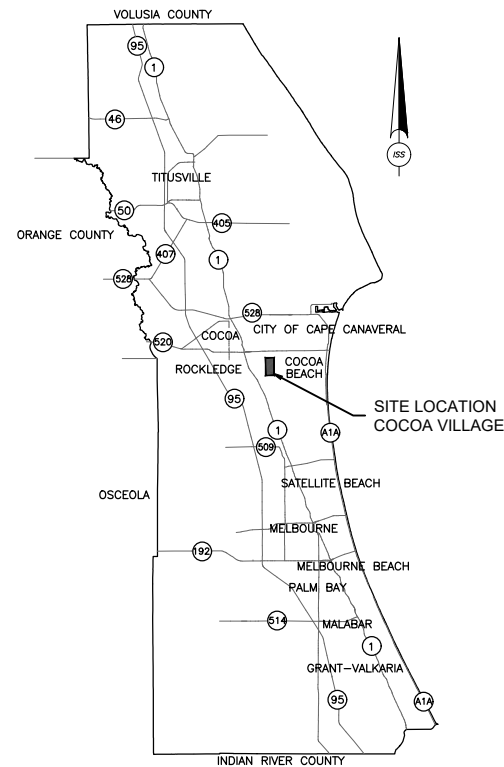


# DESIGN PLANS COCOA RIVERFRONT PARK PROMENADE IMPROVEMENTS FOR THE CITY OF COCOA

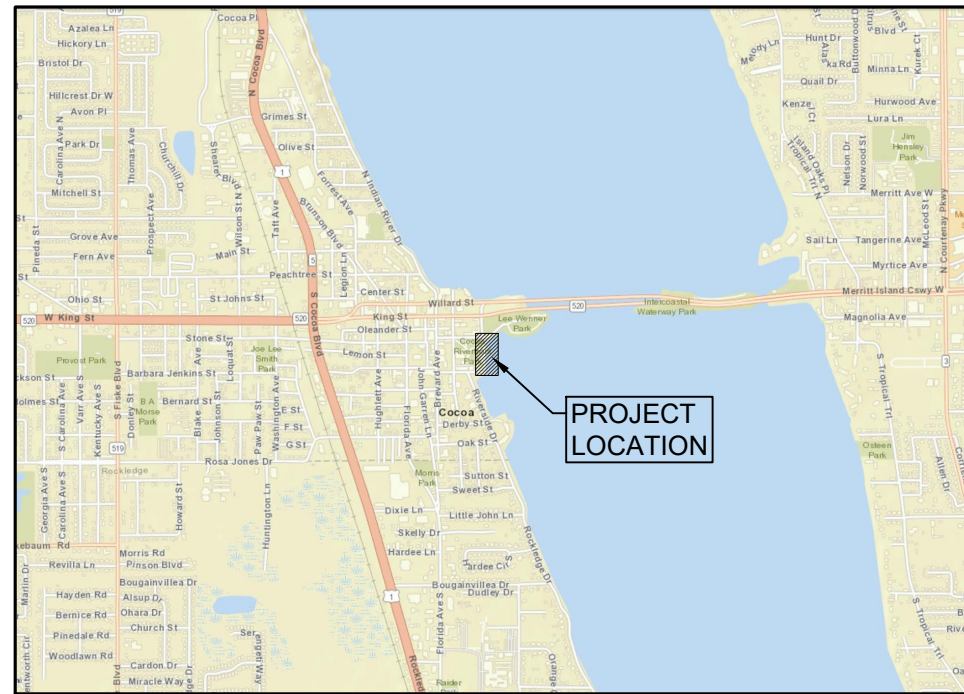


KEY MAP

RELEASED FOR BID  
OCTOBER 2019



VICINITY MAP  
NOT TO SCALE



LOCATION MAP  
SCALE: 1:1/2 MILE



7185 Murrell Road, Suite 101  
Melbourne, Florida 32940  
Phone: (321) 622-4646 FAX (321) 256-5088  
EB# 29992

**City Council**

Jake Williams, Jr.  
Brenda Warner  
Alex Goins  
Don Boisvert  
Lorraine Koss

Mayor  
Deputy Mayor - District 2  
Council Member - District 1  
Council Member - District 3  
Council Member - District 4

NOT RELEASED FOR CONSTRUCTION

# SHEET INDEX

NO.	SHEET	SHEET TITLE
01	CV-1	COVER SHEET
02	G-01	SHEET INDEX
03	G-02	CIVIL LEGEND
04	G-03	ABBREVIATIONS
05	G-04	GENERAL NOTES
06	G-05	EXISTING CONDITIONS STA.1+00.00 TO STA.3+00.00
07	G-06	EXISTING CONDITIONS STA.3+00.00 TO STA.5+00.00
08	G-07	EXISTING CONDITIONS STA.5+00.00 TO STA.7+05.66
09	D-01	DEMOLITION PLAN STA.1+00.00 TO STA.3+00.00
10	D-02	DEMOLITION PLAN STA.3+00.00 TO STA.5+00.00
11	D-03	DEMOLITION PLAN STA.5+00.00 TO STA.7+05.66
12	C-01	CIVIL SITE PLAN STA.1+00.00 TO STA.3+00.00
13	C-02	CIVIL SITE PLAN STA.3+00.00 TO STA.5+00.00
14	C-03	CIVIL SITE PLAN STA.5+00.00 TO STA.7+05.66
15	C-04	GRADING PLAN STA.1+00.00 TO STA.3+00.00
16	C-05	GRADING PLAN STA.3+00.00 TO STA.5+00.00
17	C-06	GRADING PLAN STA.5+00.00 TO STA.7+05.66
18	C-07	UTILITY PLAN STA.1+00.00 TO STA.3+00.00
19	C-08	UTILITY PLAN STA.3+00.00 TO STA.5+00.00
20	C-09	UTILITY PLAN STA.5+00.00 TO STA.7+05.66
21	C-10	EROSION CONTROL PLAN
22	C-11	BID ADD ALTERNATE PLAN
23	CD-01	OVERLOOK PLATFORM PLAN
24	CD-02	OVERLOOK PLATFORM SECTIONS
25	CD-03	SIGN WALL PLAN AND PROFILE
26	CD-04	WALL PLANS AND SECTIONS
27	CD-05	PIER AND CIVIL DETAILS
28	CD-06	EROSION AND SEDIMENTATION CONTROL DETAILS
29	E-01	ELECTRICAL NOTES AND LEGENDS
30	E-02	ELECTRICAL SITE PLAN
31	E-03	ELECTRICAL EQUIPMENT ARRANGEMENT
32	E-04	OVERLOOK LIGHTING
33	E-05	WALL RECEPTACLES
34	E-06	RECEPTACLE ARRANGEMENT
35	E-07	LIGHT POST ARRANGEMENTS
36	L-1	LANDSCAPE PLAN
37	L-2	LANDSCAPE PLAN
38	L-3	LANDSCAPE PLAN AND PLANT LIST
39	L-4	LANDSCAPE PLAN AND PLANT LIST - ADD ALTERNATE
40	L-5	LANDSCAPE SPECIFICATIONS AND DETAILS
41	IR-1	IRRIGATION PLAN
42	IR-2	IRRIGATION PLAN
43	S-01	STRUCTURAL PLAN - OVERLOOK PLATFORM
44	S-02	STRUCTURAL PLAN - WALL AND PIERS

10/22/2019 5:30:42 PM

THOMAS M. VILL, P.E. #71186	
NO.	DATE:
1	10/22/2019
DESCRIPTION FOR CONSTRUCTION REVISIONS	



7185 Murrell Road, Suite 101  
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SHEET INDEX  
PROMENADE IMPROVEMENTS

CITY OF COCOA

DRAWING TITLE: CLIENT:

PROJECT NO.:	PROJ. MGR.:
<b>COC013</b>	<b>TMV</b>
DATE:	DRWN. BY:
<b>06/28/2019</b>	<b>MBH</b>
SCALE:	CHKD. BY:
<b>N.T.S.</b>	<b>TMV</b>
DRAWING NO.:	
<b>02 OF 44</b>	
SHEET NO.:	
<b>G-01</b>	

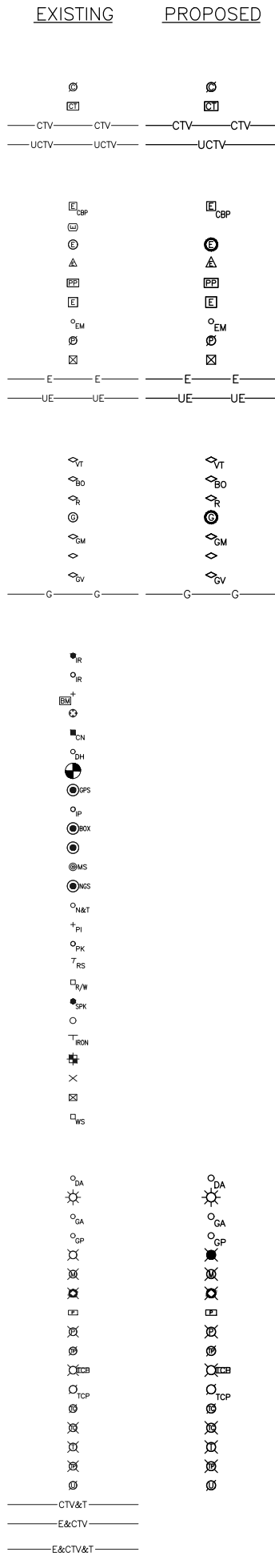
**CABLE TV**  
 CABLE TV POLE  
 CABLE TV PEDESTAL  
 OVERHEAD CABLE TELEVISION  
 UNDERGROUND CABLE TELEVISION

**ELECTRICAL**  
 CIRCUIT BREAKER PANEL  
 HANDHOLE  
 MANHOLE  
 OUTLET  
 PEDESTAL  
 TRANSFORMER BOX  
 METER  
 POWER POLE  
 TRANSFORMER TOWER  
 OVERHEAD ELECTRIC  
 UNDERGROUND ELECTRIC

**GAS**  
 VENT  
 BLOW OFF  
 FILLER PIPE  
 MANHOLE  
 METER  
 STOP BOX  
 SHUTOFF VALVE  
 GAS

**MONUMENTS**  
 IRON (FOUND)  
 IRON (SET)  
 BENCH MARK  
 BRASS PLATE  
 CONCRETE NAIL  
 DRILL HOLE  
 GOVERNMENT CORNER  
 GPS MONUMENT  
 IRON PIPE  
 MONUMENT BOX  
 MONUMENT  
 MERE STONE  
 NGS MONUMENT  
 NAIL & TAG  
 PINCH IRON  
 PK NAIL  
 RAILROAD SPIKE  
 RIGHT-OF-WAY MARKER  
 SPIKE  
 SHIPS SPIKE  
 T-IRON  
 TEMPORARY BENCHMARK  
 CROSS CUT  
 CROSS CUT IN MONUMENT  
 WOOD STAKE

**OVERHEAD UTILITIES**  
 DEADMAN ANCHOR  
 FLOOD LIGHT  
 GUY WIRE ANCHOR  
 GUY POLE  
 LAMP POLE  
 METAL LIGHT POLE  
 ORNAMENTAL LIGHT  
 POLE BOX  
 POWER & LIGHT POLE  
 POWER & TELEPHONE POLE  
 TELE, CTV, PWR & LIGHT POLE  
 TELE, CTV, & POWER POLE  
 TELE, & CTV POLE  
 TELE, CTV, & LIGHT POLE  
 TELE, & LIGHT POLE  
 TELE, POWER, & LIGHT POLE  
 UTILITY POLE  
 OVERHEAD CABLE TV & TELEPHONE  
 OVERHEAD ELECTRIC & CABLE TV  
 OVERHEAD ELECTRIC, CABLE TV  
 AND TELEPHONE



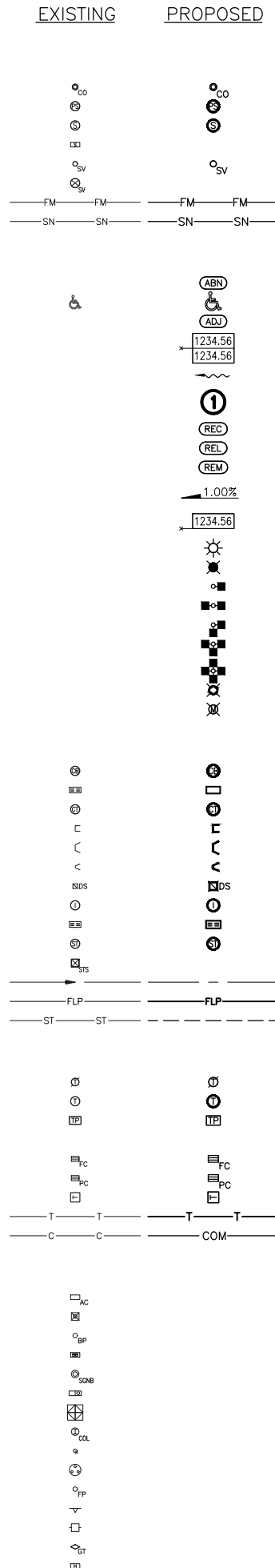
**SANITARY SEWER**  
 CLEAN OUT  
 PUMPSTATION MANHOLE  
 SANITARY MANHOLE  
 SEPTIC TANK  
 SEWER VENT  
 SEWER VALVE  
 FORCEMAIN  
 SANITARY SEWER

**SITE (MISCELLANEOUS)**  
 ABANDON ITEM  
 ACCESSIBLE SYMBOL  
 ADJUST ITEM  
 FINISH GRADE  
 FLOW ARROW  
 PARKING COUNT  
 RECONSTRUCT ITEM  
 RELOCATE ITEM  
 REMOVE ITEM  
 SLOPE LABEL  
 SPOT GRADE  
 FLOOD LIGHT  
 LAMP POLE  
 LIGHT POLE (SINGLE LAMP)  
 LIGHT POLE (DOUBLE LAMP 180°)  
 LIGHT POLE (DOUBLE LAMP 90°)  
 LIGHT POLE (THREE LAMP)  
 LIGHT POLE (FOUR LAMP)  
 ORNAMENTAL LIGHT POLE  
 METAL LIGHT POLE

**STORM SEWER/DRAINAGE**  
 CATCH BASIN (ROUND GRATE)  
 CATCH BASIN (SQUARE GRATE)  
 CISTERN  
 BOX CULVERT  
 CULVERT HEADWALL  
 CULVERT END SECTION  
 DOWN SPOUT  
 ROUND INLET  
 RECTANGULAR INLET  
 STORM MANHOLE  
 STORM SEWER STUB  
 DITCH CENTERLINE  
 FLOOD PLAIN  
 STORM SEWER

**TELEPHONE**  
 TELEPHONE POLE  
 TELEPHONE MANHOLE  
 TELEPHONE PEDESTAL  
 COMMUNICATIONS HANDHOLE  
 FIRE CALL  
 POLICE CALL  
 TELEPHONE PULL BOX  
 OVERHEAD TELEPHONE  
 UNDERGROUND TELEPHONE

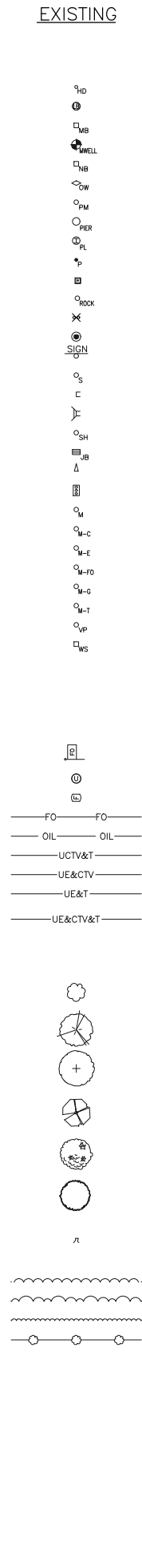
**SURVEY FEATURES**  
 AIR CONDITIONING UNIT  
 ANTENNA  
 BASKET BALL POST  
 BATTERY BOX  
 BILLBOARD SIGN BASE  
 CAMERA TOWER  
 CLIMBING BARS  
 COLUMN  
 FENCE CORNER  
 FILL PORT  
 FLAG POLE  
 FOUNTAIN  
 GAS PUMP  
 GAS TANK (UNDERGROUND)  
 HEAT PUMP



**SURVEY FEATURES (CONT.)**  
 HIGHWAY DELINEATOR  
 LIGHT POLE BASE  
 MAIL BOX  
 MONITORING WELL  
 NEWSPAPER BOX  
 OIL WELL  
 PARKING METER  
 PIER  
 PILING  
 POST (ROUND)  
 POST (SQUARE)  
 ROCK  
 RAILROAD SIGNAL  
 SATELLITE DISH  
 SIGN  
 SIGN POST  
 SLIDE END  
 SLIDE STEPS  
 SPRINKLER HEAD  
 SPRINKLER JUNCTION BOX  
 STATUE  
 TRAFFIC SIGNAL  
 UNDERGROUND MARKER  
 U/G MARKER CABLE  
 U/G MARKER ELECTRIC  
 U/G MARKER FIBER OPTIC  
 U/G MARKER GAS  
 U/G MARKER TELEPHONE  
 VOLLEY BALL POST  
 WOOD STAKE

**UNDERGROUND UTILITIES**  
 FIBER OPTIC MARKER  
 UTILITY MANHOLE  
 FIBER OPTIC VAULT  
 FIBER OPTIC  
 OIL  
 UNDERGROUND CTV & TELEPHONE  
 UNDERGROUND ELEC. & CABLE TV  
 UNDERGROUND ELEC. & TELEPHONE  
 UNDERGROUND ELECTRIC, CABLE  
 TV AND TELEPHONE

**VEGETATION**  
 BUSH/SHRUB  
 MAGNOLIA TREE  
 OAK TREE  
 PALM TREE  
 PINE TREE  
 UNKNOWN TREE  
 STUMP  
 BRUSH LINE  
 EDGE OF WOODS  
 HEDGE  
 TREE ROW

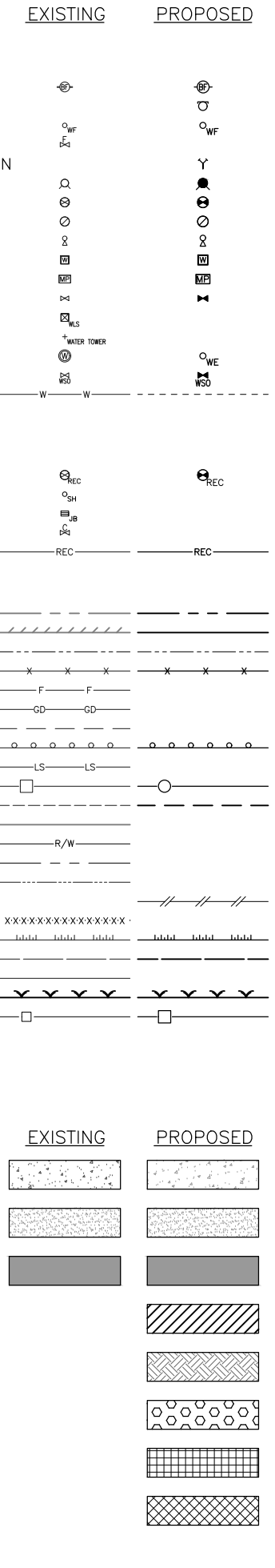


**WATER (DOMESTIC)**  
 BACKFLOW PREVENTER  
 BLOW-OFF VALVE  
 FAUCET  
 FIRE CONTROL VALVE  
 FIRE DEPARTMENT CONNECTION  
 FIRE HYDRANT  
 GATE VALVE & BOX  
 GATE VALVE & WELL  
 INDICATOR VALVE POST  
 METER  
 METER PIT  
 VALVE  
 WATER LINE STUB  
 WATER TOWER BASE  
 WELL  
 SHUT OFF VALVE  
 DOMESTIC WATER

**WATER (MISCELLANEOUS)**  
 RECLAIM WATER GATE VALVE  
 SPRINKLER HEAD  
 SPRINKLER JUNCTION BOX  
 IRRIGATION CONTROL VALVE  
 RECLAIM WATER

**LINE WORK**  
 BOUNDARY LINE  
 BUILDING  
 BUILDING SETBACK  
 CHAIN LINK FENCE  
 FIELD  
 GARDEN  
 GRAVEL  
 GUARDRAIL  
 LANDSCAPE  
 ORNAMENTAL FENCE  
 PROPERTY LINE  
 RAILROAD TRACK CENTERLINE  
 RIGHT OF WAY  
 SECTION LINE  
 SHORE LINE  
 SILT FENCE  
 TO BE DEMOLISHED  
 TOP OF BANK  
 UTILITY/DRAINAGE EASEMENT  
 WALL  
 WETLAND  
 WOOD FENCE

**PATTERNS**  
 CONCRETE  
 GRAVEL  
 PAVEMENT  
 HEAVY DUTY PAVEMENT  
 EARTH (CROSS SECTION)  
 ADA DETECTABLE WARNING  
 CONCRETE REMOVAL  
 PAVEMENT REMOVAL



**ISS INFRASTRUCTURE SOLUTION SERVICES**  
 7185 Murrell Road, Suite 101  
 Melbourne, Florida 32940  
 Phone: (321) 622-4646  
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DRAWING TITLE: **CIVIL LEGEND PROMENADE IMPROVEMENTS**  
 CLIENT: **CITY OF COCOA**

PROJECT NO.: **COC013**      PROJ. MGR.: **TMV**  
 DATE: **06/28/2019**      DRWN. BY: **MBH**  
 SCALE: **N.T.S.**      CHKD. BY: **TMV**  
 DRAWING NO.: **03 OF 44**  
 SHEET NO.: **G-02**

THOMAS M. VILL,  
 P.E.  
 #71186

NO.	DATE	DESCRIPTION	REVISIONS

AB ABANDON OR ABANDONED  
 AC ACRE  
 ACCMP ASPHALT COATED CORRUGATED METAL PIPE  
 ACP ASBESTOS CEMENT PIPE  
 AFF ABOVE FINISHED FLOOR  
 AFG ABOVE FINISHED GRADE  
 AL ALUMINUM  
 ALT ALTERNATE  
 APPROX APPROXIMATE  
 ARV AIR RELEASE VALVE  
 ARVV AIR RELEASE VACUUM VALVE  
 ASPH ASPHALT  
 ASSY ASSEMBLY  
 AVE AVENUE  
 AUTO AUTOMATIC

BCV BALL CHECK VALVE  
 BF BLIND FLANGE  
 BFV BUTTERFLY VALVE  
 BLDG BUILDING  
 BLK BLOCK  
 BM BENCH MARK  
 BOC BACK OF CURB  
 BOT BOTTOM  
 BOS BOTTOM OF STRUCTURE  
 BRG BEARING  
 BS BLACK STEEL PIPE  
 BYP BYPASS  
 BSP BACTERIOLOGICAL SAMPLING POINT

CATV CABLE TELEVISION  
 CB CATCH BASIN  
 CBS CONCRETE BLOCK STRUCTURE  
 CFM CUBIC FEET PER MINUTE  
 C&G CURB AND GUTTER  
 CIP CAST IRON PIPE  
 CIR CIRCUIT  
 CJ CONSTRUCTION JOINT  
 CL CLASS  
 CLAY CLAY PIPE  
 CLF CHAIN LINK FENCE  
 CLR CLEAR/CLEARANCE  
 CMP CORRUGATED METAL PIPE  
 CMPA CORRUGATED METAL PIPE ARCH  
 CMU CONCRETE MASONRY UNIT  
 CND CONDUIT  
 CO CLEANOUT  
 COL COLUMN  
 CONC CONCRETE  
 CONN CONNECTION  
 CONST CONSTRUCT / CONSTRUCTION  
 CONT CONTINUOUS  
 COORD COORDINATE  
 COR CORNER  
 CPLG COUPLING  
 CPP CORRUGATED PLASTIC PIPE  
 CPVC CHLORINATED POLYVINYL CHLORIDE  
 CULV CULVERT  
 CY CUBIC YARD  
 CYL CYLINDER  
 CU FT CUBIC FEET  
 CU IN CUBIC INCHES  
 CV CHECK VALVE

D DRAIN  
 DBL DOUBLE  
 DET DETAIL  
 DIA DIAMETER  
 DIAG DIAGONAL  
 DIM DIMENSION  
 DIP DUCTILE IRON PIPE  
 DISCH DISCHARGE  
 DR DRIVE  
 DWG DRAWING  
 D/W DRIVEWAY

E EAST  
 EA EACH  
 ECC ECCENTRIC  
 ECOMP ELLIPTICAL CORRUGATED METAL PIPE  
 EF EFFLUENT (FINAL)  
 EFF EFFLUENT  
 EL ELEVATION  
 ELEC ELECTRIC / ELECTRICAL  
 ELP ELLIPTICAL  
 ENC ENCASEMENT  
 EOP EDGE OF PAVEMENT  
 EOW EDGE OF WATER  
 EQUIP EQUIPMENT  
 ERCP ELLIPTICAL REINFORCED CONCRETE PIPE  
 ESMT EASEMENT  
 EST ESTIMATE / ESTIMATED  
 EW EACH WAY  
 EXIST EXISTING  
 EXP EXPANSION

FAB FABRICATE  
 FAC FLANGED ADAPTER COUPLING  
 FCV FLOW CONTROL VALVE  
 FD FLOOR DRAIN  
 FFE FINISHED FLOOR ELEVATION  
 FG FINISHED GRADE  
 FH FIRE HYDRANT  
 FIG FIGURE  
 FIN FINISH  
 FL FLOW LINE  
 FLG FLOOR / FLOOR LINE  
 FLG FLANGE  
 FM FORCE MAIN  
 FRP FIBERGLASS REINFORCED PLASTIC  
 FT FEET / FOOT  
 FTG FOOTING  
 FUT FUTURE  
 FV FOOT VALVE

GA GAUGE  
 GAL GALLON  
 GALV GALVANIZED  
 GAS GAS MAIN  
 GND GROUND  
 GPD GALLONS PER DAY  
 GPM GALLONS PER MINUTE  
 GR GRADE  
 GSP GALVANIZED STEEL PIPE  
 GSR GROUND STORAGE RESERVOIR  
 GV GATE VALVE

HB HOSE BIBB  
 HD HEAVY DUTY  
 HDPE HIGH DENSITY POLYETHYLENE  
 HOA HAND / OFF / AUTO  
 HORIZ HORIZONTAL  
 HP HORSEPOWER  
 HR HOUR  
 HT HEIGHT  
 HWL HIGH WATER LEVEL  
 HWY HIGHWAY  
 HYDR HYDRAULIC

ID INSIDE DIAMETER  
 IE INVERT ELEVATION  
 IN INCHES  
 INF INFLUENT  
 INT INTERSECTION  
 INV INVERT  
 IP IRON PIPE  
 IRR IRRIGATION

JB JUNCTION BOX  
 JT JOINT

LAT LATERAL  
 LB LICENSED BUSINESS  
 LBS POUNDS  
 LS LIFT STATION  
 LT LIGHT POLE  
 LT LEFT

MATL MATERIAL  
 MAX MAXIMUM  
 ME MITERED END  
 MECH MECHANICAL  
 MFR MANUFACTURER  
 MGD MILLION GALLONS PER DAY  
 MH MANHOLE  
 MIN MINIMUM  
 MISC MISCELLANEOUS  
 MCC MOTOR CONTROL CENTER  
 MJ MECHANICAL JOINT  
 MON MONUMENT  
 MWL MEAN WATER LEVEL

N NORTH  
 N/A NOT APPLICABLE  
 NC NORMALLY CLOSED  
 N&D NAIL AND CAP  
 NE NORTHEAST  
 NO NUMBER  
 NO NORMALLY OPEN  
 NOM NOMINAL  
 NPT NATIONAL PIPE THREAD  
 NRS NON-RISING STEM  
 NS NEAR SIDE  
 NTS NOT TO SCALE  
 NW NORTHWEST  
 NY NYLON TUBING

OC ON CENTER  
 OD OPEN DRIPOFF  
 ODP OUTSIDE DRIP PROOF  
 OF OUTSIDE FACE  
 OH OVERHEAD  
 OPP OPPOSITE  
 OPT OPTIONAL

PC POINT OF CURVATURE  
 PCM PERMANENT CONTROL MONUMENT  
 PE POLYETHYLENE  
 PEP POLYETHYLENE  
 PG PRESSURE GAUGE  
 PI POINT OF INTERSECTION  
 (P) PLAT REFERENCE  
 PL PLATE  
 PLASTIC PLASTIC PIPE  
 POLY POLYETHYLENE-LINED DUCTILE IRON  
 POB POINT OF BEGINNING  
 POJ PUSH ON JOINT  
 PP POWER POLE  
 PPM PARTS PER MILLION  
 PRESS PRESSURE  
 PROP PROPOSED  
 PRV PRESSURE REDUCING VALVE  
 PS PUMP STATION  
 PSF POUNDS PER SQUARE FOOT  
 PSI POUNDS PER SQUARE INCH  
 PSIG POUNDS PER SQUARE INCH GAUGE  
 PSIA POUNDS PER SQUARE INCH ABSOLUTE  
 P.S.M. PROFESSIONAL SURVEYOR AND MAPPER  
 PT POINT OF TANGENCY  
 PV PLUG VALVE  
 PVC POLYVINYL CHLORIDE PIPE  
 PVMT PAVEMENT  
 PWR POWER

Q FLOW RATE

R RADIUS  
 RBH RUBBER HOSE  
 RC REINFORCED CONCRETE  
 RCP REINFORCED CONCRETE PIPE  
 RD ROAD  
 RE RIM ELEVATION  
 RED REDUCER  
 REBAR REINFORCING STEEL  
 REF REFERENCE  
 REINF REINFORCE / REINFORCED  
 REM REMOVE / REMOVABLE  
 REQD REQUIRED  
 RIV RIVETED  
 RJ RESTRAINED JOINT  
 RPM REVOLUTIONS PER MINUTE  
 RR RAILROAD  
 RV RELIEF VALVE  
 R/W RIGHT-OF-WAY  
 RWW RAW WASTE WATER

S SOUTH  
 S= SLOPE (FT/FT)  
 SAN SANITARY  
 SCHED SCHEDULE  
 SE SOUTHEAST  
 SEC SECTION  
 SGL SINGLE  
 SHLD SHOULDER  
 SHT SHEET / SHEETING  
 SIG SIGNAL  
 SIM SIMILAR  
 SLV SLEEVE  
 SM SHEET METAL  
 SOF SOFFIT  
 SOLV SOLENOID VALVE  
 SP SAMPLING POINT  
 SPCG SPACING  
 SPEC SPECIFICATION  
 SPRT SUPPORT  
 SQ SQUARE  
 SS SANITARY SEWER  
 SSMH SANITARY SEWER MANHOLE  
 STA STATION  
 STD STANDARD  
 STK STAKE  
 STL STEEL  
 STLP STEEL PIPE  
 STR STRAIGHT  
 STRUCT STRUCTURAL  
 STS STORM SEWER  
 SURF SURFACE  
 SVC SERVICE  
 SW SOUTHWEST  
 SYM SYMMETRICAL

TAN TANGENT  
 T&B TOP AND BOTTOM  
 TBM TEMPORARY BENCH MARK  
 TE TOTALLY ENCLOSED  
 TEFC TOTALLY ENCLOSED, FAN COOLED  
 TEL TELEPHONE  
 TEMP TEMPORARY / TEMPERATURE  
 TENV TOTALLY ENCLOSED, NON-VENTILATED  
 THD THREAD / THREADED  
 THK THICK  
 TNO TURNOUT  
 TOB TOP OF BANK  
 TOC TOP OF CURB  
 TOM TOP OF MUCK  
 TOS TOE OF SLOPE  
 TOT TOTAL  
 TS TUBE STEEL  
 TV TELEVISION  
 TYP TYPICAL

UD UNDERDRAIN  
 UG UNDERGROUND  
 UGP UNDERGROUND POWER  
 ULT ULTIMATE  
 UON UNLESS OTHERWISE NOTED  
 UP UTILITY POLE  
 UST UNDERGROUND STORAGE TANK  
 UTIL UTILITY  
 UN UNION  
 VAC VACUUM  
 VAR VARIES  
 VB VALVE BOX  
 VC VERTICAL CURVE  
 VCP VITRIFIED CLAY PIPE  
 VEL VELOCITY  
 VERT VERTICAL  
 VFD VARIABLE FREQUENCY DRIVE  
 VFC VERTICAL POINT OF CURVATURE  
 VOL VOLUME

W WEST  
 W/ WITH (COMBINED FORM)  
 WC WALL CLEANOUT  
 WF WIDE FLANGE  
 WG WATER GAUGE  
 WHC WELDED HALF COUPLING  
 WL WATER LINE  
 WM WATER MAIN  
 W/O WITHOUT  
 WP WATERPROOF  
 WS WATER SURFACE  
 WSP WELDED STEEL PIPE  
 WT WEIGHT  
 WTP WATER TREATMENT PLANT  
 WWF WELDED WIRE FABRIC  
 WWM WELDED WIRE MESH  
 WWTP WASTEWATER TREATMENT PLANT

YD(S) YARD(S)  
 YR YEAR

10/22/2019 5:30:53 PM

NO.	DATE	DESCRIPTION	REVISIONS

**INFRASTRUCTURE SOLUTION SERVICES**  
 7185 Murrell Road, Suite 101  
 Melbourne, Florida 32940  
 Phone: (321) 622-4646  
 www.infrastructureSS.com

DRAWING TITLE:  
**ABBREVIATIONS PROMENADE IMPROVEMENTS**  
 CLIENT:  
**CITY OF COCOA**

PROJECT NO.: **COC013** PROJ. MGR.: **TMV**  
 DATE: **06/28/2019** DRWN. BY: **MBH**  
 SCALE: **NA** CHKD. BY: **TMV**  
 DRAWING NO.: **04 OF 44**  
 SHEET NO.: **G-03**

**GENERAL NOTES:**

- ALL WORK SHALL BE IN ACCORDANCE WITH THE CITY OF COCOA UTILITIES TECHNICAL PROVISIONS AND STANDARD DETAILS.
- IN THE EVENT OF CONFLICT BETWEEN PERTINENT CODES AND REGULATIONS AND REFERENCED STANDARDS OF THESE SPECIFICATIONS, THE MORE STRINGENT PROVISIONS SHALL GOVERN.
- THE SPECIFICATIONS AND DRAWINGS FOR THIS WORK HAVE BEEN PREPARED IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICE TO MEET MINIMUM REQUIREMENTS OF THE LATEST EDITION OF THE BUILDING CODE.
- ALL SPECIFICATIONS AND DOCUMENTS REFERRED TO SHALL BE OF LATEST ISSUE AND SHALL BE CONSIDERED A PART OF THESE DOCUMENTS AS THOUGH INCLUDED.
- SPECIFICATIONS AND DRAWINGS INDICATE FINISHED STRUCTURE. CONTRACTOR METHODS, PROCEDURES, AND CONDITIONS (INCLUDING SAFETY), ARE THE RESPONSIBILITY OF THE CONTRACTOR EXCEPT AS SPECIFICALLY INDICATED OTHERWISE IN THE CONTRACT DOCUMENTS.
- CONSTRUCTION LOADS SHALL NOT OVERLOAD STRUCTURE NOR SHALL THEY BE IN EXCESS OF DESIGN LOADING INDICATED ON DRAWINGS, IF ANY.
- CONTRACTOR SHALL VERIFY ALL MATERIALS, DIMENSIONS, AND CONDITIONS SHOWN ON THE DRAWINGS OR NOTED IN THE SPECIFICATIONS. ANY VARIANCES WITHIN THE DRAWINGS AND SPECIFICATIONS, OR WITH CONDITIONS ENCOUNTERED AT JOB SITE, SHALL BE REPORTED TO THE OWNER AND THE ENGINEER OF RECORD IN WRITING.
- THE CONTRACTOR SHALL TAKE ALL MEASURES NECESSARY TO CONTROL TURBIDITY AND SEDIMENT INCLUDING, BUT NOT LIMITED TO, THE INSTALLATION OF TURBIDITY BARRIERS AND SILT FENCES AT ALL LOCATIONS WHERE THE POSSIBILITY OF TRANSFERRING SUSPENDED SOLIDS INTO THE RECEIVING WATER BODY EXISTS DUE TO THE PROPOSED WORK. TURBIDITY AND SEDIMENT BARRIERS MUST BE MAINTAINED AT ALL LOCATIONS UNTIL CONSTRUCTION IS COMPLETED AND DISTURBED SOIL AREAS ARE STABILIZED. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR REMOVAL OF THE BARRIERS. AT NO TIME SHALL THERE BE ANY OFFSITE DISCHARGE WHICH VIOLATES THE WATER QUALITY STANDARDS IN CHAPTERS 62-302 AND 62-4, FLORIDA ADMINISTRATIVE CODE.
- CONTRACTOR SHALL RIGIDLY ADHERE TO ALL LAWS, CODES, AND ORDINANCES WHICH APPLY TO THIS WORK. CONTRACTOR SHALL NOTIFY AND RECEIVE CLARIFICATION FROM THE CITY AND THE ENGINEER OF RECORD IN WRITING OF ANY VARIATIONS BETWEEN CONTRACT DOCUMENTS AND GOVERNING REGULATIONS.
- ALL MANUFACTURED MATERIALS, COMPONENTS, FASTENERS, ASSEMBLIES, ETC., SHALL BE HANDLED AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND PROVISIONS. WHERE SPECIFIC MANUFACTURED PRODUCTS ARE CALLED FOR, GENERIC EQUALS WHICH MEET APPLICABLE STANDARDS AND SPECIFICATIONS MAY BE USED, IF APPROVED BY THE ENGINEER OF RECORD AND/OR THE OWNER.
- THE CONTRACTOR SHALL DEMOLISH AND HAUL ALL MATERIALS OFF-SITE FOR DISPOSAL IN COMPLIANCE WITH APPLICABLE REGULATIONS.

**CONSTRUCTION NOTES:**

- THE EXACT LOCATION AND ELEVATION OF EXISTING STRUCTURES, UTILITIES, AND PIPING SHALL BE PHYSICALLY VERIFIED IN THE FIELD BY THE CONTRACTOR BEFORE CONSTRUCTION BEGINS. THESE DRAWINGS DO NOT PURPORT TO SHOW IN COMPLETE DETAIL ALL EXISTING STRUCTURES, UTILITIES, OR PIPING. THE CONTRACTOR SHALL EXAMINE ALL AVAILABLE RECORDS AND MAKE ALL EXPLORATIONS AND EXCAVATIONS AS REQUIRED TO DETERMINE THE LOCATION OF EXISTING STRUCTURES, UTILITIES, AND PIPING, WHENEVER NECESSARY. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN AREAS OF BURIED UTILITIES AND SHALL PROVIDE AT LEAST 48 HOURS NOTICE TO THE VARIOUS UTILITY COMPANIES IN ORDER TO PERMIT MARKING THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES IN ADVANCE OF CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY UTILITY OWNERS THROUGH SUNSHINE STATE ONE CALL OF FLORIDA, INC. (811 OR 1-800-432-4770) 48 HOURS IN ADVANCE OF BEGINNING CONSTRUCTION ON JOB SITE.
- THE CONTRACTOR SHALL CHECK PLANS FOR CONFLICTS AND DISCREPANCIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE OWNER OR OWNER'S ENGINEER OF ANY CONFLICT BEFORE PERFORMING ANY WORK IN THE AFFECTED AREA.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LEARN, KNOW, AND COMPLY WITH THE REGULATIONS, ORDINANCES, PERMIT AND INSPECTION REQUIREMENTS OF THE VARIOUS GOVERNMENTAL AGENCIES HAVING JURISDICTION. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW AND COMPLY WITH THE CONDITIONS OF THE VARIOUS PERMITS OF THE GOVERNMENTAL AGENCIES. THE CONTRACTOR SHALL SCHEDULE THE REQUIRED INSPECTIONS AND APPROVALS IN ACCORDANCE WITH THE REQUIREMENTS OF THE PERMIT CONDITIONS. THE CONTRACTOR SHALL NOTIFY THE NECESSARY AGENCIES OF CONSTRUCTION COMMENCEMENT.
- THE CONTRACTOR SHALL NOT BRING ANY HAZARDOUS MATERIAL ONTO THE PROJECT. SHOULD THE CONTRACTOR REQUIRE SUCH FOR PERFORMING THE CONTRACTED WORK, THE CONTRACTOR SHALL REQUEST, IN WRITING, WRITTEN PERMISSION FROM THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A COPY OF THE MATERIAL SAFETY DATA SHEET (MSDS) FOR EACH HAZARDOUS MATERIAL PROPOSED FOR USE. THE ENGINEER SHALL COORDINATE WITH THE CITY PRIOR TO ISSUING WRITTEN APPROVAL TO THE CONTRACTOR. BECAUSE STATE LAW DOES NOT TREAT PETROLEUM PRODUCTS THAT ARE PROPERLY CONTAINERIZED AND INTENDED FOR EQUIPMENT USE AS A HAZARDOUS MATERIAL, SUCH PRODUCTS DO NOT NEED A MSDS SUBMITTAL.
- ANY KNOWN OR SUSPECTED HAZARDOUS MATERIAL FOUND ON THE PROJECT BY THE CONTRACTOR SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER, WHO SHALL DIRECT THE CONTRACTOR TO PROTECT THE AREA OF KNOWN OR SUSPECTED CONTAMINATION FROM FURTHER ACCESS. THE ENGINEER IS TO NOTIFY THE CITY OF THE DISCOVERY. THE CITY WILL ARRANGE FOR INVESTIGATION, IDENTIFICATION, AND REMEDIATION OF THE HAZARDOUS MATERIAL. THE CONTRACTOR SHALL NOT RETURN TO THE AREA OF CONTAMINATION UNTIL APPROVAL IS PROVIDED BY THE ENGINEER. THE CITY WILL ADVISE THE ENGINEER.
- IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO MAINTAIN ADEQUATE TRAFFIC CONTROL AND TO PROVIDE DETOURS AROUND CONSTRUCTION ACTIVITIES. UNLESS APPROVED BY THE OWNER, IN WRITING, NO STREET SHALL REMAIN CLOSED TO TRAFFIC OVERNIGHT. IN ADDITION, THE CONTRACTOR SHALL COOPERATE WITH LOCAL RESIDENTS IN GAINING ACCESS TO THEIR HOMES AND BUSINESS DURING WORKING HOURS AND SHALL ASSIST AT ALL TIMES WHEN VEHICLES EXPERIENCE TROUBLE DUE TO CONSTRUCTION ACTIVITIES.
- THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS. THE CONTRACTOR SHALL HAVE ALL PERMITS ONSITE PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL SAW-CUT ALL ABUTTING EXISTING CONCRETE WALKWAYS, ENTRANCES/EXITS AND DRIVEWAY APRONS TO THE CLOSEST JOINT THAT WILL REMAIN.

**CONSTRUCTION NOTES (CONTINUED):**

- COPIES OF TEST REPORTS FOR ASPHALT, SUBGRADE, FILL, AND BACKFILL UNDER ROADWAYS AND STRUCTURES, AND UTILITY TRENCHES SHALL BE PROVIDED DIRECTLY TO THE ENGINEER OF RECORD FOR APPROVAL. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE TESTING AND ENSURE THAT ALL APPLICABLE TESTS HAVE BEEN PERFORMED. FAILURE TO OBTAIN TEST RESULTS AT ANY POINT OF CONSTRUCTION WILL REQUIRE THE REMOVAL OF THE IMPROVEMENT AND REPLACEMENT BY THE CONTRACTOR. RETESTING DUE TO TEST FAILURE(S) SHALL BE CONDUCTED BY THE CONTRACTOR AT NO COST TO THE OWNER.
- ANY DISTURBED MAIL BOXES OR SIGNS DESIGNATED TO REMAIN MUST BE REINSTALLED TO EXISTING OR BETTER CONDITION ACCEPTABLE TO THE CITY AT THE CONTRACTOR'S EXPENSE.
- A MANDATORY PRE-CONSTRUCTION CONFERENCE SHALL BE SCHEDULED BY THE CONTRACTOR WITH THE CITY OF COCOA. THE CONTRACTOR SHALL CONTACT THE CITY OF COCOA'S MANAGER OF CAPITAL PROJECTS DIVISION FOR SCHEDULING AND NOTIFY THE APPLICABLE PARTIES BY MAIL A MINIMUM OF SEVEN (7) DAYS PRIOR TO THE MEETING.
- CONTRACTOR SHALL CLEAR AND GRUB ONLY THOSE PORTIONS OF THE SITE NECESSARY FOR CONSTRUCTION. CLEAR AND GRUB SHALL CONSIST OF THE REMOVAL OF ALL DELETERIOUS MATERIAL INCLUDING TREES, ROOTS, TOPSOIL, ETC.
- ORGANIC, UNSUITABLE SOILS BENEATH THE PAVED AREAS SHALL BE REMOVED AND REPLACED WITH CLEAN SAND MATERIAL OF WHICH NOT MORE THAN 15% BY DRY WEIGHT IS FINER THAN THE NUMBER 200 MESH SIEVE. FILL MATERIAL SHALL BE FREE OF ORGANICS, RUBBLE, CLAY, OR OTHER DELETERIOUS MATTER.
- ALL WASTE MATERIAL SHALL BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH APPLICABLE REGULATIONS.
- ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE SODDED OR PLANTED WITH OTHER APPROVED LANDSCAPE MATERIAL, WITHIN FIVE (5) DAYS AFTER CONSTRUCTION. CONTRACTOR MUST SALVAGE EXISTING TOP SOIL WITHIN PROJECT SITE OR REPLACE AT HIS OWN EXPENSE.
- ANY DAMAGE TO THE EXISTING GRASS OR OTHER VEGETATION ESTABLISHED IN AREAS OUTSIDE THE LIMITS OF CONSTRUCTION OF THIS PROJECT WILL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE AS DIRECTED BY THE ENGINEER.
- PROPOSED SPOT ELEVATIONS REPRESENT FINISHED PAVEMENT OR GROUND SURFACE GRADE UNLESS OTHERWISE NOTED ON DRAWINGS. UNPAVED GRADES REPRESENT TOP OF SOD OR APPLICABLE LANDSCAPE MATERIAL. THE THICKNESS OF SOD AND/OR LANDSCAPE MATERIAL SHALL BE TAKEN INTO CONSIDERATION WITH FINAL GRADING.
- ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC IN ACCORDANCE WITH F.D.O.T. STANDARD SPECIFICATION 711 AND STANDARD INDEX NO. 17346.
- ANY PUBLIC LAND CORNER OR BENCHMARK WITHIN THE LIMITS OF CONSTRUCTION IS TO BE PROTECTED. IF A CORNER MONUMENT IS IN DANGER OF BEING DESTROYED AND HAS NOT BEEN PROPERLY REFERENCED, THE CONTRACTOR SHALL NOTIFY THE CITY, WITHOUT DELAY BY TELEPHONE.
- CONTRACTOR SHALL COORDINATE ANY REQUIRED RELOCATIONS AND/OR REMOVALS OF THE EXISTING UTILITIES, BOTH ABOVE AND BELOW GROUND, WITH THE RESPECTIVE UTILITY OWNER(S). ALL ELECTRICAL UTILITY WORK SHALL BE PERFORMED BY FPL.
- THE CONTRACTOR SHALL REMOVE AND REPLACE ALL SIGNAGE AS INDICATED ON THE PLANS PER CITY OF COCOA LATEST CODES AND SPECIFICATIONS AND TO F.D.O.T. STANDARDS, WHERE APPLICABLE.
- CONTRACTOR SHALL COMPLY WITH APPLICABLE STANDARDS OF FDOT INDICES 600, 601, 602, 603, 604, 605, 611, 612, AND 613. CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF TRAFFIC (M.O.T.) AND ALL M.O.T. PLANS.
- ACCURATE AND COMPLETE RECORD DRAWINGS OF ALL WORK SHALL BE MAINTAINED ELECTRONICALLY IN AN AUTOCAD FORMAT BY THE CONTRACTOR'S SURVEYOR. LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES EXPOSED DURING CONSTRUCTION SHALL BE ACCURATELY RECORDED ON THE CONSTRUCTION RECORD DRAWINGS. THE ENGINEER AND/OR OWNER MAY WITHHOLD PROGRESS PAYMENTS IF RECORD DRAWINGS ARE NOT MAINTAINED DURING CONSTRUCTION AND KEPT UP TO DATE WITH NEW AND EXISTING UTILITIES ACCURATELY RECORDED.
- EXISTING UTILITIES MUST REMAIN IN SERVICE. CONTRACTOR SHALL SCHEDULE WORK AND COORDINATE WITH CITY AND UTILITY PROVIDERS TO MAINTAIN OPERATION.
- THE CONTRACTOR SHALL PERFORM QUALITY LEVEL "A" SUBSURFACE UTILITY INVESTIGATIONS (A.K.A. "SOFT DIGS") IN ACCORDANCE WITH THE AMERICAN SOCIETY OF CIVIL ENGINEERS STANDARD 38-02 ON EXISTING UTILITIES AT ALL LOCATIONS WHERE NEW UTILITIES WILL CROSS THE EXISTING UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR THE COSTS ASSOCIATED WITH THESE INVESTIGATIONS. THE RESULTS SHALL BE PROVIDED TO THE OWNER AND THE ENGINEER FOR REVIEW AND ACCEPTANCE PRIOR TO BEGINNING WORK.

**TESTING AND INSPECTION NOTES:**

- TESTING REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE TESTING SCHEDULE CONTAINED WITHIN THESE PLANS AND SPECIFICATIONS. SELECTION AND CONTRACTING WITH THE TESTING FIRMS SHALL BE THE RESPONSIBILITY OF THE CITY OF COCOA. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE AND SCHEDULE ALL TESTS.
- ACCEPTANCE TESTING FOR NEW PAVEMENT SHALL CONSIST OF ONE PASS OF A STANDARD 15-FOOT ROLLING STRAIGHT EDGE OPERATED WHILE THE PAVEMENT IS STILL HOT. ALL DEFICIENCIES IN EXCESS OF 3/16 INCH SHALL BE CORRECTED IN ACCORDANCE WITH F.D.O.T. STANDARD SPECIFICATION 330.

**GENERAL INVESTIGATION:**

- A SUBSURFACE INVESTIGATION WAS PERFORMED BY UNIVERSAL ENGINEERING SCIENCES, INC. AND IS INCLUDED IN CONTRACT DOCUMENTS. CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH THE REPORT FINDINGS AND FOLLOW RECOMMENDATIONS WITHIN THE INVESTIGATIVE REPORT.

**WATERMAIN SEPARATION REQUIREMENTS**

- HORIZONTAL SEPARATION BETWEEN UNDERGROUND WATER MAINS AND SANITARY OR STORM SEWERS AND WASTEWATER FORCE MAINS.
  - PROPOSED WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.
  - PROPOSED WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER.
  - PROPOSED WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST SIX FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY- OR PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY-TYPE SANITARY SEWERS SHALL BE REDUCED TO THREE FEET WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER.
  - PROPOSED WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST TEN FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND ALL PARTS OF ANY EXISTING OR PROPOSED "ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM" AS DEFINED IN SECTION 381.0065(2), F.S., AND RULE 64E-6.002, F.A.C.
- VERTICAL SEPARATION BETWEEN UNDERGROUND WATER MAINS AND SANITARY OR STORM SEWERS AND WASTEWATER FORCE MAINS.
  - NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED GRAVITY- OR VACUUM-TYPE SANITARY SEWER OR STORM SEWER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX INCHES, AND PREFERABLY 12 INCHES, ABOVE OR AT LEAST 12 INCHES BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
  - NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER OR STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
  - AT THE UTILITY CROSSINGS DESCRIBED IN PARAGRAPHS (A) AND (B) ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE. ALTERNATIVELY, AT SUCH CROSSINGS, THE PIPES SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM SEWERS, STORMWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C., AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY- OR PRESSURE-TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.

**UTILITIES SERVICE PROVIDERS AND CONTACTS**

UTILITIES	CONTACTS	PHONE NUMBER	
FIBER & TRAFFIC SIGNALS	DEVIN SWANSON	DAY: ALT:	(321) 633-2077 (321) 863-4210
WATER	GEORGE TOLER	DAY:	(321) 433-8797
SEWER	GEORGE TOLER	DAY:	(321) 433-8797
STORMWATER	MICHAEL GIORGIO	DAY: ALT:	(321) 433-8771 (321) 403-0201
GAS	RON MULLER	DAY: ALT:	(321) 638-3424 (321) 288-1142
ELECTRIC	JOEL BRAY	DAY:	(386) 586-6403
FIBER	NETWORK RELATIONS	DAY:	(877) 366-8344 X2
FIBER & COMMUNICATION LINES	DEAN BOYERS	DAY:	(469) 886-4238
TELEPHONE	DINO FARRUGGIO	DAY:	(561) 997-0240
FIBER	MIKE ISOM	DAY: ALT:	(321) 757-6451 (321) 508-1173

Refer to Specifications for Soil compaction and Testing Requirements

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THOMAS M. VILL, P.E. #71186	
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NO.	DATE:
	REVISIONS

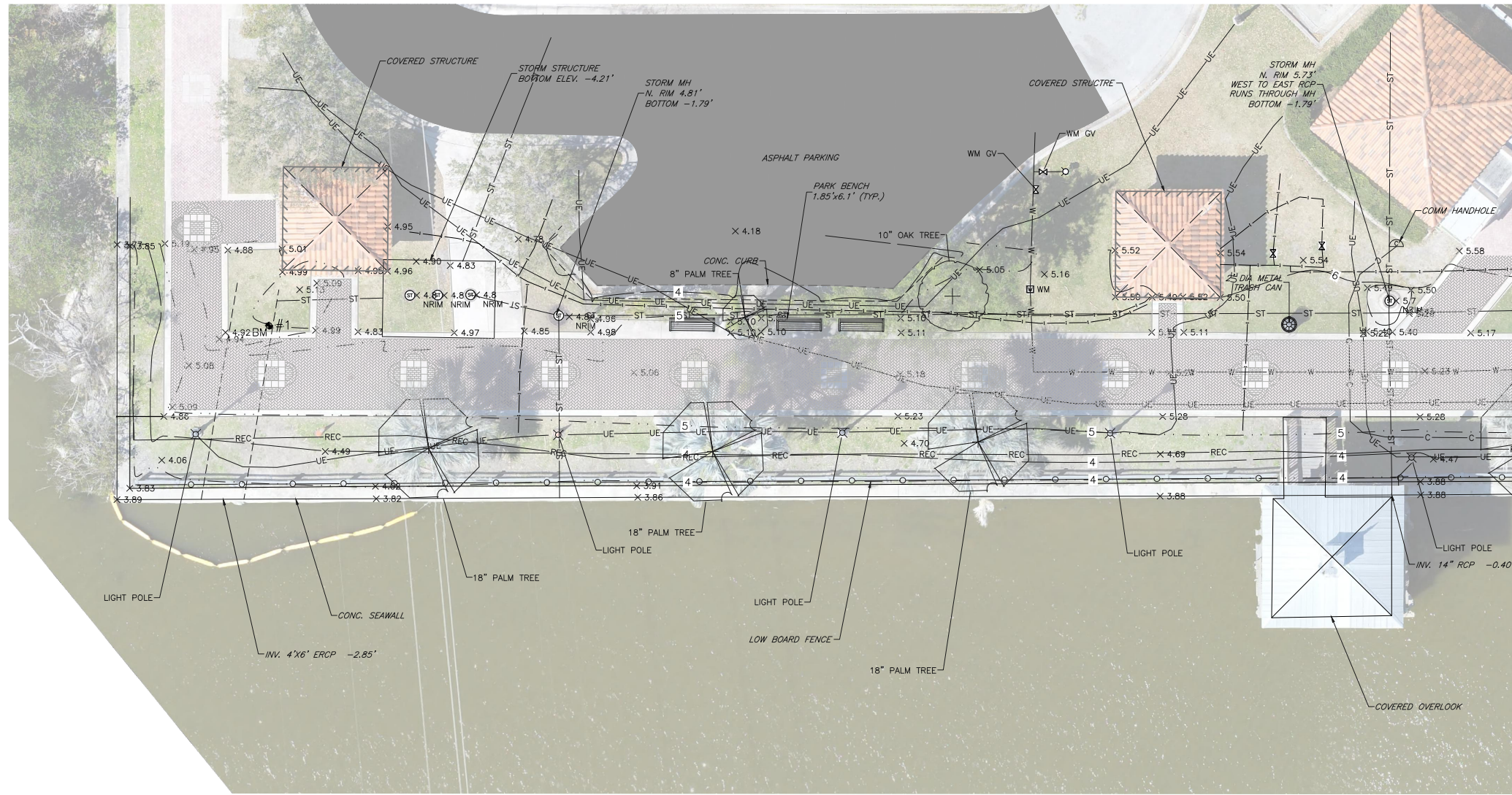
**INFRASTRUCTURE SOLUTION SERVICES**

7185 Murrell Road, Suite 101  
Melbourne, Florida 32940  
Phone: (321) 622-4646  
www.infrastructure-ss.com

DRAWING TITLE:  
**GENERAL NOTES  
PROMENADE IMPROVEMENTS**

CLIENT:  
**CITY OF COCOA**

PROJECT NO.:	PROJ. MGR.:
<b>COC013</b>	<b>TMV</b>
DATE:	DRWN. BY:
<b>06/28/2019</b>	<b>MBH</b>
SCALE:	CHKD. BY:
<b>N.T.S.</b>	<b>TMV</b>
DRAWING NO.:	
<b>05 OF 44</b>	
SHEET NO.:	
<b>G-04</b>	

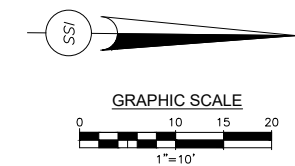


MATCH LINE - SEE SHEET G-06

BENCHMARK DATA				
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#1	TRAV IRC	4.735	1461263.5380	745007.0590
#2	TRAV IRC	3.410	1461860.6840	745109.9440
#3	TRAV MAGD	5.045	1462005.1270	745413.1890
#4	TRAV MAGD	7.640	1462224.5080	746016.4540
#5	TRAV MAGD	7.570	1462214.8110	745580.4210
#6	TRAV MAGD	4.855	1462150.6710	745181.3000
#7	TRAV MAGD	5.385	1461489.7790	745017.0320



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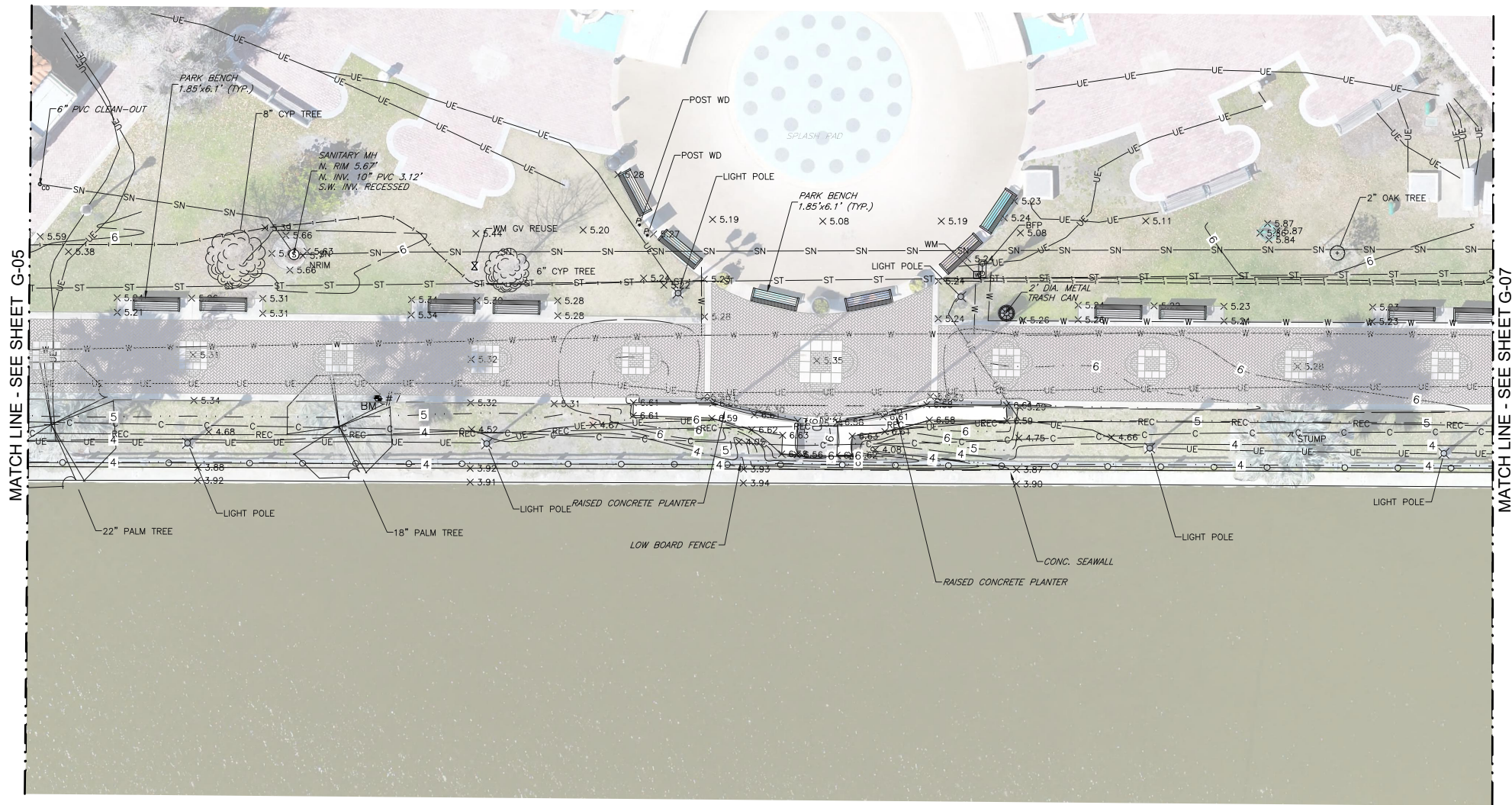
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DRAWING TITLE:  
**EXISTING CONDITIONS  
STA. 1+00.00 TO STA. 3+00.00  
PROMENADE IMPROVEMENTS**

CLIENT:  
**CITY OF COCOA**

PROJECT NO.:	PROJ. MGR.:
<b>COC013</b>	<b>TMV</b>
DATE:	DRWN. BY:
<b>06/28/2019</b>	<b>MBH</b>
SCALE:	CHKD. BY:
<b>1" = 10'</b>	<b>TMV</b>
DRAWING NO.:	
<b>06 OF 44</b>	
SHEET NO.:	
<b>G-05</b>	

THOMAS A. WILL, P.E.  
#71188



MATCH LINE - SEE SHEET G-05

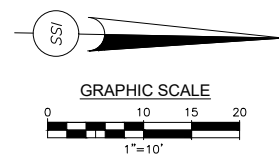
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#5	TRAV MAGD	7.570	1462214.8110	745580.4210
#6	TRAV MAGD	4.855	1462150.6710	745181.3000
#7	TRAV MAGD	5.385	1461489.7790	745017.0320

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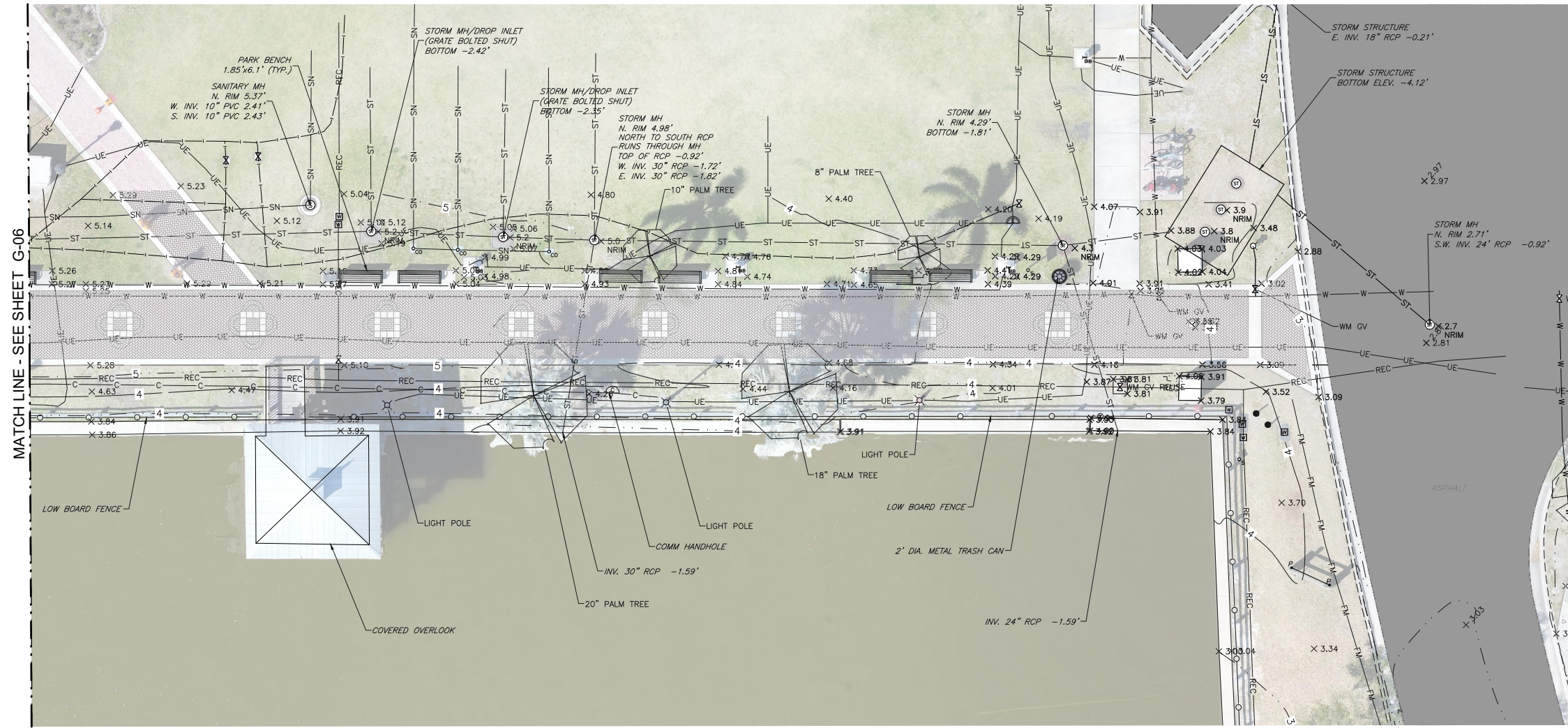
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 PROMENADE IMPROVEMENTS**

CLIENT:  
**CITY OF COCOA**

PROJECT NO.:	PROJ. MGR.:
<b>COC013</b>	<b>TMV</b>
DATE:	DRWN. BY:
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SCALE:	CHKD. BY:
<b>1" = 10'</b>	<b>TMV</b>
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<b>07 OF 44</b>	
SHEET NO.:	
<b>G-06</b>	

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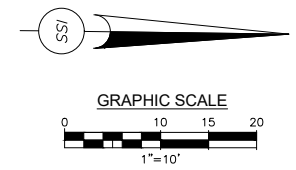
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#7	TRAV MAGD	5.385	1461489.7790	745017.0320

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**EXISTING CONDITIONS  
STA. 5+00.00 TO STA. 7+05.66  
PROMENADE IMPROVEMENTS**

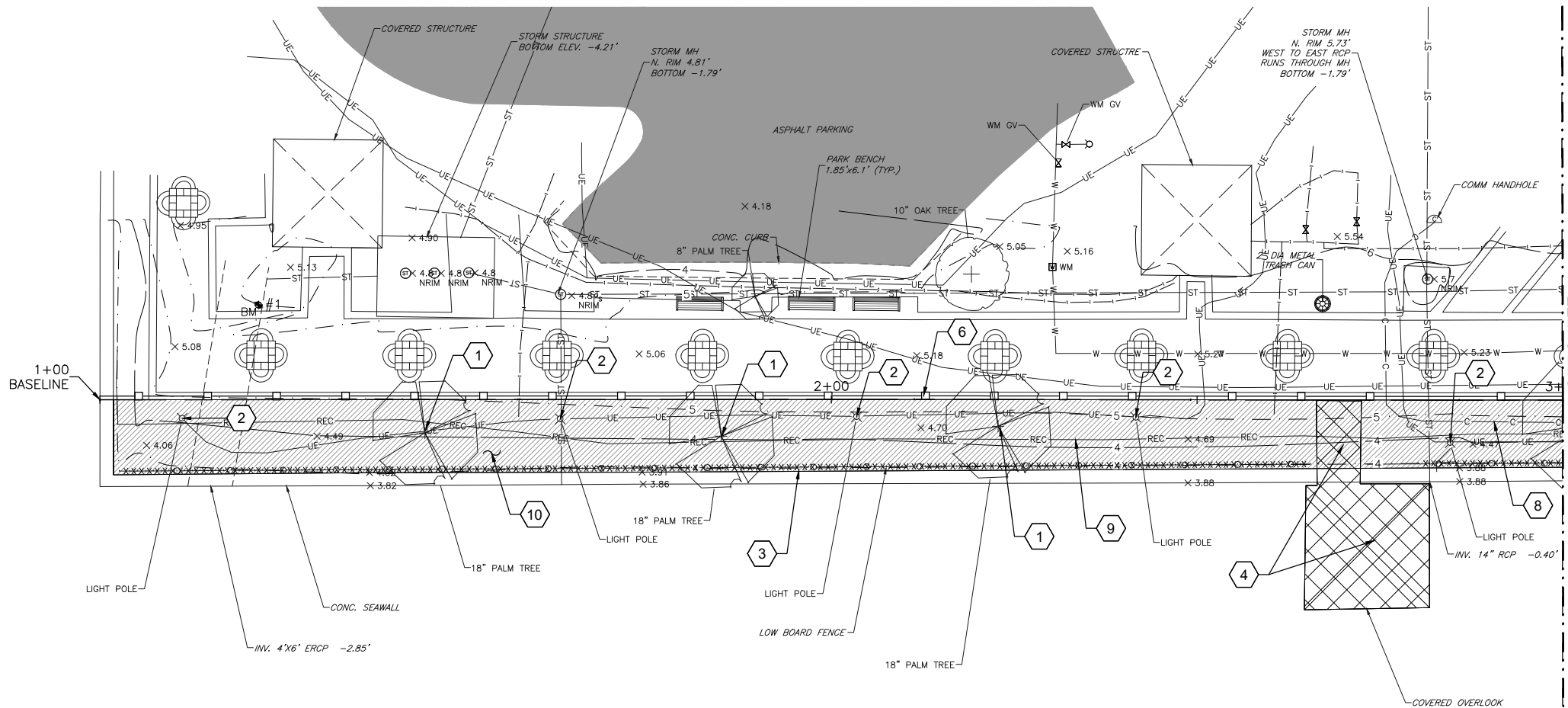
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**CITY OF COCOA**

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DATE:	DRWN. BY:
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<b>1" = 10'</b>	<b>TMV</b>
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SHEET NO.:	
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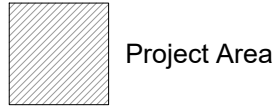
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THOMAS A. WILL, P.E.  
#11188





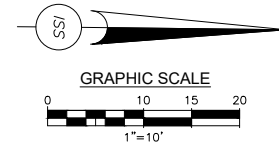
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**Requirement to Locate Underground Structures and Utilities:**  
 In addition to contacting Sunshine811 and other legal responsibility for locating utilities as part of the work, the Contractor shall perform a Quality A Subsurface Utility Engineering Investigation as defined by FDOT. As part of this work, the Contractor shall identify and locate subsurface tie-backs from the existing sea wall to an elevation of 1.0 (NAVD88). The results of this work shall be submitted to the Engineer and City for record purposes prior to beginning any construction or demolition.

**DEMOLITION KEYNOTES**

- 1 Remove and dispose of trees. Remove roots to a minimum of 1 ft below bottom of proposed improvements. Contractor shall protect existing underground improvements including sea wall tie-backs during work.
- 2 Remove and relocate light pole. Refer to electrical drawings for locations and details for relocation. Extra light poles not relocated shall be protected and delivered to the City.
- 3 Remove and dispose of fence, including posts and any concrete anchorage/footing
- 4 Remove and dispose of gazebo and entrance walkway. Completely remove piling and any subsurface supports.
- 5 Remove and dispose of raised concrete structure and walkway to sea wall. Subsurface portion of the structures shall be removed to minimum of 3 ft depth or 1 ft below bottom of proposed improvements, whichever is lower. Protect adjacent paver sidewalk and ribbon curb during demolition.
- 6 Install and maintain temporary construction fence/barricade to maintain safe and secure project site throughout the duration of the project. Fence/barricade shall be interlocking steel barricade fencing. Barricades shall have a height of 43". Steel frame shall be constructed of 1.5" O.D 16-gauge steel tubing, with a grill of upright bars made of 1/2 O.D. 16-gauge steel tubing. Grill spacing shall meet all standard codes. Signs shall be fixed to the barricades every 50 ft stating "Do Not Enter Construction Area". Contractor shall maintain the barricades secure in place during construction. Contractor can add additional measures needed to meet OSHA requirements and ensure safety of the work area.
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- 9 Remove and dispose of existing 8" reclaimed water main. Work shall be performed in accordance with requirements of the "Utility Plan" sheet C-07, C-08 and C-09.
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1	10/22/2019	RELEASED FOR BID/NOT RELEASED FOR CONSTRUCTION	DESCRIPTION
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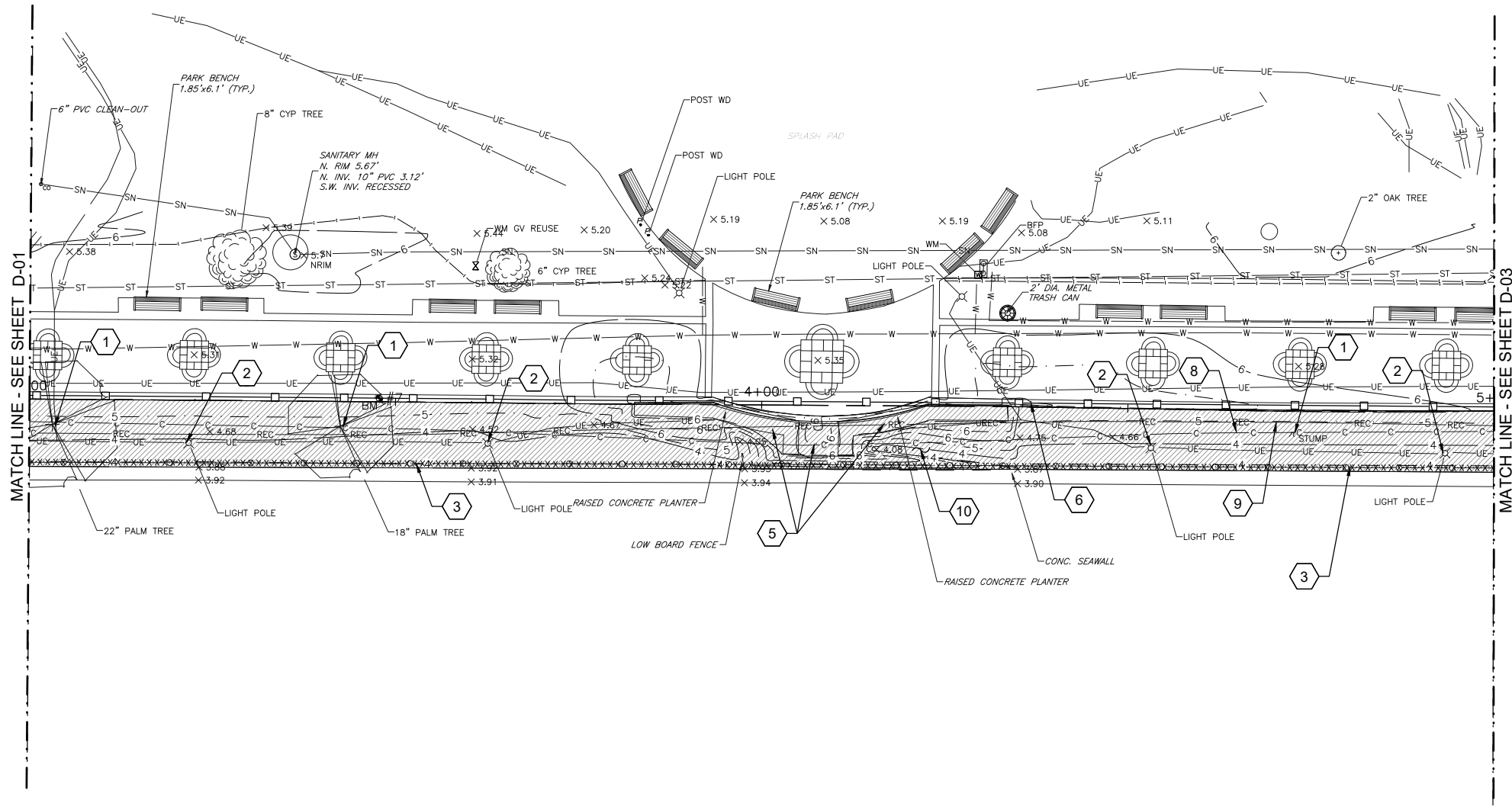
DRAWING TITLE:  
**DEMOLITION PLAN**  
 STA. 1+00.00 TO STA. 3+00.00  
**PROMENADE IMPROVEMENTS**

CLIENT:  
**CITY OF COCOA**

PROJECT NO.:	PROJ. MGR.:
<b>COC013</b>	<b>TMV</b>
DATE:	DRWN. BY:
<b>06/28/2019</b>	<b>BH</b>
SCALE:	CHKD. BY:
<b>1" = 10'</b>	<b>TMV</b>
DRAWING NO. <b>09 OF 44</b>	
SHEET NO. <b>D-01</b>	

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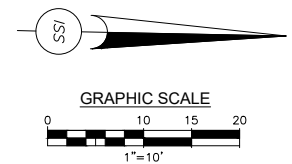
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**Call before you dig.**



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**DEMOLITION KEYNOTES**

- 1 Remove and dispose of trees. Remove roots to a minimum of 1 ft below bottom of proposed improvements. Contractor shall protect existing underground improvements including sea wall tie-backs during work.
- 2 Remove and relocate light pole. Refer to electrical drawings for locations and details for relocation. Extra light poles not relocated shall be protected and delivered to the City.
- 3 Remove and dispose of fence, including posts and any concrete anchorage/footing
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THOMAS A. VILLI, P.E. #7118	
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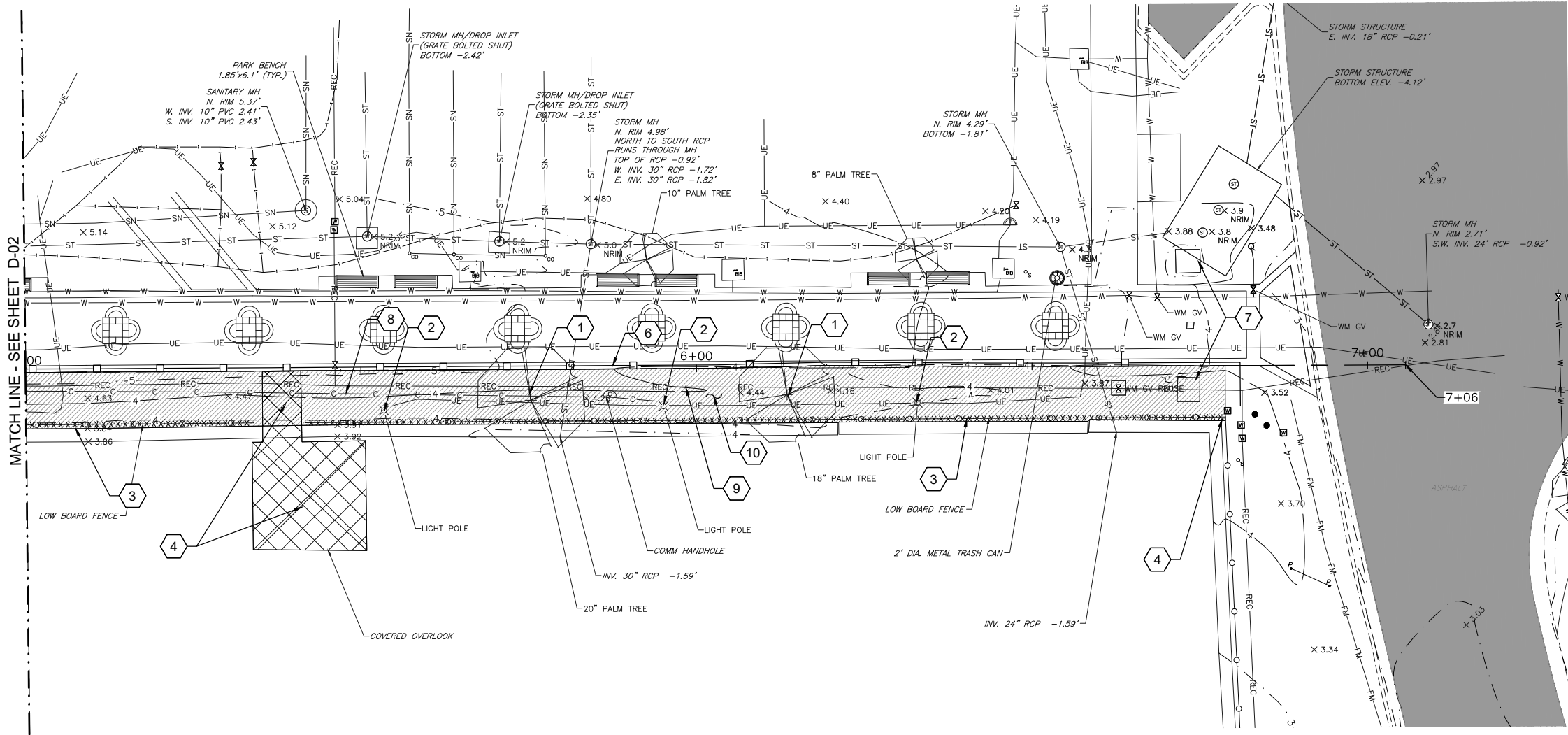
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DRAWING TITLE:  
**DEMOLITION PLAN**  
 STA. 3+00.00 TO STA. 5+00.00  
**PROMENADE IMPROVEMENTS**

CLIENT:  
**CITY OF COCOA**

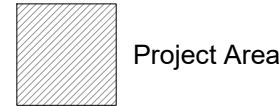
PROJECT NO.: **COC013** PROJ. MGR.: **TMV**  
 DATE: **06/28/2019** DRWN. BY: **MBH**  
 SCALE: **1" = 10'** CHKD. BY: **TMV**

DRAWING NO.: **10 OF 44**  
 SHEET NO.: **D-02**

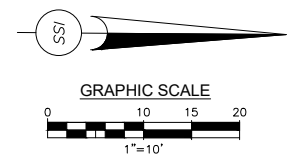


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DRAWING TITLE:  
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 STA. 5+00.00 TO STA. 7+05.66  
**PROMENADE IMPROVEMENTS**

CLIENT:  
**CITY OF COCOA**

PROJECT NO.:	PROJ. MGR.:
<b>COC013</b>	<b>TMV</b>
DATE:	DRWN. BY:
<b>06/28/2019</b>	<b>MBH</b>
SCALE:	CHKD. BY:
<b>1" = 10'</b>	<b>TMV</b>
DRAWING NO.	
<b>11 OF 44</b>	
SHEET NO.	
<b>D-03</b>	

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DRAWING TITLE:  
**CIVIL SITE PLAN**  
STA. 1+00.00 TO STA. 3+00.00  
**PROMENADE IMPROVEMENTS**

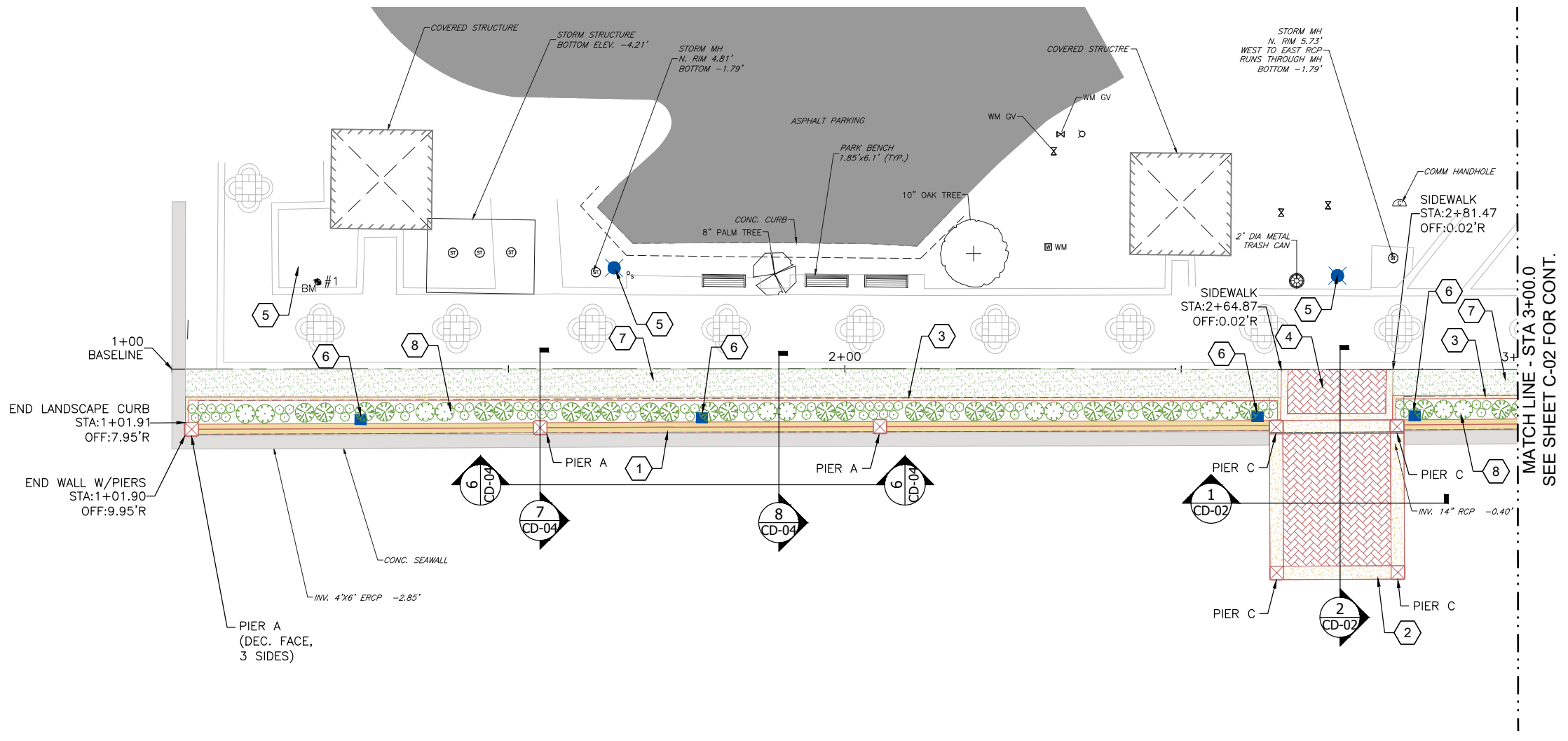
CLIENT:  
**CITY OF COCOA**

PROJECT NO.:	PROJ. MGR.:
<b>COC013</b>	<b>TMV</b>
DATE:	DRWN. BY:
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SCALE:	CHKD. BY:
<b>1" = 10'</b>	<b>TMV</b>
DRAWING NO.:	
<b>12 OF 44</b>	
SHEET NO.:	
<b>C-01</b>	

**SITE PLAN KEYNOTES**

- 1 Install reinforced concrete wall and piers with precast stone caps. Refer to details on sheets CD-04 & CD-06 and structural sheets S-01 & S-02. Refer to the Coating schedule on sheet C-01 for information on coating requirements of the wall, piers, and overlook structures.
- 2 Install concrete overlook platform. Refer to details on sheets CD-01 & CD-02 and structural sheets S-01 & S-02. Refer to the Coating schedule on sheet C-01 for information on coating requirements of the wall, piers, and overlook structures.
- 3 Install concrete landscape curb. See detail on sheet C-01.
- 4 Install concrete sidewalk with stamped herringbone pattern. Refer to details on sheet CD-01, CD-02, and CD-03. Stamped concrete shall be colorless and stamped in a new brick, herringbone pattern. As part of the shop drawing submittal for this work, the Contractor may propose minor adjustments to the dimensions of the stamped areas and adjoining smooth areas shown on the plans and details to better facilitate the stamping of the concrete.
- 5 Install relocated light pole. Refer to electrical drawings for additional information.
- 6 Install electrical power receptacles. Refer to electrical drawings for additional information.
- 7 Install sod. Refer to landscape plans for additional information.
- 8 Install landscaping. Refer to landscape plans for additional information.
- 9 Install concrete sign wall. Refer to details on sheets CD-03 & CD-04 and structural sheet S-02. Refer to the Coating schedule on sheet C-01 for information on coating requirements of the wall, piers, and overlook structures. Refer to electrical drawings for information on electrical service to lighted sign.
- 10 Install landscaping around sign wall. Refer to sheet CD-03 and landscape plans for more information.
- 11 Install "Entrance Pier." Refer to sheet CD-05 for more information.

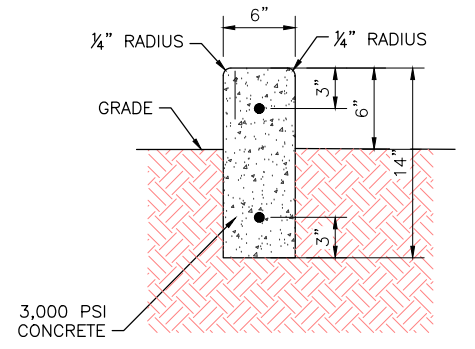
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MATCH LINE - STA 3+00.0  
SEE SHEET C-02 FOR CONT.

Coating Schedule:

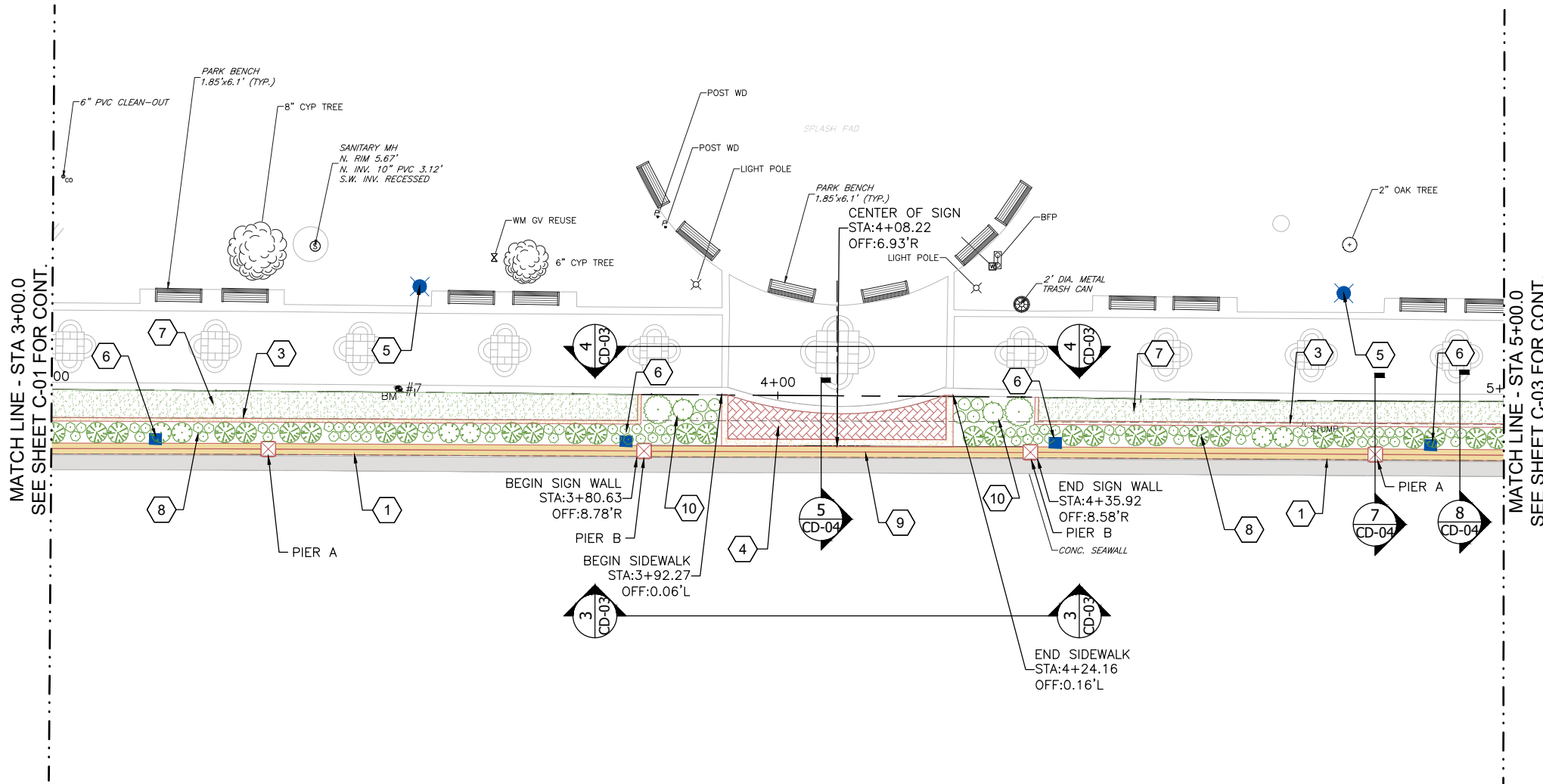
1. Contractor shall provide masonry coatings in accordance with Section 09960 and 07115 of the Specifications.
2. The wall, wall caps, sign wall, piers, pier caps, and water-facing edge of the overlooks shall receive coatings.
3. The coatings shall include two (2) distinct colors, a primary and accent color. Colors will be selected as part of the submittal process.
4. The main body of the wall, body of the piers, and water-facing edge of the overlooks shall receive the primary color.
5. The wall caps, pier caps, and decorative raised faces of the piers shall be coated with a different (accent) color.
6. Buried faces of the concrete, including the wall and wall foundation shall be coated with bituminous dampproofing in accordance with Section 07115 of the Specifications



- NOTES:
1. Install 1/2" expansion joint abutting hard surfaces and Min. 50 ft.
  2. Install contraction joint every 10 ft.

CONCRETE LANDSCAPE CURB DETAIL  
Scale: N.T.S.

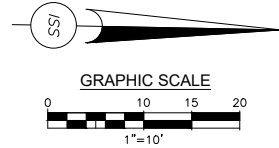




**SITE PLAN KEYNOTES**

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DRAWING TITLE:  
**CIVIL SITE PLAN**  
**STA. 3+00.00 TO STA. 5+00.00**  
**PROMENADE IMPROVEMENTS**

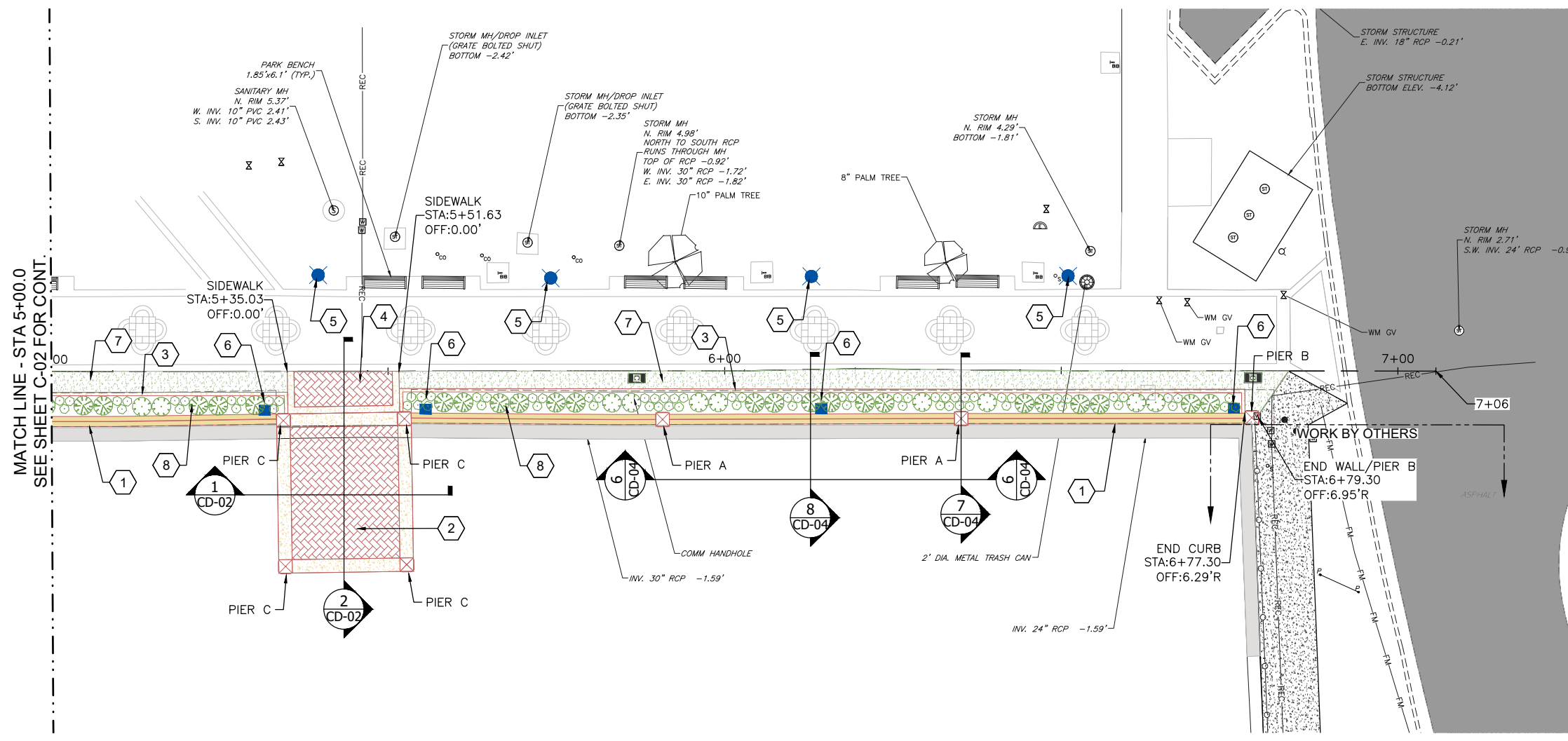
CLIENT:  
**CITY OF COCOA**

PROJECT NO.:	PROJ. MGR.:
<b>COC013</b>	<b>TMV</b>
DATE:	DRWN. BY:
<b>06/28/2019</b>	<b>MBH</b>
SCALE:	CHKD. BY:
<b>1" = 10'</b>	<b>TMV</b>
DRAWING NO.:	
<b>13 OF 44</b>	
SHEET NO.:	
<b>C-02</b>	



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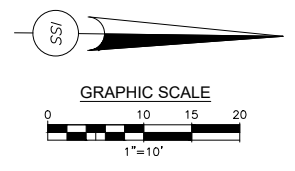
MATCH LINE - STA 5+00.0  
SEE SHEET C-02 FOR CONT.



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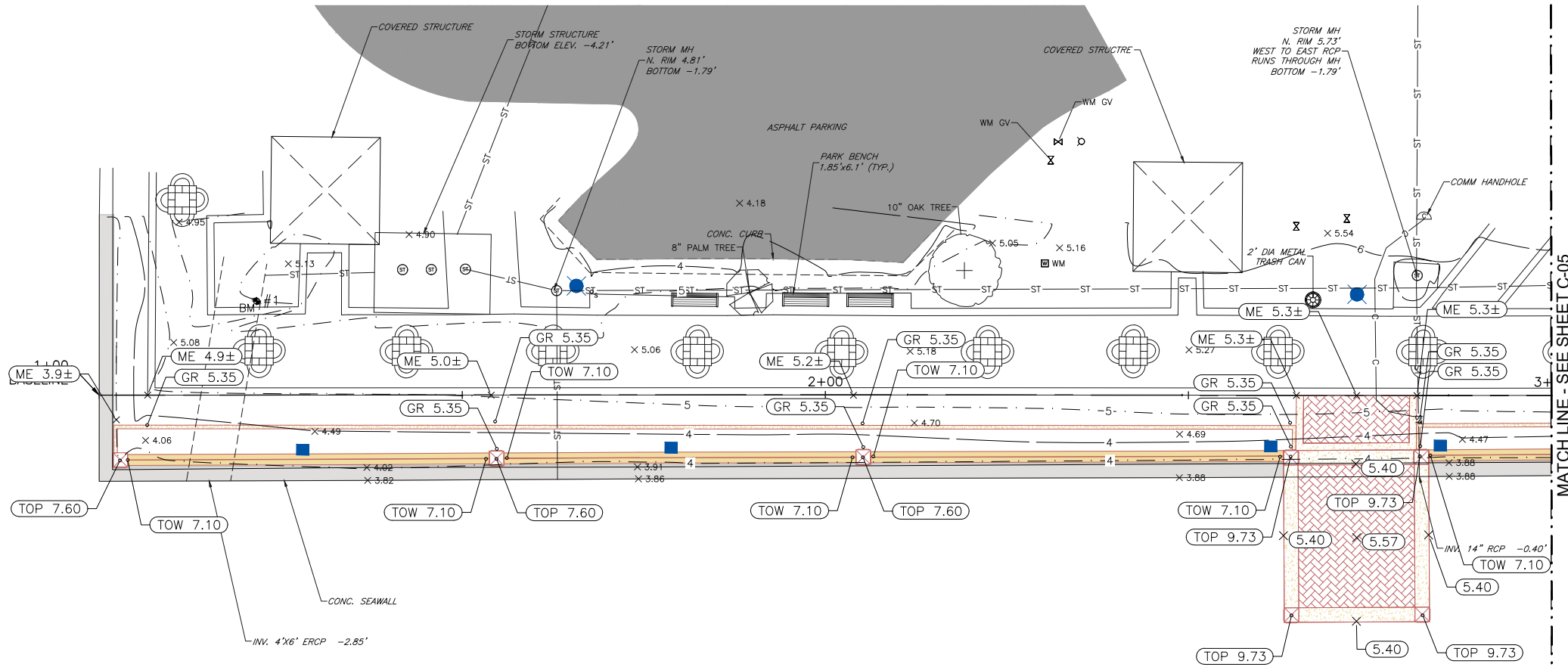
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STA. 5+00.00 TO STA. 7+05.66  
**PROMENADE IMPROVEMENTS**  
CLIENT:  
**CITY OF COCOA**

PROJECT NO.: **COC013** PROJ. MGR.: **TMV**  
DATE: **06/28/2019** DRWN. BY: **MBH**  
SCALE: **1" = 10'** CHKD. BY: **TMV**  
DRAWING NO.: **14 OF 44**  
SHEET NO.: **C-03**

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**Earthwork Note:**

The contractor shall be responsible for providing any fill as needed to construct the project to the final grades shown.

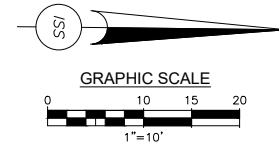
**GRADING LEGEND**

- 5.70± — X — EXISTING SPOT ELEVATION
- ME 4.3± — X — MATCH EXISTING ELEVATION
- 5.40 — X — PROPOSED SPOT ELEVATION
- GR 4.00 — ○ — PROPOSED GROUND (GRASS AREA) ELEVATION
- TOP 7.85 — ○ — PROPOSED TOP OF PIER ELEVATION
- TOW 7.10 — ○ — PROPOSED TOP OF WALL ELEVATION
- SC 7.10 — ○ — PROPOSED STAMPED CONCRETE ELEVATION

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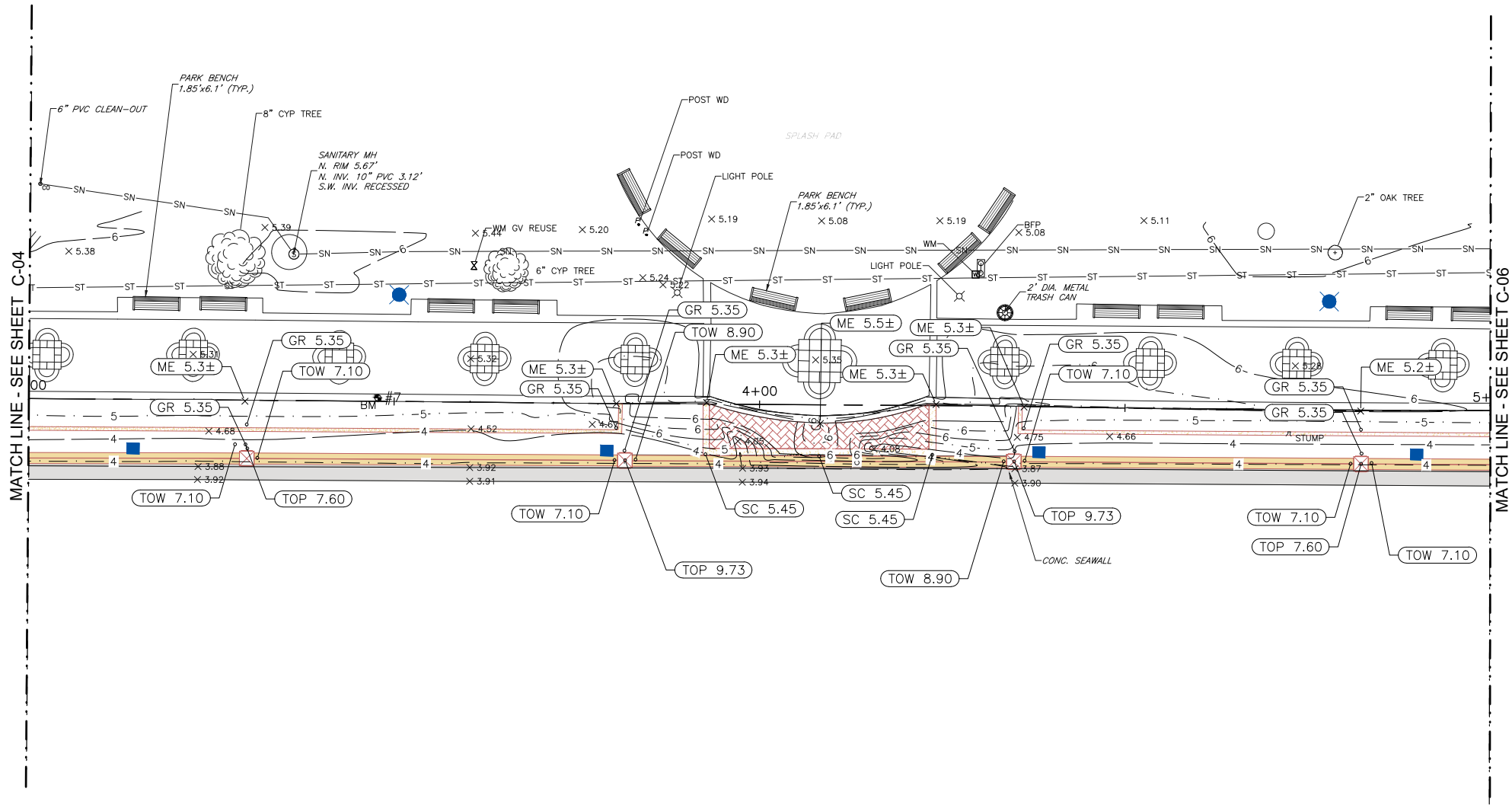
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DRAWING TITLE:  
**GRADING PLAN**  
 STA. 1+00.00 TO STA. 3+00.00  
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**CITY OF COCOA**

PROJECT NO.: **COC013** PROJ. MGR.: **TMV**  
 DATE: **06/28/2019** DRWN. BY: **MBH**  
 SCALE: **1" = 10'** CHKD. BY: **TMV**  
 DRAWING NO.: **15 OF 44**  
 SHEET NO.: **C-04**

NO.	DATE	DESCRIPTION	REVISIONS
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THOMAS A. WILL, P.E.  
#71188

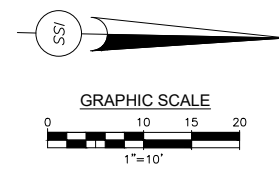


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- PROPOSED TOP OF PIER ELEVATION
- PROPOSED TOP OF WALL ELEVATION
- PROPOSED STAMPED CONCRETE ELEVATION



MATCH LINE - SEE SHEET C-04

MATCH LINE - SEE SHEET C-06

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THOMAS A. WILL, P.E.  
#7118

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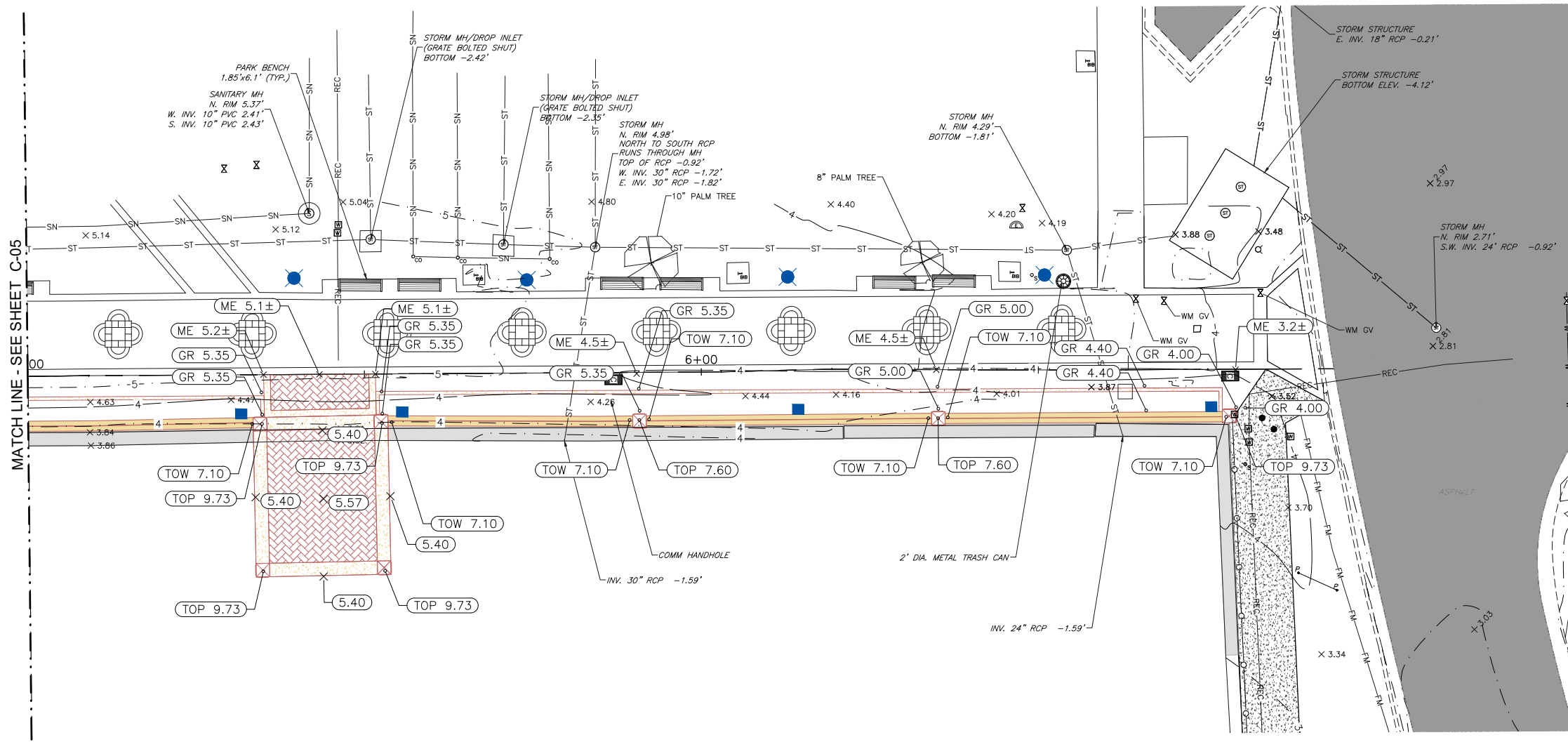
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DRAWING NO.	
<b>16 OF 44</b>	
SHEET NO.	
<b>C-05</b>	

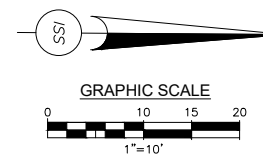




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**GRADING LEGEND**

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- TOW 7.10 — o PROPOSED TOP OF WALL ELEVATION
- SC 7.10 — o PROPOSED STAMPED CONCRETE ELEVATION



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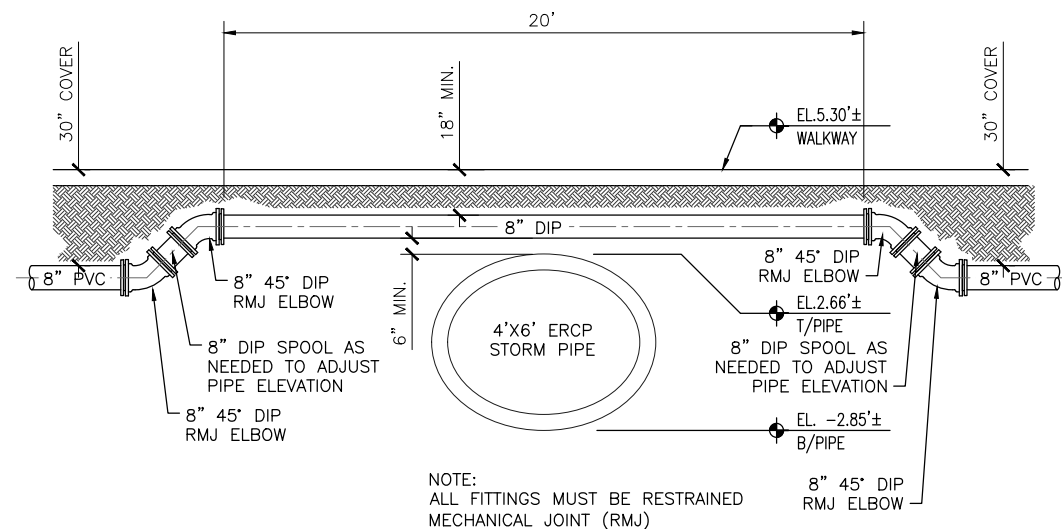
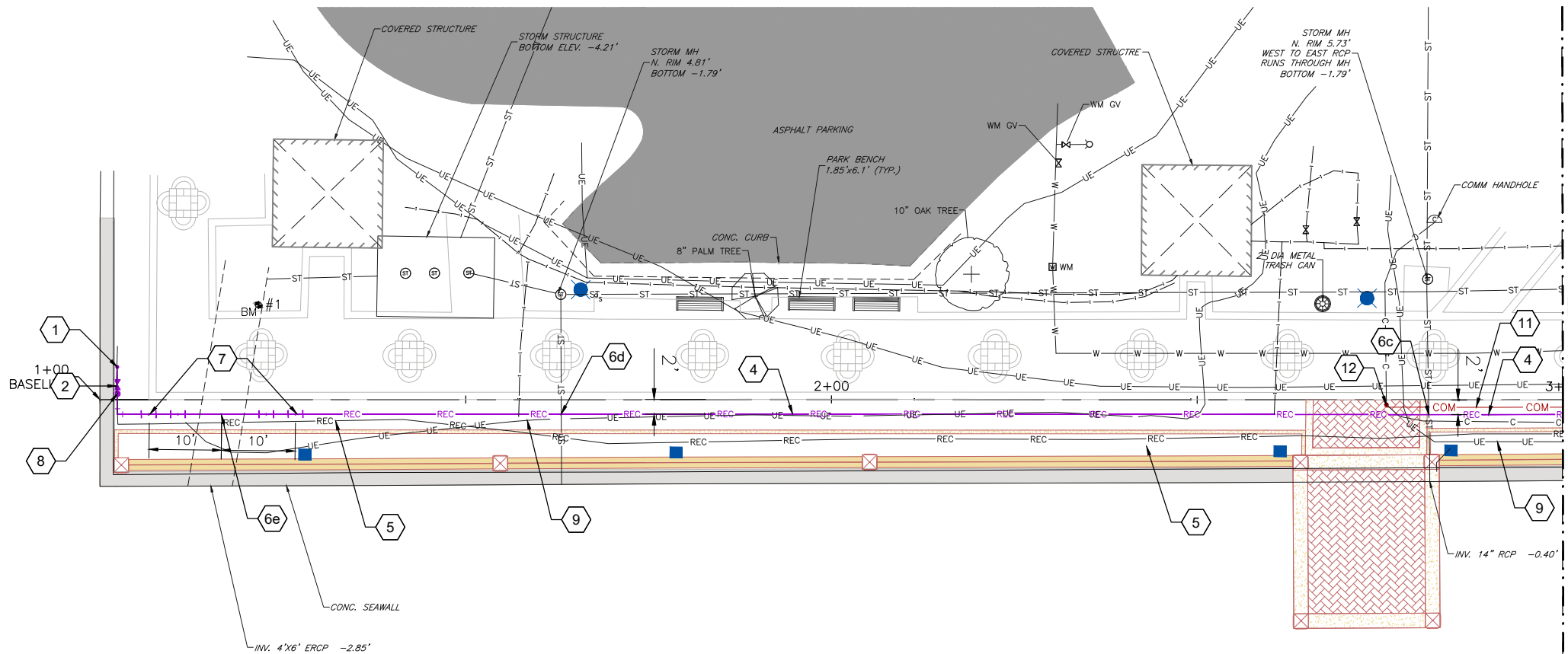
THOMAS A. WILL, P.E. #7118	
1	10/22/2019
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DESCRIPTION	
REVISIONS	

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 7185 Murrell Road, Suite 101  
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 Phone: (321) 622-4646  
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DRAWING TITLE:  
**GRADING PLAN  
 STA.5+00.00 TO STA.7+05.66  
 PROMENADE IMPROVEMENTS**

CLIENT:  
**CITY OF COCOA**

PROJECT NO.:	PROJ. MGR.:
<b>COC013</b>	<b>TMV</b>
DATE:	DRWN. BY:
<b>06/28/2019</b>	<b>MBH</b>
SCALE:	CHKD. BY:
<b>1" = 10'</b>	<b>TMV</b>
DRAWING NO.:	
<b>17 OF 44</b>	
SHEET NO.:	
<b>C-06</b>	

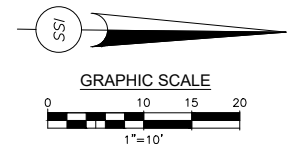


**1**  
C-07 RECLAIM WM STORM PIPE CROSSING  
Scale: 1/4" = 1'-0"

**UTILITY PLAN KEYNOTES**

- 1 Connect new 8" reclaimed water main to existing 8" reclaimed watermain
- 2 Install 8" gate valve
- 3 Install 2" jumper connection between existing and proposed reclaimed water main
- 4 Install 8" PVC reclaimed water main (30" minimum cover). Center new watermain 2 ft off edge of existing paver walkway.
- 5 Remove and dispose of existing 8" reclaimed water main.
- 6 Storm sewer crossing (letter notes location)
  - a. 24" Storm sewer, Top of Pipe = 1.01
  - b. 30" Storm sewer, Top of Pipe = 1.37
  - c. 15" Storm sewer, Top of Pipe = 1.31
  - d. 18" Storm sewer, Top of Pipe = 0.38
  - e. 48" Storm sewer, Top of Pipe = 2.66
- 7 Install 20 lf of 8" DIP reclaimed watermain storm sewer crossing. Refer to detail of crossing on this sheet.
- 8 Install 2" blow-off with sampling connection.
- 9 Remove existing underground electric conduit and wire (refer to electrical plans for re-routing of electric conduit and wire). Protect, cap, and record location of all conduit crossings under existing paver sidewalk. Include locations in asbuilt drawings.
- 10 Install new 17" x 30" communications hand hole with cover. Box and cover shall be made of polymer concrete.
- 11 Install new two (2) 2" PVC communications conduit (Sch40 PVC) with 24" cover and reinstall wiring. Center new conduit approximately 2 ft off edge of existing paver walkway.
- 12 Connect to existing 2" PVC communications conduit
- 13 Remove existing 2" PVC communications conduit
- 14 Connect existing 3" reclaimed watermain to new 8" PVC watermain by installing 8"x4" reducing tee, 4" gate valve, and 4"x3" reducer.

**Note:**  
All work on the relocation of the reclaimed watermain shall be performed in accordance with the requirements of the City of Cocoa Utilities Technical Provisions and Standard Details, latest edition. Copies of the latest edition of this document are available at <https://www.cocoafl.org/235/Utilities>. Contractor shall coordinate with City Utilities Inspector and City will pull bacteriological samples from reclaimed water main for testing.



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DRAWING TITLE:  
**UTILITY PLAN STA. 1+00.00 TO STA. 3+00.00**

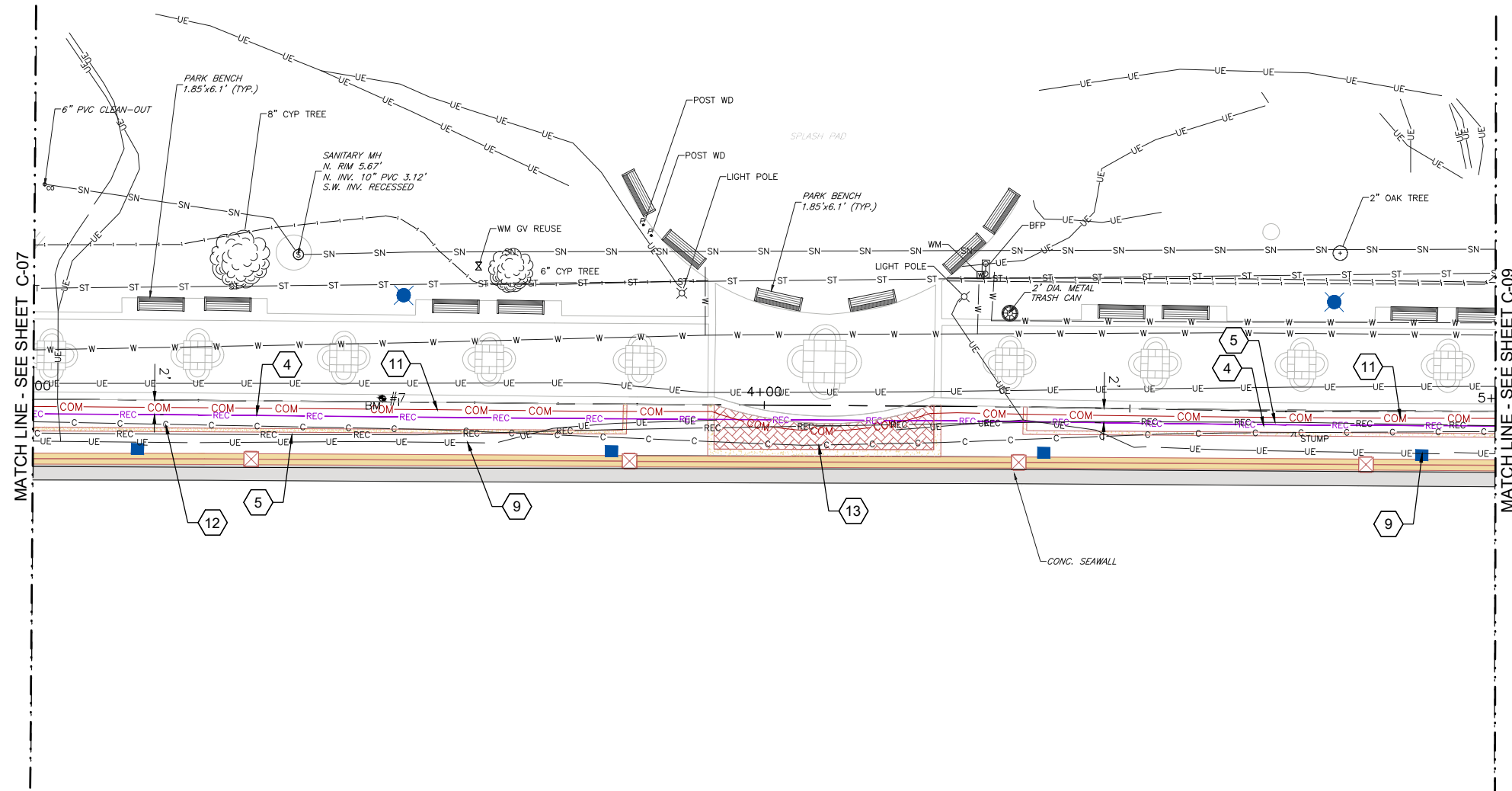
PROMENADE IMPROVEMENTS

CLIENT:  
**CITY OF COCOA**

PROJECT NO.:	PROJ. MGR.:
<b>COC013</b>	<b>TMV</b>
DATE:	DRWN. BY:
<b>06/28/2019</b>	<b>MBH</b>
SCALE:	CHKD. BY:
<b>1" = 10'</b>	<b>TMV</b>
DRAWING NO.:	
<b>18 OF 44</b>	
SHEET NO.:	
<b>C-07</b>	

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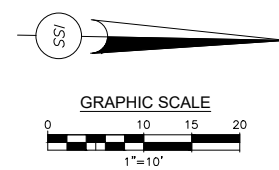
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**UTILITY PLAN KEYNOTES**

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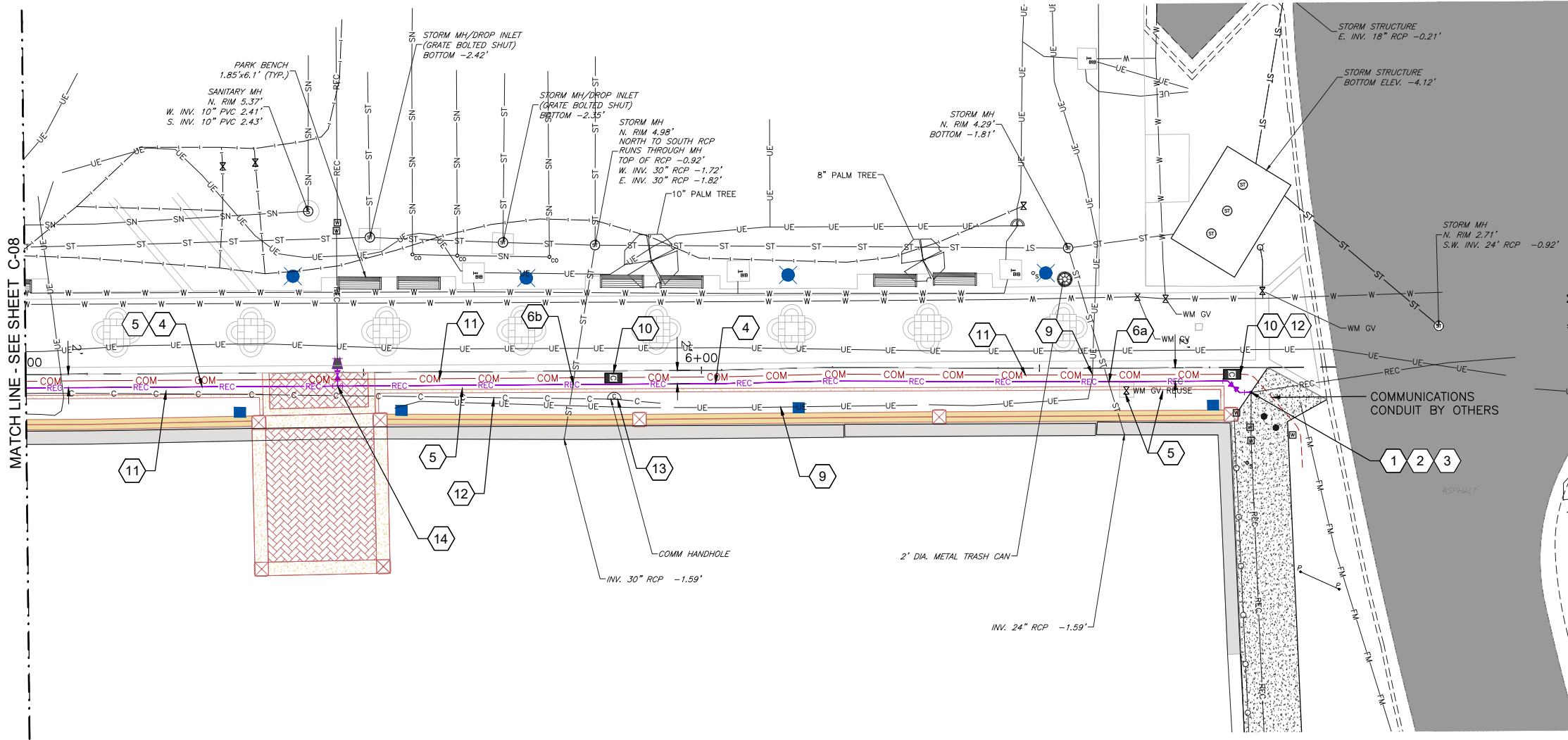
DRAWING TITLE:  
**UTILITY PLAN STA. 3+00.00 TO STA. 5+00.00**

PROMENADE IMPROVEMENTS

CLIENT:  
**CITY OF COCOA**

PROJECT NO.: <b>COC013</b>	PROJ. MGR.: <b>TMV</b>
DATE: <b>06/28/2019</b>	DRWN. BY: <b>MBH</b>
SCALE: <b>1" = 10'</b>	CHKD. BY: <b>TMV</b>
DRAWING NO. <b>19 OF 44</b>	
SHEET NO. <b>C-08</b>	

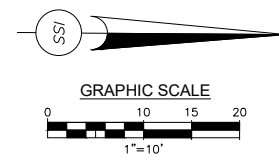
**811**  
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**UTILITY PLAN KEYNOTES**

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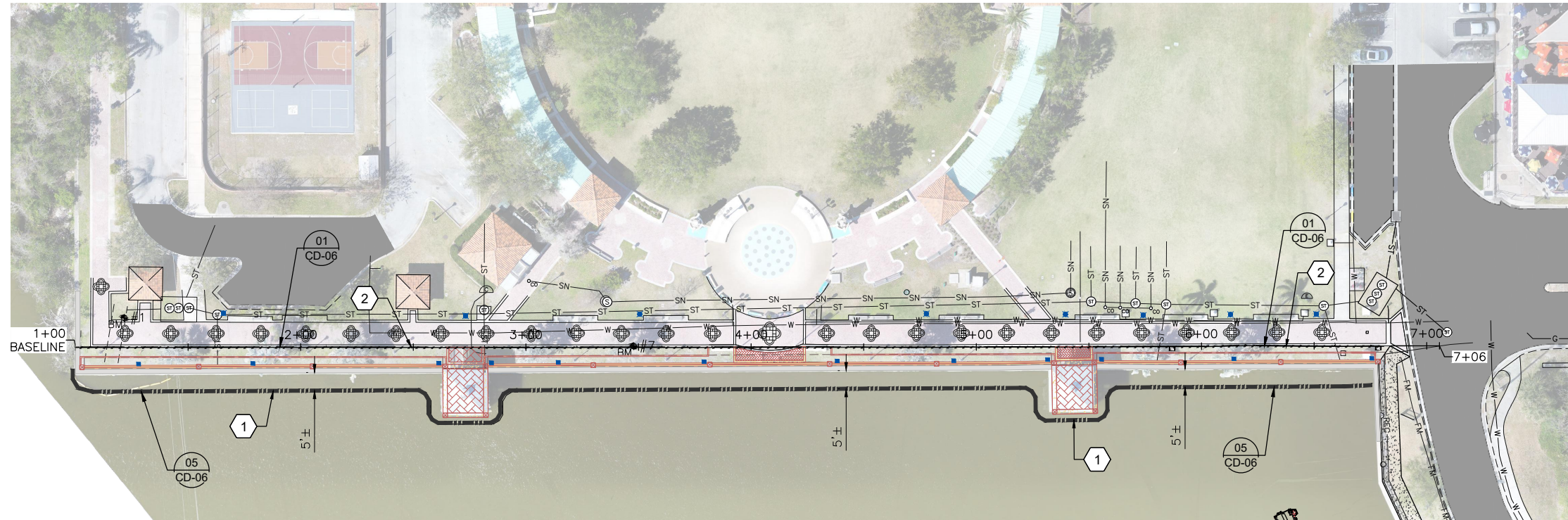
DRAWING TITLE:  
**UTILITY PLAN STA. 5+00.00 TO STA. 7+05.66**

PROMENADE IMPROVEMENTS

CLIENT:  
**CITY OF COCOA**

PROJECT NO.:	PROJ. MGR.:
<b>COC013</b>	<b>TMV</b>
DATE:	DRWN. BY:
<b>06/28/2019</b>	<b>MBH</b>
SCALE:	CHKD. BY:
<b>1" = 10'</b>	<b>TMV</b>
DRAWING NO.:	
<b>20 OF 44</b>	
SHEET NO.:	
<b>C-09</b>	





**BEST MANAGEMENT PRACTICES GUIDELINES**

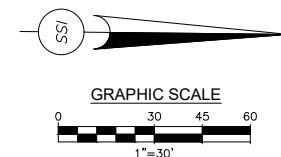
1. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS DURING CONSTRUCTION TO CONTROL EROSION AND PREVENT THE TRANSPORT OF SEDIMENT TO SURFACE, STORM DRAINS AND/OR ADJACENT PROPERTIES. SILT SCREENS, HAY BALES AND/OR FILTER FABRIC, OR OTHER APPROVED MEANS, SHALL BE EMPLOYED. SODDING AND/OR SEEDING SHALL BE ACCOMPLISHED AS SOON AS PRACTICAL AFTER EXCAVATION AND GRADING IS COMPLETE.
2. BEST MANAGEMENT PRACTICES DEVICES SHALL BE USED TO ADDRESS EROSION AND SEDIMENT CONTROL IN ACCORDANCE WITH CITY OF ROCKLEDGE COUNTY EROSION AND SILTATION CONTROL REQUIREMENTS.
3. THE PLAN INDICATES TYPICAL BEST MANAGEMENT PRACTICES DEVICE LOCATIONS. REFER TO BMP DETAILS FOR CORRECT PLACEMENT. BMPS SHALL BE PROVIDED FOR ALL EXISTING AND INTERIM DRAINAGE STRUCTURES DURING CONSTRUCTION.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL NECESSARY BMP DEVICES THROUGHOUT THE DURATION OF CONSTRUCTION OR AS INSTRUCTED BY THE ENGINEER.
5. ALL GRASSING BY SOD SHALL BE INSTALLED AS SOON AS PRACTICAL UPON THE COMPLETION OF FINAL GRADING OPERATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN ALL GRASSING IN A HEALTHY GROWING ENVIRONMENT UNTIL FINAL ACCEPTANCE AND CERTIFICATION.
6. THE CONTRACTOR, SHALL BE RESPONSIBLE TO SAFELY STORE EQUIPMENT, FUEL, OIL AND OTHER HAZARDOUS SUBSTANCES FROM CONTAMINATING THE STORM WATER MANAGEMENT AND COLLECTION SYSTEMS AND PRESERVATION AREAS.
7. ALL REQUIRED TREE PROTECTION BARRICADES SHALL MEET THE STANDARDS OF THE GOVERNING MUNICIPALITY AND ANY APPLICABLE TREE PROTECTION ORDINANCES.
8. PRIOR TO DEVELOPMENT-RELATED LAND CLEARING ACTIVITIES, ALL APPLICABLE MUNICIPAL APPROVALS MUST BE OBTAINED. IF BURNING OF TREES AND/OR BRANCHES IS REQUIRED FOR LAND CLEARING, A BURN PERMIT MUST BE FIRST OBTAINED.
9. EROSION AND SEDIMENT CONTROL BMPS IN ADDITION TO THOSE PRESENTED ON THE PLANS AND OUTLINED IN THE EROSION AND SEDIMENT CONTROL PLAN (ECP), BEST MANAGEMENT PRACTICES (BMP) PLAN, AND/OR STORMWATER POLLUTION PREVENTION PLAN (SWPPP) SHALL BE IMPLEMENTED AS NECESSARY TO PREVENT TURBID DISCHARGES FROM FLOWING ONTO ADJACENT PROPERTIES OR ROADWAYS, OFF SITE STORMWATER CONVEYANCES OR RECEIVING WATERS, OR ON SITE WETLANDS AND SURFACE WATERS. BMPS SHALL BE DESIGNED, INSTALLED, AND MAINTAINED BY THE SITE OPERATOR TO ENSURE THAT OFF SITE SURFACE WATER QUALITY REMAINS CONSISTENT WITH STATE AND LOCAL REGULATIONS. [THE OPERATOR IS THE ENTITY THAT OWNS OR OPERATES THE CONSTRUCTION ACTIVITY AND HAS AUTHORITY TO CONTROL THOSE ACTIVITIES AT THE PROJECT NECESSARY TO ENSURE COMPLIANCE.
10. OFF SITE SURFACE WATER DISCHARGES, DISCHARGES TO THE MS4, OR DISCHARGES TO ONSITE WETLANDS OR SURFACE WATERS WITH TURBIDITY IN EXCESS OF 29 NEPHELOMETRIC TURBIDITY UNITS (NTUS) ABOVE BACKGROUND LEVEL SHALL BE IMMEDIATELY CORRECTED. SUCH INCIDENTS SHALL BE REPORTED TO THE AGENCY HAVING JURISDICTION WITHIN 24 HOURS OF THE OCCURRENCE. THE REPORT SHALL INCLUDE THE CAUSE OF THE DISCHARGE AND CORRECTIVE ACTIONS TAKEN.
11. THE OPERATOR SHALL ENSURE THAT ADJACENT PROPERTIES ARE NOT IMPACTED BY WIND EROSION, OR EMISSIONS OF UNCONFINED PARTICULATE MATTER IN ACCORDANCE WITH RULE 62-296.320(4)(C)1, F.A.C., BY TAKING APPROPRIATE MEASURES TO STABILIZE AFFECTED AREAS.
12. FUEL AND OTHER PETROLEUM PRODUCT SPILLS THAT ENTER STORMWATER DRAINS OR WATERBODIES, OR FUEL AND OTHER PETROLEUM PRODUCT SPILLS THAT ARE IN EXCESS OF 25 GALLONS SHALL BE CONTAINED, CLEANED UP, AND IMMEDIATELY REPORTED TO THE AGENCY HAVING JURISDICTION. SMALLER GROUND SURFACE SPILLS SHALL BE CLEANED UP AS SOON AS PRACTICAL.
13. THE CONTRACTOR SHALL PROVIDE ANY NECESSARY DEWATERING FOR THE DURATION OF THE PROJECT'S CONSTRUCTION.
14. CONTRACTOR SHALL CONTROL OFF-SITE SOIL TRACKING INCLUDING MATERIAL SPILLAGE OR SOIL TRACKING ONTO PUBLIC ROADS. THIS IS TO BE ACCOMPLISHED BY MANUAL REMOVAL AS NECESSARY, AND BY SOIL TRACKING PREVENTION TECHNIQUES IN ACCORDANCE WITH FDOT STANDARDS INDEX 106.
15. IF CONTAMINATED SOIL AND/OR GROUNDWATER IS DISCOVERED DURING DEVELOPMENT OF THE SITE, ALL ACTIVITY IN THE VICINITY OF THE CONTAMINATION SHALL IMMEDIATELY CEASE, AND THE AGENCY HAVING JURISDICTION SHALL BE CONTACTED.

**EROSION CONTROL KEYNOTES**

- 1 Install Floating Turbidity Barrier.
- 2 Install Silt Fence.

**BMP LEGEND**

- PROPOSED FLOATING TURBIDITY BARRIER
- PROPOSED SILT FENCE
- OTHER PROPOSED BMP DEVICE (WITH BMP ID)
- PROPOSED BMP DEVICE IDENTIFICATION (REFER TO DETAILS ON SHEET #####)



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DRAWING TITLE:  
**EROSION CONTROL PLAN**  
**PROMENADE IMPROVEMENTS**  
CLIENT:  
**CITY OF COCOA**

PROJECT NO.:	PROJ. MGR.:
<b>COC013</b>	<b>TMV</b>
DATE:	DRWN. BY:
<b>06/28/2019</b>	<b>MBH</b>
SCALE:	CHKD. BY:
<b>1" = 30'</b>	<b>TMV</b>
DRAWING NO.:	
<b>21 OF 44</b>	
SHEET NO.:	
<b>C-10</b>	

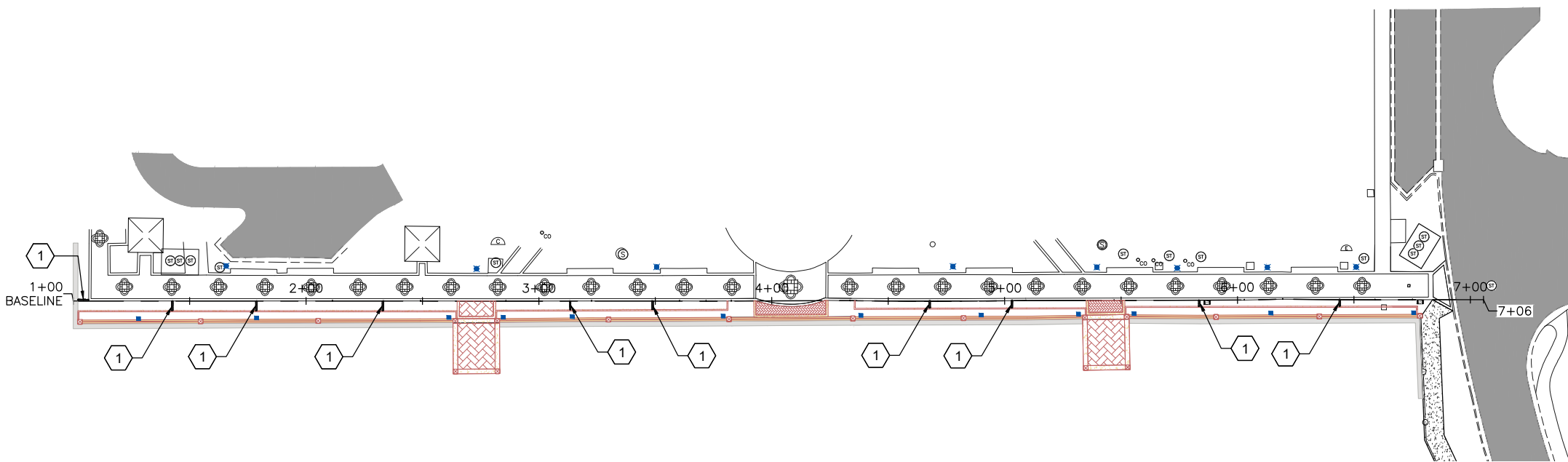
NO.	DATE:	DESCRIPTION	REVISIONS
1	10/22/2019	RELEASED FOR BID/NOT RELEASED FOR CONSTRUCTION	

THOMAS A. WILL, P.E.  
#71188

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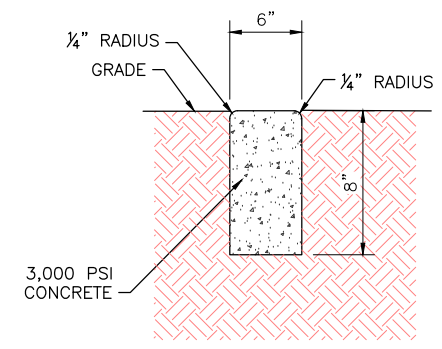


**SITE PLAN KEYNOTES**

- 1 Install concrete ribbon curb flush with sod.  
See Ribbon Curb Detail on this sheet.

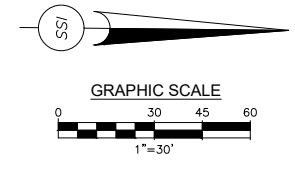
**Bid Alternate:**

1. The City is requesting a Add Alternate to the Bid for this project. As part of Contract Award, the City will decide whether or not to complete the alternate work.
2. This plan defines the Alternate Work to be performed.
3. The cost of this work shall be listed on the bid form in the "Bid - Add Alternate" line. The amount bid shall be the total amount to provide a complete and functioning project, if the City elects to complete the alternate work.
4. The alternate work is generally described as:
  - a. Replacement of approximately 800 sf of sod with plantings of Arachis Glabrata aka "Perennial Peanut." Refer to drawing L-4 for more detail.
  - b. Install an additional approximately 30 lf of ribbon curb to separate the areas of "Perennial Peanut" from the sod areas.
5. The price bid for "Bid-Add Alternate" shall include other minor ancillary changes to the improvements necessary to construct the alternate work.



- NOTES:**
1. Install 1/2" expansion joint abutting hard surfaces.

**RIBBON CURB DETAIL**  
Scale: N.T.S.



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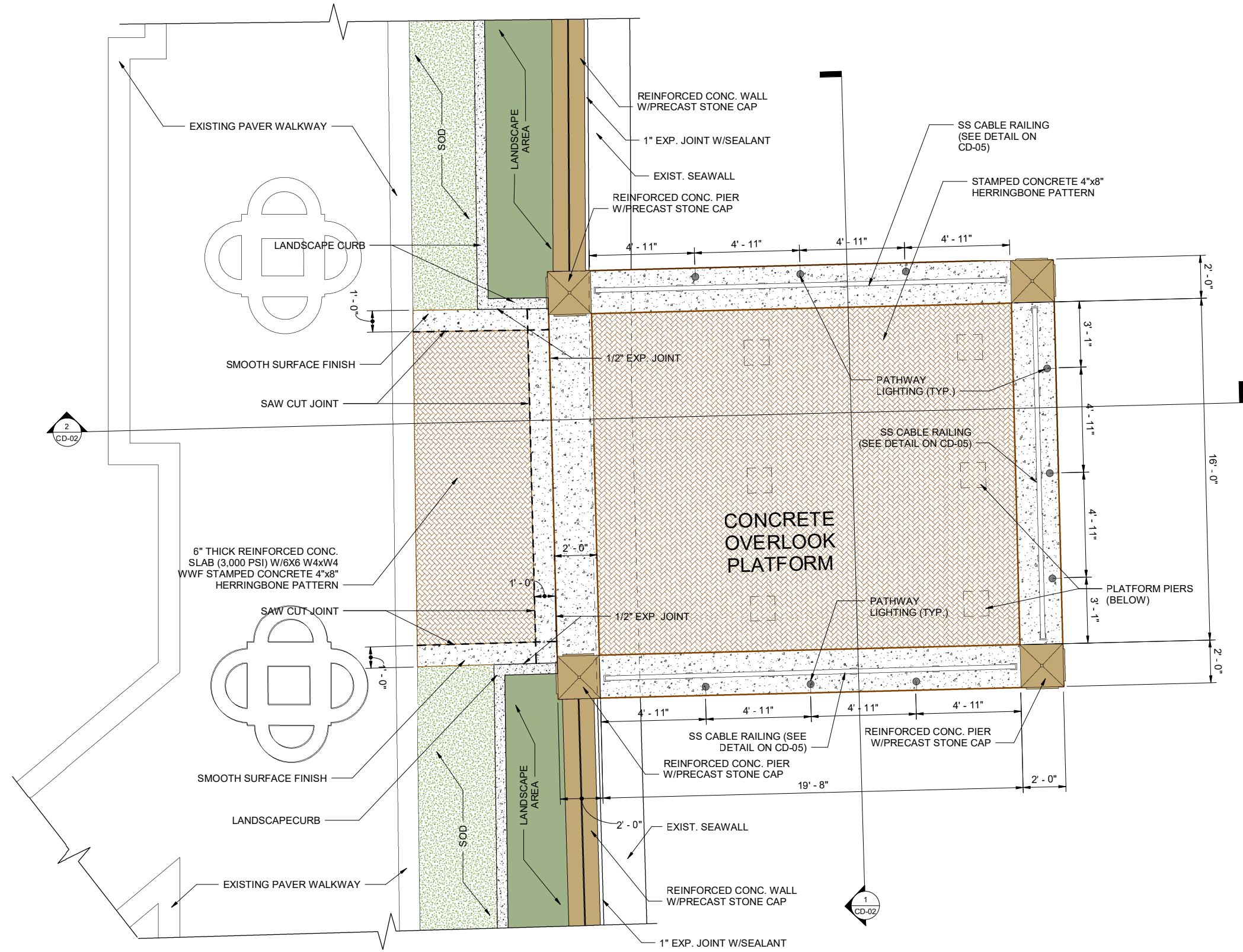
DRAWING TITLE: **BID ADD ALTERNATE PLAN**  
**PROMENADE IMPROVEMENTS**

CLIENT: **CITY OF COCOA**

PROJECT NO.: <b>COC013</b>	PROJ. MGR.: <b>TMV</b>
DATE: <b>06/28/2019</b>	DRWN. BY: <b>MBH</b>
SCALE: <b>1" = 30'</b>	CHKD BY: <b>TMV</b>
DRAWING NO. <b>22 OF 44</b>	
SHEET NO. <b>C-11</b>	



10/22/2019 5:46:19 PM



OVERLOOK PLATFORM PLAN  
3/8" = 1'-0"

10/23/2019 10:17:39 AM

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3				
2				
1	10/22/2019	RELEASED FOR BID/NOT RELEASED FOR CONSTRUCTION	DESCRIPTION	REVISIONS
NO.	DATE:			

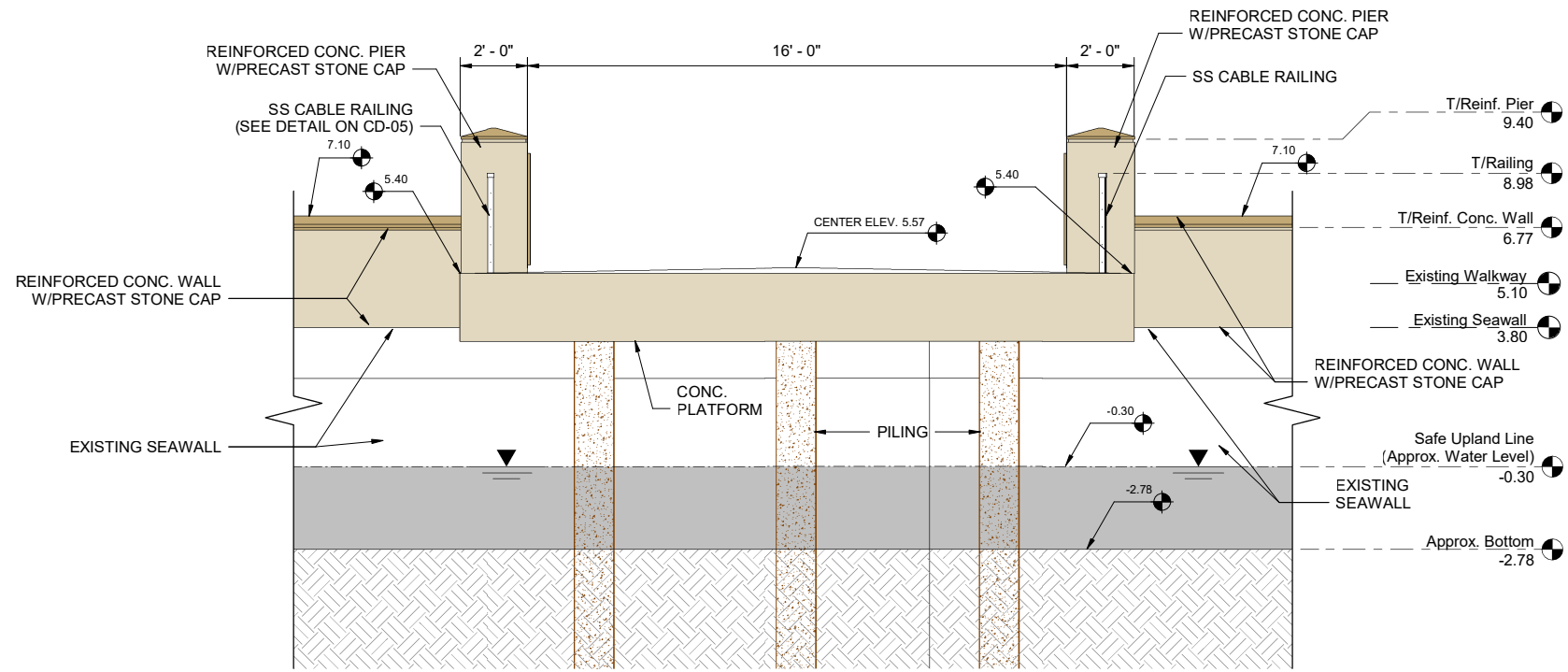
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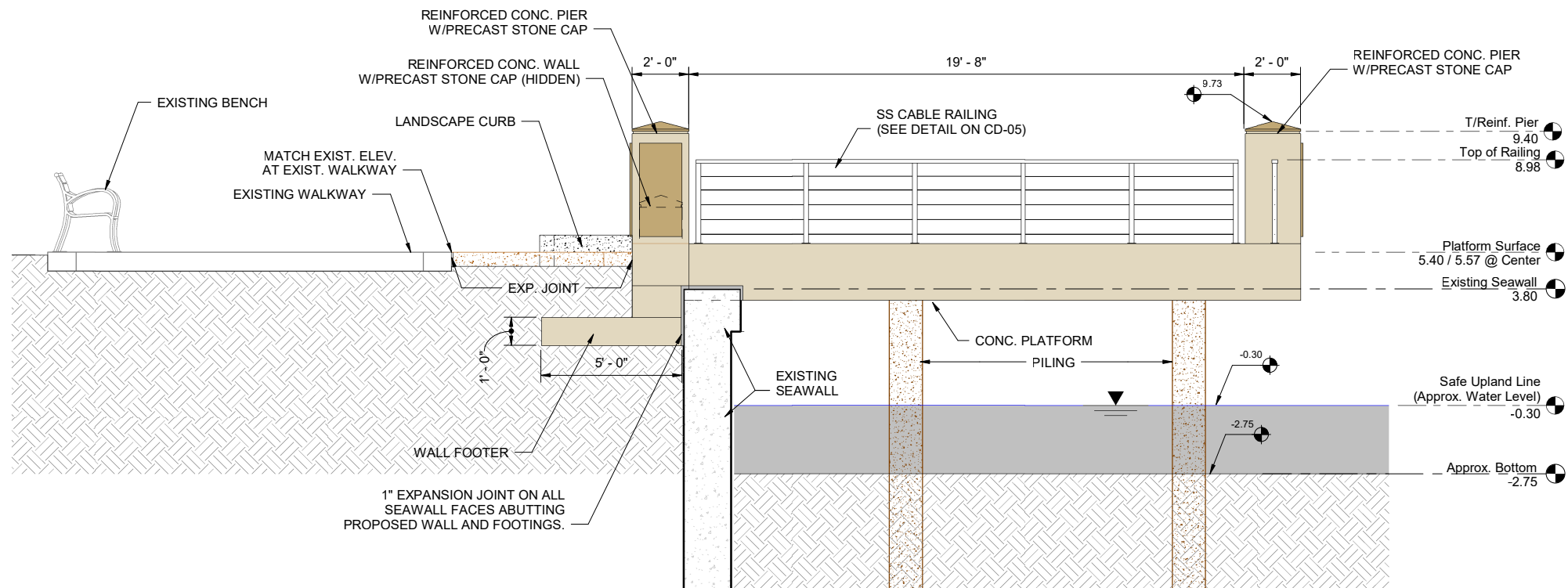
DRAWING TITLE:  
**WALL PLANS AND SECTIONS  
OVERLOOK PLATFORM PLAN**

CLIENT:  
**CITY OF COCOA**

PROJECT NO.:	PROJ. MGR.:
<b>COC013</b>	<b>TMV</b>
DATE:	DRW. BY:
<b>09/23/2019</b>	<b>MBH</b>
SCALE:	CHKD. BY:
<b>3/8" = 1'-0"</b>	<b>TMV</b>
DRAWING NO.:	
<b>22 of 44</b>	
SHEET NO.:	
<b>CD-01</b>	



1 Section 1  
CD-02 3/8" = 1'-0"



2 Section 2  
CD-02 3/8" = 1'-0"

NOTES:

1. "T/Reinf." Elevations called out in section views are top of the cast-in-place reinforced concrete wall and piers. That height does not include the height of the precast stone cap. Refer to Coating Schedule on C-01 for coating requirements.
- 2.



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DRAWING TITLE:  
WALL PLANS AND SECTIONS  
OVERLOOK PLATFORM SECTIONS

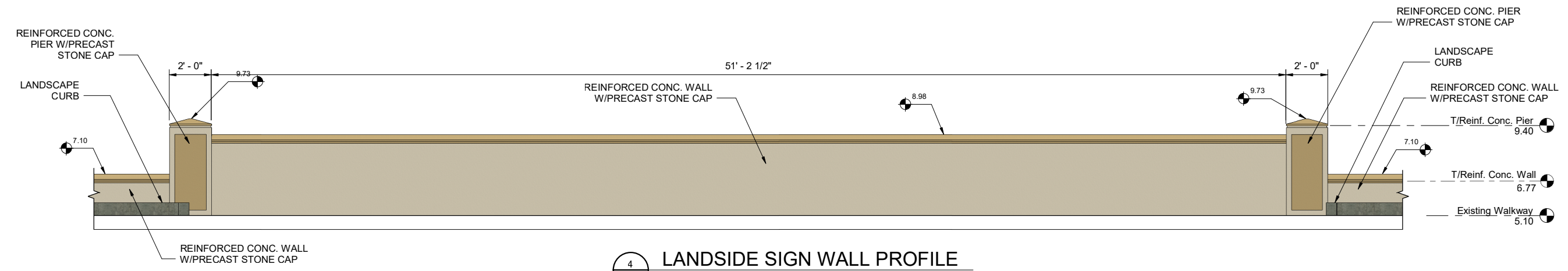
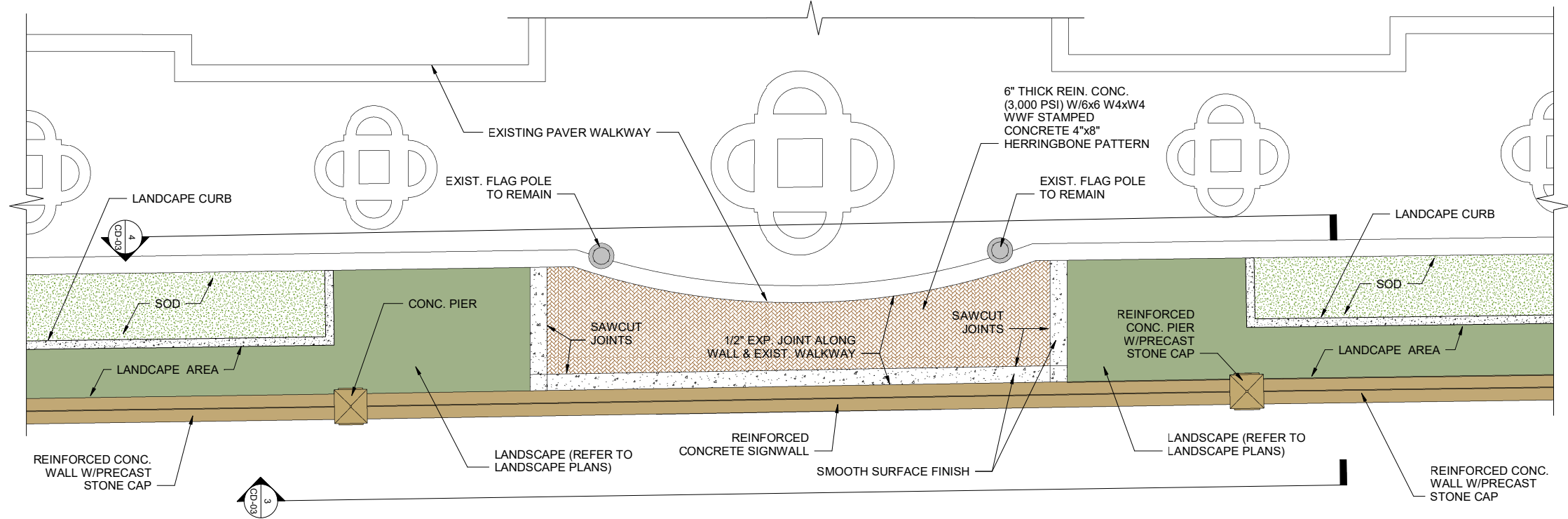
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CITY OF COCOA

PROJECT NO.:	PROJ. MGR.:
COC013	TMV
DATE:	DRW. BY:
09/23/2019	MBH
SCALE:	CHKD. BY:
3/8" = 1'-0"	TMV
DRAWING NO.:	
23 of 44	
SHEET NO.:	

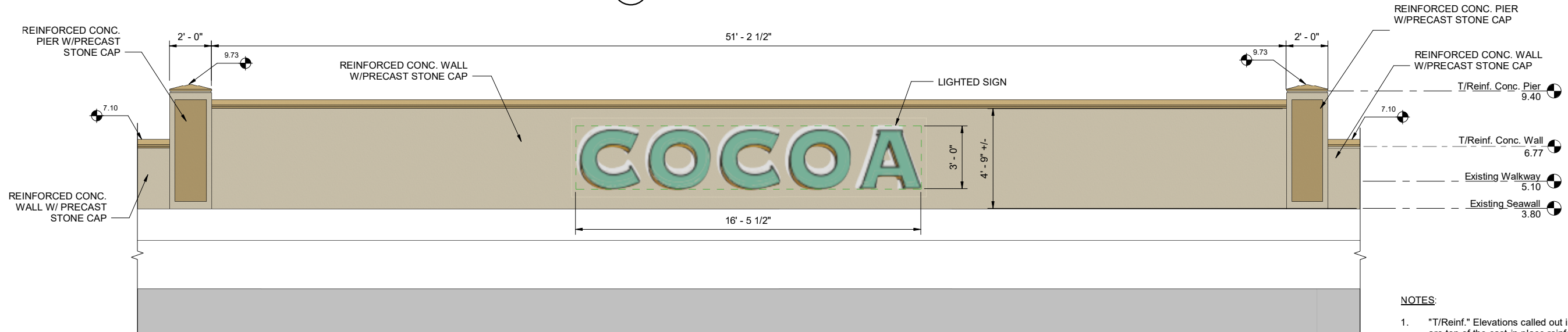
CD-02

4	
3	
2	
1	10/22/2019
NO.	DATE:





4 LANDSIDE SIGN WALL PROFILE  
 CD-03 3/8" = 1'-0"



3 RIVERSIDE SIGN WALL PROFILE  
 CD-03 3/8" = 1'-0"

- NOTES:**
- "T/Reinf." Elevations called out in section views are top of the cast-in-place reinforced concrete wall and piers. That height does not include the height of the precast stone cap.
  - Refer to Coating Schedule on C-01 for coating requirements.

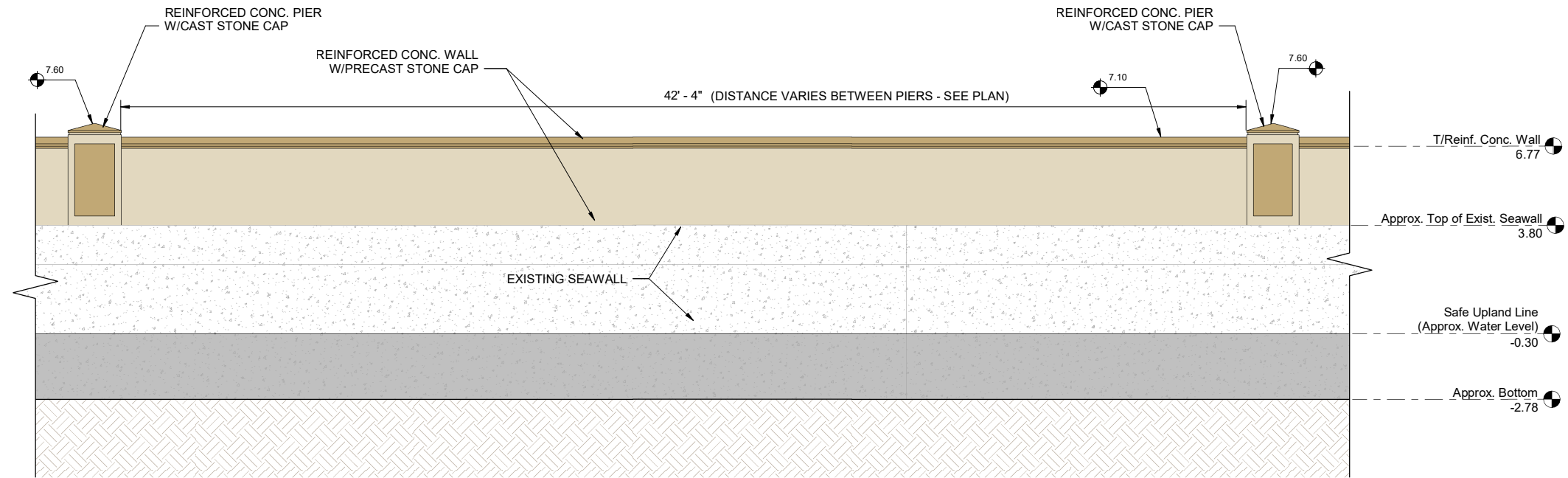
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3					
2					
1	10/22/2019	RELEASED FOR BID/NOT RELEASED FOR CONSTRUCTION			
NO.	DATE:	DESCRIPTION			REVISIONS

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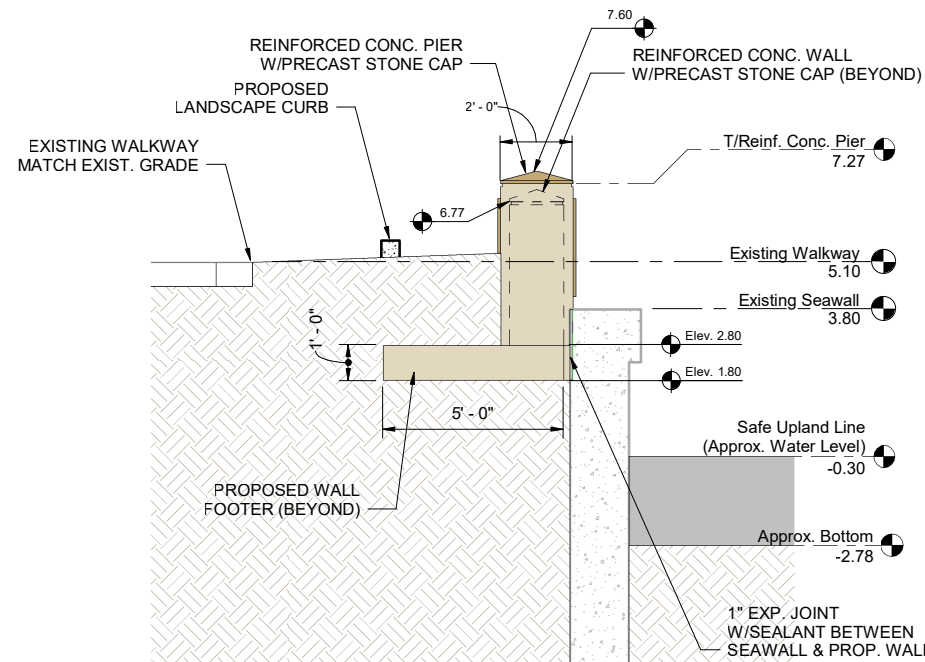
DRAWING TITLE: WALL PLANS AND SECTIONS  
 SIGN WALL PLAN AND PROFILE  
 CLIENT: CITY OF COCOA

PROJECT NO.: <b>COC013</b>	PROJ. MGR.: <b>TMV</b>
DATE: <b>09/23/2019</b>	DRW. BY: <b>MBH</b>
SCALE: <b>As Indicated</b>	CHKD. BY: <b>TMV</b>
DRAWING NO.: <b>24 of 44</b>	
SHEET NO.: <b>CD-03</b>	

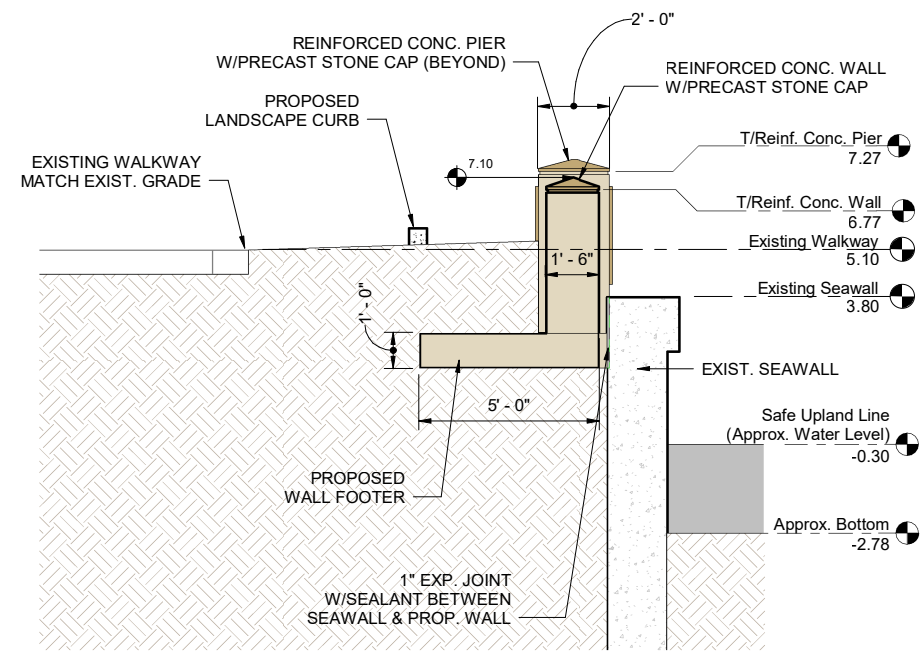
10/23/2019 10:17:46 AM



6 Section 6  
CD-04 3/8" = 1'-0"



1 Section 7  
CD-04 3/8" = 1'-0"



2 Section 8  
CD-04 3/8" = 1'-0"

NOTES:

- "T/Reinf." Elevations called out in section views are top of the cast-in-place reinforced concrete wall and piers. That height does not include the height of the precast stone cap.
- Refer to Coating Schedule on C-01 for coating requirements.

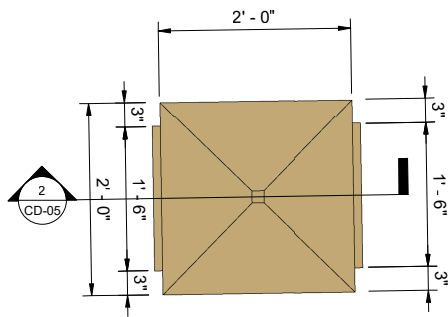
NO.	DATE	DESCRIPTION
1	10/22/2019	RELEASED FOR BID/NOT RELEASED FOR CONSTRUCTION
2		
3		
4		

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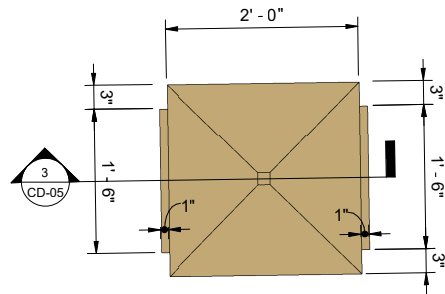
DRAWING TITLE: **WALL PLANS AND SECTIONS**  
**PROMENADE IMPROVEMENTS**  
 CLIENT: **CITY OF COCOA**

PROJECT NO.: <b>COC013</b>	PROJ. MGR.: <b>TMV</b>
DATE: <b>09/23/2019</b>	DRW. BY: <b>MBH</b>
SCALE: <b>3/8" = 1'-0"</b>	CHKD. BY: <b>TMV</b>
DRAWING NO.: <b>25 of 44</b>	
SHEET NO.: <b>CD-04</b>	

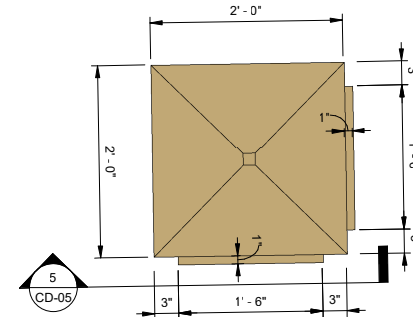
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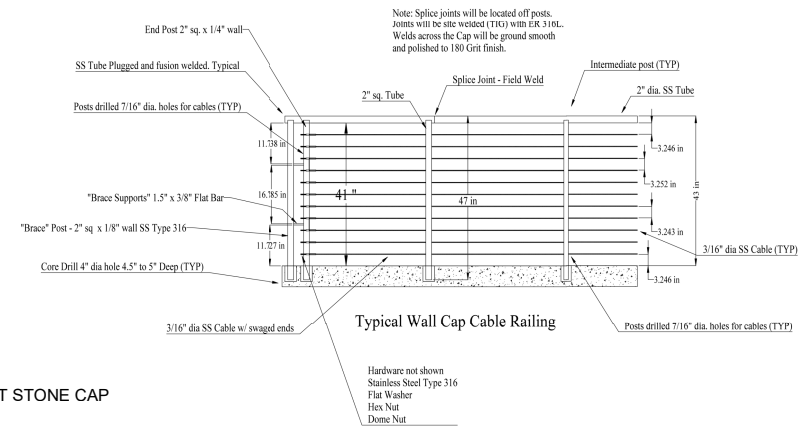
**A PIER - TYPE A**  
CD-05 1" = 1'-0"



**B PIER - TYPE B**  
CD-05 1" = 1'-0"



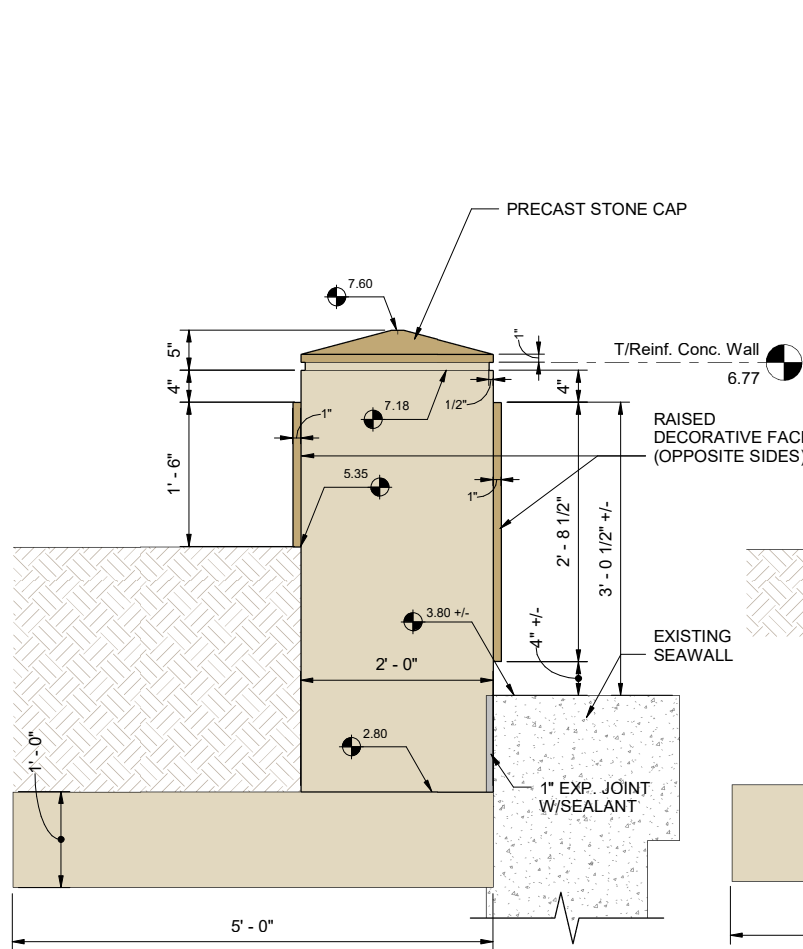
**4 PIER - TYPE C**  
CD-05 1" = 1'-0"



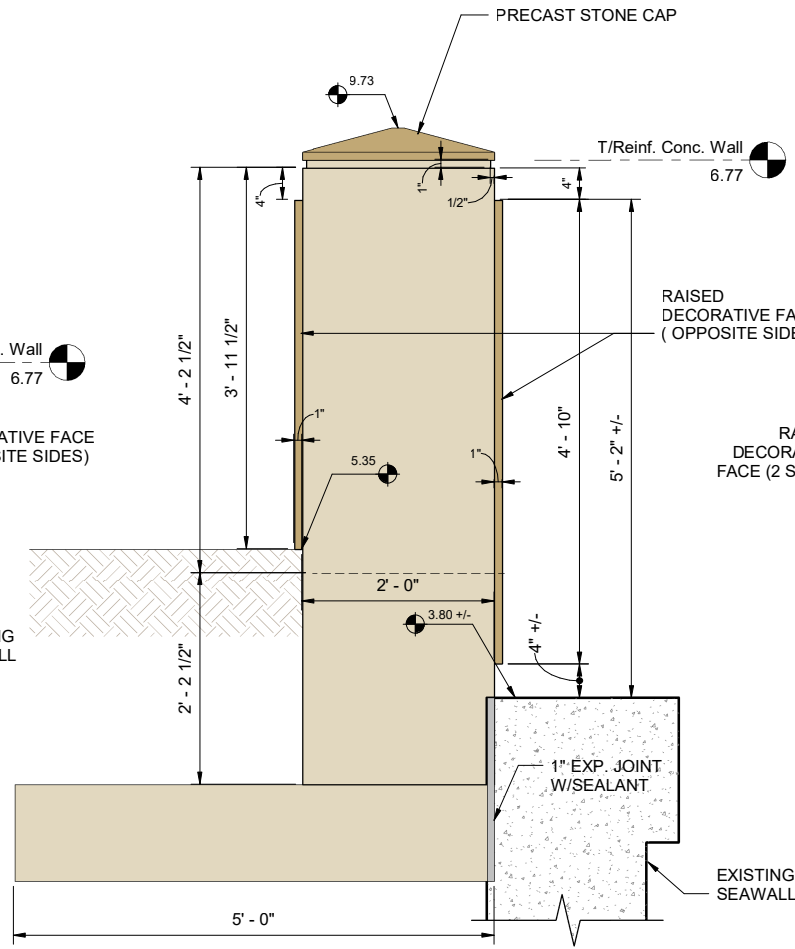
**NOTES:**

1. RAILING FABRICATOR SHALL PROVIDE DETAILED SHOP DRAWINGS AND CALCULATIONS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN FLORIDA.
2. RAILING SHALL BE PROVIDED BY AMAZON METAL FABRICATORS, INC., COCOA, FLORIDA OR EQUAL.
3. RAILING SHALL TERMINATE AT EACH FULL-DEPTH EXPANSION JOINT IN SIDEWALK WITH BRACE POST AND BRACE SUPPORTS. A STAINLESS-STEEL FLAG POST SHALL EXTEND OVER THE EXPANSION JOINT TO INSURE A MAXIMUM OPENING BETWEEN RAILING SECTIONS OF 1.5".

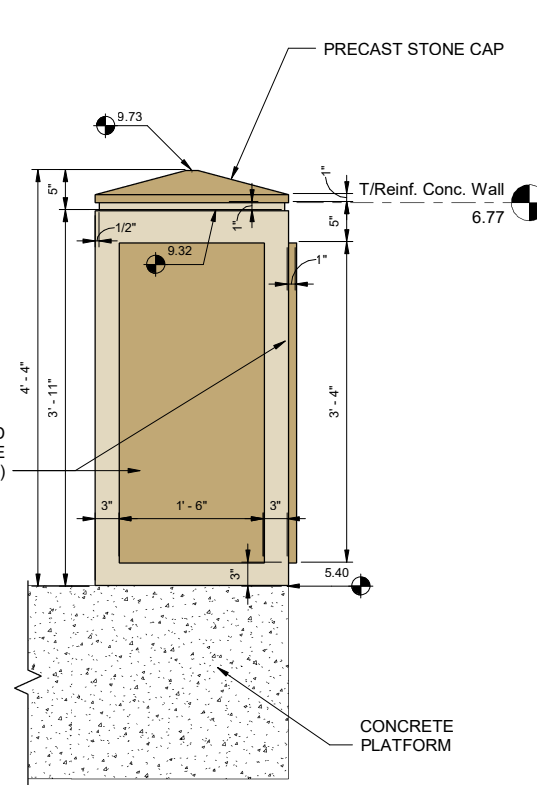
**CABLE RAILING DETAIL**  
N.T.S.



**2 PIER TYPE A - SIDE VIEW**  
CD-05 1" = 1'-0"



**3 PIER TYPE B - SIDE VIEW**  
CD-05 1" = 1'-0"



**5 PIER TYPE C - SIDE VIEW**  
CD-05 1" = 1'-0"

**NOTES:**

1. "T/Reinf." Elevations called out in section views are top of the cast-in-place reinforced concrete wall and piers. That height does not include the height of the precast stone cap.
2. Refer to Coating Schedule on C-01 for coating requirements.

10/23/2019 10:17:52 AM

Z:\PROJECTS\Cocoa\COC013 Promenade ConceptDrawings2 Eng\Final Dwg\Revit\Final 09-21-2019.rvt



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**WALL PLANS AND SECTIONS**  
**PIER AND CIVIL DETAILS**

**CITY OF COCOA**

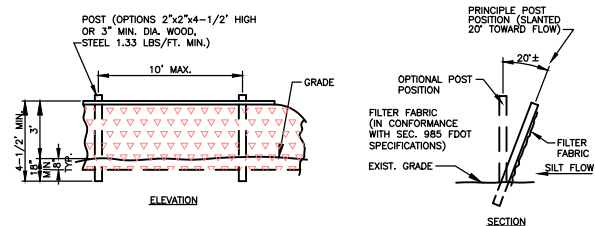
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CLIENT:

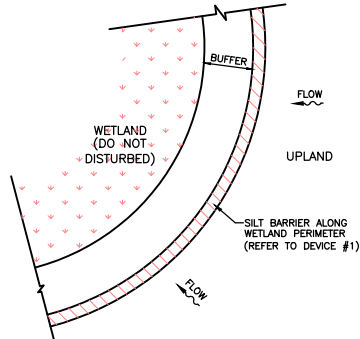
PROJECT NO.:	PROJ. MGR.:
COC013	TMV
DATE:	DRW. BY:
09/23/2019	MBH
SCALE:	CHKD. BY:
As indicated	TMV
DRAWING NO.:	
26 of 44	
SHEET NO.:	
CD-05	

4					
3					
2					
1	10/22/2019	RELEASED FOR BID/NOT RELEASED FOR CONSTRUCTION			
NO.	DATE:	DESCRIPTION			REVISIONS

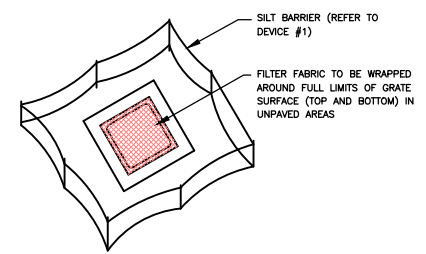
THOMAS M. VILL, P.E.  
#71186



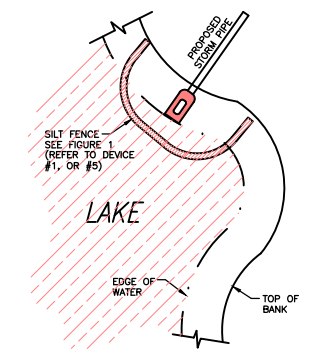
TYPICAL SILT FENCE  
**BMP DEVICE #1**  
 N.T.S.



TYPICAL SILT FENCE PLACEMENT  
 AT WETLAND BUFFER  
**BMP DEVICE #2**  
 N.T.S.

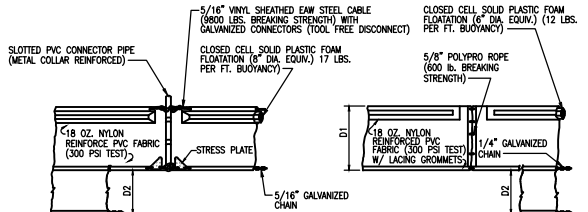


STAKED SILT BARRIER OR SILT FENCE  
 PROTECTION AROUND DITCH BOTTOM INLET  
**BMP DEVICE #3**  
 N.T.S.



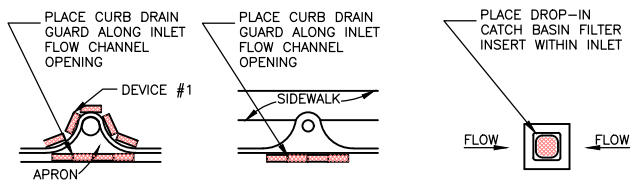
SILT BARRIER AT CONNECTION  
 OF STORM PIPE TO LAKE  
**BMP DEVICE #4**  
 N.T.S.

**NOTES:**  
 WHERE A DAM IS REQUIRED WITHIN EXISTING LAKE FOR CONSTRUCTION OF STORM PIPE, SILT FENCE SHALL BE PLACED BEYOND THE DAM.  
 WHERE THE STORM PIPE CONNECTION OCCURS BEYOND THE NORMAL WATER LEVEL A FLOATING TURBIDITY BARRIER SHALL BE UTILIZED.

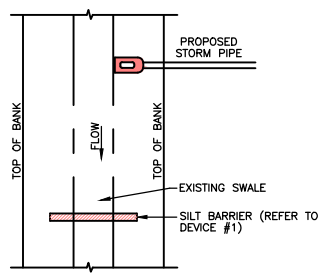


FLOATING TURBIDITY BARRIERS  
**BMP DEVICE #5**  
 N.T.S.

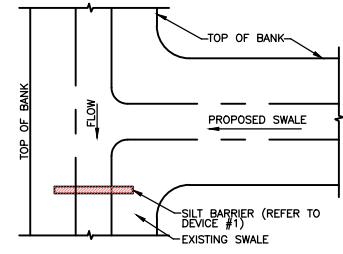
**NOTE:**  
 COMPONENTS OF TYPES I AND II MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES I AND II SHALL BE AS REVIEWED AND APPROVED BY THE ENGINEER.



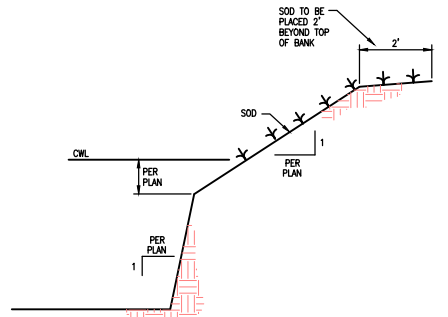
STANDARD BMP DEVICE PLACEMENT  
 AROUND INLETS OR SIMILAR STRUCTURES  
**BMP DEVICE #6**  
 N.T.S.



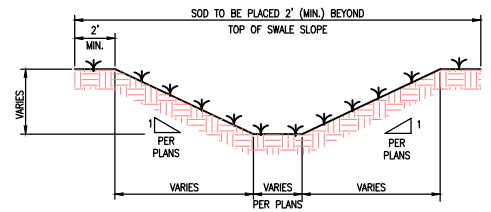
SILT BARRIER AT CONNECTION  
 OF STORM PIPE TO EXISTING SWALE  
**BMP DEVICE #7**  
 N.T.S.



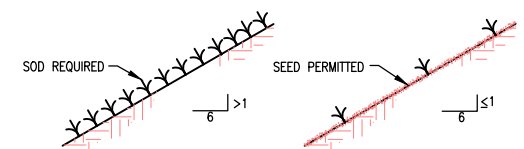
SILT BARRIER AT CONNECTION  
 OF SWALE TO EXISTING SWALE  
**BMP DEVICE #8**  
 N.T.S.



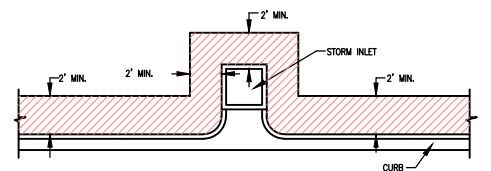
TYPICAL RETENTION/DETENTION POND SECTION  
 (MINIMUM SODDING LIMITS)  
**BMP DEVICE #9**  
 N.T.S.



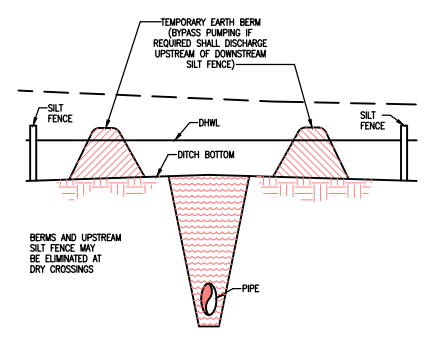
TYPICAL SWALE SECTION  
 (MINIMUM SODDING LIMITS)  
**BMP DEVICE #10**  
 N.T.S.



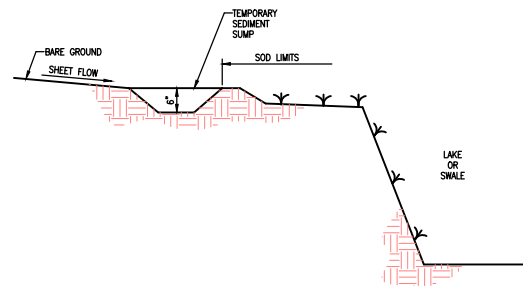
SODDING AND SEEDING OF SLOPES  
**BMP DEVICE #11**  
 N.T.S.



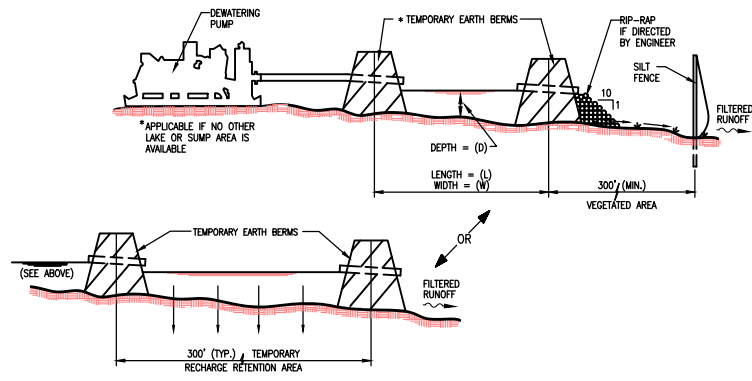
SOD ALONG CURBING AND INLETS  
**BMP DEVICE #12**  
 N.T.S.



UNDERGROUND PIPE CROSSING  
**BMP DEVICE #13**  
 N.T.S.



TEMPORARY SEDIMENT SUMP  
**BMP DEVICE #14**  
 N.T.S.



TYPICAL DEWATERING DISCHARGE PLAN  
**BMP DEVICE #15**  
 N.T.S.

10/22/2019 5:40:50 PM

PROJECT NO.:	COC013	PROJ. MGR.:	TMV
DATE:	06/28/2019	DRWN. BY:	MBH
SCALE:	N.T.S.	CHKD. BY:	TMV
DRAWING NO.:	28 OF 44		
SHEET NO.:	CD-06		

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DRAWING TITLE: **EROSION AND SEDIMENTATION CONTROL DETAILS**

PROMENADE IMPROVEMENTS

CLIENT: **CITY OF COCOA**

PROJECT NO.:	COC013	PROJ. MGR.:	TMV
DATE:	06/28/2019	DRWN. BY:	MBH
SCALE:	N.T.S.	CHKD. BY:	TMV
DRAWING NO.:	28 OF 44		
SHEET NO.:	CD-06		

SYMBOL	DESCRIPTION
<b>GENERAL WIRING</b>	
	INDICATES CIRCUIT CONDUCTORS AND RACEWAY.
	CONNECTION TO EQUIPMENT AS NOTED
	HOME RUN—PANEL/CIRCUIT NOTED
	CONDUIT RUNS CONCEALED
	CONDUIT, STUBBED AND CAPPED AS SHOWN
	OVERHEAD PRIMARY WIRING AS NOTED (EXISTING)
	UNDERGROUND ELECTRIC
	UNDERGROUND COMM / DATA
	INSTRUMENTATION & CONTROL DUCTBANK/ CONDUIT
	GROUNDING CONDUCTORS AS NOTED ON PLAN
	WIRING J—BOX, SUITABLE FOR NUMBER OF WIRES AND ENVIRONMENT PER SPECIFICATIONS
	EQUIPMENT CONNECTION, TYPICALLY FOR PLC DEVICES; COORDINATE WITH DEVICE SUPPLIER AND I&C CONTRACTOR
	DEMOLITION
	CIRCUIT WIRING TYPE PER SCHEDULES, SEE E-7
	KEY NOTE
<b>DISTRIBUTION AND MOTORS</b>	
	PANELBOARD
	TRANSFORMER, VOLTAGES, PHASE AND RATING INDICATED AS APPLICABLE
	MANHOLE / HANDHOLE, MH-1 NOTED
	GROUND CONNECTION
	MOTOR WITH HORSEPOWER SIZE NOTED
	NONFUSED DISCONNECT SWITCH, SIZE INDICATED, 3 POLE UNLESS INDICATED OTHERWISE, NEMA 1 ENCLOSURE U.O.N.
	FUSED DISCONNECT SWITCH, SIZE INDICATED (60/40, 60 = SWITCH RATING; 40 = FUSE RATING) 3 POLE UNLESS INDICATED OTHERWISE, NEMA 1 ENCLOSURE U.O.N.
	STARTER, MAGNETIC, NEMA SIZE FOR DRIVEN LOAD, NEMA 1 ENCLOSURE, UNLESS INDICATED OTHERWISE.
	COMBINATION (FUSE OR CIRCUIT BREAKER AS INDICATED). MAGNETIC STARTER, NEMA SIZE FOR DRIVEN LOAD.
	PAD MOUNTED TRANSFORMER
	POWER MANHOLE
	INSTRUMENT / CONTROLS HANDHOLE
<b>LIGHTING</b>	
	LUMINAIRE
	POLE MOUNTED LIGHTING FIXTURE
	PHOTOCELL SWITCH

SYMBOL	DESCRIPTION
	GROUND WIRE, 1/0 UNLESS OTHERWISE NOTED
<b>TIME DELAY CONTACTS</b>	
	NORMALLY OPEN, TIMED OPEN
	NORMALLY OPEN, TIMED CLOSED
	NORMALLY CLOSED, TIMED OPEN
	NORMALLY CLOSED, TIMED CLOSED
<b>LIQUID LEVEL</b>	
	OPENS ON RISING LEVEL, CLOSES ON FALLING LEVEL
	CLOSES ON RISING LEVEL, OPENS ON FALLING LEVEL
<b>PRESSURE</b>	
	OPENS ON RISING PRESSURE, CLOSES ON FALLING PRESSURE
	CLOSES ON RISING PRESSURE, OPENS ON FALLING PRESSURE
<b>FLOW</b>	
	OPENS ON RISING FLOW, CLOSES ON FALLING FLOW
	CLOSES ON RISING FLOW, OPENS ON FALLING FLOW
<b>TEMPERATURE</b>	
	OPENS ON RISING TEMPERATURE CLOSES ON FALLING TEMPERATURE
	CLOSES ON RISING TEMPERATURE, OPENS ON FALLING TEMPERATURE
<b>LIMIT SWITCH</b>	
	NORMALLY CLOSED
	NORMALLY OPEN

SYMBOL	DESCRIPTION
	CONTACT - NORMALLY OPEN
	CONTACT - NORMALLY CLOSED
	OVERLOAD RELAY HEATER
	MAGNETIC STARTER WITH NEMA SIZE INDICATED
	CIRCUIT BREAKER, MAGNETIC, TRIP SHOWN, 3 POLE U.O.N., SIZED FOR MOTOR LOAD PER N.E.C. SECTION 430
	CIRCUIT BREAKER, 100A FRAME, 40A TRIP SHOWN, 3 POLE UNLESS INDICATED OTHERWISE.
	CIRCUIT BREAKER WITH CURRENT LIMITING FUSES, TRIP AND FUSE RATING INDICATED, 3 POLE UNLESS INDICATED OTHERWISE.
	FUSED SWITCH, SWITCH AND FUSE CURRENT RATING INDICATED, 3 POLE UNLESS INDICATED OTHERWISE.
	NON-FUSED SWITCH - CURRENT RATING INDICATED, 3 POLE UNLESS INDICATED OTHERWISE.
	FUSE, SIZES AS NOTED
	GROUND
	PUSH-BUTTON SWITCH, MOMENTARY CONTACT, NORMALLY OPEN
	PUSH-BUTTON SWITCH, MOMENTARY CONTACT, NORMALLY CLOSED
	PUSH BUTTON SWITCH, MAINTAINED CONTACTS WITH MECHANICAL INTERLOCK
	REMOTE DEVICE (SQUARES INDICATE PANEL TERMINALS FOR FIELD DEVICES.)
	INTERNAL DEVICE (FILLED CIRCLES INDICATE PANEL/VFD/STARTER ETC., INTERNAL CONNECTION)
	SELECTOR SWITCH: MAINTAINED CONTACT WITH CONTACT POSITION INDICATED, CHART IDENTIFIES OPERATION
	PUSH-TO-TEST AND CONNECT, INDICATING LIGHT LETTER INDICATES COLOR
	CONTROL RELAY
	SOLENOID VALVE
	MOTOR OPERATED VALVE

CKT.	POSITION			X - CLOSED CONTACT O - OPEN CONTACT
	HAND	OFF	AUTO	
1	X	O	O	
2	O	O	X	

ABBREVIATIONS	DESCRIPTION	ABBREVIATIONS	DESCRIPTION
A	AMMETER, AMPERE, AMBER	N	NEUTRAL
AC	ALTERNATING CURRENT	N3R	NEMA 3R ENCLOSED
AF	ABOVE FINISHED FLOOR	N4X	NEMA 4X ENCLOSED
AFG	ABOVE FINISHED GRADE	NC	NORMALLY CLOSED
AHU	AIR HANDLING UNIT	NEC	NATIONAL ELECTRICAL CODE
AIC	AMPERE INTERRUPTING CAPACITY	NEMA	NATIONAL ELECTRIC MANUFACTURERS ASSOCIATION
AL	ALUMINUM	NO	NORMALLY OPEN
ALT	ALTERNATE, ALTERNATOR	NP	NAMEPLATE
AS	AMMETER SWITCH	NTS	NOT TO SCALE
AST	ABOVE GROUND STORAGE TANK (DIESEL FUEL)		
ATS	AUTOMATIC TRANSFER SWITCH	OL	OVERLOAD RELAY
BRKR	BREAKER	P	POLE
C	CONDUIT, CONTACTOR	PB	PULL BOX
CB	CIRCUIT BREAKER	PE	PHOTOCELL
CCC	CHLORINE CONTACT CHAMBER	PH	PHASE
CH	COUNTER HEIGHT DEVICE (APPRX 4" ABOVE COUNTER)	PLC	PROGRAMMABLE LOGIC CONTROLLER
CO	CONTACTOR	PM	PHASE MONITOR
CPT	CONTROL POWER TRANSFORMER	PNL	PANELBOARD
CR	CONTROL RELAY	PT	POTENTIAL TRANSFORMER
CT	CURRENT TRANSFORMER	PVC	POLYVINYL CHLORIDE CONDUIT
CU	COPPER, CONDENSING UNIT	QTY	QUANTITY
		R	RED
		RCPT	RECEPTACLE
DISC	DISCONNECT	RMS	ROOT MEAN SQUARE
EF	EXHAUST FAN	RS	RIGID STEEL CONDUIT
EHH	ELECTRICAL HAND HOLE	RTU	REMOTE TELEMETRY UNIT
EMH	ELECTRICAL MAN HOLE		
EMT	ELECTRICAL METALLIC TUBING	SCADA	SUPERVISORY CONTROL AND DATA ACQUISITION
ETM	ELAPSED TIME METER	SF	SUPPLY FAN
FACP	FIRE ALARM CONTROL PANEL	SS	STAINLESS STEEL, SELECTOR SWITCH
FBC	FLORIDA BUILDING CODE	SPD	SURGE PROTECTIVE DEVICE
FM	FLOW METER	SSRV	SOLID STATE REDUCED VOLTAGE STARTER
FS	FLOAT SWITCH	S	SWITCH
FT	FLOW TRANSMITTER	ST	SHUNT TRIP
FUT	FUTURE	SYM	SYMMETRICAL
FVNR	FULL VOLTAGE NON-REVERSING STARTER		
G	GREEN, GROUND		
GALV	GALVANIZED	TC	TIMED CLOSE
GFI	GROUND FAULT INTERRUPTER	TDR	TIME DELAY RELAY
GEN	GENERATOR	TJB	TERMINAL JUNCTION BOX
GFR	GROUND FAULT RELAY	TR	TIMING RELAY
GND	GROUND	TS	THERMAL SWITCH
GRS	GALVANIZED RIGID STEEL	TSPR	TWISTED SHIELDED PAIR
		TSS	TOTAL SUSPENDED SOLIDS
HH	HANDHOLE	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
HID	HIGH INTENSITY DISCHARGE	UON	UNLESS OTHERWISE NOTED
HOA	HAND-OFF-AUTO	UST	UNDERGROUND STORAGE TANK
I & C	INSTRUMENTATION AND CONTROL	UVR	UNDER VOLTAGE RELAY
IMC	INTERMEDIATE METAL CONDUIT	V	VOLTMETER, VOLT
JB	JUNCTION BOX	VFD	VARIABLE FREQUENCY DRIVE
K	KEY INTERLOCK	VS	VOLTMETER SWITCH
KW	KILOWATT	WP	WEATHERPROOF
KVA	KILO VOLT-AMPERE	XFMR	TRANSFORMER
LA	LIGHTNING ARRESTER		
LC	LIGHTING CONTACTOR		
LE	LEVEL ELEMENT		
LIT	LEVEL INDICATOR/TRANSMITTER		
LLS	LIQUID LEVEL SWITCH		
LS	LIMIT SWITCH		
LTO	LIGHTING		
LP	LIGHTING PANEL		
M	MAGNETIC CONTACTOR COIL		
MANUF	MANUFACTURER		
MCC	MOTOR CONTROL CENTER		
MCP	MOTOR CIRCUIT PROTECTOR		
MDP	MAIN DISTRIBUTION PANEL		
MH	MANHOLE		
MS	MOTOR STARTER		
MIN	MINIMUM		

**GENERAL NOTES**

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES PRIOR TO ANY UNDERGROUND WORK. THE UTILITY COMPANY WILL LOCATED AND IDENTIFY THEIR FACILITIES.
- ANYTHING DAMAGED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE
- BEFORE FINAL ACCEPTANCE, CONTRACTOR SHALL PROVIDE 2 SETS OF FULL SIZE AS-BUILT PLANS TO THE MAINTAINING AGENCY.
- CONDUIT ROUTING SHALL BE LIGHT POST TO LIGHT POST, RECEPTACLE TO RECEPTACLE, HAND HOLE TO HAND HOLE WHILE MAINTAINING SETBACK DISTANCE FROM EDGE OF SIDEWALK AND OTHER STRUCTURES.
- CONDUIT ROUTING MAY BE ADJUSTED AS APPROVED BY THE ENGINEER TO PREVENT CONFLICTS WITH UTILITIES AND OTHER STRUCTURES.
- LIGHT POST FOUNDATION INSTALLATIONS SHALL BE BACKFILLED TO THE TOP OF THE FOUNDATION COMPACTED TO A FIRM STABLE CONDITION APPROXIMATELY EQUAL TO THAT OF THE ADJACENT SOIL.
- THE WIRES AT THE LIGHT POST, HAND HOLES AND PULL BOXES SHALL BE LOOPED WITH SUFFICIENT LENGTH TO COMPLETELY REMOVE CONNECTORS TO THE OUTSIDE OF LIGHT POST, RECEPTACLES, HAND HOLES AND PULL BOXES TO MAKE CONNECTORS ACCESSIBLE FOR CHANGING FUSES AND TROUBLESHOOTING THE SYSTEM.
- EACH LIGHT POST SHALL HAVE A WATER PROOF IN-LINE FUSE HOLDER INSTALLED IN HOT LEG.
- UNLESS OTHERWISE SPECIFIED, ALL WIRE SHALL BE SINGLE CONDUCTOR, 98 PERCENT CONDUCTIVITY STRANDED COPPER, WITH XHHW INSTALLATION.
- ALL SPLICES SHALL BE MADE IN LIGHT POST, RECEPTACLES, HAND HOLES OR PULL BOXES. NO SPLICES SHALL BE MADE INSIDE THE CONDUIT.
- ALL CONDUIT SHALL BE SCHEDULE 40 PVC ENCASED IN CONCRETE. THE EXPOSED RUNS OF CONDUIT SHALL BE PROVIDED WITH EITHER EXPANSION JOINTS OR FLEXIBLE CONDUIT SECTIONS ADEQUATE TO TAKE CARE OF VIBRATIONS AND THERMAL EXPANSIONS.
- PULL BOXES AND HAND HOLES SHALL BE LOCATED AS REQUIRED FOR THE COMPLETION OF THE PROJECT.
- ALL MATERIAL, UNLESS OTHERWISE SPECIFIED SHALL BE UL APPROVED.
- HAND HOLES AND PULL BOXES SHALL MEET THE REQUIREMENTS OF SECTION 635 "STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION" AND CRT-635-01 "EVALUATION CRITERIA FOR TRAFFIC CONTROL DEVICES.
- ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH THE NEC, FLORIDA BUILDING CODE, STATE AND LOCAL CODES.

**INFRASTRUCTURE SOLUTION SERVICES**

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DRAWING TITLE:  
**ELECTRICAL NOTES AND LEGENDS  
 PROMENADE IMPROVEMENTS**

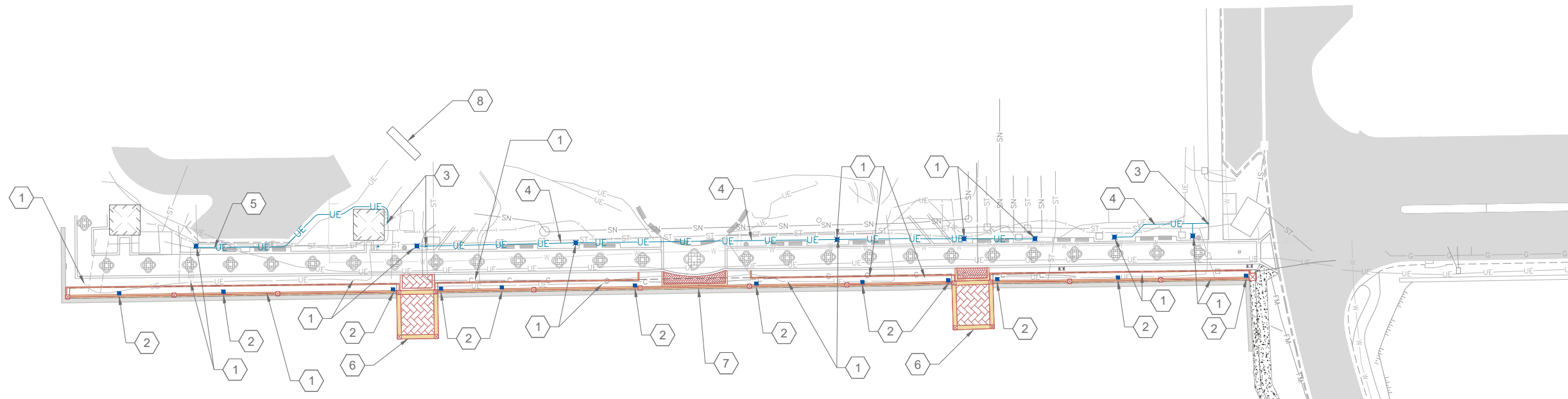
CLIENT:  
**CITY OF COCOA**

PROJECT NO: <b>COC013</b>	PROJ. MGR: <b>TMV</b>
DATE: <b>10/21/2019</b>	DRWN BY: <b>GY</b>
SCALE: <b>NONE</b>	CHKD BY: <b>TMV</b>
DRAWING NO: <b>1 OF 7</b>	
SHEET NO: <b>E-01</b>	

THOMAS M. VILL,  
 P.E.  
 #71186

DESCRIPTION REVISIONS

NO.	DATE:	REVISIONS

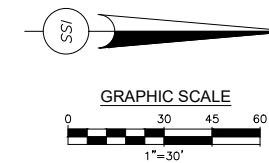


**ELECTRICAL PLAN KEYNOTES**

- 1 Relocate 8 of 9 existing light poles and construct new concrete bases. 1 Existing light pole shall be returned to City. Contractor shall confirm light locations with the City. See drawing E-07
- 2 Install weatherproof duplex electrical receptacles with lockable weatherproof in-use covers along inside of wall. See drawing E-06
- 3 Connect to existing electrical conduit. See drawing E-07
- 4 Provide and install new electrical conduit and re-connect to existing conduit. See drawing E-07
- 5 Provide and install new electrical conduit and re-connect to existing conduit. See drawing E-07
- 6 Provide and install new overlook lights as shown on drawing E-04
- 7 Provide and install electrical connections for Cocoa river side sign as shown on drawing E-05
- 8 Approximate location of existing electrical distribution equipment

**GENERAL NOTES**

1. ALL ELECTRICAL WORK SHALL BE PER NFPA 70 NEC 2014, FLORIDA BUILDING CODE, LOCAL CITY AND COUNTY CODES.
2. CONDUIT BELOW GROUND SHALL BE ENCASED IN CONCRETE.
3. CONDUIT ENCASED IN CONCRETE SHALL BE SCHEDULE 40 PVC.
4. CONDUIT ABOVE GROUND OR EXPOSED SHALL BE RIGID METAL CONDUIT.
5. ALL WIRING SHALL BE XHHN.
6. PROVIDE AND INSTALL HAND HOLDS AS REQUIRED TO COMPLETE PROJECT INSTALLATION.
7. CONTRACTOR SHALL CONFIRM CONDUIT AND WIRE SIZES.
8. REFER TO DRAWINGS G-04, G-05, G-06 AND G-07 FOR GENERAL INFORMATION CONCERNING THE PROJECT.
9. REFER TO DRAWINGS D-01, D-02 AND D-03 FOR ELECTRICAL REQUIRED DEMOLITION.



10/22/2019 9:33:32 PM

THOMAS M. VILL, P.E. #71186	
NO.	DATE:
DESCRIPTION	
REVISIONS	

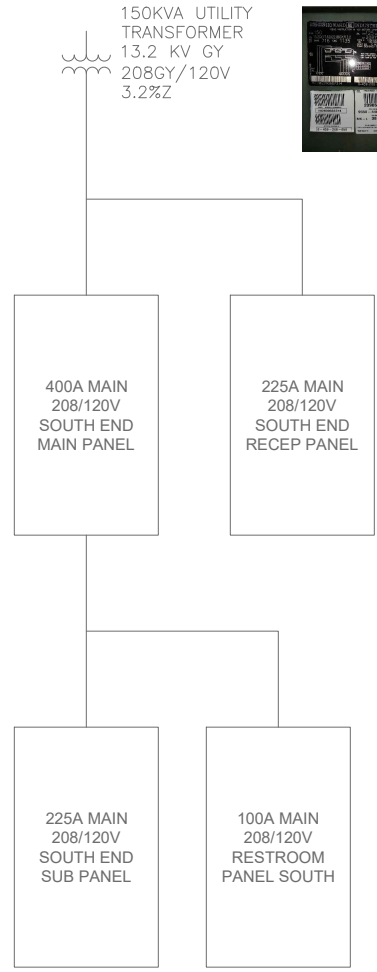
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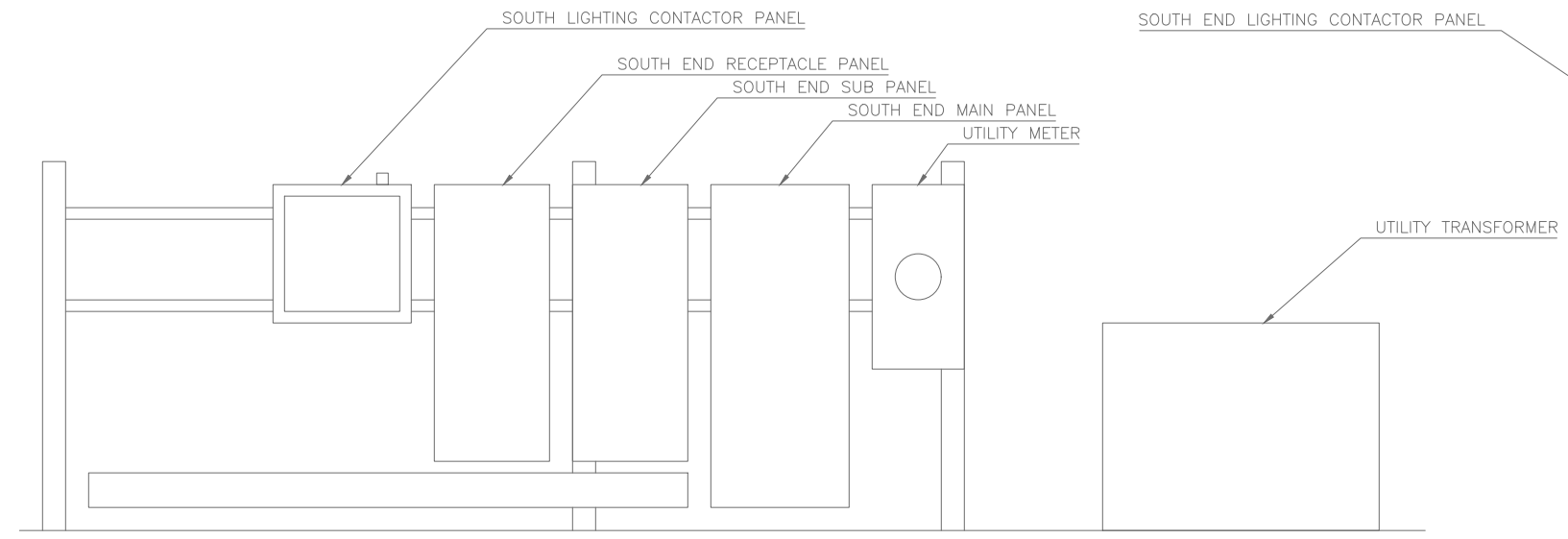
DRAWING TITLE:  
**ELECTRICAL SITE PLAN  
PROMENADE IMPROVEMENTS**

CLIENT:  
**CITY OF COCOA**

PROJECT NO. <b>COC013</b>	PROJ. MGR. <b>TMV</b>
DATE: <b>10/21/2019</b>	DRWN. BY: <b>GY</b>
SCALE: <b>1" = 30'</b>	CHKD. BY: <b>TMV</b>
DRAWING NO. <b>2 OF 7</b>	
SHEET NO. <b>E-02</b>	



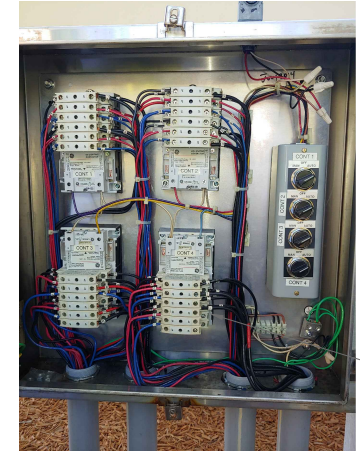
EXISTING POWER DISTRIBUTION SYSTEM BLOCK DIAGRAM



ELECTRICAL POWER DISTRIBUTION EQUIPMENT ARRANGEMENT



ELECTRICAL POWER DISTRIBUTION EQUIPMENT ARRANGEMENT



EXISTING SOUTH END LIGHTING CONTACTOR PANEL INTERIOR

SPARE POINTS WITHIN LIGHTING CONTACTOR

PANEL NAME: South End Main		MOUNTING: Surface		LOCATION: Existing										
BUS RATING: 600A		VOLTAGE: 208 /120		AIC RATING:										
MAIN TYPE: 400A CB		PHASE: 3 PH 4W												
LOAD CLASS #	CKT #	DESCRIPTION	LOAD (VA)	P	AMP	A	B	C	AMP	P	LOAD (VA)	DESCRIPTION	CKT #	LOAD CLASS
1	1	Lights 1e1	42	1	10	84					42	Lights 2e2	2	1
1	3	Lights 3e3	42	1	10		84				42	Lights 4e4	4	1
1	5	Lights 5e5	42	1	10			84			42	Lights 6e6	6	1
1	7	Lights 7e7	42	1	10	624					10	Lights 8e8	8	1
	9		1	20					20	1			10	
	11		1	20					20	1			12	
7	13	Lights Photo Cell	600	1	20	600							14	
	15		1	20									16	
	17		1	20									18	
	19		1	20									20	
	21		1	20									22	
	23		1	20			South						24	
	25		1	20	1800				20	1	1800	Recep Bollard	26	2
	27		1	20		1800			20	1	1800	Recep Bollard	28	2
	29		1	20			1800		20	1	1800	Recep Bollard	30	2
	31		1	20	4800			4800	40	3	4800	Restroom Panel South	32	8
	33		1	20		4800					4800		34	8
	35		1	20			4800				4800		36	8
2	37	Recep Bollard East	1800	1	20	5800			100	3	4000	South Sub Panel	38	8
2	39	Recep Bollard West	1800	1	20		5800				4000		40	8
2	41	Recep Bollard Center	1800	1	20			5800			4000		42	8
			TOTAL VA:			13708	12484							

PANEL NAME: South End Sub-Panel		MOUNTING: Surface		LOCATION: Existing										
BUS RATING: 600A		VOLTAGE: 208 /120		AIC RATING:										
MAIN TYPE: 100A CB		PHASE: 3 PH 4W												
LOAD CLASS #	CKT #	DESCRIPTION	LOAD (VA)	P	AMP	A	B	C	AMP	P	LOAD (VA)	DESCRIPTION	CKT #	LOAD CLASS
1	1	Lights 1b1	42	1	10	84					42	Lights 2b2	2	1
1	3	Lights 3b3	42	1	10		282				20	N. E. Soffit Lights	4	1
1	5	Lights 5b5	42	1	10			282			10	N. E. Walkway Lights	6	1
1	7	Lights 7b7	42	1	10						10	Lights 8b8	8	1
1	9	Lights 9b9	42	1	10	84		282			20	N. W. Soffit Lights	10	1
1	11	N. W. Walkway Lights	240	1	10			282			10	Lights 12b12	12	1
1	13	Lights 13c1	42	1	10	84					10	Lights 14c2	14	1
1	15	Lights 15C3	42	1	10		168				30	Fountain Pole	16	1
1	17	Lights 17c5	42	1	10			168			10	Fountain Pole	18	1
1	19	Lights 19c7	42	1	10		84				10	Street Lights	20	1
1	21	Lights 21c9	42	1	10			South			10	Street Lights	22	1
1	23	Lights 23c11	42	1	10			84			10	Lights 24c12	24	1
1	25	Lights 25d1	42	1	10	84					10	Lights 26d2	26	1
1	27	S. E. Soffit Lights	240	1	10		480				20	S. W. Soffit Lights	28	1
1	29	Lights 29d5	42	1	10			84			10	Lights 30d6	30	1
1	31	S. E. Walkway Lights	240	1	10		480				10	S. W. Walkway Lights	32	1
1	33	Lights 33d9	42	1	10		84				10	Lights 34d10	34	1
1	35	Lights 35d11	42	1	10			84			10	Lights 36d12	36	1
1	37	Overlook Lights	12.6	1	10	13			25	3			38	
1	39	Sign	25	1	10		25						40	
	41												42	
			TOTAL VA:			913	1321							

PANEL NAME: South End Recep Panel		MOUNTING: Surface		LOCATION: Existing												
BUS RATING: 600A		VOLTAGE: 208 /120		AIC RATING:												
MAIN TYPE: 200A CB		PHASE: 3 PH 4W														
LOAD CLASS #	CKT #	DESCRIPTION	LOAD (VA)	P	AMP	A	B	C	AMP	P	LOAD (VA)	DESCRIPTION	CKT #	LOAD CLASS		
2	1	Recep 1b1	1800	1	20	3600					20	1800	Recep 2a2	2	2	
	3										20		4	2		
	5										1800	20	1800	Recep 6e6	6	2
2	7	Recep 7e7	1800	1	20	3600					20	1800	Recep 8e8	8	2	
	9										20		10			
	11										20		12			
	13										20		14			
	15						1800				20	1800	Recep 16c4	16	2	
	17							1800			20	1800	Recep 18c5	18	2	
	19										20	1800	Recep 20c8	20	2	
2	21	Recep 21c9	1800	1	20		South				20	1800	Recep 22c10	22	2	
2	23	Recep 23c11	1800	1	20			3600			20	1800	Recep 24c12	24	2	
	25										20		26			
	27										20		28			
2	29	North End Wall Recep	1800	1	20			1800			20	1		30		
2	31	Center Wall Recep	1800	1	20	1800					20	1		32		
2	33	South End Wall Recep	1800	1	20		3600				20	1800	Recep 34d10	34	2	
	35							1800			20	1800	Recep 36c12	36	2	
	37										20		38			
	39										20		40			
	41										20		42			
			TOTAL VA:			10800	5400									

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**ELECTRICAL EQUIPMENT ARRANGEMENT PROMENADE IMPROVEMENTS**  
 CLIENT: CITY OF COCOA

PROJECT NO: **COC013** PROJ. MGR: **TMV**  
 DATE: **10/21/2019** DRWN. BY: **GY**  
 SCALE: **NONE** CHKD. BY: **TMV**  
 DRAWING NO: **3 OF 7**  
 SHEET NO: **E-03**

10/22/2019 9:35:47 PM

**Path Lite PURE LED**  
Cat. No. PL1-4-LL

**H PURE LED Pure Performance**

The Path Lite Pure Led is ideal for lighting flat areas, decked courtyards, and edge lighting paths. The frosted Borosilica dome glass lens has been developed to prevent dirt, mud, grass clippings or water from entering the optics area, keeping with its IP68 rating. In addition, the glass lens retains the sealing gasket and significantly reduces glare through 1, 2, 3 or 4 facets. The Path Lite 2 facets may be used as a step light in a wall or fence, etc. to shine light up and down.

The Hunza PURE LED system uses Cree MT-G2 chips for maximum performance and long life. Power supply options include a choice of integral 12 volt or an external remote (series connection) drivers. The PURE LED system incorporates Hunza's Plug-and-Play system for easy replacement of either the LED engine or integral driver in the field. A choice of Warm or Cool White colour temperatures is available.

The Path Lite Stainless Flanges are very durable and can withstand static weight loads between 1700kg and 3500kg.

\*At 700mA this fitting is the equivalent of a 35w halogen fitting.  
\*At 1000mA this fitting is the equivalent of a 50w halogen fitting.

**Ordering Information**

Luminaire	Driver mA	Colour Temp	Accessories	Material/Finish
PL1L	S - Series	2 - 2700K	CRK150	COB - Copper
PL3L	D3 - 12V/700mA	3 - 3000K	SLCAN	SS - 316 Stainless
PL3L	D7 - 12V/700mA	4 - 4000K	CANS5	
PL4L	D10 - 12V/1000mA	39 - 3000K	FLCAN	
		(90° CRI)	DSCAN	

Ordering Example: PL3L S 3 CRK150 SS

**HUNZA**  
120 Fenton Parkway  
Aurora, IL 60012  
New Zealand  
Ph: 64 9 522 8411  
Fax: 64 9 522 8307  
Email: sales@hunza.co.nz  
www.hunza.co.nz

**INTERNATIONAL CONTACTS**  
www.hunza.co.nz/contacts.php

**Luminaire Construction**  
CNC machined from one of the following metals:  
**Copper**  
Body: 63.5mm (2 1/2") x 8mm (1/4") copper tube - Endcap: 63.5mm (2 1/2") copper rod - Flange: 90mm (3 1/2") copper rod.  
**316 Stainless Steel**  
Body: 63.5mm (2 1/2") x 8mm (1/4") stainless steel - Endcap: 63.5mm (2 1/2") stainless steel rod - Flange: 90mm (3 1/2") stainless steel rod.  
**Luminaire Weight**  
COP: 800kg (176.5oz)  
SS: 510kg (112.5oz)

**Luminaire Features**  
**Lens:**  
Semi thick frosted Borosilica dome glass.  
1 Year Warranty.  
**Gaskets:**  
Silicone, iron impregnated 220°C (425°F).  
**Accessories:**  
Cable Joint Kit (Cat. CRK150)  
Floor Canister (Cat. FLCAN)  
Deck Canister (Cat. DSCAN)  
Step Lite Canister (Cat. SLCAN)  
Step Lite Canister 316 Stainless Steel (Cat. CANS5)

**Mounting**  
Floor Lite canister (see accessories) can be used for casting into concrete or a Deck Lite canister for mounting into a wooden deck. Two screw holes in the flange can be specified if canisters are not required.

**Technical Information**  
**Standards**  
AS/NZS 61346 (P2) UL 1538  
**LED**  
Cree MTG-2 Plug and Play, field replaceable LED board.  
Lumen Output: 315 at 1000mA  
Lumens Per watt: 50 minimum  
CRI Warm White (8000K): 85+  
Colour Temp: 2700K, 3000K and 4000K  
High CRI Option (2000K): 90+  
(lumen output decreases by 15%)  
**Power Supply**  
Series (External) Driver  
Constant current driver  
Output: 6Vdc at 1000mA maximum  
**Integral 12 Volt Driver**  
Hunza's Plug and Play Driver  
Input: 12vac, 7 watt total  
Output: 6Vdc nominal, 350 / 700 / 1000mA (1000mA limited to 40° Ambient temperature in Stainless Steel)  
**Transformer**  
Hunza's Wall Mount Transformer for use with integral 12 volt driver

**Hunza Path Lite Static Load Rating (316 Stainless Steel)**

Code	Description	Order of plastic fastener (N)	Suggested rating
PL1-SS	Single Fast	36	3800kg (7188lb)
PL3-SS	Two Fast 180°	26	3800kg(8375lb)
PL3-SS	Two Fast 90°	26	3000kg(6613lb)
PL3-SS	Three Fast	18	1000kg(2205lb)
PL4-SS	Four Fast	17	1000kg(2205lb)

Note: 1. Maximum Wt. with 101.672 kilograms (224lb)

**HUNZA**  
120 Fenton Parkway  
Aurora, IL 60012  
New Zealand  
Ph: 64 9 522 8411  
Fax: 64 9 522 8307  
Email: sales@hunza.co.nz  
www.hunza.co.nz

**INTERNATIONAL CONTACTS**  
www.hunza.co.nz/contacts.php

**OVERLOOK LIGHTING SPECIFICATIONS**

**OVERLOOK LIGHTING GENERAL NOTES**

- COORDINATE ACTUAL POSITIONS OF LIGHTS WITH CITY AND ENGINEER
- OVERLOOK PATH LIGHTS SHALL CONSIST OF THE FOLLOWING ITEMS
  - 18 - LUMINAIRE 2X90 12V/700mA 3000K STAINLESS STEEL, 9 PER OVERLOOK
  - 18 - 316 STAINLESS STEEL CANISTERS, 9 PER OVERLOOK
  - AS REQUIRED CONDUIT - SCHEDULE 40 PVC
  - AS REQUIRED WIRE
  - 2 - 120VAC/12V WALL MOUNT TRANSFORMER INSTALLED IN STAINLESS STEEL JUNCTION BOX, 1 PER OVERLOOK
- ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE PRE CAST OVERLOOK MANUFACTURE AND PROVIDE CANISTERS SUITABLE FOR THIS INSTALLATION AND PROPER SIZE CONDUIT BETWEEN CANISTERS TO BE CAST WITHIN THE OVERLOOK.

TO SOUTH END LIGHTING CONTACTOR PANEL  
1" CONDUIT W/1-8 AWG BLK, 1-8 AWG WHT AND 1-8 AWG GRN

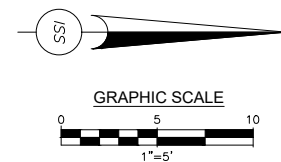
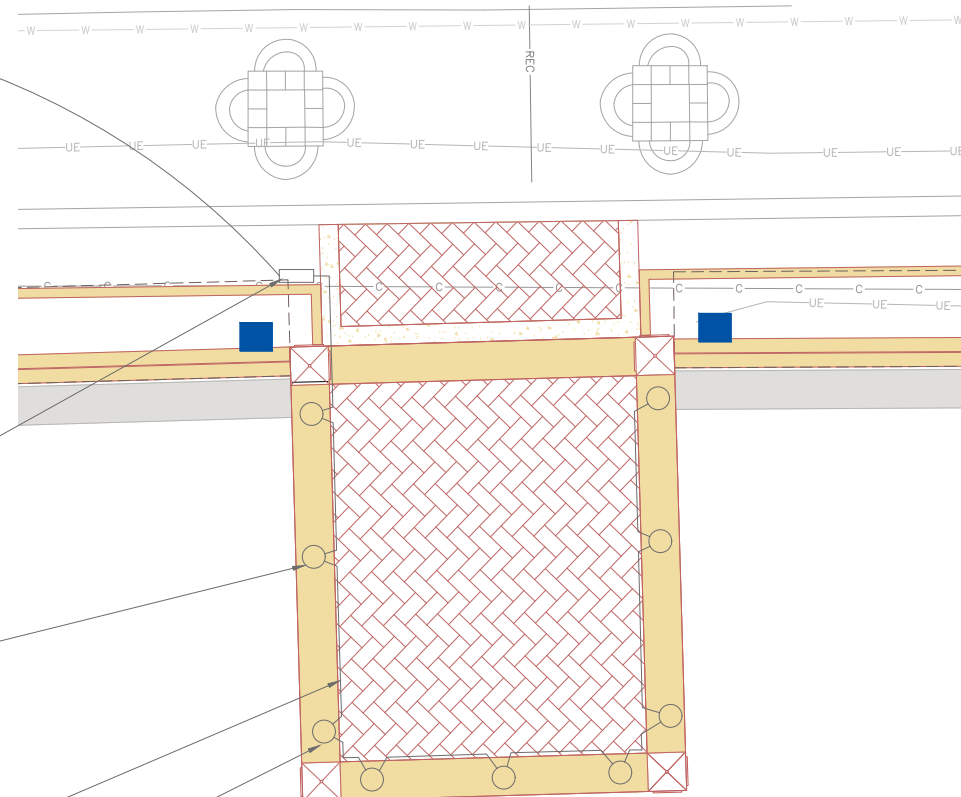
120VAC/12VAC WALL TRANSFORMER  
MOUNTED IN 12X10X6SS LOCKABLE  
JUNCTION BOX

APPROXIMATE STAINLESS STEEL CANISTER LOCATIONS ON OVERLOOK.  
COORDINATE WITH CITY ON EXACT LOCATION.  
COORDINATE WITH OVERLOOK MANUFACTURE ON CANISTER INSTALLATIONS

3/4" CONDUIT W/1-12 AWG BLK, 1-12 AWG WHT AND 1-12 AWG GRN TO SS JUNCTION BOX  
COORDINATE WITH OVERLOOK MANUFACTURE FOR CONDUIT INSTALLATION

FOLLOW LIGHTING MANUFACTURE REQUIREMENTS  
FOR WATER TIGHT INSTALLATION OF CANISTER AND CONDUITS.

**OVERLOOK LIGHT ARRANGEMENTS (TYPICAL 2 OVERLOOKS)**



NO.	DATE	DESCRIPTION	REVISIONS

**ISS INFRASTRUCTURE SOLUTION SERVICES**

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DRAWING TITLE:  
**OVERLOOK LIGHTING PROMENADE IMPROVEMENTS**

CLIENT:  
**CITY OF COCOA**

PROJECT NO. <b>COC013</b>	PROJ. MGR. <b>TMV</b>
DATE: <b>10/21/2019</b>	DRWN. BY: <b>GY</b>
SCALE: <b>1" = 5'</b>	CHKD. BY: <b>TMV</b>
DRAWING NO. <b>4 OF 7</b>	
SHEET NO. <b>E-04</b>	



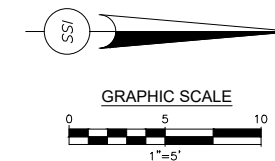
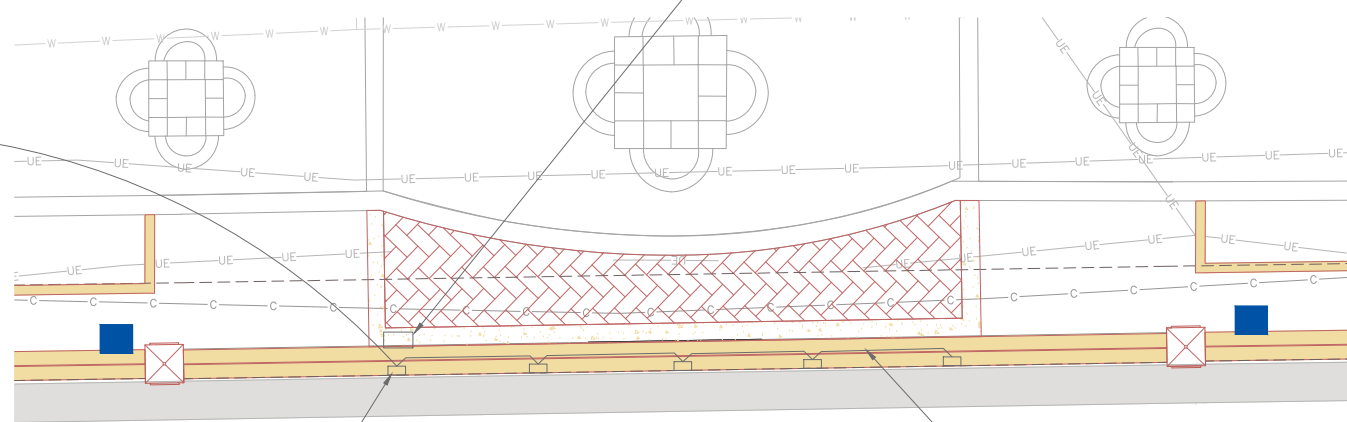
TO SOUTH END LIGHTING  
CONTACTOR PANEL  
1" CONDUIT W/1-8 AWG BLK, 1-8  
AWG WHT AND 1-8 AWG GRN

WEATHERPROOF DUPLEX  
STYLE BOX WITH WEATHERPROOF  
CONNECTION TO SIGN LETTERS  
COORDINATE WITH SIGN MANUFACTURE  
AND WALL MANUFACTURE FOR BOX  
INSTALLATIONS

COCOA SIGN

3/4" CONDUIT W/1-12 AWG BLK,  
1-12 AWG WHT AND 1-12 AWG GRN  
ASSUMPTION OF 120VAC POWER REQUIREMENT  
COORDINATE WITH SIGN MANUFACTURE TO  
CONFIRM SIGN POWER REQUIREMENTS

IF SIGN POWER REQUIRES A TRANSFORMER,  
PROVIDE AND INSTALL A SS JUNCTION BOX  
LARGE ENOUGH TO CONTAIN TRANSFORMER  
AND WIRING.



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THOMAS M. VILL, P.E. #71186	
NO.	DATE:
DESCRIPTION REVISIONS	

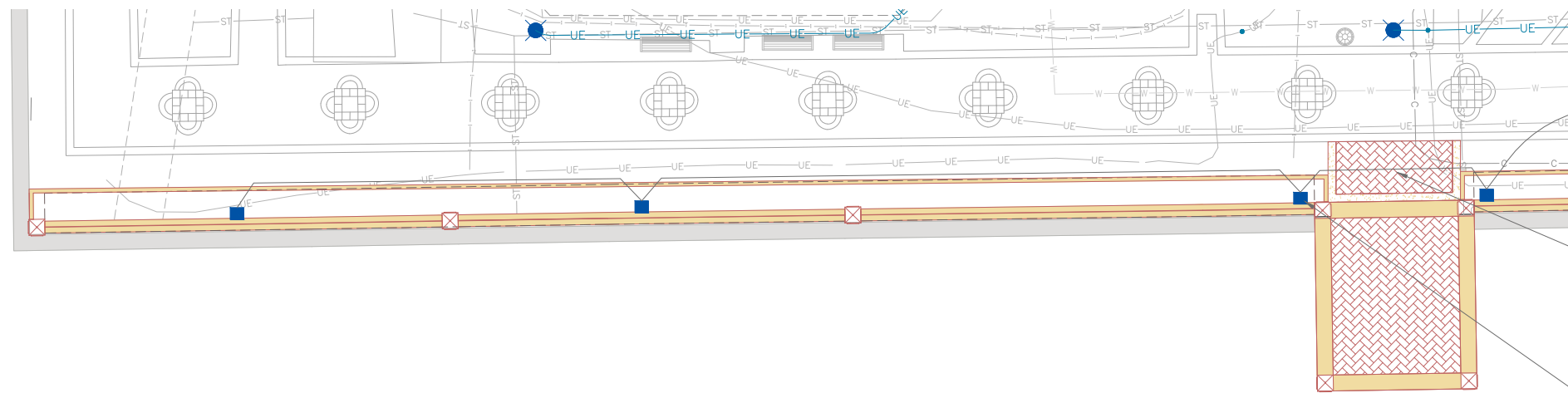
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DRAWING TITLE:  
**WALL RECEPTACLES  
PROMENADE IMPROVEMENTS**

CLIENT:  
**CITY OF COCOA**

PROJECT NO. <b>COC013</b>	PROJ. MGR. <b>TMV</b>
DATE: <b>10/21/2019</b>	DRWN. BY: <b>GY</b>
SCALE: <b>1" = 5'</b>	CHKD. BY: <b>TMV</b>
DRAWING NO. <b>5 OF 7</b>	
SHEET NO. <b>E-05</b>	

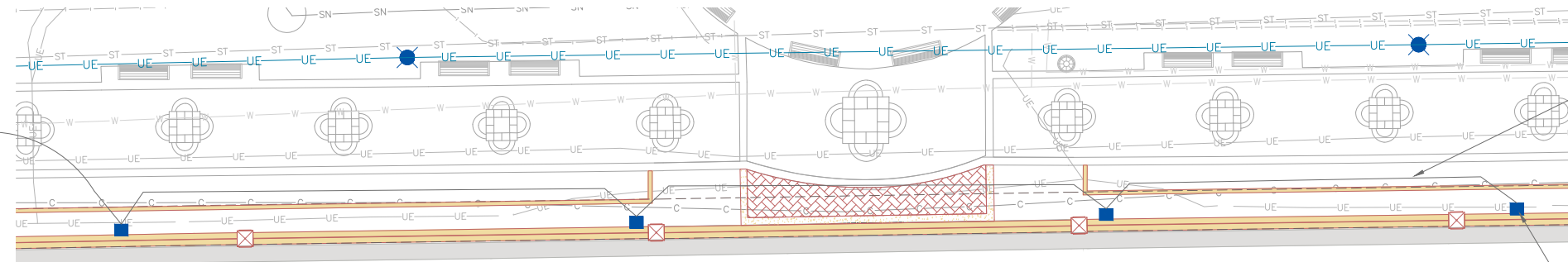


120VAC DUPLEX RECEPTACLES  
SOUTH END WALL

TO SOUTH END  
RECEPTACLE PANEL

1" CONDUIT W.  
1-6 AWG BLK  
1-6 AWG WHT AND  
1-6 AWG GRN

PROVIDE AND INSTALL STAINLESS STEEL DUPLEX WEATHERPROOF RECEPTACLES WITH LOCKABLE WEATHERPROOF IN-USE COVERS (TYPICAL 4 PLACES).

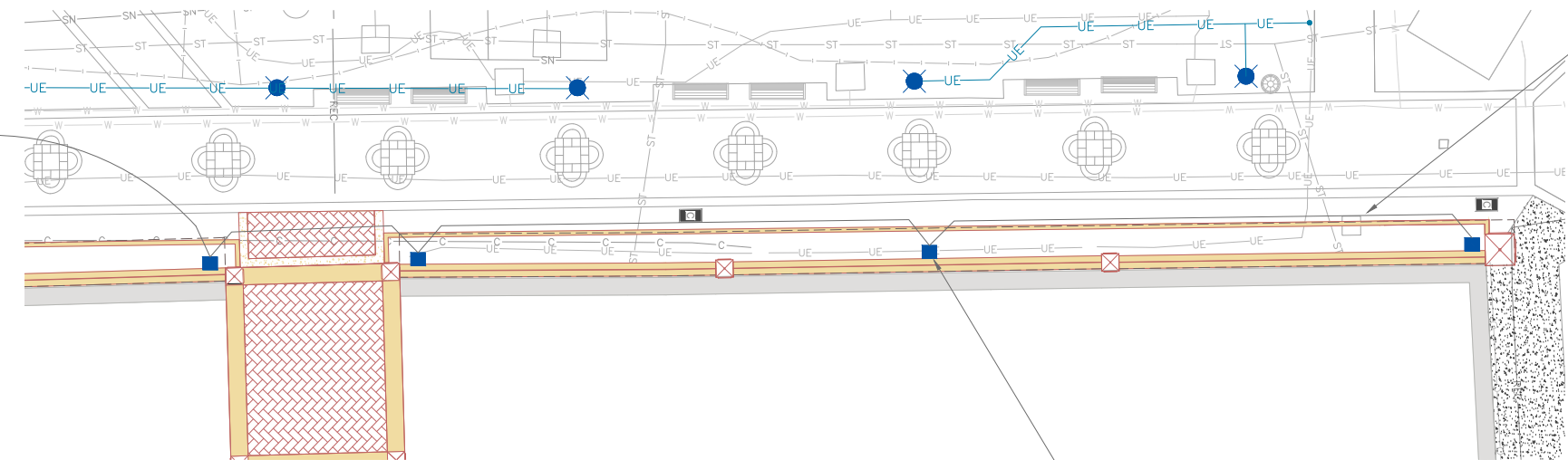


120VAC DUPLEX RECEPTACLES  
CENTER WALL

TO SOUTH END  
RECEPTACLE PANEL

1" CONDUIT W.  
1-6 AWG BLK  
1-6 AWG WHT AND  
1-6 AWG GRN

PROVIDE AND INSTALL STAINLESS STEEL DUPLEX WEATHERPROOF RECEPTACLES WITH LOCKABLE WEATHERPROOF IN-USE COVERS (TYPICAL 4 PLACES).

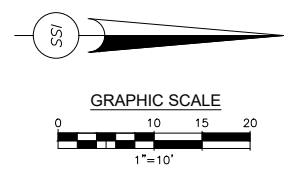


120VAC DUPLEX RECEPTACLES  
NORTH END WALL

TO SOUTH END  
RECEPTACLE PANEL

2" CONDUIT W.  
1-4 AWG BLK  
1-4 AWG WHT AND  
1-4 AWG GRN

PROVIDE AND INSTALL STAINLESS STEEL DUPLEX WEATHERPROOF RECEPTACLES WITH LOCKABLE WEATHERPROOF IN-USE COVERS (TYPICAL 4 PLACES).



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THOMAS M. VILL, P.E. #71186	
NO.	DATE:
DESCRIPTION REVISIONS	

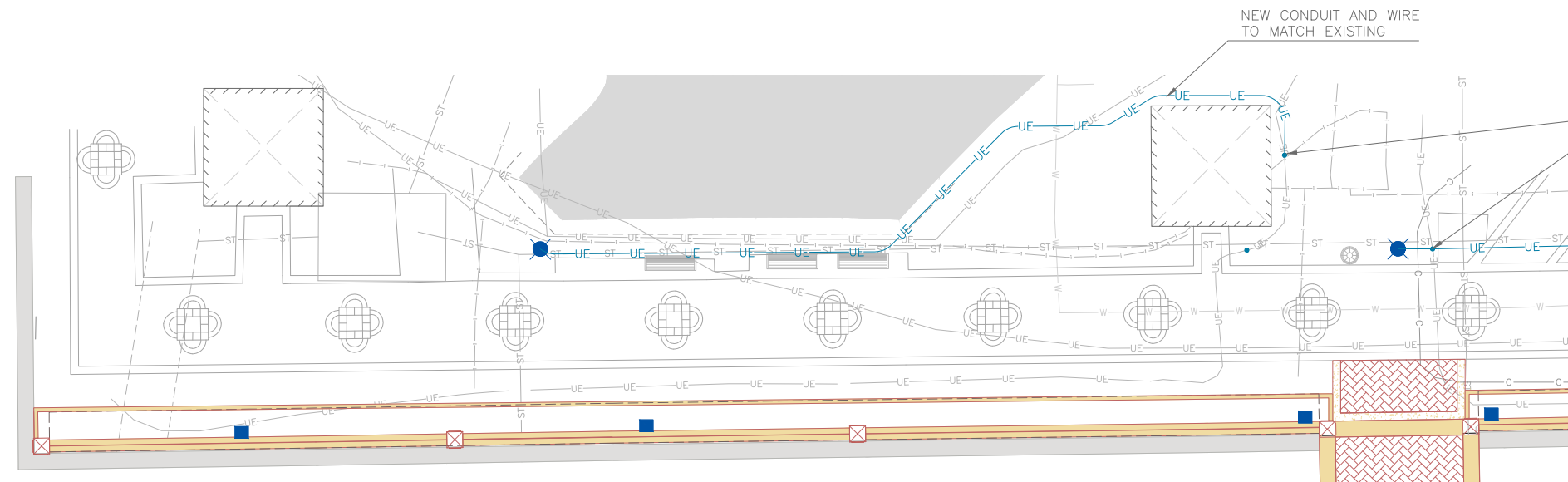
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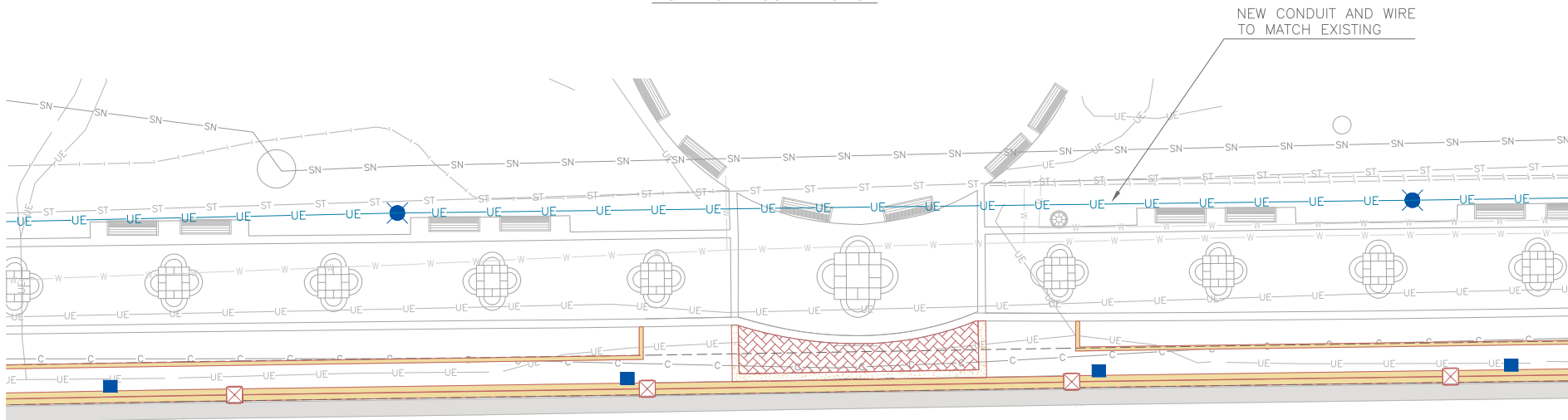
DRAWING TITLE:  
**120VAC RECEPTACLES ARRANGEMENT  
PROMENADE IMPROVEMENTS**

CLIENT:  
**CITY OF COCOA**

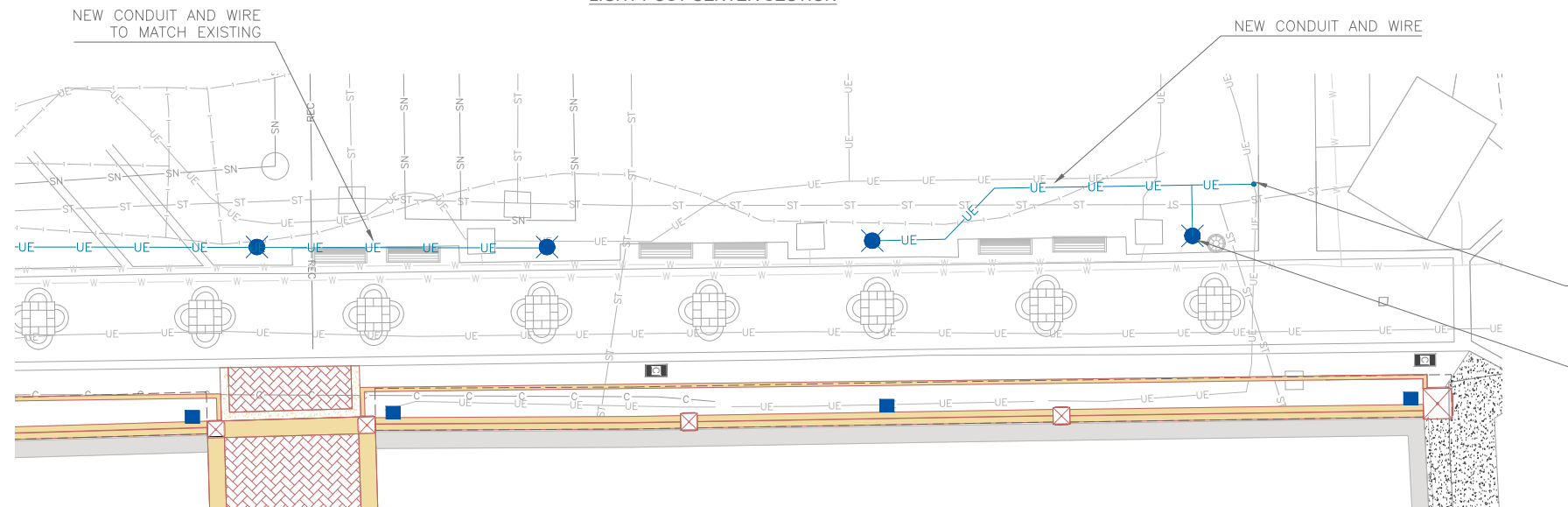
PROJECT NO. <b>COC013</b>	PROJ. MGR. <b>TMV</b>
DATE: <b>10/21/2019</b>	DRWN. BY: <b>GY</b>
SCALE: <b>1" = 10'</b>	CHKD. BY: <b>TMV</b>
DRAWING NO. <b>6 OF 7</b>	
SHEET NO. <b>E-06</b>	



LIGHT POST SOUTH SECTION

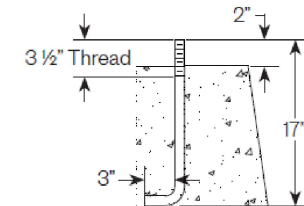
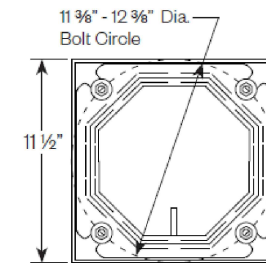


LIGHT POST CENTER SECTION



LIGHT POST NORTH SECTION

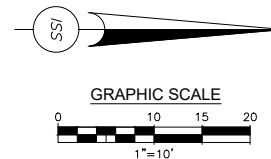
**Anchor Details**



- (4) 3/4"-10NO Galv. Stl. Anchor Bolts, AASHTO M314-90 Grade 55, Galv. Per ASTM A153.
- (4) 3/4"-10NO Galv. Stl. Hex. Nuts
- (4) 3/4" Galv. Stl. Lockwashers
- (4) 3/4" Galv. Stl. Flatwashers

Anchor bolts and templates can be requested prior to product shipment.

LIGHT POST ANCHOR DETAIL REFER TO STRUCTION DRAWINGS FOR ADDITIONAL DETAILS



10/22/2019 9:35:05 PM



7185 Murrell Road, Suite 101  
Melbourne, Florida 32940  
Phone: (321) 622-4646  
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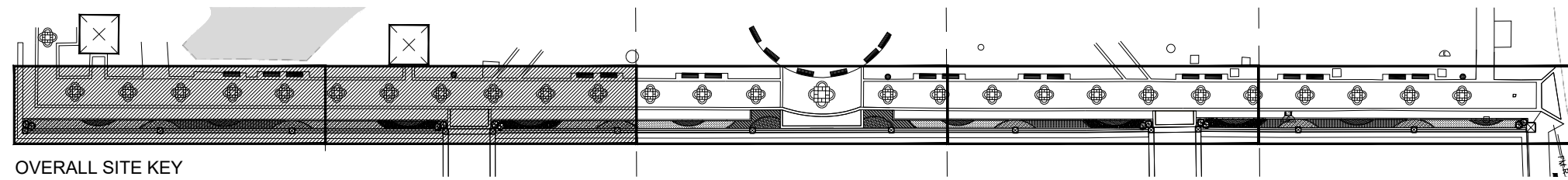
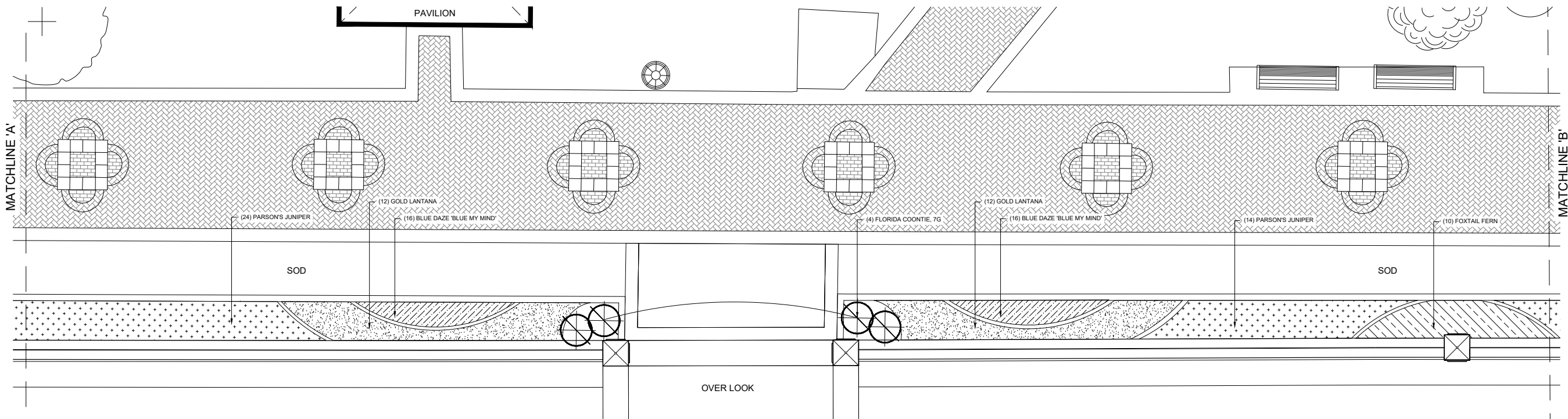
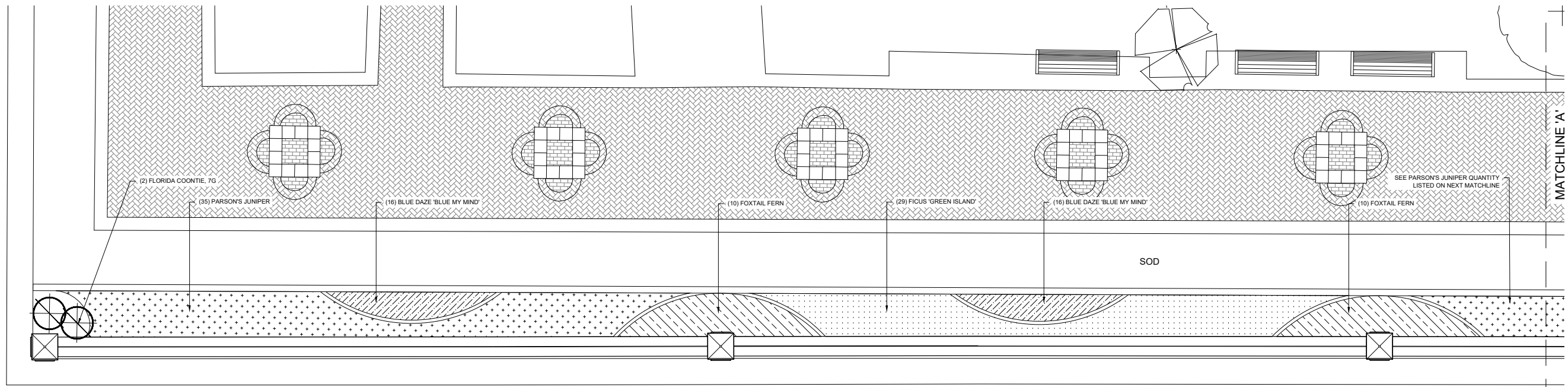
DRAWING TITLE:  
LIGHT POST ARRANGEMENT  
PROMENADE IMPROVEMENTS

CLIENT:  
CITY OF COCOA

PROJECT NO.:	PROJ. MGR.:
COC013	TMV
DATE:	DRWN. BY:
10/21/2019	GY
SCALE:	CHKD. BY:
1" = 10'	TMV
DRAWING NO.:	
7 OF 7	
SHEET NO.:	
E-07	

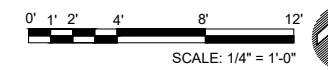
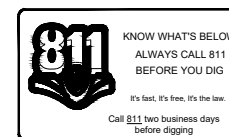
Susan Hall, ASLA  
 LANDSCAPE ARCHITECTURE  
 LC26000357  
 4425 CROOKED MILE RD.  
 MERRITT ISLAND, FL 32952  
 PHONE: (321) 449-0790  
 FAX: (321) 449-1225  
 www.hall-la.com

Cocoa Riverfront Park Promenade  
 401 River Edge Blvd.  
 Cocoa, Florida

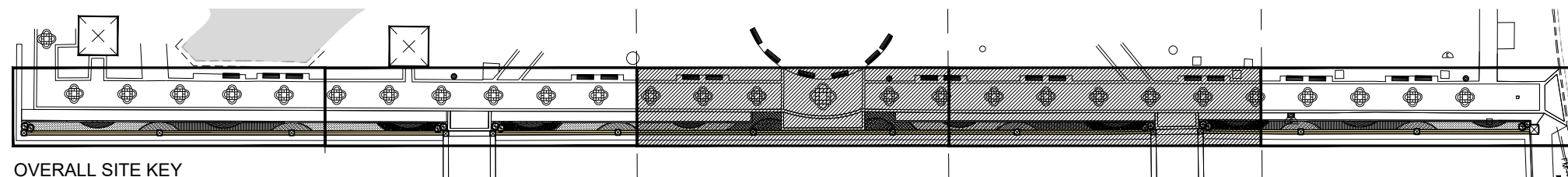
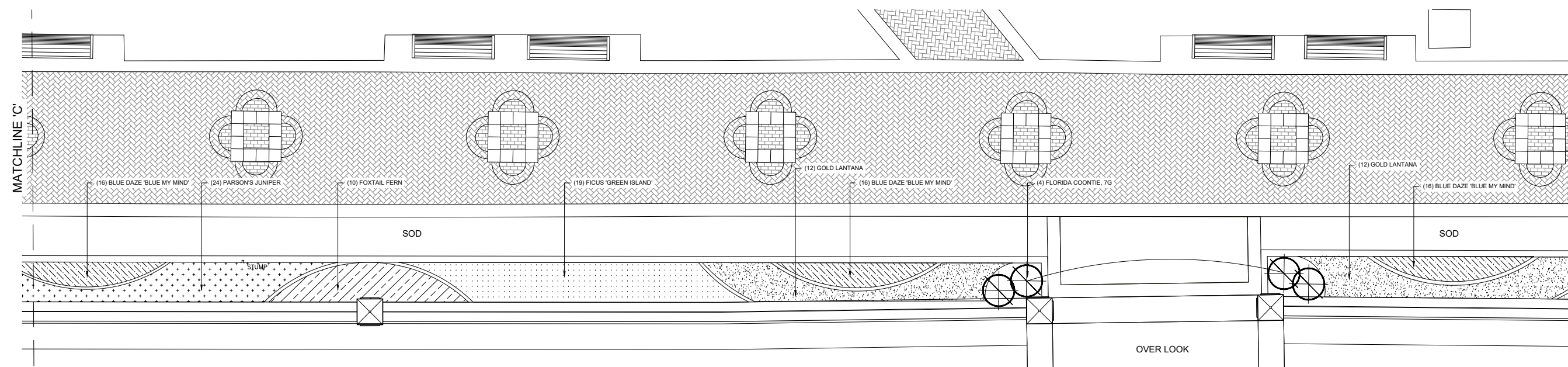
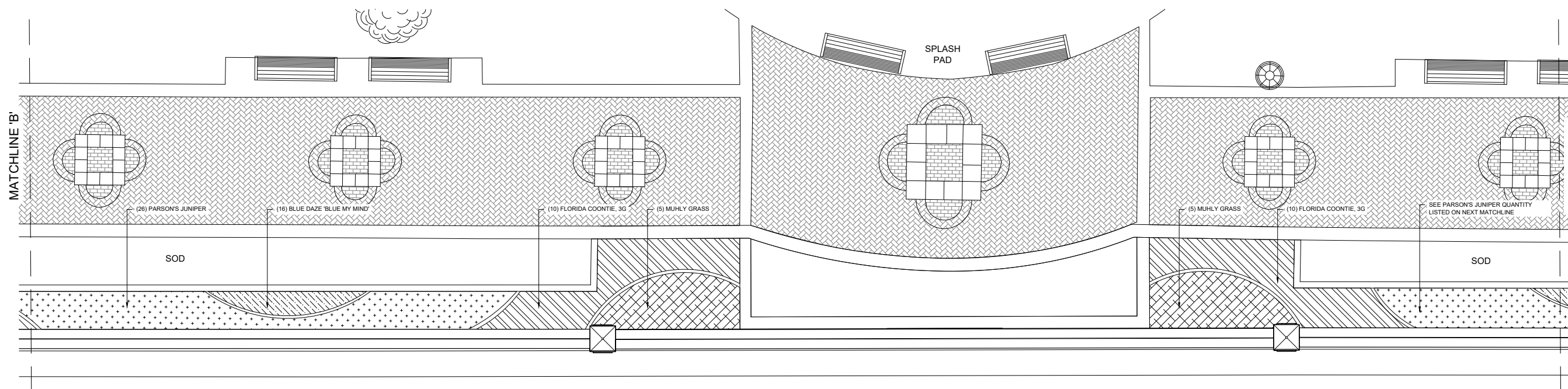


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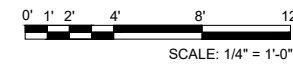
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SHEET TITLE	
LANDSCAPE PLAN	
DATE	10-21-19
DESIGN	S.H.
DRAWN	M.M.
SCALE	1/4" = 1' - 0"
REVISIONS	
SEAL	
L-1	5
SHEET	OF



SCALE: NOT TO SCALE

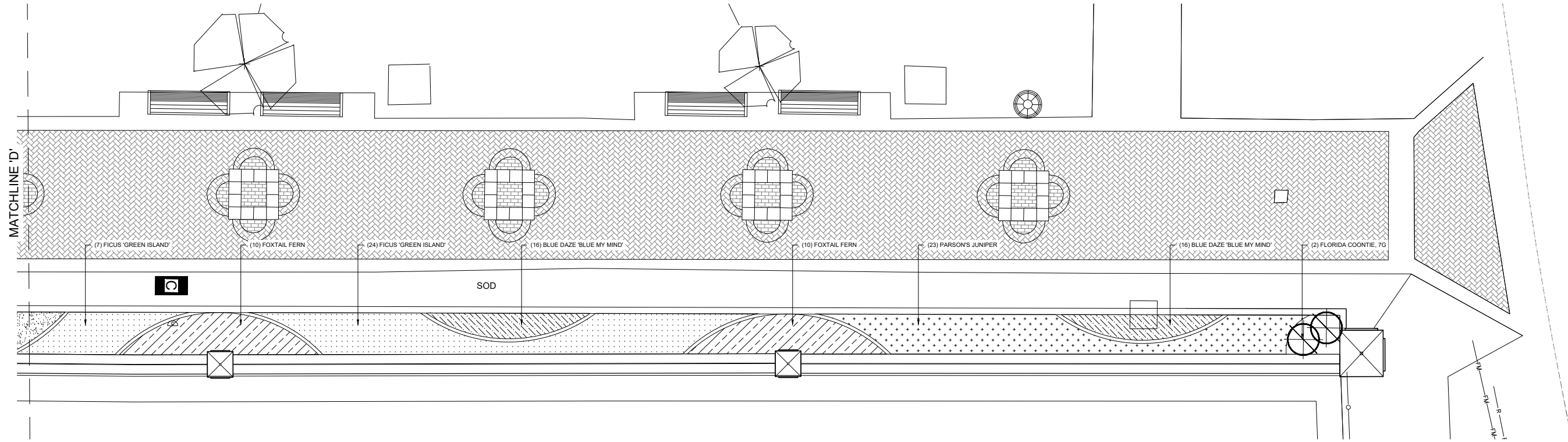


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**Cocoa Riverfront Park Promenade**  
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SHEET TITLE	LANDSCAPE PLAN
DATE	10-21-19
DESIGN	S.H.
DRAWN	M.M.
SCALE	1/4" = 1' - 0"
REVISIONS	
SEAL	
SHEET	L-2
OF	5

Cocoa Riverfront Park Promenade  
 401 River Edge Blvd.  
 Cocoa, Florida



Cocoa Riverfront Park - BASE BID Plant List

SHRUBS & GROUNDCOVERS					
QTY	BOTANICAL NAME	COMMON NAME	INSTALLED SIZE	SPECIFICATIONS	SPACING
60	<i>Asparagus densiflorus 'Meyersii'</i>	Foxtail Fern	3G	14"ht. x 14"spd.	24" oc
160	<i>Evolvulus glomeratus 'Blue My Mind'</i>	Blue Daze 'Blue My Mind'	1G	10" spd.	14" oc
79	<i>Ficus microcarpa 'Green Island'</i>	Ficus 'Green Island'	3G	12"ht. x 14"spd.	24" oc
146	<i>Juniperus chinensis 'Parsonii'</i>	Parson's Juniper	3G	18" spd.	24" oc
48	<i>Lantana 'New Gold'</i>	Gold Lantana	1G	10" spd.	24" oc
10	<i>Muhlenbergia capillaris</i>	Muhly Grass	3G	24" ht. x 20" spd.	36" oc
20	<i>Zamia pumila</i>	Florida Coontie	3G	14"ht. x 14" spd.	30" oc
12	<i>Zamia pumila</i>	Florida Coontie	7G	16"ht. x 24" spd.	As shown

MISCELLANEOUS LANDSCAPE ITEMS

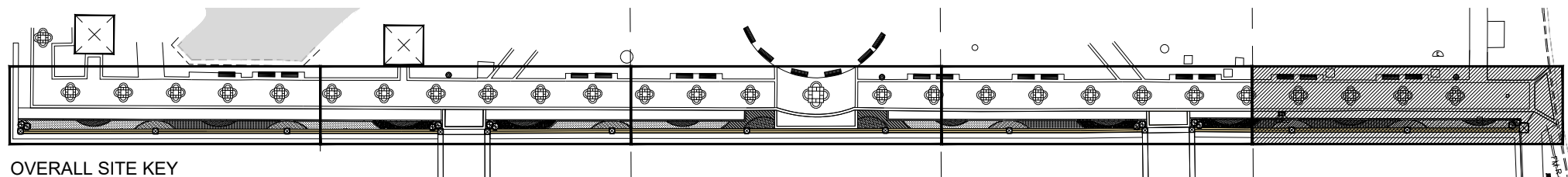
1	Site Preparation- The General Contractor shall provide the rough grade, the Landscape Contractor shall provide the fine grading as specified in the plans.
1900*	SF_Sod: Bermuda 'Tiffway 419'; An additional 10% has been added for shrinkage, cuts and wastes, Landscape Contractor to field-verify amount needed
*	For Add Alternative, use 1,000 SF of Sod: Bermuda 'Tiffway 419'
20	CY_Planting Mix- 4" depth, 33% Clean Sharp Sand, 33% Florida Peat, 33% Well-rotted Wood Chips/Compost
14	CY_Mulch - 'Coco Brown' Mulch from Florida Mulch
1	Irrigation

Bracing, Guying, Staking & Fertilizing is to be included in the unit price for installed plant material;  
 This estimate reflects current market pricing as of the date listed and is subject to change.

\*All material calculations are based on measurements from AutoCAD drawings and do not include shrinkage, cuts & waste, etc. Contractor is responsible for measuring & verifying quantities/calculations for the project.

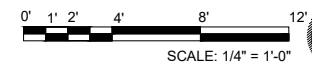
NOTE TO CONTRACTOR:

1. CONTRACTOR SHALL VERIFY WITH THE LANDSCAPE ARCHITECT THAT HE / SHE HAS THE MOST CURRENT LANDSCAPE PLANS PRIOR TO COMMENCEMENT OF WORK OR PROCUREMENT OF LANDSCAPE MATERIAL.



OVERALL SITE KEY

SCALE: NOT TO SCALE



LANDSCAPE PLAN & PLANT LIST

DATE: 10-21-19

DESIGN: S.H.

DRAWN: M.M.

SCALE: 1/4" = 1' - 0"

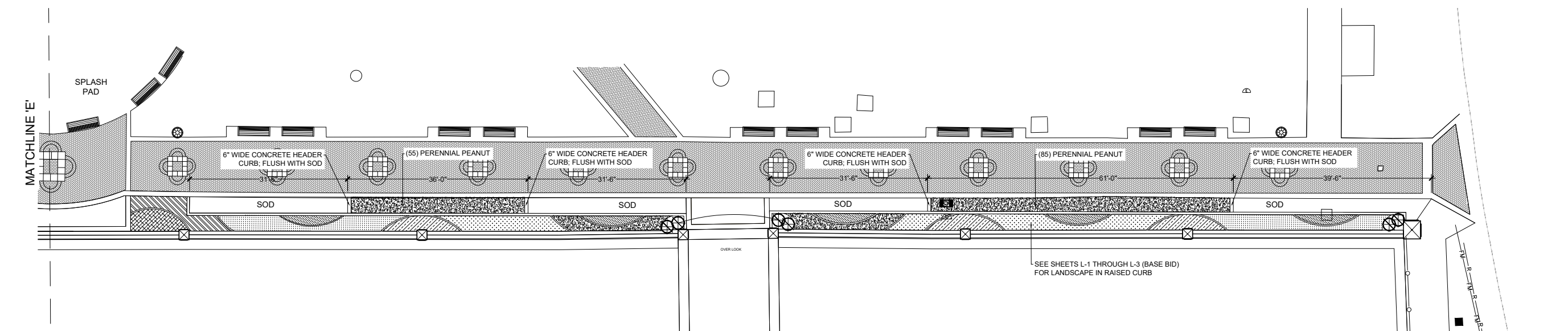
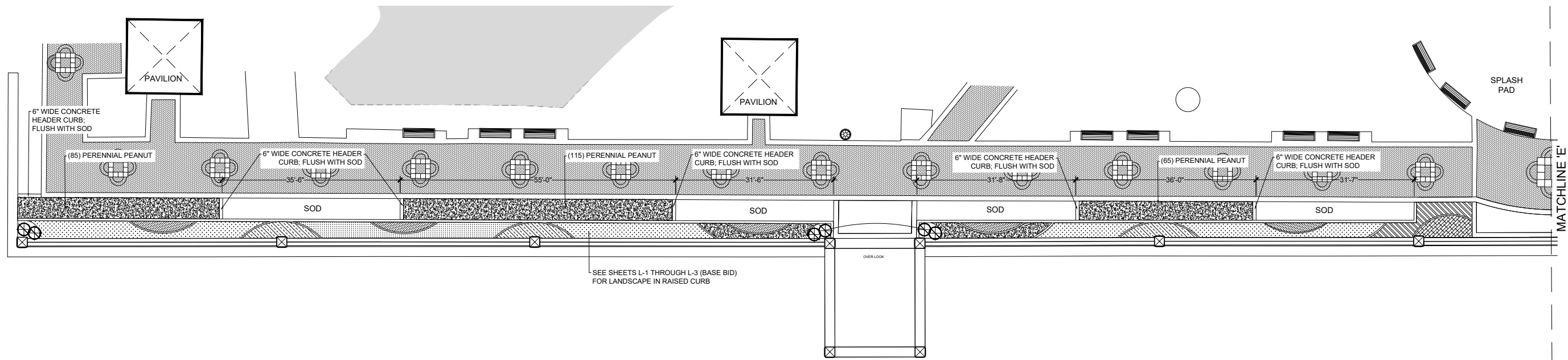
REVISIONS:

SEAL:

L-3

5

SHEET OF



**Cocoa Riverfront Park - ADD ALTERNATIVE**

SHRUBS & GROUNDCOVERS					
QTY	BOTANICAL NAME	COMMON NAME	INSTALLED SIZE	SPECIFICATIONS	SPACING
405	<i>Arachis glabrata</i>	Perennial Peanut	1G	10"-12" spd.	18" oc

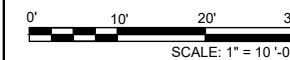
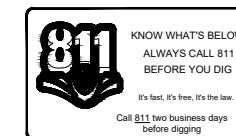
MISCELLANEOUS LANDSCAPE ITEMS	
By others	LF_Header Concrete Curb flush with sod. Refer to Civil Drawings
15	CY_Total Planting Mix- 4" depth; 33% Clean Sharp Sand, 33% Florida Peat, 33% Well-rotted Wood Chips/Compost
8	CY_Total Mulch - 'Coco Brown' Mulch from Florida Mulch

Bracing, Guying, Staking & Fertilizing is to be included in the unit price for installed plant material;  
This estimate reflects current market pricing as of the date listed and is subject to change.

**NOTE TO CONTRACTOR:**

- CONTRACTOR SHALL VERIFY WITH THE LANDSCAPE ARCHITECT THAT HE / SHE HAS THE MOST CURRENT LANDSCAPE PLANS PRIOR TO COMMENCEMENT OF WORK OR PROCUREMENT OF LANDSCAPE MATERIAL.
- FOR THE PERENNIAL PEANUT AREAS, EXCAVATE THE EXISTING SOIL TO A 4" DEPTH AND REPLACE WITH THE PLANTING MIX SPECIFIED ON THE PLANT LIST.

\*All material calculations are based on measurements from AutoCAD drawings and do not include shrinkage, cuts & waste, etc. Contractor is responsible for measuring & verifying quantities/calculations for the project.



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**Cocoa Riverfront Park Promenade**  
401 River Edge Blvd.  
Cocoa, Florida

SHEET TITLE  
**LANDSCAPE PLAN & PLANT LIST**  
(ADD ALTERNATE)

DATE  
10-21-19

DESIGN  
S.H.

DRAWN  
M.M.

SCALE  
1" = 10' - 0"

REVISIONS

SEAL

L-4 ADD ALTERNATE SHEET

**LANDSCAPE SPECIFICATIONS:**

- 1.00 GENERAL
- 1.01 The Contractor is reminded that the General Conditions and / or Special Conditions of this contract govern the work of this section of the Specifications whether attached hereto or not. Subcontractors undertaking to perform work under this Section shall be made fully aware of these documents and of their responsibilities and obligations thereunder. In the event of any discrepancies between the drawings and specifications and the following 'Scope of Work', the latter shall prevail.
- 2.00 SCOPE OF WORK
- 2.01 The work of this Section shall include all labor, materials, equipment, appliances, and accessories necessary for the complete performance of all excavation, grading, planting and backfill work in accordance with these Specifications and the Contract Drawing. Without restricting the generality of the foregoing, the items listed below and similar items shown on the Contract Drawings shall constitute the work of this Section:
  - A. Finish grading and final site preparation of all areas to be landscaped.
  - B. Furnishing and incorporating fertilizer and other soil amendments.
  - C. Furnishing plant materials and grass materials and installing same.
  - D. Furnishing and placing 'Planting Mixture' and other miscellaneous items to complete the work.
  - E. Replacement of unsatisfactory plant material.
  - F. Clean-up.
- 3.00 SITE PREPARATION
- 3.01 The Contractor shall provide finish grading and final preparation of all areas to be landscaped to within 2" of finish grade. This will require raking and pulverizing of all areas in order to crumble dirt, clogs and / or debris. The Landscape Contractor shall be responsible for finish grading, which is the top 2" of the site.
- 4.00 MATERIALS
- 4.01 Plant materials shall be furnished by the Landscape Contractor and as indicated on the plans. All plant materials shall meet or exceed the following standards.
  - A. Plant species and sizes shall conform with plant list. Nomenclature shall conform to Standardized plant names, in accordance with the latest edition of the Florida Department of Agriculture's Grades and Standards for Nursery Plants.
  - B. All plants shall be nursery grown or as stipulated herein and shall comply with all required inspections, grading standards and plant regulations as set forth in the Florida Department of Agriculture 'Grades and Standards for Nursery Plants', including revisions. Ensure that plant materials are shipped with tags stating the botanical and common name of the plant.
  - C. The minimum grade for all trees, palms, shrubs, and groundcovers shall be Florida No. 1 and shall meet or exceed the size and quality standards of the American Association of Nursery Stock, sponsored by the American Association of Nurserymen, latest addition, unless otherwise indicated and all plants shall be sound, healthy and vigorous, well-branched and densely foliated when in leaf. They shall have healthy, well developed root systems and shall be free of disease and insect pests, eggs or larvae. Florida Fancy material shall be provided where plant list specifies 'specimen'.
  - D. The determining measurements for trees shall be the height and spread, and shall be measured from the top of the plant to the root crown, not to include the immediate terminal growth. Their width shall be measured across the normal spread of the branches. Both measurements shall be made with the plants in their normal position.
  - E. Plants larger in size than those specified may be used with approval of the Landscape Architect at no additional cost to the Owner. If the use of the larger plants is approved, the ball of earth or spread of roots shall be increased proportionately.
  - F. Container grown plants the same quality as balled and burlapped plants may be substituted in lieu thereof. Plants grown in containers shall be delivered and remain in the containers in a shady location until planted. Plants in containers shall be watered prior to transportation and shall be kept moist until planted. The container must be removed prior to planting, with care as not to injure the roots.
  - G. Grass materials shall consist of the following:
    - 1. Sod: Solid sod shall be as indicated on the drawings. Sod must be strongly rooted and free of pernicious weeds. Mow to a height not to exceed 1 1/2" before lifting. Lifts shall have a uniform thickness of 1 inch to 1 1/2 inches. Sod containing nutgrass, lippia water sedge, dollar weed, or other common turfweed species (if applicable), will not be accepted.

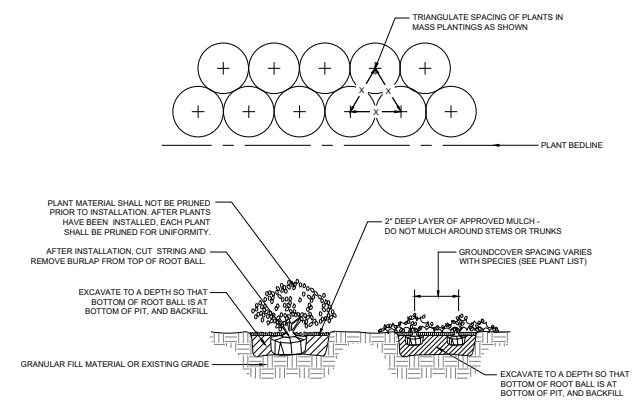
- 2. Sodding installation:
  - a) Sodding shall be done as soon as practical following finish grading. The day before sod installation, the contractor shall rake 50# Miorgranite per 1000 sf of area to receive sod. Ground shall be leveled with the back of a rake and sod laid with joints closely butted so that no voids are visible, keeping surface of sod flush with the adjoining seeded areas and or pavements. Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod strips; do not overlap. Hand tamp to ensure contact with subgrade, and water thoroughly with a fine spray immediately after laying.
  - b) After sod is in place, it shall be top dressed with sufficient sharp, clean 60% sand/40% muck soil mix to fill all voids remaining and thoroughly watered to wash the top dressing into the sodded surface.
  - c) All sod areas shall then be rolled using a vibrating #1500 sod roller if deemed necessary by the Landscape Architect, following installation.
  - d) It is the Landscape Contractor's responsibility to keep new sod properly watered until completion of the contract. All watering shall meet specifications according to 'Grades and Standards' Section 983.
- H. Substitutions in plant species or size will be made only with prior written permission of the Landscape Architect.
- I. If, in the opinion of the Landscape Architect, materials and/or work do not conform with the plans and specifications, it may be rejected and upon rejection, must be removed immediately from the site by the Contractor and replaced.
- J. The Contractor shall be responsible for the certification and inspection of plant material that may be required by local, state, or federal authorities and shall bear the cost of the same, if any.
- 4.02 Materials used to install the job shall meet or exceed the following standards:
  - A. Planting mix to be used for planting shall be: 1/3 coarse sand, 1/3 Florida peat, 1/3 well rotted pine chips or compost. 70% sand / 30% muck shall be used in planters or areas with poor drainage.
  - B. Fertilizers: Fertilizer shall be delivered mixed as specified in standard bags, sealed, and showing weight by analysis and name of manufacturer. Fertilizer shall be stored in weatherproof storage and in such a manner that its effectiveness will not be impaired.
  - C. Mulch: Mulch shall be 'Coco Brown' mulch from Florida Mulch or approved equal.
  - D. Water: All water required for the execution of the work shall be supplied at the site by the Owner.
- 5.00 INSTALLATION
- 5.01 The Planting operations used to install the job shall meet or exceed the following standards:
  - A. Excavation of Plant Pits: Plant pit excavations shall be roughly cylindrical in shape, with their side approximately vertical. Pit shall be excavated so that bottom of pit is same depth as root ball. Plants shall be centered in the hole, with the trunk location as shown in the plans. Holes for balled and burlapped plants shall be large enough to allow 12" minimum (depending on root ball size) of back fill around the sides of the root ball, and 12" of back fill beneath the root ball. In all cases the diameter of the plant hole shall be twice the diameter of the root ball. Where excess material has been excavated from the plant hole, the excavated material may be used to backfill to the proper level. Mix existing excavated material in 50% / 50% ratio with new planting soil mix. The Contractor, in excavation for plantings shall take care not to damage underground utilities or other sub-surface obstructions, and shall be held liable for their repair, if damaged.
  - B. Setting Plants: All trees shall be set so, that when settled, the top of the root ball will be flush with the surrounding area of the finish grade or slightly above finish grade. Each plant shall be planted in planting soil mix in the center of the pit. Shrubs shall be set flush with the surrounding finish grade of the planting area. The back fill shall be made with prepared planting in mixture as specified herein and shall be firmly rodded and watered, so that no air-pockets remain. The quantity of water applied immediately upon planting shall be sufficient to thoroughly moisten all of the backfilled earth. Plants shall be kept in a moistened condition the duration of the planting.
  - C. Staking and Guying: All trees shall be staked or guyed as shown in the details and according to the following specifications.
    - 1. Use wide plastic, rubber or other flexible strapping materials to support the tree to stakes or ground anchors that will give as the tree moves in any direction up to 30 degrees. Use strapping material 'Arbor Tie' by Deep Root (800) 458-7668 dark green color, or approved equal. Do not use rope or wire through a hose. Use guy chords, hose or any other thin bracing or anchorage material which has a minimum 12" [300 mm] length of high visibility flagging tape secured to guys, midway between the tree and stakes for safety.

- 2. Stake trees larger than 1" [25 mm] diameter and smaller than 2" [50 mm] diameter with a 2" by 2" [50 by 50 mm] stake, set at least 2' [0/6 m] in ground and extending to the crown of the plant. Firmly fasten the plant to the stake with flexible strapping materials as noted above.
- 3. TREES OF 2 TO 3 1/2" [50 MM TO 90 MM] CALIPER: Stake all trees, other than palm trees, larger than 2" [50 mm] caliper and smaller than 3 1/2" [90 mm] caliper with two 2" by 4" [50 by 100 mm] stakes, 8' [2.4 m] long, set 2' [0.6 m] in the ground. Place the tree midway between the stakes and hold it firmly in place by flexible strapping materials as noted above.
- 4. LARGE TREES: Guy all trees, other than palm trees, larger than 3 1/2" [90 mm] caliper, from at least three points, with flexible strapping materials as noted above. Anchor flexible strapping to 2" by 4" by 24" [50 by 100 by 600 mm] stakes, driven into the ground such that the top of the stake is at least 3" [75 mm] below the finished ground.
- 5. SPECIAL REQUIREMENTS FOR PALM TREES: Brace palms which are to be staked with three 2" by 4" [50 by 100 mm] wood braces, toe-nailed to cleats which are securely banded at two points to the palm, at a point one third the height of the trunk. Pad the trunk with five layers of bubble wrap under the cleats. Place braces approximately 120 degrees apart and secure them underground by 2" by 4" by 12" [50 by 100 by 300 mm] stake pads. Paint wood flat dark green exterior paint, two coats.
- 6. TREE PROTECTION AND ROOT BARRIERS: Install tree barriers when called for in the Contract Documents or by the Landscape Architect to protect existing trees from damage during project construction. Place barricades at the drip line of the tree foliage or as far from the base of the tree trunk as possible. Barricades shall be able to withstand bumps by heavy equipment and trucks. Maintain barricades in good condition. When called for in the Contract Documents, install root barriers or fabrics in accordance with the details shown.
- D. Pruning: All broken or damaged roots or branches shall be cut smoothly and the tops of all trees shall be pruned in a manner complying with standard horticultural practice. At the time pruning is completed, all remaining wood shall be alive.
- E. Mulching: Within one week after planting, mulch material shall be uniformly applied to a minimum loose thickness of 2 inches, over the entire area of the backfilled hole or bed. The mulch shall be maintained continuously in place until the time of final inspection, and must be a minimum of 2 inches thick to be accepted. Mulch shall not be placed against stems or trunks.
- F. Fertilizing: Feeding of all trees and specimen shrubs shall be done with a slow release granular 12-6-8 with complete minors turf and ornamental fertilizer, as per manufacturer's instructions. Contractor shall submit and label to the Landscape Architect for approval prior to application.
- 6.00 MAINTENANCE
- 6.01 Maintenance and hand watering of all trees, shrubs and groundcover by the Landscape Contractor shall terminate upon final acceptance of such work, but shall not discharge the Landscape Contractor from his responsibility to honor the guarantee period. Maintenance prior to final acceptance shall include the removal of all dead or dying twigs and branches, the weeding, watering and normal pruning of plant material.
- 7.00 GUARANTEE
- 7.01 The Landscape Contractor shall guarantee and maintain all new field grown trees and all field grown palms for a period of one year. All containerized trees, shrubs, and groundcovers for a period of 180 days, and all sod for a period of 90 days. The Landscape Contractor shall replace at the direction of the Landscape Architect all trees, shrubs, or groundcovers deemed by the Landscape Architect to be unacceptable, due to death or damage; acts of God, Owner negligence and vandalism excepted. The guarantee period shall begin upon substantial completion of the job, as determined by the landscape architect.
- 7.02 New material used to replace material unacceptable to the Landscape Architect, shall be guaranteed for similar period from date of installation.
- 8.00 FINAL INSPECTION AND ACCEPTANCE
- 8.01 The Landscape Contractor shall advise the Landscape Architect in writing at the end of the guarantee period that the project is ready for final inspection. Only upon notification to the Landscape Architect by the Landscape Contractor in writing and subsequent inspection attended by the Landscape Contractor shall the requirements of the guarantee be met.
- 9.00 CLEAN-UP
- 9.01 Upon completion of all work under this section, the Landscape Contractor shall clear the site of all debris, superfluous material and all equipment to the satisfaction of the Landscape Architect
- 9.02 End

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**Cocoa Riverfront Park Promenade**  
 401 River Edge Blvd.  
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ABBREVIATIONS	
CAL	- CALIPER
CONC.	- CONCRETE
C.T.	- CLEAR TRUNK
CY	- CUBIC YARD
EA.	- EACH
EX.	- EXISTING
F.F.E.	- FINISHED FLOOR ELEVATION
FG	- FIELD GROWN
FM	- FORCE MAIN
FTB	- FULL TO BASE
G	- GALLON
GAL	- GALLON
GW	- GREY WOOD
HT	- HEIGHT
LF	- LINEAR FOOT
MT	- MULTI TRUNK
OC	- ON CENTER
OA	- OVERALL HEIGHT
PLTG.	- PLANTING
SF	- SQUARE FEET
SPD	- SPREAD
TOB	- TOP OF BANK
TYP.	- TYPICAL



**SHRUB & GROUNDCOVER PLANTING DETAIL**

N.T.S.

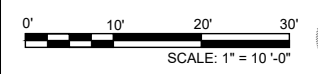
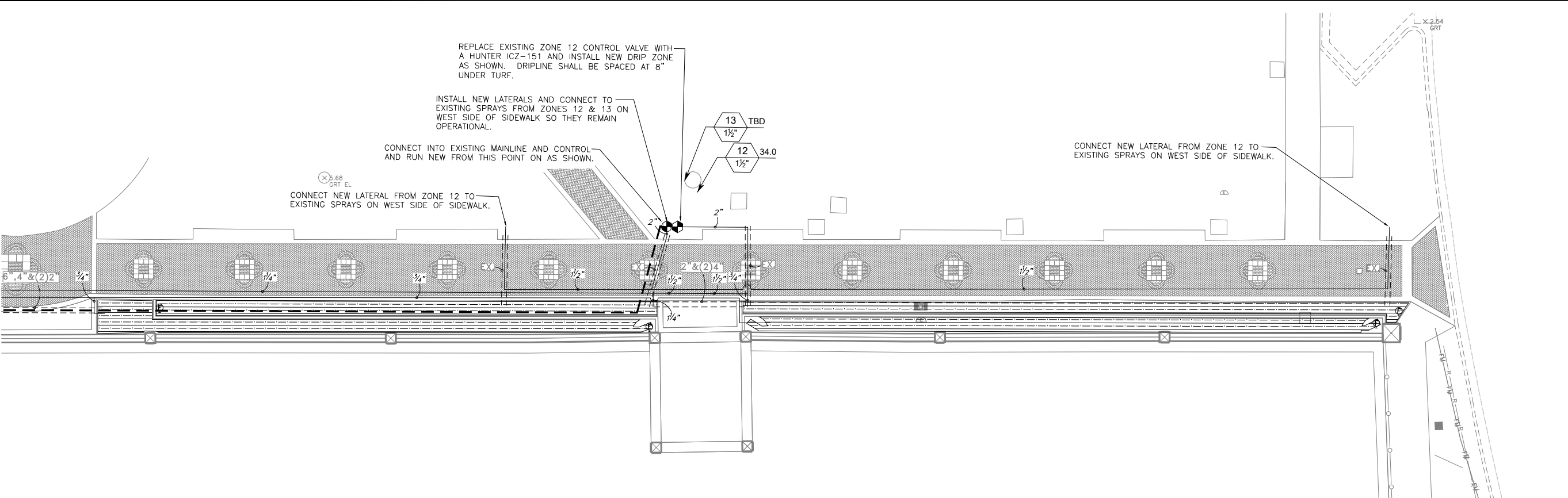
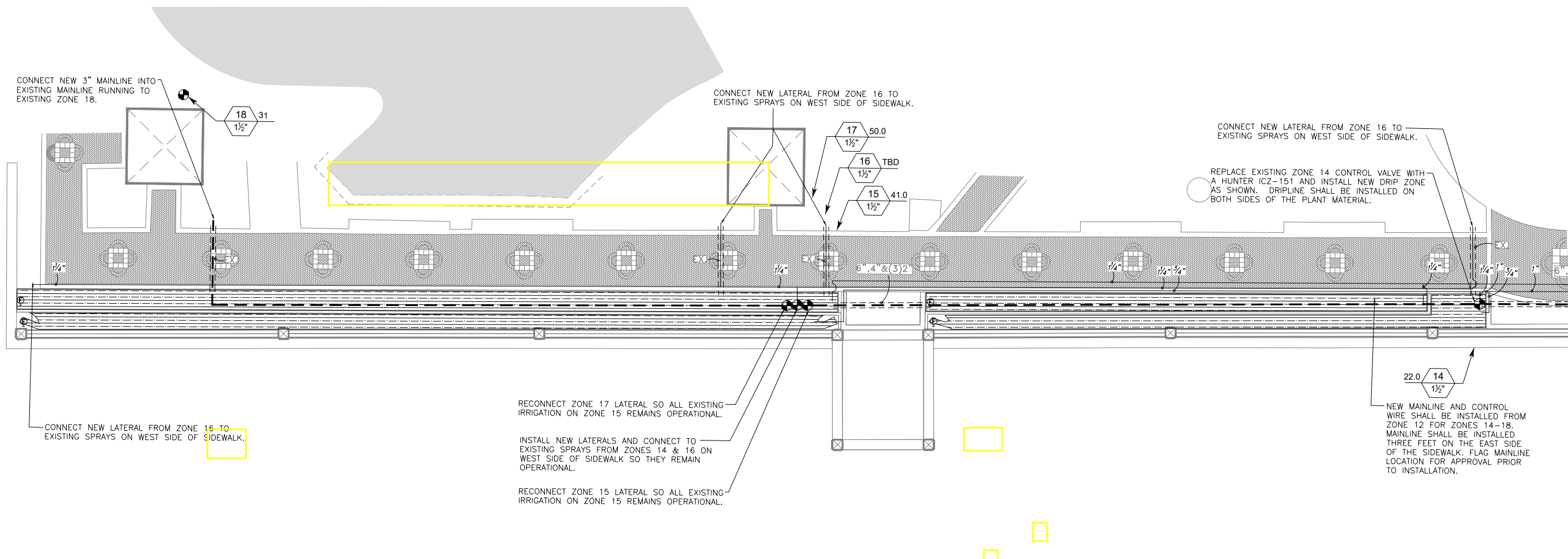
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DATE	10-21-19
DESIGN	S.H.
DRAWN	M.M.
SCALE	1/4" = 1' - 0"
REVISIONS	
SEAL	
SHEET	L-5
OF	5



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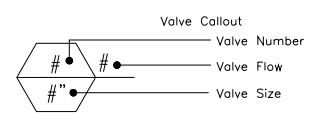
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IRRIGATION PLAN	
DATE	10-21-19
DESIGN	S.H.
DRAWN	J.C.
SCALE	1" = 10' - 0"
REVISIONS	
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SHEET	OF



**IRRIGATION LEGEND**

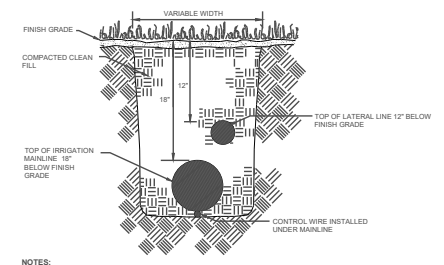
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	Hunter PROS-12 with GPH Irrigation Products GDFN 8	
	Area to Receive Dripline Netafim TLCV9-12 Space at 8" under turf and install on each side of plant material.	3,000 I.F.
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	Hunter ICZ-151 in a Jumbo Valve Box	2
	Existing Control Valve see notes	5
	Irrigation Lateral Line: PVC Class 160	1,200 I.F.
	Irrigation Mainline: PVC 3" Class 200	440 I.F.
	Pipe Sleeve: PVC Schedule 40	

IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR OWN TAKE OFF



**PROJECT NOTES**

- IRRIGATION CONTRACTOR RESPONSIBLE FOR FIELD LOCATING EXISTING MAINLINE PIPING, CONTROL WIRE, CONTROL VALVES, CONTROLLER AND LATERALS. REFER TO EXISTING IRRIGATION PLANS FOR APPROXIMATE LOCATIONS.
- CONNECTION INTO EXISTING SYSTEM TO BE ADJUSTED AS NECESSARY BASED ON CONDITIONS IN THE FIELD, TO PROVIDE FULLY OPERATIONAL SYSTEM. PRIOR TO BEGINNING WORK, THE EXISTING SYSTEM SHALL BE OPERATED BY THE CONTRACTOR TO DETERMINE THE ACTUAL EXTENT OF THE SYSTEM.
- IRRIGATION CONTRACTOR RESPONSIBLE FOR RELOCATING AND CAPPING EXISTING LINES AS NECESSARY PRIOR TO NEW CONSTRUCTION. EXTEND LINES AS NECESSARY AND STUB ABOVE GROUND FOR FUTURE CONNECTION.
- ZONE LINES WITHIN THE CONSTRUCTION BOUNDARY THAT SUPPLY OTHER AREAS SHALL BE REROUTED AS REQUIRED, AND RECONNECTED TO THEIR ORIGINAL VALVES, OR TO NEW VALVES ON THE EXISTING SYSTEM, AS APPROPRIATE. THESE NEW LINES MAY REMAIN WITHIN THE CONSTRUCTION BOUNDARY, BUT SHALL BE ROUTED SO THAT THEY ARE ACCESSIBLE AFTER CONSTRUCTION IS COMPLETE.
- ALL COMPONENTS REMOVED SHALL BE DISPOSED OF PROPERLY AND NOT REUSED.
- IRRIGATION CONTRACTOR TO COORDINATE SLEEVE INSTALLATION WITH GENERAL CONTRACTOR.
- DISTURBANCE TO EXISTING TREES AND PLANT MATERIAL, AS BY TRENCHING, SHALL BE MINIMIZED.



- NOTES:**
- DEPTH MEASUREMENTS ARE TO BE DONE FROM FINISH GRADE TO TOP OF PIPE.
  - PROVIDE A 6" MINIMUM VERTICAL SEPARATION BETWEEN MAINLINES AND LATERAL LINES.
  - ALL TRENCHES SHALL BE BACKFILLED WITH CLEAN SOIL FREE OF DEBRIS & NOXIOUS WEEDS.

**TRENCHING DETAIL**  
SCALE: NTS

**UNDERGROUND IRRIGATION SPECIFICATIONS**

**1.0 GENERAL**

- SUMMARY:** Includes but not limited to:
    - Furnishing and installing sprinkler system as described in Contract Documents complete with accessories necessary for proper functioning.
  - SYSTEM DESCRIPTION:**
    - Design Requirements:**
      - Layout of Irrigation Heads:
        - Location of heads shown on Drawings is approximate. Actual placement may vary slightly as is required to achieve full, even coverage without spraying onto buildings, sidewalks, fences, etc.
  - QUALITY ASSURANCE:**
    - Regulatory Requirements:**
      - Work and materials shall be in accordance with latest rules and regulations, and other applicable state or local laws. Nothing in Contract Documents is to be construed to permit work not conforming to these codes.
    - Pre-Installation Conference:**
      - Meet with Owner and Landscape Architect to discuss and clarify all aspects of job requirements prior to commencing work of this Section.
    - System Adjustments:**
      - Minor adjustments in system will be permitted to avoid existing fixed obstructions.
      - Mainline, laterals, and valves are shown for clarity purposes only. All irrigation equipment to be with landscape area. Mainline, laterals and valves to be installed as far away from existing and new specimen trees as possible.
      - Documentation and submittal of actual water supply performance prior to commencing installation.
  - SUBMITTALS:**
    - Record Drawings:**
      - Prepare an accurate as-built drawing as installation proceeds to be submitted prior to final inspection. Drawing shall include:
        - Detail and dimension changes made during construction.
        - Significant details and dimensions not shown in original Bidding Documents.
      - Maintain, at job site, one copy of Contract Documents (as defined in General Conditions) and relevant shop drawings.
      - Clearly mark each document "PROJECT RECORD COPY" and maintain in good condition for use of the Landscape Architect and Owner.
      - As-built drawing shall be clearly drawn.
      - Submit product literature for all sprinklers, valves, pipe, wire, wire connectors and controller.
      - Final payment for system will not be authorized until accurate and complete submittals are delivered to the Landscape Architect.
    - Instruction Manual:**
      - Provide instruction manual which lists complete instructions for system operation and maintenance.
- PRODUCT STORAGE:**
  - During construction and storage, protect materials from damage and prolonged exposure to sunlight.
- WARRANTY:**
  - Standard one (1) year warranty stipulated in General Conditions shall include:
    - Completed system including parts and labor.
    - Filling and repairing depressions and replacing plantings due to settlement of irrigation trenches for one (1) year following final acceptance.
    - System adjustment to supply proper coverage to areas to receive water.
- MAINTENANCE:**
  - Extra Materials:**
    - In addition to installed system, furnish Owner with the following items at close-out:
      - Two sprinkler head bodies of each size and type.
      - Two nozzles for each size and type.
      - Two adjusting keys for each sprinkler head cover type.

**2.0 PRODUCTS:**

- PIPE, PIPE FITTINGS, AND CONNECTIONS:**
    - Pipe shall be continuously and permanently marked with Manufacturer's name, size, schedule, type, and working pressure.
  - Pipe:**
    - Pressure Lines: as indicated on plans.
    - Lateral Lines: as indicated on plans.
    - Risers: sch. 80 PVC, gray
  - Fittings:**
    - Schedule 40 PVC.
  - Steering:**
    - Schedule 40 PVC.
- SPRINKLER HEADS:**
    - Conform to requirements shown on Drawings as to type, radius of throw, pressure, and discharge.
  - AUTOMATIC SPRINKLER SYSTEM:**
    - Control valves shall be of size and type indicated on Drawings.
    - Control wire shall be UL listed, color coded copper conductor direct burial size 14. Use 3M-DBY waterproof wire connectors at splices and locate all splices within valve boxes. Use white or gray color for common wire and other colors for all other wire.
  - VALVES:**
    - Electric Valves:**
      - Make and model shown on Drawings.
    - Automatic Controller:**
      - Make and model shown on Drawings.
  - VALVE ACCESSORIES:**
    - Valve Boxes:**
      - Ametek or Brooks heavy duty valve box with locking lid or Landscape Architect approved equal.
      - Do not install more than one (1) valve in a single box.
      - Valve boxes shall be large enough for easy removal or maintenance of valves.

**3.0 EXECUTION:**

- PREPARATION:**
  - Protection:**
    - Work of others damaged by this Section during course of its work shall be replaced or repaired by original installer at this Section's expense.
- INSTALLATION:**
  - Trenching and Backfilling:**
    - Over-excavate trenches by two (2") inches and bring back to indicated depth by filling with fine, rock-free soil or sand.
    - Cover pipe both top and sides with two (2") inches of material specified in paragraph above. In no case shall there be less than two (2") inches of rock-free soil or sand surrounding pipe.

- Installation of Plastic Pipe:**
  - Install plastic pipe in a manner to provide for expansion and contraction as recommended by Manufacturer.
  - Unless otherwise indicated on Drawings, install main lines with a minimum cover of eighteen (18") inches based on finish grade. Install lateral lines with a minimum cover of twelve (12") inches based on finish grade.
  - Locate no sprinkler head closer than twelve (12") inches from building foundation. Heads immediately adjacent to mowing strips, walks or curbs shall be one (1") inch below top of mowing strip, walk or curb and have a minimum of one (1") inch clearance between head and mowing strip, walk or curb.
  - Drawings show arrangement of piping. Should local conditions necessitate rearrangement, obtain approval of Landscape Architect prior to proceeding with work.
  - Cut plastic pipe square. Remove burrs at cut ends prior to installation so unobstructed flow will result.
  - Make solvent weld joints in the following manner:
    - Clean mating pipe and fitting with clean, dry cloth and apply one (1) coat of P-70 primer to each.
    - Apply uniform coat of 711 solvent to outside of pipe.
    - Apply solvent to fitting in similar manner.
    - Reapply a light coat of solvent to pipe and quickly insert into fitting.
    - Give pipe or fitting a quarter turn to insure even distribution of solvent and make sure pipe is inserted to full depth of fitting socket.
    - Hold in position for fifteen (15) seconds minimum or long enough to secure joint.
    - Wipe off solvent appearing on outer shoulder of fitting.
    - Do not use an excessive amount of solvent thereby causing an obstruction to form on the inside of pipe.
    - Allow joints to set at least 24 hours before applying pressure to PVC pipe.
  - Tape threaded connection with teflon tape.
- Control Valves and Controller:**
  - Install controller, control wires, and valves in accordance with Manufacturer's recommendations and according to applicable electrical code.
  - Install valves in plastic boxes with reinforced heavy duty plastic covers. Locate valve box tops at finish grade.
  - Install remote control valves in valve boxes positioned over valve so all parts of valve can be reached for service. Set cover of valve box even with finish grade.
  - Install all valve boxes over nine (9") inches of gravel for drainage.
- Sprinkler Heads:**
  - Prior to the installation of sprinkler heads, open control valves and use full head of water to flush out system.
  - Set sprinkler heads perpendicular to finish grade.
  - Set lawn sprinkler heads adjacent to existing walks, curbs, and other paved areas to grade.
- Dripline:**
  - Stake dripline every eight feet along dripline laterals.

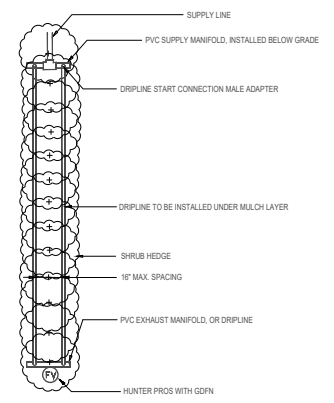
**3.3 ADJUSTMENT AND CLEANING:**

- Adjust heads to proper grade when turf is sufficiently established to allow walking on it without appreciable harm. Such lowering or raising of heads shall be part of the original contract with no additional charge to the Owner.
- Adjust sprinkler heads for proper distribution and trim to ensure spray does not fall on building.
- Adjust watering time of valves to provide proper amounts of water to all plants.

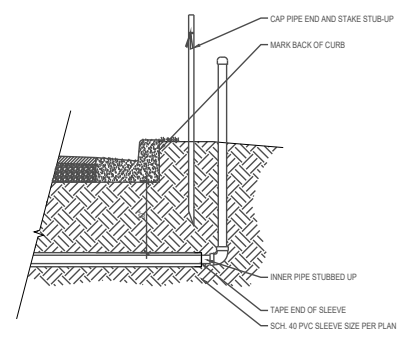
**3.4 DEMONSTRATION:**

- After system is installed and approved, instruct Owners Representative in complete operation and maintenance.

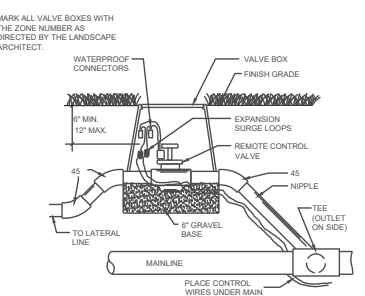
END OF SECTION



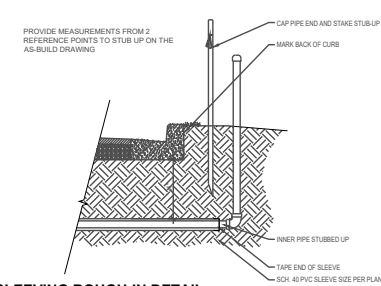
**DRIPLINE LAYOUT DETAIL**  
SCALE: NTS



**SLEEVING ROUGH-IN DETAIL**  
SCALE: NTS



**ELECTRIC VALVE INSTALLATION DETAIL**  
SCALE: NTS



**SLEEVING ROUGH-IN DETAIL**  
SCALE: NTS

**Crawford Irrigation Design, Inc.**  
IRRIGATION DESIGN AND CONSULTATION SERVICES

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Cocoa, Florida

SHEET TITLE  
**IRRIGATION SPECIFICATIONS & DETAILS**

DATE  
10-21-19

DESIGN  
S.H.

DRAWN  
J.C.

SCALE  
1/4" = 1' - 0"

REVISIONS

SEAL

IR-2 2  
SHEET OF