MAINTENANCE FACILITY ELECTRICAL UPGRADE DYERSVILLE, IOWA

IOWA DEPARTMENT OF TRANSPORTATION

UTILITY COORDINATION NOTES

COORDINATE ALL ELECTRIC UTILITY WORK WITH ALLIANT ENERGY

ALLIANT ENERGY CONTACT:
NATE RUCKER
563-587-4543
1-800-255-4268

LOCATE ALL LOCAL UTILITIES IN WORK AREA PRIOR TO STARTING WORK. CONTACT IOWA ONE CALL PRIOR TO DIGGING.

IOWA ONE CALL:
811 or 1-800-292-8989

ELECTRICAL NOTES – GENERAL

ALL WORK SHALL COMPLY WITH APPLICABLE REQUIREMENTS OF THE 2014 NATIONAL ELECTRIC CODE (NEC).

DETERMINE EXISTING CONDITIONS THAT MAY AFFECT THIS WORK, BY ON-SITE INSPECTION PRIOR TO BIDDING.

LABEL CIRCUIT BREAKER NUMBER & PANEL DESIGNATION ON EACH JUNCTION BOX COVER INSTALLED OR ACCESSED AS PART OF THE WORK.

VERIFY POWER REQUIREMENTS AND EXACT LOCATION OF EQUIPMENT FURNISHED. COMPLY WITH ELECTRICAL ROUGH-IN REQUIREMENTS FOR THIS EQUIPMENT.

ALL CIRCUITS SHALL BE IN CONDUIT AND SHALL INCLUDE AN EQUIPMENT GROUNDING CONDUCTOR, GREEN #12 STRANDED COPPER MINIMUM.

ALL CONDUCTORS SHALL BE STRANDED COPPER, #12 AWG MINIMUM. INCREASE CONDUCTOR SIZES A MINIMUM OF ONE SIZE OVER NEC TABLE 310-16 IN CIRCUITS WITH A LENGTH OVER 75 FEET.

IF EXISTING WIRING IS CALLED OUT TO BE REUSED, INSPECT CONDITION AND CURRENT RATING OF WIRE TO DETERMINE IF IT IS SAFE TO REUSE. REPORT ANY UNSATISFACTORY OR UNSAFE CONDITIONS TO THE ENGINEER.

ELECTRICAL DEMOLITION NOTES

DEMOLITION OF ALL ELECTRICAL DEVICES, CIRCUITS, AND OTHER MISCELLANEOUS MATERIALS IS TO BE BY THE ELECTRICAL CONTRACTOR.

INCLUDE IN REMOVAL OF CIRCUITS: WIRING, BOXES, CONDUITS, STRAPS, AND OTHER MISCELLANEOUS MATERIALS BACK TO THE BRANCH PANEL OR TO A JUNCTION BOX THAT IS TO REMAIN. CIRCUITS THAT TERMINATE IN A JUNCTION BOX MAY BE LEFT FOR FUTURE USE AFTER MARKING AS NOTED BELOW.

CIRCUITS THAT ARE REMOVED, AND NOT REUSED, SHALL BE DISCONNECTED AT THE CIRCUIT BREAKER IN THE EXISTING PANEL. FOLD OVER ENDS OF WIRE, DOUBLE WRAP WITH UL LISTED BLACK VINYL TAPE, AND TAG TO IDENTIFY TO WHICH JUNCTION BOX THE CIRCUIT IS TERMINATED. LABEL UNUSED CIRCUIT BREAKERS AS "SPARE".

REMOVE DEMOLISHED MATERIALS PROMPTLY FROM THE SITE AND DISPOSE OF PROPERLY.

LEAVE OLD CIRCUITS INTACT UNTIL NEW CIRCUITS ARE INSTALLED AND FULLY FUNCTIONAL.

EQUIPMENT LABELING

PROVIDE LABELING OF PANELS AND EQUIPMENT AS REQUIRED ON THE NEC AND SPECIFIED IN SPECIFICATION SECTION 16195. LABEL BOTH NEW AND EXISTING PANELS.

PROVIDE IDENTIFICATION OF WIRING AND JUNCTION BOXES AS SPECIFIED IN SECTION 16195.

TRACE EXISTING CIRCUITS FROM EXISTING PANELS ADEQUATE TO CREATE NEW PANEL SCHEDULES FOR EXISTING PANELS.

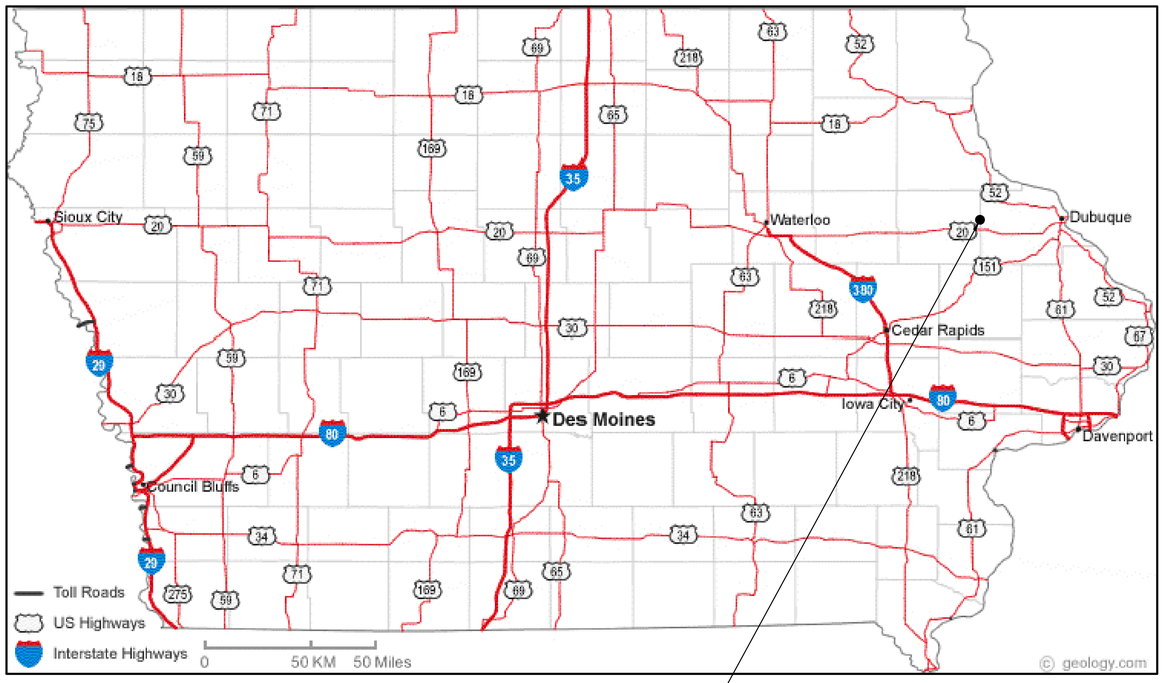
PROVIDE PANEL SCHEDULES FOR BOTH NEW AND ALL EXISTING PANELS AS SPECIFIED IN SECTION 16195.

ELECTRICAL SYMBOLS

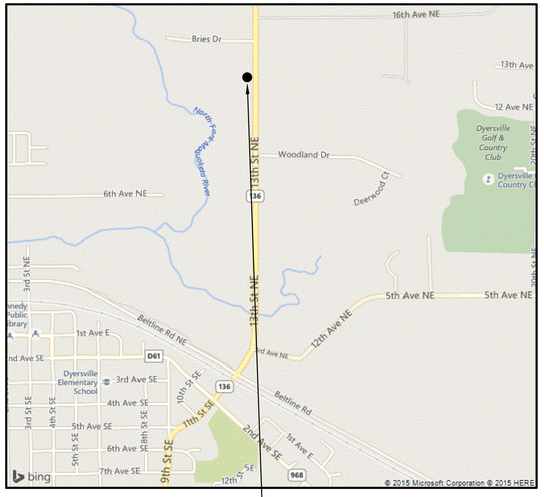
- EXPOSED CONDUIT
- INDICATES PHASE CONDUCTOR(S)
- INDICATES NEUTRAL CONDUCTOR
- INDICATES EQUIPMENT GROUNDING CONDUCTOR
- $ WALL SWITCH, 1-WAY
- (5) CIRCUIT KEYED NOTE REFERENCE
- (2) KEYED NOTE REFERENCE
- (1) / (E2) DETAIL NUMBER REFERENCE / PAGE NUMBER REFERENCE

ABBREVIATIONS

BLDG. – BUILDING
CONT. – CONTINUATION
EJ – EXPANSION JOINT
GALV – GALVANIZED
NEC – NATIONAL ELECTRICAL CODE
RGS – RIGID GALVANIZED STEEL
SCH – SCHEDULE
S.S. – STAINLESS STEEL
SQ – SQUARE
TYP – TYPICAL



PROJECT LOCATION



14117 ROUTE 136 N.
DYERSVILLE, IA 52040

BID BREAKDOWN

PROVIDE THE BID COST OF THE WORK BROKEN INTO TWO COMPONENTS:
1. BRINE BUILDING:
-200A BREAKER IN 1-LINE DISTRIBUTION PANEL.
-FEEDER CIRCUIT IN CONDUIT TO NEW BRINE BUILDING PANEL.
-NEW 200A NEMA 4X PANEL AT BRINE BUILDING.
-DEMOLITION AND SPLICING OF CIRCUITS FROM EXISTING BRINE BUILDING PANEL.

2. MAINTENANCE FACILITY: ALL OTHER WORK WORK EXCEPT WORK INVOLVING THE BRINE BUILDING LISTED ABOVE.

REFER TO SPECIFICATION SECTION 16010 FOR ADDITIONAL INFORMATION.

EXISTING WIRING

IF EXISTING WIRING IS CALLED OUT TO BE REUSED, INSPECT CONDITION AND CURRENT RATING OF WIRE TO DETERMINE IF IT IS SAFE TO REUSE. REPORT ANY UNSATISFACTORY OR UNSAFE CONDITIONS TO THE ENGINEER.

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MAINTENANCE FACILITY
ELECTRICAL UPGRADE
DYERSVILLE, IOWA

SHEET TITLE
COVER SHEET

SCALE:
AS NOTED

DRAWN BY:
M.C., R.M.

APPROVED:
R.M.

REVISIONS:

DATE:
OCTOBER 2, 2015

PROJECT NO.:
ME 1521

SHEET NO.:
CS

ELECTRICAL KEYED NOTES

1. DEMOLISH EXISTING HIGH BAY METAL HALIDE LIGHT FIXTURE AND REPLACE WITH NEW FLUORESCENT HIGH BAY LIGHT FIXTURE IN NEW LOCATION SHOWN ON PLAN (75 FIXTURES TOTAL). 50 NEW FIXTURES ARE FURNISHED BY THE IOWA DEPARTMENT OF TRANSPORTATION (IA DOT). THE 50 FIXTURES FURNISHED BY THE IA DOT ARE CURRENTLY STORED IN ANOTHER BUILDING ON SITE. CONTRACTOR SHALL FURNISH THE REMAINING 25 FIXTURES. PROVIDE A 4"X4"X2" STEEL JUNCTION BOX WITH COVER IN DEMOLISHED FIXTURE LOCATION. DISPOSE OF DEMOLISHED FIXTURE.
NOTE: LIGHT FIXTURES IN PARTS (ROOM 105) ARE BEING REPLACED WITH NEW FIXTURES IN SAME LOCATION.

   EXTEND NEW CIRCUIT, INCLUDING CONDUIT, CONDUCTORS, AND CONDUIT FITTINGS, FROM JUNCTION BOX TO NEW FIXTURE. REUSE EXISTING CONDUCTORS FROM JUNCTION BOX TO EXISTING SWITCH. VERIFY THAT THERE IS AN EQUIPMENT GROUNDING CONDUCTOR. INSPECT EXISTING WIRING FOR DEFECTS OR POTENTIAL SAFETY ISSUES. REPORT ANY ISSUES OR UNSAFE CONDITIONS TO THE ENGINEER.

   PROVIDE CABLE HANGAR ASSEMBLIES, (2) PER FIXTURE, AS NOTED IN THE LIGHT FIXTURE SCHEDULE, CONSISTING OF 20' ADJUSTABLE AIRCRAFT CABLE (ADJUST LENGTH AS REQUIRED FOR FIXTURE HEIGHT), 2–HOOKS, AND Y HANGARS. CABLE SHALL BY 7X19 CONSTRUCTION WITH DIAMETER SELECTED BY THE LIGHT FIXTURE MANUFACTURER. PROVIDE SUPPORTS FROM OVERHEAD STRUCTURE FOR NEW FIXTURES. SUPPORTS INCLUDE GALV. STEEL STRUT, THREADED HANGAR RODS, BEAM CLAMPS, FASTENERS, AND MISC. MATERIALS REQUIRED TO SUPPORT THE NEW FIXTURES FROM CABLE HANGAR ASSEMBLIES. PROVIDE WASHERS BEHIND ALL NUTS. PROVIDE NEW BLANK COVER PLATES FOR EXISTING JUNCTION BOXES IF REQUIRED. THE CABLE HANGAR ASSEMBLIES SPECIFIED ON THE LIGHT FIXTURE SCHEDULE HAVE BEEN SELECTED BY THE MANUFACTURER SPECIFICALLY FOR THE LIGHT FIXTURES SPECIFIED. THERE SHALL BE NO SUBSTITUTIONS. MATCH EXISTING FIXTURE HEIGHT ABOVE FLOOR. VERIFY THERE IS ENOUGH CLEARANCE OVER THE OVERHEAD DOOR AND TO EXISTING STRUCTURE, MODIFY HEIGHT OF FIXTURES AS REQUIRED TO PROVIDE ADEQUATE CLEARANCES.

2. DEMOLISH EXISTING HIGH BAY METAL HALIDE LIGHT FIXTURE AND REPLACE WITH NEW WET LOCATION FLUORESCENT HIGH BAY LIGHT FIXTURE IN NEW LOCATION SHOWN ON PLAN (18 FIXTURES TOTAL). ALL 18 NEW FIXTURES SHALL BE FURNISHED BY THE CONTRACTOR. PROVIDE A 4"X4"X2" STEEL JUNCTION BOX WITH COVER IN DEMOLISHED FIXTURE LOCATION. DISPOSE OF DEMOLISHED FIXTURE.

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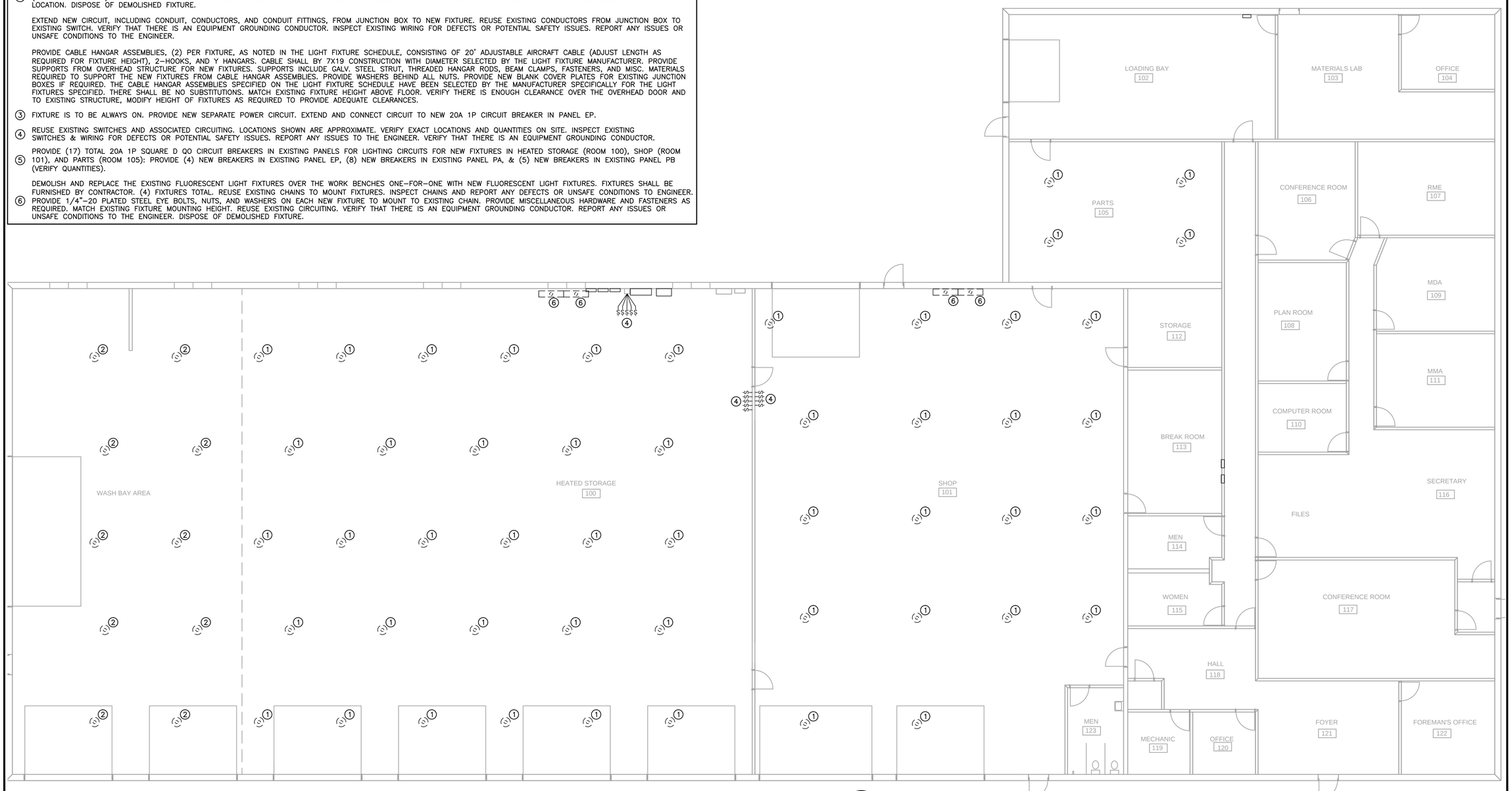
3. FIXTURE IS TO BE ALWAYS ON. PROVIDE NEW SEPARATE POWER CIRCUIT. EXTEND AND CONNECT CIRCUIT TO NEW 20A 1P CIRCUIT BREAKER IN PANEL EP.

4. REUSE EXISTING SWITCHES AND ASSOCIATED CIRCUITING. LOCATIONS SHOWN ARE APPROXIMATE. VERIFY EXACT LOCATIONS AND QUANTITIES ON SITE. INSPECT EXISTING SWITCHES & WIRING FOR DEFECTS OR POTENTIAL SAFETY ISSUES. REPORT ANY ISSUES TO THE ENGINEER. VERIFY THAT THERE IS AN EQUIPMENT GROUNDING CONDUCTOR.

5. PROVIDE (17) TOTAL 20A 1P SQUARE D QO CIRCUIT BREAKERS IN EXISTING PANELS FOR LIGHTING CIRCUITS FOR NEW FIXTURES IN HEATED STORAGE (ROOM 100), SHOP (ROOM 101), AND PARTS (ROOM 105): PROVIDE (4) NEW BREAKERS IN EXISTING PANEL EP, (8) NEW BREAKERS IN EXISTING PANEL PA, & (5) NEW BREAKERS IN EXISTING PANEL PB (VERIFY QUANTITIES).

6. DEMOLISH AND REPLACE THE EXISTING FLUORESCENT LIGHT FIXTURES OVER THE WORK BENCHES ONE–FOR–ONE WITH NEW FLUORESCENT LIGHT FIXTURES. FIXTURES SHALL BE FURNISHED BY CONTRACTOR. (4) FIXTURES TOTAL. REUSE EXISTING CHAINS TO MOUNT FIXTURES. INSPECT CHAINS AND REPORT ANY DEFECTS OR UNSAFE CONDITIONS TO ENGINEER. PROVIDE 1/4"–20 PLATED STEEL EYE BOLTS, NUTS, AND WASHERS ON EACH NEW FIXTURE TO MOUNT TO EXISTING CHAIN. PROVIDE MISCELLANEOUS HARDWARE AND FASTENERS AS REQUIRED. MATCH EXISTING FIXTURE MOUNTING HEIGHT. REUSE EXISTING CIRCUITING. VERIFY THAT THERE IS AN EQUIPMENT GROUNDING CONDUCTOR. REPORT ANY ISSUES OR UNSAFE CONDITIONS TO THE ENGINEER. DISPOSE OF DEMOLISHED FIXTURE.



LIGHTING DEMOLITION PLAN

SCALE: 1/8" = 1' – 0"

NORTH

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MAINTENANCE FACILITY
ELECTRICAL UPGRADE

DYERSVILLE, IOWA

SHEET TITLE
LIGHTING DEMOLITION PLAN

SCALE: AS NOTED

DRAWN BY: M.C., R.M.

APPROVED: R.M.

REVISIONS:

DATE: OCTOBER 2, 2015

PROJECT NO.: ME 1521

SHEET NO.: D1

CIRCUIT SCHEDULE

TAG	CIRCUIT SERVES	# OF SETS	CONDUCTOR INFORMATION	CONDUIT SIZE
1	600A I–LINE PANEL	(2)	(4) 350 kcmil THWN–2	3"
2	EXISTING MDP	(1)	(4) 600 kcmil THWN–2 + (1) #3 AWG THWN–2 E.G.C.	4"
3	NEW BRINE BUILDING	(1)	(4) #4/0 AWG THWN–2 + (1) #6 AWG THWN–2 E.G.C.	3"
4	GROUNDING CONDUCTORS	(1)	(1) #2/0 AWG THWN–2 E.G.C.	2
5	GENERATOR EMERGENCY STOP SWITCH	(1)	(2) #12 AWG THWN–2 + (1) #12 AWG THWN–2 E.G.C.	3/4"

TVSS SCHEDULE

TAG	MANUFACTURER	MODEL	RATINGS			SURGE CURRENT RATING (kA)	MODES PROTECTED	NOTES
			VOLTS	PHASE	WIRES			
TVSS–1	SQUARE D	TVS2EMA24S(1)	208/120	3	4+GRND.	240	L–N/L–L/L–G/N–G	1

NOTES:
1. SERVED FROM 60A 3P CIRCUIT BREAKER IN DISTRIBUTION PANEL.

ELECTRIC DISTRIBUTION NOTES

1. APPLY ANTIOXIDANT PASTE TO ALL CONDUCTORS WHERE THEY CONNECT TO LUGS. TORQUE ALL CONNECTIONS TO VALUES RECOMMENDED BY THE EQUIPMENT MANUFACTURER.
2. ROUTE GROUNDING CONDUCTORS AS SHORT & DIRECT AS POSSIBLE. MINIMIZE BENDS. MAKE REQ'D BENDS W/ LARGE RADIUS. STRAP CONDUIT TO WALL W/ PVC STRAPS. INSTALL GROUNDING CONDUCTOR IN CONDUIT EVERYWHERE ABOVE GRADE AND BELOW GRADE TO BURIAL DEPTH IN 1" SCH80 PVC.
3. REUSE EXISTING LB FITTING AND CONDUIT PENETRATION THROUGH EXTERIOR WALL AND INTO BACK OF EXISTING MDP AFTER DEMOLISHING EXISTING CONDUCTORS.
4. PROVIDE A 4" RIGID GALVANIZED CONDUIT EXPANSION JOINT FROM AN APPROVED MANUFACTURER. ANCHOR TO BUILDING USING S.S. STRUT.
5. RELOCATE EXISTING KW/HR METER TO NEW STAINLESS STEEL EQUIPMENT STAND. PROVIDE WIRING AS REQUIRED BY ALLIANT ENERGY IN THEIR 2015 ELECTRIC SERVICE RULES. COORDINATE WORK WITH ALLIANT ENERGY.
6. VERIFY THAT THE FOLLOWING GROUNDING CONNECTIONS EXIST AT THE EXISTING MDP. REPORT ANY THAT DO NOT EXIST OR ANY UNSAFE CONDITIONS TO THE ENGINEER:
   –MDP GROUNDING BAR BONDED TO COLD WATER PIPE AT WATER SERVICE ENTRANCE.
   –JUMPER ACROSS WATER METER AT WATER SERVICE ENTRANCE.
   –GROUNDING BAR BONDED TO BUILDING STEEL IF APPLICABLE.
   –VERIFY THAT THE NEUTRAL AND GROUND BARS ARE NOT BONDED. REMOVE BOND IF IT DOES EXIST.
   AFTER THE NEW SERVICE IS ESTABLISHED, DEMOLISH EXISTING CONDUCTORS BACK TO THE TRANSFORMER. DEMOLISH ALL ABOVE GROUND PORTIONS OF THE CONDUIT. CUT EXISTING CONDUIT 2' BELOW GRADE AND ABANDON EXISTING CONDUIT IN PLACE BELOW GRADE. PLUG EXISTING CONDUIT WITH DUCT SEAL PUTTY OR OTHER APPROVED METHOD AFTER EXISTING CONDUCTORS HAVE BEEN REMOVED. ADD GROUNDING LUG IN MDP. PROVIDE NEW GROUNDING CONDUCTOR AND CONNECT TO NEW ATS & GENERATOR SET GROUNDING LUGS.
7. BOND NEUTRAL AND GROUND BAR TOGETHER AT ONE POINT ONLY.
8. PROVIDE A CT CABINET AS RECOMMENDED BY ALLIANT ENERGY IN THEIR 2015 ELECTRIC SERVICE RULES. COORDINATE WORK WITH ALLIANT ENERGY. REFER TO UTILITY COORDINATION NOTES ON SHEET CS.
9. PROVIDE (1) 2P SPACE IN DISTRIBUTION PANEL FOR FUTURE EXPANSION.
10. PROVIDE A GENERATOR EMERGENCY SHUTOFF SWITCH FOR EXISTING GENERATOR. PROVIDE CIRCUIT FROM SHUTOFF SWITCH TO EXISTING GENERATOR EMERGENCY SHUTOFF CONNECTIONS. PROVIDE AN ENGRAVED PLASTIC LABEL ON EMERGENCY SHUTOFF SWITCH. THE LABEL SHALL SAY "ELECTRICAL SYSTEM IS EQUIPPED WITH AN EMERGENCY GENERATOR. GENERATOR SHUTOFF SWITCH TO DISCONNECT EMERGENCY POWER". REFER TO SPECIFICATION SECTION 16195 FOR ADDITIONAL INFORMATION.

CONDUIT SCHEDULE

REFER TO SECTION 16110 FOR FITTINGS & ADDITIONAL REQUIREMENTS.

PROVIDE CONDUIT IN THE SIZES SHOWN ON THE CIRCUIT SCHEDULE & OF THE TYPES AS FOLLOWS (UNLESS NOTED OTHERWISE ON DRAWINGS):

BELOW GROUND: SCH80 RIGID PVC

ABOVE GROUND, OUTSIDE: SCH40 RIGID GALVANIZED STEEL

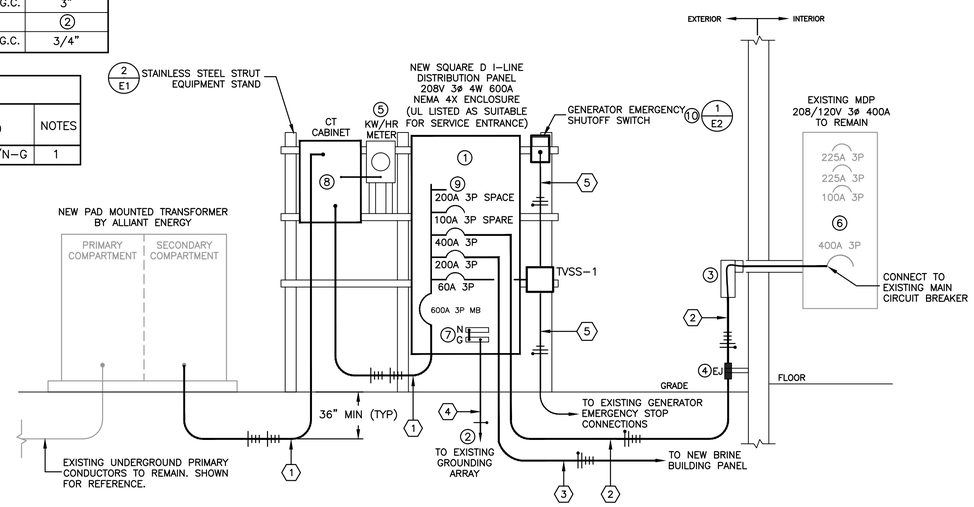
SWEEPS OR ELBOWS, OUTSIDE: SCH40 RIGID GALVANIZED STEEL

GROUNDING CONDUCTOR, ABOVE GROUND: SCH80 RIGID PVC

ABOVE GROUND, WITHIN THE BUILDING: EMT.

SPECIAL CONDITIONS

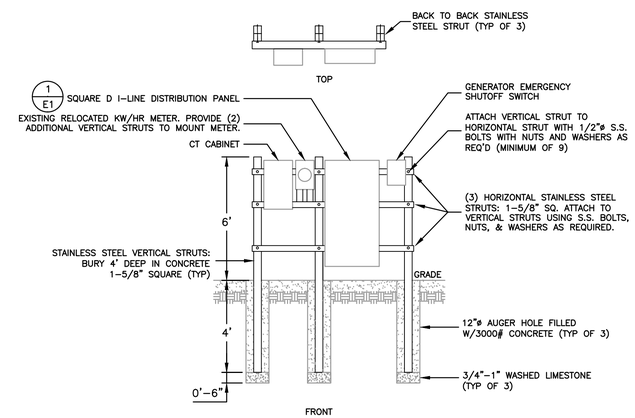
WORK INVOLVING SIGNIFICANT POWER DISRUPTIONS MUST BE PREFORMED WITHOUT MAJOR DISRUPTION TO THE OWNER'S NORMAL ACTIVITIES. REFER TO SPEC SECTION 16010–1.



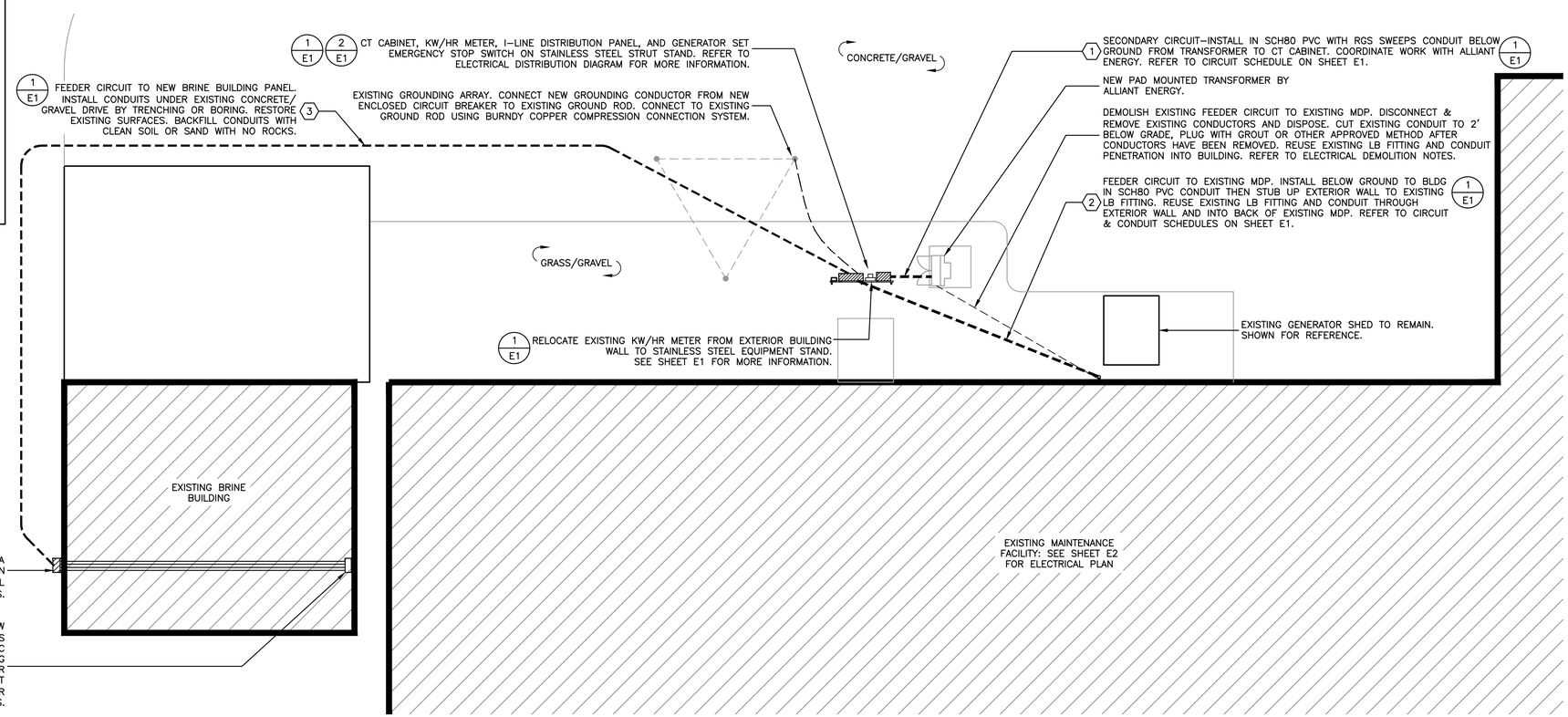
1 ELECTRICAL DISTRIBUTION DIAGRAM
NOT TO SCALE

SUPPORT STAND NOTES

STRUTS: 1–5/8"W X 1–5/8"D NOMINAL STAINLESS STEEL. ALL FASTENERS AND HARDWARE SHALL BE STAINLESS STEEL. USE SPRING LOADED NUTS FOR ALL FASTENERS. PROVIDE S.S. FLAT WASHER UNDER ALL BOLT HEADS.



2 EQUIPMENT STAND DETAIL
NOT TO SCALE



ELECTRICAL SITE PLAN
SCALE: 1" = 10' – 0"

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MAINTENANCE FACILITY ELECTRICAL UPGRADE

DYERSVILLE, IOWA

SHEET TITLE
ELECTRICAL SITE PLAN

SCALE: AS NOTED

DRAWN BY: M.C., R.M.

APPROVED: R.M.

REVISIONS:

DATE: OCTOBER 2, 2015

PROJECT NO.: ME 1521

SHEET NO.: E1

ELECTRICAL KEYED NOTES

1. DEMOLISH EXISTING HIGH BAY METAL HALIDE LIGHT FIXTURE AND REPLACE WITH NEW FLUORESCENT HIGH BAY LIGHT FIXTURE IN NEW LOCATION SHOWN ON PLAN (75 FIXTURES TOTAL). 50 NEW FIXTURES ARE FURNISHED BY THE IOWA DEPARTMENT OF TRANSPORTATION (IA DOT). THE 50 FIXTURES FURNISHED BY THE IA DOT ARE CURRENTLY STORED IN ANOTHER BUILDING ON SITE. CONTRACTOR SHALL FURNISH THE REMAINING 25 FIXTURES. PROVIDE A 4"X4"X2" STEEL JUNCTION BOX WITH COVER IN DEMOLISHED FIXTURE LOCATION. DISPOSE OF DEMOLISHED FIXTURE.
   NOTE: LIGHT FIXTURES IN PARTS (ROOM 105) ARE BEING REPLACED WITH NEW FIXTURES IN SAME LOCATION.

   EXTEND NEW CIRCUIT, INCLUDING CONDUIT, CONDUCTORS, AND CONDUIT FITTINGS, FROM JUNCTION BOX TO NEW FIXTURE. REUSE EXISTING CONDUCTORS FROM JUNCTION BOX TO EXISTING SWITCH. VERIFY THAT THERE IS AN EQUIPMENT GROUNDING CONDUCTOR. INSPECT EXISTING WIRING FOR DEFECTS OR POTENTIAL SAFETY ISSUES. REPORT ANY ISSUES OR UNSAFE CONDITIONS TO THE ENGINEER.

   PROVIDE CABLE HANGAR ASSEMBLIES, (2) PER FIXTURE, AS NOTED IN THE LIGHT FIXTURE SCHEDULE, CONSISTING OF 20' ADJUSTABLE AIRCRAFT CABLE (ADJUST LENGTH AS REQUIRED FOR FIXTURE HEIGHT), 2-HOOKS, AND Y HANGARS. CABLE SHALL BY 7X19 CONSTRUCTION WITH DIAMETER SELECTED BY THE LIGHT FIXTURE MANUFACTURER. PROVIDE SUPPORTS FROM OVERHEAD STRUCTURE FOR NEW FIXTURES. SUPPORTS INCLUDE GALV. STEEL STRUT, THREADED HANGAR RODS, BEAM CLAMPS, FASTENERS, AND MISC. MATERIALS REQUIRED TO SUPPORT THE NEW FIXTURES FROM CABLE HANGAR ASSEMBLIES. PROVIDE WASHERS BEHIND ALL NUTS. PROVIDE NEW BLANK COVER PLATES FOR EXISTING JUNCTION BOXES IF REQUIRED. THE CABLE HANGAR ASSEMBLIES SPECIFIED ON THE LIGHT FIXTURE SCHEDULE HAVE BEEN SELECTED BY THE MANUFACTURER SPECIFICALLY FOR THE LIGHT FIXTURES SPECIFIED. THERE SHALL BE NO SUBSTITUTIONS. MATCH EXISTING FIXTURE HEIGHT ABOVE FLOOR. VERIFY THERE IS ENOUGH CLEARANCE OVER THE OVERHEAD DOOR AND TO EXISTING STRUCTURE, MODIFY HEIGHT OF FIXTURES AS REQUIRED TO PROVIDE ADEQUATE CLEARANCES.
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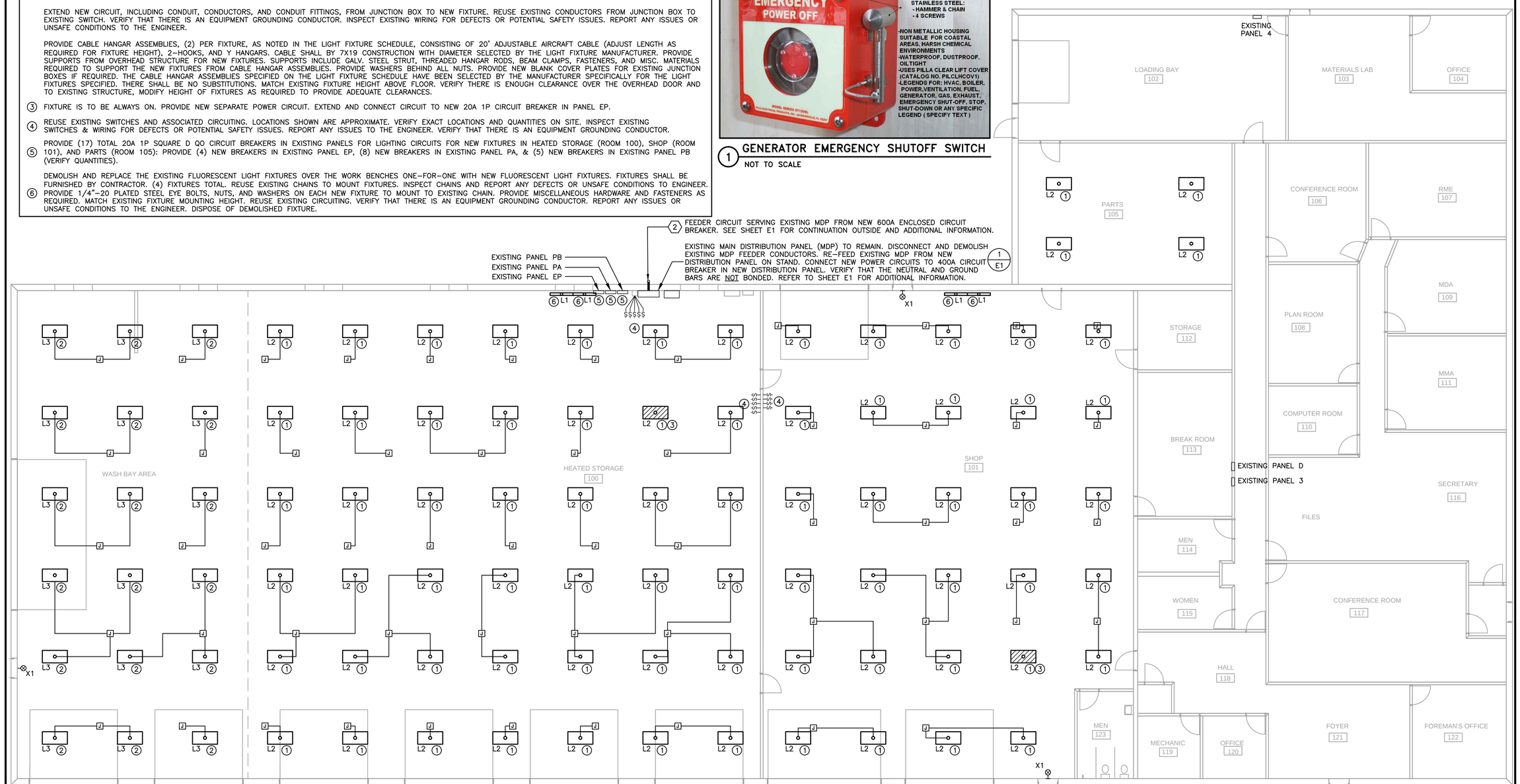
3. FIXTURE IS TO BE ALWAYS ON. PROVIDE NEW SEPARATE POWER CIRCUIT. EXTEND AND CONNECT CIRCUIT TO NEW 20A 1P CIRCUIT BREAKER IN PANEL EP.
4. REUSE EXISTING SWITCHES AND ASSOCIATED CIRCUITING. LOCATIONS SHOWN ARE APPROXIMATE. VERIFY EXACT LOCATIONS AND QUANTITIES ON SITE. INSPECT EXISTING SWITCHES & WIRING FOR DEFECTS OR POTENTIAL SAFETY ISSUES. REPORT ANY ISSUES TO THE ENGINEER. VERIFY THAT THERE IS AN EQUIPMENT GROUNDING CONDUCTOR.
5. PROVIDE (17) TOTAL 20A 1P SQUARE D QO CIRCUIT BREAKERS IN EXISTING PANELS FOR LIGHTING CIRCUITS FOR NEW FIXTURES IN HEATED STORAGE (ROOM 100), SHOP (ROOM 101), AND PARTS (ROOM 105): PROVIDE (4) NEW BREAKERS IN EXISTING PANEL EP, (8) NEW BREAKERS IN EXISTING PANEL PA, & (5) NEW BREAKERS IN EXISTING PANEL PB (VERIFY QUANTITIES).
6. DEMOLISH AND REPLACE THE EXISTING FLUORESCENT LIGHT FIXTURES OVER THE WORK BENCHES ONE-FOR-ONE WITH NEW FLUORESCENT LIGHT FIXTURES. FIXTURES SHALL BE FURNISHED BY CONTRACTOR. (4) FIXTURES TOTAL. REUSE EXISTING CHAINS TO MOUNT FIXTURES. INSPECT CHAINS AND REPORT ANY DEFECTS OR UNSAFE CONDITIONS TO ENGINEER. PROVIDE 1/4"-20 PLATED STEEL EYE BOLTS, NUTS, AND WASHERS ON EACH NEW FIXTURE TO MOUNT TO EXISTING CHAIN. PROVIDE MISCELLANEOUS HARDWARE AND FASTENERS AS REQUIRED. MATCH EXISTING FIXTURE MOUNTING HEIGHT. REUSE EXISTING CIRCUITING. VERIFY THAT THERE IS AN EQUIPMENT GROUNDING CONDUCTOR. REPORT ANY ISSUES OR UNSAFE CONDITIONS TO THE ENGINEER. DISPOSE OF DEMOLISHED FIXTURE.

LIGHT FIXTURE SCHEDULE

TAG	FIXTURE TYPE	MANUFACTURER	MODEL	VOLTS	LAMPS	NOTES
L1	LINEAR FLUORESCENT	LITHONIA	XWL232 MV	MULTI	(2) 32W T8	–
L2	FLUORESCENT HIGH BAY	LITHONIA	FGB24 6 32 N1X20 MVOLT 2/3 GEB10IS	MULTI	(6) 32W T8	1
L3	WET LOCATION FLUORESCENT HIGH BAY	LITHONIA	FHE632L 1/4 1/2 GEB10IS LP841EX	MULTI	(6) 32W T8	2
X1	WALL MOUNTED EXIT SIGN	MCPHILBIN	CXL1RW	120V	–	3

NOTES:
1. ACCESSORIES: LITHONIA IBAC240 M20 AIRCRAFT CABLE HANGAR ASSEMBLY. REFER TO KEYED NOTES FOR ADDITIONAL INFORMATION.
2. ACCESSORIES: LITHONIA FHEACT240 AIRCRAFT CABLE HANGAR ASSEMBLY. REFER TO KEYED NOTES FOR ADDITIONAL INFORMATION.
3. DEMOLISH AND REPLACE THE EXISTING EMERGENCY EXIT SIGNS WITH NEW SIGNS IN SAME LOCATION. DISPOSE OF DEMOLISHED FIXTURE. REUSE EXISTING CIRCUITING. VERIFY THAT THERE IS AN EQUIPMENT GROUNDING CONDUCTOR. INSPECT EXISTING WIRING FOR DEFECTS OR POTENTIAL SAFETY ISSUES. REPORT ANY ISSUES OR UNSAFE CONDITIONS TO THE ENGINEER.

1 GENERATOR EMERGENCY SHUTOFF SWITCH
NOT TO SCALE



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

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MAINTENANCE FACILITY
ELECTRICAL UPGRADE

DYERSVILLE, IOWA

SHEET TITLE
ELECTRICAL PLAN

SCALE: AS NOTED

DRAWN BY: M.C., R.M.

APPROVED: R.M.

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