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UNIVERSITY OF ILLINOIS INSTITUTE OF AVIATION

UN043 TOTAL SHEETS: 58

CONSTRUCTION PLANS FOR

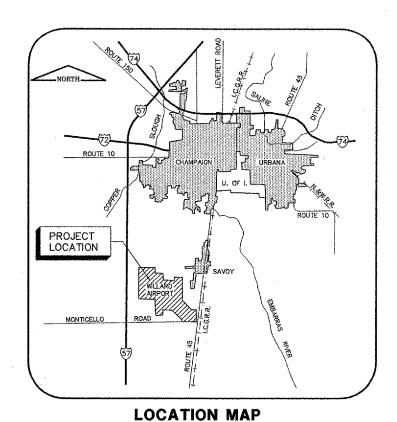
UNIVERSITY OF ILLINOIS - WILLARD AIRPORT

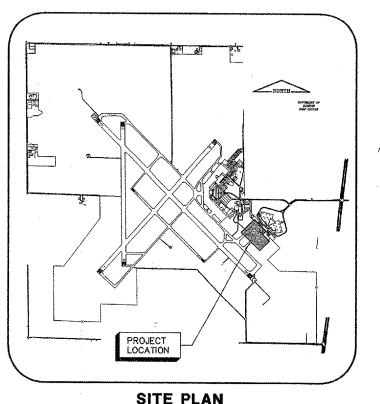
ILLINOIS PROJECT CMI-3449

A. I. P. PROJECT 3-17-0016-22

REHABILITATE AIR CARRIER APRON PHASE 1

JUNE 10, 2005





GROUND CONTROL RADIO FREQUENCY — 121.8 ATIS FREQUENCY — 124.85 MAXIMUM HEIGHT OF EQUIPMENT ABOVE GROUND IS 25 FT.

UNIVERSITY OF ILLINOIS
WILLARD AIRPORT

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CRAWFORD MURPHY & TILLY, INC. CONSULTING ENGINEERS

CONSULTING ENGINEERS License No. 184-000613

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PLOT #:

PAVEMENT STRUCTURE DESIGN DATA
560 ANNUAL OPERATIONS
DESIGN AIRCRAFT - 737-700
GROSS WEIGHT - 155,000 LBS.
DUAL WHEEL GEAR

CALL J.U.L.I.E.
BEFORE EXCAVATING
1-800-892-0123
UNIVERSITY OF ILLINOIS — WILLARD AIRPORT

RANGE: R 8 E
TOWNSHIP: TOLONO
COUNTY: CHAMPAIGN

AIR CARRIER APRON
GEOMETRIC DESIGN DATA

DESIGN GROUP - GROUP IV

WNGSPAN — UP TO BUT NOT INCLUDING 171 FT. DESIGN APPROACH CATEGORY — C

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4	GENERAL NOTES AND DETAILS
5	HORIZONTAL AND VERTICAL CONTROLS
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INDEX TO QUANTITIES

ITEM			
NUMBER	DESCRIPTION	UNIT	QUANTITY
AR125941	ADJUST STAKE MOUNTED LIGHT	EA	20
AR125942	ADJUST BASE MOUNTED LIGHT	EA	2
AR150510	ENGINEER'S FIELD OFFICE	LS	1
AR152481	SHOULDER ADJUSTMENT	CY	400
AR156510	SILT FENCE	LF	1,850
AR156520	INLET PROTECTION	EA	1
AR162408	CLASS E FENCE, VINYL-8'	LF	600
AR162720	ELECTRIC GATE - 20'	EA	1
AR162900	REMOVE CLASS E FENCE	LF	600
AR162908	REMOVE ELECTRIC GATE	EA	1
AR163000	TEMPORARY CONSTRUCTION FENCE	LF	280
AR209510	CRUSHED AGGREGATE BASE COURSE	TON	2,850
AR302900	REMOVE 4" ATPS	SY	4,255
AR401610	BITUMINOUS SURFACE COURSE	TON.	2,385
AR401655	BUTT JOINT CONSTRUCTION	SY	1,650
AR501508	8" PCC PAVEMENT	SY	2,720
AR501509	9" PCC PAVEMENT	SY	29,515
AR501510	10" PCC PAVEMENT	SY	2,890
AR501513	13" PCC PAVEMENT	SY	1,515
AR501530	PCC TEST BATCH	EA	1 1
AR501604	4" PCC SIDEWALK	SF	1,250
AR501690	PCC SIDEWALK REMOVAL	SF	1,180
AR501908	8" PCC PAVEMENT REMOVAL	SY	615
AR501915	15" PCC PAVEMENT REMOVAL	SY	3,640
AR510515	GROUND ROD	EA	28
AR510905	REMOVE GROUND ROD	EA	28
AR603510	BITUMINOUS TACK COAT	GAL	3,650
AR620510	PAVEMENT MARKING	SF	7,500
AR620590	TEMPORARY PAVEMENT MARKING	SF	8,000
AR620900	PAVEMENT MARKING REMOVAL	SF	8.000
AR701212	12" CMP	T LF	300
AR705544	4" NON PERFORATED UNDERDRAIN PIPE	 	70
AR751944	ADJUST MANHOLE - IN PAVEMENT	EA EA	2
AR800235	REMOVE 6" PCC CURB	T IF	250
AR800240	TEMPORARY HMA TRANSITIONS	SY	2,520
AR800331	PAVEMENT MILLING, 6"	SY	29,515
AR800332	PAVEMENT MILLING, 8"	SÝ	2,890
AR800248	12" VERTICAL EDGE DRAIN	LF	300
AR800281	LIQUID BOND BREAKER	SY	32,405
AR901510	SEEDING	AC	1 1
AR904510	SODDING	SY	920
AR908510	MULCHING	AC	1
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UNIVERSITY OF ILLINOIS
WILLARD AIRPORT

INDEX TO SHEETS AND SUMMARY OF QUANTITIES

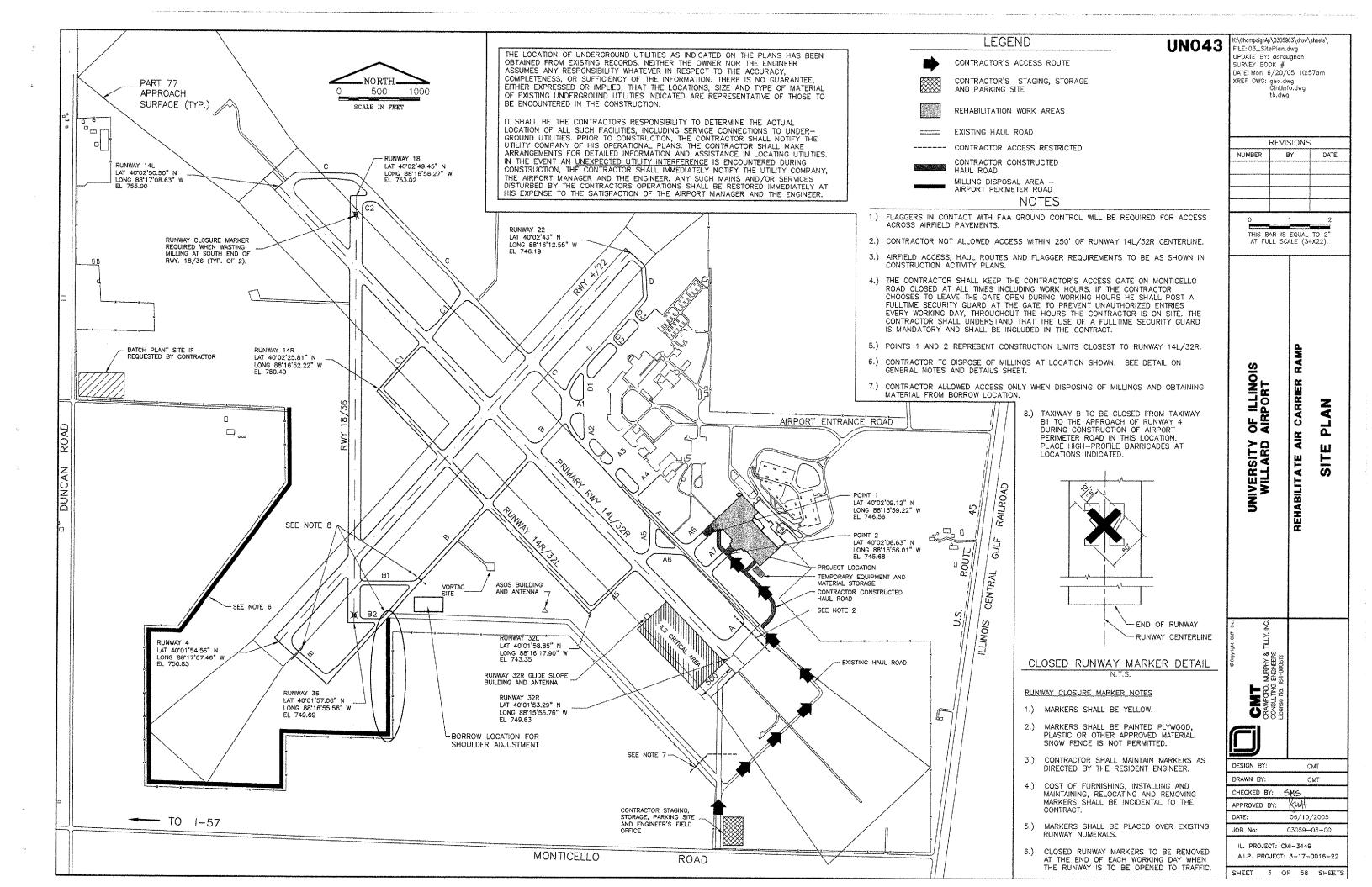
REHABILITATE AIR CARRIER RAMP



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SHEET 2 OF 58 SHEETS



GENERAL NOTES

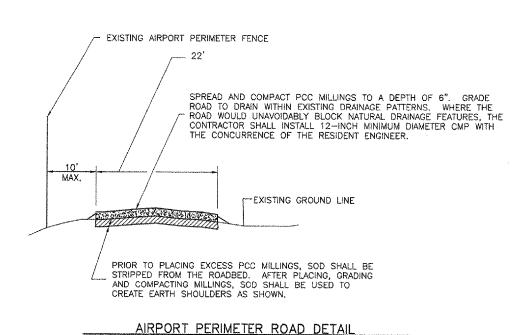
- ALL RUNWAYS, TAXIWAYS AND APRONS SHALL BE KEPT OPEN TO AIRCRAFT TRAFFIC DURING CONSTRUCTION EXCEPT AS NOTED IN THE CONSTRUCTION ACTIVITY PLANS 1.) OR AS DIRECTED BY THE AIRPORT MANAGER.
- 2.) ALL CONSTRUCTION TRAFFIC OPERATING ON OR CROSSING ACTIVE RUNWAYS, TAXIWAYS AND APRONS SHALL BE UNDER CONTROL OF A FLAGMAN IN RADIO CONTACT WITH FAA AIR TRAFFIC CONTROL TOWER PERSONNEL AT ALL TIMES. THE CONTRACTOR SHALL PROVIDE HIS OWN RADIOS.
- WHEN CONFLICTS ARISE BETWEEN CONSTRUCTION ACTIVITIES AND AIRCRAFT OPERATIONS AND SAFETY, AIRCRAFT OPERATIONS AND SAFETY SHALL TAKE PRECEDENCE AND SHALL GOVERN. FINAL AUTHORITY IN THE APPROVAL OF CLOSING AND OPENING PAVEMENTS AND CONSTRUCTION SEQUENCING LIES WITH THE AIRPORT MANAGER.
- THE CONTRACTOR SHALL STORE EQUIPMENT AND MATERIALS AT THE LOCATION SHOWN FOR THE "CONTRACTOR'S STAGING, STORAGE, PARKING SITE AND FIELD OFFICE".
- BROKEN OR WASTE CONCRETE SHALL BE DISPOSED OF BY THE CONTRACTOR OFF AIRPORT PROPERTY, UNLESS DIRECTED BY THE AIRPORT MANAGER.
- VEHICLES AND EQUIPMENT SHALL NOT BE ALLOWED WITHIN AREAS 80' FROM THE 6.) CENTERLINE OF ACTIVE TAXIWAYS OR 200' FROM THE CENTERLINE OF ACTIVE
- ALL PAVEMENTS, DRIVES AND OTHER AREAS USED BY THE CONTRACTOR FOR HAUL ROADS AND STORAGE AREAS SHALL BE MAINTAINED AND REPAIRED IN KIND BY THE CONTRACTOR TO THE SATISFACTION OF AIRPORT MANAGER, NO ADDITIONAL COMPENSATION SHALL BE MADE TO THE CONTRACTOR FOR THIS WORK.
- 8.) EXISTING TURF & AGRICULTURAL AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE COMPLETELY RESTORED BY HIM AT HIS EXPENSE TO THE SATISFACTION OF
- THE CONTRACTOR SHALL THOROUGHLY CLEAN ALL CONSTRUCTION AREAS PRIOR TO OPENING TO AIR TRAFFIC.
- 10.) REFER TO THE CONSTRUCTION ACTIVITY PLANS AND THE SPECIFICATIONS FOR REQUIREMENTS CONCERNING COORDINATION OF CONSTRUCTION ACTIVITIES.
- 11.) THE FIRE/CRASH/RESCUE VEHICLES SHALL HAVE COMPLETE ACCESS TO THE ENTIRE AIRFIELD INCLUDING THE CLOSURE AREAS.
- 12.) THE CONTRACTOR IS REQUIRED TO GIVE TWO FULL WORKING DAYS NOTICE TO THE AIRPORT MANAGER PRIOR TO CLOSING WORK AREAS TO AIRCRAFT.
- 13.) AT THE PRECONSTRUCTION MEETING, CONTRACTOR SHALL SUPPLY THE AIRPORT MANAGER WITH PROPOSED CLOSURE AND PHASING DATES FOR HIS REVIEW AND THE RESIDENT ENGINEER SHALL KEEP THE AIRPORT MANAGER ADVISED OF ANY PROPOSED CHANGES IN CLOSURE AND PHASING DATES.
- 14.) ALL CONTRACTOR'S VEHICLES AND EQUIPMENT SHALL DISPLAY AN ORANGE AND WHITE CHECKED AMATION FLAG, EXCEPT HAUL VEHICLES.
- 15.) ANY VEHICLE OPERATING WITHIN A MOVEMENT AREA DURING THE HOURS OF DARKNESS SHOULD BE EQUIPPED WITH AN AMBER REVOLVING OR FLASHING DOME-TYPE LIGHT AS
- 16.) IF, DURING CONSTRUCTION, AN EMERGENCY IS DECLARED BY THE AIRPORT, THE CONTRACTOR SHALL IMMEDIATELY CLEAR THE PAVEMENT OF ALL VEHICLES, MEN

GROUND CONTROL FREQUENCY 121.8 MHZ

MAXIMUM EQUIPMENT HEIGHT 25 FEET

CONTRACTOR'S ACCESS

- 1.) CONTRACTOR'S ACCESS SHALL BE AS FOLLOWS:
 - A) THE CONTRACTORS ACCESS TO THE WORK SHALL BE AS SHOWN ON THE SITE PLAN AND CONSTRUCTION ACTIVITY PLANS.
 - B) DURING ADVERSE WEATHER, THE CONTRACTOR SHALL MAKE PROVISIONS FOR ACCESS TO THE WORK SITE AT NO ADDITIONAL COST TO THE CONTRACT. NO EXTENSION OF CONTRACT TIME WILL BE CONSIDERED FOR DELAYS DUE TO LACK OF ADEQUATE ACCESS TO THE WORK. SEE NOTE 3 BELOW.
 - C) THE CONTRACTOR SHALL INSTALL AND MAINTAIN A HEAVY-DUTY PADLOCK ON THE ACCESS GATE. HE SHALL PROVIDE KEYS FOR THIS PADLOCK TO THE ENGINEER, AIRPORT SECURITY AND MAINTENANCE SUPERVISOR. NO ADDITIONAL KEYS ARE TO BE DISTRIBUTED UNLESS AUTHORIZED BY THE AIRPORT MANAGER.
 - D) THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ALL CONSTRUCTION ACCESS GATES CLOSED & SECURED AT ALL TIMES INCLUDING WORK HOURS. IF THE CONTRACTOR CHOOSES TO LEAVE THE GATE OPEN, HE SHALL POST A COMPETENT, FULL TIME SECURITY GUARD TO PREVENT UNAUTHORIZED ENTRIES. THE CONTRACTOR SHALL REPLACE ANY UNSATISFACTORY SECURITY GUARDS IF SO DIRECTED BY THE AIRPORT MANAGER OR RESIDENT ENGINEER.
 - E) THE CONTRACTOR SHALL CLOSE AND LOCK THE ACCESS GATES UPON LEAVING THE SITE.
 - F) THROUGHOUT THE DURATION OF THE CONTRACT, ANY DAMAGE TO THE ACCESS GATES OR FENCING ADJACENT TO THE PROJECT SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE AIRPORT MANAGER.
 - G) ALL COSTS RELATING TO CONTRACTOR'S ACCESS AND SECURITY SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
 - H) THE CONTRACTOR SHALL STORE EQUIPMENT AND MATERIALS IN SUCH A WAY AS TO NOT DISTURB AGRICULTURAL AREAS OR VIOLATE THE PART 77 APPROACH
 - EMPLOYEE PERSONAL VEHICLES SHALL NOT BE ALLOWED BEYOND THE CONTRACTOR'S PARKING AREA. CONTRACTOR PERSONNEL SHALL PARK IN THE CONTRACTOR'S STORAGE AREA. PERSONNEL SHALL BE TRANSPORTED TO THE WORK SITE BY COMPANY OWNED VEHICLES.
 - J) THE CONTRACTOR SHALL PROVIDE CONSTRUCTION ENTRANCE SIGNAGE ON MONTICELLO ROAD AS REQUIRED BY CHAMPAIGN COUNTY HIGHWAY DEPARTMENT AND THE TOLONO TOWNSHIP, THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL ACCESS ROADS WITH THE APPROPRIATE AGENCY RESPONSIBLE FOR THE ROADWAY.
 - K) THE CONTRACTOR SHALL HAVE A VACUUM TYPE SWEEPER AVAILABLE AT ALL TIMES.
- AN AREA WILL BE PROVIDED BY THE AIRPORT TO THE CONTRACTOR AS THE STAGING, STORAGE AND EMPLOYEE PARKING SITE, AT THE LOCATION SHOWN.
- THE CONTRACTOR SHALL BE ALLOWED TO USE THE P.C.C. MILLINGS TO CONSTRUCT THE HAUL/ACCESS ROAD TO SUIT HIS NEEDS AS THE WORK PROGRESSES. CONTRACTOR SUPPLIED MATERIAL WILL BE REQUIRED TO CONSTRUCT THE HAUL ROAD PRIOR TO BEGINNING WORK.
- A LIST OF AUTHORIZED PERSONNEL PERMITTED TO USE THE GATE SHALL BE PROVIDED BY THE CONTRACTOR TO THE ENGINEER.
- 5.) THE CONTRACTOR SHALL PROVIDE A SIGN AT THE ACCESS GATE SAYING "AUTHORIZED PERSONNEL ONLY"
- ALL PERSONNEL ON THE AIRFIELD WILL BE REQUIRED TO SUBMIT A TEN YEAR BACKGROUND CHECK TO AIRPORT SECURITY,



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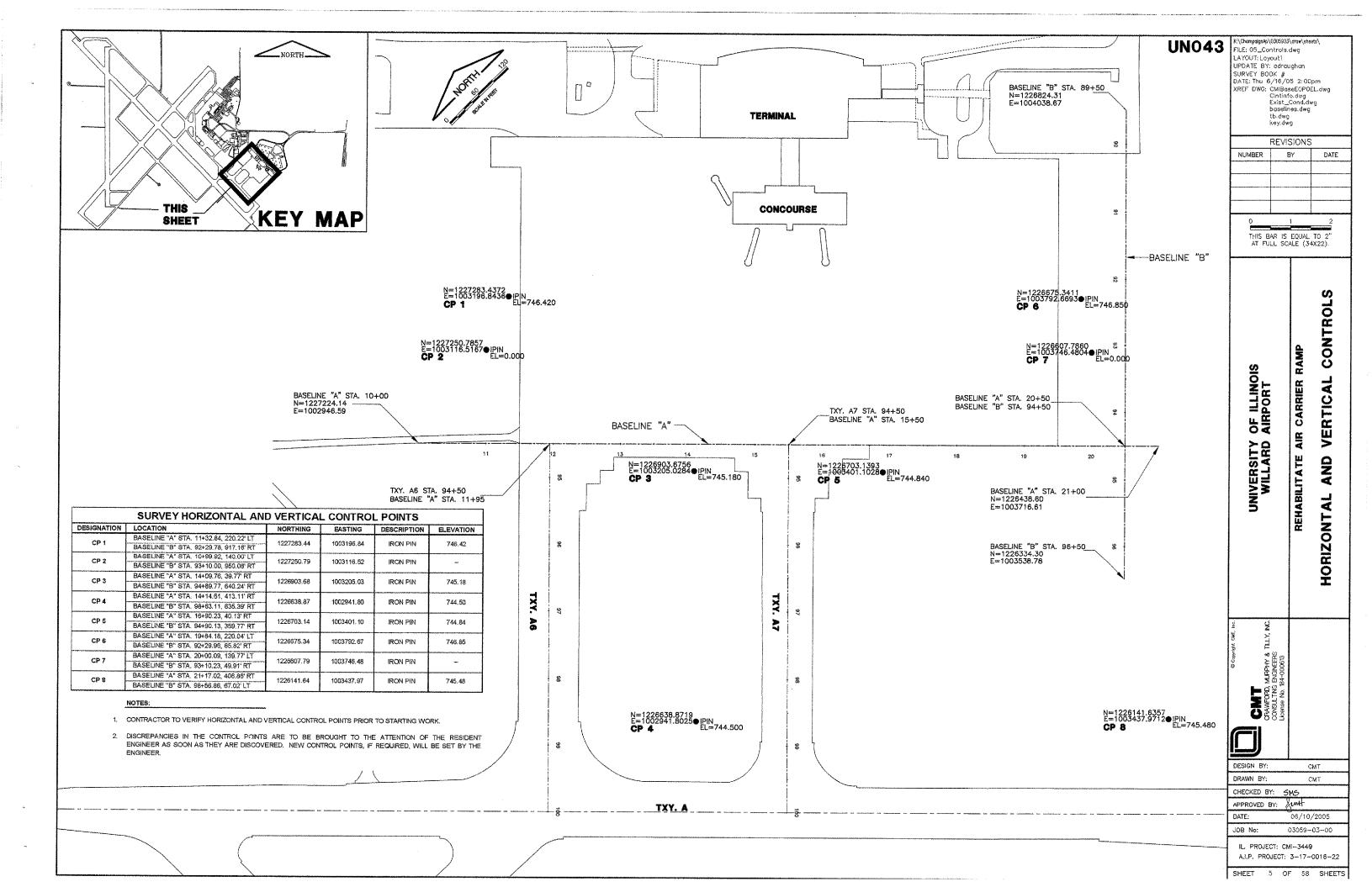
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IL. PROJECT: CMI~3449 A.I.P. PROJECT: 3-17-0016-22

SHEET 4 OF 58 SHEETS



CONSTRUCTION ACTIVITY AND PHASING GENERAL NOTES

- ACCESS TO THE WORK ZONES SHALL BE AS SHOWN IN THE SITE PLAN AND EACH CONSTRUCTION ACTIVITY PHASE PLAN.
- 2. TEMPORARY TAXIWAY CENTERLINE MARKING SHALL BE IN PLACE PRIOR TO THE CONTRACTOR CLOSING ANY PART OF THE AIR CARRIER APRON. COORDINATION WITH THE AIRPORT MANAGER WILL BE REQUIRED.
- 3. CONTRACTOR TO PLACE BEAM BARRICADES TO DELINEATE EDGE OF CONSTRUCTION ZONE PRIOR TO BEGINNING ANY WORK. BEAM BARRICADES TO BE PLACED IN A MANNER THAT PRESENTS NO GAPS IN THE BARRICADE LINE. OPENINGS INTO THE DESIGNATED HAUL ROUTE SHALL BE CLOSED AT THE FORD OF THE WORK DAY
- 4. THE WORK ZONES FOR EACH PHASE ARE ADJACENT TO SECURITY CONTROLLED AREAS OF THE AIRFIELD. THE CONTRACTOR SHALL BE AWARE THAT ANY PERSONNEL FOUND OUTSIDE OF THE LIMITS OF EACH CONSTRUCTION PHASE WILL BE IN VIOLATION OF THE REGULATIONS OF THE TRANSPORTATION SECURITY ADMINISTRATION, ANY SUCH VIOLATIONS ARE SUBJECT TO FINES UP TO \$10,000, ANY FINE LEVIED AGAINST THE AIRPORT AS A RESULT OF THE CONTRACTOR'S OPERATIONS WILL BE PAID BY THE CONTRACTOR AT NO COST TO THE CONTRACT.
- 5. IN CASE OF EMERGENCY, THE CONTRACTOR SHALL EXIT THE WORK ZONE USING THE DESIGNATED HAUL ROUTE AND RELOCATE TO THE STAGING AND STORAGE LOCATION SHOWN FOR EACH WORK PHASE.
- 6. THE STAGING AND STORAGE LOCATION DESIGNATED ON THE CONSTRUCTION ACTIVITY PLANS SHALL BE USED FOR LARGE EQUIPMENT THAT IS NOT ABLE TO BE MOVED TO THE STAGING AREA AT MONTICELLO ROAD AS SHOWN ON THE SITE PLAN. MOBILE EQUIPMENT SUCH AS ROLLERS AND OTHER WHEELED EQUIPMENT SHALL BE MOVED TO THE MONTICELLO ROAD LOCATION AT THE END OF EACH WORKING DAY.
- 7. WORK THAT MUST BE COMPLETED OUTSIDE OF THE DESIGNATED WORK AREAS, SUCH AS TEMPORARY AND PERMANENT BITUMINOUS TRANSITIONS, TEMPORARY AND PERMANENT PAVEMENT MARKING, ETC., SHALL BE COORDINATED WITH THE AIRPORT. A DESIGNATED REPRESENTATIVE OF THE AIRPORT WILL BE REQUIRED DURING ANY WORK REQUIRING THE CONTRACTOR ACCESS TO THE SECURE AREAS OUTSIDE THE CONSTRUCTION LIMITS. THE AIRPORT SHALL BE GIVEN 72 HOURS NOTICE PRIOR TO THE CONTRACTOR SCHEDULING THIS WORK.
- 8. RADIO FLAGMEN WILL NOT BE REQUIRED TO BE IN CONTACT WITH FAA GROUND CONTROL UNLESS THE CONTRACTOR REQUIRES ACCESS TO ACTIVE AND GROUND CONTROLLED AIRFIELD PAVEMENTS. THE RADIO FLAGMEN WILL MONITOR THE GROUND CONTROL FREQUENCY IN ORDER TO ASSIST IN DETERMINING IF THE CROSSING VEHICLES WILL BE SAFE TO CROSS THE ACTIVE TAXILANES. GROUND CONTROL SHALL BE NOTIFIED IF BROOMING OR OTHER CONSTRUCTIO OPERATIONS WILL REQUIRE AIRCRAFT TO HOLD FOR THE CONTRACTOR TO CLEAR THE ACTIVE TAXILANES.

TEMPORARY HAUL ROAD WIDTH AS DETERMINED BY THE CONTRACTOR BUT NOT TO EXCEED 25'

THE CONTRACTOR MAY FURNISH AND CONSTRUCT AN ALL WEATHER HAUL ROAD. THE CONTRACTOR SHALL REMOVE THE HAUL ROAD AT THE COMPLETION OF THE CONTRACT. THE PCC MILLINGS FROM THE PROJECT CAN BE USED TO CONSTRUCT THE HAUL ROAD.

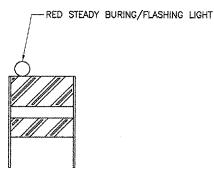
EXISTING GROUND LINE

AFTER COMPLETION OF ALL WORK AND REMOVAL OF ANY AGGREGATE OR MILLINGS THE GROUND WITHIN THE HAUL ROAD LIMITS SHALL BE SCARIFIED, BROKEN UP AND LOOSENED, TO A DEPTH NOT LESS THAN 12" BY SCARIFICATION OR DISCING. PRIOR TO SEEDING THE GROUND SHALL BE WORKED INTO A SEEDBED BY USE OF HARROWS, DRAGS OR OTHER APPROPRIATE METHODS.

CONTRACTOR CONSTRUCTED HAUL ROAD DETAIL

CONTRACTOR CONSTRUCTED HAUL ROAD

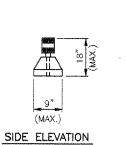
- ACCESS BETWEEN THE EXISTING AGGREGATE HAUL ROAD AND THE EXISTING APRON SHALL BE VIA A CONTRACTOR CONSTRUCTED HAUL ROAD AT THE ALIGNMENT SHOWN ON THE SITE PLAN.
- AT THE CONTRACTOR'S OPTION, THE CONTRACTOR MAY CONSTRUCT AN ALL WEATHER HAUL ROAD WITH MILLINGS OR AGGREGATE MATERIALS TO EXPEDITE CONSTRUCTION OPERATIONS.
- THE DESIGN OF THE CONTRACTOR CONSTRUCTED HAUL ROAD IS AT DISCRETION OF THE CONTRACTOR,
- 4. THE CONTRACTOR CONSTRUCTED HAUL ROAD SHALL BE REMOVED AT THE COMPLETION OF THE WORK.
- AFTER COMPLETION OF THE WORK, THE GROUND WITHIN THE LIMITS OF THE TEMPORARY HAUL ROAD SHALL BE RESTORED TO PRE-DISTURBED CONDITION. AS A MINIMUM, THE GROUND WITHIN THE LIMITS OF THE CONTRACTOR CONSTRUCTED HAUL ROAD SHALL FIRST BE SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH NOT LESS THAN 12 INCHES AND RETURNED TO PRE-DISTURBED GRADE. AFTER LOOSENING AND PRIOR TO SEEDING, THE TOP 5 INCHES SHALL BE WORKED INTO A SATISFACTORY SEEDBED BY USE OF ROLLERS, DRAGS, HARROWS OR OTHER APPROPRIATE METHODS. THE GROUND SHALL THEN BE SEEDED AND MULCHED ACCORDING TO ITEM 901 AND 908.
- 3. WHERE REQUIRED BY LOCAL DRAINAGE PATTERNS, THE CONTRACTOR SHALL INSTALL A MINIMUM 12" Ø CMP TO FACILITATE DRAINAGE UNDER THE HAUL ROAD. THE COVER OVER THE PIPE SHALL BE ADEQUATE TO PREVENT CRUSHING OF THE PIPE.
- 7. HAUL ROAD CONSTRUCTION, REMOVAL AND GROUND RESTORATION SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NOT MEASURED FOR PAYMENT. NO DIRECT PAYMENT WILL BE MADE FOR THIS WORK. THE COST TO CONSTRUCT, REMOVE AND RESTORE THE GROUND TO PRE-DISTURBED CONDITION SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT UNIT PRICES FOR THE RESPECTIVE ITEMS UTILIZING THE HAUL ROAD.

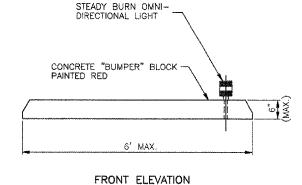


HIGH-PROFILE BARRICADE DETAIL N.T.S.

HIGH-PROFILE BARRICADE NOTES

- FLASHERS TO BE BATTERY OPERATED. LENS TO BE RED AND BE ABLE TO ROTATE 90 DEGREES.
- SANDBAGS TO BE PLACED ON EACH SUPPORT BRACE AS REQUIRED TO PREVENT DISPLACEMENT BY WIND, JET OR PROP BLAST.
- NO SEPARATE PAYMENT WILL BE MADE FOR THIS ITEM. COSTS SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.
- 4. PLACE AT MAXIMUM 15' INTERVALS.
- 5. BARREL/DRUM TYPE BARRICADES SHALL NOT BE USED.





BEAM BARRICADE DETAILS

BEAM BARRICADE NOTES

- BARRICADES TO BE CONCRETE BUMPER BLOCKS OR WHEEL STOPS, PAINTED RED. OTHER MATERIALS MAY BE USED, PROVIDED THE BARRICADES ARE HEAVY ENOUGH TO PREVENT DISPLACEMENT WITHOUT BEING ANCHORED TO THE PAVEMENT.
- 2. FLASHING OR STEADY BURNING LIGHTS SHALL BE RED IN COLOR.
- 3. BARRICADES TO BE PLACED END TO END TO COMPLETELY BLOCK ACCESS BY AIRCRAFT.
- 4. NO SEPARATE PAYMENT WILL BE MADE FOR THIS ITEM. COSTS SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.

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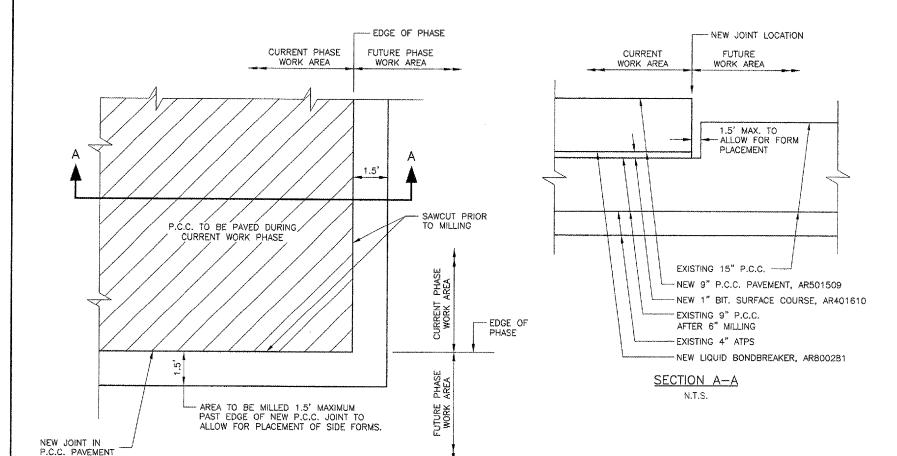
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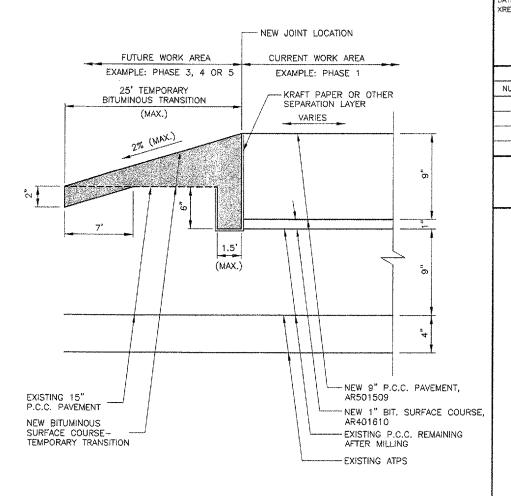
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MILLING LIMITS AT EDGE OF PHASE DETAIL

MILLING LIMITS AT EDGE OF PHASE NOTES

- 1.) THE EXISTING P.C.C. PAVEMENT SHALL BE MILLED A MAXIMUM OF 1.5—FEET PAST THE EDGE OF A NEW JOINT IN THE P.C.C. OVERLAY TO ALLOW ROOM FOR FORM PLACEMENT. ANY MILLING PAST THE ALLOWABLE 1.5—FEET WILL REQUIRE EXTRA BITUMINOUS SURFACE COURSE DURING TEMPORARY TRANSITION CONSTRUCTION. THE COST OF ANY EXTRA MATERIAL REQUIRED FOR THE TEMPORARY TRANSITION CONSTRUCTION DUE TO MILLING PAST THE ALLOWABLE 1.5—FOOT WIDTH SHALL BE BORNE BY THE CONTRACTOR.
- 2.) MILLING OF THE NEWLY PLACED P.C.C. PAVEMENT IN AN ADJACENT PHASE PREVIOUSLY COMPLETED WILL NOT BE ALLOWED. ANY DAMAGE TO PREVIOUSLY PLACED P.C.C. PAVEMENT SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE CONTRACT.
- 3.) WHEN MILLING OPERATIONS ABUT A TEMPORARY TRANSITION THAT IS NO LONGER REQUIRED, THE CONTRACTOR SHALL NOT ATTEMPT TO REMOVE IT BY MILLING. ANY DAMAGE TO NEWLY PLACED P.C.C. PAVEMENT SHALL BE REPAIRED BY THE CONTRACTOR AT NO EXPENSE TO THE CONTRACT.
- 4.) THE LIMITS OF MILLING REMOVAL IN THE CURRENT WORK PHASE SHALL BE SAWCUT TO THE DEPTH OF REMOVAL PRIOR TO BEGINNING MILLING OPERATIONS.



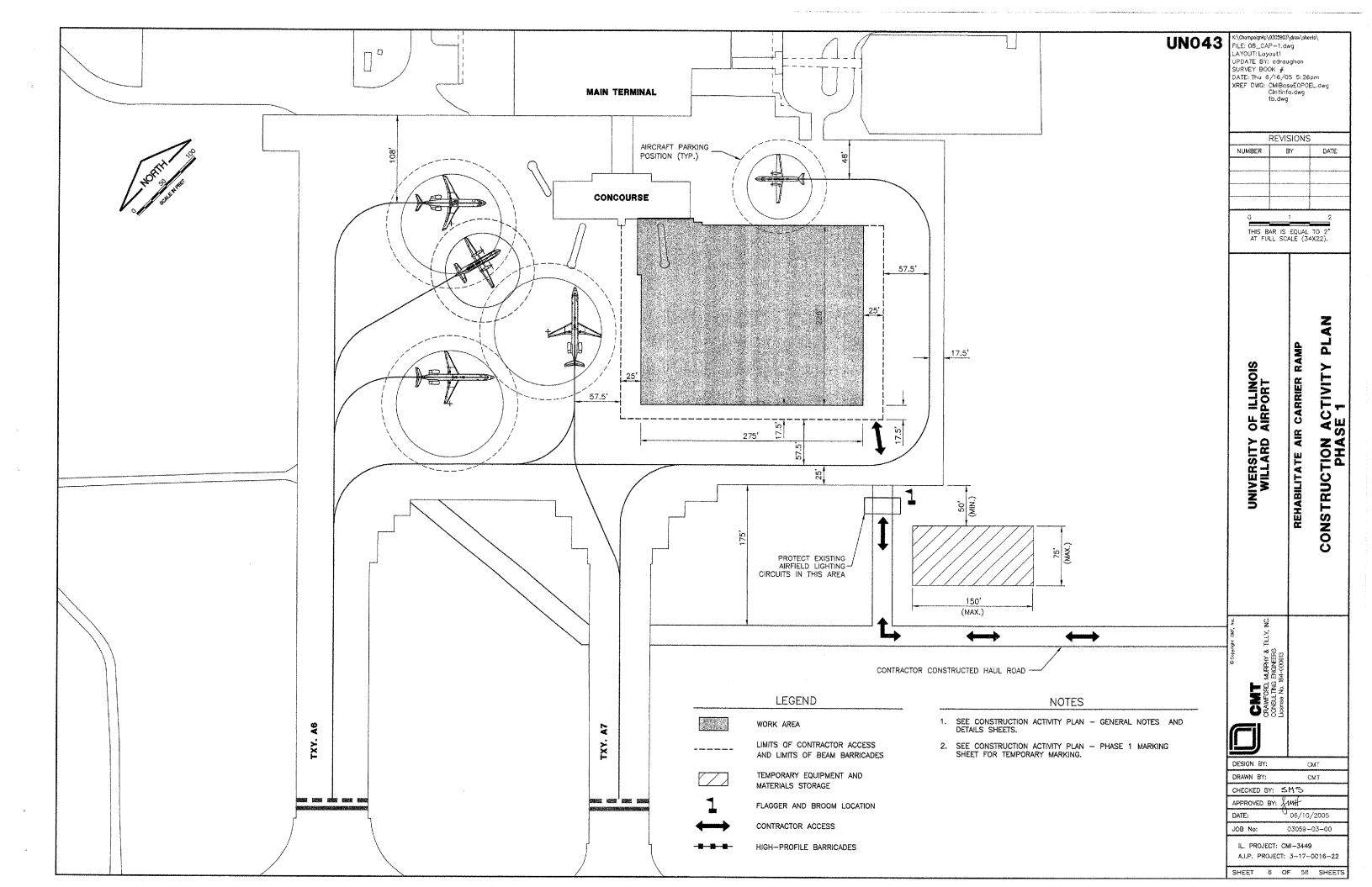
TEMPORARY TRANSITION BETWEEN PHASES DETAIL N.T.S.

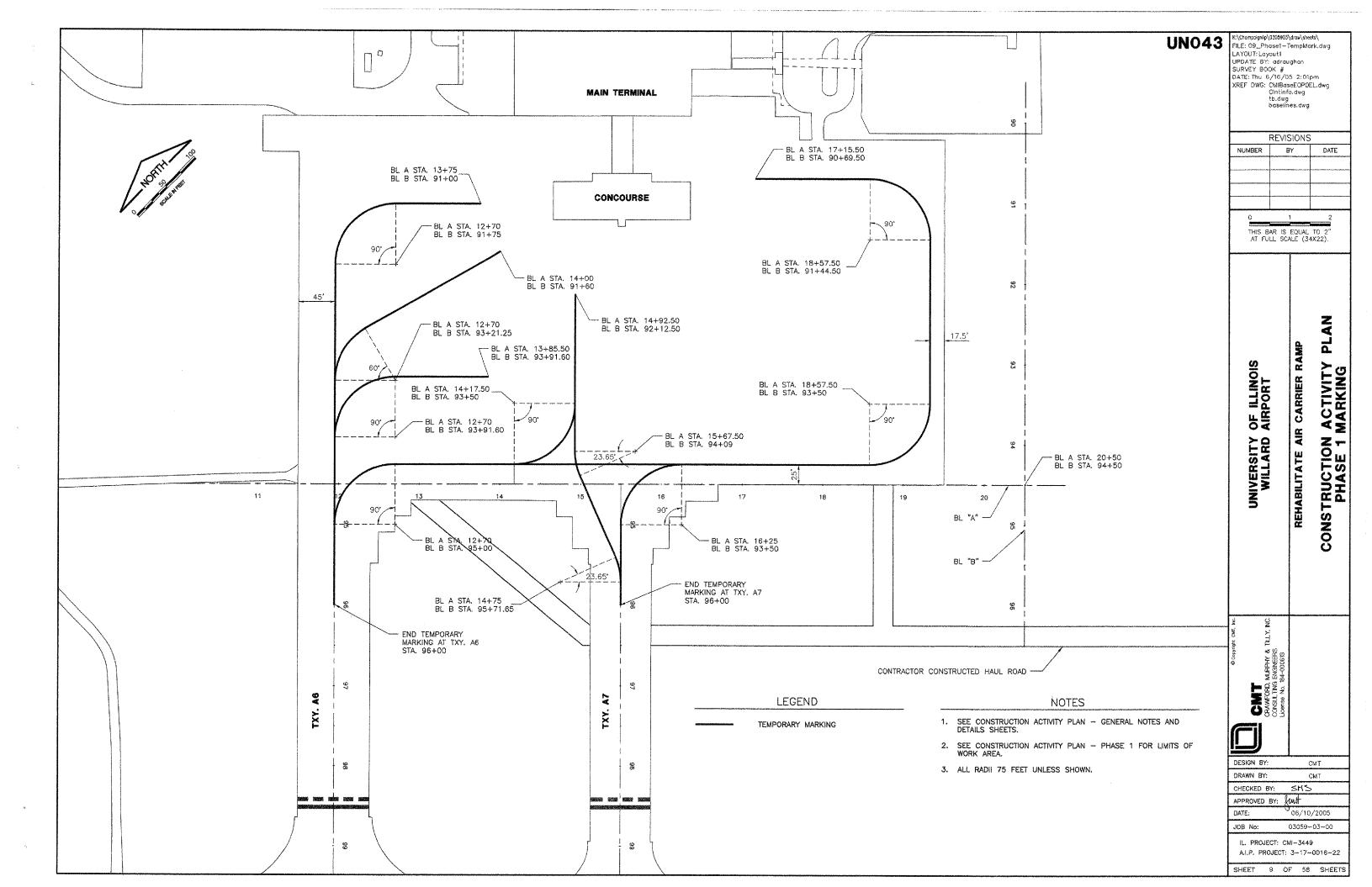
TEMPORARY TRANSITION NOTES

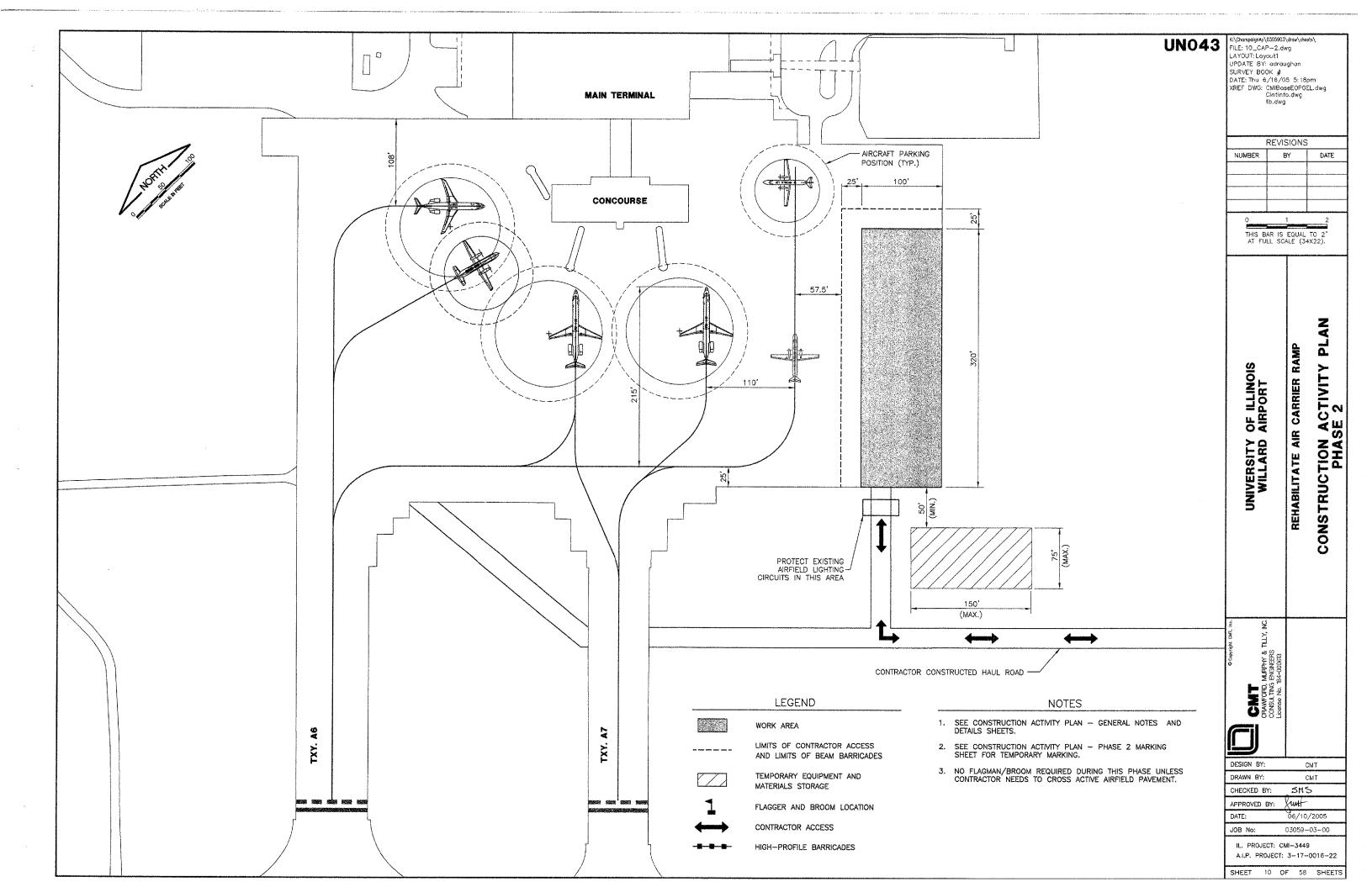
- 1.) TEMPORARY TRANSITIONS TO BE PAID BY THE SQUARE YARD.
- 2.) BITUMINOUS TACK COAT SHALL BE REQUIRED AT THE BOTTOM OF THE TEMPORARY TRANSITION. BITUMINOUS TACK COAT SHALL NOT BE APPLIED TO THE SIDE OF THE TRANSITION THAT ABUTS THE NEWLY PLACED P.C.C. PAVEMENT TO ALLOW FOR EASIER REMOVAL OF THE TRANSITION LATER IN THE PROJECT.
- 3.) TEMPORARY TRANSITIONS SHALL BE REQUIRED AS SHOWN IN THE TEMPORARY TRANSITION PLAN OR AS DIRECTED BY THE RESIDENT ENGINEER.
- 4.) THE BUTT JOINTS WHERE THE TEMPORARY TRANSITION MATCHES INTO THE EXISTING PAVEMENT SHALL BE A MINIMUM OF 7-FEET WIDE AND 2-INCHES DEEP AS SHOWN AT THE END OF THE TRANSITION IN THE DETAIL. NO EXTRA PAYMENT WILL BE MADE FOR BUTT JOINTS FOR THE TEMPORARY TRANSITIONS THAT ARE WIDER THAN 7-FEET.
- 5.) PAYMENT WILL NOT BE MADE FOR REMOVAL OF THE TEMPORARY TRANSITION BUT SHALL BE CONSIDERED INCIDENTAL TO THE TEMPORARY TRANSITION CONSTRUCTION.

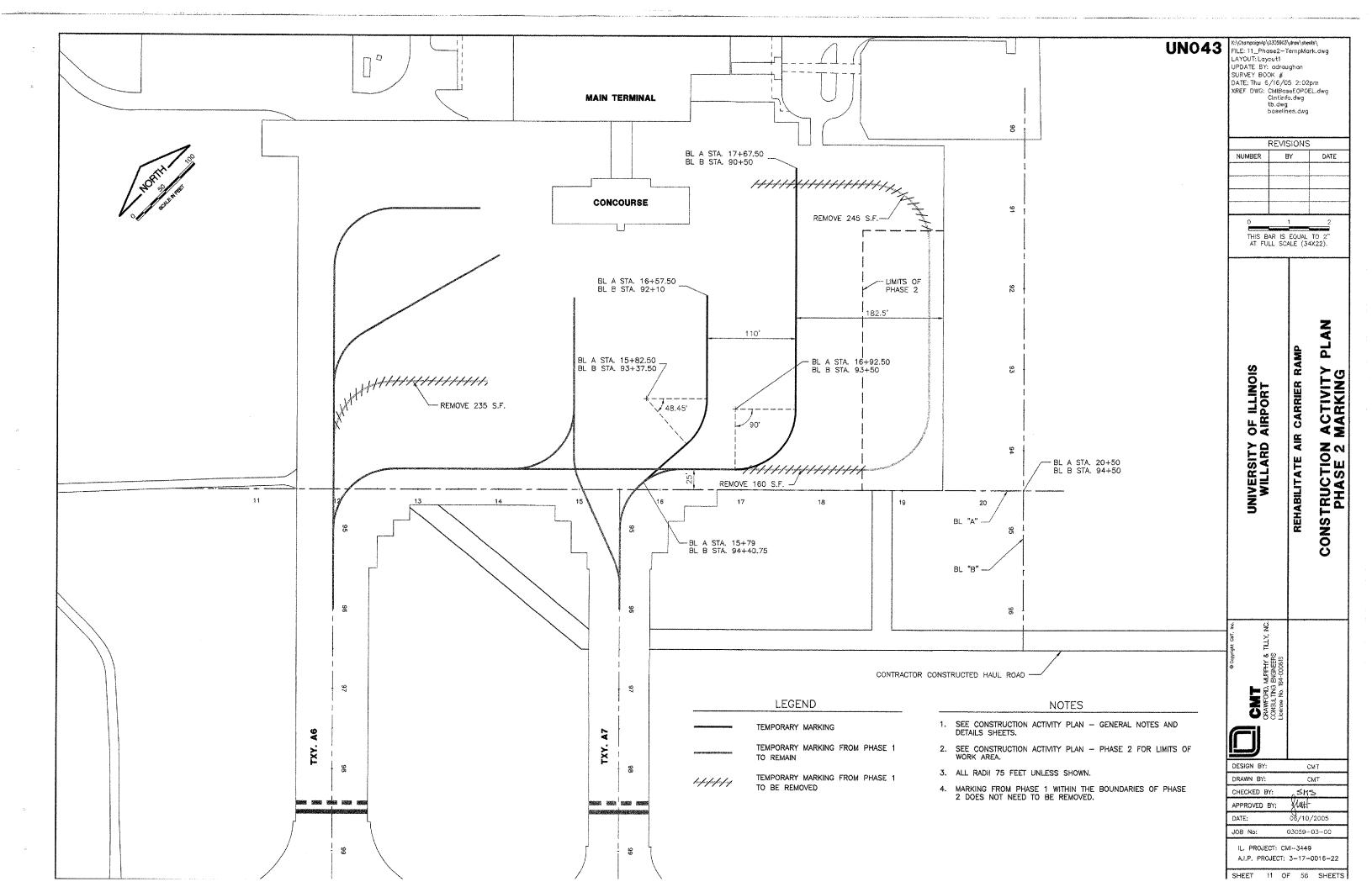
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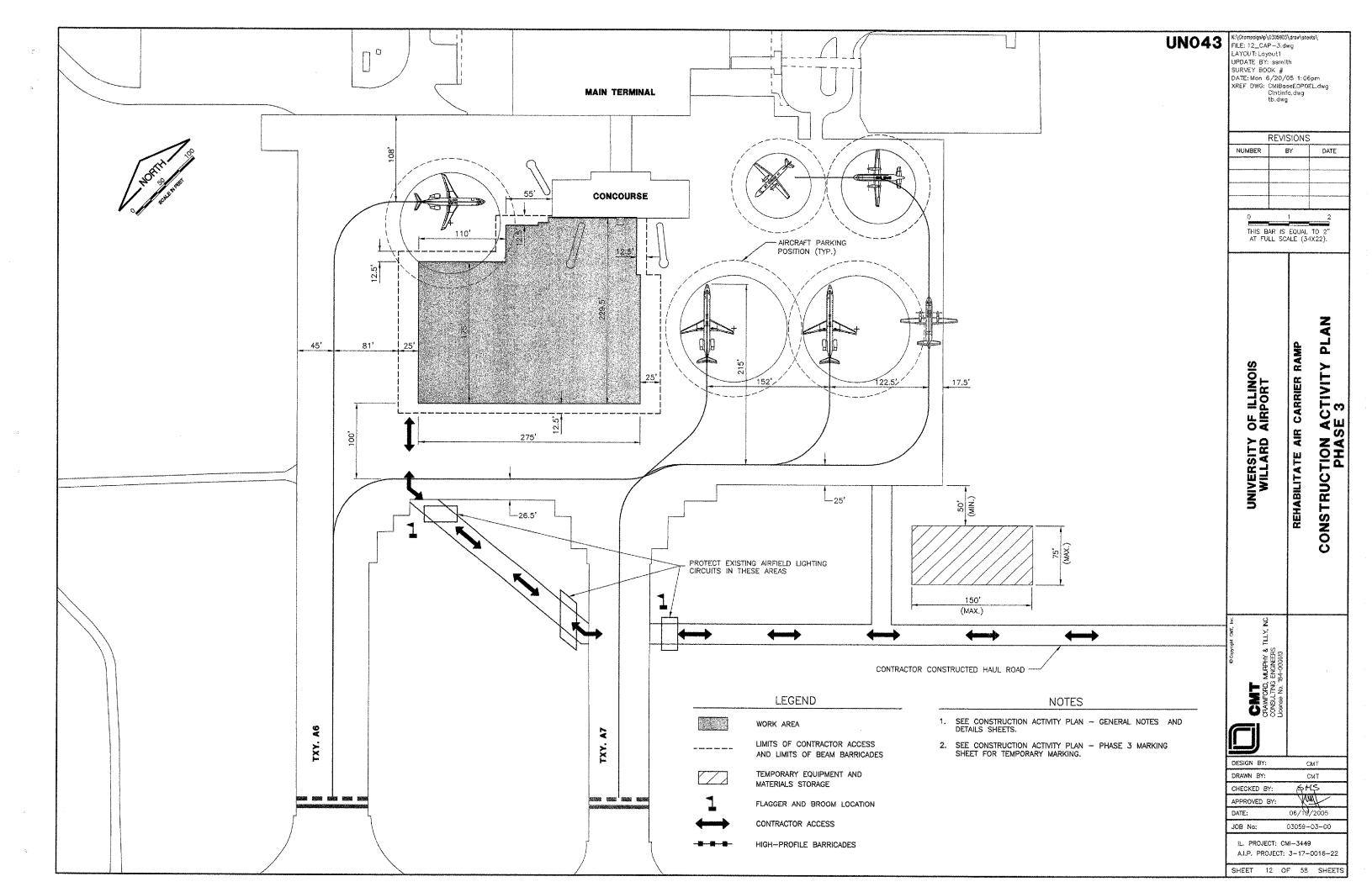
SHEET 7 OF 58 SHEETS

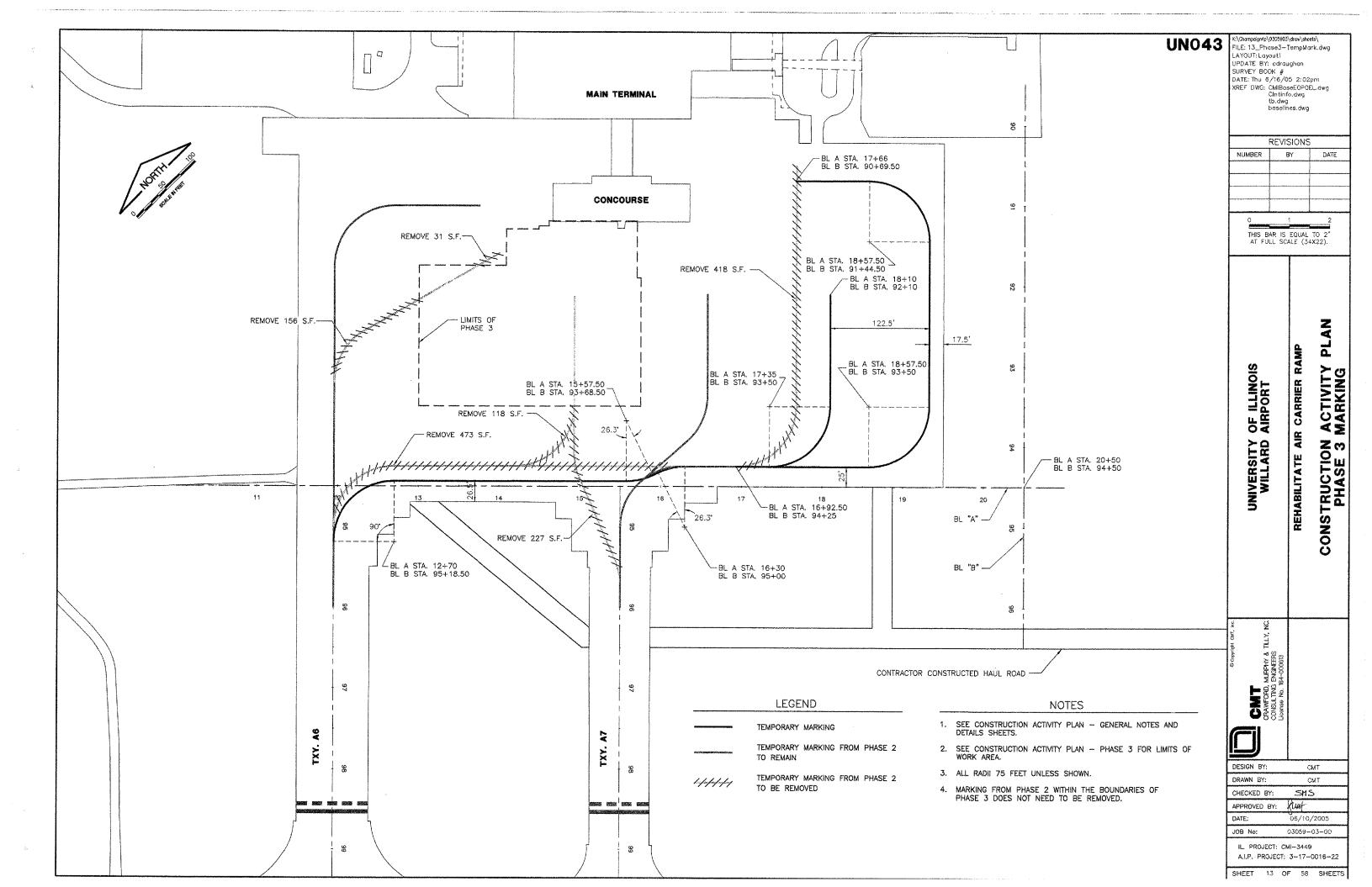


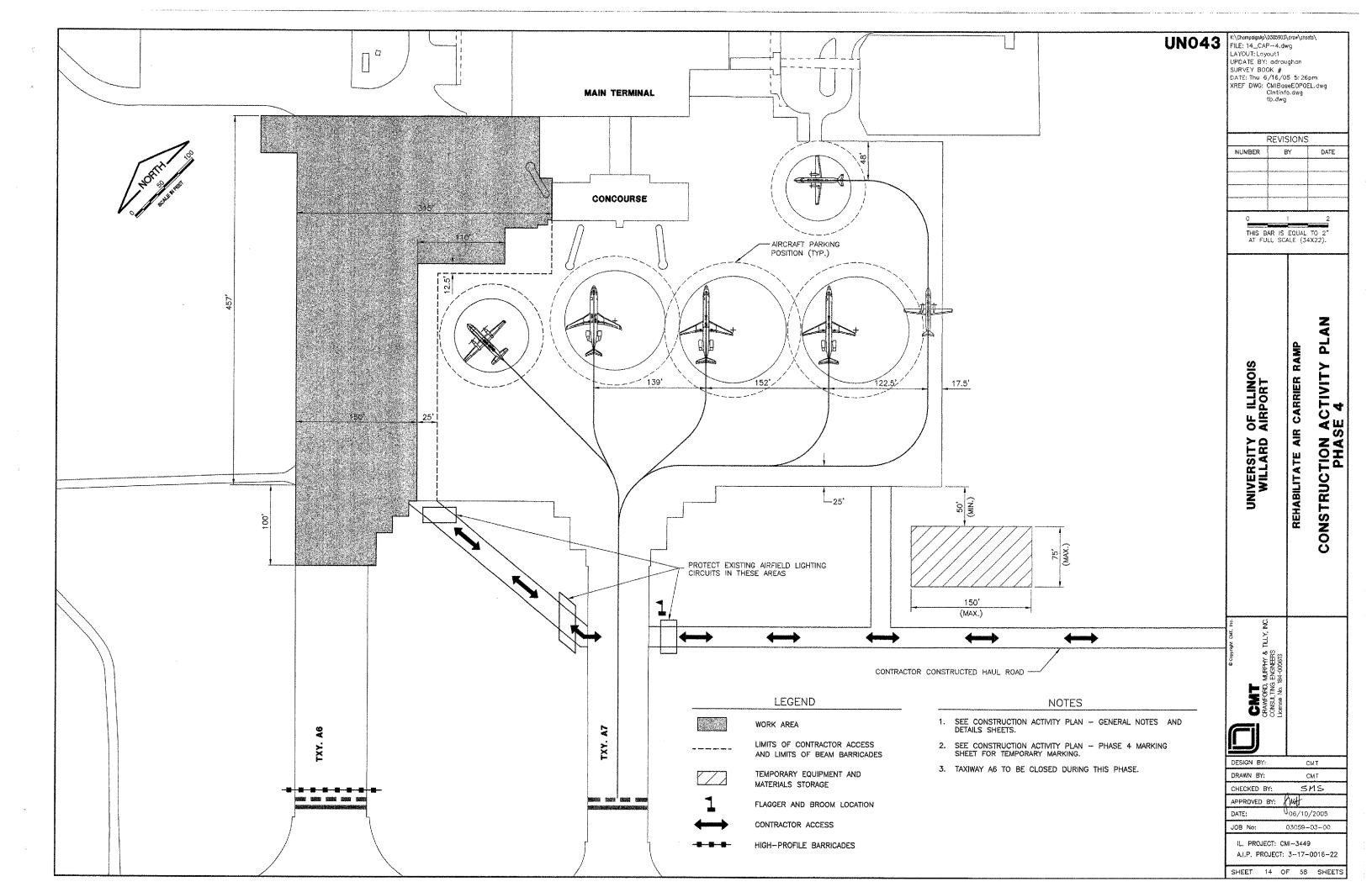


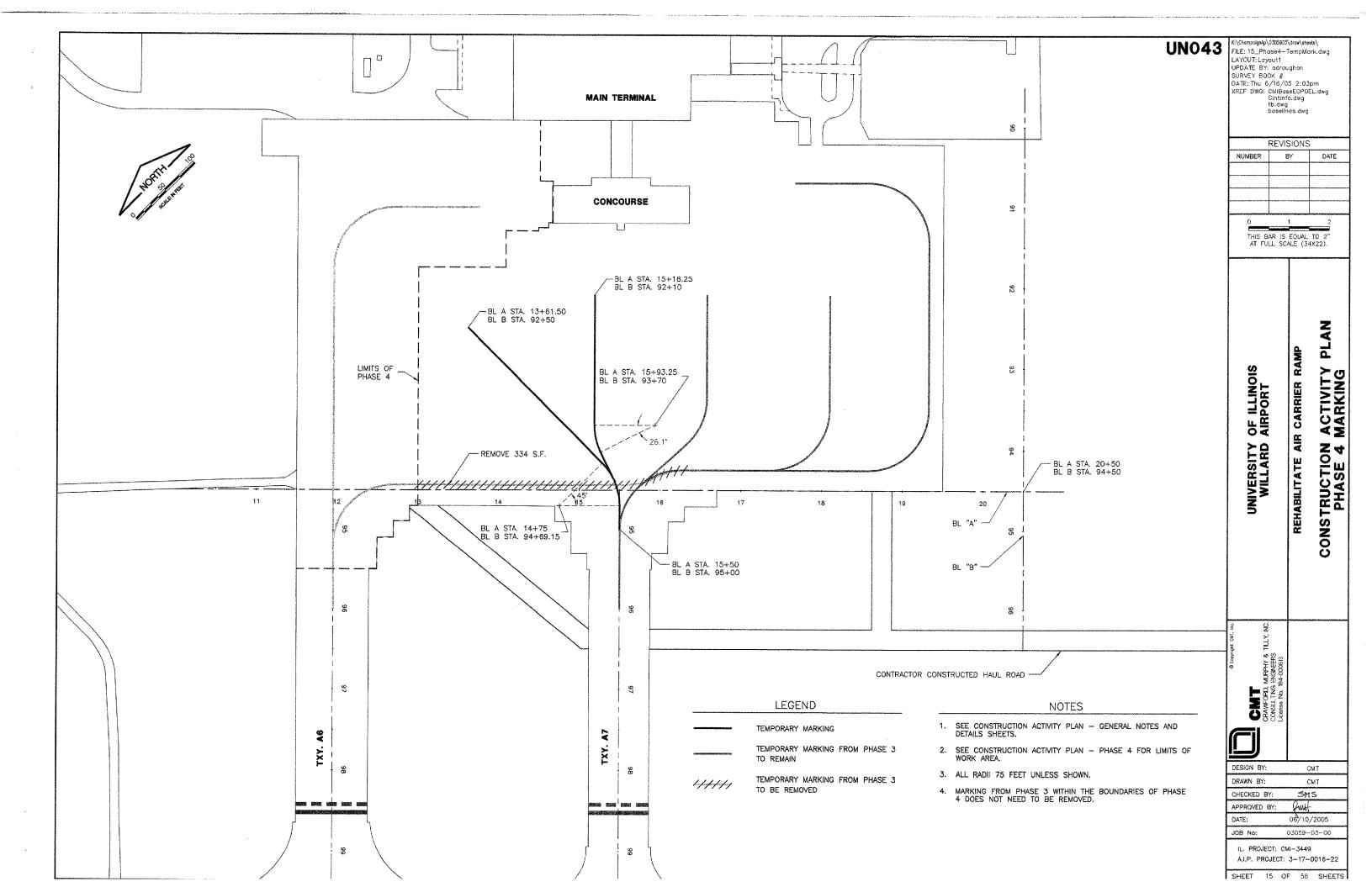


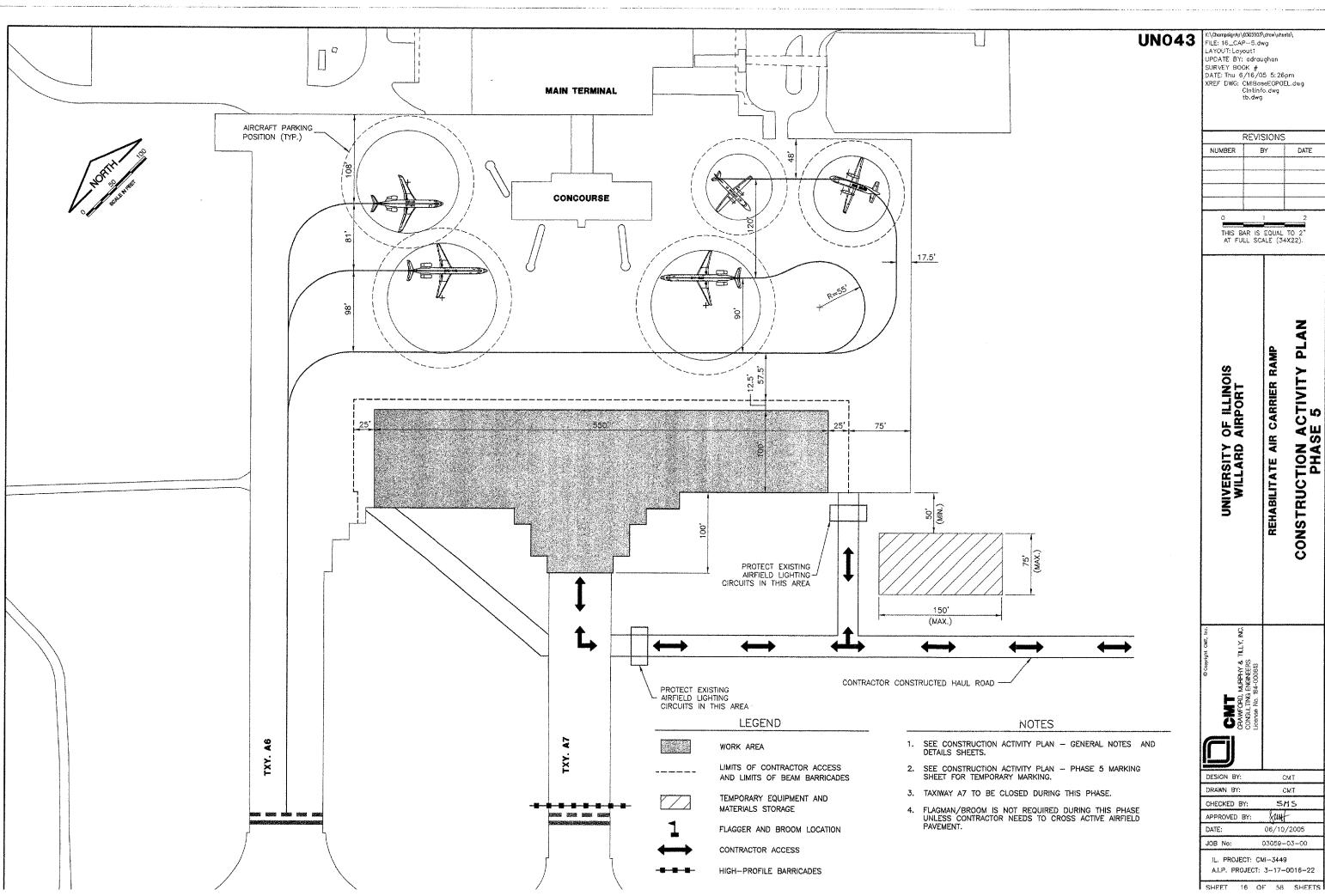




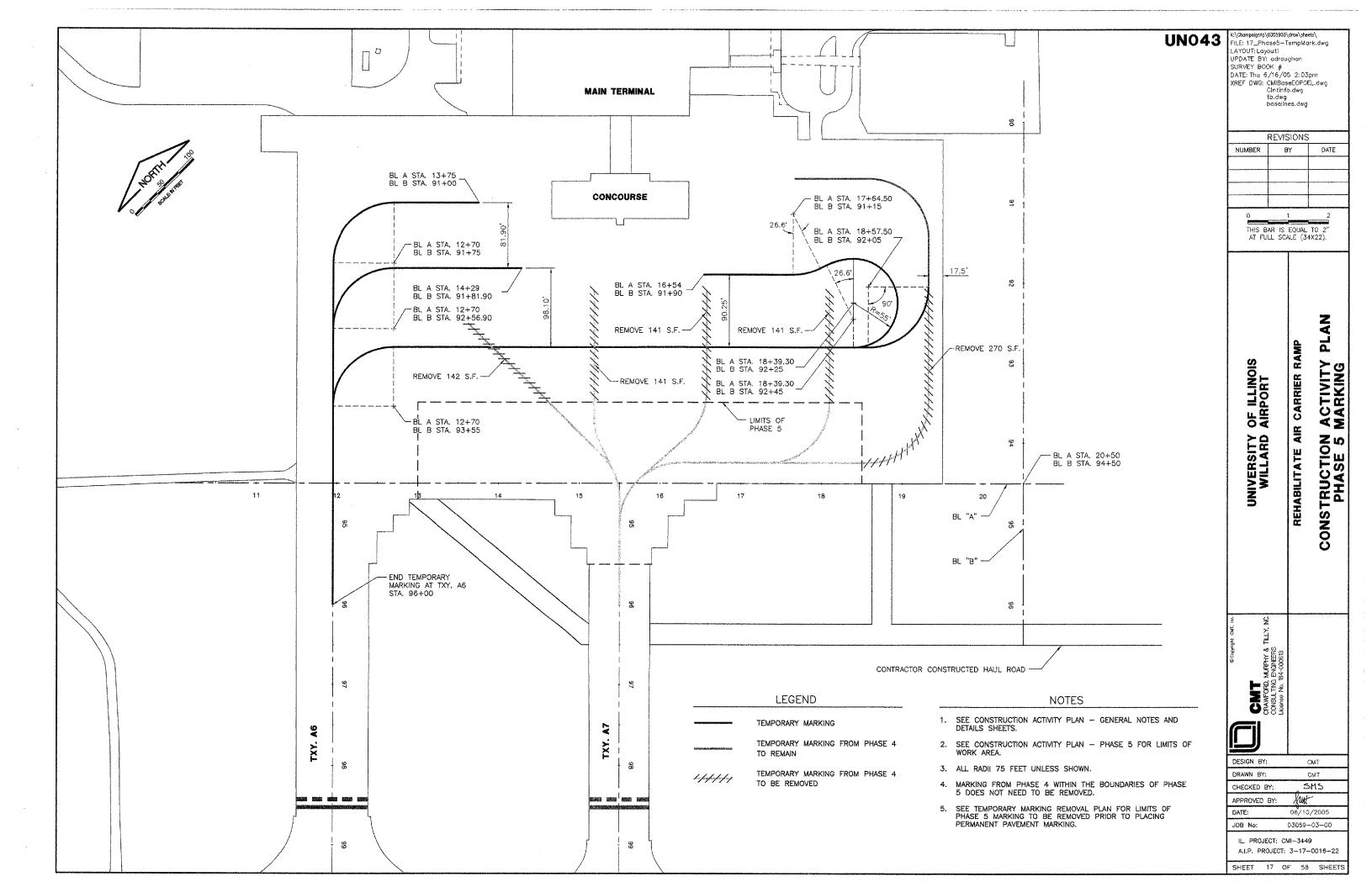


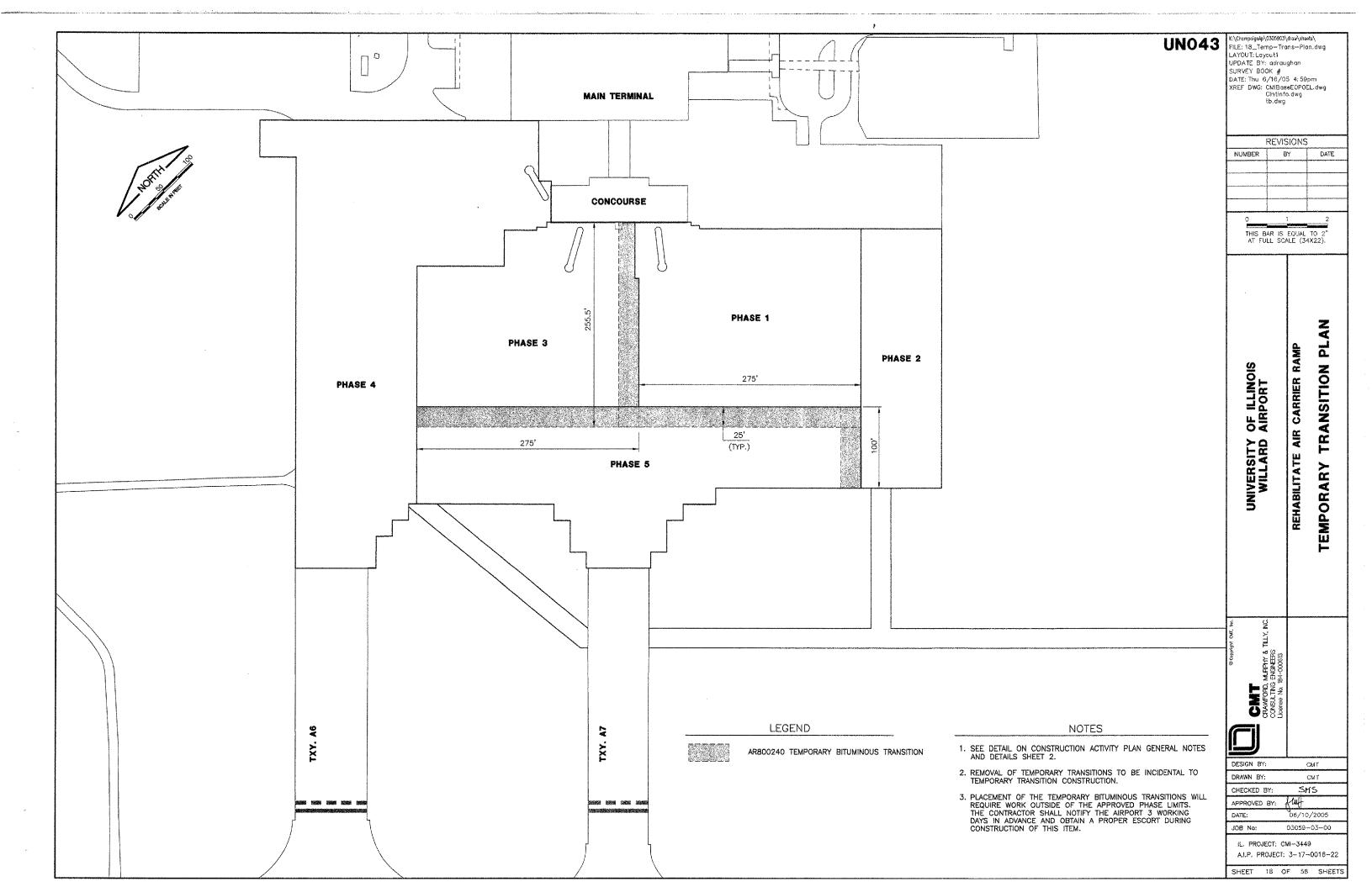


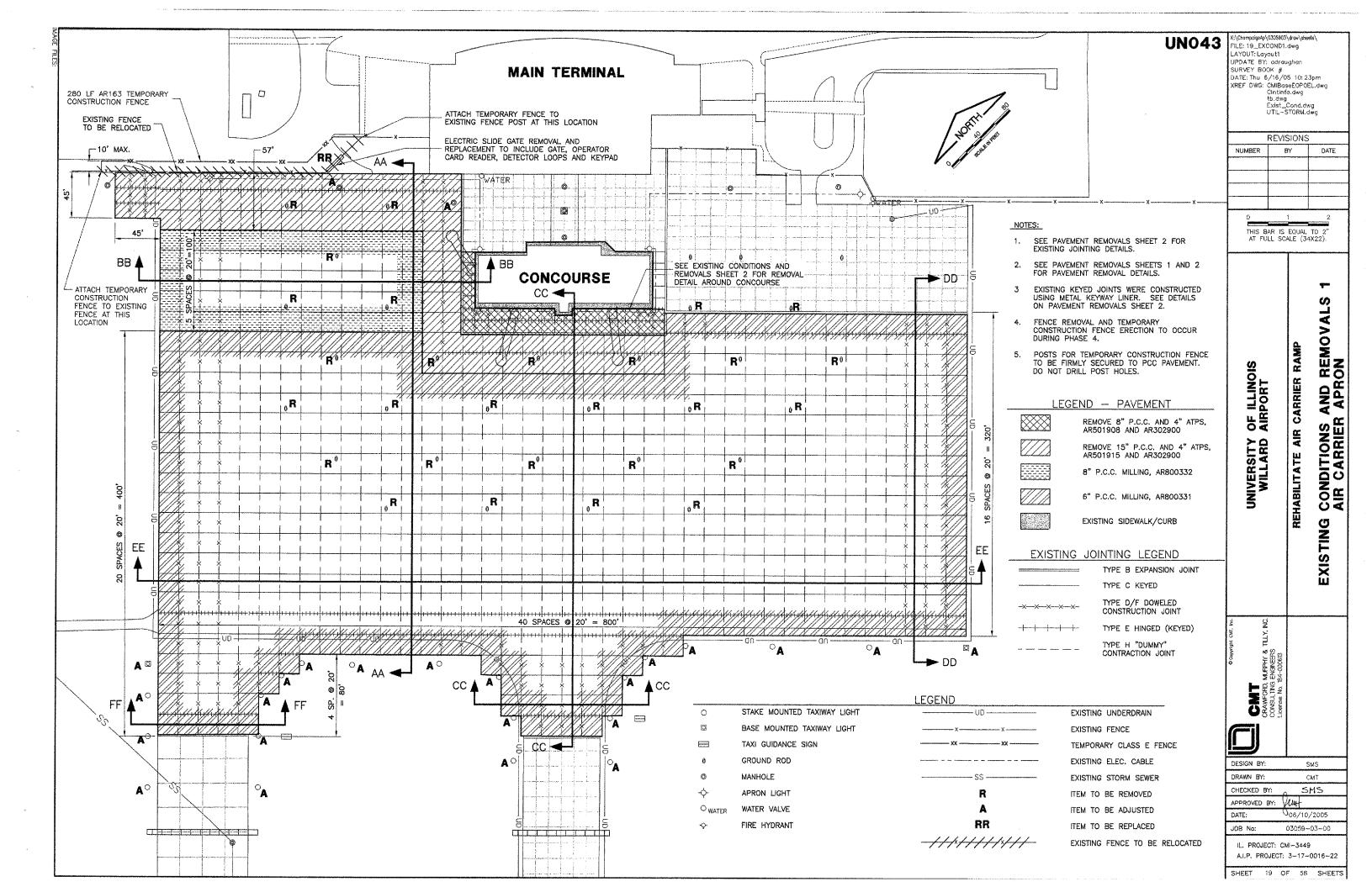


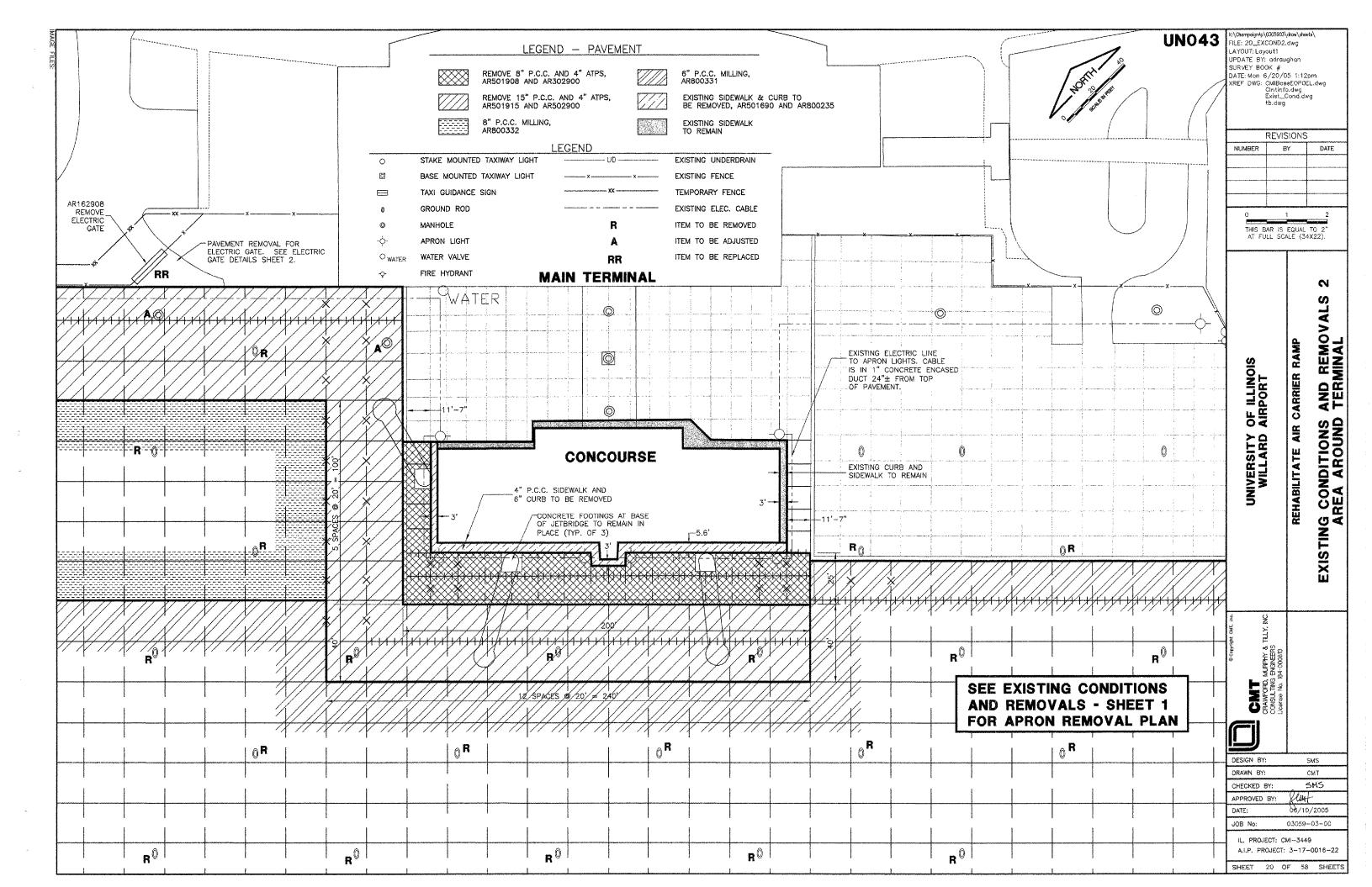


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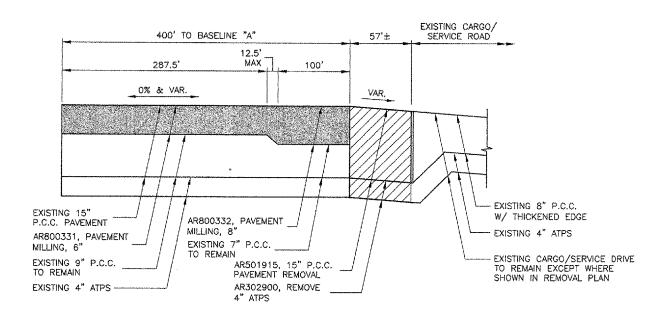




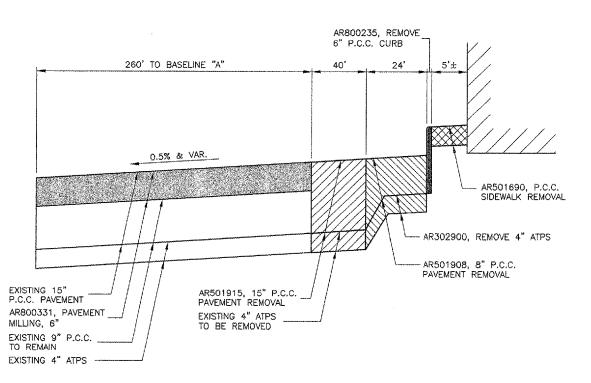




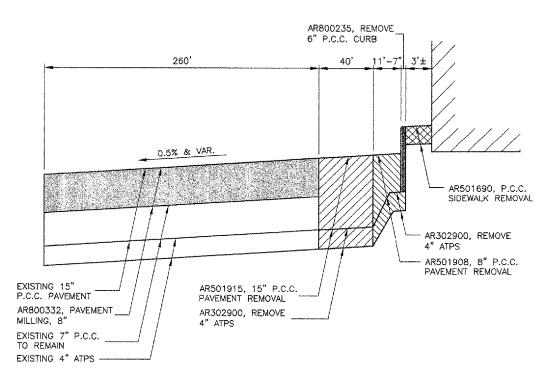
UN043



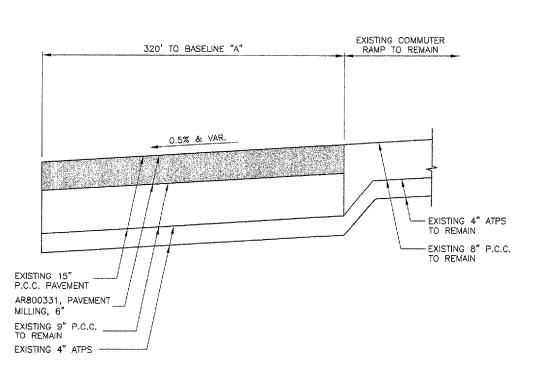
REMOVAL SECTION AA



REMOVAL SECTION CC



REMOVAL SECTION BB N.T.S.



REMOVAL SECTION DD N.T.S.

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LAYOUT: Loyout1
UPDATE BY: odraughan
SURVEY BOOK #
DATE: Thu 6/16/05 10:57pm
XREF DWG: Cintinfo.dwg
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THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

UNIVERSITY OF ILLINOIS
WILLARD AIRPORT
REHABILITATE AIR CARRIER RAMP

SHEET

REMOVALS

PAVEMENT

CRAWFORD, MARPHY & TILLY, INC.
CONSALTING ENGMERS
License No. 184-000613

 DESIGN BY:
 SMS

 DRAWN BY:
 CMT

 CHECKED BY:
 SMS

 APPROVED BY:
 VM

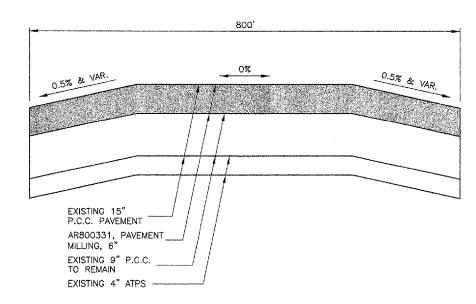
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 06/10/2005

 JOB No:
 03/059-03-00

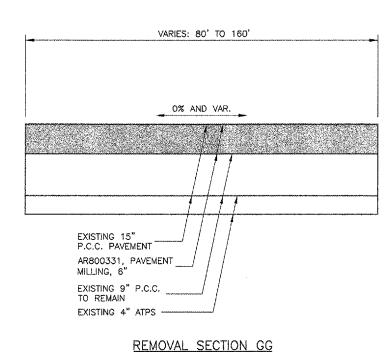
IL. PROJECT: CMI-3449

ALP. PROJECT: 3-17-0016-22

SHEET 21 OF 58 SHEETS



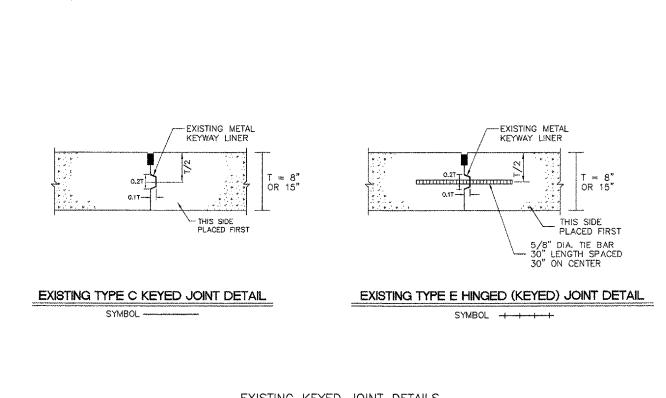
REMOVAL SECTION EE N.T.S.



N.T.S.

0% AND VAR. EXISTING 18" P.C.C. PAVEMENT AR800331, PAVEMENT MILLING, 6" EXISTING 12" P.C.C. TO REMAIN COMPACTED SUBGRADE-REMOVAL SECTION FF N.T.S.

VARIES: 90' TO 280'



EXISTING KEYED JOINT DETAILS N.T.S.

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THIS BAR IS EQUAL TO 2' AT FULL SCALE (34X22).

RAMP

2

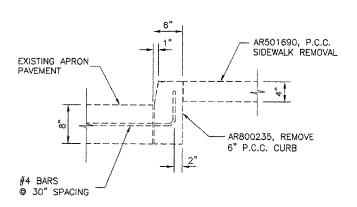
SHEET OF ILLINOIS AIRPORT CARRIER REMOVALS AIR UNIVERSITY WILLARD REHABILITATE **PAVEMENT**

CRAWFORD, N CONSULTING E License No. 18

DESIGN BY: SMS DRAWN BY: CMT CHECKED BY: SMS Sunt APPROVED BY: DATE: 06/10/2005 03059-03-00 JOB No:

IL. PROJECT: CMI-3449 A.I.P. PROJECT: 3-17-0016-22

SHEET 22 OF 58 SHEETS



NOTE:

ANY DAMAGE TO EXISTING CURB NOT SCHEDULED FOR REMOVAL TO BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE AIRPORT AT NO EXPENSE TO THE CONTRACT.

CURB ADJACENT TO CONCOURSE TYPICAL DETAIL N.T.S.

EXISTING P.C.C.

PAVEMENT

4" DIA. CORE CENTERED
OVER GROUND ROD CUT
FULL DEPTH

- 15"± P.C.C/4" ATPS

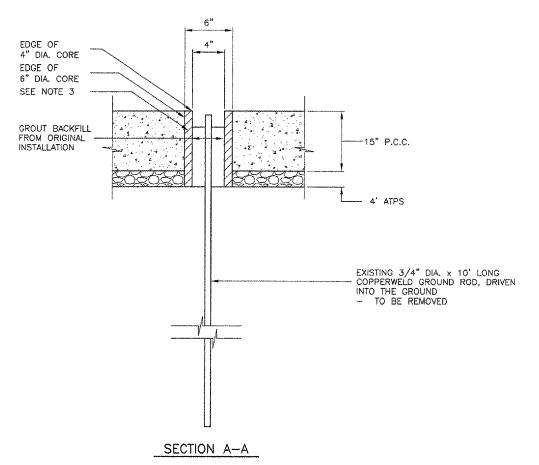
EXISTING 3/4" DIA. x 10' LONG
COPPERWELD GROUND ROD,
DRIVEN INTO THE GROUND

- TO BE REMOVED.

6" DIA. CORE CENTERED OVER
4" DIA. CORE CUT FULL DEPTH

- 15"± P.C.C./4"± ATPS

PLAN VIEW



GROUND ROD REMOVAL DETAIL

N.T.S.

UN043

REMOVAL NOTES

- 1. CUT 4" DIAMETER CORE FULL DEPTH WITH CORING MACHINE.
- 2. CUT 6" DIAMETER CORE FULL DEPTH WITH CORING MACHINE.
- 3. REMOVE 2" WIDE RING.
- 4. POSITION STRAP OR CHAIN AROUND BOTTOM OF GROUT BACKFILL.
- 5. PULL STRAP/CHAIN AND GROUND ROD STRAIGHT OUT OF GROUND.
- CONTRACTOR MAY PROPOSE ALTERNATE REMOVAL METHODS FOR APPROVAL BY THE ENGINEER PROVIDED THE METHOD DOES NOT CAUSE/REQUIRE MORE REMOVAL OF THE EXISTING PAVEMENT THAN IS SHOWN.

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BY	DATE	

THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

S DETAIL RAMP REMOVAL CARRIER AIR UNIVERSITY WILLARD MISCELLANEOUS REHABILITATE CRAWFORD, CONSULTING IN

DESIGN BY: CMT
DRAWN BY: CMT
CHECKED BY: SMS

APPROVED BY:

DATE:

JOB No:

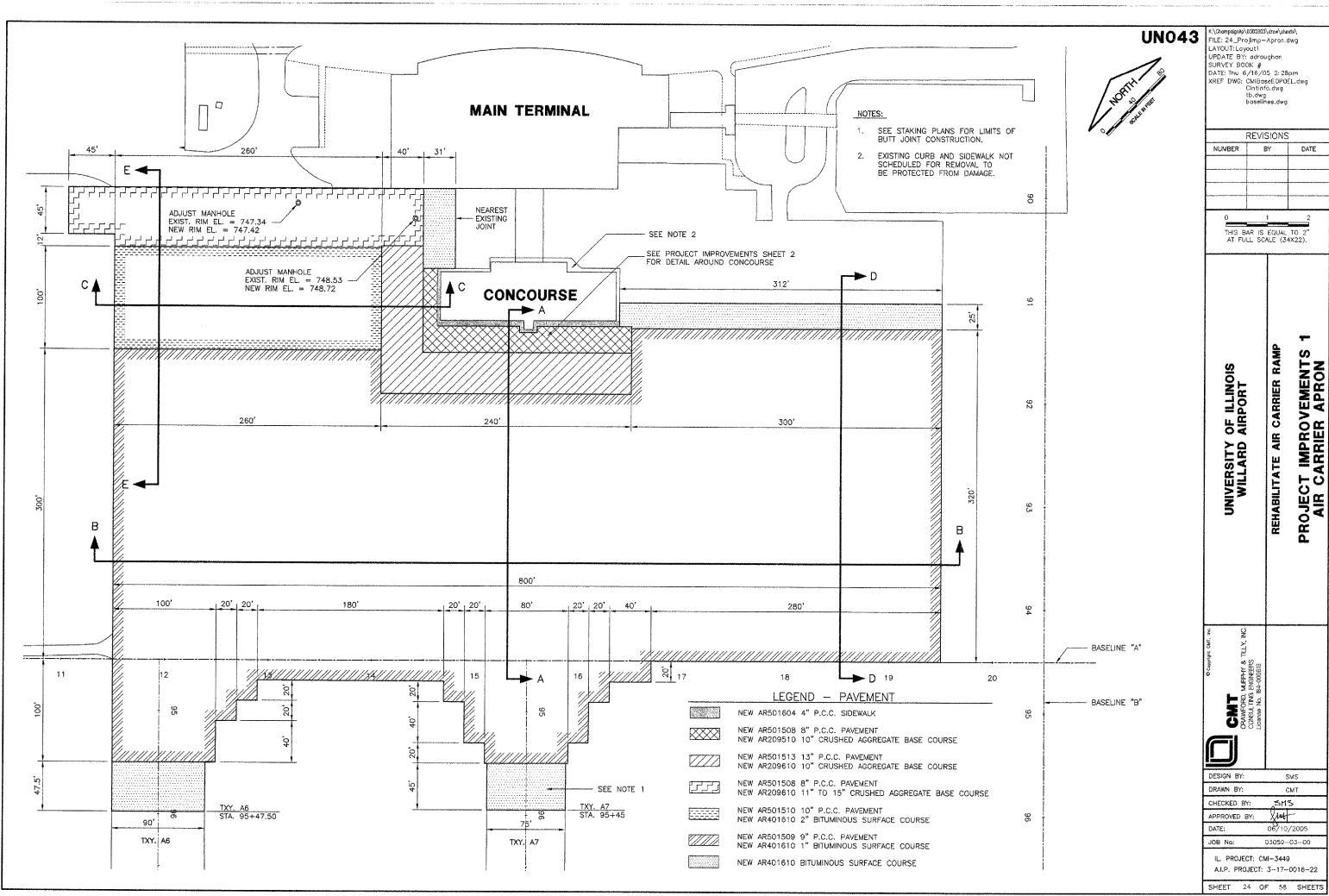
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A.I.P. PROJECT: 3-17-0016-22

SHEET 23 OF 58 SHEETS

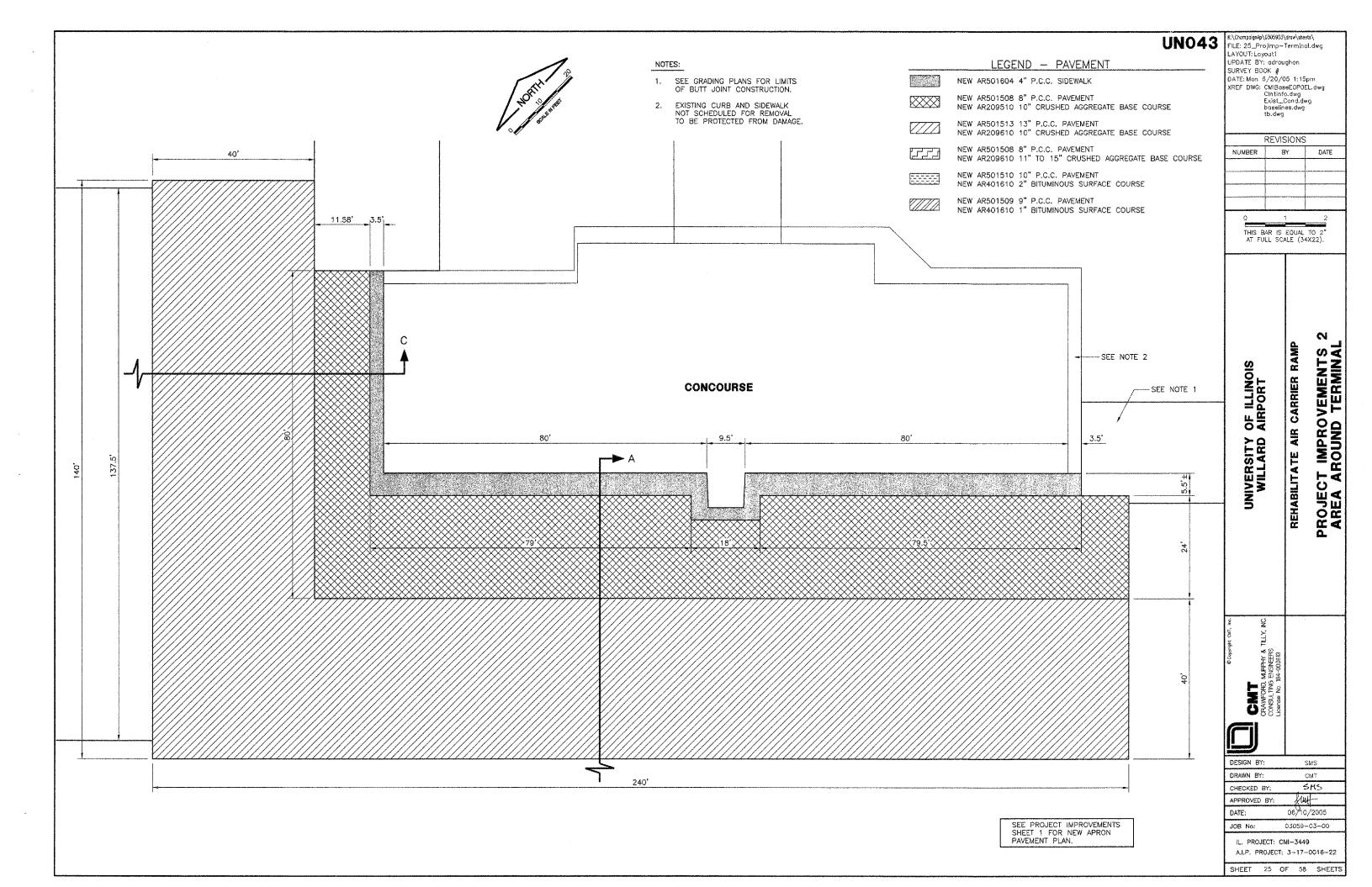
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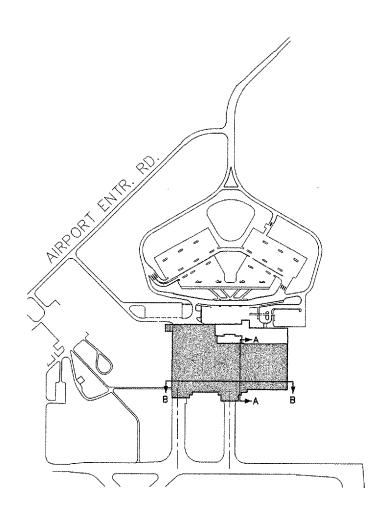


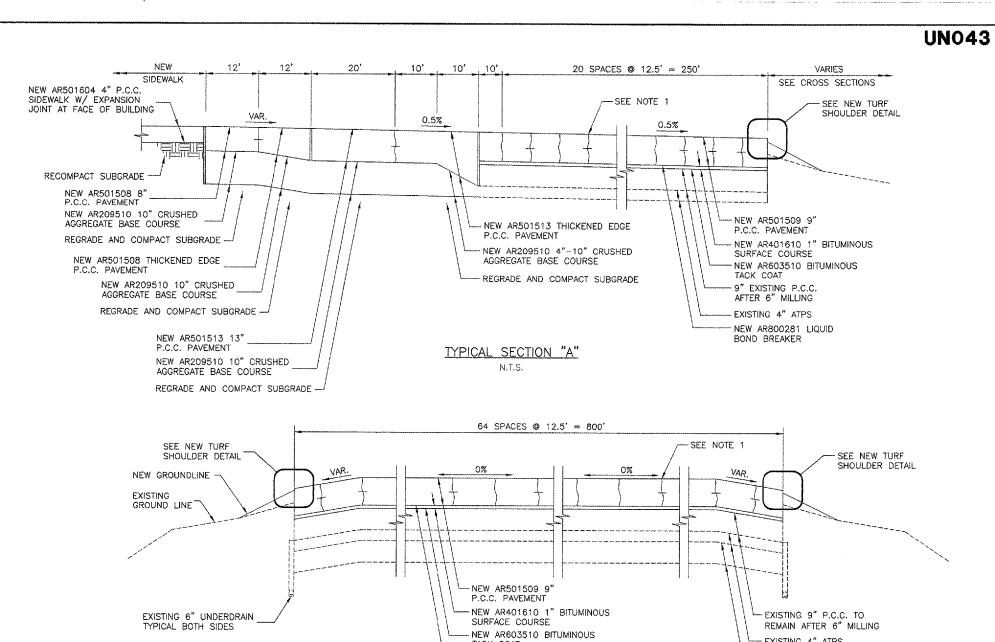
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NOTES

1. ALL CONSTRUCTION JOINTS TO BE DOWELED.





TYPICAL SECTION "B" — APRON HEAVY AIR CARRIER PAVEMENT

- NEW AR800281 LIQUID

TACK COAT

BONK BREAKER

N.T.S.

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DATE: Thu 6/16/05 2:29pm
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THIS BAR IS EQUAL TO 2' AT FULL SCALE (34X22).

SHEE UNIVERSITY OF ILLINOIS WILLARD AIRPORT SECTIONS REHABILITATE **TYPICAL** NEW

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EXISTING 4" ATPS

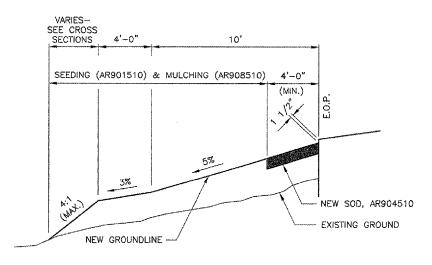
-EXISTING 8" LIME MODIFIED SUBGRADE

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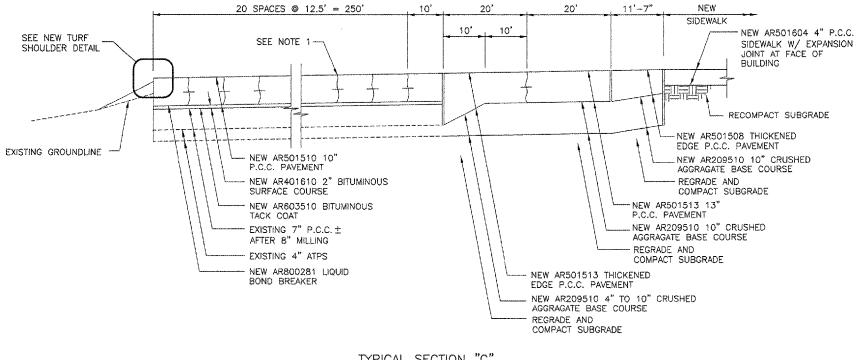
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SHEET 26 OF 58 SHEETS

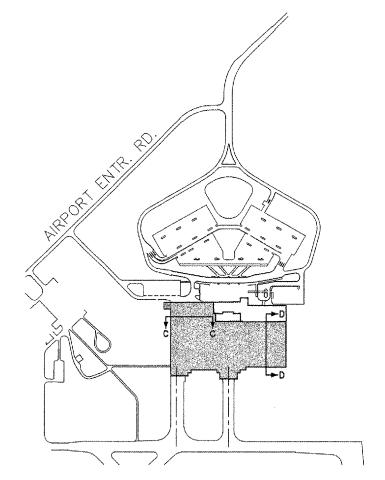
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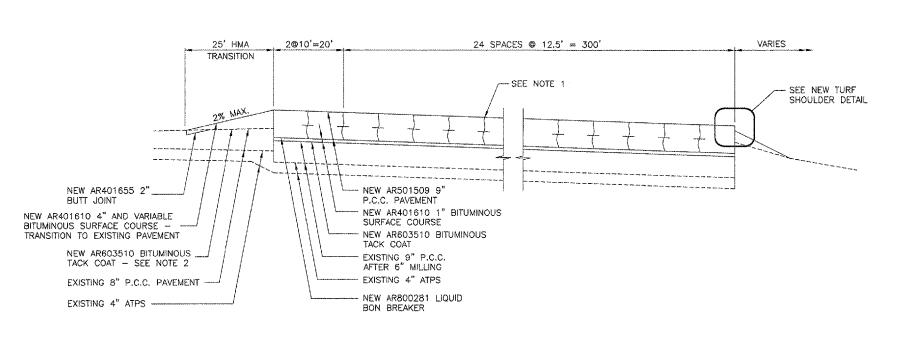






TYPICAL SECTION "C" N.T.S.





TYPICAL SECTION "D" N.T.S.

NOTES

- 1. ALL CONSTRUCTION JOINTS TO BE DOWELED.
- 2. BITUMINOUS TACK COAT REQUIRED BETWEEN EACH LIFT OF BITUMINOUS SURFACE COURSE IN THE BITUMINOUS TRANSITIONS.

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UNIVERSITY OF ILLINOIS WILLARD AIRPORT	REHABILITATE AIR CARRIER RAMP	NEW TYPICAL SECTIONS SHEET 2
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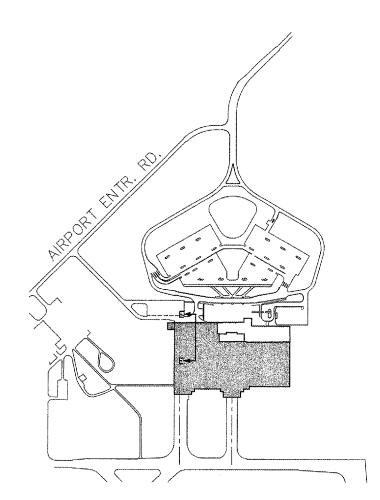
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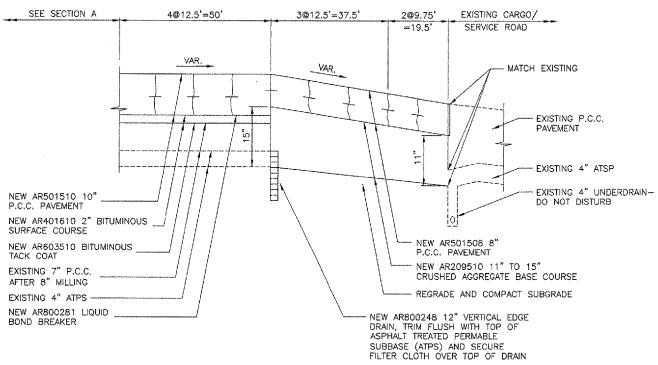
SHEET 27 OF 58 SHEETS

NOTES

1. ALL CONSTRUCTION JOINTS TO BE DOWELED.







TYPICAL SECTION "E"

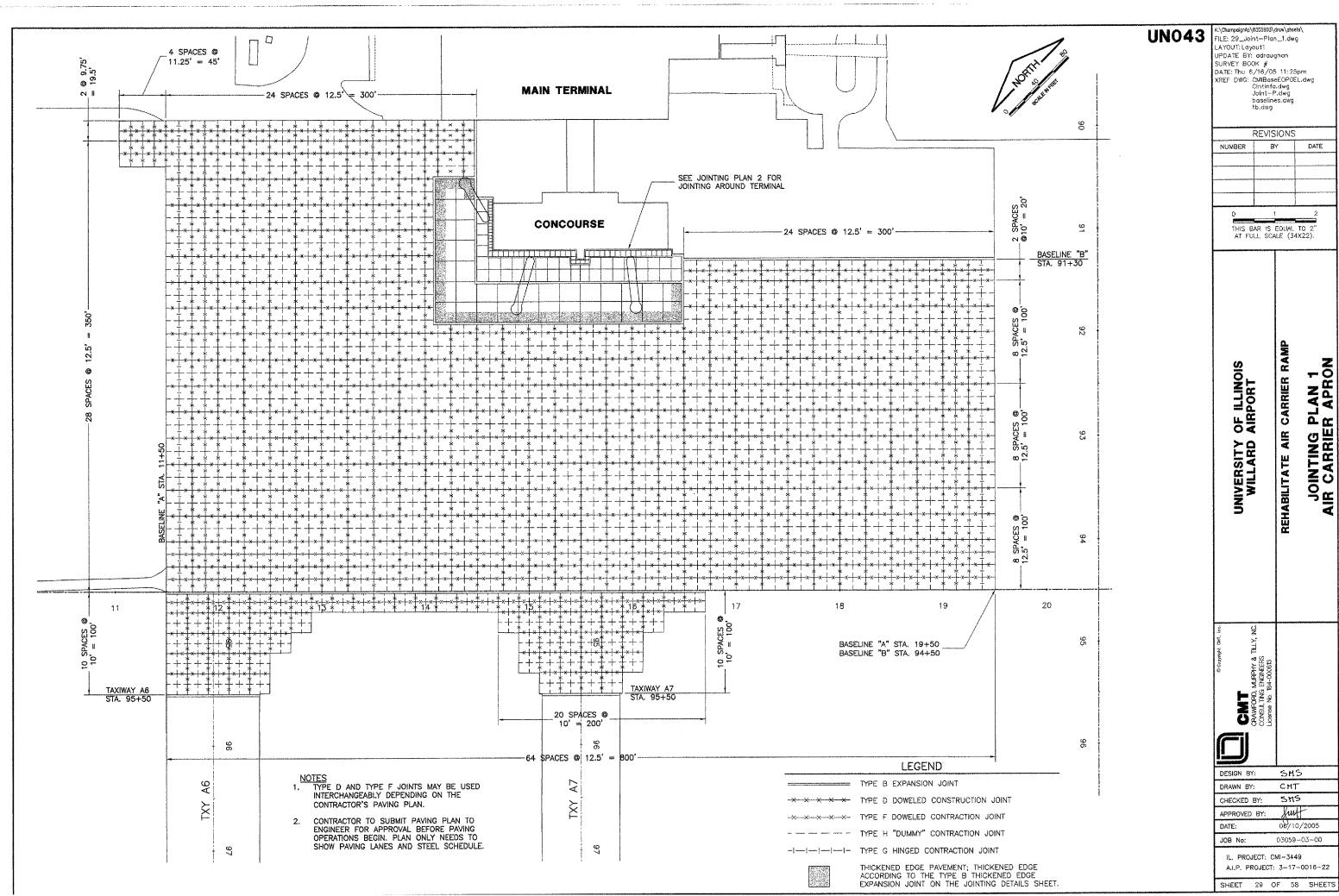
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A.I.P. PROJECT: 3-17-0016-22

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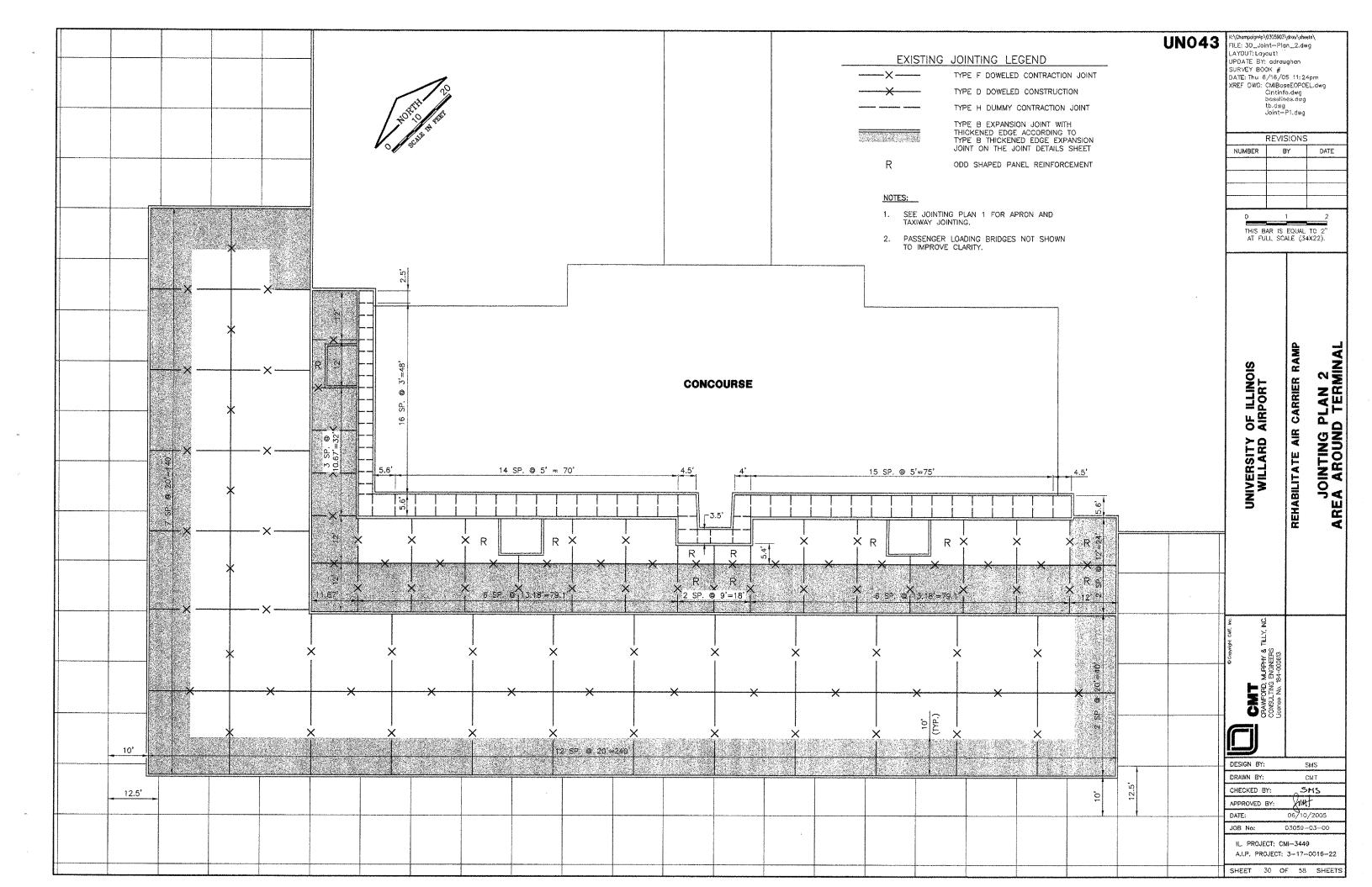


TABLE 1

PAVEMENT THICKNESS T - INCHES	DEPTH OF CONTRACTION JOINT INITIAL SAW CUT I, INCHES I=(T/4) ±1/4"	
5	1.25"	
6	1.50"	
7	1.75"	
8	2.00°	
9	2.25"	
10	2.50"	
11	2.75"	
12	3.00"	
13	3.25"	
14	3.50"	
15	3.75"	
16	4.00"	
17	4.25"	
18	4,50"	

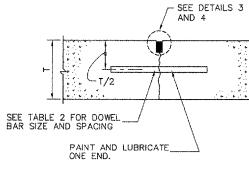
TABLE 2

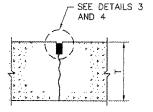
PAVEMENT THICKNESS	DOWEL BAR DETAILS					
T - INCHES	DIA.	LENGTH	SPACING	BAR SIZE	LENGTH	SPACING
5	5/8"	12"	12"	#4	24"	30"
6	3/4"	18"	12"	#5	30"	30"
7	3/4"	18"	12"	#5	30"	30"
8	1"	19"	12"	#5	30"	30"
9	1"	19"	12"	#5	30"	30"
10	1*	19"	12"	#5	30"	30"
11	1"	19"	12"	#5	30"	30"
12	1"	19"	12"	#5	30"	30"
13	1 - 1/4"	20"	15"	#5	30"	30*
14	1 1/4"	20"	15"	#5	30"	30"
15	1 - 1/4"	20"	15"	#5	30"	30"
16	1 - 1/4"	20"	15"	#5	30"	30"
17	1 - 1/2"	20"	18"	#5	30"	30″
18	1 - 1/2"	20"	18"	#5	30"	30"

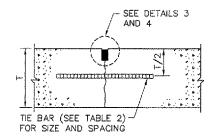
JOINT NOTES

- 1.) ALL EDGES OF NEW SLABS, FREE STANDING OR CLOSURE, SHALL BE EDGED WITH AN APPROVED TOOL HAVING A RADIUS OF 1/8" TO 1/4" TO FACILITATE SAWING OF THE SEALANT RESERVOIR. A RADIUS > 1/4" WILL NOT BE ACCEPTABLE.
- 2.) THE INITIAL SAWCUT FOR ALL LONGITUDINAL & TRANSVERSE CONTRACTION JOINTS SHALL BE SAWED AS SOON AS POSSIBLE AFTER PLACEMENT OF THE PAVEMENT.
- 3.) ALL TIE BARS & MESH SHALL BE SECURELY HELD IN PLACE BY SUPPORT PINS OR OTHER APPROVED METHODS TO PREVENT SHIFTING DURING & AFTER CONCRETE PLACEMENT.
- 4.) TIE BARS SHALL BE DEFORMED BARS IN CONFORMANCE WITH THE SPECIFICATIONS.
- 5.) THE INITIAL SAWCUT SHALL BE MADE TO THE 1/8" WIDTH INDICATED. INITIAL SAWING TO THE DIMENSIONS OF THE SECOND SAWCUT WILL NOT BE
- 6.) ALL SEALANT TO BE HOT/COLD POUR. SILICONE. AND PREFORMED SEALANT SHALL NOT BE USED ON THIS PROJECT.
- 7.) ALL JOINTS THAT ARE THE END OF A CONSTRUCTION PHASE TO BE TYPE D DOWELED CONSTRUCTION JOINTS.

CONTRACTION JOINTS







TYPE F DOWELED SYMBOL -X-X-X-

TYPE H DUMMY SYMBOL ---- TYPE G HINGED (TIED)

SYMBOL -------

DETAIL 4 *SEE TABLE

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AT FULL SCALE (34X22)

RAMP

CARRIER

AIR

REHABILITATE

AIL

DET

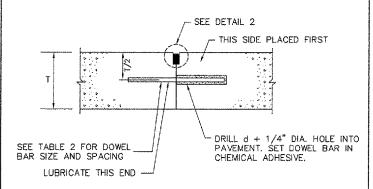
JOINTING

NEW

OF ILLINOIS AIRPORT

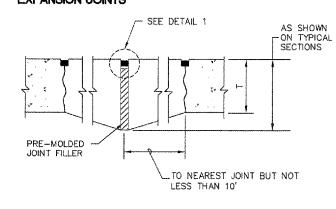
UNIVERSITY

CONSTRUCTION JOINTS

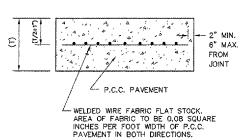


TYPE D DOWELED SYMBOL -x-x-x-

EXPANSION JOINTS

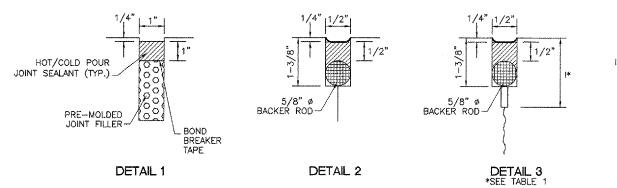


TYPE B THICKENED EDGE SYMBOL



ODD SHAPED PANEL REINFORCEMENT

JOINT SEALING DETAILS



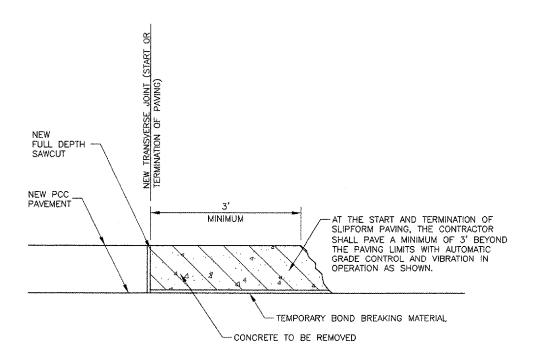


	DESIGN BY:	CMT
	DRAWN BY:	CMT
	CHECKED BY:	SMS
	APPROVED BY:	Eurt-
-	DATE:	06/10/2005
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IL. PROJECT: CMI-3449 AILP. PROJECT: 3-17-0016-22

SHEET 31 OF 58 SHEETS

DOWEL DETAIL



REQUIREMENTS AT START AND TERMINATION OF SLIPFORM PAVING

UN043

DOWELS ARC WELDED ALTERNATELY
TO TOP SPACER BARS

#9 GA. WIRE SPACER
5'-0" APART
SEE NOTE 1

SEE NOTES
2 & 3

SPACING AS SHOWN
IN JOINTING DETAILS

#0 GA. WIRE CHAIRS WELDED
TO TOP & BOTTOM SPACER
BARS (SEE DETAIL)

#0 GA. WIRE TOP & BOTTOM
SPACER BARS - 2 PER ASSEMBLY

DOWEL BASKET ASSEMBLY DETAIL

DOWEL BASKET NOTES

- 1.) #9 GA, WIRE SPACER BAR ARC WELDED TO THE BOTTOM OF TOP SPACER BAR (MAY BE MECHANICALLY ATTACHED IN LIEU OF WELDING): 3 REQUIRED PER UNIT. THIS WIRE MUST BE CUT OR REMOVED PRIOR TO PAVING.
- 2.) DOWEL BAR DIAMETER, LENGTH & SPACING SHALL BE AS SHOWN IN TABLE 2 OF JOINTING DETAILS SHEET.
- 3.) DOWELS SHALL BE EPOXY COATED FULL LENGTH OF DOWEL. IMMEDIATELY PRIOR TO PAVING, THE FREE END OF EACH DOWEL SHALL BE LUBRICATED OR OILED, FOR HALF THE LENGTH OF THE DOWEL.

TOP SPACER BAR

WIRE CHAIR

14"

DOWEL

(SEE NOTES 2 & 3)

T/2

BOTTOM

SPACER

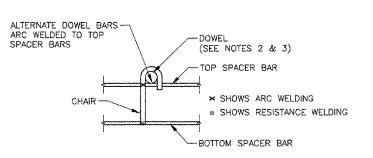
TO BE REMOVED

BAR

PRIOR TO PAVING

SIDE OF ASSEMBLY

DOWEL BAR INSTALLATION DETAIL



TYPICAL DOWEL BASKET ELEVATION DETAIL SHOWING CHAIR

DOWEL BASKET DETAILS

K:\Champoign&p\0305993\draw\sheets\
FILE: 32_PAVE_MISC_DTLS-1.dwg
LAYOUT: Layout1
UPDATE BY: adraughan
SURVEY BOOK #
DATE: Mon 6/20/05 12:05pm
XREF DWG: Cintinfo.dwg
tb.dwg

REVISIONS

NUMBER BY DATE

0 1 2

0 1 2
THIS BAR IS EQUAL TO 2"
AT FULL SCALE (34X22).

UNIVERSITY OF ILLINOIS
WILLARD AIRPORT
REHABILITATE AIR CARRIER RAMP
PAVING AND MISCELLANEOUS DETAILS
SHEET 1

CANT CRAFFIN & TU
CRAFFORD, MARPHY & TU
CONSULTING ENGRERS
License No. 184-000618

DESIGN BY: CMT

DRAWN BY: CMT

CHECKED BY: SMS

APPROVED BY: WW DATE: 06/10/2005

JOB No: 03059-03-00

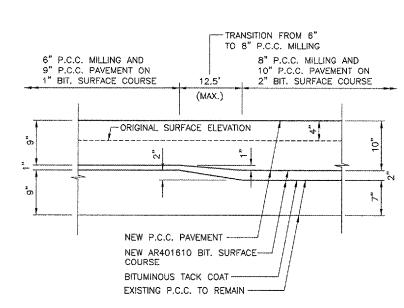
IL. PROJECT: CMI-3449 A.I.P. PROJECT: 3-17-0016-22

SHEET 32 OF 58 SHEETS

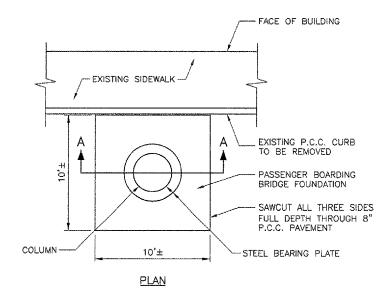
VARIABLE DEPTH SEE STAKING PLAN SHEET FOR LIMITS OF REMOVAL SURFACE REMOVAL - VARIABLE DEPTH NEW BITUMINOUS TACK COAT EXISTING P.C.C. PAVEMENT

BUTT JOINT DETAIL

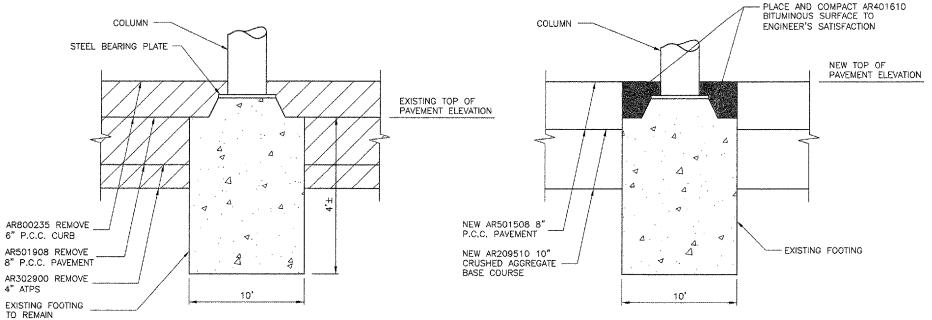
N.T.S.



TRANSITION FROM 6" TO 8" P.C.C. MILLING DETAIL N.T.S.



SECTION A - REMOVAL



REMOVAL AND REPLACEMENT AT BASE OF PASSENGER BOARDING BRIDGES DETAIL

SECTION A - REPLACEMENT

N.T.S.

NOTES

- SAWCUT FULL DEPTH THROUGH 8" P.C.C. PAVEMENT PRIOR TO BEGINNING REMOVAL OPERATIONS.
- 2.) DAMAGE TO EXISTING FOUNDATION OR BOARDING BRIDGE BY CONTRACTOR TO BE REPAIRED AT NO EXPENSE TO THE CONTRACT.
- 3.) BITUMINOUS SURFACE COURSE TO BE LEVEL WITH THE TOP OF THE STEEL PLATE, BE SLOPED TO DRAIN AWAY FROM THE COLUMN AND BE COMPACTED TO THE ENGINEER'S SATISFACTION. TO BE PAID AS AR401610 BITUMINOUS SURFACE COURSE.

UN043

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FILE: 33_PAVE_MISC_DTLS-2.dwg
LAYOUT: Layout1
UPDATE BY: adraughan
SURVEY BOOK #
DATE: Fri 6/17/05 12:15am
XREF DWG: Chritinto.dwg
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REVISIONS				
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0	1	2		

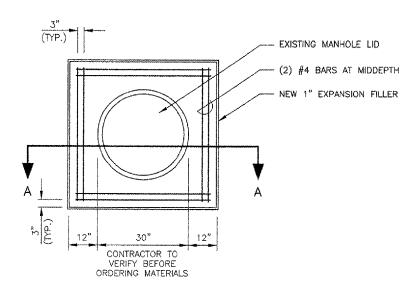
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

DETAIL: RAMP ANEOUS OF ILLINOIS AIRPORT CARRIER SCELL/ SHEET AIR UNIVERSITY REHABILITATE ≥ AND PAVING CEL DESIGN BY SMS DRAWN BY: \$MS CHECKED BY: APPROVED BY: Xunt DATE: 06/10/2005 03059--03--00 JOB No:

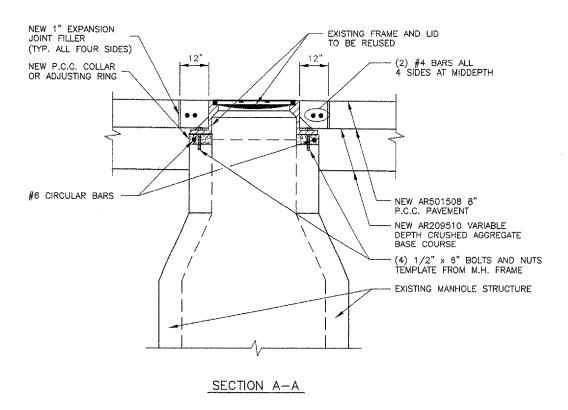
IL PROJECT: CMI--3449

AI.P. PROJECT: 3-17-0016-22

SHEET 33 OF 58 SHEETS



PLAN



MANHOLE ADJUSTMENT IN PAVEMENT DETAIL

MANHOLE NOTES

UN043 K:\ChompaignAp\0305903\draw\sheets\
FILE: 34_MH-ADJ-DETAIL.dwg LAYOUT: Layout1
UPDATE BY: adraughan
SURVEY BOOK #
DATE: Thu 6/16/05 2:34pm XREF DWG: Cintinfo.dwg tb.dwg

REVISIONS				
NUMBER	BY	DATE		
0	1	2		

THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

MANHOLE DETAILS REHABILITATE AIR CARRIER RAMP UNIVERSITY OF ILLINOIS WILLARD AIRPORT IN PAVEMENT A CRAWFORD, I CONSULTING DESIGN BY: CMT DRAWN BY: CMT

SMS

My

06/10/2005

03059-03-00

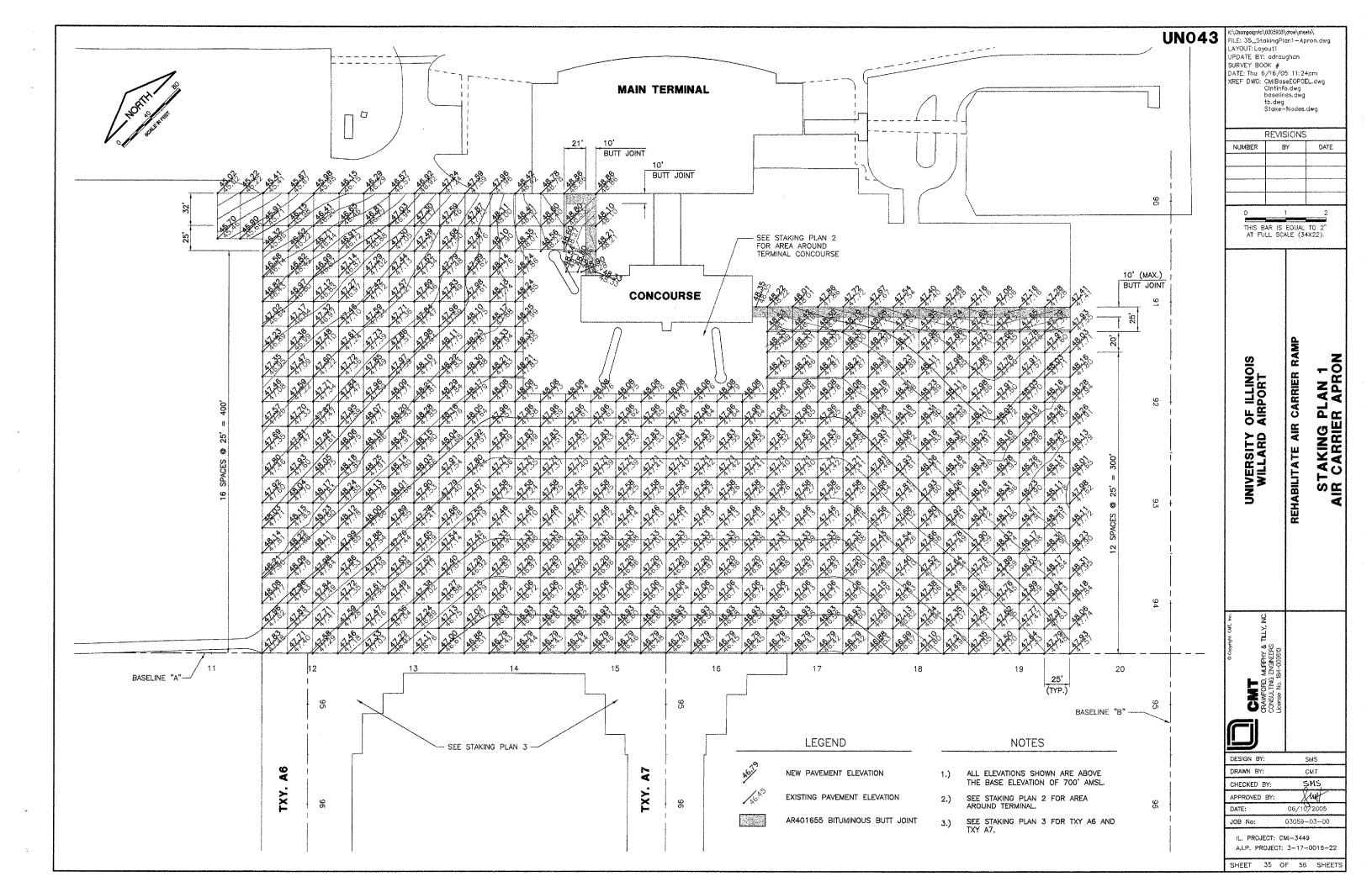
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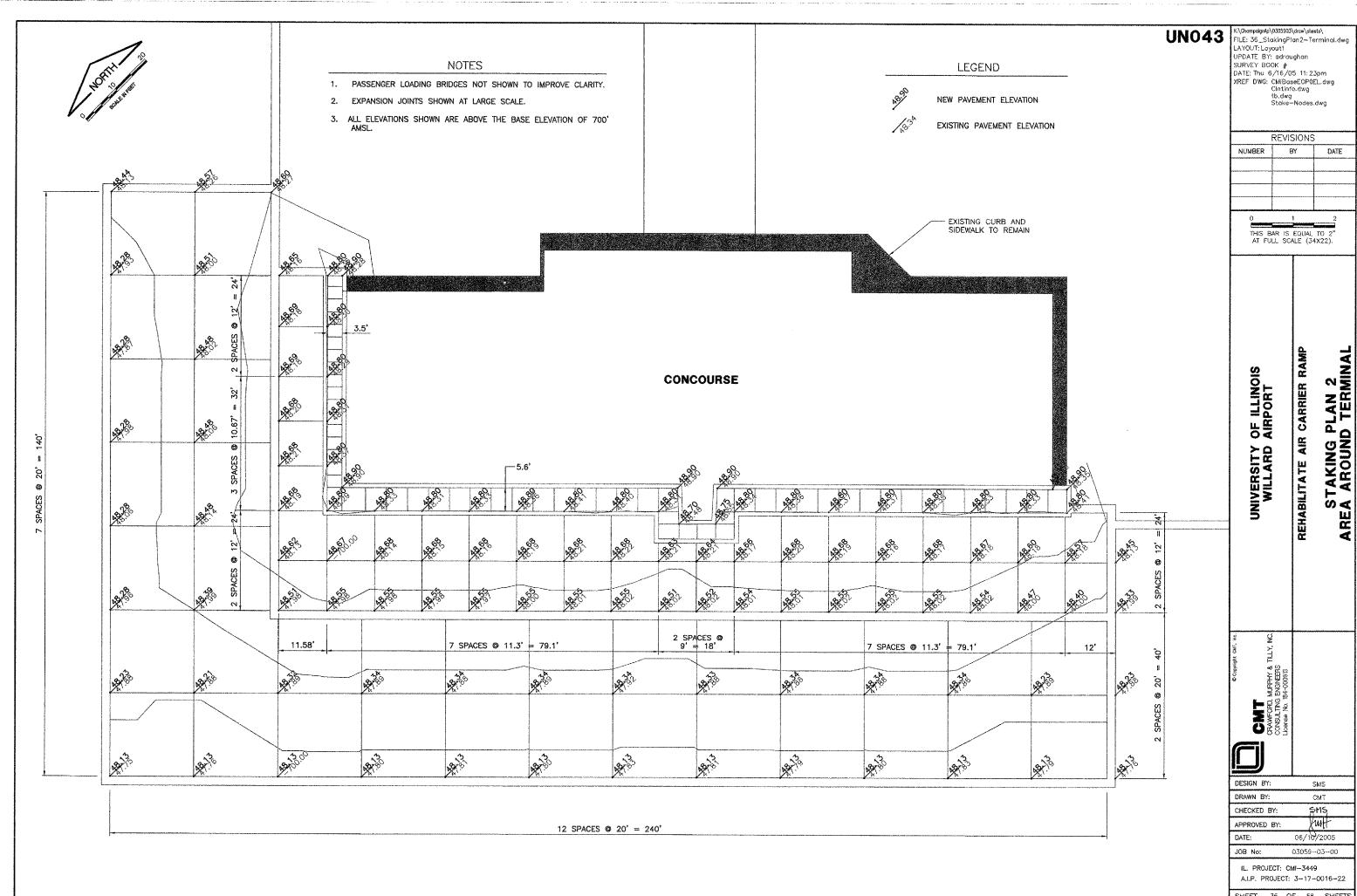
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JOB No:

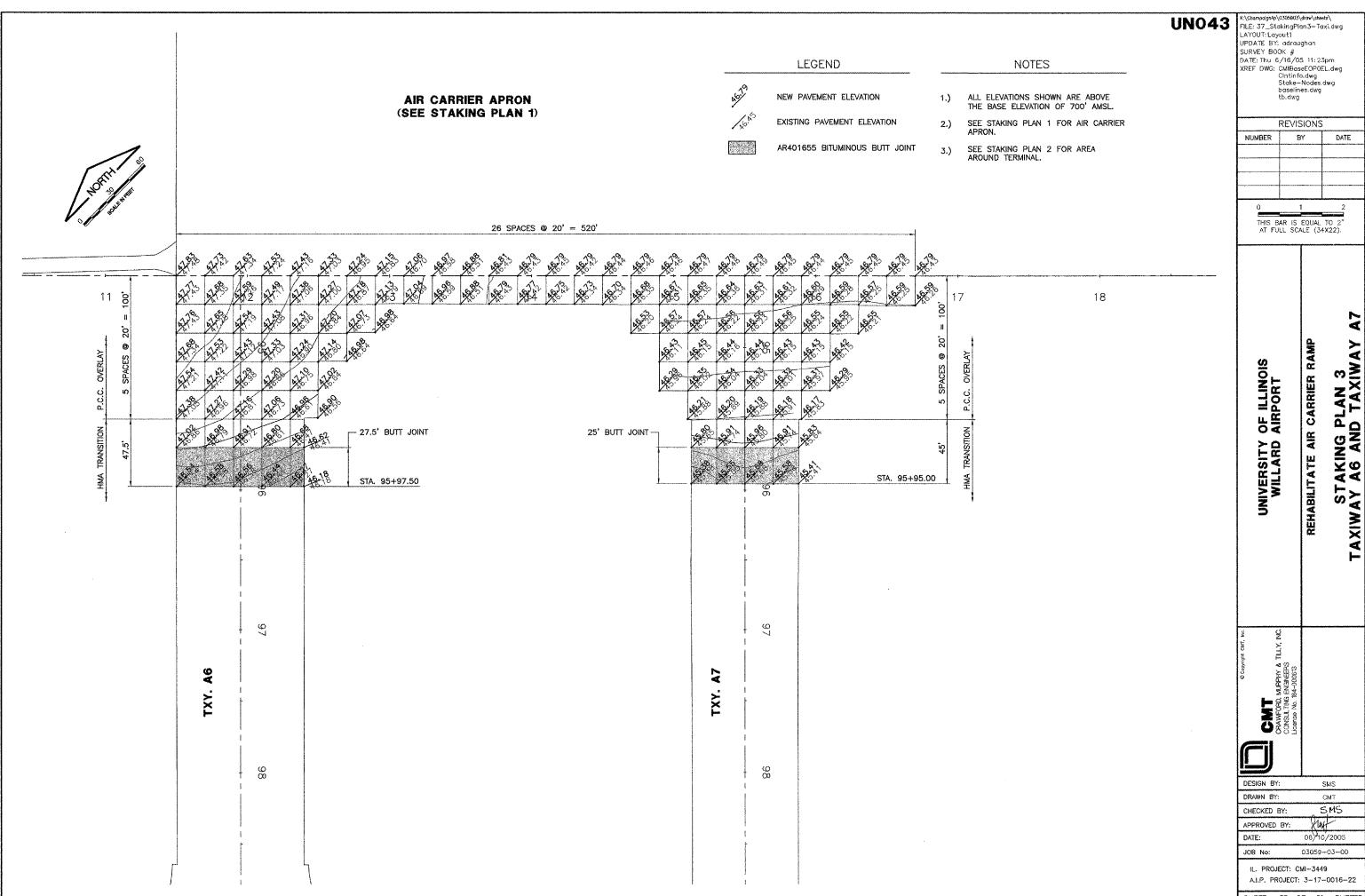
IL. PROJECT: CMI-3449 A.I.P. PROJECT: 3-17-0016-22 SHEET 34 OF 58 SHEETS

^{1.)} HEIGHT OF ADJUSTMENT SHOWN ON PROJECT IMPROVEMENTS SHEET 1.

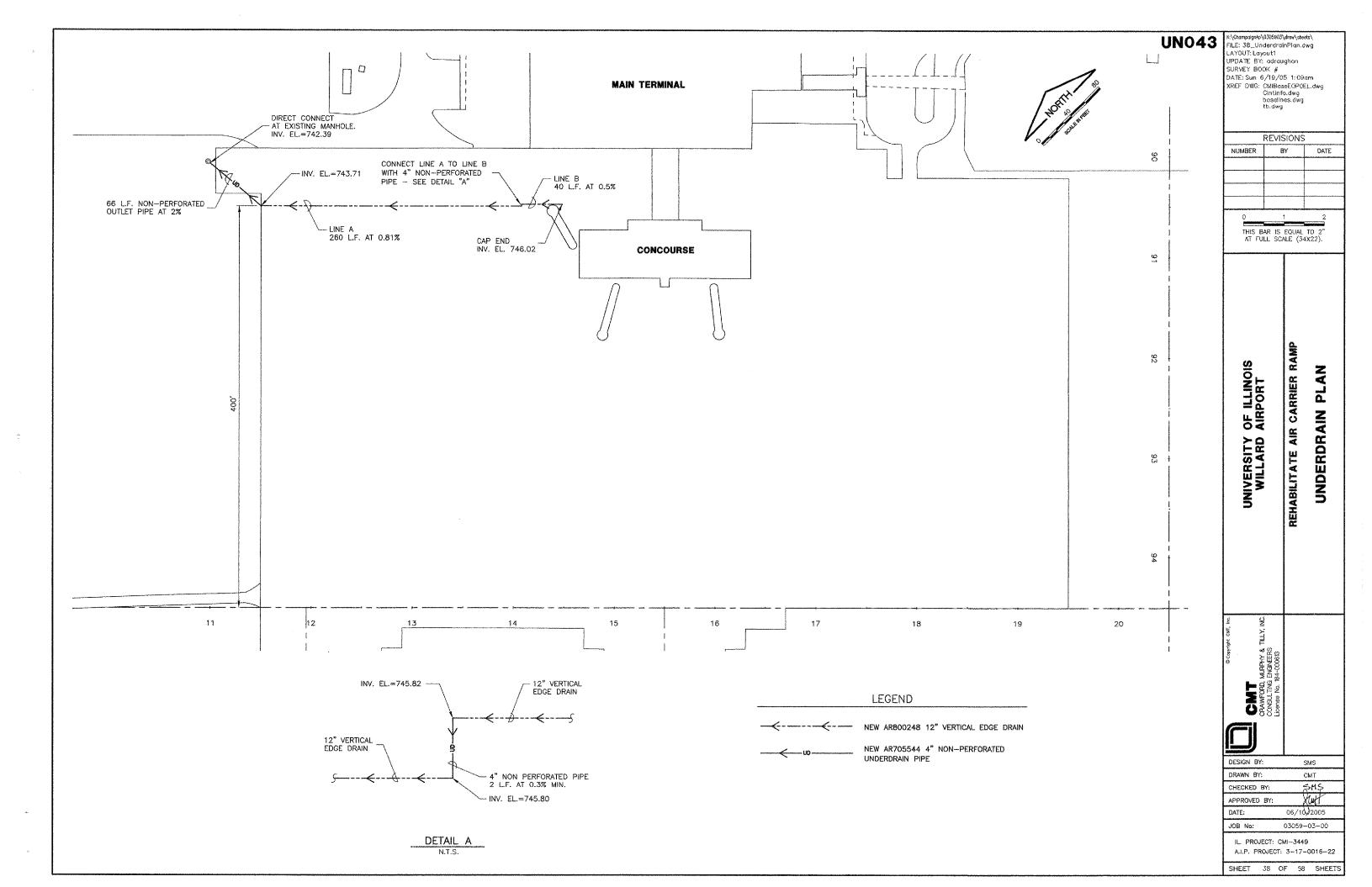


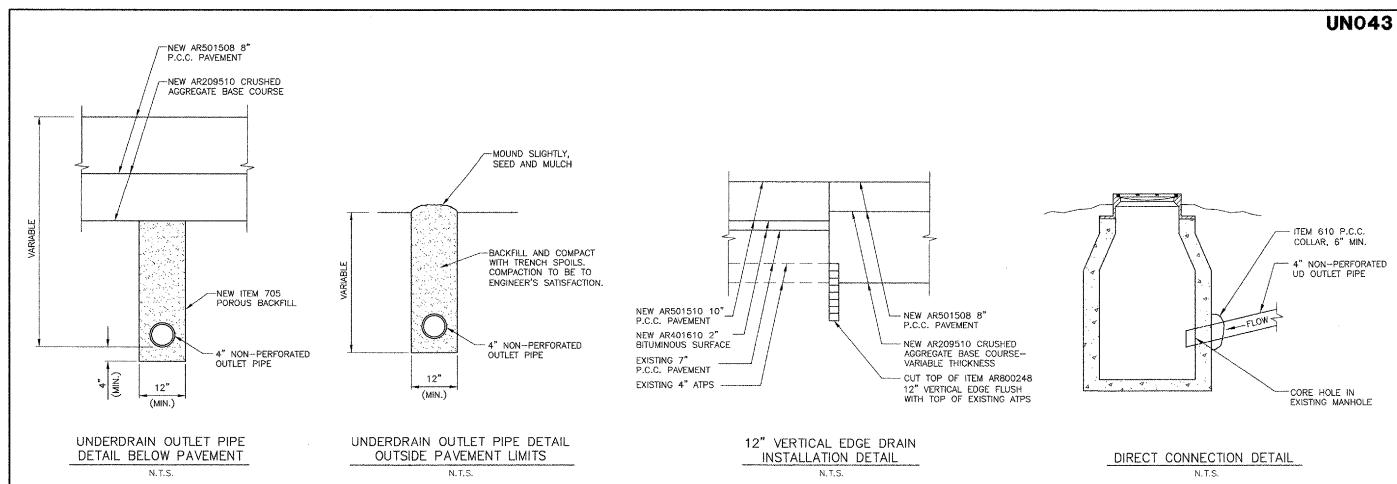


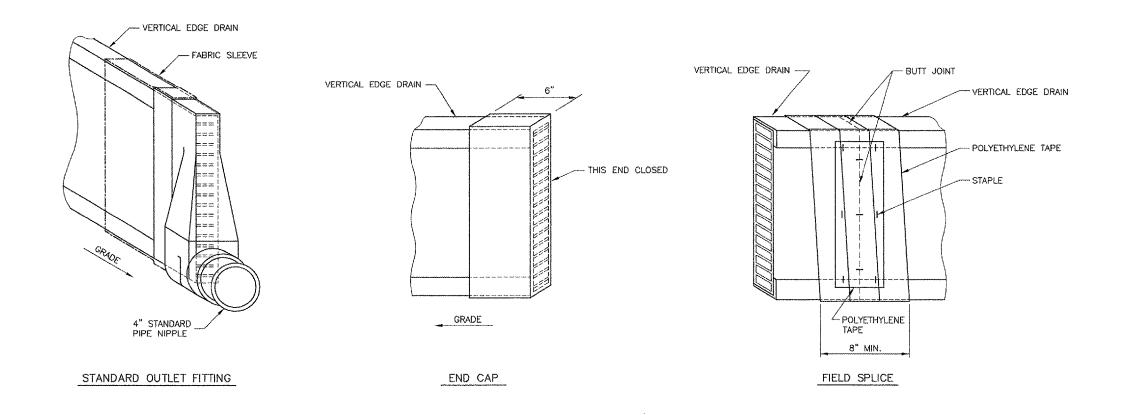
SHEET 36 OF 58 SHEETS



SHEET 37 OF 58 SHEETS







VERTICAL EDGE DETAILS

N.T.S.

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FILE: 39_Und_Details.dwg
LAYOUT: Layout1
UPDATE BY: adraughan
SURVEY BOOK #
DATE: Thu 6/16/05 2:39pm
XREF DWG: Clatinfo.dwg
tb.dwg

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NUMBER	BY	DATE

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THIS BAR IS EQUAL TO 2' AT FULL SCALE (34X22).

UNIVERSITY OF ILLINOIS
WILLARD AIRPORT
REHABILITATE AIR CARRIER RAMP
VERTICAL EDGE DRAIN
AND UNDEDRAIN DETAILS

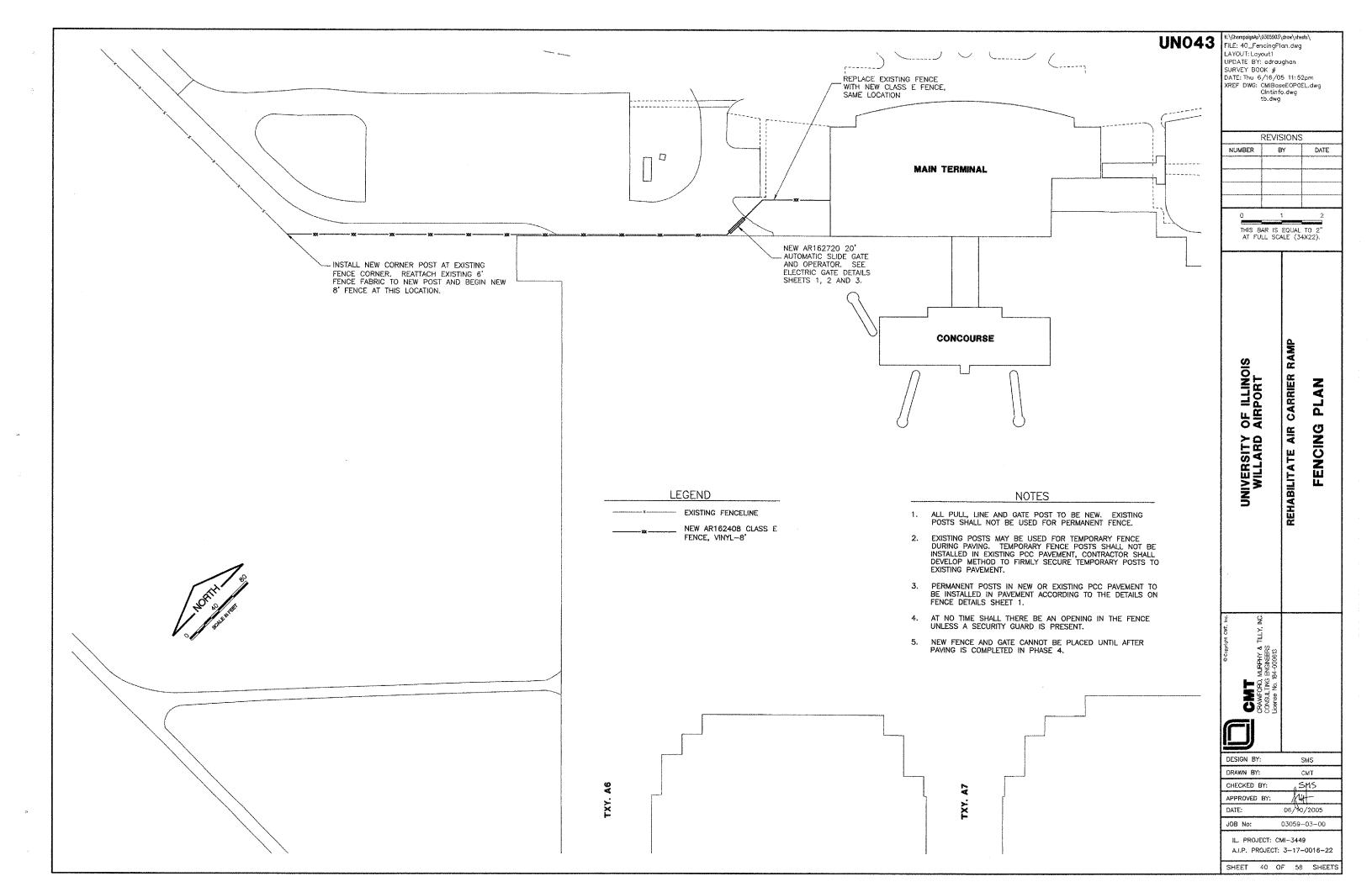
CANT GENTALLY, INC.
CANSLING ENGNERS
License No. 84-000633

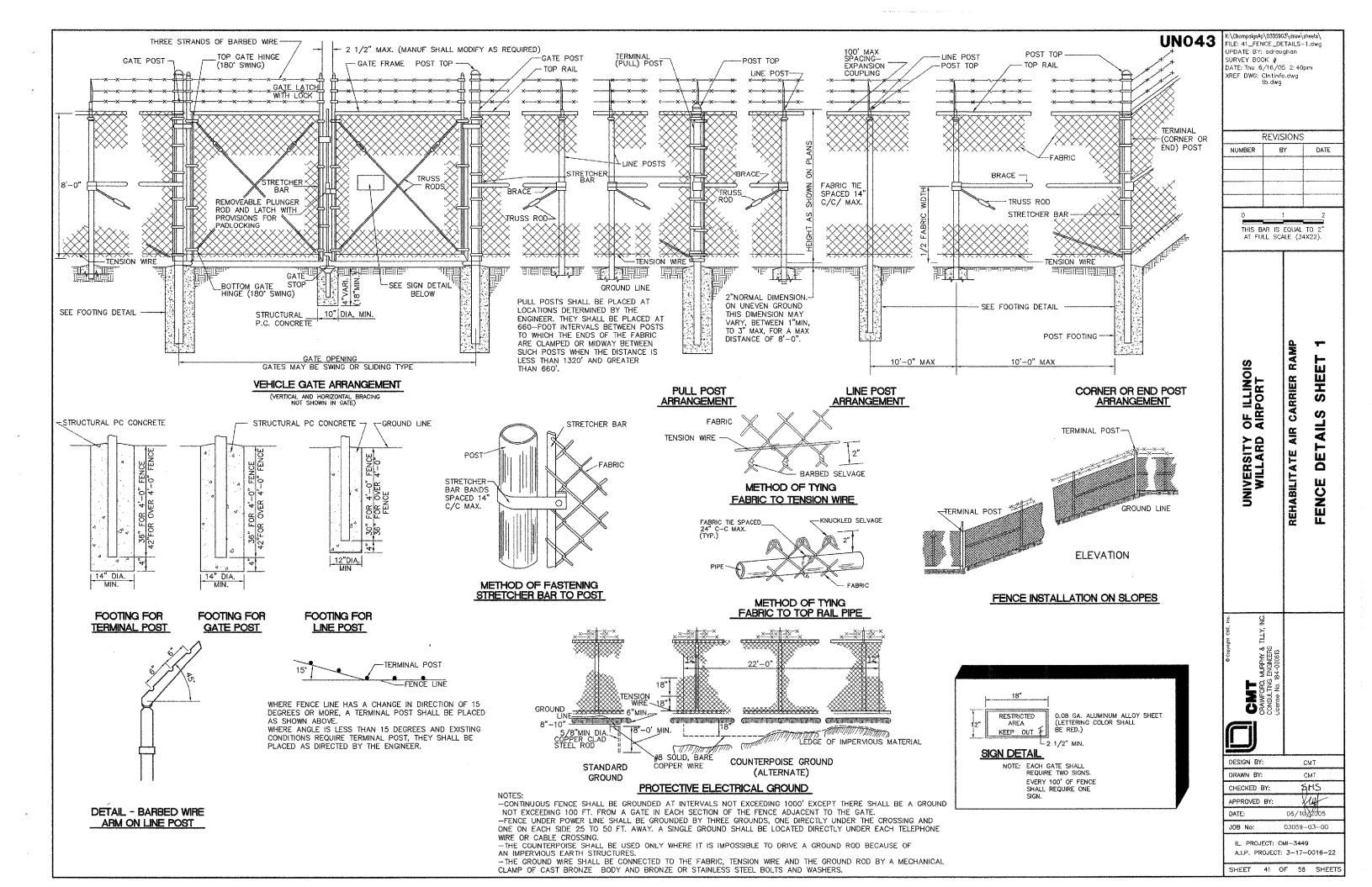
DESIGN BY: CMT
DRAWN BY: CMT
CHECKED BY: SMS
APPROVED BY:

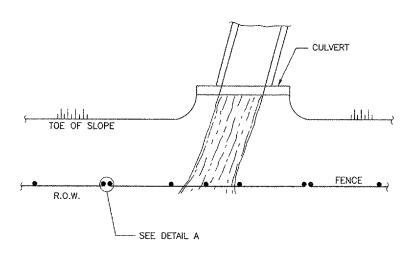
DATE: 06/40/2005 JOB No: 03059-03-00

IL. PROJECT: CMI-3449
A.I.P. PROJECT: 3-17-0016-22

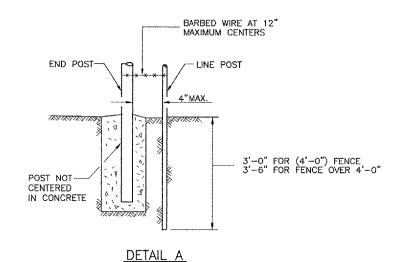
A.I.P. PROJECT: 3-17-0016-22 SHEET 39 OF 58 SHEETS

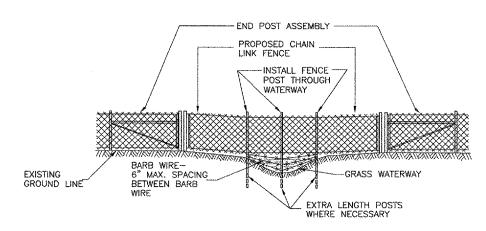






<u>PLAN</u> AT STREAM CROSSING





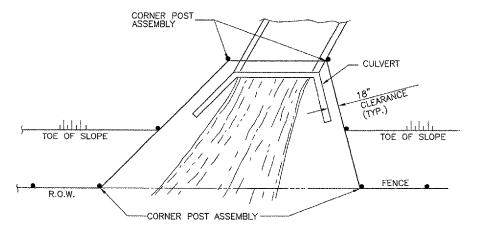
NOTES
USED AT LOCATIONS DESIGNATED BY RESIDENT ENGINEER

THE CHAIN LINK FABRIC SHALL BE REPLACED BY BARBED BARBED WIRE STRANDS AT 12" MAXIMUM CENTERS BETWEEN THE DOUBLE POSTS SHOWN ON DETAIL A WHEN SHOWN ON THE PLANS.

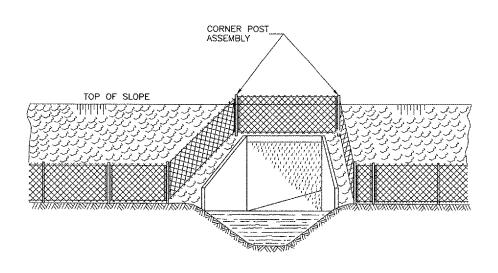
ELEVATION

INSTALLATION OF FENCE
WITHIN STREAMS OR WATERWAYS

UN043



PLAN AT HEADWALL



WHEN THE WIDTH OF THE CULVERT MAKES IT NECESSARY TO ANCHOR A POST TO THE TOP OF THE CULVERT, A CAST IRON SHOE OR OTHER DEVICE APPROVED BY THE ENGINEER SHALL BE USED.

ELEVATION INSTALLATION AROUND HEADWALL

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SHOWN.

K:\ChampaignA\0305903\draw\sheets\
FILE: 42_FENCE_DETAILS-2.dwg
UPDATE BY: odraughon
SURVEY BOOK #
DATE: Thu 6/16/05 2:40pm
XREF DWG: Cintinfo.dwg
tb.dwg

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REVISIONS			
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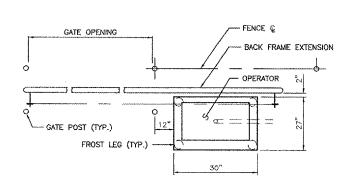
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

S RAMP UNIVERSITY OF ILLINOIS WILLARD AIRPORT Ê CARRIER SHE AIL AIR DET REHABILITATE FENCE CRAWFORD, CONSULTING DESIGN BY: CMT DRAWN BY: CMT CHECKED BY: 5MS MULT 06/10/2005 DATE: JOB No: 03059-03-00 IL. PROJECT: CMI-3449

A.I.P. PROJECT: 3-17-0016-22

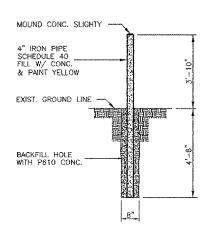
SHEET 42 OF 58 SHEETS

## **UN043**



# GATE OPERATOR DETAIL

**PLAN** 



## **BOLLARD DETAIL**

CRITICAL DIMENSIONS

CLEAR OPENING

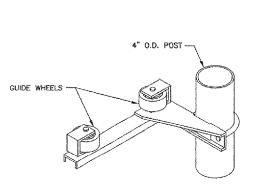
COUNTER BALANCE POST SPACING

OVERALL GATE LENGTH

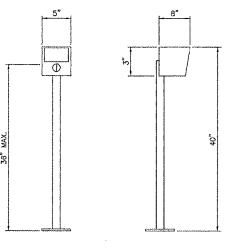
COUNTERBALANCE LENGTH

NOMINAL GATE HEIGHT

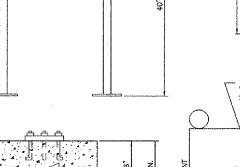
POST HEIGHT

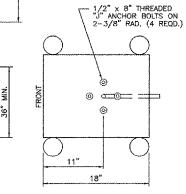


## STANDARD BOTTOM GUIDE ASSEMBLY



ITEM 610 CONCRETE

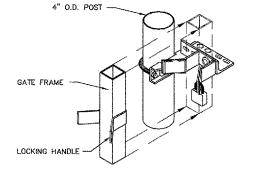




NOTE: DIMENSIONS OF CONDUIT KEY CONTROL AND ANCHOR BOLTS MAY BE CHANGED TO MEET MANUFACTURERS SPECIFICATIONS AND DIMENSIONS.

#### CARD READER DETAIL

N.T.S. (DIMENSIONS SHALL BE ADJUSTED FOR ADDITIONAL EQUIPMENT REQUIRED)



## CATCH ASSEMBLY DETAIL

(26' GATE SHOWN)

SEE CRITICAL DIMENSION "G"

SEE CATCH ASSEMBLY DETAIL

FINISHED GRADE

/ DETAIL	G	FABRIC HEIGHT	7'~0"	
A	******	C		D
- 3/16" S.S. AIRCRAFT CABLE (TYP.)				В
1" × 2" (TYP.)		2" × 2" (TYP.)		/ 1/2" x 1" (TYP.)
	$ \rangle$			
	K			

31'-0"

11'~0"

8'-0"

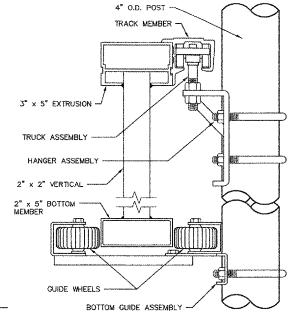
9'~3"

**ELEVATION** 

**(**B)

### CANTILEVER SLIDE GATE

(26' GATE SHOWN)



PIPE BOLLARD (TYP. EA. CORNER)

NOTE: EXTRUSIONS SHALL BE OVERSIZED FOR EXTRA RIGIDITY OVER "STANDARD" GATE DESIGN.

#### SECTION B-B

(TYP. ALL GATES)

LOCATIONS, DETAILS AND CHARACTER OF EQUIPMENT SHOWN ON THIS SHEET ARE GENERIC. EQUIPMENT LOCATIONS SHALL BE AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER.

#### NOTES

- 1. CANTILEVERED GATE SHALL BE SUFFICIENTLY RIGID TO WITHSTAND FLEXING OR BENDING DURING WINDY CONDITIONS. CONTRACTOR SHALL PROVIDE STIFFENERS, STRUCTURAL SHAPES IN EXCESS OF THE MINIMUM SPECIFED DIMENSIONS OR ADDITIONAL ROLLERS AND POSTS SUFFICIENT TO PREVENT DISPLACEMENT OF THE GATE BY WIND OR BY UNAUTHORIZED PERSONNEL.
- CONTRACTOR SHALL PROVIDE AND INSTALL GATE AS A COMPLETE WORKING UNIT. THE GATE WORK SHALL INCLUDE, BUT NOT BE LIMITED TO: GATE, OPERATOR, CARD READER AND POWER CABLES, CONDUIT, TRENCHING, CIRCUIT BREAKERS, AND ALL CONNECTIONS, LABOR AND MATERIALS NECCESSARY TO COMPLETE OPERATION.
- 3. LOCATION OF THE GATE OPERATOR SHALL BE AS RECOMMENDED BY THE MANUFACTURER.
- 4. PIPE BOLLARDS SHALL BE INSTALLED AT LOCATIONS SHOWN IN
- 5. THE FABRIC TYPE & FINISH OF THE GATE, MATCH WITH THE PROPOSED FENCE OR AS DIRECTED BY THE ENGINEER.
- 6. ALL SUDING GATES SHALL HAVE ALL ROLLERS ENCLOSED IN STEEL OR PLASTIC SHROUDS TO PREVENT ACCIDENTAL INJURY.
- 7. BARBED WIRE ON TOP OF GATE NOT SHOWN.

K:\ChampaignAp\0305903\draw\shaets\ FILE: 43_ELEC_GATE_DTLS_1.dwg LAYOUT: Layout1 UPDATE BY: adraughan SURVEY BOOK # DATE: Thu 6/16/05 3:47pm XREF DWG: Cintinfo.dwg tb.dwg

REVISIONS		
NUMBER	BY	DATE
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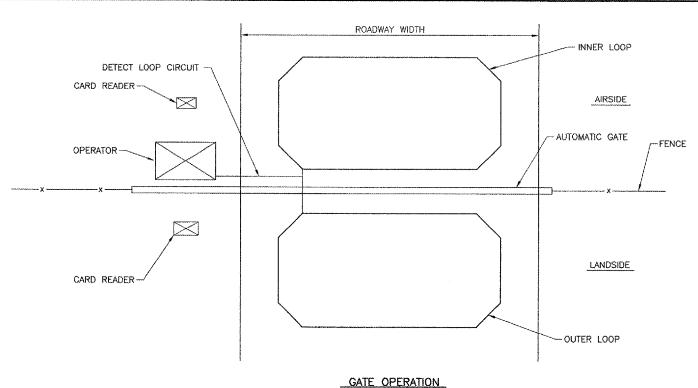
THIS BAR IS EQUAL TO 2' AT FULL SCALE (34X22).

# SHEE S CARRIER **DETAL** REHABILITATE GA ELECTRICAL

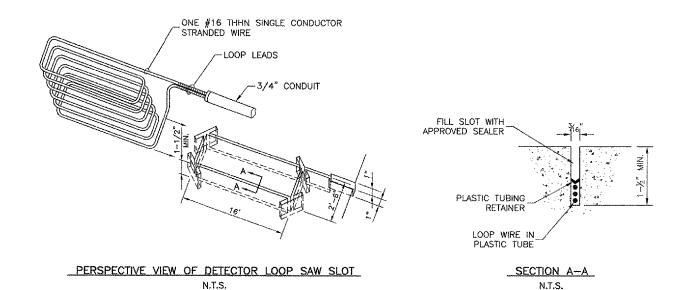
DRAWN BY: CMT SMS CHECKED BY: APPROVED BY XIM 06/10/2005 03059-03-00

IL. PROJECT: CMI-3449 A.I.P. PROJECT: 3-17-0016-22

SHEET 43 OF 58 SHEETS



N.T.S.



#### DETECTOR LOOP DETAILS

#### CAUTION:

- . DO NOT SPLICE WIRE.
- DO NOT FRACTURE WIRE INSULATION. LOOPS SHORTED TO GROUND WILL CAUSE DETECTOR MALFUNCTION. WHEN PLACING WIRE IN THE SLOT, DO NOT USE SCREWDRIVER OR OTHER SHARP TOOLS.
- TYPICAL LAYOUT FOR LOOP:

   SAW SLOT 3/16" WIDE x 1-1/2" DEEP. MAKE RECTANGULAR SHAPE TO SPECIFIED LOOP DIMENSIONS PLUS SLOT FOR LEAD CONDUIT.
- GROUT WITH NO. 202 WEATHERBAN SEALANT (A PRODUCT OF 3M CO.) OR APPROVED EQUIVALENT ... (EXAMPLE: DE WITTS NO. 99 BLACK MASTIC CAULK).

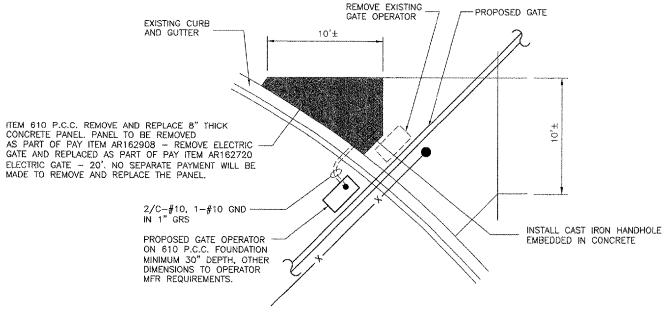
#### NOTES:

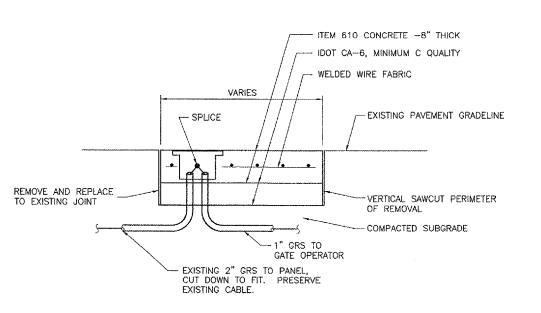
- 1.) LOOP LEADS ARE LIMITED TO 100 FEET.
- 2.) LOOP LEADS MUST HAVE FOUR (4) TWISTS PER FOOT.
- 3.) LOOP AND LOOP LEADS MUST BE LOCATED, AT LEAST, 18" FROM ANY ELECTRICAL POWER SERVICE OR RUN, OR STEEL REINFORCEMENT.
- 4.) LOOP LEADS MUST BE IN SEPERATE CONDUIT BETWEEN LOOP AND DETECTOR. THEY MUST NOT SHARE CONDUIT WITH OTHER WIRING OR LEADS FROM OTHER LOOPS.
- 5.) WIRE SHALL BE #16 THHN SINGLE CONDUCTOR STRANDED WIRE.
- 6.) ALL WIRE SHALL BE CONTINOUS WITHOUT SPLICING.

NOTE:
LOCATIONS, DETAILS AND CHARACTER OF EQUIPMENT
SHOWN ON THIS SHEET ARE GENERIC. EQUIPMENT
LOCATION SHALL BE AS RECOMMENDED BY THE
EQUIPMENT MANUFACTURER.

#### SUMMARY OF OPERATION

- 1.) THE GATES SHALL HAVE AN AUTOMATIC GATE OPERATOR WITH TWO CARD READERS AND REMOTE CONTROL. ONCE THE GATE IS OPENED IT WILL REMAIN OPEN FOR THE TIME SPECIFIED BY THE OWNER AFTER THE LOOP PICKUPS DETERMINE THAT THERE ARE NO VEHICLES OVER THE PICKUP LOOPS.
- 2.) ACTUATING THE GATE OPENERS VIA THE CARD READER REQUIRES THE VEHICLE TO APPROACH THE GATE ENTRANCE AND STOP. THE DRIVER ACTIVATES THE GATE OPENER BY SWEEPING HIS CARD. THE ACCESS CONTROL DEVICE TRANSMITS AN IMPULSE TO ACTIVATE THE GATE OPENER TO OPEN THE GATE. AFTER THE GATE IS FULLY OPENED AND STOPPED, THE VEHICLE PROCEEDS THROUGH THE OPENING, PASSING OVER THE LOOPS. WHILE THE VEHICLE IS IN THE LOOP SENSING RANGE, AN IMPULSE IS TRANSMITTED TO THE GATE OPERATOR TO HOLD THE GATE IN THE OPEN POSITION. WHEN THE LOOP HAS BEEN CLEARED, THE AUTOMATIC TIMER IS ACTIVATED AND, WHEN THE USER—DETERMINED TIME HAS ELAPSED, IT WILL ACTIVATE THE GATE OPENER TO CLOSE THE GATE. EXITING THE AREA IS ACCOMPLISHED IN THE SAME MANNER.





P.C.C. PAVEMENT REMOVAL AND REPLACEMENT

(PLAN VIEW)

N.T.S.

P.C.C. PAVEMENT REMOVAL AND REPLACEMENT N.T.S.

K.\ChempoignAt\030550S\drow\sheets\
File: 44_ELEC_GATE_DTLS_2.dwg
LAYOUT: Layout1

UPDATE BY: adraughan
SURVEY BOOK #
DATE: Fri 6/17/05 12:07pm
XREF DWG: Cintinfo.dwg
tb.dwg

REVISIONS

NUMBER BY DATE

0 1 2

THIS BAR IS EQUAL TO 2 AT FULL SCALE (34X22).

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UNIVERSITY OF ILLINOIS
WILLARD AIRPORT
REHABILITATE AIR CARRIER RAMP
ELECTRICAL GATE DETALS SHEET

CANT (CONSTITUTE CONSTITUTE)
CANTEGORY & TLLY, INC.
CONSTITUTE ENGREES
License No. 184-000613

DESIGN BY: TM

DRAWN BY: CMT

CHECKED BY: SMS

APPROVED BY: MA

DATE: 06/10/2005

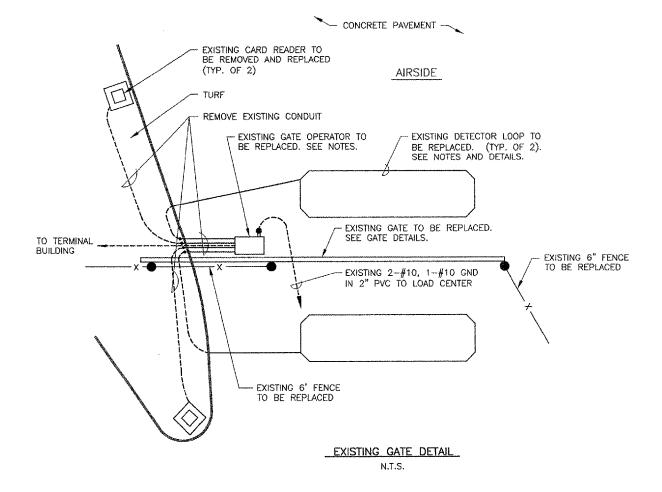
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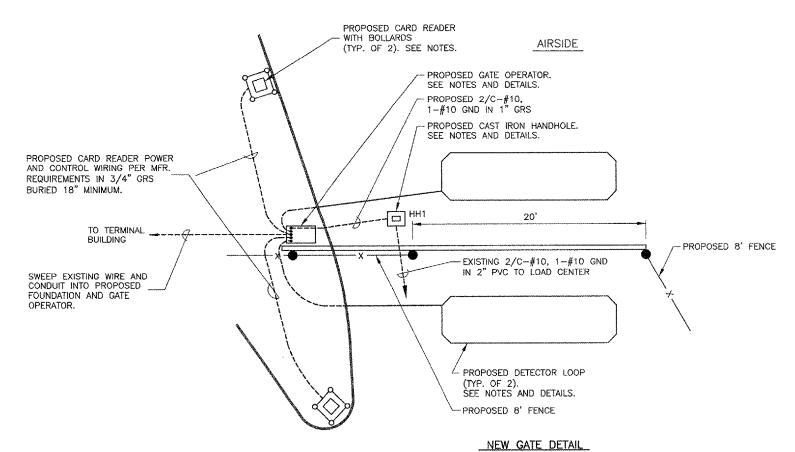
IL. PROJECT: CMI-3449

A.I.P. PROJECT: 3-17-0016-22

SHEET 44 OF 58 SHEETS

## **UN043**





N.T.S.

#### NOTES FOR GATE

- DISCONNECT AND REMOVE EXISTING GATE OPERATOR. REPLACE WITH NEW GATE OPERATOR, SENTEX SL-580, 3/4 HP, 208V, 1 PHASE, OR EQUIVALENT. GATE OPERATOR SHALL INCLUDE ALL ACCESSORIES AS REQUIRED TO INTERFACE WITH REMOTE CONTROL EQUIPMENT LISTED HEREIN.
- 2.) EXISTING GATE OPERATOR IS POWERED FROM AN EXISTING 20A-2P CIRCUIT BREAKER IN A NEARBY LOAD CENTER. PROPOSED GATE OPERATOR SHALL ALSO BE POWERED FROM THIS CIRCUIT BREAKER. EXISTING POWER WIRING SHALL REMAIN IN SERVICE AND BE RECONNECTED TO PROPOSED GATE OPERATOR WITH A SPLICE IN HH1.
- 3.) GATE OPERATOR SHALL INCLUDE 30 PROGRAMMABLE RADIO TRANSMITTERS, FURNISHED WITH GATE OPERATOR, TRANSMITTERS SHALL BE HAND HELD AND INCLUDE CLIP FOR ATTACHMENT TO VEHICLE SUN VISOR. TRANSMITTERS SHALL BE LINEAR MODEL #105015 OR EQUIVALENT.
- 4.) GATE OPERATOR SHALL INCLUDE INTERNAL TWO-CHANNEL RECEIVER, ONE CHANNEL FOR SAFTEY EDGE TRANSMITTER, THE OTHER FOR RADIO TRANSMITTERS. RECEIVER SHALL BE LINEAR MODEL 203102 OR EQUIVALENT.
- 5.) GATE OPERATOR SHALL INCLUDE WEATHERPROOF REMOTE CARD READERS, FURNISHED WITH GATE OPERATOR. CARD READERS SHALL BE LOCATED IN SIMILAR MANNER AS EXISTING CARD READERS. CARD READERS SHALL BE POWERED BY GATE OPERATOR, CARD READERS SHALL BE PROGRAMMABLE. CONTRACTOR SHALL INSTALL 3/4" GRS CONDUIT WITH ONE 2/C #16 CABLE (POWER) AND ONE 2/C #16 CABLE (CONTROL) FROM KEYPAD TO GATE OPERATOR. CARD READERS SHALL BE HID PROXPRO 5355 OR EQUIVALENT.
- GATE OPERATOR SHALL INCLUDE TWO IN-PAVEMENT LOOP DETECTORS. ONE IN-PAVEMENT LOOP SHALL BE INSTALLED "OUTSIDE" GATE AND SHALL BE USED AS "SAFETY" LOOP WHEN ENTERING AND EXITING, THE OTHER IN-PAVEMENT LOOP SHALL BE INSTALLED "INSIDE" GATE AND SHALL BE USED AS AN "OPEN" LOOP WHEN EXITING. WIRING SHALL BE AS DETAILED. EXISTING LOOP KERF SHALL BE CLEANED OUT, WASHED AND DRIED WITH COMPRESSED AIR, TO THE SATISFACTION OF THE ENGINEER. ALL EXISTING AND NEW SAW KERF SHALL BE SEALED WITH LOOP SEALANT PER DETECTOR LOOP DETAILS
- 7.) GATE OPERATOR SHALL OPERATE ON REMOTE CONTROLLED "OPEN" (FROM RADIO TRANSMITTERS, OR BY CARD READER STATION) AND AUTOMATIC ADJUSTABLE 0-90 SECOND INTERNAL TIMER CONTROLLED "CLOSE" ("SAFETY" LOOP SHALL INSTIGATE TIMING CYCLE).
- HANDHOLE SHALL BE CAST IRON, HOT DIPPED GALVANIZED, WITH STEEL COVER SUITABLE FOR VEHICLE TRAFFIC H20 LOADING. 12"Lx12"Wx8"D. APPLETON WYT-121208-CSV OR EQUIVALENT. ENGRAYE COVER WITH "ELECTRIC" LOGO. HANDHOLE SHALL BE INSTALLED AS PART OF ITEM AR162720 ELECTRIC GATE-20', NO SEPARATE PAYMENT WILL BE MADE FOR HANDHOLE.

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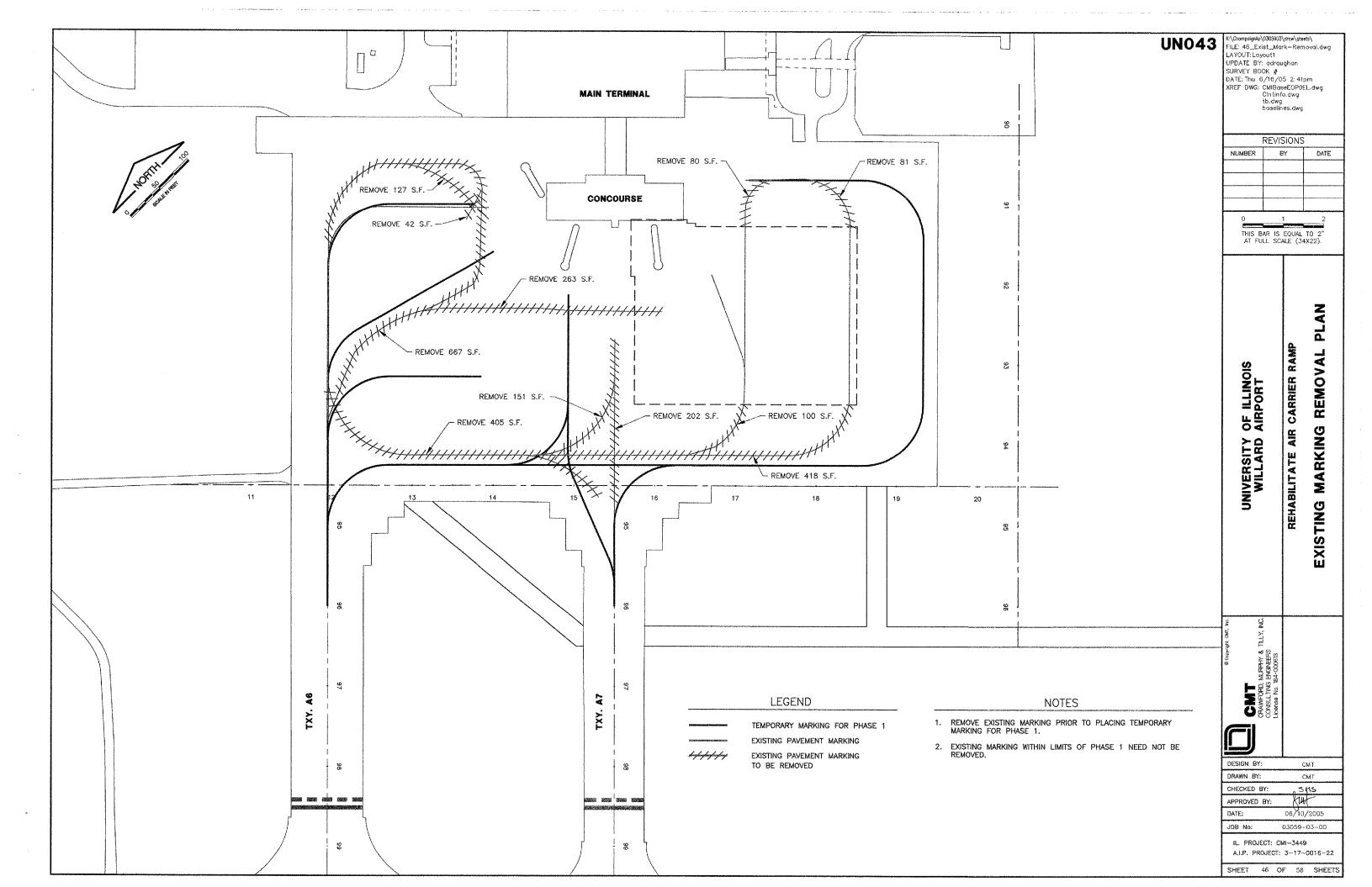
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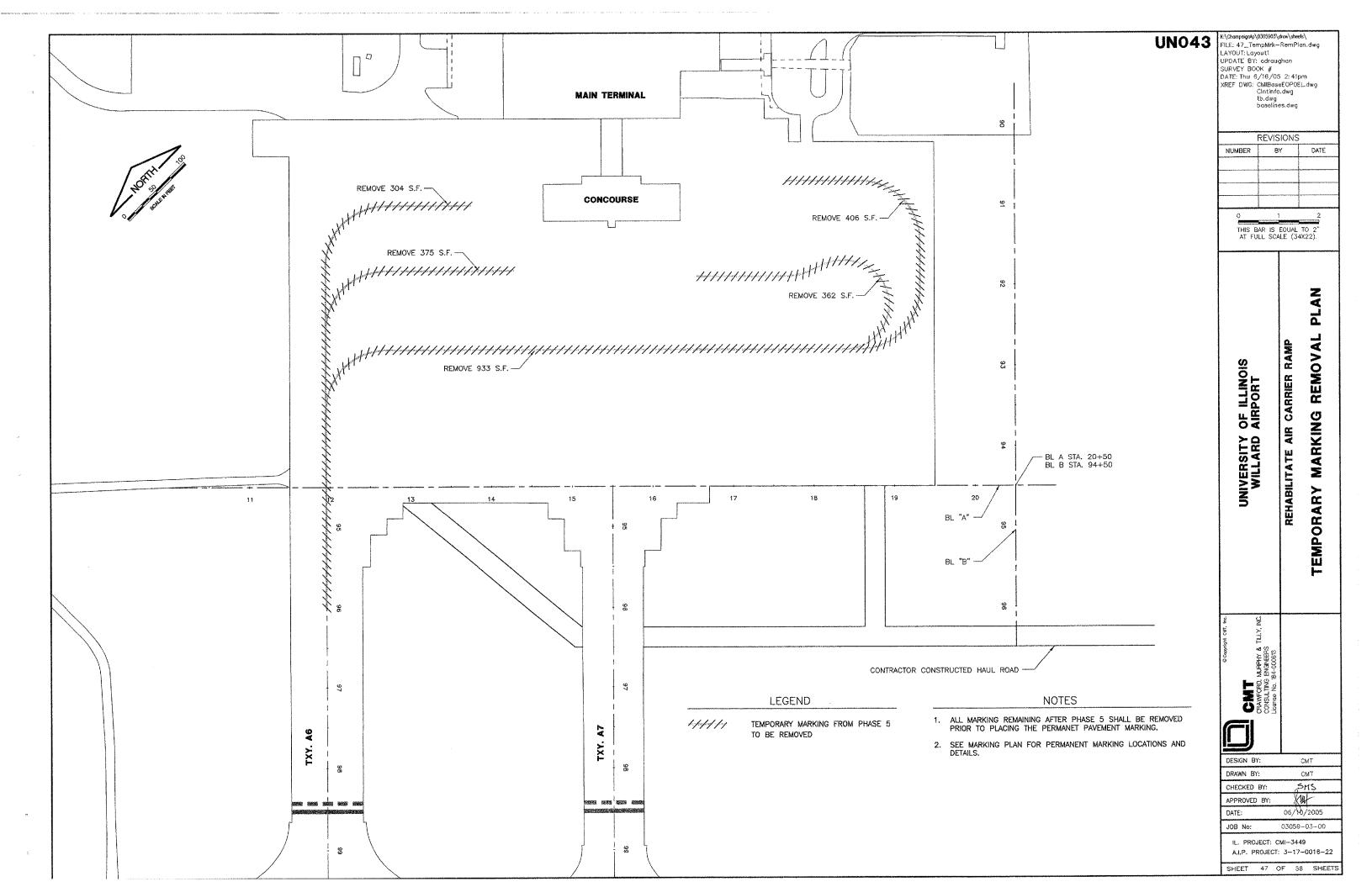
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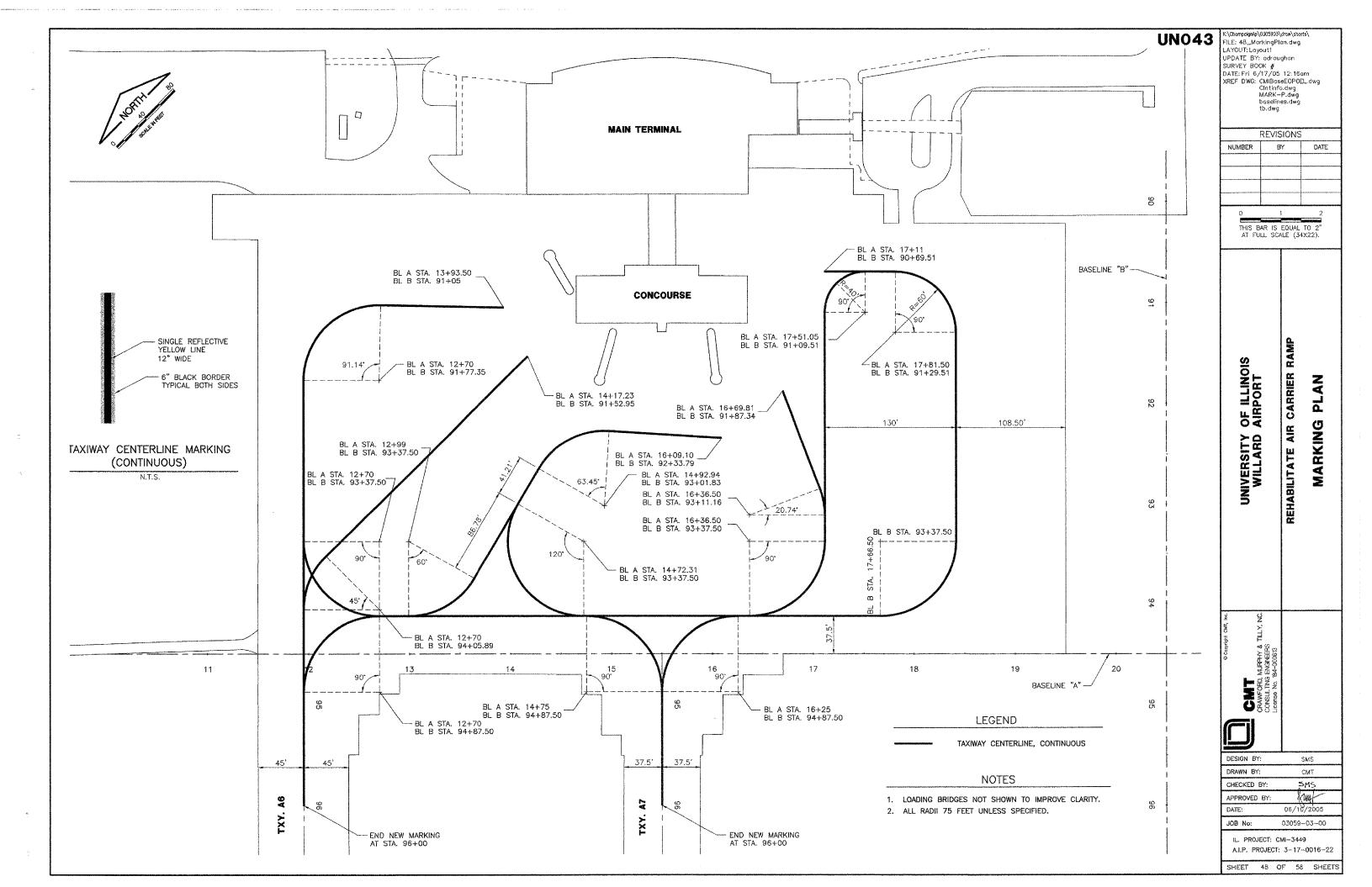
SHEET 45 OF 58 SHEETS

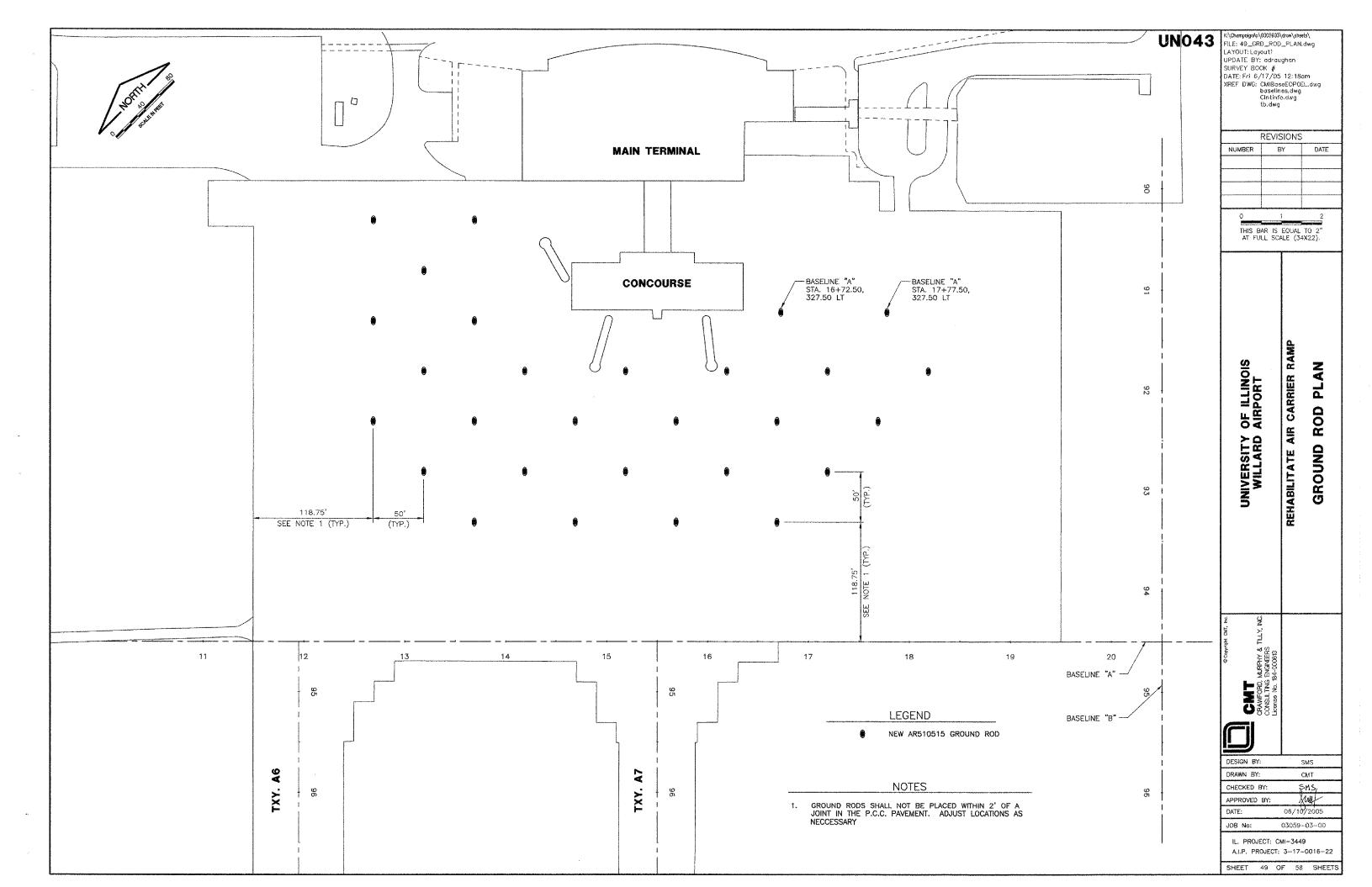
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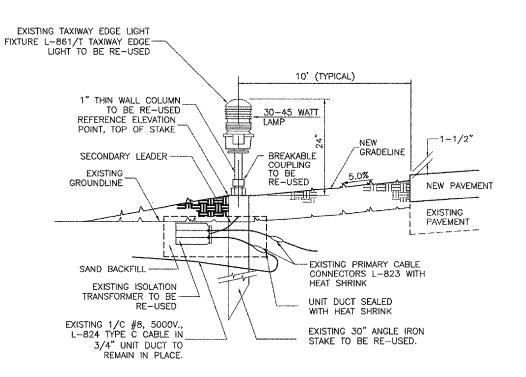








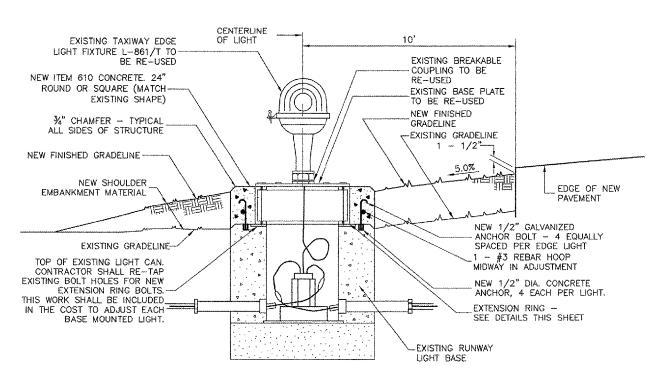
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#### METHOD OF CONSTRUCTION

- 1.) ADJUST SHOULDERS TO GRADE.
- 2.) EXCAVATE STAKE MOUNTED LIGHT AND TRANSFORMER AND SET AT NEW ELEVATION.
- 3.) BACKFILL EXCAVATED MATERIAL.

#### TAXIWAY STAKE MOUNTED LIGHT ADJUSTMENT N.T.S.

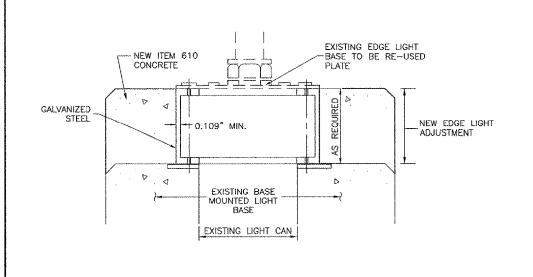


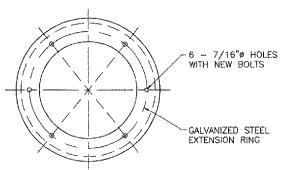
#### METHOD OF CONSTRUCTION

- 1.) ADJUST SHOULDERS TO GRADE.
- 2.) EXCAVATE BASE MOUNTED LIGHT AND INSTALL NEW EXTENSION RING AND CONCRETE TO PROPER GRADE.
- 3.) BACKFILL EXCAVATED MATERIAL.

TAXIWAY BASE MOUNTED LIGHT ADJUSTMENT

-CORE 4" DIA HOLE IN PAVEMENT (FULL DEPTH) w/ CORING MACHINE 13.5 -- PCC PAVEMENT 3/4"øx10'-0" LONG -FILL HOLE WITHIN 2" OF COPPERWELD GROUND TOP OF PAVEMENT SURFACE ROD DRIVEN 1/4" WITH NON-SHRINK GROUT BELOW PAVEMENT AND PAINT 16" DIA. RED SURFACE CIRCLE ON PAVEMENT, CENTERED OVER GROUND ROD. GROUND ROD DETAIL





THE CONTRACTOR SHALL FIELD VERIFY EXISTING LIGHT BASE TYPE (MOST ARE L-867, 12" DIA. CLASS 1) AND CALCULATE. REQUIRED HEIGHT ADJUSTMENT DIMENSION BASED ON PROPOSED SHOULDER ELEVATION AND THE ELEVATION OF THE TOP OF THE EXISTING LIGHT BASE. NO ADDITIONAL PAYMENT WILL BE MADE FOR ALTERNATE LIGHT CAN TYPES. RETAPPING EXISTING BOLT HOLES IF REQUIRED AND SHALL BE CONSIDERED INCIDENTAL TO THE UNIT PRICE FOR LIGHT ADJUSTMENT.

EXTENSION RING DETAIL

N.T.S.

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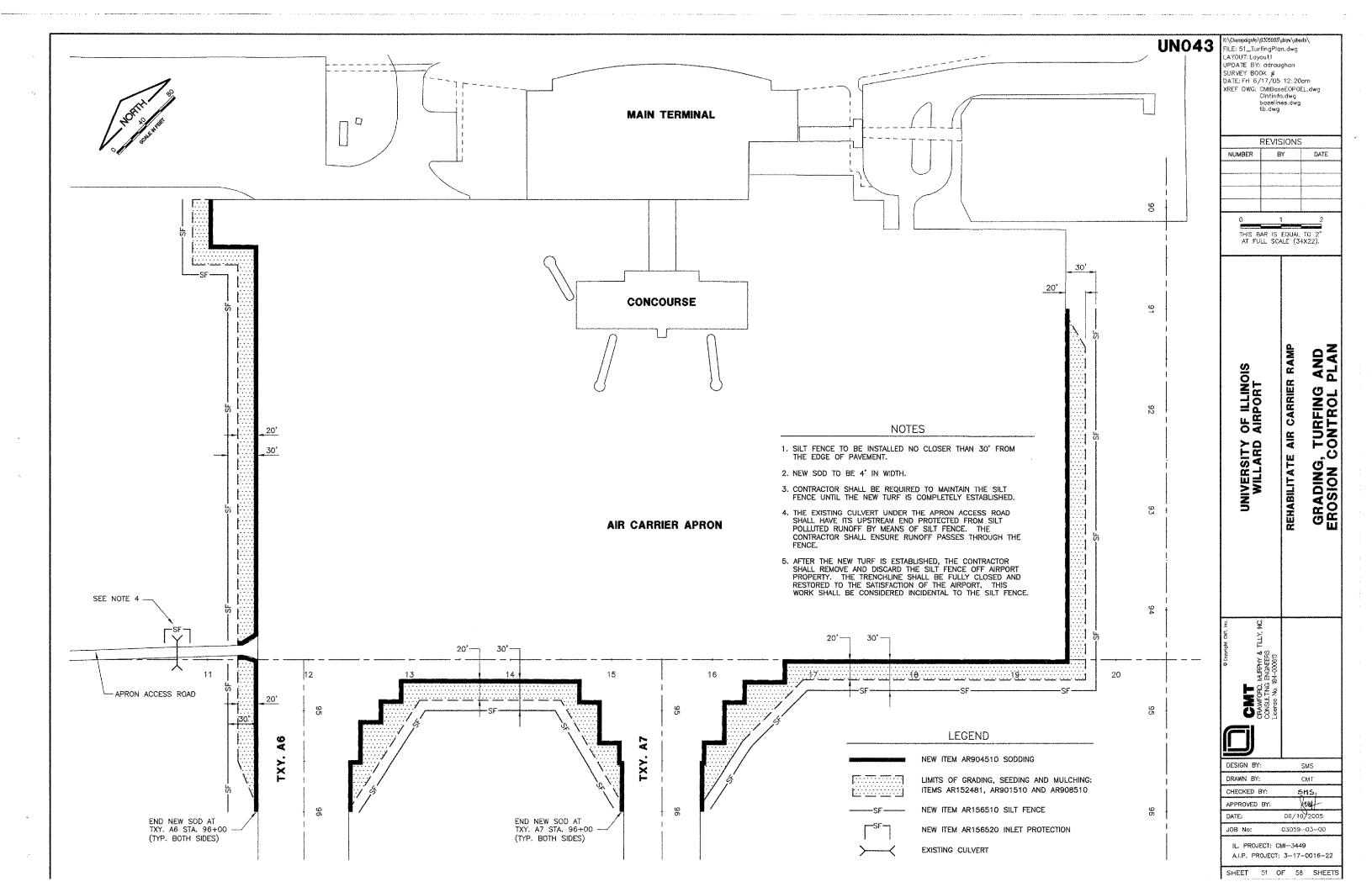
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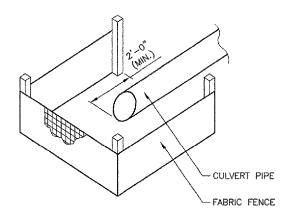
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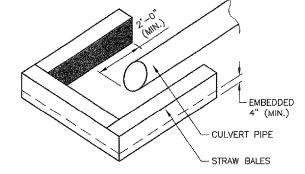
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SHEET 50 OF 58 SHEETS

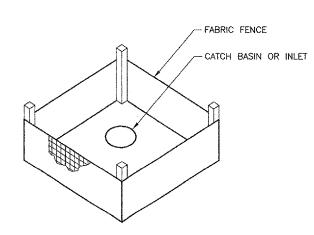


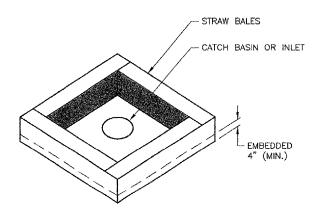




# CULVERT PROTECTION WITH FABRIC

CULVERT PROTECTION WITH STRAW BALES
N.T.S.





INLET PROTECTION WITH FABRIC

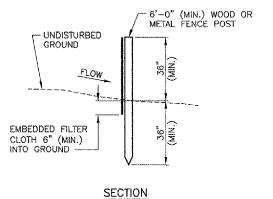
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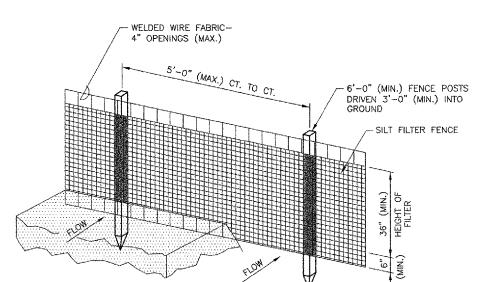
INLET PROTECTION WITH STRAW BALES

#### NOTES

- IF SILT FENCE IS USED FOR INLET PROTECTION, THE FENCE CONSTRUCTION SHALL CONFORM TO THE EROSION CONTROL FABRIC FENCE DETAIL ON THIS SHEET.
- 2. INLET PROTECTION USED AROUND FLARED END SECTIONS OR CULVERTS SHALL ONLY REQUIRE 3 SIDES AND SHALL BE PAID FOR AS INLET PROTECTION.

## **UNO43**





PERSPECTIVE VIEW

EROSION CONTROL FABRIC FENCE DETAIL

N.T.S.

#### NOTES

- WELDED WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
- 2. FILTER CLOTH TO BE FASTENED SECURELY TO WELDED WIRE FENCE WITH TIES SPACED EVERY 12".
- 3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY 6" MINIMUM AND FOLDED.
- 4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE. MAINTENANCE, WHICH INCLUDES THE REPLACEMENT OF DAMAGED FENCE, SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE EROSION CONTROL FENCE.

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UNIVERSITY OF ILLINOIS
WILLARD AIRPORT
REHABILITATE AIR CARRIER RAMP
EROSION CONTROL DETAILS

CNT
CNAWFORD, MARPHY & TILLY
CONSULTING ENGNEERS
LICETS No. 84-000633

DESIGN BY: CMT

DRAWN BY: CMT

CHECKED BY: SMS

APPROVED BY: MM

DATE: 06/10/2005

JOB No: 03059-03-00

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A.I.P. PROJECT: 3-17-0016-22

SHEET 52 OF 58 SHEETS

