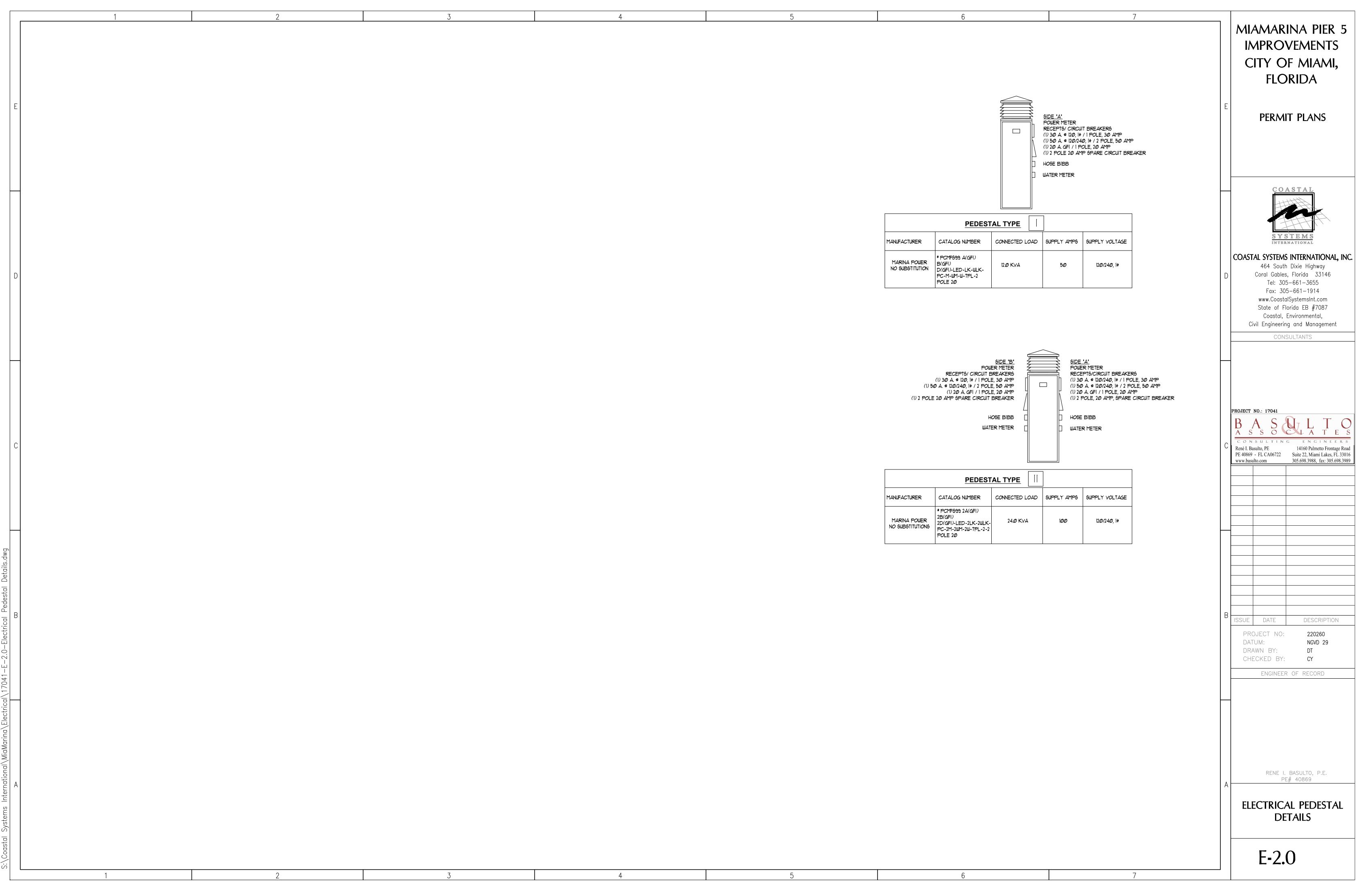
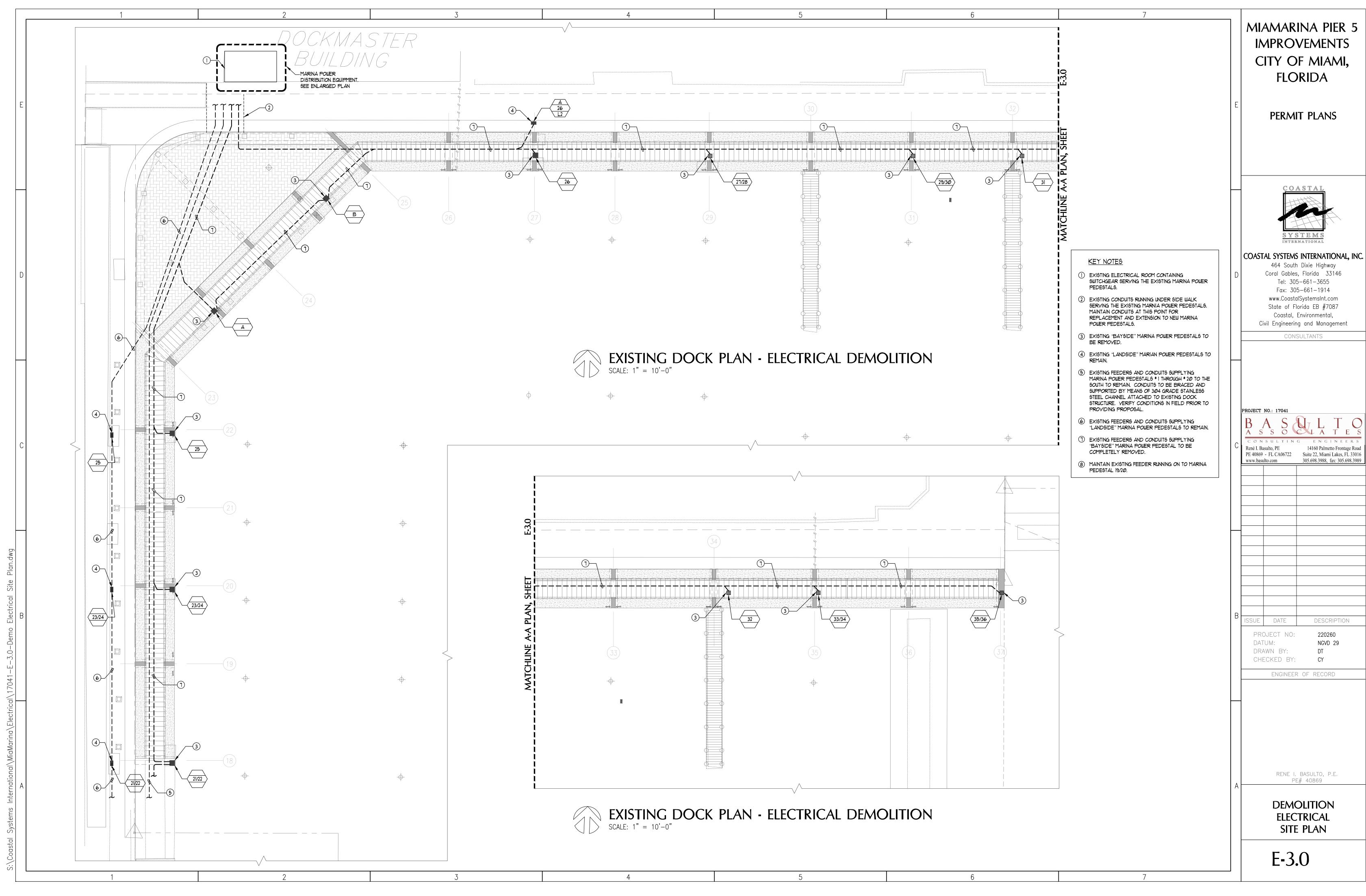
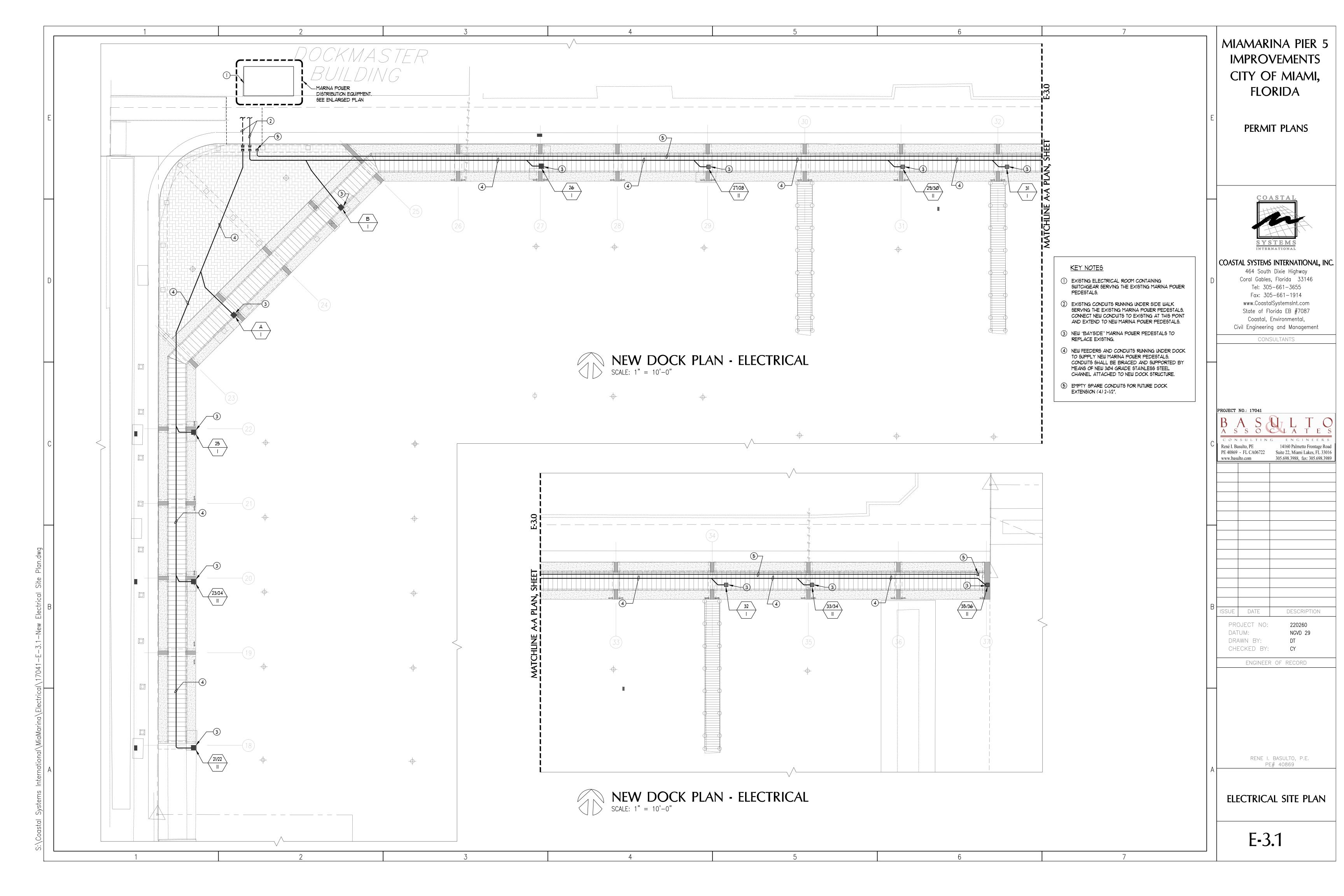
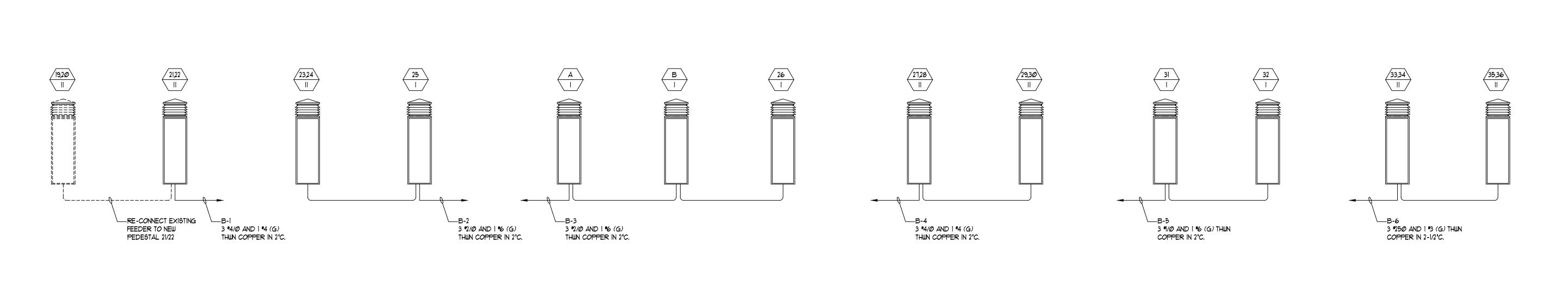
1 2	3	4 5	6 7	MIAMARINA PIER 5
				IMPROVEMENTS
				CITY OF MIAMI,
	ELECTRICAL EQUIPMENT MARKING AND LABELING NOTES	GENERAL	NOTES	FLORIDA
E	1. ALL PANELBOARDS, JUNCTION BOX AND CABINETS SHALL BE LABELED WITH LAMINATED PLASTIC PLATES, 3/4" HIGH WITH 3/8" ENGRAVED LETTERS. PUNCH TAPES WITH MASTIC BACKINGS ARE NOT ACCEPTABLE.	1. EXAMINATION OF CONTRACT DOCUMENTS AND SITE OF WORK. THE BIDDER IS REQUIRED, BEFORE SUBMITTING HIS PROPOSAL, TO VISIT THE SITE OF THE PROPOSED WORK AND FAMILIARIZE HIMSELF WITH THE NATURE AND EXTENT OF THE WORK AND ANY LOCAL CONDITIONS THAT MAY, IN ANY MANNER, AFFECT THE WORK TO BE DONE AND	20. ALL "PVC" SYSTEMS RUNNING UNDER FIXED PIERS SHALL BE SUPPORTED IN ACCORDANCE WITH THE NEC AND LOCAL CODES.	PERMIT PLANS
	2. THE FOLLOWING EQUIPMENT SHALL BE IDENTIFIED WITH ENGRAVED BAKELITE NAMEPLATES AS TO NAME AND/OR FUNCTION: DISTRIBUTION PANEL "MOP" AND "H"	EQUIPMENT, MATERIALS AND LABOR REQUIRED THEREFORE. SINCE THE WORK INVOLVES EXISTING BUILDING SYSTEMS AND FACILITIES, SPECIAL CONSIDERATION SHALL BE GIVEN TO EXAMINATION OF WORKING CONDITIONS, EXISTING FACILITIES AND ALL STRUCTURES TO FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS. SLIGHT VARIATION OF ROUTING AND OR CONSTRUCTIONS SHOULD BE ANTICIPATED BY THIS CONTRACTOR TO AVOID	 THIS POWER DISTRIBUTION LAYOUT IS DIAGRAMMATIC ONLY. THEY DO NOT SHOW EVERY BEND, OFFSET OR FITTINGS WHICH MAY BE REQUIRED FOR THIS INSTALLATION IN THE SPACE ALLOTTED. COORDINATE THIS LAYOUT WITH PLUMBING, FUELING, ETC. AND OTHER EQUIPMENT, EXISTING STRUCTURES, ETC. BEFORE ROUGHING-IN. 	
	3. ALL ELECTRICAL EQUIPMENT (PANELS, ETC.) DESIGNATION SHALL BE VERIFY WITH OWNER'S REPRESENTATIVE BEFORE ORDER SUCH MARKINGS.	CONFLICTS WITH OTHER TRADES AND ARE EXPRESSLY INCLUDED AS PART OF THE WORK WHENEVER REQUIRED AT NO ADDITIONAL COST TO THE OWNER UNAWARENESS ON THE PART OF THE CONTRACTOR WILL IN NO WAY RELIEVE HIM OF THE OBLIGATIONS AND RESPONSIBILITIES ASSUMED UNDER THIS CONTRACT.	23. GROUNDING CONTINUITY SHALL BE MAINTAINED THROUGH THE ENTIRE RACEWAY SYSTEM. 24. EXACT POINT AND METHOD OF CONNECTION FOR EACH ELECTRICAL EQUIPMENT SHALL BE DETERMINED IN THE FIELD.	
	MAIN ELECTRICAL CABINET NOTES	2. ELECTRICAL CONTRACTOR SHALL MAKE FINAL ELECTRICAL CONNECTIONS TO ALL MECHANICAL EQUIPMENT AFTER EQUIPMENT IS SET IN PLACE BY OTHER, ELECTRICAL CONTRACTOR SHALL SHORTEN CORDS (WHEN APPLICABLE), INSTALL CORRECT OUTLETS, PLUGS, RECEPTACLES, ETC. AS REQUIRED FOR COMPLETE INSTALLATION OF EQUIPMENT.	 25. ALL SPLICES SHALL BE DONE IN PROPER JUNCTION BOXES OR OUTLETS WITH PROPER CONNECTORS, PER NEC. 26. ALL EXTERIOR ELECTRICAL EQUIPMENT SHALL BE WEATHERPROOF. 	COASTAL
		 ALL DUPLEX RECEPTACLES SHALL BE 125V-2ØA-3W GROUNDED. SPECIFICATION GRADE, EXCEPT OTHERWISE INDICATED. ALL RECEPTACLES SHALL BE WIRED IN ACCORDANCE WITH N.E.C. TO ENSURE CORRECT POLARITY. 	27. ALL CONDUITS SHALL BE ELECTRICAL NONMETALLIC TUBING "PVC" SCH. 40 RATED FOR 90°C, SUNLIGHT RESISTANT AND WET LOCATION APPROVED TO BE EMBEDDED IN CONCRETE. 28. PROVIDE EXPANSION JOINT FITTING IN ALL EXPANSION JOINTS AND/OR AS REQUIRED BY THE LENGTH OF	SYSTEMS
	1. BONDING OF ELECTRICAL EQUIPMENT SHALL BE PROVIDED IN ACCORDANCE WITH N.E.C. SECTION 250 AND LOCAL CODES.	5. ALL DUPLEX RECEPTACLES SHALL BE INSTALLED IN VERTICAL POSITION WITH GROUND PRONG UP.	CONDUIT. 29. THIS 'PVC' CONDUIT PIPE AND FITTINGS SHALL RETAIN THEIR ORIGINAL PROPERTIES AFTER YEARS OF	INTERNATIONAL
	2. THE MAIN MARINA GROUND SYSTEM SHALL HAVE A RESISTANCE OF 25 OHMS OR LESS WITHOUT DEPENDING ON WATER METAL PIPE SYSTEM.	6. ALL RECEPTACLES SHALL INDICATE THE PANELBOARD AND CIRCUIT NUMBER SUPPLYING THEM. 1. FLEXIBLE METAL CONDUIT SHALL BE SECURED BY AN APPROVED MEANS AT INTERVALS NOT EXCEEDING 4 1/2	EXPOSED CONDUIT SHALL BE SECURELY HELD IN PLACE BY SUITABLE HANGERS OR STRAPS WITH THE	COASTAL SYSTEMS INTERNATIONAL, IN 464 South Dixie Highway
D D		FEET AND WITHIN 12 INCHES ON EACH SIDE OF EVERY OUTLET BOX FITTING. THIS REQUIREMENT SHALL NOT APPLY TO INSTALLATIONS OF LIGHTING FIXTURES. 8. ELECTRICAL CONTRACTOR SHALL KEEP ALL SYSTEMS, CIRCUITS, ETC. ACTIVE SERVING OCCUPIED AREAS OF PROJECT DURING CONSTRUCTION PHASING.	MAXIMUM SPACING OF POINTS FOR SUPPORTS NOT EXCEEDING THOSE SPECIFIED IN THE NEC, EXCEPT WHEN EMBEDDED IN CONCRETE, RIGID CONDUIT PIPE SHALL NOT BE CLAMPED TIGHTLY. IT SHALL BE SUPPORTED IN SUCH A MANNER AS TO PERMIT ADEQUATE LINEAR MOVEMENT, ALLOWING FOR EXPANSION AND CONTRACTION DUE TO TEMPERATURE CHANGE. WHERE A LENGTH IS EXPECTED TO BE 1/4" OR GREATER IN A	Coral Gables, Florida 33146 Tel: 305-661-3655 Fax: 305-661-1914 www.CoastalSystemsInt.com
	MAIN ELECTRICAL CABINET SIGN NOTES	9. ALL WIRES SHALL BE COPPER. ALL INSULATION SHALL BE TYPE "THHN/THWN".	STRAIGHT LINE BETWEEN SECURELY MOUNTED ITEMS, RIGID PVC EXPANSION JOINTS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. 31. PROPER CARE SHALL BE TAKEN WHEN FIELD BENDING, TO MAINTAIN THE INTERNAL DIAMETER AND WALL THICKNESS OF THE CONDUIT.	State of Florida EB #7087 Coastal, Environmental, Civil Engineering and Management
	17, 11, 1223 11, 13, 12 3, 131, 121 3, 31, 121	10. ALL CONDUITS SHALL BE SECURELY FASTENED TO THE STRUCTURE WITH PIPE STRAPS OR OTHER APPROVED PIPE SUPPORTS.	32. THE CONTRACTOR SHALL FURNISH AND INSTALL PYC CONDUIT PIPE AND FITTINGS MADE BY SAME MANUFACTURER. ALL "PYC" SHALL BE UL CERTIFIED AND ACCEPTED BY THE C.E.C.	CONSULTANTS
	1. PROVIDE A PERMANENT SIGN ON THE ACCESS DOOR OF THE MARINA MAIN ELECTRICAL CABINET STATING THAT SERVICE DISCONNECT MEANS ARE LOCATED INSIDE.	11. ALL WORK SHALL BE DONE IN A NEAT AND WORKMANLIKE MANNER. 12. CONDUIT RUNS ARE SHOWN SCHEMATICALLY. CONDITIONS WILL DETERMINE THE ACTUAL CONDUIT RUN. NO EXTRA	33. IN LAYING THE 'PVC', ALL JOINTS SHALL BE STAGGERED AT LEAST 6' BOTH VERTICALLY AND HORIZONTALLY WHERE PRACTICAL.	
	2. A SIGN SHALL BE PLACED AT THE SERVICE ENTRANCE EQUIPMENT INDICATING THE FOLLOWING: A. THERE ARE NOT EMERGENCY LIGHTS SERVING THIS MARINA	WILL BE ALLOWED FOR ADDITIONAL SUPPORTS, FITTINGS, ETC. 13. WHERE WIRE SIZES ARE INDICATED ON THE PLANS FOR INDIVIDUAL CIRCUITS, THE INDICATED WIRE SIZE SHALL APPLY TO THE COMPLETE CIRCUIT UNLESS OTHERWISE INDICATED.	34. ALL "PYC" SHALL BE INSTALLED IN SUCH MANNER AS TO INSURE AGAINST COLLECTION OF TRAPPED CONDENSATION AND "PYC" RUNG SHALL BE ARRANGED SO AS TO BE DEVOID OF TRAPS. ALL NECESSARY PRECAUTIONS TO PREVENT THE LODGMENT OF DIRT, PLASTER, OR TRASH IN ALL "PYC". FITTINGS AND BOXES DURING CONSTRUCTION SHALL BE TAKEN. ALL "PYC" SHALL BE SWABBED FREE OF DEBRIS OR MOISTURE BEFORE CONDUCTORS ARE PULLED.	
	3. A SIGN PLACED OUTSIDE OF ELECTRICAL CABINET SHALL READ AS FOLLOWS: 'NO STORAGE ALLOWED'.	14. JUNCTION, PULL AND OUTLET BOXES SHALL BE NON-METALLIC SCREWED ON COVER PLATE, NEMA TYPE "3R" EXCEPT OTHERWISE INDICATED. SIZES AND SHAPE OF BOXES SHALL ACCOMMODATE WIRING WITHOUT CROWDING. AND TO SUIT LOCATION.	35. PROYIDE PULL AND/OR JUNCTION BOXES WHERE REQUIRED BY NEC. AND LOCAL CODES, WHETHER OR NOT SHOWN ON DUGS. 36. IDENTIFY CONDUCTORS WHERE MORE THAN ONE PASSED THROUGH A PULL AND/OR JUNCTION BOX WITH	PROJECT NO.: 17041
	4. THESE SIGNS SHALL BE CONSTRUCTED OF SUFFICIENT DURABILITY TO WITHSTAND THE AMBIENT ENVIRONMENT.	15. BOXES SHALL BE SECURELY MOUNTED TO THE STRUCTURE WITH SUPPORTING FACILITIES INDEPENDENT OF THE CONDUITS ENTERING OR LEAVING THE BOXES. BRACKETS, RODS, HANGERS, BOLTS OR OTHER SUITABLE SUPPORTING METHOD MAY BE USED.	ELECTRICAL CHARACTERISTICS, SYSTEM DESIGNATION, SOURCE AND DESTINATION. 37. FOR UTILITY SUPPORT BRACKETS, SEE DETAILS ON STRUCTURAL PLANS.	B A S S L L T C
C	5. THESE SIGNS DESCRIPTION SHALL BE APPROVED BY THE ELECTRICAL INSPECTOR AND FIRE MARSHALL BEFORE ORDER.	16. ALL JUNCTION AND PULL-BOXES SHALL BE ACCESSIBLE ALL THE TIME. 17. ALL RACEWAY ROUTED, INSULATED CONDUCTORS SYSTEM SHALL BE COLOR CODED AS FOLLOWS:	38. ALL CABLES SYSTEMS RUNNING IN FLOATING PIERS CHASE SHALL BE IN ACCORDANCE WITH FLOATING PIER MANUFACTURER, THE NEC AND LOCAL CODES. FOR EXACT RUNNING LOCATION 39. SERVICE EQUIPMENT FOR FLOATING DOCKS SHALL NOT BE PERMITTED TO BE LOCATED ON THE FLOATING	CONSULTING ENGINEERS René I. Basulto, PE 14160 Palmetto Frontage Roa PE 40869 - FL CA06722 Suite 22, Miami Lakes, FL 330: www.basulto.com 305.698.3988, fax: 305.698.398
	SURGE SUPPRESSOR NOTES	120/240V SYSTEMS 120/208V SYSTEMS 480/277V SYSTEMS PHASE 'A': BLACK PHASE 'A': BROWN PHASE 'B': RED PHASE 'B': ORANGE	STRUCTURE, PER NEC SECTION 555.7 40. ELECTRICAL CONNECTIONS SHALL BE LOCATED NOT LESS THAN 12 IN. ABOVE THE DECK OF A FLOATING. PIER, UNLESS THE CONDUCTOR SPLICES ARE CONTAINED WITHIN APPROVED JUNCTION BOXES UTILIZING. SEALED WIRE CONNECTOR SYSTEMS LISTED AND IDENTIFIED FOR SUBMERSION. SUCH LISTED SYSTEMS MUST	WWW.bushte.com
	1. SERVICE ENTRANCE SURGE SUPPRESSION SHALL COMPLY WITH NATIONAL ELECTRICAL CODE ARTICLE 280 AND SHALL HAVE INTEGRAL VISUAL INDICATION FOR SURGE PROTECTION FAILURE. PROTECTION SHALL BE IN ACCORDANCE WITH APPROPRIATE IEEE STANDARDS FOR THE TYPE	NEUTRAL: WHITE PHASE 'C': BLUE PHASE 'C': YELLOW GROUND: GREEN NEUTRAL: WHITE NEUTRAL: GRAY WITH WHITE TRACER GROUND: GREEN GROUND: GREEN	DECK AND NEVER BELOW THE ELECTRICAL DATUM PLANE. PER NEC SECTION 555.9 42. PEDESTALS AND/OR SUBSTATIONS ENCLOSURES ON PIERS SHALL BE LOCATED SO AS NOT TO INTERFERE	
	OF EQUIPMENT PROTECTION. 2. THE SURGE SUPPRESSION SHALL BE PROVIDED WITH FUSED DISCONNECT, SURFACE MOUNTED IN NEMA 1. SEE 'MDP' PANEL SCHEDULES. SURGE SUPPRESSION SHALL BE MANUFACTURED BY ADVANCE PROTECTION TECHNOLOGIES, INC. OR APPROVED EQUAL.	 18. ALL EXCAVATION, CONCRETE WORK AND BACKFILLING SHALL BE DONE BY ELECTRICAL CONTRACTOR ALL TRENCHES SHALL BE DUG TO 24" DEPTH WITHOUT POCKETS OR DIPS. ALL LARGE STONES SHALL BE REMOVED FROM BOTTOM OF TRENCH. 19. BACKFILL SHALL BE SOFT DIRT OR SAND TAMPED INTO PLACE. TRENCH SHALL BE FILLED TO THE TOP AND 	WITH MOORING LINES. 43. PROVIDE PULL STRING IN ALL EMPTY PVC.	
	3. THIS EQUIPMENT IS FURNISHED, INSTALLED AND WIRED BY MARINA POWER.	SURFACE RESTORED TO ITS ORIGINAL CONDITION. ALL EXCESS EARTH SHALL BE REMOVED. "PVC" TO HAVE A MINIMUM EARTH OR CONCRETE COVER AS SHOWN ON DRAWINGS.		
бмр.	AS-BUILT DRAWINGS	APPLICABLE CODES		
General Notes B B Comparison of the second of the secon	AS-BUILT DRAWINGS SHALL BE PREPARED BY THE CONTRACTOR AND MAINTAINED DURING THE COURSE OF CONSTRUCTION AND ALL UNDERGROUND SYSTEMS SHALL BE TIED INTO FIXED BUILDING POINTS(STRUCTURAL GRID) BY ACCURATE DIMENSIONS, AS-BUILT DRAWINGS MUST BE KEPT CURRENT TO EACH WEEK'S INSTALLATION AND RECORDED ON A CLEAN FIELD SET OF CONSTRUCTION DOCUMENTS MARKED 'AS-BUILT' SET! AS-BUILT DRAWINGS SHALL BE PREPARED ON REPRODUCTIBLE MEDIA WHICH WILL PERMIT REPRODUCTION BY NORMAL PRINTING METHODS.	FLORIDA BUILDING CODE (2011 EDITION) FLORIDA FIRE PREVENTION CODE (2014 EDITION) NATIONAL ELECTRICAL CODE (2014 EDITION)		B ISSUE DATE DESCRIPTION PROJECT NO: 220260 DATUM: NGVD 29
1 - 1 - 0 - 1 - 1 - 0 - 1 - 1 - 1 - 1 -	THE DRAWINGS SHALL BECOME THE PROPERTY OF THE OWNER. DRAWINGS SHALL SHOW THE ACTUAL ROUTING OF ALL MAIN FEEDERS AND SUB-FEEDERS, SERVICE ENTRANCE, BUILDING SYSTEMS, ETC. AND THE ACTUAL WIRING AND CONDUIT SIZES USED.	NATIONAL FIRE ALARM CODE (2013 EDITION)		DRAWN BY: DT CHECKED BY: CY ENGINEER OF RECORD
ical/17041				
arina Electr				
tional/Miam				RENE I. BASULTO, P.E. PE# 40869
Internal				A
Systems				GENERAL NOTES AND SYMBOL LEGEND

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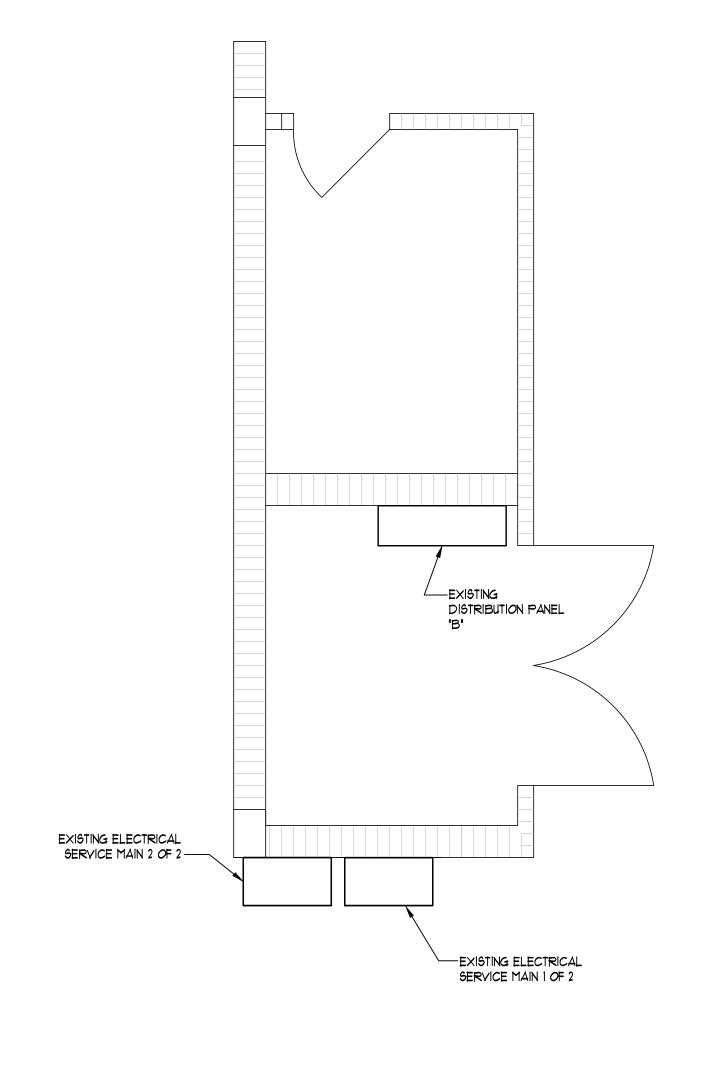








MARINA PEDESTAL RISER



ENLARGED	ELECTRICAL	ROOM PLAN
SCALE: $1/2" = 1'-0"$		

PA	NEL: "B" EXISTING	SIEMENS DISTRIBUTION PANEL 65,000 A.I.C 120/240 VOLTS, I PH., 3 WIRE 1200A. M.L.C SURFACE MOUNTEI					
CKT.		BRANCH SIZE (AMPS)			FEEDER SIZE		
NO.	DESCRIPTION OF LOAD	NO. OF POLES	FRAME	TRIP	WIRE	CONDUIT	KVA
1	MARINA PEDESTALS 19, 20 \$ 21, 22	2	225	225	4	4	48.0
2	MARINA PEDESTALS 23, 24 \$ 25	2	200	175	4	4	36.0
3	MARINA PEDESTALS A, B \$ 26	2	200	175	<u>4</u>	4	36.0
4 5 6	MARINA PEDESTALS 27, 28 \$ 29, 30	2	225	225	4	4	48.0
5	MARINA PEDESTALS 31 \$ 32	2	200	150	(4)	4	24.0
6	MARINA PEDESTALS 33, 34 \$ 35, 36	2	225	225	4	4	48.0
٦	EXISTING PANEL "BI"	2	200	200	3	3	23.3
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

- (1) EXISTING LOAD NOT AFFECTED BY THIS PROJECT.
- 2 EXISTING LOAD EQUIPMENT REPLACED.
- 3 EXISTING WIRE CONDUIT.
- 4 NEW WIRE AND CONDUIT MARINA PEDESTAL RISER.
- 5 REPLACE CIRCUIT BREAKER WITH SIZE SHOWN.

NEC ARTICLE 555.12 DEMAND LOAD CALCULATION

NO DEMAND LOAD 23.3 KVA @ 100% = 23.3 KVA DEMAND LOAD FOR 20 RECEPTACLES 240 KVA @ 70% = 168 KVA = 191.3 KVA = 797 AMPS TOTAL LOAD

- COMPANY MAN-HOLE POWER CONNECTION POINT. 3 SETS (3 * 600 KCM THWN COPPER IN 3" CONDUIT).
- 2 EXISTING ELECTRICAL SERVICE MAIN # 1 OF 2. NOT AFFECTED BY WORK RELATED TO THIS PROJECT.
- 3 EXISTING ELECTRICAL SERVICE MAIN # 2 OF 2.
- SEE PANEL SCHEDULE.

RENE I. BASULTO, P.E. PE# 40869

MIAMARINA PIER 5

IMPROVEMENTS

CITY OF MIAMI,

FLORIDA

PERMIT PLANS

COASTAL SYSTEMS INTERNATIONAL, INC. 464 South Dixie Highway

> Coral Gables, Florida 33146 Tel: 305-661-3655 Fax: 305-661-1914 www.CoastalSystemsInt.com State of Florida EB #7087 Coastal, Environmental, Civil Engineering and Management

> > CONSULTANTS

PE 40869 - FL CA06722 Suite 22, Miami Lakes, FL 33016 www.basulto.com 305.698.3988, fax: 305.698.3989

14160 Palmetto Frontage Road

DESCRIPTION

220260

NGVD 29

René I. Basulto, PE

SUE DATE

DATUM:

PROJECT NO:

DRAWN BY:

CHECKED BY: CY

ENGINEER OF RECORD

PEDESTAL AND ELECTRICAL RISER

E-4.0

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PARTIAL ELECTRICAL RISER

ELECTRICAL RISER KEY NOTES

- ① EXISTING ELECTRICAL SERVICE LATERAL TO FLORIDA POWER AND LIGHT
- 3 POLE 1200 AMP CIRCUIT BREAKER IN NEMA 3R ENCLOSURE.
- 3 POLE 1200 AMP CIRCUIT BREAKER IN NEMA 3R ENCLOSURE.
- 4 EXISTING DISTRIBUTION PANEL "B"
- 5 EXISTING DISTRIBUTION PANEL "B" FEEDER 3 SETS OF (3 * 600 KCM AND 1 * 3/0 (G) THUN COPPER IN 3" CONDUIT).