

# UNIVERSITY OF ILLINOIS INSTITUTE OF AVIATION

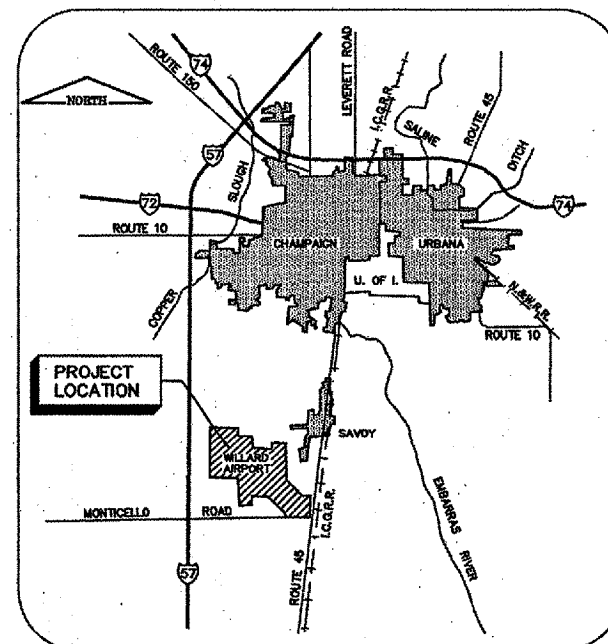
CONSTRUCTION PLANS  
FOR

## UNIVERSITY OF ILLINOIS - WILLARD AIRPORT

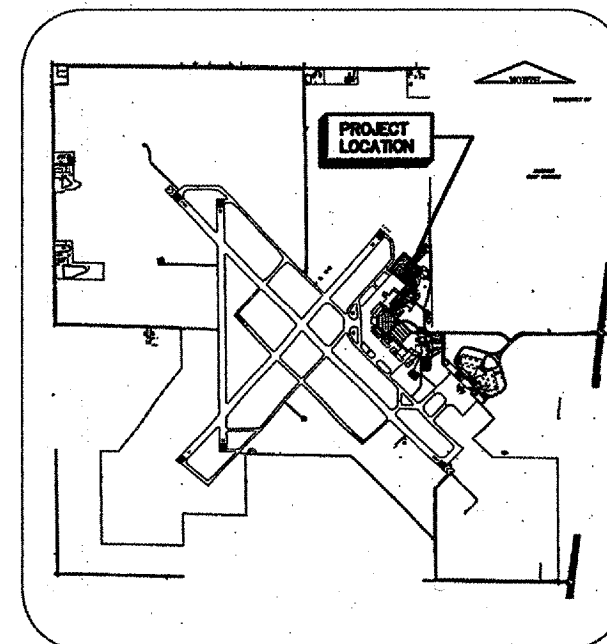
ILLINOIS PROJECT CMI-3651  
A. I. P. PROJECT 3-17-0016-23

### CONSTRUCT NORTHEAST T-HANGAR PAVEMENT

NOVEMBER 16, 2006



LOCATION MAP



SITE PLAN

*Michael J. Smeck*  
 MICHAEL J. SMECK  
 REGISTERED PROFESSIONAL ENGINEER  
 OF ILLINOIS  
 EX. 11/30/06

CALL J.U.I.E.  
 BEFORE EXCAVATING  
 1-800-892-0123  
 UNIVERSITY OF ILLINOIS - WILLARD AIRPORT  
 TOWNSHIP: T 18 N  
 RANGE: R 8 E  
 COUNTY: CHAMPAIGN

TAXILANES  
 DESIGN GROUP - GROUP II  
 WINGSPAN - UP TO BUT NOT INCLUDING 66 FT.  
 DESIGN APPROACH CATEGORY - B

PAVEMENT STRUCTURE DESIGN DATA  
 GROSS WEIGHT - 30,00 LBS.  
 SINGLE WHEEL GEAR

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

UNIVERSITY OF ILLINOIS  
 WILLARD AIRPORT  
 APPROVED *Seal/Way*  
 DATE 6 NOV 2006

**CMT**  
 CRAWFORD MURPHY & TILLY, INC.  
 CONSULTING ENGINEERS  
 License No. 184-000613  
 SUBMITTED BY *Michael J. Smeck*  
 DATE Nov. 10, 2006  
 CM&T JOB NUMBER 05059-06

**UN046**

K:\Champaign\1060906\Draw\Sheets\  
 FILE: 2 IDXSUM.dwg  
 LAYOUT: 2 IDXSUM  
 UPDATE BY: msmejkal  
 SURVEY BOOK #  
 DATE: Thu 11/16/06 4:31pm  
 XREF DWG: CIntinfo.dwg

REVISIONS

| NUMBER | BY | DATE |
|--------|----|------|
|        |    |      |
|        |    |      |
|        |    |      |
|        |    |      |

0 1 2

THIS BAR IS EQUAL TO 2"  
 AT FULL SCALE (34x22).

| INDEX TO SHEETS |   |
|-----------------|---|
| 1               | COVER SHEET                             |
| 2               | INDEX TO SHEETS / SUMMARY OF QUANTITIES |
| 3               | GENERAL NOTES                           |
| 4               | PROJECT SITE PLAN                       |
| 5               | CONSTRUCTION ACTIVITY PLAN              |
| 6               | EXISTING CONDITIONS / REMOVAL PLAN      |
| 7               | PAVING AND DRAINAGE PLAN                |
| 8               | ELECTRICAL AND PAVEMENT MARKING PLAN    |
| 9               | TYPICAL SECTIONS                        |
| 10              | STAKING PLAN                            |
| 11              | STORM SEWER PROFILES                    |
| 12              | EROSION CONTROL AND LANDSCAPING PLAN    |
| 13              | EROSION CONTROL DETAILS                 |
| 14              | DRAINAGE DETAILS                        |
| 15              | ELECTRICAL AND WATER MAIN DETAILS       |
| 16              | CROSS SECTIONS                          |
| 17              | FENCE DETAILS                           |

| SUMMARY OF QUANTITIES |                                 |      |                |                     |                |                 |
|-----------------------|---------------------------------|------|----------------|---------------------|----------------|-----------------|
| ITEM NO.              | ITEM DESCRIPTION                | UNIT | F/S/L QUANTITY | LOCAL ONLY QUANTITY | TOTAL QUANTITY | RECORD QUANTITY |
| AR106900              | REMOVE LIGHT POLE               | EA   | 2.00           | -                   | 2.00           |                 |
| AR108158              | 1/C #8 5 KV UG CABLE IN UD      | LF   | 350.00         | -                   | 350.00         |                 |
| AR110214              | 4" STEEL DUCT, DIRECT BURY      | LF   | 200.00         | -                   | 200.00         |                 |
| AR110550              | SPLIT DUCT                      | LF   | 30.00          | -                   | 30.00          |                 |
| AR125410              | MITL - STAKE MOUNTED            | EA   | 2.00           | -                   | 2.00           |                 |
| AR125901              | REMOVE STAKE MOUNTED LIGHT      | EA   | 3.00           | -                   | 3.00           |                 |
| AR150510              | ENGINEER'S FIELD OFFICE         | LS   | 1.00           | -                   | 1.00           |                 |
| AR152410              | UNCLASSIFIED EXCAVATION         | CY   | 1425.00        | -                   | 1425.00        |                 |
| AR152442              | OFFSITE BORROW EXCAVATION       | CY   | 450.00         | -                   | 450.00         |                 |
| AR156510              | SILT FENCE                      | LF   | 790.00         | -                   | 790.00         |                 |
| AR162960              | RELOCATE CLASS E FENCE          | LF   | 70.00          | -                   | 70.00          |                 |
| AR162962              | RELOCATE GATE - 24'             | EA   | 1.00           | -                   | 1.00           |                 |
| AR209606              | CRUSHED AGG. BASE COURSE - 6"   | SY   | -              | 1830.00             | 1830.00        |                 |
| AR209610              | CRUSHED AGG. BASE COURSE - 10"  | SY   | 3210.00        | -                   | 3210.00        |                 |
| AR401610              | BITUMINOUS SURFACE COURSE       | TON  | 760.00         | 430.00              | 1190.00        |                 |
| AR401900              | REMOVE BITUMINOUS PAVEMENT      | SY   | 660.00         | -                   | 660.00         |                 |
| AR401910              | REMOVE & REPLACE BIT. PAVEMENT  | SY   | 95.00          | -                   | 95.00          |                 |
| AR501900              | REMOVE PCC PAVEMENT             | SY   | 2720.00        | -                   | 2720.00        |                 |
| AR602510              | BITUMINOUS PRIME COAT           | GAL  | 800.00         | 455.00              | 1255.00        |                 |
| AR603510              | BITUMINOUS TACK COAT            | GAL  | 240.00         | 140.00              | 380.00         |                 |
| AR620520              | PAVEMENT MARKING - WATERBORNE   | SF   | 885.00         | -                   | 885.00         |                 |
| AR701412              | 12" RCP, CLASS III              | LF   | 75.00          | -                   | 75.00          |                 |
| AR701415              | 15" RCP, CLASS III              | LF   | 355.00         | -                   | 355.00         |                 |
| AR701424              | 24" RCP, CLASS III              | LF   | 405.00         | -                   | 405.00         |                 |
| AR701900              | REMOVE PIPE                     | LF   | 205.00         | -                   | 205.00         |                 |
| AR705524              | 4" PERFORATED UNDERDRAIN W/SOCK | LF   | 645.00         | -                   | 645.00         |                 |
| AR751410              | INLET                           | EA   | 2.00           | -                   | 2.00           |                 |
| AR751540              | MANHOLE 4'                      | EA   | 3.00           | -                   | 3.00           |                 |
| AR751550              | MANHOLE 5'                      | EA   | 3.00           | -                   | 3.00           |                 |
| AR751560              | MANHOLE 6'                      | EA   | 1.00           | -                   | 1.00           |                 |
| AR760965              | RELOCATE FIRE HYDRANT           | EA   | 1.00           | -                   | 1.00           |                 |
| AR800868              | SOIL GUARD                      | SY   | 1025.00        | -                   | 1025.00        |                 |
| AR901510              | SEEDING                         | AC   | 0.90           | -                   | 0.90           |                 |
| AR908510              | MULCHING                        | AC   | 0.80           | -                   | 0.80           |                 |

UNIVERSITY OF ILLINOIS  
 WILLARD AIRPORT  
 CONSTRUCT N.E. T-HANGAR PAVEMENT  
 INDEX TO SHEETS /  
 SUMMARY OF QUANTITIES

© Copyright CMT, Inc.  
**CMT**  
 CRAWFORD, MURPHY & TILLY, INC.  
 CONSULTING ENGINEERS  
 License No. 164-000613

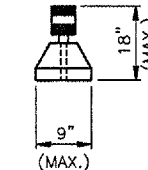
DESIGN BY: MJS  
 DRAWN BY: MJS  
 CHECKED BY: MJS  
 APPROVED BY:  
 DATE: 11/16/2006  
 JOB No: 0505906  
 A.I.P. PROJECT: 3-17-0016-23  
 I.L. PROJ: CMI-3651  
 SHEET 2 OF 17 SHEETS

**GENERAL NOTES**

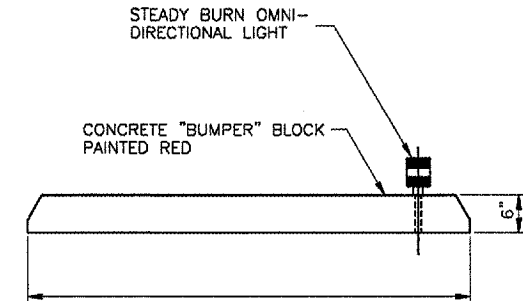
- 1.) ALL RUNWAYS, TAXIWAYS AND APRONS SHALL BE KEPT OPEN TO AIRCRAFT TRAFFIC DURING CONSTRUCTION EXCEPT AS NOTED IN THE CONSTRUCTION ACTIVITY PLANS OR AS DIRECTED BY THE AIRPORT MANAGER.
- 2.) ALL CONSTRUCTION TRAFFIC OPERATING ON OR CROSSING ACTIVE RUNWAYS, TAXIWAYS AND APRONS SHALL BE UNDER CONTROL OF A FLAGMAN IN RADIO CONTACT WITH FAA AIR TRAFFIC CONTROL TOWER PERSONNEL AT ALL TIMES. THE CONTRACTOR SHALL PROVIDE HIS OWN RADIOS.
- 3.) 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.
- 4.) THE CONTRACTOR SHALL STORE EQUIPMENT AND MATERIALS AT THE LOCATION SHOWN FOR THE "CONTRACTOR'S STAGING, STORAGE, PARKING SITE AND FIELD OFFICE".
- 5.) BROKEN OR WASTE CONCRETE SHALL BE DISPOSED OF BY THE CONTRACTOR OFF AIRPORT PROPERTY, UNLESS DIRECTED BY THE AIRPORT MANAGER.
- 6.) VEHICLES AND EQUIPMENT SHALL NOT BE ALLOWED WITHIN AREAS 80' FROM THE CENTERLINE OF ACTIVE TAXIWAYS OR 200' FROM THE CENTERLINE OF ACTIVE RUNWAYS.
- 7.) 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 AIRPORT MANAGER.
- 9.) 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 TEN 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 APPROVAL. 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 CHECKERED AVIATION 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 SPECIFIED IN THE SPECIAL PROVISIONS.
- 16.) IF, DURING CONSTRUCTION, AN EMERGENCY IS DECLARED BY THE AIRPORT, THE CONTRACTOR SHALL IMMEDIATELY CLEAR THE PAVEMENT OF ALL VEHICLES, MEN AND EQUIPMENT.

**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 AIRPORT WILL PROVIDE THE CONTRACTOR ACCESS TO THE SITE VIA AN EXISTING ACCESS GATE AS SHOWN ON THE PLANS.
  - 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 AND PRIMARY SURFACES.
  - I) 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 BE RESPONSIBLE FOR COORDINATING ALL ACCESS ROADS WITH THE APPROPRIATE AGENCY RESPONSIBLE FOR THE ROADWAY.
- 2.) AN AREA WILL BE PROVIDED BY THE AIRPORT TO THE CONTRACTOR AS THE STAGING, STORAGE AND EMPLOYEE PARKING SITE, AT THE LOCATION SHOWN.
- 3.) A LIST OF AUTHORIZED PERSONNEL PERMITTED TO USE THE GATE SHALL BE PROVIDED BY THE CONTRACTOR TO THE ENGINEER.
- 4.) THE CONTRACTOR SHALL PROVIDE A SIGN AT THE ACCESS GATE SAYING "AUTHORIZED PERSONNEL ONLY".
- 5.) ALL PERSONNEL ON THE AIRFIELD WILL BE REQUIRED TO SUBMIT A TEN YEAR BACKGROUND CHECK TO AIRPORT SECURITY.



SIDE ELEVATION



FRONT ELEVATION

**BEAM BARRICADE DETAILS**  
N.T.S.

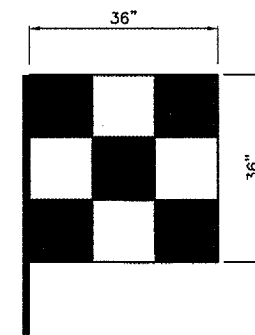
**BEAM BARRICADE NOTES**

1. 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.

**CONTRACTOR'S RESPONSIBILITY FOR UTILITY SERVICE**

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

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANY OF HIS OPERATIONAL PLANS. THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR DETAILED INFORMATION AND ASSISTANCE IN LOCATING UTILITIES. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY, THE OWNER AND THE ENGINEER. ANY SUCH MAINS AND/OR SERVICES DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED IMMEDIATELY AT HIS EXPENSE TO THE SATISFACTION OF THE OWNER AND THE ENGINEER.

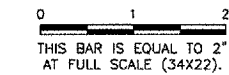


VEHICLE SIGNAL FLAG  
(ORANGE / WHITE)  
N.T.S.

GROUND CONTROL FREQUENCY 121.8 MHZ

MAXIMUM EQUIPMENT HEIGHT 25 FEET

| REVISIONS |    |      |
|-----------|----|------|
| NUMBER    | BY | DATE |
|           |    |      |
|           |    |      |
|           |    |      |



UNIVERSITY OF ILLINOIS  
WILLARD AIRPORT  
CONSTRUCT N.E. T-HANGAR PAVEMENT  
GENERAL NOTES

© Copyright CMT, Inc.  
**CMT**  
CRAWFORD, MURPHY & TILLY, INC.  
CONSULTING ENGINEERS  
License No. 984-000613

|                 |                |
|-----------------|----------------|
| DESIGN BY:      | MJS            |
| DRAWN BY:       | MJS            |
| CHECKED BY:     | MJS            |
| APPROVED BY:    |                |
| DATE:           | 11/16/2006     |
| JOB No:         | 0505906        |
| A.I.P. PROJECT: | 3-17-0016-23   |
| IL PROJ:        | CMI-3851       |
| SHEET           | 3 OF 17 SHEETS |

UN046

K:\Champaign\0505906\Draw\Sheets\A  
 FILE: 4 STEPLN.dwg  
 LAYOUT: 4 STEPLN  
 UPDATE BY: msmejkal  
 SURVEY BOOK #  
 DATE: Fri 11/10/06 9:12am  
 XREF DWG: Cmibase.dwg  
 alp2a.dwg  
 util\_water.dwg  
 util-airfield-elec.dwg  
 UTIL-GAS.dwg  
 UTIL-NONAIRFIELD-ELEC.dwg  
 UTIL-SAN.dwg

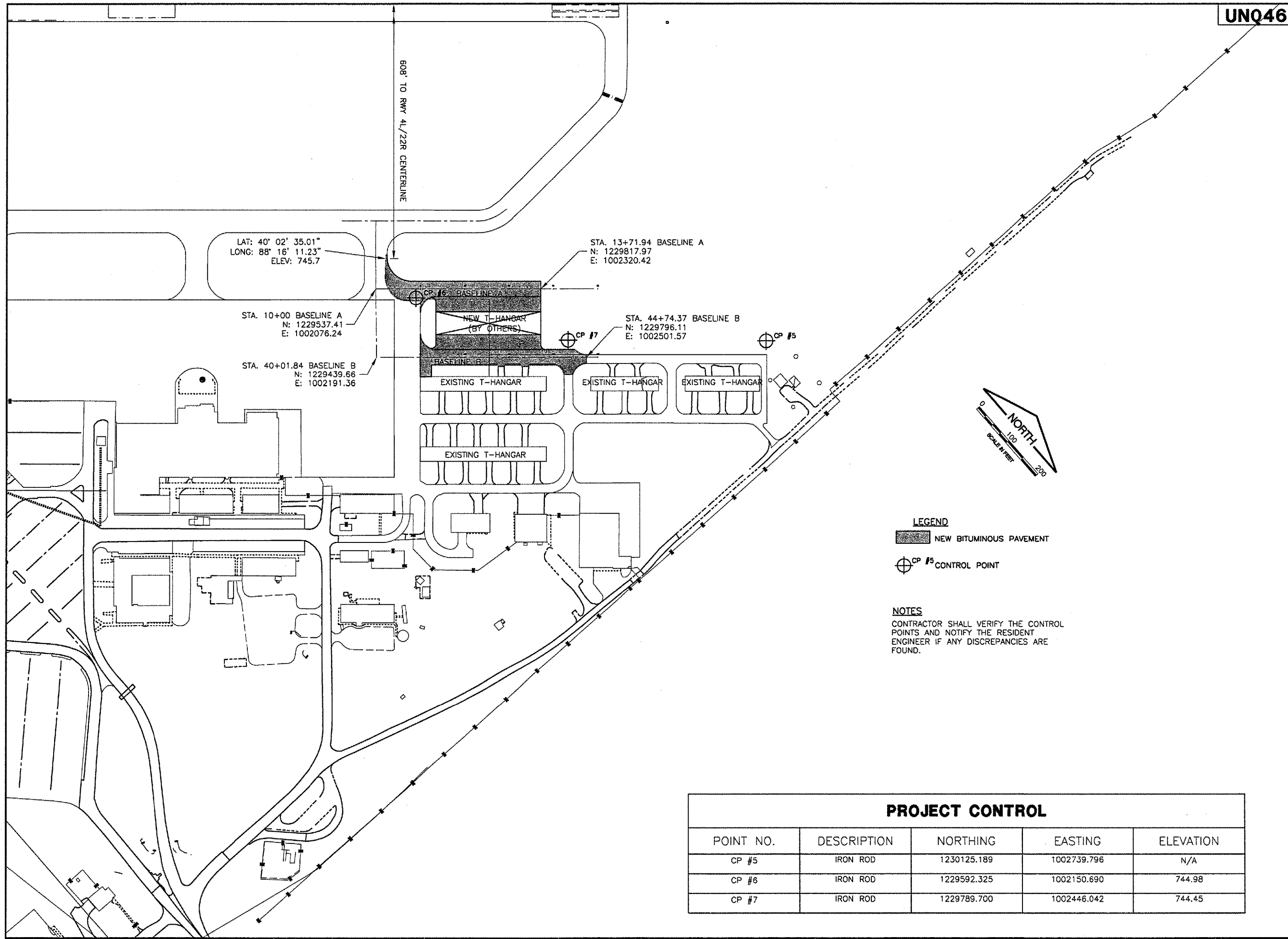
| REVISIONS |    |      |
|-----------|----|------|
| NUMBER    | BY | DATE |
|           |    |      |
|           |    |      |
|           |    |      |

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

UNIVERSITY OF ILLINOIS  
 WILLARD AIRPORT  
 CONSTRUCT N.E. T-HANGAR PAVEMENT  
 PROJECT SITE PLAN

© Copyright CMT, Inc.  
**CMT**  
 CRANKFORD, MURPHY & TILLY, INC.  
 CONSULTING ENGINEERS  
 License No. 184-000615

DESIGN BY: MJS  
 DRAWN BY: MJS  
 CHECKED BY: MJS  
 APPROVED BY:  
 DATE: 11/16/2006  
 JOB No: 0505906  
 A.I.P. PROJECT: 3-17-0018-23  
 IL. PRJ: CMI-3651  
 SHEET 4 OF 17 SHEETS



**LEGEND**

- NEW BITUMINOUS PAVEMENT
- CP #5 CONTROL POINT

**NOTES**

CONTRACTOR SHALL VERIFY THE CONTROL POINTS AND NOTIFY THE RESIDENT ENGINEER IF ANY DISCREPANCIES ARE FOUND.

| PROJECT CONTROL |             |             |             |           |
|-----------------|-------------|-------------|-------------|-----------|
| POINT NO.       | DESCRIPTION | NORTHING    | EASTING     | ELEVATION |
| CP #5           | IRON ROD    | 1230125.189 | 1002739.796 | N/A       |
| CP #6           | IRON ROD    | 1229592.325 | 1002150.690 | 744.98    |
| CP #7           | IRON ROD    | 1229789.700 | 1002446.042 | 744.45    |

LAT: 40° 02' 35.01"  
 LONG: 88° 16' 11.23"  
 ELEV: 745.7

STA. 10+00 BASELINE A  
 N: 1229537.41  
 E: 1002076.24

STA. 40+01.84 BASELINE B  
 N: 1229439.66  
 E: 1002191.36

STA. 13+71.94 BASELINE A  
 N: 1229817.97  
 E: 1002320.42

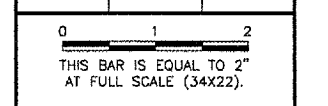
STA. 44+74.37 BASELINE B  
 N: 1229796.11  
 E: 1002501.57

808' TO Rwy 4L/22R CENTERLINE

**UN046**

K:\Champaign\1050906\Draw\Sheets\  
 FILE: 5 ACTIVITYPLN.dwg  
 LAYOUT: 5 ACTVPLN  
 UPDATE BY: msmejkal  
 SURVEY BOOK #  
 DATE: Thu 11/16/06 10:17am  
 XREF DWG: Cmb00a.dwg  
 olp2a.dwg  
 util\_water.dwg  
 util-airfield-elec.dwg  
 UTIL-GAS.dwg  
 UTIL-NONAIRFIELD-ELEC.dwg  
 UTIL-SAN.dwg  
 util\_inf.dwg

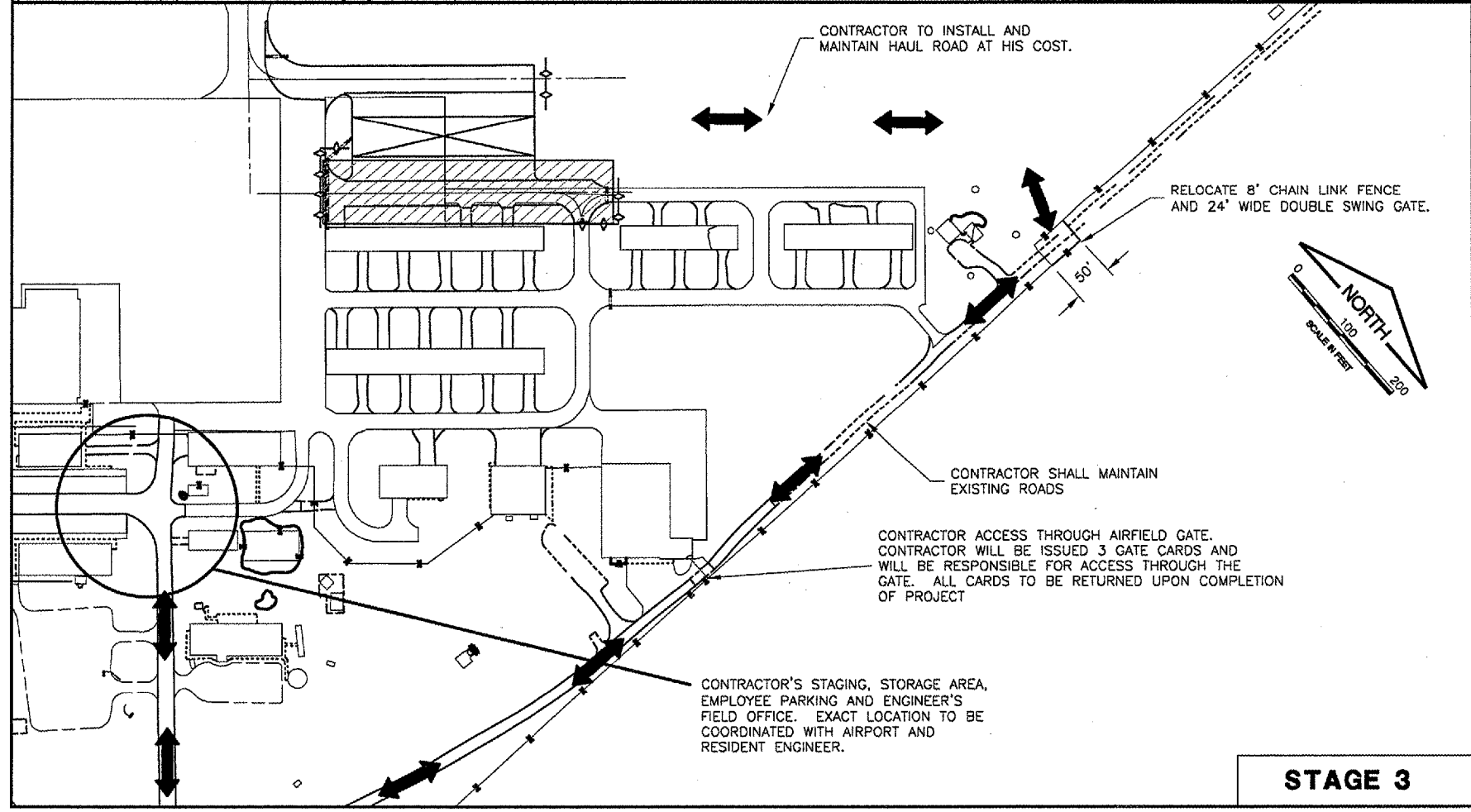
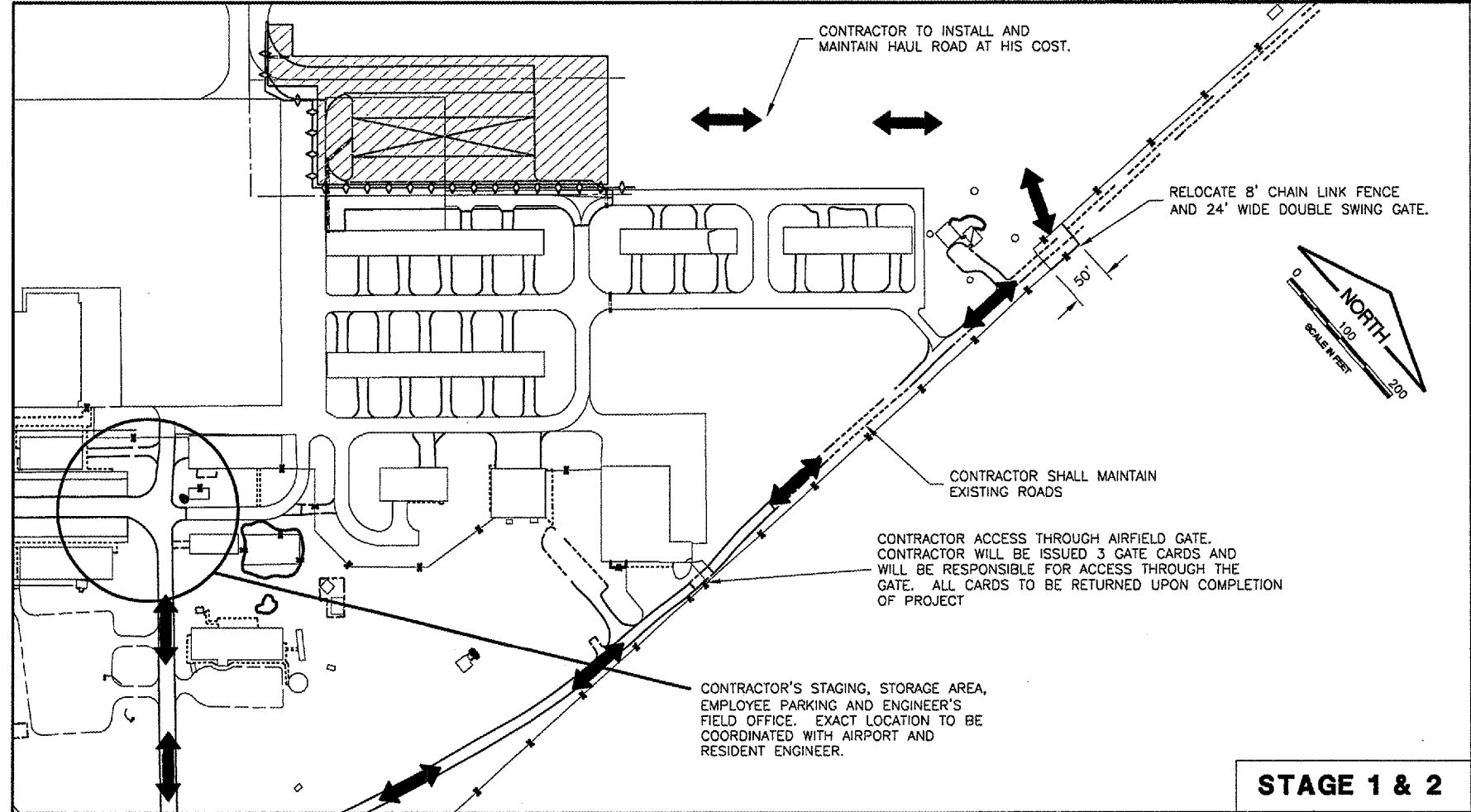
| REVISIONS |    |      |
|-----------|----|------|
| NUMBER    | BY | DATE |
|           |    |      |
|           |    |      |
|           |    |      |



**UNIVERSITY OF ILLINOIS  
 WILLARD AIRPORT**  
**CONSTRUCT N.E. T-HANGAR PAVEMENT**  
**CONSTRUCTION ACTIVITY PLAN**

© Copyright CMT, Inc.  
**CMT**  
 CHAMFORD, MURPHY & TILLY, INC.  
 CONSULTING ENGINEERS  
 License No. 194-000619

|                 |                |
|-----------------|----------------|
| DESIGN BY:      | MJS            |
| DRAWN BY:       | MJS            |
| CHECKED BY:     | MJS            |
| APPROVED BY:    |                |
| DATE:           | 11/16/2006     |
| JOB No:         | 0505906        |
| A.I.P. PROJECT: | 3-17-0016-23   |
| IL. PROJ:       | CMI-3651       |
| SHEET           | 5 OF 17 SHEETS |



**SUGGESTED SEQUENCE OF CONSTRUCTION - PHASE 1**

- NOTIFY RESIDENT ENGINEER 14 DAYS PRIOR TO START OF CONSTRUCTION
- PLACE BARRICADES
- REMOVE PCC PAVEMENT WITHIN PHASE 1 LIMITS
- CONSTRUCT EARTHWORK FOR BUILDING PAD
- INSTALL DRAINAGE IMPROVEMENTS

**SUGGESTED SEQUENCE OF CONSTRUCTION - PHASE 2**

- COORDINATE WITH T-HANGAR CONTRACTOR AT ALL TIMES
- COMPLETE EARTHWORK WITHIN PHASE LIMITS
- CONSTRUCT AGGREGATE BASE COURSE
- PLACE THE BITUMINOUS PAVEMENTS (SEE NOTE 2)
- COMPLETE ELECTRICAL IMPROVEMENTS
- PLACE PAVEMENT MARKING

**SUGGESTED SEQUENCE OF CONSTRUCTION - PHASE 3**

- PLACE BARRICADES
- REMOVE PCC AND BITUMINOUS PAVEMENTS
- COMPLETE EARTHWORK WITHIN PHASE LIMITS
- CONSTRUCT AGGREGATE BASE COURSE AND BITUMINOUS PAVEMENTS
- PLACE PAVEMENT MARKING

**NOTES**

1. THE CONSTRUCTION OF THE T-HANGAR WILL BE COMPLETED CONCURRENTLY WITH THIS PROJECT. CONTRACTOR SHALL PLAN AND COORDINATE WORK WITH T-HANGAR CONTRACTOR.
2. CONTRACTOR SHALL COMPLETE EARTHWORK FOR T-HANGAR BUILDING PAD AND ASSOCIATED PIPE REMOVAL/STORM SEWER INSTALLATION WITHIN 30 CALENDAR DAYS OF THE NOTICE TO PROCEED DATE SO T-HANGAR CONTRACTOR MAY BEGIN CONSTRUCTION.
3. CONTRACTOR SHALL NOT PLACE BITUMINOUS PAVEMENTS UNTIL T-HANGAR CONTRACTOR HAS ENCLOSED HANGAR AND INSTALLED BI-FOLD DOORS.

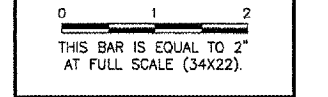
CONTRACTOR SHALL PLAN AND PERFORM HIS WORK SO AS NOT TO INTERFERE OR HINDER THE PROGRESS, WORK OR HAUL ROAD ACCESS OF OTHER CONTRACTORS. THE PRIME CONTRACTOR WILL BE RESPONSIBLE TO COORDINATE CONSTRUCTION ACTIVITIES AND ACCESS BETWEEN ALL ON-SITE CONTRACTOR'S SUBCONTRACTORS.

**LEGEND**

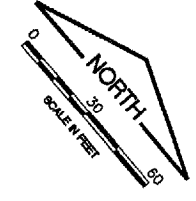
|  |                              |
|--|------------------------------|
|  | PHASE WORK AREA              |
|  | LOW PROFILE BARRICADES       |
|  | EXISTING FENCE               |
|  | CONTRACTOR ACCESS/HAUL ROUTE |

K:\Champaign\10505906\Draw\Sheets\  
 FILE: 6 EXISTCOND.dwg  
 LAYOUT: 6 EXIST  
 UPDATE BY: msmejkal  
 SURVEY BOOK #  
 DATE: Thu 11/16/06 10:20am  
 XREF DWG: Cmbase.dwg  
 alp2a.dwg  
 util\_water.dwg  
 util-storm.dwg  
 util-airfield-elec.dwg  
 util-gas.dwg  
 util-nonairfield-elec.dwg  
 util-san.dwg  
 REVISIONS

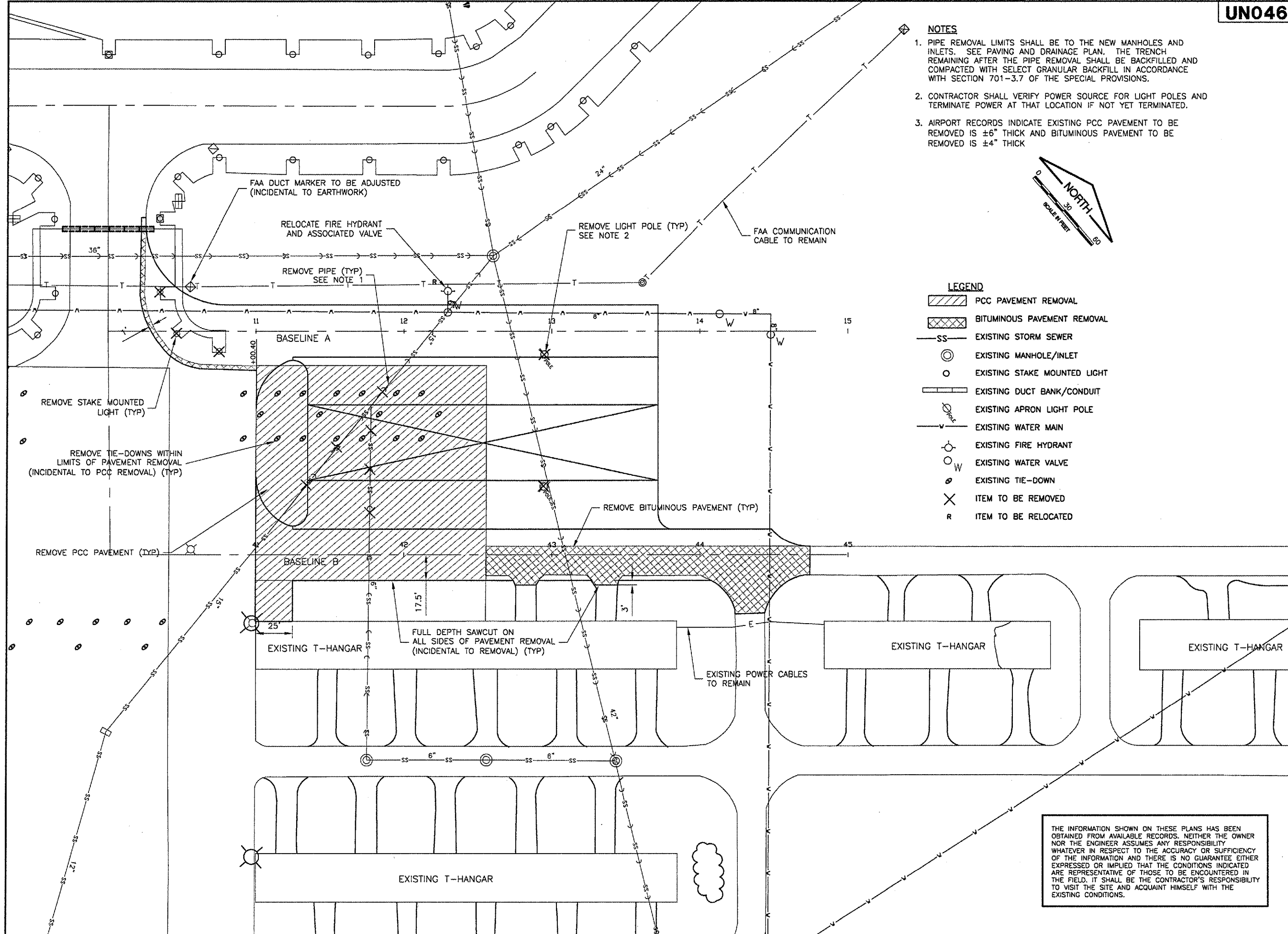
| NUMBER | BY | DATE |
|--------|----|------|
|        |    |      |
|        |    |      |
|        |    |      |



- NOTES**
1. PIPE REMOVAL LIMITS SHALL BE TO THE NEW MANHOLES AND INLETS. SEE PAVING AND DRAINAGE PLAN. THE TRENCH REMAINING AFTER THE PIPE REMOVAL SHALL BE BACKFILLED AND COMPACTED WITH SELECT GRANULAR BACKFILL IN ACCORDANCE WITH SECTION 701-3.7 OF THE SPECIAL PROVISIONS.
  2. CONTRACTOR SHALL VERIFY POWER SOURCE FOR LIGHT POLES AND TERMINATE POWER AT THAT LOCATION IF NOT YET TERMINATED.
  3. AIRPORT RECORDS INDICATE EXISTING PCC PAVEMENT TO BE REMOVED IS ±6" THICK AND BITUMINOUS PAVEMENT TO BE REMOVED IS ±4" THICK



- LEGEND**
- PCC PAVEMENT REMOVAL
  - BITUMINOUS PAVEMENT REMOVAL
  - EXISTING STORM SEWER
  - EXISTING MANHOLE/INLET
  - EXISTING STAKE MOUNTED LIGHT
  - EXISTING DUCT BANK/CONDUIT
  - EXISTING APRON LIGHT POLE
  - EXISTING WATER MAIN
  - EXISTING FIRE HYDRANT
  - EXISTING WATER VALVE
  - EXISTING TIE-DOWN
  - ITEM TO BE REMOVED
  - ITEM TO BE RELOCATED



**UNIVERSITY OF ILLINOIS  
 WILLARD AIRPORT**  
**CONSTRUCT N.E. T-HANGAR PAVEMENT  
 EXISTING CONDITIONS /  
 REMOVAL PLAN**

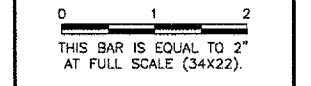
© Copyright CMT, Inc.  
**CMT**  
 CRANKFORD, MURPHY & TILLY, INC.  
 CONSULTING ENGINEERS  
 License No. 384-000615

|                 |                |
|-----------------|----------------|
| DESIGN BY:      | MJS            |
| DRAWN BY:       | MJS            |
| CHECKED BY:     | MJS            |
| APPROVED BY:    |                |
| DATE:           | 11/16/2006     |
| JOB No:         | 0505906        |
| A.I.P. PROJECT: | 3-17-0016-23   |
| IL PROJ:        | CM1-3651       |
| SHEET           | 6 OF 17 SHEETS |

THE INFORMATION SHOWN ON THESE PLANS HAS BEEN OBTAINED FROM AVAILABLE RECORDS. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY. WHATEVER IN RESPECT TO THE ACCURACY OR SUFFICIENCY OF THE INFORMATION AND THERE IS NO GUARANTEE EITHER EXPRESSED OR IMPLIED THAT THE CONDITIONS INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED IN THE FIELD. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VISIT THE SITE AND ACQUAINT HIMSELF WITH THE EXISTING CONDITIONS.

K:\Champaign\10505906\Draw\Sheets\  
 FILE: 7 PAVEDRAIN.dwg  
 LAYOUT: 7 IMPROVE  
 UPDATE BY: msmejkal  
 SURVEY BOOK #  
 DATE: Thu 11/16/06 10:24am  
 XREF DWG: C:\ntinfo.dwg  
 UTIL-STORM.dwg  
 C:\mibase.dwg  
 oip2a.dwg  
 util\_water.dwg  
 util-airfield-elec.dwg  
 UTIL-GAS.dwg  
 UTIL-NONAIRFIELD-ELEC.dwg  
 REVISIONS

| NUMBER | BY | DATE |
|--------|----|------|
|        |    |      |
|        |    |      |
|        |    |      |



**UNIVERSITY OF ILLINOIS  
 WILLARD AIRPORT**

**CONSTRUCT N.E. T-HANGAR PAVEMENT  
 PAVING AND DRAINAGE PLAN**

© Copyright CMT, Inc.  
**CMT**  
 CRAWFORD, MURPHY & TILLY, INC.  
 CONSULTING ENGINEERS  
 License No. 184-000610

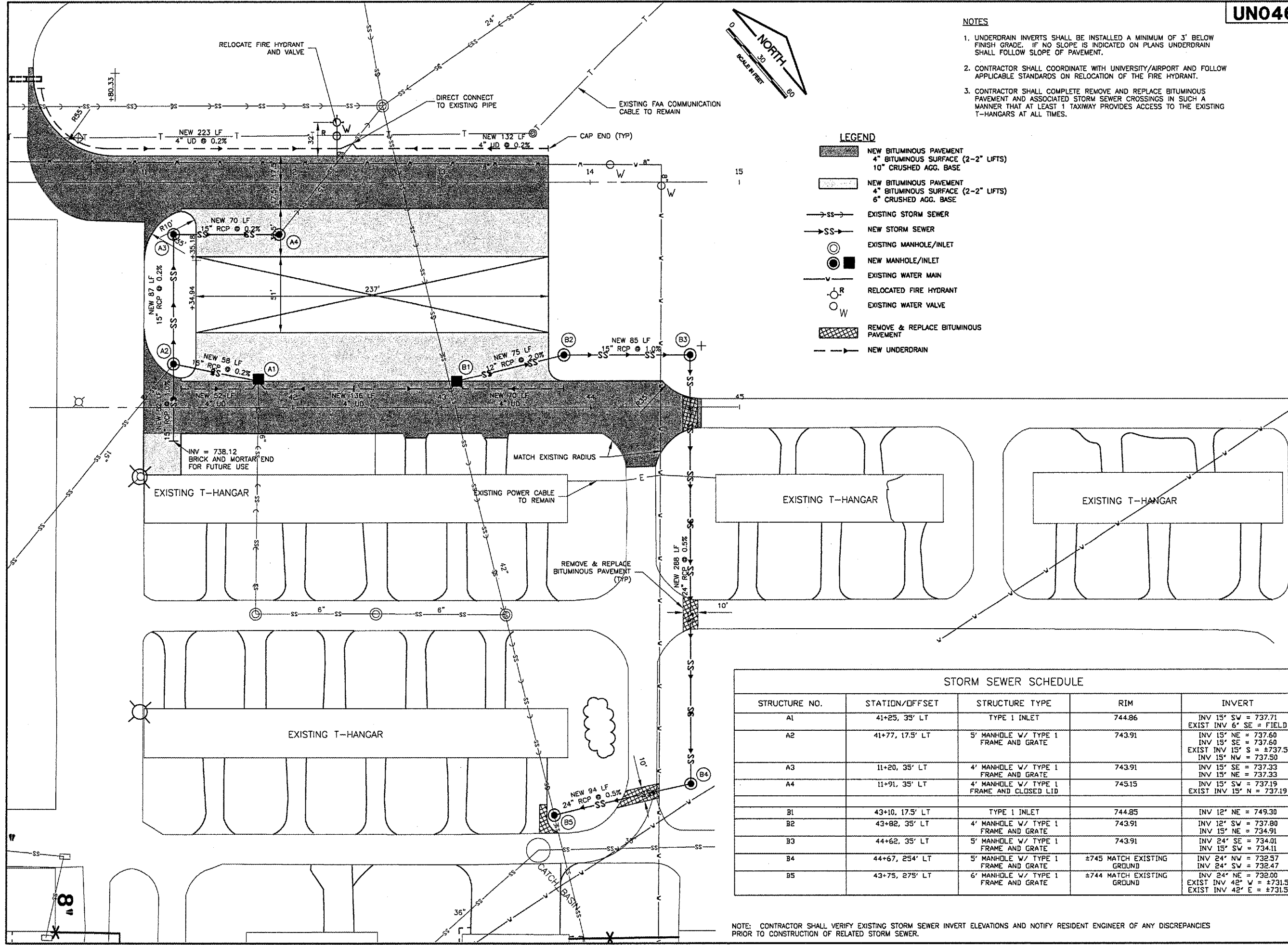
DESIGN BY: MJS  
 DRAWN BY: MJS  
 CHECKED BY: MJS  
 APPROVED BY:  
 DATE: 11/16/2006  
 JOB No: 0505906  
 A.I.P. PROJECT: 3-17-0016-23  
 IL. PROJ: CMI-3651  
 SHEET 7 OF 17 SHEETS

**NOTES**

- UNDERDRAIN INVERTS SHALL BE INSTALLED A MINIMUM OF 3' BELOW FINISH GRADE. IF NO SLOPE IS INDICATED ON PLANS UNDERDRAIN SHALL FOLLOW SLOPE OF PAVEMENT.
- CONTRACTOR SHALL COORDINATE WITH UNIVERSITY/AIRPORT AND FOLLOW APPLICABLE STANDARDS ON RELOCATION OF THE FIRE HYDRANT.
- CONTRACTOR SHALL COMPLETE REMOVE AND REPLACE BITUMINOUS PAVEMENT AND ASSOCIATED STORM SEWER CROSSINGS IN SUCH A MANNER THAT AT LEAST 1 TAXIWAY PROVIDES ACCESS TO THE EXISTING T-HANGARS AT ALL TIMES.

**LEGEND**

- NEW BITUMINOUS PAVEMENT  
4" BITUMINOUS SURFACE (2-2" LIFTS)  
10" CRUSHED AGG. BASE
- NEW BITUMINOUS PAVEMENT  
4" BITUMINOUS SURFACE (2-2" LIFTS)  
6" CRUSHED AGG. BASE
- EXISTING STORM SEWER
- NEW STORM SEWER
- EXISTING MANHOLE/INLET
- NEW MANHOLE/INLET
- EXISTING WATER MAIN
- RELOCATED FIRE HYDRANT
- EXISTING WATER VALVE
- REMOVE & REPLACE BITUMINOUS PAVEMENT
- NEW UNDERDRAIN



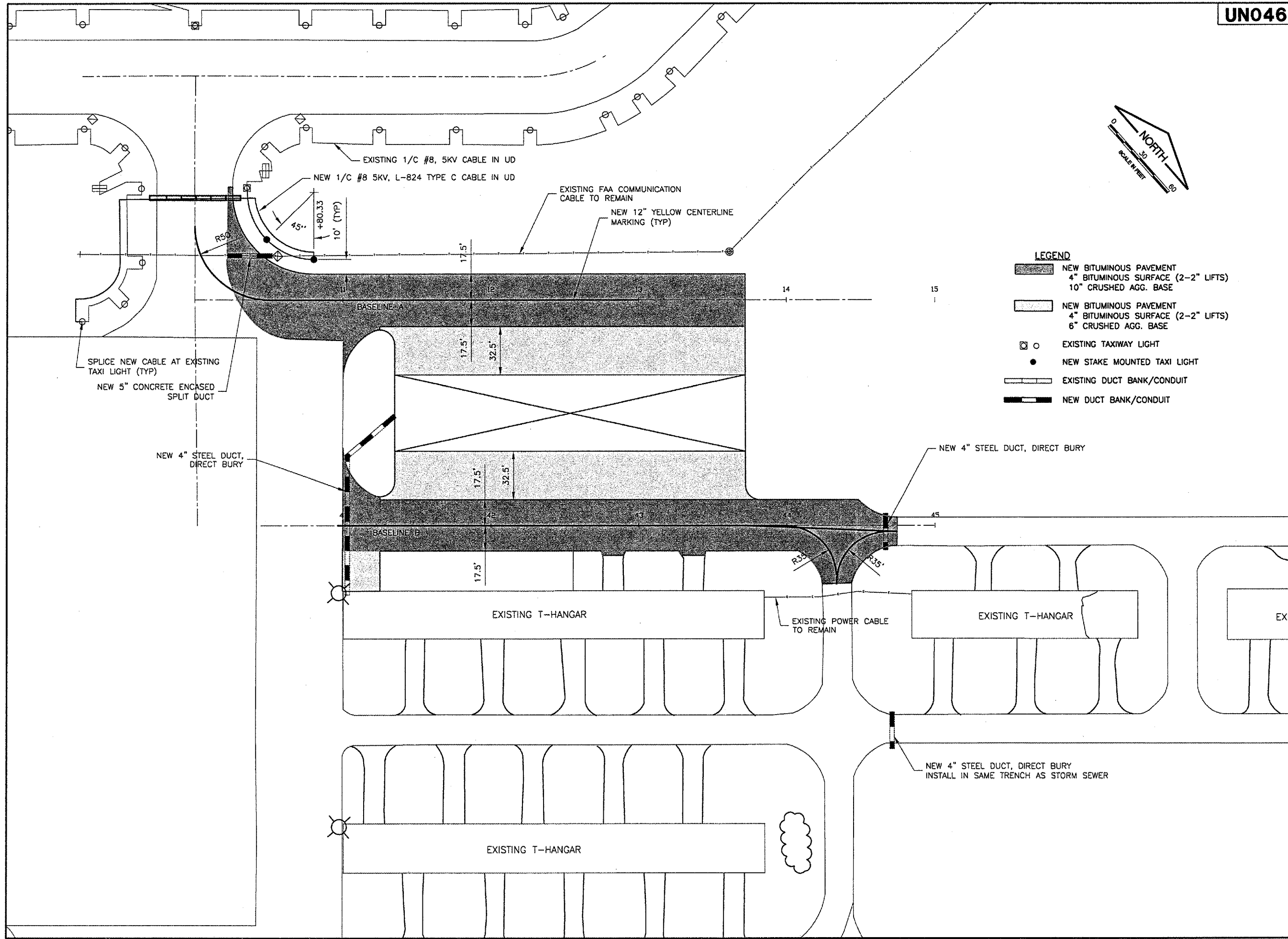
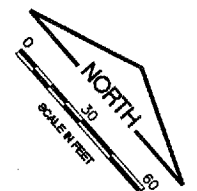
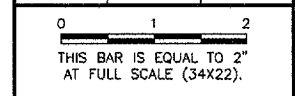
**STORM SEWER SCHEDULE**

| STRUCTURE NO. | STATION/OFFSET  | STRUCTURE TYPE                            | RIM                        | INVERT  |
|---------------|-----------------|---|----------------------------|---|
| A1            | 41+25, 35' LT   | TYPE 1 INLET                              | 744.86                     | INV 15' SW = 737.71<br>EXIST INV 6' SE = FIELD  |
| A2            | 41+77, 17.5' LT | 5' MANHOLE W/ TYPE 1 FRAME AND GRATE      | 743.91                     | INV 15' NE = 737.60<br>INV 15' SE = 737.60<br>EXIST INV 15' S = ±737.5<br>INV 15' NW = 737.50 |
| A3            | 11+20, 35' LT   | 4' MANHOLE W/ TYPE 1 FRAME AND GRATE      | 743.91                     | INV 15' SE = 737.33<br>INV 15' NE = 737.33  |
| A4            | 11+91, 35' LT   | 4' MANHOLE W/ TYPE 1 FRAME AND CLOSED LID | 745.15                     | INV 15' SW = 737.19<br>EXIST INV 15' N = 737.19   |
| B1            | 43+10, 17.5' LT | TYPE 1 INLET                              | 744.85                     | INV 12' NE = 749.30   |
| B2            | 43+82, 35' LT   | 4' MANHOLE W/ TYPE 1 FRAME AND GRATE      | 743.91                     | INV 12' SW = 737.80<br>INV 15' NE = 734.91  |
| B3            | 44+62, 35' LT   | 5' MANHOLE W/ TYPE 1 FRAME AND GRATE      | 743.91                     | INV 24' SE = 734.01<br>INV 15' SW = 734.11  |
| B4            | 44+67, 254' LT  | 5' MANHOLE W/ TYPE 1 FRAME AND GRATE      | ±745 MATCH EXISTING GROUND | INV 24' NW = 732.57<br>INV 24' SW = 732.47  |
| B5            | 43+75, 275' LT  | 6' MANHOLE W/ TYPE 1 FRAME AND GRATE      | ±744 MATCH EXISTING GROUND | INV 24' NE = 732.00<br>EXIST INV 42' W = ±731.5<br>EXIST INV 42' E = ±731.5                   |

NOTE: CONTRACTOR SHALL VERIFY EXISTING STORM SEWER INVERT ELEVATIONS AND NOTIFY RESIDENT ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION OF RELATED STORM SEWER.

K:\Champaign\0505906\Draw\Sheets\FILE: 8 ELEC MARK.dwg  
 LAYOUT: 8 ELEC MARK  
 UPDATE BY: mamejkal  
 SURVEY BOOK #  
 DATE: Thu 11/16/06 10:26am  
 XREF DWG: Cmibase.dwg  
 alp2a.dwg  
 util\_water.dwg  
 util-airfield-elec.dwg  
 UTIL-GAS.dwg  
 UTIL-NONAIRFIELD-ELEC.dwg  
 UTIL-SAN.dwg

| REVISIONS |    |      |
|-----------|----|------|
| NUMBER    | BY | DATE |
|           |    |      |
|           |    |      |
|           |    |      |



- LEGEND**
- NEW BITUMINOUS PAVEMENT  
4" BITUMINOUS SURFACE (2-2" LIFTS)  
10" CRUSHED AGG. BASE
  - NEW BITUMINOUS PAVEMENT  
4" BITUMINOUS SURFACE (2-2" LIFTS)  
6" CRUSHED AGG. BASE
  - EXISTING TAXIWAY LIGHT
  - NEW STAKE MOUNTED TAXI LIGHT
  - EXISTING DUCT BANK/CONDUIT
  - NEW DUCT BANK/CONDUIT

**UNIVERSITY OF ILLINOIS  
 WILLARD AIRPORT  
 CONSTRUCT N.E. T-HANGAR PAVEMENT  
 ELECTRICAL AND PAVEMENT  
 MARKING PLAN**

© Copyright CMT, Inc.  
**CMT**  
 CRANFORD, MURPHY & TILLY, INC.  
 CONSULTING ENGINEERS  
 License No. 184-000615

|                      |              |
|----------------------|--------------|
| DESIGN BY:           | MJS          |
| DRAWN BY:            | MJS          |
| CHECKED BY:          | MJS          |
| APPROVED BY:         |              |
| DATE:                | 11/16/2006   |
| JOB No:              | 0505906      |
| A.I.P. PROJECT:      | 3-17-0016-23 |
| IL PROJ:             | CMI-3651     |
| SHEET 8 OF 17 SHEETS |              |



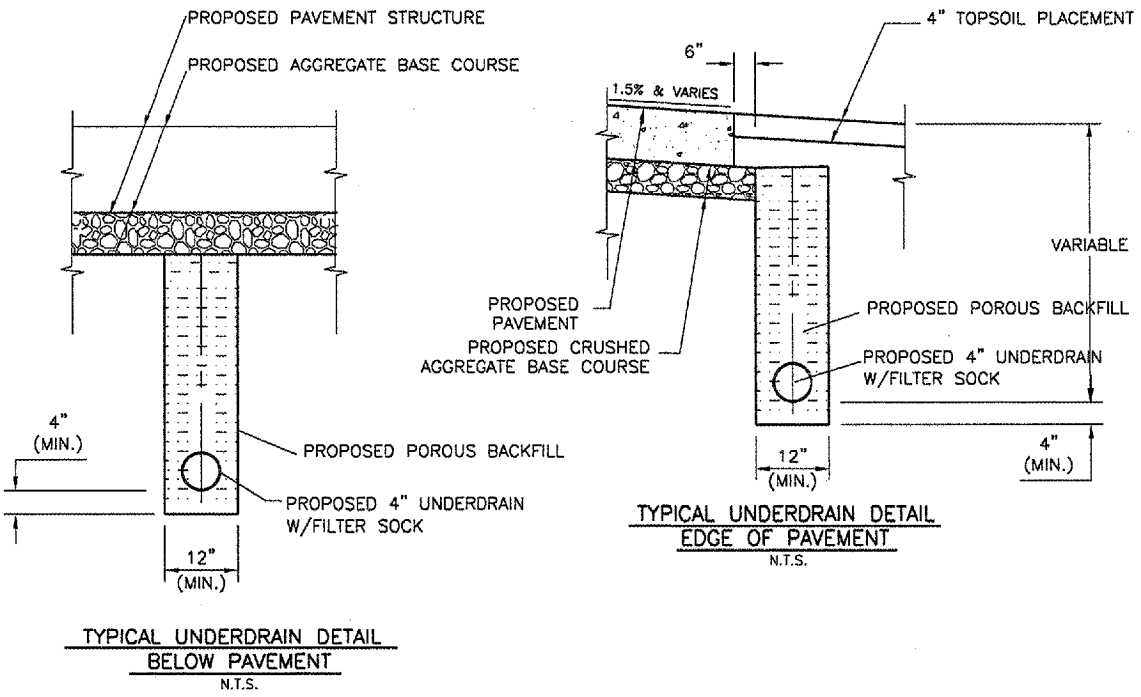
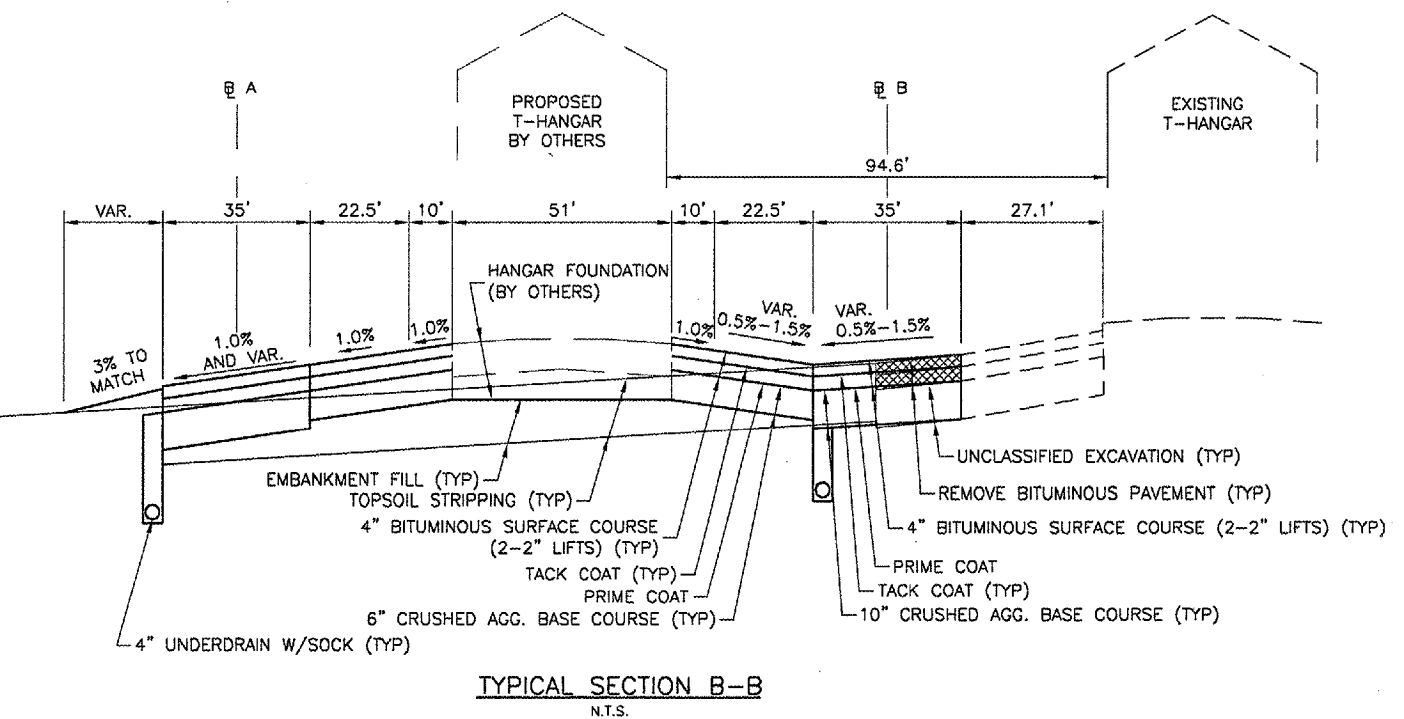
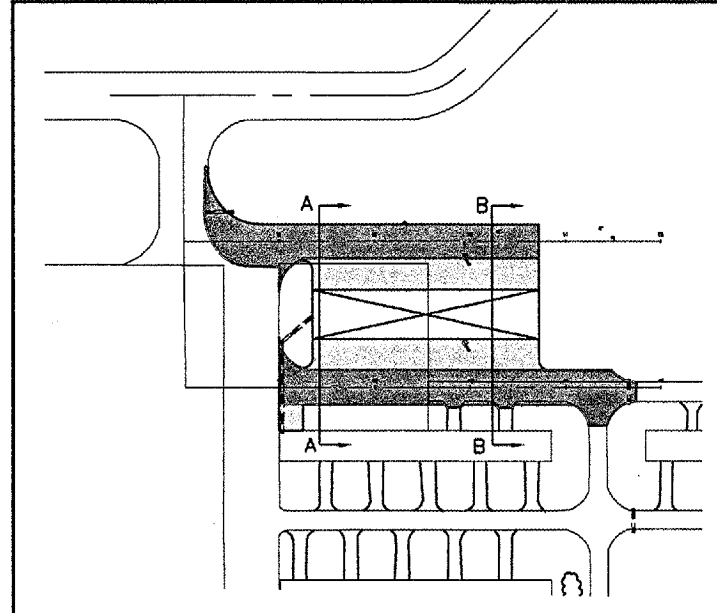
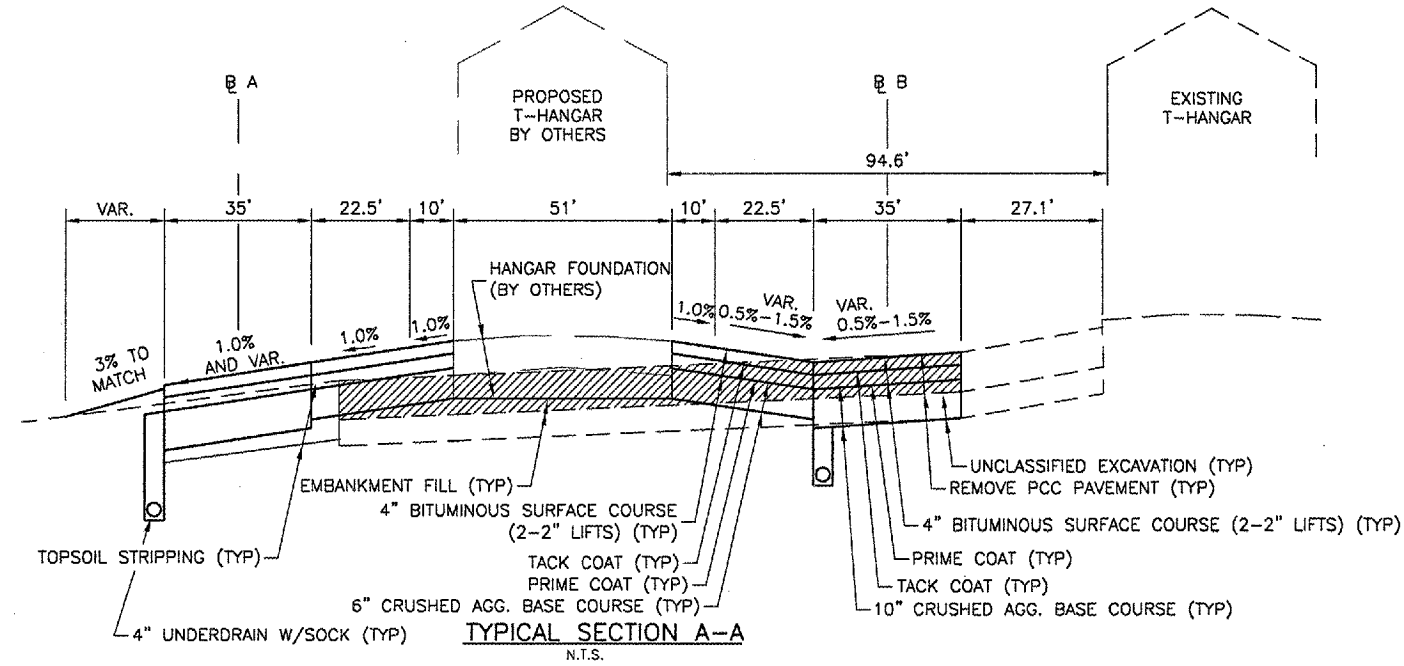
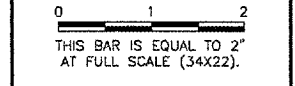
K:\Champaign\0505906\Draw\Sheets\  
 FILE: 9 TYPSECTIONS.dwg  
 UPDATE BY: msmejkal  
 SURVEY BOOK #  
 DATE: Thu 11/16/06 2:10pm  
 XREF DWG: C:\info.dwg  
 tb.dwg  
 C:\mbase.dwg  
 alp2a.dwg  
 IMAGE FILES: C:\base.dwg  
 utl-basefield-elec.dwg  
 UTIL-GAS.dwg  
 UTIL-NONAIRFIELD-ELEC.dwg  
 UTIL-SAN.dwg

**NOTES**

- EXISTING AGGREGATE BASE UNDER PAVEMENT REMOVAL AREAS SHALL BE CONSIDERED UNCLASSIFIED EXCAVATION AND MAY BE USED AS EMBANKMENT FILL AS NEEDED.
- CONTRACTOR SHALL CONSTRUCT SUBGRADE/EMBANKMENT FOR PROPOSED T-HANGAR. THE SUBGRADE SHALL BE CONSTRUCTED TO 10" BELOW THE FINISH FLOOR ELEVATION.
- CRUSHED AGGREGATE BASE COURSE SHALL BE CONSTRUCTED 1' OUTSIDE OF BITUMINOUS PAVEMENT EDGE.

REVISIONS

| NUMBER | BY | DATE |
|--------|----|------|
|        |    |      |
|        |    |      |
|        |    |      |



UNIVERSITY OF ILLINOIS  
 WILLARD AIRPORT  
 CONSTRUCT N.E. T-HANGAR PAVEMENT  
 TYPICAL SECTIONS

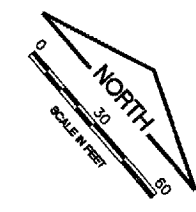
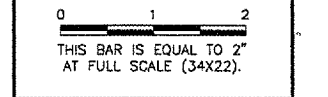
© Copyright CMT, Inc.  
**CMT**  
 CRAWFORD, MURPHY & TILLY, INC.  
 CONSULTING ENGINEERS  
 License No. 84-000613

|                 |                |
|-----------------|----------------|
| DESIGN BY:      | MJS            |
| DRAWN BY:       | MJS            |
| CHECKED BY:     | MJS            |
| APPROVED BY:    |                |
| DATE:           | 11/16/2006     |
| JOB No:         | 0505906        |
| A.I.P. PROJECT: | 3-17-0016-23   |
| IL. PROJ:       | CMI-3651       |
| SHEET           | 9 OF 17 SHEETS |

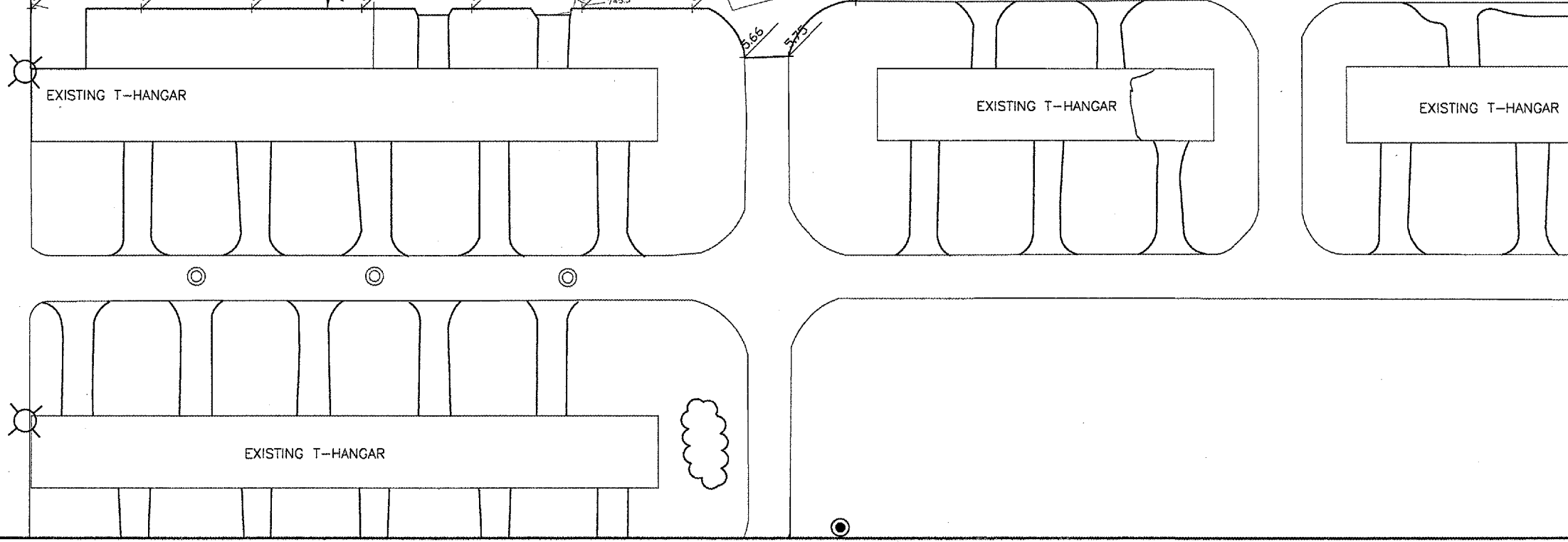
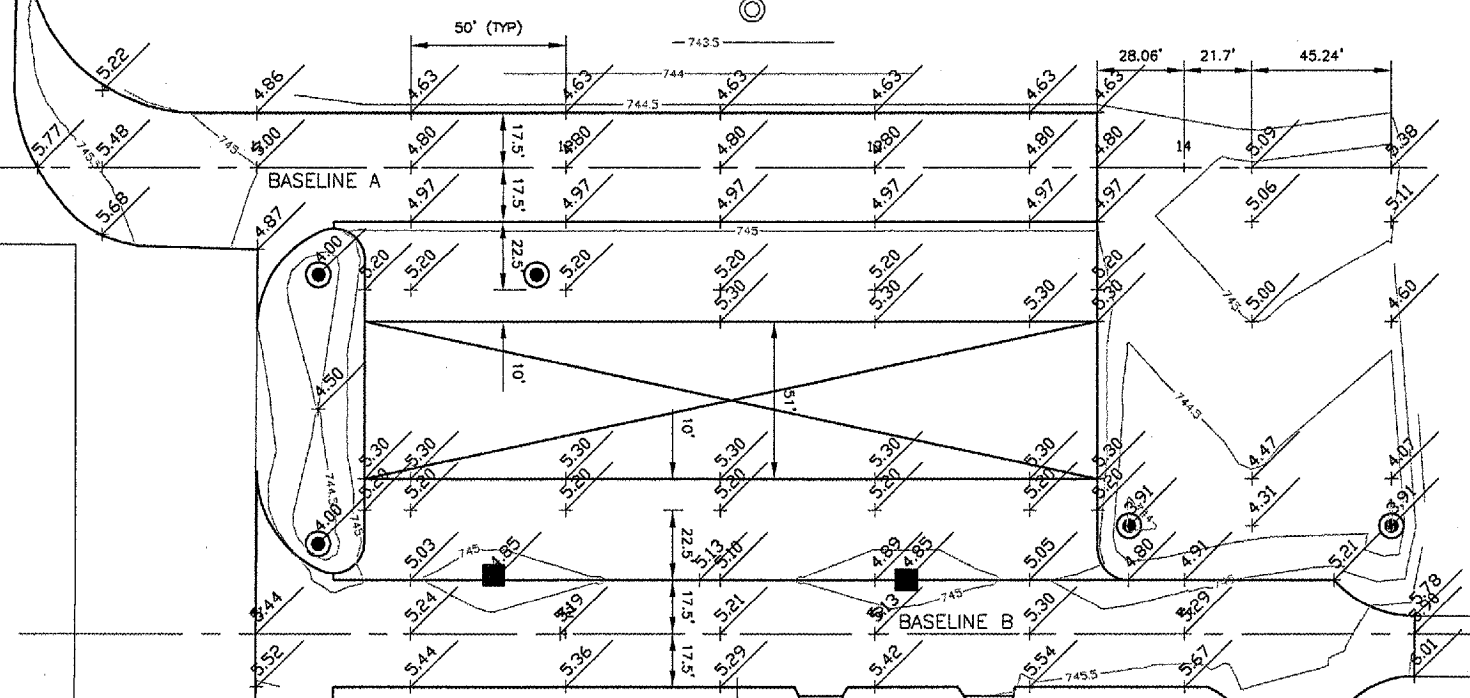
UN046

K:\Champaign\0505906\Draw\Sheets\  
 FILE: 10 STAKING.dwg  
 LAYOUT: 9 STAKING  
 UPDATE BY: mamejkal  
 SURVEY BOOK #  
 DATE: Fri 11/10/06 9:33am  
 XREF DWG: Cmbase.dwg  
 alp2a.dwg  
 util\_water.dwg  
 util-airfield-elec.dwg  
 UTIL-GAS.dwg  
 UTIL-NONAIRFIELD-ELEC.dwg  
 UTIL-SAN.dwg

| REVISIONS |             |      |
|-----------|-------------|------|
| NUMBER    | DESCRIPTION | DATE |
|           |             |      |
|           |             |      |
|           |             |      |



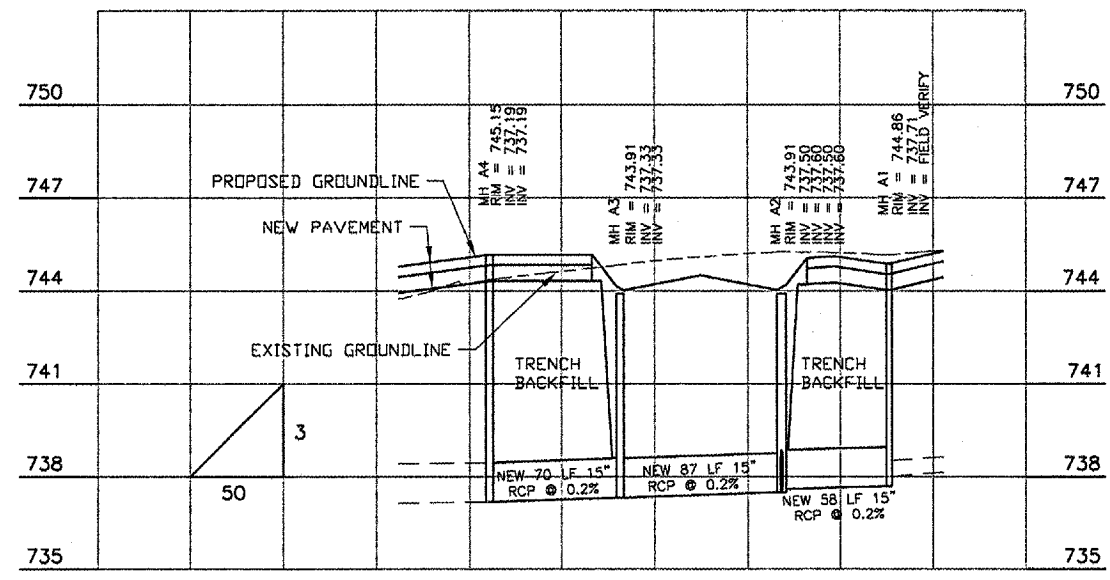
**LEGEND**  
 ✕ 4.52 NEW ELEVATION (ADD 740 FOR USGS DATUM)  
 ——— NEW CONTOUR  
 ● ■ MANHOLE/INLET



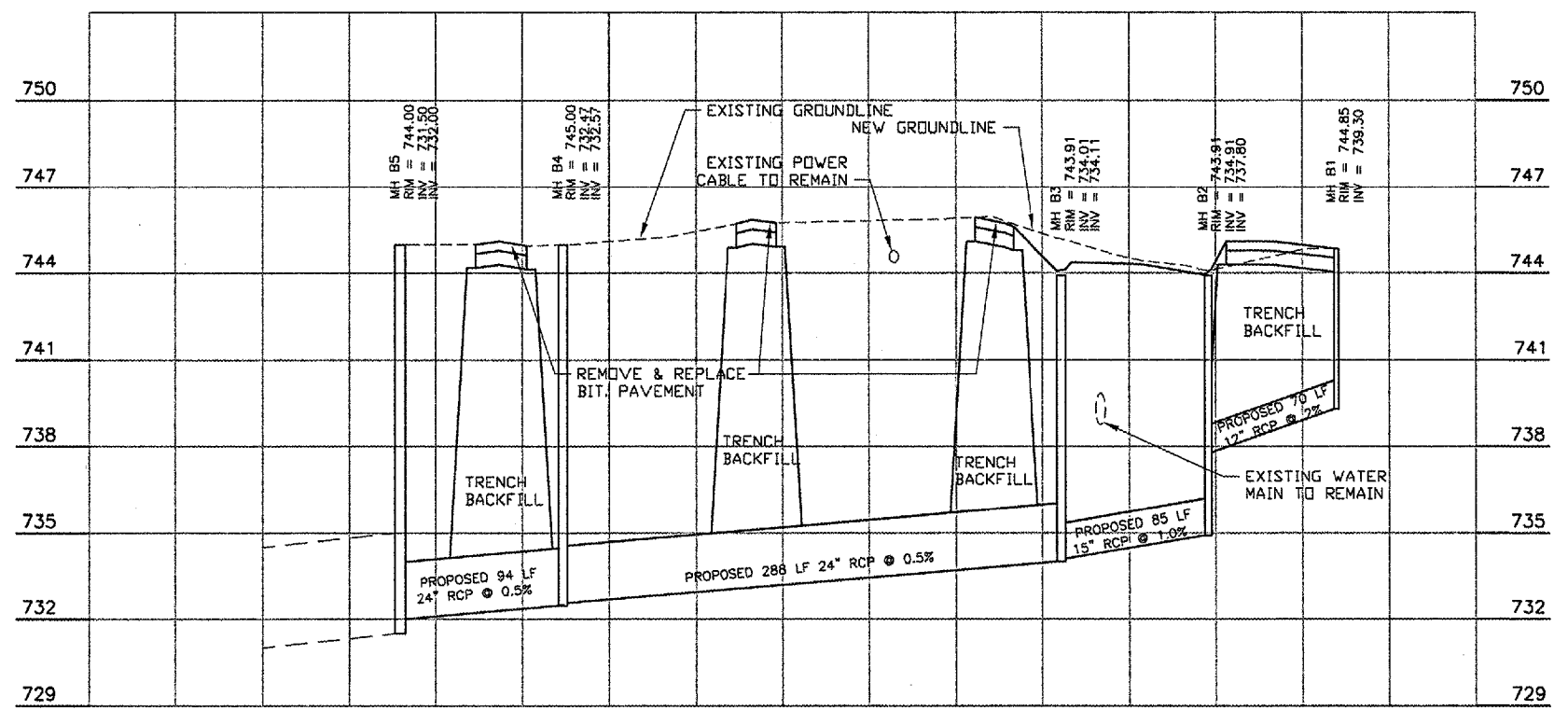
**UNIVERSITY OF ILLINOIS  
 WILLARD AIRPORT  
 CONSTRUCT N.E. T-HANGAR PAVEMENT  
 STAKING PLAN**

© Copyright CMT, Inc.  
**CMT**  
 CRAWFORD MURPHY & TILLY, INC.  
 CONSULTING ENGINEERS  
 License No. 84-000613

|                 |                 |
|-----------------|-----------------|
| DESIGN BY:      | MJS             |
| DRAWN BY:       | MJS             |
| CHECKED BY:     | MJS             |
| APPROVED BY:    |                 |
| DATE:           | 11/16/2006      |
| JOB No:         | 0505906         |
| A.I.P. PROJECT: | 3-17-0016-23    |
| IL. PROJ:       | GM1-3651        |
| SHEET           | 10 OF 17 SHEETS |



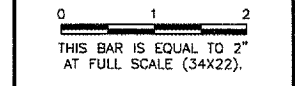
MAIN A



MAIN B

REVISIONS

| NUMBER | BY | DATE |
|--------|----|------|
|        |    |      |
|        |    |      |
|        |    |      |



UNIVERSITY OF ILLINOIS  
 WILLARD AIRPORT  
 CONSTRUCT N.E. T-HANGAR PAVEMENT  
 STORM SEWER PROFILES

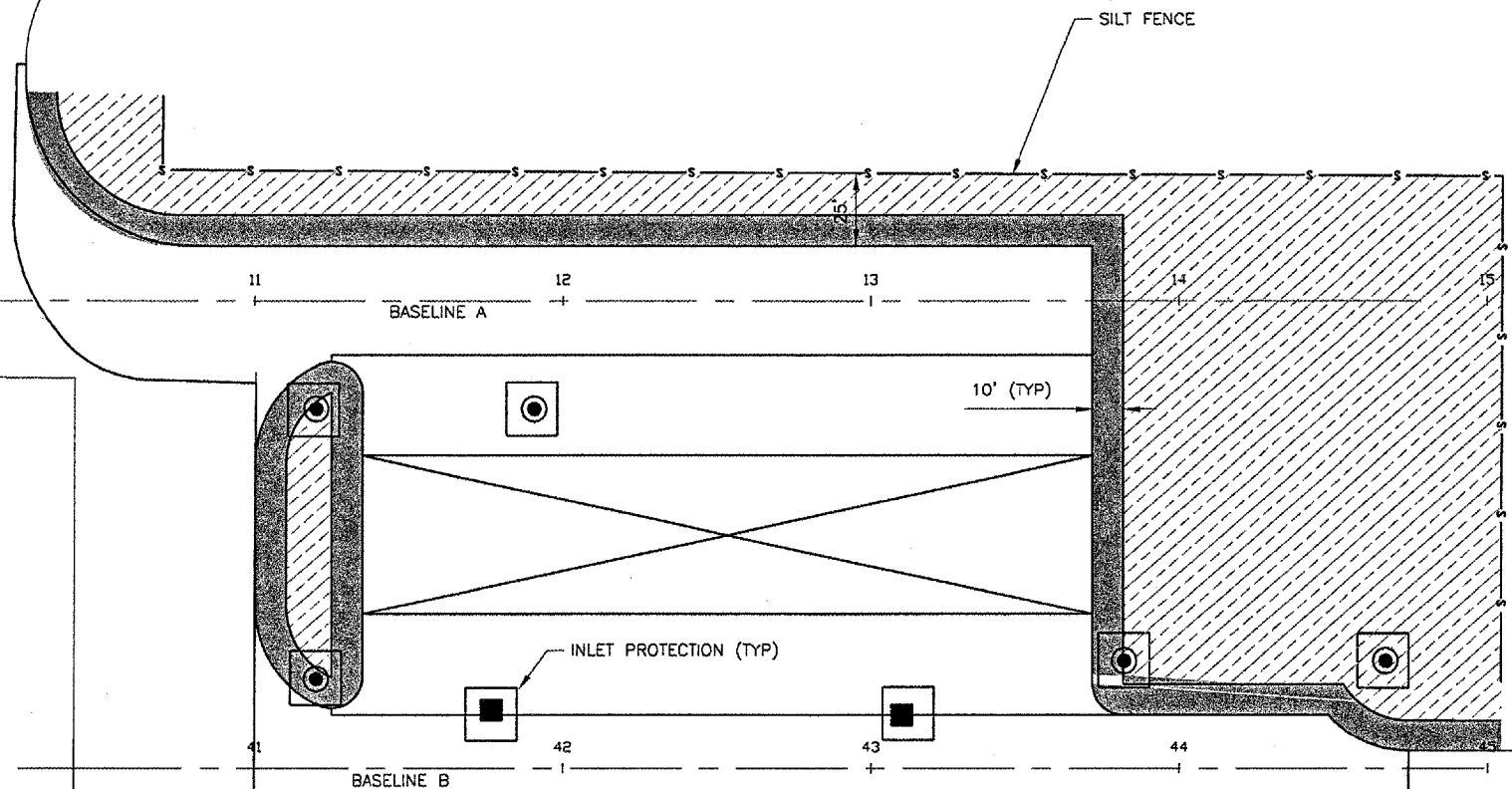
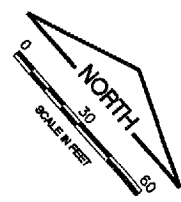
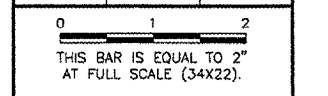
© Copyright CMT, Inc.  
**CMT**  
 CRAWFORD, MURPHY & TILLY, INC.  
 CONSULTING ENGINEERS  
 License No. 194-000618

|                 |                 |
|-----------------|-----------------|
| DESIGN BY:      | MJS             |
| DRAWN BY:       | MJS             |
| CHECKED BY:     | MJS             |
| APPROVED BY:    |                 |
| DATE:           | 11/16/2006      |
| JOB No:         | 0505906         |
| A.I.P. PROJECT: | 3-17-0016-23    |
| IL PROJ:        | CM1-3651        |
| SHEET           | 11 OF 17 SHEETS |

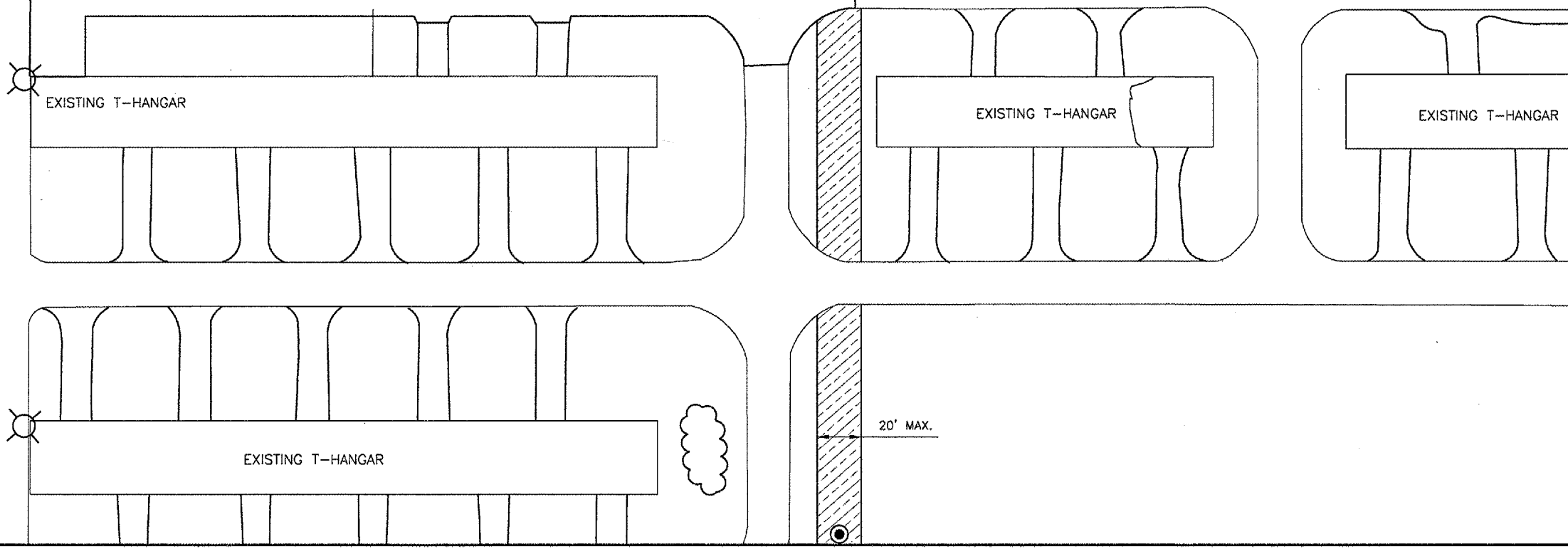
**UN046**

K:\Champaign\0505906\Draw\Sheets\  
 FILE: 12 EROSION.dwg  
 LAYOUT: 9 EROSION  
 UPDATE BY: msmejkal  
 SURVEY BOOK #  
 DATE: Fri 11/10/06 9:35am  
 XREF DWG: Cmbase.dwg  
 alp2a.dwg  
 util\_water.dwg  
 util\_airfield-elec.dwg  
 UTIL-GAS.dwg  
 UTIL-MONAIRFIELD-ELEC.dwg  
 UTIL-SAN.dwg

| REVISIONS |    |      |
|-----------|----|------|
| NUMBER    | BY | DATE |
|           |    |      |
|           |    |      |
|           |    |      |



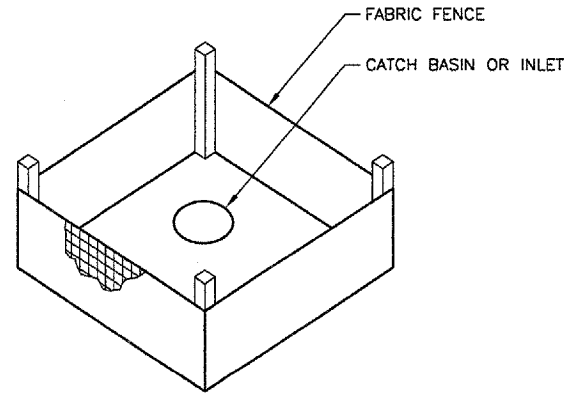
- LEGEND**
- NEW SEEDING AND MULCHING
  - NEW SEEDING AND SOIL GUARD
  - SILT FENCE
  - INLET PROTECTION



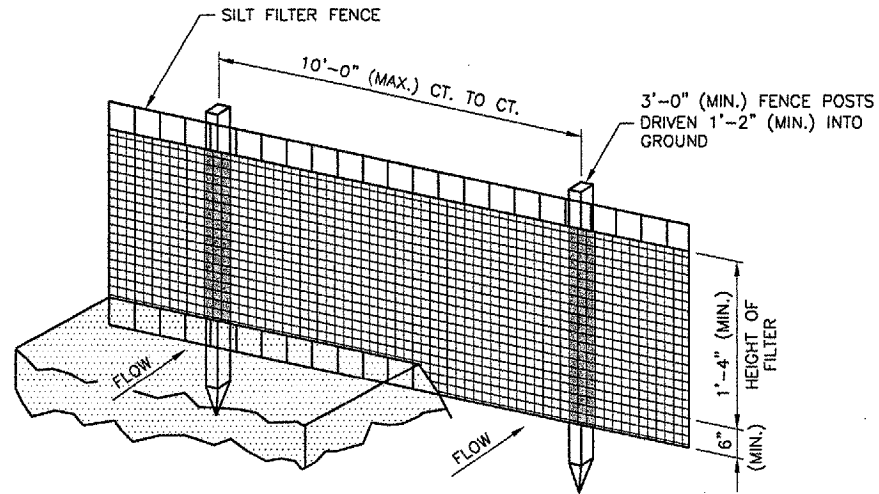
**UNIVERSITY OF ILLINOIS  
 WILLARD AIRPORT**  
**CONSTRUCT N.E. T-HANGAR PAVEMENT  
 AND LANDSCAPING PLAN**

© Copyright CMT, Inc.  
**CMT**  
 CRAWFORD, MURPHY & TILLY, INC.  
 CONSULTING ENGINEERS  
 License No. 184-000613

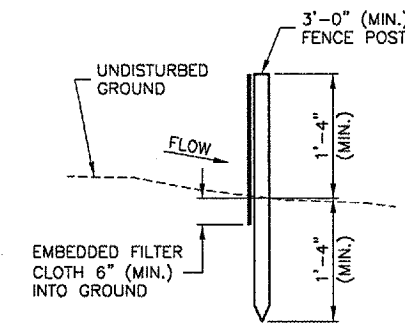
|                       |              |
|-----------------------|--------------|
| DESIGN BY:            | MJS          |
| DRAWN BY:             | MJS          |
| CHECKED BY:           | MJS          |
| APPROVED BY:          |              |
| DATE:                 | 11/16/2006   |
| JOB No:               | 0505906      |
| A.I.P. PROJECT:       | 3-17-0016-23 |
| IL. PROJ:             | CM-3651      |
| SHEET 12 OF 17 SHEETS |              |



**INLET PROTECTION WITH FABRIC**  
 N.T.S.



**PERSPECTIVE VIEW**



**SECTION**

**EROSION CONTROL FABRIC FENCE DETAIL**

N.T.S.

**NOTES**

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 2'-0" AT TOP AND MID SECTION.
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.

**STORM WATER POLLUTION PREVENTION PLAN**

THE FOLLOWING PLAN IS ESTABLISHED AND INCORPORATED IN THE PROJECT TO DIRECT THE CONTRACTOR IN THE PLACEMENT OF TEMPORARY EROSION CONTROL SYSTEMS AND TO PROVIDE A STORM WATER POLLUTION PREVENTION PLAN FOR COMPLIANCE WITH NPDES.

THE PURPOSE OF THIS PLAN IS TO MINIMIZE EROSION WITHIN THE CONSTRUCTION SITE AND TO LIMIT SEDIMENTS FROM LEAVING THE SITE BY UTILIZING PROPER TEMPORARY EROSION CONTROL SYSTEMS AND PROVIDING GROUND COVER WITHIN A REASONABLE AMOUNT OF TIME.

CERTAIN EROSION CONTROL FACILITIES SHALL BE INSTALLED BY THE CONTRACTOR AT THE BEGINNING OF CONSTRUCTION. OTHER ITEMS SHALL BE INSTALLED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER ON A CASE BY CASE SITUATION DEPENDING ON THE CONTRACTOR'S SEQUENCE OF ACTIVITIES, TIME OF YEAR, AND EXPECTED WEATHER CONDITIONS.

THE CONTRACTOR SHALL INSTALL PERMANENT EROSION CONTROL SYSTEMS AND SEEDING WITHIN A TIMEFRAME SPECIFIED HEREIN AND AS DIRECTED BY THE ENGINEER, THEREFORE MINIMIZING THE AMOUNT OF AREA SUSCEPTIBLE TO EROSION AND REDUCING THE AMOUNT OF TEMPORARY SEEDING, WHICH WILL BE THE CONTRACTOR'S COST. THE ENGINEER WILL DETERMINE IF ANY TEMPORARY EROSION CONTROL SYSTEMS SHOWN IN THE PLAN CAN BE DELETED AND IF ANY ADDITIONAL TEMPORARY EROSION CONTROL SYSTEMS, WHICH ARE NOT INCLUDED IN THIS PLAN, SHALL BE ADDED. THE CONTRACTOR SHALL PERFORM ALL WORK AS DIRECTED BY THE ENGINEER AND AS SHOWN ON THE PLANS.

**SITE DESCRIPTION**

THE FOLLOWING IS A DESCRIPTION OF THE CONSTRUCTION ACTIVITY WHICH IS THE SUBJECT OF THIS PLAN:

THIS PROJECT CONSISTS OF CONSTRUCTING NORTHEAST T-HANGAR SITWORK AND PAVEMENTS AT THE UNIVERSITY OF ILLINOIS WILLARD AIRPORT. THE PROJECT INCLUDES EARTH EXCAVATION, EMBANKMENT, STORM SEWERS, MANHOLES, INLETS VARIOUS PAVEMENT ITEMS, ELECTRICAL WORK AND OTHER MISCELLANEOUS CONSTRUCTION WORK.

THE FOLLOWING IS A DESCRIPTION OF THE INTENDED SEQUENCE OF MAJOR ACTIVITIES WHICH WILL DISTURB SOILS FOR MAJOR PORTIONS OF THE CONSTRUCTION SITE, SUCH AS GRUBBING, EXCAVATION AND GRADING:

1. EXCAVATION AND EMBANKMENT WILL BE COMPLETED WITHIN THE PROJECT LIMITS TO GRADE OUT FOR THE PROPOSED DRAINAGE, PAVEMENT IMPROVEMENTS AND BUILDING SLAB.
2. STORM SEWERS, MANHOLES AND INLETS INSTALLATION.
3. PLACEMENT, MAINTENANCE, REMOVAL AND PROPER CLEAN-UP OF TEMPORARY EROSION CONTROL. SUCH AS PERIMETER SILT FENCE, TEMPORARY DITCH CHECKS AND INLET PROTECTION.
4. PAVEMENT CONSTRUCTION.
5. FINAL GRADING, ELECTRICAL INSTALLATION AND OTHER MISCELLANEOUS ITEMS.
6. PLACEMENT OF PERMANENT EROSION CONTROL, SUCH AS SEEDING, MULCHING AND EROSION CONTROL BLANKET.

**AREA OF CONSTRUCTION SITE**

THE TOTAL AREA OF THE CONSTRUCTION SITE IS ESTIMATED TO BE 2 ACRES OF WHICH 2 ACRES WILL BE DISTURBED BY EXCAVATION, GRADING AND OTHER ACTIVITIES.

**OTHER REPORTS, STUDIES AND PLANS WHICH AID IN THE DEVELOPMENT OF THE STORM WATER POLLUTION PREVENTION PLAN AS REFERENCED DOCUMENTS:**

1. INFORMATION OF THE SOILS AND TERRAIN WITHIN THE SITE WAS OBTAINED FROM TOPOGRAPHIC SURVEYS AND SOIL BORINGS THAT WERE UTILIZED FOR THE DEVELOPMENT OF THE PROPOSED TEMPORARY EROSION CONTROL SYSTEMS.

2. PROJECT PLAN DOCUMENTS, SPECIFICATION AND SPECIAL PROVISIONS, AND PLAN DRAWINGS INDICATING DRAINAGE PATTERNS AND APPROXIMATE SLOPES ANTICIPATED AFTER GRADING ACTIVITIES WERE UTILIZED FOR THE PROPOSED PLACEMENT OF THE TEMPORARY EROSION CONTROL SYSTEMS.

**DRAINAGE TRIBUTARIES AND SENSITIVE AREAS RECEIVING RUNOFF FROM THIS CONSTRUCTION SITE:**

THE CONSTRUCTION SITE DRAINS INTO THE AIRPORT OWNED STORM SEWER WHICH ULTIMATELY OUTLETS INTO A DITCH NEAR ILLINOIS STATE ROUTE 45 AND ULTIMATELY INTO THE EMBARRAS RIVER.

**CONTROLS-EROSION CONTROLS AND SEDIMENT CONTROL**

**DESCRIPTION OF STABILIZATION PRACTICES AT THE BEGINNING OF CONSTRUCTION**

1. THE DRAWINGS SPECIFICATIONS AND SPECIAL PROVISIONS WILL ENSURE THAT EXISTING VEGETATION IS PRESERVED WHERE ATTAINABLE AND DISTURBED PORTIONS OF THE SITE WILL BE STABILIZED. STABILIZATION PRACTICES INCLUDE SEEDING AND MULCHING AS DIRECTED BY THE ENGINEER. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 7 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED.

AS SOON AS REASONABLE ACCESS IS AVAILABLE TO ALL LOCATIONS WHERE WATER DRAINS AWAY FROM THE PROJECT, TEMPORARY DITCH CHECKS, INLET PROTECTION AND PERIMETER SILT FENCE SHALL BE INSTALLED AS CALLED OUT IN THE PLAN AND DIRECTED BY THE ENGINEER.

THIS PLAN HAS BEEN PREPARED TO COMPLY WITH THE PROVISIONS OF THE NPDES PERMIT NUMBER ILR10, ISSUED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY FOR STORM WATER DISCHARGES FROM CONSTRUCTION SITE ACTIVITIES.

**DESCRIPTION OF STABILIZATION PRACTICES DURING CONSTRUCTION:**

DURING CONSTRUCTION, AREAS OUTSIDE THE CONSTRUCTION LIMITS AS OUTLINED PREVIOUSLY HEREIN SHALL BE PROTECTED. THE CONTRACTOR SHALL NOT USE THIS AREA FOR STAGING (EXCEPT AS DESCRIBED ON THE PLANS AND DIRECTED BY THE ENGINEER), PARKING OF VEHICLES OR CONSTRUCTION EQUIPMENT, STORAGE OF MATERIALS, OR OTHER CONSTRUCTION RELATED ACTIVITIES.

1. WITHIN THE CONSTRUCTION LIMITS, AREAS WHICH MAY BE SUSCEPTIBLE TO EROSION AS DETERMINED BY THE ENGINEER SHALL REMAIN UNDISTURBED UNTIL FULL SCALE CONSTRUCTION IS UNDERWAY TO PREVENT UNNECESSARY SOIL EROSION.

2. EARTH STOCKPILES SHALL BE TEMPORARILY SEEDED, AT THE CONTRACTORS EXPENSE, IF THEY ARE TO REMAIN UNUSED FOR MORE THAN FOURTEEN DAYS.

3. AS CONSTRUCTION PROCEEDS, THE CONTRACTOR SHALL INSTITUTE THE FOLLOWING AS DIRECTED BY THE ENGINEER:

A. PLACE TEMPORARY EROSION CONTROL FACILITIES AT LOCATIONS SHOWN ON THE PLANS.

B. CONSTRUCT DITCHES AND PROVIDE TEMPORARY EROSION CONTROL SYSTEMS.

C. BUILD NECESSARY EMBANKMENT AT CULVERT/STORM SEWER LOCATIONS AND THEN EXCAVATE AND PLACE PIPE.

D. EXCAVATED AREAS AND EMBANKMENT AREAS SHALL BE PERMANENTLY SEEDED IMMEDIATELY AFTER FINAL GRADING. IF NOT, THEY SHALL BE TEMPORARILY SEEDED, AT THE CONTRACTOR'S COST, IF NO CONSTRUCTION ACTIVITY IN THE AREA IS PLANNED FOR SEVEN DAYS.

4. CONSTRUCTION EQUIPMENT SHALL BE STORED AND FUELED ONLY AT DESIGNATED LOCATIONS. ALL NECESSARY MEASURES SHALL BE TAKEN TO CONTAIN ANY FUEL OR POLLUTANT IN ACCORDANCE WITH EPA WATER QUALITY REGULATIONS. LEAKING EQUIPMENT OR SUPPLIES SHALL BE IMMEDIATELY REPAIRED OR REMOVED FROM THE SITE.

5. THE RESIDENT ENGINEER SHALL INSPECT THE PROJECT DAILY DURING CONSTRUCTION ACTIVITIES. INSPECTION SHALL ALSO BE DONE WEEKLY AND AFTER RAINS OF 1/2 OR GREATER OR EQUIVALENT SNOWFALL AND DURING WINTER SHUTDOWN PERIOD.

6. SEDIMENT COLLECTED DURING CONSTRUCTION OF THE VARIOUS TEMPORARY EROSION CONTROL SYSTEMS SHALL BE DISPOSED OF ON SITE ON A REGULAR BASIS AS DIRECTED BY THE ENGINEER. THE COST OF THIS MAINTENANCE SHALL BE INCLUDED IN THE UNIT BID PRICE FOR UNCLASSIFIED EXCAVATION AND EROSION CONTROL ITEMS.

7. THE TEMPORARY EROSION CONTROL SYSTEMS SHALL BE REMOVED AS DIRECTED BY THE ENGINEER AFTER USE IS NO LONGER NEEDED OR NO LONGER FUNCTIONING. THE COST OF THIS REMOVAL SHALL BE INCLUDED IN THE UNIT BID PRICE FOR VARIOUS TEMPORARY EROSION CONTROL PAY ITEMS.

**DESCRIPTION OF STRUCTURAL PRACTICES AFTER FINAL GRADING:**

1. TEMPORARY EROSION CONTROL SYSTEMS SHALL BE LEFT IN PLACE WITH PROPER MAINTENANCE UNTIL PERMANENT EROSION CONTROL IS IN PLACE AND WORKING PROPERLY AND ALL PROPOSED TURF AREAS ARE SEEDED AND ESTABLISHED.

2. ONCE PERMANENT EROSION CONTROL SYSTEMS AS PROPOSED IN THE PLANS ARE FUNCTIONAL AND ESTABLISHED, TEMPORARY ITEMS SHALL BE REMOVED, CLEANED UP, AND DISTURBED TURF RESEEDED.

**MAINTENANCE AFTER CONSTRUCTION**

CONSTRUCTION IS COMPLETE AFTER FINAL ACCEPTANCE BY THE ILLINOIS DIVISION OF AERONAUTICS. MAINTENANCE UP TO THIS DATE WILL BE REQUIRED BY THE CONTRACTOR.

| REVISIONS |    |      |
|-----------|----|------|
| NUMBER    | BY | DATE |
|           |    |      |
|           |    |      |
|           |    |      |

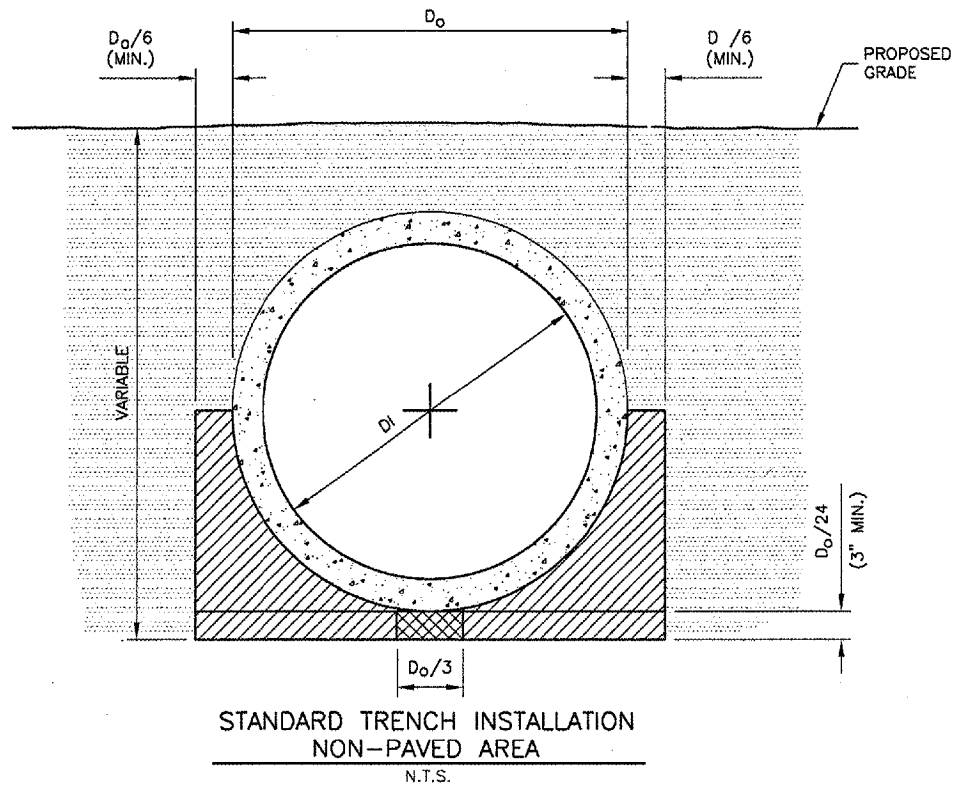
0 1 2  
 THIS BAR IS EQUAL TO 2"  
 AT FULL SCALE (34X22).

**UNIVERSITY OF ILLINOIS  
 WILLARD AIRPORT**  
**CONSTRUCT N.E. T-HANGAR PAVEMENT**  
**EROSION CONTROL DETAILS**

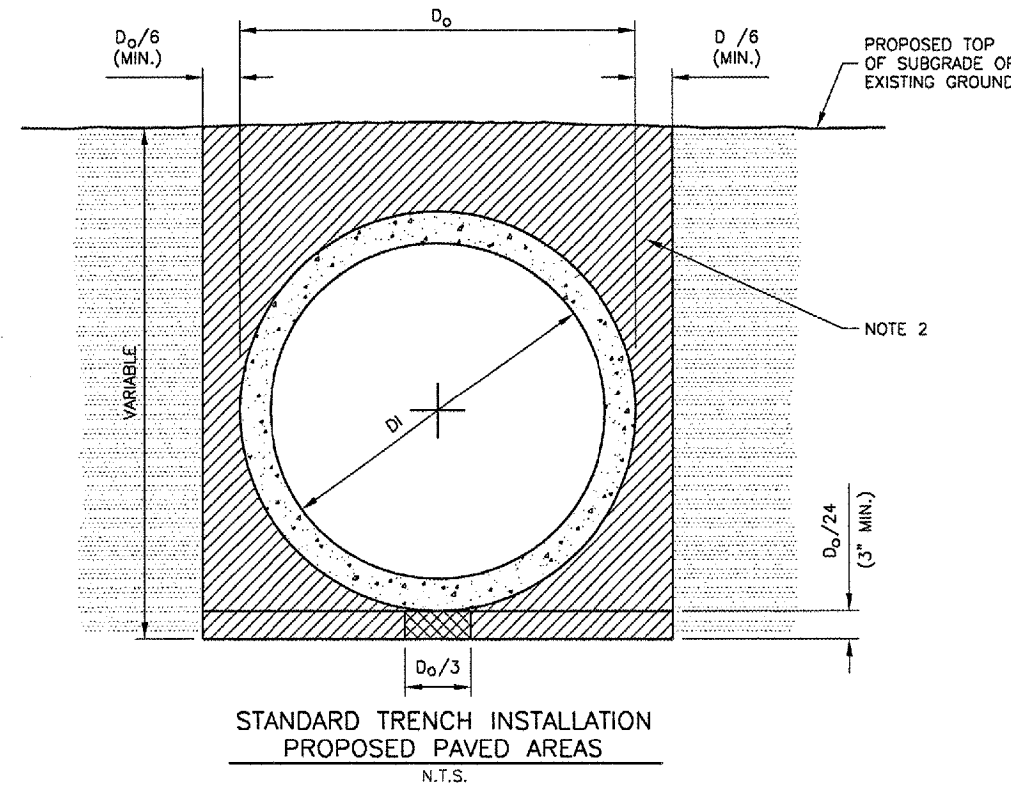
© Copyright CMT, Inc.  
**CMT**  
 CRAWFORD, MURPHY & TILLY, INC.  
 CONSULTING ENGINEERS  
 License No. 084-000613



|                 |                 |
|-----------------|-----------------|
| DESIGN BY:      | CMT             |
| DRAWN BY:       | CMT             |
| CHECKED BY:     | MJS             |
| APPROVED BY:    |                 |
| DATE:           | 11/16/2006      |
| JOB No:         | 0505906         |
| A.I.P. PROJECT: | 3-17-0016-23    |
| IL. PROJ.:      | CMI-3651        |
| SHEET           | 13 OF 17 SHEETS |



STANDARD TRENCH INSTALLATION  
 NON-PAVED AREA  
 N.T.S.



STANDARD TRENCH INSTALLATION  
 PROPOSED PAVED AREAS  
 N.T.S.

**LEGEND**

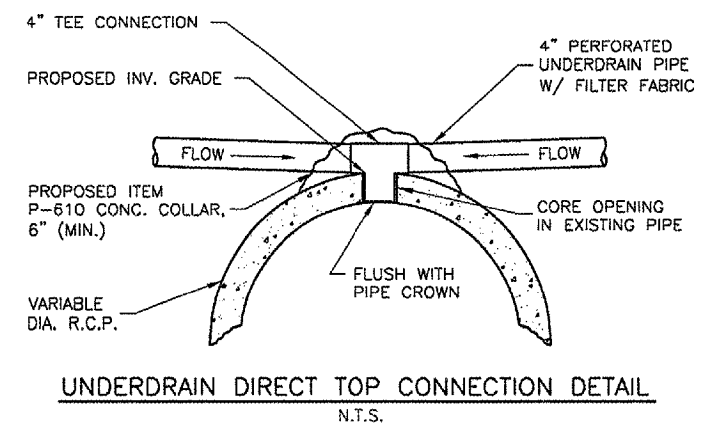
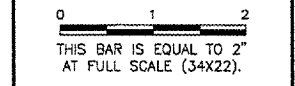
- DRAINAGE CONDUIT MATERIAL-CONCRETE
- MIDDLE BEDDING LOOSELY PLACED UNCOMPACTED BEDDING
- HAUNCH AND OUTER BEDDING COMPACTION- 95% STANDARD PROCTOR
- LOWER SIDE AND OVERFILL COMPACTION- SAME AS EMBANKMENT REQUIREMENTS

$D_o$  PIPE OUTSIDE DIAMETER  
 $D_i$  PIPE INSIDE DIAMETER

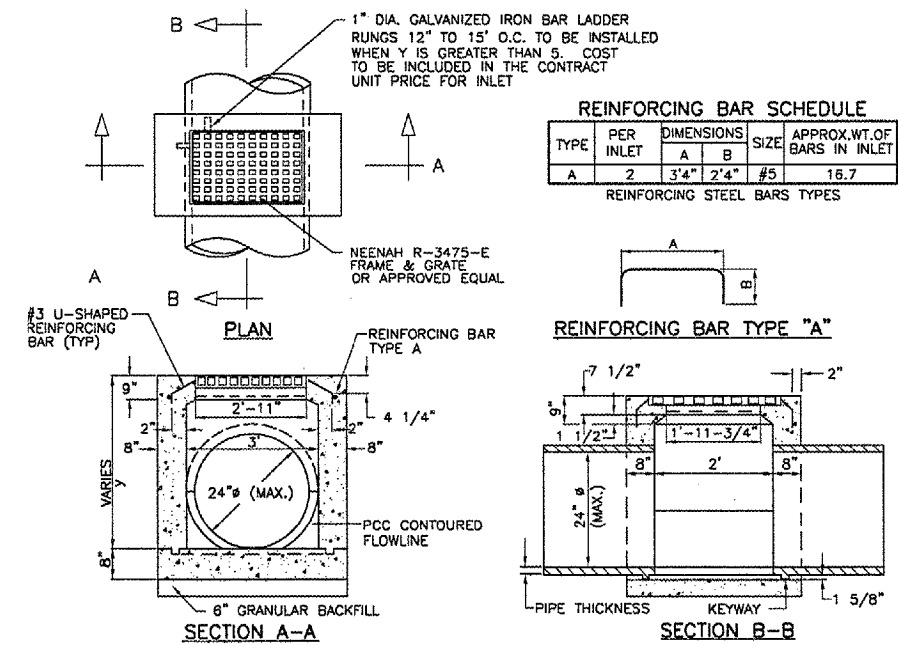
- NOTES**
- BEDDING SHOWN IS IN ACCORDANCE WITH "STANDARD EMBANKMENT INSTALLATIONS", STANDARD INSTALLATION & BEDDING FACTORS FOR THE INDIRECT DESIGN METHOD (DESIGN DATA 40), AMERICAN CONCRETE PIPE ASSOCIATION.
  - BACKFILL TO EXTEND 3' BEYOND EDGES OF PROPOSED PAVEMENT.

**REVISIONS**

| NUMBER | BY | DATE |
|--------|----|------|
|        |    |      |
|        |    |      |
|        |    |      |



UNDERDRAIN DIRECT TOP CONNECTION DETAIL  
 N.T.S.



TYPE 1 INLET  
 NOT TO SCALE

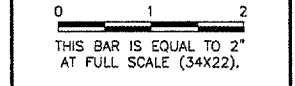
- NOTES**
- 1/2" CHAMFER TO BE USED ON ALL EXPOSED CORNERS ON INLETS. BARS TO BE INSTALLED 2" FROM FACE OF WALL.
  - INLET TO BE CONSTRUCTED OF STRUCTURAL P.C. CONCRETE. THE CONTRACT UNIT PRICE FOR INLET SHALL INCLUDE THE GRATE AND FRAME AS SPECIFIED.

UNIVERSITY OF ILLINOIS  
 WILLARD AIRPORT  
 CONSTRUCT N.E. T-HANGAR PAVEMENT  
 DRAINAGE DETAILS

© Copyright CMT, Inc.  
**CMT**  
 CRAMFORD, MURPHY & TILLY, INC.  
 CONSULTING ENGINEERS  
 License No. BH-000615

|                 |                 |
|-----------------|-----------------|
| DESIGN BY:      | CMT             |
| DRAWN BY:       | CMT             |
| CHECKED BY:     | MJS             |
| APPROVED BY:    |                 |
| DATE:           | 11/16/2006      |
| JOB No:         | 0505906         |
| A.I.P. PROJECT: | 3-17-0016-23    |
| IL PROJ:        | CMI-3651        |
| SHEET           | 14 OF 17 SHEETS |

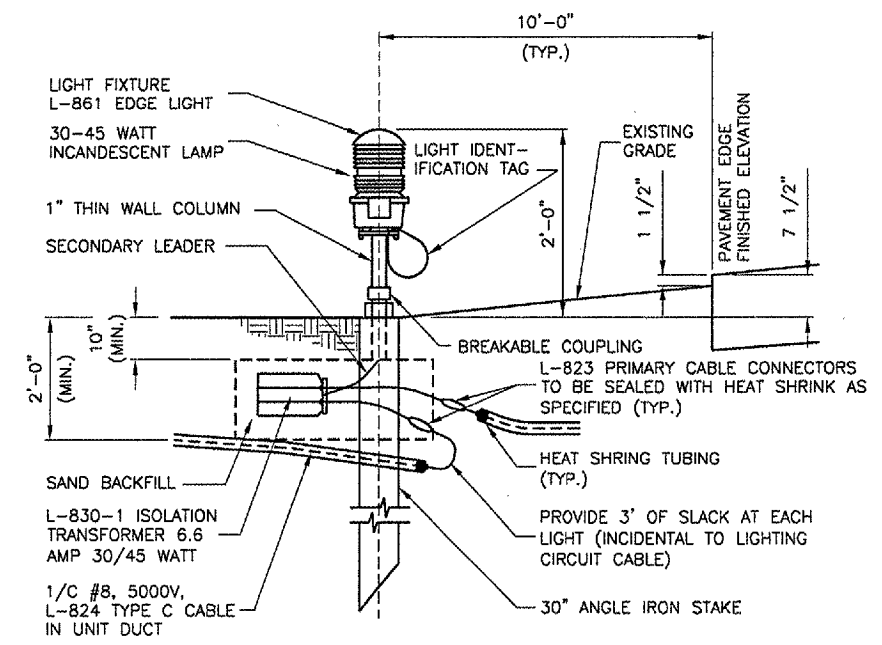
| REVISIONS |    |      |
|-----------|----|------|
| NUMBER    | BY | DATE |
|           |    |      |
|           |    |      |
|           |    |      |



UNIVERSITY OF ILLINOIS  
 WILLARD AIRPORT  
 CONSTRUCT N.E. T-HANGAR PAVEMENT  
 ELECTRICAL AND  
 WATER MAIN DETAILS

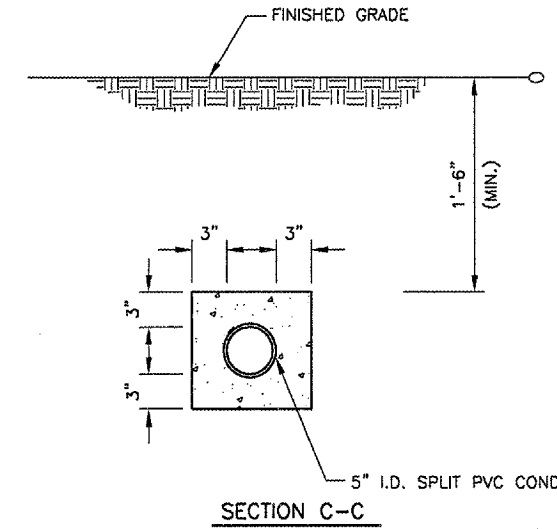
© Copyright CMT, Inc.  
**CMT**  
 CRAWFORD, MURPHY & TILLY, INC.  
 CONSULTING ENGINEERS  
 License No. 184-000613

|                 |                 |
|-----------------|-----------------|
| DESIGN BY:      | CMT             |
| DRAWN BY:       | CMT             |
| CHECKED BY:     | MJS             |
| APPROVED BY:    |                 |
| DATE:           | 11/16/2006      |
| JOB No:         | 0505906         |
| A.I.P. PROJECT: | 3-17-0016-23    |
| IL. PROJ:       | CM-3651         |
| SHEET           | 15 OF 17 SHEETS |



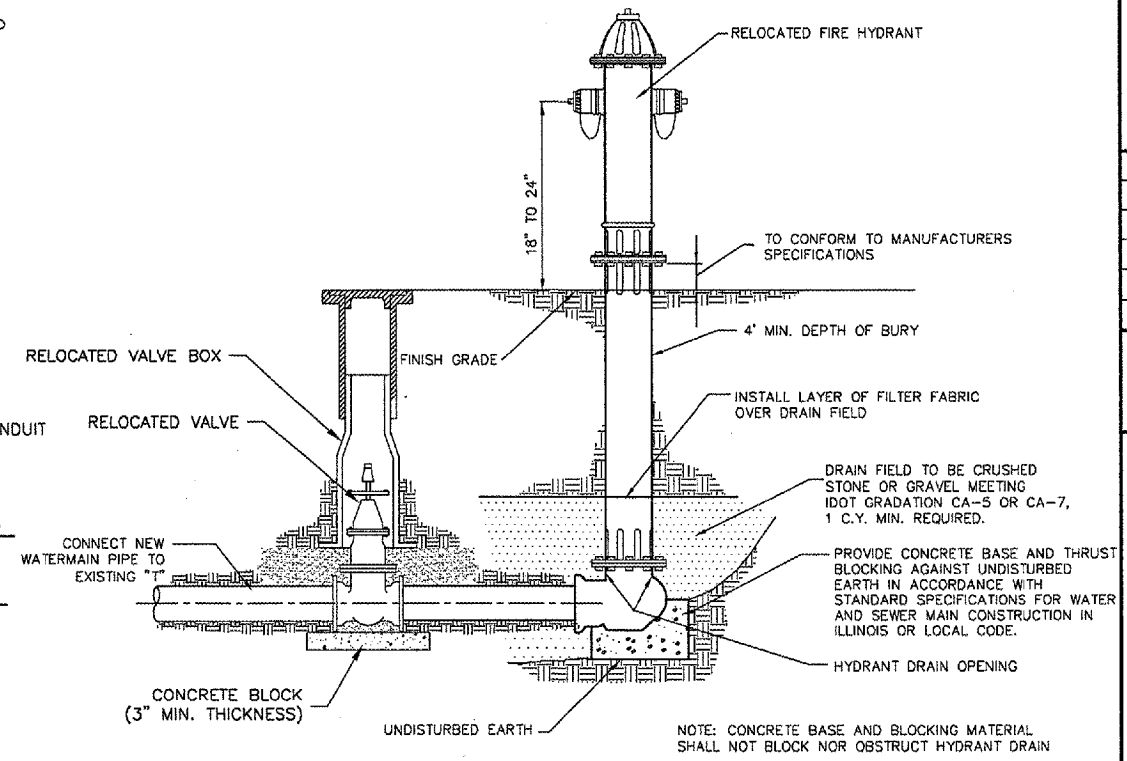
UNIT DUCT SHALL BE TERMINATED AT THE L-823 CONNECTORS AND SEALED WITH HEAT SHRINK AS SPECIFIED.

**STAKE MOUNTED MEDIUM INTENSITY MARKER LIGHTS**  
 N.T.S.



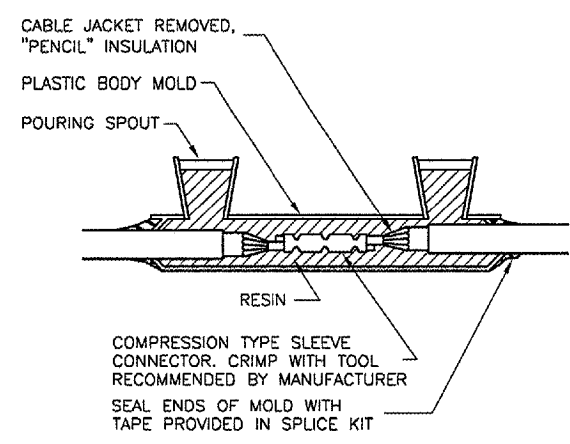
**CONCRETE ENCASED SPLIT DUCT DETAILS**  
 N.T.S.

- NOTES**
1. DIMENSIONS SHOWN ARE MINIMUM.
  2. DUCT CONCRETE SHALL BE 610 STRUCTURAL P.C.C.
  3. CONCRETE ENCASED CONDUIT TO BE INSTALLED AS SHOWN ON THE PLANS

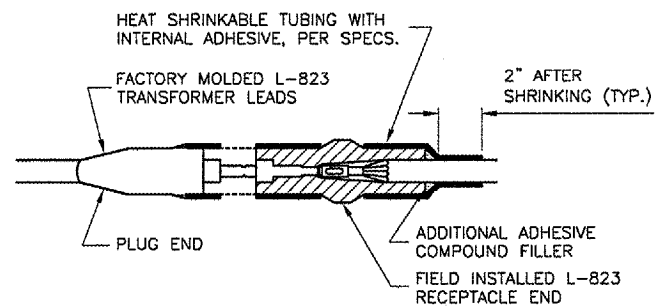
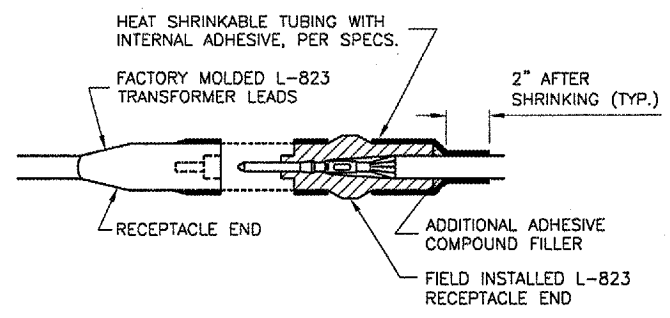


**FIRE HYDRANT RELOCATION**  
 N.T.S.

- NOTES**
1. INSIDE DIAMETER OF CONNECTOR SHALL PROPERLY MATCH THE OUTSIDE DIAMETER OF CABLE.
  2. THE COST OF FURNISHING AND INSTALLING ALL SPLICE MATERIALS SHALL BE INCIDENTAL TO THE ASSOCIATED CABLE ITEMS.
  3. THE CONTRACTOR SHALL HAVE A MINIMUM OF TWO (2) TYPE A SPLICE KITS ON THE JOB SITE AT ALL TIMES FOR EMERGENCY REPAIRS.



**TYPE A**

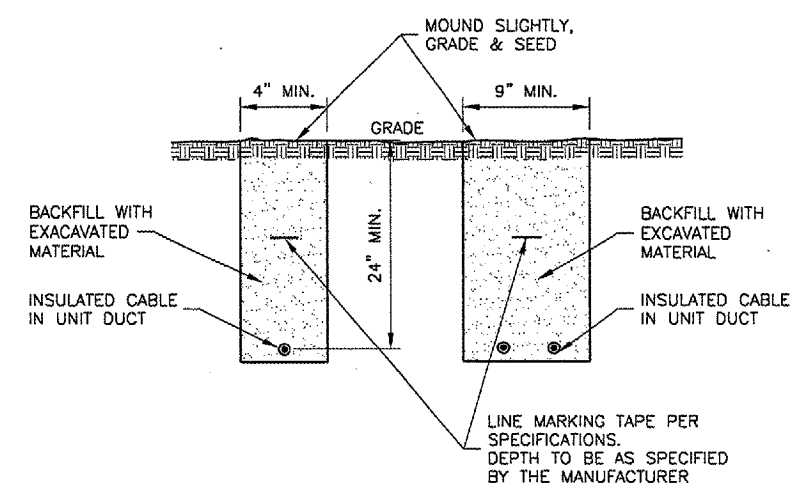


**TYPE C AND D**

**CABLE SPLICES**  
 N.T.S.

FOR IN-LINE CONNECTIONS OF EXISTING CABLES CUT DURING CONSTRUCTIONS.

FOR SPLICES AT TAXIWAY LIGHTS AND SIGNS.



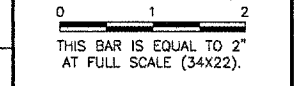
**CABLE TRENCHED IN SOIL**  
 N.T.S.

150 100 50 0 50 100 150 200 250 150 100 50 0 50 100 150 200 250 300 150 100 50 0 50 100 150 200

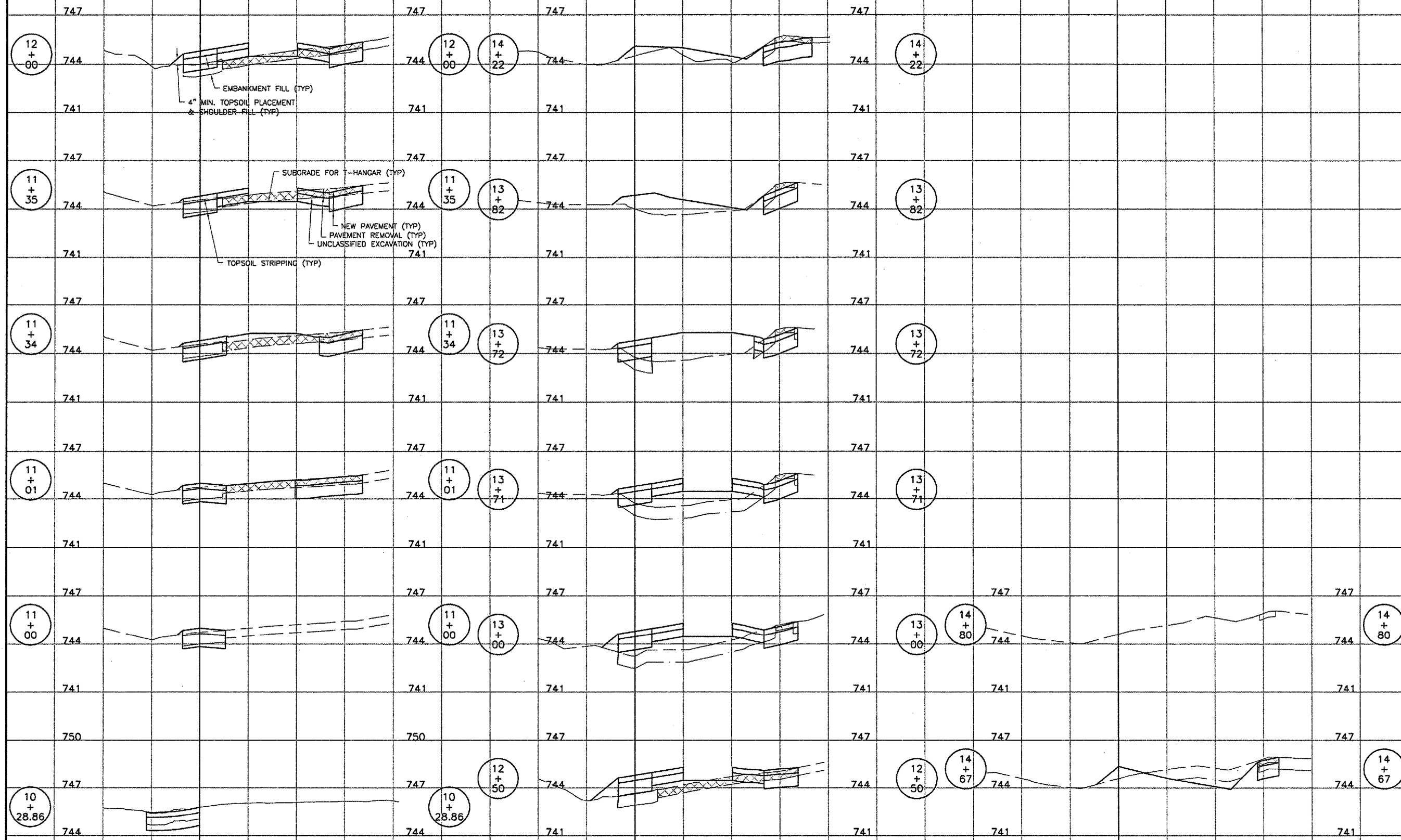
**UN046**

PATH: .  
 FILE: .  
 UPDATE BY: .  
 SURVEY BOOK #  
 XREF DWG:  
 XREF DWG:  
 DATE: .

| REVISIONS |    |      |
|-----------|----|------|
| NUMBER    | BY | DATE |
|           |    |      |
|           |    |      |
|           |    |      |



**UNIVERSITY OF ILLINOIS  
 WILLARD AIRPORT  
 CONSTRUCT N.E. T-HANGAR PAVEMENT  
 CROSS SECTIONS**



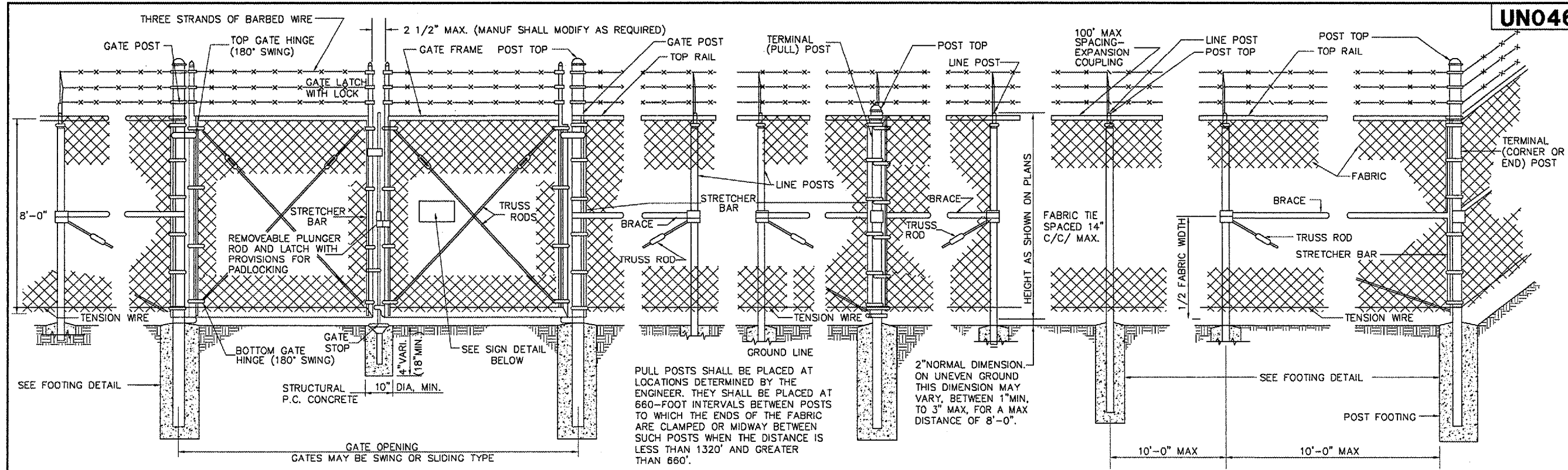
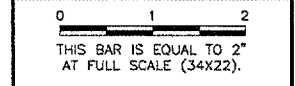
© Copyright CMT, Inc.  
**CMT**  
 CRAWFORD, MURPHY & TILLY, INC.  
 CONSULTING ENGINEERS  
 License No. 84-000613

|                       |              |
|-----------------------|--------------|
| DESIGN BY:            | MJS          |
| DRAWN BY:             | MJS          |
| CHECKED BY:           | MJS          |
| APPROVED BY:          |              |
| DATE:                 | 11/16/2006   |
| JOB No:               | 0505906      |
| A.I.P. PROJECT:       | 3-17-0016-23 |
| IL PROJ:              | CM-3651      |
| SHEET 16 OF 17 SHEETS |              |



IMAGE FILES: Qdity.tif

| REVISIONS |    |      |
|-----------|----|------|
| NUMBER    | BY | DATE |
|           |    |      |
|           |    |      |
|           |    |      |

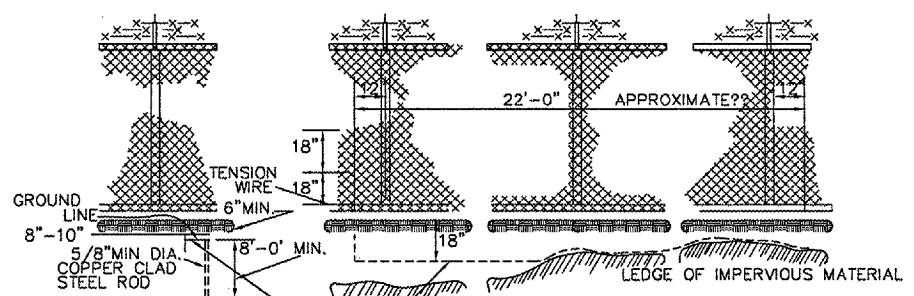
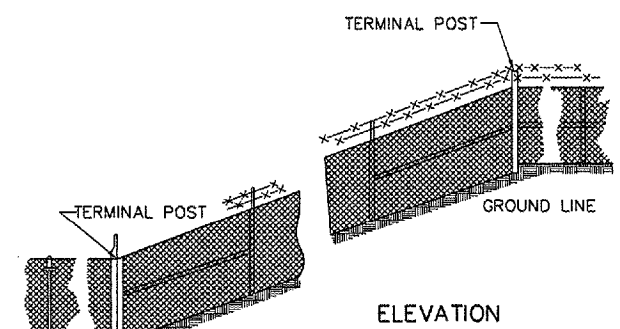
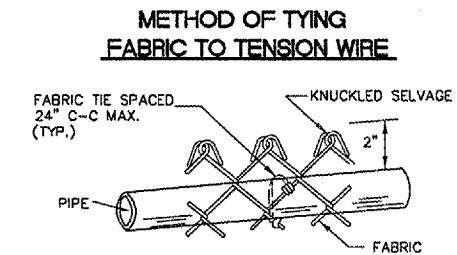
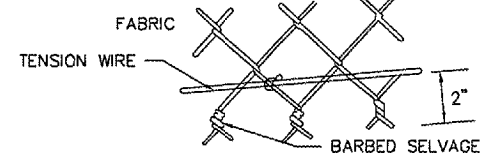
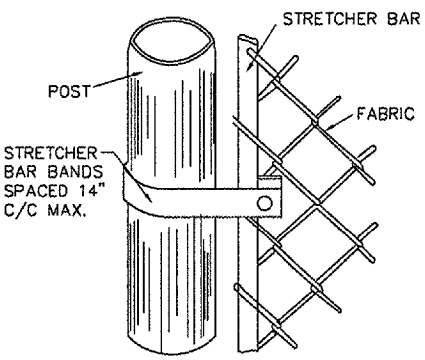
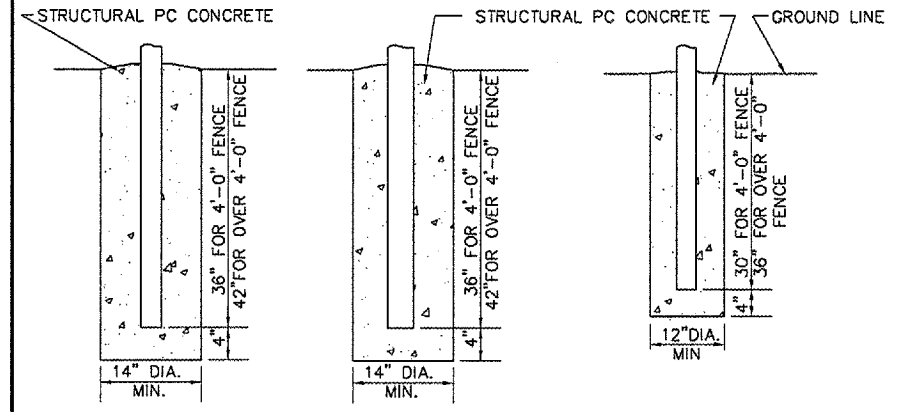


**VEHICLE GATE ARRANGEMENT**  
 (VERTICAL AND HORIZONTAL BRACING NOT SHOWN IN GATE)

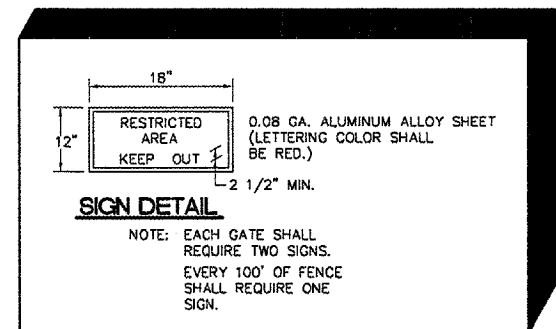
**PULL POST ARRANGEMENT**

**LINE POST ARRANGEMENT**

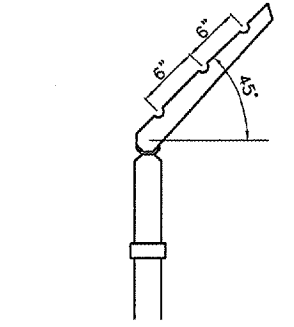
**CORNER OR END POST ARRANGEMENT**



**NOTES:**  
 -CONTINUOUS FENCE SHALL BE GROUNDED AT INTERVALS NOT EXCEEDING 1000' EXCEPT THERE SHALL BE A GROUND NOT EXCEEDING 100 FT. FROM A GATE IN EACH SECTION OF THE FENCE ADJACENT TO THE GATE.  
 -FENCE UNDER POWER LINE SHALL BE GROUNDED BY THREE GROUNDS, ONE DIRECTLY UNDER THE CROSSING AND ONE ON EACH SIDE 25 TO 50 FT. AWAY. A SINGLE GROUND SHALL BE LOCATED DIRECTLY UNDER EACH TELEPHONE WIRE OR CABLE CROSSING.  
 -THE COUNTERPOISE SHALL BE USED ONLY WHERE IT IS IMPOSSIBLE TO DRIVE A GROUND ROD BECAUSE OF AN IMPERVIOUS EARTH STRUCTURES.  
 -THE GROUND WIRE SHALL BE CONNECTED TO THE FABRIC, TENSION WIRE AND THE GROUND ROD BY A MECHANICAL CLAMP OF CAST BRONZE BODY AND BRONZE OR STAINLESS STEEL BOLTS AND WASHERS.



**FOOTING FOR TERMINAL POST**  
**FOOTING FOR GATE POST**  
**FOOTING FOR LINE POST**



**DETAIL - BARBED WIRE ARM ON LINE POST**

**UNIVERSITY OF ILLINOIS WILLARD AIRPORT**  
**CONSTRUCT N.E. T-HANGAR PAVEMENT**  
**FENCE DETAILS**

© Copyright CMT, Inc.

**CMT**  
 CRAWFORD, MURPHY & TILLY, INC.  
 CONSULTING ENGINEERS  
 License No. 04-000630

|                 |              |
|-----------------|--------------|
| DESIGN BY:      | DTN          |
| DRAWN BY:       | CMT          |
| CHECKED BY:     | MJS          |
| APPROVED BY:    |              |
| DATE:           | 11/16/2006   |
| JOB No:         | 0505906      |
| A.I.P. PROJECT: | 3-17-0016-23 |
| IL. PROJ:       | CM-3651      |

SHEET 17 OF 17 SHEETS