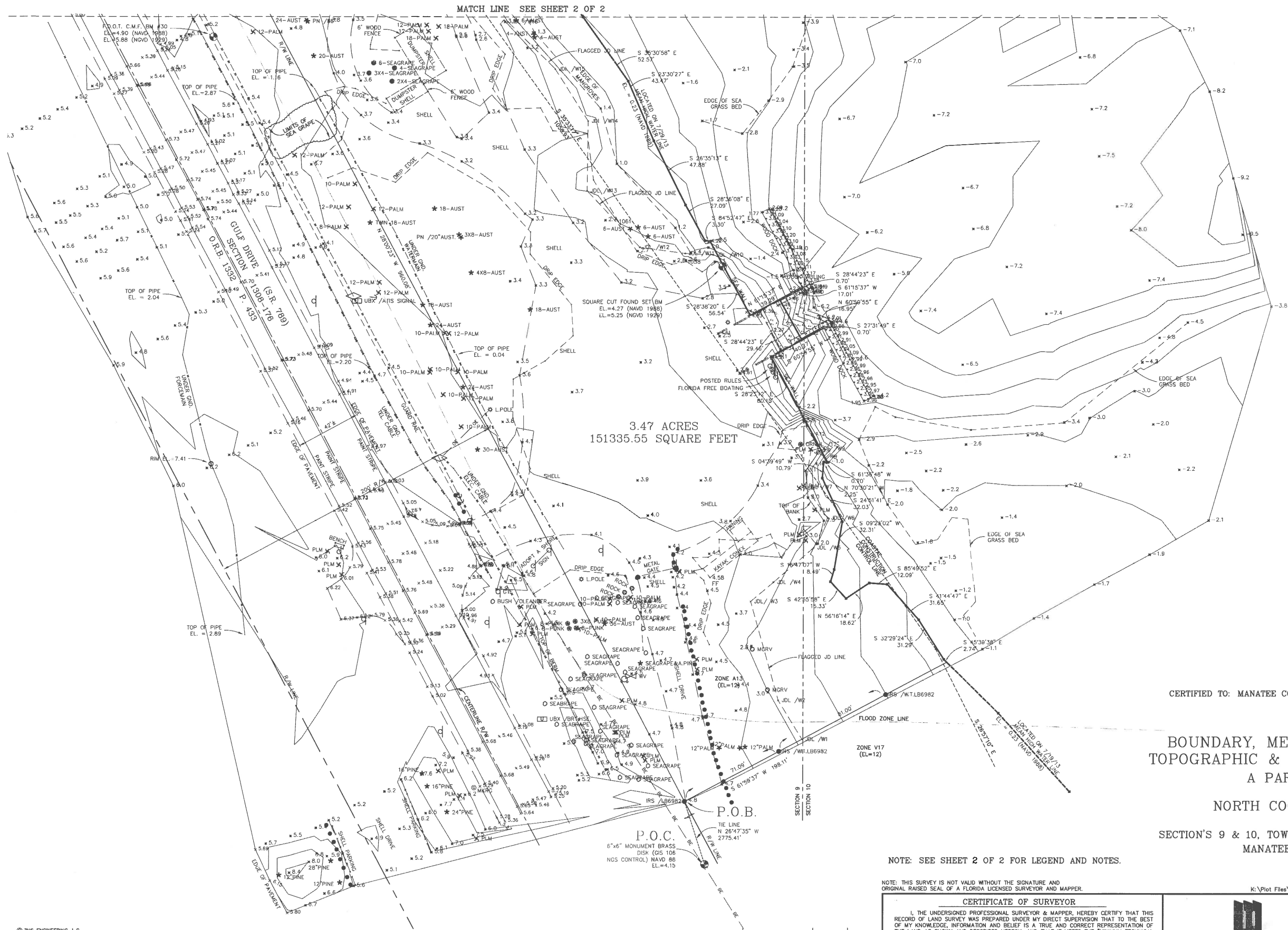


3-29-2016

ITEM NO.	DESCRIPTION	UNITS	QTY.
2.01	MOBILIZATION	LS	1
2.02	MAINTENANCE OF TRAFFIC	LS	1
2.03	SURVEY AND CONTROL LAYOUT BY CONTRACTOR	LS	1
2.04	AS-BUILT SURVEY	LS	1
2.05	PREVENTION, CONTROL, AND ABATEMENT OF EROSION AND WATER POLLUTION	LS	1
2.06	REMOVE AND DISPOSE OF EXIST. SITE ITEMS (LIGHTING, DUMPSTERS, FENCING, SIGNAGE, GATES, POSTS)	LS	1
2.07	REMOVE AND DISPOSE OF, EXIST. TREES (8-INCH AND GREATER)	EA	58
2.08	CLEARING AND GRUBBING	LS	1
2.09	GRADING AND FILL	LS	1
2.10	STORMWATER POND OUTFALL, INCL RIP-RAP, SKIMMER, CONCRETE	LS	1
2.11	PAVEMENT CEMENT CONCRETE AND BASE (6-INCH THICK MIN., 4000 PSI), INCLUDING WWR AND 12" BASE	SY	6625
2.12	CONCRETE SIDEWALK ONSITE (4-INCH THICK MIN., 3000 PSI), AND 6" BASE	SY	140
2.13	CONCRETE SIDEWALK OFFSITE (FDOT INDEX 310, 6" THICK)	SY	140
2.14	COMPACTED SHELL DRIVE	SY	420
2.15	WASHED SHELL - 4" THICK	SY	146
2.16	FDOT DRIVEWAY	SY	288
2.17	PIPE, WATER, 2-INCH PE, SDR 9	LF	145
2.18	PIPE, WATER, 1-INCH PE, SDR 9	LF	680
2.19	2-INCH WATER CONNECTION (INCL. DISINFECTION AND TESTING)	LS	1
2.20	1.5-INCH WATER METER AND BACKFLOW ASSEMBLY	EA	1
2.21	RPZ AND HOSE BIB (FOR STORAGE BUILDING)	EA	1
2.22	FITTINGS (D.I.), WATER	LS	1
2.23	6' TALL CHAIN LINK FENCE	LF	155
2.24	10' WIDE CHAIN LINK ACCESS	EA	5
2.25	TYPE AB CURB AND GUTTER	LF	46
2.26	TYPE D CURB	LF	22
2.27	WOODEN POST	EA	190
2.28	POST / ROPE	LF	380
2.29	PIPE GUARDRAIL ON SEAWALL	LF	270
2.30	WHEEL STOPS (NEW)	EA	44
2.31	BOLLARD (GALVANIZED STEEL, PAINTED)	EA	8
2.32	BOLLARD (PVC, PAINTED)	EA	4
2.33	SIGNAGE	LS	1
2.34	BENCH	EA	1
2.35	DETECTABLE WARNING	EA	8
2.36	TRAFFIC STRIPES AND MARKINGS	LS	1
2.37	FISH CLEANING STATION	EA	2
2.38	BOAT RAMP SIGN	EA	1
2.39	ELECTRIC SERVICE, SITE LIGHTING AND SIGNAGE, INCL METER	LS	1
2.40	LIGHTING ASSEMBLY (INCLUDING FIXTURE, BASE, CONDUIT, WIRES)	EA	5
2.41	TREES, CABBAGE PALMS	EA	14
2.42	SHRUBS, ALL	LS	1
2.43	GROUNDCOVER, ALL	LS	1
2.44	SODDING	SY	5160
2.45	STOCKPILE DREDGE MATERIAL ONSITE	CY	430
2.46	REMOVE AND DISPOSE OF EXIST. BOAT RAMP ITEMS (BOAT RAMP, CONCRETE SEAWALL, DEADMEN, TIEBACKS, WOOD DOCK FACILITY INCLUDING SUPPORTS AND PILES)	LS	1
2.47	EXCAVATION (FOR BOAT RAMP, DOCKS & WATER-SIDE BOAT RAMP APPROACH)	CY	430

ITEM NO.	DESCRIPTION	UNITS	QTY.
2.48	CONCRETE SEAWALL PANEL (INCLUDING CONCRETE CAP, GEOTEXTILE)	LF	270
2.49	FILL, CLEAN (BEHIND SEAWALL)	CY	170
2.50	SOUTH SEAWALL CONCRETE DEADMAN, 10-INCH THICK, 3000 PSI (FOR SEAWALL)	EA	8
2.51	NORTH SEAWALL CONCRETE DEADMAN, 10-INCH THICK, 3000 PSI (FOR SEAWALL)	EA	1
2.52	STEEL TIEBACK SYSTEM (304 SS BAR IN PVC CONDUIT) (FOR SEAWALL)	EA	15
2.53	CONCRETE, 8.25-INCH THICK, 5000 PSI (STEEL REINFORCED) (RAMP)	SY	405
2.54	AGGREGATE, 12-INCH THICK, #57 STONE (BELOW RAMP)	SY	405
2.55	CONCRETE PANEL (AT BASE OF RAMP)	LF	47
2.56	WOOD DOCK (5 FT WIDE - TIMBER FRAME STRUCTURE WITH COMPOSITE DECKING)	LF	237
2.57	FLOATING DOCK, ALUMINUM (INCLUDING 4' X 20' GANGWAY, 5' X 25' FLOATING DOCK, AND HANDRAIL)	LS	1
2.58	CONCRETE PILE, PRE-STRESSED 12-INCH X 12-INCH, 5000 PSI (FOR DOCK)	EA	48
3.01	DISCRETIONARY FUNDS (TESTING)	LS	1
3.02	DISCRETIONARY FUNDS (10% CONTINGENCY)	LS	1
4.00	BID AS ALTERNATIVE		
4.01	STORAGE BUILDING	LS	1





CERTIFIED TO: MANATEE COUNTY

BOUNDARY, MEAN HIGH WATER LINE,
TOPOGRAPHIC & JURISDICTIONAL SURVEY
A PARCEL OF LAND
OF
NORTH COQUINA BOAT RAMP
LOCATED IN
SECTION'S 9 & 10, TOWNSHIP 35 SOUTH, RANGE 16 EAST
MANATEE COUNTY, FLORIDA

NOTE: SEE SHEET 2 OF 2 FOR LEGEND AND NOTES.

NOTE: THIS SURVEY IS NOT VALID WITHOUT THE SIGNATURE AND
ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

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CERTIFICATE OF SURVEYOR

I, THE UNDERSIGNED PROFESSIONAL SURVEYOR & MAPPER, HEREBY CERTIFY THAT THIS
RECORD OF LAND SURVEY WAS PREPARED UNDER MY DIRECT SUPERVISION THAT TO THE BEST
OF MY KNOWLEDGE, INFORMATION AND BELIEF IS A TRUE AND CORRECT REPRESENTATION OF
THE LAND AS SHOWN AND DESCRIBED HEREON, AND THAT IT MEETS THE "MINIMUM TECHNICAL
STANDARDS FOR SURVEYING IN THE STATE OF FLORIDA", CHAPTER 5J-17.050, OF THE FLORIDA
ADMINISTRATIVE CODE.

FLORIDA CERTIFICATE No. LS 4285
DATE OF CERTIFICATION 08/09/13
DATE OF FIELD SURVEY 07/29/13

BY: J. N. GATON, JR., P.E.
JAMES N. GATON, JR., P.E.



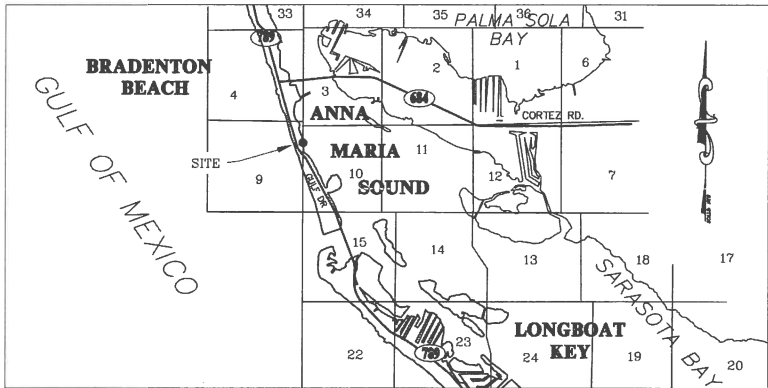
ZNS ENGINEERING

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LANDSCAPE ARCHITECTS | ENVIRONMENTAL CONSULTANTS
POST OFFICE BOX 9466 BOCA RATON, FL 33496 | 201 96 AVENUE DRIVE EAST BOCA RATON, FL 33498
E-MAIL: ZNS@ZNSENGINEERING.COM | TELEPHONE (954) 748-9000 | FAX (954) 748-3314

DRAWING: T:\Manatee\Coquina\N Coquina BR.dwg (layout 1) DATE: 07-31-13 SCALE: 1" = 30'
DRAWN: bernie JOB NO.: 00-43119 FIELD BOOK: PAGE: SHEET 1 OF 2

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CERTIFICATE OF AUTHORIZATION LB # 6982

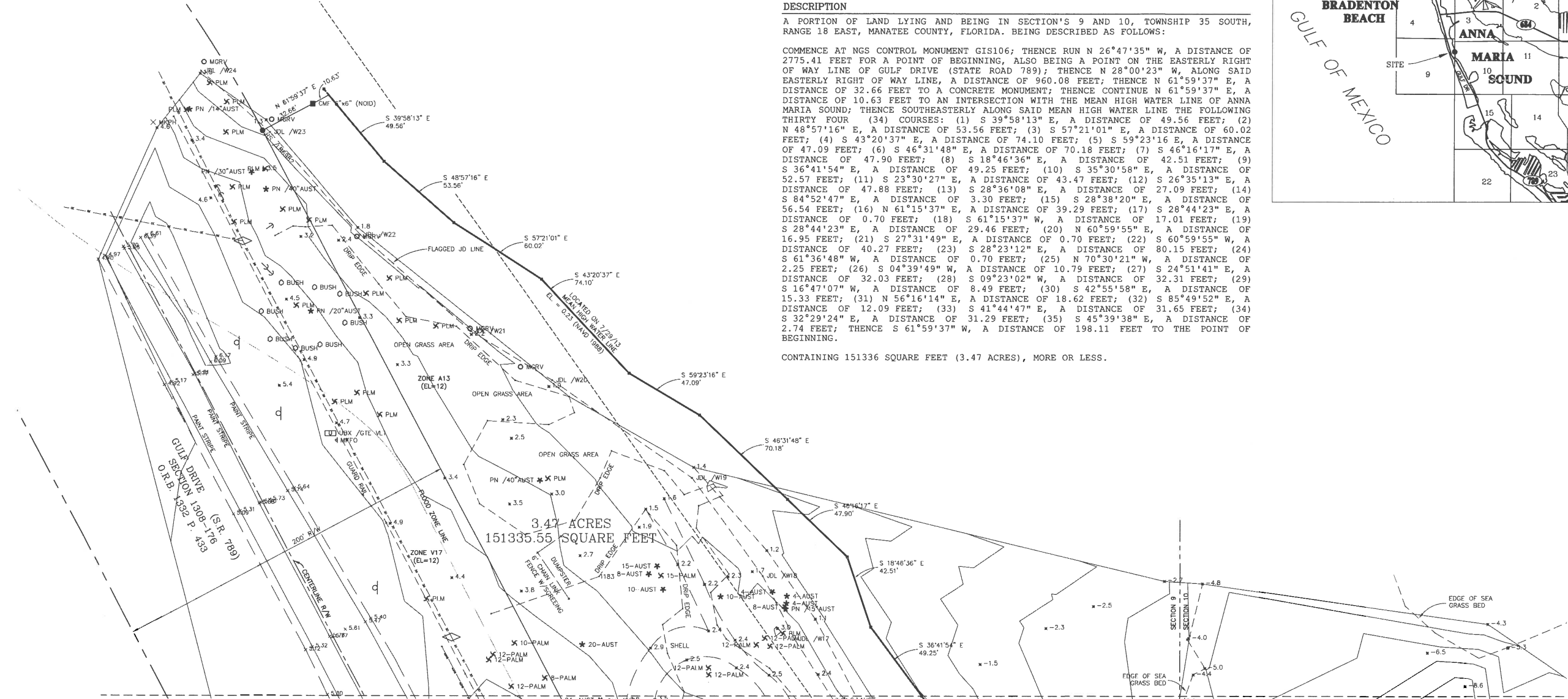


DESCRIPTION

A PORTION OF LAND LYING AND BEING IN SECTION'S 9 AND 10, TOWNSHIP 35 SOUTH, RANGE 18 EAST, MANATEE COUNTY, FLORIDA. BEING DESCRIBED AS FOLLOWS:

COMMENCE AT NGS CONTROL MONUMENT GIS106; THENCE RUN N 26°47'35" W, A DISTANCE OF 2775.41 FEET FOR A POINT OF BEGINNING, ALSO BEING A POINT ON THE EASTERLY RIGHT OF WAY LINE OF GULF DRIVE (STATE ROAD 789); THENCE N 28°00'23" W, ALONG SAID EASTERLY RIGHT OF WAY LINE, A DISTANCE OF 960.08 FEET; THENCE N 61°59'37" E, A DISTANCE OF 32.66 FEET TO A CONCRETE MONUMENT; THENCE CONTINUE N 61°59'37" E, A DISTANCE OF 10.63 FEET TO AN INTERSECTION WITH THE MEAN HIGH WATER LINE OF ANNA MARIA SOUND; THENCE SOUTHEASTERLY ALONG SAID MEAN HIGH WATER LINE THE FOLLOWING THIRTY FOUR (34) COURSES: (1) S 39°58'13" E, A DISTANCE OF 49.56 FEET; (2) N 48°57'16" E, A DISTANCE OF 53.56 FEET; (3) S 57°21'01" E, A DISTANCE OF 60.02 FEET; (4) S 43°20'37" E, A DISTANCE OF 74.10 FEET; (5) S 59°23'16" E, A DISTANCE OF 47.09 FEET; (6) S 46°31'48" E, A DISTANCE OF 70.18 FEET; (7) S 46°16'17" E, A DISTANCE OF 47.90 FEET; (8) S 18°46'36" E, A DISTANCE OF 42.51 FEET; (9) S 36°41'54" E, A DISTANCE OF 49.25 FEET; (10) S 35°30'58" E, A DISTANCE OF 52.57 FEET; (11) S 23°30'27" E, A DISTANCE OF 43.47 FEET; (12) S 26°35'13" E, A DISTANCE OF 47.88 FEET; (13) S 28°36'08" E, A DISTANCE OF 27.09 FEET; (14) S 84°52'47" E, A DISTANCE OF 3.30 FEET; (15) S 28°38'20" E, A DISTANCE OF 56.54 FEET; (16) N 61°15'37" E, A DISTANCE OF 39.29 FEET; (17) S 28°44'23" E, A DISTANCE OF 0.70 FEET; (18) S 61°15'37" W, A DISTANCE OF 17.01 FEET; (19) S 28°44'23" E, A DISTANCE OF 29.46 FEET; (20) N 60°59'55" E, A DISTANCE OF 16.95 FEET; (21) S 27°31'49" E, A DISTANCE OF 0.70 FEET; (22) S 60°59'55" W, A DISTANCE OF 40.27 FEET; (23) S 28°23'12" E, A DISTANCE OF 80.15 FEET; (24) S 61°36'48" W, A DISTANCE OF 0.70 FEET; (25) N 70°30'21" W, A DISTANCE OF 2.25 FEET; (26) S 04°39'49" W, A DISTANCE OF 10.79 FEET; (27) S 24°51'41" E, A DISTANCE OF 32.03 FEET; (28) S 09°23'02" W, A DISTANCE OF 32.31 FEET; (29) S 16°47'07" W, A DISTANCE OF 8.49 FEET; (30) S 42°55'58" E, A DISTANCE OF 15.33 FEET; (31) N 56°16'14" E, A DISTANCE OF 18.62 FEET; (32) S 85°49'52" E, A DISTANCE OF 12.09 FEET; (33) S 41°44'47" E, A DISTANCE OF 31.65 FEET; (34) S 32°29'24" E, A DISTANCE OF 31.29 FEET; (35) S 45°39'38" E, A DISTANCE OF 2.74 FEET; THENCE S 61°59'37" W, A DISTANCE OF 198.11 FEET TO THE POINT OF BEGINNING.

CONTAINING 151336 SQUARE FEET (3.47 ACRES), MORE OR LESS.



NOTES:

- BEARINGS AND COORDINATES ARE BASED ON THE FLORIDA STATE PLANE COORDINATE SYSTEM (WEST ZONE) NAD 83/90, AND ARE DERIVED FROM POINT GIS -105 AND GIS-106, ESTABLISHED DURING THE MANATEE COUNTY GIS CONTROL SURVEY OF 1988. THIS HORIZONTAL DATUM RESULTS IN THE EASTERLY RIGHT-OF-LINE OF GULF DRIVE (SR 789), HAVING A BEARING N 28°00'23" W.
- ELEVATIONS ARE BASED ON NAVD 1988, AND ARE DERIVED FROM BENCHMARK GIS-106, HAVING AN ELEVATION OF 4.15 FEET (NAVD '88).
- THE MANATEE COUNTY COASTAL CONSTRUCTION CONTROL LINE FOR THIS AREA IS RECORDED IN ROAD PLAT BOOK 10, PAGE 1 THROUGH 7, OF THE PUBLIC RECORDS OF MANATEE COUNTY, FLORIDA, AND WAS RECORDED ON 8/6/1987.
- THERE IS NO EROSION CONTROL LINE SURVEY IN EXISTENCE WHICH PERTAINS TO THIS PARCEL.
- THE MEAN HIGH WATER ELEVATION AS SHOWN HEREON WAS ESTABLISHED BY EXTENDING THE ELEVATION SHOWN ON THAT MEAN HIGH WATER INTERPOLATION POINT 397 WHICH CALLS FOR A MEAN HIGH WATER ELEVATION OF 0.23 FEET (NAVD 1988). THE MEAN HIGH WATER LINE AT ELEVATION 0.23 FEET (NAVD 1988) WAS LOCATED ON 8/08/13. THIS MEAN HIGH WATER LINE SURVEY COMPLIES WITH CHAPTER 177 PART 2 OF THE FLORIDA STATUTES.
- THE JURISDICTIONAL WETLAND LINE WAS PROVIDED BY DAVID A. LANDERS OF CPH ENGINEERS, INC., AND WAS LOCATED IN THE FIELD ON 7/29/2013.
- THIS MEAN HIGH WATER SURVEY HAS BEEN FILED IN THE FLORIDA BUREAU OF SURVEYING AND MAPPING PUBLIC REPOSITORY UNDER FILE NUMBER 5345
- PROPERTY LIES IN FLOOD ZONE "A13 (EL12) AND "V17" (EL12), AS SHOWN ON CITY OF BRADENTON BEACH PANEL No. 123091 0002 C, DATED MAY 18, 1992.

LEGEND:

■	CONCRETE MONUMENT FOUND (AS NOTED)	◇	POWER POLE
●	5/8" IRON & CAP FOUND (CAP # LB 6982 UNLESS OTHERWISE NOTED)	—	GUY ANCHOR
⊙	BENCHMARK (AS NOTED)	—	SIGN
P.O.C.	POINT OF COMMENCEMENT	—	LIGHT POLE
P.O.B.	POINT OF BEGINNING	★	AUSTRALIAN PINE
R/W	RIGHT OF WAY	×	PALM TREE
C.M.F.	CONCRETE MONUMENT FOUND	×	SEA GRAPE
IRS	IRON ROD SET	×	MANGROVE
ID	IDENTIFICATION	□	UTILITY BOX
BM	BENCH MARK	□	WATER VALVE
FDOT	FLORIDA DEPARTMENT OF TRANSPORTATION	□	FIRE HYDRANT
EL	ELEVATION	×	MARKER VERIZON
LB	LICENSED BUSINESS	×	MARKER VERIZON FIBER OPTIC CABLE
GND.	GROUND	⊙	BOLLARD
CCCL	COASTAL CONSTRUCTION CONTROL LINE	⊙	SANITARY MANHOLE
TEL	TELEPHONE	⊙	DOCK PILING
JDL	JURISDICTIONAL LINE	⊙	SPOT ELEVATION
MHWL	MEAN HIGH WATER LINE	—	OVERHEAD ELECTRIC
L.POLE	LIGHT POLE	—	BURIED ELECTRIC
AUST	AUSTRALIAN	—	BURIED TELEPHONE
MGRV	MANGROVE	—	FORCE MAIN
PLM	PALM		
ORNML	ORNAMENTAL		
MKFO	MARKER FIBER OPTIC		
VLUT	VALUT		
WV	WATER VALVE		
BOL	BOLLARD		
UBX	UTILITY BOX		
BRT.HSE.	BRIGHT HOUSE		
NAVD	NORTH AMERICAN VERTICAL DATUM		
NGVD	NATIONAL GEODETIC VERTICAL DATUM		
O.R.B.	OFFICIAL RECORDS BOOK		
P.	PAGE		

JURISDICTIONAL POINT TABLE

NORTHING	EASTING	POINT IDENTIFICATION
1135244.6740	431332.6100	JDL /W4
1135267.7430	431359.3720	JDL /W5
1135287.5410	431368.7250	JDL /W6
1135308.2150	431353.5670	JDL /W7
1135332.5320	431357.2580	JDL /W8
1135333.8240	431361.9884	JDL /W9
1135483.0064	431291.7752	JDL /W10
1135463.9970	431272.9830	JDL /W11
1135468.0840	431242.5220	JDL /W12
1135505.7190	431207.0270	JDL /W13
1135552.3050	431207.5790	JDL /W14
1135567.0810	431185.4120	JDL /W15
1135231.8060	431317.3320	JDL /W3
1135165.8760	431335.9310	JDL /W2
1135139.9410	431351.8440	JDL /W1
1135618.6330	431153.6780	JDL /W16
1135654.5430	431130.5310	JDL /W17
1135690.7310	431112.0340	JDL /W18
1135746.9080	431071.0580	JDL /W19
1135802.8940	430990.1850	JDL /W20
1135830.9920	430943.1400	JDL /W21
1135886.1940	430878.4140	JDL /W22
1135945.0920	430827.1710	JDL /W23
1135980.2450	430787.1940	JDL /W24

CERTIFIED TO: MANATEE COUNTY

BOUNDARY, MEAN HIGH WATER LINE,
TOPOGRAPHIC & JURISDICTIONAL SURVEY
PARCEL OF LAND
OF
NORTH COQUINA BOAT RAMP
LOCATED IN
SECTIONS 9 & 10, TOWNSHIP 35 SOUTH, RANGE 16 EAST
MANATEE COUNTY, FLORIDA

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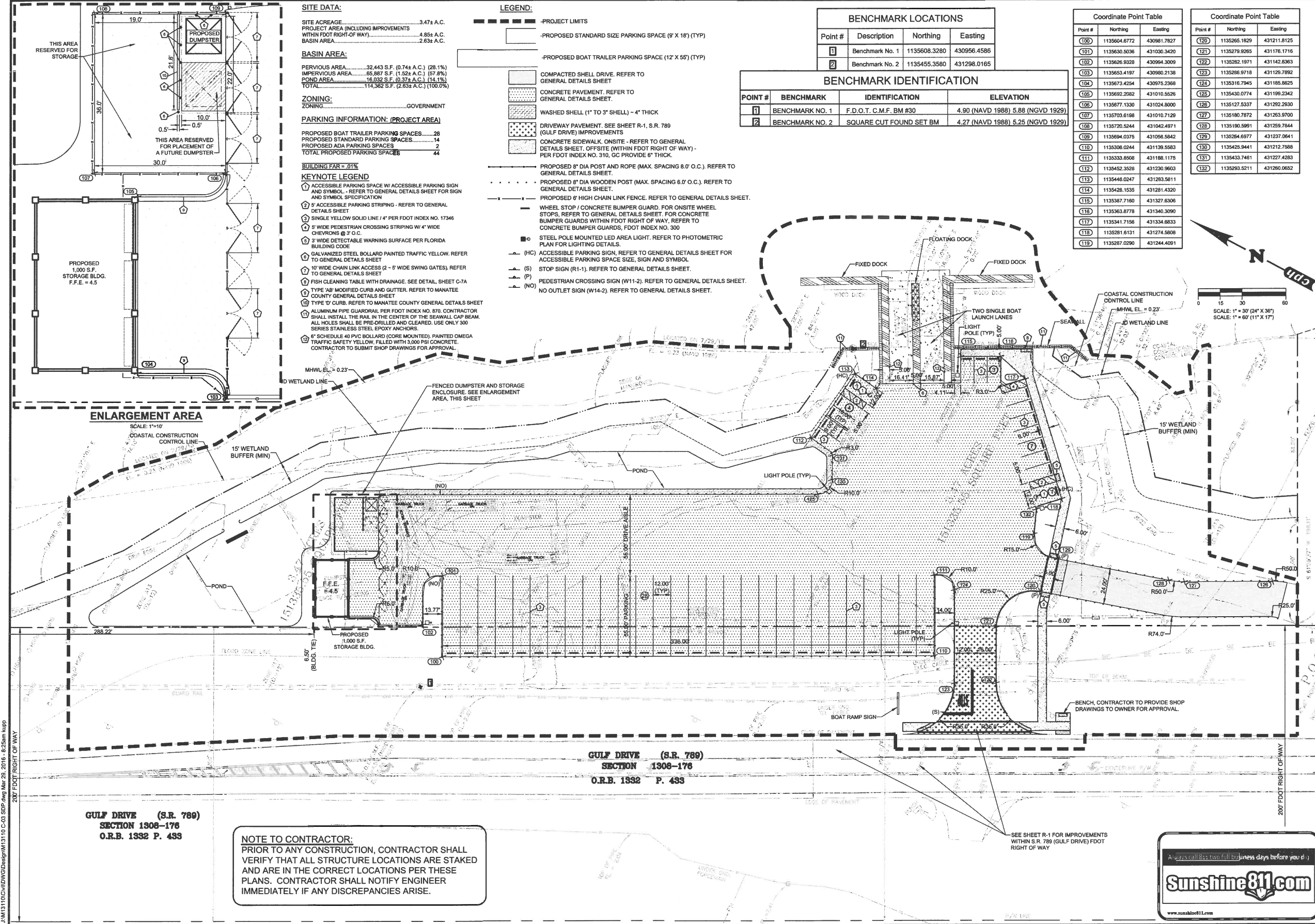
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DRAWN: bernie JOB NO.: 00-43119 FIELD BOOK: PAGE: SHEET 2 OF 2

CERTIFICATE OF AUTHORIZATION LB # 6982

REVISION BY DATE



SITE DATA:

SITE ACREAGE.....3.47± A.C.
PROJECT AREA (INCLUDING IMPROVEMENTS
WITHIN FDOT RIGHT-OF-WAY).....4.85± A.C.
BASIN AREA.....2.63± A.C.

BASIN AREA:

PERVIOUS AREA.....32,443 S.F. (0.74± A.C.) (28.1%)
IMPERVIOUS AREA.....65,887 S.F. (1.52± A.C.) (57.8%)
POND AREA.....16,032 S.F. (0.37± A.C.) (14.1%)
TOTAL.....114,362 S.F. (2.63± A.C.) (100.0%)

ZONING:

ZONING.....GOVERNMENT

PARKING INFORMATION: (PROJECT AREA)

PROPOSED BOAT TRAILER PARKING SPACES.....28
PROPOSED STANDARD PARKING SPACES.....14
PROPOSED ADA PARKING SPACES.....2
TOTAL PROPOSED PARKING SPACES.....44

BUILDING F.A.R. = .01%

KEYNOTE LEGEND

- 1 ACCESSIBLE PARKING SPACE WITH ACCESSIBLE PARKING SIGN AND SYMBOL - REFER TO GENERAL DETAILS SHEET FOR SIGN AND SYMBOL SPECIFICATION
- 2 5' ACCESSIBLE PARKING STRIPING - REFER TO GENERAL DETAILS SHEET
- 3 SINGLE YELLOW SOLID LINE 1/4" PER FDOT INDEX NO. 17346
- 4 5' WIDE PEDESTRIAN CROSSING STRIPING WITH 4" WIDE CHEVRONS @ 3" O.C.
- 5 3' WIDE DETECTABLE WARNING SURFACE PER FLORIDA BUILDING CODE
- 6 GALVANIZED STEEL BOLLARD PAINTED TRAFFIC YELLOW. REFER TO GENERAL DETAILS SHEET
- 7 10' WIDE CHAIN LINK ACCESS (2 - 5' WIDE SWING GATES). REFER TO GENERAL DETAILS SHEET
- 8 FISH CLEANING TABLE WITH DRAINAGE. SEE DETAIL SHEET C-7A
- 9 TYPE 'AB' MODIFIED CURB AND GUTTER. REFER TO MANATEE COUNTY GENERAL DETAILS SHEET
- 10 TYPE 'D' CURB. REFER TO MANATEE COUNTY GENERAL DETAILS SHEET
- 11 ALUMINUM PIPE GUARDRAIL PER FDOT INDEX NO. 870. CONTRACTOR SHALL INSTALL THE RAIL IN THE CENTER OF THE SEAWALL CAP BEAM. ALL HOLES SHALL BE PRE-DRILLED AND CLEARED. USE ONLY 300 SERIES STAINLESS STEEL EPOXY ANCHORS.
- 12 4" SCHEDULE 40 PVC BOLLARD (CORE MOUNTED). PAINTED OMEGA TRAFFIC SAFETY YELLOW, FILLED WITH 3,000 PSI CONCRETE. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR APPROVAL.

LEGEND:

- PROJECT LIMITS
- PROPOSED STANDARD SIZE PARKING SPACE (9' X 18') (TYP)
- PROPOSED BOAT TRAILER PARKING SPACE (12' X 55') (TYP)
- COMPACTED SHELL DRIVE. REFER TO GENERAL DETAILS SHEET
- CONCRETE PAVEMENT. REFER TO GENERAL DETAILS SHEET
- WASHED SHELL (1" TO 3" SHELL) - 4" THICK
- DRIVEWAY PAVEMENT. SEE SHEET R-1, S.R. 789 (GULF DRIVE) IMPROVEMENTS
- CONCRETE SIDEWALK. ONSITE - REFER TO GENERAL DETAILS SHEET. OFFSITE (WITHIN FDOT RIGHT OF WAY) - PER FDOT INDEX NO. 310, GC PROVIDE 6" THICK.
- PROPOSED 8" DIA POST AND ROPE (MAX. SPACING 8.0' O.C.). REFER TO GENERAL DETAILS SHEET.
- PROPOSED 8" DIA WOODEN POST (MAX. SPACING 6.0' O.C.). REFER TO GENERAL DETAILS SHEET.
- PROPOSED 8" HIGH CHAIN LINK FENCE. REFER TO GENERAL DETAILS SHEET.
- WHEEL STOP / CONCRETE BUMPER GUARD. FOR ONSITE WHEEL STOPS. REFER TO GENERAL DETAILS SHEET. FOR CONCRETE BUMPER GUARDS WITHIN FDOT RIGHT OF WAY, REFER TO CONCRETE BUMPER GUARDS, FDOT INDEX NO. 300
- STEEL POLE MOUNTED LED AREA LIGHT. REFER TO PHOTOMETRIC PLAN FOR LIGHTING DETAILS.
- (HC) ACCESSIBLE PARKING SIGN. REFER TO GENERAL DETAILS SHEET FOR ACCESSIBLE PARKING SPACE SIZE, SIGN AND SYMBOL.
- (S) STOP SIGN (R1-1). REFER TO GENERAL DETAILS SHEET.
- (P) PEDESTRIAN CROSSING SIGN (W11-2). REFER TO GENERAL DETAILS SHEET.
- (NO) NO OUTLET SIGN (W14-2). REFER TO GENERAL DETAILS SHEET.

BENCHMARK LOCATIONS

Point #	Description	Northing	Easting
1	Benchmark No. 1	1135608.3280	430956.4586
2	Benchmark No. 2	1135455.3580	431298.0165

BENCHMARK IDENTIFICATION

POINT #	BENCHMARK	IDENTIFICATION	ELEVATION
1	BENCHMARK NO. 1	F.D.O.T. C.M.F. BM #30	4.90 (NAVD 1988) 5.88 (NGVD 1929)
2	BENCHMARK NO. 2	SQUARE CUT FOUND SET BM	4.27 (NAVD 1988) 5.25 (NGVD 1929)

Coordinate Point Table

Point #	Northing	Easting
100	1135604.6772	430981.7827
101	1135630.5036	431030.3420
102	1135626.9328	430994.3009
103	1135653.4197	430980.2138
104	1135673.4254	430975.2368
105	1135692.2082	431010.5526
106	1135677.1330	431024.8000
107	1135703.6198	431010.7128
108	1135720.5244	431042.4971
109	1135994.0375	431056.5842
110	1135308.0244	431139.5583
111	1135333.8508	431188.1175
112	1135452.3528	431230.9603
113	1135446.0247	431283.5811
114	1135428.1535	431281.4320
115	1135387.7180	431327.6306
116	1135363.8778	431340.3090
117	1135341.7158	431334.6833
118	1135281.6131	431274.5808
119	1135287.0290	431244.4081

Coordinate Point Table

Point #	Northing	Easting
120	1135265.1829	431211.8125
121	1135279.9285	431176.1716
122	1135282.1871	431142.6363
123	1135286.9718	431126.7892
124	1135316.7945	431185.8625
125	1135430.0774	431199.2342
126	1135127.5337	431292.2630
127	1135180.7872	431263.9700
128	1135190.5991	431259.7844
129	1135284.6977	431237.0641
130	1135425.9441	431212.7588
131	1135433.7481	431227.4283
132	1135293.5211	431260.0652

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• Texas

DANIEL P. MOYER, P.E.
FL LIC. 00000007
03-28-11

Designed by:	Drawn by:	Checked by:	Approved by:	Scale:	Date:	Job No.:	No.	Date	By
KMU	KMU	JAB	DFM	AS NOTED	08/13	M13110	1	03/15/16	
								01/15/16	

PLAN MODIFICATION
ISSUED TO COUNTY

Revision

PLAN

3277A Fruitville Rd., Suite 2
Sarasota, FL 34237
Ph: 941.365.4771

Licenses:
Eng. C.O.A. No. 3215
Survey L.B. No. 7143
Arch. Lic. No. AA3000028
Landscape Lic. No. LC0000298

SITE DIMENSION PLAN

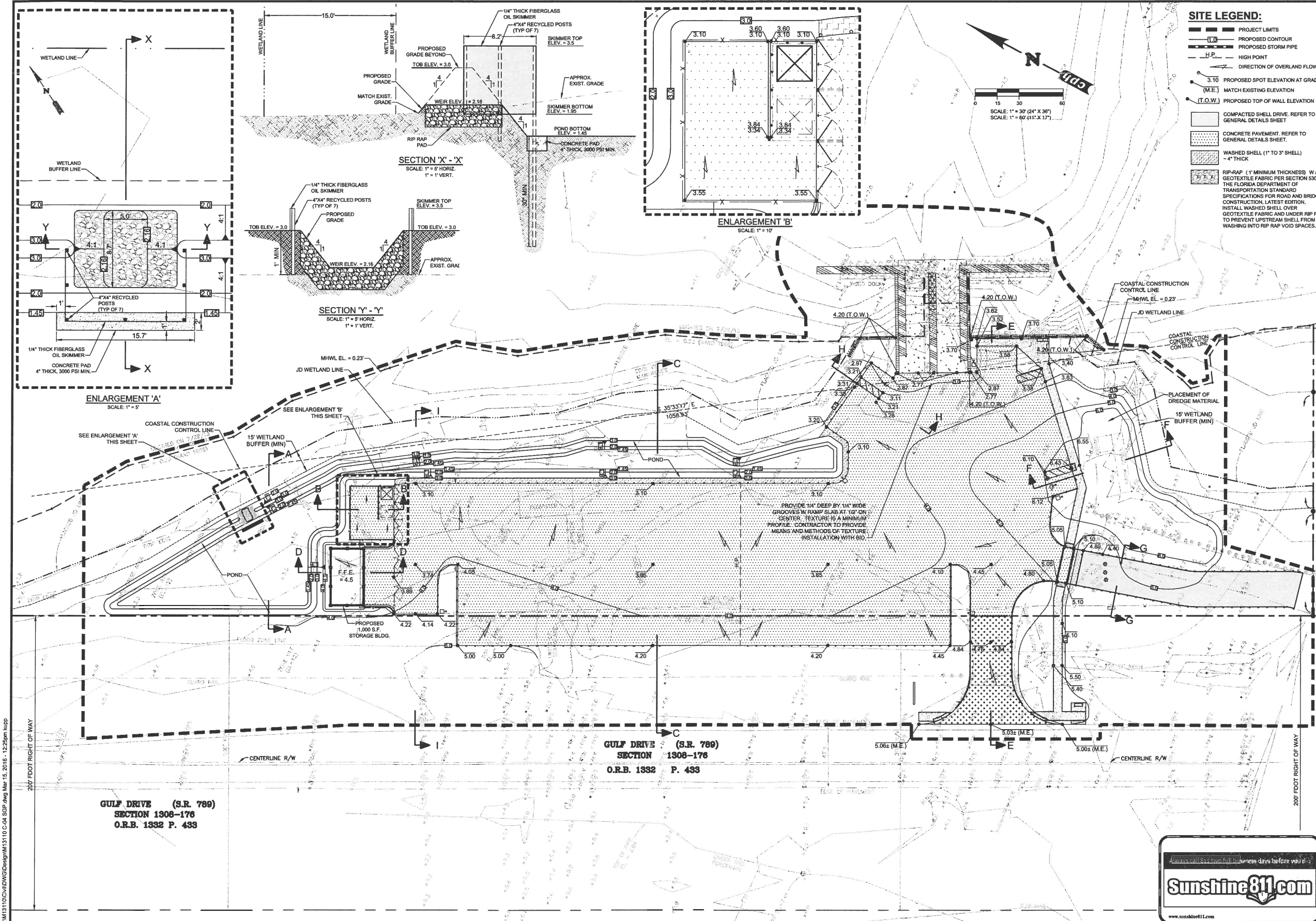
**NORTH COQUINA BOAT RAMP
PARKING LOT EXPANSION**

MANATEE COUNTY / FLORIDA

Sheet No.

C-3

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- SITE LEGEND:**
- PROJECT LIMITS
 - PROPOSED CONTOUR
 - PROPOSED STORM PIPE
 - H.P. HIGH POINT
 - DIRECTION OF OVERLAND FLOW
 - 3.10 PROPOSED SPOT ELEVATION AT GRADE (M.E.)
 - MATCH EXISTING ELEVATION
 - (T.O.W.) PROPOSED TOP OF WALL ELEVATION
 - COMPACTED SHELL DRIVE. REFER TO GENERAL DETAILS SHEET
 - CONCRETE PAVEMENT. REFER TO GENERAL DETAILS SHEET
 - WASHED SHELL (1" TO 3" SHELL) - 4" THICK
 - RIP-RAP (1" MINIMUM THICKNESS) W/ GEOTEXTILE FABRIC PER SECTION 530 OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION. INSTALL WASHED SHELL OVER GEOTEXTILE FABRIC AND UNDER RIP-RAP TO PREVENT UPSTREAM SHELL FROM WASHING INTO RIP-RAP VOID SPACES.

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DANIEL P. MOYER, P.E.
FL 00000057
03-15-16

Designed by:	KMU	Checked by:	KMU	Approved by:	JAB	Scale:	AS NOTED	Date:	09/13	Job No.:	M13110	Revision	By	Date

Plans Prepared By:
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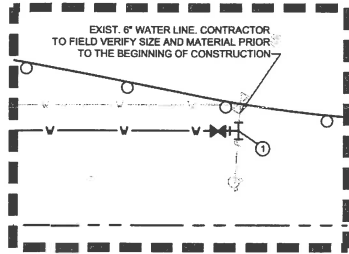
SITE GRADING AND DRAINAGE PLAN
NORTH COQUINA BOAT RAMP PARKING LOT EXPANSION
MANATEE COUNTY / FLORIDA

Sheet No.
C-4

Always call us 30 days before you'd like to start your project.

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BLOW UP 'A'
SCALE: 1"=5'

GENERAL NOTES:

1. ALL CLEANOUTS WITHIN A FLOOD AREA SHALL HAVE THE CLEANOUT ADAPTER SOLVENT WELDED WATERTIGHT TO THE CLEANOUT RISER. PLUGS ARE TO BE RECESSED SQUARE KEY WITH TEFLOM PLUMBERS TAPE WRAPPED ON THREADS TO MAKE A WATERTIGHT SEAL IN ACCORDANCE WITH THE UTILITY STANDARDS 12.12
2. THE CONTRACTOR SHALL CONTACT THE MANATEE COUNTY UTILITIES DISTRIBUTION SUPERINTENDENT, DAVID SCHOFIELD (941-792-8811 X: 5130), ONCE THE WATER MAIN HAS BEEN FIELD VERIFIED AND EXPOSED FOR MANATEE COUNTY UTILITIES INSPECTION.

FLOODPLAIN:

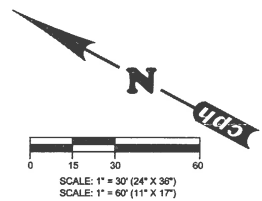
FEMA FIRM MAP 12081C0279E DATED MARCH 17, 2014

WATER SCHEDULE:

1. CONNECT TO EXISTING WATER MAIN WITH 6" X 2" TAPPING SLEEVE AND VALVE FOR PROPOSED WATER LINE. REFER TO MANATEE COUNTY UTILITY DETAIL SHEET, C-88. OPEN AFTER DISINFECTION, TESTING, AND APPROVAL.
2. 1-1/2" METER AND 1-1/2" BACKFLOW ASSEMBLY FOR POTABLE WATER PER MANATEE COUNTY REQUIREMENTS. REFER TO MANATEE COUNTY UTILITY DETAIL SHEET, C-88. CONTRACTOR TO FIELD LOCATE WITH MANATEE COUNTY STAFF.
3. 2" P.E. WATER SERVICE LINE
4. 1" P.E. WATER SERVICE LINE TO STORAGE BUILDING RPZ AND HOSE BIB
5. 1" P.E. WATER SERVICE LINE TO FISH CLEANING STATION
6. 2" - 90° BEND
7. 1" - 90° BEND
8. 2" X 2" X 1" TEE
9. 1" GATE VALVE AND BOX. REFER TO MANATEE COUNTY UTILITY DETAIL SHEET, C-88.
10. 2" X 1" REDUCER
11. 1" - 22.5° BEND
12. 1" WATER LINE TO FISH CLEANING STATION. GENERAL CONTRACTOR TO PROVIDE HOSE BIB AT CLEANING STATION.
13. STORAGE BUILDING RPZ AND HOSE BIB

UTILITY LEGEND:

- PROJECT LIMITS
- PROPOSED WATER SERVICE LINE
- PROPOSED STEEL POLE MOUNTED LED AREA LIGHT



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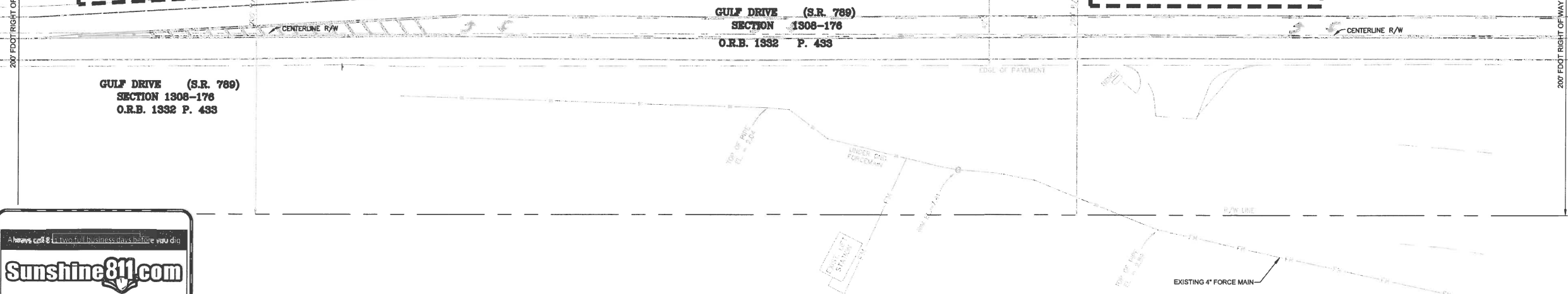
DANIEL P. MOYER, P.E.
FL. LICENSE NO. 10416-18

Designed by:	Drawn by:	Checked by:	Approved by:	Scale:	Date:	Job No.:	No.	Date	Revision
KMU	KMU	JAB	DPM	AS NOTED	08/13	MT3110	1	03/15/16	PLAN MODIFICATION ISSUED TO COUNTY
								01/15/16	

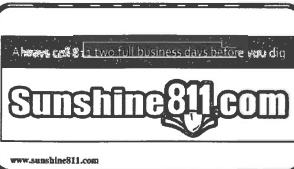
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CPH, Inc.
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Ph: 941.365.4771
Licenses:
Eng. C.O.A. No. 3315
Survey L.B. No. 7143
Arch. Lic. No. AA2800028
Landscape Lic. No. LC0000296

COMPOSITE UTILITY PLAN
**NORTH COQUINA BOAT RAMP
PARKING LOT EXPANSION**
MANATEE COUNTY / FLORIDA

Sheet No.
C-5



**GULF DRIVE (S.R. 789)
SECTION 1308-176
O.R.B. 1332 P. 433**



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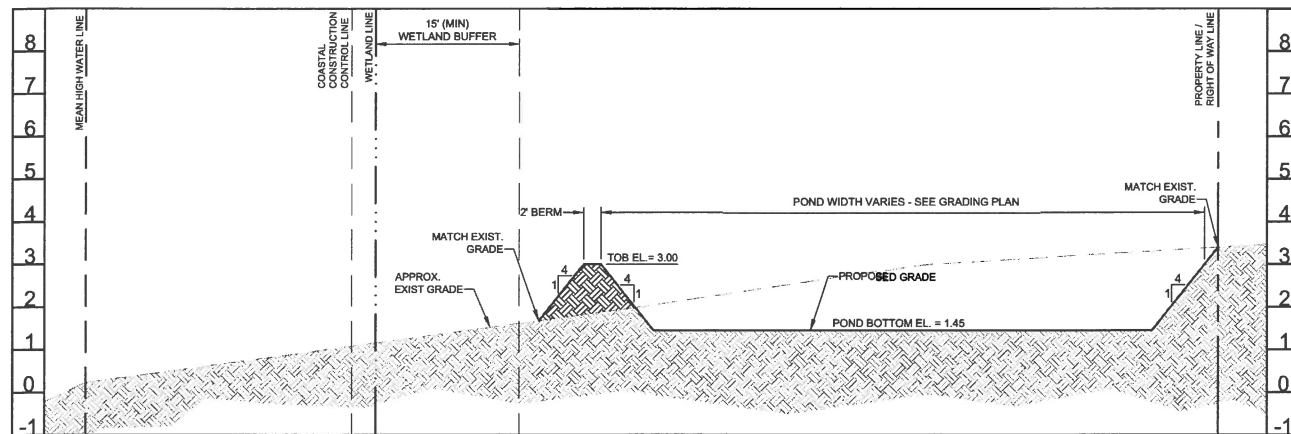
DANIEL P. MOTER, P.E.
FL LIC NO. 08857
01/15/16

Designed by:	Drawn by:	Checked by:	Approved by:	Scale:	Date:	Job No.:	No.	Date	Revision	By
KMU	KMU	JAB	DPM	AS NOTED	07/14	M13110	Δ	01/15/16	ISSUED TO COUNTY	D.P.M.

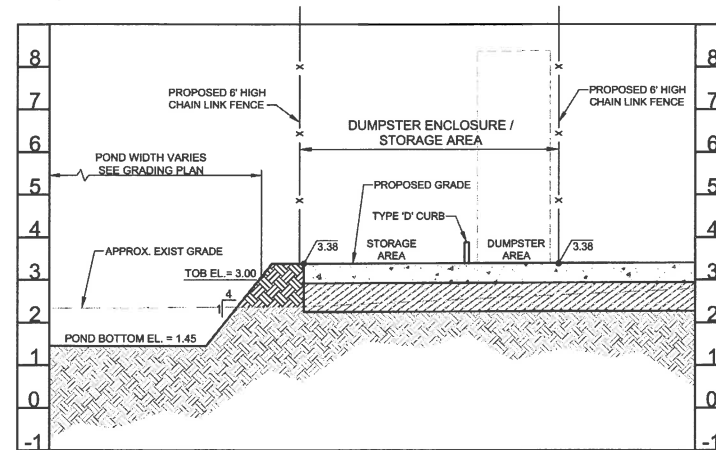
Plans Prepared By:
CPI, Inc.
3277A Fruitville Rd., Suite 2
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Survey L.B. No. 7143
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**SITE CROSS SECTIONS
SHEET**
**NORTH COQUINA BOAT RAMP
PARKING LOT EXPANSION**
MANATEE COUNTY / FLORIDA

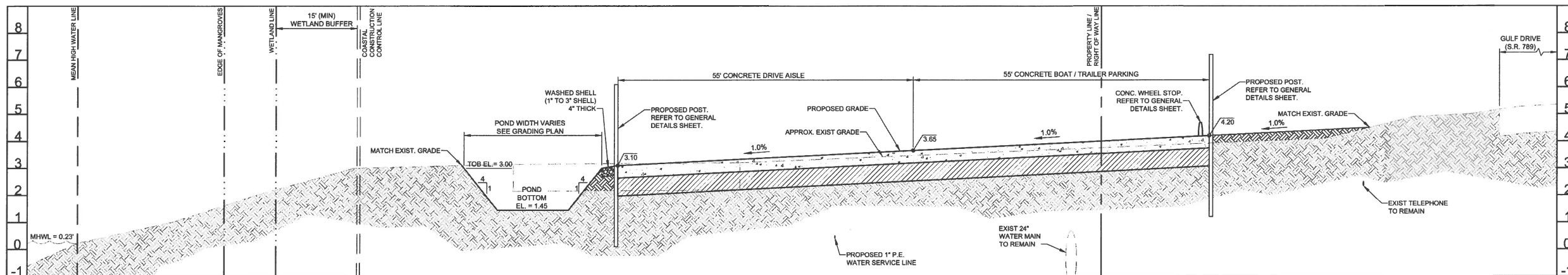
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C-6



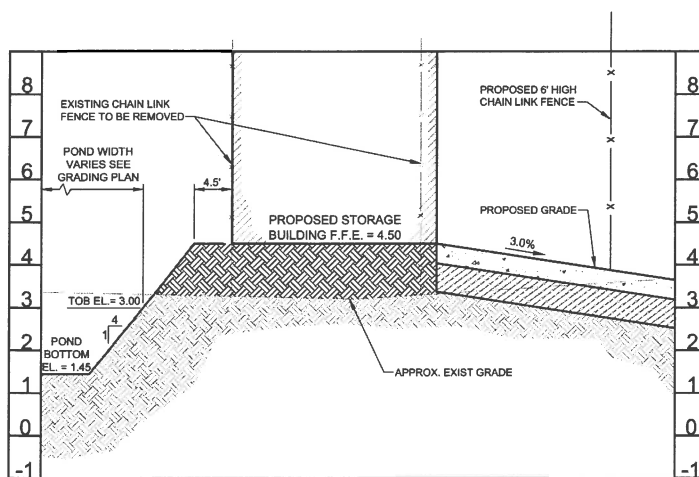
SECTION 'A'-A'
SCALE: 1"=10' HORIZ, 1"=2' VERT (24" X 36")
1"=20' HORIZ, 1"=4' VERT (11" X 17")



SECTION 'B'-B'
SCALE: 1"=10' HORIZ, 1"=2' VERT (24" X 36")
1"=20' HORIZ, 1"=4' VERT (11" X 17")



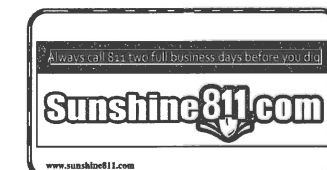
SECTION 'C'-C'
SCALE: 1"=10' HORIZ, 1"=2' VERT (24" X 36")
1"=20' HORIZ, 1"=4' VERT (11" X 17")



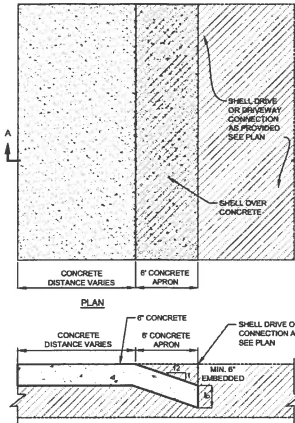
SECTION 'D'-D'
SCALE: 1"=10' HORIZ, 1"=2' VERT (24" X 36")
1"=20' HORIZ, 1"=4' VERT (11" X 17")

LEGEND:

- PROPOSED CONCRETE. REFER TO GENERAL DETAILS SHEET.
- PROPOSED COMPACTED SHELL. REFER TO GENERAL DETAILS SHEET.
- PROPOSED COMPACTED SUBGRADE. REFER TO GENERAL DETAILS SHEET.
- EXISTING CONCRETE MATERIAL.
- PROPOSED WASHED SHELL (1" TO 3" SHELL), 4" THICK
- PROPOSED FILL MATERIAL
- EXISTING GROUND MATERIAL

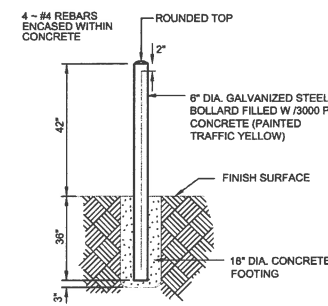


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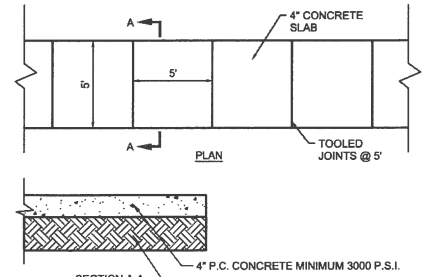


- NOTES:
1. 3/4"x4" PREMOLDED EXPANSION MATERIALS AROUND POSTS OR OTHER STRUCTURES IN CONCRETE.
 2. EXPANSION JOINTS MAXIMUM DISTANCE = 100', USED 3/4"x4" PREMOLDED EXPANSION MATERIAL.
 3. CONTRACTION JOINTS MAXIMUM DISTANCE = 21', SAW CUT 2" DEEP AND FILL WITH HOT POURED SEALER.
 4. SAW CUT JOINTS WITHIN 24 HOURS.

CONCRETE PAVEMENT AND APRON DETAIL
N.T.S.

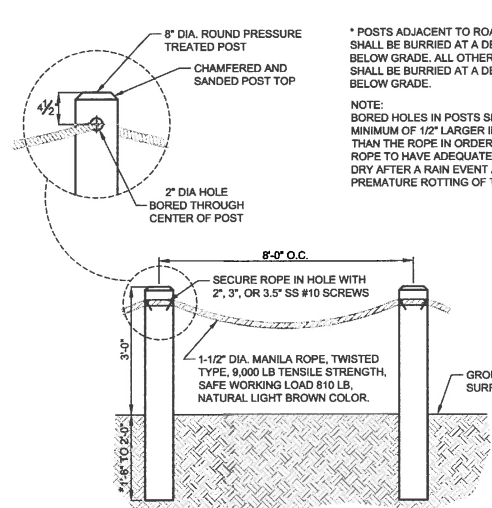
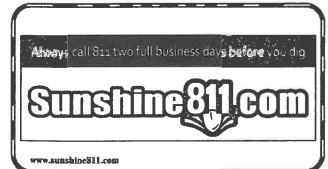


BOLLARD DETAIL
N.T.S.

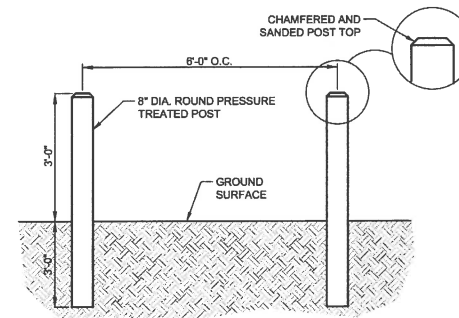


- NOTES:
1. 3/4"x4" PREMOLDED EXPANSION MATERIALS AROUND P.P. OR OTHER STRUCTURES IN WALK.
 2. EXPANSION JOINTS MAXIMUM DISTANCE = 100', USED 3/4"x4" PREMOLDED EXPANSION MATERIAL.
 3. CONTRACTION JOINTS MAXIMUM DISTANCE = 21', SAW CUT 2" DEEP AND FILL WITH HOT POURED SEALER.
 4. SAW CUT JOINTS WITHIN 24 HOURS.

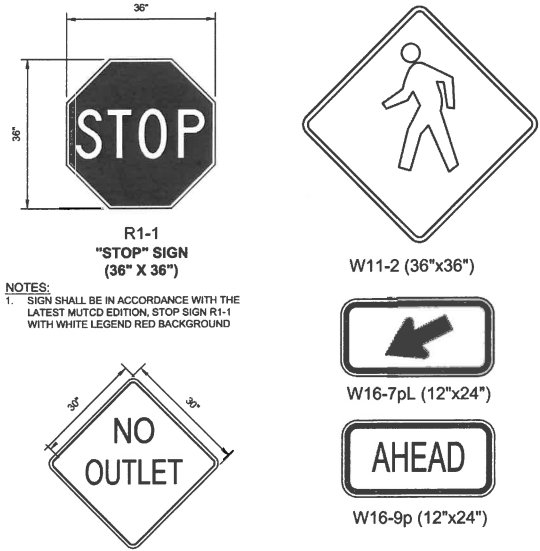
CONCRETE SIDEWALK DETAIL
N.T.S.



POST AND ROPE DETAIL
N.T.S.

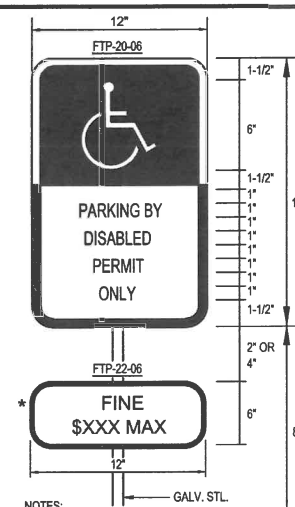


WOOD POST DETAIL
N.T.S.



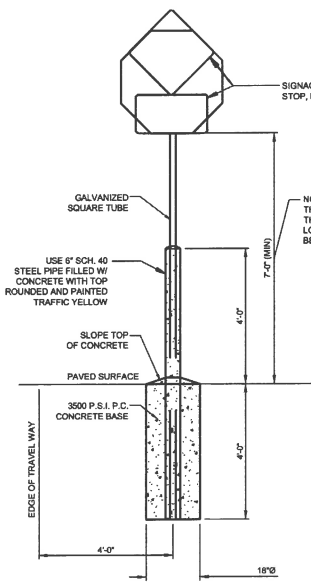
- NOTES:
1. SIGN SHALL BE IN ACCORDANCE WITH THE LATEST MUTCD EDITION, STOP SIGN R1-1 WITH WHITE LEGEND RED BACKGROUND.
 2. BOTH SIGNS SHALL BE IN ACCORDANCE WITH THE LATEST MUTCD EDITION, STOP SIGN W14-2 WITH A BLACK LEGEND YELLOW (RETROREFLECTIVE) BACKGROUND.

SIGNAGE DETAILS
N.T.S.



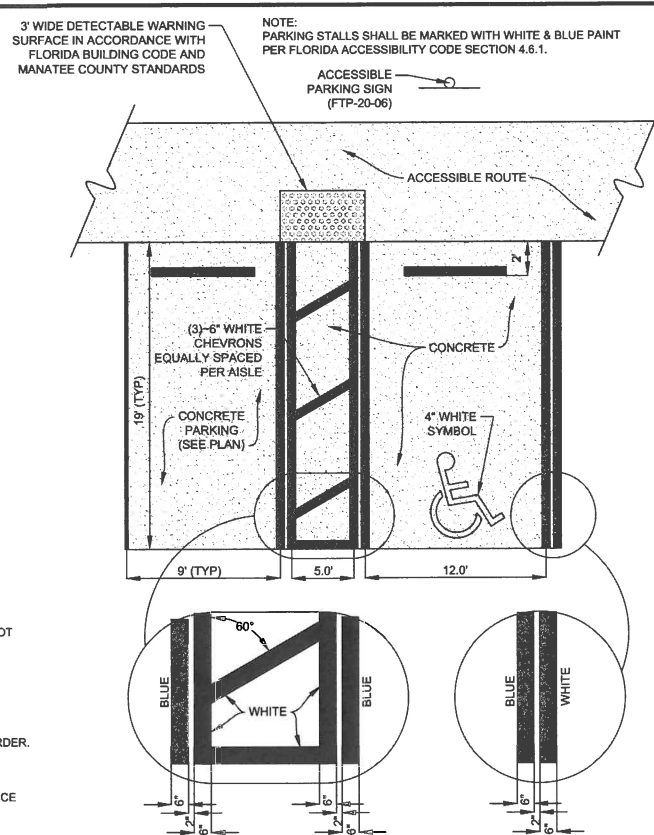
- NOTES:
- (FTP-20-06) AND (FTP-22-06) SHALL BE IN ACCORDANCE WITH F.D.O.T. INDEX NO. 17355 AND SHALL MEET THE REQUIREMENTS OF FLORIDA STATUTES 316.1955 AND 316.1956.
- * SIGN "\$XXX.00 FINE" PER LOCAL REQUIREMENTS.
- NOTE: (HANDICAP SIGN ONLY)
1. ALL LETTERS SHALL BE BLACK AND SHALL CONFORM TO FDOT "ROADWAY AND TRAFFIC DESIGN STANDARDS".
 2. TOP PORTION OF SIGN SHALL HAVE REFLECTORIZED (ENGINEERING GRADE) BLUE BACKGROUND WITH WHITE REFLECTORIZED LEGEND AND BORDER.
 3. BOTTOM PORTION OF SIGN SHALL HAVE A REFLECTORIZED (ENGINEERING GRADE) WHITE BACKGROUND WITH BLACK BORDER.
 4. ONE SIGN REQUIRED FOR EACH PARKING SPACE.
 5. HEIGHT OF SIGN SHALL BE 7' ABOVE GROUND IN ACCORDANCE WITH FDOT "ROADWAY AND TRAFFIC DESIGN STANDARDS".

ACCESSIBLE PARKING SIGN DETAIL
N.T.S.

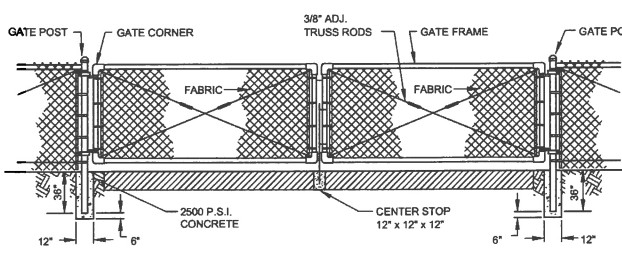
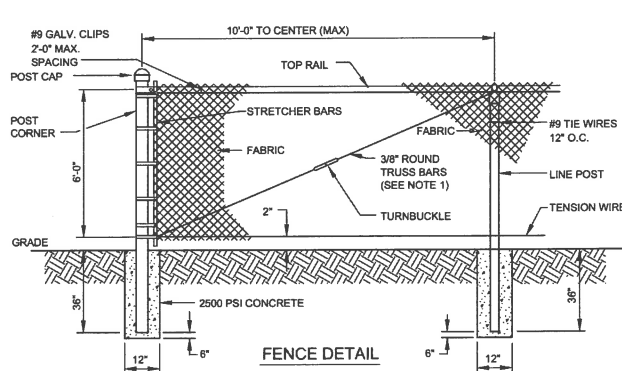


- NOTES:
1. ALL SIGNS SHALL COMPLY WITH U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION'S "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES", LOCAL CODES AND AS SPECIFIED. MOUNT SIGNS TO POST IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
 2. GALVANIZED SQUARE TUBE POST TUBES - 2"x2"x3/16" 14ga POST TUBE SHALL MEET ASTM A1011 GRADE 50, POST TUBE GALVANIZED AS PER ASTM A653 GRADE 50.

SIGN MOUNTING AND BASE WITH BOLLARD (USE WHERE SIGN IS NOT WITHIN CURBED ISLAND)
N.T.S.



ACCESSIBLE RAMP AND PARKING STALL DETAIL
N.T.S.

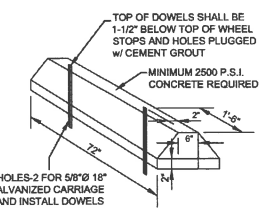


- NOTES:
1. TRUSS BARS ARE REQUIRED FOR EACH GATE SECTION AND THE FIRST SPAN ON EACH SIDE OF A CORNER POST ONLY.

CHAIN LINK FENCE / GATE DETAIL
N.T.S.

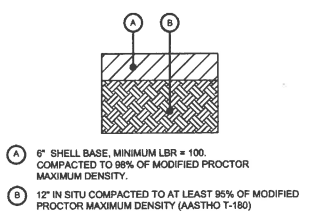


ACCESSIBLE PARKING SYMBOL
N.T.S.

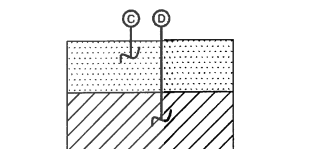


- NOTE: WHEEL STOPS TO BE FURNISHED AND INSTALLED AT EACH PARKING SPACE.

CONCRETE WHEEL STOP DETAIL (ON-SITE)
N.T.S.



COMPACTED SHELL DRIVE SECTION

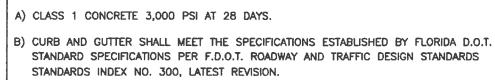
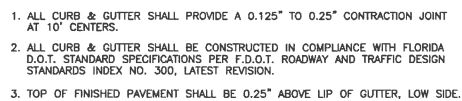


- NOTES:
1. 6" MINIMUM 4000 PSI 28 DAY COMPRESSIVE STRENGTH CONCRETE WITH 6" WELDED WIRE REINFORCEMENT.
 2. 12" INSITU OR BORROW MATERIAL STABILIZED BY BLENDING WITH SHELL TO A MINIMUM LBR = 60, COMPACTED TO 95% OF MODIFIED PROCTOR MAXIMUM DENSITY (AASHTO T-180), FLORIDA DOT SEC. 160, TYPE B.

CONCRETE PAVEMENT (WWR), 6-INCH

PAVEMENT SECTIONS
N.T.S.

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DANIEL P. MOYER, P.E.
FL NO. 18857
040494
SHEET MODIFICATION
ISSUED TO COUNTY
Revision
By
Date
No.
Job No.: M13110
Date: 03/15/16
Scale: AS NOTED
Checked by: JAB
Drawn by: KNU
Designed by: KNU
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Arch. Lic. No. A-2000028
Landscape Lic. No. LC000028
GENERAL DETAILS SHEET
NORTH COQUINA BOAT RAMP PARKING LOT EXPANSION
MANATEE COUNTY / FLORIDA
Sheet No.
C-7



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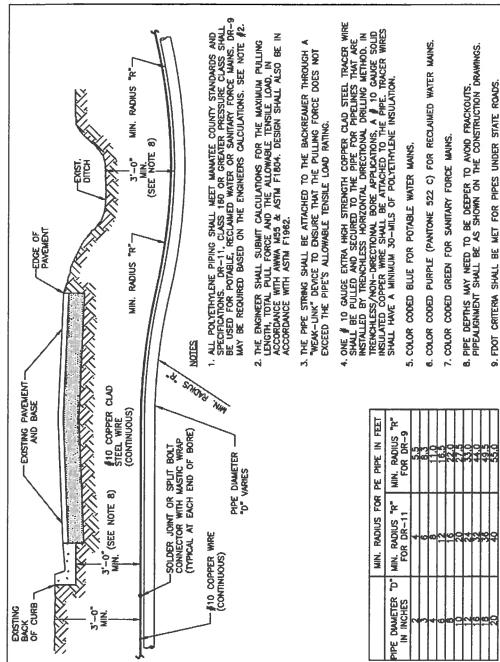
**MANATEE COUNTY
GENERAL DETAILS SHEET**

**NORTH COQUINA BOAT RAMP
PARKING LOT EXPANSION**

MANATEE COUNTY / FLORIDA

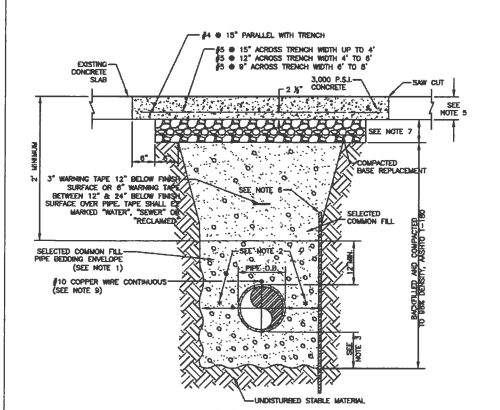
Sheet No.

C-8

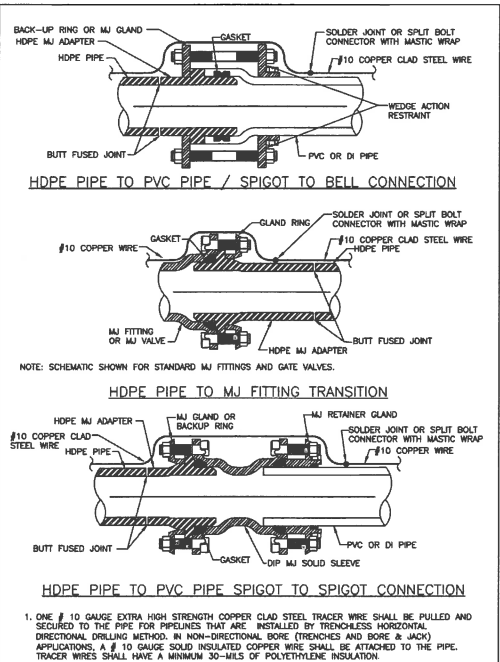


MANATEE COUNTY PUBLIC WORKS DEPARTMENT	REVISION DATE CLB/BN	DATE OF APPROVAL
	11/7/10	MAY 10, 2011

- NOTES:
1. USE OF TYPE A-2 AND A-3 PIPE BEDDING TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
 2. PROVIDE ADEQUATE CLEARANCE TO PLACE AND COMPACT STAGE 1 BEDDING MATERIAL IN TRENCH AREA BELOW PIPE SPRINGLINE. PIPE EMBEDMENT MUST BE COMPACTED OUT TO THE TRENCH WALL OR 2.5 TIMES THE PIPE OD, WHICHEVER IS LESS.
 3. TYPICALLY 4" TO 6".
 4. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
 5. THICKNESS TO MATCH EXISTING OR BE 8" MINIMUM, WHICHEVER IS GREATER.
 6. SHEETING ORDERED LEFT IN PLACE TO BE CUT OFF 24" BELOW FINISHED GRADE OR 12" BELOW SUBGRADE.
 7. BASE SHALL BE 8" MINIMUM THICKNESS CRUSHED CONCRETE.
 8. TEMPORARY PATCHES WILL BE INSTALLED TO PROVIDE A SMOOTH ALL WEATHER SURFACE AT ALL TIMES. PERMANENT REPLACEMENT TO BE MADE AS SOON AS POSSIBLE.
 9. TRACER WIRE NOT REQUIRED FOR GRAVITY SEWERS.
 10. NOTES 5, THRU 8, ARE MINIMUM REQUIREMENTS. REFER TO MANATEE COUNTY HIGHWAY AND TRAFFIC STANDARDS FOR ADDITIONAL REQUIREMENTS.

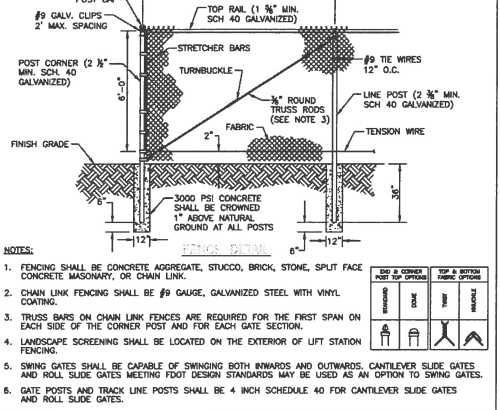


MANATEE COUNTY PUBLIC WORKS DEPARTMENT	REVISION DATE CLB/BN	DATE OF APPROVAL
	11/7/10	MAY 10, 2011

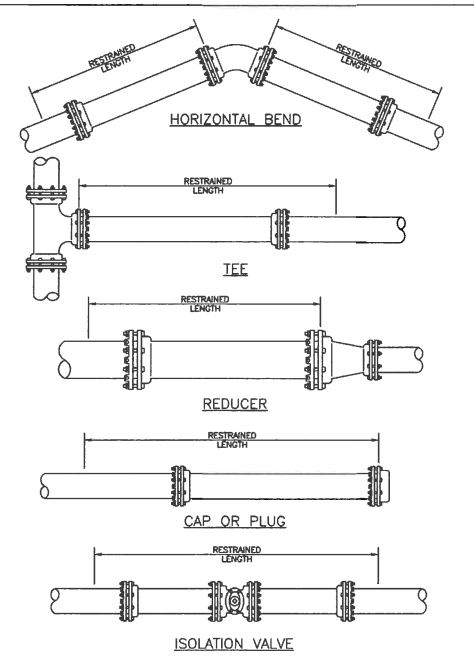


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 8. TEMPORARY PATCHES WILL BE INSTALLED TO PROVIDE A SMOOTH ALL WEATHER SURFACE AT ALL TIMES. PERMANENT REPLACEMENT TO BE MADE AS SOON AS POSSIBLE.
 9. TRACER WIRE NOT REQUIRED FOR GRAVITY SEWERS.
 10. NOTES 5, THRU 8, ARE MINIMUM REQUIREMENTS. REFER TO MANATEE COUNTY HIGHWAY AND TRAFFIC STANDARDS FOR ADDITIONAL REQUIREMENTS.



MANATEE COUNTY PUBLIC WORKS DEPARTMENT	REVISION DATE CLB/BN	DATE OF APPROVAL
	11/7/10	MAY 10, 2011

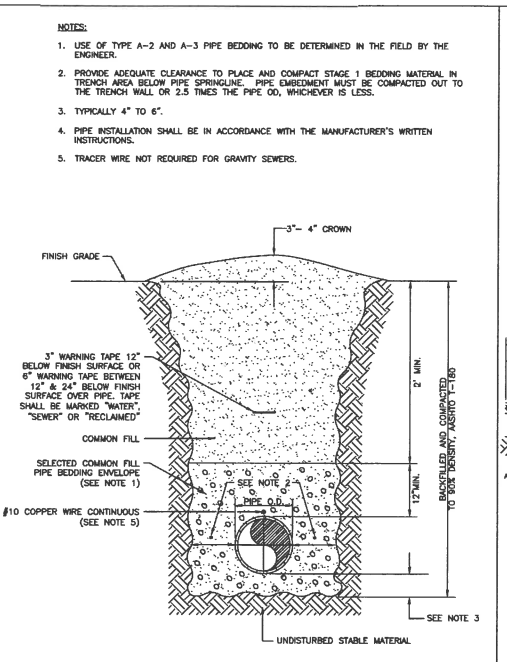


MANATEE COUNTY PUBLIC WORKS DEPARTMENT	REVISION DATE CLB/BN	DATE OF APPROVAL
	11/7/10	MAY 10, 2011

- NOTES:
1. USE OF TYPE A-2 AND A-3 PIPE BEDDING TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
 2. PROVIDE ADEQUATE CLEARANCE TO PLACE AND COMPACT STAGE 1 BEDDING MATERIAL IN TRENCH AREA BELOW PIPE SPRINGLINE. PIPE EMBEDMENT MUST BE COMPACTED OUT TO THE TRENCH WALL OR 2.5 TIMES THE PIPE OD, WHICHEVER IS LESS.
 3. TYPICALLY 4" TO 6".
 4. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
 5. THICKNESS TO MATCH EXISTING OR BE 8" MINIMUM, WHICHEVER IS GREATER.
 6. SHEETING ORDERED LEFT IN PLACE TO BE CUT OFF 24" BELOW FINISHED GRADE OR 12" BELOW SUBGRADE.
 7. BASE SHALL BE 8" MINIMUM THICKNESS CRUSHED CONCRETE.
 8. TEMPORARY PATCHES WILL BE INSTALLED TO PROVIDE A SMOOTH ALL WEATHER SURFACE AT ALL TIMES. PERMANENT REPLACEMENT TO BE MADE AS SOON AS POSSIBLE.
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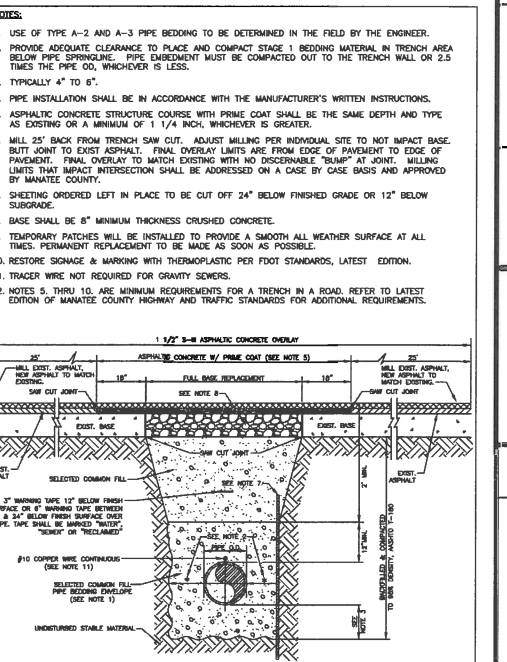


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	11/7/10	MAY 10, 2011

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Designed by:	Drawn by:	Checked by:	Approved by:	Scale:	Date:	Job No.:	© 2016
KMU	KMU	JAB	NJK	AS NOTED	06/13	M13109	

Plans Prepared By:
CPH, Inc.
3277 A Fruitville Rd., Suite 2
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Ph: 941.353.4771
Licenses:
Eng. C.O.A. No. 3215
Survey L.B. No. 7143
Arch. Lic. No. AA25000228
Landscape Lic. No. LC20000295

**MANATEE COUNTY
UTILITY DETAILS SHEET**
**NORTH COQUINA BOAT RAMP
PARKING LOT EXPANSION**
MANATEE COUNTY / FLORIDA

Sheet No.
C-8A

PLANT LIST

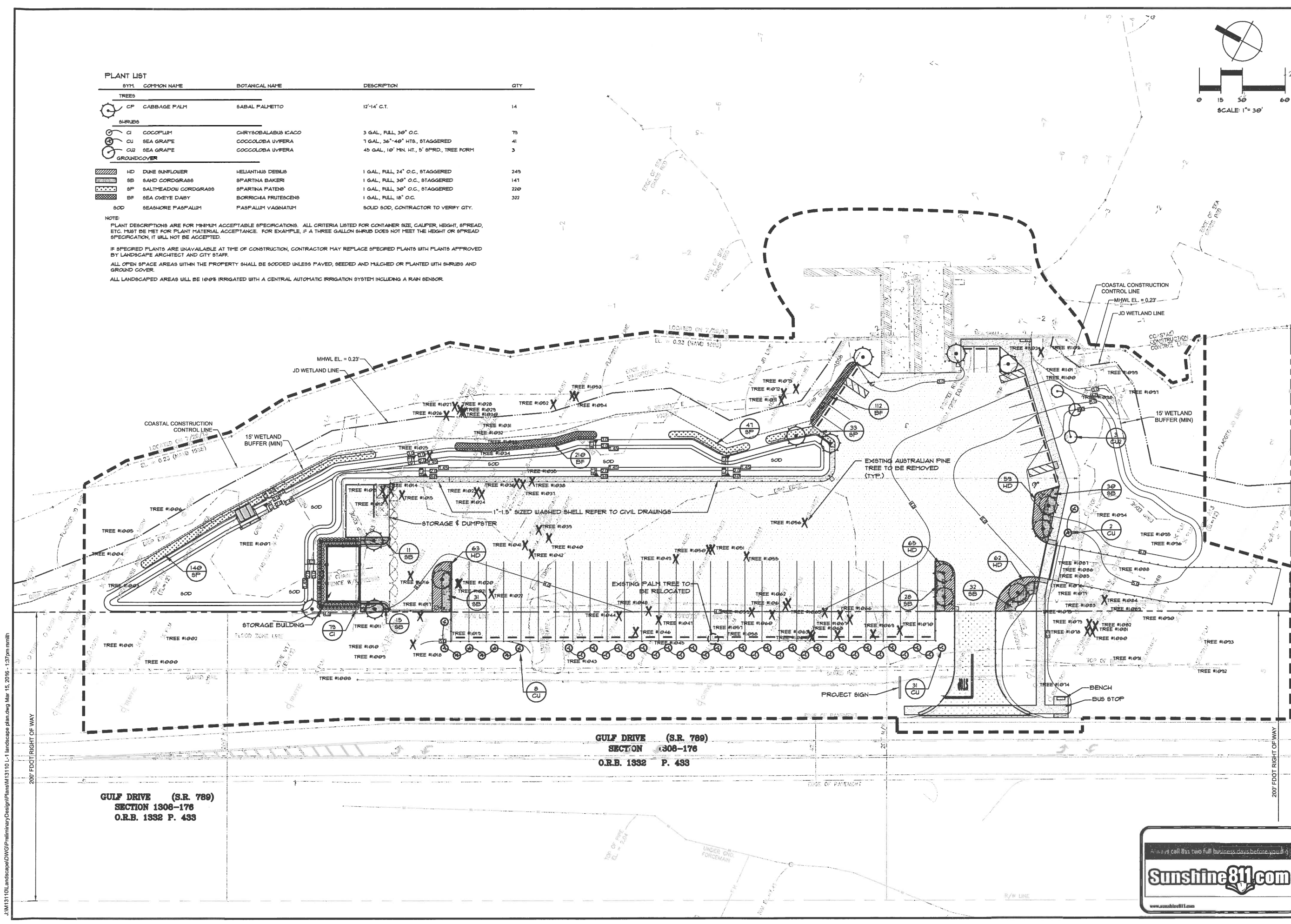
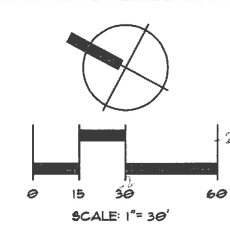
SYM.	COMMON NAME	BOTANICAL NAME	DESCRIPTION	QTY
TREES				
CP	CABBAGE PALM	SABAL PALMETTO	12'-14' C.T.	14
SHRUBS				
CI	COCOPALM	CHRYSOBALABUS ICAGO	3 GAL., FULL, 30" O.C.	79
CU	SEA GRAPE	COCCOLOBA UVIFERA	7 GAL., 36"-48" HTS, STAGGERED	41
CU	SEA GRAPE	COCCOLOBA UVIFERA	45 GAL., 18" MIN. HT., 5' SPRD., TREE FORM	3
GROUND COVER				
HD	DUNE SUNFLOWER	HELIANTHUS DEBIUS	1 GAL., FULL, 24" O.C., STAGGERED	249
SB	SAND CORDGRASS	SPARTINA BAKERI	1 GAL., FULL, 30" O.C., STAGGERED	141
SP	SALTMEADOW CORDGRASS	SPARTINA PATENS	1 GAL., FULL, 30" O.C., STAGGERED	220
BF	SEA OXEYE DAISY	BORRICHIA FRUTESCENS	1 GAL., FULL, 18" O.C.	372
SOD	SEASHORE PASPALUM	PASPALUM VAGINATUM	SOLID SOD, CONTRACTOR TO VERIFY QTY.	

NOTE:
PLANT DESCRIPTIONS ARE FOR MINIMUM ACCEPTABLE SPECIFICATIONS. ALL CRITERIA LISTED FOR CONTAINER SIZE, CALIPER, HEIGHT, SPREAD, ETC. MUST BE MET FOR PLANT MATERIAL ACCEPTANCE. FOR EXAMPLE, IF A THREE GALLON SHRUB DOES NOT MEET THE HEIGHT OR SPREAD SPECIFICATION, IT WILL NOT BE ACCEPTED.

IF SPECIFIED PLANTS ARE UNAVAILABLE AT TIME OF CONSTRUCTION, CONTRACTOR MAY REPLACE SPECIFIED PLANTS WITH PLANTS APPROVED BY LANDSCAPE ARCHITECT AND CITY STAFF.

ALL OPEN SPACE AREAS WITHIN THE PROPERTY SHALL BE SODDED UNLESS PAVED, SEEDED AND MULCHED OR PLANTED WITH SHRUBS AND GROUND COVER.

ALL LANDSCAPED AREAS WILL BE 100% IRRIGATED WITH A CENTRAL AUTOMATIC IRRIGATION SYSTEM INCLUDING A RAIN SENSOR.



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• Connecticut
• Maryland
• Texas

James K. Winter, R.L.A.
Mar 15, 2016

Designed by:	JKW	RES	JKW	JKW	08/13	M13110	01-15-16	JKW	By
Drawn by:									
Checked by:									
Approved by:									
Scale:									
Date:									
Job No.:									
© 2016									

Plans Prepared By:
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3277A Fruitville Rd., Suite 2
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Ph: 941.355.4771
Licenses:
Eng. C.O.A. No. 3215
Survey L.B. No. 7143
Arch. Lic. No. AA260926
Lndscp. Lic. No. LC0000298

LANDSCAPE PLAN
NORTH COQUINA BOAT RAMP
PARKING LOT EXPANSION
MANATEE COUNTY / FLORIDA

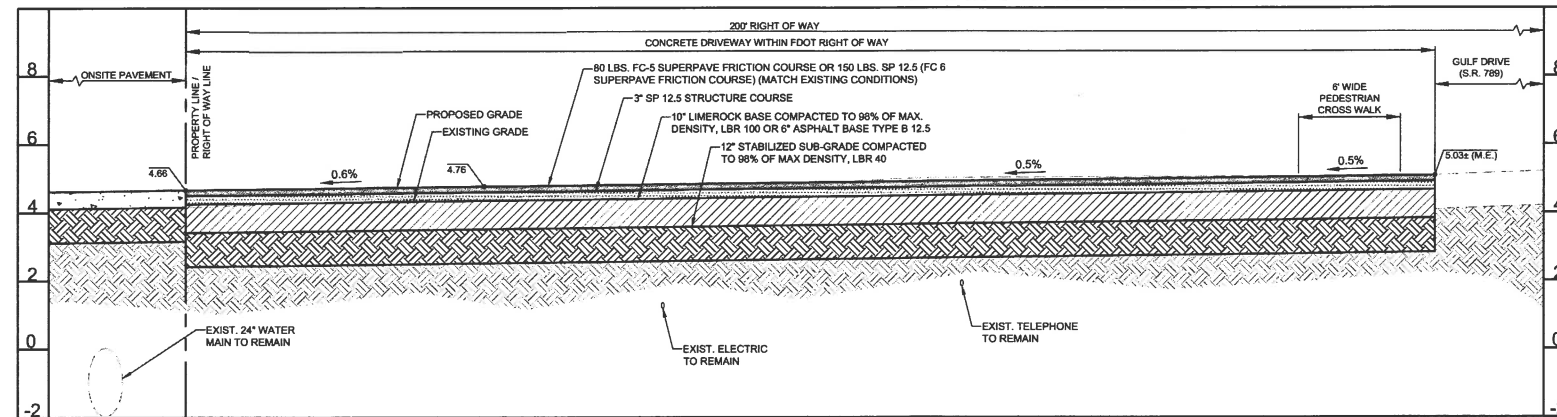
Sheet No.
L-1

call 811 two full business days before you dig

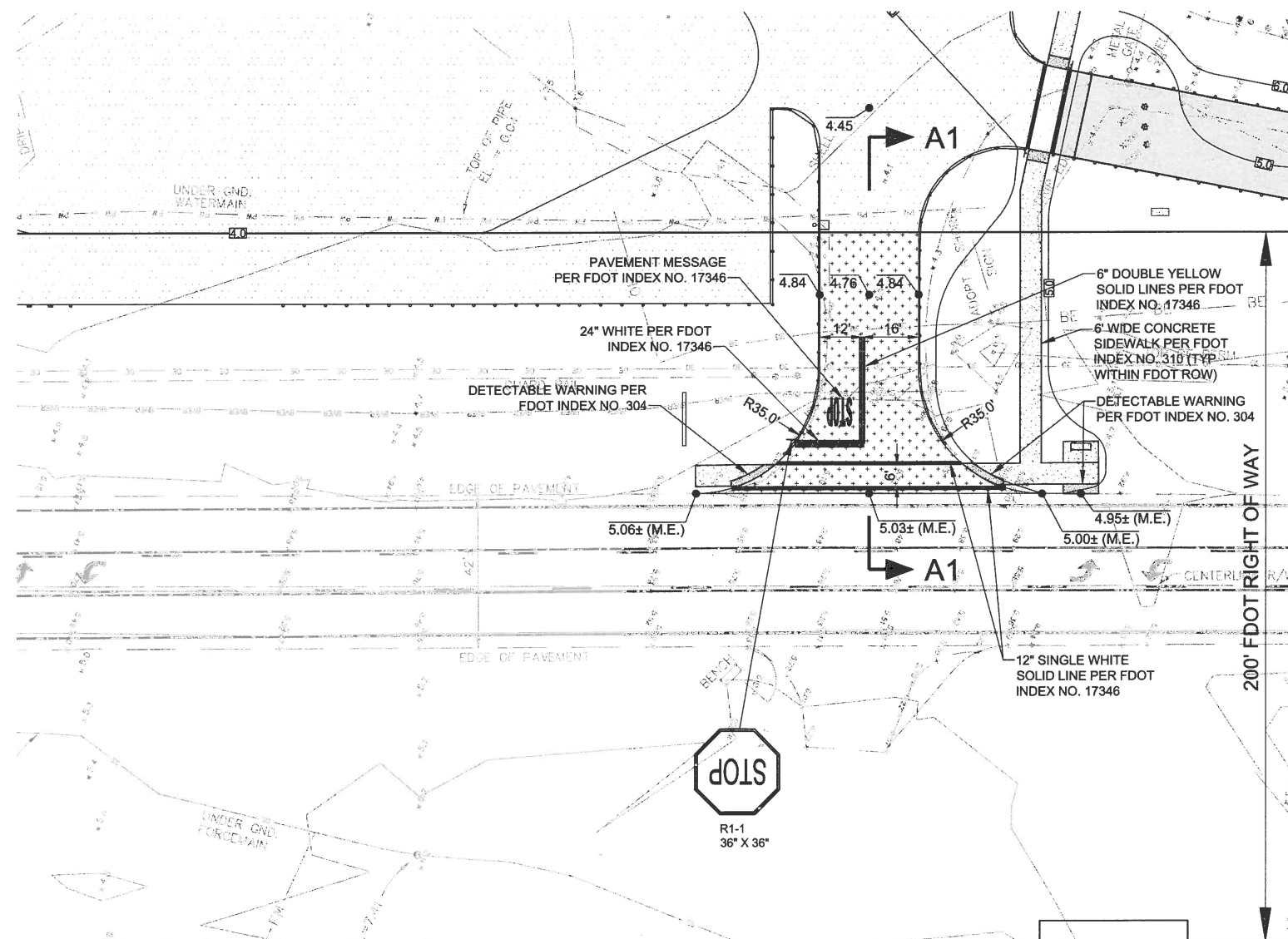
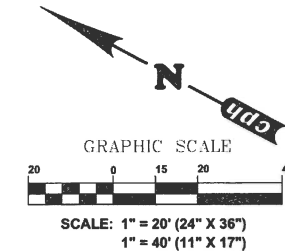
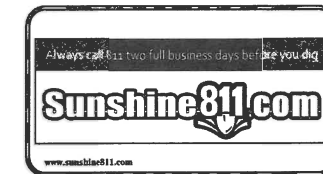
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J:\M13110\landscape\DWG\PreliminaryDesign\Plans\M13110 L-1 landscape plan.dwg Mar 15, 2016 - 1:37pm rsmlh



SECTION 'A1'-A1'
SCALE: HORIZ. 1" = 5', VERT. 1" = 2.5' (24" X 36")
HORIZ. 1" = 10', VERT. 1" = 5' (11" X 17")



REVISIONS			
NO.	DATE	DESCRIPTION	APPROVED
03/15/16		PLAN MODIFICATION	D.P.M.



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Landscape Architects Surveyors
Traffic/Transportation

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Survey L.B. No. 7143
Arch. Lic. No. AA2600926
Landscape Lic. No. LC0000298

**NORTH COQUINA BOAT RAMP
PARKING LOT EXPANSION
MANATEE COUNTY / FLORIDA**

	NAME	DATE
DESIGNED BY:	JMT	07-17-15
DRAWN BY:	KMU	07-17-15
CHECKED BY:	JMT	07-17-15
SUPERVISED BY:	DPM	07-17-15

DANIEL P. MOYER, P.E.
FL LIC. NO. 68057
03-15-16

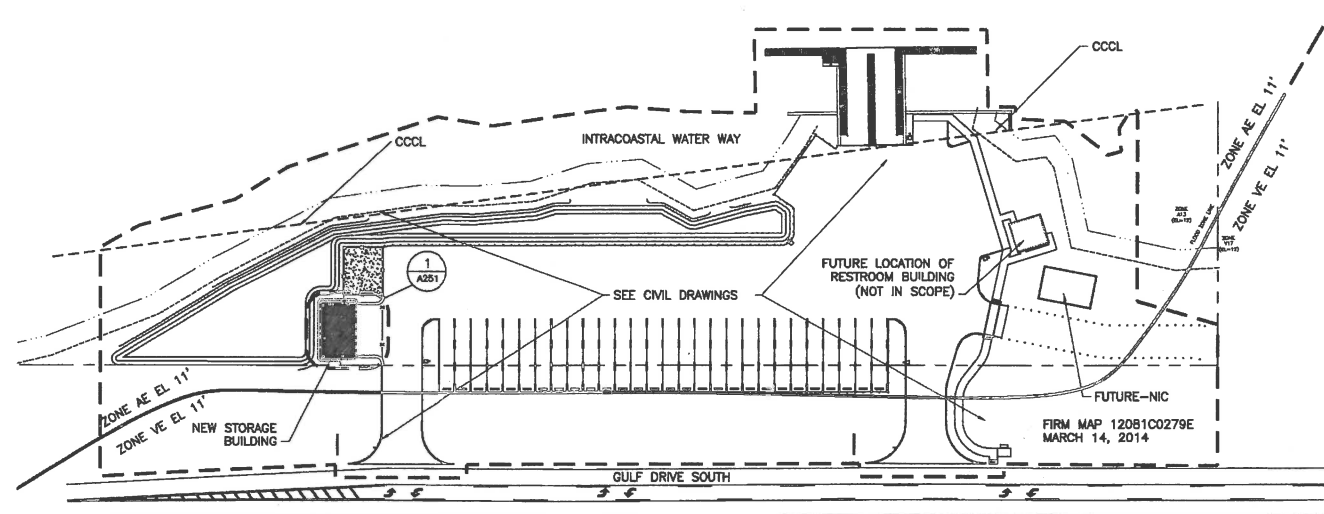
**S.R. 789 (GULF DRIVE)
IMPROVEMENTS**

SHEET
NO.
R-1

434 9th AVENUE WEST
PALMETTO, FLORIDA 34221
PHONE (941)729-5691
FAX (941)729-5692
WWW.UGARTEARCHITECTURE.COM
- AA-C001654 -

**MC COQUINA NORTH
STORAGE BLDG**

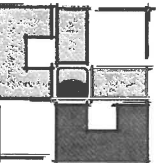
OVER DRIVE COULTER, DIVISION DIRECTOR, FLORIDA



A001

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9/29/2015 4:11 PM



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& ASSOCIATES, INC.**
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- AA-C001654 -

**STORAGE FLOOR PLAN AND
ELEVATIONS**

**MC COQUINA NORTH
STORAGE BLDG**

GULF DRIVE SOUTH BRADENTON BEACH, FLORIDA 34217

REVISIONS

10/01/15

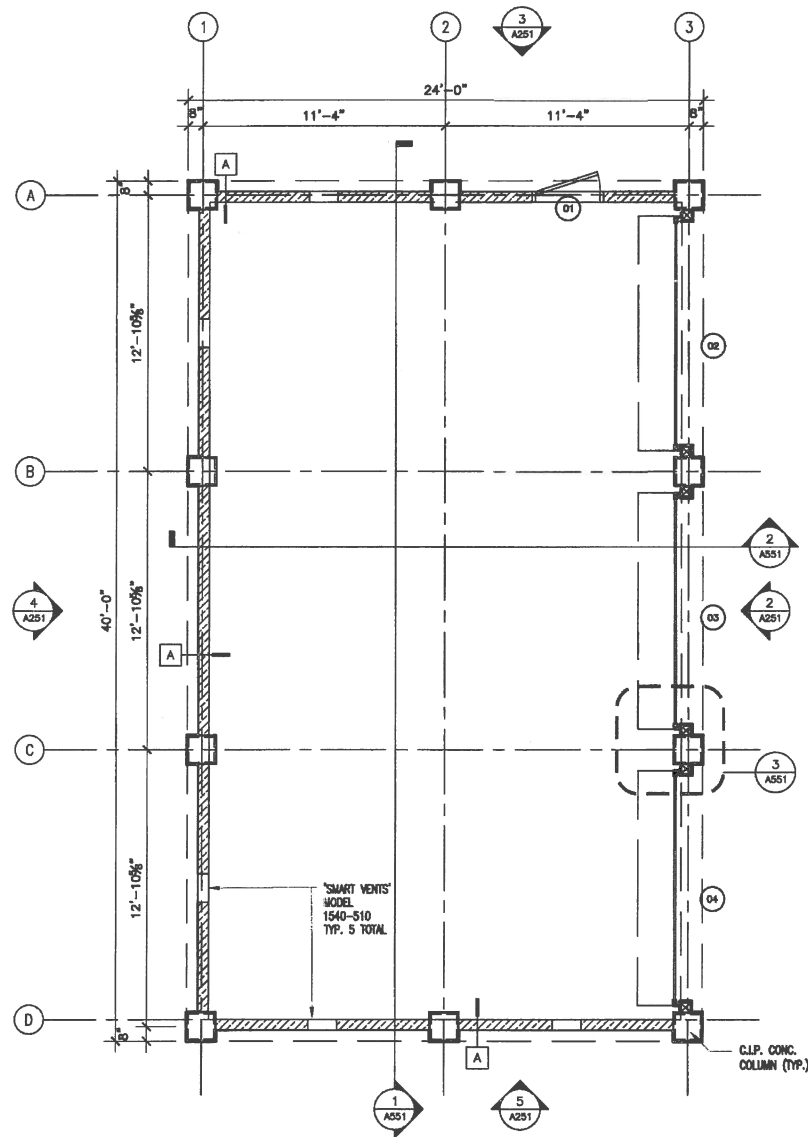
PROJECT NO: 2013-31
DATE: 04/02/15
DRAWN BY: CU/BL
CHKD BY: CU/DB

CARLOS D. UGARTE
LIC. NO. AR-0010725

SHEET

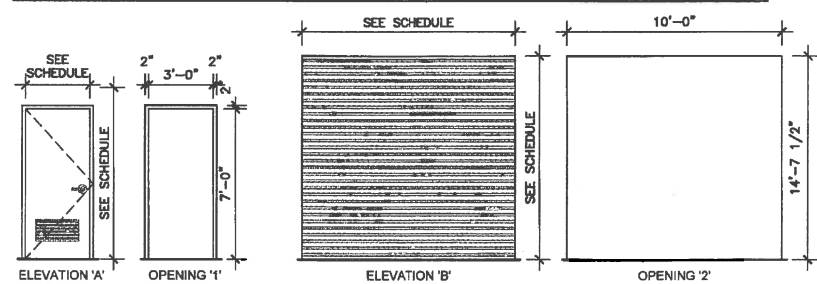
A251

9/29/2015 10:15 AM CAD DWG FILE: A251 STORAGE FLOOR PLAN.DWG



1 STORAGE BUILDING FLOOR PLAN
A251 1/4" = 1'-0"

DOOR SCHEDULE							
No.	EL	DOOR SIZE			FRAME		NOTES
		WD.	HGT.	THK.	MATL.	MATL.	
01	A	3'-0"	7'-0"	1 3/4"	ALUM.	MTL.	CLINE SEE COVER FOR NOA
02	B	10'-0"	14'-7 1/2"	2"	MTL.	MTL.	OVERHEAD DR. SEE COVER FOR NOA
03	B	10'-0"	14'-7 1/2"	2"	MTL.	MTL.	OVERHEAD DR. SEE COVER FOR NOA
04	B	10'-0"	14'-7 1/2"	2"	MTL.	MTL.	OVERHEAD DR. SEE COVER FOR NOA

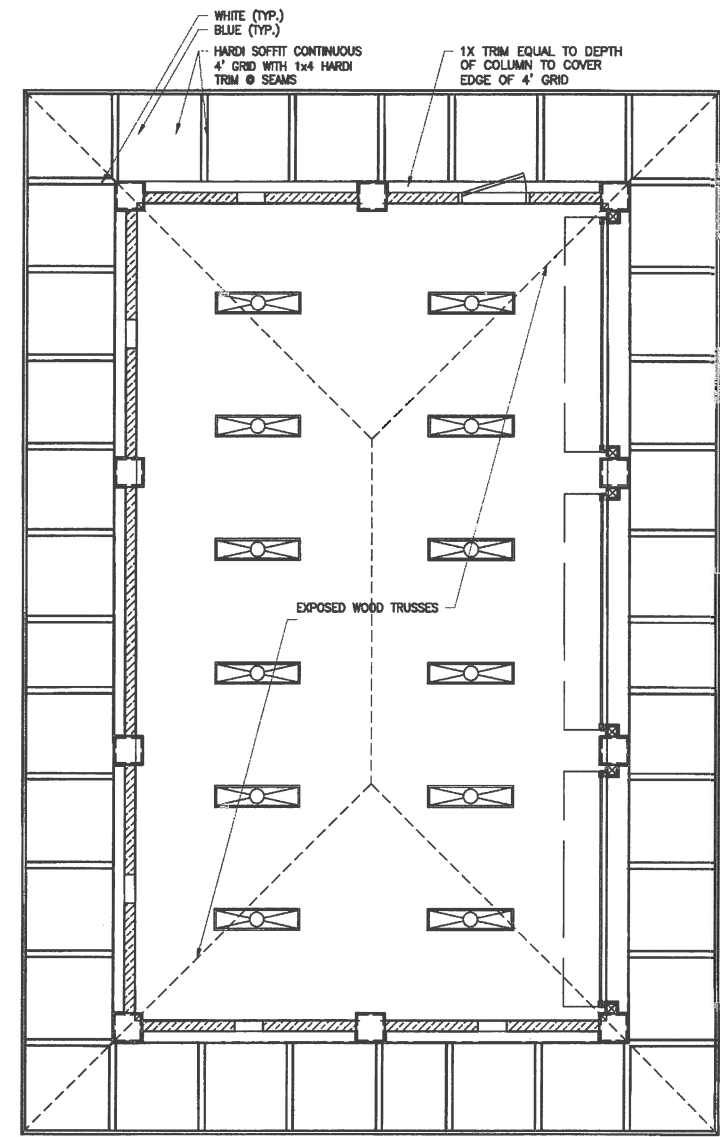


- NOTES**
- CONTRACTOR SHALL PROVIDE TO THE ARCHITECT A DETAILED PROPOSED HARDWARE SCHEDULE COMPLETE WITH CUT SHEETS FOR THE ARCHITECT'S REVIEW BEFORE PROCEEDING WITH DOORS, DOOR FRAMES AND HARDWARE ORDERS. FINAL HARDWARE SCHEDULE SHALL BE AN APPROVED HARDWARE SUPPLIER PROPOSAL.
 - ALL DISCREPANCIES SHALL BE BROUGHT TO ARCHITECT'S ATTENTION PRIOR TO ORDERING.
 - SEE NOA'S ON COVER SHEET FOR INSTALLATION SPECIFICATIONS.
 - NOA'S AND MANUFACTURER'S SPECIFICATIONS SUPERCEDE ARCHITECTURAL DRAWINGS AND DETAILS.
 - ALL EXTERIOR DOOR FRAMES TO BE METAL.
 - DOOR HARDWARE PROVIDED AND INSTALLED BY CONTRACTOR, HARDWARE KEY CORE PROVIDED BY OWNER.

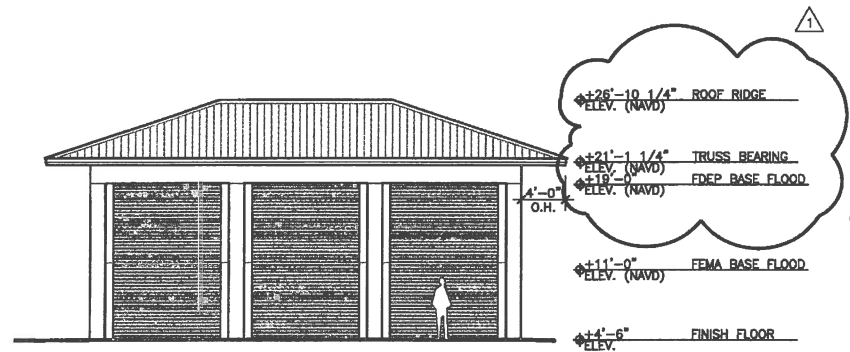
WALL LEGEND	
	TYP. EXTERIOR WALL: 16" CIP CONCRETE WALL WITH 2-COAT CEMENTITIOUS FINISH. SEE FOUNDATION PLAN FOR VERTICAL BAR REINFORCING.
	BREAK-AWAY WALL: 2X6 STUD FRAMED WALL w/ 1/2" SHEATHING, 3-COAT STUCCO FINISH

- NOTES**
- ALL EXTERIOR DIMENSIONS ARE TO FACE OF CONCRETE.

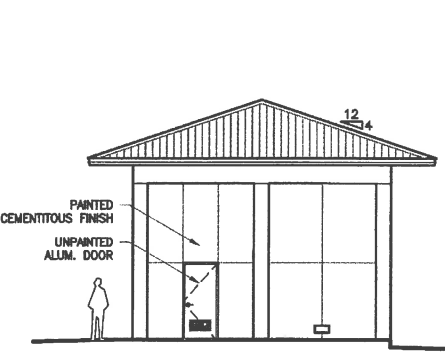
FLOOD VENT CALCULATION	
960 S.F. REQUIRES 960 S.I. OF VENTING EACH	"SMART VENT" = 200 S.I. = 5 VENTS



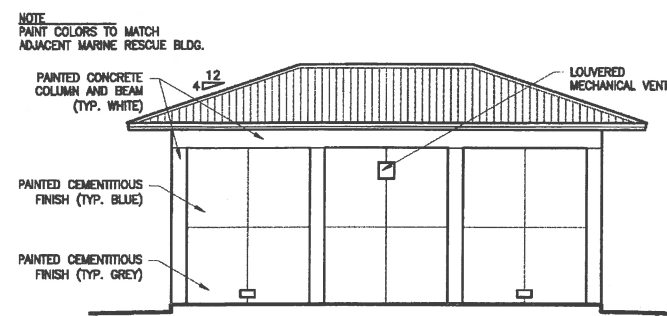
6 STORAGE BLDG. REFL. CEILING PLAN
A251 1/4" = 1'-0"



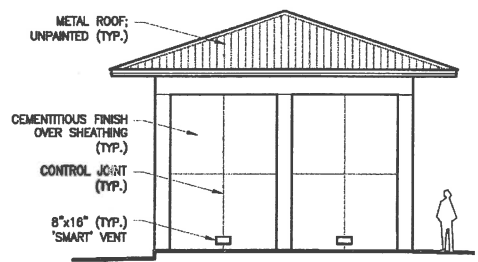
2 FRONT ELEVATION
A251 1/8" = 1'-0"



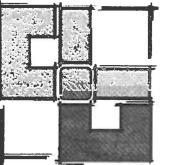
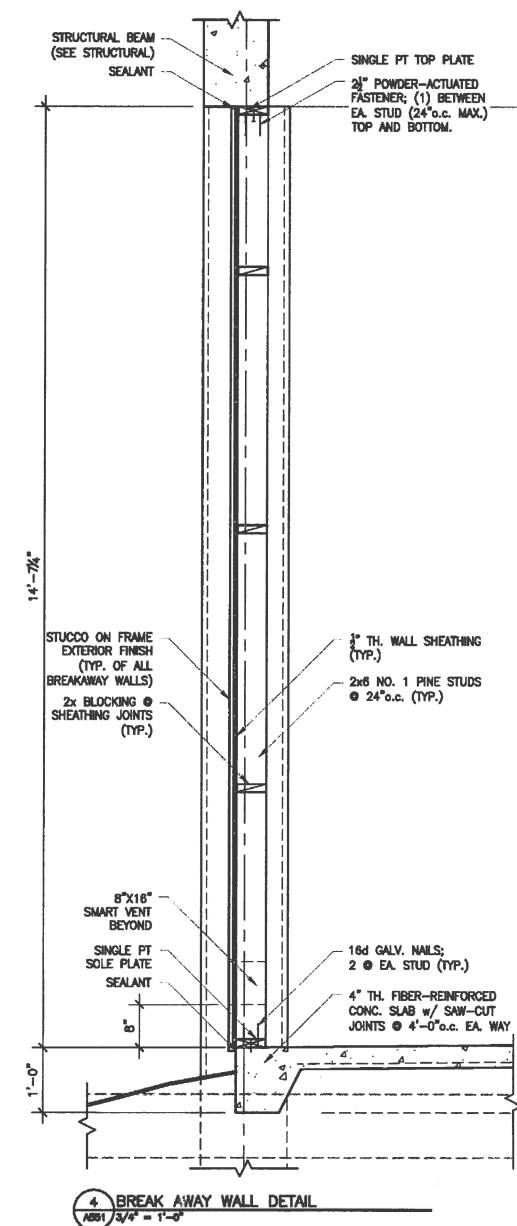
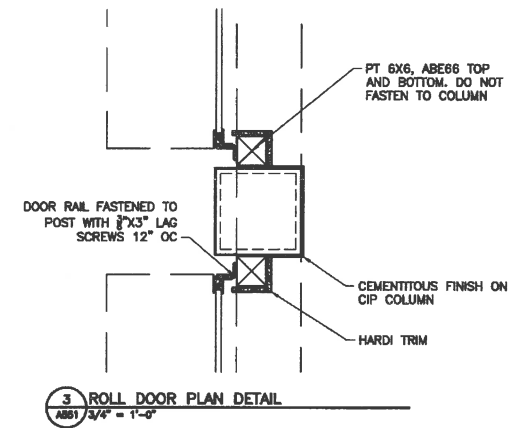
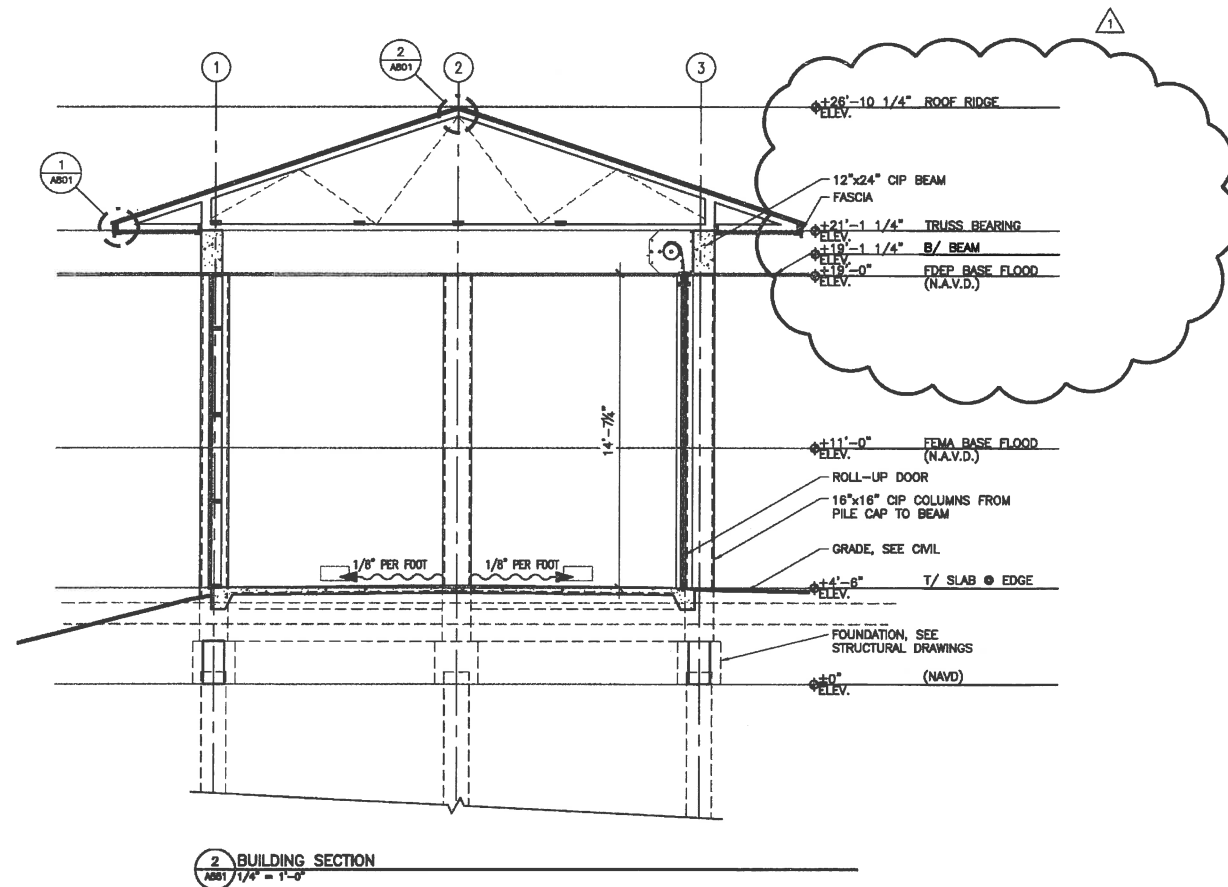
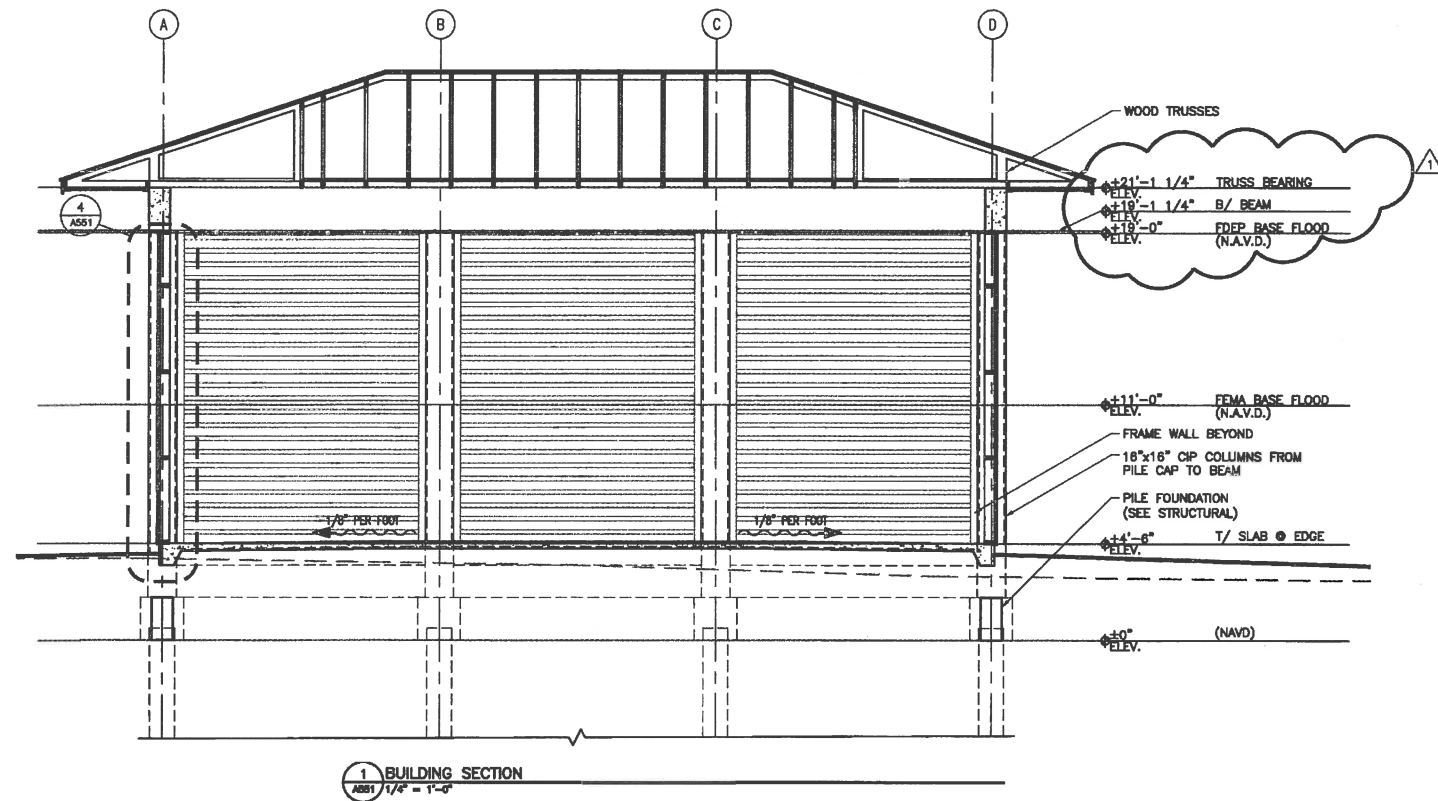
3 LEFT ELEVATION
A251 1/8" = 1'-0"



4 REAR ELEVATION
A251 1/8" = 1'-0"



5 RIGHT ELEVATION
A251 1/8" = 1'-0"



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**STORAGE BUILDING SECTIONS
 & DETAILS**

**MC COQUINA NORTH
 STORAGE BLDG**

GULF DRIVE SOUTH BRADENTON BEACH, FLORIDA 34217

REVISIONS

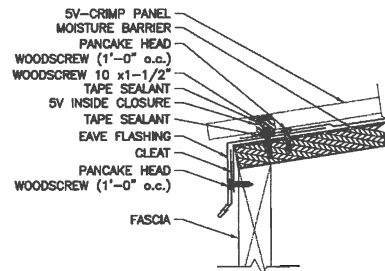
10/01/15

PROJECT NO: 2013-31
 DATE: 04/02/15
 DRAWN BY: CUI/BL
 CKD BY: CUI/DB

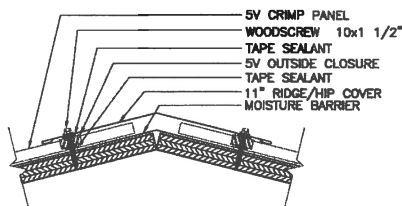
06/01/2015
 CARLOS D. UGARTE
 LIC. NO. AR-0010725

SHEET

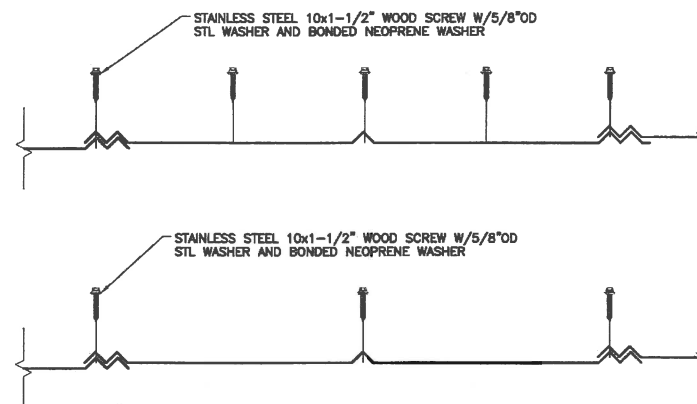
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1 EAVE DETAIL
AS01 3" = 1'-0"

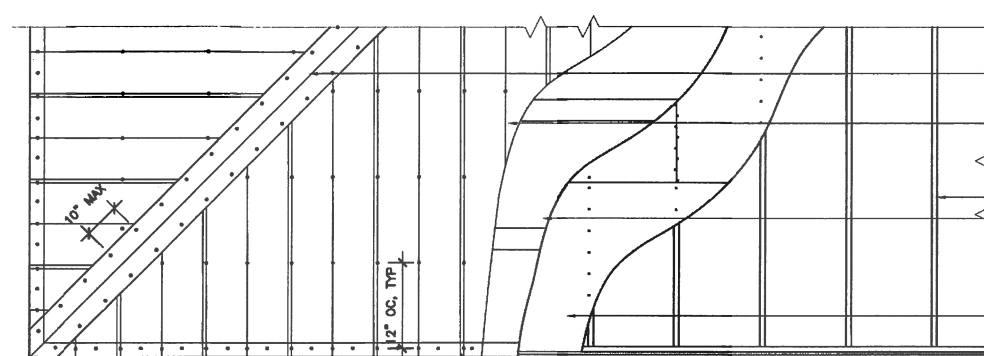


2 RIDGE DETAIL
AS01 3" = 1'-0"



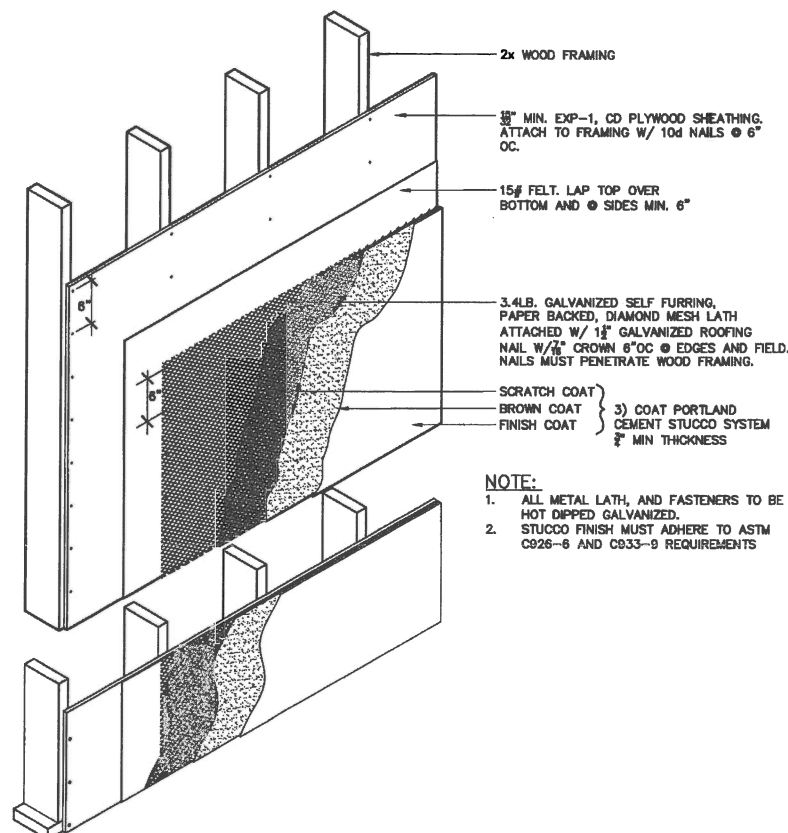
3 FASTENING PATTERNS
AS01 3" = 1'-0"

- ROOFING PANEL NOTES:
1. 5V CRIMP METAL ROOFING SYSTEM, 26GA, AS MANUFACTURED BY 'MBCI.'
 2. SEE COVER SHEET FOR MIAMI-DADE CO. NOAA.
 3. INSTALL ACCORDING TO THE PRODUCT APPROVAL.
 4. DRAWINGS ARE NOT TO BE SCALED. CONTACT ARCHITECT FOR ANY DIMENSION NOT SHOWN.
 5. COORDINATE COLOR WITH OWNER OR OWNERS REP.



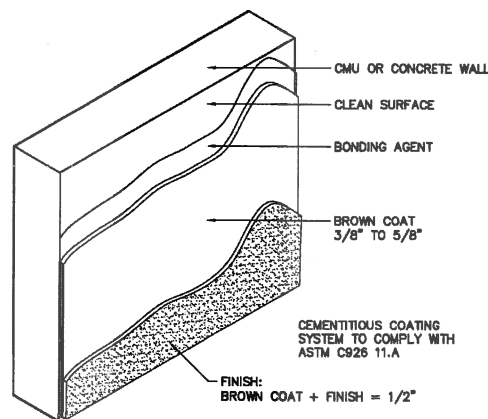
4 ROOF PLAN DETAIL
AS01 1/2" = 1'-0"

NOTE: SEE PROVIDED PRODUCT APPROVAL WITH INSTALLATION GUIDELINES SHOWING COMPLIANCE WITH THE CURRENT FLORIDA BUILDING CODE.



5 3 COAT APPLICATION OVER SHEATHING
AS01 1" = 1'-0"

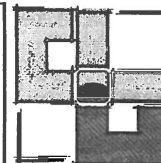
- NOTE:
1. ALL METAL LATH, AND FASTENERS TO BE HOT DIPPED GALVANIZED.
 2. STUCCO FINISH MUST ADHERE TO ASTM C926-6 AND C933-9 REQUIREMENTS



6 2 COAT APPLICATION OVER MASONRY
AS01 1" = 1'-0"

10/01/15

REVISION 1 REFERS TO THE RE-ISSUE OF THIS SET. THERE ARE NOT CHANGES TO THESE DETAILS



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DETAILS

MC COQUINA NORTH
STORAGE BLDG

GULF DRIVE SOUTH BRADENTON BEACH, FLORIDA 34217

REVISIONS
10/01/15

PROJECT NO: 2013-31
DATE: 04/02/15
DRAWN BY: CUB/L
CHKD BY: CUB/L

10/01/2015

CARLOS O. UGARTE
LIC. NO. AR-0010725

SHEET

A801

9/29/2015 10:15 AM CAD DWG FILE: A801 DETAILS.DWG
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BUILDING SPECIFICATIONS:

DIVISIONS 1 AND 2
BY OTHERS

DIVISIONS 3 AND 4 - CONCRETE AND MASONRY
SEE 1'S SHEETS

DIVISION 5 - METALS

DIVISION 6 - WOOD, PLASTIC AND COMPOSITES

SECTION 06 10 00 - ROUGH CARPENTRY

PART 1 - GENERAL

- 1.1 SUMMARY
- A. SECTION INCLUDES:
1. FRAMING WITH DIMENSION LUMBER
- 1.2 ACTION SUBMITTALS
- A. PRODUCT DATA: FOR EACH TYPE OF PROCESS AND FACTORY-FABRICATED PRODUCT, INDICATE COMPONENT MATERIALS AND DIMENSIONS AND INCLUDE CONSTRUCTION AND APPLICATION DETAILS. INCLUDE DATA FOR WOOD-PRESERVATIVE TREATMENT FROM CHEMICAL TREATMENT MANUFACTURER AND CERTIFICATION BY TREATING PLANT THAT TREATED MATERIALS COMPLY WITH REQUIREMENTS. INDICATE TYPE OF PRESERVATIVE USED AND NET AMOUNT OF PRESERVATIVE RETAINED.
2. FOR PRODUCTS RECEIVING A WATERBORNE TREATMENT, INCLUDE STATEMENT THAT MOISTURE CONTENT OF TREATED MATERIALS WAS REDUCED TO LEVELS SPECIFIED BEFORE SHIPMENT TO PROJECT SITE.
3. INCLUDE COPIES OF WARRANTIES FROM CHEMICAL TREATMENT MANUFACTURERS FOR EACH TYPE OF TREATMENT.
- 1.3 DELIVERY, STORAGE, AND HANDLING
- A. STACK LUMBER FLAT WITH SPACES BETWEEN AND BETWEEN EACH BUNDLE TO PROVIDE AIR CIRCULATION. PROTECT LUMBER FROM WEATHER BY COVERING WITH WATERPROOF SHEETING, SECURELY ANCHORED. PROVIDE FOR AIR CIRCULATION AROUND STACKS AND UNDER COVERINGS.

PART 2 - PRODUCTS

- 2.1 WOOD PRODUCTS, GENERAL
- A. LUMBER: DCC PS 20 AND APPLICABLE RULES OF GRADING AGENCIES INDICATED. IF NO GRADING AGENCY IS INDICATED, PROVIDE LUMBER THAT COMPLIES WITH THE APPLICABLE RULES OF ANY RULES-WRITING AGENCY CERTIFIED BY THE ALSO BOARD OF REVIEW. PROVIDE LUMBER GRADED BY AN AGENCY CERTIFIED BY THE ALSO BOARD OF REVIEW TO INSPECT AND GRADE LUMBER UNDER THE RULES INDICATED.
1. FACTORY MARK EACH PIECE OF LUMBER WITH GRADE STAMP OF GRADING AGENCY.
 2. WHERE NOMINAL SIZES ARE INDICATED, PROVIDE ACTUAL SIZES REQUIRED BY DCC PS 20 FOR MOISTURE CONTENT SPECIFIED. WHERE ACTUAL SIZES ARE INDICATED, THEY ARE MINIMUM DRESSED SIZES FOR DRY LUMBER.
 3. PROVIDE DRESSED LUMBER, S4S, UNLESS OTHERWISE INDICATED.
- B. MAXIMUM MOISTURE CONTENT OF LUMBER: 19 PERCENT, UNLESS OTHERWISE INDICATED.
- 2.2 WOOD-PRESERVATIVE-TREATED LUMBER
- A. PRESERVATIVE TREATMENT BY PRESSURE PROCESS: AHFA VI; USE CATEGORY UC2. FOR INTERIOR CONSTRUCTION NOT IN CONTACT WITH THE GROUND. USE CATEGORY UC3B. FOR EXTERIOR CONSTRUCTION NOT IN CONTACT WITH THE GROUND. USE CATEGORY UC4A FOR ITEMS IN CONTACT WITH THE GROUND.
1. PRESERVATIVE CHEMICALS: ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION AND CONTAINING NO ARSENIC OR CHROMIUM. DO NOT USE INORGANIC BORON (SBO) FOR BILL PLATES.
- B. KILN-DRY LUMBER AFTER TREATMENT TO A MAXIMUM MOISTURE CONTENT OF 19 PERCENT. DO NOT USE MATERIAL THAT IS WAXED OR THAT DOES NOT COMPLY WITH REQUIREMENTS FOR UNTREATED MATERIAL.
- C. MARK LUMBER WITH TREATMENT QUALITY MARK OF AN INSPECTION AGENCY APPROVED BY THE ALSO BOARD OF REVIEW.
- D. APPLICATION: TREAT ALL ROUGH CARPENTRY UNLESS OTHERWISE INDICATED.
1. WOOD FRAMING AND FURRING ATTACHED DIRECTLY TO THE INTERIOR OF BELOW-GRADE EXTERIOR MASONRY OR CONCRETE WALLS.
 2. WOOD FRAMING MEMBERS THAT ARE LESS THAN 18 INCHES ABOVE THE GROUND IN CRAWLSPACES OR UNDECAVATED AREAS.
- 2.3 DIMENSION LUMBER FRAMING
- A. LOAD-BEARING PARTITIONS: NO.2 GRADE.
1. APPLICATION: WALLS.
 2. SPECIES:
 - a. SPRUCE-PINE-FIR (SOUTH); NELMA, WOLLS, OR WMPA.

- 2.4 FASTENERS
- A. GENERAL: PROVIDE FASTENERS OF SIZE AND TYPE INDICATED THAT COMPLY WITH REQUIREMENTS SPECIFIED IN THIS ARTICLE FOR MATERIAL AND MANUFACTURE.
1. WHERE ROUGH CARPENTRY IS EXPOSED TO WEATHER, IS IN GROUND CONTACT, IS IN CONTACT WITH PRESERVATIVE-TREATED ELEMENTS, OR IS IN AN AREA OF HIGH RELATIVE HUMIDITY, PROVIDE FASTENERS WITH A HOT-DIPPED ZINC COATING COMPLYING WITH ASTM A 153/A 153M.
- B. USE STAINLESS STEEL FASTENERS WITH STAINLESS STEEL ANCHORS.
1. NAILS, BRADS, AND STAPLES: ASTM F 1607.
 2. POWER-DRIVEN FASTENERS: NES NER-272.
 3. LAG BOLTS: ASME B18.2.1.

- 2.5 METAL FRAMING ANCHORS
- A. BASIS FOR DESIGN IS SIMPSON STRONG TIE
- B. ALLOWABLE DESIGN LOADS: PROVIDE PRODUCTS WITH ALLOWABLE DESIGN LOADS, AS PUBLISHED BY MANUFACTURER THAT MEET OR EXCEED THOSE INDICATED. MANUFACTURER'S PUBLISHED VALUES SHALL BE DETERMINED FROM EMPIRICAL DATA OR BY RATIONAL ENGINEERING ANALYSIS AND DEMONSTRATED BY COMPREHENSIVE TESTING PERFORMED BY A QUALIFIED INDEPENDENT TESTING AGENCY.
- C. STAINLESS STEEL: TYPE 316L STAINLESS STEEL.
1. USE FOR WOOD-PRESERVATIVE-TREATED LUMBER AND WHERE INDICATED.

- 2.6 MISCELLANEOUS MATERIALS
- A. FLEXIBLE FLASHING: COMPOSITE, SELF-ADHESIVE, FLASHING PRODUCT CONSISTING OF A PLIABLE, RUBBERIZED-ASPHALT COMPOUND, BONDED TO A HIGH-DENSITY POLYETHYLENE FILM, ALUMINUM FOIL, OR SPUN-BONDED POLYOLFIN TO PRODUCE AN OVERALL THICKNESS OF NOT LESS THAN 0.025 INCH.

PART 3 - EXECUTION

- 3.1 INSTALLATION, GENERAL
- A. FRAMING STANDARD: COMPLY WITH AF&PA'S WCD 1, "DETAILS FOR CONVENTIONAL WOOD FRAME CONSTRUCTION" UNLESS OTHERWISE INDICATED.
- B. METAL FRAMING ANCHORS: INSTALL METAL FRAMING ANCHORS TO COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. INSTALL FASTENERS THROUGH EACH FASTENER HOLE.
- C. SORT AND SELECT LUMBER SO THAT NATURAL CHARACTERISTICS WILL NOT INTERFERE WITH INSTALLATION OR WITH FASTENING OTHER MATERIALS TO LUMBER. DO NOT USE MATERIALS WITH DEFECTS THAT INTERFERE WITH FUNCTION OF MEMBER OR PIECES THAT ARE TOO SMALL TO USE WITH MINIMUM NUMBER OF JOINTS OR OPTIMUM JOINT ARRANGEMENT.
- D. COMPLY WITH AWPA 84 FOR APPLYING FIELD TREATMENT TO CUT SURFACES OF PRESERVATIVE-TREATED LUMBER.
1. USE INORGANIC BORON FOR ITEMS THAT ARE CONTINUOUSLY PROTECTED FROM LIQUID WATER.
 2. USE COPPER NAPHTHENATE FOR ITEMS NOT CONTINUOUSLY PROTECTED FROM LIQUID WATER.
- E. SECURELY ATTACH ROUGH CARPENTRY WORK TO SUBSTRATE BY ANCHORING AND FASTENING AS INDICATED, COMPLYING WITH THE FOLLOWING:
1. NES NER-272 FOR POWER-DRIVEN FASTENERS.
 2. TABLE 2304.8.1, "FASTENING SCHEDULE," IN ICC'S INTERNATIONAL BUILDING CODE.
 3. TABLE R602.3(1), "FASTENER SCHEDULE FOR STRUCTURAL MEMBERS," AND TABLE R602.3(2), "ALTERNATE ATTACHMENTS," IN ICC'S INTERNATIONAL RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS.
- F. USE STEEL COMMON NAILS UNLESS OTHERWISE INDICATED. SELECT FASTENERS OF SIZE THAT WILL NOT FULLY PENETRATE MEMBERS WHERE OPPOSITE SIDE WILL BE EXPOSED TO VIEW OR WILL RECEIVE FINISH MATERIALS. MAKE TIGHT CONNECTIONS BETWEEN MEMBERS. INSTALL FASTENERS WITHOUT SPLITTING WOOD. DRIVE NAILS 90 DEG BUT DO NOT COUNTERSINK NAIL HEADS, UNLESS OTHERWISE INDICATED.

- 3.2 WALL AND PARTITION FRAMING INSTALLATION
- A. GENERAL: PROVIDE SINGLE BOTTOM PLATE AND DOUBLE TOP PLATES USING MEMBERS OF 2-INCH NOMINAL THICKNESS WHOSE WIDTHS EQUAL THAT OF STUDS. EXCEPTION: SINGLE TOP PLATE MAY BE USED FOR NON-LOAD-BEARING PARTITIONS. FASTEN PLATES TO SUPPORTING CONSTRUCTION, UNLESS OTHERWISE INDICATED.
1. FOR EXTERIOR BREAKAWAY WALLS, PROVIDE 2-BY 4 INCH NOMINAL SIZE WOOD STUDS SPACED 24 INCHES ON CENTER, UNLESS OTHERWISE INDICATED. PROVIDE STRAIGHT, DRY NO.1 FT FINE.

3.3 PROTECTION

- A. PROTECT WOOD THAT HAS BEEN TREATED WITH INORGANIC BORON (SBO) FROM WEATHER. IF, DESPITE PROTECTION, INORGANIC BORON-TREATED WOOD BECOMES WET, APPLY EPA-REGISTERED BORATE TREATMENT. APPLY BORATE SOLUTION BY SPRAYING TO COMPLY WITH EPA-REGISTERED LABEL.
- B. PROTECT ROUGH CARPENTRY FROM WEATHER. IF, DESPITE PROTECTION, ROUGH CARPENTRY BECOMES WET, APPLY EPA-REGISTERED BORATE TREATMENT. APPLY BORATE SOLUTION BY SPRAYING TO COMPLY WITH EPA-REGISTERED LABEL.

END OF SECTION 06 10 00

SECTION 06 17 50 - SHOP-FABRICATED WOOD TRUSSES

PART 1 - GENERAL

- 1.1 SUMMARY
- A. SECTION INCLUDES:
1. WOOD ROOF TRUSSES.
 2. METAL TRUSS ACCESSORIES.
- 1.2 ACTION SUBMITTALS
- A. SHOP DRAWINGS: SHOW FABRICATION AND INSTALLATION DETAILS FOR TRUSSES.
1. SHOW LOCATION, PITCH, SPAN, CAMBER, CONFIGURATION, AND SPACING FOR EACH TYPE OF TRUSS REQUIRED.
 2. INDICATE SIZES, STRESS GRADES, AND SPECIES OF LUMBER.
 3. INDICATE LOCATIONS OF PERMANENT BRACING REQUIRED TO PREVENT BUCKLING OF INDIVIDUAL TRUSS MEMBERS DUE TO DESIGN LOADS.
 4. INDICATE LOCATIONS, SIZES, AND MATERIALS FOR PERMANENT BRACING REQUIRED TO PREVENT BUCKLING OF INDIVIDUAL TRUSS MEMBERS DUE TO DESIGN LOADS.
 5. INDICATE TYPE, SIZE, MATERIAL, FINISH, DESIGN VALUES, ORIENTATION, AND LOCATION OF METAL CONNECTOR PLATES.
- B. DELEGATED-DESIGN SUBMITTAL: FOR METAL-PLATE-CONNECTED WOOD TRUSSES INDICATED TO COMPLY WITH PERFORMANCE REQUIREMENTS AND DESIGN CRITERIA, INCLUDING ANALYSIS DATA SIGNED AND SEALED BY THE QUALIFIED PROFESSIONAL ENGINEER RESPONSIBLE FOR THEIR PREPARATION.

1.3 DELIVERY, STORAGE, AND HANDLING

- A. HANDLE AND STORE TRUSSES TO COMPLY WITH RECOMMENDATIONS IN TPI BCSI, "BUILDING COMPONENT SAFETY INFORMATION: GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING, RESTRAINING, & BRACING METAL-PLATE CONNECTED WOOD TRUSSES."
1. STORE TRUSSES FLAT, OFF OF GROUND, AND ADEQUATELY SUPPORTED TO PREVENT LATERAL BENDING.
 2. PROTECT TRUSSES FROM WEATHER BY COVERING WITH WATERPROOF SHEETING, SECURELY ANCHORED.
 3. PROVIDE FOR AIR CIRCULATION AROUND STACKS AND UNDER COVERINGS.
- B. INSPECT TRUSSES SHOWING DISCOLORATION, CORROSION, OR OTHER EVIDENCE OF DETEIORATION. DISCARD AND REPLACE TRUSSES THAT ARE DAMAGED OR DEFECTIVE.

END OF SECTION 06 17 50

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

SECTION 07 41 13 - METAL ROOF PANELS

PART 1 - GENERAL

- 1.1 SECTION INCLUDES
- A. 5V CRIMP EXPOSED FASTENER METAL ROOF PANELS, WITH RELATED METAL TRIM AND ACCESSORIES.
- 1.2 REFERENCES
- A. AMERICAN ARCHITECTURAL MANUFACTURERS ASSOCIATION (AAMA): WWW.AAMANET.ORG
1. AAMA 621 - VOLUNTARY SPECIFICATIONS FOR HIGH PERFORMANCE ORGANIC COATINGS ON COIL COATED ARCHITECTURAL HOT DIPPED GALVANIZED (HDG) & ZINC-ALUMINUM COATED STEEL SUBSTRATES.
 2. AAMA 800.2 - VOLUNTARY SPECIFICATION NON-DRYING SEALANTS.
 3. AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE): WWW.ASCE.ORG/CODES-AND-STANDARDS
 4. ASCE 7 - MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES.
 5. ASTM INTERNATIONAL (ASTM): WWW.ASTM.ORG
 1. ASTM A 782/A 782M - STANDARD SPECIFICATION FOR STEEL SHEET, 55 % ALUMINUM-ZINC ALLOY COATED BY THE HOT-DIP PROCESS.
 2. ASTM C 845 - SPECIFICATION FOR NONSTRUCTURAL STEEL FRAMING MEMBERS.
 3. ASTM C 620 - SPECIFICATION FOR ELASTOMERIC JOINT SEALANTS.
 4. ASTM D 2264 - TEST METHOD FOR CALCULATION OF COLOR DIFFERENCES FROM INSTRUMENTALLY.
- D. UNDERWRITERS LABORATORIES, INC. (UL): WWW.UL.COM
1. UL 580 - TESTS FOR UPLIFT RESISTANCE OF ROOF ASSEMBLIES

1.3 ADMINISTRATIVE REQUIREMENTS

- A. PRE-INSTALLATION MEETING: PRIOR TO ERECTION OF FRAMING, CONDUCT PRE-INSTALLATION MEETING AT SITE ATTENDED BY OWNER, ARCHITECT, MANUFACTURER'S TECHNICAL REPRESENTATIVE, INSPECTION AGENCY AND RELATED TRADE CONTRACTORS.
1. COORDINATE BUILDING FRAMING IN RELATION TO METAL PANEL SYSTEM.
 2. COORDINATE OPENINGS AND PENETRATIONS OF METAL PANEL SYSTEM.
 3. COORDINATE WORK OF DIVISION 07 SECTIONS "ROOF SPECIALTIES" AND "ROOF ACCESSORIES" AND OPENINGS AND PENETRATIONS AND MANUFACTURER'S ACCESSORIES WITH INSTALLATION OF METAL PANELS.

1.4 QUALITY ASSURANCE

- A. MANUFACTURER/SOURCE: PROVIDE METAL ROOF PANEL ASSEMBLY AND ACCESSORIES FROM A SINGLE MANUFACTURER PROVIDING FIXED-BASE ROLL FORMING, AND ACCREDITED UNDER IAS AC 472 PART B.
- B. MANUFACTURER QUALIFICATIONS: APPROVED MANUFACTURER LISTED IN THIS SECTION WITH MINIMUM FIVE YEARS EXPERIENCE IN MANUFACTURE OF SIMILAR PRODUCTS IN SUCCESSFUL USE IN SIMILAR APPLICATIONS.
1. APPROVAL OF COMPARABLE PRODUCTS: SUBMIT THE FOLLOWING IN ACCORDANCE WITH PROJECT SUBSTITUTION REQUIREMENTS, WITHIN TIME ALLOWED FOR SUBSTITUTION REVIEW:
 - a. PRODUCT DATA, INCLUDING CERTIFIED INDEPENDENT TEST DATA INDICATING COMPLIANCE WITH REQUIREMENTS.
 - b. SAMPLES OF EACH COMPONENT.
 - c. SAMPLE SUBMITTAL FROM SIMILAR PROJECT.
 - d. SAMPLE WARRANTY.
 2. IAS AC 472 CERTIFICATE
2. APPROVED MANUFACTURERS MUST MEET SEPARATE REQUIREMENTS OF SUBMITTALS ARTICLE.
- C. INSTALLER QUALIFICATIONS: EXPERIENCED INSTALLER WITH MINIMUM OF FIVE YEARS EXPERIENCE WITH SUCCESSFULLY COMPLETED PROJECTS OF A SIMILAR NATURE AND SCOPE.
1. INSTALLER'S FIELD SUPERVISOR: EXPERIENCED MECHANIC, ABLE TO COMMUNICATE WITH OWNER, ARCHITECT, AND INSTALLERS, SUPERVISING WORK ON SITE WHENEVER WORK IS UNDERWAY.

1.5 ACTION SUBMITTALS

- A. PRODUCT DATA: MANUFACTURER'S DATA SHEETS FOR SPECIFIED PRODUCTS.
- B. SHOP DRAWINGS: SHOW LAYOUTS OF METAL PANELS. INCLUDE DETAILS OF EACH CONDITION OF INSTALLATION, PANEL PROFILES, AND ATTACHMENT TO BUILDING. PROVIDE DETAILS OF EDGE CONDITIONS, JOINTS, FASTENER AND SEALANT PLACEMENT, FLASHING, OPENINGS, PENETRATIONS, ROOF ACCESSORIES, LIGHTNING ARRESTING EQUIPMENT, AND SPECIAL DETAILS. MAKE DISTINCTIONS BETWEEN FACTORY AND FIELD ASSEMBLED WORK.
1. INDICATE PORTS OF SUPPORTING STRUCTURE THAT MUST COORDINATE WITH METAL PANEL SYSTEM INSTALLATION.
 2. INCLUDE DATA INDICATING COMPLIANCE WITH PERFORMANCE REQUIREMENTS.
- C. SAMPLES FOR INITIAL SELECTION: FOR EACH EXPOSED PRODUCT SPECIFIED INCLUDING SEALANTS. PROVIDE REPRESENTATIVE COLOR CHARTS OF FULL RANGE OF COLORS.
- D. SAMPLES FOR VERIFICATION: PROVIDE 12-INCH (305 MM) LONG SECTION OF EACH METAL PANEL PROFILE. PROVIDE COLOR CHIP VERIFYING COLOR SELECTION.

1.6 INFORMATIONAL SUBMITTALS

- A. PRODUCT TEST REPORTS: INDICATING COMPLIANCE OF PRODUCTS WITH REQUIREMENTS, WITNESSED BY A PROFESSIONAL ENGINEER.
- B. QUALIFICATION INFORMATION: FOR INSTALLER FIRM AND INSTALLER'S FIELD SUPERVISOR.
- C. IAS ACCREDITATION CERTIFICATE: INDICATING THAT MANUFACTURER IS ACCREDITED UNDER PROVISIONS OF IAS AC 472.
- D. FLORIDA PRODUCT APPROVAL
- E. MANUFACTURER'S WARRANTY: SAMPLE COPY OF MANUFACTURER'S STANDARD WARRANTY.
- 1.7 CLOSEOUT SUBMITTALS
- A. MAINTENANCE DATA.
- B. MANUFACTURER'S WARRANTY: EXECUTED COPY OF MANUFACTURER'S STANDARD WARRANTY.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. PROTECT PRODUCTS OF METAL PANEL SYSTEM DURING SHIPPING, HANDLING, AND STORAGE TO PREVENT STAINING, DETERIORATION OF COMPONENTS OR OTHER DAMAGE. PROTECT PANELS AND TRIM BUNDLES DURING SHIPPING.
1. DELIVER, UNLOAD, STORE, AND ERECT METAL PANEL SYSTEM AND ACCESSORY ITEMS WITHOUT MISSHAPING PANELS OR EXPOSING PANELS TO SURFACE DAMAGE FROM WEATHER OR CONSTRUCTION OPERATIONS.
 2. STORE IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. PROVIDE WOOD COLLARS FOR STACKING AND HANDLING IN THE FIELD.
- 1.9 COORDINATION
- A. COORDINATE SIZES, PROFILES, AND LOCATIONS OF ROOF CURBS AND OTHER ROOF-MOUNTED EQUIPMENT AND ROOF PENETRATIONS, BASED UPON SIZES OF ACTUAL SELECTED EQUIPMENT.
- 1.10 WARRANTY
- A. SPECIAL MANUFACTURER'S WARRANTY: ON MANUFACTURER'S STANDARD FORM, IN WHICH MANUFACTURER AGREES TO REPAIR OR REPLACE METAL PANEL ASSEMBLIES THAT FAIL WITHIN 10 YEARS FROM DATE OF SUBSTANTIAL COMPLETION.

PART 2 - PRODUCTS

- 2.1 MANUFACTURER
- A. BASIS OF DESIGN MANUFACTURER: MRC METAL ROOF AND WALL SYSTEMS, DIVISION OF NCI GROUP, INC., HOUSTON TX, TEL: (877) 713-8224; EMAIL: INFO@MRCBLOG.COM; WEB: WWW.MRCBLOG.COM
1. PROVIDE BASIS OF DESIGN PRODUCT, OR COMPARABLE PRODUCT APPROVED BY ARCHITECT PRIOR TO BID.
- 2.2 PERFORMANCE REQUIREMENTS
- A. GENERAL: PROVIDE METAL ROOF PANEL SYSTEM MEETING PERFORMANCE REQUIREMENTS AS DETERMINED BY APPLICATION OF SPECIFIED TESTS BY A QUALIFIED TESTING FACILITY ON MANUFACTURER'S STANDARD ASSEMBLIES.
- B. THERMAL MOVEMENTS: ALLOW FOR THERMAL MOVEMENTS FROM VARIATIONS IN BOTH AMBIENT AND INTERNAL TEMPERATURES. ACCOMMODATE MOVEMENT OF SUPPORT STRUCTURE CAUSED BY THERMAL EXPANSION AND CONTRACTION. ALLOW FOR DEFLECTION AND DESIGN FOR THERMAL STRESSES CAUSED BY TEMPERATURE DIFFERENCES FROM ONE SIDE OF THE PANEL TO THE OTHER.
- C. STRUCTURAL PERFORMANCE: PROVIDE METAL PANEL ASSEMBLIES CAPABLE OF WITHSTANDING THE EFFECTS OF INDICATED LOADS AND STRESSES WITHIN LIMITS AND UNDER CONDITIONS INDICATED:
1. MINIMUM LOADS: PER THE CRITERIA LISTED IN THE FLORIDA PRODUCT APPROVAL LISTED IN THE COVER SHEET.
- D. FLORIDA STATE BUILDING CODE COMPLIANCE: COMPLY WITH REQUIREMENTS OF FLORIDA STATE BUILDING CODE, WWW.FLORIDABUILDING.ORG/CFRS_APP_BROCHURE
- E. WATER PENETRATION: ASTM E 331: NO UNCONTROLLED WATER PENETRATION AT A STATIC PRESSURE OF 15.24 LBS/SQ. FT. (34 kPa).

- 2.3 METAL PANEL MATERIALS
- A. ALUMINUM-ZINC ALLOY COATED STEEL SHEET: ASTM A 782/A 782M, STRUCTURAL QUALITY, GRADE 50, COATING CLASS AZ55 (GRADE 340), COATING CLASS AZM165 UNPAINTED GALVALUME PLUS COATING.

- 2.4 METAL ROOF PANELS
1. 5V CRIMP
 2. NOMINAL COATED THICKNESS: 0.022 INCH (26 GAGE (0.56 MM))
 3. PANEL SURFACE: SMOOTH
 4. EXTERIOR FINISH: UNPAINTED EXPOSED GALVALUME PLUS COATING.
 5. COLOR: AS INDICATED

- 2.5 METAL ROOF PANEL ACCESSORIES
- A. GENERAL: PROVIDE COMPLETE METAL ROOF PANEL ASSEMBLY INCORPORATING RIDGE, EAVE, RAKE, VALLEY, AND PARAPET TRIMS, COPINGS, FASCIA, GUTTERS AND DOWNSPOUTS, AND MISCELLANEOUS FLASHINGS, IN MANUFACTURER'S STANDARD PROFILES (PROFILES AS INDICATED). PROVIDE REQUIRED FASTENERS, CLOSURE STRIPS, SUPPORT PLATES, AND SEALANTS AS INDICATED IN MANUFACTURER'S WRITTEN INSTRUCTIONS.
- B. FLASHING AND TRIM: MATCH MATERIAL, THICKNESS, AND FINISH OF METAL PANEL FACE SHEET.
- C. PANEL FASTENERS: SELF-TAPPING SCREWS AND OTHER ACCEPTABLE FASTENERS RECOMMENDED BY ROOF PANEL MANUFACTURER.
1. EXPOSED FASTENERS: STAINLESS STEEL FASTENERS WITH EPDM OR NEOPRENE GASKETS, WITH HEADS MATCHING COLOR OF METAL PANELS BY MEANS OF FACTORY-APPLIED COATING.
- D. SELF-ADHERING, HIGH-TEMPERATURE UNDERLAYMENT: SELF-ADHERING, COLD-APPLIED SHEET UNDERLAYMENT AS INDICATED ON THE DRAWINGS.
- E. JOINT SEALERS: MANUFACTURER'S STANDARD OR RECOMMENDED LIQUID AND PREFORMED SEALERS AND TAPES, AND AS FOLLOWS:
1. TAPE SEALERS: MANUFACTURER'S STANDARD NON-CURING BUTYL TAPE, AAMA 800.2.
 2. CONCEALED SEALANTS: NON-CURING BUTYL, AAMA 800.2.
 3. EXPOSED JOINT SEALANTS: URETHANE, SINGLE COMPONENT, ASTM C 920.

- 2.6 FABRICATION
- A. GENERAL: PROVIDE FACTORY FABRICATED AND FINISHED METAL PANELS AND ACCESSORIES MEETING PERFORMANCE REQUIREMENTS, INDICATED PROFILES, AND STRUCTURAL REQUIREMENTS.
- B. PANEL LENGTHS: FORM PANELS IN CONTINUOUS LENGTHS FOR FULL LENGTH OF DETAILED RUNS, EXCEPT WHERE OTHERWISE INDICATED ON APPROVED SHOP DRAWINGS.
- C. PROVIDE FLASHING AND TRIM: FABRICATE FLASHING AND TRIM TO COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS, APPROVED SHOP DRAWINGS, AND PROJECT DRAWINGS. FORM FROM MATERIALS MATCHING METAL PANEL SUBSTRATE AND FINISH.

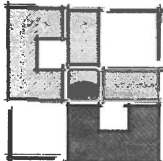
PART 3 - EXECUTION

- 3.1 EXAMINATION
- A. EXAMINE METAL PANEL SYSTEM SUBSTRATE AND SUPPORTS WITH INSTALLER PRESENT. INSPECT FOR ERECTION TOLERANCES AND OTHER CONDITIONS THAT WOULD ADVERSELY AFFECT INSTALLATION OF METAL PANEL INSTALLATION.
1. INSPECT METAL PANEL SUPPORT SUBSTRATE TO DETERMINE IF SUPPORT COMPONENTS ARE INSTALLED AS INDICATED ON APPROVED SHOP DRAWINGS. CONFIRM PRESENCE OF ACCEPTABLE SUPPORTS AT RECOMMENDED SPACING TO MATCH INSTALLATION REQUIREMENTS OF METAL PANELS.
 2. PANEL SUPPORT TOLERANCES: CONFIRM THAT PANEL SUPPORTS ARE WITHIN TOLERANCES ACCEPTABLE TO METAL PANEL SYSTEM MANUFACTURER BUT NOT GREATER THAN THE FOLLOWING:
 - a. 1/4 INCH (6 MM) IN 20 FOOT (6.1 M) IN ANY DIRECTION.
 - b. 3/8 INCH (9 MM) OVER ANY SINGLE ROOF PLANE.
- B. CORRECT OUT-OF-TOLERANCE WORK AND OTHER DEFICIENT CONDITIONS PRIOR TO PROCEEDING WITH METAL ROOF PANEL SYSTEM INSTALLATION.

- 3.2 PREPARATION
- A. MISCELLANEOUS SUPPORTS: INSTALL SUBFRAMING, GIRTS, FURRING, AND OTHER MISCELLANEOUS PANEL SUPPORT MEMBERS ACCORDING TO ASTM C 754 AND MANUFACTURER'S WRITTEN INSTRUCTIONS.
- B. FLASHINGS: INSTALL FLASHINGS TO COVER EXPOSED UNDERLAYMENT PER SECTION 07 82 00 "SHEET METAL FLASHING AND TRIM."

- 3.3 METAL PANEL INSTALLATION
- A. EXPOSED FASTENER METAL ROOF PANELS: INSTALL WEATHERTIGHT METAL PANEL SYSTEM IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS, APPROVED SHOP DRAWINGS, AND PROJECT DRAWINGS. INSTALL METAL ROOF PANELS IN ORIENTATION, SIZES, AND LOCATIONS INDICATED. FREE OF WAVES, WARPS, BUCKLES, FASTENING STRESSES, AND DISTORTIONS. ANCHOR PANELS AND OTHER COMPONENTS SECURELY IN PLACE. PROVIDE FOR THERMAL AND STRUCTURAL MOVEMENT.
- B. CONCEALED SEALANTS: INSTALL MANUFACTURER'S RECOMMENDED TAPE SEALANT AT PANEL SIDE LAPS AND END LAPS.
- C. PANEL FASTENING: ATTACH PANELS TO SUPPORTS USING SCREWS, FASTENERS, AND SEALANTS RECOMMENDED BY MANUFACTURER AND INDICATED ON APPROVED SHOP DRAWINGS.
1. FASTEN METAL PANELS TO SUPPORTS AT EACH LOCATION INDICATED ON APPROVED SHOP DRAWINGS, WITH SPACING AND FASTENERS RECOMMENDED BY MANUFACTURER.
 2. PROVIDE WEATHERPROOF GASKS FOR PIPE AND CONDUIT PENETRATING METAL PANELS OF TYPES RECOMMENDED BY MANUFACTURER.
 3. DISSIMILAR MATERIALS: WHERE ELEMENTS OF METAL PANEL SYSTEM WILL COME INTO CONTACT WITH DISSIMILAR MATERIALS, TREAT FACES AND EDGES IN CONTACT WITH DISSIMILAR MATERIALS AS RECOMMENDED BY MANUFACTURER.

END OF SECTION 07 41 13



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AA-C001654

SPECIFICATIONS

MC COQUINA NORTH
STORAGE BLDG

BRADENTON BEACH, FLORIDA 34217

GULF DRIVE SOUTH

10/01/15

EDITED FOR RE-ISSUE. ROOF INSULATION
DELETED

REVISIONS

NO.	DATE	DESCRIPTION
1	10/01/15	EDITED FOR RE-ISSUE. ROOF INSULATION DELETED

PROJECT NO: 2013-31
DATE: 04/02/15
DRAWN BY: CUJBL
CHKD BY: CUJBL

CARLO AR. UGARTE
LIC. NO. AR-0010725

SHEET

A901

9/29/2015 10:15 AM CAD DWG FILE: A901 - SPECIFICATIONS.DWG

SECTION 07 48 00 - FIBER CEMENT PRODUCTS

PART 1 - GENERAL

- 1.1 SECTION INCLUDES:
- A. FIBER CEMENT SOFFIT PANELS, FASCIA, MOLDINGS AND ACCESSORIES.
- 1.2 SUBMITTALS
- A. PRODUCT DATA: MANUFACTURES DATA SHEETS ON EACH PRODUCT TO BE USED, INCLUDING:
1. PREPARATION INSTRUCTIONS AND RECOMMENDATIONS.
2. STORAGE AND HANDLING REQUIREMENTS AND RECOMMENDATIONS.
3. INSTALLATION METHODS.
- B. SELECTION SAMPLES: FOR EACH FINISH PRODUCT SPECIFIED, TWO COMPLETE SETS 01 COLOR CHIPS REPRESENTING MANUFACTURER'S FULL RANGE OF AVAILABLE COLORS AND PATTERNS.
- C. VERIFICATION SAMPLES: FOR EACH FINISH PRODUCT SPECIFIED, TWO SAMPLES, MINIMUM SIZE 4 BY 6 INCHES (100 BY 150 MM), REPRESENTING ACTUAL PRODUCT, COLOR, AND PATTERNS.
- 1.3 QUALITY ASSURANCE
- A. INSTALLER QUALIFICATIONS: MINIMUM OF 2 YEARS EXPERIENCE WITH INSTALLATION OF SIMILAR PRODUCTS.
- B. MOCK-UP: PROVIDE A MOCK-UP FOR EVALUATION OF SURFACE PREPARATION TECHNIQUES AND APPLICATION WORKMANSHIP.
1. FINISH AREAS DESIGNATED BY ARCHITECT.
2. DO NOT PROCEED WITH REMAINING WORK UNTIL WORKMANSHIP, COLOR, AND SHEEN ARE APPROVED BY ARCHITECT.
3. REFINISH MOCK-UP AREA AS REQUIRED TO PRODUCE ACCEPTABLE WORK.
- 1.4 DELIVERY, STORAGE, AND HANDLING
- A. STORE PRODUCTS IN MANUFACTURES UNOPENED PACKAGING UNTIL READY FOR INSTALLATION.
- B. STORE SIDING ON EDGE OR LAY FLAT ON A SMOOTH LEVEL SURFACE. PROTECT EDGES AND CORNERS FROM CHIPPING. STORE SHEETS UNDER COVER AND KEEP DRY PRIOR TO INSTALLING.
- C. STORE AND DISPOSE OF SOLVENT-BASED MATERIALS, AND MATERIALS USED WITH SOLVENT-BASED MATERIALS, IN ACCORDANCE WITH REQUIREMENTS OF LOCAL AUTHORITIES HAVING JURISDICTION.
- 1.5 PROJECT CONDITIONS
- A. MAINTAIN ENVIRONMENTAL CONDITIONS (TEMPERATURE, HUMIDITY, AND VENTILATION) WITHIN LIMITS RECOMMENDED BY MANUFACTURER FOR OPTIMUM RESULTS. DO NOT INSTALL PRODUCTS UNDER ENVIRONMENTAL CONDITIONS OUTSIDE MANUFACTURES ABSOLUTE LIMITS.
- 1.6 WARRANTY
- A. PRODUCT WARRANTY: LIMITED PRODUCT WARRANTY AGAINST MANUFACTURING DEFECTS.
1. 1. HARDIEPLANK LAP AND HARDIPANEL VERTICAL SIDING FOR 50 YEARS.
2. 2. HARDIETRM FOR 10 YEARS.
- B. FINISH WARRANTY: LIMITED PRODUCT WARRANTY AGAINST MANUFACTURING FINISH DEFECTS.
1. 1. WHEN USED FOR ITS INTENDED PURPOSE, PROPERLY INSTALLED AND MAINTAINED ACCORDING TO HARDIE'S PUBLISHED INSTALLATION INSTRUCTIONS, JAMES HARDIE'S COLORPLUS FINISH WITH COLORPLUS TECHNOLOGY, FOR A PERIOD OF 15 YEARS FROM THE DATE OF PURCHASE, WILL NOT PEEL, WILL NOT CRACK, AND WILL NOT CHIP.
- C. WORKMANSHIP WARRANTY: APPLICATION LIMITED WARRANTY FOR 2 YEARS.

PART 2 - PRODUCTS

- 2.1 MANUFACTURERS
- A. ACCEPTABLE MANUFACTURER: JAMES HARDIE BUILDING PRODUCTS, INC, 20300 LA ALAMEDA, SUITE 250, MISSION VIEJO, CA 92691. ASD. TOLL FREE RESIDENTIAL: (866) J-HARDIE. TOLL FREE COMMERCIAL: (866) 274-3464. TEL: (949) 348-1000. FAX: (949) 367-0165. EMAIL: INFO@JAMESHARDIE.COM. WEB: RESIDENTIAL: HTTP://WWW.JAMESHARDIE.COM. HTTP://WWW.JAMESHARDIECOMMERCIAL.COM.
- 2.2 FINISHES
- A. FACTORY PRIMER: PROVIDE FACTORY APPLIED UNIVERSAL PRIMER.

PART 3 - EXECUTION

- 3.1 EXAMINATION
- A. DO NOT BEGIN INSTALLATION UNTIL SUBSTRATES HAVE BEEN PROPERLY PREPARED.
- B. IF FRAMING PREPARATION IS THE RESPONSIBILITY OF ANOTHER INSTALLER, NOTIFY ARCHITECT OF UNSATISFACTORY PREPARATION BEFORE PROCEEDING.
- C. NOMINAL 2 INCH BY 4 INCH (51 MM BY 102 MM) WOOD FRAMING SELECTED FOR MINIMAL SHRINKAGE AND COMPLYING WITH LOCAL BUILDING CODES. MINIMUM 1-1/2 INCHES (38 MM) FACE AND STRAIGHT, TRUE, OF UNIFORM DIMENSIONS AND PROPERLY ALIGNED.
1. PROTECT SIDING FROM OTHER TRADES.
- 3.2 PREPARATION
- A. CLEAN SURFACES THOROUGHLY PRIOR TO INSTALLATION.
- B. PREPARE SURFACES USING THE METHODS RECOMMENDED BY THE MANUFACTURER FOR ACHIEVING THE BEST RESULT FOR THE SUBSTRATE UNDER THE PROJECT CONDITIONS.

END OF SECTION 07 48 00

SECTION 07920 - JOINT SEALANTS

PART 1 - GENERAL

- 1.1 SUMMARY
- A. SECTION INCLUDES:
1. SILICONE JOINT SEALANTS.
2. LATEX JOINT SEALANTS.
- 1.2 QUALITY ASSURANCE
- A. INSTALLER QUALIFICATIONS: MANUFACTURE'S AUTHORIZED REPRESENTATIVE WHO IS TRAINED AND APPROVED FOR INSTALLATION OF UNITS REQUIRED FOR THIS PROJECT.
- B. SOURCE LIMITATIONS: OBTAIN EACH KIND OF JOINT SEALANT FROM SINGLE SOURCE FROM SINGLE MANUFACTURER.

END OF SECTION 07 92 00

DIVISION 8 - OPENINGS

SECTION 08 11 16 - ALUMINUM FLUSH DOORS AND FRAMES

PART 1 - GENERAL

- 1.1 SECTION INCLUDES
- A. ALUMINUM FLUSH DOORS.
- B. ALUMINUM DOOR FRAMES.
- 1.2 RELATED SECTIONS
- A. SECTION - JOINT SEALERS.
- B. SECTION - DOOR HARDWARE.
- 1.3 REFERENCES
- A. ALUMINUM ASSOCIATION, INC. (AA).
1. AA 5005-H14 - SHEET ARCHITECTURAL.
2. AA 6061-T6 - HEAVY DUTY STRUCTURES.
3. AA 6063-T5 - EXTRUSIONS, PIPE, ARCHITECTURAL.
4. AA DAF-45 - DESIGNATION SYSTEM FOR ALUMINUM FINISHES

- B. AMERICAN ARCHITECTURAL MANUFACTURERS ASSOCIATION (AAMA).
1. AAMA 2605-98 - PIGMENTED ORGANIC COATINGS (POLYURETHANE).
2. AAMA 2605-98 - SUPPLEMENTARY PERFORMANCE ORGANIC COATINGS (POLYURETHANE).
3. AAMA 606 - ANODIZED ARCHITECTURAL FINISHES CLEANING AND MAINTENANCE.
4. AAMA 611-02 - PAINTED ARCHITECTURAL PRODUCTS CLEANING AND MAINTENANCE.
5. AAMA 611-08 - ANODIZED ARCHITECTURAL STANDARDS.
6. AAMA 701 - FILE WEATHER STRIP.
- C. AMERICAN SOCIETY FOR TESTING MATERIALS (ASTM).
1. A 123 - ZINC HOT-DIP GALVANIZED COATINGS.
2. C 728-97 - INSULATION BOARD, MINERAL AGGREGATE.
3. E 330-97EL - STRUCTURAL PERFORMANCE OF EXTERIOR DOORS.
- 1.4 TESTING AND PERFORMANCE REQUIREMENTS
- A. STRUCTURAL TEST UNIT: MINIMUM SIZE OF 3-FEET (91.4 CM) BY 7-FEET (213.36 CM) WITH 24-INCH (60.96 CM) BY 34-INCH (86.36 CM) VISION LIGHT SHALL BE EVALUATED COMPLIANT WITH ASTM E 330 TESTING METHOD.
- B. TEST PROCEDURES AND PERFORMANCES:
1. WITH DOOR CLOSED AND LOCKED, TEST UNIT IN ACCORDANCE WITH ASTM E 330 AT STATIC AIR PRESSURE DIFFERENCE OF 80.0 POUNDS PER SQUARE FOOT (8.83 KPA) POSITIVE PRESSURE AND 90.0 POUNDS PER SQUARE FOOT NEGATIVE PRESSURE WITH 155 MILES (249.5 KM) PER HOUR WIND LOAD.
2. AT CONCLUSION OF TEST THERE SHALL BE NO GLASS BREAKAGE, PERMANENT DAMAGE TO FASTENERS, HARDWARE PARTS, SUPPORT ARMS OR ACTUATING MECHANISM, NOR ANY OTHER DAMAGE THAT WOULD CAUSE THE DOOR TO BE INOPERABLE.

PART 3 - EXECUTION

- 3.1 EXAMINATION
- A. EXAMINE JOINTS INDICATED TO RECEIVE JOINT SEALANTS, WITH INSTALLER PRESENT, FOR COMPLIANCE WITH REQUIREMENTS FOR JOINT CONFIGURATION, INSTALLATION TOLERANCES, AND OTHER CONDITIONS AFFECTING JOINT SEALANT PERFORMANCE.
- B. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.
- 3.2 PREPARATION
- A. SURFACE CLEANING OF JOINTS: CLEAN OUT JOINTS IMMEDIATELY BEFORE INSTALLING JOINT SEALANTS TO COMPLY WITH JOINT SEALANT MANUFACTURER'S WRITTEN INSTRUCTIONS AND THE FOLLOWING REQUIREMENTS:
1. REMOVE ALL FOREIGN MATERIAL FROM JOINT SUBSTRATES THAT COULD INTERFERE WITH ADHESION OF JOINT SEALANT, INCLUDING DIRT, PAINTS (EXCEPT FOR PERMANENT, PROTECTIVE COATINGS TESTED AND APPROVED FOR SEALANT ADHESION AND COMPATIBILITY BY SEALANT MANUFACTURER), OLD JOINT SEALANTS, OIL, GREASE, WATERPROOFING, WATER REPELLENTS, WATER, SURFACE DIRT, AND FROST.
2. CLEAN POREOUS JOINT SUBSTRATES SURFACES BY BRUSHING, GRINDING, MECHANICAL ABRADING, OR A COMBINATION OF THESE METHODS TO PRODUCE A CLEAN, SOUND SUBSTRATE CAPABLE OF DEVELOPING OPTIMUM BOND WITH JOINT SEALANTS. REMOVE LOOSE PARTICLES REMAINING AFTER CLEANING OPERATIONS ABOVE BY VACUUMING OR BLOWING OUT JOINTS WITH OIL-FREE COMPRESSED AIR. POREOUS JOINT SUBSTRATES INCLUDE THE FOLLOWING:
1. UNGLAZED SURFACES OF CERAMIC TILE.
- B. MASKING TAPE: USE MASKING TAPE WHERE REQUIRED TO PREVENT CONTACT OF SEALANT OR PRIMER WITH ADJACENT SURFACES THAT OTHERWISE WOULD BE PERMANENTLY STAINED OR DAMAGED BY SUCH CONTACT OR BY CLEANING METHODS REQUIRED TO REMOVE SEALANT SMEARS. REMOVE TAPE IMMEDIATELY AFTER TOOLING WITHOUT DISTURBING JOINT SEAL.
- 3.3 INSTALLATION OF JOINT SEALANTS
- A. GENERAL: COMPLY WITH JOINT SEALANT MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS FOR PRODUCTS AND APPLICATIONS INDICATED, UNLESS MORE STRINGENT REQUIREMENTS APPLY.
- B. SEALANT INSTALLATION STANDARD: COMPLY WITH RECOMMENDATIONS IN ASTM C 1193 FOR USE OF JOINT SEALANTS AS APPLICABLE TO MATERIALS, APPLICATIONS, AND CONDITIONS INDICATED.
- C. INSTALL SEALANT BACKINGS OF KIND INDICATED TO SUPPORT SEALANTS DURING APPLICATION AND AT POSITION REQUIRED TO PRODUCE CROSS-SECTIONAL SHAPES AND DEPTHS OF INSTALLED SEALANTS RELATIVE TO JOINT WIDTHS THAT ALLOW OPTIMUM SEALANT MOVEMENT CAPABILITY.
1. DO NOT LEAVE GAPS BETWEEN ENDS OF SEALANT BACKINGS.
2. DO NOT STRETCH, TWIST, PUNCTURE, OR TEAR SEALANT BACKINGS.
3. REMOVE ABSORBENT SEALANT BACKINGS THAT HAVE BECOME WET BEFORE SEALANT APPLICATION AND REPLACE THEM WITH DRY MATERIALS.
- D. INSTALL BOND-BREAKER TAPE BEHIND SEALANTS WHERE SEALANT BACKINGS ARE NOT USED BETWEEN SEALANTS AND BACKS OF JOINTS.
- E. INSTALL SEALANTS USING PROVEN TECHNIQUES THAT COMPLY WITH THE FOLLOWING AND AT THE SAME TIME BACKINGS ARE INSTALLED:
1. PLACE SEALANTS SO THEY DIRECTLY CONTACT AND FULLY WET JOINT SUBSTRATES.
2. COMPLETELY FILL RECESSES IN EACH JOINT CONFIGURATION.
- F. TOOLING OF NON-SAG SEALANTS: IMMEDIATELY AFTER SEALANT APPLICATION AND BEFORE SKINNING OR CURING BEGINS, TOOL SEALANTS ACCORDING TO REQUIREMENTS SPECIFIED IN SUBPARAGRAPHS BELOW TO FORM SMOOTH, UNIFORM BEADS OF CONFIGURATION INDICATED; TO ELIMINATE AIR POCKETS; AND TO ENSURE CONTACT AND ADHESION OF SEALANT WITH SIDES OF JOINT
1. REMOVE EXCESS SEALANT FROM SURFACES ADJACENT TO JOINTS.
2. USE TOOLING AGENTS THAT ARE APPROVED IN WRITING BY SEALANT MANUFACTURER AND THAT DO NOT DISCOLOR SEALANTS OR ADJACENT SURFACES.
3. PROVIDE CONCAVE JOINT PROFILE PER FIGURE 8A IN ASTM C 1193, UNLESS OTHERWISE INDICATED.
- a. USE MASKING TAPE TO PROTECT SURFACES ADJACENT TO RECESSED TOOL JOINTS.

- 1.6 QUALITY ASSURANCE
- A. MANUFACTURER QUALIFICATIONS: COMPANY SPECIALIZING IN MANUFACTURING ALUMINUM DOOR AND FRAME SYSTEMS OF THE TYPE REQUIRED FOR THIS PROJECT, WITH MINIMUM TEN CONTINUOUS YEARS DOCUMENTED EXPERIENCE.
- B. PRODUCT QUALIFICATIONS: WIND-LOAD TEST CERTIFICATION CONFORMING TO ASTM E 330 ON SAMPLES OF PREVIOUS PRODUCTS SHALL BE PROVIDED FOR THE TYPE OF DOOR TO BE USED.
- C. INSTALLER QUALIFICATIONS: WORKMEN SKILLED IN HANDLING ALUMINUM DOOR AND FRAME SYSTEMS OF THE TYPE REQUIRED FOR THIS PROJECT.
- D. INSTRUCTION: THE MANUFACTURER OR HIS REPRESENTATIVE WILL BE AVAILABLE FOR CONSULTATION TO ALL PARTIES ENGAGED IN THE PROJECT, INCLUDING INSTRUCTION TO INSTALLATION PERSONNEL.
- 1.7 DELIVERY, STORAGE AND HANDLING
- A. DELIVER DOORS AND FRAMES PALLETED, WRAPPED OR INDIVIDUALLY CRATED. DOORS SHALL BE SIDE PROTECTED WITH SURROUNDING GROOVED 2-INCH (50.8 MM) BY 4-INCH (101.6 MM) WOOD FRAME AND COVERED WITH 275-POUND (124.74 KG) TEST CORRUGATED CARDBOARD.
- B. INSPECT DELIVERED DOORS AND FRAMES FOR DAMAGE, UNLOAD AND STORE WITH MINIMUM HANDLING. REPAIR MINOR DAMAGE IF REFINISHED ITEMS ARE EQUAL IN ALL RESPECTS TO NEW WORK; OTHERWISE, REMOVE DAMAGED ITEMS AND REPLACE WITH NEW.
- C. STORE PRODUCTS OF THIS SECTION UNDER COVER IN MANUFACTURER'S UNOPENED PACKAGING UNTIL INSTALLATION.
1. PLACE UNITS ON MINIMUM 4-INCH (101.6 MM) WOOD BLOCKING.
2. AVOID NON-VENTED PLASTIC OR CANVAS COVERS.
3. REMOVE PACKAGING IMMEDIATELY IF PACKAGING BECOMES WET.
4. PROVIDE 0.25-INCH (6.35 MM) AIR SPACES BETWEEN STACKED DOORS.

- 1.8 PROJECT CONDITIONS
- A. FIELD MEASUREMENTS: TAKE FIELD MEASUREMENTS OF AREAS TO RECEIVE ALUMINUM FRAMES; NOTE DISCREPANCIES ON SUBMITTED SHOP DRAWINGS.
- 1.9 SCHEDULING
- A. ENSURE THAT ALL APPROVALS AND/OR SHOP DRAWINGS ARE SUPPLIED OR RETURNED TO THE MANUFACTURER IN TIME FOR FABRICATION WITHOUT AFFECTING CONSTRUCTION PROGRESS SCHEDULE.
- B. ENSURE THAT TEMPLATES AND/OR ACTUAL HARDWARE REQUESTED BY MANUFACTURER ARE AVAILABLE IN TIME FOR FABRICATION WITHOUT AFFECTING CONSTRUCTION PROGRESS SCHEDULE.

- 1.10 WARRANTY
- A. MANUFACTURER: TEN YEAR WARRANTY AGAINST DEFECTS IN WORKMANSHIP AND MATERIALS, INCLUDING WARPING, ROTTING, DECAYING OR BOWING.
- B. INSTALLER: WARRANTY INSTALLATION PROCEDURES AND PERFORMANCE FOR FIVE YEARS AGAINST DEFECTS DUE TO WORKMANSHIP AND MATERIALS HANDLING.

PART 2 - PRODUCTS

- 2.1 MANUFACTURER'S BASIS OF DESIGN
- A. ACCEPTABLE MANUFACTURER: MODEL - SERIES 1005E
- CUNE ALUMINUM DOORS, INC.
- 112 - 32ND AVENUE WEST, BRADENTON, FLORIDA 34205-4807
- TELEPHONE: (800) 646-6736, (941) 748-4104, FAX: (941) 748-5153
- WEBSITE: WWW.CUNEDOORS.COM, EMAIL: INQUIRE@CUNEDOORS.COM
- OR APPROVED EQUAL.

2.2 COMPONENTS

- A. ALUMINUM MEMBERS: ALLOY AND TEMPER RECOMMENDED BY MANUFACTURER FOR STRENGTH, CORROSION RESISTANCE, AND APPLICATION OF REQUIRED FINISH.
- B. ALUMINUM DOOR COMPONENTS: MINIMUM 5-PLY COMPOSITE LAMINATED CONSTRUCTION TO INCLUDE:
1. FACING: ONE-PIECE 0.040-INCH (1.02 MM) SMOOTH 5005-H14 STRETCHER-LEVELLED ALUMINUM ALLOY.
2. SUBSTRATE: ONE-PIECE OIL-TEMPERED HARDBOARD BACKER.
3. CORE: ORGANIC MATERIALS SHALL BE USED TO FORM A MARINE GRADE HONEYCOMB CORE WITH HIGH COMPRESSION STRENGTH OF 94.8 PSI (ASTM C565), AND INTERNAL ALUMINUM HARDWARE BACKUP TUBE.
4. HARDWARE BACKUP: THE HARDWARE BACKUP TUBE SHALL BE A MINIMUM OF 4-INCHES (101.6 MM) IN WIDTH, 1.375-INCHES (34.93 MM) IN DEPTH WITH A WALL THICKNESS OF 0.0125-INCHES (0.16 MM), CONTIGUOUS FOR THE FULL PERIMETER OF THE DOOR TO ALLOW FOR ALL SPECIFIED AND NON SPECIFIED HARDWARE REINFORCEMENT.
5. HARDWARE PREP: BASIC TO INCLUDE MORTISE LOCK EDGE PREP OR CYLINDRICAL LOCK PREP; AND PARS PREPPED FOR FLUSH BOLTS, IF REQUIRED.
6. BONDING AGENT: ENVIRONMENTALLY FRIENDLY ADHESIVE WITH STRENGTH BUILDUP OF 550 POUNDS PER SQUARE INCH (24.8 KG/CM2).

7. PERIMETER DOOR TRIM: WALL THICKNESS OF 0.050-INCH (1.25 MM) MINIMUM IN 6063-T5 EXTRUDED ALUMINUM ALLOY WITH SPECIAL BEVELED EDGE CAP DESIGN AND INTEGRAL WEATHER STRIPPING ON LOCK STYLE.
8. REPLACEABLE DOOR TRIM: MECHANICALLY FASTENED TO THE HARDWARE BACKUP TUBE, ALLOWING FOR REPLACEMENT IN THE FIELD, IF DAMAGED.
9. TRIM FINISH: TO HAVE MINIMUM OF A CLASS I ANODIZED FINISH.
10. WEATHER STRIPPING: REPLACEABLE WOOL PILE WITH NYLON FABRIC, POLYPROPYLENE BACKING MEETING AAMA 701 STANDARDS, APPLIED WEATHER STRIPPING IS NOT ACCEPTABLE.
11. MATERIALS: ONLY NONFERROUS, NON-RUSTING MEMBERS SHALL BE ACCEPTABLE, INCLUDING TIE RODS, SCREWS AND REINFORCEMENT PLATES.
12. REGULATIONS: ALL COMPONENTS AND AGENTS TO MEET EPA STANDARDS.
- C. GLAZING: NONE
- D. DOOR LOUVERS:
1. BLADES AND FRAMES: 6063-T5 EXTRUDED ALUMINUM ALLOY, 0.082-INCH (1.57 MM) MINIMUM THICKNESS. LOUVER BLADES SHALL BE INVERTED "Y" TYPE.
2. INSECT SCREENS: 14-18 MESH, 0.911-INCH (23.28 MM) DIAMETER ALUMINUM, SET IN 6063-T5 EXTRUDED ALUMINUM ALLOY FRAME, 0.050-INCH (1.25 MM) MINIMUM THICKNESS.
3. LOUVER SHALL HAVE A MINIMUM OF 50-PERCENT FREE AIRFLOW.
- E. ALUMINUM FRAMES:
1. FRAME COMPONENTS: EXTRUDED CHANNEL 6063-T5 ALUMINUM ALLOY, MINIMUM WALL THICKNESS 0.125-INCH (3.18 MM); CUT CORNERS SQUARE AND JOINERY SHALL BE MECHANICAL WITH NO WIND LOAD.
2. PROFILE: OPEN BACK WITH APPLIED 8TOP (OBS), 1.75-INCH BY 5-INCH (44 X127 MM).
3. HINGE AND STRIKE MOUNTING PLATES: EXTRUDED ALUMINUM ALLOY BAR STOCK, 0.1875-INCH (4.76 MM) THICK MOUNTED IN A CONCEALED INTEGRAL CHANNEL WITH NO EXPOSED FASTENERS.
4. REPLACEABLE WEATHER STRIPPING: AAMA 701, WOOL PILE WITH NYLON FABRIC, POLYPROPYLENE BACKING, AT HEAD AND JAMB.
5. DOOR STOP: NO SCREW-ON STOPS ACCEPTABLE.

- 2.3 FINISH (NOTE: RETAIN ONE OR MORE OF THE FOLLOWING PARAGRAPHS TO SPECIFY FINISH.)
- A. FINISH: CLEAR ANODIC COATING, AA-M13C22A51 CLASS II MECHANICAL FINISH, NON-SPECULAR, WITH CHEMICAL MEDIUM-MATTE ETCH, MINIMUM THICKNESS 0.4-MIL (0.01 MM).
1. COLOR: SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE OF AVAILABLE COLORS.
- 2.4 FABRICATION
- A. GENERAL: RECEIVE HARDWARE (IF REQUIRED BY MANUFACTURER).
- B. ALUMINUM FLUSH DOOR CONSTRUCTION: OF TYPE, SIZE AND DESIGN INDICATED.
1. MINIMUM THICKNESS: 1.75-INCHES (44 MM), 5-PLY COMPOSITE LAMINATE SYSTEM.
2. DOOR SIZE: SIZES SHOWN ARE NOMINAL; PROVIDE STANDARD CLEARANCES AS FOLLOWS:
- b. HINGE AND LOCK STILES: 0.125 INCH (3.18 MM).
- c. BETWEEN MEETING STILES: 0.25 INCH (6.35 MM).
- d. AT TOP RAILS: 0.125 INCH (3.18 MM).
- e. BETWEEN DOOR BOTTOM AND THRESHOLD: 0.125 INCH (3.18 MM).

- 2.5 ACCESSORIES
- A. FASTENERS: ALUMINUM, NONMAGNETIC STAINLESS STEEL, OR OTHER MATERIAL WARRANTED BY MANUFACTURER AGAINST CORROSIVE AND COMPATIBLE WITH ALUMINUM COMPONENTS.
1. DO NOT USE EXPOSED FASTENERS.
- B. BRACKETS AND REINFORCEMENTS: MANUFACTURER'S HIGH-STRENGTH ALUMINUM UNITS WHERE FEASIBLE, OTHERWISE, NONFERROUS STAINLESS STEEL.
- C. BITUMINOUS COATING: COLD-APPLIED ASPHALTIC MASTIC, COMPOUNDED FOR 30-MIL (0.76 MM) THICKNESS PER COAT.

PART 3 - EXECUTION

- 3.1 EXAMINATION
- A. VERIFY THAT WALL SURFACES AND OPENINGS ARE READY TO RECEIVE FRAMES AND ARE WITHIN TOLERANCES SPECIFIED IN MANUFACTURER'S INSTRUCTIONS.
- B. VERIFY THAT FRAMES INSTALLED BY OTHER TRADES FOR INSTALLATION OF DOORS OF THIS SECTION ARE IN STRICT ACCORDANCE WITH RECOMMENDATIONS AND APPROVED SHOP DRAWINGS AND WITHIN TOLERANCES SPECIFIED IN MANUFACTURER'S INSTRUCTIONS.
- 3.2 PREPARATION
- A. PERFORM CUTTING, FITTING, FORMING, DRILLING, AND GRINDING OF FRAMES AS REQUIRED FOR PROJECT CONDITIONS. DO NOT DAMAGE SIGHT-EXPOSED FINISHES.
- B. REPAIR DISSIMILAR METALS TO PREVENT ELECTROLYTIC ACTION BETWEEN METALS.
- 3.3 INSTALLATION
- A. INSTALL DOORS AND FRAMES IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND APPROVED SHOP DRAWINGS; SET FRAMES PLUMB, SQUARE, LEVEL, AND ALIGNED TO RECEIVE DOORS.
- B. ANCHOR FRAMES TO ADJACENT CONSTRUCTION IN STRICT ACCORDANCE WITH RECOMMENDATIONS AND APPROVED SHOP DRAWINGS AND WITHIN TOLERANCES SPECIFIED IN MANUFACTURER'S INSTRUCTIONS.
1. SEAL METAL-TO-METAL JOINTS BETWEEN FRAMING MEMBERS USING GOOD QUALITY ELASTOMERIC SEALANT.
- C. WHERE ALUMINUM SURFACES CONTACT WITH METALS OTHER THAN STAINLESS STEEL, ZINC OR SMALL AREAS OF WHITE BRONZE, D PROTECT FROM DIRECT CONTACT BY ONE OR MORE OF THE FOLLOWING METHODS.
1. PAINT DISSIMILAR METAL WITH ONE COAT OF HEAVY-BODIED BITUMINOUS PAINT.
2. APPLY GOOD QUALITY ELASTOMERIC SEALANT BETWEEN ALUMINUM AND DISSIMILAR METAL.
3. PAINT DISSIMILAR METAL WITH ONE COAT OF PRIMER AND ONE COAT OF PAINT RECOMMENDED FOR ALUMINUM SURFACE APPLICATIONS.
4. USE NON-ABSORPTIVE TAPE OR GASKET IN PERMANENTLY DRY LOCATIONS.
- D. HANG DOORS WITH REQUIRED CLEARANCES AS FOLLOWS:
1. HINGE AND LOCK STILES: 0.125 INCH (3.18 MM).
2. BETWEEN MEETING STILES: 0.250 INCH (6.35 MM).
3. AT TOP RAILS: 0.125 INCH (3.18 MM).
4. BETWEEN DOOR BOTTOM AND THRESHOLD: 0.125 INCH (3.18 MM).
- E. ADJUST DOORS AND HARDWARE TO OPERATE PROPERLY.
- F. INSTALLATION OF DOOR HARDWARE IS SPECIFIED IN SECTION 08.
- 3.4 CLEANING
- A. UPON COMPLETION OF INSTALLATION, THOROUGHLY CLEAN DOOR AND FRAME SURFACES IN ACCORDANCE WITH AAMA 606.
- B. DO NOT USE ABRASIVE, CAUSTIC OR ACID CLEANING AGENTS.
- 3.5 PROTECTION
- A. PROTECT PRODUCTS OF THIS SECTION FROM DAMAGE CAUSED BY SUBSEQUENT CONSTRUCTION UNTIL SUBSTANTIAL COMPLETION.
- B. REPAIR DAMAGED OR DEFECTIVE PRODUCTS TO ORIGINAL SPECIFIED CONDITION IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- C. REPLACE DAMAGED OR DEFECTIVE PRODUCTS THAT CANNOT BE REPAIRED TO ARCHITECT'S ACCEPTANCE.

END OF SECTION 08 11 16

10/01/15

RE-ISSUED. NO CHANGES FROM PREVIOUS VERSION

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REVISIONS

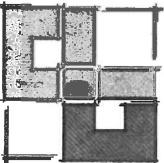
10/01/15

PROJECT NO: 2013-31
DATE: 04/02/15
DRAWN BY: CUJBL
CHK'D BY: CUJDB

CARLOS D. UGARTE
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SHEET

A902



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SPECIFICATIONS

MC COQUINA NORTH
STORAGE BLDG

BRADENTON BEACH, FLORIDA 34217
GULF DRIVE SOUTH

DIVISION 9 - FINISHES

SECTION 09 22 00 - PORTLAND CEMENT PLASTER

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. THIS SECTION INCLUDES THE FOLLOWING:
1. EXTERIOR PORTLAND CEMENT PLASTERWORK (STUCCO) ON SOLID - PLASTER BASES.
- 1.3 DELIVERY, STORAGE, AND HANDLING
- A. STORE MATERIALS INSIDE UNDER COVER AND KEEP THEM DRY AND PROTECTED AGAINST DAMAGE FROM WEATHER, DIRECT SUNLIGHT, SURFACE CONTAMINATION, CORROSION, CONSTRUCTION TRAFFIC, AND OTHER CAUSES.
- 1.4 PROJECT CONDITIONS
- A. COMPLY WITH ASTM C 626 REQUIREMENTS.
- B. EXTERIOR PLASTERWORK:
1. APPLY AND CURE PLASTER TO PREVENT PLASTER DRYING OUT DURING CURING PERIOD, USE PROCEDURES REQUIRED BY CLIMATIC CONDITIONS, INCLUDING MOIST CURING, PROVIDING COVERINGS, AND PROVIDING BARRIERS TO DEFLECT SUNLIGHT AND WIND.
2. APPLY PLASTER WHEN AMBIENT TEMPERATURE IS GREATER THAN 40 DEG F.
3. PROTECT PLASTER COATS FROM FREEZING FOR NOT LESS THAN 48 HOURS AFTER SET OF PLASTER COAT HAS OCCURRED.

PART 2 - PRODUCTS

- 2.1 METAL LATH
- A. EXPANDED-METAL LATH: ASTM C 847 WITH ASTM A 653/A 653M, G60, HOT-DIP GALVANIZED ZINC COATING.
1. DIAMOND-MESH LATH: FLAT.
- a. WEIGHT: 2.5 LB/SQ. YD.
- 2.2 ACCESSORIES
- A. GENERAL: COMPLY WITH ASTM C 1083 AND COORDINATE DEPTH OF TRIM AND ACCESSORIES WITH THICKNESSES AND NUMBER OF PLASTER COATS REQUIRED.
- 2.3 MISCELLANEOUS MATERIALS
- A. WATER FOR MIXING: POTABLE AND FREE OF SUBSTANCES CAPABLE OF AFFECTING PLASTER SET OR DAMAGING PLASTER, LATH, OR ACCESSORIES.
- B. FIBER FOR BASE COAT: ALKALINE-RESISTANT GLASS OR POLYPROPYLENE FIBERS, 1/2 INCH LONG, FREE OF CONTAMINANTS, MANUFACTURED FOR USE IN PORTLAND CEMENT PLASTER.
- C. BONDING COMPOUND: ASTM C 892.
- D. STEEL DRILL SCREWS: FOR METAL-TO-METAL FASTENING, ASTM C 1002 OR ASTM C 854, AS REQUIRED BY THICKNESS OF METAL BEING FASTENED; WITH PAN HEAD THAT IS SUITABLE FOR APPLICATION; IN LENGTHS REQUIRED TO ACHIEVE PENETRATION THROUGH JOINED MATERIALS OF NOT FEWER THAN THREE EXPOSED THREADS.
- E. FASTENERS FOR ATTACHING METAL LATH TO SUBSTRATES: COMPLYING WITH ASTM C 1083.
- 2.4 PLASTER MATERIALS
- A. PORTLAND CEMENT: ASTM C 150, TYPE I OR II.
1. COLOR FOR FINISH COATS: WHITE.
- B. LIME: ASTM C 206, TYPE S; OR ASTM C 207, TYPE S.
- C. SAND AGGREGATE: ASTM C 697.
1. COLOR FOR JOB-MIXED FINISH COATS: WHITE.

2.5 PLASTER MIXES

- A. GENERAL: COMPLY WITH ASTM C 926 FOR APPLICATIONS INDICATED.
1. FIBER CONTENT: ADD FIBER TO BASE-COAT MIXES AFTER INGREDIENTS HAVE MIXED AT LEAST TWO MINUTES. COMPLY WITH FIBER MANUFACTURERS WRITTEN INSTRUCTIONS FOR FIBER QUANTITIES IN MIXES, BUT DO NOT EXCEED 1 LB. OF FIBER/CU. FT. OF CEMENTITIOUS MATERIALS. REDUCE AGGREGATE QUANTITIES ACCORDINGLY TO MAINTAIN WORKABILITY.
- B. BASE-COAT MIXES FOR USE OVER MONOLITHIC CONCRETE: SINGLE BASE COATS FOR TWO-COAT PLASTERWORK AS FOLLOWS:
1. PORTLAND CEMENT MIX: FOR CEMENTITIOUS MATERIAL, MIX 1 PART PORTLAND CEMENT AND 9 TO 3/4 PART LIME. USE 2-1/2 TO 4 PARTS AGGREGATE PER PART OF CEMENTITIOUS MATERIAL (SUM OF SEPARATE VOLUMES OF EACH COMPONENT MATERIAL).
- C. JOB-MIXED FINISH-COAT MIXES:
1. PORTLAND CEMENT MIX: FOR CEMENTITIOUS MATERIALS, MIX 1 PART PORTLAND CEMENT AND 3/4 TO 1-1/2 PARTS LIME. USE 1-1/2 TO 3 PARTS AGGREGATE PER PART OF CEMENTITIOUS MATERIAL (SUM OF SEPARATE VOLUMES OF EACH COMPONENT MATERIAL).
- D. MODIFIED CEMENT PLASTER SHALL BE EQUAL TO STUCCO SHELD AND REINFORCING MESH.

PART 3 - EXECUTION

- 3.1 EXAMINATION
- A. EXAMINE AREAS AND SUBSTRATES, WITH INSTALLER PRESENT, AND INCLUDING WELDED HOLLOWMETAL FRAMES, CAST-IN ANCHORS, AND STRUCTURAL FRAMING, FOR COMPLIANCE WITH REQUIREMENTS AND OTHER CONDITIONS AFFECTING PERFORMANCE.
1. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.
- 3.2 PREPARATION
- A. PROTECT ADJACENT WORK FROM SOILING, SPATTERING, MOISTURE DETERIORATION, AND OTHER HARMFUL EFFECTS CAUSED BY PLASTERING.
- B. PREPARE SOLID-PLASTER BASES THAT ARE SMOOTH OR THAT DO NOT HAVE THE SUCTION CAPABILITY REQUIRED TO BOND WITH PLASTER, ACCORDING TO ASTM C 926.
- C. COORDINATION WITH SPRAYED FIRE-RESISTIVE MATERIALS:
1. BEFORE SPRAYED FIRE-RESISTIVE MATERIALS ARE APPLIED, ATTACH OFFSET ANCHOR PLATES OR CEILING RUNNERS (TRACKS) TO SURFACES INDICATED TO RECEIVE SPRAYED FIRE-RESISTIVE MATERIALS, WHERE OFFSET ANCHOR PLATES ARE REQUIRED. PROVIDE CONTINUOUS PLATES FASTENED TO BUILDING STRUCTURE NOT MORE THAN 24 INCHES O.C.
- 3.3 INSTALLING METAL LATH
- A. EXPANDED-METAL LATH: INSTALL ACCORDING TO ASTM C 1083.
1. ON SOLID SURFACES, NOT OTHERWISE FURRED: INSTALL SELF-FURRING DIAMOND-MESH LATH.
- 3.4 INSTALLING ACCESSORIES
- A. INSTALL ACCORDING TO ASTM C 1083 AND AT LOCATIONS INDICATED ON DRAWINGS.
- 3.5 PLASTER APPLICATION
- A. GENERAL: COMPLY WITH ASTM C 626.
- 3.6 CUTTING AND PATCHING
- A. CUT, PATCH, REPLACE, AND REPAIR PLASTER AS NECESSARY TO ACCOMMODATE OTHER WORK AND TO RESTORE CRACKS, DENTS, AND IMPERFECTIONS. REPAIR OR REPLACE WORK TO ELIMINATE BUSTERS, BUCKLES, CRAZING AND CHECK CRACKING, DRY OUTS, EFFLORESCENCE, SWEAT CUTS, AND SIMILAR DEFECTS AND WHERE BOND TO SUBSTRATE HAS FAILED.
- 3.7 CLEANING AND PROTECTION
- A. REMOVE TEMPORARY PROTECTION AND ENCLOSURE OF OTHER WORK. PROMPTLY REMOVE PLASTER FROM DOORFRAMES, WINDOWS, AND OTHER SURFACES NOT INDICATED TO BE PLASTERED. REPAIR FLOORS, WALLS, AND OTHER SURFACES STAINED, MARRED, OR OTHERWISE DAMAGED DURING PLASTERING.

END OF SECTION 09 22 00

SECTION 09 91 00 - PAINTING

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. THIS SECTION INCLUDES SURFACE PREPARATION AND THE APPLICATION OF PAINT SYSTEMS ON THE FOLLOWING SUBSTRATES:
1. CONCRETE/STUCCO
2. HARD/BOARD (CEMENTITIOUS SIDING, TRIM, AND SOFFIT).

PART 2 - PRODUCTS

- 2.1 MANUFACTURERS
- A. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:
1. BENJAMIN MOORE & CO.
2. SHERWIN WILLIAMS COMPANY (THE).
3. COLOR WHEEL.
- 2.2 PAINT, GENERAL
- A. MATERIAL COMPATIBILITY:
1. PROVIDE MATERIALS FOR USE WITHIN EACH PAINT SYSTEM THAT ARE COMPATIBLE WITH ONE ANOTHER AND SUBSTRATES INDICATED, UNDER CONDITIONS OF SERVICE AND APPLICATION AS DEMONSTRATED BY MANUFACTURER, BASED ON TESTING AND FIELD EXPERIENCE.
2. FOR EACH COAT IN A PAINT SYSTEM, PROVIDE PRODUCTS RECOMMENDED IN WRITING BY MANUFACTURERS OF TOPCOAT FOR USE IN PAINT SYSTEM AND ON SUBSTRATE INDICATED.
- B. COLORS: SHOWN ON DRAWINGS. INTENT IS TO MATCH COLORS TO THE EXISTING "MARINE RESCUE" BUILDING ADJACENT.
- 2.3 PRIMERS/SEALERS
- A. INTERIOR / EXTERIOR LATEX PRIMER/SEALER: FRESH START LATEX PRIMER 023 (5.8 MILS WET, 1.1 MILS DRY)
- 2.4 INTERIOR PAINTS (WALLS AND CEILING)
- A. SEMI-GLOSS FINISH
1. 1ST COAT: MOORE'S FRESH START 023 ACRYLIC PRIMER
2. 2ND COAT MOORECRAFT SUPER SPEC ACRYLIC EPOXY COATING 256 (4 MILS WET, 1.5 MILS DRY PER COAT)
- 2.5 EXTERIOR CONCRETE OR STUCCO (WALLS AND EAVES)
- A. MATTE FINISH
1. 1ST COAT: MOORE'S FRESH START 023 ACRYLIC PRIMER
2. 2ND COAT MOORE'S SUPER SPEC HP ALIPHATIC ACRYLIC URETHANE GLOSS P74 (2.8 MILS WET, 2 MILS DRY PER COAT)
- 2.5 CONCRETE FLOORING
- A. CLEAR FINISH
1. 1ST COAT: MOORE'S SUPER SPEC HP FAST DRY EPOXY FLOOR SEALER/FINISH P41 (4.6 MILS WET, 1.5 MILS DRY PER COAT)
2. AGGREGATE: MOORE'S ASUPER SPEC HP ANTI-SLIP AGGREGATE P67

PART 3 - EXECUTION

- 3.1 EXAMINATION
- A. EXAMINE SUBSTRATES AND CONDITIONS, WITH APPLICATOR PRESENT, FOR COMPLIANCE WITH REQUIREMENTS FOR MAXIMUM MOISTURE CONTENT AND OTHER CONDITIONS AFFECTING PERFORMANCE OF WORK.
- B. VERIFY SUITABILITY OF SUBSTRATES, INCLUDING SURFACE CONDITIONS AND COMPATIBILITY WITH EXISTING FINISHES AND PRIMERS.
- C. BEGIN COATING APPLICATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED AND SURFACES ARE DRY.
1. BEGINNING COATING APPLICATION CONSTITUTES CONTRACTORS ACCEPTANCE OF SUBSTRATES AND CONDITIONS.
- 3.2 PREPARATION
- A. COMPLY WITH MANUFACTURERS WRITTEN INSTRUCTIONS AND RECOMMENDATIONS IN "MPI: ARCHITECTURAL PAINTING SPECIFICATION MANUAL" APPLICABLE TO SUBSTRATES INDICATED.
- B. REMOVE PLATES, MACHINED SURFACES, AND SIMILAR ITEMS ALREADY IN PLACE THAT ARE NOT TO BE PAINTED. IF REMOVAL IS IMPRACTICAL OR IMPOSSIBLE BECAUSE OF SIZE OR WEIGHT OF ITEM, PROVIDE SURFACE-APPLIED PROTECTION BEFORE SURFACE PREPARATION AND PAINTING.
1. AFTER COMPLETING PAINTING OPERATIONS, USE WORKERS SKILLED IN THE TRADES INVOLVED TO REINSTALL ITEMS THAT WERE REMOVED. REMOVE SURFACE-APPLIED PROTECTION IF ANY.
2. DO NOT PAINT OVER LABELS OF INDEPENDENT TESTING AGENCIES OR EQUIPMENT NAME, IDENTIFICATION, PERFORMANCE RATING, OR NOMENCLATURE PLATES.
- C. CLEAN SUBSTRATES OF SUBSTANCES THAT COULD IMPAIR BOND OF PANELS, INCLUDING DIRT, OIL, GREASE, AND INCOMPATIBLE PAINTS.
1. REMOVE INCOMPATIBLE PRIMERS AND RE-PRIME SUBSTRATE WITH COMPATIBLE PRIMERS AS REQUIRED TO PRODUCE PAINT SYSTEMS INDICATED.
- D. MASONRY SUBSTRATES:
1. CONCRETE AND MASONRY SUBSTRATES SHOULD BE CLEAN, DRY AND FREE OF OIL, GREASE, FORM RELEASE AGENTS AND CURING COMPOUNDS.
2. NEW CONCRETE AND MASONRY MUST BE ALLOWED TO CURE 28 DAYS.
3. PRIME ALL EXPOSED EDGES OF MASONRY.

3.3 APPLICATION

- A. APPLY PAINTS ACCORDING TO MANUFACTURERS WRITTEN INSTRUCTIONS.
1. USE APPLICATORS AND TECHNIQUES SUITED FOR PAINT AND SUBSTRATE INDICATED.
2. PAINT SURFACES BEHIND MOVABLE EQUIPMENT AND FURNITURE SAME AS SIMILAR EXPOSED SURFACES. BEFORE FINAL INSTALLATION, PAINT SURFACES BEHIND PERMANENTLY FIXED EQUIPMENT OR FURNITURE WITH PRIME COAT ONLY.
- B. TINT EACH UNDERCOAT A LIGHTER SHADE TO FACILITATE IDENTIFICATION OF EACH COAT IF MULTIPLE COATS OF SAME MATERIAL ARE TO BE APPLIED. TINT UNDERCOATS TO MATCH COLOR OF TOPCOAT, BUT PROVIDE SUFFICIENT DIFFERENCE IN SHADE OF UNDERCOATS TO DISTINGUISH EACH SEPARATE COAT.
- C. IF UNDERCOATS OR OTHER CONDITIONS SHOW THROUGH TOPCOAT, APPLY ADDITIONAL COATS UNTIL CURED FILM HAS A UNIFORM PAINT FINISH, COLOR, AND APPEARANCE.
- D. APPLY PAINTS TO PRODUCE SURFACE FILMS WITHOUT CLOUDINESS, SPOTTING, HOLIDAYS, LAPS, BRUSH MARKS, ROLLER TRACKING, RUNS, SAGS, ROPIENESS, OR OTHER SURFACE IMPERFECTIONS. CUT IN SHARP LINES AND COLOR BREAKS.

3.4 CLEANING AND PROTECTION

- A. AT END OF EACH WORKDAY, REMOVE RUBBISH, EMPTY CANS, RAGS, AND OTHER DISCARDED MATERIALS FROM PROJECT SITE.
- B. AFTER COMPLETING PAINT APPLICATION, CLEAN SPATTERED SURFACES. REMOVE SPATTERED PAINTS BY WASHING, SCRAPING, OR OTHER METHODS. DO NOT SCRATCH OR DAMAGE ADJACENT FINISHED SURFACES.
- C. PROTECT WORK OF OTHER TRADES AGAINST DAMAGE FROM PAINT APPLICATION. CORRECT DAMAGE TO WORK OF OTHER TRADES BY CLEANING, REPAIRING, REPLACING, AND REFINISHING, AS APPROVED BY ARCHITECT, AND LEAVE IN AN UNDAMAGED CONDITION.
- D. AT COMPLETION OF CONSTRUCTION ACTIVITIES OF OTHER TRADES, TOUCH UP AND RESTORE DAMAGED OR DEFACED PAINTED SURFACES.

3.5 INTERIOR PAINTING SCHEDULE

- A. MASONRY SUBSTRATES: INCLUDING HARDI CEILINGS.
1. EPOXY SYSTEM
- a. PRIME COAT: ACRYLIC-BASED PRIMER.
- b. TOPCOAT ACRYLIC EPOXY COATING (SEMI-GLOSS).

B. CONCRETE SUBSTRATES (FLOORING):

1. EPOXY SYSTEM:
- a. PRIME COAT: EPOXY SEALER.
- b. TOPCOAT EPOXY SEALER WITH NON SLIP AGGREGATE.

3.8 EXTERIOR SYSTEMS

A. MASONRY: INCLUDING HARDI CEILINGS

1. ACRYLIC / URETHANE SYSTEM:
- a. PRIME COAT: ACRYLIC-BASED PRIMER.
- b. TOPCOAT ACRYLIC URETHANE (GLOSS).

END OF SECTION 09 91 00

DIVISION 10 - SPECIALTIES

BY OTHERS

DIVISION 11 - EQUIPMENT

BY OTHERS

DIVISION 12 - FURNISHINGS

BY OTHERS

DIVISION 22 - PLUMBING

SEE "P" SHEETS

DIVISION 23 - HEATING, VENTILATION AND AIR CONDITIONING

SEE "M" SHEETS

DIVISION 26 - ELECTRICAL

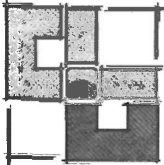
SEE "E" SHEETS

DIVISION 31 - BUILDING FATHWORK

SEE STRUCTURAL DRAWINGS

10/01/15

RE-ISSUED. EDITED TO REMOVE BATH ACCESSORIES



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SPECIFICATIONS

MC COQUINA NORTH
STORAGE BLDG

GULF DRIVE SOUTH BRADENTON BEACH, FLORIDA 34217

REVISIONS

10/01/15

PROJECT NO: 2013-31
DATE: 04/02/15
DRAWN BY: CUI/BL
CHK'D BY: CUI/DB

CARLOS D. UGARTE
LIC. NO. AR-0010725

SHEET

A903

9/29/2015 10:15 AM CAD DWG FILE: A903 SPECIFICATIONS.DWG

GENERAL NOTES:

STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH JOB SPECIFICATIONS AND ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND SITE DRAWINGS. CONSULT THESE DRAWINGS FOR SLEEVES, DEPRESSIONS, AND OTHER DETAILS NOT SHOWN ON STRUCTURAL DRAWINGS.

ALL DIMENSIONS AND CONDITIONS MUST BE VERIFIED IN THE FIELD. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK.

THE STRUCTURE IS DESIGNED TO BE SELF SUPPORTING AND STABLE AFTER THE BUILDING IS COMPLETE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCE TO INSURE SAFETY OF THE BUILDING AND ITS COMPONENTS DURING ERECTION. THIS INCLUDES THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACING, GUTS OR TIEDOWNS.

DESIGN LOADS:

THE STRUCTURAL SYSTEM FOR THIS BUILDING HAS BEEN DESIGNED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE, 2010 EDITION (FBC2010). THE FOLLOWING SUPERIMPOSED LOADINGS HAVE BEEN UTILIZED:

ROOF:	LIVE LOAD	-	20 psf.
	DEAD LOAD	-	25 psf.
WIND:	DEAD LOAD	-	6 psf. (AVAILABLE TO RESIST UPLIFT)
	ASCE 7-10		
WIND:	ULTIMATE WIND SPEED	-	150 mph
	ALLOWABLE WIND SPEED	-	118 mph
EXPOSURE D	ENCLOSED STRUCTURE		
	RISK FACTOR II		

SHOP DRAWING REVIEW:

SHOP DRAWINGS WILL BE REVIEWED FOR GENERAL COMPLIANCE WITH THE DESIGN INTENT OF THE CONTRACT DOCUMENTS ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY COMPLIANCE WITH THE CONTRACT DOCUMENTS AS TO QUANTITY, LENGTH, ELEVATIONS, DIMENSIONS, ETC.

ALL SHOP DRAWINGS SHALL BE REVIEWED BY THE CONTRACTOR PRIOR TO SUBMITTAL TO THE ARCHITECT/ENGINEER. DRAWINGS SUBMITTED WITHOUT REVIEW NOTATION WILL BE RETURNED UNCHECKED.

ONE SET OF PRINTS WILL BE RETAINED BY THE ENGINEER AND ONE BY THE ARCHITECT. THE CONTRACTOR SHALL RECEIVE THE REMAINING PRINTS FOR SUBMITTAL TO THE BUILDING DEPARTMENT AND AS REQUIRED FOR DISTRIBUTION.

IN ALL INSTANCES THE CONTRACT DOCUMENTS WILL GOVERN OVER THE SHOP DRAWINGS UNLESS OTHERWISE SPECIFIED IN A REQUEST FOR INFORMATION (RFI) OR SIMILAR DOCUMENTATION BY THE ENGINEER.

SHOP DRAWINGS SHOULD BE SUBMITTED FOR ALL COMPONENTS OF THE STRUCTURAL FRAMING SYSTEM, AS REQUIRED BY THE ARCHITECT, AND AS NOTED ELSEWHERE IN THESE NOTES, INCLUDING, BUT NOT LIMITED TO:

CONCRETE MIX DESIGNS
MASONRY BLOCK
MASONRY BLOCK ACCESSORIES
MASONRY REINFORCING
CONCRETE REINFORCING
PRE-ENGINEERED WOOD TRUSSES
PRECAST DRIVEN PILE LAYOUT AND DETAILS
PRECAST CONCRETE COMPONENTS
ANY ALTERNATE MATERIAL/PRODUCT SUBSTITUTIONS

FOUNDATIONS:

SEE THE FOLLOWING REPORT FOR COMPLETE GEOTECHNICAL RECOMMENDATIONS AND INSTALLATION PROCEDURES: SITE PREPARATION AND FOUNDATION INSTALLATION SHALL COMPLY WITH REPORT NO. 11-17419 DATED: February 12, 2014 PREPARED BY: ARDMAN & ASSOCIATES, INC. TITLED: GEOTECHNICAL EXPLORATION FOR NORTH COQUINA BOAT RAMP GULF DRIVE, BRADENTON BEACH, MANATEE COUNTY, FL

FOUNDATION DESIGN IS BASED ON A SOLE BEARING PRESSURE OF 2,000 psf.

PRESTRESSED CONCRETE PILES:

SHALL BE MANUFACTURED WITH A MIX DESIGNED BY A RECOGNIZED TESTING LABORATORY TO ATTAIN A STRENGTH OF 5,000 psi AT DRIVING. CONCRETE SHALL ATTAIN A STRENGTH OF 3,000 psi MINIMUM BEFORE STRANDS ARE RELEASED. THE USE OF HIGH EARLY CEMENT OR ADDITIVES SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND EVALUATION PRIOR TO FABRICATION. STRANDS SHALL COMPLY WITH ASTM A 416. PROVISIONS SHALL BE MADE TO TEST ONE STRAND SPECIMEN FROM EACH ROLL OF STRAND USED. THE TEST SHALL BE MADE BY AN APPROVED TESTING LABORATORY WHICH SHALL INSPECT TENSIONING AND PLACEMENT OF STRANDS, PLACEMENT OF SPIRAL, PLACEMENT OF CONCRETE, MARKING OF TEST CYLINDERS AND SHALL INSCRIBE THEIR MARK AND DATE AFTER CONCRETE HAS TAKEN ITS INITIAL SET. TESTING LABORATORY SHALL STAMP PILING WITH THEIR MARK WHEN LOADED OUT AT THE CASTING YARD ASSERTING THAT THE PILING HAVE ATTAINED DRIVING STRENGTH. ALL PILING SHALL BE DRIVEN OR JETTED AND DRIVEN TO A SAFE BEARING CAPACITY OF 32 TONS IN COMPRESSION AND 4 TONS IN TENSION FOR 12"x12" PILES USING AN APPROPRIATE DRIVING FORMULA.

PRICE OF PILING SHALL INCLUDE COST OF RETAPPING. PILES TO BE CUT OFF SQUARE AT PROPER ELEVATIONS ALLOWING A MINIMUM OF 18" OF PILE STEEL TO PROJECT INTO GRADE BEAMS AND/OR PILE CAPS.

*PILE TESTING: LOAD TESTS SHALL BE MADE ON THE PILING IN PLACE, IF REQUIRED BY THE LOCAL BUILDING DEPARTMENT OR THE GEOTECHNICAL ENGINEER. LOAD TESTED PILES MAY BE USED AS PRODUCTION PILES IF APPROVED BY THE GEOTECHNICAL ENGINEER. THE CRITERIA AS SET FORTH IN THE STANDARD BUILDING CODE SHALL BE USED TO ESTABLISH ACCEPTABILITY OF TESTED PILES. LOAD TESTING APPARATUS AND PROCEDURE SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO THE BEGINNING OF THE TEST. LOCATION OF THE LOAD TEST SHALL BE AT THE DISCRETION OF THE ENGINEER. VERIFICATION THAT THE LOAD TEST REQUIREMENTS HAVE BEEN MET SHALL BE MADE BY AN INDEPENDENT GEOTECHNICAL CONSULTANT EMPLOYED BY THE OWNER AND APPROVED BY THE ENGINEER.

AN AS-BUILT SURVEY OF PILE LOCATIONS SHALL BE PERFORMED BY A FLORIDA REGISTERED LAND SURVEYOR. PILES SHALL BE LOCATED ON THE AS-BUILT DRAWINGS HORIZONTALLY AND VERTICALLY FROM THE COLUMN CENTERLINES AND BE SUBMITTED IN AUTOCAD "DWG" FORMAT. SUBMIT THE AS-BUILT DRAWINGS TO THE STRUCTURAL ENGINEER FOR APPROVAL.

PRECAST CONCRETE PILES: TO BE REINFORCED CONCRETE POURED UNDER THE CONTROL OF AN APPROVED TESTING LABORATORY ACHIEVING A STRENGTH OF 3,000 psi AT DRIVING. 10x10 PILES SHALL HAVE 4# VERTICAL. SPACE #2 TIES @ 18" C/C EXCEPT AT THE TIP AND BUTT END WHERE #2 TIES SHALL BE SPACED AT 24" C/C. PILES TO BE CUT OFF SQUARE AT PROPER ELEVATIONS ALLOWING A MINIMUM OF 18" OF PILE REINFORCING TO PROJECT INTO THE PILE CAPS AND/OR GRADE BEAMS.

FORMWORK AND SHORING:

NO STRUCTURAL CONCRETE SHALL BE STRIPPED UNTIL IT HAS REACHED AT LEAST TWO-THIRDS OF THE 28 DAY DESIGN STRENGTH. DESIGN, ERECTION AND REMOVAL OF ALL FORMWORK, SHORES AND RESHORES SHALL MEET THE REQUIREMENTS SET FORTH IN ACI STANDARDS 307 AND 309.

PLUMBING SLEEVES:

MINIMUM SLEEVE SPACING SHALL BE THREE DIAMETERS CENTER TO CENTER OF THE LARGER SLEEVE OR 8" CLEAR BETWEEN SLEEVES, WHICHEVER IS GREATER. PRIOR TO CONSTRUCTION SLEEVE LOCATIONS AND SIZES SHALL BE APPROVED BY THE ENGINEER.

REINFORCING STEEL:

SHALL BE ASTM A615 GRADE 60 DEFORMED BARS, FREE FROM OIL, SCALE AND RUST AND PLACED IN ACCORDANCE WITH THE TYPICAL BENDING DIAGRAM AND PLACING DETAILS OF ACI STANDARDS AND SPECIFICATIONS. SECURE APPROVAL OF SHOP DRAWINGS PRIOR TO COMMENCING FABRICATION.

WELDED WIRE FABRIC:

TO CONFORM TO ASTM A 185, FREE FROM OIL, SCALE AND RUST AND PLACED IN ACCORDANCE WITH THE TYPICAL PLACING DETAILS OF ACI STANDARDS AND SPECIFICATIONS. MINIMUM LAP SHALL BE ONE SPACE PLUS TWO INCHES.

CONCRETE:

SHALL BE PER AN APPROVED MIX DESIGN PROPORTIONED TO ACHIEVE A STRENGTH AT 28 DAYS AS LISTED BELOW WITH A PLASTIC AND WORKABLE MIX:

3000 psi FOR FOUNDATIONS AND SLABS ON GRADE.
4000 psi FOR ALL OTHER STRUCTURAL CONCRETE.

CONCRETE SHALL BE PLACED AND CURED ACCORDING TO ALL STANDARDS AND SPECIFICATIONS.

SUBMIT PROPOSED MIX DESIGN WITH RECENT FIELD CYLINDER OR LAB TESTS FOR REVIEW PRIOR TO USE. MIX SHALL BE UNIQUELY IDENTIFIED BY MIX NUMBER OR OTHER POSITIVE IDENTIFICATION. MIX SHALL MEET THE REQUIREMENTS OF ASTM C89 FOR COARSE AGGREGATE. FOR ALL FLOWABLE, AT LEAST 75% OF LARGE AGGREGATE SHALL CONSIST OF 89 STONE. CONCRETE SHALL COMPLY WITH ALL THE REQUIREMENTS OF ASTM STANDARD C84 FOR MEASURING, MIXING, TRANSPORTING, ETC. CONCRETE TICKETS SHALL BE TIME STAMPED WHEN CONCRETE IS BATCHED.

THE MAXIMUM TIME ALLOWED FROM THE TIME THE MIXING WATER IS ADDED UNTIL IT IS DEPOSITED IN ITS FINAL POSITION SHALL NOT EXCEED ONE AND ONE HALF (1 1/2) HOURS. IF FOR ANY REASON THERE IS A LONGER DELAY THAN THAT STATED ABOVE, THE CONCRETE SHALL BE DISCARDED. IT SHALL BE THE RESPONSIBILITY OF THE TESTING LAB TO NOTIFY THE OWNER'S REPRESENTATIVE AND THE CONTRACTOR OF ANY NONCOMPLIANCE WITH THE ABOVE. ALL SLABS SHALL BE CURED USING A DESSIPATING CURING COMPOUND MEETING ASTM STANDARD C309 TYPE 1-D AND SHALL HAVE A FUGITIVE DYE. THE COMPOUND SHALL BE PLACED AS SOON AS THE FINISHING IS COMPLETED OR AS SOON AS THE WATER HAS LEFT THE UNFINISHED CONCRETE. ALL SCUFFED OR BROKEN AREAS IN THE CURING MEMBRANE SHALL BE RECOATED DAILY. CALCIUM CHLORIDES SHALL NOT BE UTILIZED; OTHER ADMIXTURES MAY BE USED ONLY WITH THE APPROVAL OF THE ENGINEER.

ALL CONCRETE MIX DESIGNS SHALL INCLUDE A WRITTEN DESCRIPTION INDICATING WHERE EACH PARTICULAR MIX IS TO BE PLACED WITHIN THE STRUCTURE.

ALL CONCRETE DESIGN MIX SUBMITTALS SHALL INCLUDE TESTED, STATISTICAL BACK-UP DATA AS PER CHAPTER 5 OF ACI 318.05.

UNLESS NOTED OTHERWISE ON PLANS, THE FOLLOWING CONCRETE CLEAR COVER SHALL BE PROVIDED FOR ALL NON-PRESTRESSED CONCRETE REINFORCEMENT PER ACI 318:

CONCRETE CAST AGAINST EARTH:	ALL BARS	-	3"
CONCRETE EXPOSED TO WEATHER (FORM FACE):	ALL BARS	-	2"
CONCRETE EXPOSED TO EARTH:	2# BARS AND GREATER	-	2"
	#5 BARS AND SMALLER	-	1 1/2"
WHERE NOT EXPOSED TO EARTH OR WEATHER:	#14 & #18 BARS	-	1 1/2"
SLABS, WALLS, AND JOISTS:	#11 BARS AND SMALLER	-	3/4"
BEAMS AND COLUMNS:	ALL BARS	-	1 1/2"

SEE ACI 318 FOR ADDITIONAL REQUIREMENTS AND MORE INFORMATION.

CONCRETE TESTING:

AN INDEPENDENT TESTING LABORATORY SHALL PERFORM THE FOLLOWING TESTS ON CAST IN PLACE CONCRETE:

A) ASTM C143, "STANDARD TEST METHOD FOR SLUMP OF PORTLAND CEMENT CONCRETE." MAXIMUM SLUMP SHALL BE 4-6 INCHES, DEPENDING ON THE TYPE OF CONCRETE.
B) ASTM C89, "STANDARD TEST METHOD FOR COMPRESSIVE STRENGTH OF CYLINDRICAL CONCRETE SPECIMENS." A SEPARATE TEST SHALL BE CONDUCTED FOR EACH CLASS, FOR EVERY 50 CUBIC YARDS (OR FRACTION THEREOF), PLACED PER DAY. REQUIRED CYLINDERS/QUANTITIES AND TEST AGE AS FOLLOWS:
1 AT 7 DAYS
2 AT 28 DAYS

ONE ADDITIONAL RESERVE CYLINDER TO BE TESTED UNDER THE DIRECTION OF THE ENGINEER, IF REQUIRED. IF 28 DAY STRENGTH IS ACHIEVED, THE ADDITIONAL CYLINDER(S) MAY BE DISCARDED.

NON-SHRINK GROUT:

NON-SHRINK GROUT SHALL BE A HIGH-STRENGTH MORTAR OR GROUT WITH A MINIMUM COMPRESSIVE STRENGTH OF 5000 psi AT 28 DAYS. THE GROUT SHALL BE NON-METALLIC, NON-CORROSIVE, GROUT-BASED AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM C1107. IT SHALL BOND PERMANENTLY TO A CLEAN METAL BASE/PLATE AND CONCRETE SUBSTRATE AND WILL NOT SHRINK IN ITS PLASTIC STATE, AS TESTED IN ACCORDANCE WITH ASTM C827.

CHEMICAL ANCHORS:

SHALL BE AN EQUAL TWO PART EPOXY POLYMER INJECTION SYSTEM, SUCH AS SIMPSON SET-UP® STRUCTURAL ANCHORING ADHESIVE®, MULTI-MIX 550 MAX-50 OR ENGINEER APPROVED SUBSTITUTION. INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. INSTALLERS SHALL BE TRAINED BY THE MANUFACTURER'S REPRESENTATIVE. BRUSH AND BLOW OUT ALL HOLES.

MASONRY WALLS:

MASONRY UNITS SHALL MEET ASTM C 80 FOR HOLLOW LOAD BEARING TYPE MASONRY WITH UNIT STRENGTH OF 1900 psi ON THE NET AREA (m = 1900 psi). MORTAR SHALL BE TYPE "M" OR "S" AND MEET ASTM C 270. GROUT SHALL BE 3000 psi MINIMUM COMPRESSIVE STRENGTH AND MEET ASTM C 476. PROVIDE HOOKED DOWELS IN FOOTINGS FOR ALL VERTICAL REINFORCING ABOVE. LAP SPLICES @ 8 BAR DIAMETERS.

BLOCK CELLS AS SHOWN ON PLANS SHALL BE GROUT FILLED WITH VERTICAL REINFORCING BARS. SEE PLAN NOTES FOR BAR SIZE AND SPACING. DOWELS SHALL BE USED TO PROVIDE CONTINUITY INTO THE STRUCTURE ABOVE AND/OR BELOW, UNLESS NOTED OTHERWISE. USE METAL LATH, MORTAR, OR SPECIAL UNITS TO CONFINE CONCRETE AND GROUT TO AREA REQUIRED.

PROVIDE 3 GAUGE GALVANIZED HORIZONTAL JOINT REINFORCING (FOR C, WALL OR ENGINEER APPROVED SUBSTITUTION) AT ALTERNATE BLOCK COURSES, BEGINNING 8" ABOVE FOOTINGS AND FLOOR LEVELS.

GROUT LIFT: AN INCREMENT OF GROUT HEIGHT WITHIN A TOTAL GROUT POUR.
GROUT POUR: THE TOTAL HEIGHT OF MASONRY TO BE GROUTED PRIOR TO ERECTION OF ADDITIONAL MASONRY. A GROUT POUR CONSISTS OF ONE OR MORE GROUT LIFTS. GROUT POURS SHALL SET FOR A MINIMUM OF 4 HOURS BEFORE ANY ADDITIONAL GROUT PLACEMENT.

GROUT SHALL HAVE A SLUMP BETWEEN 8 AND 11 INCHES, EXCEPT SELF-CONSOLIDATING GROUT. JOB-SITE PROPORTIONING OF SELF-CONSOLIDATING GROUT IS NOT PERMITTED.

MASONRY GROUTING REQUIREMENTS:

- FIELD-MIXED GROUT SHALL BE PLACED WITHIN 1-1/2 HOURS FROM INTRODUCING WATER INTO THE MIXTURE AND BEFORE INITIAL SET.
- GROUT SLUMP REQUIREMENTS:
 - FOR GROUT SLUMP BETWEEN 8 AND 10 INCHES, THE MAXIMUM GROUT LIFT HEIGHT IS 5 FEET.
 - FOR GROUT SLUMP BETWEEN 10 AND 11 INCHES, THE MAXIMUM GROUT LIFT HEIGHT IS 12.5 FEET.
 - FOR SELF-CONSOLIDATING GROUT, THE GROUT LIFT HEIGHT SHALL NOT EXCEED THE GROUT POUR HEIGHT (24 FEET MAX.).
- GROUT LIFT HEIGHTS EXCEEDING 5 FEET SHALL MEET THE FOLLOWING REQUIREMENTS:
 - MASONRY MORTAR HAS CURED FOR AT LEAST 4 HOURS.
 - GROUT SLUMP IS BETWEEN 10 AND 11 INCHES.
 - NO INTERMEDIATE BOND BEAMS ARE PLACED BETWEEN THE TOP AND BOTTOM OF THE GROUT LIFT HEIGHT.
 - EACH GROUT LIFT SHALL BE CONSOLIDATED BY MECHANICAL VIBRATION AT THE TIME OF PLACEMENT. CONSOLIDATION IS NOT REQUIRED FOR SELF-CONSOLIDATING GROUT.
 - EACH GROUT LIFT SHALL BE RECONSOLIDATED BY MECHANICAL VIBRATION AFTER INITIAL WATER LOSS AND SETTLEMENT HAS OCCURRED, AND BEFORE ADDING THE SUBSEQUENT GROUT LIFT. RECONSOLIDATION IS NOT REQUIRED FOR SELF-CONSOLIDATING GROUT.
 - THE TIME BETWEEN PLACING GROUT LIFTS SHALL NOT EXCEED 1 HOUR.
 - THE MAXIMUM POUR HEIGHT IS 24 FEET.
 - A GROUT KEY SHALL BE PROVIDED AT THE TOP OF EACH GROUT LIFT AND GROUT POUR. GROUT KEYS SHOULD BE FORMED BY TERMINATING THE GROUT 1-1/2 INCHES BELOW A MORTAR JOINT.

TE BEAMS:

BEAMS WITH THE PREFIX "TB" SHALL BE OF CONCRETE POURED AFTER THE BLOCK WALLS BELOW ARE IN PLACE. REINFORCING SHALL BE CONTINUOUS THROUGH THE BEAMS WITH MINIMUM LAP SPLICES OF 48 BAR DIAMETERS AND BENT BARS AT CORNERS. USE METAL LATH, MORTAR, OR SPECIAL UNITS TO CONFINE CONCRETE TO AREA REQUIRED, IN ACCORDANCE WITH ACI 308.1, SECTION 4.3.3.3 (SOLID METAL OR FELT CAVITY CAPS ARE PROHIBITED).

LINTELS:

MASONRY OPENINGS LESS THAN 6 FEET SHALL BE SPANNED WITH AN 8" SPAN RATED PRECAST/PRESTRESSED CONCRETE LINTEL. ALL PRECAST LINTELS SHALL BEAR A MINIMUM OF 8" AT EACH END ON A GROUT FILLED CELL.

MASONRY OPENINGS 6 FEET OR GREATER SHALL BE SPANNED WITH AN 8" SPAN RATED PRECAST/PRESTRESSED CONCRETE LINTEL WITH 1#5 BAR CONTINUOUS. PRECAST LINTEL AND ALL CELLS ABOVE, TO THE BOTTOM OF THE TIE BEAM OR BOND BEAM, SHALL BE GROUTED SOLID. ALL PRECAST LINTELS SHALL BEAR A MINIMUM OF 8" AT EACH END ON A GROUT FILLED CELL.

WHERE A CONCRETE COLUMN OR CONCRETE TIE COLUMN IS WITHIN 8" OF A MASONRY OPENING, THE LINTEL SHALL BE AN 8"x16" CONCRETE CAST-IN-PLACE BEAM WITH (2) #6 BARS TOP AND BOTTOM, AND (3) STIRRUPS AT 18" ON CENTER.

WOOD:

STRUCTURAL WOOD COMPONENTS (BEAMS, JOISTS, RAFTERS, ETC.) SHALL HAVE THE FOLLOWING MINIMUM ALLOWABLE FIBER STRESSES FOR NO. 2 SOUTHERN PINE CONFORMING TO 2008 NDS, WITH 2015 SUPPLEMENT, AS FOLLOWS:

SHEAR	Fv	=	175 psi
BENDING	Fb	=	1,000 psi
BENDING	Fb	=	925 psi
BENDING	Fb	=	800 psi
BENDING	Fb	=	750 psi

WOOD IN CONTACT WITH CONCRETE OR MASONRY, AND AT OTHER LOCATIONS AS SHOWN ON STRUCTURAL DRAWINGS, SHALL BE PROTECTED OR PRESURE TREATED IN ACCORDANCE WITH ATC-108. MEMBER SIZES SHOWN ARE NOMINAL UNLESS NOTED OTHERWISE.

ALL NAILS SHOWN ON PLANS ASSUME COMMON WIRE NAILS UNLESS SPECIFICALLY NOTED ON DRAWINGS.

ENGINEERED WOOD TRUSS SYSTEMS SHALL BE DESIGNED BY SUPPLIER'S SPECIALTY ENGINEER TO CONFIGURATION AND LOAD-CARRYING CAPACITY SHOWN ON DRAWINGS AND SPECIFICATIONS. ALL INDIVIDUAL TRUSS MEMBERS, TRUSS PLATE CONNECTIONS, TRUSS-TO-TRUSS CONNECTIONS, COMMON TRUSSES AND ORDER TRUSSES SHALL BE DESIGNED FOR COMPONENT AND CLADDING WIND LOADING EXCEPT THOSE TRUSSES EXCEEDING 700 SQUARE FEET IN TRIBUTARY AREA. ALTERNATE TRUSS LAYOUTS ARE ACCEPTABLE ONLY AS A CHANGE ORDER WHICH WILL INCLUDE ENGINEERING CHARGES FOR REDESIGN OF THE STRUCTURE BY THE ENGINEER OF RECORD. SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION. SHOP DRAWINGS SHALL SHOW AND SPECIFY ALL CONNECTOR TYPES USED WITHIN TRUSSES, AS WELL AS CONNECTORS UTILIZED IN ALL OTHER CONNECTIONS AND ATTACHMENTS BETWEEN TRUSSES OR COMPONENTS SUPPLIED AS PART OF THE ENGINEERED TRUSS SYSTEM. AN ERECTION DRAWING SHALL BE INCLUDED, IDENTIFYING ALL TRUSS SYSTEM COMPONENTS, AS WELL AS ALL PERMANENT BRACING REQUIRED FOR TRUSS DESIGN.

ENGINEERED SHOP DRAWINGS SHALL BEAR THE SIGNATURE AND IMPRESSED SEAL OF A FLORIDA REGISTERED PROFESSIONAL ENGINEER AS THE SPECIALTY ENGINEER. THE FOLLOWING LOAD DURATION FACTORS SHALL BE USED:

DEAD LOAD	0.90
DEAD LOAD + FLOOR LIVE LOAD	1.00
DEAD LOAD + ROOF LIVE LOAD	1.25
DEAD LOAD + WIND LOAD	1.60

THE SUPERIMPOSED DEAD LOAD, AS SPECIFIED IN THE DESIGN LOAD SECTION ABOVE, INCLUDES THE OVERALL WEIGHT OF THE FIRE SPRINKLER SYSTEM PIPES. THE GENERAL CONTRACTOR SHALL PROVIDE THE TRUSS MANUFACTURERS WITH THE LOCATIONS OF THE PIPE SUPPORTS AND THE LOADS FROM ALL SPRINKLER LINES GREATER THAN 1/2" DIAMETER.

PLYWOOD ROOF, FLOOR AND WALL SHEATHING ARE DESIGNED AS DIAPHRAGMS AND SHALL COMPLY WITH APPLICABLE PROVISIONS OF CHAPTER 23 OF THE FLORIDA BUILDING CODE AND SHALL BE FASTENED IN ACCORDANCE WITH THE MINIMUM REQUIREMENTS OF TABLES 2306.2.1 OR 2306.3 UNLESS SHOWN OTHERWISE. PLYWOOD SHALL BE INSTALLED WITH THE STRENGTH AXIS OF EACH PANEL PERPENDICULAR TO THE SUPPORTS IN ALL CASES. PLYWOOD ROOF PANELS SHALL BE INSTALLED AS SHOWN IN CASES 1 THROUGH 4 IN TABLE 2306.2.1 (CONT.).

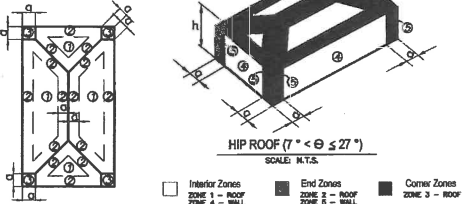
WOOD FRAMING CONNECTORS:

ALL CONNECTORS SHALL BE GALVANIZED. CONNECTOR MODEL NUMBERS SHOWN ARE STRONG-TIE CONNECTORS AS MANUFACTURED BY SIMPSON STRONG-TIE CO., 6555 W. LAS POSITAS BLVD., P.O. BOX 10786, PLEASANTON, CA 94588, 920-999-5399. DOWELS, THE GROUT TO BE NON-METALLIC, NON-CORROSIVE, GROUT-BASED AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM C1107. IT SHALL BOND PERMANENTLY TO A CLEAN METAL BASE/PLATE AND CONCRETE SUBSTRATE AND WILL NOT SHRINK IN ITS PLASTIC STATE, AS TESTED IN ACCORDANCE WITH ASTM C827.

WIND LOAD SCHEDULE				
SCHEDULE OF COMPONENTS AND CLADDING LOADS				
ZONE	ZONE DESCRIPTION	TRIBUTARY AREA (SF)	W (PRESSURE) (+PSF)	U (PRESSURE) (-PSF)
1	ROOF INTERIOR ZONE	LESS THAN 20	20.6	34.2
		20 - 100	20.0	32.7
2	ROOF, EDGE ZONE	MORE THAN 100	15.2	31.1
		LESS THAN 20	20.6	34.2
3	ROOF, OVERHANG, EDGE ZONE	20 - 100	20.0	34.9
		MORE THAN 100	15.2	43.8
4	ROOF, CORNER ZONE	LESS THAN 20	21.6	38.2
		20 - 100	20.0	32.8
5	WALL, INTERIOR ZONE	MORE THAN 100	15.2	26.2
		LESS THAN 20	15.2	123.1
6	WALL, CORNER ZONE	MORE THAN 100	15.2	110.4
		LESS THAN 20	37.4	40.6
7	WALL, INTERIOR ZONE	20 - 100	35.9	36.0
		MORE THAN 100	37.7	35.5
8	WALL, EDGE ZONE	LESS THAN 20	37.4	50.1
		20 - 100	35.9	47.0
9	WALL, CORNER ZONE	MORE THAN 100	31.7	36.0
		LESS THAN 20	31.7	36.0

NOTE: WIND PRESSURES SHOWN ARE BASED ON Vented

COEF. =	ASCE 7-10
ULTIMATE WIND SPEED V _{ULT} =	150 MPH
ALLOWABLE WIND SPEED V _{ALL} =	118 MPH
RISK CATEGORY =	1
WIND SPEED MAP =	1000A
EXPOSURE =	D
ENCLOSURE CLASSIFICATION =	ENCLOSURE
INTERNAL PRESSURE COEFFICIENT (C _{pi}) =	±0.18
C _e =	±0.18



Interior Zones
Zone 1 - Roof
Zone 2 - Wall

End Zones
Zone 2 - Roof
Zone 3 - Wall

Corner Zones
Zone 3 - Roof



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STRUCTURAL NOTES & WIND SCHEDULE

MC COQUINA NORTH STORAGE BLDG

REVISIONS

PROJECT NO: 2013-31
DATE: 04/02/15
DRAWN BY: ARW
CHKD BY: RWD

9/29/2015

ENGINEER OF RECORD
RICHARD D. WILSON
FL P.E. # 37784

SHEET

\$1.00



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TYPICAL DETAILS

**MC COQUINA NORTH
STORAGE BLDG**

GULF DRIVE SOUTH, BRADENTON BEACH, FL 34217

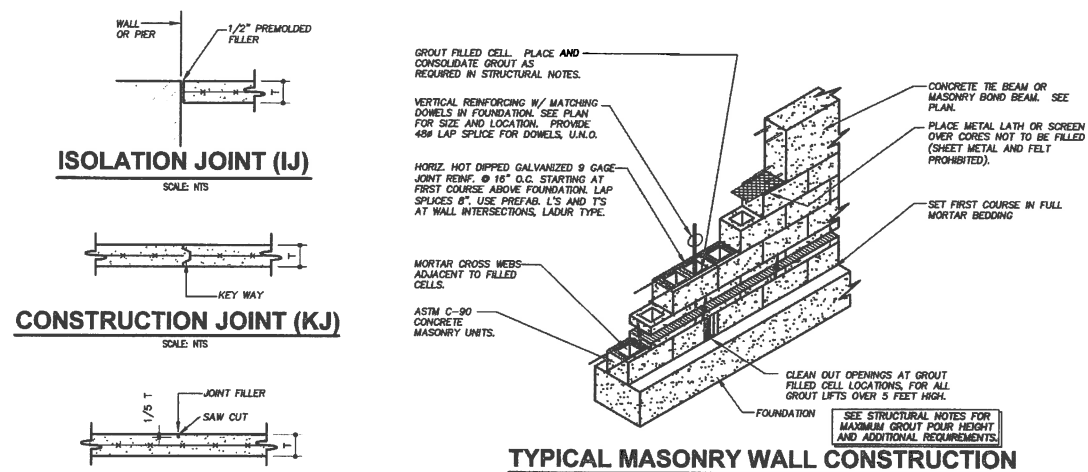
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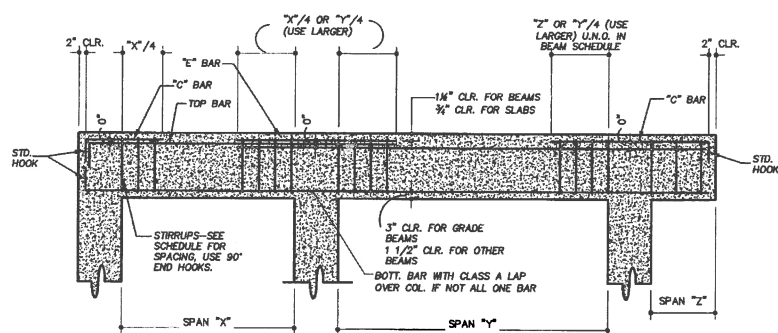
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TYPICAL MASONRY WALL CONSTRUCTION



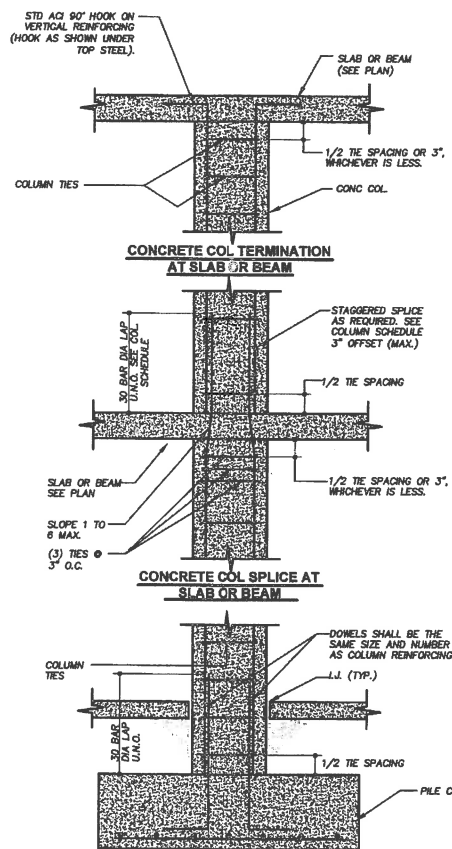
CONTROL JOINT (CJ)

SAW CUT AS SOON AS POSSIBLE
WITHOUT RAVELING CONCRETE. (4
TO 16 HOURS AFTER POUR)



TYPICAL BENDING DIAGRAM FOR BEAMS AND ONE WAY SLABS

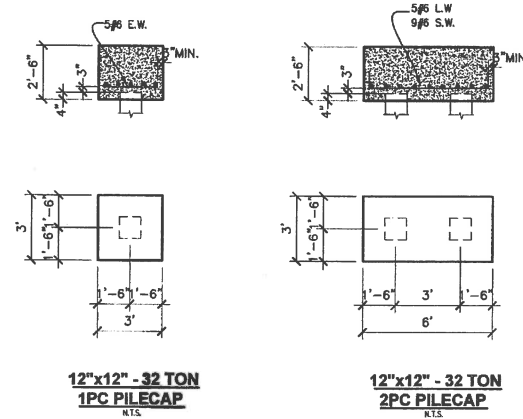
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CONCRETE COLUMN BASE

TYPICAL COLUMN REINFORCEMENT DETAIL

SCALE: NT



12"x12" - 32 TON
1PC PILECAP
N.T.S.

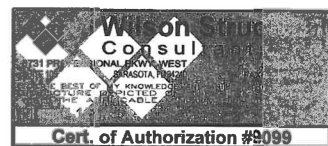
12"x12" - 32 TON
2PC PILECAP
R.T.S.

TYPICAL PILE CAP DETAILS

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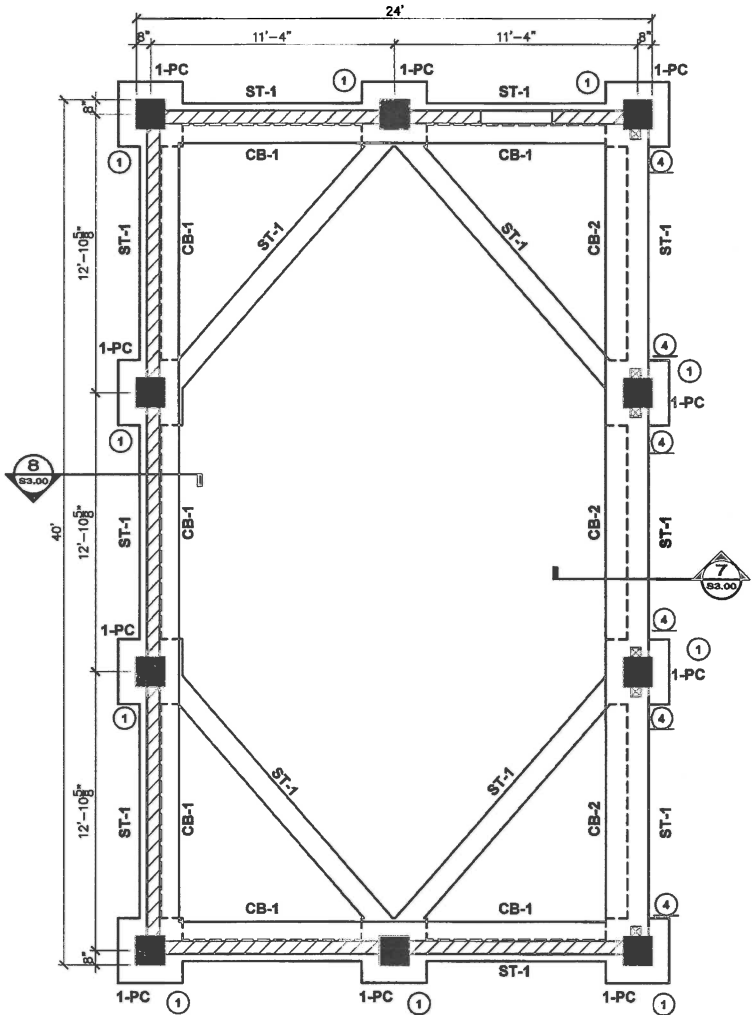
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FOUNDATION & GROUND FLOOR PLAN NOTES:

1. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS. SEE ARCHITECTURAL AND MEP FOR ADDITIONAL INFORMATION.
2. ELEVATIONS SHOWN ARE N.A.V.D. FINISHED FLOOR TO BE (4'-6" N.A.V.D.).
3. GROUND FLOOR SHALL BE A 4" CONCRETE SLAB ON GRADE REINFORCE W/ FIBERMESH 650 AT THE SUPPLIER RECOMMENDED DOSSAGE RATE. PROVIDE SLAB ON GRADE CONTROL JOINTS TO BE TOOLED OR SAWCUT. THE PATTERN SHALL BE APPROXIMATELY SQUARE AND LIMITED TO 16 SQUARE FEET. COORDINATE PATTERN WITH WALLS AND FLOOR FINISHES.
4. ① INDICATES A 16"x16" CONCRETE COLUMN. PROVIDE (8)#6 VERTICAL REINFORCING BARS & #3 TIES @ 12" O.C. (MAX SPACING). PROVIDE CLASS B LAP LENGTHS FOR VERTICAL REINFORCING BARS.
5. "ST-1" INDICATES A 12" WIDE x 16" DEEP CONCRETE STRAP BEAM W/ (2)#6 REINFORCING BARS TOP & BOTTOM AND #3 HOOPS @ 18" O.C. (MAX SPACING). EXTEND TOP AND BOTTOM STEEL CONTINUALLY THRU CAPS OR TO FAR SIDE OF CAPS & HOOK. TOP OF BEAM AT 1'-0" (N.A.V.D.).
6. "PC-#1" INDICATES A CONCRETE PILE CAP. TOP OF CAP TO BE AT 1'-0" (N.A.V.D.) SEE PILE CAP DETAILS ON SHEET S1.01 FOR ADDITIONAL INFORMATION.
7. [Hatched Pattern] INDICATES A NON-LOAD BEARING 2x8 WOOD STUD BREAK-AWAY WALL. PROVIDE SINGLE PT BOTTOM PLATE AND DOUBLE PT TOP PLATE. ATTACH PLATES TO CONCRETE WITH 1/2" HILTI KWIK BOLT 3 ANCHORS (3/4" EMBED INTO CONCRETE) @ 24" O.C. ATTACH STUDS TO BOTTOM PLATE W/ (2)RSP4 EA. STUD AND TO TOP PLATE W/ (2)H5 EA. STUD. PROVIDE 4'-0" O.C. SOLID BLOCKING FOR HEIGHT OF STUD AND PROVIDE 1/2" APA RATED EXTERIOR PLYWOOD SHEATHING AT EXTERIOR, ATTACHED W/ 10d NAILS @ 12" O.C. (MAX SPACING).
8. "CB-1" INDICATES AN 18"xCONTINUOUSx18"d CONCRETE CURB. REINFORCE W/ (2)#5 CONTINUOUS TOP AND BOTTOM AND #3 TIES @ 18" O.C. MAX SPACING. CURB MUST BE ISOLATED FROM CONCRETE COLUMNS.
9. "CB-2" INDICATES A 24"xCONTINUOUSx18"d CONCRETE CURB. REINFORCE W/ (2)#5 CONTINUOUS TOP AND BOTTOM AND #3 TIES @ 18" O.C. MAX SPACING. CURB MUST BE ISOLATED FROM CONCRETE COLUMNS.
10. ④ INDICATES A 6x6 PT POST TO BE ATTACHED TO CONCRETE COLUMN W/ 1/2" THREADED A.B.s @ 36" O.C. (MAX SPACING). DRILL & EPOXY INTO CONCRETE COLUMN (4 1/2" MIN. EMBED IN CONCRETE) PROVIDE HILTI HIT-RE 500 EPOXY ADHESIVE.

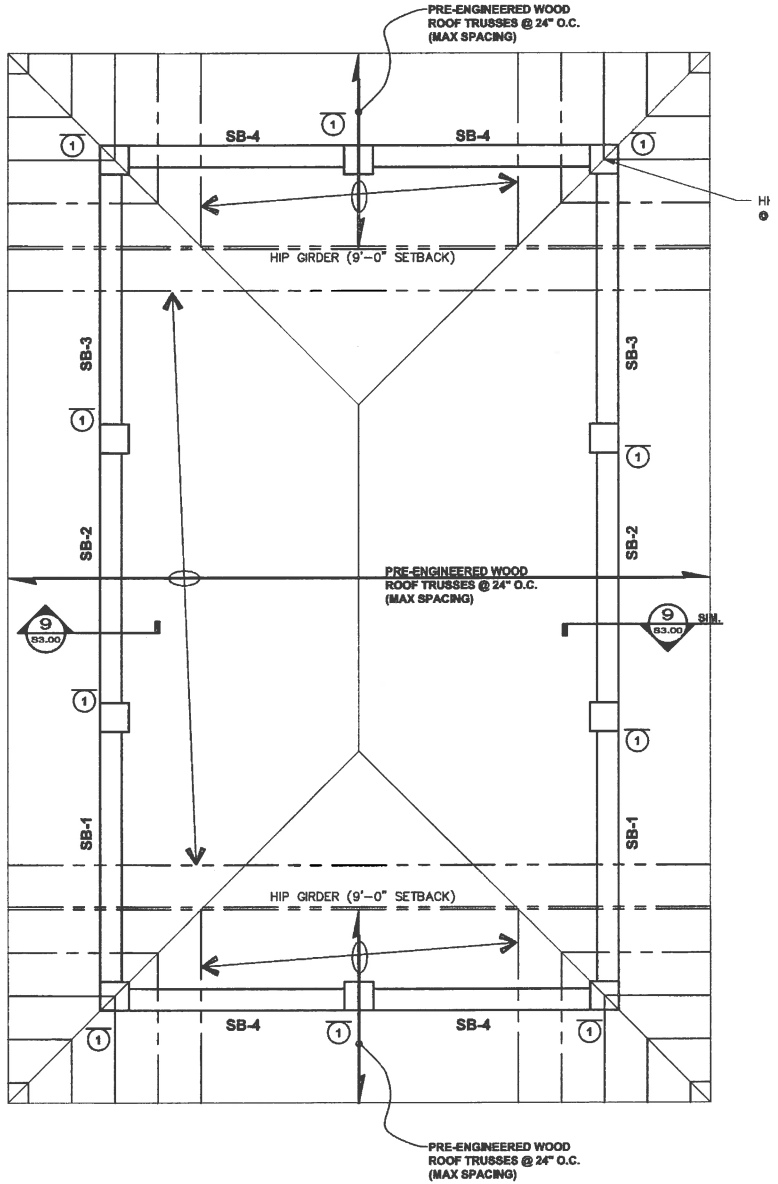


STORAGE GROUND FLOOR PLAN

SCALE 1/4" = 1'-0"

STORAGE BEAM SCHEDULE							
BEAM NUMBER	ELEV. TOP OF BEAM	SIZE W x H (INCH)	REINFORCING				CLOSED HOOP SIZE AND SPACING.
			BOT	TOP	'C'	'E'	
SB-1	21'-1 1/4"	12 X 24	2#5	2#5	-	-	#3 @10"
SB-2	21'-1 1/4"	12 X 24	2#5	2#5	-	-	#3 @10"
SB-3	21'-1 1/4"	12 X 24	2#5	2#5	-	-	#3 @10"
SB-4	21'-1 1/4"	12 X 24	2#5	2#5	-	-	#3 @10"

- BEAM SCHEDULE NOTES:
1. TOP STEEL CONTINUOUS UNLESS OTHERWISE NOTED.
 2. TOP STEEL IN CONTINUOUS BEAMS SHALL TAKE PRECEDENT OVER INTERSECTING SINGLE-SPAN BEAMS AT INTERSECTIONS.
 3. TOP OF BEAM ELEVATIONS GIVEN IN N.A.V.D.



STORAGE ROOF FRAMING PLAN

SCALE 1/4" = 1'-0"

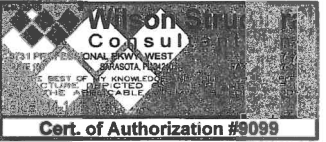
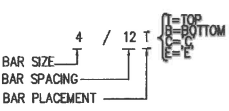
ROOF FRAMING PLAN NOTES:

1. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS. SEE ARCHITECTURAL AND MEP FOR ADDITIONAL INFORMATION.
2. ELEVATIONS SHOWN ARE RELATIVE TO THE GROUND FLOOR SLAB SURFACE SET AT 0'-0".
3. ROOF FRAMING SHALL BE PRE-ENGINEERED WOOD TRUSSES AS SHOWN. PROVIDE 1/2" APA RATED EXTERIOR PLYWOOD SHEATHING. PROVIDE BLOCKING AT ALL PANEL EDGES. ATTACH SHEATHING W/ 10d NAILS AT 6" O.C. AT SUPPORTED EDGES AND 12" O.C. AT INTERIOR SUPPORTS. PROVIDE 4" O.C. SPACING @ EDGES AND INTERIOR SUPPORTS IN ZONE 3.
4. SEE BEAM SCHEDULE THIS SHEET
5. TYPICAL TRUSS TIE DOWN TO BE HETAL 16. PROVIDE HETAL 16 TRUSS UPLIFT CONNECTION UNLESS OTHERWISE INDICATED ON PLAN.

COLUMN SYMBOLS

- - INDICATES COLUMN BELOW
- - INDICATES COLUMN THRU
- - INDICATES COLUMN ABOVE

STEEL SYMBOLS



STORAGE BUILDING
FOUNDATION AND FRA
PLANS

MC COQUINA NORTH
STORAGE BLDG

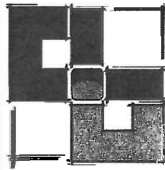
GULF DRIVE SOUTH, BRADENTON BEACH, FL 34217

REVISIONS
10/01/2015
CLIENT REQUESTED REVISIONS

PROJECT NO: 2013-31
DATE: 04/02/15
DRAWN BY: ARW
CHKD BY: RDW

9/28/2015
ENGINEER OF RECORD
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S2.01



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SECTIONS

**MC COQUINA NORTH
STORAGE BLDG**

GULF DRIVE SOUTH, BRADENTON BEACH, FL 34217

REVISIONS

10/01/2015
CLIENT REQUESTED REVISIONS

PROJECT NO: 2013-31
DATE: 04/02/15
DRAWN BY: ARW
CHKD BY: RDW

9/29/2015
ENGINEER OF RECORD
RICHARD D. WILSON
FL P.E. # 37764

SHEET

\$3.00

NOT USED

NOT USED

NOT USED

NOT USED

SECTION 1
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SECTION 2
SCALE: 3/4" = 1'-0" S3.00

SECTION 3
SCALE: 3/4" = 1'-0" S3.00

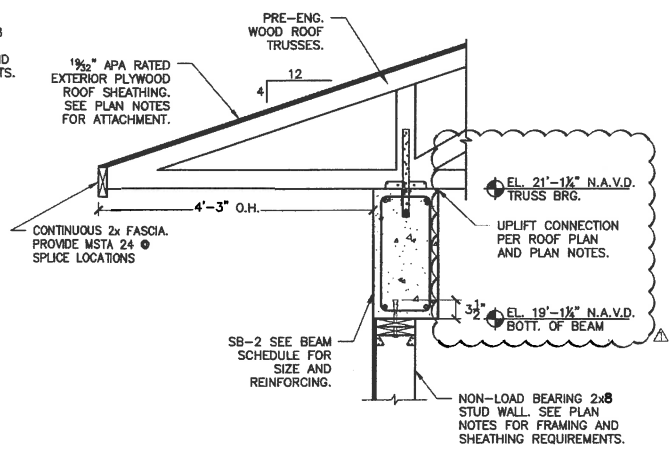
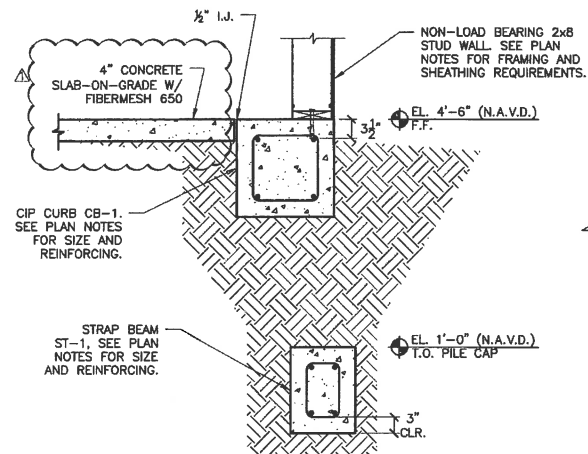
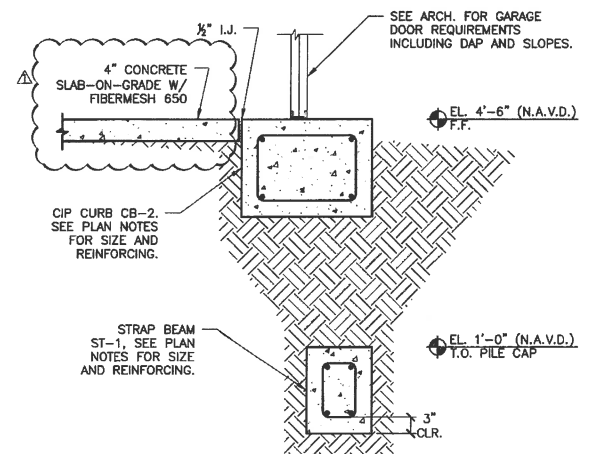
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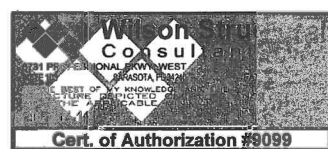
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SECTION 8
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SECTION 9
SCALE: 3/4" = 1'-0" S3.00



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ME3

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MECHANICAL STORAGE
FLOOR PLAN

MC COQUINA RESTROOMS
NORTH

GULF DRIVE SOUTH, BRADENTON BEACH, FLORIDA 34217

REVISIONS

1100/1/15

PROJECT NO: 04/02/15
DATE: STP
DRAWN BY: KCC
CHKD BY: KCC

Kell
9/19/15

KAY C. CLEM, P.E.
FL LIC. NO. 53270

SHEET

M201

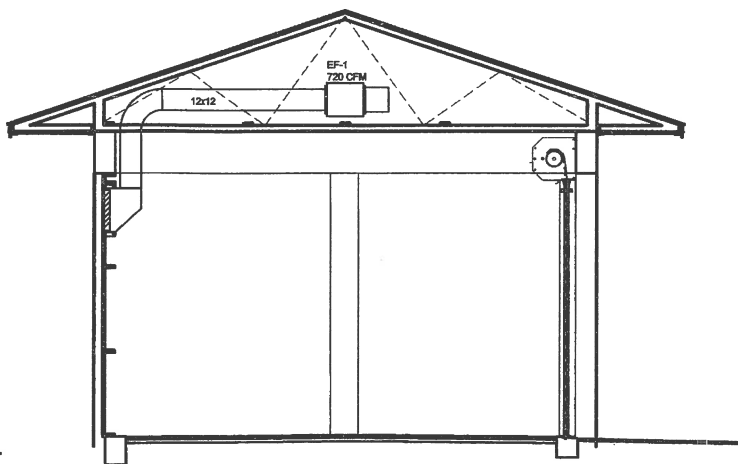
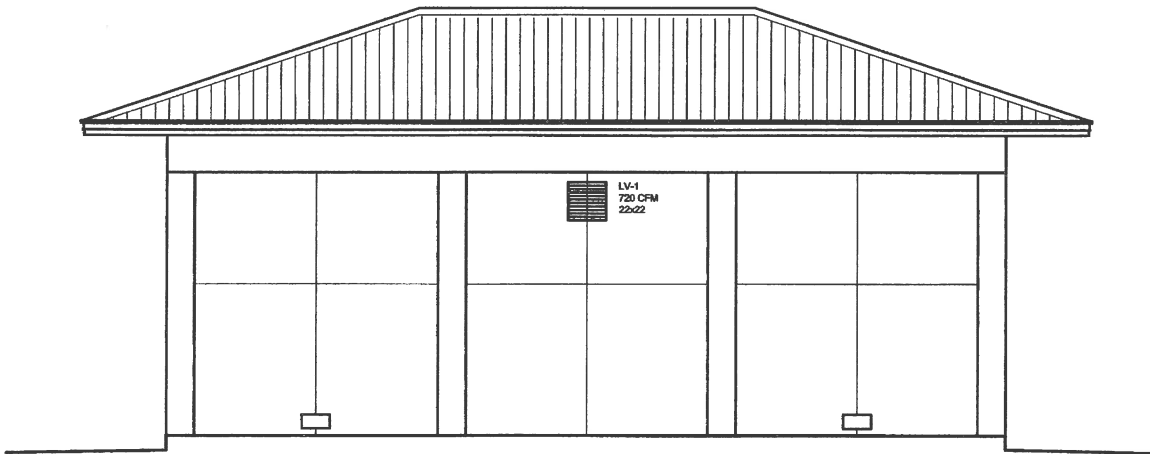
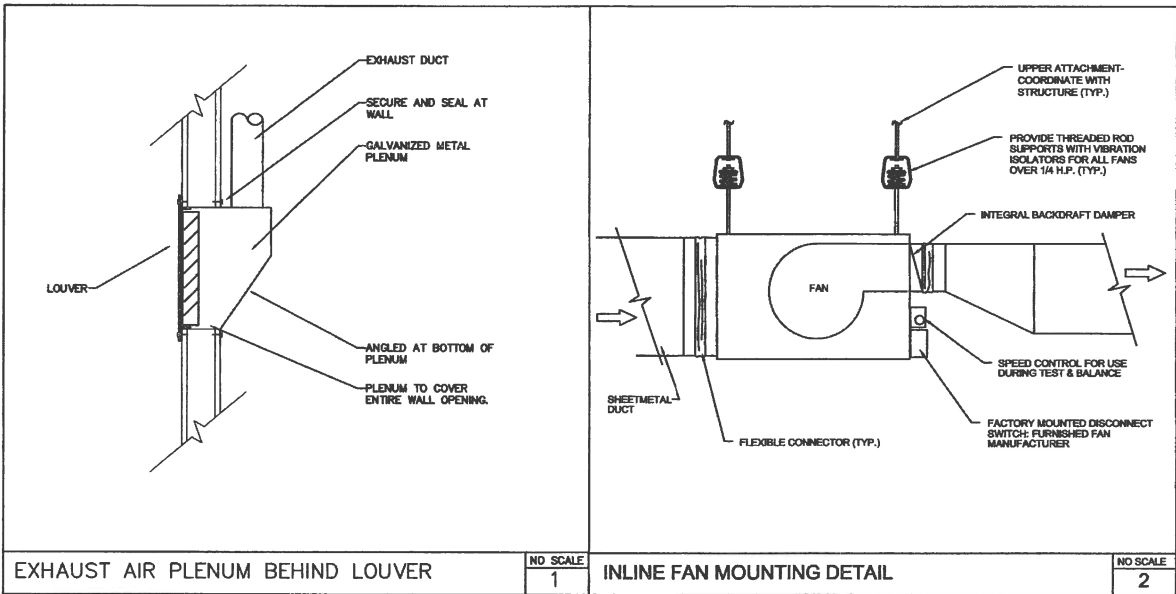
9/29/2015 12:40 PM CAD DWG FILE: 13-0472_MECHANICAL-STORAGE_BLDG.DWG

EXHAUST FAN SCHEDULE													
DIRECT DRIVE CENTRIFUGAL INLINE FAN											MARK: EF-1		
QTY	GREENHECK MODEL	VOLUME (CFM)	ESP (in wg)	FRPM	POWER (hp)	WEIGHT (lb.)	MOTOR INFORMATION						
							SIZE (hp)	V/GP	ENCL.	MOTOR HP	WINDINGS	FLA	
1	SQ-95-D	720	0.25	1,550	0.1	44	0.125	115/80/1	TA	1550	1	NA	
OPTIONS AND ACCESSORIES													
SWITCH, NEMA-1, TOGGLE, JUNCTION BOX MOUNTED & WIRED													
NO MOTOR COVER													
SOLID STATE SPEED CONTROL, 5 AMP (PN 385031) SHIPPED LOOSE													
EXHAUST FAN TO RUN 24/7													

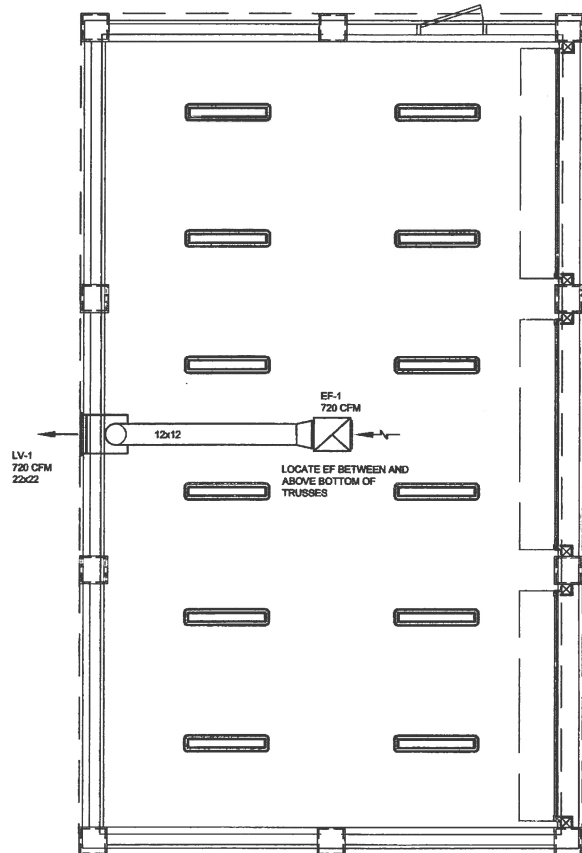
LOUVER SCHEDULE						
MARK	MANUFACTURER	MODEL	SIZE (WxH)	CFM	FREE AREA	FACE VELOCITY
LV-1	GREENHECK	EH-H-501X	22x22	720	1.1	653

LOUVER NOTES:

1. PAINT TO MATCH WALL COLOR.
2. LOUVER TO BE PROVIDED WITH UP TO DATE FLORIDA PRODUCT APPROVAL NUMBER AND NOA.



2 MECHANICAL STORAGE BUILDING ELEVATION
1/4"=1'0"



1 MECHANICAL STORAGE BUILDING FLOOR PLAN
1/4"=1'0"

ELECTRICAL SITE PLAN

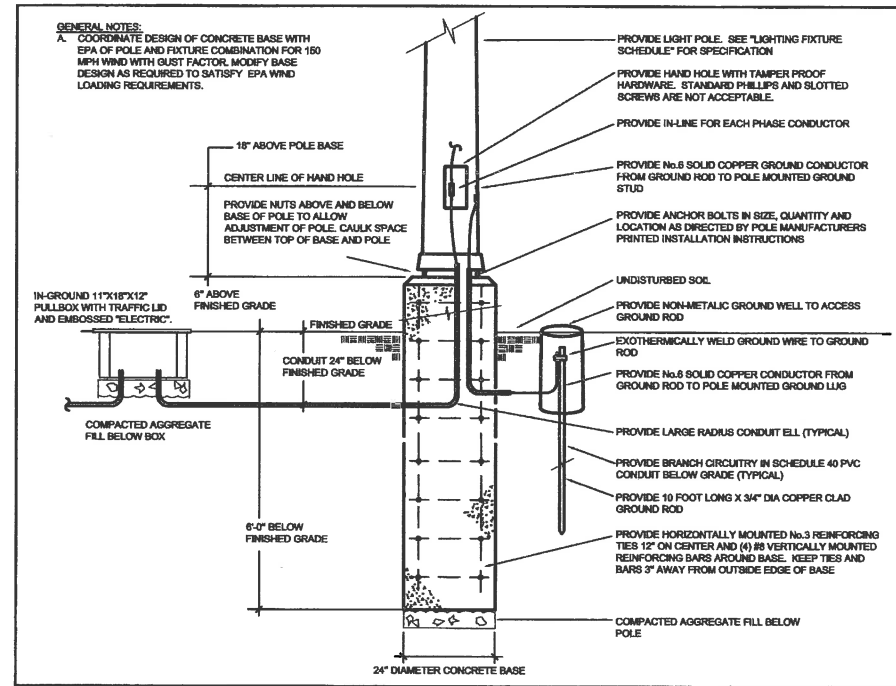
**MC COQUINA RESTROOMS
NORTH**

GULF DRIVE SOUTH, BRADENTON BEACH, FLORIDA 34217

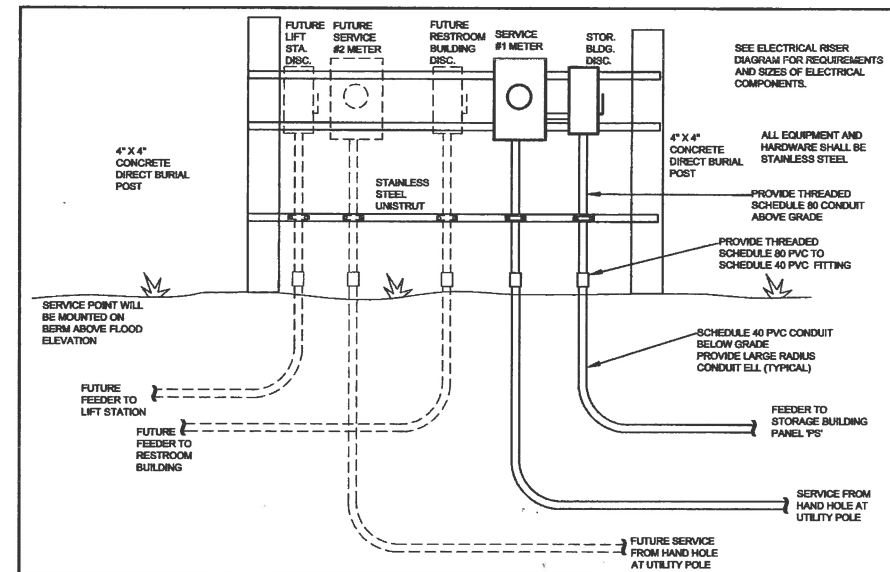
REVISIONS	
1	10/01/15
PROJECT NO: 04/02/15	
DATE: 04/02/15	BAK
DRAWN BY: BAK	
CHECKED BY: BPZ	
BRYAN P. ZAPP, P.E. FL LIC. NO. 48141	

SHEET

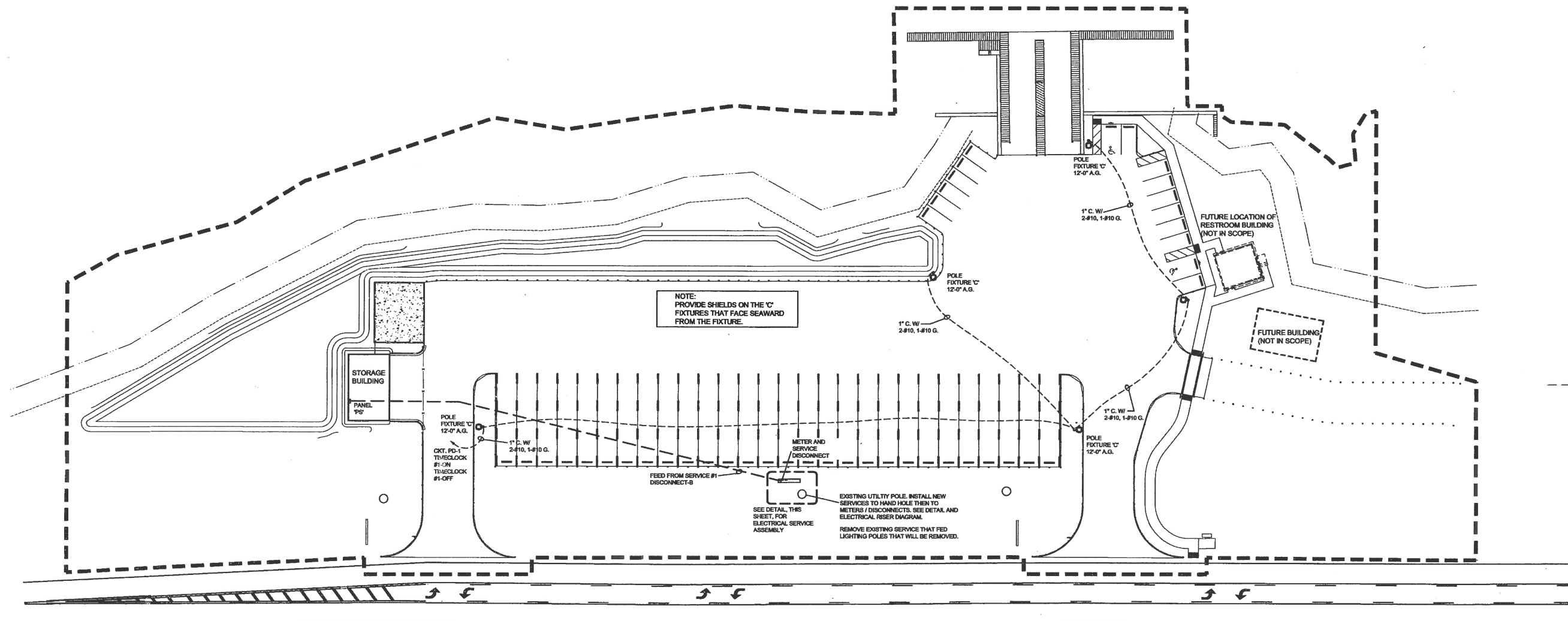
E101



3 LIGHTING POLE DETAIL
E101 NO SCALE



2 ELECTRICAL SERVICE DETAIL
E101 NO SCALE



1 ELECTRICAL SITE PLAN
E101 1"=30'-0"

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ELECTRICAL
FLOOR PLANS

MC COQUINA RESTROOMS
NORTH

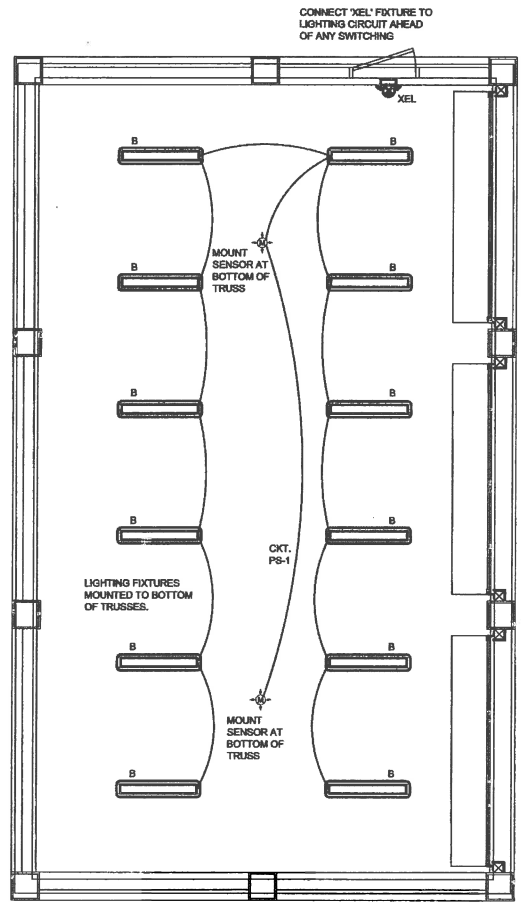
GULF DRIVE SOUTH, BRADENTON BEACH, FLORIDA 34217

GENERAL ELECTRICAL NOTES

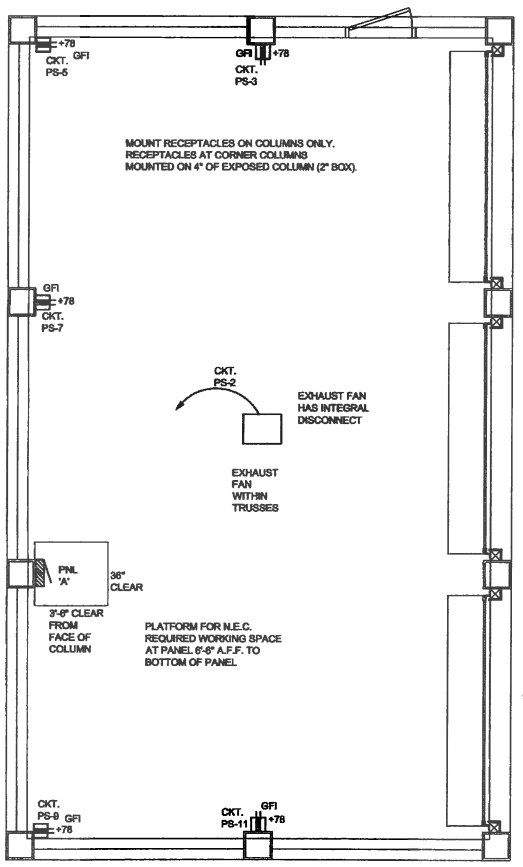
1. ALL ELECTRICAL COMPONENTS AT NON-WATERPROOFED STRUCTURES MUST BE MOUNTED ABOVE THE FEMA FLOOD ELEVATION OF 6'-0" A.F.F. (EXCEPT INTERIOR OF WATERPROOFED RESTROOMS BUILDING). VERIFY EXACT HEIGHT AT EACH STRUCTURE.
2. PROVIDE MACHINE ENGRAVED DEVICE COVERPLATES ON ALL DEVICES WITH THE PANEL AND CIRCUIT NUMBER PRIOR TO SUBSTANTIAL COMPLETION. INCLUDE DETAILS IN SUBMITTALS. COVERPLATES SHALL NOT BE LABELED IN THE FIELD.
3. PROVIDE ALL POWER AND SPECIAL COMPONENTS/CIRCUITS SHOWN. ALL CONDUIT MUST BE CONCEALED IN THE WALLS (EXCEPT DEVICES MOUNTED ON PIERED COLUMNS IN STORAGE BUILDING), IN TRUSSES OR ABOVE THE CEILINGS.
4. PROVIDE ALL OCCUPANCY SENSORS AND TIMER SWITCHES SHOWN. PROVIDE SUBMITTALS TO ENGINEER IN AUTOCAD FORMAT TO INCLUDE ALL WIRING DIAGRAMS, DEVICE QUANTITIES AND COVERAGE AREAS. INCLUDE PROGRAMMING COSTS IN BID.
5. DO NOT SCALE FROM THESE DRAWINGS.
6. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
7. THE DIVISION 26 CONTRACTOR SHALL COORDINATE WORK WITH ALL OTHER TRADES TO ASSURE PROPER CLEARANCES FOR EQUIPMENT AND TO KEEP THE JOB PROGRESSING.
8. CONDUIT RUNS SHOWN ARE DIAGRAMMATIC IN NATURE. DIVISION 26 CONTRACTOR IS RESPONSIBLE FOR SIZING AND LOCATING PULL BOXES PER NEC AND FOR COORDINATION WITH OTHER DISCIPLINES.
9. PROVIDE 2#12AWG + 1#12AWG EQUIPMENT GROUND COPPER IN 3/4" CONDUIT FOR ALL 120V BRANCH CIRCUITS U.O.A.L. PROVIDE #10AWG COPPER CONDUCTORS FOR 20 AMPERE, 120 VOLT BRANCH CIRCUITS LONGER THAN 75 FEET.

ELECTRICAL SYMBOL LIST

- WIRING DEVICES**
- NOTE: ALL DEVICES SHALL BE WHITE IN COLOR. RECEPTACLES SHALL BE VERTICALLY MOUNTED WITH THE GROUND PIN HOLE LOCATED AT THE "TWELVE O'CLOCK" (TOP OF DEVICE) POSITION U.N.O.
- NOTE: THE FOLLOWING ABBREVIATIONS APPLY TO WIRING DEVICES WHERE INDICATED:
- 1" INDICATES HORIZONTALLY MOUNTED WIRING DEVICE.
 - 1G" INDICATES ISOLATED GROUND TYPE WIRING DEVICE.
 - 1WP" INDICATES WEATHERPROOF FULLY GASKETED CAST ALUMINUM BACKBOX, IMC RACEWAY WITH THREADED FITTINGS AND UL WET LABELED "IN-USE" COVER. PROVIDE INTERMATIC DIE-CAST WP1010MC SERIES WEATHERPROOF COVER.
- RECEPTACLES**
- GF1 TYPE DUPLEX RECEPTACLE, 20 AMP, HEAVY DUTY, RECESS MOUNT ABOVE SINK, COUNTER, CASEWORK, ETC. COORDINATE MOUNTING HEIGHT WITH ARCHITECTURAL ELEVATIONS AND/OR EXISTING CONDITIONS PRIOR TO ROUGH-IN
- OCCUPANCY SENSOR SWITCHES**
- DUAL TECHNOLOGY OCCUPANCY SENSOR WALL SWITCH, ULTRASONIC AND PASSIVE INFRARED DETECTION, BUTTON FOR MANUAL ON AND MANUAL OFF, HIGH HUMIDITY, 120V LINE VOLTAGE OPERATION, DEVICE WITH SMOOTH PLASTIC DECORA FACEPLATE, MOUNT 48" AFF TO CENTER OF BACKBOX OR AS NOTED. SENSOR SWITCH MODEL # WSK-POT-WH-LT
 - DUAL TECHNOLOGY CEILING MOUNTED OCCUPANCY SENSOR, ULTRASONIC AND PASSIVE INFRARED DETECTION, 360 DEGREE PATTERN, SELECTABLE OPERATION, HIGH HUMIDITY, 120V LINE VOLTAGE OPERATION, WHITE DEVICE, WIRE IN PARALLEL IF TWO DEVICES ARE IN ONE ROOM. SENSOR SWITCH MODEL # CMR-POT-BLT
- POWER DISTRIBUTION**
- PNL PANELBOARD, REFER TO THE "PANELBOARD SCHEDULE"
 - JUNCTION BOX, COORDINATE EXACT LOCATION AND MOUNTING WITH EQUIPMENT TO BE INSTALLED.



2 LIGHTING STORAGE BUILDING PLAN
1/4"=1'0"



1 ELECTRICAL STORAGE BUILDING PLAN
1/4"=1'0"

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REVISIONS	
1	10/01/15
PROJECT NO: 04/02/15	
DATE: 04/02/15	
DRAWN BY: BAK	
CHK'D BY: B.P.Z.	
BRYAN P. ZAPP, P.E.	
FL LIC. NO. 48141	

SHEET
E201

ELECTRICAL DETAILS

MC COQUINA RESTROOMS
NORTH

GULF DRIVE SOUTH, BRADENTON BEACH, FLORIDA 34217

REVISIONS

1 10/01/15
PROJECT NO: 0402/15
DATE: 04/02/15
DRAWN BY: BAK
CHKD BY: BPZ
BRYAN P. ZAPF, P.E.
FL LIC. NO. 46141

SHEET

E501

EST. FAULT CURRENT

CONDUCTOR LENGTH	275'
CONDUCTOR "C"	3,860
ESTIMATED TRANSFORMER SCA	10,417
$\frac{275 \times 10,417}{3,860 \times 240} = 3.0623$	
$\frac{1}{1 + 3.0623} = .2444$	
$10,417 \times .2444 = 2,545$	
2,545 SHORT CIRCUIT AMPS ESTIMATED AT SERVICE ENTRANCE	

ELECTRICAL SERVICE CALCULATION

	CONNECTED	DEMAND
RECEPTACLE LOAD	900	900
LIGHTING >3 HR. LOAD	985	1,232
OTHER LOADS	147	147
TOTAL	2,032	2,279
9.5A DEMAND 100A SERVICE @ 240V, 1-PHASE PROVIDED		
NOTE: THE FUTURE RESTROOM BUILDING WILL BE FED FROM THE SAME SERVICE. ESTIMATED DEMAND FOR THE RESTROOM BUILDING IS 18 AMPS AT 240V, 1-PHASE.		

LIGHTING FIXTURE SCHEDULE

FIXTURE TYPE	FIXTURE DESCRIPTION	MANUFACTURER/ CATALOG NUMBER	VOLTS	LAMP INFORMATION		TOTAL INPUT WATTS	SEE SCHEDULE NOTE
				QTY	TYPE		
B	4' LED VANDAL RESISTANT, PRISMATIC LENS, WHITE BODY, TAMPER RESISTANT,	LUMINAIRE VFP84-56WHF-4000-120-CP-WHT -TKSD	120	LED	4,802 LUMEN 4000K	40W	2
C	LED TURTLE SAFE POLE MOUNTED AREA, BRONZE LED COLOR MIN / MAX WAVELENGTH: 585nm / 685nm, FLAT GLASS LENS	STERNSBERG OMEGA 1527 R AND F SERIES, AMBER LED FIXTURE HAS FWC APPROVAL #2008-002	120	LED	4700 LUMEN WAVELENGTH: 585NM / 685NM	101W	1, 3, 6
XEL	EXIT SIGN / EGRESS LIGHTING COMBO UNIT WITH BATTERY BACKUP, WHITE BODY WITH RED LETTERS, SIDE MOUNT EGRESS HEADS	LITHONIA LHQM-SW3R	UNV @ 120	LED 2	LEDV 6V, 5.4W	4W	4, 5

LIGHTING FIXTURE SCHEDULE GENERAL NOTES:

- FIXTURES PROPOSED AS EQUIVALENT TO SPECIFIED FIXTURES SHALL BE JUDGED ON EFFICIENCY, PERFORMANCE AND CONSTRUCTION, NOT FIXTURE CONSTRUCTION ALONE. THE ENGINEER OF RECORD RESERVES THE RIGHT TO DETERMINE FIXTURE EQUIVALENTS AND THE DECISION OF THE ENGINEER IS FINAL. THE "C" FIXTURE SPECIFIED MATCHES OTHER EXISTING EXTERIOR FIXTURES NEAR THE PROJECT LOCATION AND SUBSTITUTIONS WILL BE JUDGED TO CLOSELY MATCH THE EXISTING FIXTURES OR BE REJECTED.
- LIGHTING FIXTURE SUBMITTAL CUT SHEETS SHALL INCLUDE INFORMATION ON HOW THE FIXTURE CATALOG NUMBER IS COMPILED AND SHALL INCLUDE CUT SHEETS OF ALL OPTIONAL COMPONENTS, SUCH AS FRAME-IN-HITS, BALLAST DRIVER INFORMATION, INPUT WATTS, BALLAST FACTOR, SHIELD INFORMATION, LAMPS, ETC.
- LIGHTING FIXTURES SHALL BE SUPPORTED PER NEC ARTICLE 410.
- LIGHTING SYSTEMS, SESCO (TAMPA OFFICE), TAMPA BAY LIGHTING, AND WESTERN FLORIDA LIGHTING. THE ENGINEER RESERVES THE RIGHT TO DETERMINE FIXTURE EQUIVALENTS BASED ON THE CATALOG SERIES, APPEARANCE AND THE ENGINEER'S JUDGMENT AND MAY REJECT FIXTURES ON THESE GROUNDS.

SCHEDULE NOTES: (APPLICABLE WHERE REFERENCED)

- FIXTURE SHALL BE TURTLE SAFE WITH A MINIMUM LAMP COLOR WAVELENGTH OF 585nm AND A MAXIMUM WAVELENGTH OF 685nm. FIXTURES AND LAMP COLOR WAVELENGTH MUST BE APPROVED AND CERTIFIED BY THE FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION (FWC) PRIOR TO SUBMITTAL AND ORDERING. A SAMPLE FIXTURE MAY HAVE TO BE DIRECTLY TESTED BY THE FWC OFFICE. INCLUDE FWC APPROVAL NUMBER WITH SUBMITTAL. PROVIDE PHYSICAL SHIELD TO BLOCK LIGHT SOURCE AND DIRECTED LIGHT VISIBLE FROM THE SEAWARD SIDE OF THE FIXTURE. IN SOME CASES THE SHIELD WILL BE REQUIRED ON MULTIPLE SIDES OF THE FIXTURE. FIXTURE SPECIFIED HAS FWC APPROVAL NUMBER 2008-002.
- MOUNTED AT CEILING.
- FIXTURE SHALL HAVE SHIELD SO THAT NO DIRECT LIGHT IS VISIBLE WHEN FIXTURE IS OBSERVED FROM SEAWARD. PROVIDE SHIELD ON SIDES OF FIXTURE THAT FACE THE WATER.
- WALL MOUNTED 7'-6" AFF TO CENTER.
- CONNECT EMERGENCY EGRESS FIXTURE TO THE LINE SIDE OF THE LIGHTING CIRCUIT, AHEAD OF ANY SWITCHING.
- PROVIDE POLE AND TENON / ARM FOR MOUNTING FIXTURE TO POLE. COLOR SHALL MATCH FIXTURE. BOTTOM OF FIXTURE MOUNTED 12'-0" ABOVE GRADE. SEE DETAIL FOR MOUNTING OF POLE.

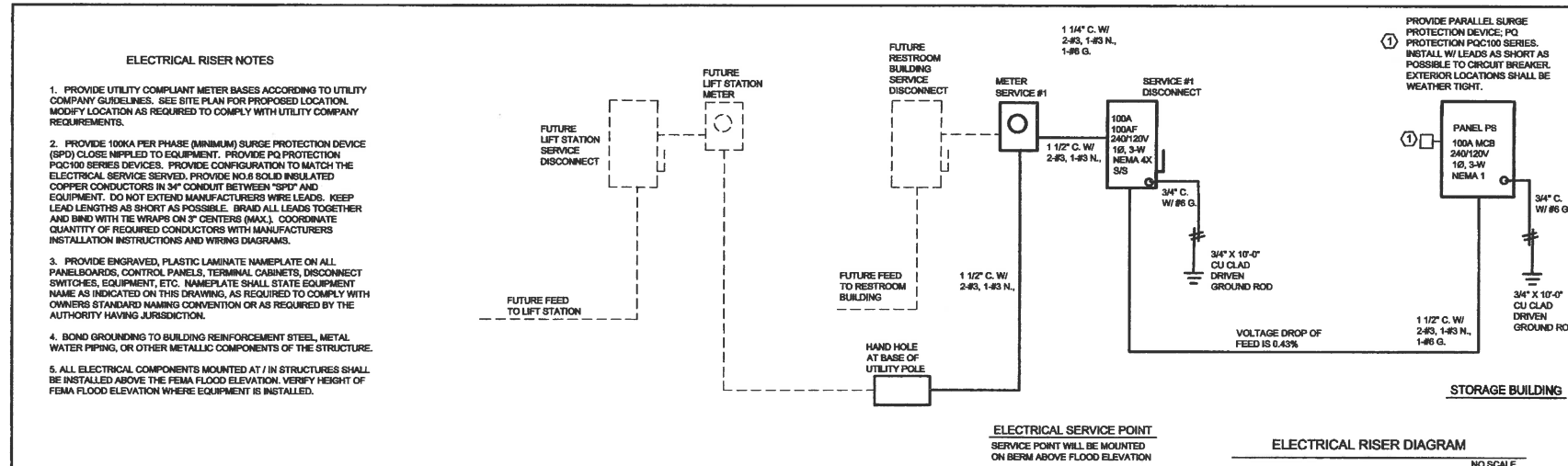
CONDUIT AND WIRE SCHEDULE

CB	POLE	WIRE SIZE	CONDUIT	PHASE	CB	POLE	WIRE SIZE	CONDUIT	PHASE
20A	1	2-#12, 1-#12 G.	3/4"	1/2W	50A	2	2-#8, 1-#10 G.	1"	1/2W
20A	2	2-#12, 1-#12 G.	3/4"	1/2W	50A	3	3-#8, 1-#10 G.	1"	3/3W
20A	3	3-#12, 1-#12 G.	3/4"	3/3W	50A	3	3-#8, 1-#8 N, 1-#10 G.	1"	3/3W
25A	1	2-#10, 1-#10 G.	3/4"	1/2W	60A	2	2-#6, 1-#10 G.	1"	1/2W
25A	2	2-#10, 1-#10 G.	3/4"	1/2W	60A	3	3-#6, 1-#10 G.	1"	3/3W
25A	3	3-#10, 1-#10 G.	3/4"	3/3W	60A	3	3-#6, 1-#8 N, 1-#10 G.	1 1/4"	3/3W
30A	1	2-#10, 1-#10 G.	3/4"	1/2W	70A	2	2-#4, 1-#8 G.	1"	1/2W
30A	2	2-#10, 1-#10 G.	3/4"	1/2W	70A	3	3-#4, 1-#8 G.	1 1/4"	3/3W
30A	3	3-#10, 1-#10 G.	3/4"	3/3W	70A	3	3-#4, 1-#4 N, 1-#8 G.	1 1/4"	3/3W
30A	3	3-#10, 1-#10 N, 1-#10 G.	3/4"	3/3W	80A	2	2-#4, 1-#8 G.	1"	1/2W
35A	3	3-#8, 1-#10 G.	1"	3/3W	80A	3	3-#4, 1-#8 G.	1 1/4"	3/3W
35A	3	3-#8, 1-#8 N, 1-#10 G.	1"	3/3W	80A	3	3-#4, 1-#4 N, 1-#8 G.	1 1/4"	3/3W
40A	2	2-#8, 1-#10 G.	1"	1/2W	90A	2	2-#3, 1-#8 G.	1 1/4"	1/2W
40A	3	3-#8, 1-#10 G.	1"	3/3W	90A	3	3-#3, 1-#8 G.	1 1/4"	3/3W
40A	3	3-#8, 1-#8 N, 1-#10 G.	1"	3/3W	90A	3	3-#3, 1-#3 N, 1-#8 G.	1 1/2"	3/3W
45A	2	2-#8, 1-#10 G.	1"	1/2W	100A	2	2-#3, 1-#8 G.	1 1/4"	1/2W
45A	3	3-#8, 1-#10 G.	1"	3/3W	100A	3	3-#3, 1-#8 G.	1 1/4"	3/3W
45A	3	3-#8, 1-#8 N, 1-#10 G.	1"	3/3W	100A	3	3-#3, 1-#3 N, 1-#8 G.	1 1/2"	3/3W

- NOTES:
- ALL CONDUCTORS SHALL BE COPPER.
 - ALL CONDUIT SHALL HAVE GROUNDING CONDUCTOR INSTALLED.
 - CONDUIT BELOW GRADE OUTSIDE OF BUILDING SHALL BE 1" MINIMUM.
 - SIZING OF CONDUCTORS MUST BE ALTERED FOR DERATING PER N.E.C. FOR VOLTAGE DROP CONSIDERATIONS. 120V CIRCUITS GREATER THAN 75 FEET IN LENGTH SHALL USE ONE WIRE SIZE LARGER.
 - SEE RISER DIAGRAM FOR SIZING OF CIRCUITS GREATER THAN 100A.
 - IF CONDUIT AND CONDUCTOR SIZES ARE SHOWN ON THE PLAN, THIS SCHEDULE DOES NOT APPLY.

PANELBOARD DESIGNATION: PS

VOLTAGE:	240/120V	1PH-3W	MAINS RATING:	100	AMPS	MAIN CB TRIP RATING:	100	AMPS
<input checked="" type="checkbox"/> SURFACE <input type="checkbox"/> FLUSH	<input checked="" type="checkbox"/> MCB <input type="checkbox"/> MLO		FEED THRU LUGS			INTERRUPTING RATING:	10,000	AIC
				ENCLOSURE: NEMA 1				
SERVES	CB SIZE	LOAD VA	CKT#	LOAD VA	CB SIZE	SERVES		
LTG-INTERIOR	20	720	1	2	147	20	EXHAUST FAN	
RECEPTACLES	20	180	3	4	206	20	LTG-PARKING	
RECEPTACLES	20	180	5	6				
RECEPTACLES	20	180	7	8				
RECEPTACLES	20	180	9	10				
RECEPTACLES	20	180	11	12				
			13	14				
			15	16				
SURGE PROTECTION	302		17	18				
			19	20				
			21	22				
			23	24				
			25	26				
			27	28				
			29	30				
				A	B	DEMAND: 1.8 KW		



ELECTRICAL SPECIFICATIONS (DIVISION 26)

SCOPE OF WORK AND GENERAL CONDITIONS:
THE SCOPE OF WORK SPECIFIED HEREIN CONSISTS OF PROVIDING (DEFINED AS FURNISH AND INSTALL) ALL LABOR, MATERIALS, EQUIPMENT AND SERVICES REQUIRED TO COMPLETE THE ELECTRICAL AND RELATED WORK INDICATED ON THE DRAWINGS, AS SPECIFIED HEREIN AND SUBJECT TO THE TERMS AND CONDITIONS OF THE CONTRACT. ELECTRICAL WORK INCLUDES, BUT IS NOT LIMITED TO, THE FOLLOWING:
PANELBOARDS
CIRCUIT BREAKERS
DISCONNECT SWITCHES
GROUNDING
RACEWAY FOR POWER DISTRIBUTION WIRING
CONDUCTORS FOR POWER DISTRIBUTION
WIRING DEVICES
LIGHTING FIXTURES
RACEWAY FOR COMMUNICATIONS WIRING (VOICE, DATA, TELEVISION)
CONNECTION OF MOTORS, CONTROL DEVICES AND ELECTRICAL EQUIPMENT FURNISHED BY OTHERS
TESTING
FINAL ACCEPTANCE/WARRANTY
RECORD DRAWINGS

ITEMS SPECIFIED HEREIN, SHOWN ON THE DRAWINGS, AND/OR REASONABLY INTERPRETED FROM THE DRAWINGS THAT ARE NECESSARY TO COMPLETE THE ELECTRICAL WORK SHALL BE PROVIDED BY THIS DIVISION, WHETHER ITEM IS SPECIFICALLY SHOWN OR NOT.

GENERAL:
CONTRACTOR SHALL BECOME THOROUGHLY ACQUAINTED WITH THE PROJECT SITE (A.S. EXISTING CONDITIONS) AND THE ENTIRE CONSTRUCTION DOCUMENTS PACKAGE (A.S. ARCHITECTURAL, STRUCTURAL, CIVIL, MECHANICAL, PLUMBING, FIRE PROTECTION, ELECTRICAL DRAWINGS AND SPECIFICATIONS) BEFORE BID SUBMISSION. WORK OF THE ELECTRICAL CONTRACTOR MUST BE COORDINATED WITH THE WORK OF ALL TRADES.

CONTRACTOR SHALL REVIEW THE ENTIRE CONSTRUCTION DOCUMENTS PACKAGE AND SHALL SEARCH FOR EQUIPMENT, LIGHTING FIXTURES, ETC THAT REQUIRE ELECTRICAL SERVICE THAT ARE NOT SHOWN ON THE ELECTRICAL DRAWINGS. CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER PRIOR TO BID IF EQUIPMENT, LIGHTING FIXTURES, ETC REQUIRING ELECTRICAL SERVICE APPEAR ON THE DRAWINGS OF OTHER TRADES THAT DO NOT APPEAR ON THE ELECTRICAL DRAWINGS.

INTENT:
THE INTENT OF THE DRAWINGS AND SPECIFICATIONS IS TO DESCRIBE THAT COMPLETE ELECTRICAL AND SPECIAL SYSTEMS ARE REQUIRED. HOWEVER, THE WORK SHALL BE COMPLETE EVEN THOUGH ITEMS MAY NOT BE SPECIFICALLY CALLED FOR OR SHOWN. INSTALLATIONS SHALL MEET ALL GOVERNING CODES, SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT/ENGINEER AND ALL AGENCIES HAVING JURISDICTION.

WORK NOT COVERED IN THIS SECTION:
RECESSES, CHASES, AND OTHER PROVISIONS TO BE MADE IN THE STRUCTURE AS REQUIRED TO ACCOMMODATE ELECTRICAL ITEMS, SUCH AS CONDUIT, PANELS, SWITCHES, ETC, SHALL BE PROVIDED BY THE ELECTRICIAN SHALL, HOWEVER, NOTIFY ALL SUCH TRADES OF HIS EXACT REQUIREMENTS AHEAD OF TIME AND SHALL PAY THE COSTS OF ANY CUTTING OR PATCHING CAUSED BY FAILURE TO DO SO. ALL SUCH REMEDIAL WORK SHALL BE DONE ONLY BY MECHANICS OF THE TRADES INVOLVED.

PERMITS, TAXES, FEES:
CONTRACTOR SHALL OBTAIN ALL GOVERNMENTAL PERMITS, PAY ALL SALES TAXES AND OTHER ASSOCIATED FEES INCLUDING COSTS FOR UTILITY CONNECTIONS, REQUIRED TO PERFORM THE INTENDED ELECTRICAL WORK. CONTRACTOR SHALL FILE ALL NECESSARY PLANS, PREPARE ALL DOCUMENTS AND OBTAIN ALL NECESSARY APPROVALS OF ALL GOVERNMENTAL AGENCIES HAVING JURISDICTION. CONTRACTOR SHALL OBTAIN ALL REQUIRED CERTIFICATES OF INSPECTION FOR ELECTRICAL WORK AND DELIVER SAME TO THE OWNER AND ARCHITECT BEFORE REQUEST FOR ACCEPTANCE AND FINAL PAYMENT FOR THE WORK.

CONTRACTOR SHALL INCLUDE IN THE WORK WITHOUT EXTRA COST TO THE OWNER, ALL LABOR, MATERIALS, SERVICES, APPARATUS, OR DRAWINGS NECESSARY TO COMPLY WITH ALL APPLICABLE LAWS, ORDINANCES, RULES AND REGULATIONS, WHETHER OR NOT SHOWN ON DRAWINGS AND/OR SPECIFIED.

ALL MATERIALS FURNISHED AND ALL WORK INSTALLED SHALL COMPLY WITH THE FOLLOWING:

NATIONAL ELECTRIC CODE 2008
2010 FLORIDA BUILDING CODE WITH ANY AMENDMENTS
NATIONAL BUREAU OF FIRE UNDERWRITERS
REGULATIONS OF THE SERVING UTILITY COMPANIES

ALL MATERIAL AND EQUIPMENT PROVIDED FOR THE ELECTRICAL WORK SHALL BEAR THE APPROVAL LABEL, OR SHALL BE LISTED, BY UNDERWRITERS' LABORATORIES, INC.

MEASUREMENTS:
SHOULD THE CONTRACTOR DISCOVER ANY DISCREPANCY BETWEEN ACTUAL MEASUREMENTS AND THOSE INDICATED ON THE DRAWINGS, WHICH PREVENTS FOLLOWING GOOD PRACTICES OR THE INTENT OF THE DRAWINGS AND SPECIFICATIONS, HE SHALL NOTIFY THE ARCHITECT/ENGINEER THROUGH THE GENERAL CONTRACTOR, AND SHALL NOT PROCEED WITH HIS WORK UNTIL HE HAS RECEIVED INSTRUCTIONS FROM THE ARCHITECT/ENGINEER. ALL REQUESTS FOR INFORMATION (RFI) SHALL INCLUDE A PROPOSED SOLUTION.

PRIOR TO ROUGH-IN OF EQUIPMENT THE OWNER, ARCHITECT AND ENGINEER RESERVE THE RIGHT TO RELOCATE ANY PANELBOARD, DISCONNECT, STARTER, LIGHTING FIXTURE, WIRING DEVICE, COMMUNICATIONS OUTLET, ETC THREE (3) FEET IN ANY DIRECTION WITHOUT ANY ADDITIONAL CHARGE, FEE, OR CHANGE ORDER.

DRAWINGS:
DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL LOCATION OF THE ELECTRICAL AND SPECIAL SYSTEMS WORK INCLUDED IN THE CONTRACT. THE ENTIRE CONSTRUCTION DOCUMENTS PACKAGE (DRAWINGS AND SPECIFICATIONS) SHALL BE EXAMINED FOR EXACT LOCATION OF FIXTURES, DEVICES AND EQUIPMENT. WHERE ITEMS ARE NOT LOCATED BY THE DRAWINGS OR SPECIFICATIONS OR OTHER CONSULTANTS THEN THE ITEMS SHALL BE LOCATED PER THE ENGINEERING DRAWINGS. HOWEVER, THE DRAWINGS ARE NOT TO BE SCALED.

CONTRACTOR SHALL FOLLOW THE ELECTRICAL DRAWINGS IN LAYING OUT WORK AND SHALL COORDINATE WITH THE DRAWINGS OF OTHER TRADES TO VERIFY SPACES IN WHICH WORK WILL BE INSTALLED. MAINTAIN MAXIMUM HEADROOM AND SPACE AT ALL LOCATIONS. WHERE HEADROOM OR SPACE CONDITIONS APPEAR INADEQUATE, THE ARCHITECT/ENGINEER SHALL BE NOTIFIED BEFORE PROCEEDING WITH INSTALLATION. ALL REQUESTS FOR INFORMATION (RFI) SHALL INCLUDE A PROPOSED SOLUTION.

IF DIRECTED BY THE ARCHITECT/ENGINEER, THE CONTRACTOR SHALL, WITHOUT EXTRA CHARGE, MAKE REASONABLE MODIFICATIONS IN THE LOCATIONS OF ELECTRICAL WORK AS NEEDED TO PREVENT CONFLICTS WITH WORK OF OTHER TRADES AND FOR PROPER INSTALLATION OF THE WORK.

COOPERATION WITH OTHER TRADES:
REFER TO THE NATIONAL ELECTRICAL CODE REQUIRED WORKING SPACE NOTES* INCLUDED WITH THESE CONSTRUCTION DOCUMENTS FOR ADDITIONAL COORDINATION REQUIREMENTS

CONTRACTOR SHALL GIVE FULL COOPERATION TO OTHER TRADES AND SHALL FURNISH IN WRITING TO THE ARCHITECT/ENGINEER ANY INFORMATION NECESSARY TO PERMIT THE WORK OF OTHER TRADES TO BE INSTALLED SATISFACTORILY AND WITH THE LEAST POSSIBLE INTERFERENCE OR DELAY.

WHERE ELECTRICAL WORK WILL BE INSTALLED IN CLOSE PROXIMITY TO, OR MAY INTERFERE WITH, WORK OF OTHER TRADES THE CONTRACTORS SHALL ASSIST EACH OTHER IN WORKING OUT A SATISFACTORY SPACE FOR EACH CONTRACTORS WORK. IF DIRECTED BY THE ARCHITECT/ENGINEER, THE CONTRACTOR SHALL PREPARE COMPOSITE WORKING DRAWINGS AND SECTIONS AT SUITABLE SCALE, NOT LESS THAN 1/4" = 1'-0", CLEARLY SHOWING HOW WORK IS TO BE INSTALLED IN RELATION TO WORK OF OTHER TRADES. IF THE CONTRACTOR INSTALLS HIS WORK BEFORE COORDINATING WITH OTHER TRADES, OR CAUSES ANY INTERFERENCE WITH WORK OF OTHER TRADES, THE CONTRACTOR SHALL MAKE THE NECESSARY CHANGES IN THE ELECTRICAL WORK TO CORRECT THE CONDITIONS WITHOUT EXTRA CHARGE.

CONTRACTOR SHALL FURNISH TO OTHER TRADES, AS REQUIRED, ALL NECESSARY TEMPLATES, PATTERNS, AND ASSEMBLY DETAILS FOR THE PROPER INSTALLATION OF WORK AND FOR THE PURPOSE OF COORDINATING ADJACENT WORK.

SCAFFOLDING, RIGGING, HOISTING:
CONTRACTOR SHALL PROVIDE ALL SCAFFOLDING, RIGGING AND HOISTING NECESSARY FOR ERECTION AND DELIVERY INTO THE PREMISES OF ALL ELECTRICAL EQUIPMENT. REMOVE SAME FROM PREMISES WHEN NO LONGER REQUIRED.

EXCAVATING AND BACKFILLING:
CONTRACTOR SHALL PROVIDE ALL TRENCH AND PIT EXCAVATION AND BACKFILLING REQUIRED FOR WORK UNDER THIS SECTION OF THE SPECIFICATIONS, BOTH INSIDE AND OUTSIDE OF THE BUILDING, INCLUDING REPAIRING OF FINISHED SURFACES, ALL REQUIRED SHORING, BRACING, PUMPING, AND ALL PROTECTION FOR SAFETY OF PERSONS AND PROPERTY. LOCAL OR STATE SAFETY CODES SHALL BE FOLLOWED. IN ADDITION, THE CONTRACTOR SHALL CHECK THE ELEVATIONS OF THE UTILITIES ENTERING AND LEAVING THE BUILDING. IF SUCH ELEVATIONS REQUIRE EXCAVATIONS LOWER THAN THE FOOTING LEVELS, THE ARCHITECT/ENGINEER SHALL BE NOTIFIED OF SUCH CONDITIONS BEFORE EXCAVATIONS COMMENCE. CONTRACTOR SHALL MAKE EXCAVATIONS AT THE MINIMUM REQUIRED DEPTHS IN ORDER NOT TO UNDERCUT THE FOOTINGS. CONFORM TO THE REQUIREMENTS OF THE STATE OF FLORIDA "TRENCH SAFETY ACT". FILLING, BACKFILLING AND COMPACTION SHALL BE AS SPECIFIED IN OTHER AREAS OF THE CONTRACT DOCUMENTS AND SPECIFICATIONS.

MATERIAL AND WORKMANSHIP:
ALL MATERIALS AND APPARATUS REQUIRED FOR ELECTRICAL WORK, EXCEPT AS SPECIFICALLY NOTED OTHERWISE, SHALL BE NEW, OF FIRST CLASS QUALITY, AND SHALL BE FURNISHED, DELIVERED, ERECTED, CONNECTED AND FINISHED IN EVERY DETAIL AND SHALL BE SO SELECTED AND ARRANGED AS TO FIT PROPERLY INTO THE BUILDING SPACES. WHERE NO SPECIFIC KIND OR QUALITY OF MATERIAL IS GIVEN, A FIRST CLASS STANDARD ARTICLE, AS APPROVED BY THE ENGINEER, SHALL BE PROVIDED.

CONTRACTOR SHALL PROCURE THE SERVICES OF AN EXPERIENCED SUPERINTENDENT, WHO SHALL BE CONSTANTLY IN CHARGE OF THE INSTALLATION OF THE WORK, TOGETHER WITH ALL SKILLED WORK PERSONNEL, FITTERS, METAL WORKERS, WELDERS, HELPERS, AND LABOR REQUIRED TO UNLOAD, TRANSPORT, ERECT, CONNECT, ADJUST, START, OPERATE AND TEST EACH SYSTEM.

ALL EQUIPMENT AND MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER. THIS INCLUDES THE PERFORMANCE OF ALL TESTS RECOMMENDED BY THE MANUFACTURER.

CUTTING AND PATCHING:
CONTRACTOR SHALL PROVIDE ALL CUTTING AND PATCHING NECESSARY TO INSTALL ELECTRICAL WORK. PATCHING SHALL MATCH ADJACENT SURFACES AND SHALL MEET THE APPROVAL OF THE ARCHITECT AND OWNER.

NO STRUCTURAL MEMBERS SHALL BE CUT OR MODIFIED IN ANY WAY WITHOUT THE WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER. ANY MODIFICATION SHALL BE DONE IN A MANNER APPROVED BY THE STRUCTURAL ENGINEER.

SLEEVES AND PLATES:
CONTRACTOR SHALL PROVIDE AND LOCATE ALL SLEEVES REQUIRED FOR ELECTRICAL WORK BEFORE THE FLOORS, WALLS AND CEILINGS ARE CONSTRUCTED, OR SHALL BE RESPONSIBLE FOR THE COST OF CUTTING AND PATCHING WHERE SLEEVES WERE NOT INSTALLED, OR WHERE INCORRECTLY LOCATED. CONTRACTOR SHALL PROVIDE ALL DRILLING REQUIRED FOR THE INSTALLATION OF HIS HANGERS. SLEEVES SHALL BE PROVIDED FOR ALL CONDUIT PASSING THROUGH CONCRETE FLOOR SLABS ABOVE GRADE AND CONCRETE, MASONRY, TILE AND GYPSUM WALL CONSTRUCTION.

WHERE CONDUIT SLEEVES ARE PLACED IN EXTERIOR WALLS BELOW GRADE, THE SPACE BETWEEN THE CONDUIT AND THE SLEEVES SHALL BE SEALED WATER-TIGHT.

WHERE CONDUIT MOTION DUE TO EXPANSION AND CONTRACTION WILL OCCUR, PROVIDE SLEEVES OF SUFFICIENT DIAMETER TO PERMIT FREE MOVEMENT OF THE CONDUIT. CHECK FLOOR AND WALL CONSTRUCTION FINISHES TO DETERMINE PROPER LENGTH OF SLEEVES FOR VARIOUS LOCATIONS. PROVIDE ACTUAL LENGTHS TO SUIT THE FOLLOWING:
1. TERMINATE SLEEVES FLUSH WITH WALLS, PARTITIONS AND CEILING.
2. IN AREAS WHERE CONDUIT IS CONCEALED, AS IN CHASES, TERMINATE SLEEVES 1" ABOVE FLOOR.
3. IN AREAS WHERE CONDUIT IS EXPOSED, EXTEND SLEEVES 2" ABOVE FINISHED FLOOR.
4. SLEEVES SHALL BE CONSTRUCTED OF SCHEDULE 40 STEEL PIPE.

FASTEN SLEEVES SECURELY IN FLOORS AND WALLS SO THEY WILL NOT BECOME DISPLACED WHEN CONCRETE IS POURED OR WHEN OTHER CONSTRUCTION IS BUILT AROUND THEM. TAKE PRECAUTIONS TO PREVENT CONCRETE, PLASTER OR OTHER MATERIALS FROM BEING FORCED INTO THE SPACE BETWEEN PIPE AND SLEEVE DURING CONSTRUCTION.

PENETRATIONS THROUGH FIRE RATED FLOORS, WALLS AND CEILINGS SHALL BE PROVIDED WITH A U.L. APPROVED FIRESTOP RATED PENETRATION SYSTEM IN ACCORDANCE WITH NFPA 101-2009, LIFE SAFETY CODE.

PROVIDE WATER-TIGHT ASSEMBLIES, MATERIALS, SEALANTS, ETC AROUND RACEWAY WHERE RACEWAY PASSES THROUGH INTERIOR/EXTERIOR OF BUILDING AT BOTH ABOVE AND BELOW GROUND RACEWAY PENETRATION LOCATIONS.

SUBSTITUTION OF SPECIFIED EQUIPMENT:
MATERIALS OR PRODUCTS SPECIFIED BY TRADE NAME, MANUFACTURER'S NAME OR CATALOG NUMBER SHALL BE PROVIDED AS SPECIFIED.

SUBSTITUTIONS ARE NOT PERMITTED WITHOUT WRITTEN APPROVAL TEN (10) WORKING DAYS PRIOR TO BID DATE FROM THE ENGINEER VIA THE ARCHITECT. APPROVALS OF EQUIVALENT MATERIALS OR PRODUCTS WILL BE MADE AVAILABLE TO ALL KNOWN BIDDERS AND ISSUED AS AN ADDENDUM (PRIOR TO BID) TO THE CONTRACT DOCUMENTS IF SUBSTITUTED MATERIALS OR PRODUCTS ARE APPROVED BY ARCHITECT/ENGINEER.

ANY CONTRACTOR PROPOSING AN EQUIVALENT MATERIAL OR PRODUCT MUST SUBMIT, WITH THE REQUEST, COMPLETE CATALOG INFORMATION TO PERMIT EVALUATION OF THE PRODUCT. IN THE CASE OF LIGHTING FIXTURES, AN INDEPENDENT TESTING LABORATORY TEST REPORT (NOT THE MANUFACTURER'S) STATING FIXTURE EFFICIENCY AND PERFORMANCE, SHALL ACCOMPANY THE REQUEST.

CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE CORRECTIONS TO ALL SITUATIONS CREATED BY THE SUBSTITUTION OF MATERIALS OR PRODUCTS. THE ACCEPTANCE OF SUBSTITUTED MATERIALS OR PRODUCTS, EITHER PRIOR TO BID OR THEREAFTER, DOES NOT RELIEVE THE CONTRACTOR FROM THE RESPONSIBILITY TO PROVIDE CORRECTIONS, AT HIS/HER EXPENSE, FOR ALL DISCREPANCIES AND CONFLICTS CREATED BY THE SUBSTITUTION OF MATERIALS OR PRODUCTS.

SHOP DRAWINGS:
CONTRACTOR SHALL SUBMIT FOR REVIEW AND APPROVAL SHOP DRAWINGS OF ALL MATERIALS OR PRODUCTS REQUIRED TO COMPLETE THE PROJECT AND HIS MATERIALS OR PRODUCTS SHALL BE DELIVERED TO THE JOB SITE OR INSTALLED UNTIL THE CONTRACTOR HAS ENGINEER APPROVED SHOP DRAWINGS.

SHOP DRAWINGS FOR ELECTRICAL MATERIALS AND PRODUCTS SHALL BE SUBMITTED AS ONE COMPLETE PACKAGE, AT ONE TIME AND NOT INDIVIDUAL SUBMITTALS. CONTRACTOR SHALL FURNISH THE NUMBER OF COPIES REQUIRED BY THE GENERAL AND SPECIAL CONDITIONS OF THE CONTRACT, BUT IN NO CASE LESS THAN SIX (6) IDENTICAL COPIES.

SHOP DRAWINGS SHALL BE REVIEWED AND STAMPED BY THE ELECTRICAL AND GENERAL CONTRACTORS FOR COMPLIANCE WITH THE SPECIFIED MATERIALS AND PRODUCTS PRIOR TO SUBMISSION TO THE ARCHITECT/ENGINEER.

CUT SHEETS, DRAWINGS, SPECIFICATIONS, ETC SUBMITTED FOR REVIEW SHALL BE PROPERLY LABELED AND SHALL CLEARLY IDENTIFY THE SPECIFIC ITEMS) FOR WHICH THE CONTRACTOR IS PROPOSING TO PROVIDE. CUT SHEETS THAT ARE NOT MARKED TO IDENTIFY THE SPECIFIC ITEM BEING PROPOSED MAY BE RETURNED FOR CLARIFICATION.

NO EXCEPTION RENDERED ON SHOP DRAWINGS SHALL NOT BE CONSIDERED AS A GUARANTEE THAT THE MATERIAL OR PRODUCTS COMPLY WITH THE BUILDING CONDITIONS OR MEASUREMENTS. WHERE SHOP DRAWINGS ARE REVIEWED, SAID "NO EXCEPTION" DOES NOT IN ANY WAY RELIEVE THE CONTRACTOR FROM THE RESPONSIBILITY OF PROVIDING LABOR, MATERIAL OR PRODUCTS REQUIRED TO PERFORM THE WORK AS REQUIRED BY THE DRAWINGS AND SPECIFICATIONS.

SHOP DRAWINGS SUBMITTALS ARE REQUIRED ON ELECTRICAL DISTRIBUTION EQUIPMENT, PANELBOARDS, TRANSFORMERS, CONDUIT, CONDUCTORS (WIRE), CIRCUIT BREAKERS, DISCONNECT SWITCHES, WIRING DEVICES, FLOOR BOXES, LIGHT FIXTURES, TIMECLOCK, CONTACTORS AND BURST PROTECTION DEVICES (SPD).

PANELBOARDS:
PROVIDE POWER DISTRIBUTION EQUIPMENT AS INDICATED ON THE ELECTRICAL RISER DIAGRAM AND PANEL SCHEDULES. PANELBOARDS SHALL BE OF DEAD FRONT CONSTRUCTION AND SHALL BE MANUFACTURED BY CUTLER-HAMMER.

PANELBOARDS SHALL NOT BE LESS THAN 20" WIDE AND SHALL BE FABRICATED FROM CODE GAUGE STEEL WITH A POST FABRICATION APPLIED GRAY ENAMEL FINISH.

PANELBOARD AND INTERNAL COMPONENTS SHALL BE CONSTRUCTED AND U.L. LISTED TO WITHSTAND THE SYMMETRICAL SHORT CIRCUIT AMPERES INDICATED ON THE ELECTRICAL RISER DIAGRAM OR PANEL SCHEDULES.

WIRE GUTTER SPACE SHALL COMPLY WITH U.L. AND NEC STANDARDS FOR PANELBOARDS.

PANELBOARDS SHALL BE SURFACE OR RECESS MOUNTED AS SHOWN ON PANEL SCHEDULES AND/OR FLOOR PLANS. PANEL SHALL BE EQUIPPED WITH RECESS MOUNTED HINGES AND KEY OPERATED LOCK. ALL LOCKS SHALL BE KEYS A LIKE. TURN OVER ALL KEYS TO OWNER.

PROVIDE TYPED CIRCUIT IDENTIFICATION CARD INSIDE EACH PANEL. BASE DESCRIPTION ON LOAD SERVED.

PROVIDE LAMINATED, ENGRAVED PLASTIC NAMEPLATE WITH WHITE LETTERS STATING PANELBOARD NAME MOUNTED ON FRONT OF EACH PANEL. MOUNT NAMEPLATE WITH METAL RIVETS. MINIMUM NAMEPLATE SIZE SHALL BE 3" WIDE BY 1-1/2" HIGH WITH 1/2" 1/8" ENGRAVED LETTERS.

CIRCUIT BREAKERS:
CIRCUIT BREAKERS SHALL BE QUICK-MAKE, QUICK-BREAK, THERMAL MAGNETIC MOLDED CASE OF FRAME SIZE, NUMBER OF POLES AND TRIP RATINGS AS SHOWN ON THE ELECTRICAL RISER DIAGRAM AND/OR PANEL SCHEDULES. MULTI-POLE BREAKERS SHALL HAVE A SINGLE HANDLE TO TRIP ALL POLES AT ONCE. CIRCUIT BREAKERS SHALL BE FROM THE SAME MANUFACTURER AND COMPATIBLE WITH THE EXISTING PANELBOARD.

DISCONNECT SWITCHES:
DISCONNECT SWITCHES SHALL BE U.L. LISTED. SWITCH BLADES SHALL BE FULLY VISIBLE IN THE "OFF" POSITION WITH THE DOOR OPEN. ALL CURRENT CARRYING PARTS SHALL BE PLATED TO RESIST CORROSION.

SWITCHES SHALL BE QUICK-MAKE, QUICK-BREAK SUCH THAT, DURING NORMAL OPERATION, THE CONTACTS SHALL NOT BE CAPABLE OF BEING RESTRAINED BY THE OPERATING HANDLE AFTER THE CLOSING OR OPENING ACTION OF THE CONTACTS HAS STARTED. THE HANDLE AND MECHANISM SHALL BE AN INTERNAL PART OF THE BOX, NOT THE COVER, WITH POSITIVE PADLOCKING PROVISIONS IN THE "OFF" POSITION.

PROVIDE HEAVY-DUTY, NEMA-1 ENCLOSURE UNLESS NEMA-3R (RAIN PROOF) IS REQUIRED BY THE SWITCH LOCATION. ENCLOSURES SHALL BE PROVIDED WITH A POST FABRICATION APPLIED GRAY ENAMEL FINISH.

FUSIBLE SWITCHES SHALL BE CAPABLE OF FIELD CONVERSION FROM STANDARD CLASS-H FUSE SPACING TO CLASS-B FUSE SPACING WITHOUT AFFECTING THE U.L. LISTING. THE SWITCH MUST ALSO ACCEPT CLASS-R FUSES AND HAVE A FIELD INSTALLABLE U.L. LISTED REJECTION FEATURE TO REJECT ALL FUSES EXCEPT CLASS-R. THE U.L. LISTED SHORT CIRCUIT RATING, WHEN EQUIPPED WITH CLASS-B OR CLASS-R FUSES, SHALL BE 200,000 AMPERES RMS SYMMETRICAL.

GROUNDINGS:
PROVIDE A SINGLE, COMPLETE GROUNDING NETWORK FOR THE ENTIRE ELECTRICAL AND SPECIAL SYSTEMS WHICH COMPLIES WITH NEC REQUIREMENTS.

RACEWAY FOR POWER DISTRIBUTION WIRING:
WIRING FOR POWER DISTRIBUTION SHALL BE INSTALLED IN RIGID GALVANIZED STEEL (RGS), INTERMEDIATE METAL CONDUIT (IMC), ELECTRICAL METALLIC TUBING (EMT), FLEXIBLE METAL CONDUIT OR SCHEDULE 4060 PVC CONDUIT. PROVIDE THE CONDUIT TYPE INDICATED IN THIS SPECIFICATION WHERE CONDUIT TYPE IS NOT NOTED ON THE DRAWINGS.

RIGID GALVANIZED STEEL (RGS) CONDUIT WITH THREADED FITTINGS SHALL BE PROVIDED ABOVE GROUND AT EXPOSED INTERIOR AND EXTERIOR LOCATIONS WHERE CONDUIT MAY BE SUBJECTED TO PHYSICAL DAMAGE FROM VEHICLES, MAINTENANCE EQUIPMENT, ETC. PROVIDE LARGE RADIUS SWEEP ELBOWS FOR RGS CONDUIT.

IMC CONDUIT WITH THREADED FITTINGS SHALL BE PROVIDED IN ABOVE GROUND, EXPOSED INTERIOR AND EXTERIOR LOCATIONS WHERE CONDUIT WILL NOT BE SUBJECTED TO PHYSICAL DAMAGE, BUT WILL BE EXPOSED TO RAIN WATER, HAZARDOUS CONDITIONS, ETC. THREADED FITTINGS FOR IMC IS NOT ACCEPTABLE.

EMT CONDUIT WITH SET SCREW FITTINGS SHALL BE PROVIDED IN ABOVE GROUND INTERIOR LOCATIONS WHERE CONDUIT WILL NOT BE SUBJECTED TO PHYSICAL DAMAGE AND WILL REMAIN COMPLETELY DRY DURING ALL WEATHER CONDITIONS.

EMT CONDUIT WITH COMPRESSION FITTINGS CAN BE PROVIDED IN PROTECTED, DAMP EXTERIOR LOCATIONS WHERE CONDUIT WILL NOT BE SUBJECTED TO DIRECT/INDIRECT RAINWATER/LIQUIDS (E.G. UNDER CANOPIES). SET SCREW FITTINGS ARE NOT ACCEPTABLE FOR ANY EXTERIOR LOCATION. PROVIDE IMC CONDUIT WITH THREADED FITTINGS WHERE CONDUIT WILL BE EXPOSED TO DIRECT/INDIRECT RAINWATER/LIQUIDS.

EMT CONDUIT SHALL NOT BE USED IN LOCATIONS WHERE CONDUIT COULD BE EXPOSED TO DIRECT/INDIRECT RAINWATER/LIQUIDS, WIND DRIVEN RAIN, HOSE DOWN AREAS, OPEN AIR AREAS WITHOUT AIR CONDITIONING (UNLESS CONDUIT WILL REMAIN COMPLETELY DRY DURING ALL WEATHER CONDITIONS) AND AREAS WHERE RAINWATER/LIQUIDS MIGHT DRIP OR RUN INTO CONDUIT, BACKBOXES OR DEVICES.

SCHEDULE 80 PVC CONDUIT SHALL BE USED FOR UNDERGROUND SERVICE ENTRANCE FEEDERS AND ALL CONDUIT BELOW ROADWAYS U.N.O. ON THE RISER DIAGRAMS AND/OR FLOOR PLANS. PROVIDE LARGE RADIUS RIGID GALVANIZED STEEL ELBOWS FOR SCHEDULE 80 PVC CONDUIT. COAT RGS ELBOWS WITH BLACK MASTIC.

SCHEDULE 40 PVC CONDUIT SHALL BE USED FOR ALL UNDERGROUND FEEDERS AND WIRING EXCEPT FOR SERVICE ENTRANCE FEEDERS AND UNDER ROADWAYS. PROVIDE LARGE RADIUS RIGID GALVANIZED STEEL ELBOWS FOR SCHEDULE 40 PVC CONDUIT WHERE OVERALL CONDUIT RUN IS GREATER THAN 100 FEET. COAT RGS ELBOWS WITH BLACK MASTIC.

PVC CONDUIT SHALL NOT BE USED MORE THAN SIX INCHES ABOVE FINISHED GRADE IN EITHER INTERIOR OR EXTERIOR LOCATIONS. PVC CONDUIT SHALL TRANSITION TO METAL CONDUIT NO MORE THAN SIX INCHES ABOVE GRADE.

ALL PVC CONNECTIONS SHALL BE WATER-TIGHT.

FLEXIBLE METAL CONDUIT SHALL BE USED TO CONNECT LIGHTING FIXTURES AND EQUIPMENT SUBJECT TO VIBRATION, INCLUDING A/C EQUIPMENT, MOTORS, TRANSFORMERS, ETC. OR AT INACCESSIBLE LOCATIONS PROVIDE LIQUID TIGHT FLEXIBLE METAL CONDUIT AND FITTINGS FOR EXTERIOR APPLICATIONS.

CONCEAL ALL CONDUIT IN WALLS, PARTITIONS, OR CEILINGS IN FINISHED AREAS. CONDUIT SHALL NOT BE EXPOSED IN FINISHED AREAS EXCEPT WHEN ABSOLUTELY NECESSARY. CONDUIT SHALL BE STRAIGHT AND PARALLEL TO BUILDING LINES.

PROVIDE ALL CONDUIT, BOTH NEW AND EXISTING, WITH PROTECTION AGAINST DAMAGE AND ENTRANCE OF WATER, DIRT, FOREIGN MATERIAL, ETC. WITH WATER-TIGHT CAPS. PROVIDE WATER-TIGHT ASSEMBLIES, SEALANTS, ETC WHERE CONDUIT PASSES THROUGH INTERIOR OF BUILDING AT BOTH ABOVE AND BELOW GROUND LOCATIONS.

FIRE RATED ASSEMBLIES SHALL BE PROVIDED WHERE CONDUIT PASSES THROUGH FIRE RATED CONSTRUCTION. REFER TO THE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF FIRE RATED CONSTRUCTION. REFER TO THE FIRE STOP PENETRATION DETAILS ON THE ELECTRICAL DRAWINGS.

CONDUIT SIZES SHOWN ON THE DRAWINGS AND SCHEDULES ARE THE MINIMUM SIZES REQUIRED. LARGER SIZE CONDUIT TO FACILITATE WIRE PULLS, ETC, IS PERMITTED.

INSULATING BUSHINGS:
INSULATING BUSHINGS WITH DOUBLE LOCK-NUTS SHALL BE PROVIDED WHEREVER A CONDUCTOR NO.4 AWG OR LARGER ENTERS AN ENCLOSURE, PANEL, DISCONNECT OR ELECTRICAL EQUIPMENT PER N.E.C. 300.4(F).

CONDUCTORS:
PROVIDE 75 DEGREE CELSIUS (167 DEGREE FAHRENHEIT) TYPE TH4W, THW, THWN, OR XHHW INSULATED COPPER CONDUCTORS RATED AT 600V FOR POWER DISTRIBUTION WIRING. CONDUIT WIRE FULL SHOWN ON THE DRAWINGS AND FEEDER SCHEDULES ARE BASED ON TYPE THW WIRE UNLESS NOTED OTHERWISE.

CONDUCTORS UP TO AND INCLUDING NO. 10 AWG SHALL BE SOLID AND CONDUCTORS NO. 8 AWG AND LARGER SHALL BE STRANDED. MINIMUM CONDUCTOR SIZE SHALL BE NO.12 AWG. CONDUCTORS SHALL BE CONTINUOUS BETWEEN EQUIPMENT AND DEVICES. SPLICES ARE TO BE MADE ONLY IN ACCESSIBLE JUNCTION OR OUTLET BOXES AND SHOULD BE KEPT TO A MINIMUM. SPLICES ON NO.12 AND NO.10 WIRE SHALL BE MADE WITH PRESSURE CONNECTORS CAPABLE OF CARRYING FULL WIRE CAPACITY. SPLICES ON NO.8 WIRE AND LARGER SHALL BE MADE WITH SOLDERLESS LUGS WRAPPED WITH BOTH RUBBER AND PLASTIC ELECTRICAL TAPE. CONNECTIONS TO FIXED EQUIPMENT TERMINALS ARE TO BE MADE WITH SOLDERLESS LUGS.

ALL CONDUIT USED FOR POWER DISTRIBUTION SHALL CONTAIN A GROUNDING CONDUCTOR. CONDUIT RACEWAY SHALL NOT BE USED IN PLACE OF A GROUNDING CONDUCTOR.

WIRING DEVICES:
THE EXTENT OF WIRING DEVICE WORK IS INDICATED ON THE DRAWINGS. WIRING DEVICES ARE DEFINED AS SINGLE DISCRETE UNITS OF ELECTRICAL DISTRIBUTION SYSTEMS THAT ARE INTENDED TO CARRY BUT NOT UTILIZE ELECTRIC ENERGY. TYPES OF WIRING DEVICES IN THIS SECTION INCLUDE: RECEPTACLES, GROUND FAULT CIRCUIT INTERRUPTERS, ARC FAULT CIRCUIT INTERRUPTERS, AND LIGHTING AND CONTROL SWITCHES.

PROVIDE WHITE COLORED WIRING DEVICES AND MATCHING THERMOPLASTIC COVERPLATES UNLESS NOTED OTHERWISE. FINAL COLOR SELECTION SHALL BE COORDINATED WITH OWNER/ARCHITECT PRIOR TO BID.

QUALITY ASSURANCE:
NEC COMPLIANCE: COMPLY WITH NEC AS APPLICABLE TO INSTALLATION AND WIRING OF ELECTRICAL WIRING DEVICES.

UL COMPLIANCE: COMPLY WITH APPLICABLE REQUIREMENTS OF U.L. 20, 485A, 48B AND 943 PERTAINING TO INSTALLATION OF WIRING DEVICES. PROVIDE WIRING DEVICES WHICH ARE U.L. LISTED AND LABELED.

IEEE COMPLIANCE: COMPLY WITH APPLICABLE REQUIREMENTS OF IEEE STANDARD 241, "RECOMMENDED PRACTICE FOR ELECTRIC POWER SYSTEMS IN COMMERCIAL BUILDINGS", PERTAINING TO ELECTRICAL WIRING SYSTEMS.

NEMA COMPLIANCE: COMPLY WITH APPLICABLE PORTIONS OF NEMA STANDARDS PUBLICATION NUMBER WD-1, "GENERAL PURPOSE WIRING DEVICES", WD-2, "SEMI-CONDUCTOR DIMMERS FOR INCANDESCENT LAMPS", AND WD-5, "SPECIFIC PURPOSE WIRING DEVICES".

RECEPTACLES:
SIMPLEX: PROVIDE SPECIFICATION GRADE 20 AMPERE, 125 VOLT, HEAVY DUTY, 2 POLE, 3 WIRE, RECEPTACLE WITH GREEN HEXAGONAL EQUIPMENT GROUND SCREW AND METAL PLASTER EARS DESIGNED FOR SIDE AND BACK WIRING WITH SPRING LOADED, SCREW ACTIVATED PRESSURE PLATE IN NEMA 5-20R CONFIGURATION UNLESS NOTED OTHERWISE. COORDINATE ALL "BEPAL" RECEPTACLES WITH THE EQUIPMENT SERVED PRIOR TO ROUGH-IN. PROVIDE RECEPTACLE RATING AND CONFIGURATION TO MATCH EQUIPMENT SERVED.

DUPLEX: PROVIDE SPECIFICATION GRADE 20 AMPERE, 125 VOLT, HEAVY DUTY, 2 POLE, 3 WIRE, RECEPTACLE WITH GREEN HEXAGONAL EQUIPMENT GROUND SCREW AND METAL PLASTER EARS DESIGNED FOR SIDE AND BACK WIRING WITH SPRING LOADED, SCREW ACTIVATED PRESSURE PLATE IN NEMA 5-20R CONFIGURATION.

GROUND FAULT CIRCUIT INTERRUPTERS: PROVIDE SPECIFICATION GRADE "FEED THRU" TYPE GROUND FAULT CIRCUIT INTERRUPTERS, WITH HEAVY DUTY DUPLEX RECEPTACLE CAPABLE OF PROTECTING CONNECTED DOWNSTREAM RECEPTACLES ON SINGLE CIRCUIT, AND OF BEING INSTALLED IN A 2-3/4" DEEP OUTLET BOX WITHOUT ADAPTER, GROUNDING TYPE U.L. RATED CLASS A, GROUP 1, RATED 20 AMPERES, 120 VOLTS, 60 HZ, WITH BOLD STATE GROUND FAULT SENSING AND SIGNALING, WITH 5 MILLIAMPERES GROUND FAULT TRIP LEVEL, EQUIP WITH NEMA 5-20R CONFIGURATION.

PROVIDE FLOOR BOXES FOR RECEPTACLES INDICATED AS MOUNTED AT THE FLOOR. FLOOR BOXES SHALL BE AS INDICATED ON THE PLANS AND SYMBOLS.

MOTION DETECTOR, TIMER AND SNAP SWITCHES:
PROVIDE DEVICES INDICATED ON THE PLANS OR EQUAL. DEVICES SHALL BE 20 AMPERE, 120/277 VOLTS AC. PROVIDE WITH MOUNTING YOKES INSULATED FROM MECHANISM, PLASTER EARS, SWITCH HANDLE, AND SIDE-WIRED SCREW TERMINALS. DEVICES SHALL BE WHITE.

LIGHTING FIXTURES:
CONTRACTOR SHALL PROVIDE, WIRE AND LAMP ALL LIGHTING FIXTURES SHOWN ON SITE PLAN, FLOOR PLANS AND LIGHTING FIXTURE SCHEDULE. AT SUBSTANTIAL COMPLETION, CONTRACTOR SHALL CLEAN DUST, DEBRIS, FINGERPRINTS, ETC FROM ALL FIXTURE LENSES, LOUVERS, AND REFLECTORS AND SHALL REPLACE ALL LAMPS, BALLASTS, ETC THAT ARE NOT WORKING.

CONTRACTOR SHALL REVIEW THE ARCHITECTURAL DRAWINGS (SECTIONS, ELEVATIONS, DETAILS, ETC.) FOR LIGHTING FIXTURES WHICH MAY BE SHOWN AND SHALL NOTIFY THE ARCHITECT/ENGINEER PRIOR TO BID IF FIXTURES APPEAR ON THE ARCHITECTURAL DRAWINGS THAT DO NOT APPEAR ON THE ELECTRICAL DRAWINGS.

CONDUIT FOR COMMUNICATIONS AND OTHER SYSTEMS:
RACEWAY FOR COMMUNICATIONS WIRING (VOICE, DATA, CABLE TELEVISION, ENTRY GATE SYSTEM). REFER TO THE COMMUNICATIONS RISER DIAGRAM AND ELECTRICAL SYMBOL LEGEND FOR ADDITIONAL REQUIREMENTS.

PROVIDE CONDUIT, BACKBOX, BLANK COVERPLATE AND PULL STRINGS FOR EACH OUTLET INDICATED ON CONSTRUCTION DOCUMENTS. PROVIDE BUSHING ON ENDS OF CONDUIT. DEVICES AND WIRING PROVIDED BY OTHERS.

PROVIDE EACH CONDUIT WITH PULL STRING STUBBED FROM BACKBOX OR STUB-UP TO WHERE SHOWN.

REQUIRED TESTING:
TESTS SHALL DEMONSTRATE THAT THE SYSTEM FUNCTIONS PROPERLY THROUGHOUT, THAT IT IS FREE FROM GROUNDS AND SHORTS, AND THAT ALL REQUIREMENTS HEREIN HAVE BEEN COMPLIED WITH. CONTRACTOR SHALL PROVIDE ALL NECESSARY INSTRUMENTS AND PERSONNEL, FOR TESTS AND THE OWNER WILL SUPPLY THE CURRENT. TESTS SHALL BE AS PRESCRIBED BY THE AUTHORITY HAVING JURISDICTION, AHCA, OWNER AND THE CONTRACT DOCUMENTS AND SHALL INCLUDE MEGGER AND GROUNDING TESTS IN ACCORDANCE WITH N.E.C. REQUIREMENTS AND INDUSTRY STANDARDS.

PROVIDE A GROUND RESISTANCE TEST OF EACH NEW GROUND CONDUCTOR, GROUND U.L.C. GROUND BAR, ETC SO THAT THE ENTIRE SYSTEM PROVIDED UNDER THIS CONTRACT IS SAFELY GROUNDED. CORRECT ANY GROUND CONDITION THAT EXCEEDS N.E.C. REQUIREMENTS AND INDUSTRY STANDARDS.

PROVIDE A MEGGER TEST OF EACH NEW CONDUCTOR PROVIDED UNDER THIS CONTRACT TO GUARANTEE THAT EACH NEW CONDUCTOR IS FREE FROM INSULATION DAMAGE, ETC. REPLACE ANY CONDUCTOR THAT DOES NOT PASS MINIMUM TEST VALUES.

PROVIDE OWNER/ARCHITECT/ENGINEER WITH COPY OF FINAL TEST RESULTS FROM ALL TESTS PRESCRIBED BY THE AUTHORITY HAVING JURISDICTION, AHCA, OWNER AND THE CONTRACT DOCUMENTS. WHEN REQUESTED, THE CONTRACTOR SHALL CONDUIT REQUIRED OPERATING TEST(S) IN THE PRESENCE OF THE OWNER/ARCHITECT/ENGINEER AND OTHER AUTHORIZED PERSONS.

FINAL ACCEPTANCE:
AFTER TESTING, A FINAL INSPECTION SHALL BE MADE BY THE OWNER/ARCHITECT/ENGINEER AND OTHER AUTHORIZED PERSONS WITH THE CONTRACTOR. THE INSPECTION SHALL INCLUDE, BUT NOT BE LIMITED TO, CHECK ALL PANELS ARE COMPLETE WITH NAMEPLATES AND CIRCUIT DIRECTORIES, ALL LIGHTING FIXTURES ARE OPERATING, PROPERLY CLEANED AND LAMPED, AND THAT ALL WORK HAS BEEN PERFORMED IN PROFESSIONAL MANNER.

FINAL ACCEPTANCE OF THE PROJECT SHALL NOT PREJUDICE THE OWNER'S RIGHT TO REQUIRE REPLACEMENT AND/OR REPAIR OF ANY DEFECTIVE WORK OR MATERIALS.

WARRANTY:
ALL PARTS, MATERIALS, EQUIPMENT AND LABOR FURNISHED UNDER THIS SECTION OF THE SPECIFICATIONS SHALL BEAR A ONE (1) YEAR, NO COST TO THE OWNER, WARRANTY FROM THE DATE OF FINAL ACCEPTANCE. CONTRACTOR SHALL PROVIDE ALL OF THE ABOVE WARRANTY REQUIREMENTS IN A WRITTEN STATEMENT ALONG WITH EQUIPMENT MANUFACTURERS WARRANTIES.

RECORD DRAWINGS:
CONTRACTOR SHALL KEEP ACCURATE RECORDS OF ACTUAL CONDITIONS INCLUDING DEVICE LOCATIONS AND CONDUIT RUNS WHERE DIFFERENT FROM THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL PROVIDE AS PER THE 2010 FLORIDA BUILDING CODE ENERGY CONSERVATION SECTION 505.7.4.1 DRAWINGS WHICH STATES:

CONSTRUCTION DOCUMENTS OF THE ACTUAL INSTALLATION SHALL BE PROVIDED TO THE BUILDING OWNER, INCLUDING:
1. A SINGLE-LINE DIAGRAM OF THE BUILDING ELECTRICAL DISTRIBUTION SYSTEM AND
2. FLOOR PLANS INDICATING LOCATION AND AREA SERVED FOR ALL DISTRIBUTION.
THE SCALE ON THESE AS-BUILT DRAWINGS SHALL BE NO SMALLER THAN THE SCALE USED ON THE ORIGINAL PLANS.

OPERATION & MAINTENANCE MANUALS:
THE CONTRACTOR SHALL PROVIDE AS PER THE 2010 FLORIDA BUILDING CODE ENERGY CONSERVATION SECTION 505.7.4.2 MANUALS WHICH STATES: CONSTRUCTION DOCUMENTS SHALL REQUIRE THAT AN OPERATING MANUAL AND MAINTENANCE MANUAL BE PROVIDED TO THE BUILDING OWNER. THE MANUALS SHALL INCLUDE, AT A MINIMUM, THE FOLLOWING:
1. SUBMITTAL DATA STATING EQUIPMENT RATING AND SELECTED OPTIONS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE.
2. OPERATION MANUALS AND MAINTENANCE MANUALS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE. REQUIRED ROUTINE MAINTENANCE ACTIONS SHALL BE CLEARLY IDENTIFIED.
3. NAMES AND ADDRESSES OF AT LEAST ONE QUALIFIED SERVICE AGENCY.

END OF DIVISION 26

ME3
CONSULTING ENGINEERS, LLC
5300 PAYLOR LANE
SARASOTA, FL 34240
Tel: 941-748-1319
www.me3-eng.com
Design: B.A.K.
Check: B.P.Z.
Draw: B.A.K.
Fax: 941-748-1348
aids@me3-eng.com
ME3 Job No: 13-0472
Date: 04/02/2015
C.O.A. 27552
Copyright 2015 ME3 All rights reserved.

UGARTE & ASSOCIATES, INC.
ARCHITECTURE PLANNING
434 9th AVENUE WEST
PALMETTO, FLORIDA 34221
PHONE (941)729-5691
FAX (941)729-5692
www.UGARTEARCHITECTURE.COM
- AA-C001654 -

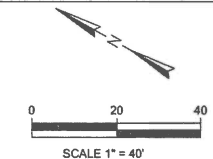
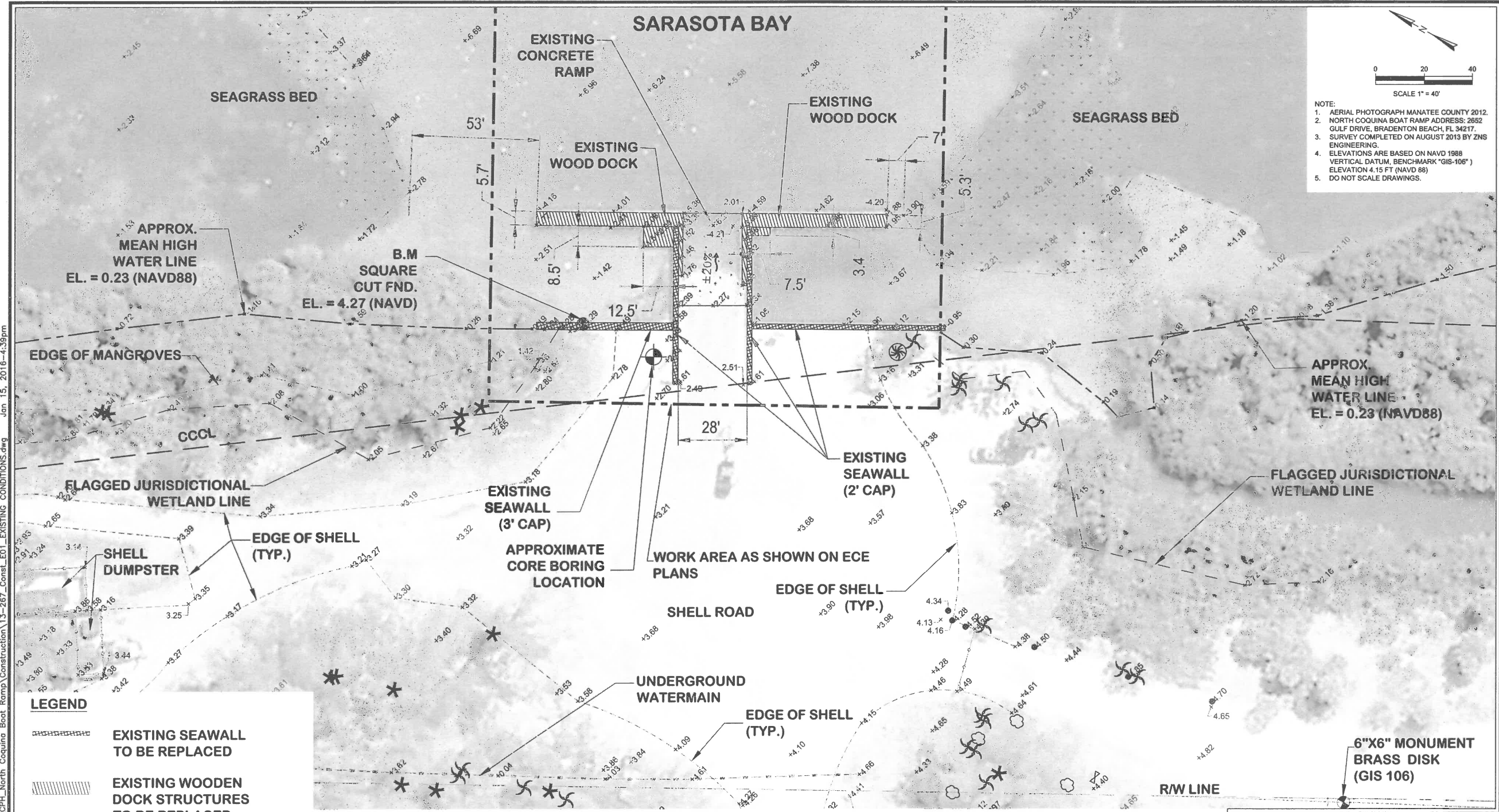
ELECTRICAL SPECIFICATIONS

MC COQUINA RESTROOMS NORTH

GULF DRIVE SOUTH, BRADENTON BEACH, FLORIDA 34217

REVISIONS
1 10/01/15
PROJECT NO: 04/02/15
DATE: BAK
DRAWN BY: BPF
CHKD BY:
BRYAN P. ZAPP, P.E.
FL LIC. NO. 45141

Z:\CADD_Graphics\US Projects\13-267_CPH_North Coquina Boat Ramp\Construction\13-267_Const_E01_EXISTING CONDITIONS.dwg Jan 15, 2016 4:39pm



NOTE:
1. AERIAL PHOTOGRAPH MANATEE COUNTY 2012.
2. NORTH COQUINA BOAT RAMP ADDRESS: 2652 GULF DRIVE, BRADENTON BEACH, FL 34217.
3. SURVEY COMPLETED ON AUGUST 2013 BY ZNS ENGINEERING.
4. ELEVATIONS ARE BASED ON NAVD 1988 VERTICAL DATUM, BENCHMARK "GIS-106" ELEVATION 4.15 FT (NAVD 88)
5. DO NOT SCALE DRAWINGS.

LEGEND

- | | | | | | | | |
|--|--|--|--|--|------------------|--|-----------------|
| | EXISTING SEAWALL TO BE REPLACED | | MEAN HIGH WATER LINE (MHWL) | | CHAIN LINK FENCE | | AUSTRALIAN PINE |
| | EXISTING WOODEN DOCK STRUCTURES TO BE REPLACED | | EDGE OF MANGROVES | | SIGN | | PALM TREE |
| | EXISTING WATERMAIN | | JURISDICTIONAL WETLAND LINE | | WATER VALVE | | ORNAMENTAL TREE |
| | OVERHEAD ELECTRIC | | EDGE OF SEAGRASS BED | | FIRE HYDRANT | | SEA GRAPE |
| | BURIED ELECTRIC | | COASTAL CONSTRUCTION CONTROL LINE (CCCL) | | | | |
| | BURIED TELEPHONE | | | | | | |
| | EXISTING SPOT ELEVATION | | | | | | |

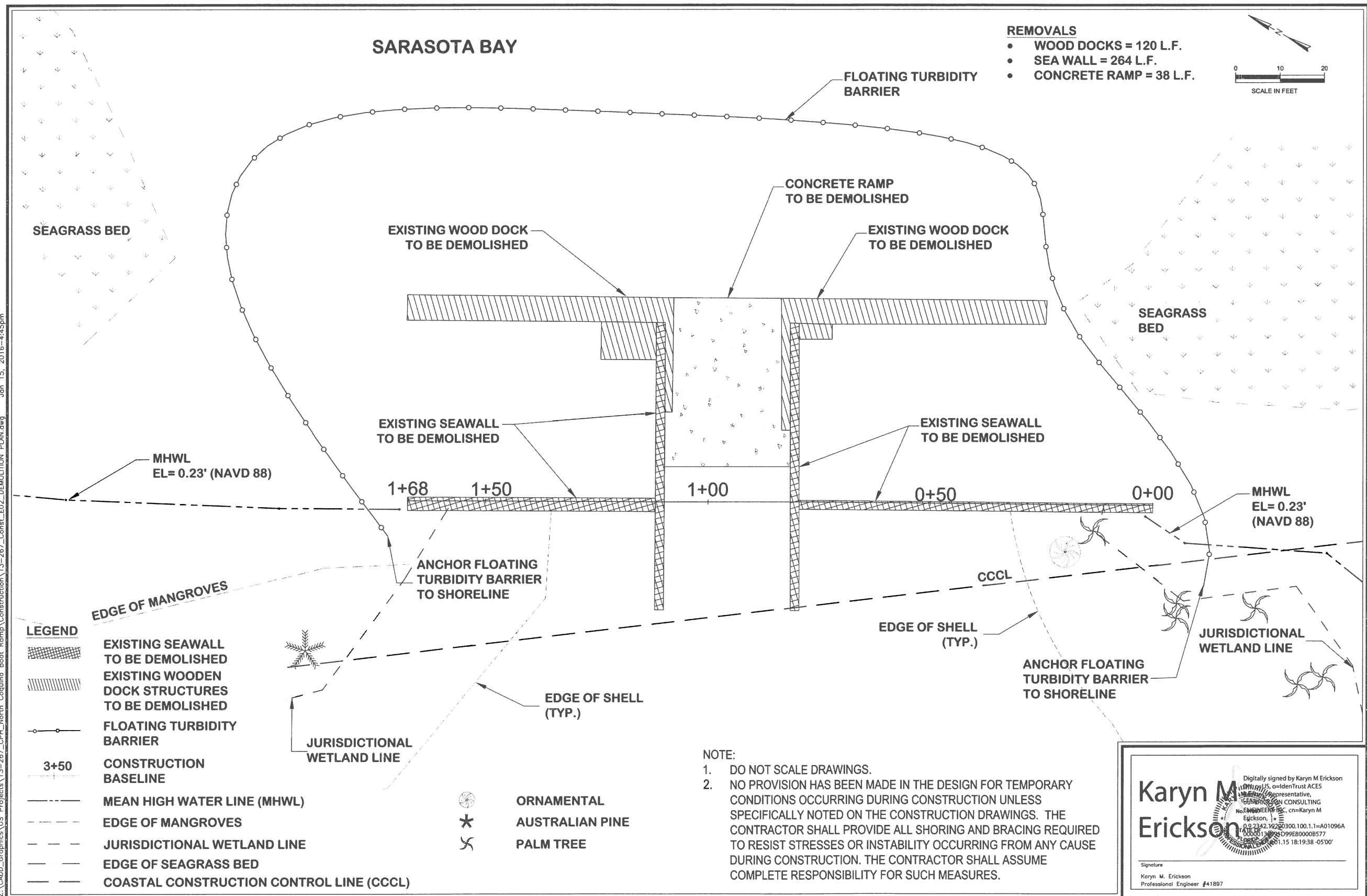
Digitally signed by Karyn M. Erickson
Karyn M. Erickson, o=IdenTrust ACES, ou=IdenTrust ACES, cn=Karyn M. Erickson, email=k.m.erickson@iden-trust.com

Karyn M. Erickson

Signature
Karyn M. Erickson
Professional Engineer #41897

NORTH COQUINA BOAT RAMP MANATEE COUNTY, FLORIDA									
EXISTING CONDITIONS									

Z:\CADD_Graphics\US Projects\13-267_CPH_North Coquina Boat Ramp Construction\13-267_Const_E02_DEMOLITION_PLAN.dwg Jan 15, 2016-4:45pm



REVISIONS	DATE	BY	CHKD	BY	NAME	ISSUED TO	COUNTY
1	1/15/16	BRC	NAME				

DESIGNED	DRAWN	CHECKED	NAME
BRC	JCC		
DATE:	01-15-2016	JOB NO.:	13-267
SCALE:	AS NOTED		

NORTH COQUINA BOAT RAMP	DEMOLITION PLAN
MANATEE COUNTY, FLORIDA	

Erickson Consulting Engineers, Inc.	7201 Delaney Court
	Sarasota, FL 34240
	(941) 373-6460

DRAWING NUMBER
E2

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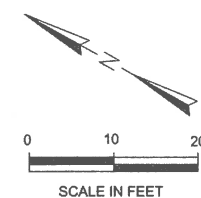
NOTES:

1. DO NOT SCALE DRAWINGS.
2. NO PROVISION HAS BEEN MADE IN THE DESIGN FOR TEMPORARY CONDITIONS OCCURRING DURING CONSTRUCTION UNLESS SPECIFICALLY NOTED ON THE CONSTRUCTION DRAWINGS. THE CONTRACTOR SHALL PROVIDE ALL SHORING AND BRACING REQUIRED TO RESIST STRESSES OR INSTABILITY OCCURRING FROM ANY CAUSE DURING CONSTRUCTION. THE CONTRACTOR SHALL ASSUME COMPLETE RESPONSIBILITY FOR SUCH MEASURES.

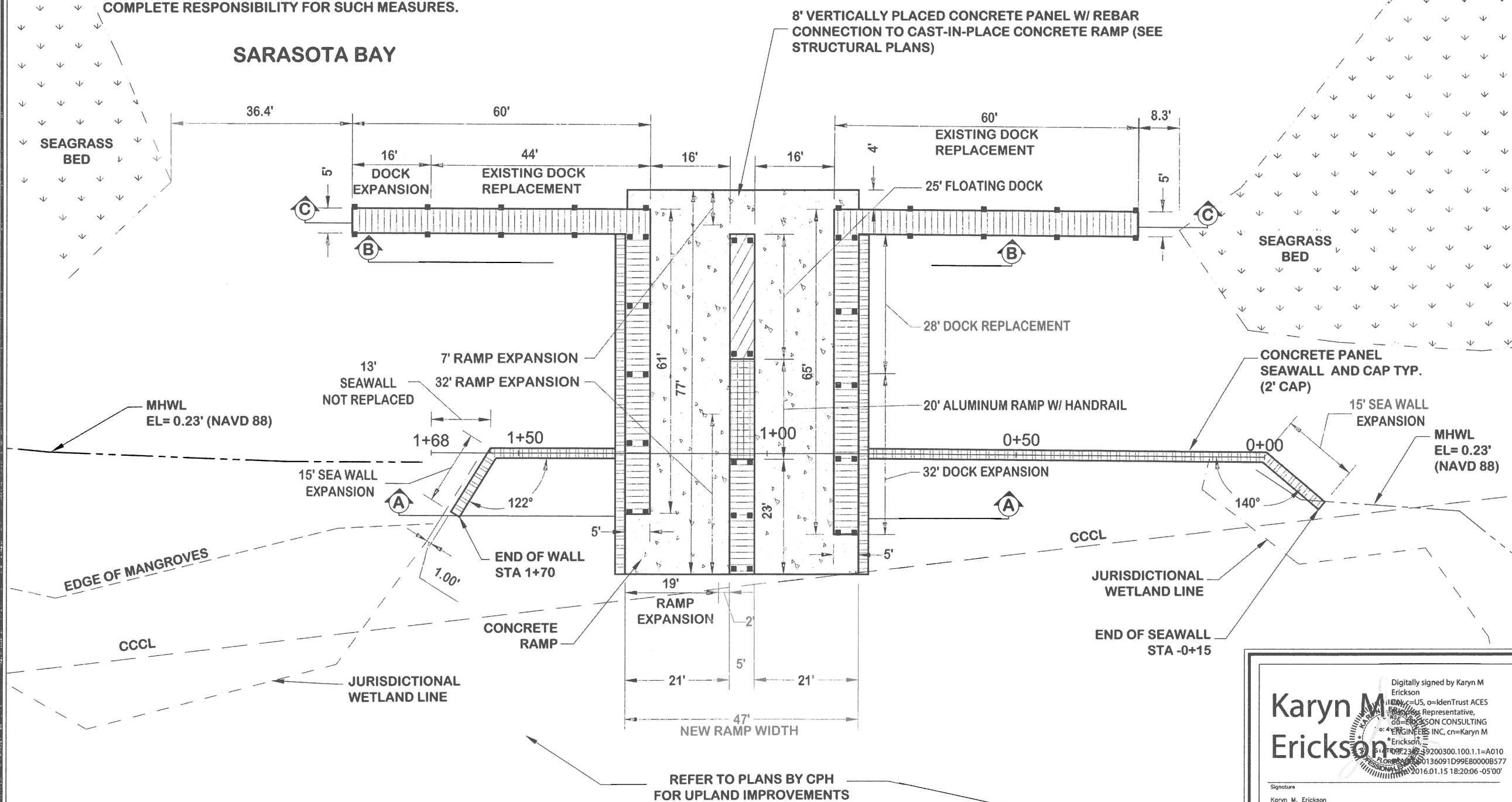
LEGEND

- NEW SEAWALL STRUCTURE (267 L.F.)
- NEW DOCK STRUCTURE (237 L.F.)
- NEW ALUMINUM RAMP WITH HANDRAIL (20 L.F.)
- NEW ALUMINUM FLOATING DOCK WITH CONCRETE DECK (25 L.F.)

- 3+50 CONSTRUCTION BASELINE
- MEAN HIGH WATER LINE (MHWL)
- EDGE OF MANGROVES
- JURISDICTIONAL WETLAND LINE
- EDGE OF SEAGRASS BED
- COASTAL CONSTRUCTION CONTROL LINE (CCCL)



SARASOTA BAY



REMARKS

ISSUED BY: BRC
DATE: 1/15/16
JOB NO. 13-267

DESIGNED BY: BRC
DATE: 01-15-2016
JOB NO. 13-267
SCALE: AS NOTED

NORTH COQUINA BOAT RAMP
MANATEE COUNTY, FLORIDA

SITE PLAN

Erickson Consulting Engineers, Inc.
7201 Delaney Court
Sarasota, FL 32420
(941) 373-6460

DRAWING NUMBER
E3

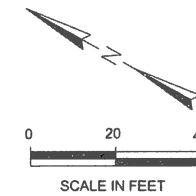
Z:\CADD_Graphics\US Projects\13-267_CPH_North Coquina Boat Ramp\Construction\13-267_Const_E04_EXCAVATION AREAS.dwg Jan 15, 2016 5:28pm

LEGEND

- LIMITS OF EXCAVATION
- CONSTRUCTION BASELINE
- SILT FENCE (TYPE III)
- JURISDICTIONAL WETLAND LINE
- MEAN HIGH WATER LINE (MHWL)
- COASTAL CONSTRUCTION CONTROL LINE (CCCL)
- NEW ALUMINUM RAMP WITH HANDRAIL

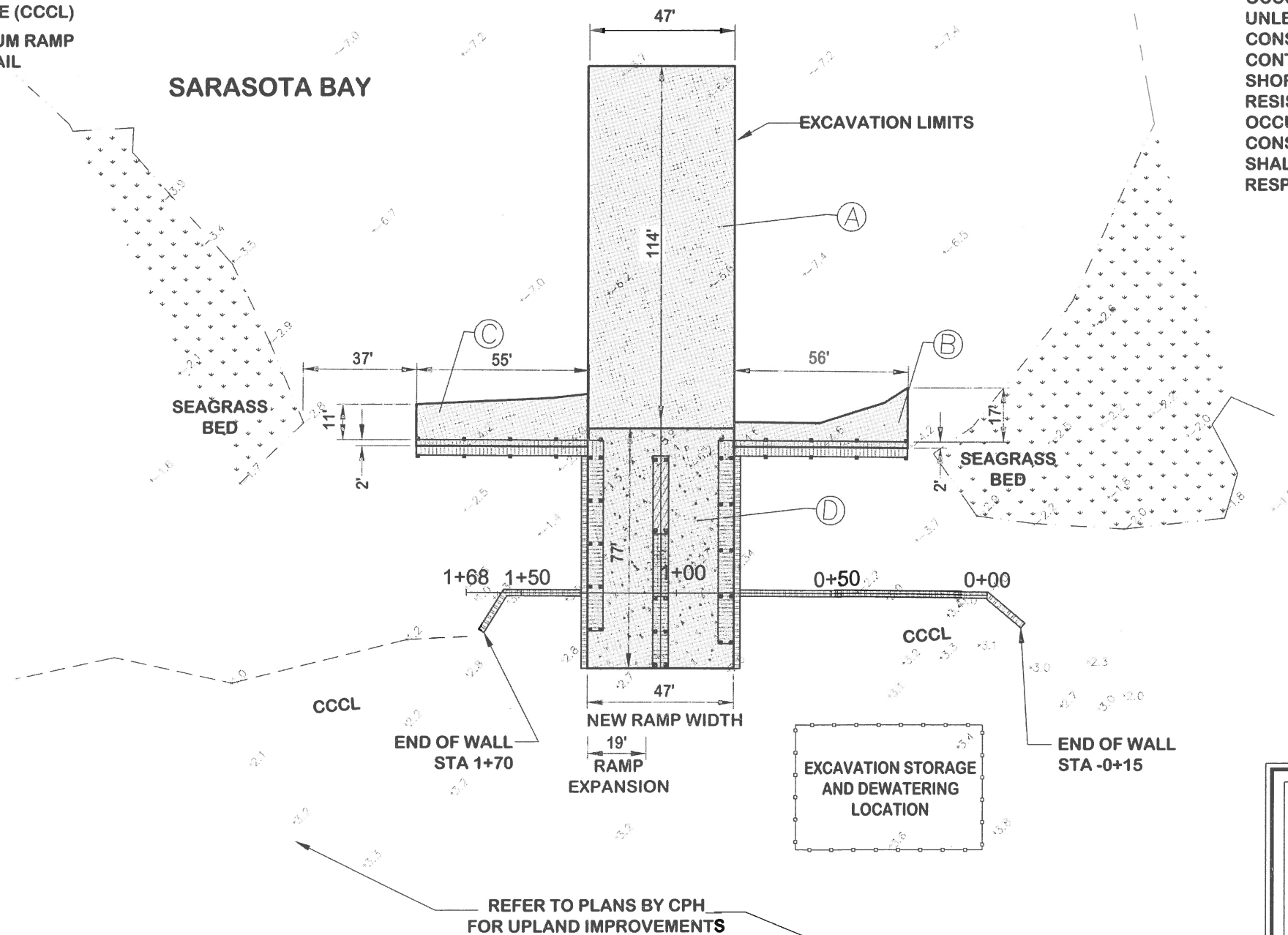
- EDGE OF SEAGRASS BED
- NEW SEAWALL STRUCTURE (267 L.F.)
- NEW DOCK STRUCTURE (236.5 L.F.)
- EXISTING SPOT ELEVATION
- EDGE OF MANGROVES
- NEW ALUMINUM FLOATING DOCK WITH CONCRETE DECK

Excavation Volumes		
Area	Excavation Depth (ft-NAVD88)	Volume (CY)
A	-7.2	200
B	-5.2	10
C	-5.2	20
D	-2.8 TO -7.2 (RAMP)	200
Total		430



NOTES:

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Digitally signed by Karyn M Erickson
DN: cn=Karyn M Erickson, o=Erickson Consulting, ou=ENGINEERING, email=karyn.m.erickson@ericksonconsulting.com, c=US
Karyn M. Erickson
Professional Engineer #41887

REVISIONS			
NO.	DATE	BY	DESCRIPTION
1	1/15/16	BRC	ISSUED TO COUNTY

DESIGNED	DRAWN	CHECKED	DATE
BRC	ACC	KME	01-15-2016
DATE: 01-15-2016		JOB NO. 13-267	SCALE: AS NOTED

NORTH COQUINA BOAT RAMP
MANATEE COUNTY, FLORIDA

EXCAVATION AREAS

Erickson Consulting Engineers, Inc.
7201 Delaney Court
Sarasota, FL 34240
(941) 373-6460

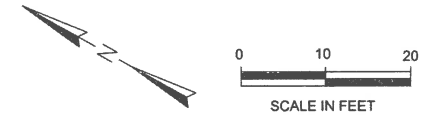


DRAWING NUMBER
E 4

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LEGEND

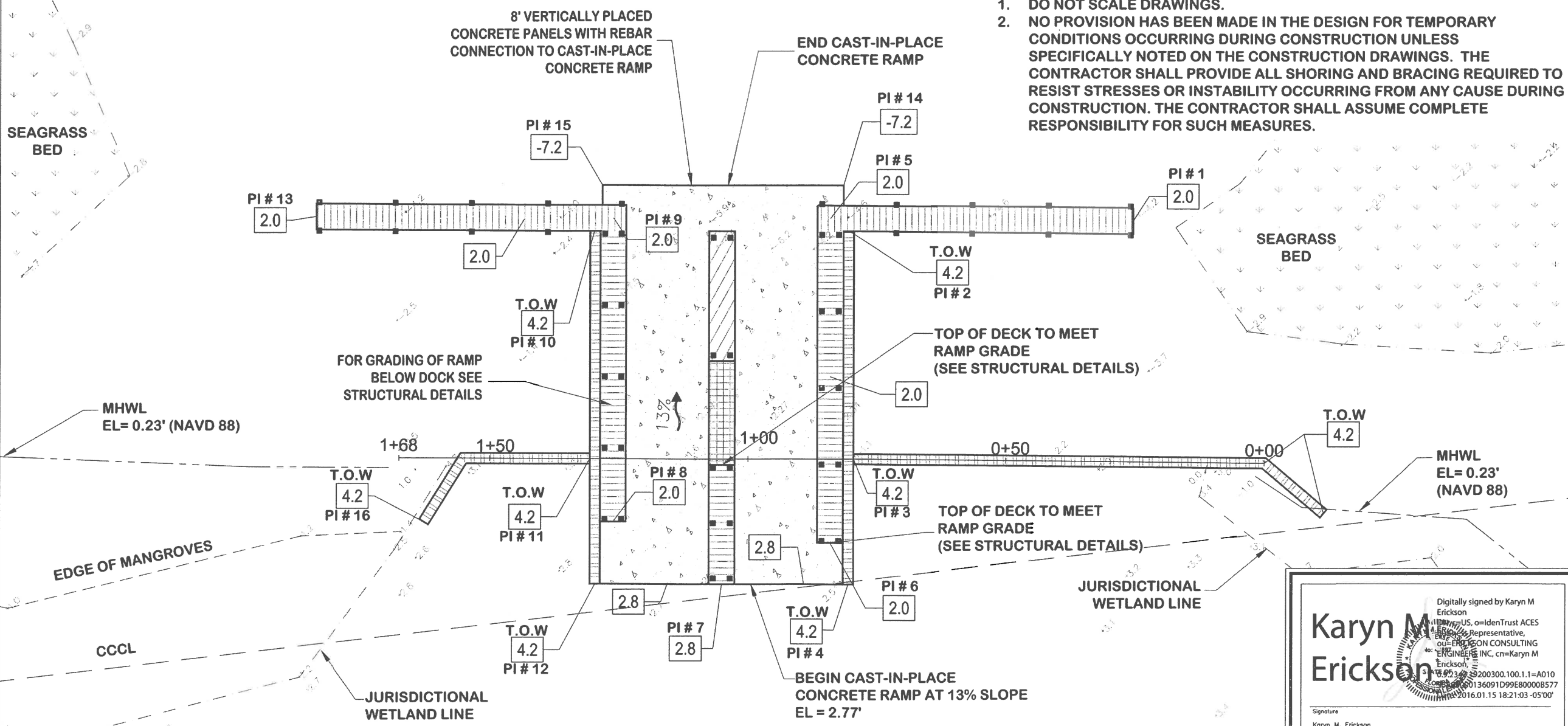
	NEW SEAWALL STRUCTURE	3+50	CONSTRUCTION BASELINE	T.O.W	TOP OF WALL
	NEW DOCK STRUCTURE	-----	MEAN HIGH WATER LINE (MHWL)	4.2	PROPOSED ELEVATION
	NEW ALUMINUM RAMP WITH HANDRAIL	-----	EDGE OF MANGROVES		EXISTING ELEVATION
	NEW ALUMINUM FLOATING DOCK WITH CONCRETE DECK	-----	JURISDICTIONAL WETLAND LINE		
		-----	EDGE OF SEAGRASS BED		
		-----	COASTAL CONSTRUCTION CONTROL LINE (CCCL)		



SARASOTA BAY

P.I.#	STATION	OFFSET	P.I.#	STATION	OFFSET
PI #1	STA. 0+26	46.37 FT	PI #9	STA. 1+26	46.37 FT
PI #2	STA. 0+80.5	43.87 FT	PI #10	STA. 1+29.5	43.87 FT
PI #3	STA. 0+79.5	0.00 FT	PI #11	STA. 1+30.5	0.00 FT
PI #4	STA. 0+80.5	-24.13 FT	PI #12	STA. 1+29.5	-24.13 FT
PI #5	STA. 0+84.5	46.37 FT	PI #13	STA. 1+84.25	46.37 FT
PI #6	STA. 0+84.5	-16.15 FT	PI #14	STA. 0+81.56	52.72 FT
PI #7	STA. 1+05	-24.13 FT	PI #15	STA. 1+28.57	52.72 FT
PI #8	STA. 1+26	-12.10 FT	PI #16	STA. 1+63.12	-12.29 FT

- NOTES:
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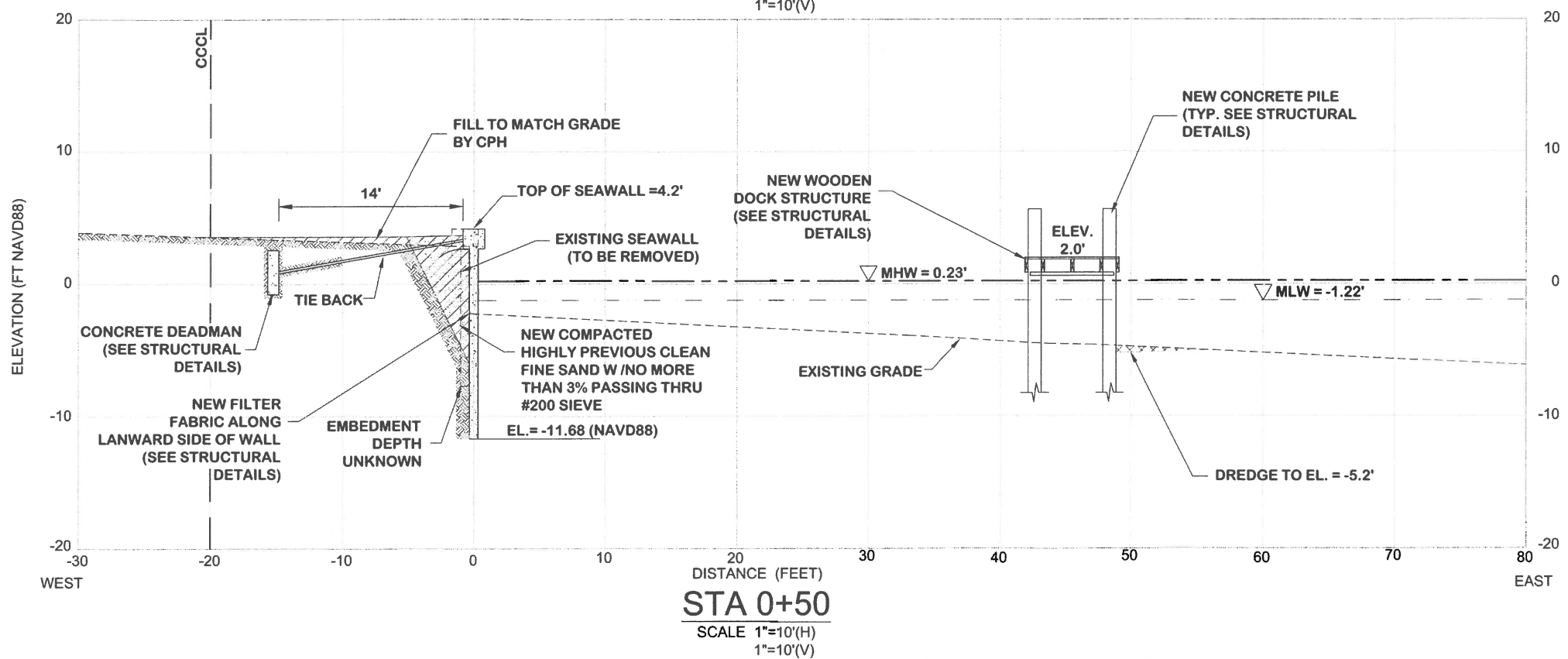
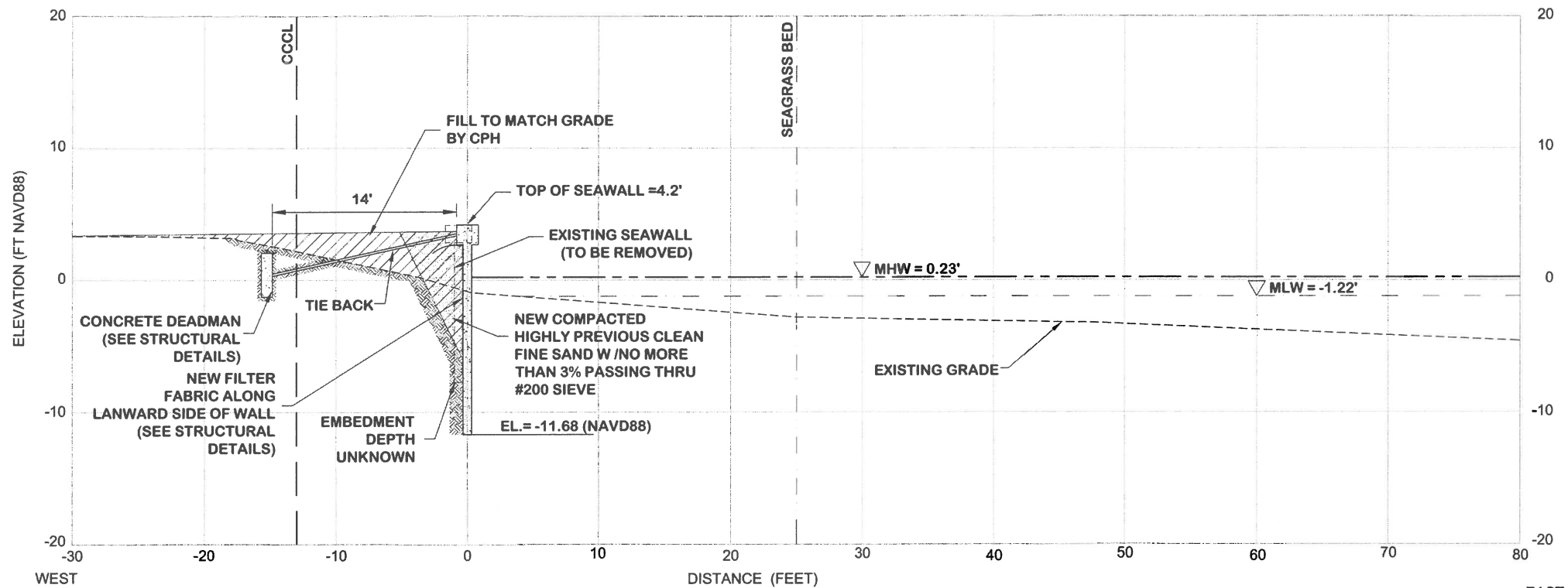


Digitally signed by Karyn M Erickson
Karyn M Erickson
Professional Engineer #41897

Signature
Karyn M. Erickson
Professional Engineer #41897

REVISIONS	NO. 1	DATE	1/15/16	BY	BRC	NAME		ISSUED TO COUNTY	
DESIGNED	DATE	01-15-2016	JOB NO.	13-267	SCALE	AS NOTED			
NORTH COQUINA BOAT RAMP MANATEE COUNTY, FLORIDA									
PAVING, GRADING AND DRAINAGE PLAN									
Erickson Consulting Engineers, Inc. 7201 Delaney Court Sarasota, FL 32420 (941) 373-6460									
DRAWING NUMBER E 5									

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- NOTES:
1. DO NOT SCALE DRAWINGS.
 2. NO PROVISION HAS BEEN MADE IN THE DESIGN FOR TEMPORARY CONDITIONS OCCURRING DURING CONSTRUCTION UNLESS SPECIFICALLY NOTED ON THE CONSTRUCTION DRAWINGS. THE CONTRACTOR SHALL PROVIDE ALL SHORING AND BRACING REQUIRED TO RESIST STRESSES OR INSTABILITY OCCURRING FROM ANY CAUSE DURING CONSTRUCTION. THE CONTRACTOR SHALL ASSUME COMPLETE RESPONSIBILITY FOR SUCH MEASURES.

LEGEND

CUT

FILL

MHW

MLW

Digitally signed by Karyn M. Erickson
Karyn M. Erickson, o=US, o=IdenTrust ACES
Erickson Representative,
OU=ERICKSON CONSULTING
No: "ERICKSON", cn=Karyn M. Erickson,
c=US, o=IdenTrust ACES, ou=ERICKSON CONSULTING
DN: Karyn M. Erickson, o=US, o=IdenTrust ACES, ou=ERICKSON CONSULTING, cn=Karyn M. Erickson, c=US

Signature

Karyn M. Erickson
Professional Engineer #41897

REV.	DATE	BY	CHKD	NAME	REMARKS
1	1/15/16	BRC	NAME	ISSUED TO COUNTY	

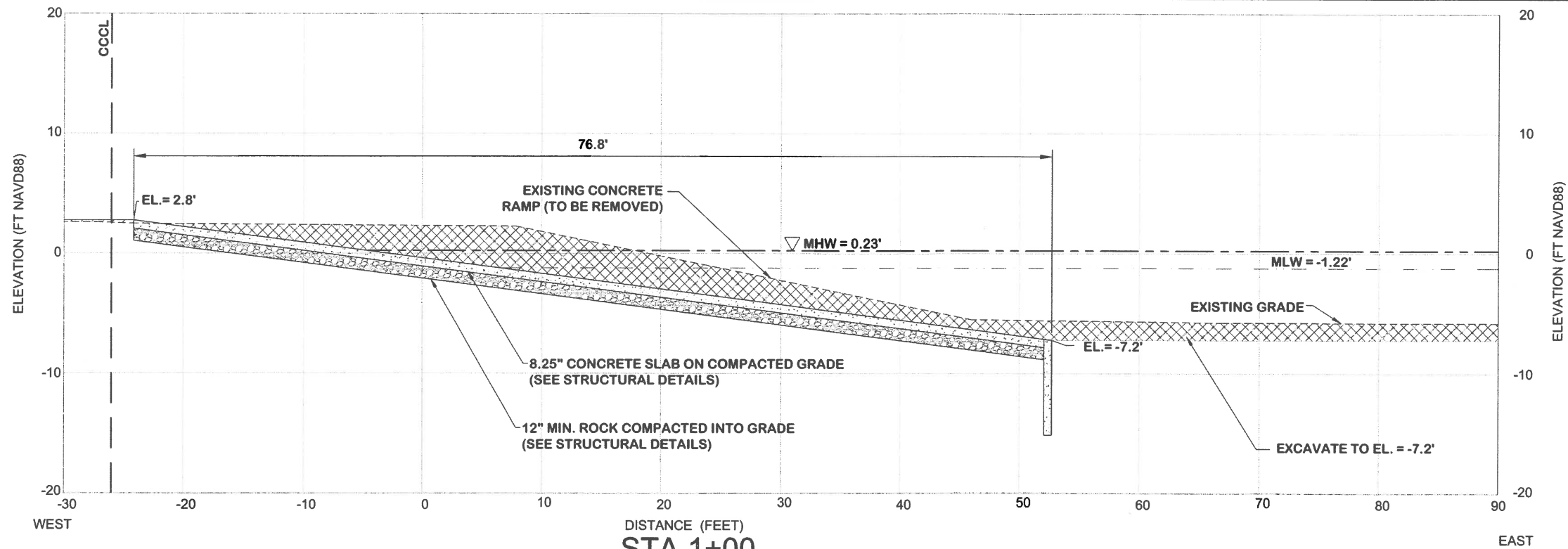
DESIGNED	DRAWN	CHECKED	DATE	SCALE
BRC	BRC	JCC	01-15-2016	AS NOTED

NORTH COQUINA BOAT RAMP MANATEE COUNTY, FLORIDA	CROSS SECTIONS (SHORE PERPENDICULAR)
--	---

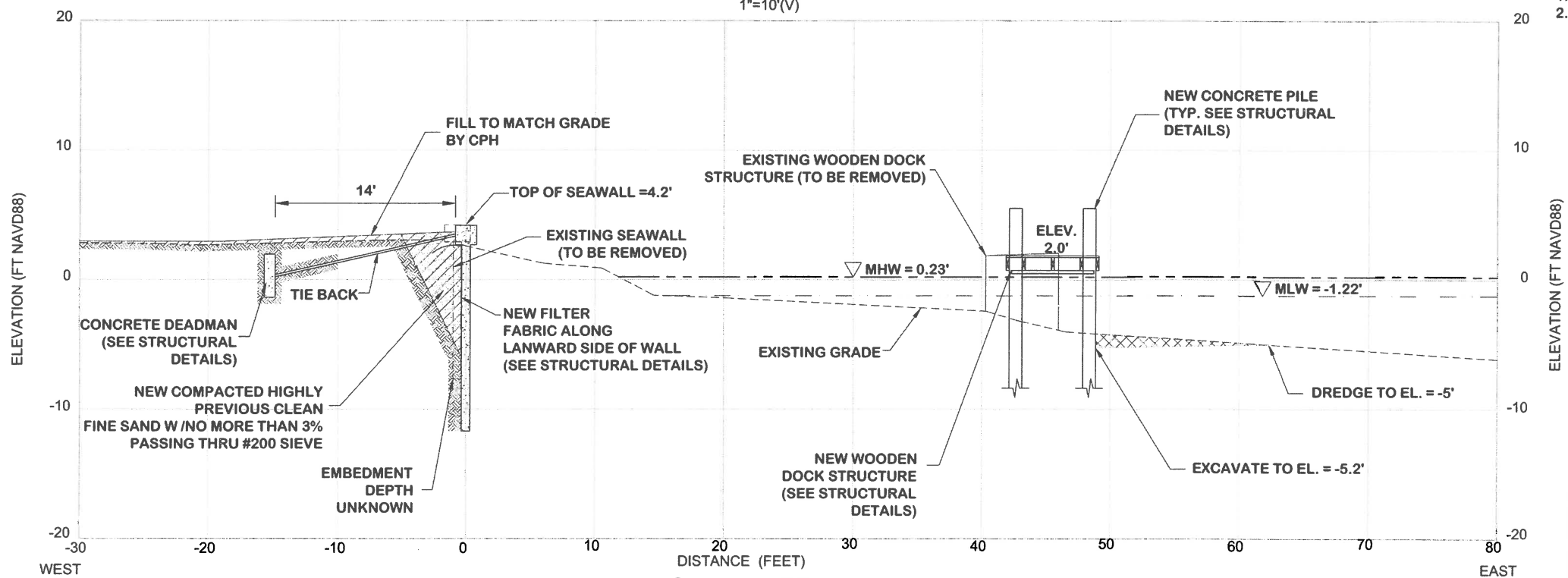
ERICKSON CONSULTING ENGINEERS, INC. 7201 Delaney Court Sarasota, FL 34220 (941) 373-8460	ERICKSON CONSULTING ENGINEERS, INC.
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DRAWING NUMBER
E6

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STA 1+00
SCALE 1"=10'(H)
1"=10'(V)



STA 1+50
SCALE 1"=10'(H)
1"=10'(V)

- NOTES:
- DO NOT SCALE DRAWINGS.
 - NO PROVISION HAS BEEN MADE IN THE DESIGN FOR TEMPORARY CONDITIONS OCCURRING DURING CONSTRUCTION UNLESS SPECIFICALLY NOTED ON THE CONSTRUCTION DRAWINGS. THE CONTRACTOR SHALL PROVIDE ALL SHORING AND BRACING REQUIRED TO RESIST STRESSES OR INSTABILITY OCCURRING FROM ANY CAUSE DURING CONSTRUCTION. THE CONTRACTOR SHALL ASSUME COMPLETE RESPONSIBILITY FOR SUCH MEASURES.

LEGEND

- CUT
- FILL
- MHW
- MLW
- 8.25" CONCRETE SLAB ON COMPACTED GRADE
- 12" MIN. ROCK COMPACTED INTO GRADE

Digitally signed by Karyn M. Erickson
Karyn M. Erickson
Professional Engineer #41897

REV.	NO.	DATE	BY	CHKD.	NAME	REMARKS
1	1	1/15/16	BRC	NAME	ISSUED TO COUNTY	

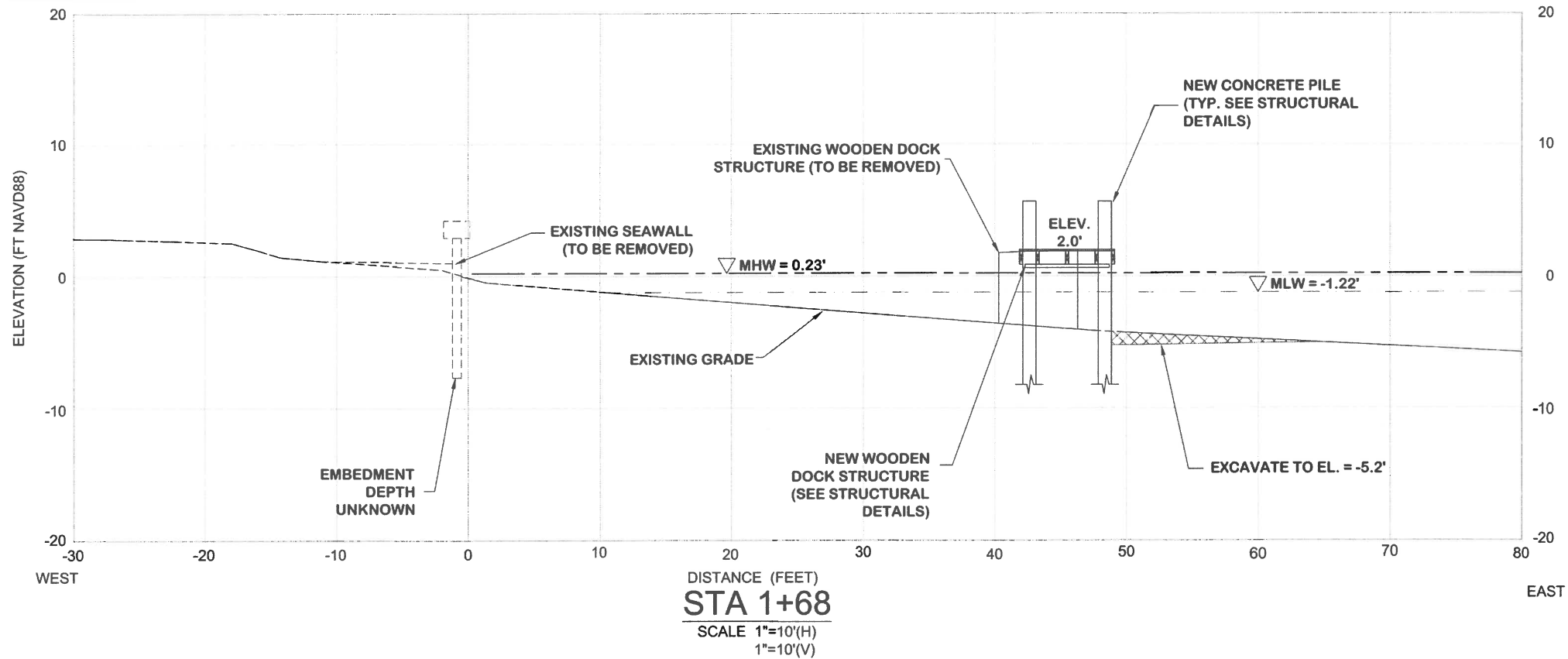
DESIGNED	DRAWN	CHECKED	DATE	DATE	DATE	SCALE
BRC	JCC	JCC	01-15-2016	01-15-2016	01-15-2016	AS NOTED

NORTH COQUINA BOAT RAMP
MANATEE COUNTY, FLORIDA
CROSS SECTIONS
(SHORE PERPENDICULAR)

Erickson Consulting Engineers, Inc.
7201 Delaney Court
Sarasota, FL 34240
(941) 373-6460

DRAWING NUMBER
E7

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NOTES:

1. DO NOT SCALE DRAWINGS.
2. NO PROVISION HAS BEEN MADE IN THE DESIGN FOR TEMPORARY CONDITIONS OCCURRING DURING CONSTRUCTION UNLESS SPECIFICALLY NOTED ON THE CONSTRUCTION DRAWINGS. THE CONTRACTOR SHALL PROVIDE ALL SHORING AND BRACING REQUIRED TO RESIST STRESSES OR INSTABILITY OCCURRING FROM ANY CAUSE DURING CONSTRUCTION. THE CONTRACTOR SHALL ASSUME COMPLETE RESPONSIBILITY FOR SUCH MEASURES.

LEGEND

- CUT
- FILL
- MHW
- MLW

Digitally signed by Karyn M Erickson
DN: cn=Erickson, o=IdentTrust ACES
Erickson Consulting, ou=Erickson Consulting
ENGINEERING INC, cn=Karyn M Erickson
1.2.842.3.4.1.200300.100.1.1=A0109
36091D99E80000B577
2016.01.15 18:22:23 -05'00'

Karyn M Erickson

Signature

Karyn M. Erickson
Professional Engineer #41897

REV	DATE	BY	CHKD	NAME	REMARKS
1	1/15/16	BRC	KME		ISSUED TO COUNTY

DESIGNED	DRAWN	CHECKED	DATE	SCALE
BRC	JCC	KME	01-15-2016	AS NOTED
JOB NO.	13-267			

NORTH COQUINA BOAT RAMP
MANATEE COUNTY, FLORIDA

CROSS SECTIONS
(SHORE PERPENDICULAR)

Erickson Consulting Engineers, Inc.

7201 Delaney Court
Sarasota, FL 32420
(941) 373-8460

DRAWING NUMBER

E8



SCALE 1"=10'(H)
1"=10'(V)



SCALE 1"=10'(H)
1"=10'(V)

- 1.
- 2.

— — — MHW
— — — MLW


**8.25" CONCRETE SLAB ON
COMPACTED GRADE**

 12" MIN. ROCK
COMPACTED INTO GRADE

Karyn M. Erickson

Signature
Karyn M. Erickson
Professional Engineer #41897

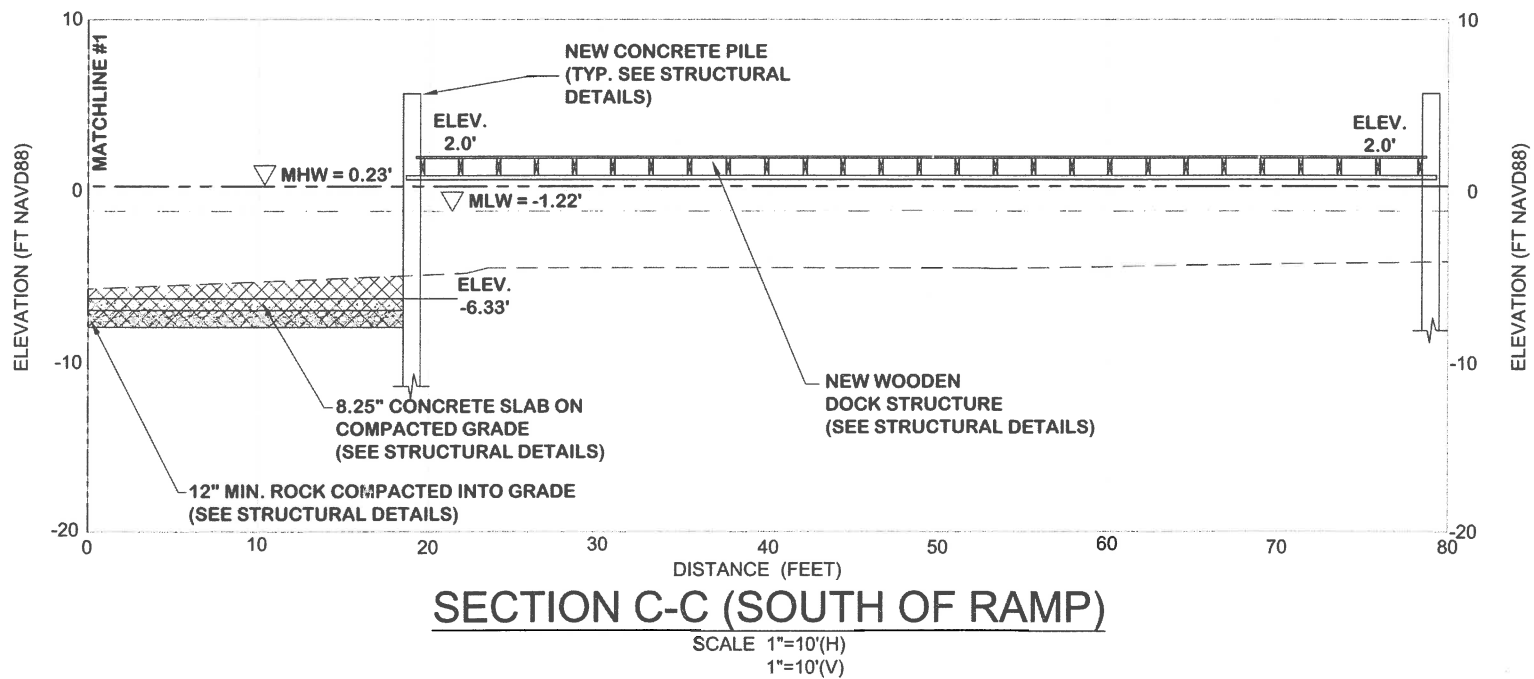
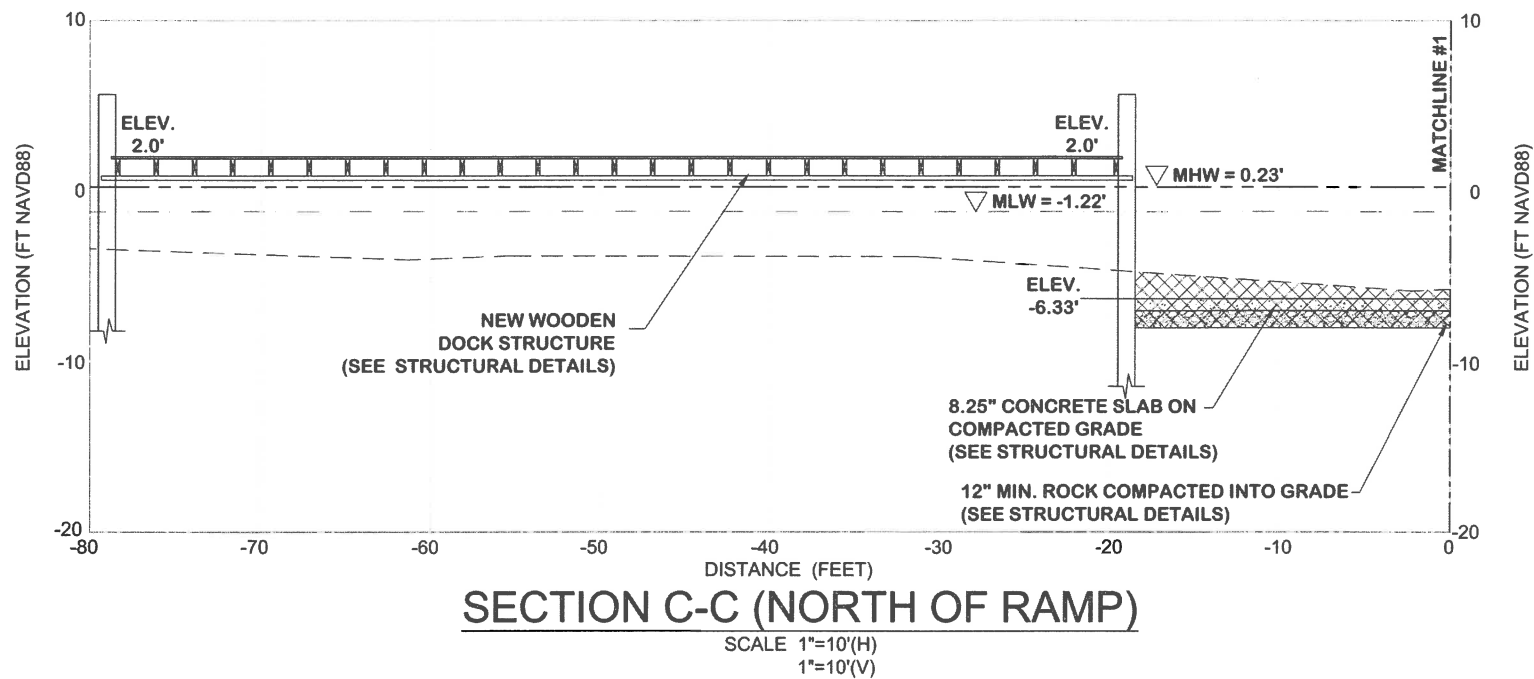
**CROSS SECTIONS
(SHORE PARALLEL)**

ECB

Erickson Consulting Engineers, Inc.
7201 Delaney Court
Sarasota, FL 32420
(941) 373-6460

DRAWING NUMBER
E 9

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- NOTES:**
1. DO NOT SCALE DRAWINGS.
 2. NO PROVISION HAS BEEN MADE IN THE DESIGN FOR TEMPORARY CONDITIONS OCCURRING DURING CONSTRUCTION UNLESS SPECIFICALLY NOTED ON THE CONSTRUCTION DRAWINGS. THE CONTRACTOR SHALL PROVIDE ALL SHORING AND BRACING REQUIRED TO RESIST STRESSES OR INSTABILITY OCCURRING FROM ANY CAUSE DURING CONSTRUCTION. THE CONTRACTOR SHALL ASSUME COMPLETE RESPONSIBILITY FOR SUCH MEASURES.

- LEGEND**
- CUT
 - FILL
 - MHW
 - MLW
 - 8.25" CONCRETE SLAB ON COMPACTED GRADE
 - 12" MIN. ROCK COMPACTED INTO GRADE

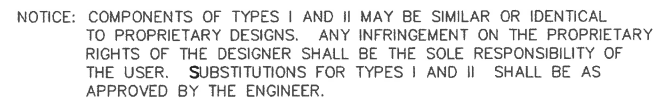
Digitally signed by Karyn M. Erickson
Karyn M. Erickson
Professional Engineer #41897

REVISIONS	DATE	BY	REMARKS
1	1/15/16	BRG	ISSUED TO COUNTY

DESIGNED	DRAWN	CHECKED	DATE	JOB NO.	SCALE
BRG	BRG	JCC	01-15-2016	13-267	AS NOTED

NORTH COQUINA BOAT RAMP MANATEE COUNTY, FLORIDA	CROSS SECTIONS (SHORE PARALLEL)
--	------------------------------------

Erickson Consulting Engineers, Inc. 7201 Delaney Court Sarasota, FL 34240 (941) 373-6460	DRAWING NUMBER E 10
---	-------------------------------



FLOATING TURBIDITY BARRIER
FDOT INDEX #103
NOT TO SCALE



Karyn M. Erickson
Professional Engineer #41897

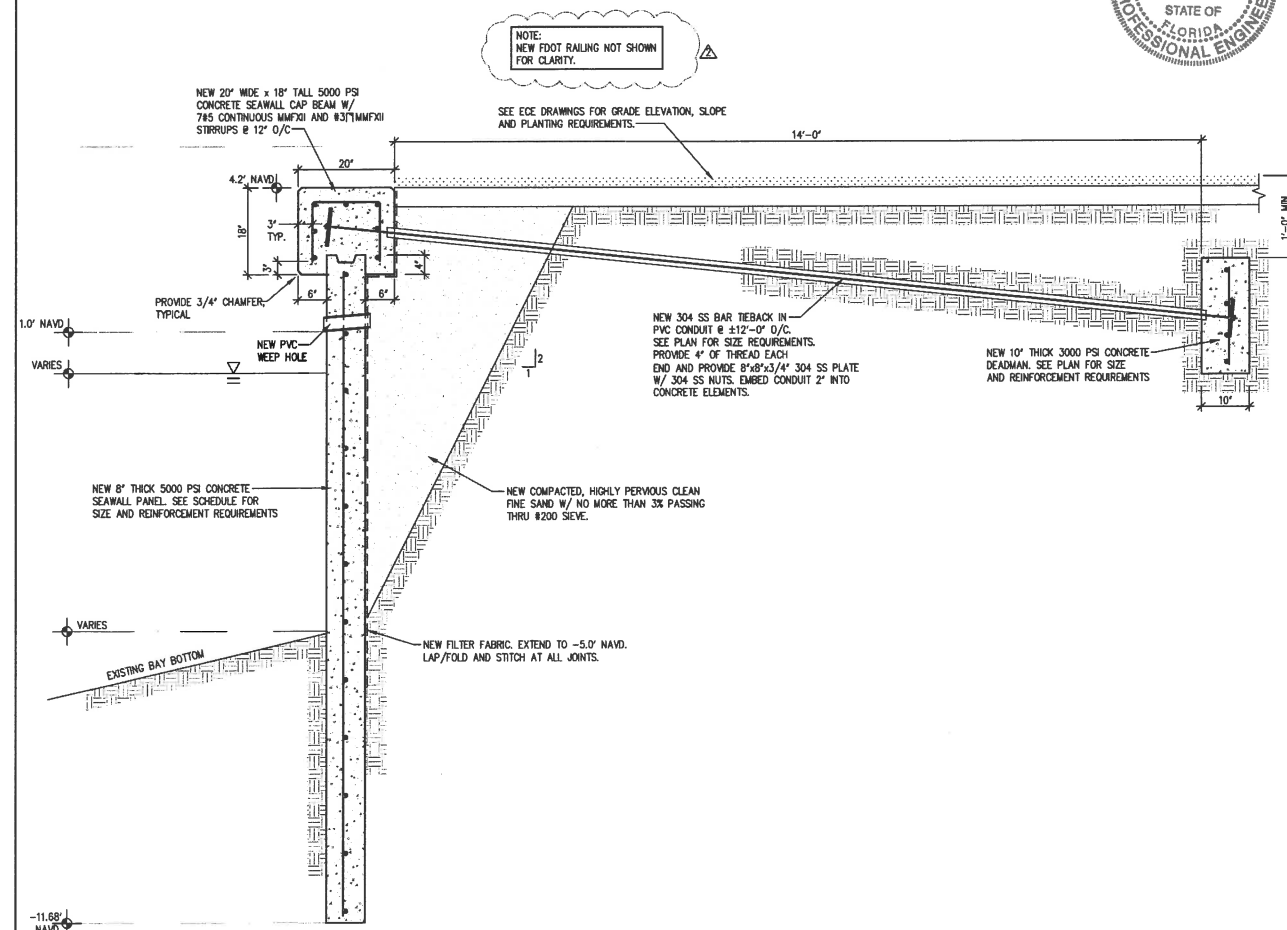
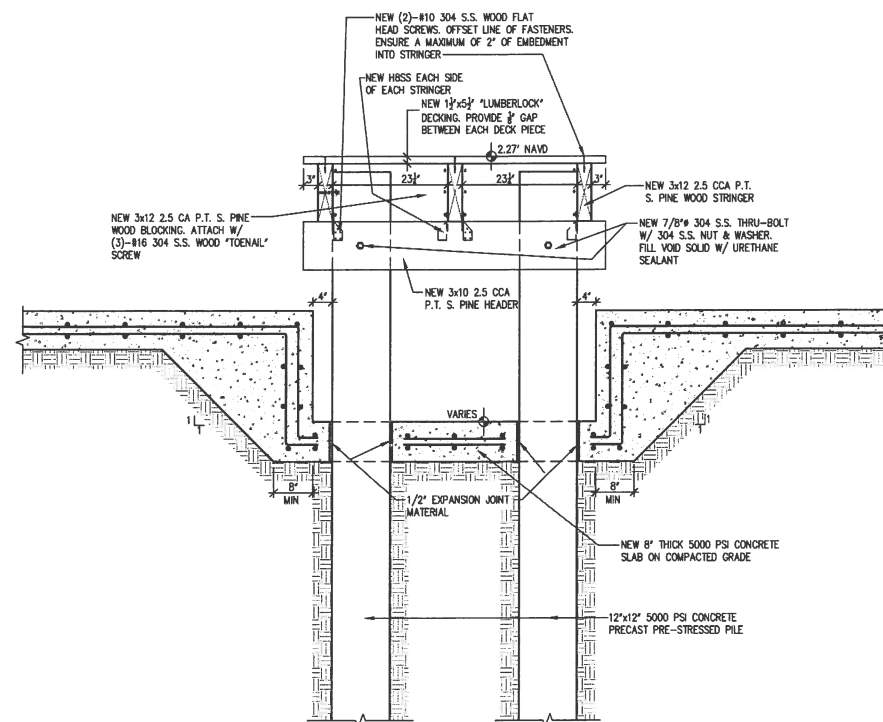
NORTH COQUINA BOAT RAMP MANATEE COUNTY, FLORIDA									
CONSTRUCTION DETAILS									
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<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>REV. NO. 1</p> <p>DATE 1/15/16</p> <p>ISSUED TO COUNTY</p> </div> <div style="width: 45%;"> <p>BY </p> <p>DATE </p> <p>ISSUED TO </p> </div> </div>									
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>REMARKS</p> <p> </p> <p> </p> <p> </p> </div> <div style="width: 45%;"> <p> </p> <p> </p> <p> </p> </div> </div>									



(S2.2) N.T.S.

S2.2 NTS





D14
S2.3 $\frac{3}{8}''=1'-0''$

PROJECT NAME

NORTH COQUINA
BOAT RAMP
MANATEE COUNTY, FL

ISSUED FOR

CONSTRUCTION 12-21-15

PROJECT NUMBER

S2013-103

SIGN/SEAL

RIAN STIRLING, PE 34927

[illegible]

DRAWN BY RTR

CHECKED BY BHS

DATE 12-21-15

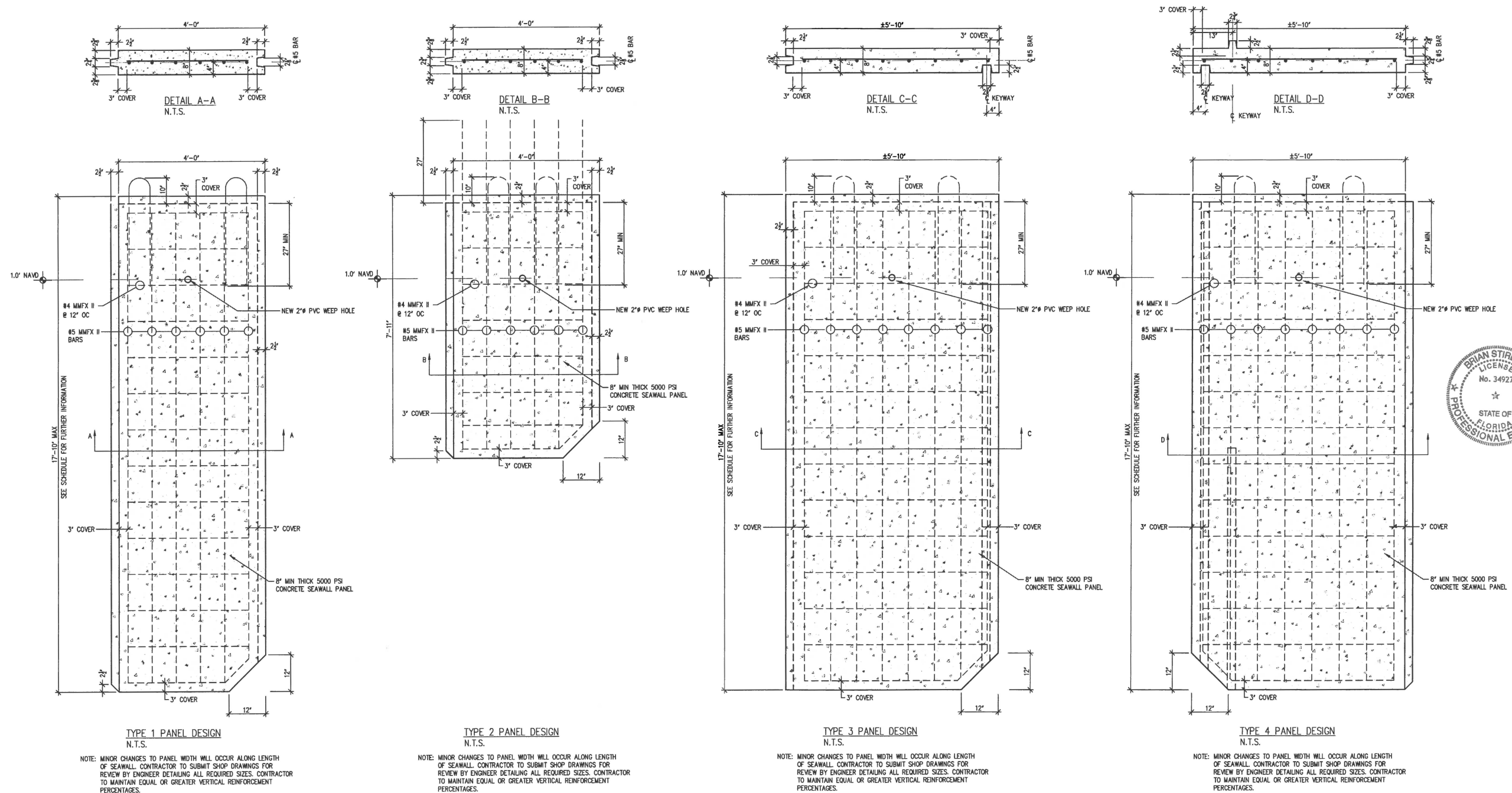
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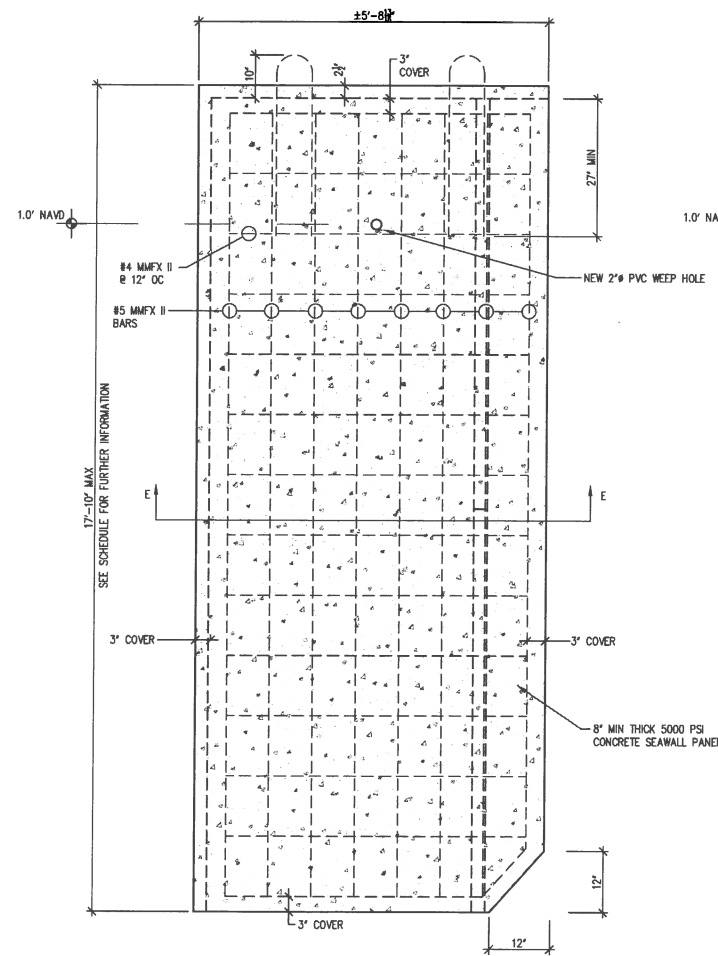
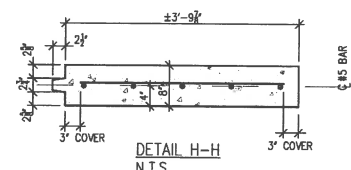
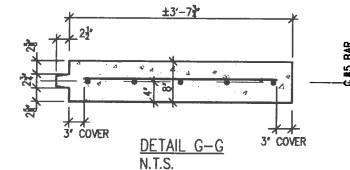
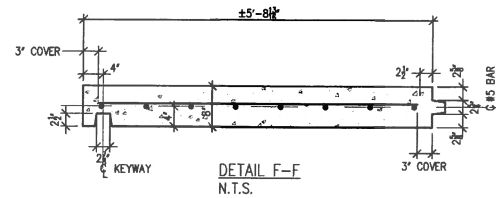
SHEET TITLE

STRUCTURAL DETAILS

SHEET NUMBER

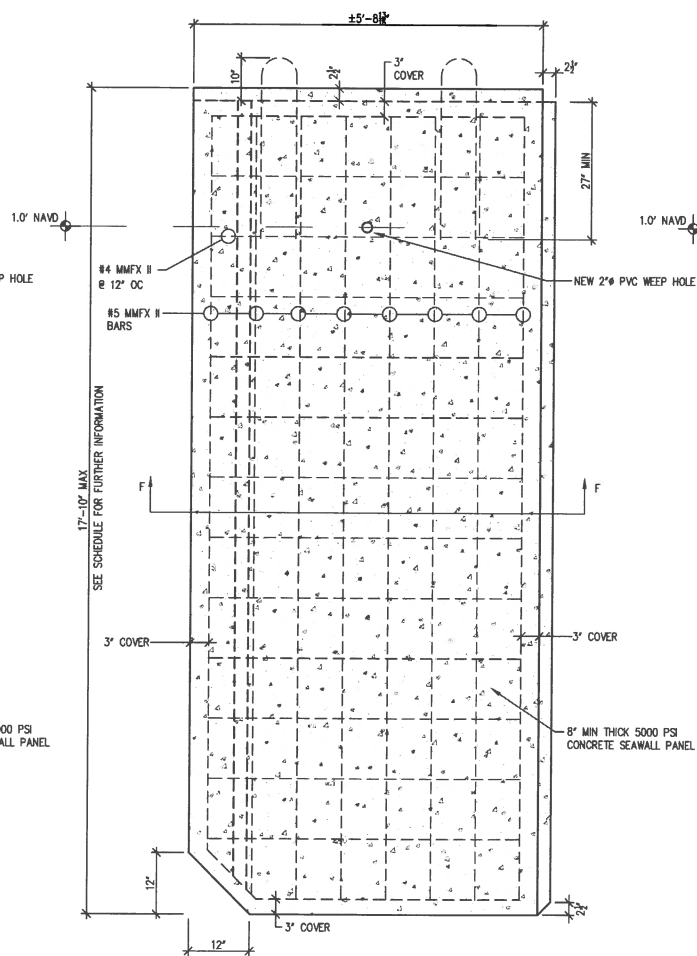
S2.4





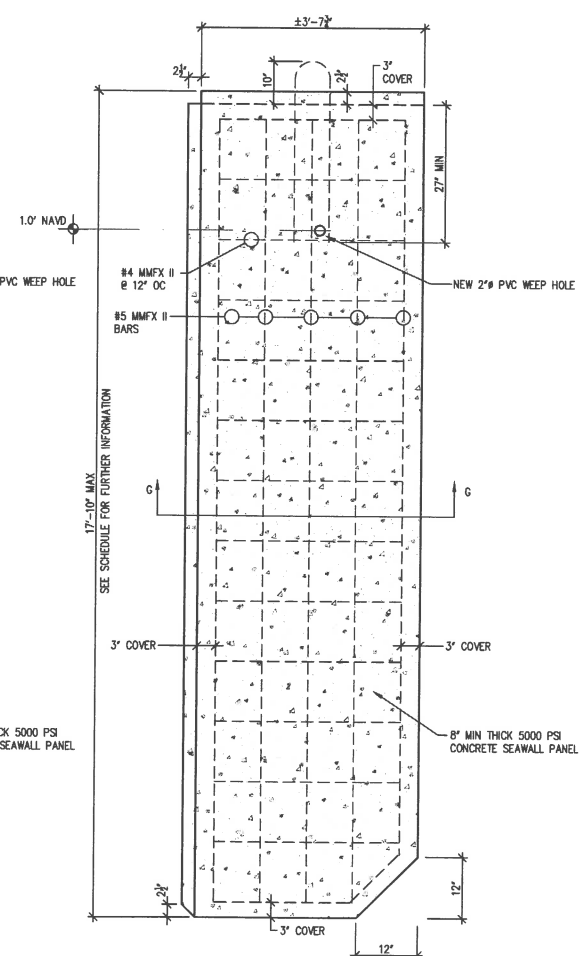
TYPE 5 PANEL DESIGN
N.T.S.

NOTE: MINOR CHANGES TO PANEL WIDTH WILL OCCUR ALONG LENGTH OF SEAWALL. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR REVIEW BY ENGINEER DETAILING ALL REQUIRED SIZES. CONTRACTOR TO MAINTAIN EQUAL OR GREATER VERTICAL REINFORCEMENT PERCENTAGES.



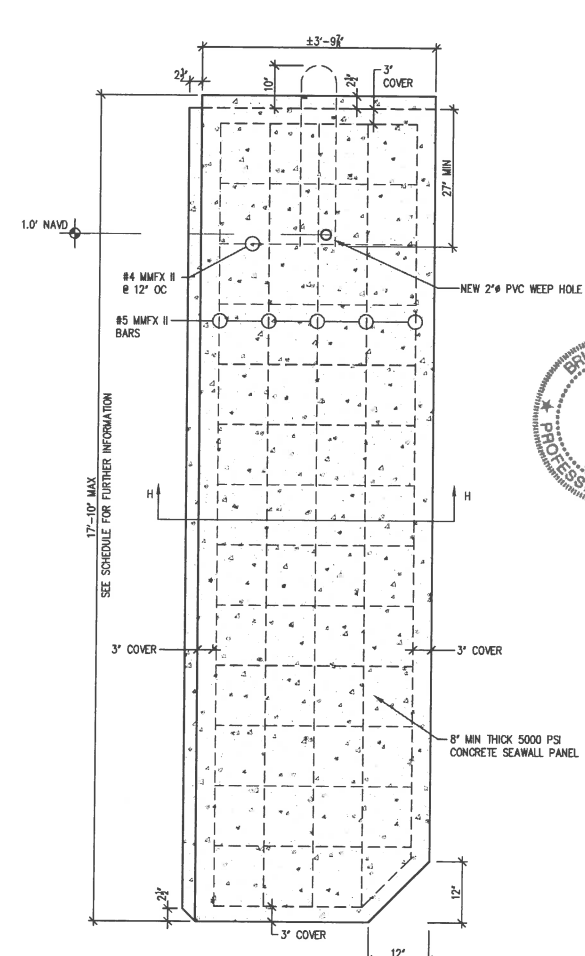
TYPE 6 PANEL DESIGN
N.T.S.

NOTE: MINOR CHANGES TO PANEL WIDTH WILL OCCUR ALONG LENGTH OF SEAWALL. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR REVIEW BY ENGINEER DETAILING ALL REQUIRED SIZES. CONTRACTOR TO MAINTAIN EQUAL OR GREATER VERTICAL REINFORCEMENT PERCENTAGES.



TYPE 7 PANEL DESIGN
NTS

NOTE: MINOR CHANGES TO PANEL WIDTH WILL OCCUR ALONG LENGTH OF SEAWALL. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR REVIEW BY ENGINEER DETAILING ALL REQUIRED SIZES. CONTRACTOR TO MAINTAIN EQUAL OR GREATER VERTICAL REINFORCEMENT PERCENTAGES.



TYPE 8 PANEL DESIGN
N.T.C.

NOTE: MINOR CHANGES TO PANEL WIDTH WILL OCCUR ALONG LENGTH OF SEAWALL. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR REVIEW BY ENGINEER DETAILING ALL REQUIRED SIZES, CONTRACTOR TO MAINTAIN EQUAL OR GREATER VERTICAL REINFORCEMENT

