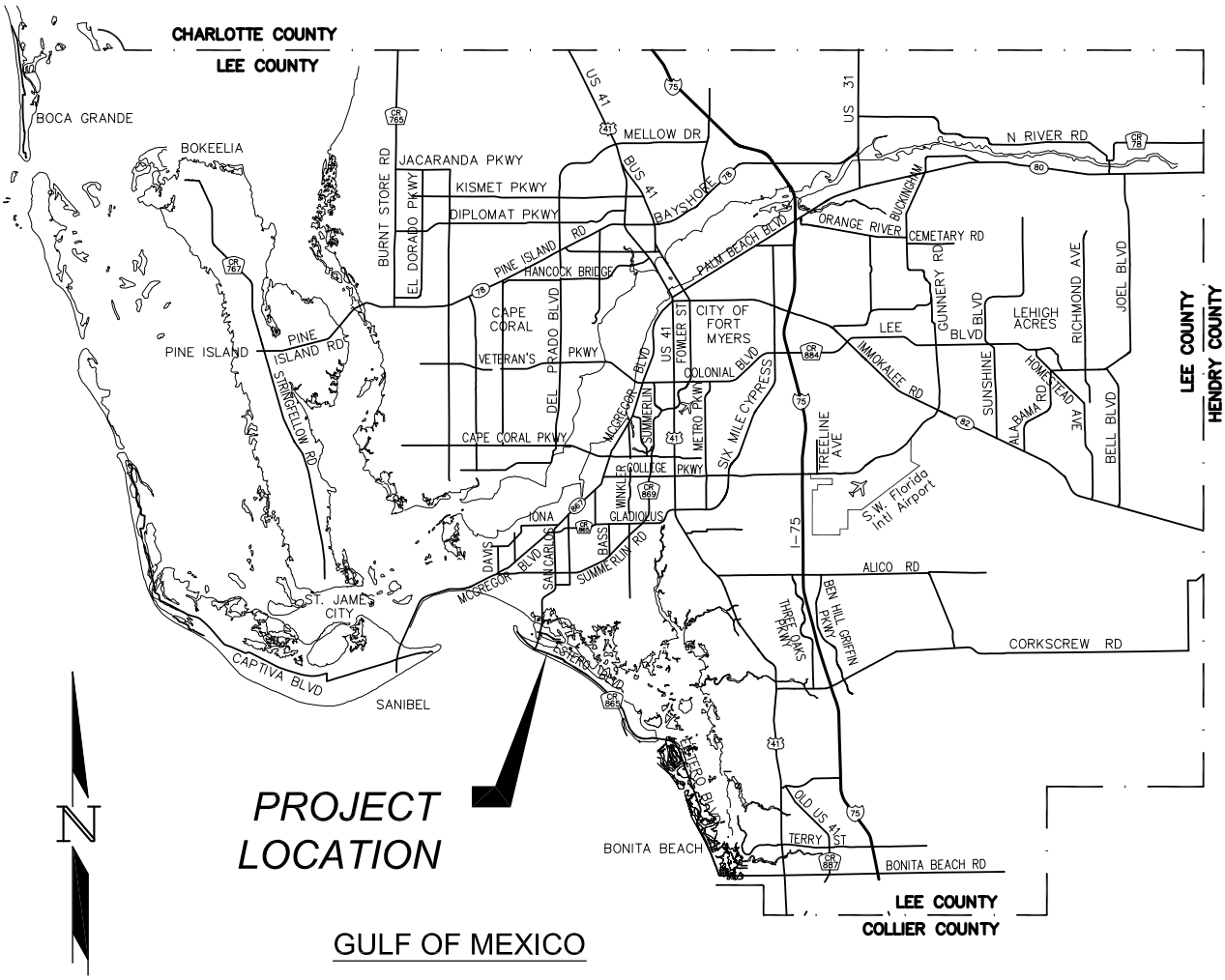
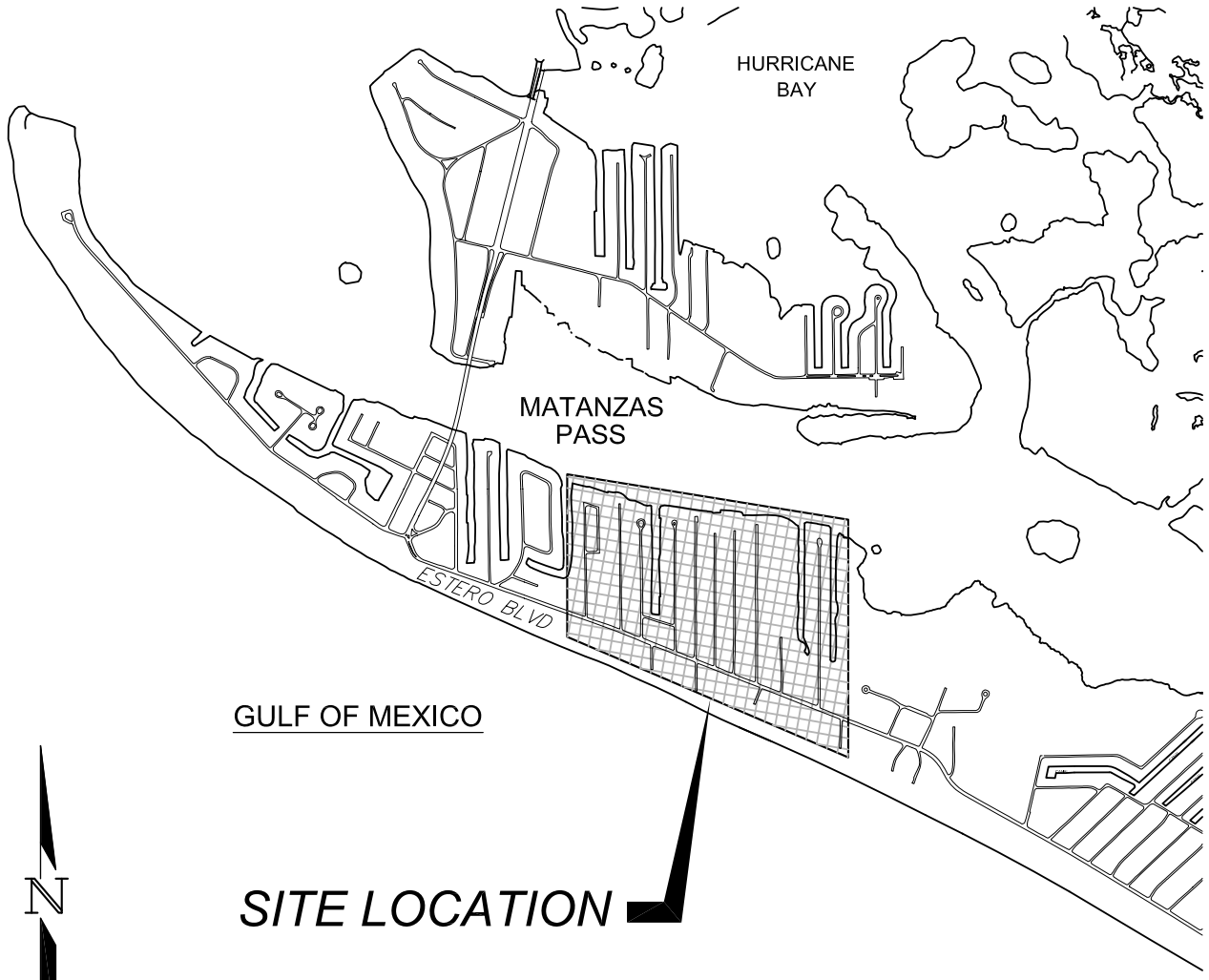



LOCATION MAP
TOWN OF FORT MYERS BEACH
FEMA HMGP 1609 – 48 – R
FORT MYERS BEACH, LEE COUNTY, FLORIDA
APPLICATION NUMBER: 091019-6

ECT
Environmental Consulting & Technology, Inc.
4100 CENTER POINTE DRIVE, SUITE 112
FORT MYERS, FLORIDA 33916
Tel (239) 277-0003 Fax (239) 277-1211




SITE MAP
TOWN OF FORT MYERS BEACH
FEMA HMGP 1609 – 48 – R
FORT MYERS BEACH, LEE COUNTY, FLORIDA
APPLICATION NUMBER: 091019–6

ECT
Environmental Consulting & Technology, Inc.
4100 CENTER POINTE DRIVE, SUITE 112
FORT MYERS, FLORIDA 33916
Tel (239) 277–0003 Fax (239) 277–1211

**LIST OF UTILITY SERVICE AREAS:**

**POWER**
FLORIDA POWER AND LIGHT
15834 WINKLER ROAD
FORT MYERS, FLORIDA 33908
(239) 415-1302

**WATER**
TOWN OF FORT MYERS BEACH
2523 ESTERO BOULEVARD
FORT MYERS BEACH, FLORIDA 33931
(239) 765-0202

**SEWER**
LEE COUNTY UTILITIES
1500 MONROE STREET
FORT MYERS, FLORIDA 33906
(239) 533-8181

**NATURAL GAS**
TECO / PEOPLES GAS
5901 ENTERPRISE PARKWAY
FORT MYERS, FLORIDA 33905
(239) 690-5507

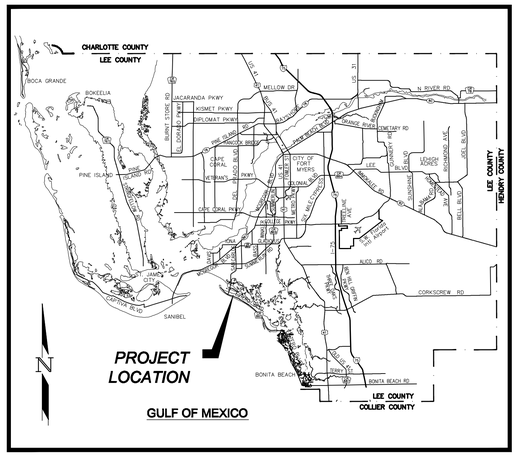
**TELEPHONE**
EMBARQ / UNITED TELEPHONE-FLORIDA
P. O. BOX 370
FORT MYERS, FLORIDA 33901
(239) 336-2011

**CABLE**
COMCAST CABLE
1418 SE 10TH STREET
CAPE CORAL, FLORIDA 33990
(239) 574-2020

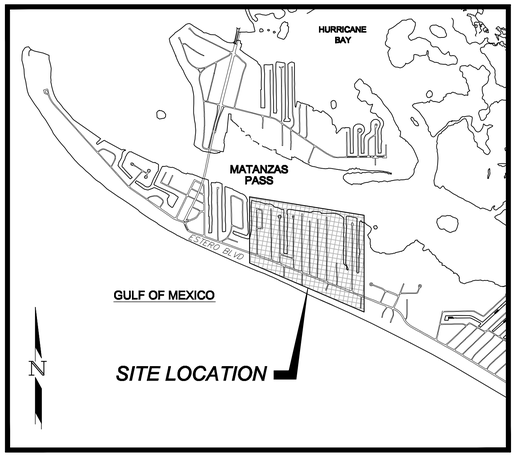
PLANS FOR

# BASIN BASED
# NEIGHBORHOOD FLOOD MITIGATION AND STORMWATER QUALITY IMPROVEMENT PROJECT
# TOWN OF FORT MYERS BEACH

SECTION 19, TOWNSHIP 46 SOUTH, RANGE 24 EAST
LEE COUNTY, FLORIDA




PROJECT LOCATION MAP
NOT TO SCALE




PROJECT SITE MAP
NOT TO SCALE

## INDEX OF DRAWINGS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| | C-02 | ABBREVIATIONS, LEGENDS AND STANDARD NOTES |
| | C-03 | DRAINAGE BASIN MAP |
| (NOT INCLUDED, TYP.) | ~~C-04 & C-05~~ | ~~PLAN, PROFILE AND CROSS SECTIONS - CAROLINA AVENUE~~ |
| | ~~C-06 & C-07~~ | ~~PLAN, PROFILE AND CROSS SECTIONS - OSTEGO DRIVE~~ |
| | ~~C-08 & C-09~~ | ~~PLAN, PROFILE AND CROSS SECTIONS - MIRAMAR STREET~~ |
| | ~~C-10 & C-11~~ | ~~PLAN, PROFILE AND CROSS SECTIONS - OHIO AVENUE~~ |
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| | ~~C-19~~ & C-20 | PLAN, PROFILE AND CROSS SECTIONS - FAIRWEATHER LANE |
| | C-21 & ~~C-22~~ | PLAN, PROFILE AND CROSS SECTIONS - MANGO STREET |
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| | ~~C-42~~ | ~~AERIAL MAP~~ |


PREPARED FOR:

## FORT MYERS BEACH TOWN COUNCIL

| | |
|---|---|
| LARRY KIKER | MAYOR |
| BOB RAYMOND | VICE MAYOR |
| TOM BABCOCK | COUNCIL MEMBER |
| JO LIST | COUNCIL MEMBER |
| ALAN MANDEL | COUNCIL MEMBER |

**FEDERAL COST-SHARE FUNDING SOURCE:**
FEMA HMGP 1609 - 48 - R
DEM ID No.: 09HM-37-09-46-02-017

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" (LATEST EDITION), UNLESS OTHERWISE SPECIFIED. ALL TYPICAL DETAILS ARE EITHER: PER FDOT - "DESIGN STANDARDS" (LATEST EDITION), LEE COUNTY UTILITIES (SEWER), TOWN OF FORT MYERS BEACH (WATER), OR THE MANUFACTURER (PROPRIETARY PRODUCTS) - UNLESS OTHERWISE SPECIFIED.

REVISIONS

| NO. | DATE | REVISION | BY | APPROVED |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

ECT PROJECT No.: 08 -1063

## DEPARTMENT OF PUBLIC WORKS

TERRANCE "TERRY" STEWART, TOWN MANAGER
CATHIE LEWIS, PUBLIC WORKS DIRECTOR

2523 ESTERO BOULEVARD
FORT MYERS BEACH, FLORIDA 33931

TELEPHONE (239) 765-0202 & FAX (239) 765-0909

PREPARED BY:


**ECT**
***Environmental Consulting & Technology, Inc.***
*4100 CENTER POINTE DRIVE, SUITE 112*
*FORT MYERS, FLORIDA 33916*
*Tel (239) 277-0003 Fax (239) 277-1211*
*http://www.ectinc.com*
*CA#5520*


The stormwater management system(s) indicated within this plan set dated as April 2010 are approved for construction in conjunction with the SFWMD permit (Application No. 091019-6). Attention is noted that other items currently shown that are either an adjunct thereto or not related to the stormwater management system may be subsequently revised.

BRADLEY S. VANCE, P.E.
FLORIDA P.E. No. 43746

DATE

SHEET NUMBER
C-01

# ABBREVIATIONS:

| | |
|---|---|
| A | ACRE |
| ALT. | ALTERNATE |
| APPROX. | APPROXIMATE |
| ASB | ASBESTOS |
| B.M. | BENCH MARK |
| C.B. | CATCH BASIN |
| CF | CUBIC FEET |
| CFM | CUBIC FEET PER MINUTE |
| CI | CAST IRON |
| CIP | CAST IRON PIPE |
| C.J. | CONSTRUCTION JOINT |
| CMP | CORRUGATED METAL PIPE |
| C.O. | CLEANOUT |
| CV | CHECK VALVE |
| CF | CUBIC FOOT |
| CY | CUBIC YARD |
| ℄ | CENTER LINE |
| C.L.F. | CHAIN LINK FENCE |
| COL. | COLUMN |
| CONC. | CONCRETE |
| CONST | CONSTRUCT |
| CONT. | CONTINUOUS |
| CONTR. | CONTRACTOR |
| CU | COPPER |
| CI | CUBIC INCH |
| DIA. # | DIAMETER |
| DIAG. | DIAGONAL |
| DIM | DIMENSION |
| DIST. | DISTANCE |
| D.I.P. | DUCTILE IRON PIPE |
| D.E. | DRAINAGE EASEMENT |
| DRWG. | DRAWING |
| E | EAST |
| EA. | EACH |
| E.G.L. | EXISTING GRADE LINE |
| ELEV. | ELEVATION |
| EQUIP. | EQUIPMENT |
| ERCP | ELLIPTICAL REINFORCED CONCRETE PIPE |
| EX. EXIST. | EXISTING |
| F.F. | FINISHED FLOOR |
| F.F.E. | FINISHED FLOOR ELEVATION |
| FM | FORCE MAIN |
| FOUND. | FOUNDATION |
| FIN. | FINISH |
| FRP | FIBERGLASS REINFORCED PLASTIC |
| FT | FEET |
| N.G. | NATURAL GAS |
| G.C. | GENERAL CONTRACTOR |
| G.I. | GALVANIZED IRON |
| GPM | GALLONS PER MINUTE |
| G.V. | GATE VALVE |
| GA. | GAUGE |
| G | GALLON |
| GR | GRADE |
| HDPE | HIGH DENSITY POLYETHYLENE |
| HOR. | HORIZONTAL |
| HYD. | HYDRANT |
| I.D. | INSIDE DIAMETER |
| IRR | IRRIGATION |
| INV. | INVERT |
| L.A.E. | LAKE ACCESS EASEMENT |
| MGD | MILLION GALLONS PER DAY |
| MB | MAILBOX |
| MH | MANHOLE |
| M.J. | MECHANICAL JOINT |
| MAX. | MAXIMUM |
| MECH. | MECHANICAL |
| M.E.S. | MITERED END SECTION |
| MANF. | MANUFACTURER |
| MIN. | MINIMUM |
| MISC. | MISCELLANEOUS |
| N | NORTH |
| NE | NORTHEAST |
| NW | NORTHWEST |
| N.P.W. | NON POTABLE WATER |
| N.T.S. | NOT TO SCALE |
| NO. / # | NUMBER |
| NOM. | NOMINAL |
| NG | NATURAL GAS |
| O.C. | ON CENTER |
| O.C.E.W. | ON CENTER EACH WAY |
| O.D. | OUTSIDE DIAMETER |
| P.G.L. | PROPOSED GRADE LINE |
| PSF | POUNDS PER SQUARE FOOT |
| PSI | POUNDS PER SQUARE INCH |
| P.V. | PLUG VALVE |
| PVC | POLYVINYL CHLORIDE |
| PE | POLYETHYLENE |
| PVMT. | PAVEMENT |
| PC | POINT OF CURVATURE |
| ℙ | PROPERTY LINE |
| PW | POTABLE WATER |
| PT | POINT OF TANGENCY |
| P.U.E. | PUBLIC UTILITY EASEMENT |
| PVI | POINT OF VERTICAL INTERSECTION |
| QTY. | QUANTITY |
| R | RADIUS |
| RD. | ROAD |
| RCP | REINFORCED CONCRETE PIPE |
| REQ'D | REQUIRED |
| R.O.W. | RIGHT OF WAY |
| R/W | RIGHT OF WAY |
| S | SOUTH |
| SE | SOUTHEAST |
| SW | SOUTHWEST |
| S.S. | STAINLESS STEEL |
| SAN. | SANITARY |
| SCHD. | SCHEDULE |
| SECT. | SECTION |
| SEW. | SEWER |
| SHT. | SHEET |
| SPEC. | SPECIFICATION |
| SQ. | SQUARE |
| ST. | STREET |
| STA. | STATION |
| ST. | STEEL |
| STAND. | STANDARD |
| SYM. | SYMMETRICAL |
| TOE | TOE OF SLOPE |
| TOB | TOP OF BANK |
| THK. | THICK |
| TEL. | TELEPHONE |
| TEMP. | TEMPERATURE |
| TRANS. | TRANSFORMER |
| TYP. | TYPICAL |
| USPS | UNITED STATES POSTAL SERVICE |
| U.E. | UTILITY EASEMENT |
| VERT. | VERTICAL |
| W | WATER |
| WM | WATER MAIN |
| W | WITH |
| W/O | WITHOUT |
| WD. | WOOD |
| WT | WEIGHT |
| WSWT | WET SEASON WATER TABLE |
| W.V. | WATER VALVE |

# SYMBOLS

- GATE VALVE / PLUG VALVE
- TEE ASSEMBLY
- REDUCER
- FIRE HYDRANT
- FIRE HYDRANT ASSEMBLY WITH GATE VALVE
- MITERED END SECTION
- MANHOLE (EXISTING)
- HEADWALL
- DRAINAGE INLET
- CONCRETE UTILITY POLE
- WOOD UTILITY POLE
- GUY WIRE ANCHOR
- LIGHT POLE
- TELEPHONE SERVICE PEDESTAL
- SIGN
- NATURAL GAS MARKER
- CLEAN–OUT
- MAILBOX (EXISTING)
- PROPERTY CORNER
- WATER METER
- BACKFLOW PREVENTION DEVICE
- WOOD POST
- CONCRETE BOLLARD
- ELECTRICAL TRANSFORMER
- SUPPORT COLUMN

# LINETYPES

| | EXISTING | PROPOSED |
|---|---|---|
| RIGHT OF WAY | | |
| LAKE MAINTENANCE EASEMENT | | |
| PUBLIC UTILITY EASEMENT | | |
| DRAINAGE EASEMENT | | |
| CENTER LINE | | |
| WETLAND BOUNDARY | | |
| FORCE MAIN | FM | FM |
| SANITARY SEWER | SS | SS |
| WATER MAIN | WM | WM |
| STORM WATER PIPE | | |
| PERIMETER BERM | | |
| FENCE LINE | | |
| SILT FENCE | | |
| DITCH | | |
| DRAINAGE BASIN BOUNDARY | | |
| COASTAL CONSTRUCTION CONTROL LINE (MAY 30, 1991) | | |
| 10–YEAR STILL WATER ELEVATION (2.5' NAVD88) | | |
| MEAN HIGH WATER ELEVATION (0.14' NAVD88) | | |
| 10–YEAR STILL WATER ELEVATION (4.9' NAVD88) (OPEN COAST) | | |

# HATCH PATTERNS

- WETLANDS
- UPLAND BUFFER
- UPLAND AREAS
- LITTORAL SHELF AREA
- COMPENSATING LITTORAL PLANTING AREA
- RIP RAP
- PROPOSED WATER
- EXISTING WATER
- INDIGENOUS AREA
- EARTH
- CONCRETE
- BRICK PAVERS
- GRAVEL BACKFILL

## SPECIFICATIONS, PERMITS, and CONDITIONS

THE WORD "TOWN" SHALL MEAN THE "TOWN OF FORT MYERS BEACH".

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" (LATEST EDITION), UNLESS OTHERWISE SPECIFIED. ALL TYPICAL DETAILS ARE EITHER: PER FDOT – "DESIGN STANDARDS" (LATEST EDITION), LEE COUNTY UTILITIES (SEWER), TOWN OF FORT MYERS BEACH (WATER), OR THE MANUFACTURER (PROPRIETARY PRODUCTS) – UNLESS OTHERWISE SPECIFIED.

ALL CONSTRUCTION SHALL COMPLY WITH THE APPLICABLE PERMITS FROM THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT (SFWMD) AND U.S. ARMY CORPS OF ENGINEERS (USACOE).

THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER PRIOR TO THE INITIATION OF ANY DEVIATION FROM THE APPROVED PLANS. NO SUCH DEVIATION(S) SHALL BE AUTHORIZED WITHOUT PRIOR WRITTEN APPROVAL BY THE PROJECT ENGINEER. IF A REQUIRED DIMENSION IS NOT SHOWN OR A DISCREPANCY IS FOUND ON THE PLANS, THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER PRIOR TO COMMENCING THAT PART OF THE AFFECTED CONSTRUCTION.

PROVISIONS FOR EXISTING DRAINAGE PATTERNS SHALL BE PROVIDED DURING CONSTRUCTION.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY REQUIRED DEWATERING PERMITS.

THE LOCATIONS AND ELEVATIONS OF THE PROPOSED IMPROVEMENTS ARE SUBJECT TO MODIFICATION IN THE FIELD BY THE TOWN OR PROJECT ENGINEER TO PRESERVE EXISTING FEATURES.

THE CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS OUTSIDE THE CONSTRUCTION AREA (RIGHT OF WAY) TO THEIR ORIGINAL OR BETTER CONDITION AT NO ADDITIONAL PAY.

ALL DAMAGE(S) TO THE EXISTING ROADWAY, DRIVEWAYS, SIDEWALKS, UTILITITES, OR OTHER APPURTANENCES SHALL BE REPLACED BY THE CONTRACTOR AS DIRECTED BY THE TOWN/PROJECT ENGINEER AT NO ADDITIONAL PAY.

THE CONTRACTOR SHALL REMOVE ALL DEBRIS AND REFUSE FROM CONSTRUCTION AREA (RIGHT OF WAY) AND DISPOSE OF ACCORDING TO ALL APPLICABLE REGULATIONS.

DURING CONSTRUCTION, IF ANY FORTUITOUS (HISTORICAL OR ARCHAEOLOGICAL) FINDS ARE DISCOVERED OR OBSERVED, ALL WORK SHALL CEASE IN THE AREA. THE CONTRACTOR SHALL IMMEDIATELY CONTACT THE PROJECT ENGINEER WHO WILL NOTIFY THE TOWN. EXAMPLES MAYI NCLUDE FRAGMENTS OF STONE TOOLS, SHELLS, SHELL TOOLS, POTTERY, GLASS, BOTTLES, ANIMAL BONES, BUILDING FOUNDATIONS, SHELL MOUNDS OR SAND MOUNDS. THE TOWN WILL ASSESS THE SIGNIFICANCE OF THE FINDS IN A TIMELY MANNER.

IF ANY HUMAN SKELETAL REMAINS (UNMARKED BURIALS) ARE FOUND, ALL WORK IN THE AREA SHALL STOP AND THE NEAREST (LOCAL) LAW ENFORCEMENT OFFICE SHALL BE IMMEDIATELY NOTIFIED. ACCORDING TO STATE LAW (F.S. 872.05), IT IS UNLAWFUL TO DAMAGE OR DESTROY A HUMAN BURIAL SITE.

ALL EXCAVATION(S) SHALL BE CONSIDERED AS "UNCLASSIFIED".

## SURVEYS and MONUMENTATION

THE BASE DRAWING INFORMATION REPRESENTS THE INFORMATION CONTAINED IN THE SPECIFIC PURPOSE SURVEY (RIGHT OF WAY and MUNICIPAL IMPROVEMENTS) PROVIDED BY METRON SURVEYING, INC. DATED 5/29/2009. ALL ELEVATIONS ARE BASED UPON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAV88) AS ESTABLISHED BY METRON SURVEYING, INC.

THESE DRAWINGS ARE NOT INTENDED TO REPRESENT A BOUNDARY SURVEY AS DEFINED BY FLORIDA STATUTE.

ALL EXISTING MONUMENTATION SHALL BE PROTECTED. IF ANY MONUMENTATION IS DISTURBED OR DESTROYED, IT SHALL BE REPLACED AFTER CONSTRUCTION IS COMPLETE, TO THE REQUIRED ACCURACY, BY A FLORIDA LICNESED PROFESSIONAL SURVEYOR AND MAPPER (PSM) AT THE CONTRACTOR'S EXPENSE.

A PERMANENT BENCHMARK(S) SHALL BE ESTABLISHED WITHIN 100' OF EACH STORM WATER STRUCTURE OR GROUP OF STORM WATER STRUCTURES BY A FLORIDA STATE LICENSED PROFESSIONAL SURVEYOR & MAPPER (PSM).

THE CONTRACTOR SHALL MAINTAIN A CURRENT AND UPDATED SET OF AS–BUILT DRAWINGS AT ALL TIMES AND PROVIDE ONE (1) COPY TO THE PROJECT ENGINEER UPON COMPLETION OF CONSTRUCTION.

THE CONVERSION FACTOR FROM NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988 TO THE NATIONAL GEODETIC VERTICAL DATUM (NGVD) OF 1929 IS AS FOLLOWS:

(NAVD88 + 1.18 ft. = NGVD29)

## PROPRIETARY PRODUCT(S) SUBSTITUTION APPROVAL

THE PRODUCT AND/OR MATERIAL SELECTIONS FOR THE PROPRIETARY COMPONENTS SHOWN ON THESE PLANS WERE DETERMINED BASED ON THEIR APPLICATION(S) TO THIS PROJECT. THE PRODUCT AND/OR MATERIAL SPECIFIED SHALL BE CONSIDERED THE MINIMUM PERFORMANCE ACCEPTABLE IN ACCORDANCE WITH THE ASSOCIATED PRODUCT(S). THE CONTRACTOR HAS THE OPPORTUNITY TO PROPOSE ALTERNATIVE PRODUCTS AND/OR MATERIALS FOR THE PURPOSES OF PROVIDING AN "OR EQUAL" SUBSTITUTION. HOWEVER, THE PROPOSED ALTERNATIVE PRODUCT(S) AND/OR MATERIALS SHALL PROVIDE AT LEAST THE SAME QUALITIES AS THOSE SPECIFIED FOR THE APPLICATION. ALL PRODUCT(S) AND/OR MATERIAL SHALL EQUALLY CONFORM TO THE LATEST ASTM SPECIFICATIONS OR OTHER LISTED COMMERCIAL SPECIFICATIONS (eg: U.L.) COVERING THE CLASS OR KIND OF PRODUCT(S) AND/OR MATERIAL(S) BEING USED. ALL PRODUCT(S) AND/OR MATERIAL(S) SHALL DEMONSTRATE A MINIMUM OF FIVE (5) SOUTHWEST FLORIDA INSTALLATIONS THAT HAVE A MINIMUM CONTINOUS IN–SERVICE PERIOD OF FIVE (5) YEARS.

## PAVING, GRADING and DRAINAGE

ALL CULVERTS AND STORM SEWER PIPE SHALL BE REINFORCED CONCRETE PIPE (RCP) UNLESS OTHERWISE NOTED ON THE PLANS. ALL CONCRETE PIPE SHALL CONFORM TO CLASS III (ASTM C76) FOR ROUND PIPE AND CONFORM TO TABLE I FOR CLASS HE–III (ASTM C507) FOR ELLIPTICAL PIPE. ALL PIPE JOINTS SHALL USE RUBBER GASKETS (ROUND) OR PREFORMED PLASTIC (ELLIPTICAL), BE WRAPED PER FDOT SPECIFICATIONS, AND LIFTING HOLES SHALL NOT BE PERMITTED.

THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR EACH INLET FOR REVIEW AND WRITTEN APPROVAL BY THE PROJECT ENGINEER PRIOR TO FABRICATION. ALL INLETS ARE TO BE PROVIDED WITH PER FDOT STANDARD INDEX (LATEST EDITION).

DURING CONSTRUCTION, GRATE INLET AND JUNCTION BOX OPENINGS SHALL BE APPROPRIATELY PROTECTED TO PREVENT DEBRIS AND SILTATION FROM ENTERING INTO THE STORM SYSTEM.

VERTICAL AND STRAIGHT "SAW CUTS" THROUGH EXISTING PAVEMENT AND BASE MATERIAL ARE REQUIRED WHERE NEW PAVEMENT MATCHES TO EXISTING PAVEMENT.

ALL BACKFILLING SHALL BE PLACED IN MAXIMUM EIGHT INCH (8") LOOSE LIFTS AND COMPACTED TO A MINIMUM OF 95% MAXIMUM DENSITY PER ASTM 1557, EXCEPT AS OTHERWISE PROVIDED OR INDICATED.

ALL SURFACES SHALL VARY EVENLY AND SMOOTHLY BETWEEN THE INDICATED GRADES.

A 2–1/2" ALLOWANCE (OVER EXCAVATION) SHALL BE PROVIDED FOR ALL AREAS TO BE SODDED FROM THAT SHOWN AS "FINISHED GRADE" TO THAT OF "TOP OF SOD".

THE CONTRACTOR SHALL PROVIDE COMPLIANT IN–PLACE DENSITY TESTS (1 PER 500 ± SQUARE FEET) TO THE PROJECT ENGINEER FOR THE LIMEROCK BASE AREAS PRIOR TO PLACEMENT OF THE ASPHALT PAVING.

## EXISTING UTILITIES

THE WATERMAIN LOCATIONS ARE SHOWN AS WAS GRAPHICALLY DISCERNIBLE FROM THE RECORD DRAWINGS PROVIDED BY THE TOWN OF FORT MYERS BEACH. THE SIZE WAS ASSUMED AS 6" DIAMETER WITH AN AVERAGE DEPTH OF 24"/30" (2.25') TO TOP OF PIPE.

THE ELEVATIONS OF SEWER MAINS AND MANHOLES ARE SHOWN AS WAS GRAPHICALLY DISCERNIBLE FROM THE RECORD DRAWINGS PROVIDED BY THE TOWN OF FORT MYERS BEACH. THESE ELEVATIONS WERE CONVERTED FROM NGVD29 TO NAVD88 BY SUBTRACTING 1.18' FROM THAT INDICATED.

ALL ADJUSTMENTS OR RELOCATIONS OF ANY UTILITY SHALL BE IN ACCORDANCE WITH THE OWNER'S SPECIFICATIONS AND DETAILS.

THE LOCATIONS OF ALL UTILITIES AS INDICATED ARE APPROXIMATE AND MAY VARY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION AND PROTECTION OF ALL EXISTING UTILITIES PRIOR TO AND DURING CONSTRUCTION.

PROVISIONS FOR PROTECTION AND CONTINUOUS OPERATION OF THE WATER AND SEWER SERVICES SHALL BE THE CONTRACTOR'S RESPONSIBILITY.

THE CONTRACTOR SHALL BE LIABLE FOR ALL DAMAGES INCURRED TO ANY UTILITIES DURING CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE UTILITY OWNER(S) AT LEAST 72 HOURS PRIOR TO BEGINNING WORK AFFECTING ANY UTILITY.

## STORM WATER POLLUTION PREVENTION PLAN (SWP3)

THE CONTRACTOR SHALL PROVIDE THE TOWN AND PROJECT ENGINEER WITH A COPY OF THE NOTICE OF INTENT (NOI) AND THE STORM WATER POLLUTION PREVENTION PLAN (SWP3) IN COMPLIANCE WITH THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION GUIDELINES AND CRITERIA PRIOR TO THE START OF CONSTRUCTION.

ALL POLLUTION PREVENTION CONTROL MEASURES SHALL BE INSPECTED WEEKLY AND AFTER ANY STORM EVENT(S) GREATER THAN 1/2 INCH IN 24 HOURS.

ALL POLLUTION PREVENTION CONTROL MEASURES SHALL BE MAINTAINED IN PROPER WORKING ORDER. ALL REPAIRS SHALL BE INITIATED IMMEDIATELY, BUT NOT LONGER THAN TWENTY–FOUR (24) HOURS AFTER DISCOVERY.

## TRAFFIC CONTROL PLAN

CONTRACTOR SHALL SUBMIT A CONSTRUCTION TRAFFIC CONTROL PLAN TO THE TOWN AND PROJECT ENGINEER FOR REVIEW AND APPROVAL PRIOR TO MOBILIZATION. ALLOW 7 TO 10 BUSINESS DAYS FOR THE REVIEW. THE CONTRACTOR SHALL PROVIDE THE PROJECT ENGINEER WITH A COPY OF THE APPROVED CONSTRUCTION TRAFFIC CONTROL PLAN.

THE MAINTENANCE OF TRAFFIC (MOT) SHALL FOLLOW THE MUTCD AND FDOT STANDARD INDEX 600 (LATEST EDITION) PROCEDURES, INCLUDING ANY FLAGGING.

## WASTE MANAGEMENT and DISPOSAL

THIS PROJECT SHALL BE SERVED BY PORTABLE SANITARY FACILITIES DURING CONSTRUCTION.

ALL WASTE MATERIAL SHALL BE COLLECTED AND STORED IN A LIDDED METAL CONTAINER AND IN ACCORDANCE WITH THE TOWN'S SOLID WASTE REGULATIONS. THE DUMPSTER SHALL BE EMPTIED A MINIMUM OF ONCE A WEEK OR MORE OFTEN, IF NECESSARY.

ALL HAZARDOUS OR TOXIC MATERIAL SHALL BE PROPERLY CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE APPROPRIATE STATE AND/OR FEDERAL REGULATIONS.

ANY FUEL OR OTHER PETROLEUM PRODUCTS RELEASED SHALL BE ADDRESSED IMMEDIATELY BY THE CONTRACTOR IN ACCORDANCE WITH CHAPTER 62–770 (FAC).

## CONSTRUCTION DOCUMENTATION

THE CONTRACTOR SHALL MAINTAIN, ON THE WORK SITE, A CURRENT COPY OF ANY PERMITS NECESSARY FOR CONSTRUCTION AND AN UPDATED SET OF "AS–BUILT" DRAWINGS AT ALL TIMES. THE CONTRACTOR SHALL ACCURATELY INDICATE THE LOCATIONS AND DEPTHS OF ALL CONSTRUCTED IMPROVEMENTS AND PROVIDE ONE (1) COPY TO THE PROJECT ENGINEER UPON THE COMPLETION OF CONSTRUCTION.

THE CONTRACTOR SHALL OBTAIN PRE–CONSTRUCTION PHOTOGRAPHS AND VIDEO OF THE PROJECT AREA CLEARLY DEPICTING THE CONDITION OF THE CONSTRUCTION AREA(S) AND ADJACENT PROPERTIES. THE VIDEO SHALL DIRECT SPECIFIC ATTENTION TO ITEMS SUCH AS FENCES, LANDSCAPING, DECORATIVE AMENITIES, PAVEMENT CONDITIONS, AND EXISTING UTILITIES. A COPY OF THE PHOTOGRAPHS SHALL BE PROVIDED TO THE TOWN ON A "CD" IN "JPG" FORMAT AND A COPY OF THE VIDEO SHALL BE PROVIDED TO THE TOWN ON A "DVD" IN "MPG" FORMAT. SUBSEQUENT TO THE COMPLETION OF RESTORATION ACTIVITIES, THE CONTRACTOR SHALL OBTAIN POST–CONSTRUCTION PHOTOGRAPHS AND VIDEO TO DOCUMENT THE SATISFACTORY RESTORATION OF THE CONSTRUCTION AREA(S) IN THE SAME FASHION AS ABOVE AND PROVIDED TO THE TOWN.

**THE STORMWATER MANAGEMENT SYSTEM(S) INDICATED WITHIN THIS PLAN SET DATED AS APRIL 2010 ARE APPROVED FOR CONSTRUCTION IN CONJUNCTION WITH THE SFWMD PERMIT (APPLICATION NO. 091019-6). ATTENTION IS NOTED THAT OTHER ITEMS CURRENTLY SHOWN THAT ARE EITHER AN ADJUNCT THERETO OR NOT RELATED TO THE STORMWATER MANAGEMENT SYSTEM MAY BE SUBSEQUENTLY REVISED.**

REVISIONS

| NO. | DESCRIPTION | DATE |
|---|---|---|

BRADLEY S. VANCE
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Environmental Consulting & Technology, Inc.
4100 Center Pointe Drive, Suite 112
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(239) 277-0003
CA#5520

CLIENT:
TOWN OF FORT MYERS BEACH
2523 ESTERO BLVD.
FORT MYERS BEACH, FL 33931
(239) 765-0202

PROJECT:
BASIN BASED NEIGHBORHOOD FLOOD MITIGATION AND STORMWATER QUALITY IMPROVEMENT PROJECT
FEMA HMGP 1609-48-R
TOWN OF FORT MYERS BEACH

SHEET TITLE:
ABBREVIATIONS, LEGENDS AND STANDARD NOTES

DATE: APRIL 2010
PROJECT NO: 08–1063
FILE NO: 19–46–24
SCALE: NONE

SHEET NUMBER
C-02

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Exhibit 2.0
Application 091019-6
2 of 15

MATANZAS PASS

CAR_OSG
4.47 AC.

MIR
7.25 AC.

KEYEST
3.97 AC.

CAR_S
1.13 AC.

ALVA
1.53 AC.

AVE. E
0.85 AC.

MRMR_G
2.50 AC.

PALM
3.08 AC.

SRFSNG
2.38 AC.

NEPTUNE
2.11 AC.

COTTAGE
4.63 AC.

EST2500
4.14 AC.

OBV
9.32 AC.

VRG_N
0.92 AC.

PRL_N
4.23 AC.

PRL_S
3.72 AC.

DLM_N
4.27 AC.

DLM_S
4.83 AC.

DMPRPTY
0.88 AC.

FWR_N
2.66 AC.

FM_DITCH
2.23 AC.

SEAGRAPE
1.16 AC.

MGO_N
1.13 AC.

MGO_S
4.88 AC.

CHP_S
1.91 AC.

CHPSEA
3.13 AC.

TRP_N
2.09 AC.

TRP_S
4.85 AC.

OSTEGO DRIVE
CAROLINA DRIVE
AVOS PASS
MIRAMAR STREET
OHIO AVENUE
ESTERO BLVD.
BAYVIEW DRIVE
PALM AVENUE
VIRGINIA AVENUE
PEARL STREET
DELMAR AVENUE
FAIRWEATHER LANE
MANGO STREET
CHAPEL STREET
TROPICAL SHORES WAY
COTTAGE AVENUE

GULF OF MEXICO

COASTAL CONSTRUCTION CONTROL LINE (APPROX. LOCATION)

DRAINAGE AREAS NOT PART OF THIS APPLICATION

GRAPHIC SCALE
0 75 150
SCALE IN FEET

THE STORMWATER MANAGEMENT SYSTEM(S) INDICATED WITHIN THIS PLAN SET DATED AS APRIL 2010 ARE APPROVED FOR CONSTRUCTION IN CONJUNCTION WITH THE SFWMD PERMIT (APPLICATION NO. 091019-6). ATTENTION IS NOTED THAT OTHER ITEMS CURRENTLY SHOWN THAT ARE EITHER AN ADJUNCT THERETO OR NOT RELATED TO THE STORMWATER MANAGEMENT SYSTEM MAY BE SUBSEQUENTLY REVISED.

REVISIONS

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PROJECT:
BASIN BASED NEIGHBORHOOD FLOOD MITIGATION AND STORMWATER QUALITY IMPROVEMENT PROJECT
FEMA HMGP 1609-48-R
TOWN OF FORT MYERS BEACH

SHEET TITLE:
DRAINAGE BASIN MAP (EXISTING CONDITIONS)

DATE: APRIL 2010
PROJECT NO: 08-1063
FILE NO: 19-46-24
SCALE: 1" = 150'

SHEET NUMBER
C-03

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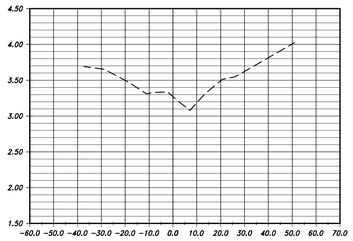
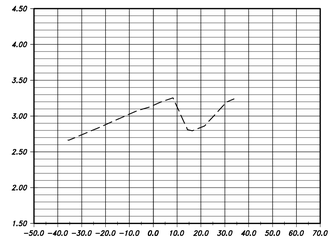
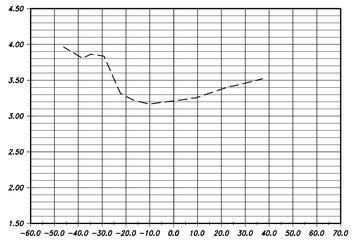
Exhibit 2.0
Application 091019-6
3 of 15




BAYVIEW DRIVE 1+00




BAYVIEW DRIVE 2+00




BAYVIEW DRIVE 3+00

## SECTIONS

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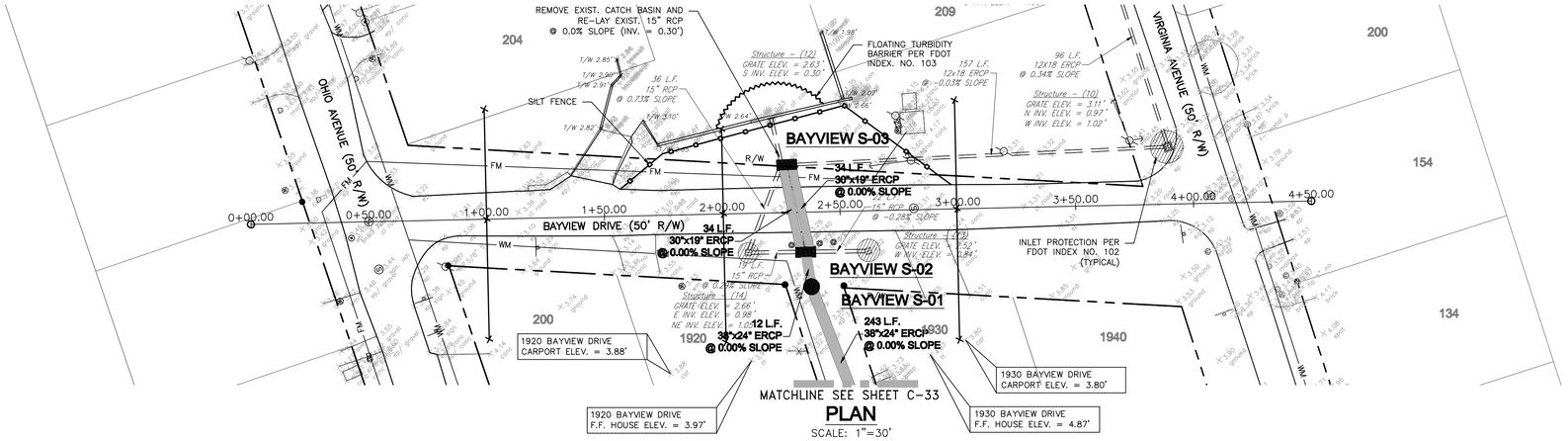
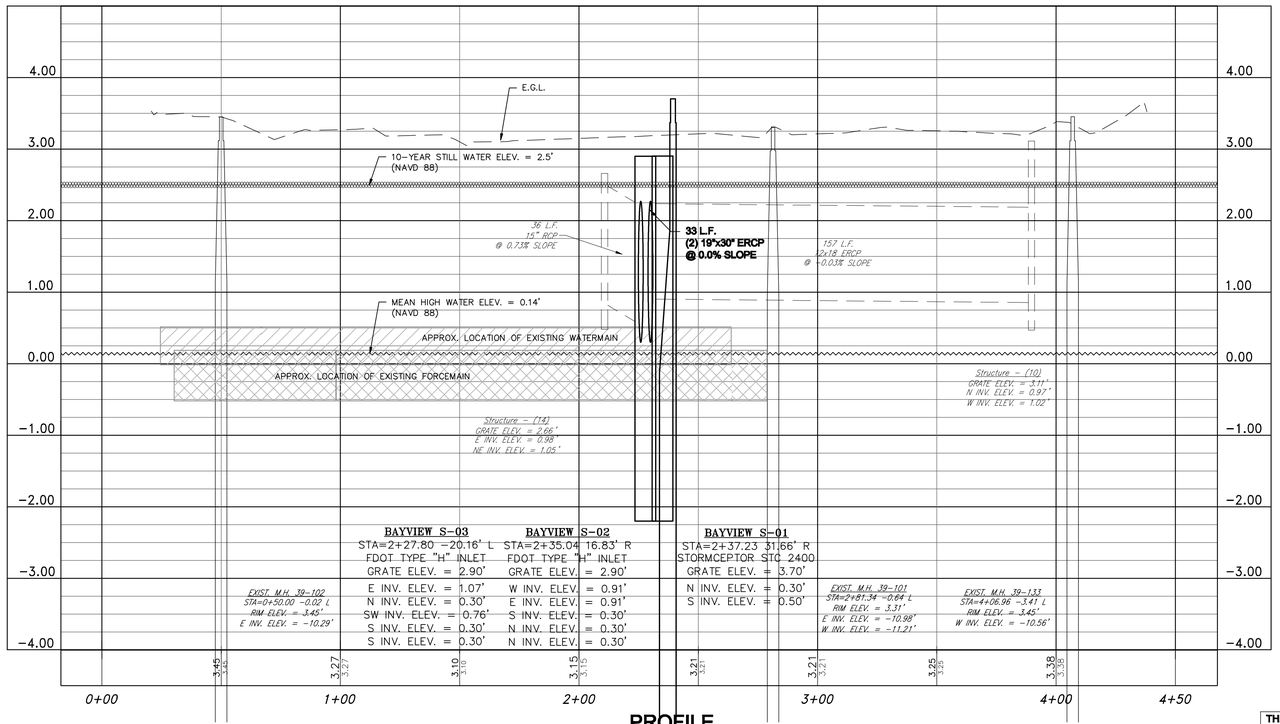
1"=1' VERT.




## PLAN

SCALE: 1"=30'




## PROFILE

SCALE: 1"=30' HORIZ.
1"=1' VERT.

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GRAPHIC SCALE
0 15 30
SCALE IN FEET

REVISIONS

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BASIN BASED NEIGHBORHOOD FLOOD MITIGATION AND STORMWATER QUALITY IMPROVEMENT PROJECT
FEMA HMGP 1609-48-R
TOWN OF FORT MYERS BEACH

SHEET TITLE:
PLAN, PROFILE AND CROSS SECTIONS BAYVIEW DRIVE

| | |
|---|---|
| DATE: | APRIL 2010 |
| PROJECT NO: | 08-1063 |
| FILE NO: | 19-46-24 |
| SCALE: | AS SHOWN |

SHEET NUMBER
C-12

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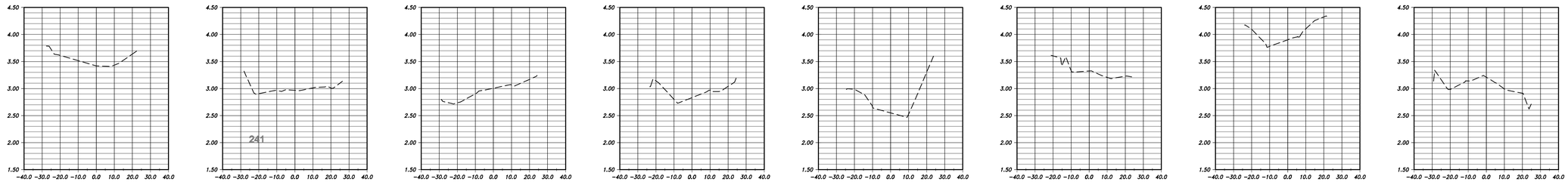
Exhibit 2.0
Application 091019-6
4 of 15




## SECTIONS

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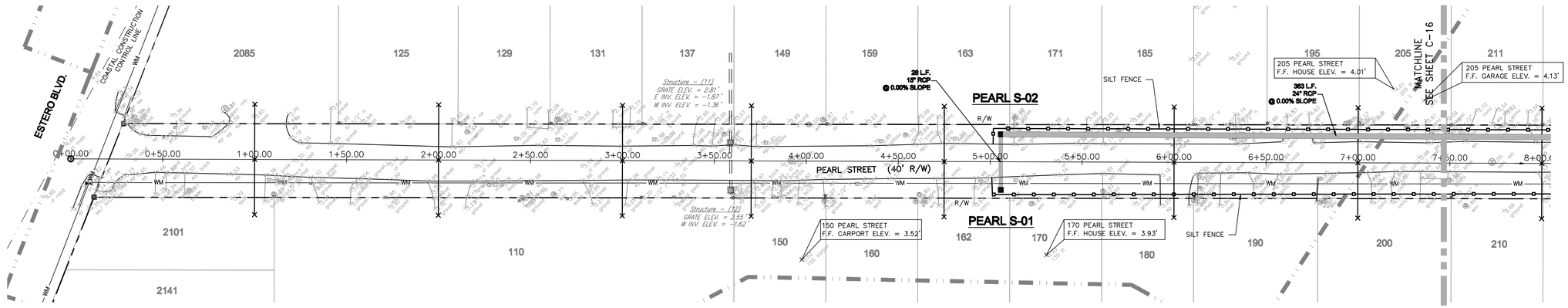
1"=1' VERT.




## PLAN

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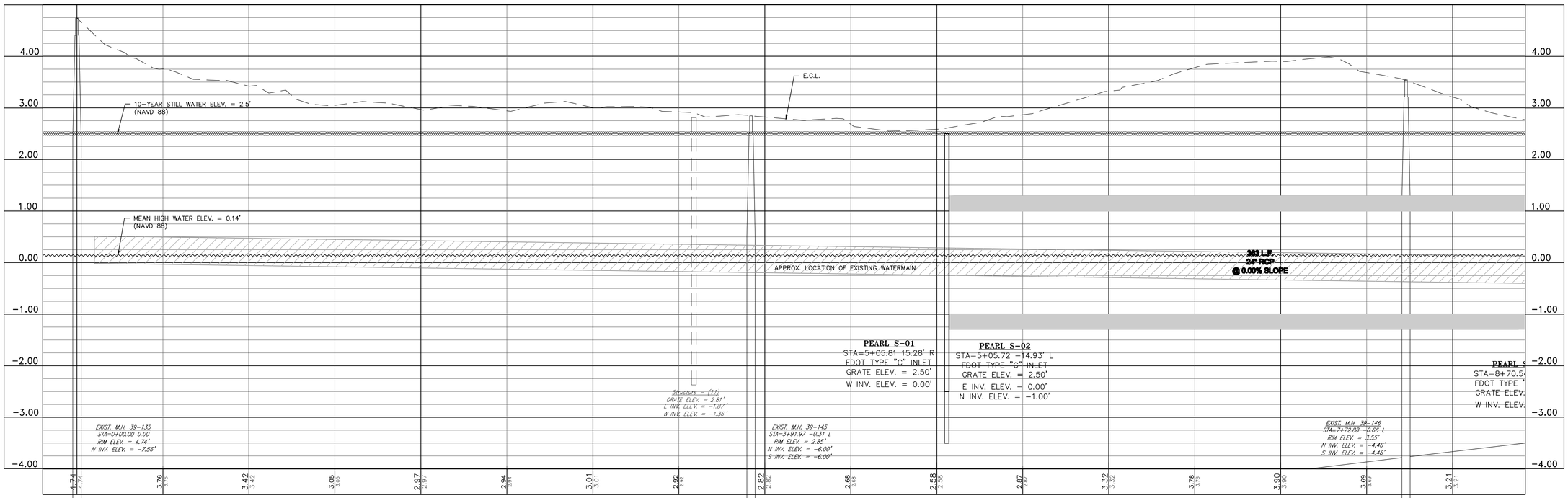


## PROFILE

SCALE: 1"=30' HORIZ.
1"=1' VERT.

THE STORMWATER MANAGEMENT SYSTEM(S) INDICATED WITHIN THIS PLAN SET DATED AS APRIL 2010 ARE APPROVED FOR CONSTRUCTION IN CONJUNCTION WITH THE SFWMD PERMIT (APPLICATION NO. 091019-8). ATTENTION IS NOTED THAT OTHER ITEMS CURRENTLY SHOWN THAT ARE EITHER AN ADJUNCT THERETO OR NOT RELATED TO THE STORMWATER MANAGEMENT SYSTEM MAY BE SUBSEQUENTLY REVISED.

GRAPHIC SCALE
0 15 30
SCALE IN FEET

REVISIONS

| NO. | DESCRIPTION | DATE |
|---|---|---|


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PROJECT:
BASIN BASED NEIGHBORHOOD FLOOD MITIGATION AND STORMWATER QUALITY IMPROVEMENT PROJECT
FEMA HMGP 1609-48-R
TOWN OF FORT MYERS BEACH

SHEET TITLE:
PLAN, PROFILE AND CROSS SECTIONS PEARL STREET

| | |
|---|---|
| DATE: | APRIL 2010 |
| PROJECT NO: | 08-1063 |
| FILE NO: | 19-46-24 |
| SCALE: | AS SHOWN |

SHEET NUMBER
C-15

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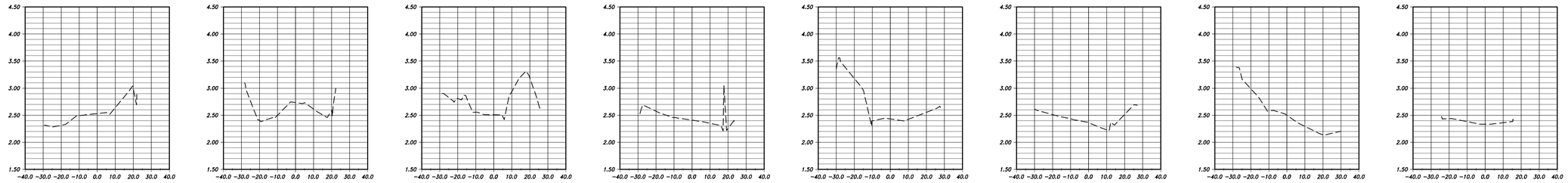
Exhibit 2.0
Application 091019-6
5 of 15




## SECTIONS

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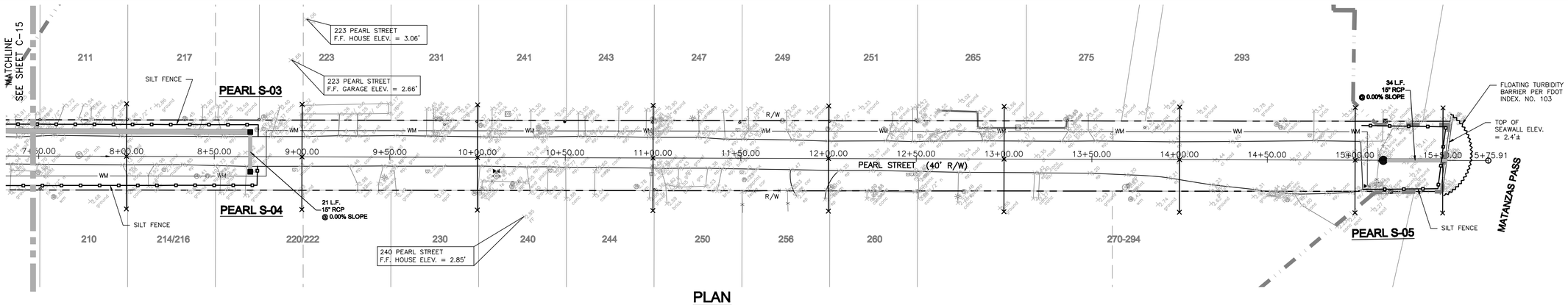
1"=1' VERT.




## PLAN

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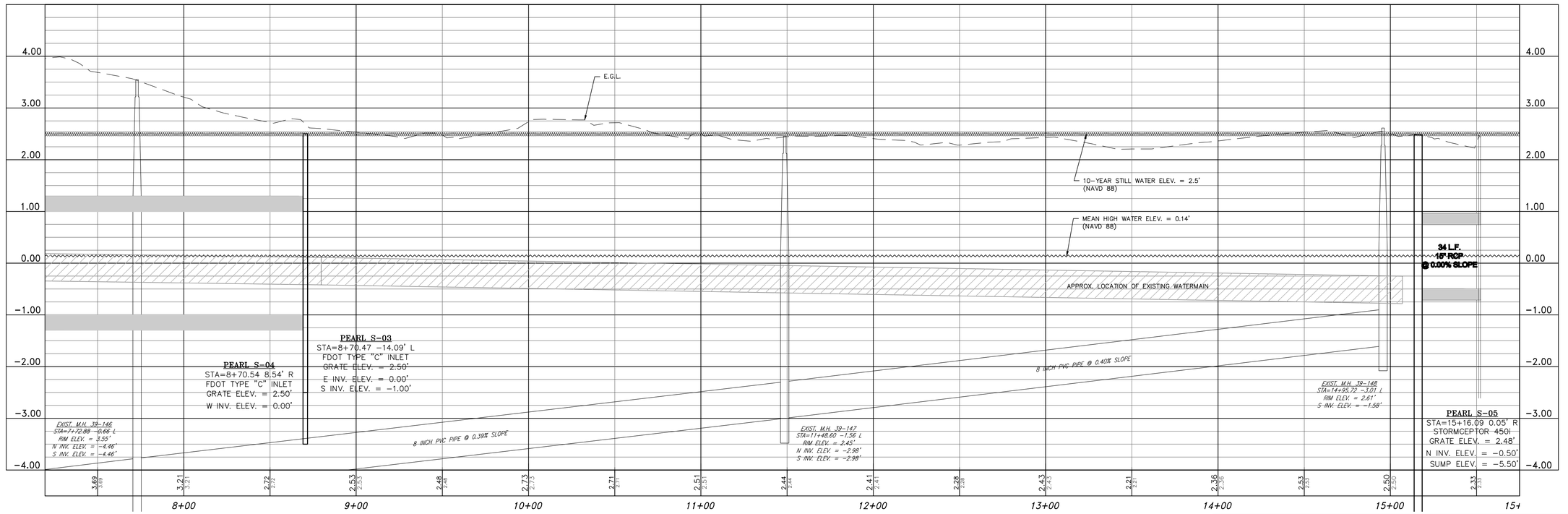


## PROFILE

SCALE: 1"=30' HORIZ.
1"=1' VERT.

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GRAPHIC SCALE
0 15 30
SCALE IN FEET

REVISIONS

| NO. | DESCRIPTION | DATE |
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PROJECT:
BASIN BASED NEIGHBORHOOD FLOOD MITIGATION AND STORMWATER QUALITY IMPROVEMENT PROJECT
FEMA HMGP 1609-48-R
TOWN OF FORT MYERS BEACH

SHEET TITLE:
PLAN, PROFILE AND CROSS SECTIONS PEARL STREET

| | |
|---|---|
| DATE: | APRIL 2010 |
| PROJECT NO: | 08-1063 |
| FILE NO: | 19-46-24 |
| SCALE: | AS SHOWN |

SHEET NUMBER
C-16

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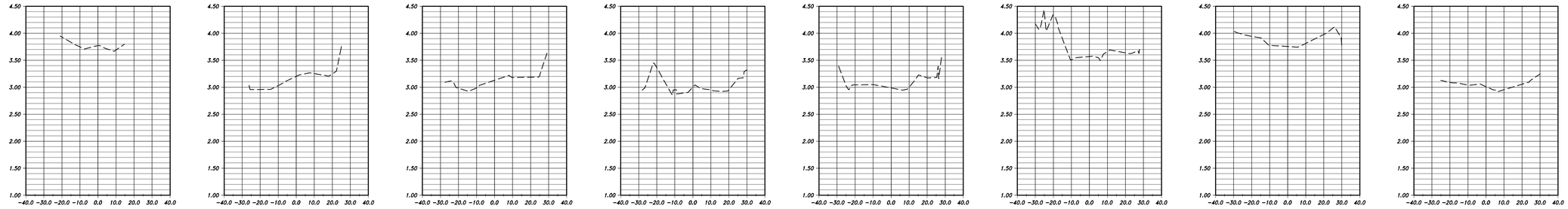
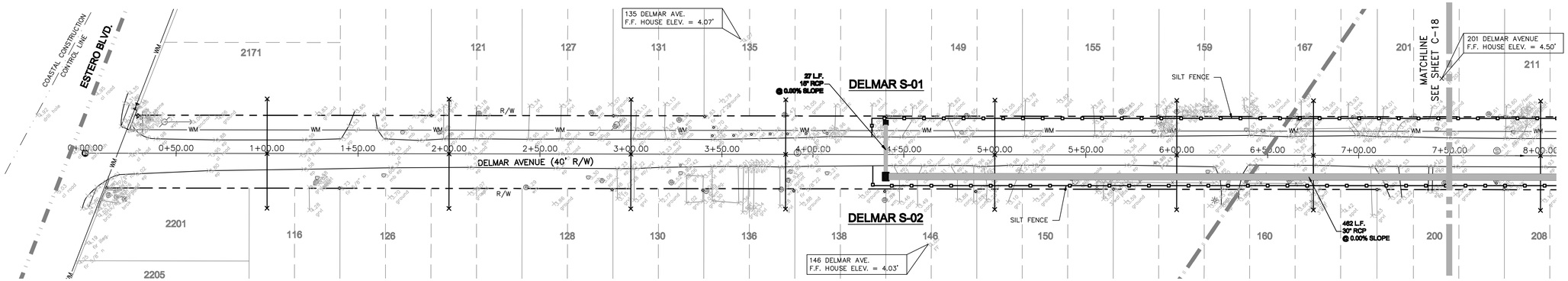
Exhibit 2.0
Application 091019-6
6 of 15



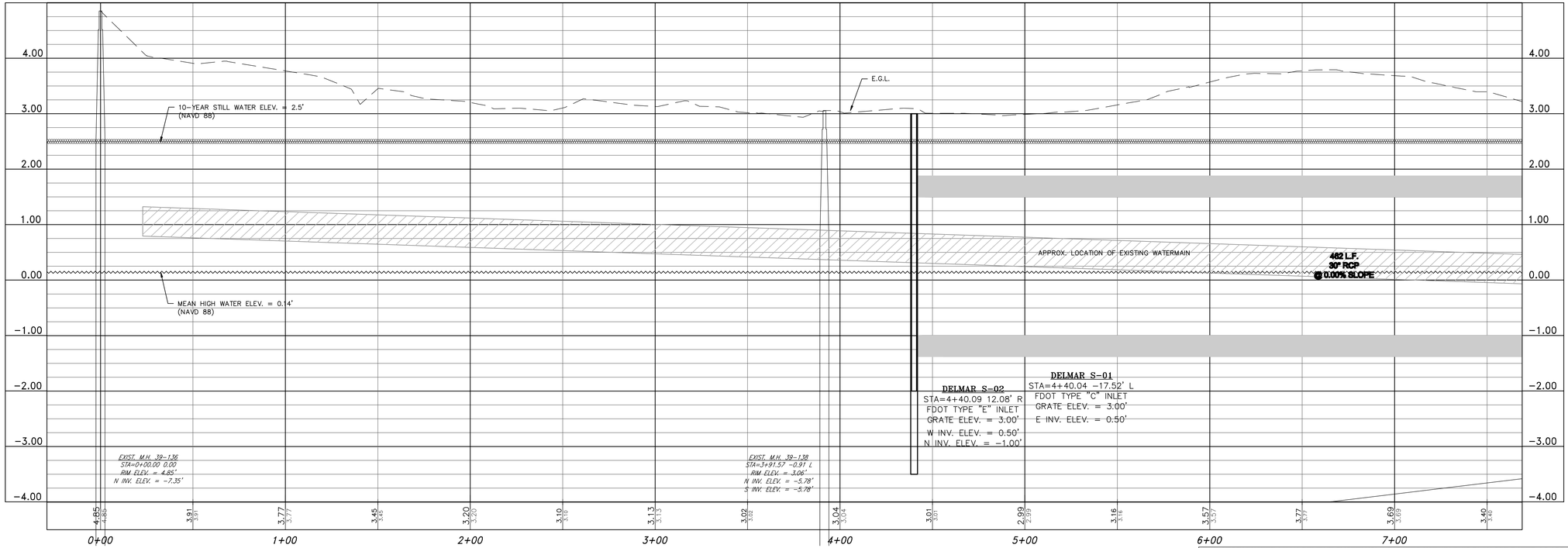

## SECTIONS

SCALE: 1"=30' HORIZ.
1"=1' VERT.




## PLAN

SCALE: 1"=30'




## PROFILE

SCALE: 1"=30' HORIZ.
1"=1' VERT.

THE STORMWATER MANAGEMENT SYSTEM(S) INDICATED WITHIN THIS PLAN SET DATED AS APRIL 2010 ARE APPROVED FOR CONSTRUCTION IN CONJUNCTION WITH THE SFWMD PERMIT (APPLICATION NO. 091019-6). ATTENTION IS NOTED THAT OTHER ITEMS CURRENTLY SHOWN THAT ARE EITHER AN ADJUNCT THERETO OR NOT RELATED TO THE STORMWATER MANAGEMENT SYSTEM MAY BE SUBSEQUENTLY REVISED.

GRAPHIC SCALE
0 15 30
SCALE IN FEET

REVISIONS

| NO. | DESCRIPTION | DATE |
|---|---|---|

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PROJECT:
BASIN BASED NEIGHBORHOOD FLOOD MITIGATION AND STORMWATER QUALITY IMPROVEMENT PROJECT
FEMA HMGP 1609-48-R
TOWN OF FORT MYERS BEACH

SHEET TITLE:
PLAN, PROFILE AND CROSS SECTIONS DELMAR AVENUE

| | |
|---|---|
| DATE: | APRIL 2010 |
| PROJECT NO: | 08-1063 |
| FILE NO: | 19-46-24 |
| SCALE: | AS SHOWN |

SHEET NUMBER
C-17

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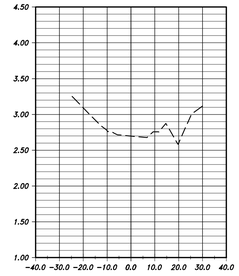
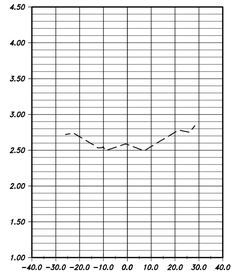
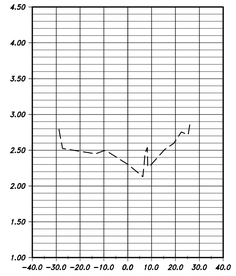
Exhibit 2.0
Application 091019-6
7 of 15



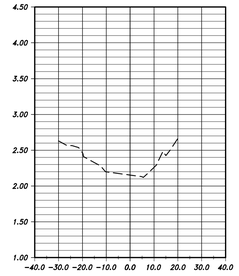

DELMAR AVENUE 9+00



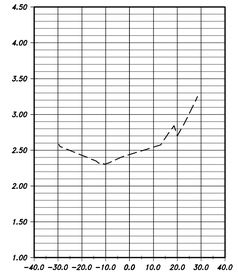

DELMAR AVENUE 10+00



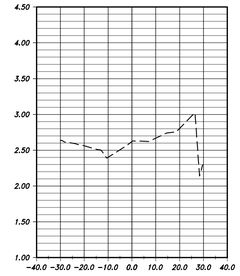

DELMAR AVENUE 11+00



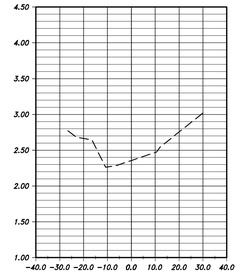

DELMAR AVENUE 12+00



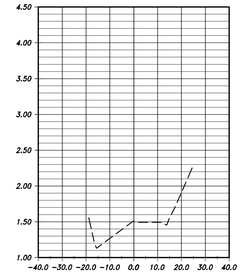

DELMAR AVENUE 13+00




DELMAR AVENUE 14+00



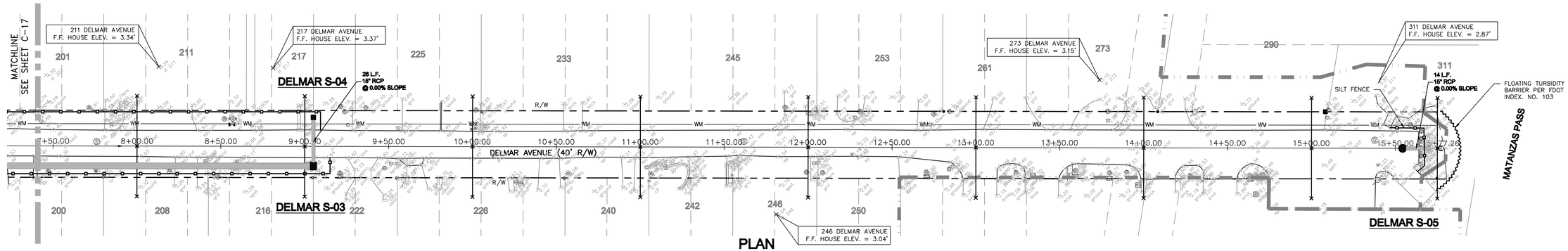

DELMAR AVENUE 15+00




DELMAR AVENUE 15+75

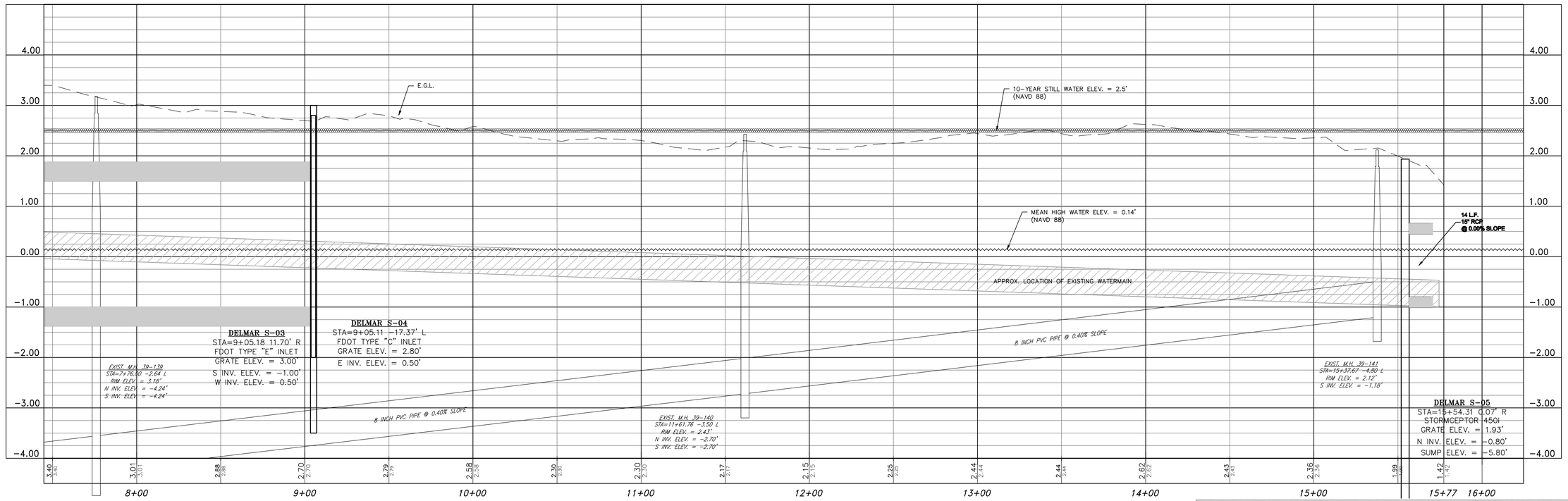
## SECTIONS

SCALE: 1"=30' HORIZ.
1"=1' VERT.




## PLAN

SCALE: 1"=30'




## PROFILE

SCALE: 1"=30' HORIZ.
1"=1' VERT.

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GRAPHIC SCALE
0 15 30
SCALE IN FEET

REVISIONS

| NO. | DESCRIPTION | DATE |
|---|---|---|

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FEMA HMGP 1609-48-R
TOWN OF FORT MYERS BEACH

SHEET TITLE:
PLAN, PROFILE AND CROSS SECTIONS DELMAR AVENUE

| | |
|---|---|
| DATE: | APRIL 2010 |
| PROJECT NO: | 08-1063 |
| FILE NO: | 19-46-24 |
| SCALE: | AS SHOWN |

SHEET NUMBER
C-18

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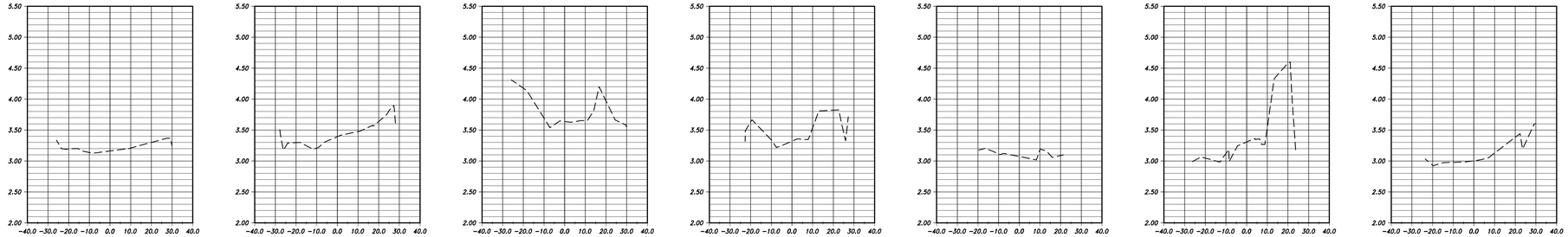
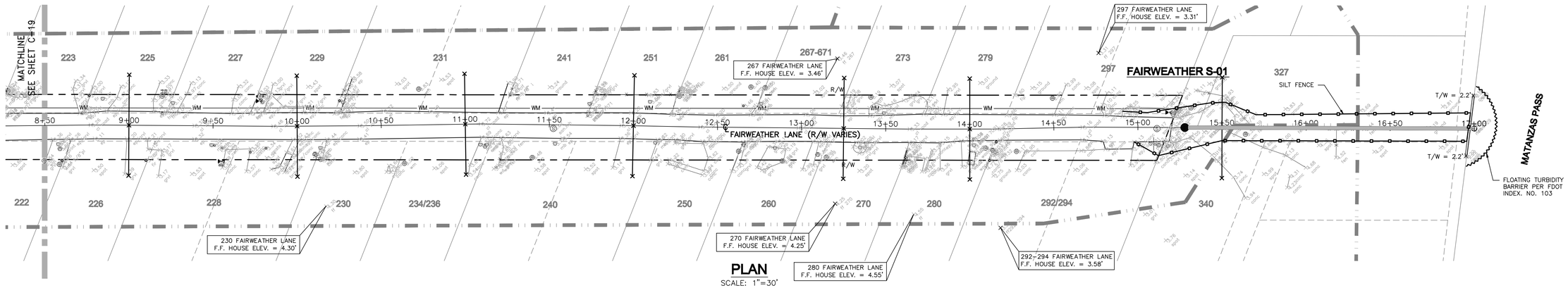
Exhibit 2.0
Application 091019-6
8 of 15



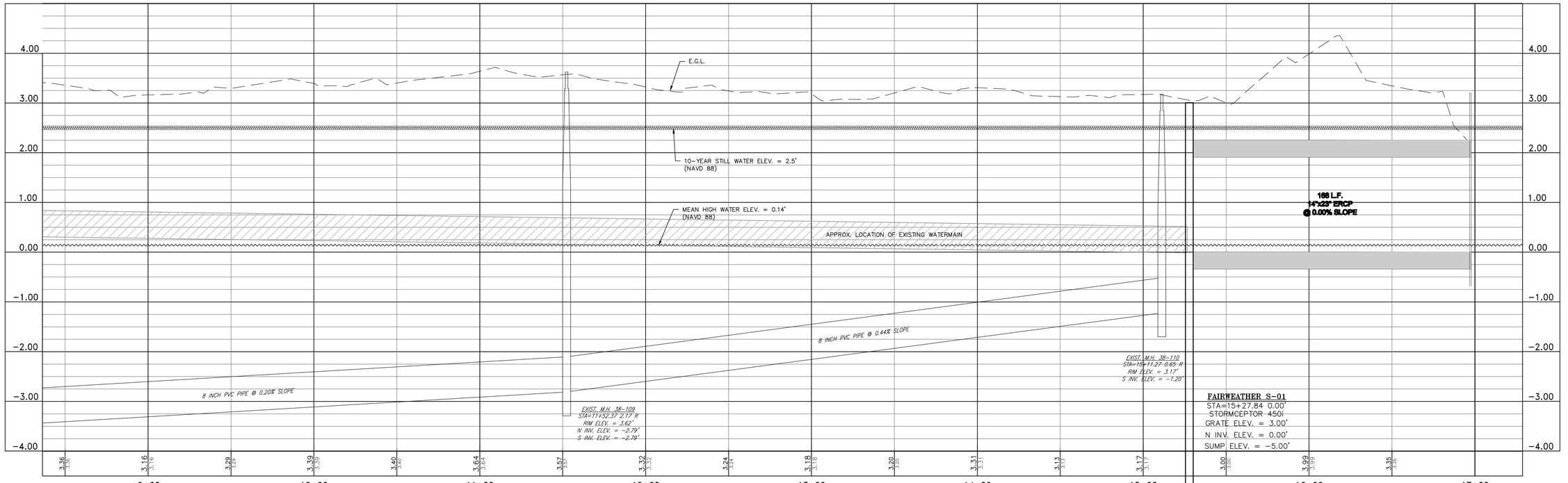

## SECTIONS

SCALE: 1"=30' HORIZ.
1"=1' VERT.




## PLAN

SCALE: 1"=30'

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GRAPHIC SCALE
0 15 30
SCALE IN FEET

REVISIONS

| NO. | DESCRIPTION | DATE |
|---|---|---|

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2523 ESTERO BLVD.
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PROJECT:
BASIN BASED
NEIGHBORHOOD FLOOD MITIGATION AND
STORMWATER QUALITY IMPROVEMENT PROJECT
FEMA HMGP 1609-48-R
TOWN OF FORT MYERS BEACH

SHEET TITLE:
PLAN, PROFILE AND
CROSS SECTIONS
FAIRWEATHER LANE

| | |
|---|---|
| DATE: | APRIL 2010 |
| PROJECT NO: | 08-1063 |
| FILE NO: | 19-46-24 |
| SCALE: | AS SHOWN |

SHEET NUMBER
C-20

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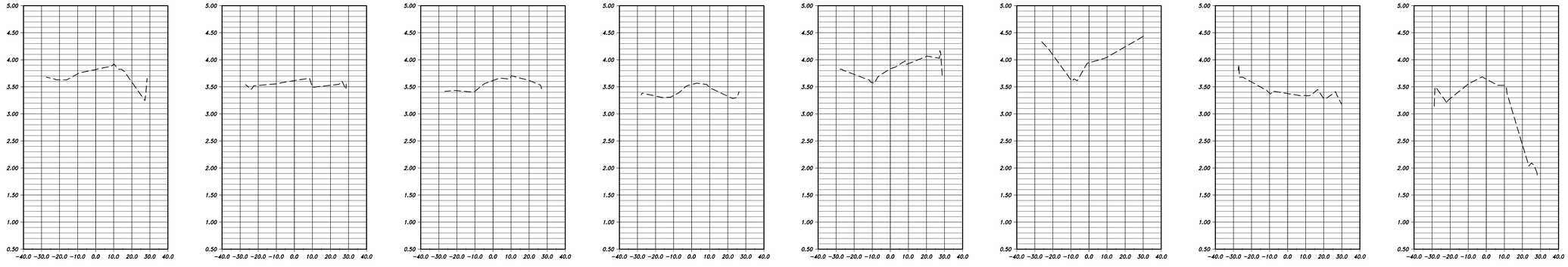


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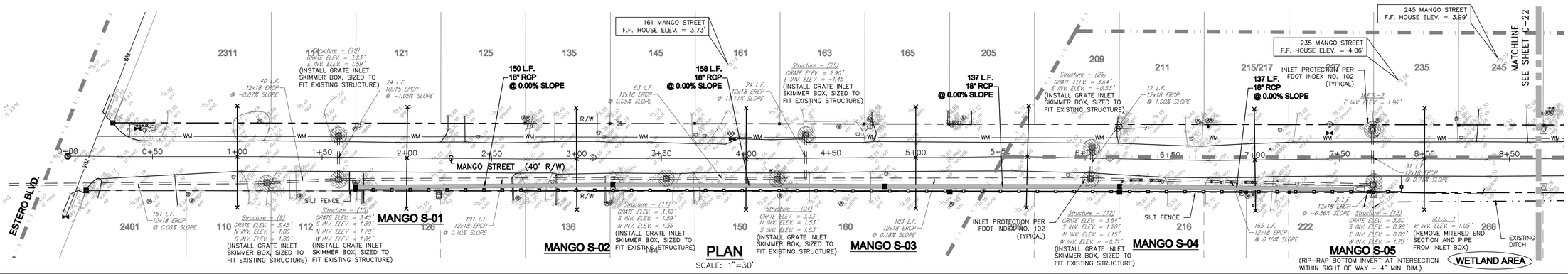
1"=1' VERT.

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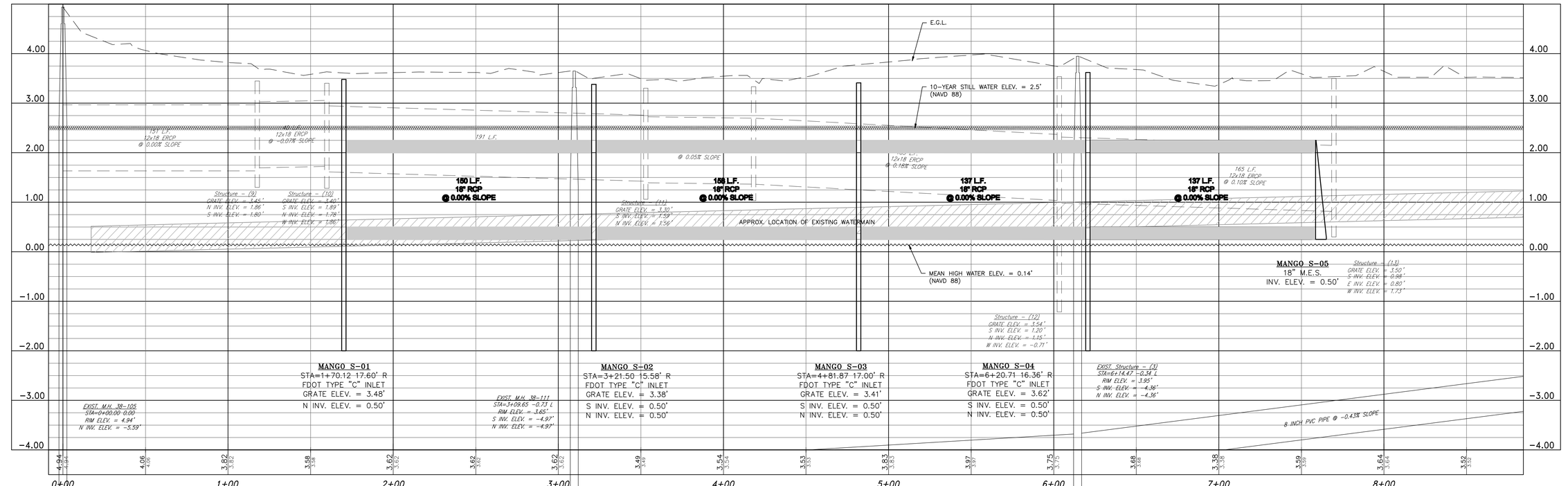
SCALE: 1"=30'

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|---|---|---|

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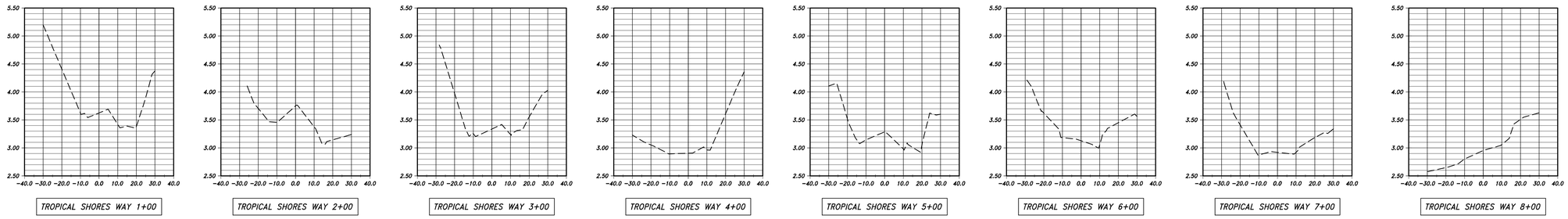
BASIN BASED NEIGHBORHOOD FLOOD MITIGATION AND STORMWATER QUALITY IMPROVEMENT PROJECT
FEMA HMGP 1609-48-R
TOWN OF FORT MYERS BEACH

SHEET TITLE:
PLAN, PROFILE AND CROSS SECTIONS MANGO STREET

| | |
|---|---|
| DATE: | APRIL 2010 |
| PROJECT NO: | 08-1063 |
| FILE NO: | 19-46-24 |
| SCALE: | AS SHOWN |

SHEET NUMBER
C-21

Exhibit 2.0
Application 091019-6
10 of 15




## SECTIONS

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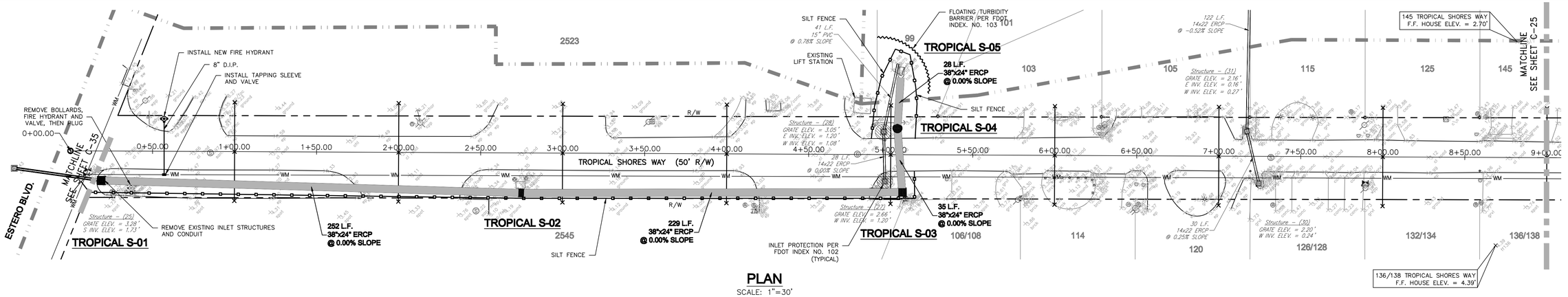
1"=1' VERT.

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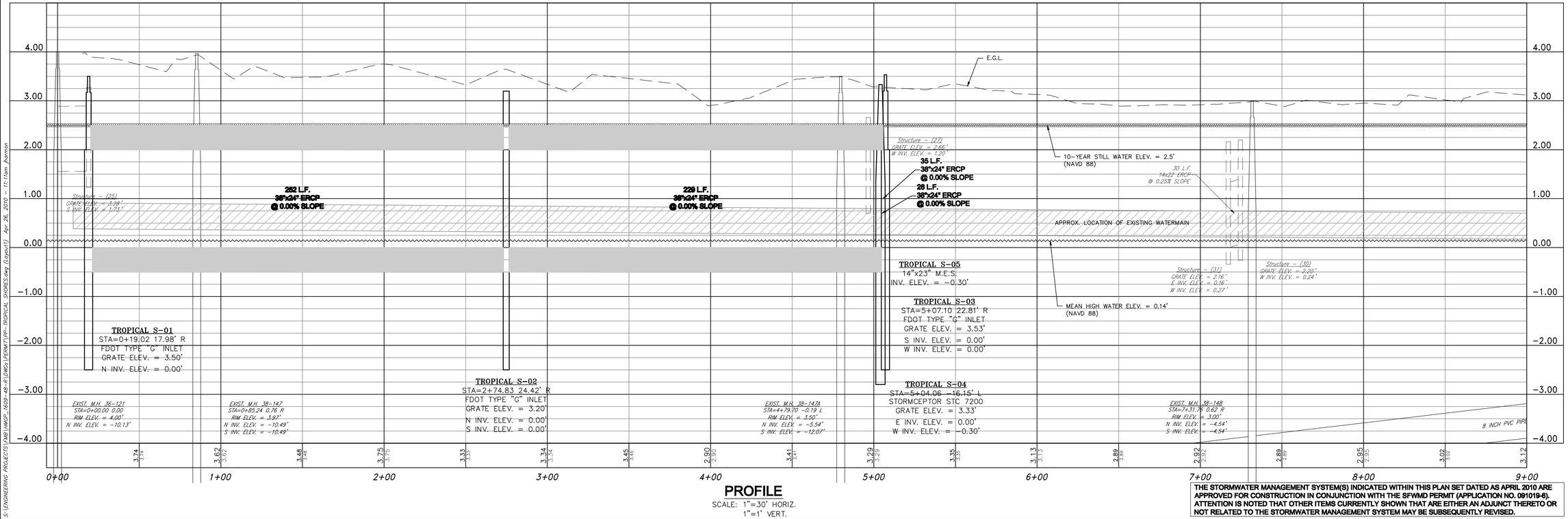


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REVISIONS

| NO. | DESCRIPTION | DATE |
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GRAPHIC SCALE
0 15 30
SCALE IN FEET

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FEMA HMGP 1609-48-R
TOWN OF FORT MYERS BEACH

SHEET TITLE:
PLAN, PROFILE AND CROSS SECTIONS TROPICAL SHORES WAY

| | |
|---|---|
| DATE: | APRIL 2010 |
| PROJECT NO: | 08-1063 |
| FILE NO: | 19-46-24 |
| SCALE: | AS SHOWN |

SHEET NUMBER
C-24

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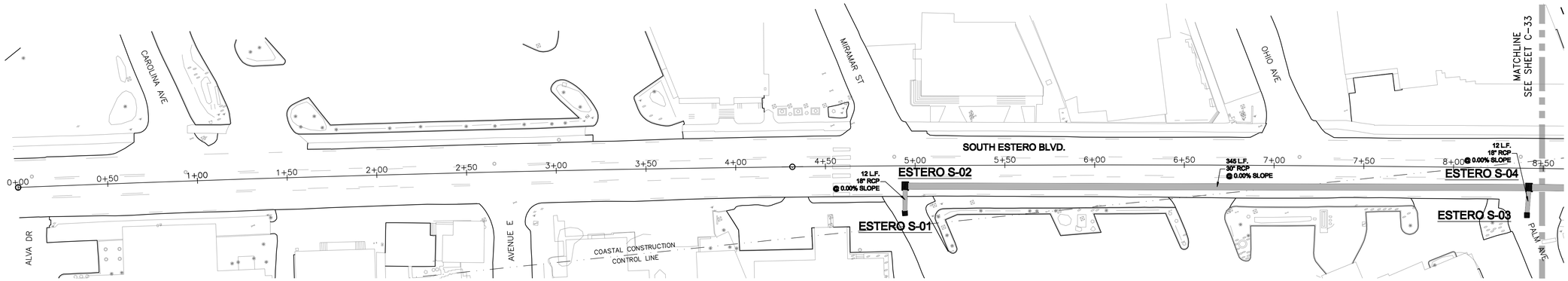
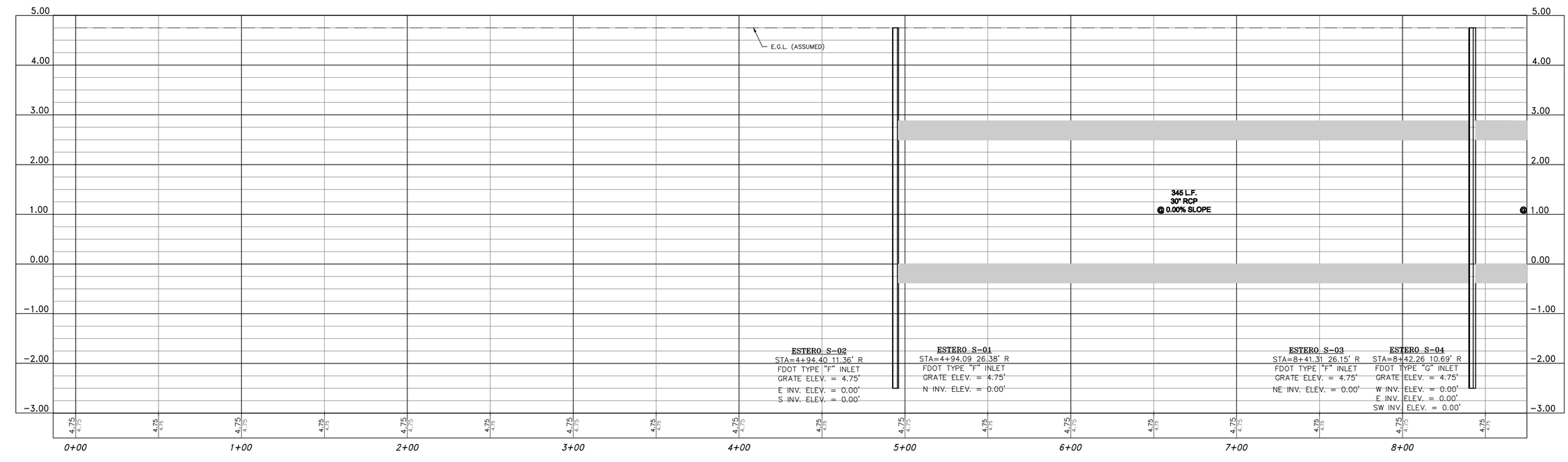
Exhibit 2.0
Application 091019-6
11 of 15

GRAPHIC SCALE
0 15 30
SCALE IN FEET

## SECTIONS
SCALE: 1"=30' HORIZ.
1"=1' VERT.




## PLAN
SCALE: 1"=30'

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NEIGHBORHOOD FLOOD MITIGATION AND STORMWATER QUALITY IMPROVEMENT PROJECT
FEMA HMGP 1609-48-R
TOWN OF FORT MYERS BEACH

SHEET TITLE:
PLAN, PROFILE AND CROSS SECTIONS SOUTH ESTERO BLVD.

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|---|---|
| DATE: | APRIL 2010 |
| PROJECT NO: | 08-1063 |
| FILE NO: | 19-46-24 |
| SCALE: | AS SHOWN |

SHEET NUMBER
C-32

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Exhibit 2.0
Application 091019-6
12 of 15

GRAPHIC SCALE
0 15 30
SCALE IN FEET

## SECTIONS
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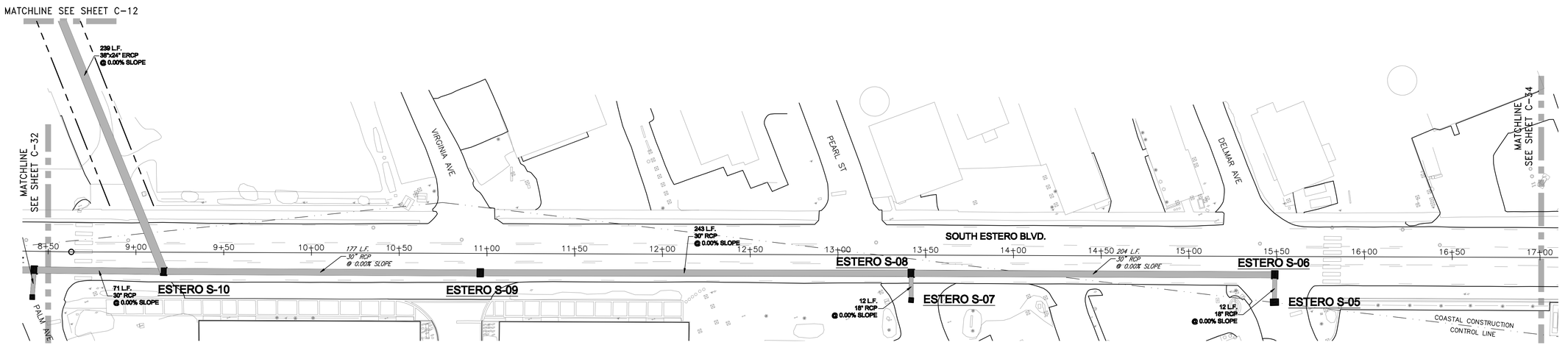
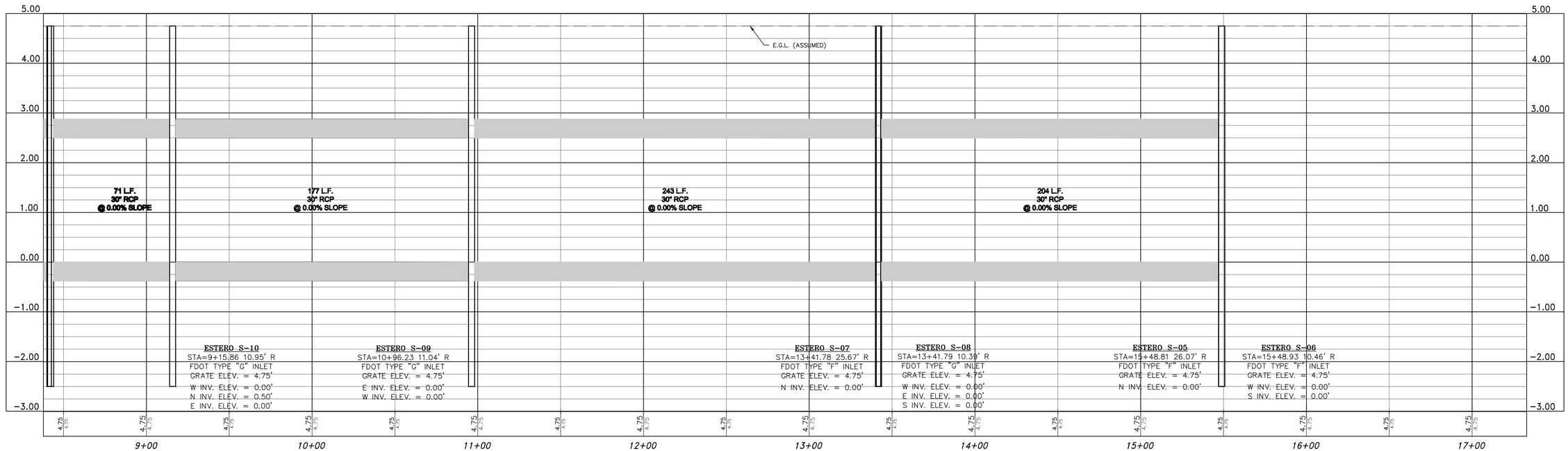
1"=1' VERT.




## PLAN
SCALE: 1"=30'

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FORT MYERS BEACH, FL 33931
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PROJECT:
BASIN BASED NEIGHBORHOOD FLOOD MITIGATION AND STORMWATER QUALITY IMPROVEMENT PROJECT
FEMA HMGP 1609-48-R
TOWN OF FORT MYERS BEACH

SHEET TITLE:
PLAN, PROFILE AND CROSS SECTIONS SOUTH ESTERO BLVD.

| | |
|---|---|
| DATE: | APRIL 2010 |
| PROJECT NO: | 08-1063 |
| FILE NO: | 19-46-24 |
| SCALE: | AS SHOWN |

SHEET NUMBER
C-33

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Exhibit 2.0
Application 091019-6
13 of 15

GRAPHIC SCALE
0 15 30
SCALE IN FEET

## SECTIONS
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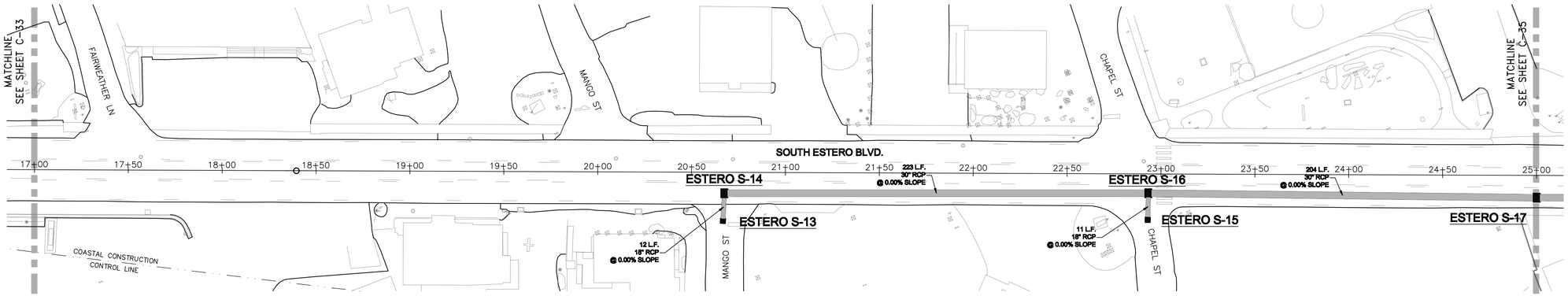
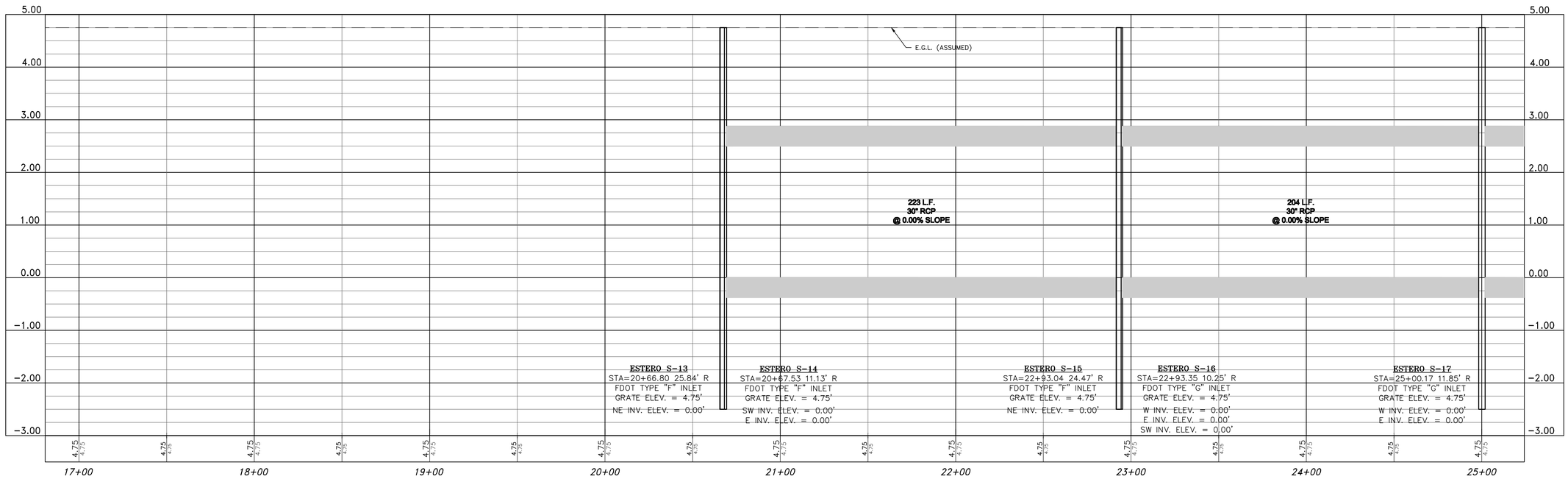
1"=1' VERT.




## PLAN
SCALE: 1"=30'

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FEMA HMGP 1609-48-R
TOWN OF FORT MYERS BEACH

SHEET TITLE:
PLAN, PROFILE AND CROSS SECTIONS SOUTH ESTERO BLVD.

| | |
|---|---|
| DATE: | APRIL 2010 |
| PROJECT NO: | 08-1063 |
| FILE NO: | 19-46-24 |
| SCALE: | AS SHOWN |

SHEET NUMBER
C-34

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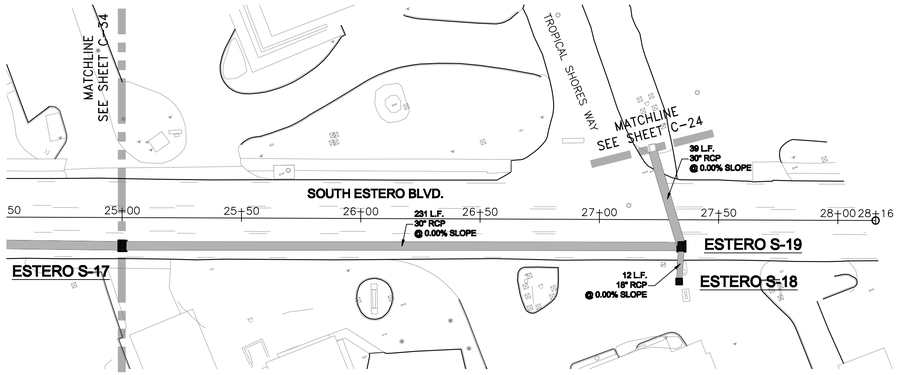
Exhibit 2.0
Application 091019-6
14 of 15

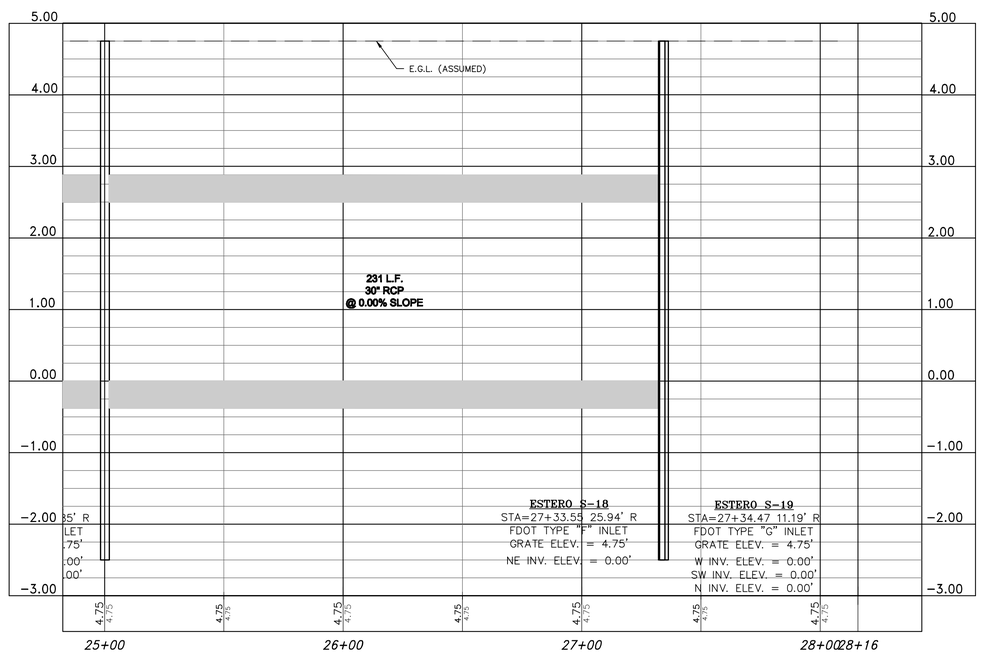
GRAPHIC SCALE
0 15 30
SCALE IN FEET

## SECTIONS

SCALE: 1"=30' HORIZ.
1"=1' VERT.




PLAN
SCALE: 1"=30'

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FEMA HMGP 1609-48-R
TOWN OF FORT MYERS BEACH

SHEET TITLE:
PLAN, PROFILE AND
CROSS SECTIONS
SOUTH ESTERO BLVD.

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| DATE: | APRIL 2010 |
| PROJECT NO: | 08-1063 |
| FILE NO: | 19-46-24 |
| SCALE: | AS SHOWN |

SHEET NUMBER
C-35

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Exhibit 2.0
Application 091019-6
15 of 15

# LAND USE TABLE

*Basin Based Neighborhood Improvements*
*Application No: 091019-6*

| STREET or SYSTEM NAME | BASIN ID | TOTAL BASIN AREA (Acres) | PUBLIC RIGHT OF WAY (Acres) | PRIVATE COMMERCIAL PROPERTY (Acres) | PRIVATE RESIDENTIAL PROPERTY (Acres) |
|---|---|---|---|---|---|
| PEARL STREET | *PRL N* | 4.23 | 0.78 | 0.00 | 3.45 |
| | *PRL S* | 3.72 | 0.77 | 0.52 | 2.42 |
| | | 7.95 | 1.55 | 0.52 | 5.88 |
| DELMAR AVENUE | *DLM N* | 4.27 | 0.85 | 0.00 | 3.42 |
| | *DLM S* | 4.83 | 0.94 | 0.84 | 3.05 |
| | | 9.10 | 1.79 | 0.84 | 6.47 |
| FAIRWEATHER LANE | *FWR N* | 2.66 | 0.83 | 0.00 | 1.84 |
| MANGO STREET | *MGO S* | 4.88 | 0.99 | 0.72 | 3.18 |
| ESTERO-BAYVIEW | | | | | |
| | *AVE E* | 0.85 | 0.24 | 0.41 | 0.20 |
| | *MIRMR G* | 2.50 | 0.27 | 1.81 | 0.42 |
| | *PALM* | 3.08 | 0.61 | 2.48 | 0.00 |
| | *SRFSNG* | 2.38 | 0.40 | 1.98 | 0.00 |
| | | 8.81 | 1.51 | 6.67 | 0.62 |
| ESTERO-TROPICAL | | | | | |
| | *NEPTUNE* | 2.11 | 0.12 | 1.99 | 0.00 |
| | *COTTAGE* | 4.63 | 1.15 | 1.21 | 2.27 |
| | *EST2500* | 4.14 | 0.89 | 3.25 | 0.00 |
| | *TRP S* | 4.85 | 1.54 | 1.71 | 1.59 |
| | | 15.74 | 3.71 | 8.16 | 3.87 |

**TOTAL AREA = 49.14 acres**

Exhibit 2.1
Application 091019-6
1 of 1

**Computed Flowrate (Q):**

Q = (1/2") (1/12) (Basin Area)/(Tc)

**Times of Concentration (Tc):**

Tc (overland) = 20 minutes

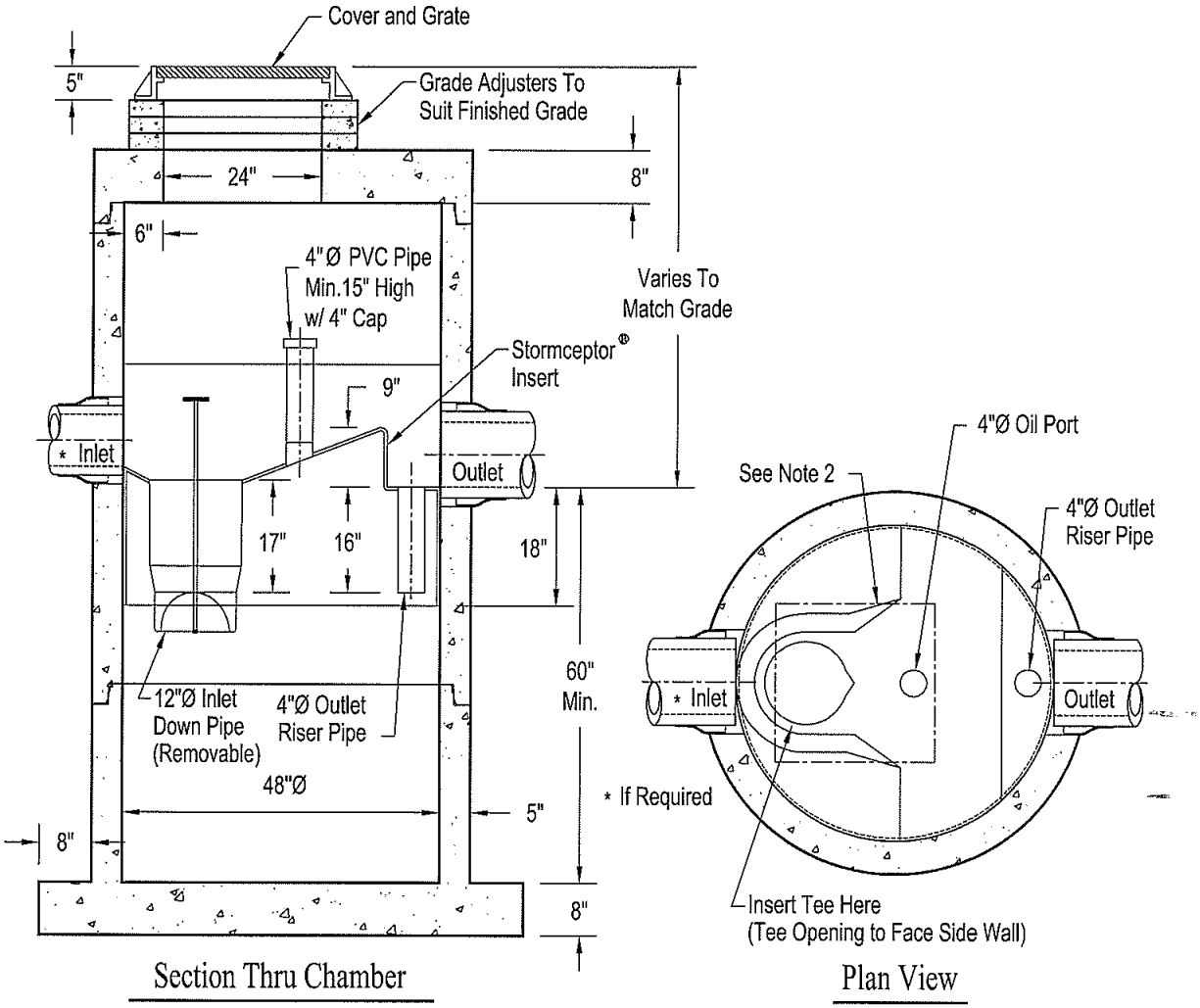
Tc (roadway) = (street length)/(0.25 feet/second)

| Basin Name | Basin Area (in acres) | Street Length (in feet) | Discharge Rate Q (in cfs) |
|---|---|---|---|
| Pearl Street | 7.95 | 1500 | 2.00 |
| Delmar Avenue | 9.10 | 1500 | 2.20 |
| Fairweather Lane | 2.66 | 800 | 1.10 |
| Estero-Bayview | 8.81 | 1300 | 2.50 |
| Estero-Tropical Shores | 15.74 | 1300 | 4.50 |

Rinker MATERIALS™

Concrete Pipe Division

# STC 450i Precast Concrete Stormceptor®
# (450 U.S. Gallon Capacity)




Notes:

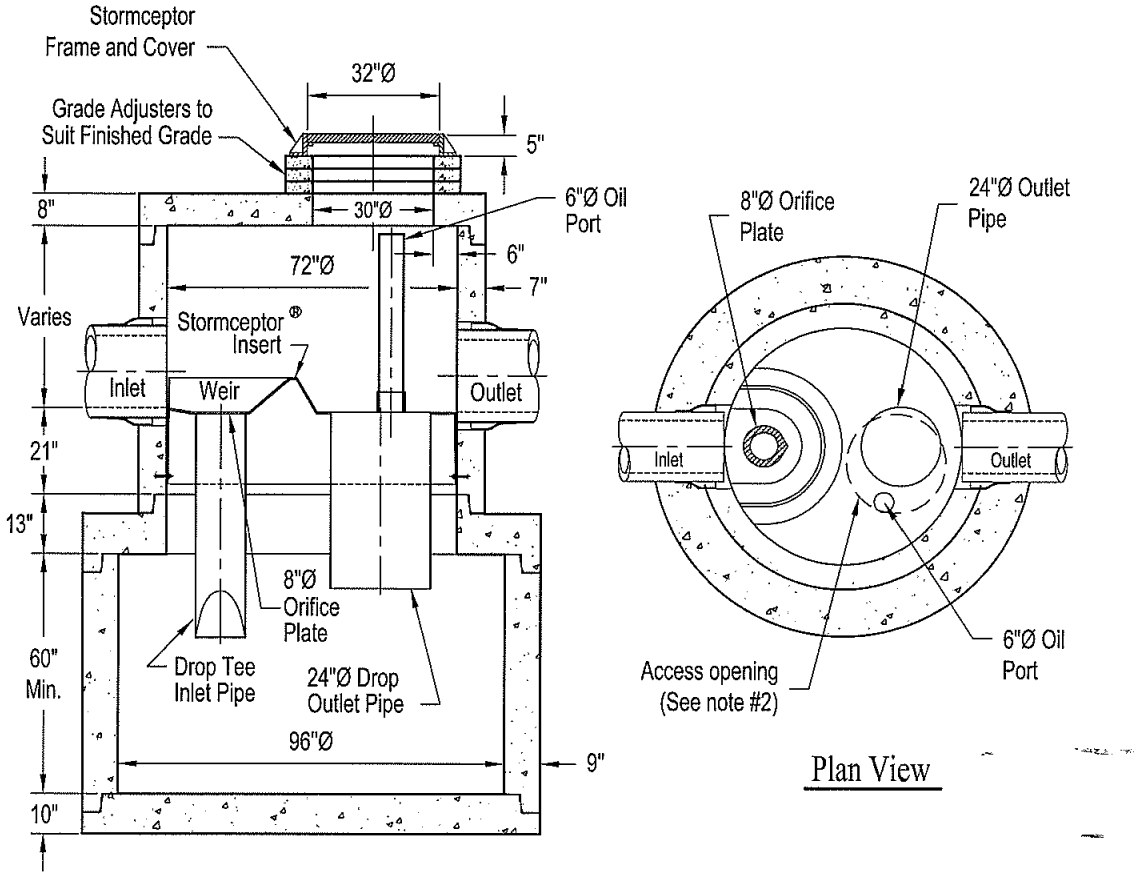
1. The Use Of Flexible Connection is Recommended at The Inlet and Outlet Where Applicable.
2. The Cover Should be Positioned Over The Inlet Drop Pipe and The Oil Port.
3. The Stormceptor System is protected by one or more of the following U.S. Patents: #4985148, #5498331, #5725760, #5753115, #5849181, #6068765, #6371690.
4. Contact a Concrete Pipe Division representative for further details not listed on this drawing.

Rinker 027

Rinker MATERIALS™

Concrete Pipe Division

# STC 2400 Precast Concrete Stormceptor®
# (2400 U.S. Gallon Capacity)




Notes:

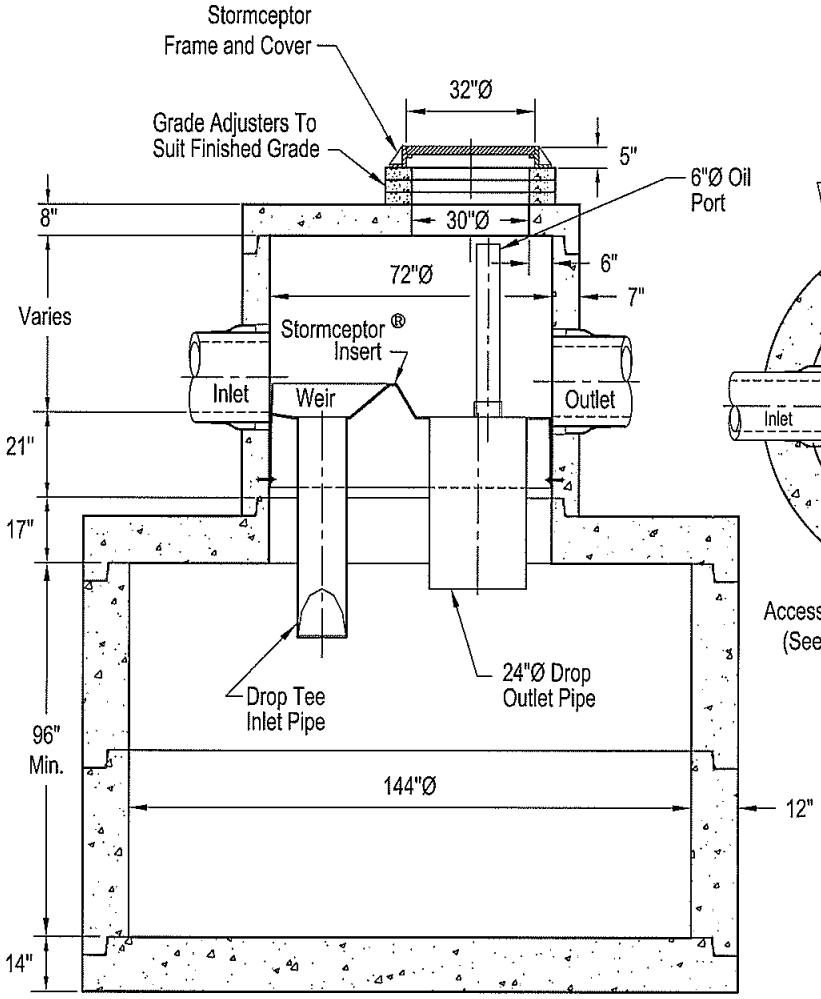
1. The Use Of Flexible Connection is Recommended at The Inlet and Outlet Where Applicable.
2. The Cover Should be Positioned Over The Outlet Drop Pipe and The Oil Port.
3. The Stormceptor System is protected by one or more of the following U.S. Patents: #4985148, #5498331, #5725760, #5753115, #5849181, #6068765, #6371690.
4. Contact a Concrete Pipe Division representative for further details not listed on this drawing.

Rinker 031

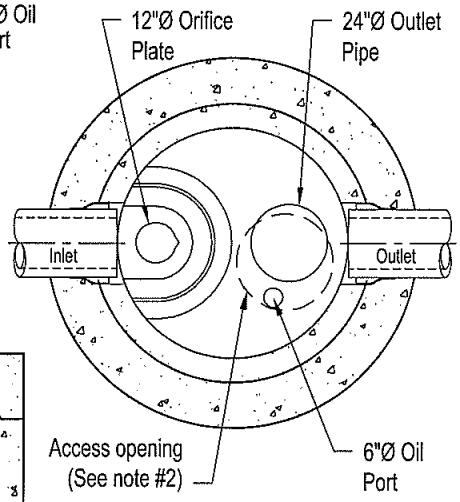
Rinker MATERIALS™

Concrete Pipe Division

# STC 7200 Precast Concrete Stormceptor®
## (7200 U.S. Gallon Capacity)




Section Thru Chamber




Plan View

Notes:

1. The Use Of Flexible Connection is Recommended at The Inlet and Outlet Where Applicable.
2. The Cover Should be Positioned Over The Outlet Drop Pipe and The Oil Port.
3. The Stormceptor System is protected by one or more of the following U.S. Patents: #4985148, #5498331, #5725760, #5753115, #5849181, #6068765, #6371690.
4. Contact a Concrete Pipe Division representative for further details not listed on this drawing.

Rinker 035

Suntree
Technologies Inc.
798 Clearlake Road, Cocoa, FL 32922
Ph: 321-637-7552 FAX: 321-637-7554
www.suntreetech.com

# Grate Inlet Skimmer Box

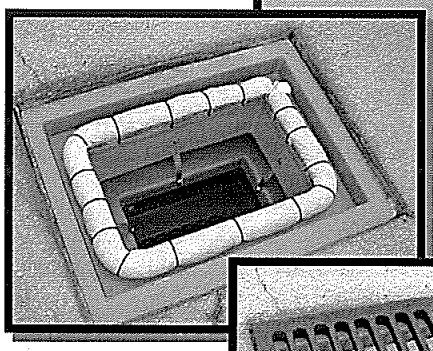
## Stormwater Treatment System For A Grated Inlet

*Captures Everything From Hydrocarbons, To Sediment, To Foliage, To Litter... Everything!*

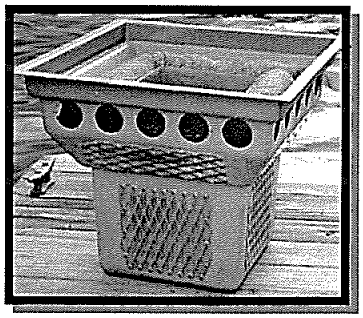

Patented

*Installs Quickly*

- Remove the grate
- Drop in the filter
- Replace the grate




*Will Not Impede The Designed Flow Of The Inlet*



*Custom Sizes... No Problem*

# Grate Inlet Skimmer Box Special Features

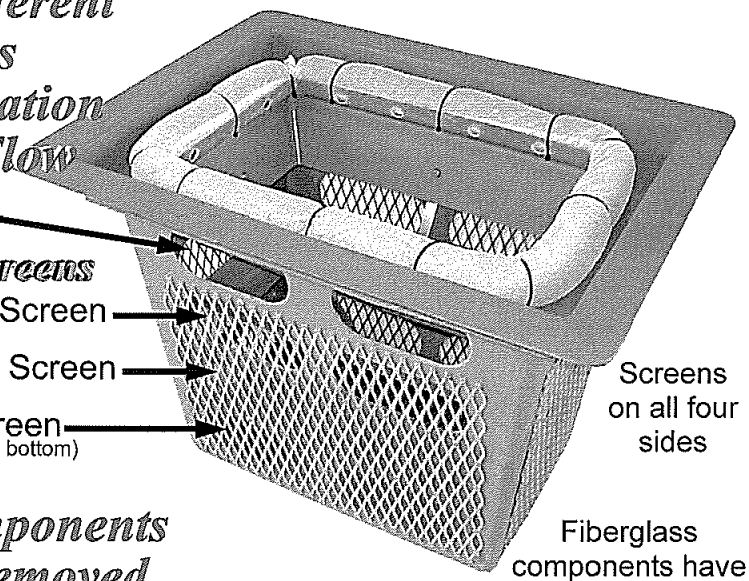
## Multi-Stage Filtration

Screens of Different Sieve Sizes Optimize Filtration And Water Flow

- Bypass Openings

**Stainless Steel Screens**

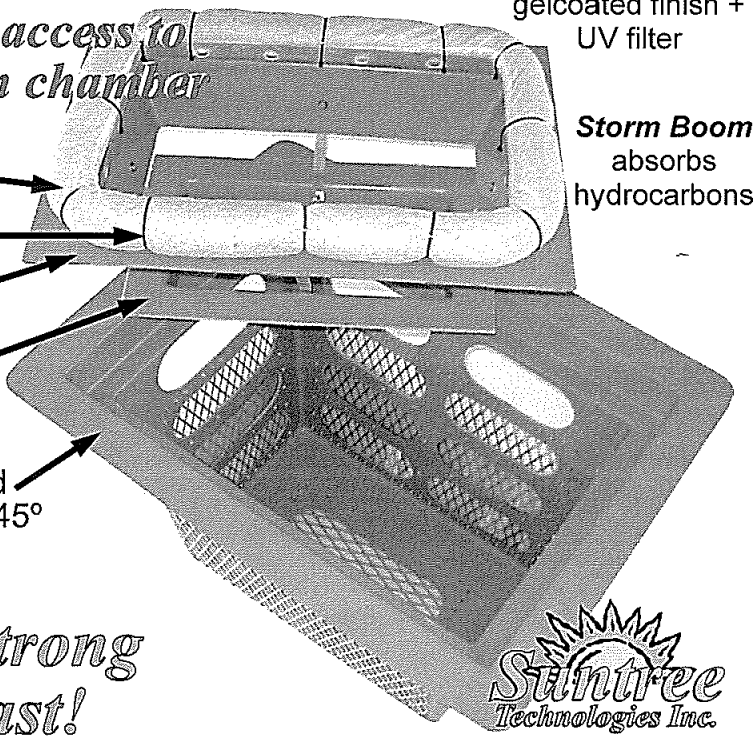
- Coarse Sieve Size Screen
- Medium Sieve Size Screen
- Fine Sieve Size Screen
  (Fine sieve size screen also on bottom)



Screens on all four sides

## Interior components are easily removed to allow easy access to lower filtration chamber

Fiberglass components have gelcoated finish + UV filter



- Storm Boom — ***Storm Boom*** absorbs hydrocarbons
- Zip Tie
- Skimmer Tray
- Deflection Shield

- Flange is reinforced with knitted 1808 ±45° biaxial fiberglass

## Built Strong To Last!

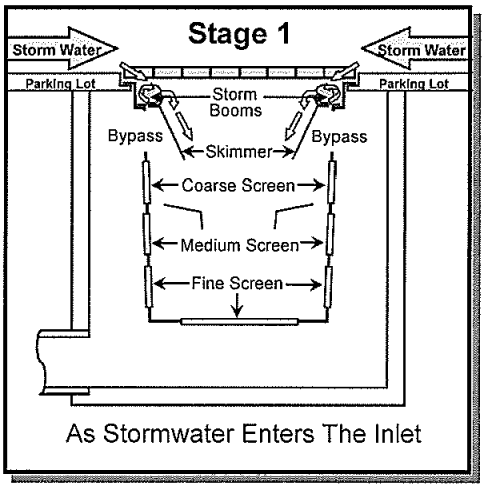
Suntree Technologies Inc.

Exhibit 2.4
Application 091019-6
2 of 6

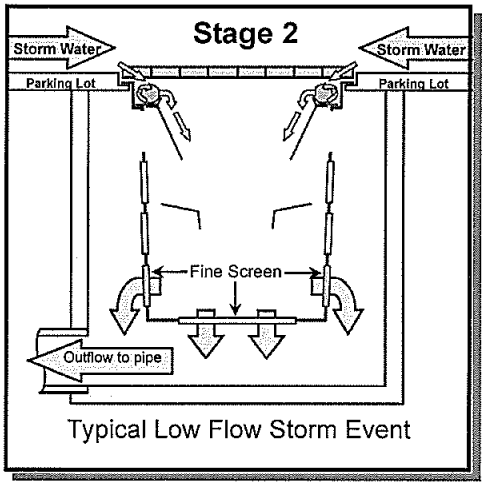
# *Grate Inlet Skimmer Box — Functional Description*

## *Multi-Stage Filtration Utilizes Screens Of Different Sieve Sizes To Optimize Filtration And Water Flow*

**Stage 1:** As stormwater enters the inlet through the grate it comes in contact with and passes through a ***Storm Boom*** located around the top perimeter of the ***Grate Inlet Skimmer Box***. After making contact with the ***Storm Boom***, the stormwater flows down into the lower filtration chamber which is equipped with 3 different sieve size filtration screens and bypass openings.



As Stormwater Enters The Inlet

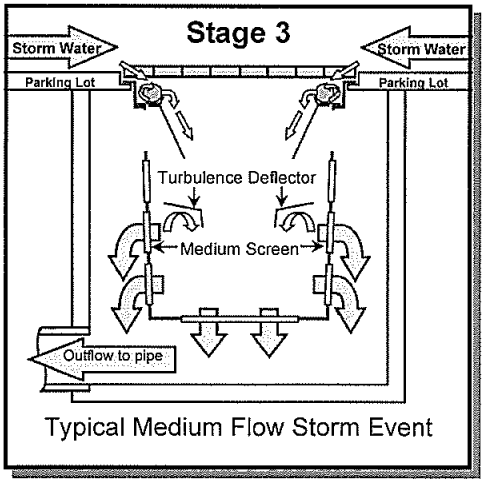


Typical Low Flow Storm Event

**Stage 2:** Throughout the entire storm event, stormwater continues to come in contact with the ***Storm Boom*** and then flow into the lower filtration chamber, adjacent to the fine sieve size screens. The fine sieve size screens are sized to be able to capture sediment such as sand, clay, phosphates, etc. A sand filter quickly forms across the bottom which has the potential to capture the finest of particles.

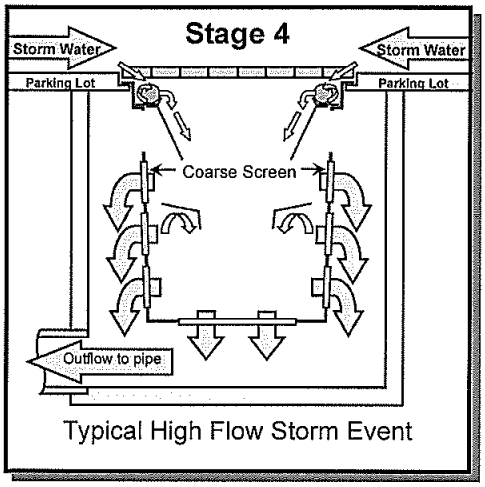
**Stage 3:** As the storm event increases in intensity the water level in the ***Grate Inlet Skimmer box*** rises to a level adjacent to the medium sieve size screens and the *turbulence deflector*. The medium screen provides additional flow with less chance of obstruction than the fine screen. The *turbulence deflector* dramatically reduces the turbulence in the lower filtration chamber, which allows sediment to continue to settle, without re-suspending sediment that has previously been captured.

Suntree Technologies Inc.



Typical Medium Flow Storm Event

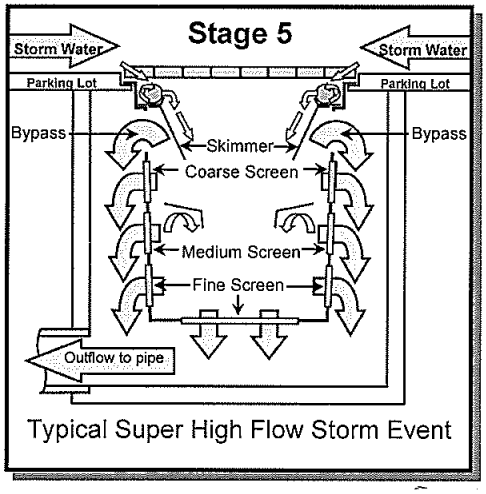
**Stage 4:** As the storm event increases in intensity to that of high flow storm event, the water level in the ***Grate Inlet Skimmer box*** rises to a level adjacent to the coarse sieve size screens above *turbulence deflector.*



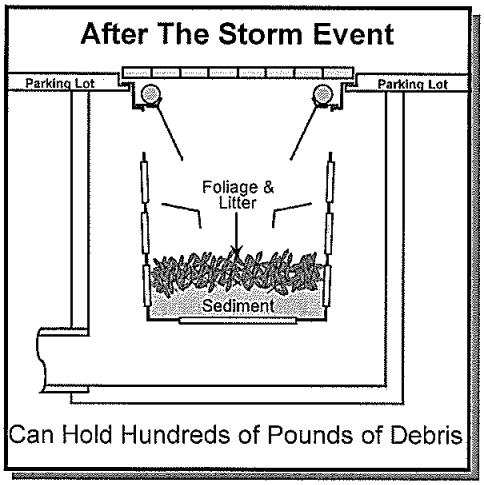
Typical High Flow Storm Event

The coarse screen provides additional filtered flow with less chance for obstruction than either the medium or fine screen. The coarse screen is sized to capture floatables like foliage and litter. At this stage water is flowing through all the different sieve size screens, the *turbulence deflector* continues to dramatically reduce the turbulence in the lower filtration chamber, and sediment continues to settle and collect toward the bottom.

**Stage 5:** If the storm event creates an extremely high flow rate into the inlet which exceeds the flow through all the screens, the water flow can bypass the filtration screens through skimmer protected bypass openings near the top of the ***Grate Inlet Skimmer Box***. As water flows through the bypass openings, it also continues to flow through all the other screens. Storm events that produce such high flow rates are rare and typically don't last very long.



Typical Super High Flow Storm Event



Can Hold Hundreds of Pounds of Debris

## Drains Dry After Every Storm Event

**After The Storm Event:** The stormwater drains completely out of the ***Grate Inlet Skimmer Box*** after the storm event. The debris collected in the unit is stored in a dry state which helps to contain the nutrient pollutant load, prevents the filter from going septic, and prevents mosquitoes from breeding in the unit. After each storm event more debris is collected, which can ultimately weigh many hundreds of pounds.

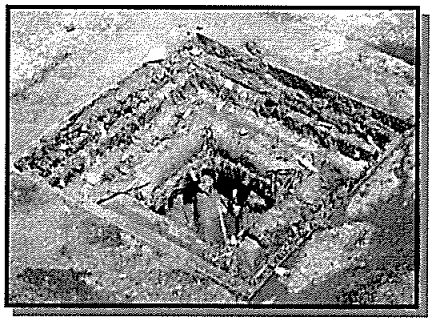
## *Grate Inlet Skimmer Box - Captured Debris*

# The Challenge...

Suntree Technologies Inc.

*Take On The Toughest Inlets...*
*Capture & Keep The Debris...*
*Keep The Inlet Flowing!*

The picture to the right shows an inlet with a ***Grate Inlet Skimmer Box*** immediately after the grate was removed, just 45 days after it was installed. Because this inlet is adjacent to a wash down area, it experiences a simulated storm event every day. The filter is full to capacity and has been operating in bypass mode for some time.

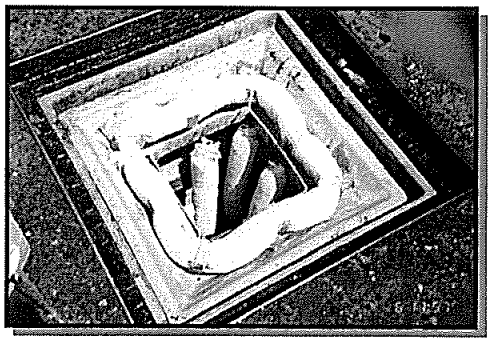


The picture to the left shows the ***Grate Inlet Skimmer Box*** immediately after the removal of booms and skimmer tray. Notice the bypass openings around the top are completely unobstructed. The filter is full to capacity and is operating in bypass mode. Because this inlet experiences an extra heavy hydrocarbon pollutant load it is fitted with extra ***Storm Booms***.

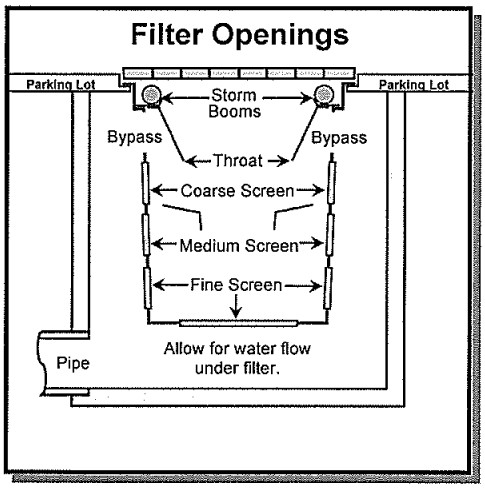
## Stainless Steel Screens are easily cleaned to restore the original unobstructed flow rates to the Grate Inlet Skimmer Box

Although the inlet is relatively small with a grate that measures 24" x 24", debris weighing 232 pounds with a volume of 78 quarts was removed during this servicing. To the right is a photo of the same ***Grate Inlet Skimmer Box*** after being serviced.

## Ready For The Next Storm Event!



## *Grate Inlet Skimmer Box - Sizing and Flow Rates*




**Custom Sizes No Problem**

The **maximum flow rate** of a *Grate Inlet Skimmer Box* is determined by the amount of flow that can pass through the throat, the exception is found only in very large units.

To determine the **minimum flow rate** of a ***Grate Inlet Skimmer Box***, consider only the potential flow through the throat and bypass. If the potential flow through the throat is less than the potential flow through the bypass, then the throat determines the minimum flow. If the potential water flow through the bypass is less than that of the throat, then the bypass determines the minimum flow. **Filtered Flow** represents the potential flow rate through all screens, and does not include the potential flow through the bypass. Water flow through the bypass happens only when the flow rate through the grate exceeds the flow rate through all the screens.

**Flow Rate Table For 8 different Models**

| | Dimensions of the flange around the top of the Grate Inlet Skimmer Box | | | Flow Rate (cubic feet per second) | | |
|---|---|---|---|---|---|---|
| Model Number | Width (inches) | Length (inches) | Depth (inches) | Throat | Filtered Flow | Bypass Flow |
| ~~GISB-I-24-24-25~~ | ~~24~~ | ~~24~~ | ~~25~~ | ~~4.4~~ | ~~14.9~~ | ~~6.7~~ |
| GISB-A-24-37-25 | 24 | 37 | 25 | 10.2 | 21.1 | 8.7 |
| ~~GISB-C-28-37-25~~ | ~~28~~ | ~~37~~ | ~~25~~ | ~~12.2~~ | ~~19.4~~ | ~~7.4~~ |
| GISB-J-24-41-25 | 24 | 41 | 25 | 12 | 24.6 | 10 |
| GISB-NK-32-32-25 | 32 | 32 | 25 | 12.5 | 19.1 | 10.3 |
| GISB-36-36-25 | 36 | 36 | 25 | 18.8 | 23.4 | 13.4 |
| GISB-D-36-48-18 | 36 | 48 | 18 | 33.2 | 26.3 | 13.3 |
| GISB-G-52-58-18 | 52 | 58 | 18 | 89.3 | 40.1 | 25 |

♦ The yellow blocks represent the minimum flow rates.
♦ Filtered flow is based on unobstructed screens.

**Drawings and flow specifications for any size Grate Inlet Skimmer Box is available upon request.**


ECT Environmental Consulting & Technology, Inc.
4100 Center Pointe Drive, Suite 112
Fort Myers, Florida 33916
(239) 277 - 0003 CA # 5520

**TOWN OF FORT MYERS BEACH**
2523 Estero Boulevard
Fort Myers Beach, Florida
(239) 765 - 0202

# *WETLAND OWNERSHIP MAP*

BASIN BASED NEIGHBORHOOD IMPROVEMENTS

HMGP 1609 - 48 - R SFWMD App# 091019-6

Exhibit 3.0
Application No. 091019-6

CONSTRUCTION POLLUTION PREVENTION PLAN
for
# BASIN BASED NEIGHBORHOOD IMPROVEMENTS

| SITE DESCRIPTION | | | |
|---|---|---|---|
| Project Name and Location: (Latitude, Longitude, or Address) | Basin Based Neighborhood Improvements<br>(SFWMD App# 091019-6)<br>Fort Myers Beach, Florida | Owner Name and Address: | Town of Fort Myers Beach<br>2523 Estero Boulevard<br>Fort Myers Beach, Florida |
| Description: (Purpose and Types of Soil Disturbing Activities) | | | |

Construction of this project will generally consist of limited clearing within the existing ROW and construction of stormwater infrastructure improvements.

Soil disturbing activities will include: clearing and grubbing; site grading; and excavation for the storm water management facilities.

| | |
|---|---|
| Runoff Coefficient: | 0.65 |
| Site Area: | 49 ± acres |

Sequence of Major Activities:

The order of activities will be as follows:

1. Install silt fences and turbidity barriers.
2. Perform clearing and grubbing.
3. Construction storm water facilities.
4. Stabilize denuded areas and stockpiles within 21 days of last construction activity in that area.
5. Complete final paving and re-grading.
6. Install permanent sodding and plantings.
7. When all construction activity is complete and the site is stabilized: remove all silt fences and turbidity barriers; stabilize any areas disturbed by their removal.

| | |
|---|---|
| Name of Receiving Waters: | Matanzas Pass |

## CONTROLS

### Erosion and Sediment Controls

### Stabilization Practices

Temporary Stabilization: Top soil stock piles and disturbed portions of the site where construction activity temporarily cease for at least 21 days will be stabilized with temporary seed and mulch no later than 14 days from the last construction activity in that area. The seed shall be Bahia, millet, rye, or other fast-growing grasses. Prior to seeding, fertilizer or agricultural limestone shall be applied to each area to be temporarily stabilized. After seeding, each area shall be mulched. Areas of the site which will be paved will be temporarily stabilized by applying a limerock subgrade until bituminous pavement can be applied.

Permanent Stabilization: Disturbed portions of the site, where construction activities permanently cease, shall be stabilized with sod, landscaping, and/or other equivalent stabilization measures (e.g., rip-rap, geotextiles) no later than 14 days after the date of the last construction activity. The sod shall typically be Floratam or Bahia sod.

## CONTROLS (Continued)

### Structural Practices

Silt Fence / Straw Bale Barrier - will be constructed along the ROW of the project and along those areas of the project that border adjacent wetlands. At a minimum, the silt fence and/or straw bale barrier will be placed along all wetland buffers and all Corps of Engineers jurisdictional wetland boundaries.

Straw Bale Drop Inlet Sediment Filter - will be placed around all constructed storm drain inlets immediately upon completion of construction and shall remain in-place until the contributing drainage area is stabilized. Alternatively, grate inlets can be covered with filter fabric material until stabilization.

### Storm Water Management

The project will utilize structural treatment systems, such as "*stormceptors"* at the outlets of each of the drainage basins prior to outfalling to Matanzas Pass.

DISCHARGE RATES: varies by basin

## OTHER CONTROLS

### Waste disposal:

Waste Materials:

All waste materials will be collected and stored in a trash dumpster which will meet all local and State solid waste management regulations. All trash and construction debris from the site will be deposited in this dumpster. The dumpster will be emptied as required due to use and/or State and local regulations, with the trash disposed of at the appropriate landfill operation. No construction waste materials will be buried onsite. All personnel will be instructed regarding the correct procedure for waste disposal. Notices stating these practices will be posted in the construction office trailer.

Hazardous Waste:

All hazardous waste materials will be disposed of in the manner specified by local or State regulation or by the manufacturer. Site personnel will be instructed in these practices.

Sanitary Waste:

All sanitary waste will be collected from the portable units by a local, licensed, Town of Fort Myers Beach sanitary waste management contractor, as required by local regulation.

### Offsite Vehicle Tracking:

As each area or segment is completed, paved streets will be swept as needed to remove any excess muck, dirt, or rock tracked from the site. Dump trucks hauling material from the construction site will be covered with a tarpaulin.

## TIMING OF CONTROLS/MEASURES

Installation of hay bail / silt fence barriers (around wetlands) will be constructed prior to extensive clearing or grading of any other portions of the project. Areas where construction activity temporarily ceases for more than 21 days will be stabilized with a temporary seed and mulch within 14 days of the last disturbance. Once construction activity ceases permanently in an area, that area will be stabilized with permanent sod, landscaping, and/or other equivalent stabilization measures (e.g., rip-rap, geotextiles). After the entire site is stabilized, the silt fence / straw bale barriers can be removed.

## CERTIFICATION OF COMPLIANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS

The storm water pollution prevention plan reflects the United States Environmental Protection Agency and the South Florida Water Management District (SFWWD) requirements for storm water management and erosion and sediment control, as established in the Chapter 40E-4 FAC and Chapter 373 FS.

## MAINTENANCE/INSPECTION PROCEDURES

### Erosion and Sediment Control Inspection and Maintenance Practices

These are the inspection and maintenance practices that will be used to maintain erosion and sediment controls.

- All control measures will be inspected at least once each week and following any storm event of 0.5 inches or greater.
- All measures will be maintained in good working order; if a repair is necessary, it shall be corrected as soon as possible, but in no case later than 7 days after the inspection.
- Built up sediment will be removed from silt fence when it has reached one-half the height of the fence.
- Silt fence will be inspected for depth of sediment, tears, to see if the fabric is securely attached to the fence posts, and to see that the fence posts are firmly in the ground.
- Temporary seeding and permanent sodding and planting will be inspected for bare spots, washouts, and healthy growth.
- A maintenance inspection report will be made after each inspection. A copy of the report form to be completed by the inspector is attached.
- The Owner will appoint one individual who will be responsible for inspections, maintenance and repair activities, and for completing the inspection and maintenance reports.
- Personnel selected for inspection and maintenance responsibilities will receive training from the site superintendent. They will be trained in all the inspection and maintenance practices necessary for keeping the erosion and sediment controls used onsite in good working order.

### Non-Storm Water Discharge

It is expected that the following non-storm water discharges will occur from the site during the construction period:

- Water from water line flushings.
- Pavement wash waters (when no spills or leaks of toxic or hazardous materials have occurred).
- Uncontaminated groundwater (from dewatering excavation).
- All non-storm water discharges will be directed to the storm water management facilities prior to discharge.

## INVENTORY FOR POLLUTION PREVENTION PLAN

The materials or substances listed below are expected to be present onsite during construction:

- Concrete
- Fabrics
- Plastics
- Metallic Components
- Asphalt
- Fertilizers
- Petroleum Based Products
- Vegetative Materials
- Wood
- Mortaring Materials

## SPILL PREVENTION

### Material Management Practices

The following are the materials management practices that will be used to reduce the risk of spills or other accidental exposure of materials and substances to storm water runoff.

#### Good Housekeeping:

The following good housekeeping practices will be followed onsite during the construction project:

- An effort will be made to store only enough product required to do the job.
- All materials stored onsite will be stored in a neat, orderly manner in their appropriate containers, and if possible, under a roof or other enclosure.
- Products will be kept in their original containers with the original manufacturer's label.
- Substances will not be mixed with one another unless recommended by the manufacturer.
- Whenever possible, all of a product will be used up before disposing of the container.
- Manufacturers' recommendations for proper use and disposal will be followed.
- The site superintendent will inspect to ensure proper use and disposal of materials onsite.

#### Hazardous Products:

These practices are used to reduce the risks associated with hazardous materials:

- Products will be kept in original containers unless they are not re-sealable.
- Original labels and material safety data will be retained; they contain important product information.
- If surplus product must be disposed of, manufacturers' or local and State recommended methods for proper disposal will be followed.

### Product Specific Practices

The following produce specific practices will be followed onsite:

#### Petroleum Products:

All onsite vehicles will be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Petroleum products will be stored in tightly sealed containers which will be clearly labeled. Any asphalt substances used onsite will be applied in accordance with the manufacturer's recommendations and standard construction practices.

#### Fertilizers:

Fertilizers will be applied only in the minimum amounts recommended by the manufacturer. Once applied, fertilizer will be worked into the soil to limit exposure to storm water. Storage will be in a covered shed. The contents of any partially used bags of fertilizer will be transferred to a sealable plastic bin to avoid spills.

#### Paints:

All containers will be tightly sealed and stored when not required for use. Excess paint will not be discharged to the storm sewer system but will be properly disposed of according to manufacturers' instructions and/or state and local regulations.

## SPILL PREVENTION (Continued)

### Spill Control Practices

In addition to the good housekeeping and material management practices discussed in the previous sections of this plan, the following practices will be followed for spill prevention and cleanup.

- Manufacturers' recommended methods for spill cleanup will be clearly posted and site personnel will be made aware of the procedures and the location of the information and cleanup supplies.
- Materials and equipment necessary for spill cleanup will be kept in the material storage area onsite. Equipment and materials will include--but not be limited to--rags, gloves, goggles, kitty litter, sand, and plastic and metal trash containers specifically for this purpose.
- All spills will be cleaned up as soon as possible after discovery.
- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- Spills of toxic or hazardous material will be reported to the appropriate state or local government agency, regardless of the size.
- The spill prevention plan will be adjusted to include measures to prevent this type of spill from reoccurring and how to clean up the spill if there is another one. A description of the spill, what caused it, and the cleanup measures will also be included.
- The Contractor's site superintendent will be responsible for the day-to-day site operations and will be the spill prevention and cleanup coordinator. He will designate at least two other site personnel who will receive spill prevention and cleanup training. These individuals will each become responsible for a particular phase of prevention and cleanup. The names of responsible spill personnel will be posted in the material storage area and/or in the office trailer onsite.

## POLLUTION PREVENTION PLAN CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: _____

Print Name: Bradley S. Vance, PE (as an Agent)

Title: Senior Engineer

Date: _____

## CONTRACTOR'S CERTIFICATION

I certify under penalty of law that I understand the terms and conditions of the general National Pollutant Discharge Elimination System (NPDES) permit that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

| Signature | For | Responsible for |
|---|---|---|
| _____<br>Date: _____<br>_____<br>Date: _____<br>_____<br>Date: _____<br>_____<br>Date: _____ | | |

CONSTRUCTION POLLUTION PREVENTION PLAN
for

_____

## Inspection And Maintenance Report Form

*(To be completed every 7 days and within 24 hours of a rainfall event of 0.5 inches or more)*

INSPECTOR: _____ DATE: _____

INSPECTOR'S QUALIFICATIONS:

_____

_____

Days since last rainfall: _____ Amount of last rainfall _____ inches

**STABILIZATION MEASURES**

| Area | Date Since Last Disturbed | Date of Next Disturbance | Stabilized? (yes / no) | Stabilized With | Condition |
|---|---|---|---|---|---|
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Stabilized required:

_____

_____

To be performed by: _____ on or before: _____

CONSTRUCTION POLLUTION PREVENTION PLAN
for

_____

## Inspection And Maintenance Report Form

*Structural Controls*

DATE: _____

**SILT FENCE / STRAW BALE BARRIER**

| From | To | Is Silt Fence / Straw Bale Barrier in place? | Is there evidence of washout or over-topping? |
|---|---|---|---|
| | | | |
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Maintenance required for silt fence / straw bale barrier:

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_____

To be performed by: _____ on or before: _____

CONSTRUCTION POLLUTION PREVENTION PLAN
for

_____

## Inspection And Maintenance Report Form

*Structural Controls*

DATE: _____

**EARTHEN PERIMETER BERM**

| From | To | Is berm stabilized ? | Is there evidence of washout or over-topping? |
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Maintenance required for perimeter berm:

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To be performed by: _____ on or before: _____

CONSTRUCTION POLLUTION PREVENTION PLAN
for

_____

## Inspection And Maintenance Report Form

CHANGES REQUIRED TO THE POLLUTION PREVENTION PLAN:

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REASONS FOR CHANGES:

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I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

_____ _____

Signature Date

**January, 2010**

# Basin Based Neighborhood Improvements
## URBAN STORMWATER MANAGEMENT PROGRAM

## 1.0 Introduction

This document provides details of the Urban Stormwater Management Program associated with the "**Basin Based Neighborhood Improvements"** project in the Town of Fort Myers Beach, Florida. This plan discusses non-structural controls, intended to provide for the quality of stormwater runoff by reducing the generation and accumulation of potential stormwater runoff contaminants at or near the respective sources. Although many of the methodologies and procedures outlined in this document are general Best Management Practices (BMP's) which can be useful in attenuating pollutants in many types of urbanized settings, the implementation of these practices is an on-going process, to the maximum extent possible, to address the conditions associated with the existing developed character of these watersheds and the surrounding hydrologic features.

Pollution prevention guidelines are provided for the areas of (a) nutrient and pesticide management; (b) street sweeping; (c) solid waste management; (d) operation and maintenance of the stormwater system; (e) water quality testing; and (f) construction monitoring activities. A discussion of each of these activities is given in the following sections.

## 2.0 Nutrient and Pesticide Management

Nutrient and pesticide management consists of a series of practices designed to manage the use of fertilizers and pesticides so as to minimize loss of these compounds into stormwater runoff and the resulting water quality impacts on adjacent waterbodies. Implementation of such management practices will also maximize the effectiveness of those nutrients and pesticides that are applied.

Each resident must commit themselves to the practice of responsible and careful landscape design and maintenance to prevent the contamination of surface waters. The guidelines included in this section are intended to outline and provide educated environmental choices regarding the maintenance of individual yards within the community. These maintenance and management guidelines are meant to promote an attractive neighborhood that preserves the health of adjacent waterways and environmental features.

## 2.1 General Requirements

Commercial applicators of chemical lawn products must have the required certifications and licensing from the Florida Department of Agriculture along with necessary documentation as required by the Town of Fort Myers Beach Ordinances. These conditions will also be in accordance with the most current State of Florida statutes regarding the same.

Only registered commercial applicators and individual residents are permitted to apply chemicals within the limits of their private property. All chemical products must be used in accordance with the manufacturer's recommendations. The application of any chemical product within five (5) feet of any surface water including but not limited to ponds, lakes, drainage ditches or canals, is discouraged. Further, the use of any chemical product in a manner that will allow airborne or waterborne entry of such products into surface waters is also discouraged.

## 2.2 Nutrient Management Program

Management and application of nutrients and fertilizers within the Town of Fort Myers Beach will adhere to the following guidelines:

A. All fertilizers should be stored in a dry storage area protected from rainfall and ponding.

B. No fertilizer containing in excess of 2% phosphate/phosphorus ($P_2O_5$) per guaranteed analysis label (as defined by Chapter 576, Florida Statutes) should be applied to turf grass unless justified by a soil test.

C. Fertilizer containing in excess of 2% phosphate/phosphorus ($P_2O_5$) per guaranteed analysis label should not be applied within 5 feet of the edge of water or within 5 feet of a drainage facility.

D. All fertilizer should be applied such that spreading of fertilizer on all impervious surfaces is minimized.

E. Liquid fertilizers containing in excess of 2% phosphate/phosphorus ($P_20_5$) per guaranteed analysis label should not be applied thorough an irrigation system within 10 feet of the edge of water or within 10 feet of a drainage facility.

F. Liquid fertilizers containing in excess of 2% phosphate/phosphorus ($P_20_5$) per guaranteed analysis label should not be applied through high or medium mist application or directed spray application within 10 feet of the edge of water or within 10 feet of a drainage facility.

2.3 Pest Management Program

Proper maintenance of plants and turf areas will minimize the ability of pests to successfully attack landscaping. Several general guidelines follow:

A. Apply fertilizer and water only when needed and in moderate amounts. Excessive amounts of either can cause rapid growth that is attractive to insects and disease.

B. Mowing of grasses to a height of 3-4 inches. If cut shorter, the plants may become stressed and more vulnerable to pest infestation. Each mowing should remove no more than one-third of the leaf blade, and those cuttings should remain on the lawn to decompose.

C. It is recommended that pesticides, fungicides, and herbicides be used only in response to a specific problem and in the manner and amount recommended by the manufacturer to address the specific problem. Broad application of pesticides, fungicides and herbicides as a preventative measure is strongly discouraged.

The use of pesticides, fungicides, or herbicides is limited to products that meet the following criteria:

A. Must be consistent with the USDA-NRCS soil rating for selecting pesticides.

B. Must have the minimum potential for leaching into groundwater or loss from runoff.

C. Products must be EPA approved.

D. The half-life of products used should not exceed seventy (70) days.

## 3.0 Street Sweeping

This practice involves sweeping and vacuuming the streets to remove dry weather accumulation of pollutants, especially particulate matter, before wash-off of these pollutants can occur during a storm event. This practice reduces the potential for pollution impacts on receiving waterbodies by removing particulate matter and associated chemical constituents. Although street cleaning operations are frequently conducted primarily for aesthetic purposes, the street sweeping program for the Town of Fort Myers Beach also serves to improve the quality of stormwater runoff generated from impervious traffic areas. Street sweeping activities can be particularly effective in the removal of particulate material, such as sand, and the associated nutrient loadings from roadside areas where they could easily become transported via stormwater flow.

A street sweeping program that includes a number of roadway segments within this

general area is currently employed by the Town of Fort Myers Beach on a regular and/or periodic basis. A summary including the frequency of the sweeping activities, total miles swept, and an estimate of the quantity of sweepings collected should be included in the Town of Fort Myers Beach annual NPDES report.

## 4.0 Solid Waste Management

In general, solid waste management involves issues related to the management and handling of urban refuse, litter, and horticultural waste that will minimize the impact of these constituents as stormwater pollutants.

Maintenance of adequate sanitary facilities for temporarily storing refuse on private premises prior to collection is considered the responsibility of the individual resident. Fallen leaves and other vegetation, along with grass clippings, may become direct stormwater pollutants when they are allowed to accumulate. Local requirements for refuse collection are brought to the attention of each resident as a matter of individual or public notification, announcements, and other educational materials or programs to minimize these water quality impacts.

## 5.0 Inspection and Maintenance of the Stormwater System

The stormwater management components for the project are designed to aid in the capture and settling of stormwater generated pollutants (sediments, vegetation, debris, and solids/floatables) prior to discharge to Matanzas Pass. Inspection details and maintenance requirements for the project are given in the following sections.

### 5.1 Routine Inspections

Maintenance of the stormwater management system will consist of periodic inspections. During each inspection, the following items will be reviewed:

A. Inspect the hydraulic structures (inlets, manholes, and conduits) to ensure free-flowing conditions and overall structural integrity of the facilities.

B. Grates should be clean and free of obstructions or accumulations.

C. Check for any accumulation of sediment, trash such as garbage bags, or debris in the culverts connecting the inlets.

D. Measure the accumulations of material within the chambers of the *Stormceptors*.

Upon completion of each inspection, a written report shall be prepared listing any

deficiencies or actions that need to be addressed and/or corrected by the Public Works Department.

### 5.2 Semi-Annual Maintenance

Semi-Annual maintenance operations and cleanings of siltation and sedimentary materials, yard waste and clippings, and/or other trash and debris, etc. should be completely removed and disposed of properly.

## 6.0 Water Quality Testing

To document the operational efficiency of the treatment systems for this project, monitoring will be performed at the outfalls to tidal waters, for which flow is present. Monitoring may occur 3 times a year, once during the dry season (February thru March) and twice during the wet season (August thru September). A manual grab sample will be collected at the outfall location and analyzed for the typical constituents and parameters. Trained and certified personnel will perform the sample collection and laboratory analysis. The results of the laboratory analyses will be submitted to South Florida Water Management District as part of an annual water quality monitoring report by December 31st of each year.

## 7.0 Construction Monitoring Activities

The Town of Fort Myers Beach currently employs an inspection program thru its NPDES participation for construction projects to ensure compliance with local stormwater requirements concerning erosion and sediment control. The Town provides enforcement through this inspection program by issuing a violation notice and/or a stop work order to those construction site operators that repeatedly do not maintain compliance with the approved Stormwater Pollution Prevention Plan (SWP3) and other applicable permit conditions.

# APPLICATION 091019-6
# PERMIT 36-07287-P

# EXHIBIT 4.0
# Pages 1-10 of 10
# Construction Pollution Prevention Plan

# EXHIBIT 5.0
# Pages 1-5 of 5
# Urban Stormwater Management Program

# INCORPORATED BY REFERENCE