

# CONSTRUCTION PLANS FOR JOLIET REGIONAL AIRPORT JOLIET, WILL COUNTY, ILLINOIS CONSTRUCT PERIMETER FENCE

**SCOPE OF WORK**

**BASE BID:**

CLASS E FENCE AND GATE REMOVAL, CLEARING AND GRUBBING, 6" PCC PAVEMENT, SEEDING AND MULCHING, INSTALL 10' CLASS E FENCE AND MANUAL SLIDE GATES.

**ALTERNATE "A"**

INSTALL 6 FOOT CLASS E (GALVANIZED CHAIN LINK) FENCING, 20' & 26' ELECTRIC SLIDE GATES, 24 FOOT MANUAL SLIDE GATES, AND 6 FOOT WALK GATES.

**ALTERNATE "B"**

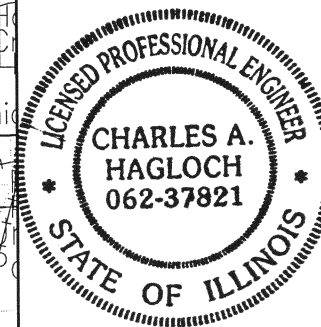
INSTALL 6 FOOT CLASS E (VINYL COATED CHAIN LINK) FENCING, 20' & 26' ELECTRIC SLIDE GATES, 24 FOOT MANUAL SLIDE GATES, AND 6 FOOT WALK GATES.



COVERING  
ELECTRICAL DESIGN  
REVISED - 06/09/2011

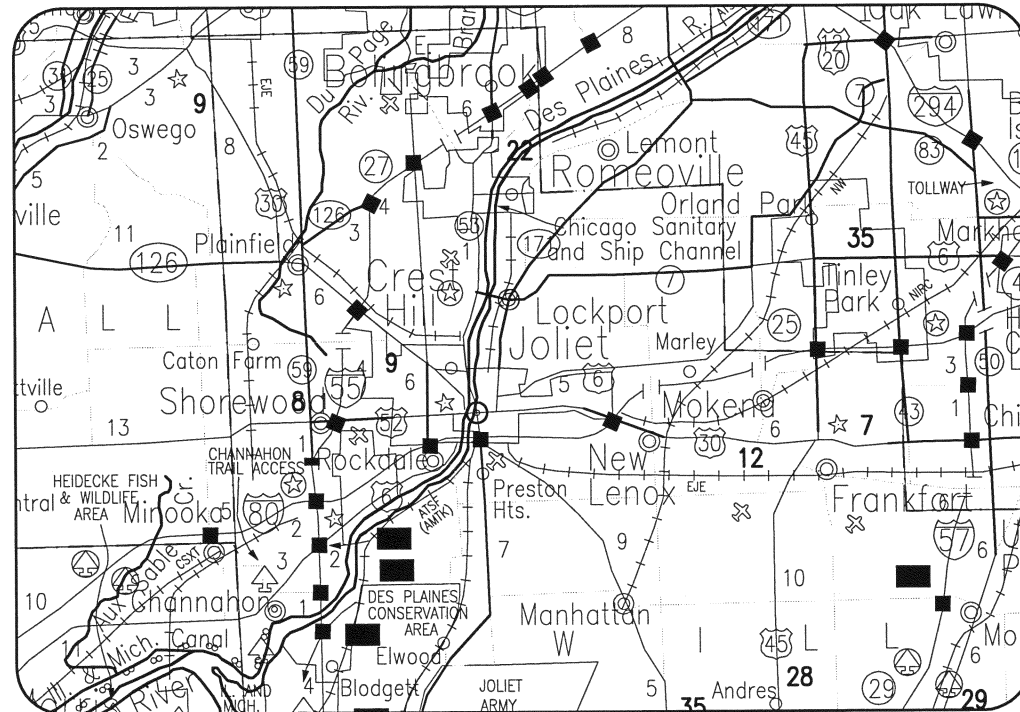
**HANSON**  
Hanson Professional Services Inc.  
ELECTRICAL ENGINEER

Submitted by: *Kevin N. Lightfoot* ENG'R  
Date Submitted JUNE 21, 2011  
Lics. Exp. Date NOVEMBER 30, 2011



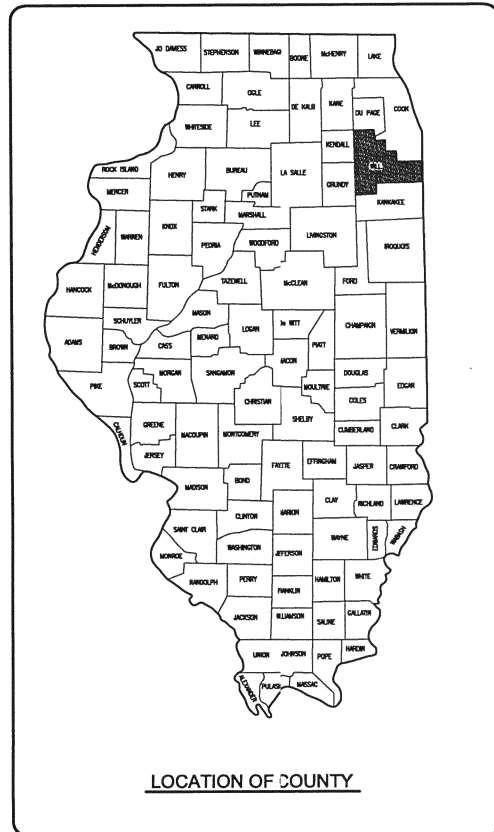
**HANSON**  
Hanson Professional Services Inc.  
CIVIL ENGINEER

Submitted by: *Charles A. Hagloch* ENG'R  
Date Submitted JUNE 21, 2011  
Lics. Exp. Date NOVEMBER 30, 2011



**LOCATION**

ILL. PROJ.: JOT-4103  
A.I.P. PROJ.: 3-17-0056-B7  
LATITUDE: 41° 31' 03"  
LONGITUDE: 88° 10' 30"  
ELEVATION: 581.0' M.S.L.  
DATE: MAY 24, 2011



**JOLIET PARK DISTRICT**

Approved: *K. Brett Hull* CHAIRMAN  
Date: 6-13-11  
Approved: \_\_\_\_\_ SECRETARY  
Date: 6-13-11

REVISION	DATE	
JOLIET REGIONAL AIRPORT JOLIET PARK DISTRICT JOLIET, ILLINOIS		
ILL. PROJ.: JOT-4103 A.I.P. PROJ.: 3-17-0056-B7		
Hanson Project No.	10A0046D_0001	
Filename	R-001CVR.DWG	
Scale	NOT TO SCALE	
Date	xx/xx/xx	
LAYOUT	03/17/10	BAK
DRAWN	03/17/10	BAK
REVIEWED	RAW	xx/xx/xx
<b>HANSON</b> Hanson Professional Services Inc. 1525 South Sixth Street Springfield, Illinois 62703-2886 Ph: (217) 788-2450 Fax: (217) 788-2503 www.hanson-inc.com Offices Nationwide		
CONSTRUCT PERIMETER FENCE		
COVER SHEET		
1		
1 of 19 sheets		

**SUMMARY OF QUANTITIES**

ITEM NO.	DESCRIPTION	UNIT	TOTAL QUANTITIES	AS BUILT QUANTITIES
BASE BID				
AR150510	ENGINEER'S FIELD OFFICE	L.S.	1	
AR151450	CLEARING AND GRUBBING	ACRE	0.3	
AR162510	CLASS E FENCE 10'	L.F.	3,837	
AR162900	REMOVE CLASS E FENCE	L.F.	2,624	
AR162908	REMOVE ELECTRIC GATE	EACH	2	
AR162910	REMOVE CLASS E GATE	EACH	8	
AR501506	6" PCC PAVEMENT	S.Y.	23	
AR800544	CLASS E MANUAL SLIDE GATE - 24'	EACH	2	
AR901510	SEEDING	ACRE	0.3	
AR908510	MULCHING	ACRE	0.3	
ALTERNATE A				
AR162224	CLASS E MANUAL SLIDE GATE - 24'	EACH	2	
AR162506	CLASS E FENCE 6'	L.F.	5,070	
AR162606	CLASS E GATE - 6'	EACH	9	
AR162720	ELECTRIC GATE - 20'	EACH	1	
AR162726	ELECTRIC GATE - 26'	EACH	1	
ALTERNATE B				
AR162304	CLASS E GATE 6'-VINYL	EACH	9	
AR162406	CLASS E FENCE, VINYL- 6'	L.F.	5,070	
AR800547	20' ELECTRIC GATE, VINYL	EACH	1	
AR800548	26' ELECTRIC GATE, VINYL	EACH	1	
AR800549	6' HIGH VINYL MAN. SLIDE GATE, 24'	EACH	2	

**INDEX TO SHEETS**

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	SUMMARY OF QUANTITIES AND INDEX TO SHEETS
3	PROPOSED SAFETY PLAN
4	EXISTING FENCE REMOVAL PLAN
5	PROPOSED FENCING PLAN
6	PROPOSED FENCING PLAN (WEST SIDE)
7	PROPOSED FENCING PLAN (SOUTH SIDE)
8	PROPOSED FENCING PLAN (EAST SIDE)
9	PROPOSED FENCING PLAN (NORTH SIDE) - (ADDITIVE ALTERNATE)
10	PROPOSED FENCING DETAILS
11	PROPOSED FENCING DETAILS
12	ELECTRICAL LEGEND AND ABBREVIATIONS
13	MAIN HANGAR ACCESS GATE ELECTRICAL PLAN
14	MAIN HANGAR GATE ELECTRICAL ONE LINE
15	T-HANGAR ACCESS GATE ELECTRICAL PLAN
16	T-HANGAR ACCESS GATE ELECTRICAL ONE LINE
17	PROPOSED ELECTRIC SLIDE GATE DETAILS
18	KEYPAD UNIT, BOLLARD AND GATE OPERATOR DETAILS
19	ELECTRICAL DETAILS

REVISION	DATE

**JOLIET REGIONAL AIRPORT  
JOLIET PARK DISTRICT  
JOLIET, ILLINOIS**

IL PROJ.: JOT-4103 A.I.P. PROJ.: 3-17-0056-B7

Hanson Project No. 10A00460_0001	File Name R-002FLP.DWG	Scale NOT TO SCALE	Date xx/xx/xx
LAYOUT	BAK	03/17/11	xx/xx/xx
DRAWN	BAK	03/17/11	xx/xx/xx
REVIEWED	RAW	xx/xx/xx	xx/xx/xx



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 www.hanson-inc.com  
 Offices Nationwide

**CONSTRUCT  
PERIMETER FENCE**

**SUMMARY OF QUANTITIES  
AND INDEX TO SHEETS**

**UTILITY NOTE**

THE LOCATION, SIZE, AND TYPE OF MATERIAL OF EXISTING UNDERGROUND AND/OR ABOVEGROUND UTILITIES INDICATED ON THE PLANS ARE NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY WHATSOEVER IN RESPECT TO THE ACCURACY, COMPLETENESS, OR SUFFICIENCY OF THE INFORMATION. THERE IS NO GUARANTEE, EITHER EXPRESSED OR IMPLIED, THAT THE LOCATIONS, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED IN THE CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE OWNER'S REPRESENTATIVE AND/OR THE RESIDENT ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY DAMAGE TO SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT. ALL UTILITY CABLES AND LINES SHALL BE LOCATED BY THE RESPECTIVE UTILITY. **CONTACT JULIE (JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS) FOR UTILITY INFORMATION, PHONE: 1-800-892-0123.** CONTACT THE FAA (FEDERAL AVIATION ADMINISTRATION) FOR ASSISTANCE IN LOCATING FAA CABLES AND UTILITIES. LOCATION OF FAA POWER, CONTROL, AND COMMUNICATION CABLES SHALL BE COORDINATED WITH AND/OR LOCATED BY THE FAA. ALSO CONTACT AIRPORT DIRECTOR/MANAGER AND AIRPORT PERSONNEL FOR ASSISTANCE IN LOCATING UNDERGROUND AIRPORT CABLES AND/OR UTILITIES. ALSO COORDINATE WORK WITH ALL ABOVEGROUND UTILITIES.

**HAUL ROUTE AND VEHICLE PARKING**

THE CONTRACTOR WILL USE THE EXISTING ROAD AROUND THE AIRPORT AS HIS DESIGNATED HAUL ROUTES. IF NO ROADS EXIST THE CONTRACTOR WILL TRAVEL NEXT TO THE FENCE ON THE AIRFIELD SIDE OF THE FENCE. THE CONTRACTOR'S EMPLOYEES WILL PARK THEIR PERSONAL VEHICLES IN THE AIRPORT AUTO PARKING LOT. THE CONTRACTOR WILL BE REQUIRED TO TRANSPORT HIS EMPLOYEES TO THE AREA IN WHICH HE WILL BE WORKING. ANY AREA DAMAGE OUTSIDE OF THESE FENCING AREAS WILL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S OWN EXPENSE. AT THE CONCLUSION OF THE PROJECT THE CONTRACTOR WILL GRADE, SEED AND MULCH THE EXISTING AND PROPOSED FENCING AREAS AS NEEDED TO RESTORE IT TO IT'S ORIGINAL STATE. RESTORATION OF THESE AREAS UNLESS NOTED OTHERWISE WILL BE CONSIDERED INCIDENTAL TO THE PROJECT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

**CONTRACTOR RESPONSIBILITIES**

THE CONTRACTOR WILL PARK HIS EQUIPMENT EITHER IN THE AREA HE IS WORKING IN OR IN THE FRONTAL AREA AT A LOCATION DESIGNATED BY THE AIRPORT MANAGER.

THE CONTRACTOR AND HIS EMPLOYEES WILL BE RESTRICTED TO THE WORK AREA AND ALL OTHER AREAS OF THE AIRPORT ARE "OFF LIMITS" TO THEM.

THE CONTRACTOR WILL NO BE REQUIRED TO CLOSE ANY RUNWAY OR TAXIWAY.

**SCOPE OF WORK**

**BASE BID**  
CLASS E FENCE AND GATE REMOVAL, CLEARING AND GRUBBING, 6" PCC PAVEMENT, SEEDING AND MULCHING, INSTALL 10 CLASS E FENCE AND MANUAL SLIDE GATES.

**ALTERNATE "A"**  
INSTALL 6 FOOT CLASS E (GALVANIZED CHAIN LINK) FENCING, 20' AND 26' ELECTRIC SLIDE GATES, 24 FOOT MANUAL SLIDE GATES, AND 6 FOOT WALK GATES.

**ALTERNATE "B"**  
INSTALL 6 FOOT CLASS E (VINYL COATED CHAIN LINK) FENCING, 20' AND 26' ELECTRIC SLIDE GATES, 24 FOOT MANUAL SLIDE GATES, AND 6 FOOT WALK GATES.

**CERTIFIED PAYROLLS**

THE RESIDENT ENGINEER **CANNOT** FORWARD CONSTRUCTION REPORTS TO THE ILLINOIS DIVISION OF AERONAUTICS FOR PROCESSING UNTIL ALL **CERTIFIED PAYROLLS** FOR THE PERIOD HAVE BEEN RECEIVED.

**MATERIAL CERTIFICATION**

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

**HEIGHT OF CONSTRUCTION EQUIPMENT**

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

**J.U.L.I.E. INFORMATION**

COUNTY \_\_\_\_\_ WILL  
CITY \_\_\_\_\_ JOLIET  
TOWNSHIP \_\_\_\_\_ TROY  
SECTION NO. \_\_\_\_\_ 14 & 15  
ADDRESS \_\_\_\_\_ JOLIET REGIONAL AIRPORT  
3000 WEST JEFFERSON STREET  
JOLIET, ILLINOIS 60435

**CRITICAL POINT DATA**

- CRITICAL POINT #1  
LATITUDE: 41° 31' 11.20226"  
LONGITUDE: 88° 10' 48.65523"  
ELEVATION: 579.05 M.S.L.
- CRITICAL POINT #2  
LATITUDE: 41° 31' 18.03565"  
LONGITUDE: 88° 10' 18.42434"  
ELEVATION: 582.55 M.S.L.
- CRITICAL POINT #3  
LATITUDE: 41° 30' 53.03358"  
LONGITUDE: 88° 10' 19.86535"  
ELEVATION: 570.10 M.S.L.
- CRITICAL POINT #4  
LATITUDE: 41° 30' 54.96528"  
LONGITUDE: 88° 10' 47.98781"  
ELEVATION: 574.30 M.S.L.

**PROPOSED SAFETY PLAN**

GENERAL - THE JOLIET REGIONAL AIRPORT IS COMPRISED OF TWO RUNWAYS. THE PROPOSED CONSTRUCTION WILL NOT NECESSITATE CLOSING ANY RUNWAYS.

IDENTIFICATION - WHEN THE CONTRACTORS VEHICLES AND EQUIPMENT ARE ON THE AIRPORT THEY SHALL BE PROPERLY MARKED WITH THREE (3') FOOT SQUARE CHECKERED FLAGS (INTERNATIONAL ORANGE AND WHITE). THE CONTRACTOR WILL ALSO PROVIDE WORKERS WITH SOME TYPE OF TAG OR GARMENT TO IDENTIFY THE PERSON AS BEING PART OF THE CONSTRUCTION CREW.

RADIO CONTROL - THE CONTRACTOR WILL BE REQUIRED TO BE IN TWO-WAY RADIO CONTACT (122.70 MHz.) WITH THE AIRPORT UNICOM. THIS WILL KEEP THE CONTRACTOR IN CONSTANT CONTACT WITH THE JOLIET REGIONAL AIRPORT AND ENABLE THE AIRPORT TO IMMEDIATELY CONTACT THE CONTRACTOR IN CASE OF AN AERONAUTIC EMERGENCY THAT WOULD REQUIRE ACTION BY THE CONTRACTOR AND/OR HIS PERSONNEL.

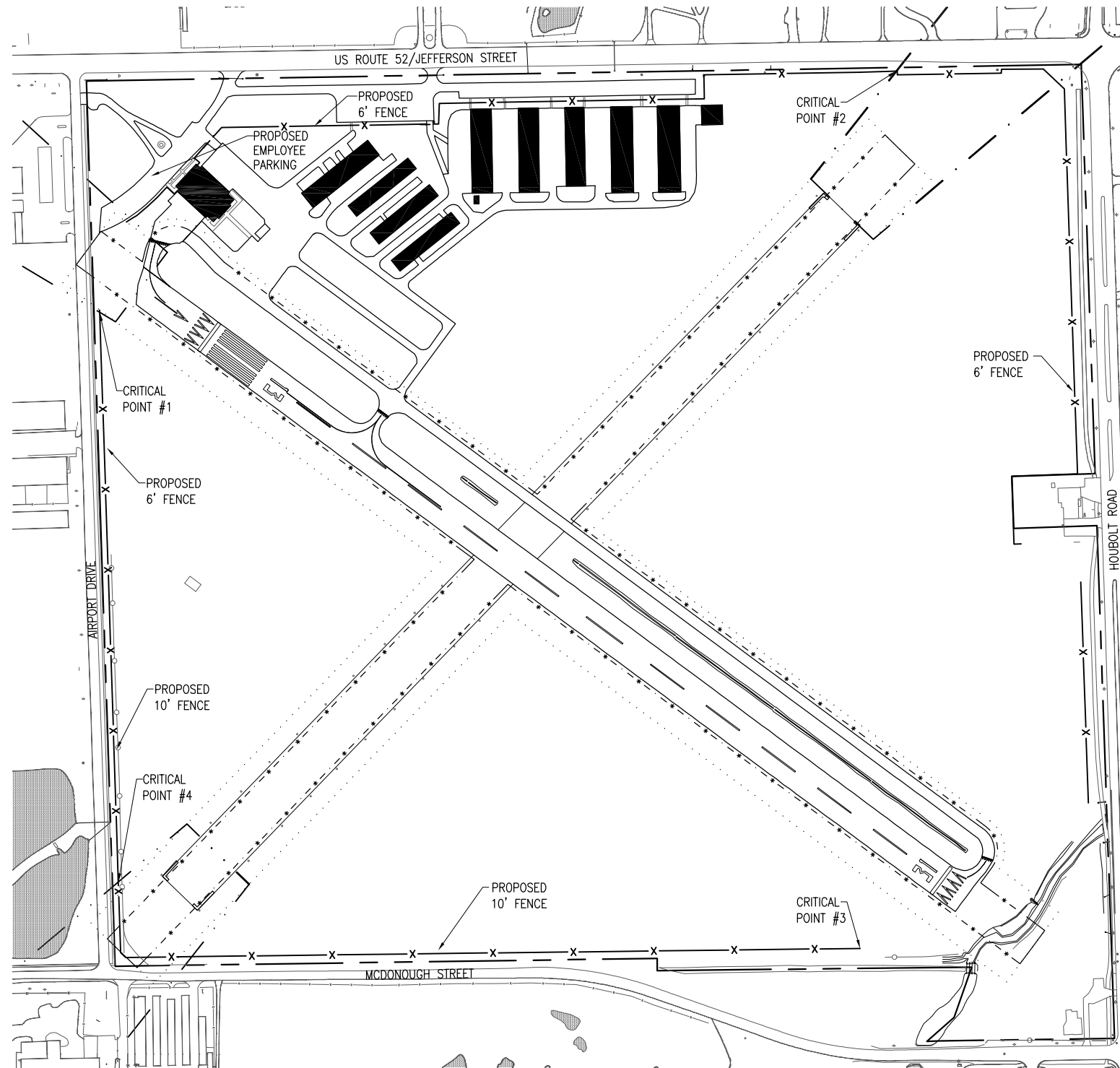
**150-ENGINEER'S FIELD OFFICE NOTES**

THE CONTRACTOR WILL FURNISH A WIRELESS PHONE TO THE RESIDENT ENGINEER FOR HIS EXCLUSIVE USE FOR THE DURATION OF THIS PROJECT. THE RESIDENT ENGINEER WILL USE THIS PHONE FOR PROJECT BUSINESS ONLY. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL CHARGES ASSOCIATED WITH THIS CELL PHONE.

THE PROPOSED ENGINEER'S FIELD OFFICE WILL BE PAID FOR UNDER ITEMS: AR150510 ENGINEER'S FIELD OFFICE \_\_\_\_ 1 L.S.

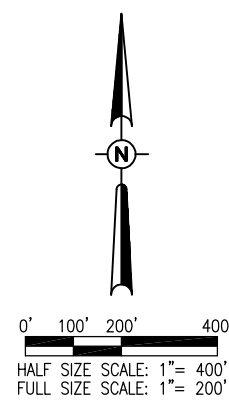
**PROPOSED MATERIAL STORAGE AREA NOTES**

THERE ARE SEVERAL AREAS WITHIN THE SECURE AREAS OF THE AIRPORT THAT THE CONTRACTOR WILL BE ALLOWED TO STORE HIS MATERIAL. THE AIRPORT DIRECTOR WILL DESIGNATE TO THE CONTRACTOR WHERE ON THE AIRPORT THE CONTRACTOR WILL BE ALLOWED TO STORE HIS MATERIAL. ALL CONSTRUCTION MATERIALS WILL BE STORED IN THE DESIGNATED AREAS.



**LEGEND**

- EXISTING IMPROVEMENTS
- EXISTING BUILDINGS
- EXISTING FENCE (TO BE REMAIN)
- PROPOSED FENCE



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REVISION		<b>JOLIET REGIONAL AIRPORT JOLIET PARK DISTRICT JOLIET, ILLINOIS</b>	A.I.P. PROJ.: 3-17-0056-B7 IL PROJ.: JOT-4103
DATE			
Hanson Project No. 10A00460_0001 Filename R-0035FY.DWG Scale 1" = 200' Date xx/xx/xx		LAYOUT BAK 03/17/11 DRAWN BAK 03/17/11 REVIEWED RAW xx/xx/xx	<b>HANSON</b> © Copyright Hanson Professional Services Inc. 2011 <b>Hanson Professional Services Inc.</b> 1525 South Sixth Street Springfield, Illinois 62703-2986 Ph: (217) 788-2450 Fax: (217) 788-2503 www.hanson-inc.com Offices Nationwide
<b>CONSTRUCT PERIMETER FENCE</b>		<b>PROPOSED SAFETY PLAN</b>	
<b>3</b>		3 of 19 sheets	



**NOTE**

THE CONTRACTOR WILL BE PERMITTED TO ACCESS THE AIRPORT PROPERTY THROUGH ANY OF THE EXISTING GATES THAT ARE IN CLOSE PROXIMITY TO THE WORK TO BE COMPLETED THAT DAY. THE CONTRACTOR WILL BE REQUIRED TO COORDINATE HIS DAILY ACCESS WITH THE RESIDENT ENGINEER AND THE AIRPORT MANAGER.

**FENCE REMOVAL NOTES**

THE EXISTING FENCE TO BE REMOVED IS 4 FOOT TALL CLASS E CHAIN LINK FENCE. THE CONTRACTOR IS REQUIRED TO REMOVE AND DISPOSE OF THE FENCE MATERIAL OFF THE AIRPORT PROPERTY.

THE AIRPORT WILL BE GIVEN RIGHT OF FIRST REFUSAL ON THE CHAIN LINK FABRIC AND TOP RAIL. IF THE AIRPORT DOESN'T WANT THE MATERIAL, THEN THE CONTRACTOR WILL DISPOSE OF THE MATERIAL OFF THE AIRPORT SITE AT HIS OWN EXPENSE.

ALL OTHER FENCE MATERIAL TO INCLUDE FENCE POSTS, WIRE, HARDWARE, CONCRETE, AND ALL ASSOCIATED MATERIAL SHALL BE REMOVED AND DISPOSED OF OFF THE AIRPORT PROPERTY.


DISPOSAL OF THE EXISTING FENCE MATERIAL SHALL BE INCLUDED IN THE COST OF ITEM:

AR162900 REMOVE CLASS E FENCE\_\_\_\_\_PER L.F.

**CLEARING AND GRUBBING NOTES**

THE AREAS DESIGNATED FOR CLEARING AND GRUBBING ARE SHOWN ON THIS SHEET. ALL OF THESE AREAS ARE LOCATED ON EXISTING AIRPORT PROPERTY.

ALL CLEARING AND GRUBBING WILL BE LOCATED AND MARKED BY THE RESIDENT ENGINEER.

ALL AREAS DESIGNATED FOR CLEARING AND GRUBBING ARE SHOWN ON THIS SHEET AS .

NO BURNING WILL BE ALLOWED ON THE AIRPORT PROPERTY. ALL MATERIAL DERIVED FROM THE CLEARING AND GRUBBING PROCESS WILL BE REMOVED FROM THE AIRPORT PROPERTY AND LEGALLY DISPOSED OF.

ALL AREAS BEING CLEARED AND GRUBBED WILL BE SMOOTH GRADED AND SEEDED AND MULCHED IN ACCORDANCE WITH ITEM 901 "SEEDING" AND 908 "MULCHING".

THE CONTRACTOR WILL CLEAR AND GRUB IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

CLEARING, GRUBBING AND DISPOSAL OF THE DESIGNATED AREAS WILL BE PAID FOR UNDER: ITEM AR151450 "CLEARING AND GRUBBING"\_\_\_\_\_ 0.30 ACRES.

**ELECTRIC GATE REMOVAL NOTES**

THE EXISTING ELECTRIC GATES TO BE REMOVED ARE 4 FOOT TALL CLASS E CHAIN LINK ELECTRIC SLIDE GATES. THE CONTRACTOR WILL REMOVE THE GATE, GATE OPERATOR, CONCRETE PAD, POLES, CARD READER, ETC. AND DISPOSE OF THIS FENCE MATERIAL OFF THE AIRPORT PROPERTY.

THE AIRPORT WILL BE GIVEN RIGHT OF FIRST REFUSAL ON ANY OF THE GATE MATERIAL. IF THE AIRPORT DOESN'T WANT THE MATERIAL, THEN THE CONTRACTOR WILL DISPOSE OF THE MATERIAL OFF THE AIRPORT SITE AT HIS OWN EXPENSE.

DISPOSAL OF THE EXISTING ELECTRIC SLIDE GATE MATERIAL SHALL BE INCLUDED IN THE COST OF ITEM:

AR162908 REMOVE ELECTRIC GATE\_\_\_\_\_PER EACH.

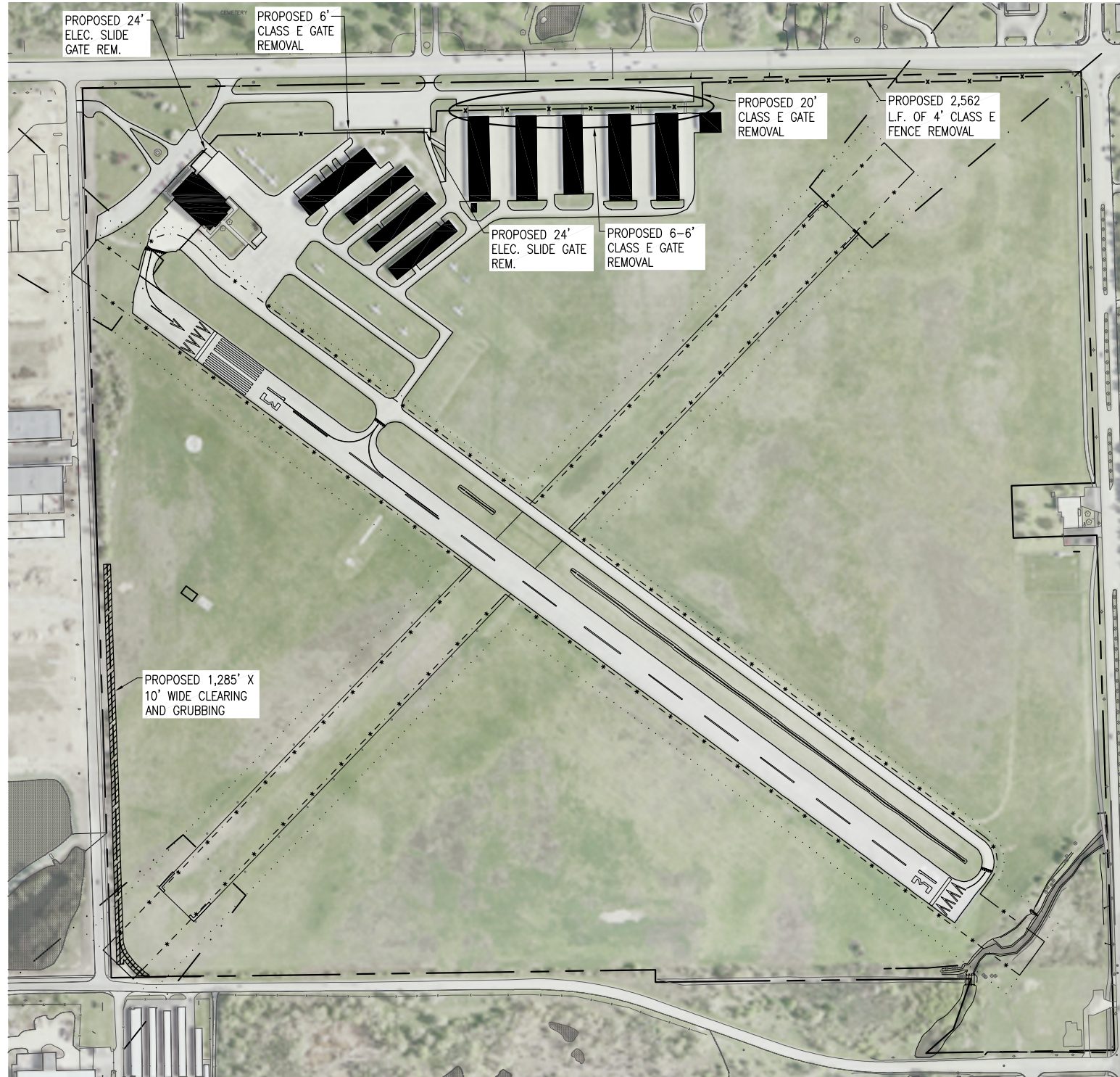
**GATE REMOVAL NOTES**

THERE ARE SEVEN EXISTING 4 FOOT TALL CLASS E CHAIN LINK GATES THAT WILL BE REMOVED. SIX GATES ARE 6' WALK GATES AND ONE GATE IS A 20' DOUBLE SWING GATE. THE CONTRACTOR IS REQUIRED TO REMOVE AND DISPOSE OF THE FENCE MATERIAL OFF THE AIRPORT PROPERTY.

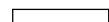


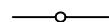
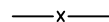
THE AIRPORT WILL BE GIVEN RIGHT OF FIRST REFUSAL ON THE CHAIN LINK GATES. IF THE AIRPORT DOESN'T WANT THE MATERIAL, THEN THE CONTRACTOR WILL DISPOSE OF THE MATERIAL OFF THE AIRPORT SITE AT HIS OWN EXPENSE.

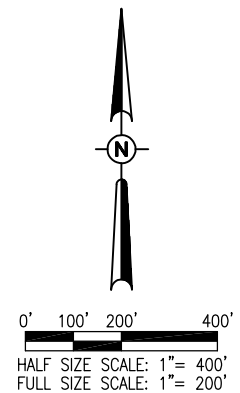
DISPOSAL OF THE EXISTING GATES SHALL BE INCLUDED IN THE COST OF ITEM:

AR162910 REMOVE CLASS E GATE\_\_\_\_\_PER EACH.




**LEGEND**

-  EXISTING IMPROVEMENTS
-  EXISTING BUILDINGS
-  PROPOSED CLASS E FENCE AND BRUSH REMOVAL
-  EXISTING FENCE (TO REMAIN)
-  EXISTING FENCE (TO BE REMOVED)



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REVISION		<b>JOLIET REGIONAL AIRPORT JOLIET PARK DISTRICT JOLIET, ILLINOIS</b>	IL. PROJ.: JOT-4103      A.I.P. PROJ.: 3-17-0056-B7
DATE			
Hanson Project No. 10A0046D_0001 Filename R=17FEN.DWG Scale 1" = 200' Date xx/xx/xx		LAYOUT BAK 03/17/11 DRAWN BAK 03/17/11 REVIEWED RAW xx/xx/xx	
 <b>HANSON</b> Professional Services Inc. 2011 Hanson Professional Services Inc. 1525 South Sixth Street Springfield, Illinois 62703-2986 Ph: (217) 788-2450 Fax: (217) 788-2503 www.hanson-inc.com Offices Nationwide		<b>CONSTRUCT PERIMETER FENCE</b>	<b>EXISTING FENCE REMOVAL PLAN</b>
4		4 of 19 sheets	



**FENCE INSTALLATION NOTES**

THE PROPOSED FENCE SHALL BE 6 FOOT AND 10 FOOT CLASS E FENCE WITH THREE STRANDS OF BARB WIRE. THIS WORK WILL INCLUDE PROPOSED ELECTRICAL SLIDE GATES AT THE LOCATIONS SHOWN. THE PROPOSED FENCE AND GATES SHALL MEET THE REQUIREMENTS PROVIDED IN THE SPECIAL PROVISIONS.

A TOP RAIL WILL BE REQUIRED FOR ALL OF THE PROPOSED CLASS E FENCE.

THE PROPOSED CLASS E FENCE WILL BE INSTALLED AT THE LOCATIONS SHOWN ON THE FOLLOWING PROPOSED FENCING PLANS AND IN ACCORDANCE WITH THE DETAILS AS SHOWN IN THESE CONSTRUCTION PLANS.

FROM POINT #1 TO POINT #2 WILL BE 6' CLASS E FENCE. FROM POINT #3 TO POINT #4 WILL BE 10' CLASS E FENCE. FROM POINT #4 TO POINT #5 WILL BE 6' CLASS E FENCE. FROM POINT #6 TO POINT #1 WILL BE 6' CLASS E FENCE.

**UTILITY NOTE**

THE LOCATION, SIZE, AND TYPE OF MATERIAL OF EXISTING UNDERGROUND AND/OR ABOVEGROUND UTILITIES INDICATED ON THE PLANS ARE NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY WHATEVER IN RESPECT TO THE ACCURACY, COMPLETENESS, OR SUFFICIENCY OF THE INFORMATION. THERE IS NO GUARANTEE, EITHER EXPRESSED OR IMPLIED, THAT THE LOCATIONS, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED IN THE CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE OWNER'S REPRESENTATIVE AND/OR THE RESIDENT ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY DAMAGE TO SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT. ALL UTILITY CABLES AND LINES SHALL BE LOCATED BY THE RESPECTIVE UTILITY. **CONTACT JULIE (JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS) FOR UTILITY INFORMATION, PHONE: 1-800-892-0123.** CONTACT THE FAA (FEDERAL AVIATION ADMINISTRATION) FOR ASSISTANCE IN LOCATING FAA CABLES AND UTILITIES. LOCATION OF FAA POWER, CONTROL, AND COMMUNICATION CABLES SHALL BE COORDINATED WITH AND/OR LOCATED BY THE FAA. ALSO CONTACT AIRPORT DIRECTOR/MANAGER AND AIRPORT PERSONNEL FOR ASSISTANCE IN LOCATING UNDERGROUND AIRPORT CABLES AND/OR UTILITIES. ALSO COORDINATE WORK WITH ALL ABOVEGROUND UTILITIES.

**ALTERNATE "B"**

THE ALTERNATE "B" ITEMS OF WORK SHALL CONSIST OF THE FOLLOWING:

- AR162304 CLASS E GATE 6'-VINYL
- AR162406 CLASS E FENCE, VINYL-6'
- AR800547 20' ELECTRIC GATE, VINYL
- AR800548 26' ELECTRIC GATE, VINYL
- AR800549 6' HIGH VINYL MAN. SLIDE GATE, 24'

ALL FENCE FABRIC, POSTS, CLIPS AND GATES WILL BE BLACK VINYL COATED AND 6' IN HEIGHT.

A TOP RAIL WILL BE REQUIRED FOR ALL PROPOSED CLASS E FENCE. NO BARB WIRE WILL BE REQUIRED.

**ALTERNATE "A"**

THE ALTERNATE "A" ITEMS OF WORK SHALL CONSIST OF THE FOLLOWING:

- AR162224 CLASS E MANUAL SLIDE GATE - 24'
- AR162506 CLASS E FENCE 6'
- AR162606 CLASS E GATE - 6'
- AR162720 ELECTRIC GATE - 20'
- AR162726 ELECTRIC GATE - 26'

ALL FENCE FABRIC, POSTS, CLIPS AND GATES WILL BE GALVANIZED COATED AND 6' IN HEIGHT.

A TOP RAIL WILL BE REQUIRED FOR ALL PROPOSED CLASS E FENCE. NO BARB WIRE WILL BE REQUIRED.

**BASE BID**

THE BASE BID ITEMS OF WORK SHALL CONSIST OF THE FOLLOWING ITEMS OF WORK:

- AR150510 ENGINEER'S FIELD OFFICE
- AR151450 CLEARING AND GRUBBING
- AR162510 CLASS E FENCE 10'
- AR901510 SEEDING
- AR908510 MULCHING
- AR162900 REMOVE CLASS E FENCE
- AR162908 REMOVE ELECTRIC GATE
- AR162910 REMOVE CLASS E GATE
- AR800544 CLASS E MANUAL SLIDE GATE - 24'

THE CLASS E FENCE FABRIC, POSTS, CLIPS AND GATES WILL BE GALVANIZED COATED.

THE PROPOSED FENCE AND GATES WILL BE 10' IN HEIGHT.

A TOP RAIL WILL BE REQUIRED FOR THE 10' CLASS E FENCE. THERE WILL BE 3 STRANDS OF BARB WIRE ON THIS FENCE.

THE CLASS E MANUAL SLIDE GATES WILL BE GALVANIZED, 10' IN HEIGHT AND SPAN A 24' OPENING.

**NOTE**

THE CONTRACTOR WILL BE PERMITTED TO ACCESS THE AIRPORT PROPERTY THROUGH ANY OF THE EXISTING GATES THAT ARE IN CLOSE PROXIMITY TO THE WORK TO BE COMPLETED THAT DAY. THE CONTRACTOR WILL BE REQUIRED TO COORDINATE HIS DAILY ACCESS WITH THE RESIDENT ENGINEER AND THE AIRPORT DIRECTOR, OR HIS DESIGNATED REPRESENTATIVE.

**EARTHWORK**

MINOR EARTHWORK GRADING MAY BE NECESSARY TO ESTABLISH ADEQUATE CLEARANCE FOR THE PROPOSED FENCE. HOWEVER, THIS WORK IS ANTICIPATED TO BE MINIMAL. THEREFORE, EARTHWORK WILL BE CONSIDERED INCIDENTAL TO THE INSTALLATION OF THE PROPOSED FENCE.

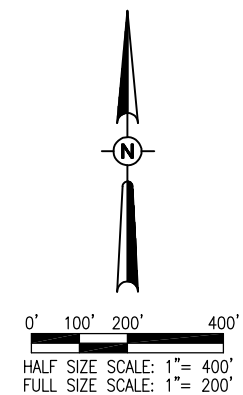
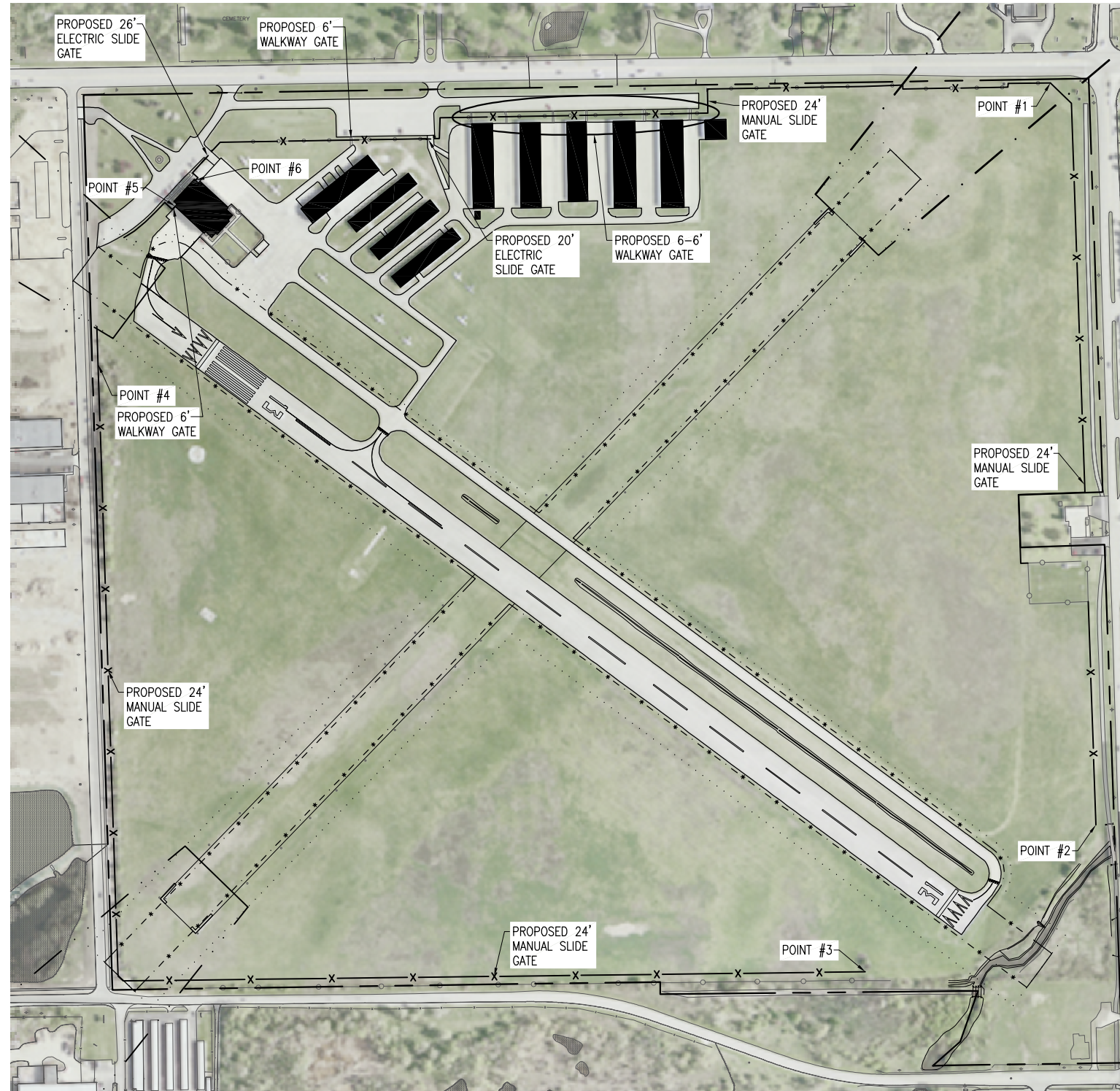
THE CONTRACTOR IS RECOMMENDED TO VISIT THE SITE AND INSPECT THE PROPOSED ALIGNMENT.

**SEEDING AND MULCHING**

ALL AREAS ALONG THE PROPOSED FENCE ALIGNMENT DISTURBED BY THE CONSTRUCTION OPERATIONS SHALL BE SEEDED IN ACCORDANCE WITH THE SPECIAL PROVISIONS. PROPOSED SEEDING WILL BE CONSIDERED AS AN INCIDENTAL ITEM TO THE PROPOSED FENCING.

**QUANTITY SCHEDULE**

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
BASE BID			
AR162510	CLASS E FENCE 10'	L.F.	3,837
AR800544	CLASS E MANUAL SLIDE GATE - 24'	EACH	2
ALTERNATE "A"			
AR162224	CLASS E MANUAL SLIDE GATE - 24'	EACH	2
AR162506	CLASS E FENCE 6'	L.F.	5,070
AR162606	CLASS E GATE - 6'	EACH	8
AR162720	ELECTRIC GATE - 20'	EACH	1
AR162726	ELECTRIC GATE - 26'	EACH	1
ALTERNATE "B"			
AR162304	CLASS E GATE 6'-VINYL	EACH	8
AR162406	CLASS E FENCE, VINYL- 6'	L.F.	5,070
AR800547	20' ELECTRIC GATE, VINYL	EACH	1
AR800548	26' ELECTRIC GATE, VINYL	EACH	1
AR800549	6' HIGH VINYL MAN. SLIDE GATE, 24'	EACH	2



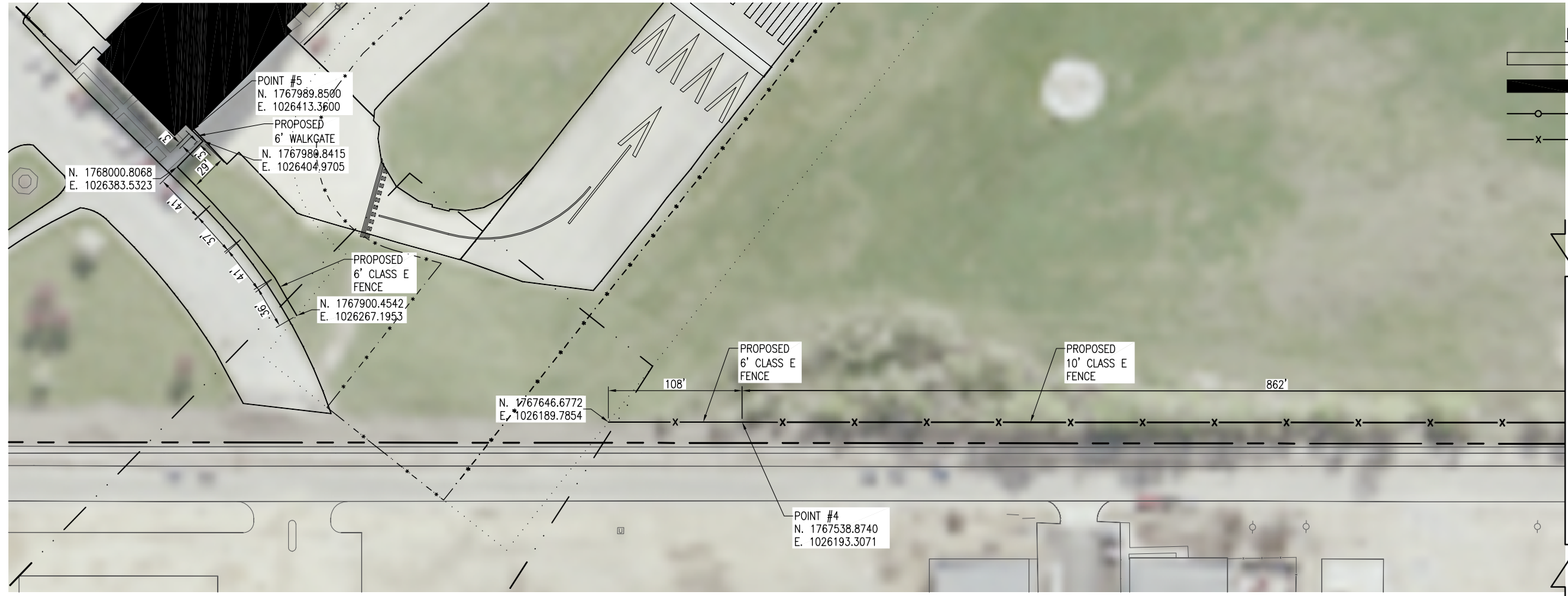
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REVISION		DATE			
<b>JOLIET REGIONAL AIRPORT JOLIET PARK DISTRICT JOLIET, ILLINOIS</b>					
IL PROJ.: JOT-4103 A.I.P. PROJ.: 3-17-0056-B7					
Hanson Project No. 1040046D_0001	Filename R-172FEN.DWG	Scale 1" = 200'	Date xx/xx/xx	LAYOUT BAK 03/17/11	DRAWN BAK 03/17/11
				REVIEWED RAW xx/xx/xx	
<p style="font-size: x-small;">© Copyright Hanson Professional Services Inc. 2011 Hanson Professional Services Inc. 1525 South Sixth Street Springfield, Illinois 62703-2986 Ph: (217) 788-2450 Fax: (217) 788-2503 www.hanson-inc.com Offices Nationwide</p>					
CONSTRUCT PERIMETER FENCE			PROPOSED FENCING PLAN		
5					
5 of 19 sheets					



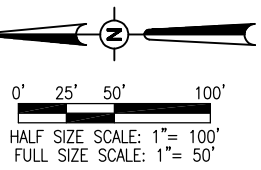
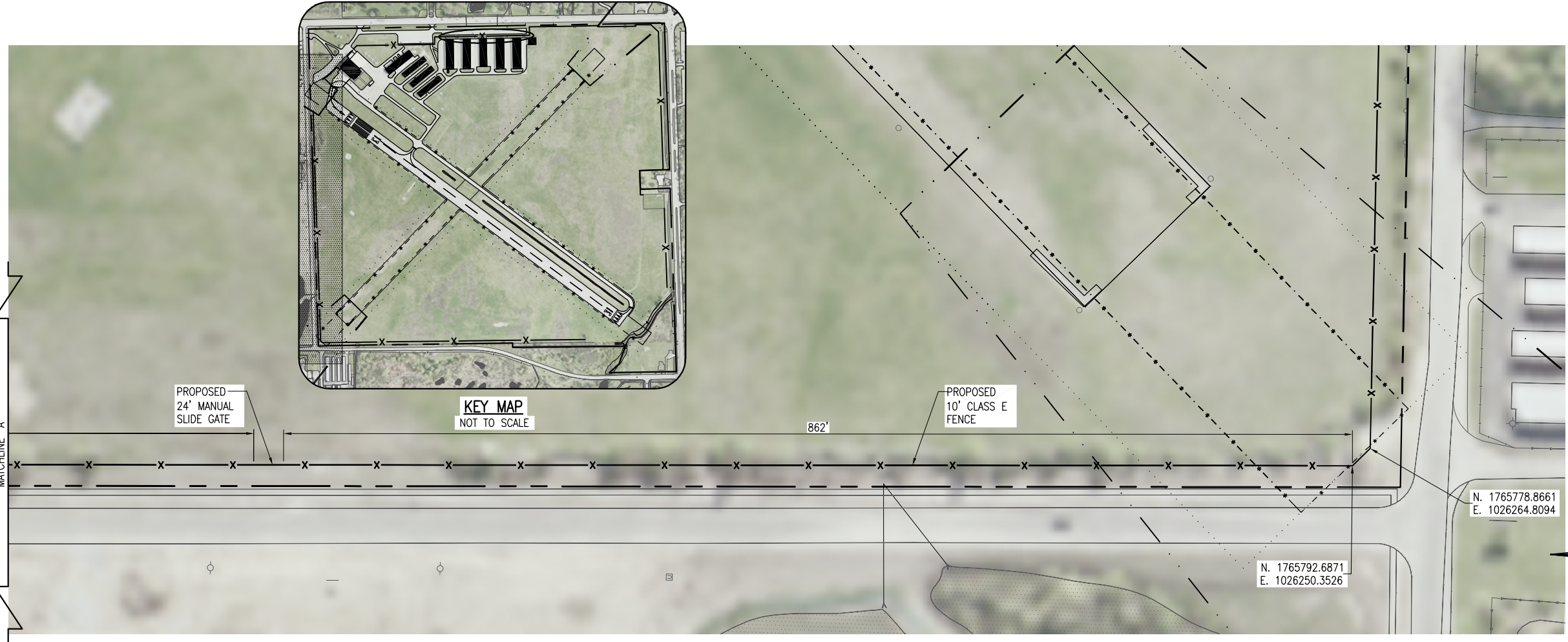
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JO019



**LEGEND**

	EXISTING IMPROVEMENTS
	EXISTING BUILDINGS
	EXISTING FENCE (TO REMAIN)
	PROPOSED FENCE



REVISION	DATE

**JOLIET REGIONAL AIRPORT  
 JOLIET PARK DISTRICT  
 JOLIET, ILLINOIS**

IL PROJ.: JOT-4103 A.I.P. PROJ.: 3-17-0056-B7

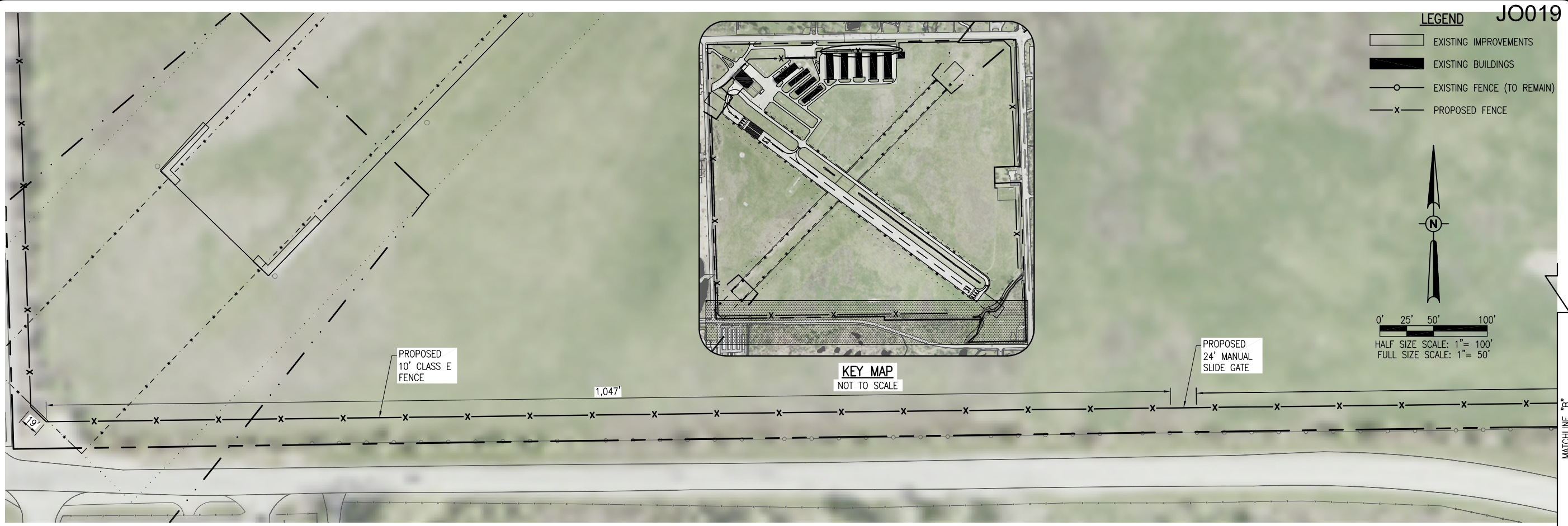
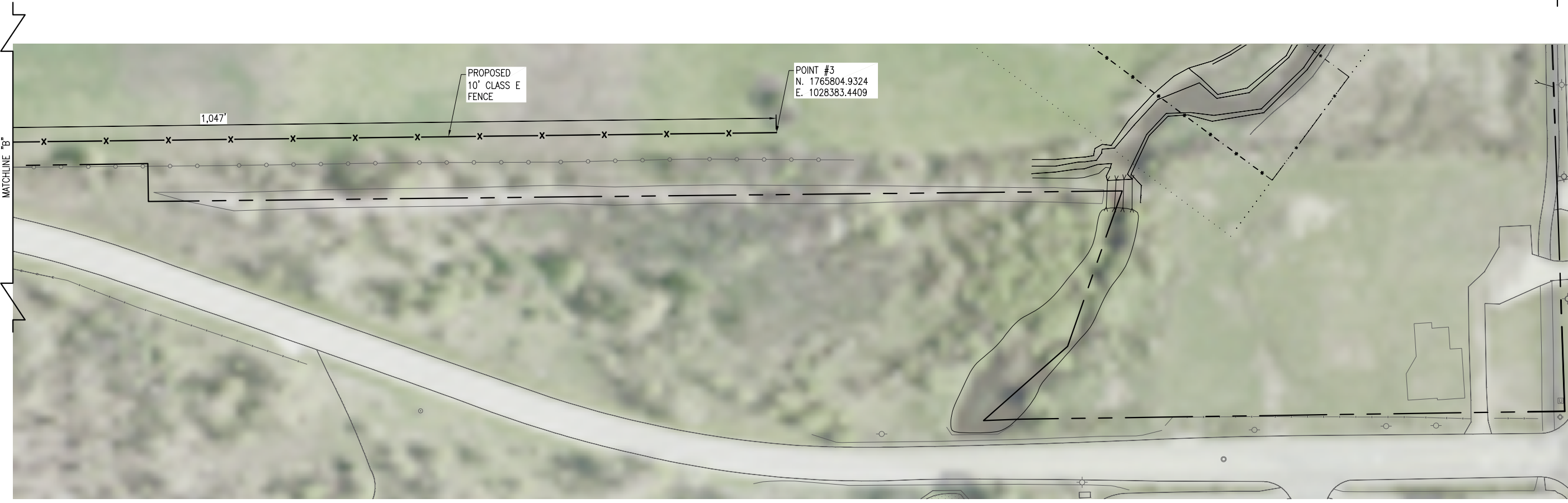
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**CONSTRUCT PERIMETER FENCE**

**PROPOSED FENCING PLAN (WEST SIDE)**





**LEGEND** JO019

- EXISTING IMPROVEMENTS
- EXISTING BUILDINGS
- EXISTING FENCE (TO REMAIN)
- PROPOSED FENCE

0' 25' 50' 100'

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

**KEY MAP**  
 NOT TO SCALE

PROPOSED 10' CLASS E FENCE

PROPOSED 24' MANUAL SLIDE GATE

DATE	REVISION

**JOLIET REGIONAL AIRPORT**  
**JOLIET PARK DISTRICT**  
**JOLIET, ILLINOIS**

IL PROJ.: JOT-4103 A.I.P. PROJ.: 3-17-0056-B7

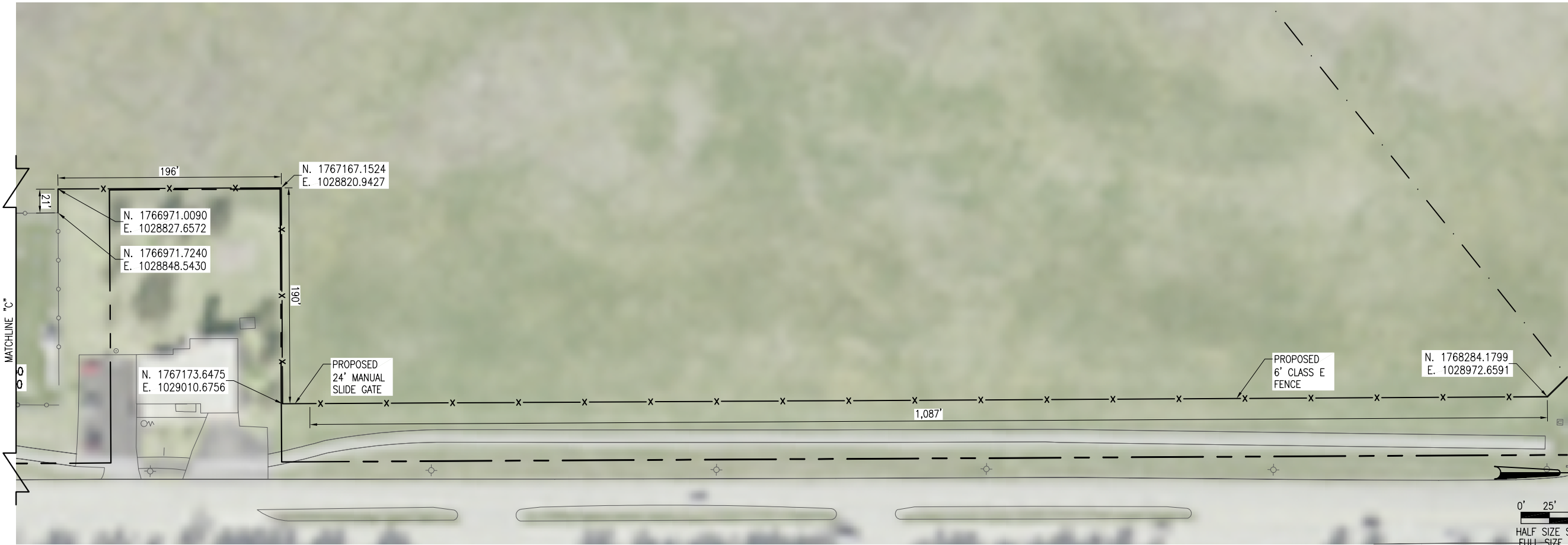
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**CONSTRUCT PERIMETER FENCE**

PROPOSED FENCING PLAN (SOUTH SIDE)





**LEGEND**

	EXISTING IMPROVEMENTS
	EXISTING BUILDINGS
	EXISTING FENCE (TO REMAIN)
	PROPOSED FENCE

REVISION	DATE

**JOLIET REGIONAL AIRPORT  
JOLIET PARK DISTRICT  
JOLIET, ILLINOIS**

IL. PROJ.: JOT-4103 A.I.P. PROJ.: 3-17-0056-B7

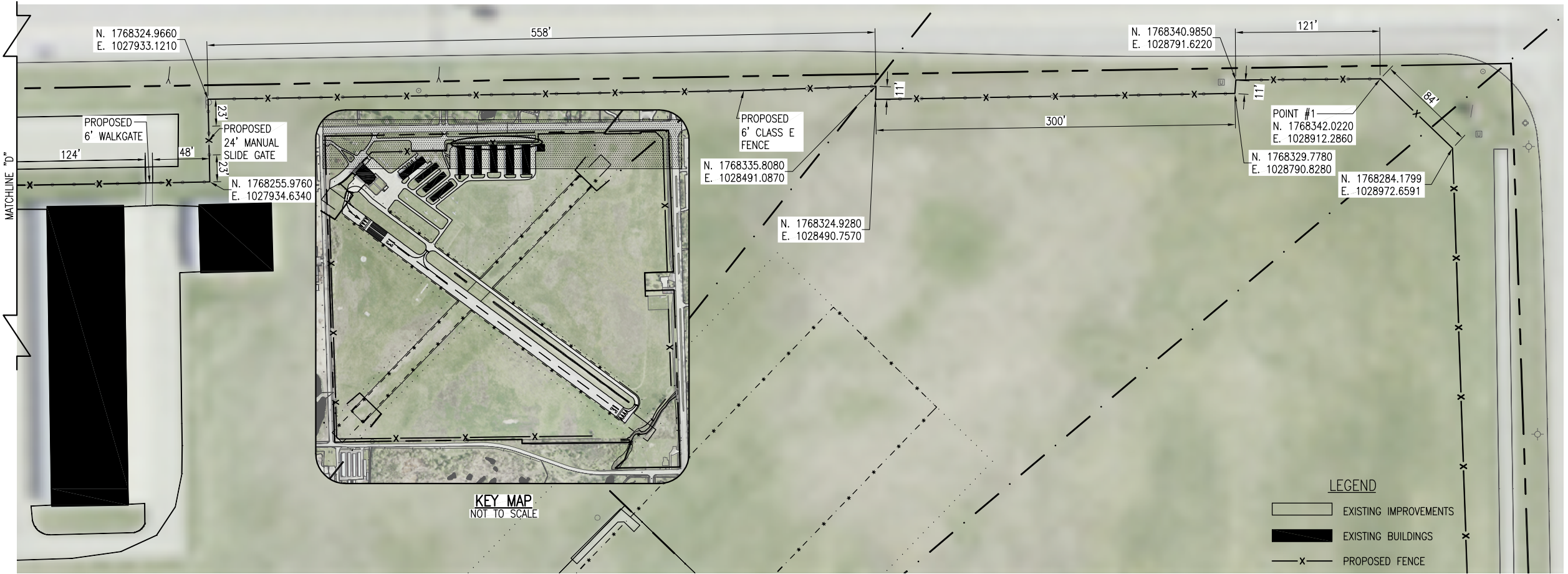
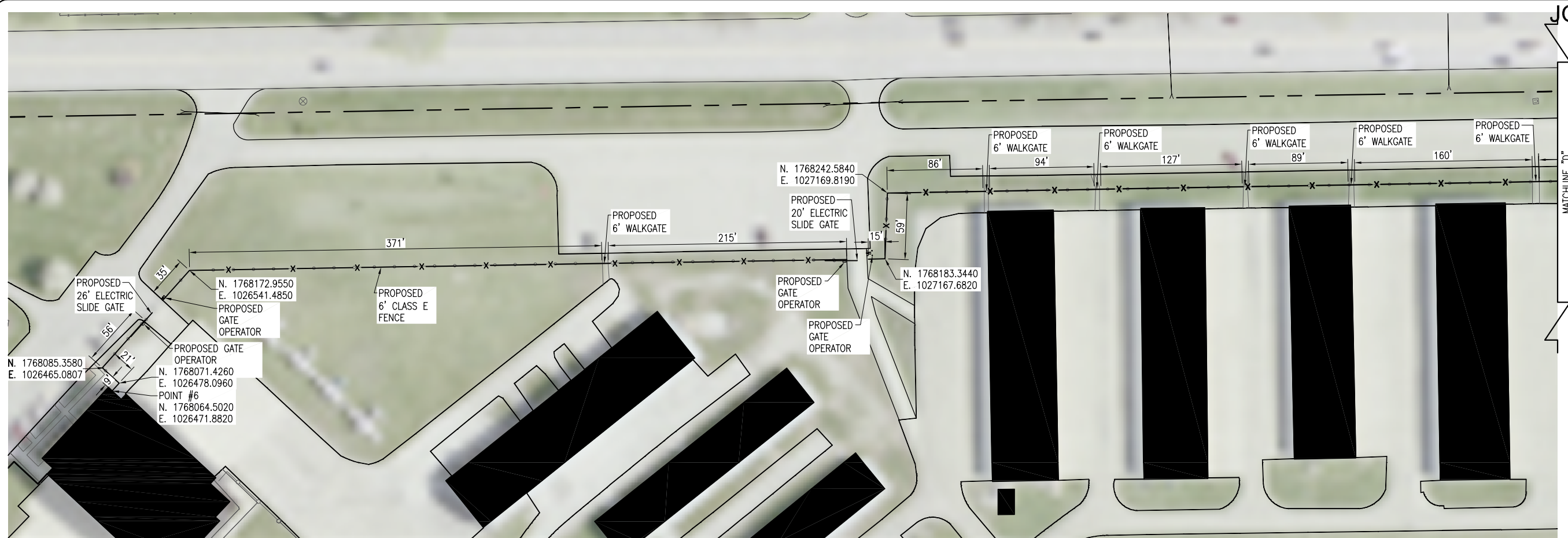
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**CONSTRUCT PERIMETER FENCE**

PROPOSED FENCING PLAN (EAST SIDE)





REVISION	DATE

**JOLIET REGIONAL AIRPORT  
JOLIET PARK DISTRICT  
JOLIET, ILLINOIS**

IL PROJ.: JOT-4103 A.I.P. PROJ.: 3-17-0056-B7

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**CONSTRUCT PERIMETER FENCE**

PROPOSED FENCING PLAN (NORTH SIDE) - (ADDITIVE ALTERNATE)

**9**  
9 of 19 sheets

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**LEGEND**

- EXISTING IMPROVEMENTS
- EXISTING BUILDINGS
- PROPOSED FENCE

0' 25' 50' 100'  
 HALF SIZE SCALE: 1" = 100'  
 FULL SIZE SCALE: 1" = 50'

**GENERAL NOTES**

**FABRIC** - THE FABRIC MAY BE WOVEN WITH EITHER ZINC COATED STEEL WIRE OR ALUMINUM-ALLOY WIRE IN A 2-INCH MESH. COATED WIRE AND ALUMINUM-ALLOY SHALL HAVE A DIAMETER OF 0.148 INCHES. THE FABRIC SHALL MEET THE FOLLOWING REQUIREMENTS: (1) ZINC-COATED STEEL FABRIC SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 181, TYPE 1, CLASS D. (2) ALUMINUM-COATED STEEL FABRIC SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 181 TYPE II. THE UNIT WEIGHT OF THE COATING SHALL BE DETERMINED IN ACCORDANCE WITH AASHTO T 213. THE ALUMINUM-COATED STEEL FABRIC SHALL BE GIVEN A CLEAR ORGANIC COATING AFTER FABRICATION. (3) ALUMINUM-ALLOY FABRIC SHALL BE MADE FROM WIRE CONFORMING TO THE REQUIREMENTS OF AASHTO M 181 TYPE III.

**METAL POSTS** - METAL POSTS (LINE, CORNER, END, PULL AND GATE POSTS) SHALL BE THE SHAPES, DIMENSIONS, AND WEIGHT SHOWN IN THE TABLES. (1) STEEL PIPE, TYPE A, SHALL BE HOT-DIPPED GALVANIZED CONFORMING TO THE REQUIREMENTS OF ASTM F 1083. (2) STEEL PIPE, TYPE B, SHALL BE MANUFACTURED FROM COLD ROLLED ELECTRIC RESISTANCE WELDED, HEATED AND TEMPERED STEEL. THE STEEL STRIP USED IN THE MANUFACTURE OF THE PIPE SHALL CONFORM TO ASTM A 569 OR ASTM A 607. THE WALL THICKNESS SHALL NOT BE LESS THAN THAT SHOWN IN THE TABLE. THE PRODUCT OF THE YIELD STRENGTH AND SECTION MODULUS OF THE PIPE SHALL NOT BE LESS THAN THAT OF THE PIPE MEETING THE REQUIREMENTS OF ASTM F 1083. (3) STEEL PIPE, TYPE C, SHALL BE MANUFACTURED BY ROLLED FORMING ALUMINIZED STEEL TYPE 2 STRIP AND ELECTRIC RESISTANCE WELDING INTO TUBULAR FORM. THE OUTSIDE OF THE WELD AREA SHALL BE METALLIZED WITH COMMERCIAL PURE ALUMINUM TO A THICKNESS SUFFICIENT TO PROVIDE RESISTANCE TO CORROSION EQUAL TO THAT OF THE REMAINDER OF THE OUTSIDE OF THE TUBE. THE ALUMINUM COATING WEIGHT SHALL BE A MINIMUM OF 0.75 OUNCES PER SQUARE FOOT, TRIPLE SPOT TEST, 0.70 OUNCES PER SQUARE FOOT SINGLE SPOT TEST, AS MEASURED IN ACCORDANCE WITH ASTM A 428. THE STEEL STRIP USED IN THE MANUFACTURE OF THE PIPE SHALL CONFORM TO ASTM A 787 TYPE 1 AND SHALL HAVE A MINIMUM YIELD STRENGTH OF 50,000 P.S.I. THE WEIGHT OF THE PIPE SHALL NOT BE LESS THAN THAT SHOWN ON THE PLANS AND THE PRODUCT OF THE YIELD STRENGTH AND SECTION MODULUS OF THE PIPE SHALL NOT BE LESS THAN THAT OF PIPE MEETING THE REQUIREMENTS OF ASTM A 120. (4) STRUCTURAL SHAPES SHALL BE FABRICATED FROM STEEL CONFORMING TO THE REQUIREMENTS OF AASHTO M 281, GRADES A OR B. ROLLED FORMED SECTIONS SHALL BE FABRICATED FROM STEEL CONFORMING TO THE REQUIREMENTS OF ASTM A 570, GRADES 36 THRU 50, WITH A MAXIMUM TENSILE STRENGTH OF 80,000 POUNDS PER SQUARE INCH. ALL STRUCTURAL SHAPES AND ROLLED FORMED SECTIONS SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M 111, USING ZINC OF ANY GRADE CONFORMING TO THE REQUIREMENTS OF AASHTO M 120. THE ZINC COATING SHALL BE NOT LESS THAN 2.0 OUNCES PER SQUARE FOOT OF SURFACE. (5) SQUARE HOLLOW STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 500, GRADE B OR ASTM A 501. THE TUBING SHALL BE GALVANIZED INSIDE AND OUTSIDE IN ACCORDANCE WITH AASHTO M 111, USING ZINC OF ANY GRADE CONFORMING TO THE REQUIREMENT OF AASHTO M 120. THE ZINC COATING SHALL NOT BE LESS THAN 2.0 OUNCES PER SQUARE FOOT OF SURFACE. (6) ROLL FORMED STEEL "C" SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F 1043 OR ASTM F 1083, GROUP IIA, AND BE GALVANIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM F 1043, TYPE A.

**TOP RAILS** - THE TOP RAILS SHALL BE 1.625 INCH O.D., GALVANIZED OR ALUMINUM COATED PIPE HAVING A MINIMUM BENDING STRENGTH OF 202 LBS. AT THE CENTER OF A 10 FT. SPAN.

**BOTTOM TENSION WIRE** - THE BOTTOM TENSION WIRE SHALL BE #9 GAUGE GALVANIZED STEEL WIRE MEETING THE REQUIREMENTS OF AASHTO M 181, THE WIRE SHALL BE STRETCHED TIGHT WITH GALVANIZED TURNBUCKLES SPACED AT INTERVALS NOT MORE THAN 1,000 FEET. THE ZINC COATING SHALL BE NOT LESS THAN 12 OUNCES PER SQUARE FOOT OF SURFACE.

**HORIZONTAL BRACES** - THE BRACES SHALL BE "STANDARD WEIGHT" GALVANIZED STEEL PIPE MEETING THE SPECIFICATIONS FOR LINE POSTS AND SHALL BE THE SAME DIMENSIONS AND WEIGHT AS REQUIRED FOR THE TOP RAIL.

**TRUSS RODS** - THE TRUSS RODS SHALL BE 3/8" ROUND GALVANIZED STEEL ROD WITH GALVANIZED TURNBUCKLES. THE ZINC COATING SHALL BE NOT LESS THAN 1.2 OUNCES PER SQUARE FOOT OF SURFACE.

**GATE** - THE GATE TYPE AND SIZE SHALL CONFORM TO THE DETAILS SHOWN ON THE PLANS AND AS PROVIDED IN THE SPECIAL PROVISIONS.

**POST TOPS** - THE POST TOPS SHALL BE STEEL OR MALLEABLE IRON OR WROUGHT IRON OR APPROVED TYPE AND SHALL BE GALVANIZED. THE ZINC COATING SHALL BE NOT LESS THAN 1.2 OUNCES PER SQUARE FOOT OF SURFACE.

**STRETCHER BARS** - THE STRETCHER BARS SHALL BE FLAT GALVANIZED STEEL BARS NOT LESS THAN 1/4" X 3/4" AND THE STRETCHER BAR BANDS SHALL BE FLAT GALVANIZED STEEL BARS NOT LESS THAN 1/8" X 1" WITH A 3/8" DIAMETER GALVANIZED CARRIAGE BOLT. THE ZINC COATING SHALL BE NOT LESS THAN 1.2 OUNCES PER SQUARE FOOT OF SURFACE.

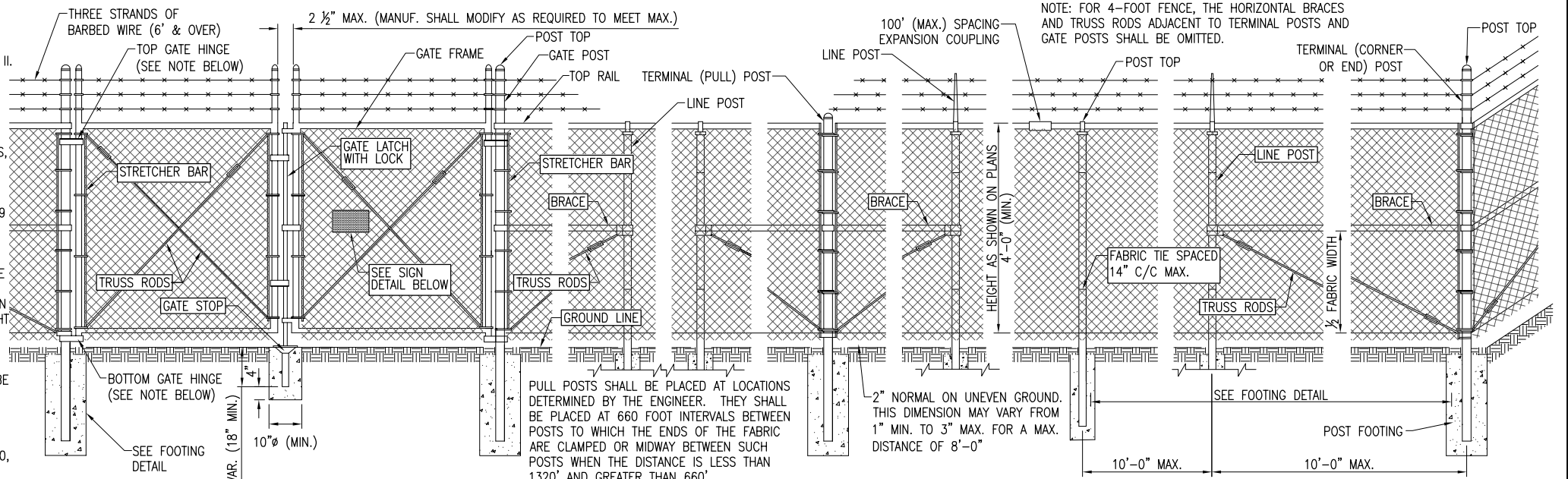
**FABRIC TIES** - THE FABRIC TIES SHALL BE HOG RINGS, OR ALUMINUM WIRE, OR GALVANIZED STEEL WIRE NOT LESS THAN #9 GAUGE. THE ZINC COATING SHALL BE NOT LESS THAN 1.2 OUNCES PER SQUARE FOOT OF SURFACE.

**FITTINGS** - THE PERTINENT FITTINGS FOR FENCE AND GATES SHALL BE STEEL OR MALLEABLE IRON OR WROUGHT IRON OR APPROVED TYPE AND SHALL BE GALVANIZED. THE ZINC COATING SHALL BE NOT LESS THAN 1.2 OUNCES PER SQUARE FOOT OF SURFACE IN ACCORDANCE WITH AASHTO M 232.

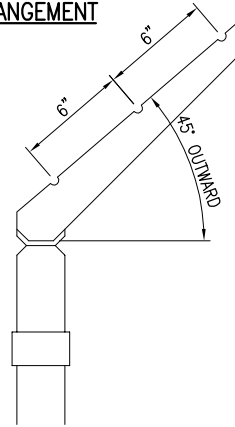
**STRUCTURAL P.C. CONCRETE** - THE STRUCTURAL P.C. CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF ITEM 610 OF THE STANDARD SPECIFICATIONS.

**BOLTS AND NUTS** - THE BOLTS AND NUTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 307 AND SHALL BE ZINC COATED IN ACCORDANCE WITH AASHTO M 232 OR M 298, CLASS 50.

**BARBED WIRE** - BARBED WIRE MAY BE EITHER GALVANIZED STEEL BARBED WIRE OR ALUMINUM-COATED STEEL BARBED WIRE CONSISTING OF 2 STRANDS OF 12 1/2 GAUGE WIRE WITH 4-POINT BARBS OF 14 GAUGE WIRE SPACED 5 INCHES APART CONFORMING TO THE FOLLOWING REQUIREMENTS: (1) GALVANIZED BARBED WIRE SHALL CONFORM TO THE SPECIFICATIONS OF ZINC-COATED (GALVANIZED) STEEL BARBED WIRE, AASHTO M 280, CLASS 3 WITH A MINIMUM COATING OF 0.80 OUNCES PER SQUARE FOOT OF WIRE SURFACE (2) ALUMINUM-COATED STEEL BARBED WIRE SHALL CONFORM TO THE SPECIFICATIONS FOR GALVANIZED STEEL BARBED WIRE, EXCEPT THE WIRE SHALL BE ALUMINUM COATED. THE WIRE SHALL HAVE NOT LESS THAN 0.25 OUNCES OF COATING OF ALUMINUM ALLOY PER SQUARE FOOT OF UNCOATED SURFACE. THE WEIGHT OF THE ALUMINUM ALLOY COATING SHALL BE DETERMINED IN ACCORDANCE WITH AASHTO T 213.

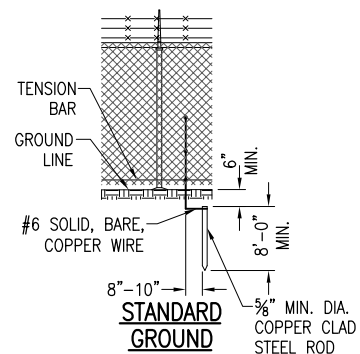


**VEHICLE GATE ARRANGEMENT**



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

(ONLY FOR OVER 48" FENCE)

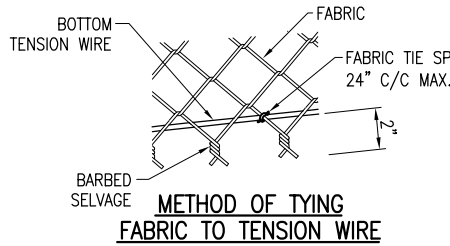


**GENERAL NOTE:**

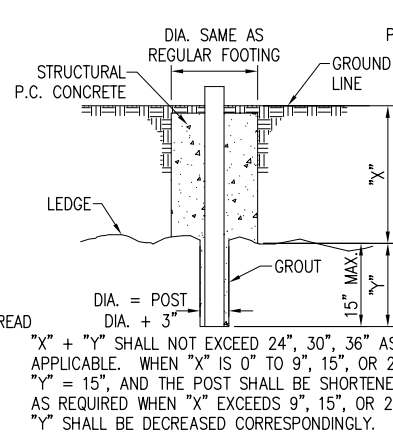
CONTINUOUS FENCE SHALL BE GROUNDED AT INTERVALS NOT EXCEEDING 500 FT IN URBAN AREAS AND 1,000 FT IN RURAL AREAS. THERE SHALL BE A GROUND WITHIN 100 FT OF GATES IN EACH SECTION OF THE FENCE ADJACENT TO THE GATE. FENCE UNDER A POWER LINE SHALL BE GROUNDED BY THREE GROUNDS; ONE DIRECTLY UNDER THE CROSSING AND ONE ON EACH SIDE 25 FT TO 50 FT AWAY. A SINGLE GROUND SHALL BE LOCATED DIRECTLY UNDER EACH TELEPHONE WIRE OR CABLE CROSSING. THE COUNTERPOISE GROUND SHALL BE USED ONLY WHERE IT IS IMPOSSIBLE TO DRIVE A GROUND ROD. THE GROUND WIRE SHALL BE CONNECTED TO THE FABRIC AND TENSION WIRE WITH UL LISTED GROUNDING CONNECTORS OF CAST BRONZE BODY AND BRONZE OR STAINLESS STEEL BOLTS AND WASHERS. GROUNDING CONNECTORS SHALL BE SIZED AND SUITABLE FOR THE RESPECTIVE APPLICATION. CONNECTIONS TO GROUND RODS SHALL BE WITH UL LISTED GROUNDING CONNECTORS SUITABLE FOR EXOTHERMIC WELD TYPE CONNECTORS, CADWELD BY ERICO PRODUCTS, INC., DIRECT BURIAL IN EARTH OR SOLON, OHIO, (PHONE 1-800-248-9353), THERMOWELD BY CONTINENTAL INDUSTRIES, INC., TULSA, OKLAHOMA (PHONE 918-663-1440) OR ULTRAWELD BY HARGER, GRAYSLAKE, ILLINOIS (PHONE 1-800-842-7437). EXOTHERMIC WELD CONNECTIONS SHALL BE INSTALLED IN CONFORMANCE WITH THE RESPECTIVE MANUFACTURER'S DIRECTIONS USING MOLDS SUITABLE FOR EACH RESPECTIVE APPLICATION. GROUND RODS SHALL BE 5/8-IN. DIAMETER BY 8 FT LONG (MINIMUM), UL-LISTED, COPPER-CLAD. THE GROUND WIRE USED TO BOND THE FENCE FABRIC AND TENSION WIRE TO THE GROUND ROD SHALL BE #6 AWG BARE SOLID COPPER CONDUCTOR.

10' FENCE-POST & BRACE TABLE		
DESCRIPTION	DIA. - INCH (O.D.)	WT. LBS./FT.
LINE POST	2.875	5.79
TERMINAL POST	4.0	9.11
END POST	4.0	9.11
CORNER POST	4.0	9.11
PULL POST	4.0	9.11
GATE POST	6.625	18.97
TOP RAIL	1.66	2.27

NOTE: ONLY ROUND POSTS WILL BE PERMITTED.

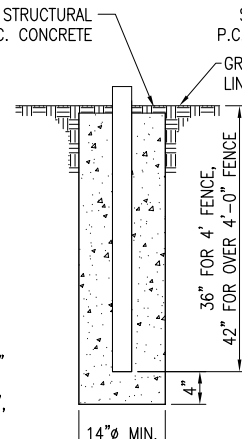


**PULL POST ARRANGEMENT**



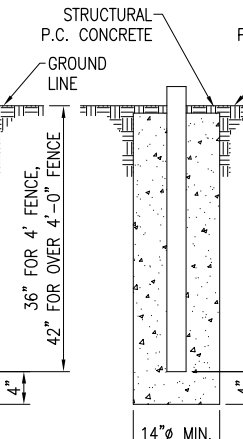
**FOOTING FOR POST WHEN ROCK LEDGE IS ENCOUNTERED**

**LINE POST ARRANGEMENT**



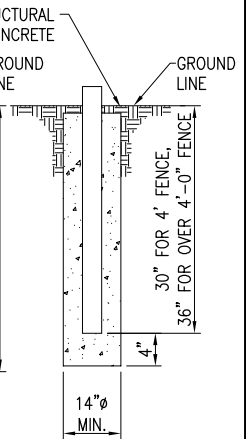
**FOOTING FOR LINE POST**

**CORNER OR END POST ARRANGEMENT**



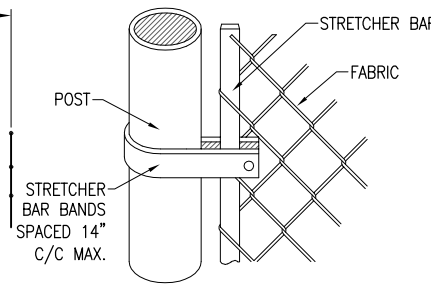
**FOOTING FOR CORNER OR END POST**

**FOOTING FOR GATE POST**

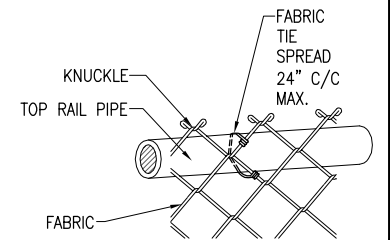


SEE SIGN DETAIL ON SHEET 21

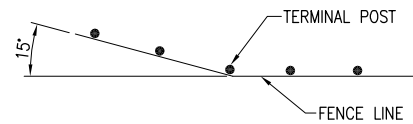
**SIGN DETAIL**



**METHOD OF FASTENING STRETCHER BAR TO POST**



**METHOD OF TYING FABRIC TO PIPE**



WHERE THE FENCE LINE HAS A CHANGE IN DIRECTION OF 15° OR MORE, A TERMINAL POST SHALL BE PLACED AS SHOWN ABOVE. WHERE ANGLE IS LESS THAN 15° AND EXISTING CONDITIONS REQUIRE TERMINAL POST, THEY SHALL BE PLACED AS DIRECTED BY ENGINEER.

JO019

REVISION	DATE

JOLIET REGIONAL AIRPORT  
JOLIET PARK DISTRICT  
JOLIET, ILLINOIS

A.I.P. PROJ.: 3-17-0056-B7

IL PROJ.: JOT-4103

Hanson Project No. 10A0046D_0001	FILENAME R-571FEN.DWG	NOT TO SCALE	DATE xx/xx/xx
LAYOUT	BAK	03/17/11	xx/xx/xx
DRAWN	BAK	03/17/11	xx/xx/xx
REVIEWED	RAW	xx/xx/xx	xx/xx/xx

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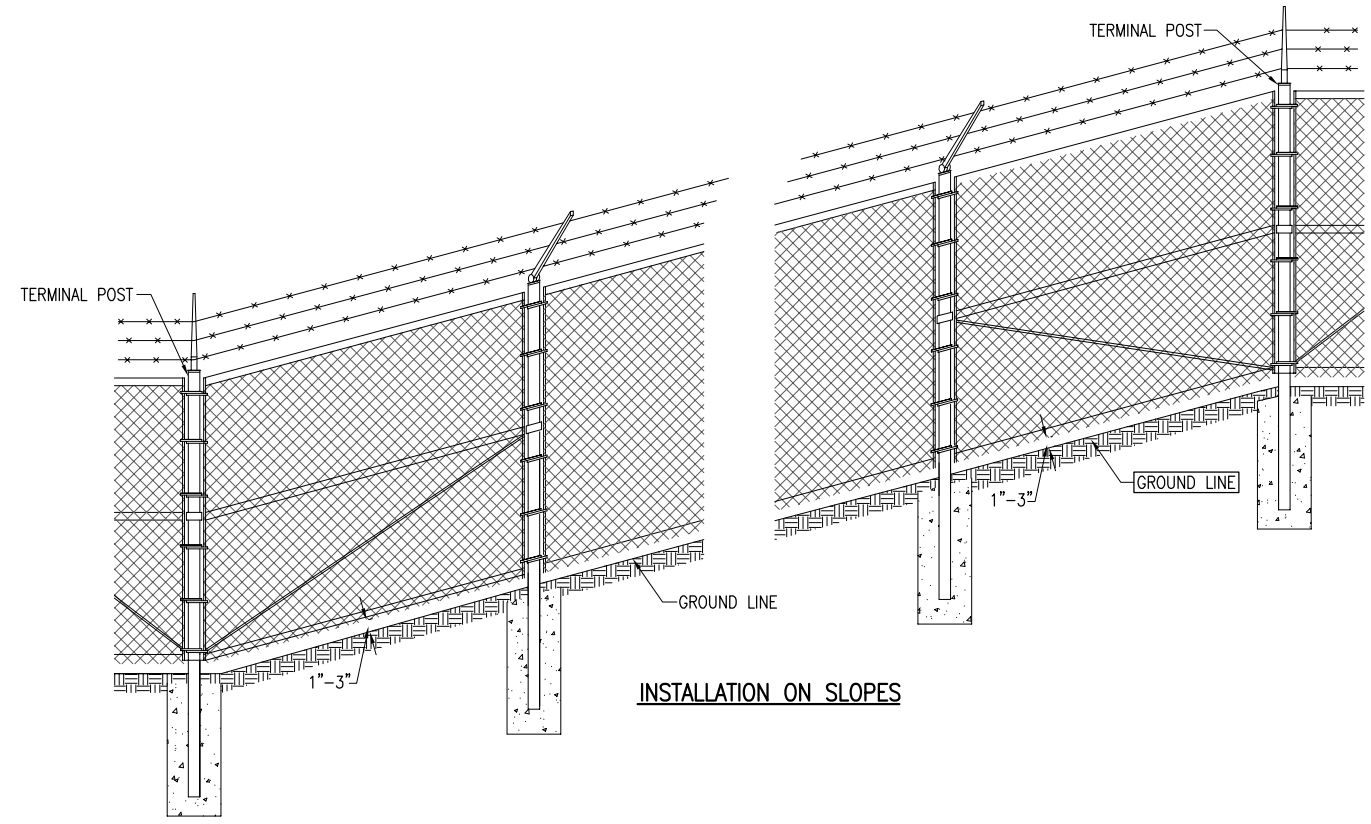
CONSTRUCT PERIMETER FENCE

PROPOSED FENCING DETAILS

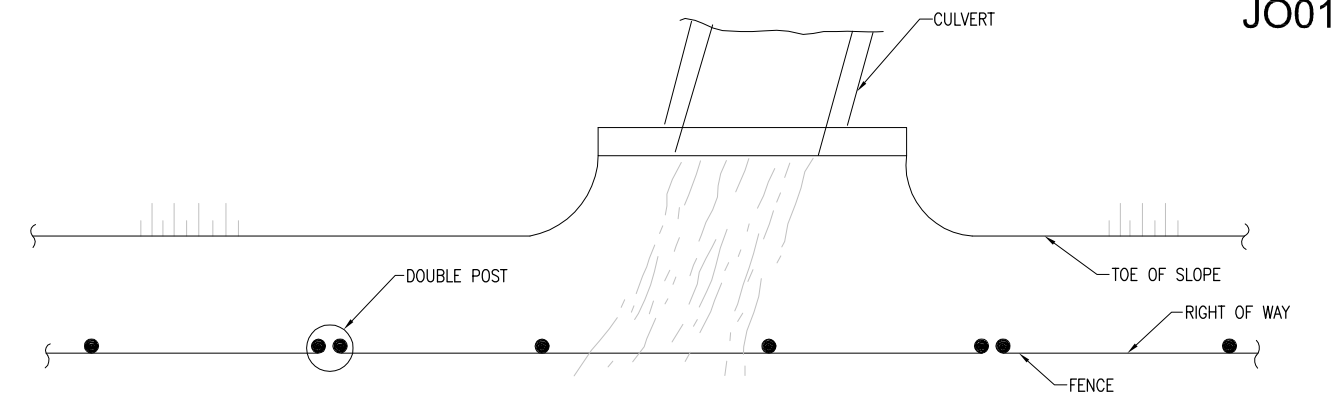
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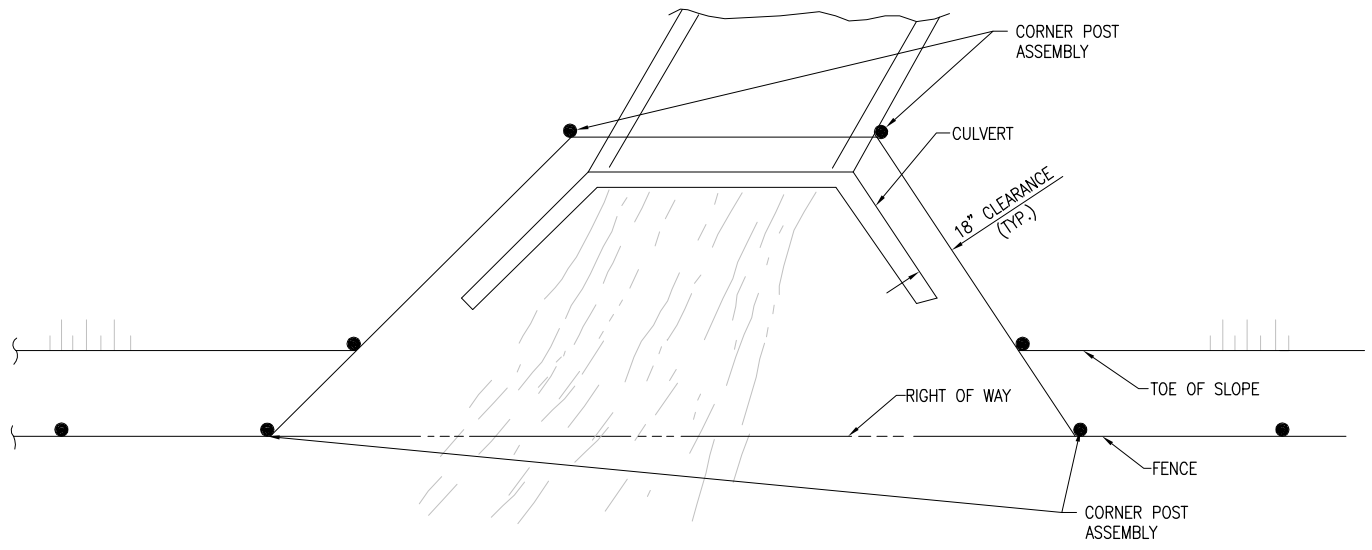




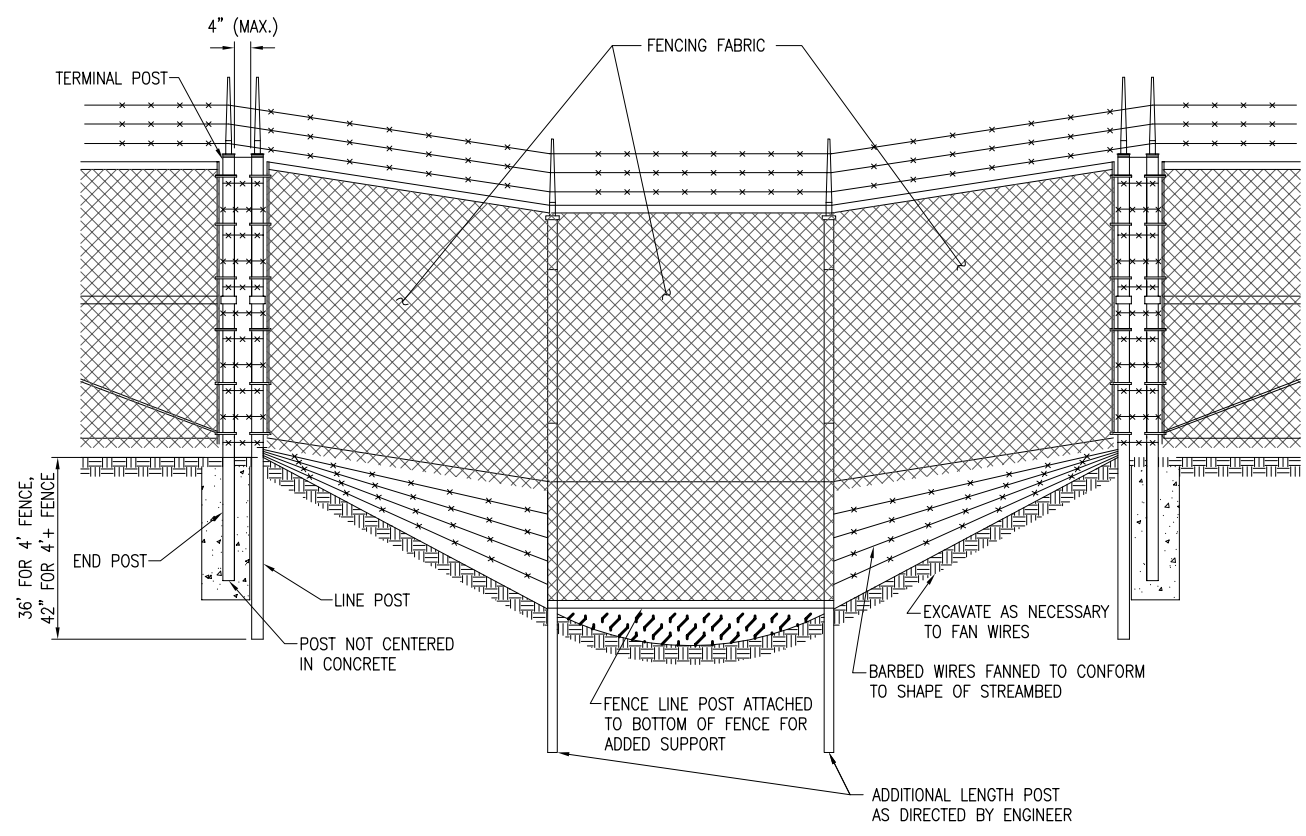
INSTALLATION ON SLOPES



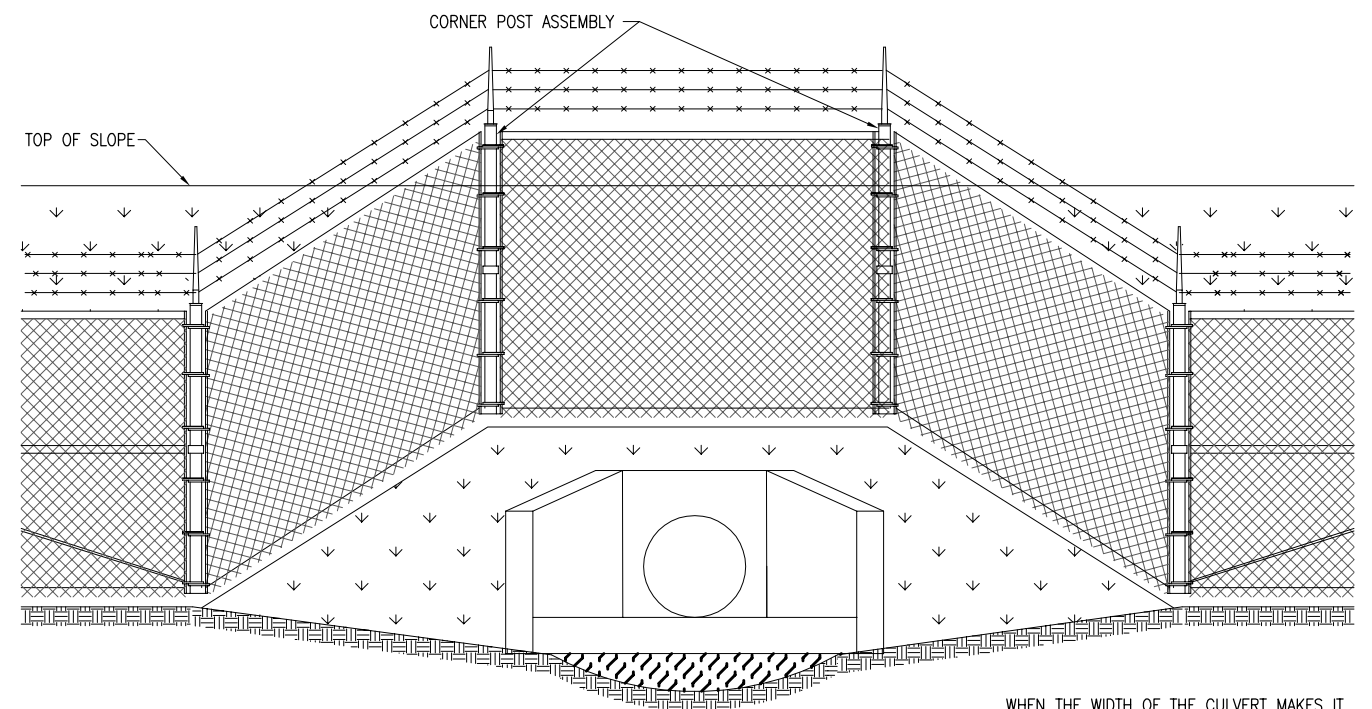
INSTALLATION OVER STREAM (PLAN)



INSTALLATION AROUND HEADWALL (PLAN)



INSTALLATION OVER STREAM (ELEVATION)



INSTALLATION AROUND HEADWALL (ELEVATION)

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.

THE CHAIN LINK FABRIC SHALL BE REPLACED BY BARBED WIRE STRANDS AT 12" MAXIMUM CENTERS BETWEEN THE DOUBLE POST SHOWN.

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REVISION	DATE

JOLIET REGIONAL AIRPORT  
JOLIET PARK DISTRICT  
JOLIET, ILLINOIS

IL PROJ.: JOT-4103 A.I.P. PROJ.: 3-17-0056-B7

Hanson Project No.	10A0046D_0001
Filename	R-572FEN.DWG
Scale	NOT TO SCALE
Date	xx/xx/xx
LAYOUT	BAK 03/17/11
DRAWN	BAK 03/17/11
REVIEWED	RAW xx/xx/xx

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Offices Nationwide

CONSTRUCT PERIMETER FENCE

PROPOSED FENCING DETAILS

**ELECTRICAL LEGEND - ONE-LINE DIAGRAM**

	CABLE TERMINATOR/LUG, TERMINAL BLOCK, OR SPLICE
	TRANSFORMER
	DISCONNECT SWITCH
	FUSIBLE DISCONNECT SWITCH
	CIRCUIT BREAKER
	THERMAL MAGNETIC CIRCUIT BREAKER
	NORMALLY OPEN (N.O.) CONTACT
	NORMALLY CLOSED (N.C.) CONTACT
	TOGGLE SWITCH / 2 POSITION SWITCH
	FUSE
	TRANSIENT VOLTAGE SURGE SUPPRESSOR OR SURGE PROTECTOR DEVICE
	GROUND - GROUND ROD, GROUNDING ELECTRODE, OR AT EARTH POTENTIAL
	INDICATING LIGHT
	MOTOR
	LOAD, MOTOR, # = HORSEPOWER
	ELECTRIC UTILITY METER BASE
	JUNCTION BOX WITH SPLICE OR TERMINALS
	EQUIPMENT, XXX = DEVICE DESCRIPTION
	GROUND BAR, GROUND BUS OR GROUND TERMINAL
	SOLID NEUTRAL, NEUTRAL BUS, OR NEUTRAL TERMINAL
	PANELBOARD WITH MAIN LUGS
	PANELBOARD WITH MAIN BREAKER
	FUSE PANEL WITH MAIN FUSE PULLOUT
	DUPLEX RECEPTACLE 120V SINGLE PHASE GROUNDING TYPE
	CONTROL STATION
	TRANSFER SWITCH: N = NORMAL EM = EMERGENCY L = LOAD
	ENGINE GENERATOR SET

**ELECTRICAL LEGEND - PLANS**

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

**ELECTRICAL ABBREVIATIONS**

A.F.F.	ABOVE FINISHED FLOOR
A, AMP	AMPERES
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BKR	BREAKER
C	CONDUIT
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CR	CONTROL RELAY
CU	COPPER
DPDT	DOUBLE POLE DOUBLE THROW
DPST	DOUBLE POLE SINGLE THROW
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ENCL	ENCLOSURE
EP	EXPLOSION PROOF
ES	EMERGENCY STOP
ETL	INTERTEK - ELECTRICAL TESTING LABS
ETM	ELAPSE TIME METER
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
GRSC	GALVANIZED RIGID STEEL CONDUIT
HID	HIGH INTENSITY DISCHARGE
HOA	HAND OFF AUTOMATIC
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
J	JUNCTION BOX
KVA	KILOVOLT AMPERE(S)
KW	KILOWATTS
LC	LIGHTING CONTACTOR
LTFMC	LIQUID TIGHT FLEXIBLE METAL CONDUIT (UL LISTED)
LTG	LIGHTING
LP	LIGHTING PANEL
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MCM	THOUSAND CIRCLUAR MIL
MDP	MAIN DISTRIBUTION PANEL
MFR	MANUFACTURER
MH	METAL HALIDE
MIN	MINIMUM
MLO	MAIN LUGS ONLY
NEC	NATIONAL ELECTRICAL CODE (NFPA 70)
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OHE	OVERHEAD ELECTRIC
OL	OVERLOAD

**ELECTRICAL ABBREVIATIONS (CONTINUED)**

PB	PULL BOX
PC	PHOTO CELL
PDB	POWER DISTRIBUTION BLOCK
PNL	PANEL
RCPT	RECEPTACLE
R	RELAY
S	STARTER
SPD	SURGE PROTECTION DEVICE
SPST	SINGLE POLE SINGLE THROW
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
TYP	TYPICAL
UG	UNDERGROUND
UGE	UNDERGROUND ELECTRIC
UL	UNDERWRITER'S LABORATORIES
V	VOLTS
W/	WITH
W/O	WITHOUT
WP	WEATHER PROOF
XFER	TRANSFER
XFMR	TRANSFORMER

**AIRPORT EQUIPMENT/FACILITY ABBREVIATIONS**

ASOS	AUTOMATED SURFACE OBSERVING SYSTEM
ATCT	AIR TRAFFIC CONTROL TOWER
AWOS	AUTOMATED WEATHER OBSERVING SYSTEM
CCR	CONSTANT CURRENT REGULATOR
DME	DISTANCE MEASURING EQUIPMENT
FAR	FEDERAL AVIATION REGULATION
GS	GLIDE SLOPE FACILITY
HIRL	HIGH INTENSITY RUNWAY LIGHT
ILS	INSTRUMENT LANDING SYSTEM
IM	INNER MARKER
LIR	LOW IMPACT-RESISTANT
LOC	LOCALIZER FACILITY
MALS	MEDIUM INTENSITY APPROACH LIGHTING SYSTEM
MALS-R	MEDIUM INTENSITY APPROACH LIGHTING SYSTEM WITH RUNWAY ALIGNMENT INDICATING LIGHTS
MIRL	MEDIUM INTENSITY RUNWAY LIGHT
MITL	MEDIUM INTENSITY TAXIWAY LIGHT
NDB	NON-DIRECTIONAL BEACON
PAPI	PRECISION APPROACH PATH INDICATOR
PLASI	PULSE LIGHT APPROACH SLOPE INDICATOR
RAIL	RUNWAY ALIGNMENT INDICATING LIGHTS
REIL	RUNWAY END IDENTIFIER LIGHT
RVR	RUNWAY VISUAL RANGE
VADI	VISUAL APPROACH DESCENT INDICATOR
VASI	VISUAL APPROACH SLOPE INDICATOR
VOR	VERY HIGH FREQUENCY OMNIDIRECTIONAL RANGE FACILITY
WC	WIND CONE

**NOTES:**

- ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70 - NATIONAL ELECTRICAL CODE (NEC) MOST CURRENT ISSUE IN FORCE, THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCES, AND REQUIREMENTS IN FORCE. ANY INSTALLATIONS WHICH VOID THE U.L. LISTING, ETL LISTING (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE WILL NOT BE PERMITTED.
- ALL WORK, POWER OUTAGES, AND/OR SHUT DOWN OF EXISTING SYSTEMS SHALL BE COORDINATED WITH THE AIRPORT DIRECTOR/MANAGER. ONCE SHUT DOWN, THE CIRCUITS SHALL BE LABELED AS SUCH TO PREVENT ACCIDENTAL ENERGIZING OF THE RESPECTIVE CIRCUITS. ALL PERSONNEL SHALL FOLLOW U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) 29 CFR PART 1910 OCCUPATIONAL SAFETY & HEALTH STANDARDS FOR ELECTRICAL SAFETY AND LOCKOUT/TAGOUT PROCEDURES INCLUDING, BUT NOT LIMITED TO, 29 CFR SECTION 1910.147 THE CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT).
- COLOR CODE PHASE AND NEUTRAL CONDUCTOR INSULATION FOR NO. 6 AWG OR SMALLER. PROVIDE COLORED INSULATION OR COLORED MARKING TAPE FOR PHASE AND NEUTRAL CONDUCTORS FOR NO. 4 AWG AND LARGER. INSULATED GROUND CONDUCTORS SHALL HAVE GREEN COLORED INSULATION FOR ALL CONDUCTOR AWG AND/OR KCMIL TO COMPLY WITH NEC 250.119. NEUTRAL CONDUCTORS SHALL HAVE WHITE COLORED INSULATION FOR NO. 6 AWG AND SMALLER TO MEET THE REQUIREMENTS OF NEC 200.6. STANDARD COLORS FOR POWER WIRING AND BRANCH CIRCUITS SHALL BE AS FOLLOWS:  
  

240/120 VAC, 3 PHASE, 4 WIRE	
PHASE A	BLACK
PHASE B	ORANGE
PHASE C	BLUE
NEUTRAL	WHITE
GROUND	GREEN

208Y/120 VAC, 3 PHASE, 4 WIRE	
PHASE A	BLACK
PHASE B	RED
PHASE C	BLUE
NEUTRAL	WHITE
GROUND	GREEN
- SEE RESPECTIVE SITE PLANS FOR SITE LEGEND INFORMATION.
- LTFMC DENOTES LIQUID TIGHT FLEXIBLE METAL CONDUIT UL LISTED, SUNLIGHT RESISTANT, & SUITABLE FOR GROUNDING. LIQUID TIGHT FLEXIBLE METAL CONDUIT AND ASSOCIATED FITTINGS SHALL BE U.L. LISTED TO MEET THE REQUIREMENTS OF NEC 350.6. LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS USED FOR FLEXIBILITY (INCLUDING CONNECTIONS TO CCR'S & TRANSFORMERS) SHALL REQUIRE AN EXTERNAL BONDING JUMPER OR INTERNAL EQUIPMENT GROUNDING CONDUCTOR PER NEC 350.60. EXTERNAL BONDING JUMPERS USED WITH CCR INSTALLATIONS SHALL BE #6 AWG COPPER (MINIMUM). DO NOT INSTALL LTFMC THAT IS NOT UL LISTED. CONFIRM LTFMC BEARS THE UL LABEL PRIOR TO INSTALLATION.
- ALL ENCLOSURES RATED NEMA 4, 4X SHALL HAVE WATERTIGHT HUBS AT CONDUIT ENTRANCES U.L. LISTED NEMA 4, 4X FOR THE RESPECTIVE ENCLOSURE, TO MAINTAIN THE NEMA 4, 4X RATING.
- HIGH VOLTAGE & LOW VOLTAGE CIRCUITS SHALL NOT BE INSTALLED IN THE SAME WIREWAY, CONDUIT, DUCT, OR HANDHOLE.
- PER NEC 513 THE ENTIRE AREA OF A HANGAR INCLUDING ANY ADJACENT AND COMMUNICATING AREAS NOT SUITABLY CUT OFF FROM THE HANGAR, SHALL BE CLASSIFIED AS A CLASS I, DIVISION 2 HAZARDOUS LOCATION UP TO A LEVEL 18 INCHES ABOVE THE FLOOR, PER NEC 513.3(C) "VICINITY OF AIRCRAFT", THE AREA WITHIN 5 FT. HORIZONTALLY FROM AIRCRAFT POWER PLANTS OR AIRCRAFT FUEL TANKS SHALL BE CLASSIFIED AS A CLASS I, DIVISION 2 LOCATION THAT SHALL EXTEND UPWARD FROM THE FLOOR TO A LEVEL 5FT. ABOVE THE UPPER SURFACE OF WINGS AND OF ENGINE ENCLOSURES. ALL ELECTRICAL INSTALLATIONS IN CLASSIFIED HAZARDOUS LOCATIONS SHALL BE AVOIDED UNLESS SPECIFICALLY APPROVED FOR SUCH LOCATIONS AND INSTALLED IN CONFORMANCE WITH NEC 500, 501, AND 513 AS WELL AS OTHER APPLICABLE CODES AND REQUIREMENTS.

REVISION		<b>JOLIET REGIONAL AIRPORT JOLIET PARK DISTRICT JOLIET, ILLINOIS</b>	A.I.P. PROJ.: 3-17-0056-B7
DATE			
Hanson Project No. 10A00460_0001 Filename: E-001.DWG Scale: NOT TO SCALE Date: xx/xx/xx		LAYOUT: BAK 03/17/10 DRAWN: BAK 03/17/10 REVIEWED: RAW/KNL xx/xx/xx	
 © Copyright Hanson Professional Services Inc. 2011 Hanson Professional Services Inc. 1525 South Sixth Street Springfield, Illinois 62703-2986 Ph: (217) 788-2450 Fax: (217) 788-2503 www.hanson-inc.com Offices Nationwide		<b>CONSTRUCT PERIMETER FENCE</b>  <b>ELECTRICAL LEGEND AND ABBREVIATIONS</b>	<b>12</b> 12 of 19 sheets

REVISION	DATE

**JOLIET REGIONAL AIRPORT  
JOLIET PARK DISTRICT  
JOLIET, ILLINOIS**

IL PROJ.: JOT-4103 A.I.P. PROJ.: 3-17-0056-B7

Hanson Project No. 10A0046D_0001	Filename R-141ELE.DWG	Scale 1" = 30'	Date xx/xx/xx
LAYOUT	BAK	03/17/11	xx/xx/xx
DRAWN	BAK	03/17/11	xx/xx/xx
REVIEWED	RAW	xx/xx/xx	xx/xx/xx

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




**MAIN HANGAR ACCESS  
GATE ELECTRICAL PLAN**

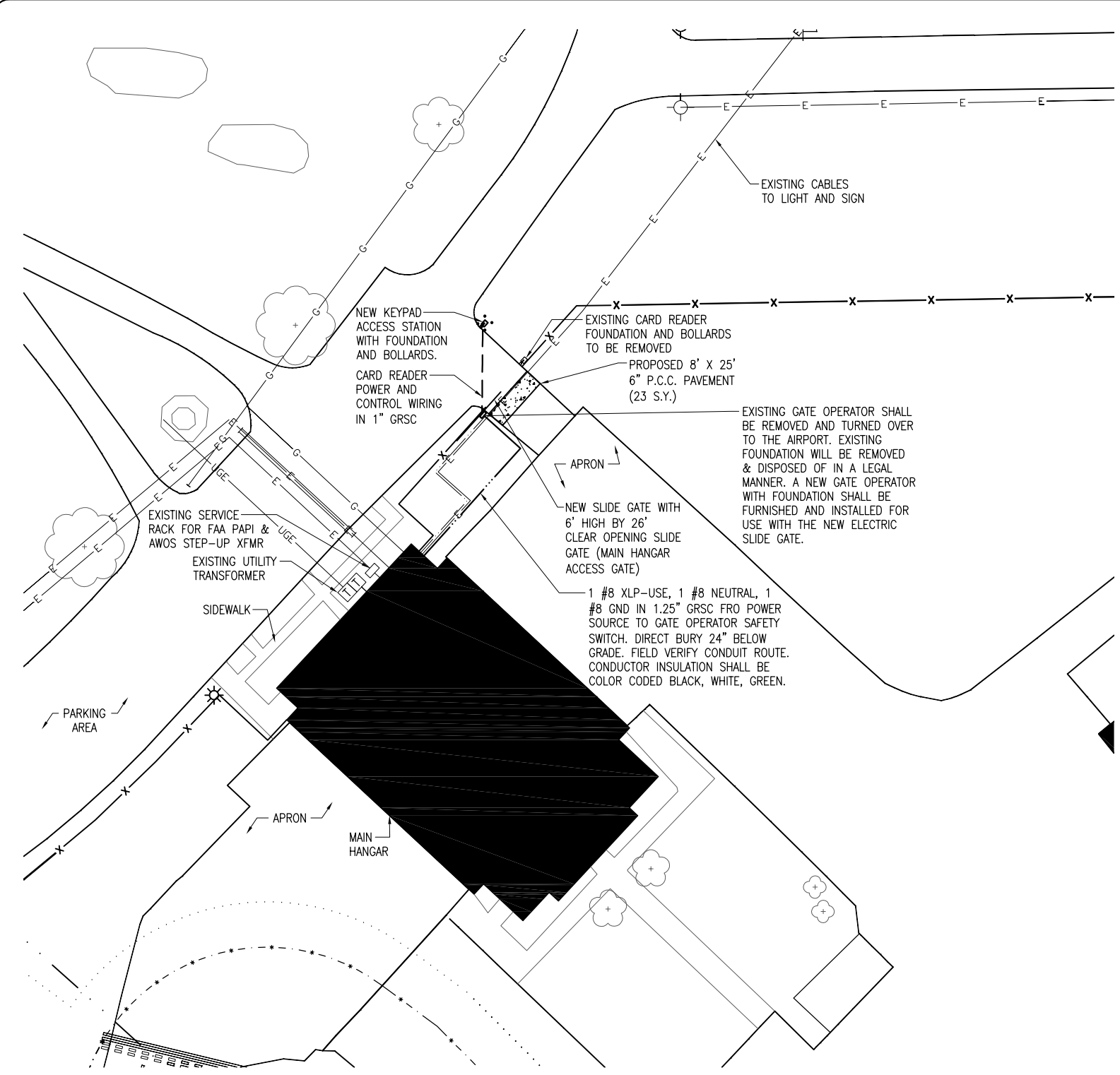
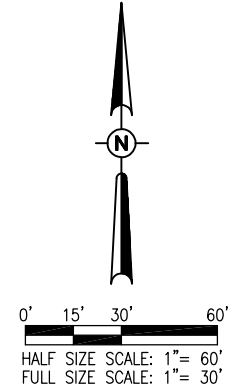
THE LOCATION, SIZE, AND TYPE OF MATERIAL OF EXISTING UNDERGROUND AND/OR ABOVEGROUND UTILITIES INDICATED ON THE PLANS ARE NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY WHATEVER IN RESPECT TO THE ACCURACY, COMPLETENESS, OR SUFFICIENCY OF THE INFORMATION. THERE IS NO GUARANTEE, EITHER EXPRESSED OR IMPLIED, THAT THE LOCATIONS, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED IN THE CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE OWNER'S REPRESENTATIVE AND/OR THE RESIDENT ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY DAMAGE TO SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.

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

- NOTES:**
1. THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS.
  2. EXISTING DETECTOR LOOPS SHALL BE REMOVED AND REPLACED WITH NEW DETECTOR LOOPS.
  3. SEE SPECIAL PROVISIONS ITEMS AR162726 & AR800548 AND "PROPOSED ELECTRIC SLIDE GATE DETAILS" SHEETS FOR EACH RESPECTIVE GATE FOR ADDITIONAL REQUIREMENTS ON ELECTRIC SLIDE GATE WORK.
  4. COORDINATE CONDUIT ENTRANCE INTO BASEMENT FOR ACCESS TO POWER SOURCE. IF CONDUIT ENTERS INTO THE HANGAR BAY AREA CONDUIT MUST ENTER 24" ABOVE FINISHED FLOOR TO COMPLY WITH NEC 513. SEE "ELECTRICAL LEGEND AND ABBREVIATIONS" SHEET FOR ADDITIONAL NOTES.

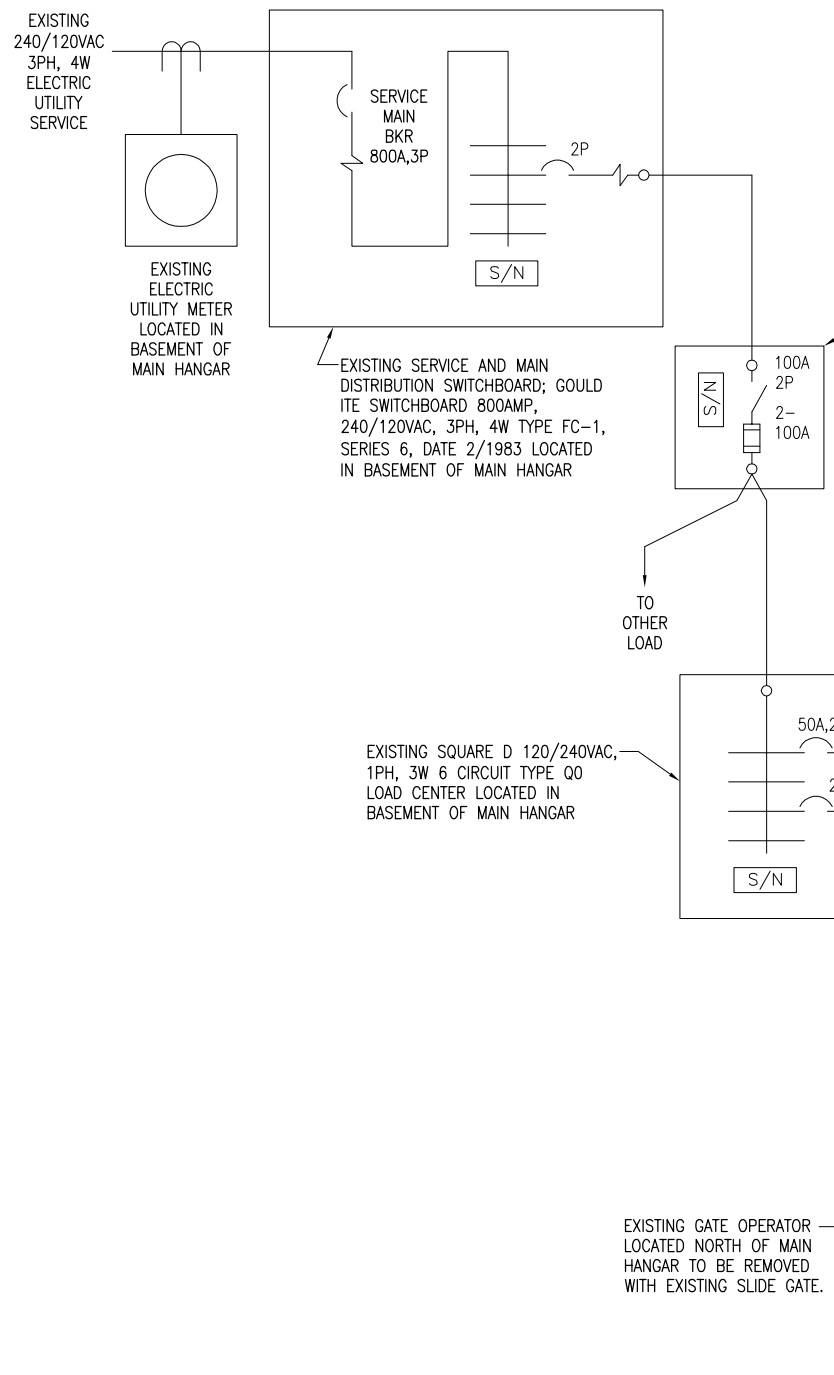
**LEGEND**

-  EXISTING IMPROVEMENTS
-  EXISTING BUILDINGS
-  EXISTING UNDERGROUND ELECTRIC UTILITY PRIMARY
-  EXISTING ELECTRIC
-  EXISTING GAS LINE
-  PROPOSED CABLE IN GRSC
-  PROPOSED FENCE
-  PROPOSED KEYPAD ACCESS STATION WITH BOLLARDS





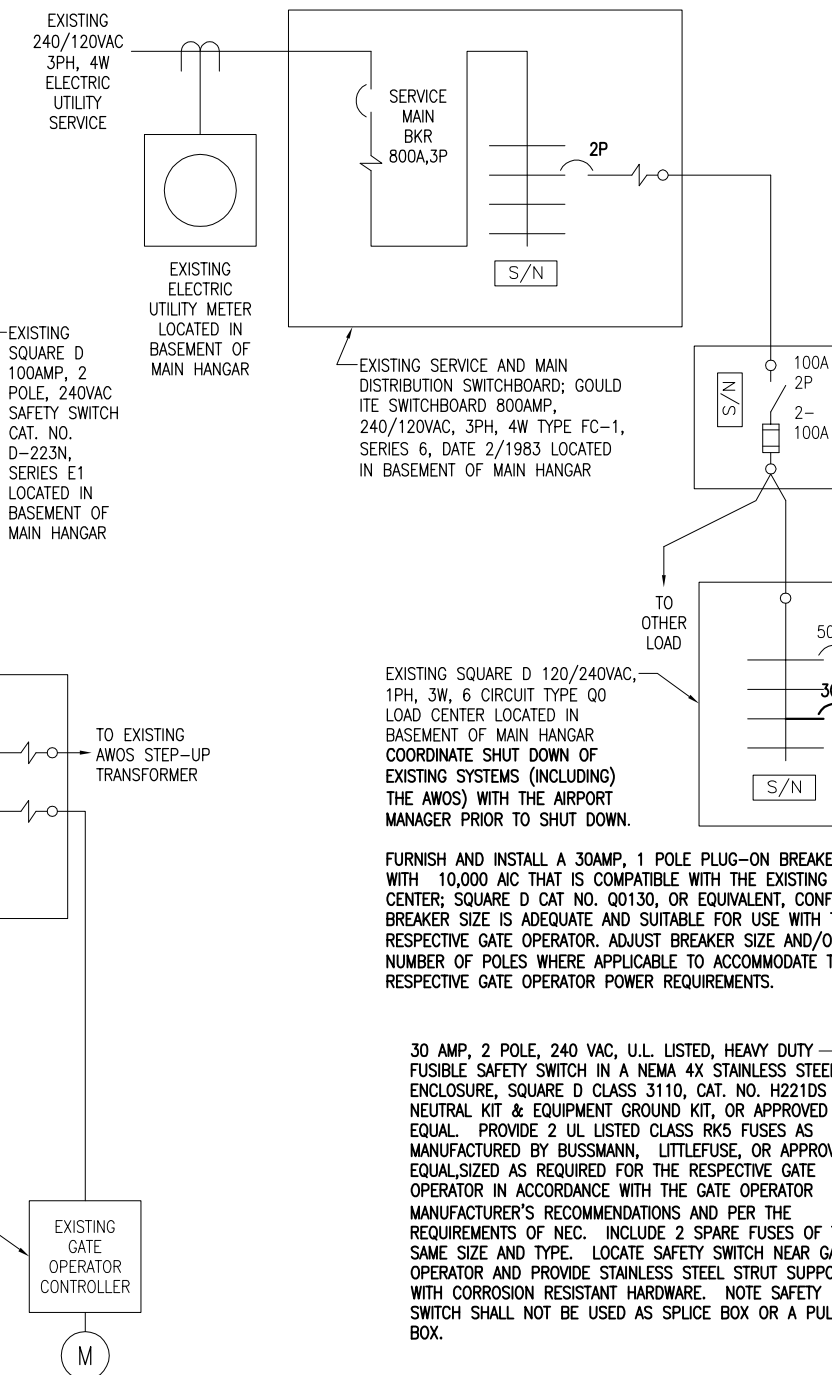
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**EXISTING ELECTRICAL ONE LINE DIAGRAM FOR MAIN HANGAR GATE OPERATOR**

LEGEND PLATE SCHEDULE	
DEVICE	LABEL
MAIN HANGAR GATE OPERATOR DISCONNECT	MAIN HANGAR GATE 120VAC FED FROM MAIN HANGAR LOAD CENTER IN BASEMENT

NOTE: LEGEND PLATES SHALL BE WEATHERPROOF ENGRAVED PLASTIC OR PHENOLIC MATERIAL, 1/4" HIGH BLACK LETTERS ON A WHITE BACKGROUND UNLESS NOTED OTHERWISE. SECURE WITH WEATHERPROOF ADHESIVE AND MACHINE SCREWS. FURNISH ADDITIONAL LEGEND PLATES WHERE REQUIRED BY CODE, FOR ADDITIONAL EQUIPMENT, AS DETAILED HEREIN ON THE PLANS, AND AS NOTED IN THE SPECIAL PROVISION SPECIFICATIONS.



**PROPOSED ELECTRICAL ONE LINE FOR MAIN HANGAR GATE OPERATOR**

EXISTING SERVICE AND MAIN DISTRIBUTION SWITCHBOARD; GOULD ITE SWITCHBOARD 800AMP, 240/120VAC, 3PH, 4W TYPE FC-1, SERIES 6, DATE 2/1983 LOCATED IN BASEMENT OF MAIN HANGAR

EXISTING SQUARE D 120/240VAC, 1PH, 3W, 6 CIRCUIT TYPE Q0 LOAD CENTER LOCATED IN BASEMENT OF MAIN HANGAR

EXISTING GATE OPERATOR LOCATED NORTH OF MAIN HANGAR TO BE REMOVED WITH EXISTING SLIDE GATE.

EXISTING GATE OPERATOR CONTROLLER

EXISTING SQUARE D 100AMP, 2 POLE, 240VAC SAFETY SWITCH CAT. NO. D-223N, SERIES E1 LOCATED IN BASEMENT OF MAIN HANGAR

EXISTING SERVICE AND MAIN DISTRIBUTION SWITCHBOARD; GOULD ITE SWITCHBOARD 800AMP, 240/120VAC, 3PH, 4W TYPE FC-1, SERIES 6, DATE 2/1983 LOCATED IN BASEMENT OF MAIN HANGAR

EXISTING SQUARE D 120/240VAC, 1PH, 3W, 6 CIRCUIT TYPE Q0 LOAD CENTER LOCATED IN BASEMENT OF MAIN HANGAR COORDINATE SHUT DOWN OF EXISTING SYSTEMS (INCLUDING THE AWOS) WITH THE AIRPORT MANAGER PRIOR TO SHUT DOWN.

FURNISH AND INSTALL A 30AMP, 1 POLE PLUG-ON BREAKER WITH 10,000 AIC THAT IS COMPATIBLE WITH THE EXISTING LOAD CENTER; SQUARE D CAT NO. Q0130, OR EQUIVALENT, CONFIRM BREAKER SIZE IS ADEQUATE AND SUITABLE FOR USE WITH THE RESPECTIVE GATE OPERATOR. ADJUST BREAKER SIZE AND/OR NUMBER OF POLES WHERE APPLICABLE TO ACCOMMODATE THE RESPECTIVE GATE OPERATOR POWER REQUIREMENTS.

30 AMP, 2 POLE, 240 VAC, U.L. LISTED, HEAVY DUTY FUSIBLE SAFETY SWITCH IN A NEMA 4X STAINLESS STEEL ENCLOSURE, SQUARE D CLASS 3110, CAT. NO. H221DS WITH NEUTRAL KIT & EQUIPMENT GROUND KIT, OR APPROVED EQUAL. PROVIDE 2 UL LISTED CLASS RK5 FUSES AS MANUFACTURED BY BUSSMANN, LITTELFUSE, OR APPROVED EQUAL, SIZED AS REQUIRED FOR THE RESPECTIVE GATE OPERATOR IN ACCORDANCE WITH THE GATE OPERATOR MANUFACTURER'S RECOMMENDATIONS AND PER THE REQUIREMENTS OF NEC. INCLUDE 2 SPARE FUSES OF THE SAME SIZE AND TYPE. LOCATE SAFETY SWITCH NEAR GATE OPERATOR AND PROVIDE STAINLESS STEEL STRUT SUPPORT WITH CORROSION RESISTANT HARDWARE. NOTE SAFETY SWITCH SHALL NOT BE USED AS SPLICE BOX OR A PULL BOX.

NEMA 4 STAINLESS STEEL ENCLOSURE ADEQUATELY SIZED FOR TERMINAL BLOCKS, SURGE PROTECTOR, ASSOCIATED CONTROL COMPONENTS AND CONDUITS & WIRING FOR INPUT POWER, LOOP DETECTORS, KEYPAD STATION CONTROL, SECONDARY SAFETY DEVICES, ETC. INSTALL ADJACENT TO SAFETY SWITCH & GATE OPERATOR.

AC SURGE PROTECTOR, UL 1449 LISTED, SURGE CURRENT RATING OF 40KA, SUITABLE FOR USE ON A 120VAC, 1 PHASE, 2 WIRE SYSTEM; JOSLYN MODEL 1260-21, OR APPROVED EQUAL. INCLUDE MOUNTING BRACKET.

EQUIPMENT GROUND BAR ADEQUATELY SIZED FOR ALL GROUND WIRES TO AND FROM ENCLOSURE ILSCO CAT. NO. D167-6 OR APPROVED EQUAL. INSTALL ONE GROUND WIRE PER TERMINAL.

PROVIDE CONDUITS BETWEEN JUNCTION BOX AND GATE OPERATOR ADEQUATELY SIZED FOR ALL POWER, CONTROL, AND SENSOR WIRING. POWER WIRING CONDUIT SHALL BE A SEPARATE DEDICATED CONDUIT. PROVIDE GND BUSHINGS AT CONDUIT TERMINATIONS INSIDE GATE OPERATOR HOUSING & BOND TO GATE OPERATOR FRAME WITH #8 AWG MIN. BONDING JUMPER.

3/4" DIA x 10'L UL LISTED COPPERCLAD GND ROD

BOND GND ROD TO GATE OPERATOR FRAME WITH #6 AWG BARE STRANDED COPPER CONDUCTOR. PROVIDE 1" SCHED 40 PVC CONDUIT & COORDINATE INTO CONCRETE FOUNDATION. CONNECTION TO GND ROD SHALL BE EXOTHERMIC WELD. CONNECTION TO GATE OPERATOR FRAME SHALL BE WITH A TWO-HOLE TONGUE COMPRESSION LUG BOLTED TO THE FRAME WITH 3/8" STAINLESS STEEL, BOLTS, NUTS, & WASHERS.

CONFIRM MOTOR HORSEPOWER WITH RESPECTIVE GATE OPERATOR MFR.

1 #8 XLP-USE, 1 #8 XLP-USE (WHITE INSULATION), 1 #8 GND (GREEN INSULATION) IN 1.25" GRSC FROM POWER SOURCE TO SAFETY SWITCH AT GATE OPERATOR. DIRECT BURY AT EXTERIOR OF BLDG.

INCLUDE EQUIPMENT GROUND KIT

1 #10 THWN, 1 #10 NEUTRAL, 1 #10 GND IN 3/4" GRSC

TO EXISTING AWOS STEP-UP TRANSFORMER

TO EXISTING AWOS STEP-UP TRANSFORMER

TO OTHER LOAD

TO OTHER LOAD

NOTES: **JO019**

- CONTRACTOR SHALL EXAMINE THE SITE TO DETERMINE EXISTING CONDITIONS.
- ALL POWER OUTAGES, AND/OR SHUT DOWN OF EXISTING AIRFIELD NAVAIDS OR OTHER SYSTEMS SHALL BE COORDINATED WITH THE AIRPORT MANAGER AND/OR AIRPORT REPRESENTATIVE. ONCE SHUT DOWN, THE CIRCUITS SHALL BE LABELED AS SUCH TO PREVENT ACCIDENTAL ENERGIZING OF THE RESPECTIVE CIRCUITS. ALL PERSONNEL SHALL FOLLOW U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) 29 CFR PART 1910 OCCUPATIONAL SAFETY & HEALTH STANDARDS FOR ELECTRICAL SAFETY AND LOCKOUT/TAGOUT PROCEDURES INCLUDING, BUT NOT LIMITED TO, 29 CFR SECTION 1910.147 THE CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT).
- SEE "ELECTRICAL LEGEND AND ABBREVIATIONS" SHEET FOR GENERAL NOTES AND REQUIREMENTS.
- ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70 - NATIONAL ELECTRICAL CODE (NEC) MOST CURRENT ISSUE IN FORCE, THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCES AND REQUIREMENTS IN FORCE. ANY INSTALLATIONS WHICH VOID THE U.L. LISTING, ETL LISTING, (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE WILL NOT BE PERMITTED.
- ALL EQUIPMENT AND MATERIALS NOT LABELED AS EXISTING ARE NEW.
- HIGH VOLTAGE & LOW VOLTAGE CIRCUITS SHALL NOT BE INSTALLED IN THE SAME RACEWAY.
- ALL CONDUCTORS/WIRING SHALL BE COPPER
- CONTRACTOR SHALL CONFIRM POWER REQUIREMENTS WITH THE ACTUAL NAMEPLATE ON EACH GATE OPERATOR (OR OTHER RESPECTIVE EQUIPMENT) AND ADJUST CIRCUIT BREAKER, WIRE SIZES AND CONDUIT SIZES TO CONFORM WITH NEC AND MANUFACTURER'S RECOMMENDATIONS WHERE APPLICABLE. WIRE SIZES SHOWN ON THE PLANS ARE MINIMUM.
- CONFIRM CONTROL WIRING REQUIREMENTS WITH THE RESPECTIVE GATE OPERATOR SYSTEM MANUFACTURER'S REPRESENTATIVE.
- GATE OPERATORS SHALL BE RATED FOR THE RESPECTIVE VOLTAGE AVAILABLE AT THE SITE AND SHALL PROPERLY OPERATE ON THE RESPECTIVE NOMINAL VOLTAGE SYSTEM PLUS OR MINUS 10 PERCENT. CONTRACTOR SHALL CONFIRM WITH THE GATE OPERATOR MANUFACTURER THAT THE RESPECTIVE GATE OPERATOR HE SELECTS IS RATED SUITABLE FOR THE RESPECTIVE APPLICATION, IS SUITABLE AND COMPATIBLE WITH THE RESPECTIVE GATE, AND WILL OPERATE PROPERLY ON THE RESPECTIVE POWER SUPPLY. NOTE THE GATE OPERATOR MUST ALSO OPERATE PROPERLY ON STANDBY ENGINE GENERATOR POWER AND SHALL NOT REQUIRE MANUAL RESET DUE TO TRANSFER FROM UTILITY POWER TO STANDBY GENERATOR POWER OR BACK TO UTILITY POWER. THE GATE OPERATOR MUST NOT REQUIRE MANUAL RESET FOR MOMENTARY POWER OUTAGES. WHERE A POWER OUTAGE OCCURS THE GATE OPERATOR SHALL AUTOMATICALLY RESUME NORMAL OPERATION UPON RESTORATION OF POWER.
- REMOVAL OF EACH EXISTING ELECTRICAL SLIDE GATE WILL BE PAID FOR UNDER:  
ITEM AR162908 - REMOVE ELECTRICAL GATE
- PROPOSED 26 FT. ELECTRICAL SLIDE GATE AND ASSOCIATED WORK SHOWN ON THIS SHEET WILL BE PAID FOR UNDER:  
ALTERNATE A, ITEM AR162726 - ELECTRIC GATE - 26'  
OR ALTERNATE B, ITEM AR800548 26' ELECTRIC GATE, VINYL.

REVISION	DATE	BY	CHKD

**JOLIET REGIONAL AIRPORT  
JOLIET PARK DISTRICT  
JOLIET, ILLINOIS**

Project No. 10A0046D\_0001  
Filename: E-601.DWG  
Scale: NOT TO SCALE  
Date: xx/xx/xx

LAYOUT	BAK	03/17/10
DRAWN	BAK	03/17/10
REVIEWED	RAW/KNL	xx/xx/xx

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**CONSTRUCT PERIMETER FENCE**

**MAIN HANGAR GATE ELECTRICAL ONE LINE**

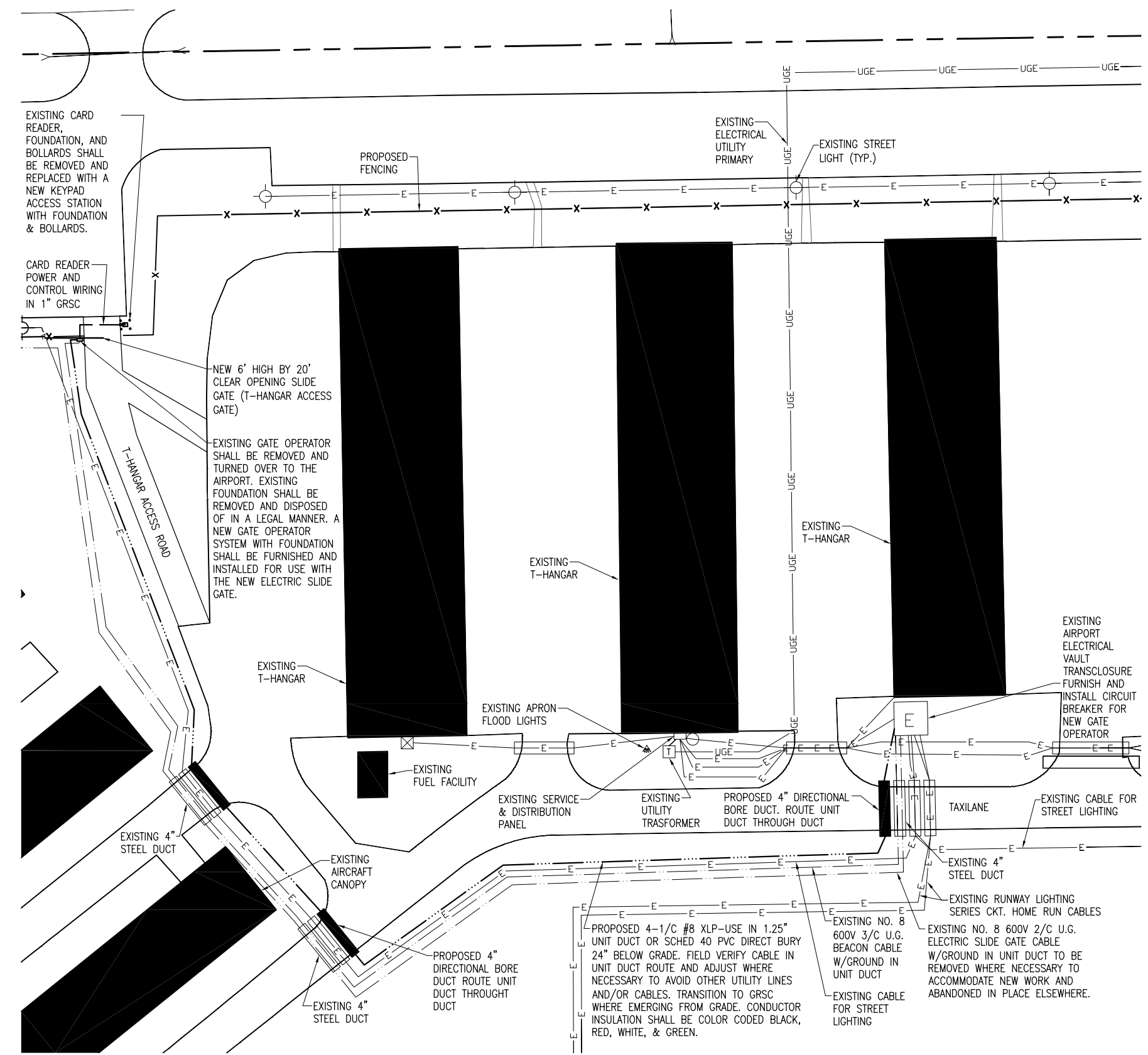
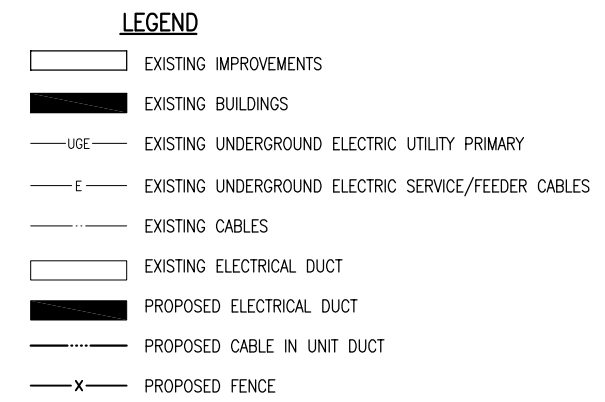
**14**  
14 of 19 sheets

IL PROJ.: JOT-4103 A.I.P. PROJ.: 3-17-0056-B7

THE LOCATION, SIZE, AND TYPE OF MATERIAL OF EXISTING UNDERGROUND AND/OR ABOVEGROUND UTILITIES INDICATED ON THE PLANS ARE NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY WHATEVER IN RESPECT TO THE ACCURACY, COMPLETENESS, OR SUFFICIENCY OF THE INFORMATION. THERE IS NO GUARANTEE, EITHER EXPRESSED OR IMPLIED, THAT THE LOCATIONS, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED IN THE CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE OWNER'S REPRESENTATIVE AND/OR THE RESIDENT ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY DAMAGE TO SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.

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

- NOTES:**
1. THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS.
  2. EXISTING DETECTOR LOOPS SHALL BE REMOVED AND REPLACED WITH NEW DETECTOR LOOPS.
  3. SEE SPECIAL PROVISIONS ITEMS AR162720 & AR800547 AND "PROPOSED ELECTRIC SLIDE GATE DETAILS" SHEETS FOR EACH RESPECTIVE GATE FOR ADDITIONAL REQUIREMENTS ON ELECTRIC SLIDE GATE WORK.



EXISTING CARD READER, FOUNDATION, AND BOLLARDS SHALL BE REMOVED AND REPLACED WITH A NEW KEYPAD ACCESS STATION WITH FOUNDATION & BOLLARDS.

CARD READER POWER AND CONTROL WIRING IN 1" GRSC

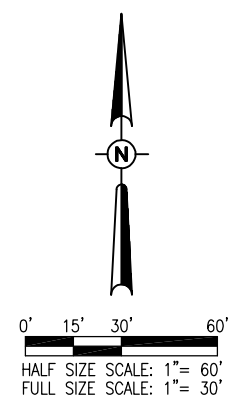
NEW 6' HIGH BY 20' CLEAR OPENING SLIDE GATE (T-HANGAR ACCESS GATE)

EXISTING GATE OPERATOR SHALL BE REMOVED AND TURNED OVER TO THE AIRPORT. EXISTING FOUNDATION SHALL BE REMOVED AND DISPOSED OF IN A LEGAL MANNER. A NEW GATE OPERATOR SYSTEM WITH FOUNDATION SHALL BE FURNISHED AND INSTALLED FOR USE WITH THE NEW ELECTRIC SLIDE GATE.

PROPOSED 4-1/2" #8 XLP-USE IN 1.25" UNIT DUCT OR SCHED 40 PVC DIRECT BURY 24" BELOW GRADE. FIELD VERIFY CABLE IN UNIT DUCT ROUTE AND ADJUST WHERE NECESSARY TO AVOID OTHER UTILITY LINES AND/OR CABLES. TRANSITION TO GRSC WHERE EMERGING FROM GRADE. CONDUCTOR INSULATION SHALL BE COLOR CODED BLACK, RED, WHITE, & GREEN.

EXISTING NO. 8 600V 3/C U.G. BEACON CABLE W/GROUND IN UNIT DUCT

EXISTING NO. 8 600V 2/C U.G. ELECTRIC SLIDE GATE CABLE W/GROUND IN UNIT DUCT TO BE REMOVED WHERE NECESSARY TO ACCOMMODATE NEW WORK AND ABANDONED IN PLACE ELSEWHERE.



REVISION	DATE

**JOLIET REGIONAL AIRPORT  
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 JOLIET, ILLINOIS**

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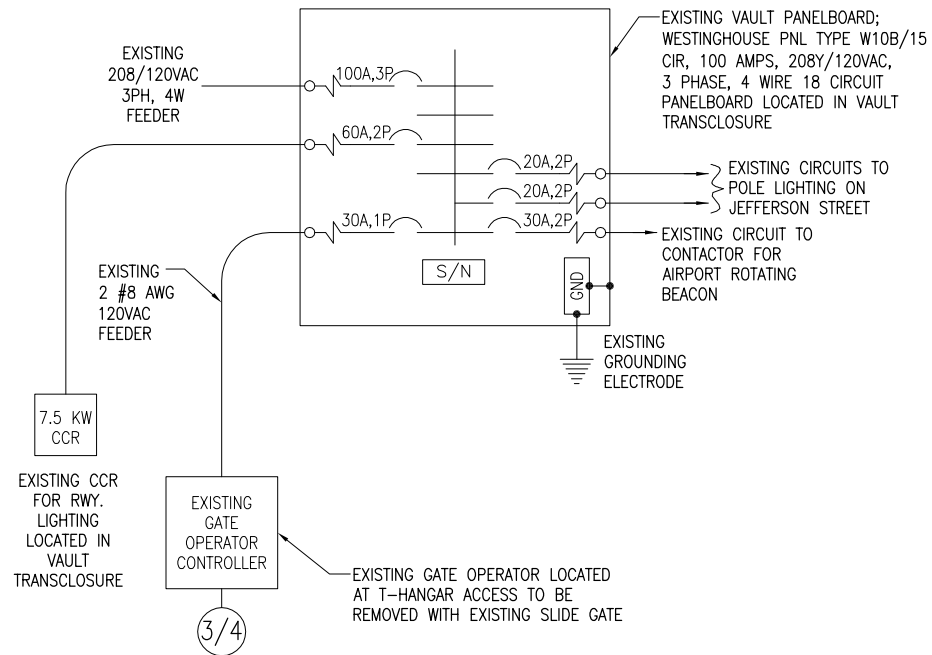
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Date xx/xx/xx	
LAYOUT BAK 03/17/11	
DRAWN BAK 03/17/11	
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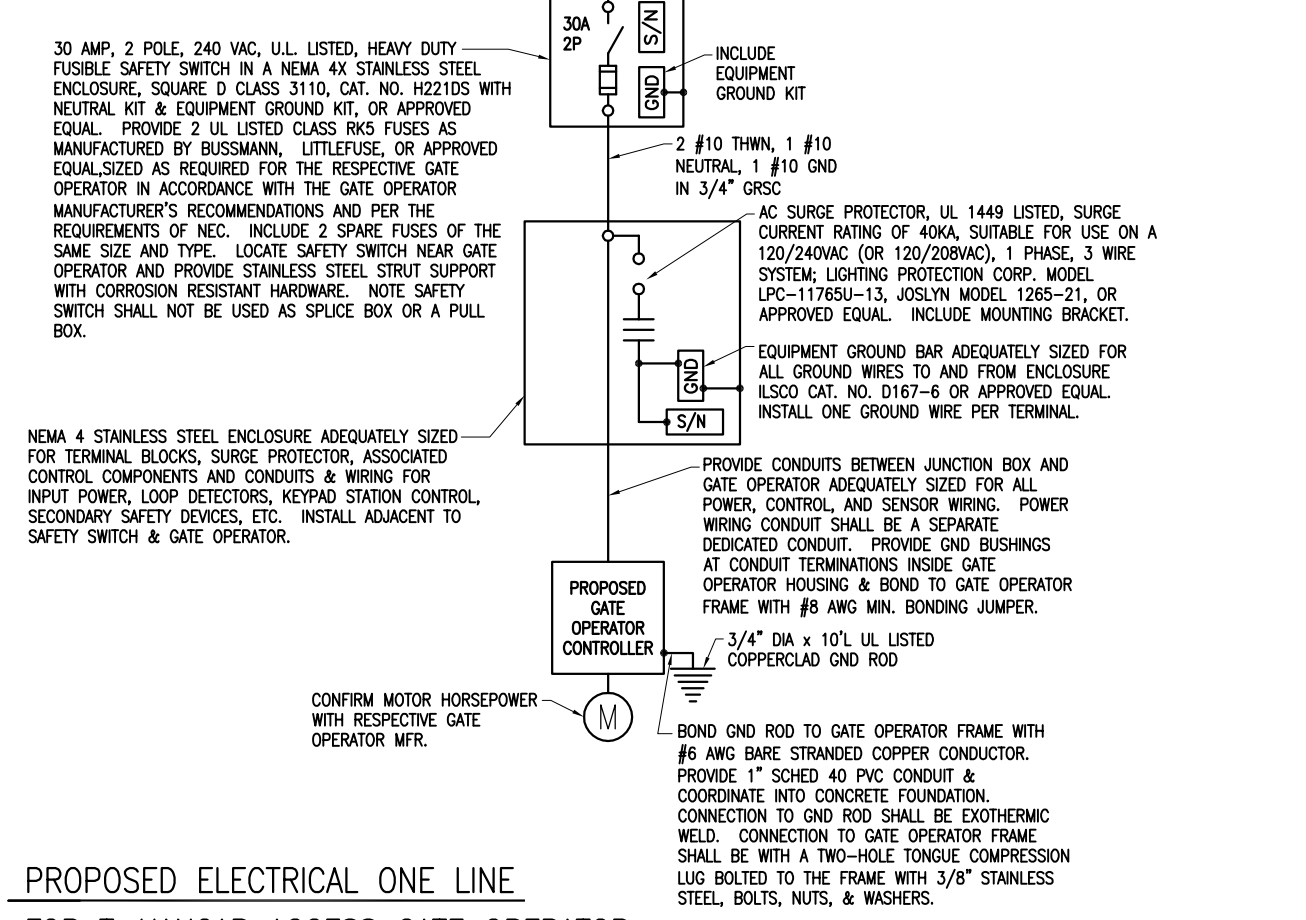
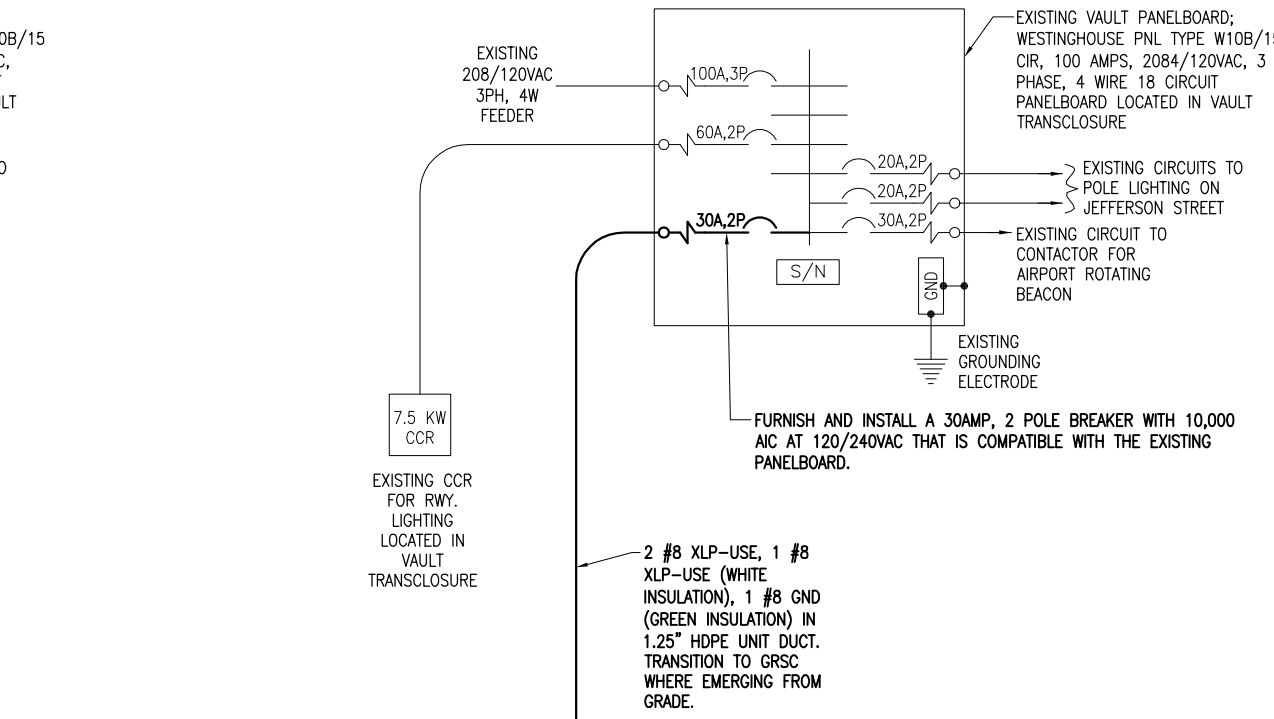
**CONSTRUCT PERIMETER FENCE**

**T-HANGAR ACCESS GATE ELECTRICAL PLAN**

**15**  
 15 of 19 sheets



**EXISTING ELECTRICAL ONE LINE DIAGRAM FOR T-HANGAR ACCESS GATE OPERATOR**



**PROPOSED ELECTRICAL ONE LINE FOR T-HANGAR ACCESS GATE OPERATOR**

LEGEND PLATE SCHEDULE	
DEVICE	LABEL
T-HANGAR ACCESS GATE OPERATOR DISCONNECT	T-HANGAR ACCESS GATE 208VAC FED FROM AIRPORT VAULT TRANSCLOSURE

NOTE: LEGEND PLATES SHALL BE WEATHERPROOF ENGRAVED PLASTIC OR PHENOLIC MATERIAL, 1/4" HIGH BLACK LETTERS ON A WHITE BACKGROUND UNLESS NOTED OTHERWISE. SECURE WITH WEATHERPROOF ADHESIVE AND MACHINE SCREWS. FURNISH ADDITIONAL LEGEND PLATES WHERE REQUIRED BY CODE, FOR ADDITIONAL EQUIPMENT, AS DETAILED HEREIN ON THE PLANS, AND AS NOTED IN THE SPECIAL PROVISION SPECIFICATIONS.

- NOTES:**
- CONTRACTOR SHALL EXAMINE THE SITE TO DETERMINE EXISTING CONDITIONS.
  - ALL POWER OUTAGES, AND/OR SHUT DOWN OF EXISTING AIRFIELD LIGHTING OR OTHER SYSTEMS SHALL BE COORDINATED WITH THE AIRPORT MANAGER AND/OR AIRPORT REPRESENTATIVE. ONCE SHUT DOWN, THE CIRCUITS SHALL BE LABELED AS SUCH TO PREVENT ACCIDENTAL ENERGIZING OF THE RESPECTIVE CIRCUITS. ALL PERSONNEL SHALL FOLLOW U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) 29 CFR PART 1910 OCCUPATIONAL SAFETY & HEALTH STANDARDS FOR ELECTRICAL SAFETY AND LOCKOUT/TAGOUT PROCEDURES INCLUDING, BUT NOT LIMITED TO, 29 CFR SECTION 1910.147 THE CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT).
  - SEE "ELECTRICAL LEGEND AND ABBREVIATIONS" SHEET FOR GENERAL NOTES AND REQUIREMENTS.
  - ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70 - NATIONAL ELECTRICAL CODE (NEC) MOST CURRENT ISSUE IN FORCE, THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCES AND REQUIREMENTS IN FORCE. ANY INSTALLATIONS WHICH VOID THE U.L. LISTING, ETL LISTING, (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE WILL NOT BE PERMITTED.
  - ALL EQUIPMENT AND MATERIALS NOT LABELED AS EXISTING ARE NEW.
  - HIGH VOLTAGE & LOW VOLTAGE CIRCUITS SHALL NOT BE INSTALLED IN THE SAME RACEWAY.
  - ALL CONDUCTORS/WIRING SHALL BE COPPER
  - CONTRACTOR SHALL CONFIRM POWER REQUIREMENTS WITH THE ACTUAL NAMEPLATE ON EACH GATE OPERATOR (OR OTHER RESPECTIVE EQUIPMENT) AND ADJUST CIRCUIT BREAKER, WIRE SIZES AND CONDUIT SIZES TO CONFORM WITH NEC AND MANUFACTURER'S RECOMMENDATIONS WHERE APPLICABLE. WIRE SIZES SHOWN ON THE PLANS ARE MINIMUM.
  - CONFIRM CONTROL WIRING REQUIREMENTS WITH THE RESPECTIVE GATE OPERATOR SYSTEM MANUFACTURER'S REPRESENTATIVE.
  - GATE OPERATORS SHALL BE RATED FOR THE RESPECTIVE VOLTAGE AVAILABLE AT THE SITE AND SHALL PROPERLY OPERATE ON THE RESPECTIVE NOMINAL VOLTAGE SYSTEM PLUS OR MINUS 10 PERCENT. CONTRACTOR SHALL CONFIRM WITH THE GATE OPERATOR MANUFACTURER THAT THE RESPECTIVE GATE OPERATOR HE SELECTS IS RATED SUITABLE FOR THE RESPECTIVE APPLICATION, IS SUITABLE AND COMPATIBLE WITH THE RESPECTIVE GATE, AND WILL OPERATE PROPERLY ON THE RESPECTIVE POWER SUPPLY. NOTE THE GATE OPERATOR MUST ALSO OPERATE PROPERLY ON STANDBY ENGINE GENERATOR POWER AND SHALL NOT REQUIRE MANUAL RESET DUE TO TRANSFER FROM UTILITY POWER TO STANDBY GENERATOR POWER OR BACK TO UTILITY POWER. THE GATE OPERATOR MUST NOT REQUIRE MANUAL RESET FOR MOMENTARY POWER OUTAGES. WHERE A POWER OUTAGE OCCURS THE GATE OPERATOR SHALL AUTOMATICALLY RESUME NORMAL OPERATION UPON RESTORATION OF POWER.
  - REMOVAL OF EACH EXISTING ELECTRICAL SLIDE GATE WILL BE PAID FOR UNDER: ITEM AR162908 - REMOVE ELECTRICAL GATE
  - PROPOSED 20 FT. ELECTRICAL SLIDE GATE AND ASSOCIATED WORK SHOWN ON THIS SHEET WILL BE PAID FOR UNDER: ALTERNATE A, ITEM AR162720 - ELECTRIC GATE - 20' OR ALTERNATE B, ITEM AR800547 20' ELECTRIC GATE, VINYL.

REVISION	DATE	BY	CHKD	DATE

**JOLIET REGIONAL AIRPORT  
JOLIET PARK DISTRICT  
JOLIET, ILLINOIS**

IL PROJ.: JOT-4103 A.I.P. PROJ.: 3-17-0056-B7

Hanson Project No. 10A00460_0001	Filename E-602.DWG	Scale NOT TO SCALE	Date xx/xx/xx
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DRAWN	BAK	03/17/10	xx/xx/xx
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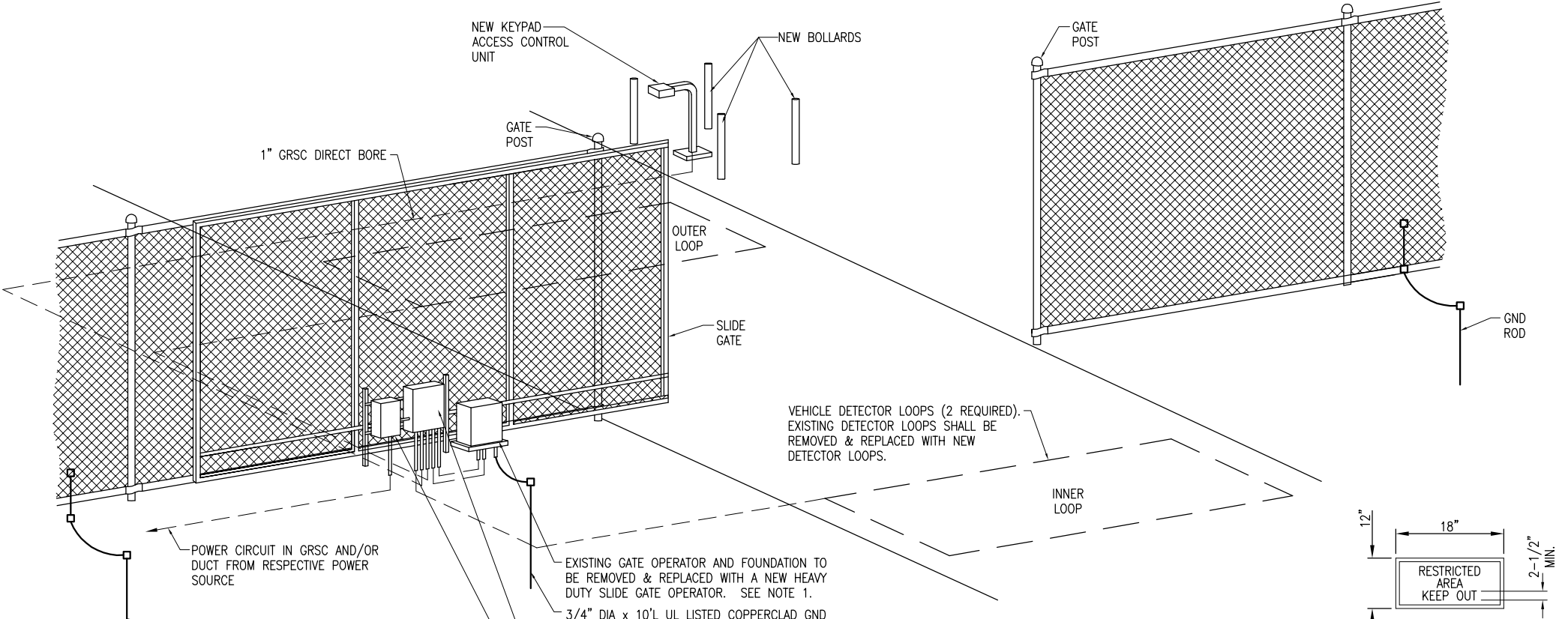
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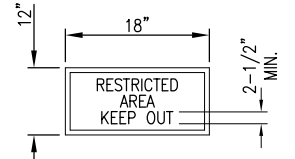
**T-HANGAR ACCESS GATE ELECTRICAL ONE LINE**

**16**  
16 of 19 sheets



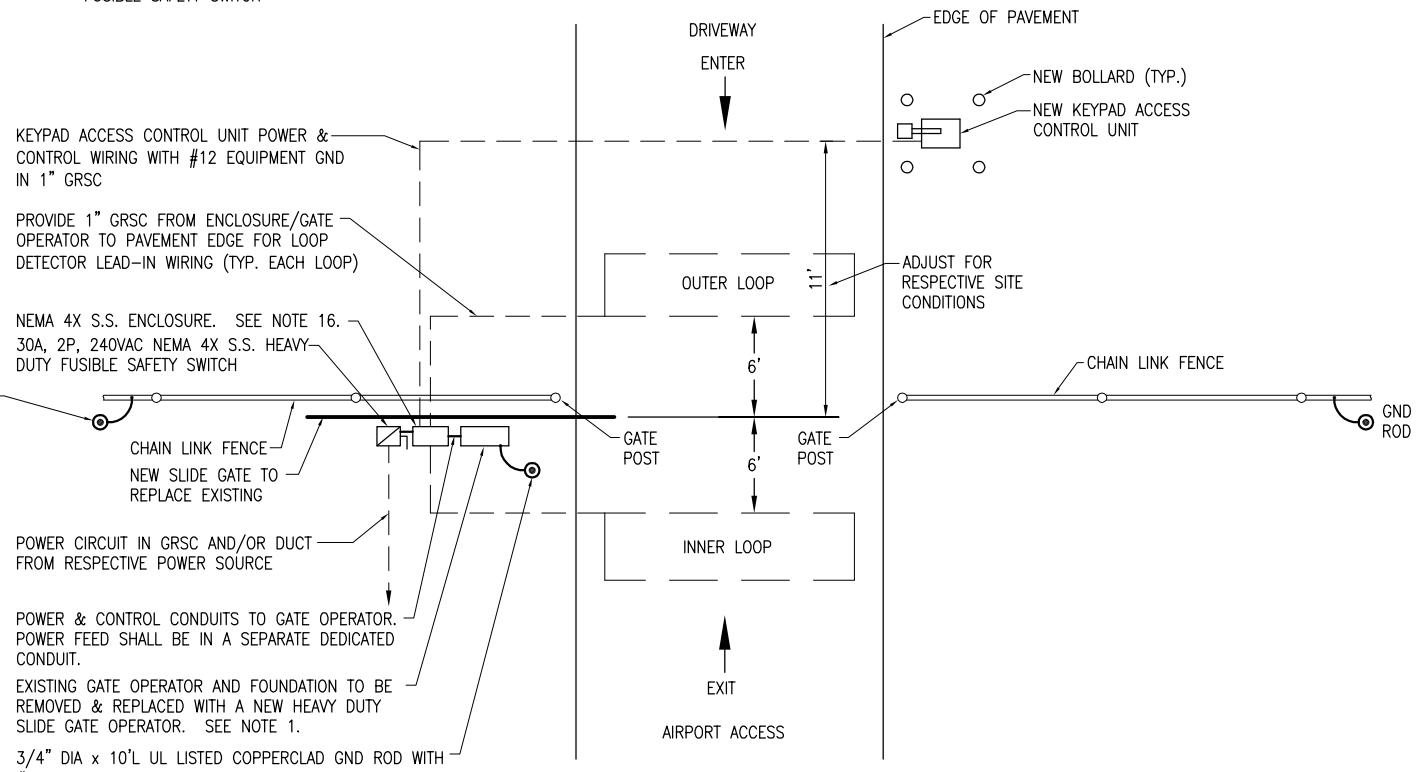


**ELECTRIC GATE DETAIL (ISOMETRIC)**  
"NOT TO SCALE"



**SIGN DETAIL**  
NOTE: 0.08 GA. ALUMINUM ALLOY SHEET LETTERING COLOR SHALL BE RED. EACH GATE SHALL REQUIRE ONE SIGN. EVERY 100' OF FENCE SHALL REQUIRE ONE SIGN.

VEHICLE DETECTOR LOOPS		
GATE SIZE	LOOP SIZE	NO. OF TURNS
8' TO 12'	4' X 6'	3 TURNS
12' TO 16'	4' X 10'	2 TURNS
16' TO 20'	6' X 14'	2 TURNS
20' TO 24'	6' X 18'	2 TURNS
24' TO 30'	6' X 22'	2 TURNS
30' TO 34'	6' X 26'	2 TURNS



**ELECTRIC GATE PLAN**  
"NOT TO SCALE"

- NOTES:**
- SEE SPECIAL PROVISION SPECS FOR REQUIREMENTS ON RESPECTIVE GATE & GATE OPERATOR SYSTEM.
  - ALL DIMENSIONS AND LAYOUT INFORMATION SHOWN SHOULD BE ADJUSTED AS RECOMMENDED BY THE MANUFACTURER. SEE RESPECTIVE SITE PLAN FOR EACH GATE.
  - CONCRETE FOUNDATIONS SHALL BE PROVIDED FOR THE SLIDE GATE OPERATOR UNIT. FOUNDATION FOR THE GATE OPERATOR SHALL BE 48" (MIN.) IN DEPTH AND OF THE SIZE RECOMMENDED BY THE MANUFACTURER.
  - 1" GRS CONDUIT WILL BE REQUIRED BETWEEN THE SLIDE GATE OPERATOR INSTALLATION AND THE CARD READER ACCESS CONTROL UNIT, AND THE DETECTOR LOOPS. THE MINIMUM BURYING DEPTH IS 24". ALL METAL CONDUITS ENTERING THE GATE OPERATOR SHALL BE BONDED TO THE GATE OPERATOR FRAME WITH A #8 AWG (MIN.) COPPER BONDING JUMPER. CONFIRM CONTROL WIRING REQUIREMENTS WITH THE RESPECTIVE GATE OPERATOR SALES AND SERVICE REPRESENTATIVE.
  - THE GUARD/BOLLARD POSTS SHALL BE 4" DIA. STEEL (HEAVY WALL) PIPE, CONCRETE FILLED, AND SHALL EXTEND FROM THE TOP OF THE CARD CONTROL UNIT TO A DEPTH OF 48" BELOW THE GROUND LINE. THE CONCRETE FOOTER DIMENSION SHALL BE AS DETAILED HEREIN. GUARD/BOLLARD POSTS SHALL BE PAINTED WITH YELLOW COLORED ENAMEL FINISH.
  - THE SLIDING GATE SHALL BE CANTILEVER TYPE OF THE SIZE CALLED FOR ON THE PLANS, SHALL HAVE AN ENCLOSED ROLLER ASSEMBLY WHICH IS PROTECTED FROM FREEZING RAIN AND SNOW, AND SHALL BE AS MANUFACTURED BY TYMETAL CORPORATION OR APPROVED EQUAL.
  - INCLUDE SIMPLEX 120VAC RECEPTACLE & POWER SUPPLY COMPATIBLE WITH & SUITABLE FOR THE KEYPAD ACCESS CONTROL UNIT.
  - CONTRACTOR SHALL COORDINATE ANY POWER OUTAGES TO EXISTING EQUIPMENT WITH THE RESPECTIVE OWNER'S REPRESENTATIVE AND THE AIRPORT MANAGER.
  - INCLUDE AC SURGE PROTECTOR FOR THE GATE OPERATOR, UL 1449 LISTED, SURGE CURRENT RATING OF 40KA, SUITABLE FOR USE ON THE RESPECTIVE VOLTAGE SYSTEM. SEE PROPOSED ELECTRICAL ONE LINE DIAGRAMS FOR EACH GATE OPERATOR.
  - CONCRETE USED FOR INSTALLING THE GATE OPERATOR, ASSOCIATED EQUIPMENT, & FENCE SHALL MEET THE REQUIREMENTS OF STRUCTURAL PORTLAND CEMENT CONCRETE ITEM 610.
  - ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70 - NATIONAL ELECTRICAL CODE (NEC) MOST CURRENT ISSUE IN FORCE, THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCES, AND REQUIREMENTS IN FORCE. ANY INSTALLATIONS WHICH VOID THE UL LISTING, ETL LISTING, (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE WILL NOT BE PERMITTED.
  - PROVIDE A WEATHERPROOF ENGRAVED PHENOLIC OR PLASTIC LEGEND PLATE FOR THE SAFETY SWITCH AT THE RESPECTIVE GATE OPERATOR NOTING THE GATE SERVED, VOLTAGE, AND RESPECTIVE POWER SOURCE CIRCUIT AND LOCATION.
  - PAYMENT FOR EACH SLIDE GATE, GATE OPERATOR, AND ALL ASSOCIATED CONTROL & SAFETY DEVICES SHALL BE ON A LUMP SUM BASIS AND SHALL BE FULL COMPENSATION FOR ALL MATERIALS, EQUIPMENT, CABLE IN CONDUIT, DUCT, OR UNIT DUCT, GROUNDING, LABOR, TOOLS, COORDINATION, TESTING, AND INCIDENTALS REQUIRED TO INSTALL THE GATE COMPLETE AND IN OPERATING CONDITION.
  - CONTROL CIRCUIT WIRING SHALL NOT BE ROUTED THROUGH THE SAFETY SWITCH/DISCONNECT.
  - ALL CONTROL POWER TRANSFORMERS, POWER SUPPLIES, RECEPTACLES, LOOP DETECTOR AMPLIFIERS, SECONDARY SAFETY DEVICE EQUIPMENT, AND ANY OTHER ASSOCIATED CONTROLS SHALL BE INSTALLED EITHER INSIDE THE GATE OPERATOR CONTROL PANEL OR INSIDE A SEPARATE NEMA 4 STAINLESS STEEL CONTROL PANEL ENCLOSURE. WHERE THE CONTROL EQUIPMENT IS TO BE INSTALLED INSIDE THE GATE OPERATOR CONTROL PANEL THE CONTRACTOR SHALL COORDINATE THIS WITH THE GATE OPERATOR MANUFACTURER AND THE RESPECTIVE GATE OPERATOR EQUIPMENT SUPPLIER. LOCATING THESE CONTROLS OUTSIDE OF GATE OPERATOR CONTROL PANEL BUT WITHIN THE GATE OPERATOR HOUSING WILL NOT MEET THIS REQUIREMENT.

REVISION	DATE

**JOLIET REGIONAL AIRPORT  
JOLIET PARK DISTRICT  
JOLIET, ILLINOIS**

IL PROJ.: JOT-4103 A.I.P. PROJ.: 3-17-0056-B7

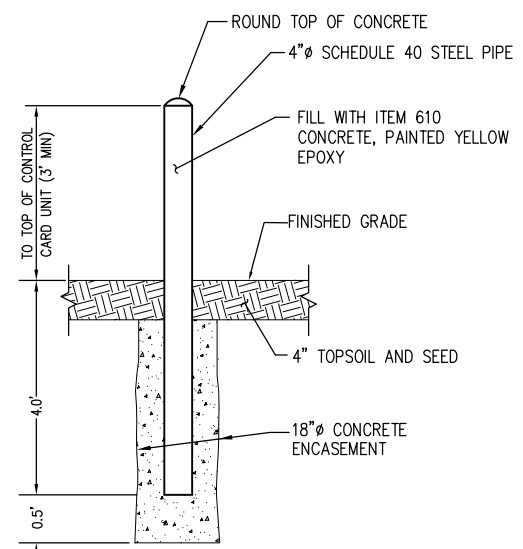
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DRAWN	BAK	03/17/10	xx/xx/xx
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**CONSTRUCT PERIMETER FENCE**

**PROPOSED ELECTRIC SLIDE GATE DETAILS**

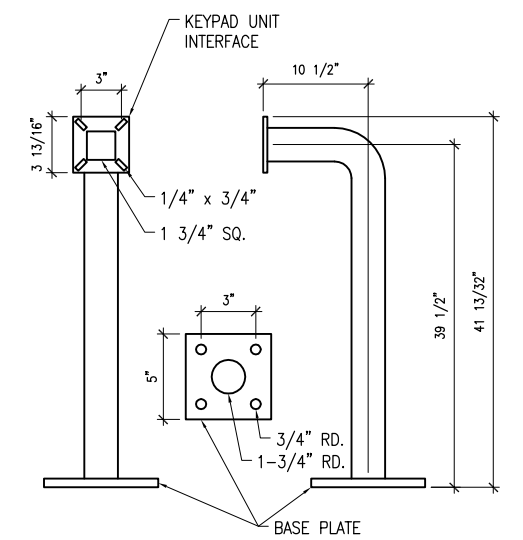
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- NOTES**
1. THE EXPOSED PORTION OF THE BOLLARD SHALL BE PAINTED YELLOW EPOXY.
  2. BOLLARD AND ASSOCIATED ITEMS ARE INCIDENTAL TO THE ELECTRIC SLIDING GATE.

**BOLLARD DETAIL**

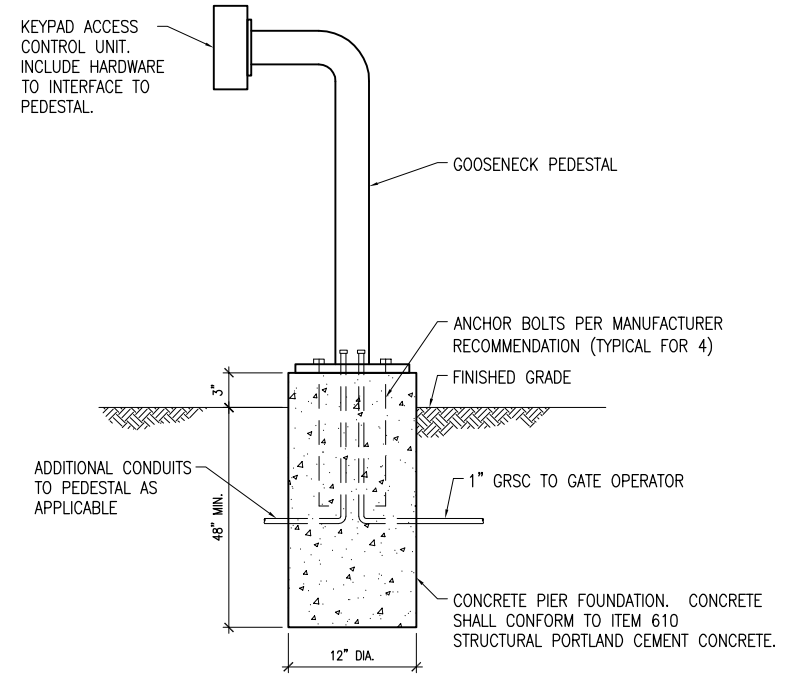
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**GOOSENECK PEDESTAL DETAIL**

SCALE: NONE

**NOTE:**  
GOOSENECK PEDESTAL SHALL BE AMERICAN ACCESS SYSTEMS, INC. (7079 SOUTH JORDAN RD., UNIT 6, ENGLEWOOD, CO 80112, PHONE: 800-541-5677, FAX 303-799-9756) MODEL 18-001 OR APPROVED EQUAL.



- NOTES**
1. SEE SPECIAL PROVISION SPECS FOR REQUIREMENTS ON KEYPAD ACCESS CONTROL UNIT.
  2. INCLUDE #12 AWG EQUIPMENT GND WIRE TO KEYPAD ACCESS CONTROL UNIT.
  3. FACE OF KEYPAD ACCESS CONTROL UNIT SHALL NOT EXTEND BEYOND BOLLARDS.

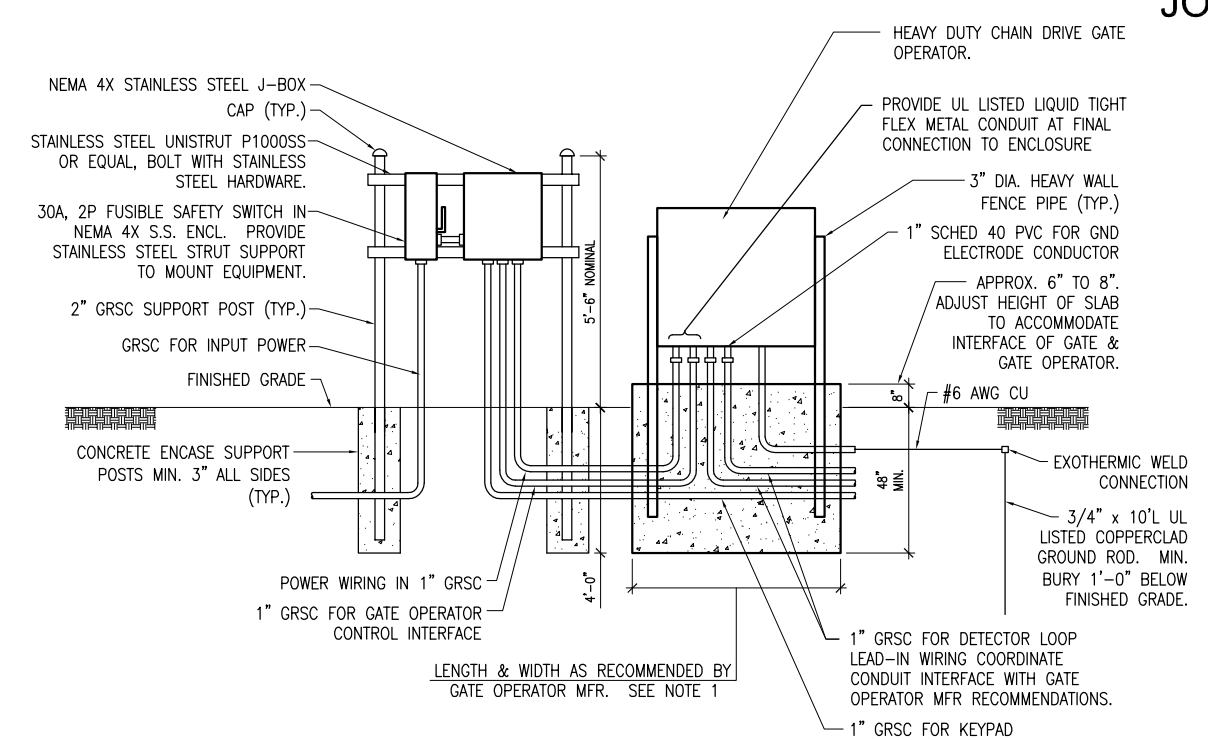
**KEYPAD ACCESS CONTROL UNIT PEDESTAL ELEVATION DETAIL**

SCALE: NONE



- NOTES**
1. WARNING SIGNS/PLACARDS AS DETAILED ABOVE OR SIMILAR, SHALL BE INSTALLED WHERE CLEARLY VISIBLE ON BOTH SIDES OF EACH ELECTRIC SLIDE GATE. WARNING SIGNS SHALL BE WEATHERPROOF, CORROSION RESISTANT METAL, AS DETAILED ABOVE (OR SIMILAR), AND IN ACCORDANCE WITH THE RESPECTIVE GATE OPERATOR MANUFACTURER'S RECOMMENDATIONS.

**WARNING SIGN DETAIL**



- NOTES**
1. FOUNDATION FOR GATE OPERATOR SHALL BE 48" MIN. IN DEPTH AND OF THE LENGTH & WIDTH RECOMMENDED BY THE MANUFACTURER. CONFIRM MOUNTING REQUIREMENTS WITH THE RESPECTIVE GATE OPERATOR MANUFACTURER.
  2. COORDINATE CONDUITS INTO FOUNDATION.
  3. CONFIRM CONDUIT SIZES AND WIRING REQUIREMENTS WITH THE GATE OPERATOR MFR. ADJUST/INCREASE CONDUIT SIZES WHERE APPLICABLE. REQUIREMENTS VARY BETWEEN DIFFERENT MANUFACTURERS.
  4. ALL ENCLOSURES RATED NEMA 4, 4X SHALL HAVE WATERTIGHT HUBS AT CONDUIT ENTRANCES U.L. LISTED NEMA 4, 4X FOR THE RESPECTIVE ENCLOSURE, TO MAINTAIN THE NEMA 4, 4X RATING.

**GATE OPERATOR FOUNDATION DETAIL**

"NOT TO SCALE"



**"DANGER - HIGH VOLTAGE KEEP OUT" SIGN**

PROVIDE WARNING SIGN ON VAULT ENCLOSURE EXTERIOR DOORS LABELED "DANGER - HIGH VOLTAGE - KEEP OUT" PER THE REQUIREMENTS OF NEC 110.34 (C). PROVIDE MINIMUM OF 4 SIGNS (ONE ON EACH DOOR TO THE VAULT).

REVISION	
DATE	

**JOLIET REGIONAL AIRPORT  
JOLIET PARK DISTRICT  
JOLIET, ILLINOIS**

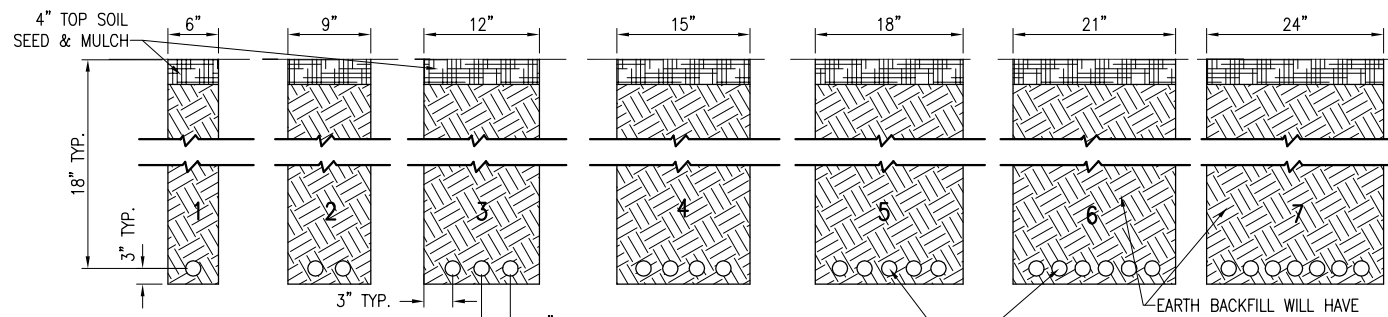
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Hanson Project No. 10A00460_0001	Filename E-502.DWG	Scale NOT TO SCALE	Date xx/xx/xx
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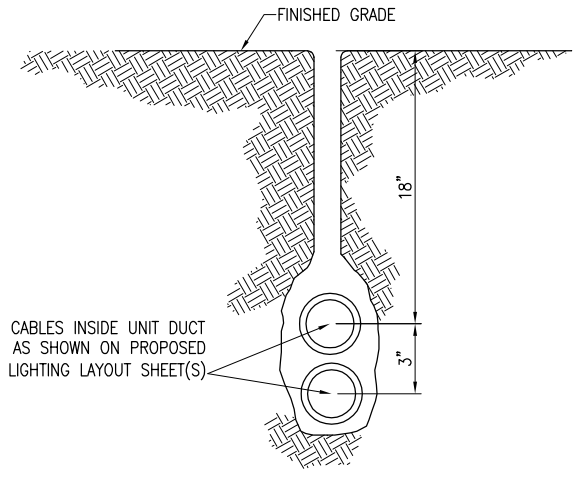
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**CONSTRUCT PERIMETER FENCE**

**KEYPAD UNIT, BOLLARD AND GATE OPERATOR DETAILS**

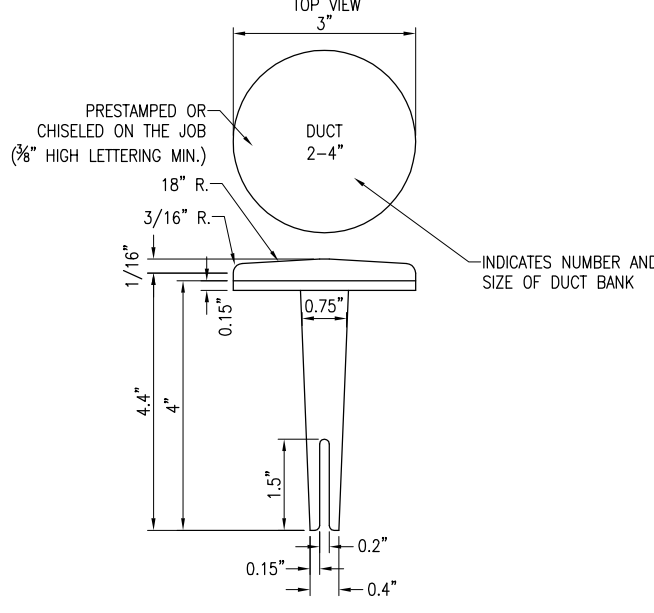


**NOTES:**  
 DETAIL NUMBERS INDICATE NO. OF CABLES.  
 TRENCHES WITH MORE THAN SEVEN CABLES SHALL BE INCREASED 3" IN WIDTH FOR EACH ADDITIONAL CABLE; IF SPECIFIED ON PLANS TWO PARALLEL TRENCHES MAY BE CONSTRUCTED.  
 DEPTH OF TRENCHES SHALL BE AS SHOWN ABOVE UNLESS OTHERWISE SPECIFIED ON THE PLANS.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



**PLOWED CABLE**  
 (NOT TO SCALE)

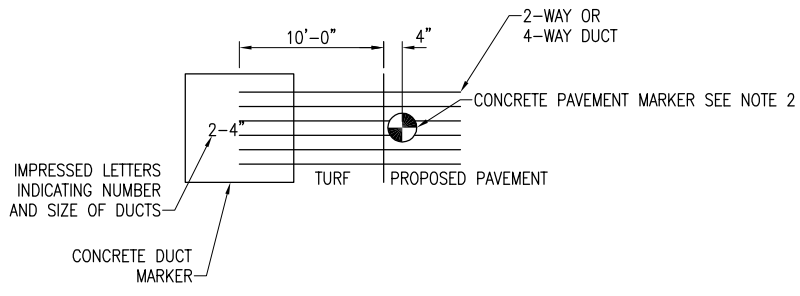
**CABLE TRENCHES**  
 (NOT TO SCALE)



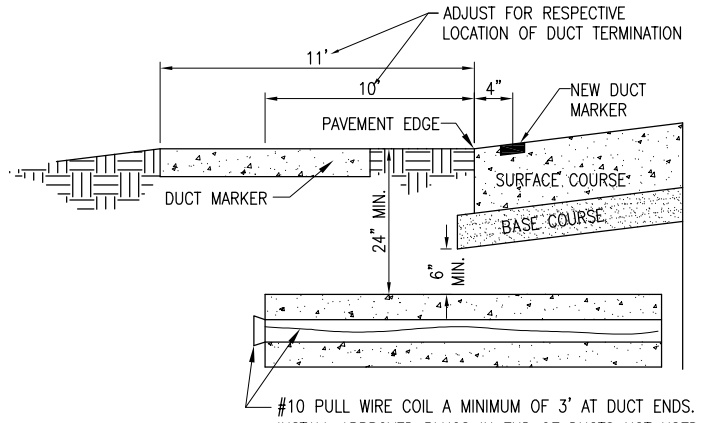
**BITUMINOUS PAVEMENT DUCT MARKERS**  
 "NOT TO SCALE"

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

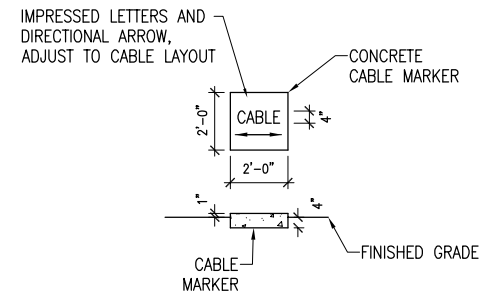
- CABLE & DUCT MARKER NOTES:**
1. THE COST OF ALL TURF AND PAVEMENT DUCT MARKERS SHALL BE INCIDENTAL TO THE DUCT. THE COST OF ALL CABLE MARKERS SHALL BE INCIDENTAL TO THE CABLE.
  2. BITUMINOUS PAVEMENT DUCT MARKER AND CONCRETE DUCT MARKER TO BE PROVIDED AT EACH END OF EACH DUCT AS SHOWN ON THE LOCATION PLAN. FOR CONCRETE PAVEMENT, THE LETTER "D" SHALL BE IMPRESSED IN THE PAVEMENT INSTEAD OF THE MARKER. THE LETTER SHALL BE FORMED AS DESCRIBED IN NOTE 4.
  3. CABLE MARKERS SHALL BE PLACED AT CHANGES OF DIRECTION AND APPROXIMATELY EVERY 200' ALONG CABLE RUNS.
  4. CONCRETE CABLE MARKERS AND DUCT MARKERS SHALL HAVE LETTERS 4" HIGH, 3" WIDE WITH WIDTH OF STROKE 1/2" AND 1/4" DEEP. ALL LETTERS, NUMBERS AND ARROWS TO BE IMPRESSED.



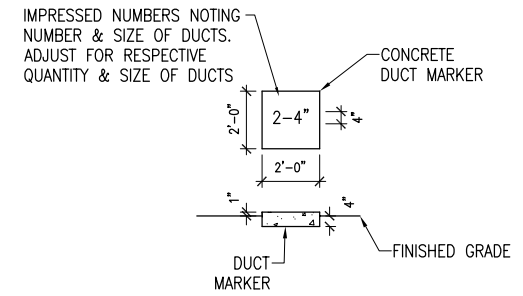
**DUCT MARKER DETAIL**  
 "NOT TO SCALE"



**UNDERGROUND ELECTRICAL DUCT**  
 (NOT TO SCALE)



**TURF CABLE MARKERS**  
 "NOT TO SCALE"



**TURF DUCT MARKERS**  
 "NOT TO SCALE"

REVISION
DATE

**JOLIET REGIONAL AIRPORT**  
**JOLIET PARK DISTRICT**  
**JOLIET, ILLINOIS**

Hanson Project No. 10A00460_0001
Filename E-503.DWG
Scale NOT TO SCALE
Date xx/xx/xx
LAYOUT BAK 03/17/10
DRAWN BAK 03/17/10
REVIEWED RAW/KNL xx/xx/xx

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**CONSTRUCT PERIMETER FENCE**  
**ELECTRICAL DETAILS**