KE007 TOTAL SHEETS: 67

CONSTRUCTION PLANS FOR

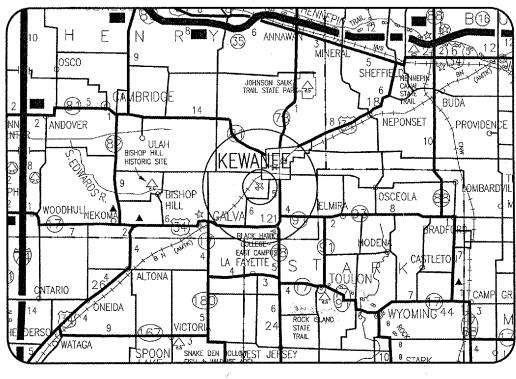
KEWANEE MUNICIPAL AIRPORT

KEWANEE, HENRY COUNTY, ILLINOIS

OVERLAY TAXIWAY "B", "C" AND PART OF APRON, CONSTRUCT NEW VAULT

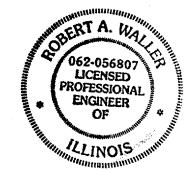
SCOPE OF WORK

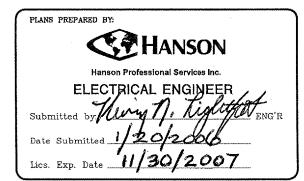
THE PROPOSED IMPROVEMENTS INCLUDE THE CONSTRUCTION OF A BITUMINOUS OVERLAY TO TAXIWAY "B" AND "C" AND THE WESTERN HALF OF THE AIRCRAFT APRON, INSTALLATION OF EDGE DRAINS ADJACENT TO THE SOUTHERN PORTION OF TAXIWAY "B", THE REHABILITATION OF THE TAXIWAY "B" AND "C" MEDIUM INTENSITY TAXIWAY LIGHTING (MITL) SYSTEM, AND THE CONSTRUCTION OF A NEW ELECTRICAL VAULT.



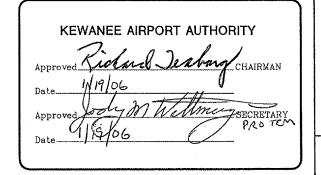
LOCATION

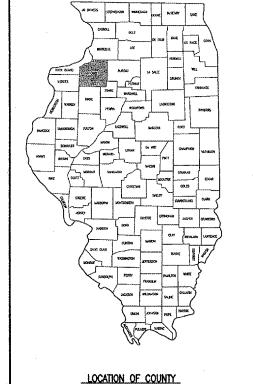












ILL. PROJ. EZI-3533 A.I.P. PROJ. 3-17-0058-B10

LATITUDE: 41° 12' 19" LONGITUDE: 89° 57' 50" ELEVATION: 858.0' M.S.L. DATE: DECEMBER 16, 2005

JAN 12, 2000 3:10 PM RAW
I:\AIRPORTS\KEWANEE\810—05TXYD\AIRPORT\SHEETS\

OVERLAY TXY & APRON CONSTRUCT VAULT

HANSON

1

SUMMARY OF QUANTITIES

			·	
ITEM NO.	DESCRIPTION	UNIT	AS AWARDED QUANTITIES	AS BUILT QUANTITIES
AR107812	L-807 WIND CONE-12' INTERNALLY LIT	EA	1	
AR107900	REMOVE WIND CONE	. EA	1	
AR108158	1/C #8 5KV UG CABLE IN UD	Ŀ	12,614	
AR108554	2/C #4 600V UG CABLE IN UD	UF	920	
AR108656	3/C #6 600V UG CABLE IN UD	LF	870	
AR108800	CONTROL CABLE	LF	560	
AR109100	CONSTRUCT ELECTRICAL VAULT	LS	1	
AR109200	INSTALL ELECTRICAL EQUIPMENT	LS	1	
AR109901	REMOVE ELECTRICAL VAULT	LS	1	
AR110014	4" DIRECTIONAL BORE	LF	390	
AR110503	3-WAY CONCRETE ENCASED DUCT	LF.	216	
AR110504	4-WAY CONCRETE ENCASED DUCT	LF	66	1
AR110610	ELECTRICAL HANDHOLE	EA	3	·***
AR125410	MITL-STAKE MOUNTED	EA	42	
AR125415	MITL-BASE MOUNTED	EA	8	
AR125445	TAXI GUIDANCE SIGN, 5 CHARACTER	EA	1	
AR125446	TAXI GUIDANCE SIGN, 6 CHARACTER	EA EA	2	
AR125901	REMOVE STAKE MOUNTED LIGHT	EA	42	
AR125902	REMOVE BASE MOUNTED LIGHT	EA	8	
AR125904	REMOVE TAXI GUIDANCE SIGN	EA EA	3	
AR125989	REFURBISH PLASI	EA EA	l i	
AR150510	ENGINEER'S FIELD OFFICE	LS	1	
AR150510	HAUL ROUTE	LS	1	
AR156510	SILT FENCE	LF	100	
AR156511	DITCH CHECK	EA EA	2	
AR156512	BALES	EA	16	
		EA EA	3	<u> </u>
AR156520	INLET PROTECTION BITUMINOUS CRACK REPAIR	LF	2812	
AR201660		TON		
AR401610	BITUMINOUS SURFACE COURSE	TON	1246 800	
AR401620	BIT. SURFACE COURSE, LEVELING		1778	
AR401655	BUTT JOINT CONSTRUCTION	SY	<u> </u>	
AR401910	REMOVE & REPLACE BIT. PAVEMENT	SY	489	
AR402622	POROUS FRICTION COURSE, 0.10'	SY	10,389	ļ
AR501900	REMOVE PCC PAVEMENT	SY	29	
AR510510	TIE DOWN	EA EA	16	
AR510900	REMOVE TIE DOWN	EA	24	
AR603510	BITUMINOUS TACK COAT	GAL	4848	
AR620520	PAVEMENT MARKING - WATERBORNE	SF SF	3820	
AR620525	PAVEMENT MARKING BLACK BORDER		588	
AR705410	POROUS BACKFILL	CY	224	
AR705526	6" PERFORATED UNDERDRAIN W/SOCK	<u> </u>	1339	ļ
AR705630	UNDERDRAIN INSPECTION HOLE	EA	5	
AR751909	REMOVE INSPECTION HOLE	EA	3	
AR751949	ADJUST INSPECTION HOLE	EA	9	
AR800590	4/C #6 600V UG CABLE IN UD	UF 10	310	
AR800591	UPGRADE AIRPORT ROTATING BEACON	LS	11	
AR901510	SEEDING	AC	1,4	
AR905520	TOPSOILING (FROM OFF SITE)	CY	440	
AR908510	MULCHING	AC	1.4	L

	INDEX TO SHEETS	REVISION					
SHEET							
NO.	DESCRIPTION	ш					
2	COVER SHEET SUMMARY OF QUANTITIES, INDEX TO SHEETS	DATE					
3	PROPOSED SAFETY PLAN					ш	_
4	PROPOSED PAVEMENT PREPARATION PLAN STA. 4+00 TO STA. 12+00 PROPOSED PAVEMENT PREPARATION PLAN STA. 12+00 TO STA. 20+00	1				:	B10
<u>5</u>	PROPOSED PAVEMENT PREPARATION PLAN STA. 12+00 TO STA. 20+00 PROPOSED PAVEMENT PREPARATION PLAN STA. 20+00 TO STA. 26+00	-		-	ξ	:	PROJ.: 3-17-0058-B10
7	PROPOSED TYPICAL SECTIONS	1	ŀ	7	COUNTY, ILLINOIS	1	8
8	PROPOSED PLAN AND PROFILE TAXIWAY B STA. 7+00 TO STA. 21+00	-	j	ក្ត	3	,	-17
9 10	PROPOSED PLAN AND PROFILE TAXIWAY B STA. 21+00 TO STA. 24+81.11 PROPOSED PLAN AND PROFILE TAXIWAY C STA. 100+00 TO STA. 102+96.21	1	Ì	立	~	,	<u>ان</u>
11	PROPOSED STAKING PLAN STA. 4+00 TO STA. 12+00	1	•	∢ :	5		200
12	PROPOSED STAKING PLAN STA. 12+00 TO STA. 20+00]	;	₹	Ē		A.P.
13 14	PROPOSED STAKING PLAN STA. 20+00 TO STA. 26+00 PROPOSED DRAINAGE PLAN	\cdot	į	÷	\aleph	:	Ā
15	UNDERDRAIN NOTES AND DETAILS	1		KEWANEE MUNICIPAL AIRPORT	≿		
16	PROPOSED STORMWATER POLLUTION PREVENTION PLAN	1		₹ !	HENRY		
17	EXISTING TIE DOWN REMOVAL AND MARKING PLAN	1	į	щ	뽀		
18 19	PROPOSED MARKING PLAN STA 4+00 TO STA. 12+00 PROPOSED MARKING PLAN STA. 12+00 TO STA. 20+00	1	!	2			533
20	PROPOSED MARKING PLAN STA. 20+00 TO STA. 20+00	1	3	≶∃	<u>W</u>	1	1
21	EXISTING ELECTRICAL PLAN STA. 4+00 TO STA. 12+00	1	į	E (II)	KEWANEE,	-	PRO.1: F71-3533
22	EXISTING ELECTRICAL PLAN STA. 12+00 TO STA. 20+00		3	x	Ш	,	ġ
23 24	EXISTING ELECTRICAL PLAN STA. 20+00 TO STA. 26+00 PROPOSED ELECTRICAL PLAN STA. 4+00 TO STA. 12+00	1			×	1	ä
25	PROPOSED ELECTRICAL PLAN TAXIWAY "A"	1				;	=
26	PROPOSED ELECTRICAL PLAN STA. 12+00 TO STA. 20+00				ω	10	 ×
27	PROPOSED ELECTRICAL PLAN STA. 20+00 TO STA. 26+00 WIND CONE ELEVATION DETAIL				10	2	S
28 29	PROPOSED PLASI WIRING DETAILS & NOTES	8	¥		8/0	08/01/05	S
30	LIGHTNING PROTECTION DETAILS FOR BEACON	8	9		10	-	<u>~</u>
31	ELECTRICAL DETAILS	810-06TXYD 0800	R-002FLP.D	08/01/02	- i	ایدا	ı.
32 33	ELECTRICAL DETAILS ELECTRICAL NOTES	P	위등	<u>Ş</u>	R.A.W.	B.A.K.	S
34	ELECTRICAL NOTES		œŽ	õ	L	Ш	
35	ELECTRICAL LEGEND AND ABBREVEATIONS	HEI Project No.			_	2	a
36	EXISTING VAULT SITE PLAN EXISTING VAULT ELECTRICAL ONE-LINE DIAGRAM	Proj	Filename Scale	Dole	Ιğ	DRAWN	Ž
37 38	PROPOSED VAULT SITE PLAN	¥	ଆ ୪	1 &			ď
39	PROPOSED AIRPORT ELECTRICAL VAULT EQUIPMENT PLAN		~	,			
40 41	VAULT LIGHTING AND RECEPTACLE PLAN PROPOSED AIRPORT ELECTRICAL VAULT WALL ELEVATIONS	-					
42	PROPOSED VAULT ELECTRICAL ONE-LINE DIAGRAM SHEET 1		Š	ĺ	Ö Ö	4	
43	PROPOSED VAULT ELECTRICAL ONE-LINE DIAGRAM SHEET 2	1	Ž	j	ig Zige	462 de	
44	PANEL SCHEDULES & DETAILS		A	i	as ≃	liana	
45 46	HIGH VOLTAGE WIRING SCHEMATIC AIRFIELD LIGHTING CONTROL SCHEMATIC	1		i	ssion y Tra	Indianapolis, Indiana 46214 Offices Nationwide	
47	AIRFIELD LIGHTING CONTROL SCHEMATIC CONTINUED	١,		•	Profe	apoli	
48	LIGHTING CONTACTOR PANEL DETAIL	1 (۳.)	30n F	ndian	
49 50	LEGEND PLATE SCHEDULE AND TRANSFORMER WIRING DIAGRAMS ELECTRICAL AND GROUNDING DETAILS	Ι'		/	E.	_	
51	PROPOSED APRON CROSS-SECTIONS STA. 7+02.28 TO STA. 7+18.12	1	V				
52	PROPOSED APRON CROSS-SECTIONS STA. 7+50 TO STA. 8+00	 -	,				
53	PROPOSED APRON CROSS-SECTIONS STA. 8+50 TO STA. 9+00	WOOD V &	<u>5</u> ⊢	,	νĵ		
54	PROPOSED APRON CROSS-SECTIONS STA. 9+29.35 TO STA. 9+64.87	2	- =		띹 .	_	
55 56	PROPOSED APRON CROSS-SECTIONS STA. 9+79.35 TO STA. 10+19.35 PROPOSED TAXIWAY "B" CROSS-SECTIONS STA. 10+21.20 TO STA. 10+71.20	<	VAUL		j (2	
57	PROPOSED TAXIWAY "B" CROSS-SECTIONS STA. 11+00 TO STA. 12+50				֝֟֞֞֝֟֝֟֝֟֝֟֝֟	Ĭ	
58	PROPOSED TAXIWAY "B" CROSS-SECTIONS STA. 12+97.64 TO STA. 13+47.72	V/ED! 4V TVV	CONSTRUCT	,	SUMMARY OF QUANTITIES,	INDEX 10 SHEET	
59 60	PROPOSED TAXIWAY "B" CROSS—SECTIONS STA. 14+22.72 TO STA. 15+00 PROPOSED TAXIWAY "B" CROSS—SECTIONS STA. 15+50 TO STA. 17+00	l F	∵ ⊋		P 5	ر -	
61	PROPOSED TAXIMAT B CROSS—SECTIONS STA. 19+30 TO STA. 17+00 PROPOSED TAXIMAY "B" CROSS—SECTIONS STA. 17+50 TO STA. 18+50	>	; <u>j:</u>		≥ 3	ភ្ជ	
62	PROPOSED TAXIWAY "B" CROSS—SECTIONS STA. 19+00 TO STA. 20+50] =	38		¥ 5	<u> </u>	
63	PROPOSED TAXIWAY "B" CROSS-SECTIONS STA. 21+00 TO STA. 22+50	🖁	ζį		ŠĨ	-	
64 65	PROPOSED TAXIWAY "B" CROSS—SECTIONS STA. 23+00 TO STA. 24+22.63 PROPOSED TAXIWAY "B" CROSS—SECTIONS STA. 24+50 TO STA. 24+81.11	🗟	, O		Ő		
66	PROPOSED TAXIWAY "C" CROSS-SECTIONS STA. 100+30 TO STA. 101+00	\vdash					
67	PROPOSED TAXIWAY "C" CROSS-SECTIONS STA. 101+50 TO STA. 102+96.21	1		7			

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SCOPE OF WORK

THE PROPOSED IMPROVEMENTS INCLUDE THE CONSTRUCTION OF A BITUMINOUS OVERLAY TO TAXIWAY "B" AND "C" AND THE WESTERN HALF OF THE AIRCRAFT APRON, INSTALLATION OF EDGE DRAINS ADJACENT TO THE SOUTHERN PORTION OF TAXIWAY "B" AND "C" MEDIUM INTENSITY TAXIWAY LIGHTING (MITL) SYSTEM, AND THE CONSTRUCTION OF A NEW ELECTRICAL VAULT.

CONTRACTOR'S RESPONSIBILITIES

GENERAL :

THE CONTRACTOR MUST FOLLOW PROCEDURES ON THIS SHEET THAT ASSURES SAFE OPERATING CONDITIONS FOR AIRCRAFT AS WELL AS HIS PERSONNEL AND EQUIPMENT. THE AIRPORT MANAGER WILL AT ALL TIMES HAVE JURISDICTION

IDENTIFICATION -- THE CONTRACTOR IS REQUIRED TO MARK ALL VEHICLES AND EQUIPMENT USED FOR CONSTRUCTION WITH 3 FT, SQUARE, INTERNATIONAL ORANGE AND WHITE CHECKERED FLAGS ANYTIME THEY ARE ON AIRPORT PROPERTY.

ALL CONTRACTOR PERSONNEL SHALL HAVE IDENTIFICATION MAKING IT OBVIOUS THAT THEY ARE A PART OF THE CONSTRUCTION CREW.

THE CONTRACTOR, HIS EMPLOYEES, AND EQUIPMENT SHALL BE RESTRICTED TO THE PROJECT WORK AREA.

RADIO CONTROL - THE CONTRACTOR IS REQUIRED TO BE IN TWO-WAY RADIO CONTACT WITH THE KEWANEE MUNICIPAL AIRPORT UNICOM (122.80 MHZ) WHENEVER HIS PERSONNEL IS ON THE AIRPORT PROPERTY

EQUIPMENT PARKING AND STORAGE - THE CONTRACTOR'S EQUIPMENT PARKING, MATERIAL STORAGE, AND EMPLOYEE PARKING WILL BE AT THE LOCATION SHOWN ON THIS DRAWING. ONLY VEHICLES AND EQUIPMENT NECESSARY FOR CONSTRUCTION WILL BE PERMITTED TO LEAVE THESE AREAS.

THE CONTRACTOR IS REQUIRED TO LIMIT THE USE OF CONSTRUCTION EQUIPMENT ON THE EXISTING PAVEMENTS. ONLY EQUIPMENT NEEDED TO COMPLETE THE SPECIFIC WORK ON THE EXISTING PAVEMENT WILL BE PERMITTED. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO EXISTING PAVEMENTS CAUSED BY HIS PERSONNEL OR

150-ENGINEER'S FIELD OFFICE NOTES

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

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

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

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

WHEN RUNWAY 1-19 IS CLOSED AND CONSTRUCTION TRAFFIC IS REQUIRED TO CROSS THE OPEN RUNWAY, RUNWAY 9-27, THE CONTRACTOR WILL USE FLAG-MEN, EQUIPPED WITH RADIOS, TO DIRECT TRUCK TRAFFIC ACROSS RUNWAY 9-27. THE FLAG-MEN MUST HAVE THE COMMUNICATION EQUIPMENT CAPABLE OF CHANGING FREQUENCIES TO CONTACT EACH OTHER AND THE AIRPORT UNICOM (122.80 MHZ). THE REQUIRED USE OF FLAGMEN WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

BARRICADES AND TRAFFIC CONES

ADDITIONAL COMPENSATION WILL BE ALLOWED.

EXISTING AIRPORT PROPERTY LINE

RUNWAY 9-27 4500'x75

PLACE BARRICADES AT

PROPOSED -

100' X 200'

EQUIPMENT

PARKING

FXISTING

GATE

HAUL ROUTE &

20' WIDE

HOLDLINE LOCATION

MIDLAND ROAD

(HORIZONTAL AND VERTICAL [DATA		
NO.	DESCRIPTION	NORTHING	EASTING	ELEV.
1	KEWPORT AZ (NGS) MARKER, ALUM. ROD	1,652,491.649	2,349,792.846	850.62
2	CHISELED "□" ON INSPECTION HOLE	-	_	848.87
3	KEWPORT (NGS) MARKER, ALUM. ROD	1,652,431.715	2,352,728.103	854.13
4	CHISELED "디" ON EAST END OF CONC. SIGN BASE		-	854.76
<u>5</u>	CHISELED "□" ON WEST END OF CONC. SIGN BASE	-	-	851.21

THE LOCATION, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ON THE PLANS IS NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE RESPECTIVE

NOTIFY THE ORIGITY COMPANIES OF HIS DEPENATIONAL PLANS AND SHARL UBJAIN FROM THE RESPECTIVE.

TUILITY COMPANIES DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES

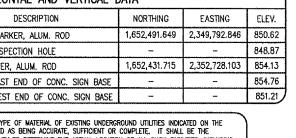
AND THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN

THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE

CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE ENGINEER SHALL

ALSO BE IMMEDIATELY NOTIFIED. ANY SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT

ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.

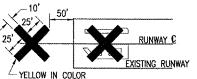


RUNWAY CLOSURE PROCEDURES: * CONTACT THE AIRPORT MANAGER OR HIS ASSIGNED REPRESENTATIVE, * ISSUANCE OF NOTAM BY THE AIRPORT MANAGER OR HIS ASSIGNED REPRESENTATIVE. CALL J.U.L.I.E. FOR UTILITY INFORMATION AT 1-800-892-0123. * PLACEMENT OF CROSSES (SEE DETAIL THIS SHEET). OPERATIONS WITHIN 200 FT. OF THE AFFECTED RUNWAY CENTERLINE BEGIN. RUNWAY RE-OPENING PROCEDURES: REMOVE CROSSES. * REMOVE LIGHTED BARRICADES. THAN 200 FT, FROM THE AFFECTED RUNWAY CENTERLINE. RUNWAY AND TAXIWAY CLOSURE NOTE: AIRCRAFT OPERATION LINE 200' 400' HEIGHT OF CONSTRUCTION EQUIPMENT FULL SIZE SCALE: 1"= 400' HALF SIZE SCALE: 1"= 800" SEMI-TRACTOR AND TRAILER. HAUL ROUTE AND EQUIPMENT PARKING AIRCRAFT **OPERATION** LINE POINT 3 IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO PLACE AND MAINTAIN BARRICADES AND TRAFFIC CONES AS SHOWN ON THIS SHEET OR AS DIRECTED BY THE RESIDENT ENCINEER. THE BARRICADES WILL BE EQUIPPED WITH RED STEADY BURN LIGHTS AND 20 INCH SQUARE ORANGE FLAGS. THE BARRICADES AND CONES, THEIR MAINTENANCE, PLACEMENT AND REMOVAL WITHIN THE RECONSTRUCTION AREA WILL BE CONSIDERED AS AN INCIDENTAL ITEM TO THE CONTRACT AND NO CONSTRUCTION IMPROVEMENTS COORDINATION OR INSTALLATION FOR WORK BEYOND THAT IS SPECIFIED. (5) TRAFFIC CONES WILL BE USED ON A CLOSED RUNWAY FOR TRAFFIC CONTROL IN LIEU OF BARRICADES. POINT 2 -PLACE BARRICADES AT HOLDLINE LOCATION (3)----POINT 1 CRITICAL POINT DATA

76p> [

TEMPORARY RUNWAY CLOSURE NOTE

COST OF CONSTRUCTING, PLACING, MAINTAINING AND REMOVING CROSSES WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED. THE CROSSES WILL BE YELLOW IN COLOR AND SHALL BE MADE OF A SUITABLE MATERIAL AS APPROVED BY THE RESIDENT ENGINEER. THE CROSSES WILL BE PLACED AS SHOWN ON THIS SHEET AND SECURED IN A MANNER APPROVED BY THE RESIDENT ENGINEER. THE PROPOSED CROSSES WILL BE PLACED EACH DAY THE RUNWAY IS CLOSED AND REMOVED WHEN THE RUNWAY IS RE-OPENED. THE CONTRACTOR WILL BE RESPONSIBILE FOR THE PLACEMENT AND REMOVAL OF THE CROSSES. NO ADDITIONAL COMPENSATION TO THE CONTRACT WILL BE ALLOWED.



CROSSES MAY BE PLACED OVER THE NUMERALS OR OFF THE RUNWAY END

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DETAIL OF CROSS FOR CLOSED RUNWAY

- * PLACEMENT OF LIGHTED BARRICADES. ONLY AT THE TIME THAT ALL OF THE ABOVE ARE COMPLETED MAY ANY CONSTRUCTION
- * NOTIFY THE AIRPORT MANAGER OR HIS REPRESENTATIVE TO CANCEL THE NOTAM.
- * CANCELLATION OF THE NOTAM. A CLOSED RUNWAY WILL NOT BE RE-OPENED UNTIL ALL EQUIPMENT AND WORK ARE FURTHER

RUNWAY 9-27 AND 1-19 WILL BE CLOSED ANY TIME CONSTRUCTION ACTIVITIES ARE REQUIRED WITHIN 200' OF THE RESPECTIVE RUNWAY CENTERLINE, IN ACCORDANCE WITH THE PROCEDURES SHOWN ON THIS PROPOSED SAFETY PLAN. HOWEVER, ONE RUNWAY WILL REMAIN OPEN WHEN THE OTHER IS CLOSED, THROUGH THE USE OF FLAGMEN, WHERE NECESSARY. TAXIWAY "B" AND "C", AS WELL AS THE PORTION OF THE RAMP AFFECTED BY THE PROJECT, WILL BE CLOSED FOR THE DURATION OF THE PROJECT,

THE RESIDENT ENGINEER WILL ESTABLISH THE AIRCRAFT OPERATIONAL AREA FOR EACH OF THE AIRPORT RUNWAYS BY PLACING A ROW OF LATH, 200 FT. FROM EACH OF THE CENTERLINES. NO PERSONNEL OR EQUIPMENT WILL CROSS THE LATH ROW WITHOUT CLOSING THE

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

THE CONTRACTOR IS REQUIRED TO CONSTRUCT A TEMPORARY HAUL ROUTE AND EQUIPMENT PARKING AREA IN ACCORDANCE WITH THE SPECIAL PROVISIONS AND AT THE LOCATION SHOWN ON THIS SHEET. THE HAUL ROUTE AND EQUIPMENT PARKING AREA SHALL BE ESTABLISHED AS FAR SOUTH AND EAST OF RUNWAY 1-19 AS IS PRACTICAL.

THE DESIGNATED HAUL ROUTE SHALL BE THE ONLY ACCESS USED BY THE CONTRACTOR OR HIS EMPLOYEES.

CRITICAL POINT 1

ELEVATION - 854.90

ELEVATION - 856,31

ELEVATION - 851.59

EXISTING AIRPORT PROPERTY LINE

LATITUDE - 41' 12' 12.08227"

CRITICAL POINT 2 LATITUDE - 41' 12' 16.03385"

LONGITUDE - 89' 57' 37.26742"

LATITUDE - 41' 12' 25.08439"

LONGITUDE -- 89° 57' 38.28434"

LONGITUDE - 89' 57' 37.36973"

THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS TO USE STATE, CITY, COUNTY, OR TOWNSHIP ROADS.

THE CONTRACTOR AND HIS PERSONNEL SHALL ACCESS THE AIRPORT THROUGH AN EXISTING GATE LOCATED OFF MIDLAND ROAD. THE CONTRACTOR WILL ENSURE THE GATE IS CLOSED AND LOCKED AT THE END OF EACH DAY.

THE INSTALLATION OF THE PROPOSED LIGHTING HOMERUN CABLES THROUGH OR ACROSS THE HAUL ROUTE WILL REQUIRE COORDINATION BETWEEN CONTRACTORS AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR LABOR OR MATERIAL ASSOCIATED WITH THE

ALL WORK ASSOCIATED WITH THE PROPOSED HAUL ROUTE SHALL BE CONSIDERED INCIDENTAL TO AR150540 - HAUL ROUTE,

THE PROPOSED CONSTRUCTION WILL DISTURB MORE THAN 1 ACRES OF LAND, THEREFORE AN EROSION CONTROL PLAN AND AN NPDES PERMIT ARE REQUIRED.

LEGEND EXISTING IMPROVEMENTS EXISTING BUILDING PROPOSED CONSTRUCTION **IMPROVEMENTS**

PROPOSED FOUIPMENT/VEHICLE PARKING AREA & HAUL ROUTE

---- EXISTING AIRPORT PROPERTY LINE LIGHTED BARRICADES

HORIZONTAL/VERTICAL CONTROL

VERLAY TXY & CONSTRUCT \

ILLINOI

COUNTY,

KEWANEE MUNI KEWANEE, HENRY

J.U.L.I.E. INFORMATION

KEWANER

WETHERSFIELD

KEWANEE MUNICIPAL AIRPORT

KEWANEE, ILLINOIS 61443

3761 MIDLAND ROAD

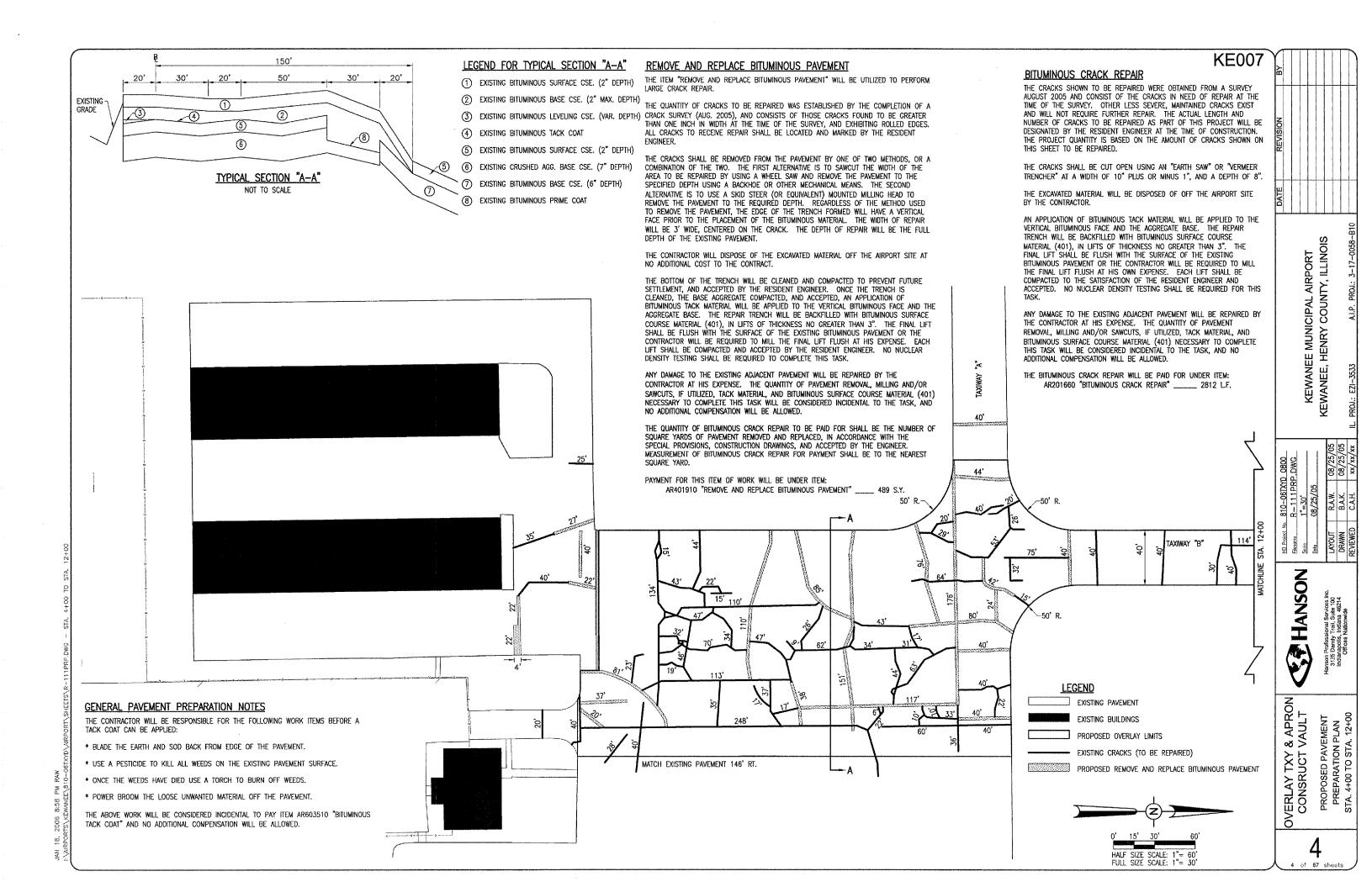
TOWNSHIP

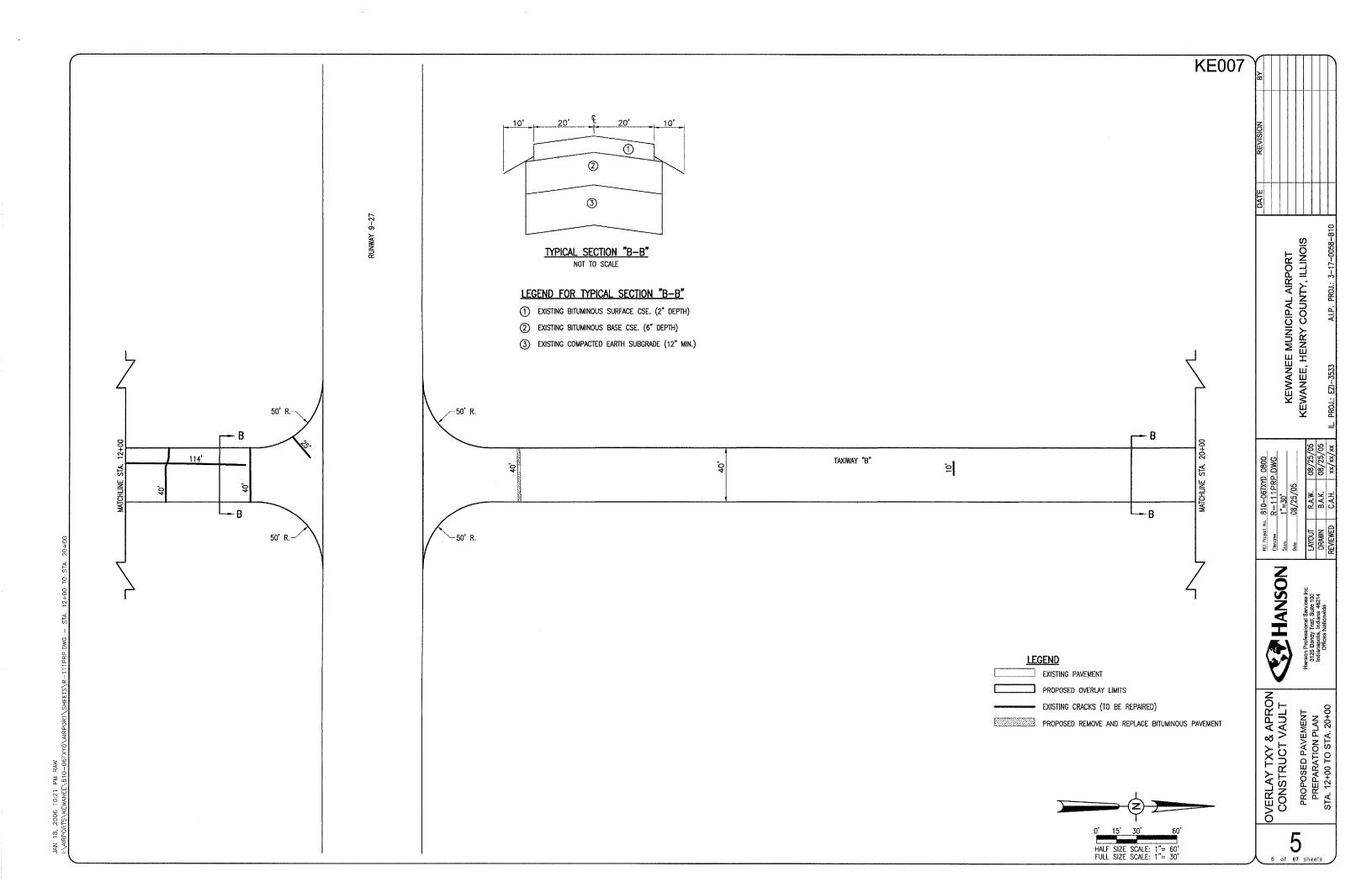
ADDRESS

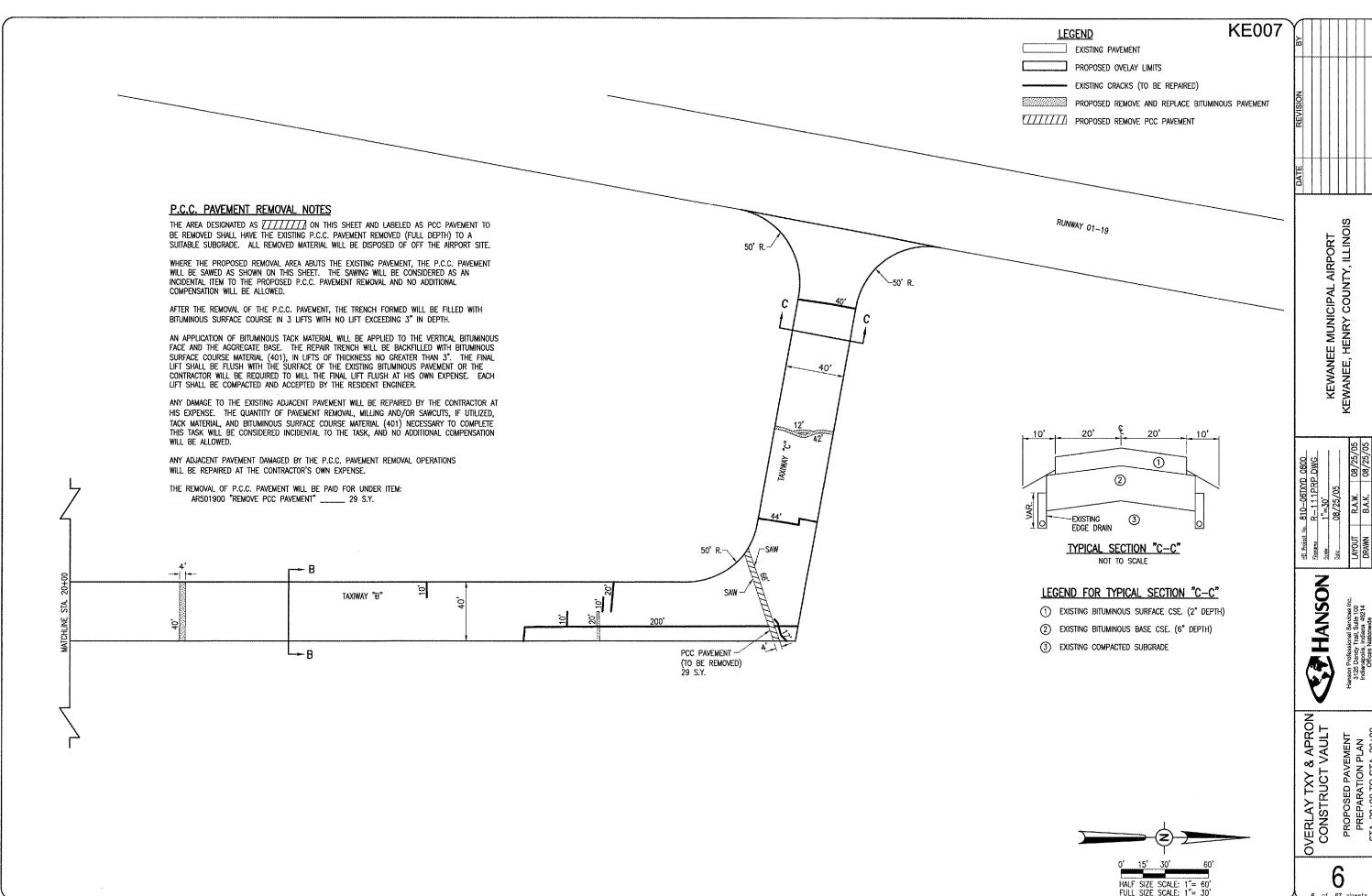
SECTION NO. 17

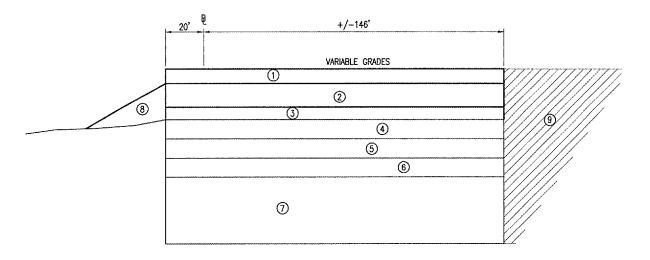
HANS

& APRON





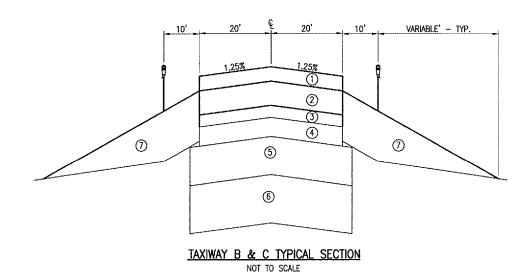




RAMP TYPICAL SECTION NOT TO SCALE

LEGEND FOR RAMP TYPICAL SECTION

- ① PROPOSED BITUMINOUS SURFACE CSE. (1.5" DEPTH)
- 2 PROPOSED BITUMINOUS LEVELING CSE. (VARIABLE DEPTH)
- ③ PROPOSED POROUS FRICTION CSE. (0.1' DEPTH)
- 4 EXISTING BITUMINOUS SURFACE CSE. (2" DEPTH)
- (5) EXISTING BITUMINOUS BASE CSE. (2" MAX. DEPTH)
- 6 EXISTING BITUMINOUS SURFACE CSE. (2" DEPTH)
- (7) EXISTING CRUSHED AGG. BASE CSE. (7" DEPTH)
- (8) PROPOSED TOPSOILING (FROM OFF SITE)
- 9 EXISTING RAMP PAVEMENT MATCH GRADE



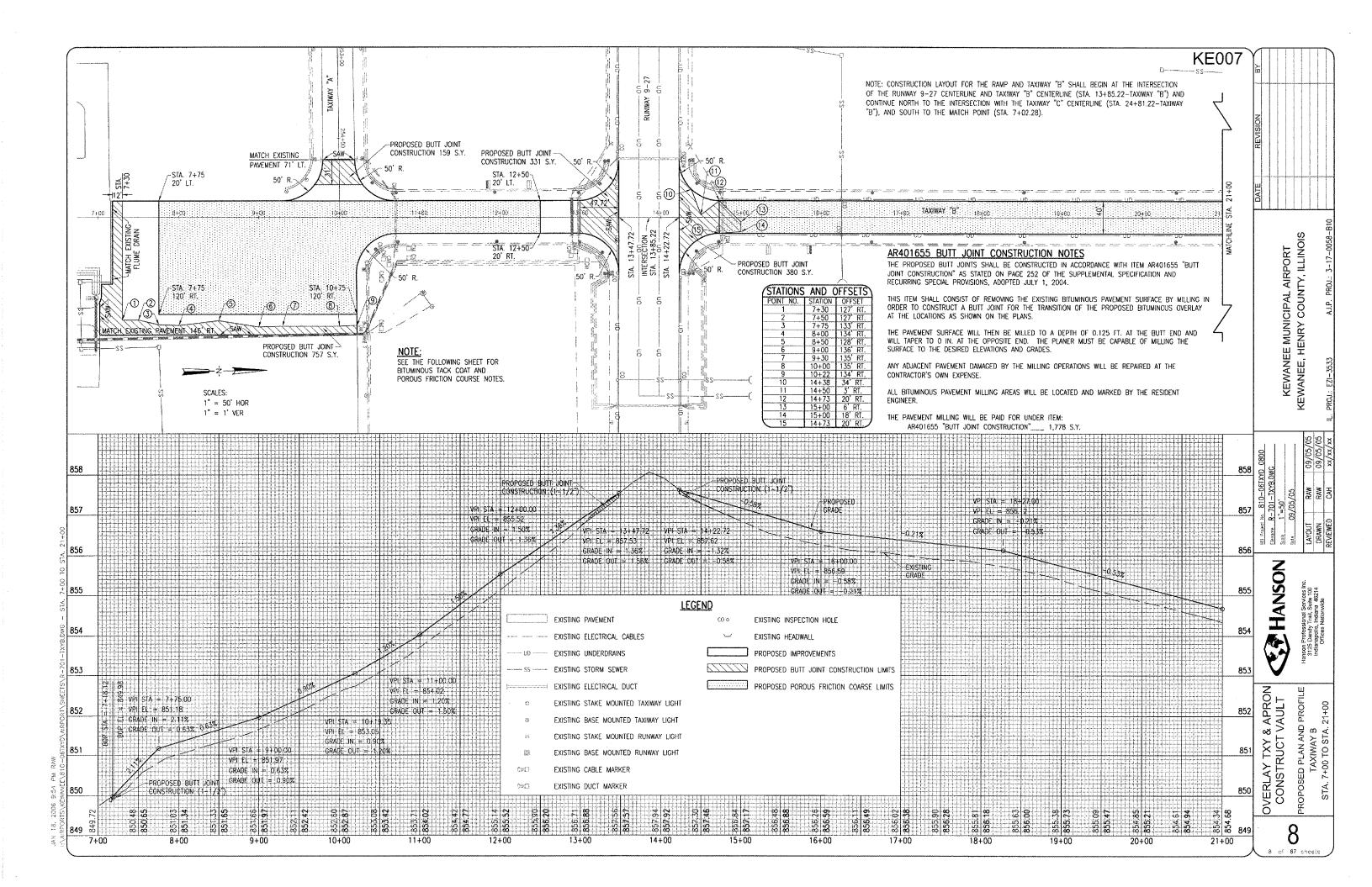
LEGEND FOR TYPICAL SECTION "B-B"

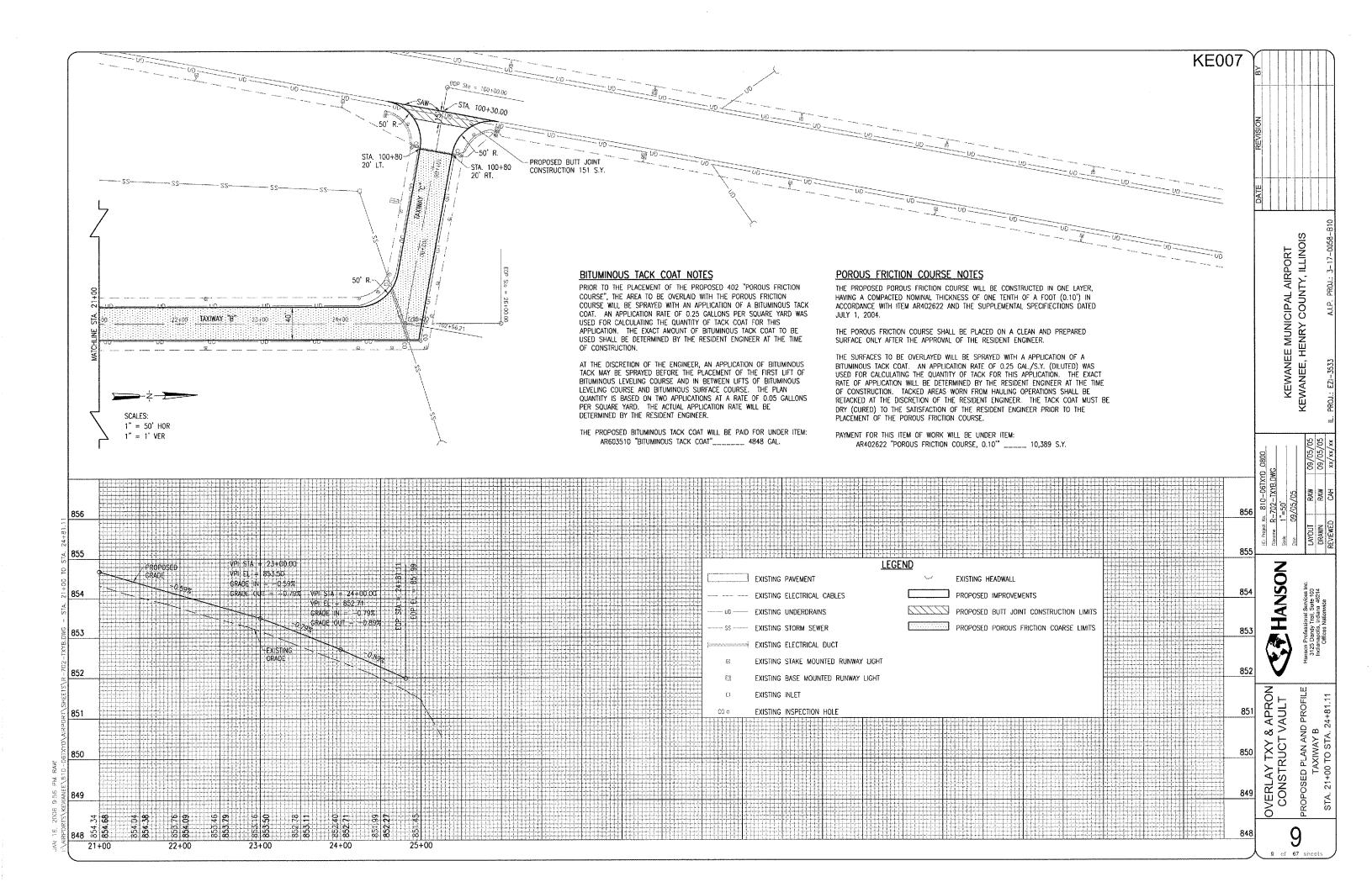
- 1 PROPOSED BITUMINOUS SURFACE CSE. (1.5" DEPTH)
- 2) PROPOSED BITUMINOUS LEVELING CSE. (VARIABLE DEPTH)
- 3 PROPOSED POROUS FRICTION CSE. (0.1' DEPTH)
- 4 EXISTING BITUMINOUS SURFACE CSE. (2" DEPTH)
- (5) EXISTING BITUMINOUS BASE CSE. (6" DEPTH)
- (6) EXISTING COMPACTED EARTH SUBGRADE (12" MIN.)
- 7 PROPOSED TOPSOILING (FROM OFF SITE)

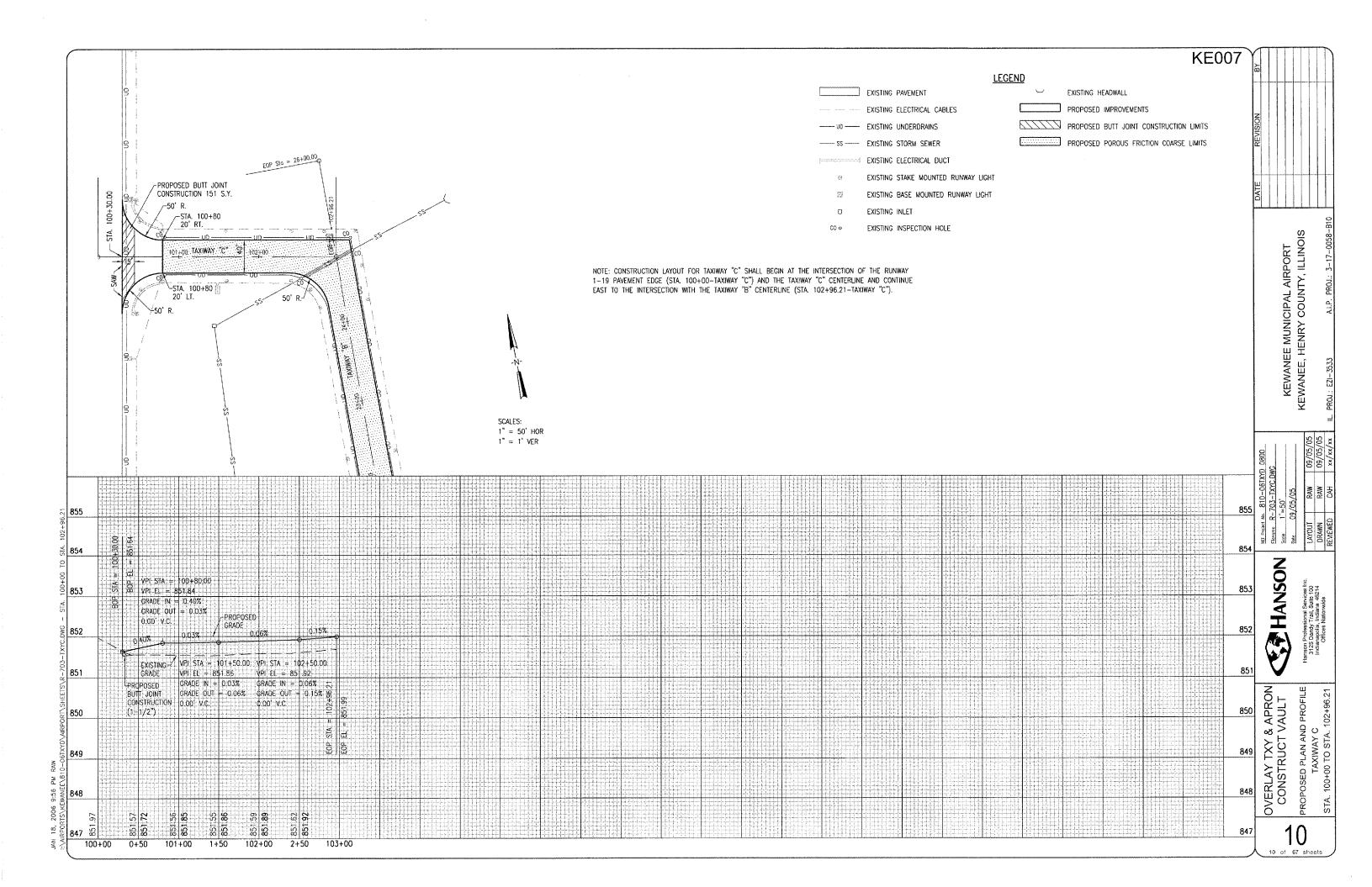
HANSON

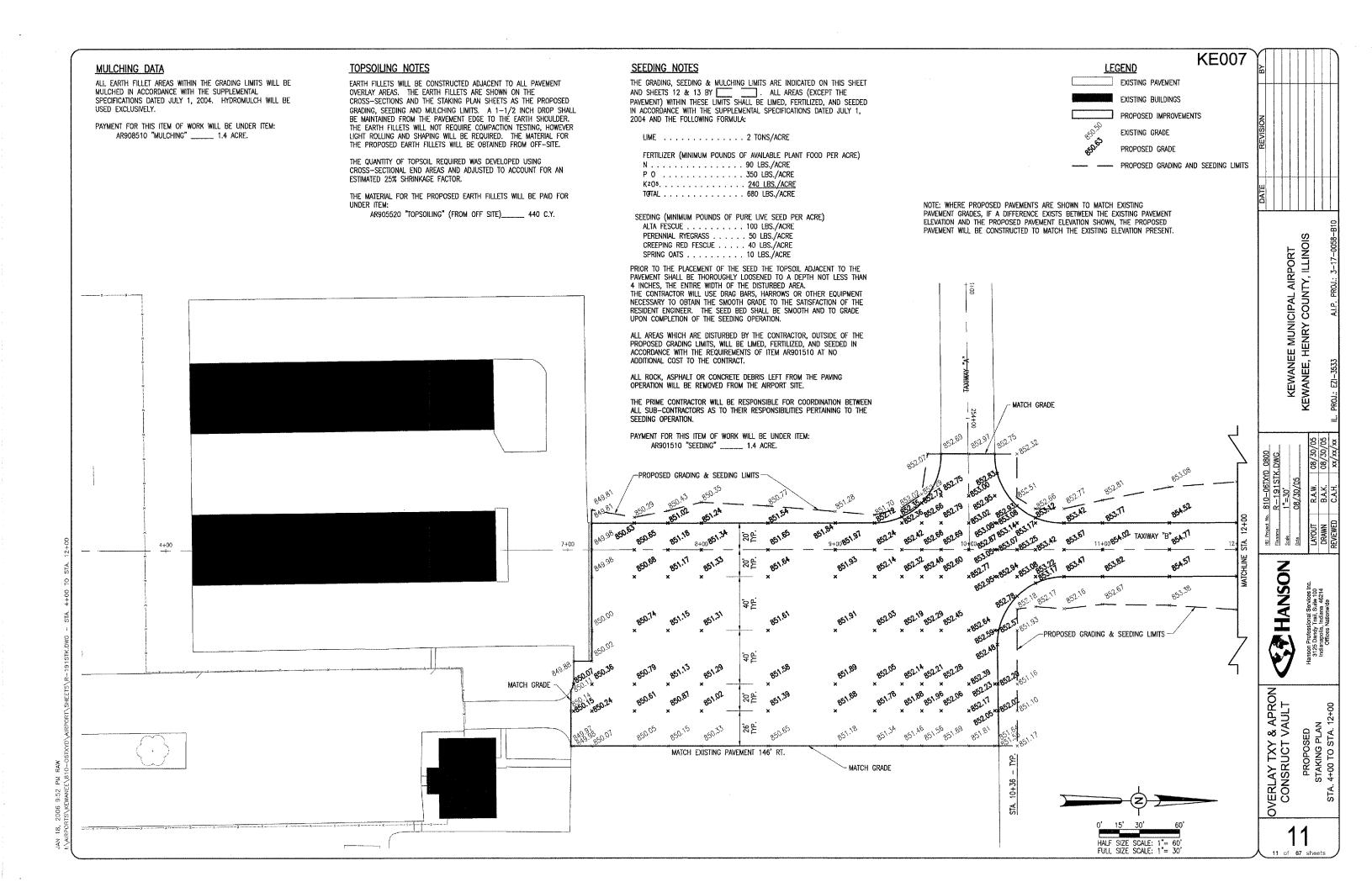
KEWANEE MUNICIPAL AIRPORT KEWANEE, HENRY COUNTY, ILLINOIS

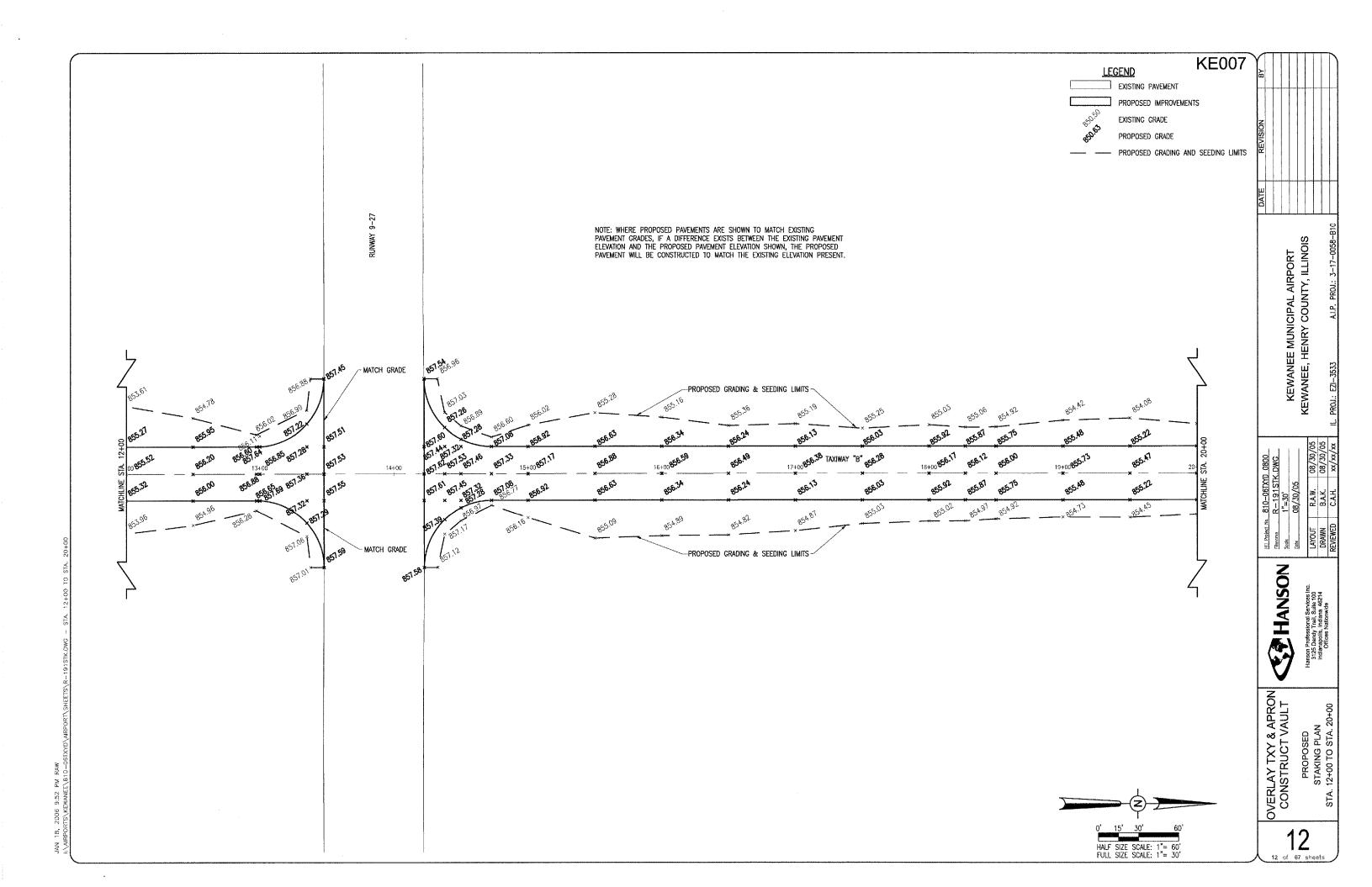
OVERLAY TXY & APRON CONSTRUCT VAULT

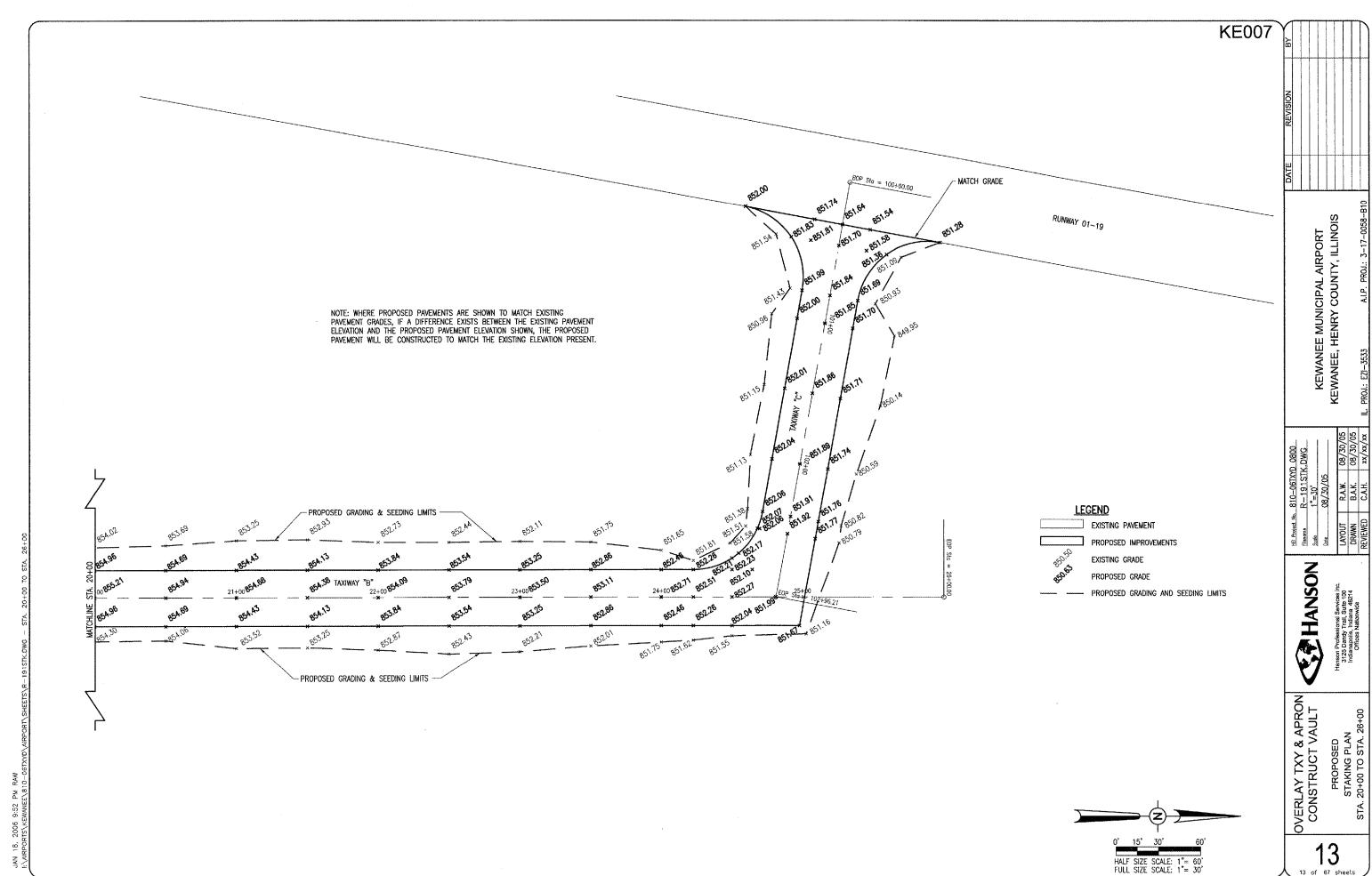




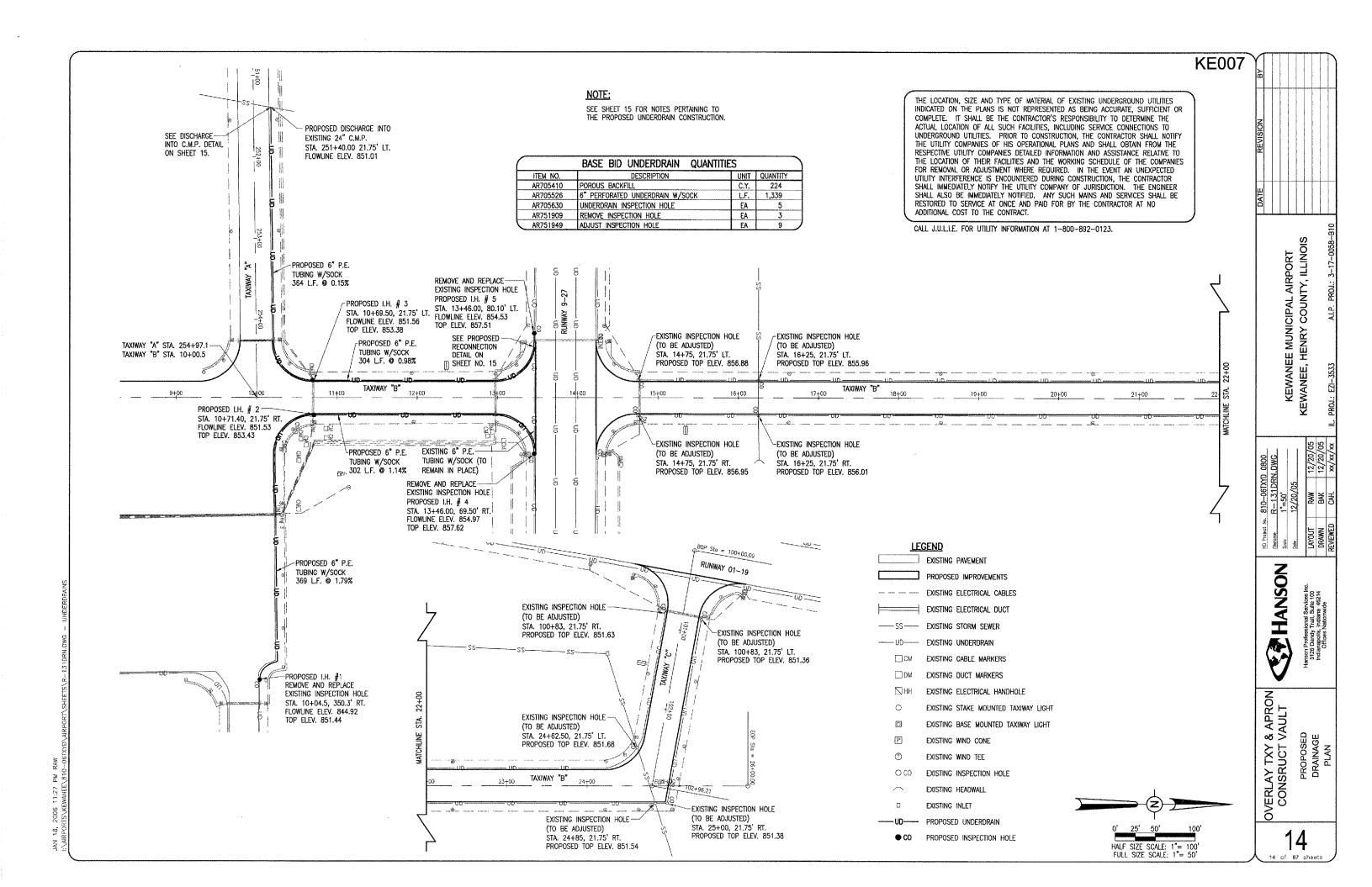






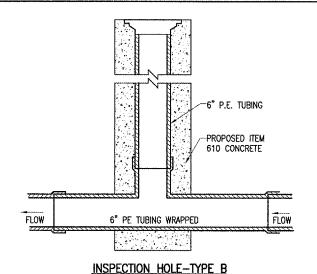


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CAST IRON FRAME AND COVER

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



INSPECTION HOLE NOTES

DIAMETER OF PIPE AS SPECIFIED.

TOP OF INSPECTION HOLES SHALL BE 2" ABOVE FINISH GROUND LINE AT LOCATION

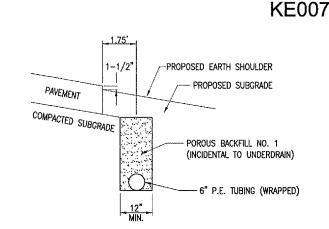
1/2" CHAMFER TO BE USED ON ALL EXPOSED EDGES OF INSPECTION HOLES.

THE CONCRETE SHALL BE STRUCTURAL PORTLAND CEMENT CONCRETE (NON-

THE PROPOSED UNDERDRAIN INSPECTION HOLES WILL BE PAID FOR UNDER ITEM AR705530 UNDERDRAIN INSPECTION HOLE______5 EACH,

POROUS BACKFILL NOTES

THE QUANTITY OF POROUS BACKFILL WAS CALCULATED USING AN AVERAGE DEPTH OF 36" AND AVERAGE WIDTH OF 18". THE MINIMUM TRENCH WIDTH IS 12".



UNDERDRAIN DETAIL

NOT TO SCALE

705-UNDERDRAIN NOTES:

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

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING 6" P.E. TUBING (WRAPPED) AND UNDERDRAIN INSPECTION HOLES AT THE LOCATIONS AND TO THE GRADES SHOWN ON THE CONSTRUCTION PLANS.

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

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

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

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

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

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

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

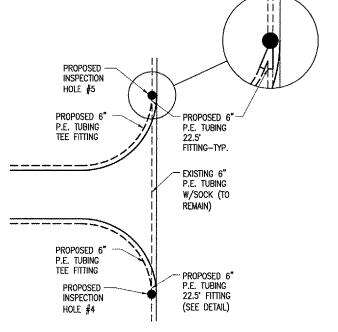
THE TRENCH SHALL BE BACKFILLED WITH SELECT MATERIAL, MEETING THE APPROVAL OF THE ENGINEER, PLACED IN 8 IN. LAYERS, LOOSE MEASUREMENT, AND COMPACTED TO THE ENGINEER'S SATISFACTION."

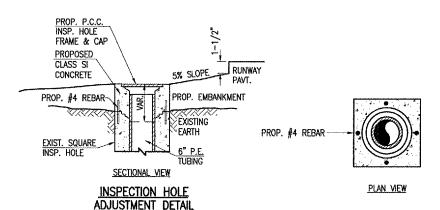
705-3.6 BACKFILLING; ADD THE FOLLOWING TO THIS SECTION:

"THE EDGE DRAIN TRENCH WILL BE BACKFILLED WITH POROUS BACKFILL IDOT (CA-14 OR CA-16) IN ACCORDANCE WITH THE DETAIL ON THE CONSTRUCTION PLANS. THE POROUS BACKFILL WILL BE COMPACTED TO THE SATISFACTION OF THE RESIDENT ENGINEER.

THE PROPOSED UNDERDRAIN PIPE WILL BE PAID FOR UNDER ITEM: AR705526 6" PERFORATED UNDERDRAIN W/SOCK_____ 1,339 L.F.

THE PROPOSED POROUS BACKFILL WILL BE PAID FOR UNDER ITEM: AR705410 POROUS BACKFILL 224 C.Y.



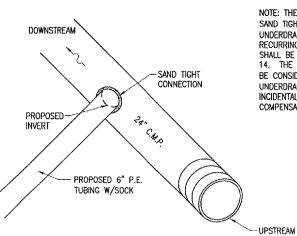


"NOT TO SCALE"

PROPOSED RECONNECTION DETAIL

NOT TO SCALE

NOTE: THE RECONNECTION OF THE UNDERDRAIN SHOWN IN THE DETAIL ABOVE SHALL USE STANDARD PE TUBING FITTINGS. THE CONNECTION OF THE FITTINGS WILL BE IN ACCORDANCE WITH ITEM 705 "PIPE UNDERDRAINS FOR AIRPORTS" INCLUDED IN THE SUPPLEMENTAL AND RECURRING SPECIAL PROVISIONS DATED JULY 1, 2004. THE RECONNECTION OF THE UNDERDRAIN SHALL BE CONSIDERED INCIDENTAL TO ITEM AR705526 - 6" PERFORATED UNDERDRAIN W/SOCK, INCLUDING ALL LABOR, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE TASK, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.



NOTE: THE CONNECTION OF THE UNDERDRAIN INTO THE 24" CMP WILL BE SAND TIGHT IN NATURE. IN ACCORDANCE WITH ITEM 705 "PIPE UNDERDRAINS FOR AIRPORTS" INCLUDED IN THE SUPPLEMENTAL AND RECURRING SPECIAL PROVISIONS DATED JULY 1, 2004. THE CONNECTION SHALL BE CONSTRUCTED TO THE INVERT ELEVATION SHOWN ON SHEET 14. THE CONNECTION OF THE UNDERDRAIN TO THE EXISTING CMP SHALL BE CONSIDERED INCIDENTAL TO ITEM AR705526 - 6" PERFORATED UNDERDRAIN W/SOCK, INCLUDING ALL LABOR, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE TASK, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

DISCHARGE INTO C.M.P. DETAIL

NOT TO SCALE

HANSON (1)

OVERLAY TXY & APRON CONSRUCT VAULT

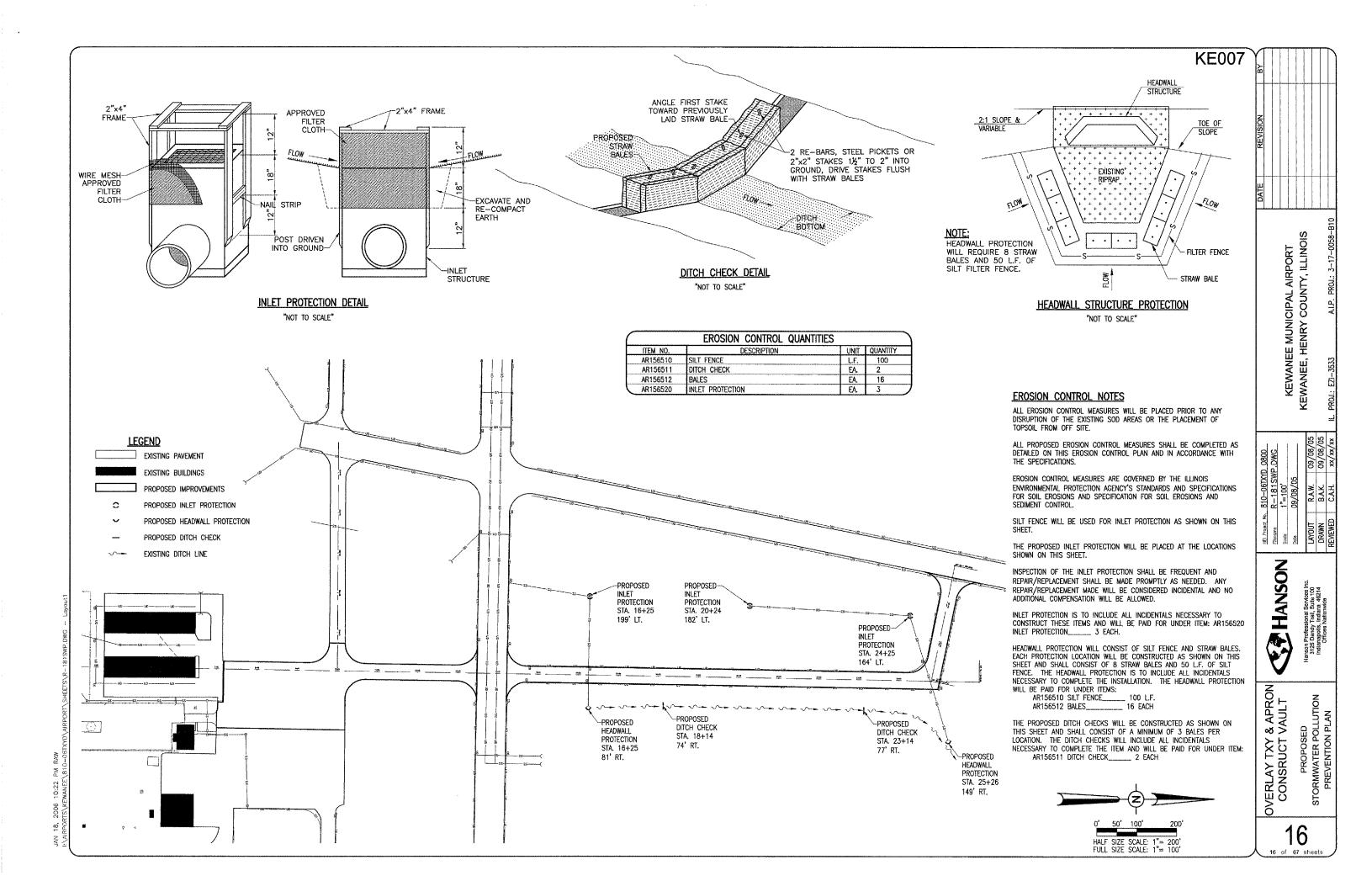
COUNTY, ILLINO

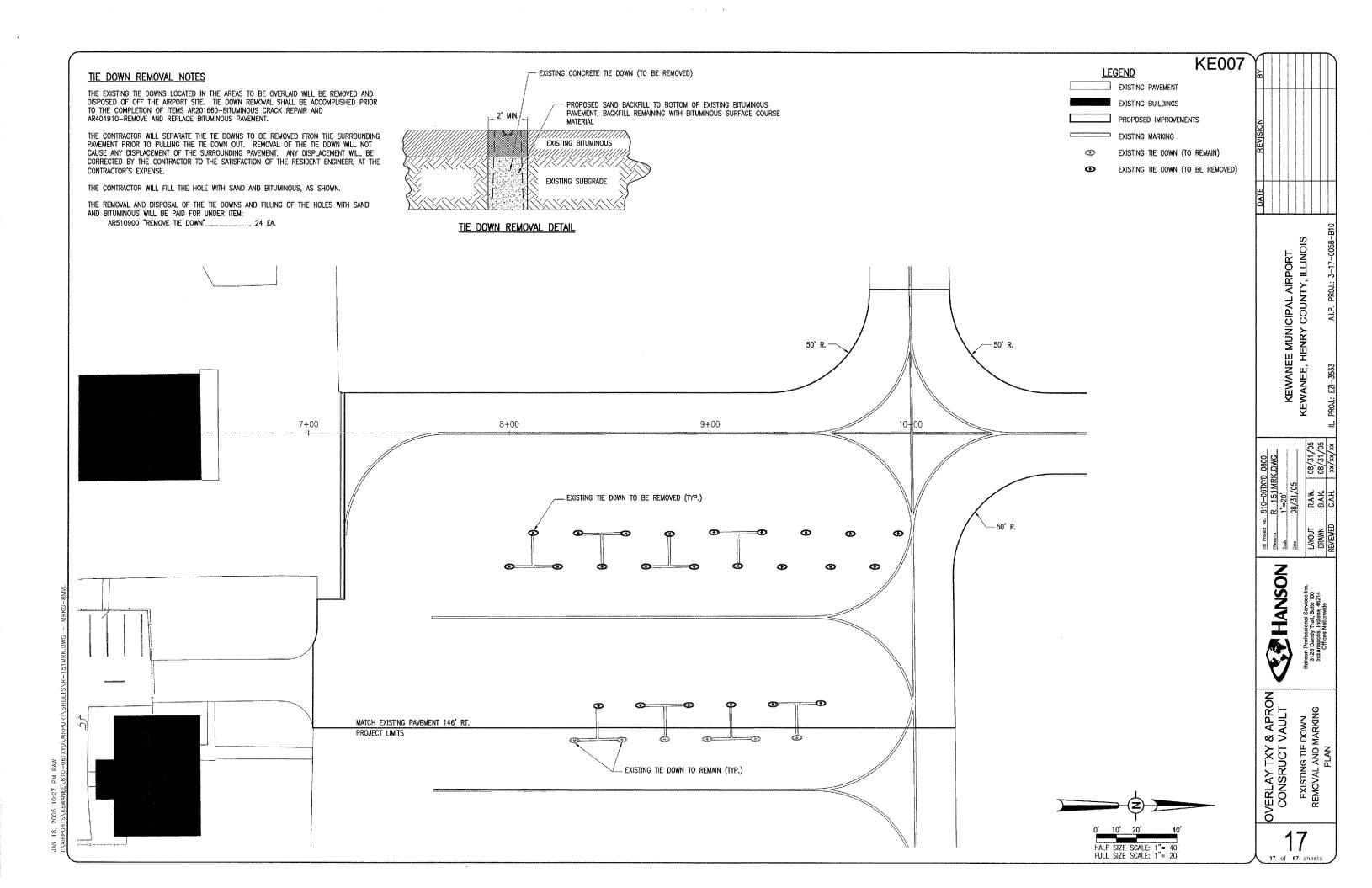
HENRY

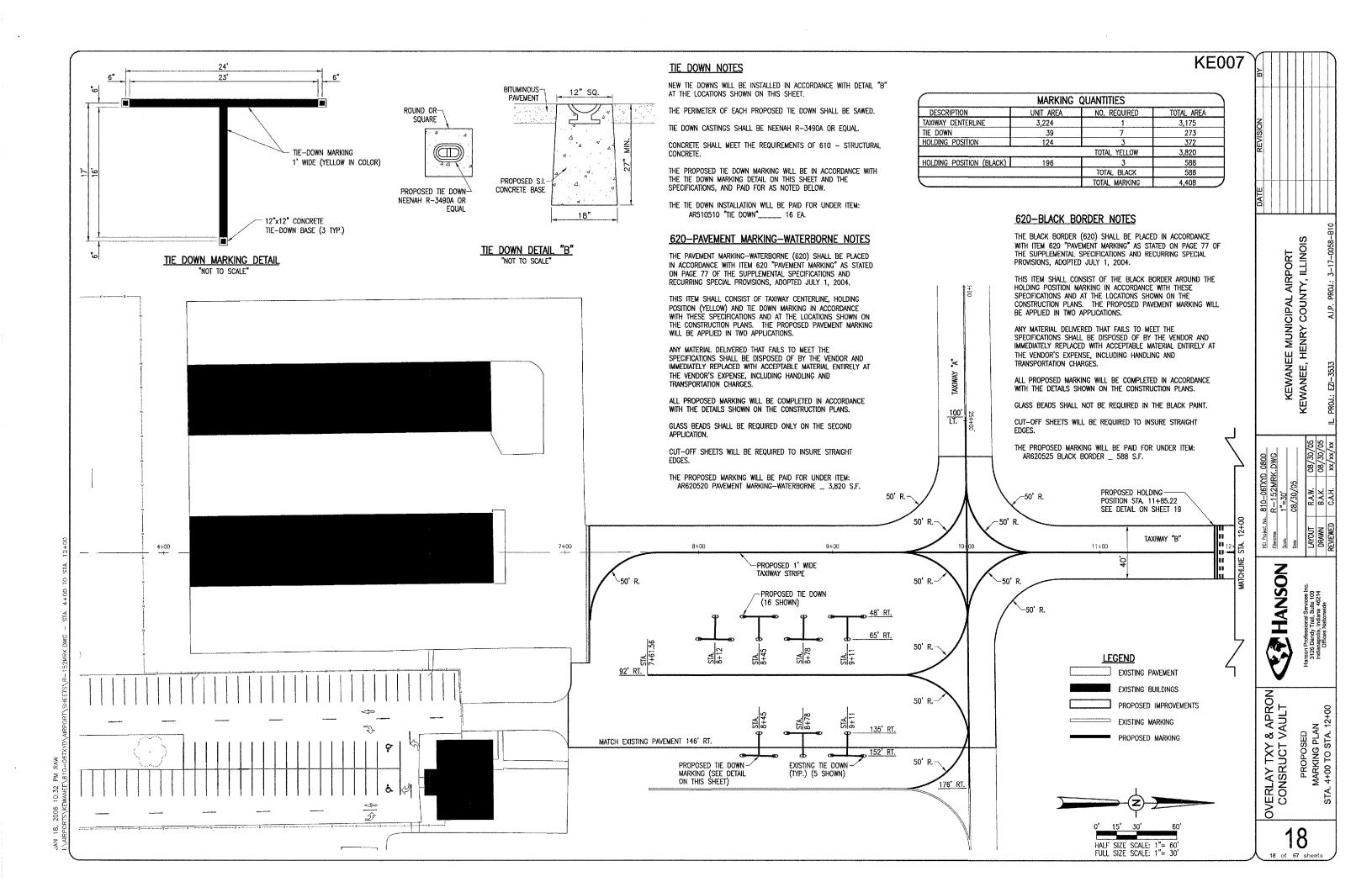
KEWANEE,

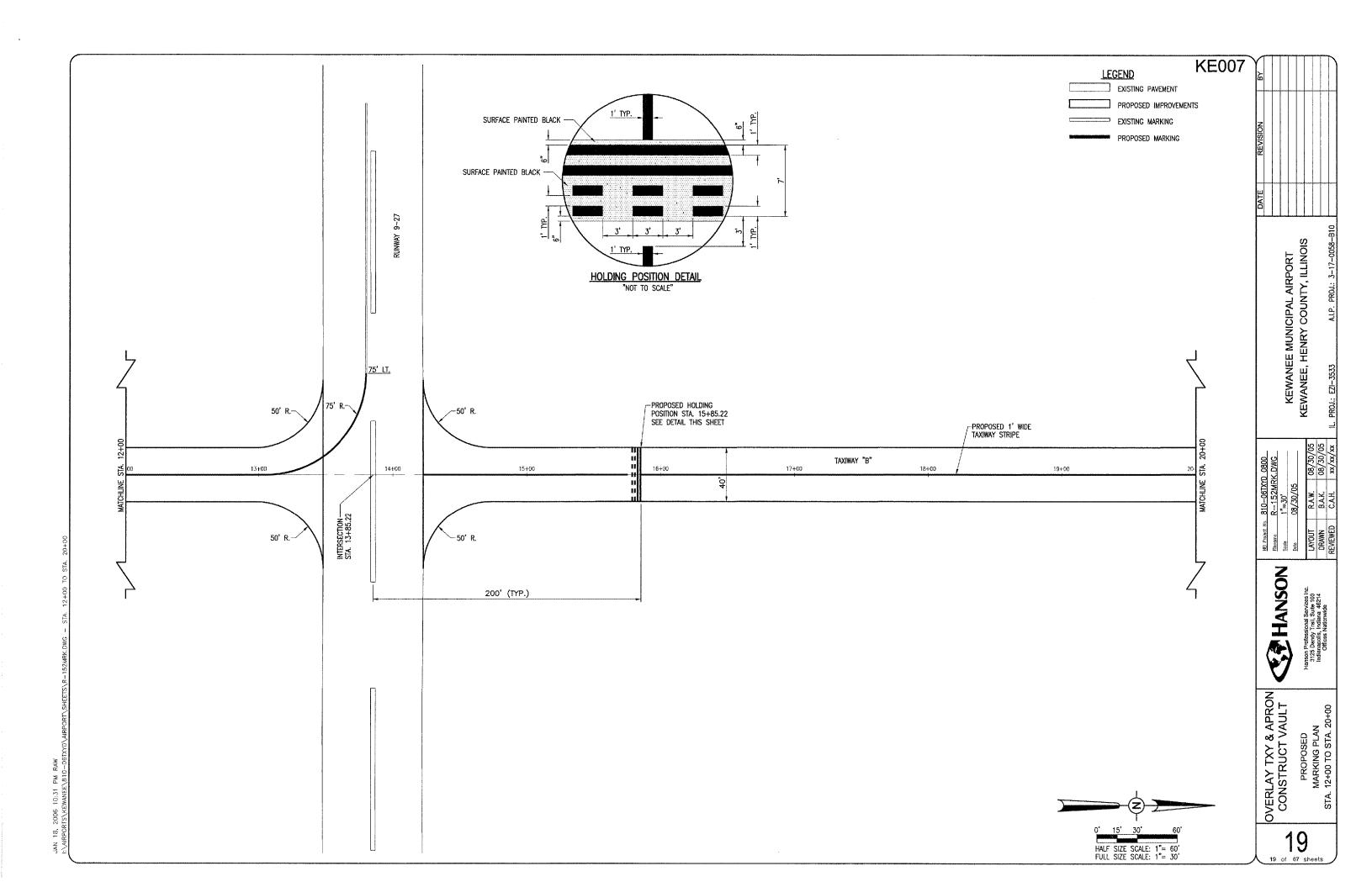
MUNICIPAL

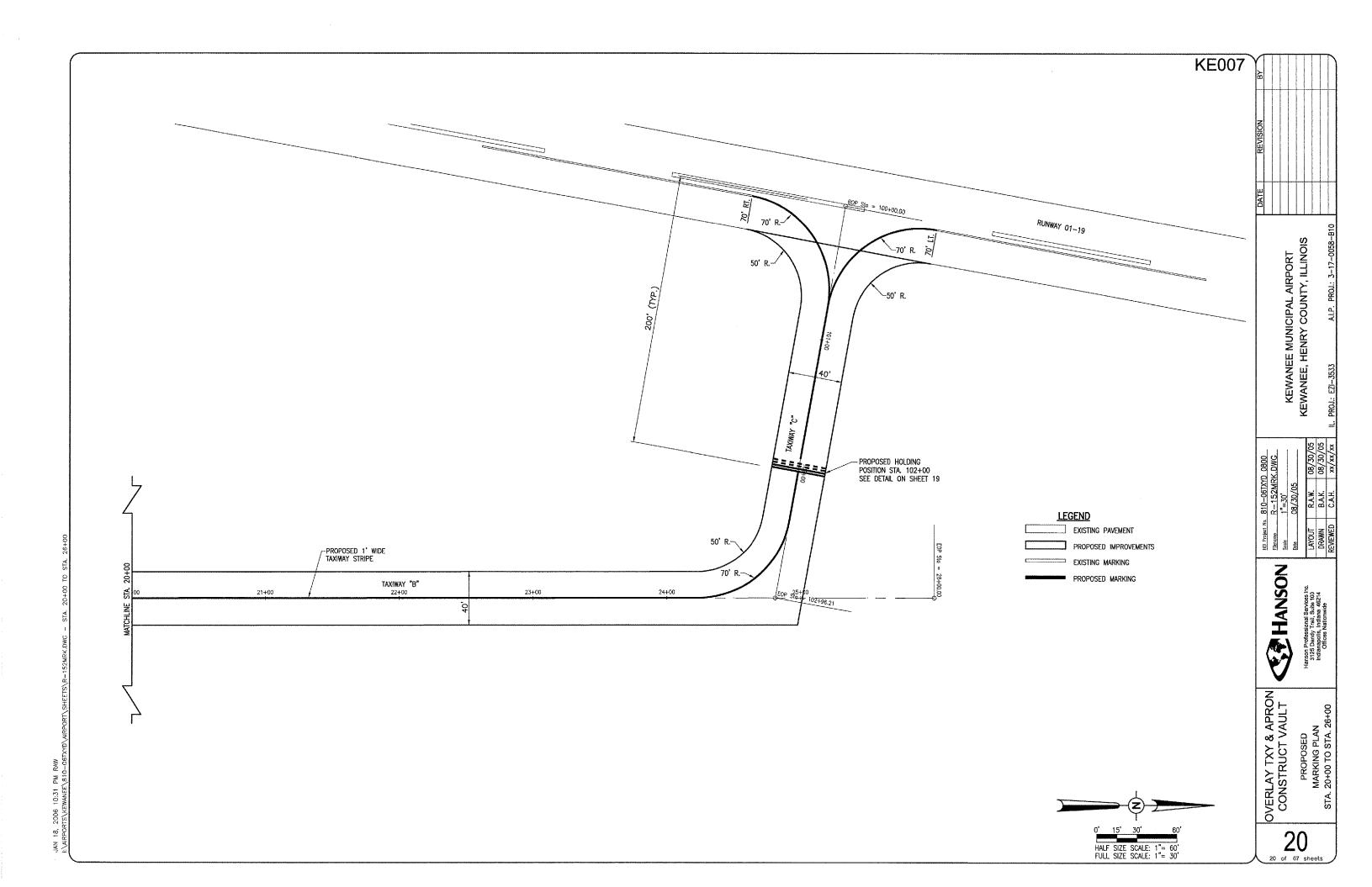
15 of 67 sheet:

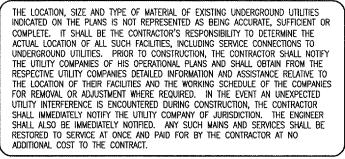












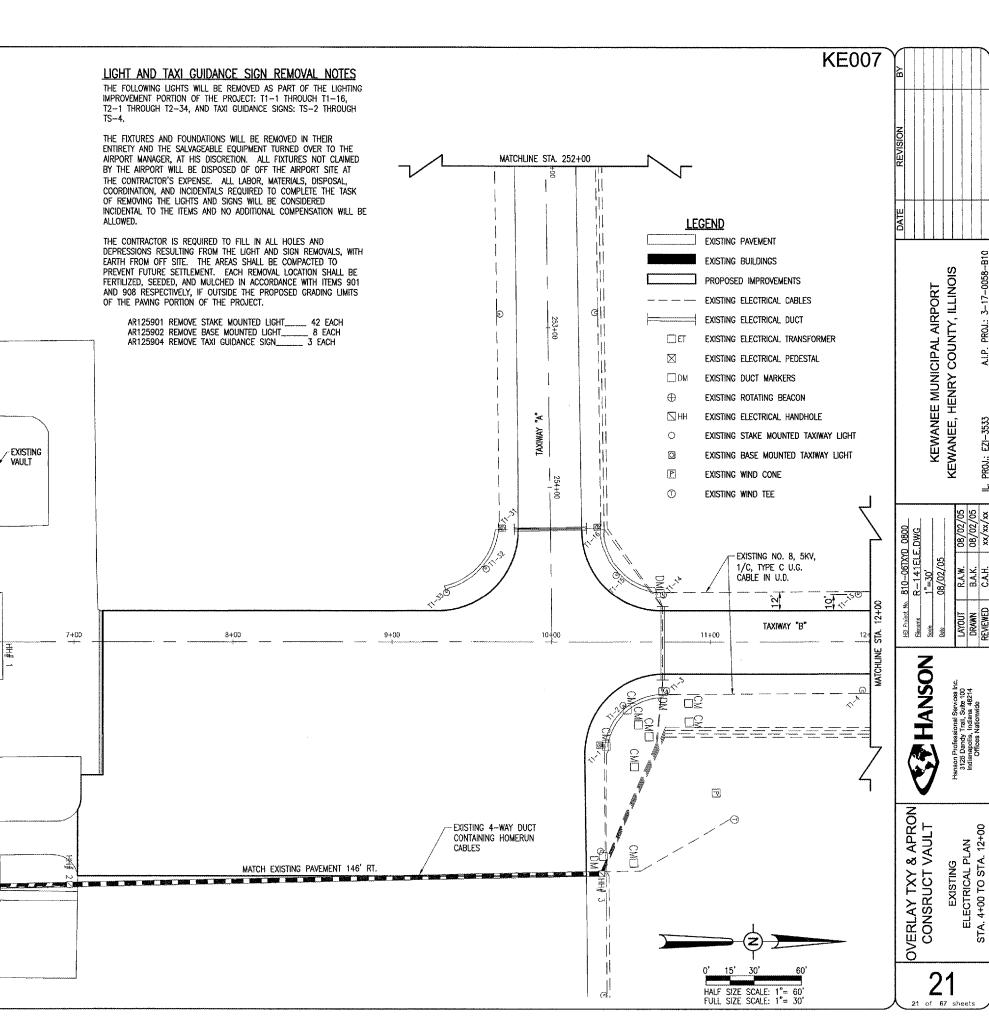
CALL J.U.L.I.E. FOR UTILITY INFORMATION AT 1-800-892-0123.

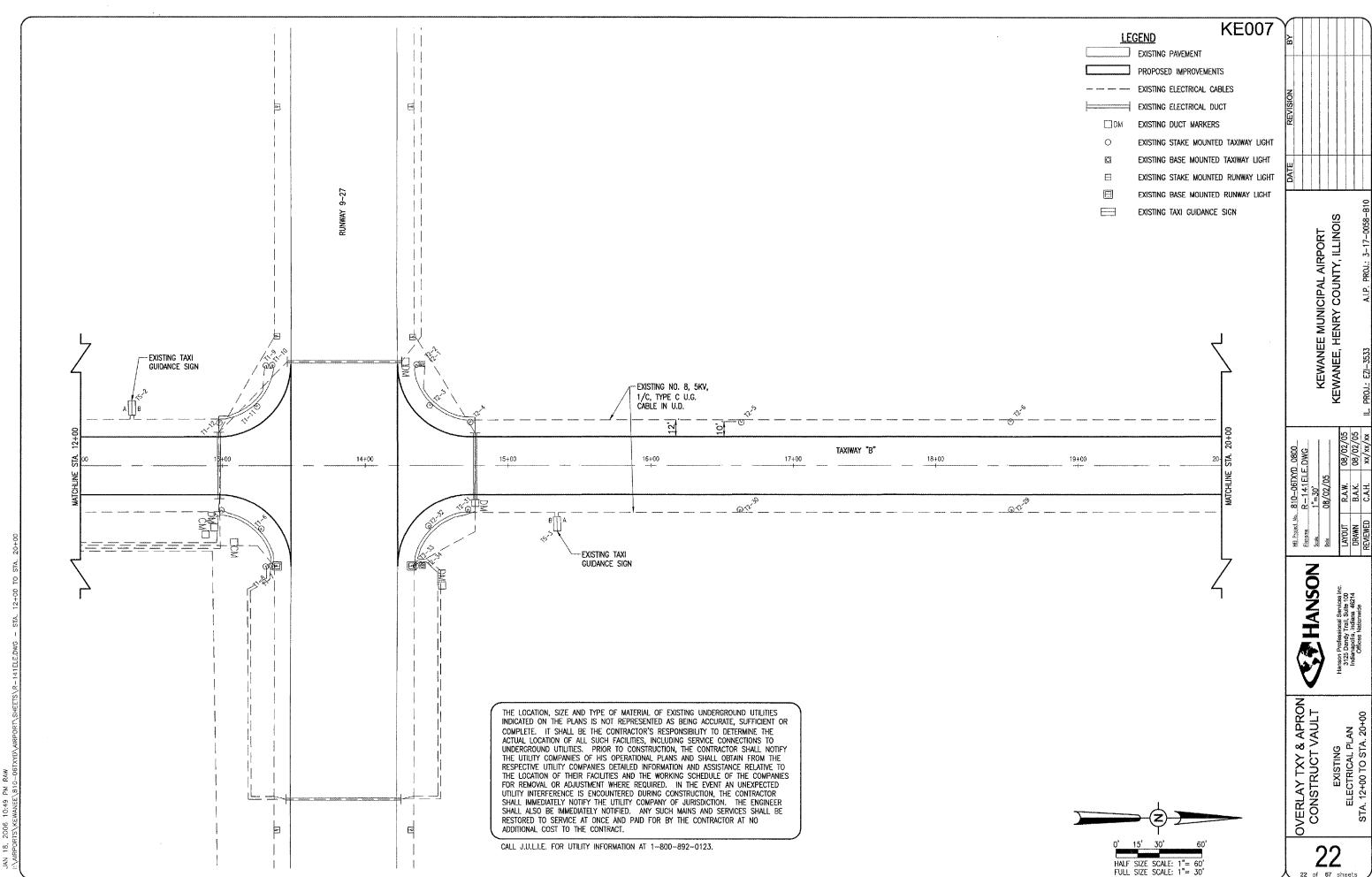
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	ELECTRICAL REMOVAL QUANTITIES		
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
AR125901	REMOVE STAKE MOUNTED LIGHT	EACH	42
AR125902	REMOVE BASE MOUNTED LIGHT	EACH	8
AR125904	REMOVE TAXI GUIDANCE SIGN	EACH	3

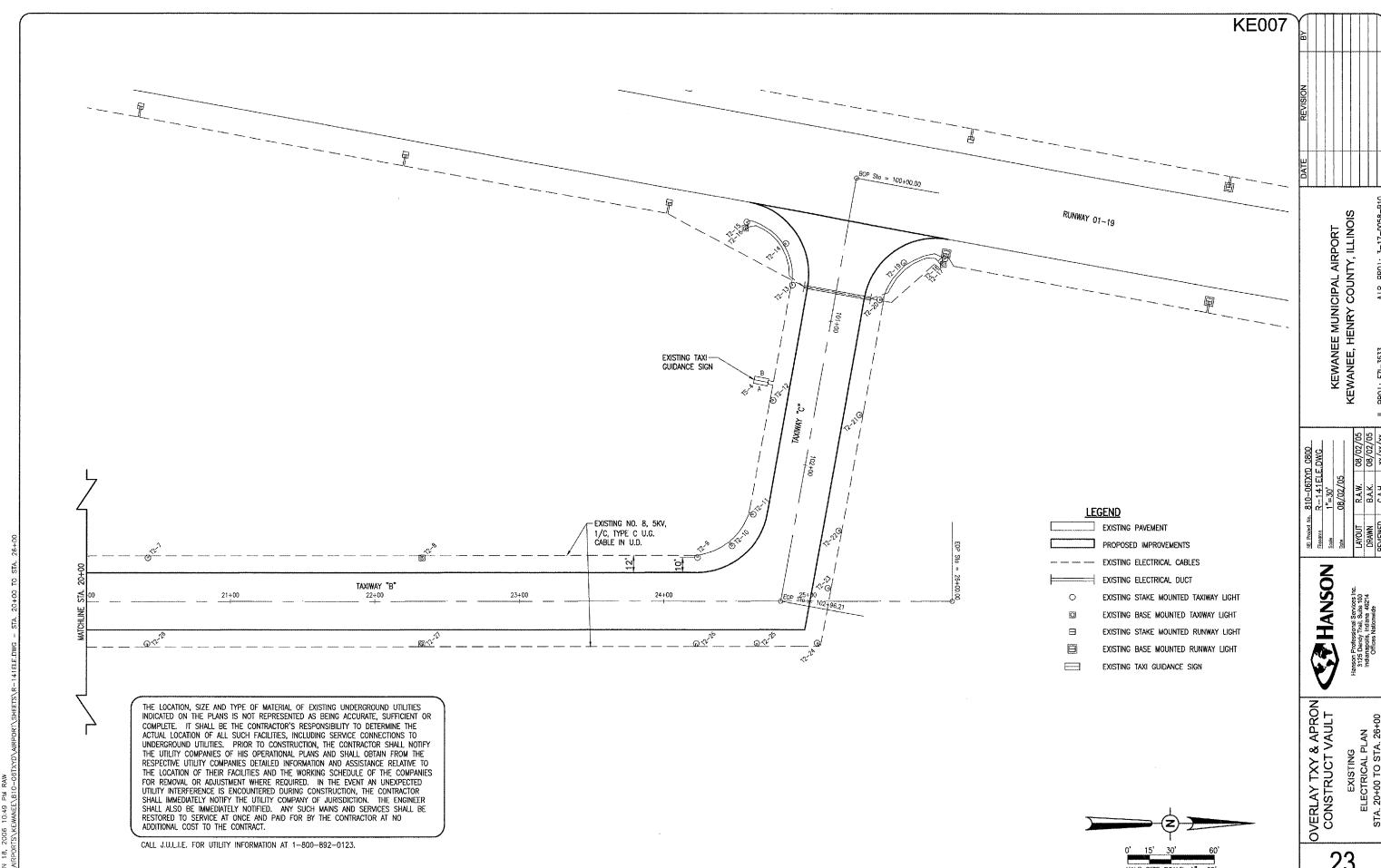
FXISTING

VAULT

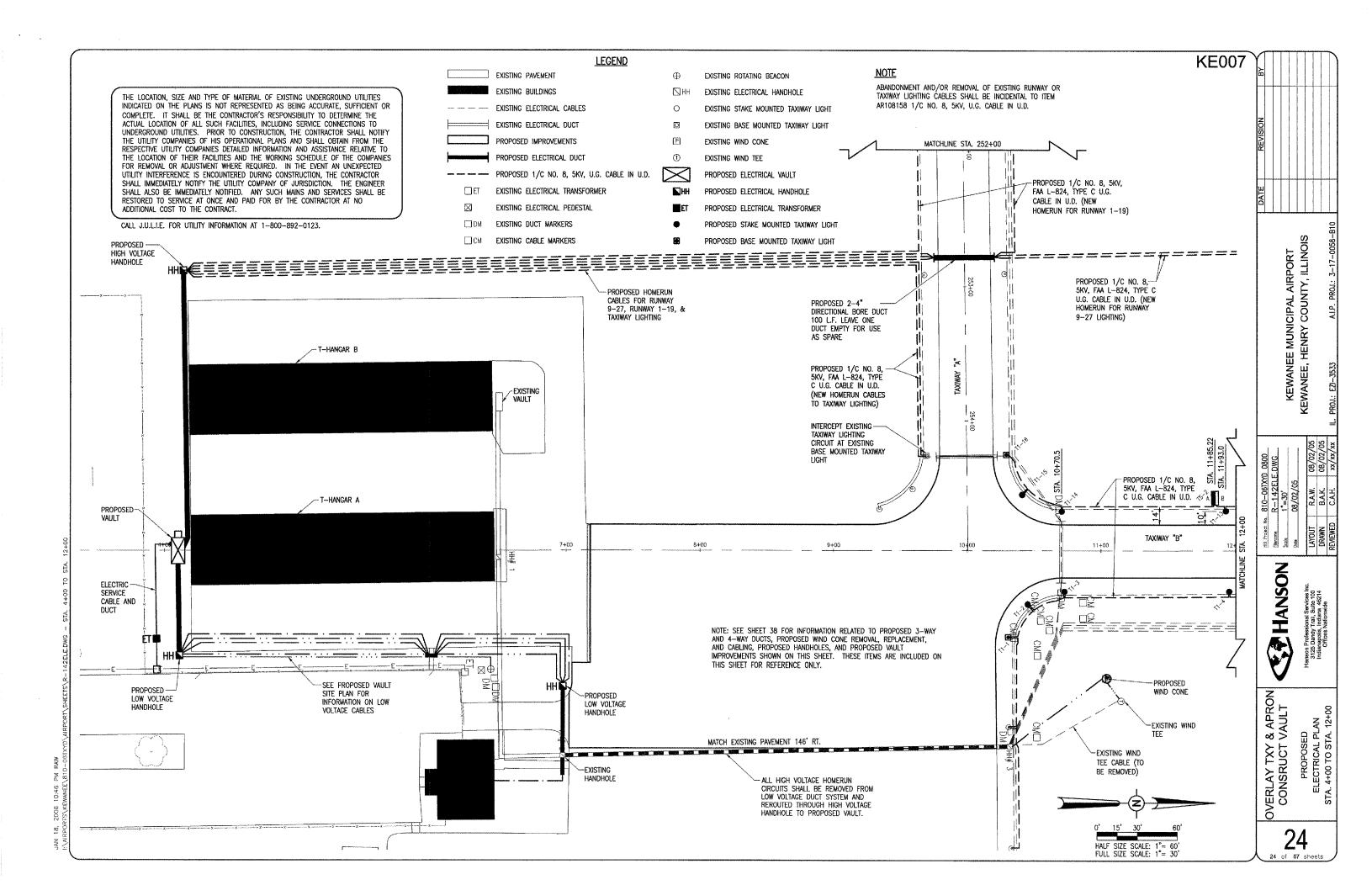




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HALF SIZE SCALE: 1"= 60' FULL SIZE SCALE: 1"= 30'



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

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

NOTE

ABANDONMENT AND/OR REMOVAL OF EXISTING RUNWAY OR TAXIWAY LIGHTING CABLES SHALL BE INCIDENTAL TO ITEM AR108158 1/C NO. 8, 5KV, U.G. CABLE IN U.D.

KE007 LEGEND EXISTING PAVEMENT --- EXISTING ELECTRICAL CABLES EXISTING ELECTRICAL DUCT ---- PROPOSED 1/C NO. 8, 5KV, U.G. CABLE IN U.D. 0 EXISTING STAKE MOUNTED TAXIWAY LIGHT EXISTING BASE MOUNTED TAXIWAY LIGHT EXISTING STAKE MOUNTED RUNWAY THRESHOLD LIGHT EXISTING STAKE MOUNTED RUNWAY LIGHT EXISTING BASE MOUNTED RUNWAY LIGHT EXISTING TAXI GUIDANCE SIGN CONNECT NEW RUNWAY 1-19 HOMERUN CABLE AT EXISTING THRESHOLD LIGHT -CONNECT NEW HOMERUN CABLE AT EXISTING BASE MOUNTED RUNWAY 18 114 EXISTING HOMERUN CABLES FOR RUNWAY 1-19 SHALL BE DISCONNECTED FROM THE RESPECTIVE RUNWAY LIGHTS & ABANDONED IN-PLACE OR REMOVED AT CONTRACTORS OPTION. PROPOSED 1/C NO. 8, 5KV, FAA L-824, TYPE C U.G. CABLE IN U.D. (NEW HOMERUN CABLES FOR RUNWAY 1-19)

MATCHLINE STA. 252+00

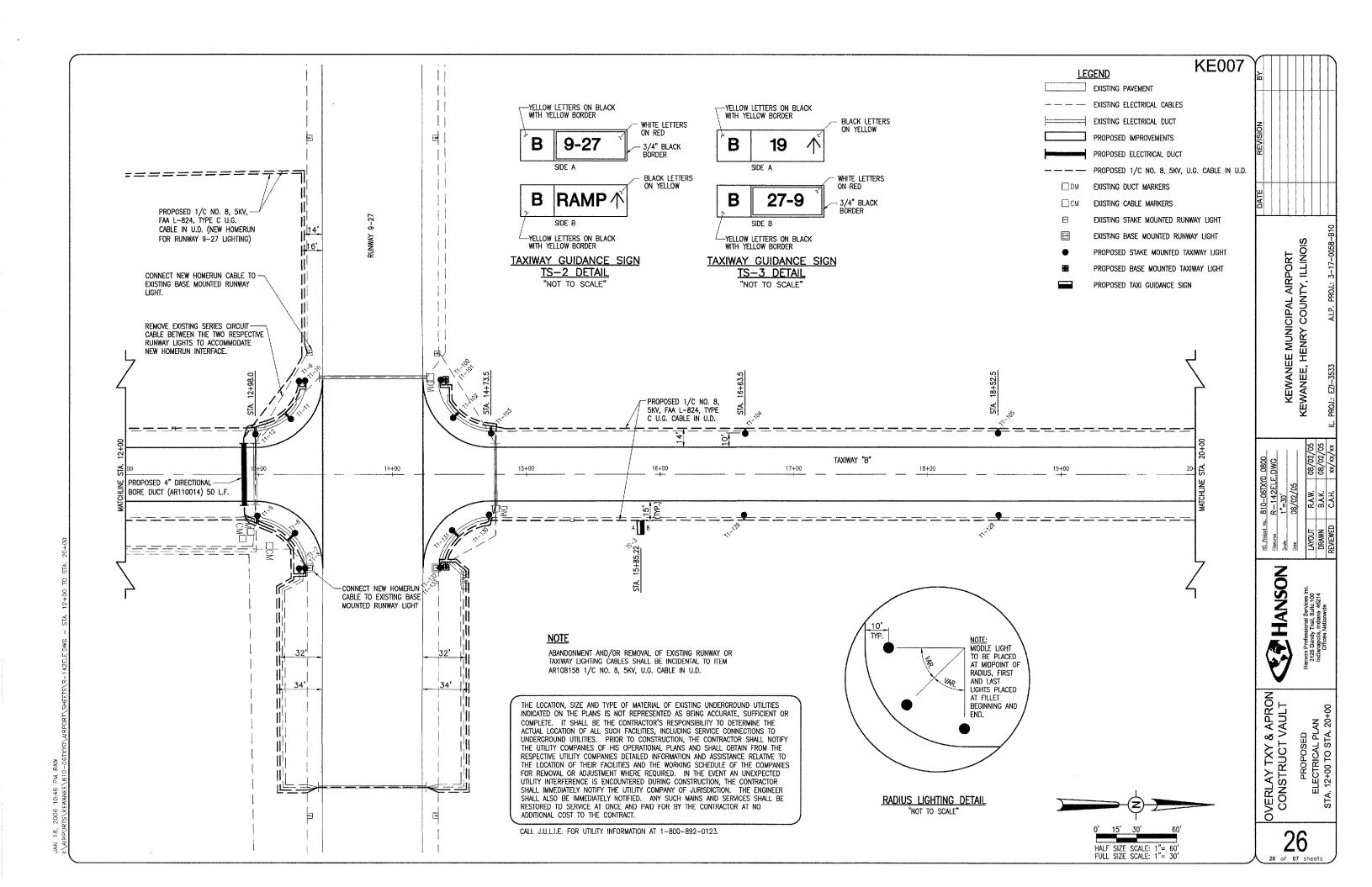
OVERLAY TXY & APRON CONSRUCT VAULT 25

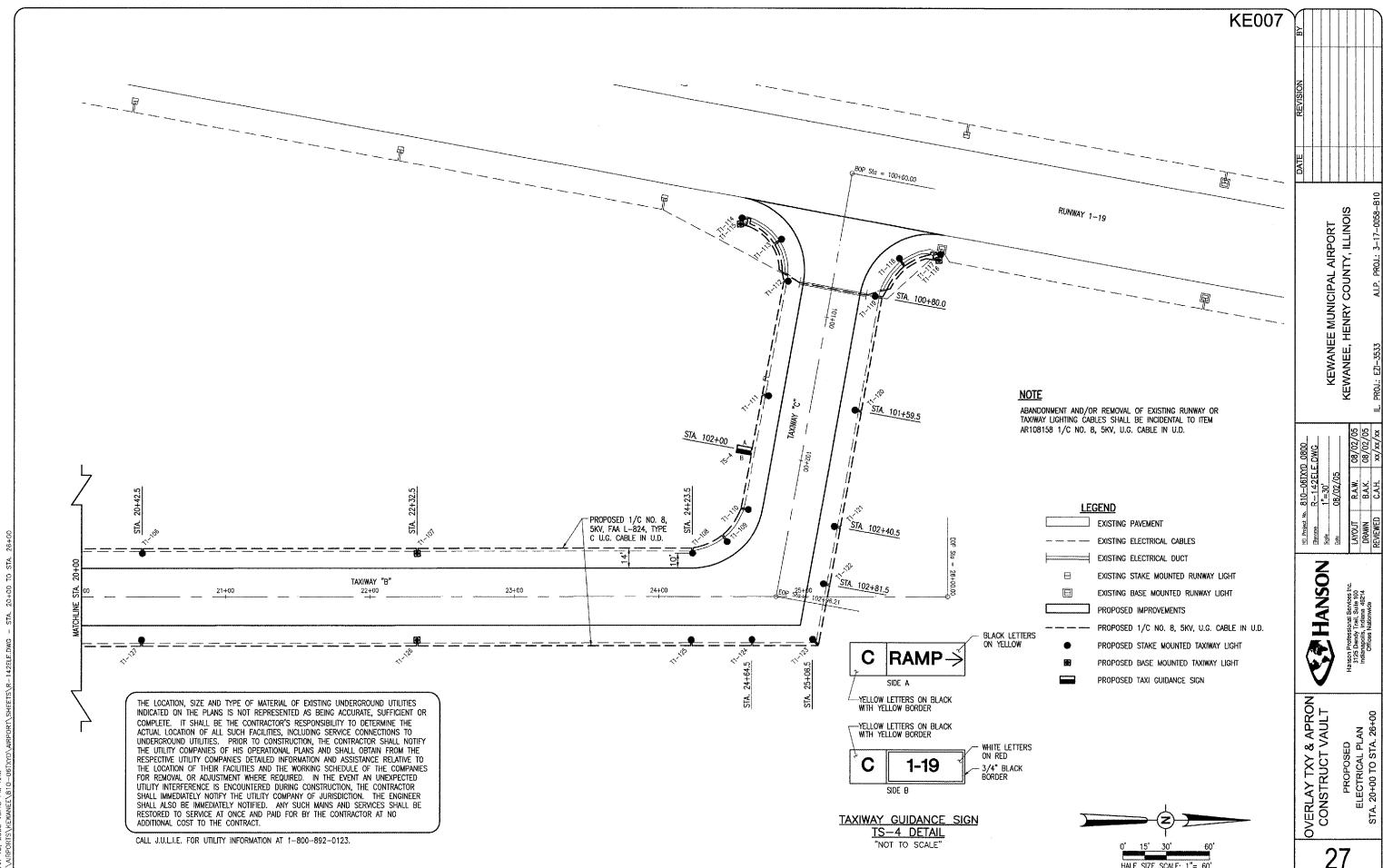
PROPOSED ELECTRICAL PLAN TAXIWAY "A"

KEWANEE MUNICIPAL AIRPORT KEWANEE, HENRY COUNTY, ILLINOIS

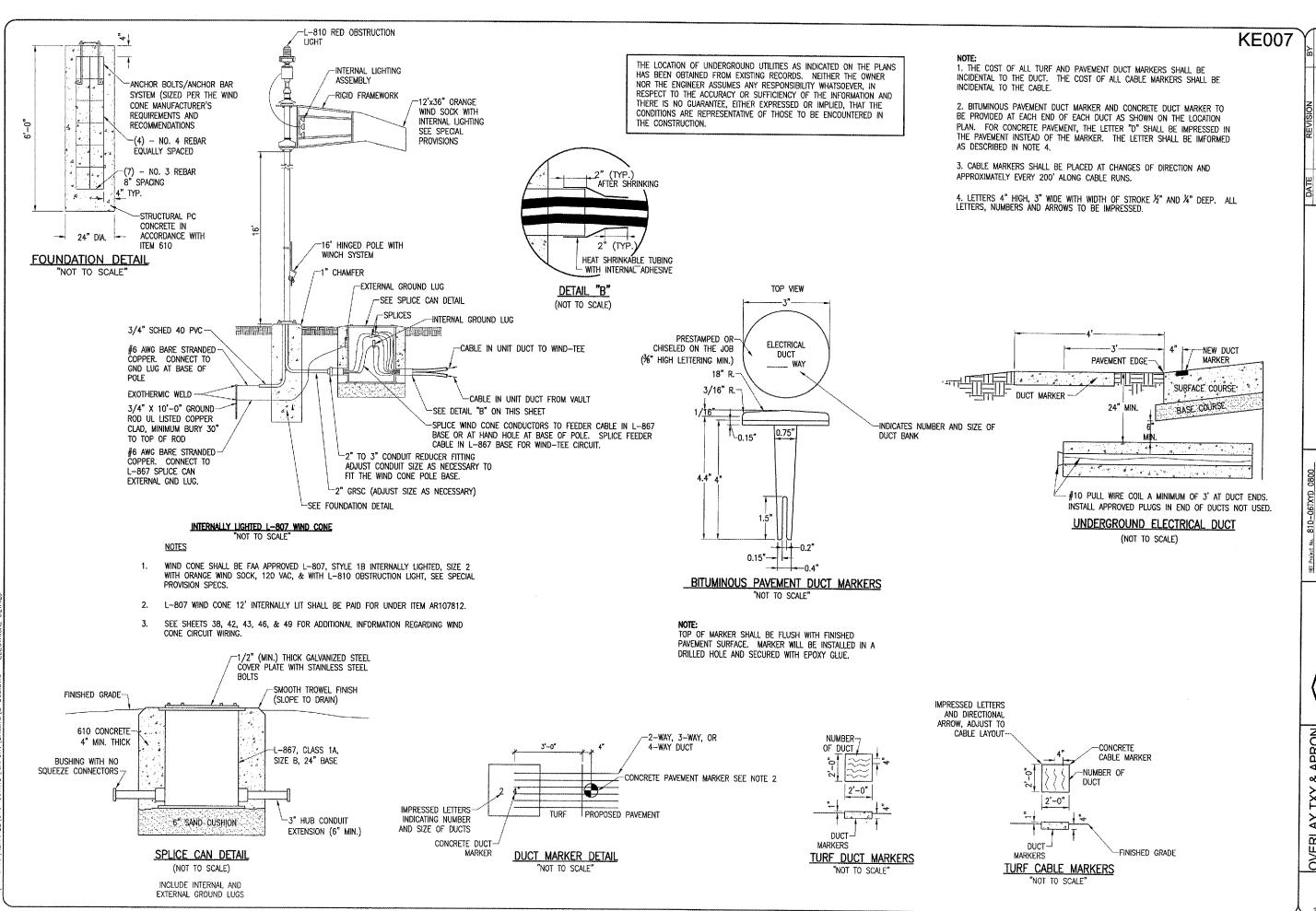
HALF SIZE SCALE: 1"= 60' FULL SIZE SCALE: 1"= 30'

HANSON





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



KEWANEE MUNICIPAL AIRPORT KEWANEE, HENRY COUNTY, ILLINOIS

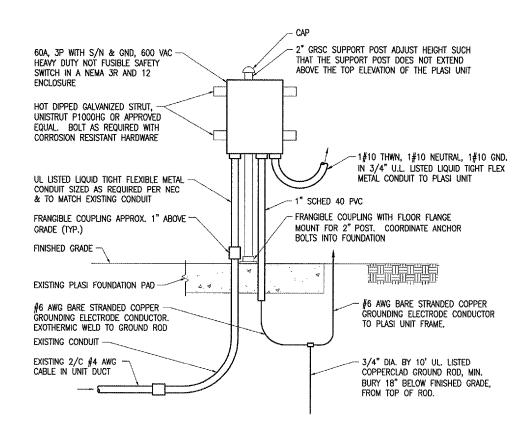
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OVERLAY TXY & APRON CONSTRUCT VAULT WIND CONE EVATION DETAIL

28

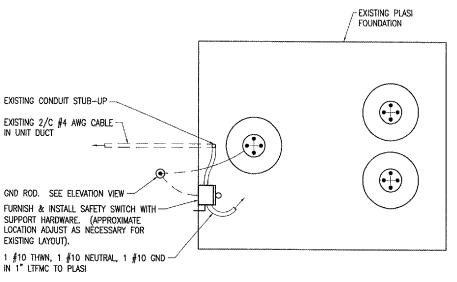
28 of 67 shee

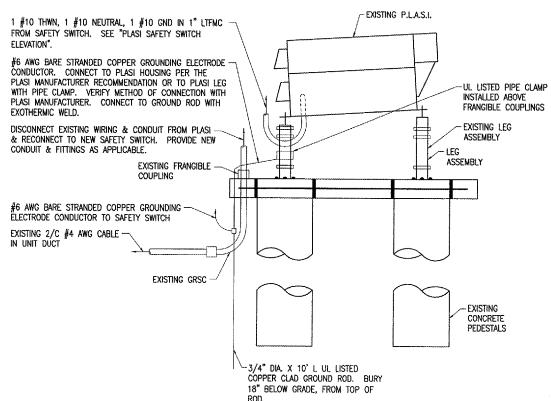
- PLASI UNITS LOCATED ON RUNWAY 9-27 ARE EXISTING. A HEAVY DUTY 60 AMP, 2 POLE OR 3 POLE WITH SOLID NEUTRAL & GND, 600 VAC NOT FUSIBLE SAFETY SWITCH IN A NEMA 3R AND 12 ENCLOSURE SHALL BE FURNISHED & INSTALLED AT EACH PLASI. 60 AMP SAFETY SWITCH IS REQUIRED TO ACCOMMODATE #4 AWG OR #2 AWG CONDUCTORS FOR LUG TERMINATIONS & WIRE BENDING SPACE. NEUTRAL SHALL BE BONDED TO GROUND IN SAFETY SWITCH & GND ROD SHALL BE INSTALLED TO CONFORM WITH NEC 250.32
- LTFMC DENOTES LIQUID TIGHT FLEXIBLE METAL CONDUIT UL LISTED, SUITABLE FOR GROUNDING, AND SUNLIGHT RESISTANT. NEC 350.6 NOTES LIQUID TIGHT FLEXIBLE METAL CONDUIT AND ASSOCIATED FITTINGS SHALL BE LISTED. DO NOT INSTALL LIFMC THAT IS NOT UL LISTED.
- CONTRACTOR SHALL FURNISH & INSTALL BOOST TRANSFORMERS FOR PLASI UNITS IN THE VAULT. BOOST TRANSFORMERS SHALL BE SIZED & CONNECTED TO PROVIDE THE PROPER VOLTAGE AT THE RESPECTIVE PLASI UNIT AS RECOMMENDED BY THE PLASI MANUFACTURER (DEVORE AVIATION CORPORATION, 6104 JEFFERSON BLVD. N.E., ALBUQUERQUE, NEW MEXICO 87109-3410, PHONE: 505-345-8713, FAX: 505-344-3835).
- INSTALLATION OF THE SAFETY SWITCH AND ASSOCIATED CONDUIT, WIRING, FITTINGS, GROUNDING, & ACCESSORIES FOR EACH PLASI UNIT SHALL BE PAID FOR UNDER ITEM AR125989 REFURBISH PLASI PER EACH.
- 5. SEE SHEETS 38, 42, 43, & 49 FOR ADDITIONAL INFORMATION REGARDING PLASI CIRCUIT WIRING.



NOTE: SEE NEW ELECTRICAL ONE LINE DIAGRAM FOR VAULT AND PLASI FOR ADDITIONAL INFORMATION ON EQUIPMENT AND WIRING.

PLASI SAFETY SWITCH ELEVATION





ALL WORK SHOWN ON THIS SHEET SHALL BE PAID FOR UNDER ITEM AR125989 -REFURBISH PLASI - PER EA.

PLASI FOUNDATION PLAN VIEW PLASI ELEVATION

29

HANSON

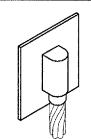
OVERLAY TXY & APRON CONSTRUCT VAULT

COUNTY,

KEWANEE MUNICIPAL WANEE, HENRY COUN

KE007

CABLE TO GROUND ROD

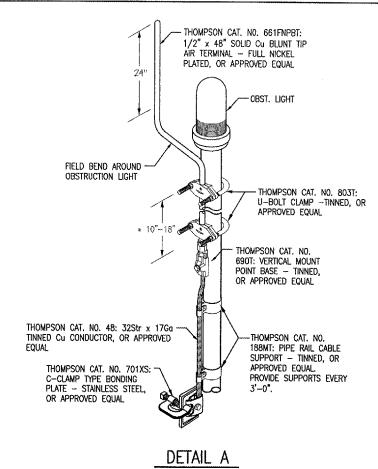


CABLE TO SURFACE

DETAIL NOTES

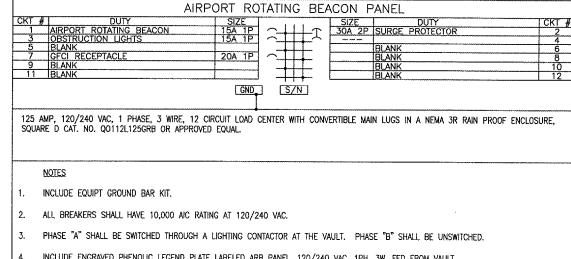
- EXOTHERMIC WELDS SHALL BE CADWELD AS MANUFACTURED BY ERICO PRODUCTS, SOLON, OHIO, ULTRAWELD AS MANUFACTURED BY HARGER LIGHTNING PROTECTION & GROUNDING EQUIPMENT, GRAYSLAKE, IL, OR THERMOWELD AS MANUFACTURED BY CONTINENTAL INDUSTRIES, TULSA, OKLAHOMA. VERIFY PROPER SIZES, MOLDS, TYPES, AND REQUIREMENTS FOR THE RESPECTIVE APPLICATION WITH THE MANUFACTURER, AND INSTALL PER THEIR DIRECTIONS.
- FOR APPLICATIONS TO GALVANIZED STEEL OR PAINTED STEEL, REMOVE GALVANIZING AND/OR PAINT & CLEAN THE SURFACE TO EXPOSE BARE STEEL BEFORE MAKING EXOTHERMIC WELD CONNECTION.
- 3. VERIFY EXOTHERMIC MOLDS ARE SUITABLE FOR USE WITH THE RESPECTIVE TYPE (SOLID OR STRANDED) & SIZE CONDUCTOR.

EXOTHERMIC WELD DETAILS



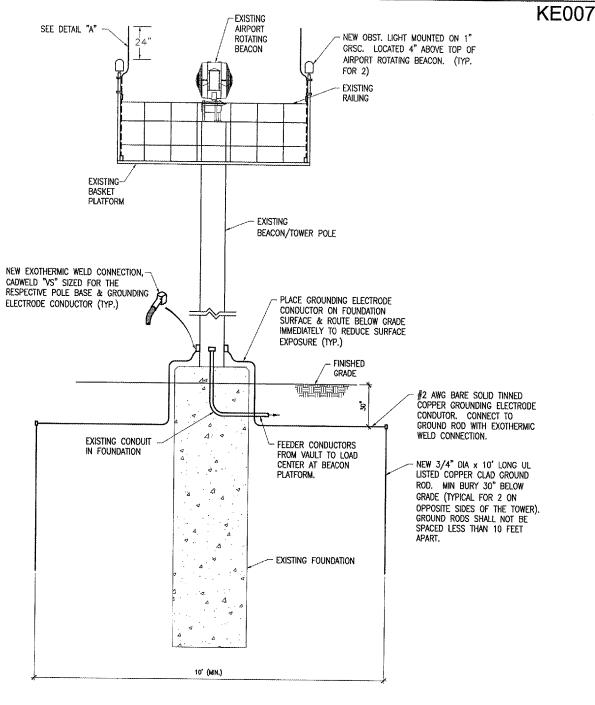
NOTES

- REFERENCES TO THOMPSON ARE THOMPSON LIGHTNING PROTECTION INC., 901 SIBLEY MEMORIAL HWY, ST. PAUL, MN 55188, PHONE: 651-455-7661, 800-777-1230, FAX: 651-455-2545.
- . VERIFY LIGHTNING PROTECTION COMPONENTS AND CATALOG NUMBERS WITH THE RESPECTIVE LIGHTNING PROTECTION EQUIPMENT MANUFACTURER.



4. INCLUDE ENGRAVED PHENOLIC LEGEND PLATE LABELED ARB PANEL, 120/240 VAC, 1PH, 3W, FED FROM VAULT.

NOTE: SEE SHEETS 38, 42, 43, & 46 FOR ADDITIONAL INFORMATION REGARDING WIRING FOR THE AIRPORT ROTATING BEACON CIRCUIT.



LIGHTNING PROTECTION DETAIL
FOR AIRPORT ROTATING BEACON

ALL WORK SHOWN ON THIS SHEET SHALL BE PAID FOR UNDER ITEM AR800591 — UPGRADE AIRPORT ROTATING BEACON — PER L.S.

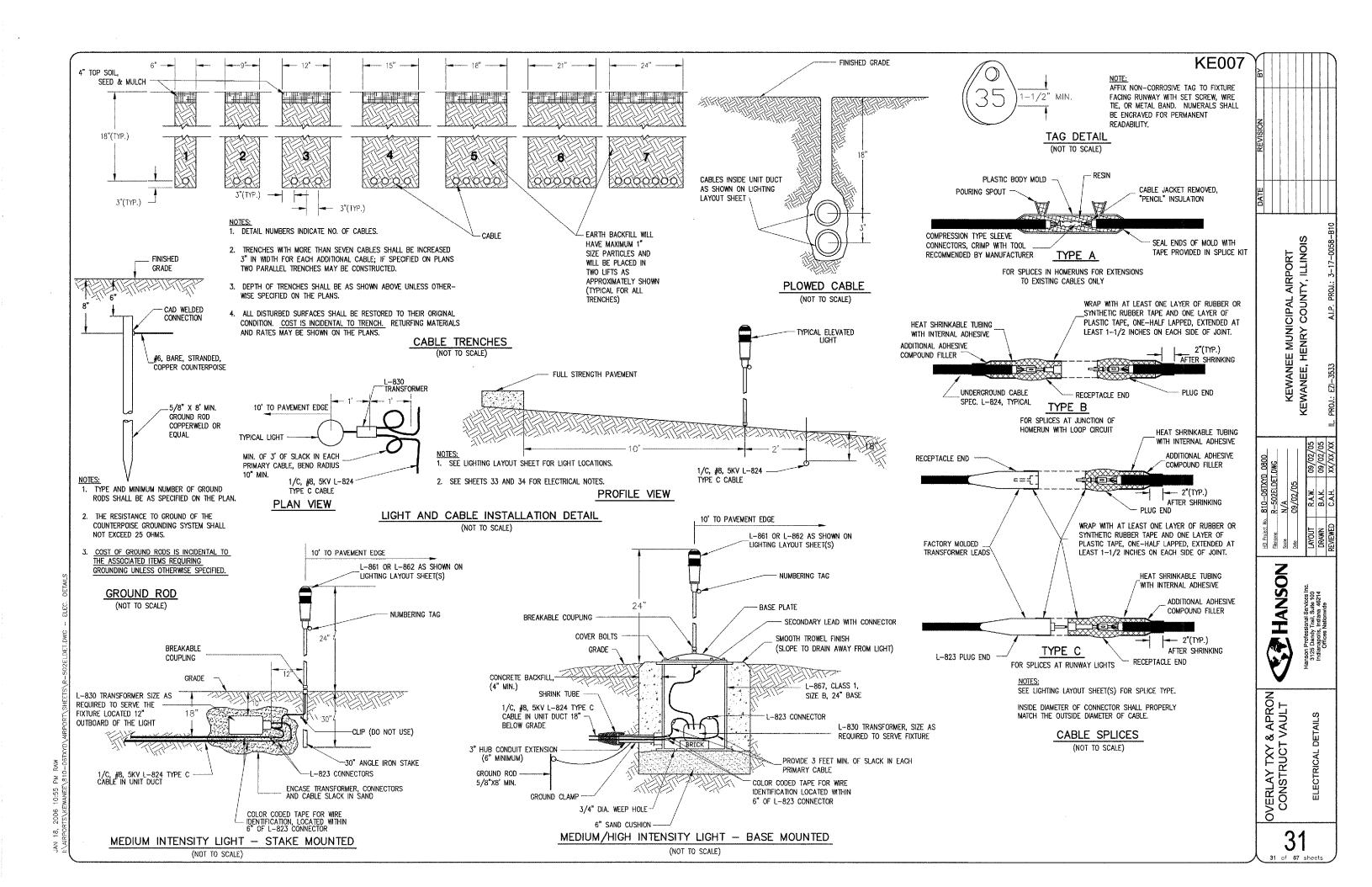
KEWANEE, HENRY COUNTY, ILLINOIS
PROJ.: EZI-3533
AIP. PROJ.: 3-17-0058-810

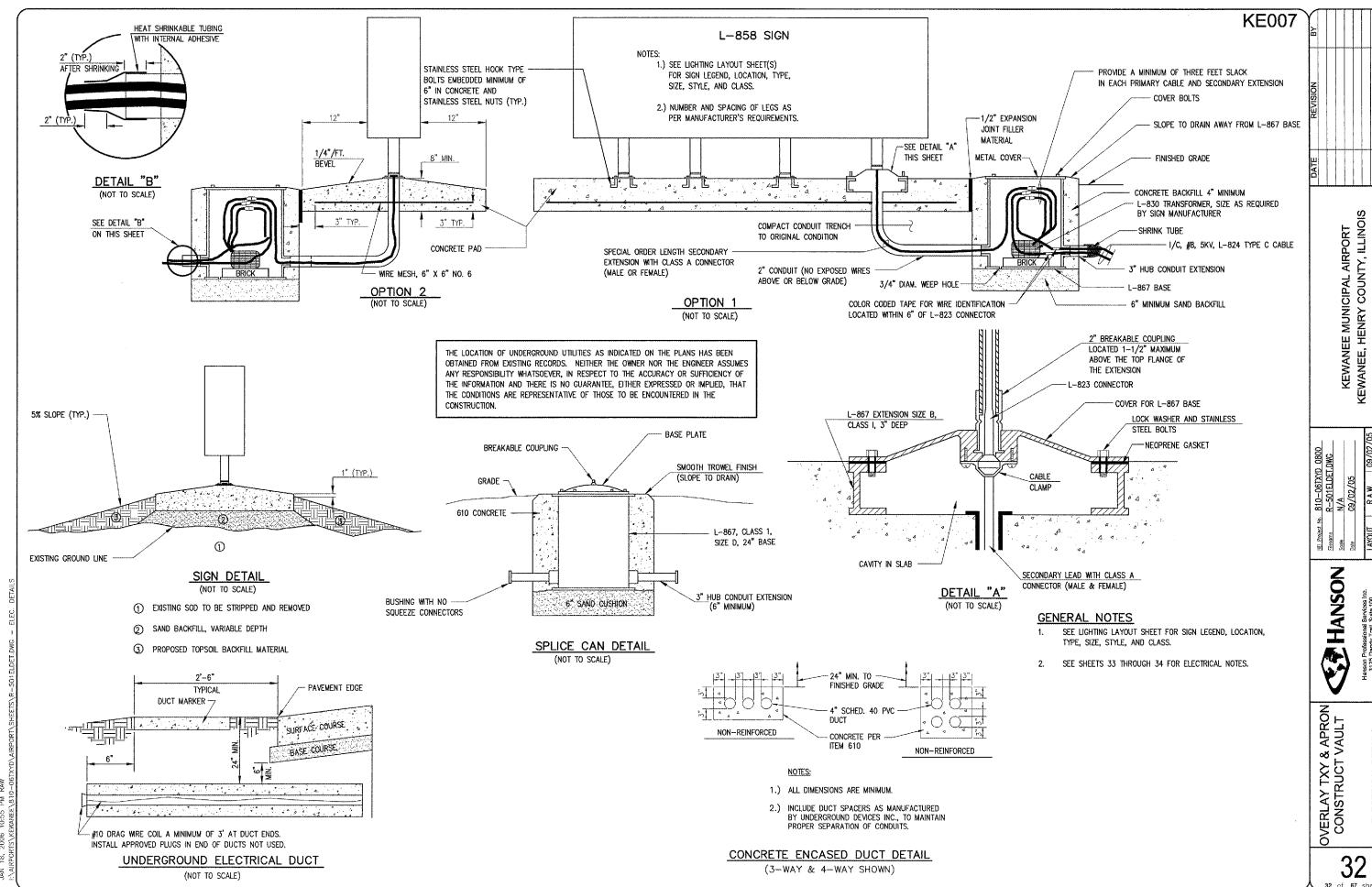
Harson Professional Services Inc. (3125 Barth Trail, Suits 100 Indianapolis, Indianapolis, Indiana 46214

OVERLAY TXY & APRON CONSTRUCT VAULT LIGHTNING PROTECTION DETAILS FOR BEACON

30 30 of 67 sheet

AN 18, 2006 8:17 AM DMV





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GENERAL

- 1. THE ELECTRICAL INSTALLATION, AS A MINIMUM, SHALL MEET THE NATIONAL ELECTRICAL CODE (LATEST RECOGNIZED VERSION) AND LOCAL REGULATIONS.
- 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 SYSTÉM.
- 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, $\underline{\text{ANY COST FOR THESE ITEMS SHALL BE}}$ 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
- ANY AND ALL INSTRUCTIONS FROM THE ENGINEER TO THE CONTRACTOR REGARDING CHANGES IN OR DEVIATIONS FROM THE PLANS AND SPECIFICATIONS SHALL BE IN WRITING WITH COPIES SENT TO THE AIRPORT SPONSOR AND THE FAA FIELD OFFICE (ADO/AFO). THE CONTRACTOR SHALL NOT ACCEPT ANY VERBAL INSTRUCTIONS FROM THE RESIDENT ENGINEER REGARDING ANY CHANGES FROM THE PLANS AND SPECIFICATIONS.
- 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
 - A DETAILED DESCRIPTION OF THE OVERALL EQUIPMENT AND ITS A. INDIVIDUAL COMPONENTS.
 - THEORY OF OPERATION INCLUDING THE FUNCTION OF EACH COMPONENT.
- INSTALLATION INSTRUCTIONS.
- START-UP INSTRUCTIONS.
- PREVENTATIVE MAINTENANCE REQUIREMENTS. E.
- F. 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
- PARTS LIST WHICH WILL INCLUDE ALL MAJOR AND MINOR COMPONENTS SUCH AS RESISTORS, DIODES, ETC. IT SHALL INCLUDE A COMPLETE NOMENCLATURE OF EACH COMPONENT AND, IF APPLICABLE, THE NAME OF ITS MANUFACTURER AND THE CATALOG NUMBER
- I. SAFETY INSTRUCTIONS.

POWER AND CONTROL

- STENCIL ALL ELECTRICAL EQUIPMENT TO IDENTIFY FUNCTION, CIRCUIT VOLTAGE AND PHASE. WHERE THE EQUIPMENT CONTAINS FUSES, ALSO STENCIL. THE FUSE OR FUSE LINK AMPERE RATING, WHERE THE EQUIPMENT DOES NOT HAVE SUFFICIENT STENCILING AREA, THE STENCILING SHALL BE DONE ON THE WALL NEXT TO THE UNIT. THE LETTERS SHALL BE ONE INCH HIGH AND PAINTED IN WHITE OR BLACK TO PROVIDE THE HIGHEST CONTRACT
- COLOR CODE ALL PHASE WIRING BY THE USE OF COLORED WIRE INSULATION AND/OR COLORED TAPE. WHERE TAPE IS USED, THE WIRE INSULATION SHALL BE BLACK, BLACK AND RED SHALL BE USED FOR SINGLE-PHASE, THREE WIRE SYSTEMS AND BLACK, RED AND BLUE SHALL BE USED FOR THREE—PHASE SYSTEMS. NEUTRAL CONDUCTORS, SIZE NO. 6 AWG OR SMALLER. SHALL BE IDENTIFIED BY A CONTINUOUS WHITE OR NATURAL GRAY OUTER FINISH ALONG ITS ENTIRE LENGTH, NEUTRAL CONDUCTORS LARGER THAN NO. 6 AWG SHALL BE IDENTIFIED EITHER BY A CONTINUOUS WHITE OR NATURAL GRAY OUTER FINISH ALONG ITS ENTIRE LENGTH OR BY THE USE OF WHITE TAPE AT ITS TERMINATIONS AND INSIDE ACCESSIBLE WIREWAYS.
- 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
- LOW VOLTAGE (600 V.) AND HIGH VOLTAGE (5000 V.) CONDUCTORS SHALL BE INSTALLED ÎN SEPÁRATE WIREWAYS.
- NEATLY LACE WIRING IN DISTRIBUTION PANELS, WIREWAYS, SWITCHES AND
- 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
- SPLICES AND JUNCTION POINTS SHALL BE PERMITTED ONLY IN JUNCTION BOXES, DUCTS EQUIPPED WITH REMOVABLE COVERS, AND AT EASILY
- 11. CIRCUIT BREAKERS IN POWER DISTRIBUTION PANEL(S) SHALL BE THERMAL-MAGNETIC MOLDED CASE, PERMANENT TRIP WITH 100 AMPERE, MINIMUM FRAME.

- 12. DUAL LUGS SHALL BE USED WHERE TWO (2) WIRES, SIZE NO. 6 OR LARGER, ARE TO BE CONNECTED TO THE SAME TERMINAL.
- 13. ALL WALL MOUNTED EQUIPMENT ENCLOSURES SHALL BE MOUNTED ON
- WOODEN EQUIPMENT MOUNTING BOARDS SHALL BE PLYWOOD, EXTERIOR TYPE, 3/4 INCH, MINIMUM, THICKNESS, BOTH SIDES PAINTED WITH ONE COAT OF PRIMER AND TWO COATS OF GRAY OIL-BASED PAINT.
- 15. RIGID STEEL CONDUIT SHALL BE USED THROUGHOUT THE INSTALLATION UNLESS OTHERWISE SPECIFIED, THE MINIMUM TRADE SIZE SHALL BE 3/4
- 16. ALL RIGID CONDUIT SHALL BE TERMINATED AT CONSTANT CURRENT REGULATORS WITH A SECTION (10" MINIMUM) OF FLEXIBLE CONDUIT.
- UNLESS OTHERWISE SHOWN, ALL EXPOSED CONDUITS SHALL BE RUN PARALLEL TO OR AT RIGHT ANGLES WITH THE LINES OF THE STRUCTURE.
- 18. ALL STEEL CONDUITS, FITTINGS, NUTS, BOLTS, ETC. SHALL BE GALVANIZED.
- 19. USE CONDUIT BUSHINGS AT EACH CONDUIT TERMINATION. WHERE NO. 4 AWG OR LARGER UNDERGROUND WIRE IS INSTALLED, USE INSULATED BUSHINGS.
- 20. USE DOUBLE LOCK NUTS AT EACH CONDUIT TERMINATION.
- WRAP ALL PRIMARY AND SECONDARY POWER TRANSFORMER CONNECTIONS WITH SUFFICIENT LAYERS OF INSULTING TAPE AND COVER WITH INSULATING VARNISH FOR FULL VALUE OF CABLE INSULATION VOLTAGE.
- 22. UNLESS OTHERWISE NOTED, ALL INDOOR SINGLE CONDUCTOR CONTROL WIRING SHALL BE NO. 12 AWG. MINUMUM.
- 23. THE FOLLOWING SHALL APPLY TO RELAY/CONTACTOR PANELS/ENCLOSURES:
 - ALL COMPONENTS SHALL BE MOUNTED IN DUST PROOF ENCLOSURE(S) WITH VERTICALLY HINGED COVERS.
 - 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
 - EACH CIRCUIT COMPONENT SHALL BE CLEARLY IDENTIFIED INDICATING ITS CORRESPONDING NUMBER SHOWN ON THE DRAWINGS AND ITS FUNCTION.
 - A COMPLETE WIRING DIAGRAM (NOT A SCHEMATIC 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.

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- UNLESS OTHERWISE NOTED, ALL UNDERGROUND FIELD POWER MULTIPLE AND SERIES CIRCUIT CONDUCTORS WHETHER DEB OR IN DUCT/CONDUIT SHALL BE FAA APPROVED L—824 TYPE. INSULATION VOLTAGE AND SIZE SHALL BE AS SPECIFIED.
- NO COMPONENTS OF PRIMARY CIRCUIT SUCH AS CABLE, CONNECTORS AND TRANSFORMERS SHALL BE BROUGHT ABOVE GROUND AT EDGE LIGHTS, SIGNS, REIL, PAPI, ETC.
- 5. 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.
- THE CABLE ENTRANCE INTO THE FIELD—ATTACHED L—823 CONNECTORS SHALL BE ENCLOSED BY A HEAT—SHRINKABLE TUBING WITH CONTINUOUS INTERNAL ADHESIVE
- L-823 TYPE II, TWO-CONDUCTOR SECONDARY CONNECTORS SHALL BE CLASS 'A' (FACTORY MOLDED).
- THERE SHALL BE NO SPLICES IN THE SECONDARY CABLE(S) WITHIN THE STEMS OF A RUNWAY/TAXIWAY EDGE/THRESHOLD LIGHTING FIXTURE AND THE WIREWAYS LEADING TO TAXIWAY SIGNS AND PAPI/REIL EQUIPMENT.
- ELECTRICAL INSULATING GREASE SHALL BE APPLIED WITHIN THE L-823, SECONDARY, TWO CONDUCTOR CONNECTORS TO PREVENT WATER ENTRANCE. THESE CONNECTORS SHALL NOT BE TAPED.
- DEB ISOLATION TRANSFORMERS SHALL BE BURIED AT A DEPTH OF TEN (10")
 INCHES ON A LINE CROSSING THE LIGHT AND PERPENDICULAR TO THE
 RUNWAY/TAXIWAY CENTERLINE AT A LOCATION TWELVE (12") INCHES FROM
 THE LIGHT OPPOSITE FROM THE RUNWAY/TAXIWAY.
- A SLACK OF THREE (3') FEET, MINIMUM, SHALL BE PROVIDED IN THE PRIMARY CABLE AT EACH TRANSFORMER/CONNECTOR TERMINATION. AT STAKE—MOUNTED LIGHTS, THE SLACK SHALL BE LOOSELY COILED IMMEDIATELY BELOW THE ISOLATION TRANSFORMER.
- 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.
- L-867 BASES SHALL BE SIZE B, 24" DEEP, CLASS I, UNLESS OTHERWISE NOTED.
- BASE MOUNTED BREAKABLE COUPLINGS SHALL NOT HAVE WEEP HOLES TO THE OUTSIDE. PLUGGED UP HOLES SHALL NOT BE ACCEPTABLE. IT SHALL BE A 1/4" DIAMETER, MINIMUM, OR EQUIVALENT OPENING FOR DRAINAGE FROM THE SPACE AROUND THE SECONDARY CONNECTOR INTO THE L-867 BASE.
- 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.
- TOPS OF THE STAKES SUPPORTING LIGHT FIXTURES SHALL BE FLUSH WITH THE SURROUNDING GRADE.

- PLASTIC LIGHTING FIXTURE COMPONENTS, SUCH AS LAMP HEADS, STEMS, BREAKABLE COUPLINGS, BASE COVERS, BRACKETS, STAKES, SHALL NOT BE ACCEPTABLE.
- 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 FLANGIBLE COUPLING, THE STEM, THE LAMP HOUSING AND THE LENS.
- 19. THE TOLERANCE FOR THE LATERAL SPACING (LIGHT LANE TO UNWAY/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 BE SEALED WITH HEAT SHRINK.
- 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,
 INITESS OTHERWISE SHOWN
- APPLY AN OXIDE INHIBITING, ANTI-SEIZING COMPOUND TO ALL SCREWS, NUTS AND BREAKAGE COUPLING THREADS.
- LOCATIONS OF ENDS OF ALL UNDERGROUND DUCTS SHALL BE IDENTIFIED BY DUCT MARKERS.
- 28. WHERE A PARALLEL, CONSTANT VOLTAGE PAPI SYSTEM IS PROVIDED, THE "T" SPLICES SHALL BE OF THE CAST TYPE.
- 29. CONCRETE USED FOR SLABS, FOOTINGS, BACKFILL AROUND TRANSFORMER HOUSINGS, MARKINGS, ETC. SHALL BE 3000 PSI, AIR—ENTRAINED.
- 30. ALL POWER AND CONTROL CABLES IN MAN/HAND HOLES SHALL BE TAGGED. USE EMBOSSED COPPER STRIPS TO BE ATTACHED AT BOTH ENDS TO THE CABLE BY THE USE OF PLASTIC STRAPS. MINIMUM OF TWO TAGS SHALL BE PROVIDED ON EACH CABLE IN A MAN/HAND HOLE—ONE AT THE CABLE EXIT.

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GROUNDING NOTES

- ALL GROUND CONNECTIONS TO GROUND RODS, BUSSES, PANELS, ETC. SHALL BE MADE WITH PRESSURE TYPE SOLDERLESS LUGS AND GROUND CLAMPS SOLDERED OR BOLT AND WASHER TYPE CONNECTIONS ARE NOT ACCEPTABLE. CLEAN ALL METAL SURFACES BEFORE MAKING GROUND CONNECTIONS.
- 2. TOP OF GROUND RODS SHALL BE TEN (10) INCHES BELOW GRADE.
- . THE RESISTANCE TO GROUND OF THE VAULT GROUNDING SYSTEM WITH THE COMMERCIAL POWER LINE NEUTRAL DISCONNECTED SHALL NOT EXCEED 10 OHMS.

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VERLAY TXY & APRON CONSTRUCT VAULT

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	ELECTRICAL LEGEND — SCHEMATIC
	NORMALLY OPEN (N.O.) CONTACT
	NORMALLY CLOSED (N.C.) CONTACT
(9)	STARTER COIL, * = STARTER NUMBER
OL	OVERLOAD RELAY CONTACT
(R)	CONTROL RELAY, * = CONTROL RELAY NUMBER
(P)	RELAY, * = RELAY NUMBER
OFF AUTO	TOGGLE SWITCH / 2 POSITION SWITCH
OFF AUTO	2-POSITION SELECTOR SWITCH
HAND XOO	3-POSITION SELECTOR SWITCH (H-O-A SHOWN)
1	2 POLE DISCONNECT SWITCH
111	3 POLE DISCONNECT SWITCH
<u></u>	PHOTOCELL
	TERMINAL BLOCK, * = TERMINAL NUMBER
	DEVICE TERMINAL, • = DEVICE TERMINAL NUMBER
	Internal Panel Wiring
· · · · · · · · · · · · · · · · · · ·	FIELD WIRING
	FUSE
GND	ground bus or terminal
S/N	NEUTRAL BUS
#	GROUND, GROUND ROD
0 0	INDUSTRIAL CONTROL RELAY OR LIGHTING CONTACTOR
CCR LOAD	S1 CUTOUT HANDLE REMOVED
CCR LOAD	S1 CUTOUT HANDLE INSERTED
ng.	N.O. THERMAL SWITCH
्रु	N.C. THERMAL SWITCH

	ELECTRICAL ABBREVIATIONS
A.F.F.	ABOVE FINSHED 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
EſL	INTERTEK — ELECTRICAL TESTING LABS
ETM	ELAPSE TIME METER
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
GRSC	GALVANIZED RIGID STEEL CONDUIT
HID	HIGH INTENSITY DISCHARGE
HOA	HAND OFF AUTOMATIC
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
J	JUNCTION BOX
KVA	KILOVOLT AMPERE(S)
KW	KILOWATTS
LC	LIGHTING CONTACTOR
LTFMC	LIQUID TIGHT FLEXIBLE METAL CONDUIT (UL LISTED)
LP	LIGHTING PANEL
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MCM	THOUSAND CIRCLUAR 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

ELI	ECTRICAL 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
υĻ	UNDERWRITER'S LABORATORIES
٧	VOLTS
w/	WITH
w /o	WITHOUT
WP	WEATHER PROOF
XFER	TRANSFER
XFMR	TRANSFORMER

	AIRPORT EQUIPMENT ABBREVIATIONS
<u> </u>	ANTON EQUIPMENT ADDREVATIONS
CCR	CONSTANT CURRENT REGULATOR
NIRL	MEDIUM INTENSITY RUNWAY LIGHT
MITE.	MEDIUM INTENSITY TAXIWAY LIGHT
NDB	NON~DIRECTIONAL BEACON
PAPI	PRECISION APPROACH PATH INDICATOR
PLASI	PULSE LIGHT APPROACH SLOPE INDICATOR
REIL	RUNWAY END IDENTIFIER LIGHT
VADI	VISUAL APPROACH DESCENT INDICATOR
VASI	VISUAL APPROACH SLOPE INDICATOR
WC	WIND CONE

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	ELECTRICAL LEGEND - PLANS	
	CONDUIT (EXPOSED)	
	CONDUIT OR UNIT DUCT (CONCEALED OR BURIED)	
	DUCT	
——E——	BURIED/UNDERGROUND ELECTRIC	
UGE	UNDERGROUND ELECTRIC	
OHE	OVERHEAD ELECTRIC	
⊶¤	POLE MOUNTED HID FIXTURE	
₽	DUPLEX CONVENIENCE RECEPTACLE, 120V, SINGLE PHASE, GROUNDING TYPE, 48" A.F.F. EXCEPT AS NOTED	
ю0°	WALL OR CEILING INT'D. JUNCTION BOX. CONFIGURATION VARIES WITH USE	
40	SINGLE THROW DISCONNECT SWITCH	
423	SINGLE THROW, FUSIBLE DISCONNECT SWITCH	
403	ENCLOSED CIRCUIT BREAKER	
ලන	CONTROL PANEL	
9	MOTOR, ESTIMATED H.P. AS INDICATED.	İ
<u> </u>	MOTOR	
回	TRANSFORMER	
凸	ELECTRIC UTILITY METER	
	ENCLOSURE	
	CIRCUIT BREAKER PANEL-SEE SCHEDULES	
0	GROUND ROD	
	Long slashes indicate neutral, short slashes indicate hot or switched leg. G == separate ground wire.	
77.5	HOMERUN TO PANEL PNL A INDICATES PANEL 1,3,5 INDICATES CIRCUIT NUMBERS	
\$	SINGLE POLE SWITCH	
\$ OR \$T	FRACTIONAL HP STARTER	
0	CONTACTOR	
	SURFACE MOUNTED OR CHAIN HUNG FLUORESCENT FIXTURE	

HO O WALL OR CEILING MT'D. INCANDESCENT OR HID FIXTURE.

Town (CIT OCC)	1	1			1 1	ı
CONDUIT OR UNIT DUCT (CONCEALED OR BURIED)	1					İ
DUCT	1	REVISION				
BURIED/UNDERGROUND ELECTRIC	1	EX.				
UNDERGROUND ELECTRIC						
OVERHEAD ELECTRIC				ŀ		
POLE MOUNTED HID FIXTURE	1	Ш	П		П	
DUPLEX CONVENIENCE RECEPTACLE, 120V, SINGLE PHASE, GROUNDING TYPE, 48" A.F.F. EXCEPT AS NOTED	1	DATE				
WALL OR CEILING MT'D, JUNCTION BOX, CONFIGURATION VARIES WITH USE	1					-4
SINGLE THROW DISCONNECT SWITCH					ဟ	
SINGLE THROW, FUSIBLE DISCONNECT SWITCH				ь	ğ	
ENCLOSED CIRCUIT BREAKER				Ř	Ξ	
CONTROL PANEL				꽃	>	
MOTOR, ESTIMATED H.P. AS INDICATED.				1	Z	
MOTOR				¥.	ಶ್	
TRANSFORMER				ž	≿	
ELECTRIC UTILITY METER				₹	K	
ENCLOSURE				Ш	里	
CIRCUIT BREAKER PANEL-SEE SCHEDULES				KEWANEE MUNICIPAL AIRPORT	EWANEE, HENRY COUNTY, ILLIN	
GROUND ROD				<u>₹</u>	K	
long slashes indicate neutral. Short slashes indicate hot or switched leg. $\mathbf{G} \approx \mathbf{SEPARATE}$ ground wire.				x	ΚÜ	

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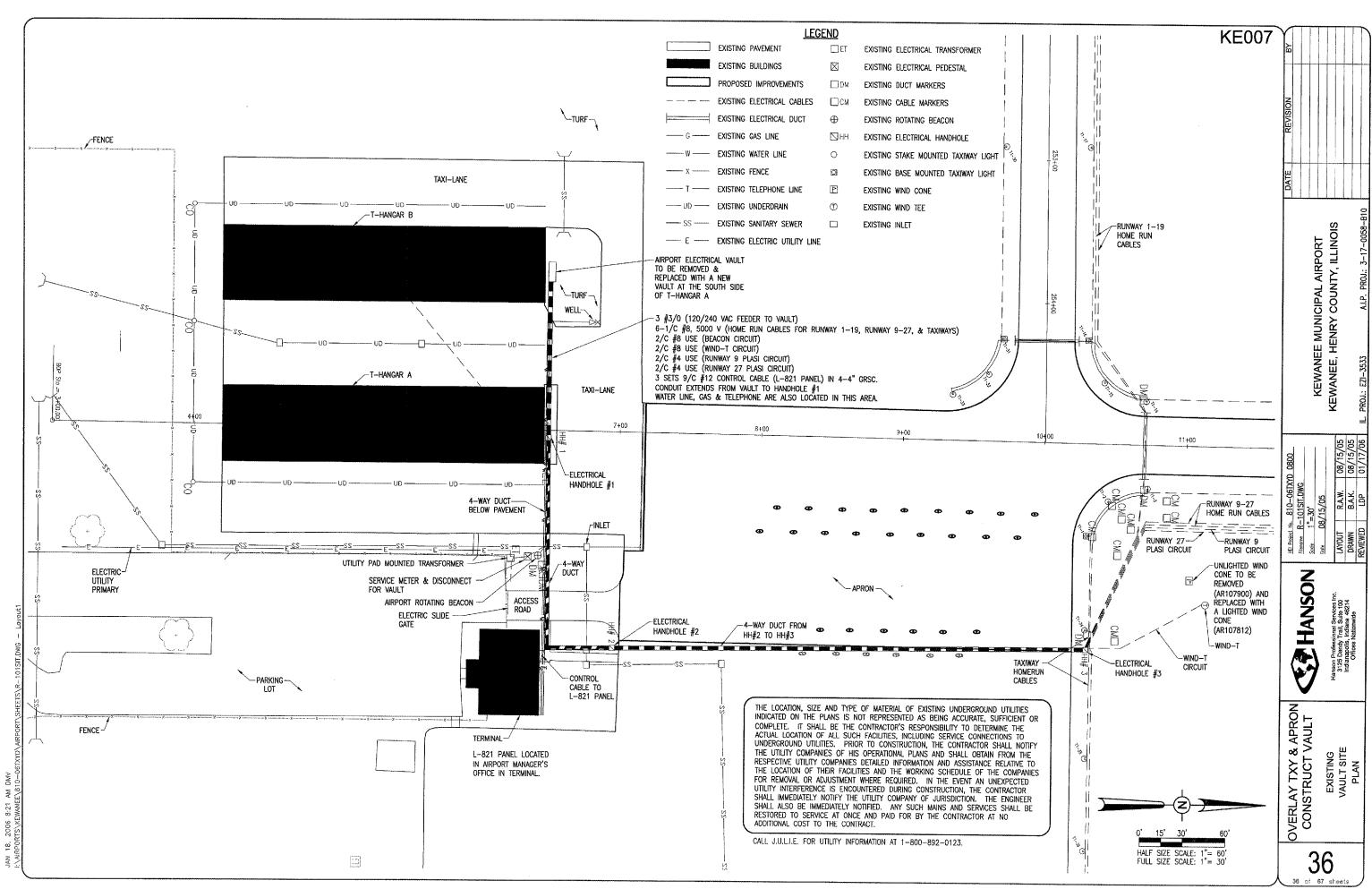
- 1. ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70 (MOST CURRENT ISSUE IN FORCE), THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCES, AND REQUIREMENTS IN FORCE. ANY INSTALLATIONS WHICH VOID THE U.L. LISTING, ETL LISTING (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE SHALL NOT BE PERMITTED.
- 2. CONTRACTOR SHALL COORDINATE WORK AND ANY POWER OUTAGES WITH THE RESPECTIVE FACILITY OWNER PERSONNEL AND THE AIRPORT MANAGER.
- PHASE AND NEUTRAL CONDUCTORS FOR NO. 4 AWG AND LARGER. INSULATED GROUND CONDUCTORS SHALL HAVE GREEN COLORED INSULATION FOR ALL CONDUCTOR AWG AND/OR KCMIL. STANDARD COLORS FOR POWER WIRING AND

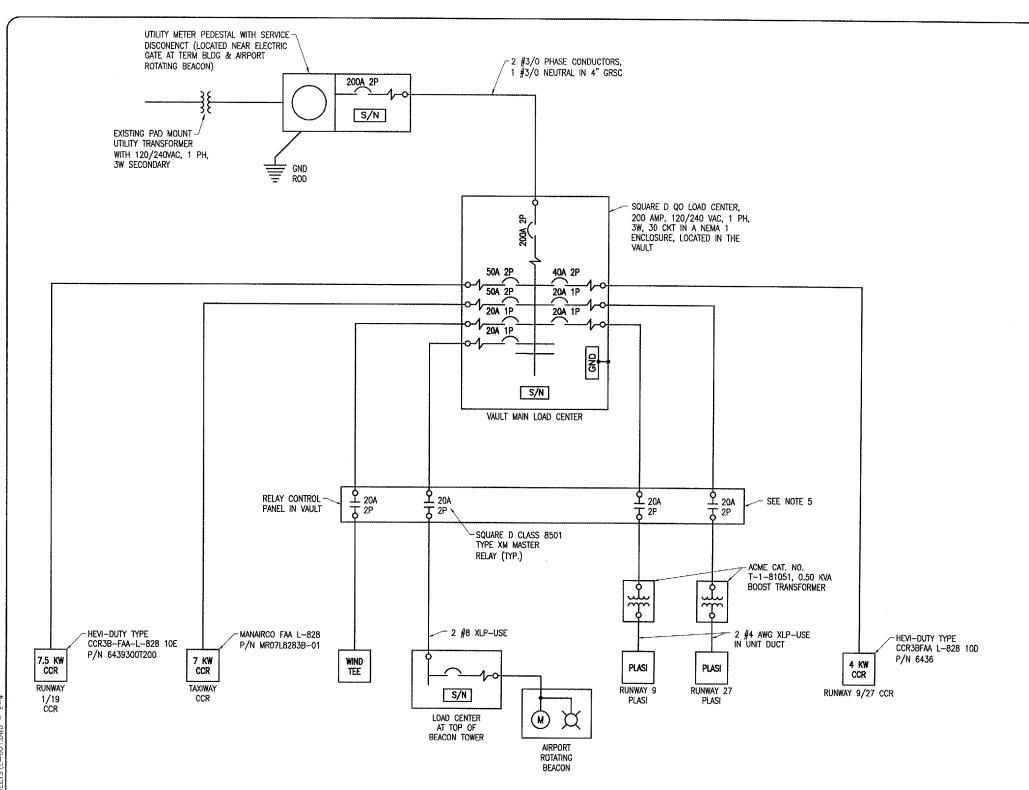
20/240	VAC, 1	PHASE,	3	WIRE
HASE A		BLACK		
HASE B		RED		
EUTRAL		WHITE		
ROUND		GREEN		

 COLOR CODE PHASE AND NEUTRAL CONDUCTOR INSULATION FOR NO. 6 AWG OR SMALLER. PROVIDE COLORED INSULATION OR COLORED MARKING TAPE FOR BRANCH CIRCUITS SHALL BE AS FOLLOWS:

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ELECTRICAL LEGEND AND ABBREVEATIONS





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NOTES

- 1. ALL VAULT WORK AND/OR POWER OUTAGES SHALL BE COORDINATED WITH THE
- 2. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS TO CONFIRM POWER & CONTROL CIRCUITS.
- 3. EXISTING AIRFIELD CIRCUITS SHALL BE LOCATED, IDENTIFIED, DISCONNECTED, REROUTED & RECONNECTED TO THE NEW VAULT AS DETAILED HEREIN. ALL EXISTING AIRFIELD LIGHTING SYSTEMS SHALL BE OPERABLE DURING NIGHTFALL. CONTRACTOR SHALL PROVIDE ALL TEMPORARY WORK AS NECESSARY TO MAINTAIN OPERATION OF THE AIRFIELD LIGHTING SYSTEMS AT NIGHTFALL. CONTRACTOR SHALL COORDINATE TRANSFER OF EXISTING AIRFIELD CIRCUITS TO MINIMIZE DOWN
- 4. CCR DENOTES CONSTANT CURRENT REGULATOR.
- 5. PLASI'S ARE WIRED FOR CONTINUOUS OPERATION 24 HOURS A DAY. RELAY CONTACTS MIGHT BE BYPASSED. FIELD VERIFY AS NECESSARY.

KEWANEE MUNICIPAL AIRPORT KEWANEE, HENRY COUNTY, ILLINOIS

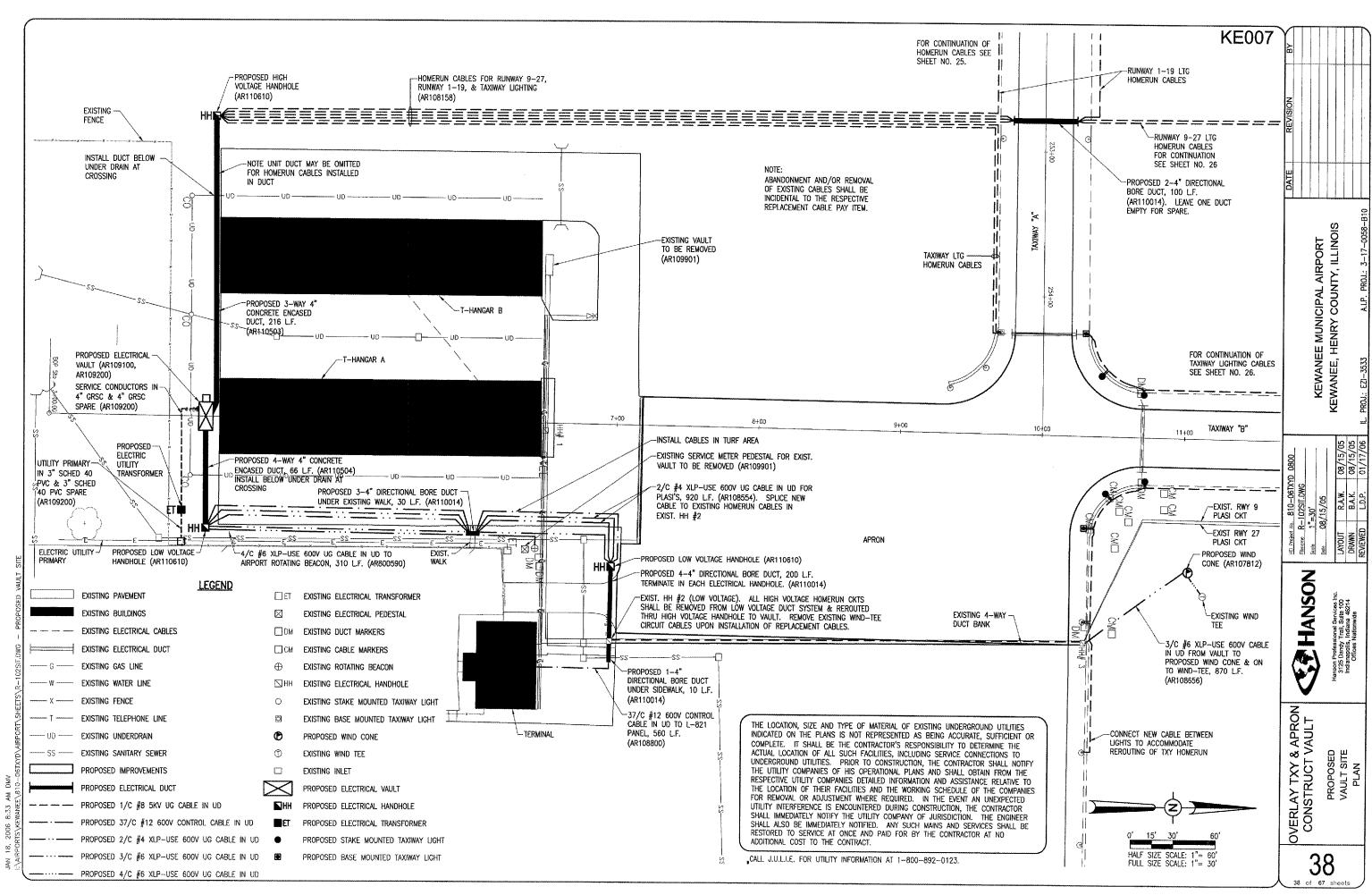
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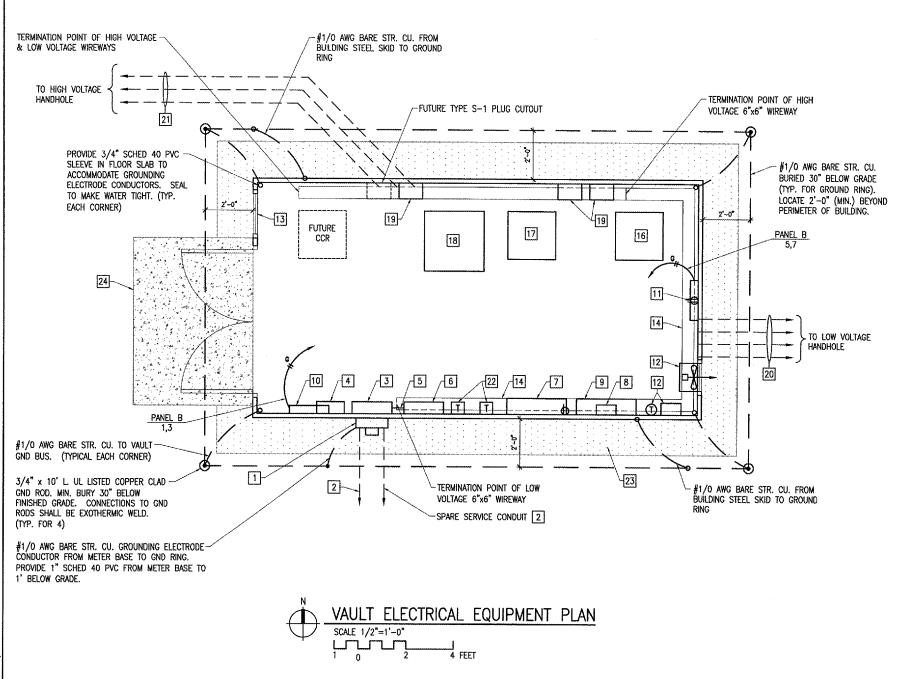
EXSITING VAULT ELECTRICAL ONE-LINE DIAGRAM

OVERLAY TXY & APRON CONSTRUCT VAULT

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EXISTING VAULT ELECTRICAL ONE-LINE DIAGRAM





KEYED NOTES

- 1 ELECTRIC UTILITY METER WITH SUPPORT HARDWARE PER SERVING ELECTRIC UTILITY COMPANY REQUIREMENTS.
- 2 UTILITY SERVICE CONDUCTORS (BY UTILITY) IN 4" GRSC (BY CONTRACTOR) FROM UTILITY TRANSFORMER TO METER BASE. INCLUDE SPARE 4" GRSC PER UTILITY CO. REQUIREMENTS. CONTRACTOR SHALL FURNISH & INSTALL SERVICE CONDUCTORS & CONDUIT FROM METER BASE TO SERVICE PANEL. SEE "NEW VAULT ELECTRICAL ONE LINE DIAGRAM".
- 3 SERVICE PANEL A, SEE PANEL A SCHEDULE.
- 4 AC SURGE PROTECTOR/TVSS, SEE "NEW VAULT ELECTRICAL ONE LINE DIAGRAM."
- 5 2 #1/0 THWN, 1 #1/0 THWN NEUTRAL, 1 #4 GND IN 2" GRSC FROM SERVICE PANEL A TO PANEL B.
- 6 PANEL B, SEE PANEL B SCHEDULE.
- 7 LIGHTING CONTACTOR PANEL. SEE AIRFIELD LIGHTING WIRING SCHEMATIC AND LIGHTING CONTACTOR PANEL DETAIL.
- 8 L-854 RADIO CONTROL UNIT. EXTEND RADIO ANTENNA CABLE AND MOUNT ANTENNA ON THE ROOF FOR PROPER OPERATION.
- PADIO RELAY INTERFACE PANEL WITH PHOTOCELL BYPASS SWITCH FOR RUNWAY 1-19 CCR, TAXIWAY CCR, AND RUNWAY 18-36 CCR. SEE AIRFIELD LIGHTING WIRING SCHEMATIC FOR WIRING REQUIREMENTS. MOUNT PHOTOCELL ON ROOF. FIELD VERIFY LOCATION FOR PROPER CONTROL AND OPERATION.
- [10] ELECTRIC WALL HEATER EH-1, 3000 WATT, 240 VAC, 1 PHASE, SUITABLE FOR SURFACE MOUNTING WITH INTEGRAL THERMOSTAT, Q-MARK MODEL CWH3407, OR APPROVED EQUAL. BOTTOM OF HEATER SHALL BE 3" ABOVE THE UPPER ELECTRICAL WIREWAY.
- ELECTRIC WALL HEATER EH-2, 2000 WATT, 240 VAC, 1 PHASE, SUITABLE FOR SURFACE MOUNTING WITH INTEGRAL THERMOSTAT, Q-MARK MODEL CWH3404, OR APPROVED EQUAL. BOTTOM OF HEATER SHALL BE 3" ABOVE THE UPPER ELECTRICAL WIREWAY.
- EXHAUST FAN EF-1, 2000 CFM AT .25" STATIC PRESSURE WITH 1/2 HP, 120 VAC MOTOR, COOK MODEL 20S10D, OR APPROVED EQUAL INCLUDE WALL HOUSING WITH GUARD, GRAVITY BACK DRAFT DAMPER, ALDMINUM WEATHER-HOOD PAINTED TO MATCH BUILDING EXTERIOR, STAINLESS STEEL INSECT SCREEN, AND FRACTIONAL HP ELECTRICAL DISCONNECT. INSTALL FAN AS HIGH AS POSSIBLE. PROVIDE 120 VAC THERMOSTAT WITH CONTACTOR AND AUTO-OFF-MANUAL CONTROL SWITCH AT 48" AFF. MCUNT THERMOSTAT ON 2" THICK INSULATED BASE. SEE EXHAUST FAN CONTROL SCHEMATIC FOR WIRING REQUIREMENTS.
- INTAKE LOUVER L-1, 24" WIDE BY 48" HIGH INTAKE LOUVER WITH STAINLESS STEEL INSECT SCREEN, 120 VAC MOTORIZED DAMPER WITH LIMIT SWITCH, KYNAR FINISH MATCHING BUILDING EXTERIOR, RUSKIN MODEL ELF375DX, OR APPROVED EQUAL. SEE EXHAUST FAN CONTROL SCHEMATIC FOR WIRING REQUIREMENTS.
- [14] 6" BY 6" LOW VOLTAGE WIREWAY. LABEL "LOW VOLTAGE" EVERY 4 FEET. INSTALL ABOVE HIGH VOLTAGE WIREWAY.
- 6" BY 6" HIGH VOLTAGE WIREWAY. LABEL "HIGH VOLTAGE" EVERY 4 FEET. INSTALL BELOW LOW VOLTAGE WIREWAY.
- 16 RUNWAY 1-19 CONSTANT CURRENT REGULATOR, SEE GENERAL NOTE 1.
- 17] RUNWAY 9-27 CONSTANT CURRENT REGULATOR. SEE GENERAL NOTE 1.
- 8 TAXIWAY CONSTANT CURRENT REGULATOR. SEE GENERAL NOTE 1.
- 19 SERIES PLUG CUTOUT TYPE S-1 WITH ENCLOSURE. SEE GENERAL NOTES 1 AND 2.
- [20] 4-4" GRSC FROM LOW VOLTAGE WIREWAY TO LOW VOLTAGE HANDHOLE.
- 21 3-4" GRSC FROM HIGH VOLTAGE WIREWAY TO HIGH VOLTAGE HANDHOLE.
- [22] BOOST TRANSFORMERS, SEE ELEVATION VIEW.
- VEGETATION BARRIER CONSISTING OF A MIN. 3" PEA GRAVEL SURFACE OVER FILTER OR LANDSCAPING FABRIC. PROPOSED SURFACE TREATMENT WILL COVER ENTIRE AREA BENEATH VAULT STRUCTURE AS WELL AS 18" AROUND THE PERIMETER OF THE BUILDING EDGE. THE STONE AND FABRIC AS WELL AS ANY EQUIPMENT AND LABOR REQUIRED TO COMPLETE THIS TASK WILL BE CONSIDERED INCIDENTAL TO THE INSTALLATION OF THE PROPOSED ELECTRICAL VAULT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- [24] ENTRANCE PAD CONSTRUCTED OF 6" CONCRETE SLAB W/6X6-W5XW5 WELDED WIRE FABRIC ON A COMPACTED SUBGRADE. MINIMUM DIMENSIONS OF PAD WILL BE 7'Wx5'Dx6"H, SLOPED AT A MIN. OF 0.5"/FT AWAY FROM THE VAULT ENTRANCE. PCC USED TO CONSTRUCT THE PAD WILL CONFORM TO ITEM 610. ALL MATERIALS, LABOR AND EQUIPMENT USED TO CONSTRUCT THE PAD INCLUDING ANY GRADING REQUIRED WILL BE CONSIDERED INCIDENTAL TO THE CONSTRUCTION OF THE PROPOSED ELECTRICAL VAULT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

GENERAL NOTES

- 1. SEE "NEW VAULT ELECTRICAL ONE LINE DIAGRAM" FOR LOW VOLTAGE INPUT POWER WIRING REQUIREMENTS TO CCR'S (CONSTANT CURRENT REGULATORS). SEE "HIGH VOLTAGE WIRING SCHEMATIC" FOR CCR OUTPUT WIRING REQUIREMENTS. SEE "AIRFIELD LIGHTING WIRING SCHEMATIC" FOR CCR CONTROL WIRING REQUIREMENTS. PROVIDE 5 FEET MINIMUM CLEAR WORKING SPACE IN FRONT OF EACH CCR AND EACH SERIES PLUG CUTOUT.
- CONSTANT CURRENT REGULATORS AND THEIR RESPECTIVE SERIES PLUG CUTOUTS SHALL BE CLEARLY LABELED TO IDENTIFY THE RESPECTIVE REGULATOR DESIGNATION, RUNWAY OR TAXIWAY SERVED, POWER SOURCE OR CIRCUIT, AND VOLTAGE SYSTEM.
- 3. SEE ELEVATION VIEWS FOR ADDITIONAL INFORMATION ON PROPOSED EQUIPMENT LAYOUTS.
- 4. COORDINATE CONDUIT & SLEEVE ENTRANCES THROUGH FLOOR SLAB AND WALLS.

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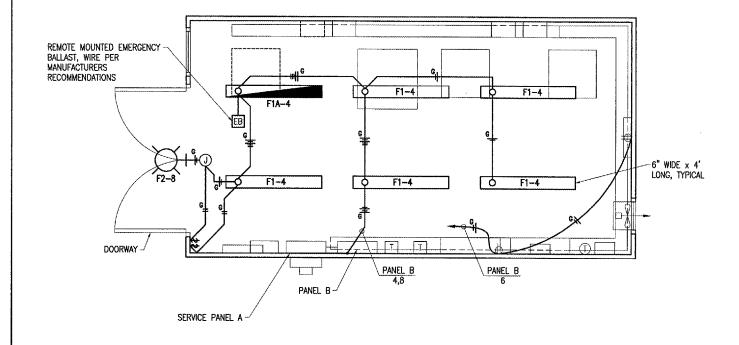
KEWANEE MUNICIPAL AIRPORT KEWANEE, HENRY COUNTY, ILLINOIS

Harrson Professional Services Inc. 3125 Dandy Trail, Suite 100 Indianapolis, Indiana 46214

OVERLAY TXY & APRON
CONSTRUCT VAULT
PROPOSED
AIRPORT ELECTRICAL VAULT

OVERLAY TXY & APRON CONSTRUCT VAULT

40 of 67 sheets



SCALE 1/2"=1'-0"

VAULT LIGHTING & RECEPTACLE PLAN

	BALLAST CAPABLE OF OPERATING 2 LAMPS FOR 90	CW-GEB10RS-WLF	2-32W T8 4100K 59 TOTAL INPUT WATTS	120
	COMPACT FLUORESCENT WALL-PAK, ONE PIECE INJECTION MOLDED UV STABILIZED POLYCARBONATE HOUSING, HIGH PERFORMANCE SPECULAR ANODIZED SEGMENTED REFLECTOR, ONE PIECE HIGH TEMPURATURE SILICONE GASKET, MEDIUM BRONZE FINISH, HIGH POWERFACTOR ELECTRONIC BALLAST WITH LESS THAN OR EQUAL TO 10% THD, UL USTED FOR WET LOCATIONS, FUSED.	CR-DMB-LPI	1-42W TRT 4100K 47 Total Input Watts	120

4 FT. WET LOCATION LISTED ENCLOSED AND LITHONIA:
GASKETED INDUSTRIAL FLUORESCENT LIGHT FIXTURE, DMW-2-32-AR-120IMPACT RESISTANT, UV RESISTANT REINFORCED CW-GEB1ORS-WLF

FIXT. TYPE

DESCRIPTION

POLYESTER FIBERGLASS HOUSING, HIGH IMPACT ACRYLC DIFFUSER, RAPID START COLD WEATHER O DEG. F. ELECTRONIC BALLAST WITH LESS THAN OR EQUAL TO 10% THD.

LIGHTING FIXTURE SCHEDULE

2-32W T8 4100K 59 TOTAL INPUT WATTS

VOLTS MOUNTING

REMARKS

SURFACE TO HARD PROVIDE WET LOCATION FITTINGS INSTALLED IN TOP OF FIXTURE.

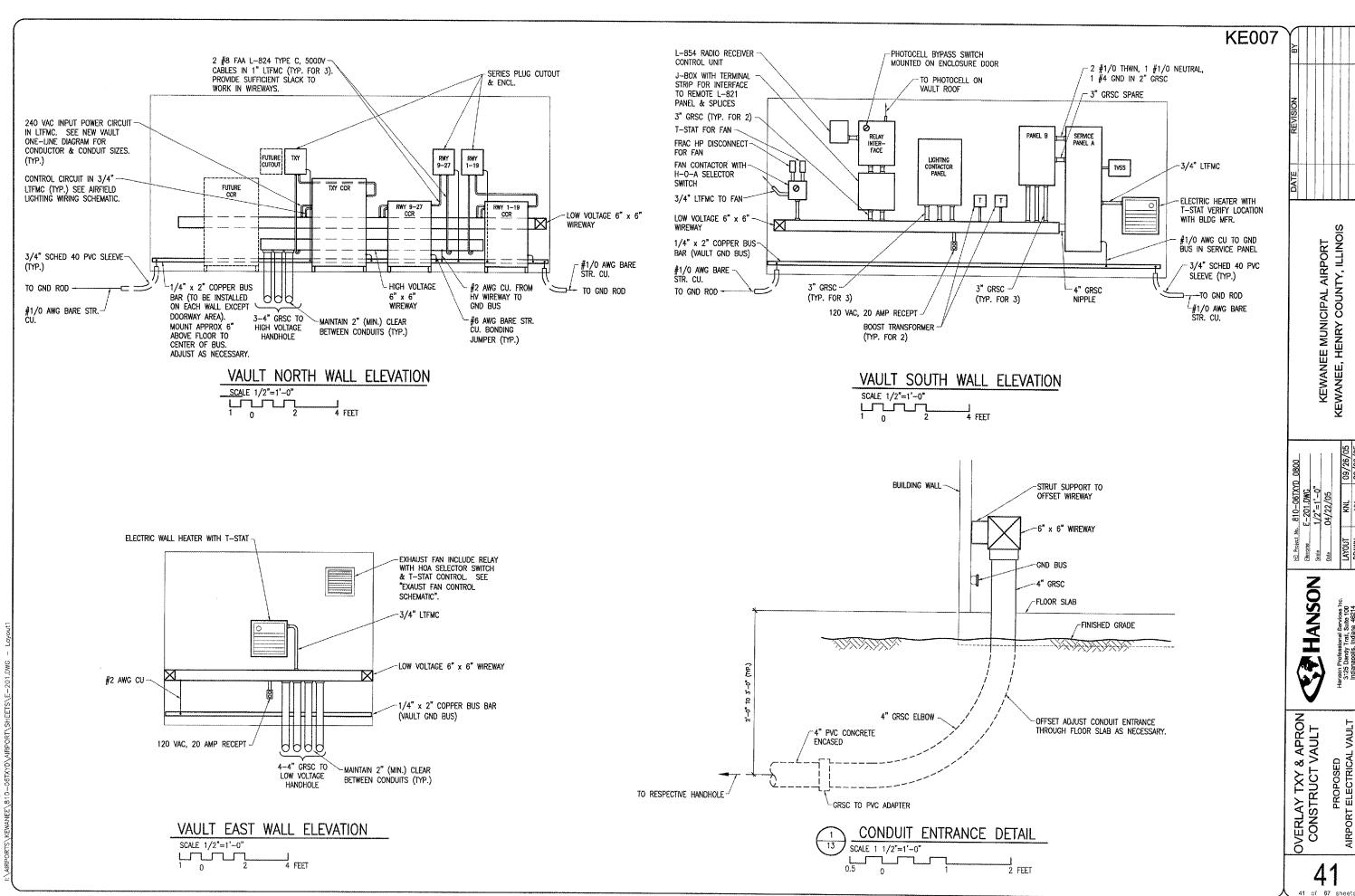
SURFACE TO HARD PROVIDE WET LOCATION FITTINGS INSTALLED IN TOP OF FIXTURE.

CONNECT TO WALL SWITCH LOCATED ON THE INSIDE OF THE BUILDING.

SURFACE TO WALL
ABOVE EXTERIOR
DOOR
APPROXIMATELY 4
INCHES ABOVE TOP
OF DOOR FRAME.

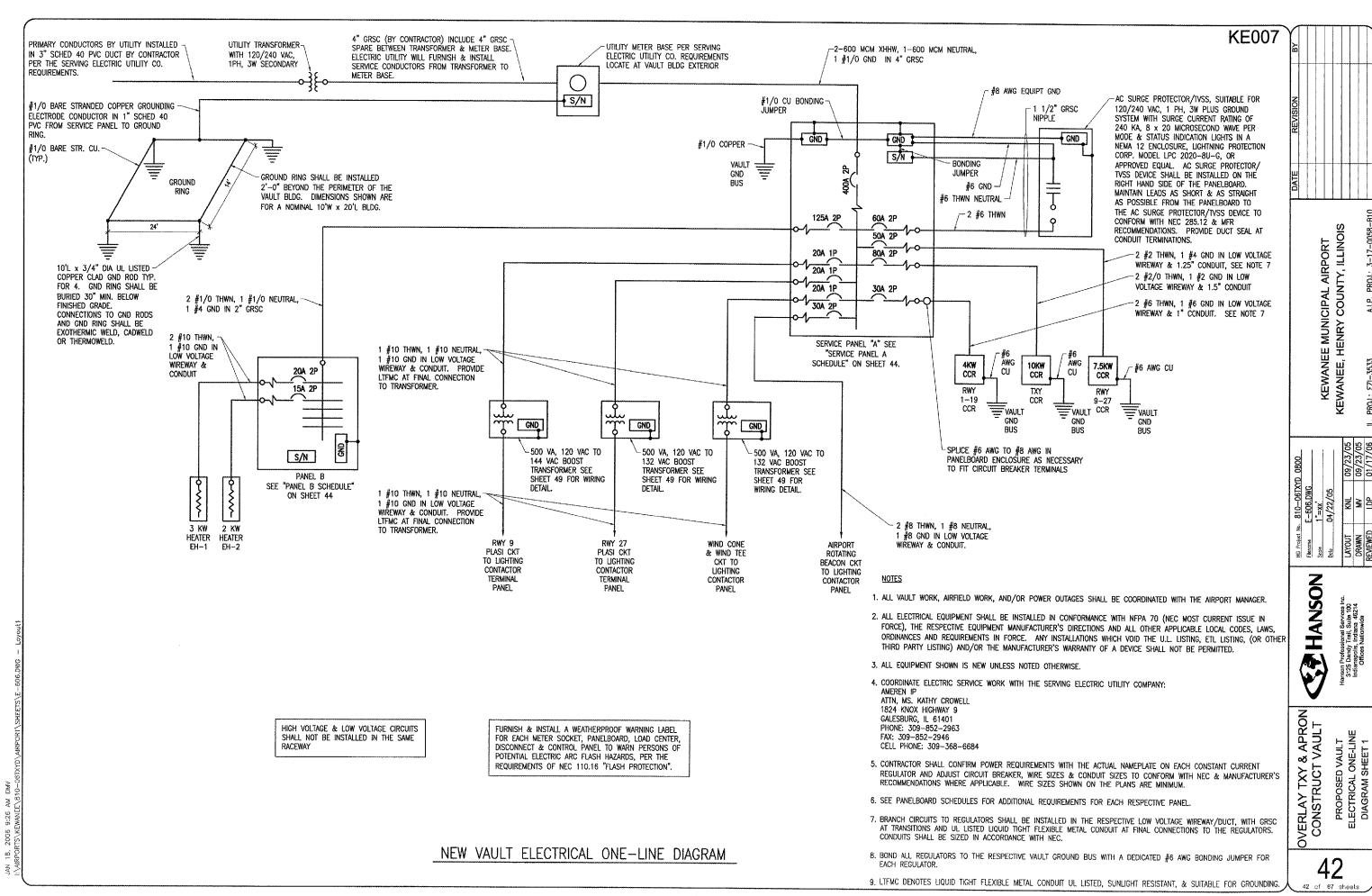
MANUFACTURER & CATALOG NO.

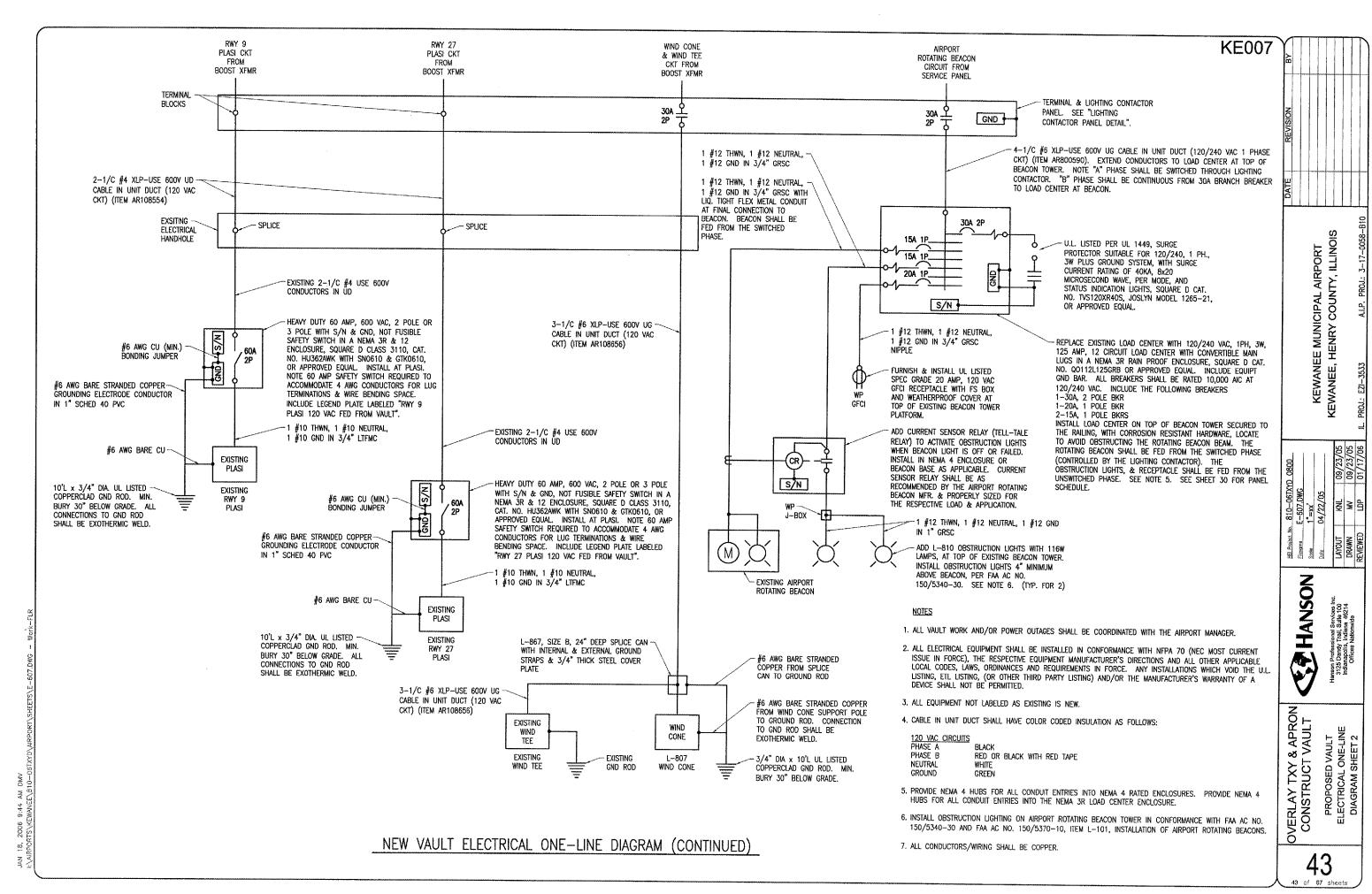
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	<u>note</u> 15 amp #12 aw		CIRCUITS	FOR	LIGHTING	&	RECEPTACLES	SHALL	USE	-



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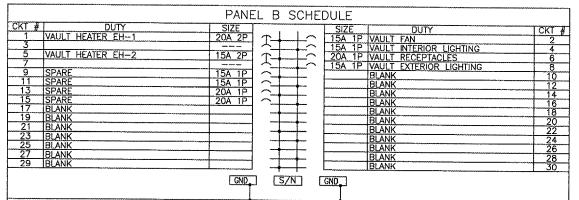
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400 AMP, 120/240 VAC, 1 PHASE, 3 WIRE, 42 CIRCUIT PANELBOARD WITH 400 AMP, 2 POLE MAIN BREAKER WITH 22,000 AIC AT 240 VAC IN A NEMA 1 ENCLOSURE. INCLUDE SEPARATE GROUND BAR KITS. ALL BRANCH BREAKERS SHALL BE BOLT-ON TYPE WITH 22,000 AIC AT 120/240 VAC. PANELBOARD SHALL BE SQUARE D CAT. NO. NQOD42L400CU WITH NQOD4 MAIN BREAKER KIT AND Q4L2400 MAIN BREAKER IN A NEMA 1 ENCLOSURE, OR APPROVED EQUAL.

- 1. PANELBOARD BUS SHALL BE COPPER. NEUTRAL BUS SHALL BE COPPER. EQUIPMENT GROUND BARS SHALL BE COPPER. NOTE ONE OF THE EQUIPMENT GROUND BARS SHALL ACCOMMODATE LINE & TAP GROUND WIRES UP TO #1/O AWG. THE OTHER GROUND BAR SHALL ACCOMMODATE A #1/O AWG LINE/BONDING JUMPER & TAP GROUND CONDUCTORS FROM #14 AWG TO #6 AWG.
- 2. INCLUDE ENGRAVED PHENOLIC LEGEND PLATE LABELED "SERVICE PANEL A, 120/240 VAC, 1 PHASE, 3 WIRE". INCLUDE ADDITIONAL LEGEND PLATE FOR THE MAIN BREAKER LABELED "SERVICE BREAKER".



225 AMP, 120/240 VAC, 1 PHASE, 3 WIRE, 30 CIRCUIT PANELBOARD WITH MAIN LUGS IN A NEMA 1 ENCLOSURE. INCLUDE SEPARATE GROUND BAR KITS. ALL BRANCH BREAKERS SHALL BE BOLT-ON TYPE WITH 22,000 AIC AT 120/240 VAC. PANELBOARD SHALL BE SQUARE D CAT. NO. NQOD30L225CU OR APPROVED EQUAL.

- I. PANELBOARD BUS SHALL BE COPPER. NEUTRAL BUS SHALL BE COPPER. EQUIPMENT GROUND BARS SHALL BE COPPER.
- 2. INCLUDE ENGRAVED PHENOLIC LEGEND PLATE LABELED "PANEL B, 120/240 VAC, 1 PHASE, 3 WIRE, FED FROM SERVICE PANEL A".

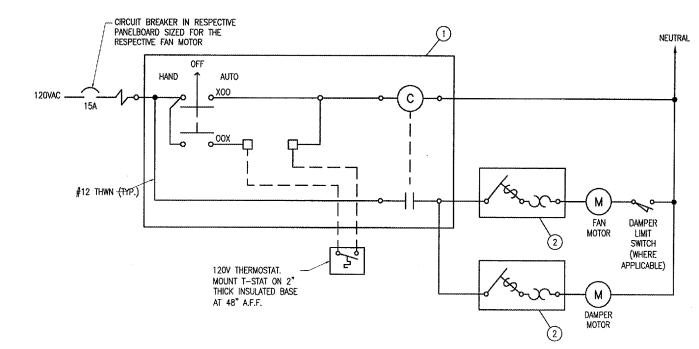
NOTES FOR FAN CONTROL SCHEMATIC

- 1. GROUND WIRES REQUIRED BUT NOT SHOWN FOR CLARITY.
- 2. ALL WIRING SHALL BE #12 THWN MINIMUM.
- 3. PROVIDE A NEMA 1 ENCLOSURE SIZED TO INSTALL THE CONTACTOR, HOA SELECTOR SWITCH & TERMINALS.
- PROVIDE LEGEND PLATE FOR THE CONTACTOR AND FRACTIONAL HP MOTOR STARTER IDENTIFYING THE LOAD SERVED 4. AND THE POWER SOURCE.
- VERIFY MOTOR HORSEPOWERS AND FULL LOAD AMPS WITH THE RESPECTIVE MANUFACTURER. CONTRACTOR SHALL 5. COORDINATE MOTOR CIRCUIT BREAKER, CONTACTOR, FRACTIONAL HP STARTER, OVERLOADS, WIRE SIZES, CONDUIT SIZES, ETC. FOR THE RESPECTIVE EQUIPMENT FURNISHED, PER NEC & MANUFACTURER'S RECOMMENDATIONS. COORDINATE FAN & LOUVER INSTALLATION WITH BUILDING MFR.

INTAKE LOUVERS SHALL OPEN AND EXHAUST FAN SHALL OPERATE WHEN SPACE TEMP EXCEEDS 85'F (ADJUSTABLE). EXHAUST FAN SHALL OPERATE ONLY WHEN DAMPER HAS PROVED "OPEN". IN MANUAL MODE DAMPER SHALL REMAIN 6. OPEN AND FAN SHALL RUN CONTINUOUSLY.

LEGEND

- 1 120VAC, NEMA SIZE 0 (MINIMUM), 1 POLE, FULL VOLTAGE CONTACTOR IN A NEMA 1 ENCLOSURE, SQUARE D CLASS 8502, TYPE SBG5V02 OR APPROVED EQUAL. INCLUDE H-O-A SELECTOR SWITCH WITH EACH CONTACTOR.
- ② FRACTIONAL HORSEPOWER MOTOR MANUAL STARTER, SQUARE D MANUAL STARTER WITH HANDLE/GUARD/LOCK OFF, IN NEMA 1 ENCLOSURE CLASS 2510, TYPE FG5 OR APPROVED EQUAL. INCLUDE MELTING ALLOY TYPE THERMAL OVERLOADS SIZED AS REQUIRED TO PROTECT THE RESPECTIVE MOTOR. 120VAC MOTORS SHALL HAVE



EXHAUST FAN CONTROL SCHEMATIC

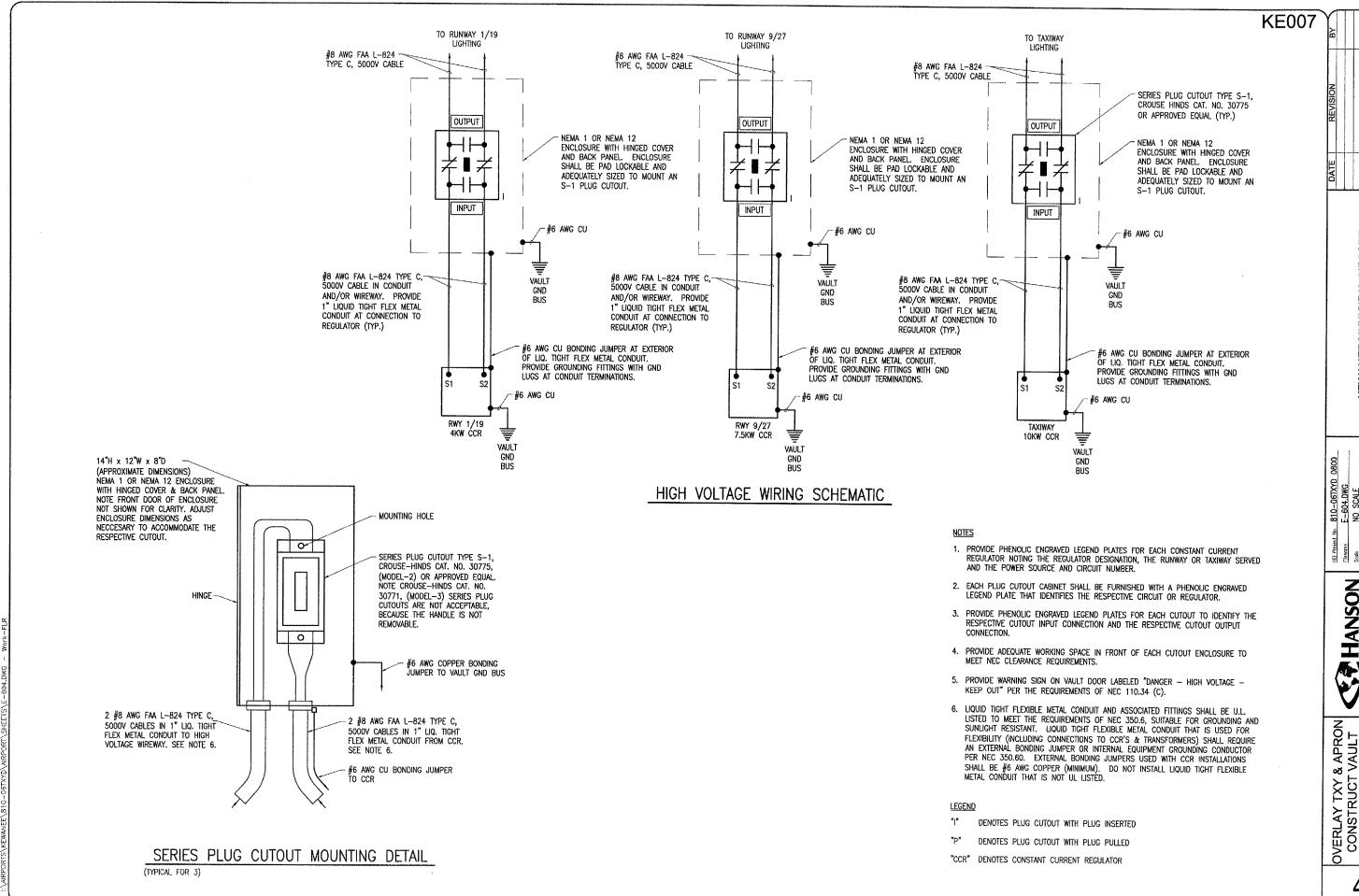
KEWANEE MUNICIPAL AIRPORT WANEE, HENRY COUNTY, ILLIN

HANSON

OVERLAY TXY & APRON CONSTRUCT VAULT SCHEDULES DETAILS PANEL & [

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(E-10)



(E-11)

HIGH VOLTAGE WIRING SCHEMATIC

HANSON Flevene E-66

2006 NO

2016 O44,

Hanson Professional Services Inc.

3125 Dandy Teal, Suite 100

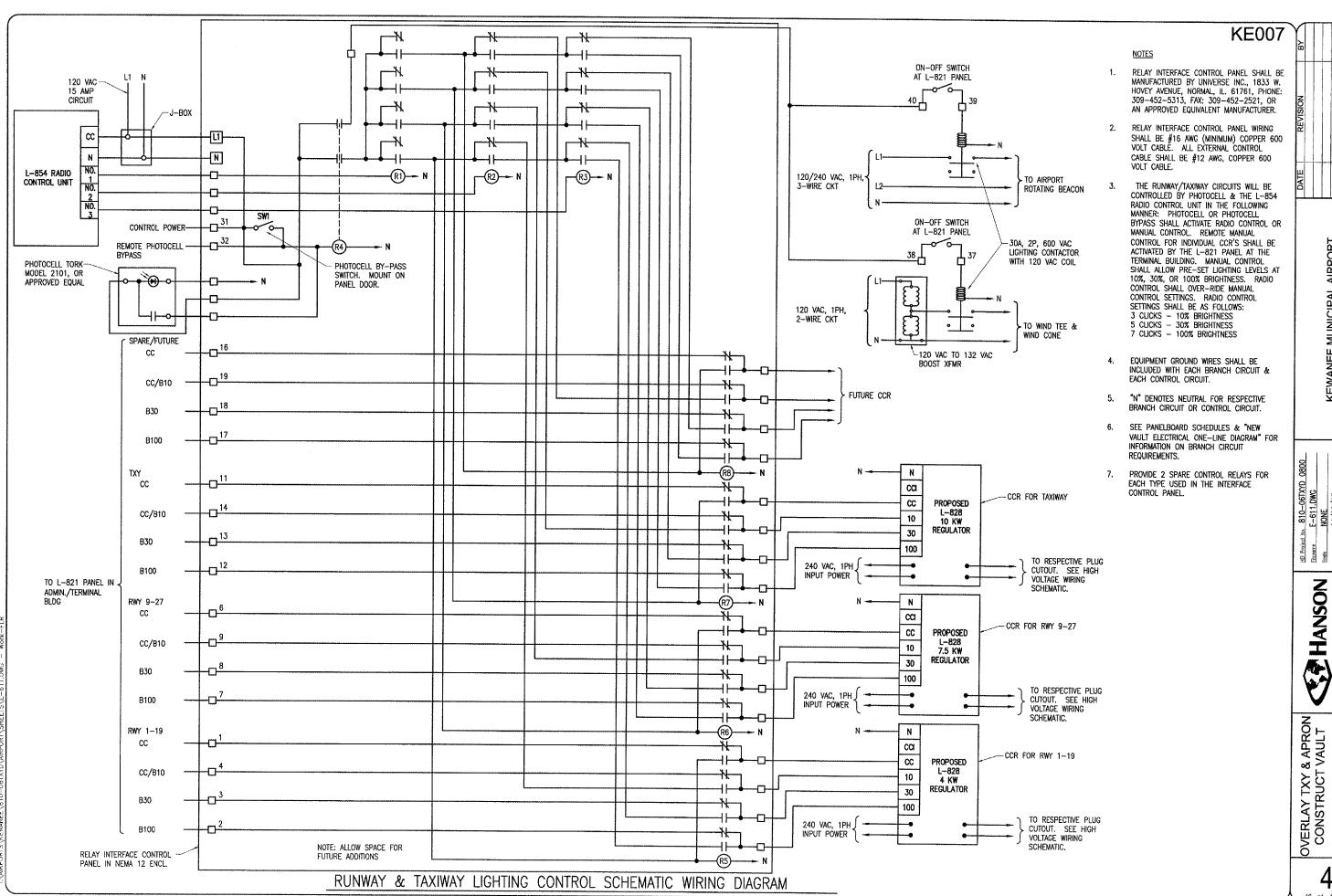
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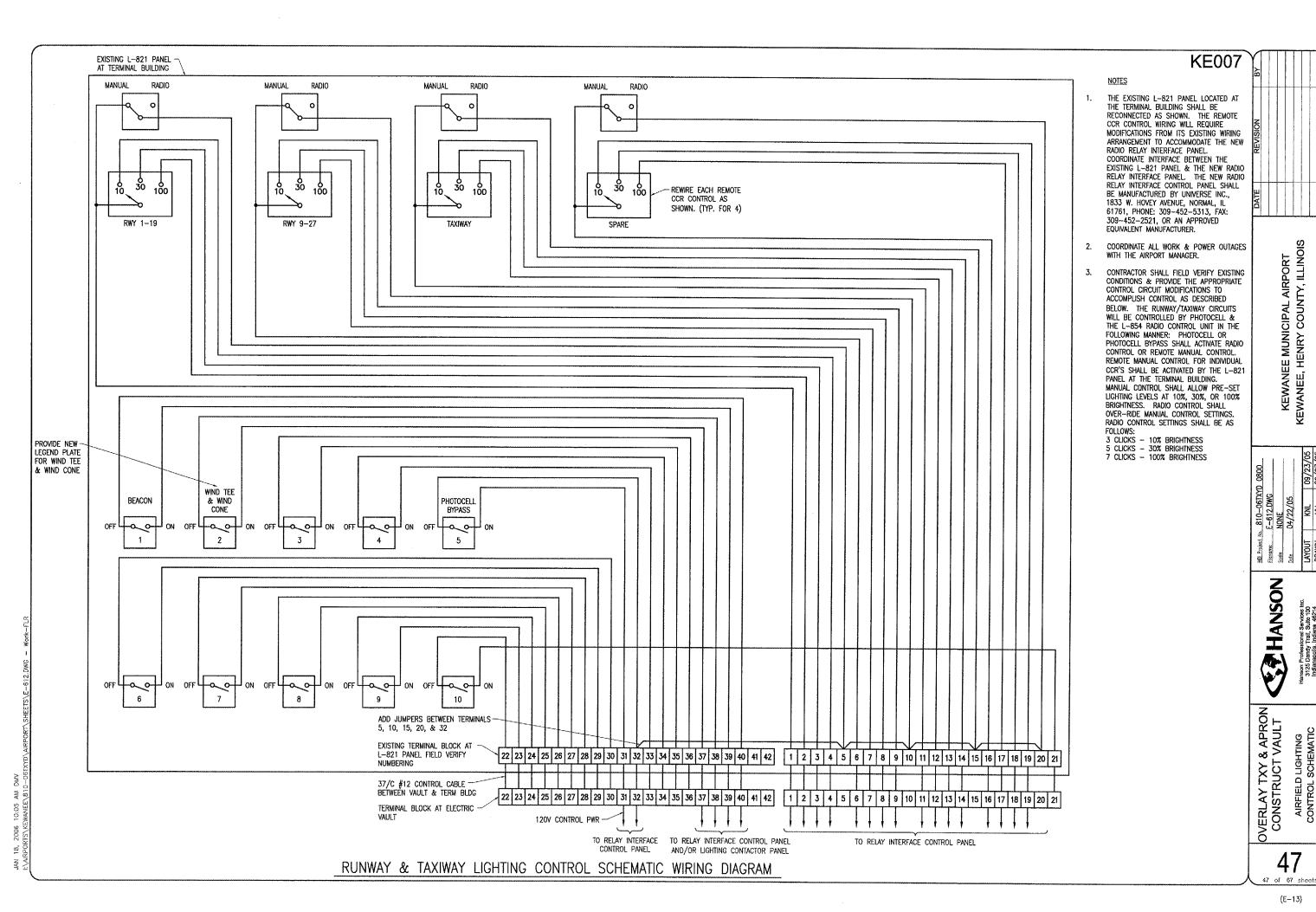
KEWANEE MUNICIPAL AIRPORT KEWANEE, HENRY COUNTY, ILLINOIS

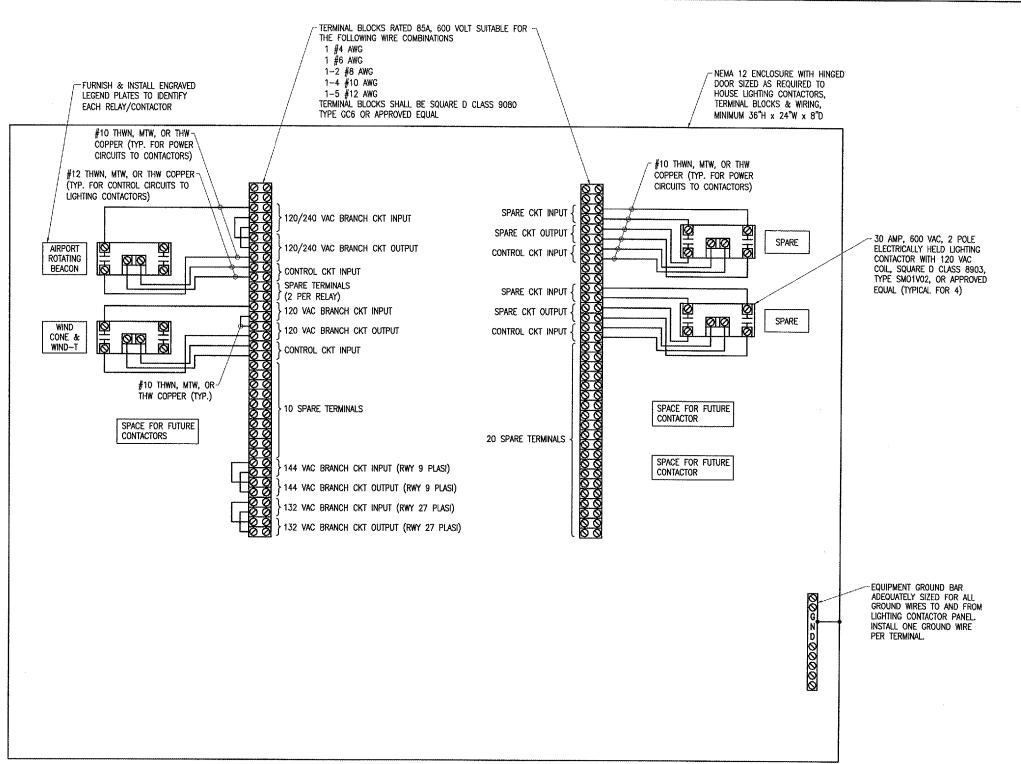
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KEWANEE MUNICIPAL AIRPORT KEWANEE, HENRY COUNTY, ILLINOIS





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NOTES

 1. 15 AMP & 20 AMP INPUT POWER/BRANCH CIRCUITS SHALL BE #10 AWG COPPER THWN FROM THE RESPECTIVE POWER SOURCE TO THE LIGHTING CONTACTOR PANEL.
 30 AMP INPUT POWER/BRANCH CIRCUITS SHALL BE #8 AWG COPPER THWN (MIN.) FROM THE RESPECTIVE POWER SOURCE TO THE LIGHTING CONTACTOR PANEL.

INPUT CONTROL CIRCUITS SHALL BE #12 AWG COPPER THWN.

FOR 120 VAC BRANCH CIRCUITS THE NEUTRAL CONDUCTOR SHALL NOT BE SWITCHED THROUGH THE RELAY CONTACTS. USE TERMINAL BLOCKS TO TRANSITION FROM VAULT BRANCH CIRCUIT WIRING TO FIELD WIRING.

THE AIRPORT ROTATING BEACON CIRCUIT SHALL HAVE PHASE "A" SWITCHED THROUGH THE LIGHTING CONTACTOR. PHASE "B" SHALL BE UNSWITCHED FROM THE POWER SOURCE TO THE LOAD CENTER AT THE BEACON.

PROVIDE #10 AWG COPPER BONDING JUMPER FROM PANEL ENCLOSURE FRAME TO ENCLOSURE DOOR.

DATE REVISION BY

KEWANEE MUNICIPAL AIRPORT KEWANEE, HENRY COUNTY, ILLINOIS

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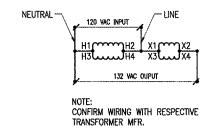
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OVERLAY TXY & APRON
CONSTRUCT VAULT
LIGHTING CONTACTOR
PANEL DETAIL

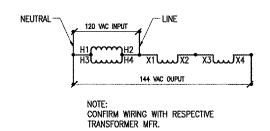
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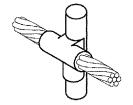
VAULT LEGEND PLATE SCHEDULE						
DEVICE	IABEL					
SERVICE PANELBOARD "A"	SERVICE PANEL "A" 120/240 VAC, 1 PH, 3 W					
MAIN BREAKER IN SERVICE PANEL "A"	SERVICE DISCONNECT					
PANELBOARD "B"	PANEL "B" 120/240 VAC, 1 PH, 3 W					
RUNWAY 1-19 CCR	RUNWAY 1-19					
TAXIWAY CCR	TAXIWAY					
RUNWAY 9-27 CCR	RUNWAY 9-27					
CUTOUT ENCLOSURE FOR RUNWAY 1-19	RUNWAY 1-19 CUTOUT					
CUTOUT ENCLOUSRE FOR TAXIWAY	TAXIWAY CUTOUT					
CUTOUT ENCLOSURE FOR RUNWAY 9-27	RUNWAY 9-27 CUTOUT					
EACH CUTOUT INPUT SIDE CONNECTION	INPUT					
EACH CUTOUT OUTPUT SIDE CONNECTION	OUTPUT					
RADIO INTERFACE PANEL FOR RUNWAYS & TAXIWAY	RADIO RELAY INTERFACE CONTROL PANEL					
LIGHTING CONTACTOR PANEL	LIGHTING CONTACTOR PANEL FOR AIRFIELD LIGHTING EQUIPMENT					
BOOST TRANSFORMER FOR RUNWAY 9 PLASI	RWY 9 PLASI					
BOOST TRANSFORMER FOR RUNWAY 27 PLASI	RWY 27 PLASI					
BOOST TRANSFORMER FOR WIND CONE	WIND CONE & WIND TEE					
LOW VOLTAGE WIREWAY (PROVIDE 4 LEGEND PLATES 1/2" HIGH BLACK LETTERS WHITE BACKGROUND)	LOW VOLTAGE					
HIGH VOLTAGE WIREWAY (PROVIDE 4 LEGEND PLATES 1/2" HIGH BLACK LETTERS WHITE BACKGROUND)	HIGH VOLTAGE					
VAULT GROUND BUS (PROVIDE 4 LEGEND PLATES 1/2" HIGH WHITE LETTERS GREEN BACKGROUND)	VAULT GROUND BUS					

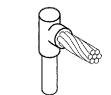


120 VAC TO 132 VAC BOOST TRANSFORMER CONNECTION DIAGRAM FOR SQUARE D CAT. NO. 250SV43B OR CAT. NO. 500SV43B TRANSFORMER



120 VAC TO 144 VAC BOOST TRANSFORMER CONNECTION DIAGRAM FOR SQUARE D CAT. NO. 500SV43B TRANSFORMER



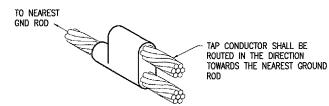


CABLE TO GROUND ROD

CABLE TO GROUND ROD



CABLE TO GROUND ROD

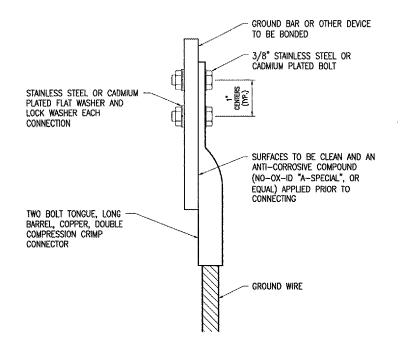


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DETAIL NOTES

- 1. EXOTHERMIC WELDS SHALL BE CADWELD AS MANUFACTURED BY ERICO PRODUCTS, SOLON, OHIO OR THERMOWELD AS MANUFACTURED BY CONTINENTAL INDUSTRIES, TULSA, OKLAHOMA. VERIFY PROPER SIZES, TYPES, AND REQUIREMENTS FOR THE RESPECTIVE APPLICATION WITH THE MANUFACTURER, AND INSTALL PER
- 2. FOR APPLICATIONS TO METAL SURFACES THAT ARE LESS THAN 3/16" THICK CONTACT THE EXOTHERMIC WELD MANUFACTURER FOR DIRECTION AND INSTRUCTION ON EXOTHERMIC WELD INSTALLATION TO THE RESPECTIVE
- 3. FOR APPLICATIONS TO GALVANIZED STEEL OR PAINTED STEEL, REMOVE GALVANIZING AND/OR PAINT & CLEAN THE SURFACE TO EXPOSE BARE STEEL BEFORE MAKING EXOTHERMIC WELD CONNECTION.
- 4. INDIVIDUAL GROUNDING ELECTRODE CONDUCTORS SHALL NOT BE INSTALLED IN METAL CONDUIT. INSTALL GROUNDING ELECTRODE CONDUCTORS IN SCHED 40 PVC CONDUIT AS REQUIRED IN FOUNDATIONS, FOR PROTECTION, WHERE ENTERING ENCLOSURES, ETC.

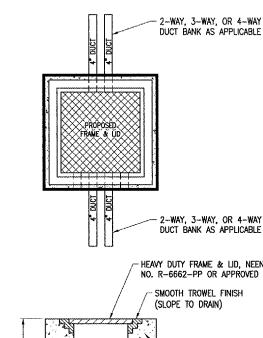
EXOTHERMIC WELD DETAILS



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

- 1, ALL CONNECTIONS TO GROUND BUS BAR SHALL BE WITH 2 HOLE TONGUE LONG BARREL COMPRESSION LUGS BOLTED TO THE BUS BAR.
- 2. GROUND WIRE CONNECTIONS TO EQUIPMENT SHALL BE WITH 2 HOLE TONGUE LONG BARREL COMPRESSION LUGS BOLTED TO THE DEVICE OR WITH THE RESPECTIVE EQUIPT MANUFACTURER'S LUG OR TERMINAL WHERE APPLICABLE.
- 3. GROUNDING ELECTRODE CONDUCTORS, BONDING JUMPERS, & INDIVIDUAL GROUND WIRES SHALL NOT BE INSTALLED IN METAL CONDUIT.
- 4. ALL CONNECTIONS SHALL BE COATED WITH A CORROSION PREVENTATIVE COMPOUND (SANCHEM INC. NO-OX-ID "A-SPECIAL", BURNDY PENETROX E, OR EQUAL) BEFORE JOINING. ALL COPPER BUS BARS SHALL BE CLEANED PRIOR TO MAKING CONNECTIONS TO REMOVE SURFACE OXIDATION. CLEAN SURFACES, OF RESPECTIVE DEVICES TO BE BONDED, TO BARE METAL, PER NEC 250-12.

GROUNDING LUG CONNECTION DETAIL

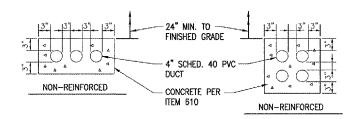


HEAVY DUTY FRAME & LID, NEENAH CAT. NO. R-6662-PP OR APPROVED EQUAL (SLOPE TO DRAIN) -610 P.C.C. 00 0 \bigcirc 6" SAND CUSHION

2" SCHED 40 PVC DRAIN PIPE. NOTE 6" OF CA-7 GRAVEL MAY BE PROVIDED, INSTEAD OF 6" CONCRETE FLOOR WITH DRAIN PIPE, AT CONTRACTORS OPTION.

LIDS FOR LOW VOLTAGE HANDHOLES SHALL BE LABELED "LOW VOLTAGE". LIDS FOR HIGH VOLTAGE HANDHOLES SHALL BE LABELED "HIGH VOLTAGE". COORDINATE LETTERING WITH MFR.

ELECTRICAL HANDHOLE DETAIL



NOTES:

- 1.) ALL DIMENSIONS ARE MINIMUM.
- 2.) INCLUDE DUCT SPACERS AS MANUFACTURED BY UNDERGROUND DEVICES INC., TO MAINTAIN PROPER SEPARATION OF CONDUITS.

CONCRETE ENCASED DUCT DETAIL

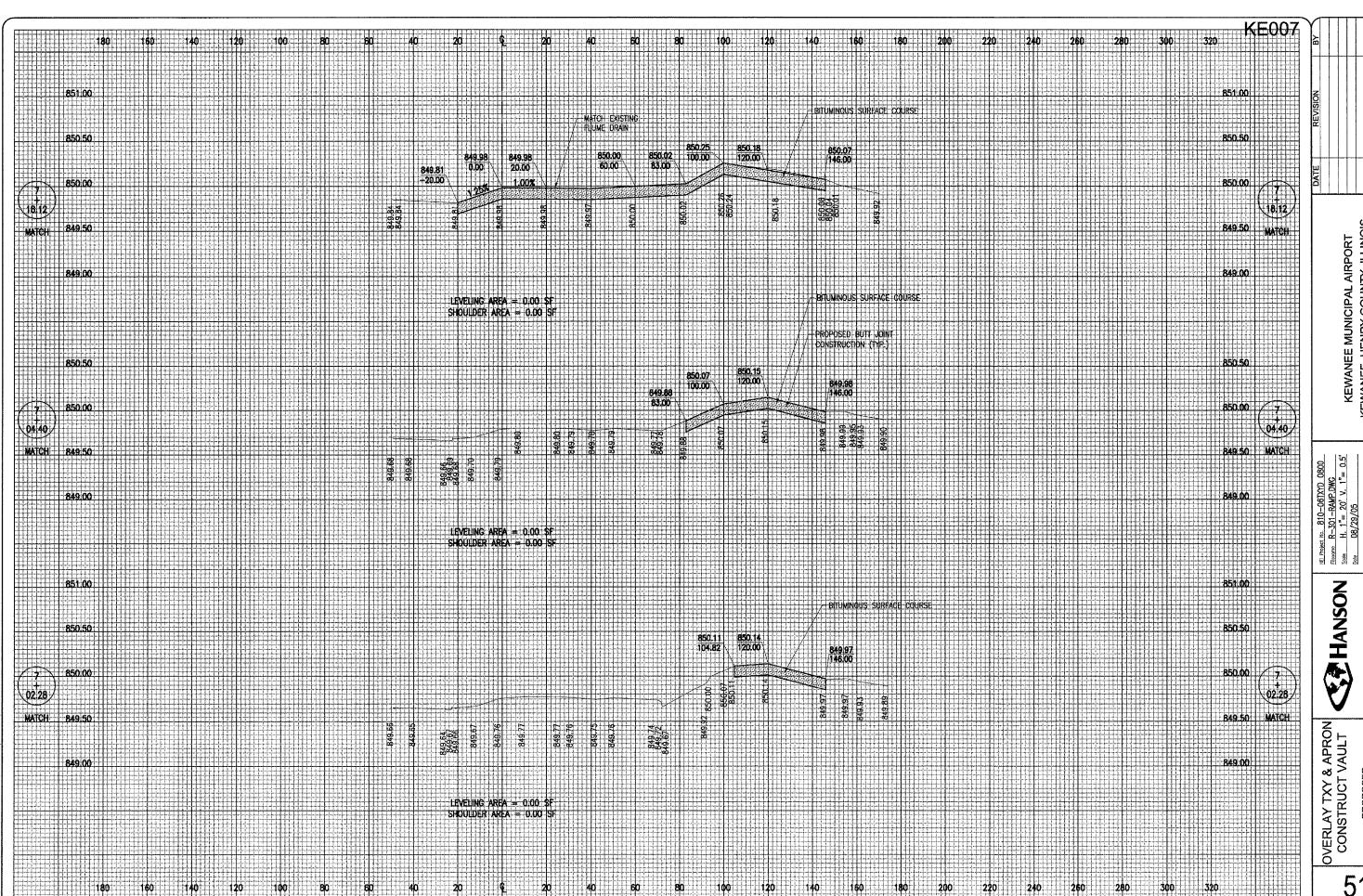
(3-WAY & 4-WAY SHOWN)

KE007

COUNTY, ILLINOIS KEWANEE MUNICIPAL AIRPORT WANEE, HENRY COUNTY, ILLINC

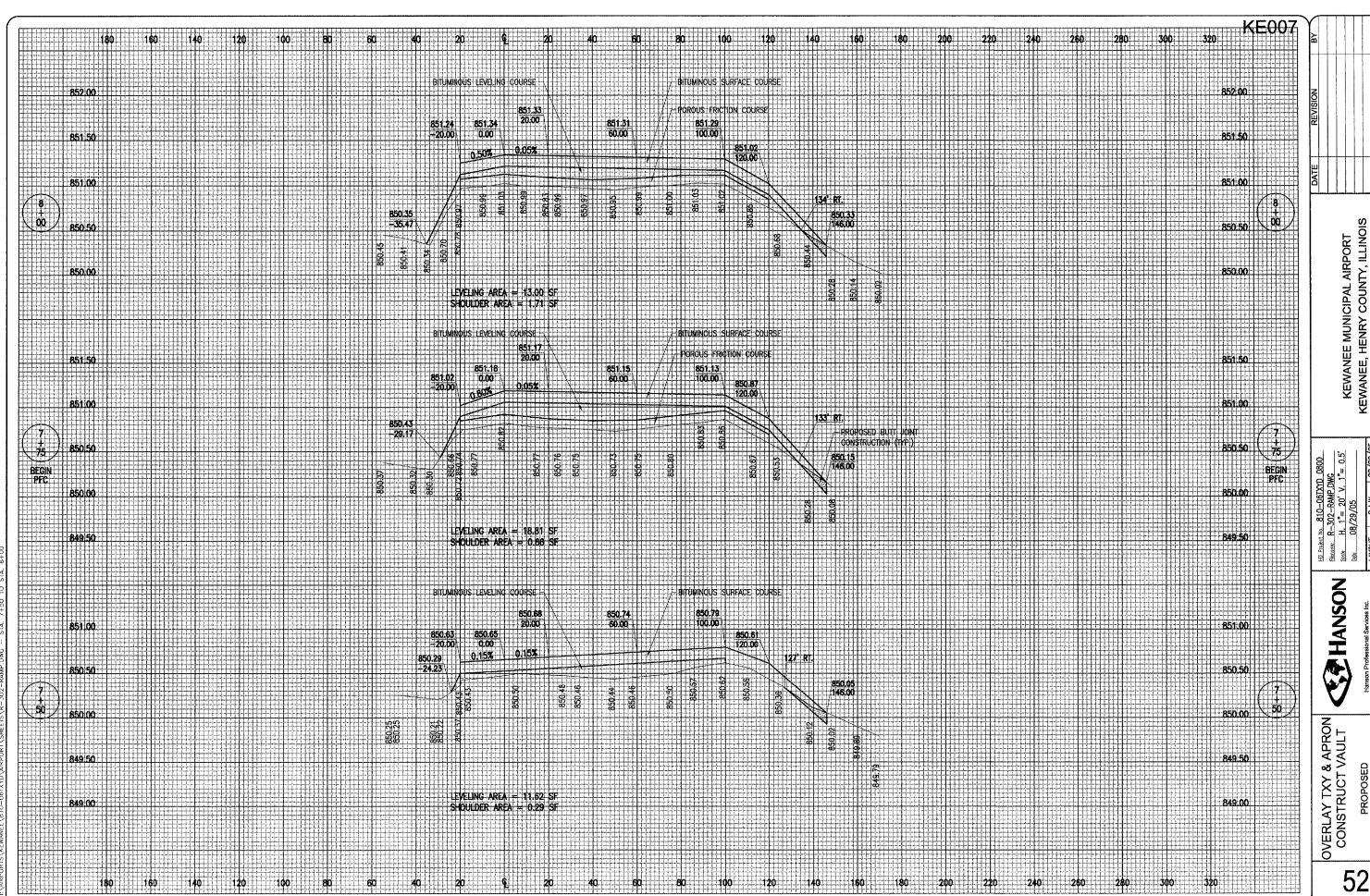


OVERLAY TXY & APRON CONSTRUCT APRON



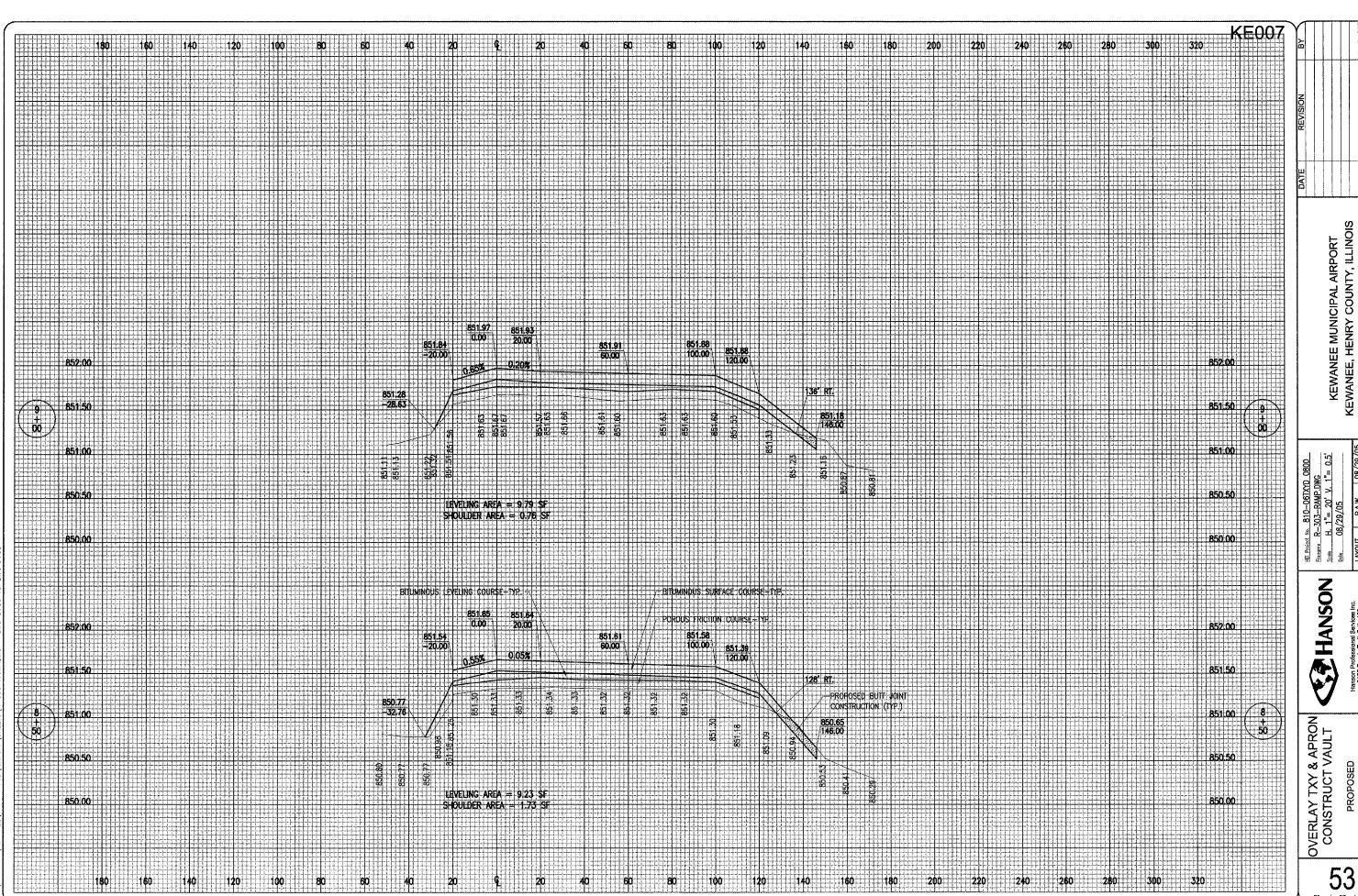
OVERLAY TXY & APRON CONSTRUCT VAULT PROPOSED APRON CROSS-SECTIONS STA. 7+02.28 TO STA. 7+18.12

KEWANEE MUNICIPAL AIRPORT KEWANEE, HENRY COUNTY, ILLINOIS



5, 6

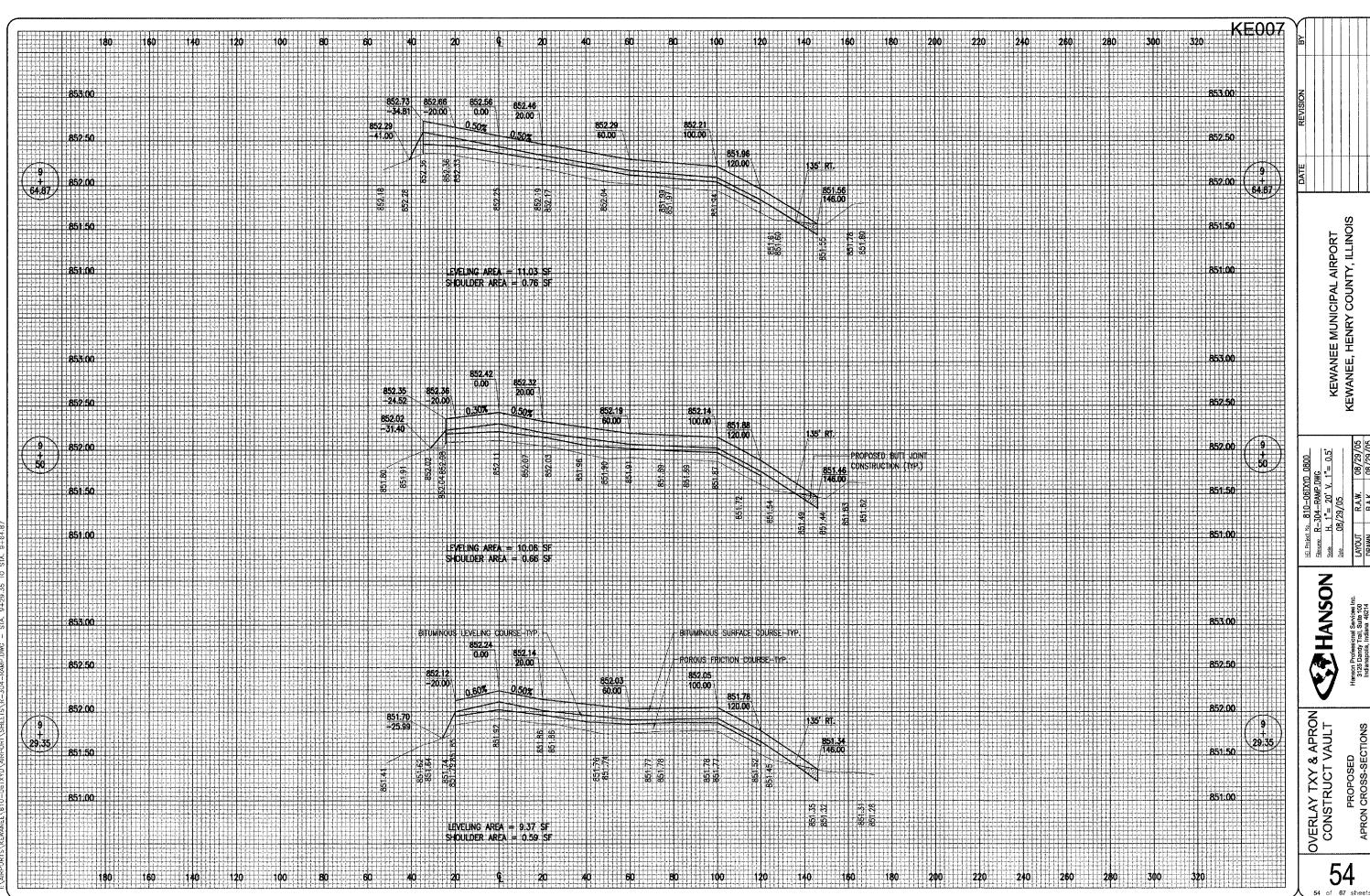
PROPOSED APRON CROSS-SECTIONS STA. 7+50 TO STA. 8+00 52



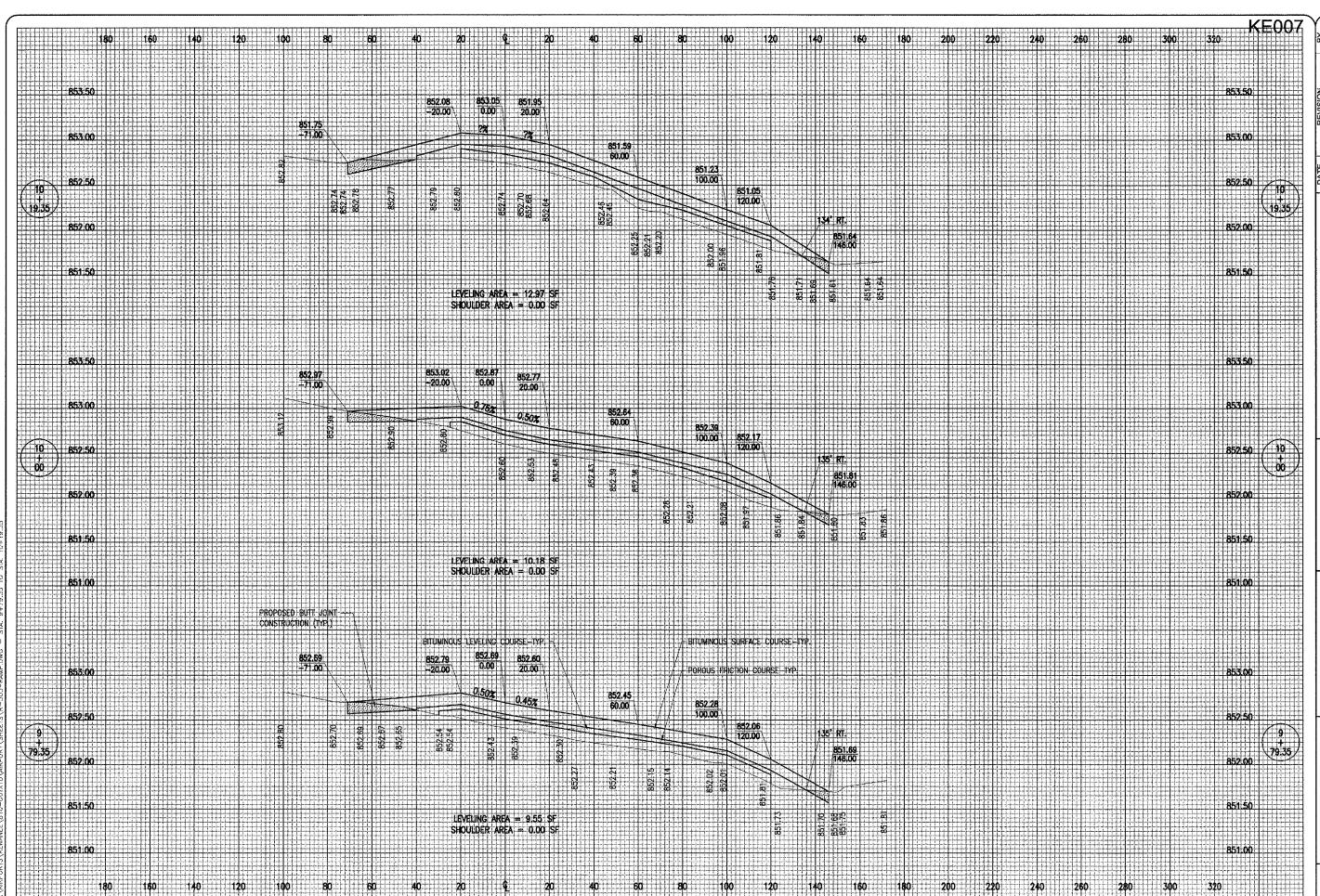
PROPOSED APRON CROSS-SECTIONS STA. 8+50 TO STA. 9+00

53 53 of 67 sheets

PROJ.: EZI-3533



KEWANEE MUNICIPAL AIRPORT KEWANEE, HENRY COUNTY, ILLINOIS ct No. 810-06TXYD 0800 R-304-RAMP.DWG H. 1"= 20' V. 1"= 0.5' 08/29/05 HANSON PROPOSED APRON CROSS-SECTIONS STA. 9+29.35 TO STA. 9+64.87

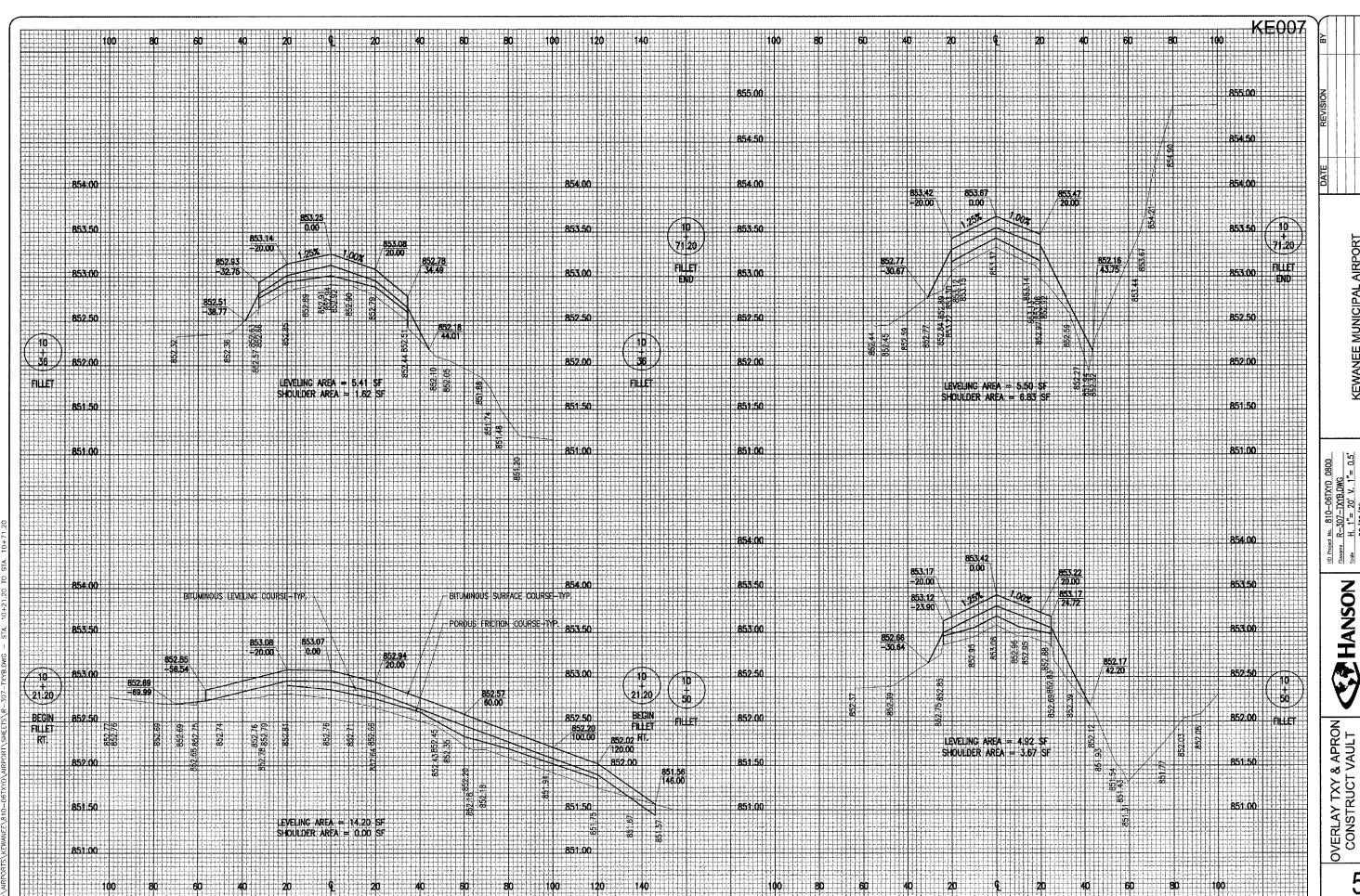


OVERLAY TXY & APRON CONSTRUCT VAULT

HANSON

PROPOSED APRON CROSS-SECTIONS STA. 9+79.35 TO STA. 10+19.35 55

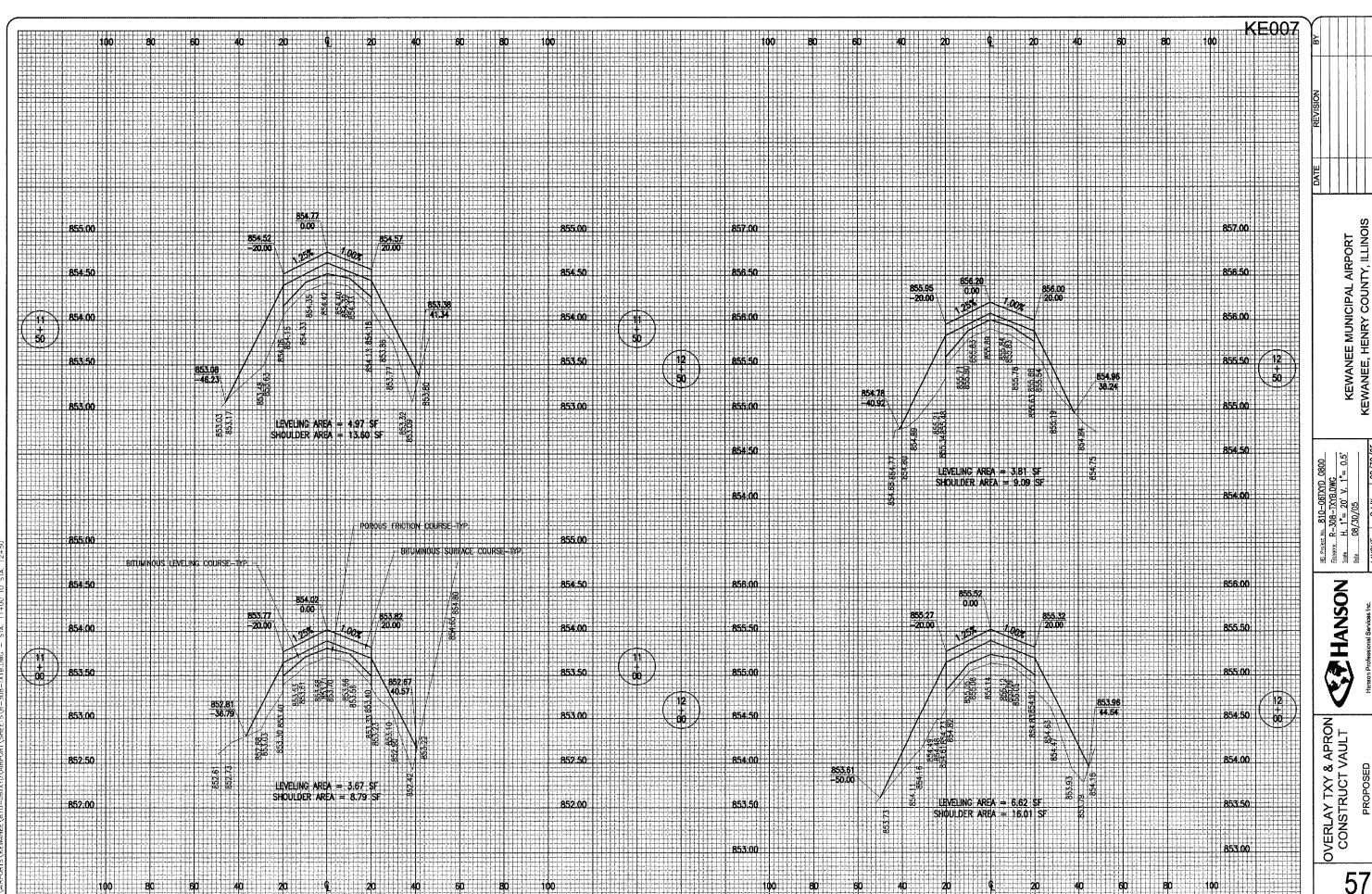
KEWANEE MUNICIPAL AIRPORT KEWANEE, HENRY COUNTY, ILLINOIS



PROPOSED TAXIWAY "B" CROSS-SECTIONS STA. 10+21.20 TO STA. 10+71.20 56

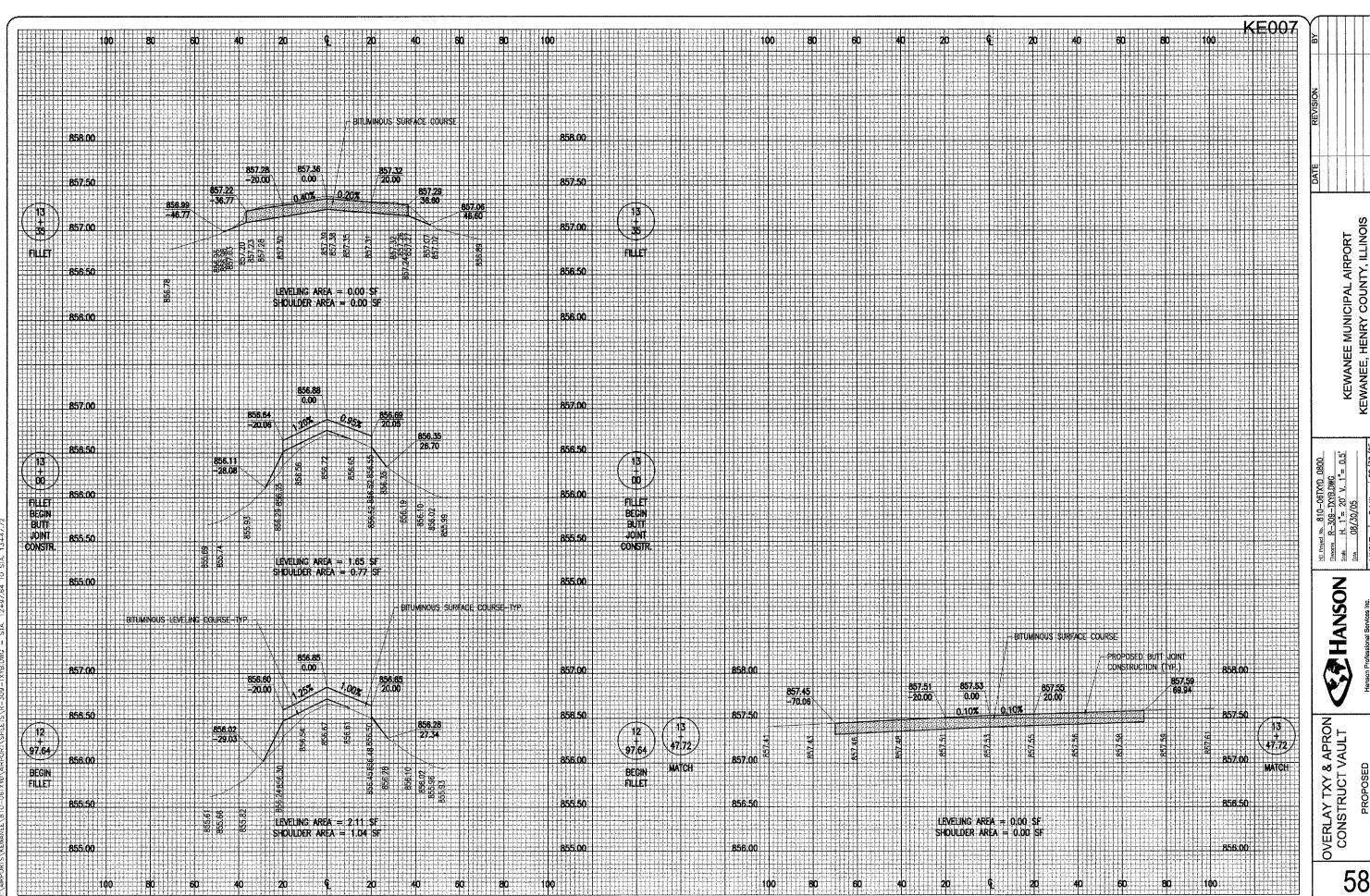
KEWANEE MUNICIPAL AIRPORT KEWANEE, HENRY COUNTY, ILLINOIS

56 of 67 sheets



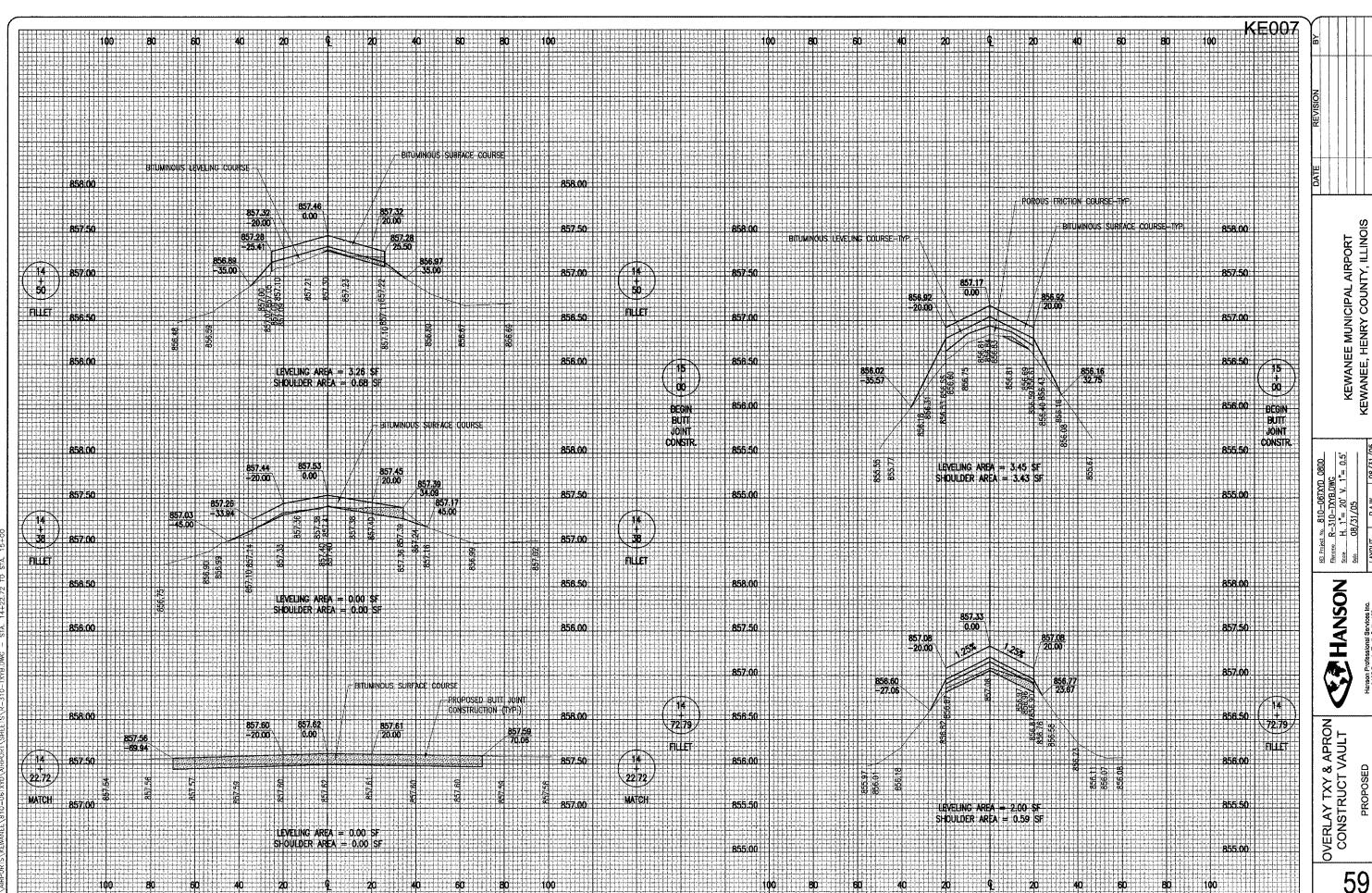
19, POR

PROPOSED
TAXIWAY "B" CROSS-SECTIONS
STA. 11+00 TO STA. 12+50 57

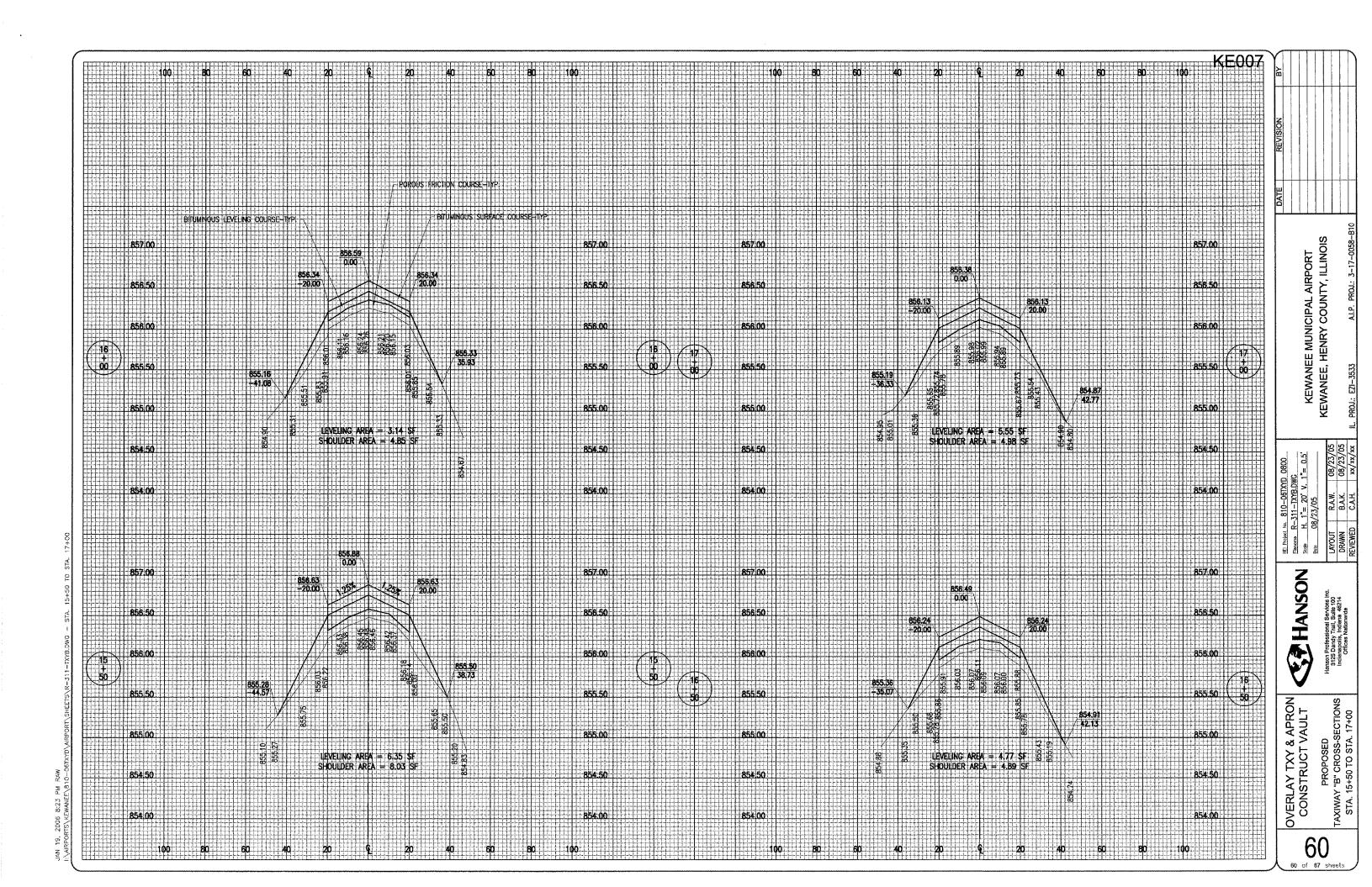


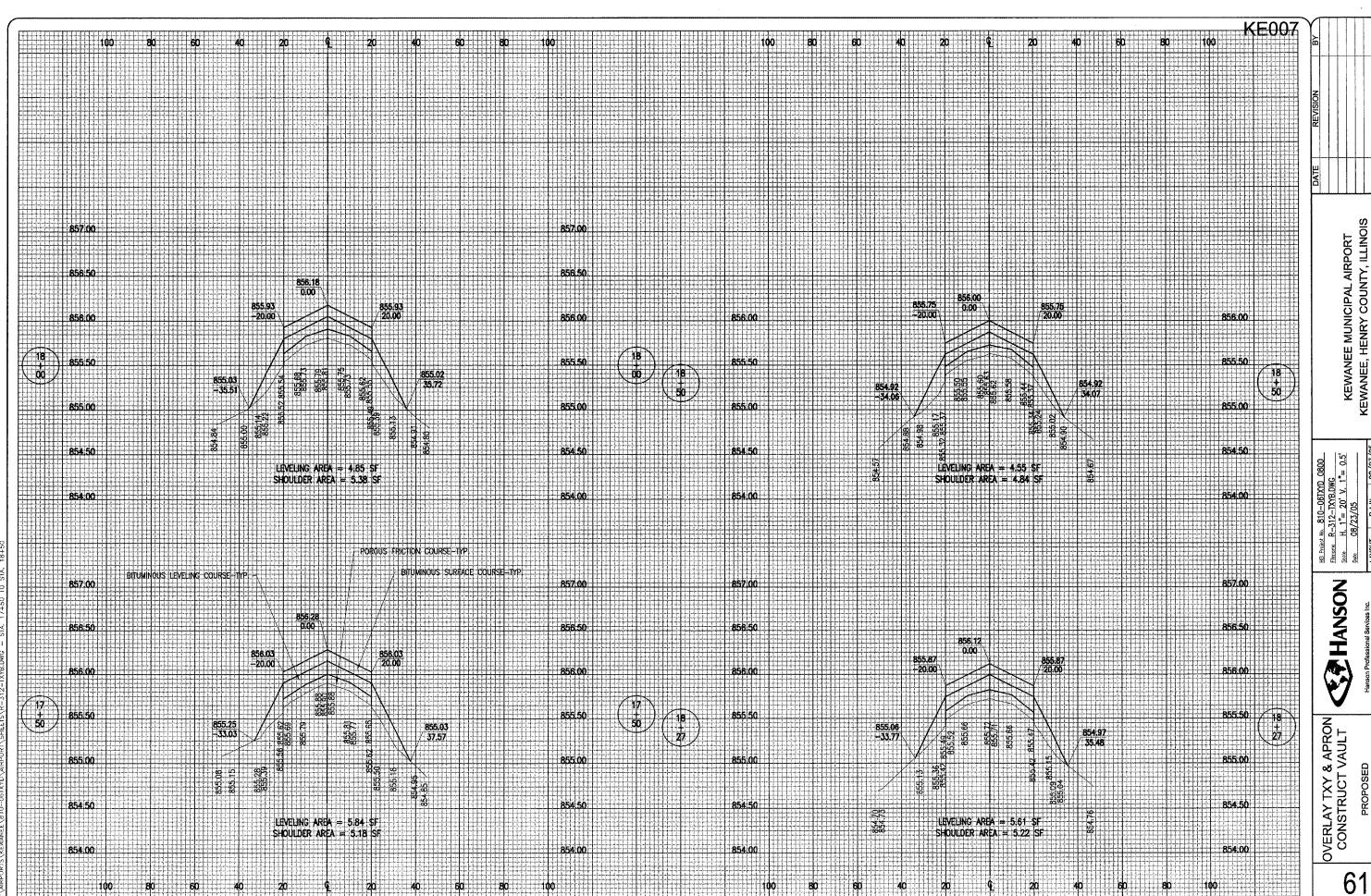
KEWANEE MUNICIPAL AIRPORT KEWANEE, HENRY COUNTY, ILLINOIS 8.DWC V. 1"= 0.5'

PROPOSED TAXIWAY "B" CROSS-SECTIONS STA, 12+97.64 TO STA, 13+47.72



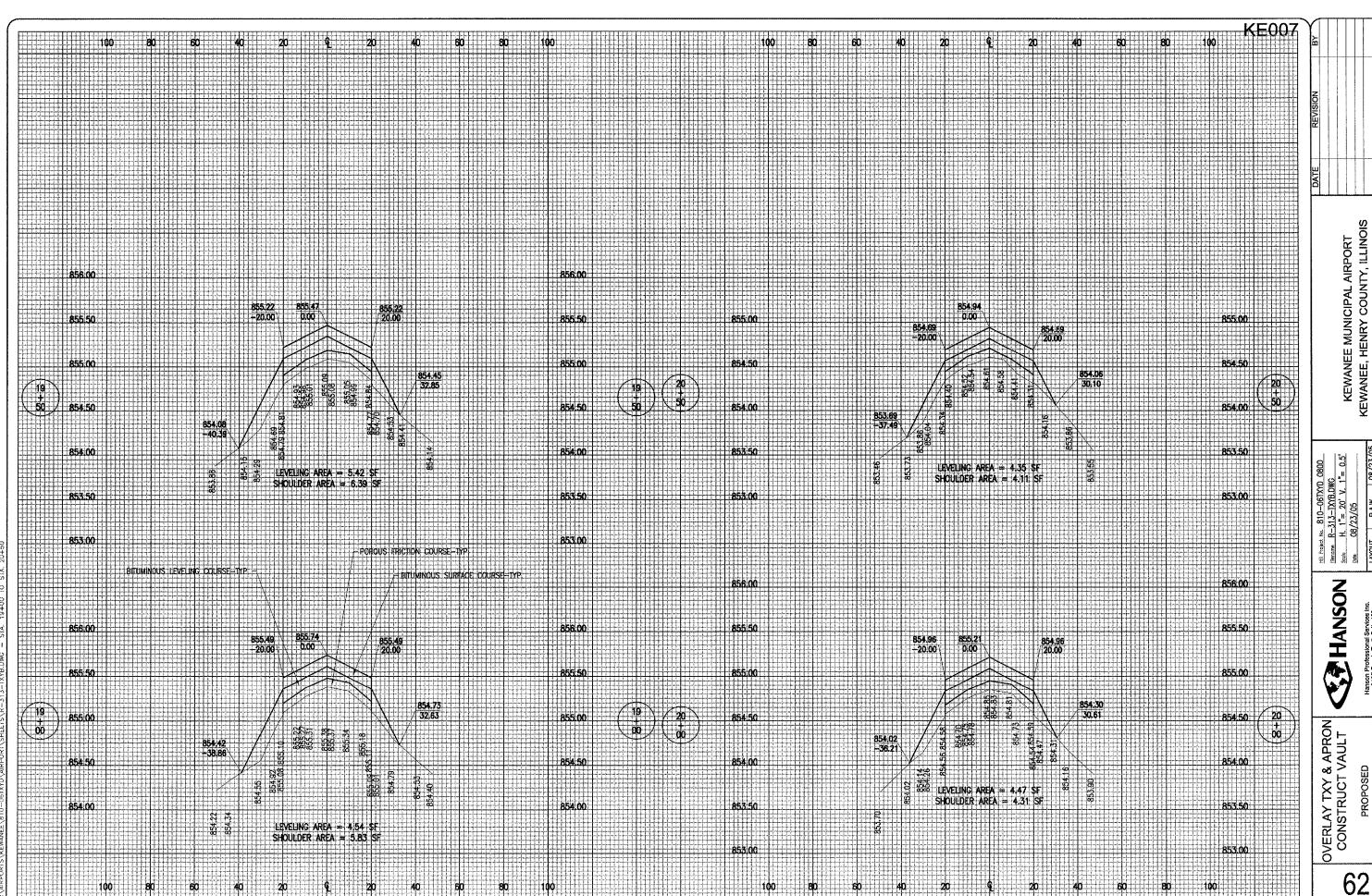
PROPOSED TAXIWAY "B" CROSS-SECTIONS STA, 14+22.72 TO STA, 15+00 59





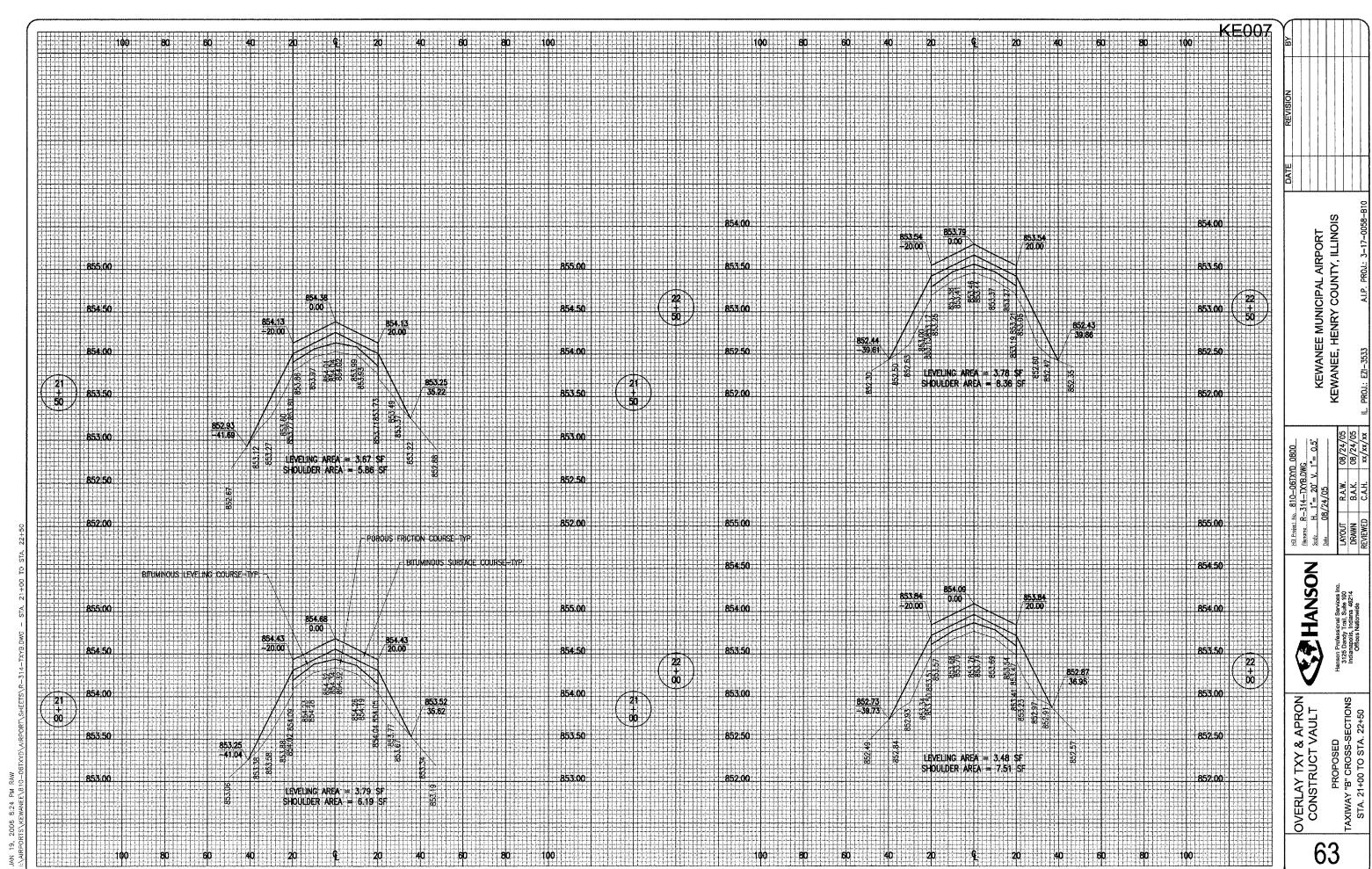
OVERLAY TXY & APRON CONSTRUCT VAULT

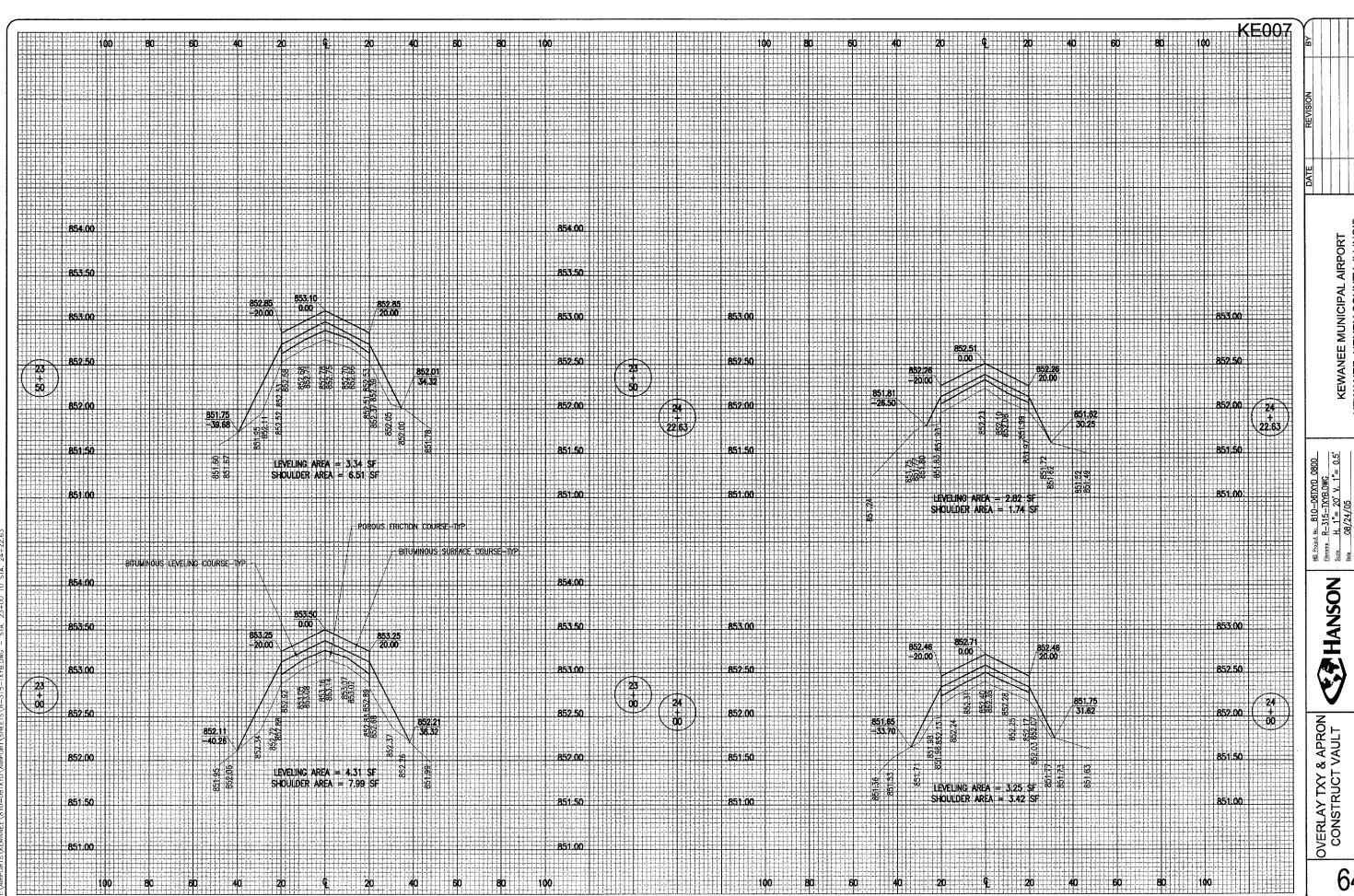
PROPOSED TAXIWAY "B" CROSS-SECTIONS STA. 17+50 TO STA. 18+50



ct No. 810-06TXYD 0800
R-313-TXYB.DWG
H. 1"= 20' V. 1"= 0.5'
08/23/05 HANSON

PROPOSED
TAXIWAY "B" CROSS-SECTIONS
STA. 19+00 TO STA. 20+50

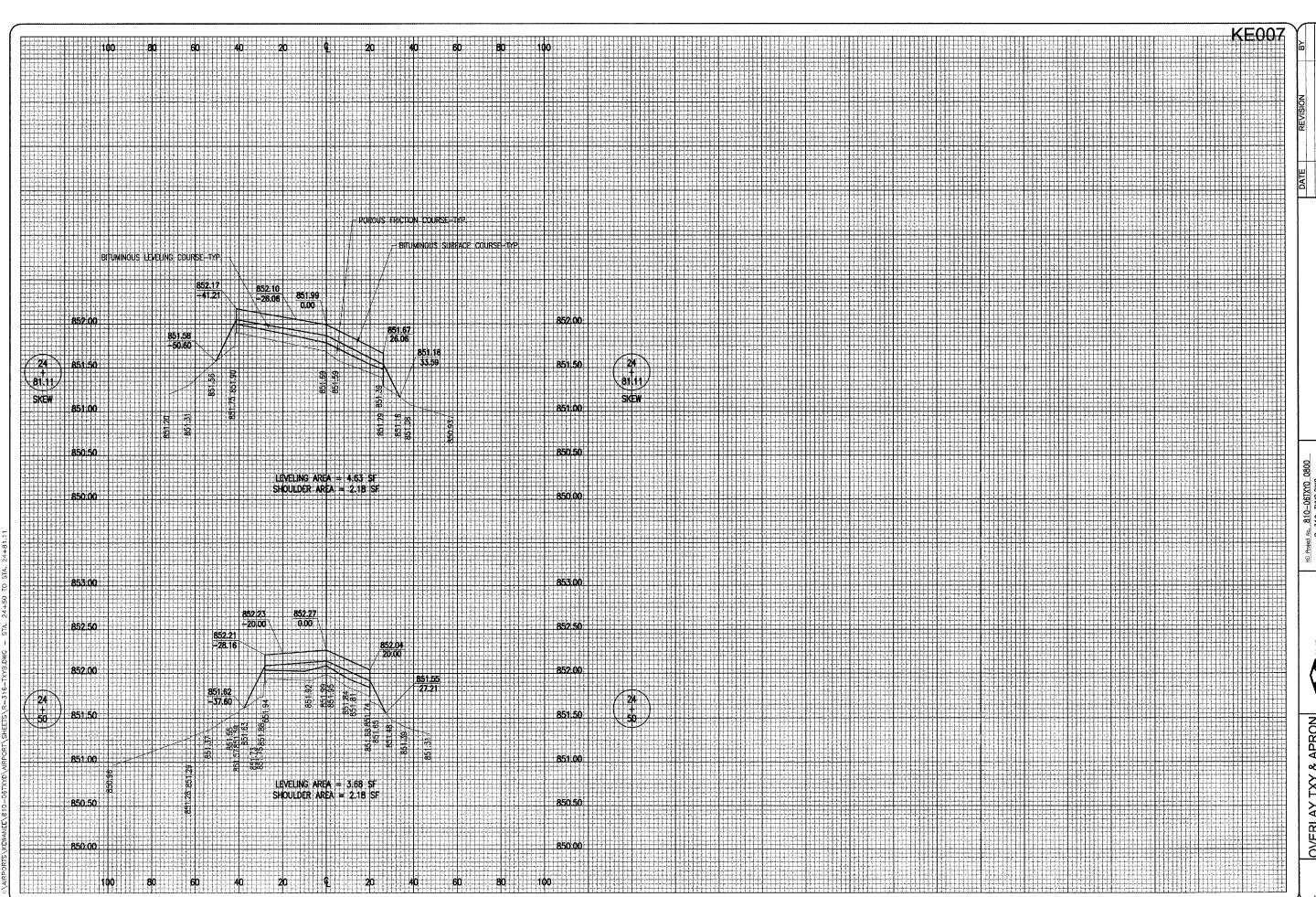




OVERLAY TXY & APRON CONSTRUCT VAULT PROPOSED TAXIWAY "B" CROSS-SECTIONS STA, 23+00 TO STA. 24+22.63

64

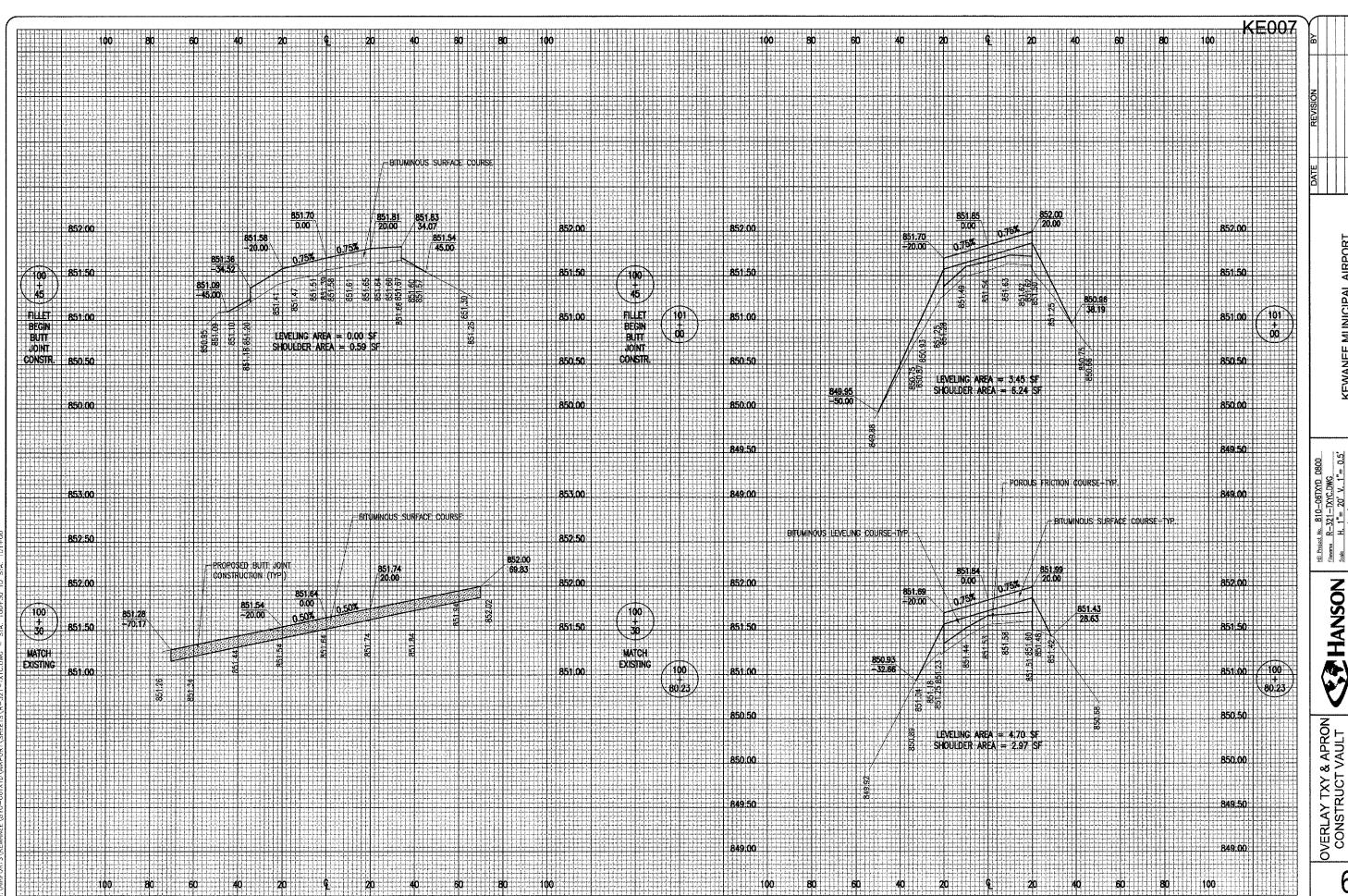
KEWANEE MUNICIPAL AIRPORT KEWANEE, HENRY COUNTY, ILLINOIS



KEWANEE MUNICIPAL AIRPORT KEWANEE, HENRY COUNTY, ILLINOIS He Project No. 810-06TXYD 0800 Flavours R-316-TXYB.DWC Scale. H, 1"= 20' V, 1"= 0.5' Date. 08/24/05 HANSON OVERLAY TXY & APRON CONSTRUCT VAULT PROPOSED TAXIWAY "B" CROSS-SECTIONS STA, 24+80 TO STA. 24+81.11

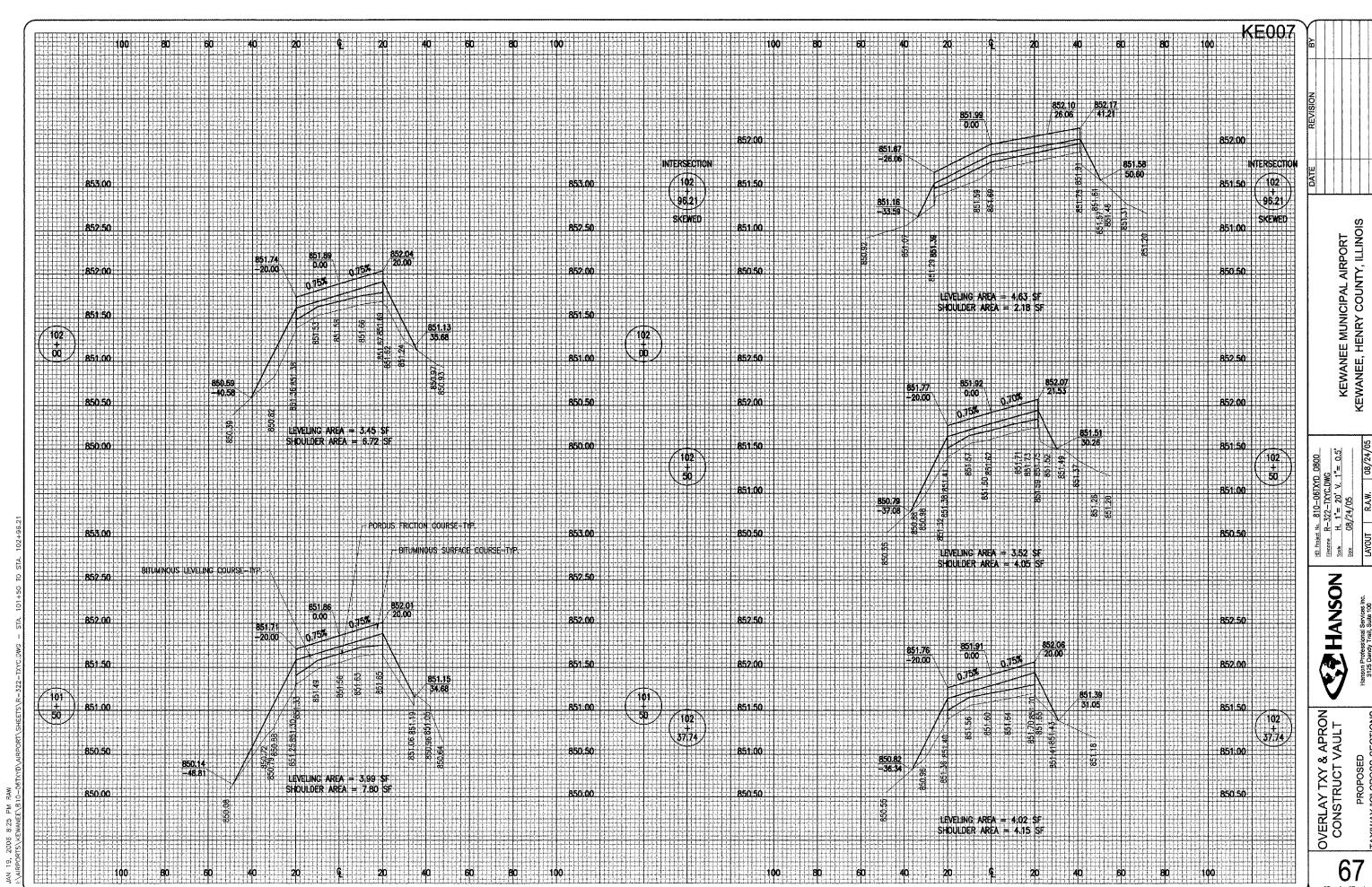
65

65 of 67 sheet



KEWANEE MUNICIPAL AIRPORT KEWANEE, HENRY COUNTY, ILLINOIS ct No. 810-06TXYD 0800
R-321-TXYC.DWG
H. 1*= 20' V. 1*= 0.5'
08/24/05 HANSON

PROPOSED FAXIWAY "C" CROSS-SECTIONS STA, 100+30 TO STA, 101+00



PROPOSED TAXIWAY "C" CROSS-SECTIONS STA. 101+50 TO STA. 102+96.21