



MLM-MARTIN
ARCHITECTS, INC.

Corrections #1 & Addendum # 1

Project: Orange County Three Points Maintenance (Young Pine)

To: Orange County
Capital Projects Division
Internal Operations Centre II
400 E. South Street
Orlando, FL 32801

From: MLM-Martin Architects, Inc.
668 N. Orlando Ave, Ste. 107
Maitland, FL 32751

ATTN: Roan Waterbury Maria Hockman

RE: Corrections #1 & Addendum # 1 [Δ 02/28/2014]

Date: 2/28/2014 **File:** 97133-10-511-10

ATTACHED IS CORRECTIONS #1 & ADDENDUM # 1 TO THE SUBJECT CONTRACT DOCUMENTS. THIS ADDENDUM SETS FORTH CHANGES AND/OR ADDITIONAL INFORMATION AS REFERENCED HEREIN AND IS HEREBY MADE PART OF AND SHOULD BE ATTACHED TO THE CONTRACT DOCUMENTS. **ACKNOWLEDGE RECEIPT** OF ALL ADDENDA IN THE SPACE PROVIDED IN THE **BID FORM**. FAILURE TO DO SO MAY SUBJECT THE BIDDERS TO DISQUALIFICATION.

A. Specifications:

Item #1: Section 10670 Metal shelving
Delete benches from project

DELETE: 1.2.C. Benches

DELETE: 2.2.B. 1 & 2.2.B.2

Item #2: Section 16471 Panelboards
Corrected section number on header

DELETE: Number 16472.

ADD: Number 16471.

B. Drawings:

Item #1: Sheet CS-0.0.1 Dated 02-28-2014
Corrected address number. Updated issue date, name and building permit number.

DELETE: address number 4601

ADD: address number 4651

Item #2: Sheet A0.2 Dated 02-28-2014

ADD: enclosed, covered enclosed & overall areas for each building structure.
Updated border information.

Item #3: Sheet A0.3 Dated 02-28-2014

668 North Orlando Avenue, Suite 107, Maitland, FL 32751
Phone 407 897 6764, Fax 407 894 1338,
mmartin@mlm-martin.com www.mlm-martin.com License No. AA C002208

- ADD:** "powered by emergency generator" to slide gate note 02.46.
Updated border information.
- Item #4: Sheet A0.4 Dated 02-28-2014
DELETE: Bench removed from project. Note 10.19 changed to "not used".
Updated border information.
- Item #5: Sheet C301 Dated 02-28-2014
Revised notes and callouts. Added general notes
- Item #6: Sheet C302 Dated 02-28-2014
Revised Asset Table and Fire Calcs
- Item #7: Sheet C407 Dated 02-28-2014
Added Sign Detail for lift station
- Item #8: Sheet C502 Dated 02-28-2014
Revised pavement section
- Item #9: Sheet A03.1 Dated 02-28-2014
DELETE: Bench removed from project. Note 10.19 changed to "not used".
Updated border information.
- Item #10: Sheet A03.3 Dated 02-28-2014
C2 title clarification & updated border information.
- Item #11: Sheet A11.1 Dated 02-28-2014
DELETE: Bench removed from project. Note 10.19 changed to "not used"..
Updated border information.
- Item #12: Sheet P3.3 Dated 02-28-2014
ADD: Oil-Water Separator and associated piping added to drawing. Note #15
added for description of separator. Updated border information.
- Item #13: Sheet E1.0 Dated 02-28-2014
REVISE: Location of emergency electrical disconnect. Updated border
information.
- Item #14: Sheet E5.1 Dated 02-28-2014
ADD: Fire alarm riser diagram. Updated border information.

C. Additional Information:

- Item #1: Oil Water separator

End of Corrections #1 & Addendum # 1

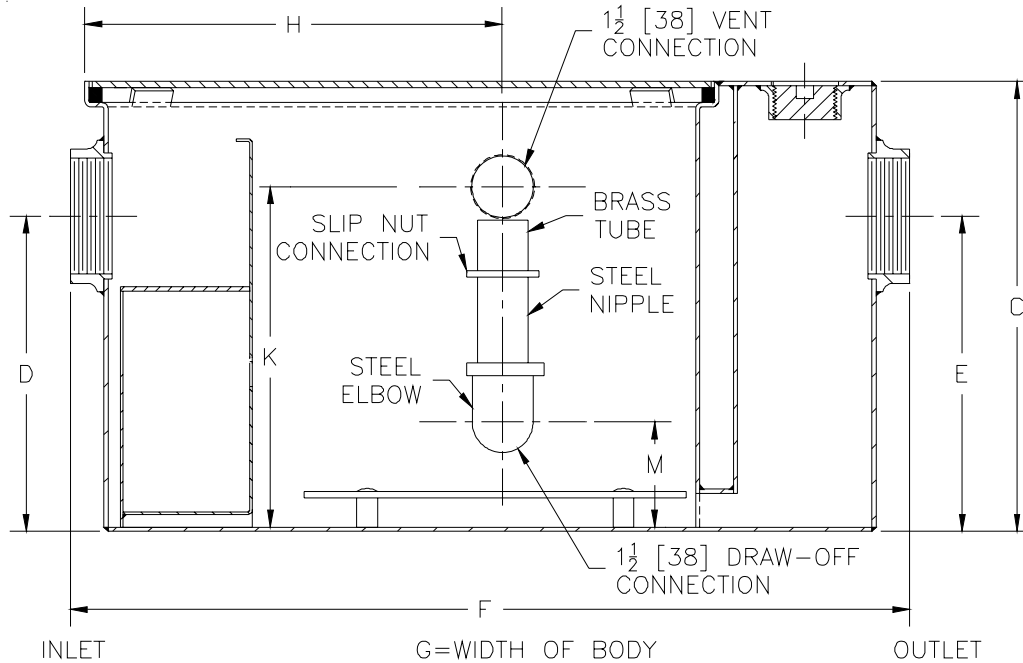


Z1186 OIL INTERCEPTOR

SPECIFICATION SHEET

TAG _____

Dimensional Data (inches and [mm]) are Subject to Manufacturing Tolerances and Change Without Notice



Size	Inlet/Outlet Size **	Flow Rate GPM [L]	Water Cap. Gal. [L]	Approx. Wt.Lbs. [kg]	Dimensions In Inches						
					C	D/E	F	G	H	K	M
300	2 [51]	10 [38]	7 [26]	56 [25]	13-5/8 [346]	8-1/8 [206]	25-1/8 [638]	14 [356]	11-5/8 [295]	11 [279]	2-3/4 [70]
400	2 [51]	15 [57]	9 [34]	77 [35]	14 [356]	8-1/4 [210]	25-1/4 [641]	14-1/8 [359]	11-5/8 [295]	11 [279]	2-3/4 [70]
500	3 [76]	20 [76]	10 [38]	106 [48]	15-1/2 [394]	9-3/8 [238]	27-1/8 [689]	16-3/4 [425]	13-1/4 [336]	12-1/2 [318]	2-1/2 [64]
600	3 [76]	25 [94]	16 [60]	116 [53]	18-1/4 [464]	11-3/4 [298]	30 [762]	17-1/4 [438]	16 [406]	15-1/4 [387]	4 [102]
700	3 [76]	35 [132]	21 [79]	140 [64]	19-3/4 [502]	12-1/2 [318]	32-1/4 [819]	19-7/8 [505]	16-3/8 [416]	16-3/4 [425]	4-11/16 [119]
800	3 [76]	50 [189]	30 [113]	171 [78]	24-1/4 [616]	14-1/4 [362]	34-1/8 [867]	22-1/2 [572]	17-1/4 [438]	21-1/4 [540]	6-7/16 [164]

ENGINEERING SPECIFICATION: ZURN Z1186

Acid Resistant Coated interior and exterior fabricated steel oil interceptor, bronze cleanout plug and visible double wall trap seal, removable combination pressure equalizing/flow diffusing baffle and sediment bucket, horizontal baffle, adjustable oil draw-off and vent connections either side, secured gasketed non-skid cover, complete with flow control fitting. Regularly furnished with inlet and outlet in high position.

Note: Location of outlet from bottom of interceptor cannot be changed.

OPTIONS (Check/specify appropriate options)

PREFIXES

___ Z Acid Resistant Coated Fabricated Steel*

SUFFIXES

- ___ -E Acid Resistant Coated Interior and exterior fabricated steel extension section. (Specify 'C' Dim. required) for recessed installation.
- ___ -HD Heavy duty traffic cover rated at 10,000 lbs. [4536] Kg. maximum safe live load. A 3 [76] minimum extension height is required when heavy-duty cover (-HD) option is specified. (Specify 'C' Dim. height required.)
- ___ -K Anchor flange 1-3/4 [44] down from top and 2 [51] wide. A 3 [76] minimum extension height is required when anchor flange (-K) option is specified. (Specify 'C' Dim. height required.)
- ___ -KC Anchor flange 1-3/4 [44] down from top and 2 [51] wide with clamp collar.

** Inlet and outlet sizes shown indicate standard operating sizes and flow control setting. Size #300 and #400 will have 3 [76] connections reduced to 2 [51] standard. Size #700 and #800 will have 4 [102] connections reduced to 3 [76] as standard.

REV. L	DATE: 10/22/10	C.N. NO. 111958
DWG. NO. 58916	PRODUCT NO. Z1186	

*REGULARLY FURNISHED UNLESS OTHERWISE SPECIFIED

SECTION 10670 - METAL SHELVING, LOCKERS, WORK TABLE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Conditions of the Contract and Division 1, as indexed, apply to this Section.

1.2 SCOPE

- A. Supply and install all Metal Shelving Systems as shown on Drawings and as specified herein.
- B. Metal Lockers
- ~~C. Bench~~
- D. Work Table
- E. Other Misc. Items Specified and shown on the drawings.

1.3 GUARANTEE

- A. Per General Conditions.

1.4 SUBMITTALS

- A. Manufacturer's data.
- B. Submit two samples of color selected and hardware for acceptance by Architect.

PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. Republic Storage Systems Company, Inc., 1038 Beleden Avenue, N.E., Conton, Ohio 44705, 1(800) 477-1255.
- B. Pemco Products, Inc. (800) 562-1000
- C. Northern Tool + Equipment
- D. Or accepted equal.

2.2 PRODUCTS

- A. Locker (Republic) or accepted equal

1. Standard lockers, double tier 12" wide x 15" deep x 42"
2. End finishing panels
3. Number plates
4. 16GA Zee base, 4" high
5. Color: "Decorator Tan"
6. Flat top corner filler

~~B. Benches and Pedestals (Republic) or accepted equal~~

- ~~1. Pedestals 17-1/2" high x 1-1/4" o.d. tubing with 10 gauge steel flanges secured to floor.~~
- ~~2. 1-1/4" x 9-1/2" x 36" laminated maple bench.~~

C. Storage Shelving

1. Wide span shelving units, 30" deep 2 shelf units high. Base 2 shelf unit and rack end unit 60" wide. See plan for quantity. #20383 +20018C. Each unit includes :
 - a. 1 upright frame
 - b. 2 steel shelf levels
 - c. 2 pair side shelves supports
 - d. 2 pair rigidity beams
 - e. 1 rack ending kit
2. Color: "Decorator Tan"

D. Work Bench (Republic) or accepted equal

1. Seven (7), 60"x30", 12 gauge steel 1 3/4" top with 1/8" tempered hardboard bonded to steel top. Adjustable straight legs, model # M183158 global industrial equipment 1-800- 645-1232, Republic Work Bench, Adjustable Legs, 13 gauge top, 14 gauge legs, 16 gauge stringers, 18 gauge base shelve, 16 gauge back, 12gauge foot , tempered hardboard kit with 20 gauge trim or acceptable equal.
2. Color: "Decorator Tan"

PART 3 - EXECUTION

3.1 MEASUREMENTS

- A. Verify all dimensions shown on Drawings by taking field measurements; proper fit and attachment of all parts is required.

3.2 COORDINATION

- A. Coordinate with all other trade whose Work relates to metal locker installation for placing of all required blocking, subframing, backing, furring, etc., to insure proper locations.

3.3 DELIVERY AND STORAGE

- A. Deliver and store materials in dry, protected areas. Keep free of corrosion or other damage. Replace any damaged parts at no cost to Owner.

3.4 INSTALLATION

- A. Install all lockers per manufacturer's published instructions and approved installation layouts. Secure to back wall through metal stud with wood sleepers.
- B. Install all shelves as per manufacturer's published instructions and approved layouts. Secure units to floor and wall purlings.
- C. Install all work bench per manufacturer's instructions.

3.5 CLEAN-UP

- A. Per General Conditions.

END SECTION 10670

SECTION 16471 - PANELBOARDS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Provide all labor, materials and equipment necessary to properly and completely install panelboards as scheduled on the drawings and as required by this section.

1.3 REFERENCES

- A. NECA National Electrical Installation Standards
- B. NEMA PB 1 Panelboards
- C. NEMA PB 1.1 General Instructions for Proper Installation, Operation and Maintenance of Panelboards Rated 600 Volts or Less
- D. NFPA 70 National Electrical Code
- E. UL 50 Enclosures for Electrical Equipment
- F. UL 67 Panelboards
- G. UL 489 Molded-Case Circuit Breakers, Molded-Case Switches and Circuit-Breaker Enclosures

1.4 REGULATORY REQUIREMENTS

- A. Conform to requirements of NFPA 70.
- B. Furnish products listed and classified by UL as suitable for purpose specified and indicated.

1.5 QUALITY ASSURANCE

- A. Perform work in accordance with NECA National Electrical Installation Standards.
- B. Manufacturer: Company specializing in manufacturing the products specified in this section with minimum ten years experience.

1.6 SUBMITTALS

- A. Product data shall be submitted on:
 - 1. Panel
 - 2. Cabinet
 - 3. Bus
 - 4. Dimensions
 - 5. Construction
- B. Shop drawings shall be submitted for every panel on this project. Clearly indicate the following information:
 - 1. UL Label.
 - 2. Each circuit breaker amperage rating, circuit number and position/location in panel.
 - 3. Electrical characteristics of panel.
 - 4. Mains rating.
 - 5. Main device rating.
 - 6. Mounting.
 - 7. Dimension, width, depth, height.
 - 8. Bus material.
 - 9. Interrupting capacity of minimum rated breaker.
 - 10. Panel type.

11. Series AIC rating with upstream breakers.

1.7 PROJECT RECORD DOCUMENTS

- A. Submit record documents to record actual locations of products; indicate actual branch circuit arrangement.

1.8 OPERATION AND MAINTENANCE DATA

- A. Submit Maintenance Data: Include spare parts data listing, source and current prices of replacement parts and supplies, and recommended maintenance procedures and intervals.

1.9 FIELD MEASUREMENTS

- A. Verify that field measurements are as instructed by manufacturer.

1.10 MAINTENANCE MATERIALS

- A. Provide two of each panelboard key.

1.11 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Handle panelboards and enclosures carefully to prevent damage.
- B. Store equipment indoors and protect from weather.
- C. Deliver tubs and internal assemblies sufficiently in advance of installation period as necessary to prevent delay of work. This time shall be established by a CPM provided by the Contractor and accepted by the supervising authorities.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Basis of Design: Square D.
- B. Approved Substitutions: General Electric or Siemens.
- C. Manufacturers (including accepted substitutions) must provide equipment equal to or superior than the basis of design used on this project.
 - 1. Panels or circuit breakers with an AIC rating less than that shown on the Drawings will not be approved.
 - 2. Where basis of design panelboard can accept a certain type, frame, and/or AIC rated breaker, the accepted substitution manufacturer must also be able to accept all equal breaker type, frame, and/or AIC rating.

2.2 GENERAL

- A. Lighting and Appliance Branch Circuit Panelboards: NEMA PB 1, circuit breaker type, dead front UL 67.
- B. Panelboard Bus: Copper ratings as indicated. Provide copper ground bus in each panelboard. Provide isolated full size neutral bus where neutral is applicable. Provide non-linear load panelboards as specified on drawings. Non-linear panelboards shall have 200 percent rated neutral busbar.
- C. Short Circuit Rating:
 - 1. Minimum Integrated Short Circuit Rating: 10,000 amperes rms symmetrical for 240 volt panelboards; 14,000 amperes rms symmetrical for 480 volt panelboards. Bus shall be braced for minimum capacity equal to or greater than the lowest breaker symmetrical interrupting capacity. Minimum short circuit rating shall be increased to meet the following requirements:

- a) Individual CB AIC rating shown on panel schedules indicate lowest AIC rating allowed for individual circuit breaker in panel.
 - b) Panel Series AIC rating shown is the required rating of panel and its circuit breakers based on series rating of individual panel circuit breakers with panel main circuit breaker or upstream feeder breaker.
 - c) Circuit breaker types are not shown or called for. The Contractor must provide breakers in panel or feeder breakers in upstream breakers to comply with the required AIC ratings given, including providing current limiting breakers where required to achieve all ratings given.
2. Short Circuit Rating Label:
- a) Panelboards shall be labeled with a UL short-circuit rating.
- D. Enclosure:
1. Enclosures shall be at least 20" wide made from galvanized steel. Provide minimum gutter space in accordance with the National Electrical Code. Where feeder cables supplying the mains of a panel are carried through its box to supply other electrical equipment, the box shall be sized to include the additional required wiring space. At least four interior mounting studs with adjustable nuts shall be provided.
 2. Enclosures shall be provided with blank ends.
 3. Where indicated on the drawings, branch circuit panelboards shall be column width type.
 4. Regulatory requirements:
 - a) NEMA PB 1, Type 1, Type 3R, or Type 4X as indicated on Drawings. Use only Type 3R or Type 4X for units to be installed outdoors. Use only Type 4X in interior wet locations and designated wash-down areas. For the purposes of this specification, a wash-down area is defined as any area that is directly washed or rinsed with any form of water hose.
 5. Cabinet Box: 6" deep, 20" wide minimum, constructed of code gauge steel, galvanized or bonderized to prevent rust.
- E. Cabinet Front: Flush or surface (as indicated on Drawings) cabinet front with concealed trim clamps, concealed hinge, and flush lock all keyed alike. Finish in manufacturer's standard baked enamel finish for interior panels. Exterior panels to be painted with rust inhibit primer painted over on all surfaces with epoxy paint.
- F. Panels and breakers shall be rated for voltage and class of service to which applied.
- G. Spaces:
1. Space provisions or spaces for future breakers shall be located at the bottom of the panel and be fully bussed complete with all necessary mounting hardware less the breaker.
- H. Provide lugs as required for conductors being connected to panelboard lugs, circuit breakers, etc.

2.3 MAINS

- A. Provide main lug only (MLO) or main circuit breaker (MCB) as noted on drawings either by riser diagram or by schedule. Where conflict exists, provide MCB.
- B. Regardless of what is shown on drawings, provide the following minimum requirements.
 1. Main circuit breaker on each panel serving building main, if required by applicable codes.

2. Main circuit breaker on each panel fed directly from a transformer (unless disconnect with overcurrent devices is installed in feeder between transformer and panel).
- C. Provide lugs as required for conductors being connected to panelboard lugs, circuit breakers, etc.
- D. Main circuit breaker is not to be mounted as branch breaker or subfeeder breaker.

2.4 CIRCUIT BREAKERS

A. General

1. Molded Case Circuit Breakers: Plug-in type for 250V or less, bolt-on type for over 250V, thermal magnetic trip circuit breakers, with common trip handle for all poles. Provide circuit breakers UL listed as Type SWD for lighting circuits. Provide UL Class A ground fault interrupter circuit breakers where scheduled. Do not use tandem circuit breakers.
2. Current Limiting Molded Case Circuit Breakers: Provide circuit breakers with integral thermal and instantaneous magnetic trip in each pole coordinated with automatically resetting current limiting elements in each pole. Interrupting rating 100,000 symmetrical amperes, let-through current and energy level less than permitted for same size Class RK-5 fuse.

B. Main Breakers:

1. Main breakers shall be individually mounted separate from branch breakers.
2. Covered by a metal plate, except for operating handle.
3. Connection from the load's side to the panel bus shall be bus bar. Insulated wire not permitted.

C. Branch Breakers:

1. Thermal-magnetic, molded case, with inverse time-current overload and instantaneous magnetic tripping, unless otherwise shown. Breakers shall be calibrated for 40 degrees C or shall be ambient compensating.
2. Quick-make, quick-break, with tripped indication clearly shown by breaker handle taking a position between ON and OFF.
3. Multi-pole breakers shall have common internal trip. No handle ties between single pole breakers are acceptable for this project.
4. Multi-wire branch circuit breakers shall have multi-pole breakers as required by the NEC. Handle ties between breaker handles are not acceptable.
5. Single pole 15 and 20 ampere circuit breakers shall be rated for switching duty and shall be labeled as "SWD."
6. AIC rating shall be as called for under "2.2 General."
7. Ground Fault Circuit Interrupters (GFCI):
 - a) Provide UL Class (5 milliamp sensitivity) ground fault circuit protection on 120 VAC branch circuits for exterior location receptacles and for interior locations where required by NEC. (These may not be indicated on Panel Schedule.) This protection shall be an integral part of the branch circuit breaker, which also provides overload, and short circuit protection for branch circuit wiring. Tripping of a branch circuit breaker containing ground fault circuit interruption shall not disturb the feeder circuit to the panelboard. Provide separate neutral for circuits on GFCI breakers whether indicated on drawings or otherwise.
8. Breakers feeding heating and air-conditioning equipment shall be rated HACR type

breaker.

9. Breakers feeding high intensity discharge lamps systems shall be HID rated.

D. All breakers are to have lugs sized to match conductors called for on drawings.

2.5 SERVICE ENTRANCE EQUIPMENT

A. Panelboards used as service entrance equipment shall be listed and labeled by UL for use as service equipment.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install panelboards in accordance with NEMA PB 1.1. Install all panelboards and panelboard enclosures in accordance with the manufacturer's written instructions, NECA Standard of Installation, the applicable requirements of the National Electrical Code, and recognized industry practices.
- B. Install panelboards plumb. Install recessed panelboards flush with wall finishes. Provide supports in accordance with Section 16190 Hangers and Supports.
- C. Height: 6' to top of panelboard; install panelboards taller than 6' with bottom no more than 4" above housekeeping curb.
- D. Provide filler plates for unused spaces in panelboards.
- E. Provide typed circuit directory for each branch circuit panelboard. Mount a typewritten directory showing the actual circuit numbers, type of load and room names on inside of door. Room names shall be actual names or numbers used, not necessarily shown on the drawings. Progress drawings shall show same arrangements as the directory. Revise directory to reflect circuiting changes required to balance phase loads.
- F. Provide engraved plastic nameplates under the provisions of Section 16195 Identification for Electrical Systems.
- G. Provide spare conduits out of each recessed panelboard to an accessible location above ceiling. Minimum spare conduits: 4 empty 1". Identify each as "SPARE."
- H. Proper working clearances shall be maintained at every panelboard location. The working space in front of a panelboard shall be as a minimum, 30" wide extending 3', 3.5', or 4' (per NEC 110.26) out perpendicular to the panelboard.
- I. All enclosures shall be firmly anchored to walls and supporting structures (where used) using appropriate hardware. Provide supporting (unistrut type) channels on walls constructed of gypsum board or where otherwise necessary to provide a mechanically secure and permanent installation. Enclosures shall be installed so that the top is 6'-6" above finished floor. Where the size of the enclosure is such that the top cannot be installed at 6'-6", the top of the enclosure shall be kept as low as possible.
- J. Clean the interior of each panelboard before installing conductors. At all times, keep the interior trim and exterior surfaces of the panelboard free of rust and debris. Repaint finishes if necessary.
- K. Coordinate all raceways and conductors with their respective panelboards so that all connections and conductors routing present an orderly appearance. Conductors in the panelboards shall be laced and arranged in orderly manner.
- L. Collect all keys upon delivery of panelboard. Store keys on one ring to be kept by project superintendent. Forward key ring with keys to Owner upon substantial completion.
- M. Provide a separate neutral conductor for each GFI breaker. These shall not be combined to

serve more than one circuit, even when on different phases. Increase plan indications of conductors for neutral wires required as necessary.

3.2 IDENTIFICATION

- A. Refer to Section 16195 Identification for Electrical Systems for products and content.
- B. Provide engraved plastic nameplates under the provisions of Section Electrical Identification.
- C. Nameplate shall state panel name and voltage of this panel, name of panel that feeds this respective panel, and UL short-circuit rating of this panel.
- D. Provide labels and identification as required by the NEC.
- E. All circuit identifications and directories shall be checked to verify accuracy of the description of the load and/or equipment being fed

3.3 FIELD QUALITY CONTROL

- A. Field inspection and testing will be performed.
- B. Measure steady state load currents at each panelboard feeder; rearrange circuits in the panelboard to balance the phase loads to within 20 percent of each other. Maintain proper phasing for multi-wire branch circuits.
- C. Visual and Mechanical Inspection: Inspect for physical damage, proper alignment, anchorage, and grounding. Check proper installation and tightness of connections for circuit breakers, fusible switches, and fuses.
- D. Feeder conductors shall be checked by accepted means to establish the absence of shorts to ground, insulation value, etc., and the result recorded and submitted to the Engineer.
- E. All circuits shall be operated to establish a good working order and checked for shorts.
- F. All panel directory circuit numbers shall be checked to verify accuracy of the number.
- G. Where and when requested by Engineer provide:
 - 1. Inspection of equipment by authorized equipment manufacturer technician complete with submittal of statement of findings by technician, and providing any adjustments deemed necessary for a complete and operating system.
 - 2. Ground, voltage, and/or load readings complete with submittal on legible form with applicable data.

END OF SECTION