



**IFB 17-068B Electrical Gear and Equipment Addition  
ADDENDUM No. 1  
October 13, 2017**

**A. Clarifications**

1. Please reference the revised drawings attached as part of this Addendum.
2. Please reference the revised Cost Form attached as part of this Addendum.

**B. Questions and Answers**

1. **Question:** Should PSTA delete the 4 cord reels as they are not needed?

**Response:** The cord reels have been deleted from the drawings.

2. **Question:** Should PSTA change quantity of Receptacles for Portable Column Lifts from 10 to 11?

**Response:** The quantity of receptacles has been increased to 11.

3. **Question:** Can PSTA add Alternate #5 "50A. Welding Outlet" to the cost form?

**Response:** See attached revised Cost Form.

4. **Question:** Can apprentices, trainees, and/or helpers work on a project covered by the Davis-Bacon or related Acts (DBRA), and what wage rates must they be paid?

**Response:** See below verbiage from United States Department of Labor Website:

<https://www.dol.gov/whd/programs/dbra/faqs/trainees.htm>

Individuals who meet the following definition may be employed as Apprentices on DBRA projects:

(a) A person employed and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau,

or

(b) A person in the first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been properly certified to be eligible for probationary employment as an apprentice.

**Trainees** employed must be persons registered in a construction occupation under a program which has been approved in advance by the U.S. Department of Labor, Employment and Training Administration, as meeting its standards for on-the-job training programs and which have been so certified by that Administration.



Information on wage rates paid to apprentices and trainees is not reflected in Davis-Bacon wage determinations. Similarly, their addition through the additional classification procedure (conformance) is neither necessary nor appropriate. On projects funded by the Federal-Aid Highway Act, apprentices and trainees certified by the Secretary of Transportation are not covered by Davis-Bacon labor standards.

The proper wage rates to be paid to apprentices and trainees are those specified by the particular programs in which they are enrolled, expressed as a percentage of the journeyman rate on the wage determination. In the event employees reported as apprentices or trainees on a covered project have not been properly registered within the meaning of the Regulations and the contract stipulations, or are utilized at the job site in excess of the ratio to journeymen permitted under the approved program, they must be paid the applicable wage rates for laborers and mechanics employed on the project performing in the classification of work they actually performed. This applies regardless of work classifications which may be listed on the submitted payrolls and regardless of their level of skill.

**Helper** classifications may be issued in or added to a wage determination only where the (a) the duties of the helpers are clearly defined and distinct from those of the journeyman classification and from the laborer, (b) the use of such helpers is an established prevailing practice in the area, and (c) the term "helper" is not synonymous with "trainee" in an informal training program.

**All other Bid terms and conditions originally issued remain unchanged.**

REMINDER: Make sure you mark "Addendum No. 1" on Attachment "1" Acknowledgement of Addendum and remember to sign and return Acknowledgement Addendum form with your submittal package. Failure to do so may result in the disqualification of your Bid submittal.

The IFB is revised to the extent specifically amended by this Addendum #1. Otherwise, all provisions of the IFB remain in effect.

Eric L. Haubner  
Purchasing Agent II  
Pinellas Suncoast Transit Authority  
ehaubner@psta.net



# REVISED 10/13/17

**ATTACHMENT 3**  
**BID FORM**  
(Required with Bid Submittal)

The undersigned hereby agrees to furnish the items as listed below in accordance with the specifications contained herein. All charges must be included on the Bid Form and must include all associated costs for the services being proposed.

Bidder shall provide all material, labor, equipment, programming, testing and commissioning required for an extension of the existing maintenance building electrical power distribution system as described in these documents and the attached drawings.

	Description	Quantity	Unit Cost	Extended Cost
1	Receptacles for Portable Column Lifts	11		
<b>TOTAL BASE BID</b>				
2	Roller Brake Dyno Machine (Add Alternate #1)	1		
3	Parallelogram Lift Machine (Add Alternate #2)	1		
4	Wheel Alignment Machine (Add Alternate #3)	1		
5	30 AMP Three Phase 208V Receptacle (Add Alternate #4)	1		
6	50 AMP Welding Outlet (Add Alternate #5)	1		

By signature on this document, Bidder acknowledges and agrees that its offer includes and accepts all terms, conditions, and specifications of PSTA's Bid solicitation as originally published, without exception, change or alteration of any kind, except as may have been published by PSTA in official amendments prior to this date of submittal.

**Bidder's Name:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Authorized Representative's Signature:** \_\_\_\_\_

**Authorized Representative: Name/Title:** \_\_\_\_\_



# PINELLAS SUNCOAST TRANSIT AUTHORITY

## ELECTRICAL GEAR AND EQUIPMENT ADDITION

3201 SCHERER DRIVE  
ST. PETERSBURG, FLORIDA 33716

04/18/2017

DRAWING LIST			
PINELLAS SUNCOAST TRANSIT AUTHORITY			
3201 SCHERER DRIVE, ST. PETERSBURG, FL 33716			
BRIDGE CRANE AND GEAR ADDITION			
HE# 16- 409			
NO	DRAWING	DWG #	DRAWING TITLE
<b>MECHANICAL</b>			
1	16409-E-0.1	E-0.1	ELECTRICAL SITE PLAN
2	16409-E-1.1	E-1.1	ELECTRICAL MAINT. BUILDING FIRST FLOOR - SECTION A
3	16409-E-1.2	E-1.2	ELECTRICAL MAINT. BUILDING FIRST FLOOR - SECTION B
4	16409-E-1.3	E-1.3	ELECTRICAL MAINT. BUILDING FIRST FLOOR - SECTION C
5	16409-E-1.4	E-1.4	ELECTRICAL FUEL AND REVENUE BUILDINGS
6	16409-E-2.1	E-2.1	ELECTRICAL RISER DIAGRAM
7	16409-E-2.2	E-2.2	ELECTRICAL PANEL SCHEDULES

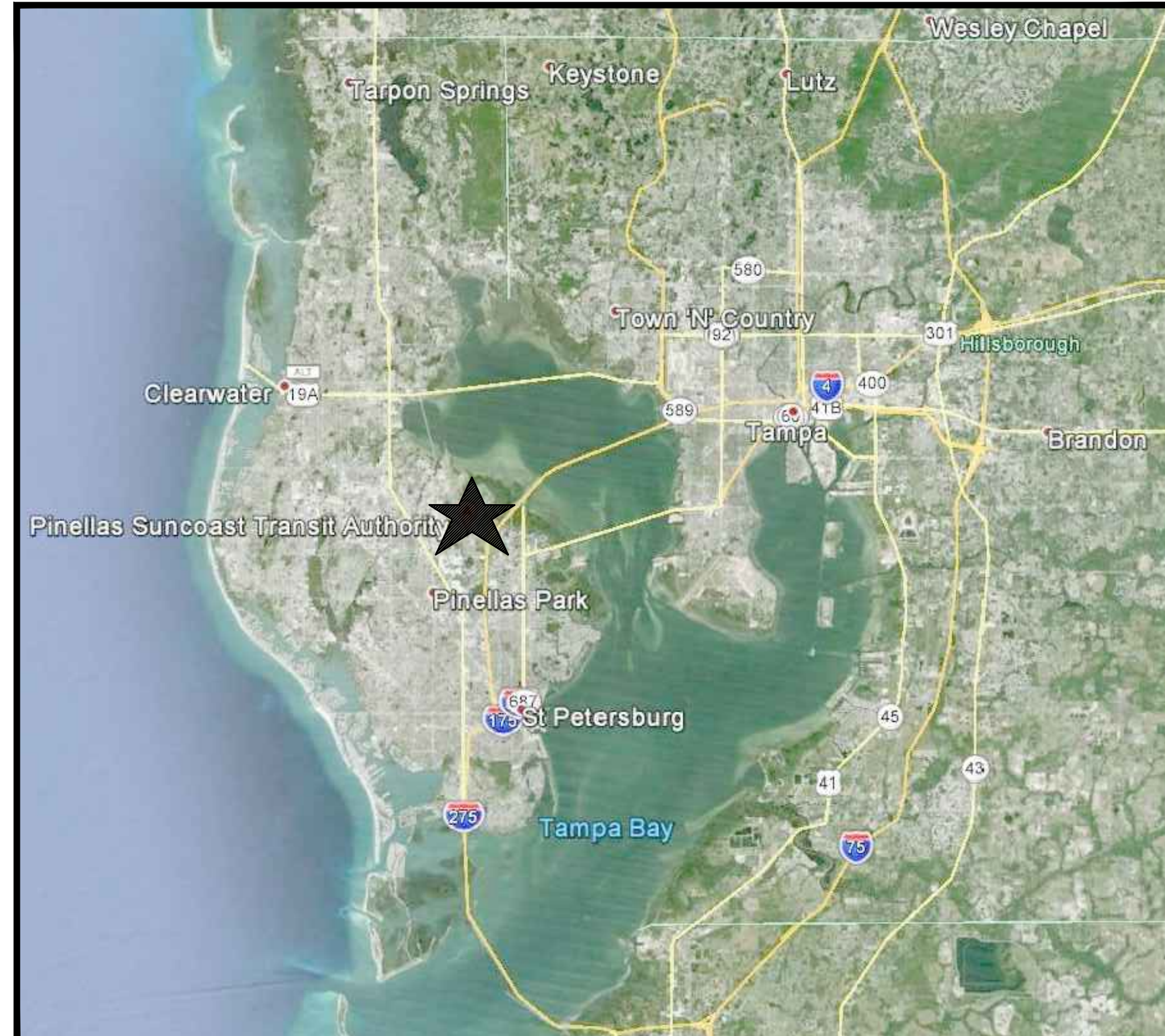
### SCOPE OF WORK

PROVIDE ALL MATERIAL, LABOR, EQUIPMENT, PROGRAMMING, TESTING AND COMMISSIONING REQUIRED FOR AN EXTENSION OF THE EXISTING MAINTENANCE BUILDING ELECTRICAL POWER DISTRIBUTION SYSTEM. PROVIDE DISCONNECT SWITCHES, BREAKERS, GROUNDING, BRANCH CIRCUITS, CONDUIT, WIRING AND ALL OTHER ITEMS REQUIRED FOR A COMPLETE EXTENSION OF THE POWER DISTRIBUTION SYSTEM TO SUPPORT THE FOLLOWING NEW EQUIPMENT TO BE INSTALLED BY OTHERS:

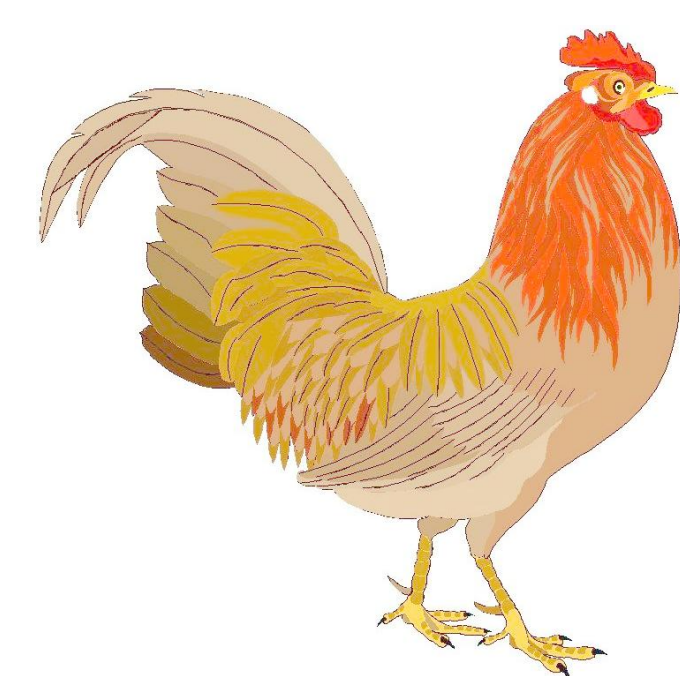
- (10) RECEPTACLES FOR PORTABLE COLUMN LIFTS
- (1) ROLLER BRAKE DYNO MACHINE (ADD ALTERNATE #1)
- (1) PARALLELOGRAM LIFT MACHINE (ADD ALTERNATE #2)
- (1) WHEEL ALIGNMENT MACHINE (ADD ALTERNATE #3)
- (1) 30 AMP THREE PHASE 208V RECEPTACLE (ADD ALTERNATE #4)
- (1) 50 AMP THREE PHASE RECEPTACLE AND 35 AMP BREAKER (ADD ALTERNATE #5)

### FAMILIARITY OF WORK

IT IS EXPECTED THAT THE SUCCESSFUL CONTRACTOR WILL HAVE PERFORMED A DETAILED REVIEW OF THE PROJECT AND PROJECT REQUIREMENTS, INCLUDING SITE REVIEW SUCH THAT SEQUENCING, STAGING, ACCESS, AND POTENTIAL AREAS WITH DIFFICULT EXISTING FIELD CONDITIONS ARE ACCOUNTED FOR IN THE BID. CONTRACTOR'S UNFAMILIARITY WITH EXISTING SITE CONDITIONS WILL NOT BE CONSIDERED A MEANS FOR COMPENSATION ADJUSTMENTS.



ALL EQUIPMENT WILL BE POWERED FROM AN EXTENSION OF THE EXISTING ELECTRICAL SERVICE IN THE MAINTENANCE BUILDING.  
WORKMANSHIP FOR ALL ELECTRICAL SYSTEMS SHALL BE NEAT AND PROFESSIONAL AND SHALL COMPLY WITH CURRENT NECA/NEIS INSTALLATION STANDARDS.  
AMPLE SPACE ON SITE IS AVAILABLE FOR MATERIAL STAGING AND LAY DOWN AREAS. THE STAGING/LAY DOWN AREAS SHALL BE COORDINATED WITH THE OWNER AND PROPERLY SEPARATED AND SECURED WITH FENCING. THE OWNER WILL NOT PROVIDE SECURE STORAGE FOR ANY MATERIAL OR EQUIPMENT.



## HAHN ENGINEERING, INC.

MECHANICAL & ELECTRICAL CONSULTING

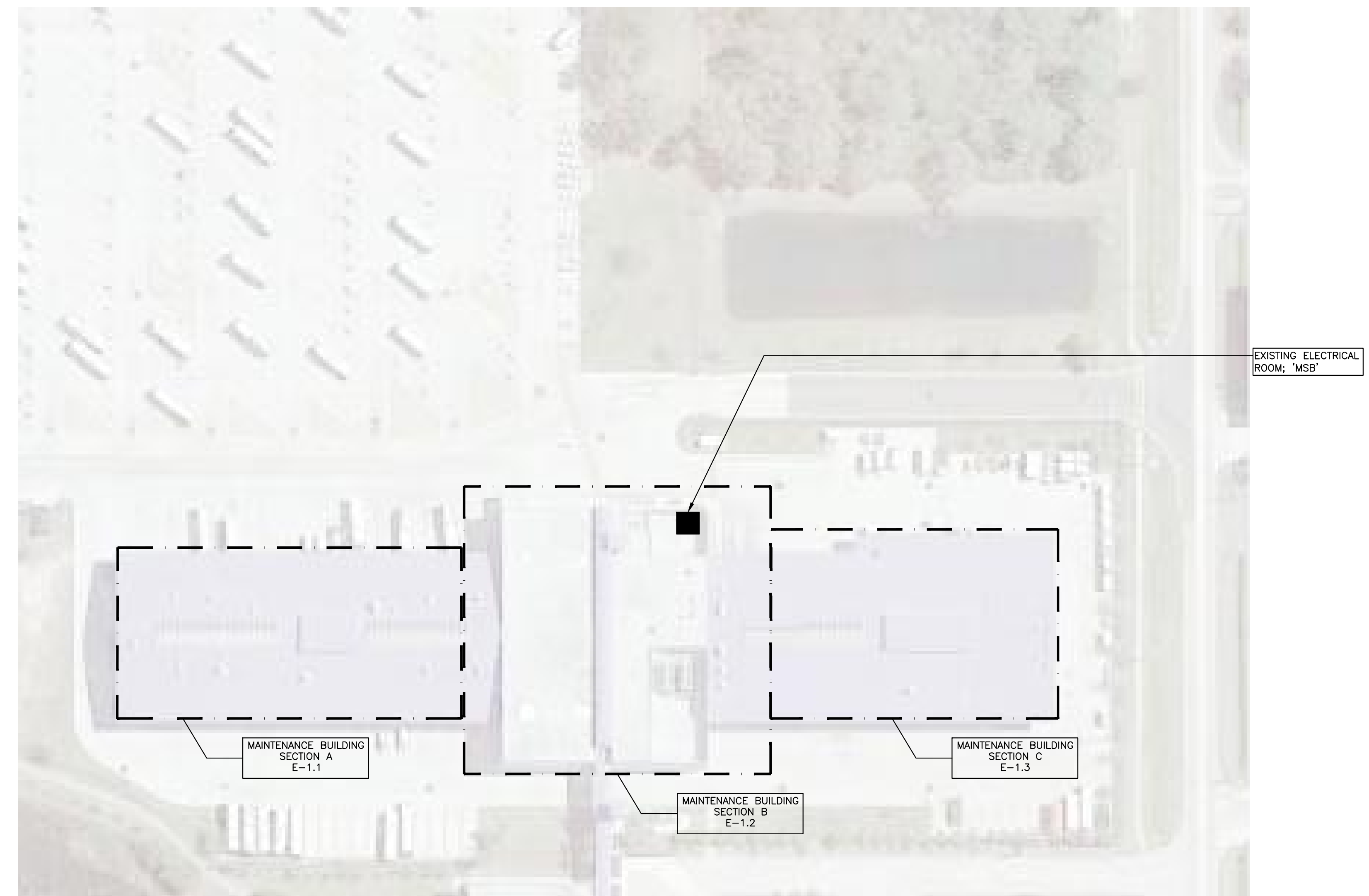
3060 S. DALE MABRY  
TAMPA, FLORIDA 33629

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Phone 813.831.8599  
Fax 813.835.7046

▲	06/01/2017	ADDENDUM #1
▲	09/14/2017	ADDENDUM #2
▲	10/11/2017	ADDENDUM #3

LEGEND	
GFCI	DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE - INSTALL WITH GROUND PIN. SURFACE MOUNTED. HEIGHT @ 30" AFF UNLESS DESIGNATED OTHERWISE.
⊕	SPECIAL RECEPTACLE - SEE PANEL SCHEDULE. HEIGHT @ 30" UNLESS DESIGNATED OTHERWISE.
⊞	HEAVY DUTY FUSED DISCONNECT SWITCH WP-WEATHERPROOF NEMA 3R
CNG	COMPRESSED NATURAL GAS
RGS	RIGID GALVANIZED STEEL CONDUIT
EMT	ELECTRICAL METALLIC TUBING CONDUIT
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
CU	COPPER
EGC	EQUIPMENT GROUNDING CONDUCTOR
AFF	ABOVE FINISHED FLOOR



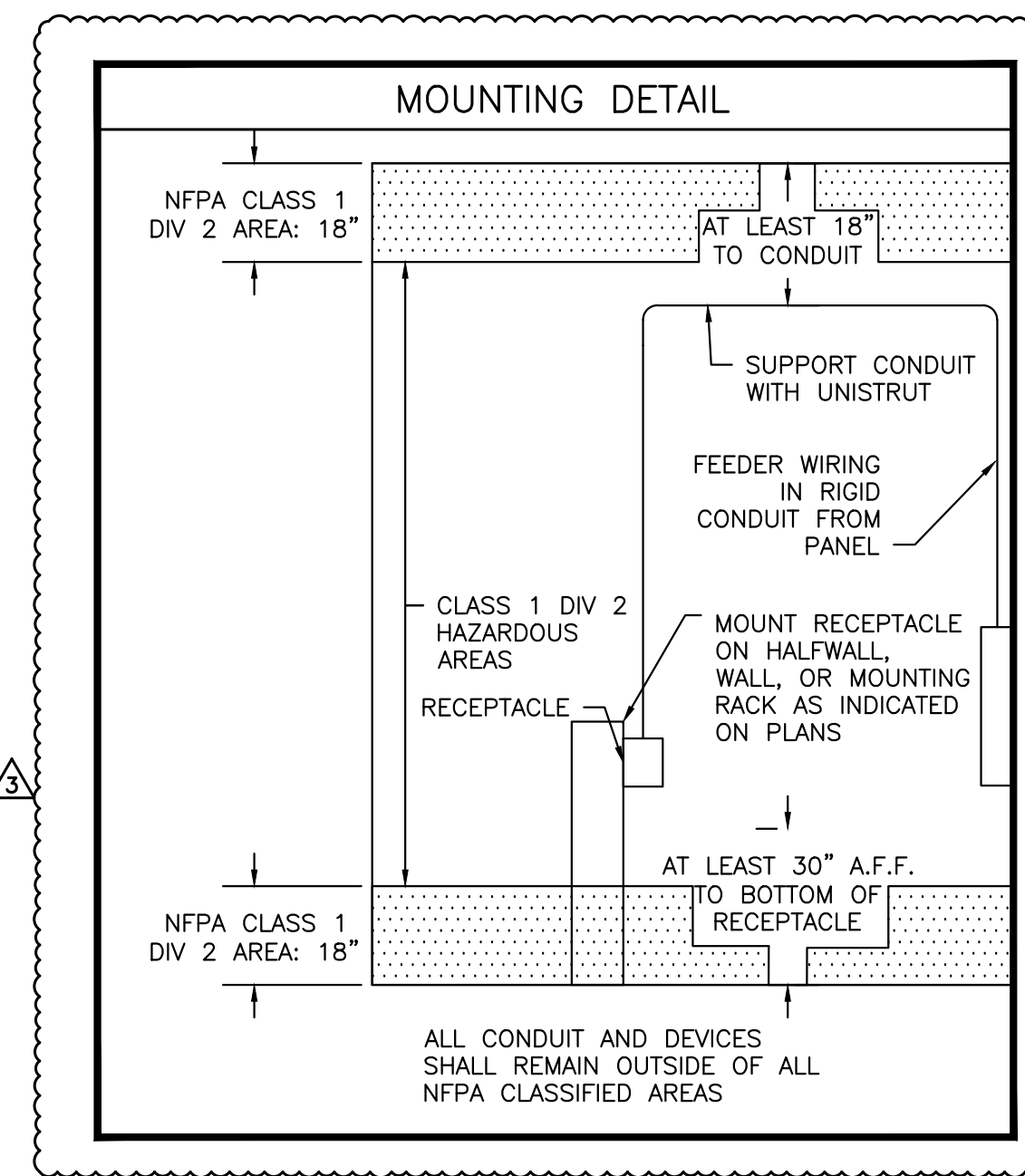
### GENERAL NOTES

- WORK SHALL MEET OR EXCEED REGULATORY REQUIREMENTS, INCLUDING LATEST EDITION OF THE NFPA 701 (LIFE SAFETY CODE), THE NATIONAL ELECTRICAL CODE 2011, FLORIDA BUILDING CODE 5TH EDITION (2014) AND LOCAL REQUIREMENTS & BUILDING CODES.
- EQUIPMENT, FIXTURES, SWITCHES, STARTERS, CONTACTORS, CONTROLS, DEVICES, CONNECTIONS, BOXES, MOUNTING SUPPORTS, HARDWARE, WIRE, CONDUIT & ACCESSORIES SHALL BE PER PLANS AND SPECIFICATIONS FOR COMPLETE AND OPERATING ELECTRICAL SYSTEMS.
- CIRCUIT NUMBERS INDICATED ON THE DRAWINGS ARE FOR REFERENCE USE. CONTRACTOR TO BALANCE THE LOADS IN ALL PANELS IN WHICH WORK IS PERFORMED. MAINTAIN COMPLETE AS-BUILT DRAWINGS. PROVIDE ELECTRONIC AS-BUILT DRAWINGS AT COMPLETION OF PROJECT. ELECTRONIC SET OF DRAWINGS WILL BE PROVIDED OFR USE TO UPDATE THROUGHOUT PROJECT.
- PROVIDE ENGRAVED NAMEPLATES FOR ALL ELECTRICAL EQUIPMENT.
- PROVIDE REQUIRED CONDUIT & CABLE PENETRATIONS THROUGH PARTITIONS, WALLS, FLOORS, SLABS & ROOFS, WITH APPROVED FIRE SEALANT COMPOUND.
- CONDUCTORS SHALL BE COPPER, 600 VOLT WITH MINIMUM SIZE OF #12 AWG THWN / THHN, UNLESS OTHERWISE SPECIFIED. WIRE SIZES OF #10 AND LARGER SHALL BE STRANDED.
- EQUIPMENT SHALL BE RATED FOR MAXIMUM AVAILABLE VOLTAGE AND GROUND FAULT CURRENT. ALL EQUIPMENT SHALL HAVE U. L. LISTING.
- CONTRACTOR SHALL COORDINATE ELECTRICAL REQUIREMENTS AND MAKE FINAL CONNECTIONS OF EQUIPMENT FURNISHED BY OTHER TRADES.
- CONTRACTOR SHALL MAINTAIN A COMPLETE TEMPORARY POWER SYSTEM DURING CONSTRUCTION. COORDINATE ALL POWER OUTAGES & CHANGEOVERS WITH THE OWNER.
- CONTRACTOR SHALL GUARANTEE MATERIALS AND WORKMANSHIP FOR ONE YEAR.
- CONTRACTOR SHALL OBTAIN AND PAY FOR PERMITS AND INSPECTIONS.
- EXPOSED EXTERIOR CONDUIT SHALL BE RIGID GALVANIZED STEEL. ALL EXPOSED INTERIOR CONDUIT SHALL BE ELECTRICAL METALLIC TUBING. CONDUIT INSTALLED BELOW SLAB OR UNDERGROUND MAY BE SCHEDULE 40 PVC OR RIGID GALVANIZED STEEL PAINTED WITH HEAVY COAT OF BITUMASTIC PAINT (3/4" MINIMUM). CONDUIT SHALL BE CONCEALED WHERE POSSIBLE. CONCEALED CONDUIT IN WALLS AND CEILINGS SHALL BE EMT. EMT FITTINGS SHALL BE DIE CAST SET SCREW TYPE AT DRY INTERIOR LOCATIONS. EMT FITTINGS AT DAMP OR WET LOCATIONS SHALL BE DIE CAST COMPRESSION RAIN-TIGHT TYPE. ALL WIRING SHALL BE IN CONDUIT.
- PROVIDE GREEN GROUND WIRE IN EACH RACEWAY. SIZE WIRE IN ACCORDANCE WITH TABLE 250.122 OF THE NEC.
- PANELBOARDS SHALL BE CIRCUIT BREAKER TYPE AS MANUFACTURED BY SIEMENS, OR AS NOTED. PANELBOARDS SHALL HAVE A HINGED LOCKING DOOR. PANELS RATED 600 AMPS AND LARGER SHALL HAVE HINGES ON THE COVER SO THAT THE COVER IS SUPPORTED AND MAY SWING TO THE SIDE WHEN THE COVER BOLTS ARE REMOVED.
- PROVIDE A TYPED CIRCUIT DIRECTORY WITH PROTECTIVE COVERING. WIRES IN PANEL SHALL BE TAGGED WITH CIRCUIT NUMBER. CIRCUIT BREAKERS FOR MECHANICAL EQUIPMENT SHALL BE HACR TYPE.
- CIRCUIT BREAKERS, TRANSFORMERS, DISCONNECT SWITCHES, MOTOR STARTERS AND OTHER ELECTRICAL APPARATUS INSTALLED FOR THE OPERATION OF ANY EQUIPMENT SHALL BE PROPERLY IDENTIFIED WITH ENGRAVED LAMINATED PLASTIC NAMEPLATES ATTACHED TO EQUIPMENT BY STAINLESS STEEL SCREWS.
- WIREWAYS, PULLBOXES, OUTLETS AND JUNCTION BOXES SHALL BE PROPERLY SIZED PER THE NATIONAL ELECTRICAL CODE. ALL PULLBOXES AND OUTLET BOXES SHALL BE PLAINLY COLOR CODED AND HAVE WIRING TAGGED TO INDICATE PANEL AND CIRCUIT NUMBERS.
- DISCONNECT SWITCHES SHALL BE SIEMENS SAFETY SWITCHES. SWITCHES SHALL BE HEAVY DUTY AND RATED FOR THE PROPER VOLTAGE. SWITCHES SHALL BE RATED AS INDICATED ON THE DRAWINGS FOR SIZE, NUMBER OF POLES AND TYPE ENCLOSURE.
- FUSES SHALL BE BUSSMAN CURRENT LIMITING TYPE.
- WHERE RECEPTACLES ARE INSTALLED CLOSER THAN 72" FROM EDGE OF SINK OR LAV, RECEPTACLE SHALL BE OF THE GROUND FAULT CIRCUIT INT. TYPE, OR SERVED BY A GFCI BREAKER.
- EXTERIOR RECEPTACLES SHALL BE WP GFCI TYPE WITH WP WIRE IN USE COVER. PROVIDE RECEPTACLE AT ELECTRICAL EQUIPMENT.
- BRANCH CIRCUIT CONDUCTORS SHALL BE SIZED FOR NO MORE THAN 3% VOLTAGE DROP AT THE FARTHEST POINT. 20 AMPERE BRANCH CIRCUITS SHALL HAVE MINIMUM SIZE #10 COPPER HOMERUN WIRING FOR CIRCUITS OVER 57' LONG & #8 COPPER HOMERUN WIRING FOR CIRCUITS OVER 150' LONG.
- DISPOSE OF LAMPS, BALLASTS, & OTHER HAZARDOUS MATERIALS IN ACCORDANCE WITH FEDERAL, STATE, LOCAL, & EPA REGULATIONS.
- PROVIDE FLEXIBLE CONDUIT & WIRING CONNECTION TO MOTORS & VIBRATING EQUIPMENT.
- OUTDOOR EQUIPMENT, CONDUIT & CONNECTIONS SHALL BE WEATHERPROOF.
- PROVIDE A DEDICATED NEUTRAL FOR ALL CIRCUITS.
- WHERE GFCI RECEPTACLES ARE SHOWN, A SEPARATE GFCI DEVICE SHALL BE PROVIDED, THEY SHALL NOT BE SLAVED.
- PRIOR TO COMPLETION OF THE PROJECT, PROVIDE WRITTEN CERTIFICATION FOR EACH LIFE SAFETY AND LOW VOLTAGE ELECTRICAL SYSTEM.

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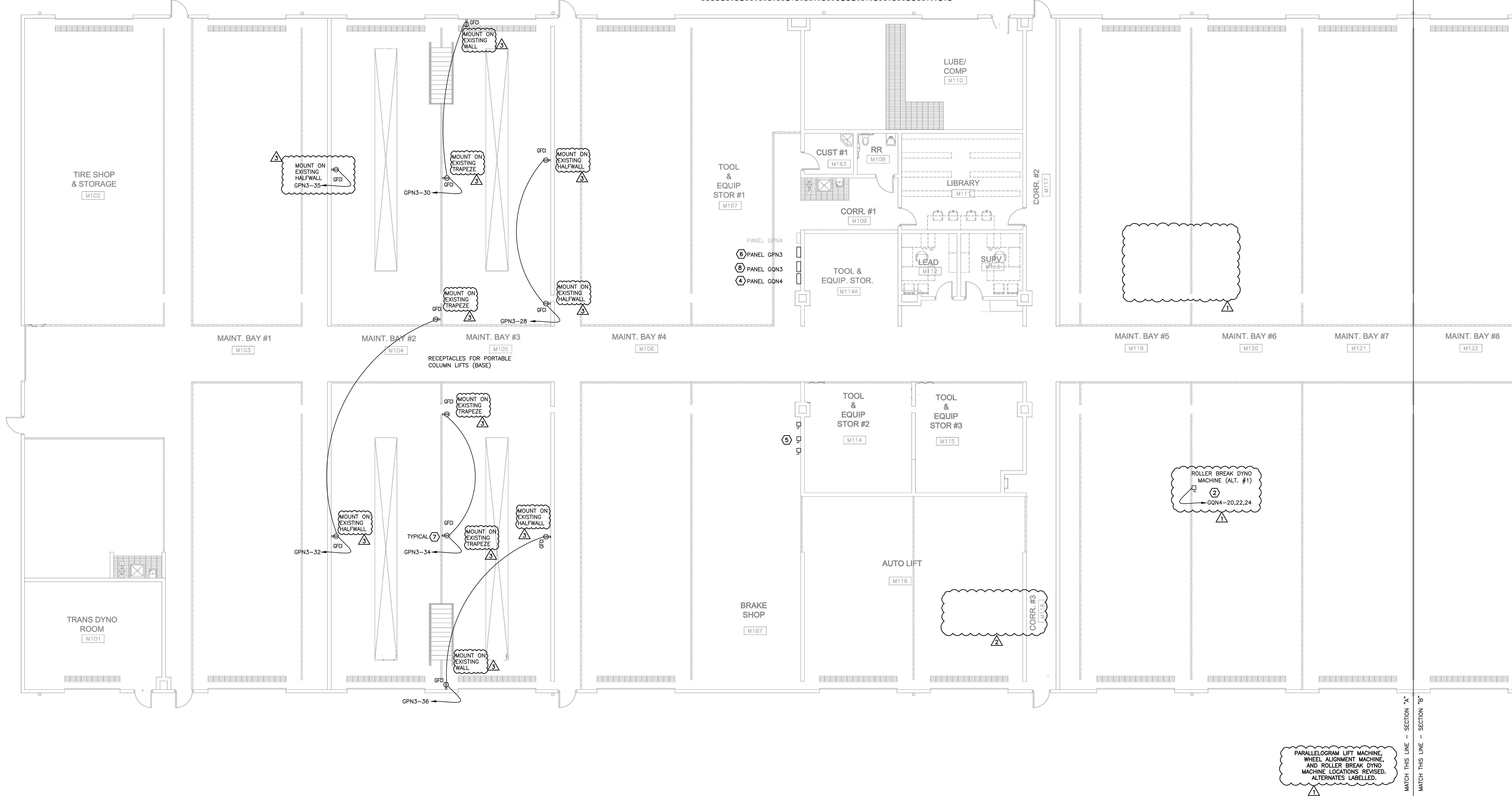
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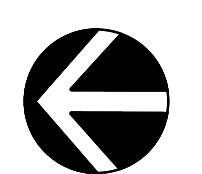
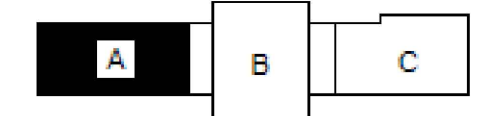


- GENERAL NOTES**
- ALL INTERIOR EXPOSED CONDUIT SHALL BE EMT. NO CONDUIT SHALL PASS THROUGH NFGA CLASSIFIED AREAS.
  - ALL CONDUIT SHALL BE ROUTED PARALLEL AND PERPENDICULAR TO BUILDING LINES.
  - SURVEY EXISTING STRUCTURE, UTILITIES AND EQUIPMENT PRIOR TO ROUGH-IN. NOTIFY OWNER AND ENGINEER OF ANY CONFLICTS PRIOR TO ROUGH IN.
  - (UNUSED)
  - WORKMANSHIP FOR ALL ELECTRICAL SYSTEMS SHALL BE NEAT AND PROFESSIONAL AND SHALL COMPLY WITH CURRENT NECA/NEIS INSTALLATION STANDARDS.
  - THE SPACE WITHIN 18" OF THE ROOF OF THE MAINTENANCE BAYS IS A HAZARDOUS RATED AREA DUE TO THE POSSIBLE PRESENCE OF OIL. ALL CONDUIT AND WIRING LOCATED WITHIN THIS SPACE SHALL BE CLASS 1 DIV 2 RATED AND CONDUIT SHALL BE SIZED FOR NO MORE THAN 25% FILL.
  - ALL RECEPTACLES AND ELECTRICAL DEVICES IN AND AROUND THE MAINTENANCE BAYS SHALL BE INSTALLED A MINIMUM OF 30" AFF IN MAINTENANCE BAYS AND SHOPS. THE AREA FROM THE FLOOR TO 18" ABOVE THE FLOOR IS A CLASS 1 DIV 2 HAZARDOUS AREA.

- DRAWING NOTES**
- (UNUSED)
  - PROVIDE SHOP DRAWINGS FOR ROLLER BREAK DYNO (DYNAMOMETER). FIELD VERIFY LOCATION PRIOR TO ROUGH IN. PROVIDE FEEDER WIRING, ONE SET OF (4) #8 THWN CU AND (1) #10 THWN CU EGC IN 1" CONDUIT. PROVIDE REQUIRED FRAME AND ALL OTHER MATERIALS REQUIRED TO HANG IT TO MATCH OTHER DEVICES THROUGHOUT THE BAYS.
  - (UNUSED)
  - EXISTING 225 AMP 480/277V PANEL 'GQ4'. SEE SCHEDULES.
  - EXISTING DISCONNECTS AND FEEDER CIRCUITS: GPN3-31,33,35; GPN3-37,39,41; AND GQ3-25,27,29. DEMOLISH AND DISPOSE OF DISCONNECTS, AND REMOVE FEEDER CIRCUITS ALL THE WAY BACK TO SOURCE. VERIFY WITH OWNER WHETHER TO REMOVE BREAKERS FROM PANELS AND HAND OVER TO OWNER FOR REUSE OR TO RELABEL CIRCUITS ON PANEL SCHEDULE AS 'SPARE' FOR EACH.
  - EXISTING 225 AMP 208/120V PANEL 'GPN3'. SEE SCHEDULES.
  - RECEPTACLE FOR PORTABLE COLUMN LIFTS. PROVIDE FEEDER WIRING, ONE SET OF (3) #12 THWN CU AND (1) #12 THWN CU EGC IN 1" CONDUIT. PROVIDE SHOP DRAWINGS FOR OWNER ENGINEER REVIEW.
  - EXISTING 225 AMP 480/277V PANEL 'GQ4'. SEE SCHEDULES.



**ELECTRICAL RENOVATION – MAINTENANCE BUILDING FIRST FLOOR SECTION A**  
 SCALE: 1/8"=1'-0"



- ADDENDUM 1 06/01/2017
- ADDENDUM 2 09/14/2017
- ADDENDUM 3 10/10/2017

PINELLAS SUNCOAST TRANSIT AUTHORITY  
**PSTA**  
 ELECTRICAL GEAR AND EQUIPMENT ADDITION  
 3201 SCHERER DRIVE, ST. PETERSBURG, FL 33716

**E-1.1**  
 ELECTRICAL MAINT. BUILDING FIRST FLOOR SECTION A  
 SCALE: 1/8" = 1'-0"  
 FILE: 16409-Elec.dwg  
 JOB: 16-409  
 DRAWN: J.D.E.  
 CHECK: J.J.H.  
 SHEET: E-1.1  
 DATE: 04/18/17

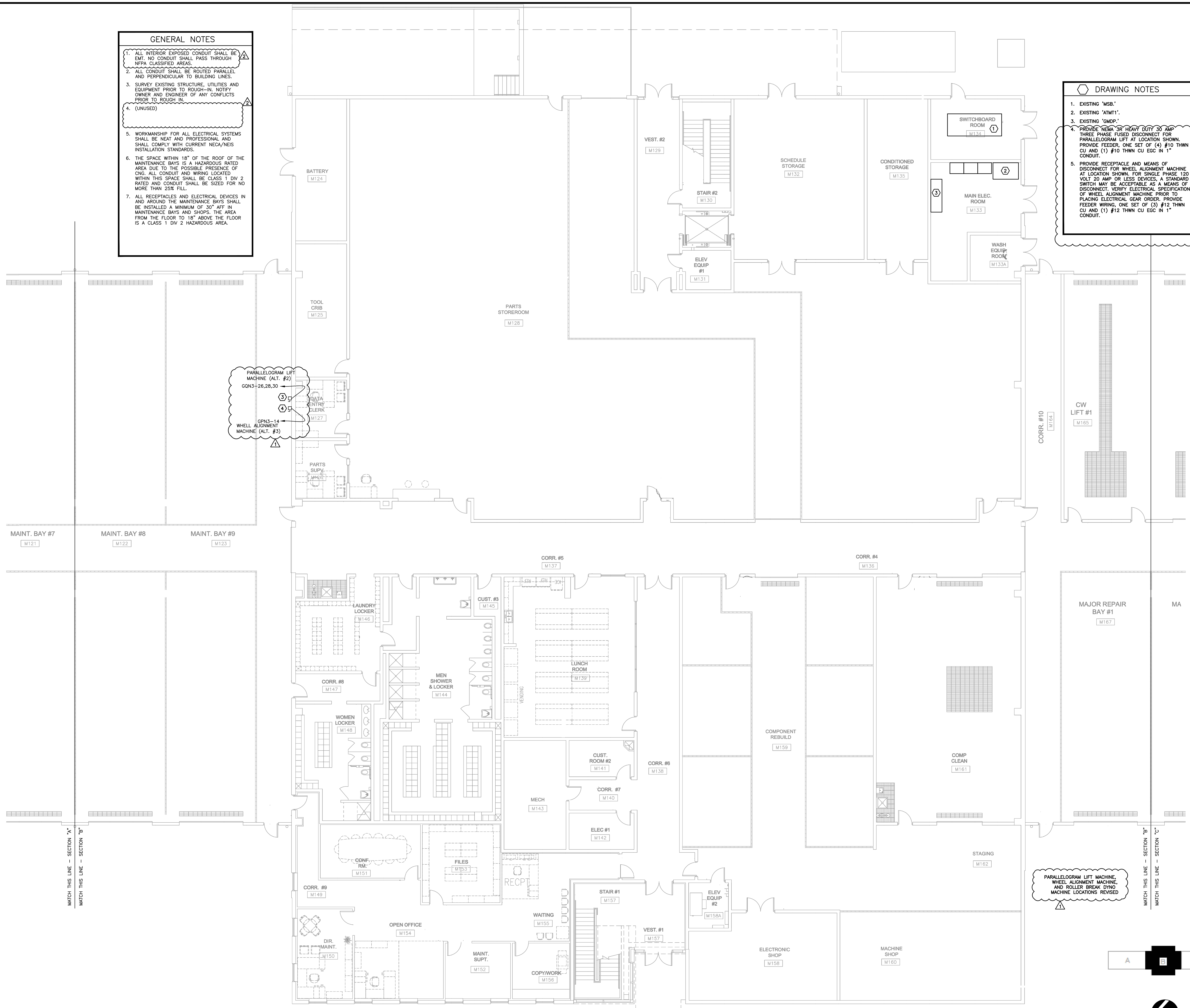
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**GENERAL NOTES**

- ALL INTERIOR EXPOSED CONDUIT SHALL BE EMT. NO CONDUIT SHALL PASS THROUGH NFPA CLASSIFIED AREAS.
- ALL CONDUIT SHALL BE ROUTED PARALLEL AND PERPENDICULAR TO BUILDING LINES.
- SURVEY EXISTING STRUCTURE, UTILITIES AND EQUIPMENT PRIOR TO ROUGH-IN. NOTIFY OWNER AND ENGINEER OF ANY CONFLICTS PRIOR TO ROUGH IN.
- (UNUSED)
- WORKMANSHIP FOR ALL ELECTRICAL SYSTEMS SHALL BE NEAT AND PROFESSIONAL AND SHALL COMPLY WITH CURRENT NEC/ANSI INSTALLATION STANDARDS.
- THE SPACE WITHIN 18" OF THE ROOF OF THE MAINTENANCE BAYS IS A HAZARDOUS RATED AREA DUE TO THE POSSIBLE PRESENCE OF CNG. ALL CONDUIT AND WIRING LOCATED WITHIN THIS SPACE SHALL BE CLASS 1 DIV 2 RATED AND CONDUIT SHALL BE SIZED FOR NO MORE THAN 25% FILL.
- ALL RECEPTACLES AND ELECTRICAL DEVICES IN AND AROUND THE MAINTENANCE BAYS SHALL BE INSTALLED A MINIMUM OF 30" AFF IN MAINTENANCE BAYS AND SHOPS. THE AREA FROM THE FLOOR TO 18" ABOVE THE FLOOR IS A CLASS 1 DIV 2 HAZARDOUS AREA.

**DRAWING NOTES**

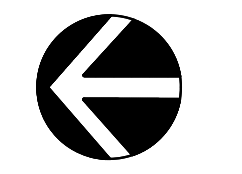
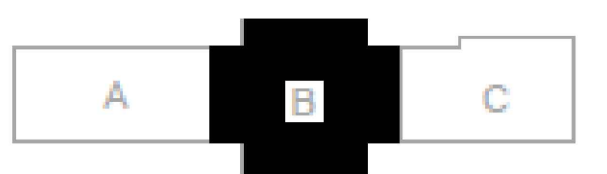
- EXISTING 'MSB'.
- EXISTING 'ATM1'.
- EXISTING 'OMDP'.
- PROVIDE NEMA 3R HEAVY DUTY 20 AMP THREE PHASE FUSED DISCONNECT FOR PARALLELOGRAM LIFT AT LOCATION SHOWN. PROVIDE FEEDER, ONE SET OF (4) #10 THWN CU AND (1) #10 THWN CU EGC IN 1" CONDUIT.
- PROVIDE RECEPTACLE AND MEANS OF DISCONNECT FOR WHEEL ALIGNMENT MACHINE AT LOCATION SHOWN. FOR SINGLE PHASE 120 VOLT 20 AMP OR LESS DEVICES, A STANDARD SWITCH MAY BE ACCEPTABLE AS A MEANS OF DISCONNECT. VERIFY ELECTRICAL SPECIFICATION OF WHEEL ALIGNMENT MACHINE PRIOR TO PLACING ELECTRICAL GEAR ORDER. PROVIDE FEEDER WIRING, ONE SET OF (3) #12 THWN CU AND (1) #12 THWN CU EGC IN 1" CONDUIT.



MATCH THIS LINE - SECTION "A"  
MATCH THIS LINE - SECTION "B"

MATCH THIS LINE - SECTION "B"  
MATCH THIS LINE - SECTION "C"

PARALLELOGRAM LIFT MACHINE, WHEEL ALIGNMENT MACHINE, AND ROLLER BREAK DYNO MACHINE LOCATIONS REVISED



**ELECTRICAL RENOVATION - MAINTENANCE BUILDING FIRST FLOOR SECTION B**  
SCALE: 1/8"=1'-0"

**Hahn Engineering, Inc.**  
MECHANICAL & ELECTRICAL CONSULTING  
C.O.A.# 9853  
www.hahneng.com  
3080 S. DALE HARRY  
TAMPA, FLORIDA 33629  
Phone 813.831.8599  
Fax 813.835.7046

ADDENDUM 1  
06/01/2017  
ADDENDUM 2  
09/14/2017

PINELLAS SUNCOAST TRANSIT AUTHORITY  
**PSTA**  
ELECTRICAL GEAR AND EQUIPMENT ADDITION  
3201 SCHERER DRIVE, ST. PETERSBURG, FL 33716

**PSTA**  
ELECTRICAL GEAR AND EQUIPMENT ADDITION  
3201 SCHERER DRIVE, ST. PETERSBURG, FLORIDA 33716

TITLE: ELECTRICAL MAINT. BUILDING FIRST FLOOR SECTION B  
SCALE: 1/8" = 1'-0"  
FILE: 16409-Elec.dwg  
JOB: 16-409  
DRAWN: J.D.E.  
CHECK: J.J.H.  
SHEET: **E-1.2**  
DATE: 04/18/17

BID SET

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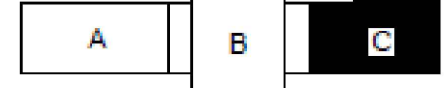
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- DRAWING NOTES**
- PROVIDE NEW NEMA 15-30 30 AMP THREE PHASE POWER OUTLET. FIELD VERIFY LOCATION OF OUTLET PRIOR TO PLACING ELECTRICAL GEAR ORDER. MOUNT AT LEAST 30" ABOVE FINISHED FLOOR ON WALL. PROVIDE ALL NECESSARY WIRE, CONDUIT, AND MOUNTING EQUIPMENT FOR A COMPLETE AND OPERATIONAL OUTLET.
  - EXISTING PANEL "PGS2" PROVIDE 100% RATED 30 AMP 3 POLE BREAKER FOR NEW NEMA 15-30 RECEPTACLE. PROVIDE FEEDER WIRING. ONE SET OF (4) #10 THWN CU AND (1) #10 THWN CU EGC IN 1" CONDUIT.
  - PROVIDE NEW 50A THREE PHASE RECEPTACLE. FIELD VERIFY LOCATION PRIOR TO PLACING ELECTRICAL GEAR ORDER. PROVIDE ALL NECESSARY WIRE AND CONDUIT FOR A COMPLETE AND OPERATIONAL RECEPTACLE.
  - EXISTING SQ. D NF PANEL "HT" PROVIDE 35 AMP 3 POLE BREAKER (CDB34035) FOR NEW 50 AMP RECEPTACLE. PROVIDE FEEDER WIRING. ONE SET OF (4) #10 THWN CU AND (1) #10 THWN CU EGC IN 1" CONDUIT.

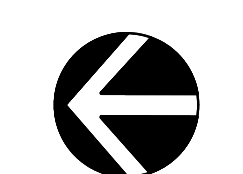


MATCH THIS LINE - SECTION "B"  
 MATCH THIS LINE - SECTION "C"

NEW 50A RECEPTACLE ADDED.  
 MORE EXISTING PANEL SHOWN.  
 30A RECEPTACLE FROM  
 PREVIOUS SET RE-CORRUTED  
 TO NEW PANEL. ALTERNATES  
 LABELLED.



**ELECTRICAL RENOVATION - MAINTENANCE BUILDING FIRST FLOOR SECTION C**  
 SCALE: 1/8"=1'-0"



- ADDENDUM 1 06/01/2017
- ADDENDUM 2 09/14/2017
- ADDENDUM 3 10/10/2017

PINELLAS SUNCOAST TRANSIT AUTHORITY  
**PSTA**  
 ELECTRICAL GEAR AND EQUIPMENT ADDITION  
 3201 SCHERER DRIVE, ST. PETERSBURG, FL 33716

**PSTA**  
 ELECTRICAL GEAR AND EQUIPMENT ADDITION  
 3201 SCHERER DRIVE, ST. PETERSBURG, FLORIDA 33716

TITLE ELECTRICAL MAINT. BUILDING FIRST FLOOR SECTION C  
 SCALE 1/8" = 1'-0"  
 FILE 16409-Elec.dwg  
 JOB 16-409  
 DRAWN J.D.E.  
 CHECK J.J.H.  
 SHEET **E-1.3**  
 DATE 04/18/17

BID SET



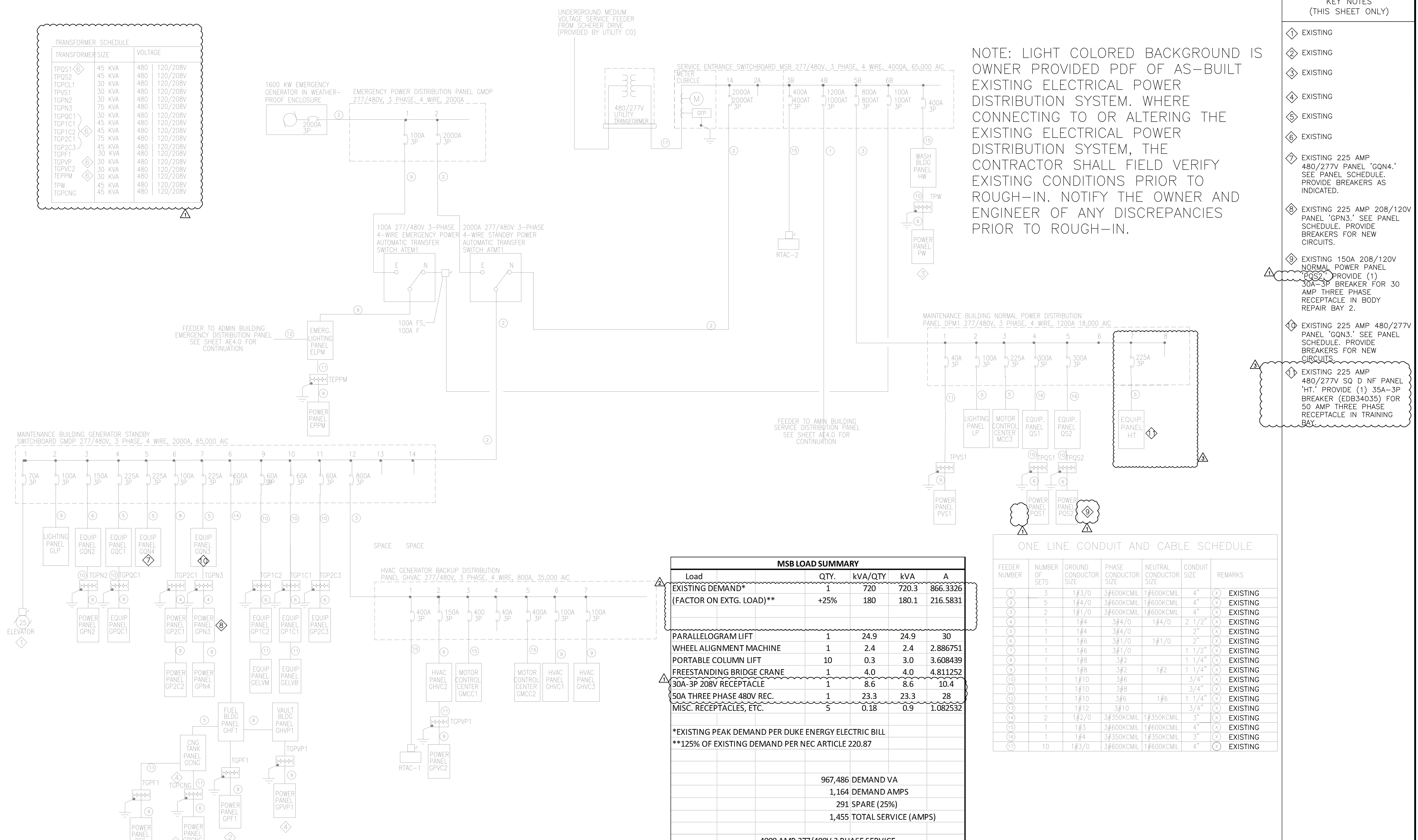
**KEY NOTES (THIS SHEET ONLY)**

- ① EXISTING
- ② EXISTING
- ③ EXISTING
- ④ EXISTING
- ⑤ EXISTING
- ⑥ EXISTING
- ⑦ EXISTING 225 AMP 480/277V PANEL 'GN4.' SEE PANEL SCHEDULE. PROVIDE BREAKERS AS INDICATED.
- ⑧ EXISTING 225 AMP 208/120V PANEL 'GN3.' SEE PANEL SCHEDULE. PROVIDE BREAKERS FOR NEW CIRCUITS.
- ⑨ EXISTING 150A 208/120V NORMAL POWER PANEL 'POS2.' PROVIDE (1) 30A-3P BREAKER FOR 30 AMP THREE PHASE RECEPTACLE IN BODY REPAIR BAY 2.
- ⑩ EXISTING 225 AMP 480/277V PANEL 'GN3.' SEE PANEL SCHEDULE. PROVIDE BREAKERS FOR NEW CIRCUITS.
- ⑪ EXISTING 225 AMP 480/277V SQ D N F PANEL 'HT.' PROVIDE (1) 35A-3P BREAKER (EDB34035) FOR 50 AMP THREE PHASE RECEPTACLE IN TRAINING BAY.

NOTE: LIGHT COLORED BACKGROUND IS OWNER PROVIDED PDF OF AS-BUILT EXISTING ELECTRICAL POWER DISTRIBUTION SYSTEM. WHERE CONNECTING TO OR ALTERING THE EXISTING ELECTRICAL POWER DISTRIBUTION SYSTEM, THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO ROUGH-IN. NOTIFY THE OWNER AND ENGINEER OF ANY DISCREPANCIES PRIOR TO ROUGH-IN.

**TRANSFORMER SCHEDULE**

TRANSFORMER SIZE	VOLTAGE
TPQS1	45 KVA 480 120/208V
TPQS2	45 KVA 480 120/208V
TGPCL1	30 KVA 480 120/208V
TPVS1	30 KVA 480 120/208V
TGPN2	75 KVA 480 120/208V
TGPN3	30 KVA 480 120/208V
TGPOC1	30 KVA 480 120/208V
TGP1C1	45 KVA 480 120/208V
TGP1C2	45 KVA 480 120/208V
TGP2C1	75 KVA 480 120/208V
TGP2C3	45 KVA 480 120/208V
TGPF1	30 KVA 480 120/208V
TGPP1	30 KVA 480 120/208V
TGPP2	30 KVA 480 120/208V
TGPP3	30 KVA 480 120/208V
TEPPM	45 KVA 480 120/208V
TPW	45 KVA 480 120/208V
TGPCNG	45 KVA 480 120/208V



**MSB LOAD SUMMARY**

Load	QTY.	kVA/QTY	kVA	A
EXISTING DEMAND*	1	720	720.3	866.3326
(FACTOR ON EXTG. LOAD)**	+25%	180	180.1	216.5831
PARALLELOGRAM LIFT	1	24.9	24.9	30
WHEEL ALIGNMENT MACHINE	1	2.4	2.4	2.886751
PORTABLE COLUMN LIFT	10	0.3	3.0	3.608439
FREESTANDING BRIDGE CRANE	1	4.0	4.0	4.811252
30A-3P 208V RECEPTACLE	1	8.6	8.6	10.4
50A THREE PHASE 480V REC.	1	23.3	23.3	28
MISC. RECEPTACLES, ETC.	5	0.18	0.9	1.082532
<b>*EXISTING PEAK DEMAND PER DUKE ENERGY ELECTRIC BILL</b>				
<b>**125% OF EXISTING DEMAND PER NEC ARTICLE 220.87</b>				
		967,486 DEMAND VA		
		1,164 DEMAND AMPS		
		291 SPARE (25%)		
		1,455 TOTAL SERVICE (AMPS)		
4000 AMP 277/480V 3 PHASE SERVICE				

**ONE LINE CONDUIT AND CABLE SCHEDULE**

FEEDER NUMBER	NUMBER OF SETS	GROUND CONDUCTOR SIZE	PHASE CONDUCTOR SIZE	NEUTRAL CONDUCTOR SIZE	CONDUIT SIZE	REMARKS
1	3	1#3/0	3#600KCMIL	1#600KCMIL	4"	EXISTING
2	5	1#4/0	3#600KCMIL	1#600KCMIL	4"	EXISTING
3	2	1#1/0	3#600KCMIL	1#600KCMIL	4"	EXISTING
4	1	1#4	3#4/0	1#4/0	2 1/2"	EXISTING
5	1	1#4	3#4/0	1#4/0	2"	EXISTING
6	1	1#6	3#1/0	1#1/0	2"	EXISTING
7	1	1#6	3#1/0	1#1/2"	1 1/2"	EXISTING
8	1	1#8	3#2	1#1/4"	1 1/4"	EXISTING
9	1	1#8	3#2	1#2	1 1/4"	EXISTING
10	1	1#10	3#6	3/4"	3/4"	EXISTING
11	1	1#10	3#8	3/4"	3/4"	EXISTING
12	1	1#10	3#6	1#6	1 1/4"	EXISTING
13	1	1#12	3#10	3/4"	3/4"	EXISTING
14	2	1#2/0	3#350KCMIL	1#350KCMIL	3"	EXISTING
15	1	1#3	3#600KCMIL	1#600KCMIL	4"	EXISTING
16	1	1#4	3#350KCMIL	1#350KCMIL	3"	EXISTING
17	10	1#3/0	3#600KCMIL	1#600KCMIL	4"	EXISTING

**MT LOAD SUMMARY**

Load	FACTOR	VA	A
EXTG LOAD*		96,441	116
DEMAND*	125%	120,551	145
<b>*EXISTING LOAD AND DEMAND PER MAXIMUM POSSIBLE VALUES; NO PANEL SCHEDULE IS PROVIDED IN THESE DOCUMENTS.</b>			
PROPOSED: 50A-3P RECEPTACLE ON 35A-3P BREAKER		23,279	28
		143,829 DEMAND VA	
		173 DEMAND AMPS	
		26 SPARE (15%)	
		199 TOTAL SERVICE (AMPS)	
225 AMP 277/480V 3 PHASE SERVICE FED BY 225A BREAKER			

**PQS2 LOAD SUMMARY**

Load	FACTOR	VA	A
EXTG LOAD*		30,750	85
DEMAND*	60%	18,450	51
<b>*EXISTING LOAD AND DEMAND PER AS BUILT DOCUMENTS; NO PANEL SCHEDULE IS PROVIDED IN THESE DOCUMENTS.</b>			
<b>**125% OF EXISTING DEMAND PER NEC ARTICLE 220.87</b>			
PROPOSED: NEMA 15-30 RECEPTACLE ON 100% RATED 30A-3P BREAKER		8,640	24
		27,090 DEMAND VA	
		75 DEMAND AMPS	
		19 SPARE (25%)	
		94 TOTAL SERVICE (AMPS)	
150 AMP 120/208V 3 PHASE SERVICE			

**QS2 LOAD SUMMARY**

Load	FACTOR	VA	A
EXTG LOAD*		162,873	196
DEMAND*	100%	162,873	196
<b>*EXISTING LOAD AND DEMAND PER AS BUILT DOCUMENTS; NO PANEL SCHEDULE IS PROVIDED IN THESE DOCUMENTS.</b>			
PROPOSED: NEMA 15-30 RECEPTACLE ON 30A-3P BREAKER ON PANEL PQS2		8,640	10
		171,513 DEMAND VA	
		206 DEMAND AMPS	
		52 SPARE (25%)	
		258 TOTAL SERVICE (AMPS)	
400 AMP 277/480V 3 PHASE SERVICE FED BY 300A BREAKER			

**DPM1 LOAD SUMMARY**

Load	FACTOR	VA	A
EXTG LOAD*		659,339	793
DEMAND*	100%	659,339	793
<b>*EXISTING LOAD AND DEMAND PER AS BUILT DOCUMENTS; NO PANEL SCHEDULE IS PROVIDED IN THESE DOCUMENTS.</b>			
PROPOSED: NEMA 15-30 RECEPTACLE ON 30A-3P BREAKER ON PANEL PQS2		8,640	10
PROPOSED: 50A-3P RECEPTACLE ON 35A-3P BREAKER ON 'MT'		23,279	28
		691,258 DEMAND VA	
		831 DEMAND AMPS	
		125 SPARE (15%)	
		956 TOTAL SERVICE (AMPS)	
1200 AMP 277/480V 3 PHASE SERVICE FED BY 800A BREAKER			

- ADDENDUM 1 06/01/2017
- ADDENDUM 2 09/14/2017
- ADDENDUM 3 10/10/2017

PINELLAS SUNCOAST TRANSIT AUTHORITY  
**PSTA**  
 ELECTRICAL GEAR AND EQUIPMENT ADDITION  
 3201 SCHERER DRIVE, ST. PETERSBURG, FL 33716

TITLE ELECTRICAL RISER DIAGRAM  
 SCALE N.T.S.  
 FILE 16409-Elec.dwg  
 JOB 16-409  
 DRAWN J.D.E.  
 CHECK J.J.H.  
 SHEET  
**E-2.1**  
 DATE 04/18/17

BID SET

PANEL 'GQN4'

PANEL	GQN4	10/12/17	HERTZ	60	AUTO CALCULATIONS		
HI VOLTAGE	480	SYM RMS AMPS	22,000	LOAD (VA)	172,785		
LOW VOLTAGE	277	BREAKER TYPE	MCB	DIVERSITY(VA)	0		
PHASE	3	MAIN LUG AMPS	225A MCB	25% C LOAD	0		
#WIRES	4	FED TOP/BOTTOM	TOP	TOTAL VA	172,785		
NEUTRAL	Y	MOUNTING	SURFACE	TOTAL KVA	173		
GROUND BUS Y/N	Y	NEMA TYPE	NEMA 1	CONN AMPS	208		
GND WIRE Y/N	Y	MANUFACTURER	SQUARE D	FACTOR AMPS	0		
WIRE THIN/THW	THWN	PANEL TYPE	NQOD	TOTAL AMPS	208		
FROM	GMDP			DESIGN AMPS	225		
NO. OF POLES	42						
MIN. AMPS	225						
% FACTOR	0						
BUSSING	COPPER						
ISOLATED GND	Y						

CIR #	BREAKER	CIRCUIT DESCRIPTION	Feeder Selection	L1	L2	L3
1	25A-3P	EXTG. VEHICLE LIFT BAY 1 EAST		3,880		
3		LOADS FROM AS-BUILTS			3,880	
5						3,880
7	25A-3P	EXTG. VEHICLE LIFT BAY 1 WEST		3,880		
9		LOADS FROM AS-BUILTS			3,880	
11						3,880
13	25A-3P	EXTG. VEHICLE LIFT BAY 4 EAST		3,880		
15		LOADS FROM AS-BUILTS			3,880	
17						3,880
19	25A-3P	EXTG. VEHICLE LIFT BAY 4 WEST		3,880		
21		LOADS FROM AS-BUILTS			3,880	
23						3,880
25	20A-1P	SPACE		0		
27	20A-1P	SPACE		0		
29	20A-1P	SPACE		0		
31	20A-1P	SPACE		0		
33	20A-1P	SPACE		0		
35	20A-1P	SPACE		0		
37	20A-1P	SPACE		0		
39	20A-1P	SPACE		0		
41	20A-1P	SPACE		0		
125A-3P		EXISTING DYNAMOMETER		27000	27000	27000

CIR #	BREAKER	CIRCUIT DESCRIPTION	L1	L2	L3
2	15A-3P	EXTG. TIRE MOUNTER	1,330		
4		LOADS FROM AS-BUILTS		1,330	
6					1,330
8	15A-3P	EXTG. TIRE MOUNTER TIRE SHOF	1,330		
10		LOADS FROM AS-BUILTS		1,330	
12					1,330
14	15A-3P	EXTG. TIRE MOUNTER TIRE SHOF	1,330		
16		LOADS FROM AS-BUILTS		1,330	
18					1,330
20	50A-3P	ROLLER BREAK DYNO	1 set of #8	11,085	
22					11,085
24					11,085
26	20A-1P	SPACE		0	
28	20A-1P	SPACE		0	
30	20A-1P	SPACE		0	
32	20A-1P	SPACE		0	
34	20A-1P	SPACE		0	
36	20A-1P	SPACE		0	
38	20A-1P	SPACE		0	
40	20A-1P	SPACE		0	
42	20A-1P	SPACE		0	

\*F.S.B.C. LOAD ESTIMATED BY 1/3HP LATERAL MOTION MOTOR AND 5HP LIFTING MOTOR. CONFIRM PRIOR TO ORDERING GEAR

LOAD CALCULATIONS FOR PANEL			
CONNECTED LOAD L1			57,595 VA
CONNECTED LOAD L2			57,595 VA
CONNECTED LOAD L3			57,595 VA
SUB TOTAL VA			172,785 VA
RECEPTACLE LOAD		0 VA	
LESS 1ST 10,000 VA		10,000 VA	
REMAINING VA		0 VA	
50% OF THE REMAINING VA		0 VA	
LESS DIVERSITY (PER ARTICLE 220-44 N.E.C.)			0 VA
CONTINUOUS LOAD		0 VA	
		X .25	
PLUS 25% OF THE CONTINUOUS LOAD			0 VA
APPLIANCE RECEPTACLE LOAD		0 VA	
FOR 1 APPLIANCE, TAKE 100% OF THE LOAD		0	
RANGE RECEPTACLE LOAD		0 VA	
FOR 1 RANGE, TAKE 100% OF THE LOAD		0	
HVAC LOAD: HEATING-COOLING		0	
REMOVE COOLING LOAD		0	
SUB TOTAL			172,785 VA
FACTOR		0%	0 VA
TOTAL VA			172,785 VA
AMPS	172,785 VA / 1.73 / VOLTAGE -->		480
			208 AMPS

PANEL 'GQN3'

PANEL	GQN3	10/12/17	HERTZ	60	AUTO CALCULATIONS		
HI VOLTAGE	480	SYM RMS AMPS	22,000	LOAD (VA)	175,158		
LOW VOLTAGE	277	BREAKER TYPE	MCB	DIVERSITY(VA)	0		
PHASE	3	MAIN LUG AMPS	225A MCB	25% C LOAD	0		
#WIRES	4	FED TOP/BOTTOM	TOP	TOTAL VA	175,158		
NEUTRAL	Y	MOUNTING	SURFACE	TOTAL KVA	175		
GROUND BUS Y/N	Y	NEMA TYPE	NEMA 1	CONN AMPS	211		
GND WIRE Y/N	Y	MANUFACTURER	SQUARE D	FACTOR AMPS	0		
WIRE THIN/THW	THWN	PANEL TYPE	NQOD	TOTAL AMPS	211		
FROM	GMDP			DESIGN AMPS	225		
NO. OF POLES	42						
MIN. AMPS	225						
% FACTOR	0						
BUSSING	COPPER						
ISOLATED GND	Y						

CIR #	BREAKER	CIRCUIT DESCRIPTION	Feeder Selection	L1	L2	L3
1	20A-3P	BLAST CABINET BREAK SHOP		2,700		
3		EXTG			2,700	
5						2,700
7	15A-3P	VEHICLE LIFT AUTO REPAIR BAY		900		
9		EXTG			900	
11						900
13	15A-3P	VEHICLE LIFT AUTO REPAIR BAY		1,000		
15		EXTG			1,000	
17						1,000
19	100A-3P	PANEL GPN3 VIA XFMR TPN3		22,270		
21		EXTG			21,010	
23						19,180
25	35A-3P	DUST VAC (ABANDONED)		0		
27					0	
29						0
31	20A-1P	SPACE		0		
33	20A-1P	SPACE		0		
35	20A-1P	SPACE		0		
37	20A-1P	SPACE		0		
39	20A-1P	SPACE		0		
41	20A-1P	SPACE		0		

CIR #	BREAKER	CIRCUIT DESCRIPTION	L1	L2	L3
2	110A-3P	AIR COMPRESSOR LUBE & OIL	24,376		
4		EXTG		24,376	
6		(LOAD SHOWN IS MAX ALLOWABLE FOR BREAKER)			24,376
8	20A-3P	AIR DRYER LUBE & OIL	580		
10		EXTG		580	
12					580
14	15A-3P	PORTABLE LIFT POWER BAY 4	1,000		
16		EXTG		1,000	
18					1,000
20	30A-3P	TRASH COMPACTOR	1,200		
22		EXTG		1,200	
24					1,200
26	30A-3P	PARALLELOGRAM LIFT	1 set of #10	5,810	
28					5,810
30					5,810
32	20A-1P	SPACE		0	
34	20A-1P	SPACE		0	
36	20A-1P	SPACE		0	
38	20A-1P	SPACE		0	
40	20A-1P	SPACE		0	
42	20A-1P	SPACE		0	

\*F.S.B.C. LOAD ESTIMATED BY 1/3HP LATERAL MOTION MOTOR AND 5HP LIFTING MOTOR. CONFIRM PRIOR TO ORDERING GEAR

LOAD CALCULATIONS FOR PANEL			
CONNECTED LOAD L1			59,836 VA
CONNECTED LOAD L2			58,576 VA
CONNECTED LOAD L3			56,746 VA
SUB TOTAL VA			175,158 VA
RECEPTACLE LOAD		0 VA	
LESS 1ST 10,000 VA		10,000 VA	
REMAINING VA		0 VA	
50% OF THE REMAINING VA		0 VA	
LESS DIVERSITY (PER ARTICLE 220-44 N.E.C.)			0 VA
CONTINUOUS LOAD		0 VA	
		X .25	
PLUS 25% OF THE CONTINUOUS LOAD			0 VA
APPLIANCE RECEPTACLE LOAD		0 VA	
FOR 1 APPLIANCE, TAKE 100% OF THE LOAD		0	
RANGE RECEPTACLE LOAD		0 VA	
FOR 1 RANGE, TAKE 100% OF THE LOAD		0	
HVAC LOAD: HEATING-COOLING		0	
REMOVE COOLING LOAD		0	
SUB TOTAL			175,158 VA
FACTOR		0%	0 VA
TOTAL VA			175,158 VA
AMPS	175,158 VA / 1.73 / VOLTAGE -->		480
			211 AMPS

PANEL 'GPN3'

PANEL	GPN3	10/12/17	HERTZ	60	AUTO CALCULATIONS		
HI VOLTAGE	208	SYM RMS AMPS	22,000	LOAD (VA)	62,460		
LOW VOLTAGE	120	BREAKER TYPE	MCB	DIVERSITY(VA)	(2,630)		
PHASE	3	MAIN LUG AMPS	225A MCB	25% C LOAD	0		
#WIRES	4	FED TOP/BOTTOM	TOP	TOTAL VA	59,830		
NEUTRAL	Y	MOUNTING	SURFACE	TOTAL KVA	60		
GROUND BUS Y/N	Y	NEMA TYPE	NEMA 1	CONN AMPS	166		
GND WIRE Y/N	Y	MANUFACTURER	SQUARE D	FACTOR AMPS	0		
WIRE THIN/THW	THWN	PANEL TYPE	NQOD	TOTAL AMPS	166		
FROM	GQN3			DESIGN AMPS	225		
NO. OF POLES	42						
MIN. AMPS	225						
% FACTOR	0						
BUSSING	COPPER						
ISOLATED GND	Y						

CIR #	BREAKER	CIRCUIT DESCRIPTION	Feeder Selection	L1	L2	L3
1	20A-1P	EQ RCPT. BRAKE SHOP*		900		
3	20A-1P	EQ. RCPT. AUTO BAY*			700	
5	20A-1P	EQ. RCPT. AUTO BAY*				720
7	20A-1P	RCPT. AUTO BAY*		720		
9	20A-1P	RCPT. AUTO BAY*			500	
11	20A-1P	VEH. EXH. HOSE REEL MTR*				400
13	20A-1P	RECEPTACLES*		840		
15	20A-1P	RECEPTACLES RM. M112*			800	
17	20A-1P	RECEPTACLES RM. M111*				360
19	20A-1P	RECEPTACLES RM. M113		800		
21	20A-1P	UNKNOWN CIRCUIT**			1,920	
23	20A-1P	UNKNOWN CIRCUIT**				1,920
25		SPACE		0		
27	20A-1P	TRASH COMP. CONTROL*			300	
29	20A-1P	VITA ROOT GAS MONITOR SVS**				1,920
31	35A-2P	EXISTING BRIDGE CRANE*		2,040		
33					2,040	
35	20A-1P	PORTABLE COLUMN LIFTS	1 set of #12	900		800
37	15A-3P	SPARE		0		
39					0	
41						