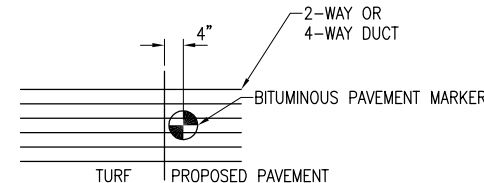
THE LOCATION, SIZE, AND TYPE OF MATERIAL OF EXISTING UNDERGROUND AND/OR ABOVEGROUND UTILITIES INDICATED ON THE PLANS ARE NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY WHATEVER IN RESPECT TO THE ACCURACY, COMPLETENESS, OR SUFFICIENCY OF THE INFORMATION. THERE IS NO GUARANTEE, EITHER EXPRESSED OR IMPLIED, THAT THE LOCATIONS, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED IN THE CONSTRUCTION. 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 OWNER'S REPRESENTATIVE AND/OR THE RESIDENT ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY DAMAGE TO SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.

ALL UTILITY CABLES AND LINES SHALL BE LOCATED BY THE RESPECTIVE UTILITY. CONTACT JULIE (JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS) FOR UTILITY INFORMATION, PHONE: 1-800-892-0123. CONTACT THE FAA (FEDERAL AVIATION ADMINISTRATION) FOR ASSISTANCE IN LOCATING FAA CABLES AND UTILITIES. LOCATION OF FAA POWER, CONTROL, AND COMMUNICATION CABLES SHALL BE COORDINATED WITH AND/OR LOCATED BY THE FAA. ALSO CONTACT AIRPORT DIRECTOR/MANAGER AND AIRPORT PERSONNEL FOR ASSISTANCE IN LOCATING UNDERGROUND AIRPORT CABLES AND/OR UTILITIES. ALSO COORDINATE WORK WITH ALL ABOVEGROUND UTILITIES.



BITUMINOUS PAVEMENT DUCT MARKERS
(NOT TO SCALE)

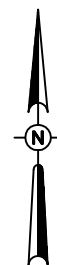
NOTE:
TOP OF MARKER SHALL BE FLUSH WITH FINISHED PAVEMENT SURFACE. MARKER MAY BE INSTALLED IN A DRILLED HOLE AND SECURED WITH EPOXY GLUE.



DUCT MARKER DETAIL
(NOT TO SCALE)

CABLE & DUCT MARKER NOTES:

1. THE COST OF ALL PAVEMENT DUCT MARKERS SHALL BE INCIDENTAL TO THE DUCT.
2. BITUMINOUS PAVEMENT DUCT MARKER PROVIDED AT EACH END OF EACH DUCT AS SHOWN ON THE LOCATION PLAN.



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

SO081

BY	REVISION	DATE

SOUTHERN ILLINOIS AIRPORT
MURPHYSBORO / CARBONDALE, ILLINOIS



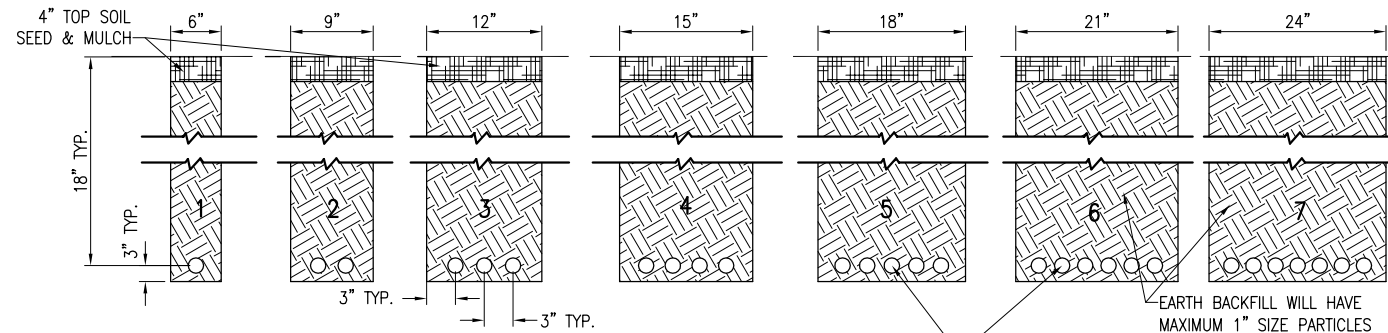
IL PROJ.: MDH-4173

Hanson Project No. 11A0037D_0001	FILENAME R-012ELPLAN.DWG	SCALE NOT TO SCALE	DATE 04/20/2012
LAYOUT	JSL	03/21/2012	
DRAWN	CWS	03/21/2012	
REVIEWED	JSL	04/16/2012	



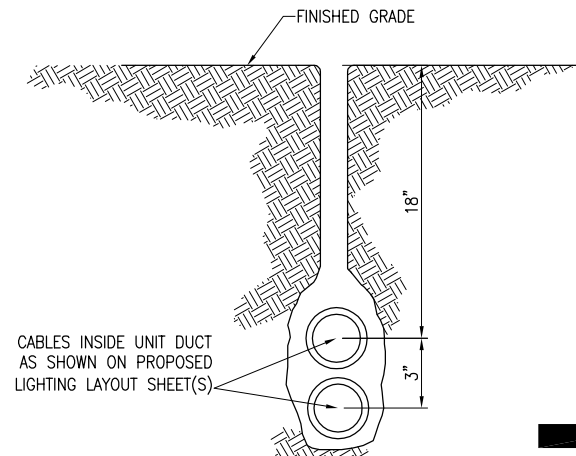
Hanson Professional Services Inc.
3125 New Era Road
Murphysboro, Illinois 62966
Offices Nationwide

CONSTRUCT PERIMETER
ROAD TO SUPPORT
ARFF/SRE BUILDING
PROPOSED
AIRFIELD ELECTRICAL,
SIGNAGE & ELECTRICAL PLAN

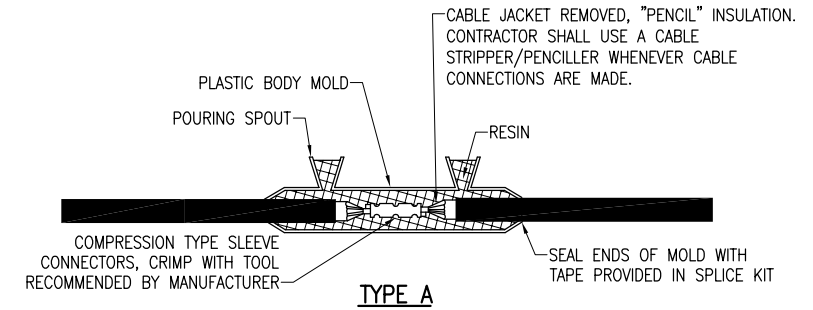


NOTES:
 DETAIL NUMBERS INDICATE NO. OF CABLES.
 TRENCHES WITH MORE THAN SEVEN CABLES SHALL BE INCREASED 3" IN WIDTH FOR EACH ADDITIONAL CABLE; IF SPECIFIED ON PLANS TWO PARALLEL TRENCHES MAY BE CONSTRUCTED.
 DEPTH OF TRENCHES SHALL BE AS SHOWN ABOVE UNLESS OTHERWISE SPECIFIED ON THE PLANS.
 ALL DISTURBED SURFACES SHALL BE RESTORED TO THEIR ORIGINAL CONDITION. COST IS INCIDENTAL TO TRENCH.

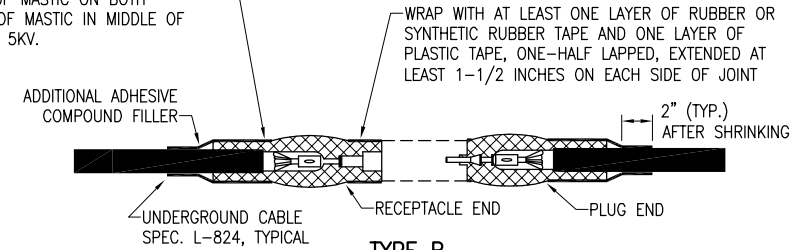
CABLE TRENCHES
 (NOT TO SCALE)



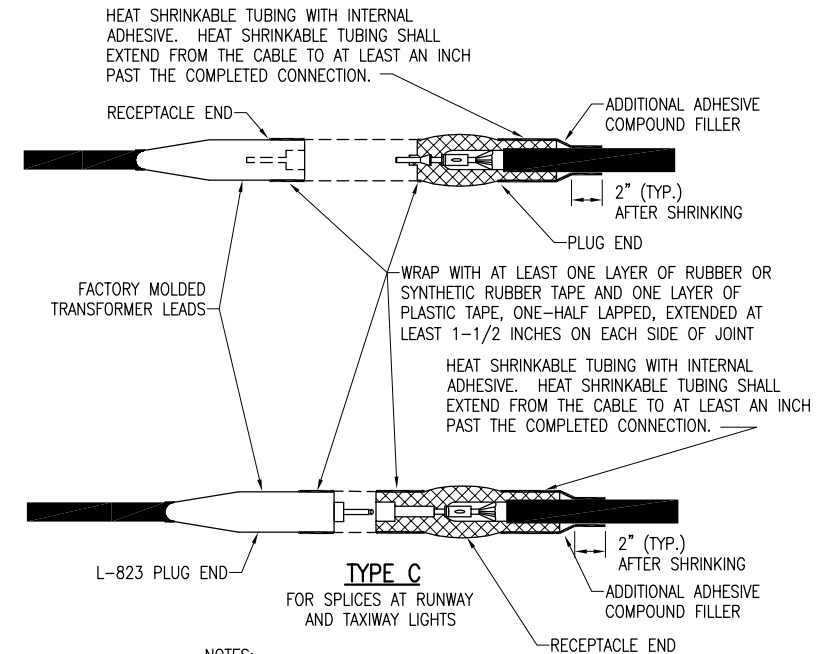
PLOWED CABLE
 (NOT TO SCALE)



FOR SPLICES IN LOW VOLTAGE CABLE (600V) HOMERUNS FOR EXTENSIONS TO EXISTING LOW VOLTAGE CABLES ONLY. TYPE A SPLICES SHALL BE MADE IN SPLICE CANS, HANDHOLES, MANHOLES, OR JUNCTIONS BOXES



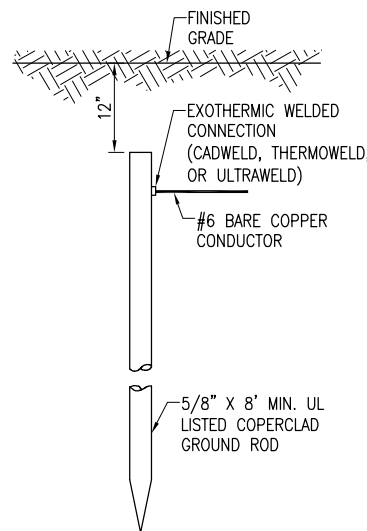
FOR SPLICES AT JUNCTION OF HOMERUN WITH LOOP CIRCUIT AND FOR SPLICES IN HOMERUNS TO EXISTING CABLES



NOTES:
 SEE PROPOSED LIGHTING LAYOUT SHEET(S) FOR SPLICE TYPE.
 INSIDE DIAMETER OF CONNECTOR SHALL PROPERLY MATCH THE OUTSIDE DIAMETER OF CABLE.

CABLE SPLICES
 (NOT TO SCALE)

PER FAA AC 150/5340-30F DESIGN AND INSTALLATION DETAILS FOR AIRPORT VISUAL AIDS, A LIGHT BASE GROUND MUST BE INSTALLED AT EACH LIGHT FIXTURE. A LIGHT BASE 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 LIGHT BASE GROUND SHALL BE A #6 AWG BARE COPPER CONDUCTOR BONDED 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.



NOTES:
 TYPE AND MINIMUM NUMBER OF GROUND RODS SHALL BE AS SPECIFIED ON THE PLAN.
 THE RESISTANCE TO GROUND OF THE GROUNDING SYSTEM SHALL NOT EXCEED 25 OHMS.
 COST OF GROUND RODS IS INCIDENTAL TO THE ASSOCIATED ITEMS REQUIRING GROUNDING UNLESS OTHERWISE SPECIFIED.

GROUND ROD
 (NOT TO SCALE)

DATE	REVISION

SOUTHERN ILLINOIS AIRPORT
 MURPHYSBORO / CARBONDALE, ILLINOIS

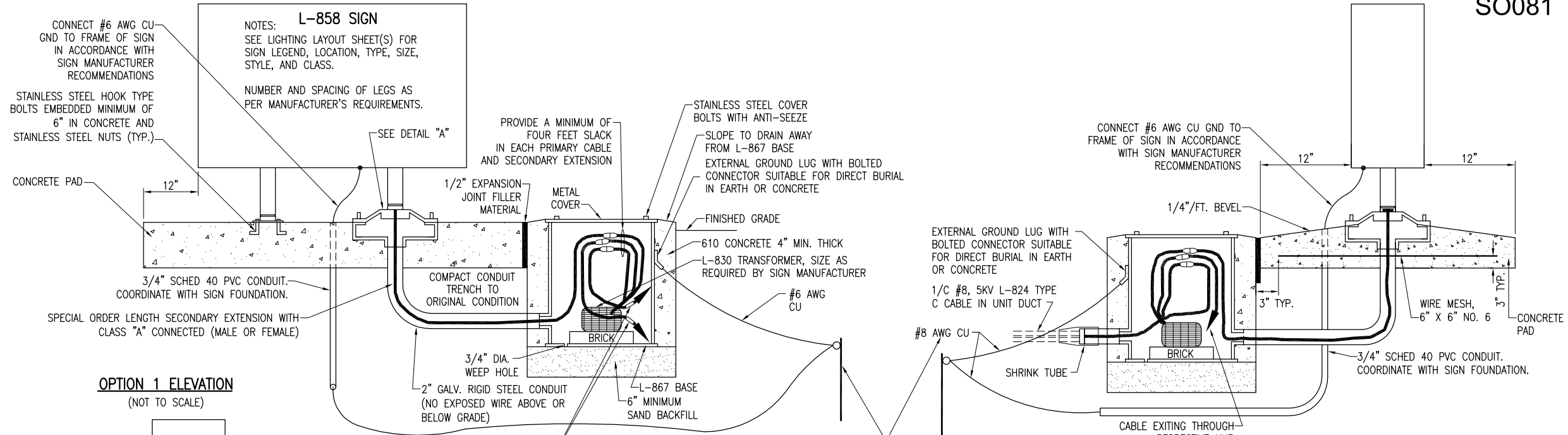
Hanson Project No.	11A0037D_0001
Filename	E-501.DWG
Scale	NOT TO SCALE
Date	04/20/2012
LAYOUT	JSL 03/21/2012
DRAWN	CWS 03/21/2012
REVIEWED	JSL 04/16/2012



Hanson Professional Services Inc.
 3125 New Illinois
 Murphysboro, IL 62966
 Offices Nationwide

CONSTRUCT PERIMETER
 ROAD TO SUPPORT
 ARFF/SRE BUILDING

ELECTRICAL DETAILS
 SHEET 1



NOTES: L-858 SIGN

CONNECT #6 AWG CU GND TO FRAME OF SIGN IN ACCORDANCE WITH SIGN MANUFACTURER RECOMMENDATIONS

STAINLESS STEEL HOOK TYPE BOLTS EMBEDDED MINIMUM OF 6" IN CONCRETE AND STAINLESS STEEL NUTS (TYP.)

CONCRETE PAD

12"

1/2" EXPANSION JOINT FILLER MATERIAL

METAL COVER

PROVIDE A MINIMUM OF FOUR FEET SLACK IN EACH PRIMARY CABLE AND SECONDARY EXTENSION

STAINLESS STEEL COVER BOLTS WITH ANTI-SEEZE

SLOPE TO DRAIN AWAY FROM L-867 BASE

EXTERNAL GROUND LUG WITH BOLTED CONNECTOR SUITABLE FOR DIRECT BURIAL IN EARTH OR CONCRETE

FINISHED GRADE

610 CONCRETE 4" MIN. THICK

L-830 TRANSFORMER, SIZE AS REQUIRED BY SIGN MANUFACTURER

#6 AWG CU

3/4" SCHED 40 PVC CONDUIT, COORDINATE WITH SIGN FOUNDATION.

SPECIAL ORDER LENGTH SECONDARY EXTENSION WITH CLASS "A" CONNECTED (MALE OR FEMALE)

COMPACT CONDUIT TRENCH TO ORIGINAL CONDITION

BRICK

3/4" DIA. WEEP HOLE

2" GALV. RIGID STEEL CONDUIT (NO EXPOSED WIRE ABOVE OR BELOW GRADE)

L-867 BASE

6" MINIMUM SAND BACKFILL

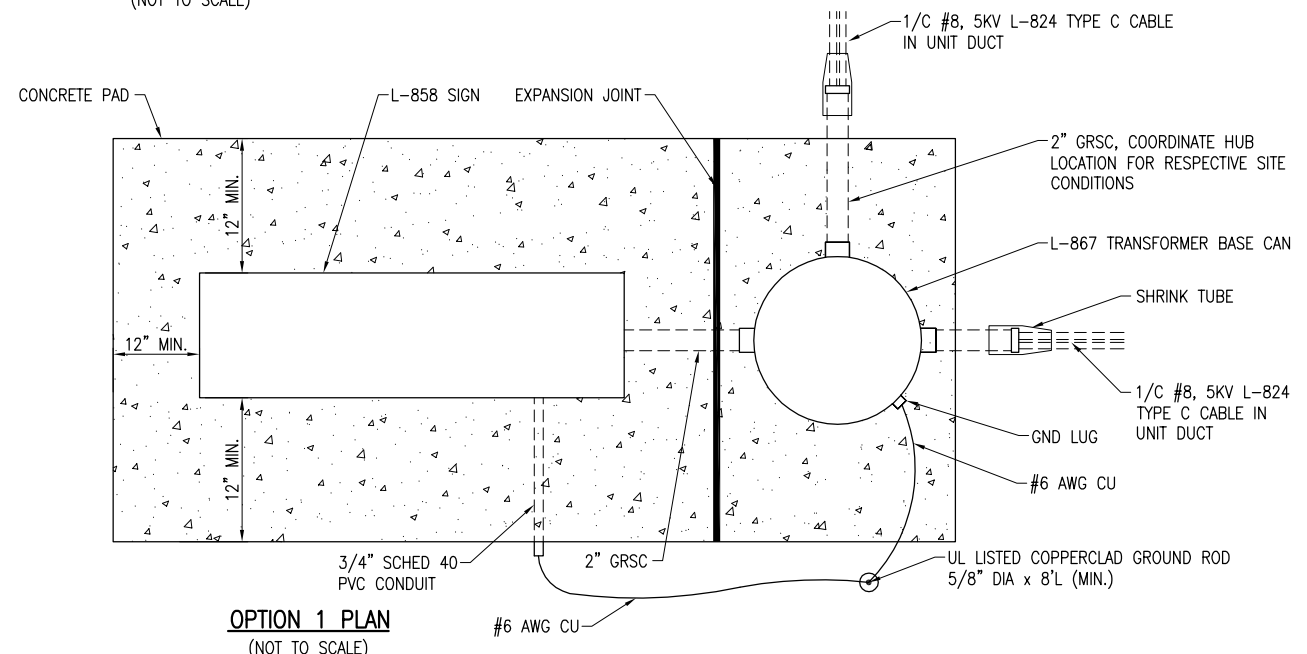
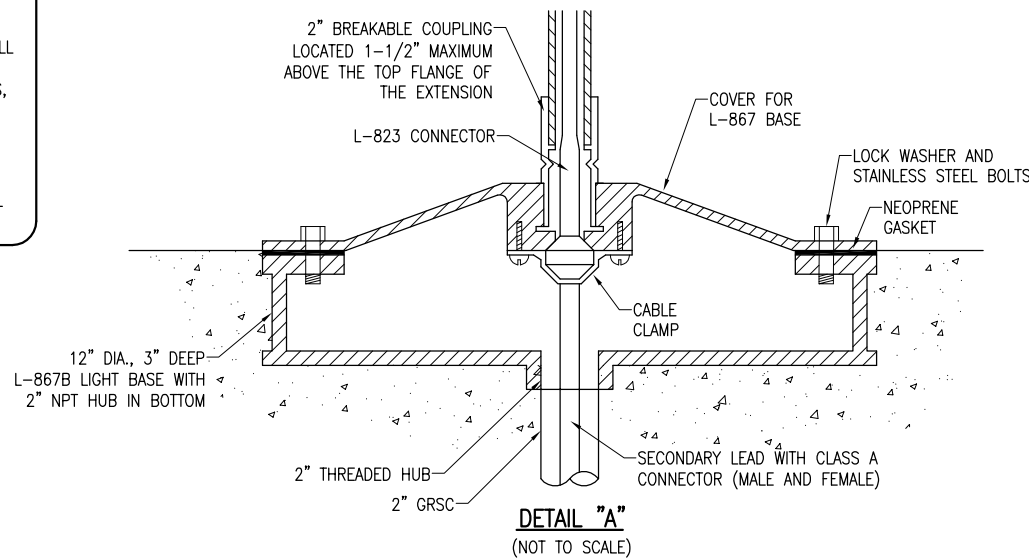
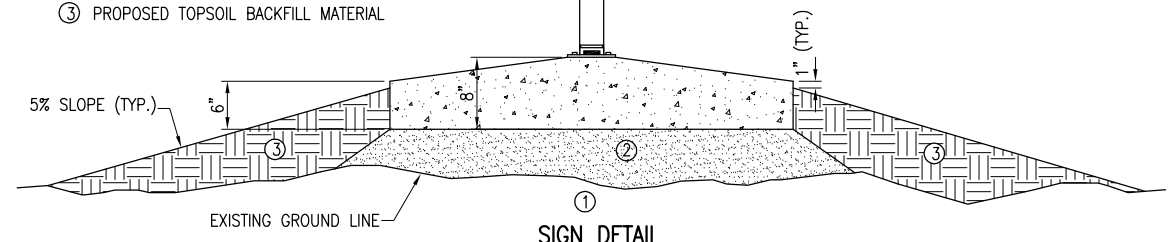
UL LISTED COPPERCLAD GROUND ROD 5/8" DIA x 8'L (MIN.)

PER FAA AC 150/5340-30F DESIGN AND INSTALLATION DETAILS FOR AIRPORT VISUAL AIDS, A LIGHT BASE GROUND MUST BE INSTALLED AT EACH LIGHT FIXTURE. A LIGHT BASE 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 LIGHT BASE GROUND SHALL BE A #6 AWG BARE COPPER CONDUCTOR CONNECTED TO THE GROUND LUG ON THE RESPECTIVE L-867 TRANSFORMER BASE/LIGHT CAN, TAXI SIGN FRAME, OR MOUNTING STAKE AND A 3/8-INCH DIAMETER BY 8-FOOT LONG (MINIMUM) UL LISTED COPPER CLAD GROUND ROD.

GENERAL NOTES

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

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



REVISION	DATE

SOUTHERN ILLINOIS AIRPORT
MURPHYSBORO / CARBONDALE, ILLINOIS

SIA
SOUTHERN ILLINOIS AIRPORT

PROJ.: MDH-4173

Hanson Project No.	11A0037D_0001
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REVIEWED	CAH 04/16/2012


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CONSTRUCT PERIMETER ROAD TO SUPPORT ARFF/SRE BUILDING

ELECTRICAL DETAILS SHEET 2

DATE	REVISION	BY

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IL PROJ.: MDH-4173

Hanson Project No. 11A0037D_0001	
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DRAWN	CWS 03/21/2012
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CONSTRUCT PERIMETER ROAD TO SUPPORT ARFF/SRE BUILDING

ELECTRICAL NOTES SHEET 1

GENERAL 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.
- CONTRACTOR SHALL KEEP A COPY OF THE LATEST NEC IN FORCE ON SITE AT ALL TIMES DURING CONSTRUCTION FOR USE AS A REFERENCE.
- 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).
- 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.
- 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.
- 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.
- 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.
- ANY AND ALL INSTRUCTIONS FROM THE RESIDENT 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 ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF AERONAUTICS. THE CONTRACTOR SHALL NOT ACCEPT ANY VERBAL INSTRUCTIONS FROM THE RESIDENT ENGINEER REGARDING ANY CHANGES FROM THE PLANS AND SPECIFICATIONS.
- 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 DETAILED DESCRIPTION OF THE OVERALL EQUIPMENT AND ITS INDIVIDUAL COMPONENTS.
 - THEORY OF OPERATION INCLUDING THE FUNCTION OF EACH COMPONENT.
 - INSTALLATION INSTRUCTION.
 - START-UP INSTRUCTIONS.
 - PREVENTATIVE MAINTENANCE REQUIREMENTS.
 - CHART FOR TROUBLE-SHOOTING.
 - 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.
 - 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.
 - SAFETY INSTRUCTIONS.

POWER AND CONTROL NOTES

- 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.
- 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 PHASE CONDUCTORS ON 120/240VAC SINGLE-PHASE, THREE WIRE SYSTEMS AND BLACK, ORANGE (FOR HIGH LEG) AND BLUE SHALL BE USED FOR PHASE CONDUCTORS ON 240/120VAC THREE-PHASE, FOUR WIRE SYSTEMS. BLACK, RED, AND BLUE SHALL BE USED FOR PHASE CONDUCTORS ON 208/120 VAC THREE-PHASE, FOUR WIRE 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).
- 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.
- IN CONTROL WIRING THE SAME COLOR SHALL BE USED THROUGHOUT THE SYSTEM FOR THE SAME FUNCTION, SUCH AS 10%, 30%, 100% BRIGHTNESS CONTROL, ETC.
- LOW VOLTAGE (600 V.) AND HIGH VOLTAGE (5000 V.) CONDUCTORS SHALL BE INSTALLED IN SEPARATE WIREWAYS.
- NEATLY LACE WIRING IN DISTRIBUTION PANELS, WIREWAYS, SWITCHES AND JUNCTION/PULL BOXES.
- THE MINIMUM SIZE OF PULL/JUNCTION BOXES, REGARDLESS OF THE QUANTITY AND SIZE OF THE CONDUCTORS SHOWN, SHALL BE AS FOLLOWS:
 - 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.
 - 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.
- 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.
- EQUIPMENT CABINETS SHALL NOT BE USED AS PULL/JUNCTION BOXES. ONLY WIRING TERMINATING AT THE EQUIPMENT SHALL BE BROUGHT INTO THESE ENCLOSURES.
- SPLICES AND JUNCTION POINTS SHALL BE PERMITTED ONLY IN JUNCTION BOXES, DUCTS EQUIPPED WITH REMOVABLE COVERS, AND AT EASILY ACCESSIBLE LOCATIONS.
- CIRCUIT BREAKERS IN POWER DISTRIBUTION PANEL(S) SHALL BE THERMAL-MAGNETIC MOLDED CASE, PERMANENT TRIP WITH 100 AMPERE, MINIMUM FRAME.
- DUAL LUGS SHALL BE USED WHERE TWO (2) WIRES, SIZE NO. 6 OR LARGER, ARE TO BE CONNECTED TO THE SAME TERMINAL.
- ALL INTERIOR WALL MOUNTED EQUIPMENT ENCLOSURES SHALL BE MOUNTED ON HOT DIPPED GALVANIZED STEEL STRUT SUPPORT, OR STAINLESS STEEL STRUT SUPPORT, WITH CORROSION RESISTANT HARDWARE.
- SUPPORT FOR EXTERIOR MOUNTED EQUIPMENT SHALL USE HOT DIPPED GALVANIZED STEEL STRUT SUPPORT OR STAINLESS STEEL STRUT SUPPORT WITH STAINLESS STEEL HARDWARE. PROVIDE ZINC RICH PAINT APPLIED TO FIELD CUTS OF GALVANIZED STEEL SUPPORT TO MINIMIZE THE POTENTIAL FOR CORROSION PER THE RESPECTIVE STRUT SUPPORT MANUFACTURER'S RECOMMENDATIONS.
- 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.
- 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. CONFIRM LIQUID-TIGHT FLEXIBLE METAL CONDUIT BEARS THE UL LABEL PRIOR TO INSTALLING IT.
- UNLESS OTHERWISE SHOWN, ALL EXPOSED CONDUITS SHALL BE RUN PARALLEL TO OR AT RIGHT ANGLES WITH THE LINES OF THE STRUCTURE.
- ALL STEEL CONDUITS, FITTINGS, NUTS, BOLTS, ETC. SHALL BE GALVANIZED.
- USE CONDUIT BUSHINGS AT EACH CONDUIT TERMINATION. WHERE NO. 4 AWG OR LARGER UNDERGROUND WIRE IS INSTALLED, USE INSULATED BUSHINGS.
- USE DOUBLE LOCK NUTS AT EACH CONDUIT TERMINATION.
- 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.
- UNLESS OTHERWISE NOTED, ALL SINGLE CONDUCTOR CONTROL WIRING SHALL BE NO. 12 AWG. COPPER MINIMUM.
- THE FOLLOWING SHALL APPLY TO RELAY/CONTACTOR PANELS/ENCLOSURES:
 - 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.
 - THE ENCLOSURE(S) SHALL HAVE AMPLE SPACE FOR THE CIRCUIT COMPONENTS, TERMINAL BLOCKS AND INCOMING AND INTERNAL WIRING.
 - ALL CONTROL CONDUCTOR TERMINATIONS SHALL BE OF THE OPEN-EYE CONNECTOR/SCREW TYPE. SOLDERED CLOSED-EYE TERMINATIONS, OR TERMINATIONS WITHOUT CONNECTORS ARE NOT ACCEPTABLE.
 - 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.
 - ACCESS TO, OR REMOVAL OF A CIRCUIT COMPONENT OR TERMINAL BLOCK WILL NOT REQUIRE THE REMOVAL OF ANY OTHER CIRCUIT COMPONENT OR TERMINAL BLOCK.
 - EACH CIRCUIT COMPONENT SHALL BE CLEARLY IDENTIFIED INDICATING ITS CORRESPONDING NUMBER SHOWN ON THE DRAWINGS AND ITS FUNCTION.
 - A COMPLETE WIRING DIAGRAM SHALL BE MOUNTED ON THE INSIDE OF THE COVER. THE DIAGRAM SHALL REPRESENT EACH CONDUCTOR BY A SEPARATE LINE.
 - THE DIAGRAM SHALL IDENTIFY EACH CIRCUIT COMPONENT AN NUMBERING AND COLOR OF EACH TERMINAL CONDUCTOR AND TERMINAL.
 - ALL WIRING SHALL BE NEATLY TRAINED AND LACED.
 - MINIMUM WIRE SIZE SHALL BE NO. 12 AWG.
- FURNISH & INSTALL A WEATHERPROOF WARNING LABEL FOR EACH METER SOCKET, SERVICE DISCONNECT, SAFETY SWITCH, CUTOUT, PANELBOARD, & CONTROL PANEL TO WARN PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARDS, PER THE REQUIREMENTS OF NEC 110.16 "FLASH PROTECTION".

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 ELECTRICAL DETAILS.
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 ELECTRICAL DETAILS.
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.
21. GALVANIZED/PAINTED EQUIPMENT/COMPONENT SURFACES SHALL NOT BE DAMAGED BY DRILLING, FILING, ETC. DRAIN HOLES IN METAL TRANSFORMER HOUSINGS SHALL BE MADE BEFORE GALVANIZING.
22. EDGE LIGHT NUMBERING TAGS SHALL BE FACING THE PAVEMENT.
23. CABLE/SPLICE/DUCT MARKERS SHALL BE PRECAST CONCRETE OF THE SIZE SHOWN. LETTERS/NUMBERS/ARROWS FOR THE LEGEND TO BE IMPRESSED INTO THE TOPS OF THE MARKERS SHALL BE PRE-ASSEMBLED AND SECURED IN THE MOLD BEFORE THE CONCRETE IS POURED. LEGEND INSCRIBED BY HAND IN WET CONCRETE SHALL NOT BE ACCEPTABLE.
24. ALL UNDERGROUND CABLE RUNS SHALL BE IDENTIFIED BY CABLE MARKERS AT 200 FEET MAXIMUM SPACING, WITH AN ADDITIONAL MARKER AT EACH CHANGE OF DIRECTION OF THE CABLE RUN. CABLE MARKERS SHALL BE INSTALLED IMMEDIATELY ABOVE THE CABLES.
25. THERE SHALL BE NO SPLICES BETWEEN THE ISOLATION TRANSFORMERS. L-823 CONNECTORS ARE ALLOWED AT TRANSFORMER CONNECTIONS ONLY, UNLESS OTHERWISE SHOWN.
26. APPLY AN OXIDE INHIBITING, ANTI-SEIZING COMPOUND TO ALL SCREWS, NUTS AND BREAKAGE COUPLING THREADS.
27. LOCATIONS OF ENDS OF ALL UNDERGROUND DUCTS SHALL BE IDENTIFIED BY DUCT MARKERS.
28. WHERE A PARALLEL, CONSTANT VOLTAGE PAPI SYSTEM IS PROVIDED, THE "T" SPLICES SHALL BE OF THE CAST TYPE.
29. CONCRETE USED FOR SLABS, FOOTINGS, BACKFILL AROUND TRANSFORMER HOUSINGS, MARKINGS, ETC. SHALL BE 3500 PSI, AIR-ENTRAINED.
30. ALL POWER AND CONTROL CABLES IN MAN/HAND HOLES SHALL BE TAGGED. USE EMBOSSED COPPER STRIPS TO BE ATTACHED AT BOTH ENDS TO THE CABLE BY THE USE OF PLASTIC STRAPS. MINIMUM OF TWO TAGS SHALL BE PROVIDED ON EACH CABLE IN A MAN/HAND HOLE-ONE AT THE CABLE ENTRANCE AND ONE AT THE CABLE EXIT.
31. THE LOCATION, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND AND/OR ABOVEGROUND UTILITIES INDICATED ON THE PLANS IS NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY WHATEVER IN RESPECT TO ACCURACY, COMPLETENESS, OR SUFFICIENCY OF THE INFORMATION. THERE IS NO GUARANTEE EITHER EXPRESSED OR IMPLIED, THAT THE LOCATIONS, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED IN THE CONSTRUCTION. 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 OWNER'S REPRESENTATIVE AND/OR THE RESIDENT ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY DAMAGE TO SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT. ALL UTILITY CABLES AND LINES SHALL BE LOCATED BY THE RESPECTIVE UTILITY. **CONTACT J.U.L.I.E. FOR UTILITY INFORMATION AT 1-800-892-0123.** ALSO CONTACT AIRPORT DIRECTOR/MANAGER AND AIRPORT PERSONNEL FOR ASSISTANCE IN LOCATING UNDERGROUND AIRPORT CABLES AND/OR UTILITIES. ALSO COORDINATE WORK WITH ALL ABOVEGROUND UTILITIES.
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 150/5340-30F DESIGN AND INSTALLATION DETAILS FOR AIRPORT VISUAL AIDS, CHAPTER 12, PART 12.6; A GROUND MUST BE INSTALLED AT EACH LIGHT FIXTURE. THE PURPOSE OF THE LIGHT BASE GROUND IS TO PROVIDE A DEGREE OF PROTECTION FOR MAINTENANCE PERSONNEL FROM POSSIBLE CONTACT WITH AN ENERGIZED LIGHT BASE OR MOUNTING STAKE THAT MAY RESULT FROM A SHORTED POWER CABLE OR ISOLATION TRANSFORMER. A LIGHT BASE GROUND SHALL BE INSTALLED AT EACH TRANSFORMER BASE/LIGHT CAN ASSOCIATED WITH RUNWAY LIGHTS, TAXIWAY LIGHTS, AND LIGHTED TAXI GUIDANCE SIGNS. A LIGHT BASE GROUND SHALL ALSO BE INSTALLED AT EACH STAKE MOUNTED LIGHT FIXTURE. A LIGHT BASE GROUND SHALL BE INSTALLED AND CONNECTED TO THE METAL FRAME OF EACH TAXI GUIDANCE SIGN AS DETAILED ON THE PLANS AND IN ACCORDANCE WITH THE RESPECTIVE TAXI GUIDANCE SIGN MANUFACTURER RECOMMENDATIONS. THE LIGHT BASE GROUND SHALL BE A #6 AWG BARE COPPER CONDUCTOR BONDED 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), ULTRAWELD BY HARGER, GRAYSLAKE, ILLINOIS (PHONE: 800-842-7437), OR APPROVED EQUAL. 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 150/5340-30E THE RESISTANCE TO GROUND OF THE RESPECTIVE MOUNTING STAKE OR LIGHT BASE (WITH GROUND ROD CONNECTED) MUST BE 25 OHMS OR LESS.

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SOUTHERN ILLINOIS AIRPORT
MURPHYSBORO / CARBONDALE, ILLINOIS



IL PROJ.: MDH-4173

Hanson Project No.	11A0037D_0001
Filename	NOT TO SCALE
Scale	04/20/2012
Date	E-003.DWG
LAYOUT	JSL 03/21/2012
DRAWN	CWS 03/21/2012
REVIEWED	JSL 04/16/2012



Hanson Professional Services Inc.
3125 New Era Road
Murphysboro, Illinois 62866
Offices Nationwide

CONSTRUCT PERIMETER ROAD TO SUPPORT ARFF/SRE BUILDING

ELECTRICAL NOTES SHEET 2

MAY 04, 2012 7:16 AM SCHUB01446 C:\AIRPORTS\SIA-CARBONDALE\11A0037\AIRPORT\SHEET\E-003.DWG - ELECTRICAL NOTES SHEET 2

ELECTRICAL LEGEND - ONE-LINE DIAGRAM	
	CABLE TERMINATOR/LUG, TERMINAL BLOCK, OR SPLICE
	TRANSFORMER
	DISCONNECT SWITCH
	FUSIBLE DISCONNECT SWITCH
	CIRCUIT BREAKER
	THERMAL MAGNETIC CIRCUIT BREAKER
	NORMALLY OPEN (N.O.) CONTACT
	NORMALLY CLOSED (N.C.) CONTACT
	TOGGLE SWITCH / 2 POSITION SWITCH
	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 OR TERMINALS
	EQUIPMENT, XXX = DEVICE DESCRIPTION
	GROUND BAR, GROUND BUS OR GROUND TERMINAL
	SOLID NEUTRAL, NEUTRAL BUS, OR NEUTRAL TERMINAL
	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: N = NORMAL EM = EMERGENCY L = LOAD
	ENGINE GENERATOR SET

ELECTRICAL LEGEND - PLANS	
	CONDUIT (EXPOSED)
	CONDUIT OR UNIT DUCT (CONCEALED OR BURIED)
	DUCT
	DUCT
	BURIED/UNDERGROUND ELECTRIC
	OVERHEAD ELECTRIC
	TOGGLE SWITCH
	PUSH BUTTON STATION
	WALL OR CEILING MTD. JUNCTION BOX. CONFIGURATION VARIES WITH USE
	SINGLE THROW DISCONNECT SWITCH
	SINGLE THROW, FUSIBLE DISCONNECT SWITCH
	ENCLOSED CIRCUIT BREAKER
	MOTOR
	TRANSFORMER
	ELECTRIC UTILITY METER
	ENCLOSURE
	CIRCUIT BREAKER PANEL-SEE SCHEDULES
	CONTROL PANEL
	GROUND ROD
	POLE WITH CAMERA

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
LTFCM	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 WORK, POWER OUTAGES, AND/OR SHUT DOWN OF EXISTING SYSTEMS SHALL BE COORDINATED WITH THE AIRPORT DIRECTOR/MANAGER. 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

208Y/120 VAC, 3 PHASE, 4 WIRE
 PHASE A BLACK
 PHASE B RED
 PHASE C BLUE
 NEUTRAL WHITE
 GROUND GREEN

- SEE RESPECTIVE SITE PLANS FOR SITE LEGEND INFORMATION.
- LTFCM 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 LTFCM THAT IS NOT UL LISTED. CONFIRM LTFCM BEARS THE UL LABEL PRIOR TO INSTALLATION.
- ALL ENCLOSURES RATED NEMA 4, 4X SHALL HAVE WATERTIGHT HUBS AT CONDUIT ENTRANCES U.L. LISTED NEMA 4, 4X FOR THE RESPECTIVE ENCLOSURE, TO MAINTAIN THE NEMA 4, 4X RATING.
- HIGH VOLTAGE & LOW VOLTAGE CIRCUITS SHALL NOT BE INSTALLED IN THE SAME WIREWAY, CONDUIT, DUCT, OR HANDHOLE.
- PER NEC 511 THE GARAGE AREA OF THE ARFF/SRE BUILDING MIGHT BE CLASSIFIED AS A CLASS I, DIVISION 2, GROUP D HAZARDOUS LOCATION FOR A LEVEL OF 18 INCHES ABOVE THE FLOOR. ALL ELECTRICAL INSTALLATIONS SHALL CONFORM TO THE APPLICABLE SECTIONS OF NEC 500, 501 AND 511 IN ADDITION TO THE OTHER APPLICABLE SECTIONS OF NEC. WHERE ELECTRICAL EQUIPMENT IS INSTALLED IN A CLASSIFIED HAZARDOUS LOCATION IT SHALL BE SUITABLE FOR USE IN THE RESPECTIVE CLASSIFIED HAZARDOUS LOCATION. WHERE POSSIBLE, AVOID INSTALLATION OF ELECTRICAL EQUIPMENT, RACEWAYS AND WIRING IN THE CLASSIFIED HAZARDOUS AREAS OF THE FACILITY.

REVISION	DATE

SOUTHERN ILLINOIS AIRPORT
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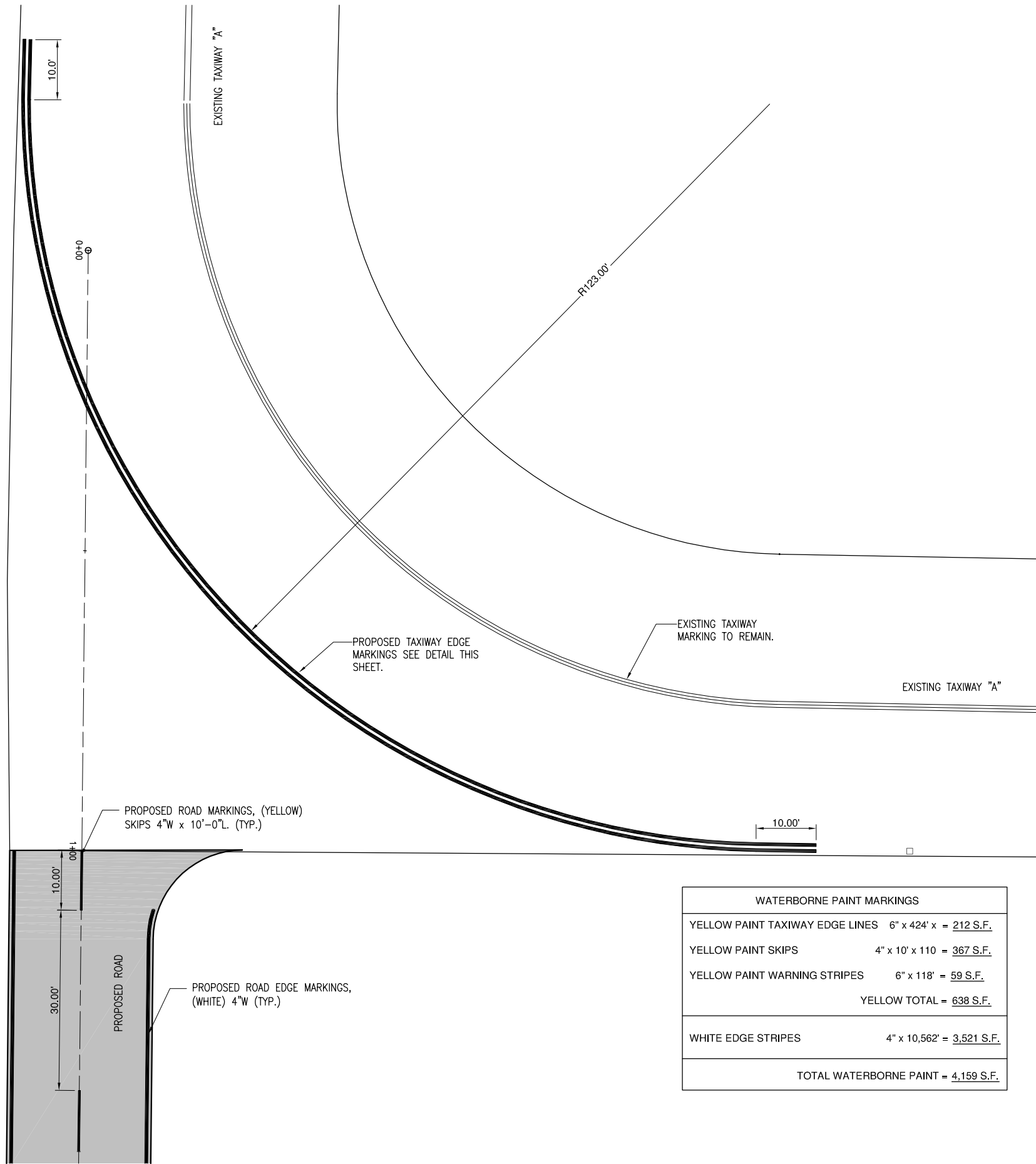
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REVIEWED	JSL 04/16/2012

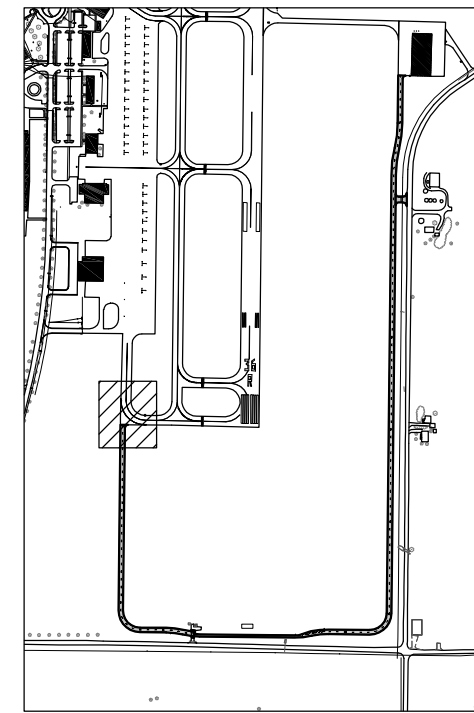


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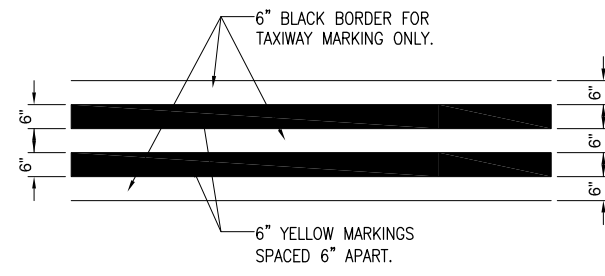
CONSTRUCT PERIMETER
 ROAD TO SUPPORT
 ARFF/SRE BUILDING
 ELECTRICAL LEGEND
 AND ABBREVIATIONS



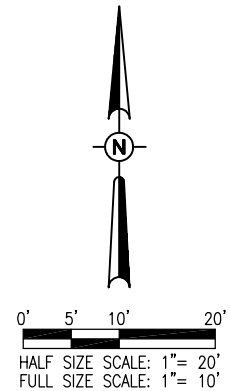
WATERBORNE PAINT MARKINGS	
YELLOW PAINT TAXIWAY EDGE LINES	6" x 424' x = 212 S.F.
YELLOW PAINT SKIPS	4" x 10' x 110 = 367 S.F.
YELLOW PAINT WARNING STRIPES	6" x 118' = 59 S.F.
YELLOW TOTAL = 638 S.F.	
WHITE EDGE STRIPES	4" x 10,562' = 3,521 S.F.
TOTAL WATERBORNE PAINT = 4,159 S.F.	



KEY PLAN



TAXIWAY EDGE MARKING



SO081

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IL. PROJ.: MDH-4173

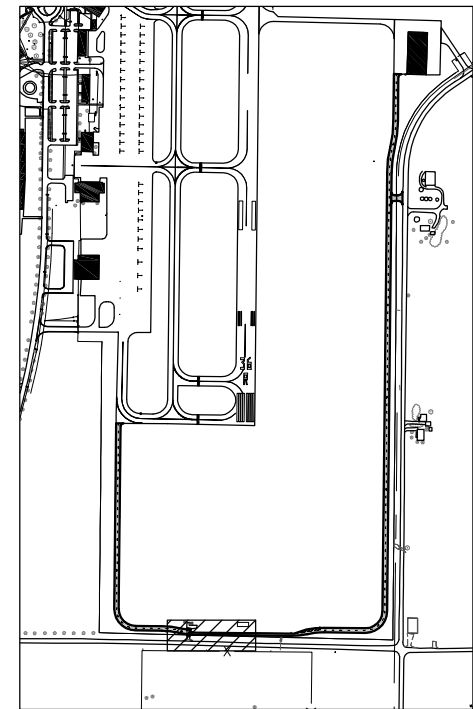
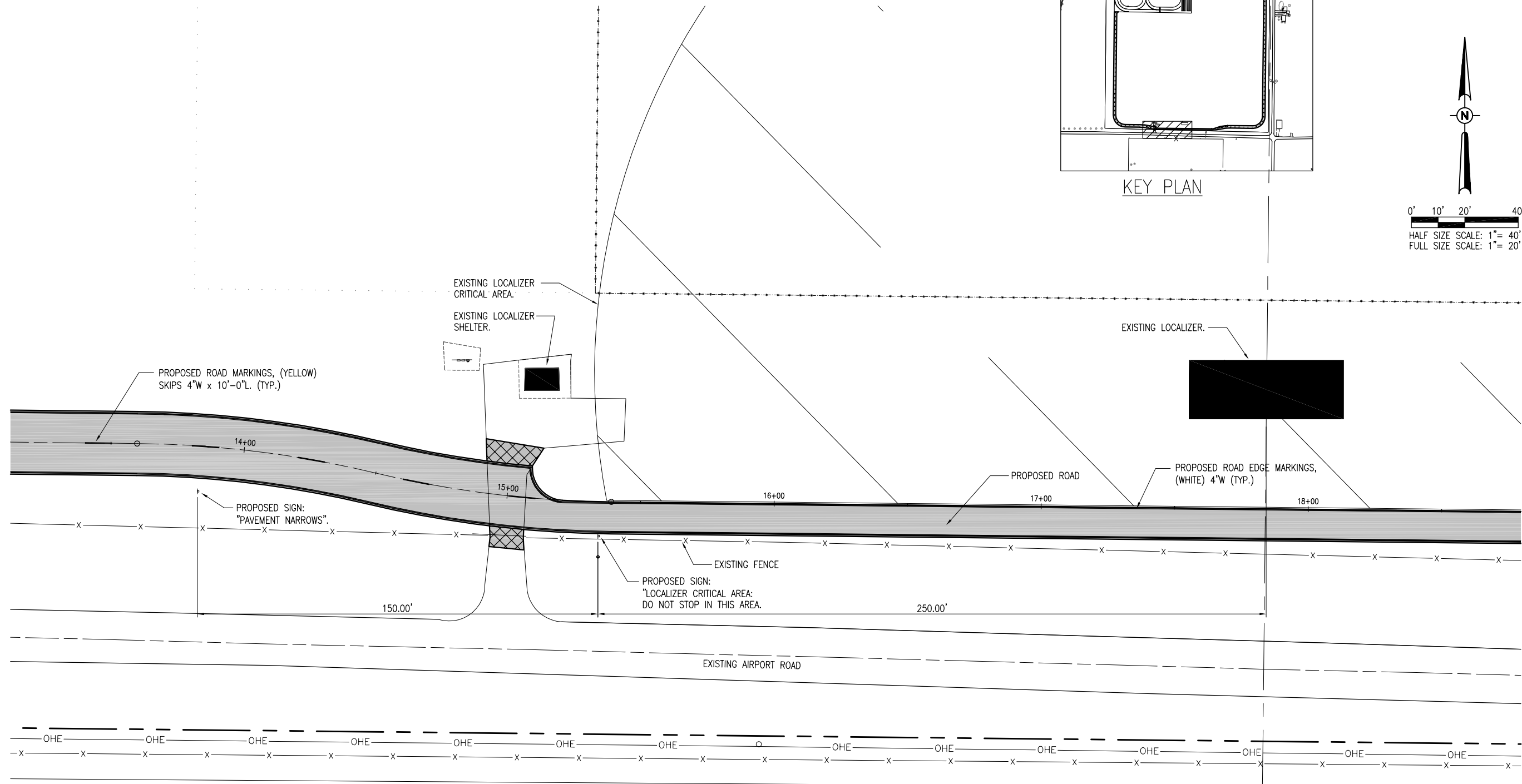
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Scale	NOT TO SCALE
Date	04/20/2012
LAYOUT	JSL 03/21/2012
DRAWN	CWS 03/21/2012
REVIEWED	JSL 04/16/2012

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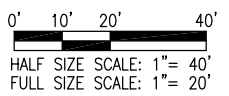
CONSTRUCT PERIMETER
 ROAD TO SUPPORT
 ARFF/SRE BUILDING

PROPOSED
 PAVEMENT MARKINGS
 STA. 0+00 TO 1+50 & DETAILS

MAY 03, 2012 4:47 PM SCHUB01446
 C:\AIRPORTS\SIA-CARBONDALE\11A0037\AIRPORT\SHEET\R-021MRK.DWG - LOCALIZER 1



KEY PLAN



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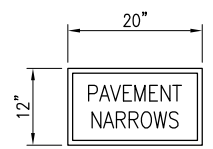
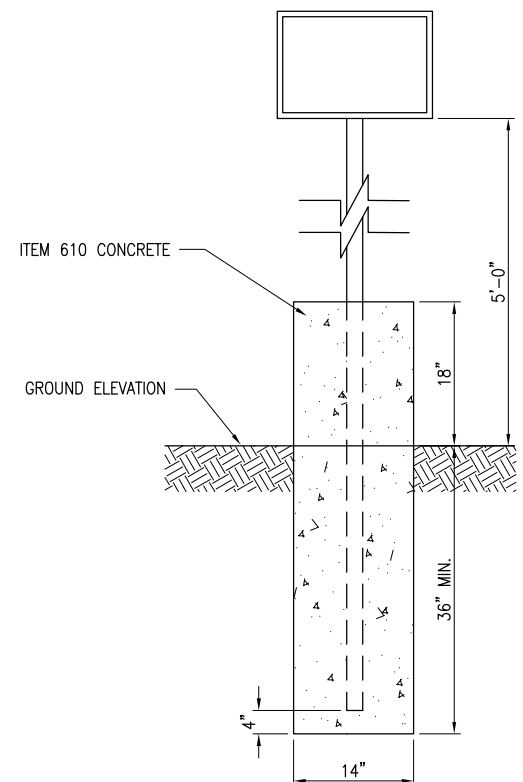
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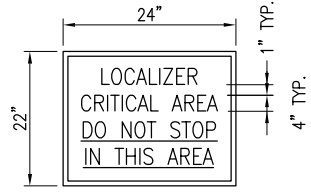
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CONSTRUCT PERIMETER
 ROAD TO SUPPORT
 ARFF/SRE BUILDING

PROPOSED
 PAVEMENT MARKING PLAN
 STA. 13+50 TO 18+00

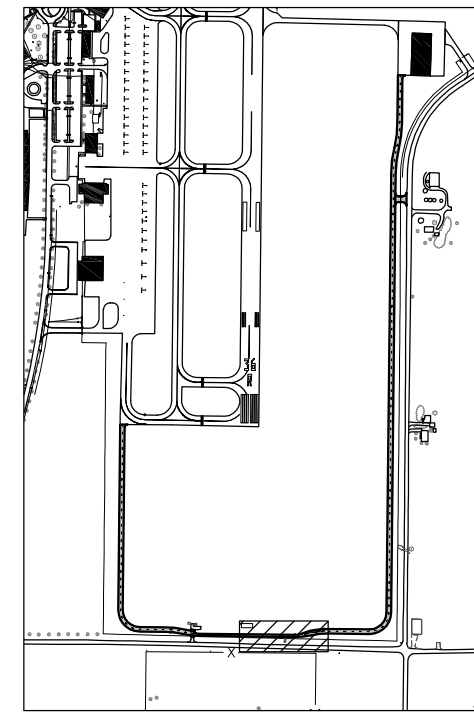


SIGN DETAIL
"NOT TO SCALE"



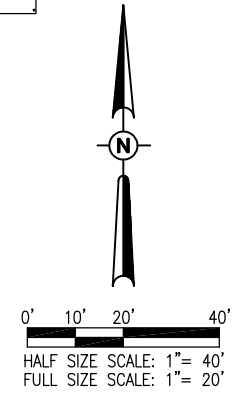
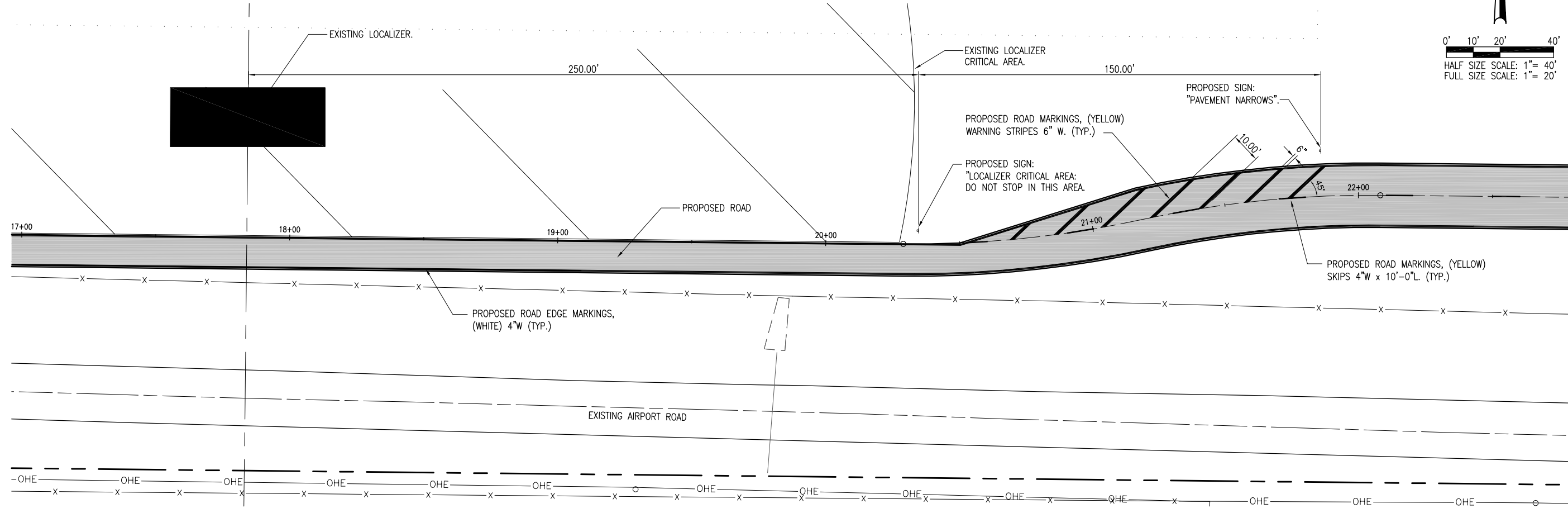
SIGN DETAIL
"NOT TO SCALE"

- NOTES:
1. SIGN SHALL BE 0.08 GA. ALUMINUM ALLOY SHEET. LETTERING COLOR SHALL BE RED. BACKGROUND SHALL BE WHITE. TOP OF SIGN SHALL BE 5 FT. ABOVE GROUND ELEVATION.
 2. SIGN SHALL BE MOUNTED ON A STEEL POST, TYPE A, CONFORMING TO IDOT STD. 720011. POST AND SIGN INSTALLATION SHALL CONFORM TO IDOT STD. 729001.
 3. PAYMENT SHALL BE MADE UNDER ITEM AR910200, ROADWAY SIGN, PER EACH, AND SHALL INCLUDE THE COST OF THE SIGN, POST, ITEM 610 CONCRETE, HARDWARE, INSTALLATION, LABOR AND ALL INCIDENTALS TO COMPLETE THE WORK.



KEY PLAN

PROPOSED SIGN LOCATION
"NOT TO SCALE"



DATE	REVISION	BY

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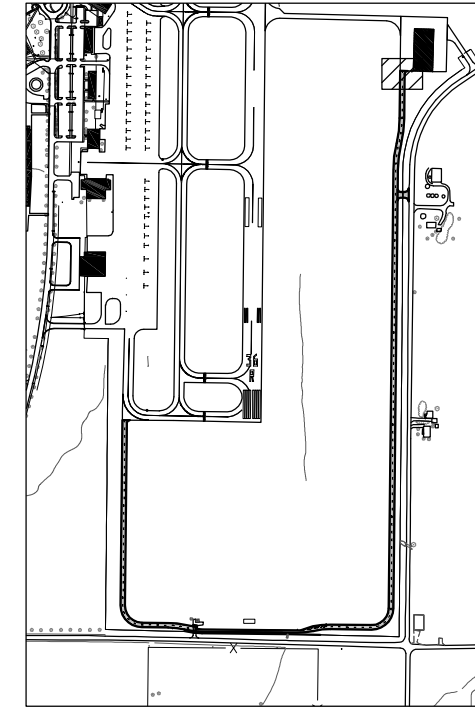
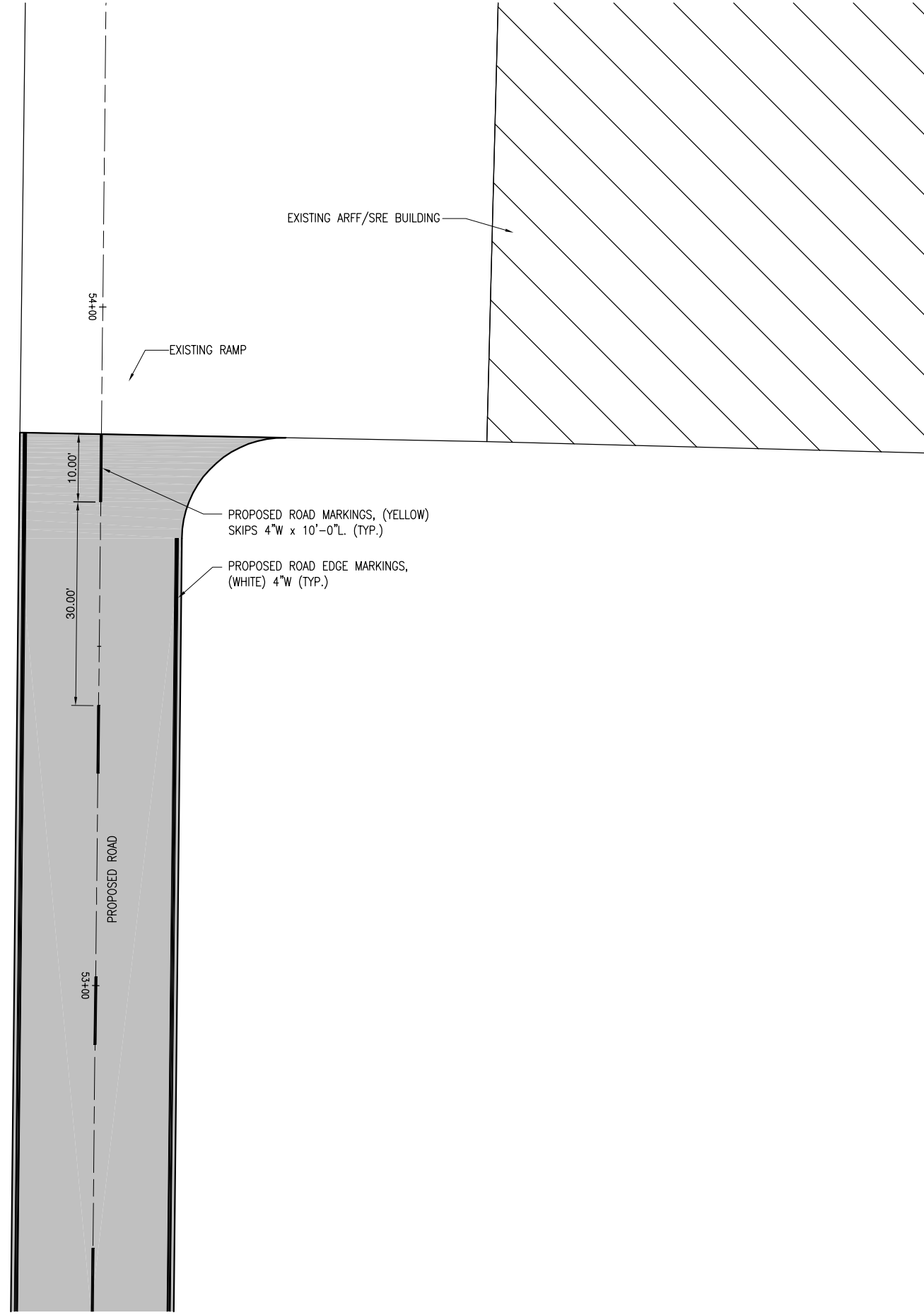


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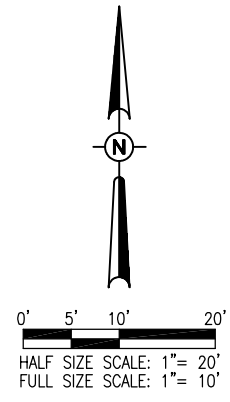
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Scale	NOT TO SCALE
Date	04/20/2012
LAYOUT	JSL 03/21/2012
DRAWN	CWS 03/21/2012
REVIEWED	JSL 04/16/2012



CONSTRUCT PERIMETER ROAD TO SUPPORT ARFF/SRE BUILDING
PROPOSED PAVEMENT MARKING PLAN
STA. 18+00 TO 22+00 & DETAILS




KEY PLAN



SO081

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SOUTHERN ILLINOIS AIRPORT
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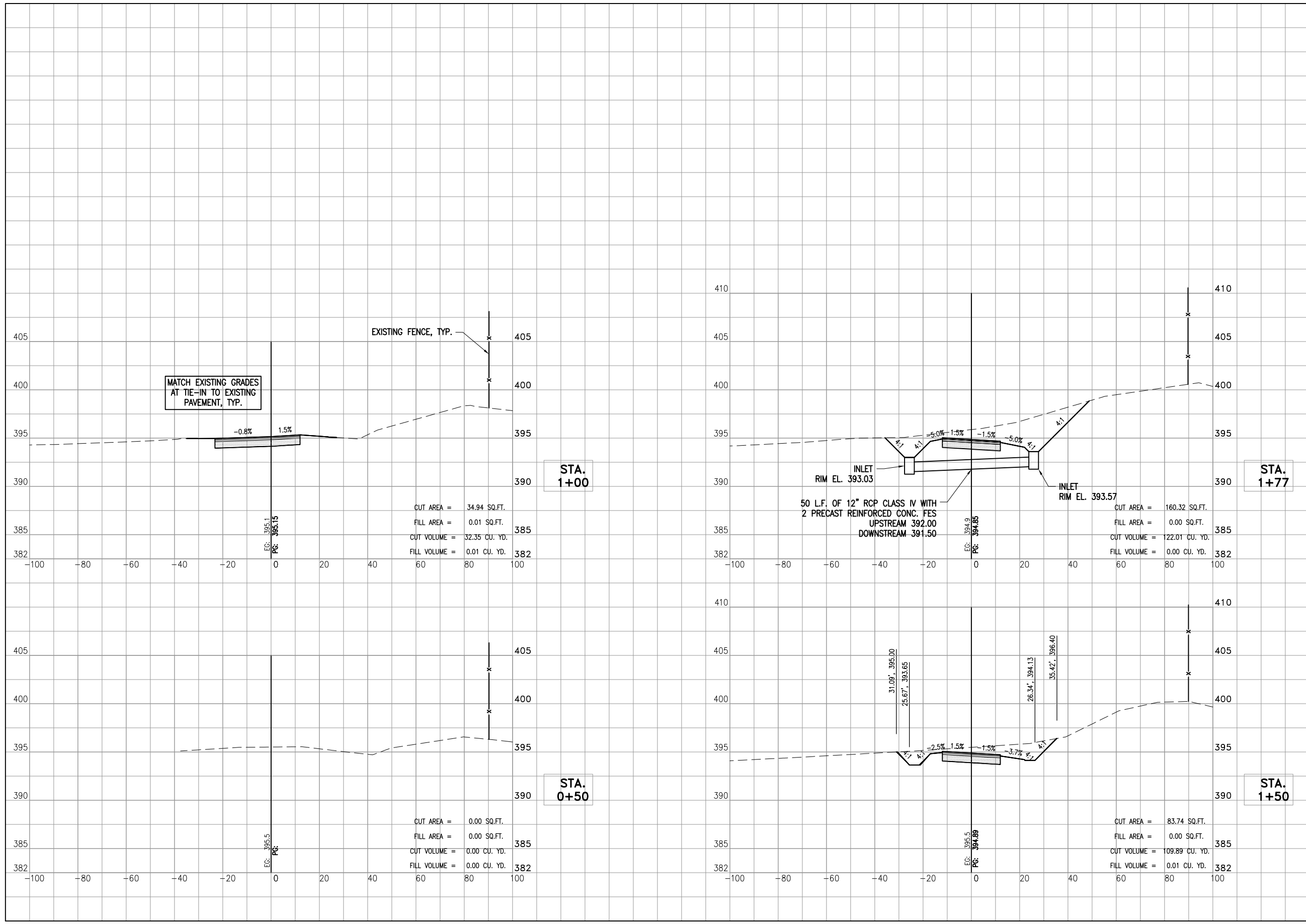
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CONSTRUCT PERIMETER
 ROAD TO SUPPORT
 ARFF/SRE BUILDING

PROPOSED
 PAVEMENT MARKING PLAN
 STA. 52+50 TO STA. 54+00



MAY 07, 2012 5:30 PM HARR01115

REVISION	DATE

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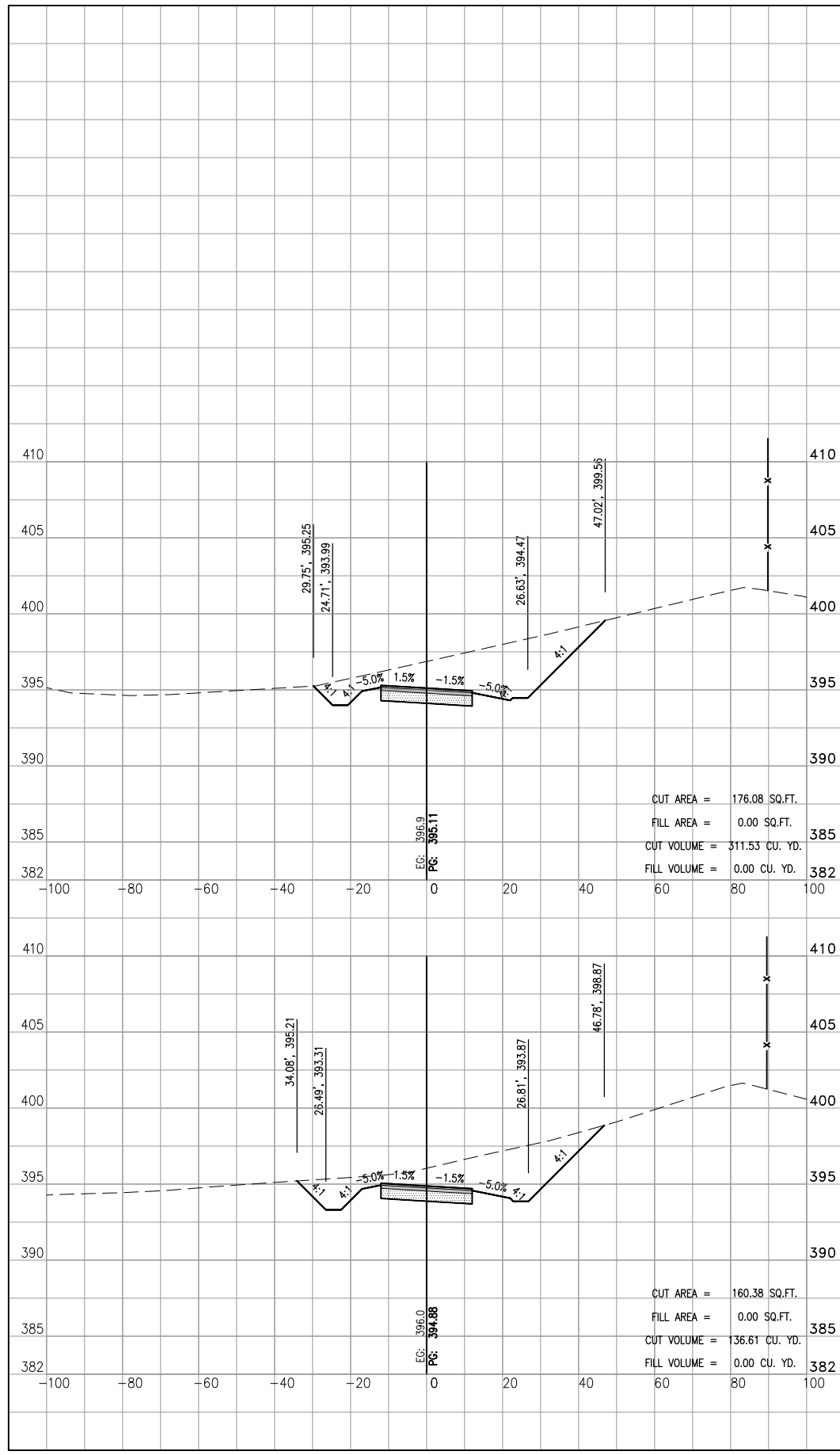
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Date 04/20/12	LAYOUT MLH 03/30/12	DRAWN DAW 03/30/12
REVIEWED JSL 04/20/12		

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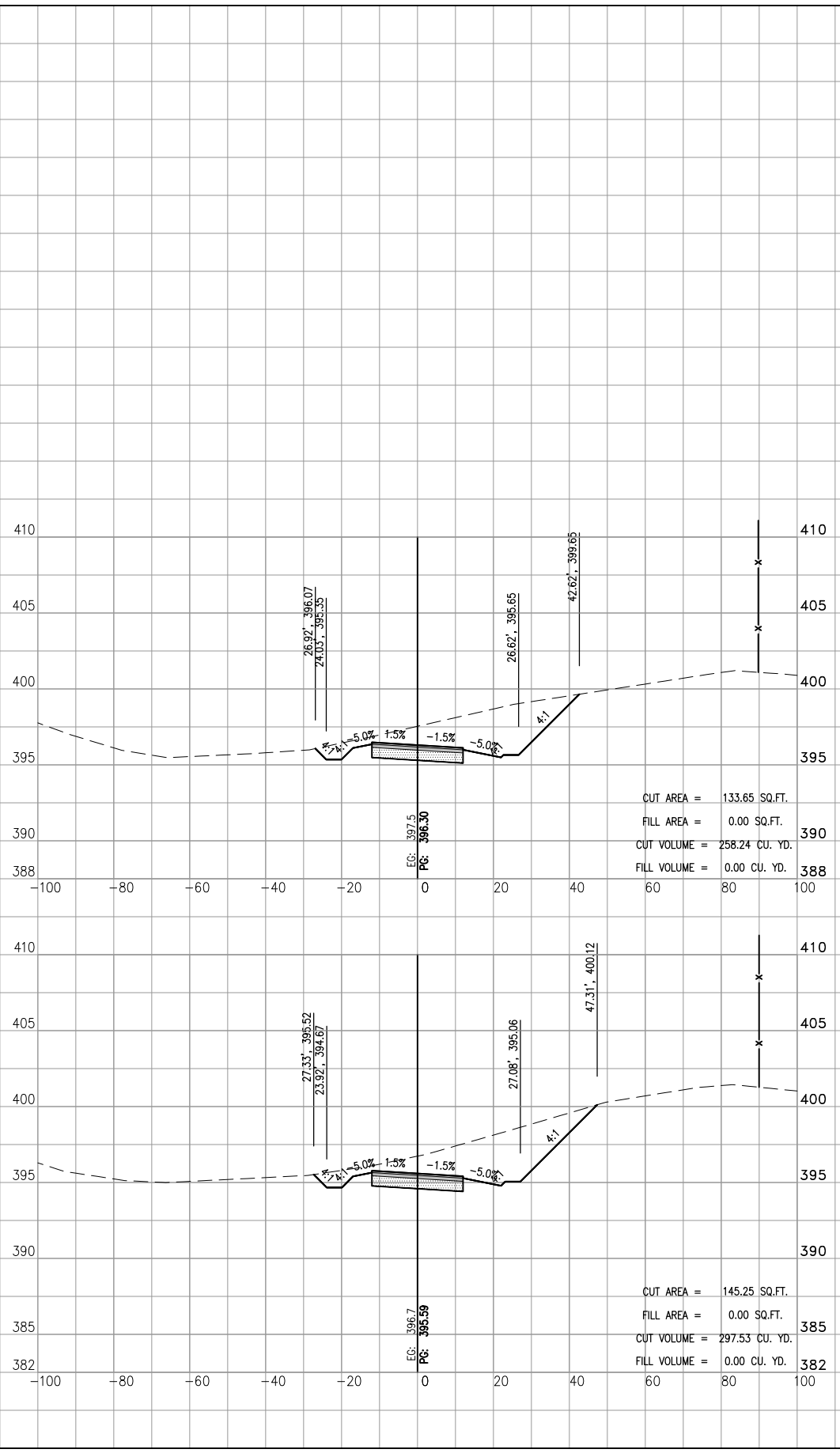
CONSTRUCT PERIMETER ROAD TO SUPPORT ARFF/SRE BUILDING

CROSS SECTION STA. 0+50 TO STA. 1+77



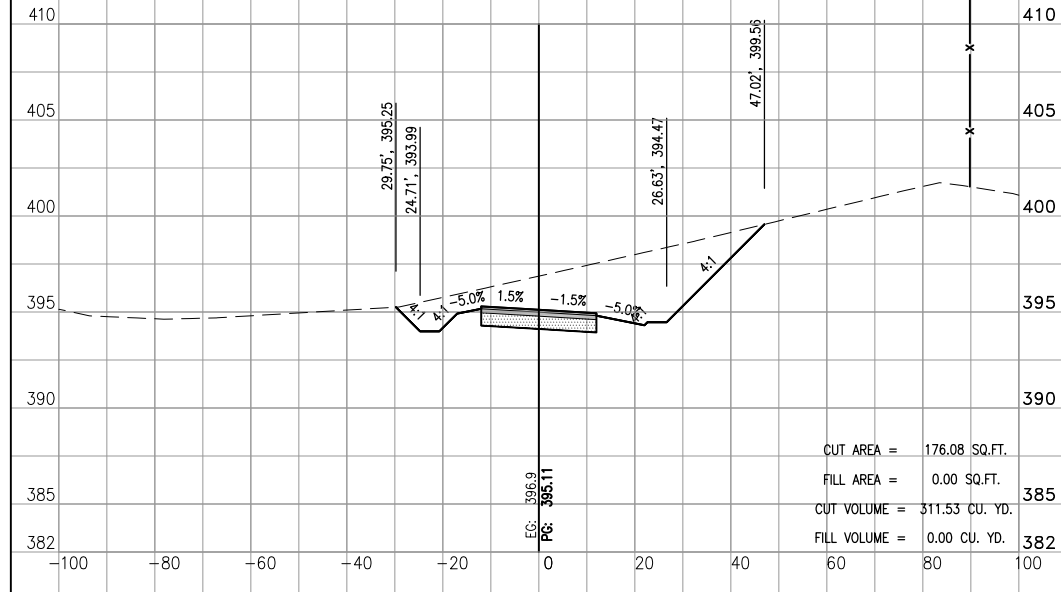
STA. 2+00

CUT AREA = 160.38 SQ.FT.
 FILL AREA = 0.00 SQ.FT.
 CUT VOLUME = 136.61 CU. YD.
 FILL VOLUME = 0.00 CU. YD.



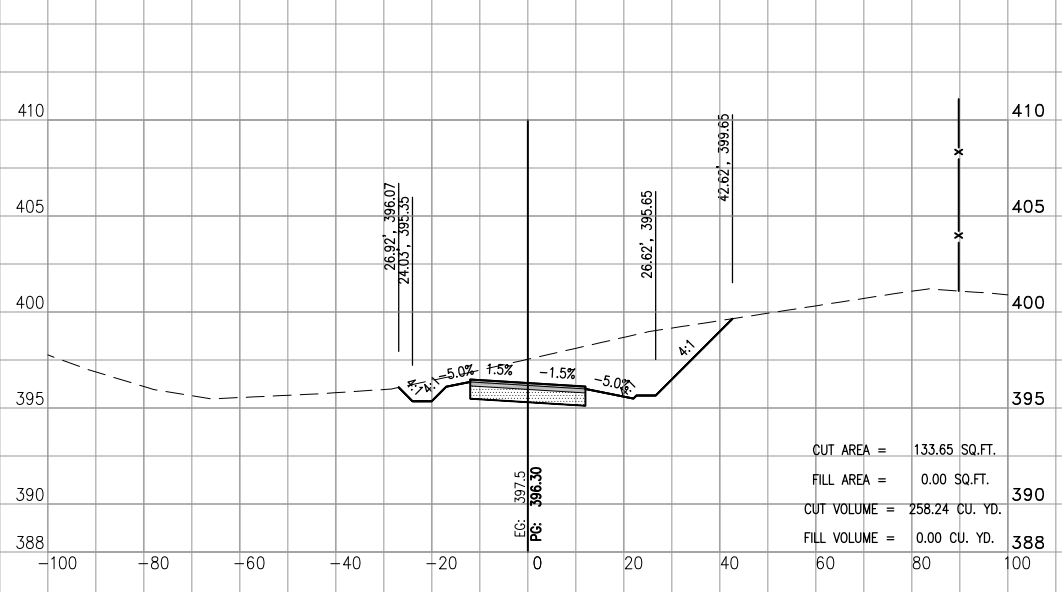
STA. 2+50

CUT AREA = 176.08 SQ.FT.
 FILL AREA = 0.00 SQ.FT.
 CUT VOLUME = 311.53 CU. YD.
 FILL VOLUME = 0.00 CU. YD.



STA. 3+00

CUT AREA = 133.65 SQ.FT.
 FILL AREA = 0.00 SQ.FT.
 CUT VOLUME = 258.24 CU. YD.
 FILL VOLUME = 0.00 CU. YD.

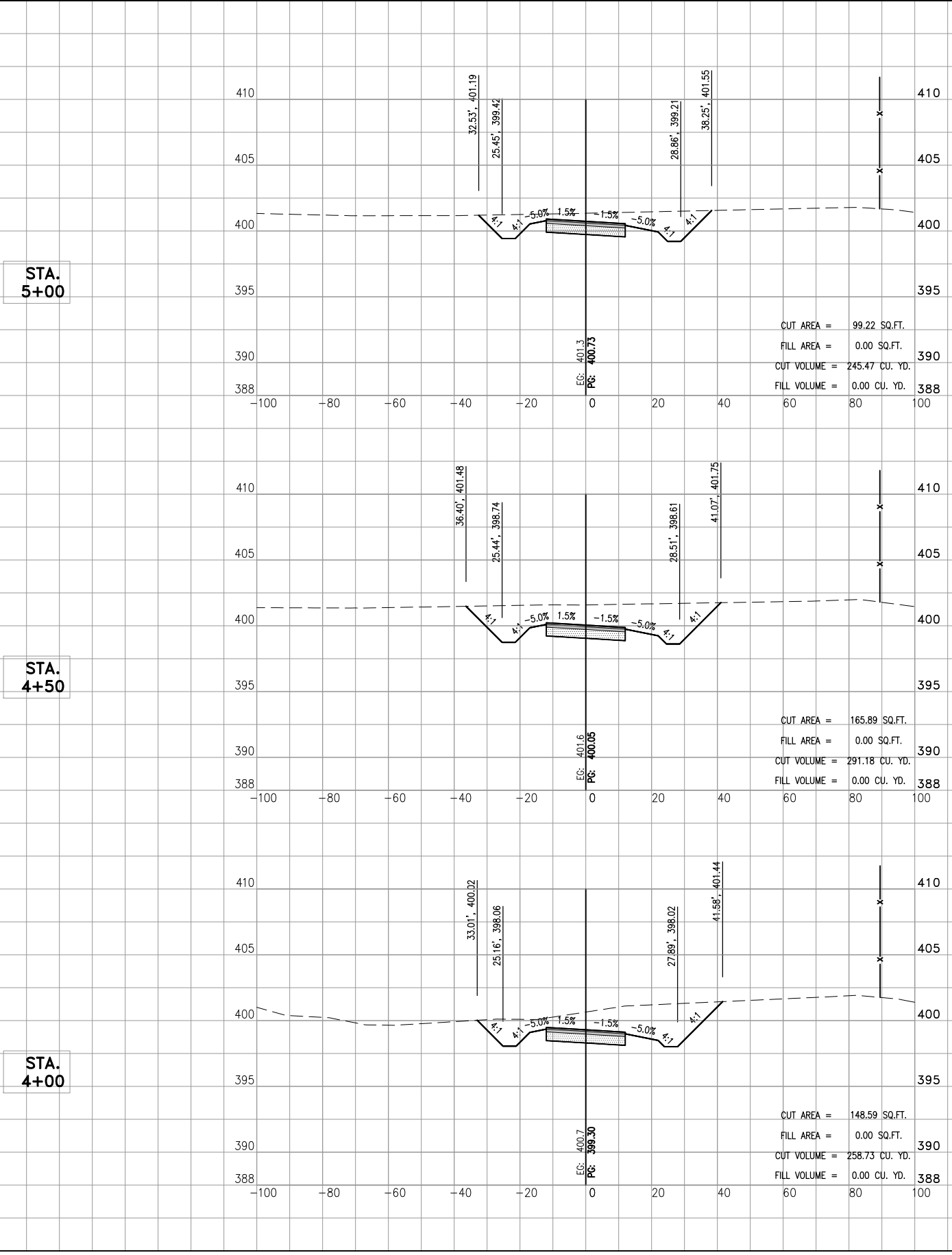
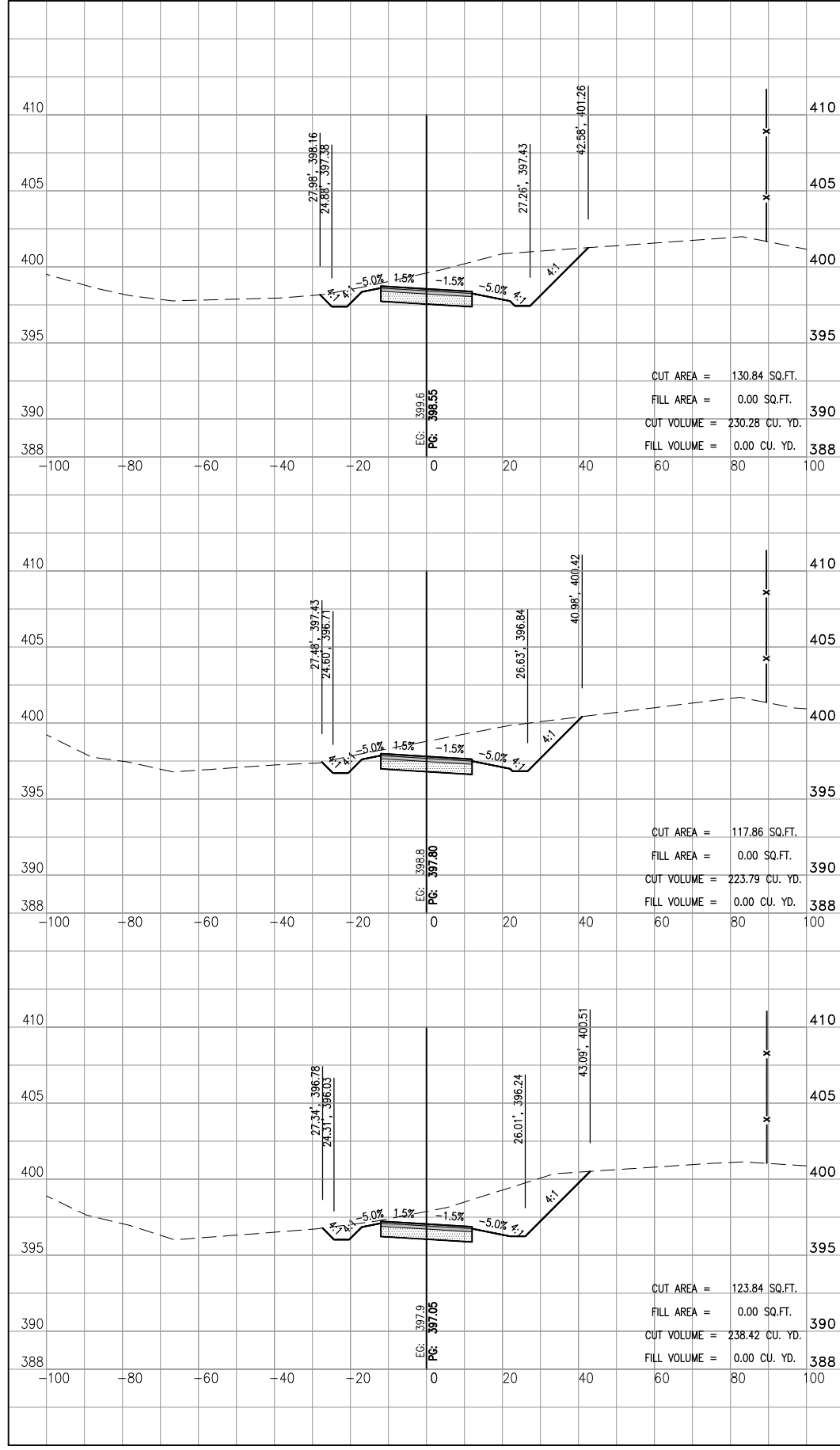


STA. 3+50

CUT AREA = 145.25 SQ.FT.
 FILL AREA = 0.00 SQ.FT.
 CUT VOLUME = 297.53 CU. YD.
 FILL VOLUME = 0.00 CU. YD.

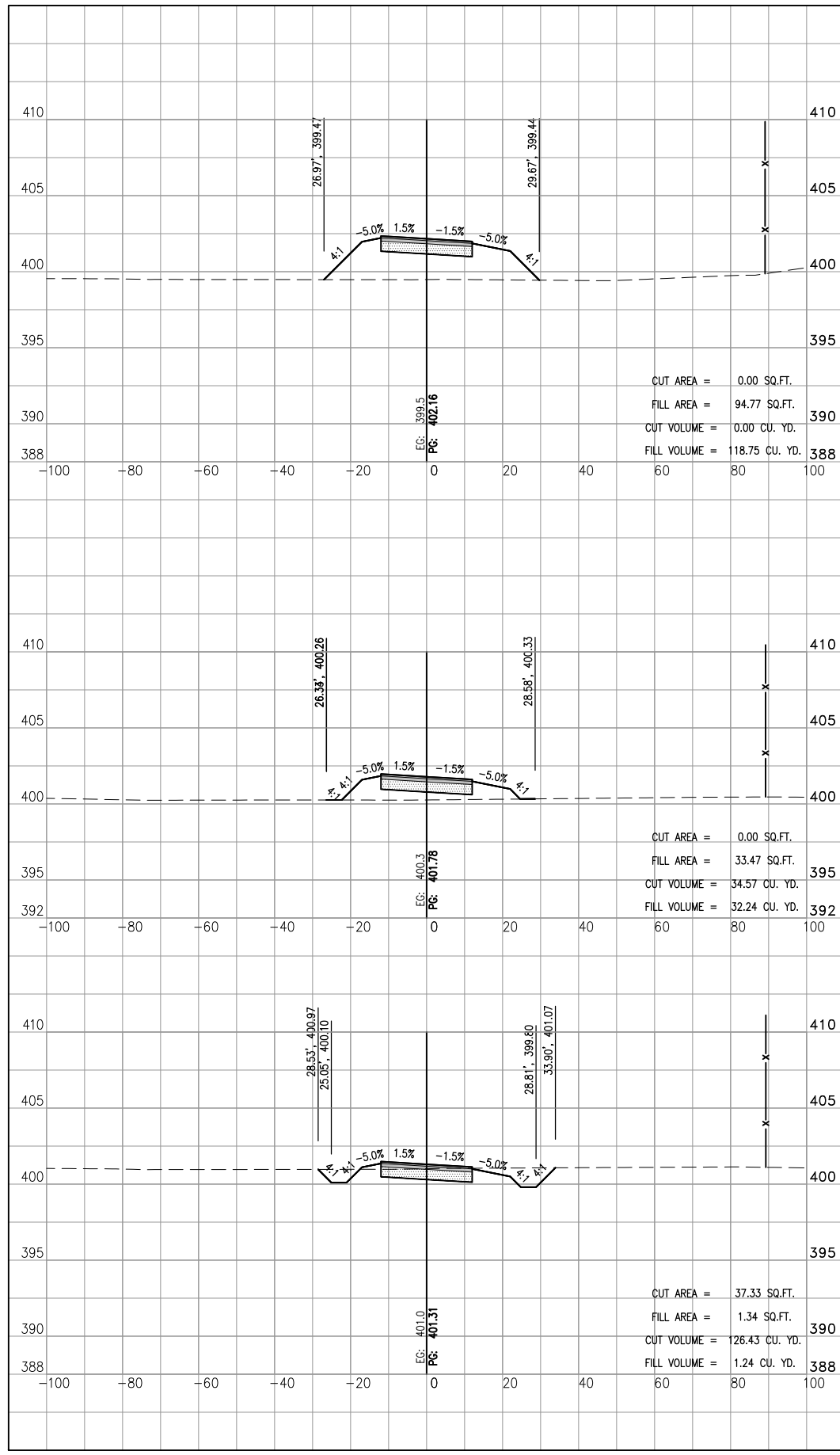
MAY 07, 2012 5:30 PM HARR01115

<p>CONSTRUCT PERIMETER ROAD TO SUPPORT ARFF/SRE BUILDING</p>	
<p>CROSS SECTION STA. 2+00 TO STA. 3+50</p>	
<p>26 26 of 51 sheets</p>	
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<p> LAYOUT MLH 03/30/12 DRAWN DAW 03/30/12 REVIEWED JSL 04/20/12 </p>	<p> Hanson Project No. 11A0037 Filename C-302-XS.DWG Scale 1"=20'H 1"=5'V Date 04/20/12 </p>
<p> SOUTHERN ILLINOIS AIRPORT MURPHYSBORO / CARBONDALE, ILLINOIS SIA SOUTHERN ILLINOIS AIRPORT IL PROJ.: MDH-4173 </p>	
DATE	REVISION



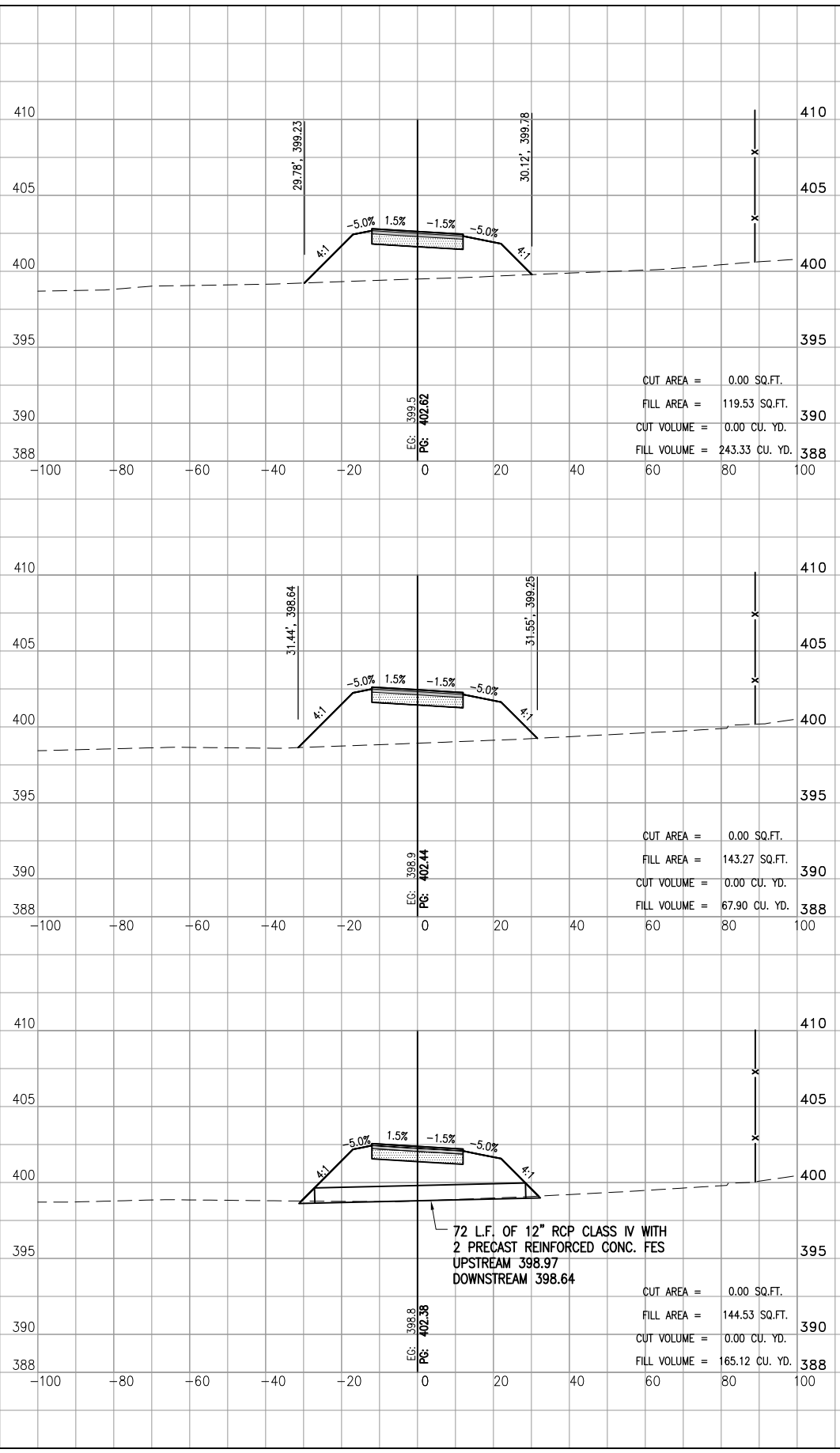
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	<p>LAYOUT MLH 03/30/12 DRAWN DAW 03/30/12 REVIEWED JSL 04/20/12</p>	<p>DATE</p>
<p>CONSTRUCT PERIMETER ROAD TO SUPPORT ARFF/SRE BUILDING</p>	<p>CROSS SECTION STA. 4+00 TO STA. 6+50</p>	<p>SOUTHERN ILLINOIS AIRPORT MURPHYSBORO / CARBONDALE, ILLINOIS</p> <p>IL PROJ.: MDH-4173</p>
<p>27</p> <p>27 of 51 sheets</p>		



STA.
8+00

CUT AREA = 0.00 SQ.FT.
 FILL AREA = 94.77 SQ.FT.
 CUT VOLUME = 0.00 CU. YD.
 FILL VOLUME = 118.75 CU. YD.



STA.
7+50

CUT AREA = 0.00 SQ.FT.
 FILL AREA = 33.47 SQ.FT.
 CUT VOLUME = 34.57 CU. YD.
 FILL VOLUME = 32.24 CU. YD.

STA.
9+00

CUT AREA = 0.00 SQ.FT.
 FILL AREA = 119.53 SQ.FT.
 CUT VOLUME = 0.00 CU. YD.
 FILL VOLUME = 243.33 CU. YD.

STA.
8+50

CUT AREA = 0.00 SQ.FT.
 FILL AREA = 143.27 SQ.FT.
 CUT VOLUME = 0.00 CU. YD.
 FILL VOLUME = 67.90 CU. YD.

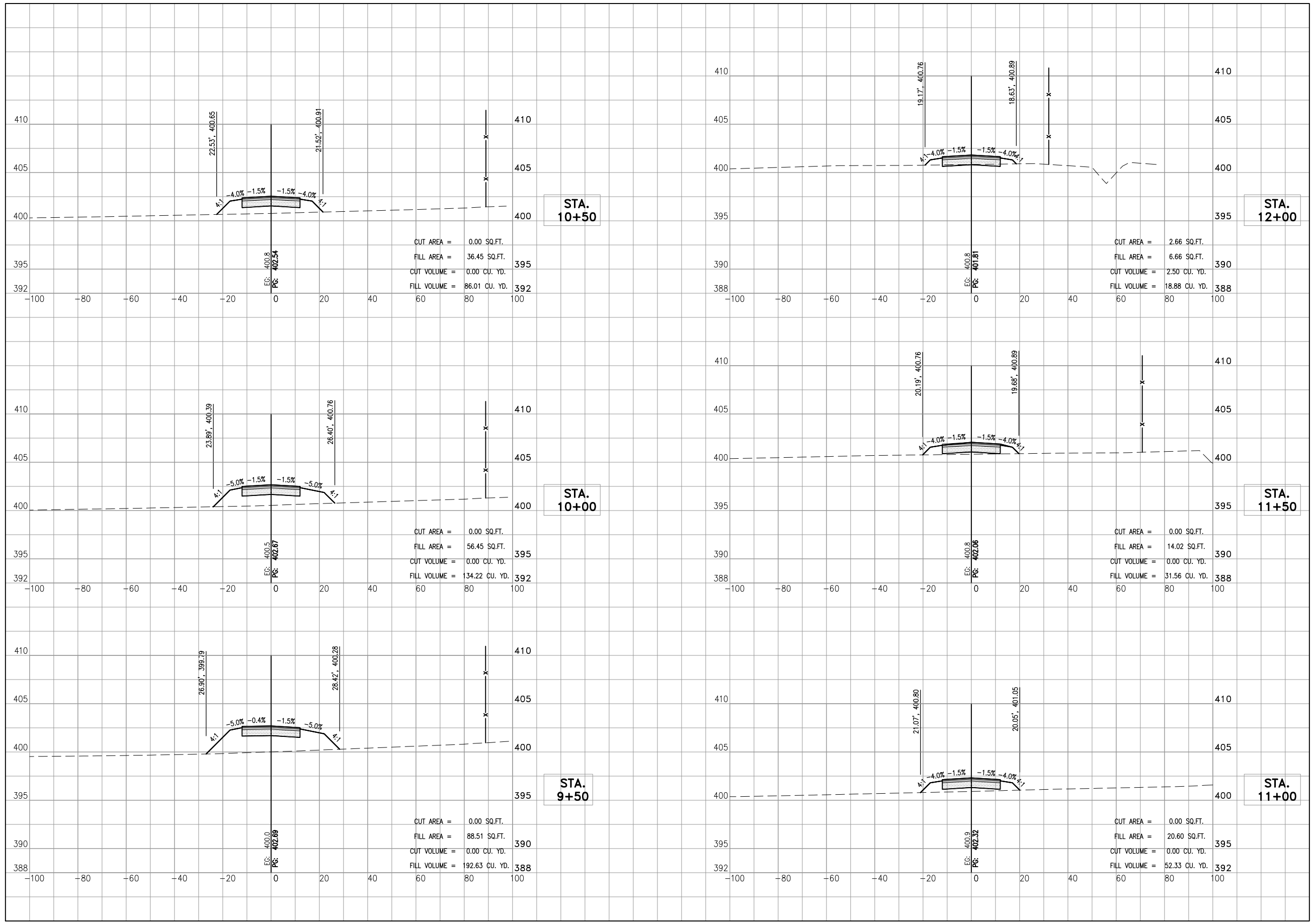
STA.
8+37

CUT AREA = 0.00 SQ.FT.
 FILL AREA = 144.53 SQ.FT.
 CUT VOLUME = 0.00 CU. YD.
 FILL VOLUME = 165.12 CU. YD.

72 LF. OF 12" RCP CLASS IV WITH
 2 PRECAST REINFORCED CONC. FES
 UPSTREAM 398.97
 DOWNSTREAM 398.64

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DATE	
<p>SOUTHERN ILLINOIS AIRPORT MURPHYSBORO / CARBONDALE, ILLINOIS</p> <p>STIA SOUTHERN ILLINOIS AIRPORT</p> <p>IL PROJ.: MDH-4173</p>	
Hanson Project No. 11A0037	LAYOUT MLH 03/30/12
Filename C-302-XS.DWG	DRAWN DAW 03/30/12
Scale 1"=20'H 1"=5'V	REVIEWED JSL 04/20/12
Date 04/20/12	
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<p>CONSTRUCT PERIMETER ROAD TO SUPPORT ARFF/SRE BUILDING</p> <p>CROSS SECTION STA. 7+00 TO STA. 9+00</p>	
<p>28</p> <p>28 of 51 sheets</p>	



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REVISION	DATE

SOUTHERN ILLINOIS AIRPORT
MURPHYSBORO / CARBONDALE, ILLINOIS

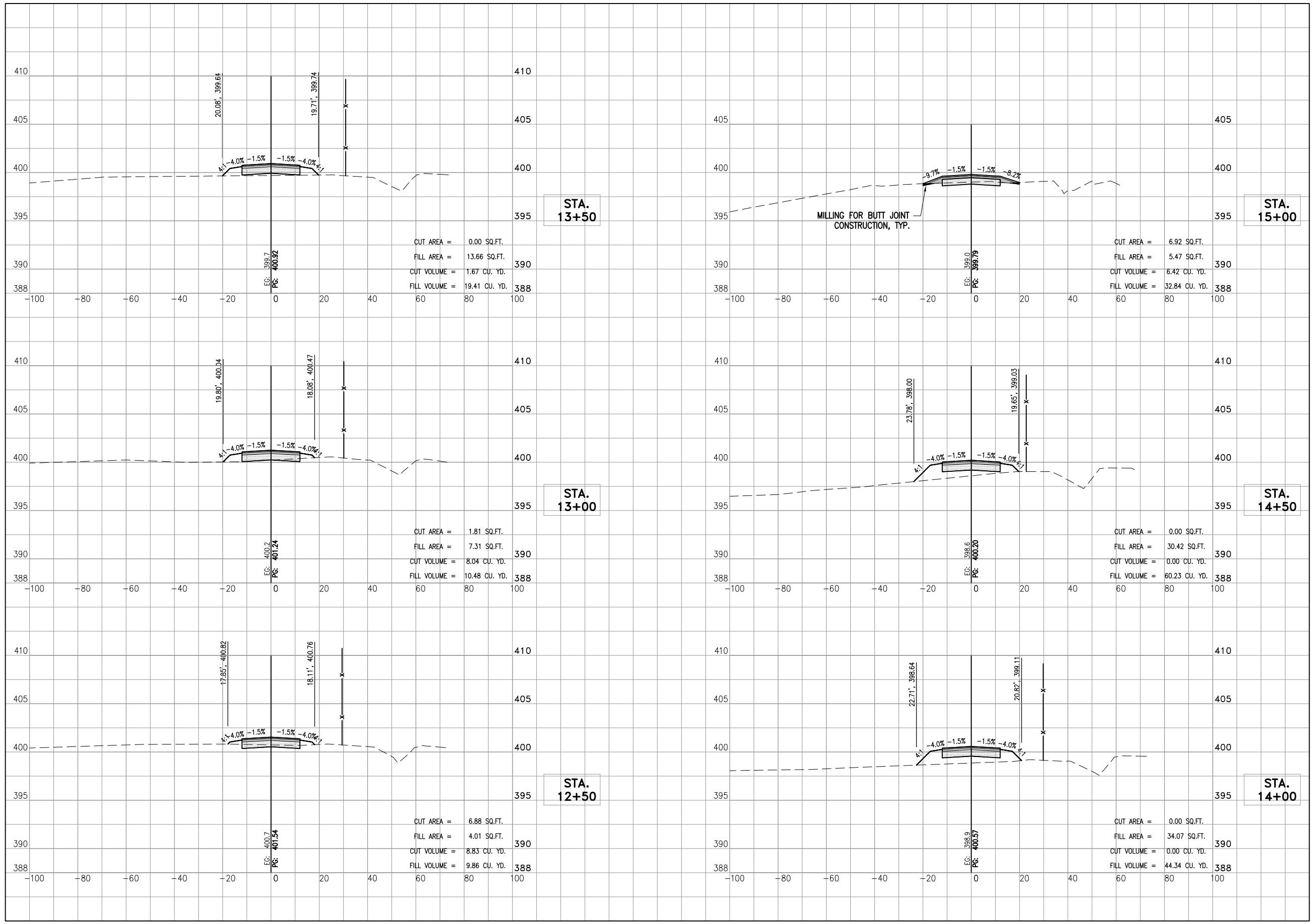
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Hanson Project No. 11A0037	File Name C-302-XS.DWG	Scale 1"=20'H 1"=5'V
Date 04/20/12	LAYOUT MLH	03/30/12
	DRAWN DAW	03/30/12
	REVIEWED JSL	04/20/12

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CONSTRUCT PERIMETER ROAD TO SUPPORT ARFF/SRE BUILDING

CROSS SECTION STA. 9+50 TO STA. 12+00



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SOUTHERN ILLINOIS AIRPORT
 MURPHYSBORO / CARBONDALE, ILLINOIS

SIA
 SOUTHERN ILLINOIS AIRPORT

IL PROJ.: MDH-4173

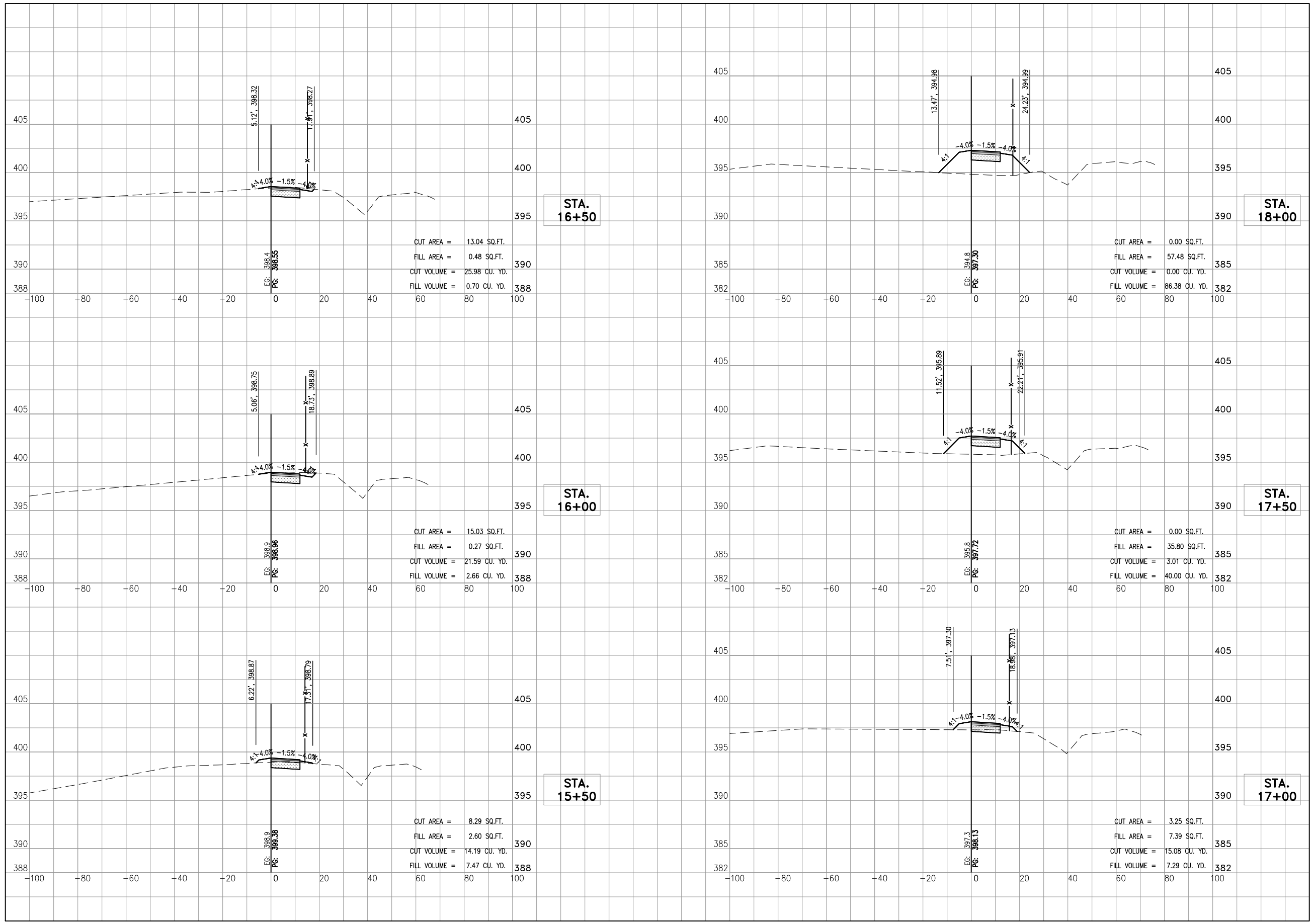
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Date 04/20/12	LAYOUT MLH	03/30/12
	DRAWN DAW	03/30/12
	REVIEWED JSL	04/20/12

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CONSTRUCT PERIMETER ROAD TO SUPPORT ARFF/SRE BUILDING

CROSS SECTION STA. 12+50 TO STA. 15+00



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MURPHYSBORO / CARBONDALE, ILLINOIS

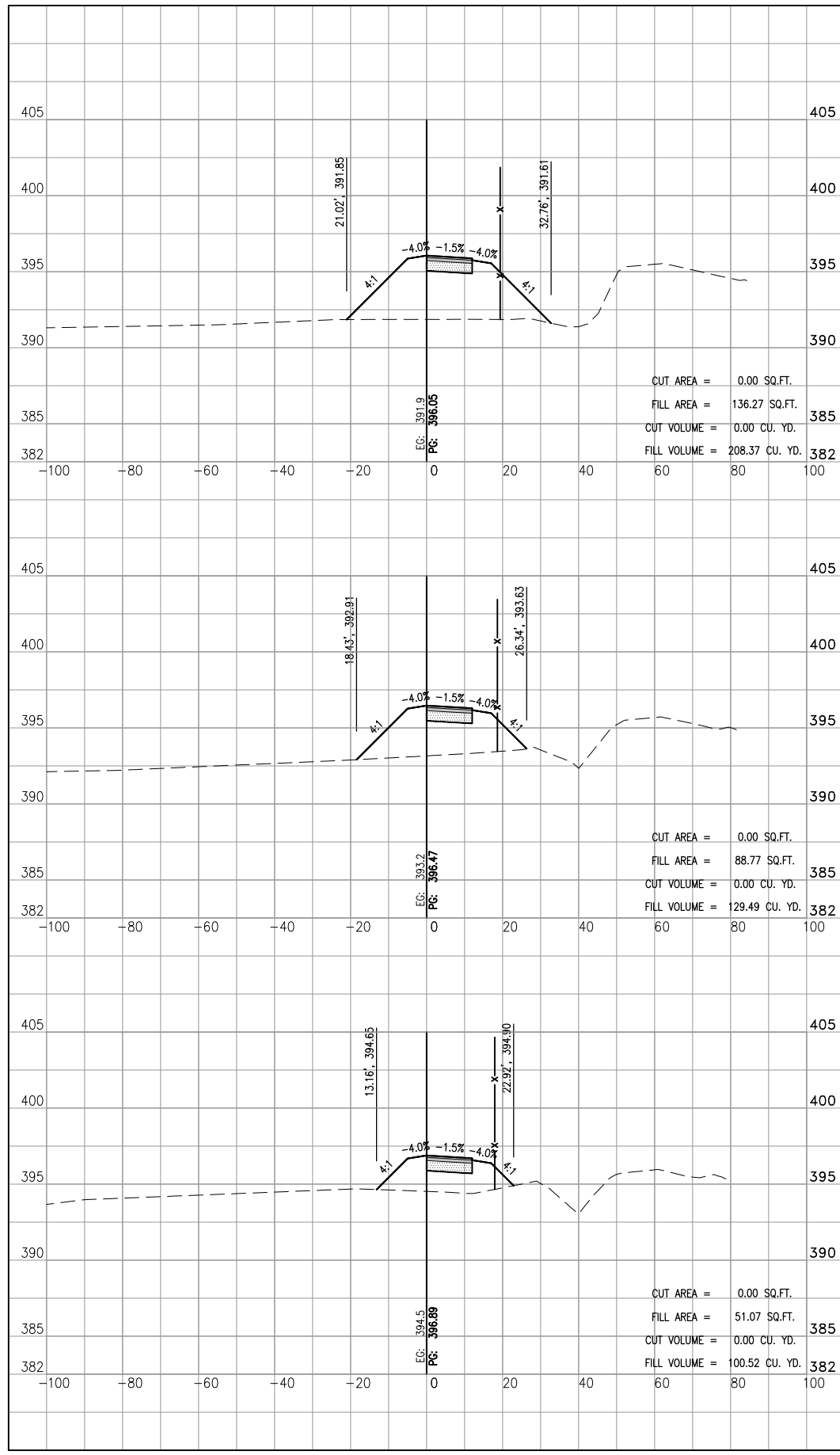
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Hanson Project No. 11A0037	File Name C-302-XS.DWG	Scale 1"=20'H 1"=5'V
Date 04/20/12	LAYOUT MLH	03/30/12
	DRAWN DAW	03/30/12
	REVIEWED JSL	04/20/12

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CONSTRUCT PERIMETER ROAD TO SUPPORT ARFF/SRE BUILDING

CROSS SECTION STA. 15+50 TO STA. 18+00



STA.
19+50

CUT AREA = 0.00 SQ.FT.
 FILL AREA = 136.27 SQ.FT.
 CUT VOLUME = 0.00 CU. YD.
 FILL VOLUME = 208.37 CU. YD.

STA.
19+00

CUT AREA = 0.00 SQ.FT.
 FILL AREA = 88.77 SQ.FT.
 CUT VOLUME = 0.00 CU. YD.
 FILL VOLUME = 129.49 CU. YD.

STA.
20+00

CUT AREA = 0.00 SQ.FT.
 FILL AREA = 180.70 SQ.FT.
 CUT VOLUME = 0.00 CU. YD.
 FILL VOLUME = 23.49 CU. YD.

STA.
18+50

CUT AREA = 0.00 SQ.FT.
 FILL AREA = 51.07 SQ.FT.
 CUT VOLUME = 0.00 CU. YD.
 FILL VOLUME = 100.52 CU. YD.

STA.
19+96

CUT AREA = 0.00 SQ.FT.
 FILL AREA = 181.71 SQ.FT.
 CUT VOLUME = 0.00 CU. YD.
 FILL VOLUME = 273.81 CU. YD.

48 L.F. OF 36" RCP CLASS IV WITH
 2 PRECAST REINFORCED CONC. FES
 UPSTREAM 390.61
 DOWNSTREAM 390.29

REVISION	DATE

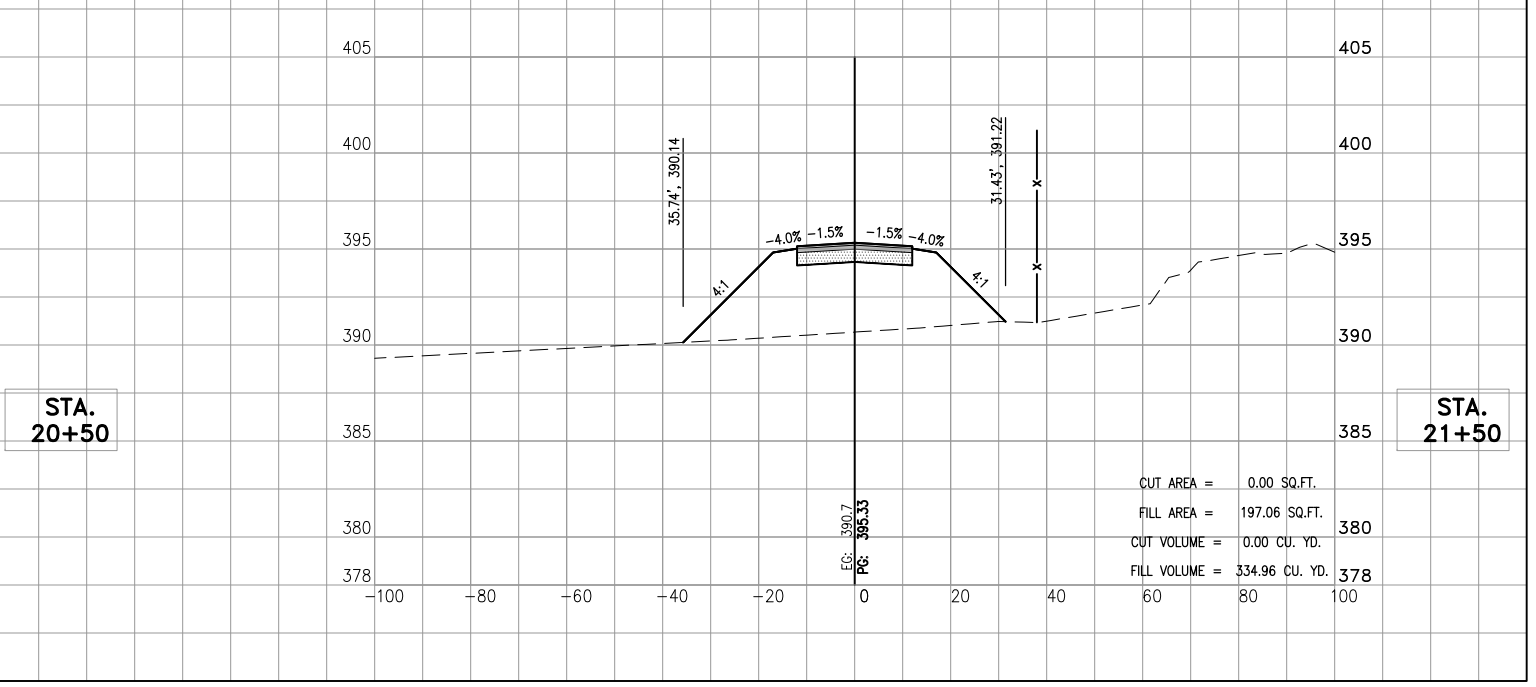
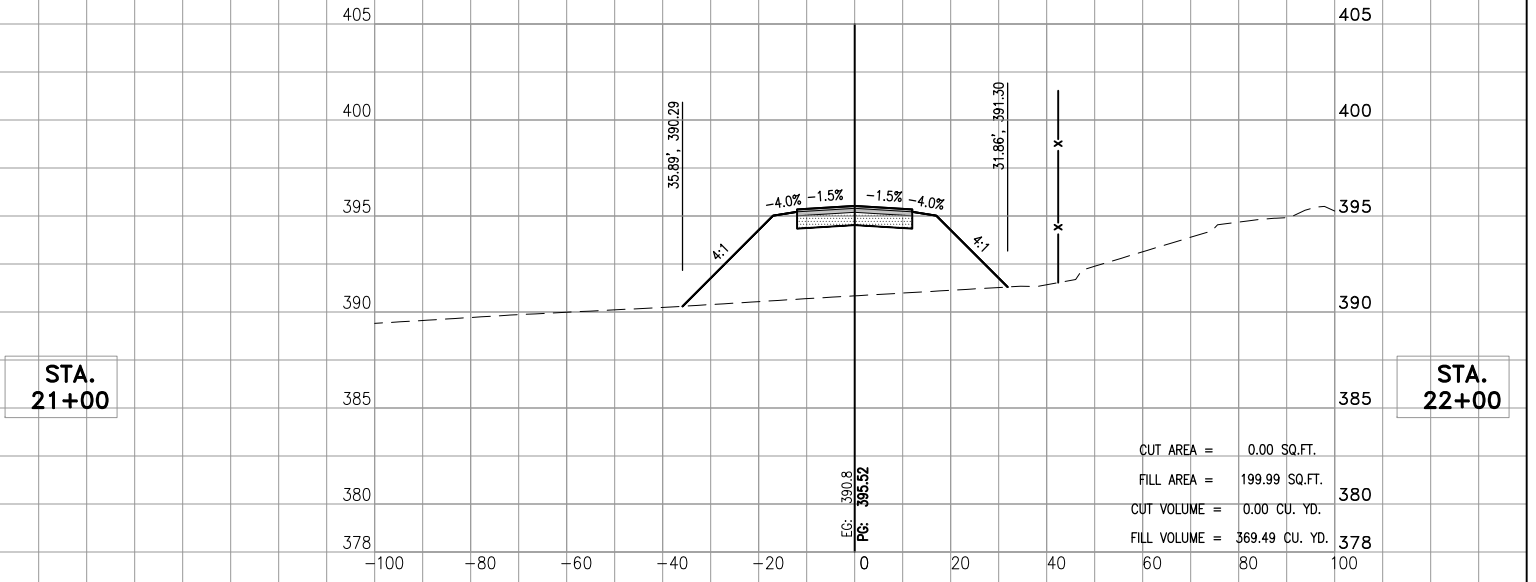
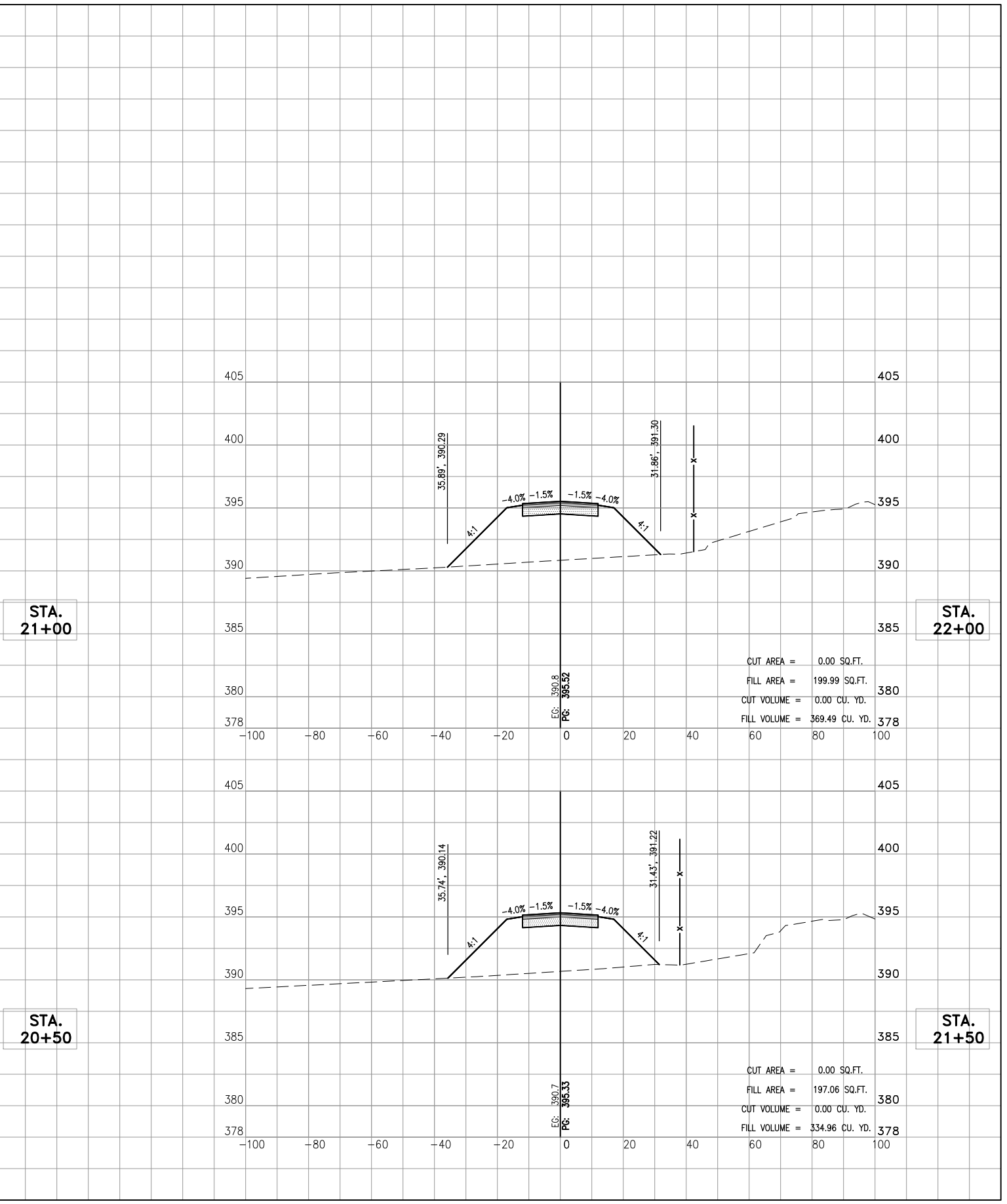
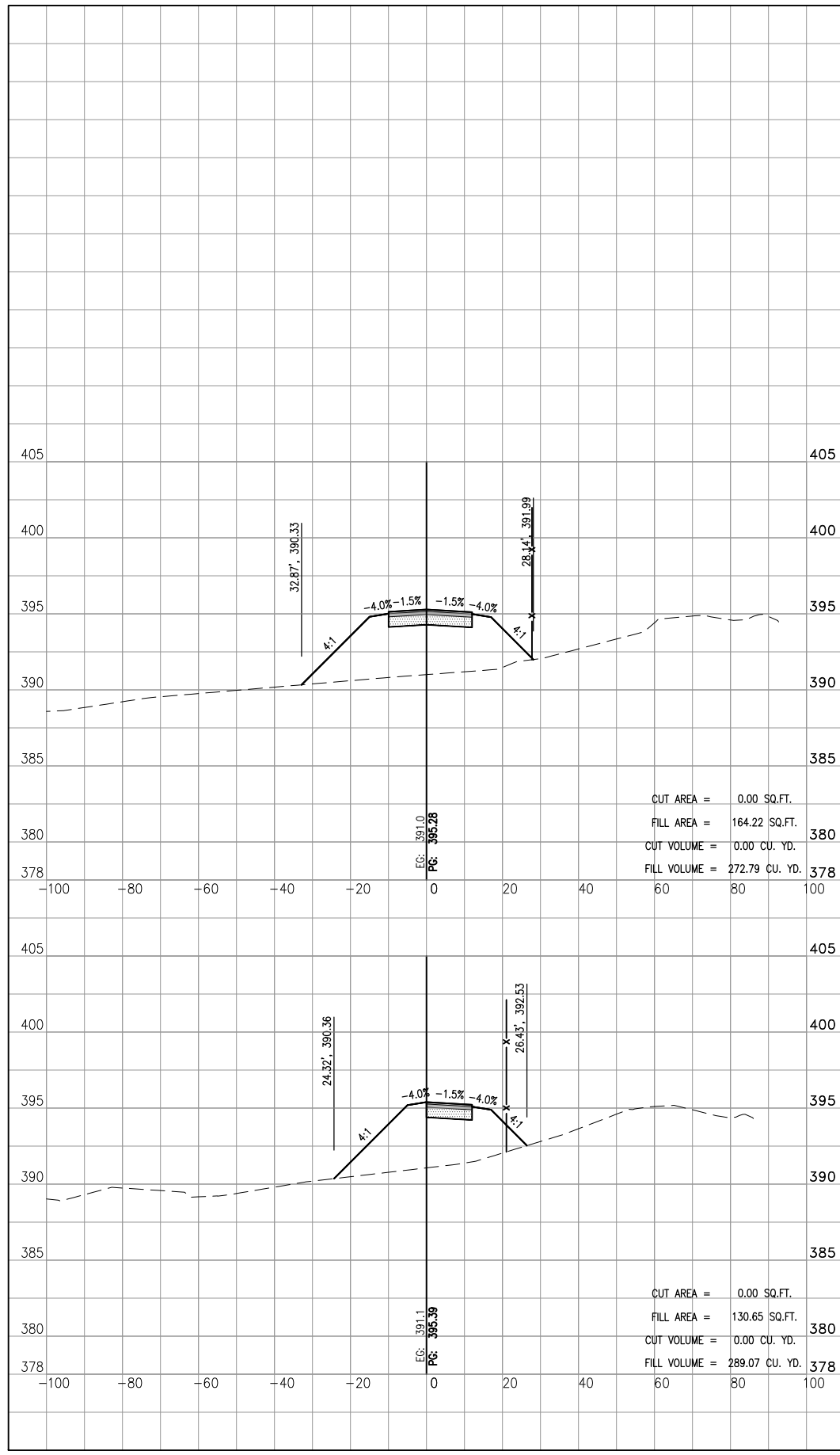
SOUTHERN ILLINOIS AIRPORT
 MURPHYSBORO / CARBONDALE, ILLINOIS

Hanson Project No. 11A0037	File Name C-302-XS.DWG	Scale 1"=20'H 1"=5'V
Date 04/20/12	LAYOUT MLH	03/30/12
	DRAWN DAW	03/30/12
	REVIEWED JSL	04/20/12

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CONSTRUCT PERIMETER
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CROSS SECTION STA. 18+50
 TO STA. 20+00



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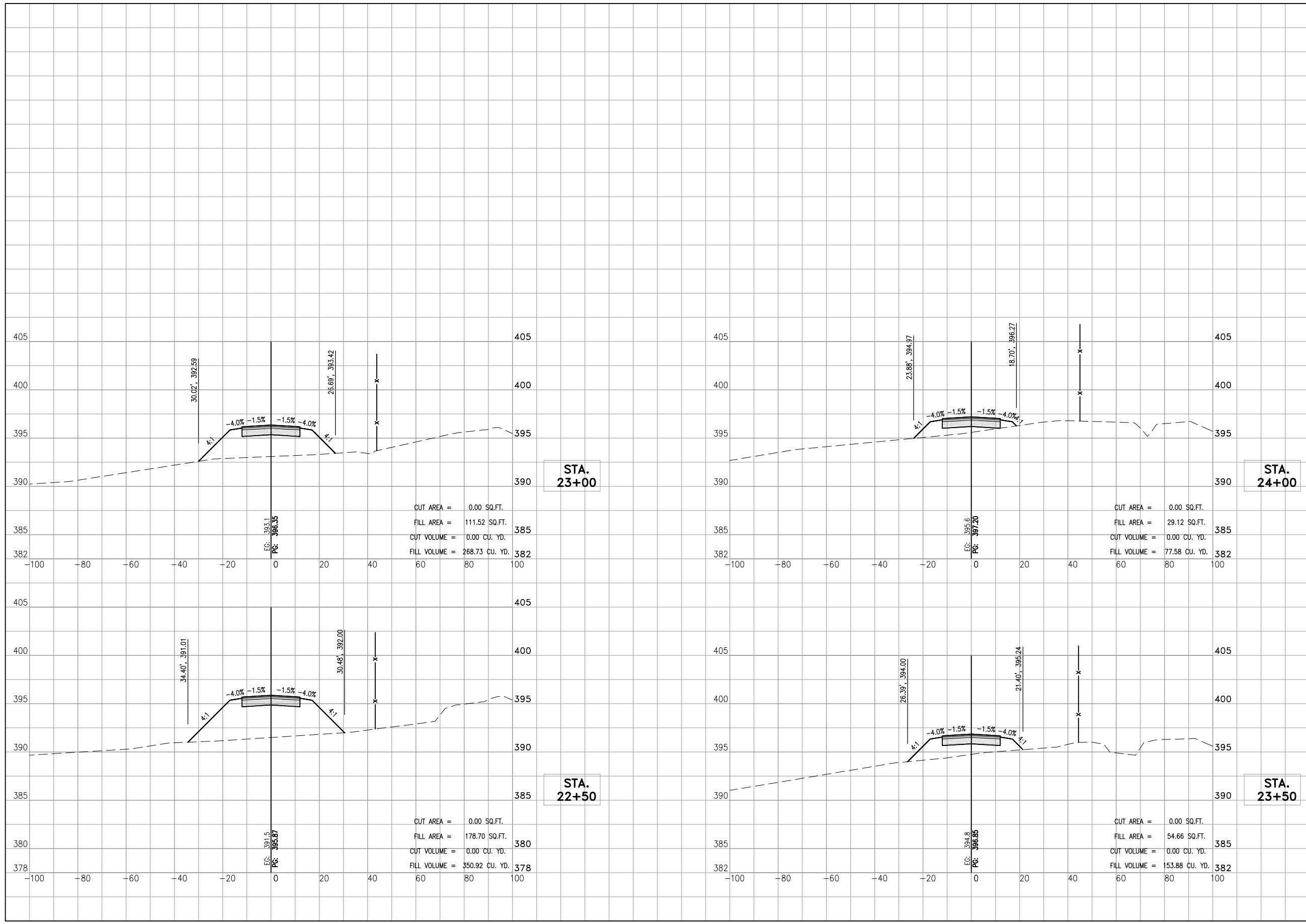
REVISION	DATE

SOUTHERN ILLINOIS AIRPORT
 MURPHYSBORO / CARBONDALE, ILLINOIS

 SOUTHERN ILLINOIS AIRPORT
 IL PROJ.: MDH-4173

Hanson Project No. 11A0037	File Name C-302-XS.DWG	Scale 1"=20'H 1"=5'V
Date 04/20/12	LAYOUT MLH	03/30/12
	DRAWN DAW	03/30/12
	REVIEWED JSL	04/20/12


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CONSTRUCT PERIMETER
 ROAD TO SUPPORT
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 CROSS SECTION STA. 20+50
 TO STA. 22+00



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SOUTHERN ILLINOIS AIRPORT
MURPHYSBORO / CARBONDALE, ILLINOIS

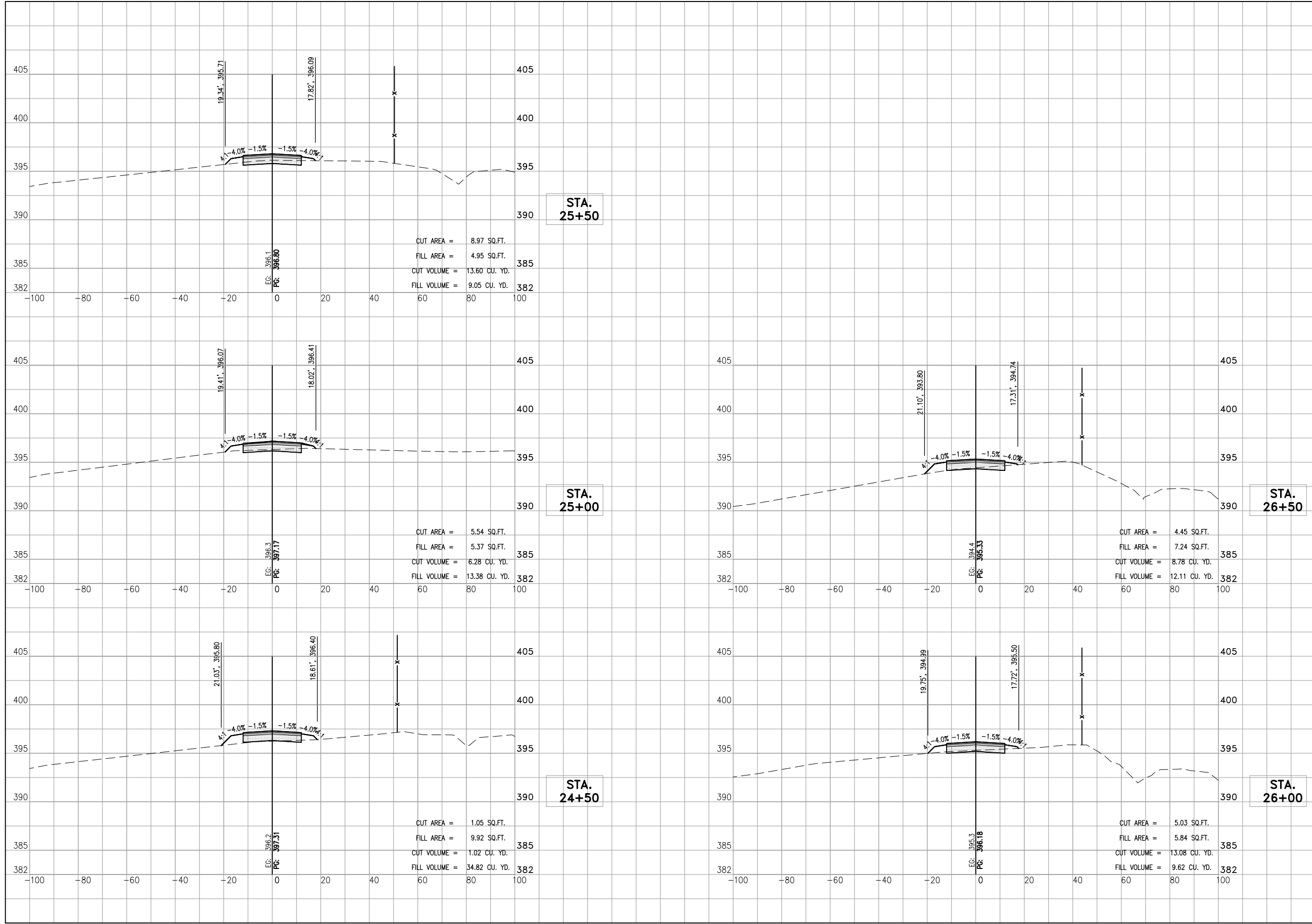
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Hanson Project No. 11A0037	File Name C-302-XS.DWG	Scale 1"=20'H 1"=5'V
LAYOUT	MLH	03/30/12
DRAWN	DAW	03/30/12
REVIEWED	JSL	04/20/12

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CONSTRUCT PERIMETER ROAD TO SUPPORT ARFF/SRE BUILDING

CROSS SECTION STA. 22+50 TO STA. 24+00



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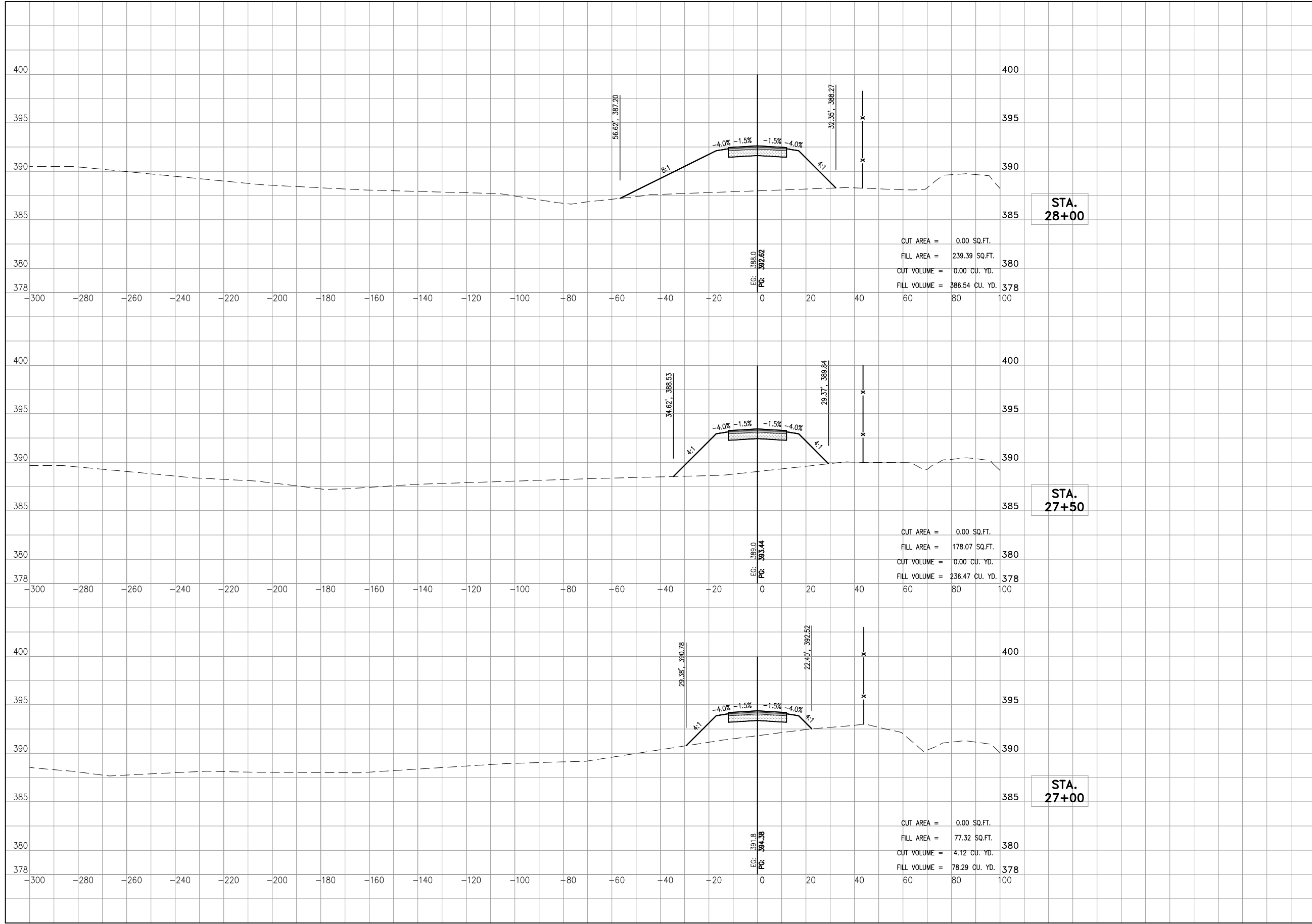
SOUTHERN ILLINOIS AIRPORT
MURPHYSBORO / CARBONDALE, ILLINOIS

Hanson Project No. 11A0037	File Name C-302-XS.DWG	Scale 1"=20'H 1"=5'V
Date 04/20/12	LAYOUT MLH	03/30/12
	DRAWN DAW	03/30/12
	REVIEWED JSL	04/20/12

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CONSTRUCT PERIMETER
ROAD TO SUPPORT
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CROSS SECTION STA. 24+50
TO STA. 26+50



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SOUTHERN ILLINOIS AIRPORT
MURPHYSBORO / CARBONDALE, ILLINOIS



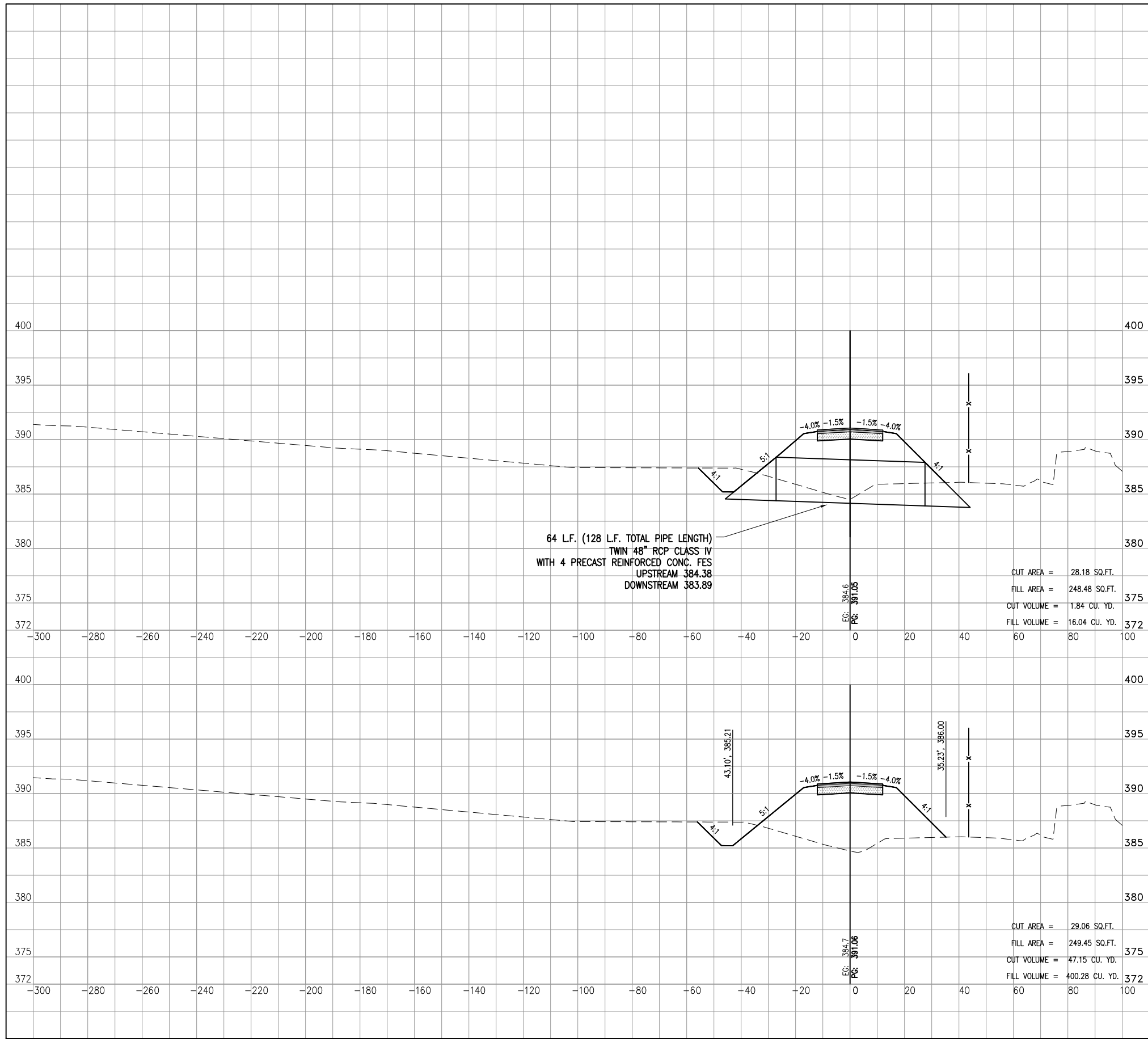
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Hanson Project No. 11A0037	File Name C-302-XS.DWG	Scale 1"=20'H 1"=5'V
LAYOUT MLH	DATE 04/20/12	DATE 03/30/12
DRAWN DAW	DATE 03/30/12	DATE 03/30/12
REVIEWED JSL	DATE 04/20/12	DATE 04/20/12

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CONSTRUCT PERIMETER
ROAD TO SUPPORT
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CROSS SECTION STA. 27+00
TO STA. 28+00



64 L.F. (128 L.F. TOTAL PIPE LENGTH)
TWIN 48" RCP CLASS IV
WITH 4 PRECAST REINFORCED CONC. FES
UPSTREAM 384.38
DOWNSTREAM 383.89

STA.
29+52

STA.
29+50

REVISION	DATE

SIA
SOUTHERN ILLINOIS AIRPORT
MURPHYSBORO / CARBONDALE, ILLINOIS

IL PROJ.: MDH-4173

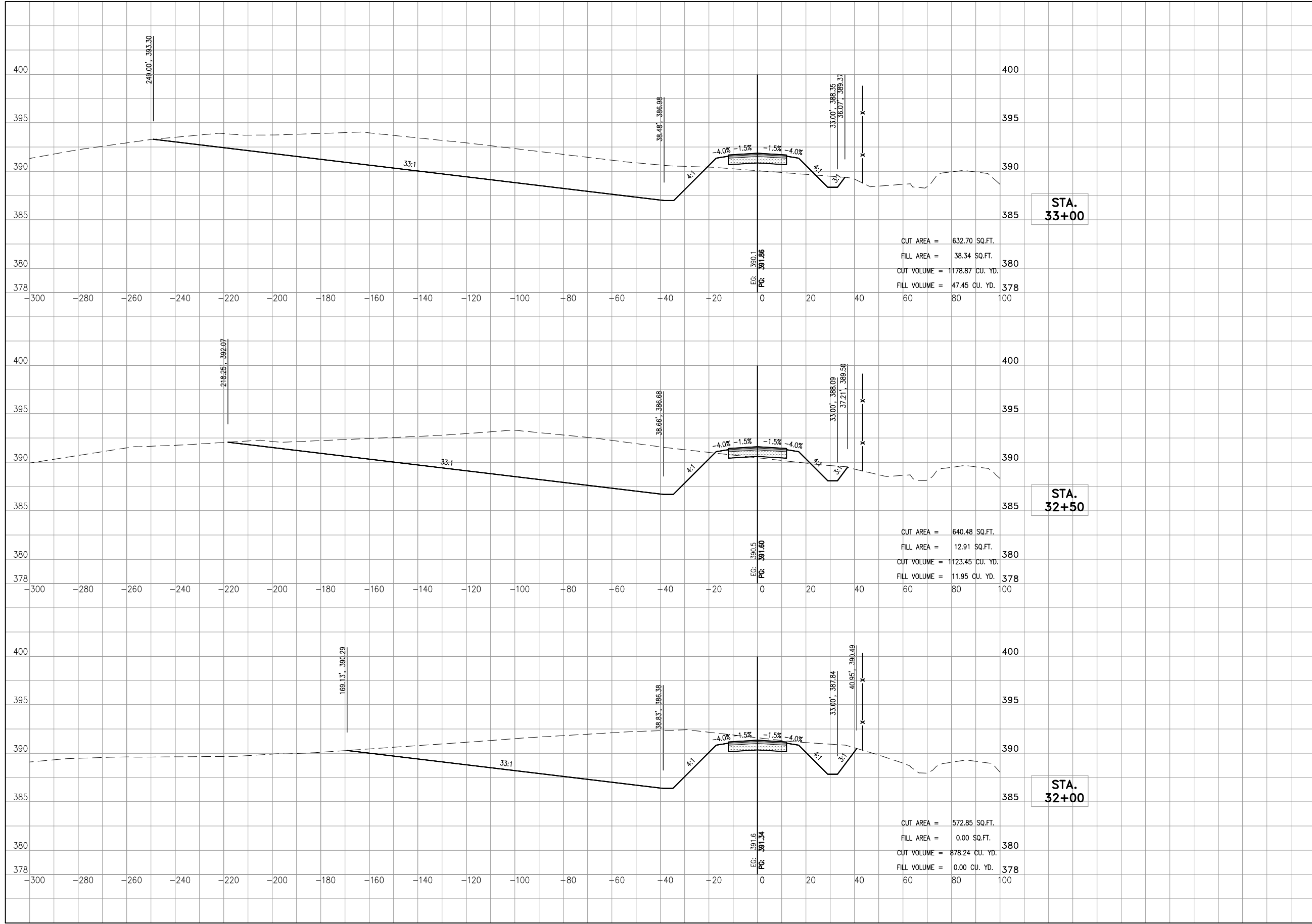
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Date 04/20/12	LAYOUT MLH	03/30/12
	DRAWN DAW	03/30/12
	REVIEWED JSL	04/20/12

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CONSTRUCT PERIMETER
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CROSS SECTION STA. 29+50
TO STA. 29+52



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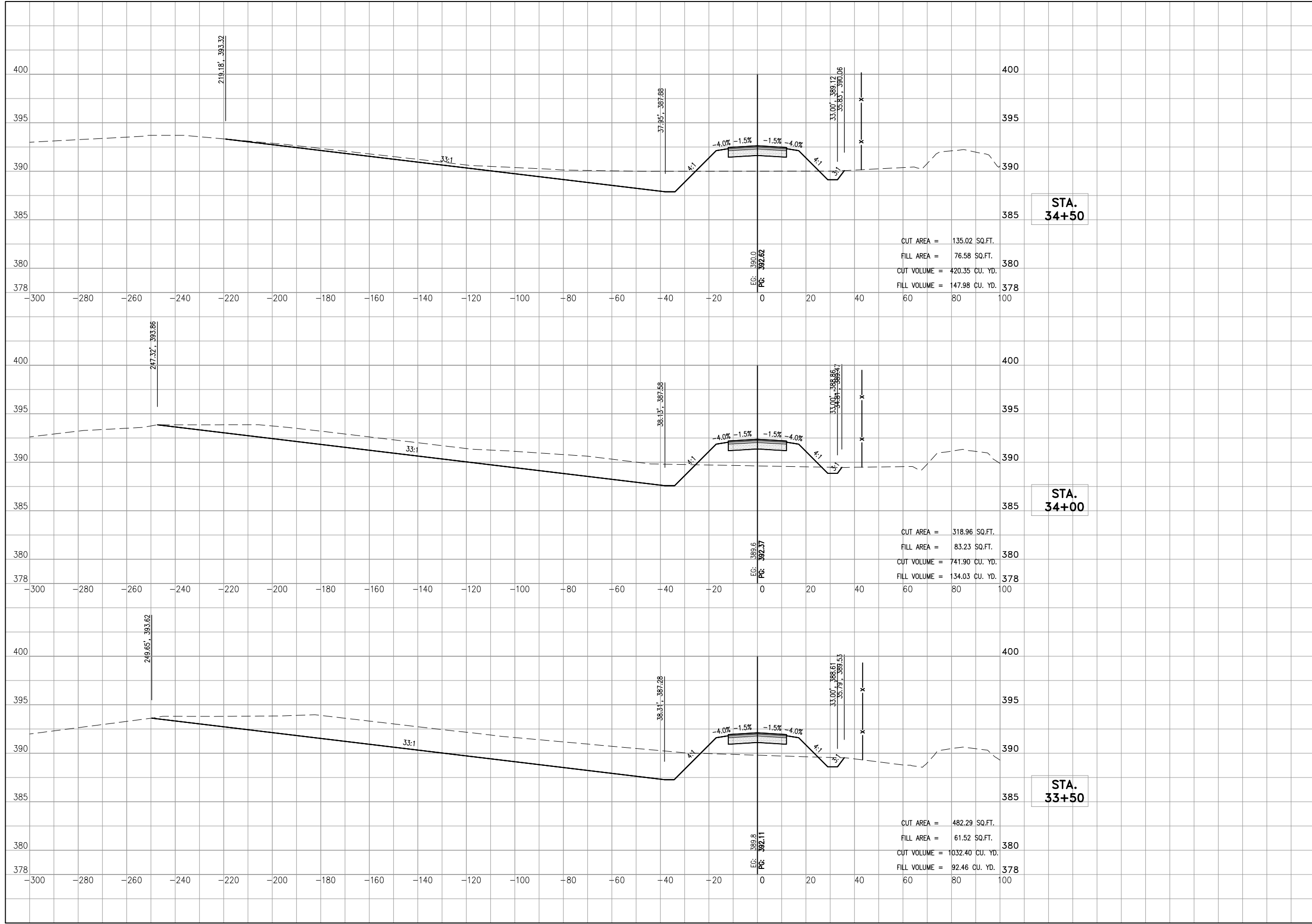
SOUTHERN ILLINOIS AIRPORT
MURPHYSBORO / CARBONDALE, ILLINOIS

Hanson Project No.	11A0037
Filename	C-302-XS.DWG
Scale	1"=20'H 1"=5'V
Date	04/20/12



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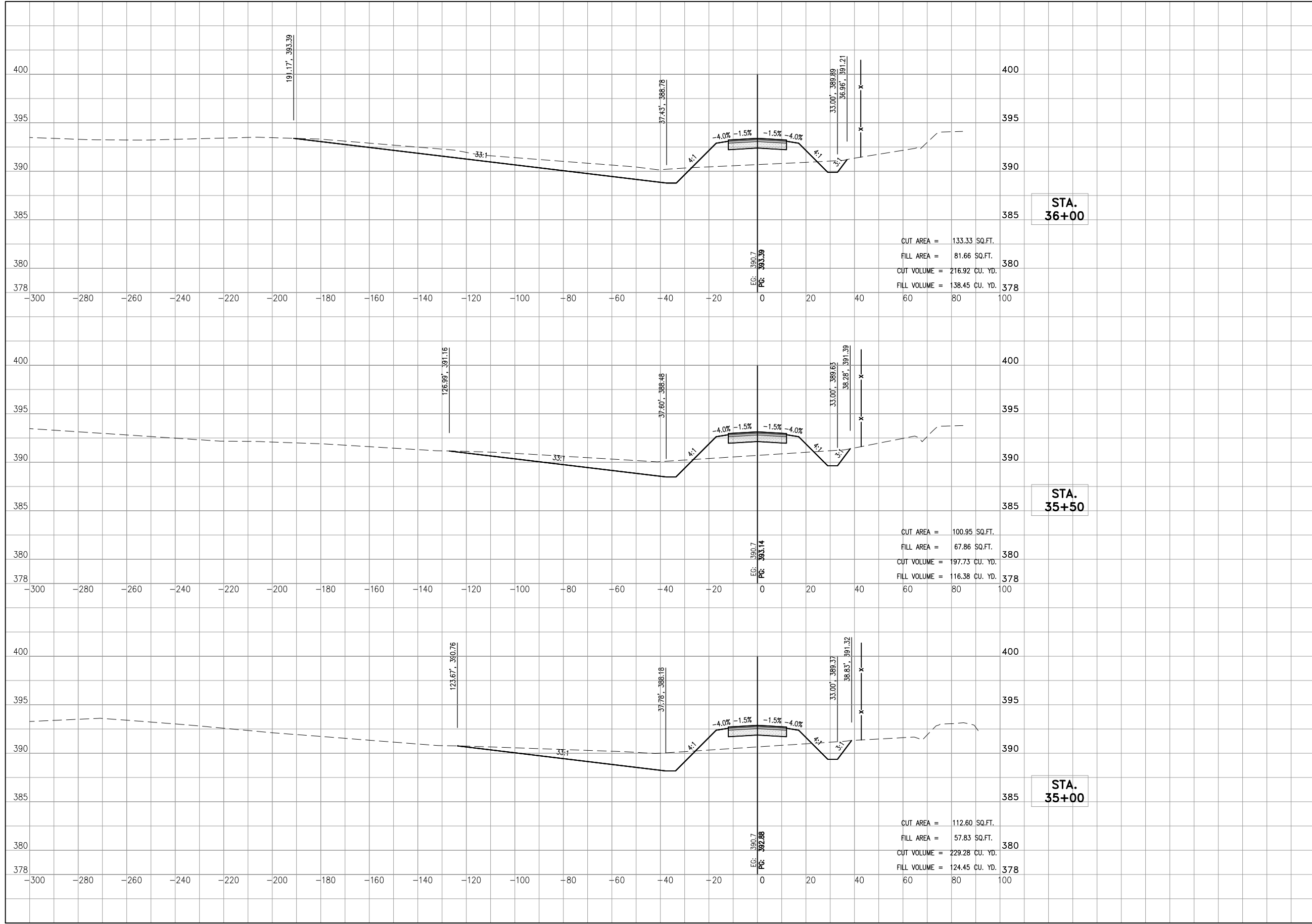
CONSTRUCT PERIMETER
ROAD TO SUPPORT
ARFF/SRE BUILDING

CROSS SECTION STA. 32+00
TO STA. 33+00



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<p>CONSTRUCT PERIMETER ROAD TO SUPPORT ARFF/SRE BUILDING</p> <p>CROSS SECTION STA. 33+50 TO STA. 34+50</p>	<p>DATE</p>	<p>REVISION</p>
	<p>  SOUTHERN ILLINOIS AIRPORT MURPHYSBORO / CARBONDALE, ILLINOIS <small>SOUTHERN ILLINOIS AIRPORT</small> </p>	
<p>Hanson Project No. 11A0037</p> <p>Filename C-302-XS.DWG</p> <p>Scale 1"=20'H 1"=5'V</p> <p>Date 04/20/12</p>	<p>LAYOUT MLH 03/30/12</p> <p>DRAWN DAW 03/30/12</p> <p>REVIEWED JSL 04/20/12</p>	<p>IL PROJ.: MDH-4173</p>
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 MURPHYSBORO / CARBONDALE, ILLINOIS



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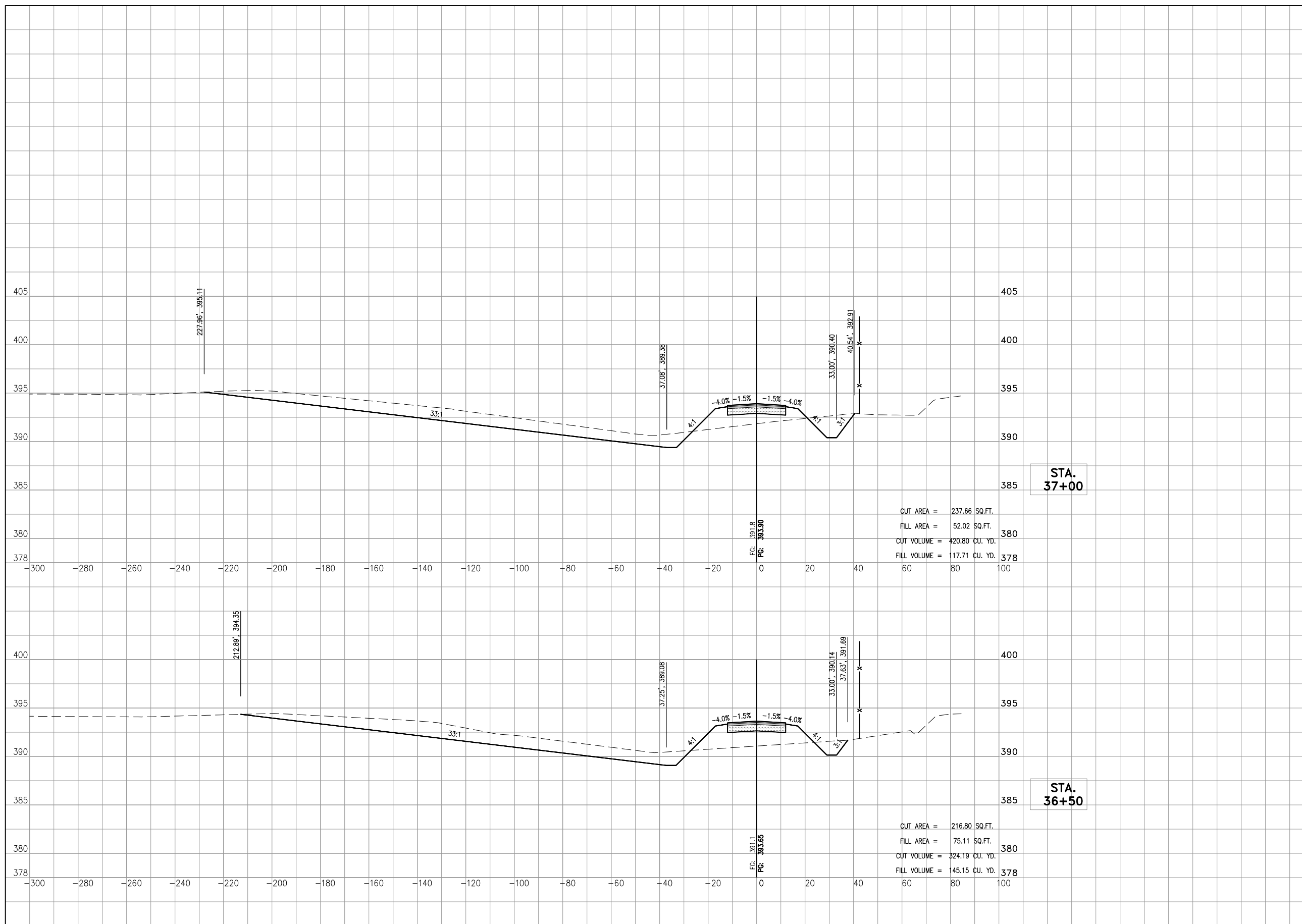
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Filename C-302-XS.DWG	DRAWN	DAW	03/30/12
Scale 1"=20'H 1"=5'V	REVIEWED	JSL	04/20/12
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CONSTRUCT PERIMETER ROAD TO SUPPORT ARFF/SRE BUILDING

CROSS SECTION STA. 35+00 TO STA. 36+00



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SIA
SOUTHERN ILLINOIS AIRPORT
MURPHYSBORO / CARBONDALE, ILLINOIS

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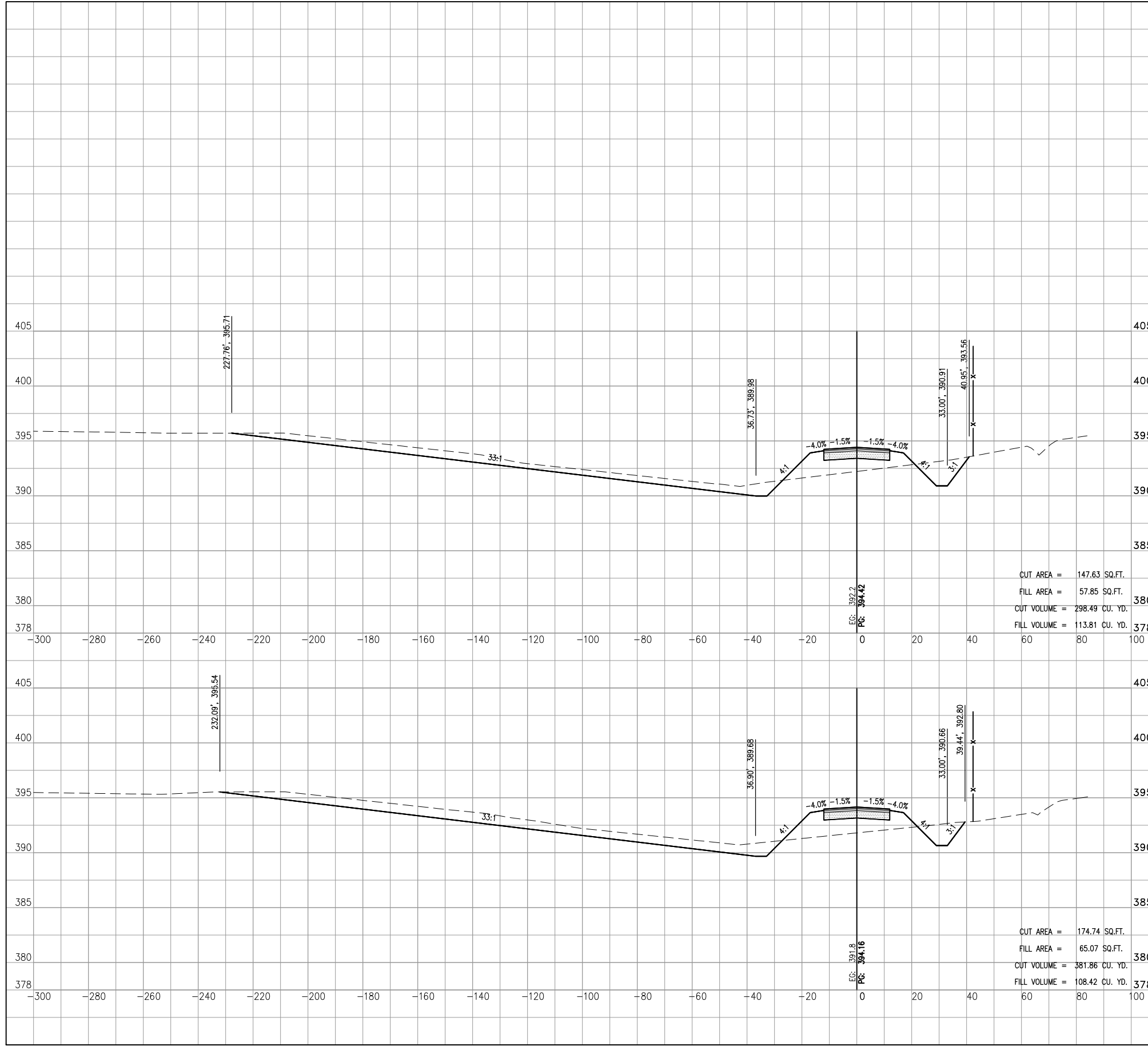
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Filename C-302-XS.DWG	DRAWN	DAW	03/30/12
Scale 1"=20'H 1"=5'V	REVIEWED	JSL	04/20/12
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CONSTRUCT PERIMETER
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CROSS SECTION STA. 36+50
 TO STA. 37+00

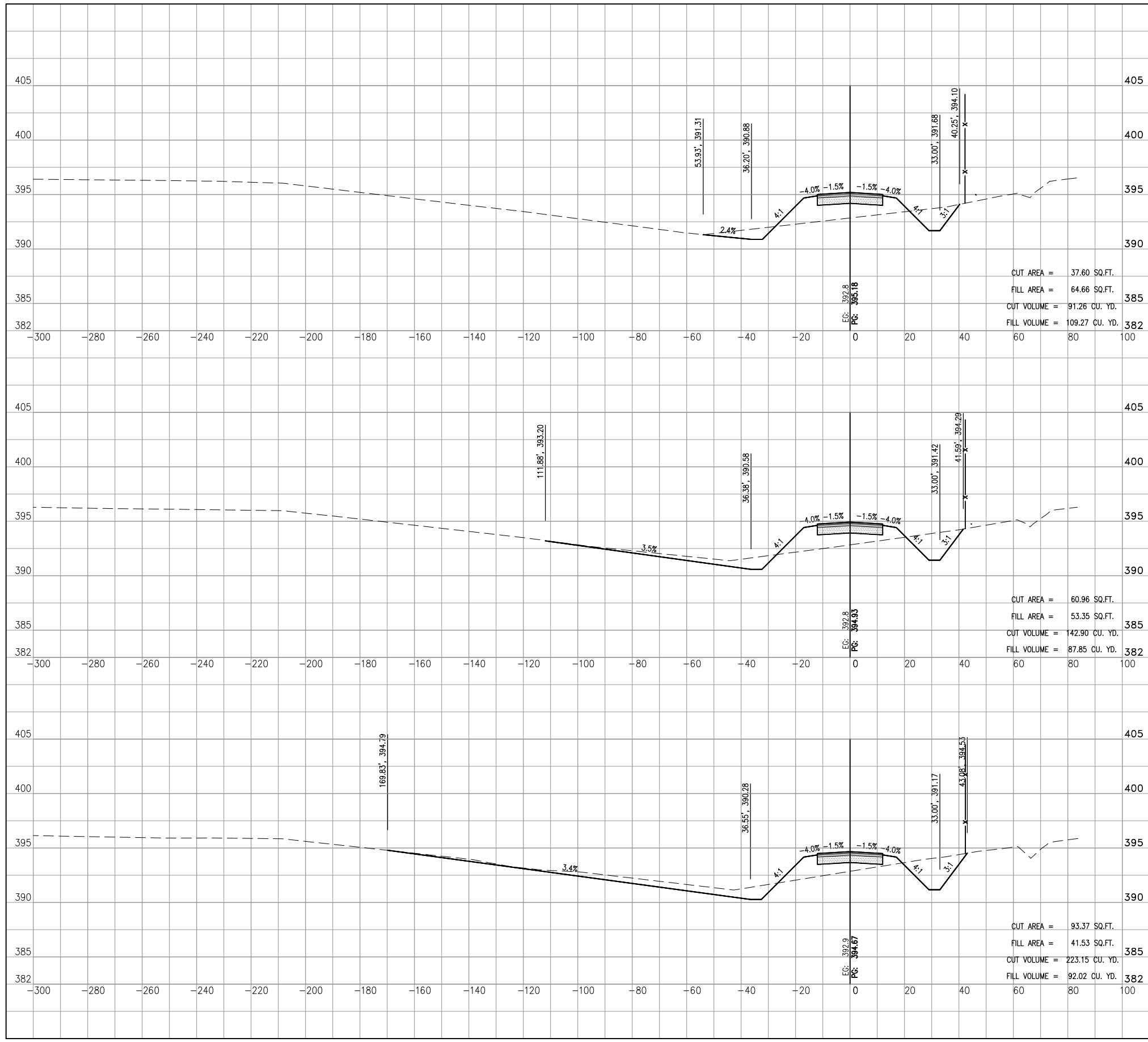


STA. 38+00

STA. 37+50

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<p>Hanson Project No. 11A0037 Filename C-302-XS.DWG Scale 1"=20'H 1"=5'V Date 04/20/12</p>		<p>LAYOUT MLH 03/30/12 DRAWN DAW 03/30/12 REVIEWED JSL 04/20/12</p>	
<p>45</p> <p>45 of 51 sheets</p>			



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SOUTHERN ILLINOIS AIRPORT
MURPHYSBORO / CARBONDALE, ILLINOIS

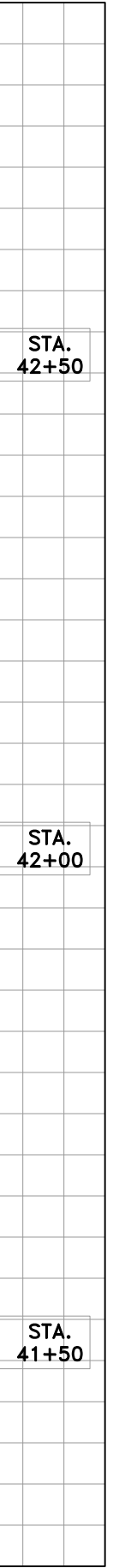
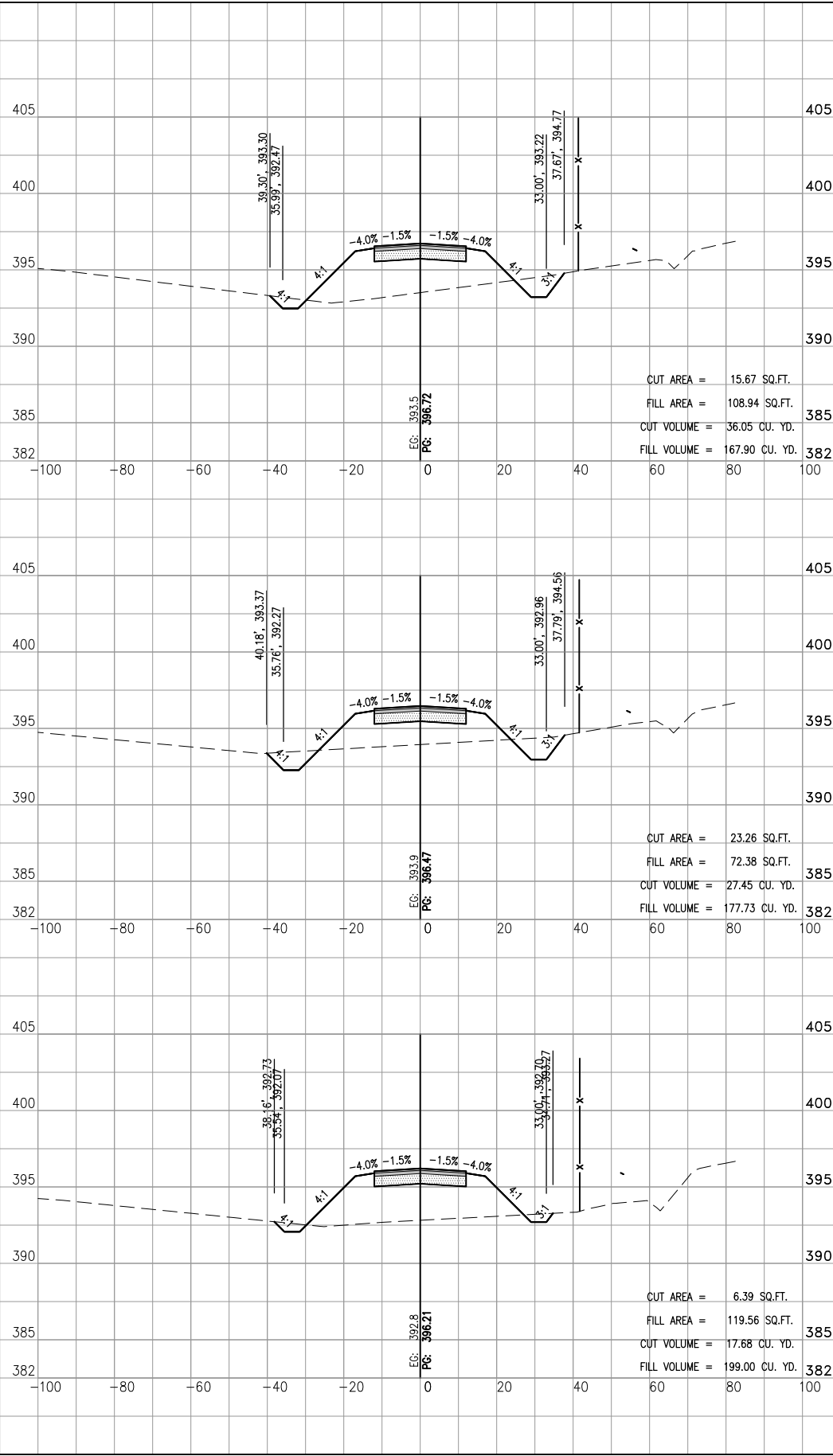
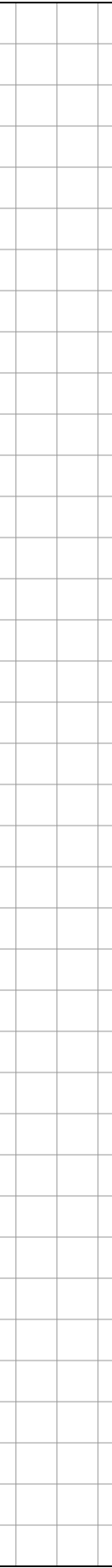
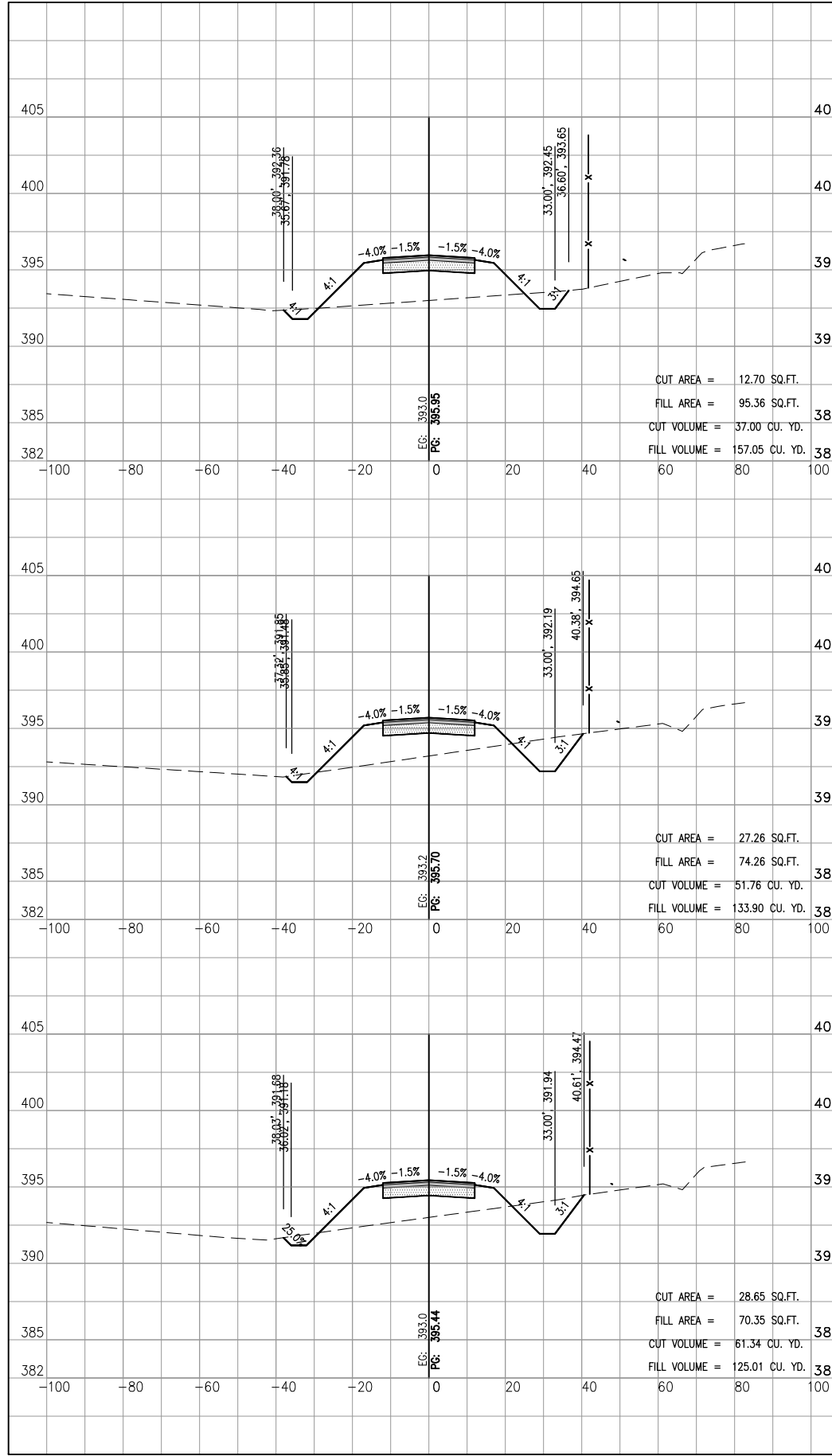
IL PROJ.: MDH-4173

Hanson Project No. 11A0037	File Name C-302-XS.DWG	Scale 1"=20'H 1"=5'V
Date 04/20/12	LAYOUT MLH	03/30/12
	DRAWN DAW	03/30/12
	REVIEWED JSL	04/20/12

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Murphysboro, Illinois 62866

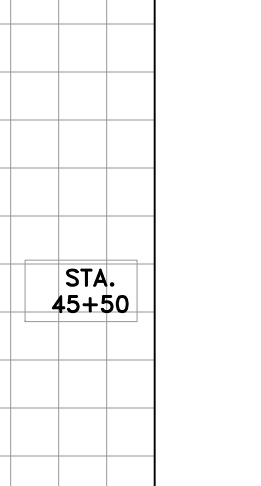
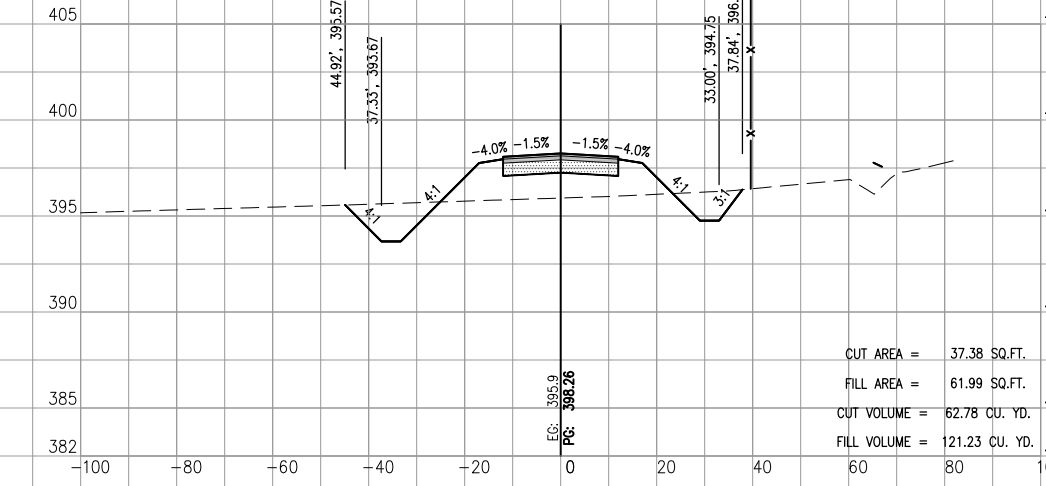
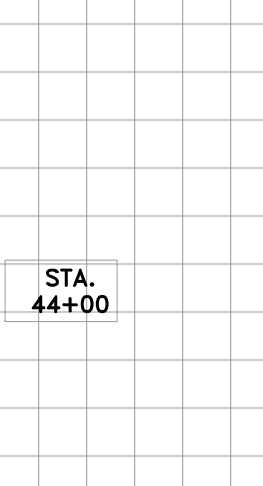
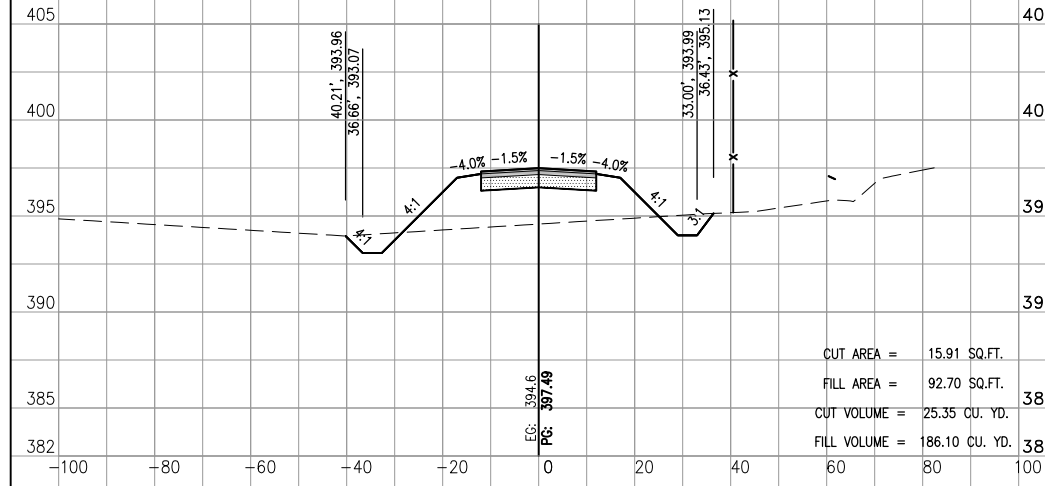
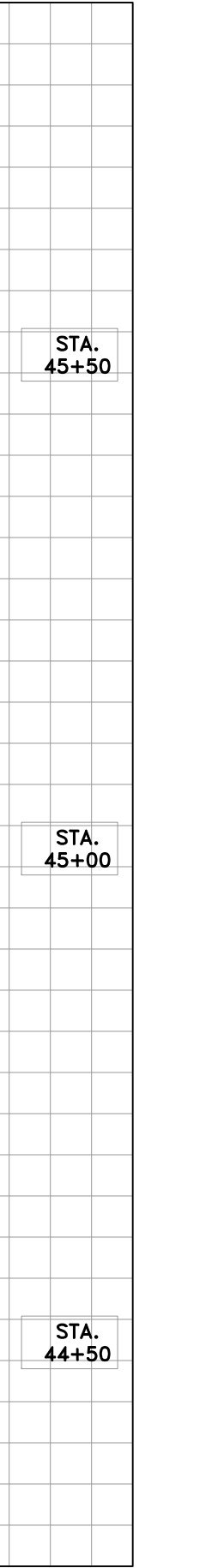
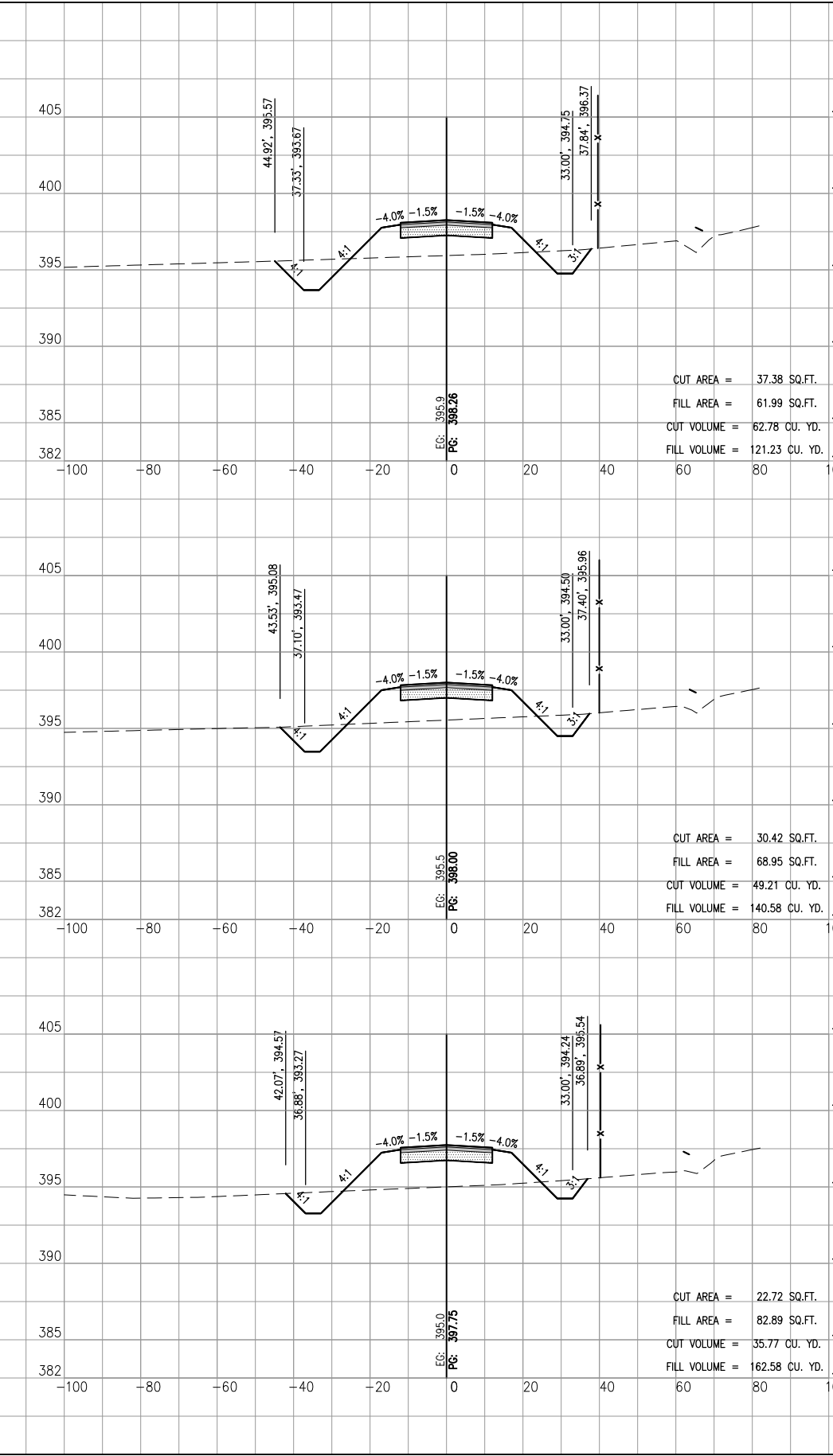
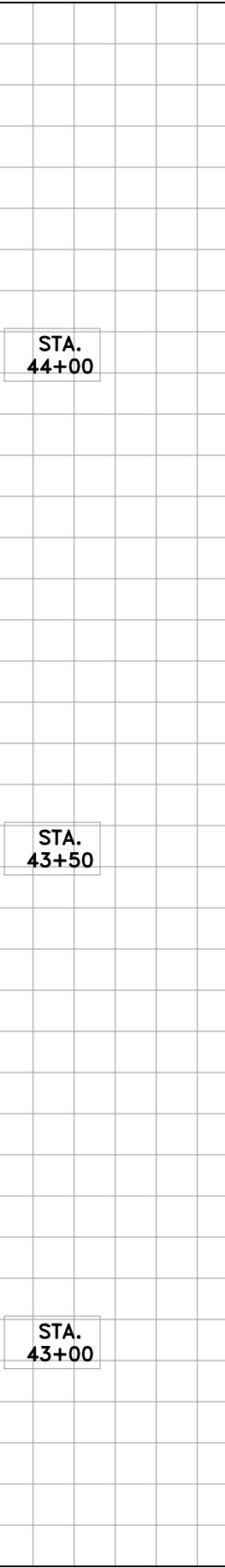
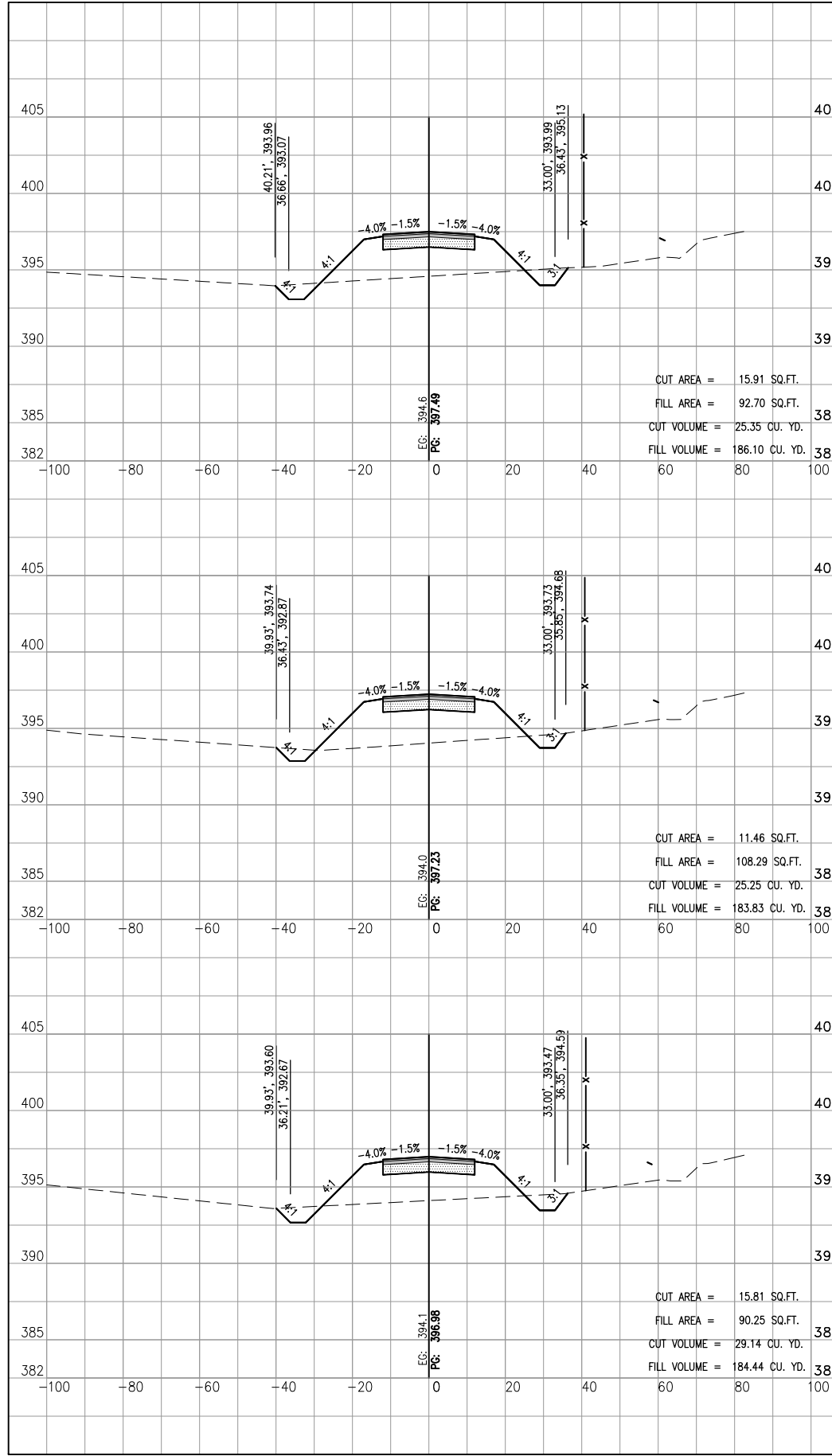
CONSTRUCT PERIMETER ROAD TO SUPPORT ARFF/SRE BUILDING

CROSS SECTION STA. 38+50 TO STA. 39+50



MAY 07, 2012 5:39 PM HARR01115

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<p>SOUTHERN ILLINOIS AIRPORT MURPHYSBORO / CARBONDALE, ILLINOIS</p> <p>SIA SOUTHERN ILLINOIS AIRPORT</p> <p>IL PROJ.: MDH-4173</p>		<p>LAYOUT MLH 03/30/12 DRAWN DAW 03/30/12 REVIEWED JSL 04/20/12</p>	
<p>CONSTRUCT PERIMETER ROAD TO SUPPORT ARFF/SRE BUILDING</p>		<p>CROSS SECTION STA. 40+00 TO STA. 42+50</p>	
<p>47</p> <p>47 of 51 sheets</p>			



MAY 07, 2012 5:39 PM HARR01115

REVISION	DATE

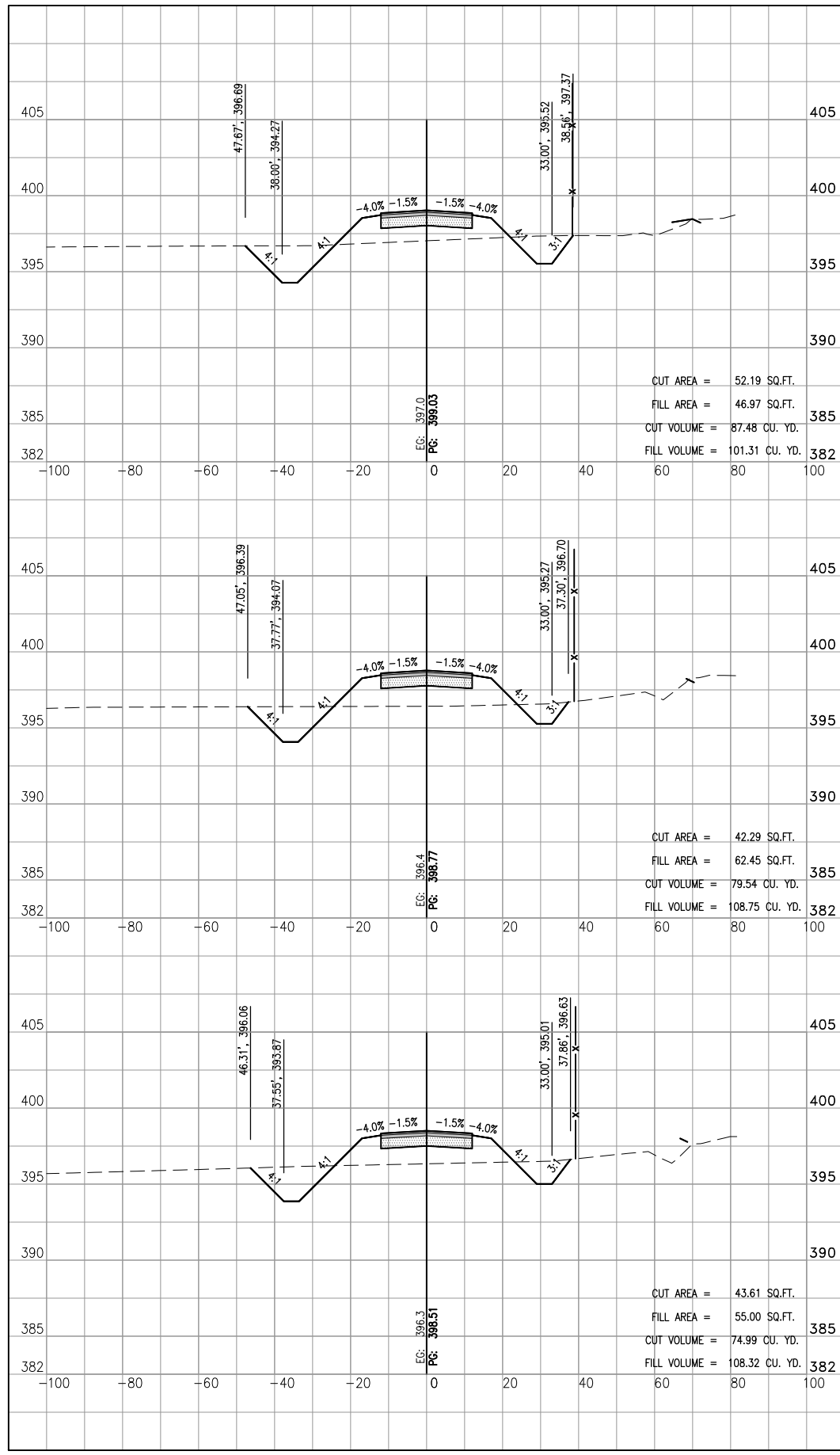
SOUTHERN ILLINOIS AIRPORT
 MURPHYSBORO / CARBONDALE, ILLINOIS

 SOUTHERN ILLINOIS AIRPORT
 IL PROJ.: MDH-4173

Hanson Project No. 11A0037	File Name C-302-XS.DWG	Scale 1"=20'H 1"=5'V
Date 04/20/12	LAYOUT MLH	03/30/12
	DRAWN DAW	03/30/12
	REVIEWED JSL	04/20/12

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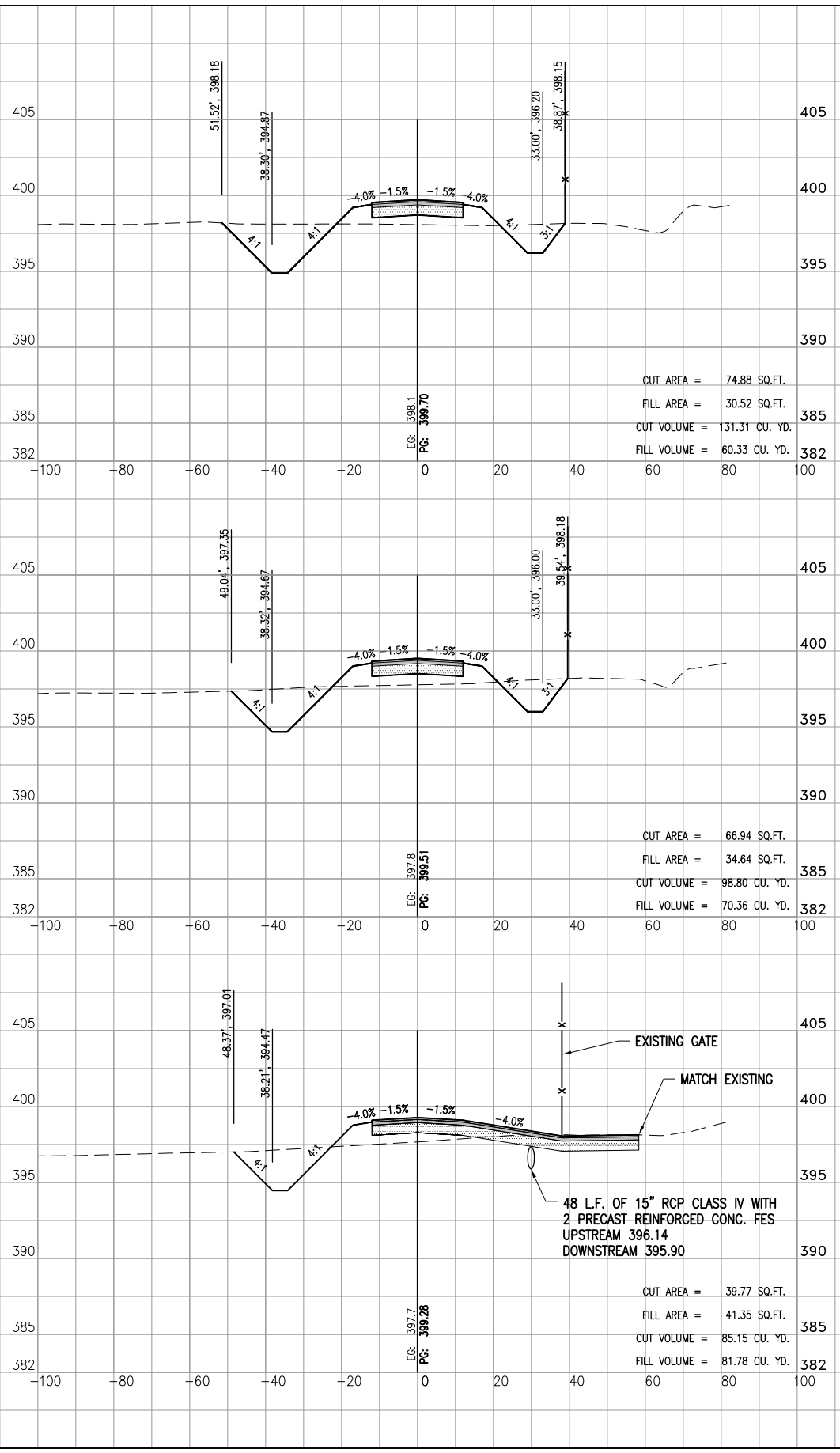
CONSTRUCT PERIMETER
 ROAD TO SUPPORT
 ARFF/SRE BUILDING
 CROSS SECTION STA. 43+00
 TO STA. 45+50



STA. 47+00

STA. 46+50

STA. 46+00



STA. 48+50

STA. 48+00

STA. 47+50

EXISTING GATE
MATCH EXISTING
48 L.F. OF 15" RCP CLASS IV WITH
2 PRECAST REINFORCED CONC. FES
UPSTREAM 396.14
DOWNSTREAM 395.90

MAY 08, 2012 9:57 AM HARR01115

REVISION	DATE

SOUTHERN ILLINOIS AIRPORT
MURPHYSBORO / CARBONDALE, ILLINOIS

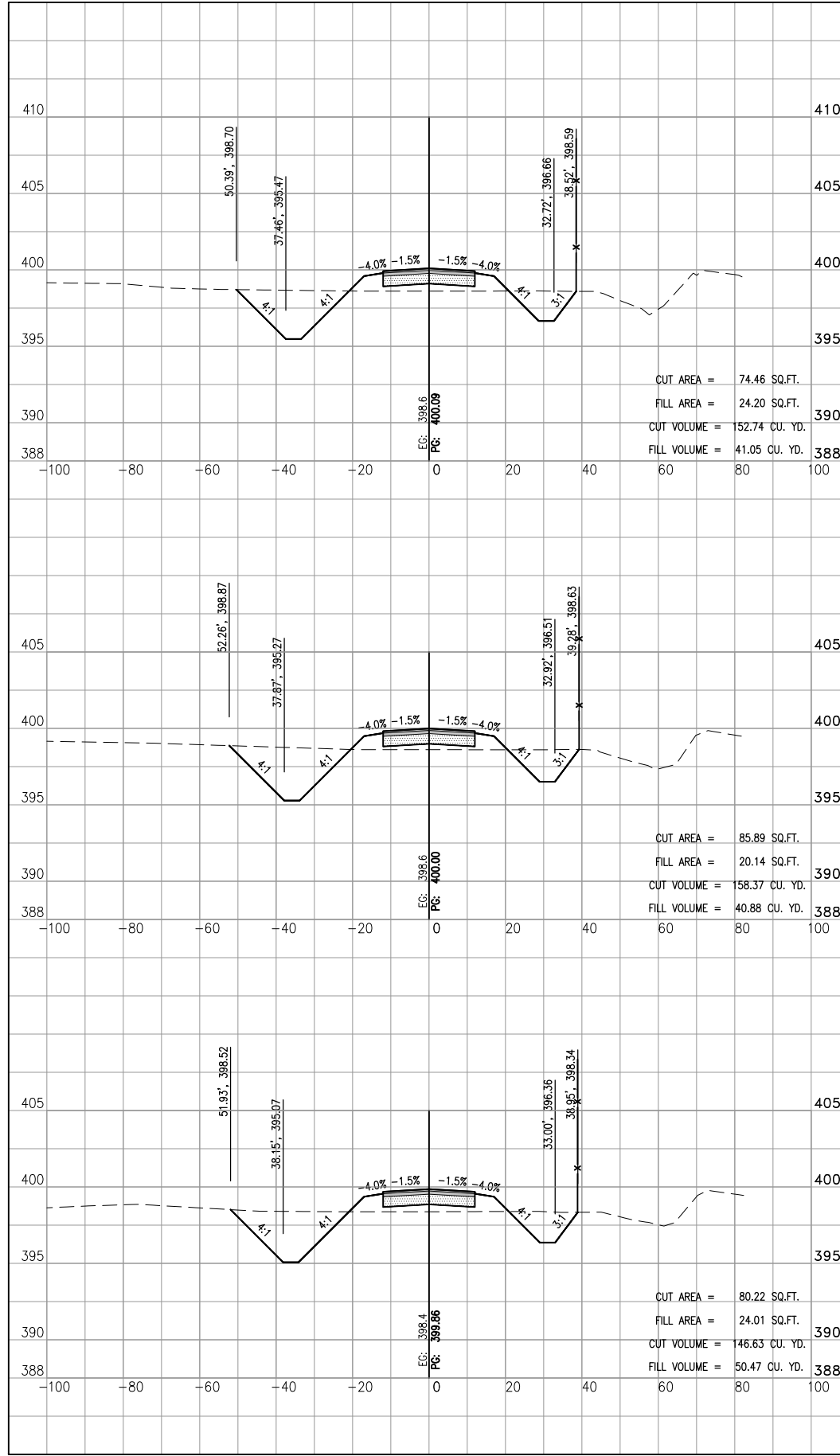
IL PROJ.: MDH-4173

Hanson Project No. 11A0037	File Name C-302-XS.DWG	Scale 1"=20'H 1"=5'V	Date 04/20/12
LAYOUT	MLH	03/30/12	
DRAWN	DAW	03/30/12	
REVIEWED	JSL	04/20/12	

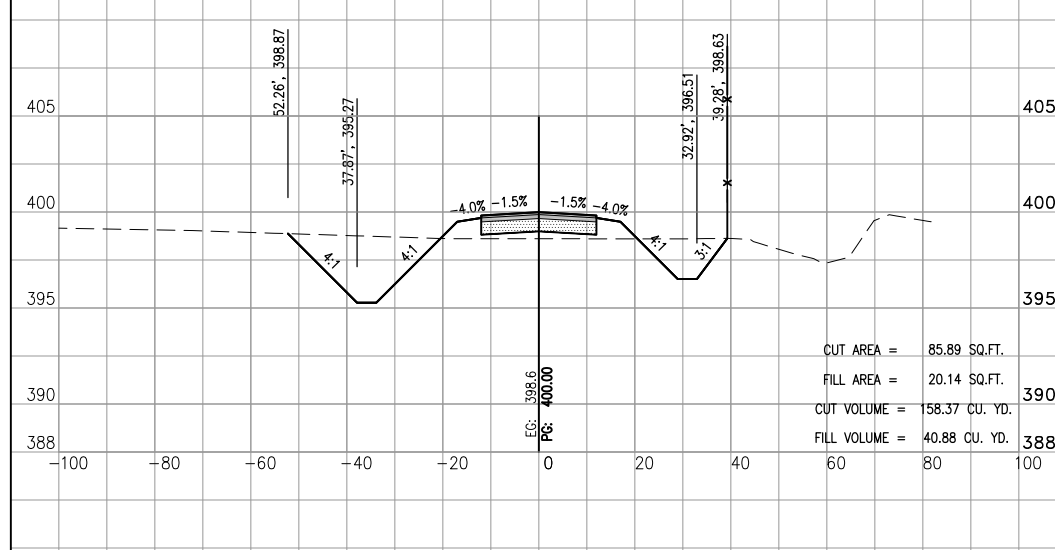
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CONSTRUCT PERIMETER
ROAD TO SUPPORT
ARFF/SRE BUILDING

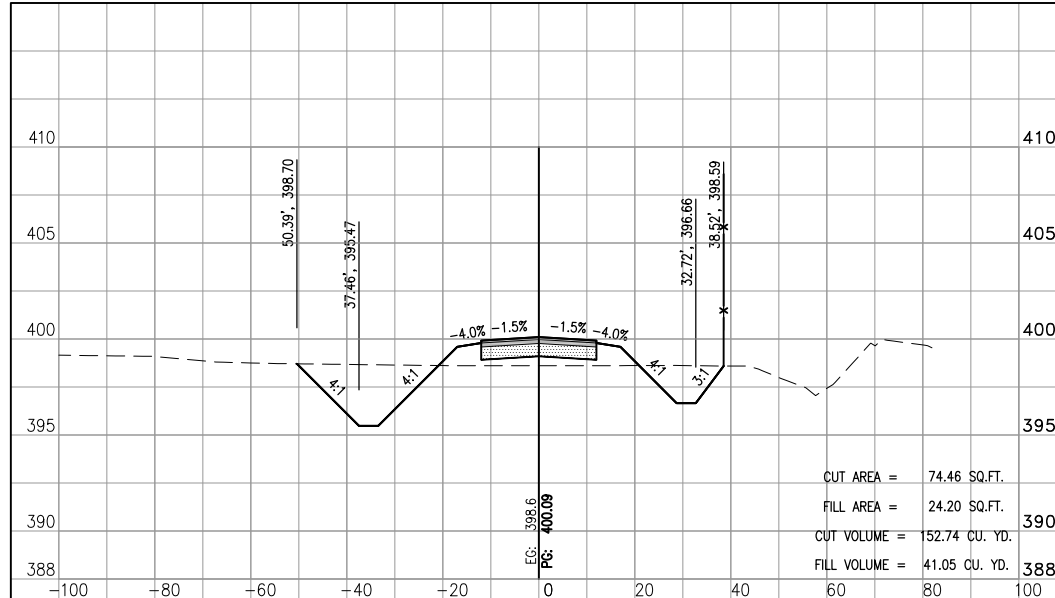
CROSS SECTION STA. 46+00
TO STA. 48+50



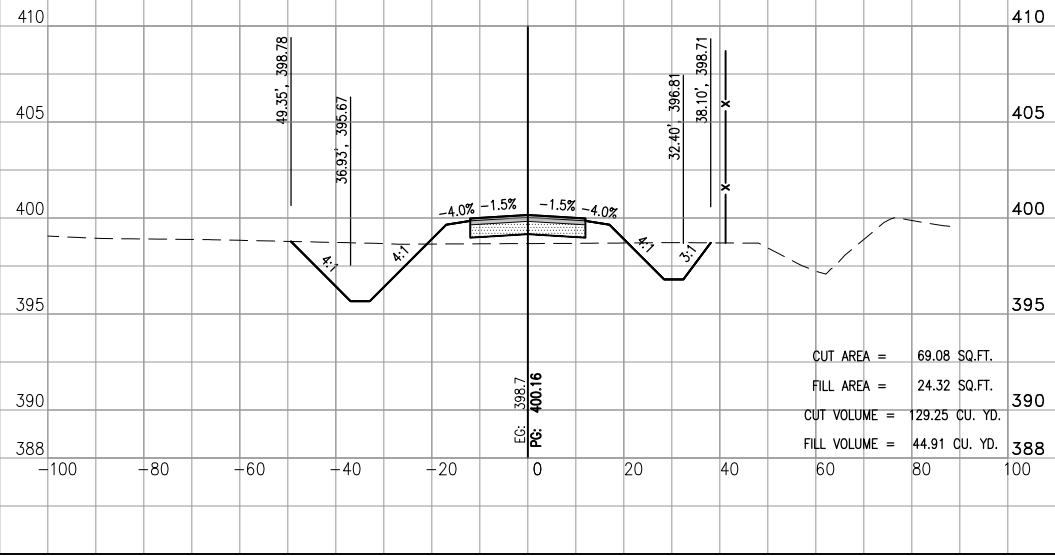
STA. 49+00



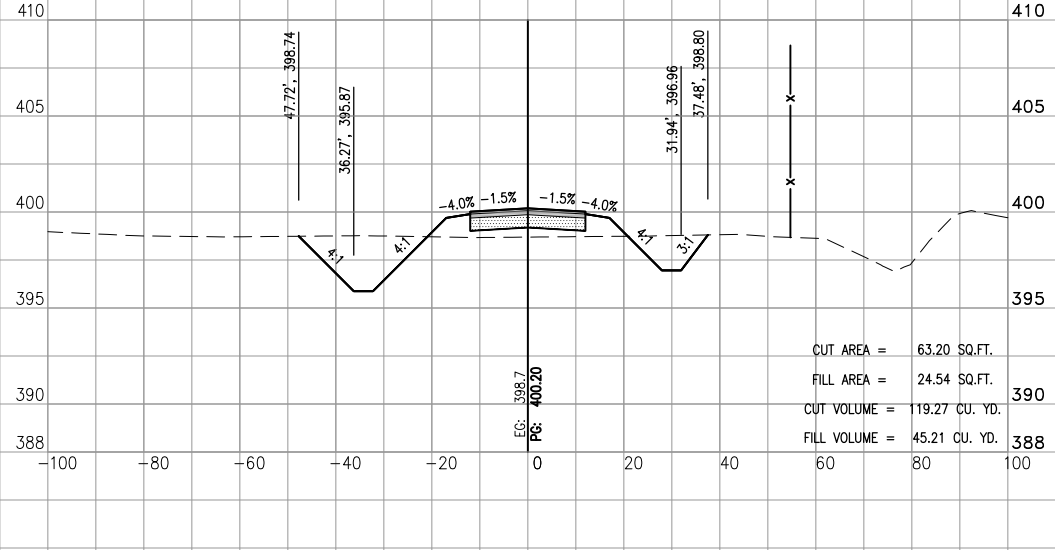
STA. 49+50



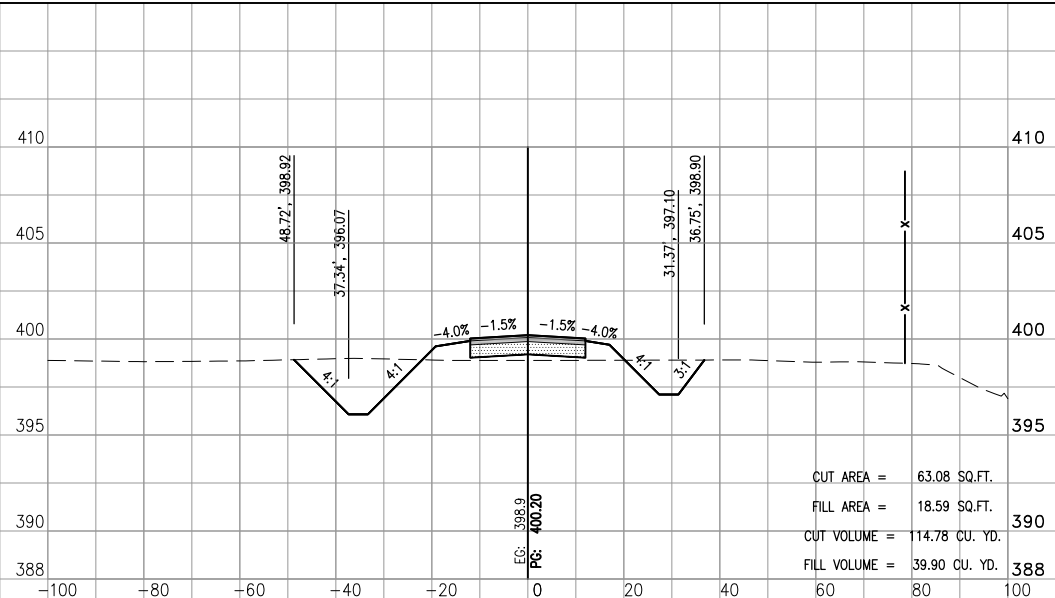
STA. 50+00



STA. 50+50



STA. 51+00



STA. 51+50

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CONSTRUCT PERIMETER ROAD TO SUPPORT ARFF/SRE BUILDING

CROSS SECTION STA. 49+00 TO STA. 51+50



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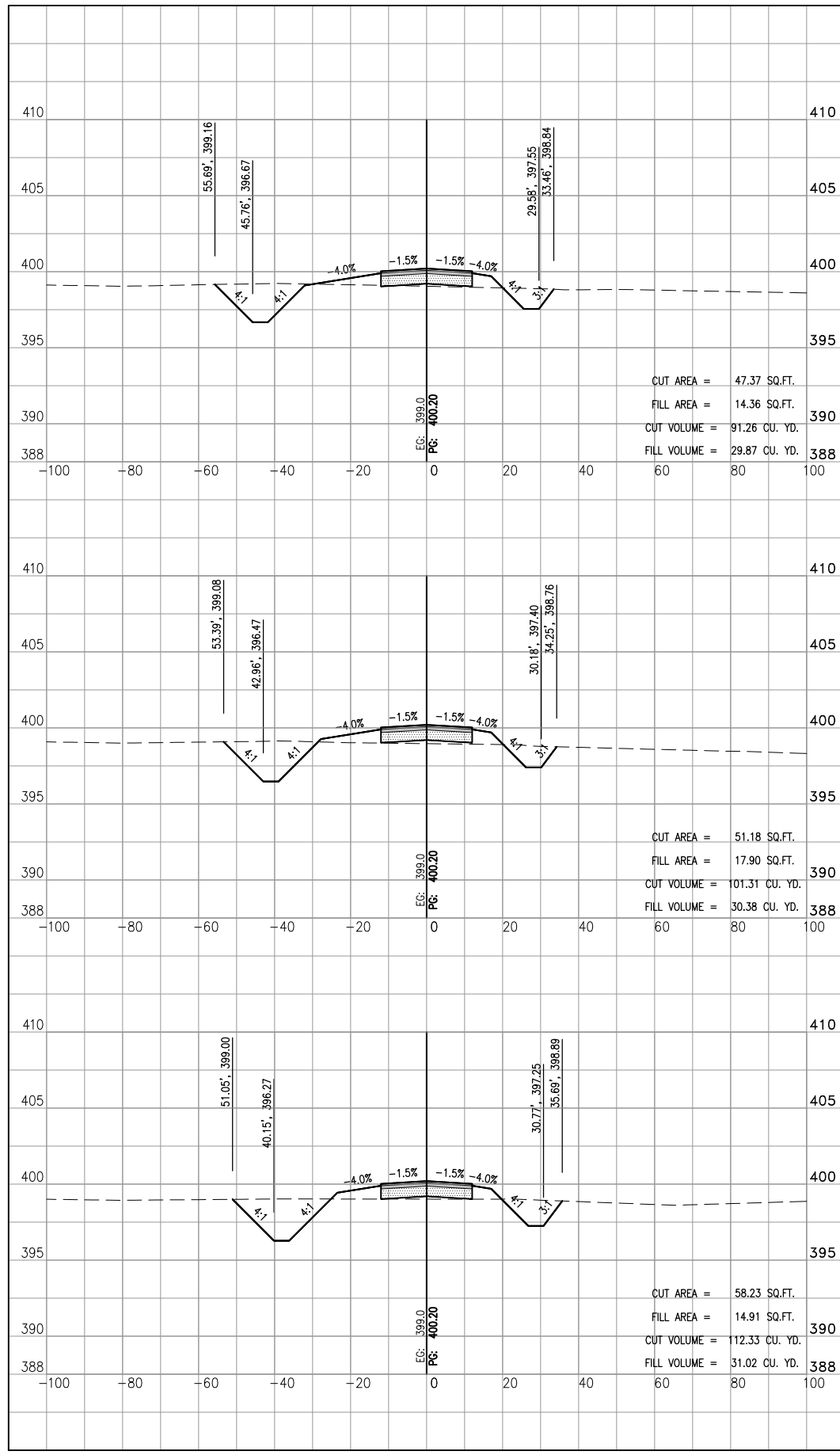
Hanson Project No.	11A0037
Filename	C-302-XS.DWG
Scale	1"=20'H 1"=5'V
Date	04/20/12
LAYOUT	MLH 03/30/12
DRAWN	DAW 03/30/12
REVIEWED	JSL 04/20/12

SOUTHERN ILLINOIS AIRPORT
MURPHYSBORO / CARBONDALE, ILLINOIS



IL PROJ.: MDH-4173

REVISION	DATE



STA.
53+00

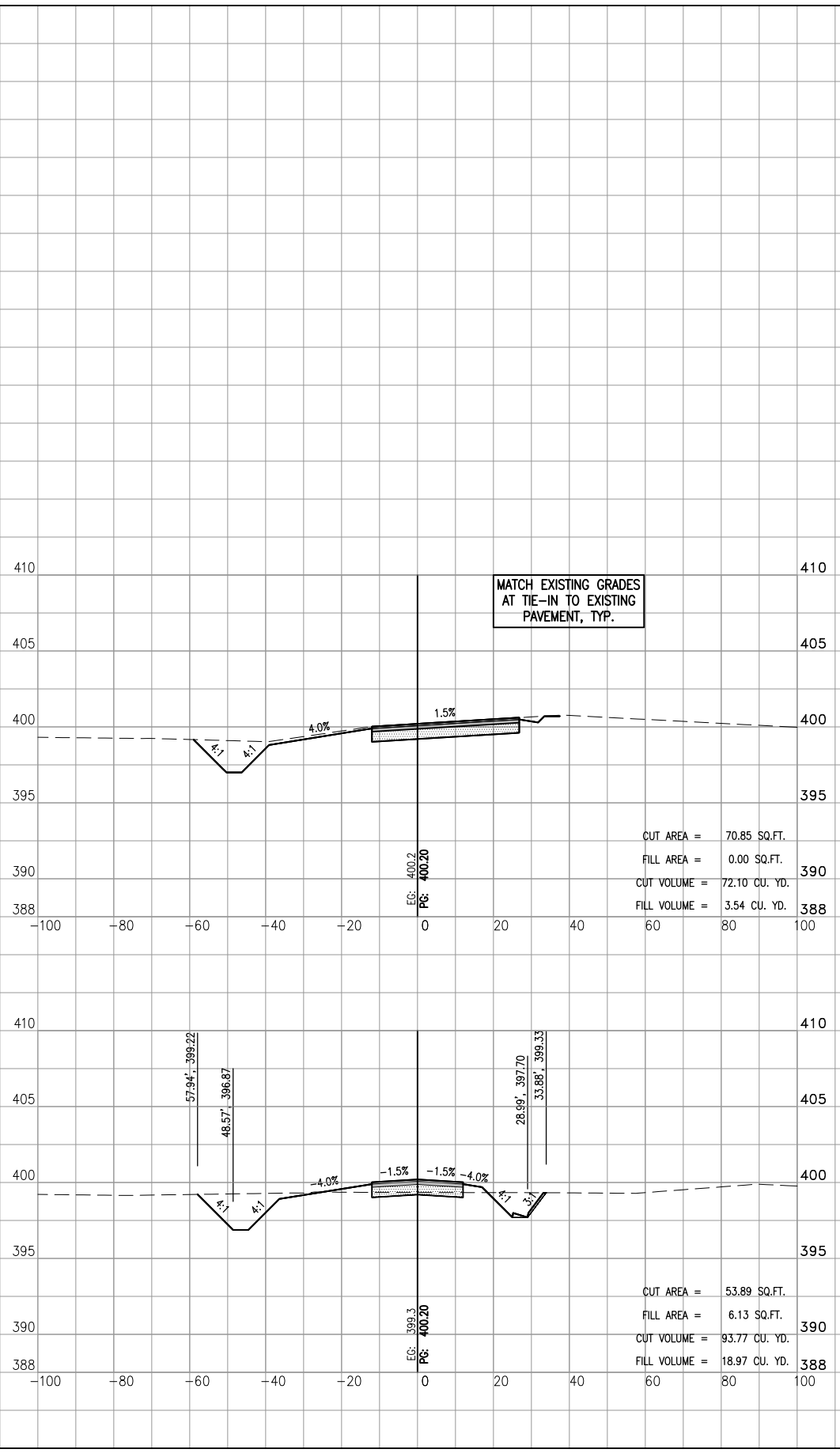
CUT AREA = 47.37 SQ.FT.
FILL AREA = 14.36 SQ.FT.
CUT VOLUME = 91.26 CU. YD.
FILL VOLUME = 29.87 CU. YD.

STA.
52+50

CUT AREA = 51.18 SQ.FT.
FILL AREA = 17.90 SQ.FT.
CUT VOLUME = 101.31 CU. YD.
FILL VOLUME = 30.38 CU. YD.

STA.
52+00

CUT AREA = 58.23 SQ.FT.
FILL AREA = 14.91 SQ.FT.
CUT VOLUME = 112.33 CU. YD.
FILL VOLUME = 31.02 CU. YD.



STA.
53+81

CUT AREA = 70.85 SQ.FT.
FILL AREA = 0.00 SQ.FT.
CUT VOLUME = 72.10 CU. YD.
FILL VOLUME = 3.54 CU. YD.

STA.
53+50

CUT AREA = 53.89 SQ.FT.
FILL AREA = 6.13 SQ.FT.
CUT VOLUME = 93.77 CU. YD.
FILL VOLUME = 18.97 CU. YD.

REVISION	DATE

SOUTHERN ILLINOIS AIRPORT
MURPHYSBORO / CARBONDALE, ILLINOIS

IL PROJ.: MDH-4173

Hanson Project No. 11A0037	File Name C-302-XS.DWG	Scale 1"=20'H 1"=5'V
Date 04/20/12	LAYOUT MLH	03/30/12
	DRAWN DAW	03/30/12
	REVIEWED JSL	04/20/12

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CROSS SECTION STA. 52+00 TO STA. 54+00