

DRAWING NUMBER

DESCRIPTION

E0.01

SYMBOL LEGEND, FIXTURE SCHEDULE, INDEX OF DRAWINGS

E1.01

ELECTRICAL SITE DISTRIBUTION PLAN

E1.02

SITE LIGHTING PHOTOMETRIC PLAN

E2.01

SOUTH BUILDING POWER PLAN

E2.02

NORTH BUILDING POWER PLAN

E3.01

NORTH BUILDING LIGHTING PLAN

E3.02

SOUTH BUILDING LIGHTING PLAN

E3.03

SOUTH BUILDING PHOTOMETRIC LIGHTING PLAN

E3.04

NORTH BUILDING PHOTOMETRIC LIGHTING PLANS

E4.01

ENLARGED PLANS AND DETAILS

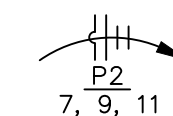










































E5.01

ONE LINE RISER AND PANEL SCHEDULES

E5.02

PANEL SCHEDULES

ELECTRICAL SYMBOL LEGEND:

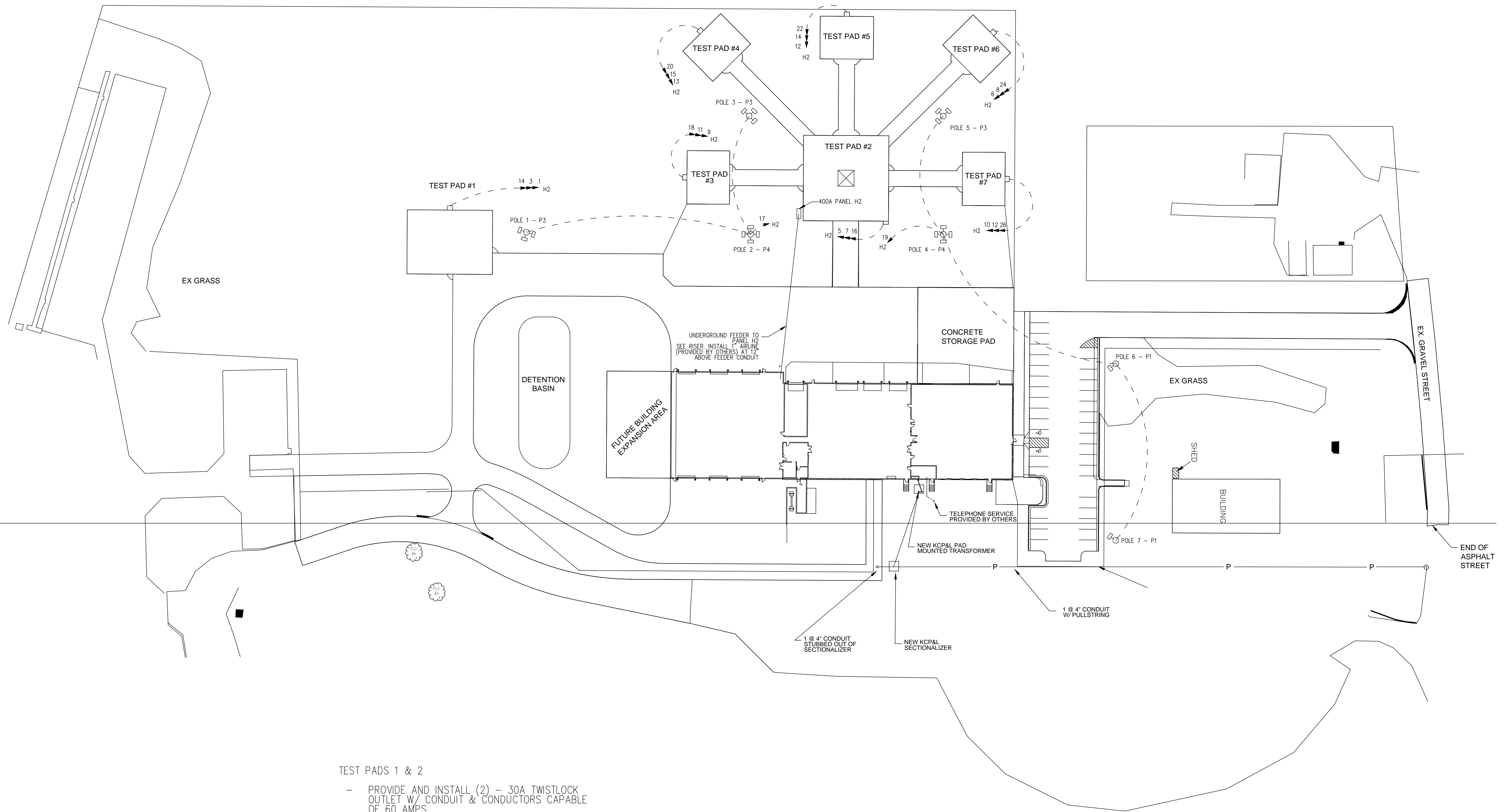
-  HOMERUN TO PANELBOARD, HASH MARKS INDICATE NUMBER OF CONDUCTORS; INFORMATION AT ARROWS ARE PANEL BOARD AND CIRCUIT NUMBERS
-  SINGLE POLE SWITCH (MOUNT @ 48 A.F.F. U.N.O.)
-  3 = THREE WAY
-  4 = 4 WAY
-  K = KEYED
-  D = DIMMER
-  44 = MOUNTING HT. A.F.F. IN INCHES
-  EXIT LIGHT
-  EXIT / EMERGENCY BATTERY PACK LIGHT FIXTURE
-  EMERGENCY BATTERY PACK LIGHT FIXTURE
-  TELEPHONE / DATA OUTLET - WALL MOUNTED MOUNT @ 16" A.F.F. U.N.O.
-  TELEPHONE / DATA OUTLET - IN FLOOR
-  DATA OUTLET - WALL MOUNTED MOUNT @ 16" A.F.F. U.N.O.
-  TELEPHONE OUTLET - WALL MOUNTED MOUNT @ 16" A.F.F. U.N.O.
-  DUPLEX RECEPTACLE IN FLOOR
-  DOUBLE DUPLEX RECEPTACLE IN FLOOR
-  220 VOLT RECEPTACLE
-  DUPLEX RECEPTACLE (MOUNT @ 16" A.F.F. U.N.O.)
-  WP = WEATHERPROOF
-  GFI = GROUND FAULT RECEPTACLE
-  D = DOUBLE DUPLEX RECEPTACLE
-  E = EXISTING RECEPTACLE
-  44 = MOUNTING HT. A.F.F. IN INCHES
-  PROGRAMMABLE THERMOSTAT @ 54" A.F.F. WHITE ROGERS IF80-0471 5+2
-  DISCONNECT
-  SPEAKER
-  OCCUPANCY SENSOR
-  SMOKE DETECTOR
-  CLOCK
-  CONTACTOR
-  JUNCTION BOX
-  MOTOR
-  FIRE HORN / STROBE LIGHT
-  HEAT DETECTOR
-  BELL
-  FIRE STROBE
-  PROJECTOR
-  JUNCTION BOX (MOUNT FLUSH W/ TOP OF SLAB)
-  EXTERIOR WALL-PAK FIXTURE
-  RECESSED CAN LIGHT
-  WALL SCONCE
-  WALL MOUNTED FIXTURE
-  EXHAUST FAN

FIXTURE SCHEDULE

Quantity	Fixture Type	Manufacturer	Model Number	VA	COMMENTS
68	A	Williams	LT-24-L73/835-AF-DIM-BD-UNV	71	OFFICE 2 X 4 TROFFER
3	A-EM	Williams	LT-24-L73/835-AF-DIM-BD-UNV-EM/10W	75	
1	A1	Williams	LT-24-L73/835-AF-DIM-BD-UNV-OCCPH LR1655	71	ENTRANCE TROFFER W/PHOTOCELL & OCCUPANCY SENSOR
48	B	Williams	LT-22-L43/835-AF-DIM-BD-UNV	41	OFFICE2 X 2 TROFFER
3	B-EM	Williams	LT-22-L43/835-AF-DIM-BD-UNV-EM/10W	46	
15	C	Williams	76-4-L53/840-DRV-UNV	48	SURFACE LED
1	C-EM	Williams	76-4-L53/840-DRV-UNV-EM/10W	50	
25	D	Williams	GL-4-L300/840-DRV-UNV	251	15' MOUNTING HEIGHT INDUSTRIAL
4	D-EM	Williams	GL-4-L300/840-DRV-UNV-EM/12W/BMTD/(L180)	256	
12	EX	Williams	EXIT-R-EM-WHT	1	EXIT SIGN
8	EM1	Williams	WETRHL - REMOTE HEAD FOR TYPE EM3	1.5	EXTERIOR REMOTE HEAD FOR EXTERIOR EGRESS
4	EM2	Williams	EMER/LED/RC/HL	3	
9	EM3	Williams	EXIT-EM/LED/RC/HL	4.5	EXIT SIGN WITH BUG EYE EMERGENCY FIXTURES
1	F-EM	Williams	VVP-HL60/740-T3-DBZ-SDGL-EM/10WC/PC-UNV	70	FRONT ENTRANCE WALL PACK WITH PHOTOCELL & EMERGENCY BATTERY FOR EXTERIOR EGRESS LIGHTING
27	G	Williams	GL-4-L400/840-DRV-UNV	335	HIGH BAY INDUSTRIAL LED - MOUNTING HEIGHT AT 38'
4	G-EM	Williams	GL-4-L400/840-DRV-UNV-EM/12W/BMTD/(L180)	340	
7	P	KW-POLE	RTSP 3--7.5-11 (BLK)-3.5-BC-COATED		30" BLACK ROUND TAPERED STEEL POLE
2	P1				
3	P3	METEoR	(3)-BTS-440-408-UNV-STV-60-BLK-FLD-SF-OUT FIXTURES WITH (3) BULLHORNS MOUNTED AT 120 DEGREES APART FOR POLE TOP MOUNTING	1320	THREE (3) LED FLOOD LIGHT FIXTURES WITH 60 DEGREE SPREAD FOR TEST PAD LIGHTING. PROVIDE THREE BULLHORNS AT 120 DEGREE FOR MOUNTING OF FIXTURES
2	P4	METEoR	(4)-BTS-440-408-UNV-STV-60-BLK-FLD-SF-OUT FIXTURES WITH (4) BULLHORNS MOUNTED AT 90 DEGREES APART FOR POLE TOP MOUNTING	1760	FOUR (4) LED FLOOD LIGHT FIXTURES WITH 60 DEGREE SPREAD FOR TEST PAD LIGHTING. PROVIDE FOUR BULLHORNS AT 90 DEGREE FOR MOUNTING OF FIXTURES



NO.	DATE	REVISION	BY
DWG TITLE			
ALTEC - DESIGN ASSURANCE BUILDING ELECTRICAL			
ENGINEER	CHECKED BY	M. HILMAN	
JOB NO	DRAWN BY	D. MEALS	
SCALE	DATE	6/1/2017	
N/A			
DWG NO			
E0.01			
SHEET NO			
1 OF 1			



TEST PADS 1 & 2

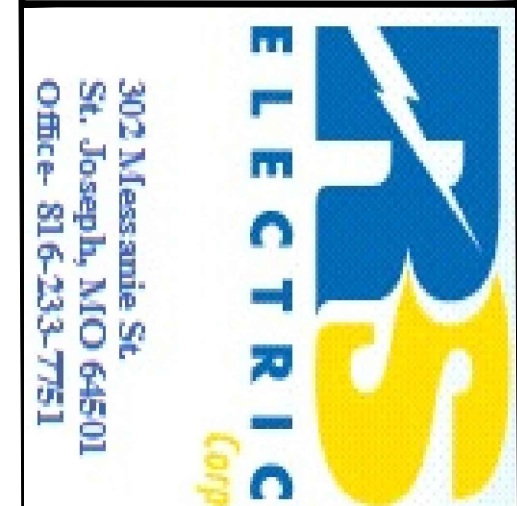
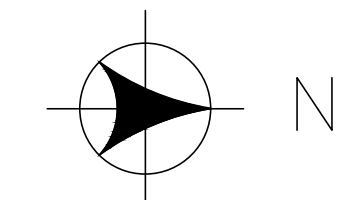
- PROVIDE AND INSTALL (2) - 30A TWISTLOCK OUTLET W/ CONDUIT & CONDUCTORS CAPABLE OF 60 AMPS
- PROVIDE A 5KVA 480:120/240 SINGLE PHASE TRANSFORMER WITH (2) - DOUBLE DUPLEX GFCI OUTLETS
- PROVIDE A DATA OUTLET
- INSTALL AIR LINE (MATERIAL PROVIDED BY GC)

TEST PADS 3, 4, 5, 6, & 7

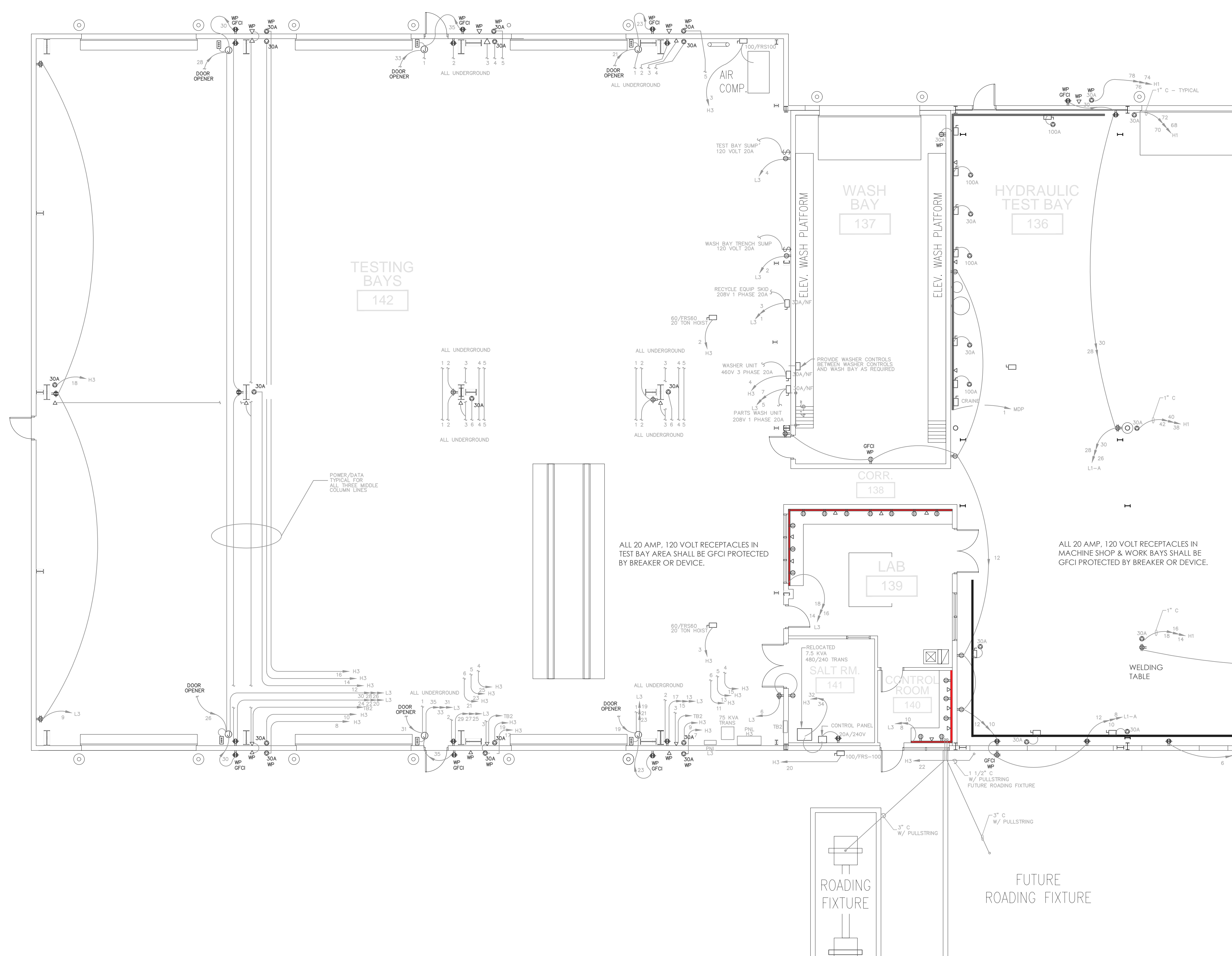
- PROVIDE AND INSTALL (2) - 30A TWISTLOCK OUTLETS RECEPTACLES
- PROVIDE A 5KVA 480:120/240 SINGLE PHASE TRANSFORMER WITH (2) - DOUBLE DUPLEX GFCI OUTLETS
- PROVIDE A DATA OUTLET
- INSTALL AIR LINE (MATERIAL PROVIDED BY GC)

SITE ELECTRICAL PLAN

SCALE: 1" = 50'



NO.	DATE	REVISION	BY
DWG TITLE			
ATLEC DESIGN ASSURANCE SITE LIGHTING DISTRIBUTION PLAN			
ENGINEER	CHECKED BY		
JOB NO	DRAWN BY		
SCALE	DATE		
DWG NO			
SHEET NO			
2 OF 13			



302 Messanie St.
St. Joseph, MO 64501
Office- 816-233-7751

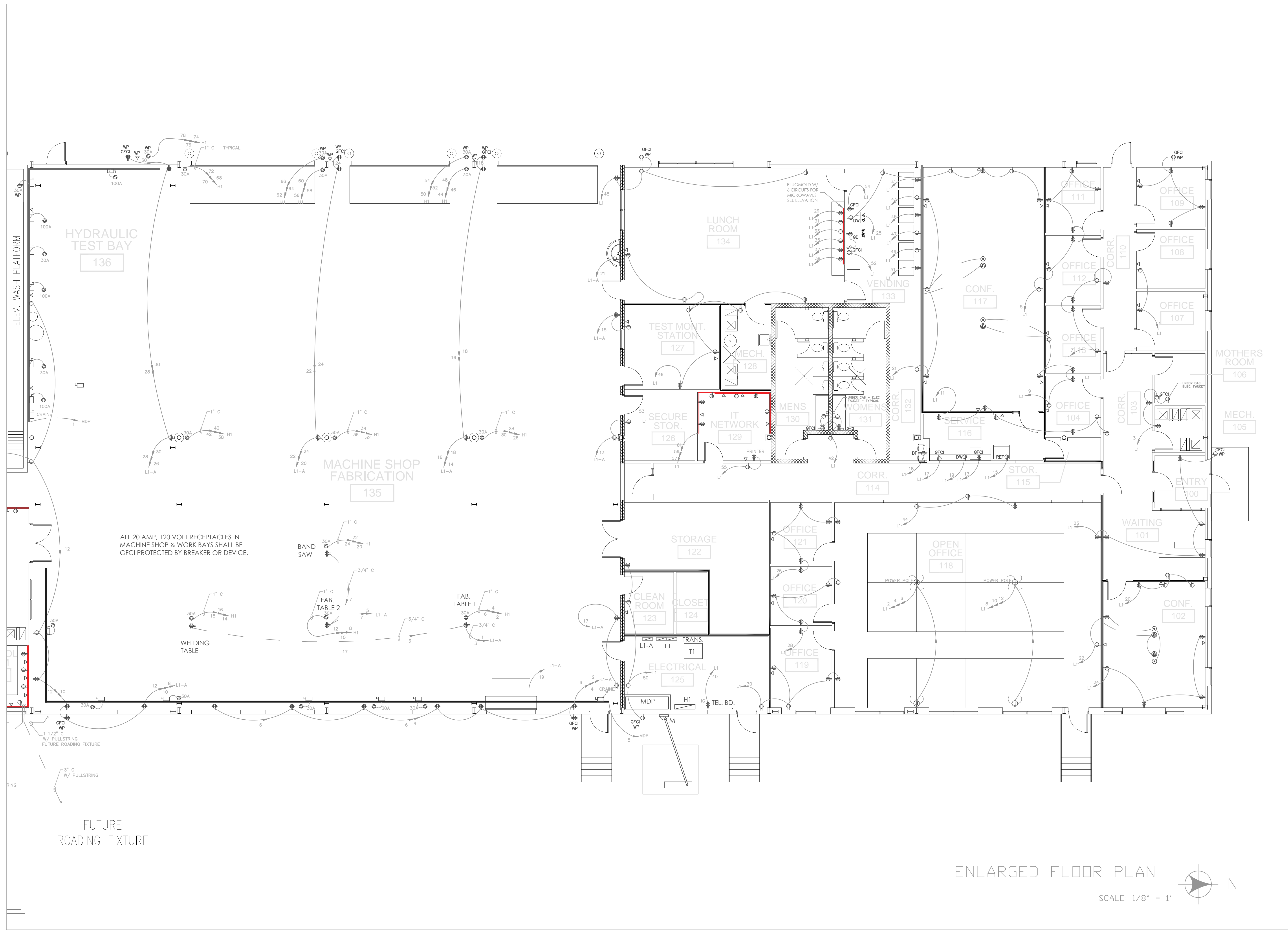
NO.	DATE	REVISION	BY

ATLEC
DESIGN ASSURANCE
SOUTH BUILDING
POWER PLAN

ENGINEER	CHECKED BY
JOB NO	M. HILMAN
SCALE	D. MEALS
1/8" : 1'	DATE
DWG NO	6/9/2017

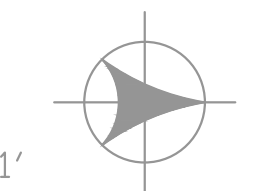
E2.01

SHEET NO
4 OF 13



ENLARGED FLOOR PLAN

SCALE: 1/8" = 1'



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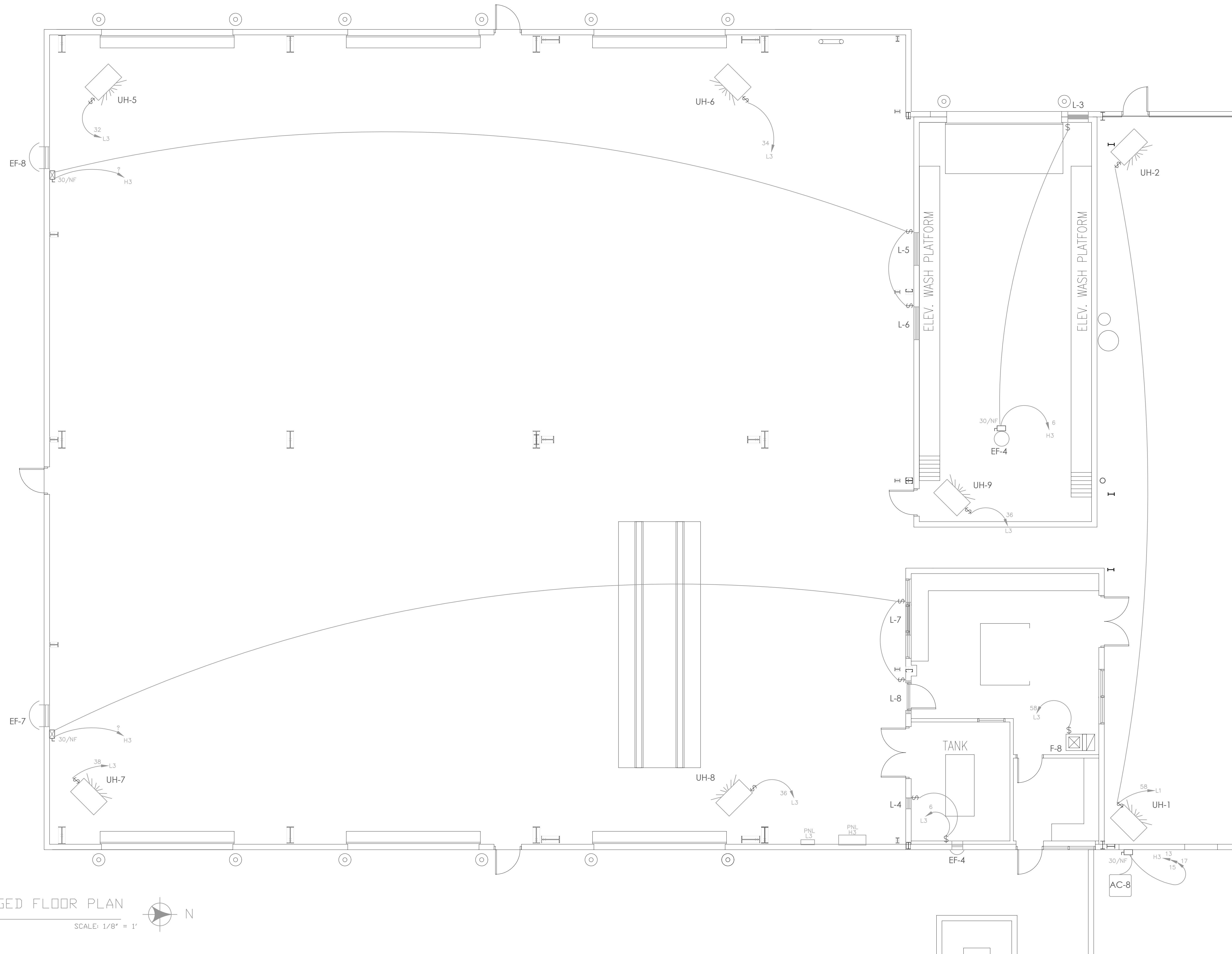
NO.	DATE	REVISION	BY

ATLEC
DESIGN ASSURANCE
NORTH BUILDING
POWER PLAN

ENGINEER	CHECKED BY M. HILMAN
JOB NO.	DRAWN BY D. MEALS
SCALE 1/8" : 1'	DATE 6/9/2017

E2.02

SHEET NO
5 OF 13



ENLARGED FLOOR PLAN
 SCALE: 1/8" = 1'



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 St. Joseph, MO 64501
 Office- 816-233-7751

NO.	DATE	REVISION	BY

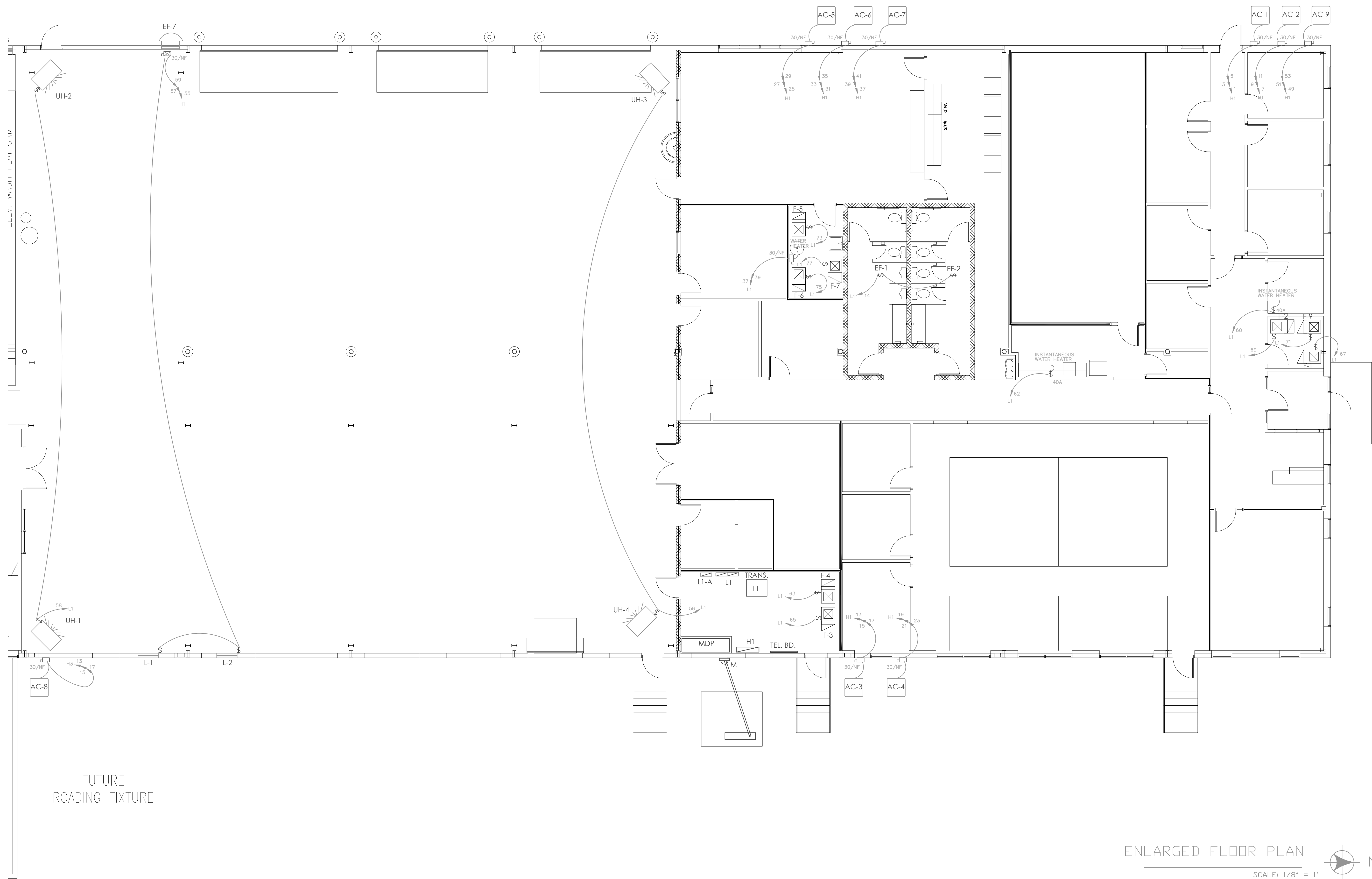
DWG TITLE

ATLEC
 DESIGN ASSURANCE
 S. BUILDING SPECIAL
 SYSTEMS POWER PLAN

ENGINEER	CHECKED BY
JOB NO	DRAWN BY
SCALE	DATE
DWG NO	

E2.03

SHEET NO
 6 OF 13



FUTURE
ROADING FIXTURE

ENLARGED FLOOR PLAN

SCALE: 1/8" = 1'



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St. Joseph, MO 64501
Office- 816-233-7751

NO.	DATE	REVISION	BY

ATLEC
DESIGN ASSURANCE
N. BUILDING SPECIAL
SYSTEMS POWER PLAN

ENGINEER	CHECKED BY M. HILMAN
JOB NO	DRAWN BY D. MEALS
SCALE 1/8" : 1'	DATE 6/9/2017

DWG NO
E2.04
SHEET NO
7 OF 13



ENLARGED FLOOR PLAN
 SCALE: 1/8" = 1'



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 St. Joseph, MO 64501
 Office- 816-233-7751

NO.	DATE	REVISION	BY

DWG TITLE

ATLEC
 DESIGN ASSURANCE
 NORTH BUILDING
 LIGHTING PLAN

ENGINEER	CHECKED BY M. HILMAN
JOB NO	DRAWN BY D. MEALS
SCALE 1/8" : 1'	DATE 6/9/2017
DWG NO	E3.01
SHEET NO	8 OF 13

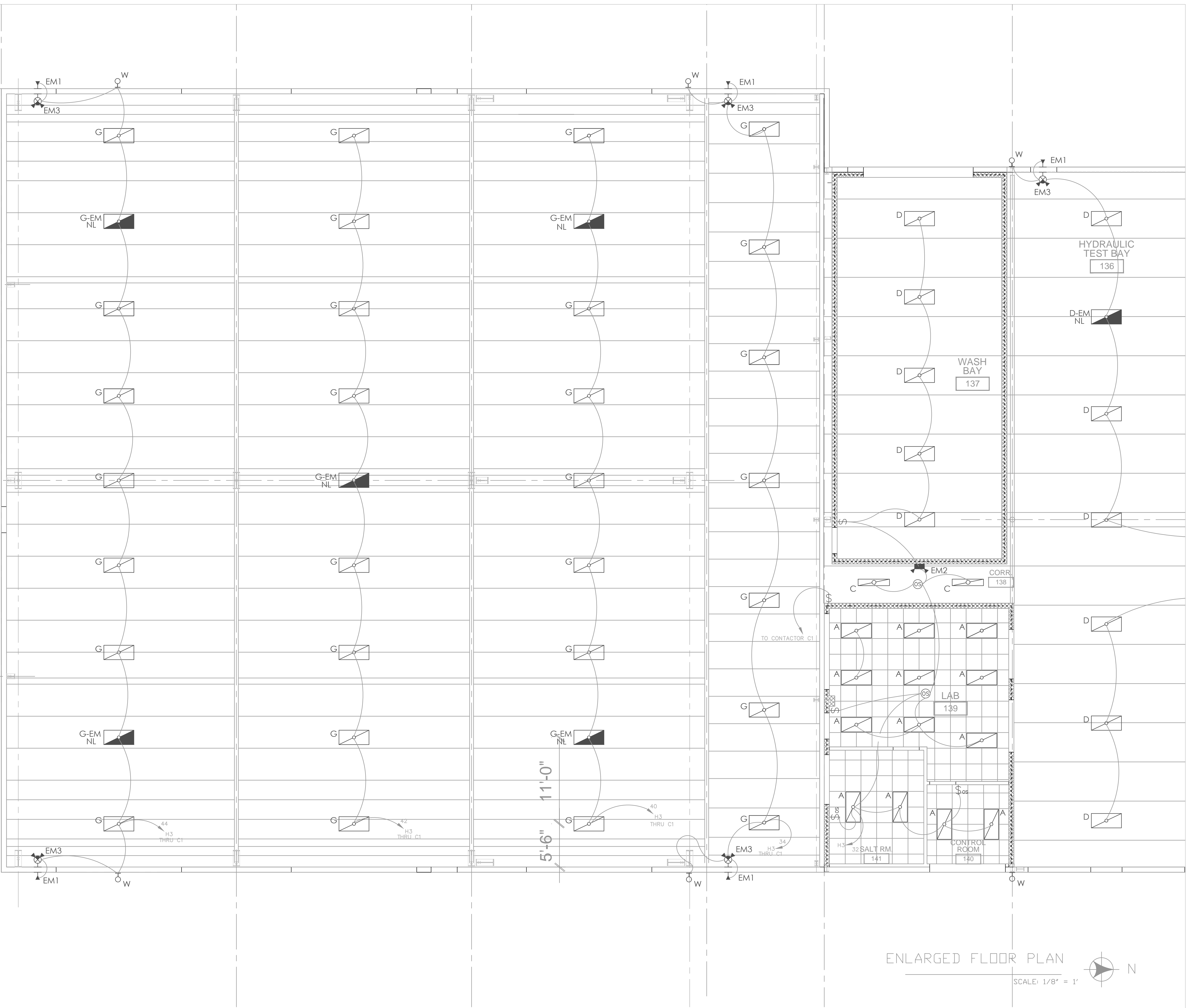
1

2

3

4

5



ENLARGED FLOOR PLAN

SCALE: 1/8" = 1'



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St. Joseph, MO 64501
Office- 816-233-7751

NO.	DATE	REVISION	BY

ATLEC
DESIGN ASSURANCE
SOUTH BUILDING
LIGHTING PLAN

ENGINEER	CHECKED BY M. HILMAN
JOB NO	DRAWN BY D. MEALS
SCALE 1/8" : 1'	DATE 6/9/2017

DWG NO
E3.02
SHEET NO
9 OF 13

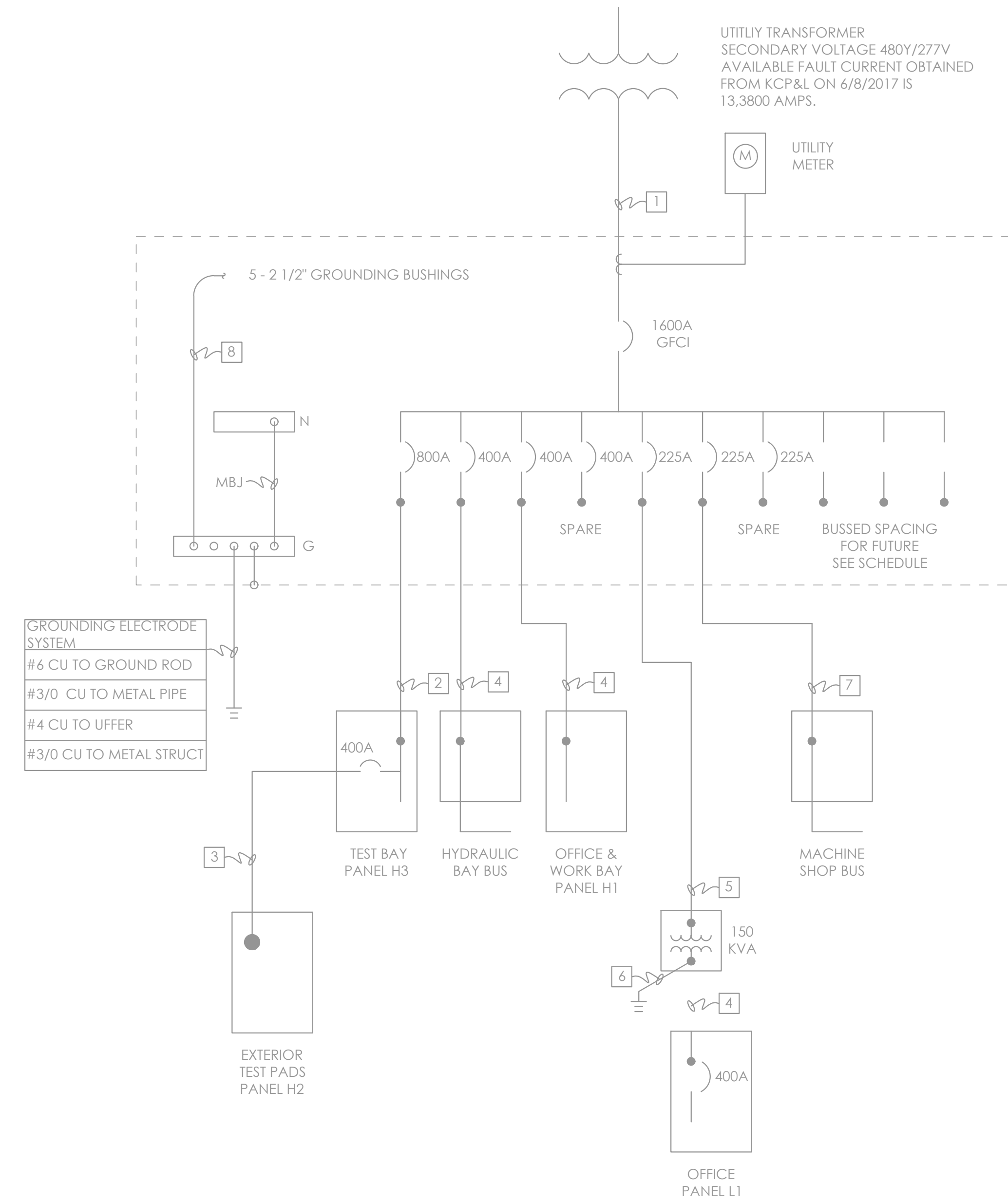
SWITCHBOARD: MDP MAIN SECTION:

MAIN: 1600 AMP GFCI VOLTAGE 480 TYPE: SQ.D
 BUS: 1600 AMP PHASE 3 LOCATION: MAIN ELECTRICAL ROOM
 WIRE 4 SERVICE ENTRANCE RATED (FAULT CURRENT RECEIVED FROM KCP&L ON 6/8/17 IS 38,807 AMPS)

FEEDER: (4) PARALLEL RUNS OF 3" CONDUIT EACH WITH (4) #400 kcmil THWN Cu.

CCT NO	DESCRIPTION	SWTCH	WIRE / CONDUIT	KVA LOAD	REMARKS
1.	PANEL H1	400	(4) #500kcmil THWN Cu & (1) #3 GND / (1) - 3 1/2" CONDUIT	188.9	
2.	150 Kva TRANSFORMER - PANEL L1	225	(3)- #4/0 THWN Cu, 2 1/2" C	100.2	
3.	PANEL H3	800	(2) PARALLEL RUNS OF 3" EA WITH (4)-#500 KCMIL & (1)-#1/0 GND EACH	531.0	
4.	HYDRAULIC BAY BUS SYSTEM	400	(4) #500kcmil THWN Cu & (1) #3 GND / (1) - 3 1/2" CONDUIT	232.3	
5.	MACHINE SHOP STARLINE BUS	225	(4) #4/0 THWN Cu & (1) #4 GND / (1) - 2 1/2" CONDUIT	82.3	
6.	SPARE	400			
7.	SPARE	225			
8.	SPACE FOR 400 A BKR				
9.	SPACE FOR 400 A BKR				
16.	SPACE FOR 200 A BKR				
17.	SPACE FOR 200 A BKR				
18.	SPACE FOR 100 A BKR				
19.	SPACE FOR 100 A BKR				

TOTAL CONNECTED LOAD: **1134.6** KVA
1364.8 AMPS



GROUNDING ELECTRODE SYSTEM
 #6 CU TO GROUND ROD
 #3/0 CU TO METAL PIPE
 #4 CU TO UFFER
 #3/0 CU TO METAL STRUCT

WIRE SCHEDULE	
1	(4) @ 2 1/2" CONDUIT EACH WITH (4) - #400 KCMIL THWN CU
2	(3) @ 2 1/2" CONDUIT EACH WITH (4) - #250 KCMIL THWN CU & 1/0 CU GROUND
3	(2) @ 3" PVC EATH WITH (4) - #300 KCMIL THWN AL & (1) - #1/0 THWN AL GROUND (SIZED FOR VOLTAGE DROP)
4	(2) @ 2" CONDUIT EACH WITH (4) - #3/0 THWN CU & (1) @ #3 CU GROUND
5	(1) @ 2" CONDUIT EACH WITH (3) - #4/0 THWN CU & (1) - #4 CU GROUND
6	#2 GROUND TO BUILDING STEEL
7	(1) @ 2 1/2" CONDUIT EACH WITH (4) - #4/0 THWN CU & (1)- #4 CU GROUND
8	SUPPLY-SIDE EQUIPMENT BONDING JUMPER - NEC 250.102: SINGLE 2KO KCMIL (1) CU THRU (5) FITTINGS OR (5) - #2 CU (ONE TO EACH CONDUIT



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NO.	DATE	REVISION	BY

ALTEC
 DESIGN ASSURANCE
 ONE LINE RISER
 & PANEL SCHEDULE

ENGINEER: CHECKED BY: M. HILMAN
 JOB NO: DRAWN BY: D. MEALS
 SCALE: DNS DATE: 6/9/2017
 DWG NO:

E4.01

