

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
**PROPOSED
HIGHWAY PLANS**

F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255/270	D8 PUMP STATIONS 2019	MADISON	7	1
ILLINOIS CONTRACT NO. 46526				

D-30-001-18 **D-8**

INDEX OF SHEETS

- 1 COVER SHEET
- 2 GENERAL NOTES
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- 4 FUN AND SUN PUMP STATION ELECTRICAL PLAN AND DETAILS
- 5 FUN AND SUN PUMP STATION ELECTRICAL PLAN AND DETAILS
- 6 GREY'S FARM STATION ELECTRICAL PLAN AND DETAILS
- 7 GREY'S FARM PUMP STATION ELECTRICAL PLAN AND DETAILS

HIGHWAY STANDARDS

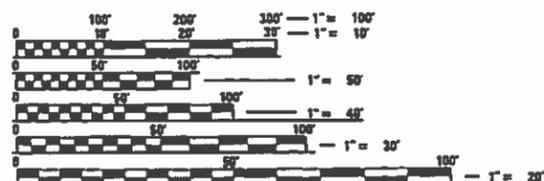
000001-07 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS

FAI 255 / FAI 270 (I-255/1-270)
SECTION D8 PUMP STATIONS 2019
NEW MANUAL TRANSFER SWITCHES
AND MISC. IMPROVEMENTS
MADISON COUNTY

C-30-008-19



LOCATION OF SECTION INDICATED THIS: - [Symbol]



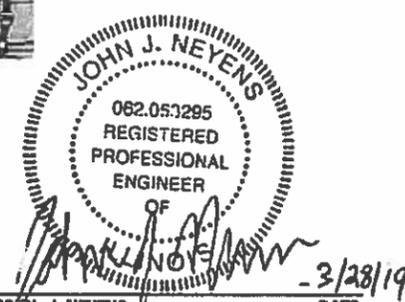
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811



MADISON COUNTY

GROSS LENGTH = NA
NET LENGTH = NA



JOHN J. NEYENS
REGISTERED PROFESSIONAL ENGINEER
STATE OF ILLINOIS NO. 062-063295
LICENSE EXPIRES NOVEMBER 30, 2019

PLANS PREPARED BY:

**KLINGNER
& ASSOCIATES, P.C.**
Engineers • Architects • Surveyors

Quincy, Illinois
616 North 2nd Street
217-223-5870
www.klingner.com
Galesburg, IL, Burlington, IA
Peña, IA, Harrodsburg, MO, Columbia, MO
STATE OF ILLINOIS DESIGN FIRM NO. 184-2738

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED March 27, 2019
Keith Kalkreuth
REGIONAL ENGINEER

May 10, 2019
E.A. Etkin
ENGINEER OF DESIGN AND ENVIRONMENT

May 10, 2019
Paul P. Chaf
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

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OF THE STATE OF ILLINOIS**

PROJECT ENGINEER: HERVE GELIN 618-346-3175
PROJECT MANAGER: PHILLIP SAWYER 618-346-3275
SQUAD LEADER: JYCEA BOBO 618-346-3190
CONTRACT NO. 46526

D:\1716\171604\Work - Order 03 - Phase II Pump Station Manual Approval\Manual Approval\Drawings\Submittal\2019\255-270-19-01.dwg

DESIGN CRITERIA

1. BUILDING CODES: IBC 2012

GENERAL NOTES

1. PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURES HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD, AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING MATERIALS.
2. THE CONTRACTOR SHALL SECURE ANY LOCAL, STATE, COUNTY PERMITS NEEDED FOR THIS PROJECT.
3. THE CONTRACTOR SHALL PERFORM ALL CONSTRUCTION FOR THE PROJECT IN A MANNER AND SEQUENCE THAT ARE BASED ON ACCEPTED INDUSTRY STANDARDS THAT RECOGNIZE THE INTERACTION OF THE COMPONENTS THAT COMPRISE THE STRUCTURE, WITHOUT CAUSING DISTRESS, UNANTICIPATED MOVEMENTS OR IRREGULAR LOAD PATHS AS A RESULT OF THE CONSTRUCTION MEANS AND METHODS EMPLOYED.
4. CONSTRUCTION LOADS SHALL NOT EXCEED DESIGN LIVE LOAD. THE CONTRACTOR IS RESPONSIBLE FOR ALL DESIGN REQUIRED TO SUPPORT CONSTRUCTION EQUIPMENT USED IN CONSTRUCTING THIS PROJECT. SHORING AND RESHORING IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE INCLUDED WITH THE COST OF FURNISHING AND ERECTING STRUCTURAL STEEL, SPECIAL.
5. UTILITIES - LOCATIONS / INFORMATION ON PLANS
ILLINOIS STATE LAW REQUIRES A 48-HOUR NOTICE TO BE GIVEN TO UTILITIES BEFORE DIGGING. FIELD MARKING OF FACILITIES MAY BE OBTAINED BY CONTACTING J.U.L.I.E. OR FOR NON-MEMBERS, THE UTILITY COMPANY DIRECTLY. AGENCIES KNOWN TO HAVE FACILITIES WITHIN THE PROJECT AREA ARE AS FOLLOWS:

 - * Ameren Illinois (GAS & ELECTRIC)
 - * AT&T Illinois (COMMUNICATIONS)
 - * CenturyLink, Inc. (COMMUNICATIONS)
 - * City of East St. Louis (LIGHTING)
 - * ILLINOIS AMERICAN WATER CO. (WATER)

MEMBERS OF J.U.L.I.E. CALL TOLL FREE (800) 892-0123 OR 811 AND ARE INDICATED BY *. NON-J.U.L.I.E. MEMBERS MUST BE NOTIFIED INDIVIDUALLY
6. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENFORCE ALL APPLICABLE SAFETY CODES AND REGULATIONS DURING ALL PHASES OF CONSTRUCTION.
7. ALL CONTRACTORS ARE REQUIRED TO EXAMINE THE DRAWINGS AND SPECIAL PROVISIONS CAREFULLY. VISIT THE SITE AND FULLY INFORM THEMSELVES AS TO ALL EXISTING CONDITIONS AND LIMITATIONS, PRIOR TO AGREEING TO PERFORM THE WORK. FAILURE TO VISIT THE SITE AND FAMILIARIZE THEMSELVES WITH THE EXISTING CONDITIONS AND LIMITATIONS WILL IN NO WAY RELIEVE THE CONTRACTOR FROM FURNISHING ANY MATERIALS OR PERFORMING ANY WORK IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS WITHOUT ADDITIONAL COST TO THE OWNER.
8. DURING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE EXISTING PUMP STATION BUILDING.
9. DRAWINGS ARE NOT TO SCALE.
10. THE DEPARTMENT RESERVES THE RIGHT TO NOTIFY THE CONTRACTOR TO CHANGE THE CONSTRUCTION SCHEDULE IF NEEDED TO ENSURE PROPER DEWATERING NEEDS FOR THE DEPARTMENT.
11. THE DEPARTMENT STRONGLY ENCOURAGES THE PRIME CONTRACTOR AND THEIR APPROVED SUB-CONTRACTORS TO HIRE MINORITY, WOMEN AND DISADVANTAGED INDIVIDUALS FROM ITS FEDERALLY FUNDED HIGHWAY CONSTRUCTION CAREERS TRAINING PROGRAM (HCCTP) TO HELP MEET WORKFORCE AND TRAINEE GOALS. THIS PROGRAM IS TRAINING MINORITIES, WOMEN AND DISADVANTAGED INDIVIDUALS IN HIGHWAY CONSTRUCTION RELATED SKILLS, E.G., MATH FOR THE TRADES, JOB READINESS, TECHNICAL SKILLS COURSEWORK (CARPENTRY, CONCRETE FLATWORK, BLUEPRINT READING, SITE PLANS, SITE WORK, TOOLS USE, ETC.) AND OSHA 10 HOUR CERTIFICATION TO PREPARE THEM FOR A CAREER IN THE HIGHWAY CONSTRUCTION TRADES, GRADUATES ARE WELL TRAINED AND READY TO BECOME PRODUCTIVE ENTRY LEVEL CONSTRUCTION WORKERS. CONTACT THE DISTRICT 8 EEO OFFICE AT 618-346-3360 AND/OR THE HCTP COORDINATOR AT 618-874-6528 TO LEARN MORE ABOUT THE PROGRAM AND FOR ASSISTANCE IN MEETING WORKFORCE AND TRAINEE GOALS.

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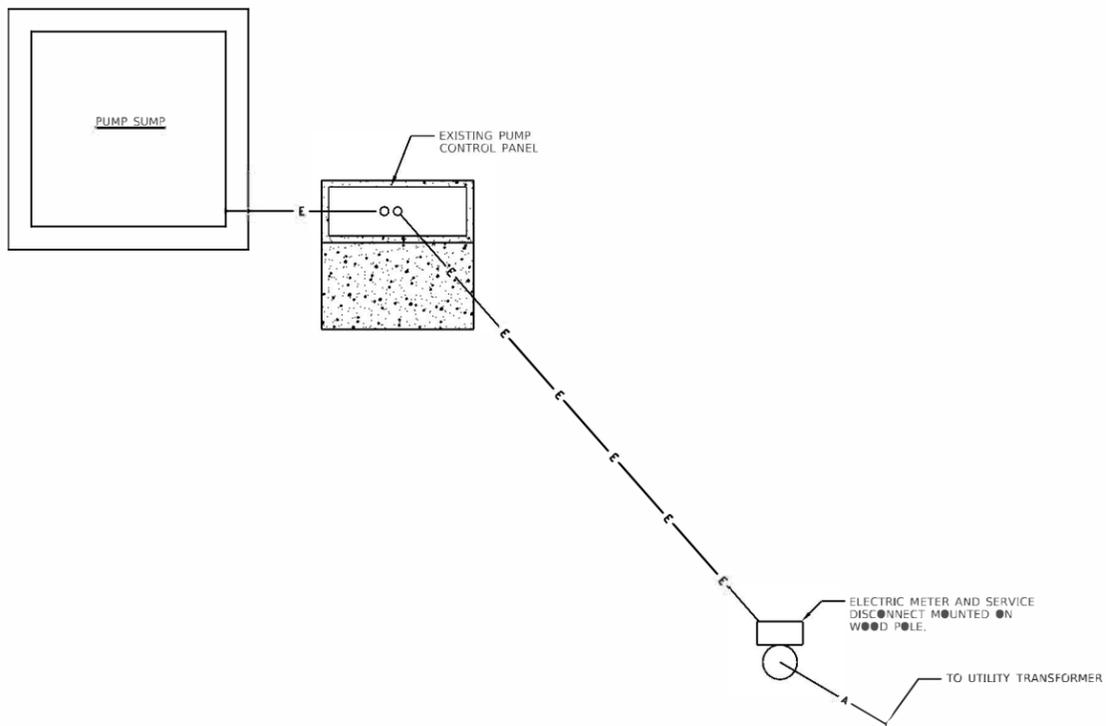
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

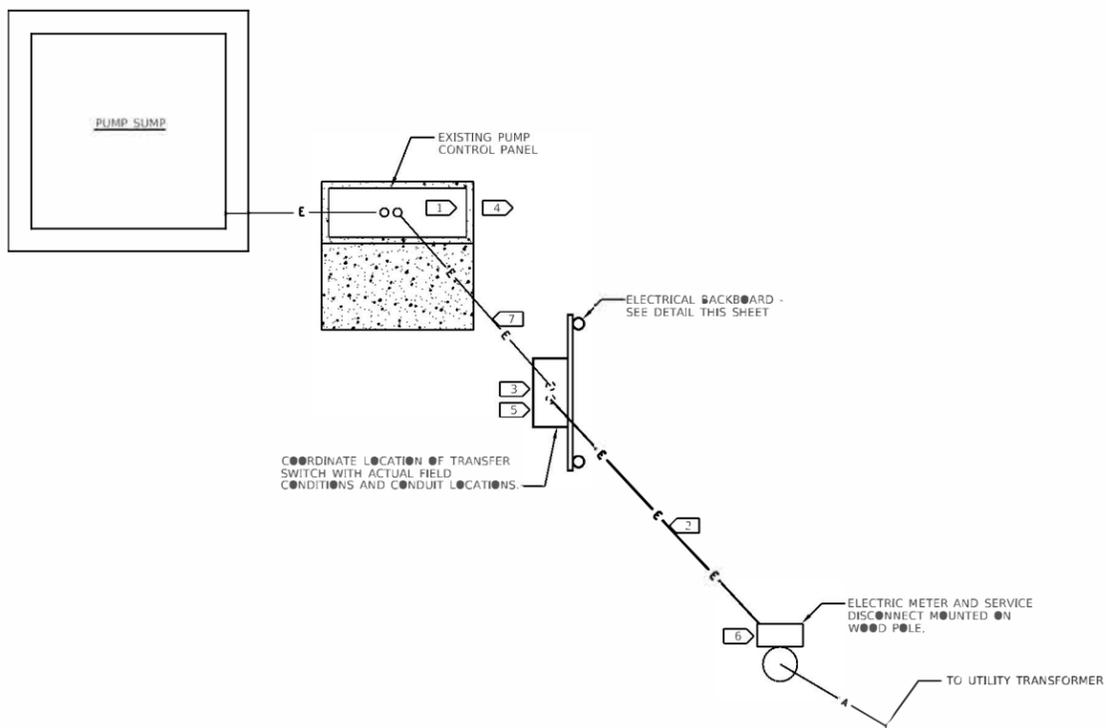
GENERAL NOTES

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255/270	D8 PUMP STATIONS	MADISON	7	2
CONTRACT NO. 46526				
ILLINOIS FED. AID PROJECT				



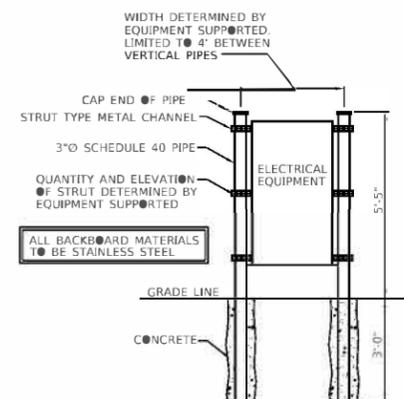
EXISTING ELECTRICAL PLAN
SCALE: 3/8" = 1'-0"



PROPOSED ELECTRICAL PLAN
SCALE: 3/8" = 1'-0"

KEY NOTES (APPLICABLE TO THIS SHEET ONLY)

- 1 REMOVE PHASE-TO-GROUND BOND IN EXISTING CONTROL PANEL.
- 2 INSTALL NEW CONDUIT/CONDUCTORS FROM SERVICE DISCONNECT TO NEW TRANSFER SWITCH.
- 3 NEW MANUAL TRANSFER SWITCH.
- 4 CONNECT TO EXISTING GEC.
- 5 NEW GENERATOR QUICK CONNECTION ENCLOSURE.
- 6 ESTABLISH PHASE-TO-GROUND BOND WITHIN EXISTING SERVICE DISCONNECT ENCLOSURE.
- 7 MODIFY EXISTING CONDUIT/CONDUCTORS TO TERMINATE AT NEW TRANSFER SWITCH.



ELECTRICAL BACKBOARD DETAIL
NTS



0 2 4
SCALE: 3/8" = 1'-0"

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KLINGNER & ASSOCIATES, P.C.
Engineers • Architects • Surveyors
616 N. 24TH ST. QUINCY, ILLINOIS 62301 217.223.3670
STATE OF ILLINOIS DESIGN FIRM NO. 184.2739

USER NAME = bgj	DESIGNED -	REVISED -
PLOT SCALE = 0/2" = 1'-0"	DRAWN -	REVISED -
PLOT DATE = 3/25/2019	CHECKED -	REVISED -
	DATE -	REVISED -

DESIGNED -	REVISED -
DRAWN -	REVISED -
CHECKED -	REVISED -
DATE -	REVISED -

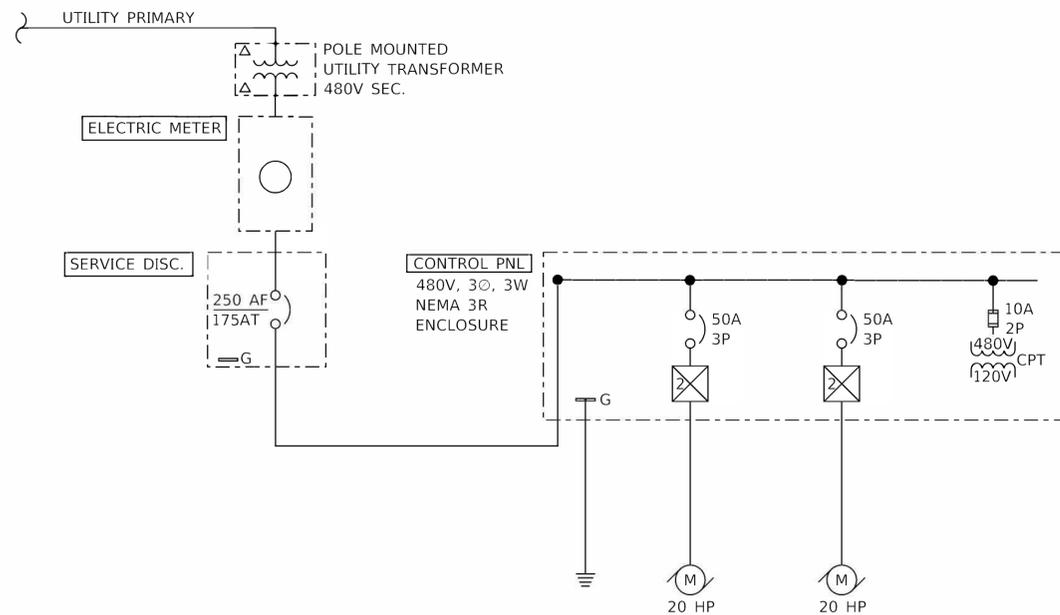
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**FUN AND SUN PUMP STATION
ELECTRICAL PLAN AND DETAILS**

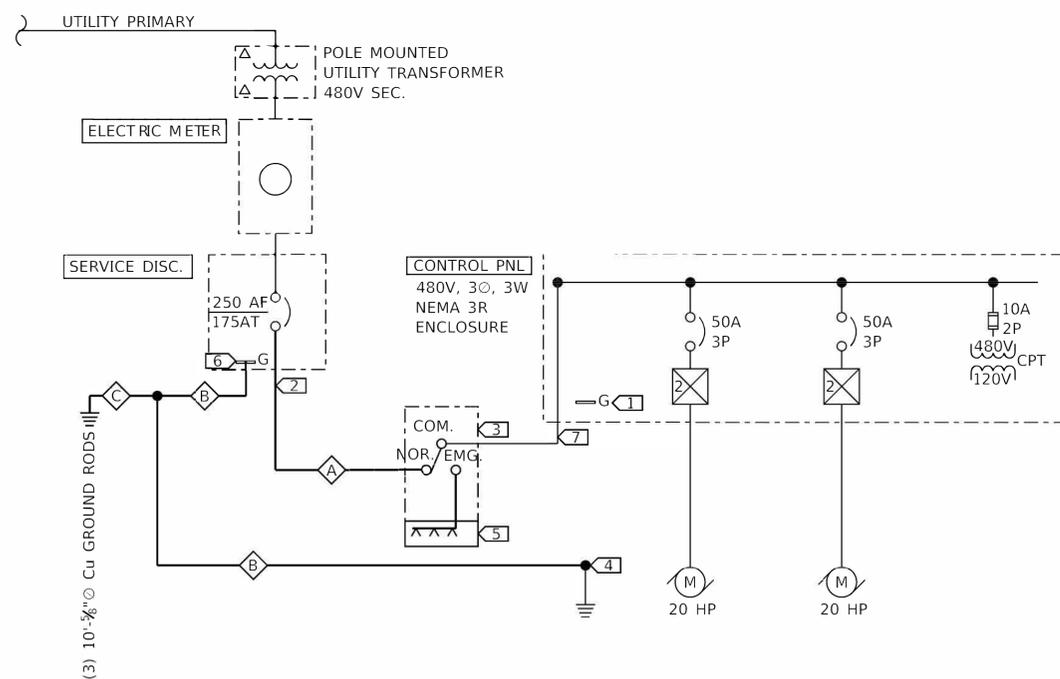
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F.A.I. RTE. 255/270	SECTION DB PUMP STATIONS 2019	COUNTY MADISON	TOTAL SHEETS 7	SHEET NO. 4
CONTRACT NO. 46526			ILLINOIS, ED. A10 PROJECT	

REV. - MS



EXISTING ONE-LINE DIAGRAM
NTS



PROPOSED ONE-LINE DIAGRAM
NTS

FEEDER SCHEDULE						
TAG	NUMBER OF SETS	PHASE QUANTITY	CONDUCTORS SIZE	NEUTRAL	EGC/ GEC	CONDUIT
A	1	3	2/0 AWG	-	#6 AWG	2"
B	1	-	-	-	#4 AWG	-
C	1	-	-	-	#6 AWG	-

KEY NOTES (APPLICABLE TO THIS SHEET ONLY)

- 1 REMOVE PHASE-TO-GROUND BOND IN EXISTING CONTROL PANEL.
- 2 INSTALL NEW CONDUIT/CONDUCTOR FROM SERVICE DISCONNECT TO NEW TRANSFER SWITCH.
- 3 NEW MANUAL TRANSFER SWITCH.
- 4 CONNECT TO EXISTING GEC.
- 5 NEW GENERATOR QUICK CONNECTION ENCLOSURE.
- 6 ESTABLISH PHASE-TO-GROUND BOND WITHIN EXISTING SERVICE DISCONNECT ENCLOSURE.
- 7 MODIFY EXISTING CONDUIT/CONDUCTORS TO TERMINATE AT NEW TRANSFER SWITCH.

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STATE OF ILLINOIS DESIGN FIRM NO. 184-2735

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DESIGNED -
DRAWN -
CHECKED -
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PLOT SCALE = 0:1" = 1'-0"
PLOT DATE = 3/25/2019

DESIGNED -
DRAWN -
CHECKED -
DATE -

REVISED -
REVISED -
REVISED -
REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

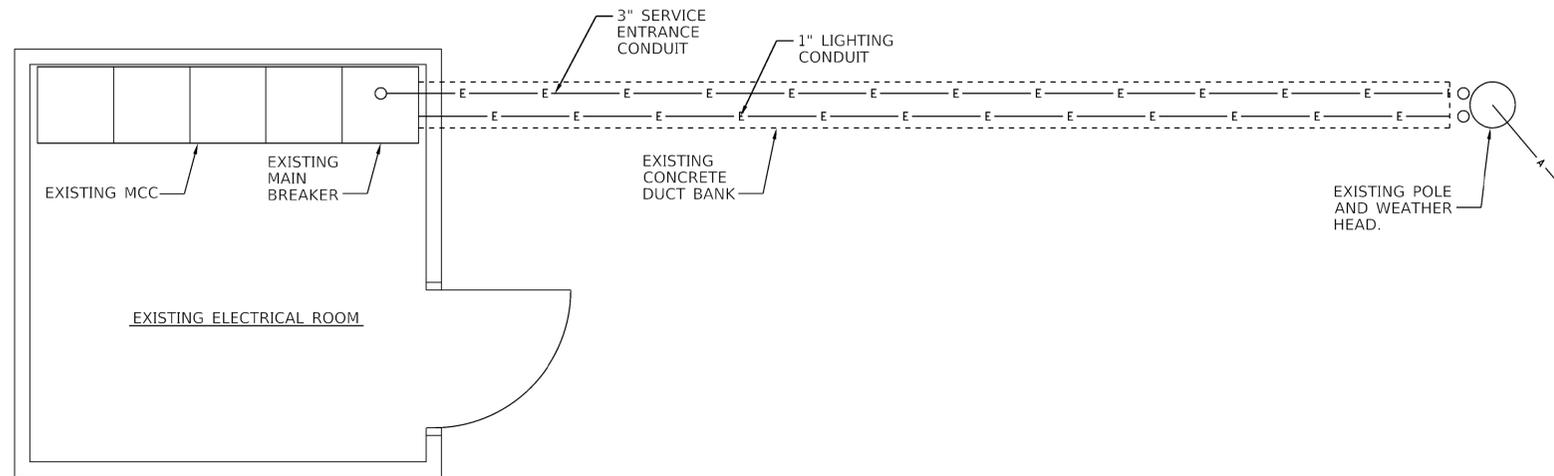
**FUN AND SUN PUMP STATION
ELECTRICAL ONE-LINE DIAGRAM**
SCALE: NONE SHEET 2 OF 2 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255/270	D8 PUMP STATIONS 2019	MADISON	7	5
CONTRACT NO. 46526				
ILLINOIS FED. AID PROJECT				

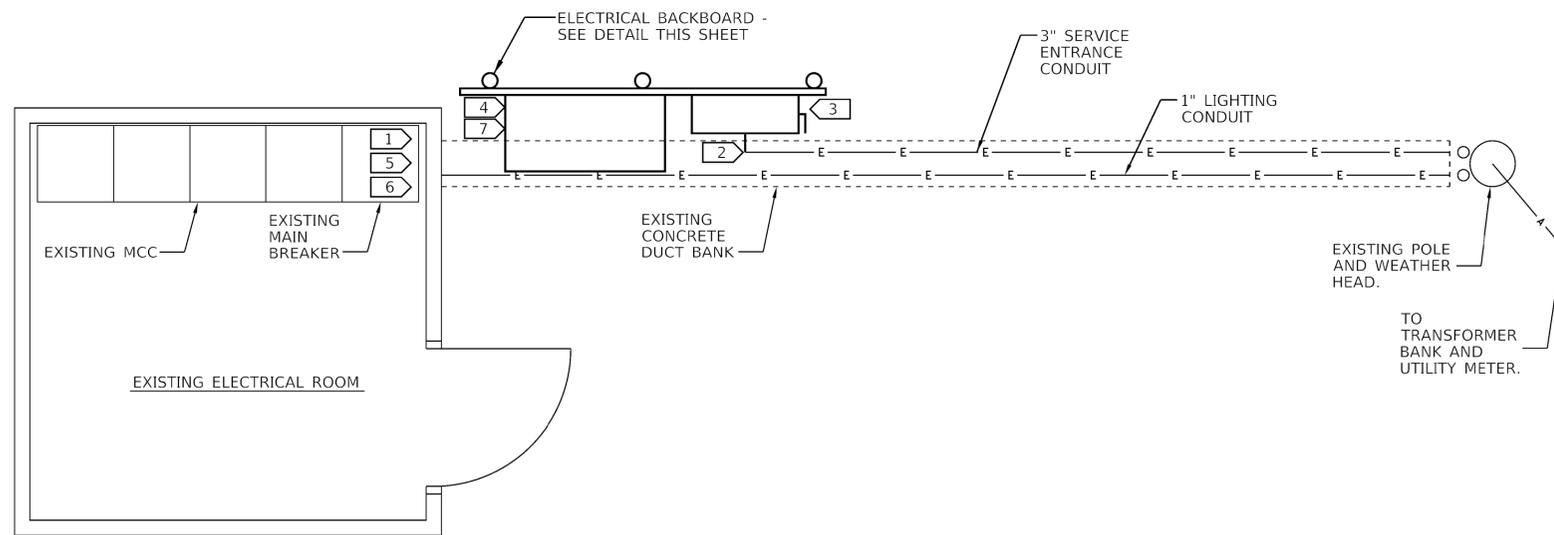
REV. - MS

(APPLICABLE TO THIS SHEET ONLY)

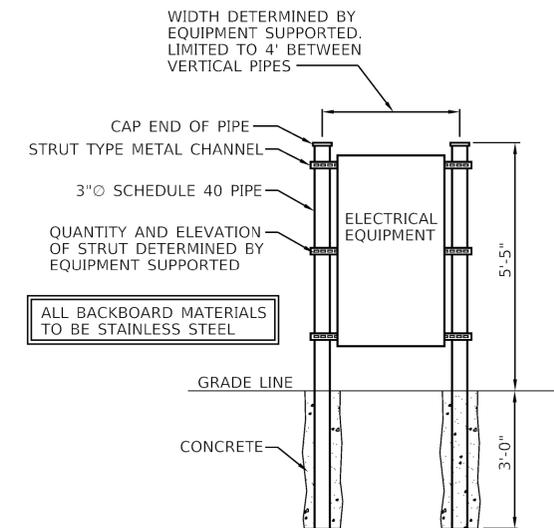
- 1 REMOVE NEUTRAL-TO-GROUND BOND IN EXISTING MCC.
- 2 INTERCEPT EXISTING SERVICE ENTRANCE CONDUCTORS AND RE-ROUTE TO NEW SERVICE DISCONNECT SWITCH.
- 3 NEW SERVICE DISCONNECT SWITCH.
- 4 NEW MANUAL TRANSFER SWITCH.
- 5 PROVIDE NEW FEEDERS BETWEEN TRANSFER SWITCH AND EXISTING MCC. ROUTE THROUGH WALL OF PUMP STATION.
- 6 CONNECT TO EXISTING GEC.
- 7 NEW GENERATOR QUICK CONNECTION ENCLOSURE.



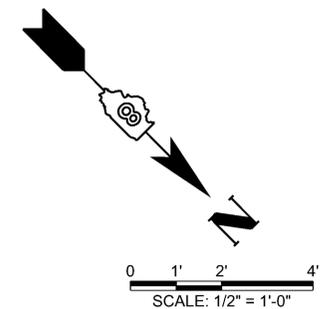
EXISTING ELECTRICAL PLAN
SCALE: 1/2"=1'-0"



PROPOSED ELECTRICAL PLAN
SCALE: 1/2"=1'-0"



ELECTRICAL BACKBOARD DETAIL
NTS



Q:\17\Files\170264\Work_02 - Phase II Pump Station Blanket Agreement\Homeland Security Transfer_Switch_Projects\Documents\District 8\0846526-shh-Plan2.dgn

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STATE OF ILLINOIS DESIGN FIRM NO. 184-2738

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PLOT DATE = 3/25/2019	CHECKED -	REVISED -
	DATE -	REVISED -

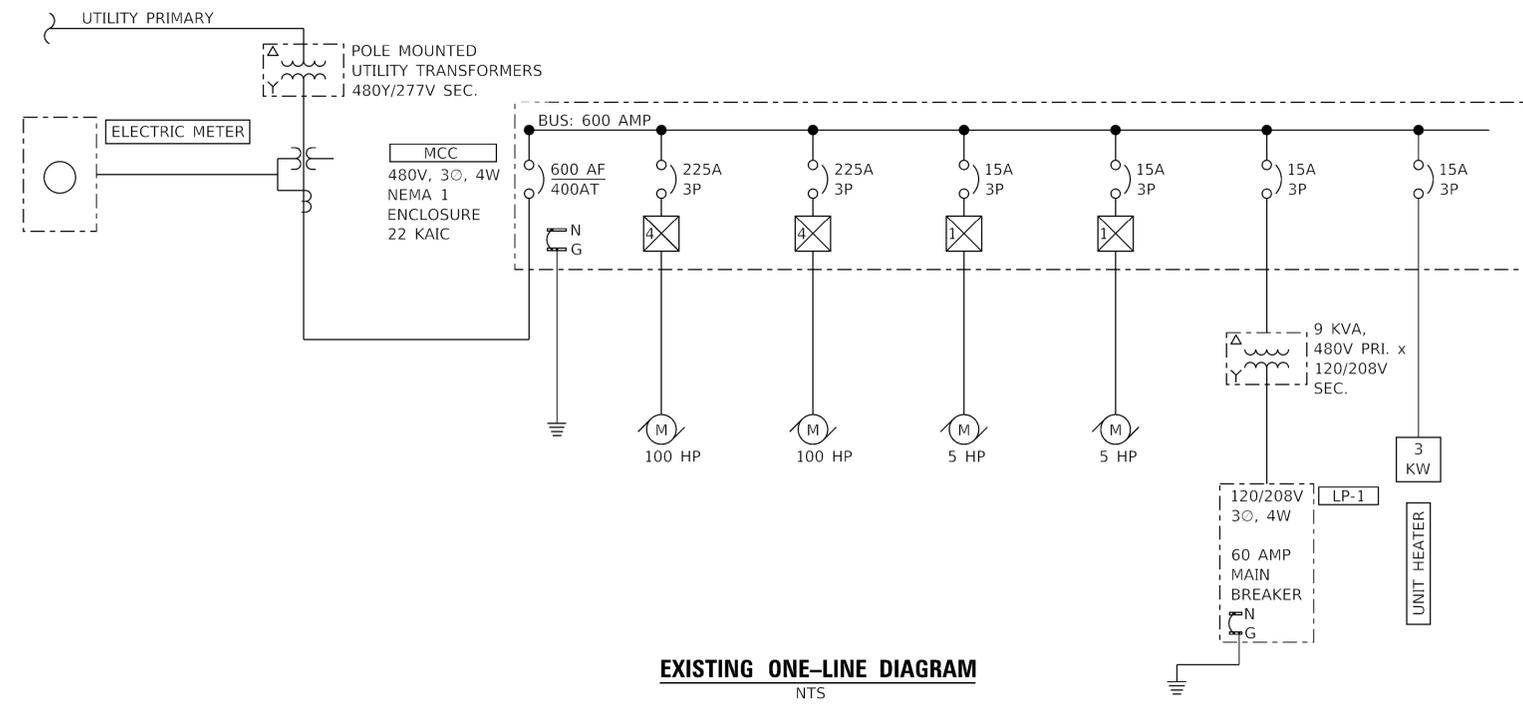
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CHECKED -	REVISED -
DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

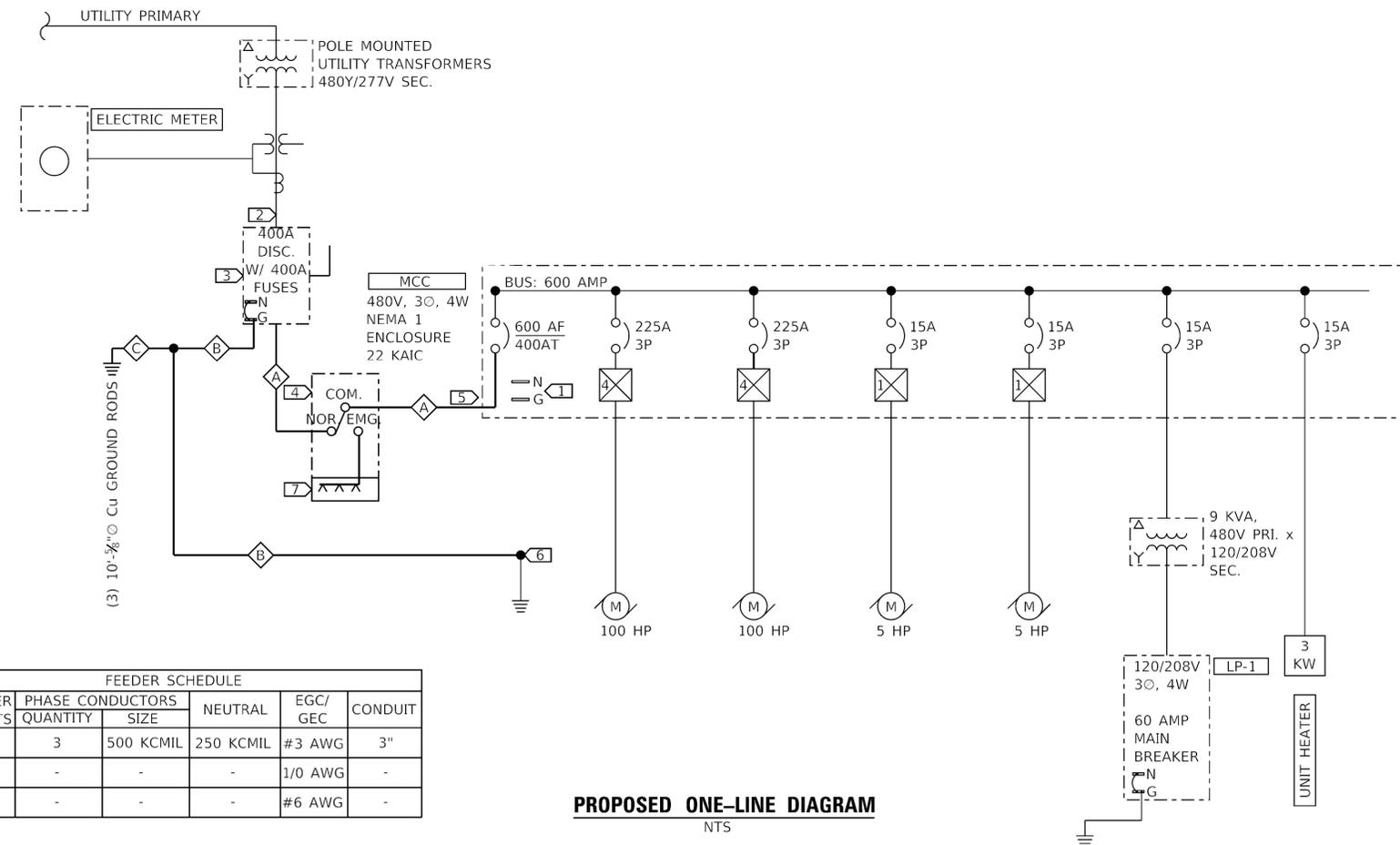
**GREY'S FARM PUMP STATION
ELECTRICAL PLAN AND DETAILS**

SCALE: AS NOTED SHEET 1 OF 2 SHEETS STA. TO STA.

F.A.I. RTE. 255/270	SECTION DB PUMP STATIONS 2019	COUNTY MADISON	TOTAL SHEETS 7	SHEET NO. 6
CONTRACT NO. 46526			ILLINOIS FED. AID PROJECT	



- (APPLICABLE TO THIS SHEET ONLY)
- 1 REMOVE NEUTRAL-TO-GROUND BOND IN EXISTING MCC.
 - 2 INTERCEPT EXISTING SERVICE ENTRANCE CONDUCTORS AND RE-ROUTE TO NEW SERVICE DISCONNECT SWITCH.
 - 3 NEW SERVICE DISCONNECT SWITCH.
 - 4 NEW MANUAL TRANSFER SWITCH.
 - 5 PROVIDE NEW FEEDERS BETWEEN TRANSFER SWITCH AND EXISTING MCC. ROUTE THROUGH WALL OF PUMP STATION.
 - 6 CONNECT TO EXISTING GEC.
 - 7 NEW GENERATOR QUICK CONNECTION ENCLOSURE.



FEEDER SCHEDULE						
TAG	NUMBER OF SETS	PHASE CONDUCTORS QUANTITY	PHASE CONDUCTORS SIZE	NEUTRAL	EGC/ GEC	CONDUIT
A	1	3	500 KCML	250 KCML	#3 AWG	3"
B	1	-	-	-	1/0 AWG	-
C	1	-	-	-	#6 AWG	-

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STATE OF ILLINOIS DESIGN FIRM NO. 184-2738

USER NAME = bgj	DESIGNED -	REVISED -
PLOT SCALE = 0.083322' / 1"	DRAWN -	REVISED -
PLOT DATE = 3/25/2019	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GREY'S FARM PUMP STATION
ELECTRICAL ONE-LINE DIAGRAM**

SCALE: NONE SHEET 2 OF 2 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255/270	DB PUMP STATIONS 2019	MADISON	7	7
CONTRACT NO. 46526				
ILLINOIS FED. AID PROJECT				