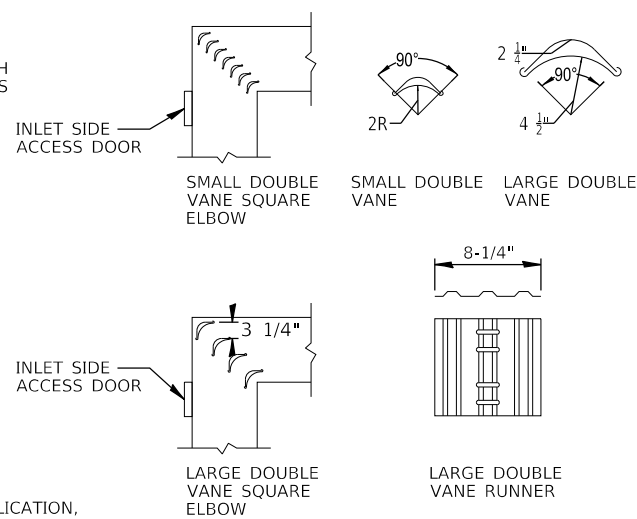


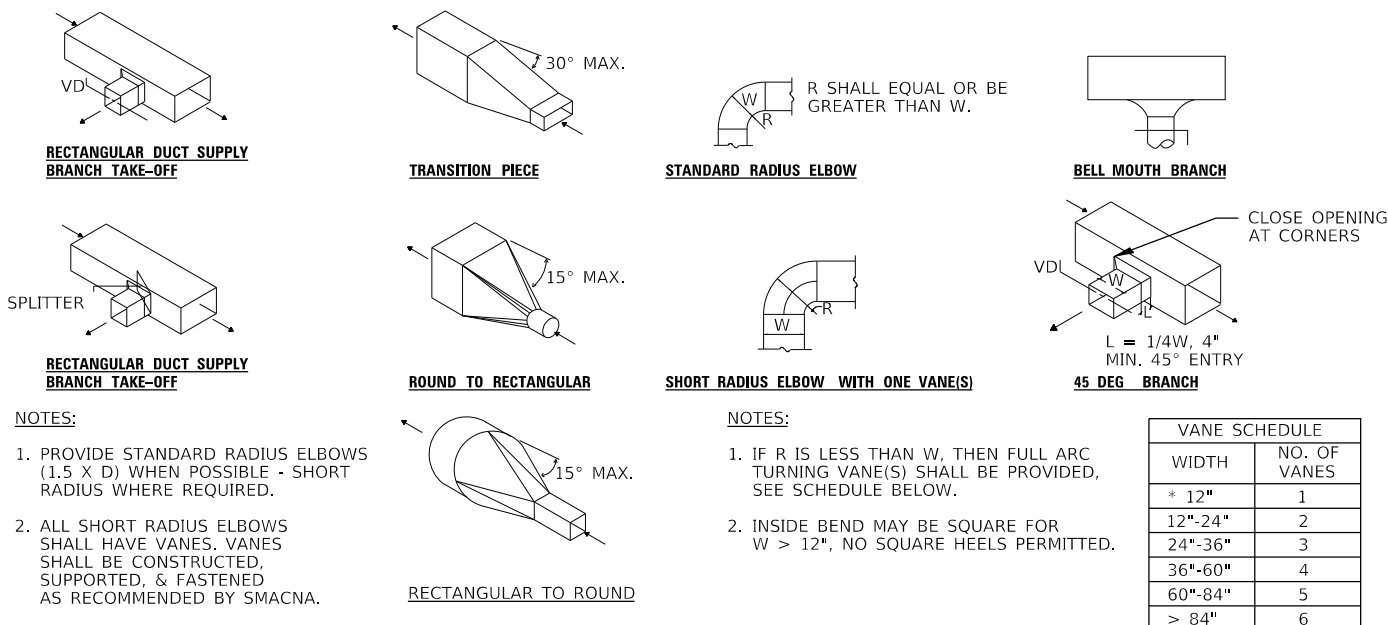
- NOTES:**
- SEE SPECIFICATIONS FOR INSULATION REQUIREMENTS.
 - FOR ATTACHMENT TO WALL FOLLOW MANUFACTURER RECOMMENDATIONS.

1
HV5
TYPICAL SIDEWALL OUTSIDE FAN MOUNTING DETAIL EF-1 & EF-3
SCALE: NONE



- NOTES:**
- FOR DUCT WITH 2000 FPM VELOCITY AND ABOVE

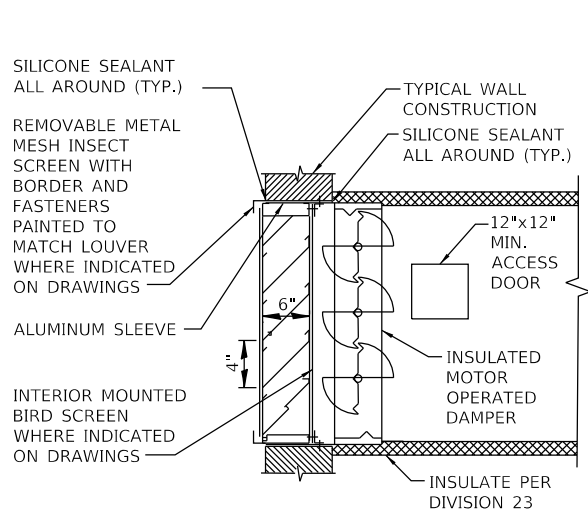
2
HV5
TYPICAL DOUBLE VANE ELBOW DETAILS
SCALE: NONE



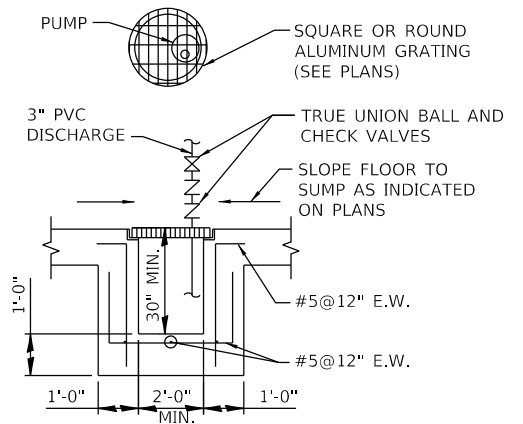
- NOTES:**
- PROVIDE STANDARD RADIUS ELBOWS (1.5 X D) WHEN POSSIBLE - SHORT RADIUS WHERE REQUIRED.
 - ALL SHORT RADIUS ELBOWS SHALL HAVE VANES. VANES SHALL BE CONSTRUCTED, SUPPORTED, & FASTENED AS RECOMMENDED BY SMACNA.
 - NO SQUARE OR RECTANGULAR HEEL ELBOWS SHALL BE ALLOWED.

3
HV5
TYPICAL DUCT DETAILS
SCALE: NONE

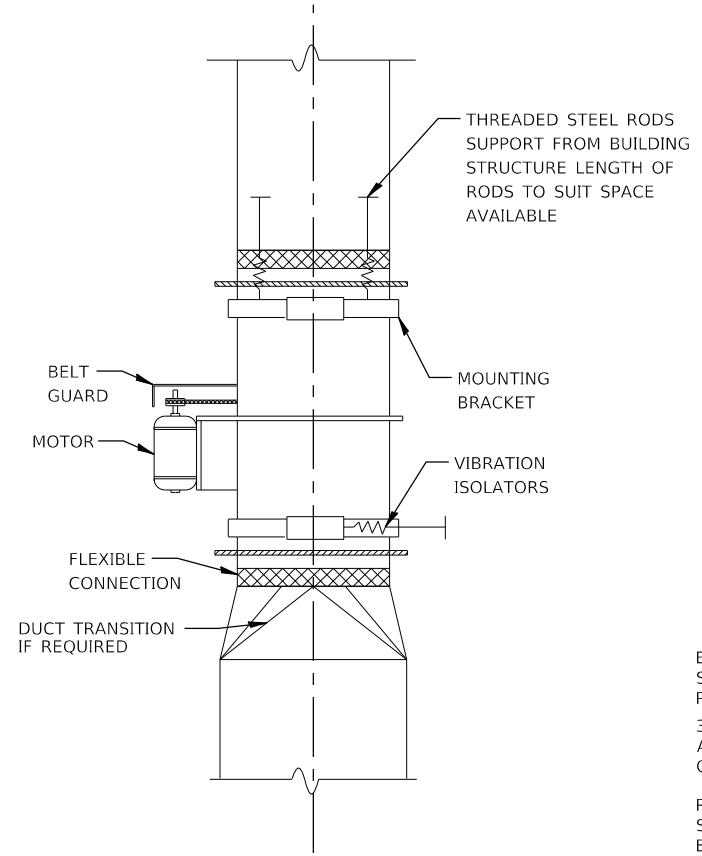
VANE SCHEDULE	
WIDTH	NO. OF VANES
* 12"	1
12"-24"	2
24"-36"	3
36"-60"	4
60"-84"	5
> 84"	6



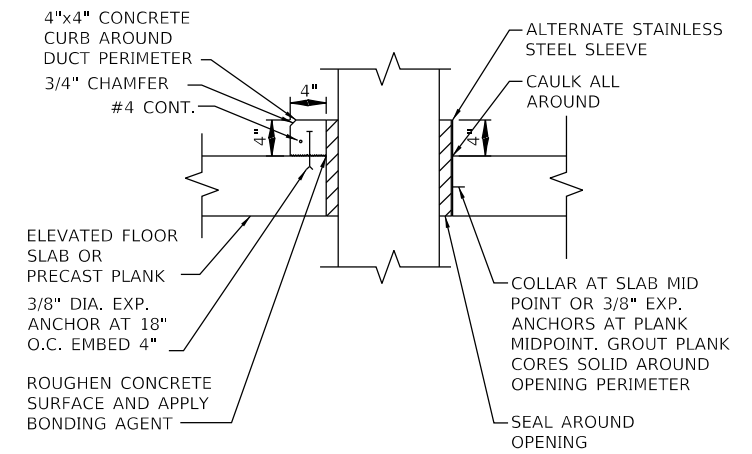
4
HV5
WALL, LOUVER, DAMPER, AND DUCTWORK
SCALE: NONE



5
HV5
SIMPLEX SUMP
SCALE: NONE



6
HV5
TYPICAL INLINE FAN DETAIL EF-2, SF-1, AND SF-2
SCALE: NONE



7
HV5
DUCT PENETRATION AT INTERIOR FLOOR SLAB
SCALE: NONE

MODEL: Default
FILE NAME: S:\MAD\1800-1899\1843\002\Drawings\CAD\Micros-SS4\CAD_Sheets\PS19-xxxx-HV5-HVDetails.dgn
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		DATE - 8/28/2024	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HV DETAILS
PUMP STATION 49

SHEET HV5 OF 7 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	601
CONTRACT NO. 61J87				
ILLINOIS FED. AID PROJECT				

HV5

FAN SCHEDULE

UNIT NO.	LOCATION	SERVICE	AIRFLOW (CFM)	EXT. S.P. (IN. W.C.)	MOTOR SIZE (HP)	FAN TYPE	MOTOR TYPE	DRIVE	SOUND POWER (SONES)	ELECTRICAL				OPERATING WEIGHT (LBS.)	REMARKS
										VOLTAGE	PHASE	STARTER BY	DISCONNECT BY		
EF-1	DRY WELL	DRY WELL	8,800	0.75	3	SIDEWALL CENTRIFUGAL	TEFC	BELT	17.5	460	3	DIV 26	DIV 26	262	①
EF-2	WET WELL	WET WELL (LOWER LEVELS)	9,000	0.75	3	MIXED FLOW	TEFC	BELT	7.5	460	3	DIV 26	DIV 26	440	①
SF-1	DRY WELL	DRY WELL	8,800	0.75	3	MIXED FLOW	TEFC	BELT	6.7	460	3	DIV 26	DIV 26	82	①
SF-2	WET WELL	WET WELL (LOWER LEVELS)	9,000	0.75	3	MIXED FLOW	TEFC	BELT	7.5	460	3	DIV 26	DIV 26	440	①
EF-3	WET WELL	WET WELL (UPPER LEVEL)	900	0.5	0.25	SIDEWALL CENTRIFUGAL	TEFC	BELT	8.1	115	1	DIV 26	DIV 26	72	①

① FAN AND ACCESSORIES SHALL BE SUITABLE FOR CLASS I DIV. 2 GROUPS C AND D ENVIRONMENTS.

WALL LOUVER SCHEDULE

UNIT NO. L-	LOCATION	SERVICE	AIRFLOW (CFM)	WIDTH (IN)	HEIGHT (IN)	BLADE DEPTH (IN)	MAX. APD (IN WG)	MAX. FACE VEL. (FPM)	FREE AREA (SQ. FT.)	SCREEN		TOP ELEVATION	REMARKS
										TYPE	LOCATION		
1	DRY WELL	SF-1 OA	8,800	40	56	6	0.13	922	9.55	INSECT	EXTERIOR	10'-8"	
2	WET WELL	EF-3 OA	900	40	16	6	0.05	572	1.57	INSECT	EXTERIOR	10'-8"	
3	WET WELL	SF-2 OA	9,000	72	40	6	0.09	777	11.58	INSECT	EXTERIOR	10'-8"	
4	WET WELL	EF-2 EA	9,000	72	40	6	0.08	777	11.58	BIRD	INTERIOR	10'-8"	

VENTILATION SCHEDULE

ROOM NO.	ROOM NAME	LOCATION	FLOOR AREA SQ. FT.	PLAN REQUIREMENTS		FAN SUPPLY FAN	SYSTEM EXHAUST FAN	REMARKS
				CFM AIR SUPPLY	CFM AIR EXHAUST			
101	DRYWELL	GROUND FLOOR	293	2,000	2,000	SF-1	EF-1	
105	ELECTRICAL ROOM	GROUND FLOOR	255					
106	WET WELL	GROUND FLOOR	136	900	900	RO	EF-3	
104	DRYWELL	INTERMEDIATE FLOOR (-1)	319	2,266	2,266	SF-1	EF-1	
106	WET WELL ACCESS	INTERMEDIATE FLOOR (-1)	115	-	-	SF-2	EF-2	
-	DISCHARGE CHAMBER	INTERMEDIATE FLOOR (-1)	203	-	-	-	-	
102	DRYWELL	INTERMEDIATE FLOOR (-2)	319	2,266	2,266	SF-1	EF-1	
102	SCREENING PLATFORM	INTERMEDIATE FLOOR (-2)	369	5,130	5,130	SF-2	EF-2	
101	DRYWELL	WET WELL FLOOR (-3)	319	2,266	2,266	SF-1	EF-1	
-	WET WELL	WET WELL FLOOR (-3)	-	3,870	3,870	SF-2	EF-2	
102	STAIRWELL	WET WELL FLOOR (-3)	119	-	-	-	-	
102	STAIRWELL	INTERMEDIATE FLOOR (-2)	119	-	-	-	-	
102	STAIRWELL	INTERMEDIATE FLOOR (-1)	119	-	-	-	-	
102	STAIRWELL	GROUND FLOOR	132	-	-	-	-	
-	TOTAL	-	2,766	18,700	18,700	-	-	-

NR = NOT REQUIRE
RO = RELIEF OPENING

ELECTRIC HEATER SCHEDULE

UNIT NO. EUH-	LOCATION	CAPACITY (WATTS)	AIRFLOW (CFM)	ELECTRICAL				REMARKS
				VOLTAGE	PHASE	FLA	DISCONNECT BY	
1	DRYWELL	5,000	700	480	3	6.8	DIVISION 26	①
2	STAIRWELL	3,000	700	480	3	4.3	DIVISION 26	①
3	WETWELL	5,000	700	480	3	6.8	DIVISION 26	①
4	ELECTRICAL RM	3,000	700	480	3	3.6	DIVISION 26	

① EQUIPMENT AND ACCESSORIES SHALL BE SUITABLE FOR CLASS I DIVISION 2 GROUPS AND C AND D ENVIRONMENTS.

DESIGN CONDITIONS

APPLICABLE BUILDING CODE:		SUMMER EXTERIOR: 91.4°F DB / 74.0°F WB		
2018 INTERNATIONAL BUILDING CODE		WINTER EXTERIOR: -1.0°F DB		
OCCUPANCY TYPE	VENTILATION	SUMMER INTERIOR (DB/WB)	WINTER INTERIOR (DB)	REMARKS
WET WELL	30 ACH INTERMITTENTLY	AMBIENT	50	
DRY WELL	30 ACH INTERMITTENTLY	AMBIENT	50	
ELECTRICAL ROOM	EQUIPMENT COOLING	AMBIENT +10°F	70	
STAIRWELL	N/A	AMBIENT	50	

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**HV SCHEDULES - 1
PUMP STATION 49**

SHEET HV6 OF 7 SHEETS

F.A.P. RTE. 305	SECTION 11-00087-00-GS	COUNTY LAKE	TOTAL SHEETS 816	SHEET NO. 602
ILLINOIS FED. AID PROJECT			CONTRACT NO. 61J87	

HV6

SPLIT SYSTEM SCHEDULE

UNIT NO. SS-	LOCATION	SERVICE	FAN SECTION		COOLING COIL SECTION			ELECTRICAL					OPERATING WEIGHT (LBS.)	REMARKS
			SUPPLY AIR (CFM)	QUANTITY	SENSIBLE CAPACITY (MBH)	TOTAL CAPACITY (MBH)	EAT DB/WB (°F)	VOLTAGE	PHASE	MCA	BREAKER SIZE	DISCONNECT BY		
1	ELECTRICAL RM	ELECTRICAL RM	500	1	13.7	18	80/67	208	1	16.5	25	DIV 26	31/172	①

① PROVIDE PRECHARGED REFRIGERANT PIPING KIT, SIZE AND LENGTH AS REQUIRED.

DAMPER SCHEDULE

UNIT NO. MD-	LOCATION	SERVICE	AIRFLOW (CFM)	BLADE ACTION	ACTUATOR FAIL	DAMPER SIZE (WxH)	REMARKS
1	DRY WELL RM	SF-1 OA	8,800	PARALLEL	CLOSED	40x56	①
2	DRY WELL RM	EF-1 EA	8,800	PARALLEL	CLOSED	34x34	①
3	WET WELL ACCESS	SF-2 OA	9,000	PARALLEL	CLOSED	72x40	①
4	WET WELL ACCESS	EF-2 EA	9,000	PARALLEL	CLOSED	72x40	①
5	WET WELL ACCESS	EF-3 OA	900	PARALLEL	CLOSED	40x16	①
6	WET WELL ACCESS	EF-3 EA	900	PARALLEL	CLOSED	16x16	①

① DAMPER AND ACTUATOR SHALL BE SUITABLE FOR CLASS 1 DIV 2 LOCATIONS

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STRAND ASSOCIATES
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(815) 744-4200
IDFPR NO. 184-001273

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**HV SCHEDULES - 2
PUMP STATION 49**

SHEET HV7 OF 7 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	603
CONTRACT NO. 61J87				
		ILLINOIS	FED. AID PROJECT	

HV7

BUILDING PLANS	
	POWER PANELBOARD
	SURFACE MOUNTED CONTROL PANELBOARD
	MANUAL DISCONNECT SWITCH NONFUSED (RATING AS INDICATED)
	MANUAL DISCONNECT SWITCH FUSED (RATING AS INDICATED)
	CIRCUIT BREAKER DISCONNECT
	MAGNETIC MOTOR STARTER (RATING AS INDICATED)
	COMBINATION MAGNETIC MOTOR STARTER AND FUSED DISCONNECT SWITCH (RATING AS INDICATED)
	CONTROL STATION (1, 2 & 3 BUTTONS SHOWN)
	SINGLE SPEED ELECTRIC MOTOR (KW OR HP RATING AS INDICATED)
	MOTORIZED DAMPER
	LIMIT SWITCH
	INTRUSION ALARM OVERRIDE SWITCH RECESSED IN WALL
	MAGNETICALLY OPERATED REED SWITCH
	FLOAT SWITCH
	PRESSURE SWITCH
	FLOW SWITCH
	ELECTRIC - PNEUMATIC SWITCH
	PNEUMATIC - ELECTRIC SWITCH
	TORQUE SWITCH
	TRANSFORMER
	FIRE ALARM PULL STATION
	AUDIO VISUAL ALARM
	SMOKE DETECTOR
	HEAT DETECTOR
	FLAME DETECTOR
	COMBUSTIBLE GAS DETECTOR
	THERMOSTAT
	UNIT HEATER - DOWNBLAST TYPE OR CENTRIFUGAL FAN TYPE
	ALARM HORN
	GROUND GRID
	GROUND ROD
	GROUND TEST WELL
	LIGHTNING CONDUCTOR
	ELECTRIC PULL BOX
	ELECTRIC JUNCTION BOX
	HANDHOLE COMPOSITE CONCRETE

BUILDING PLANS	
	LED FIXTURE F1 INDICATES FIXTURE TYPE- REFER TO FIXTURE SCHEDULE 2a INDICATES CIRCUIT NO. 2 ON SWITCH a (TYP.)
	LED FIXTURE
	WALL MOUNTED LED FIXTURE
	LED FIXTURE ON EMERGENCY CIRCUIT
	LED FIXTURE ON EMERGENCY CIRCUIT
	EXIT SIGN SINGLE SIDED (ABOVE DOOR)
	DIRECTIONAL EXIT SIGN - DOUBLE SIDED (DIRECTION AS INDICATED - TYP.)
	DIRECTIONAL EXIT SIGN - SINGLE SIDED
	BATTERY UNIT FOR EMERGENCY LIGHT
	BATTERY OPERATED EMERGENCY LIGHT WITH TWO HEADS
	EMERGENCY LIGHT, REMOTE HEAD
	BARE GROUND CABLE
	EXPOSED CONDUIT
	CONCEALED CONDUIT IN FLOOR OR UNDERGROUND
	CONDUIT HOME-RUN TO PANEL AS INDICATED (LP-1-6 DENOTES PANEL DESIGNATION, SLASH LINES INDICATE QUANTITY OF WIRE, GROUND WIRE INDICATED AS LONG LINE WITH DOT, NEUTRAL WIRE INDICATED AS LONG LINE, PHASE WIRES AND SWITCH LEGS INDICATED AS SHORT LINES)
	CONDUIT TURNED DOWN
	CONDUIT TURNED UP
	CONDUIT TERMINATED OR CAPPED
	SINGLE POLE TOGGLE SWITCH
	MANUAL MOTOR STARTER SWITCH WITH THERMAL OVERLOAD PROTECTION
	TIMED-ON SWITCH
	SINGLE RECEPTACLE
	DUPLEX RECEPTACLE
	QUADRUPLEX RECEPTACLE
	DUPLEX RECEPTACLE WITH GROUND FAULT CIRCUIT INTERRUPTER
	DUPLEX RECEPTACLE WITH ISOLATED GROUND
SCHEMATIC SYMBOLS	
	CONDUCTOR CONNECTION
	NO CONNECTION
	TERMINAL ON A DEVICE
	NORMALLY OPEN CONTACT
	NORMALLY CLOSED CONTACT

SCHEMATIC SYMBOLS	
	SINGLE POLE, SINGLE THROW SWITCH
	SINGLE POLE, DOUBLE THROW SWITCH
	DOUBLE POLE, SINGLE THROW SWITCH
	DOUBLE POLE, DOUBLE THROW SWITCH
	THREE WAY ROTARY SWITCH
	NORMALLY CLOSED MOMENTARY PUSH BUTTON SWITCH
	NORMALLY OPEN MOMENTARY PUSH BUTTON SWITCH
	EMERGENCY STOP BUTTON - MAINTAINED
	2 POSITION SELECTOR SWITCH (EXTRA CONTACT BLOCK)
	NORMALLY OPEN DOUBLE BREAK SINGLE THROW CONTACT BLOCK
	NORMALLY CLOSED DOUBLE BREAK SINGLE THROW CONTACT BLOCK
	DOUBLE BREAK DOUBLE THROW CONTACT BLOCK
	MUSHROOM HEAD PUSH BUTTON
	MAINTAINED CONTACT PUSH BUTTON
	2 OR 3 POSITIONS SELECTOR SWITCH (CLOSED CONTACTS INDICATED BY "X")
	3 POLE SINGLE THROW DISCONNECT SWITCH
	HEATER ELEMENT SWITCH - CLOSSES ON RISING TEMPERATURE
	HEATER ELEMENT SWITCH - OPENS ON RISING TEMPERATURE
	PRESSURE SWITCH - CLOSSES ON RISING PRESSURE
	PRESSURE SWITCH - OPENS ON RISING PRESSURE
	AUTOMATIC TRANSFER SWITCH

SCHEMATIC SYMBOLS	
	DIFFERENTIAL PRESSURE SWITCH - CLOSSES WHEN THE DIFFERENTIAL IN PRESSURE BETWEEN TWO DIAPHRAGMS EXCEEDS A SET POINT
	DIFFERENTIAL PRESSURE SWITCH - OPENS WHEN THE DIFFERENTIAL IN PRESSURE BETWEEN TWO DIAPHRAGMS EXCEEDS A SET POINT
	TIME DELAY RELAY SWITCH -CLOSSES ON TIME DELAY AFTER ENERGIZATION OF RELAY COIL
	TIME DELAY RELAY SWITCH -OPENS ON TIME DELAY AFTER ENERGIZATION OF RELAY COIL
	TIME DELAY RELAY SWITCH -OPENS ON TIME DELAY AFTER DE-ENERGIZATION OF RELAY COIL
	TIME DELAY RELAY SWITCH -CLOSSES ON TIME DELAY AFTER DE-ENERGIZATION OF RELAY COIL
	LEVEL SWITCH - CLOSSES ON RISING LEVEL
	LEVEL SWITCH - OPENS ON RISING LEVEL
	FLOW SWITCH - CLOSSES ON FLOW
	FLOW SWITCH - OPENS ON FLOW
	N.O. LIMIT SWITCH
	TRANSFORMER TYPE AND RATED AS INDICATED
	CONNECTION TO GROUND
	LIGHTNING OR SURGE ARRESTER
	THERMAL OVERLOAD ELEMENT
	CIRCUIT BREAKER
	HEATING ELEMENT
	SOLENOID VALVE
	DEVICE ENCLOSURE
	ANNUNCIATOR
	COUNTER
	ELAPSED TIME METER
	ELECTRONIC TIMER
	TOTALIZER
	PUMP START COUNTER
	INDICATOR LIGHT (SEE SCHEMATIC DIAGRAM DEVICE TABLE FOR COLOR SYMBOLS)
	INDICATOR LIGHT (PUSH TO TEST TYPE)
	TIMED-ON SWITCH
	CURRENT SWITCH

SCHEMATIC SYMBOLS	
	COIL
	C - CLOSE
	CR - CONTROL RELAY
	F - FAST OR FORWARD
	M - MOTOR STARTER
	MX - MOTOR STARTER AUXILIARY RELAY
	N - NORMAL
	O - OPEN
	OL - OVERLOAD RELAY
	R - REVERSE
	S - SLOW
	TD - TIME DELAY RELAY
	TDAE - TIME DELAY AFTER ENERGIZATION
	TDAD - TIME DELAY AFTER DE-ENERGIZATION
ONE-LINE DIAGRAMS	
	POWER CIRCUIT
	EQUIPMENT ENCLOSURE
	CONTROL OR INTERLOCK CIRCUIT
	BUS (RATING AS INDICATED)
	CONDUCTOR CONNECTION
	DRAWOUT DEVICE
	DRAWOUT MOLDED CASE CIRCUIT BREAKER (600V, THERMAL MAGNETIC TYPE, UNLESS NOTED OTHERWISE)
	TRIP SETTING (TYP.)
	FRAME SIZE (TYP.)
	MOLDED CASE CIRCUIT BREAKER (600V, THERMAL MAGNETIC TYPE, UNLESS NOTED OTHERWISE)
	FUSE (RATING AS INDICATED)
	DRAWOUT FUSE (RATING AS INDICATED)
	FUSE - SWITCH (RATING AS INDICATED)
	NON-FUSIBLE DISCONNECT SWITCH
	THERMAL OVERLOAD ELEMENT
	INSTANTANEOUS CONTACT
	CURRENT TRANSFORMER-DOUGHNOUT TYPE (QUANTITY, RATIO AND RATING AS INDICATED)
	CURRENT TRANSFORMER-WINDOW TYPE (RATIO AND RATING AS INDICATED)
	POTENTIAL TRANSFORMER (QUANTITY, RATIO AND RATING AS INDICATED)
	CAPACITOR
	BATTERY
	AMMETER SWITCH
	VOLTMETER SWITCH
	SELECTOR SWITCH
	AMMETER (RANGE AS INDICATED)
	KEY INTERLOCK (NUMBER FOR ASSOCIATION)

ONE-LINE DIAGRAMS	
	VOLTMETER (RANGE AS INDICATED)
	KILOWATT HOUR METER
	MICROPROCESSOR METERING DEVICE
	CONTROL STATION
	TRANSFER SWITCH (TYPE AND RATING AS INDICATED)
	SINGLE SPEED NON-REVERSING MANUAL STARTER (NEMA OR IEC DESIGNATION AS SPECIFIED OR SHOWN)
	SINGLE SPEED NON-REVERSING MAGNETIC STARTER (NEMA OR IEC DESIGNATION AS SPECIFIED OR SHOWN)
	COMBINATION CIRCUIT BREAKER & SINGLE SPEED NON-REVERSING MAGNETIC STARTER (NEMA OR IEC DESIGNATION AS SPECIFIED OR SHOWN)
	COMBINATION DISCONNECT SWITCH & SINGLE SPEED NON-REVERSING STARTER (NEMA OR IEC DESIGNATION AS SPECIFIED OR SHOWN)
	ENGINE GENERATOR
	GROUND FAULT RELAY
ABBREVIATIONS	
A	AMMETER
AFF	ABOVE FINISHED FLOOR
AS	AMMETER SWITCH
COMED	COMMONWEALTH EDISON
CPT	CONTROL POWER TRANSFORMER
CR	CONTROL RELAY
DS1	DISCONNECT SWITCH #1
DS-1	DOOR SWITCH #1
EF	EXHAUST FAN
EUH	ELECTRIC UNIT HEATER
FLS	FLOAT LEVEL SWITCH
F.O.B.	FACE OF BUILDING
GD	GAS DETECTOR
GM	GAS MONITORING PANEL
HD	HEAT DETECTOR
JB	JUNCTION BOX
LFP	LOW FLOW PUMP
LIT	LEVEL INDICATING TRANSMITTER
LP	LIGHTING PANELBOARD
LS	LIMIT SWITCH
MCP	MINIMUM CURRENT PROTECTION
MD	MOTORIZED DAMPER
MH	MOUNTING HEIGHT
MP-1	MAIN PUMP #1
PDR	PUMP DELAY RELAY
PP	POWER PANEL
PPR	PUMP PROTECTION RELAY
RTM	RELAY TEMP/MOISTURE
RTR	RELAY TIMED RUN
RTU	REMOTE TERMINAL UNIT
SD	SMOKE DETECTOR
SF	SUPPLY FAN
SG	SLIDE GATE
SS	SELECTOR SWITCH
T	THERMOSTAT
TMR	TIMER
TQ	TORQUE SWITCH
TS	TEMPERATURE SWITCH
UH	UNIT HEATER
WP	WEATHERPROOF
XP	EXPLOSION PROOF
EQUIPMENT TYPE	
EQUIPMENT TAG	
EQUIPMENT NO.	

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1170 SOUTH HOUBOLT ROAD
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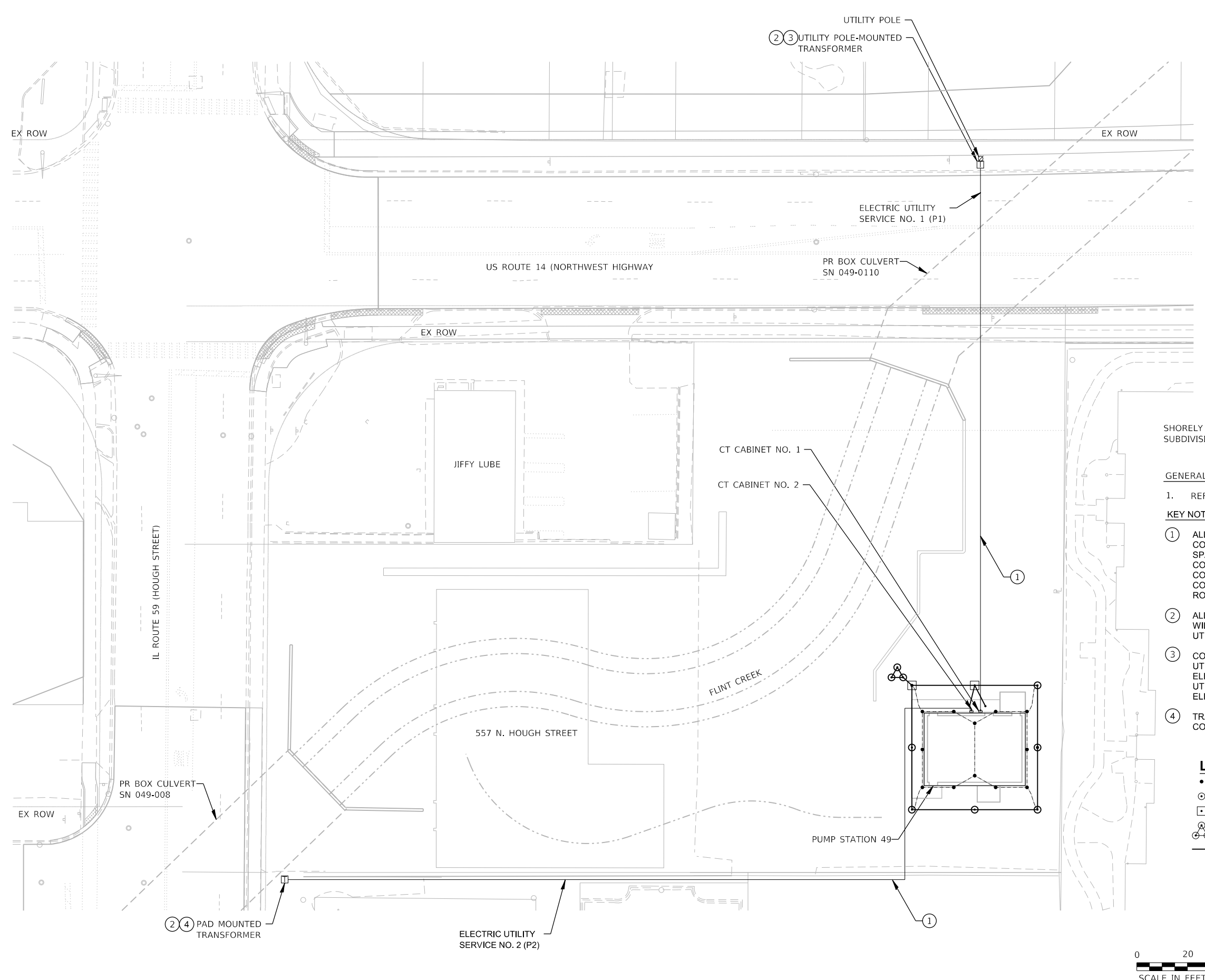
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYMBOL LIST
PUMP STATION 49

SHEET E1 OF 28 SHEETS

ILLINOIS FED. AID PROJECT

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	604
CONTRACT NO. 61J87				



SHORELY WOODS
SUBDIVISION

GENERAL NOTES:

- REFER TO SHEET E3 FOR GROUNDING REQUIREMENTS.

KEY NOTES:

- ALL ELECTRIC UTILITY SERVICE CONDUITS SHALL BE INSTALLED IN CONCRETE ENCASED DUCT BANK AS DETAILED ON SHEET E25. PROVIDE SPARE 2 1/2" CONDUIT IN DUCT BANK AS DETAILED ON SHEET E25. CONCRETE DUCTBANK SHALL BE INSTALLED ON IDOT PROPERTY ONLY. CONCRETE DUCTBANK SHALL NOT BE PROVIDED UNDER US ROUTE 14. CONDUIT ROUTED UNDER US ROUTE 14 SHALL BE INSTALLED WHILE US ROUTE 14 IS UNDER CONSTRUCTION.
- ALL ELECTRICAL TERMINATIONS AT ELECTRIC UTILITY TRANSFORMERS WILL BE PROVIDED BY ELECTRIC UTILITY. COORDINATE WITH ELECTRIC UTILITY FOR INSTALLATION OF SECONDARY CABLES.
- CONDUIT SHALL BE STUBBED 10'-0" ABOVE GRADE AT BASE OF ELECTRIC UTILITY POLE. PROVIDE SLACK IN THE SECONDARY CABLES AT THE ELECTRIC UTILITY POLE FOR ELECTRIC UTILITY INSTALLATION UP THE UTILITY POLE TO TRANSFORMER TERMINATIONS. COORDINATE WITH ELECTRIC UTILITY COMPANY FOR INSTALLATION REQUIREMENTS.
- TRANSFORMER PAD PROVIDED BY ELECTRIC UTILITY COMPANY. COORDINATE INSTALLATION WITH ELECTRIC UTILITY COMPANY.

LEGEND

- AIR TERMINAL
- ⊙ GROUND ROD
- ⊠ GROUND TEST WELL
- ⊕ GROUNDING GRID TRIANGLE
- GROUND WIRE



E2

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

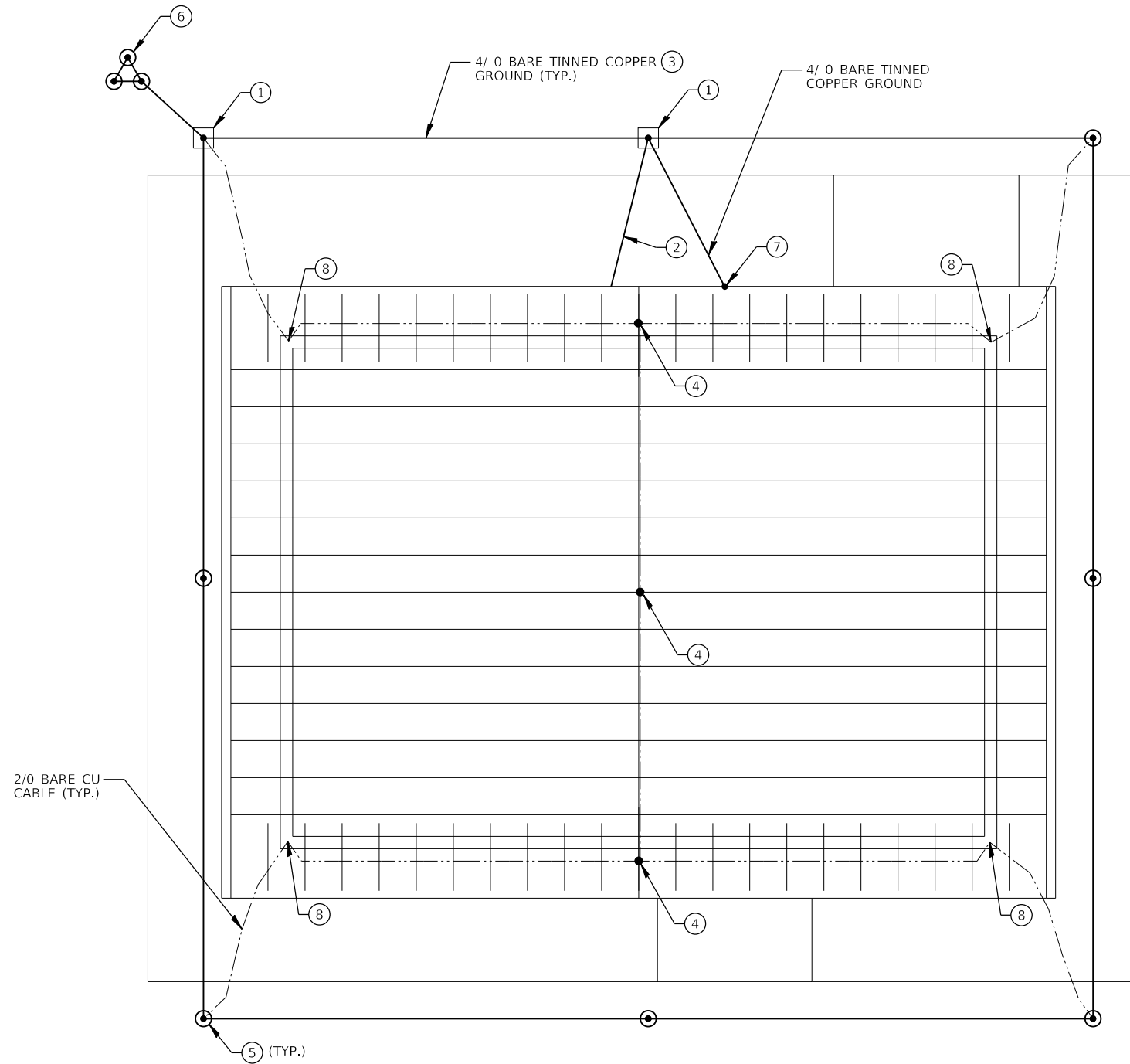
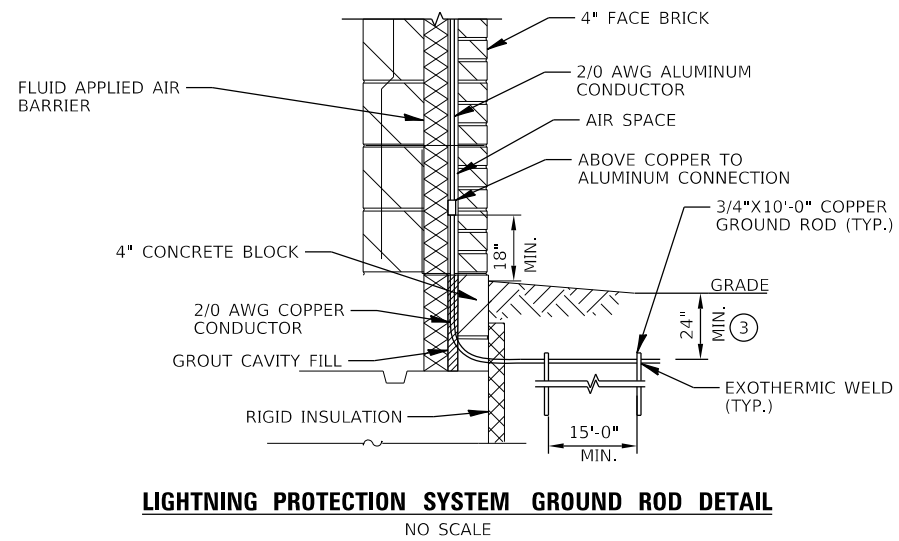
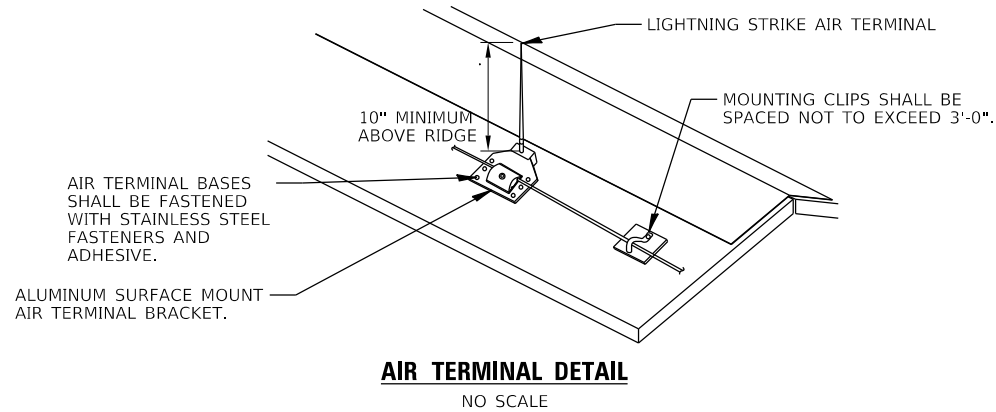
**ELECTRICAL GROUND AND UNDERGROUND UTILITIES PLAN
PUMP STATION 49**

SHEET E2 OF 28 SHEETS

F.A.P. RTE. 305	SECTION 11-00087-00-GS	COUNTY LAKE	TOTAL SHEETS 816	SHEET NO. 605
CONTRACT NO. 61J87				
		ILLINOIS	FED. AID PROJECT	

KEY NOTES:

- ① PROVIDE GROUND LUGS IN GROUND WELL FOR TESTING. DO NOT CONNECT ENDS OF GROUND LUG TO EACH OTHER. GROUND ROD AND ACCESS BOX SHALL BE PROVIDED AS SHOWN ON SHEET E25.
- ② PROVIDE 4/0 BARE COPPER GROUND AND CONNECT TO MCC GROUND BUS.
- ③ GROUND CABLE SHALL BE A MINIMUM 2'-0" BELOW FINAL GRADE.
- ④ INSTALL AIR TERMINALS WITHIN 2'-0" OF ROOF EDGES AT INTERVALS NOT EXCEEDING 20'-0" ALONG RIDGE OF THE ROOF. AIR TERMINALS SHALL BE INSTALLED AS SHOWN ON THE DETAIL ON THIS SHEET.
- ⑤ GROUND RODS SHALL BE PROVIDED AS SHOWN ON SHEET E2. GROUND RODS SHOWN ON THIS SHEET FOR CLARIFICATION ONLY.
- ⑥ GROUNDING TRIANGLE GROUND RODS SHALL BE SPACED A MINIMUM OF TEN FEET APART.
- ⑦ PROVIDE A CONCRETE ENCASED GROUNDING ELECTRODE (GROUND CONDUCTOR ROUTED IN FOUNDATION WALL) TO GROUND THE BUILDING AND STRUCTURE FOOTINGS TO THE GROUND GRID.
- ⑧ ROUTE GROUND CONDUCTOR THROUGH WALL AIR SPACE AS SHOWN ON THE DETAIL ON THIS SHEET.



LEGEND

- AIR TERMINAL
- ⊙ GROUND ROD
- ⊠ GROUND TEST WELL
- △ GROUNDING GRID TRIANGLE
- GROUND WIRE



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ELECTRICAL ROOF LIGHTNING PROTECTION PLAN
PUMP STATION 49

SHEET E3 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	606
CONTRACT NO. 61J87				

ILLINOIS FED. AID PROJECT

MODEL: Default
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ASSOCIATES

1170 SOUTH HOUBOLT ROAD
JOLIET, ILLINOIS 60431
(815) 744-4200
IDFPR NO. 184-001273

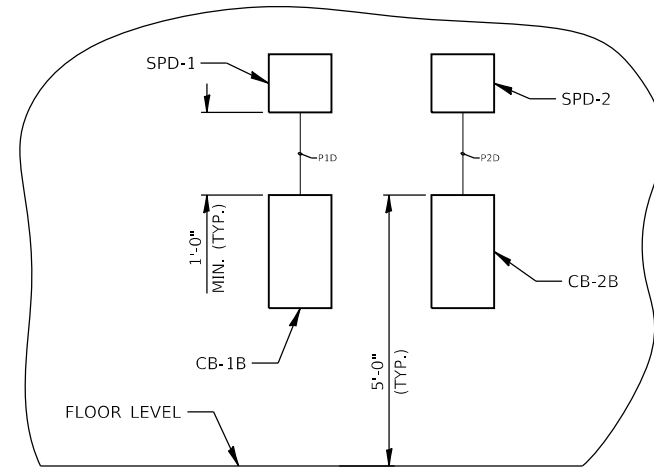
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E3

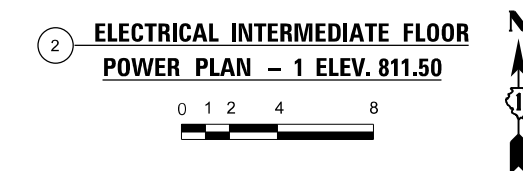
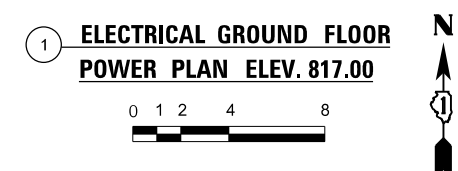
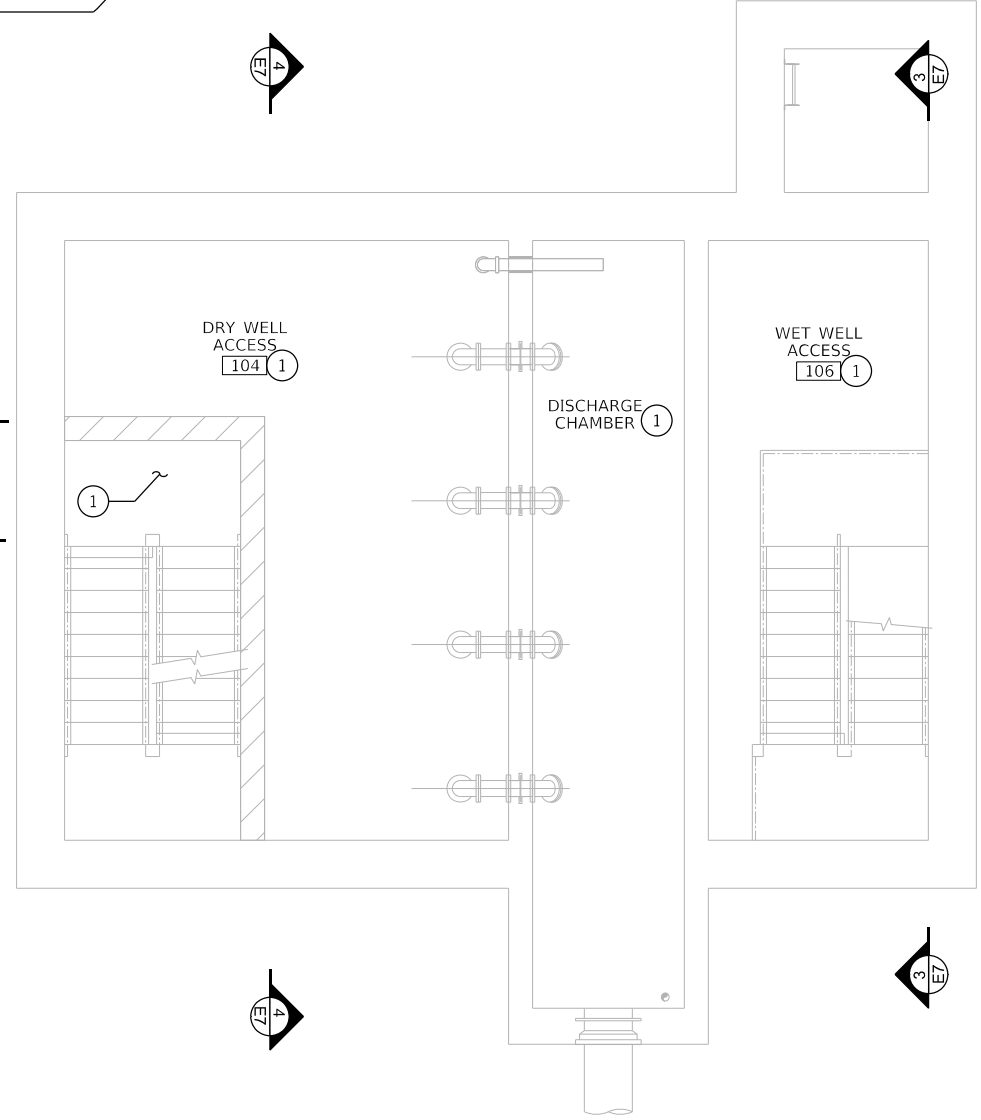
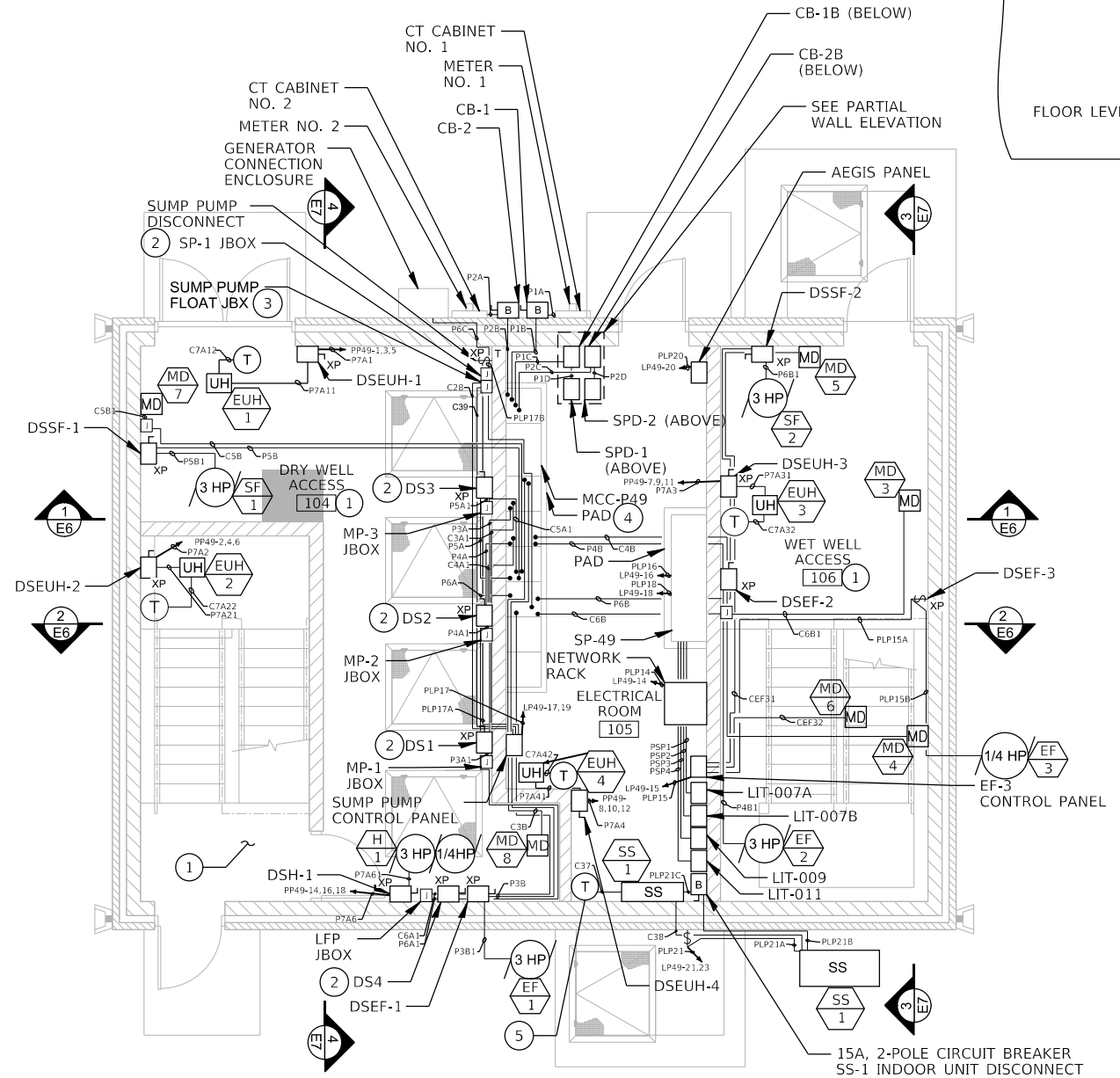
GENERAL NOTES:

1. ALL 120/208V EQUIPMENT ON THIS SHEET SHALL BE POWERED FROM LIGHTING PANEL LP-49 IN MCC-49, UNLESS NOTED OTHERWISE. REFER TO SHEET E27 FOR LIGHTING PANEL LP-49 SCHEDULE.
2. ALL 480V ELECTRIC UNIT HEATERS ON THIS SHEET SHALL BE POWERED FROM POWER PANEL PP-49 IN MCC-49, UNLESS NOTED OTHERWISE. REFER TO SHEET E27 FOR POWER PANEL PP-49 SCHEDULE.
3. REFER TO SHEET E28 FOR CONDUIT AND CABLE SCHEDULES.



KEY NOTES:

1. ALL ELECTRICAL WORK AND EQUIPMENT IN THIS AREA SHALL BE RATED FOR A CLASS I, DIVISION 2, GROUP D LOCATION.
2. PROVIDE A 2" CONDUIT STUB THROUGH FLOOR BELOW EACH PUMP JUNCTION BOX FOR INSTALLATION OF MANUFACTURER FURNISHED PUMP CABLE FROM PUMP JUNCTION BOX TO PUMP. CONDUIT SHALL EXTEND 6-INCHES ON EACH SIDE OF THE FLOOR. PROVIDE A STAINLESS STEEL KELLUM GRIP FOR SUPPORTING EACH MANUFACTURER FURNISHED PUMP CABLE FROM A STAINLESS STEEL HOOK ONE FOOT BELOW PUMP JUNCTION BOX.
3. PROVIDE INDIVIDUAL 2" CONDUIT STUBS (3 TOTAL) THROUGH FLOOR BELOW SUMP PUMP FLOAT SWITCH JUNCTION BOX FOR INSTALLATION OF MANUFACTURER FURNISHED FLOAT SWITCH CABLE FROM SUMP PUMP FLOAT SWITCH JUNCTION BOX TO SUMP PUMP FLOAT SWITCHES. CONDUIT SHALL EXTEND 6-INCHES ON EACH SIDE OF THE FLOOR. PROVIDE A STAINLESS STEEL KELLUM GRIP FOR SUPPORTING EACH MANUFACTURER FURNISHED FLOAT SWITCH CABLE FROM THE BOTTOM OF THE SUMP PUMP FLOAT SWITCH JUNCTION BOX.
4. PROVIDE MCC PAD AS SHOWN ON SHEET E25.
5. PROVIDE OUTLET BOX FOR DIVISION 23 PROVIDED UNIT CONTROLLER.



STATE OF ILLINOIS
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ELECTRICAL GROUND & INTERMEDIATE FLOOR - 1 POWER PLANS
PUMP STATION 49

F.A.P. RTE. 305	SECTION 11-00087-00-GS	COUNTY LAKE	TOTAL SHEETS 816	SHEET NO. 607
CONTRACT NO. 61J87				
ILLINOIS FED. AID PROJECT				

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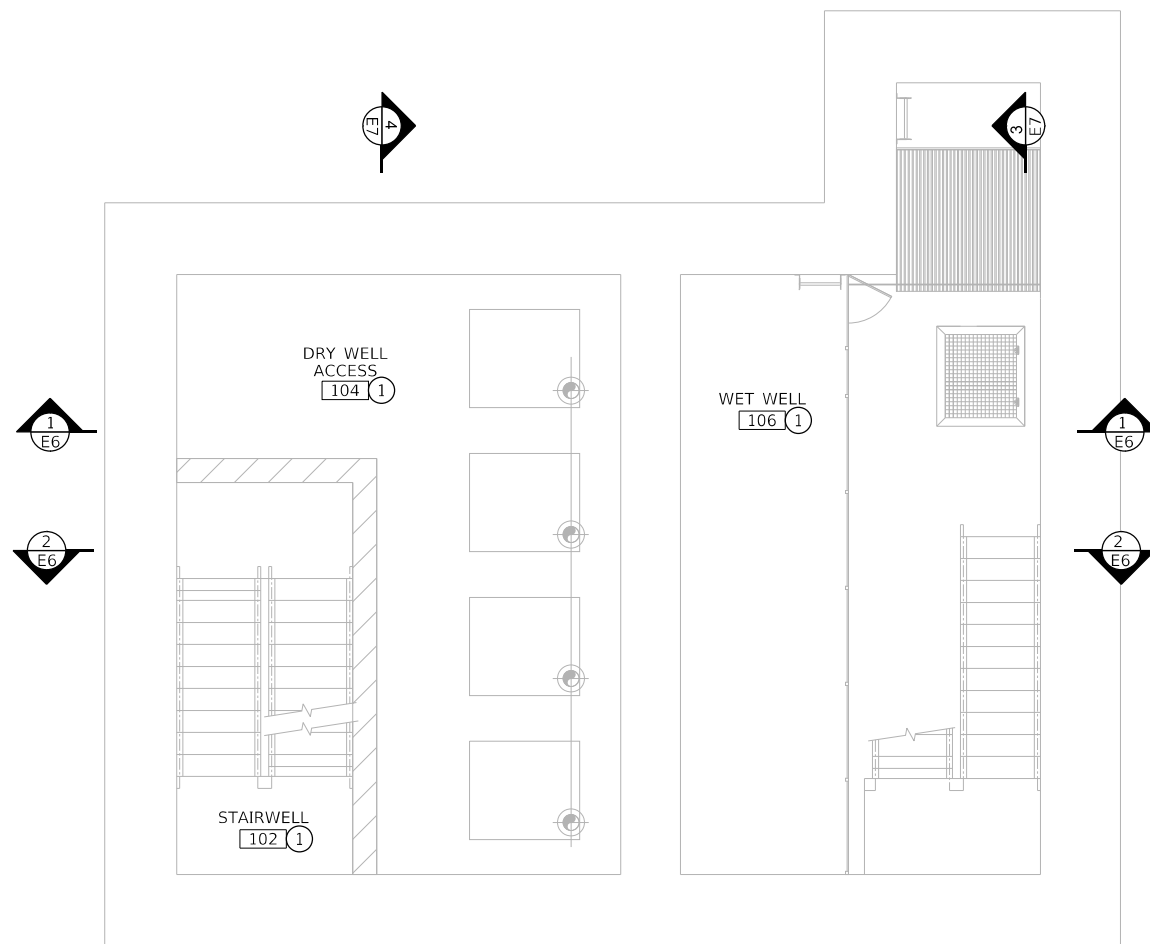
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GENERAL NOTES:

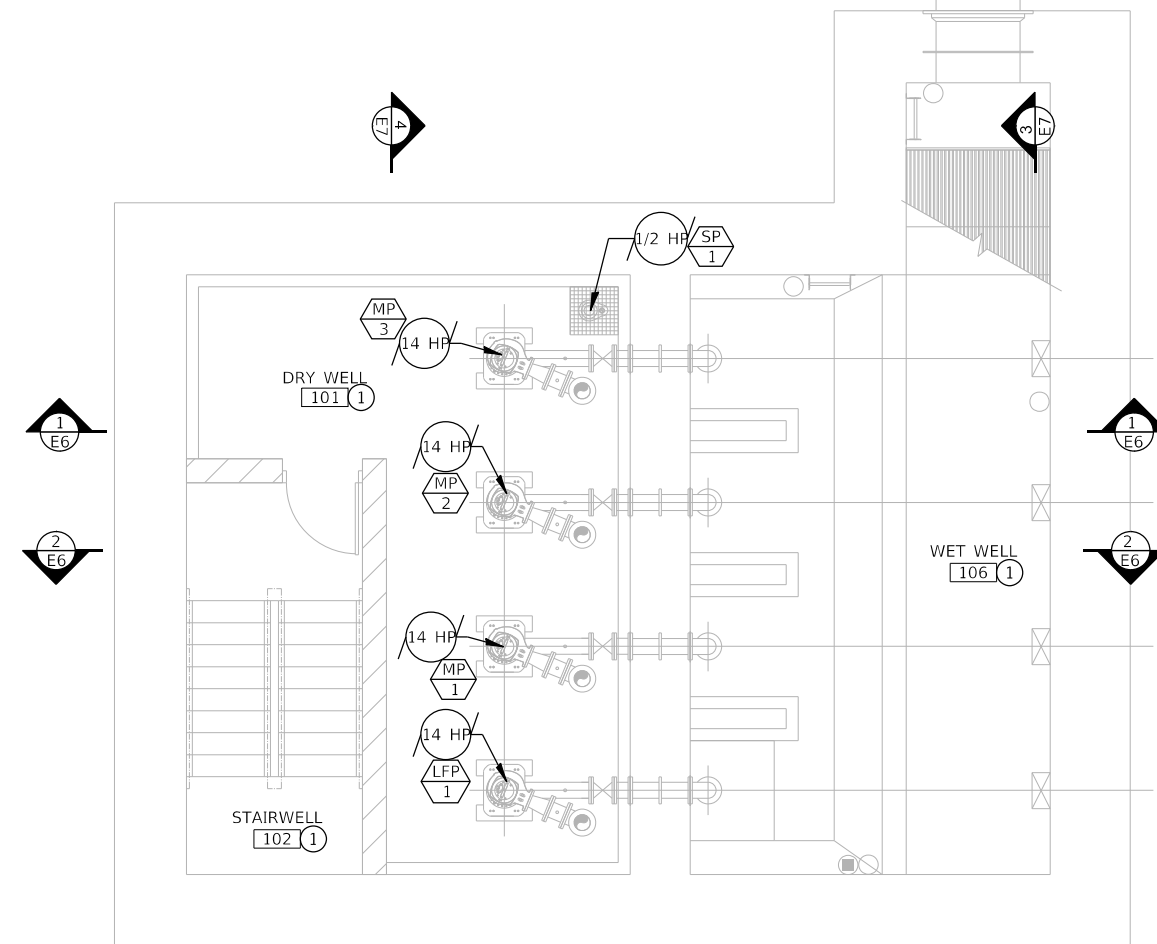
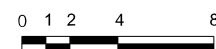
1. ALL 120/208V EQUIPMENT ON THIS SHEET SHALL BE POWERED FROM LIGHTING PANEL LP-49 IN MCC-49, UNLESS NOTED OTHERWISE. REFER TO SHEET E27 FOR LIGHTING PANEL LP-49 SCHEDULE.
2. ALL 480V ELECTRIC UNIT HEATERS ON THIS SHEET SHALL BE POWERED FROM POWER PANEL PP-49 IN MCC-49, UNLESS NOTED OTHERWISE. REFER TO SHEET E27 FOR POWER PANEL PP-49 SCHEDULE.
3. REFER TO SHEET E28 FOR CONDUIT AND CABLE SCHEDULES.

KEY NOTES:

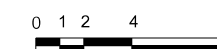
- ① ALL ELECTRICAL WORK AND EQUIPMENT IN THIS AREA SHALL BE RATED FOR A CLASS 1, DIVISION 2, GROUP D LOCATION.



① **ELECTRICAL INTERMEDIATE FLOOR
POWER PLAN - 2 ELEV. 793.00**



② **ELECTRICAL WET WELL FLOOR
POWER PLAN - 3 ELEV. 777.50**



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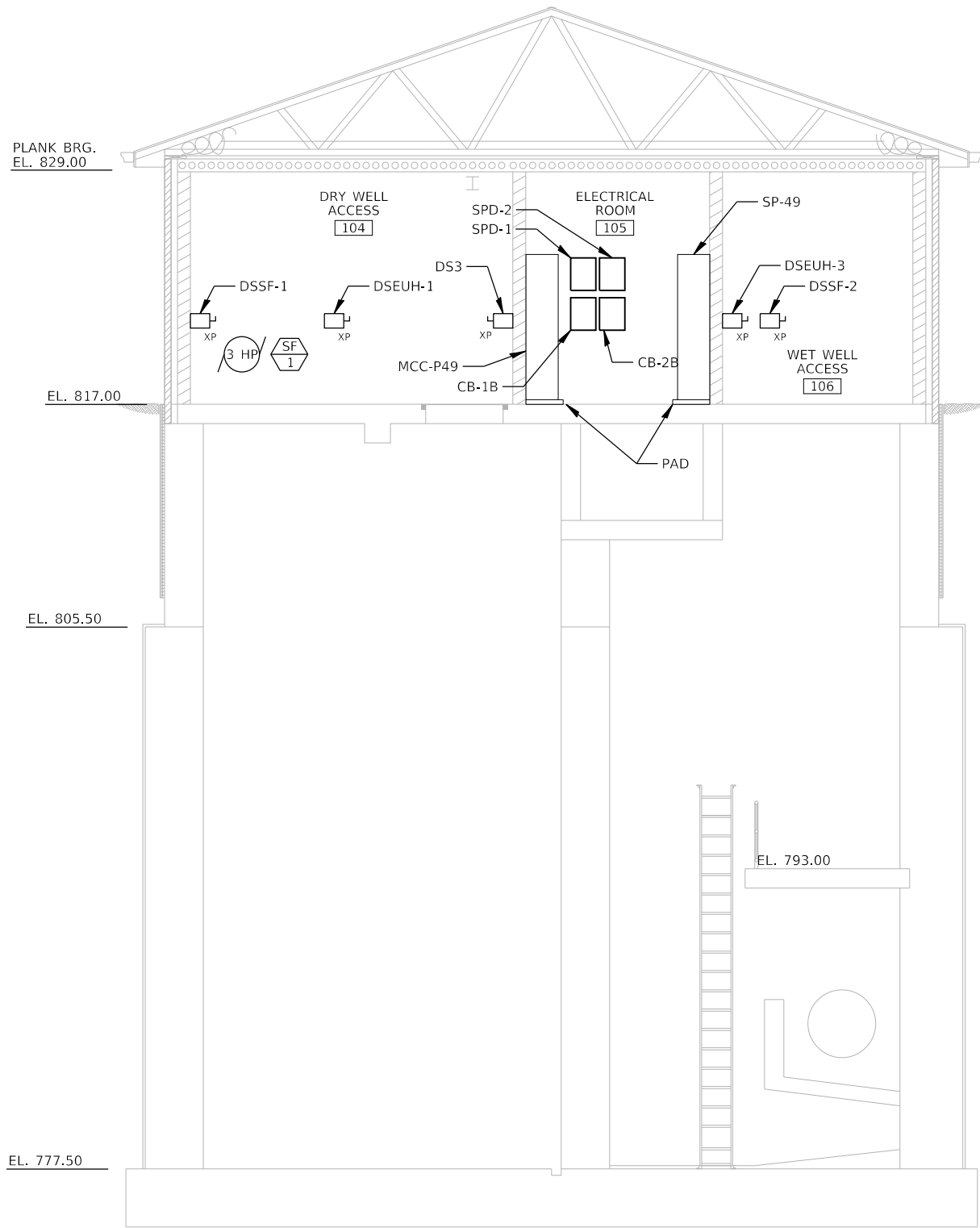
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

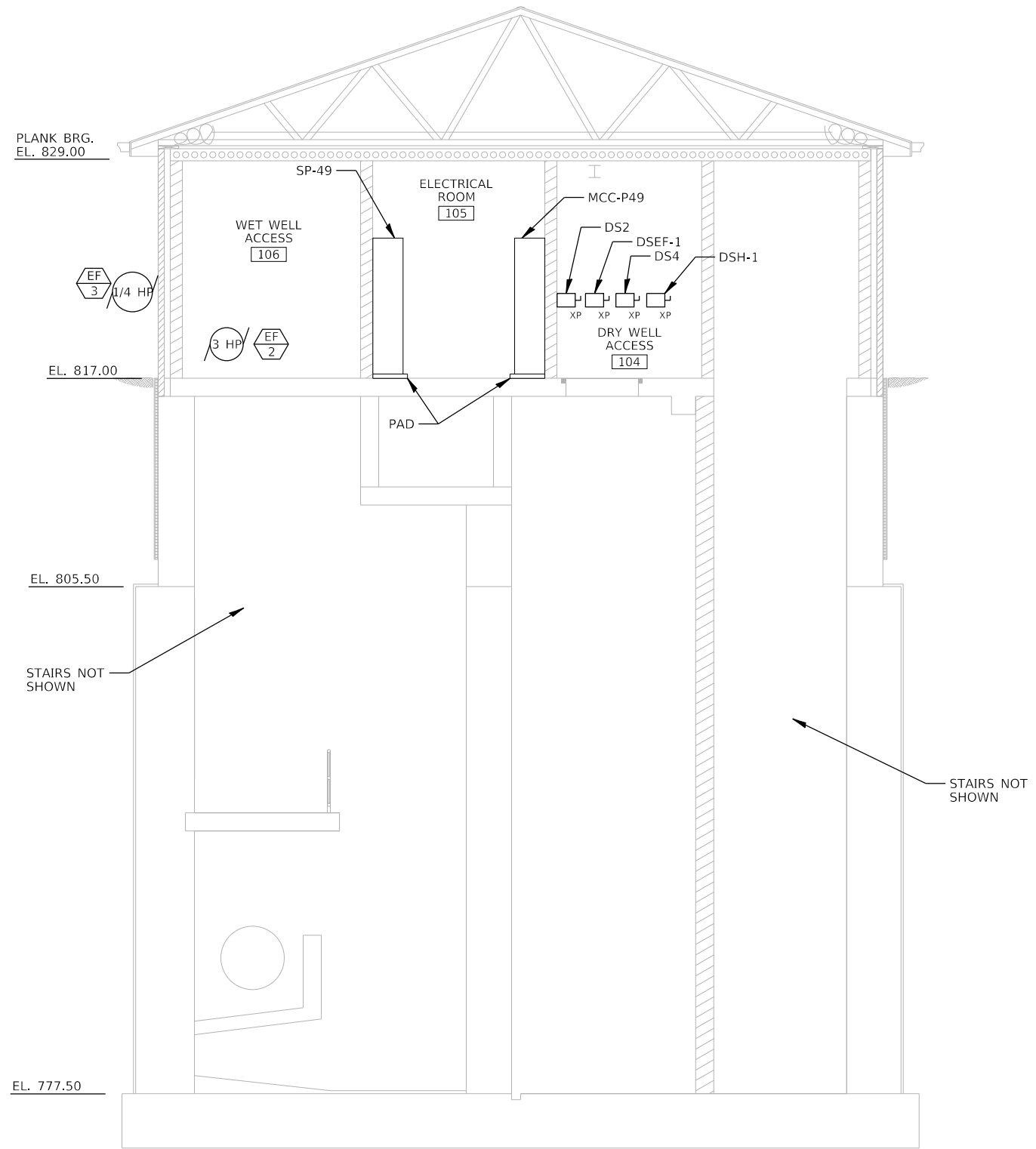
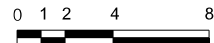
**ELECTRICAL INTERMEDIATE - 2 & WET WELL FLOOR POWER PLANS
PUMP STATION 49**

SHEET E5 OF 28 SHEETS

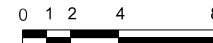
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	608
CONTRACT NO. 61J87				
ILLINOIS FED. AID PROJECT				



1 ELECTRICAL POWER PUMP STATION SECTION LOOKING NORTH



2 ELECTRICAL POWER PUMP STATION SECTION LOOKING SOUTH



MODEL: Default
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STRAND ASSOCIATES
 1170 SOUTH HOUBOLT ROAD
 JOLIET, ILLINOIS 60431
 (815) 744-4200
 IDFPR NO. 184-001273

USER NAME = brianf	DESIGNED - ARC	REVISED -
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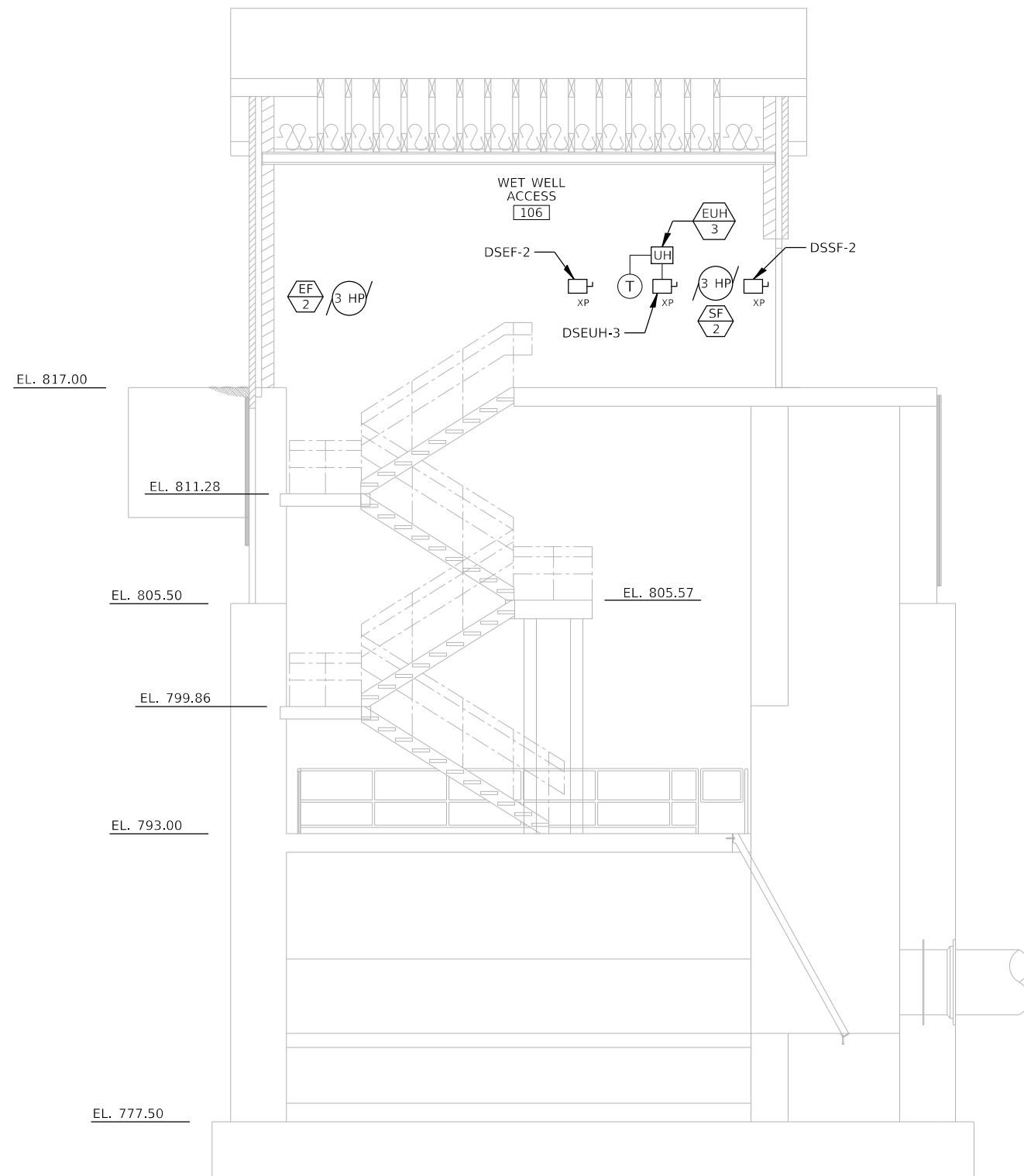
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

ELECTRICAL PUMP STATION POWER SECTIONS - NORTH & SOUTH
 PUMP STATION 49
 SHEET E6 OF 28 SHEETS

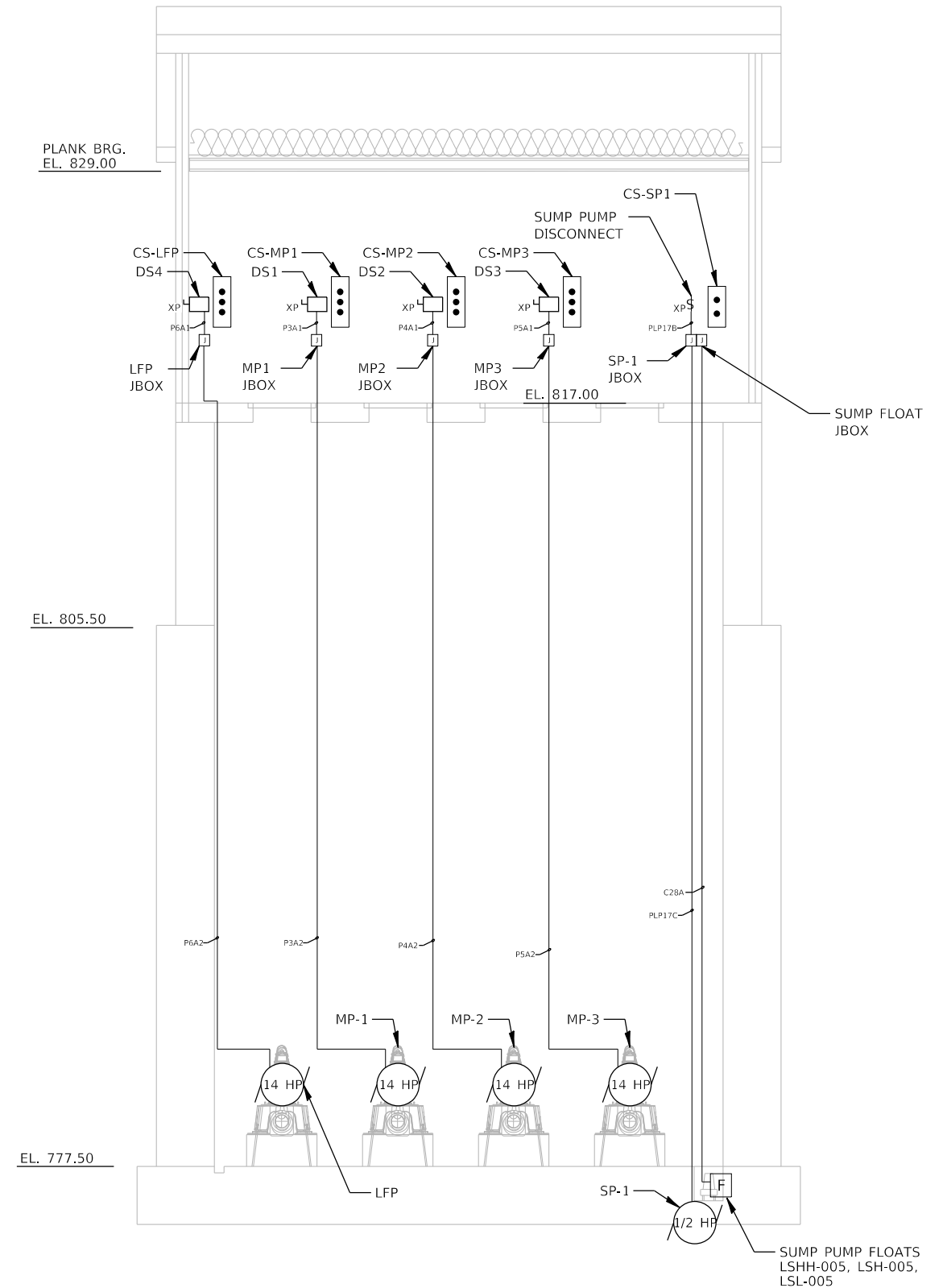
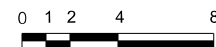
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CONTRACT NO. 61J87				
ILLINOIS FED. AID PROJECT				

GENERAL NOTES:

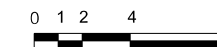
- REFER TO SHEET E28 FOR CONDUIT AND CABLE SCHEDULES.



3 ELECTRICAL POWER PUMP STATION SECTION LOOKING EAST



4 ELECTRICAL POWER PUMP STATION SECTION LOOKING WEST



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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

ELECTRICAL PUMP STATION POWER SECTIONS - EAST & WEST
 PUMP STATION 49

SHEET E7 OF 28 SHEETS

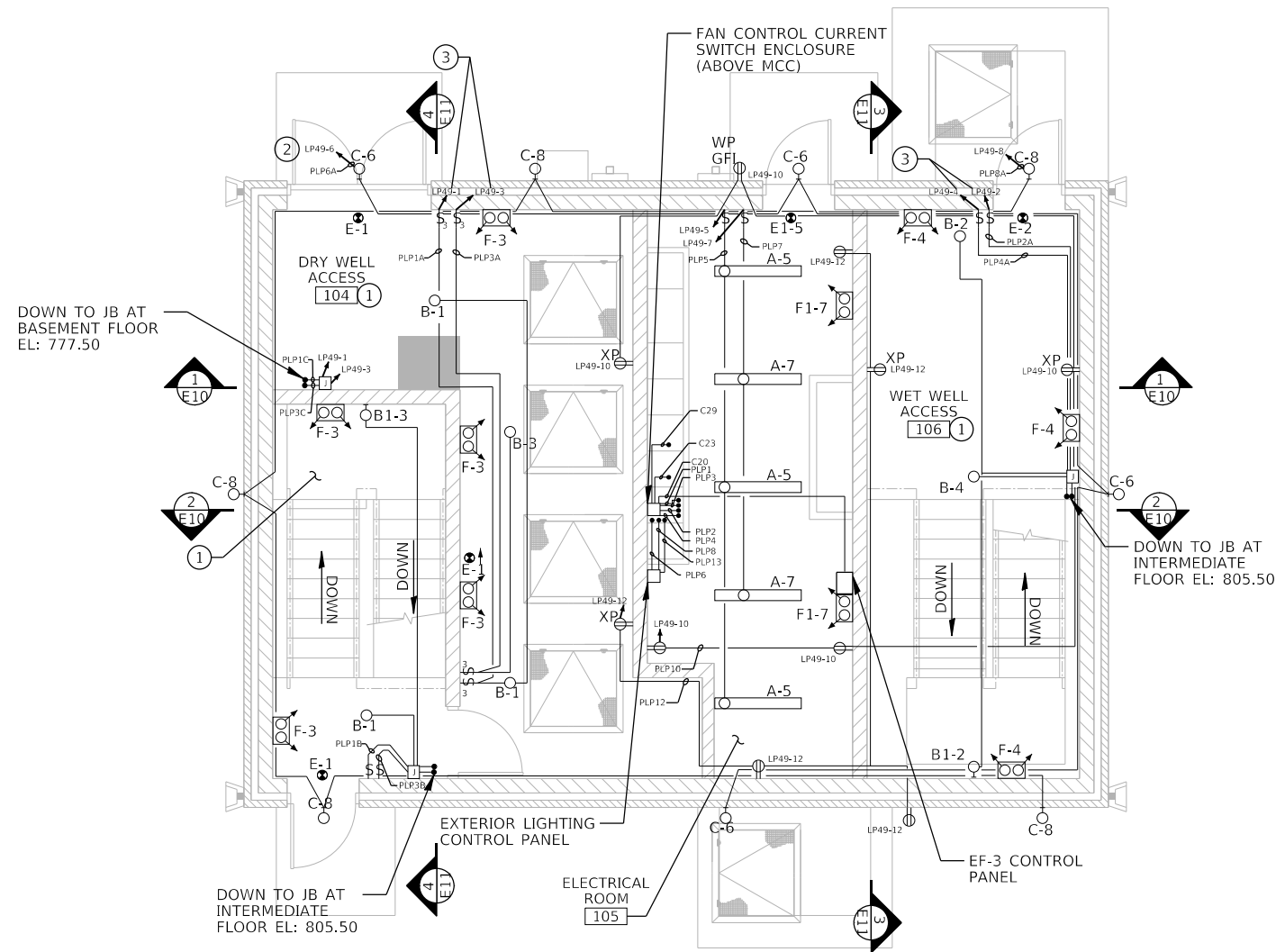
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305	11-00087-00-GS	LAKE	816	610
CONTRACT NO. 61J87				
ILLINOIS FED. AID PROJECT				

GENERAL NOTES:

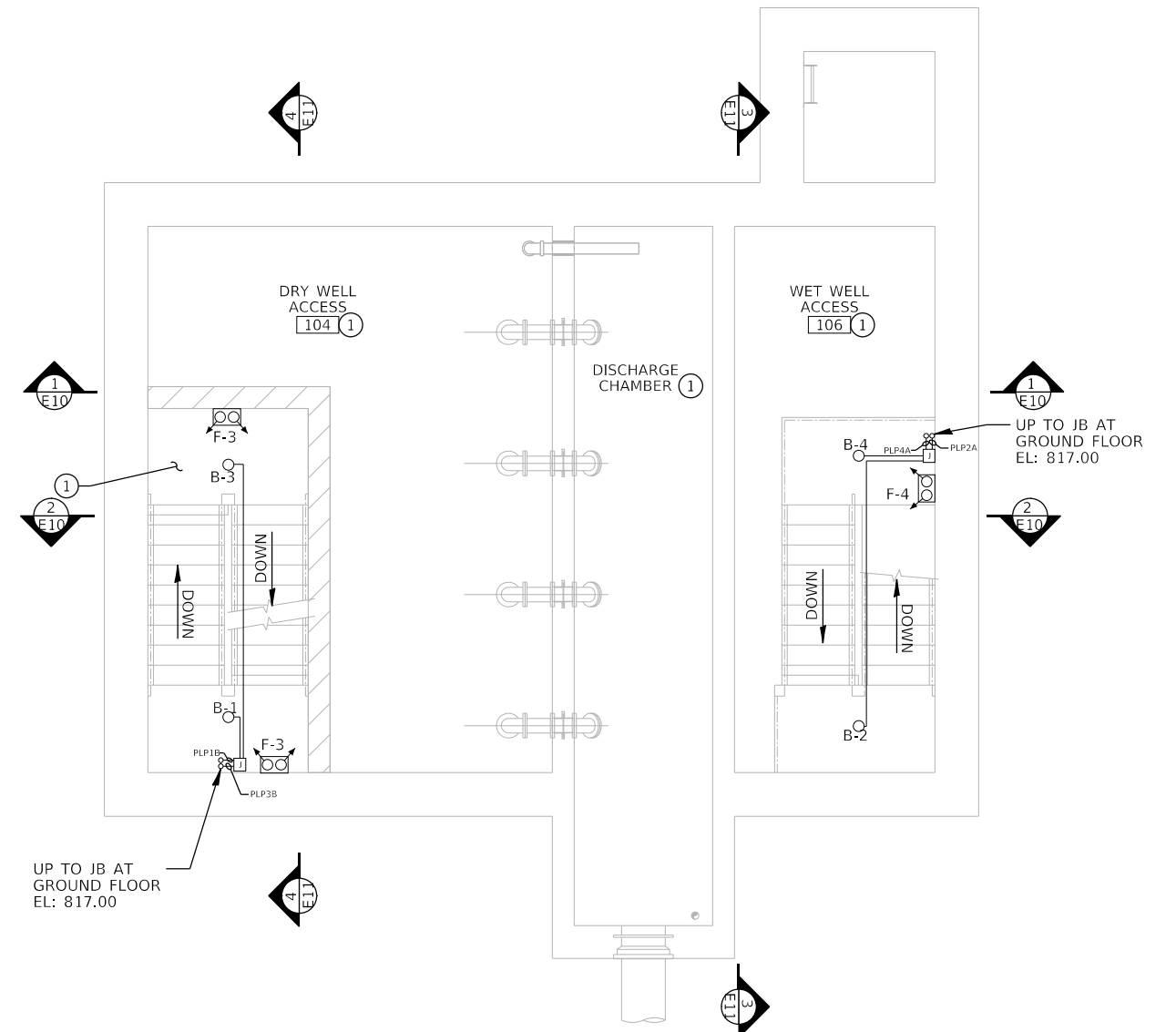
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2. REFER TO SHEET E28 FOR CONDUIT AND CABLE SCHEDULES.

KEY NOTES:

1. ALL ELECTRICAL WORK AND EQUIPMENT IN THIS AREA SHALL BE RATED FOR A CLASS I, DIVISION 2, GROUP D LOCATION.
2. EXTERIOR LIGHTING BRANCH CIRCUIT CONDUIT AND WIRING SHALL BE THROUGH EXTERIOR LIGHTING CONTROL PANEL.
3. INTERIOR LIGHTING BRANCH CIRCUIT CONDUIT AND WIRING SHALL BE THROUGH FAN CONTROL CURRENT SWITCH ENCLOSURE (ABOVE MCC).



1 **ELECTRICAL GROUND LIGHTING AND RECEPTACLE PLAN ELEV. 817.00**



2 **ELECTRICAL INTERMEDIATE LIGHTING AND RECEPTACLE PLAN - 1 ELEV. 811.50**



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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

ELECTRICAL GROUND & INTERMEDIATE - 1 FLOOR LIGHTING & RECEPTACLE PLANS - PUMP STATION 49

SHEET E8 OF 28 SHEETS

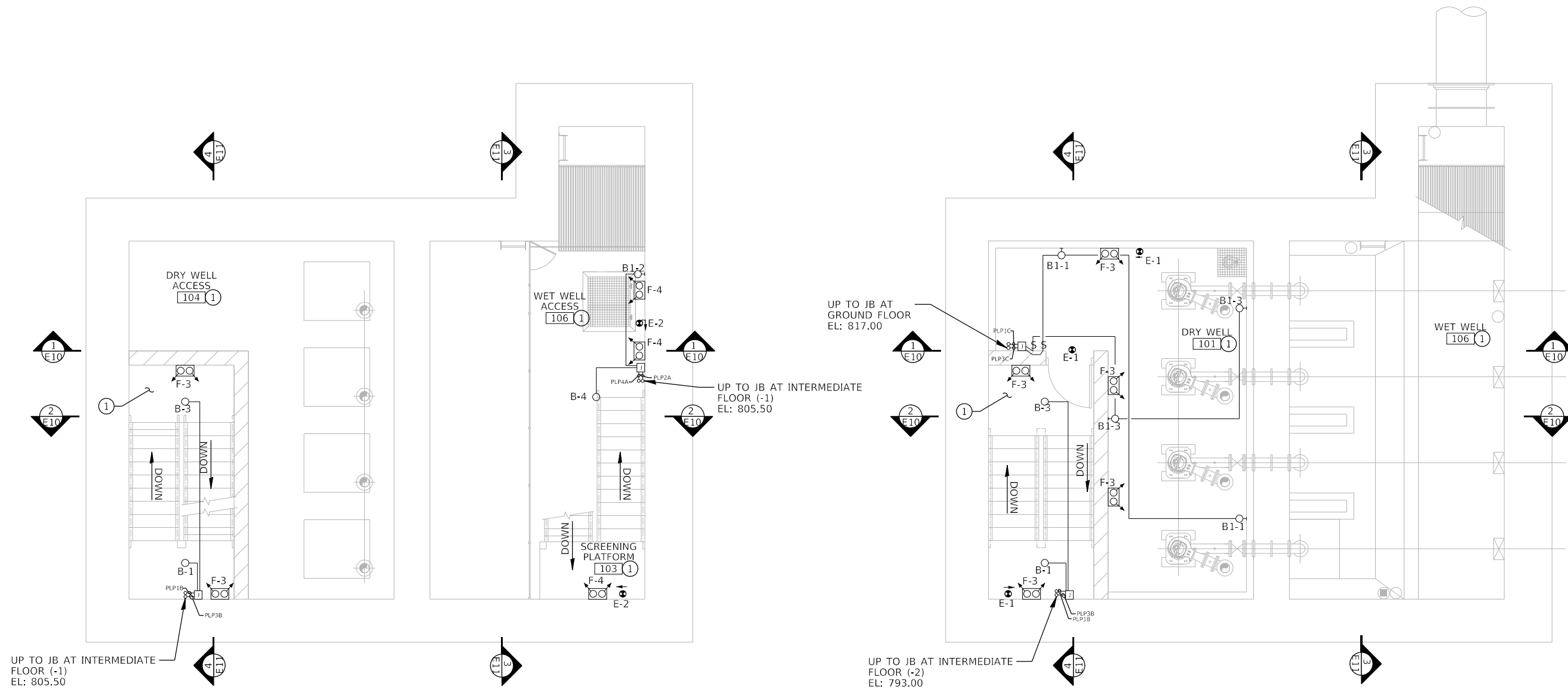
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CONTRACT NO. 61J87				
ILLINOIS		FED. AID PROJECT		

GENERAL NOTES:

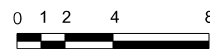
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2. REFER TO SHEET E28 FOR CONDUIT AND CABLE SCHEDULES.

KEY NOTES:

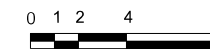
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1 **ELECTRICAL INTERMEDIATE LIGHTING AND RECEPTACLE PLAN - 2 ELEV. 793.00**



2 **ELECTRICAL WET WELL LIGHTING AND RECEPTACLE PLAN - 3 ELEV. 777.50**



MODEL: Default
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 IDFPR NO. 184-001273

USER NAME = brianf
 DESIGNED - ARC
 DRAWN - BJF
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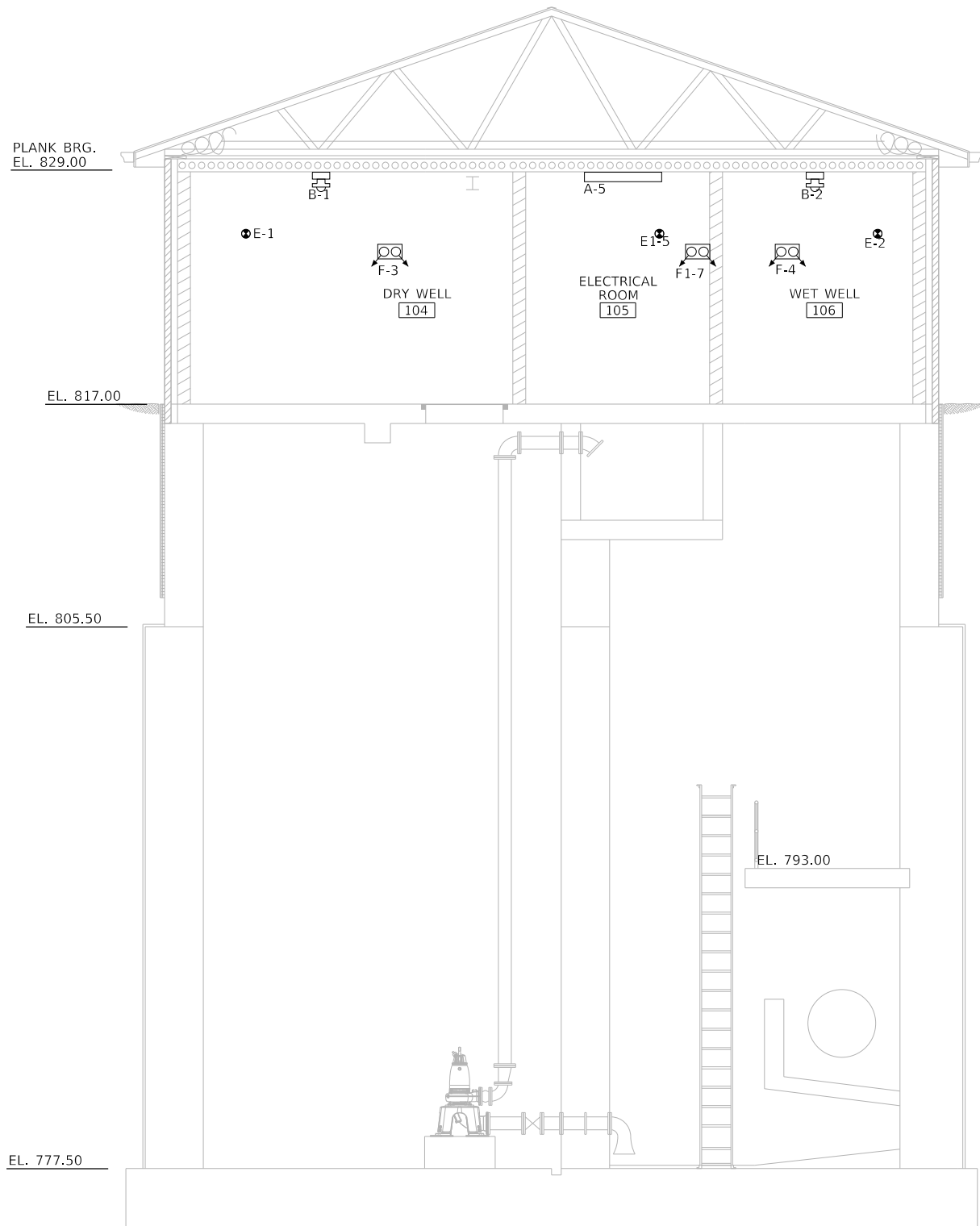
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

ELECTRICAL INTERMEDIATE - 2 & WET WELL FLOOR LIGHTING & RECEPTACLE PLANS - PUMP STATION 49

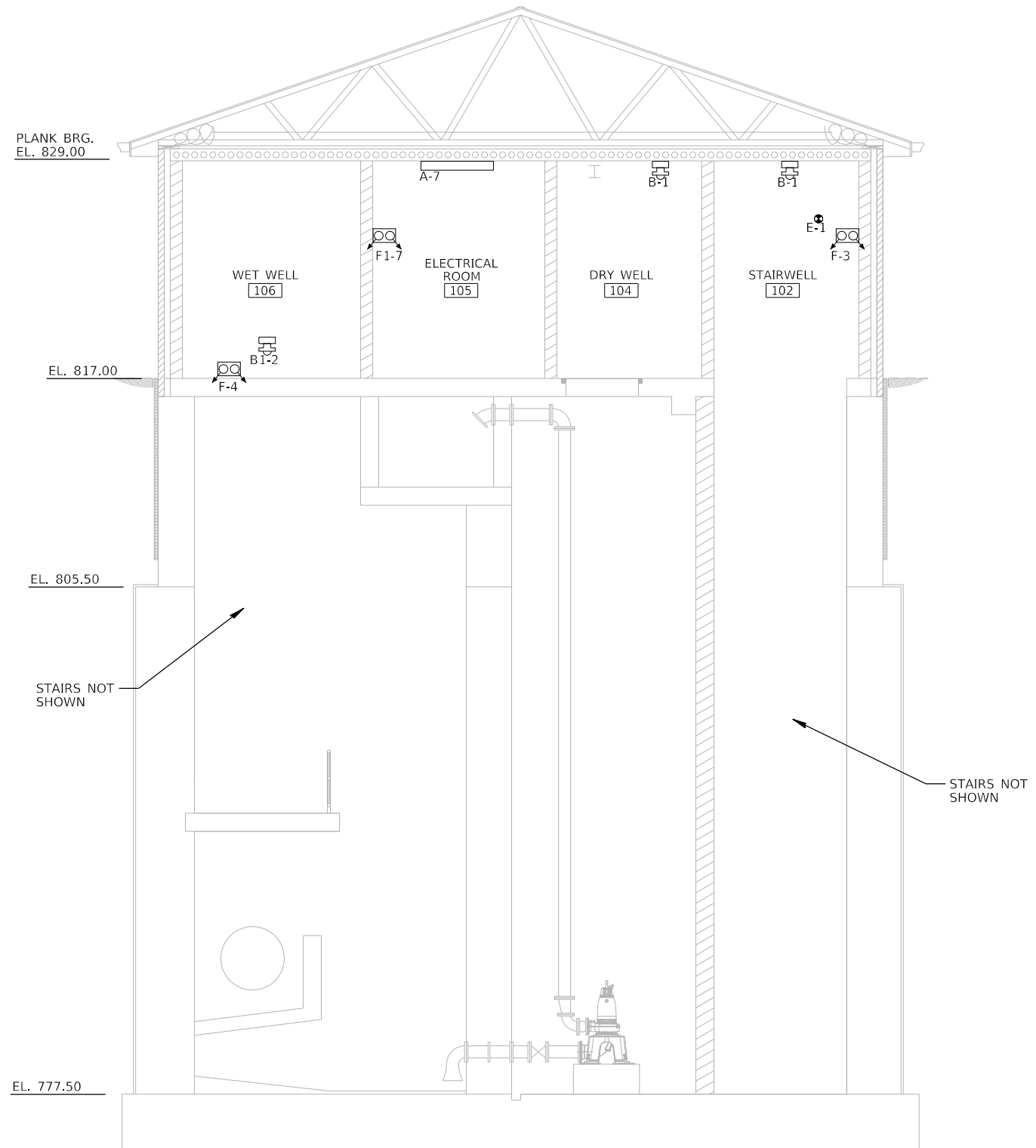
SHEET E9 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	612
CONTRACT NO. 61J87				
ILLINOIS		FED. AID PROJECT		

8/27/2024 9:30:46 AM



1 PUMP STATION LIGHTING SECTION LOOKING NORTH



2 PUMP STATION LIGHTING SECTION LOOKING SOUTH

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1170 SOUTH HOUBOLT ROAD
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(815) 744-4200
IDFPR NO. 184-001273

USER NAME = brianf	DESIGNED - ARC	REVISED -
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PLOT DATE = 8/27/2024	DATE - 8/28/2024	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

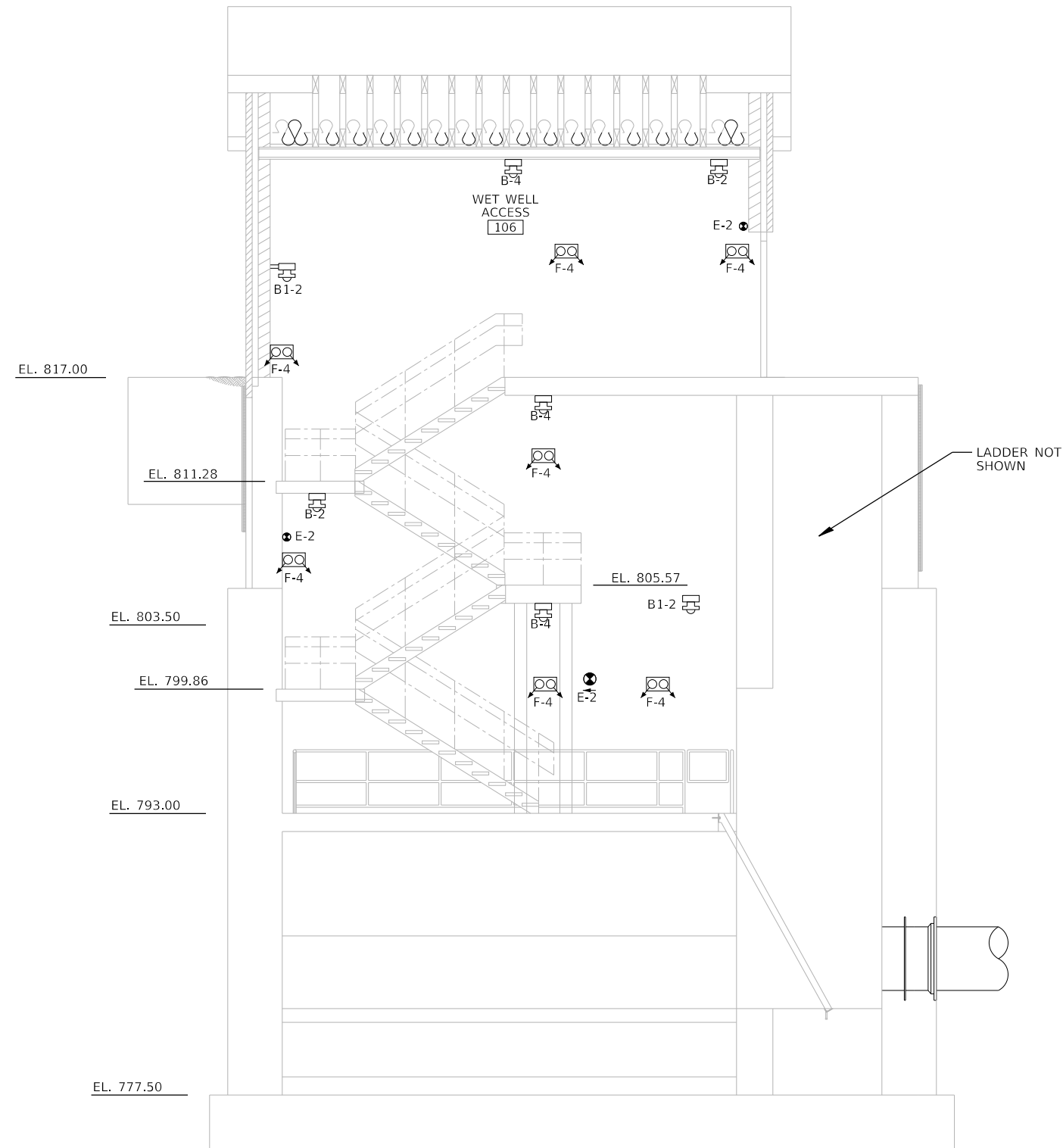
ELECTRICAL PUMP STATION LIGHTING SECTIONS - NORTH & SOUTH
PUMP STATION 49

SHEET E10 OF 28 SHEETS

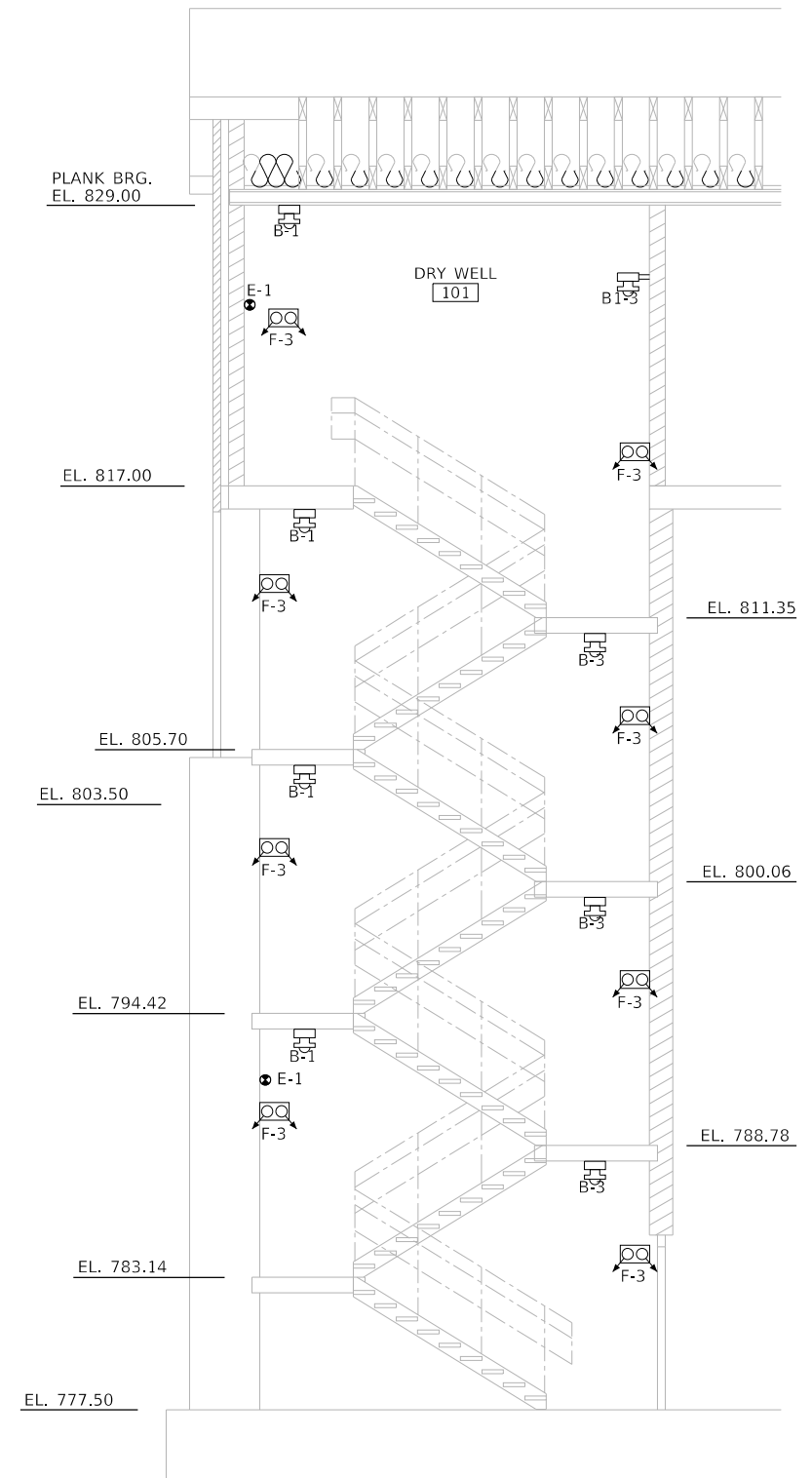
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	613
CONTRACT NO. 61J87				
ILLINOIS		FED. AID PROJECT		

E10

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3 PUMP STATION LIGHTING SECTION LOOKING EAST
 0 1 2 4 8



4 PUMP STATION LIGHTING SECTION LOOKING WEST
 0 1 2 4 8



USER NAME = brianf	DESIGNED - ARC	REVISED -
DRAWN - BJF	CHECKED - SAI	REVISED -
PLOT SCALE = 8:0.0000 "/>		

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

ELECTRICAL PUMP STATION LIGHTING SECTIONS - EAST & WEST	
PUMP STATION 49	
SHEET E11 OF 28 SHEETS	

F.A.P. RTE. 305	SECTION 11-00087-00-GS	COUNTY LAKE	TOTAL SHEETS 816	SHEET NO. 614
CONTRACT NO. 61J87				
ILLINOIS FED. AID PROJECT				

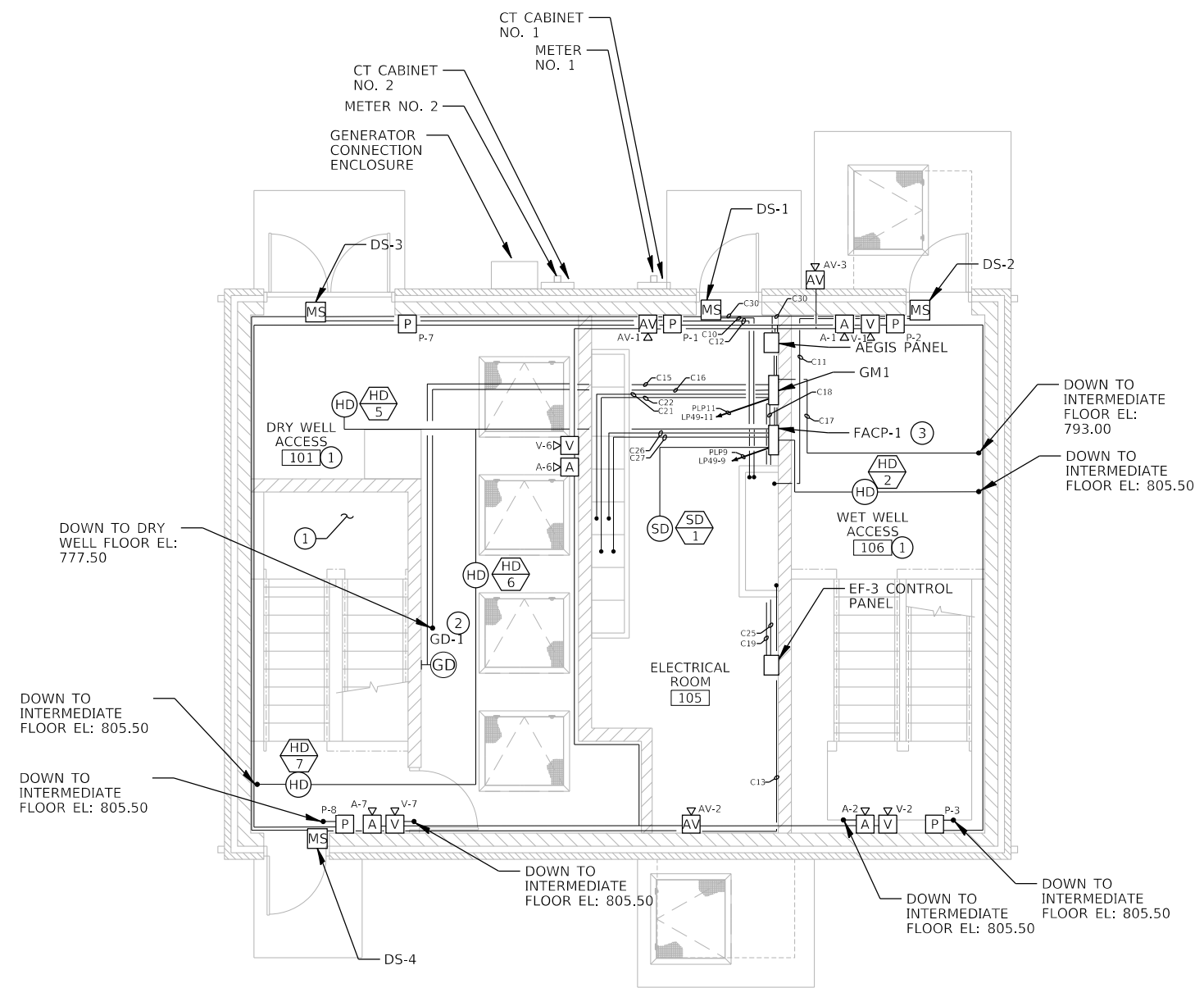
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GENERAL NOTES:

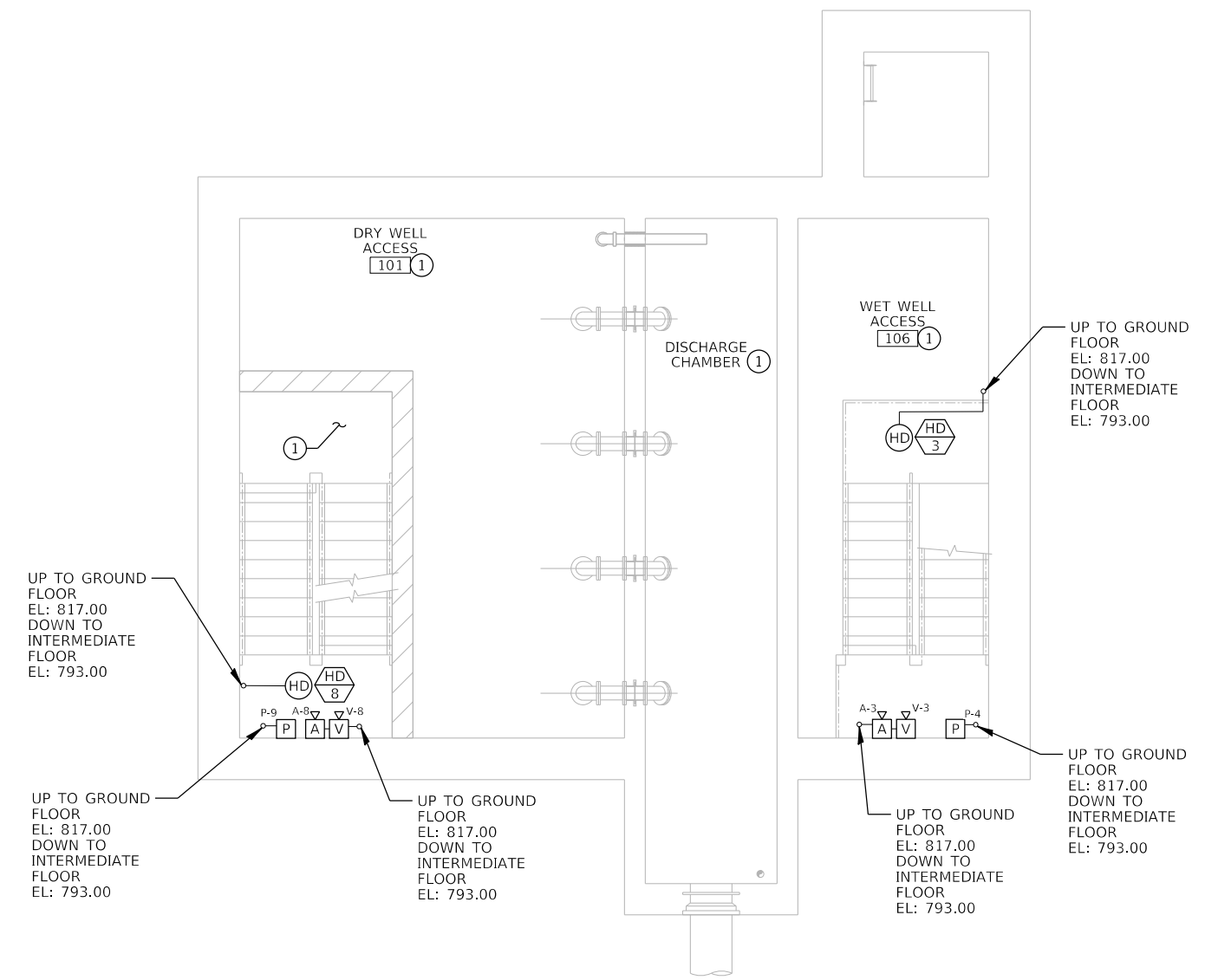
1. ALL 120/208V EQUIPMENT ON THIS SHEET SHALL BE POWERED FROM LIGHTING PANEL LP-49 IN MCC-49, UNLESS NOTED OTHERWISE. REFER TO SHEET E27 FOR LIGHTING PANEL LP-49 SCHEDULE.
2. REFER TO SHEET E28 FOR CONDUIT AND CABLE SCHEDULES.

KEY NOTES:

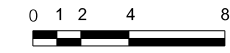
- ① ALL ELECTRICAL WORK AND EQUIPMENT IN THIS AREA SHALL BE RATED FOR A CLASS I, DIVISION 2, GROUP D LOCATION.
- ② INSTALL GAS DETECTION AS SHOWN ON DRAWING E26.
- ③ SPACE ADJACENT TO THE FACP SHALL BE RESERVED FOR ANCILLARY ITEMS ASSOCIATED WITH THE FIRE ALARM SYSTEM. COORDINATE INSTALLATION OF FIRE ALARM SYSTEM ANCILLARY ITEMS WITH FACP SUPPLIER.



① **ELECTRICAL GROUND FLOOR FIRE DETECTION, GAS DETECTION, AND SECURITY PLAN ELEV. 817.00**



② **ELECTRICAL INTERMEDIATE FLOOR FIRE DETECTION AND GAS DETECTION PLAN - 1 ELEV. 811.50**



MODEL: Default
FILE NAME: S:\MAD\1800--1899-1843\002\Drawings\CAD\Micros-SS4\CAD_Sheets\PS49-xxxx-E12-GroundFloorPlan.dgn

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1170 SOUTH HOUBOLT ROAD
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(815) 744-4200
IDFPR NO. 184-001273

USER NAME = brianf	DESIGNED - ARC	REVISED -
PLOT SCALE = 8:0.0000 "/>		

DRAWN - BJF	REVISED -
CHECKED - SAI	REVISED -
DATE - 8/28/2024	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

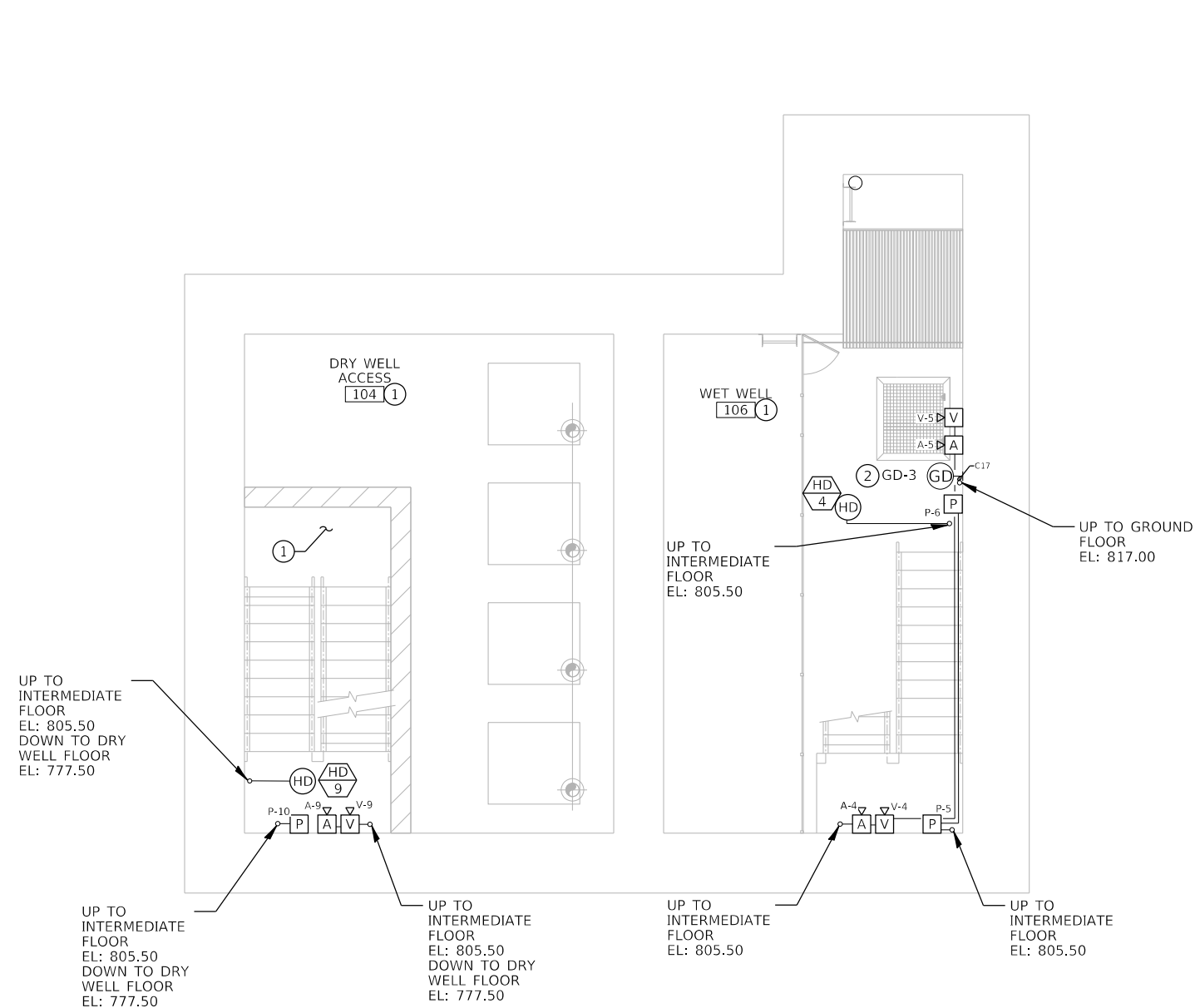
**ELECTRICAL GROUND & INTERMEDIATE - 1 FLOOR FIRE DETECTION,
GAS DETECTION, AND SECURITY PLANS - PUMP STATION 49**

SHEET E12 OF 28 SHEETS

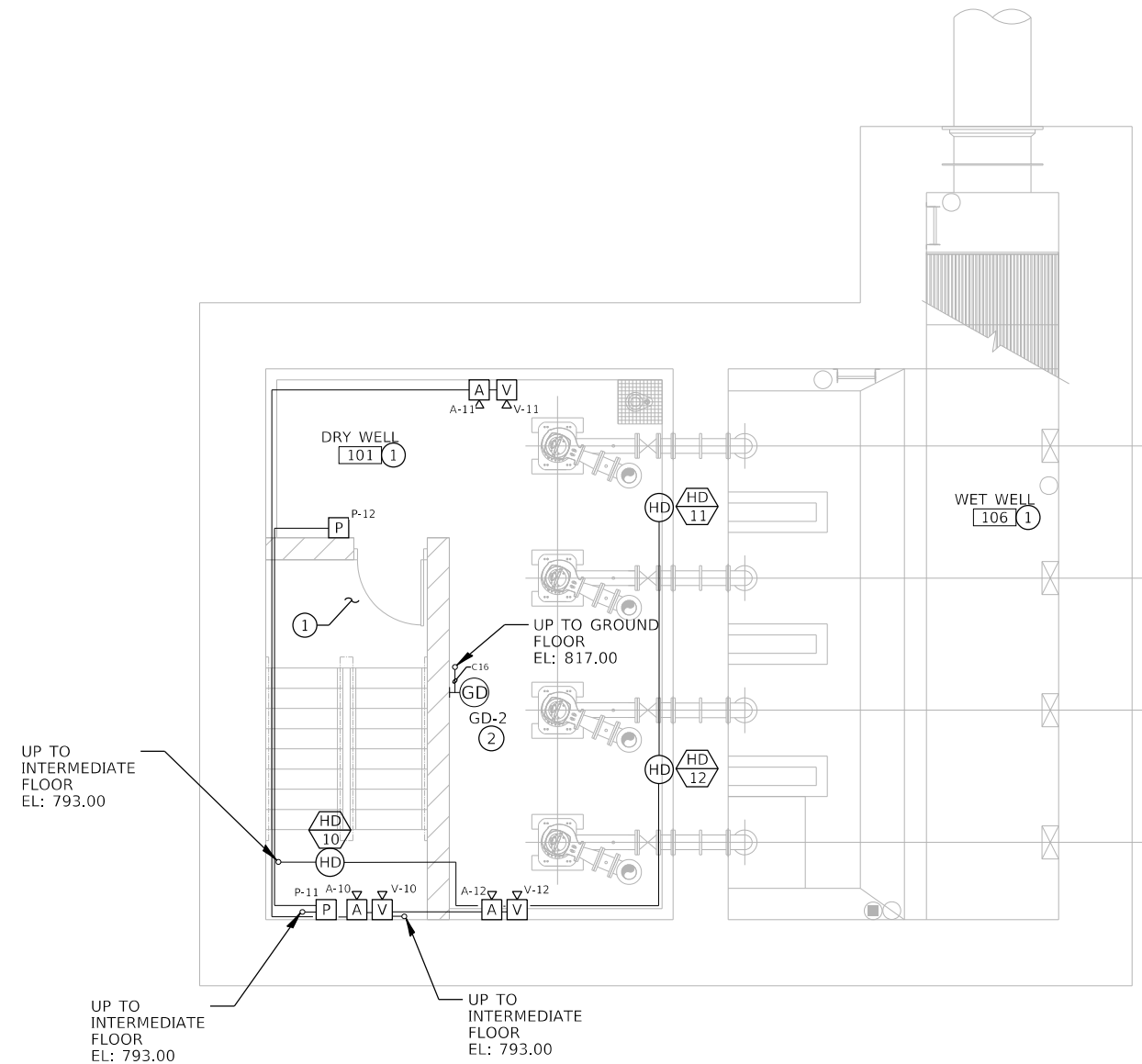
F.A.P. RTE. 305	SECTION 11-00087-00-GS	COUNTY LAKE	TOTAL SHEETS 816	SHEET NO. 615
CONTRACT NO. 61J87				
ILLINOIS FED. AID PROJECT				

KEY NOTES:

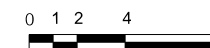
- ① ALL ELECTRICAL WORK AND EQUIPMENT IN THIS AREA SHALL BE RATED FOR A CLASS 1, DIVISION 2, GROUP D LOCATION.
- ② INSTALL GAS DETECTION AS SHOWN ON DRAWING E26.



① **ELECTRICAL INTERMEDIATE FLOOR FIRE DETECTION AND GAS DETECTION PLAN - 2 ELEV. 793.00**



② **ELECTRICAL WET WELL FLOOR FIRE DETECTION AND GAS DETECTION PLAN - 3 ELEV. 777.50**



MODEL: Default
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SA
STRAND ASSOCIATES
1170 SOUTH HOUBOLT ROAD
JOLIET, ILLINOIS 60431
(815) 744-4200
IDFPR NO. 184-001273

USER NAME =	brianf	DESIGNED -	ARC	REVISED -	
DRAWN -	BJF	CHECKED -	SAI	REVISED -	
PLOT SCALE =	8:0.0000 "/ in.	DATE -	8/28/2024	REVISED -	
PLOT DATE =	8/27/2024				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ELECTRICAL INTERMEDIATE - 2 & WET WELL FLOOR FIRE DETECTION AND GAS DETECTION PLANS - PUMP STATION 49

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	616
CONTRACT NO. 61J87				
ILLINOIS		FED. AID PROJECT		

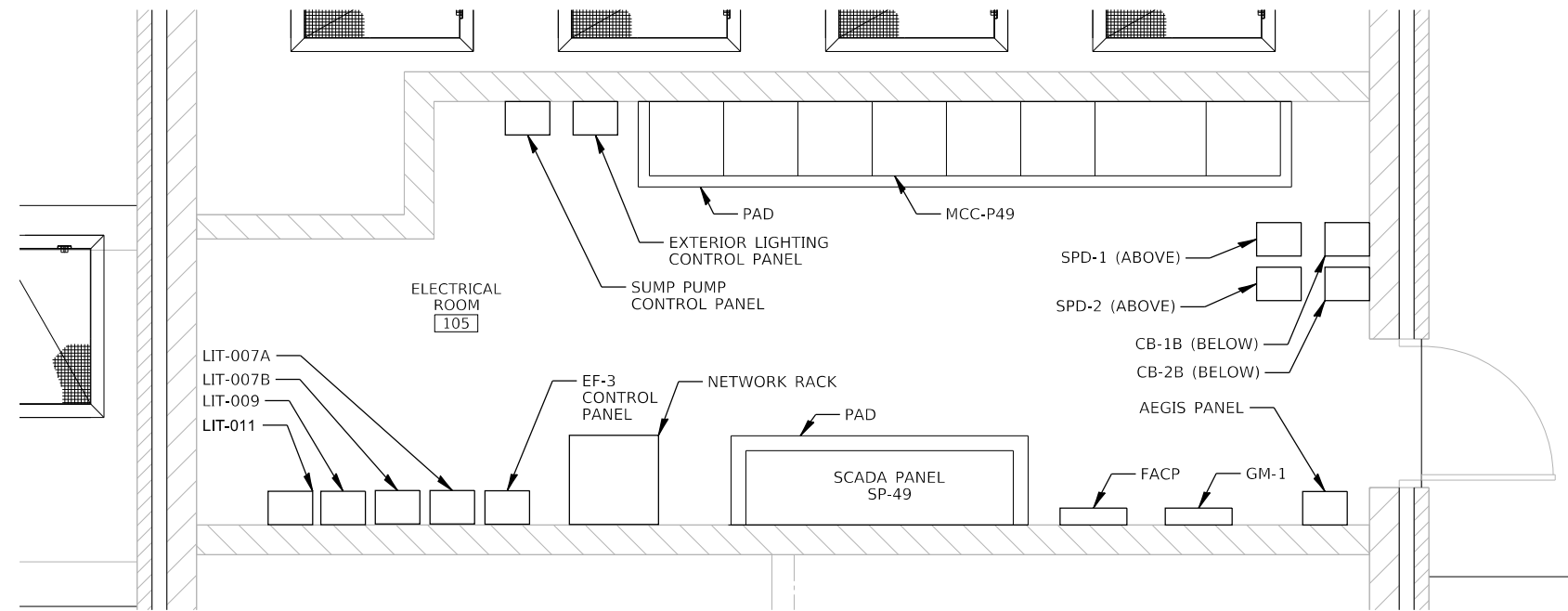
SHEET E13 OF 28 SHEETS

E13

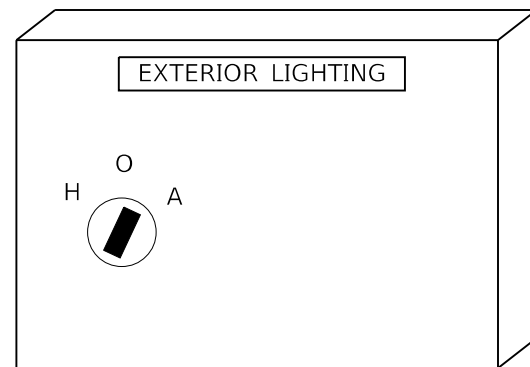
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GENERAL NOTES:

- REFER TO SHEET E28 FOR CONDUIT AND CABLE SCHEDULES.



ELECTRICAL ROOM LAYOUT PLAN



EXTERIOR LIGHTING CONTROL PANEL DETAIL

MODEL: Default
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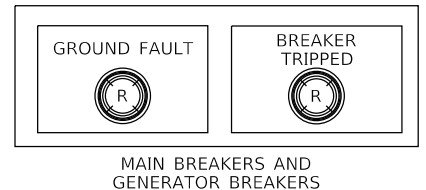
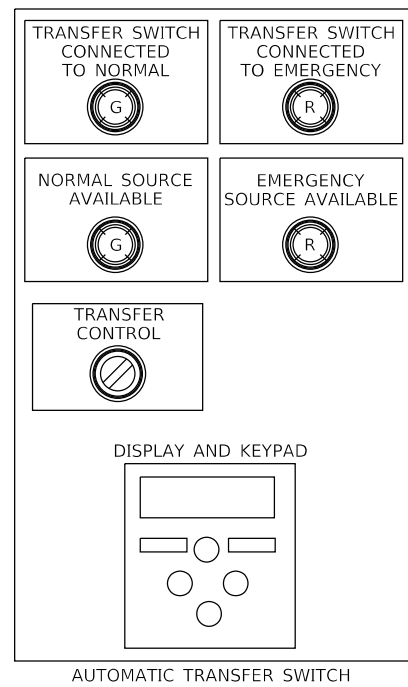
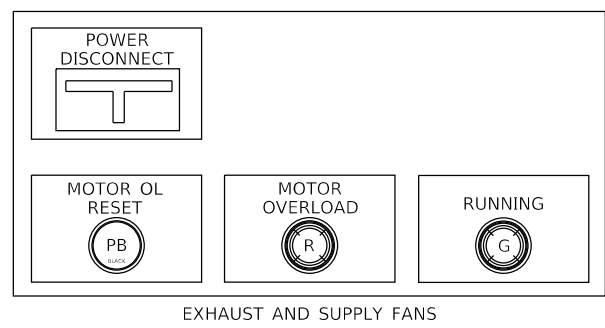
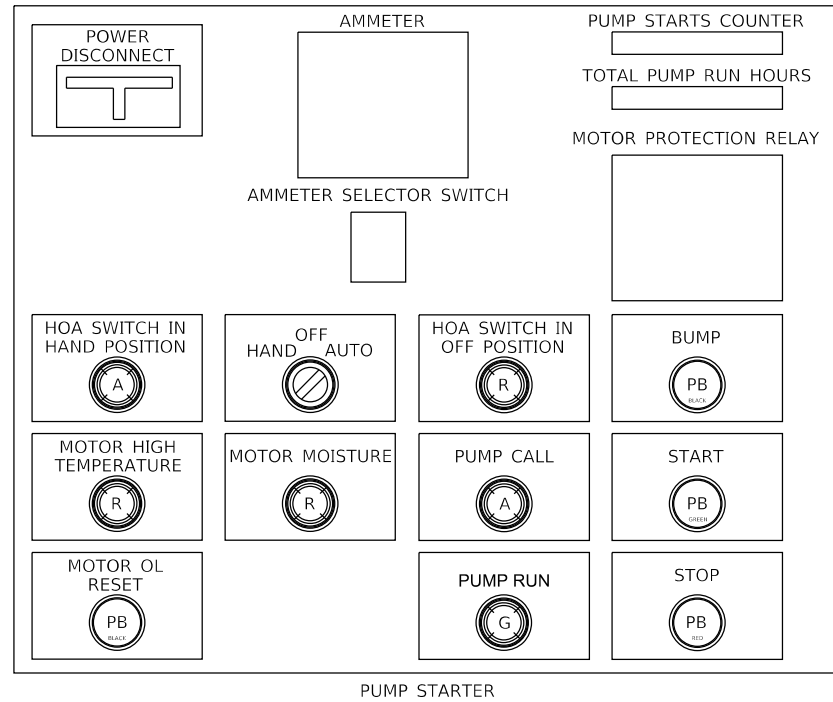
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PLOT DATE =	8/27/2024	DATE -	8/28/2024	REVISED -	

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**ELECTRICAL ROOM EQUIPMENT LAYOUT, DETAILS, & ELEVATIONS
 PUMP STATION 49**

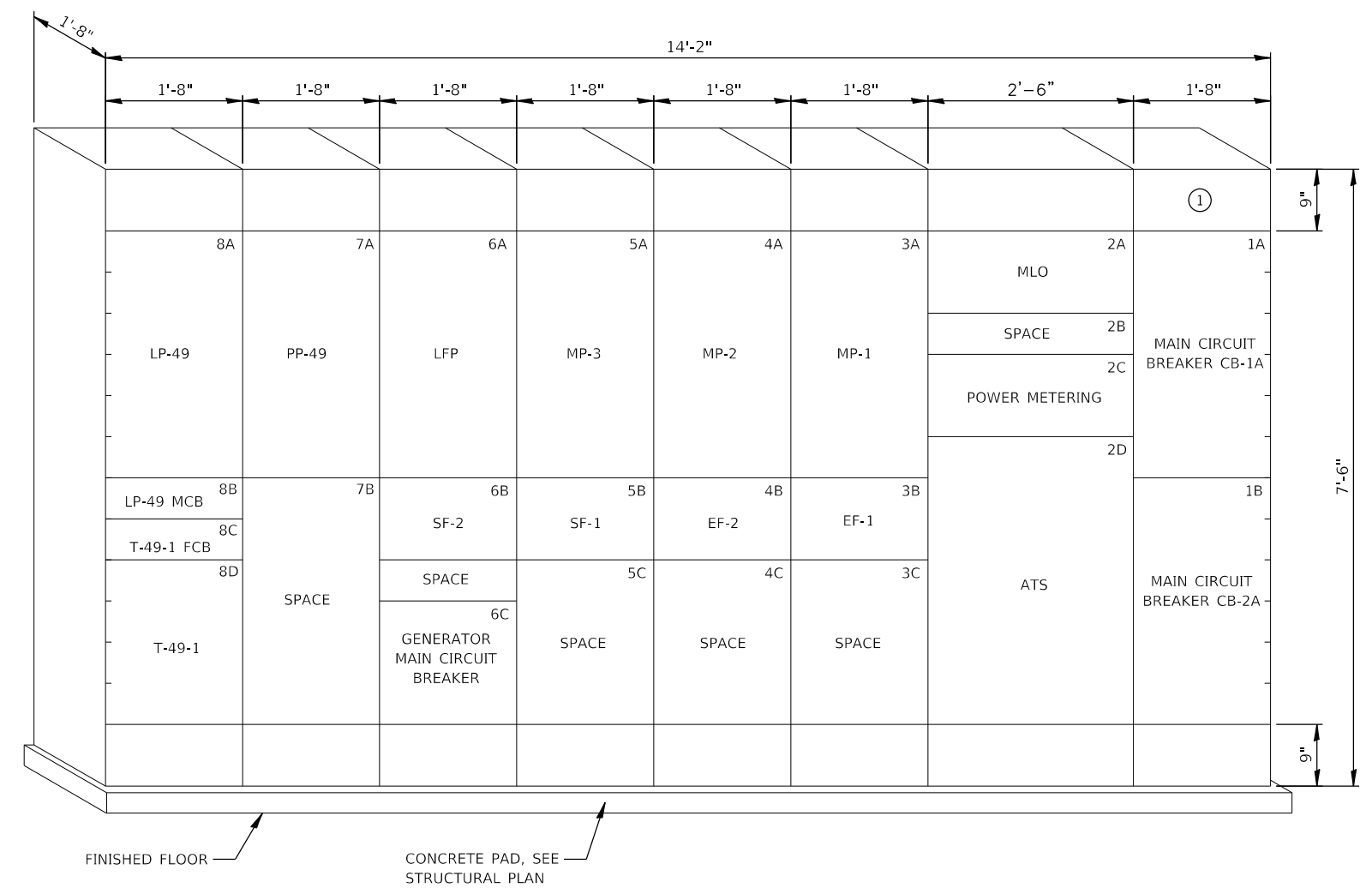
SHEET E14 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	617
CONTRACT NO. 61J87				
ILLINOIS		FED. AID PROJECT		



KEY NOTES:

① PROVIDE A 12"X2" NAMEPLATE ON TOP WIREWAY OF MCC-P49 ENGRAVED "MOTOR CONTROL CENTER PANEL P49, 480V, 3Φ, 3W."



MODEL: Default
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STRAND ASSOCIATES
1170 SOUTH HOUBOLT ROAD
JOLIET, ILLINOIS 60431
(815) 744-4200
IDFPR NO. 184-001273

USER NAME = brianf	DESIGNED - ARC	REVISED -
PLOT SCALE = 8:0.0000 "/ in.	DRAWN - BJF	REVISED -
PLOT DATE = 8/27/2024	CHECKED - SAI	REVISED -
	DATE - 8/28/2024	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ELECTRICAL MOTOR CONTROL CENTER
PUMP STATION 49

SHEET E15 OF 28 SHEETS

F.A.P. RTE. 305	SECTION 11-00087-00-GS	COUNTY LAKE	TOTAL SHEETS 816	SHEET NO. 618
ILLINOIS			FED. AID PROJECT	

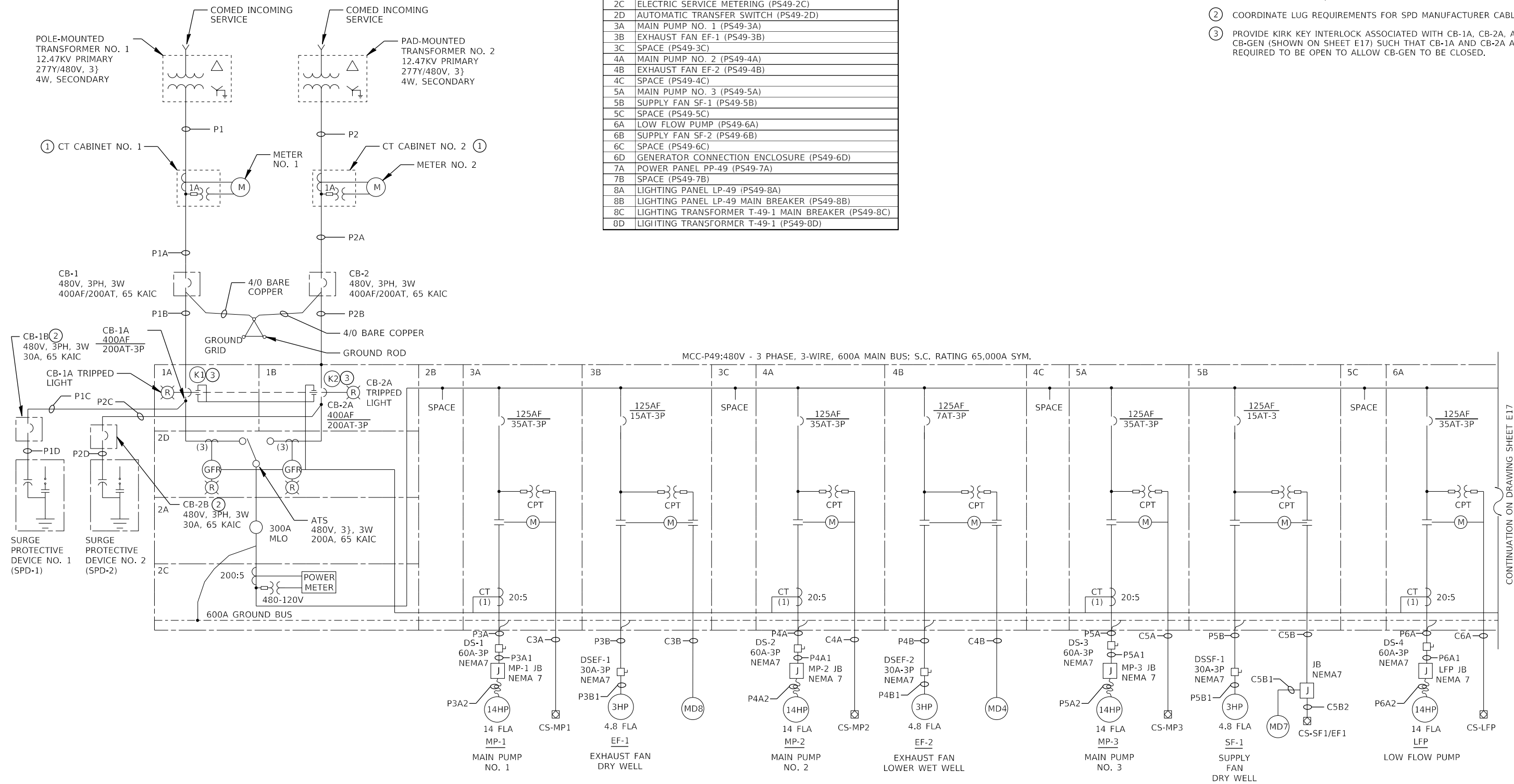
MCC-P49 NAMEPLATE SCHEDULE	
ITEM	NAMEPLATE ENGRAVING
1A	MAIN BREAKER SERVICE NO. 1 (PS49-1A)
1B	MAIN BREAKER SERVICE NO. 2 (PS49-1B)
2A	MCC MAIN LUGS (PS49-2A)
2B	SPACE (PS49-2B)
2C	ELECTRIC SERVICE METERING (PS49-2C)
2D	AUTOMATIC TRANSFER SWITCH (PS49-2D)
3A	MAIN PUMP NO. 1 (PS49-3A)
3B	EXHAUST FAN EF-1 (PS49-3B)
3C	SPACE (PS49-3C)
4A	MAIN PUMP NO. 2 (PS49-4A)
4B	EXHAUST FAN EF-2 (PS49-4B)
4C	SPACE (PS49-4C)
5A	MAIN PUMP NO. 3 (PS49-5A)
5B	SUPPLY FAN SF-1 (PS49-5B)
5C	SPACE (PS49-5C)
6A	LOW FLOW PUMP (PS49-6A)
6B	SUPPLY FAN SF-2 (PS49-6B)
6C	SPACE (PS49-6C)
6D	GENERATOR CONNECTION ENCLOSURE (PS49-6D)
7A	POWER PANEL PP-49 (PS49-7A)
7B	SPACE (PS49-7B)
8A	LIGHTING PANEL LP-49 (PS49-8A)
8B	LIGHTING PANEL LP-49 MAIN BREAKER (PS49-8B)
8C	LIGHTING TRANSFORMER T-49-1 MAIN BREAKER (PS49-8C)
8D	LIGHTING TRANSFORMER T-49-1 (PS49-8D)

GENERAL NOTES:

1. REFER TO SHEET E28 FOR CONDUIT AND CABLE SCHEDULES.

KEY NOTES:

- ① CT AND METER CABINET SHALL BE PROVIDED IN ACCORDANCE WITH ELECTRIC UTILITY REQUIREMENTS.
- ② COORDINATE LUG REQUIREMENTS FOR SPD MANUFACTURER CABLING.
- ③ PROVIDE KIRK KEY INTERLOCK ASSOCIATED WITH CB-1A, CB-2A, AND CB-GEN (SHOWN ON SHEET E17) SUCH THAT CB-1A AND CB-2A ARE REQUIRED TO BE OPEN TO ALLOW CB-GEN TO BE CLOSED.



ONE-LINE DIAGRAM-1

CONTINUATION ON DRAWING SHEET E17

MODEL: Default
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8/27/2024 9:30:49 AM



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PLOT SCALE = 8:0.0000 "/> <td>DRAWN - BJF</td> <td>REVISED -</td>	DRAWN - BJF	REVISED -
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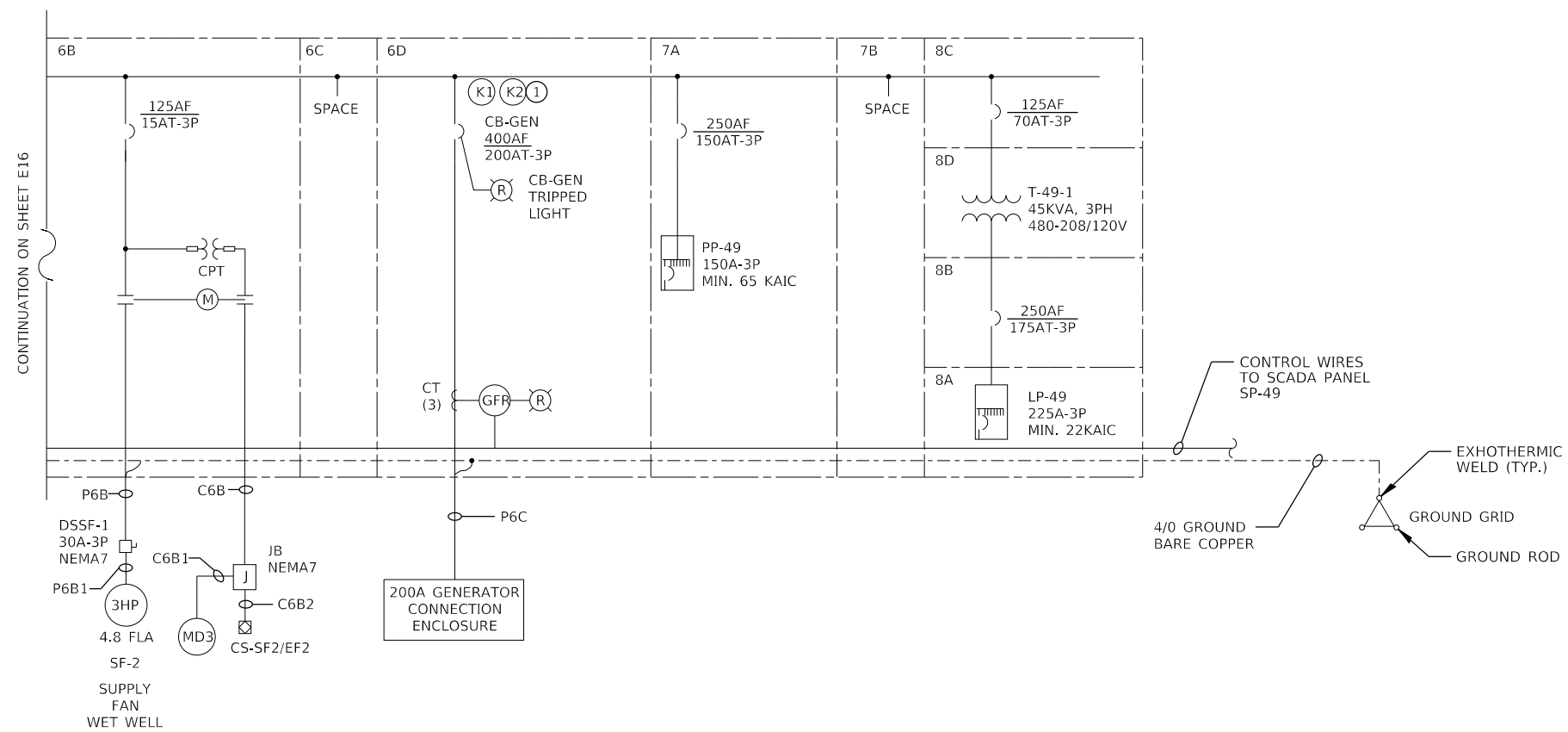
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ELECTRICAL ONE-LINE DIAGRAM - 1
PUMP STATION 49

SHEET E16 OF 28 SHEETS

F.A.P. RTE. 305	SECTION 11-00087-00-GS	COUNTY LAKE	TOTAL SHEETS 816	SHEET NO. 619
CONTRACT NO. 61J87				
ILLINOIS FED. AID PROJECT				

- KEY NOTES:
- PROVIDE KIRK KEY INTERLOCK ASSOCIATED WITH CB-1A, CB-2A, AND CB-GEN SUCH THAT CB-1A AND CB-2A ARE REQUIRED TO BE OPEN TO ALLOW CB-GEN TO BE CLOSED. CB-1A AND CB-2A ARE SHOWN ON SHEET E16.



ONE-LINE DIAGRAM-2

MODEL: Default
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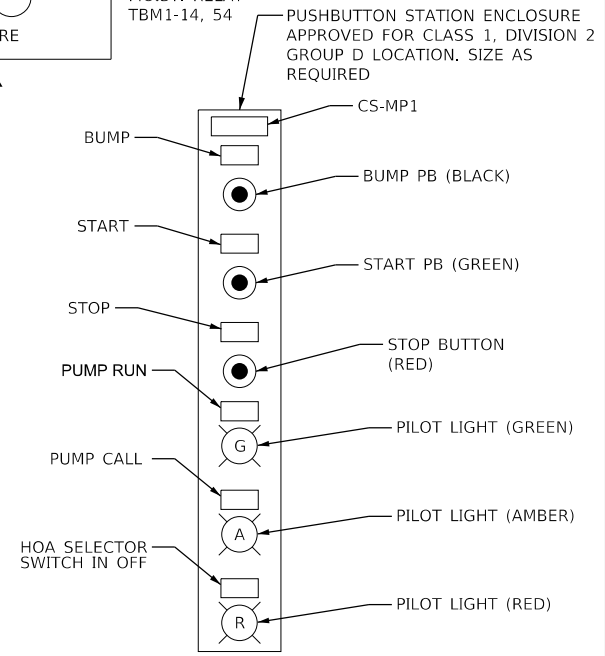
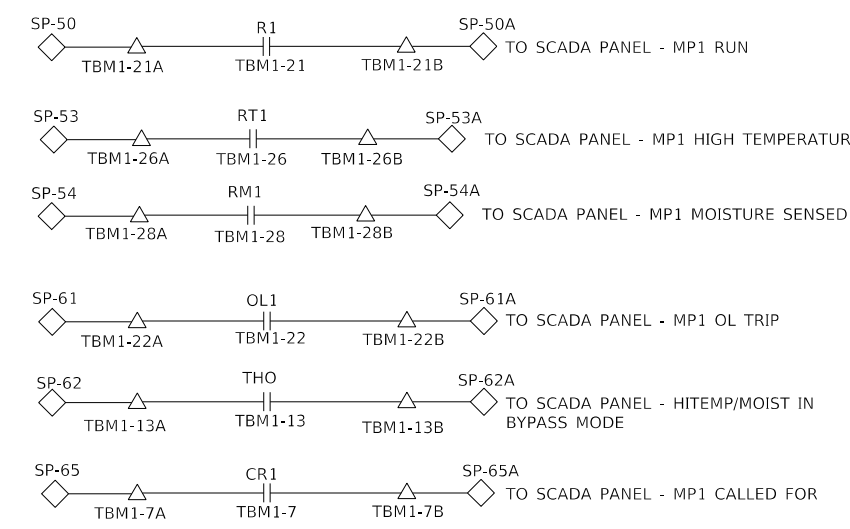
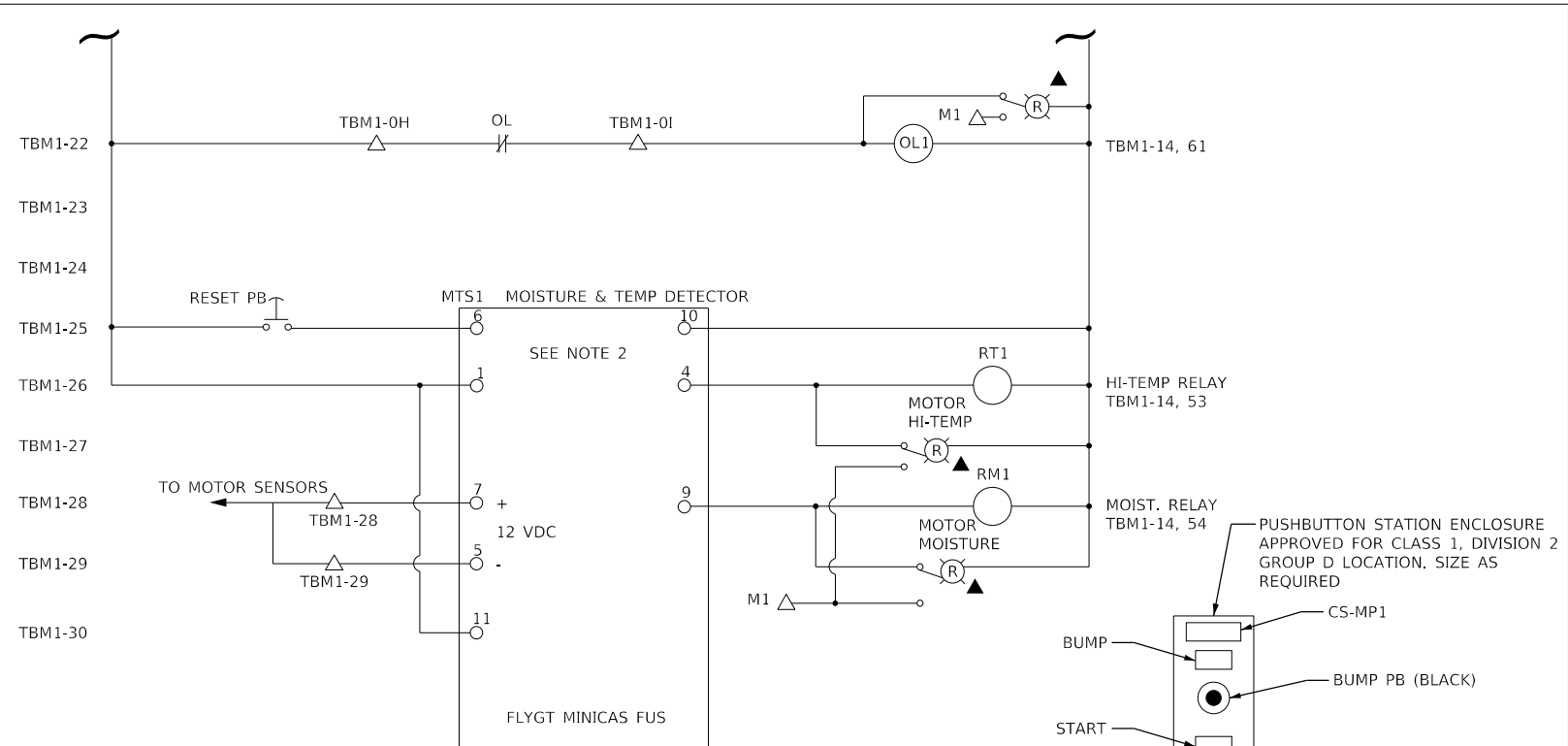
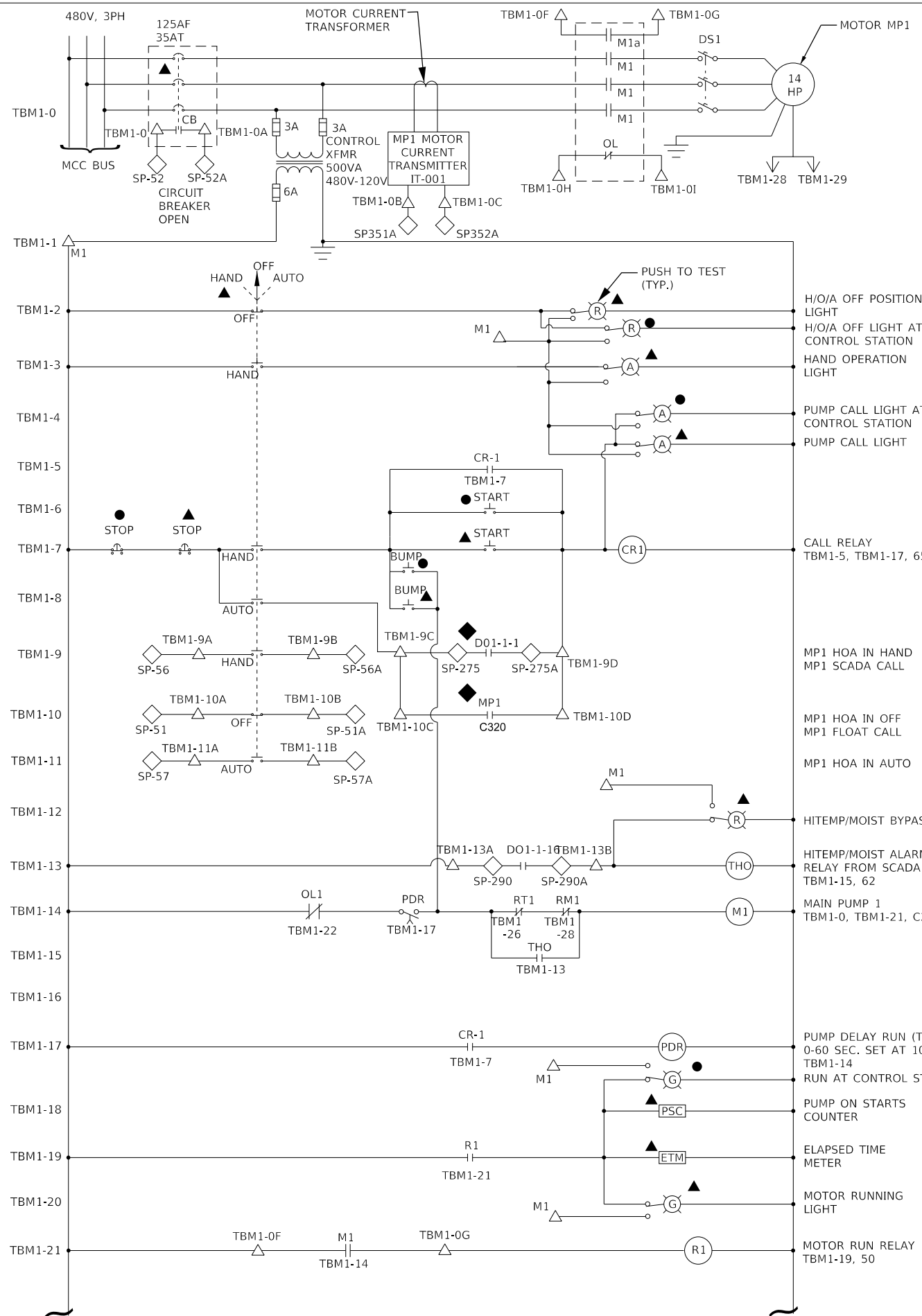
1170 SOUTH HOUBOLT ROAD JOLIET, ILLINOIS 60431 (815) 744-4200 IDFPR NO. 184-001273	USER NAME = brianf	DESIGNED - ARC	REVISED -
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	PLOT DATE = 8/27/2024	DATE - 8/28/2024	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

ELECTRICAL ONE-LINE DIAGRAM - 2
 PUMP STATION 49

SHEET E17 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	620
CONTRACT NO. 61J87				
ILLINOIS		FED. AID PROJECT		



MATERIAL LIST	
QTY	DESCRIPTION
AS REQD.	NEMA 7 PB ENCLOSURE
1	NAMEPLATE
1	NEMA 7 PUSHBUTTON, BLACK
1	NEMA 7 PUSHBUTTON, GREEN
1	NEMA 7 PUSHBUTTON, RED
1	NEMA 7 PILOT LIGHT, LED, GREEN
1	NEMA 7 PILOT LIGHT, LED, AMBER
1	NEMA 7 PILOT LIGHT, LED, RED

LOCAL CONTROL STATION
(CS-MP1)

- COMPONENT LOCATION:
- LOCATED IN CONTROL STATION DRY WELL GROUND LEVEL EL. 817.00
 - ▲ LOCATED ON RESPECTIVE STARTER DOOR
 - ◆ LOCATED IN SCADA PANEL
 - △ TERMINAL IN MOTOR STARTER
 - ◇ TERMINAL IN SCADA PANEL

NOTES:

1. N.O. CONTACTS CLOSE ON ALARM.
2. COORDINATE EXACT REQUIREMENTS FOR PUMP PROTECTION WITH PUMP MANUFACTURER.
3. ALL DEVICES MOUNTED IN MOTOR STARTER, UNLESS OTHERWISE NOTED.

MAIN PUMP NO. 1 (MP-1) SCHEMATICS

MODEL: Default
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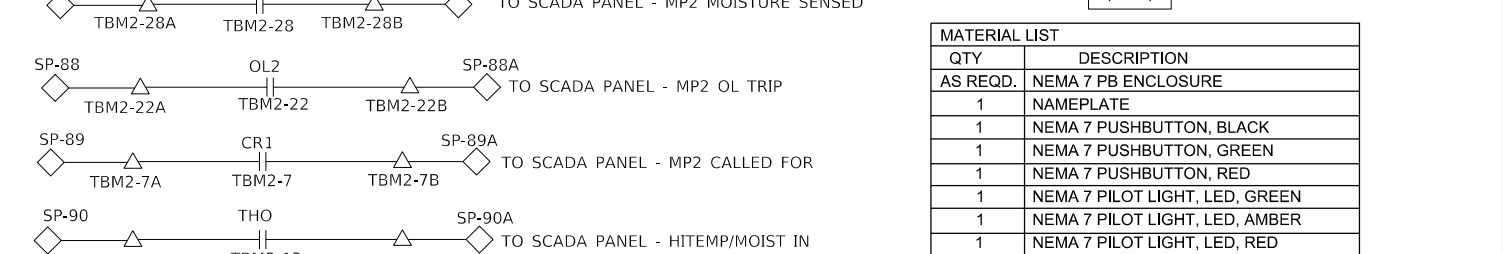
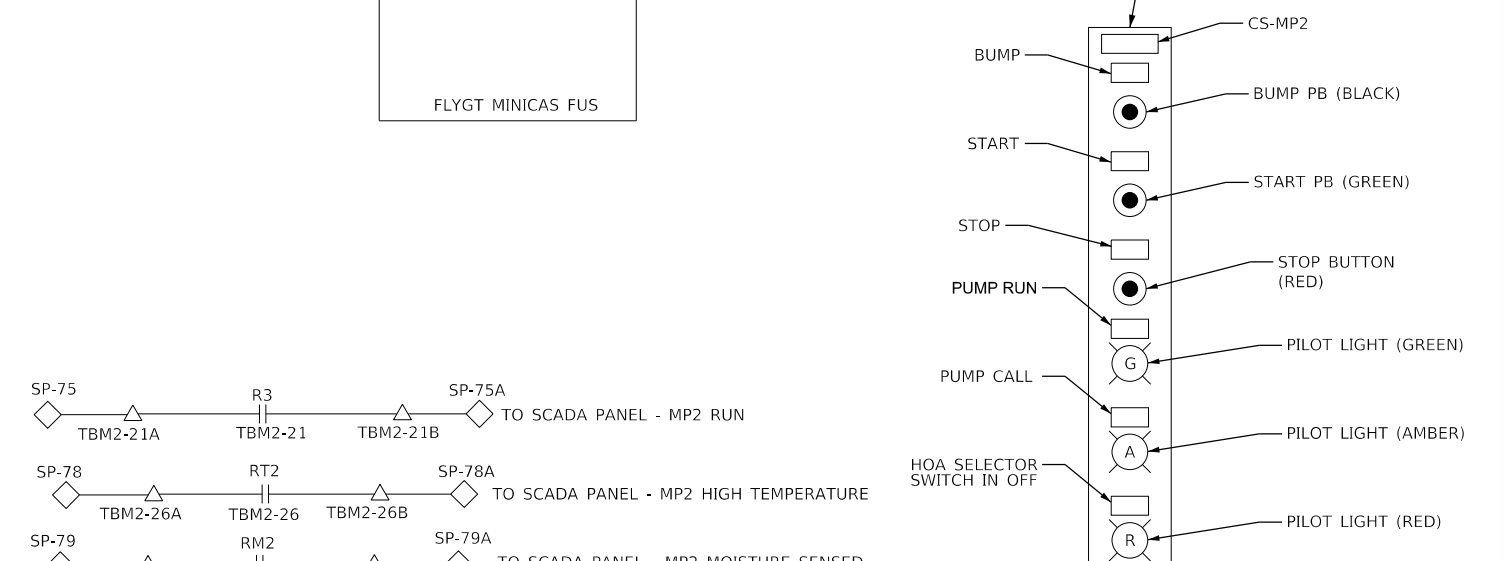
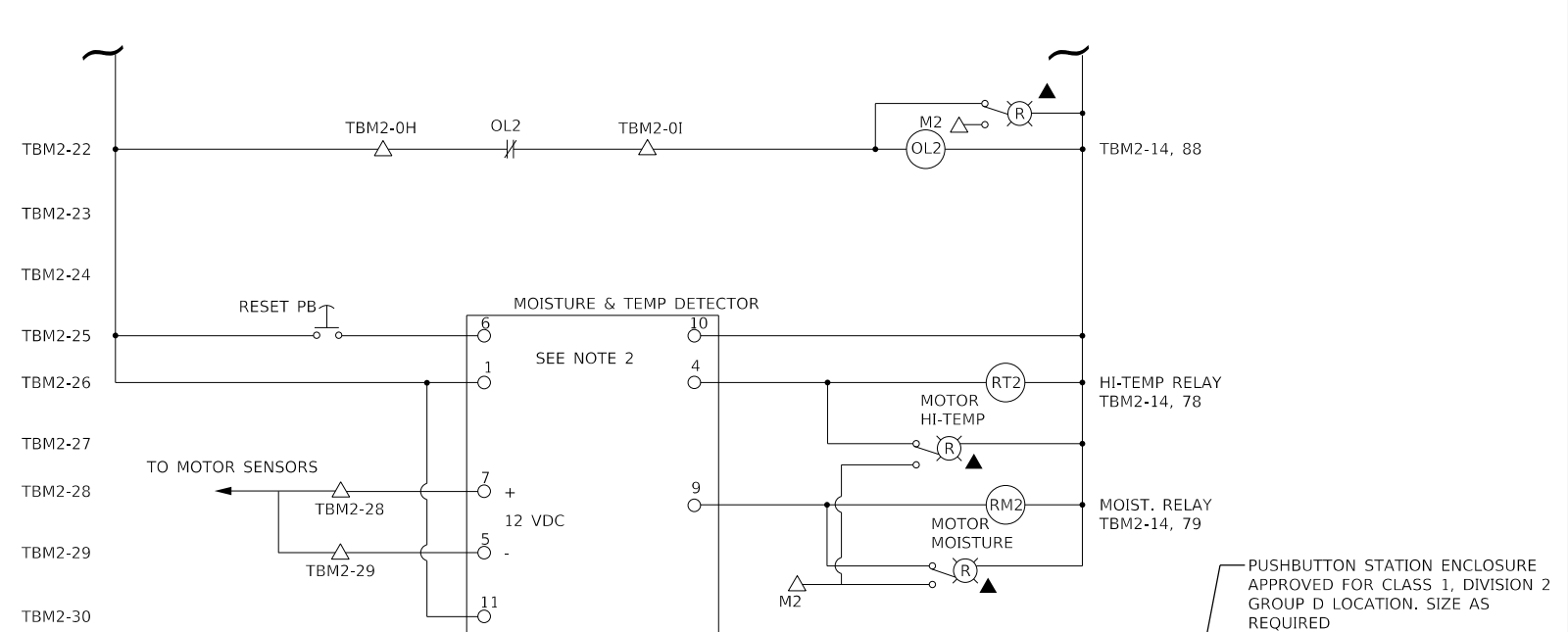
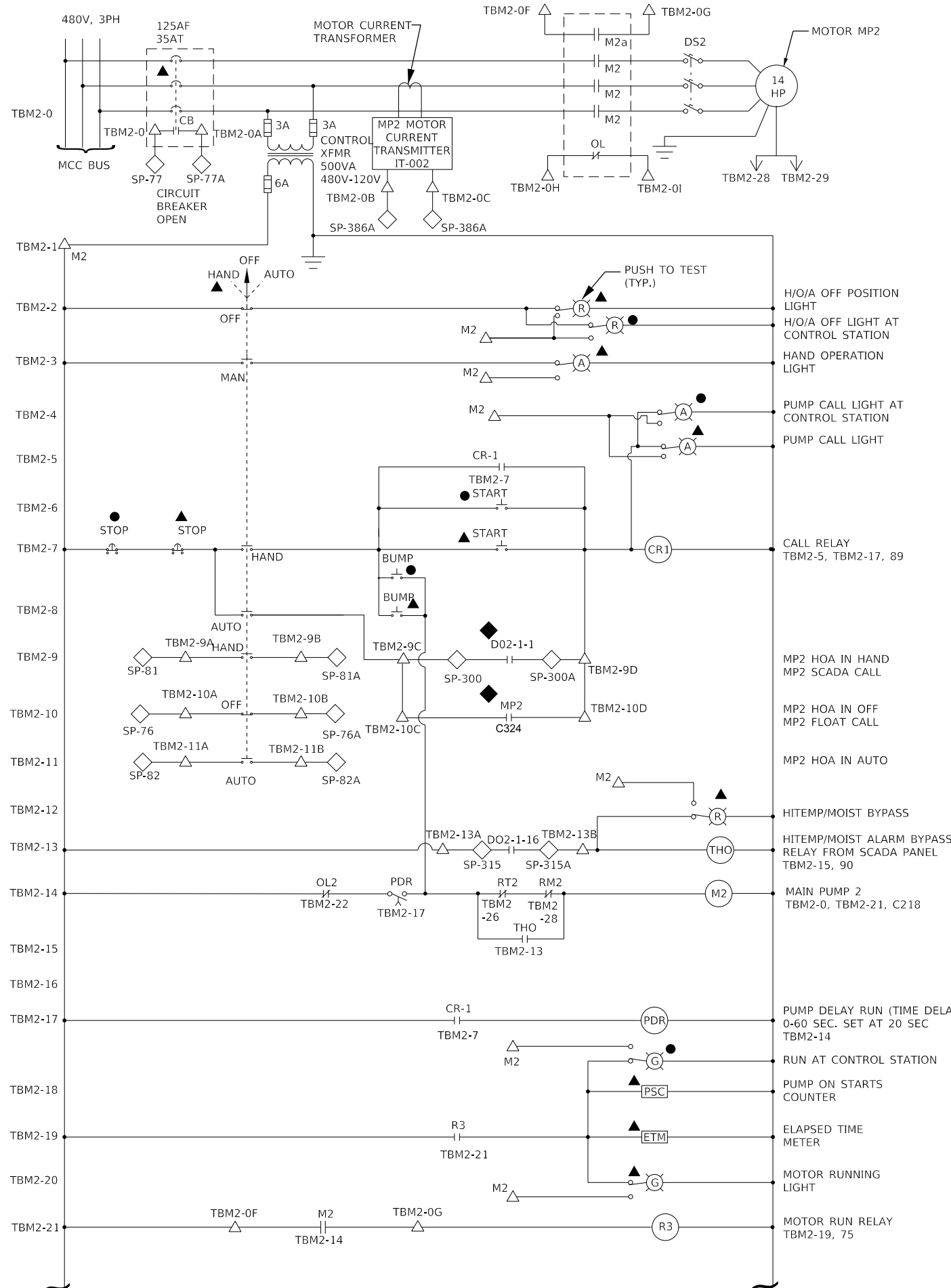
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PLOT SCALE = 8:0.0000 "/>		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ELECTRICAL - MAIN PUMP NO. 1 SCHEMATICS
PUMP STATION 49

SHEET E18 OF 28 SHEETS

F.A.P. RTE. 305	SECTION 11-00087-00-GS	COUNTY LAKE	TOTAL SHEETS 816	SHEET NO. 621
CONTRACT NO. 61J87				
ILLINOIS FED. AID PROJECT				



MATERIAL LIST	
QTY	DESCRIPTION
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1	NEMA 7 PUSHBUTTON, BLACK
1	NEMA 7 PUSHBUTTON, GREEN
1	NEMA 7 PUSHBUTTON, RED
1	NEMA 7 PILOT LIGHT, LED, GREEN
1	NEMA 7 PILOT LIGHT, LED, AMBER
1	NEMA 7 PILOT LIGHT, LED, RED

LOCAL CONTROL STATION
(CS-MP2)

- NOTES:**
- N.O. CONTACTS CLOSE ON ALARM.
 - COORDINATE EXACT REQUIREMENTS FOR PUMP PROTECTION WITH PUMP MANUFACTURER.
 - ALL DEVICES MOUNTED IN MOTOR STARTER, UNLESS OTHERWISE NOTED.

- COMPONENT LOCATION:**
- LOCATED IN CONTROL PANEL DRY WELL GROUND LEVEL EL. 817.00
 - ▲ LOCATED ON RESPECTIVE STARTER DOOR
 - ◆ LOCATED IN SCADA PANEL
 - △ TERMINAL IN MOTOR STARTER
 - ◇ TERMINAL IN SCADA PANEL

MAIN PUMP NO. 2 (MP-2) SCHEMATICS

MODEL: Default
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1170 SOUTH HOUBOLT ROAD
JOLIET, ILLINOIS 60431
(815) 744-4200
IDFPR NO. 184-001273

USER NAME = brianf	DESIGNED - ARC	REVISED -
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	DATE - 8/28/2024	REVISED -

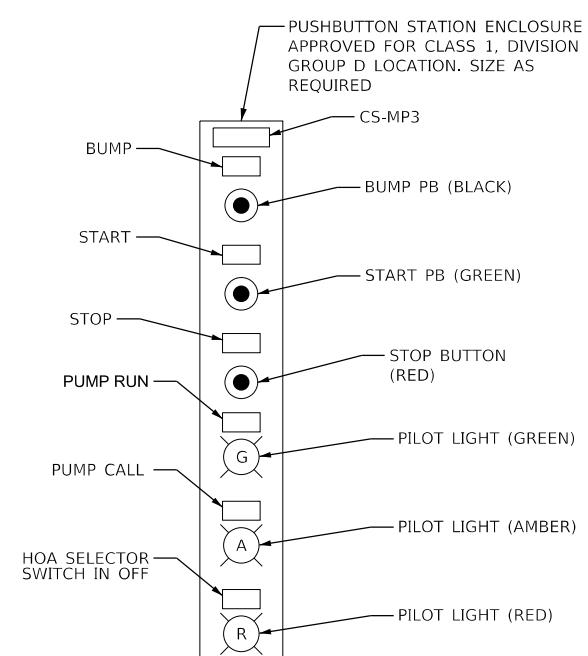
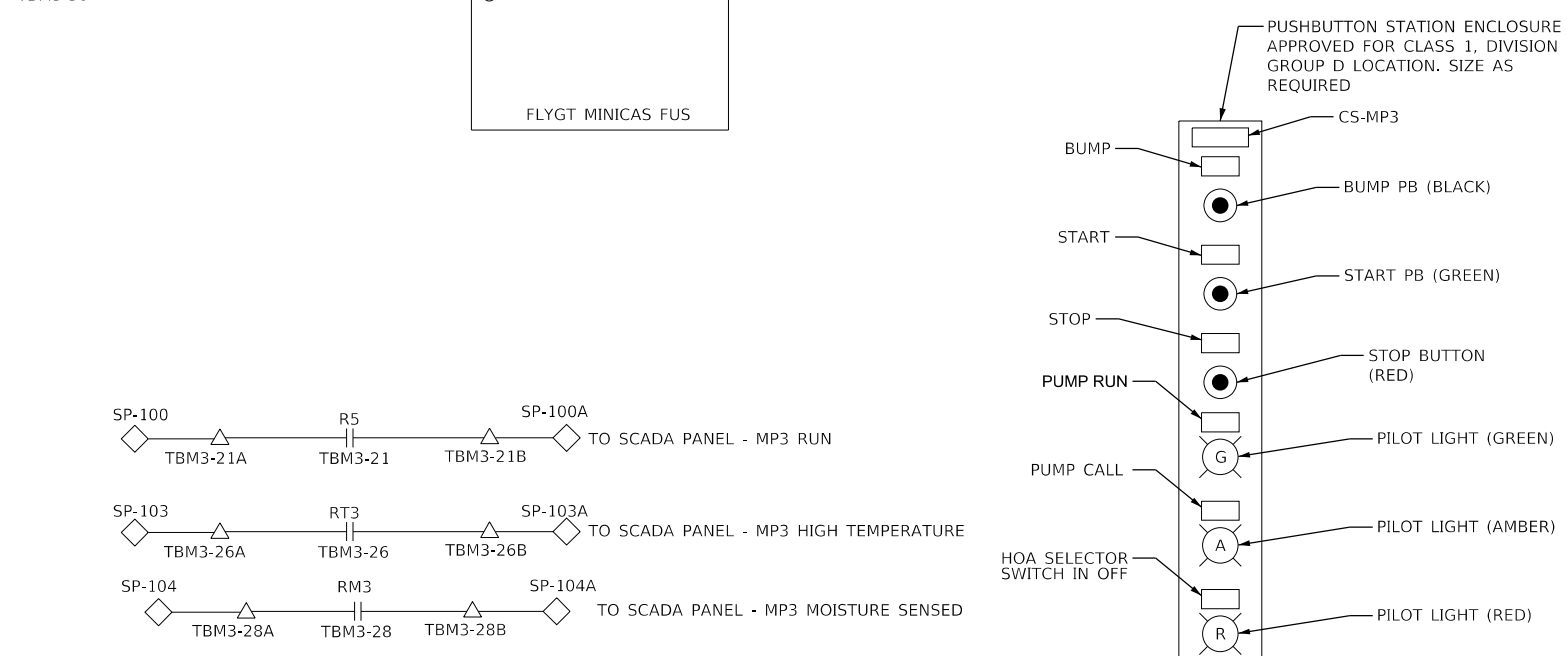
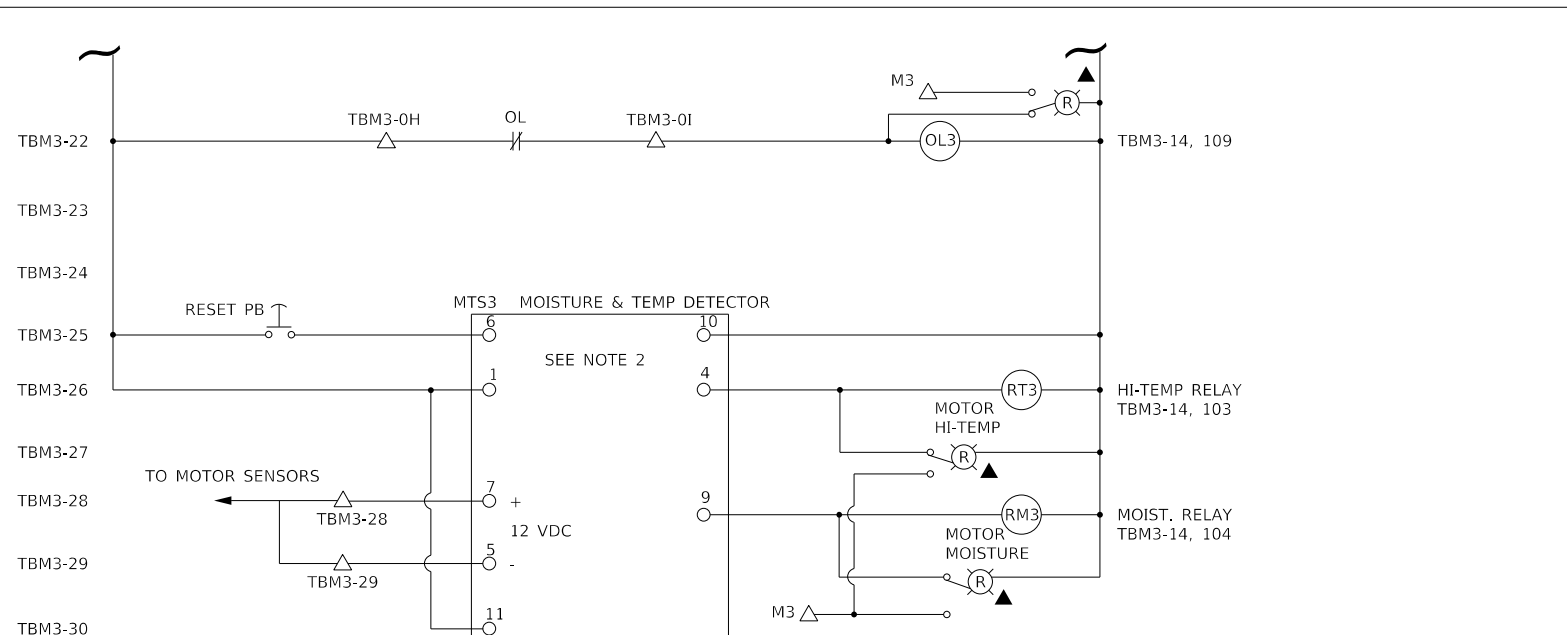
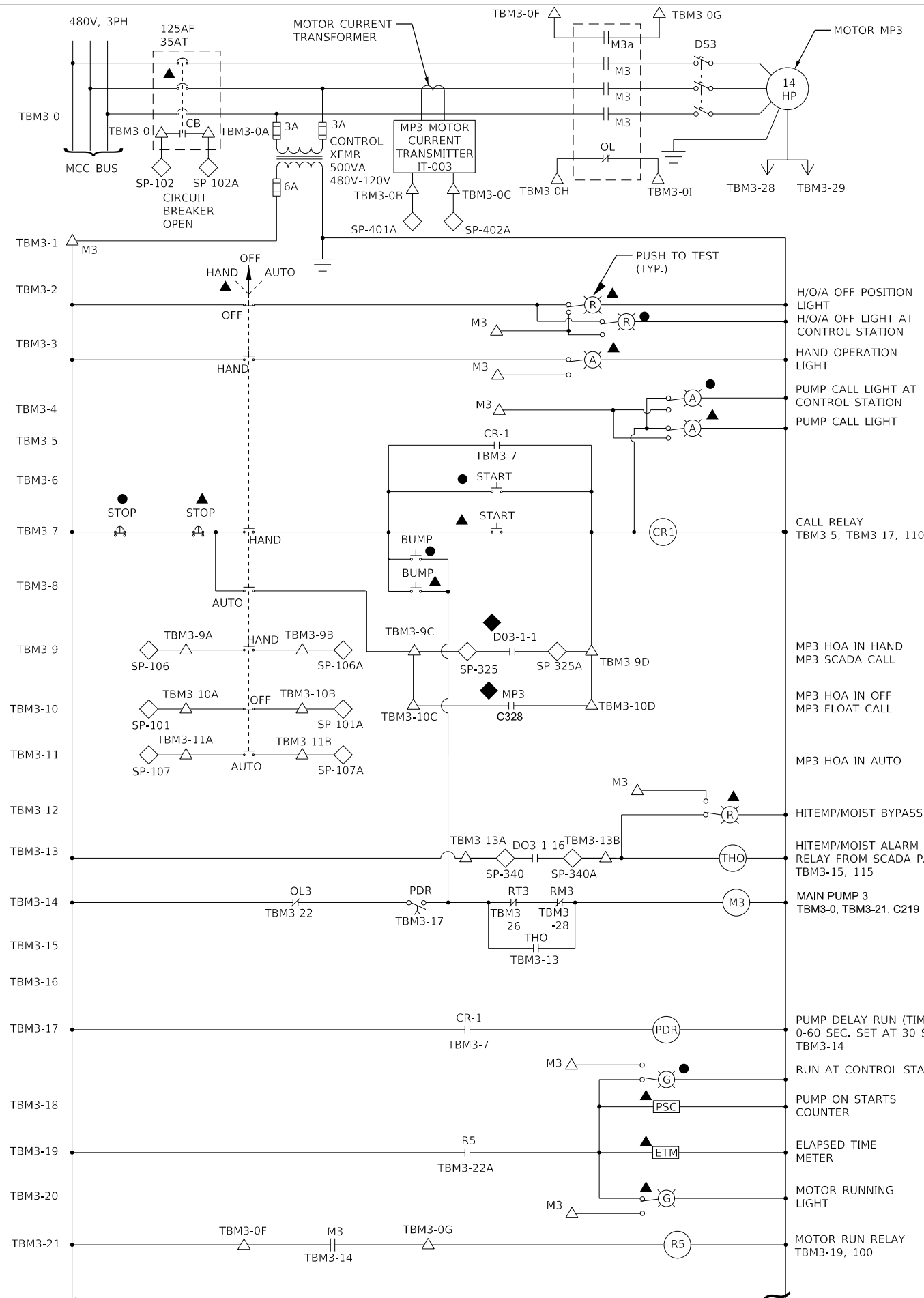
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ELECTRICAL - MAIN PUMP NO. 2 SCHEMATICS
PUMP STATION 49

SHEET E19 OF 28 SHEETS

F.A.P. RTE. 305	SECTION 11-00087-00-GS	COUNTY LAKE	TOTAL SHEETS 816	SHEET NO. 622
CONTRACT NO. 61J87				
ILLINOIS FED. AID PROJECT				

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MATERIAL LIST	
QTY	DESCRIPTION
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1	NAMEPLATE
1	NEMA 7 PUSHBUTTON, BLACK
1	NEMA 7 PUSHBUTTON, GREEN
1	NEMA 7 PUSHBUTTON, RED
1	NEMA 7 PILOT LIGHT, LED, GREEN
1	NEMA 7 PILOT LIGHT, LED, AMBER
1	NEMA 7 PILOT LIGHT, LED, RED

- LOCAL CONTROL STATION**
(CS-MP3)
- COMPONENT LOCATION:
- LOCATED IN CONTROL STATION DRY WELL GROUND LEVEL EL. 817.00
 - ▲ LOCATED ON RESPECTIVE STARTER DOOR
 - ◆ LOCATED IN SCADA PANEL
 - △ TERMINAL IN MOTOR STARTER
 - ◇ TERMINAL IN SCADA PANEL

- NOTES:**
- N.O. CONTACTS CLOSE ON ALARM.
 - COORDINATE EXACT REQUIREMENTS FOR PUMP PROTECTION WITH PUMP MANUFACTURER.
 - ALL DEVICES MOUNTED IN MOTOR STARTER, UNLESS OTHERWISE NOTED.

MAIN PUMP NO. 3 (MP-3) SCHEMATICS



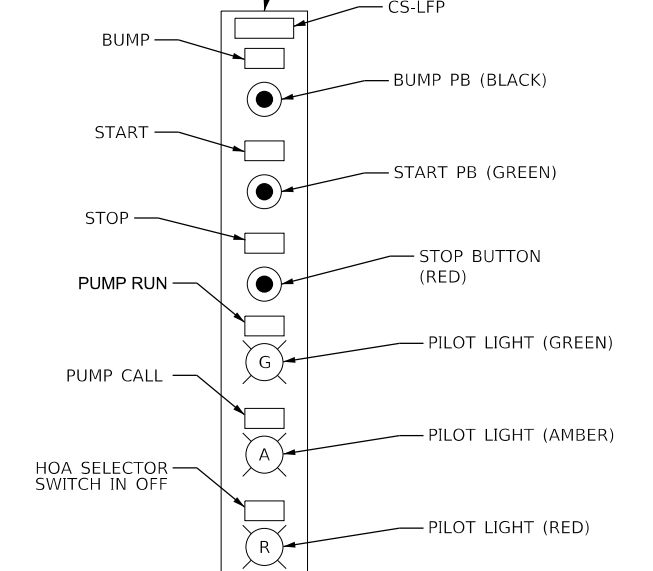
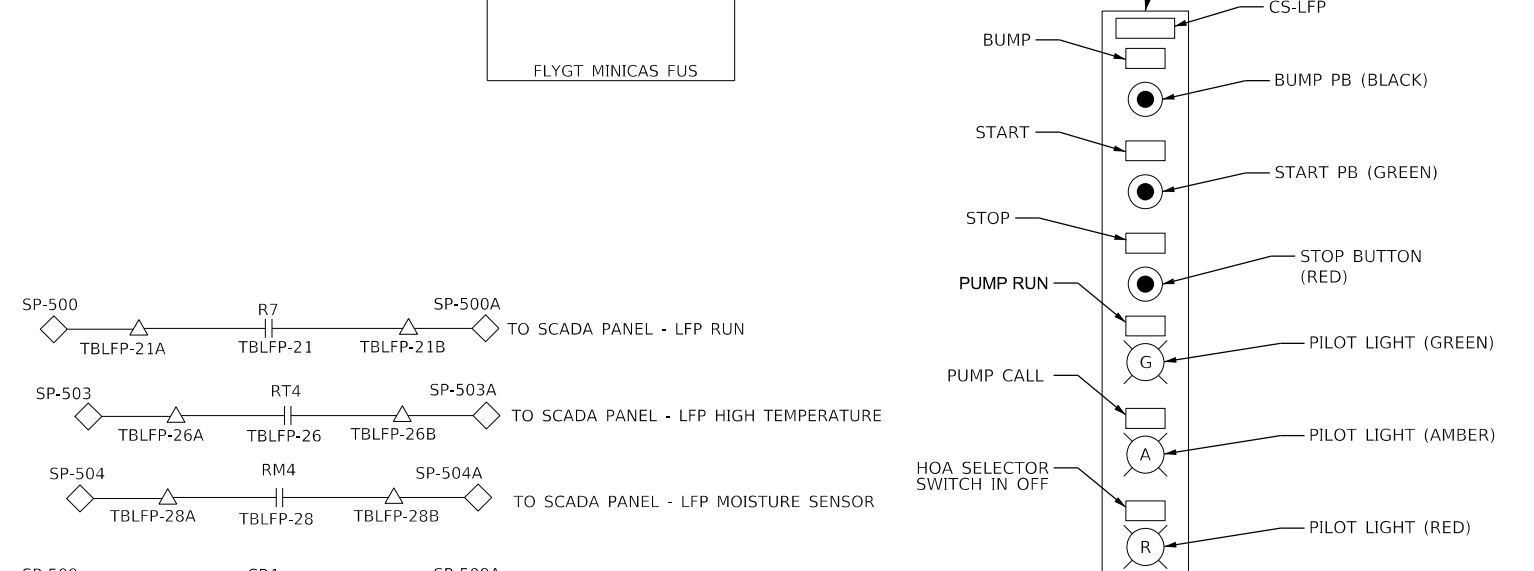
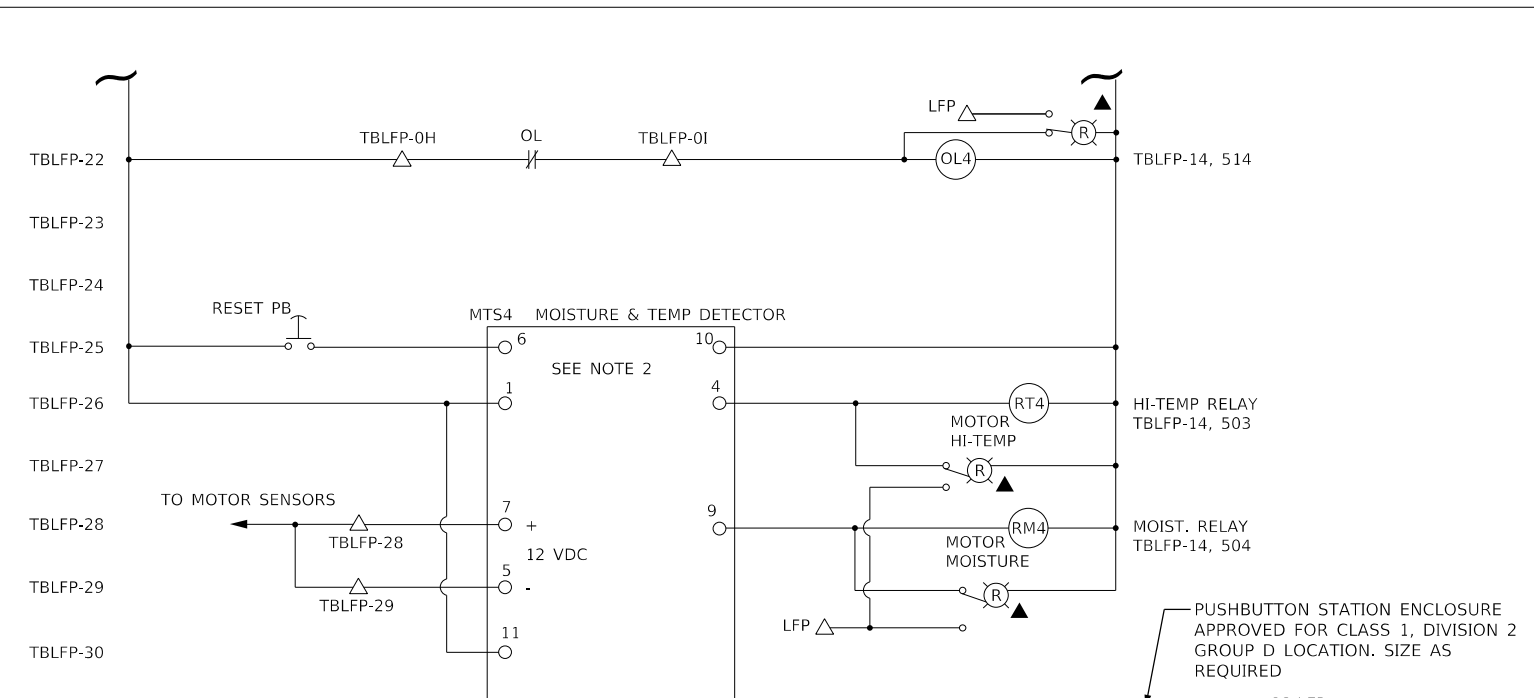
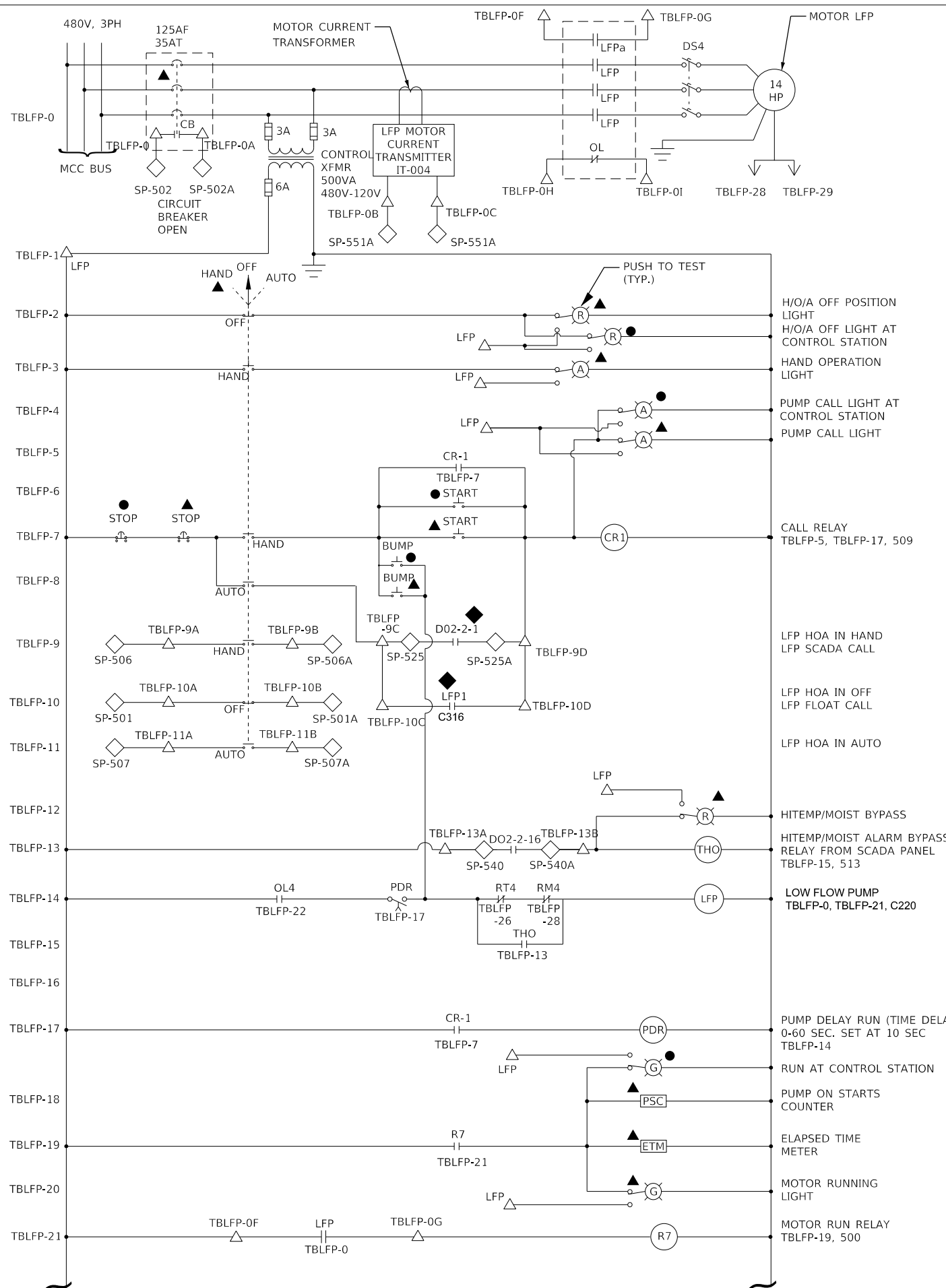
1170 SOUTH HOUBOLT ROAD JOLIET, ILLINOIS 60431 (815) 744-4200 IDFPR NO. 184-001273	USER NAME = brianf	DESIGNED - ARC	REVISED -
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	PLOT DATE = 8/27/2024	CHECKED - SAI	REVISED -
		DATE - 8/28/2024	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ELECTRICAL - MAIN PUMP NO. 3 SCHEMATICS
PUMP STATION 49**

SHEET E20 OF 28 SHEETS

F.A.P. RTE. 305	SECTION 11-00087-00-GS	COUNTY LAKE	TOTAL SHEETS 816	SHEET NO. 623
CONTRACT NO. 61J87				
ILLINOIS FED. AID PROJECT				



MATERIAL LIST	
QTY	DESCRIPTION
AS REQD.	NEMA 7 PB ENCLOSURE
1	NAMEPLATE
1	NEMA 7 PUSHBUTTON, BLACK
1	NEMA 7 PUSHBUTTON, GREEN
1	NEMA 7 PUSHBUTTON, RED
1	NEMA 7 PILOT LIGHT, LED, GREEN
1	NEMA 7 PILOT LIGHT, LED, AMBER
1	NEMA 7 PILOT LIGHT, LED, RED

- NOTES:**
- N.O. CONTACTS CLOSE ON ALARM.
 - COORDINATE EXACT REQUIREMENTS FOR PUMP PROTECTION WITH PUMP MANUFACTURER.
 - ALL DEVICES MOUNTED IN MOTOR STARTER, UNLESS OTHERWISE NOTED.

- COMPONENT LOCATION:**
- LOCATED IN CONTROL STATION DRY WELL GROUND LEVEL EL. 917.00
 - ▲ LOCATED ON RESPECTIVE STARTER DOOR
 - ◆ LOCATED IN SCADA PANEL
 - △ TERMINAL IN MOTOR STARTER
 - ◇ TERMINAL IN SCADA PANEL

LOW FLOW PUMP (LFP) SCHEMATICS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

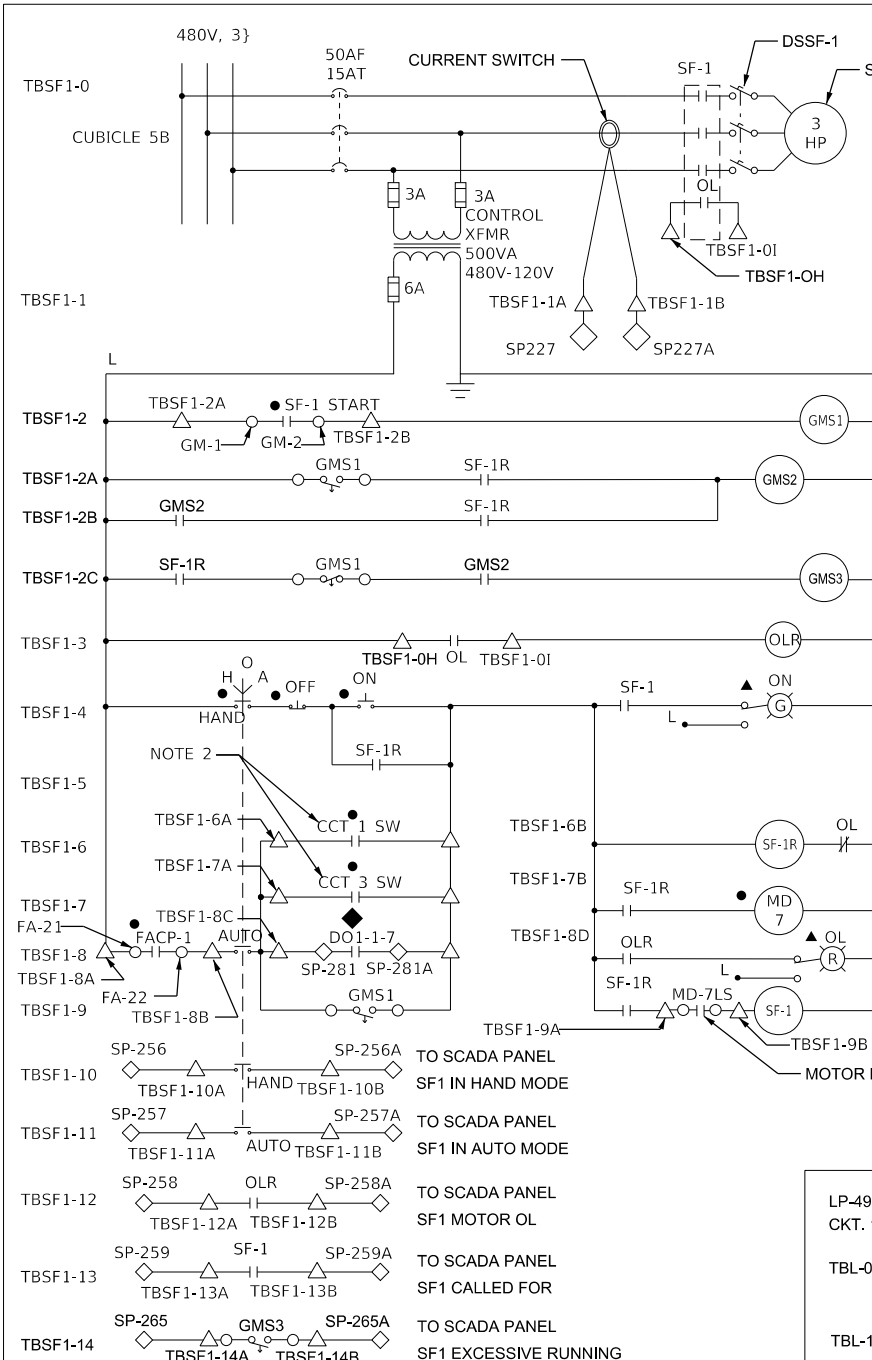
ELECTRICAL - LOW FLOW PUMP NO. 4 SCHEMATICS
PUMP STATION 49

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	624
CONTRACT NO. 61J87				
ILLINOIS FED. AID PROJECT				

MODEL: Default
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8/27/2024 9:30:51 AM

1170 SOUTH HOUBOLT ROAD
JOLIET, ILLINOIS 60431
(815) 744-4200
IDFPR NO. 184-001273

USER NAME = brianf	DESIGNED - ARC	REVISED -
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PLOT DATE = 8/27/2024	CHECKED - SAI	REVISED -
	DATE - 8/28/2024	REVISED -



SUPPLY FAN 1 GAS START
(OFF-TIME DELAY/DELAY ON BREAK)
0-60 MINUTES. SET AT 10 MINS
TBSF1-2A, TBSF1-2C, TBSF1-9

SUPPLY FAN 1 GAS RUNNING
TBSF1-2B, TBSF1-2C

SUPPLY FAN 1 EXCESSIVE RUNNING
(ON-TIME DELAY)
0-60 MINUTES. SET AT 10 MINS
TBSF1-14

OVERLOAD RELAY
TBSF1-8, TBSF1-12

CUBICLE 5B

SF-1 RELAY
TBSF1-2A, TBSF1-2B, TBSF1-2C,
TBSF1-5, TBSF1-7, TBSF1-9

MOTOR DAMPER
TBSF1-9

MOTOR OL TRIP

SUPPLY FAN 1
TBSF1-4, TBSF1-5,
TBSF1-13, TBSF1-0

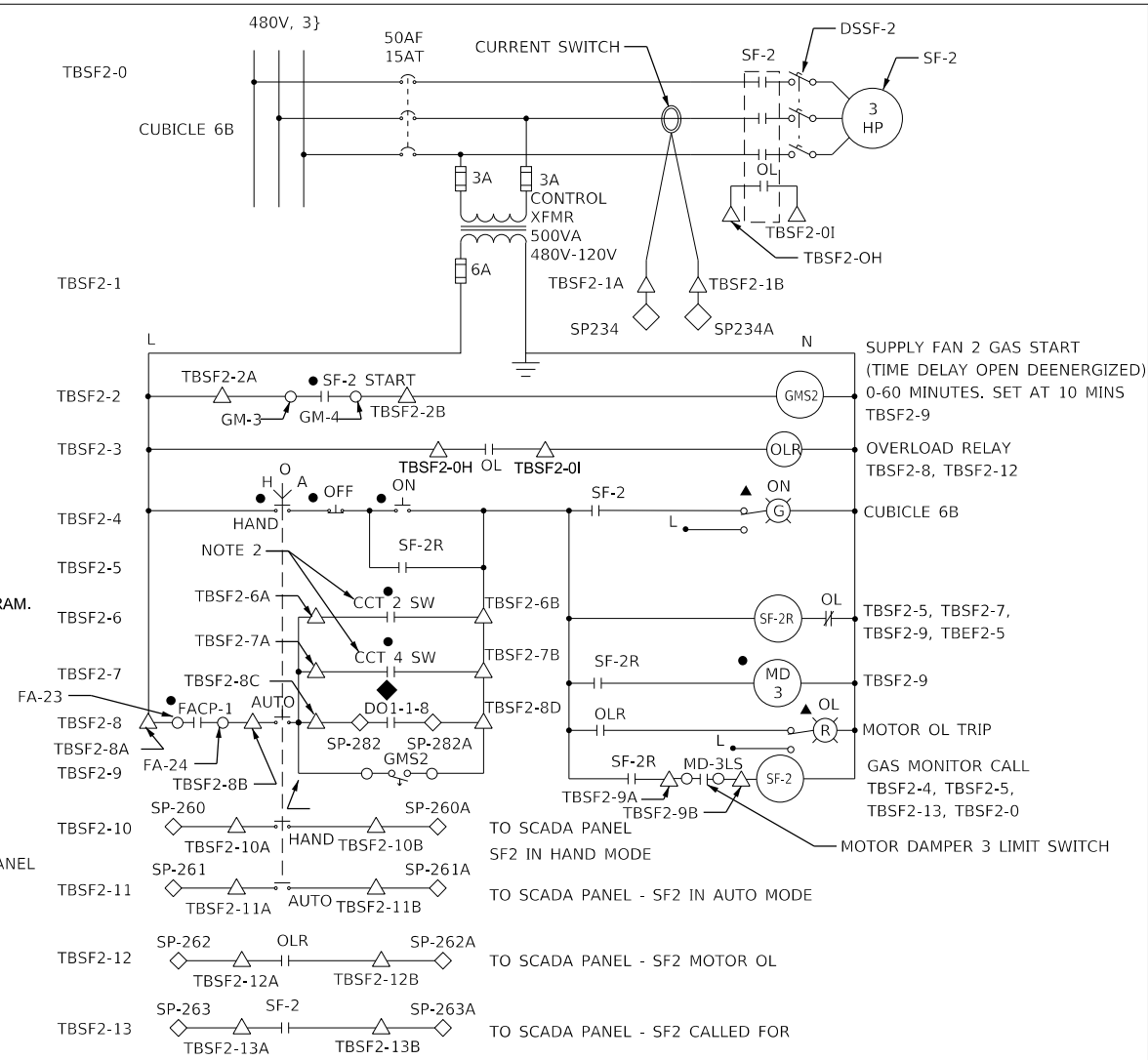
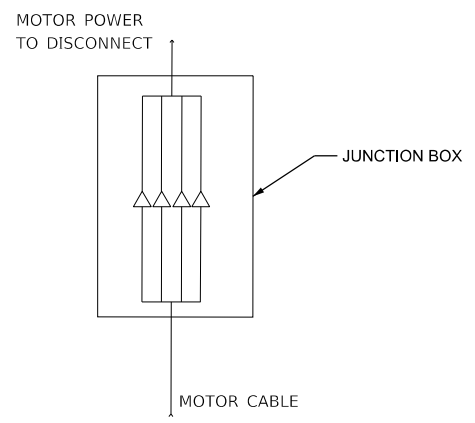
MOTOR DAMPER 7 LIMIT SWITCH

- NOTES:**
- REFER TO SHEET E24 FOR COMBUSTIBLE GAS MONITORING SYSTEM BLOCK DIAGRAM.
 - SEE LIGHTING AND FAN CONTROL INTERLOCK SCHEMATIC ON THIS SHEET. SEE SHEET E8 FOR FAN CONTROL CURRENT SWITCH ENCLOSURE LOCATION.
 - PROVIDE A DEDICATED CURRENT SWITCH FOR EACH LIGHT CIRCUIT SHOWN.

- COMPONENT LOCATION:**
- LOCATED REMOTE IN FIELD
 - LOCATED IN SCADA PANEL SP49
 - LOCATED IN RESPECTIVE MCC STARTER DOOR OR CONTROL PANEL
 - TERMINAL IN SCADA PANEL SP49
 - TERMINAL IN RESPECTIVE EQUIPMENT
 - TERMINAL REMOTE IN THE FIELD

UNLESS OTHERWISE INDICATED ALL ITEMS WITHOUT FURTHER DESIGNATION SHALL BE LOCATED IN THE RESPECTIVE STARTER COMPARTMENT

SUMP PUMP JUNCTION BOX DIAGRAM
(SP-1)



SUPPLY FAN 2 GAS START
(TIME DELAY OPEN DEENERGIZED)
0-60 MINUTES. SET AT 10 MINS
TBSF2-9

OVERLOAD RELAY
TBSF2-8, TBSF2-12

CUBICLE 6B

SF-2 RELAY
TBSF2-2A, TBSF2-2B, TBSF2-2C,
TBSF2-5, TBSF2-7, TBSF2-9

MOTOR DAMPER
TBSF2-9

MOTOR OL TRIP

GAS MONITOR CALL
TBSF2-4, TBSF2-5,
TBSF2-13, TBSF2-0

MOTOR DAMPER 3 LIMIT SWITCH

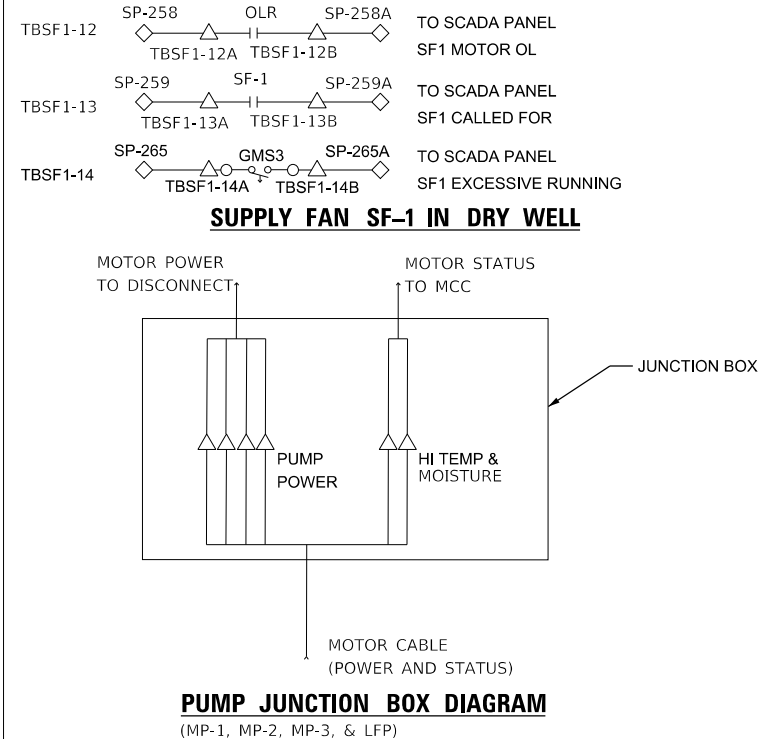
TO SCADA PANEL
SF2 IN HAND MODE

TO SCADA PANEL - SF2 IN AUTO MODE

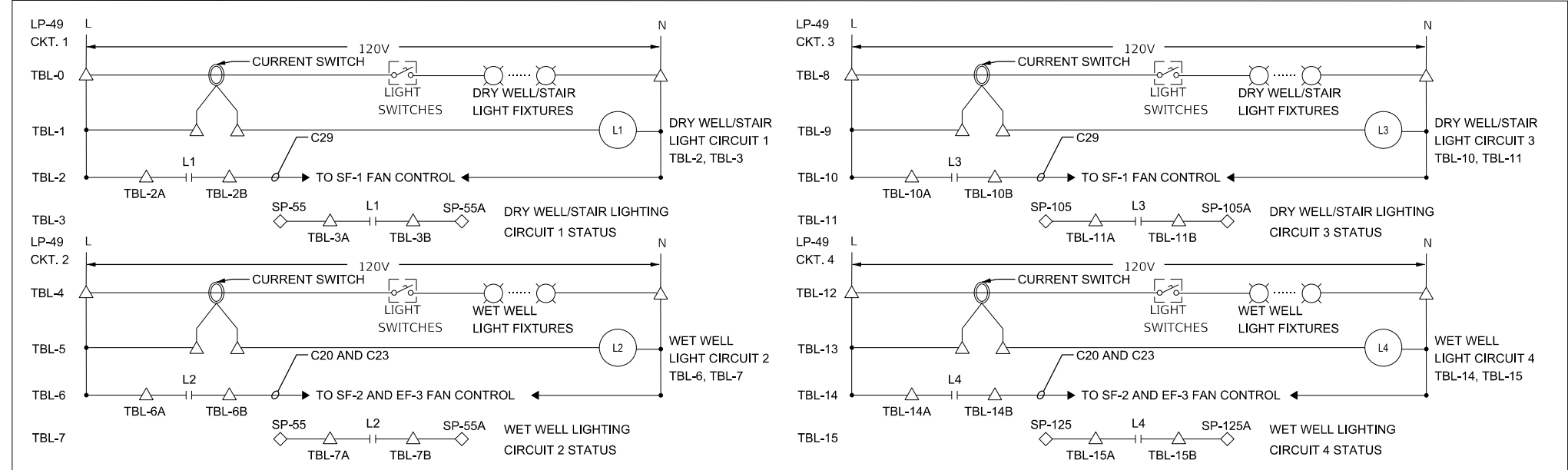
TO SCADA PANEL - SF2 MOTOR OL

TO SCADA PANEL - SF2 CALLED FOR

SUPPLY FAN SF-2 IN WET WELL



PUMP JUNCTION BOX DIAGRAM
(MP-1, MP-2, MP-3, & LFP)



LIGHTING AND FAN CONTROL INTERLOCK SCHEMATIC

FAN CONTROL CURRENT SWITCH ENCLOSURE

MODEL: Default
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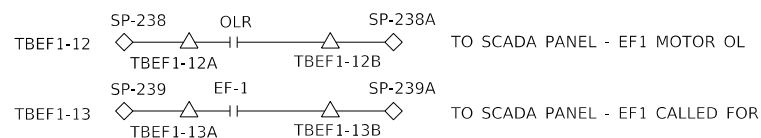
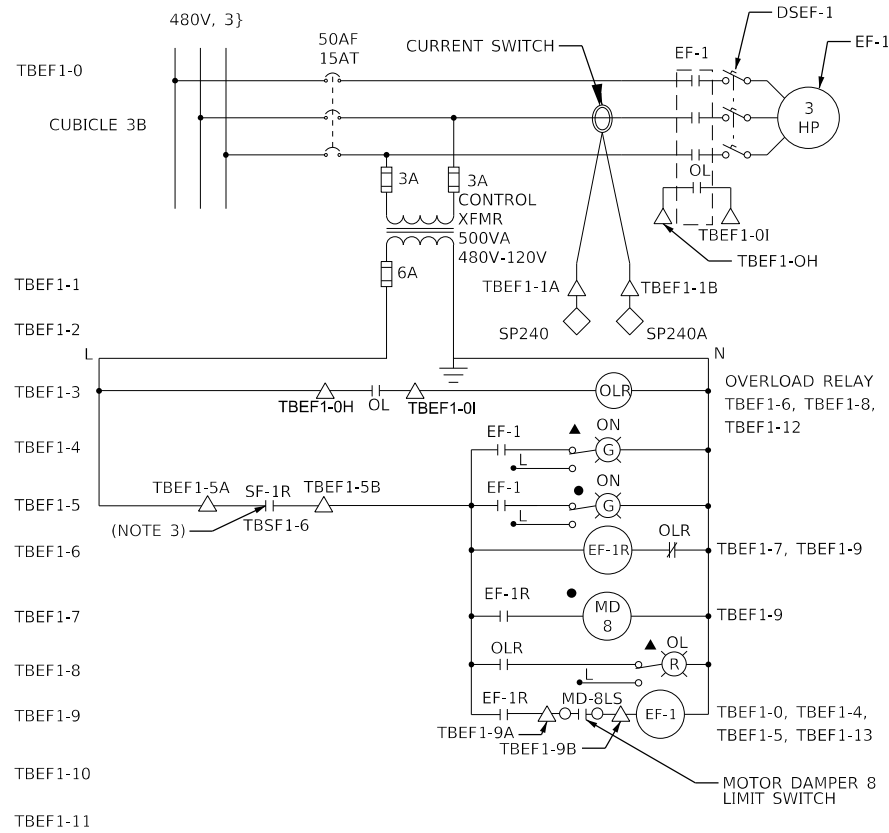
	1170 SOUTH HOUBOLT ROAD JOLIET, ILLINOIS 60431 (815) 744-4200 IDFPR NO. 184-001273	USER NAME = brianf	DESIGNED - ARC	REVISED -
		PLOT SCALE = 8:0.0000 "/> <td>DRAWN - BJF</td> <td>REVISED -</td>	DRAWN - BJF	REVISED -
		CHECKED - SAI	REVISED -	
		DATE - 8/28/2024	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

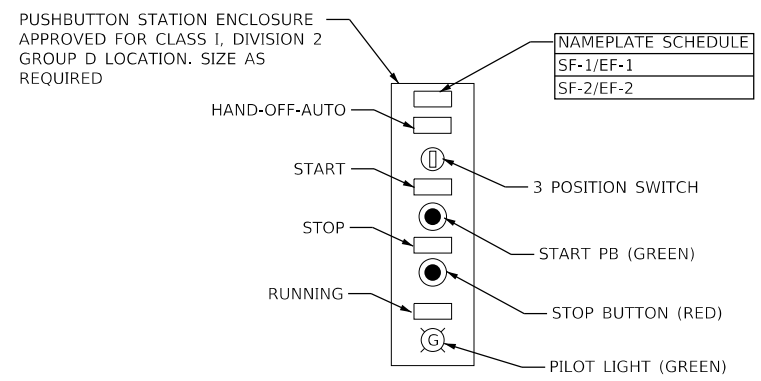
ELECTRICAL SCHEMATIC DIAGRAMS AND DETAILS - 1
PUMP STATION 49

SHEET E22 OF 28 SHEETS

F.A.P. RTE. 305	SECTION 11-00087-00-GS	COUNTY LAKE	TOTAL SHEETS 816	SHEET NO. 625
CONTRACT NO. 61J87				
ILLINOIS FED. AID PROJECT				

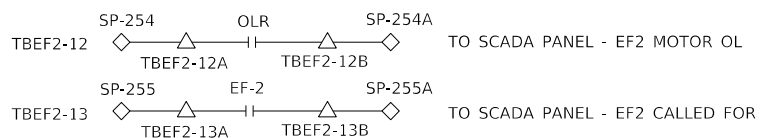
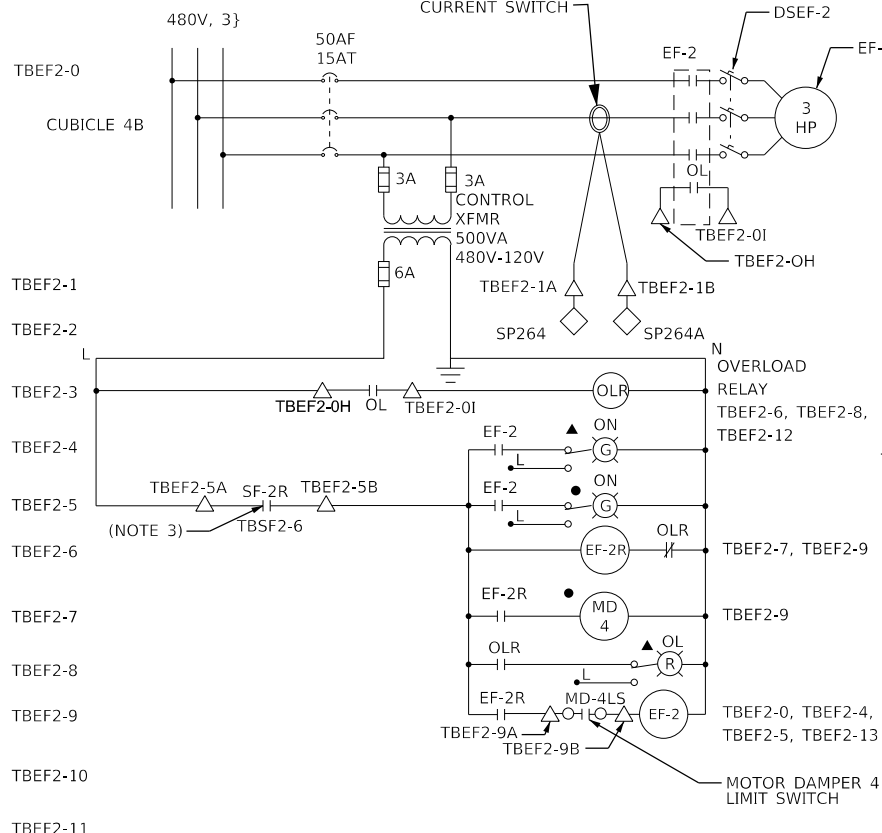


EXHAUST FAN EF-1 IN DRY WELL

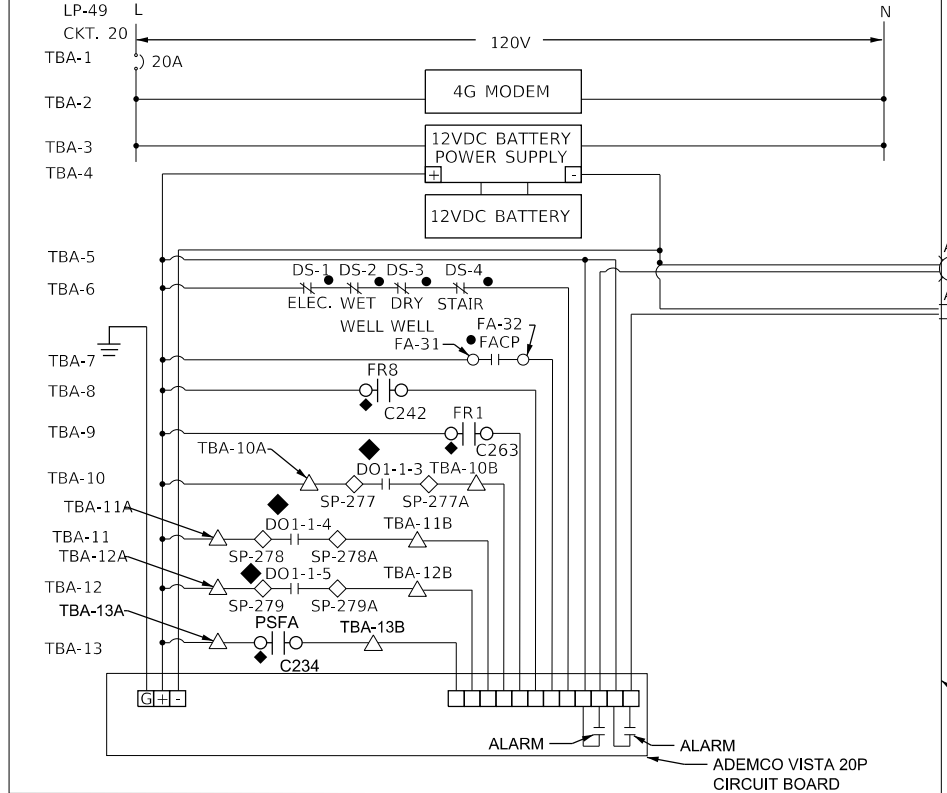


QTY	DESCRIPTION
AS REOD.	NEMA 7 PB ENCLOSURE
1	NAMEPLATE (SEE SCHEDULE)
1	NEMA 7 PILOT LIGHT, LED, GREEN
1	NEMA 7 PUSHBUTTON, RED
1	NEMA 7 PUSHBUTTON, GREEN

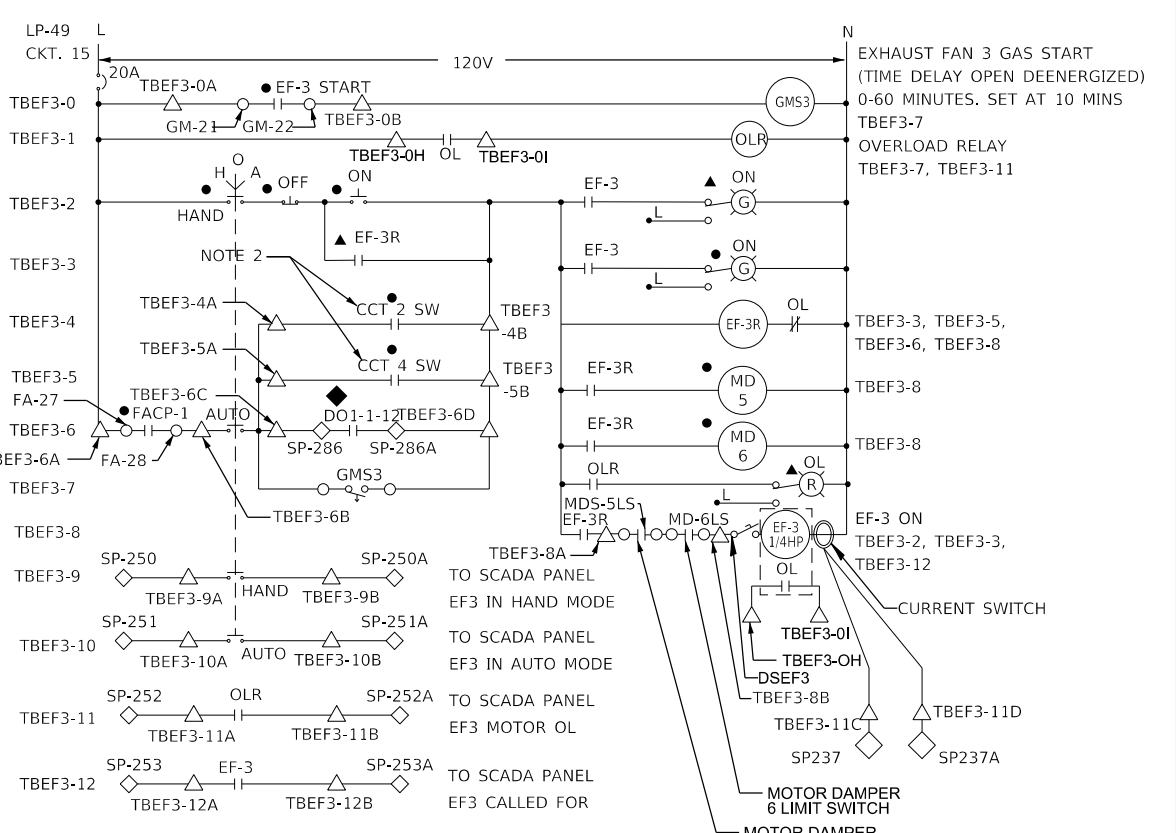
LOCAL CONTROL STATION
(CS-SF-1/EF-1 & CS-SF-2/EF-2)



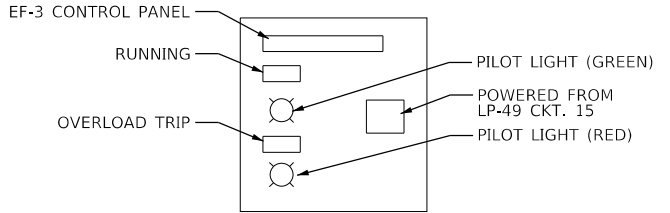
EXHAUST FAN EF-2 IN WET WELL



AEGIS BLOCK DIAGRAM



EXHAUST FAN EF-3 IN WET WELL



CONTRACTOR TO SIZE ENCLOSURE TO HOLD ALL COMPONENTS SHOWN IN EXHAUST FAN EF-3 IN WET WELL SCHEMATIC ABOVE

EF-3 CONTROL PANEL

- NOTES:**
- GS-1 AND GS-2 ARE CONTACTS IN THE COMBUSTIBLE GAS MONITORING PANEL GM1. SEE SHEET E24.
 - SEE LIGHTING AND FAN CONTROL INTERLOCK SCHEMATIC ON SHEET E22. SEE SHEET E8 FOR FAN CONTROL CURRENT SWITCH ENCLOSURE LOCATION.
 - SF-1 RELAY LOCATED IN SF-1 MOTOR STARTER IN MCC-P49 CUBICLE 5B.
 - SF-2 RELAY LOCATED IN SF-2 MOTOR STARTER IN MCC-P49 CUBICLE 65.

- COMPONENT LOCATION:**
- LOCATED REMOTE IN FIELD
 - ◆ LOCATED IN SCADA PANEL SP49
 - ▲ LOCATED IN RESPECTIVE MCC STARTER DOOR OR CONTROL PANEL
 - ◇ TERMINAL IN SCADA PANEL SP49
 - △ TERMINAL IN RESPECTIVE EQUIPMENT
 - TERMINAL REMOTE IN THE FIELD

UNLESS OTHERWISE INDICATED ALL ITEMS WITHOUT FURTHER DESIGNATION SHALL BE LOCATED IN THE RESPECTIVE STARTER COMPARTMENT

MODEL: Default FILE NAME: S:\MAD1\1800--18991\1843\002\Drawings\CAD\Micros-SS4\CAD_Sheets\PS19-xxxx-E23-Schematic\tagDet2.dgn 8/27/2024 9:30:51 AM

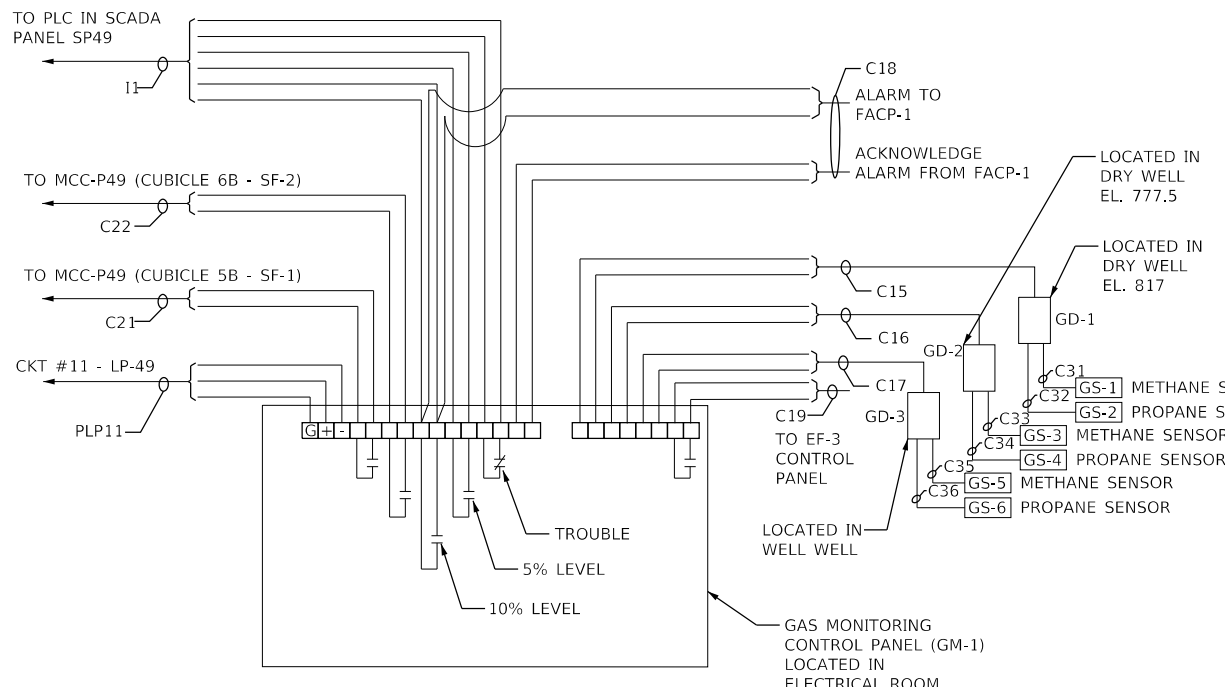


USER NAME = brianf	DESIGNED - ARC	REVISED -
DRAWN - BJF	CHECKED - SAI	REVISED -
PLOT SCALE = 8:0.0000 "/>		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

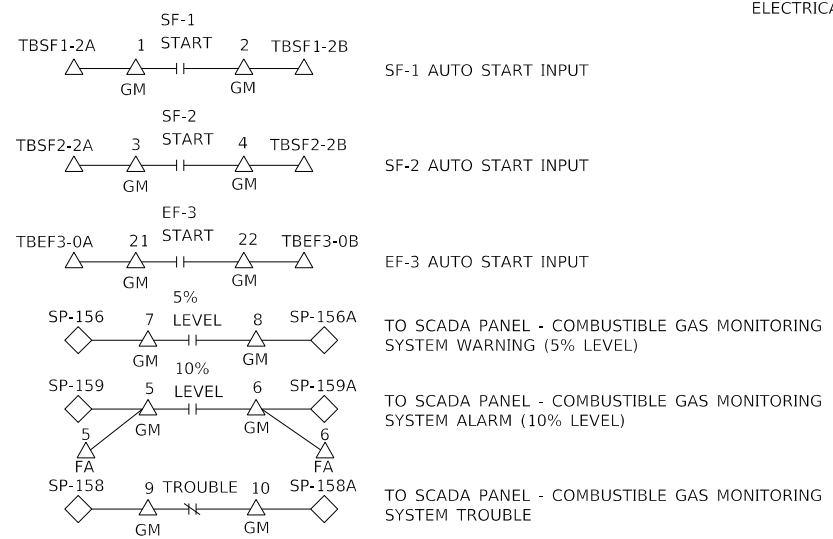
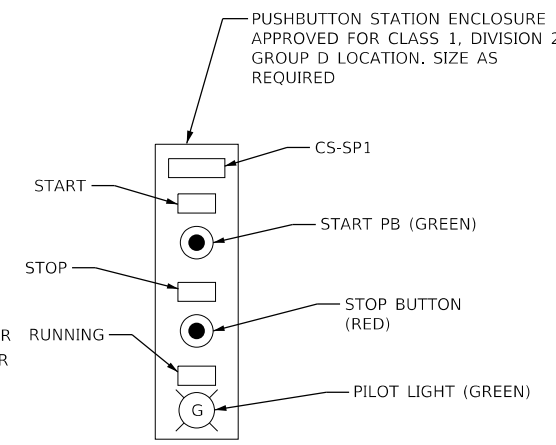
ELECTRICAL SCHEMATIC DIAGRAMS AND DETAILS - 2
PUMP STATION 49
SHEET E23 OF 28 SHEETS

F.A.P. RTE. 305	SECTION 11-00087-00-GS	COUNTY LAKE	TOTAL SHEETS 816	SHEET NO. 626
CONTRACT NO. 61J87				
ILLINOIS FED. AID PROJECT				

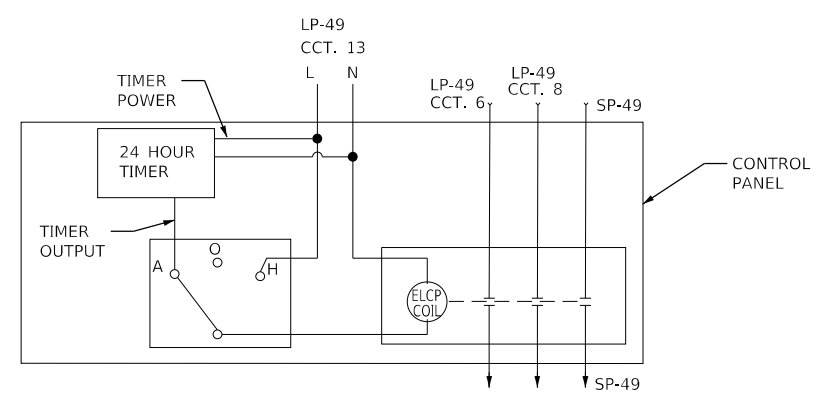


MATERIAL LIST	
QTY	DESCRIPTION
AS REQD.	NEMA 7 PB ENCLOSURE
1	NAMEPLATE
1	NEMA 7 PILOT LIGHT, LED, GREEN
1	NEMA 7 PUSHBUTTON, RED
1	NEMA 7 PUSHBUTTON, GREEN

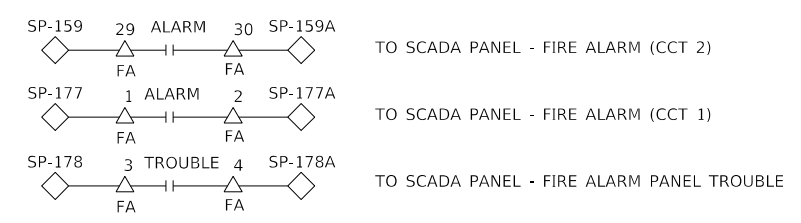
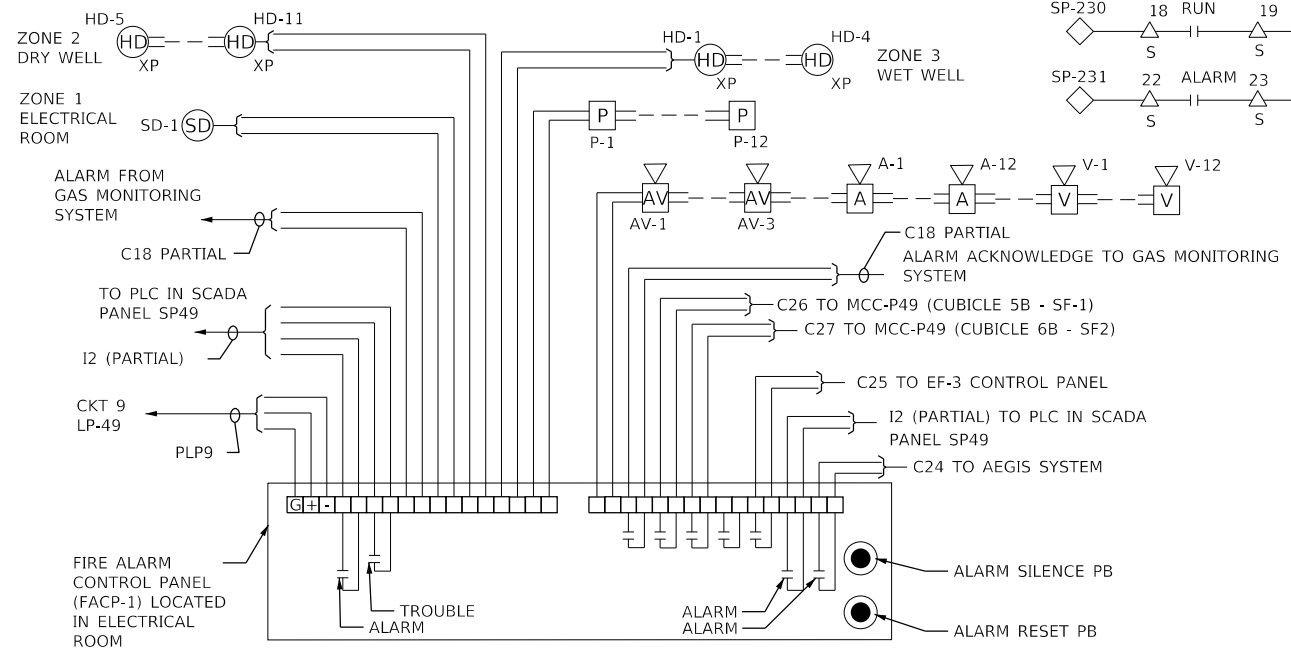
LOCAL CONTROL STATION
(CS-SP1)



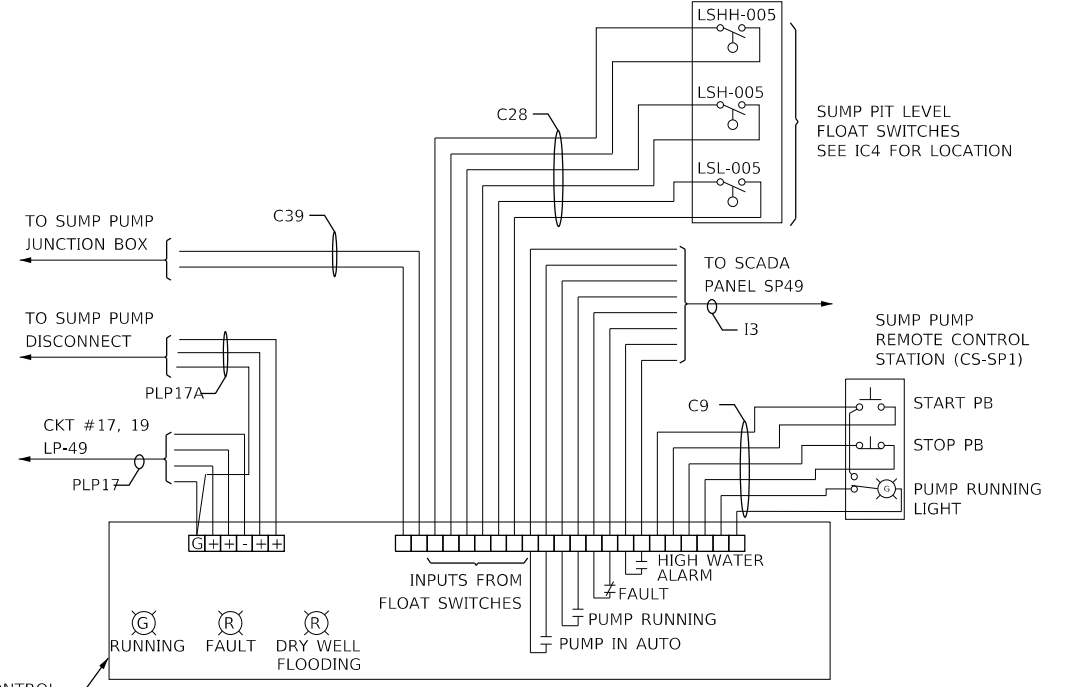
COMBUSTIBLE GAS MONITOR SYSTEM BLOCK DIAGRAM



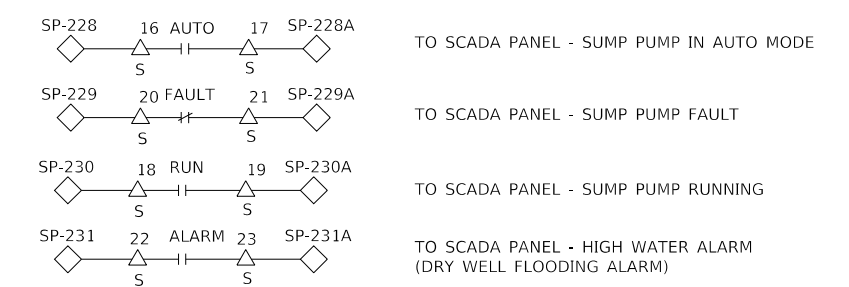
EXTERIOR LIGHTING CONTROL PANEL



FIRE ALARM SYSTEM BLOCK DIAGRAM



SUMP PUMP CONTROL SYSTEM
LOCATED IN ELECTRICAL ROOM



SUMP PUMP CONTROL SYSTEM BLOCK DIAGRAM

NOTE:
CONTRACTOR SHALL PROVIDE A COMPLETE FIRE ALARM SYSTEM INCLUDING THE 'FACP' AND ALL ASSOCIATED EQUIPMENT AS SHOWN ON THE DRAWINGS (AT A MINIMUM) AND AS REQUIRED BY NFPA 72. VERIFY AND INCORPORATE ALL FIRE ALARM SYSTEM REQUIREMENTS. THE FIRE ALARM VENDOR / CONTRACTOR SHALL PROVIDE FINAL SHOP DRAWINGS DESIGNED BY A NICET CERTIFIED DESIGNER. DRAWINGS SHALL BE APPROVED BY THE OWNER PRIOR TO SUBMISSION TO THE 'AHJ'.

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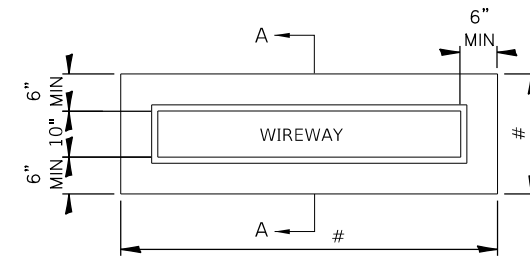
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PLOT DATE = 8/27/2024	CHECKED - SAI	REVISED -
	DATE - 8/28/2024	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

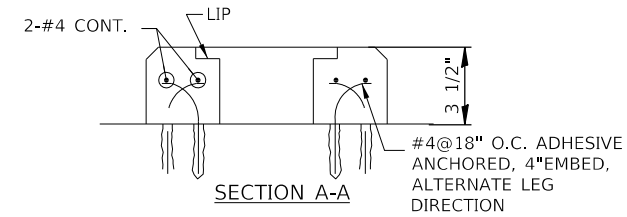
ELECTRICAL SCHEMATIC DIAGRAMS AND DETAILS - 3
PUMP STATION 49

SHEET E24 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	627
CONTRACT NO. 61J87				
ILLINOIS FED. AID PROJECT				

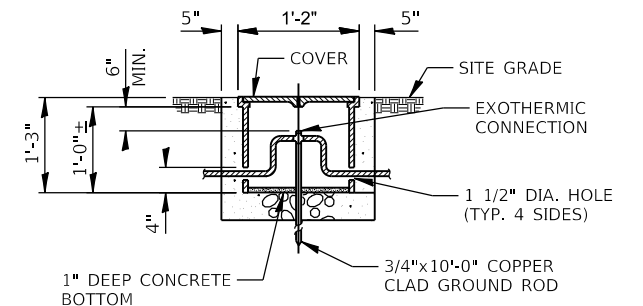
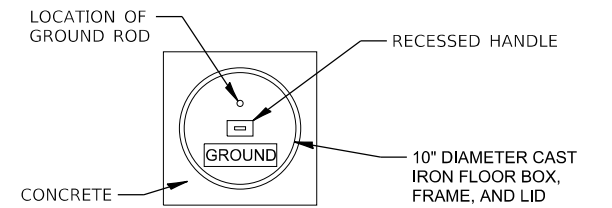


COORDINATE WITH EQUIPMENT MANUFACTURER

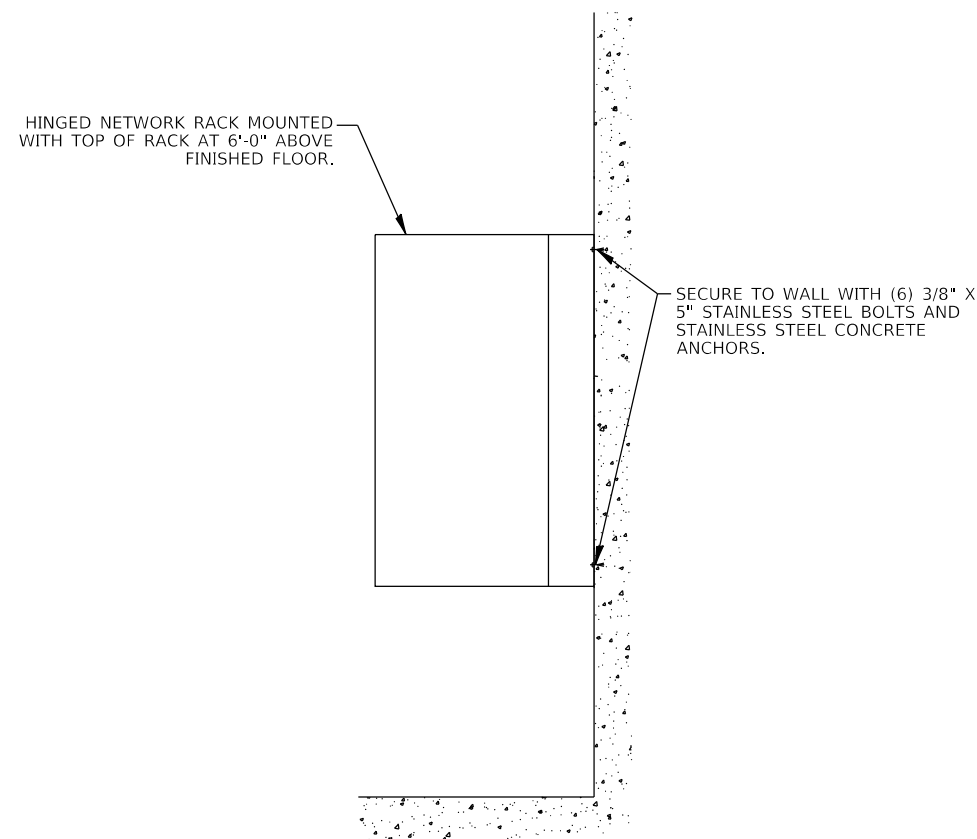


NOTE: PROVIDE FLUSH METAL COVER ON ALL EXPOSED WIREWAY

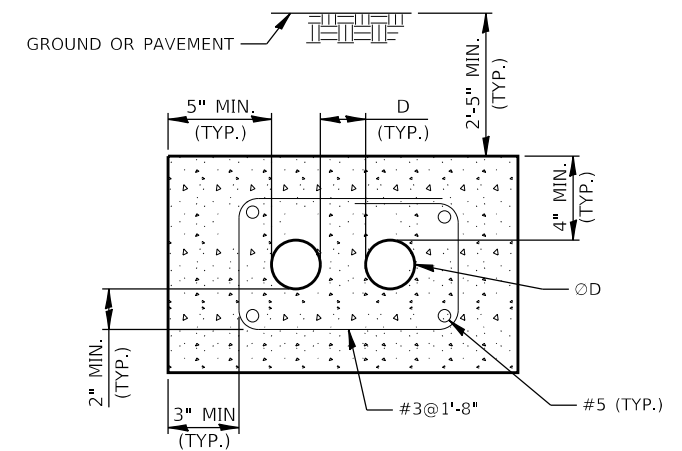
MCC PAD
NOT TO SCALE



GROUND ROD AND ACCESS BOX DETAIL
NOT TO SCALE



NETWORK RACK INSTALLATION
NOT TO SCALE



SECTION 1
TYPICAL REINFORCING FOR
CONCRETE ENCASED DUCT
NOT TO SCALE

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DRAWN -	BJF	REVISIONS			
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PLOT DATE =	8/27/2024	DATE -	8/28/2024	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ELECTRICAL DETAILS - 1
PUMP STATION 49

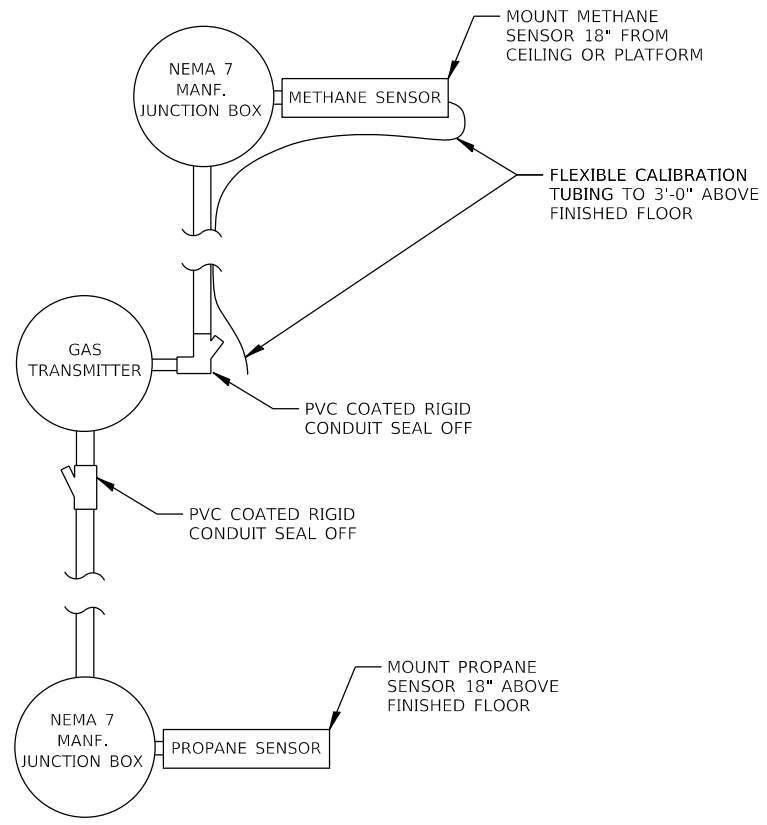
SHEET E25 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	628
CONTRACT NO. 61J87				
ILLINOIS		FED. AID PROJECT		

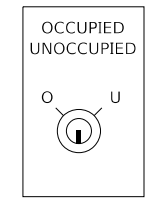
E25

8/27/2024 9:30:52 AM

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 8/27/2024 9:30:53 AM



GAS DETECTOR INSTALLATION
 NOT TO SCALE



"OCCUPIED - UNOCCUPIED"
KEY SWITCH (KS-1)
 NOT TO SCALE

STRAND ASSOCIATES
 1170 SOUTH HOUBOLT ROAD
 JOLIET, ILLINOIS 60431
 (815) 744-4200
 IDFPR NO. 184-001273

USER NAME =	brianf	DESIGNED -	ARC	REVISED -	
		DRAWN -	BJF	REVISED -	
PLOT SCALE =	8:0.0000 " / in.	CHECKED -	SAI	REVISED -	
PLOT DATE =	8/27/2024	DATE -	8/28/2024	REVISED -	

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**ELECTRICAL DETAILS - 2
 PUMP STATION 49**

SHEET E26 OF 28 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	629
CONTRACT NO. 61J87				
ILLINOIS		FED. AID PROJECT		

POWER CONDUIT

Table with columns: NUMBER, SIZE (IN.), TYPE, CONDUCTOR QUANTITY AND SIZE (AWG-kcmil), COND./CABLE INSULATION, FROM, TO. Contains 75 rows of conduit specifications.

CONTROL CONDUIT

Table with columns: NUMBER, SIZE (IN.), TYPE, CONDUCTOR QUANTITY AND SIZE (AWG-kcmil), COND./CABLE INSULATION, FROM, TO. Contains 39 rows of control conduit specifications.

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

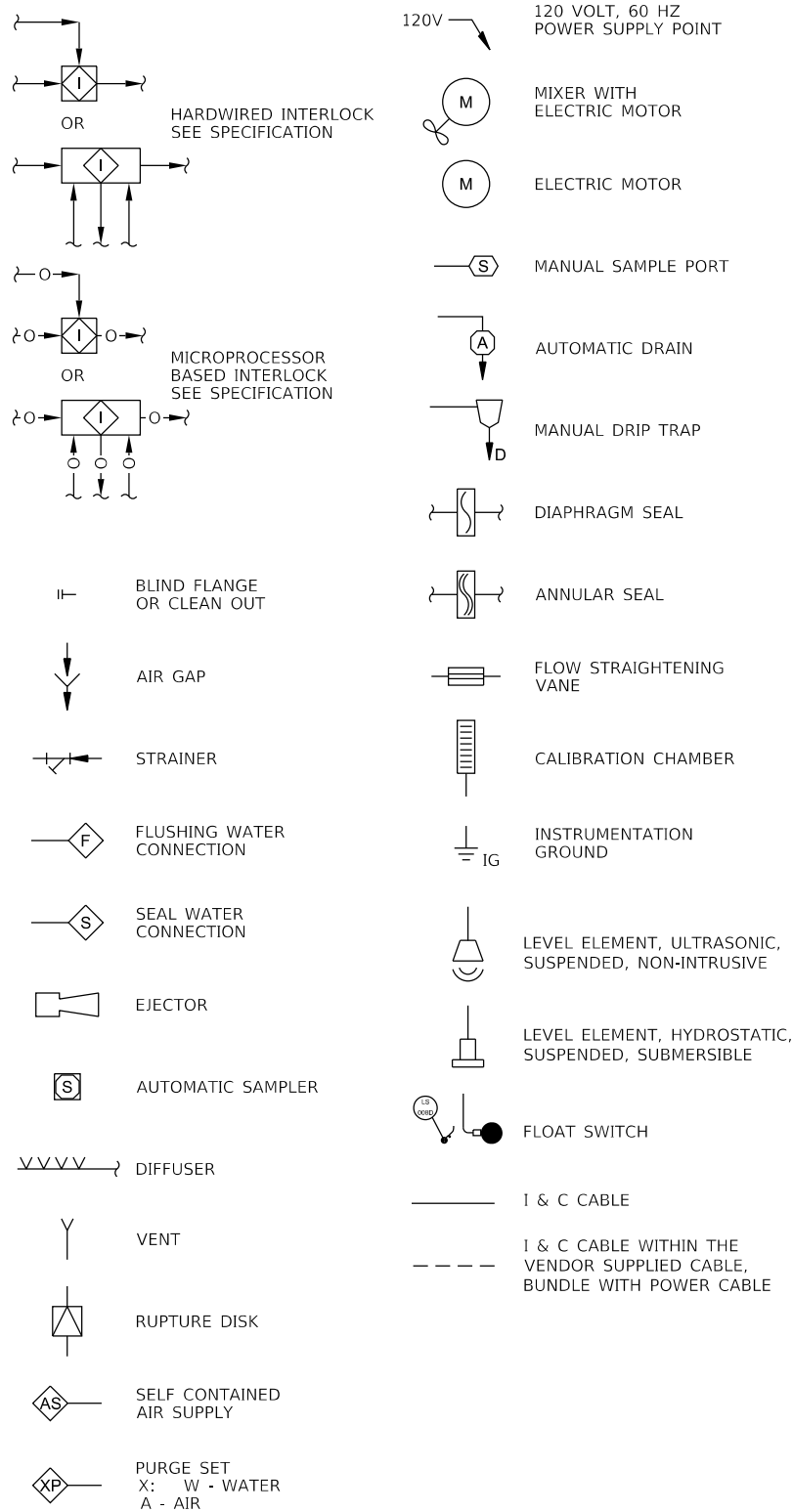
**ELECTRICAL CONDUIT AND CABLE SCHEDULE
PUMP STATION 49**

E28

MODEL: Default
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Administrative header block containing project information: USER NAME = brianf, DESIGNED - ARC, REVISIONS table, PLOT SCALE = 8:0.0000 "/in., PLOT DATE = 8/27/2024, SHEET E28 OF 28 SHEETS, CONTRACT NO. 61J87, ILLINOIS FED. AID PROJECT.

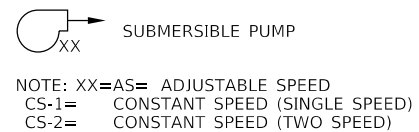
MISCELLANEOUS SYMBOLS



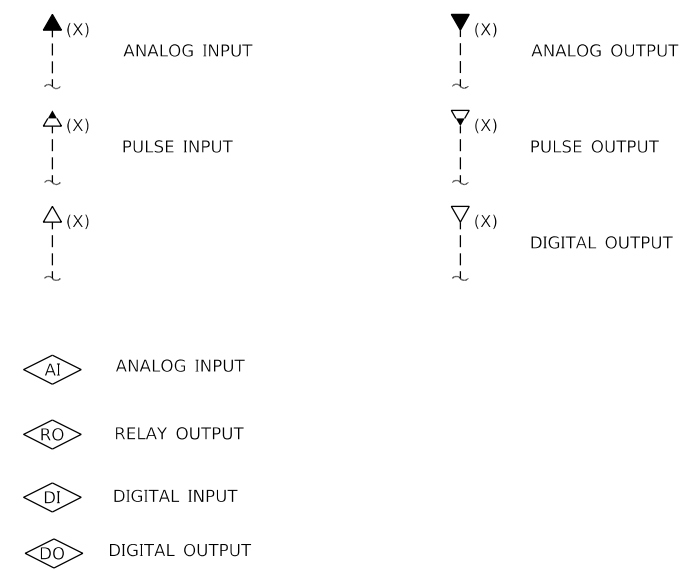
VALVE SYMBOLS



PUMP SYMBOLS

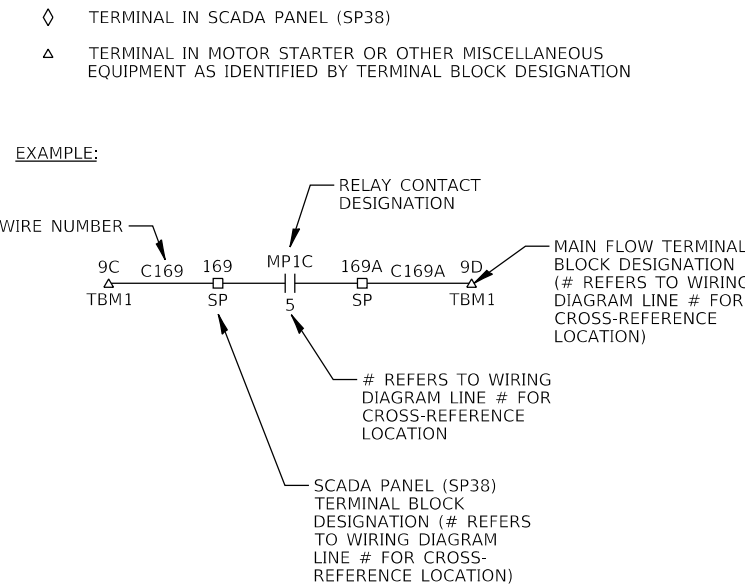


INPUTS & OUTPUTS TO PLC OR DISTRIBUTED CONTROL



NOTE: X= TOTAL NUMBER OF SIGNALS WHERE MORE THAN ONE SIGNAL IS REQUIRED. IF QUANTITY IS NOT SHOWN, THEN ONE SIGNAL IS REQUIRED.

WIRING DIAGRAM SYMBOLS & EXAMPLE



ABBREVIATIONS

- ATS AUTOMATED TRANSFER SWITCH
- BKR BREAKER
- CS CONTROL SWITCH
- EF EXHAUST FAN
- FACP FIRE ALARM CONTROL PANEL
- GM GAS MONITORING
- IG ISOLATED GROUND
- LFP LOW FLOW PUMP
- MCC MOTOR CONTROL CENTER
- PMPR PUMP OVERRIDE
- RGS RIGID GALVANIZED STEEL
- SF SUPPLY FAN
- SP SCADA PANEL

GENERAL NOTES:

1. THIS IS A STANDARD LEGEND. NOT ALL OF THE INFORMATION SHOWN ON THIS LEGEND IS USED IN THESE CONTRACT DRAWINGS.

MODEL: Default
FILE NAME: S:\MAD\1800-1899\1843\002\Drawings\CAD\Micros-SS4\CAD_Sheets\PS49-xxxx-IsC1-GeneralNotes1.dgn



1170 SOUTH HOUBOLT ROAD JOLIET, ILLINOIS 60431 (815) 744-4200 IDFPR NO. 184-001273	USER NAME = brianf	DESIGNED - ARC	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

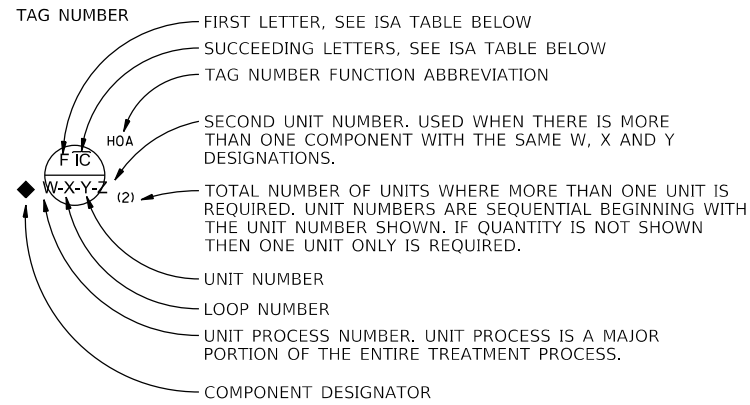
I&C SYMBOLS LIST, ABBREVIATIONS & GENERAL NOTES - 1
PUMP STATION 49

SHEET IC1 OF 26 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	632
CONTRACT NO. 61J87				

ILLINOIS FED. AID PROJECT

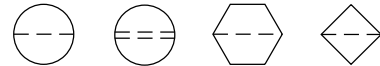
INSTRUMENT IDENTIFICATION



EXAMPLE SYMBOLS

	CONTROL PANEL MOUNTED ACCESSIBLE TO OPERATOR	FIELD MOUNTED	MCC/MOTOR STARTER MOUNTED NORMALLY ACCESSIBLE TO OPERATOR
DISCRETE INSTRUMENTS			
MICROPROCESSOR BASED SHARED INSTRUMENT			
COMPUTER FUNCTION		NONE	NONE

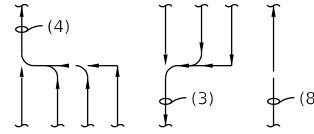
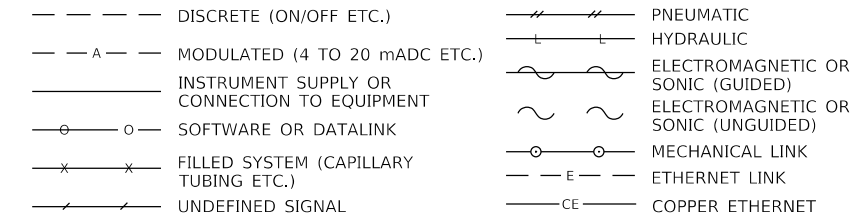
INACCESSIBLE OR BEHIND-THE-PANEL DEVICES OR FUNCTIONS MAY BE DEPICTED BY USING THE SAME SYMBOLS BUT WITH DASHED HORIZONTAL BARS, I.E.



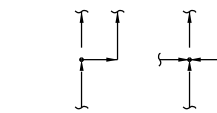
TAG NUMBER FUNCTION ABBREVIATIONS

- ALT ALTERNATE
- AM AMMETER
- AS AMMETER SWITCH
- C CLOSE(D)
- CB CIRCUIT BREAKER
- CM COMPUTER-MANUAL
- DIFF DIFFERENCE OR DIFFERENTIAL
- DO DISSOLVED OXYGEN
- F FAIL
- F(X) CHARACTERIZED
- FOR FORWARD-STOP-REVERSE (MAINTAINED CONTACT)
- FSR FORWARD-STOP-REVERSE (MOMENTARY CONTACT)
- GD GAS DETECTOR
- HMI HUMAN-MACHINE INTERFACE
- HOA HAND-OFF-AUTOMATIC (MAINTAINED CONTACT)
- II CURRENT-TO-CURRENT
- IP CURRENT-TO-PNEUMATIC
- ISBR INTRINSICALLY SAFE BARRIER RELAY
- LE LEVEL EMITTER
- LEL LOWER EXPLOSIVE LIMIT
- LIT LEVEL TRANSMITTER
- LL LEAD-LAG (MAINTAINED CONTACT)
- LOR LOCAL-OFF-REMOTE (MAINTAINED CONTACT)
- LOS LOCKOUT STOP (LOCKABLE IN "STOP" POSITION, MOMENTARY CONTACT)
- LR LOCAL-REMOTE (MAINTAINED CONTACT)
- LS LEVEL SWITCH
- LT LEVEL TRANSDUCER
- MA MANUAL-AUTOMATIC (MAINTAINED CONTACT)
- MOA MANUAL-OFF-AUTOMATIC (MAINTAINED CONTACT)
- MTS MOTOR HIGH TEMPERATURE SWITCH
- O OPEN
- OA OFF-AUTOMATIC
- OAC OPEN-AUTOMATIC-CLOSE (MAINTAINED CONTACT)
- OC OPEN-CLOSE(D) (MAINTAINED CONTACT)
- OL OVERLOAD
- OSC OPEN-STOP-CLOSE (MOMENTARY CONTACT SPRING RETURN TO CENTER POSITION)
- OO ON-OFF (MAINTAINED CONTACT)
- OOA ON-OFF-AUTOMATIC (MAINTAINED CONTACT)
- OOR ON-OFF-REMOTE (MAINTAINED CONTACT)
- R RUN
- S STOP
- SP SPEED POT
- SQRT SQUARE ROOT
- SS START-STOP (MOMENTARY CONTACT)
- SSA START-STOP-AUTOMATIC (MOMENTARY CONTACT)
- SSL START-STOP-LOCK (LOCKABLE IN "STOP" POSITION, MOMENTARY CONTACT)
- SUM SUMMATION
- VIB VIBRATION
- X MULTIPLY
- XFER TRANSFER

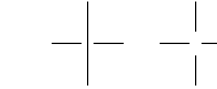
SIGNALS



PARALLELING LINES. (PARENTHETICAL NUMBER INDICATES THE NUMBER OF SIGNALS REPRESENTED)

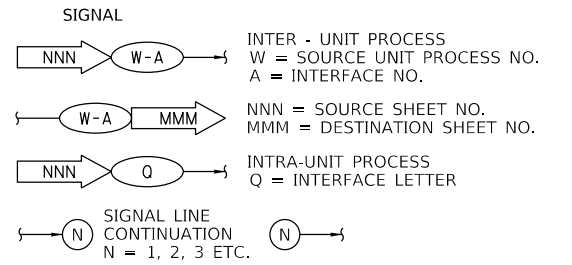
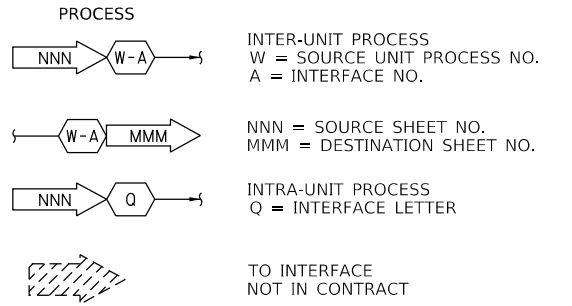


CONNECTING LINES



NON-CONNECTING LINES

INTERFACE SYMBOLS



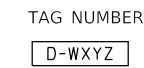
INSTRUMENT SOCIETY OF AMERICA TABLE

LETTER	FIRST LETTER (S)		SUCCEEDING LETTERS		
	PROCESS OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS (t)		ALARM		
B	BURNER COMBUSTION		USERS CHOICE (t)	CLOSE, STOP, DECREASE	USERS CHOICE (t)
C	USERS CHOICE (t)			CONTROL	CLOSED
D	USERS CHOICE (t)	DIFFERENTIAL		OPEN, START, INCREASE	
E	VOLTAGE		PRIMARY ELEMENT		
F	FLOW RATE, FIRE				
G	USERS CHOICE (t)		GLASS		FAIL
H	HAND (MANUAL)				HIGH (OPEN)
I	CURRENT		INDICATE		INTERMEDIATE
J	POWER	SCAN			
K	TIME OR SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT (PILOT)		LOW (CLOSED)
M	MOTOR, MOISTURE	MOMENTARY			MIDDLE
N	USERS CHOICE (t)		USERS CHOICE (t)	USERS CHOICE (t)	ON
O	USERS CHOICE (t)		ORIFICE		OPENED
P	PRESSURE OR VACUUM		POINT (TEST CONNECTION)		
Q	QUANTITY	INTEGRATE			
R	RADIOACTIVITY		RECORD OR PRINT		
S	SPEED OR FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE (t)		MULTIFUNCTION (t)	MULTIFUNCTION (t)	MULTIFUNCTION (t)
V	VIBRATION			VALVE	
W	WEIGHT OR FORCE		WELL		
X	UNCLASSIFIED (t)	X AXIS	UNCLASSIFIED (t)	UNCLASSIFIED (t)	UNCLASSIFIED (t)
Y	EVENT, STATE, OR PRESSURE	Y AXIS		RELAY OR COMPUTE (t)	
Z	POSITION, DIMENSION	Z AXIS		DRIVE, ACTUATE OR UNCLASSIFIED FINAL CONTROL ELEMENT	

(t) WHEN USED, EXPLANATION IS SHOWN ADJACENT TO INSTRUMENT SYMBOL.

SPECIAL CASES:

EQUIPMENT IDENTIFICATION



- D: INSTRUMENTATION TAG, EQUIPMENT ABBREVIATION
- W: UNIT PROCESS NUMBER
- X: LOOP NUMBER
- Y: UNIT NUMBER
- *COMPONENT DESIGNATOR

EQUIPMENT ABBREVIATIONS

- M MECHANICAL EQUIPMENT
- P PUMP

POWER OPERATED VALVE IDENTIFICATION

SAME AS INSTRUMENT IDENTIFICATION.

ELECTRICAL PANEL/ CONTROL STATION IDENTIFICATION

- TAG NUMBER (LCP-P) ◆
- LCP PANEL DESIGNATION
- P PANEL NUMBER
- ◆COMPONENT DESIGNATOR

COMPONENT DESIGNATORS

- CRITICAL ALARM
 - ◆ PROVIDE IN ACCORDANCE WITH DIVISION 26
 - ◆◆ EXISTING COMPONENT TO BE RELOCATED IN ACCORDANCE WITH DIVISION 26
 - ◆◆◆ OWNER FURNISHED COMPONENT TO BE INSTALLED IN ACCORDANCE WITH DIVISION 26
 - * OWNER FURNISHED COMPONENT TO BE INSTALLED IN ACCORDANCE WITH DIVISION 11 AND DIVISION 23
 - ** PROVIDE AS PART OF A MANUFACTURER'S OR VENDOR'S PACKAGED SYSTEM IN ACCORDANCE WITH DIVISION 11, DIVISION 13 AND DIVISION 23
 - *** EXISTING COMPONENT TO BE RELOCATED IN ACCORDANCE WITH DIVISION 11 AND DIVISION 23
- PROVIDE COMPONENT WITHOUT A DESIGNATOR IN ACCORDANCE WITH DIVISION 11, DIVISION 13 AND DIVISION 23

GENERAL NOTES:

1. THIS IS A STANDARD LEGEND. NOT ALL OF THE INFORMATION SHOWN ON THIS LEGEND IS USED IN THESE CONTRACT DRAWINGS.
2. CROSS-HATCHED PORTIONS OF P&ID'S

INDICATE FUTURE OR CONCURRENT WORK WHICH IS NOT A PART OF THIS CONTRACT.
3. THERE IS NO INTENT TO SHOW ALL EXISTING FACILITIES ON THE P&ID'S.
4. FOB ON PLAN SHEETS INDICATES FRONT OF BUILDING

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STRAND ASSOCIATES
1170 SOUTH HOUBOLT ROAD
JOLIET, ILLINOIS 60431
(815) 744-4200
IDFPR NO. 184-001273

USER NAME = brianf	DESIGNED - ARC	REVISED -
PLOT SCALE = 8:0.0000 " / in.	DRAWN - BJF	REVISED -
PLOT DATE = 8/27/2024	CHECKED - SAI	REVISED -
	DATE - 8/28/2024	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

I&C SYMBOLS LIST, ABBREVIATIONS & GENERAL NOTES - 2
PUMP STATION 49

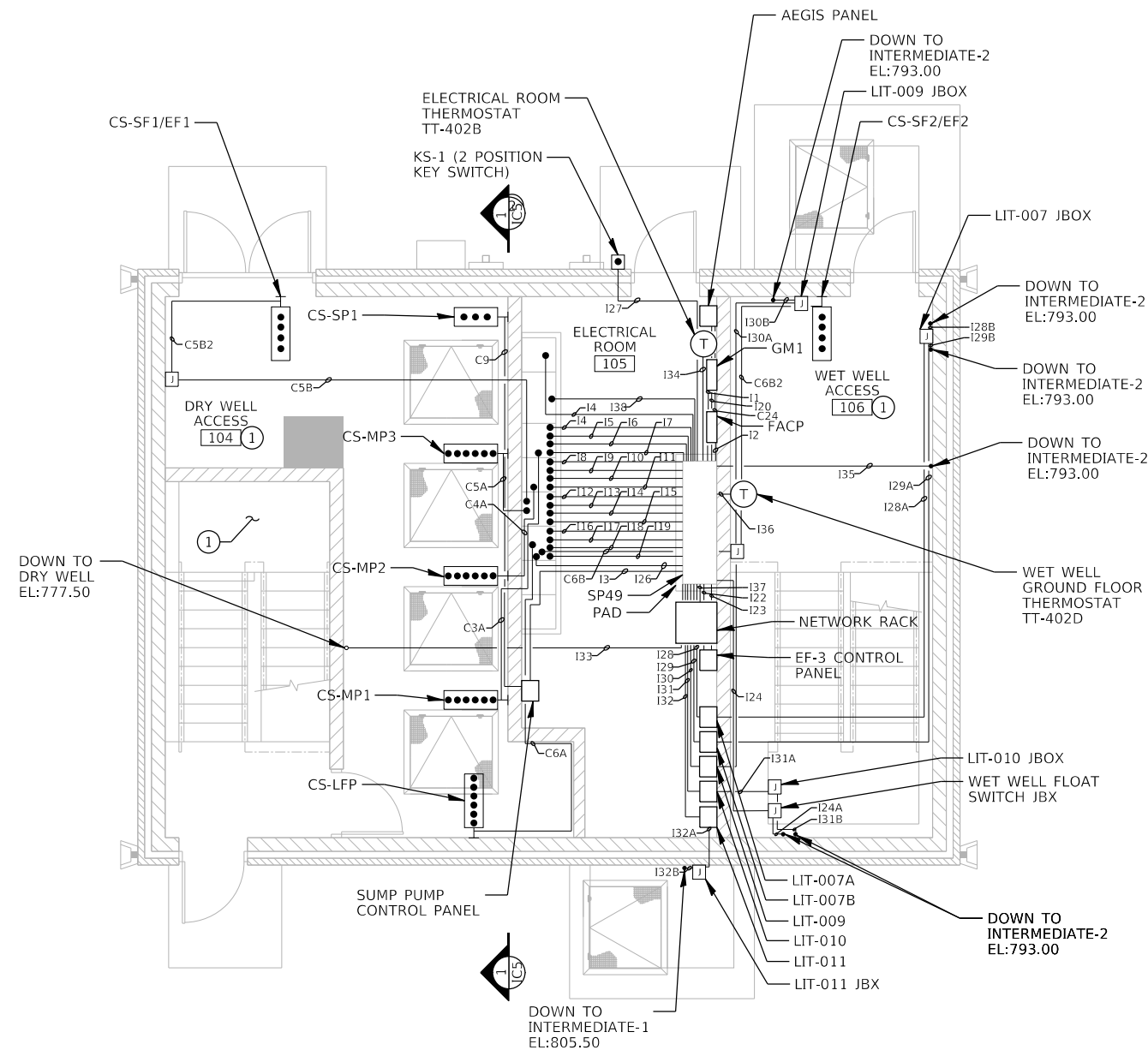
SHEET IC2 OF 26 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	633
CONTRACT NO. 61J87				
ILLINOIS FED. AID PROJECT				

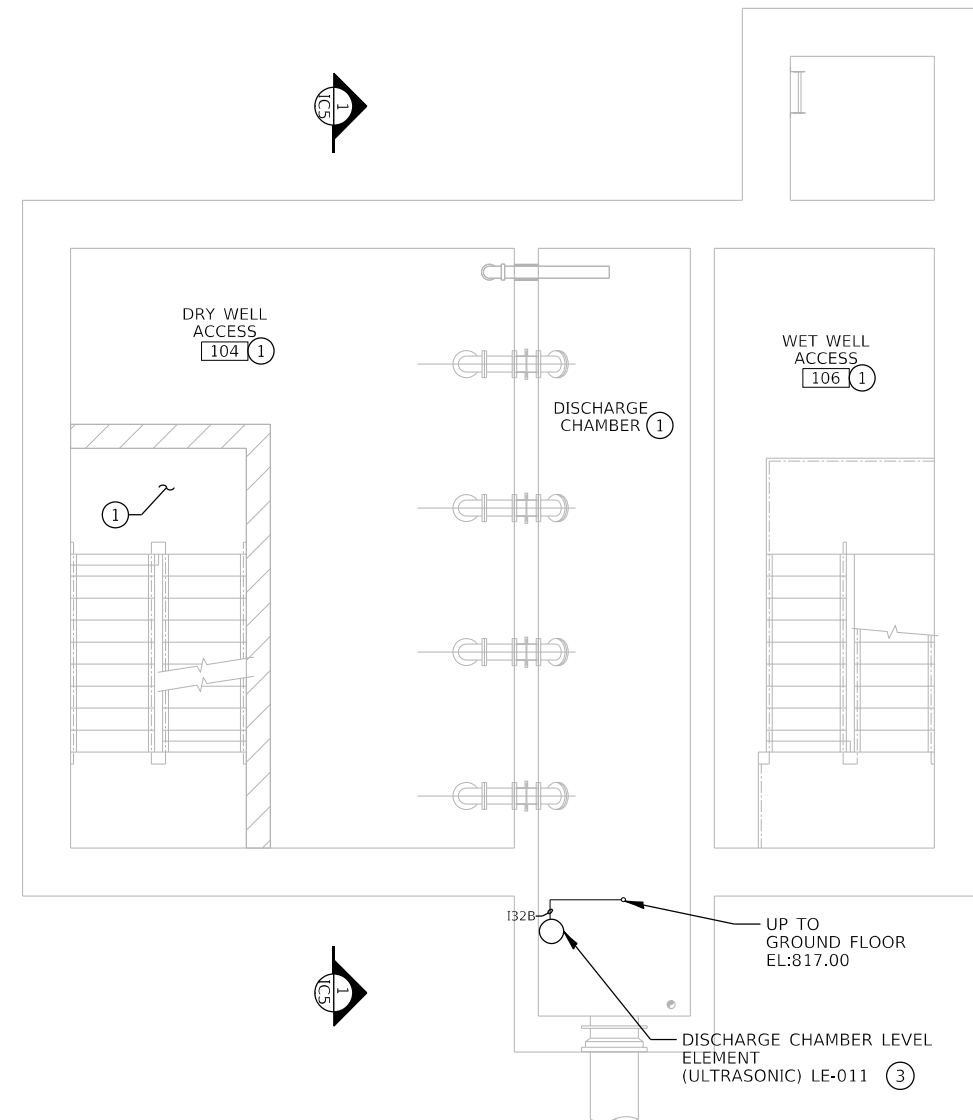
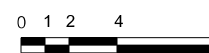
IC2

KEY NOTES

- ① ALL ELECTRICAL WORK AND EQUIPMENT IN THIS AREA SHALL BE RATED FOR A CLASS 1, DIVISION 2, GROUP D LOCATION.
- ② "UNOCCUPIED-OCCUPIED" WEATHER PROOF KEY OPERATED SWITCH. SEE SHEET E26 FOR DETAIL.
- ③ SUPPORT ULTRASONIC AS SHOWN IN DETAIL ③ MB.



① I&C GROUND FLOOR PLAN ELEV. 817.00



② I&C INTERMEDIATE FLOOR PLAN - 1 ELEV. 811.50



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 8/27/2024 9:30:58 AM



USER NAME = brianf	DESIGNED - ARC	REVISED -
DRAWN - BJF	REVISIONS -	
PLOT SCALE = 8:0.0000 "/>		

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

I&C GROUND & INTERMEDIATE FLOOR - 1 PLANS
 PUMP STATION 49

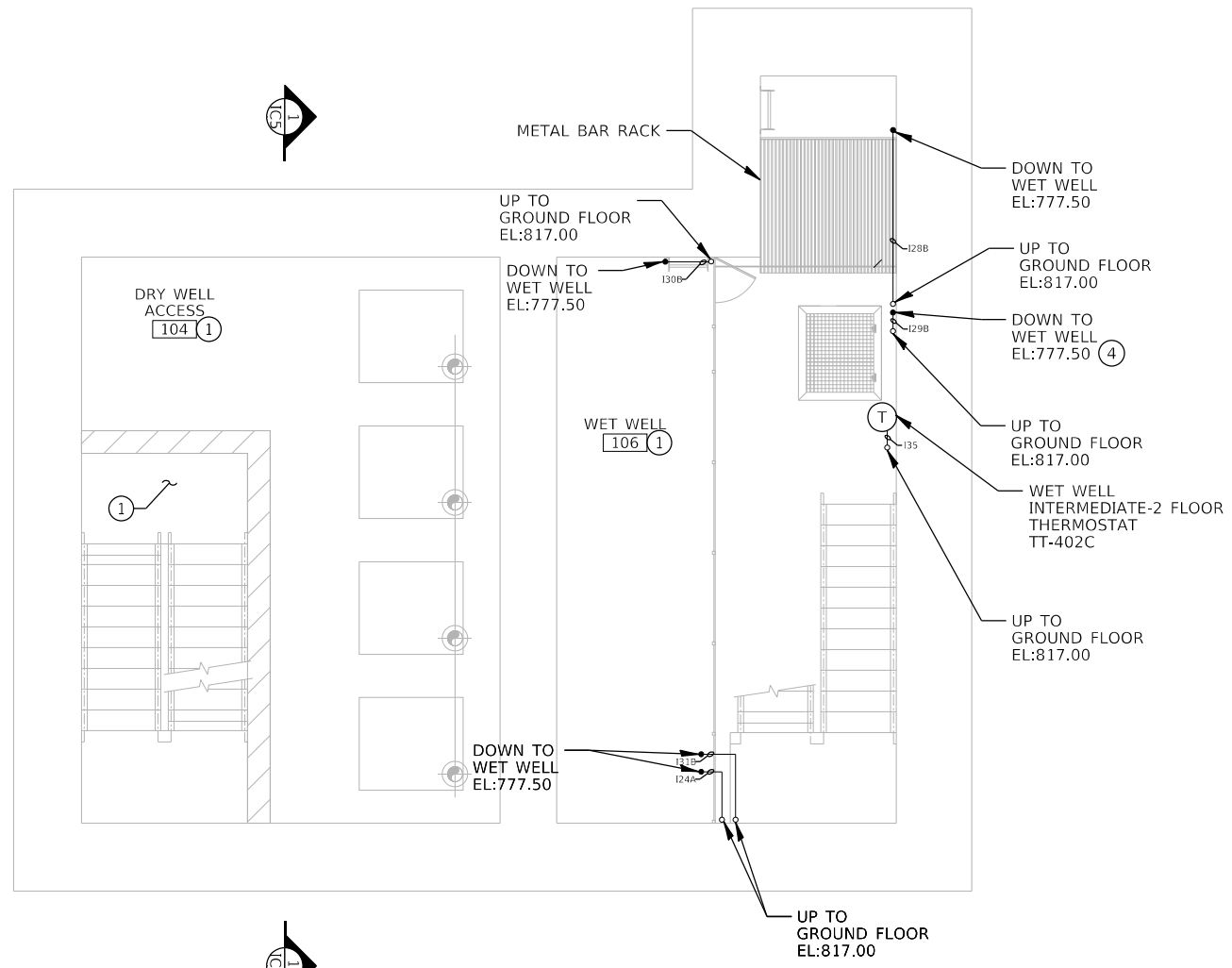
SHEET IC3 OF 26 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 61J87				
ILLINOIS		FED. AID PROJECT		

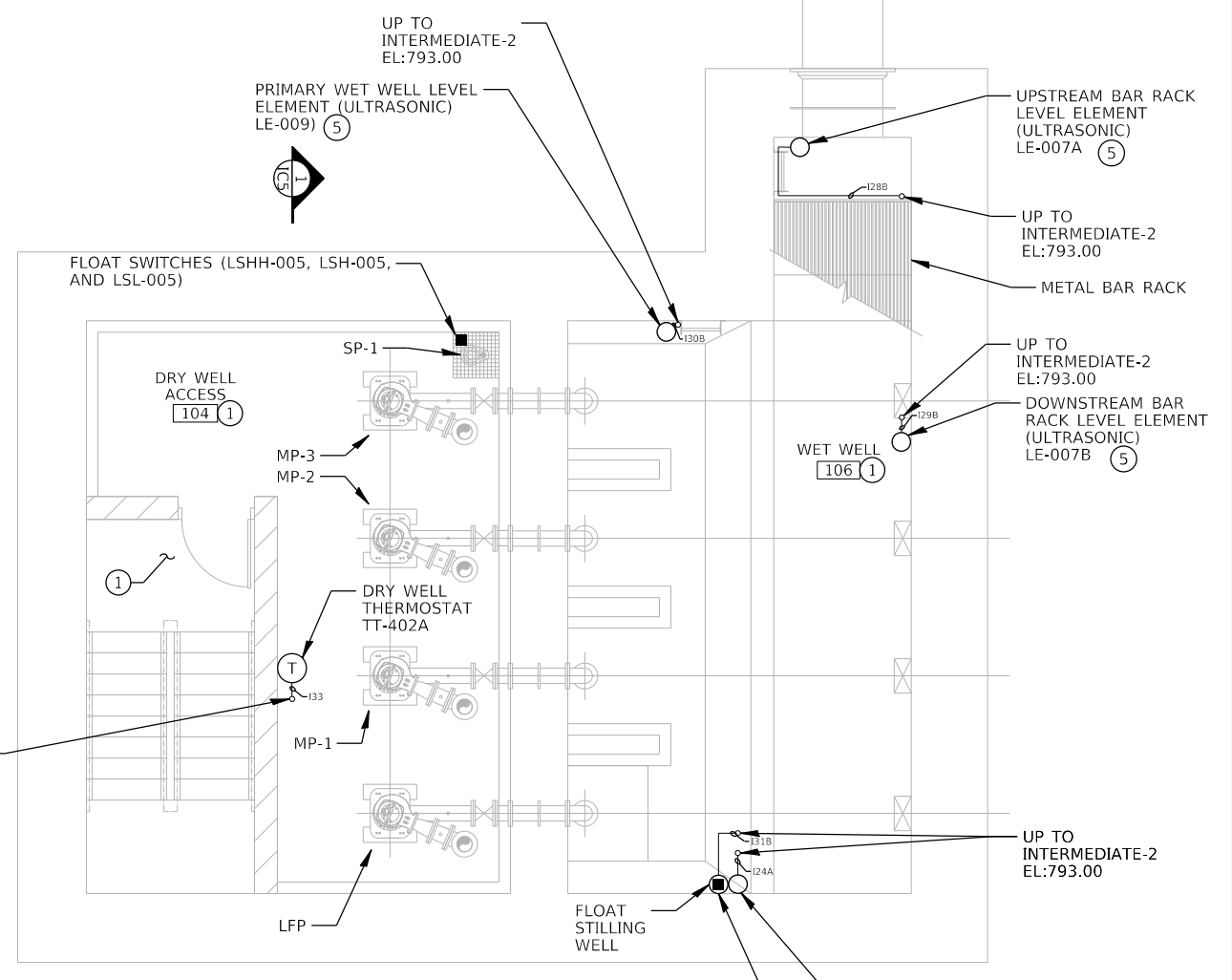
IC3

KEY NOTES

- ① ALL ELECTRICAL WORK AND EQUIPMENT IN THIS AREA SHALL BE RATED FOR A CLASS I, DIVISION 2, GROUP D LOCATION.
- ② PROVIDE A STAINLESS STEEL KELLUM GRIP FOR SUPPORTING EACH FLOAT SWITCH MANUFACTURER CABLE AS SHOWN IN DETAIL (2/M8)
- ③ PROVIDE A STAINLESS STEEL KELLUM GRIP FOR SUPPORTING EACH LEVEL ELEMENT MANUFACTURER CABLE AS SHOWN IN DETAIL (1/M8)
- ④ PROVIDE A 2" CONDUIT STUB THROUGH FLOOR FOR INSTALLATION OF MANUFACTURER FURNISHED LEVEL ELEMENT CABLE FROM LEVEL TRANSMITTER JUNCTION BOX TO DOWNSTREAM LEVEL ELEMENT. CONDUIT SHALL EXTEND 6-INCHES ON EACH SIDE OF THE FLOOR.
- ⑤ SUPPORT EACH ULTRASONIC AS SHOWN IN DETAIL (3/M8)



① **I&C INTERMEDIATE FLOOR PLAN - 2 ELEV. 793.00**



② **I&C WET WELL FLOOR PLAN - 3 ELEV. 777.50**



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SA STRAND ASSOCIATES
 1170 SOUTH HOUBOLT ROAD
 JOLIET, ILLINOIS 60431
 (815) 744-4200
 IDFPR NO. 184-001273

USER NAME = brianf	DESIGNED - ARC	REVISED -
DRAWN - BJF	REVISIONS -	
PLOT SCALE = 8:0.0000 "/>		

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

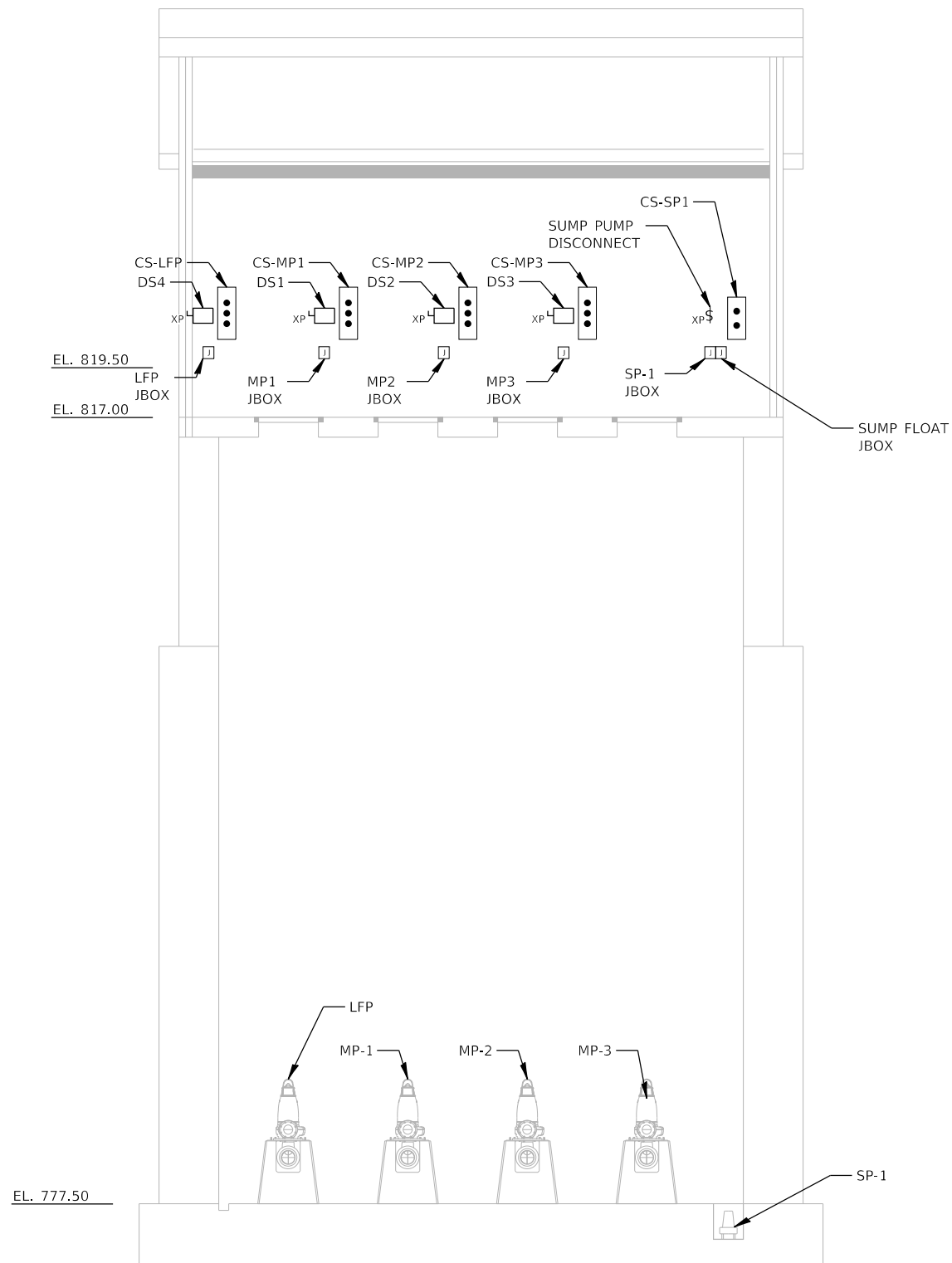
I&C INTERMEDIATE FLOOR - 2 & WET WELL FLOOR PLANS PUMP STATION 49

SHEET IC4 OF 26 SHEETS

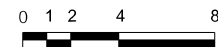
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CONTRACT NO. 61J87				
ILLINOIS FED. AID PROJECT				

IC4

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1 I&C PUMP STATION INSTRUMENTATION SECTION LOOKING WEST



1170 SOUTH HOUBOLT ROAD JOLIET, ILLINOIS 60431 (815) 744-4200 IDFPR NO. 184-001273	USER NAME = brianf	DESIGNED - ARC	REVISED -
	DRAWN - BJF	CHECKED - SAI	REVISED -
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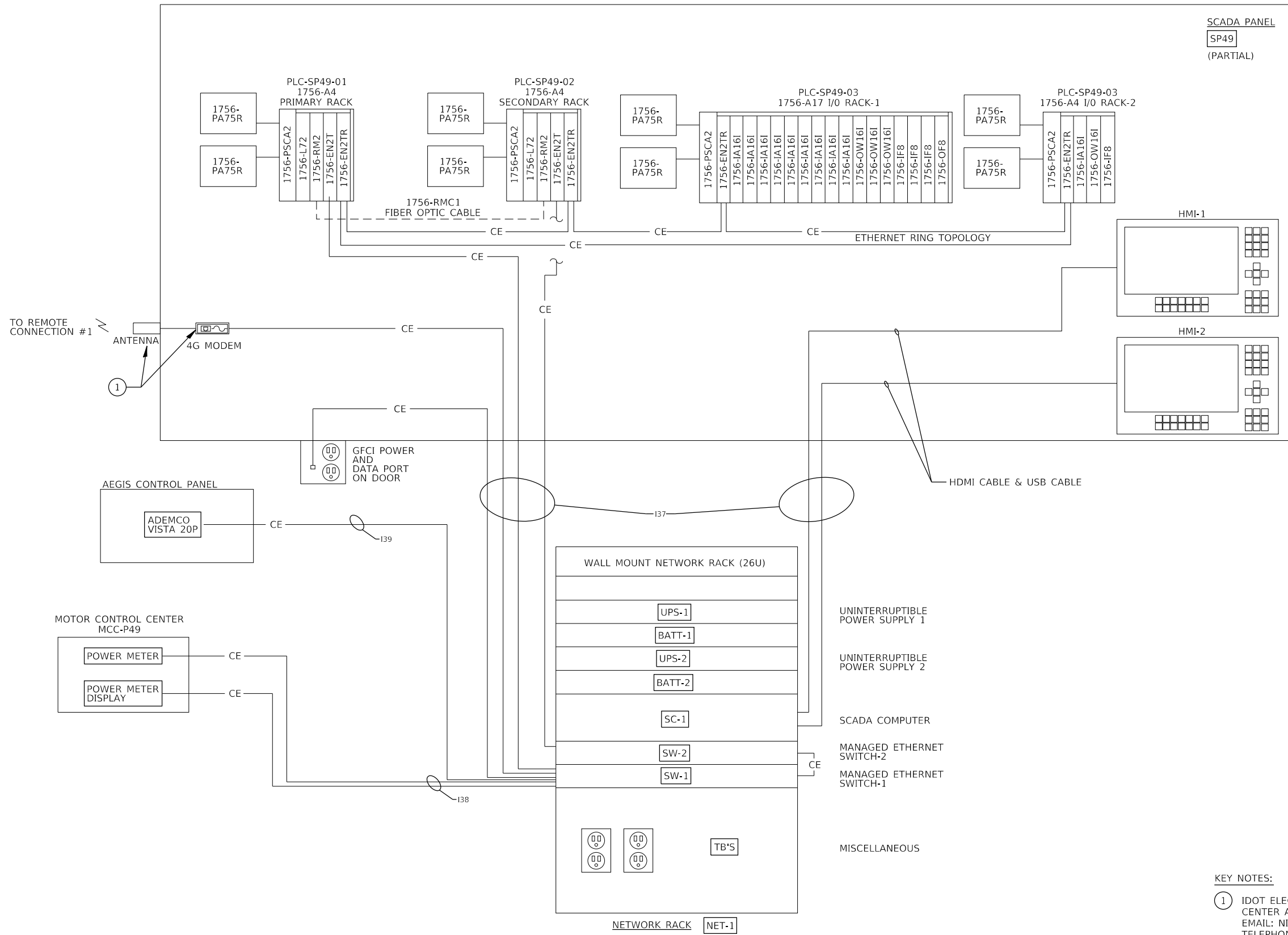
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

I&C PUMP STATION INSTRUMENTATION SECTION - WEST
 PUMP STATION 49

SHEET IC5 OF 26 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	636
CONTRACT NO. 61J87				
ILLINOIS		FED. AID PROJECT		

IC5



SCADA PANEL
SP49
(PARTIAL)

KEY NOTES:

- 1 IDOT ELECTRICAL MAINTENANCE TRAFFIC SYSTEM CENTER AT OAK PARK. CONTACT NICK TEMPEL VAI EMAIL: NICHOLAS.TEMPERL@ILLINOIS.GOV, AND/OR TELEPHONE: (847)705-4450. IDOT ELECTRICAL MAINTENANCE TRAFFIC CENTER WILL PROVIDE SIM CARD FOR CELLULAR MODEM. COORDINATE FINAL MOUNTING AND ORIENTATION OF ANTENNA WITH IDOT.

MODEL: Default
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8/27/2024 9:30:59 AM



1170 SOUTH HOUBOLT ROAD JOLIET, ILLINOIS 60431 (815) 744-4200 IDFPR NO. 184-001273	USER NAME = brianf	DESIGNED - ARC	REVISED -
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		DATE - 8/28/2024	REVISED -

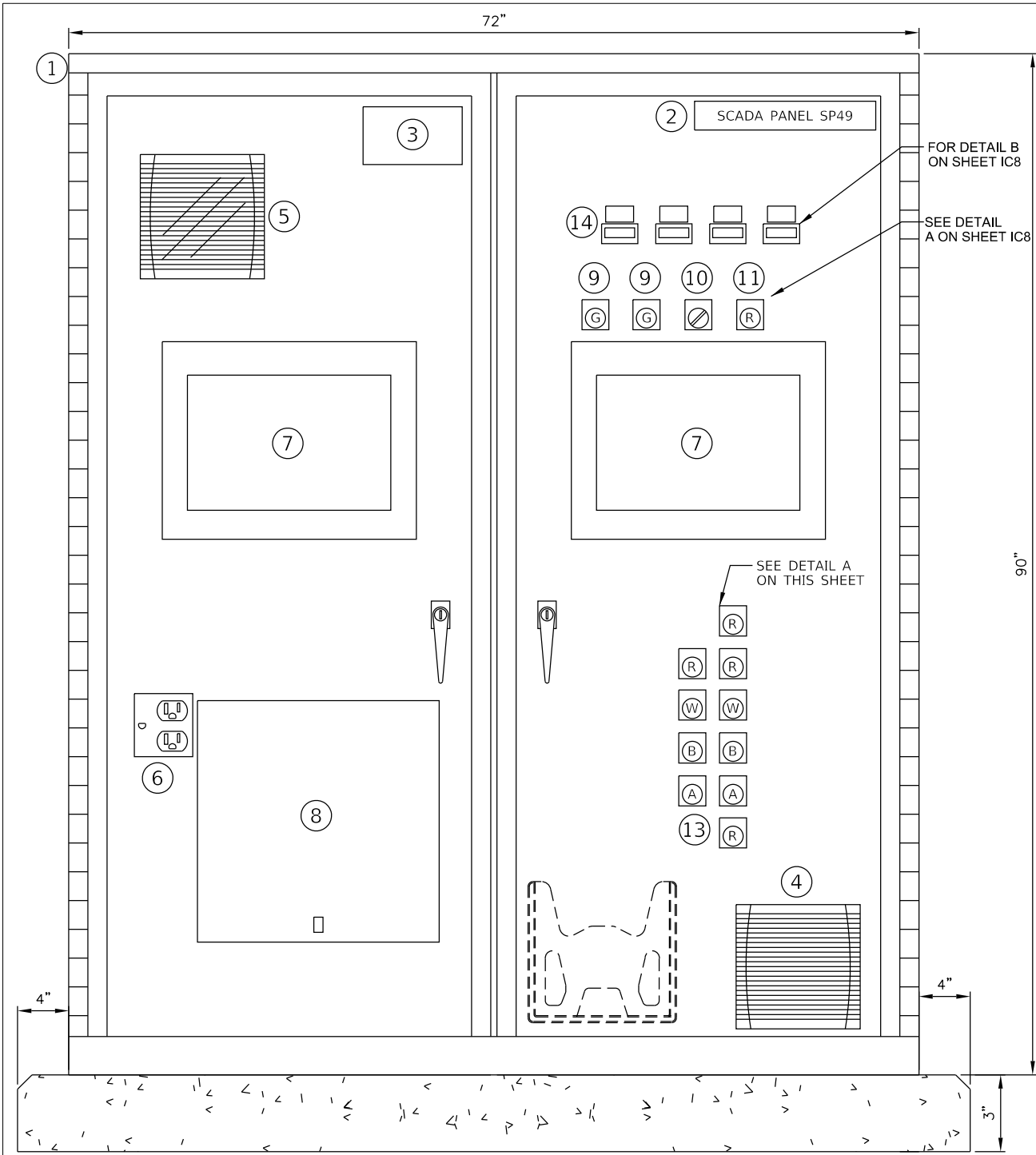
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

I&C SCADA SYSTEM ARCHITECTURE
PUMP STATION 49

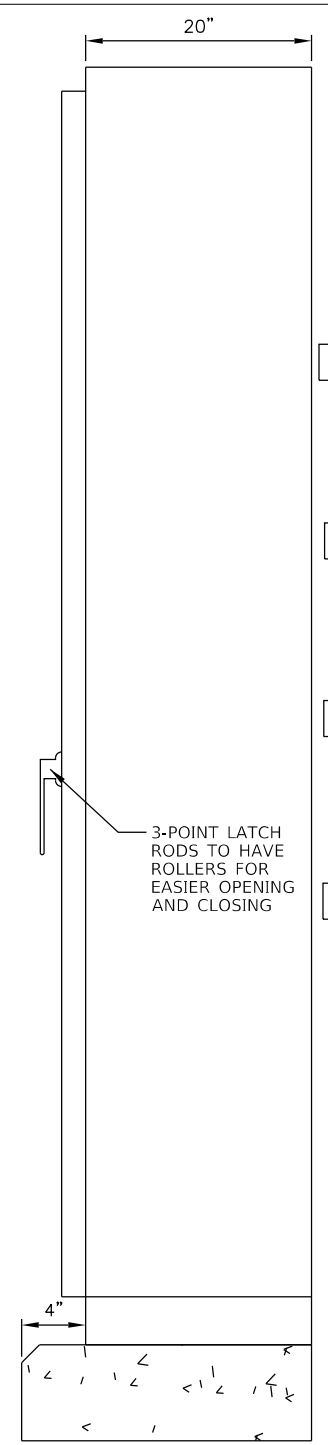
SHEET IC6 OF 26 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	637
CONTRACT NO. 61J87				
ILLINOIS		FED. AID PROJECT		

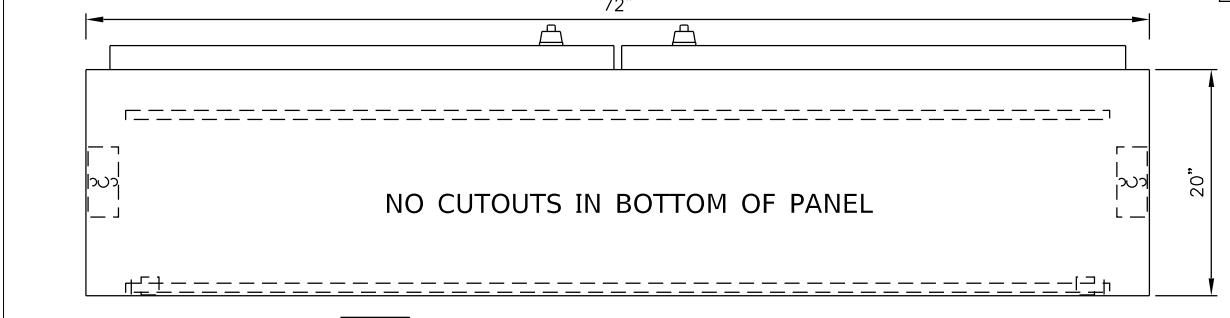
IC6



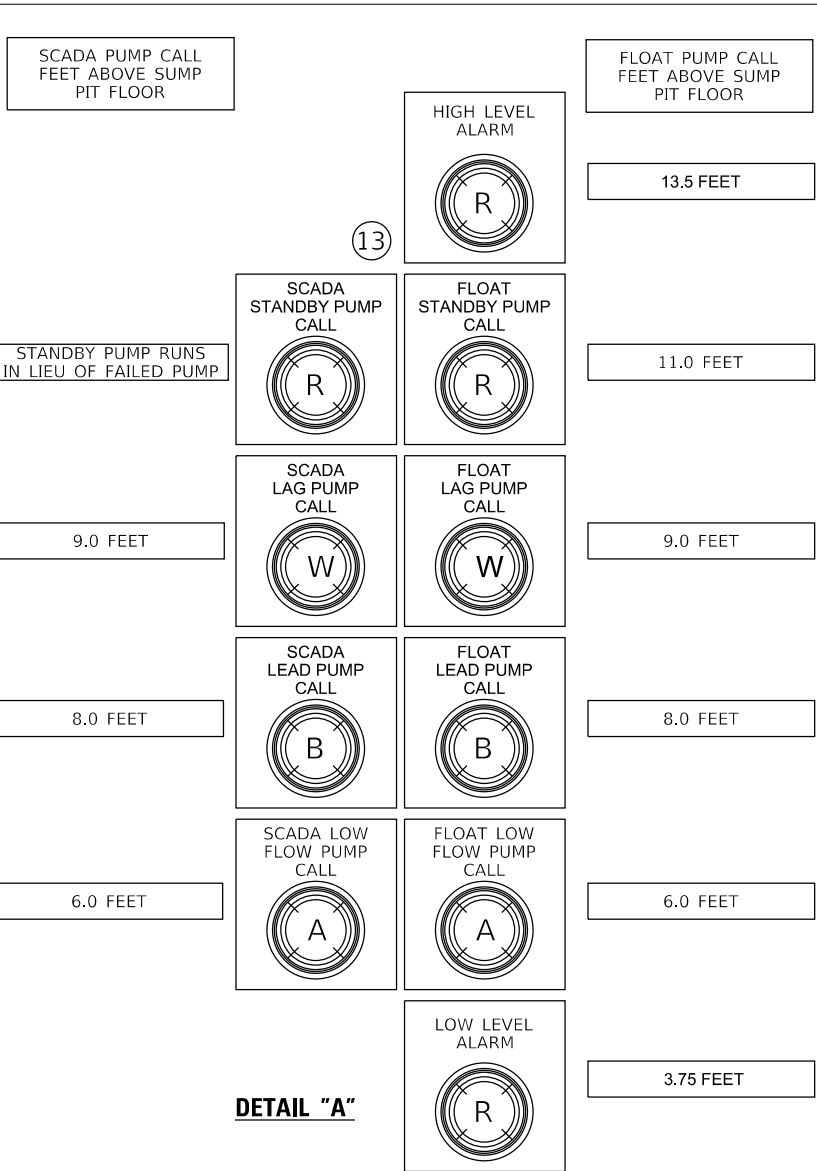
1 SCADA PANEL SP49 FRONT VIEW
SCALE: NONE



2 SCADA PANEL SP49 SIDE VIEW
SCALE: NONE



3 SCADA PANEL SP49 PLAN VIEW
SCALE: NONE



DETAIL "A"

NOTES:

- SEE SHEETS IC1 AND IC2 FOR INSTRUMENTATION SYMBOL LIST, ABBREVIATIONS, AND GENERAL NOTES.
- THE SCADA PANEL SHALL BE OF SUFFICIENT DEPTH TO ACCOMMODATE ALL DEVICES. PROPER CLEARANCE SHALL BE PROVIDED BETWEEN DOOR MOUNTED DEVICES AND PANEL MOUNTED DEVICES.
- SCADA PANEL DETAIL PROVIDES INFORMATION REGARDING SOME OF THE MAJOR COMPONENTS TO BE MOUNTED IN THE PANEL. ANCILLARY DEVICES SUCH AS RELAYS, TIMER, POWER SUPPLIES, ETC., ARE NOT SHOWN. ALL DEVICES TO PROVIDE A FUNCTIONING SYSTEM AS DETAILED IN THE PLANS AND SPECIFICATIONS SHALL BE PROVIDED. CONTRACTOR TO PROVIDE SUBMITTAL DETAILING PANEL LAYOUT FOR ALL COMPONENTS.
- REFER TO SPECIFICATION SECTION 40 94 23 FOR ADDITIONAL CONTROL PANEL AND INTRINSICALLY SAFE DEVICE INSTALLATION REQUIREMENTS.
- NAMEPLATES SHALL BE WHITE BACKGROUND WITH BLACK LETTERING.
- INTRINSICALLY SAFE WIRING SHALL BE SEGREGATED FROM ALL OTHER TYPES OF WIRING. INTRINSICALLY SAFE WIRING SHALL BE INSTALLED IN A CONDUIT ONLY WITH OTHER INTRINSICALLY SAFE CIRCUITS IN PANELS AND EQUIPMENT. INTRINSICALLY SAFE CIRCUIT WIRING SHALL HAVE A MINIMUM OF 3 INCHES OF CLEARANCE, OR A GROUNDED METAL OR INSULATING PARTITION, BETWEEN THE INTRINSICALLY SAFE AND OTHER TYPES OF WIRING. SEE NEC ARTICLE 504.
- REFER TO SHEET IC25 DETAIL NO. 1 FOR GROUNDING REQUIREMENTS.
- PATCH PANEL MUST BE SUITABLE FOR SC, ST, OR LC FIBER CONNECTION. CONNECTOR, FIBER CABLE, AND FIBER PATCH CABLE TO BE PROVIDED BY OTHERS IN THE FUTURE.
- IF A CENTER CABINET SUPPORT IS INSTALLED, THE SUPPORT SHALL BE BOLTED IN. WELDING IS NOT ALLOWED.

ITEM #	DESCRIPTION	DETAIL
1	NEMA 12 ENCLOSURE, 2-DOOR, 90x72	N/A
2	PANEL NAMEPLATE " SCADA PANEL SP49	N/A
3	ELECTRICAL NAMEPLATE	N/A
4	FAN AND FILTER ASSEMBLY	N/A
5	LOUVER KIT ASSEMBLY	N/A
6	GFCI 120VAC OUTLET AND ETHERNET PORT	N/A
7	SCADA HMI-1 AND HMI-2	N/A
8	24x24 FOLDING SHELF	N/A
9	PILOT LIGHT, LED, GREEN	IC8 "A"
10	SELECTOR SWITCH, 4-POSITION	IC8 "B"
11	PILOT LIGHT, LED, RED	IC8 "C"
12	PILOT LIGHT, LED, RED	IC8 "C"
13	PILOT LIGHT, LED, AMBER	A
	PILOT LIGHT, LED, BLUE	
	PILOT LIGHT, LED, WHITE	
	PILOT LIGHT, LED, RED	
14	PROCESS DISPLAY	IC8 "D"

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8/27/2024 9:31:06 AM

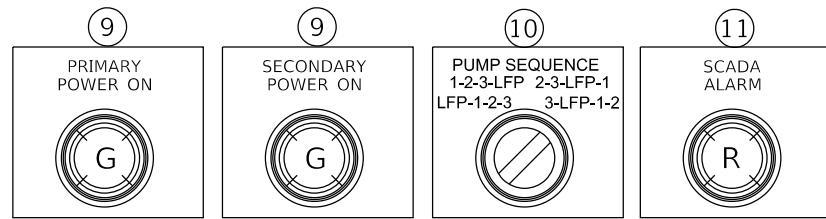
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PLOT DATE = 8/27/2024	CHECKED - SAI	REVISED -
	DATE - 8/28/2024	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**I&C SCADA PANEL SP49 DETAIL
PUMP STATION 49**

SHEET IC7 OF 26 SHEETS

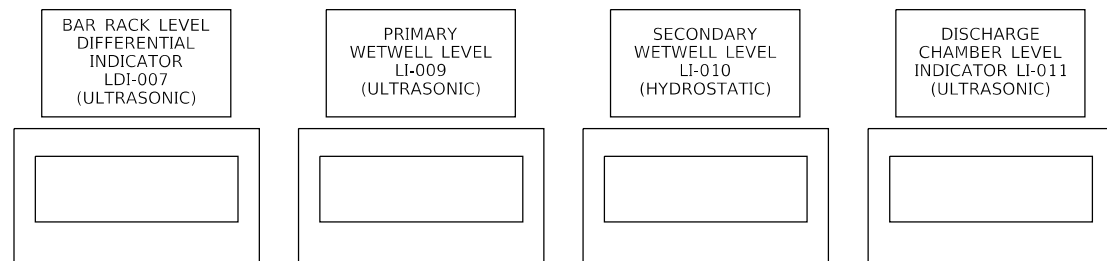
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	638
CONTRACT NO. 61J87				
ILLINOIS FED. AID PROJECT				



DETAIL "A"

ITEM	QTY	DESCRIPTION
1	1	78x64 PANEL
2	2	LED LIGHT & DOOR SWITCH
3	2	PLC POWER SUPPLY
4	1	PRIMARY CONTROLLOGIX PROCESSOR AND RACK
5	1	SECONDARY CONTROLLOGIX PROCESSOR AND RACK
6	1	4G MODEM
7	1	4G MODEM
8	AS REQ'D	PLC REMOTE RACKS AND MODULES
9	1	GFCI, 120VAC, 15A
10	2	24VDC POWER SUPPLY (PS1, PS2)
11	2	120VAC LINE FILTER (LF1, LF2)
12	AS REQ'D	CIRCUIT BREAKERS AND FUSES
13	AS REQ'D	INTRINSICALLY SAFE RELAYS
14	AS REQ'D	TIME DELAY RELAYS
15	AS REQ'D	RELAYS
16	AS REQ'D	TERMINAL BLOCK

NAMEPLATE SCHEDULE			
17	15	14	12
ISB1	DCR1	TDFM	CB1
ISB2	DCR2	SPARE1	CB2
ISB3	AC-R	SPARE2	CB3
ISB4	FMR	SPARE3	CB4
ISB5	PLC-FR		CB5
ISB6	MP1		CB6
ISB7	MP2		CB7
ISB8	MP3		CB8
ISBPF	LFP1		CB9
SPARE1	FR8		CB10
SPARE2	FR7		CB11
SPARE3	FR6		CB12
	FR5		CB13
	FR4		CB14
	FR3		CB15
	FR2		CB16
	FR1		CB17
	FRPF		CB18
	SPARE1		CB19
	SPARE2		SPARE1
	SPARE3		SPARE2
			SPARE3
			SPARE4

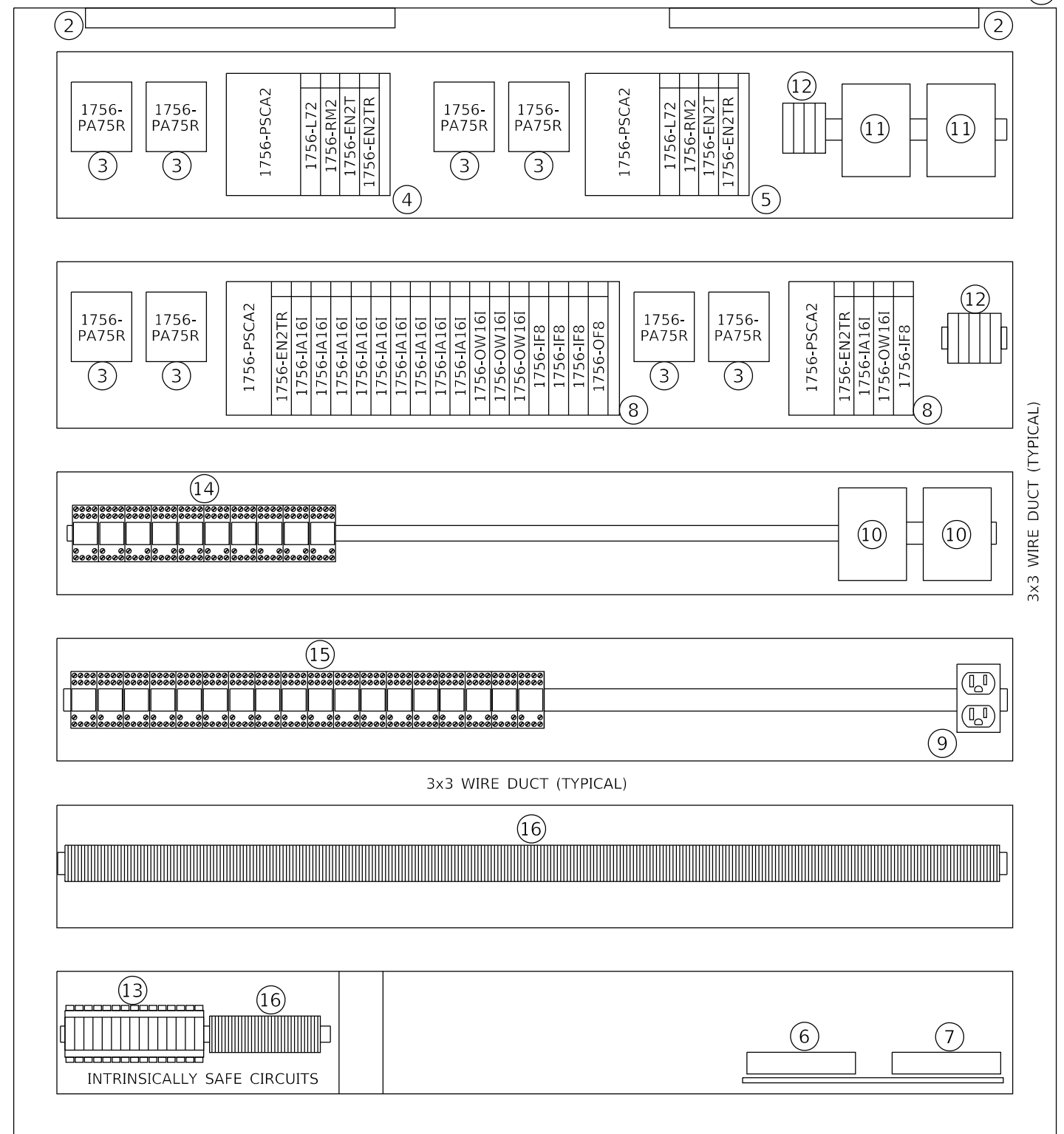


DETAIL "B"

NOTES:

- SEE SHEETS IC1 AND IC2 FOR INSTRUMENTATION SYMBOL LIST, ABBREVIATIONS, AND GENERAL NOTES.
- THE SCADA PANEL SHALL BE OF SUFFICIENT DEPTH TO ACCOMMODATE ALL DEVICES. PROPER CLEARANCE SHALL BE PROVIDED BETWEEN DOOR MOUNTED DEVICES AND PANEL MOUNTED DEVICES.
- SCADA PANEL DETAIL PROVIDES INFORMATION REGARDING SOME OF THE MAJOR COMPONENTS TO BE MOUNTED IN THE PANEL. ANCILLARY DEVICES SUCH AS RELAYS, TIMER, POWER SUPPLIES, ETC., ARE NOT SHOWN. ALL DEVICES TO PROVIDE A FUNCTIONING SYSTEM AS DETAILED IN THE PLANS AND SPECIFICATIONS SHALL BE PROVIDED. CONTRACTOR TO PROVIDE SUBMITTAL DETAILING PANEL LAYOUT FOR ALL COMPONENTS.
- REFER TO SPECIFICATION SECTION 40 94 23 FOR ADDITIONAL CONTROL PANEL AND INTRINSICALLY SAFE DEVICE INSTALLATION REQUIREMENTS.
- NAMEPLATES SHALL BE WHITE BACKGROUND WITH BLACK LETTERING.
- INTRINSICALLY SAFE WIRING SHALL BE SEGREGATED FROM ALL OTHER TYPES OF WIRING. INTRINSICALLY SAFE WIRING SHALL BE INSTALLED IN A CONDUIT ONLY WITH OTHER INTRINSICALLY SAFE CIRCUITS IN PANELS AND EQUIPMENT. INTRINSICALLY SAFE CIRCUIT WIRING SHALL HAVE A MINIMUM OF 3 INCHES OF CLEARANCE, OR A GROUNDED METAL OR INSULATING PARTITION, BETWEEN THE INTRINSICALLY SAFE AND OTHER TYPES OF WIRING. SEE NEC ARTICLE 504.
- REFER TO SHEET IC25 DETAIL NO. 1 FOR GROUNDING REQUIREMENTS.

SCADA BACK PANEL



	1170 SOUTH HOUBOLT ROAD JOLIET, ILLINOIS 60431 (815) 744-4200 IDFPR NO. 184-001273	USER NAME = brianf	DESIGNED - ARC	REVISED -
		PLOT SCALE = 8:0.0000 " / in.	DRAWN - BJF	REVISED -
		PLOT DATE = 8/27/2024	CHECKED - SAI	REVISED -
			DATE - 8/28/2024	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

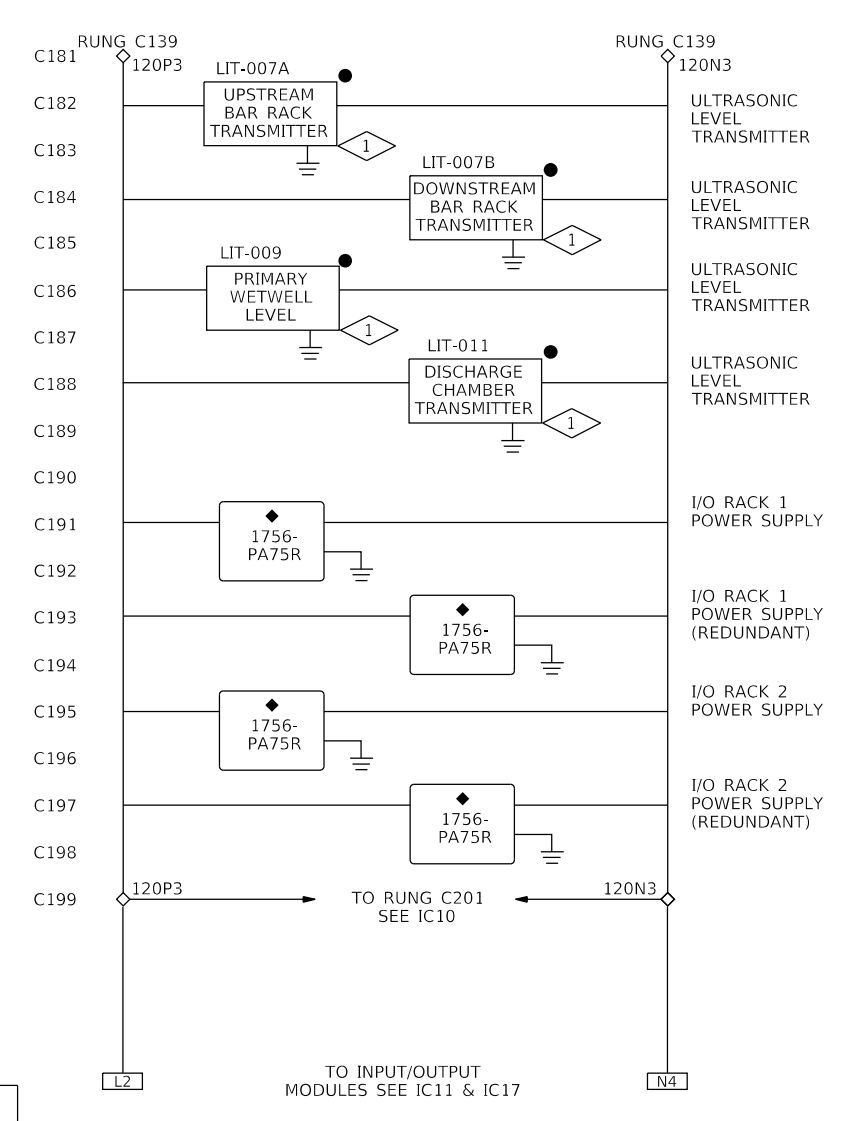
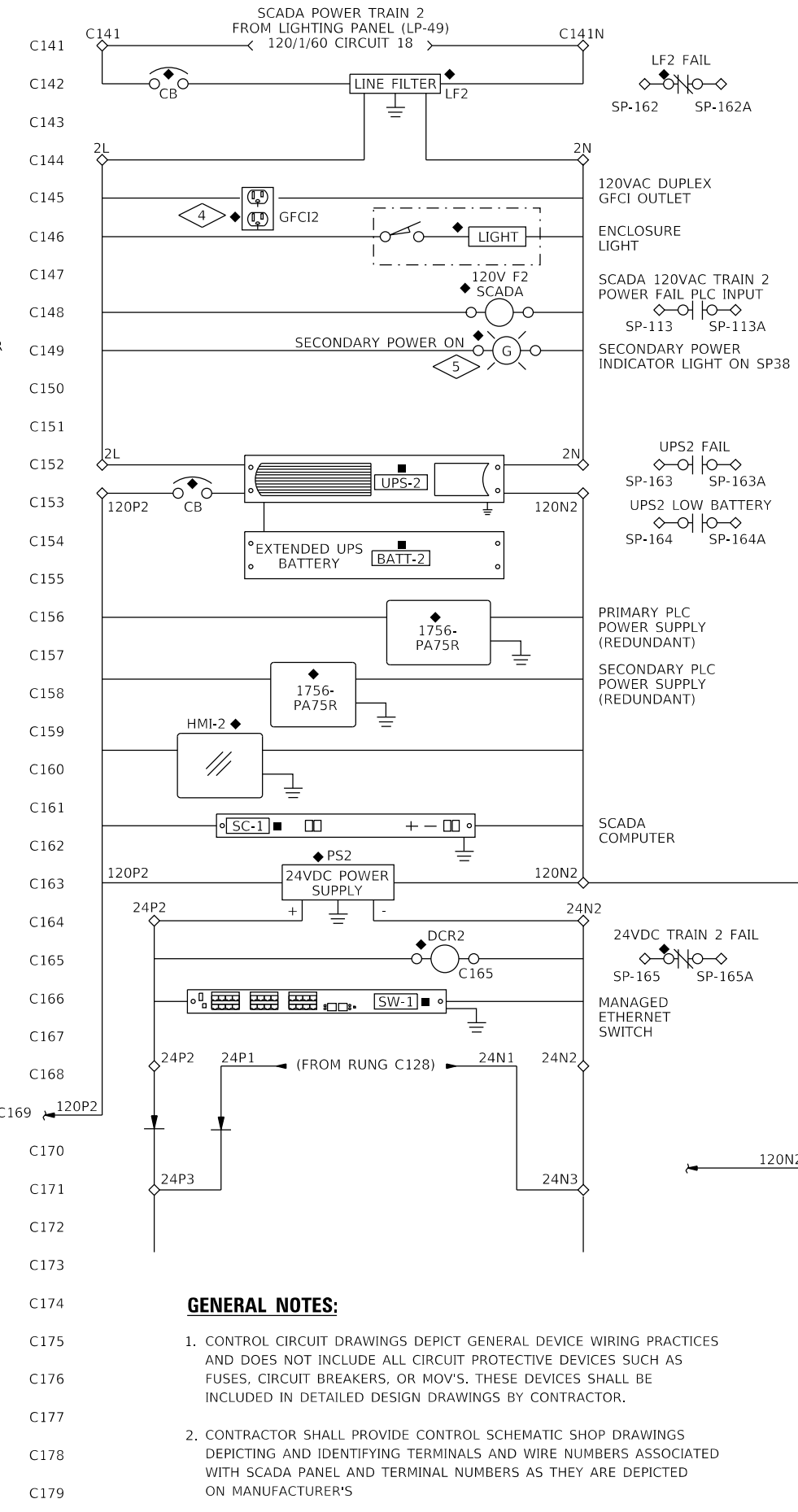
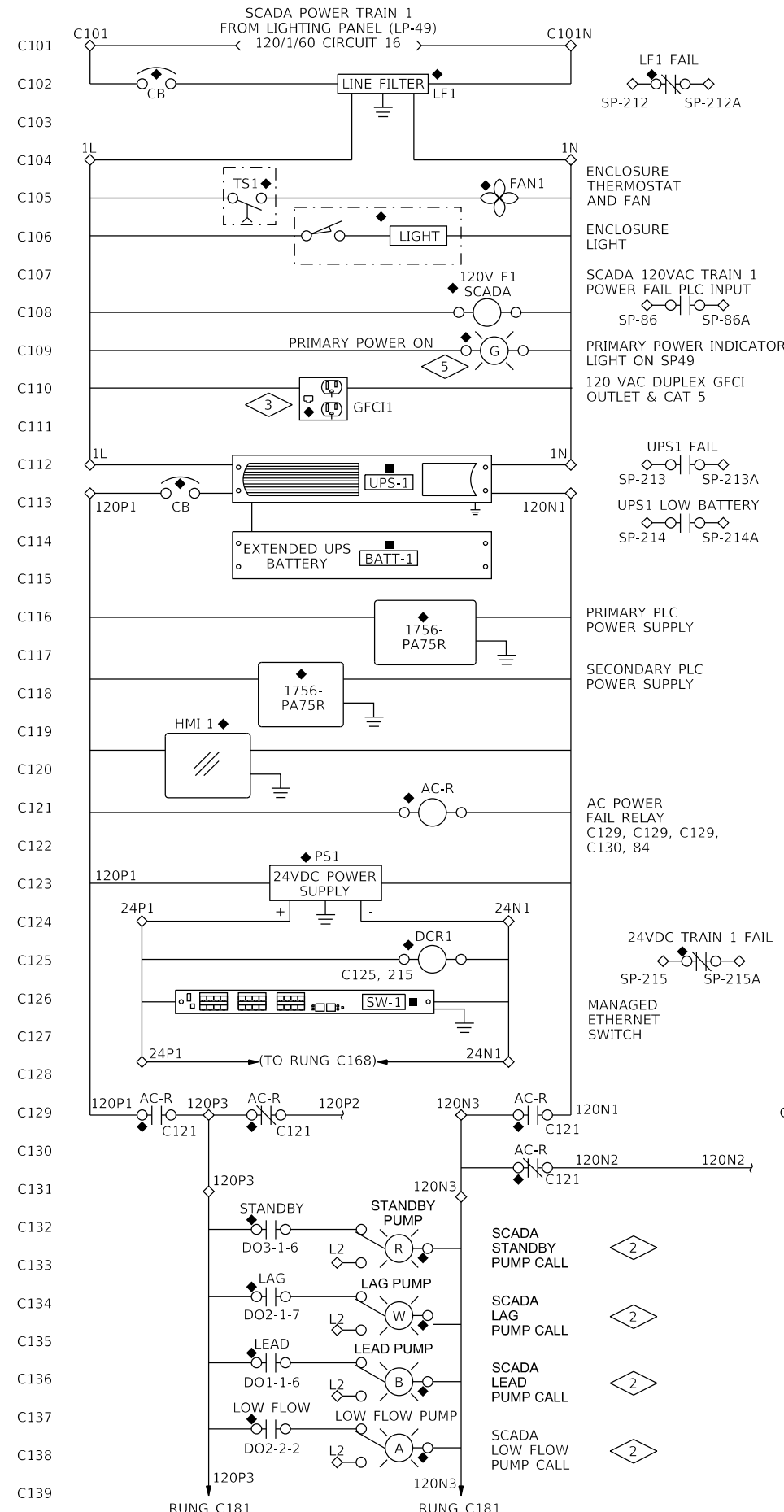
I&C CONTROL PANEL SP49 INTERIOR DETAIL
PUMP STATION 49

SHEET IC8 OF 26 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	639
CONTRACT NO. 61J87				
ILLINOIS FED. AID PROJECT				

IC8

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8/27/2024 9:31:06 AM



- PLAN NOTES:**
- ANALOG WIRING TO PLC AND VENDOR FURNISH CABLE TO TRANSDUCER NOT SHOWN.
 - PUMP CALL LIGHTS SHOWN AS DETAIL "A" ON IC7.
 - MOUNTED ON SCADA CABINET DOOR SEE IC7, CAT 6 CONNECTOR TO BE WIRED TO SW-1 IN NETWORK RACK NET-1.
 - MOUNTED INTERIOR TO SCADA CABINET, SEE SCADA BACK PANEL ON IC8.
 - POWER LIGHTS SHOWN AS DETAIL "A" ON IC8.

- LEGEND:**
- △ TERMINAL IN MCC
 - ◇ TERMINAL IN SCADA PANEL
 - ▲ DEVICE IN MCC
 - ◆ DEVICE IN SCADA PANEL
 - DEVICE FIELD MOUNTED
 - DEVICE LOCATED IN NETWORK RACK

- GENERAL NOTES:**
- CONTROL CIRCUIT DRAWINGS DEPICT GENERAL DEVICE WIRING PRACTICES AND DOES NOT INCLUDE ALL CIRCUIT PROTECTIVE DEVICES SUCH AS FUSES, CIRCUIT BREAKERS, OR MOV'S. THESE DEVICES SHALL BE INCLUDED IN DETAILED DESIGN DRAWINGS BY CONTRACTOR.
 - CONTRACTOR SHALL PROVIDE CONTROL SCHEMATIC SHOP DRAWINGS DEPICTING AND IDENTIFYING TERMINALS AND WIRE NUMBERS ASSOCIATED WITH SCADA PANEL AND TERMINAL NUMBERS AS THEY ARE DEPICTED ON MANUFACTURER'S

MODEL: Default
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8/27/2024 9:31:07 AM



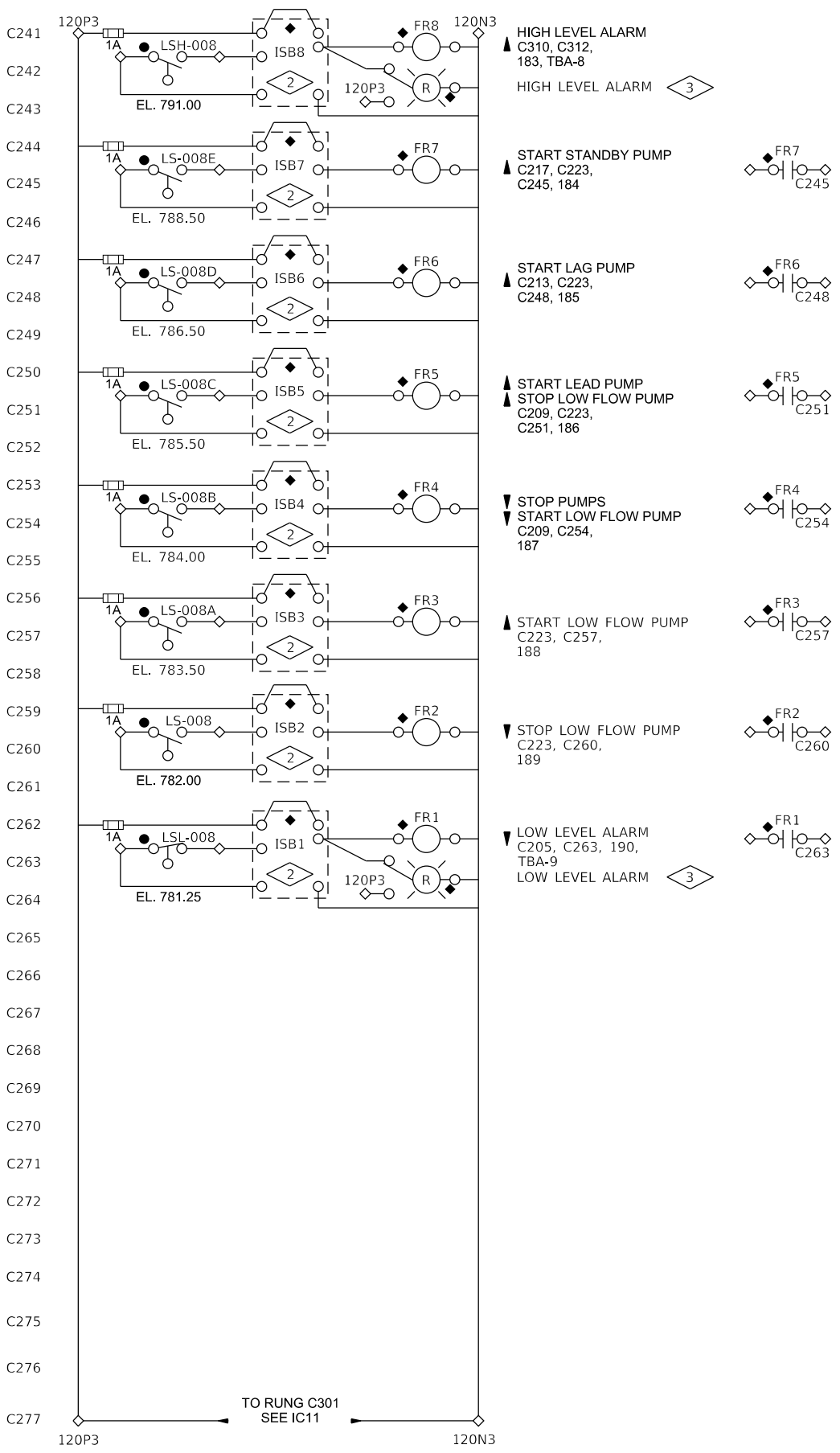
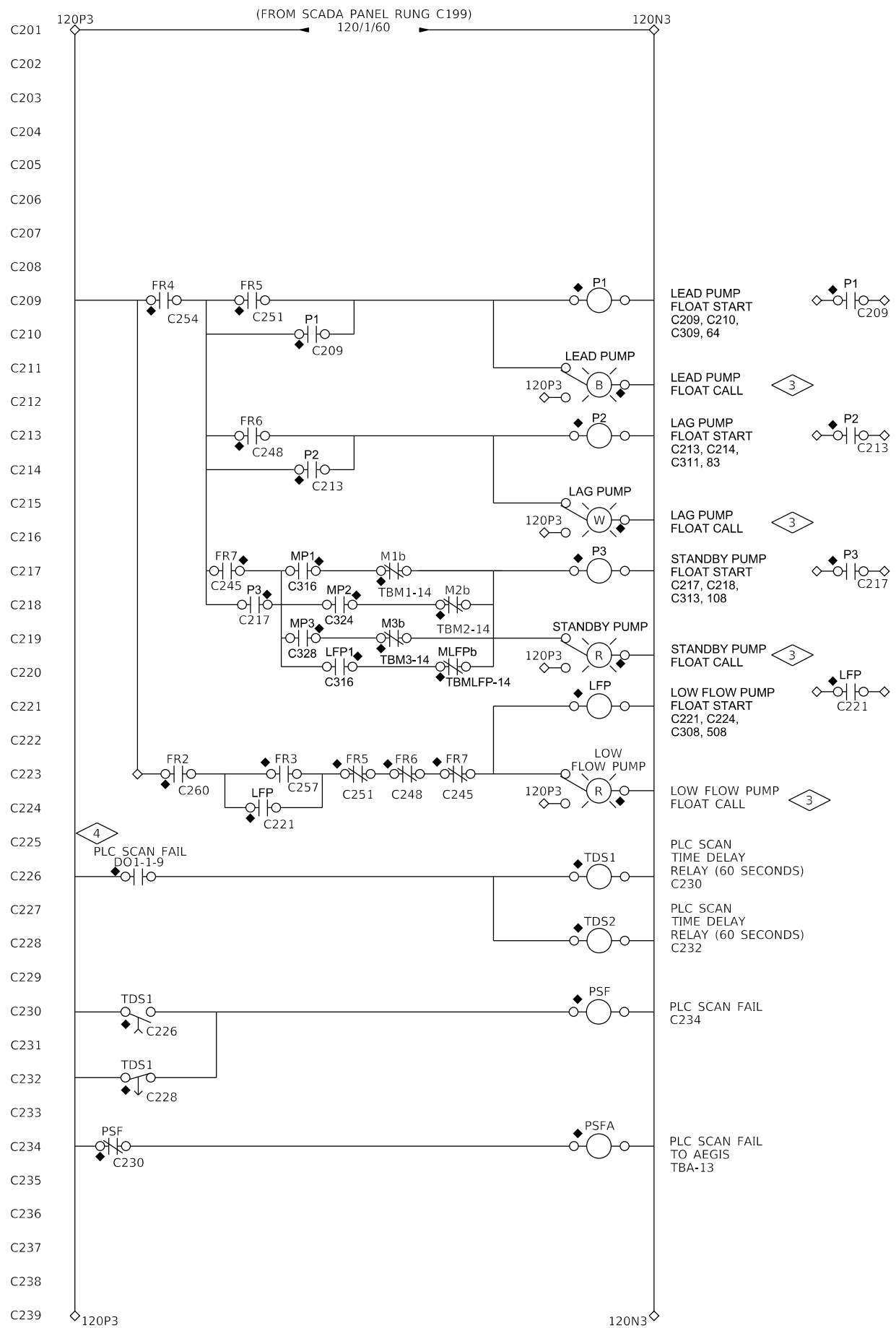
1170 SOUTH HOUBOLT ROAD JOLIET, ILLINOIS 60431 (815) 744-4200 IDFPR NO. 184-001273	USER NAME = brianf	DESIGNED - ARC	REVISED -
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	PLOT DATE = 8/27/2024	CHECKED - SAI	REVISED -
		DATE - 8/28/2024	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**I&C CONTROL PANEL SP49 SCHEMATIC - 1
PUMP STATION 49**

SHEET IC9 OF 26 SHEETS

F.A.P. RTE. 305	SECTION 11-00087-00-GS	COUNTY LAKE	TOTAL SHEETS 816	SHEET NO. 640
CONTRACT NO. 61J87				
ILLINOIS FED. AID PROJECT				



GENERAL NOTES:

- CONTROL CIRCUIT DRAWINGS DEPICT GENERAL DEVICE WIRING PRACTICES AND DOES NOT INCLUDE ALL CIRCUIT PROTECTIVE DEVICES SUCH AS FUSES, CIRCUIT BREAKERS, OR MOV'S. THESE DEVICES SHALL BE INCLUDED IN DETAILED DESIGN DRAWINGS BY CONTRACTOR.
- CONTRACTOR SHALL PROVIDE CONTROL SCHEMATIC SHOP DRAWINGS DEPICTING AND IDENTIFYING TERMINALS AND WIRE NUMBERS ASSOCIATED WITH SCADA PANEL AND TERMINAL NUMBERS AS THEY ARE DEPICTED ON MANUFACTURER'S EQUIPMENT TERMINAL BLOCKS. COORDINATE PRIOR TO SUBMITTING SHOP DRAWINGS. ALL WIRED DEVICES SHALL BE COORDINATED, DEPICTED AND IDENTIFIED.

PLAN NOTES:

- PLC FAIL OUTPUT. OUTPUT DE-ENERGIZES WHEN PRIMARY AND SECONDARY LEVEL ELEMENTS ARE OUT OF RANGE, AND/OR BOTH PLC PROCESSORS FAIL. SEE SPECIFICATION FOR DETAILS.
- INTRINSICALLY SAFE BARRIER. ONE ISB PER FLOAT. TYPICAL, WIRE AND CONDUIT IN ACCORDANCE WITH NEC ARTICLE 504.
- PILOT LIGHTS AND CONTROL MODE SELECTOR SWITCH SHOWN ON THIS SHEET ARE SHOWN ON IC7 AND IC8.
- PLC SCAN FAIL OUTPUT SHALL ENERGIZE AND DEENERGIZE EVERY 15 SECONDS.

LEGEND:

- △ TERMINAL IN MCC
- ◇ TERMINAL IN SCADA PANEL
- ◆ DEVICE IN MCC
- ◆ DEVICE IN SCADA PANEL
- DEVICE FIELD MOUNTED
- ▲ RISING WATER LEVEL TRIGGER
- ▼ FALLING WATER LEVEL TRIGGER

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DEPARTMENT OF TRANSPORTATION

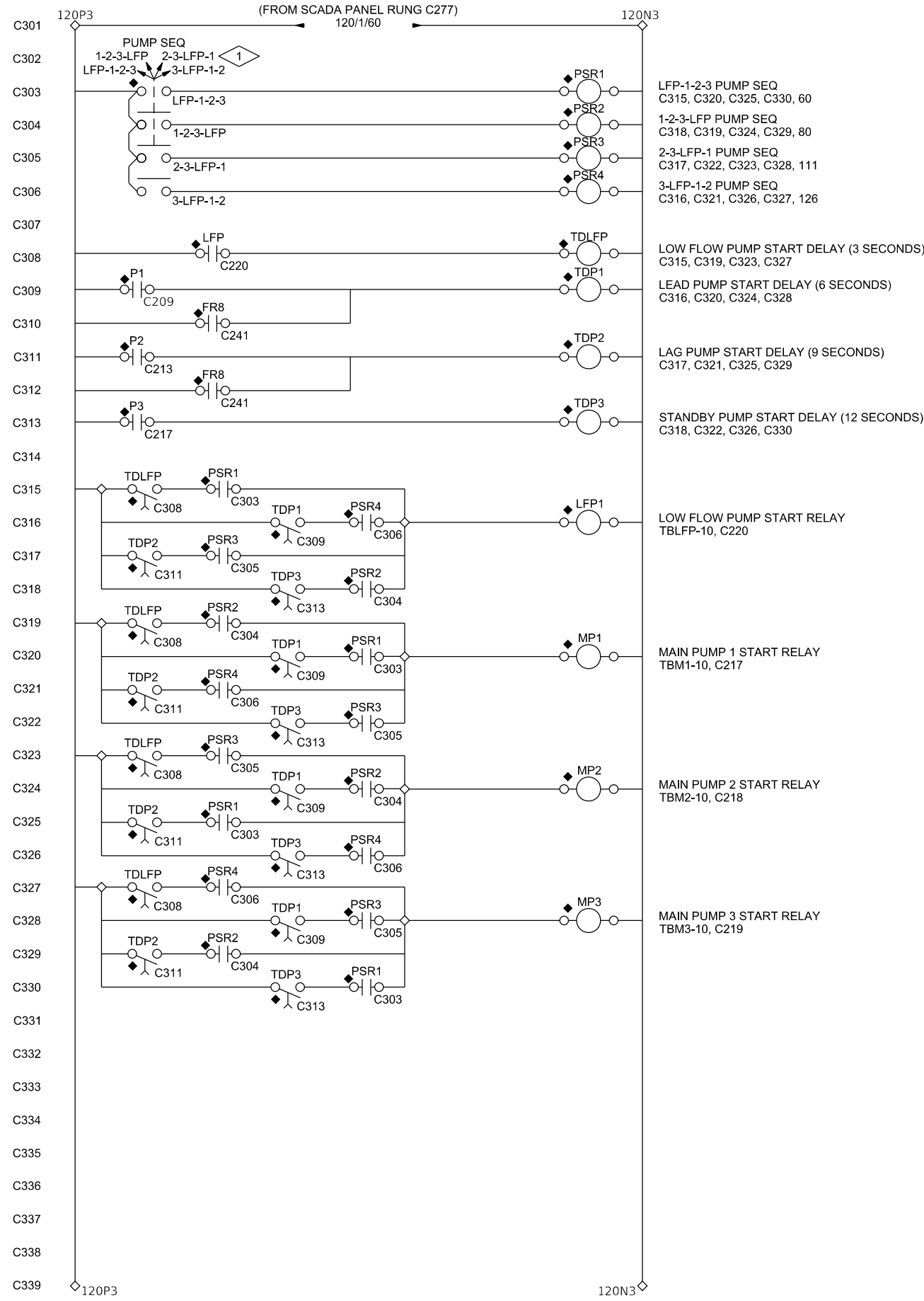
I&C CONTROL PANEL SP49 SCHEMATIC - 2
PUMP STATION 49

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	641
CONTRACT NO. 61J87				
ILLINOIS		FED. AID PROJECT		

SHEET IC10 OF 26 SHEETS

IC10

8/27/2024 9:31:07 AM



GENERAL NOTES:

- CONTROL CIRCUIT DRAWINGS DEPICT GENERAL DEVICE WIRING PRACTICES AND DOES NOT INCLUDE ALL CIRCUIT PROTECTIVE DEVICES SUCH AS FUSES, CIRCUIT BREAKERS, OR MOV'S. THESE DEVICES SHALL BE INCLUDED IN DETAILED DESIGN DRAWINGS BY CONTRACTOR.
- CONTRACTOR SHALL PROVIDE CONTROL SCHEMATIC SHOP DRAWINGS DEPICTING AND IDENTIFYING TERMINALS AND WIRE NUMBERS ASSOCIATED WITH SCADA PANEL AND TERMINAL NUMBERS AS THEY ARE DEPICTED ON MANUFACTURER'S EQUIPMENT TERMINAL BLOCKS. COORDINATE PRIOR TO SUBMITTING SHOP DRAWINGS. ALL WIRED DEVICES SHALL BE COORDINATED, DEPICTED AND IDENTIFIED.

PLAN NOTES:

- PILOT LIGHTS AND CONTROL MODE SELECTOR SWITCH SHOWN ON THIS SHEET ARE SHOWN ON IC7 AND IC8.

LEGEND:

- △ TERMINAL IN MCC
- ◇ TERMINAL IN SCADA PANEL
- ▲ DEVICE IN MCC
- ◆ DEVICE IN SCADA PANEL
- DEVICE FIELD MOUNTED
- ▲ RISING WATER LEVEL TRIGGER
- ▼ FALLING WATER LEVEL TRIGGER

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1170 SOUTH HOUBOLT ROAD
JOLIET, ILLINOIS 60431
(815) 744-4200
STRAND ASSOCIATES
IDFPR NO. 184-001273

USER NAME =	brianf	DESIGNED -	ARC	REVISED -	
DRAWN -	BJF	REVISIONS -			
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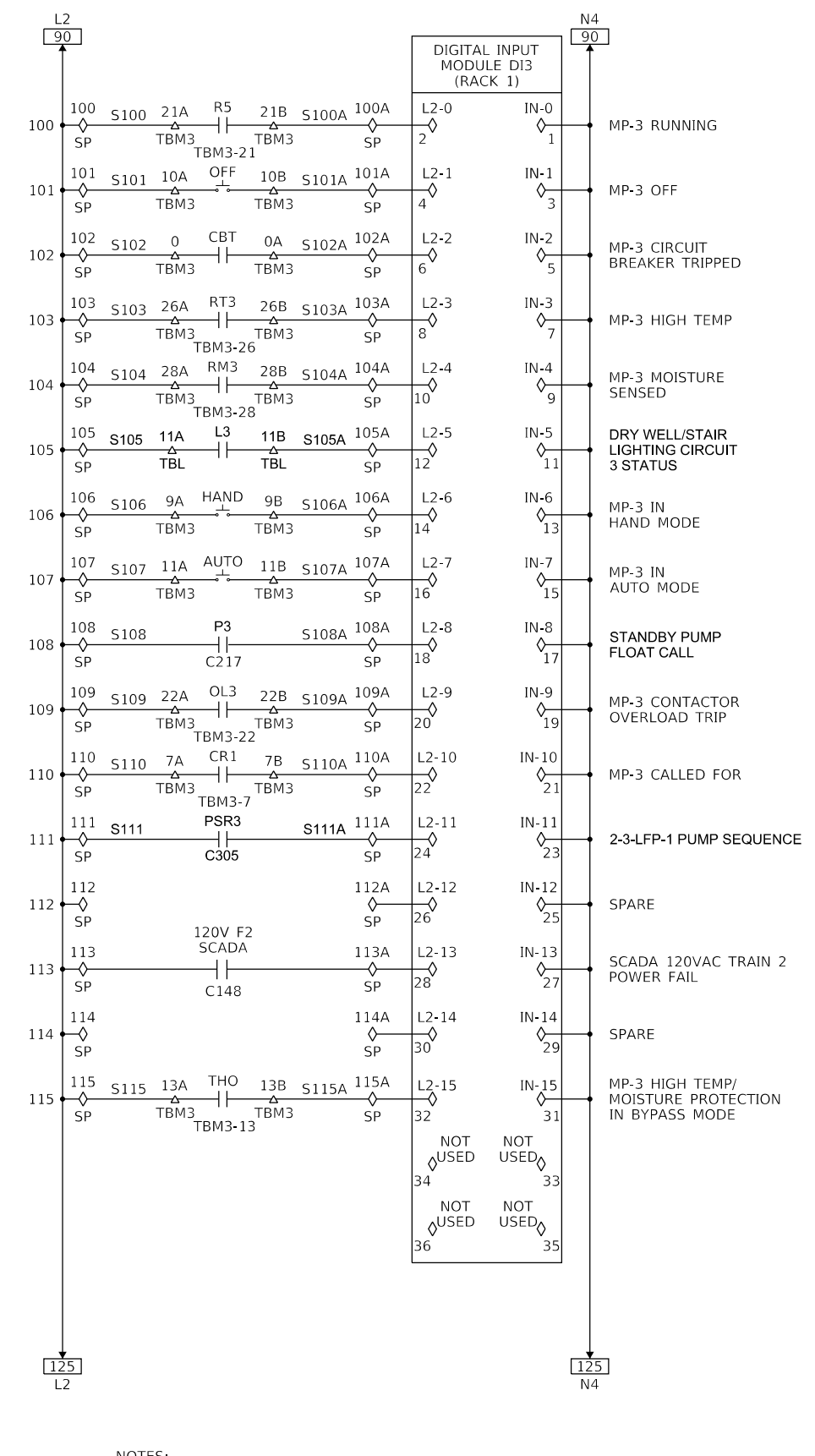
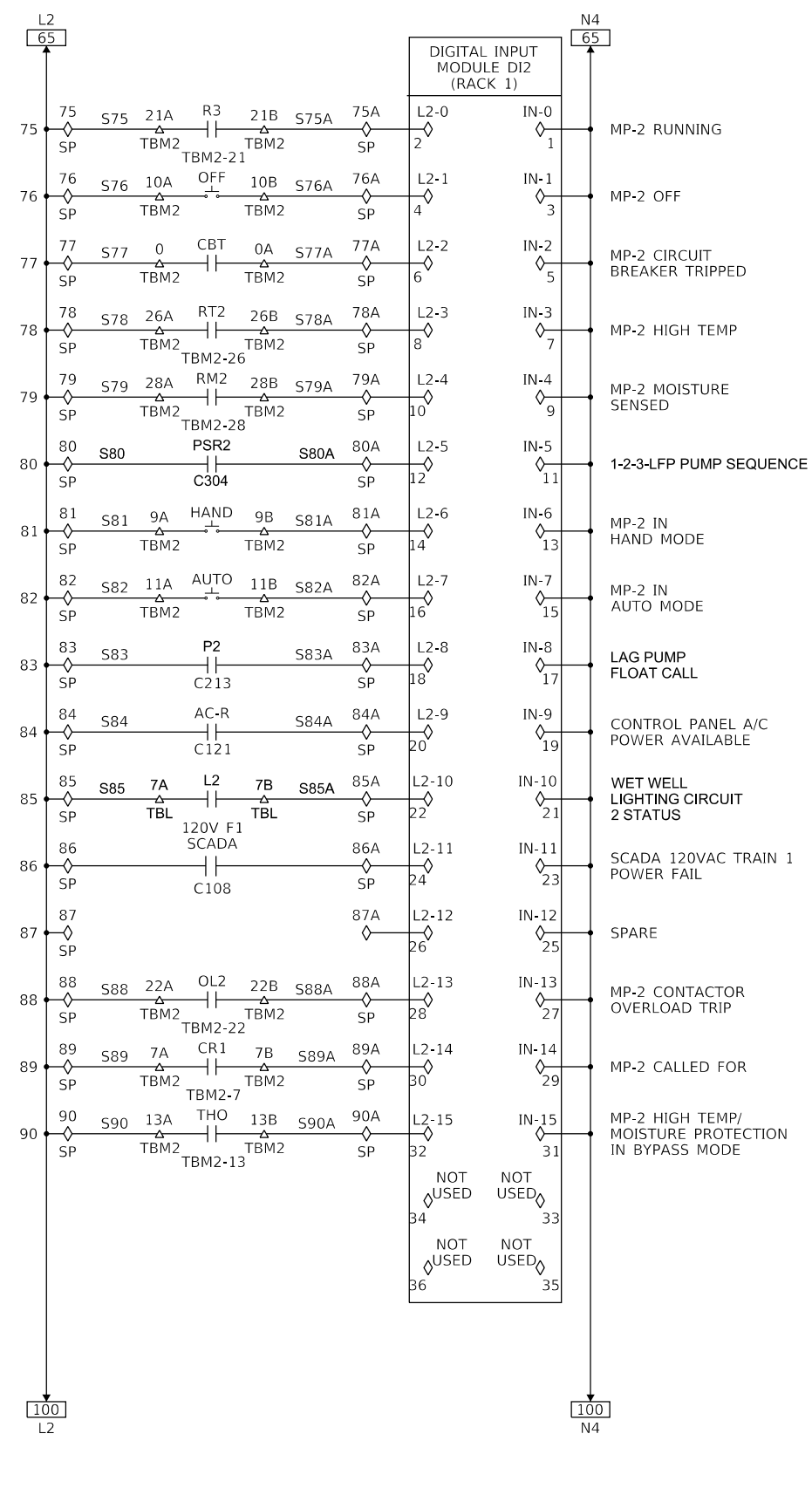
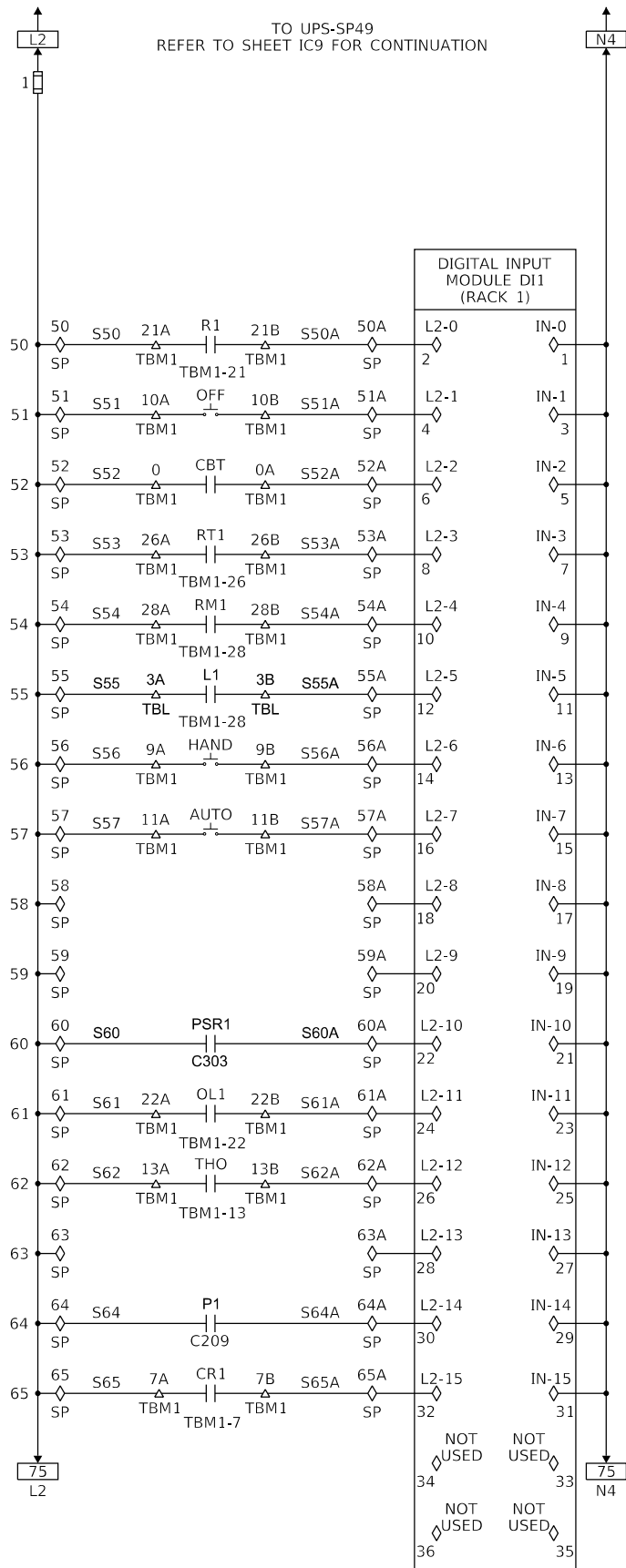
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

I&C CONTROL PANEL SP49 SCHEMATIC - 3
PUMP STATION 49

SHEET IC11 OF 26 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	642
CONTRACT NO. 61J87				
ILLINOIS		FED. AID PROJECT		

IC11



NOTES:

- SEE SHEETS E1, IC1 AND IC2 FOR INSTRUMENTATION SYMBOL LISTS, ABBREVIATIONS, AND GENERAL NOTES.
- ALL INTERCONNECTING WIRES/CABLES BETWEEN PANELS SHALL TERMINATE ON TERMINAL STRIPS AND SHOULD NOT BE DIRECTLY CONNECTED TO DEVICES LOCATED IN THE PANELS.

MODEL: Default
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USER NAME = brianf	DESIGNED - ARC	REVISED -
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

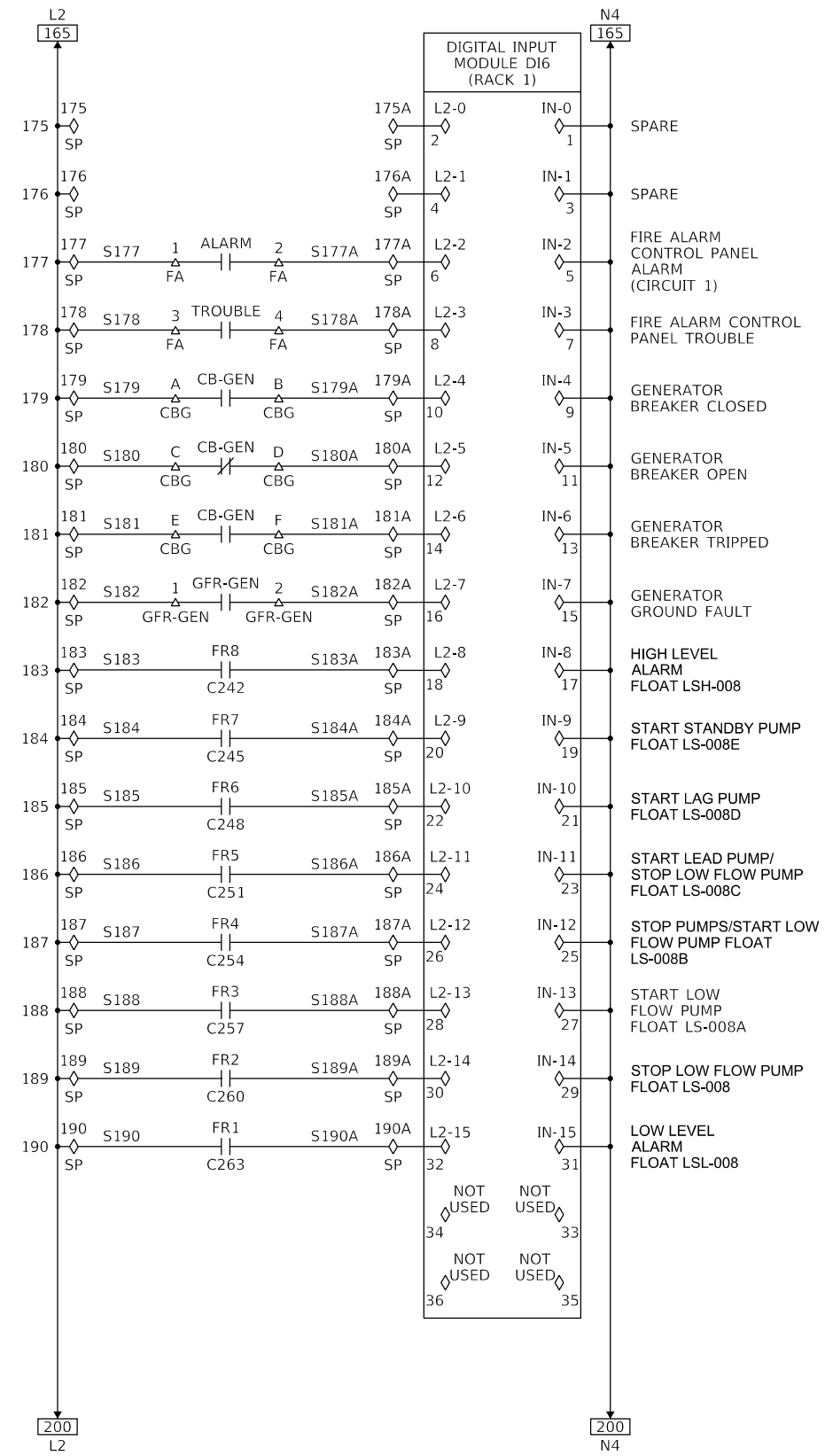
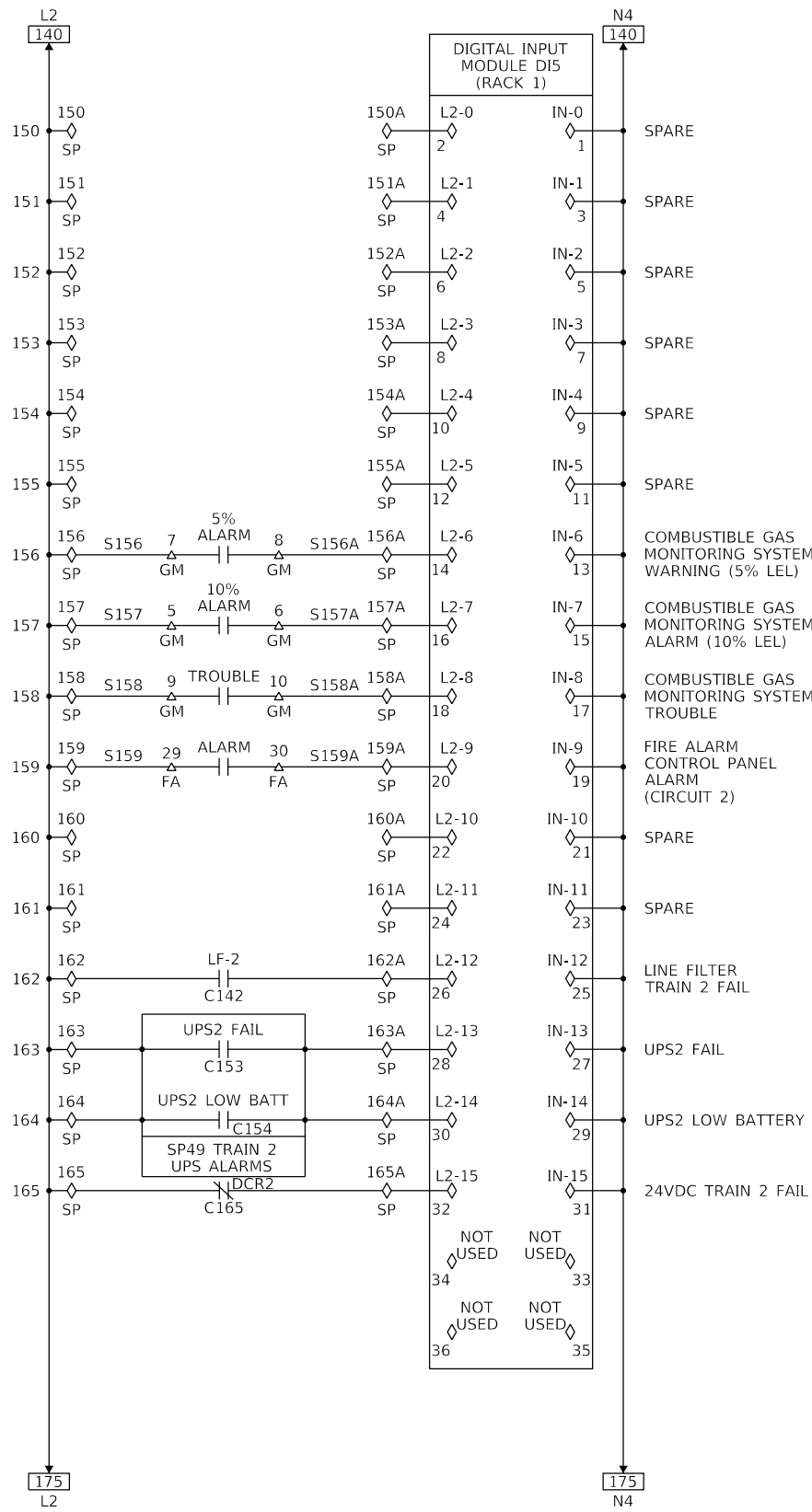
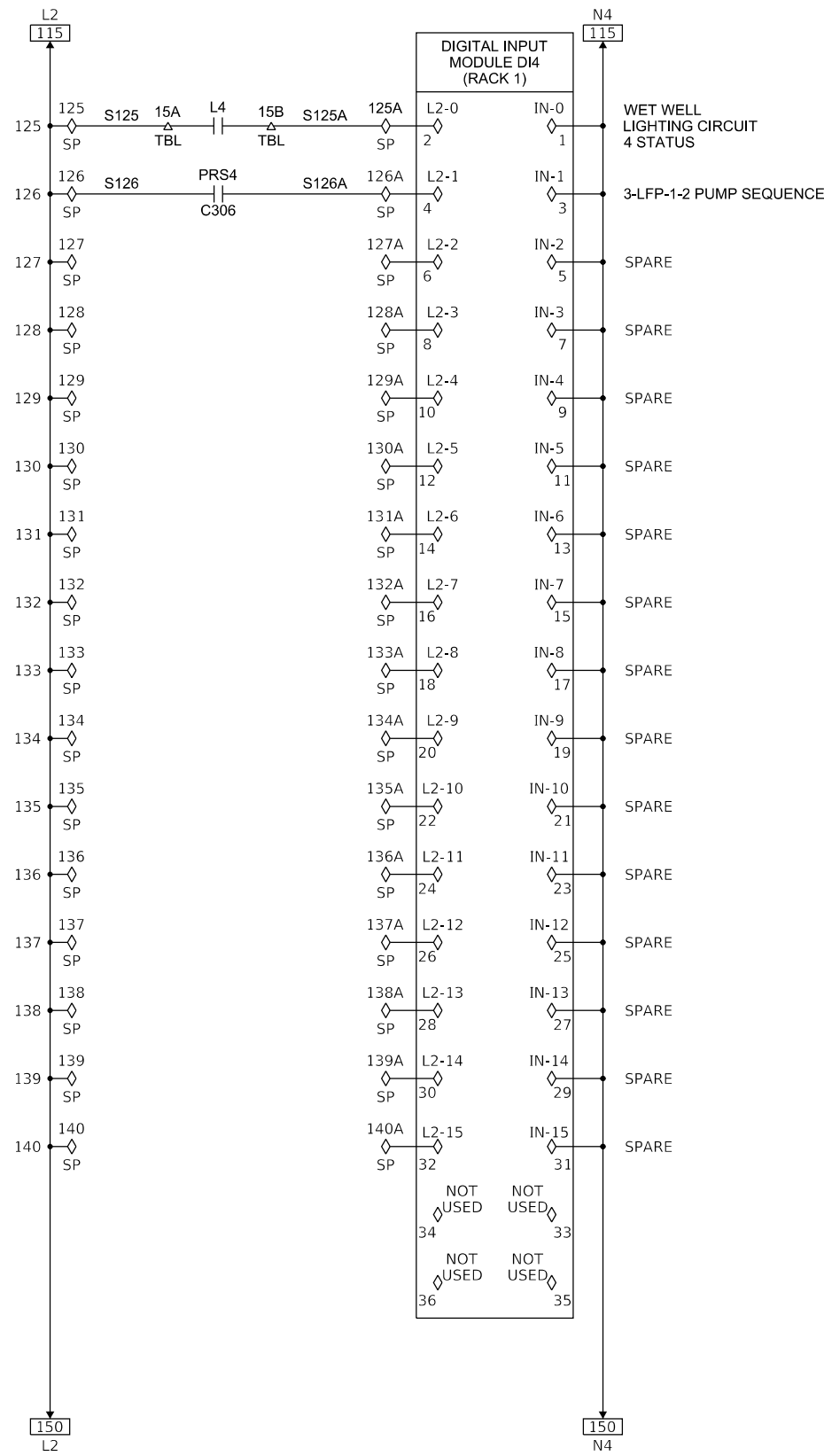
**I&C CONTROL PANEL SP49 SCHEMATIC - 4
PUMP STATION 49**

F.A.P. RTE. 305	SECTION 11-00087-00-GS	COUNTY LAKE	TOTAL SHEETS 816	SHEET NO. 643
CONTRACT NO. 61J87				
ILLINOIS FED. AID PROJECT				

SHEET IC12 OF 26 SHEETS

IC12

MODEL: Default
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- NOTES:**
- SEE SHEETS E1, IC1 AND IC2 FOR INSTRUMENTATION SYMBOL LISTS, ABBREVIATIONS, AND GENERAL NOTES.
 - ALL INTERCONNECTING WIRES/CABLES BETWEEN PANELS SHALL TERMINATE ON TERMINAL STRIPS AND SHOULD NOT BE DIRECTLY CONNECTED TO DEVICES LOCATED IN THE PANELS.

IC13



USER NAME =	brianf	DESIGNED -	ARC	REVISED -	
DRAWN -	BJF	REVISIONS			
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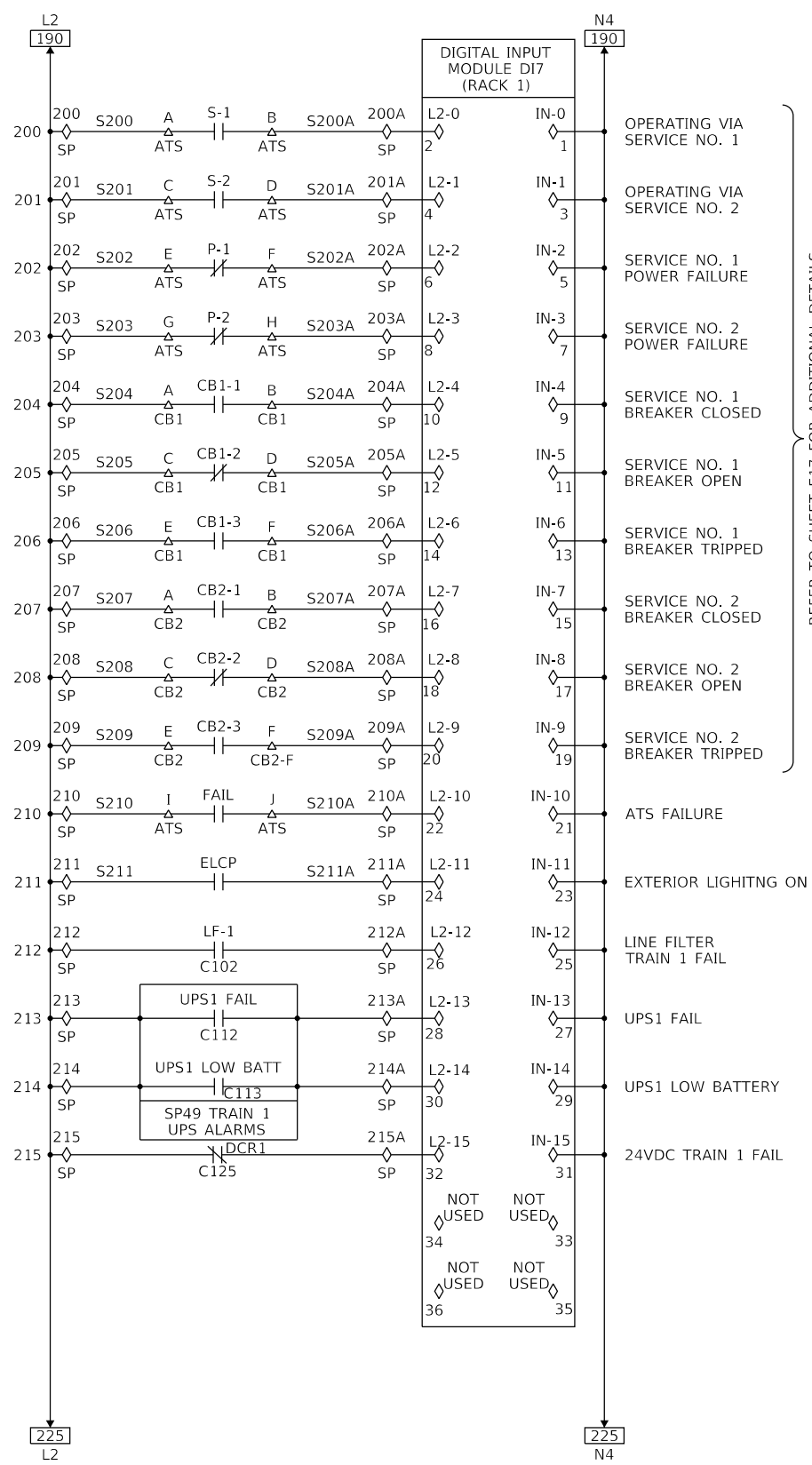
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**I&C CONTROL PANEL SP49 SCHEMATIC - 5
 PUMP STATION 49**

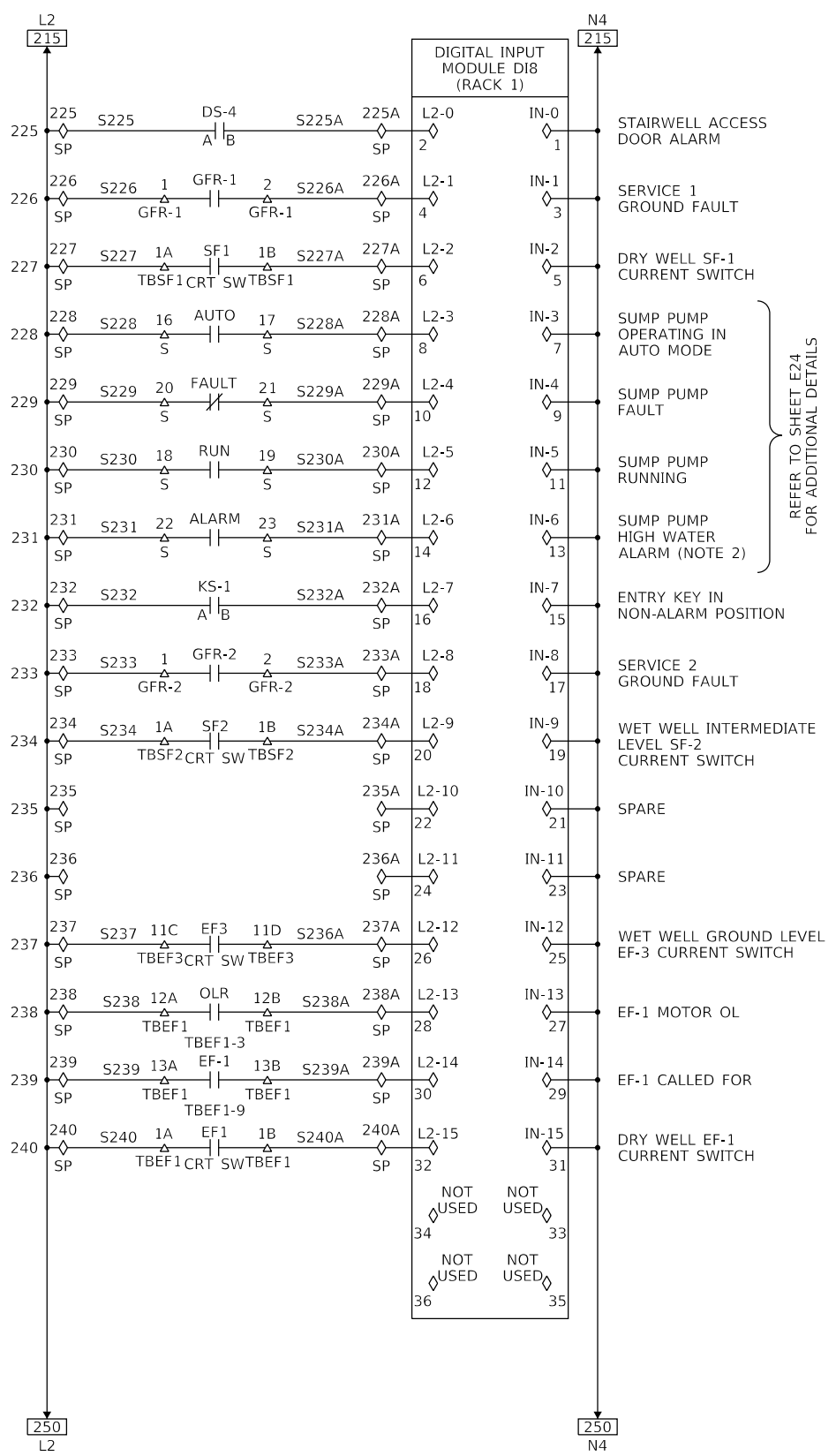
SHEET IC13 OF 26 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	644
CONTRACT NO. 61J87				
ILLINOIS FED. AID PROJECT				

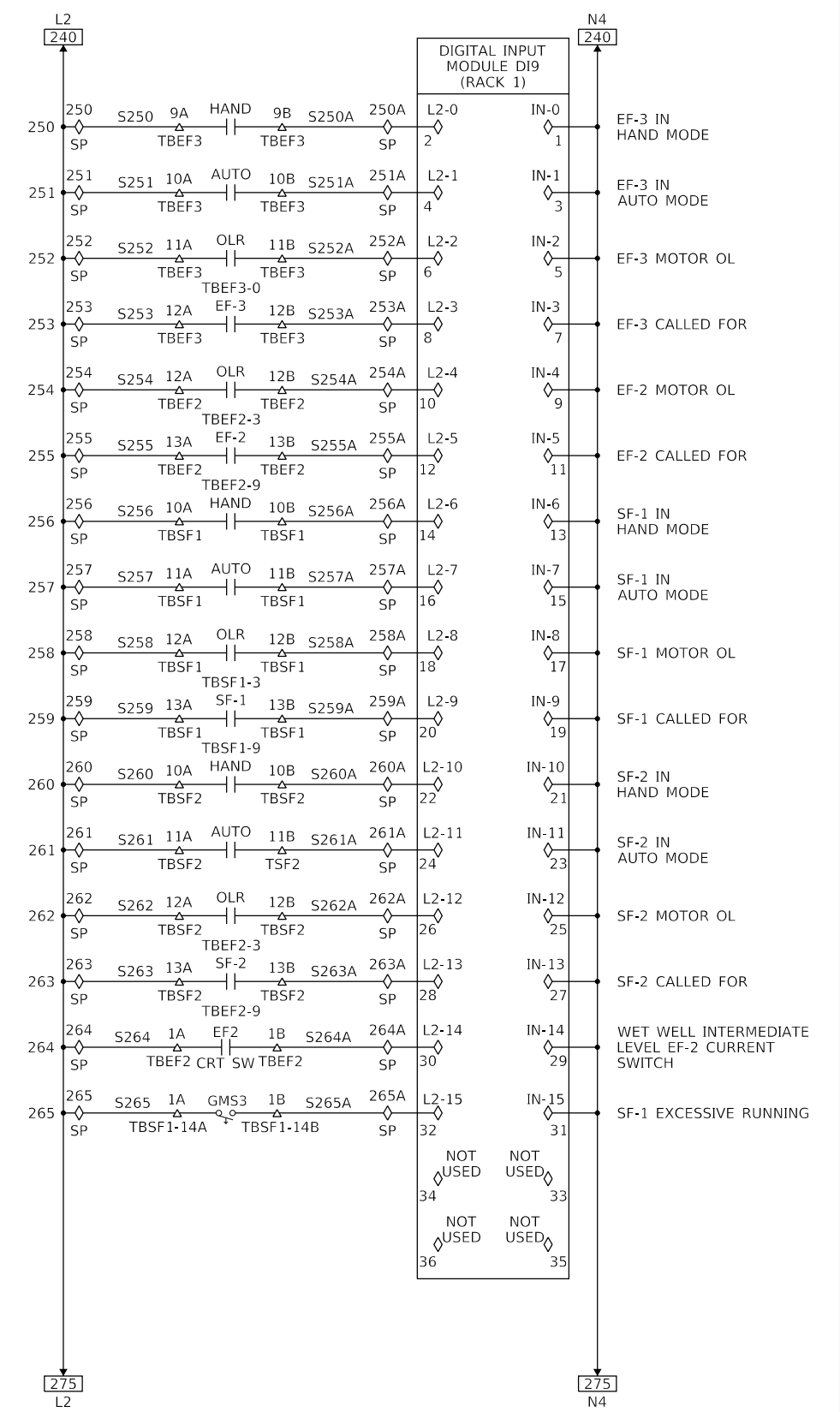
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REFER TO SHEET E17 FOR ADDITIONAL DETAILS



REFER TO SHEET E24 FOR ADDITIONAL DETAILS



NOTES:

- SEE SHEETS E1, IC1 AND IC2 FOR INSTRUMENTATION SYMBOL LISTS, ABBREVIATIONS, AND GENERAL NOTES.
- THE HIGH WATER ALARM IS USED TO PROVIDE THE "DRY WELL FLOODING ALARM".
- ALL INTERCONNECTING WIRES/CABLES BETWEEN PANELS SHALL TERMINATE ON TERMINAL STRIPS AND SHOULD NOT BE DIRECTLY CONNECTED TO DEVICES LOCATED IN THE PANELS.

IC14



USER NAME = brianf	DESIGNED - ARC	REVISED -
DRAWN - BJF	REVISIONS -	
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PLOT DATE = 8/27/2024	DATE - 8/28/2024	REVISED -

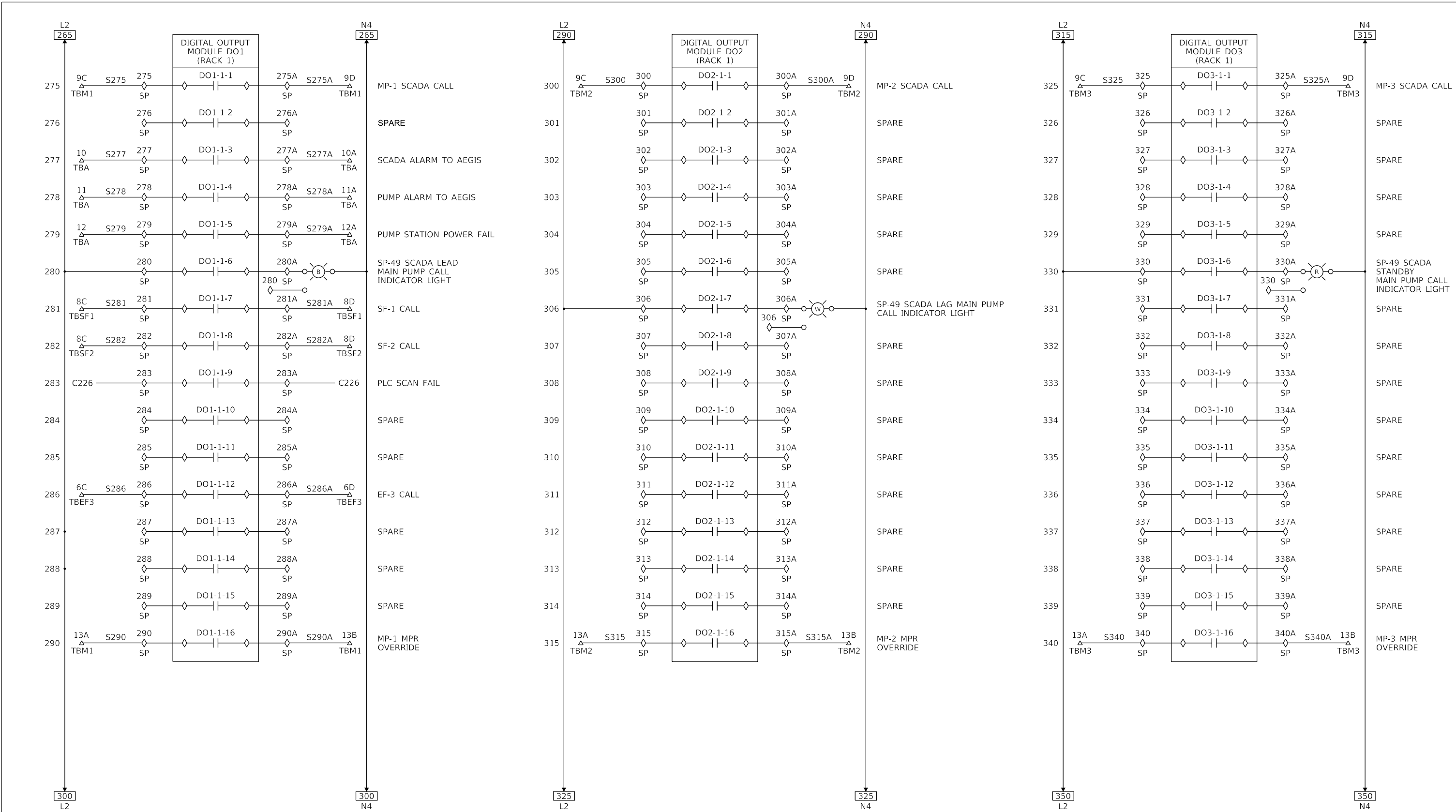
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

I&C CONTROL PANEL SP49 SCHEMATIC - 6
 PUMP STATION 49

SHEET IC14 OF 26 SHEETS

F.A.P. RTE. 305	SECTION 11-00087-00-GS	COUNTY LAKE	TOTAL SHEETS 816	SHEET NO. 645
CONTRACT NO. 61J87				
ILLINOIS FED. AID PROJECT				

MODEL: Default
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NOTES:

- SEE SHEETS E1, IC1 AND IC2 FOR INSTRUMENTATION SYMBOL LISTS, ABBREVIATIONS, AND GENERAL NOTES.
- ALL INTERCONNECTING WIRES/CABLES BETWEEN PANELS SHALL TERMINATE ON TERMINAL STRIPS AND SHOULD NOT BE DIRECTLY CONNECTED TO DEVICES LOCATED IN THE PANELS.

IC15



1170 SOUTH HOUBOLT ROAD JOLIET, ILLINOIS 60431 (815) 744-4200 IDFPR NO. 184-001273	USER NAME = brianf	DESIGNED - ARC	REVISED -
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	PLOT DATE = 8/27/2024	CHECKED - SAI	REVISED -
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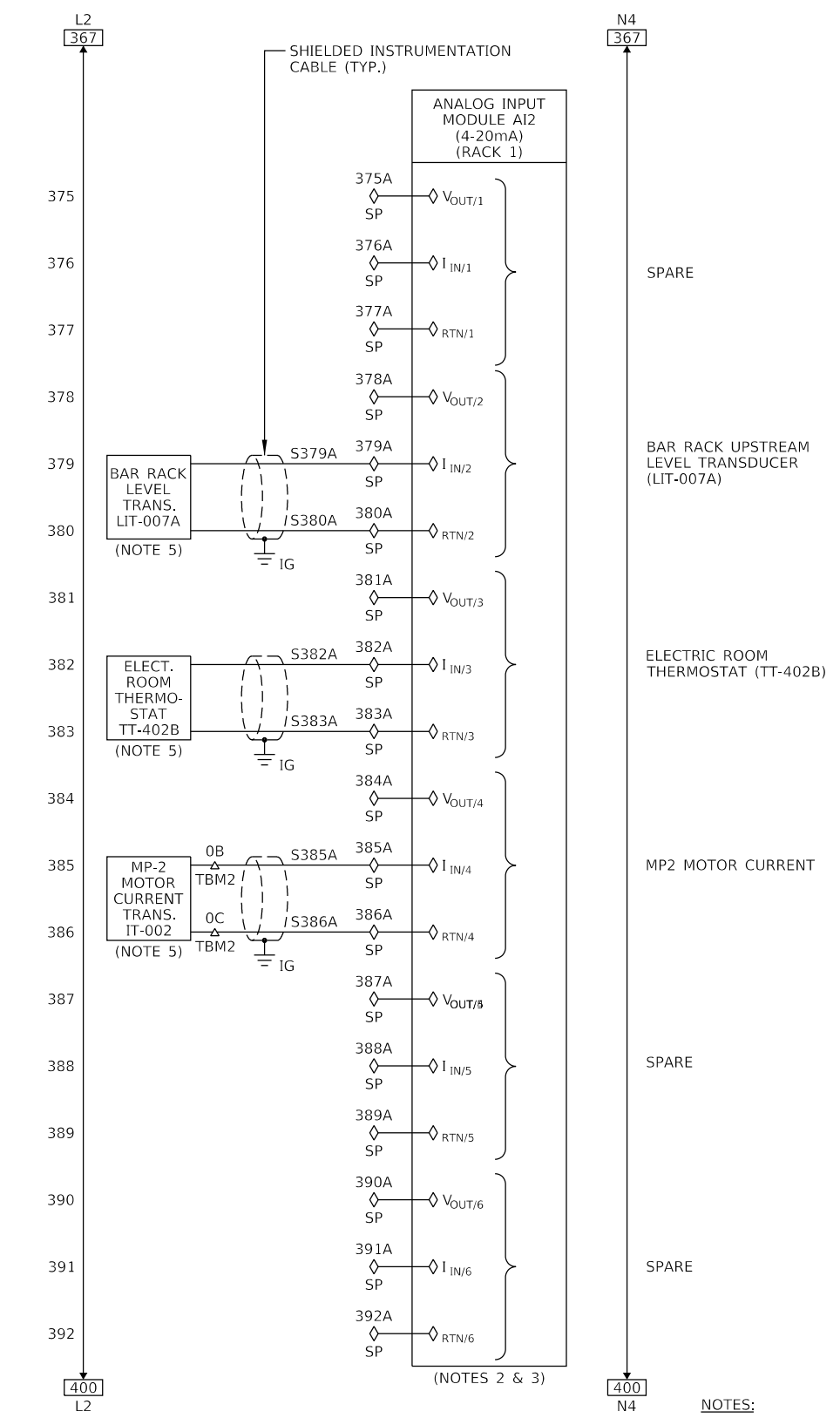
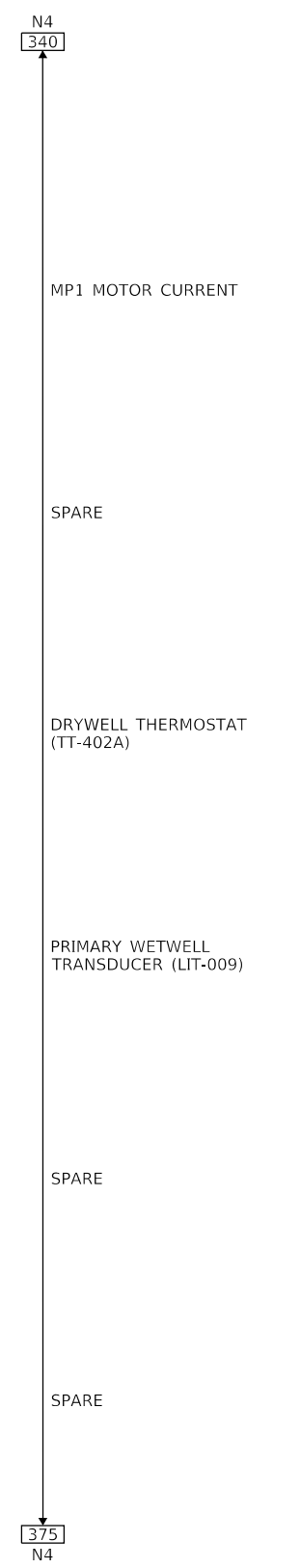
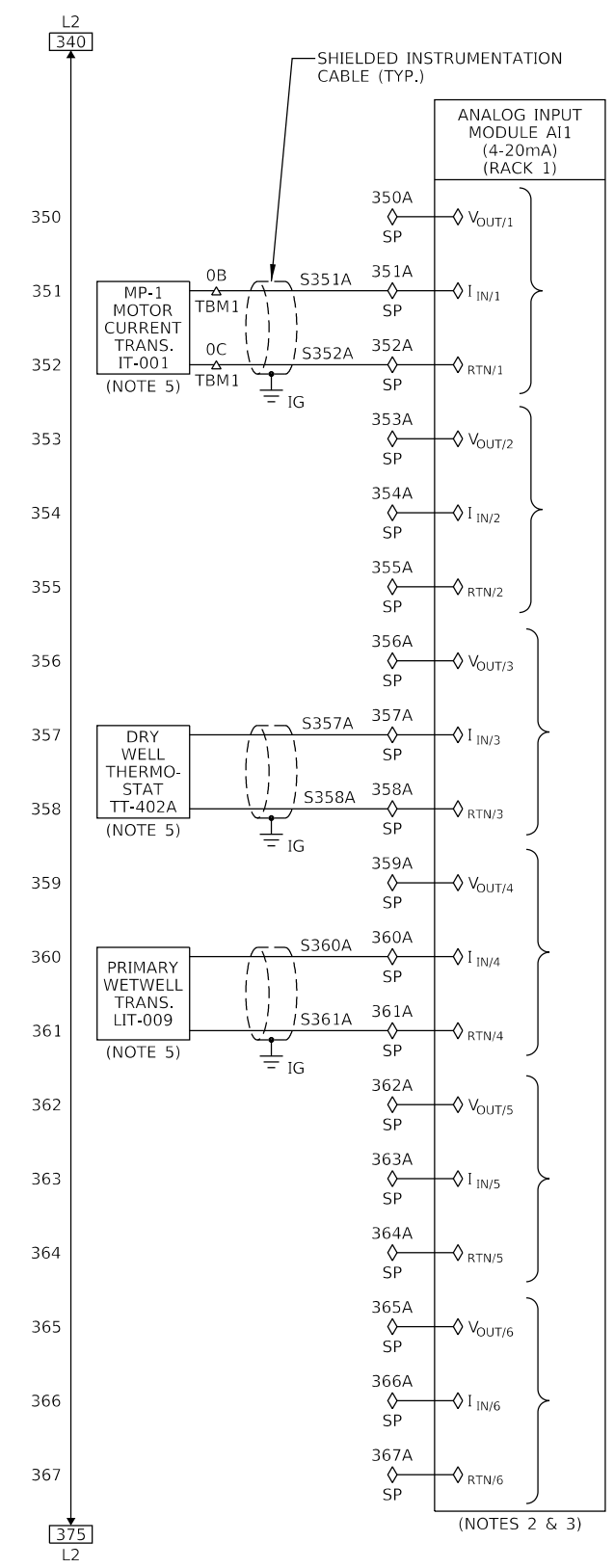
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**I&C CONTROL PANEL SP49 SCHEMATIC - 7
 PUMP STATION 49**

SHEET IC15 OF 26 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	646
CONTRACT NO. 61J87				
ILLINOIS		FED. AID PROJECT		

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- NOTES:**
- SEE SHEETS E1, IC1, AND IC2 FOR INSTRUMENTATION SYMBOL LISTS, ABBREVIATIONS, AND GENERAL NOTES.
 - PROVIDE INTRINSICALLY SAFE BARRIERS FOR ALL 4-20mA INPUT SIGNALS COMING FROM THOSE DEVICES THAT ARE INSTALLED IN HAZARDOUS LOCATIONS.
 - CONTRACTOR TO VERIFY IF FIELD DEVICES SELECTED REQUIRE 2-WIRE OR 4-WIRE CONTROL AND CONNECT TO ANALOG INPUT MODULES ACCORDINGLY.
 - ALL INTERCONNECTING WIRES/CABLES BETWEEN PANELS SHALL TERMINATE ON TERMINAL STRIPS AND SHOULD NOT BE DIRECTLY CONNECTED TO DEVICES LOCATED IN THE PANELS.
 - DEVICE IS LOCATED IN THE FIELD AND NOT IN SCADA PANEL SP49. DEVICE IS BEING SHOWN HERE FOR CLARITY.



1170 SOUTH HOUBOLT ROAD JOLIET, ILLINOIS 60431 (815) 744-4200 IDFPR NO. 184-001273	USER NAME = brianf	DESIGNED - ARC	REVISED -
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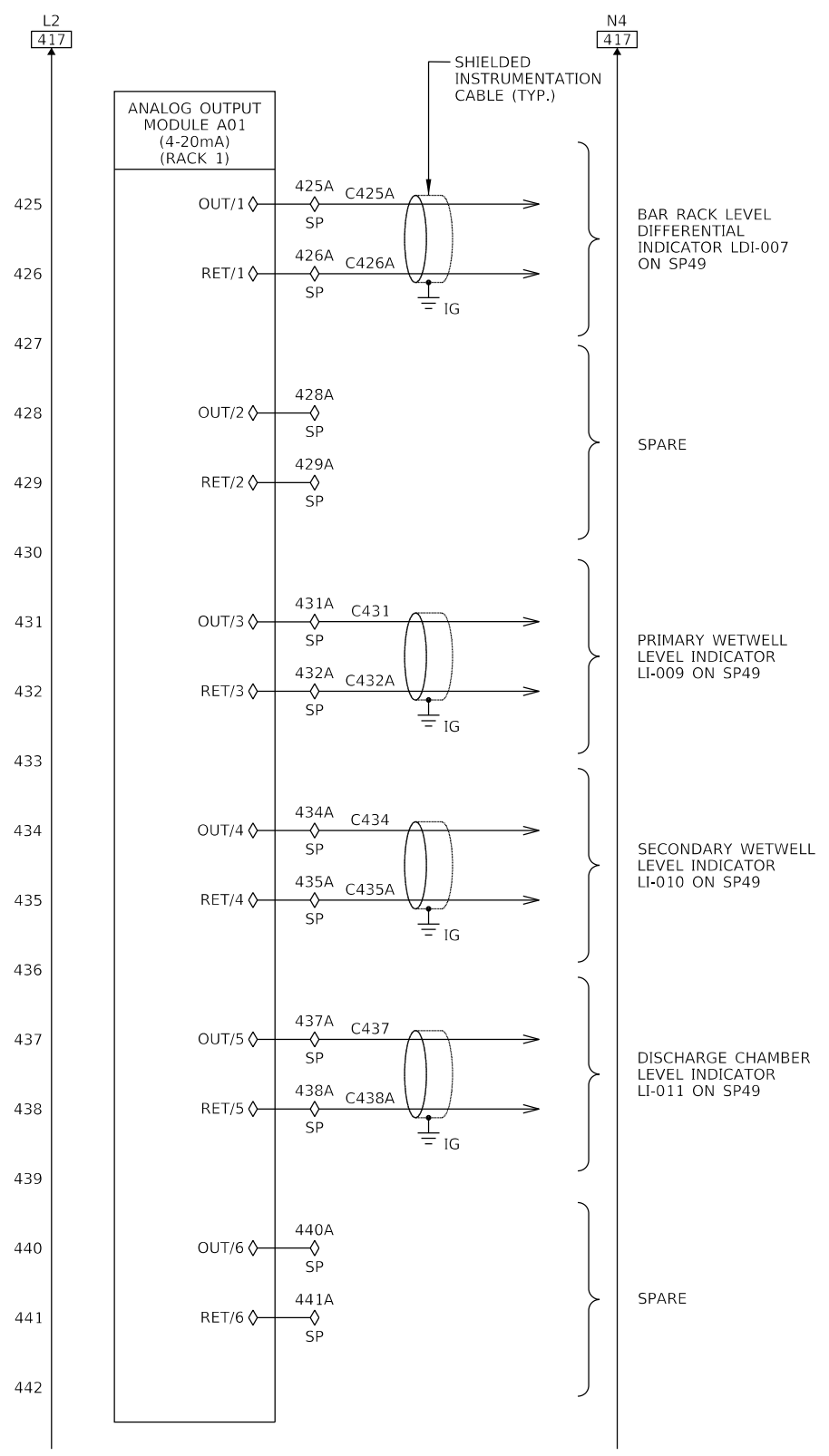
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**I&C CONTROL PANEL SP49 SCHEMATIC - 8
 PUMP STATION 49**

SHEET IC16 OF 26 SHEETS

F.A.P. RTE. 305	SECTION 11-00087-00-GS	COUNTY LAKE	TOTAL SHEETS 816	SHEET NO. 647
CONTRACT NO. 61J87				
ILLINOIS FED. AID PROJECT				

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NOTES:

- SEE SHEETS E1, IC1, AND IC2 FOR INSTRUMENTATION SYMBOL LISTS, ABBREVIATIONS, AND GENERAL NOTES.
- ALL INTERCONNECTING WIRES/CABLES BETWEEN PANELS SHALL TERMINATE ON TERMINAL STRIPS AND SHOULD NOT BE DIRECTLY CONNECTED TO DEVICES LOCATED IN THE PANELS.

IC17

1170 SOUTH HOUBOLT ROAD
 JOLIET, ILLINOIS 60431
 (815) 744-4200
STRAND ASSOCIATES IDFFPR NO. 184-001273

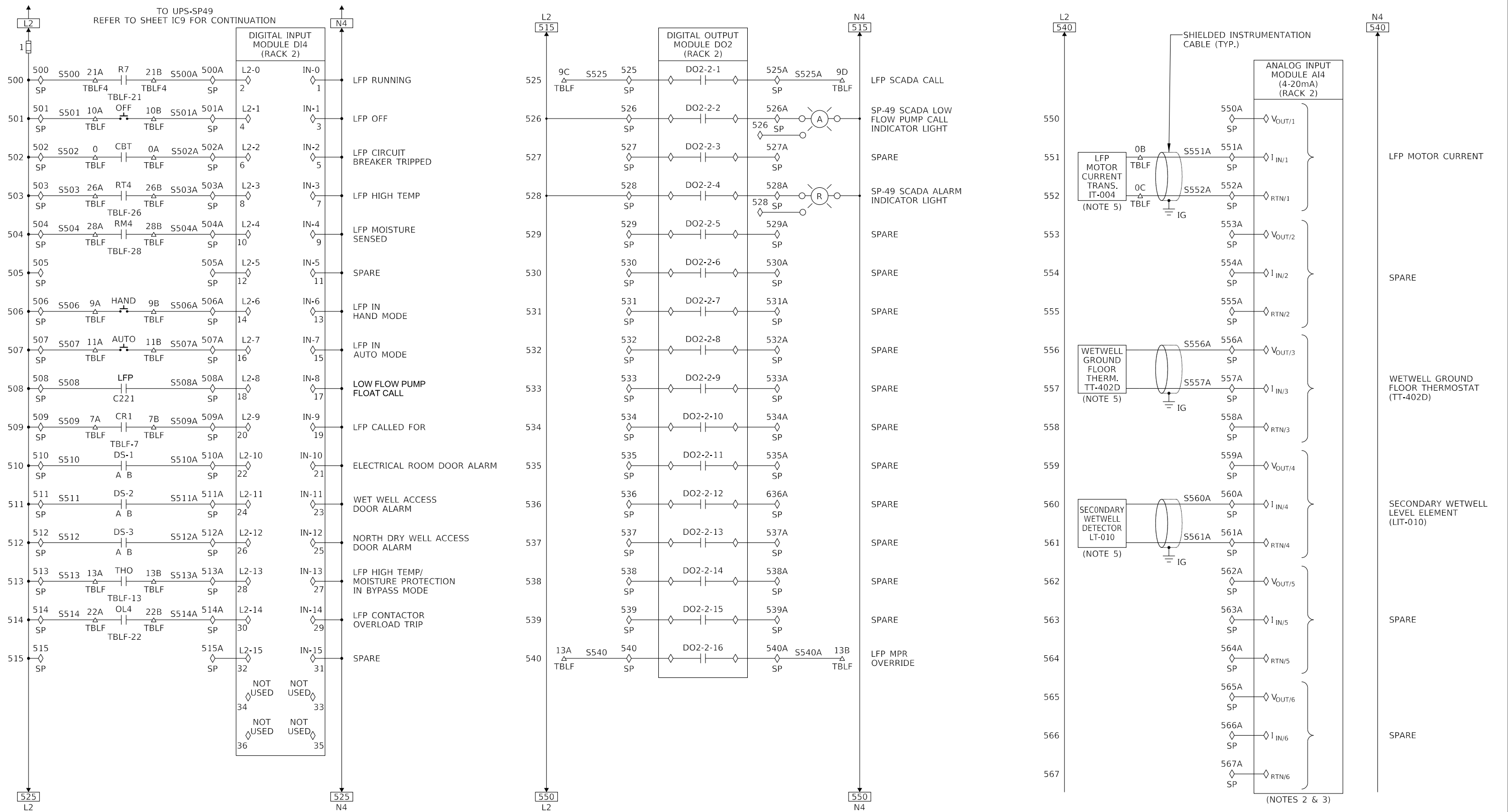
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PLOT DATE = 8/27/2024	DATE - 8/28/2024	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**I&C CONTROL PANEL SP49 SCHEMATIC - 9
 PUMP STATION 49**

SHEET IC17 OF 26 SHEETS

F.A.P. RTE. 305	SECTION 11-00087-00-GS	COUNTY LAKE	TOTAL SHEETS 816	SHEET NO. 648
CONTRACT NO. 61J87				
ILLINOIS		FED. AID PROJECT		



- NOTES:**
- SEE SHEETS E1, IC1, AND IC2 FOR INSTRUMENTATION SYMBOL LISTS, ABBREVIATIONS, AND GENERAL NOTES.
 - PROVIDE INTRINSICALLY SAFE BARRIERS FOR ALL 4-20mA INPUT SIGNALS COMING FROM THOSE DEVICES THAT ARE INSTALLED IN HAZARDOUS LOCATIONS.
 - CONTRACTOR TO VERIFY IF FIELD DEVICES SELECTED REQUIRE 2-WIRE OR 4-WIRE CONTROL AND CONNECT TO ANALOG INPUT MODULES ACCORDINGLY.
 - ALL INTERCONNECTING WIRES/CABLES BETWEEN PANELS SHALL TERMINATE ON TERMINAL STRIPS AND SHOULD NOT BE DIRECTLY CONNECTED TO DEVICES LOCATED IN THE PANELS.
 - DEVICE IS LOCATED IN THE FIELD AND NOT IN SCADA PANEL SP49. DEVICE IS BEING SHOWN HERE FOR CLARITY.

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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

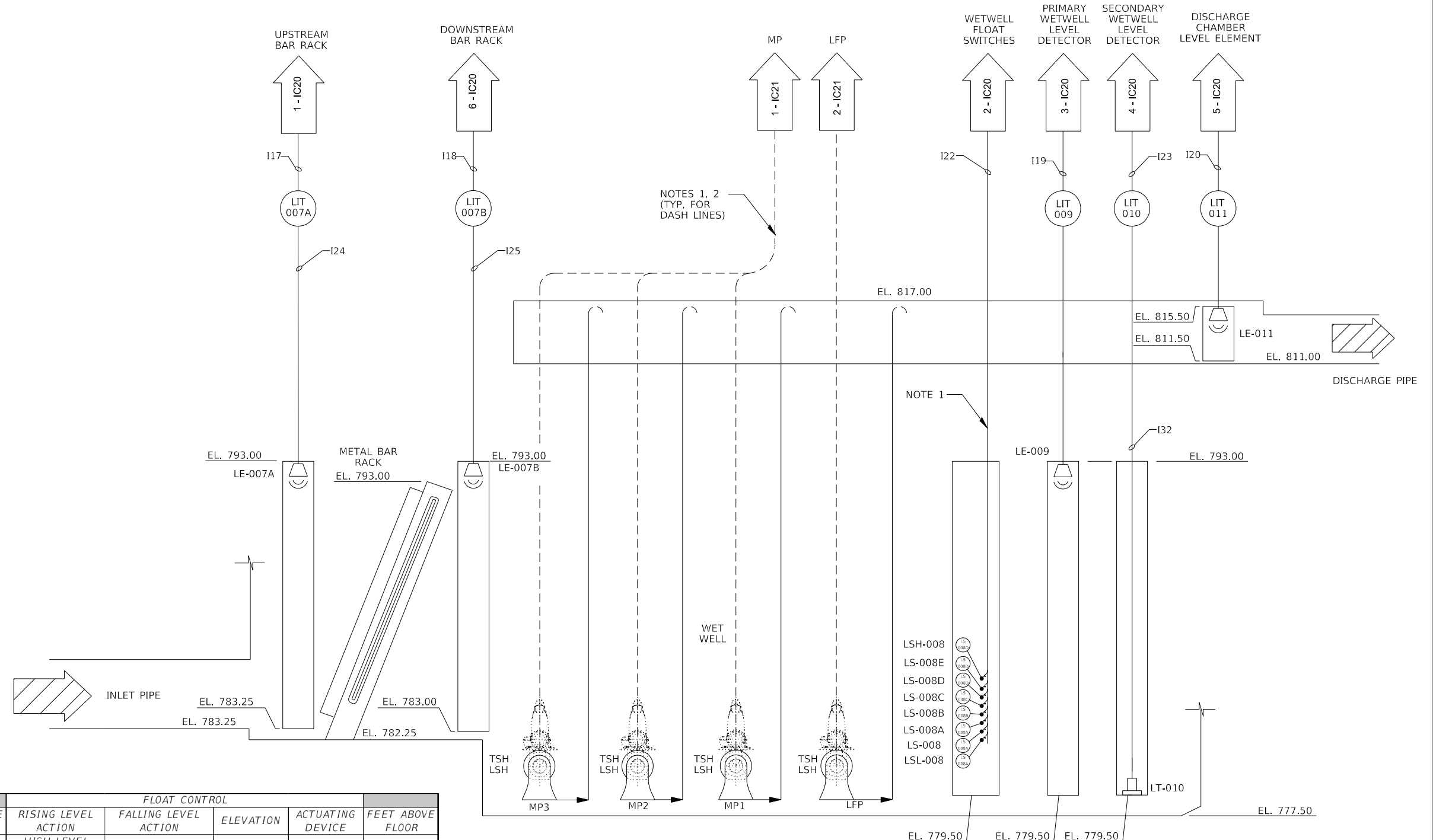
**I&C CONTROL PANEL SP49 SCHEMATIC - 10
 PUMP STATION 49**

F.A.P. RTE. 305	SECTION 11-00087-00-GS	COUNTY LAKE	TOTAL SHEETS 816	SHEET NO. 649
CONTRACT NO. 61J87				
ILLINOIS FED. AID PROJECT				

IC18

SHEET IC18 OF 26 SHEETS

- NOTES:**
1. MANUFACTURER'S CABLES.
 2. FOR DESCRIPTION OF INSTRUMENT DEVICES ASSOCIATED WITH MINI-CAS RELAY, SEE ELECTRICAL DRAWINGS.
 3. SEE SHEET IC26 FOR CABLE/CONDUIT SCHEDULE.



PLC CONTROL				FLOAT CONTROL				
ELEVATION	RISING LEVEL ACTION	FALLING LEVEL ACTION	FEET ABOVE FLOOR	RISING LEVEL ACTION	FALLING LEVEL ACTION	ELEVATION	ACTUATING DEVICE	FEET ABOVE FLOOR
791.00	HIGH LEVEL ALARM	-	13.5	HIGH LEVEL ALARM	-	791.00	LSH-008	13.5
788.50	*START STANDBY PUMP	-	11.0	* START STANDBY PUMP	-	788.50	LS-008E	11.0
786.50	* START LAG PUMP	-	9.0	START LAG PUMP	-	786.50	LS-008D	9.0
785.50	* START LEAD PUMP	-	8.0	START LEAD PUMP	-	785.50	LS-008C	8.0
	STOP LOW FLOW PUMP	-		STOP LOW FLOW PUMP	-			
784.00	-	STOP PUMPS	6.5	-	STOP PUMPS	784.00	LS-008B	6.5
	-	START LOW FLOW PUMP		-	START LOW FLOW PUMP			
783.50	START LOW FLOW PUMP	-	6.0	START LOW FLOW PUMP	-	783.50	LS-008A	6.0
782.00	-	STOP LOW FLOW PUMP	4.5	-	STOP LOW FLOW PUMP	782.00	LS-008	4.5
781.25	-	LOW LEVEL ALARM	3.75	-	LOW LEVEL ALARM	781.25	LSL-008	3.75
* STANDBY PUMP SHALL ONLY START IF LEAD OR LAG PUMP HAS FAILED AND ELEVATION HAS REACHED 788.5								

MODEL: Default
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STRAND ASSOCIATES
1170 SOUTH HOUBOLT ROAD
JOLIET, ILLINOIS 60431
(815) 744-4200
IDFPR NO. 184-001273

USER NAME = brianf	DESIGNED - ARC	REVISED -
PLOT SCALE = 8:0.0000 "/ in.	DRAWN - BJF	REVISED -
PLOT DATE = 8/27/2024	CHECKED - SAI	REVISED -
	DATE - 8/28/2024	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**I&C PROCESS AND INSTRUMENTATION DIAGRAM
PUMP STATION 49**

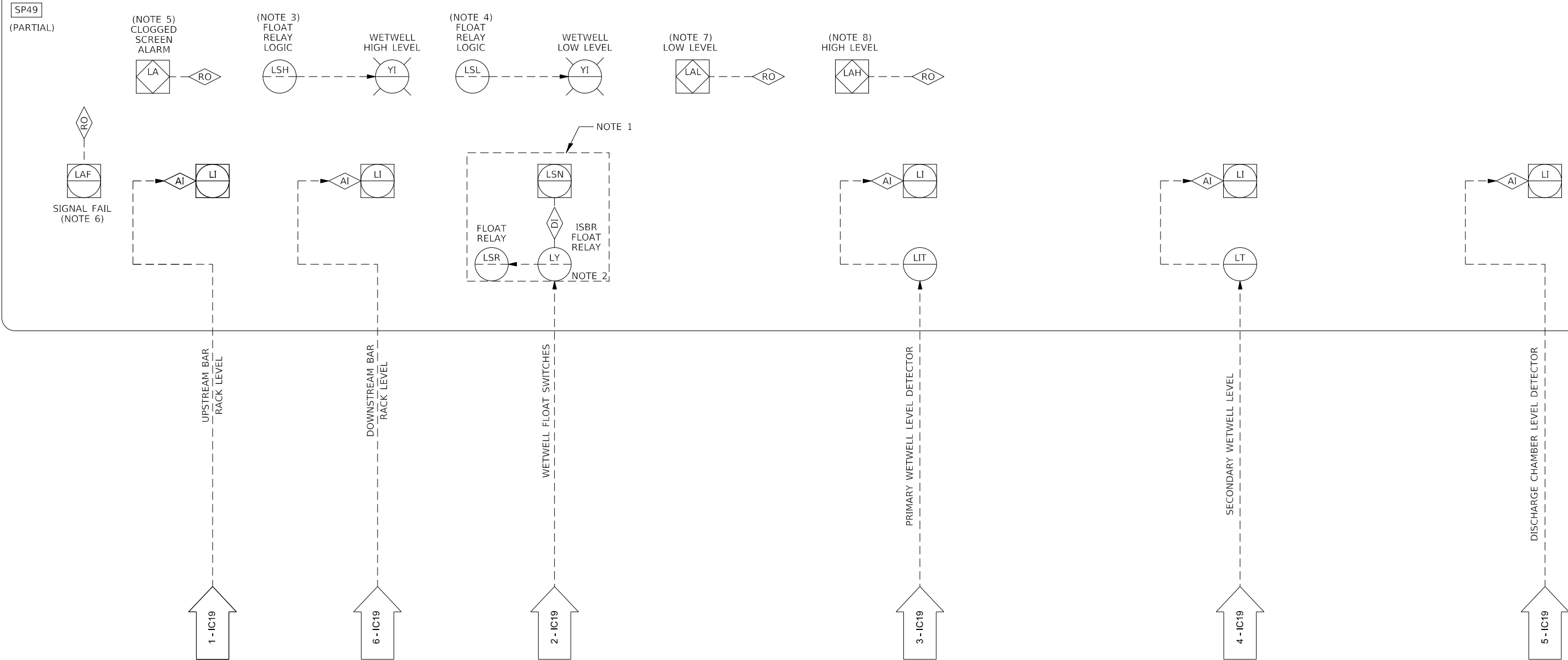
SHEET IC19 OF 26 SHEETS

F.A.P. RTE. 305	SECTION 11-00087-00-GS	COUNTY LAKE	TOTAL SHEETS 816	SHEET NO. 650
CONTRACT NO. 61J87				
ILLINOIS FED. AID PROJECT				

IC19

NO SCALE

SCADA PANEL WITH HMI



NOTES:

- TYPICAL FLOAT RELAY IS SHOWN. ARRANGEMENT IS TYPICAL FOR 8 CORRESPONDING FLOATS LSL-008, LS-008, LS-008A THROUGH LS-008E, AND LSH-008.
- FLOAT RELAYS PART OF FLOAT SWITCH RELAY LOGIC FOR PUMP CONTROL AND LEVEL TRANSMITTER SIGNAL VERIFICATION.
- FLOAT RELAY LOGIC BASED ON LSH-008.
- FLOAT RELAY LOGIC BASED ON LSL-008.
- METAL BAR RACK BLOCKAGE ALARM GENERATED BY PLC SOFTWARE LOGIC IN THE EVENT THAT DIFFERENTIAL MEASUREMENT BETWEEN UPSTREAM (LIT-007A) AND DOWNSTREAM (LIT-007B) EXCEEDS 18".
- ALARM GENERATED BY PLC SOFTWARE LOGIC IN THE EVENT THAT HYDROSTATIC AND ULTRASONIC LEVEL SIGNALS ARE NOT VALIDATED BY BACKUP FLOAT SIGNALS.
- WET WELL LOW LEVEL ALARM GENERATED BY PLC SOFTWARE LOGIC BASED ON LIT009, LIT010 AND LSL-008.
- WET WELL HIGH LEVEL ALARM GENERATED BY PLC SOFTWARE LOGIC BASED ON LIT009, LIT010 AND LSH-008.

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STRAND ASSOCIATES
 1170 SOUTH HOUBOLT ROAD
 JOLIET, ILLINOIS 60431
 (815) 744-4200
 IDFPR NO. 184-001273

USER NAME =	brianf	DESIGNED -	ARC	REVISED -	
		DRAWN -	BJF	REVISED -	
PLOT SCALE =	8:0.0000 " / in.	CHECKED -	SAI	REVISED -	
PLOT DATE =	8/27/2024	DATE -	8/28/2024	REVISED -	

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

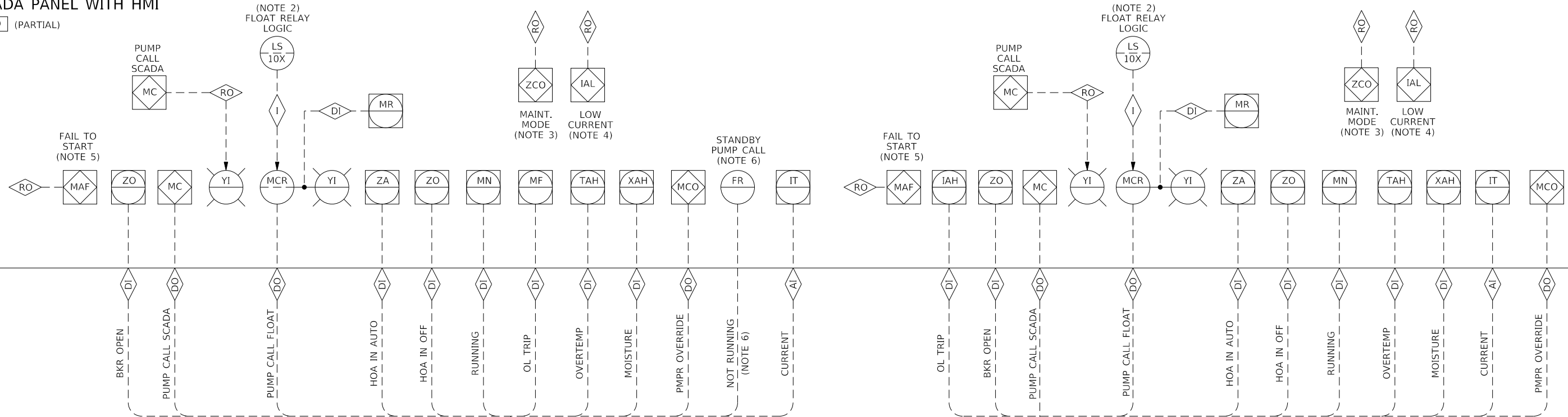
I&C P&ID DRAWING - 1
 PUMP STATION 49
 SHEET IC20 OF 26 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	651
CONTRACT NO. 61J87				
ILLINOIS FED. AID PROJECT				

IC20

SCADA PANEL WITH HMI

SP49 (PARTIAL)

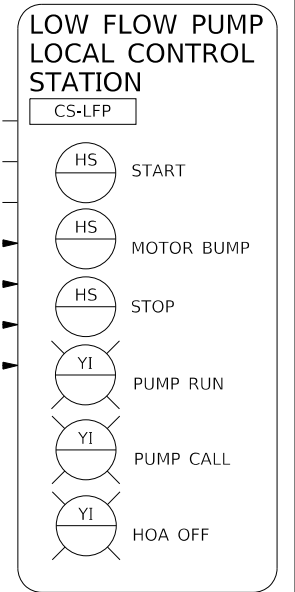
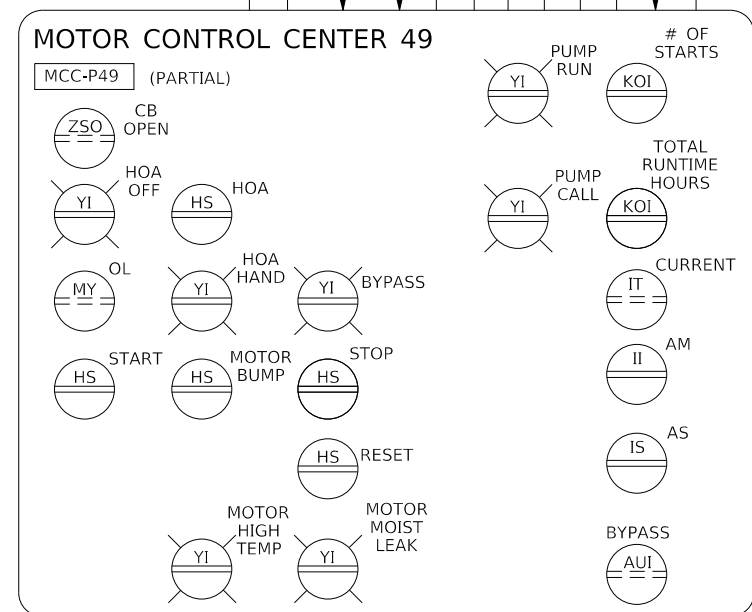
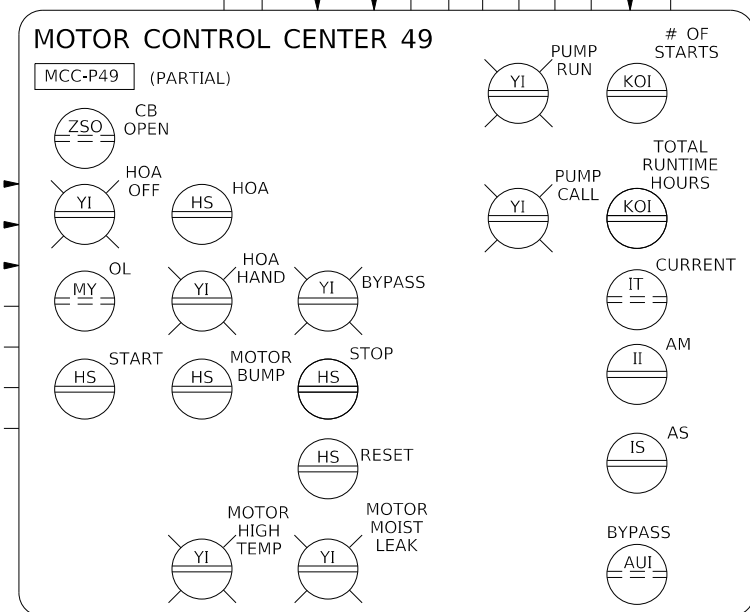
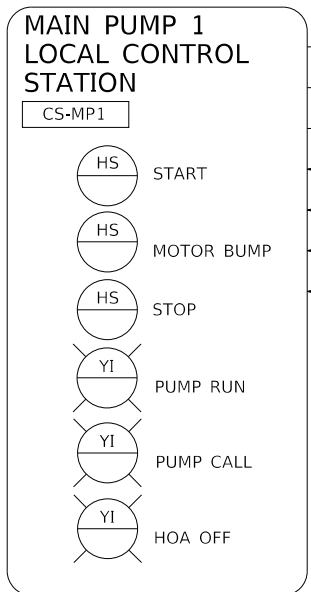


NOTES:

1. TYPICAL MAIN PUMP ARRANGEMENT SHOWN FOR MP-1 ARRANGEMENT IS TYPICAL FOR MP-2 AND MP-3.
2. FLOAT RELAY LOGIC BASED ON WET WELL LEVEL AS DETERMINED BY FLOAT SWITCHES.
3. MAINTENANCE MODE ALARM TO BE GENERATED BY PLC SOFTWARE LOGIC BASED ON BKR OPEN AND HOA IN OFF.
4. ALARM TO BE GENERATED BY PLC SOFTWARE LOGIC IN THE EVENT OF AN UNDER CURRENT CONDITION.
5. ALARM TO BE GENERATED BY PLC SOFTWARE LOGIC BASED ON A MOTOR FAILING TO SUCCESSFULLY START UPON RECEIVING EITHER, A PUMP SCADA CALL OR A PUMP FLOAT CALL.
6. PUMP "NOT RUNNING" STATUS FROM MOTOR STARTER IS USED FOR HARDWIRE LOGIC FOR OPERATION OF STANDBY PUMP.

CURRENT
BKR_OPEN
PUMP_CALL_SCADA
PUMP_CALL_FLOAT
IN_AUTO
IN_OFF
RUN
OL_TRIP
OVERTEMP
MOISTURE
PMPR_OVERRIDE
PUMP_NOT_RUNNING

CURRENT
BKR_OPEN
PUMP_CALL_SCADA
PUMP_CALL_FLOAT
IN_AUTO
IN_OFF
RUN
OL_TRIP
OVERTEMP
MOISTURE
PMPR_OVERRIDE
PUMP_NOT_RUNNING



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

I&C P&ID DRAWING - 2
PUMP STATION 49

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	652
CONTRACT NO. 61J87				

MODEL: Default
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8/27/2024 9:35:38 AM

SA
STRAND ASSOCIATES
1170 SOUTH HOUBOLT ROAD
JOLIET, ILLINOIS 60431
(815) 744-4200
IDFPR NO. 184-001273

USER NAME = brianf	DESIGNED - ARC	REVISED -
PLOT SCALE = 8:0.0000 "/ in.	DRAWN - BJF	REVISED -
PLOT DATE = 8/27/2024	CHECKED - SAI	REVISED -
	DATE - 8/28/2024	REVISED -

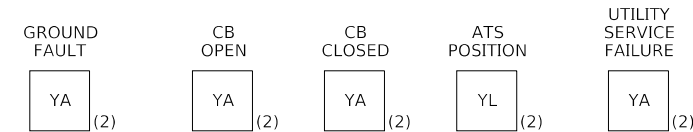
SHEET IC21 OF 26 SHEETS

ILLINOIS FED. AID PROJECT

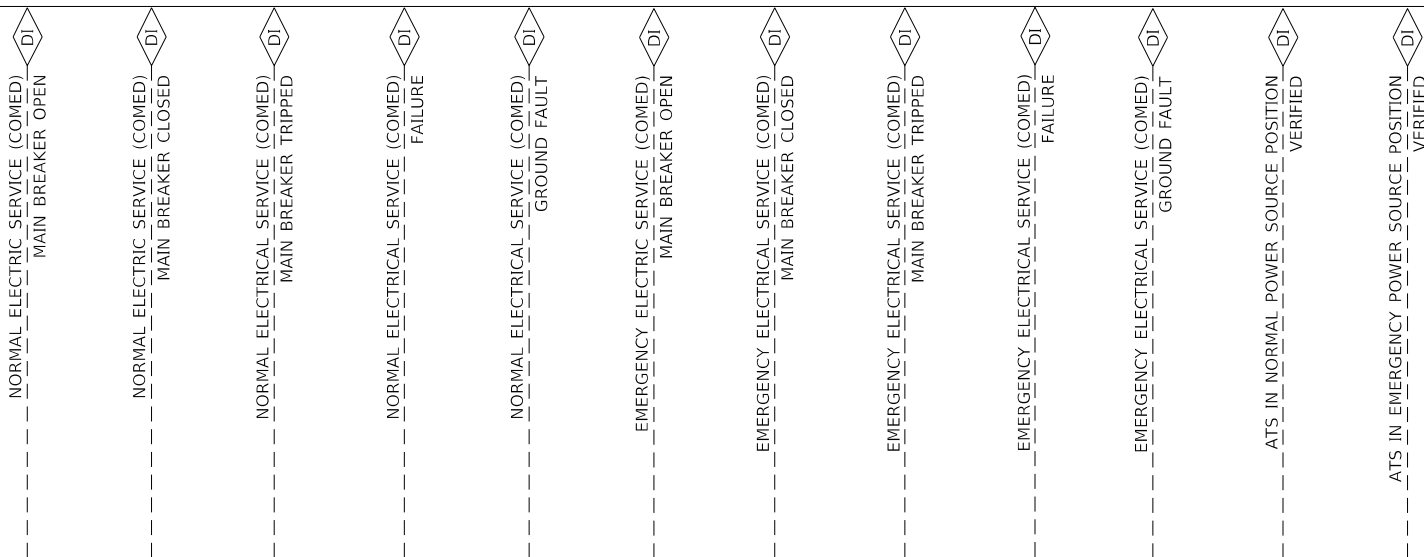
IC21

SCADA PANEL WITH HMI

SP49 (PARTIAL)

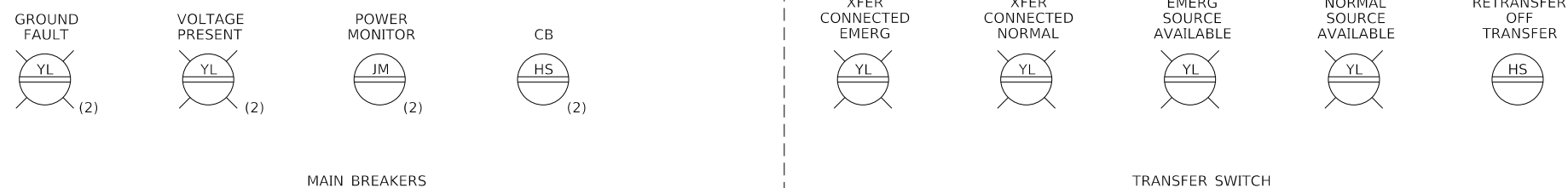


TRANSFER SWITCH



MOTOR CONTROL CENTER 49

MCC-P49 (PARTIAL)



THE FOLLOWING DATA (DERIVED VIA DUAL POWER MONITORS) SHALL BE DISPLAYED AND TRENDED AT SCADA:

1. NORMAL LINE-LINE VOLTAGE
2. EMERGENCY LINE-LINE VOLTAGE
3. NORMAL LINE CURRENT
4. EMERGENCY LINE CURRENT
5. NORMAL LINE POWER (KW)
6. EMERGENCY LINE POWER (KW)
7. NORMAL LINE POWER FACTOR

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1170 SOUTH HOUBOLT ROAD JOLIET, ILLINOIS 60431 (815) 744-4200 IDFPR NO. 184-001273	USER NAME = brianf	DESIGNED - ARC	REVISED -
		DRAWN - BJF	REVISED -
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	PLOT DATE = 8/27/2024	DATE - 8/28/2024	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

I&C P&ID DRAWING - 3
PUMP STATION 49
SHEET IC22 OF 26 SHEETS

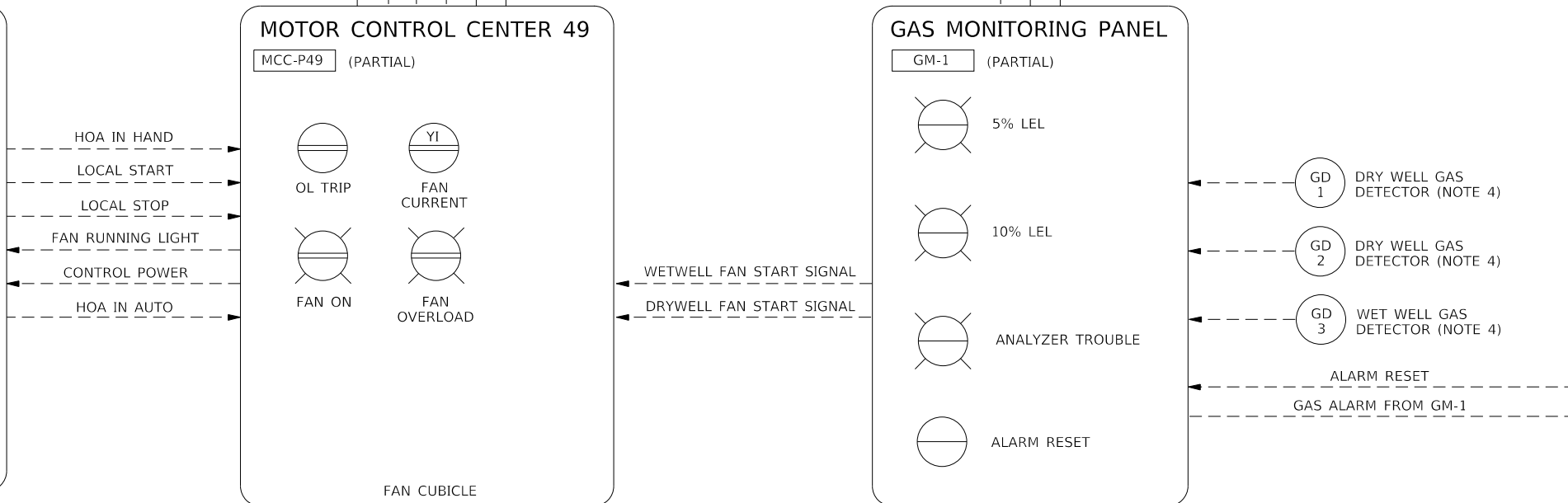
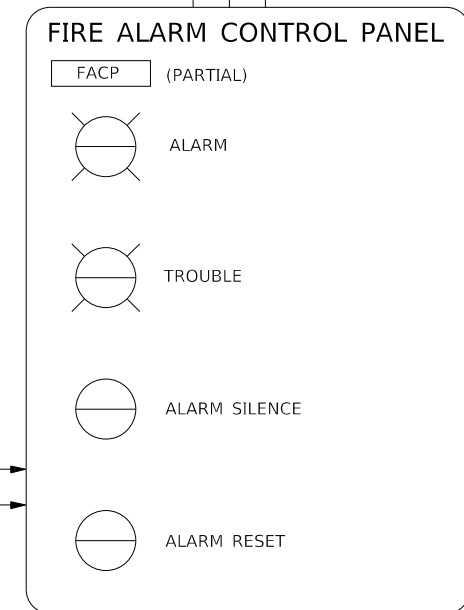
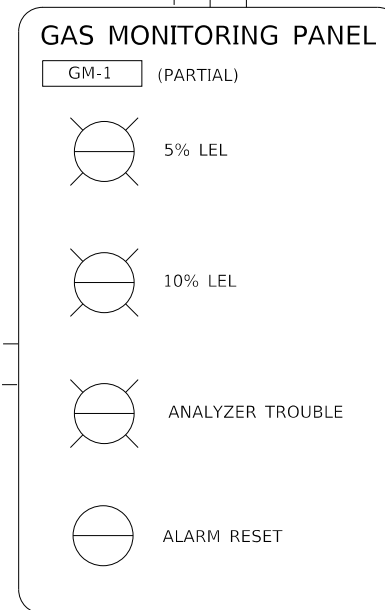
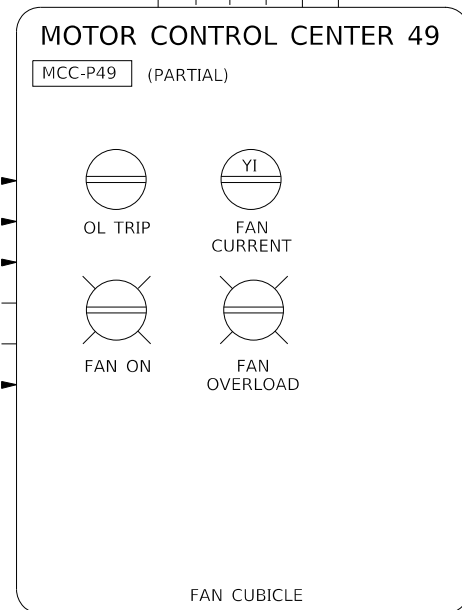
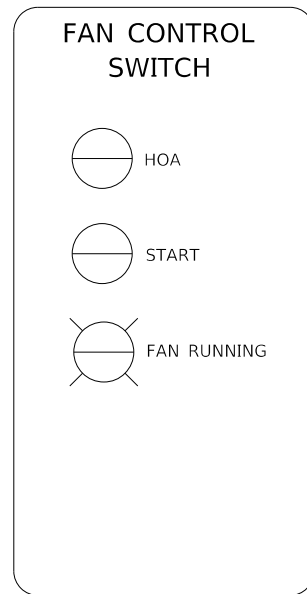
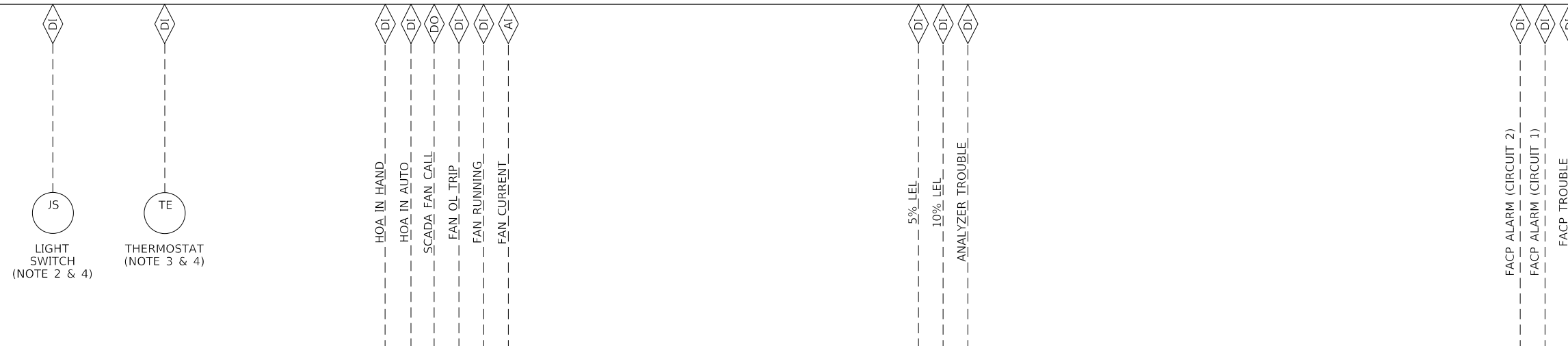
F.A.P. RTE. 305	SECTION 11-00087-00-GS	COUNTY LAKE	TOTAL SHEETS 816	SHEET NO. 653
CONTRACT NO. 61J87				
ILLINOIS FED. AID PROJECT				

SCADA PANEL WITH HMI

SP49 (PARTIAL)

NOTES:

1. VENTILATION RUNNING LIGHT BY WETWELL DOOR AND DRYWELL DOOR, LIT WHEN THE SPACE VENTILATION SYSTEM IS RUNNING.
2. WETWELL AND DRYWELL LIGHT BRANCH CIRCUITS ARE MONITORED BY CURRENT SWITCHES FOR CONTROL OF THE SPACE VENTILATION SYSTEM. SEE DRAWING E22 FOR LIGHTING AND FAN CONTROL INTERLOCK SCHEMATIC.
3. THERMOSTATS CONTROL FANS PER THE TABLE BELOW.
4. PROVIDE INTRINSICALLY SAFE RELAYS AND BARRIERS FOR CONTROL AND INSTRUMENT CABLES RUN FROM HAZARDOUS LOCATIONS INTO CONTROL PANELS, AS REQUIRED TO INSURE SAFE OPERATION IN HAZARDOUS LOCATIONS.



LOCATION	FANS	DESCRIPTION	THERMOSTAT ID (NOTE 3)	GM-1 INPUT	LIGHT SWITCH INPUT (NOTE 2)	VENTILATION RUN LIGHT (NOTE 1)
DRYWELL	SF-1/EF-1	DRY WELL INTERMEDIATE LEVEL FANS	TT-402A	Y	Y	Y
WETWELL	SF-2/EF-2	WET WELL INTERMEDIATE LEVEL FANS	TT-402C	Y	Y	Y
WETWELL	EF-3	WET WELL GROUND LEVEL FAN	TT-402D	Y		

MODEL: Default
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(815) 744-4200
IDFPR NO. 184-001273

USER NAME = brianf	DESIGNED - ARC	REVISED -
PLOT SCALE = 8:0.0000 "/ in.	DRAWN - BJF	REVISED -
PLOT DATE = 8/27/2024	CHECKED - SAI	REVISED -
	DATE - 8/28/2024	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

I&C P&ID DRAWING - 4
PUMP STATION 49

SHEET IC23 OF 26 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	654
CONTRACT NO. 61J87				

ILLINOIS FED. AID PROJECT

IC23

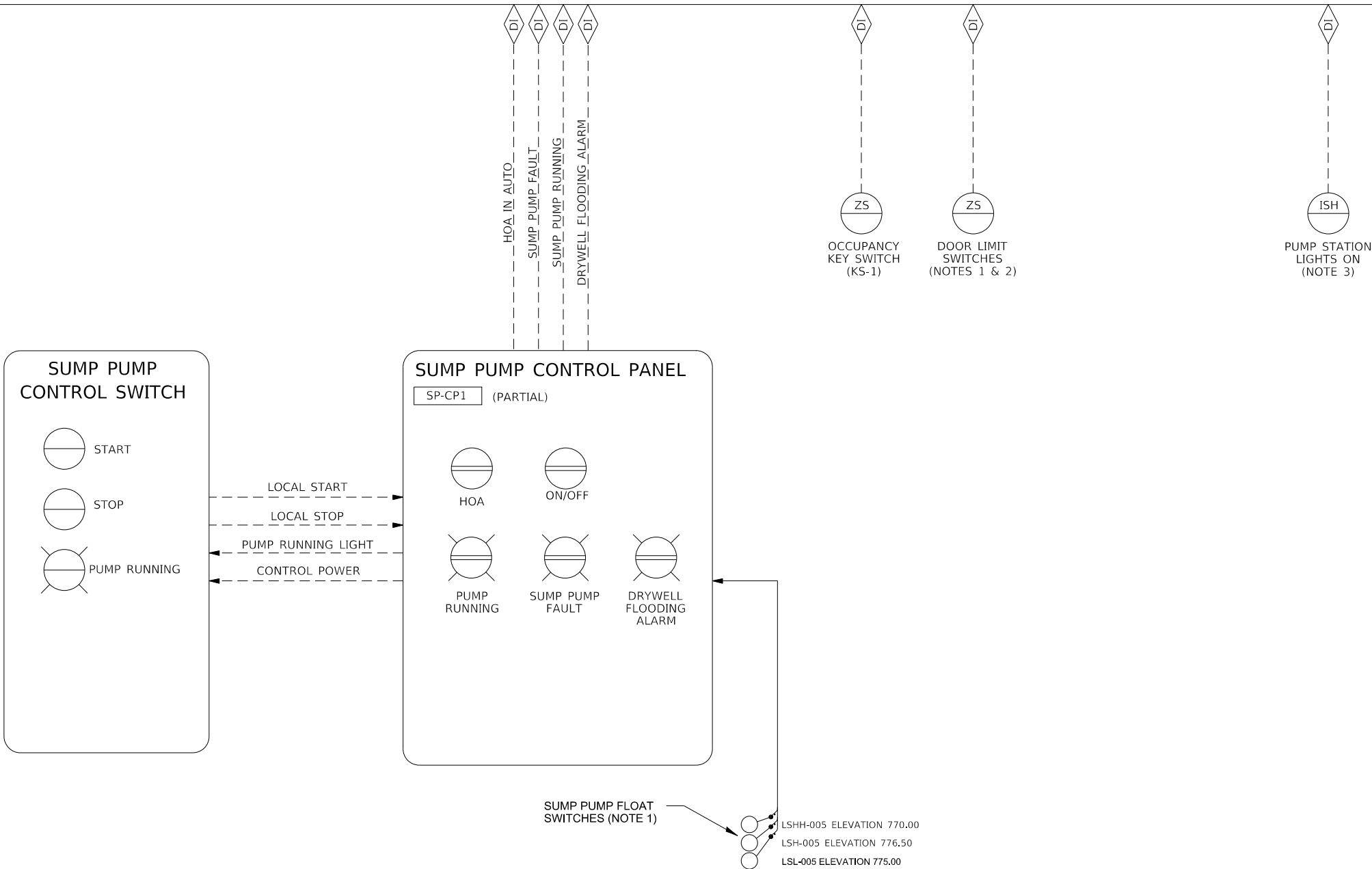
8/27/2024 9:35:39 AM

SCADA PANEL WITH HMI

SP49 (PARTIAL)

NOTES:

1. PROVIDE INTRINSICALLY SAFE RELAYS AND BARRIERS FOR CONTROL AND INSTRUMENT CABLES RUN FROM HAZARDOUS LOCATIONS INTO CONTROL PANELS, AS REQUIRED TO INSURE SAFE OPERATION IN HAZARDOUS LOCATIONS.
2. DOOR LIMIT SWITCH REPRESENTS 4 FACILITY ACCESS DOORS. REFER TO E12 FOR LOCATIONS AND TAG IDS.
3. LIGHTING CONTACTOR IN EXTERIOR LIGHTING CONTROL PANEL PROVIDES INPUT TO SCADA.



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8/27/2024 9:35:39 AM

SA
STRAND ASSOCIATES

1170 SOUTH HOUBOLT ROAD
JOLIET, ILLINOIS 60431
(815) 744-4200
IDFPR NO. 184-001273

USER NAME = brianf	DESIGNED - ARC	REVISED -
	DRAWN - BJF	REVISED -
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PLOT DATE = 8/27/2024	DATE - 8/28/2024	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**I&C P&ID DRAWING - 5
PUMP STATION 49**

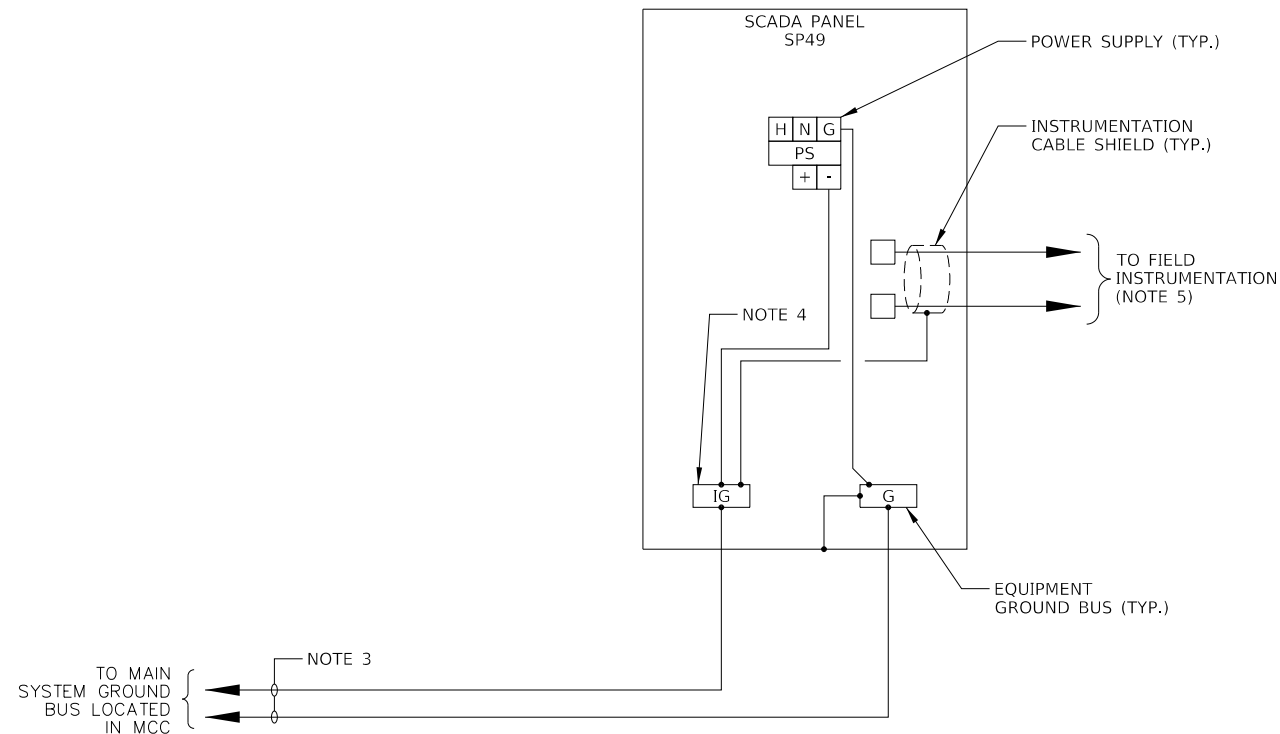
SHEET IC24 OF 26 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 61J87				
		ILLINOIS	FED. AID PROJECT	

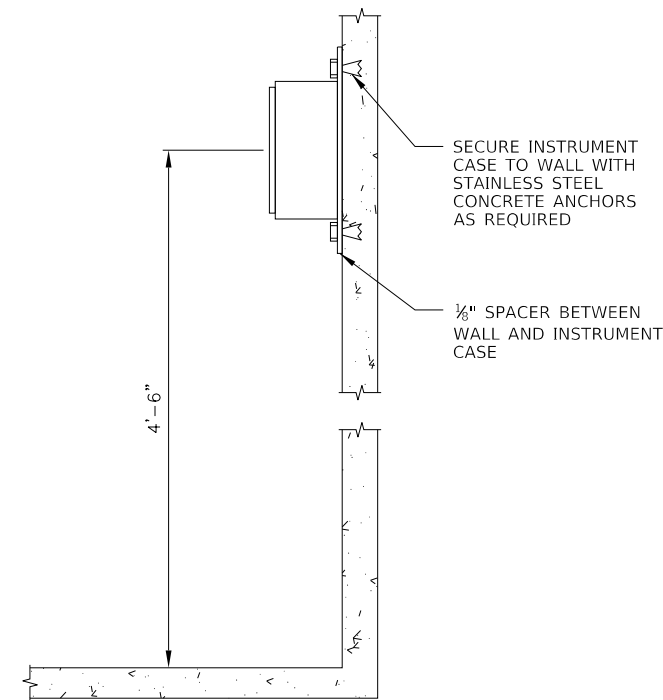
IC24

NOTES:

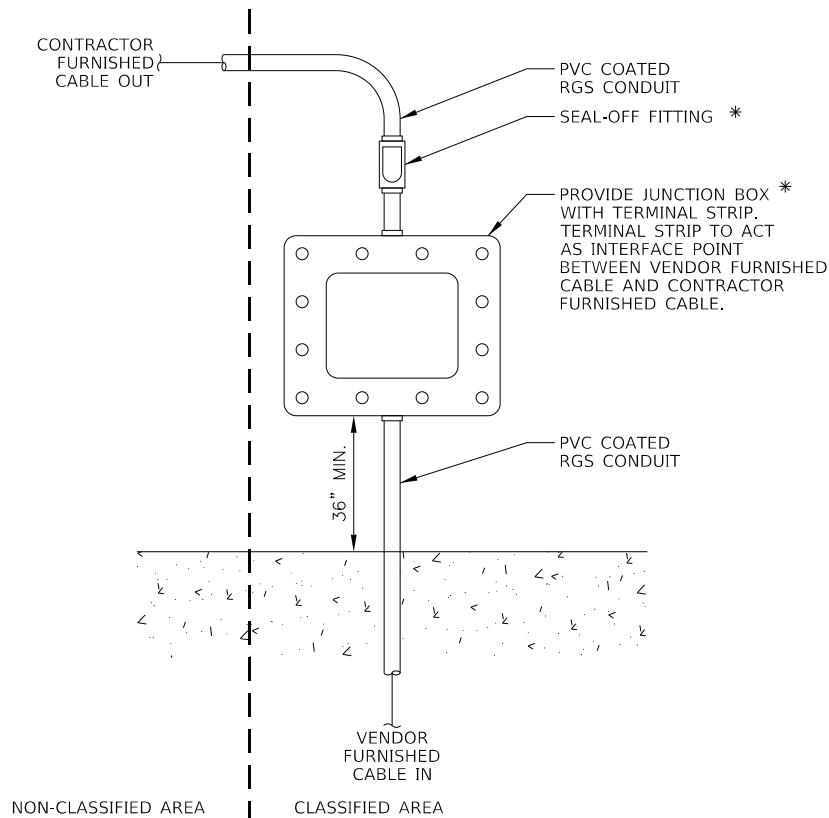
1. SEE SHEETS E1, IC1, AND IC2 FOR INSTRUMENTATION SYMBOL LIST, ABBREVIATIONS, AND GENERAL NOTES.
2. NAMEPLATES SHALL BE WHITE BACKGROUND WITH BLACK LETTERING.
3. PROVIDE A #4 AWG MINIMUM GROUND WIRE. GROUND WIRE MUST BE INSULATED TO ENSURE SINGLE POINT GROUND. IG GROUND WIRE TO BE GREEN W YELLOW LINE FOR IDENTIFICATION PURPOSES.
4. IG GROUND BUS MUST BE ISOLATED FROM CONTROL PANEL.
5. CABLE SHIELD MUST NOT BE CONNECTED AT FIELD DEVICE. TERMINATE SHIELD ONLY ON INSTRUMENTATION GROUND BAR AS INDICATED.



1 CONTROL AND SCADA PANEL GROUNDING DETAIL
SCALE: NONE



2 INSTRUMENT CASE MOUNTING DETAIL
SCALE: NONE



* PROVIDE NEMA 7 EXPLOSION-PROOF JUNCTION BOXES AND SEAL-OFF FITTINGS WHERE CLASSIFIED OR CORROSIVE LOCATIONS ARE IDENTIFIED ON DRAWINGS.

3 I & C JUNCTION BOX INSTALLATION DETAIL
SCALE: NONE

MODEL: Default
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PLOT DATE =	8/27/2024	DATE -	8/28/2024	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

I&C GROUNDING & MISCELLANEOUS DETAILS
PUMP STATION 49

SHEET IC25 OF 26 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	656
CONTRACT NO. 61J87				
		ILLINOIS	FED. AID PROJECT	

IC25

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NUMBER	SIZE (IN.)	TYPE	CONDUCTOR QUANTITY AND SIZE (AWG-kcmil)	COND./CABLE INSULATION	FROM	TO
I1	3/4	RGS	6-#14 & 1-#14 GND	THWN	SCADA PANEL (SP-49)	GAS MONITOR SYSTEM (GM-1)
I2	3/4	RGS	6-#14 & 1-#14 GND	THWN	SCADA PANEL (SP-49)	FIRE ALARM CONTROL PANEL (FACP-1)
I3	3/4	RGS	8-#14 & 1-#14 GND	THWN	SCADA PANEL (SP-49)	SUMP PUMP CONTROL PANEL
I4	1 1/4	RGS	26-#14 & 1-#14 GND	THWN	SCADA PANEL (SP-49)	MCC-P49 (CUBICLE 3A) MP-1
I5	3/4	RGS	1-(2) CONDUCTOR 16 AWG SHIELDED TWISTED PAIR CABLE	PVC	SCADA PANEL (SP-49)	MCC-P49 (CUBICLE 3A) MP-1
I6	3/4	RGS	4-#14 & 1-#14 GND	THWN	SCADA PANEL (SP-49)	MCC-P49 (CUBICLE 3B) EF-1
I7	3/4	RGS	1-(2) CONDUCTOR 16 AWG SHIELDED TWISTED PAIR CABLE	PVC	SCADA PANEL (SP-49)	MCC-P49 (CUBICLE 3B) EF-1
I8	1 1/4	RGS	26-#14 & 1-#14 GND	THWN	SCADA PANEL (SP-49)	MCC-P49 (CUBICLE 4A) MP-2
I9	3/4	RGS	1-(2) CONDUCTOR 16 AWG SHIELDED TWISTED PAIR CABLE	PVC	SCADA PANEL (SP-49)	MCC-P49 (CUBICLE 4A) MP-2
I10	3/4	RGS	4-#14 & 1-#14 GND	THWN	SCADA PANEL (SP-49)	MCC-P49 (CUBICLE 4B) EF-2
I11	3/4	RGS	1-(2) CONDUCTOR 16 AWG SHIELDED TWISTED PAIR CABLE	PVC	SCADA PANEL (SP-49)	MCC-P49 (CUBICLE 4B) EF-2
I12	1 1/4	RGS	26-#14 & 1-#14 GND	THWN	SCADA PANEL (SP-49)	MCC-P49 (CUBICLE 5A) MP-3
I13	3/4	RGS	1-(2) CONDUCTOR 16 AWG SHIELDED TWISTED PAIR CABLE	PVC	SCADA PANEL (SP-49)	MCC-P49 (CUBICLE 5A) MP-3
I14	3/4	RGS	10-#14 & 1-#14 GND	THWN	SCADA PANEL (SP-49)	MCC-P49 (CUBICLE 5B) SF-1
I15	3/4	RGS	1-(2) CONDUCTOR 16 AWG SHIELDED TWISTED PAIR CABLE	PVC	SCADA PANEL (SP-49)	MCC-P49 (CUBICLE 5B) SF-1
I16	1 1/4	RGS	26-#14 & 1-#14 GND	THWN	SCADA PANEL (SP-49)	MCC-P49 (CUBICLE 6A) LFP
I17	3/4	RGS	1-(2) CONDUCTOR 16 AWG SHIELDED TWISTED PAIR CABLE	PVC	SCADA PANEL (SP-49)	MCC-P49 (CUBICLE 6A) LFP
I18	3/4	RGS	10-#14 & 1-#14 GND	THWN	SCADA PANEL (SP-49)	MCC-P49 (CUBICLE 6B) SF-2
I19	3/4	RGS	1-(2) CONDUCTOR 16 AWG SHIELDED TWISTED PAIR CABLE	PVC	SCADA PANEL (SP-49)	MCC-P49 (CUBICLE 6B) SF-2
I20	3/4	RGS	10-#14 & 1-#14 GND	THWN	SCADA PANEL (SP-49)	AEGIS PANEL
I22	3/4	RGS	10-#14 & 1-#14 GND	THWN	SCADA PANEL (SP-49)	EXHAUST FAN EF-3 CONTROL PANEL
I23	3/4	RGS	1-(2) CONDUCTOR 16 AWG SHIELDED TWISTED PAIR CABLE	PVC	SCADA PANEL (SP-49)	EXHAUST FAN EF-3 CONTROL PANEL
I24	1	PVCC RGS	16-#14 & 1-#14 GND	THWN	SCADA PANEL (SP-49)	WET WELL FLOAT SWITCH JUNCTION BOX
I25	1 1/4	RGS	22-#14 & 1-#14 GND	THWN	SCADA PANEL (SP-49)	MCC-P49 (SECTION 1)
I26	3/4	RGS	6-#14 & 1-#14 GND	THWN	SCADA PANEL (SP-49)	MCC-P49 (CUBICLE 6D) CB-GEN
I27	3/4	RGS	2-#14 & 1-#14 GND	THWN	SCADA PANEL (SP-49)	KS-1 KEYED SWITCH
I28	3/4	RGS	1-SHIELDED PAIR CABLE	PVC	SCADA PANEL (SP-49)	LIT-007A UPSTREAM LEVEL TRANSMITTER
I28A	3/4	RGS	1-SHIELDED PAIR CABLE	PVC	LIT-007A UPSTREAM LEVEL TRANSMITTER	LIT-007 JBX
I28B	-	-	MANUFACTURER CABLE	-	LIT-007 JBX	LIT-007A UPSTREAM LEVEL ELEMENT
I29	3/4	RGS	1-SHIELDED PAIR CABLE	PVC	SCADA PANEL (SP-49)	LIT-007B DOWNSTREAM TRANSMITTER
I29A	3/4	RGS	1-SHIELDED PAIR CABLE	PVC	LIT-007B DOWNSTREAM TRANSMITTER	LIT-007 JBX
I29B	-	-	MANUFACTURER CABLE	-	LIT-007 JBX	LIT-007B DOWNSTREAM ELEMENT
I30	3/4	RGS	1-SHIELDED PAIR CABLE	PVC	SCADA PANEL (SP-49)	LIT-009 PRI. WET WELL LEVEL TRANSMITTER
I30A	3/4	RGS	1-SHIELDED PAIR CABLE	PVC	LIT-009 PRI. WET WELL LEVEL TRANSMITTER	LIT-009 JBX
I30B	-	-	MANUFACTURER CABLE	-	LIT-009 JBX	LIT-009 PRI. WET WELL LEVEL ELEMENT
I31	3/4	RGS	1-SHIELDED PAIR CABLE	PVC	SCADA PANEL (SP-49)	LIT-010 SEC. WET WELL LEVEL TRANSMITTER
I31A	3/4	RGS	1-SHIELDED PAIR CABLE	PVC	LIT-010 SEC. WET WELL LEVEL TRANSMITTER	LIT-010 JBX
I31B	-	-	MANUFACTURER CABLE	-	LIT-010 JBX	LIT-010 SEC. WET WELL LEVEL ELEMENT
I32	3/4	RGS	1-SHIELDED PAIR CABLE	PVC	SCADA PANEL (SP-49)	LIT-011 DISCHARGE CHAMBER LEVEL TRANSMITTER
I32A	3/4	RGS	1-SHIELDED PAIR CABLE	PVC	LIT-011 DISCHARGE CHAMBER LEVEL TRANSMITTER	LIT-011 JBX
I32B	-	-	MANUFACTURER CABLE	-	LIT-011 JBX	LE-011 DISCHARGE CHAMBER ELEMENT
I33	3/4	PVCC RGS	1-SHIELDED PAIR CABLE	PVC	SCADA PANEL (SP-49)	TT-402A DRYWELL TSTAT
I34	3/4	RGS	1-SHIELDED PAIR CABLE	PVC	SCADA PANEL (SP-49)	TT-402B ELECTRICAL ROOM TSTAT
I35	3/4	PVCC RGS	1-SHIELDED PAIR CABLE	PVC	SCADA PANEL (SP-49)	TT-402C WET WELL INTERMEDIATE FLOOR TSTAT
I36	3/4	PVCC RGS	1-SHIELDED PAIR CABLE	PVC	SCADA PANEL (SP-49)	TT-402D WET WELL GROUND FLOOR TSTAT
I37	4	RGS	4~CAT6 300V UNSHIELDED ETHERNET CABLES, 1~HDMI CABLE, AND 1~USB CABLE	-	SCADA PANEL (SP-49)	NETWORK RACK
I38	2	RGS	2~CAT6 600V SHIELDED ETHERNET CABLES	-	SCADA PANEL (SP-49)	MCC-P49 (CUBICLE 2C) POWER METER
I39	3/4	RGS	1~CAT6 300V UNSHIELDED ETHERNET CABLES	-	SCADA PANEL (SP-49)	AEGIS CONTROL PANEL

IC26



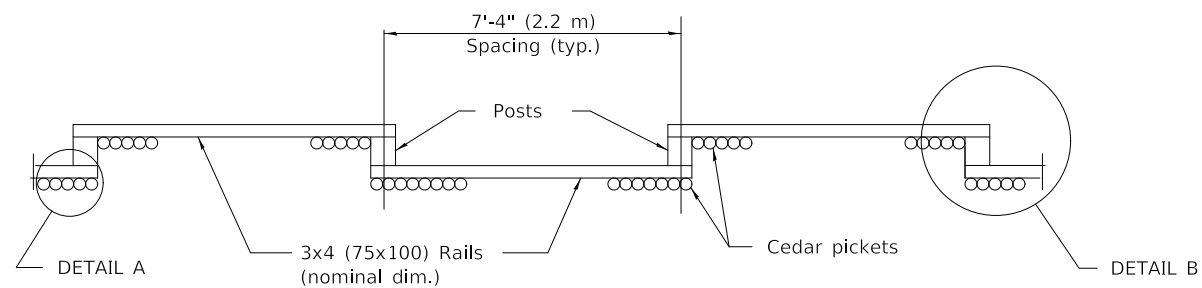
1170 SOUTH HOUBOLT ROAD JOLIET, ILLINOIS 60431 (815) 744-4200 IDFPR NO. 184-001273	USER NAME = brianf	DESIGNED - ARC	REVISED -
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	PLOT DATE = 8/27/2024	DATE - 8/28/2024	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

I&C CONDUIT AND WIRING SCHEDULE
 PUMP STATION 49

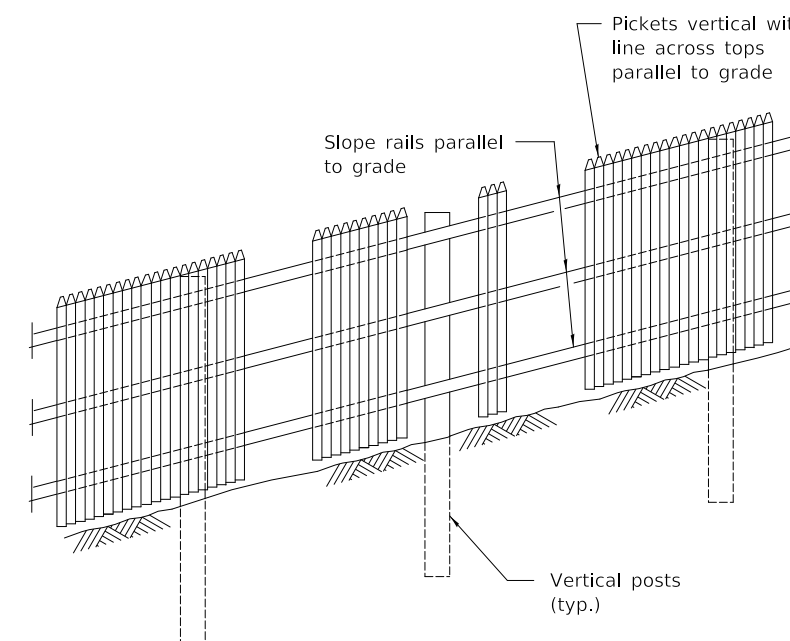
SHEET IC26 OF 26 SHEETS

F.A.P. RTE. 305	SECTION 11-00087-00-GS	COUNTY LAKE	TOTAL SHEETS 816	SHEET NO. 657
CONTRACT NO. 61J87				
ILLINOIS FED. AID PROJECT				

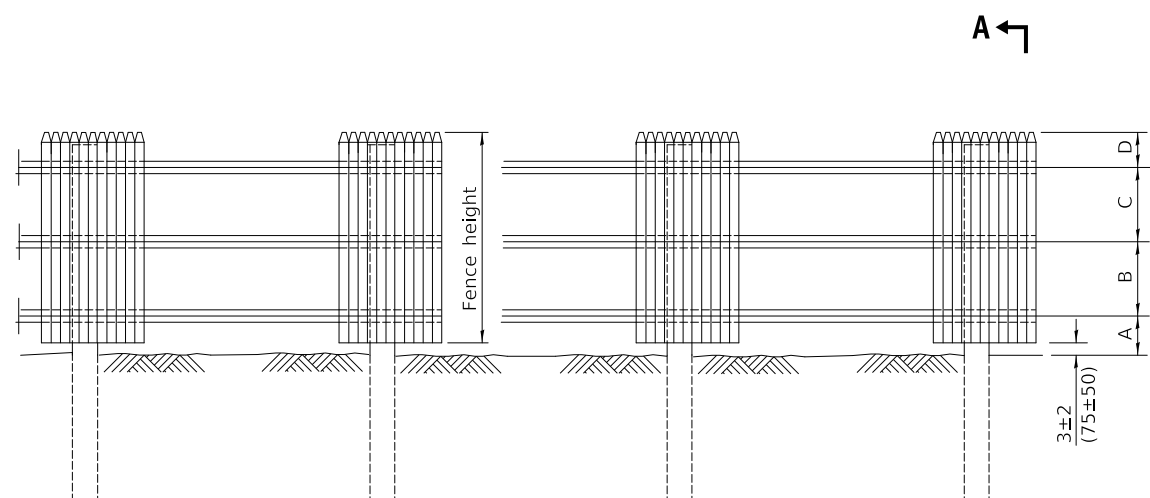


PLAN
(Facing highway)

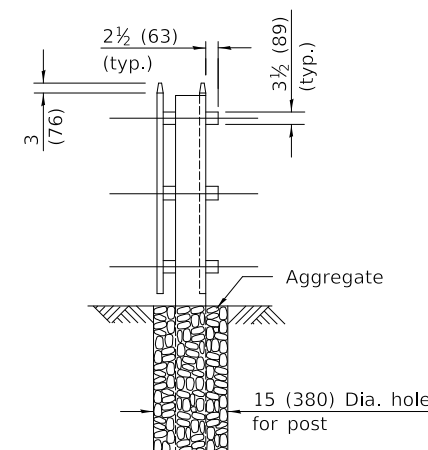
	FENCE HEIGHT	
	6'-0" (1.8 m)	8'-0" (2.4 m)
Post Size (nominal dim.)	6x8 (150x200)	8x8 (200x200)
Post Length	10'-0" (3.0 m)	14'-0" (4.3 m)
Post Embedment	4'-0" (1.2 m)	6'-0" (1.8 m)
A	15 (380)	18 (460)
B	24 (600)	33 (870)
C	24 (600)	33 (870)
D	12 (300)	15 (380)



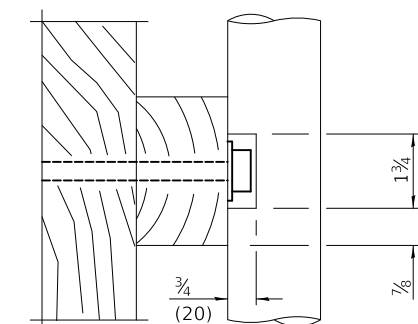
ELEVATION
(Showing treatment with sloping ground)



ELEVATION

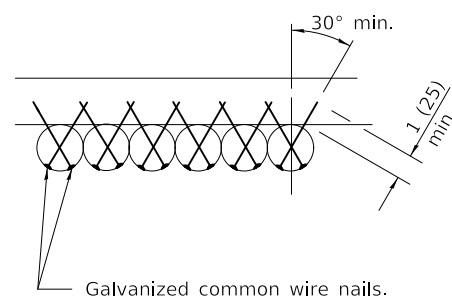


SEC. A-A



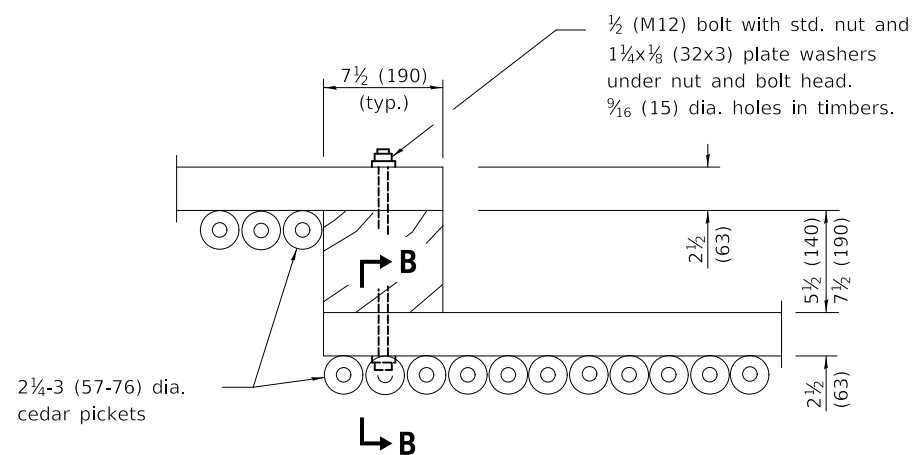
SECTION B-B

(Notch pickets when required to clear washer and bolt head.)



DETAIL A

(Showing typical picket to rail attachment)



DETAIL B

(Showing typical panel to post connection at each rail.)

GENERAL NOTES

Loading is based on 80 mph (130 km/h) with 30% gust factor. Minimum allowable soil pressure = 1.25 tsf (120 kPa).

All dimensions are in inches (millimeters) unless otherwise shown.

MODEL: S:\MODEL\NAME: FILE: NAME: 0310187-std-spec-detailed.dwg

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Tel: 630.773.3900
Fax: 630.773.3975
www.civiltechinc.com

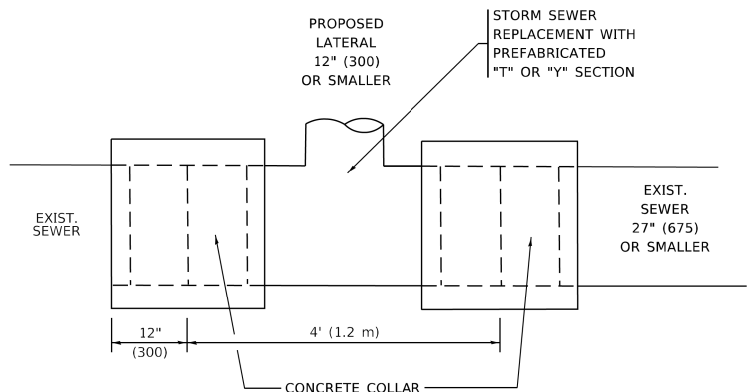
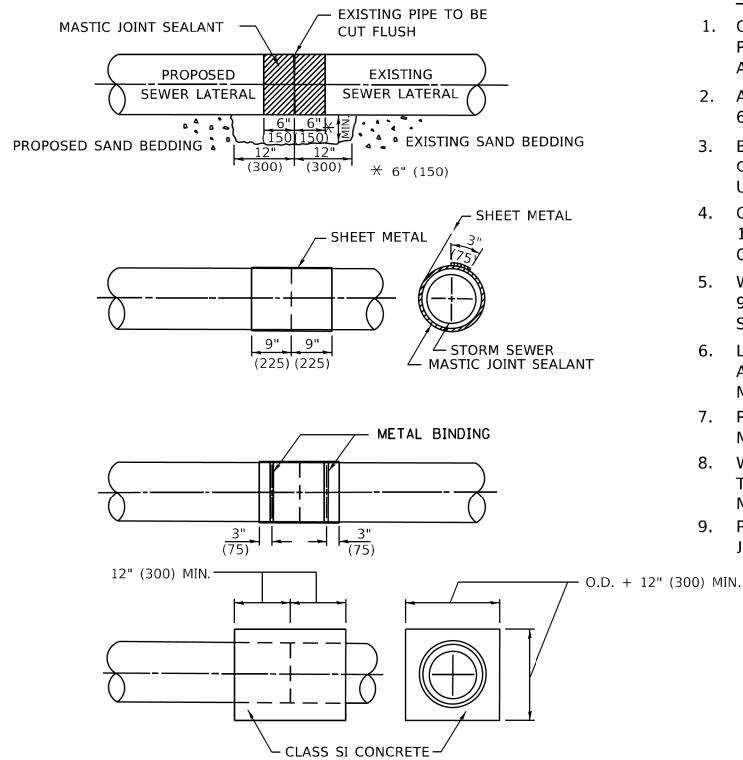
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	DATE - 08/28/2024	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**US ROUTE 14
CONSTRUCTION DETAIL**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	658
CONTRACT NO. 61J87				
ILLINOIS FED. AID PROJECT				

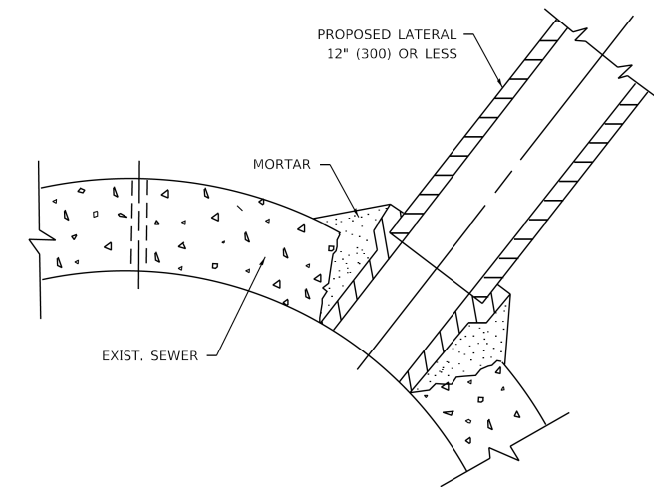


DETAIL "A"

LATERAL CONNECTION TO EXISTING SEWER OF 27" (675) OR SMALLER

DETAIL "B"

CLASS SI CONCRETE COLLAR



DETAIL "C"

PROPOSED LATERAL CONNECTION TO EXISTING SEWER OF 30" (750) OR LARGER

CONSTRUCTION SEQUENCE

1. CUT THE EXISTING END OF THE PIPE SO AS TO PRESENT A FLUSH BUTT JOINT. BRUSH AND CLEAN ALL PIPES.
2. APPLY THE MASTIC JOINT SEALANT TO THE FIRST 6" (150) OF EACH PIPE.
3. BUTT THE PIPES TOGETHER LEAVING A MINIMUM OF 12' x 6' (300 x 150) DEEP EXCAVATION UNDER AND AROUND EACH PIPE END.
4. CUT A PIECE OF SHEET METAL GAGE NO. 19 1.1 (0.0418) 18" (450) WIDE BY THE OUTSIDE CIRCUMFERANCE OF THE PIPE PLUS 3" (75) LONG.
5. WRAP THE SHEET METAL AROUND THE PIPES, 9" (225) ON EACH SIDE OF THE JOINT, STARTING AT THE TOP OF THE PIPE.
6. LAP THE SHEET METAL AT LEAST 3" (75) AT THE TOP OF THE PIPE AND PLACE THE MASTIC JOINT SEALANT BETWEEN THE LAP.
7. PLACE TWO METAL BANDS AROUND THE SHEET METAL AND TIGHTEN.
8. WIPE OFF ANY EXCESS MASTIC JOINT SEALANT THAT OOZES OUT FROM BETWEEN THE SHEET METAL AND THE PIPES.
9. PLACE CLASS SI CONCRETE AROUND THE JOINT.

NOTES:

MATERIAL

MATERIAL USED FOR THE TEE OR WYE SECTION SHALL BE COMPATIBLE WITH THE EXISTING STORM SEWER OR THE PROPOSED STORM SEWER.

CONSTRUCTION METHODS

- THIS WORK SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE APPLICABLE PORTIONS OF SECTION 550 OF THE STANDARD SPECIFICATIONS.
- CONNECTION TO AN EXISTING STORM SEWER SHALL BE BY EITHER OF THE FOLLOWING METHODS:
 - PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 27" (675) OR SMALLER SEE DETAIL "A" AND "B".
 - PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 30" (750) OR LARGER SEE DETAIL "C".

IF THE EXISTING SEWER PIPE IS CRACKED, BROKEN OR OTHERWISE DAMAGED BY THE CONTRACTOR IN MAKING THE CIRCULAR OPENING, THE CONTRACTOR SHALL REPLACE THAT SECTION OF PIPE WITH PIPE EQUAL AND SIMILAR IN ALL RESPECTS TO THE PIPE IN THE EXISTING SEWER, IN A CAREFUL WORKMANLIKE MANNER, WITHOUT EXTRA COMPENSATION.

GENERAL

- CARE MUST BE TAKEN TO PREVENT DEBRIS FROM ENTERING THE SEWER. ALL DEBRIS WHICH ENTERS THE SEWER MUST BE REMOVED. THE SEWER MUST BE LEFT CLEAN AND UNOBSTRUCTED UPON COMPLETION OF THE CONTRACT.
- CARE MUST BE TAKEN TO PREVENT ANY PART OF THE NEW PIPE CONNECTION FROM PROJECTING INTO THE EXISTING SEWER.

BASIS OF PAYMENT

- TEE OR WYE CONNECTIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR STORM SEWER TEE OR WYE OF THE TYPE AND SIZE SPECIFIED IN THE PLANS, THIS PRICE SHALL INCLUDE ALL EXCAVATION OF THE TRENCH, REMOVAL OF THE EXISTING STORM SEWER, FURNISHING AND INSTALLING THE SPECIFIED TEE OR WYE SECTION, FURNISHING AND INSTALLING THE REQUIRED CONCRETE COLLAR, AND ALL OTHER MATERIAL NECESSARY TO COMPLETE THIS WORK AS SHOWN AND SPECIFIED.
- REMOVAL AND REINSTALLATION OF EXISTING STORM SEWER ADJACENT TO THE PROPOSED TEE OR WYE SECTION, FOR THE PURPOSE OF FACILITATING THE INSTALLATION OF THE TEE OR WYE SECTION, WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE WORK.
- TRENCH BACKFILL, EXCAVATION IN ROCK AND REMOVAL AND REPLACEMENT OF UNSUITABLE MATERIAL BELOW PLAN BEDDING GRADE WILL BE PAID FOR SEPARATELY.
- CONCRETE COLLAR FOR CONNECTING A PROPOSED STORM SEWER TO AN EXISTING STORM SEWER WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE PROPOSED STORM SEWER.

* ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

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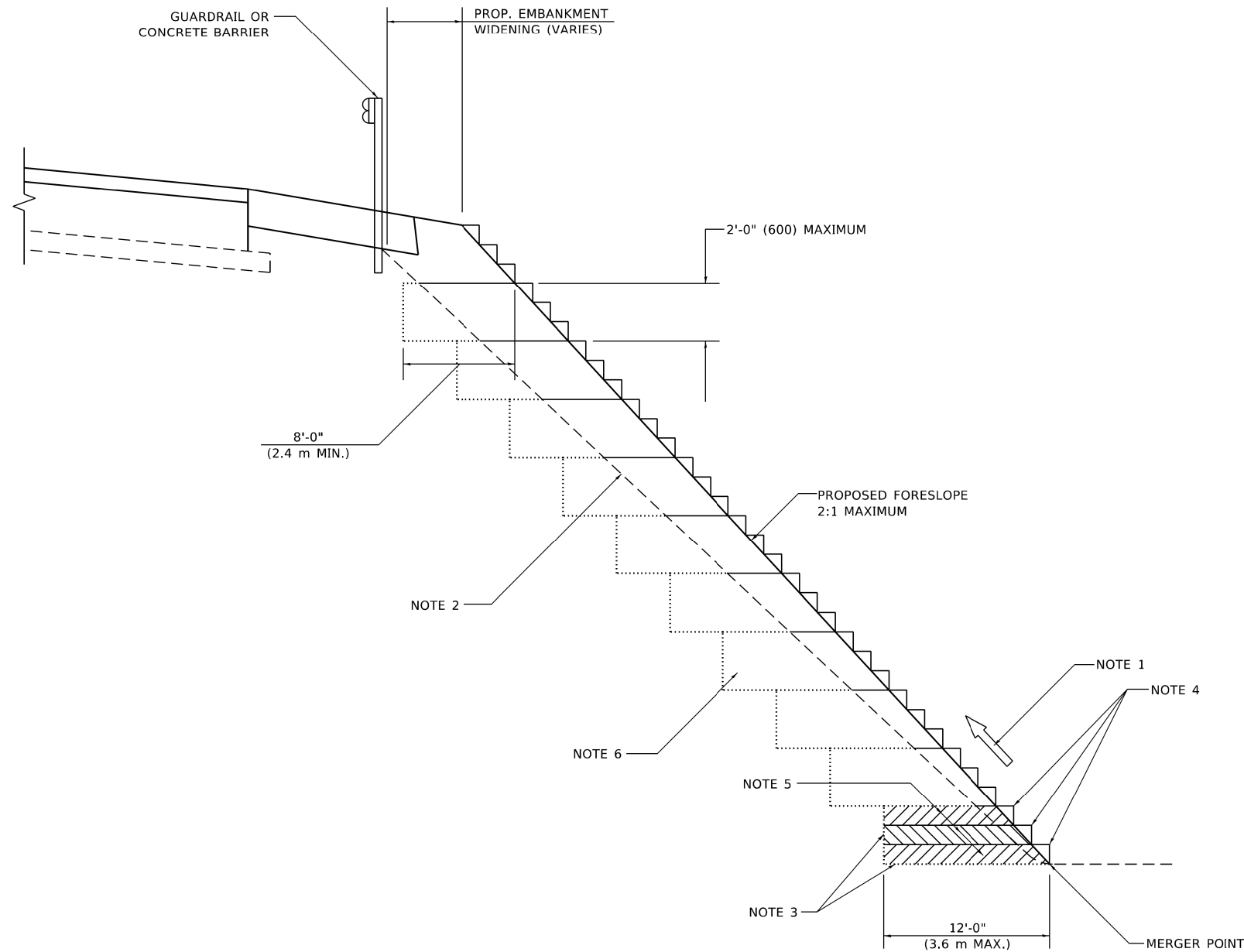
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PLOT DATE = 11/18/2022	DATE - 07-25-90	REVISED - K. SMITH 11-18-22

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DETAIL OF STORM SEWER
CONNECTION TO EXISTING SEWER**

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-G5	LAKE	816	659
BD500-01 (BD-07)		CONTRACT NO. 61J87		
ILLINOIS FED. AID PROJECT				



**TYPICAL BENCHING DETAIL
FOR EMBANKMENT**

GENERAL NOTES

1. CONSTRUCT SUCCEEDING BENCH CUTS AND EMBANKMENT PLACEMENT AND COMPACTION FROM BOTTOM TO TOP IN STAIRSTEP FASHION.
2. EXISTING FORESLOPE PREPARED IN ACCORDANCE WITH ARTICLE 205.03 OF THE STANDARD SPECIFICATIONS.
3. BENCH CUT EXISTING SLOPE TYPICAL FOR EACH STEP.
4. TRIM TO FINAL SLOPE.
5. EQUAL 8-INCH (200) LIFTS OF EMBANKMENT COMPACTED IN ACCORDANCE WITH ARTICLE 205.05 OF THE STANDARD SPECIFICATIONS.

BASIS OF PAYMENT

1. EXCAVATION OF BENCH CUTS WITHIN EXISTING EMBANKMENT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC METER OR CUBIC YARD FOR "EARTH EXCAVATION". THIS PRICE WILL INCLUDE ALL LABOR AND MATERIAL, NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)
UNLESS OTHERWISE SHOWN.

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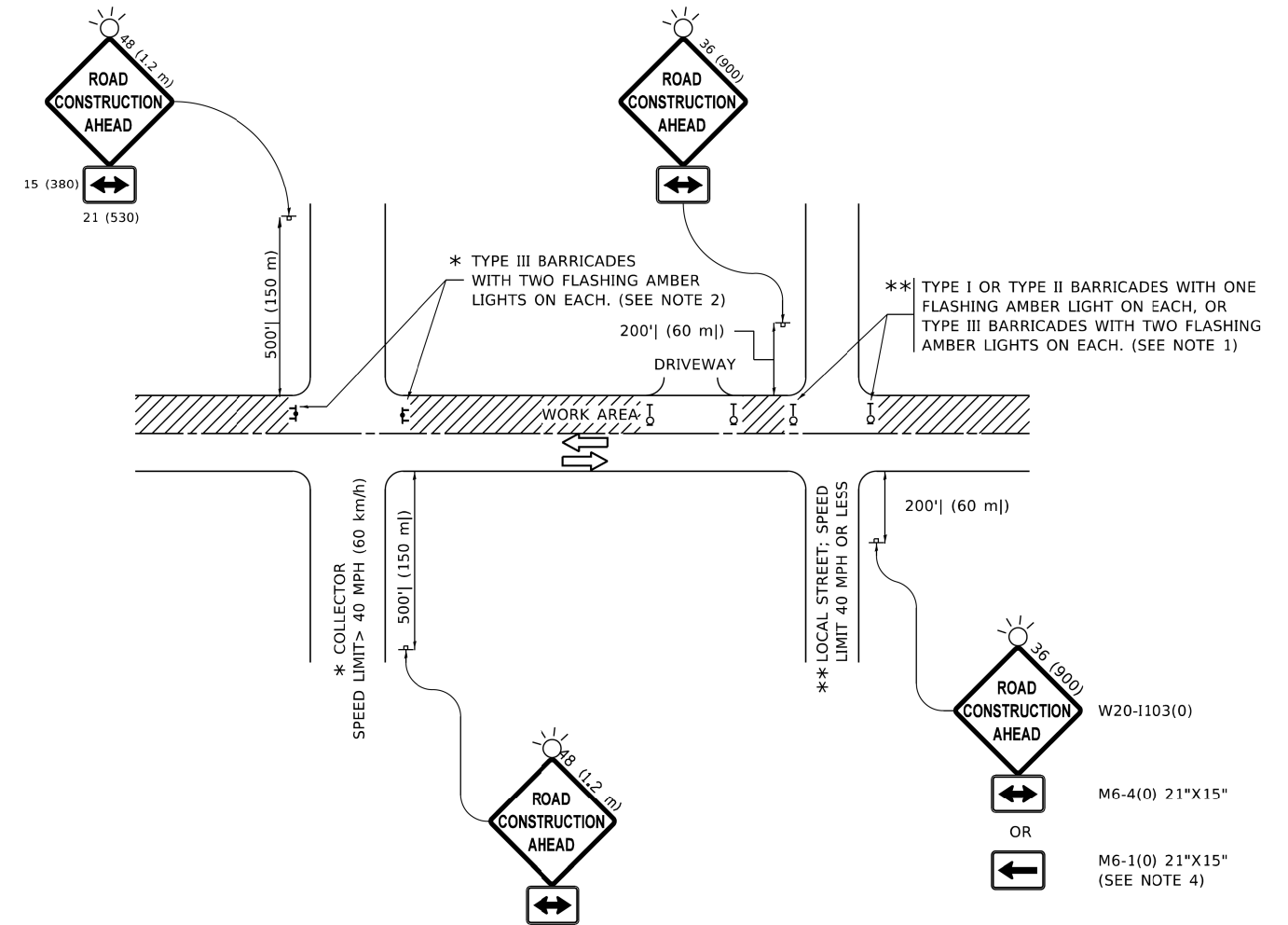
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PLOT DATE = 11/18/2022	DATE - 06-16-04	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BENCHING DETAIL
FOR EMBANKMENT WIDENING**

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-G5	LAKE	816	660
BD-51			CONTRACT NO. 61J87	
ILLINOIS FED. AID PROJECT				



NOTES:

- SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - ONE "ROAD CONSTRUCTION AHEAD" SIGN 36 x 36 (900x900) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
 - THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
- SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - ONE "ROAD CONSTRUCTION AHEAD" SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
 - THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
- CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT.
- SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).
- WHEN WORK IS BEING PERFORMED ON A SIDE ROAD OR DRIVEWAY, FOLLOW THE APPLICABLE STANDARD(S). THE DIRECTIONAL ARROW (M6-1 OR M6-4) SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE TRAFFIC CONTROL SET-UP.
- ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAYS UNLESS OTHERWISE SPECIFIED IN THE PLANS OR BY THE ENGINEER.
- THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCLUDED IN THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

All dimensions are in inches (millimeters) unless otherwise shown.

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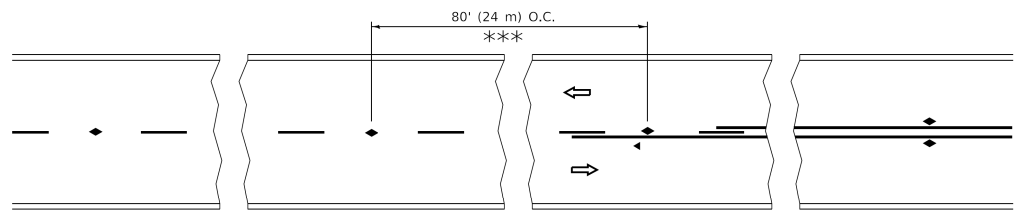
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PLOT DATE = 5/3/2024	DATE - 06-89	REVISED - D. SENDERAK 05-03-24

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC CONTROL AND PROTECTION FOR
SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS**

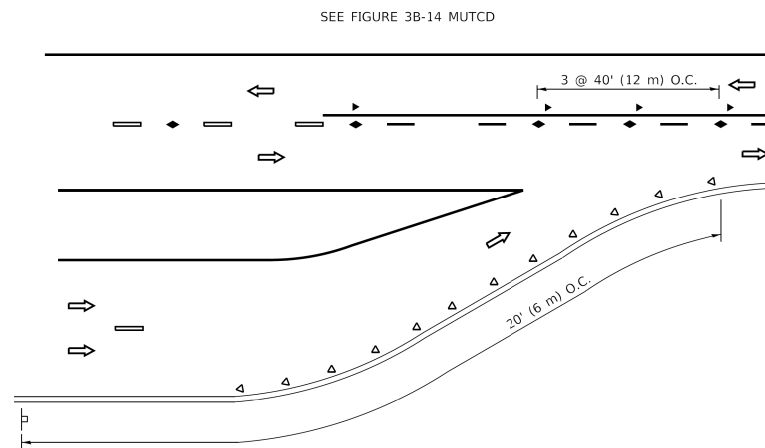
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TC-10			CONTRACT NO. 61J87	
ILLINOIS FED. AID PROJECT				

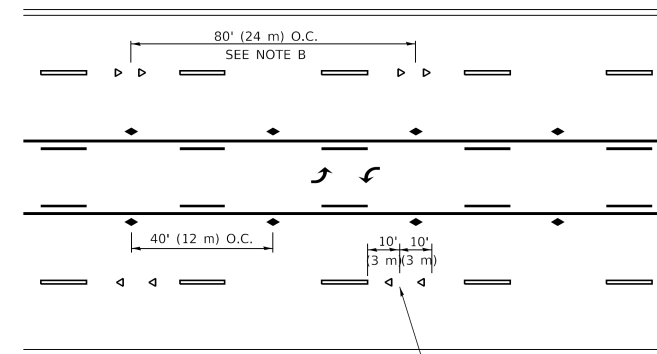


*** REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

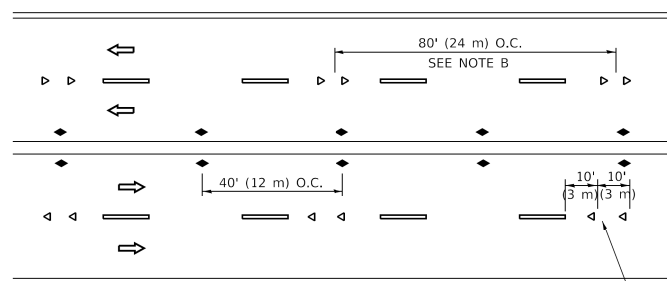
TWO-LANE/TWO-WAY



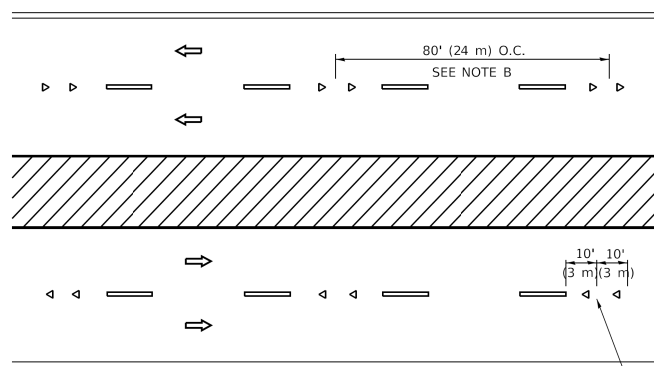
LANE REDUCTION TRANSITION



TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

GENERAL NOTES

1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 2 TO 3 (50 TO 75) TOWARD TRAFFIC AS SHOWN.
3. MARKERS THROUGH TANGENTS LESS THAN 500' (150 m) IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.
4. MARKERS ARE TO BE USED ADJACENT TO BOTH SOLID WHITE LINES IN DUAL LEFT TURN LANES

SYMBOLS

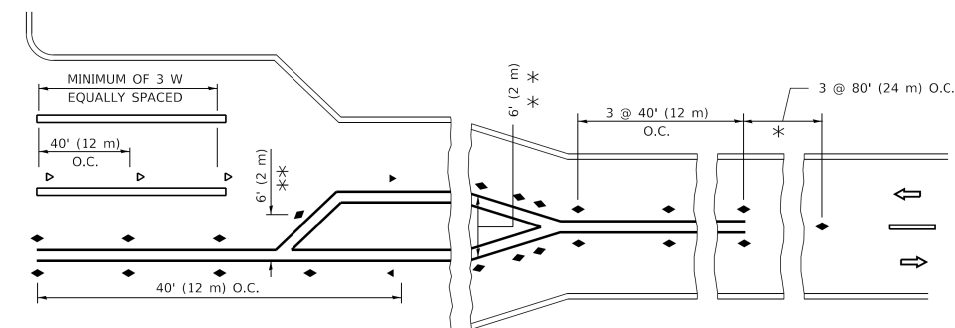
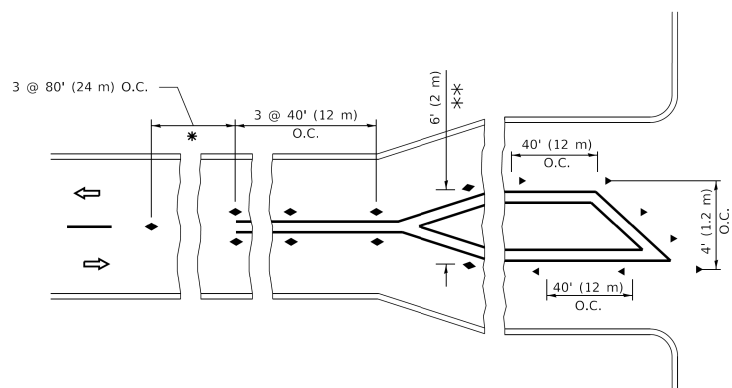
- YELLOW STRIPE
- WHITE STRIPE
- ◀ ONE-WAY AMBER MARKER
- ◀ ONE-WAY CRYSTAL MARKER (W/O)
- ◆ TWO-WAY AMBER MARKER

LANE MARKER NOTES

- A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.
- B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H (20 km/h) LOWER THAN POSTED SPEEDS.

DESIGN NOTES

1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHALL BE INCLUDED IN THE PLANS WHEN STANDARD SPECIFICATIONS ARE NOT BEING USED.
4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.



TURN LANES

* SEE TWO-LANE/TWO-WAY WHERE MARKERS CONTINUE
 ** WHERE THE MEDIAN WIDTH IS 6' (2 m) OR LESS USE TWO-WAY MARKERS.

All dimensions are in inches (millimeters) unless otherwise shown.

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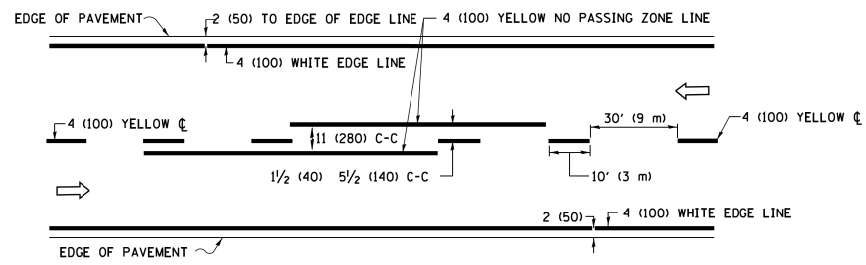
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

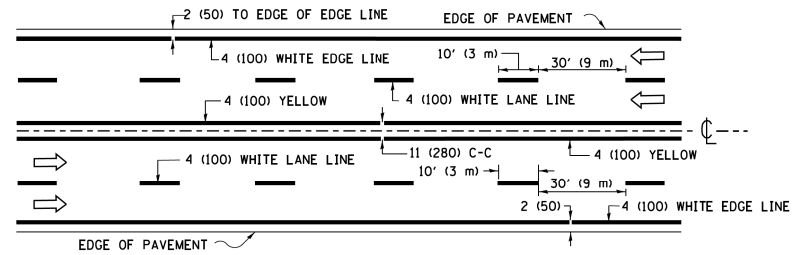
**TYPICAL APPLICATIONS
 RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)**

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

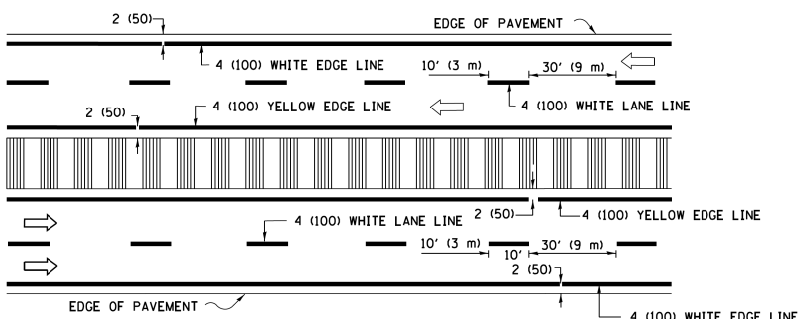
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305	11-00087-00-GS	LAKE	816	662
TC-11			CONTRACT NO. 61J87	
ILLINOIS FED. AID PROJECT				



2-LANE ROADWAY

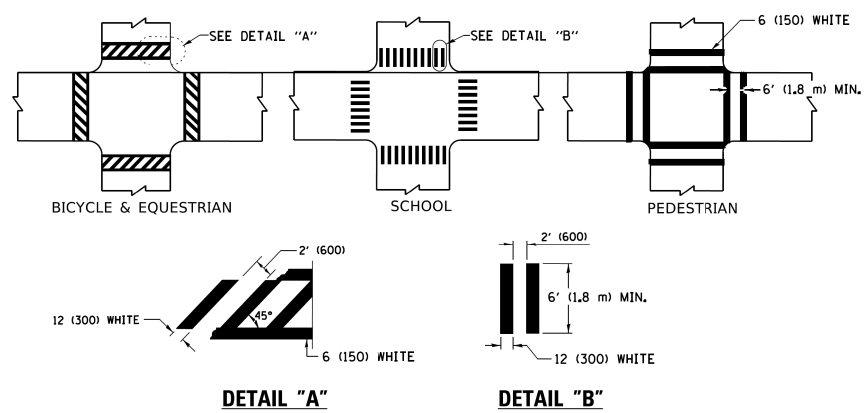


MULTI-LANE UNDIVIDED



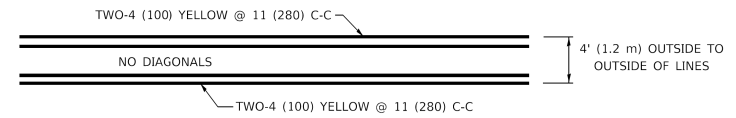
MULTI-LANE DIVIDED WITH MEDIAN

TYPICAL LANE AND EDGE LINE MARKING

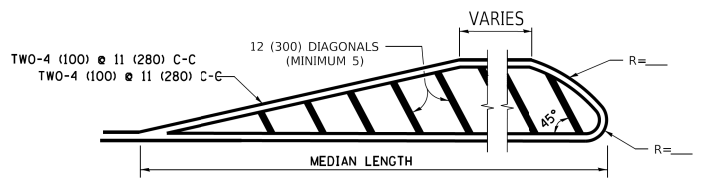


TYPICAL CROSSWALK MARKING

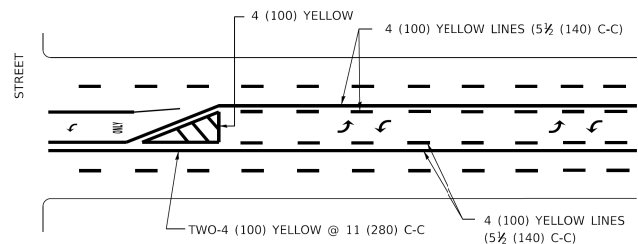
* MARKINGS SHALL BE INSTALLED PARALLEL TO THE CENTERLINE OF THE ROAD WHICH IT CROSSES



4' (1.2 m) WIDE MEDIANS ONLY

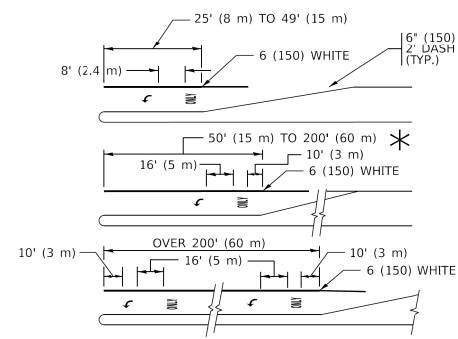


MEDIANS OVER 4' (1.2 m) WIDE



MEDIAN WITH TWO-WAY LEFT TURN LANE

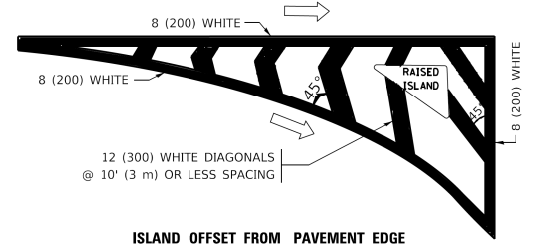
TYPICAL PAINTED MEDIAN MARKING



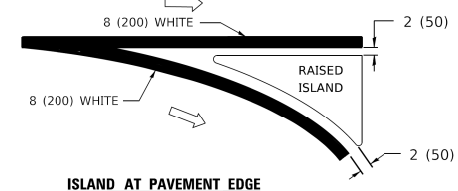
TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING

FULL SIZE LETTERS 8" (2.4 m) AND ARROWS SHALL BE USED.
 * AREA = 15.6 SQ. FT. (1.5 m²) ONLY AREA = 20.8 SQ. FT. (1.9 m²)
 * TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

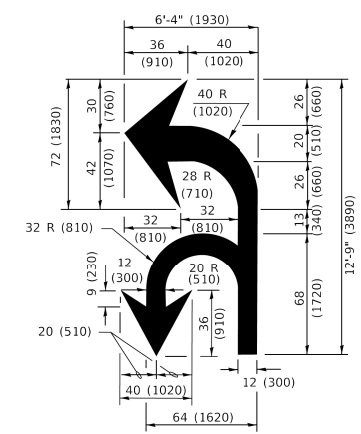


ISLAND OFFSET FROM PAVEMENT EDGE

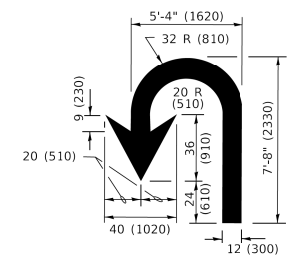


ISLAND AT PAVEMENT EDGE

TYPICAL ISLAND MARKING



COMBINATION LEFT AND U-TURN



U-TURN

LANE REDUCTION TRANSITION

* LANE REDUCTION ARROWS REQUIRED AT SPEEDS OF 45 MPH OR GREATER OR WHEN SPECIFIED IN PLANS.

D(FT)	SPEED LIMIT
345	30
425	35
500	40
580	45
665	50
750	55

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5 1/2 (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MEDIANS IN YELLOW
TURN LANE MARKINGS	6 (150) LINE: FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5 1/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE.
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES: "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m ²) EACH "X"=54.0 SQ. FT. (5.0 m ²)
SHOULDER DIAGONALS (REQUIRED FOR SHOULDERS ≥ 8')	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))
U TURN ARROW	SEE DETAIL	SOLID	WHITE	16.3 SF
2 ARROW COMBINATION LEFT AND U TURN	SEE DETAIL	SOLID	WHITE	30.4 SF

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

All dimensions are in inches (millimeters) unless otherwise shown.

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	DATE - 03-19-90	REVISED - C. JUCIUS 04-12-16

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

DISTRICT ONE TYPICAL PAVEMENT MARKINGS			
SCALE: NONE	SHEET 1 OF 2 SHEETS	STA. TO STA.	

F.A. RTE. 305	SECTION 11-00087-00-GS	COUNTY LAKE	TOTAL SHEETS 816	SHEET NO. 663
TC-13		CONTRACT NO. 61J87		
ILLINOIS FED. AID PROJECT				

TURN BAY ENTRANCE AT START OF LANE CLOSURE TAPER

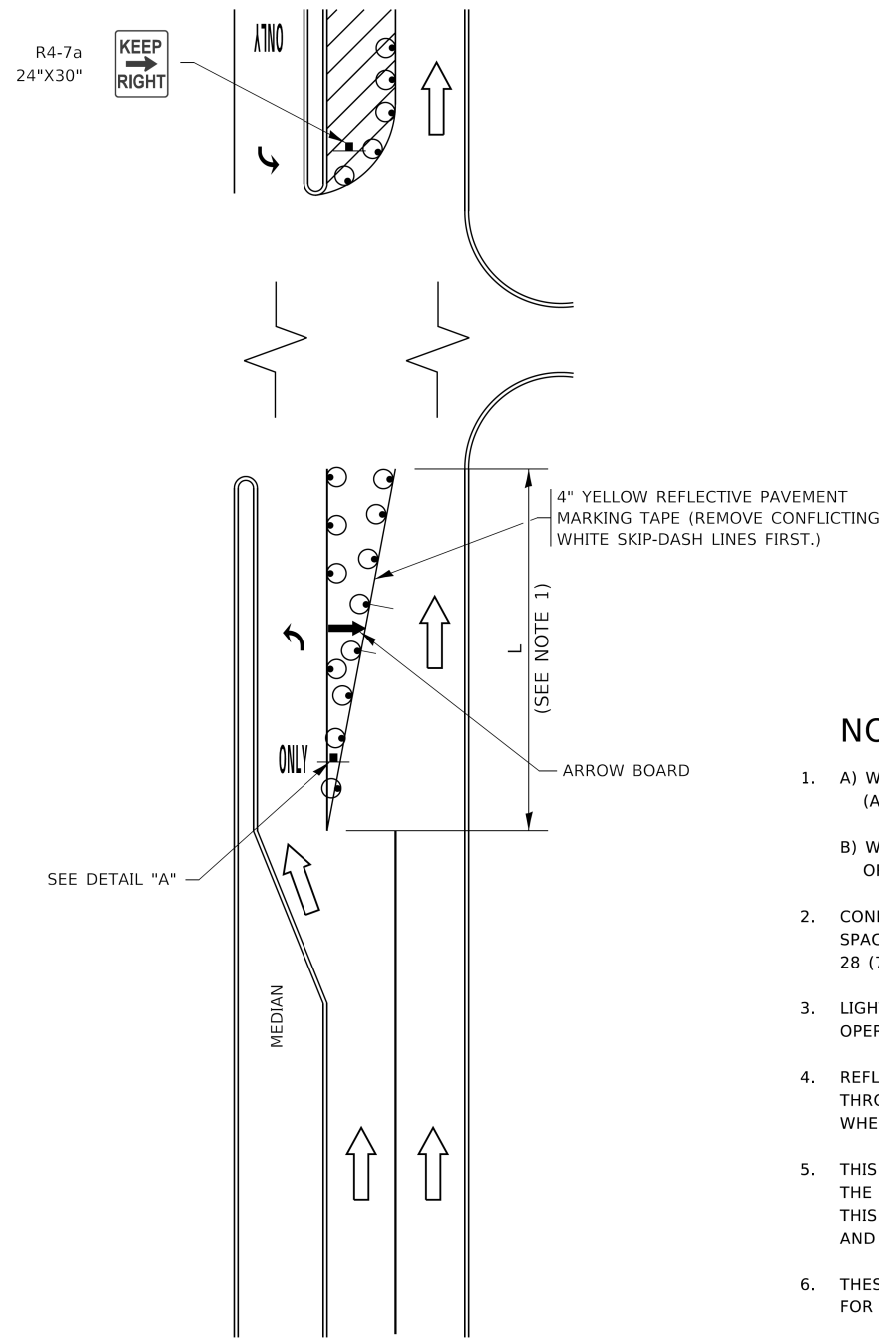


FIGURE 1

TURN BAY ENTRANCE WITHIN A LANE CLOSURE

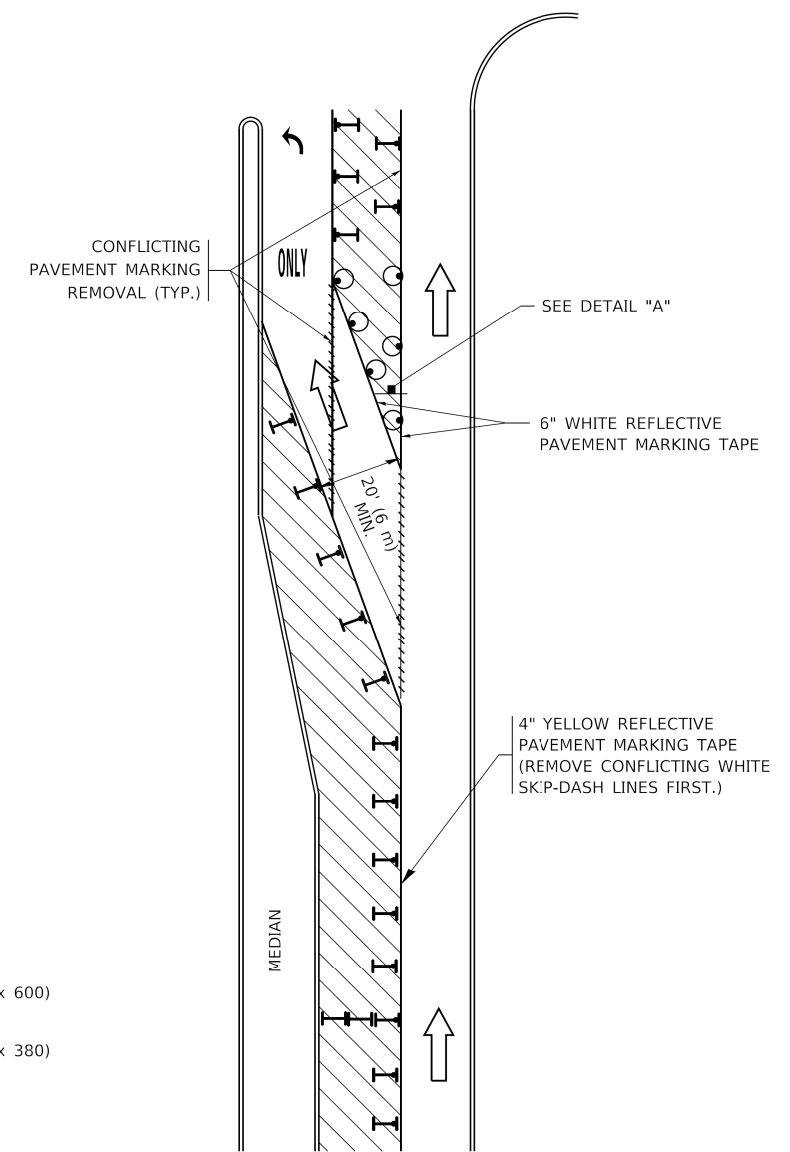


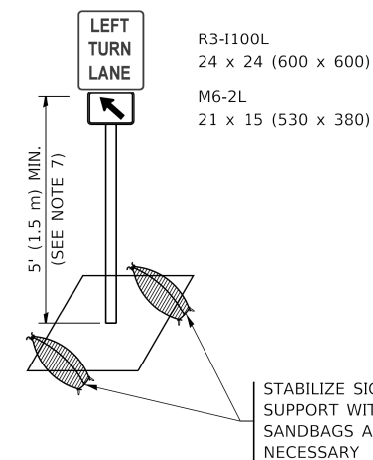
FIGURE 2

LEGEND

- WORK AREA
- LANE OPEN TO TRAFFIC
- ARROW BOARD
- TYPE I OR II BARRICADE OR DRUM WITH STEADY BURN LIGHT
- DRUM WITH STEADY BURN LIGHT
- SIGN ASSEMBLY
- TYPE I OR II CHECK BARRICADE WITH FLASHING LIGHT

NOTES:

1. A) WHEN "L" IS ≤ THE STORAGE LENGTH OF THE TURN LANE (AS SHOWN IN FIG. 1), USE FIGURE 1.
 B) WHEN "L" IS > THE STORAGE LENGTH OF THE TURN LANE OR THE TURN LANE IS WITHIN THE LANE CLOSURE, USE FIGURE 2.
2. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT.
3. LIGHTS WILL NOT BE REQUIRED ON BARRICADES OR DRUMS FOR DAY OPERATIONS. ALL LIGHTS SHALL BE MONODIRECTIONAL.
4. REFLECTIVE TEMPORARY PAVEMENT MARKINGS SHALL BE PLACED THROUGHOUT THE BARRICADED AREAS OF EACH TURN BAY AS SHOWN WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN (14) DAYS.
5. THIS APPLICATION ALSO APPLIES WHEN WORK IS BEING PERFORMED IN THE RIGHT LANE(S) AND THE RIGHT TURN BAY IS TO REMAIN OPEN. UNDER THIS CONDITION, "RIGHT TURN LANE" R3-1100R 24 x 24 (600 x 600) AND M6-2R 21 x 15 (530 x 380) SHALL BE USED.
6. THESE CONTROLS SHALL SUPPLEMENT MAINLINE TRAFFIC CONTROL FOR LANE CLOSURES.
7. THE SIGNS SHALL BE MOUNTED ABOVE THE BARRICADES/DRUMS ON SEPARATE SIGN SUPPORTS THAT MEET NCHRP 350 OR MASH REQUIREMENTS.
8. TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) SHALL BE INCLUDED IN THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.



DETAIL A

All dimensions are in inches (millimeters) unless otherwise shown.

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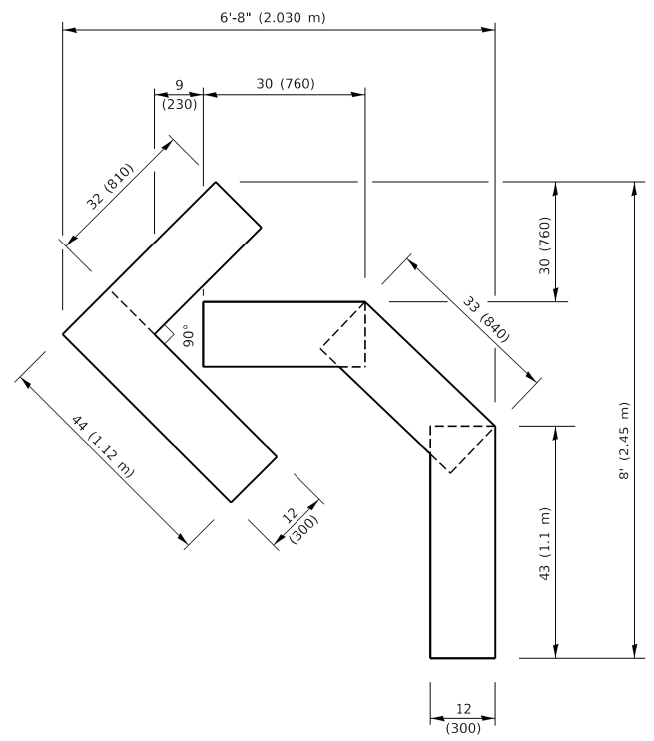
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	DRAWN - A. HOUSEH 11-07-95	REVISED - A. SCHUETZE 07-01-13
PLOT SCALE = 50.0000' / 1"	CHECKED - A. HOUSEH 10-12-96	REVISED - A. SCHUETZE 09-15-16
PLOT DATE = 3/4/2019	DATE - T. RAMMACHER 01-06-00	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC CONTROL AND PROTECTION AT TURN BAYS
(TO REMAIN OPEN TO TRAFFIC)**

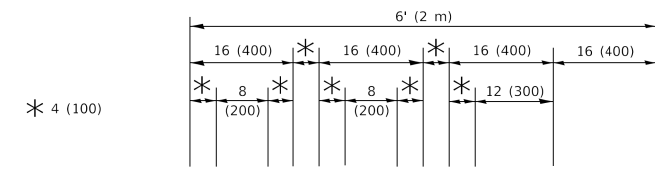
SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-G5	LAKE	816	664
TC-14		CONTRACT NO. 61J87		
ILLINOIS FED. AID PROJECT				



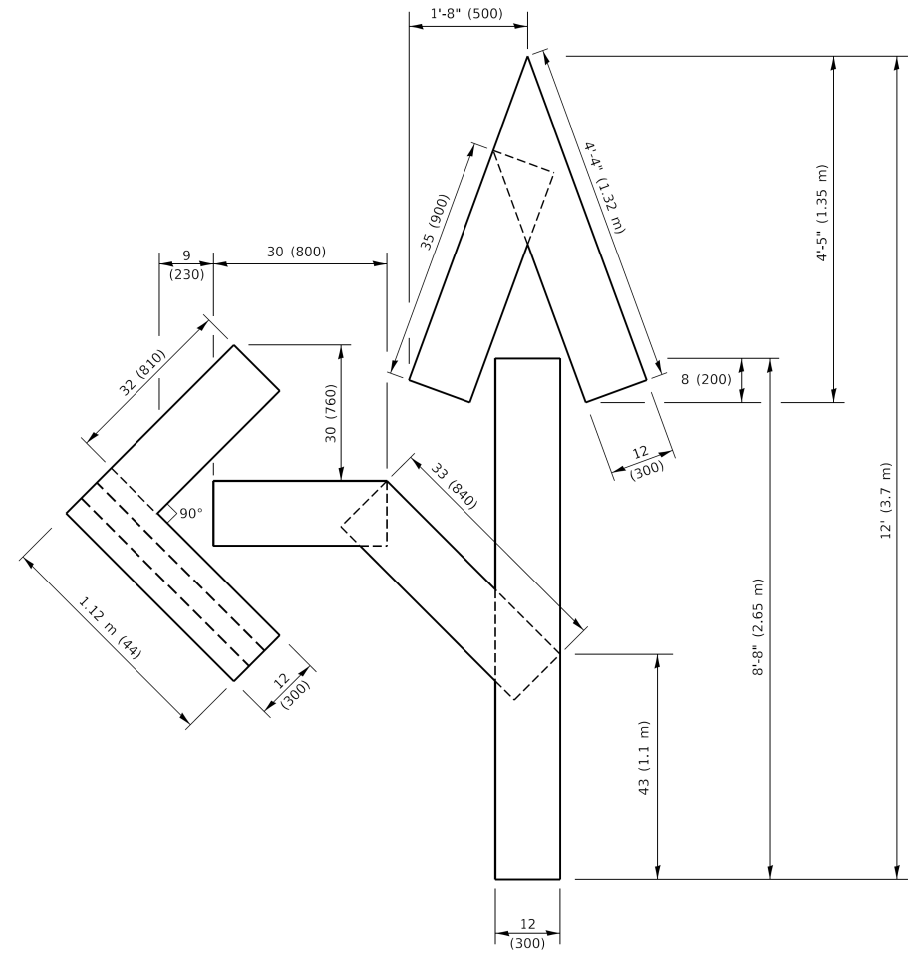
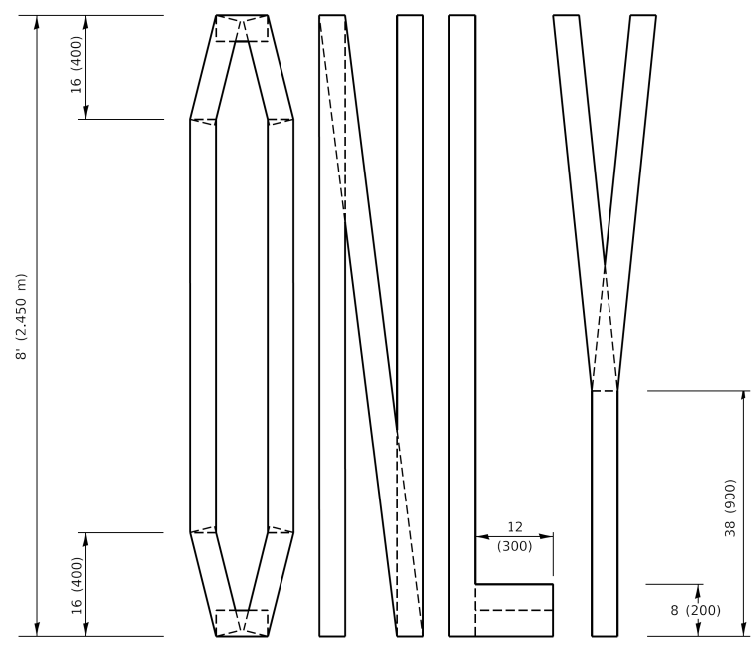
QUANTITY

4 (100) LINE = 45.5 ft. (13.9 m)
15.2 sq. ft. (1.41 sq. m)



QUANTITY

4 (100) LINE = 64.1 ft. (19.5 m)
21.4 sq. ft. (1.99 sq. m)

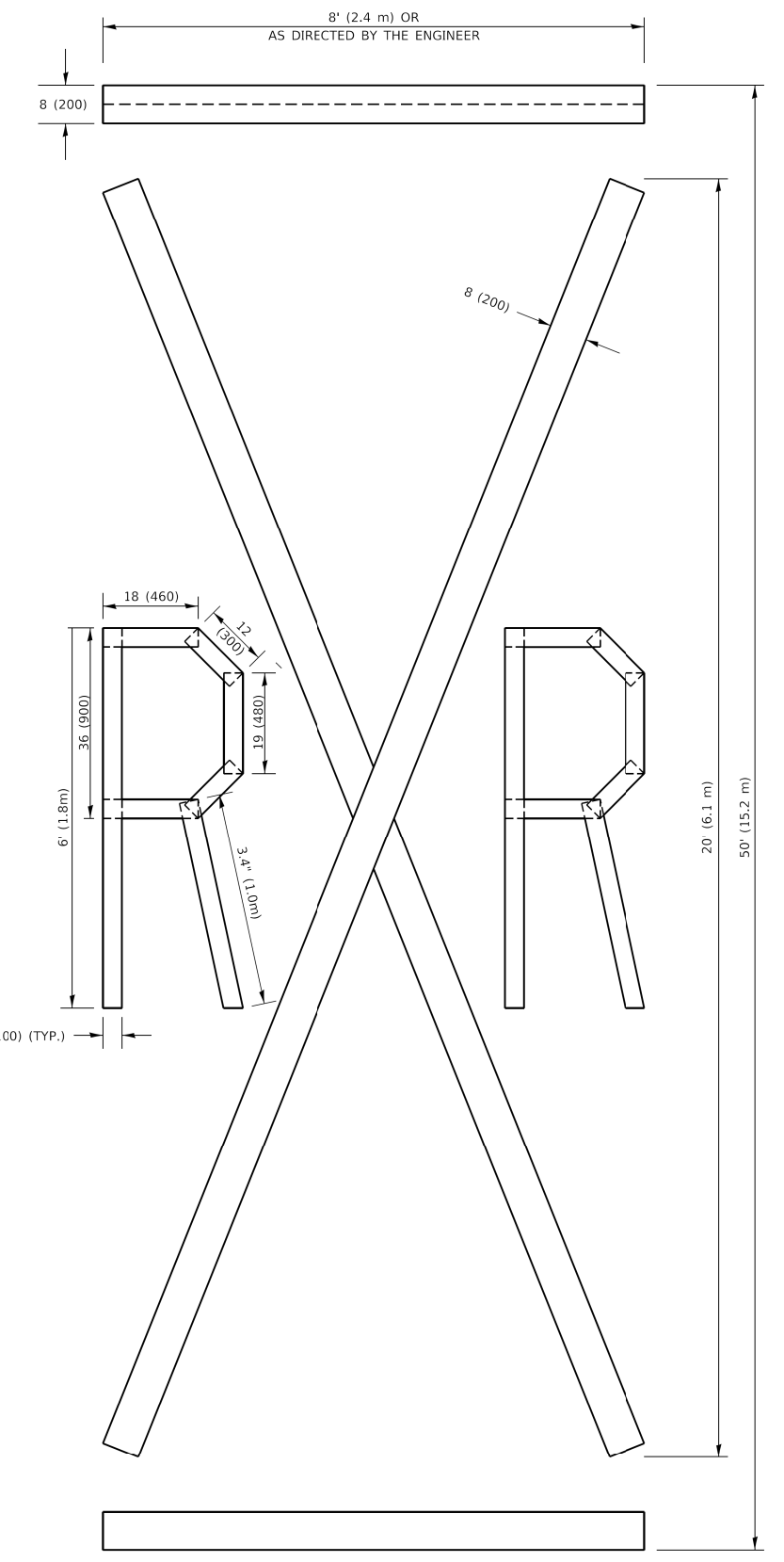


QUANTITY

4 (100) LINE = 82.5 ft. (25.1 m)
27.5 sq. ft. (2.53 sq. m)

NOTE:

ALL QUANTITIES OF PLACEMENT ARE REPRESENTED IN LINEAR FEET OF 4" LINES TO MATCH THE 4" TEMPORARY TAPE PAY ITEM AND REPRESENTS THE TOTAL QUANTITY OF 4" TAPE REQUIRED.



QUANTITY

4 (100) LINE = 225.9 ft. (68.9 m)
75.3 sq. ft. (6.99 sq. m)

All dimensions are in inches (millimeters) unless otherwise shown.

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PLOT SCALE = 50.0068" / in.	DRAWN -	REVISED - E. GOMEZ 08-28-00
PLOT DATE = 3/4/2019	CHECKED -	REVISED - E. GOMEZ 08-28-00
	DATE - 09-18-94	REVISED - A. SCHUETZE 09-15-16

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SHORT TERM PAVEMENT MARKING LETTERS AND SYMBOLS

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	665
TC-16		CONTRACT NO. 61J87		
ILLINOIS FED. AID PROJECT				

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ROUTE MARKERS

FOR U.S. ROUTES
M1-40-2424

FOR ILLINOIS ROUTES
M1-50-2424

R.R. UNMARKED ROUTES
SPECIAL 24" x 18" VARIABLE
4" BLACK LETTERS ON WHITE
REFLECTIVE BACKGROUND

ARROWS SIGNS

M5-1L-2115

M5-1R-2115

M6-1-2115

M6-1-2115

M6-3-2115

CARDINAL DIRECTION & DETOUR SIGNS

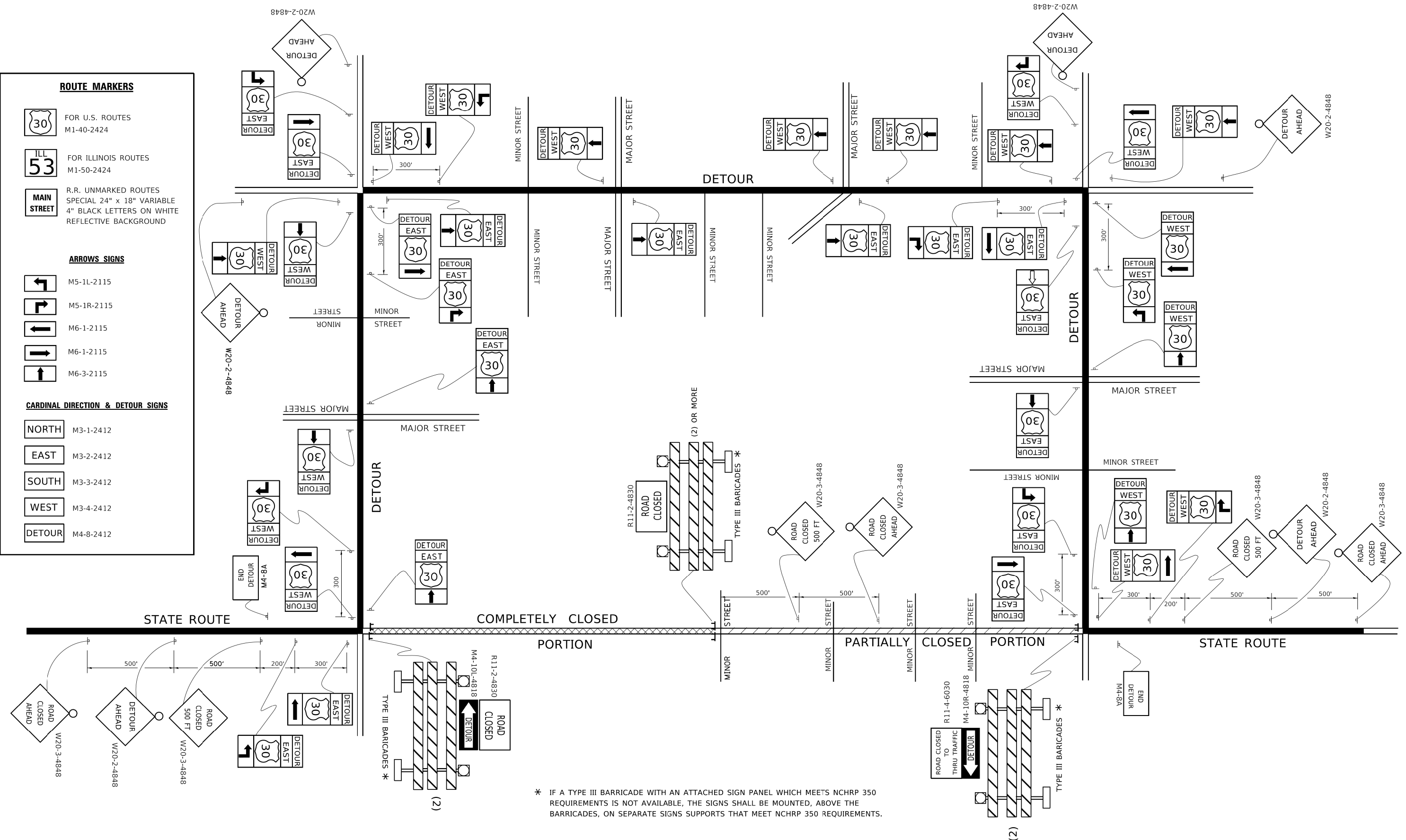
NORTH M3-1-2412

EAST M3-2-2412

SOUTH M3-3-2412

WEST M3-4-2412

DETOUR M4-8-2412



* IF A TYPE III BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 REQUIREMENTS IS NOT AVAILABLE, THE SIGNS SHALL BE MOUNTED, ABOVE THE BARRICADES, ON SEPARATE SIGNS SUPPORTS THAT MEET NCHRP 350 REQUIREMENTS.

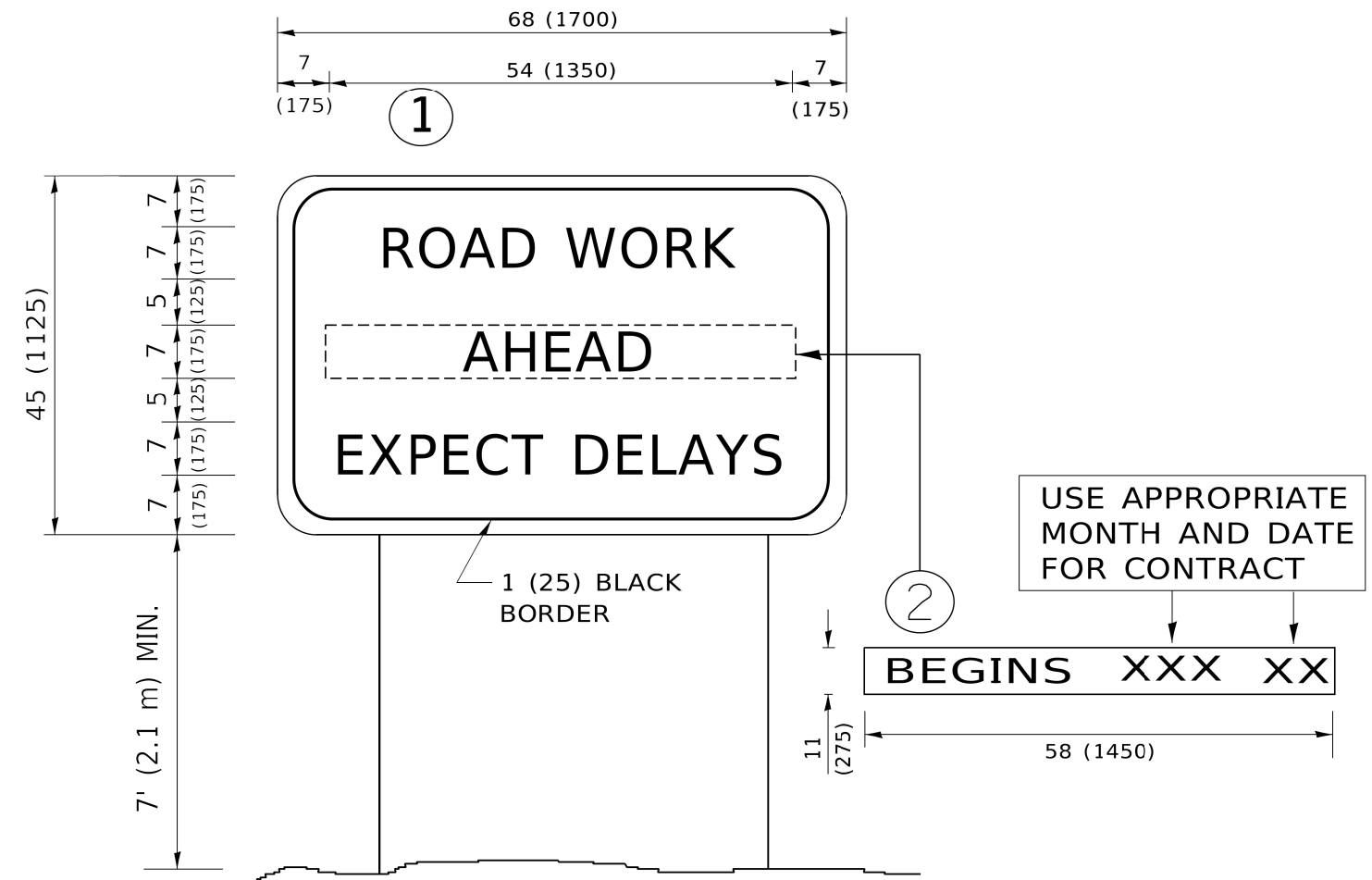
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PLOT DATE = 3/4/2019	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**DETOUR SIGNING
 FOR CLOSING STATE HIGHWAYS**

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-G5	LAKE	816	666
TC-21		CONTRACT NO. 61J87		
ILLINOIS FED. AID PROJECT				



NOTES:

1. USE BLACK LETTERING ON ORANGE BACKGROUND.
2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN ① WITH INSTALLED PANEL ② ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
4. REMOVE PANEL ② SOON AFTER THE START OF CONSTRUCTION.
5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

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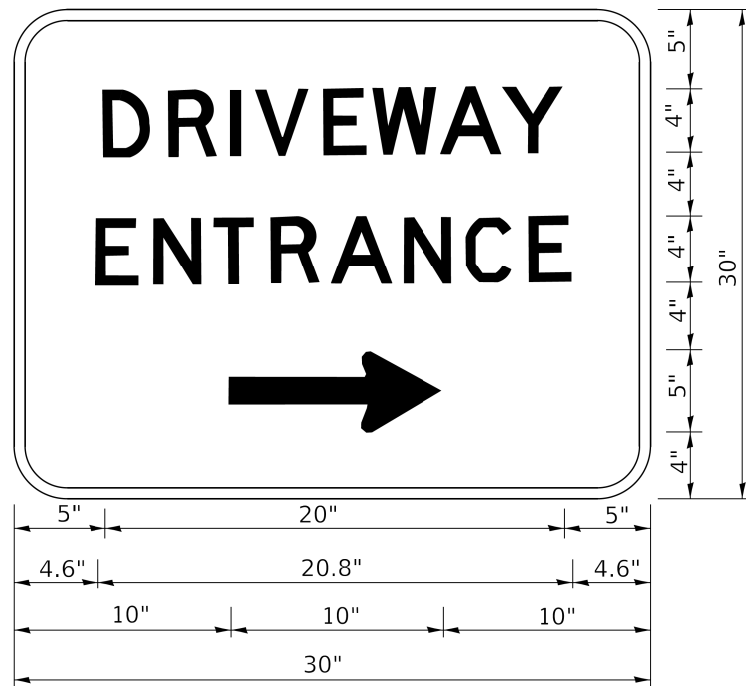
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	DRAWN -	REVISED - R. MIRS 12-11-97
PLOT SCALE = 50.0000 ' / ft.	CHECKED -	REVISED - T. RAMMACHER 02-02-99
PLOT DATE = 3/4/2019	DATE -	REVISED - C. JUCIUS 01-31-07

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ARTERIAL ROAD
INFORMATION SIGN**

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	667
TC-22			CONTRACT NO. 61J87	
ILLINOIS FED. AID PROJECT				



3.0" RADIUS, 0.5" BORDER, WHITE ON GREEN; REFLECTORIZED
 "DRIVEWAY" D; "ENTRANCE" D; STANDARD ARROW CUSTOM 12.0" x 5.0"

NOTES:

1. HALF OF THE SIGNS WILL REQUIRE A LEFT HAND FACING ARROW.
2. TWO SIGNS SHALL BE USED AT EACH COMMERCIAL ENTRANCE PLACED BACK-TO-BACK: ONE WITH A RIGHT HAND ARROW (SHOWN) SHALL BE PLACED ON THE NEAR RIGHT SIDE THE DRIVEWAY AND ONE WITH A LEFT HAND ARROW SHALL BE PLACED ON THE FAR LEFT SIDE OF THE DRIVEWAY.
3. SIGNS TO BE PAID FOR AS ITEM "TEMPORARY INFORMATION SIGNING".

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	DRAWN -	REVISED -
PLOT SCALE = 50.0000' / 1"	CHECKED -	REVISED -
PLOT DATE = 8/6/2021	DATE -	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

DRIVEWAY ENTRANCE SIGNING

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-G5	LAKE	816	668
TC-26			CONTRACT NO. 61187	
ILLINOIS FED. AID PROJECT				

SIGNAL HEAD, 1-FACE, 1-SECTION
THE BOTTOM OF THE HOUSING SHALL
BE NOT LESS THAN 12" (305mm) NOR
MORE THAN 24" (610mm) ABOVE THE
TOP OF THE SIGN.

4" (102 mm) X 6" (152 mm)
WOOD POST AND SIGN

FLASHER
CONTROLLER
AND CABINET

FLASHER
CONTROLLER
AND CABINET

CONDUIT CLAMP

7' (2.134m) MIN. URBAN
5' (1.524m) MIN. RURAL

1½" (38mm) G.S. CONDUIT.
FIVE EVENLY SPACED CONDUIT
CLAMPS SHALL BE USED TO
ATTACH CONDUIT TO POST

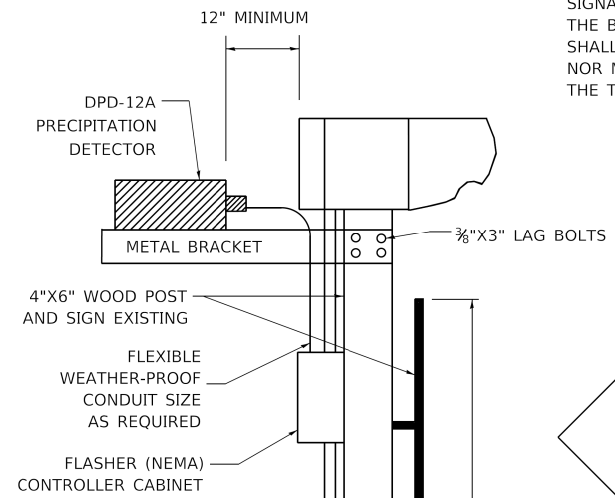
1½" (38mm) DRILLED HOLE CENTERED
AT 18" (457mm) FROM GROUND LEVEL

1½" (38mm) DRILLED HOLE CENTERED
AT 4" (102mm) FROM GROUND LEVEL

30" (76mm) MIN.

EDGE OF PAVEMENT

**POST MOUNTED FLASHING BEACON
WITH CONTROLLER AND CABINET**



SIGNAL HEAD, 1-FACE, 1-SECTION
THE BOTTOM OF THE HOUSING
SHALL BE NOT LESS THAN 12"
NOR MORE THAN 24" ABOVE
THE TOP OF THE SIGN.

12" MINIMUM
24" MAXIMUM

W8-5 SIGN

7' MIN. URBAN
5' MIN RURAL

1-½" G.S. CONDUIT.
4 EVENLY SPACED CONDUIT
CLAMPS SHALL BE USED TO
ATTACH CONDUIT TO POST

2/C CABLE AND 1½" G.S.
CONDUIT IN TRENCH TO
CONTROLLER AND SERVICE
INSTALLATION

30' MIN.

EDGE OF
PAVEMENT

SIDE VIEW

FRONT VIEW

**POST MOUNTED FLASHING BEACON
WITH PRECIPITATION DETECTOR**

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
FLASHING BEACON INSTALLATION DETAILS

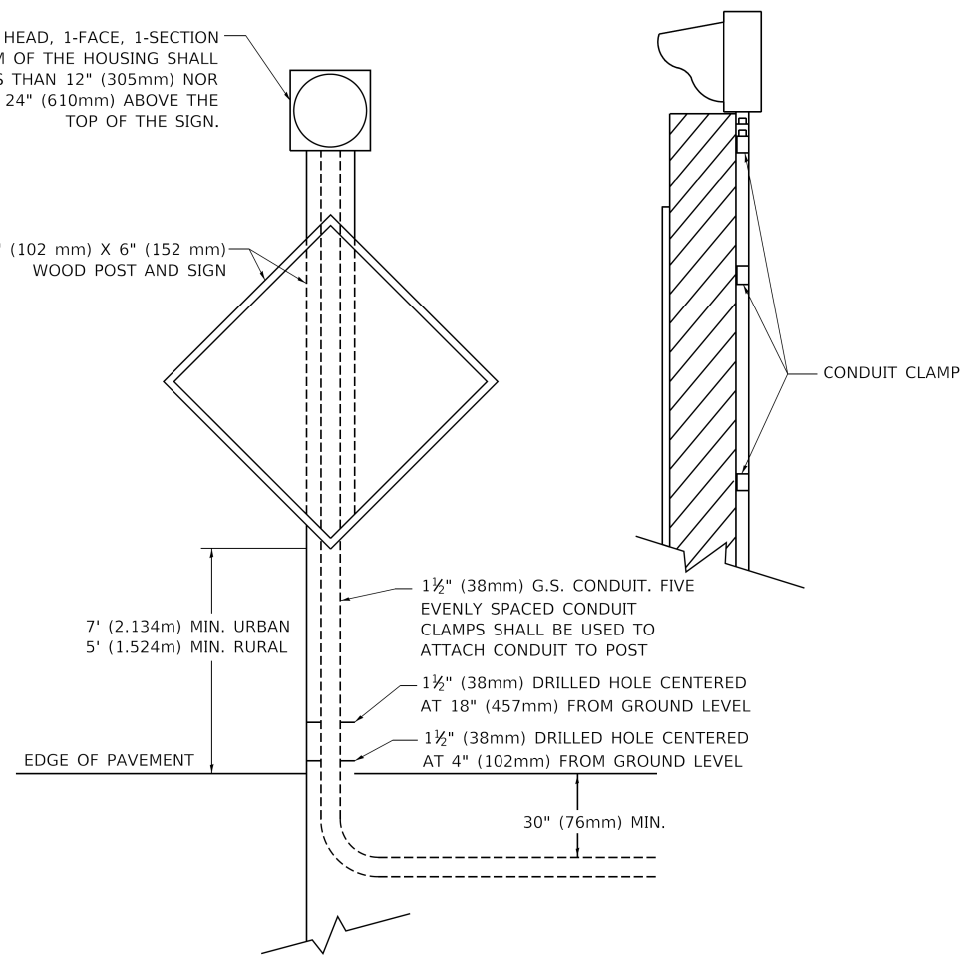
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	669
TS-04			CONTRACT NO. 61187	
ILLINOIS FED. AID PROJECT				

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

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SIGNAL HEAD, 1-FACE, 1-SECTION
THE BOTTOM OF THE HOUSING SHALL
BE NOT LESS THAN 12" (305mm) NOR
MORE THAN 24" (610mm) ABOVE THE
TOP OF THE SIGN.

4" (102 mm) X 6" (152 mm)
WOOD POST AND SIGN



POST MOUNTED FLASHING BEACON

SOLAR FLASHING
BEACON, BATTERY AND
ELECTRONICS

SIGNAL HEAD, 1-FACE, 1 SECTION WITH
FLASHER. THE BOTTOM OF THE HOUSING
SHALL BE NOT LESS THAN 12" (300 mm) NOR
MORE THAN 24" (600 mm) ABOVE THE TOP
OF THE SIGN.

4" (100mm) X 6" (150mm)
WOOD POST

ADVANCE WARNING
SIGN, 48" X 48"

* 12' (3.7 m) MIN. TO
EDGE OF PAVEMENT
6' (1.8 m) MIN. TO
EDGE OF SHOULDER

ADVANCE STREET NAME PLAQUE
SIGN, W6-8P, VARI ES" x 12",
DESIGN SERIES "C"
(OPTIONAL)

* 24" (600 mm)
MIN.

7' (2.1 m) MIN. URBAN
5' (1.5 m) MIN. RURAL

1.5" (38 mm) DRILLED HOLE CENTERED
AT 18" (457 mm) AND 4" (102 mm) FROM
GROUND LEVEL

* REFER TO HWY STANDARD 720006
FOR MORE DETAILS

**SOLAR POWERED FLASHING
BEACON**

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	DRAWN - LP	REVISED - 07-01-2015
PLOT SCALE = 50.0000" / 1"	CHECKED -	REVISED -
PLOT DATE = 3/4/2019	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DISTRICT ONE
FLASHING BEACON INSTALLATION DETAILS**

SCALE: SHEET 2 OF 2 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	670
TS-04		CONTRACT NO. 61J87		
ILLINOIS FED. AID PROJECT				

SHEET - SHEET

ALIGNMENT

SHEET - SHEET

ALIGNMENT

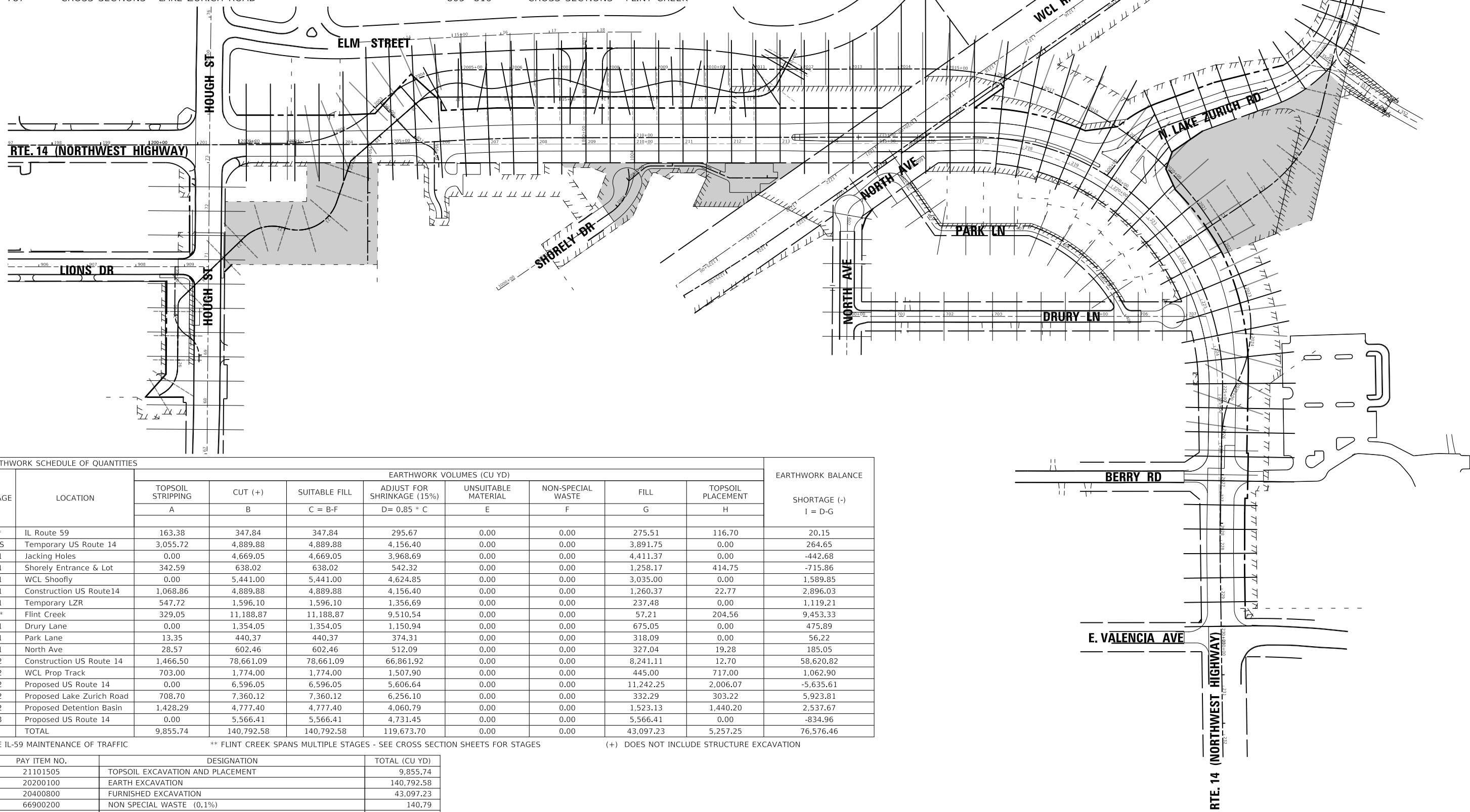
SHEET(S)

GRADING SHEETS

671 CROSS SECTIONS LOCATIONS
 672 - 698 CROSS SECTIONS - TEMPORARY US ROUTE 14 (NORTHWEST HIGHWAY)
 699 - 737 CONSTRUCTION CROSS SECTIONS - US ROUTE 14 (NORTHWEST HIGHWAY)
 738 - 741 CROSS SECTIONS - TEMPORARY LAKE ZURICH ROAD
 742 - 780 CROSS SECTIONS - US ROUTE 14 (NORTHWEST HIGHWAY)
 781 - 787 CROSS SECTIONS - LAKE ZURICH ROAD

788 - 789 CROSS SECTIONS - IL ROUTE 59 (HOUGH STREET)
 790 - 791 CROSS SECTIONS - NORTH AVEUNE
 792 - 794 CROSS SECTIONS - DRURY LANE
 795 - 796 CROSS SECTIONS - PARK LANE
 797 - 804 CROSS SECTIONS - TEMPORARY FLINT CREEK
 805 - 816 CROSS SECTIONS - FLINT CREEK

203 PROPOSED DETENTION BASIN
 790 & 791 SHORELY CUL-DE-SAC, ENTRANCE, & PARKING LOT



EARTHWORK SCHEDULE OF QUANTITIES		EARTHWORK VOLUMES (CU YD)								EARTHWORK BALANCE
STAGE	LOCATION	TOPSOIL STRIPPING	CUT (+)	SUITABLE FILL	ADJUST FOR SHRINKAGE (15%)	UNSUITABLE MATERIAL	NON-SPECIAL WASTE	FILL	TOPSOIL PLACEMENT	SHORTAGE (-) I = D-G
		A	B	C = B-F	D= 0.85 * C	E	F	G	H	
*	IL Route 59	163.38	347.84	347.84	295.67	0.00	0.00	275.51	116.70	20.15
PS	Temporary US Route 14	3,055.72	4,889.88	4,889.88	4,156.40	0.00	0.00	3,891.75	0.00	264.65
1	Jacking Holes	0.00	4,669.05	4,669.05	3,968.69	0.00	0.00	4,411.37	0.00	-442.68
1	Shorely Entrance & Lot	342.59	638.02	638.02	542.32	0.00	0.00	1,258.17	414.75	-715.86
1	WCL Shoofly	0.00	5,441.00	5,441.00	4,624.85	0.00	0.00	3,035.00	0.00	1,589.85
1	Construction US Route 14	1,068.86	4,889.88	4,889.88	4,156.40	0.00	0.00	1,260.37	22.77	2,896.03
1	Temporary LZR	547.72	1,596.10	1,596.10	1,356.69	0.00	0.00	237.48	0.00	1,119.21
**	Flint Creek	329.05	11,188.87	11,188.87	9,510.54	0.00	0.00	57.21	204.56	9,453.33
1	Drury Lane	0.00	1,354.05	1,354.05	1,150.94	0.00	0.00	675.05	0.00	475.89
1	Park Lane	13.35	440.37	440.37	374.31	0.00	0.00	318.09	0.00	56.22
1	North Ave	28.57	602.46	602.46	512.09	0.00	0.00	327.04	19.28	185.05
2	Construction US Route 14	1,466.50	78,661.09	78,661.09	66,861.92	0.00	0.00	8,241.11	12.70	58,620.82
2	WCL Prop Track	703.00	1,774.00	1,774.00	1,507.90	0.00	0.00	445.00	717.00	1,062.90
2	Proposed US Route 14	0.00	6,596.05	6,596.05	5,606.64	0.00	0.00	11,242.25	2,006.07	-5,635.61
2	Proposed Lake Zurich Road	708.70	7,360.12	7,360.12	6,256.10	0.00	0.00	332.29	303.22	5,923.81
2	Proposed Detention Basin	1,428.29	4,777.40	4,777.40	4,060.79	0.00	0.00	1,523.13	1,440.20	2,537.67
3	Proposed US Route 14	0.00	5,566.41	5,566.41	4,731.45	0.00	0.00	5,566.41	0.00	-834.96
	TOTAL	9,855.74	140,792.58	140,792.58	119,673.70	0.00	0.00	43,097.23	5,257.25	76,576.46

*SEE IL-59 MAINTENANCE OF TRAFFIC ** FLINT CREEK SPANS MULTIPLE STAGES - SEE CROSS SECTION SHEETS FOR STAGES (+) DOES NOT INCLUDE STRUCTURE EXCAVATION

PAY ITEM NO.	DESIGNATION	TOTAL (CU YD)
21101505	TOPSOIL EXCAVATION AND PLACEMENT	9,855.74
20200100	EARTH EXCAVATION	140,792.58
20400800	FURNISHED EXCAVATION	43,097.23
66900200	NON SPECIAL WASTE (0.1%)	140.79
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL (0.1%)	140.79

MODEL: \\MODEL\NAME
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Two Pierce Place, Suite 1400
 Itasca, Illinois 60143
 Tel: 630.773.3900
 Fax: 630.773.3975
 www.civiltch.com

USER NAME = mc	DESIGNED - NEM	REVISED -
PLOT SCALE = 200.0000' / in.	DRAWN - MC	REVISED -
PLOT DATE = 8/28/2024	CHECKED - DNM	REVISED -
	DATE - 08/28/2024	REVISED -

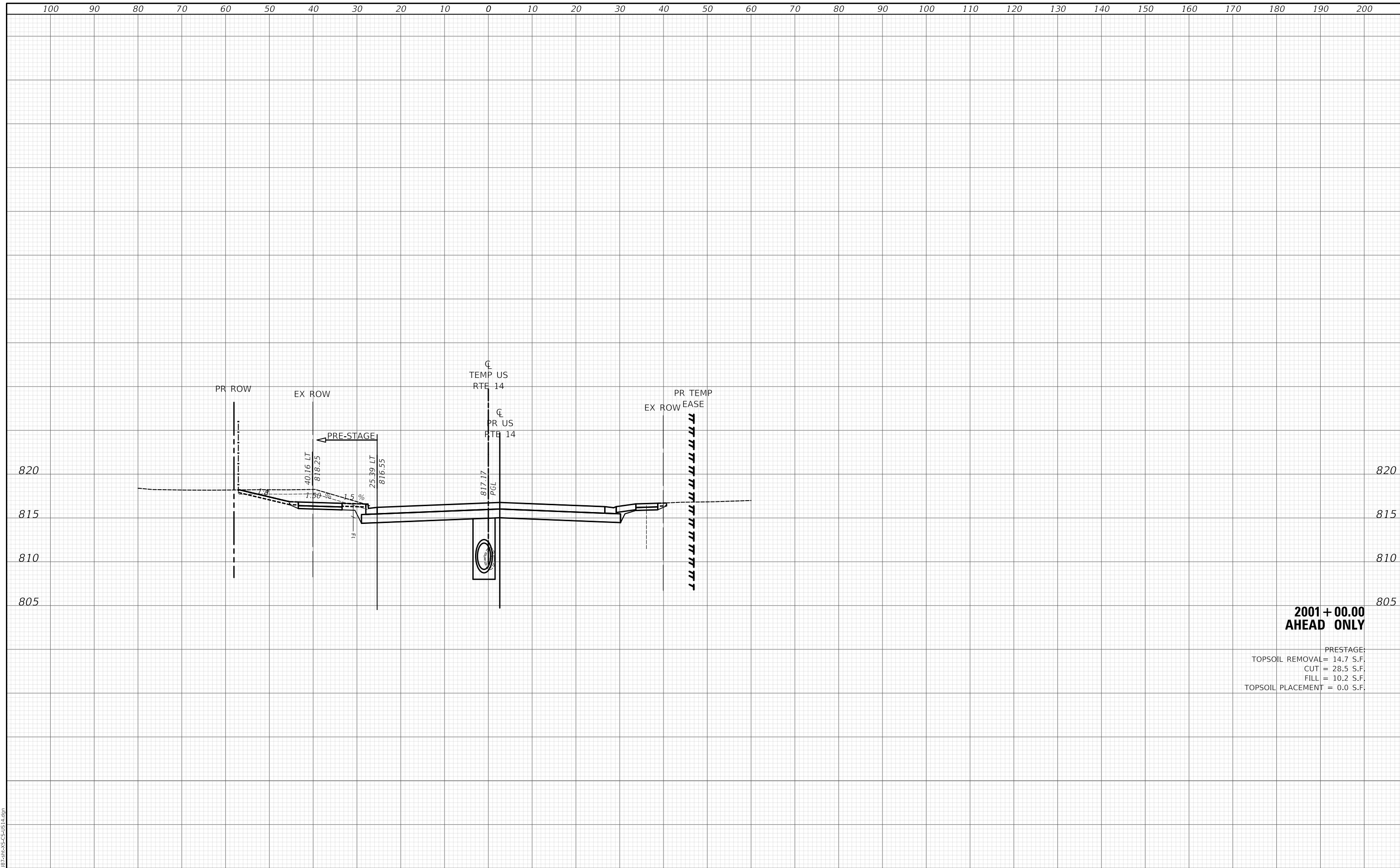
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTION LOCATIONS		SUGGESTED EARTHWORK	
SCALE:	SHEET	OF SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	671
CONTRACT NO. 61J87				
ILLINOIS FED. AID PROJECT				

FINAL SURVEY NO.	SURVEYED	DATE
NOTE BOOK	PLOTTED	
	TEMPLATE	
	AREAS	
	CHECKED	

ORIGINAL SURVEY NO.	SURVEYED	DATE
NOTE BOOK	PLOTTED	
	TEMPLATE	
	AREAS	
	CHECKED	



**2001 + 00.00
AHEAD ONLY**

PRESTAGE:
 TOPSOIL REMOVAL = 14.7 S.F.
 CUT = 28.5 S.F.
 FILL = 10.2 S.F.
 TOPSOIL PLACEMENT = 0.0 S.F.

MODEL: S:\MODEL\NAMES
 FILE NAME: ...1187-SPR-14-CR-C5-C5-VS-14.dgn

CIVILTECH
 Two Pierce Place, Suite 1400
 Moline, Illinois 61413
 Tel: 630.773.3900
 Fax: 630.773.3975
 www.civiltechinc.com

USER NAME = mc	DESIGNED - NEM	REVISED -
	DRAWN - MC	REVISED -
PLOT SCALE = 20.0000' / in.	CHECKED - DNM	REVISED -
PLOT DATE = 9/10/2024	DATE - 08/28/2024	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

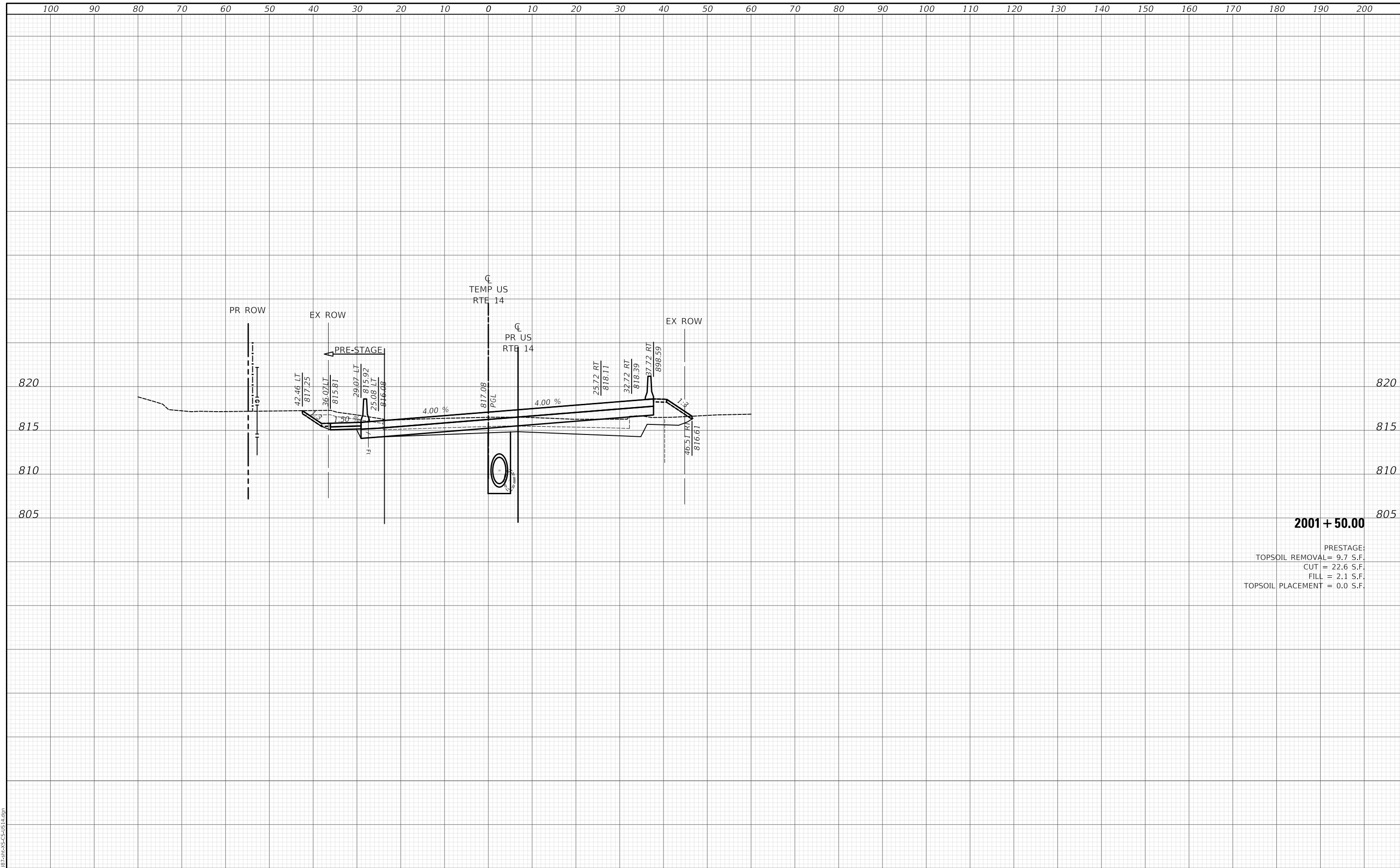
**TEMPORARY US ROUTE 14
PROPOSED CROSS SECTIONS**

SCALE: SHEET OF SHEETS STA. 2001+00.00 TO STA. 2001+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	672
				CONTRACT NO. 61187
		ILLINOIS	FED. AID PROJECT	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
AREAS CHECKED	
FINAL SURVEY	
NOTE BOOK	
NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
AREAS CHECKED	
ORIGINAL SURVEY	
NOTE BOOK	
NO.	



2001 + 50.00

PRESTAGE:
 TOPSOIL REMOVAL = 9.7 S.F.
 CUT = 22.6 S.F.
 FILL = 2.1 S.F.
 TOPSOIL PLACEMENT = 0.0 S.F.

MODEL: S:\MODEL\NAMES
 FILE NAME: ...118187-SPR-14-CR-C5-US-4.dgn

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 Fax: 630.773.3975
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USER NAME = mc	DESIGNED - NEM	REVISED -
PLOT SCALE = 20.0000' / in.	DRAWN - MC	REVISED -
PLOT DATE = 9/10/2024	CHECKED - DNM	REVISED -
	DATE - 08/28/2024	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**TEMPORARY US ROUTE 14
 PROPOSED CROSS SECTIONS**

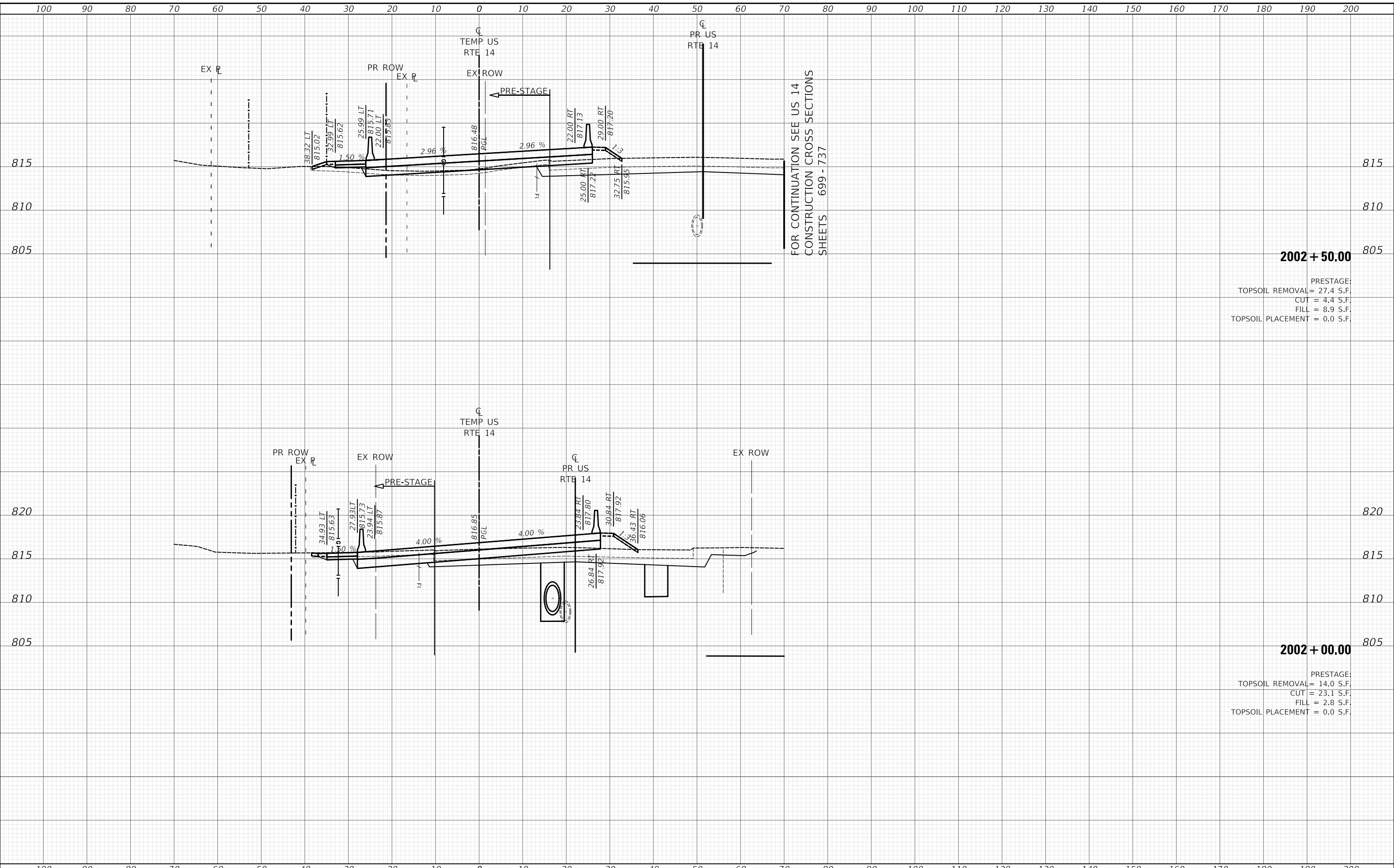
SCALE: SHEET OF SHEETS STA. 2001+50.00 TO STA. 2001+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	673
			CONTRACT NO. 61187	
		ILLINOIS	FED. AID PROJECT	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
FINAL SURVEY	
NOTE BOOK	
NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
ORIGINAL SURVEY	
NOTE BOOK	
NO.	

MODEL: S:\MODEL\NAMES
FILE NAME: ...10181787-SPR-C5-CS-US-14.dgn



202 + 50.00
PRESTAGE:
TOPSOIL REMOVAL = 27.4 S.F.
CUT = 4.4 S.F.
FILL = 8.9 S.F.
TOPSOIL PLACEMENT = 0.0 S.F.

202 + 00.00
PRESTAGE:
TOPSOIL REMOVAL = 14.0 S.F.
CUT = 23.1 S.F.
FILL = 2.8 S.F.
TOPSOIL PLACEMENT = 0.0 S.F.

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USER NAME = mc	DESIGNED - NEM	REVISED -
PLOT SCALE = 20.0000' / in.	DRAWN - MC	REVISED -
PLOT DATE = 9/10/2024	CHECKED - DNM	REVISED -
	DATE - 08/28/2024	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY US ROUTE 14
PROPOSED CROSS SECTIONS

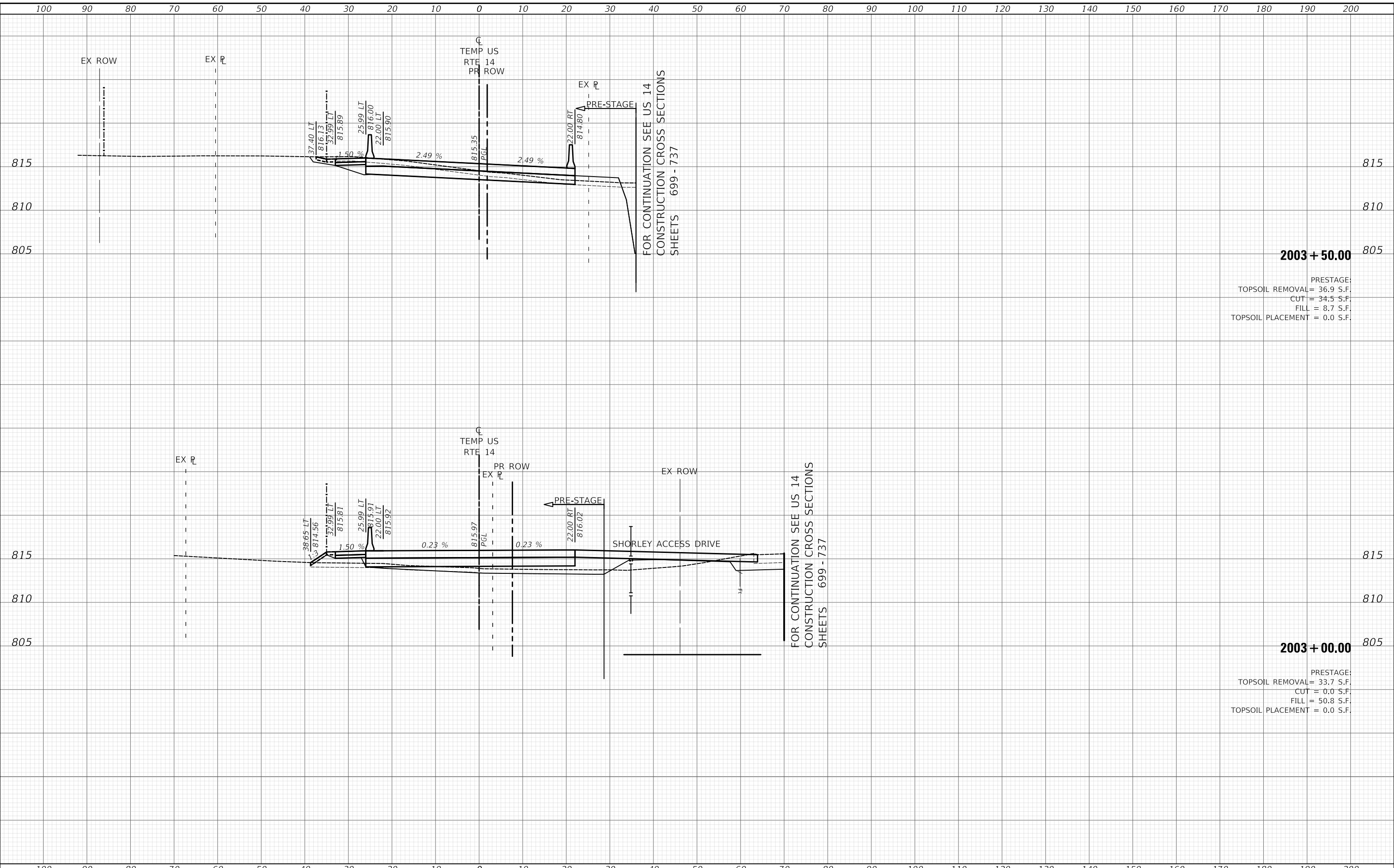
SCALE: SHEET OF SHEETS STA. 2002+00.00 TO STA. 2002+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	674
				CONTRACT NO. 61187
				ILLINOIS FED. AID PROJECT

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
FINAL SURVEY	
NOTE BOOK	
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DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
ORIGINAL SURVEY	
NOTE BOOK	
NO.	

MODEL: S:\PROJECTS\11-00087-00-GS\11-00087-00-GS-US-14.dgn



2003 + 50.00

PRESTAGE:
 TOPSOIL REMOVAL = 36.9 S.F.
 CUT = 34.5 S.F.
 FILL = 8.7 S.F.
 TOPSOIL PLACEMENT = 0.0 S.F.

2003 + 00.00

PRESTAGE:
 TOPSOIL REMOVAL = 33.7 S.F.
 CUT = 0.0 S.F.
 FILL = 50.8 S.F.
 TOPSOIL PLACEMENT = 0.0 S.F.

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**TEMPORARY US ROUTE 14
 PROPOSED CROSS SECTIONS**

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USER NAME = mc	DESIGNED - NEM	REVISED -
	DRAWN - MC	REVISED -
PLOT SCALE = 20.0000' / in.	CHECKED - DNM	REVISED -
PLOT DATE = 9/10/2024	DATE - 08/28/2024	REVISED -

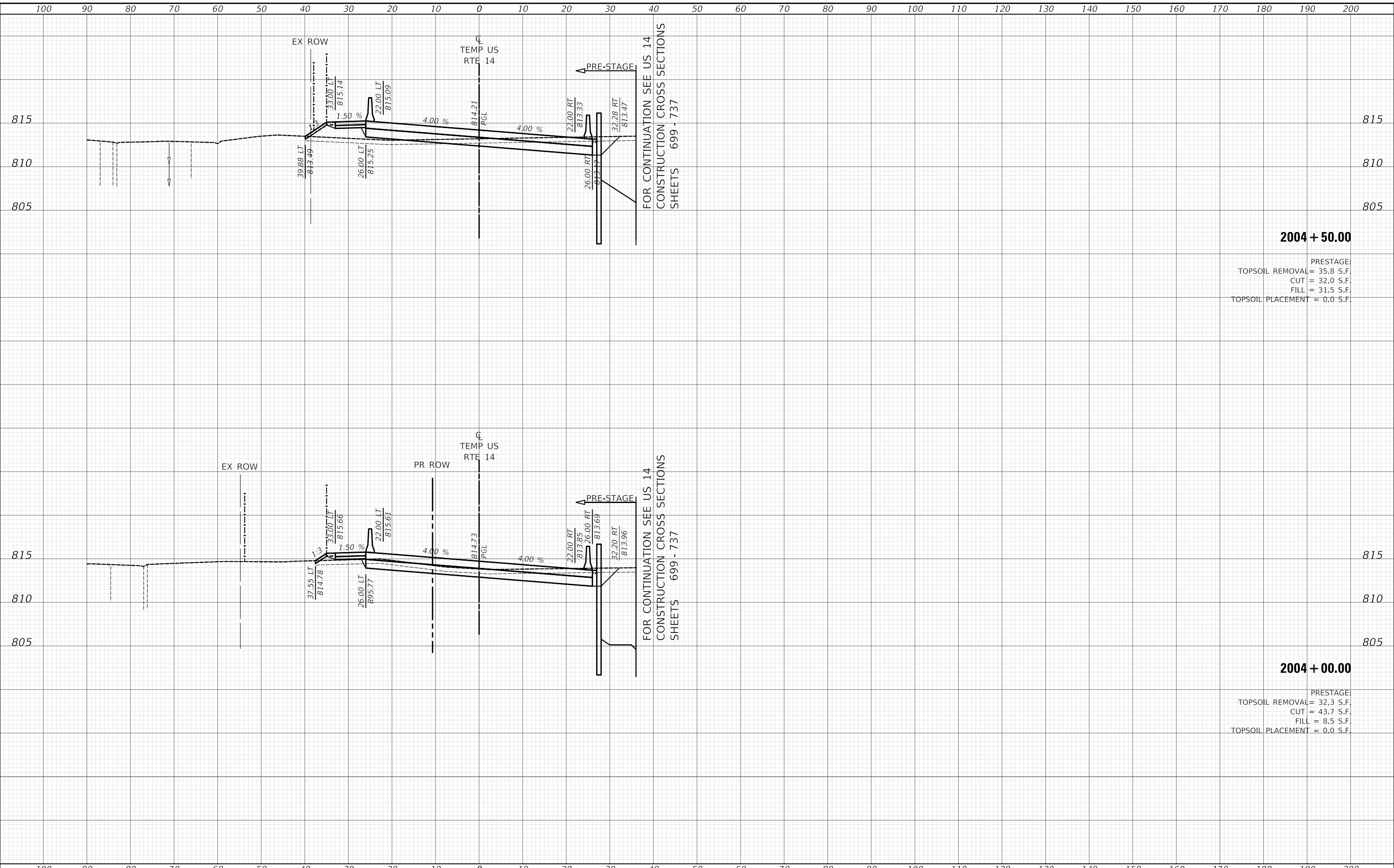
SCALE: SHEET OF SHEETS STA. 2003+00.00 TO STA. 2003+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	675
				CONTRACT NO. 61J87
				ILLINOIS FED. AID PROJECT

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
FINAL SURVEY	
NOTE BOOK	
NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
ORIGINAL SURVEY	
NOTE BOOK	
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MODEL: S:\PROJECTS\11-00087-00-GS\11-00087-00-GS-US-14.dgn



FOR CONTINUATION SEE US 14
CONSTRUCTION CROSS SECTIONS
SHEETS 699 - 737

FOR CONTINUATION SEE US 14
CONSTRUCTION CROSS SECTIONS
SHEETS 699 - 737

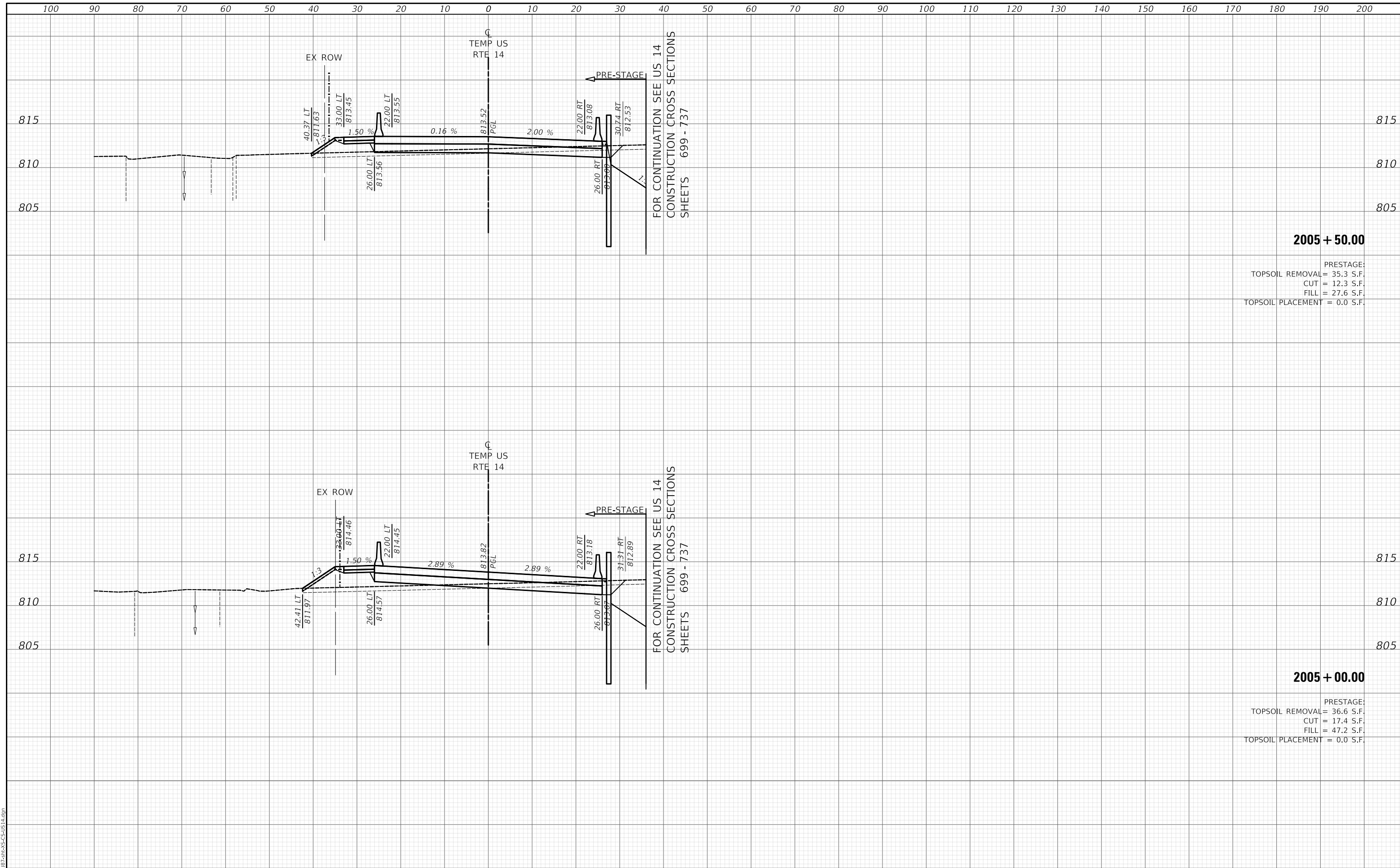
2004 + 50.00
PRESTAGE:
TOPSOIL REMOVAL = 35.8 S.F.
CUT = 32.0 S.F.
FILL = 31.5 S.F.
TOPSOIL PLACEMENT = 0.0 S.F.

2004 + 00.00
PRESTAGE:
TOPSOIL REMOVAL = 32.3 S.F.
CUT = 43.7 S.F.
FILL = 8.5 S.F.
TOPSOIL PLACEMENT = 0.0 S.F.

<p>Two Pierce Place, Suite 1400 Itasca, Illinois 60143 Tel: 630.773.3900 Fax: 630.773.3975 www.civiltechinc.com</p>	USER NAME = mc PLOT SCALE = 20.0000" / in. PLOT DATE = 9/10/2024	DESIGNED - NEM DRAWN - MC CHECKED - DNM DATE - 08/28/2024	REVISED - REVISED - REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY US ROUTE 14 PROPOSED CROSS SECTIONS	SCALE:	SHEET OF SHEETS	STA. 2004+00.00 TO STA. 2004+50.00	F.A.P. RTE. 305 SECTION 11-00087-00-GS COUNTY LAKE TOTAL SHEETS 816 SHEET NO. 676 CONTRACT NO. 61J87	ILLINOIS FED. AID PROJECT

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
FINAL SURVEY	
NOTE BOOK	
NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
ORIGINAL SURVEY	
NOTE BOOK	
NO.	



2005 + 50.00

PRESTAGE:
 TOPSOIL REMOVAL = 35.3 S.F.
 CUT = 12.3 S.F.
 FILL = 27.6 S.F.
 TOPSOIL PLACEMENT = 0.0 S.F.

2005 + 00.00

PRESTAGE:
 TOPSOIL REMOVAL = 36.6 S.F.
 CUT = 17.4 S.F.
 FILL = 47.2 S.F.
 TOPSOIL PLACEMENT = 0.0 S.F.

MODEL: S:\MODEL\NAMES
 FILE NAME: ...1187-SPR-CR-C5-US-14.dgn

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	DRAWN - MC	REVISED -
PLOT SCALE = 20.0000' / in.	CHECKED - DNM	REVISED -
PLOT DATE = 9/10/2024	DATE - 08/28/2024	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**TEMPORARY US ROUTE 14
 PROPOSED CROSS SECTIONS**

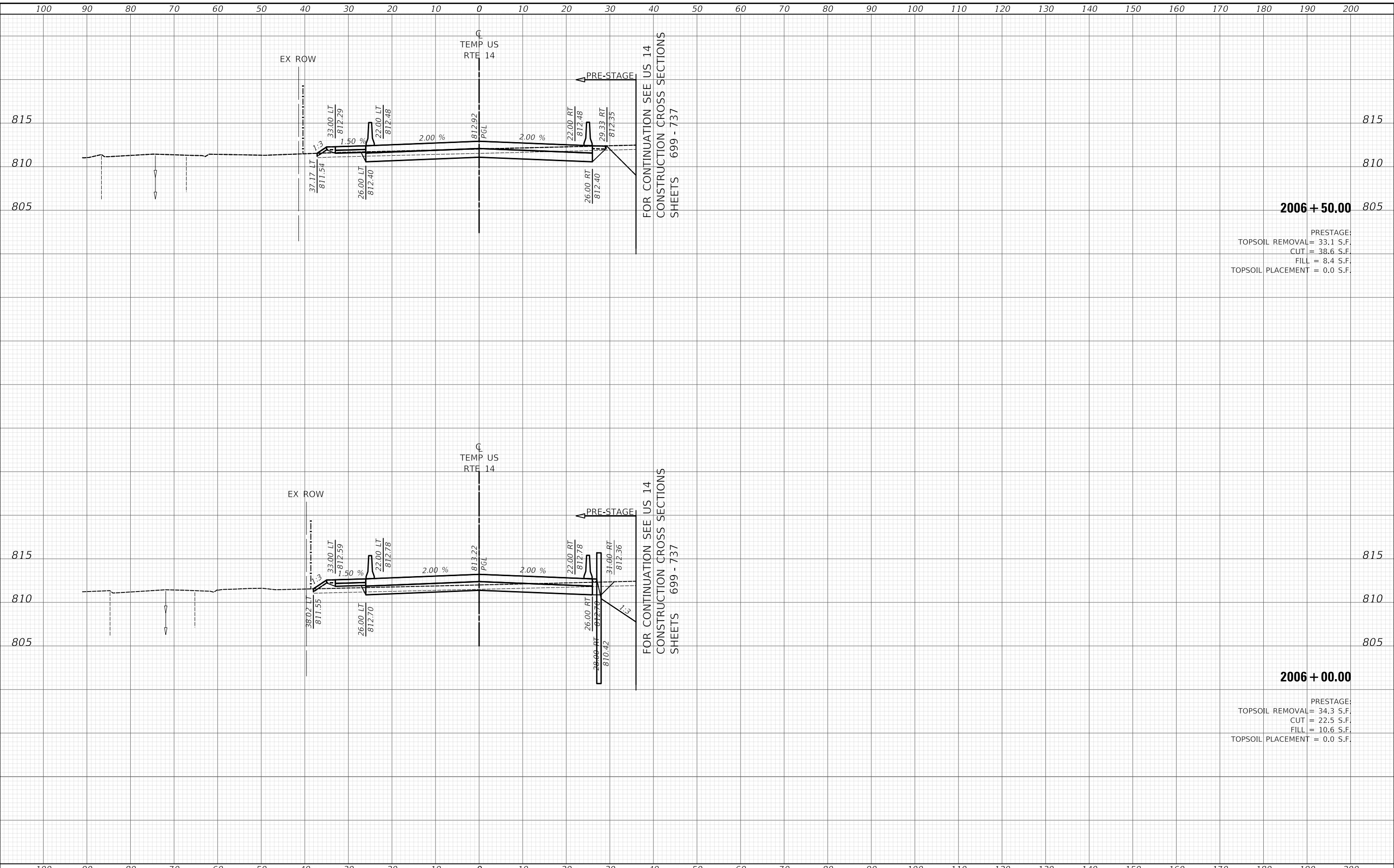
SCALE: SHEET OF SHEETS STA. 2005+00.00 TO STA. 2005+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	677
				CONTRACT NO. 61187
				ILLINOIS FED. AID PROJECT

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
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FINAL SURVEY	
NOTE BOOK	
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DATE	
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TEMPLATE	
AREAS	
CHECKED	
ORIGINAL SURVEY	
NOTE BOOK	
NO.	

MODEL: S:\MODEL\NAMES
FILE NAME: ...1187-SPR-CR-C5-US-4.dgn



206 + 50.00

PRESTAGE:
 TOPSOIL REMOVAL = 33.1 S.F.
 CUT = 38.6 S.F.
 FILL = 8.4 S.F.
 TOPSOIL PLACEMENT = 0.0 S.F.

206 + 00.00

PRESTAGE:
 TOPSOIL REMOVAL = 34.3 S.F.
 CUT = 22.5 S.F.
 FILL = 10.6 S.F.
 TOPSOIL PLACEMENT = 0.0 S.F.

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USER NAME = mc	DESIGNED - NEM	REVISED -
	DRAWN - MC	REVISED -
PLOT SCALE = 20.0000' / in.	CHECKED - DNM	REVISED -
PLOT DATE = 9/10/2024	DATE - 08/28/2024	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**TEMPORARY US ROUTE 14
 PROPOSED CROSS SECTIONS**

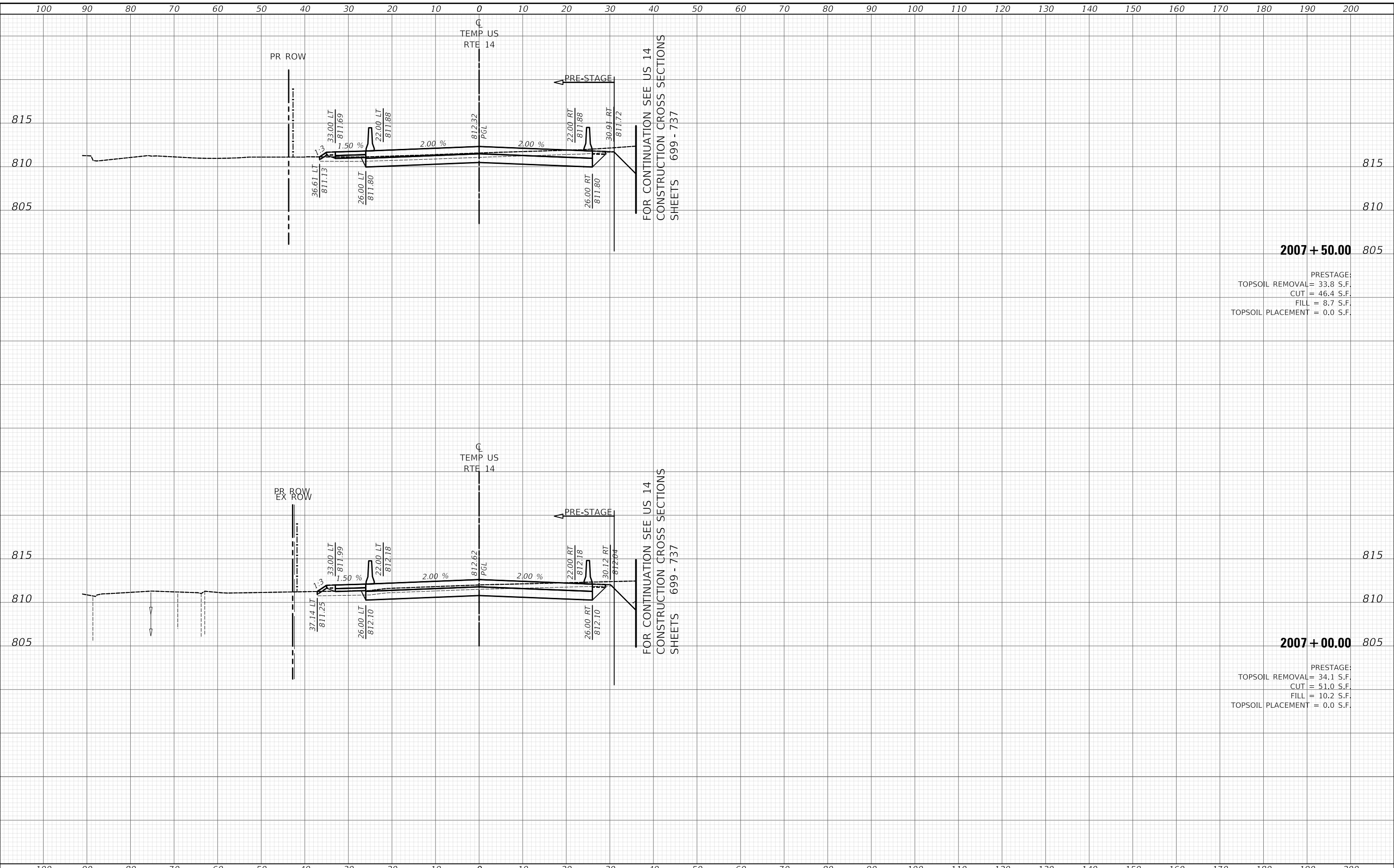
SCALE: SHEET OF SHEETS STA. 206+00.00 TO STA. 206+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	678
				CONTRACT NO. 61J87
		ILLINOIS	FED. AID PROJECT	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
FINAL SURVEY	
NOTE BOOK	
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DATE	
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TEMPLATE	
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CHECKED	
ORIGINAL SURVEY	
NOTE BOOK	
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FILE NAME: ...118187-Prop-Cross-Sections.dgn



FOR CONTINUATION SEE US 14
CONSTRUCTION CROSS SECTIONS
SHEETS 699 - 737

FOR CONTINUATION SEE US 14
CONSTRUCTION CROSS SECTIONS
SHEETS 699 - 737

2007 + 50.00
PRESTAGE:
TOPSOIL REMOVAL = 33.8 S.F.
CUT = 46.4 S.F.
FILL = 8.7 S.F.
TOPSOIL PLACEMENT = 0.0 S.F.

2007 + 00.00
PRESTAGE:
TOPSOIL REMOVAL = 34.1 S.F.
CUT = 51.0 S.F.
FILL = 10.2 S.F.
TOPSOIL PLACEMENT = 0.0 S.F.

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USER NAME = mc	DESIGNED - NEM	REVISED -
	DRAWN - MC	REVISED -
PLOT SCALE = 20.0000' / in.	CHECKED - DNM	REVISED -
PLOT DATE = 9/10/2024	DATE - 08/28/2024	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

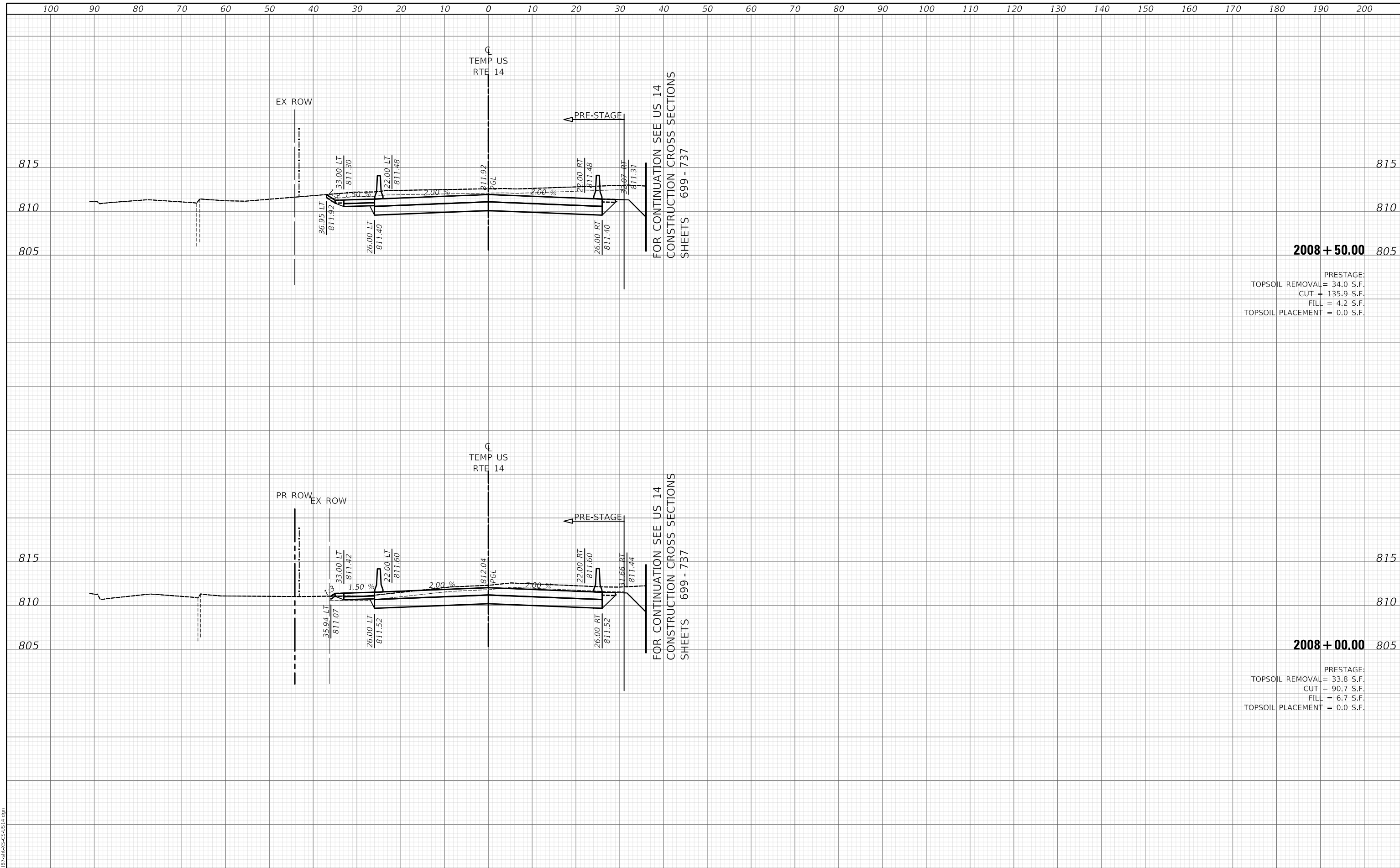
**TEMPORARY US ROUTE 14
PROPOSED CROSS SECTIONS**

SCALE: SHEET OF SHEETS STA. 2007+00.00 TO STA. 2007+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	679
				CONTRACT NO. 61187
		ILLINOIS	FED. AID PROJECT	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
FINAL SURVEY	
NOTE BOOK	
NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
ORIGINAL SURVEY	
NOTE BOOK	
NO.	



2008 + 50.00

PRESTAGE:
 TOPSOIL REMOVAL = 34.0 S.F.
 CUT = 135.9 S.F.
 FILL = 4.2 S.F.
 TOPSOIL PLACEMENT = 0.0 S.F.

2008 + 00.00

PRESTAGE:
 TOPSOIL REMOVAL = 33.8 S.F.
 CUT = 90.7 S.F.
 FILL = 6.7 S.F.
 TOPSOIL PLACEMENT = 0.0 S.F.

MODEL: SPODELMAMES
 FILE NAME: ...0181875-SPR-C5-CS-US-14.dgn

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USER NAME = mc	DESIGNED - NEM	REVISED -
	DRAWN - MC	REVISED -
PLOT SCALE = 20.0000' / in.	CHECKED - DNM	REVISED -
PLOT DATE = 9/10/2024	DATE - 08/28/2024	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

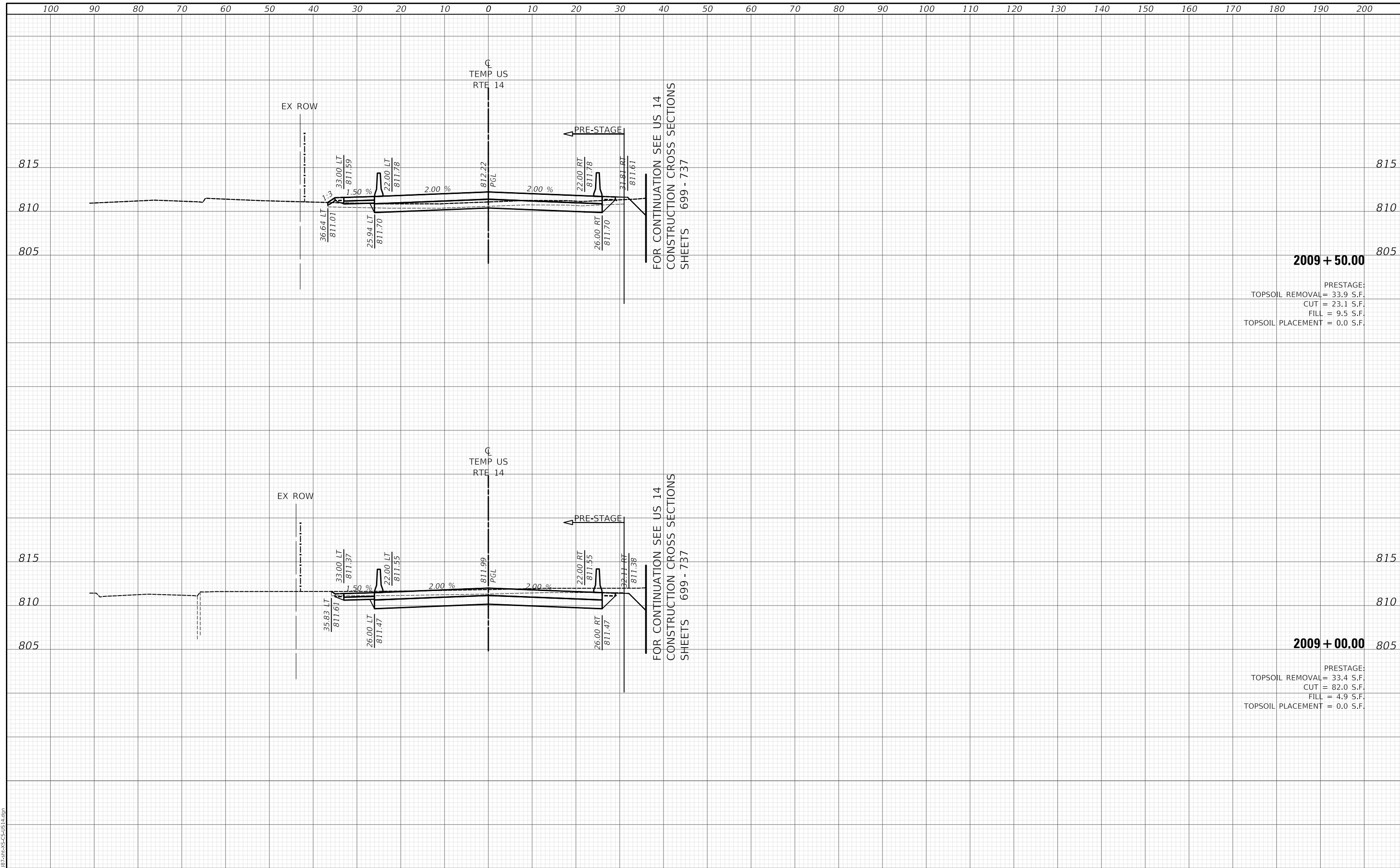
TEMPORARY US ROUTE 14
PROPOSED CROSS SECTIONS

SCALE: SHEET OF SHEETS STA. 2008+00.00 TO STA. 2008+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	680
CONTRACT NO. 61J87				
ILLINOIS		FED. AID PROJECT		

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
FINAL SURVEY	
NOTE BOOK	
NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
ORIGINAL SURVEY	
NOTE BOOK	
NO.	



FOR CONTINUATION SEE US 14
CONSTRUCTION CROSS SECTIONS
SHEETS 699 - 737

FOR CONTINUATION SEE US 14
CONSTRUCTION CROSS SECTIONS
SHEETS 699 - 737

209 + 50.00
PRESTAGE:
TOPSOIL REMOVAL = 33.9 S.F.
CUT = 23.1 S.F.
FILL = 9.5 S.F.
TOPSOIL PLACEMENT = 0.0 S.F.

209 + 00.00
PRESTAGE:
TOPSOIL REMOVAL = 33.4 S.F.
CUT = 82.0 S.F.
FILL = 4.9 S.F.
TOPSOIL PLACEMENT = 0.0 S.F.

MODEL: S:\MODEL\MAMES
FILE NAME: ...1187-SPR-14-SS-CS-US-14.dgn

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USER NAME = mc	DESIGNED - NEM	REVISED -
	DRAWN - MC	REVISED -
PLOT SCALE = 20.0000' / in.	CHECKED - DNM	REVISED -
PLOT DATE = 9/10/2024	DATE - 08/28/2024	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TEMPORARY US ROUTE 14
PROPOSED CROSS SECTIONS**

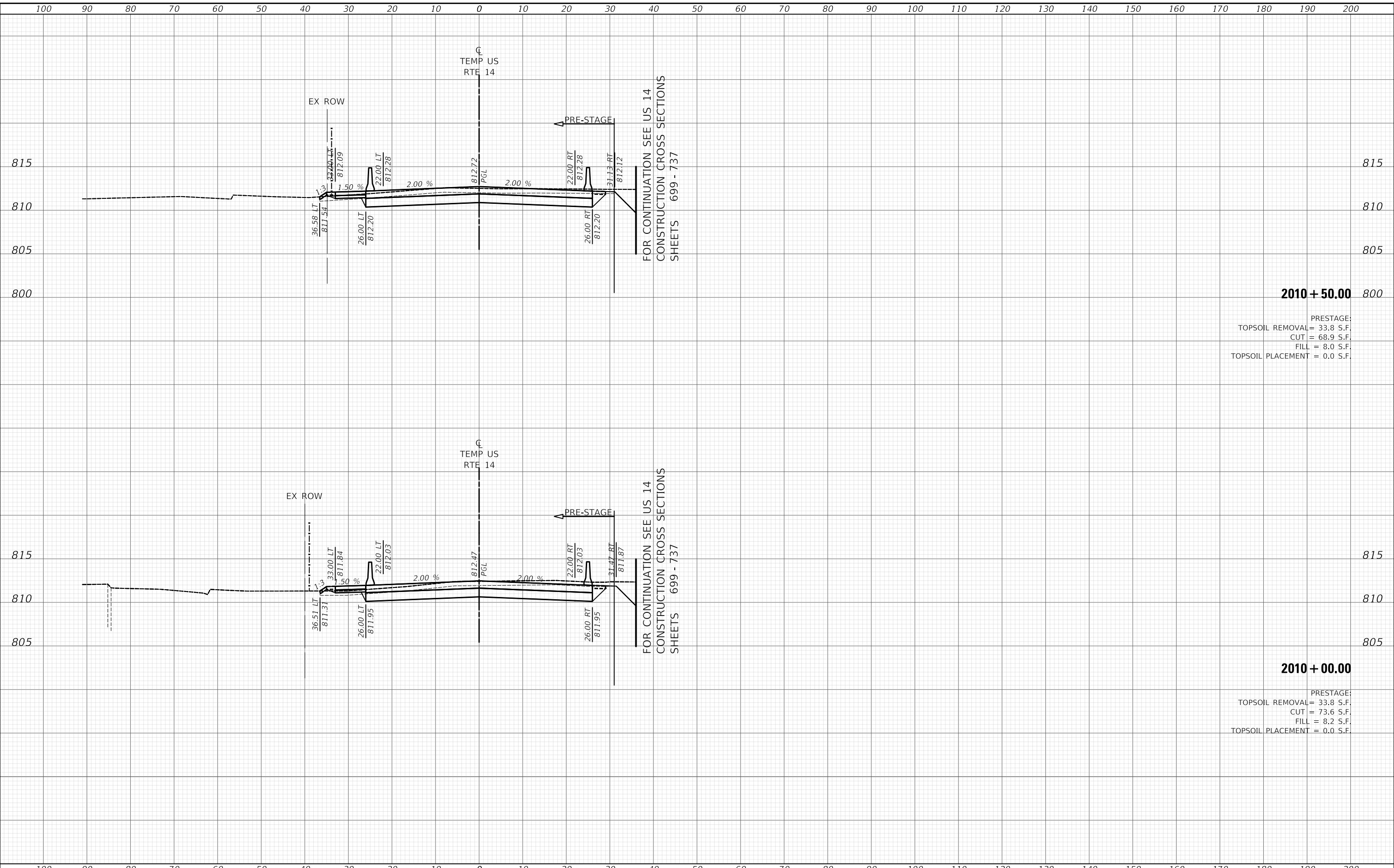
SCALE: SHEET OF SHEETS STA. 209+00.00 TO STA. 209+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	681
				CONTRACT NO. 61187
		ILLINOIS	FED. AID PROJECT	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
FINAL SURVEY	
NOTE BOOK	
NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
ORIGINAL SURVEY	
NOTE BOOK	
NO.	

MODEL: SPODELMAMES
FILE NAME: ...018187-SPR-CR-C5-US-4.dgn



PRESTAGE:
TOPSOIL REMOVAL = 33.8 S.F.
CUT = 68.9 S.F.
FILL = 8.0 S.F.
TOPSOIL PLACEMENT = 0.0 S.F.

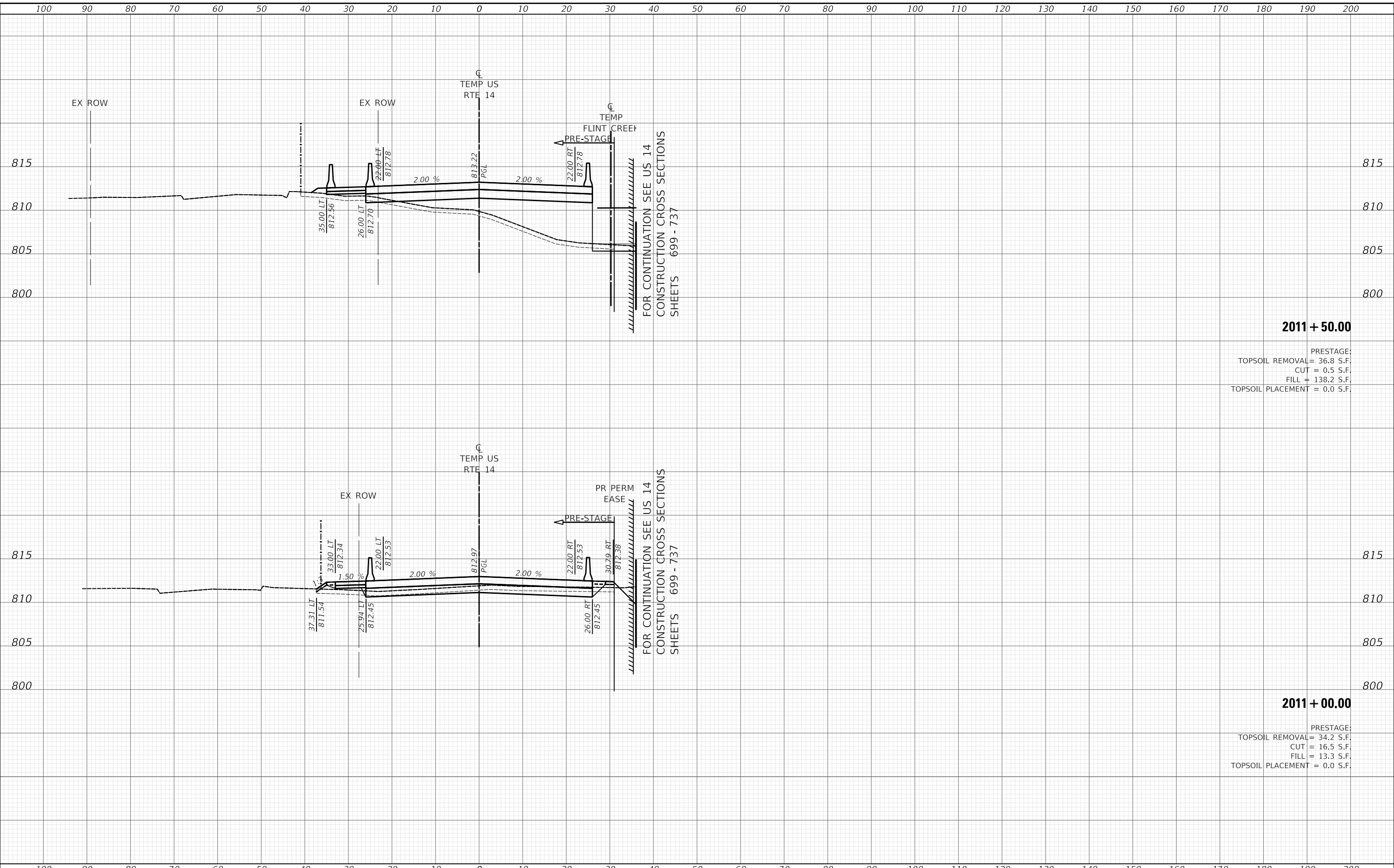
PRESTAGE:
TOPSOIL REMOVAL = 33.8 S.F.
CUT = 73.6 S.F.
FILL = 8.2 S.F.
TOPSOIL PLACEMENT = 0.0 S.F.

<p>Two Pierce Place, Suite 1400 Mascoutah, Illinois 60143 Tel: 630.773.3900 Fax: 630.773.3975 www.civiltechinc.com</p>	USER NAME = mc DESIGNED - NEM DRAWN - MC CHECKED - DNM DATE - 08/28/2024 PLOT SCALE = 20.0000" / 1" PLOT DATE = 9/10/2024	REVISED - REVISED - REVISED - REVISED -	<p align="center">STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</p>	<p align="center">TEMPORARY US ROUTE 14 PROPOSED CROSS SECTIONS</p>	SCALE: SHEET OF SHEETS STA. 2010+00.00 TO STA. 2010+50.00	<table border="1"> <tr> <th>F.A.P. RTE.</th> <th>SECTION</th> <th>COUNTY</th> <th>TOTAL SHEETS</th> <th>SHEET NO.</th> </tr> <tr> <td>305</td> <td>11-00087-00-GS</td> <td>LAKE</td> <td>816</td> <td>682</td> </tr> </table>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	305	11-00087-00-GS	LAKE	816	682	CONTRACT NO. 61187 ILLINOIS FED. AID PROJECT
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.													
305	11-00087-00-GS	LAKE	816	682													

DATE	
BY	
SURVEYED	
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TEMPLATE	
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CHECKED	
FINAL SURVEY	
NOTE BOOK	
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DATE	
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ORIGINAL SURVEY	
NOTE BOOK	
NO.	

MODEL: S:\01\DELIM\MES
FILE NAME: ...10181787-SPR-CR-C5-US-14.dgn



2011 + 50.00
 PRESTAGE:
 TOPSOIL REMOVAL = 36.8 S.F.
 CUT = 0.5 S.F.
 FILL = 138.2 S.F.
 TOPSOIL PLACEMENT = 0.0 S.F.

2011 + 00.00
 PRESTAGE:
 TOPSOIL REMOVAL = 34.2 S.F.
 CUT = 16.5 S.F.
 FILL = 13.3 S.F.
 TOPSOIL PLACEMENT = 0.0 S.F.

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**TEMPORARY US ROUTE 14
 PROPOSED CROSS SECTIONS**

USER NAME = mc	DESIGNED - NEM	REVISED -
PLOT SCALE = 20.0000' / in.	DRAWN - MC	REVISED -
PLOT DATE = 9/10/2024	CHECKED - DNM	REVISED -
	DATE - 08/28/2024	REVISED -

SCALE: SHEET OF SHEETS STA. 2011+00.00 TO STA. 2011+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	683
				CONTRACT NO. 61J87
		ILLINOIS	FED. AID PROJECT	

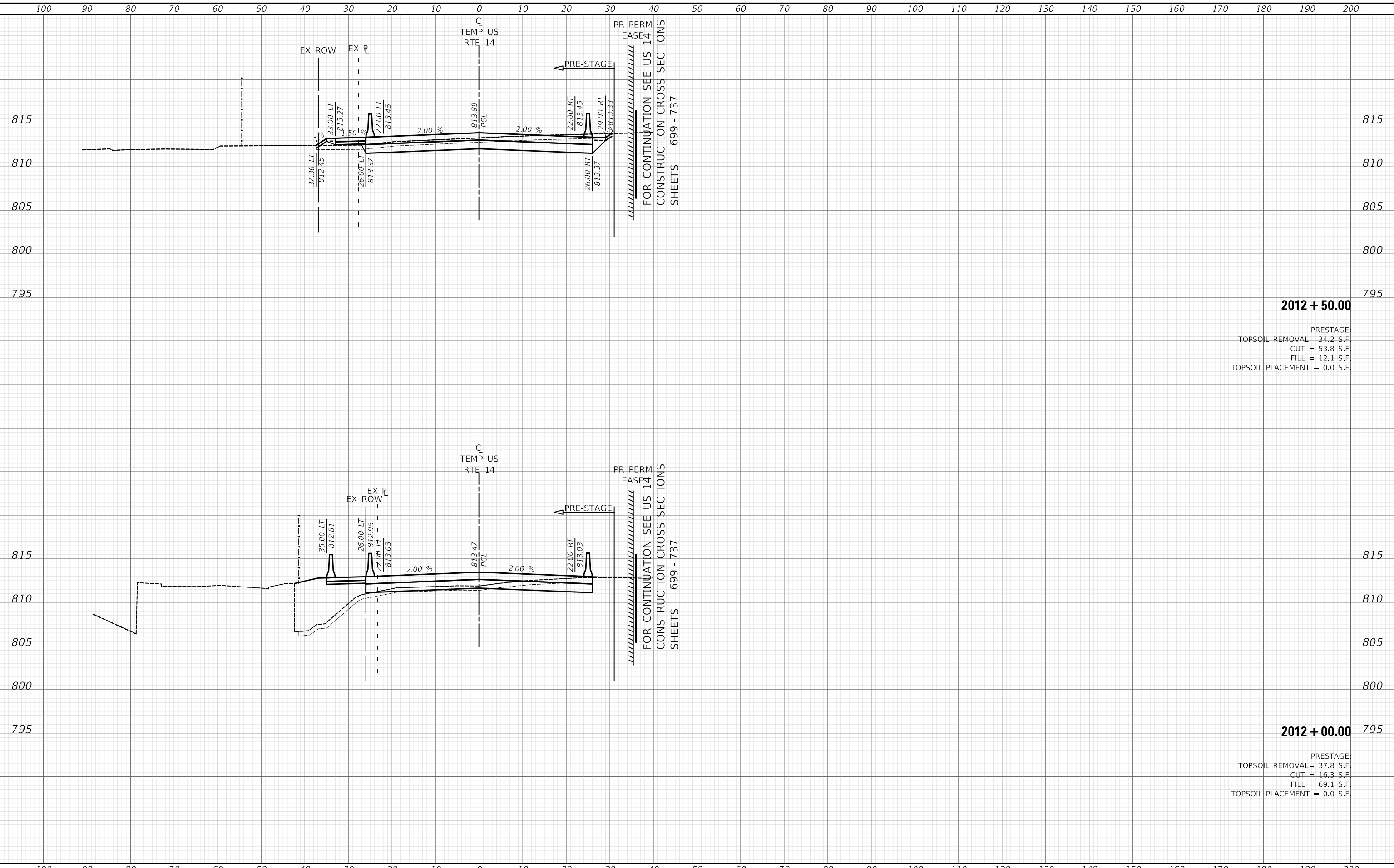
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DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
FINAL SURVEY	
NOTE BOOK	
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DATE	
BY	
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TEMPLATE	
AREAS	
CHECKED	
ORIGINAL SURVEY	
NOTE BOOK	
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MODEL: S:\MODEL\NAMES
FILE NAME: ...118175-PC-14-5-14.dgn



2012 + 50.00

PRESTAGE:
 TOPSOIL REMOVAL = 34.2 S.F.
 CUT = 53.8 S.F.
 FILL = 12.1 S.F.
 TOPSOIL PLACEMENT = 0.0 S.F.

2012 + 00.00

PRESTAGE:
 TOPSOIL REMOVAL = 37.8 S.F.
 CUT = 16.3 S.F.
 FILL = 69.1 S.F.
 TOPSOIL PLACEMENT = 0.0 S.F.

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TEMPORARY US ROUTE 14
PROPOSED CROSS SECTIONS**

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USER NAME = mc	DESIGNED - NEM	REVISED -
	DRAWN - MC	REVISED -
PLOT SCALE = 20.0000' / in.	CHECKED - DNM	REVISED -
PLOT DATE = 9/10/2024	DATE - 08/28/2024	REVISED -

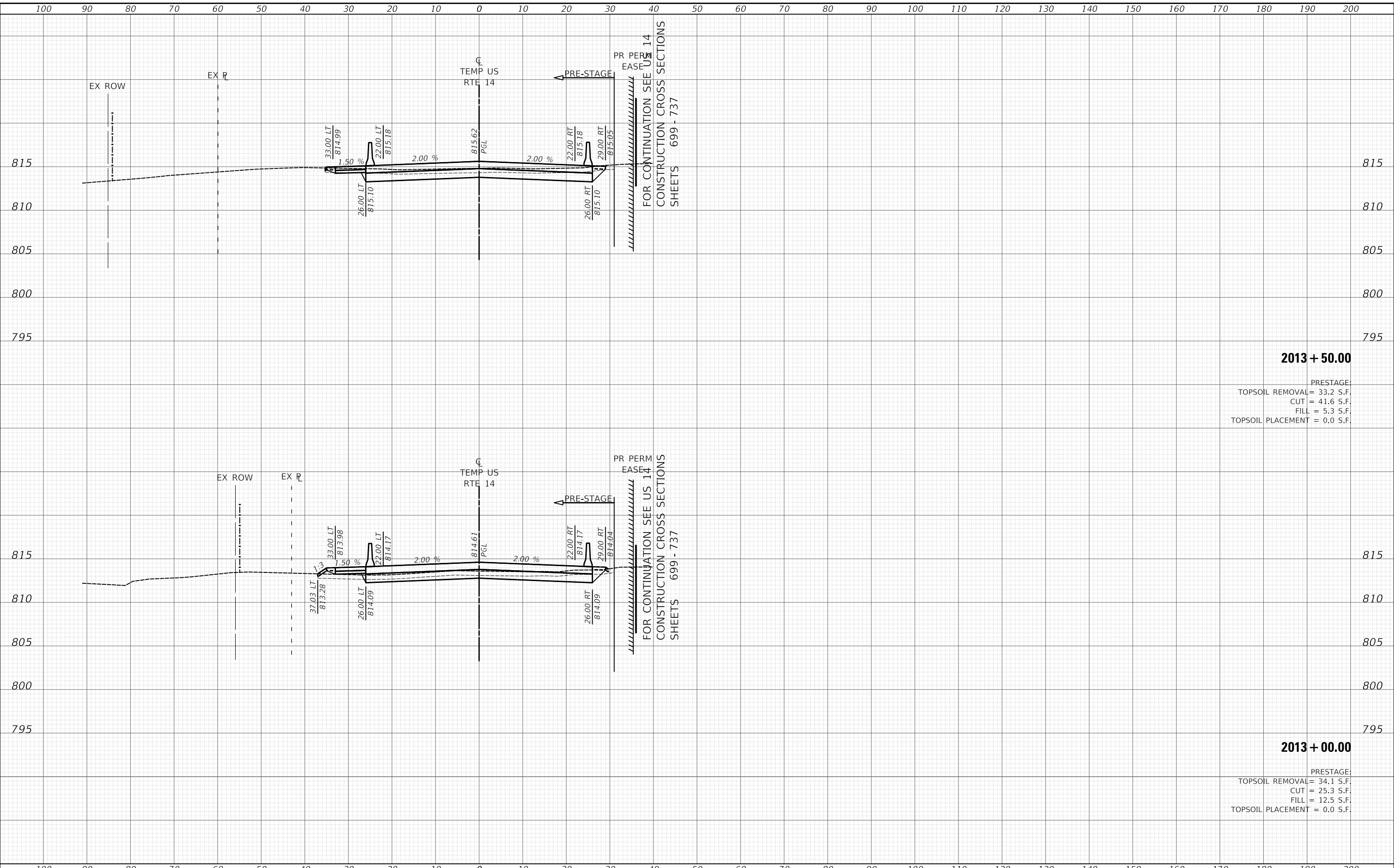
SCALE: SHEET OF SHEETS STA. 2012+00.00 TO STA. 2012+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	684
			CONTRACT NO. 61J87	
		ILLINOIS	FED. AID PROJECT	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
FINAL SURVEY	
NOTE BOOK	
NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
ORIGINAL SURVEY	
NOTE BOOK	
NO.	

MODEL: S:\MODEL\MAMES
FILE NAME: ...118187-SPR-CR-C5-US-14.dgn



2013 + 50.00
 PRESTAGE:
 TOPSOIL REMOVAL = 33.2 S.F.
 CUT = 41.6 S.F.
 FILL = 5.3 S.F.
 TOPSOIL PLACEMENT = 0.0 S.F.

2013 + 00.00
 PRESTAGE:
 TOPSOIL REMOVAL = 34.1 S.F.
 CUT = 25.3 S.F.
 FILL = 12.5 S.F.
 TOPSOIL PLACEMENT = 0.0 S.F.

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USER NAME = mc	DESIGNED - NEM	REVISED -
	DRAWN - MC	REVISED -
PLOT SCALE = 20.0000' / in.	CHECKED - DNM	REVISED -
PLOT DATE = 9/10/2024	DATE - 08/28/2024	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**TEMPORARY US ROUTE 14
 PROPOSED CROSS SECTIONS**

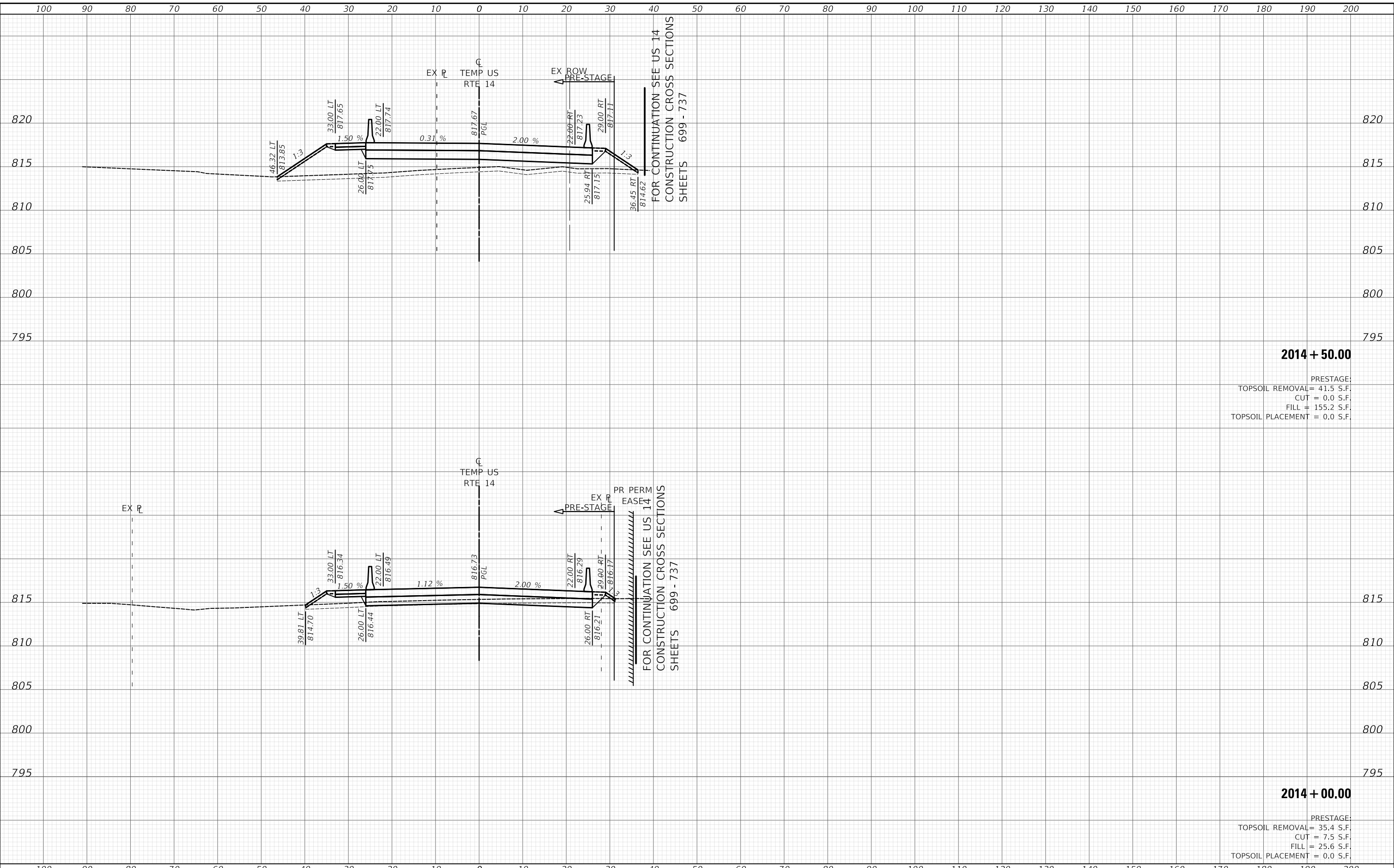
SCALE: SHEET OF SHEETS STA. 2013+00.00 TO STA. 2013+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	685
				CONTRACT NO. 61J87
		ILLINOIS	FED. AID PROJECT	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
FINAL SURVEY	
NOTE BOOK	
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DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
ORIGINAL SURVEY	
NOTE BOOK	
NO.	

MODEL: S:\MODEL\MAMES
FILE NAME: ...118187-2-11-24-11-24-11-24.dgn



2014 + 50.00

PRESTAGE:
TOPSOIL REMOVAL = 41.5 S.F.
CUT = 0.0 S.F.
FILL = 155.2 S.F.
TOPSOIL PLACEMENT = 0.0 S.F.

2014 + 00.00

PRESTAGE:
TOPSOIL REMOVAL = 35.4 S.F.
CUT = 7.5 S.F.
FILL = 25.6 S.F.
TOPSOIL PLACEMENT = 0.0 S.F.

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	DRAWN - MC	REVISED -
PLOT SCALE = 20.0000' / in.	CHECKED - DNM	REVISED -
PLOT DATE = 9/10/2024	DATE - 08/28/2024	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TEMPORARY US ROUTE 14
PROPOSED CROSS SECTIONS**

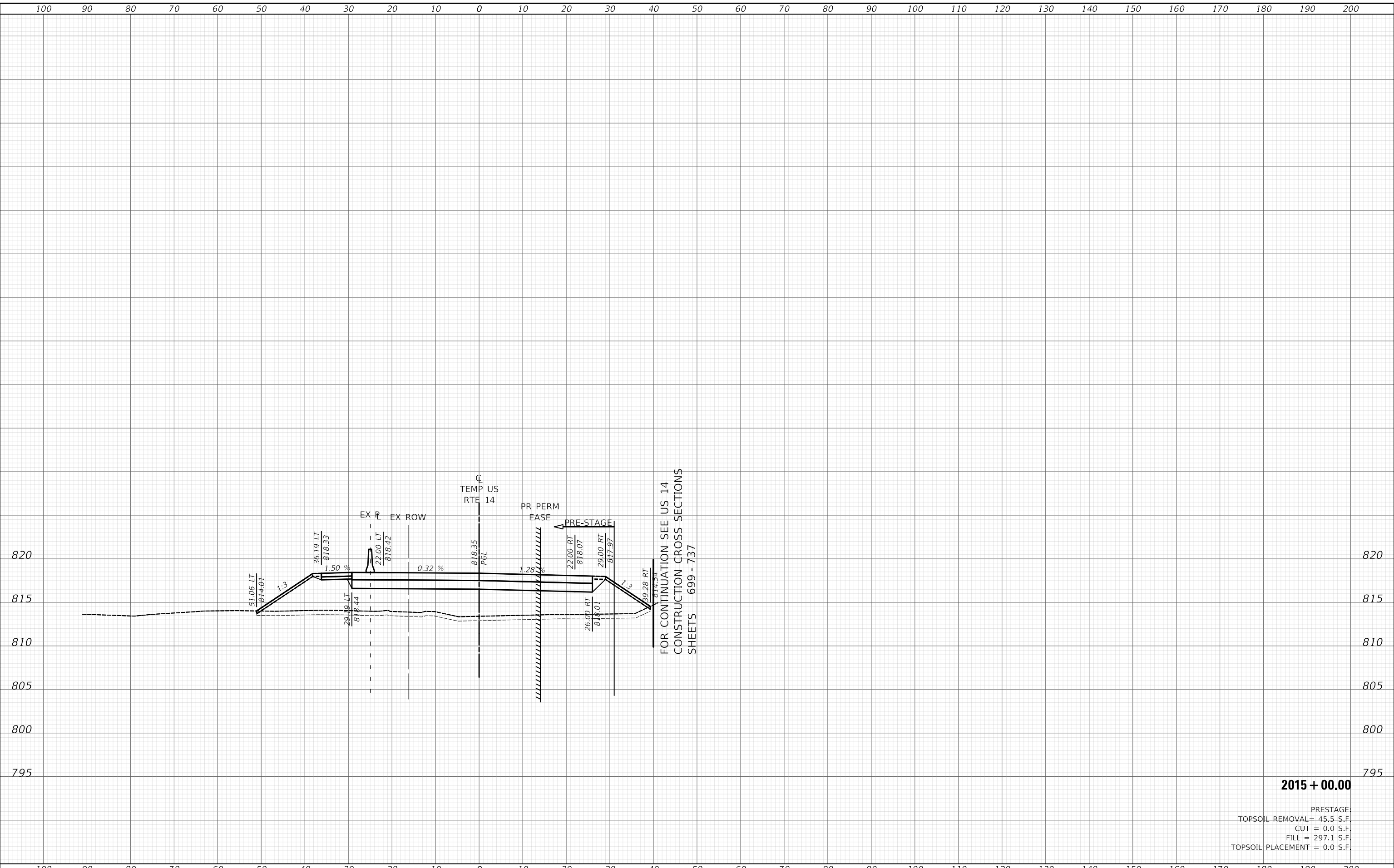
SCALE: SHEET OF SHEETS STA. 2014+00.00 TO STA. 2014+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	686
				CONTRACT NO. 61J87
		ILLINOIS	FED. AID PROJECT	

FINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED AREAS CHECKED	BY	DATE

MODEL: S:\MODEL\NAME: ...:JOB\11875-PC-11-05-15-14.dgn



2015 + 00.00

PRESTAGE:
 TOPSOIL REMOVAL = 45.5 S.F.
 CUT = 0.0 S.F.
 FILL = 297.1 S.F.
 TOPSOIL PLACEMENT = 0.0 S.F.

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PLOT SCALE = 20.0000' / in.	DRAWN - MC	REVISED -
PLOT DATE = 9/10/2024	CHECKED - DNM	REVISED -
	DATE - 08/28/2024	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**TEMPORARY US ROUTE 14
 PROPOSED CROSS SECTIONS**

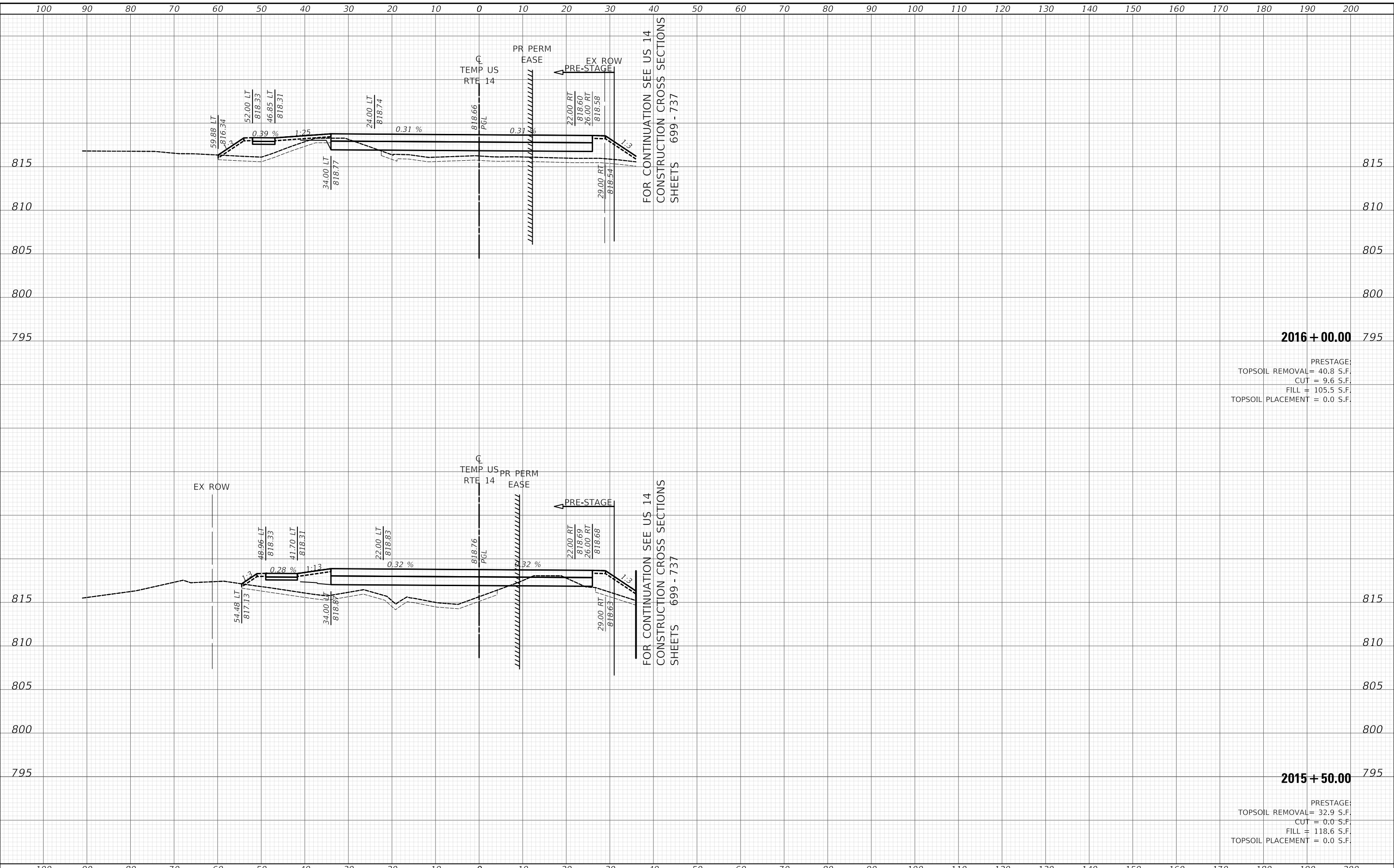
SCALE: SHEET OF SHEETS STA. 2015+00.00 TO STA. 2015+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	687
CONTRACT NO. 61J87				
ILLINOIS			FED. AID PROJECT	

DATE	
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SURVEYED	
PLOTTED	
TEMPLATE	
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CHECKED	
FINAL SURVEY	
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2016 + 00.00

PRESTAGE:
 TOPSOIL REMOVAL = 40.8 S.F.
 CUT = 9.6 S.F.
 FILL = 105.5 S.F.
 TOPSOIL PLACEMENT = 0.0 S.F.

2015 + 50.00

PRESTAGE:
 TOPSOIL REMOVAL = 32.9 S.F.
 CUT = 0.0 S.F.
 FILL = 118.6 S.F.
 TOPSOIL PLACEMENT = 0.0 S.F.

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**TEMPORARY US ROUTE 14
 PROPOSED CROSS SECTIONS**

USER NAME = mc	DESIGNED - NEM	REVISED -
	DRAWN - MC	REVISED -
PLOT SCALE = 20.0000' / in.	CHECKED - DNM	REVISED -
PLOT DATE = 9/10/2024	DATE - 08/28/2024	REVISED -

SCALE: SHEET OF SHEETS STA. 2015+50.00 TO STA. 2016+00.00

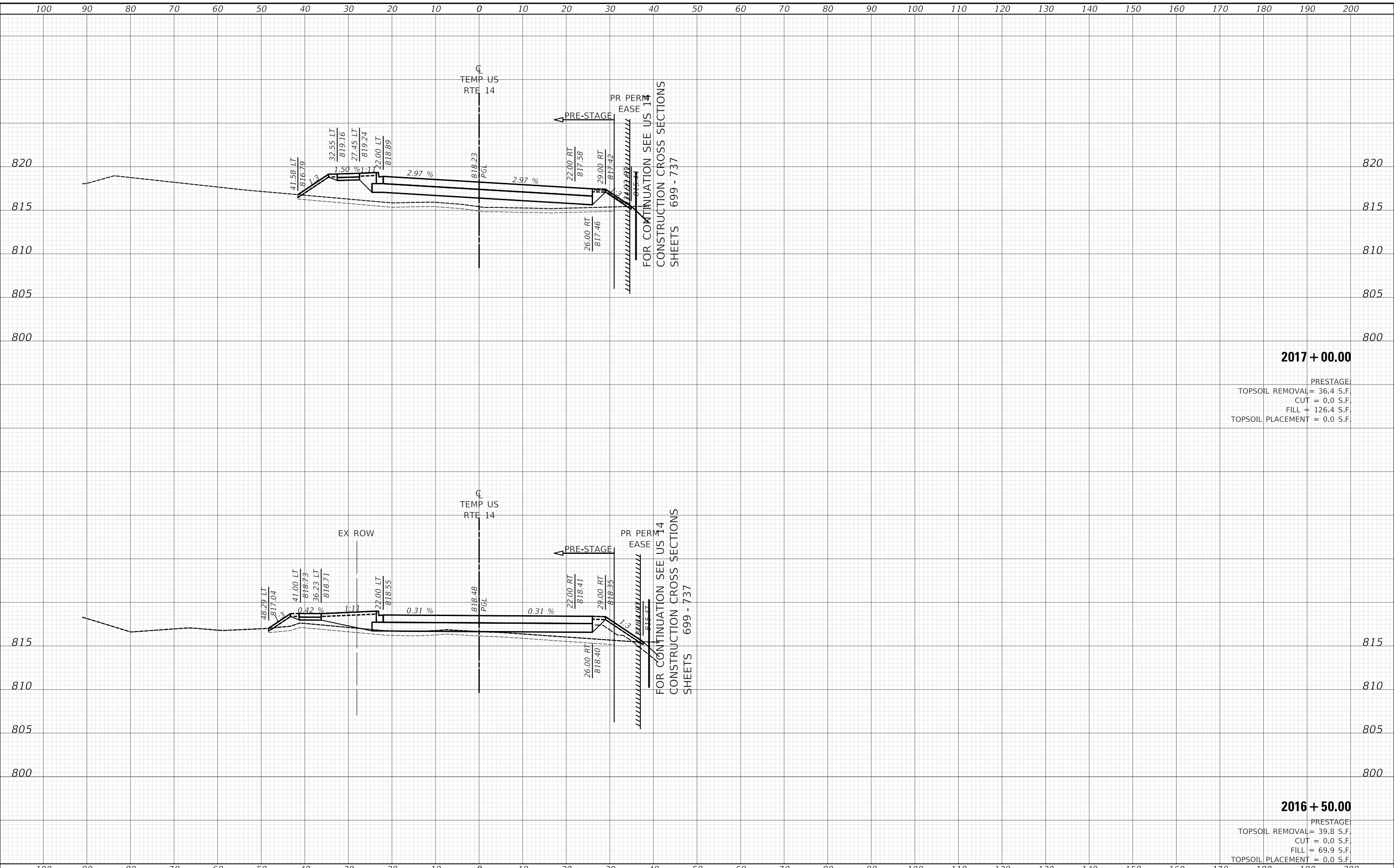
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	688
				CONTRACT NO. 61J87
ILLINOIS FED. AID PROJECT				

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DATE	
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AREAS	
CHECKED	
FINAL SURVEY	
NOTE BOOK	
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DATE	
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ORIGINAL SURVEY	
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2017 + 00.00
 PRESTAGE:
 TOPSOIL REMOVAL = 36.4 S.F.
 CUT = 0.0 S.F.
 FILL = 126.4 S.F.
 TOPSOIL PLACEMENT = 0.0 S.F.

2016 + 50.00
 PRESTAGE:
 TOPSOIL REMOVAL = 39.8 S.F.
 CUT = 0.0 S.F.
 FILL = 69.9 S.F.
 TOPSOIL PLACEMENT = 0.0 S.F.

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	DRAWN - MC	REVISED -
PLOT SCALE = 20.0000' / in.	CHECKED - DNM	REVISED -
PLOT DATE = 9/10/2024	DATE - 08/28/2024	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**TEMPORARY US ROUTE 14
 PROPOSED CROSS SECTIONS**

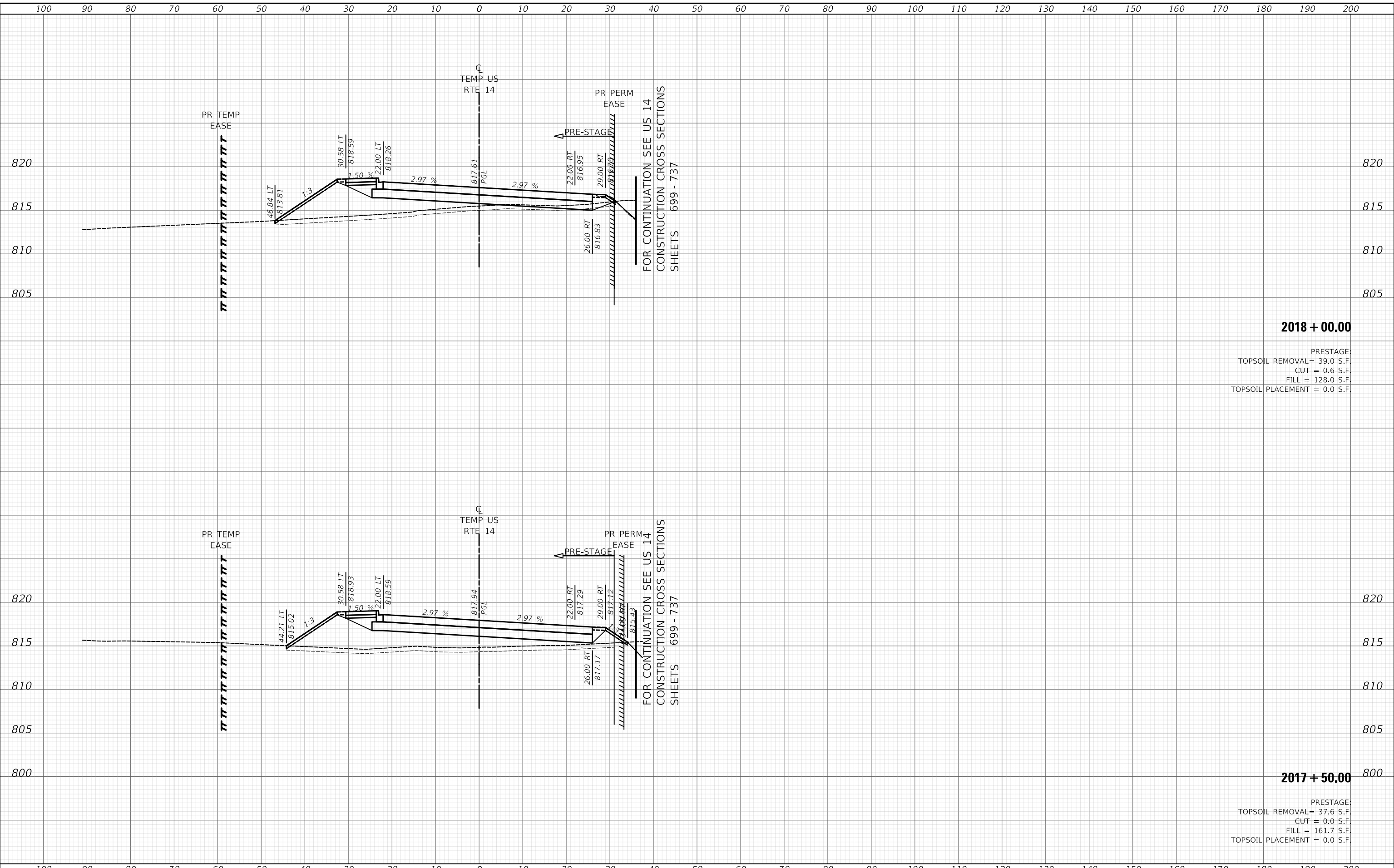
SCALE: SHEET OF SHEETS STA. 2016+50.00 TO STA. 2017+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	689
				CONTRACT NO. 61J87
				ILLINOIS FED. AID PROJECT

DATE	
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FILE NAME: ...118187-PC-15-C5-US-14.dgn



2018 + 00.00

PRESTAGE:
TOPSOIL REMOVAL = 39.0 S.F.
CUT = 0.6 S.F.
FILL = 128.0 S.F.
TOPSOIL PLACEMENT = 0.0 S.F.

2017 + 50.00

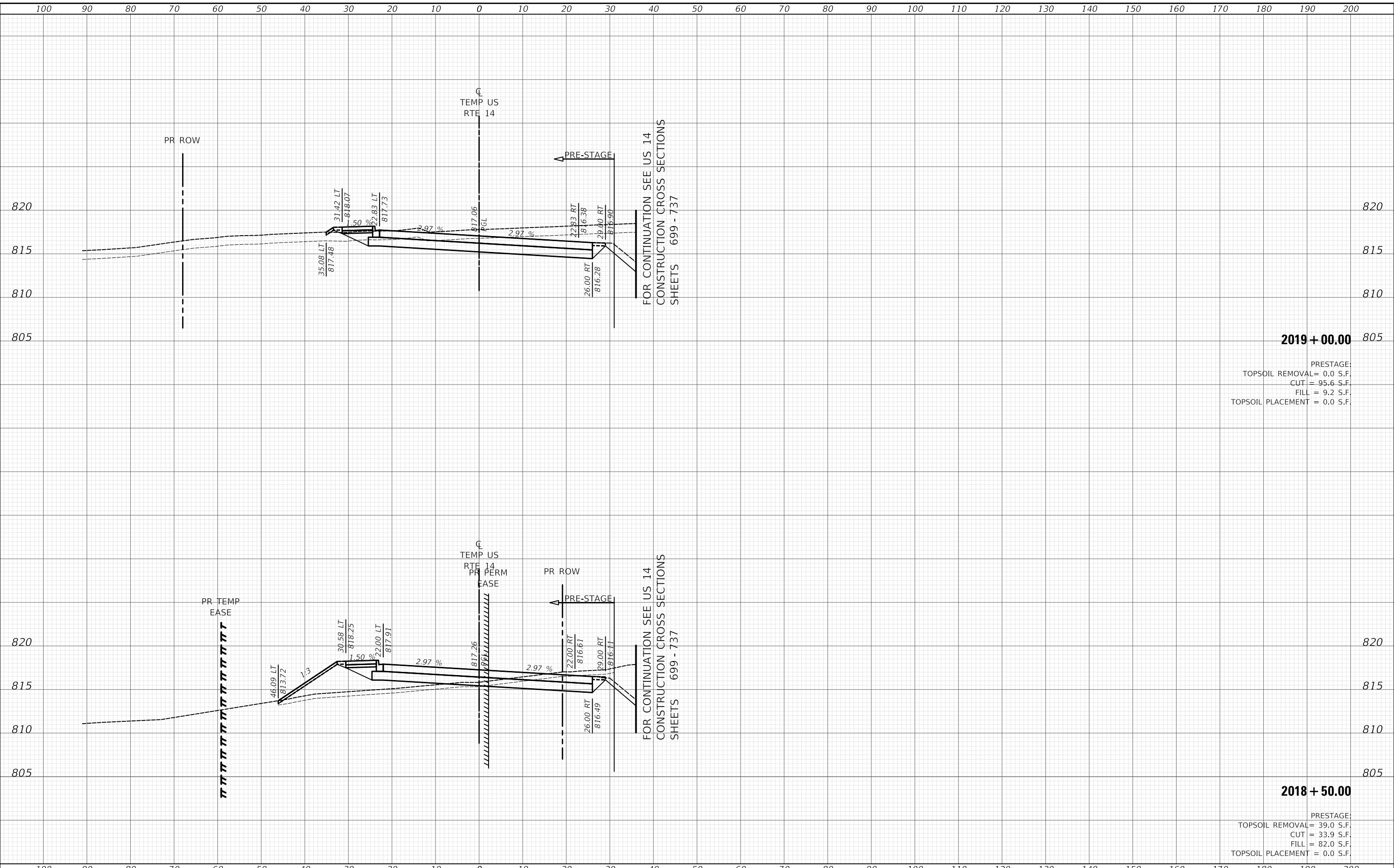
PRESTAGE:
TOPSOIL REMOVAL = 37.6 S.F.
CUT = 0.0 S.F.
FILL = 161.7 S.F.
TOPSOIL PLACEMENT = 0.0 S.F.

<p>Two Pierce Place, Suite 1400 Mascoutah, Illinois 60143 Tel: 630.773.3900 Fax: 630.773.3975 www.civiltechinc.com</p>		USER NAME = mc DESIGNED - NEM DRAWN - MC CHECKED - DNM DATE - 08/28/2024	REVISED - REVISED - REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		TEMPORARY US ROUTE 14 PROPOSED CROSS SECTIONS		F.A.P. RTE. 305 SECTION 11-00087-00-GS COUNTY LAKE TOTAL SHEETS 816 SHEET NO. 690 CONTRACT NO. 61J87	SCALE: SHEET OF SHEETS STA. 2017+50.00 TO STA. 2018+00.00 ILLINOIS FED. AID PROJECT
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DATE	
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CHECKED	
FINAL SURVEY	
NOTE BOOK	
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DATE	
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ORIGINAL SURVEY	
NOTE BOOK	
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MODEL: S:\PROJECTS\11-00087-00-GS\11-00087-00-GS-US-14.dgn



2019 + 00.00

PRESTAGE:
 TOPSOIL REMOVAL = 0.0 S.F.
 CUT = 95.6 S.F.
 FILL = 9.2 S.F.
 TOPSOIL PLACEMENT = 0.0 S.F.

2018 + 50.00

PRESTAGE:
 TOPSOIL REMOVAL = 39.0 S.F.
 CUT = 33.9 S.F.
 FILL = 82.0 S.F.
 TOPSOIL PLACEMENT = 0.0 S.F.

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PLOT SCALE = 20.0000' / in.	DRAWN - MC	REVISED -
PLOT DATE = 9/10/2024	CHECKED - DNM	REVISED -
	DATE - 08/28/2024	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**TEMPORARY US ROUTE 14
 PROPOSED CROSS SECTIONS**

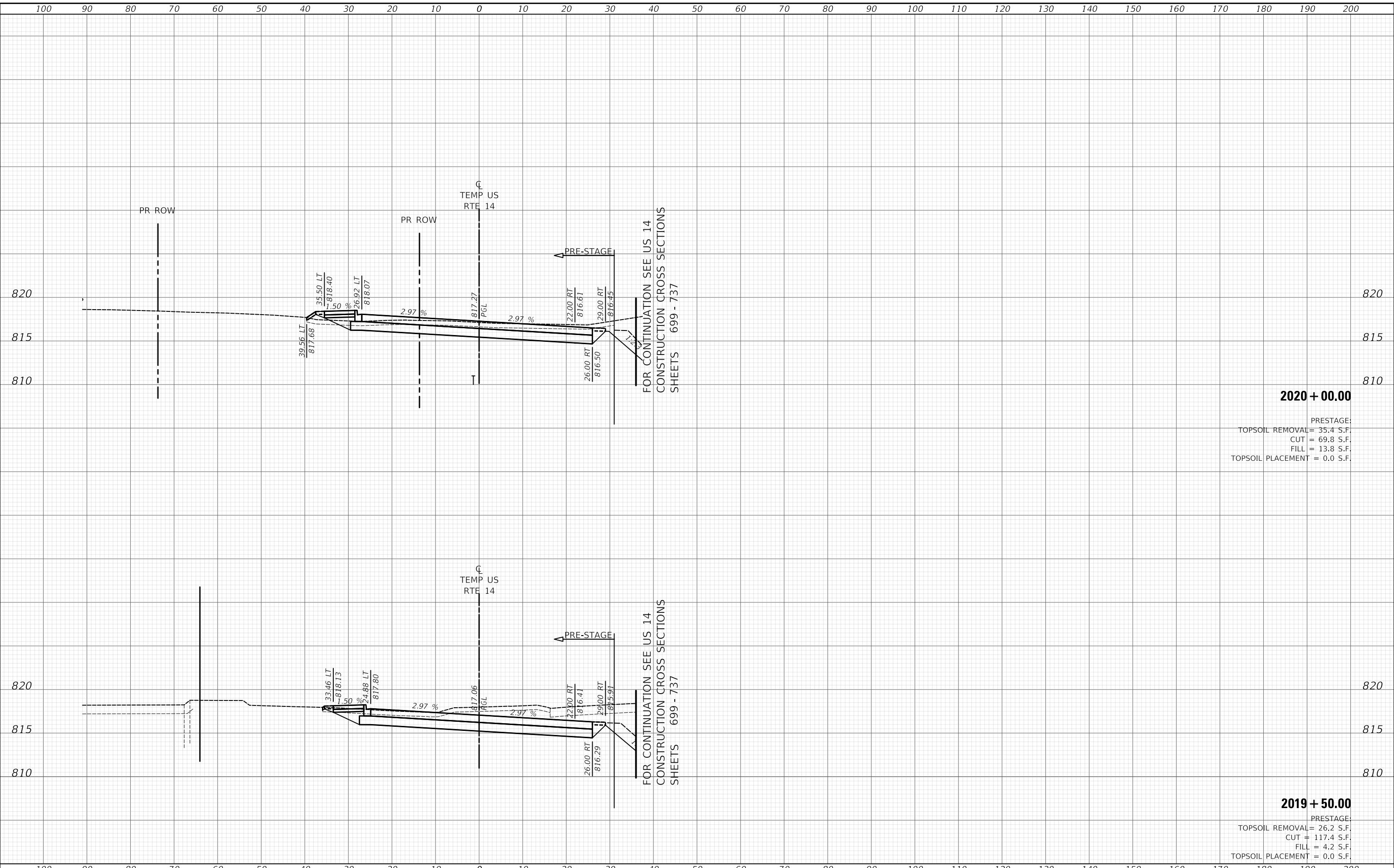
SCALE: SHEET OF SHEETS STA. 2018+50.00 TO STA. 2019+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	691
				CONTRACT NO. 61J87
		ILLINOIS	FED. AID PROJECT	

FINAL SURVEY NO.	SURVEYED	DATE
NOTE BOOK	PLOTTED	
AREAS CHECKED	TEMPLATE	
	AREAS	

ORIGINAL SURVEY NO.	SURVEYED	DATE
NOTE BOOK	PLOTTED	
AREAS CHECKED	TEMPLATE	
	AREAS	

MODEL: S:\MODEL\NAMES
FILE NAME: ...10181875-PC-NC-SS-CS-US-14.dgn



2020 + 00.00
 PRESTAGE:
 TOPSOIL REMOVAL = 35.4 S.F.
 CUT = 69.8 S.F.
 FILL = 13.8 S.F.
 TOPSOIL PLACEMENT = 0.0 S.F.

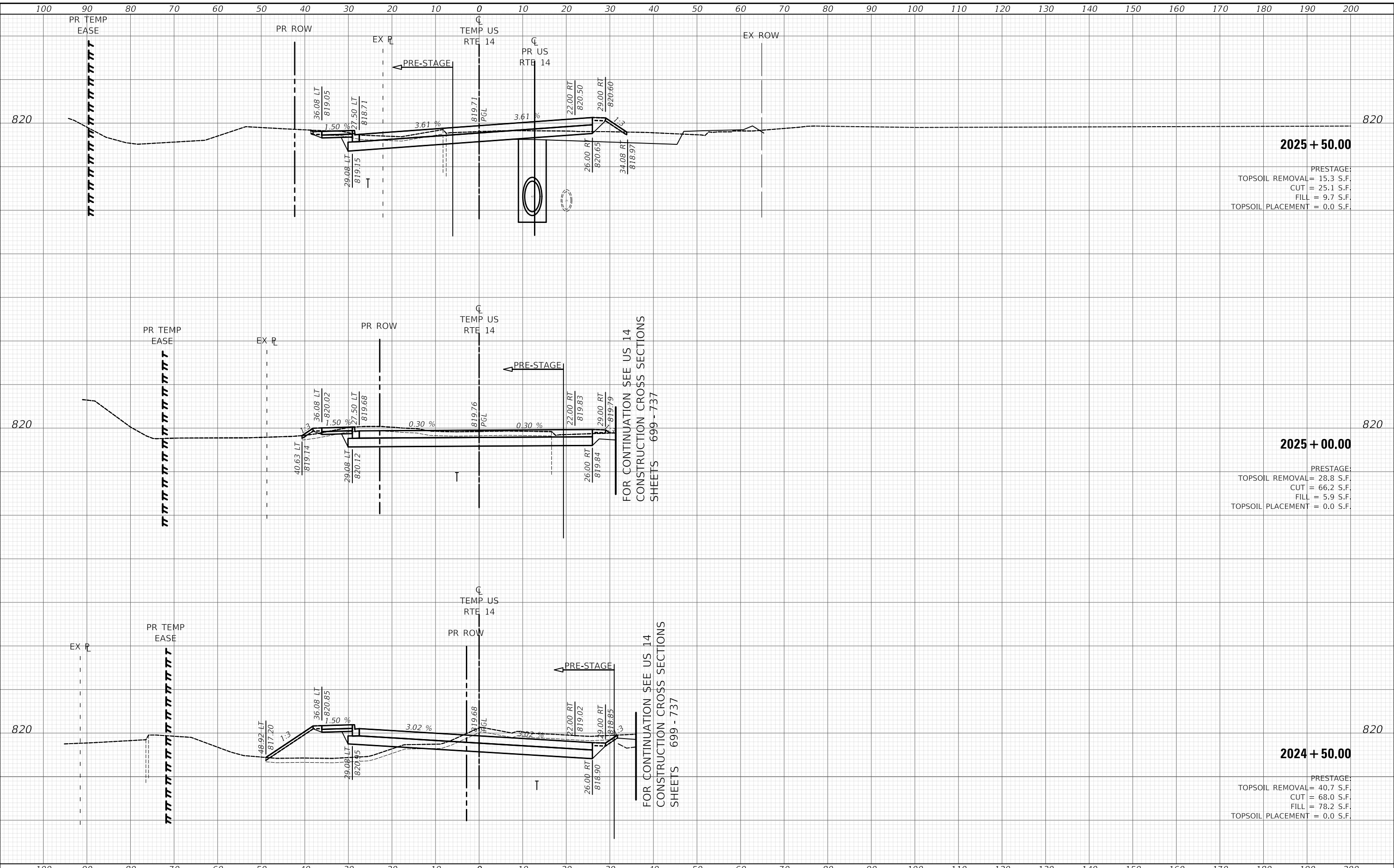
2019 + 50.00
 PRESTAGE:
 TOPSOIL REMOVAL = 26.2 S.F.
 CUT = 117.4 S.F.
 FILL = 4.2 S.F.
 TOPSOIL PLACEMENT = 0.0 S.F.

Two Pierce Place, Suite 1400 Moline, Illinois 61413 Tel: 630.773.3900 Fax: 630.773.3975 www.civiltechinc.com	USER NAME = mc PLOT SCALE = 20.0000' / in. PLOT DATE = 9/10/2024	DESIGNED - NEM DRAWN - MC CHECKED - DNM DATE - 08/28/2024	REVISED - REVISED - REVISED - REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY US ROUTE 14 PROPOSED CROSS SECTIONS	SCALE:	SHEET OF SHEETS	STA. 2019+50.00 TO STA. 2020+00.00	F.A.P. RTE. 305 SECTION 11-00087-00-GS COUNTY LAKE TOTAL SHEETS 816 SHEET NO. 692 CONTRACT NO. 61J87	ILLINOIS FED. AID PROJECT
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DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
FINAL SURVEY	
NOTE BOOK	
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DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
ORIGINAL SURVEY	
NOTE BOOK	
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MODEL: S:\PROJECTS\11875-PRC-14-SS-CS-US-14.dgn
 FILE NAME: ...



2025 + 50.00
 PRESTAGE:
 TOPSOIL REMOVAL = 15.3 S.F.
 CUT = 25.1 S.F.
 FILL = 9.7 S.F.
 TOPSOIL PLACEMENT = 0.0 S.F.

2025 + 00.00
 PRESTAGE:
 TOPSOIL REMOVAL = 28.8 S.F.
 CUT = 66.2 S.F.
 FILL = 5.9 S.F.
 TOPSOIL PLACEMENT = 0.0 S.F.

2024 + 50.00
 PRESTAGE:
 TOPSOIL REMOVAL = 40.7 S.F.
 CUT = 68.0 S.F.
 FILL = 78.2 S.F.
 TOPSOIL PLACEMENT = 0.0 S.F.

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**TEMPORARY US ROUTE 14
 PROPOSED CROSS SECTIONS**

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PLOT SCALE = 20.0000' / in.	DRAWN - MC	REVISED -
PLOT DATE = 9/10/2024	CHECKED - DNM	REVISED -
	DATE - 08/28/2024	REVISED -

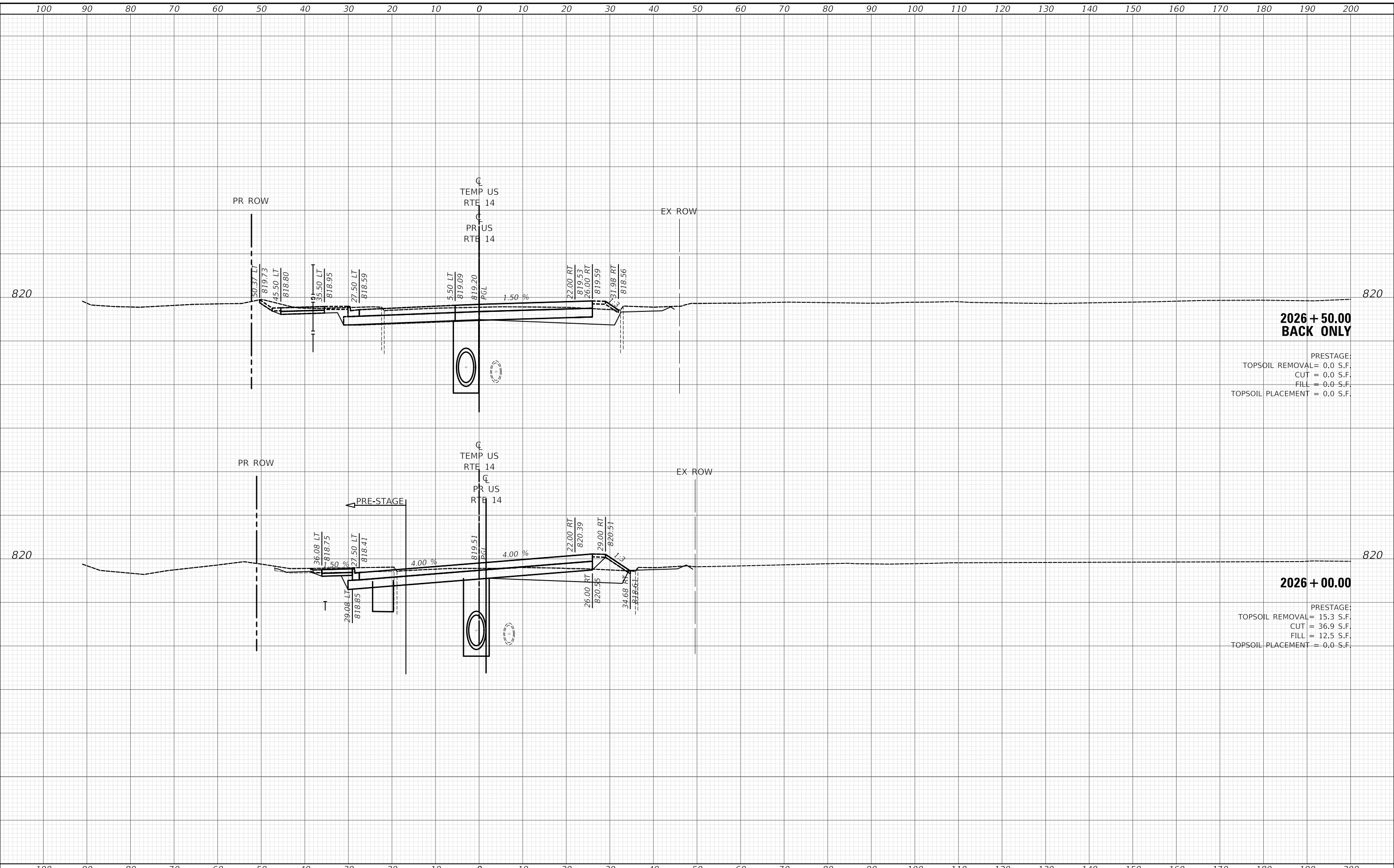
SCALE: SHEET OF SHEETS STA. 2024+50.00 TO STA. 2025+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	696
				CONTRACT NO. 61J87
		ILLINOIS	FED. AID PROJECT	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
AREAS CHECKED	
FINAL SURVEY	
NOTE BOOK	
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DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
AREAS CHECKED	
ORIGINAL SURVEY	
NOTE BOOK	
NO.	

MODEL: S:\MODEL\MAMES
FILE NAME: ...1187-SPR-CV-SS-US-4.dgn



**2026 + 50.00
BACK ONLY**

PRESTAGE:
 TOPSOIL REMOVAL = 0.0 S.F.
 CUT = 0.0 S.F.
 FILL = 0.0 S.F.
 TOPSOIL PLACEMENT = 0.0 S.F.

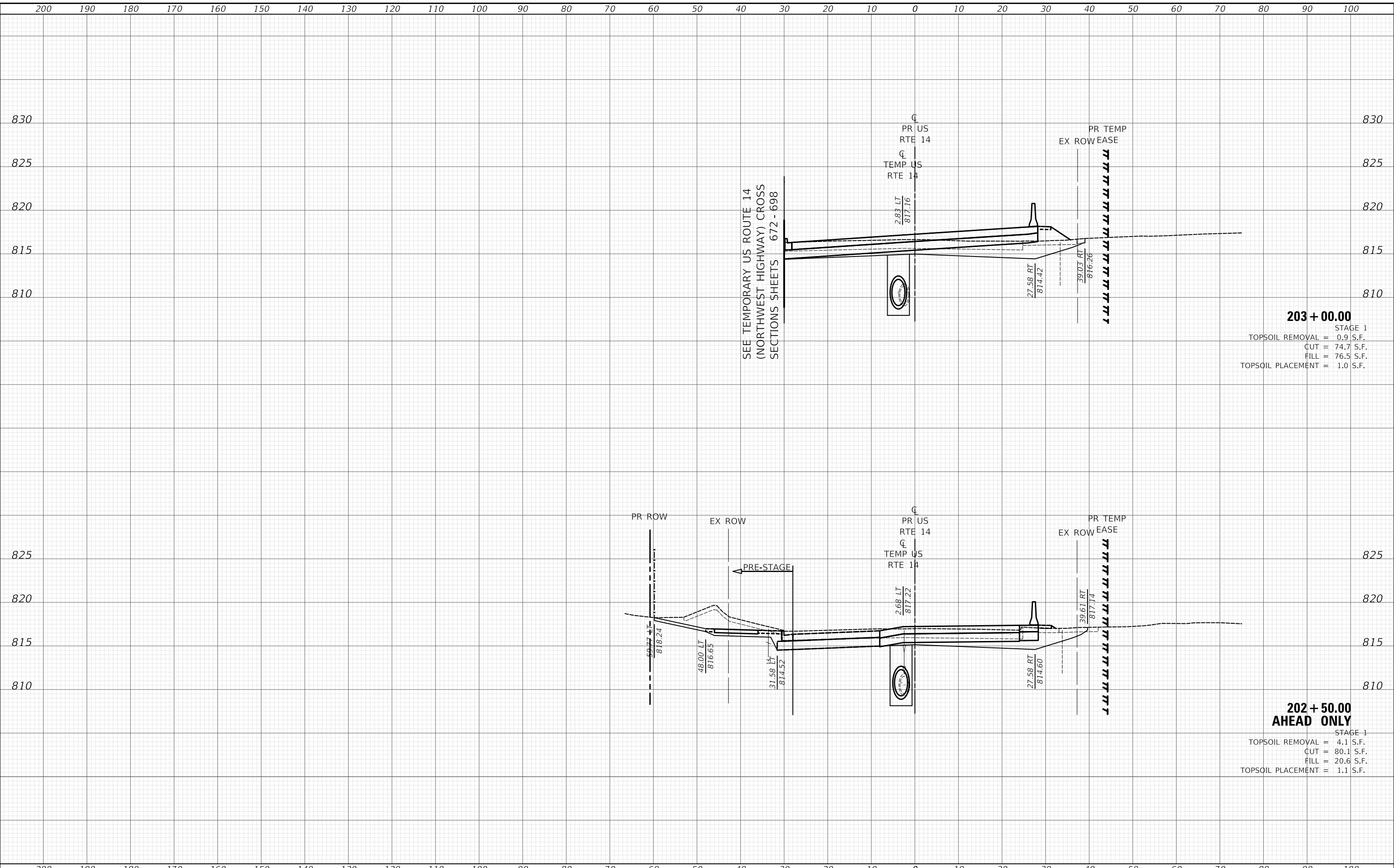
2026 + 00.00

PRESTAGE:
 TOPSOIL REMOVAL = 15.3 S.F.
 CUT = 36.9 S.F.
 FILL = 12.5 S.F.
 TOPSOIL PLACEMENT = 0.0 S.F.

DATE	
BY	
SURVEYED	
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FINAL SURVEY	
NOTE BOOK	
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DATE	
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AREAS	
CHECKED	
ORIGINAL SURVEY	
NOTE BOOK	
NO.	

MODEL: SPODELMAMES
FILE NAME: ...1018187-SPR-ASUS-H-CONST.dgn



203 + 00.00
STAGE 1
TOPSOIL REMOVAL = 0.9 S.F.
CUT = 74.7 S.F.
FILL = 76.5 S.F.
TOPSOIL PLACEMENT = 1.0 S.F.

202 + 50.00
AHEAD ONLY
STAGE 1
TOPSOIL REMOVAL = 4.1 S.F.
CUT = 80.1 S.F.
FILL = 20.6 S.F.
TOPSOIL PLACEMENT = 1.1 S.F.

200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

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PLOT SCALE = 20.0000' / in.	DRAWN - MC	REVISED -
PLOT DATE = 9/10/2024	CHECKED - DNM	REVISED -
	DATE - 08/28/2024	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

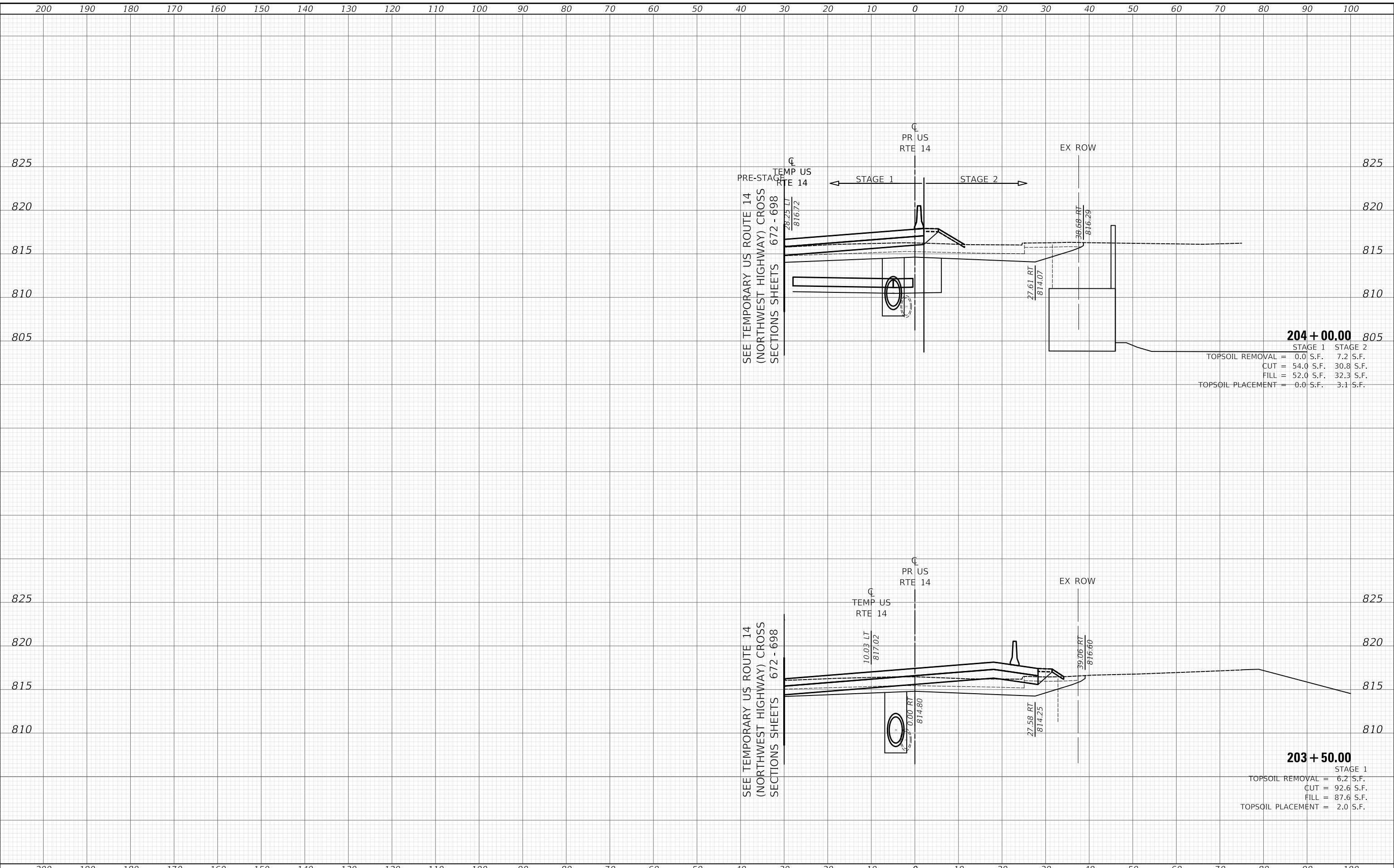
US ROUTE 14
CONSTRUCTION CROSS SECTIONS
SCALE: SHEET OF SHEETS STA. 202+50.00 TO STA. 203+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	699
				CONTRACT NO. 61J87
				ILLINOIS FED. AID PROJECT

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
FINAL SURVEY	
NOTE BOOK	
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DATE	
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MODEL: S:\PROJECTS\11-00087-00-GS\11-00087-00-GS-14-CONST.dgn



200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

USER NAME = mc	DESIGNED - NEM	REVISIED -
	DRAWN - MC	REVISIED -
PLOT SCALE = 20.0000' / in.	CHECKED - DNM	REVISIED -
PLOT DATE = 9/10/2024	DATE - 08/28/2024	REVISIED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

US ROUTE 14 CONSTRUCTION CROSS SECTIONS			
SCALE:	SHEET	OF	SHEETS
	STA. 203+50.00	TO STA.	204+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	11-00087-00-GS	LAKE	816	700
CONTRACT NO. 61J87				
ILLINOIS				FED. AID PROJECT

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