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LANDSCAPE PLAN

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SITE PLAN - ELECTRICAL SITE PLAN - ELECTRICAL

SITE PLAN - ELECTRICAL
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SCHEDULES & DETAILS - ELECTRICAL
SITE PLAN - ELECTRICAL

REPORT OF SPT BORING FOR STRUCTURE

LANDSCAPE PLAN LANDSCAPE PLAN LANDSCAPE PLAN LANDSCAPE PLAN LANDSCAPE DETAILS MINUTEMEN CAUSEWAY POSTED SPEED 30 MPH

> GOVERNING STANDARDS AND SPECIFICATIONS **DESIGN STANDARDS DATED 2014** AND BRIDGE CONSTRUCTION DATED 2014

NOTE: THESE PLANS HAVE BEEN DESIGNED TO PLOT ON *D* SIZE (24* X 36*) PAPER, THE SCALE MAY HAVE BEEN CHANGED IF

MINUTEMEN CAUSEWAY STORMWATER / STREETSCAPE **IMPROVEMENTS**

CITY OF COCOA BEACH, FLORIDA

FOR:

CITY OF COCOA BEACH, FL

FDOT FINANCIAL PROJECT ID 434974-1-58-01 FEDERAL AID NUMBER 4225-071-C **BREVARD COUNTY (70060-001)**



LOCATION MAP

CITY OF COCOA

600 SCHOOL ST. COCOA, FL 32922 P: (321) 433-8822 F: (321) 639-7663 CONTACT: ROBERT HAILE HAILE@COCOAFL.ORG

STORMWATER MANAGEMENT

CITY OF COCOA BEACH 2 SOUTH ORLANDO AVENUE 1600 MINUTEMAN CAUSEWAY COCOA BEACH, FL 32931 P: (321) 868-3292

JREGAN@CITYOFCOCOABEACH.COM

SANITARY SEWER / RECLAIM WATER CITY OF COCOA BEACH

2 SOUTH ORLANDO AVENUE -1600 MINUTEMAN CAUSEWAY COCOA BEACH, FL 32931 P: (321) 868-7500 CONTACT: STEVEN LEWANDOWSKI

ELECTRIC POWER FLORIDA POWER & LIGHT - BREVARD P: (800) 778-9140 CONTACT: USIC DISPATCH

NATURAL GAS FLORIDA CITY GAS P: (321) 638-3424 F: (321) 633-6733 CONTACT: RON MUELLER RMUELLER@AGLRESOURCES.COM FIBER OPTIC **LEVEL 3 COMMUNICATIONS**

CONTACT: AURA ADLAO BULURAN

TELEPHONE P: (800) 778-9140 CONTACT: USIC DISPATCH

P: (877) 366-8344

BRIGHT HOUSE NETWORKS, LLC P: (800) 778-9140 CONTACT: CENTRAL LOCATING SERVICE

OWNER/APPLICANT CITY OF COCOA BEACH CRA 2 SOUTH ORLANDO AVENUE COCOA BEACH, FL 32932 CONTACT: BOB MAJKA, CITY MANAGER
CITYMANAGER@CITYOFCOCOABEACH.COM

CIVIL ENGINEER MILLER LEGG 631 SOUTH ORLANDO AVE, SUITE 400 WINTER PARK, FL 32789 F: (407) 629-7883 RCOHEN@MILLERLEGG.COM

SURVEYOR MILLER LEGG 631 SOUTH ORLANDO AVE, SUITE 400 WINTER PARK, FL 32789 F: (407) 629-7883 JOUARTEL @MILLERLEGG COM

Central Florida Office: 631 S. Orlando Avenue · Suite 400

Winter Park, Florida · 32789-7122 407-629-8880 · Fax: 407-629-7883

www.millerlegg.com

Certificates of Authorization: EB7318, LB6680, LC0337

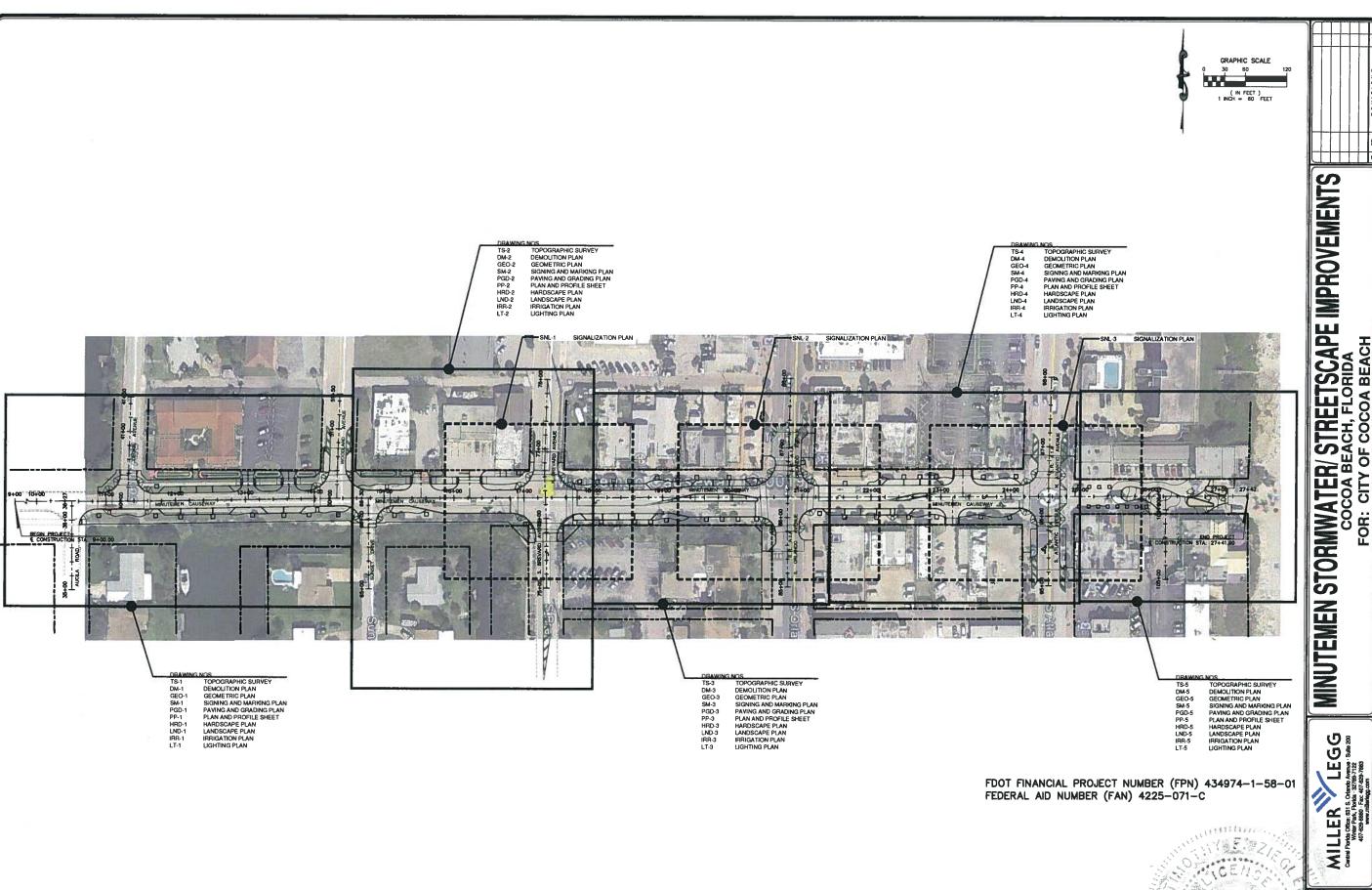
GEOTECHNICAL ENGINEER UNIVERSAL ENGINEERING **SCIENCES** 820 BREVARD AVENUE P: (321) 638-0808 F: (321) 638-0978 CONTACT: BRAD FAUCETT, PE

LANDSCAPE ARCHITECT MILLER LEGG 631 SOUTH ORLANDO AVE. SUITE 400 P: (407) 629-8880

F: (407) 629-7883 CONTACT; JON D, WALLS, RLA JWALLS@MILLERLEGG.COM

MINUTEMEN CAUSEWAY

PROJECT MANAGER: JOANIE REGAN (321) 868-3292



STORMWATER/STREETSCAPE IMPROVEMENTS COCOA BEACH, FLORIDA FOR: CITY OF COCOA BEACH MINUTEMEN

Central Forkta Office: 631 S. Watter Park, Floid Watter Park, Floid

| CONTINUENCE |

KEY-1

11/17/14 pg 99

	TABULATION OF QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	TOTAL	
101-1	MOBILIZATION	LS	1	
102-1	02-1 MAINTENANCE OF TRAFFIC		1	
104-18- INLET PROTECTION SYSTEM		EA	21	
110-1-1	110-1-1 CLEARING AND GRUBBING		1	
110-4-	110-4- REMOVAL OF EXISTING CONCRETE PAVEMENT		10200	
160-4-	160-4- TYPE B STABILIZATION		8771	
165-70- SUBGRADE, LIME TREATED		SY	8771	
210-1-AA REWORKING LIMEROCK BASE		SY	8771	
327-70-AA MILLING EXISTING ASPHALT PAVEMENT		SY	41	
334-1-AA SUPERPAVE ASPHALTIC CONCRETE		TN	824	
425-1-AAB	125-1-AAB INLETS		35	
425-2-AAB	MANHOLES	EA	6	
425-11-	DRAINAGE STRUCTURE - MODIFY EXISTING	EA	1	
430-17A-BC C	PIPE CULVERT	LF	883	
520-1-AA	CONCRETE CURB AND GUTTER	LF	0	
520-2-AA	CONCRETE CURB	LF	3657	
522-1-	CONCRETE SIDEWALK AND DRIVEWAYS, 4" THICK	SY	0	
526-1-A	PAVERS, ARCHITECTURAL	SY	1684	
527-2-	DETECTABLE WARNINGS	SF	33	
548-AA-	RETAINING WALL SYSTEM	SF	0	
580-1-A	LANDSCAPE COMPLETE	LS	1	
590-70-A	IRRIGATION SYSTEM	LS	1	
1644-ABC-D D	FIRE HYDRANT	EA	0	

ITEM NO.	DESCRIPTION	UNIT	TOTAL	
0400 2 12	CONCRETE, CLASS II, TRENCH SLAB	CY		
0630-2-11	CONDUIT, FURNISH & INSTALL, OPEN TRENCH	LF	2406	
0630 2 12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE	LF		
0630 2 14	CONDUIT, FURNISH & INSTALL, ABOVEGROUND	LF		
0635 2 11	PULL & SPLICE BOX, F&I, 13" x 24" COVER SIZE	EA	43	
0639 1123	ELECTRICAL POWER SERVICE, F&I, UNDERGROUND, METER NOT REQUIRED	AS		
0639 2 1	ELECTRICAL SERVICE WIRE	LF	60	
0639 3 11	ELECTRICAL SERVICE DISCONNECT, F&I, POLE MOUNT	EA	-	
0639 3 12	ELECTRICAL SERVICE DISCONNECT, F&I, CABINET	EA	1	
0639 3 60	ELECTRICAL SERVICE DISCONNECT, REMOVE	EA		
0641 2 19	PRESTRESSED CONCRETE POLE, F&I, CUSTOM DESIGN	EA		
0715-1-11	LIGHTING CONDUCTORS, F&I, INSULATED, NO 10	LF	1600	
0715-1-12	LIGHTING CONDUCTORS, F&I, INSULATED, NO 6	LF		
0715-1-13	LIGHTING CONDUCTORS, F&I, NO. 4	LF	2000	
0715-1-15	LIGHTING CONDUCTORS, F&I, NO. 12	LF	7500	
0715-1-60	LIGHTING CONDUCTORS, REMOVE & DISPOSE	LF		
0715 4129	LIGHT POLE COMPLETE, F&I, SPECIAL FOUNDATION, WIND SPEED 130, CUSTOM HEIGHT	EA	33	
0715-5-50	LUMINAIRE & BRACKET ARM (REMOVE)	EA	•	
0715-7-11	LOAD CENTER, F&I, SECONDARY VOLTAGE	EA.		
0715-7-40	LOAD CENTER, REMOVE, SECONDARY VOLTAGE	EA		
0715-500-1	POLE CABLE DISTRIBUTION SYSTEM, CONVENTIONAL	EA		

ITEM NO. DESCRIPTION		UNIT	TOTAL	
TEM NO.				
** 0700 1 11	SINGLE POST SIGN, F&I GROUND MOUNT, UP TO 12 SF	AS	40	
** 0700 1 12	SINGLE POST SIGN, F&I GROUND MOUNT, 12-20 SF	AS	8	
0700 1 50	SINGLE POST SIGN, RELOCATE	AS	2	
0700 3101	SIGN PANEL, F&I, GROUND MOUNT, UP TO 12SF	EA	2	
0706-3	RETRO-REFLECTIVE PAVEMENT MARKER	EA	6295	
	FINAL PAVEMENT SURFACE MARKINGS (PAINT)	LS	0	
	PAINTED PAVEMENT MARKINGS (WHITE) (SOLID) (6")	NM	0	
	PAINTED PAVEMENT MARKINGS (WHITE) (SOLID) (8")	LF	245	
	PAINTED PAVEMENT MARKINGS (WHITE) (SOLID) (12")	LF	1303	
	PAINTED PAVEMENT MARKINGS (WHITE) (SOLID) (18")	LF	171	
	PAINTED PAVEMENT MARKINGS (WHITE) (2"-4" SKIP) (6")	LF	52	
0710-11160	PAINTED PAVEMENT MARKINGS (WHITE) MESSAGE	EA	8	
10710-11170	PAINTED PAVEMENT MARKINGS (WHITE) (ARROW)	EA	21	
	PAINTED PAVEMENT MARKINGS (YELLOW) (SOLID) (6")	NM	1	
	PAINTED PAVEMENT MARKINGS (YELLOW) (SOLID) (8")	LF	52	
0710-11223	PAINTED PAVEMENT MARKINGS (YELLOW) (SOLID) (18")	LF	112	
0710-11231	PAINTED PAVEMENT MARKINGS (YELLOW) (2'-4' SKIP) (6")	LF	51	
	THERMOPLASTIC, STANDARD (WHITE) (SOLID) (6")	NM	0	
0711 11 122	THERMOPLASTIC, STANDARD (WHITE) (SOLID) (8")	LF	245	
0711 11 123	THERMOPLASTIC, STANDARD (WHITE) (SOLID) (12")	LF	1303	
	THERMOPLASTIC, STANDARD (WHITE) (SOLID) (18")	LF	171	
	THERMOPLASTIC, STANDARD (WHITE) (SOLID) (24")	LF	337	
	THERMOPLASTIC, STANDARD (WHITE) (10'-30' SKIP) (6")	GM	0	
	THERMOPLASTIC, STANDARD (WHITE) (6'-10' SKIP) (6")	LF	295	
	THERMOPLASTIC, STANDARD (WHITE) (2'-4' SKIP) (6")	LF	52	
	THERMOPLASTIC, STANDARD (WHITE) MESSAGE	EA	8	
	THERMOPLASTIC, STANDARD (WHITE) (ARROW)	EA	21	
	THERMOPLASTIC, STANDARD (YELLOW) (SOLID) (6")	NM	1	
	THERMOPLASTIC, STANDARD (YELLOW) (SOLID) (8")	LF	52	
	THERMOPLASTIC, STANDARD (YELLOW) (SOLID) (18")	LF	112	
0711 11 233	THERMOPLASTIC, STANDARD (YELLOW) (2'-4" SKIP) (6")	LF	51	
** 999 2014	STAMPED ASPHALT PATTERN	SF	7084	

- TIEM 71D-90 QUANTITIES ARE FOR ONE APPLICATION OF PAVEMENT (PAINT) MARKING. CONTRACTOR SHALL UTILIZE 2
 APPLICATIONS OF PAINT PAVEMENT MARKINGS DURING THE 30 DAY CURING PERIOD OF ASPHALT. THERMOPLASTIC
 MARKINGS SHALL BE OVERLAID AFTER THE 30 DAY CURING PERIOD OF ASPHALT.
- ** PAY ITEM 700-1-50 AND PAY ITEMS FOR NEW SIGNS SHALL INCLUDE ALUMINUM ROUND TUBE AND BREAKAWAY SIGN POSTS FOR FDOT INDEX 11850.
- *** PAY ITEM NUMBER 999-2014 SHALL INCLUDE LABOR AND MATERIALS FOR AN ACCEPTABLE INSTALLATION. MATERIALS SHALL
 MATCH SPECIFICATIONS PER DETAIL AS REFERENCED ON SHEET PDD-7. UTILIZE ITEMS SPECIFIED ON THE FDOT QUALIFIED
 PRODUCTS LIST.

	TABULATION OF QUANTITIES	(SIGNALIZAT	ION)								
					SHEE	T NOS.			GRANO	TOTAL	REF.
ITEM NO.	OESCRIPTION	UNIT	SI	G-1	SI	G-2	SI	G-3	0.17.11	701712	SHEET
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	
630-2-11	CONDUIT, (FM) OPEN TRENCH	LF	196		303		288		787	_	\vdash
632-7-1	SIGNAL CABLE- NEW OR RECONSTRUCTED INTERSECTION (FAI)	Pi	1		1		1		3		
835-1-11	SIGNALS - PULL & JUNCTION BOXES (F&I PULL BOX)	EA	6		5	 	5	\vdash	16		
646-1-11	ALUMINUM SIGNALS POLE, PEDESTAL	EA	3		2				5		-
649-31-201	MAST ARM (F&), 130-MPH, SINGLE W/O LUM, 36	EA			1				1		
650-1-311	TRAFFIC SIGNAL (F&I) 3—SECTION, 1—WAY	AS	4		2				- 6		\vdash
650-4	TRAFFIC SIGNAL, RELOCATE	AS	4		1		3		В		
650-1-411	TRAFFIC SIGNAL, (Fat), 4 SECTION, 1 WAY,	AS			1				1		-
650-1-511	TRAFFIC SIGNAL, (F&I), 5 SECTION, 1 WAY,	AS	4						4		
653-191	PEDESTRIAN SIGNAL (FAI) (LED) (1-SECT, 1-WAY)	AS	1						1		
653-192	PEDESTRIAN SIGNAL (F&I) (LED) (1-SECT, 2-WAY)	AS	3		2				5		
653-400	PEDESTRIAN SIGNAL, RELOCATE	EA	1						1	$\overline{}$	_
660-1-109	LOOP DETECTOR (F&I) (TYPE 9)	EA	6		1		1		В		\vdash
660-2-106	LOOP ASSEMBLY (F&I) (TYPE F)	AS	8		4	i	5		17		
665-1-11	PED DETECTOR STATION & SIGN (F&I)(POLE OR CONTROLLER CABINET MOUNTED)	AS	7		2				9		\vdash
670-5-400	TRAFFIC CONTROLLER ASSEMBLY, MODIFY	AS	1		1				2		\vdash
690-10	TRAFFIC SIGNAL HEAD ASSEMBLY (REMOVE)	EA	В		2			-	10	-	\vdash
690-20	SIGNAL PEDESTRIAN ASSEMBLY (REMOVE)	EA	1		2				3		-
690-31	SIGNAL PEDESTAL REMOVAL	EA	1		1				2		_
690-32-2	POLE REMOVAL, SHALLOW, BOLT ON ATTACHMENT	EA			1			T	1		\vdash
690-70	DETECTOR PEDESTRIAN ASSEMBLY (REMOVE)	EA	1						1		
690-90	CONDUIT & CABLING- WITHIN INTERSECTION (REMOVE)	PI	1		1		1		3		_
690-100	SIGNAL EQUIPMENT MISCELLANEOUS REMOVE	PI	1		1		1		3		-
700-35-01	SIGN PANEL, RELOCATE, UP TO 12 SF	ÉA		$\overline{}$	3		2		5		_

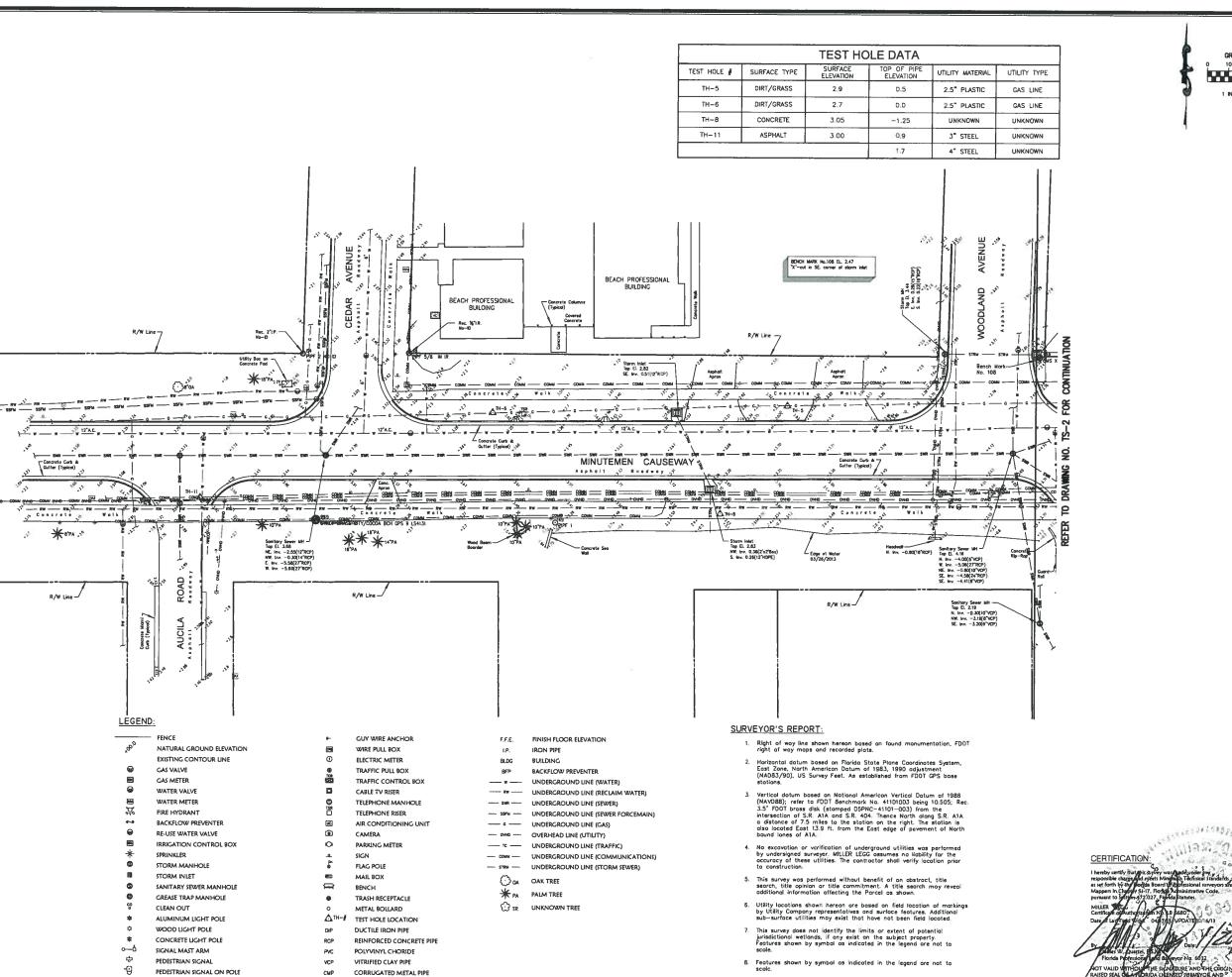
PAY ITEM FOOT NOTE

- * PAY ITEM 670-5-400 INCLUDES SIGNAL TIMING MODIFICATIONS, AND LABOR/MATERIAL TO INSTALL/MODIFY EXISTING CONTROLLER TO ACCOMMODATE HARDWARE PROPOSED FOR A COMPLETE ACCEPTABLE INSTALLATION
- PAY ITEM 690-31 INCLUDES PEDESTRIAN SIGNAL HEADS REMOVAL & ASSOCIATED ITEMS
- PAY ITEMS FOR NEW SIGNAL HEADS ON THE NEW MAST ARM SHALL INCLUDE BACKPLATES (WITH YELLOW REPLECTIVE BORDER). HOWEVER, NEW SIGNAL HEADS MOUNTED ON THE EXISTING DIAGONAL SPAN WIRE SHALL NOT INCLUDE BACKPLATES. ALL NEW SIGNAL HEADS SHALL INCLUDE TUNNEL VISORS.

MINUTEMEN STORMWATER/ STREETSCAPE IMPROVEMENTS COCOA BEACH, FLORIDA FOR: CITY OF COCOA BEACH

MILLER LEGG
Contral Paris Other Date 107-103-103

13-00191 QTY-1 (2)



GRAPHIC SCALE (IN FEET) 1 INCH = 20 FEET

IMPROVEMENTS SCAPE I STREET BEACH, FLOF 200 STORMWATER COCOA B FOR: CITY (MINCTEMEN

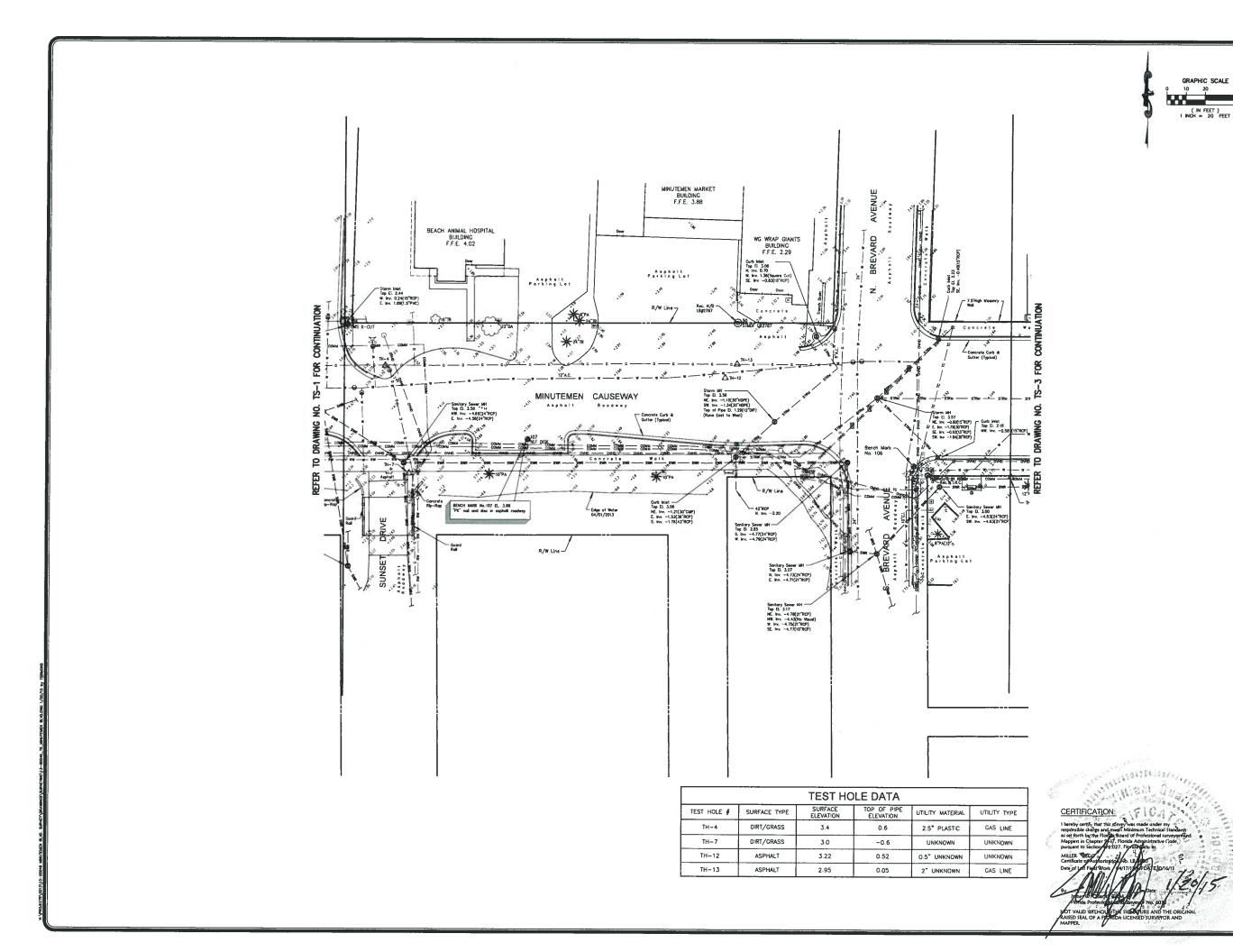
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MILLER Central Florida Office: 631 S. SURVI

CORPORATES OF AUTHORIZATION EB7318 LB6680 LC0337 JWQ RR JWQ DEX OWL DAL 13-00191

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MINUTEMEN STORMWATER/ STREETSCAPE IMPROVEMENTS COCOA BEACH, FLORIDA FOR: CITY OF COCOA BEACH

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EB7318 L86680 LC0337

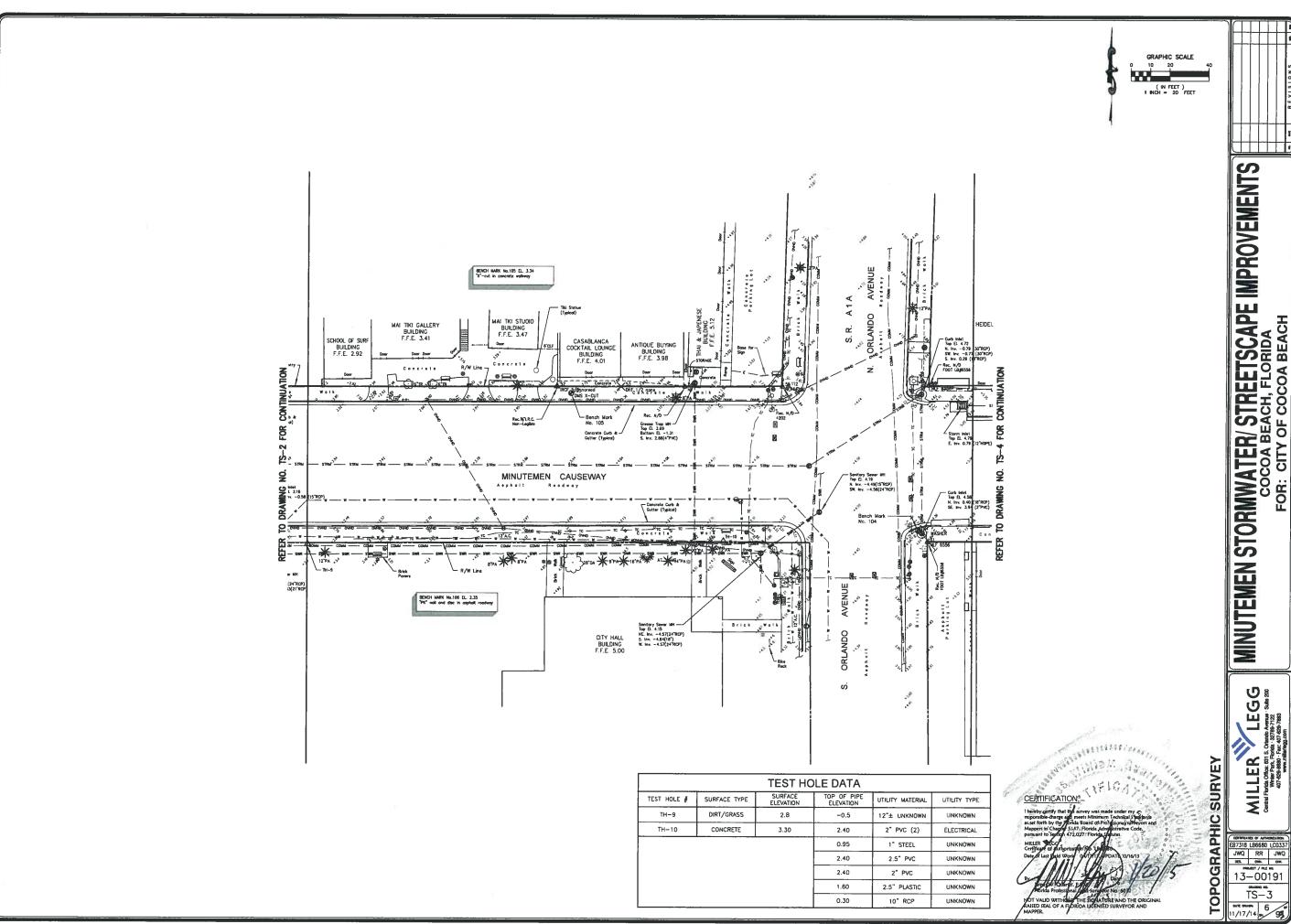
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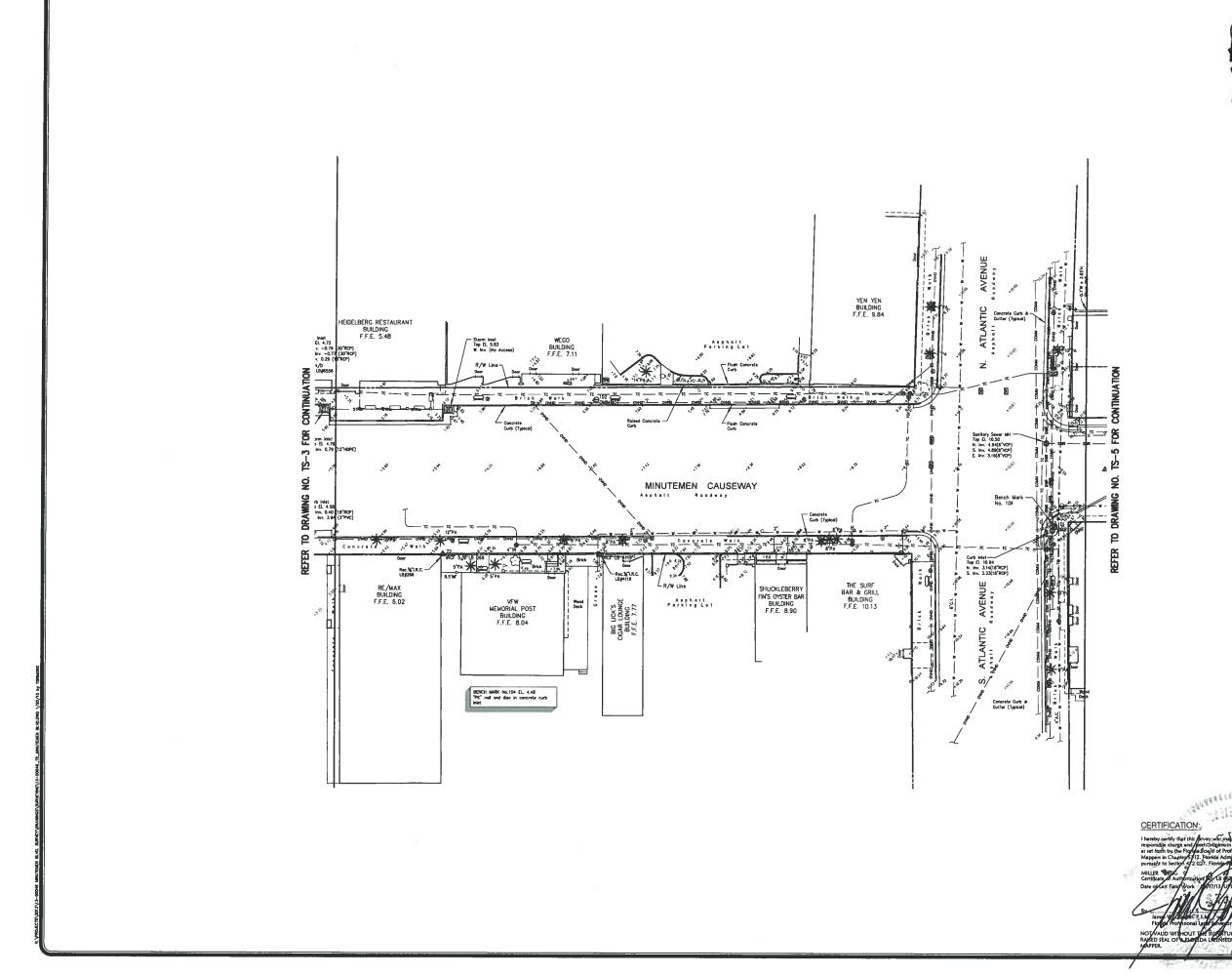
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TOPOGRAPHIC SURVEY TS-2 SATE SPANSE 11/17/14 st 9





1 STORMWATER/ STREETSCAPE IMPROVEMENTS COCOA BEACH, FLORIDA FOR: CITY OF COCOA BEACH MINUTEMEN

GRAPHIC SCALE

(iN FEET) 1 NCH = 20 FEET



TOPOGRAPHIC SURVEY

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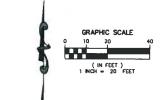
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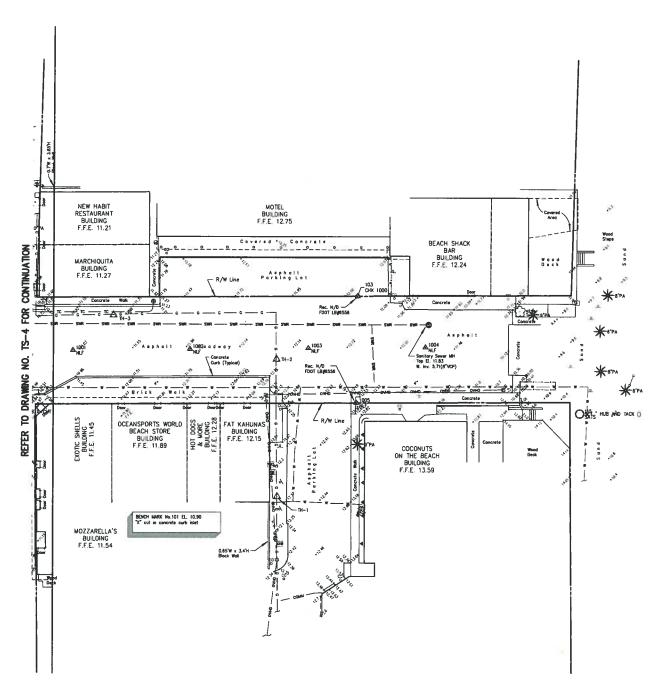
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11/17/14 9

99





TEST HOLE DATA						
TEST HOLE #	SURFACE TYPE	SURFACE ELEVATION	TOP OF PIPE ELEVATION	UTILITY MATERIAL	UTILITY TYPE	
TH-1	OIRT/GRASS	11.8	9.8	1.25" PLASTIC	GAS LINE	
TH-2	ASPHALT	12.05	9.85	1.25" PLASTIC	GAS LINE	
TH-3	ASPHALT	10.73	B.53	1.25" PLASTIC	GAS LINE	

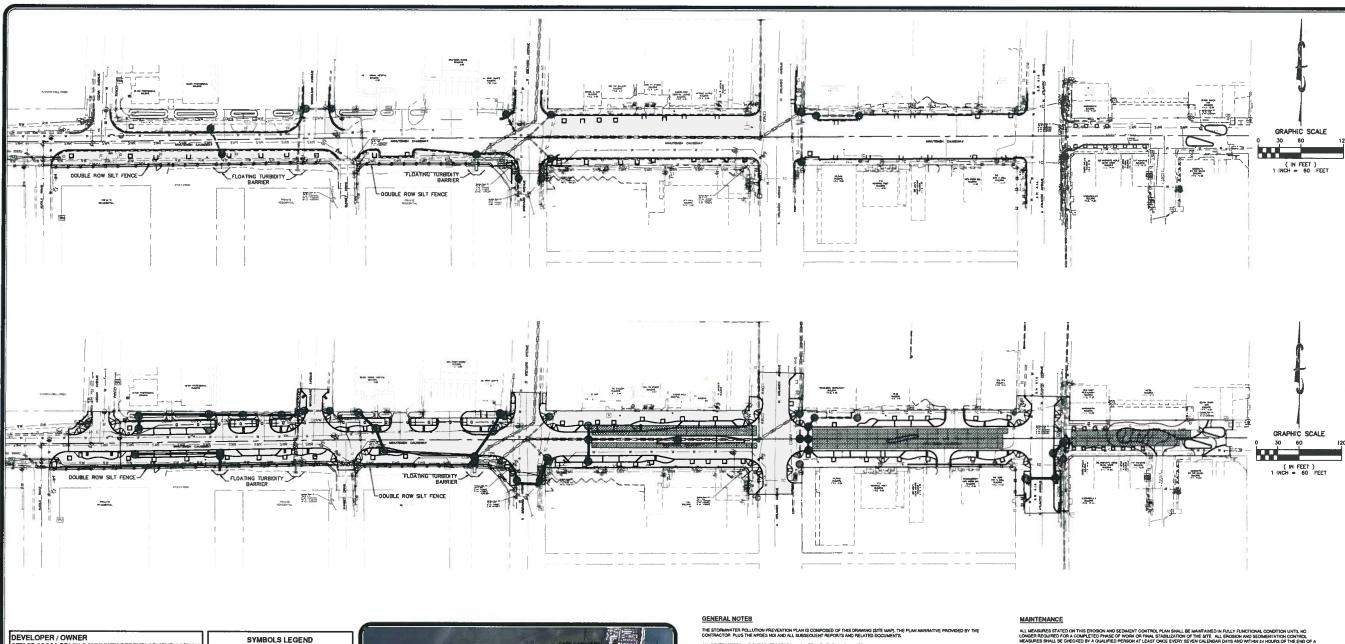
TOPOGRAPHIC SURVEY

MILLER Central Florids Office: 831 S. Orlends White Plant, Florids - SET 407-628-6880 - For 407-6 GETSTEATE OF AUTHORIZATION
EB7318 LB6680 LC0337
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TS-5

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MINUTEMEN STORMWATER/ STREETSCAPE IMPROVEMENTS COCOA BEACH, FLORIDA FOR: CITY OF COCOA BEACH



DEVELOPER / OWNER CITY OF COCOA BEACH COMMUNITY REDEVELOPMENT AGENC P.O. BOX 322430 COCOA BEACH, FL 32932-2430 SCM-1 ROCK BAGS OR O' APPROPRIATE (USED ON ASPHALT SURFACES) SITE OPERATOR / GENERAL CONTRACTOR: SUPERINTENDENT: SOIL EROSION / SEDIMENTATION CONTROL OPERATION TIME SCHEDULE TEMPORARY CONTROL MEASURES TRIP & STOCKPILE TOPSOIL SITE CONSTRUCTION



TOWNSHIP 255 - RANGE 36E- SECTION 10, 11, 14 & 15 **LOCATION MAP**

ALL MATERIAL SPILED. DROPPED. WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED MASFIRATELY.

DEWATERING IS NOT ANTICIPATED FOR THE INSTALLATION OF UTILITIES. ALL WORK SHALL BE IN COMPLIANCE WITH NPDES.

PLAN LE (PREVENTION

MILLER Central Florida Offico: 831 S. E87318 L86680 LC0337
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MINUTEMEN

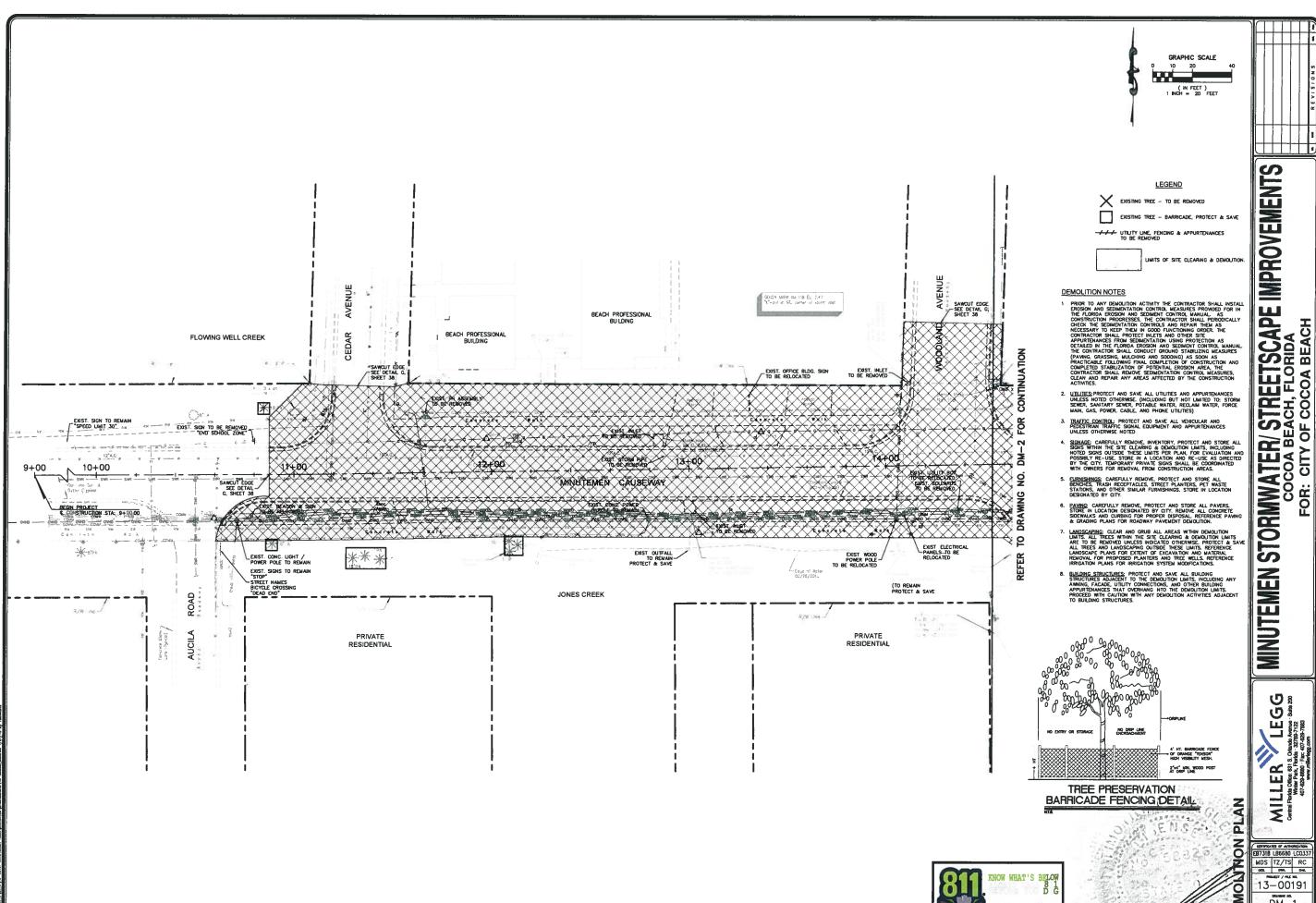
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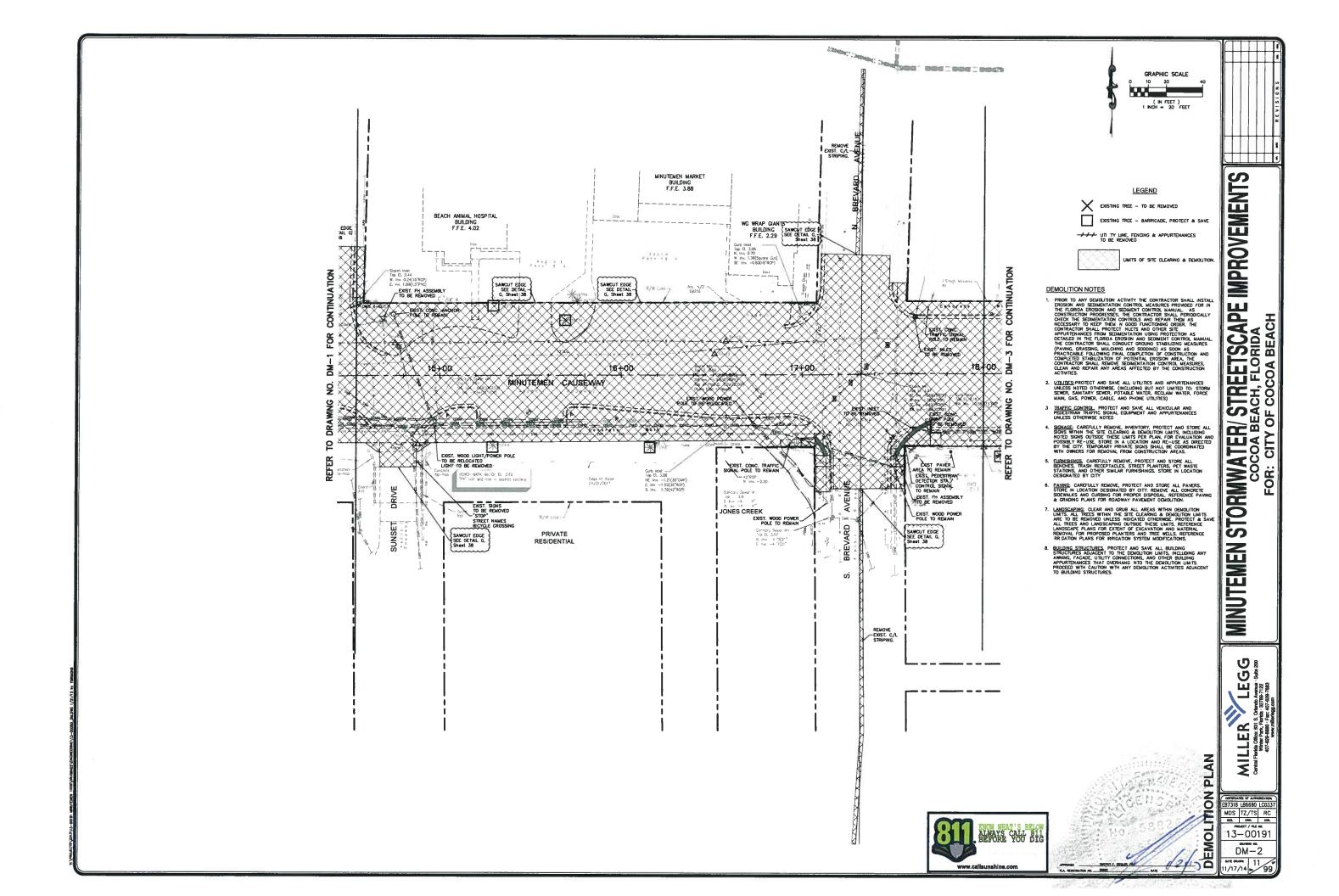
IMPROVEMENT

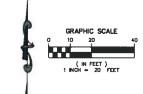
STORMWATER/ STREETSCAPE COCOA BEACH, FLORIDA FOR: CITY OF COCOA BEACH

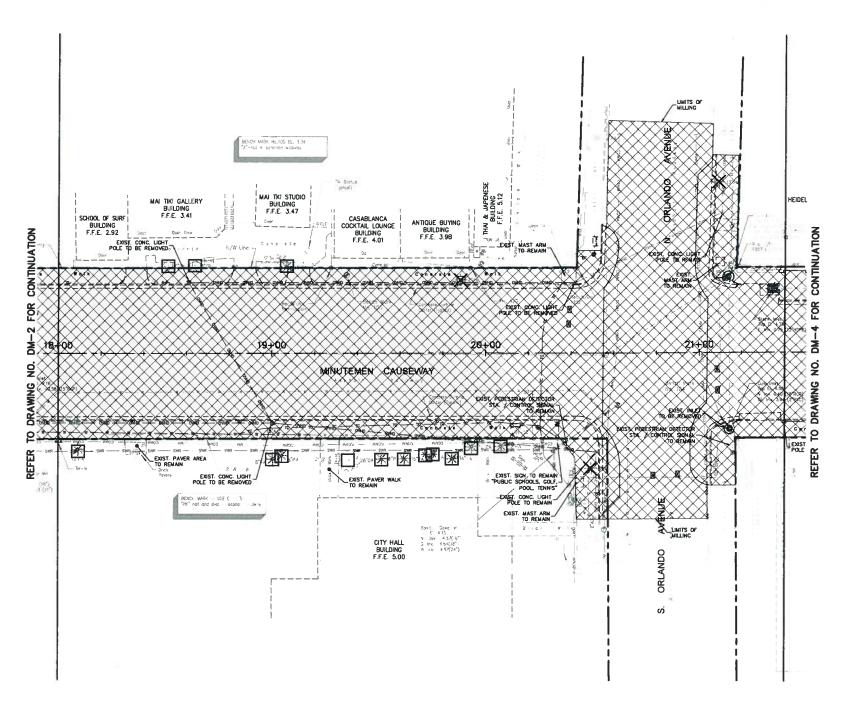
13-00191 PPP-1 11/17/14 su 99



DM-1 11/17/14 pg 99







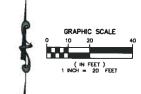
LEGEND

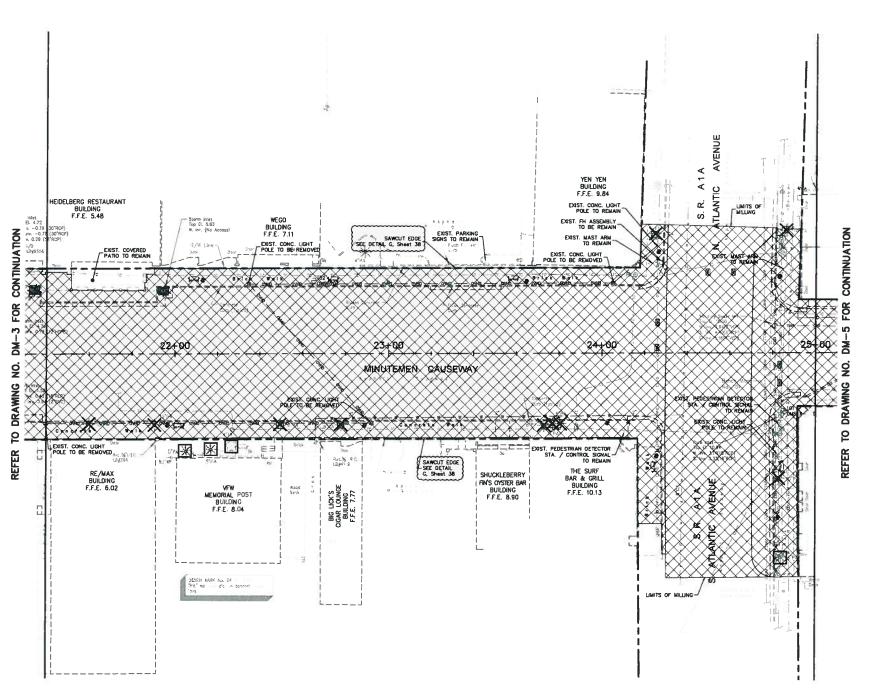
MINUTEMEN LEGG do Avenue · Sutte 200 2789-7122 7-629-7983

STORMWATER/ STREETSCAPE IMPROVEMENTS COCOA BEACH, FLORIDA FOR: CITY OF COCOA BEACH

CONTRICATES OF AUTHORIZATION EB7348 LB6680 CO337 MDS TZ/TS RC focs bus our

13-00191 DM-3 11/17/14 st 99







EXISTING TREE - TO BE REMOVED

LEGG bo Averus - Subs 200 7789-7183 429-7883

MINUTEMEN

STORMWATER/ STREETSCAPE IMPROVEMENTS COCOA BEACH, FLORIDA FOR: CITY OF COCOA BEACH

COTHER RS OF AUTHORIZATION EB7318 LB6680 LC0337 MDS TZ/TS RC OEX DWA ON. PROSECT / PLE NO. 13—00191 DM-4



LEGEND EXISTING TREE -- TO BE REMOVED

STORMWATER/ STREETSCAPE IMPROVEMENTS COCOA BEACH, FLORIDA FOR: CITY OF COCOA BEACH EXISTING TREE - BARRICADE, PROTECT & SAVE LIMITS OF SITE CLEARING & DEMOLITION.

LEGG 20 Averue - Sudie 200 7789-7122 -629-7883

MINUTEMEN

| CONTRICATES OF AUTHORIZATION: | EB7518 LB6680 LC0337 | MOS | TZ/TS | RC | OSK | OWN | OWN | | FROMET / PLE NO. | 13-00191

DM-5 олж оплана 11/17/14 вт 99

* Covered -Azeq

10 C UIL

BEACH SHACK BAR BUILDING F.F.E. 12.24

COCONUTS
ON THE BEACH
BUILDING
F.F.E. 13.59

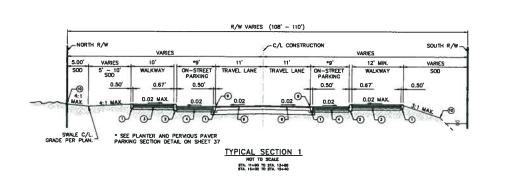
NEW HABIT RESTAURANT BUILDING F.F.E. 11.21

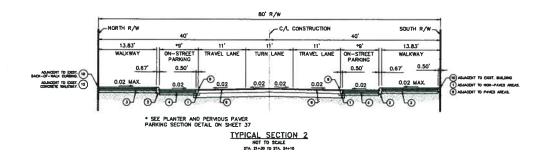
MARCHIQUITA BUILDING F.F.E. 11.27

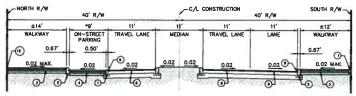
EXOTIC SHELLS BUILDING F.F.E. 11.45

MOZZARELLA'S BUILDING F.F.E. 11.54

OCEANSPORTS WORLD BEACH STORE BUILDING F.F.E. 11.89



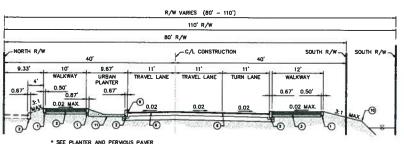




* SEE PLANTER AND PERVIOUS PAVER PARKING SECTION DETAIL ON SHEET 37

TYPICAL SECTION 3

NOT TO SCALE
STA. 18+40 TO STA. 20+20



TYPICAL SECTION 4

NOT TO SCALE
STA. 16+00 TO STA. 16+00

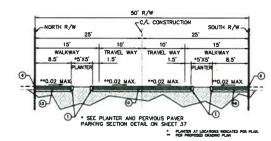
-NORTH R/W ON-STREET PARKING 0.50' 0.50 10

⊙√

* SEE PLANTER AND PERMOUS PAVER PARKING SECTION DETAIL ON SHEET 37

TYPICAL SECTION 5
NOT TO SCALE
STA. 17+80 TO STA. 18+80

/∙©



TYPICAL SECTION 6
SCALE: 1:10
STA 24-90 TO STA 27-20

MINUTEMEN STORMWATER/ STREETSCAPE IMPROVEMENTS COCOA BEACH, FLORIDA FOR: CITY OF COCOA BEACH

LEGG bo Avenue - Sudre 200 7789-7122 -629-7883 MILLER Centra Fucto Gote, 631. Cotanol. White Part, Florida - 27788 407-629-6880 - E-

13-00191

TYP-1

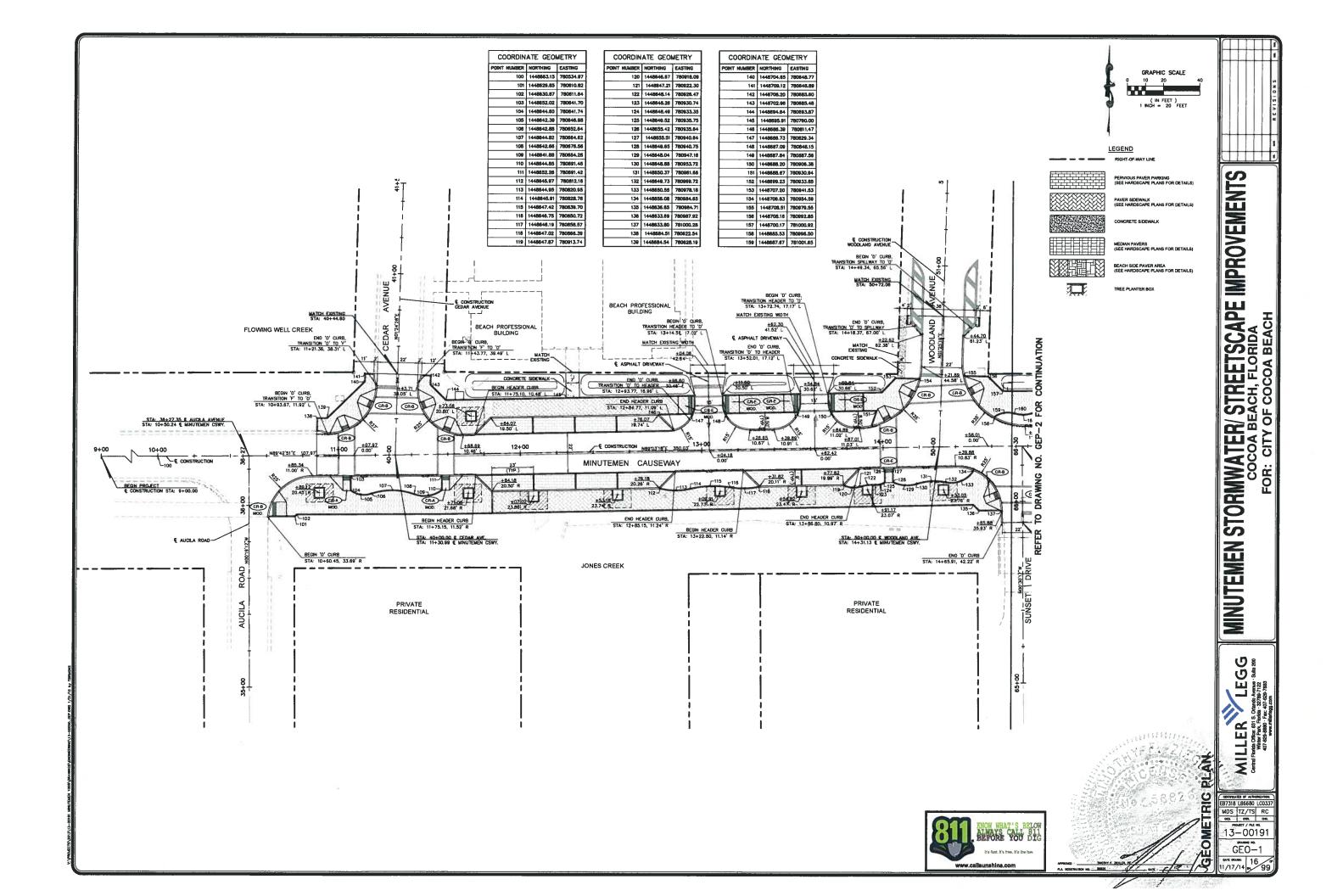
(1) 8° CONCRETE BANDING (DETAIL / SHEET

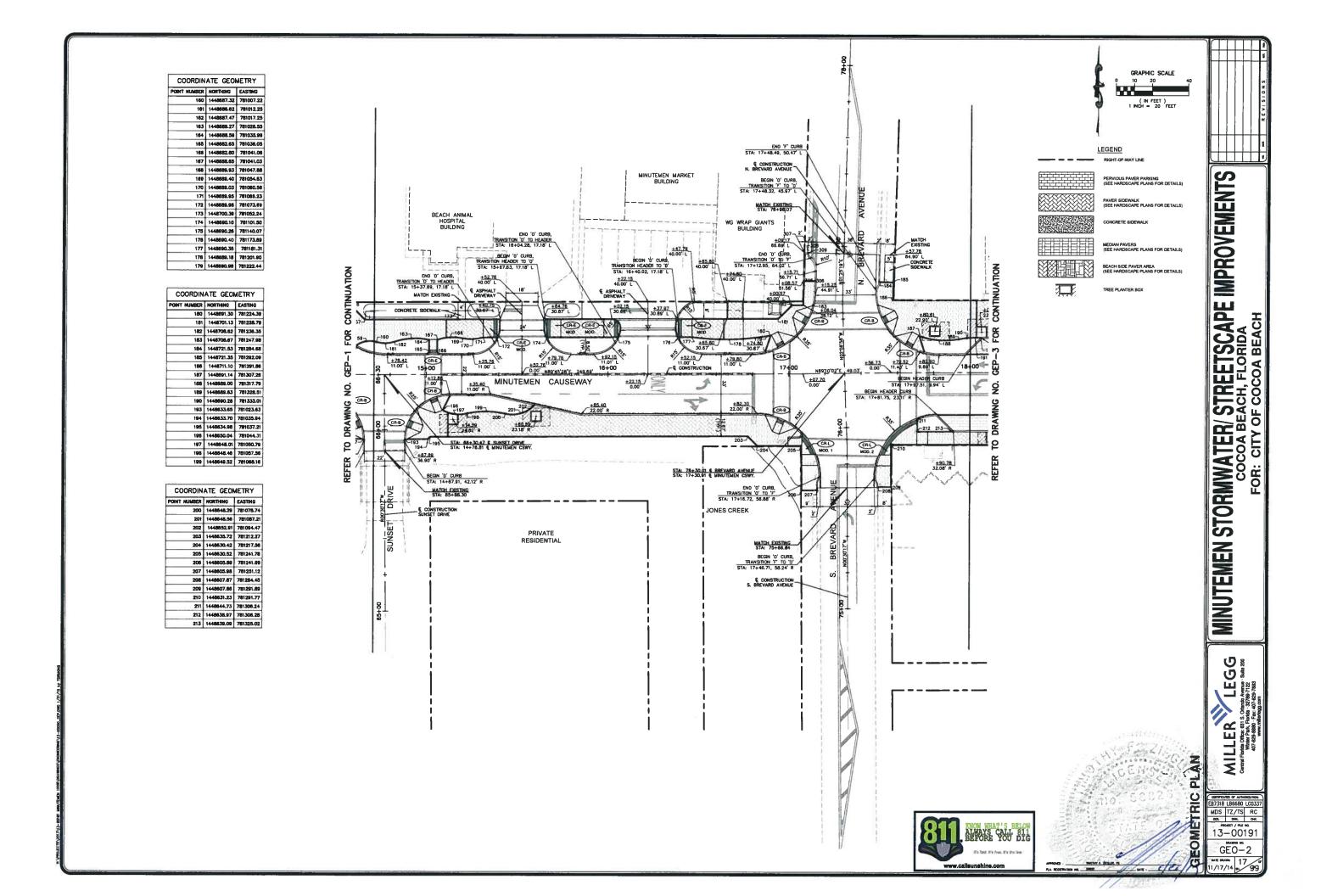
B FULL DEPTH PAVEMENT REPLACEME B' CURB (FDOT INDEX 300) SAWCUT & MATCH EXISTING PAVEME

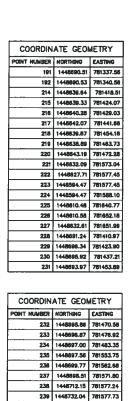
O TO CONCRETE BUADING (DETAIL 7 SHEET 38)
O TO CLUB FOOT NIDEX 300

WALKWAY (SEE HARDSCAPE PLANS FOR DETAILS)
ON-STREET FARKING 7 PERVIOUS PAVERS
(SEE HARDSCAPE PLANS FOR DETAILS)
(NOT USED)

) MATCH EXISTING GRADE
) URBAN PLANER (REFERENCE LANDSCAPE PLANS FOR DETAIL)

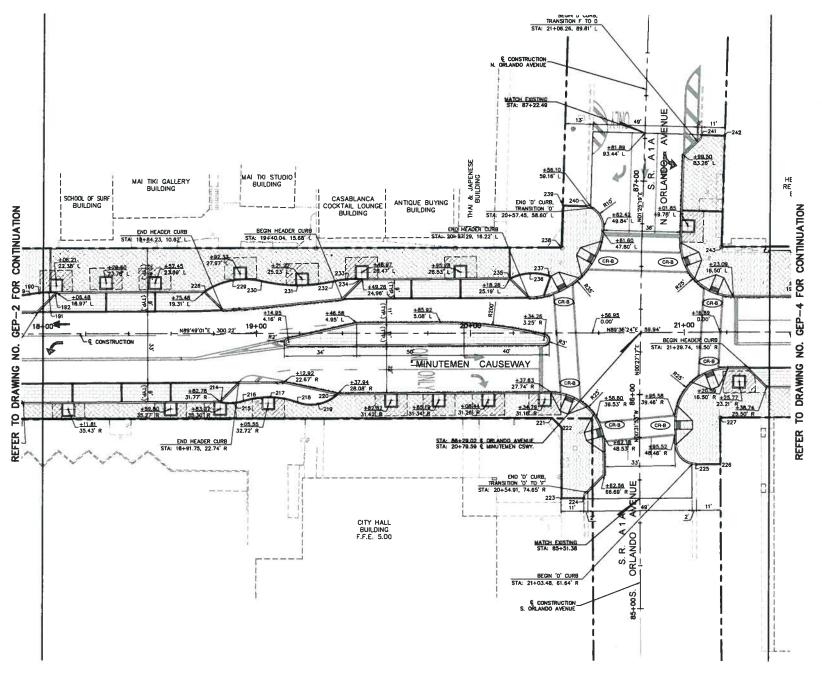


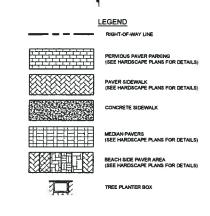




240 1448731.77 781588.83

241 1448765.14 781842.64 242 1448764.87 781653.57 243 1448712.61 781652.27





GRAPHIC SCALE

(IN FEET) 1 INCH = 20 FEET

PLAN METRIC

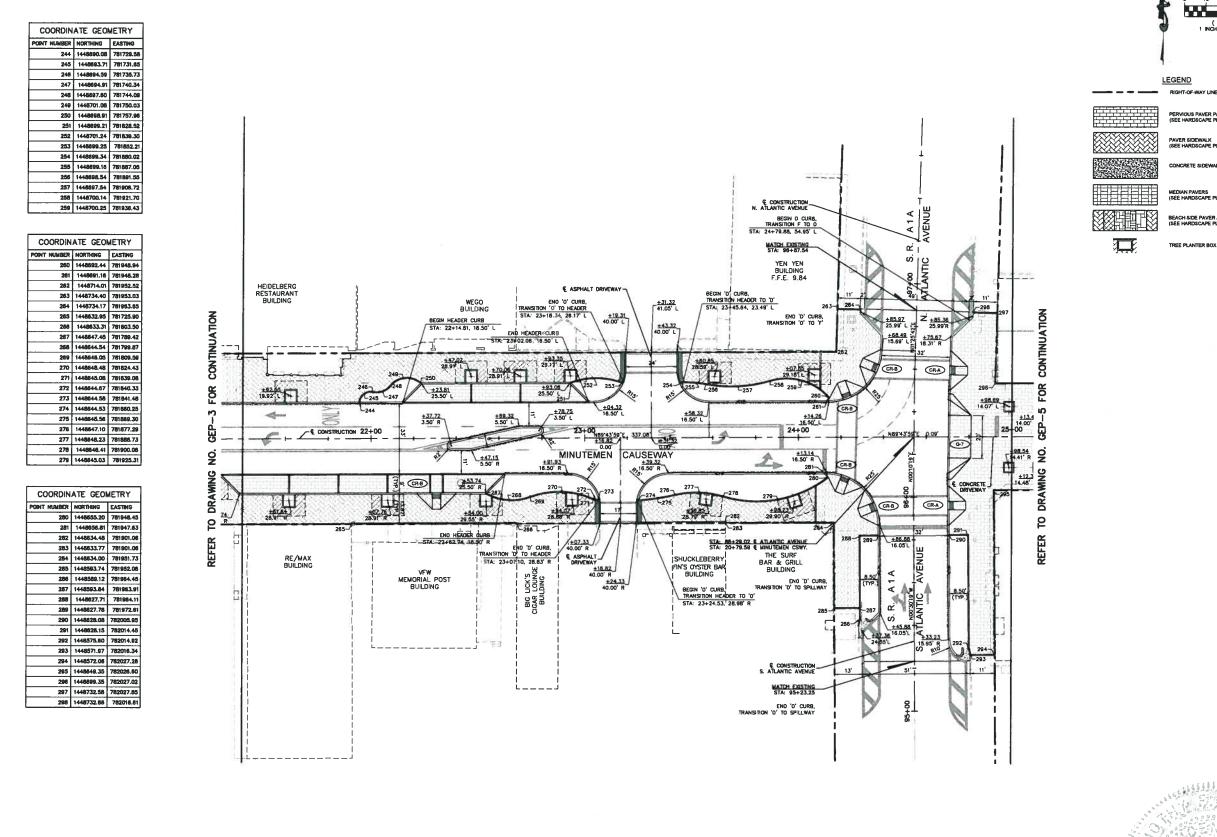
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to Avenue - Sute 200
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7-029-7883 MILLER Contra Parks other over

MINUTEMEN

STORMWATER/ STREETSCAPE IMPROVEMENTS COCOA BEACH, FLORIDA FOR: CITY OF COCOA BEACH

CONTRIGATES OF AUTHORIZATION
EB7318 LB6580 LC0337
MOS TZ/TS RC
DOL DWL ONL 13-00191 GEO-3

11/17/14 18 99





GRAPHIC SCALE

(IN FEET) 1 INCH = 20 FEET

PAVER SIDEWALK (SEE HARDSCAPE PLANS FOR DETAILS)

BEACH SIDE PAVER AREA (SEE HARDSCAPE PLANS FOR DETAILS)

CONCRETE SIDEWALK

LEGEND

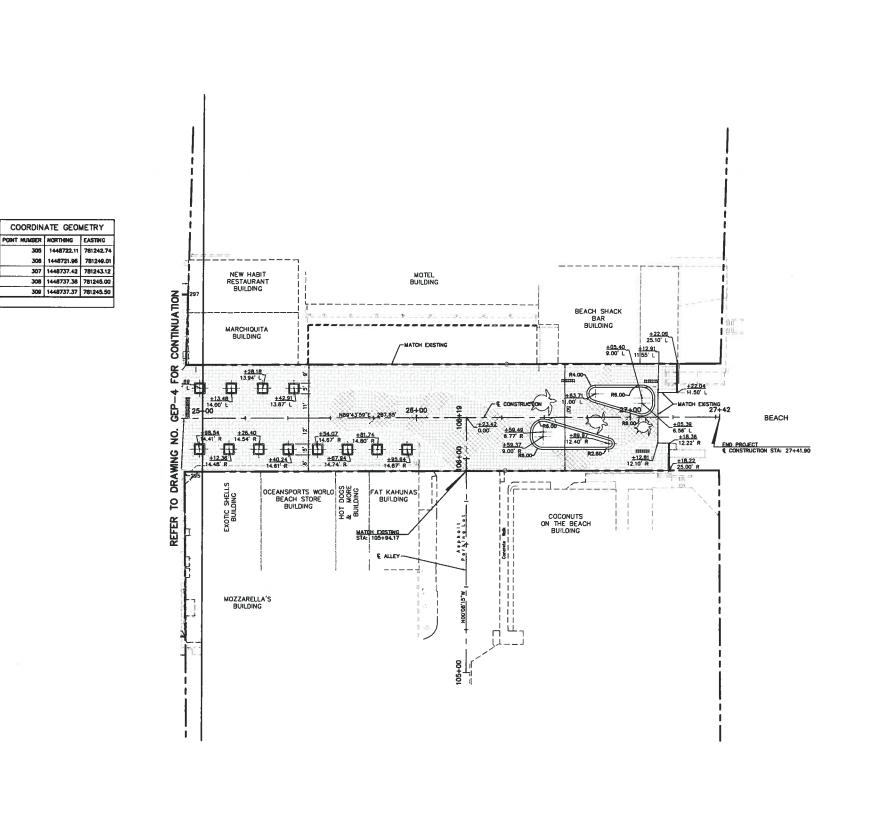
IMPROVEM STORMWATER/ STREETSCAPE COCOA BEACH, FLORIDA FOR: CITY OF COCOA BEACH

EB7318 L96680 LC0337
MDS TZ/TS RC

13-00191 GEO-4 11/17/14 mg 99

GEOMETRIC

ENTS



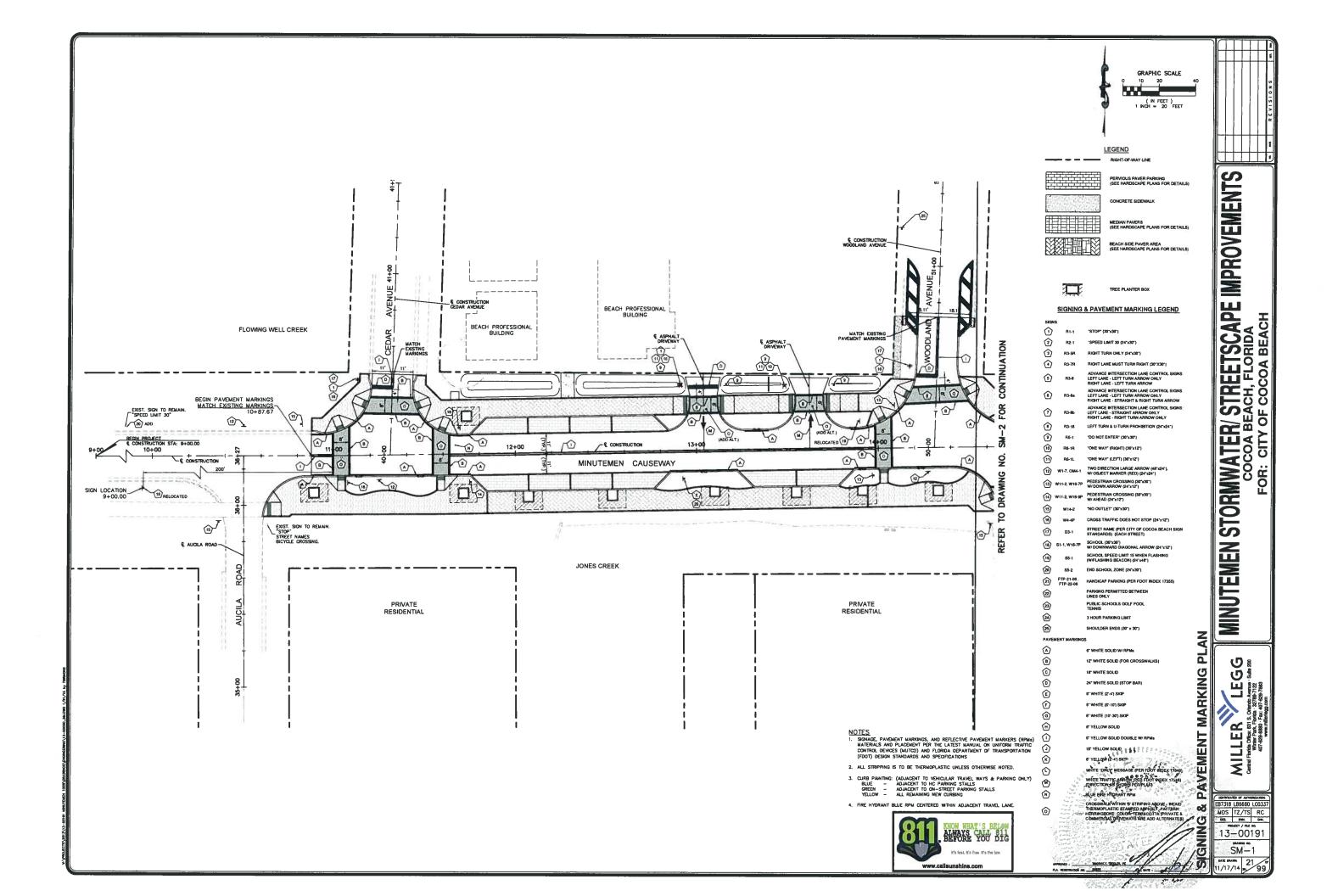


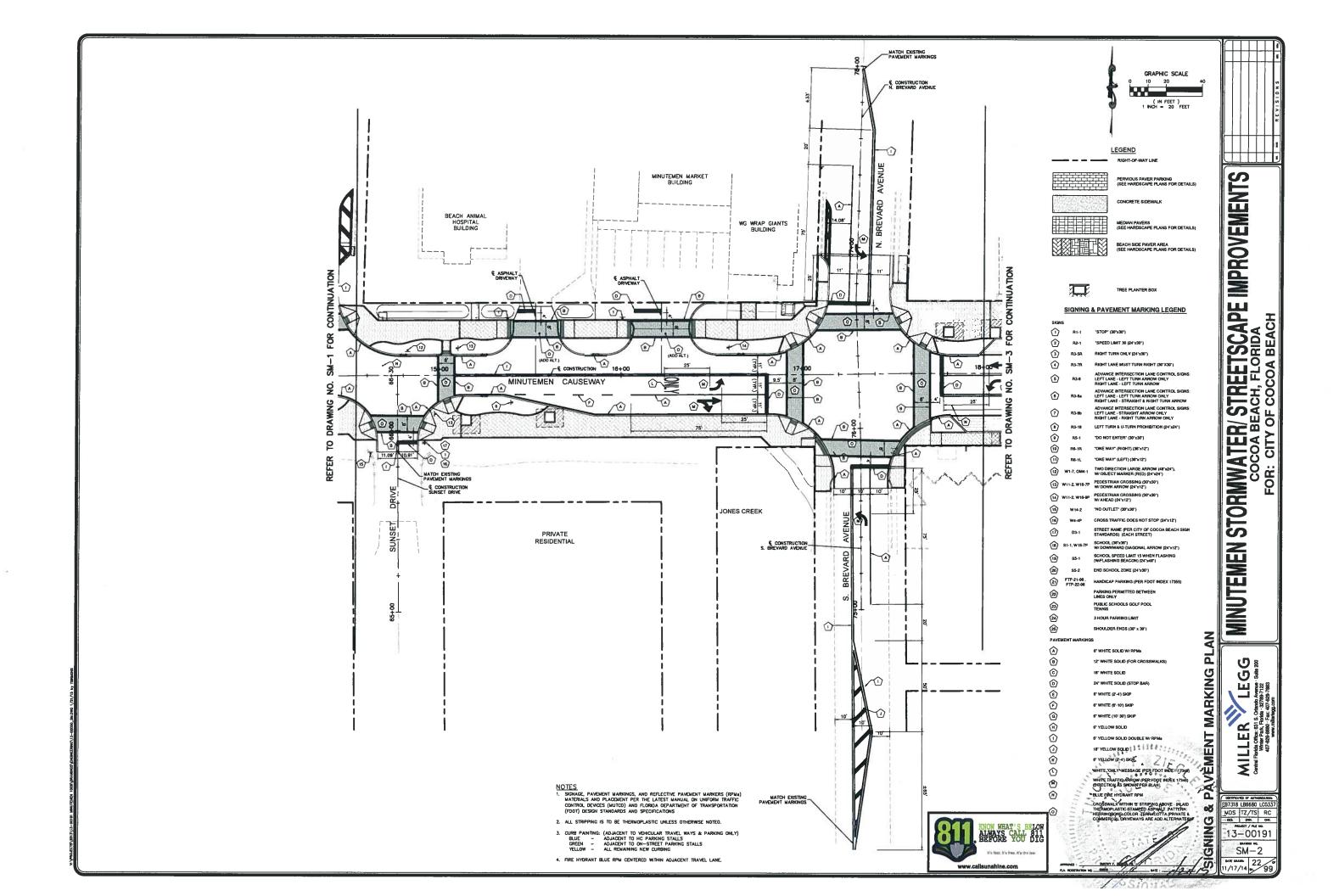
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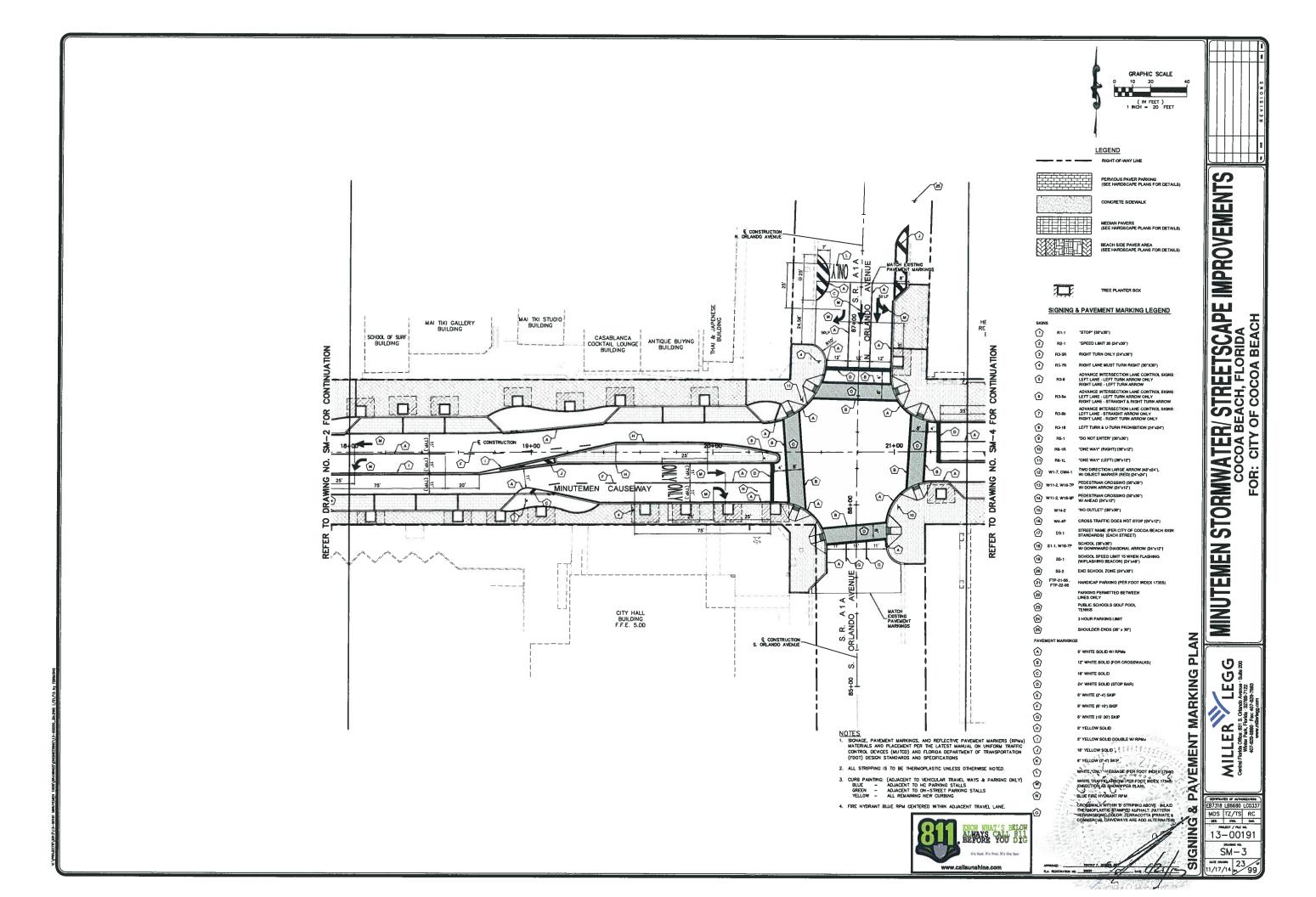
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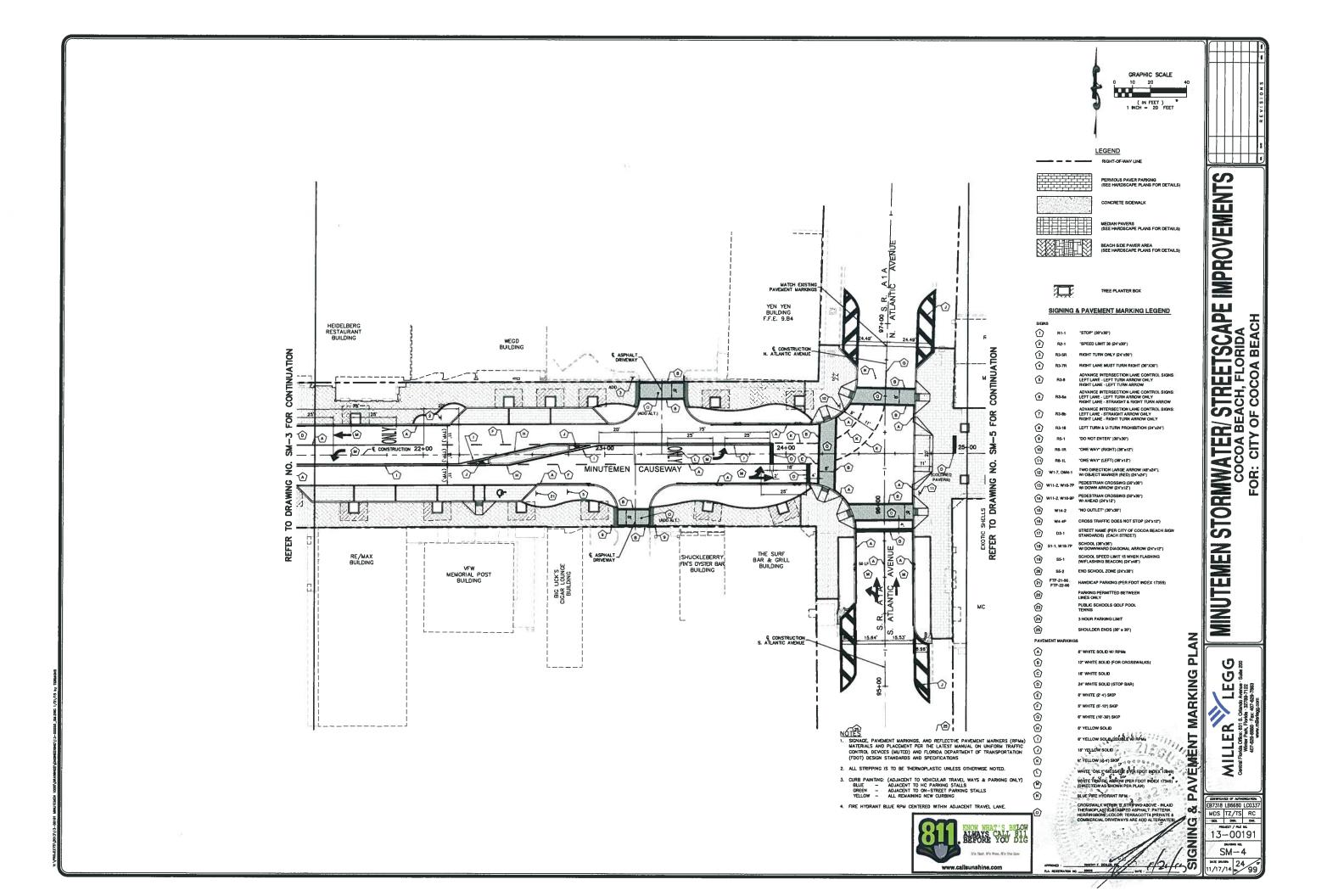
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PROJECT / PLE NO.
13-00191

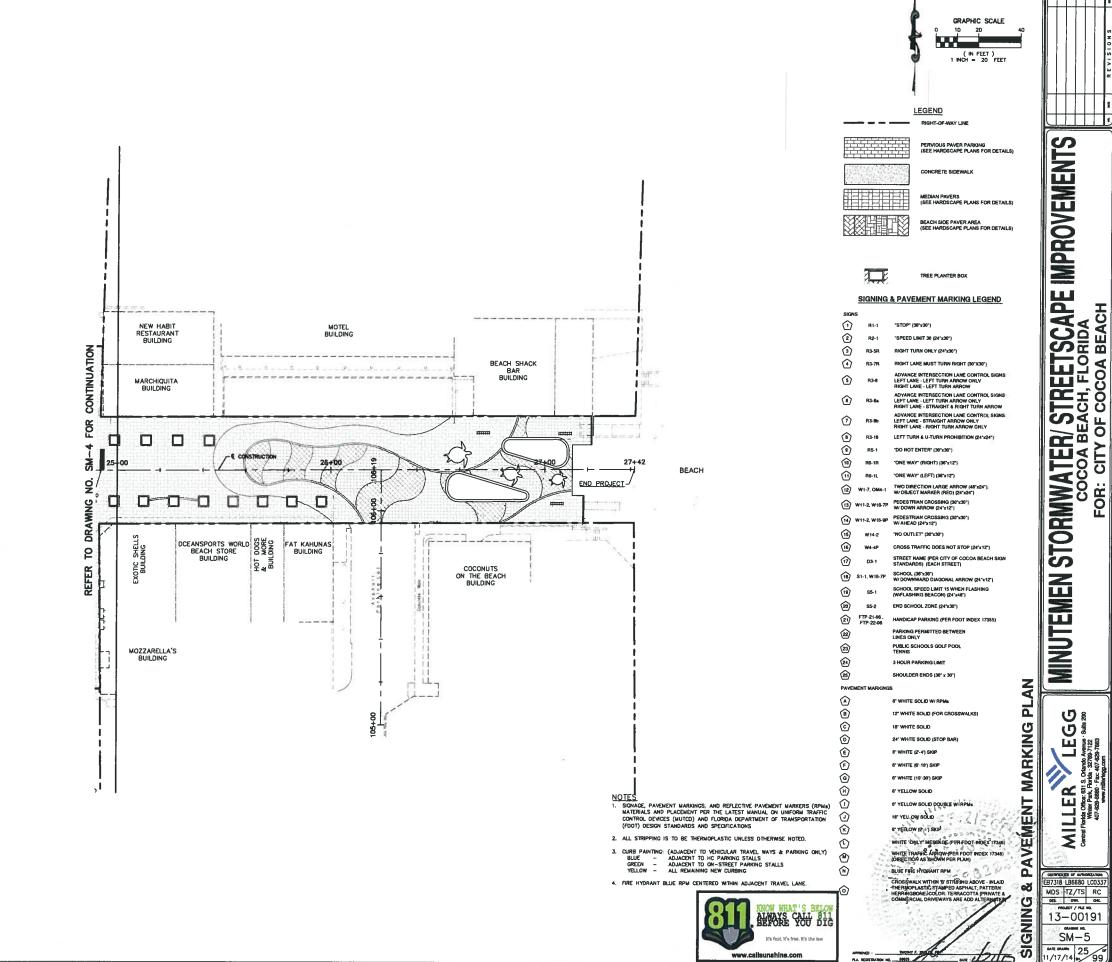
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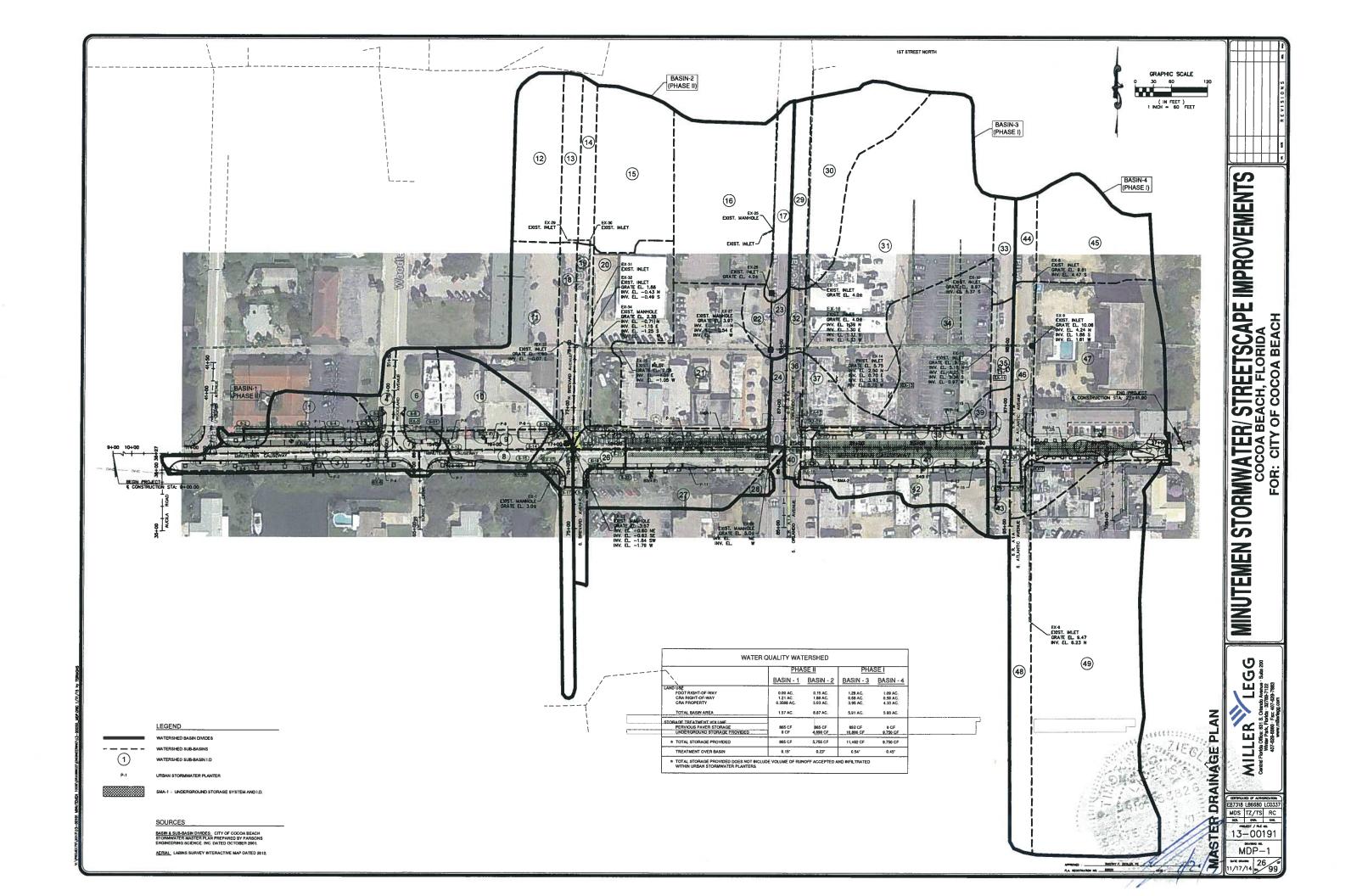


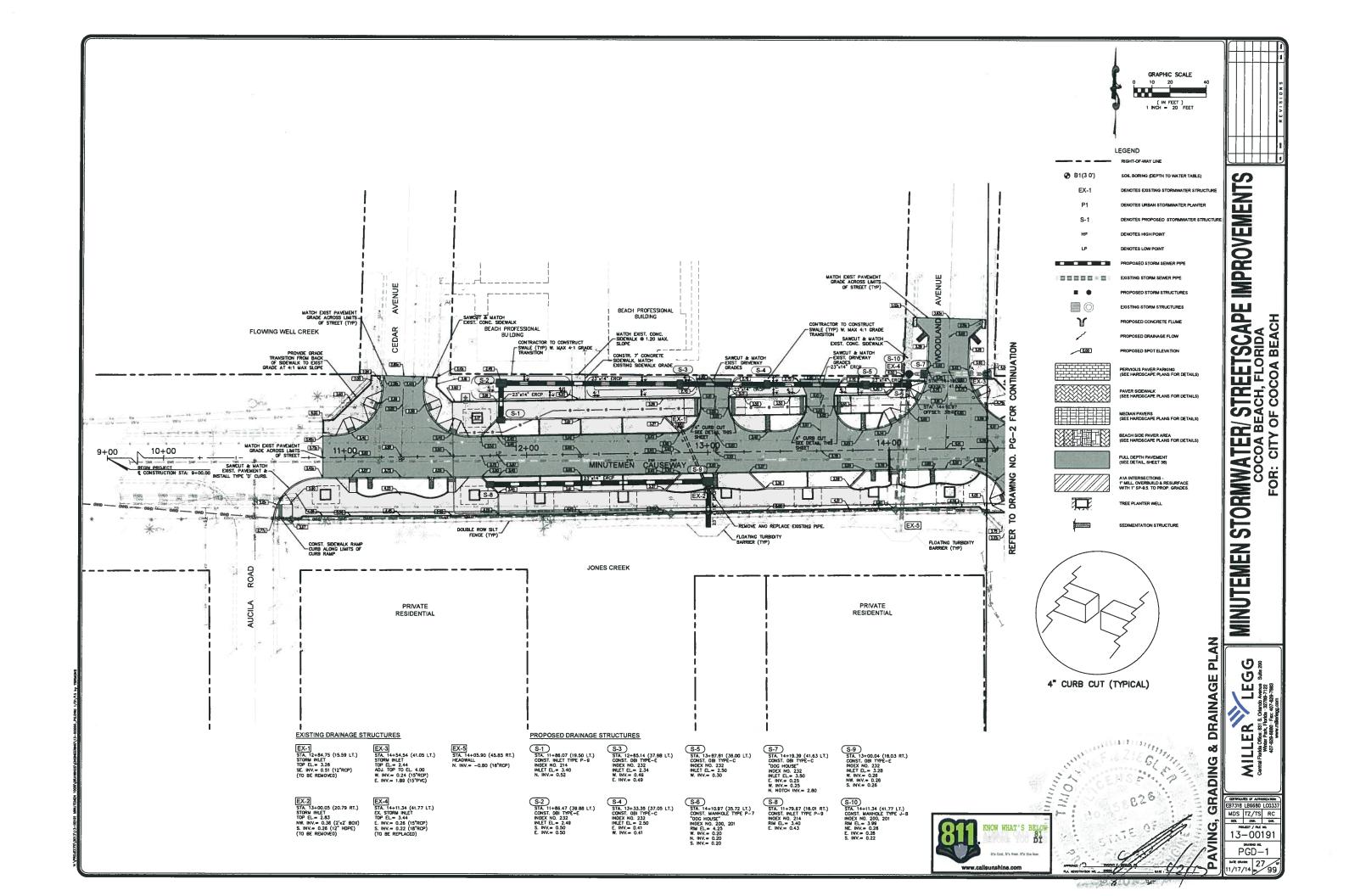


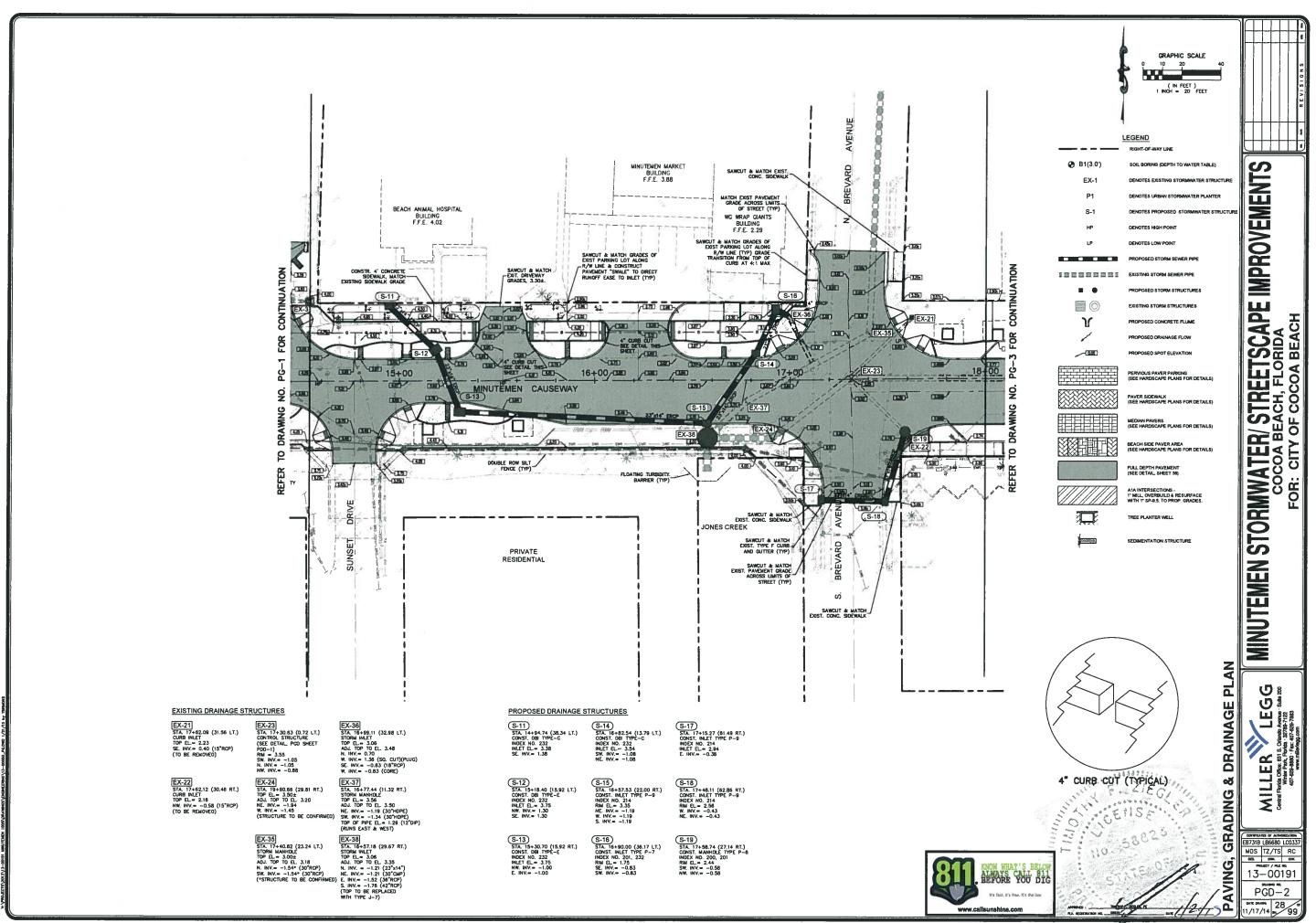
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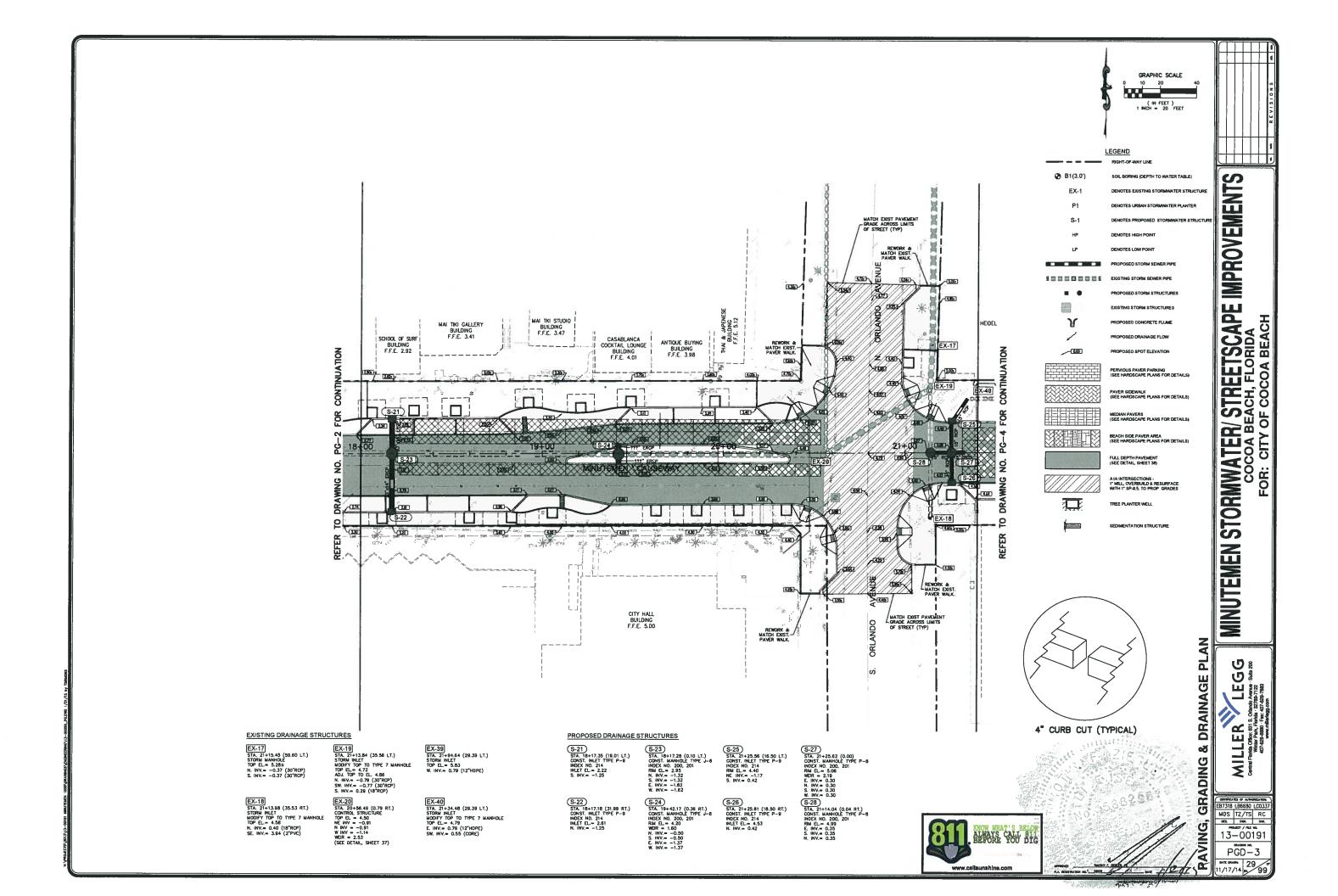
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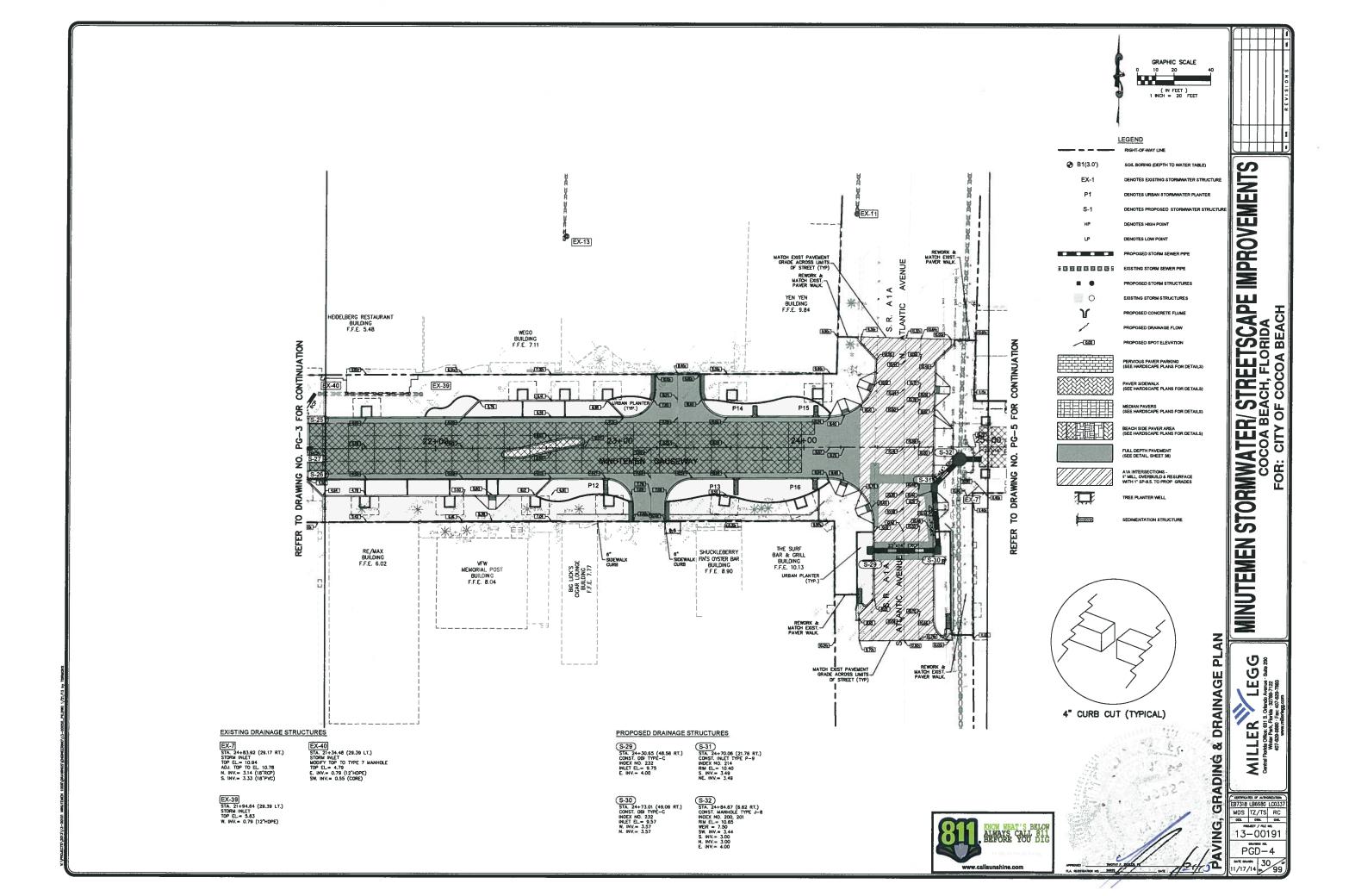
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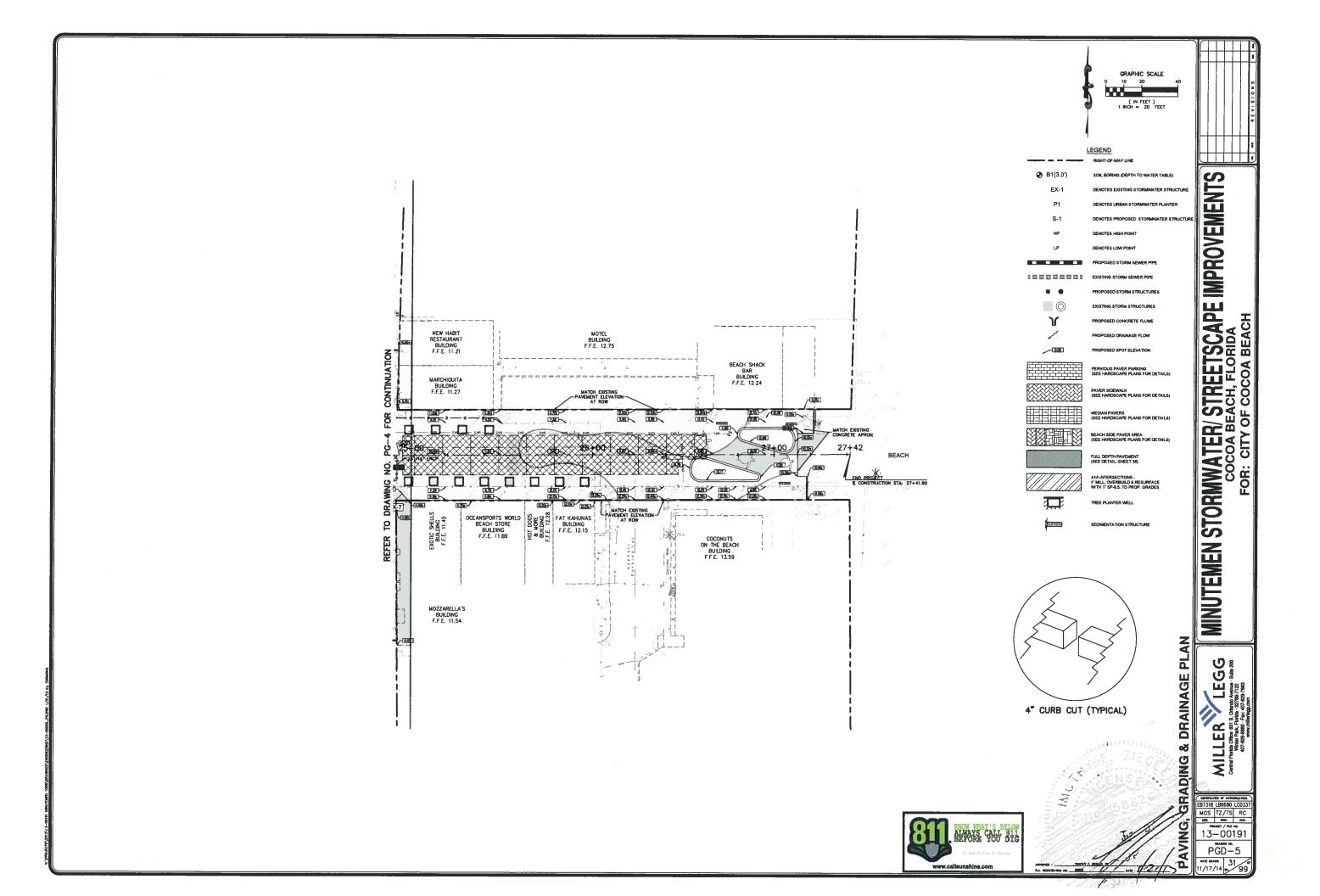


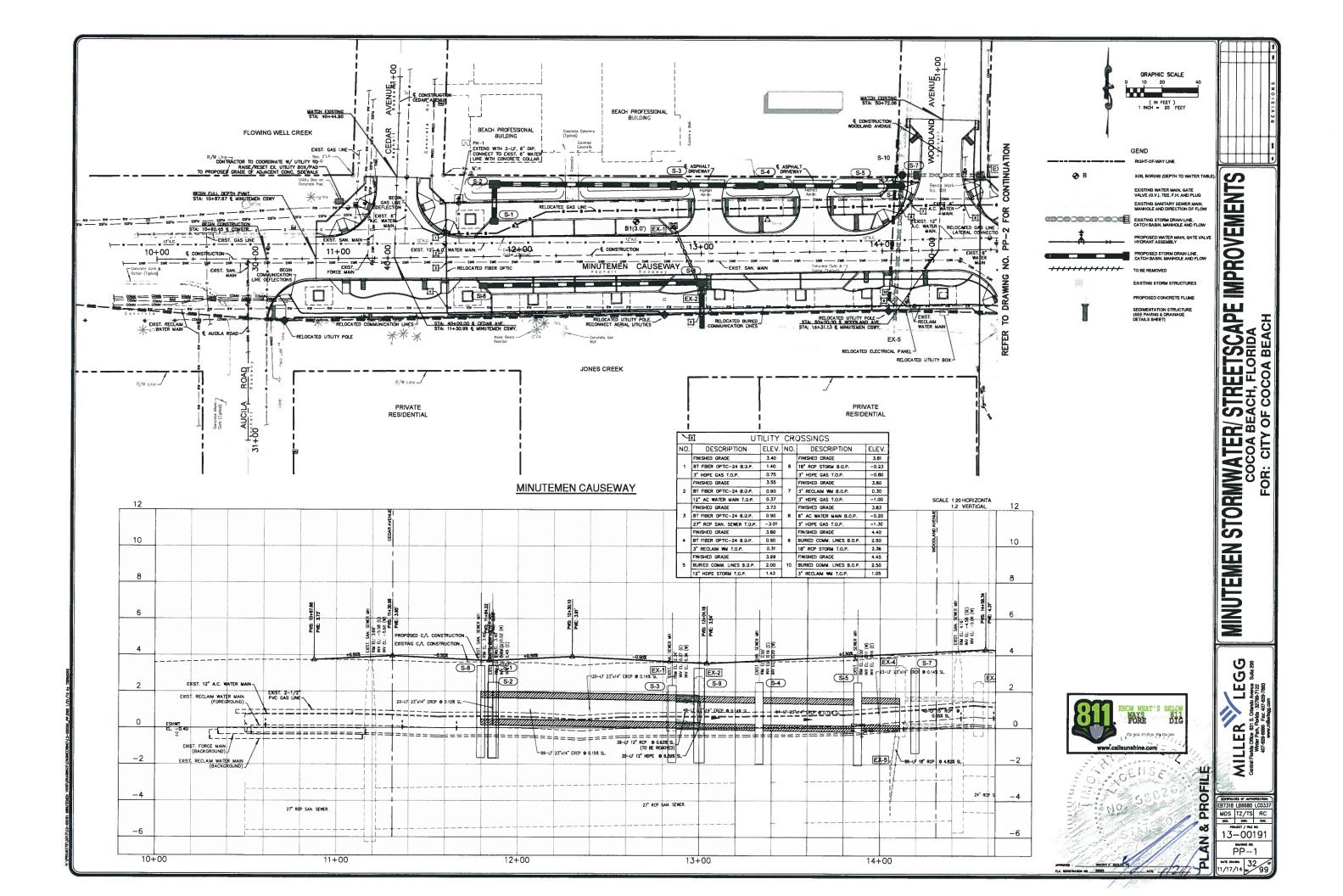


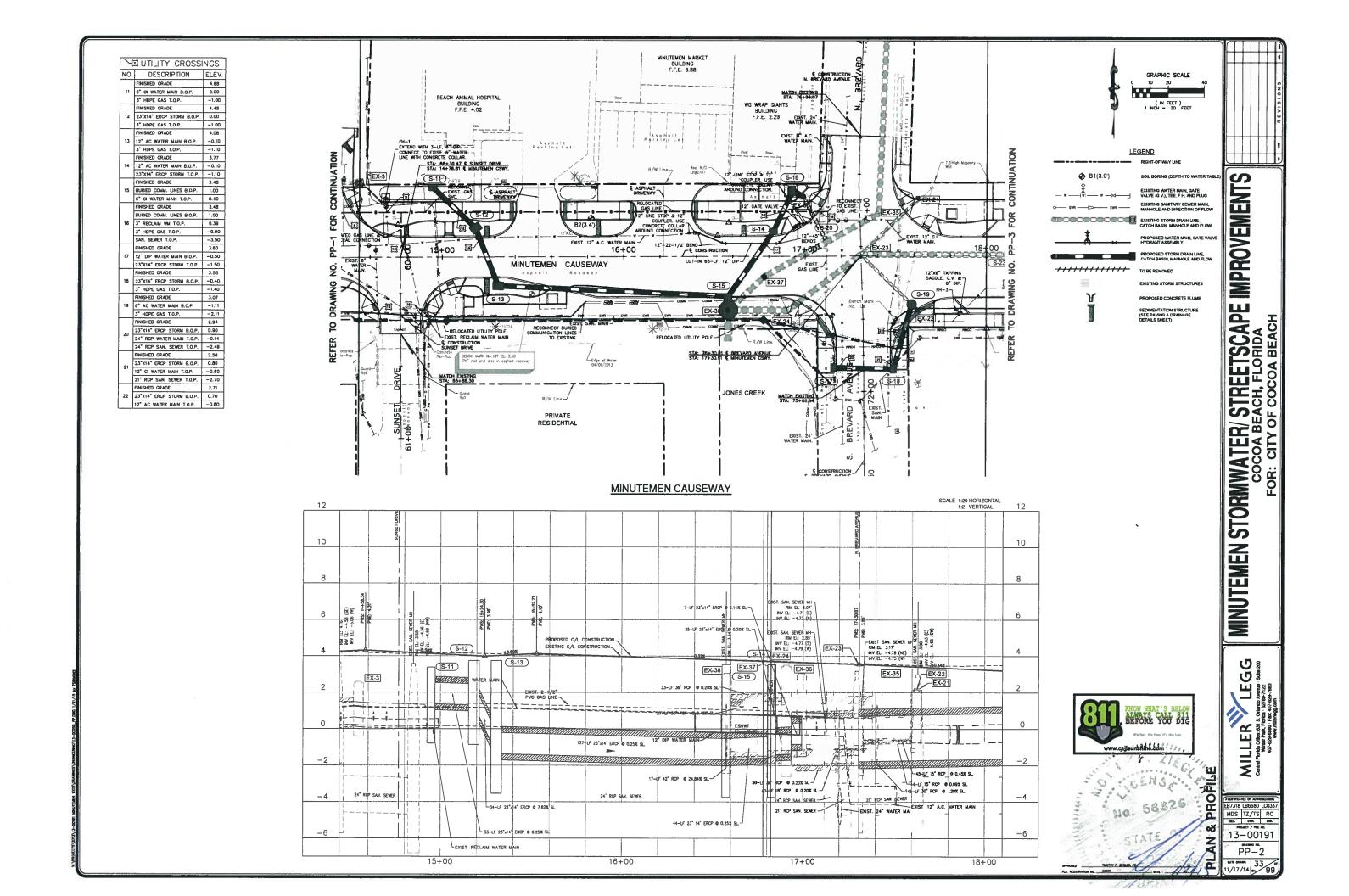


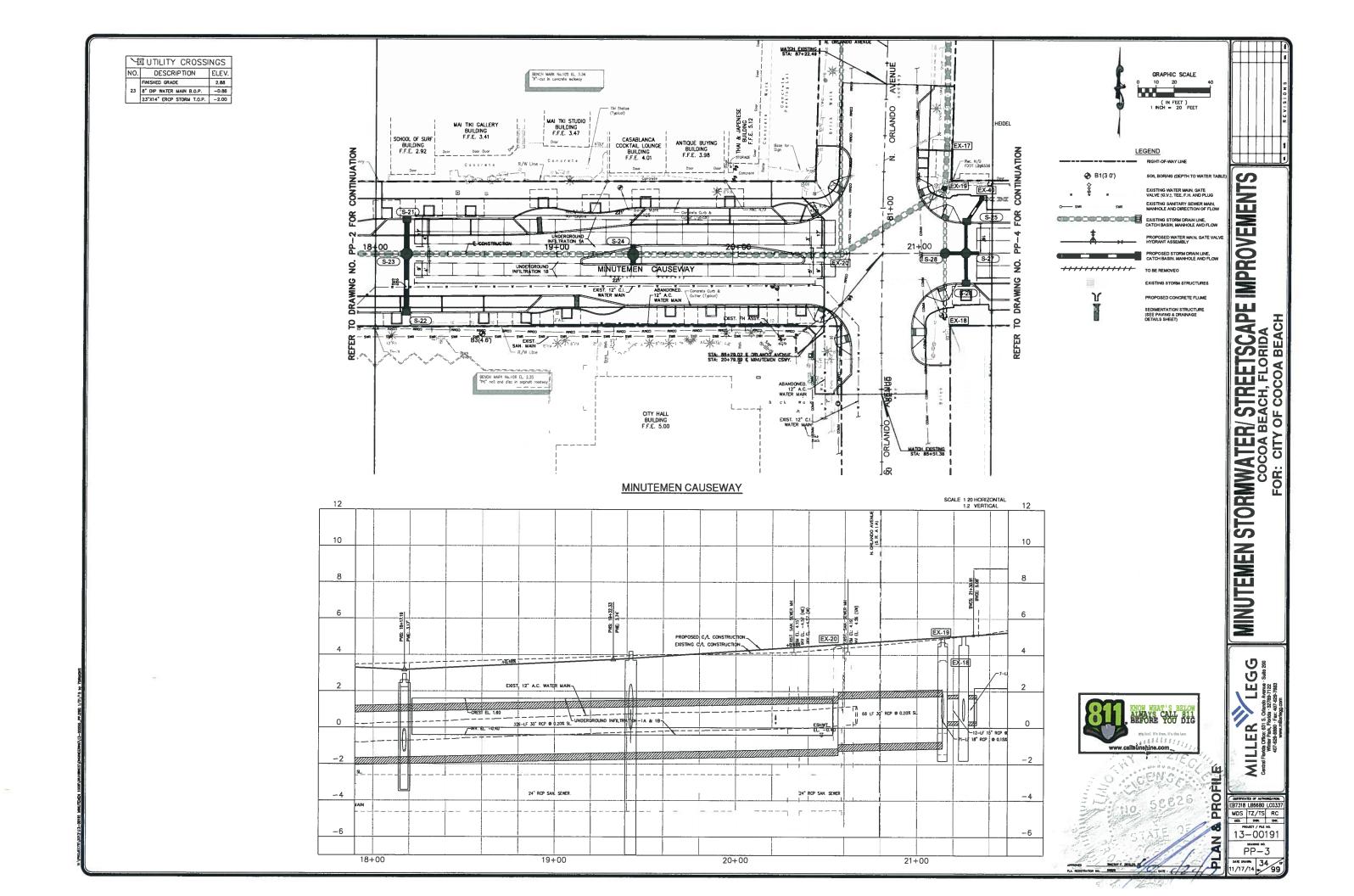


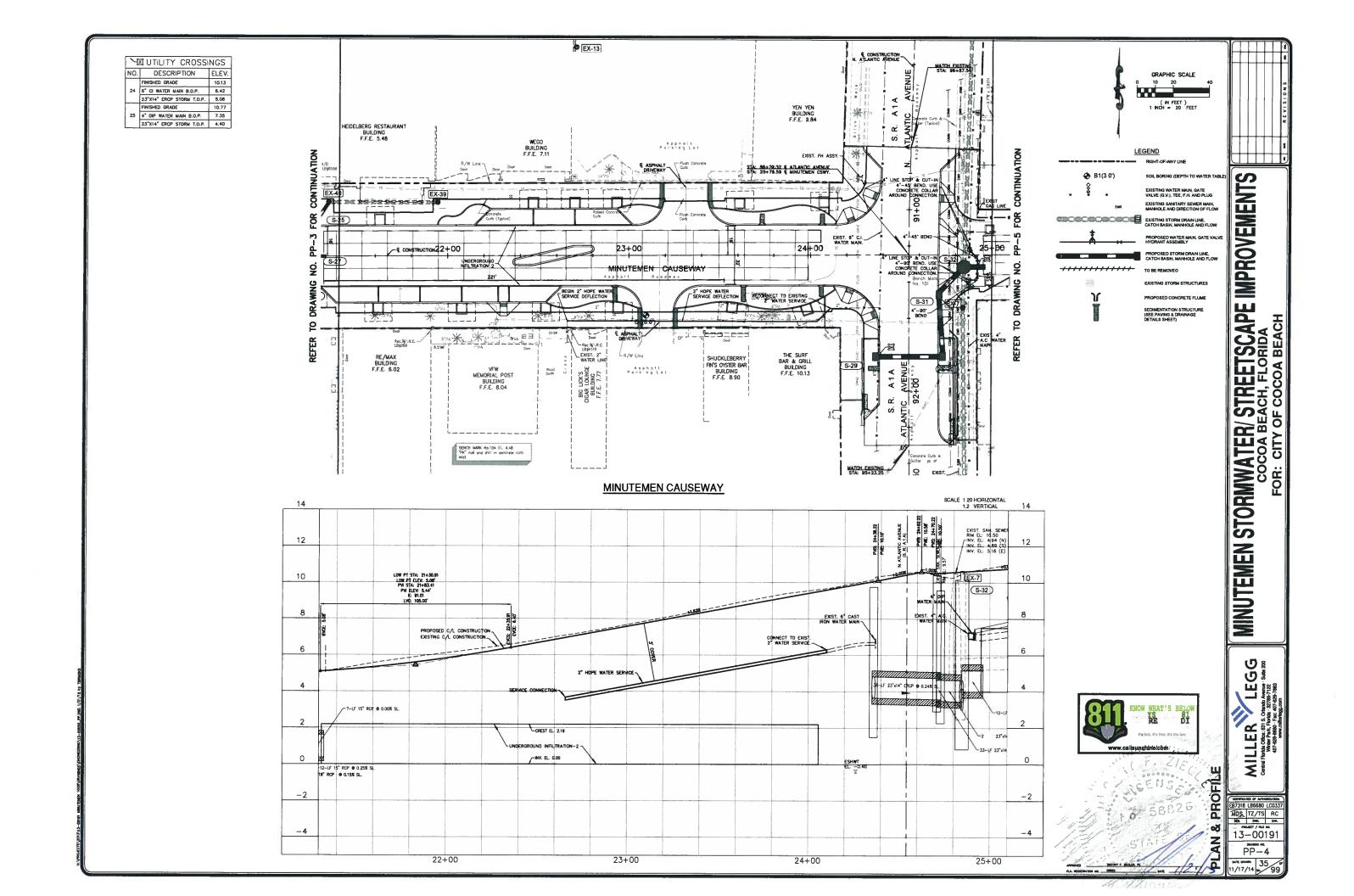


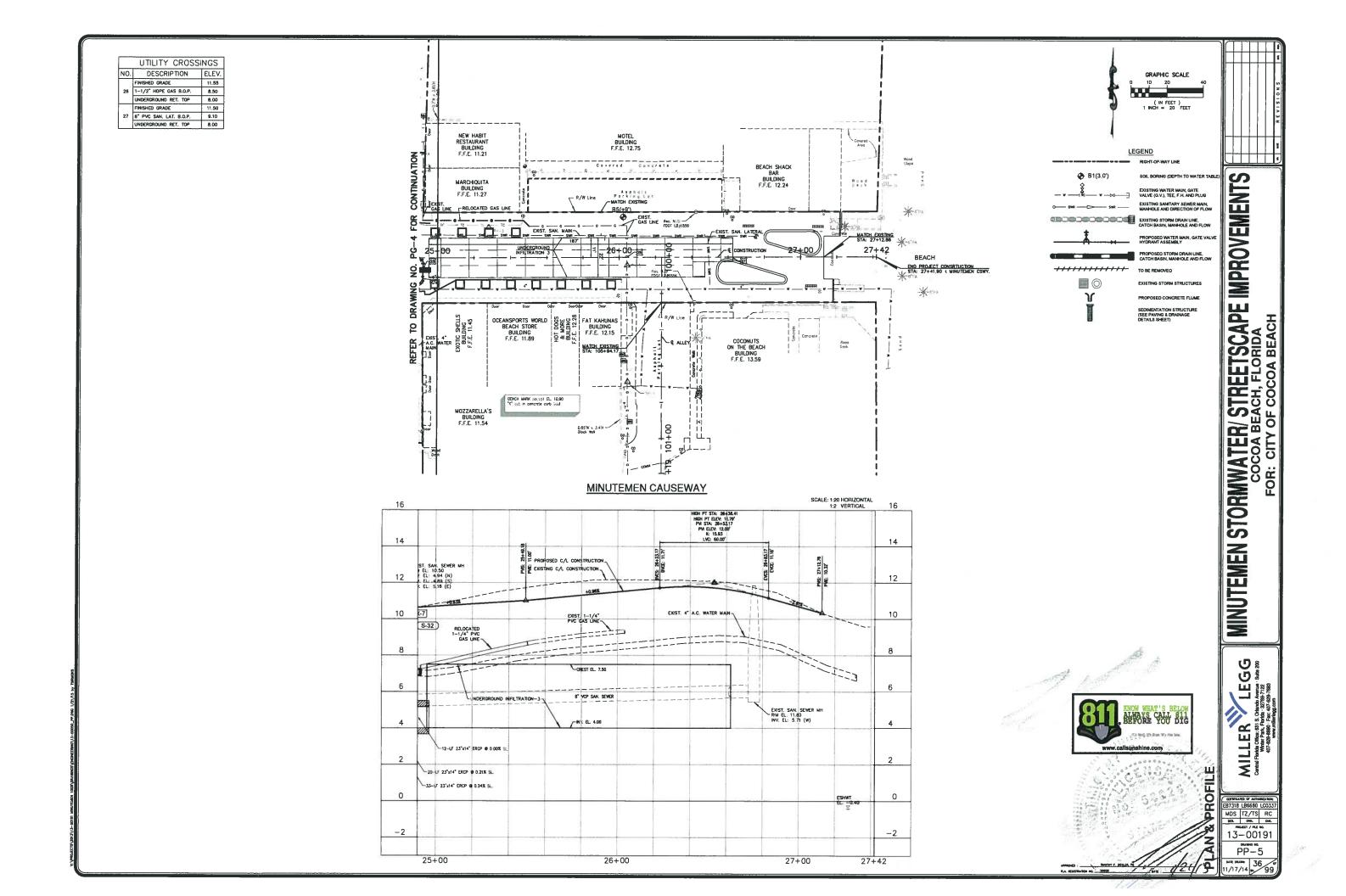


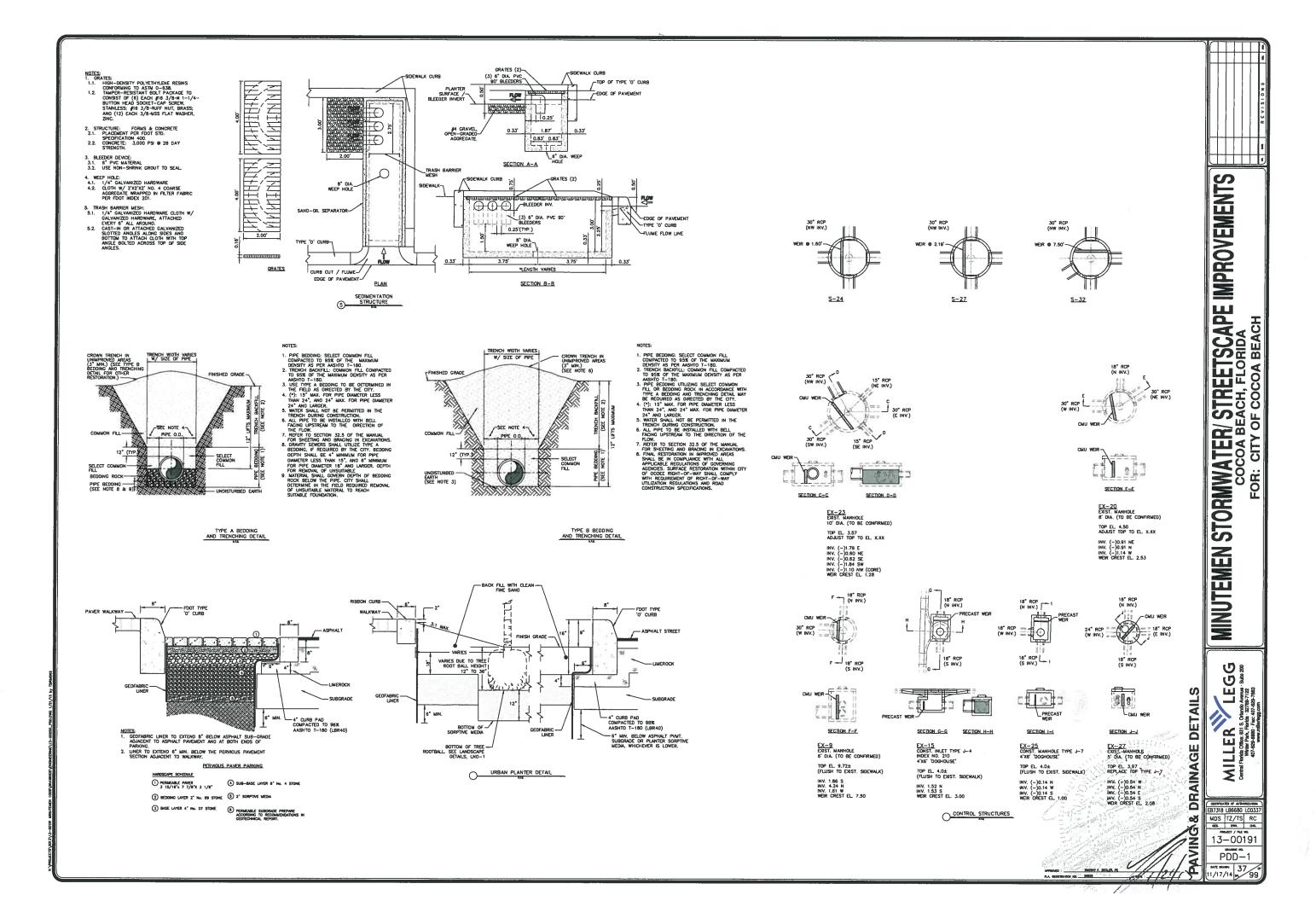


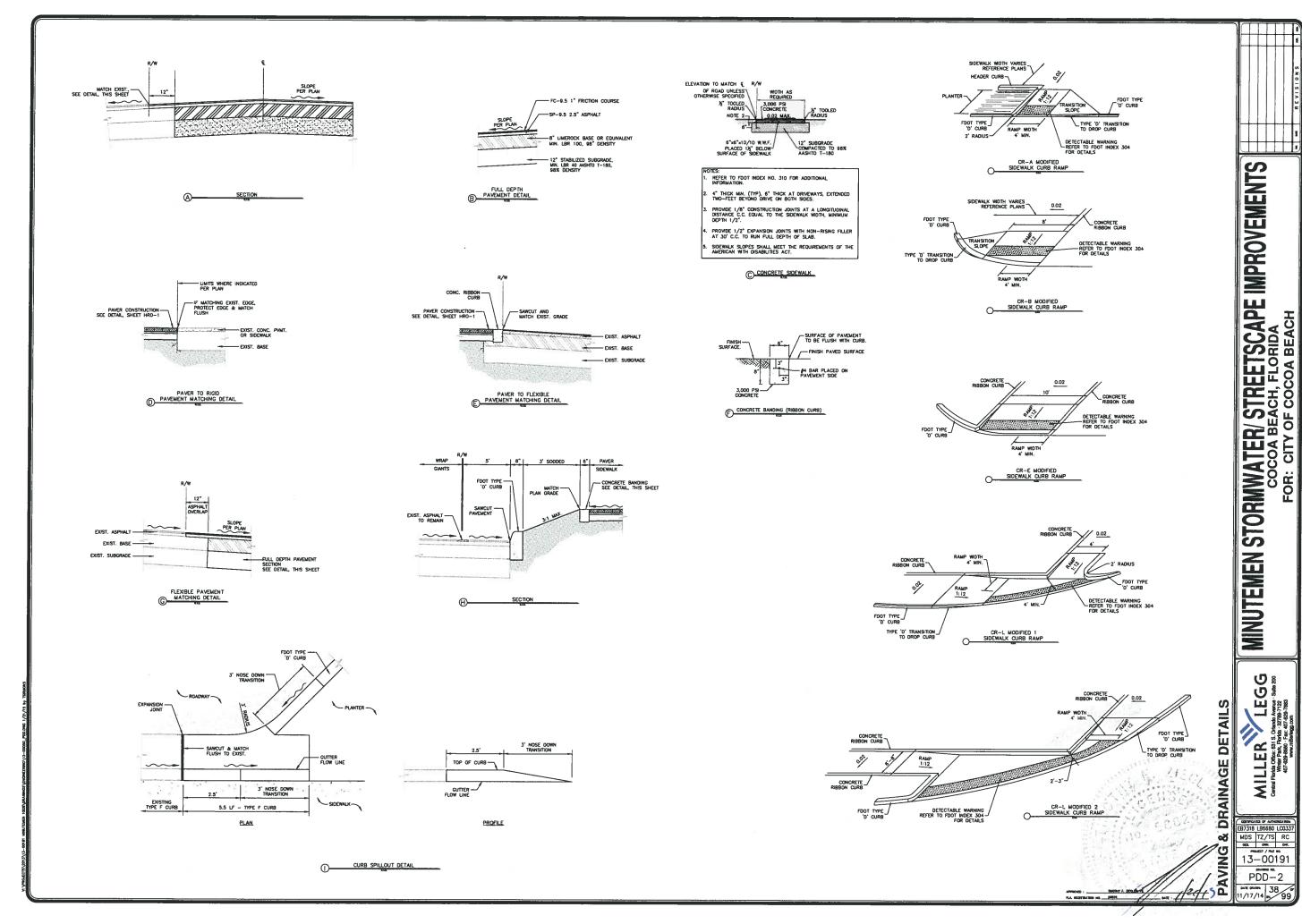


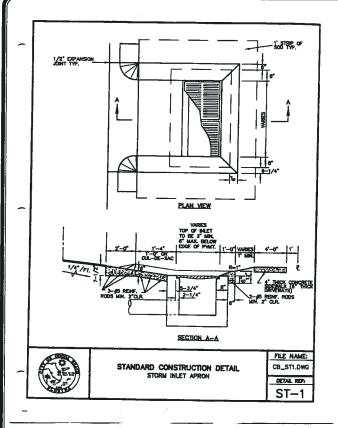


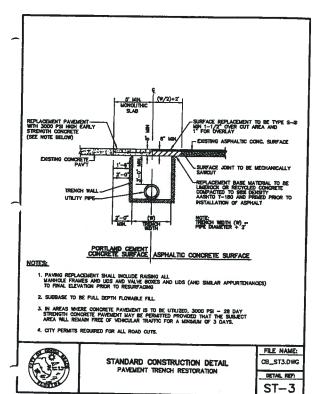












STORM DRAINAGE DESIGN AND CONSTRUCTION NOTES

ALL MATERIALS AND INSTALLATION METHODS USED FOR LAND DEVELOPMENT CODE REQUIRED MEROVEMENTS FOR SUBDINSCINGS AND SITE PLANS SHALL BE IN CONFORMANCE WITH THE DITY, FOR TS MANDARD SPECIFICATIONS FOR ROAD AND BRODE CONSTRUCTION (LATEST EXITION), AND THE FOOT ROADRING AND TRAFFIC DESIGN STAMPANCE (LATEST EDITION).

ALL STORM SEWERS AND CALVERTS LOCATED IN ROADWAY RIGHTS—OF-WAY AND ROADWAY EASTMENTS SHALL BE A MIRBRUM OF CLASS IN REDIFFORCED CONCRETE PRE-C DUTSIDE OF ROADWAY EASTMENTS AND R.O.W., PIPE MAY BE MADE OF ALTERNATE MATERIALS ROCULIONS:

A. SMOOTH RINER WALL HIGH DENSITY
POLYETHYLENE (HOPE) IN ACCORDANCE WITH
ASSITIO M-284, AASTIO MET, ASTI B 3350 AND
ASTIM D2412 FOR SIZES UP TO 42" IN DIAMETER OR B. PVC IN ACCORDANCE WITH THE PROVISION NOTED IN THE "SEWER DETAILS" OF THESE SPECIFICATIONS.

IN THE SERVER METALS OF THREE STANDARDS.

C. CORMIGATED ALIBRIANIA.

ALL STORM SEWER PRIC KONTE SHALL BE ENTRELY WELPPED WITH FILTER FABRIC WITH A MERITAM WOTH OF 24 "AND A MERITAM OF 24" OF A MERITAM OF 25 AND CONTROL SECTION OF STANDARDS. SENDER, AND THE STANDARDS AND THE SECURIORISM OF THE SECU

DEPTH OF COVER MEASURED TO THE TOP OF PIPE (NOT INCLUDING THE BELL DOWN) SHALL BE A MINISHM OF 1 FOOT. DEVIATION FROM THIS REQUIREMENT MAY BE ALLOWED BY NOTELESSED THE PIPE'S TRUTCHINAL CAPACITY. THIS DEVALUED MUST BE SPECIFIED ON THE PLAIS APPROVED FOR CONSTRUCTION AND SUBSEQUENTLY REFLECTED ON THE SKOP DRAWINGS AND AS-BOLLT PLAIS.

ALL STORM ORAMAGE PRES LOCATED IN ROADWAY RIGHTS-OF-WAY AND ROADWAY EAST-OFF WAY AND ROADWAY EAST-OFF WAY AND ROADWAY FROM THE ROAD (18") DAMBETER OF EQUIPMENT OF THE ROADWAY-FINE (28) YEAR STORM OF THE ROADWAY-FINE (28) YEAR STORM OF ARE PREMITTED ON PROVATE STE PLANS PROVIDED THAT MAINTENANCE SHALL SE PREFORMED TO THE OWNER.

STORM MALES, MANAGUES, AND CATCH BASINS SHALL BE ETIMER POURED IN PLACE OR PRECAST REINFORCID CONCRETE. STRUCTURES SHALL BE REQUIRED AT EACH CHANGE OF PRES SEE OR CHANGE IN PIPE. DEFECTION, ALL STRUCTURES SHALL BE IN COMPLIANCE WITH ASTAL C4-78 AND SHALL HAVE 6" THOCK WALLS, 6" THOCK W

STORM MALTS SALL BE SPACED IN SUCH A MANDER AS TO ACCEPT ONE HUNDRED

(100) PERCENT OF THE DESIGN STORM A MANDER AS TO ACCEPT ONE HUNDRED

(100) PERCENT OF THE DESIGN STORM RUNOFF WITHOUT IMPEDING THE FLOW OF

RAFFIC. FOR ROADWAY SECTIONS WITH DESIGN SPECIES 45 MAY AND LESS AND

WITHOUT FALL MOTH SHOULDERS, SPECIA PRESULTING EVER A MAY AND LESS AND

FOUR HOMES (4*) PER HOUR SHALL HOT DECIDE ONE—HALF OF A TEXT THROSTITE OF

ADJACENT TO THE OUTTER. FOR SITE FLANS, RILLT SPACING SHALL BE DESIGNED TO

ACCEPT ONE HUNDRED (100) PERCENT OF THE RUNOFF FROM A RAMFALL MISTRITY OF

FOUR MOMES (4*) PER HOUR WITHOUT RESULTING BY PONDING OF WATER AROUND THE INLET.

LAKE DEPTHS SHALL BE EIGHT FEET (8") MINIMUM TO FIFTEEN FEET (15") MAXIMUM, MEASURED FROM THE TOP OF BANK.



STANDARD CONSTRUCTION DETAIL

FILE NAME: CB_ST4.DWG DETAIL REF: ST-4

STORM DRAINAGE DESIGN AND CONSTRUCTION NOTES (CONTD.)

- FOR CONNECTIONS BETWEEN BALETS WITH PEPHIG 15° IN DAMETER AND LARGER, THE MAZULUM DISTANCES BETWEEN RALETS AND / OR CLEAN-OUT LANCTION BOXES SHALL BE 300 FEET. CLLAVERTS SHALL BE 3,000 TO MART MAY BOXES OF STATE OF SHALL BE 300 USEN A MARRING'S 1 OF 0.012. SPACING FOR CLEAN-OUTS AND RALETS FOR SMALLER PIPHIG SHALL BE REDUCED AND EVALUATED ON A CASE BY CASE BASS.
- THE MAXIMUM PERIOSSBLE SLOPE OF ANY NEW SITE GRADING IS 3:1 (NORICONTAL MERIDIAL). THIS LIMIT SHALL BE APPLIED TO ALL AREAS DECOYT STORMARDER CONNEYTHICK AND TREATMENT STYTEMS WHICH MAKE A MAXIMUM SHOPE OF 4: (DECOYT BELOW THE MATER TABLE WHICH SHAPPER SLOPES ARE PERIOSSBEL).
- ALL SWALES AND DITCHES SHALL HAVE A MAXIMAN PERBITTED SDE SLOPE MOT GREATER THAN 4 TO 1 AT A MEMBAUL THE MAXIMAN PERBITTED BLOCKLOPE, SHALL BE 2:1, PROMOED THAT A 2" MORE SERM IS INSTALLED, DESIGN CENTERLINE AND TOP-OY-BLANK ELEVATIONS SHALL BE NOTED AT INTERVALS OF 100".
- SWALES THAT ARE NORMALLY DRY AND INTENDED FOR CONSEVANCE OF STORMMATER RANDET AND ARE NOT INTENDED FOR RETEXTION SHALL HAVE A MERICAN DRAMAGE MANTIPLANCE EASTERDED FOR METEXT SPECT. SWALED AREAS INTENDED FOR RETEXTED SHALL PROVIDE APPROPRIATE EASTERDT AREAS FOR ACCESS AND MARITDANCE MEASURED FOR THE TOP OF PEAKS AT A MERICAN, THE SAND EASTERD HALL MEASURE 10' FEXT IN WIDTH FROM THE TOP OF THE STALE.
- PIPED STORMWATER SYSTEMS SHALL HAVE A MINIMUM ORANIAGE MAINTENANCE EASEMENT WOTH OF 20 FEET, AND MAT BE INCREASED DEPENDING UPON THE SIZE AND DEPTH OF PIPE.
- NORMAL ROADSIDE SWALES ARE PERMITTED TO BE CONSTRUCTED TO A MAXIMUM DEPTH OF 18" BELOW THE OUTSIDE EDGE OF PAVEMENT OR CONCRETE CURB.
- CONCRETE EROSION CONTROL MUST BE PROVIDED WHERE SWALES OR CULVERTS INTERCEPT DRAINAGE DITCHES.
- WHEN A LAKE IS INCORPORATED WITHIN A SUBDIVISION AND IS ABUTTED BY LOTS, SUCH ABUTTING LOT LINES SHALL BE EXTENDED INTO THE LAKE PROPORTIONATELY ENCOMPASSING ALL OF THE LAKE AREA.
- DROUGHASSING ALL OF THE LAKE AREA.

 ARE INFLOW AND CURLET STRUCTURES SHALL EDISTALLY SE CONSTRUCTED WITH RESPONDED CONCRETE AND SHALL BE SERVEDT TO THE APPROVAL OF THE CITY.

 SCHARGES FOR WEIT PORIOS SHALL BE CONSTRUCTED WHAT THE SOTTOW IN CONSTRUCTED BY BELOW THE MORBALL BE CORRECTED BY BEING THE CONSTRUCTION OF THE CONSTRU



STANDARD CONSTRUCTION DETAIL

FILE NAME: CB_ST5.DWG DÉTAIL REF: ST-5

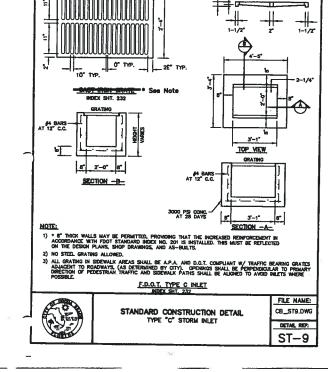
STORM DRAWAGE DESIGN AND CONSTRUCTION NOTES (CONTD.)

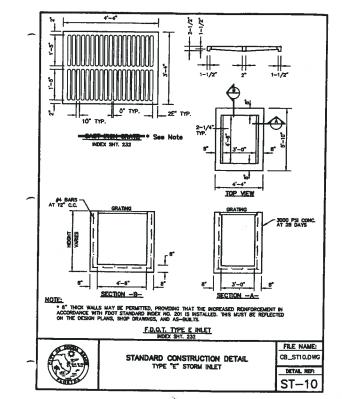
- SOIL EROSION CONTROL MEASURES, SATISFACTORY TO THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT AND THE CITY, SHALL BE EMPLOYED DURING CONSTRUCTION.
- THE CITY MAY REQUEST THAT THE DEVELOPER SUBJUT A REPORT BY A QUALIFIED HYDROLOGIST ON THE MAPACT THE LAKE WILL HAVE ON HECHBORNO WATER TABLE ELEVATIONS BOTH DURING CONSTRUCTION AND AFTER LAKE COMPLETION, THE CITY MAY REQUIRE GROUNDWATER MONITORING DURING THE LAKE EXCAYATION.
- ADEQUATE MANYENANCE EASEMENTS OR RIGHTS—OF—WAY AS APPROVED BY THE CITY SHALL BE PROVIDED ANDUND THE ENTIRE PERMETER OF ALL LAUES AND ASSOCIATED OUTFALLS DESCRIBENGED AND OUT OF LAUES. APPLICABLE CROSS SECTIONS SHALL BE RICLIDED ON ALL FINAL DEVELOPMENT PLANS.
- DEVELOPMENT PLANS FOR ALL STORMNATER MANAGEMENT SYSTEMS SHALL CONTAIN POR-OFF DATA (OVERFLUM), BOTTOM BEVATION, HORMAL MATER LEVELS, MEAN ARROLL SESSIOLAL HORN WATER TABLE ELEVATION, TREATMENT VOLLIME AND CHRESPONDING ELEVATION, TOO YEAR HOR WATER LEVELS, AND THE DESIGN TABLANCE ALLANDER OF MATERIAL SERVICE AND THE DESIGN TABLANDER OF THE SERVICE AND THE DESIGN TABLANDER OF THE DESIGN
- IN GENERAL, ALL RETENTION / DETENTION STEES MUST BE CONSTRUCTED ON ALL PROJECTS PRIOR TO ANY ROAD, PARGING LOT, OR BULDING CONSTRUCTION COMMERCIATION OF AS CURRENT PRIOR CONSTRUCTS CONTRICE STATE AND WATER MARS MAY BE INSTANCE. PROR TO RETENTION/DETENTION SITE CONSTRUCTION IF DEWATERING IS NOT REQUIRED.
- WICH CLAUSTIS ARE INSTALLED TO MAINTAIN THE FLOW OF EXISTING DRAMAGE WAYS INSERE, INSELY PROPOSED ROADS WOULD OTHERWISE SEVEN THE DRAMAGE WAYS INSELL EXTENDED FROM THE PROPOSED ROADS WITH THE SELL EXTENDED FROM THE PROPOSED FROM THE PROPOSED FROM THE PLOW FROM THE TOO YEAR 24 HOUR STORM LOVED THE THE PLOW FROM THE TOO YEAR 24 HOUR STORM LOVED THE THE PLOW FROM THE TOO YEAR 24 HOUR STORM LOVED THE THE PLOW FROM THE TOO YEAR 24 HOUR STORM LOVED THE TOO YEAR 24 HOUR STORM LOVED THE TOO YEAR 24 HOUR STORM LOVED THE PLOW FROM THE TOO YEAR 24 HOUR STORM LOVED TH
- LANDSCAPE PLANS SHALL CLEARLY DEPICT THE DESIGN LOCATION OF PLANTINGS RELATIVE TO THE LOCATION OF PUBLIC UTILITIES AND STORMINATER INFRASTRUCTURE IN ORDER TO EVALULATE POSTUTIAL CONFUCIES.



STANDARD CONSTRUCTION DETAIL STORM DRAINAGE DESIGN AND CONSTRUCTION NOTES

FILE NAME: CB_ST6.DWG DETAIL REF ST-6





ALL GRATES SHALL BE AN ALTERNATE "G" GRATE (HOT DIPPED GALVANIZED AFTER FABRICATION)

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MINUTEMEN

IMPROVEMENTS

R/STREETSCAPE II BEACH, FLORIDA OF COCOA BEACH

200

STORMWATER

Z AINA DR/ EB7318 LB6680 LC0337
MDS TZ/TS RC

OEL OWN. OHL

PROJECT / PLE NO. So 13-00191 PDD-3

MX 940 39 6

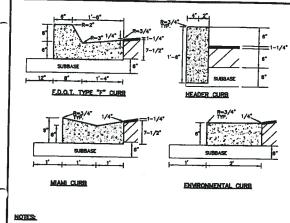
CONTRACTOR REQUIREMENTS FOR SITE CLEARING. GRADING. AND EROSION CONTROL DESIGN AND CONSTRUCTION NOTES (CONTD.)

- 9. FOR INDIVIDUAL CONSTRUCTION PROJECTS INVOLVING MULTIPLE PHASES, UPON COMPLETION OF EACH PHASE OF THE PHACET, SEEDING AND MULCHING AND GR/ SODOWO IS TO SE PERFORMED PROR TO COMMUNICATION IN EXIT PHASE OF CONSTRUCTIONS.
- ONCE AN AREA IS SEEDED OR SODDED, IT MUST BE MAINTAINED BY THE CONTRACTOR TO ALLOW THE GRASS TO BECOME ESTABLISHED.
- ANY BURNING OF CLEARED MATERIALS MUST BE INSPECTED AND PERMITTED ON A DALLY BASIS. CONTACT THE FIRE MARSHALL AT 758-5401 PRIOR TO EACH DAY OF DESIRED BURNING. 12. ABSOLUTELY NO BURYING OF CLEARED MATERIALS IS PERMITTED.
- 13. THE REMOVAL OF ALL VEGETATION AND TOPSOIL ON THE FITTIRE ROADWAY, PARKING AND BILLIONG LOT AREAS IS REQUIRED TO BE COMPLETED PRIOR TO THE PLACEMENT OF FILL ON MINDS: AREAS THE TOPSOIL MAY BE TEMPORARILY STOCKHELD AND USED AS TOPSOIL OVER OWER PROCESSED GREEN AREAS SUCH AS PLANT BEDS, SODDED AREAS, AND WHERE TREES ARE TO BE INSTALLED ON RELOCATED.
- 14. A SIGNED, DATED, AND SEALED LETTER FROM A SOLIS ENGINEER OR THE ENGINEER OF RECORD CENTERING THAT THE AMEAS TO BE FILED MAYE BEEN STREPPED OF ORGANIC MATERIALS, MUST BE SUBMITTED TO THE CITY PRIOR TO FILLING.
- 15. FILL MATERIAL IS TO BE PLACED IN ONE FOOT LIFTS AND COMPACTED TO THE APPROPRIATE DEPISTY (888 FOR PAVED AREAS AND 95% FOR BUILDING PADS AND ALL OTHER AREAS AS PER AASHTO T-1807.
- 16. DURNIC SURDINSION DEVELOPMENT WHEN FUTURE BUILDING LOTS ARE FILLED AS PART OF THE OVERALL SUBDINISION MERCOMEMENTS, COMPACTION TEST REPORTS MUST BE PERFORMED ON THE SULDING LOTS AT 300 FOOD WITEVAUS. THESE TESTS ARE TO BE PERFORMED IN ONE-POOT VEHTCAL INCIDENTS. THE RESULTS OF THESE TESTS ARE TO BE SUBMITTED TO THE CITY UPON COMPLETION OF THE TESTS.
- IF ANY MUCK MATERIAL IS DISCOMERED, IT SHALL BE REQUIRED TO BE REMOVED AND REPLACED WITH A SUTTABLE MATERIAL THAT IS PROPERLY BACKFILLED, COMPACTED AND TESTED USING ASSISTOT—180 MODIFED PROCTOR METHOD.
- STOCKPLING IS NOT GENERALLY PERMITTED BY THE CITY, WHEN ALLOWED, STOCKPLES SMALL NOT EXCEED SOFFERT IN HEACHT MEASURED FROM THE CHROMAL GRADE, AT A MOMBAIL, STOCK PILES THAT WILL REMAIN IN FLACE IN EXCESS OF THENTY OATS SMOULD BE SEDEED AND MALCHED MANDLATELY UPON PLACEMENT OF THE FINAL LEFT.
- 19. SOLE ARE TO BE STABLEED BY WATER OR OTHER MEANS DURING CONSTRUCTION. THES IS INTERED TO TRADE SOLE DECISION AND THE IMPACT TO REDIGEORING COMMUNITIES. ADEQUATE DISTRIBUTION OF THE DITTER LIGHTS OF THE DITTER CANNOTS THE SET PLANTAGE OF THE DITTER CANNOTS THE SET PLANTAGE OF THE DITTER CANNOTS THE DITTER OF THE DITTER CANNOTS AS DETAILS NECESSARY OF THE DITTER OF STOCKPHE AREAS, AND OTHER METHODS AS DETAILS NECESSARY OF THE DITT.
- 20. ALL FIL MATERIALS LOCATED BENEATH STRUCTURES AND PAYEMENT SHALL CONSIST OF CLEAN GRANULAR SAND FREE FROM ORGANICS AND SIMLAR MATERIAL THAT COULD DECOMPOSE.
- ALL FILL TO BE PLACED IN LANDSCAPED AREAS SHALL HAVE A Ph RANGE BETWEEN 8.5 AND 7.5, BE ORGANIC IN NATURE, FREE OF ROCKS AND DEBRIS, OR MATCH NATIVE EXISTING SOILS.



STANDARD CONSTRUCTION DETAIL STANDARD CONTROL OF THE STANDARD CONTROL OF THE CLEARING, GRADING, AND EROSION CONTROL DESIGN AND CONSTRUCTION NOTES

FILE NAME: CB_R24.DWG DETAIL REF R-24



- ALL CURREN TO BE CONSTRUCTED OF 28 DAY, 3000 P.S.L. CONCRETE
 2. 1/2" PRE-MCIDED EXPANSION JOHT REQUIRED EVERY 500',
 CONSTRUCTION JOHT REQUIRED TO ANDROLL OF MORRADIA.
 3. 1/2" PRE-MCIDED EXPANSION JOHT REQUIRED AT TACH SIDE OF ALL
 STROM, MATE STRUCTURE.

 THE MATERIAL PRESENTATION OF THE PRESENT AND TRACE SIDE OF ALL
 STROM, MATERIAL PRESENTATION.

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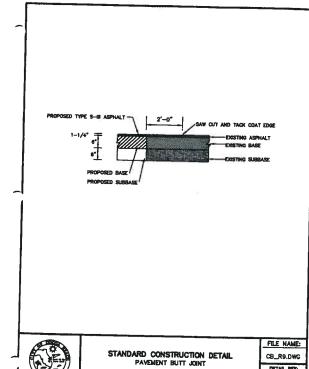
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 STROM, MATERIAL PRESENTATION OF THE PRESENTATION.

 THE PRESENTATION OF THE PRESENTATION OF THE PRESENTATION OF ALL
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 STROM, MATERIAL PRESENTATION OF THE PRESENTATION OF T
- 3. 1/27 PRE-MOLDED DEPARSION JOHN REQUIRED AT EACH SIDE OF ALL
 STORM HALT STRUCTURES AND AT ALL RADUS POINTS.
 4. 6" SURBASE TO BE COMPACTED AND TESTED TO BROX DESTY BASED ON
 ASSISTOT 1-168 MODERED PROCIFOR TEST AND SHALL BE STABLIZED TO A MEMBAUM LB.R. 40.
 5. EXPANSION JOHN MATERIAL MUST COVER THE ENTIRE CROSS SECTION
 OF CURB.
 6. IN THE STABLE SHALL EXTRUDED CURBS (DEFINED AS HEADER—TYPE CURBS
 PRETALLED DIRECTLY ON TOP OF PANEDINT) BE PERSONTED.
 7. ALL ASPIRALT AND/OR PAYER INDIVENMY APPROVIS LOCATED IN PUBLIC
 REGISTOR—THAY, SHALL INCLUDE CURBING.



STANDARD CONSTRUCTION DETAIL

FILE NAME: CB_R7.DWG DETAIL REF: R-7





DETAIL REF: R-9

ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES

ALL MATERIALS AND RESIDENTANCE AREA DESIGN AND CONSTRUCTION NOTES
ALL MATERIALS AND RESIDENTANCE METHORS USED FOR LAND DEVLLOPMENT COOR REQUIRED
IMPROVIDEDTS FOR SUBMINISHES FOR ROOM AND REGIC CONSTRUCTION (LATEST
EDITION). AND THE PLOT EXAMINISHES FOR ROOM AND REGIC CONSTRUCTION (LATEST
EDITION). AND THE PLOT EXAMINISHES FOR ROOM AND REGIC CONSTRUCTION (LATEST
EDITION). AND THE PLOT SHAPPIN ROUGHY AREAS SHAPE EDITION.

1. ALL RIGHT-OF-WAY OTHER THAN ROUGHYAY AREAS SHALE EDITION.
SODDED, ALL SOMES SHAPPIN ROUGHYAY AREAS SHAPE EDITION IS A
CONCERN.

THE FOLLOWING WILL BE THE STANDARD PROTECTION FOR DITCHES UNLESS DRAINAGE CALCULATIONS INDICATE OTHERWISE:

SWALE PROPER GRADES PROTECTION REQUIRED
0.29-1.03 GRASSING AND MULCHING
1.05-4.03 SOUTH
4.03 AND GREATER DITCH PAYRING

THE PAVEMENT BASE, AND SUBBASE THOORESS PRESENTED ON DETAILS REPRESENTED THE MEMBAR REQUIREMENTS FOR LOCAL PUBLIC STREETS AND REVIAIRE PARKING LOTS. THE CHITY RESERVES HE RIGHT AT ITS DESCRIFTION AND PRIVATE PARKING LOTS THE CHITY RESERVES HE RIGHT AT ITS DESCRIFTION AND PRIVATE BASE REQUIREMENTS FOR COLLECTOR AND ARTERIAL ROADWING THE PARKING LOTS SHACKED TO THE VERY WENDLAN COMBERGIAL TRAFFIC.

THE DEVELOPER SHALL PROVIDE AT THEIR OWN EXPENSE A CENTRED SOLES ENGINEERED LABORATION TO PERSONN ALL FELD AND LABORATION TESTING REQUIRED TO VEREY THAT THE CONSTRUCTION SI IS COMPLIANCE BY THAT THE CONSTRUCTION SI OF COMPLIANCE BY THE THAT THE CONSTRUCTION SI OF COMPLIANCE BY THE DEVELOPER TO DISSURE THAT THE STANDARDS. IT IS THE RESPONSESUITY OF THE DEVELOPER TO DISSURE THAT THE PROVIDE TO THE PRODUCT OF THAT IS STANDARD SITE RESPECTION OF DESIGNED FROM TO THE PROJECT FAMIL RESPECTION AN ORDER TO ALLOW PROJECT ACCEPTANCE BY THE CITY.

- THE LIMITS OF STABILIZED SUBBASE SHALL EXTEND TO A DEPTH OF SIX INCHES (6") BELOW THE BOTTOM OF THE BASE AND OUTWARD TO TWILLIE INCHES (12") BEYOND THE CURR.
- THE STABILIZING MATERIAL, IF REQUIRED, SHOULD BE A HIGH BEARING VALUE SCIL. SAND-CLAY, LABERGOX, RECYCLED CONCRETE, SHELL, OR OTHER MATERIAL AS APPROVED BY THE CITY'S DESIGNATED SITE BUSNECTOR AND A LOCKINEDS SOULS BEOMETER.
- THE SUBBASE SHALL BE STABILIZED NOT LESS THAN FORTY (40) POUNDS LIMEROCK BEARNO RATIO (LIBR) TO A 6" INDIBILIAL DEPTH. A COMPACTION OF NO LESS THAN RINETY-EIGHT (68 %) PERCENT DENSITY BASED ON AASHTO T-180 SHALL BE REFUNED
- FOR ROADWAYS, TESTS FOR SUBBASE BEARING CAPACITY AND COMPACTION SHALL BE DONE AT A MENDALM OF EVERY 300 FEET AND SHALL BE STAGGERED TO THE LEFT, RIGHT, AND AT COPHER LURG OF THE ROADWAY, FOR SITE PLANS. TEST SHALL BE PERFORMED FOR EVERY 600 SQUARE YARDS OF STABLIZED AREA, OR PORTIONS THEREOF.
- DASSE FOR ALL STREETS SHALL MAYE A MEMBRUS SK RICH (67) DD-TH. SOIL COMENT BASSE FOR ALL STREETS SHALL MAYE A MEMBRUS SK RICH (67) DD-TH. SOIL COMENT COMPACTED TO MAKE GROWN TO THE STANDARD SOUL STANDARD TO THE COMPACTED TO MAKE GROWN TO THE STANDARD FOR ALL STANDARD STANDARD TO THE BROOKE CONSTRUCTION (LATEST EXPRON). RECYCLE CONCRETE OR LIMPTON EASES BROOKE CONSTRUCTION (LATEST EXPRON). RECYCLE CONCRETE OR LIMPTON EASES BROOKE CONSTRUCTION (LATEST EXPRON). RECYCLE CONCRETE OR LIMPTON EASES



STANDARD CONSTRUCTION DETAIL ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES

FILE NAME: CB_R1D.DWG DETAIL REP: S

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ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES (CONTO.)

- SOIL CEMENT AND RECYCLED CONCRETE MIX DESIGNS SHALL BE SUBMITTED BY A LICENSED SOILS ENGINEER TO THE CITY'S DESIGNATED SITE INSPECTION PRIOR TO THE START OF SUBMISSES PROPARATION. ALL MIX DESIGNS SHALL BE SUBJECT TO THE APPROVAL OF THE CITY.
- CONCRETE DELIVERY TICKETS SHALL BE PROVIDED TO THE CITY'S DESIGNATED SITE INSPECTOR AT THE TIME OF PLACEMENT. IF THE RESPECTOR IS NOT ON SITE THROUGHOUT THE DITTINE RESTALATION, ACQUALATED DELIVERY TRICETS CAN BE PROVIDED TO THE INSPECTOR BY THE CONTRACTOR ON THE POLLOWING DAY.
- TESTING OF THE BASE SHALL BE DONE AT INTERVALS EQUIVALENT TO SURGRADE TESTING AND SHALL CONSIST OF, AS A MINIMUM, A MOISTURE CONTENT AND COMPACTION TEST.
- PORTLAND CEMENT CONCRETE, LIMEROCK, RECYCLED CONCRETE, OR FULL DEPTH ASPIRALT PAYEMENT MAY BE USED IN PLACE OF SOIL CEMENT BASE. ALL BASE, AND ROADWAY DESIGNS SHALL BE SUBJECT TO THE APPROVAL OF THE CITY.
- SOIL CEMENT BASE MATERIAL CONSTRUCTION SHALL BE CONTINUOUSLY SUPERVISED BY A SOILS TESTING LABORATORY AT THE DEVELOPER'S EXPENSE. THE TESTING LABORATORY HAVE THE DEVELOPER'S EXPENSE. THE TESTING OF SOIL CEMENT WITH THE CENTRICATION RECORDED BY FLOT.
- SOIL CEMENT PAVEMENT BASES WITH THE CURE COAT APPLED SHALL BE ALLOWED TO CURE A MEMBLAN OF SEVEN (7) DAYS UNDER NO TRAFFIC PRICE TO PLACING MAY ASHALT SURFACE. (TEST REPORTS ARE REQUIRED TO BE DELIVERED TO THE CITY'S DESIGNATED SITE INSPECTOR PRICE TO TRAFFIC USAGE.)
- DESCINATED STE INSPECTOR PRIOR TO TRAFFIC USAGE.

 RECYCLED CONCRETE CAN BE USED AS MA ATERNATIVE BASE MATERIAL, PROVIDED THE MATERIAL STALL BE LIGHTED TO MANDRAIN OF STALL WAS USAGETHER.

 MATERIAL SHALL BE LIGHTED TO MANDRAIN OF 35 OF MATER SENSITIVE CAN THE MATERIAL SHALL BE LIGHTED TO MANDRAIN OF 35 OF MATER SENSITIVE CAN THE MATERIAL SHALL BOT CONTAIN ORGANIC CHARLES AND THE CONTROL OF A C
- RECYCLED COMERCE OR LIBERDOK FOR BASE OR SUBBASE APPLICATIONS SMALL BE ALLORD ON OTH ROADWAY SHAPE OF STREET BLEVATION OF THE ROADWAY SUBBASE IS A MEMBAM OF \$7 ABOVE THE SEASOMAL HOM GROUNDWATER TABLE AS CURTIFIED BY A FLORIDA LICENSED PROFESSIONAL SOLES FINANCIER AND SUBSCIDENTLY APPROVED THE YIEL CITY. HA REAS NOT MEETING THE STREET AS THE STREET AND A STREET AND A



STANDARD CONSTRUCTION DETAIL ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES

FILE NAME: CB_R11.DWG DETAIL REP R-11

ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES (CONTD.)

- DESIGN MIXES AND PRODUCT GRADATION REGISHATION FOR ALL MATERIALS TO BE RESTAULD AS PART OF THE LIMB DEVELOPMENT CODE REQUIRED BURNOVERINTS SHALL BE SUBBRITTED TO THE CITY'S DESIGNATED SET INSPECTOR FOR ACCEPTANCE BY THE CITY. THE RIFORMATION SHALL BE SUBBRITTED NO LESS THAN THREE (3) WORKING DAYS PRICK TO JANY CONSTRUCTION. SUBBRITTALS SHALL INCLUDE, BUT NOT BE LIMITED TO, REFORMATION TO EVALUATE THE MATERIALS PROPOSED FOR BUILDING SHALL SH
- PRIOR TO PLACEMENT FLORIDA STATE CERTIFIED BATCH PLANTS MUST CERTIFY TO THE CITY'S RESIDENT PROJECT INSPECTOR THAT THE ASPHALT GELIARRED TO THE SITE IS IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS.
- 20. EXTRACTION AND GRADATION TESTS ON ASPHALT IMMES SHALL BE PROMDED TO THE CITY'S DESIGNATED SITE INSPECTION FOR EVERY 2500 SQUARE YARDS OF ASPHALT, OR PART THEREOF, TO DISJURE THAT DESIGN MOVES MEET THE CITY STANDARD SPECIFICATIONS.
- FIELD TESTING OF THE ASPHALT PAYEMENT SHALL BE DONE AT INTERVALS EQUIVALENT TO SUBGRADE TESTING AND SHALL CONSIST OF, AS A MINIBUM, A COMPACTION TEST. ASPHALT PAYEMENT SHALL BE COMPACTED TO 88D DESITY PER PIA 1—1238 (METHOD B), MACLEAR DENSITY TEST, "BACKSCATTER METHOD".
- UN ADDITION TO THE FIELD DENSITY TESTS INCIDENT THE CONTROL THE CITY PESSENNES THE RIGHT TO REQUIRE CORE SAMPLES OF PAYMENT SECTIONS EXTRACTED AND TESTED BY A CERTIFIED SOLD ENGINEERING LARGORATION AT THE EVELOPET'S EXPONSE. THE CITY'S DESIGNATED SITE INSPECTOR SHALL DESIGNATE THE LOCATIONS OF THE TEST CORE LOCATIONS.
- 23. THE ROADWAY CROWN SHALL HAVE A STANDARD ONE QUARTER INCH (1/4") PER FOOT SLOPE.
- 24. ALL ROADWAYS WITH CLIRE AND GUTTER SECTIONS SHALL HAVE AS A STANDARD A MONERAL CONSTRUMAL SLOPE OF 0.305. THE ROADWAY CONTRINER SHALL BE CLEARLY MARKED OF THE SEASON PLANES AT A MONBAIL DESCHI ROADWAY CERTERIARE ELECTRONIS SHALL BE WITH THE SEASON PLANES AND AT TOO'S INTERVALS ALONG THE ROADWAY PROFILE ON BOTH THE DESIGN PLANES AND AS DRILLT DRIANKINGS.
- THE FINISHED PAVEMENT EDGE SHALL BE WITHIN ONE QUARTER BICH (1/4") ABOVE THE ADJACENT CONCRETE CURB FOR CURBS COLLECTING AND CONVEYING STORMWATER.
- 28. CONCRETE CURBS SHALL BE PROVIDED ON BOTH SIDES OF ALL STREETS AND ALL CONCRETE CURBS SHALL BE CONSTRUCTED WITH 3000 P.S.I. CONCRETE AT 28 DAYS.
- ALL ROADWAY STRIPING, STOP BARS AND CROSSWALKS SHALL BE THERMOPLASTIC, STRIPING PATTERNS AND DIMENSIONS TO CONFORM WITH F.D.O.T. AND M.U.T.C.D. DESIGN STANDARDS, LATEST EPITICIA.



STANDARD CONSTRUCTION DETAIL ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES

FILE NAME: CB_R12.DWG DETAIL REF: R-12

ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES (CONTD.)

- . CONCRETE CURBING, SIDEWALKS, PAVEMENT AND SIMILAR CONCRETE AREAS SHALL BE SAW CUT WITHIN 4 TO 16 HOURS OF PLACEMENT. SAW CUTS SHALL BE 1/4" IN WOOTH TO A DEPTH OF 1/4 OF THE TOTAL DEPTH OF CONCRETE OR 1-1/2", WHOTEVER IS LESS. SAW CUTS SHALL BE LOCATED AT INTERVALS OF THE FEET (10") WITH DEPARSON JOINTS AT STREET WITERSECTIONS, RADIUS POINTS, STRUCTURES, AND ALONG CURVES AT SOTTY FEET (60") MIETVALS ALL DEPARSON JOINT MATERIAL IS REQUIRED TO BE BRISTALLED HEROLD HE DITTED DEPTH OF THE CONCRETE CURB. FOR LIKEAL SECTIONS OF CURBS, DEPARSON JENTIS SHALL BE LOCATED AT A MANDRAM SPACING OF FIVE-HANDRED FIET (500") AND SHALL BE 1/2" IN WIDTH.
- 28. AN "X" SHALL BE OUT IN THE CURB TO MARK THE LOCATION OF WATER DISTRIBUTION SYSTEM VALVE.
- 29. A "V" SHALL BE CUT IN THE CURB TO MARK THE LOCATION OF ALL SEMER SERVICES.
- 30. A "1" SHALL BE CUT IN THE CURB TO MARK THE LOCATION OF ALL RECLAIMED WATER SERVICES.
- 31. A "A" SHALL BE CUT IN THE CURB TO MARK THE LOCATION OF ALL POTABLE WATER SERVICES.
- SUPPLIES (3) CONCRETE CYLPHODES SHALL BE TAKON AND TESTED (1 IN 14 DAYS AND 1 IN 28 DAYS) FOR EVERY SEVERY—FIVE (75) CUBIC YARDS OF CONCRETE OR LESS PLACED. TEST RESULTS SHALL THEN BE PROVIDED TO THE CITY'S DESIGNATED SITE RESPECTOR AS THEY BECOME AVAILABLE.
- A CONCRETE SUMP EST SHALL BE RECURRED WITHOUT THE FIRST SO CURIC YARDS OF CONCRETE THEREAFER, SUMP TESTS SHALL BE RECURRED FOR EVERY HERTY CONCRET AROS OF CONCRETE, OF RACKION THESEO, WITH COURSE OF THE RESULTS PROVIDED TO THE CITYS DESIGNATED SITE RESPECTIOR. THE SLUMP TEST SHALL MEET THE RECURRED MAY CORRISON OF A ROCK LOAD DELIVERED.
- THE DEVELOPER SHALL PROVIDE ALL REQUIRED PAYEMENT MARGINGS ON ALL ROADBAYS PER GITY, COUNTY, AND STATE REQUIREMENTS, CONTENING STREPS SHALL BE PROVIDED ON EXTENSIONS OF GITY COLLECTOR OR ARTERNAL ROADS, COUNTY ROADS, STATE MARWAYS, AND ALONG LOCAL STREETS IN THE MORNTY OF THEIR INTERSECTION WITH THE AROON ENCINOUS HOLOGISTS.
- A FDOT APPROVED STOP SIGN AND A 24"-WIDE WHITE THERMOPLASTIC STOP BAR ARE REQUIRED AT ALL ROADWAY INTERSECTIONS.
- 36. ALL TRAFFIC CONTROL DEMOES PLACED AT INTERSECTIONS, PRIVATE STREETS, PUBLIC STREETS, COUNTY ROMES, AND STATE HIGHWAYS WITHIN THE CITY LIMITS SHALL BE INSTALLED ACCORDING TO THE MANULA ON UNFORM TRAFFIC CONTROL DEMOES, LIMITS TEDTION. THE MANTENANCE—OF—TRAFFIC (MOT) METALLATION AND SUBSEQUENT OPERATION SHALL BE OVERSEED BY A CONTRACTOR CONTROL BY THE AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION, OR EQUIVALENT CERTIFICATION.



STANDARD CONSTRUCTION DETAIL ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES

CB_R13.DWG DETAIL REF: R-13

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ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES

- 37. THE DEVELOPER IS RESPONSIBLE FOR PAYING FEES FOR TRAFFIC CONTROL DEMCES TO THE CITY FOR INSTALLATION. STREET SIGHS AND STOP SIGHS SHALL BE PLACED AT ALL INTERSECTIONS, INCLUDING BUT HOT CHIETED TO PRIVATE STREETS, PURIL'S STREETS, COUNTY ROADS, AND STATE HIGHWAYS WITHIN THE CITY LIMITS.
- THE DEVELOPER IS RESPONSIBLE FOR PAYING FEES FOR ALL STREET LIGHTS PRIOR TO ACCEPTANCE OF THE PROJECT BY THE CITY.
- 39. FIVE FOOT (6") WIDE SIDEWALKS SHALL BE PROVIDED ON BOTH SIDES OF ALL RESIDENTIAL STREETS. (SEE DETAIL, INDEXES M-2 AND M-3)
- 40. BIKE PATHS SHALL BE CONSTRUCTED EIGHT FEET (8") IN WIDTH ALONG ARTERIAL HIGHWAYS AS DIRECTED BY THE CITY, (SEE DETAIL, INDEXES M-2 AND M-3)
- 41. STANDARD TURNING RADII FOR INTERSECTIONS:

RESIDENTIAL STREETS WITH STATE & COUNTY ROADWAYS 35-50 FT. OR MAJOR THOROUGHFARES WITHIN THE CITY

ENTRANCES TO COMMERCIAL SITES OFF OF CITY STREETS 35 FT. INTERSECTIONS INTERIOR IN SUBDIVISIONS

35 FT. SHOULD BREVARD COUNTY OR THE FLORIDA DEPARTMENT OF TRANSPORTATION (F.D.O.T.) DETERMINE THAT LARGER RADIS ARE WARRANTED WITHIN THEIR RIGHT-OF-WAY, THE LARGER RADIS SHALL PREVAIL.

- 42. CONSTRUCTION METHODS AND DESIGN FOR CONCRETE PAVEMENT SHALL CONFORM TO FDOT STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, LATEST
- 43. ALL CONTRACTORS THAT ARE PERFORMING THE CONSTRUCTION OF LAND DEVELOPMENT CODE REQUIRED IMPROVEMENTS (INCLIDING WATER MANS, SANTARY SEWER MANS, RECLAIMED WATER MANDS, STORM WATER PIPES AND INLETS, ROPMAN'S, AND PAGROW PACILITES) SHALL BE CORTRETE WITH THE STATE OF PLOREMS BOARD OF PROFESSIONAL REGULATIONS (BPR) FOR THE TYPE OF WORK THAT THEY PERFORM,
- ALL CONTRACTORS THAT ARE PERFORMING THE CONSTRUCTION WORK OF LAND DEVELOPMENT CODE REQUIRED IMPROVMENTS SHALL BE LICENSED BY THE STATE OF FLORIDA AND RESISTENCE WITH THE CITY OF COCOA BEACH. THE LICENSE AND SHALL PERTAIN DIRECTLY TO THE TIPPE OF WORK BRIND PERFORMENT.
- EXCEPT AS PROVIDED IN THE LAND DEVELOPMENT CODE, ALL ELECTRIC, TELEPHONE, TELEVISION LINES AND SAMLAR UTILITIES ARE REQUIRED TO BE INSTALLED UNDERGROUND AT THE EXPENSE OF THE OWNER, DEVELOPER, AND BUILDER.



STANDARD CONSTRUCTION DETAIL ROADWAY AND PARKING AREA DESIGNAND CONSTRUCTION NOTES

FILE NAME: CB_R14.DWG DETAIL REF: R-14

ROADWAY AND PARKING AREA DESIGN AND CONSTRUCTION NOTES

46. UTILITY DEPTH:

LITY DEPTH:

MOH VOLTAGE LITUITIES SUCH AS POWER (FEEDER, SETMCE, AND DROPS)

SHALL BE BURRED A IMMOUNT OF 30 ROCKES IN DEPTH.

ON VOLTAGE UITHLITES SUCH AS PRIONE AND CARLET TY SHALL BE BURRED A

IMMOUNT OF THE ROCKES IN DEPTH FOR FEEDER AND SERMCES, SETWICE

HORO'S SHALL BE BURRED A MARRIAN OF 12 ROCKES IN DEPTH.

HI NO INSTANCE SHALL THE DEPTH OF COVER BE LESS THAN 30' FROM

HI NO INSTANCE SHALL THE DEPTH OF COVER BE LESS THAN 30' FROM

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HI NO INSTANCES TO THE THE THAN THE SHALL THE COUNTY THAT THE SHALL THE THAN THE SHALL THE

47. LANDSCAPE PLANS SHALL CLEARLY DEPICT THE DESIGN LOCATION OF PLANTINGS RELATIVE TO THE LOCATION OF UNDERGROUND AND OVERHEAD PUBLIC UTILITIES AND STORMMATER INFRASTRUCTURE IN ORDER TO EVALUATE POTENTIAL CONFILIES.



STANDARD CONSTRUCTION DETAIL ROADWAY AND PARKING AREA DESIGNAND CONSTRUCTION NOTES

FILE NAME: CB__R15.DWG DETAIL REF: R-15

TECHNICAL SPECIFICATIONS FOR SITE PLANS AND SUBDIVISIONS TESTING

MATERIALS

THE RISPECTION AND TESTING OF MATERIALS AND FINISHED ARTICLES TO BE INCORPORATED IN THE WORK SHALL BE MADE BY BURNELS, LABORATORIES, OR AGENCIES APPROVED BY THE DEWRINER OF RECORD, THE CONTRACTOR SHALL BET MADE AT STATE EXPONENCE OF RECORD THE PERCENT OF MATERIALS AS THE EMPHRICAR OF RECORDING THE CONTRACTOR FOR SHALL NOT MADERIALS AS THE EMPHRICAR OF RECORDING THE CONTRACTOR FOR SHALL NOT MADERIALS AS THE EMPHRICAR OF RECORDING THE MATERIAL OR RESINED ARTICLE IS ACCRETED WITH DEPARTMENT OF THE RESIDENCE OF RECORD THAT THE MATERIAL OR RESIDED ARTICLE IS ACCRETED AND THE ABORD AS WELL AS TO THE CONTRACTOR SHALL BEST MADE SHALL BEST MADE SHALL BEST MADER SHALL BEST MADERS OF ALL BEST MADERS OF

- B. LABORATORY CONTROL AND CERTIFICATES
- 1. SPECIFICATIONS: SAMPLING, ISSTING, AND LABORATORY METHODS SHALL BE IN ACCORDANCE WITH THE STAMBARD SPECIFICATIONS OF THE AASHTO OR ASTAL WRETE AASHTO OR ASTAL SPECIFICATIONS ARE USED. THE REFERENCE SHALL BE CONSTRUED TO BE THE MOST RECORD TSTAMBARD SPECIFICATIONS OF THE MOST RECORD TSTAMBARD SPECIFICATIONS OF THE TEST.
- 2. TEST & CENTIFICATES. THE CONTRACTOR SHALL ENGAGE AN APPROVED TESTING
 LABORATORY TO PROVIDE THE FOLLOWING TESTS AND CONTRICATIONS SORDE BY A
 REGISTERED ENGAGER OF THE STATE OF FLORID PROTORIES. SORDE BY A
 SHALL BE STATE CENTRED FOR THE TESTING PERFORMENT
 REQUIRED BY ETHER THE DIMBERS OF RECORD OF THE CITY SHALL ASO BE PROVIDED BY
 THE CONTRACTOR, AND THE FOLLOWING SHALL NOT BE TRAVEL ASO BE PROVIDED BY
 EXCHANGED OF THE CONTRACTORY SESSION ESPONSIBILITIES.

 - SCE. AMALYSIS FOR STRUCTURAL FILL MATERIAL PRIOR TO INSTALLATION.
 PROTEINS DUSTRIES, MOSTURE CONTENT, COMPACTED FEED DENSITIES, AND ATTEMPERS, MOSTURE CONTENT, COMPACTED FEED DENSITIES, AND ATTEMPERS, MOSTURE RESIDENCY COMPACTED FEED DENSITIES, AND ATTEMPERS, MOSTURE AND COMPRESSIVE STRENGTH TESTS (FOR SOIL CEMENT MAX DESCRIPTION AND CONTENT EASE MATERIAL PRIOR TO INSTALLATION, AND AMALYSIS OF RECYCLED CONCERTE BASE MATERIAL PRIOR TO INSTALLATION, AND STREETLY TESTS, MUCLEAR DENSITY TESTS (EACH SCATTER METHOD), AND AMALYSIS OF CORE SAMPLES, CURRING, GUTTERS, SIDEMALS, BOX PATIS, AND CONCERTE MAX DESCRIPTIONS OF ALL APPLICATIONS INCLUDING PAREMENT, CAST-M-PLACE STRUCTURES, CURRING, GUTTERS, SIDEMALS, BOX PATIS, AND CONCERTE, IN CONCERT, CAST-M-PLACE STRUCTURES, CURRING, CHITTERS, SIDEMALS, BOX PATIS, AND CONCERT, IN CONCERT, CAST-M-PLACE STRUCTURES, CURRING, CHITTERS, SIDEMALS, BOX PATIS, AND CONCERT, CONCERT, CAST-M-PLACE STRUCTURES, CURRING, CHITTERS, SIDEMALS, BOX PATIS AND CONCERT, CAST-M-PLACE STRUCTURES, CURRING, CHITTERS, SIDEMALS, BOX PATIS AND CONCERT, CAST-M-PLACE STRUCTURES, CURRING, CHITTERS, SIDEMALS, BOX PATIS AND CONCERT, CAST-M-PLACE STRUCTURES, CURRING, CHITTERS, SIDEMALS, BOX PATIS AND CONCERT, CAST-M-PLACE STRUCTURES, CURRING, CHITTERS, SIDEMALS, BOX PATIS AND CONCERT, CAST-M-PLACE STRUCTURES, CURRING, CHITTERS, SIDEMALS, BOX PATIS MANS, AND DRIVEMANS, AND RECLAUSE MATER MANS, FORCE MANS, AND RECLAUSE MATER MANS.



STANDARD CONSTRUCTION DETAIL TECHNICAL SPECIFICATIONS
FOR SITE PLANS AND SUBDIVISIONS
TESTING

FILE NAME: CB_R16.DWG DETAIL REF: R-16

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- CONTRACTOR SHALL MEET ALL PERMIT CONDITIONS AS ESTABLISHED BY THE CITY OF COODA BEACH AND ALL OTHER APPLICABLE AGENCIES, INCLUDING BUT NOT LIMITED TO COUNTY, FDOT, AND THE SARWAD.

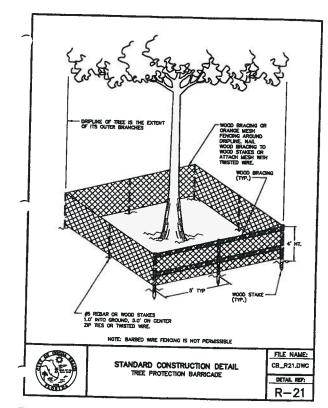


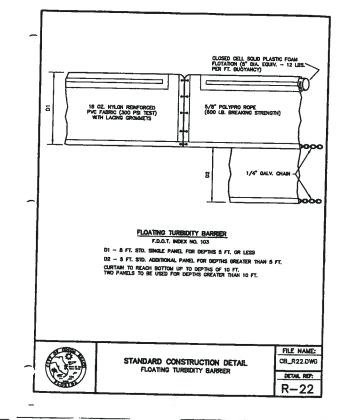
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STANDARD CONSTRUCTION DETAIL SILT FENCE TURBIDITY BARRIER

FILE NAME: CB_R2D.DWG DETAIL REF:

R-20





CONTRACTOR REQUIREMENTS FOR SITE CLEARING, GRADING, AND EROSION CONTROL DESIGN AND CONSTRUCTION NOTES

THE FOLLOWING MEASURES REPRESENT MINIMUM STANDARDS TO BE ADMERD TO BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION OF A PROJECT, THE CITY RESERVES THE RIGHT TO REQUIRE ADDITIONAL SECURITY OF A PROJECT WHICH ADDITIONAL SECTION AND ADDITIONAL SHOULD BE ADMINISTRATION OF THE PRACTICES, FAILURE OF THE CONTRACTOR OF THE PRACTICES, FAILURE OF TO COMPALY WITH THESE PROPERSIONS SHAULT RESILT IN THE ESSUANCE OF A STOP WORK ORDER.

- 1. NO DISTURBANCE OF PROPOSED CONSERVATION EASEMENTS, NATURAL BUFFERS, OR WATER BODIES IS PERATTED. THE CONTRACTOR SHALL LOCATE THESE AREAS ON SITE AND BARRICADE THAN TO APEDIANT MAINTHORED CLEAPING, BARRICADES AND OTHER PROTECTIVE PERCINCIA ARE TO BE LOCATED AT THE DRIP LINE OF DOSTRIO MATTHE TREES OR AT THE EDGE OF THE NATIVE UNDER-STORYED ARTS, WINCHESTER IS RAMEEST TO THE CONSTRUCTION ACTIVITY.
- SPECIMEN AND HISTORIC TREES, CONSERVATION EASTMENTS, NATURAL VEGETATION BUFFERS, AND SIMILAR AREAS, MUST BE PROTECTED BY BARRICADES OR FENCING PRIOR TO CLEARING, BARRICADES ARE TO BE SET AT THE DIPPLE OF THE TREES AND MARTIANCE THROUGHOUT THE DURATION OF THE PROJECT. BARRED WIRE IS NOT PERMITTED AS A PROTECT BARRIED.
- 4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE ALL PROTECTIVE VERTATION BURBICADES AND ERISSON CONTROL STRUCTURES AND BRASINES IN PLACE PRIOR TO THE COMMENCANT OF ANY EMPHOREM, OLDINOR PREBINATION GROBENION, TEXES REASINESS INCLIDE, TO ANY EMPHOREM, CONSTRUCTION FENCES, INVESTICE SEASONS INCLIDED AND THE PROPERTY CONSTRUCTION FENCES, INVESTICES, SATE PRIVACES, AND MAINTAIN ALL EROSSON CONTROL, DEVOCES THAT BULL ET THE EXPRESSIBILITY OF THE CONTRACTOR TO MAINTENANCE, SHALL INCLIDED PERFORMENT OF THE CONTRACTOR TO MAINTENANCE, SHALL INCLIDED PERFORMENT OF THE DITTER PROJECT.
- 6. WHERE FILL MATERIAL IS INTENDED TO BE INSTALLED ADJACENT TO DOSTRIO VEGETATION WHICH IS INTENDED TO REMAIN NATURAL, THE CONTRACTOR MAY INSTALL SLT FENCING AS A THREE PROTECTION MEASURE, IN LEUGH OF INSTALLING ETHER WOOD BRACKER OF GRANGE MESS FENCION. THIS FRACTICE IS ENCOURAGED BY THE CITY. OF THE SLT FRICE FALLS TO PROVIDE ADEQUALE PROTECTION FROM BRACT DUE TO CONSTRUCTION, THEN ADDITIONAL CONSTRUCTION FENCING OR WOOD BRACKING SHALL BE REQUIRED.
- 7. AT A MANIMUM, THE CONTRACTOR SHALL SEED AND MULCH ALL DISTURBED AREAS. SUFFICIENT GRASS COVERAGE IS TO BE ESTABLISHED WITHIN THIRTY DAYS. 8. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR THROUGH SCHEDULING, TO MINIMIZE THE DISTURBANCE OF SITE AREAS THAT HAVE BEDN BROUGHT TO THEIR PROPOSED FINAL GRADE, WITHIN THEM'T CAN'S OF BROOME A SUBJECT AREA TO ITS FINAL GRADE, THE CONTRACTOR SHALL INSTALL SEED AND MULCH OR SOO, AS REQUEST.



STANDARD CONSTRUCTION DETAIL CONTRACTOR REQUIREMENTS FOR SITE CLEARING, GRADING, AND EROSION CONTROL DESIGN AND CONSTRUCTION NOTES

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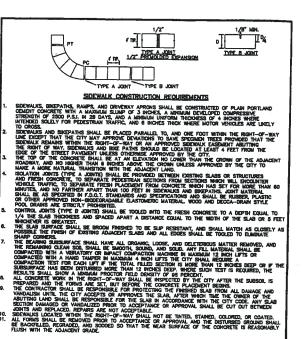
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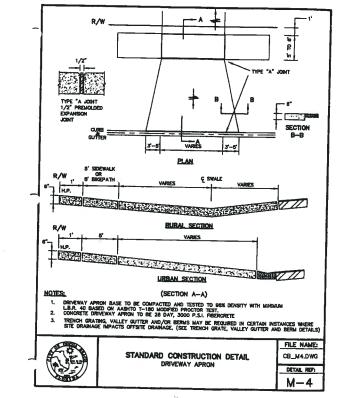
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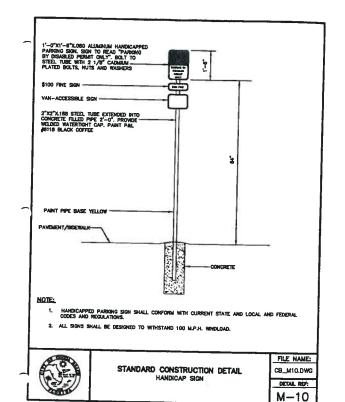


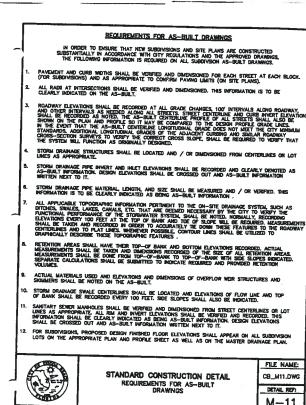
STANDARD CONSTRUCTION DETAIL

SIDEWALK CONSTRUCTION REQUIREMENTS



M - 11



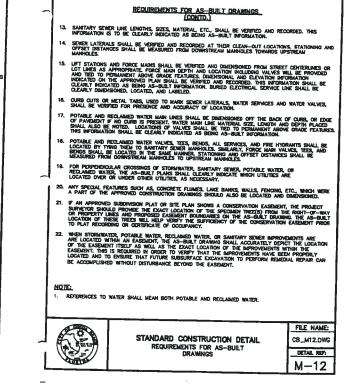


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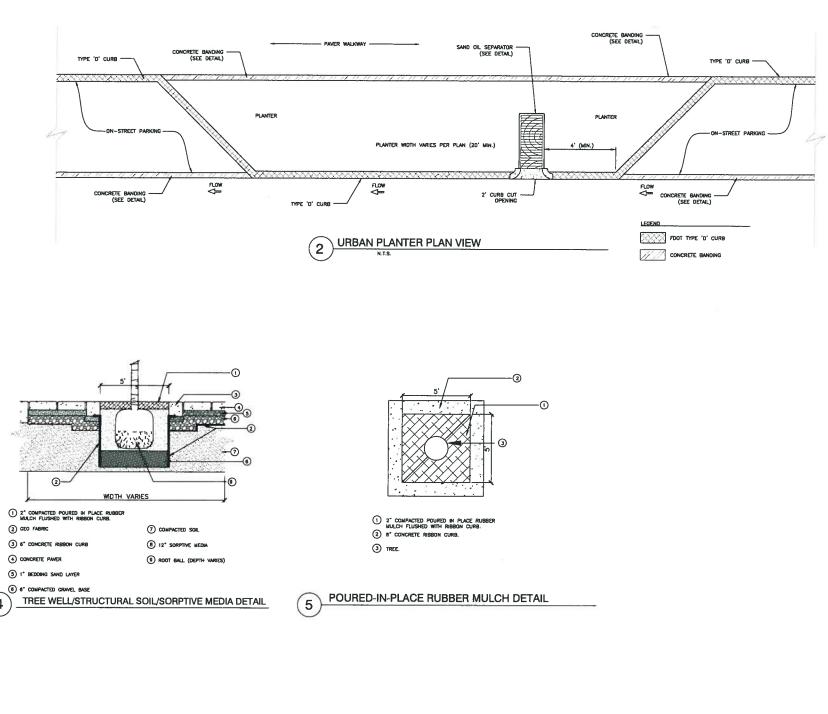
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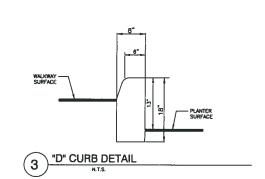
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11/17/14 pt 99





1 CONCRETE BANDING

CONCRETE BANDING FLUSH W/ ADJACENT PAVED SURFACES

& DRAINAGE DETAILS

| CONTECTION | CON

MILLER LEGG Central Portion Offer 2018. Central Annual - Suba 200 When Park Profer 20789-7122 407-629-6880 - Feat 407-629-7883

MINUTEMEN

STORMWATER/ STREETSCAPE IMPROVEMENTS COCOA BEACH, FLORIDA FOR: CITY OF COCOA BEACH

Section 2721 **Engineered Surface Drainage Products**

PVC surface drainage inlets shall include the drain basin type as indicated on the contract drawing and referenced within the contract specifications. The grates for each of these fittings are to be considered an integral part of the surface drainage inlet and shall be furnished by the same manufacturer.

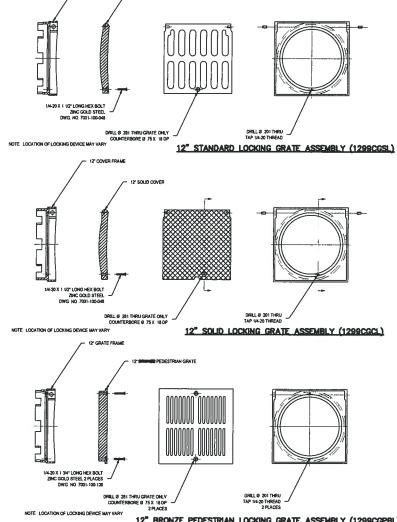
The drain basins required for this contract shall be manufactured from PVC pipe stock, utilizing a thermo-molding process to reform the pipe stock to the specified configuration. The drainage pipe connection stubs shall be manufactured from PVC pipe stock and formed to provide a watertight connection with the specified pipe system. This joint tightness shall conform to ASTM D3212 for joints for drain and sewer plastic pipe using flexible seals. The flexible seals shall conform to ASTM F477. The pipe bell spigot shall be joined to the main body of the drain basin or catch basin. The raw material used to manufacture the pipe stock that is used to manufacture the main body and pipe stubs of the surface drainage inlets shall conform to ASTM D1784 cell class 12454.

The grates and frames furnished for all surface drainage inlets shall be ductile iron for sizes 8", 10", 12", 15", 18", 24", and 30" and shall be made specifically for each basin so as to provide a round bottom flange that closely matches the diameter of the surface drainage inlet. Grates for drain basins shall be capable of supporting H-20 wheel loading for traffic areas or H-10 loading for pedestrian areas. 12" and 15" square grates will be hinged to the frame using pins. Metal used in the manufacture of the castings shall conform to ASTM A536 grade 70-50-05 for ductile iron. Grate shall be provided painted black.

INSTALLATION

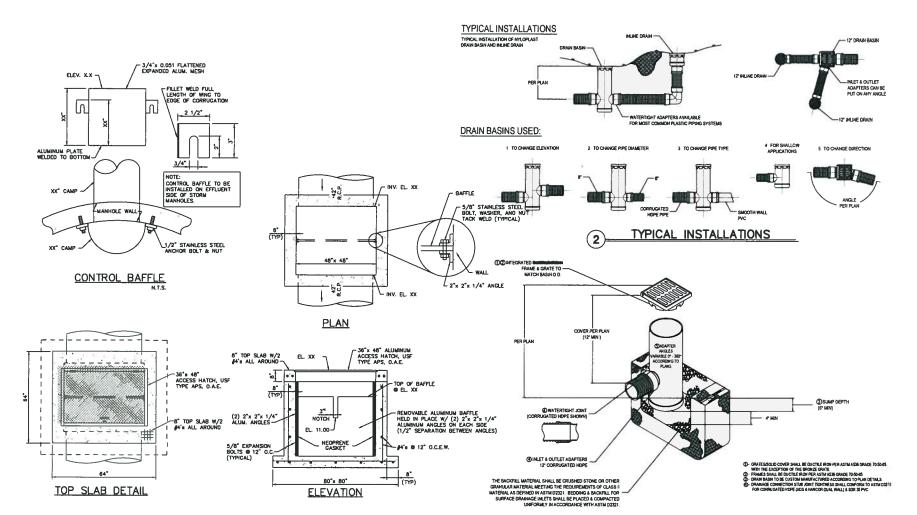
The specified PVC surface drainage inlet shall be installed using conventional flexible pipe backfill materials and procedures. The backfill material shall be crushed stone or other granular material meeting the requirements of class 2 material as defined in <u>ASTM D2321</u>. Bedding and backfill for surface drainage inlets shall be placed and compacted uniformly in accordance with <u>ASTM D2321</u>. The drain basin body will be cut at the time of the final grade. No brick, stone or concrete block will be required to set the grate to the final grade height. For H-20 load rated installations, a concrete ring will be poured under and around the grate and frame. The concrete slab must be designed taking into the consideration local soil conditions, traffic loading, and other applicable design factors. For other installation considerations such as migration of fines, ground water, and soft foundations refer to ASTM D2321 guidelines.

ALL GRATES SHALL BE AN ALTERNATE "G" GRATE (HOT DIPPED GALVANIZED AFTER FABRICATION)



12" BRONZE PEDESTRIAN LOCKING GRATE ASSEMBLY (1299CGPBL)

TYPICAL INSTALLATIONS



3 12" DRAIN INSTALLATION DETAIL

(J) \$ LE(DETAIL MILLER Central Florida Office: 631 S AINAGE

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IMPROVEMENT

SCAPE | RIDA BEACH

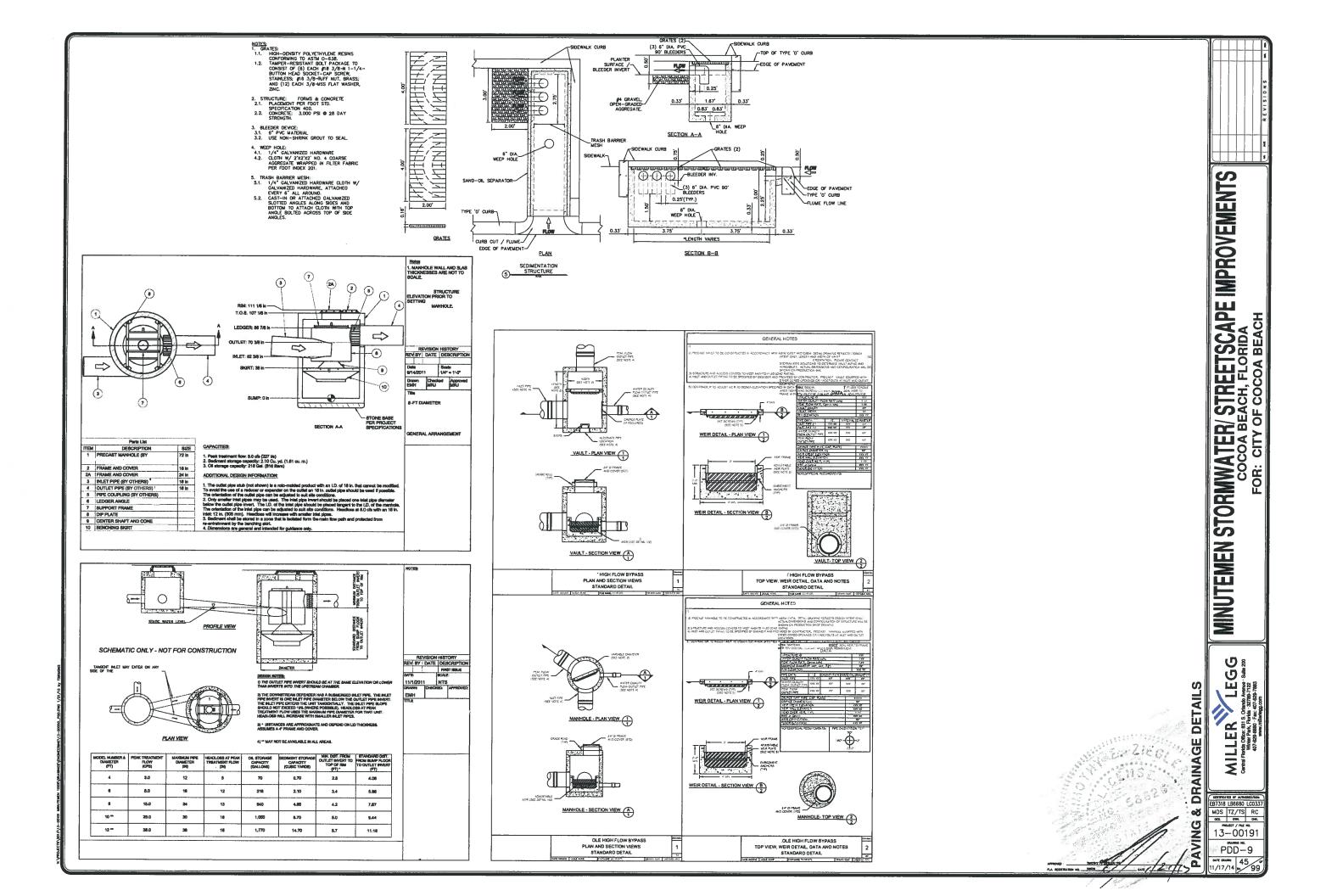
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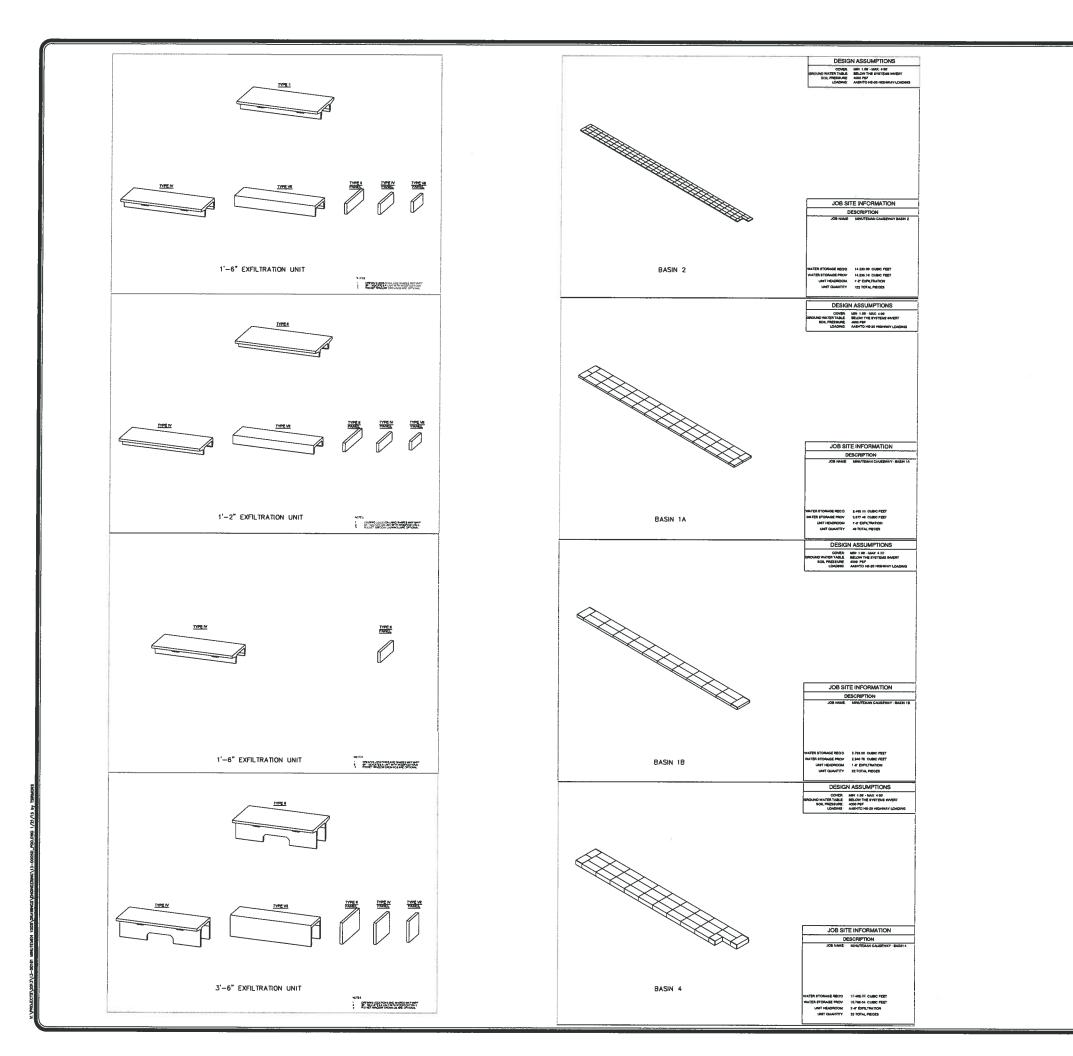
STORMWATER/ S COCOA BE/ FOR: CITY OF

BEA

CONTENCATES OF AUTHORIZATION:
EB7318 LB6680 LC0337
MDS TZ/TS RC
003. 0104. 044. 13-00191 PDD-8

CONTROL STRUCTURE





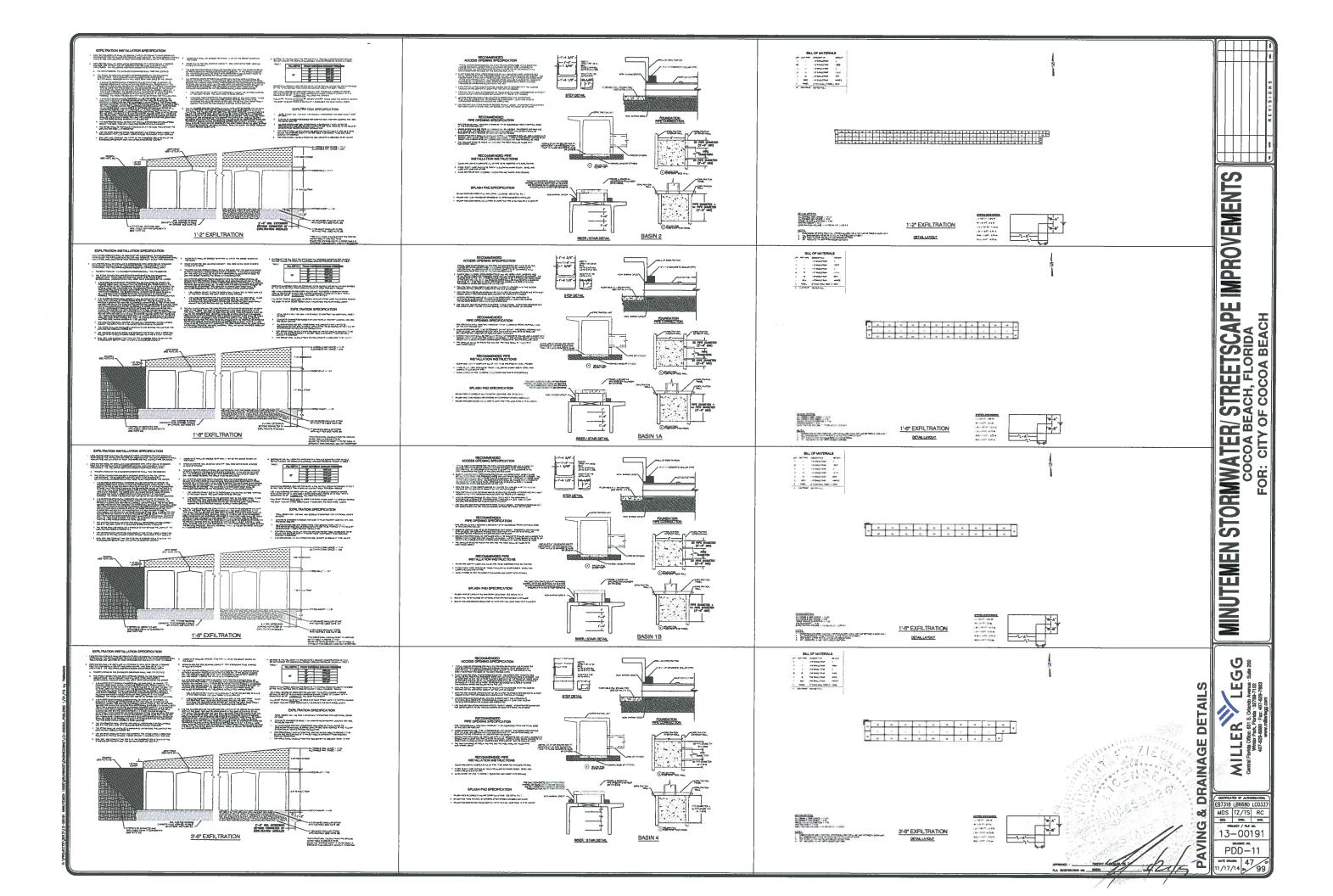
MINUTEMEN STORMWATER/ STREETSCAPE IMPROVEMENTS
COCOA BEACH, FLORIDA
FOR: CITY OF COCOA BEACH

MILLER LEGG
Central Profits Offers (2018.) Central Profits Offers (2018.) Central Arrays Suth 200
White Park Profits - 27789-7122
407-429-4890 Sept. 407-429-7183

| CONTRICATE OF AUTHORIZATION
| EB7318 LB6680 LC0.337
| MDS | TZ/TS | RC |
| OCL | ONL | ONL |
| TROUBET / File NO. |
| 13-00191

PAVING & DRAINAGE DETAILS PDD-10

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SECTION I. SCOPE OF WORK

SECTION 1. SLOPE OF WORM.

It CENERAL

All potable setter, reclaimed water, and sever mains and appurtanences must be installed in occordance with the City of Cocoo Utilities Department's Technical Provisions for the Construction of the Water Distribution System, the Water Redomation States of the Construction of Cocoo Utilities Department Cocoo Utilities Proportment Include.

It is approved plant, and the Standard below State Contractor requirements Include.

Furthering oil lober, moterials, tools and equipment necessary or incidental to the construction.

Arranging of pre-construction conference with the Engineering Distaion, it is recommended but the pre-construction conference with the Engineering Distaion, it is scheduling materials inspection, open ditch impaction, pressure/leokoge test.

Any deviation from these requirements must be approved in writing by the Engineering Division Manager prior to commencement of construction.

Fises charged by the City are set by City Council by resolution and are listed on the oppendix "Noter Service Rates and Charges" mode a part of the Utilities Hondbook. Fises are subject to change without notics. The most current fises will be charged.

The Utilities Deportment and Engineering Division are located at 800 School Street, Cocco, Florida, 32922. The Dispatch telephone number is (321) 433-8788; facsimila number is (321) 433-8708.

12 DEFANDING
The term "opproved equal" is used to mean a part or item that has been approved in writing by the Deputy Director of Engineering, the Water Field Operations
Superintendent, or the Utilities Director. A written request must be made in order to have on Riem accepted as on approved equal. Written specifications on the part or item must be fumbined with the request.

Whenever a specification from a specific source is alted, the most curent revision of that specification will be used.

Unless otherwise specified, "City" means City of Cocco; "Utilities Department" means City of Cocco Utilities Department; "Engineering Division" means City of Cocco Utilities Obsertment, Engineering Division.

SECTION II. MATERIAL SPECIFICATIONS

2.1 PIPE(see also Section 5.3 - Wire for locator wire specifications)

2.1.2 Polythol. Chloride. Presente Pips. 4"—12", Polytholy chloride presente pipe (sizes 4" likrough 12") still be cetel from pipe septiment cuttled dismeter Cases 150 (DR-18) conforming to the American Whore Morke Associations (AWN) specifications (DO) and will be blus or white in calor. Pipe with be in standard 20—fool lengths. All jinks will be of the electrometric-gastes type with thickened, integral sold-world bell or coupling with the some OR as the barral. All PVC pipe and couplings with baor the U.I., lobel and NSF approved for potable water.

2.1.3 Ductille Iron. Ductille Iron pipe will be cement lined pressure Class 350 conforming to AWMA specification (C15). Water main and storm drain crossing conflicts will be properly disapped by the project engineer and opproved by the Utilities placement prior provided to the conformation of the provided by the project will be ductile iron pipe. In no case will water make the control less than 5 feet from foundations. The solve distances will be disapped for water moins target than 5 feet from foundations. The solve distances will be disapped for water moins target than 5 feet from foundations. The observed distances will be disapped for water moins target than 5 feet from foundations. The opposition of the control of the control

2.1.4 Rectaimed Water. PVC pipe installed in rectained water eystems will be Class 150 (DR 18) conforming to AWMA specification CSGO and will be purple in cotor. All PVC or ducted ten pipe will be installed with a 5"-wide purple offsets identification tape affixed to the top of the pipe. Script in 1-1/2 black lettering will deathly the main return to the top of the pipe. Script in 1-1/2 black lettering will deathly the main research class 350 for 12" and smaller of pressure Class 350 for 12" and smaller and where cover is less than 3 feat, pressure Class 350 in receipted, Ductle for pipe with identification top will be installed where hardward saparation of less than 15 feat or vertical separation of less than 15" feat or vertical separation or less than 15" feat or vertical

2.2 VALVES AND VALVE BOXES

2.2.1 Resident Soot Colo Ydruss, 4"-16" Resilient sect gato volves will have mechanical joint and as mesulfactured by American Flow Control, Model AFC-2500, U.S. mechanical joint and as mesulfactured by American Flow Control, Model AFC-2500, U.S. must conform to AWMA specification CSOB and be menuricatured in the U.S.A. Resilient seats will be of notural or synthetic rubber and be bonded or mechanically statement of 200 pain. The time of the color of the value body all be faished bonded processor of 200 pain. The time of the statement of 200 pain. The time of the statement of 200 pain. The cooting must be applied in a menner to withstend the colten of line failed and operation of the secting post under long-terms service. Vertice seats must seat by compression only. Medging or sliding of the resilient seat is not acceptable. Valves seat regardless of direction of flow. Opining the valve will be required. The section of the depth of the valve mult is greater than 45" below grade, or 30" below grade or 30"

or his designes. See Exhibit.

2.2.2 <u>Butterfly Volves</u>, 15° and jorger, Butterfly volves with mechanical pint ends will be rubber sested. 50° (light clearing type, and to body. The interior and exterior will be flash opened to the pint of the pi

The 2* blowelf gate valve will be rated at 125 SWP or 200 WOG, All 2* gate valves must meet all E.P.A. and F.D.E.P. requirements regarding load and zinc contents. Bross filtings and 2* bross whell valves are required on blowoffs and will not be occapied at other locations. All valves muel be manufactured in the U.S.A.

2.2.4 Volve Boxes. Velve boxes and lids must be manufactured in the U.S.A. Boxes and lids must be structurally equal to those produced by l'rumbull or Tigle and must have \$1.4\footnote{\text{minuments}} and the produced by l'rumbull or Tigle and must have \$1.4\footnote{\text{minuments}} and the produced by \$1.4\footnote{\text{minuments}} and \$1.4\footn

Z.2.5. Check Yolyes, Check valves for fireline systems will be the double detector check valve or monufactured by Febco, Model No. 5060DC, Worts, Model No. 7060DC, Ames, Silver Bailet; or on opproved equal, in coordance with AWRA specification C508, Duale detector check valves will be occepted as a complete opproved casembly in occordance with the section on "Creat-Commisción Control and Sackflow Prevention" in the Utilities Handbook. Check valves must be hastified hardrantally down ground in a grassed one. Check Valves must be hastified hardrantally obove ground in a grassed one.

2.3 RITINGS All Rittings must be of the mechanical joint type with an approved joint restraint, or push-on joint with a gasset joint field restraint eystem, such as "Field Lok" as manufactured by U.S. Pipe or an approved equal. All fittings must be manufactured in the risk.

2.3.1 Cast Iron. Cast Iron fittings will be AWWA specification C110, Class 250, cement lined with inside sed coating. The fittings will be bituminous coated on the outside and be erropped with 6 mil polyethylene (sealed with lape).

2.3.2 Ducille iron, 4"—16". Ducille iron compact fittinge (altres 4" through 16") must conform to AWWA epecification C153. Ducille iron compact fittings will be mechanical joint with on interior cement lining with seel cooling and an exterior bitumhous cooling. All fittings will be empoyed with 6 mis polysthylens (seeled with tape).

2.3.3 Botts, All mechanical joint bolts must be CORTEN Steel.

2.3.4 Topping Societies. Topping soddless on makins 4" to t2" in diameter will be cost from body mechanical joint types. Soddless on makins 18" to 48" in diameter will be fobricated stated with 0-ring seed, fusion bended, eposity coated with stationises stead nuts and botts. The tapping valve must have centering ring and conform to Section 2.2.1

2.4 FIRE HYDRANTS
Fire hydronts must be monufactured in accordance with AWWA specification CS03.
Hydrants must have branze— to-branza main seat threading surfaces. They will be traffic
type with drain holes plugged at the lactory.

Hydronts will have one 6° volve opening, one 4-1/2° pumper nozde, and two 2-1/2° hase nozdes. Stem couplings are to be cost iron or nyton-coated elset. The upper volve plota must be branzs. The hydront show ell be coated indied with fusion bonded appay, 5 mil minimum. All hydronte will be pointed of the foctory with flustedosed appay, 5 mil minimum. All nytonate will be pointed of the foctory with flustedeam high-performances paray 8100 egyletin, non-lead, dry film thickness 5 to 8 miles, color gift 3 febre. City crears will apply finish point to each new fire hydront ofter the contractor has paid the appropriate changes.

contractor has poid the appropriate changes.

Finding good is to be setabilished and like proper length hydron! installed by the contractor prior to occeptance by the City. All nazzles will be a minimum of 16" and a maximum of 24" above finished grade. A 6" mechanical plant hydron cannels and provided using a hydrant valve anchoring tee with integrally cost standard mechanical plant digit of an original plant of plant and bronch. The contractor will not listed rises or most adminished will be done by the City. The contractor or developer will be charged the cost of labor and malerials for this service and must provide payment in deviewed. Afficial inspection. If it is determined that to the hydrant has been modified, the hydrant will be removed. Either they prove length hydrant will be freely a finished by the City, of the contractor's or it under the direction of Utilities Department personnel.

2.5 SERVICE CONNECTIONS, 3/4"-2"
All services connections will be single connections. Services that are 3/4" and 1" are to be typo K noneedal temper soft capper. All connections or to be defined to the figure of the fore typo. 1-1/2" and 2" services are to be of type K drawn temper in etraight lengths or annealed emper if farmhand in calls. Alsouriety no jeach least solder below will be consepted. Any repairs of service lines will be be placed to be a service lines. Service tops in PVC pipe will be the service line. Service tops in PVC pipe will be the service line. Service tops in PVC pipe will be critical with a shell cutter; the plug will be removed.

2.5.1 Saddles. Saddles must be used for all connections to PVC pipe. Saddles must be brenze as monufactured by Musiler Company, Ford Mater Bos Company, or Smith-Blair Company. The pips sizes for these manufacturers or noted below:

MUDLER: For pipe sixes 4" to 12", for 3/4" and 1" services, the single strap design must be used. For 1-1/2" and 2" services, the double strap design must be used. Both designs are for the H-16500 series.

FORD. For pipe sizes 4" to 12", for 3/4" and 1" services, the style 1018 single alrop design must be used. For t-t/2" and 2" services, the style 2028 double strop design must be used. For pipe sizes to "on larger, for 3/4", t", t-t/2," and 2" services, the style 2028 double strop design must be used. For 900 sizes to "one of the style 2028 double strop design must be used.

SMITH-BLAIR. For pipe sizes 4" to 12", for 3/4" and 1" services, the 32t series single strop design must be used. For pipe sizes 4" and larger, for 3/4", 1", 1-1/2" and 2" services, the 323 series double strop design must be used.

An approved equal may be used in iteu of any of the above-listed designs/models.

2.5.2 Curb Stone, 3/4" and 1". Ourb stope 3/4" and 1" in size will be Mueller Mork 8
Crisedt, Model No. H-14532 or No. B-24-3527 bolf volve, as manufactured by Mueller
Company, Model No. B-23-23227 can be used for 3/4" curb stope, and Model No. B-23-444W for
1" curb stope, as manufactured by Ford Melet Box Company, Model No. 4317, as
manufactured by Hopes Manufacturing Company, or an approved equal, is also acceptable.
Or 2" will be fore-by-fange with locating wing, Model No. BF23-BSW for I-1/2", Model
No. BF23-777% for 2", as manufactured by Ford Meter Bio Company, Model No. 4316 as
manufactured by Hoyes Manufacturing Company; or an approved equal.

2.5.3 Consention. Sicos. 3/4" and 1". Corporation stops 3/4" and 1" will be all bress and equal to Model No. H- 15000, manufactured by Mueller Company, Model No.F-5000, as manufactured by Furd Meter Box Company, Model No. 2500. on emunifactured by Hoyes Monufacturing Company, or an opproved equal. Corporation stops I--1/2" and 2" will be breas and equal to Mueller Ordered, as manufactured by Mueller Company, Model No. 78 600. as manufactured by Ford Matire Box Company, Model No. 4400, as manufactured by Ford Matire Box Company, Model No. 4400, as manufactured by Hoyes Monorifacturing Company, or on opproved equal.

pin hings.

Service locations will be permanently stended on concrete curb or the street with a blue "If" for potable water or a purple "R" for reuse. Rause services will be located at the apposite lot comer from water services where practical or with five feet minimum separation.

2.5.5 Recipied Water. Recipied water service will be installed to finished grade in a plastic meter box eith a purple plastic top and iron flipper lid with a full pin

2.6 MSPECTION OF MATERIALS
Motertals delivered to the job sits will be subject to inspection by the City prior to installation. All moterals found to be defactive or not meeting specifications during inspection or during the progress of the work will be rejected and removed from the job sits without idealy. All moterals delivered to this job sits will be in accordance with the moterious specifications. Moterals not inspected by the City prior to installation will be uncovered by the controlled in separate to verify compliance with these specifications. The contractor with furnish capies of the pocking list(s) for materials upon demand.

SECTION III. PROTECTION OF PROPERTY AND OBSTRUCTIONS
3.I PROTECTION. Temporary supports and/or adequate protection and mointenance must
provided on all underground and surface situatives encountered in the progress of the
work. Structures that have been disturbed will be restored to a condition equal to their
original stato upon completion of the work.

3.2 OBSTRUCTIONS. All utility owners must be notified prior to beginning construction. Any known obstructions will be shown on the pions. The utmost couldness will be token in all operations to world domage to existing obstructions whether or not shown on the

SECTION IV. TRENCH PREPARATION

4.1 EXCAVATION. A tranch will be opened so that the pipe can be installed to the alignment and depth required. It will be excented only so far in advance of pipe placement as necessary. The trench will be excepted to the depth required so as to provide a uniform and continuous bearing support for the pipe or undisturbed graund. Ball heas will be provided at office of each joint to permit planting to be made and impacted managing.

property.

During seconetion, if cabes, cinders, muck or other organic material considered unstable is uncovered at the bottom of the trench at sub-grads. It will be removed on bookfilled with opproved material. This material will be competed in layers to provide a uniform and continuous bearing characteristic of that crea's soil condition. Where the bottom of the tranch at abs-grade consists of unstable material to such adequate that it cannot be removed and replaced with an approved material to support the pipel projectly, a suitable foundation must be constructed. Exceeded material will be pipel projectly as suitable foundation must be constructed. Exceeded material will be pipel sideworks or driveroup. Fire hydroits under pressure, whe bosso, or other utility controls will be left unosstructed and accessible of all times. Outers will be kept deer or other satisfactory provisions will be made for street droings.

4.2 SHEETING AND BRACING. Open cut trenches must be sheeted and braced as required by any governing State law, municipal ordinances, DSHA Standards, and as may be necessary that the state of the st

appropriate.

4.3 DE-WATERING. Excess water must not be allowed in the trench of any time. An adequate supply of sell points, headers or pumps, dif in first-close operating condition, may be used to remove the water. The use of growel and pumps will also be an acceptable means at armoving the water. The trench will be excevated no more than the available pumping facilities are capable of de-materins, Distance trans pumps will be accommodated in acceptable of the control of the cont

SECTION V. PIPE LINE CONSTRUCTION
5.1 GDRPAL
All width moles, service lines and apportenences must be installed as specified on
the approved plans and in acceptance with the Standard Data! Sheet. Installation will
conform to ARMA specification 10-000 except as modified herain.

5.2 PIPE PLACEMENT. The bottom of the tranch will not be accounted below the spec-grade. If undercutting occurs, the bottom of the tranch will be brought up to the original grade with approved material and thereapily compociate, an affected by the select and the selection of t

All mechanical joints will be made up in etrict accordance with the manufacturer's specifications. Beweder ands will be removed from PVC pipe entering a mechanical joint he belt will be concludy closed before the gestant is inserted. Gastes must be evenly seated, the gland pieced in position with the bots, and evenly tightaned. All skp joints will be made up in strict occordance with the manufacturer's specifications.

After placing a length of pipe in the french, the spigot end will be contered in the bell, the pipe forced home, brought to correct alignment, and covered with an approve backfill material. Duttlie from pipe will be backfilled to the centraline of the pipe and compacted to insity—the premart (95%) of standard Proctor T-99.

Pipe all be hatcilled with 30° minimum cover. Maximum cover of 42° will be accepted, where the process of his posice or indicated on the plans. At times depth will be determined from proposed finish posice or single-document of the plans of the control of the provision will apply during the hanch hour as well as everything the provision will apply during the hanch hour as well as everything. If water is in the Irrench, the soci will remain in place until the tremch is pumped completely dry.

5.3 WRE. A UF_814 locator wire will be installed on all potable water, reclaimed water, and sever make. The wire must be placed on the top of the pipe with at least one wro ground coch section of pipe. A rub of wire must run from the main to such hydront. Each first hydront must have one wrop of the wire around the barral located of that grade.

A run of wire will also be brought up in each valve box. The wire will have 4 fest of excess length. Wirs is to be connected together using a yellow wire nut.

A BACKPLING. All bockfilling motariol will be first from choiers, sales, rofuse, vegetable or organic moterial, boulders, rocks, stones, or other material which is considered unsatioble. When bookslill moterial is not specified on the pions, bookfilling with the accordated material may be acceptable provided that such material is suitable for bockfilling. Pipe should be bockfilled as soon as possible to minimize the length of open franch. Valves, fittings, and thrust blocks will be left uncovered until inspection by the Utilities Deportment has been acceptable.

As SALINS AND FITMIGS. All wives on different near been completed.

3. VALINS AND FITMIGS. All wives on different parts be set and joined to the pipe in the proper location as shown on the pions. Voives should be installed outside of the powerment where proficied. A modern yellow set till be provided for every videl. This works boar must not transmit shock or stress to the valve and will be centered and plumber to write the writer of the finished powerment or grade level as specified in this plans. A 24*-equive concrete pod 4 in thickness will be poured crowned the video will be cent into the pool for all voives 12 or forget. Volve normacticure as sited files will be cast into the pool for all voives 12 or forget. Volve normacticure as sited files will be cast into the pool for all voives 12 or forget. Volve normacticure as sited files will be cast into the pool for all voives 12 or forget. Volve normacticure as sited sites will be cast into the pool for all voives 12 or forget. Volve normacticure as sited, number of turns, and direction to open the volves.

(Exemple: 12° G.V. U.S.P. 20 c.e.w.)

(Exemple: 12 U.Y. U.S.P. 20 c.E.W.)

S. & FIRE HYDRATS. All fire hydronte will be located as shown on the plans and marked on the parement with a blue reflector. On unpowed streets, a blue reflector will be officed to a post and placed as close to the edge of the road as feasible one as to be easily visible. The hydronts will be located in such a manner as to provide complete easily visible. The hydronts will be located in such a manner as to provide complete to the posterior will be reflected. All hydronts must stand plumb with the pumper nozate facing towards the cuto and tho bury line of the hydront at that finely per nozate facing towards the cuto and tho bury line of the hydront at that finely depressing the provided in States highey right-or-francy will be placed in accordance with any F.D.O.T. requirements. All fire hydronts will be connected to the make in the monner shown on the Standard of Call Sheet.

5.7 TRUST BLOCKS. Thrust blocks will be inelidited at oil bends, first hydronts, and as specified on the plans, in accordance with the Standard Detail Sheet. Match homesees, the rads, or champs of odequated strength to provent movement may be installed at locations where thrust blocks are not practical. Rods and clamps will be stainless steel. A 20-foot length of mechanical joint dualities from the will be installed of oil mails entings and a thrust color will be poured around the pipe at a distance of 1D feet from the end of the joint.

from the end of the joint.

S.6 PPE (MSTALLE) IN CASNES. Pipe to be installed under poverment where open trenching is not permitted will be installed through a steal cosing which has been jocked and bored. Cealing size indicated before MINNEUM CASNES SIZE

4"

6"

10"

20"

16"

30"

12"

20"

36"

Water mains must be pushed or pulled through the casing on pressure—treated wood skide attached to the pipe with stahless steel strops. Stahless steel costing spacers with polyethylene skide will be occepted in like or wood skide and are required on mains 12" in diameter and larger. The stahless steel casing spacers with polyethylene skide will be placed in accordance with monufacture' excommendations. Casing spacers must be monufactured by Cascode or on opproved equal. Restrained joints are required on mol matalled inside casings.

5.9 BLOWOFTS. Rushing blowoffs are to be installed and constructed as shown on this Standard Datial Sheet. Blowoff materials include 2° brass pigs, threaded intrings, 2° brass shows above, and plantic materia our purple for reuse). The plantic fittings, 2° brass shows above, and plantic materials our course of the property of the pr

SECTION VI. TIE—INS TO EXISTING SYSTEMS
5.1 GENERAL
The contractor is not to operate only valve or remove only thrust block from City—owned.
The contractor inter direct apprecision of a operate of the Utilities Department.
All contractors must follow the procedures listed below for connecting new moless to existing water systems.

8.1.1 Moins 8" and smotler. Re-In- volves will be operated and pressure tested to verify water tightness prior to the UE-In. Valves that are not water tight must be replaced or a new valver must be installed invanidatily adjacent to the valve. Othersise, the UE-In is not to be made until the system has been approved for service by F.D.E.P. The contractor will provide a 2 tips on the new main and a 2" top on the sesting main the service will be until the provided of the provided of the provided of the provided on the provided of the provided on the main criter a successful becterological seat. The UE-In valve is not to be operated and this pumper is not to be removed until clasarone has been obtained from F.D.E.P. and the City. This project empireer will be required to provide on executed F.D.E.P. certificate a computation prior to detained. After decreases, the UE-In view will be operated. The Division.

8.1.2 Mains 10" and larger. This some procedure as noted for mains 8" and smaller will be used for mains 10" and larger except that a bockflow preventer will be utilized for filling the main, pranding valent for bacteriological sampling, and maintaining pressure in the main after a successful bectartological test. The tile-in valve can be opered for about 10 miles of the supervision of the Engineering Division. The tile-in valve is not to be operated and the jumper is not to be removed until valve will be operated and the jumper is not to be removed until valve will be operated, the jumper premoved, on the main thoroughly flushed under the appearation of the Engineering Olvision.

SECTION VII. TESTING
7.1 GENERAL
All narryl inetatled pipe that has been backflilled must be tested at a gauge pressure
of 150 psi in occardance with AMMA specification CSDD.

7.2 F.U.S-BND. The City will provide on adequots volume of woter for the filling, flushing, and testing pir moins. The convoctor will notify the Engineering Obdation adduring the flushing, of no time should the pressure is the City's eystem be atlosed drop below 40 pal. Water used during westaful or unsupervised flushing will be billed to the confrontor.

To 3. HTDROSTATIC TEST. A blowoff or fire hydront will be installed at the end of the pipeline under test. The line being tested will be slowly filled with exter to line specified test pressure. Before opphying the sepecified test pressure, and of viii be expelled from the test section including service connections. If fire hydronts or blow-offs are not vouliable on high selevation, stop or tiprits of highest selevation will be mode to facilitate oir removal and testing. When testing is complete, the service insee installed for oir removal must be removale.

The line must hold the 150 pel test pressure for a teo-hour test period. The first bour is to be witnessed by the contractor; the second hour must be witnessed by the contractor; the second hour must be witnessed by the second hour must be set inspection. If the line falls to meet the test, it will be reported and re-feated witnessed to the test requirements are satisfied. Line pressure will be meintoined to eithin 5 pai of the test pressure of all (times.

of the test pressure of all times.

7.4 LEAAGE TEST. A leadogs test of 150 psi elli be performed on all nerty installed sections of pipe ofter installation of all service connections. Any leadogs observed must be less than the following per thousand feet of pipe:

SIZE

ALL DIMARE LEAKAGE

1.2 ALL DIMARE LEAKAGE

1.0 3.3 Gedions/floor

1.0 Gedions/floor

1.0 Gedions/floor

1.0 Gedions/floor

1.1 Gedions/floor

1.1 Gedions/floor

1.1 Gedions/floor

1.1 Gedions/floor

16" t.32 Gallorie/Hour

SECTION VIII. OISINFECTION & BACTERIOLOGICAL TESTING
8.1 GANRAL.

The contractor must flush mains and coronge for compoints disinfection by abformation and provision of AWMA specification. CSS.1 Tolsreficing flust encorrent to applicable content of 100 ppm will be evenly distributed throughout the plos system and cliented content of 100 ppm will be evenly distributed throughout the plos system and cliented to armoin in the pipe for testerty-four hours before its instanted out. After flushing, the water should remain in the pipe for 2 testerty four before the store of the AWMA specification of CSSI. Somples will be taken by a private lab point for by the contractor. Water mains must not be finished and contractor with AWMA specification coordinates with AWMA specification contracts with AWMA specification and the contractor.

Disinfection and bacteriological testing of reclaimed water mains is not required

SECTION IX. CONNECTION TO EXISTING SYSTEM
9.1 CEDERAL.
Connections to existing City concrets mains will be made by the Utilities Department under the direction of the Engineering Division. Any charges for taps or connections made by the Utilities Department will be paid to the City by this owner or connections made by the Utilities Department will be paid to the City by this owner or connections of irregular parmits; provide a day sit orea, of pit preparation including shoring and ist rescing, mentionence of traffic, all right-of-my restarctation; and notify all utilities prior to construction. Tops on PVC. AC, or DIP mains that are from 4" through 12" in star must be made by City personal utilizing soddles and values provided by the confractor. Alternatively, the tap may be made by a topping confractor who has been approved by the Utilities Department.

Tapping sodder and values supplied by the contractor will be inspected by the Engineering Division prior to installation. The installed tapping sodder and valve must be tested with water of 100 pal for 15 minutes prior to toping to insure o exter-tight installation. The pressure test will be performed by the contractor and witnessed by a representative of the Engineering Division. After the pressure test of the sodder has been completed and payment of the tapping cost has been made to the City of Cocca Castomer Service Department, the contractor must contact the Tornemission/Division Division to schedule the top. When personnel from the Tensmission/Division Division arrive on site to make the log, the contractor will provide or day work pit in accordance with CSFA standards. The confractor will other provide the necessary equipment to lift the toping machine into and out of the pit.

SECTION X FINAL CLEAN-UP AND ACCEPTANCE ID.1 GENERAL

10.1 GONERAL. Upon completion of the work and before acceptance by the Utilities Department, contractor will meet all permit conditions, remove all debris, and complete sodding, sprigging, or seeding if required by the plans. The contractor will leave all arous affected by higher sportstoms to a need and presentable condition.

SECTION XI. FIRE SERVICE 11.1 CENERAL Where set of population of the provention device will be installed in accordance with the "Cross-Connection Central and Backlow Prevention" section of the Uther Hendbook.

SECTION XII. CONNECTION OF BUILDINGS OVER FOUR FLOORS 12.1 GENERAL 12.1 GENERAL
Connection of domestic enter supply systems serving buildings over four floors in height to the City's water distribution system will be subject to the following requirements.

t. A flature unit analysis will be performed by the project engineer to determine peak domestic flow requirements. This analysis is to be provided to the City.

A water meter and a reduced pressure backflow preventer, sized in accordance with the domestic liow requirements, will be installed above ground at the developer's expanse.

3. Upon written request, the City will provide the site engineer with the minimum expected system pressure. The site engineer will be responsible for providing this information to the orbitlect and building owner. Weens for providing on odequate supply of water to all parts of the building during periods of minimum pressure will be the responsibility of the building orbitate.

4. Repair costs for demage to the water mater caused by flows exceeding its roted canacity will be charged to the customer.

SECTION XIII. BACKFLOW PREVENTERS
13.1 GOMERAL.

Bockflow preventers must be installed at locations where dangerous cross-connections may occur. The need for backflow preventers will be determined by the titifities the property of the pro

SECTION XIV. AS-BUILT DRAWINGS
14.1 CENERAL
As-built drawings are required for all systems to be accepted by the City. As-builte
will be prepared by a surveyor or an engineer registered in the Stote of Florido and
will contain the following information:

t. Location of cil valvez, service lines, littings and fire hydronts ucing at least two lies to permanent points (manholes, property corners, curbs, or stormwater inlets). An occeptable station and offset system may be used for service lines and fittings only. Location of mains from property easement lines or edge of povement at intervals of 300 leet.

Elevations to the top of the water line at intervols of 300 feet and at all drainage and sewer main crossings. Bench mark to be shown on as-builts.

Separation between recidimed water or force mains and water mains if they are inetalled within 10 feet of water mains.

Water main material and distance of mains from buildings or structures within 20 feet of this water main.

6. Distance from hydront to hydront volve.

7. Pertinent easement information.

8. Certification by the surveyor or engineer occepting responsibility for occuracy of information supplied on the os-built drowings and o statement certifying that oil moins are within assements and/or public rights-of-eay. The name "City of Cocco" must oppear on oil os-built survey information.

As-builts will be drawn of a scale of 1 linch - 100 frest. Areas requiring additional detail may be enlarged an necessary, Rights-of-way, assements, and int these will be occurred; when, Lots, block numbers, and extrest names will be included. If the as-builts were prepared by an AutoCod (version 12) compatible program or DFX file, a disastet with both file will be provided to the CIS, All projects within the South Moldiand Water Service Area will be prepared in a digital format compatible with AutoCod (version 12).

One reproducible print or computer diskette and three signed and sealed blue-line prints are required. After the surveyor or engineer has certified the locations, the engineer will certify on FD.E.F. Form 62-535.3(10). But it me system depicted on the os-built drawing was constructed in substantial conformance with approved plans and will incition as intended.

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IMPROVEN

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RETSCAPE I, FLORIDA COA BEACH

STRE SEACH, OF COC

COCOA B FOR: CITY

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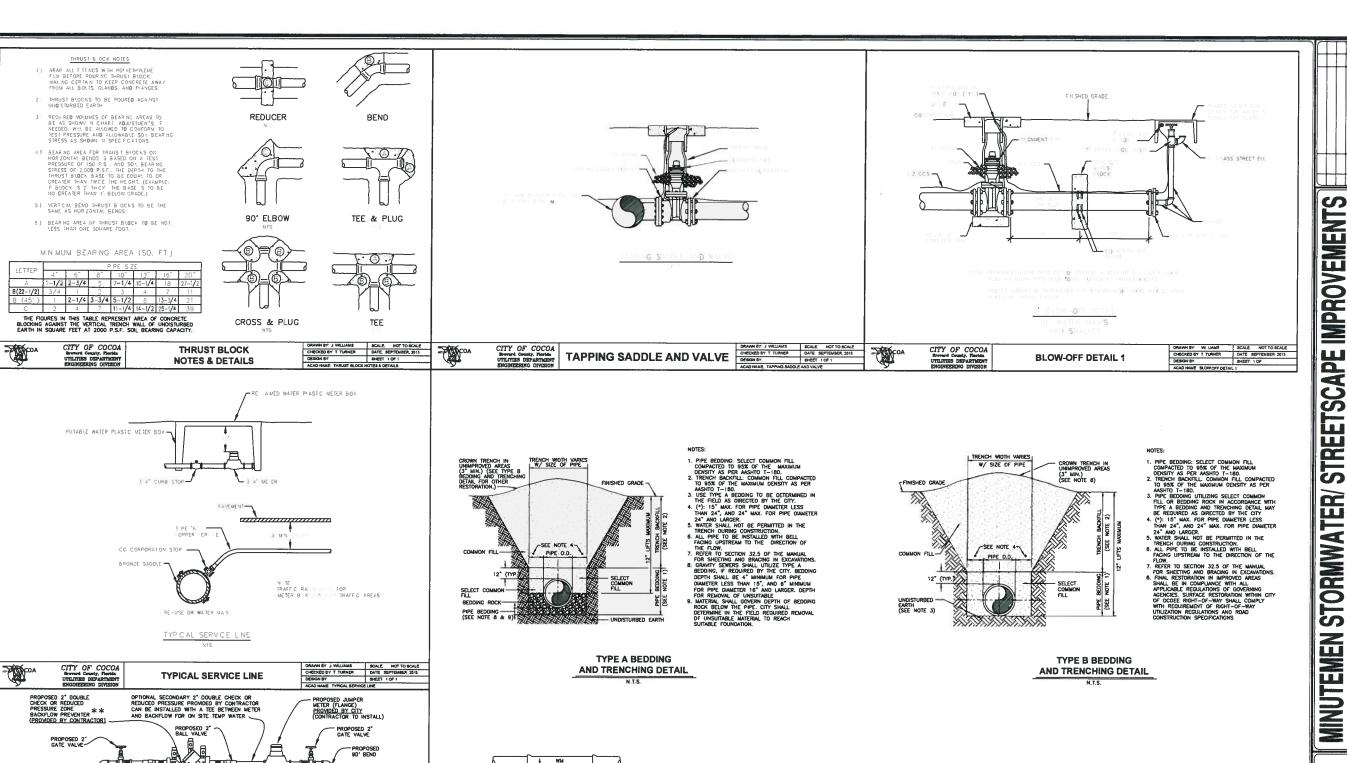
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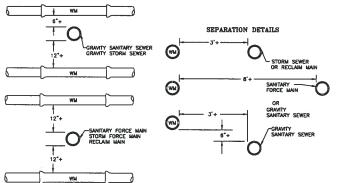
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13-00191 WSD-5

10. 53326 α POTABLE OF STREET

DATE OFFICIAL 48 99





NEW OR RELOCATED, UNDERGROUND WATER MAINS INCLUDED IN THIS PROJECT WILL BE LAID TO PROVIDE A HORZONTAL DISTANCE OF AT LEAST THREE FEET BETWEIN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY DISTANCE OF THE WATER MAIN AND THE OUTSIDE OF ANY DISTANCE OF THE WATER FEET BETWEIN THE DISTANCE OF THE WATER FEET BETWEIN THE OUTSIDE OF THE OUTSIDE OF THE WATER FEET BETWEIN THE OUTSIDE OF THE OUTSIDE OUTSIDE

AT THE LITELY CROSSINGS DESCRIBED IN PART I.C.I.W. ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE WILL BE CENTERED ABOVE OR BELOW THE OTHER PRETAIRE SO THE WATER MAIN CHORTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PREPAIRE OF BE PREFAIRED. BE REPAIRED SO THAT ALL WATER MAIN JOINTS ME AT LEAST THREE FEET FROM ALL JOINTS WILL GOVERN COMPANYED FORCE DIVERSE (FEED ALL STORTS CONVEYING FEED ALL STORTS STOR

RECLAIMED WATER SYSTEM SHALL BE IDENTIFIED AS REQUIRED.

WATER & SEWER LINE SEPARATION

DETAIL ~ MILLEF Central Florida Office: 9 Writter Park, 407-029-888 **ATER** EB7318 LB6680 LC0337
MDS TZ/TS RC
OCS. DWIL. CHIC. ш Ω

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IMPROVEMENT

ER/ STREETSCAPE II A BEACH, FLORIDA IY OF COCOA BEACH

STORMWATER, COCOA B COCOA B FOR: CITY OF

MINIST

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D # LE(

13-00191 WSD-6 0ATE DELEMBE 49 0

BRASS OR GALVANIZED PIPING NO. PVC

INSTALLATION OF SWAB IN
NEW WATER MAIN TO BE
FLUSHED OUT WITH JUMPER
ASSEMBLY AND WITNESSED
BY CITY OF COCOA INSPECTION

CITY OF COCOA Browned County, Florida UTILITIES OFFARTMENT ENGINEERING DIVISION

JUMPER & METER ASSEMBLY

JUMPER & METER ASSEMBLY

PROJECT - TIE-IN VALVE

NOTES:

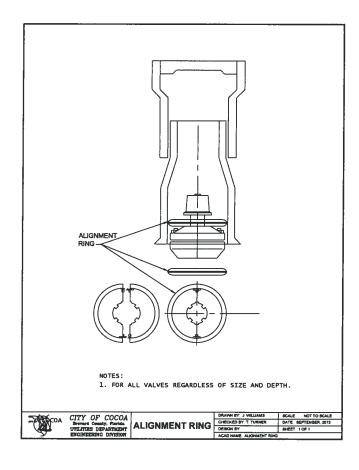
1. REQUIRED AT ALL CONNECTIONS BETWEEN EXISTING ACTIVE WATER MAINS AND PROPOSED WATER MAIN IMPROVEMENTS.

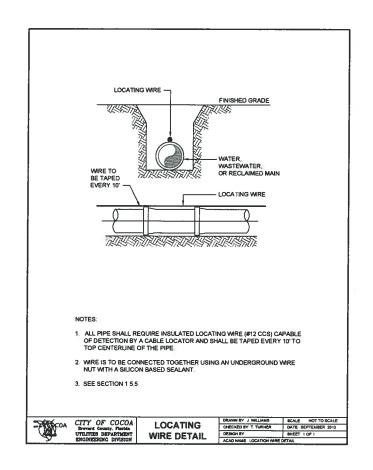
2. ONLY EXCEPTION TO JUMPER AND METER ASSEMBLY IS INSTALLATION OF FIRE HYDRANT WHERE AN ARCHORNIC IMPRE IS USED.

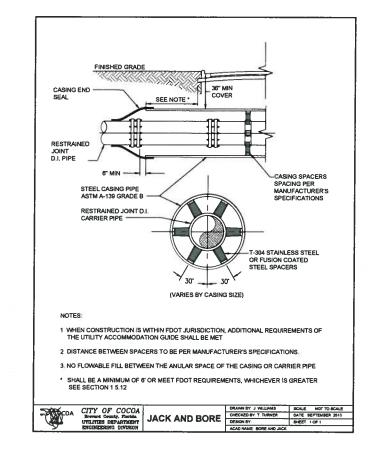
DRAWN BY J WILLIAMS SCALE NOT TO SCALE
CHECKED BY T TURNER DATE SEPTEMBER, 2013
DESPON BY
ACAD MAME. JUNPER & METER ASSEMBLY

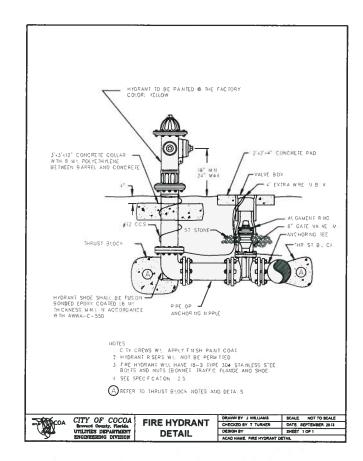
NO TEES OR SPIGOTS UPSTREAM OF METER

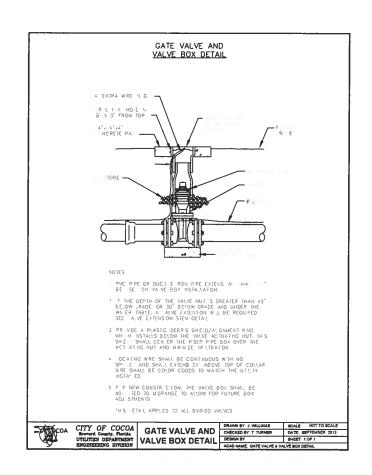
BRASS OR GALVANIZED PIPING NO PVC

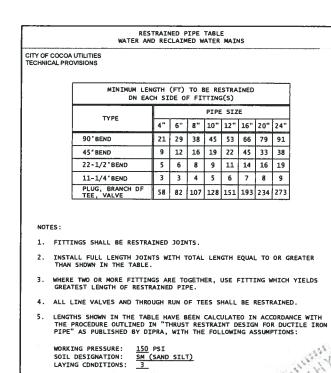












6. TABLE IS FOR PVC AND WRAPPED DUCTILE IRDN.

CITY OF COCOA
RESTRAINED PIPE TABLE
UNITARIS DEPARTMENT
ENGINEZIENG DIVISION

RESTRAINED PIPE TABLE

OCCURRENT TUMBER

OCCURRENT

ACAD NAME RESTRAINED PIPE TABLE

OCCURRENT

O

MINUTEMEN U 8 U I Avenue 789-7122 629-7883 LER a Office: 631 S inter Park, Po 7-629-6880 · F DET MILLI Contral Florida OII

IMPROVEMENTS

STORIMWATER/ STREETSCAPE COCOA BEACH, FLORIDA FOR: CITY OF COCOA BEACH

41.11:--

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EB7318 LB6680 LC0337
MOS TZ/TS RC
OSS. DNN. DNL. 13-00191

WSD-7 1/17/14 sty 99

	TABULATION OF QUANTITIES																											
PAY ITEM	DESCRIPTION		UNIT	SHEET NUMBERS														TAL HIS			REF. SHEE							
NO.			""		RP-1	HR		HRI		HRP-4 PLAN FINAL		HRP-5			N. (2001)	CI AN I	TA IA I	G AN I	Chial	5.44	NI EDNAI	7.41	J 5344	SI- PLAN	EET			
101-1	Mobilization	includes equipment transport & staging.	LS	FDAN	FIRM	LEVIA	FEENL	I CLAIN	LIMAL	TLAN.	FUWLL	FLAN	FRWAL	TLAN	FRACE	PLAN	INAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN 1	FINAL	PLAN	FINAL	+
102-1	Maintenance of Traffic	Includes work zone signs, barricades, dust control, arrow panels and off-duty officer.	LS	 	 			1		 											-	 	-	} -		 	1	4
107-1	Litter Removal		AC		 			 														 	 	<u>'</u>	 		4	
HARDSCAPE				 	-					l				 							1	 	-		-	 	+	+
522-2	Concrete Sidew alk and	Sea Turtle Concrete Form	SF				0.0000000	 		1000000		130		-							 			130 sf		130 sf	+	
	Dríveways, 6" tháck									 												 		100 31	 	1100 01	+	
26-1-1	Pavers, Architectural	Onstreef Parking Pavers , Color: Adobe 4"x 8"x 3"	SF	2149		116		2075		1635														5975 sf	 	5975 st	+	
	(Vehicular Areas)		1	† 	1					1 2 30				 						 	 	 		5570 31	 	100/001	+	
526-1-1	Pavers, Architectural	Median Paving - Adobe 4" x 8" x 2 3/8"	SF	 				458		174								100			-	 	-	632 sf		632 sf	+	+
*****	(Non-Vehicular Areas)		1	†	-	-				1	-									——		 	 			1002 31		-
526-1-2	Pavers, Architectural	Sidew alk Pavers, Color; Amaretto 4"x 8"x 2-3/8"	SF	3637	·	2877		5640		6295				l							-			18649 sf	 	18649 sf	-	+
	(Sidew alk)		+	1										 	-							-	+	100 10 01	ļ	10073 31	+	
526-1-2	Pavers, Architectural	intersection Plaza Pavers, Color: Amaretto 4"x 8"x 2-3/8" & 4" x 4" x 2 3/8"	SF	2092	-	2110		2089		940											 			7231 sf	 	7194 sf	-	
	(Sidew alk)			·										 										7201 01	ļ	715431	+	
526-1-2	Pavers, Architectural	Intersection Plaza Pavers, Color: Citrus 4"x 8"x 2-3/8"	SF	2092		2110		2089		940	\rightarrow				-		-				-			7231 sf		7194 sf	+	+
	(Sidew alk)			 										l			-				-	-		720131		7 7 31		
526-1-2	Pavers, Architectural	Beach Plaza Pavers; Roadlock Paver, Color, Tan w / Shellock Finish 8"x 12"x 2-3/8"	SF	 				-		1565		2855												4420 sf		4348 sf	+	
	(Sidew alk)		-		 					-							-	-				-		7720 31		4540 81	+	
526-1-2	Pavers, Architectural	Beach Plaza Pavers; Roadlock Paver, Color; Cafe w / Shellock Finish 8"x 12"x 2-3/8"	SF	 	 				-	1565		2855		 							 			4420 sf	ļ	4348 sf	+	
	(Sidewalk)	· · · · · · · · · · · · · · · · · · ·	1	 		-		 		1000											 			7720 31		7340 41	+	
526-1-2	Pavers, Architectural	Beach Plaza Exposed Heavy Glass Pavers w / Shellock Finish 8"x 12"x 2-3/8"	SF									1848		l								 		1848 sf	ļ	1848 sf	+	+
	(Sidew alk)							l			-	10.10												10-10-31		1040 31	+	
526-1-2	Pavers, Architectural	Beach Plaza Exposed Glass Pavers w / Shellock Finish 8"x 12"x 2-3/8"	SF	 				 				2408	-											2408 sf	ļ	2408 sf	+	
	(Sidew alk)		1	 				H				2100		<u> </u>	$\overline{}$									2400 31		2400 31	+	
	<u> </u>							l																			+	
520-3-6	6" Concrete Ribbon Curb	Drop Curb Special (see detail)	LF	1597		972		1232		1075		250		-									 	5126 If		5126 If		+
			+=	1				1202		1010		200		l								 		312011		3120 H	+	
520-3-8	8" Concrete Ribbon Curb	Drop Curb Special (see detail)	LF					├ 				263		+							 	ļ		263 If		263 If	+	
			 				-	+				200												203 11		203 #	+	
751-36-11	*Bicycle Rack	(BR-1) Standard Surface Mount Bike Rack	- EA																			ļ				ļ.,		
			+	 																						 	+	+
751-37	'Trash Receptacle	(RS-1) Trash Can	ΕA	2		3				4		7						+						10		18	s	
751-37	*Trash Receptacle	(RS-1) Recycling can	БA	2		3		1		4		7												18		15		+
751-38-11	*Bench	(B-1) Curved Backless Slat Bench	EA	1																	<u> </u>			10			,}	
			+					-									-				ļ					<u> </u>		
51-38-11	'Bench	(8-2) Backless Stat Bench	БA	3		1		7		8		5										—		24		24	+	+
			T																								 	+
51-38-11	*Bench	(B-3) Curved Inside Back Stat Bench	EA			1				4							\neg							5			<i>j</i>	+
			T=01/6/			7.1	1000																			l	1	1
51-38-11	*Bench	(B-4) Curved Outside Back Slat Bench	EA	2		2				4														8		8	<u>,</u>	1
	1																											
51-38-11	*Bench	(B-5) Straight Back Slat Bench	ΕA			4		3	$\neg \neg$				\neg				\neg							7		7	1	+
																										·		1
RIGATION				555																								
90-70	Irrigation System	Main line, laterals, heads, controller, wiring/electric, valves, pumps, wells, moisture sensors, flex lubing	LS	1																								

*NOTE THAT DECORATIVE BENCHES, AND DECORATIVE RECYCLE/TRASH RECEPTACLES ARE NON PARTICIPATING WITH FEDERAL FUNDING

					ŀ	LANDSC	APE TAE	BULATION OF	QUAI	NTITIES	3												
PAY ITEM PA		SYM	BOTANICAL NAME		INSTALLED	MAXIMUM		RBWARKS	=	SHEET NUMBERS							TOTAL THIS			GRAND TOTAL			
NO. S	SIZE	SIM		COMMON NAME	SZE	MAINTAINED SIZE	SPACING	CONTRACT	UNIT	LNP-1		LNP-2		LNP-3		LNP4		LNP-5		SHEET			
										PLAN	FINAL	PLAN	FINAL	FLAN	FINAL	PLAN	FNAL	PLAN	FINAL	FLAN	FNAL	FLAN	FINAL
580-1-2 LAND			- LARGE PLANTS						$\overline{}$				i i								i i	1	
580-1-2	LARGE	BN	Bismerk noblis 'Silver Select'	Bismark Palm	Min. 8" C.T.				Ea			1		4					ļ		 	1 :	,
580-1-2	LARGE		Conocarpus erectus 'Sericeus'	Silver Buttonw ood	10' HT. x 4'	14' HT.			Ea	8		7		8		12		6		<u> </u>		41	<u> </u>
580-1-2	LARGE		Livistona Chinensis	Chinese Fountain Palm	6' C.T.				Ea Ea	2							1		 			1	
580-1-2	LARGE	PM	Phoenix dactylifers 'Medjool'	Oate Pelm	12" C.T., MATCHED				Ea				*****	14		13	1					27	
580-1-2	LARGE	QV	Quercus virginiana 'Cathedral'	Cathedral Live Oak	10' HT. x 4'				Es	5		2										7	
580-1-2	LARGE	SP	Sabal patmetto	Cabbage Palm	10'-16' C.T.				Ea	8		5		3		. 8		16	<u> </u>	1		40	,
580-1-1 LANDS	CAPECO	MPLETE	- SMALL PLANTS																T			-	
580-1-1	SMALL	BF	Bulbine frutescens	Stalked Bulbine	Pull Pot		1 gai @ 18" oc.		Ee .	149		229		26		309				 	 	713	,
580-1-1	SMALL	DR	Ouranta repens	Sky Rower	12" ht x 15"sprd		3 gal @ 24" oc.		Ea	99		164		15		158			-	1	1	436	
580-1-1	SMALL	HD	Helanthus debilis	Qucumberleaf Sunflower	Full Pot		1 gal @ 18° oc.		Ea			 						219		l		219	
580-1-1	SMALL	HL	Hymenocallis latifolia	Spider Lily	12" lst.	16	1 gal @ 18° oc.	· · · · · · · · · · · · · · · · · · ·	Ea	56		46		184		148				 		434	
580-1-1	SMALL	IS	llex vomitoria 'Stokes Dwarf'	Dwarf Yaupon Holly	12" ht. x 12"sprd		3 gal @ 24" oc.		Ea	34		20		100		95	<u> </u>					249	
580-1-1	SMALL	N	ixora coccinea "Nora Grant"	Pink txora	15" ht. x 18"sprd		3 gal @ 30" oc.		Ea	32		14		37		28				 		111	
580-1-1	SMALL	ZF	Zamia floridana	Coontie	12" ht, x 15"sprd		3 gal @ 24" oc.		Ea	81		72		44		48			 	!	ļ	245	

ABBREVIATIONS

CAL - CALIPER
C.T. - CLEAR TRUNK
EA. - E.GALLON
H.T. - HOGHT
L.S. - LUMP SUM
L.N. - LUMER
PL - PLANT
O.A. - OVERALL HEIGHT
O.C. - ON CENTER
SPRO. - SPREAD
S.Y. - SQUARE YARD

PAY ITEM NOTE: CONTRACTOR TO VERIFY ALL QUANTITIES.



MINUTEMEN STORMWATER/ STREETSCAPE IMPROVEMENTS COCOA BEACH, FLORIDA FOR: CITY OF COCOA BEACH

MILLER LEGG
Central Privils order, 25785-7122
407-625-9805
Fee, 407-625-9805
Fee, 407-625-9805

CONTENSIS OF ANTIORIZATION

EB7318 LB6680 (C0337

JDW JS JDW

952 DW DOX

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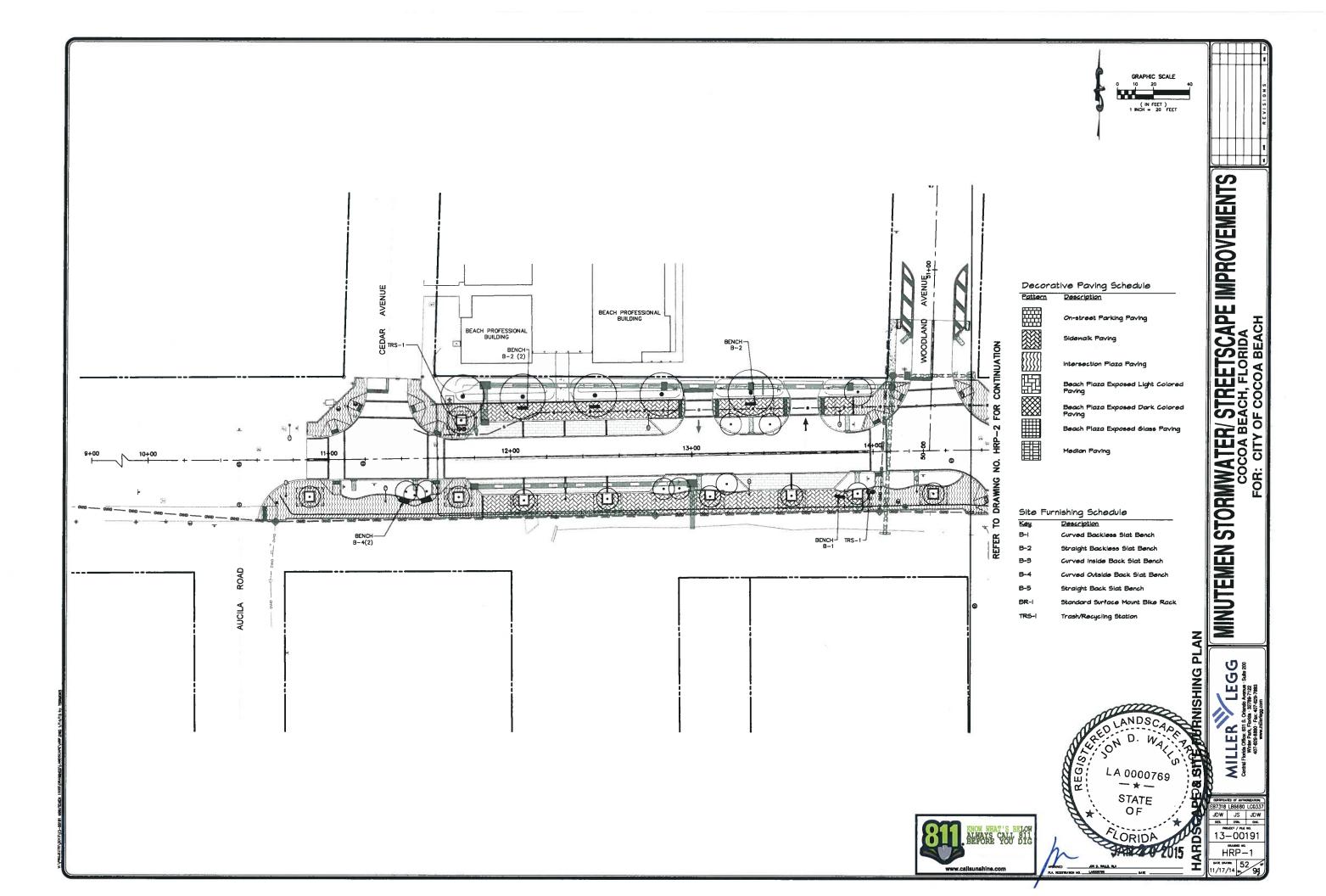
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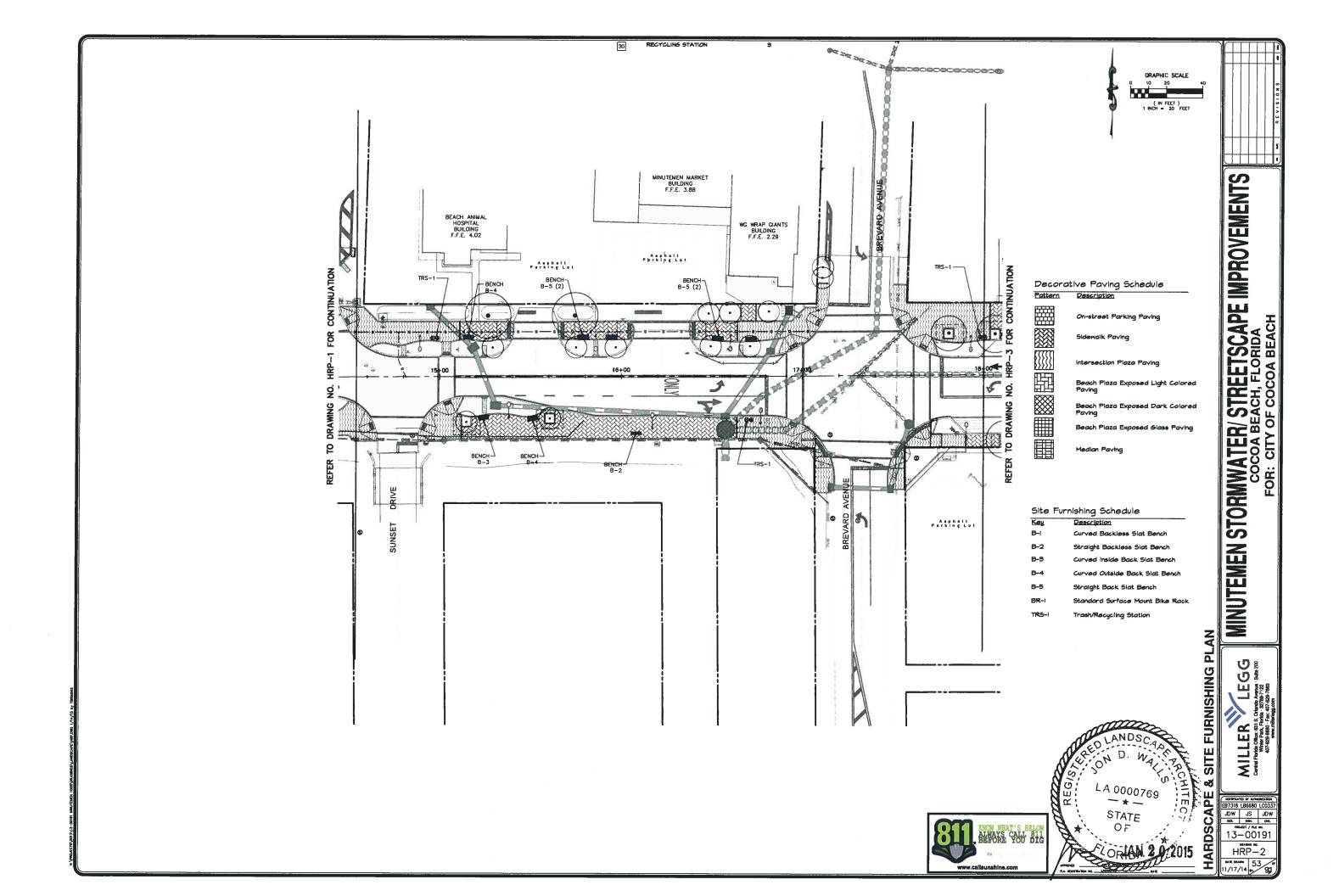
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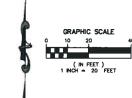
ANTI GAMON

511/17/14

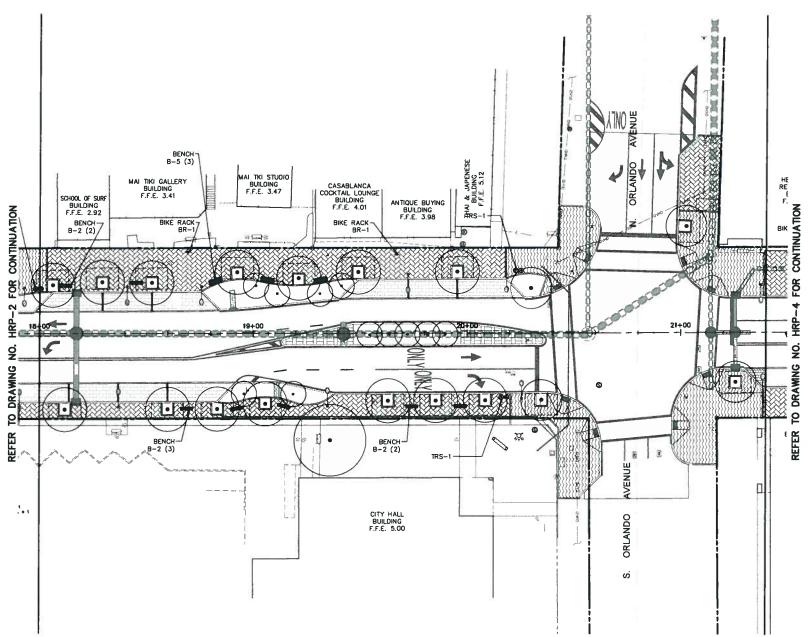
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On-street Parking Paving

LA 0000769

STATE OF

Site Furnishing Schedule

3130 1 01 1113111113 301100010										
Key	Description									
B-1	Curved Backless Slat Bench									
B-2	Straight Backless Slat Bench									
8-9	Curved Inside Back Slat Bench									
B-4	Curved Outside Back Slat Bench									
B-5	Straight Back Slat Bench									
BR-I	Standard Surface Mount Bike Ro									
TRS-I	Trash/Recycling Station									
	Key B-I B-2 B-3 B-4 B-5 BR-I									

MINUTEMEN STORMWATER/ STREETSCAPE IMPROVEMENTS COCOA BEACH, FLORIDA FOR: CITY OF COCOA BEACH HE FURNISHING PL

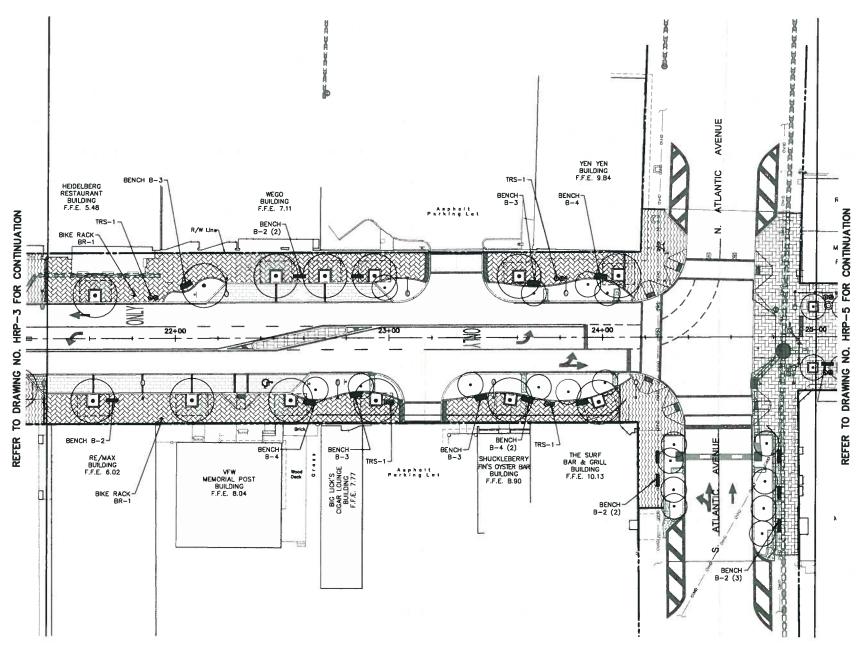
MILLER LEGG

Central Profes Offer 2718, Chardo Annes Sula 200
Where Park Forder 27789-7122
407-429-4890. Fay: 407-429-7883

| COTTOPICATES OF AUTHORIZATION: | EB7318 LB6680 LC0337 | JDW | JS | JDW | DKL | OWL HRP-3



STORMWATER/STREETSCAPE IMPROVEMENTS COCOA BEACH, FLORIDA FOR: CITY OF COCOA BEACH





On-street Parking Paving

Sidenalk Paving

Beach Plaza Exposed Glass Paying

Site Furnishing Schedule

É FURNISHING PLAN

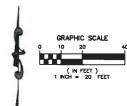
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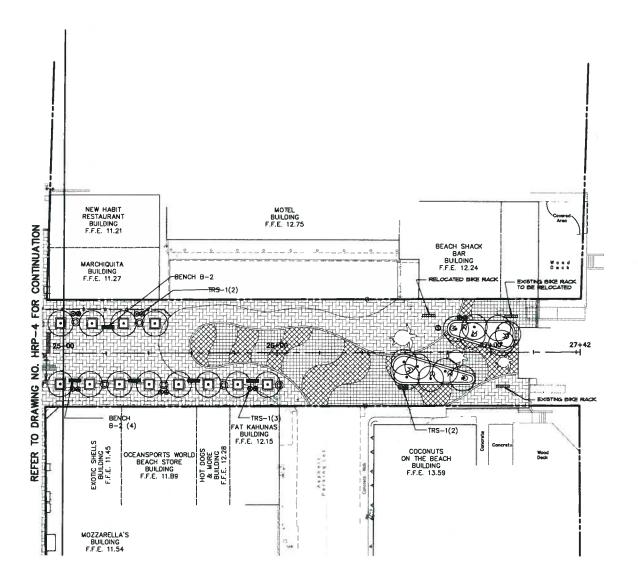
MILLER LEGG

Central Profets Offer, 2018, Outnot Auto. Sulp 200
Where Park Forder, 2018-97122
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CONTINUATE OF AUTHORIZATION
EB7318 LB6680 LC0337
JDW JS JDW
003 998 GH.
13-00191 HRP-4

0ATE CHARGE 55





Decorative Paving Schedule

Description

On-street Parking Paving

Sidenalk Paving

Median Paving

Site Furnishing Schedule

Key	Description
B-I	Curved Backless Slat Bench
B -2	Straight Backless Stat Bench
8-5	Curved Inside Back Stat Bench
B-4	Curved Outside Back Slat Bench
8 -5	Straight Back Slat Bench
BR-I	Standard Surface Mount Bike Rack
TRS-1	Trash/Recycling Station

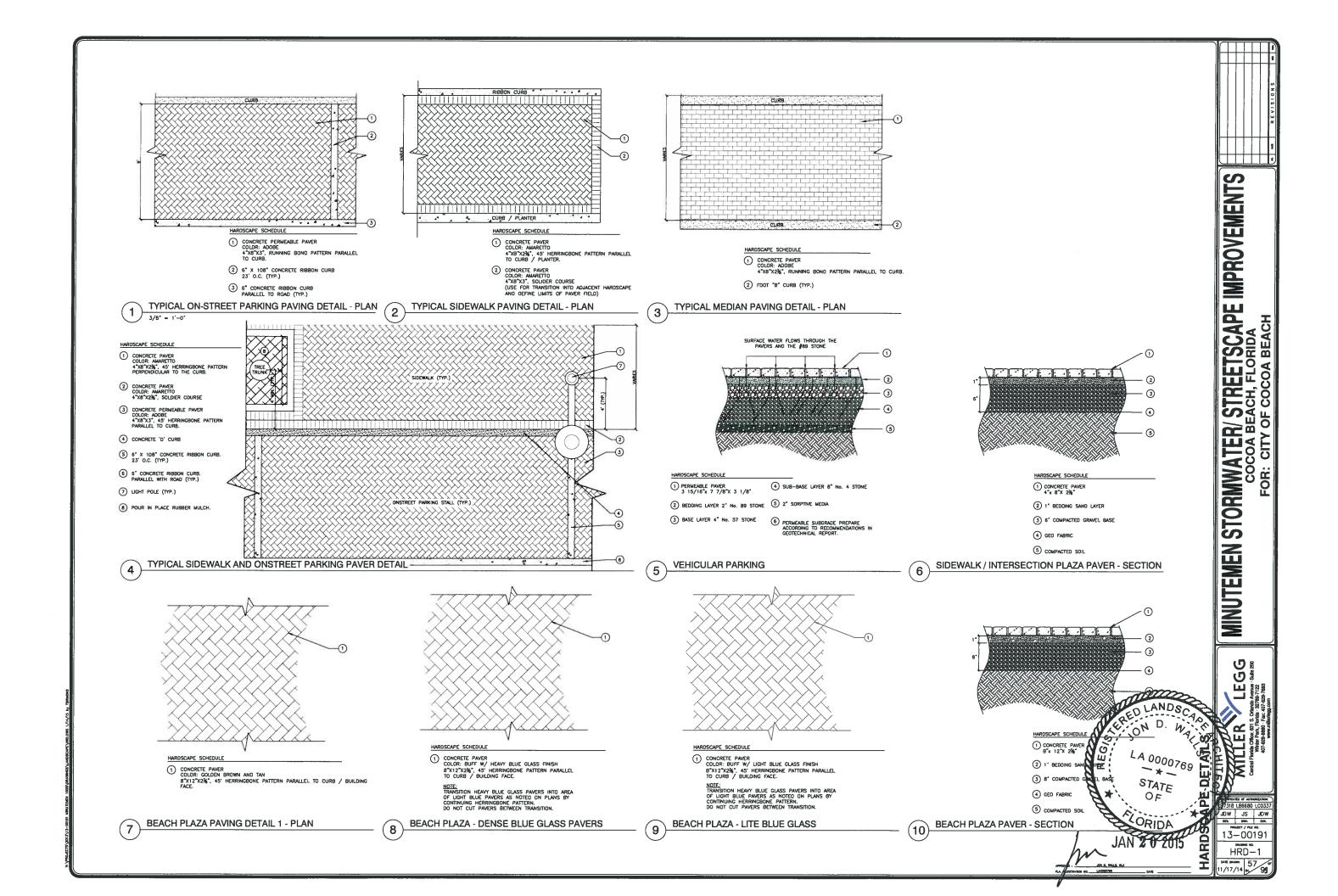
MINUTEMEN STE FURNISHING PLAN MILLER LEGG Central Portica Ottor 2018. Central Actions Sulta 200 Where Park Fordis 20789-7122 407-629-880. Fac. 407-629-7883

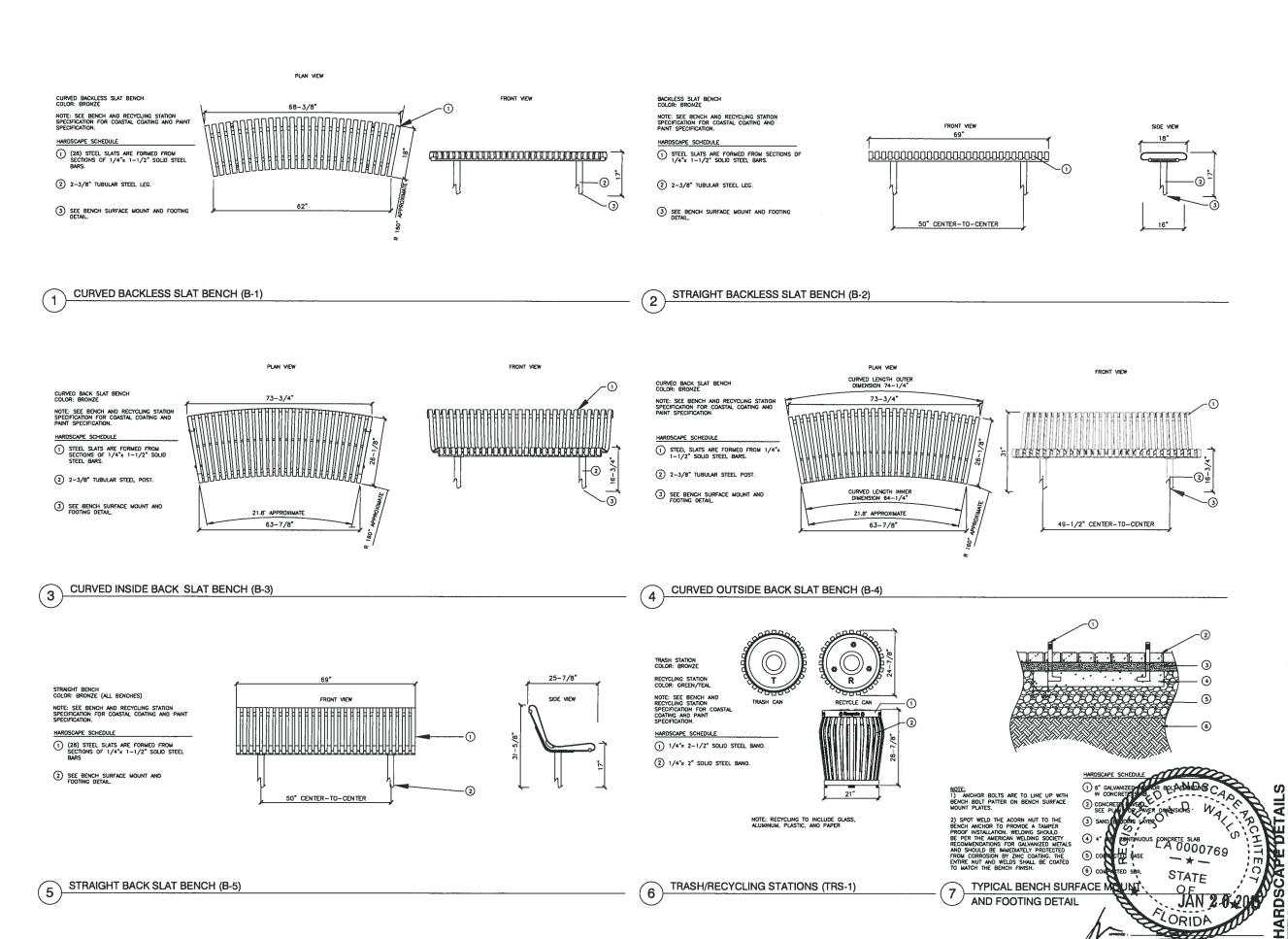
STORMWATER/ STREETSCAPE IMPROVEMENTS COCOA BEACH, FLORIDA FOR: CITY OF COCOA BEACH

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STORMWATER/ STREETSCAPE IMPROVEMENTS COCOA BEACH, FLORIDA FOR: CITY OF COCOA BEACH MINUTEMEN

LE az786-7122 77-629-7883 CORCE: 631 S Central Florida Off Window

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EB7318 LB6680 LC0337
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0ATE ORASSA 58 0

4.00' 4.00'

FORMED FROM 2-3/8" O.D. 17-5/8" CENTER-TO-CENTER

HOLETTING STANDARD DI-GROUND AND SURFACE (AS SHOW)

- LIMATES, HOT DIP GALVANIZING BEFORE POWDER COATING IS AVAILABLE. SEE

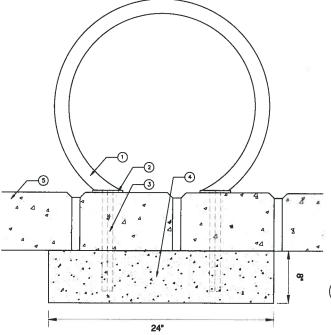
2 ENLARGED INTERSECTION PEDESTRIAN PLAZA WAVE PAVING DETAIL **BIKE RACK DETAIL (BR-1)** (3)

1 YELLOW DETECTABLE WARNING PAD IN PAVERS.

(2) CONCRETE PAVER COLOR: AMARETTO 4"X8" X2%" AND 4"X4"X2%", RUNNING BOND PARALLEL TO WAVE.

CONCRETE PAVER
COLOR: CITRUS
4"% 8"% 3", RUNNING BOND PARALLEL TO
WAVE.

INTERSECTION PEDESTRIAN PLAZA WAVE PAVING DETAIL



Thermoplestic penel, > 180 mils thickness In-situ material. Remove soft areas and replace with well graded, compacted gravel TYPICAL PAVEMENT WITH TRAFFICPATTERNS XD CROSS-SECTION DETAIL Good Subgrade Support Characterized by Firm to Hard Soils



NOTES:

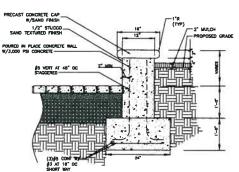
- 1. CROSSWALK TO BE STAMPED ASPHALT.
- CROSS WALK PLACEMENT PER PLAN. REFERENCE FDOT INDEX 17346 FOR ADDITIONAL INFORMATION 3. MIN. CROSSWALK WIOTH TO BE 10-FEET WIDE.

STAMPED ASPHALT CROSSWALK 5 STAI

1 BIKE RACK.

- (2) ANCHOR PLATE PER MANUFACTURER.
- 3 ANCHOR BOLTS (SUBMIT SHOP DRAWINGS).
- (4) 8°x 12°x 24° CONCRETE FOUNDATION.
- 5 SIDEWALK CONCRETE PAVERS. NOTE: CONTRACTOR TO PROVIDE SHOP DRAWING FOR ANCHOR BOLT AND CONNECTION.

BIKE RACK SUPPORT DETAIL 4) BINE



BEACH PLAZA SEATWALL/PLANTER DETAIL

LA 0000769 STATE

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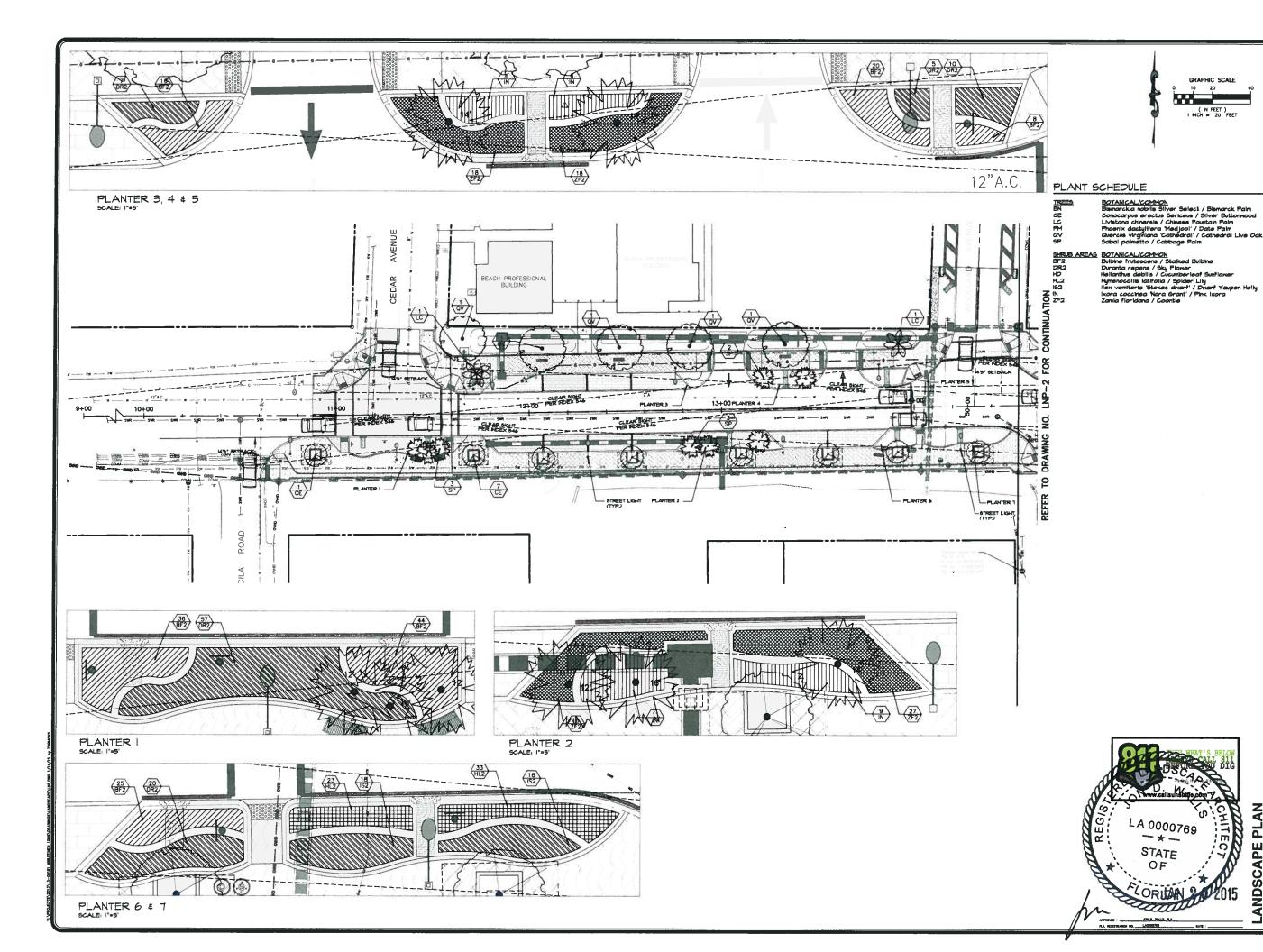
MINUTEMEN

STORMWATER/ STREETSCAPE IMPROVEMENTS COCOA BEACH, FLORIDA FOR: CITY OF COCOA BEACH

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HRD-3



STORMWATER/ STREETSCAPE IMPROVEMENTS COCOA BEACH, FLORIDA FOR: CITY OF COCOA BEACH MINUTEMEN

GRAPHIC SCALE

(IN FEET) 1 INCH = 20 FEET

LEGG 15. Chardo Avenue Sude 200 Florida - 20728-7122 Florida - 20728-7123 MILLER Control Future Date (1975)

Control Future Date (1975)
When Park Future (1975) PLAN

CONTRACT OF ANNORMANDS

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JOW JS JOW

SEX OWN OSC

MODET / Mx NO

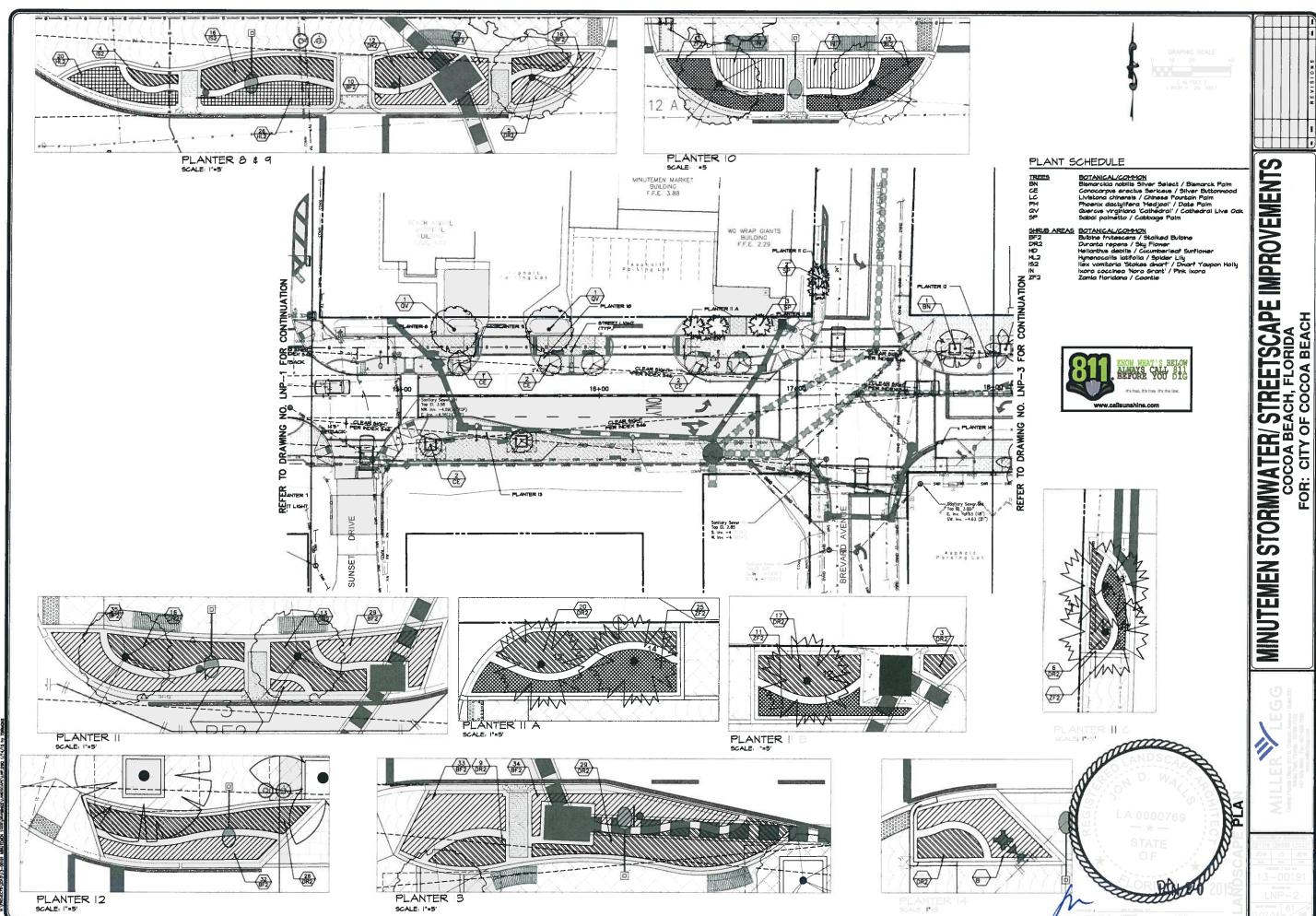
LNP-1

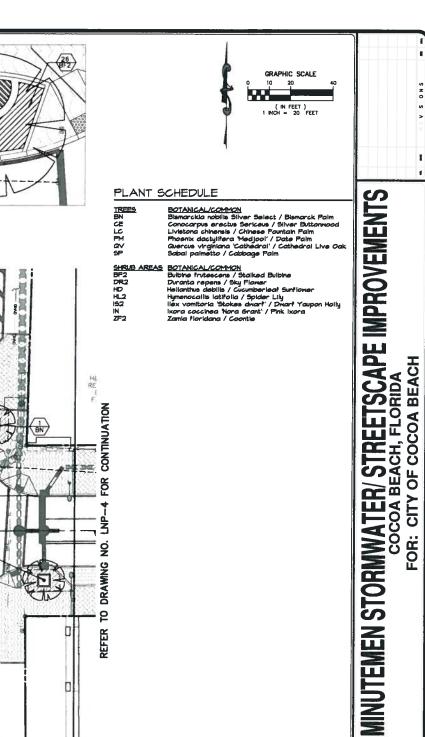
ANY SHAPE: 60

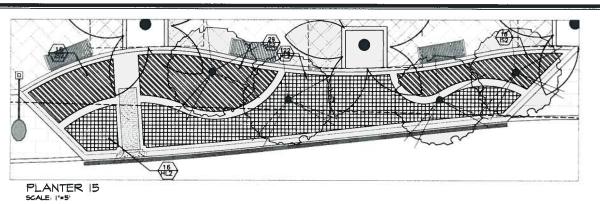
OR

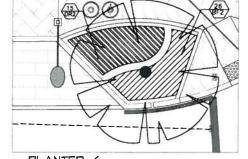
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MR DAME 60 0

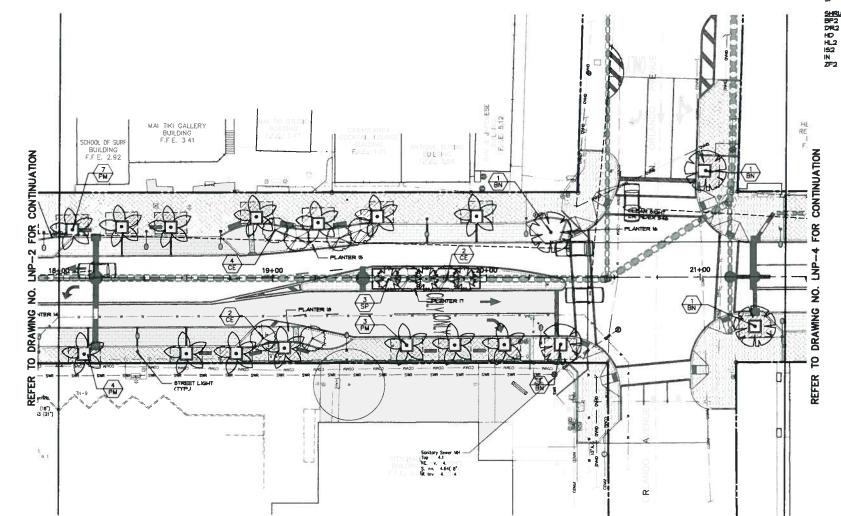


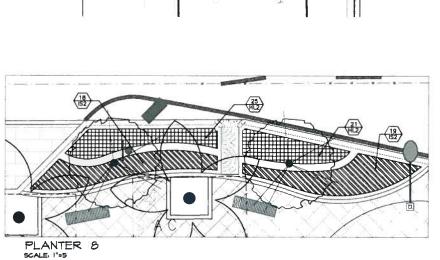


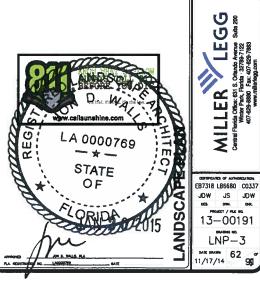










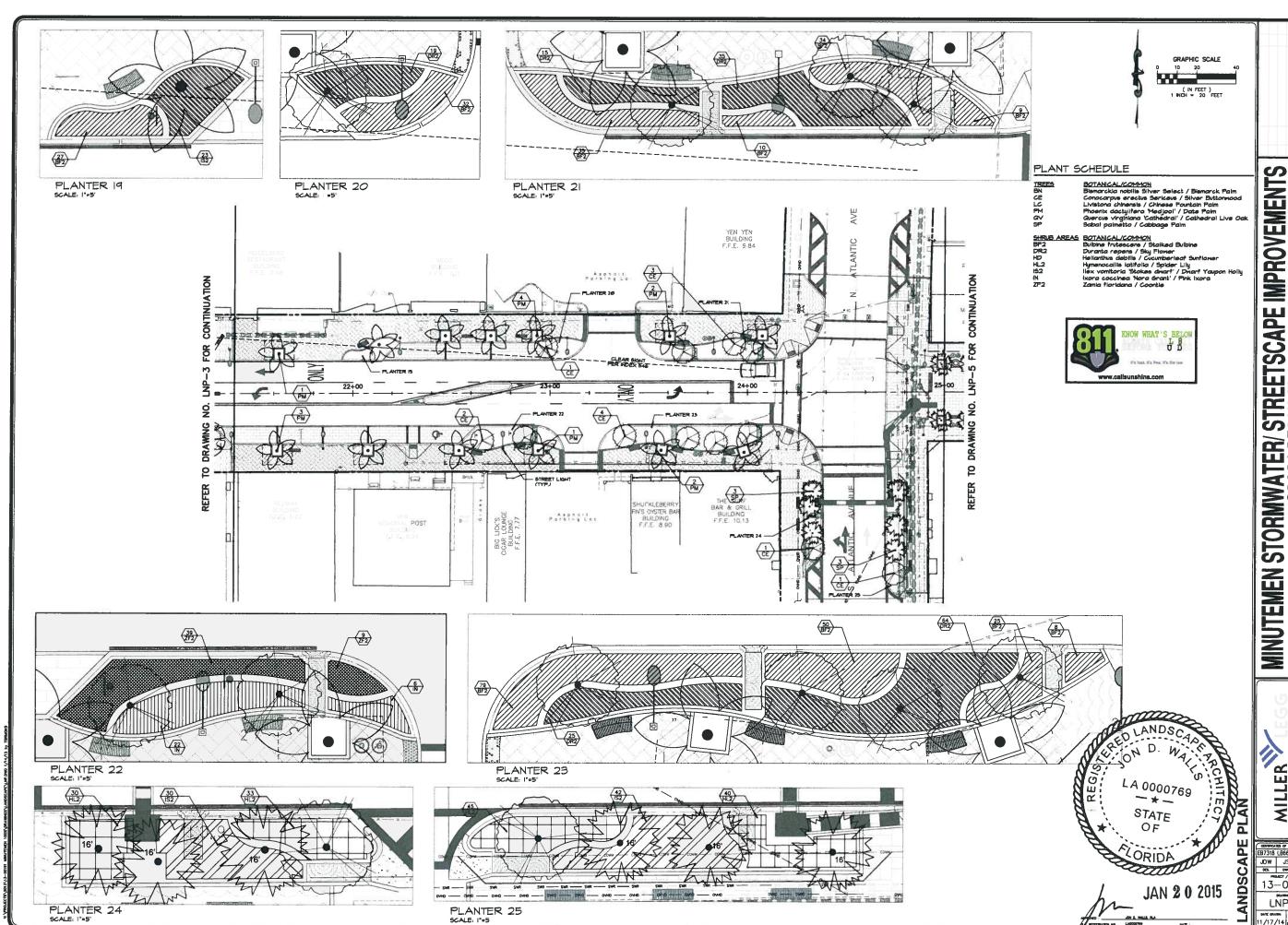


(21) (2F2) my PLANTER 17

GISTSPICATES OF AUTHORIZATION EBR7318 LB6680 C0337
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13-00191 ENP-3

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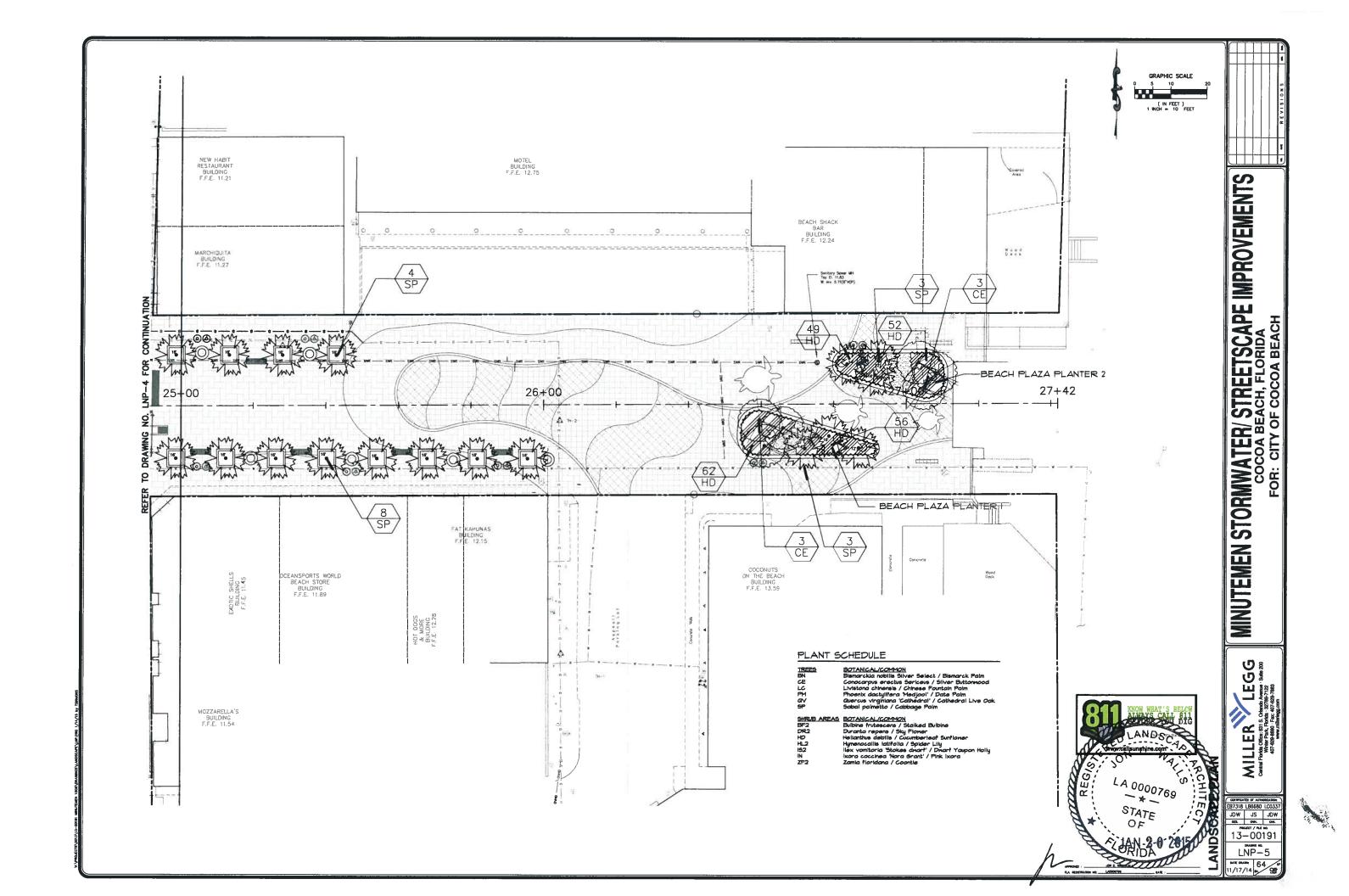
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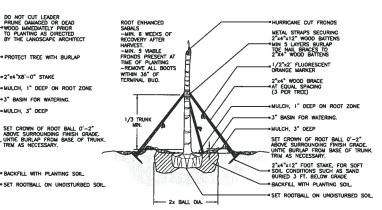
STORMWATER/STREETSCAPE COCOA BEACH, FLORIDA FOR: CITY OF COCOA BEACH MINUTEMEN

Suths MILLER Central Fords Office: 631 S Writter Park, Flor 407-629-8890 - F

LNP-4 0ATE DRAISE 63



(2" cal. and over) LARGE TREE PLANTING DETAIL



LARGE PALM PLANTING DETAIL

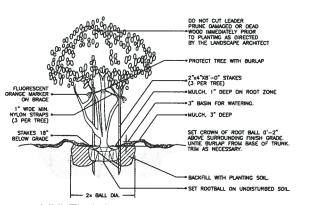
METAL STRAPS SECURING 2"x4"x12" WOOD BATTEN

MULCH. 1" DEEP ON ROOT ZONE

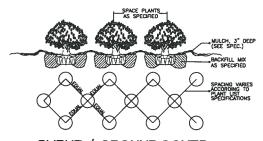
2"x4"x12" FOOT STAKE, FOR SOFT SOIL CONDITIONS SUCH AS SANO BURIED 3 FT. BELOW GRADE

(2" cal. and under) SMALL TREE PLANTING DETAIL

-- 3" BASIN FOR WATERING.

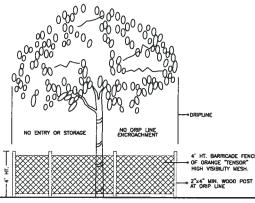


MULTI- TRUNK AND SMALL TREE (2' cal. and under) PLANTING DETAIL

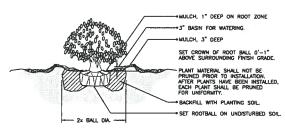


SHRUB / GROUNDCOVER SPACING / PLANTING DETAIL

CIGARED SABAL PALM PLANTING DETAIL



TREE PRESERVATION BARRICADE FENCING DETAIL



SHRUB PLANTING DETAIL

GENERAL NOTES:

I. PLANT MATERIAL: All plant natural shall be Florida 1 or better as established by "Grades and for Nursery Plants" of the state of Florida, Department of Agriculture.

2. All trees, strube and groundcovers shall be of the sizes as specified in the Plant List

Planting soil to be a weed-free nixture of 56% sand, 46% suck, and 16% Canadian peat. All plan to receive planting soil as per details.

28. All new plant seterfal shall be guaranteed for I year from time of final acceptatement inct in a healthy growing condition will be replaced by the Contractors Cover within \$6 days of notification. For all replacement plant exterfal, the series as additional 45 days begond the original seriesty period. All trees that lean whole less that TS sph will be re-set and braced by the Contractor at no additional forms.

21. The successful bidder shall funish to the Ower a unit price breakdown for all naturals. The Own its discretion, add or delete from the naturals utilizing the unit price breakdown substitued.

22. No plant saterial will be accepted showing evidence of cable, chain marks, equipment scars, or

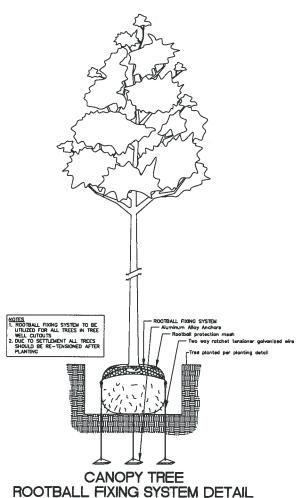
36. In all pedestrian areas, all trees and pains shall be maintained to allow for clear passage at an 8 foot clear trust.

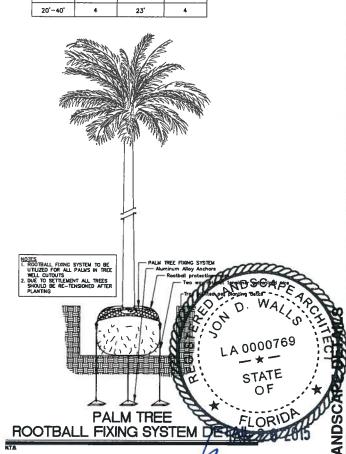
3L. All landscape saterial shall be setback a sintrus of 16° from any Fire Hydrant

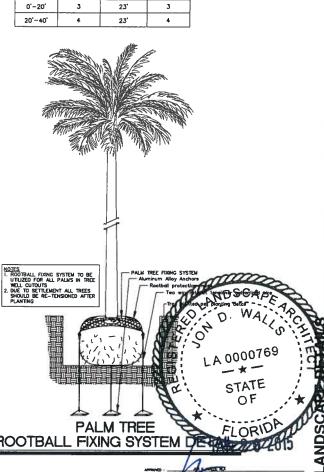
Height - (ft) Anchore Cable Length (ft) Rootball Mats

32. All disturbed areas will be sodded with Argentine behingrass.

Height - (ft)	Calper - (In)	Anchora	Cable Length (ft)	Rootbel Mets
8'-15'	1.5" - 3"	3	10'	3
15'-25'	3" - 5.75"	3	16'	3
25'-40'	5.75" - 9"	3	23'	3
40'+	1.5" ~ 3"	3	23'	3





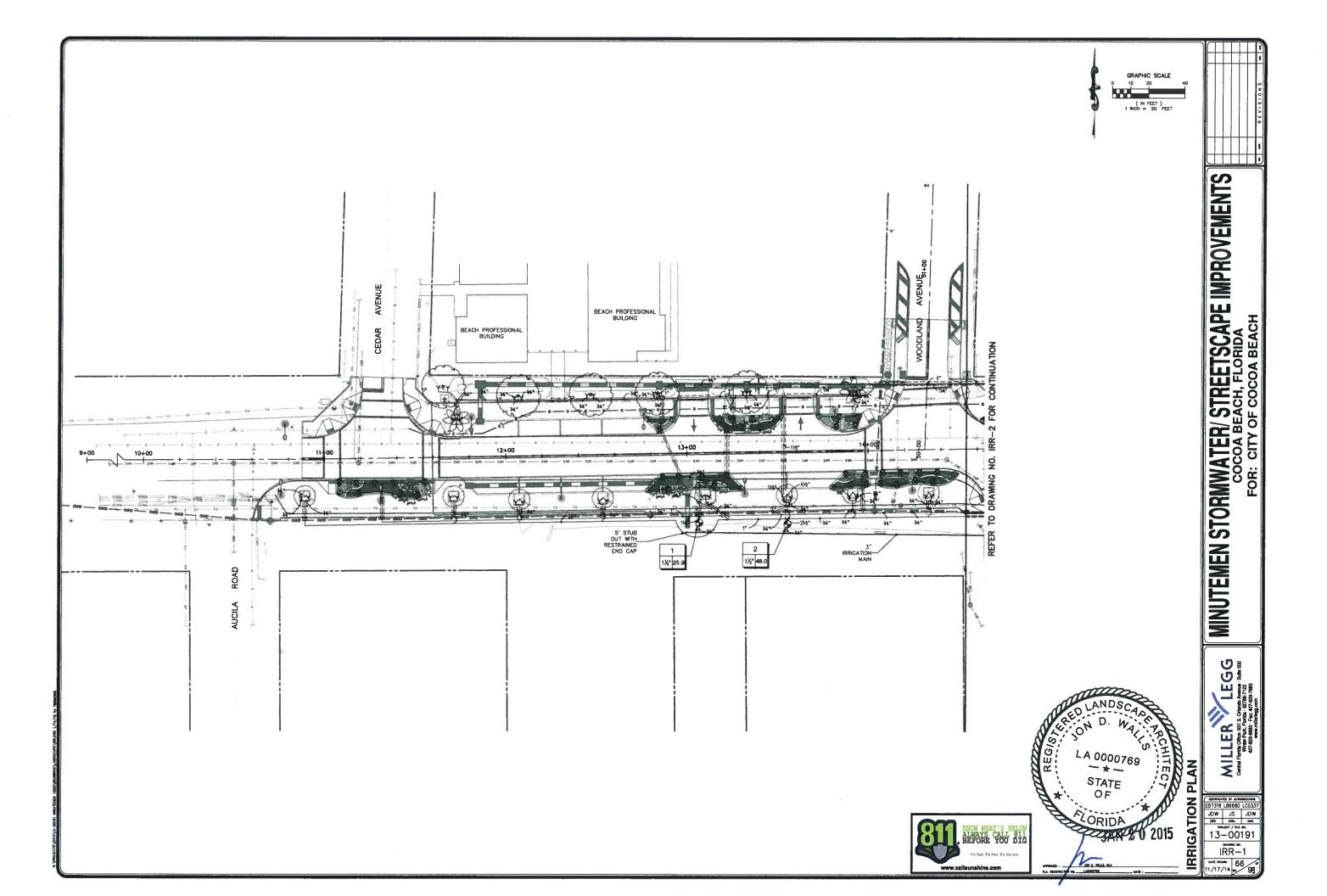


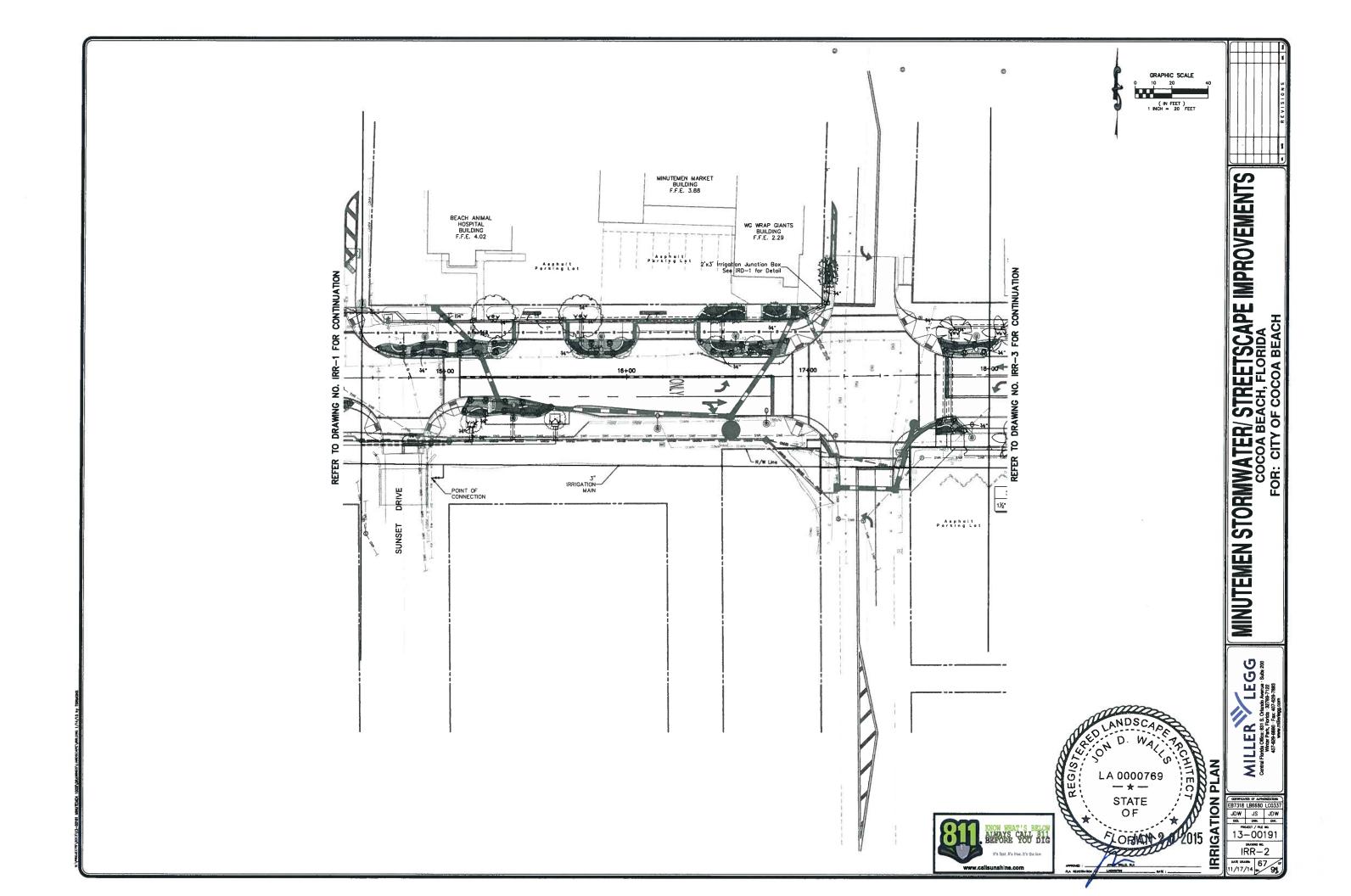
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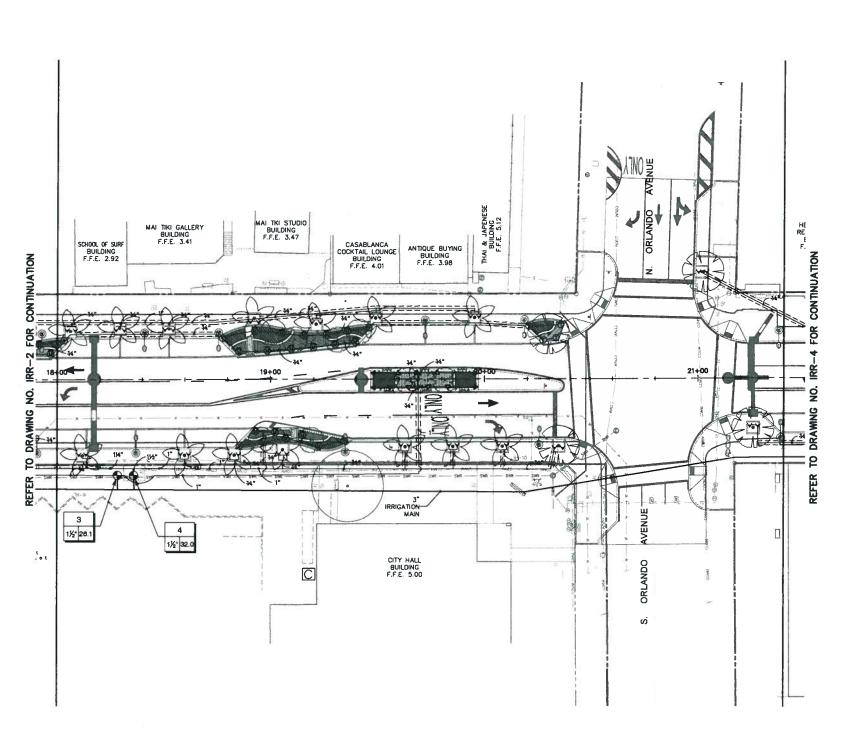
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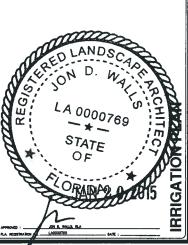
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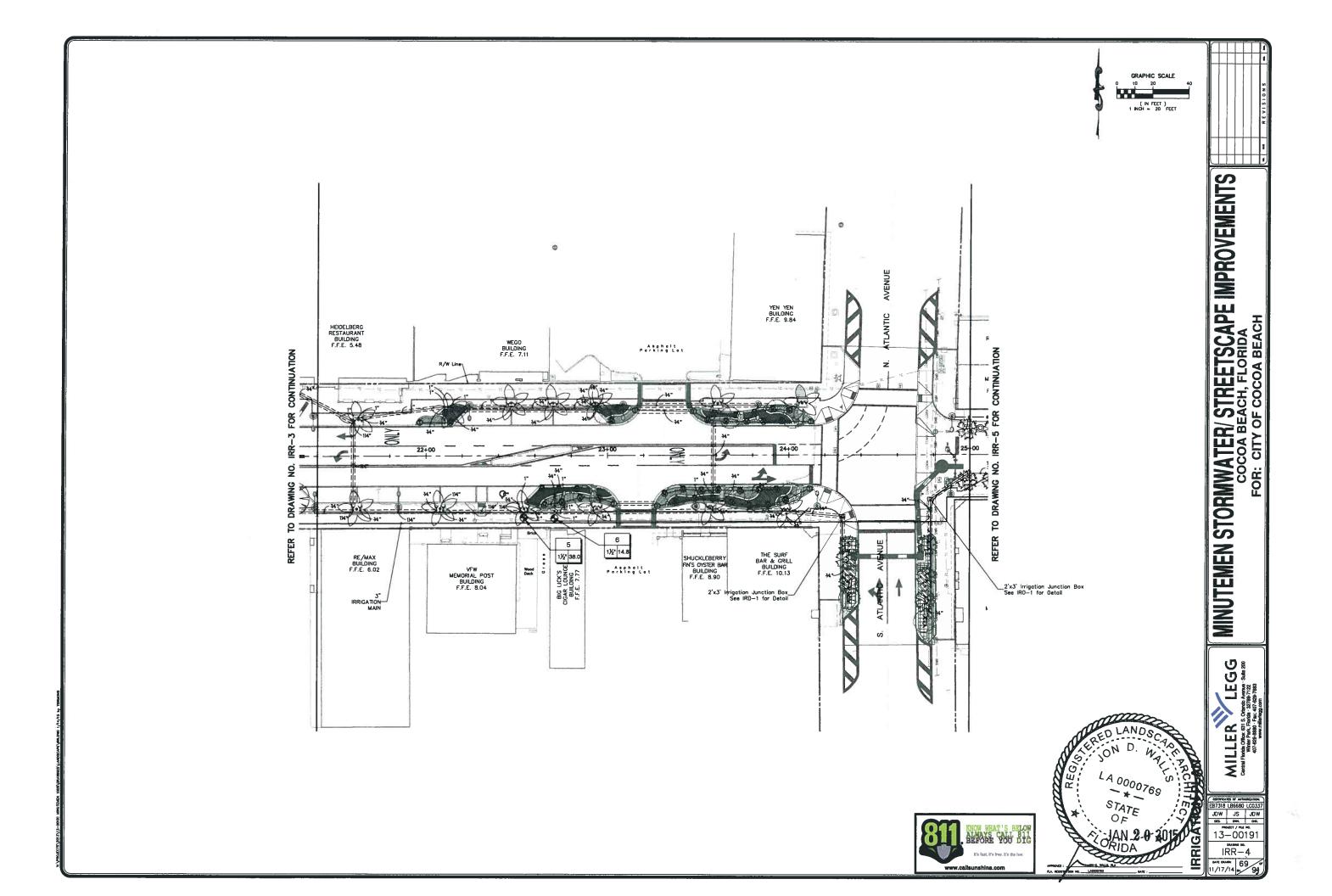


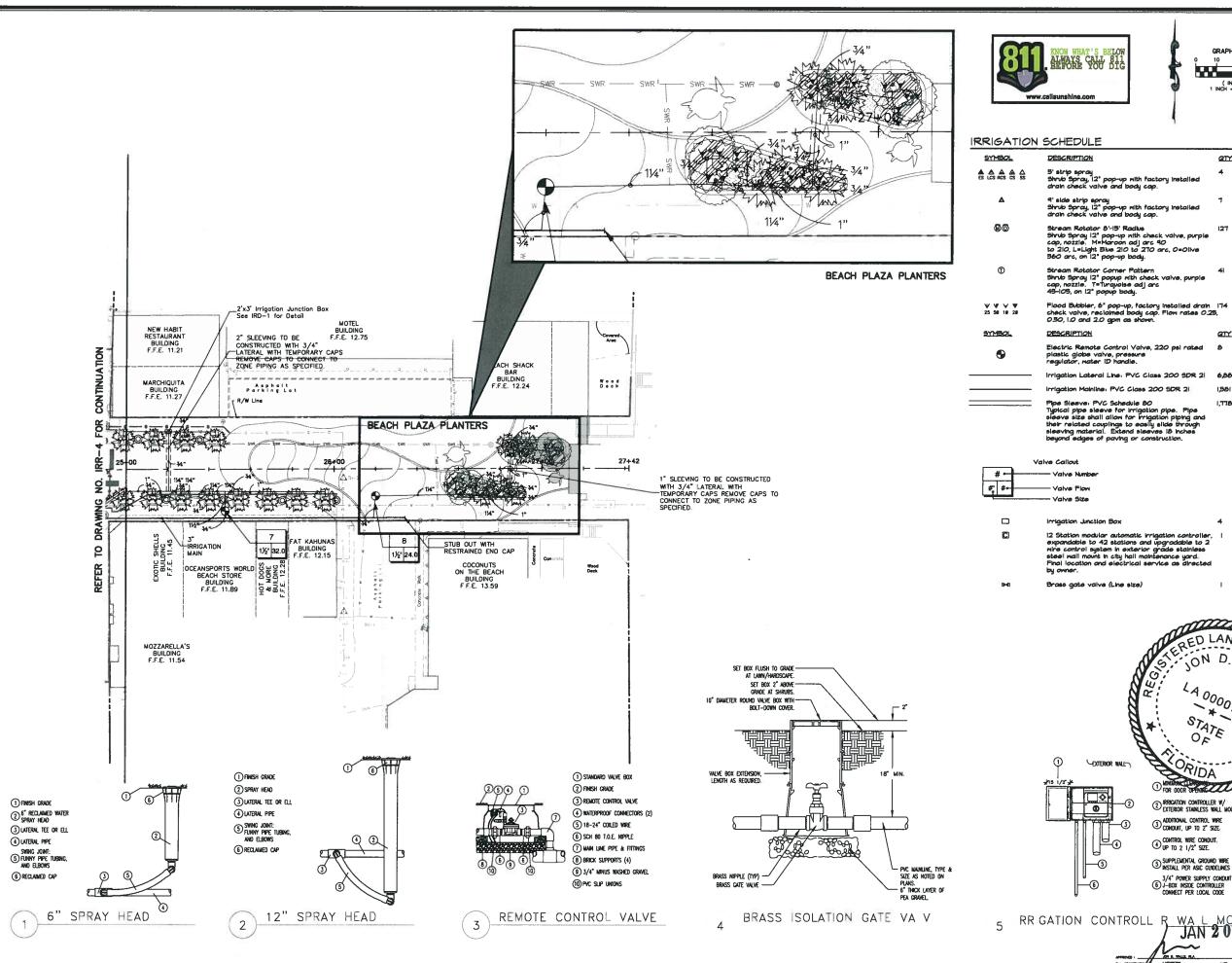


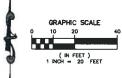


MINUTEMEN STORMWATER/ STREETSCAPE IMPROVEMENTS
COCOA BEACH, FLORIDA
FOR: CITY OF COCOA BEACH

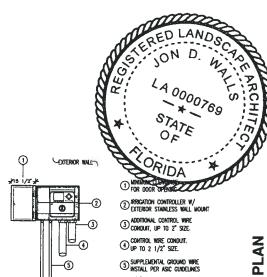
GRAPHIC SCALE
0 10 20
(IN FEET)
1 INCH = 20 FEET







SYMBOL	DESCRIPTION	<u>ar</u>	25
ES LCS RCS CS SS	5' strip spray Shrub Spray, 12" pop-up with factory installed drain check valve and body cap.	4	90
Δ	9' side strip spray Shrub Spray, 12' pop-up with factory installed drain check valve and body cap.	7	50
₩©	Stream Rotator 8'-15' Radiue Shrub Spray 12" pop-up nith check valve, purple cap, nozzle. Melarcon ad Jac 40 to 210, L=Light Blue 210 to 270 arc, 0=01ive 560 arc, an 12" pop-up body.	127	40
•	Stream Rotator Corner Pattern Shrub Spray 12° popup vith check valve, purple cap, nozzle. T="Inquoise adj arc 45-105, on 12° popup body.	41	40
₩ ₩ ₩ ₩ 25 58 18 28	Flood Bubbler, 6" pop-up, factory installed drain check valve, reclaimed body cap. Flow rates 0.25 0.50, I.O and 2.0 gpm as shown.	174 5,	30
SYMBOL	DESCRIPTION	<u>arr</u>	
•	Electric Remote Control Valve, 220 psi rated plastic globe valve, pressure regulator, water ID handle.	В	
	irrigation Lateral Line: PVC Class 200 SDR 21	6,884 l.f.	
	Irrigation Mainline: PVC Class 200 SDR 21	1,381 1.7.	
	Pipe Sleeve: PVC Schedule 80 Typical pipe sleeve for irrigation pipe. Pipe sleeve size shall allow for Irrigation piping and their related couplings to easily slide through sleeving material. Extend sleeves 18 inches heared extens of construction.	I,TI 6TT,I	



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Central Forcia Office: 631 S.
Withter Park, Flor
407-629-8860 - Fr

MINUTEMEN

IMPROVEMENTS

STORIMWATER/ STREETSCAPE COCOA BEACH, FLORIDA FOR: CITY OF COCOA BEACH

CERTIFICATES OF ALTHOREGATION EB7318 LB6680 LC0337 JDW JS JDW 068 098 096 710467 / 712 100 13-00191 IRR-5 0.012 CDASSA 70 (0.11/17/14 pt 99

IRRIGATION WA L MOUNT **JAN 2 0 2015**

IRRIGATION SPECIFICATIONS

THE SYSTEM HAS BEEN DESIGNED TO CONFORM WITH THE REQUIREMENTS OF ALL APPLICABLE CODES. SHOULD ANY CONFLICT EXIST. THE REQUIREMENTS OF THE CODES SHALL PREVAIL IT IS THE RESPONSIBILITY OF THE OWNER/INSTALLATION CONTRACTOR TO INSURE THE ENTIRE SYSTEM IS INSTALLED ACCORDING TO ALL APPLICABLE LAWS, RULES, REGULATIONS AND CONVENTIONS, IRRIGATION CONTRACTOR IS RESPONSIBLE FOR INING ALL REQUIRED PERMITS ACCORDING TO FEDERAL, STATE AND LOCAL LAWS.

THE SCOPE OF WORK IS SHOWN ON THE PLANS, NOTES AND DETAILS, THE IRRIGATION CONTRACTOR SHALL BE CERTIFIED AS A CERTIFIED IRRIGATION CONTRACTOR BY THE IRRIGATION ASSOCIATION, THE CERTIFICATION SHALL BE CURRENT AND IN GOOD STANDING.

THE WORK SPECIFIED IN THIS SECTION CONSISTS OF FURNISHING ALL COMPONENTS NECESSARY FOR THE INSTALLATION, TESTING, AND DELIVERY OF A COMPLETE, FULLY FUNCTIONAL AUTOMATIC LANDSCAPE IRRIGATION SYSTEM THAT COMPLETELY COMPLIES WITH THE 100% IRRIGATION PLANS. SPECIFICATIONS, NOT DETAILS AND LLL APPLICABLE LAWS, REGULATIONS, CODES AND ORDINANCES, THIS WORK SHALL INCLUDE, BUT NOT BE LIMITED TO, THE PROVIDING OF ALL REQUIRED MATERIAL (PIPE, VALVES, FITTINGS, CONTROLLERS, WIRE, PRIMER, GLUE, ETC.), LAYOUT, PROTECTION OF THE PUBLIC, EXCAVATION, ASSEMBLY, INSTALLATION, BACK FILLING, COMPACTING, REPAIR OF ROAD SURFACES, CONTROLLER AND LOW VOLTAGE FEEDS TO VALVES, CLEANUP, MAINTENANCE, GUARANTEE AND AS-BUILT PLANS.

ALL IRRIGATED AREAS SHALL PROVIDE 100% HEAD-TO-HEAD COVERAGE FROM A FULLY AUTOMATIC IRRIGATION SYSTEM WITH A RAIN SENSOR AS SHOWN. THE RAIN SENSOR SHALL BE INSTALLED TO PREVENT ITS ACTIVATION BY ADJACENT HEADS. ALL WATERING PROCEDURES SHALL CONFORM TO LOCAL CODES, AS WELL AS THIS PROJECT'S REGIONAL WATER MANAGEMENT DISTRICT RESTRICTIONS AND REGULATIONS, ZONES ARE PRIORITIZED FIRST BY PUBLIC SAFETY AND THEN BY HYDRAULIC CONCERNS. THIS SEQUENCING WILL BE A MANDATORY PUNCH UST ITEM. THESE PLANS HAVE BEEN DESIGNED TO SATISEY/EXCEED THE FLORIDA BUILDING CODE (FBC) APPENDIX F AND THE FLORIDA IRRIGATION SOCIETY STANDARDS AND SPECIFICATIONS FOR TURF AND LANDSCAPE IRRIGATION SYSTEMS, FOURTH EDITION.

COMMENCEMENT OF WORK.

IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO FAMILLARZE THEMSELVES WITH ALL GRADE DIFFERENCES, LOCATION OF WALLS, RETAINING WALLS, STRUCTURES AND UTILITIES, DO NOT WILLFULLY INSTALL THE SPRINKLER SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN OBSTRUCTION, GRADE DIFFERENCES OR DIFFERENCES IN THE AREA DIMENSIONS EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE DESIGN. SUCH OBSTRUCTIONS, OR DIFFERENCES, SHOULD BE BROUGHT TO THE ATTENTION OF THE OWNER AUTHORIZED REPRESENTATIVE IN THE EVENT THIS NOTIFICATION IS NOT PERFORMED, THE IRRIGATION CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS

RRIGATION CONTRACTOR SHALL REPAIR OR REPLACE ALL EXISTING SITE ITEMS DAMAGED BY THEIR WORK IRRIGATION CONTRACTOR SHALL COORDINATE THEIR WORK WITH OTHER CONTRACTORS FOR THE LOCATION AND INSTALLATION OF PIPE SLEEVES AND LATERALS THROUGH WALLS LINDER ROADWAYS AND PAVING. FTC.

THE CONTRACTOR SHALL TAKE IMMEDIATE STEPS TO REPAIR, REPLACE, OR RESTORE ALL SERVICES TO ANY UTILITIES WHICH ARE DISRUPTED DUE TO THEIR OPERATIONS. ALL COSTS INVOLVED IN DISRUPTION OF SERVICE AND REPAIRS DUE TO NEGLIGENCE ON THE PART OF THE CONTRACTOR SHALL BE THE CONTRACTOR'S

POINT OF CONNECTION (P.O.C.)

THE P.O.C. IS A 4" MAINLINE THE P.O.C. MUST BE CAPABLE OF DELIVERING A MINIMUM OF 80 GPM AT 70 PSI. CONTRACTOR SHALL VERIFY THESE MINIMUM CONDITIONS CAN BE MET PRIOR TO BEGINNING IRRIGATION

IF THE CONDITIONS CAN NOT BE MET, THE CONTRACTOR MUST NOTIFY THE DESIGNER PRIOR TO PROCEEDING WITH THE WORK, IF THE CONTRACTOR DOES NOT DO SO, THE CONTRACTOR PROCEEDS AT THEIR OWN RISK AND BECOMES RESPONSIBLE FOR ANY FUTURE WORK REQUIRED TO MAKE THE SYSTEM PERFORM AS REQUIRED

PIPING

PIPE LOCATIONS SHOWN ON THE PLAN ARE SCHEMATIC AND SHALL BE ADJUSTED IN THE FIELD, WHEN LAYING OUT MAINLINES PLACE A MAXIMUM OF 18" AWAY FROM EITHER THE BACK OF CURB. FRONT OF WALK. BACK OF WALK, OR OTHER HARDSCAPE TO ALLOW FOR EASE IN LOCATING AND PROTECTION FROM PHYSIC DAMAGE, INSTALL ALL LATERAL PIPE NEAR EDGES OF PAVEMENT OR AGAINST BUILDINGS WHENEVER POSSI TO ALLOW SPACE FOR PLANT ROOT BALLS, ALWAYS INSTALL PIPING INSIDE PROJECT PROPERTY BOUNDARY.

PIPES SHALL ALWAYS BE PLACED IN PLANTING BEDS, IF IT IS NECESSARY TO HAVE PIPING LINDER HARDSCAPES. SUCH AS ROADS, WALKS, AND PATIOS, THE PIPES MUST BE SLEEVED USING SCHEDULE BD PVC WITH THE SLEEVE DIAMETER BEING TWICE THE SIZE OF THE PIPE IT IS CARRYING WITH A MINIMUM SLEEVE SIZE OF 2".

PIPE SIZES SHALL CONFORM TO THOSE SHOWN ON THE DRAWINGS. NO SUBSTITUTIONS OF SMALLER PIPE SIZES SHALL BE PERMITTED. BUT SUBSTITUTIONS OF LARGER SIZES MAY BE APPROVED. ALL DAMAGED AND REJECTED PIPE SHALL BE REMOVED FROM THE SITE AT THE TIME OF SAID REJECTION.

MAINLINE SHALL BE PVC CLASS 200 SDR 21, MAINLINE PIPE SHALL BE GASKETED, WITH DUCTILE IRON FITTINGS (SIZED PER PLANS

CONTRACTOR TO ENSURE ALL MAINLINE PIPING IS PROPERLY RESTRAINED USING MECHANICAL JOINT FITTINGS, RESTRAINING COLLARS, THREADED RODS, THRUST BLOCKS, ETC., AS AND WHERE REQUIRED. CONTRACTOR SHALL REFER TO PIPE MANUFACTURER'S RECOMMENDED INSTALLATION PRACTICES FOR FURTHER DIRECTION.

PVC PIPE IOINT COMPOUND AND PRIMERS SLOW-DRYING HEAVY DUTY CEMENT AND TINTED (PURPE) EL PRIMER THAT IS COMPATIBLE WITH THE CEMENT. THE PVC CEMENT SHALL BE WELD-ON 2711 GREY AND THE PRIMER SHALL BE WELD-ON P70 PURPLE PRIMER, OR APPROVED EQUALS.

ELECTRICAL SUPPLY FOR CONTROLLER SHALL TO BE PROVIDED BY THE IRRIGATION CONTRACTOR CONTRACTOR TO COORDINATE WITH OWNER AND LOCAL UTILITIES FOR THE INSTALLATION OF AND CONNECTION TO AVAILABLE SITE POWER SUPPLY FOR REQUIRED ELECTRICAL COMPONENTS AS SET FORTH IN

ALL ELECTRICAL INSTALLATION TO COMPLY WITH THE NATIONAL ELECTRICAL CODE AND ANY AND ALL OTHER APPLICABLE ELECTRICAL CODES, LAWS AND REGULATIONS, A LICENSED ELECTRICIAN SHALL PERFORM ALL ELECTRICAL HOOK-UPS. POWER FOR THE CONTROLLER SHALL BE 120 VOLT, 20 AMP

IRRIGATION CONTROL WIRE SHALL BE THERMOPLASTIC SOLID COPPER. SINGLE CONDUCTOR, LOW VOLTAGE IRRIGATION CONTROLLER WIRE SUITABLE FOR DIRECT BURIAL AND CONTINUOUS OPERATION AT RATED

TAPE AND BUNDLE CONTROL WIRES EVERY 10' AND RUN ADJACENT TO THE MAINLINE, AT ALL TURNS IN DIRECTION MAKE A 2' COIL OF WIRE, AT ALL VALVE BOXES COIL WIRE AROUND A 3/4" PIECE OF PVC PIPE TO MAKE A COIL USING 30 LINEAR INCHES OF WIRE, MAKE ELECTRICAL CONNECTIONS WITH 3M-DBY DBR

NUMBER ALL WIRES USING AN ELECTRICAL BOOK OF NUMBERS ACCORDING TO THE PLANS, NUMBER WIRES IN ALL VALVE BOXES, JUNCTION BOXES AND AT THE CONTROLLER,

WIRE SIZED, NUMBERED AND COLORED AS FOLLOWS

- #14 WHITE FOR COMMON
- #14 SPARE BLACK COMMON
- #14 SPARE YELLOW HOT WIRE

CONTROLLER GROUNDING

CONTRACTOR TO UTILIZE 4"X8"X5/8" COPPER GROUNDING PLATES. 5/8"X10" COPPER CLAD GROUNDING RODS, YONE STRIKE CAD WELLS AT ALL CONNECTION POINTS, #6 BARE COPPER WRE, AND EARTH CONTACT
MATERIAL. INSTALL THESE AND OTHER REQUIRED COMPONENTS AS OUTLINED IN THE DETAIL. CONTRACTOR TO VERIFY THAT THE EARTH TO GROUND RESISTANCE DOES NOT EXCEED 10 OHMS. CONTRACTOR SHALL PROVIDE A WRITTEN CERTIFICATION ON A LICENSED ELECTRICAL CONTRACTORS LETTER HEAD SHOWING THE DATE O THE TEST, CONTROLLER LOCATION, AND TEST RESULTS, EACH CONTROLLER SHALL BE SO GROUNDED AND

LAY OUT IRRIGATION SYSTEM MAINLINES AND LATERAL LINES, MAKE THE NECESSARY ADJUSTMENTS AS REQUIRED TO TAKE INTO ACCOUNT ALL SITE OBSTRUCTIONS AND LIMITATIONS PRIOR TO EXCAVATING TRENCHES

STAKE ALL SPRINKLER HEAD LOCATIONS. ADJUST LOCATION AND MAKE THE NECESSARY MODIFICATIONS TO NOZZLE TYPES, ETC. REQUIRED TO INSURE 100% HEAD TO HEAD COVERAGE. REFER TO THE EDGE OF PAVEMENT DETAIL ON THE IRRIGATION DETAIL SHEET.

SPRAY HEADS SHALL BE INSTALLED 4" FROM SIDEWALKS OR CURRED ROADWAYS AND 12" FROM LINCUPRED ROADWAYS AND BUILDING FOUNDATIONS, ROTORS SHALL BE INSTALLED 4" FROM BUILDING FOUNDATIONS, AND 36" FROM UNCURBED ROADWAYS.

SHRUB HEADS SHALL BE INSTALLED ON 3/4" SCH 40 PVC RISERS. THE RISERS SHALL BE SET AT A MINIMUM OF 18" OFF SIDEWALKS, ROADWAY CURBING, BUILDING FOUNDATIONS, AND/OR ANY OTHER HARDSCAPED AREAS. SHRUB HEADS SHALL BE INSTALLED TO A STANDARD HEIGHT OF 4" BELOW MAINTAINED HEIGHT OF PLANTS AND SHALL BE INSTALLED WITHIN PLANTED MASSES TO BE LESS VISIBLE AND OFFER PROTECTION. PAINT ALL SHRUIRISERS WITH FLAT BLACK OR FOREST GREEN PAINT, UNLESS IRRIGATION SYSTEM WILL BE INSTALLED FROM A

CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES 72 HOURS PRIOR TO LOCATE VALVES PRIOR TO EXCAVATION, INSURE THAT THEIR LOCATION PROVIDES FOR EASY ACCESS AND IHAT THERE IS NO INTERFERENCE WITH PHYSICAL STRUCTURES, PLANTS, TREES, POLES, FTC. VALVE BOXES MUST BE PLACED A MINIMUM OF 12" AND A MAXIMUM OF 15" FROM THE FDGE OF PAVEMENT CURBS, FTC., AND THE TOP OF THE BOX MUST BE 2" ABOVE FINISH GRADE, NO VALVE BOXES SHALL BE INSTALLED IN TURF AREAS.
WITHOUT APPROVAL BY THE IRRIGATION DESIGNER; ONLY IN SHRUB BEDS, NEVER INSTALL VALVE BOXES IN

SEQUENCE ALL VALVES SO THAT THE FARTHEST VALVE FROM THE P.O.C. OPERATES FIRST AND THE CLOSEST TO THE P.O.C. OPERATES FIRST AND THE CLOSEST VALVE TO THE P.O.C. SHOULD BE THE LAST VALVE IN THE PROGRAMMED SEQUENCE.

ADJUST THE FLOW CONTROL ON EACH RCV TO ENSURE SHUT OFF IN 10 SECONDS AFTER DEACTIVATION BY THE IRRIGATION CONTROLLER.

USING 3" HIGH NUMBER STENCILS, PAINT THE VALVE NUMBER IN WHITE ON THE LID OF EACH VALVE BOX.

BUBBLERS SHALL BE INSTALLED USING SCH 80 NIPPLES AND SHALL BE PLACED AT THE BASE OF TREES FOR LOW FINAL ACCEPTANCE OF THE IRRIGATION SYSTEM WILL BE GIVEN AFTER THE FOLLOWING DOCUMENTS AND

ALL POP-UP HEADS AND SHRUB RISERS SHALL BE PRESSURE COMPENSATING. ALL POP-UP HEADS SHALL BE

MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS, AND IN ACCORDANCE WITH LOCAL AND STATE LAWS. ALL SPRINKLER EQUIPMENT NOT OTHERWISE DETAILED OR SPECIFIED SHALL BE INSTALLED AS PER

EXCAVATE STRAIGHT AND VERTICAL TRENCHES WITH SMOOTH, FLAT OR SLOPING BOTTOMS, TRENCH WIDTH AND DEPTH SHOULD BE SUFFICIENT TO ALLOW FOR THE PROPER VERTICAL AND HORIZONTAL SEPARATION

PROTECT EXISTING LANDSCAPED AREAS. REMOVE AND REPLANT ANY DAMAGED PLANT MATERIAL UPON JOB COMPLETION. THE REPLACEMENT MATERIAL SHALL BE THE SAME GENUS, SPECIES, AND SIZE OF THE MATERIAL IT IS REPLACING. THE FINAL DETERMINATION AS TO WHAT NEEDS TO BE REPLACED AND THE ACCEPTABILITY OF THE REPLACEMENT MATERIAL SHALL BE SOLELY DETERMINED BY THE OWNER OR OWNER'S REPRESENTATIVE

CUT ALL PIPE SQUARE AND DEBURR. CLEAN PIPE AND FITTINGS OF FOREIGN MATERIAL, THEN APPLY A SMALL amount of primer while ensuring that any excess is wiped off immediately. Primer should not AMOUNT OF PRIMER WHILE ENSUMING THAT ANY EXCESS IS WIPED OF MINED ATELY. PRIMER SHOULD NOT PUDDLE OR ROIF FROM IPE OR FITTINGS, NEXT APPLY A THIN COAT OF PVC CEMENT. REST APPLY A THIN LAYER TO THE PIPE. THEN A THIN LAYER INSIDE THE FITTING, AND FINALLY ANOTHER VERY THIN LAYER ON THE PIPE. INSERT THE PIPE INTO THE FITTING. INSURE THAT THE PIPE IS INSERTED TO THE BOTTOM OF THE FITTING. THEN THEN PIPE A 1/4 TURN AND HOLD FOR 10 SECONDS. MAKE SURE THAT THE PIPE DOESN'T RECEDE FROM THE FITTING. IF THE PIPE ISN'T AT THE BOTTOM OF THE FITTING UPON COMPLETION, THE GUIE JOINT IS UNACCEPTABLE AND MUST BE DISCARDED.

PIPES MUST CURE A MINIMUM OF 30 MINUTES PRIOR TO HANDLING AND PLACING INTO TRENCHES. A LONGER CURING TIME MAY BE REQUIRED: REFER TO THE MANUFACTURER'S SPECIFICATIONS. THE PIPE MUST CURE A MINIMUM OF 24 HOURS PRIOR TO FILLING WITH WATER.

BACKFILLING

THE BACKFILL 6" BELOW AND 6" ABOVE ALL PIPING SHALL BE CLEAN SAND, ALL OTHER TRONCH BACKFILL CAN BE NATIVE MATERIAL BUT SHALL NOT CONTAIN ANYTHING LARGER THAN 2" IN DIAMETER

MAIN LINE PIPE DEPTH MEASURED TO THE TOP OF PIPE SHALL BE 24" MINIMUM, 36" MINIMUM AT VEHICULAR

LATERAL LINE DEPTHS MEASURED TO TOP OF PIPE SHALL BE 18" MINIMUM, 30" MINIMUM AT VEHICULAR

CONTRACTOR SHALL BACKFILL ALL PIPING, BOTH MAINLINE AND LATERALS, PRIOR TO PERFORMING ANY PRESSURE TESTS. THE PIPE SHALL BE BACKFILLED WITH THE EXCEPTION OF 2' ON EACH SIDE OF EVERY JOINT (BELL FITTINGS, 90'S, TEES, 45'S, ETC.). THESE JOINTS SHALL NOT BE BACKFILLED UNTIL ALL PIPING HAS SATISFACTORILY PASSED ITS APPROPRIATE PRESSURE TEST AS OUTLINED BELOW

PRIOR TO THE PLACEMENT OF HEADS, FLUSH ALL LINES FOR A MINIMUM OF 10 MINUTES OR UNTIL LINES ARE COMPLETELY CLEAN OF DEBRIS, WHICHEVER IS LONGER

USE SCREENS IN HEADS AND ADJUST HEADS FOR PROPER COVERAGE AVOIDING EXCESS WATER ON WALLS,

REMOVE ALL REMOTE CONTROL VALVES AND CAP USING A THREADED CAP. FILL MAINLINE WITH WATER AND PRESSURIZE THE SYSTEM TO 125 PSI MONITOR THE SYSTEM PRESSURE AT TWO GAUGE LOCATIONS: THE GAUGE PRESSURE HE 313M TO 123 FSI. MONITOR HE STSTEM PRESSURE AT TWO CAUGE (CCATIONS; THE GAUGE LOCATIONS MUST BE AT OPPOSITE ENDS OF THE MAINLINE WITH THE SAME RESPECTIVE PRESSURES, MONITOR THE GAUGES FOR TWO HOURS, THERE CAN BE NO LOSS IN PRESSURE AT EITHER GAUGE FOR SOLVENT-WELDED PIPE. GASKETED PIPING SHALL LOSE NO MORE WATER THAN ALLOWED PER THE FLORIDA STATE BUILDING CODE, VOLUME II PLUMBING, PART VI, APPENDIX 'F', REFER TO THIS SECTION FOR THE FORMULA TO BE USED TO CALCULATE THE MAXIMUM ALLOWABLE WATER LOSS DURING THE TESTING TIME. IF THESE PARAMETERS ARE

EXCEEDED, LOCATE THE PROBLEM; REPAIR IT; WAIT 24 HOURS AND RETRY THE TEST, THIS PROCEDURE MUST BE

THE LATERAL LINES MUST BE FILLED AND VISUALLY CHECKED FOR LEAKS, ANY LEAKS DETECTED MUST BE REPAIRED. NO PRESSURE TEST OF THE LATERAL LINES IS REQUIRED.

ONCE THE MAINLINE AND LATERAL UNES HAVE PASSED THEIR RESPECTIVE TESTS AND THE SYSTEM IS COMPLETELY OPERATIONAL A COVERAGE TEST AND DEMONSTRATION OF THE SYSTEM IS REQUIRED. THE IRRIGATION CONTRACTOR MUST DEMONSTRATE TO THE OWNER OR HIS/HER REPRESENTATIVE THAT PROPER COVERAGE IS OBTAINED AND THAT THE SYSTEM WORKS AUTOMATICALLY FROM THE CONTROLLER. THIS DEMONSTRATION REQUIRES THAT EACH ZONE BE TURNED ON IN THE PROPER SEQUENCE AS SHOWN ON THE PLANS FROM THE CONTROLLER FACH ZONE WILL BE INSPECTED FOR PROPER COVERAGE AND FUNCTION TH DETERMINATION OF PROPER COVERAGE AND FUNCTION WILL BE SOLEY DETERMINED BY THE ON

OPERATIONAL TESTING - UPON COMPLETION OF BACKFILLING, FINISH GRADING AND CONTOURING, TEST THE ENTIRE SYSTEM FOR PROPER OPERATION, INCLUDING ELECTRICALLY ACTUATING THE REMOTE CONTROL VALVES. RUN EACH ZONE UNTIL WATER BEGINS TO PUDDLE OR RUN OFF. THIS WILL ALLOW DETERMINATION OF THE NUMBER OF IRRIGATION START TIMES NECESSARY TO MEET THE WEEKLY EVAPOTRANSPIRATION REQUIREMENTS OF THE PLANTING MATERIAL IN EACH ZONE. IN SANDY SOILS NO PUDDLING WILL OCCUR. IN

THE CONTRACTOR MUST SUBMIT FOR APPROVAL, PRIOR TO INSTALLATION, COPIES OF THE MANUFACTURER'S

AFTER PROJECT COMPLETION, AND AS A CONDITION OF FINAL ACCEPTANCE, THE IRRIGATION CONTRACTOR SHALL PROVIDE THE OWNER WITH A HIGH QUALITY, ACCURATE, AND LEGIBLE SET OF AS-BUILT DRAWINGS. THE AS-BUILTS MUST IDENTIFY ALL REMOTE CONTROL VALVES, GATE VALVES, BALL VALVES, SPLICE BOXES, CONTROLLERS, MAINLINE, SLEEVING, AND LOW VOLTAGE WIRING, EACH OF THESE ITEMS IS SHALL LOCATED USING A SUBMETER GPS SYSTEM. THE IRRIGATION CONTRACTOR MUST ALSO PROVIDE ACCURATI INFORMATIVE, AND EASY TO FOLLOW AND UNDERSTAND OPERATION AND MAINTENANCE MANUALS FOR AL

CONTROLLER CHARTS - UPON COMPLETION OF "AS-BUILTS", CONTRACTOR SHALL PREPARE CONTROLLER CHARTS AT ONE PER CONTROLLER. INDICATE ON EACH CHART THE AREA CONTROLLED BY A REMOTE CONTROL VALVE JUSING A DIFFERENT COLOR FOR EACH ZONE! THIS CHART SHALL BE REDUCED TO A SIZE THAT WILL FIT INSIDE OF THE CONTROLLER DOOR. THE REDUCTION SHALL BE HERMETICALLY SEALED INSIDE TWO

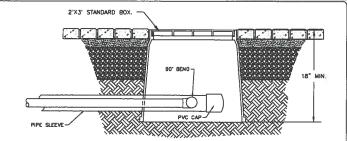
CONTRACTOR SHALL FURNISH EXTRA MATERIALS DESCRIBED BELOW THAT MATCH PRODUCTS INSTALLED AND THAT ARE PACKAGED WITH PROTECTIVE COVERING FOR STORAGE AND IDENTIFIED WITH LABELS DESCRIBING CONTENTS. INCLUDE TOOLS TO SERVICE THESE PRODUCTS SPRINKLER UNITS: FIVE OF EACH UNIT FOR EACH TYPE AND SIZE INSTALLED, BUT NO FEWER THAN TWO

2. EMITTER UNITS: FIVE OF EACH UNIT FOR EACH TYPE AND SIZE INSTALLED, BUT NO FEWER THAN TWO UNITS.

CONDITIONS HAVE BEEN COMPLETED AND APPROVED. FINAL PAYMENT WILL NOT BE RELEASED UNTIL THESE

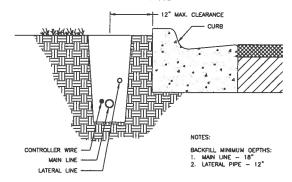
- FINAL WALK-THRU AND CORRECTION OF ALL PUNCH LIST ITEMS.
- 2 COMPLETION AND ACCEPTANCE OF 'AS-BUILT' DRAWINGS 3. ACCEPTANCE OF REQUIRED CONTROLLER CHARTS AND PLACEMENT INSIDE OF CONTROLLERS.
- 4. TURNOVER OF ALL REQUIRED PARTS AND TOOLS AS OUTLINED IN THE PROJECT SPECIFICATIONS.

GUARANTEE: THE IRRIGATION SYSTEMS SHALL BE GUARANTEED FOR A MINIMUM OF ONE CALENDAR YEAR FROM THE TIME OF FINAL ACCEPTANCE.

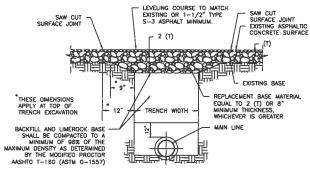


IRRIGATION SLEEVING JUNCTION BOX DETAIL

LOCATIONS AS SHOWN ON PLANS



MAINLINE AND LATERAL PIPING DETAIL 2



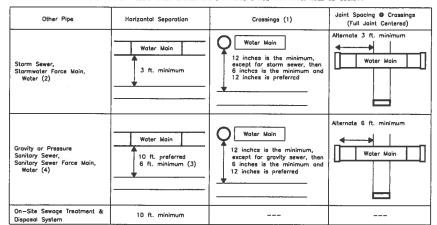
NOTES:

- 1. ALL PUBLIC ROADS AND PAVED DRIVE CROSSINGS SHALL BE BACKFILLED WITH COMMON FILL MATERIAL AND TOPPED WITH AT LEAST 8" IN THICKNESS OF LIMEROCK BASE COURSE MATERIAL DURING CONSTRUCTION OF LITLLY TRENCH.

 IN AREAS WHERE ABOVE CETAILS DEVIATE FROM COUNTY AND/OR CITY STANDARDS, THE CONTRACTOR SHALL PROVIDE ALL NECESSARY MATERIALS AND LABOR TO CONFORM TO SAID STANDARDS.
- ALL EXCAVATIONS SHALL COMPLY WITH THE TRENCH SAFETY ACT (F.S. 553.60 THRU 553.64, LAWS OF FLORIDA). LATEST EDITION.

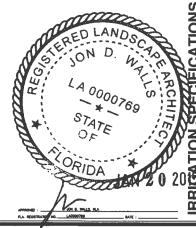
OPEN-CUT DETAIL - ASPHALTIC CONCRETE 3

LOCATION OF PUBLIC WATER SYSTEM MAINS IN ACCORDANCE WITH F.A.C. RULE 62-555.314



) Water main should cross above ather pipe. When water main must be below ather pipe, the minimum separation is 12 inches) water regulated under Port 111 of Chapter 62–610, F.A.C.

(3) 3 ft. far gravity sanitary sewer where the bottom of the water main is laid at least 6 inches above the tap of the gravity sewer (4) water not regulated under Part III of Chapter 82-610, F.A.C.



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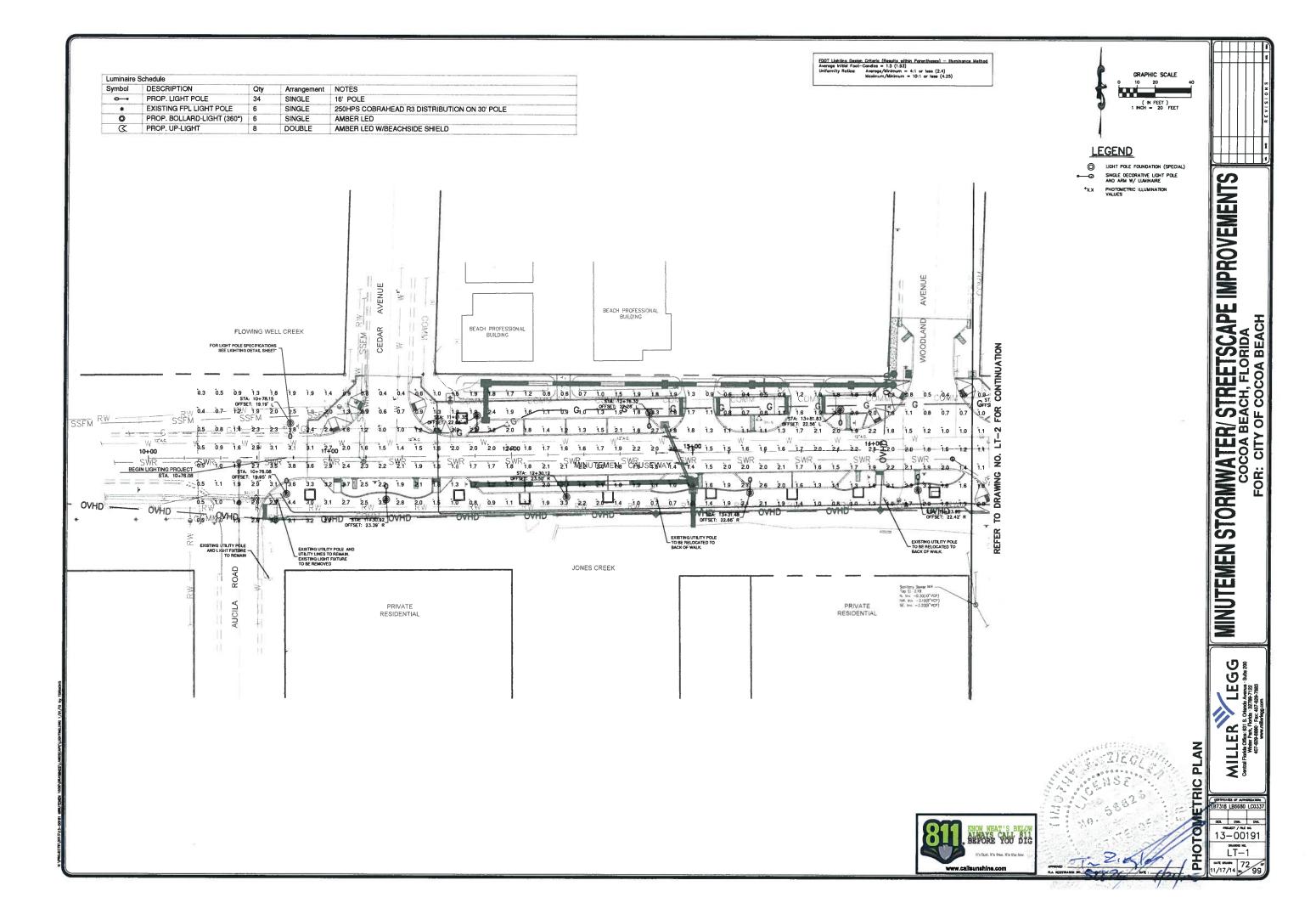
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FDEP SEPARATION DETAILS



EDOT Lighting Ossign Criteria (Results within Porentheses) — fluminance Method Average initial Foot-Condies = 1.5 (1.93)
Uniformity Ratios: Average/Aliminum = 4:1 or less (2.4)
Maximum/Minimum = 10:1 or less (4.25) MINUTEMEN MARKET BUILDING F.F.E. 3.88 BEACH ANIMAL HOSPITAL BUILDING F.F.E. 4.02 WC WRAP GIANTS BUILDING F-F.E. 2.29 0.3 0.5 0.9 1.3 1.7 ST&: 17+92.88 SFFSCT: 21.47 L 0.5 0.8 1.2 1.9 1.2 0.8 0.7 0.7 0.7 0.8 18+00 17+00 1.9 2.1 2.0 1.6 1.5 1.5 1.6 1.9 2.4 2.5 2.9 3.3 3.3 3.3 2.7 2.5 1.8 1.2 9.9 0.9 1.0 1.2 4.5 2.1 PRIVATE RESIDENTIAL

(IN FEET) 1 INCH = 20 FEET **LEGEND** 1 LIGHT POLE FOUNDATION (SPECIAL)
SINGLE DECORATIVE LIGHT POLE
AND ARM W/ LUMINAIRE STORMWATER/ STREETSCAPE IMPROVEMENTS COCOA BEACH, FLORIDA FOR: CITY OF COCOA BEACH PHOTOMETRIC ILLUMINATION VALUES

GRAPHIC SCALE

MILLER LEGG Contral Profits Office 361 S. Othorio Averaus - Subs 200 Winter Park - Forties - 27769-7223 407-629-6900 - Fore, 407-629-7823

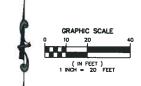
MINUTEMEN

ORNIFICATES OF AUTHORIZATION EB7318 LB6680 LC0337

OCS. ONN. ONC. PROJECT / PLK IN. 13—00191 LT-2

PHOTOMETRIC PLAN 0ATE DANS 73 0 11/17/14 0 99

EDOT Lighting Design Criteria (Results within Porentheses).— Blue
Average initial Foot—Condes = 1.5 (1.93)
Uniformity Rotios: National Policy (1.94)
Maximum/Minimum = 10:1 or ises (4.25) MAI TKI STUDIO BUILDING F.F.E. 3.47 MAI TIKI GALLERY BUILDING F.F.E. 3.41 SCHOOL OF SURF BUILDING F.F.E. 2.92 1.7 1.1 0.7 0.7 1.0 1.5 1.6 1.1 0.9 0.9 1.1 1.4 1.9 2.2 2.3 2.3 2.3 2.6 2.6 2.8 2.1 19+00 19+00 1.6 1.3 1.1 1.2 1.9 1.5 1.8 1.6 1.6 1.6 1.8 2.0 2.3 83 2.2 MINUTEMEN CAUSEWAY 1.1 1.1 1.1 1.3 1.7 1.9 1.8 1.5 1.3 1.1 1.1 1.3 1.8 2.3 2.7 2.7 18 1.8 1.8 2.0 1.6 1.1 0.9 0.8 1.1 1.7 2.3 02.4 2.5 514 19+34-71 0.9 0.8 1.1 1.7 2.3 02.4 2.5 9



LEGEND

UGHT POLE FOUNDATION (SPECIAL) SINGLE DECORATIVE LIGHT POLE AND ARM W/ LUMINAIRE

PHOTOMETRIC (ULUMINATION VALUES

STORMWATER/ STREETSCAPE IMPROVEMENTS COCOA BEACH, FLORIDA FOR: CITY OF COCOA BEACH MINUTEMEN

LEGG bo Averus - Sube 200 789-7122 -629-7883

MILLER Gentra Florido Diose, 681 S. Olando A. Whene Park, Florido A. Whene Park, Florido S. 27798

EB7318 LB6680 LC033 13-00191

LT-3 11/17/14 99

EDGT Lighting Design Criteria (Results within Porentheses) - Illuminance Method Average initide Foot-Condes = 1.5 (1.33)
Uniformity Rotios: Average Althrium = 4:1 or less (2.4)
Maximum/Alinimum = 10:1 or jess (4.25) GRAPHIC SCALE (IN FEET) 1 INCH = 20 FEET **LEGEND** LIGHT POLE FOUNDATION (SPECIAL)
SINGLE DECORATIVE LIGHT POLE
AND ARM W/ LIMINAIRE 0 MINUTEMEN STORMWATER/ STREETSCAPE IMPROVEMENTS COCOA BEACH, FLORIDA FOR: CITY OF COCOA BEACH PHOTOMETRIC ILLUMINATION VALUES HEIDELBERG RESTAURANT BUILDING F.F.E. 5.48 2.7 2.6 1.9 1.6 1.5 21.6 1.9 2.1 2.0 1.8 1.4 1.3 1.3 1.5 1.8 23.00 2.3 2.2 1.9 1.7 1.7 1.9 2.2 2.5 2.6 24.500 2.4 2.2 2.0 2.0 2.1 2.5 3.0 2.3 2.7 2.3 2.1 2.0 1.8 1.7 1.6 1.4 1.3 1.3 1.4 1.6 1.9 20 1.9 1.8 1.8 1.8 1.9 2.1 2.1 2.0 2.1 2.1 2.3 2.5 2.5 2.2 2.2 2.3 2.7 3.8 MINUTEMEN CAUSEWAY Said THE SURF BAR & GRILL BUILDING F.F.E 10.13 Shuckleberry Fin's Oyster Bar Building F.F.E. 8.90 BIG LICK'S CIGAR LOUNGE BUILDING

LEGG to Avenue : Sude 200 7789-7123 459-7883

MILLER Central Florids Office: SS1. S. Orlands Whiter Park, Florids : SS7 407-4539-8840 - E--- : ST

13-00191

LT-4

EDOT Lighting Design Criterio (Results within Parentheses) — Bluminance Method Average initial Foot-Condies = 1.5 (1.93)
Uniformity Ratios: Average/Albrimum = 4:1 or less (2.4)
Maximum/Minimum = 10:1 or less (4.25)

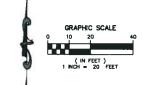
SEACH

BEACH SHACK BAR BUILDING F.F.E. 12.24 Sonitory Sever MH Top Et. 11.83 W. My 5.71(8 VCP)

COCONUTS ON THE BEACH BUILDING F.F.E. 13.59

OCEANSORTS WORLD SO WELL STORE BUILDING BEACH STORE BUILDING F.F.E. 11.89

MOZZARELLA'S BUILDING F.F.E. 11.54



LEGEND

UGHT POLE FOUNDATION (SPECIAL) SINGLE DECORATIVE LIGHT POLE AND ARM W/ LUMINAIRE

PHOTOMETRIC ILLUMINATION VALUES

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STORMWATER/ STREETSCAPE IMPROVEMENTS COCOA BEACH, FLORIDA FOR: CITY OF COCOA BEACH

MINUTEMEN

RNOW WHAT'S BELOW ALWAYS CALL SIT

METRIC PLAN

LEGG to Averue : Suite 200 7798-7122 429-7883 MILLER Central Floride Others Pro-EB7318 LB6680 LC033 13-00191 LT-5 0ATE OF OTATION 76 99

LUMINAIRE DESIGN

medium scale, decora tive down light tixture with a spun aluminum bell styled

- . The dome is available with two types of shades: round edge (R) and flared edge (F) styles.
- The luminaire shall measure 27" outside diameter and 19 1/8" overall height.
- · The luminaire shall have a hinged door for tool-less driver and LED access
- . The luminaire shall be supplied with the line-ground, line neutral and neutral-ground electrical surge protection in accordance with IEFE/ANSE C62.41.2 guidelines.
- . The luminaire shall be U.L. or E.T.L. listed in U.S. and

DRIVER

- . The LED driver shall be securely mounted inside the fixture for optimized driver performance and longevity.
- · The LED driver assembly shall have easy tool-less access using twist lock component
- . The LED driver shall be supplied with a quick-disconnect electrical connector on the power supply providing an easy power connection.



LIGHT SOURCES

- . The luminaire shall use high output, high brightness LEDs.
- . The LEDs shall be mounted in arrays, on printed circuit
- boards designed to maximize heat transfer to the heat sink surface.
- . The LEDs shall be attached to the printed circuit board with not less than 90% pure silver to insure uptimal electrical and thermal conductivity.
- · The LEDs and printed circuit boards shall be protected from moisture and corrosion by a conformal coating of 1 to 3 mils.
- . The LEDs and printed circuit board construction shall be environmentally friendly and 100% recyclable. They shall not contain lead, mercury or any other hazardous substances and shall be RoHS compliant.
- . The LED life rating shall be determined in accordance with IESNA LM-80.

- · The luminaire shall be provided with individual, acrylic, refractor type optics applied to each LED.
- The luminaire shall provide Type 3 (2, 3, 3R, 4, 5) light distribution per the IESNA classifications. Testing shall be done in accordance with IESNA LM-79.
- The luminaire is supplied with a clear flat glass (FG) lens. Optional lenses are clear sag glass (SG), frosted sag glass (FSG), and frosted flat glass (FFG).

PERFORMANCE

- The LEDs and LED driver shall operate over a -40°C (-40°F) to +50°C (122°F) ambient
- air temperature range.

 The High Performance white LEDs will have a life expectancy of approximately 70,000 hours with not less than 70% of original brightness (lumen maintenance), rated at 25°C.
- . The High Brightness. High Output LED's shall be 4500K (or 6200K option) color tem-
- The luminuire shall have a minimum 14200 (see table) initial delivered lumen rating when operated at steady state with an average ambient temperature of 25°C (77°F).

INITIAL DELIVERED LUMEN DATA (FG LENS)

Source	T2	T3	T3R	T5	Watt
	14180	13785	13770	14200	160
	t3260	12890	12880	13280	160
2277	12445	12100	12085	12460	160
	11270	10945	t1175	11320	126
	10540	10235	10450	10585	126
_	9890	9605	9805	9935	126
	8460	8180	8330	8545	96
	7910	7650	7790	7990	96
	7425	7 t80	73 t 0	7500	96
	5975	5765	5900	6005	66
	5590	5390	5520	56 t 5	66
	5245	5060	5180	5270	68

ARMS

- . The arm construction shall be cast aluminum and/or extruded aluminum
- . Arms with decorative filiarce shall have meticulously detailed scroll work and gracefully curved brackets.

FINISH

- · Prior to coating, the luminaire shall be chemically cleaned and etched in a 5-stage washing system which includes alkaline cleaning, rinsing, phosphoric etching, reverse-osmosis water rinsing and non-chrome sealing to ensure corrosion resistance and excellent adhesion for the
- The finish coat shall be an electrostatically applied semi-gloss, super durable polyester powder coat, baked on at 400°F, to provide a durable, color retentive finish.
- *The optional BLACK TEXTUREO (Verde Green or Swedish Iron) finish shall be hand-brushed using a 3-step process.

- . The luminaire shall be free from all defects in materials and workmanship for a period of seven (7) years from the date of manufacture
- . The luminaire manufacturer shall warrant the LED boards/system, during the stated warranty period, against failure defined as more than 10% simultaneous non-operating LEDs.
- . The driver shall be warranted for seven (7) years.

ELECTRONIC DRIVERS

- The driver shall be U.L. Recognized
- · The driver shall have overload as well as short circuit protection
- The driver shall be a DC voltage output, constant current design, 50/60HZ. The driver shall have a minimum power factor of greater than 0.90.
- The driver shall be rated at full load with THD 20%.

LUMINAIRE HOUSING

- The upper housing is a span aluminum bell shade attached to a cast aluminum top.
 The luminuire shall be Rated IP65* to provide years of dirt and moisture-free operation.
- The luminaire shall be supplied with an aluminum door frame and lens with tool-less access.

PHOTOCELL OPTIONS*

Bi-metal Cell Option (Not Available on Side Mount Option) • Photocells shall be thermo bi-metal button type.

- . On single post-top fixtures the photocell shall be mounted in the top easting and pre-wired to the driver.
- · On multiple head fixtures photocells shall be mounted in the pole shaft, on an access plate.
- The photocell is not pre-wired since drivers are mounted in the fitter and packaged separately. The photocell shall turn on at 1.0 foot-candle and turn off at not more than 5 foot-candles.
- The photocell is 120V or 208-277 volt.

Electronic Cell Option (Not Available on Side Mount Option)

- Photocells shall be electronic button type.
- On single post-top fixtures the photocell shall be mounted in the top casting and pre-wired
- On multiple head fixtures photocells shall be mounted in the pole shaft, on an access plate.
- The photocell is not pre-wired since drivers are mounted in the fitter and packaged separately.

 The photocell is instant-on at 1.5 foot-candic and turn off 5-10 seconds at 2-3 foot-candles.
- . The photocell is 120V or 208-277 volt.

Lock Type Option (Available with Side Mount Option Only)

- Photocells shall be roto-lock design.

 They shall be thermal-bimetallic switch type.
- Photocells shall be mounted in the housing on the photocell bracket and pre-wired to the driver.
- On multi-fixture poles the photocell shall be mounted on top of pole/arm/hangstraight. The photocell is not pre-wired since drivers are mounted in the fitters and packaged separately.
- Physical time delay is 2 minutes to turn on at 1.5 foot-candles and 2 minutes to turn off at in niore than 6 foot-can
- The photocell is 120-277 volt.
- * Note: Photocells are not tP rated. Fixture mounted PC eliminates tP65 rating.

REGARDING PHOTO CELL TYPE, COORDINATION PENDING WITH MAINTAINING AGENCY ON ELIMINATING POLE MOUNTED PHOTOCELLS AND USE ONE PHOTOCELL MOUNTED ON NEW LOAD CENTER

IMPROVEMENTS RETSCAPE II, FLORIDA COA BEACH, FICTOR OF COC STORMWAT COCK 品 MINCTEME

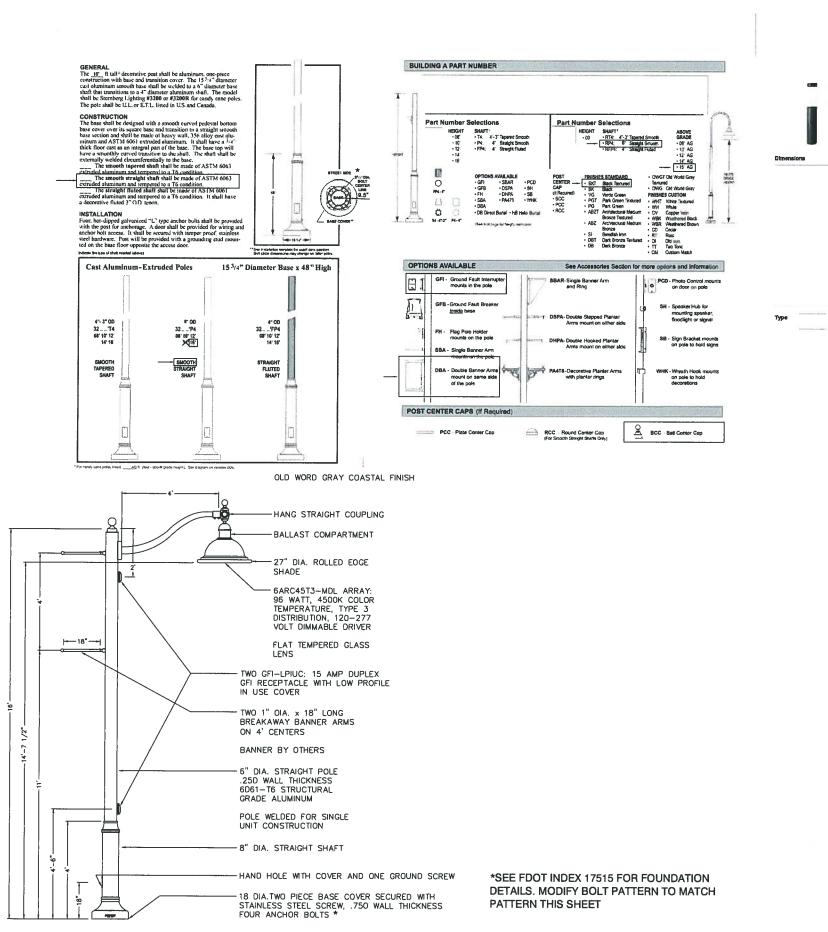
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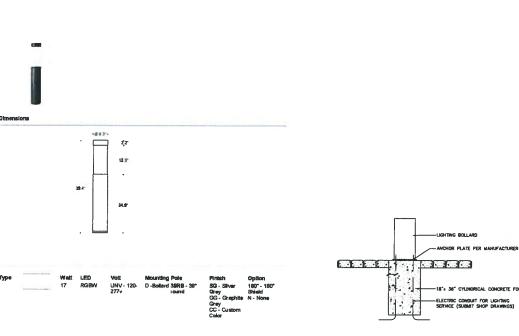
LIGHTIN

LD-1

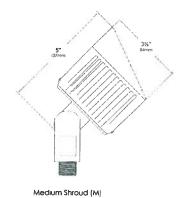


STREET LIGHT DETAIL

NTS

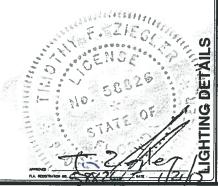


LIGHTING BOLLARD DETAIL



6 WATT LED - AMBER OUTPUT

BEACH PLAZA PLANTER UP-LIGHT DETAIL



LEG(do Avenue : Subs i 7788-7122 7-428-7182 ER MILLI Central Florida On

MINUTEMEN

ENTS

IMPROVEM

STORMWATER/ STREETSCAPE COCOA BEACH, FLORIDA FOR: CITY OF COCOA BEACH

EB7318 LB6680 LC033

13-00191 LD-2 0ATE DEAMS 78

	TABULATION OF QUANTITIES	(SIGNALIZAT	ION)								
					SHEE	T NOS.			CRANO	TOTAL	REF.
ITEM NO.	DESCRIPTION	UNIT	SI	G-1	Sic	G-2	SI	G-3		TOTAL	SHEET
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	
630-2-11	CONOUIT, (Fail) OPEN TRENCH	LF	196		303		288		787		
632-7-1	SIGNAL CABLE- NEW OR RECONSTRUCTED INTERSECTION (F&I)	PI	1		1		1		3		
635-1-11	SIGNALS - PULL & JUNCTION BOXES (F&F PULL BOX)	EA	6	_	5		5		16		-
646-1-11	ALUMINUM SIGNALS POLE, PEDESTAL	EA	3		2				5		-
649-31-201	MAST ARM (F&I), 130-MPH, SINGLE W/O LUM, 36	EA			1				1		\vdash
650-1-311	TRAFFIC SIGNAL (F&I) 3-SECTION, 1-WAY	AS	4		2				В		\vdash
850-4	TRAFFIC SIGNAL, RELOCATE	AS	4		1		3		8	-	
650-1-411	TRAFFIC SIGNAL, (FAM), 4 SECTION, 1 WAY,	AS			1				1		_
650-1-511	TRAFFIC SIGNAL, (F&I), 5 SECTION, 1 WAY,	AS	4						4		
653-191	PEDESTRIAN SIGNAL (F&I) (LEO) (1-SECT, 1-WAY)	AS	1						1		
653-192	PEDESTRIAN SIGNAL (F&I) (LED) (1-SECT, 2-WAY)	AS	3		2				5		
653-400	PEDESTRIAN SIGNAL, RELOCATE	EA	1						1	\vdash	
660-1-109	LOOP DETECTOR (F&I) (TYPE 9)	EA	6		1		1		8	$\overline{}$	
660-2-106	LOOP ASSEMBLY (F&I) (TYPE F)	AS	8		4		5		17		
665-1-11	PED DETECTOR STATION & SIGN (F&I)(POLE OR CONTROLLER CABINET MOUNTED)	AS	7		2				9		
670-5-400	TRAFFIC CONTROLLER ASSEMBLY, MODIFY	AS	1		1				2		
690-10	TRAFFIC SIGNAL HEAO ASSEMBLY (REMOVE)	EA	8		2				10		
690-20	SIGNAL PEOESTRIAN ASSEMBLY (REMOVE)	EA	1		2				3		
690-31	SIGNAL PEDESTAL REMOVAL	EA	1		1				2		
690-32-2	POLE REMOVAL, SHALLOW, BOLT ON ATTACHMENT	EA			1				1		
690-70	DETECTOR PEDESTRIAN ASSEMBLY (REMOVE)	EA	1						1		
69090	CONOUIT & CABLING- WITHIN INTERSECTION (REMOVE)	PI	1		1		1		3		
690-100	SIGNAL EQUIPMENT MISCELLANEOUS REMOVE	PI	1		1		1		3		
700-35-01	SIGN PANEL, RELOCATE, UP TO 12 SF	FA			3		2		5		

PAY ITEM FOOT NOTES:

- PAY ITEM 670-5-400 INCLUDES SIGNAL TIMING MODIFICATIONS, AND LABOR/MATERIAL TO INSTALL/MODIFY EXISTING CONTROLLER TO ACCOMMODATE HARDWARE PROPOSED FOR A COMPLETE ACCEPTABLE INSTALLATION
- * PAY ITEM 690-31 INCLUDES PEDESTRIAN SIGNAL HEADS REMOVAL & ASSOCIATED ITEMS
- * PAY ITEMS FOR NEW SIGNAL HEADS ON THE NEW MAST ARM SHALL INCLUDE BACKPLATES (WITH YELLOW REFLECTIVE BORDER). HOWEVER, NEW SIGNAL HEADS MOUNTED ON THE EXISTING DIAGONAL SPAN WIRE SHALL NOT INCLUDE BACKPLATES. ALL NEW SIGNAL HEADS SHALL INCLUDE TURNEL VISORS.

MINUTEMEN STORMWATER/ STREETSCAPE IMPROVEMENTS COCOA BEACH, FLORIDA FOR: CITY OF COCOA BEACH

SIGNALIZATION OF QUANTITIES

SIGNALIZATION TABULATION OF QUANTITIES

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MNUTER

WATER STATES 3800 FEEL 370 SO CHARGE 3

SIGNALIZATION NOTES

- THE SIGNALIZATION PLANS HAVE BEEN PREPARED IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION'S DESIGN STANDARDS, DATED 2014. COMERNING SPECIFICATIONS ARE THE STATE OF FLORIDA, DEPARTMENT OF TRANSPORTATION SPECIFICATIONS, DATED 2014 AND SUPPLEMENTS THERETO IF NOTED IN THE SPECIAL PROVISIONS FOR THIS PROJECT.
- THESE PLANS REFLECT CONDITIONS KNOWN DURING PLAN DEVELOPMENT. IN THE EVENT ACTUAL PHYSICAL CONDITIONS REEVENT THE APPLICATION OR THE PROGRESSION OF ANY WORK SPECIFIED IN THESE PLANS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY AND PRIOR TO ANY FURTHER WORK ACTIVITY.
- 5. WHENEVER SIGNAL WORK IS BEING PERFORMED AT AN INTERSECTION (INSTALLING CONDUIT IN THE STREET, REMOVING EXISTING SIGNAL EQUIPMENT, INSTALLING NEW SIGNAL SOLUPPENT, INSTALLING LODES AND RUINS, AND THIRMING ON NEW SIGNALS) WHERE A LANE IS CLOSED AN OFF DUTY LAW ENFORCEMENT OFFICER SHALL DIRECT TRAFFIC. THE COST OF THE OFF DUTY LAW ENFORCEMENT OFFICER SHALL BE INCIDENTAL TO THE WORK AND WILL NOT BE PAID SEPARATELY.
- 4. OURING NON WORKING HOURS, NO COUIPMENT, TWINGES OR MATERIAL SHALL BE PARKED OR STORED WITHIN 30 FEET (8 METERS) OF THE RODOMY CARRYING TRAFFIC. IF THE ABOVE IS NOT POSSIBLE. A STORAGE AREA WITH PROPER BELINEATION AND ADVANCED WARNING SHALL BE USED WITH THE APPROVAL OF THE ENGINEER.
- THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE UTILITY DEPARTMENT AT LEAST 48 HOURS IN ADVANCE OF POLE SETTING OPERATIONS WHERE A CONFLICT WITH OVERHEAD ELECTRICAL CONDUCTORS IS EXPECTED AND IN ALL CASES WHERE JOINT USE POLES ARE TO BE USED.
- 6. AT THE TIME OF FINAL PROJECT INSPECTION THE CONTRACTOR SHALL FURNISH TO THE INSPECTOR THREE COMPLETE SETS OF AS BUILT PLANS, ONE SET SHALL BE LEFT IN THE CABINET FOR THE LOCAL MAINTAINING ACENCY.
- THE CONTRACTOR SHALL HAVE AN IMSA LEVEL II CERTIFIED SIGNAL TECHNICIAN ON CALL WITHIN A MAXIMUM OF TWO HOURS RESPONSE TIME.
- B. THE CONTRACTOR SHALL NOTIFY FDOT AT LEAST 24 HOURS IN ADVANCE OF INSTALLING GROUND ROOS, UNDERGROUND CONDUIT, MAST ARM FOUNDATIONS OR SETTING POLES SO THAT THESE OPERATIONS MAY 96 DISSERVE.
- IT SHOULD BE NOTED THAT NO TEST BORINGS WERE MADE WHERE CONDUIT RUNS ARE TO BE INSTALLED BY JACKING OR TRENCHING. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE ORD SIZE CONDITIONS BEFORE SUBMITTING BID PROPOSALS IN ACCORDANCE WITH SECTION 2 4 OF THE FOOT SPECIFICATIONS.
- 11. ALL CONDUITS TO BE INSTALLED UNDER PAVEMENT OR SIDEWALK SHALL BE INSTALLED PRIOR TO THE INSTALLATION OF THE BASE COURSE.
- 13. THE CONTRACTOR SHALL INSTALL A CONDUIT STUB WITH CAP A MINIMUM OF 12 MCHES (30 CM) OUTSIDE THE POLE FOOTING COMPLETE WITH SWEEP UP INTO THE POLE. THE FOOTING, TOP OF SIDEMAK, SIDE OF POLE, ETC. SHALL BE MARKED WITH AN APPROPRIATE ETCHED X-IN ORDER THAT IT MAY BE READLY LOCATED FOR PTUTINE USE.
- ALL ENDS OF CONDUITS IN PULL BOXES AND CABINETS SHALL BE SEALED WITH ELECTRICAL PUTTY AFTER WIRING IS COMPLETE.

- 16. PULL BOXES SHALL BE PLACED BEHIND CURB AND GUTTER. IF THERE 1S NO CURB AND GUTTER, THEN PULL BOXES SHALL BE PLACED AT LEAST 7 FEET (2.1 METERS) FROM THE EDGE OF PAYMENT, OR WITHIN R/W. WHICHEVER IS SHORTEST DISTANCE.
- UNLESS SPECIFIED OTHERWISE, ALL PULL BOX COVERS TO BE FURNISHED AND INSTALLED SHALL BE NON METALLIC.
- UNDER NO CIRCUMSTANCES SHALL ENERGIZED CABLE BE PLACED IN THE SAME CONDUIT OR PULL BOX AS LOOP LEAD IN CABLE.

- 21. ALL FIELD WRING SHALL BE NEATLY BUNDLED AND CLEARLY IDENTIFIED WITH PERMANENT LEGIBLE, WEATHERPROOF TAGS THAT ARE SECURELY ATTACHED TO EACH CABLE. THE TAGGING SYSTEM PROPOSES SHALL BE SUBMITTED FOR APPROVAL WITH THE OTHER EQUIPMENT SUBMITTALS REQUIRED FOR THIS PROJECT.
- 22. FIBER OPTIC INTERCONNECT CABLE SHALL BE 245/12M UNLESS SPECIFIED OTHERWISE. A COPPER TRACE/PULL WIRE SHALL BE INCLIDED WITH FIBER OPTIC CABLE WISTALLED IN UNDERGROUND CONQUIT.
- 23. THREE SPARE WIRES ARE REQUIRED PER SIGNAL CABLE. SPARES SHALL BE BOUND AND GROUNDED IN CABINET.
- 24. DURING TRAFFIC SIGNAL FLASHING OPERATION THE RED ARROW INDICATION OF ALL 3

 SECTION LEFT TURN HEADS SHALL FLASH, UNLESS SPECIFED OTHERWISE, FLASHING
 OPERATION SHALL BE AMBER FOR MOVEMENTS 2 & B AND RED FOR MOVEMENTS 4

 & B.

- 27. UNLESS SPECIFIED OTHERWISE, CATENARY AND MESSENGER SPAN WIRES SHALL BE $3/8-(0.95\ \mbox{CM})$ DIAMETER.
- 28. CIRCULAR DRIP LOOPS (MINIMUM ONE CIRCLE) ARE TO BE PROVIDED AT ALL AERIAL DISCONNECT HANGER, INTERCONNECT JUNCTION BOX, ELECTRICAL SIGN AND POLE JUNCTIONS.
- 29. 35. THE USE OF WONES-PLUGS FOR SIGNAL INSTALLATIONS SHALL BE PROHIBITED.

- 32. ANY EXISTING LOOPS DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY THE

- CONTRACTOR AT NO ADDITIONAL COST. TEMPORARY DETECTION WILL BE REQUIRED WHENEVER REPAIRS CANNOT BE MADE IN A TIMELY FASHION.
- 34. ALL TYPE F LOOPS SHALL BE 6 FEET (1.8 METERS) WIDE BY 40 FEET (12.2 METERS) LONG AND EXTEND 4 FEET (3 METERS) BEYOND THE STOP BAR UNLESS DTHERWISE NOTED IN THE PLANS.
- 37. EACH LOOP SHALL BE TREATED AS AN INDIVIDUAL LOOP WITH SEPARATE LEAD INS FROM SPLICE POINT TO CABINET TERMINAL.
- 38. SHIELDED WIRING SHALL BE USED FOR ALL LOOP LEAD IN CABLE FROM THE LOOP SPLICE POINT TO THE CABINET TERMINAL.
- 40. SECTION 660 3.2 OF THE FDOT SPECIFICATIONS IS MODIFIED TO REQUIRE THAT ALL SAWQUTS FOR LOOP INSTALLATION SHALL BE CLEARED OF DUST, DIRT AND OTHER DEBRIS WITH A VACUIUM CLEANER PRIOR TO THE INSTALLATION OF LOOP WRE OR LEAD IN CABLE. ALL SAWGUTS SHALL BE SEALED WITH AN APPROVED FLEXIBLE PROXY.

- 44. PUSH BUTTONS SHALL BE CONSTRUCTED WITH MECHANICAL CONTACTS. MICROSWITCHES SHALL NOT BE USED.
- 45. UNLESS OTHERWISE NOTED, ALL REMOVED EQUIPMENT EXCEPT CONCRETE POLES SHALL BE DELIVERED TO THE MAINTAINING AGENCY, BREVARD COUNTY FOR BREVARD AVE.—MINUTEMEN INTERSECTION AND FOOT FOR SR ATA—MINUTEMEN INTERSECTIONS.
- 46. THE FINISH COATING OF TRAFFIC SIGNAL MAST ARMS/POLES SHALL BE A TRICLYCOYL (SOCYANURATE OR URETHANE POLYESTER POWDER EQUIVALENT IN COLOR TO VALMONT EBONY BLACK §334. THE COATING SHALL BE ELECTRO STATICALLY APPLIED AND CURED BY HEATING.
- 48. THE CONTRACTOR SHALL NOTIFIY BREVARD COUNTY AND FDOT TRAFFIC ENGINEERING THAT A SIGNAL IS READY FOR INTIAL INSPECTION. TRAFFIC ENGINEERING WILL SHAPE AND A STATE OF THE SIGNAL TO BE TURNED ON A SHAPE MODE FOR PERSONAL TO BE TURNED ON A SHAPE MODE FOR THE SIGNAL TO BE TURNED ON TO FULL OPERATION. TRAFFIC ENGINEERING WILL ALLOW THE SIGNAL TO BE TURNED ON TO FULL OPERATION WHEN AUTHORIZED BY THE ENGINEER

33. THE CONTRACTOR SHALL NOTIFY BREVARD COUNTY & FDOT TRAFFIC OPERATIONS AT LEAST 24 HOURS IN ADVANCE OF LOOP CUTTING SO THAT COUNTY PERSONNEL MAY CAULK THE LOOPS AND OBSERVE THEIR INSTALLATION.

35. ALL DETECTOR LOOPS OR SYSTEM SENSORS SHALL BE CUT ONTO THE ASPHALTIC CONCRETE STRUCTURAL COURSE WHENEVER POSSIBLE. ALL LOOP LEAD — IN CABLES SHALL BE PLACED IN CONDUIT. LOOP LEAD — IN CABLE SHALL NOT EXIT THE ROADWAY WITHIN THE CORNER RADIUS AT 36. AN INTERSECTION.

39. 44. THE CONTRACTOR SHALL USE BELDON TYPE 943 RDADWAY LOOP WIRE, OR EQUIVALENT TYPE XHHW HIGH DENSITY CROSSLINKED POLYETHYLENE INSULTED WIRE RATED 600 VOLTS.

- 41. SECTION 660 3.3 OF THE FDOT SPECIFICATIONS IS MODIFIED TO PROHIBIT THE USE OF TYPE 111 STEEP ASPHALT OR COAL TAR BASE CEMENT TO SEAL TRAFFIC DETECTOR LOOPS.
- 42. SECTION 860 6.2 OF THE FDOT SPECIFICATIONS 15 MODIFIED TO REQUIRE THE INSULATION RESITANCE OF EACH LOOP TO MEASURE GREATER THAN 100 MEGAOHMS WHEN USING A 500 VOLT OC INSULATION MEGGER.
- 43. THE COST OF FURNISHING AND INSTALLING THE SIGNS SHALL BE INCLUDED IN PAY ITEM NO. 699-1-1:

- 47. NEW TRAFFIC SIGNALS SHALL INITIALLY OPERATE IN FLASH MODE FOR AT LEAST 7 CONSECUTIVE DAYS PRIOR TO NORMAL OPERATION.

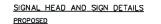
IMPROVEMENT ليا ER/STREETSCAPE A BEACH, FLORIDA IY OF COCOA BEACH STORMWATER/ COCOA B FOR: CITY C MINUTEMEN

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NAME OF THE PARTY OF THE PARTY



1652 2 4 38 74 650-1-511 4 AS

8 8 R Y G 3-SECT., 1-WAY 850-1-311 4 AS





P4 P6 653-191 3 AS 653-192 2 AS

AUDIBLE PEDESTRIAN SIGNAL (APS)
PEDESTRIAN DETECTOR SIGN (LED
OPTION) COMBINATION COST
INCLUDED IN PAY ITEM 865-1-11

7 SIGN PANELS

EXISTING 2 6

3-SECT., 2-WAY

 \triangle BREVARD AVE

MINUTEMEN CSWY

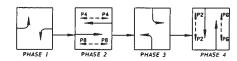
EXISTING PED SIGNALS (690-20 1 EA (TO REMAIN)

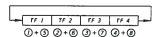
P6 MOH

690-31 1 EA NOTE: EXISTING PEDESTAL REMOVAL INCLUDES REMOVAL OF EXISTING PEDESTRIAN HEADS

P4 P6

SIGNAL OPERATING PLAN (SOP 4)





	* CONT	HUL	LEK	- /	IMIN	IGS			
7	IMING FUNCTION								
М	OVEMENT NUMBER	1	2	3	4	5	6	7	8
_	MIN GREEN	7	20	7	7	7	20	7	7
	EXT	3	3.5	3	3	3	3.5	3	3
*	MAX I	30	60	30	30	30	60	30	30
TRW	MAX 2	18	67	18	18	18	67	18	18
FUNC	YELLOW CLEARANCE	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
ď	ALL RED	2.4	2.7	2.4	2.5	2.4	2.7	2.4	2.5
æ	PEDESTRIAN WALK		7		7		7		7
THING	PED. CLEARANCE		13		13		13		13
_	PHASE RECALL		MIH				MIN		

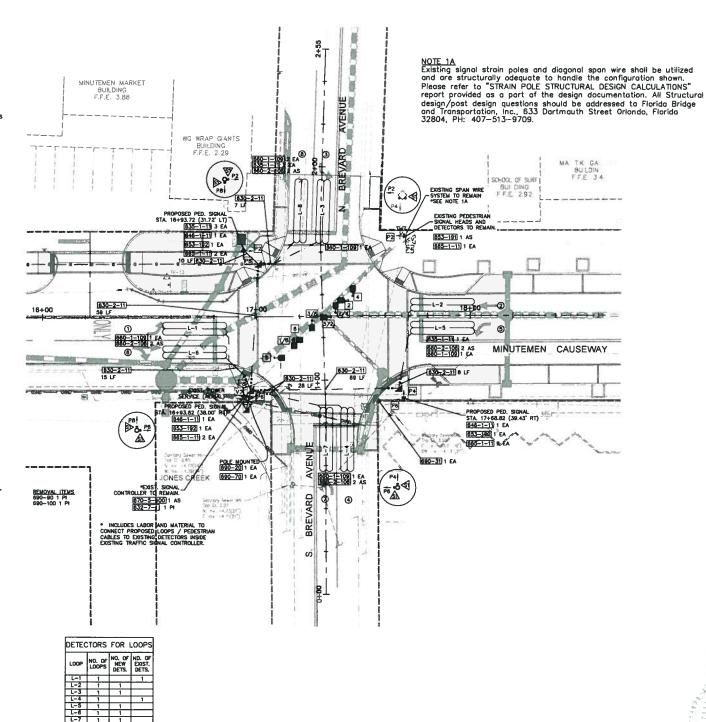
* TIMINGS SHOWN ARE EXISTING. YELLOW, ALL RED AND PEDESTRIAN CLEARANCES HAVE BEEN RECOMPUTED. CONTRACTOR SHALL PROGRAM CONTROLLER TO RUN ON FULLY ACTUATED MODE DURING CONSTRUCTION. FINAL TIMINGS SHALL BE PROVIDED AFTER FACILITY OPENS TO TRAFFIC. CONTRACTOR SHALL ADD A 10 SEC. DELAY FOR ALL PROTECTED PERMISSIVE LEFT TURNS AND RIGHT TURN MOVEMENTS.

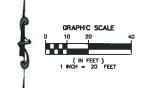
CONTROLLER OPERATIONS:

- MAJOR STREET MINUTEMEN CAUSEWAY MINOR STREET BREVARD AVENUE
- CONTROLLER SHALL OPERATE IN ACCORDANCE WITH MOVEMENT DIAGRAM SIGNAL OPERATING PLAN (SOP) No. 4 PER FDOT INDEX 17870.
- 3. PEDESTRIAN SIGNALS UPON ACTUATION ONLY.

NOTES:

- 1. CONTRACTOR TO COORDINATE WITH CITY OF COCOA BEACH.
- 2. FINAL SIGNAL TIMINGS SHALL BE PROVIDED BY CITY OF COCOA BEACH.
- 3. CONTRACTOR SHALL MAINTAIN THE EXISTING SIGNALS OPERATIONAL AT ALL TIMES.
- CONTRACTOR SHALL COORDINATE WITH FLORIDA POWER & LIGHT FOR CONNECTION TO AND INTERRUPTION OF POWER SERVICE.
- CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATIONS OF ALL SIGNAL HEADS PRIOR TO FABRICATION AND INSTALLATION, OR ADJUSTMENTS.
- 6. PEDESTRIAN SIGNAL HEADS TO BE ORIENTED TO THE CENTER OF THE RAMP THEY SERVE.
- UTILITY LOCATIONS ARE CONSIDERED APPROXIMATE. CONTRACTOR TO VERIFY HORIZONTAL AND VERTICAL CONFLICTS PRIOR TO THE START OF WORK.
- 8. CONTRACTOR IS TO RUN ALL NECESSARY WIRING FOR THE CONNECTION OF THE PROPOSED PEDESTRIAN SIGNAL HEADS THROUGH EXISTING PULL BOXES AND EXISTING COMPUTES IF THEY MEET FOOT AND BREVARD COUNTY SPECIFICATIONS. ANY MESSING OR DAMAGED PART OF THE EDISTING PULL BOXES OR CONDUITS SHALL BE REPLACED. COST TO BE INCLUDED IN THE PRICE FOR RELATED BID ITEM.
- 10. MAINTAINING AGENCY IS CITY OF COCOA BEACH. ALL EQUIPMENT ORDERS SHALL BE COORDINATED AND APPROVED BY THIS AGENCY PRIOR TO ORDERING EQUIPMENT. ALL MATERIAL SHALL BE UL APPROVED AND MEET LATEST FOOT DESIGN STANDARDS AND SPECIFICATIONS, EXCEPT FOR DECORATIVE LIGHT POLES AND FOUNDATIONS.





LEGEND

----- EXISTING TRAFFIC SIGNAL

PROPOSED TRAFFIC SIGNAL

EXISTING PEDESTRIAN SIGNAL, 2-WAY; 1-WAY WITH ONE ARROW

- PROPOSED PEDESTRIAN SIGNAL, 2-WAY; 1-WAY WITH ONE ARROW
- EXISTING PEDESTRIAN DETECTOR
 PROPOSED PEDESTRIAN DETECTOR
 EXISTING OVERHEAD SIGN
 FINAL LOCATION OF RELOCATED OVERHEAD SIGN
- EXISTING PULL BOX

IMPROVEM ETSCAPE LORIDA OA BEACH R/STREET BEACH, FLOF Y OF COCOA E STORMWATER/ COCOA BI FOR: CITY C MINUTEMEN

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U B E E MILLER Central Florida Office: 831 S. Writzer Park, Flori

MINUTEMEN CAUSEWAY AT BREVARD AVE.

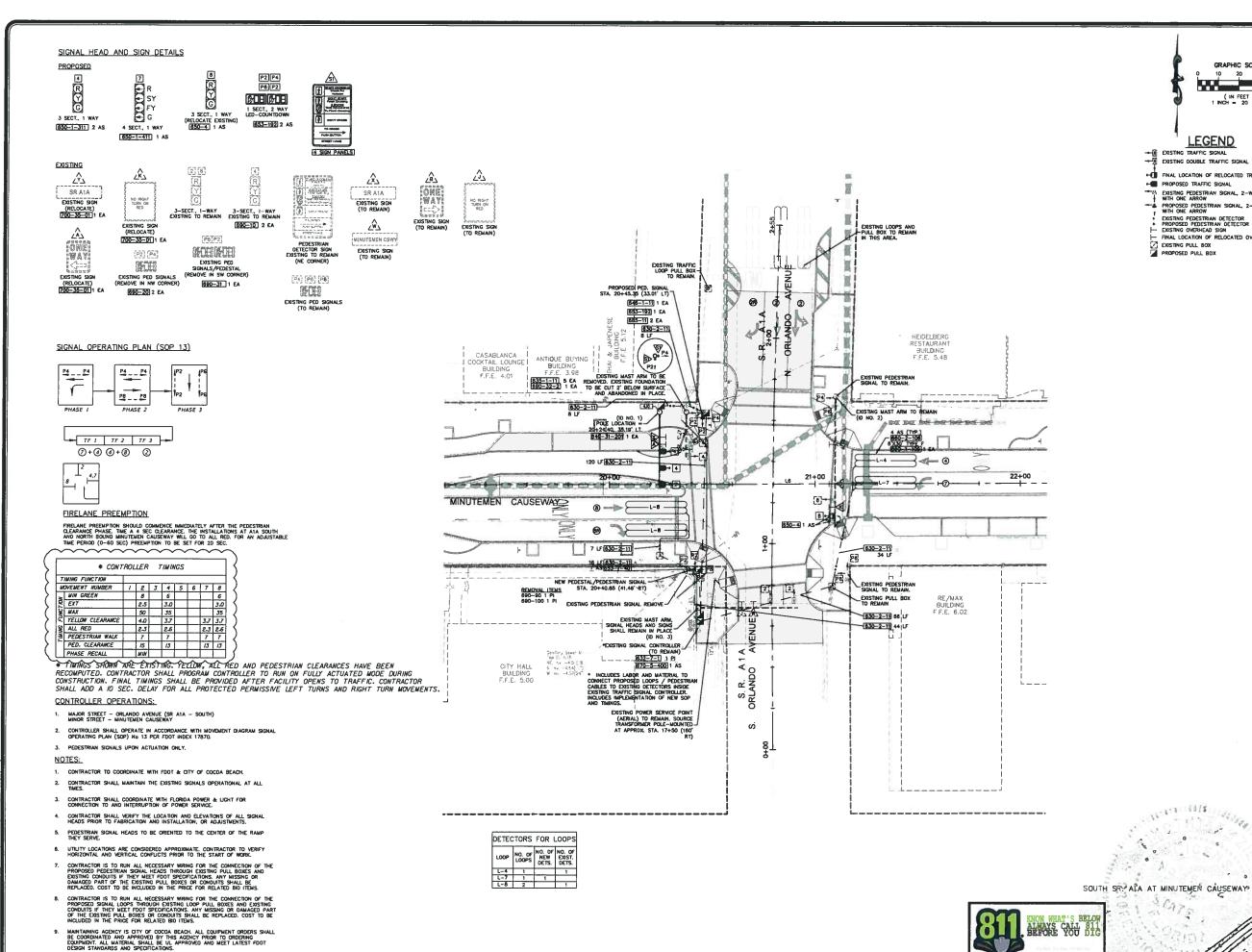


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PLAN ON

13-00191 SIG-1 ME ORASSE 81 99

CONTINUANTES OF ANTHORIZATION:
EB7318 LB6680 LC0337
MDS TZ/TS RC
DCL DWL DWL



GRAPHIC SCALE (IN FEET) 1 INCH = 20 FEET

LEGEND

- EXISTING TRAFFIC SIGNAL
- PROPOSED TRAFFIC SIGNAL
- E ENSTING PEDESTRIAN SIGNAL, 2-WAY; 1-WAY
 WITH ONE ARROW
 PROPOSED PEDESTRIAN SIGNAL, 2-WAY; 1-WAY
 WITH ONE ARROW
 ENSTING PEDESTRIAN DETECTOR
 PROPOSED PEDESTRIAN DETECTOR
 PROPOSED PEDESTRIAN DETECTOR
 EDISTING OVERHEAD SIGN
 FINAL LOCATION OF RELOCATED OVERHEAD SIGN
 CONTRACTOR OF RELOCATED OVERHEAD SIGN

- A EXISTING PULL BOX

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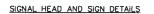
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CONTINUATES OF ANTHORIZATION
EB7318 LB6680 LC0337
MDS TZ/TS RC
60S DWA GAC 13-00191 SIG-2 1/17/14 **82**



EXISTING



























PED SIGNALS REMAIN)

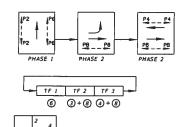
[P6] [P8]	
OCT THE	
XISTING PED SIGNALS	
(TO REMAIN)	

PEDESTRIAN
DETECTOR SIGN
EXISTING TO REMAIN

MINUTEMEN CSWY EXISTING SIGN (TO REMAIN)

EXISTING SIGN (TO REMAIN)

SPECIAL SIGNAL OPERATING PLAN



FIRELANE PREEMPTION

FIRELANE PREEMPTION SHOULD COMMENCE IMMEDIATELY AFTER THE PEDESTRIAN CLEARANCE PHASE. THE A 4 SEC CLEARANCE. THE IMSTALLATIONS AT ATA SOUTH AND NORTH BOUND MINUTEMEN CAUSEWAY WILL GO TO ALL RED. FOR AN ADJUSTABLE TIME PERIOD (0-80 SEC) PREEMPTION TO BE SET FOR ZO SEC.

	* CONT	,	LL	,	res in	,,,,			
7	IMING FUNCTION								
M	OVEMENT NUMBER	1	2	3	4	5	6	7	8
*	MIN GREEN			6	6		8		6
FUNCTION	EXT			3.0	3.0		2.5		3.0
¥	MAX			35	35		50		35
	YELLOW CLEARANCE			3.7	3.7		4.0		3.7
TIMING	ALL RED		П	2.2	2.3		2.0		2.3
ē	PEDESTRIAN WALK				7		7		7
~	PED. CLEARANCE				Ю		//		10
	PHASE RECALL		1	1			MIN		Т

** TININGS SHOWN ARE EXISTING. YELLOW, ALL RED AND PEDESTRIAN CLEARANCES HAVE BEEN
RECOMPUTED. CONTRACTOR SHALL PROGRAM CONTROLLER TO RUN ON FULLY ACTUATED MODE DURING
CONSTRUCTION. FINAL TIMINGS SHALL BE PROVIDED AFTER FACILITY OPENS TO TRAFFIC. CONTRACTOR
SHALL ADD A IO SEC. DELAY FOR ALL PROTECTED PERMISSIVE LEFT TURNS AND RIGHT TURN

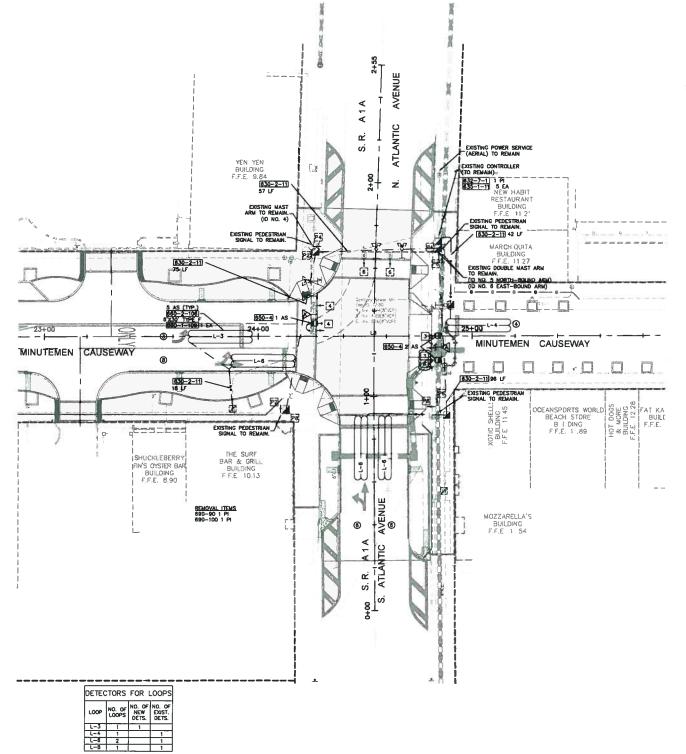
CONTROLLER OPERATIONS:

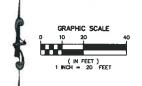
- MAJOR STREET ATLANTIC AVENUE (SR A1A NORTH) MINOR STREET MINUTEMEN CAUSEWAY
- CONTROLLER SHALL OPERATE IN ACCORDANCE WITH MOVEMENT DIAGRAM SIGNAL OPERATING PLAN (SOP) No. 4 PER FOOT INDEX 17870.
- 3. PEDESTRIAN SIGNALS UPON ACTUATION ONLY.

NOTES:

- 1. CONTRACTOR TO COORDINATE WITH FOOT & CITY OF COCOA BEACH.
- 2. CONTRACTOR SHALL MAINTAIN THE EXISTING SIGNALS OPERATIONAL AT ALL TIMES.

- PEDESTRIAN SIGNAL HEADS TO BE ORIENTED TO THE CENTER OF THE RAMP THEY SERVE
- CONTRACTOR IS TO RUN ALL NECESSARY WIRING FOR THE CONNECTION OF THE PROPOSED PEDESTRIAN SIGNAL HEADS THROUGH EXISTING CONDUITS IF THEY WEET POUT SPECIFICATIONS. ANY MISSING OR DAMAGED PART OF THE EXISTING PULL BOXES OR CONDUITS SHALL BE REPLACED. COST TO BE INCLUDED IN THE PRICE FOR RELATED BIO ITEMS.
- MAINTAINING AGENCY IS CITY OF COCOA BEACH. ALL EQUIPMENT ORDERS SHALL BE COORDINATED AND APPROVED BY THIS AGENCY PRIOR TO ORDERING EQUIPMENT. ALL MATERIAL SHALL BE UL APPROVED AND MEET LATEST FDOT DESIGN STANDARDS AND SPECIFICATIONS.





LEGEND EXISTING TRAFFIC SIGNAL EXISTING DOUBLE TRAFFIC SIGNAL

- FINAL LOCATION OF RELOCATED TRAFFIC SIGNAL
- PROPOSED TRAFFIC SIGNAL
- EXISTING PEDESTRIAN SIGNAL, 2-WAY; 1-WAY WITH ONE ARROW

FINAL LOCATION OF RELOCATED OVERHEAD SIGN PROPOSED PULL BOX

IMPROVEM STORMWATER/ STREETSCAPE COCOA BEACH, FLORIDA FOR: CITY OF COCOA BEACH MINUTEMEN

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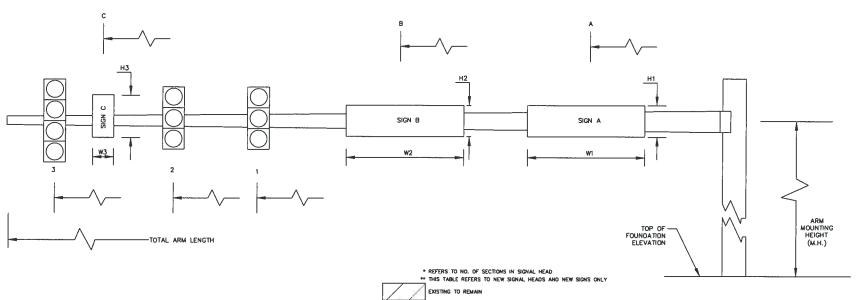
PLAN

NORTHOUSE ALA AT MINUTEMEN CAUSEWAY





EB7318 LB6680 LC0337
MOS TZ/TS RC
003. 0104. 046. 13-00191 SIG-3 MTE DANNE 83 (11/17/14 pg 99



GENERAL NOTES:

- (4) FOR MOUNTING SIGN OPTIONS SEE INDEX NO'S: 17743 AND 17745.

IO NUMBER	SHEET	LOCATION	TOP OF FOUNDATION	BACKPLATES PED SIGNA	PEO SIGNAL DISTANCE FROM POLE (FT.)						TOTAL ARM	ARM M.H.	4 BETWEEN OUAL ARMS	(DISTANCE FR	OM POLE/HEI	GHT AND WI	OTH OF SIGN	(FT.)				PAINT
NUMBER	NUMBER		ELEVATION	Y/N Y/N	1	•	2	•	3		LENGTH	W.J.I.	OUAL ARMS	A	Н1	W1	В	H2	W2	С	нз	W3	COLOR
1	SIG-2	NW CORNER	4.10	N Y	18	3	26	3	34	4	36	21.5	N/A	11	12"	36" (APPROX.)	14.5	30"	24"	}		}	BLACK
2	SIG-2	NE CORNER				//	58	3	//	/	//	//	N/A	N/A	N/A	N/A	N/A	N/A	N/A	54	30"	24"	
3	SIG-2	SW CORNER			///	\mathcal{T}	//	77				//	N/A				7/	//			1/		1/
4	SIG-3	NW CORNER			//	///	35	3	77	7	//	//	N/A	N/A	N/A	N/A	N/A	N/A	N/A	31	30"	24"	
5	SIG-3	NE CORNER (NORTH-BOUND)			77				//	\overline{Z}		//	///			77	//	//		77		1	
6	SIG-3	NE CORNER (EAST-BOUND)			39	3	50	3			//	//			///	///	N/A	N/A	N/A	44.5	30"	24"	

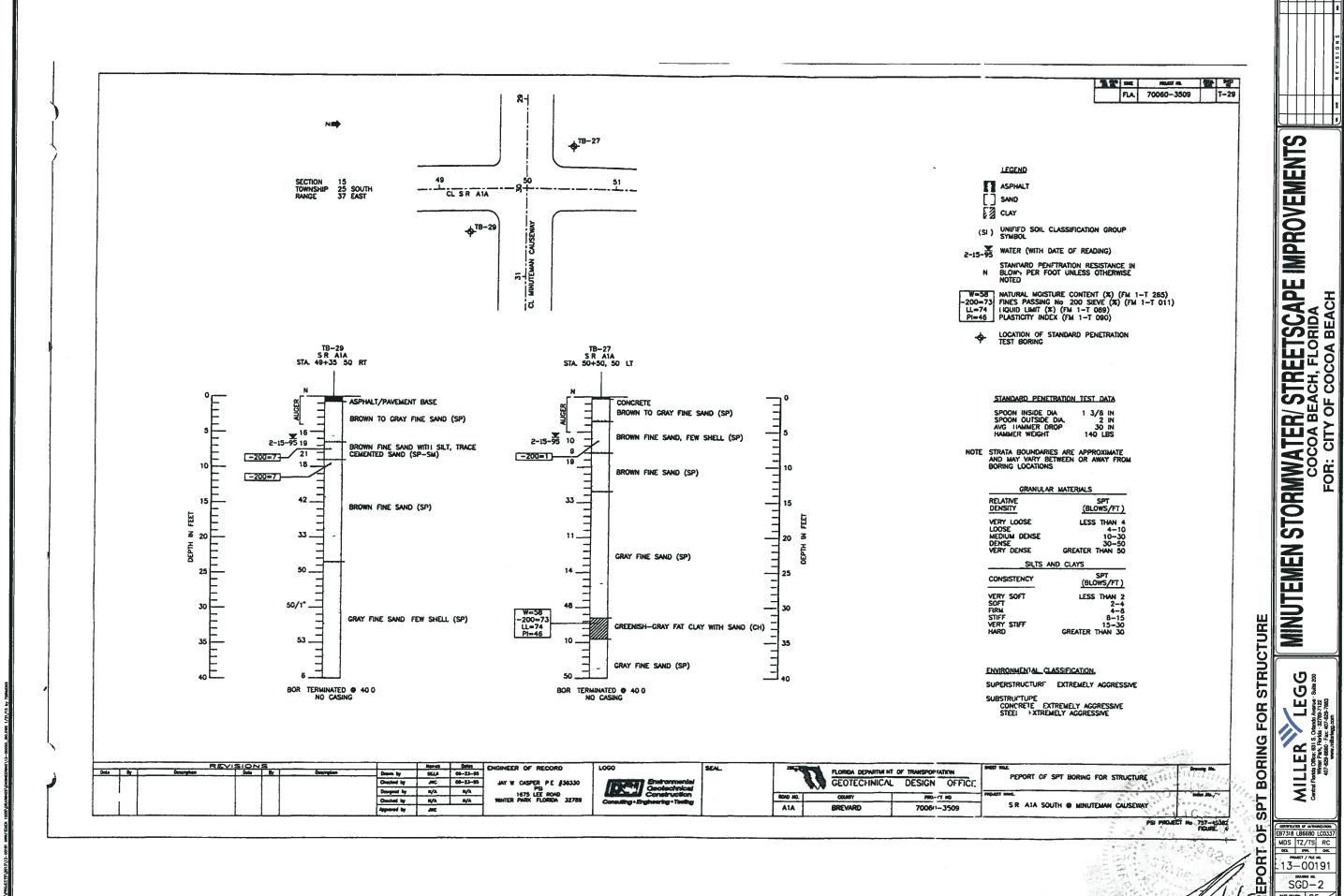
					S	TANDARD	MAST	ARM AS	SEMBLI	ES DESIG	N TABI	E				
STRUCTURE	SHEET	ASSEMBLY NUMBERS		FIRST ARM			SECOND ARM		UF		Р	OLE		SPECI	AL ORILLEO SHAFT	DATA
NUMBERS	NUMBER	NUMBERS (1)	ARM TYPE	FAA (ft.) ²⁰	F8A (in.) ⁽²⁾	ARM TYPE	FAA (ft.) ²⁰	FBA (in.) ⁽²⁾	(deg)	POLE TYPE	UAA (ft.) ³⁰	UB (ft.)	UCA (in.) ⁵⁰	OA (ft.)	DB (ft.)	RA
1	SIG-2	E3-T2	E3	25.1	6.96	N/A	N/A	N/A	N/A	Т2	24.5	21.5	12.60	SEE FOOT OESIGN INDEX 17743	SEE FDOT DESIGN INDEX 17743	SEE FOOT DESIGN INDEX 17743

STORMWATER/ STREETSCAPE IMPROVEMENTS COCOA BEACH, FLORIDA FOR: CITY OF COCOA BEACH SIGNALIZATION MAST ARM TABULATION & ASSEMBLY MINUTEMEN

MILLER LEGG
Central Flotdes Office: 851 S. Charolo Avenue - Subs 200
Wrese Pers, Rucks. S2789-7722
Wrese Pers, Rucks. S2789-7722

| SGD - 1 | SGD

1 May 5



11/17/14 85 99

GENERAL NOTES

The Controctor may use any of the optional pipe moterials tobulated for a given structure. Only the moterial aptions tobulated for a given structure can be used.

2.Adjustment to the bid quantities, prices and payment will not be allowed.

used.

2.Adjustment to the bid quontities, prices and payment will not be allowed due to increase or decrease in structure size, shope, length, width, depth or occessory construction necessory to accommodate the use of an optional pipe material other than the "plotted" aption; likewise there will be no added or reduced compensation for structure olterations required ta relieve utility conflicts which arise from the use of an optional material other than the "plotted" aption.

3. Adjustment to the bid quantities, prices and payment will not be allowed due to increased or decreased excavation, bedding, borrow, backfilling, compoction, special installation requirements or disposal of excess materials due to use af any of the pipe optional materials. Likewise, adjustment in the quantities, prices and payment will not be allowed due to differences in end treatment size or types, pipe length, alternate jointing and connecting materials, saddles, cradles, filter fabrics, shoring or similar features due to the use of an optional material ather than the "plotted" option.

4. If adjustments are required due to plan errars or amissions or outhorized field changes, the "plotted" material and not the material elected by the Contractor would be used to establish new pay quantities.

1. The Contractor may use any of the optional pipe materials tobulated for a given structure. Only the material options tobulated for a given structure can be used.

pipe materials he chaoses to use at the precanstruction conference. Once appraval of the Engineer.

pipe materials he chooses to use at the precanstruction conference. Once approval of the Engineer.
identified the Cantractor may not change pipe material selected without the 5. The Contractor shall notify the Department in writing as to which optional EXHIBIT SDS—30
THIS EXAMPLE SHOULD BE USED WHEN MATERIAL OPTIONS
ARE THE SAME FOR THE DIFFERENT PIPE SIZES AND WHEN LIMITED EXCEPTIONS ARE NOTED.

LIMITED EXCEPTIONS ARE NOTED.

Date: 1/1/09
GENERAL NOTES

Pine shapes other than round (Flintical Arch) are supposited and poid for

6. Pipe shapes other than round (Elliptical/Arch) are summarized and paid for using equivalent round pipe diameter.

			OPTIONAL MATERIALS		
PIPE SIZE (INCHES)	**DSL (YEARS)	OPTIONAL SIZE (INCHES)	MATERIAL AND THICKNESS	*MINIMUM COVER (INCHES)	*MAXIMUM COVER CLASS III (FEET)
23x14	261	23 x 14	ERCP	12	17
	106	21 x 15	Aluminum arch	30	11
	360	23 x 14	ENRCP	12	17
15	261	N/A	RCP	12	23
	106	N/A	Aluminum Round	12	100
•	360	N/A	NRCP	12	23
30	349	N/A	RCP	12	22
	106	N/A	Aluminum Round	12	50
	122	N/A	Smooth Corrugated Steel	12	82
	360	N/A	NRCP	12	22
	[]				

*FROM FDOT DRAINAGE MANUAL JAN, 2014

**FROM FDOT CULVERT LIFE ESTIMATOR - NOTE THAT ESTIMATOR DOES NOT ALLOW ELLIPTICAL OR "NON-STANDARD" PIPE SIZES THEREFORE STANDARD 18" PIPES ESTIMATES WERE USED FOR ELLIPTICAL PIPES

IMPROVEMENTS STORMWATER/ STREETSCAPE COCOA BEACH, FLORIDA FOR: CITY OF COCOA BEACH MINUTEMEN **U** 8 LEGC

AL MATERIALS Ō

MILLER Central Florida Office: 631 S. Writter Park, Flor 407-629-6880 - F. 13-00191

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- 120 YOUT BRANCH CROUTS, WHERE THE LENGTH OF CROUT CONDUCTORS COMPLETE FROM CROUT BREAKER IN SOURCE PANEL TO ANY DEVICE ON THE CROUT IS 0-100 FEET FROM THE PANEL, ARE TO HAVE JET MEMBAIN BRANCH CIRCUIT WIRING THROUGHOUT CIRCUIT. (CONDUT SIZE PER SPECIFICATION AND NEC).
- 120 YOLT BRANCH CHICUITS, WHERE THE LENGTH OF CIRCUIT CONDUCTORS COMPLETE FROM CIRCUIT
 BREAKER IN SOURCE PANEL TO ANY DEVICE ON THE CIRCUIT IS 101-175 FEET FROM THE PANEL,
 ARE TO HAVE, \$10 MANIAUM BRANCH CIRCUIT WIREN HOMERUN (3/4°L) FROM PANEL CIRCUIT
 BREAKER TO FIRST DOVEC AND \$12 BRANCH CIRCUIT WIREN FROMOGROUP FOR CIRCUIT
 CIRCUIT. (CONDUIT SIZE PER SPECIFICATION AND NEC). FIRST 75 FEET OF COMBINED HOMERUN AND BRANCH CIRCUIT TO BE MINIMUM \$10 WIRE. (3/4°C).
- 3. 120 VOLT BRANCH CROUTS, WHERE THE LENGTH OF CROUT CONDUCTORS COMPLETE FROM CROUT BREWER IN SOURCE PANEL TO ANY DEVICE ON THE CROCUT IS 170—225 FEET FROM THE PANEL, ARE TO HAVE \$10 MIRBLAND BRANCH CROCKIN WERSHC HOMERUM (3/4°C.) FROM PANEL CROCKIT BREWER TO FIRST DEVICE AND \$10 BRANCH CROCKIT WIRRIG THROUGHOUT THE REMANDER OF THE
- 4. 120 YOLT BRANCH CRICAITS, WHERE THE LENGTH OF CIRCUIT CONDUCTORS COMPLETE FROM CRICAIT BREAKER IN SOURCE PANEL TO ANY DEVICE ON THE CIRCUIT IS 226 FEET OR MORE FROM THE PANEL, ARE TO HAVE (80 MINIMUM BRANCH CIRCUIT WRING HOMERUM (1°C.) FROM PANEL CIRCUIT BREAKER TO FREST DEVICE AND §10 BRANCH CIRCUIT WRING PROUGHOUT THE REMANDER OF THE CIRCUIT (3/4°C.). FREST 125 FEET OF COMBINED HOMERUM AND BRANCH CIRCUIT TO BE MINIMUM AN USE OF THE CIRCUIT TO BE MINIMUM.
- NO MULTI-WIRE BRANCH CIRCUITS ARE TO BE USED. EACH CIRCUIT IS TO HAVE SEPARATE INDIVIDUAL NEUTRAL.
- 6. VISIT AND CAREFULLY EXAMINE THOSE PORTIONS OF THE SITE AFFECTED BY THIS WORK BEFORE SHIBATTING PROPOSALS, SO AS TO BECOME FAMILIAR WITH DISTING CONDITIONS AND DEFOULTES THAN WILL AFFECT DESIZITION OF THE WORK. SUBMISSION OF PROPOSAL WILL BE CONSTITUED AS EMBODICE THAT SUCH EXAMINION HAS BEEN MAD LATER CLARES FOR LUGOR, EQUIPMENT OR MATERIALS REQUIRED BECOMES DECONATION HAS TOR LUGOR, EQUIPMENT OR MATERIALS REQUIRED BECOMES DECONATION.
- 7. READ SPECIFICATIONS.
- B. SEE RISER DIAGRAMS AND BUILDING PLANS.
- 9. ALL EMPTY CONDUITS ARE TO HAVE PULL-STRINGS PROVIDED IN THEM.
- 10. WHERE CONDUIT ROUTING IS SHOWN, THE CONDUITS ARE SHOWN FOR DIAGRAMMATIC PURPOSES AND ARE NOT NECESSARLY REPRESENTATIVE OF EXACT PLACEMENT. THE ROUTINGS SHOWN ARE PROPOSED CONDUIT ROUTINGS. TO ORTHOCON TO COORDINATE ALL ROUTING WITH OTHER TRADES PROR IT DIS DIC CONTRACTOR TO FIELD VERSEY EXISTING CONDUITIONS AND ROUTING OF CONDUIT PROOF TO BID. CONTRACTOR IS RESPONSIBLE FOR RELOCATING CONDUIT FROM THE PROPOSED ROUTING SHOWN TO THE ROUTINGS AND APPLICABLE CODES, COMPLETE WITH ALL COORDINATION AND EXISTING CONDITIONS TAKEN INTO ACCOUNT.
- 11. SPUCES IN POWER AND LICHTING OUTLET BOXES SHALL BE KEPT TO A MINIMUM, PULL CONDUCTORS THROUGH TO DEVICES, EDUPMENT CABINETS/PANELBOARDS. SPLCING IN WIREWAYS IS NOT PERMITTED UNLESS SPECIAL WRITTEN PERMISSION IS GRAVITED BY A/E.
- NO SPUCES SHALL BE MADE IN UNDERGROUND (OR FLUSH) IN-GRADE PULL BOXES UNLESS ENGINEER HAS GIVEN SPECIFIC ACCEPTANCE.
- 13. CONTRACTOR SHALL INCLIDE IN HIS BID THE TRANSPORT AND DISPOSAL OR RECYCLING OF ALL WASTE MATERIALS EDHERATED BY THIS PROJECT IN ACCORDANCE WITH ALL RULES, REDILATIONS AND CUIDELINES APPLICABLE. CONTRACTOR SHALL COMPLY FALLY WITH FLOREDS ATTITUTE 403.7188 REPARRISM DISPOSAL OF CONTRACTOR SHALL COMPLY FALLY WITH FLOREDS ATTITUTE 403.7188 SHALL BE TRANSPORTED AND DISPOSED OF A MCORDANICE WITH ALL DEP AND EPA GUIDELINES
- 14. EXSTING CONDITIONS AND UTILITIES INDICATED ARE TAKEN FROM EXISTING CONSTRUCTION DOCUMENTS, WAROUS SURVEYS, AND FIELD INVESTIGATIONS. IT IS TO BE UNDESTROOD THAT UNFORESEEN CONDITIONS PROBLEM? DOST AND NEW WORK MAY NOT BE FIELD LICATED EXACTLY AS SHOWN ON THE DIVININGS. COOPERATION WITH OTHER TRAVES IN ROUTINE AND/ORD RUPTIES AS OFFICE BY THE ARCHITECT/BURGREEN MAY BE RECESSEAVE AND IT IS INTERDED THAT SUCH DEVATIONS SHOT BY THE ARCHITECT/BURGREEN MAY BE RECESSEAVE AND IT IS INTERDED THAT SUCH DEVATIONS SHOT BE CONDITIONED A PART OF THIS CONTRACT. IT IS ALSO UNDESTROOD THAT THE PLANS ARE NOT COMPLETELY TO SCALE. THIS CONTRACT OR STO FIELD VEREY DIMENSIONS OF ALL SITE UTILITIES, ETC., PRIOR TO BID AND INCLIDE ANY DEVALUTIONS IN THE CONTRACT.
- 15. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL DISTING UTILITIES WHETHER SHOWN ON PLANS OR NOT AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL BEAR ALL EXPENSE FOR REPART OR REPACCIBENT OF UTILITIES OR OTHER PROPERTY DAMAGED BY OPENTIONS IN COMMINITION WITH THE COMPLETION OF THIS WORK. THE CONTRACTOR SHALL LOCATE ALL UTILITIES (BOTH MONIMY AND UNIQUIDIN) IN AREA OF WORK PROR TO EXCANDION WITH THE USE OF ELECTRONIC LOCATION, TRACET DRIVES AND EQUIPMENT SUITABLE FOR SUCH USE, REPLECT LOCATED UTILITIES ON AS-BUILT DOCUMENTS.
- REMOVE EXISTING POWER, LIGHTING, SYSTEMS, MATERIAL AND EQUIPMENT WHICH ARE MADE OBSOLETE OR WHICH INTERFERE WITH THE CONSTRUCTION OF THE PROJECT.
- REINSTALL ANY SUCH POWER, LIGHTING, SYSTEMS, MATERIALS AND EQUIPMENT WHICH ARE REQUIRED TO REMAIN ACTIVE FOR THE FACILITY TO BE FULLY FUNCTIONAL.
- 18. ALL EXISTING ELECTRICAL IS NOT SHOWN. IT IS THE CONTRACTORS RESPONSIBILITY TO RECOME FAMILIAR WITH ALL EXISTING CONDITIONS PROOR TO BIO, AND INCLUDE IN HIS BIO THE REMOVAL OF ALL ELECTRICAL EQUIPMENT, WIRE, COMDUIT, DENOES, FIXTURES, ETC. THAT IS NOT BEING REUSED, BHOCK TO ITS SOURCE.
- ALL RECEPTACLES, DEVICES AND EQUIPMENT NOT SHOWN, AND IN AREAS OUTSIDE OF REMODELING SHALL REMAIN ACTIVE UNLESS OTHERWISE NOTED. FURNISH AND INSTALL ACCESSIBLE JUNCTION BOXES AND REFORM DESITING ORGALITS AS REQUIRED TO MAINTAIN CIRCUIT CONTINUITY TO RECEPTACLES, DEVICES AND EQUIPMENT REMAINING.
- ALL CONDUIT TO BE CONCEALED UNLESS IMPOSSIBLE DUE TO DUSTING CONDITIONS (I.E. IMPOSSIBLE UNDERGROUND RUNS).
- 21. ALL NEW DEVICES TO BE FLUSH MOUNTED UNLESS SPECIFICALLY NOTED OTHERWISE.
- 22. ALL OUTLET BOXES WHERE FIXTURES OR DEVICES ARE REMOVED SHALL BE REMOVED. IF OUTLET BOX MUST REBAIN TO MANTAIN COMMINITY OF CIRCUITRY, AN APPROPRIATE ACCESSIBLE BLANK PLATE SHALL BE RESTALLED WITH FIRSH TO MATCH DUSTRING OR HOW, WHERE APPLICABLE.
- 24. NEW UNDERGROUND RACEWAYS ARE TO BE HAND DUG. ROUTE UNDER EXISTING WALKWAYS AS REDUIRED BY OWNER.
- 25. ALL ITEMS REMOVED AND NOT RE-USED SHALL BE IMMEDIATELY TURNED OVER TO OWNER AS THEY ARE IMMOE ANALMELE BY REMOVATION. REMOVE ITEMS FROM JOB SITE AND DELIVER TO OWNERS STORAGE LOCATION(S) AS DIRECTED BY PROJECT MANAGER. DISCARD COMPLETE ITEMS WHICH OWNER ELECTS TO REFUSE.

		SYMBOL LEGEND			
SYMBOL	DESCRIPTION	DESIGN SELECTION	APPROVED SUBSTITUTION	APPROVED SUBSTITUTION	REWARKS
궁	Pole with mounting arm and cut—off Light Foxture. Boxes indicate number of foxtures and orientation	SEE FIXTURE SCHEDULE			
0	BOLLARD OR POST LIGHT FIXTURE	SEE FOXTURE SCHEDULE			
Φ	PHOTO CELL	TORK (SEE DETAIL)	PARAGON (SEE DETAIL)	INTERMATIC (SEE DETAIL)	
æ	DISCONNECT SWITCH, SIZE AS NOTED	SQUARE "D"	G.E.	SIEMENS	g, i
-	120/208V BRANCH CIRCUIT PANELBOARD SURFACE MOUNTED	SQUARE "D"	G.E.	SIEMENS	i
/	BRANCH CIRCUIT CONDUIT CONCEALED ABOVE CEILING OR IN WALL SLASH MARKS INDICATE MUMBER OF COMDUCTORS (CROUND MIRE NOT SHOWN). TWO COMDUCTORS PLUS (CROUND REQUIRED (UNLESS OTHERWISE NOTED OR MARKED)				
$\overline{\wedge}$	HOME RUN WIRING. ONE CIRCUIT PER ARROW HEAD				

- 1) ALL DEVICES TO BE GREY WITH SMOOTH METAL \$302 S.S. PLATES UNLESS OTHERWISE NOTED.
- 2) DASHED ITEM DENOTES "EXISTING".
- 3) "R" BY DEVICE DENOTES EXISTING TO BE REMOVED COMPLETELY.
- 4) "H" BY DEVICE DENOTES DEVICE TO BE MOUNTED HORIZONTALLY.
- 5) MOUNT SWITCHES AT 48" AFF TO TOP.
- 6) SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- 7) ALL ITEMS NOTED ON THE LEGENOS DO NOT NECESSARILY APPEAR ON PLANS.
- a) U.L. LISTED FOR WET LOCATION IN CLOSED POSITION.
- b) SUPPORT DUTLET BOX FROM STRUCTURE WITH (1) 3/8" ALL THREADS MINIMUM. BOXES LARGER THAN 25 SQUARE INCHES SHALL BE SUPPORTED WITH (2) 3/8" ALL THREADS MINIMUM.
- c) U.L. LISTED FOR WET LOCATION IN OPEN POSITION WITH ATTACHMENT PLUG INSERTED.
- d) JUNCTION/OUTLET BOX SHALL BE SIZED AS REQUIRED FOR CONDUCTOR/DEVICE FILL PER N.E.C.
- e) THREADED CONDUIT HUBS SHALL BE SIZED AND CONFIGURED AS REQUIRED FOR APPLICATION.
- If within 30 Miles of the coast line, copper free cast aluminum outlet boxes shall be used for exterior applications.
- g) promde kindorf into, rack for free standing applications. Kindorf shall be puc coated for exterior applications. All cut ends are to be sealed.
- Mantain Working Clearances in Strict accordance with N.E.C. Coordinate exact location of Couphent with all discremes (i.e. Structural, Heac, Plumbing, Fire Protection, Kitchen, Millwork, etc.) Pror to Rough—in to Mantain Clearances.
- j) OUTLET BOX SHALL BE SIZED PER SYSTEM INSTALLER REQUIREMENTS.
- Coordinate the telephone/data/systems device, wire, cable, etc with the tele/data/systems specifications, grainings, and/or symbol legends.
- [PROVIDE 1°C. TO CEILING SPACE] [PROVIDE 1°C. TO [TTB] [STB] [CTB] [PROVIDE CONDUIT AS CALLED FOR ON SYSTEMS PLANS/SYMBOL LEGENDS)





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IMPROVEMENTS

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STORMWATER, COCOA B COCOA B FOR: CITY

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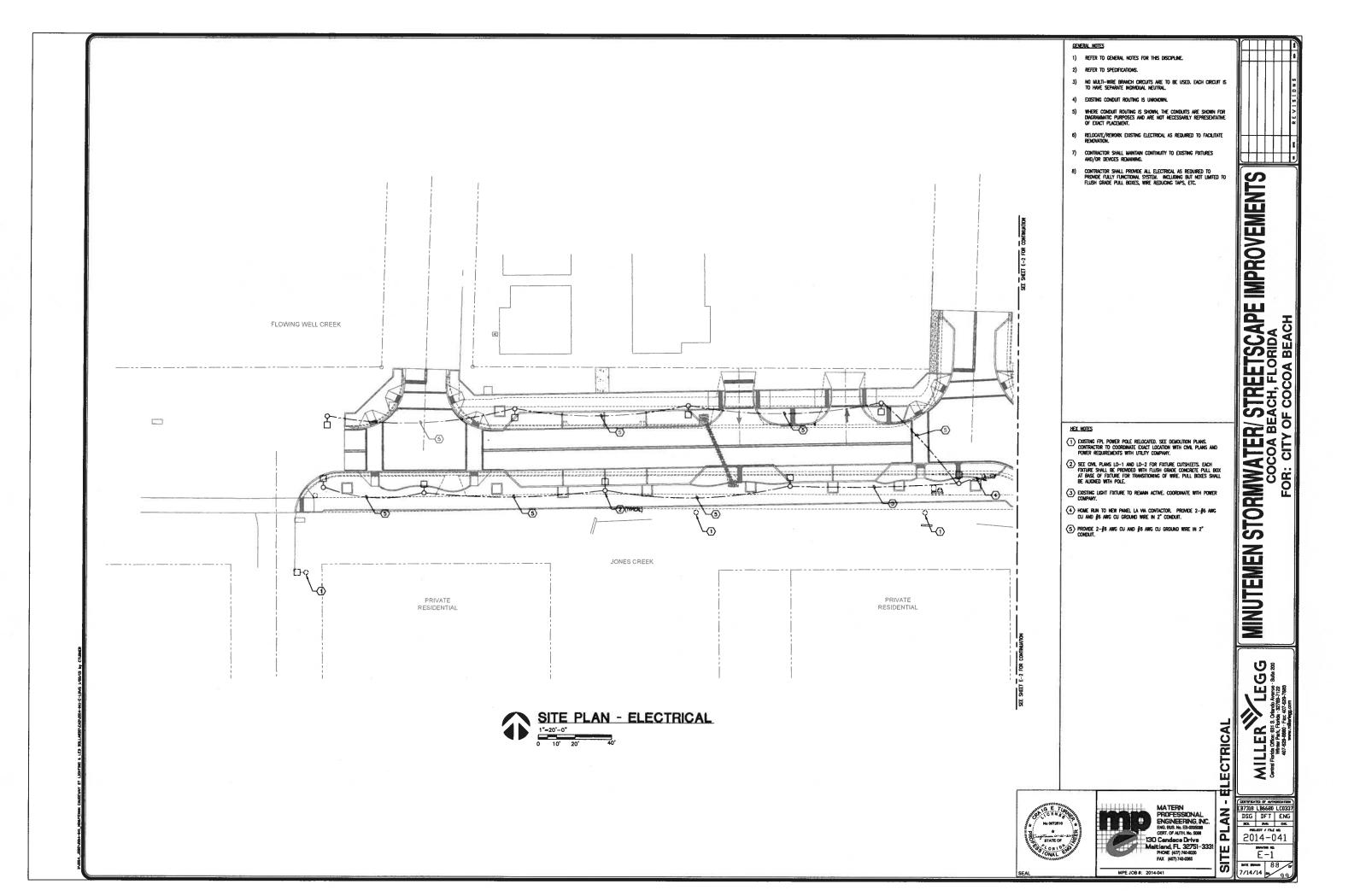
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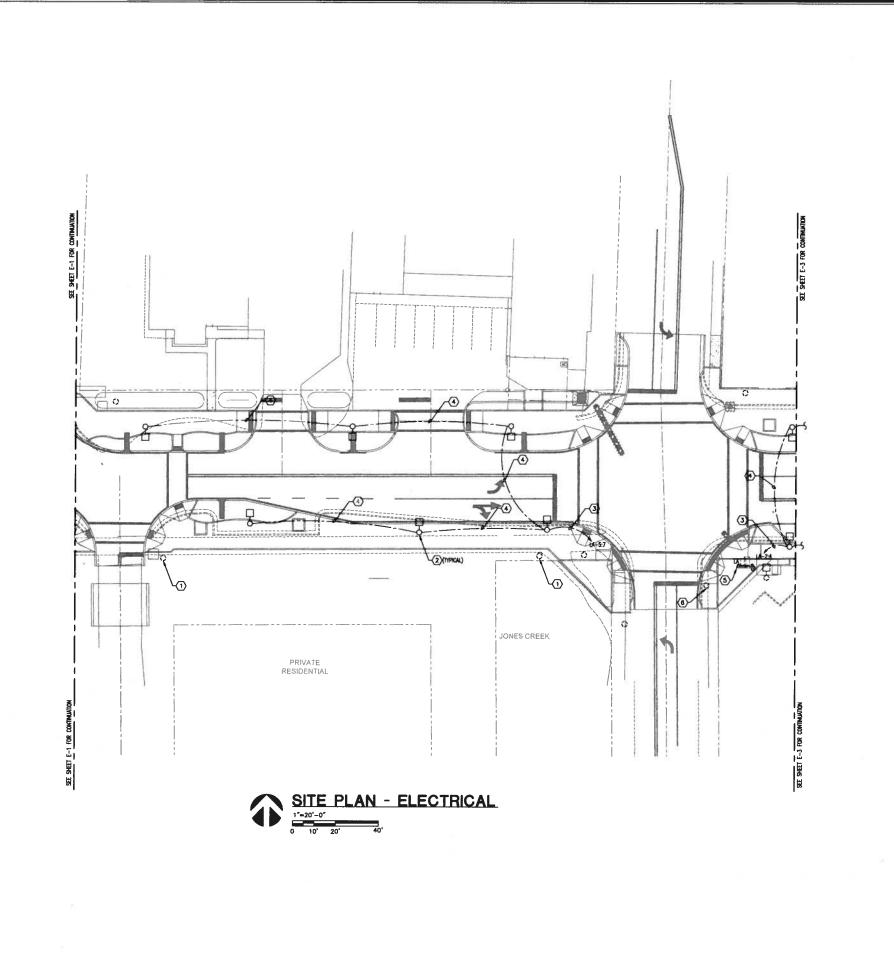
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MPE JOB#: 2014-041





- 1) REFER TO GENERAL NOTES FOR THIS DISCIPLINE.
- 2) REFER TO SPECIFICATIONS.
- EXISTING CONDUIT ROUTING IS UNKNOWN.
- RELOCATE/REWORK EXISTING ELECTRICAL AS REQUIRED TO FACILITATE
 REPORTATION
- CONTRACTOR SHALL MAINTAIN CONTINUITY TO EXISTING FIXTURES AND/OR DEVICES REMAINING.
- PROVIDE FULLY FUNCTIONAL SYSTEM. INCLUDING BUT NOT LIMITED TO FLUSH GRADE PULL BOXES, WIRE REDUCING TAPS, ETC.
- 8) EXSTING LIGHT FIXTURES SHALL EITHER REMAIN ACTIVE LIMITL NEW STREET LIGHTING IS IN PLACE OR CONTRACTOR SHALL PROVIDE TEMPORARY LIGHTING TO MEET MINIMUM FOOT REQUIREMENTS UNTIL NEW LIGHTING IS FULLY FUNCTIONAL.

HEX NOTES

- NEW FPL UTILITY POLE LOCATION, COORDINATE WITH CIVIL DRAWINGS AND UTILITY COMPANY FOR EXACT REQUIREMENTS.
- (2) SEE CML PLANS LD-1 AND LD-2 FOR FIXTURE CUTSHEETS, EACH FXTURE SHALL BE PROMODED WITH FLUSH GRADE CONCRETE PULL BOX AT BMS OF FXTURE FOR TRANSFRONRIG OF WIRE, PULL BOXES SHALL BE ALKNED WITH POLE.
- (3) HOMERUM TO NEW PANEL LA VIA CONTACTOR. PROVIDE 2-\$6 AWG CU AND \$6 AWG CU GROUND WIRE IN 2" CONDUIT.
- 4) PROVIDE 2-#6 AING CU AND #6 AING GROUND WIRE 2" CONDUST.
- (5) LOCATION OF NEW FPL SERVICE FOR NEW CALSEWAY LIGHTING FIXTURES. REFER TO RISSER DIAGRAM ON SHEET E-S. EXTEND DOSTING ROCK AS REQUIRED TO ACCOMMONIE NEW PAPEL METER, CONTACTOR, WARE, TRANSITION BOX, TIMECLOCK, AND PHOTOCELL
- (B) ASSUMED SERVICE ENTRANCE LOCATION FROM FPL. CONTRACTOR TO VERRY PRIOR TO BID.

LEGG Mod Avenue - State 200 77-625-7122 77-625-7122 MILLER
Central Fronta Office: 631 & Oderodo Av
When Plant, Fronta : 27755407-428-2805 - Fire 407-459

MINUTEMEN

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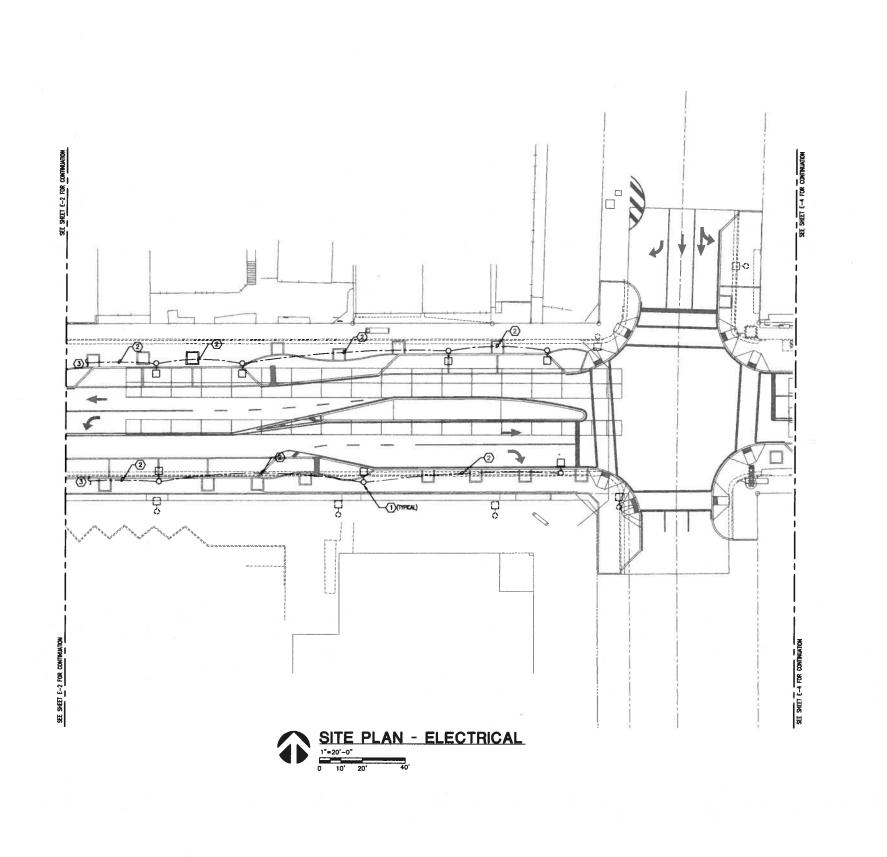
STORMWATER/ STREETSCAPE IMPROVEMENT COCOA BEACH, FLORIDA FOR: CITY OF COCOA BEACH





MATERN
PROFESSIONAL
BISINEERING, INC.
Ed. BUS. No. EB-000509
CERT. OF AUTH No. 5098
130 Cendece Drive
Maittland, FL. 32751-3331
PRIVALE (40)740-0005
FAX. (407)740-0005

PLAN - ELECTRICAL CENTRATE OF AUTOMORPHISM
E87318 LB6680 LC0337
DSG DFT ENG
182 NN OFF
PRESET / FAL NO
2014-041 SITE E-2 7/14/14 29 99



GENERAL NOTES

- 1) REFER TO GENERAL NOTES FOR THIS DISCIPLINE.
- 2) REFER TO SPECIFICATIONS.
- 4) EXISTING CONDUST ROUTING IS UNKNOWN.
- RELOCATE/REWORK EXISTING ELECTRICAL AS REQUIRED TO FACILITATE REMONATION.
- PROVIDE FULLY FUNCTIONAL SYSTEM. INCLUDING BUT NOT LIMITED TO FLUSH GRADE PULL BOXES, WIRE REDUCING TAPS, ETC.
- Existing light fatures shall either remain active until new street lighting is in place or contractor shall provide temporary lighting to meet minimum foot requirements until New lighting is fully princtional.

HEX NOTES

- (1) SEE CML PLANS LD-1 AND LD-2 FOR FIXTURE CATSHEETS, EACH FORURE SHALL BE PROVIDED WITH FILISH GRADE CONCRETE PULL BOX AT BASE OF FIXTURE FOR TRANSTROMANG OF WIRE. PULL BOXES SHALL BE ALCRED WITH FOLE.
- $\ensuremath{\bigcirc}$ Provide 2-#6 aing cu and #6 aing ground wire in 2° conduit.
- 3) PROVIDE 2-§6 AING CU AND §8 AING CU GROUND WIRE IN 2° CONDUIT. REFER TO ADMICENT SHEET FOR CONTINUATION OF CIRCUIT.

MILLER LEGG
Certal Portst Office 1818. Cherch Armers - Subs 200
When Park, Forder - S778-772.
407-428-980 F. Fee, 407-428-7803

MINUTEMEN STORMWATER/ STREETSCAPE IMPROVEMENTS COCOA BEACH, FLORIDA FOR: CITY OF COCOA BEACH



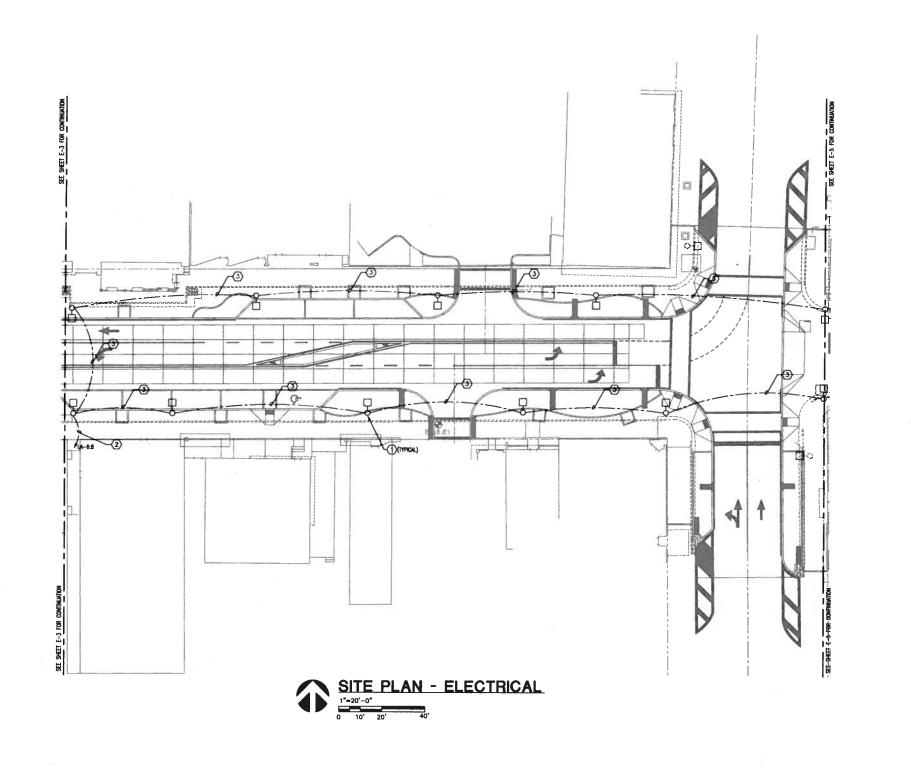


MATERN
PROFESSIONAL
ENGINEERING, INC.
ENG. BUS. No. EB-000508
CERT. OF AUTH No. 5086
130 Candeca Drive
Maittland, FL. 32751-3331
PROBLE (W) 740-5005
FAX. (407) 740-5005

MPE JOB #: 2014-041

SITE PLAN - ELECTRICAL COTTPENTS OF AUTORISATION
E87318 LB6680 LC0337
DSG DFT ENG
ERA PAR ON
MARKET / FALL SEL
2014-041 2004/201 NL E-3 2007/201 NL E-3 2017/2014/14 20 99





- 1) REFER TO GENERAL NOTES FOR THIS DISCIPLINE.
- NO MULTI-WIRE BRANCH CIRCUITS ARE TO BE USED. EACH CIRCUIT IS TO HAVE SEPARATE INDIVIDUAL NEUTRAL.

- RELOCATE/REWORK EXISTING ELECTRICAL AS REQUIRED TO FACILITATE RENOVATION.
- CONTRACTOR SHALL MAINTAIN CONTINUITY TO EXISTING FIXTURES AND/OR DEVICES REMAINING.
- EXISTING LIGHT FOTURES SHALL EITHER REMAIN ACTIVE UNTIL NEW STREET LIGHTING IS IN PLACE OR CONTRACTOR SHALL PROVIDE TEMPORARY LIGHTING TO MEET MANNUM FOOT REQUIREMENTS UNTIL NEW LIGHTING IS FULLY PUNCTIONAL.

HEX NOTES

- SEE CIVIL PLANS LD-1 AND LD-2 FOR FIXTURE CLITSHEETS. EACH FORUSE SHALL BE PROVIDED WITH FLUSH GRADE CONCRETE PULL BOX AT BISS OF FORUSE FOR TRANSMONING OF WIRE. PULL BOXES SHALL BE ALIGHED WITH POLE.
- (2) Homerun to Panel La via Contactor. Provide 2-#4 aing cu and #4 aing cu ground wire in 2" conduit.
- 3 PROVIDE 2-#6 AWG CU AND #6 AWG CU GROUND WIRE IN 2"

MILLER LEGG Cortra Froits Office 631 & Cherch Avenue : chile 200 Where Pert, Fronts : 2778-7722 407-250-3600 - For 447-459-7823 PLAN - ELECTRICAL

MINUTEMEN





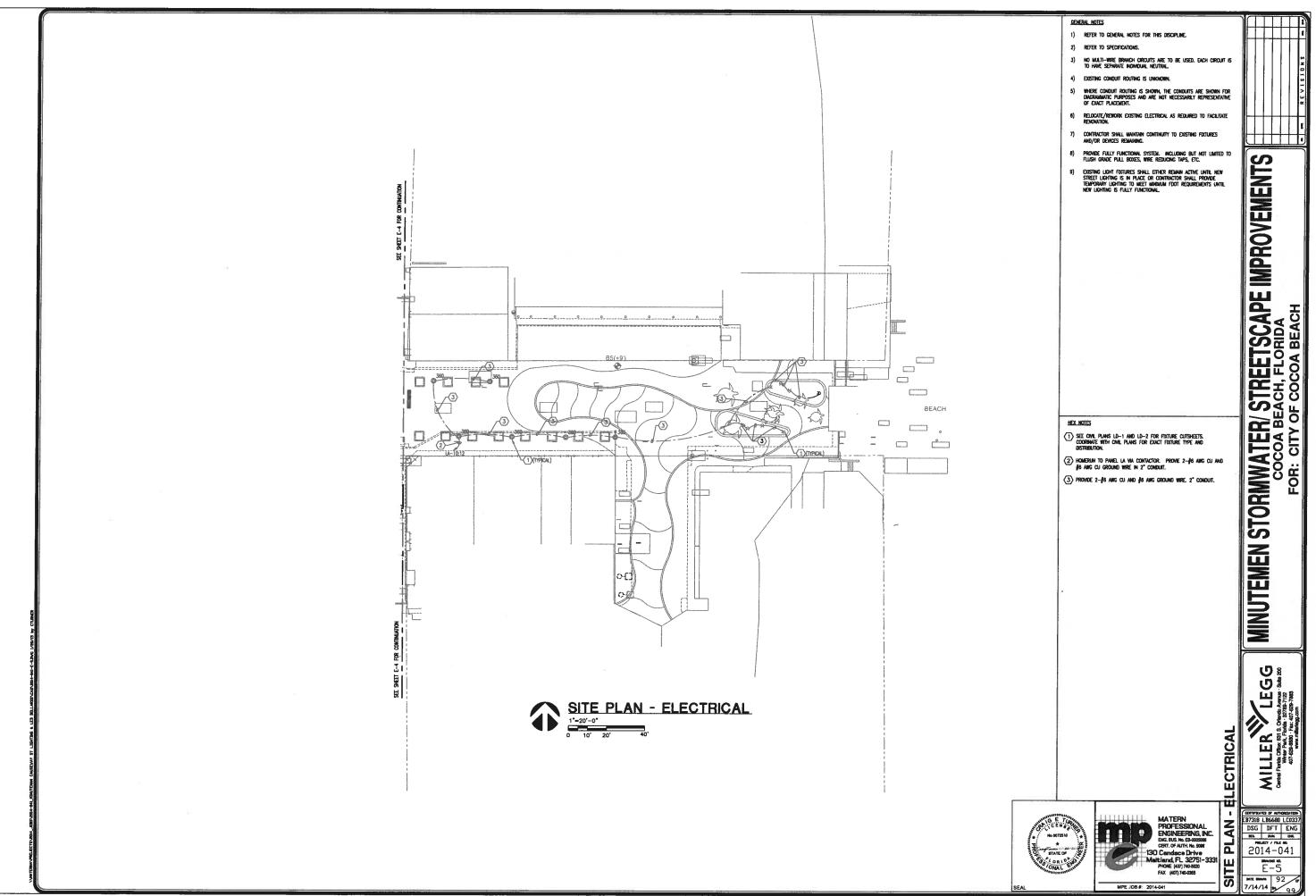
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PROFESSIONAL
ENGINEERING, INC.
EM. USIN. ED-0000000
GORT. OF AUTH IN. 5008
130 Cendidace Drive
Mattland, FL. 32751-3331
PHONE LUDY 740-5020
FAX. (407) 740-5020

SITE MPE JOB #: 2014-041

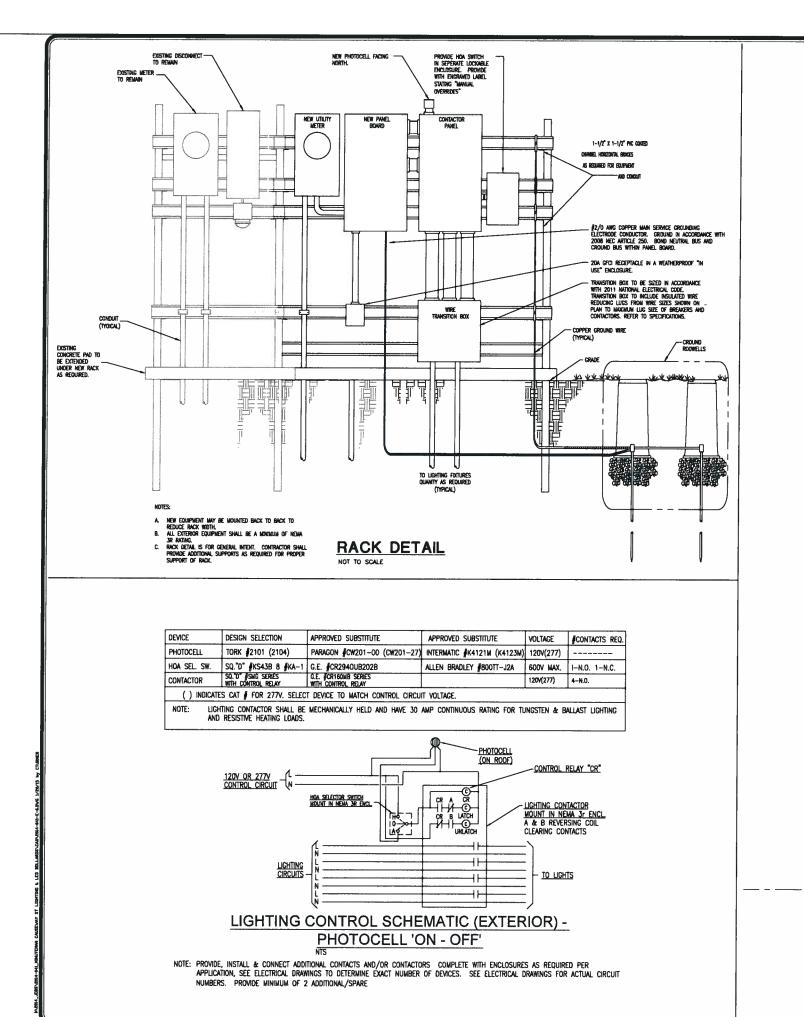
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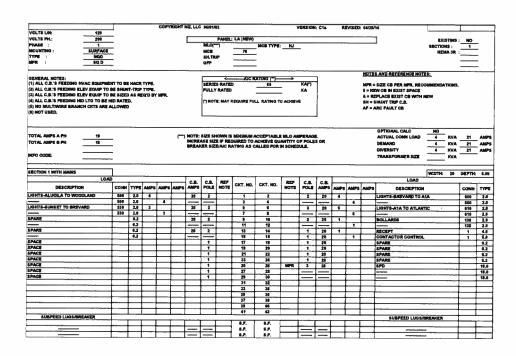
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DSG DFT ENG
REAL PAR DIAL
PRIMATE / FRA 80
2014-041

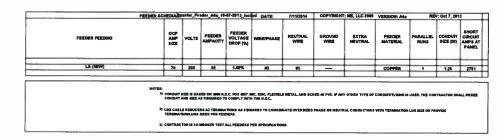
STORMWATER/ STREETSCAPE IMPROVEMENTS COCOA BEACH, FLORIDA FOR: CITY OF COCOA BEACH

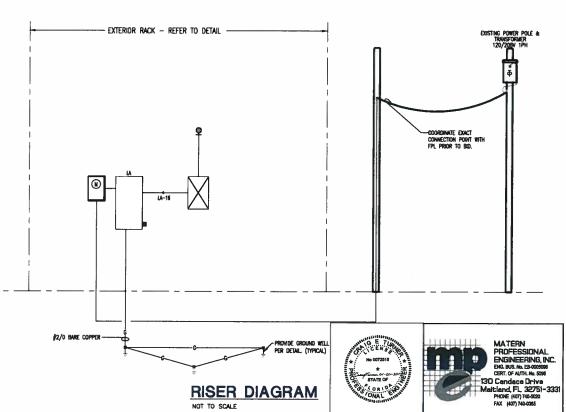












RISER DIAGRAM

NOT TO SCALE

MINUTEMEN ELECTRIC Ū § MILLER Control Florida Citizen 651 & Ostrodo A. Wiston Petr, Boltonio activos 641 & Ostrodo A. Wiston Petr, Florida activos 641 & Ostrodo A. ETAILS

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IMPROVEMENTS

STORMWATER/ STREETSCAPE COCOA BEACH, FLORIDA FOR: CITY OF COCOA BEACH

ERTHEATER BY ANTIGEZATEN EB7318 LB6680 LC0337
DSG DFT ENG
BEX BYIL GIS.
PREAST / File 88.
2014-041

S

MPE JOB #: 2014-041

CHEDUL E-6 7/14/14 BL 90

VOLTAGE DROP MANUAL CALCULATION-MPE

PANEL	VOLTAGE	PHASE	CB AMPS	% AMPS TO USE FOR CALCS	LOAD POWER FACTOR %	FDR SIZE	CONDUIT MATERIAL	((R	x	cos))		(XL	x	SIN)	x	(L/1000)	x	AMPS	RUNS	x	1.7321	-	VOLTS	% VOLT DROP	Total Voltage Drop
LA-1:3	208	1	20	23.8	100	#4	PVC	0.3100	x	1	1	0.0480	x		x	375	x	5	1	x	2.0000	-	1.11	0.53%	0,53%
A:BRANCH	208	1	20	10.58	100	#6	PVC	0.4900	X	1	+	0.0510	x		x	85	X	2	1	X	2,0000		0.20	0.09%	0.63%
BRANCH	208	1	20	7.94	100	#6	PVC	0.4900	X	1	+	0.0510	x		х	100	X	2	1	X	2,0000	-	0.18	0.07%	0.70%
BRANCH	208	1	20	5.28	100	#6	PVC	0.4900	X	1	+	0.0510	x		X	100	X	1	1	X	2.0000	-	0.10	0.05%	0.75%
BRANCH	208	1	20	2.64	100	#6	PVC	0.4900	X	1	+	0.0510	x		X	55	х	1	1	X	2.0000	-	0.03	0.01%	0.77%
BRANCH	208	1	20	10.58	100	#6	PVC	0.4900	X	1	+	0.0510	x		x	60	х	2	1	x	2,0000	-	0.12	0.08%	0.82%
BRANCH	208	1	20	7.94	100	#6	PVC	0.4900	X	1	+	0.0510	x		x	105	x	2	1	X	2.0000	-	0.18	0.08%	0.90%
BRANCH	208	1	20	5.28	100	#6	PVC	0.4900	х	1	+	0.0510	x		x	95	х	1	1	x	2.0000	-	0.10	0.05%	0.95%
BRANCH	208	1	20	2.64	100	#6	PVC	0.4900	X	1	+	0.0510	x		x	105	x	1	1	x	2.0000	-	0.08	0.03%	0.98%
LA-5;7	205	. 1	20	15.87	100	#6	PVC	0.4900	х	-1	+	0.0810	X		x	115	X	3	1	X	2.0000	-	0,36	0.17%	0.17%
BRANCH	208	1	20	7.94	100	#6	PVC	0.4900	х	1	+	0.0510	x		х	50	X	2	1	х	2.0000	-	0.09	0.04%	0.22%
BRANCH	208	1	20	8.28	100	#6	PVC	0.4900	X	1	+	0.0510	x		x	75	X	1	1	x	2.0000	-	0.08	0.04%	0.25%
BRANCH	208	1	20	2.84	100	#6	PVC	0.4900	X	1	+	0.0510	x		х	100	X	1	1	х	2.0000	-	0.05	0.02%	0.28%
BRANCH	208	1	20	5.28	100	#6	PVC	0.4900	X	1	+	0.0510	x		х	80	x	1	1	X	2.0000	-	0.08	0.03%	0.31%
BRANCH	208	1	20	2.64	100	#6	PVC	0.4900	X	1	+	0.0510	х		X	80	X	1	1	X	2,0000	-	0.04	0.02%	0.33%
		- 7			7-45		6 150		X	1000	+	- 1	х		x	1	X			¥					1

VOLTAGE DROP MANUAL CALCULATION-MPE

PANEL	VOLTAGE	PHASE	CB AMPS	% AMP8 TO USE FOR CALC8	LOAD POWER FACTOR %	FDR SIZE	CONDUIT	((R	x	cos))	٠	(XL	x	SIN)	×	(L/1000)	×	AMPS	RUNS	x	1.7321	-	VOLTS	% VOLT DROP	Total Voltage Drop
LA-2:4	208	1	20	23.8	100	#6	PVC	0.4900	X	1	+	0.0510	х		x	40	х	5	1	x	2.0000	-	0.19	0.09%	0.09%
A:BRANCH	205	1	20	13.22	100	#6	PVC	0.4900	X	1	+	0.0510	х	1 10	X	60	X	3	1	x	2.0000		0.15	0.07%	0.18%
BRANCH	208	1	20	10.67	100	#6	PVC	0.4900	X	1	+	0.0510	X		X	45	X	2	1	X	2,0000	-	0.09	0.04%	0.21%
BRANCH	208	1	20	7.93	100	#6	PVC	0.4900	х	1	Ŧ	0.0510	X		X	40	х	2	1	x	2.0000	-	0.06	0.03%	0.24%
BRANCH	208	1	20	5.29	100	#6	PVC	0.4900	X	1	+	0.0510	X		X	100	X	1	1	X	2.0000		0.10	0.05%	0.29%
BRANCH	208	1	20	2.64	100	#6	PVC	0.4900	X	1	+	0.0510	x		X	50	х	1	1	X	2.0000	-	0.03	0.01%	0.30%
BRANCH	208	1	20	7.93	100	#6	PVC	0.4900	X	1	+	0.0510	x		x	45	X	2	- 1	x	2.0000		0.07	0.03%	0.34%
BRANCH	208	1	20	5.29	100	#6	PVC	0.4900	X	1	+	0.0510	x		x	100	x	1	1	x	2,0000	-	0.10	0.05%	0.38%
BRANCH	208	1	20	2.64	100	#6	PVC	0.4900	X	1	+	0.0510	х		X	100	х	1	1	X	2.0000	-	0.05	0.02%	0.41%
									X	Y	+		x	()	x	- 31 - 5	х		1	X					

VOLTAGE DROP MANUAL CALCULATION-MPE

MPE COPYRIGHT

PANEL	VOLTAGE	PHASE	CB AMPS	% AMPS TO USE FOR CALCS	LOAD POWER FACTOR %	FDR SIZE	CONDUIT MATERIAL	((R	x	CO8))	•	(XL	x	SIN)	x	(L/1000)	x	AMP8	RUNS	x	1.7321		VOLTS	% VOLT DROP	Total Voltage Orop
LA-2:4	208	1	20	23.8	100	#10	PVC	1.2000	х	1	+	0.0500	X		X	40	х	5	1	х	2.0000	-	0.46	0.22%	0.22%
A:BRANCH	208	1	20	13.22	100	#12	PVC	2.0000	X	1	+	0.0540	х		X	60	х	3	1	х	2.0000	-	0.63	0.31%	0.52%
BRANCH	208	1	20	10.57	100	#12	PVC	2.0000	X	1	+	0.0540	X		X	45	х	2	1	х	2.0000	=	0.38	0.18%	0.71%
BRANCH	208	1	20	7.93	100	#12	PVC	2.0000	X.	1	+	0.0540	X		x	40	х	2	1	х	2.0000	=	0.25	0.12%	0.83%
BRANCH	208	1	20	5.29	100	#12	PVC	2.0000	X	1	+	0.0540	х		x	100	X	1	1	х	2.0000	=	0.42	0.20%	1.03%
BRANCH	208	1	20	2.64	100	#12	PVC	2.0000	X	1	+	0.0540	x		X	50	х	1	1	х	2.0000	-	0,11	0.05%	1.08%
BRANCH	205	1	20	7.93	100	#12	PVC	2,0000	х	1	+	0.0540	X		X	45	х	2	1	х	2.0000	-	0,29	0.14%	1.22%
BRANCH	208	1	20	5,29	100	#12	PVC	2.0000	х	1	+	0.0540	x		х	100	х	1	1	х	2.0000	-	0.42	0.20%	1.42%
BRANCH	208	1	20	2.64	100	#12	PVC	2.0000	х	1	+	0.0540	х		х	100	x	1	1	х	2.0000	•	0.21	0.10%	1.63%
								Ι	x		+		x		х		X		1	х		-		1	

VOLTAGE DROP MANUAL CALCULATION-MPE

PANEL	VOLTAGE	PHASE	CB AMPS	% AMPS TO USE FOR CALCS	LOAD POWER FACTOR %	FDR SIZE	CONDUIT MATERIAL	((R	x	cos))	+	(XL	x	SIN)	×	(L/1000)	x	AMPS	RUNS	x	1.7321	-	VOLTS	% VOLT DROP	Total Voltage Drop
LA-6:8	205	1	20	29.1	100	#4	PVC	0.3100	х	1	+	0,0480	х		х	385	х	8	1	х	2.0000	-	1.39	0.87%	0.57%
BRANCH	208	1	20	13.23	100	#6	PVC	0.4900	X	1	+	0.0510	X		х	65	х	3	1	х	2.0000	=	0.14	0.07%	0.74%
BRANCH	208	1	20	10.58	100	#8	PVC	0.4900	X	1	+	0,0510	х		х	90	х	2	1	х	2.0000	=	0.19	0.09%	0.83%
BRANCH	208	1	20	7.94	100	#6	PVC	0.4900	х	1	+	0.0510	X		X	85	х	2	1	х	2.0000	=	0.13	0.06%	0.89%
BRANCH	208	1	20	5.29	100	#6	PVC	0.4900	х	1	+	0.0510	х		х	75	х	1	1	х	2.0000		80.0	0.04%	0.93%
BRANCH	208	1	20	2.65	100	#6	PVC	0.4900	X	1	+	0.0510	X		X	110	х	1	1	х	2.0000	-	0.06	0.03%	0.95%
BRANCH	208	1	20	13.23	100	#6	PVC	0.4900	X	1	+	0.0510	x		х	70	х	3	1	х	2,0000	-	0.18	0.09%	1.04%
BRANCH	208	1	20	10.58	100	#8	PVC	0.4900	х	1	1	0.0510	x		х	10	х	2	1	х	2,0000	-	0.02	0.01%	1.05%
BRANCH	208	1	20	7.94	100	#5	PVC	0.4900	X	1	+	0.0510	x		X	T5	х	2	1	х	2.0000	▔	0.12	0.06%	1.11%
BRANCH	208	1	20	5.29	100	#8	PVC	0.4900	х	1	+	0.0510	х		х	70	х	1	1	х	2.0000	-	0.07	0.03%	1.14%
BRANCH	208	1	20	2.65	100	#6	PVC	0.4900	х	1	+	0.0510	x		X	75	х	1	1	х	2.0000	-	0.04	0.02%	1.18%
								1	Y		1		¥		¥		¥		1	v		_			1

VOLTAGE OROP MANUAL CALCULATION-MPE

PANEL	VOLTAGE	PHASE	CB AMPS	% AMPS TO USE FOR CALCS	LOAD POWER FACTOR %	FDR SIZE	CONDUIT MATERIAL	((R	x	cos))	-	(XL	x	SIN)	x	(L/1000)	x	AMPS	RUNS	x	1.7321	-	VOLTS	% VOLT DROP	Total Voltage Drop
LA-10:12	208	1	20	5.62	100	#8	PVC	0,4900	X	1	+	0.0510	х		х	770	х	1	1	х	2.0000	-	1,00	0.48%	0.48%
BRANCH	208	1	20	1.2	100	#6	PVC	0.4900	X	1	+	0.0510	X		Х	30	х	0	1	х	2.0000	-	0.01	0.00%	0.48%
BRANCH	208	1	20	0.8	100	#8	PVC	0.4900	x	1_	+	0.0510	х		х	15	X	0	1	х	2.0000	-	0.00	0.00%	0.48%
BRANCH	208	1	20	4.81	100	#6	PVC	0.4900	X	1	+	0.0510	х		х	30	х	1	1	х	2.0000	-	0.03	0.01%	0.50%
BRANCH	208	1	20	4.21	100	#8	PVC	0.4900	X	1	+	0.0510	х		х	30	x	1	1	х	2.0000	-	0.02	0.01%	0.51%
BRANCH	208	1	20	3.51	100	#6	PVC	0.4900	х	1	1+	0.0510	х		х	25	X	1	1	х	2.0000	-	0.02	0.01%	0.52%
BRANCH	205	- 1	20	3	100	#6	PVC	0.4900	х	1	+	0.0510	X		х	60	x	1	1	X	2.0000	-	0.04	0.02%	0.54%
BRANCH	208	1	20	2.41	100	#6	PVC	0.4900	Х	1	+	0.0510	X		х	30	x	0	1	X	2.0000	-	0.01	0.01%	0.54%
BRANCH	208	1	20	1.2	100	#6	PVC	0.4900	х	1	+	0.0510	х		х	30	x	0	1	х	2.0000	-	0.01	0.00%	0.55%
BRANCH	208	1	20	0.8	100	#6	PVC	0.4900	х	1	+	0.0510	х		х	30	х	0	1	х	2.0000	-	0.00	0.00%	0.55%
BRANCH	208	1	20	0.6	100	#6	PVC	0.4900	Х	1	+	0.0510	х		х	30	x	0	1	х	2.0000	-	0.00	0.00%	0.55%
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VOLTAGE DROP CALCULATIONS

NOTES:

1. OLICILATIONS TABULATED USING PROPERTIARY MPE VOLTAGE DROP SOFTWARE VERSION 2, COPYRIGHT 2012

2. CALCILATIONS BASED ON ASSUMED COMOUNT ROUTING WITH 10X SAFETY FACTOR.

3. TOTAL VOLTAGE DROP IN ALL CASES IS BELOW 2011. HECK, POOT, AND 2010 FBC REQUIREMENTS.

4. SELECTED WHICE SIZE OF (IS IS PER TOUT STANDING AND NOT COMMINION PRACTICES.

CONDUIT SIZE SELECTION CH	ART	PER 2011 NEC TABLE 4													
CONDUIT TYPE	TRADE SIZE	TOTAL AREA SQIN	MAXIMUM CONDUIT FILL (40%)	CONDUCTOR TRADE SIZE	CONDUCTOR AREA	CONDUCTORS PER CONDUIT	TOTAL CONDUCTOR AREA	WIRE SELECTION < MAXIMUM CONDUIT FILL							
RIGID PVC SCHEDULE 40	7	3.291	1,3164	en en	0.027	3	0,081	YES							
	L			L			T								
RIGID PVC SCHEDULE 40	r	3.291	1,3184	#4	0.042	3	0,126	YES							

CONDUIT FILL CALCULATIONS

SERVICE CALCULATIONS AND FEEDERS



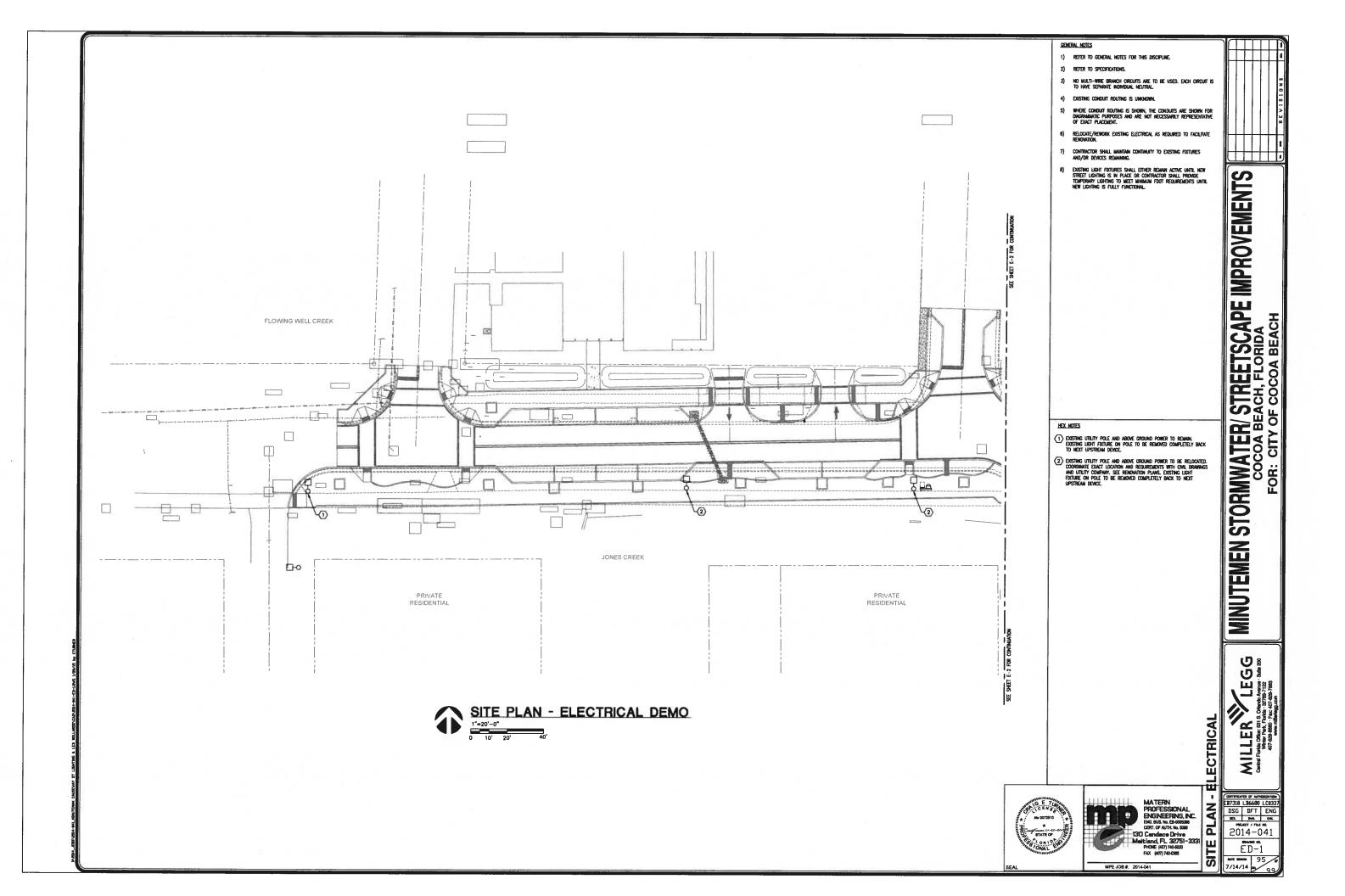


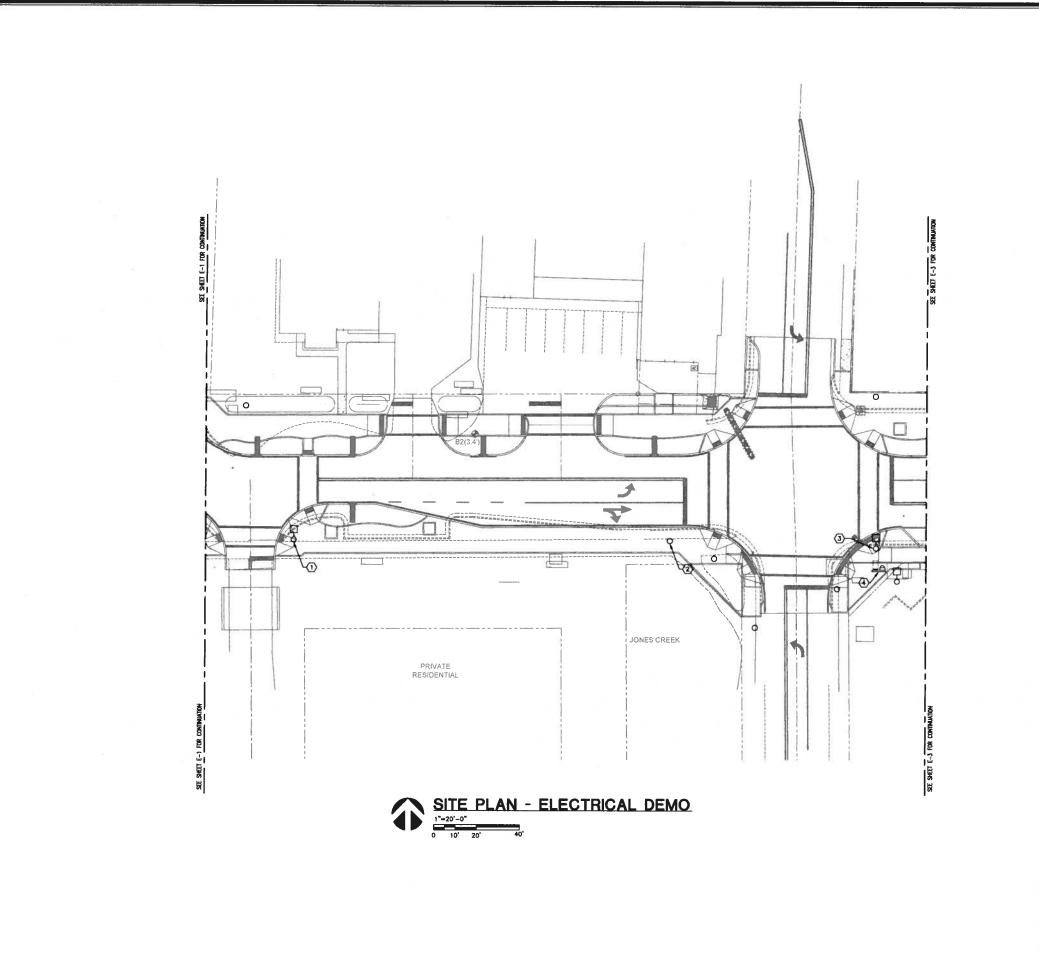
MPE JOB#: 2014-041

CALCULATIONS - ELECTRICAL

CALCULATION - CONTROL 3MTE 350000 94 7/14/14 35 99

MINUTEMEN STORMWATER/ STREETSCAPE IMPROVEMENTS COCOA BEACH, FLORIDA FOR: CITY OF COCOA BEACH MILLER LEGG Central Portics Offer 62 18. Central Avenue: Subs 200 Where Park Furdies 27789-7122 407 4259-800 1-54 450 450-7800





CENERAL NOTES

- 1) REFER TO GENERAL NOTES FOR THIS DISCIPLINE.
- 2) REFER TO SPECIFICATIONS.

- RELOCATE/REWORK EXISTING ELECTRICAL AS REQUIRED TO FACILITATE REMOVATION.
- CONTRACTOR SHALL MAINTAIN CONTINUITY TO EXISTING FIXTURES AND/OR DEVICES REMAINING.
- EXISTING LIGHT FIXTURES SHALL EITHER REMAIN ACTIVE UNTIL NEW STREET LIGHTING IS IN PLACE OR CONTRACTOR SHALL PROVIDE TEMPORARY LIGHTING TO MEET MINIMUM FOOT REQUIREMENTS UNTIL NEW LIGHTING IS FULLY FUNCTIONAL.

STORMWATER/ STREETSCAPE IMPROVEMENTS COCOA BEACH, FLORIDA FOR: CITY OF COCOA BEACH MINUTEMEN

EXISTING LITLLITY POLE AND ABOVE GROUND POWER TO REMAIN.

EXISTING LIGHT FIXTURE ON POLE TO BE REMOVED COMPLETELY BACK
TO NEXT UPSTREAM DEVICE.

HEX NOTES

(2) EOSTING UTILITY POLE AND ABOVE GROUND POWER TO BE RELOCATED.
COORDINATE EXACT LOCATION AND REQUIREMENTS WITH CYAL DRAWN'S
AND UTILITY COMPANY, SEE REMOVATION PLANS.

3) Existing lithity pole and light to be removed. Coordinate with CML drainings and power company for requirements.

(4) EXISTING RACK TO REMAIN. SEE RENOVATION PLANS FOR RACK EXTENSION.

MILLER LEGG
Central Fortes Offer 851 & Chanch Avenue - Subs 200
When Park Forter, 82778-7722
Adv. 2020-8800 - For, 447-629-7883 LECTRICAL



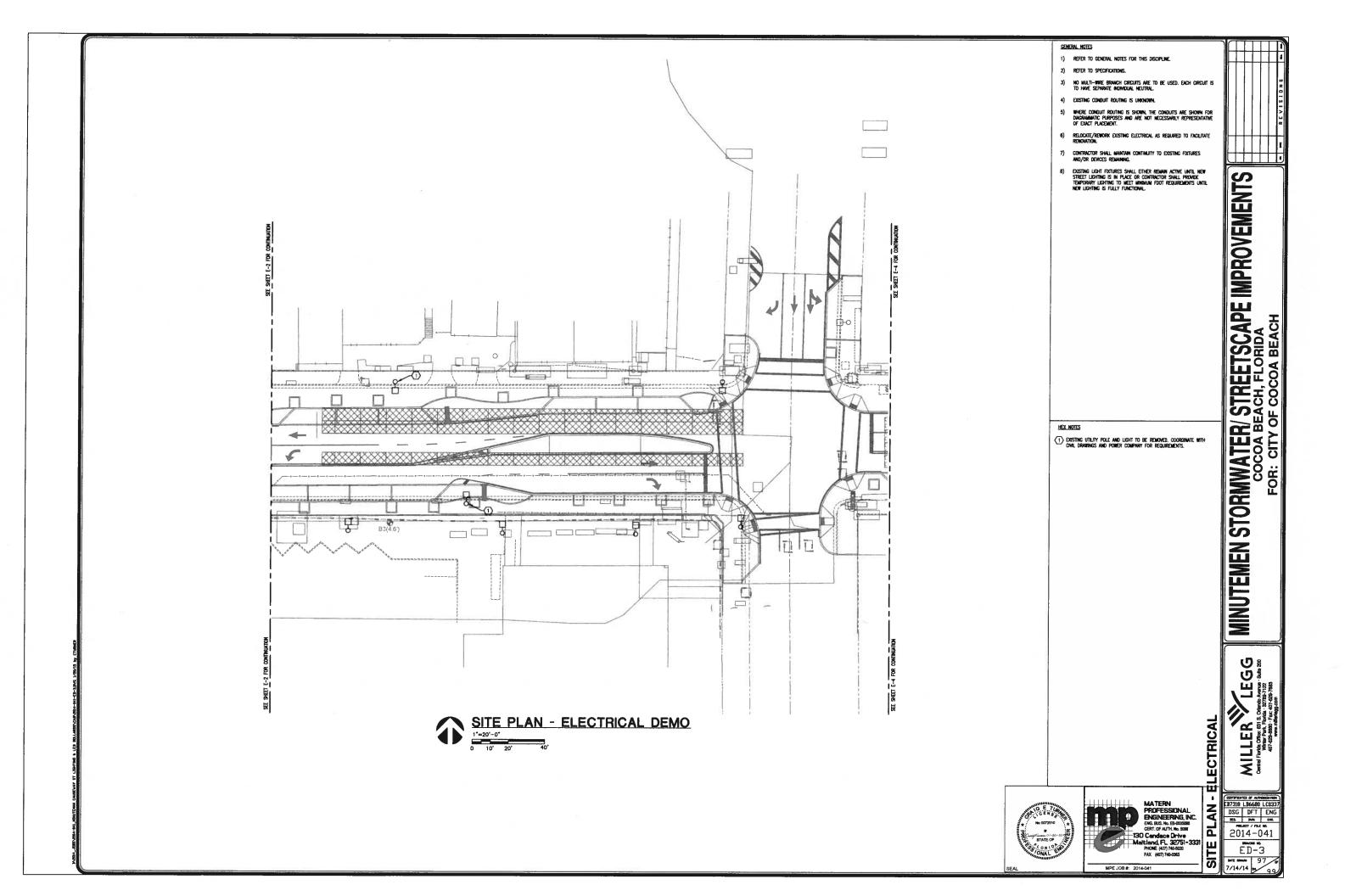


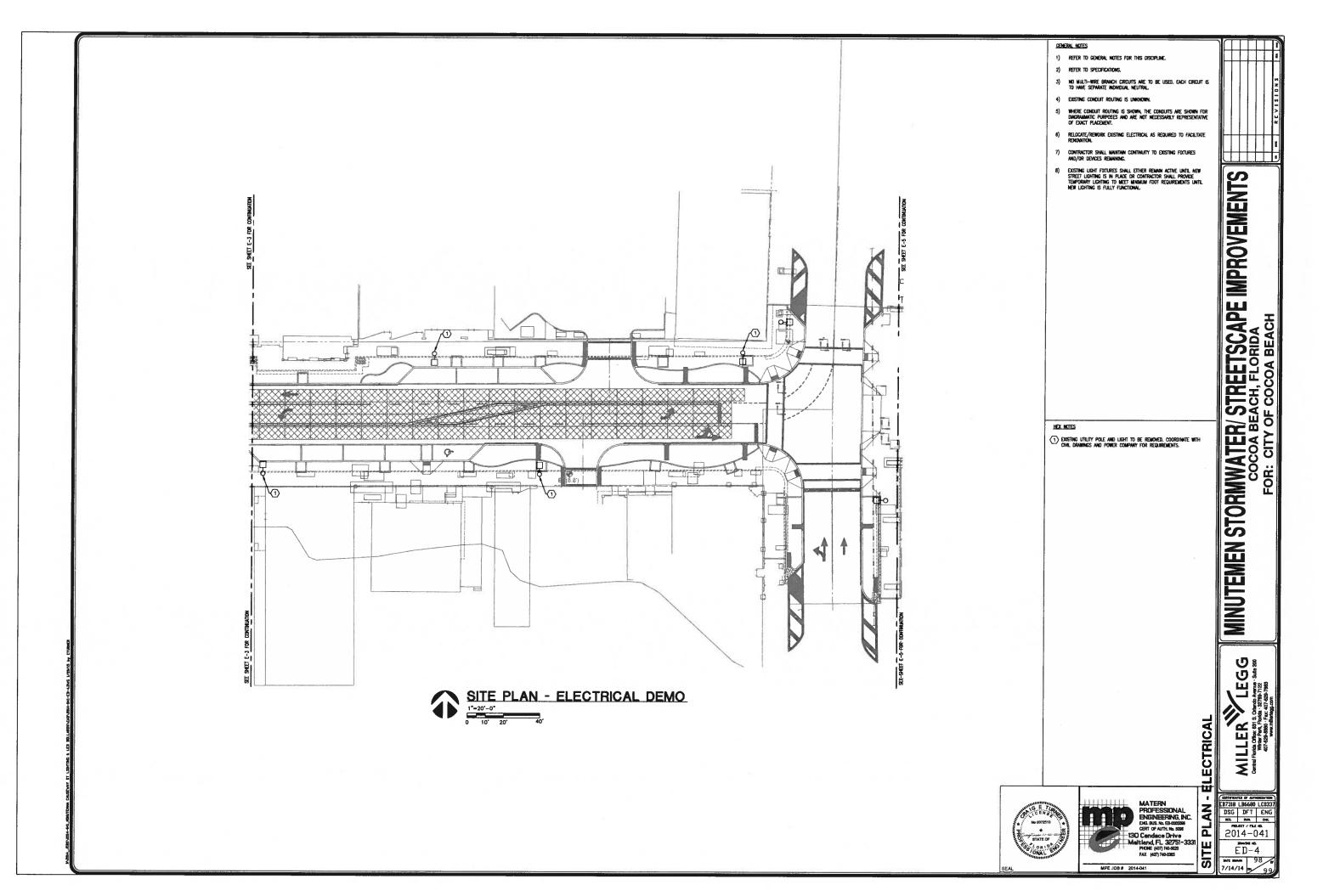
MATERN
PROFESSIONAL
ENGINEERING, INC.
ENG. BUS. No. EB-000509
CERT. OF AUTH No. 5008
13°C Candidace Drive
Maritland, F.L. 32°751-3331
PRIOR (MOT) 740-0365

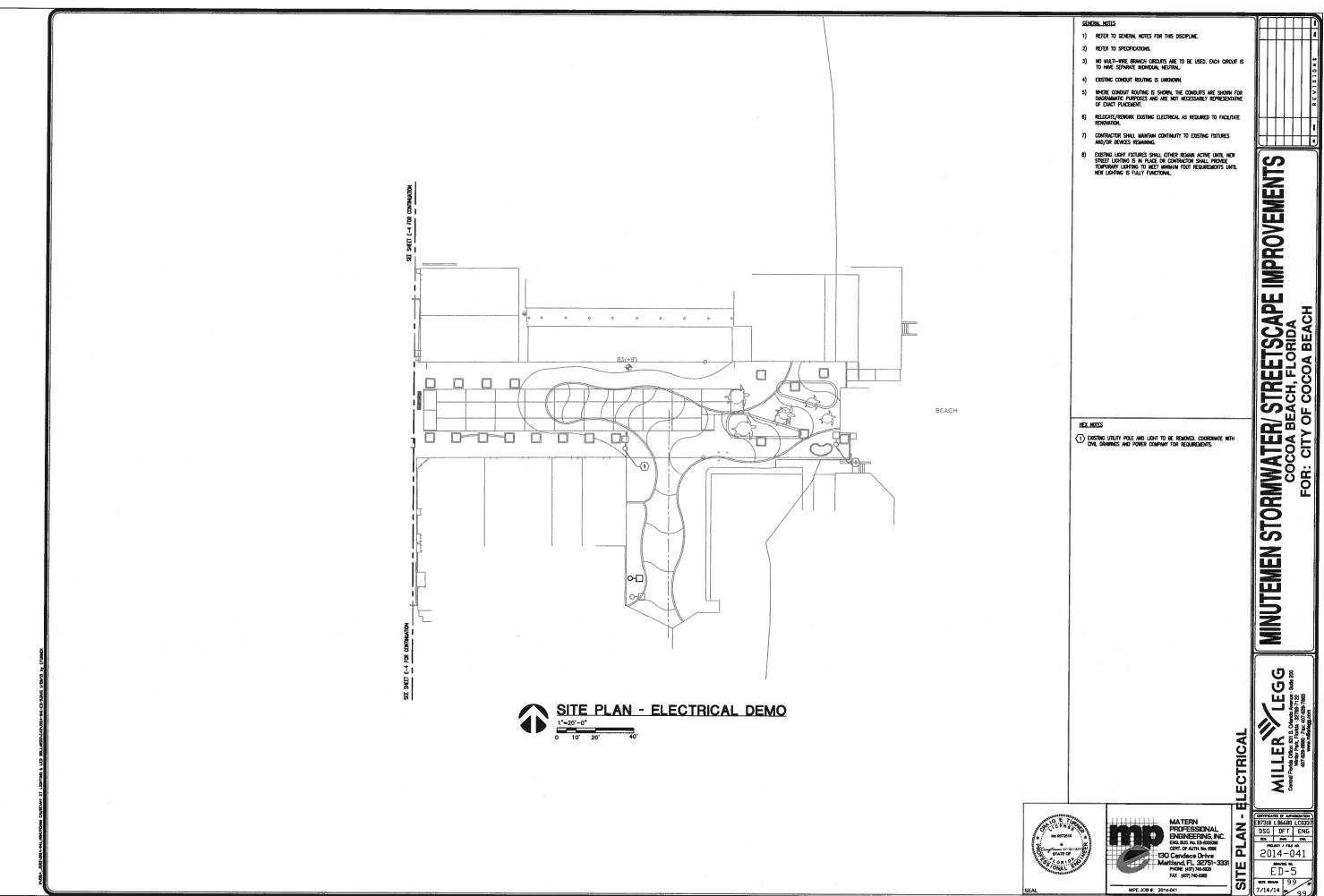
ED-2 2017 2000 96 7/14/14 24 99

EB7318 LB6680 LC0337
DSG DFT ENG
BEX NOT ON.
PRILITY FILE NO.
2014-041

MPE JOB#: 2014-041







MPE JOB #: 2014-041

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