PROJECT INFORMATION

APPLICANT:
INDIAN RIVER COUNTY SCHOOL BOARD
4530 4690 28TH COURT
VERO BEACH, FLORIDA 32967

LOCATION:
GIFFORD MIDDLE SCHOOL
6500 57TH STREET
VERO BEACH, FLORIDA 32967

ENGINEER:
SCHULKE, BITTLE & STODDARD, LLC.
1717 INDIAN RIVER BOULEVARD, SUITE 201
VERO BEACH, FLORIDA 32960
TEL: 772-770-9622
FAX: 772-770-9496

EXISTING LAND USE

THE PROPERTY HAS A COMPREHENSIVE LAND USE DESIGNATION OF M-2, AND THE ZONING DESIGNATION OF RM-10.

PROPERTY TAX ID NUMBERS

THE PROPERTY INCLUDES ALL OR PART OF THE FOLLOWING:
32-39-22-000007-0000-0088.0

PROJECT LOCATION

45TH STREET APPROXIMATELY ¼ MILE WEST OF US HIGHWAY 1 IN VERO BEACH, INDIAN RIVER COUNTY, FLORIDA

CONSTRUCTION SCHEDULE

CONSTRUCTION START: JUNE, 2017
CONSTRUCTION FINISH: SEPTEMBER, 2018

FLOOD ELEVATION

THE PARCEL OF LAND SHOWN HEREON APPEARS TO BE IN FLOOD ZONE X PER FLOOD INSURANCE RATE MAP #12061C0241 H, DATED DECEMBER 4, 2012.

ELEVATION DATA

THE ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988. THE PRIMARY BENCHMARK IS INDIAN RIVER COUNTY BENCHMARK #470009 ELEVATION 19.94' NAVD.

PROJECT PHASING

- THIS PROJECT IS PROPOSED TO BE COMPLETED IN ONE PHASE.

UTILITY PROVIDERS

THIS PROJECT WILL BE SERVICED BY:

WATER/SEWER	INDIAN RIVER COUNTY
ELECTRIC	FPL
CABLE TV	COMCAST
TELEPHONE	AT&T

LEGAL DESCRIPTION

BEGINNING AT THE SOUTHEAST CORNER OF SECTION 22, TOWNSHIP 32, RANGE 39 EAST: THENCE RUN WESTERLY ALONG THE SOUTHERLY LINE OF SAID SECTION 22, A DISTANCE OF 274.65 FEET: THENCE RUN NORTHERLY ON A STRAIGHT LINE TO A POINT ON THE NORTH LINE OF THE SOUTHEAST 1/4 OF THE SOUTHEAST 1/4 OF SAID SECTION SECTION 22, WHICH POINT IS 279.50 FEET WEST OF THE INTERSECTION OF SAID NORTH LINE OF THE SOUTHEAST 1/4 OF THE SOUTHEAST 1/4 OF SAID SECTION 22, A DISTANCE OF 279.50 FEET TO THE INTERSECTION OF SAID NORTH LINE OF THE SOUTHEAST 1/4 OF THE SOUTHEAST 1/4 OF SAID SECTION 22, WITH THE EAST LINE OF SAID SECTION 22: THENCE RUN SOUTHERLY ON THE EASTERLY LINE OF SAID SECTION 22, A DISTANCE OF 1,331.20 FEET TO THE POINT OF BEGINNING: CONTAINING 8.5 ACRES, MORE OR LESS: AND ALSO,

BEGINNING AT THE SOUTHWEST CORNER OF SECTION 23, TOWNSHIP 32 SOUTH, RANGE 39 EAST; THENCE RUN EASTERLY ALONG THE SOUTHERLY LINE OF SAID SECTION 23, A DISTANCE OF 790.80 FEET; THENCE RUN NORTHERLY 15'4" WEST A DISTANCE OF 1,377.90 FEET TO A POINT POINT ON THE NORTH LINE OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SAID SECTION 23, WHICH POINT IS A DISTANCE OF 426.90 FEET EAST OF THE INTERSECTION OF SID NORTH LINE OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF THE OF SAID SECTION 23, WITH THE WEST LINE OF SAID SECTION 23; THENCE RUN WESTERLY ALONG SAID NORTH LINE OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SAID SECTION 23 A DISTANCE OF 426.90 FEET TO THE INTERSECTION OF SAID NORTH LINE OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SAID SECTION 23, WITH THE WEST LINE OF SAID SECTION 23; THENCE RUN SOUTHERLY ON THE WESTERLY LINE OF SAID SECTION 23 A DISTANCE OF 1,331.20 FEET TO THE POINT OF BEGINNING; CONTAINING 18.4 ACRES, MORE OR LESS.

BOTH OF THE ABOVE DESCRIBED TRACTS ARE CONVEYED SUBJECT TO THE EXISTING ROAD RIGHT-OF-WAY OF 25 FEET ALONG THE SOUTHERLY BOUNDARY LINE OF EACH RESPECTIVE TRACT; THE RIGHT-OF-WAY BEING KNOWN AS THE 25 FOOT RIGHT-OF-WAY, FOR THE NORTH GIFFORD ROAD.

LESS AND EXCEPT:
COMMENCE AT THE NORTHWEST CORNER OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 23, TOWNSHIP 32 SOUTH, RANGE 39 EAST, INDIAN RIVER COUNTY, FLORIDA, RUN EAST ALONG THE NORTH LINE OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 23 A DISTANCE OF 181.95 FEET TO THE POINT OF BEGINNING OF THE FOLLOWING TRACT; THENCE RUN SOUTH AND PERPENDICULAR TO THE AFORESAID NORTH LINE A DISTANCE OF 237.00 FEET; THENCE RUN EAST AND PARALLEL TO THE NORTH LINE OF OF THE AFORESAID SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER A DISTANCE OF 309.58 FEET; THENCE RUN NORTHERLY A DISTANCE OF 245.65 FEET TO A POINT LYING ON THE NORTH LINE OF THE AFORESAID SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER AND 426.90 FEET EAST OF THE NORTHWEST CORNER OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER; THENCE RUN WEST AND ALONG THE AFORESAID NORTH LINE A DISTANCE OF 244.95 FEET TO THE POINT OF BEGINNING.

TOGETHER WITH AN EASEMENT FOR INGRESS AND EGRESS AS FOLLOWS:
COMMENCE AT THE NORTHWEST CORNER OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 23, TOWNSHIP 32 SOUTH, RANGE 39 EAST, INDIAN RIVER COUNTY, FLORIDA, AND RUN WEST ALONG THE NORTH LINE OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 22, TOWNSHIP 32 SOUTH, RANGE 39 A DISTANCE OF 279.50 FEET AND TO THE POINT OF BEGINNING OF A 20 FOOT EASEMENT, SAID EASEMENT LYING 20 FEET SOUTH OF THE FOLLOWING DESCRIBED LINE; THENCE RUN EAST AND ALONG THE NORTH LINE OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 22, TOWNSHIP 32 SOUTH, RANGE 39 EAST, A DISTANCE OF 279.50 FEET AND TO THE NORTHWEST CORNER OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 23, TOWNSHIP 32, RANGE 39 EAST; THENCE RUN EAST ALONG THE NORTH LINE OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER A DISTANCE OF 181.95 FEET.

SYMBOL LEGEND

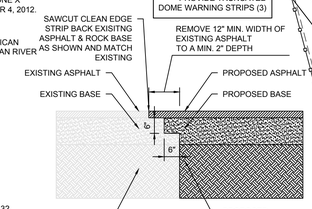
- R1-1 — 30" STOP SIGN
- FTP-21-06 / FTP-22-06 — HANDICAPPED PARKING SIGNS
- R3-1 — NO RIGHT TURN SIGN
- R4-7 — KEEP RIGHT SIGN

PROJECT DESCRIPTION

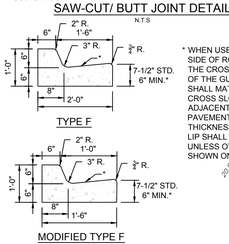
THIS PROJECT PROPOSED TO RE-PAVE THE EXISTING BUS DROP OFF/ PARKING AREA AND CONSTRUCT A SOCCER FIELD AND A BASEBALL DIAMOND WITH ALL NECESSARY DRAINAGE. NO INCREASE IN IMPERVIOUS AREA IS PROPOSED.

SAW-CUT/ BUTT JOINT DETAIL

N.T.S.



TYPE F / MODIFIED TYPE F



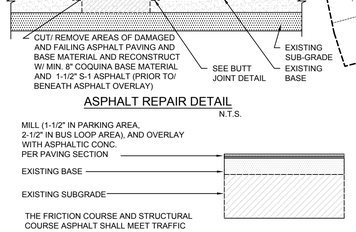
* WHEN USED ON HIGH SIDE OF ROADWAYS, THE CROSS SLOPE OF THE GUTTER SHALL MATCH THE CROSS SLOPE OF ADJACENT PAVEMENT. THE THICKNESS OF THE LIP SHALL BE 6" UNLESS OTHERWISE SHOWN ON PLANS

CURB DETAILS / SPECIFICATIONS

N.T.S.

ASPHALT REPAIR DETAIL

N.T.S.



PAVEMENT RE-SURFACING

N.T.S.

* DEPTH OF MATERIAL PER SCHEDULE BELOW
SEE WRITTEN SPECIFICATIONS FOR ADDITIONAL PAVEMENT AND TESTING REQUIREMENTS.

TYPICAL ASPHALTIC CONCRETE PAVING SECTION

N.T.S.

HEAVY DUTY ASPHALT		REGULAR DUTY ASPHALT	
2-1/2"	ASPHALTIC CONC. (*) (MIN. 1000 P.S.I. MARSHALL)	1-1/2"	ASPHALTIC CONC. (*) (MIN. 1000 P.S.I. MARSHALL)
8"	COQUINA SHELL (*) COMPACTED TO 98% MAX. DENSITY (AASHTO T-180)	6"	COQUINA SHELL (*) COMPACTED TO 98% MAX. DENSITY (AASHTO T-180)
12"	STABILIZED SUBGRADE (*) (F.B.V. 50) (98% COMPACTION AASHTO T-180) MIXED TO A HOMOGENEOUS MATERIAL	8"	STABILIZED SUBGRADE (*) (F.B.V. 50) (98% COMPACTION AASHTO T-180) MIXED TO A HOMOGENEOUS MATERIAL

EXISTING STORMWATER STRUCTURE SCHEDULE

STRUCTURE NUMBER	DESCRIPTION	TOP ELEV	N INV ELEV	S INV ELEV	E INV ELEV	W INV ELEV	MISCELLANEOUS
XD-01	CATCH BASIN	18.57				13.26	
XD-02	CATCH BASIN	17.17			13.95	13.90	
XD-03	CATCH BASIN	16.62	13.42	13.62			
XD-04	CATCH BASIN	17.39			12.87	12.78	
XD-05	CATCH BASIN	16.10	12.02	12.45	12.37		
XD-06	CATCH BASIN	17.28			8.81		

WET SEASON H_2O
13.00 (NGVD)
- 1.43 (CONVERSION FACTOR TO NAVD)
11.57 (NAVD)

25 YEAR/ 24 HOUR EVENT
MAX. = 15.82 (NGVD)
- 1.43 (CONVERSION FACTOR TO NAVD)
14.39 (NAVD)

GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 inch = 30 ft.

BASE-TO-BASE SPACING SHALL BE 0.65" MINIMUM BETWEEN DOMES.

PLAN VIEW

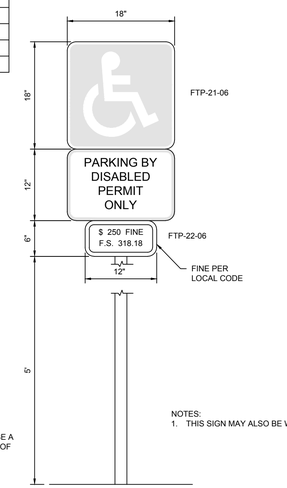
TOP WIDTH OF THE DOME SHALL BE A MINIMUM OF 50% AND A MAXIMUM OF 65% OF THE BASE DIAMETER. DOME HEIGHT TOLERANCE = ±.02" MAXIMUM DOME WIDTH = 1.4"

TRUNCATED DOME

TRUNCATED DOMES DETAIL

N.T.S

NOTE:
SIGNS INSTALLED WITHIN SIDEWALKS SHALL BE SET DIRECTLY IN THE CONCRETE AND SHALL UTILIZE A 3" DIAMETER SIGN POST PER THE SPECIFICATIONS.

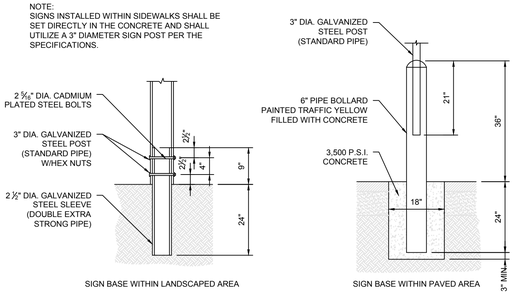


NOTES:
1. THIS SIGN MAY ALSO BE WALL MOUNTED

THESE SIGNS TYPICAL AT EACH ACCESSIBLE PARKING SPACE

ACCESSIBLE PARKING SIGN

N.T.S

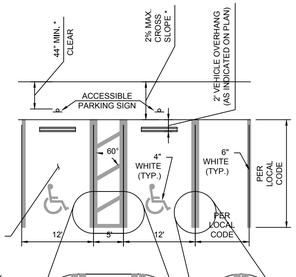


SIGN BASE WITHIN LANDSCAPED AREA

SIGN BASE WITHIN PAVED AREA

SIGN BASE

N.T.S



NOTE :
ONLY APPLIES IN SITUATIONS WITH ACCESSIBLE PATH LOCATED AT EDGE OF PARKING SPACES

TYPICAL ACCESSIBLE STRIPING

SCALE: N.T.S

GENERAL NOTE :
-THIS DETAIL IS FOR STRIPING DETAIL ONLY. PARKING SPACE CONFIGURATION SHOULD BE AS DEPICTED ON SITE PLAN

REVISION	MARK	DATE

DRAWING 16-191
DESIGNED C.K.B.
DRAWN KB
CHECKED J.W.S.
SCALE 1" = 30'
DATE 01/05/2017

SCHULKE, BITTLE & STODDARD, L.L.C.
CIVIL & STRUCTURAL ENGINEERING - LAND PLANNING - ENVIRONMENTAL PERMITTING
1717 INDIAN RIVER BLVD, SUITE 201 VERO BEACH, FLORIDA 32960
TEL 772.770-9622 FAX 772.770-9496 EMAIL info@sbsengineers.com

SITE PLAN
BUS

GIFFORD MIDDLE SCHOOL
BUS AND SOCCER FIELD
IMPROVEMENTS

ENGINEER CERTIFICATION
☐ JOSEPH W. SCHULKE FL. REG. NO. 47048
☐ JODAH B. BITTLE FL. REG. NO. 57396
☐ WILLIAM P. STODDARD FL. REG. NO. 57605

DATE:

SHEET
C-100

PROJECT NO.
16-191

SPECIFICATIONS - CLEARING/GRADING/PAVING/DRAINAGE/UTILITY CONSTRUCTION

GENERAL
IT IS INTENDED THAT THE FLORIDA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", LATEST REVISIONS, BE USED WHERE APPLICABLE FOR VARIOUS WORK, AND THAT WHERE SUCH WORDING THEREIN REFERS TO THE STATE OF FLORIDA AND ITS DEPARTMENT OF TRANSPORTATION AND PERSONNEL, SUCH WORDING IS INTENDED TO BE REPLACED WITH THAT WORDING WHICH WOULD PROVIDE PROPER TERMINOLOGY, THEREBY MAKING SUCH "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AS THE "STANDARD SPECIFICATIONS" FOR THIS PROJECT. IN ADDITION THE CONTRACTOR SHALL REFER TO THE "FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS", LATEST REVISIONS. IF WITHIN THAT PARTICULAR SECTION ANOTHER SECTION, ARTICLE OR PARAGRAPH IS REFERRED TO, IT SHALL BE A PART OF THE STANDARD SPECIFICATIONS, ALSO.
ALL WORK SHALL BE IN A WORKMANLIKE MANNER AND SHALL CONFORM WITH ALL APPLICABLE CITY, COUNTY, STATE, AND FEDERAL REGULATIONS AND/OR CODES. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND LICENSES REQUIRED TO BEGIN WORK.
THE CONTRACTOR SHALL GIVE THE ENGINEER 24 HOURS NOTICE PRIOR TO REQUESTING REQUIRED INSPECTIONS AND SHALL SUPPLY ALL EQUIPMENT NECESSARY TO PROPERLY TEST AND INSPECT THE COMPLETED WORK.
THE CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIALS FOR A PERIOD OF ONE YEAR FROM THE DATE OF PROJECT ACCEPTANCE, DURING WHICH ALL FAULTY CONSTRUCTION AND/OR MATERIALS SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.

CLEARING/GRUBBING
THE CONTRACTOR SHALL COMPLETELY REMOVE AND DISPOSE OF ALL BUILDING, TIMBER, BRUSH, STUMPS, ROOTS, RUBBISH, DEBRIS, INCLUDING SEPTIC TANK, BUILDING FOUNDATIONS, PIPES, ETC., WITHIN THE LIMITS OF THE ROADWAY CONSTRUCTION, ALL AREAS WHERE STRUCTURES WILL BE CONSTRUCTED INCLUDING PIPE CULVERTS, AND AS OTHERWISE DEPICTED IN THE PLANS, ALL IN ACCORDANCE WITH SECTION 110 OF THE STANDARD SPECIFICATIONS.

GRADING
THE CONTRACTOR SHALL PERFORM ALL GRADING NECESSARY TO ACHIEVE THE PROPOSED PLAN GRADES. FINAL DRESSING SHALL HAVE A TOLERANCE OF 0.1 FT +- FROM THE PLAN CROSS SECTIONS. GRADING SHALL INCLUDE ALL SHAPING, ROUGH GRADING, AND FINAL DRESSING REQUIRED FOR THE PROPOSED ROADWAY AND ROAD EMBANKMENTS WITHIN THE LIMITS DEPICTED IN THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE FINISHED GRADES UNTIL CONTRACT CLOSE-OUT, AND MUST RE-GRADE AS REQUIRED WHEN EROSION OR OTHER DISTURBANCES OCCUR. SEED/MULCH AND/OR SODDING SHALL BE INCORPORATED TO ASSIST IN THIS REGARD. HOWEVER, ANY LOSS OF SOD OR SEED/MULCH DURING THESE OCCURRENCES SHALL BE REPLACED AT THE CONTRACTORS EXPENSE.

SOD:
SOD SHALL BE ST. AUGUSTINE OR ARGENTINE BAHIA - AS NOTED ON THE LANDSCAPE PLANS OR CONTRACT DOCUMENTS. SOD SHALL BE WELL MATTED WITH ROOTS AND SHALL BE SUFFICIENTLY THICK TO SECURE A DENSE STAND OF LIVE GRASS. THE SOD SHALL BE LIVE, FRESH AND UNINJURED AT THE TIME OF PLANTING AND SHALL BE REASONABLY FREE OF WEEDS AND OTHER GRASSES. THE RECEIVING GROUND SURFACE SHALL BE GRADED TO PROPER ELEVATIONS, FREE OF LARGE VOIDS, ROOTS, WEEDS OR PATCHES OF EXISTING GRASS. UPON LAYING, THE ENTIRE AREA SHALL BE ROLLED THOROUGHLY. ALL SODDED AREAS ARE TO BE WATERED TO KEEP SOD ALIVE UNTIL THE CONTRACTOR IS CLOSED OUT, DEAD SOD SHALL BE REPLACED BY CONTRACTOR.

EMBANKMENT CONSTRUCTION
ROADWAY EMBANKMENT CONSTRUCTION SHALL CONSIST OF ALL THE EMBANKMENT CONSTRUCTION REQUIRED FOR THE PROPOSED ROADWAY AND/OR PARKING LOT, BUILDING PADS, DITCHES AND SWALES IN ACCORDANCE WITH SECTION 120 OF THE STANDARD SPECIFICATIONS. EMBANKMENTS SHALL BE CONSTRUCTED FROM MATERIAL CONTAINING NO MUCK, STUMPS, ROOTS,BRUSH,VEGETABLE MATTER, RUBBISH, OR OTHER DELETERIOUS MATERIALS THAT WILL NOT COMPACT TO A SUITABLE ENDURING ROAD BED. EXISTING EARTH SURFACES SHALL BE COMPACTED/PROOF ROLLED PRIOR TO PLACEMENT OF ANY EMBANKMENT MATERIAL.
MATERIAL: UNLESS OTHERWISE SPECIFIED, MATERIAL SHALL BE TYPE 2 MATERIAL*
COMPACTION: 12" COMPACTED LIFTS, MINIMUM 98% MAXIMUM DRY DENSITY (A.A.S.H.T.O. T-180).
- MIN. 100% MAX DENSITY ADJACENT TO STRUCTURES WITHIN PAVED AREAS
COMPENSATION: COMPENSATION FOR THE EMBANKMENT CONSTRUCTION SHALL BE MADE FULLY BY THE BID ITEMS FOR BORROW EXCAVATION (PER C.Y.), GRADING (PER L.F. OF ROADWAY OR PER ACRE OF SITE), AND REGULAR EXCAVATION (PER C.Y.) WHEN APPLICABLE.

EMBANKMENT AND BACKFILL MATERIAL:
TYPE 1: WELL GRADED CRUSHED STONE OR CRUSHED GRAVEL (ASTM C33-71A, GRADATION 67) - ¾" TO NO. 4 SIEVE.
TYPE 2: SANDY MATERIAL, AND MAY BE UNCLASSIFIED MATERIAL OBTAINED FROM CONTRACTOR'S EXCAVATIONS AND APPROVED BY THE ENGINEER. THIS MATERIAL SHALL BE FREE FROM WOOD, ROOTS, HUMUS, PEAT, MUCK, AND OTHER ORGANIC MATERIALS, AND SHALL NOT CONTAIN CLODS, STONES, MASONRY, RUBBLE OR THE LIKE GREATER THAN ½ INCHES IN DIAMETER.
TYPE 3: SELECT GRANULAR SAND MATERIAL, FREE OF ORGANICS WITH LESS THAN 3% FINES PASSING THE NO. 200 SIEVE.

STAKING
CONSTRUCTION STAKING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

STABILIZING
STABILIZED SUBGRADE SHALL BE CONSTRUCTED TO THE FLORIDA BEARING VALUE OR L.B.R. AS PER PLAN FOR THE DEPTH AND LIMITS SHOWN ON THE PLAN, AND IN ACCORDANCE WITH SECTION 160 OF THE STANDARD SPECIFICATIONS, ALL STABILIZED AREAS SHALL BE COMPACTED TO AT LEAST 98% OF THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180. ALL MATERIAL SHALL BE MIXED TO A HOMOGENEOUS MATERIAL.

BASE COURSE
THE BASE SHALL BE CONSTRUCTED OF EITHER LIMEROCK MATERIAL IN ACCORDANCE WITH SECTION 911 OR CEMENTED COQUINA SHELL MATERIAL IN ACCORDANCE WITH SECTION 915 OF THE STANDARD SPECIFICATIONS.
LIMEROCK BASE SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 200 AND CEMENTED COQUINA SHELL BASE SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 250 OF THE STANDARD SPECIFICATIONS. THE CONTRACTOR SHALL PROVIDE ROCK PIT CERTIFICATION FOR CEMENTED COQUINA SHELL MATERIAL. BASE SHALL BE COMPACTED TO AT LEAST 98% OF THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180 AND TO AN L.B.R. VALUE WHEN SPECIFIED ON PLANS. BASE SHALL BE APPROVED PRIOR TO PRIME COAT.

PRIME AND TACK COAT
PRIME AND TACK COATS FOR THE BASE COURSE SHALL BE IN ACCORDANCE WITH SECTION 300 OF THE STANDARD SPECIFICATIONS.

ASPHALT CONCRETE SURFACE COURSE (A.C.S.C.)
TYPE SP 9.5 & TYPE SP 12.5 A.C.S.C. SHALL BE CONSTRUCTED FOR THE DEPTH AND LIMITS SHOWN ON THE PLAN, IN ACCORDANCE WITH SECTIONS 320, 330, AND 334 OF THE STANDARD SPECIFICATIONS.

CEMENT CONCRETE PAVEMENT:
CONSTRUCT PORTLAND CEMENT CONCRETE (TYPE II, CLASS I) PAVEMENT IN ONE COURSE ON A PREPARED STABILIZED SUBGRADE IN ACCORDANCE WITH SECTIONS 346 AND 350. PROVIDE STEEL REINFORCEMENT WHEN SPECIFIED IN THE PLANS.

CURB
ALL CURB CONSTRUCTION SHALL BE IN ACCORDANCE WITH SECTION 520 OF THE STANDARD SPECIFICATIONS, AND IN ACCORDANCE WITH F.D.O.T. INDEX NO. 300. PROVIDE CONTRACTION JOINTS AT 10-FOOT O.C. MAXIMUM. TRANSITION ENDS OF CURB FROM FULL TO ZERO HEIGHTS IN 3-FEET. CURB CUT RAMPS SHALL BE IN ACCORDANCE WITH F.D.O.T. INDEX NO. 304.

TESTING
THE CONTRACTOR SHALL RETAIN THE SERVICES OF AN APPROVED INDEPENDENT TESTING LABORATORY TO CONDUCT ALL REQUIRED TESTS ON EMBANKMENT,SUBGRADE, BASE, PIPE BACKFILL AND SURFACE COURSE MATERIALS. TEST RESULTS MUST BE SUBMITTED PRIOR TO ANY REQUEST FOR PAYMENT ON THE ABOVE ITEMS.

THE SCHEDULE FOR TESTING THE ROAD/PAVEMENT AREAS CONSTRUCTION SHALL BE AS FOLLOWS:
A. EMBANKMENT: DENSITY TESTS SHALL BE TAKEN AT A MAXIMUM OF 5,000 SF INTERVALS FOR EACH 12" LIFTS CONSTRUCTED, AND AT ALL EXISTING PROOFROLLED EARTH SURFACES.
B. SUBGRADE: (1) F.B.V./ L.B.R. (PER PLAN) TEST SHALL BE TAKEN AT INTERVALS OF NOT MORE THAN 5000 SF / 10,000 SF OR CLOSER AS MIGHT BE NECESSARY IN THE EVENT OF VARIATIONS IN SUBSOIL CONDITIONS. (MIN. OF 3 / 1 PER JOB)
(2) DENSITY TESTS SHALL BE TAKEN AT INTERVALS OF NOT MORE THAN 5000 SF OR CLOSER AS MIGHT BE NECESSARY.
C. BASE: (1) F.B.V./ L.B.R. (PER PLAN) TEST SHALL BE TAKEN AT INTERVALS OF NOT MORE THAN 5000 SF / 10,000 SF OR CLOSER (MIN. OF 3 / 1 PER JOB)
(2) DENSITY TESTS SHALL BE TAKEN AT INTERVALS OF NOT MORE THAN 5000 SF OR CLOSER AS MIGHT BE NECESSARY.
D. PIPE BACKFILL: DENSITY TESTS SHALL BE TAKEN AT A MAXIMUM OF 50 FT. INTERVALS, 1' ABOVE PIPE, 1' BELOW GRADE, MIN., AND AT PIPE DEPTHS GREATER THAN 8 FT. AN ADDITIONAL TEST SHALL BE TAKEN AT MID DEPTH OF BACKFILL
E. STRUCTURES: A MINIMUM OF 1 DENSITY TEST SHALL BE PERFORMED IN THE STABILIZED SUBGRADE, AND WITHIN THE BACKFILL FOR EACH STRUCTURE, ADJACENT TO EACH STRUCTURE INSTALLED.
F. BUILDING PAD: AS SPECIFIED IN ARCHITECTURAL PLANS.
G. CURB PADS - DENSITY TEST SHALL BE TAKEN AT A MAXIMUM OF 500 FT. INTERVALS.

ALL TESTS SHALL BE PAID FOR BY THE CONTRACTOR.

CLEAN-UP
THE CONTRACTOR MUST PROVIDE CLEAN-UP OF EXCESS CONSTRUCTION MATERIAL UPON COMPLETION OF THE PROJECT. THE SITE MUST BE LEFT IN A NEAT, CLEAN, GRADED CONDITION.

DRAINAGE STRUCTURE SPECIFICATIONS
STORM INLETS AND MANHOLES SHALL BE CONSTRUCTED IN GENERAL ACCORDANCE WITH SECTION 425 OF THE STANDARD SPECIFICATIONS OF THE FLORIDA DEPARTMENT OF TRANSPORTATION. CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4000 PSI. ALL REINFORCING STEEL TO BE ASTM A 615-72 GRADE 40, FY = 40,000 PSI, AND SHALL BE HANDLED AND PLACED IN ACCORDANCE WITH ACI 318-71. PRECAST CONCRETE MANHOLES AND STORM INLETS MAY BE USED UPON THE ENGINEER'S APPROVAL OF THE MANUFACTURER'S SHOP DRAWINGS.

PRECAST INLETS/MANHOLES
ALL STORM INLETS SHALL BE PRECAST REINFORCED CONCRETE IN ACCORDANCE WITH APPLICABLE REFERENCES TO FDOT DRAWINGS IN THE "FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS", LATEST EDITION. TYPE II PORTLAND CEMENT SHALL BE USED IN THE CONCRETE MIX. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28-DAYS OF 4000 PSI.

CULVERT PIPES
INSTALL PIPE CULVERTS AND STORM SEWERS IN ACCORDANCE WITH SECTION 430 AND RELATED SECTIONS OF THE STANDARD SPECIFICATIONS AT THE LOCATIONS DEPICTED IN THE PLANS. FURNISH AND INSTALL SAND/TIGHT (WATERTIGHT TO 2 PSI) PIPE JOINTS AND PIPE/STRUCTURE JOINTS. ALL JOINTS SHALL BE GASKETED. REINFORCED CONCRETE PIPES (R.C.P.) SHALL BE IN ACCORDANCE WITH SECTION 941 OF THE STANDARD SPECIFICATIONS CORRUGATED ALUMINUM PIPE SHALL BE IN ACCORDANCE WITH SECTION 945 OF THE STANDARD SPECIFICATIONS. ADS (CORRUGATED POLYETHYLENE) SHALL BE IN ACCORDANCE WITH SECTION 948-2.3 OF THE STANDARD SPECIFICATIONS.

BACKFILLING OVER PIPE CULVERT AND STORM SEWERS SHALL BE COMPLETED IN MAXIMUM 4" LIFTS TO THE SPRINGLINE MAXIMUM 6" LIFTS, TO A POINT 12" ABOVE THE PIPE, AND IN 12" LIFTS BEYOND, COMPACTED TO A MINIMUM OF 98% OF MAXIMUM DRY DENSITY. TYPE 2 MATERIAL SHALL BE USED FOR ALL BACKFILL, UNLESS OTHERWISE SPECIFIED IN THE PLANS OR BY THE ENGINEER.

FURNISH AND INSTALL FILTER FABRIC JACKET AROUND ALL PIPE JOINTS AND THE JOINT BETWEEN THE PIPE AND THE STRUCTURE IN ACCORDANCE WITH DESIGN STANDARDS INDEX NUMBERS 201 & 280. USE FABRIC MEETING THE PHYSICAL REQUIREMENTS OF TYPE 3 SPECIFIED ON THE DESIGN STANDARDS, INDEX 199. THE FABRIC SHALL EXTEND A MINIMUM OF 12 INCHES (300 MM) BEYOND EACH SIDE OF THE JOINT OR BOTH EDGES OF THE COUPLING BAND. IF A COUPLING BAND IS USED. THE FABRIC SHALL HAVE A MINIMUM WIDTH OF 24 INCHES (600 MM) AND A LENGTH SUFFICIENT TO PROVIDE A MINIMUM OVERLAP OF 24 INCHES (600 MM). SECURE THE FILTER FABRIC JACKET AGAINST THE OUTSIDE OF THE PIPE BY METAL OR PLASTIC STRAPPING OR BY OTHER METHODS APPROVED THE THE ENGINEER.

CONCRETE
UNLESS OTHERWISE SPECIFIED OR INDICATED, ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28-DAYS OF 3000 PSI. ALL WORK SHALL COMPLY WITH THE CURRENT EDITION OF THE AMERICAN CONCRETE INSTITUTE (ACI) BUILDING CODE AND THE APPLICABLE BUILDING CODES HAVING JURISDICTION IN THE AREA.

RECORD DRAWINGS
CONTRACTOR SHALL KEEP AND MAINTAIN RECORD DRAWINGS ON THE PROJECT SITE AT ALL TIMES WHICH SHALL BE ANNOTATED BY THE CONTRACTOR DEPICTING ANY CHANGES MADE IN THE FIELD WHICH DIFFER FROM THE CONTRACT DRAWINGS. RECORD DRAWINGS SHALL INCLUDE, BUT ARE NOT LIMITED TO, HORIZONTAL LOCATION AND VERTICAL ELEVATION OF INVERT AND TOP OF CULVERTS, SEWER MANHOLES, DRAINAGE STRUCTURES, INLETS, UTILITY MAINS AND AS-BUILTS OF ALL LAKE BANKS, LOT/BLDG. PADS, SWALES, BERMS, CURBS, PAVEMENT, SIDEWALKS- DEPICTING HORIZONTAL LOCATION AND ELEVATIONS. CONTRACTOR SHALL SUBMIT COMPLETE AND FINAL RECORD DRAWINGS TO ENGINEER UPON COMPLETION OF PROJECT AND PRIOR TO FINAL INSPECTION AND FINAL PAYMENT.

THE CONTRACTOR SHALL BE REQUIRED TO HAVE A SURVEYOR PROVIDE CERTIFIED RECORD DRAWINGS/AS-BUILTS. THESE DRAWINGS SHALL BE PROVIDED IN AN ACAD ELECTRONIC FILE AS WELL AS ON SIGNED/SEALED HARD COPIES. THE AS-BUILTS MUST MEET I.R.C. UTILITY DEPT. CRITERIA FOR WATER MAIN AND SEWER AS-BUILTS, INCLUDING TIES TO STATE PLANE COORDINATES.

INSPECTION
MINIMUM CONSTRUCTION INSPECTION CHECKPOINTS
THE ENGINEER SHALL BE NOTIFIED 24 HOURS IN ADVANCE:
A. PRIOR TO ANY MAJOR DEVIATION FROM THE APPROVED PLANS.
B. PRIOR TO BACKFILLING ANY PIPE TRENCHES.
C. UPON COMPLETION OF SUBGRADE AND COMPACTION.
D. PRIOR TO POURING CURBS, SIDEWALKS OR OTHER FLATWORK.
E. UPON BEGINNING OF SPREADING OF ROCK BASE MATERIAL.
F. UPON COMPLETION OF GRADING AND COMPACTION OF BASE MATERIAL AND PRIOR TO PRIMING.
G. IMMEDIATELY PRIOR TO AND UPON APPLICATION OF A.C.S.C.
H. UPON COMPLETION OF CONSTRUCTION.

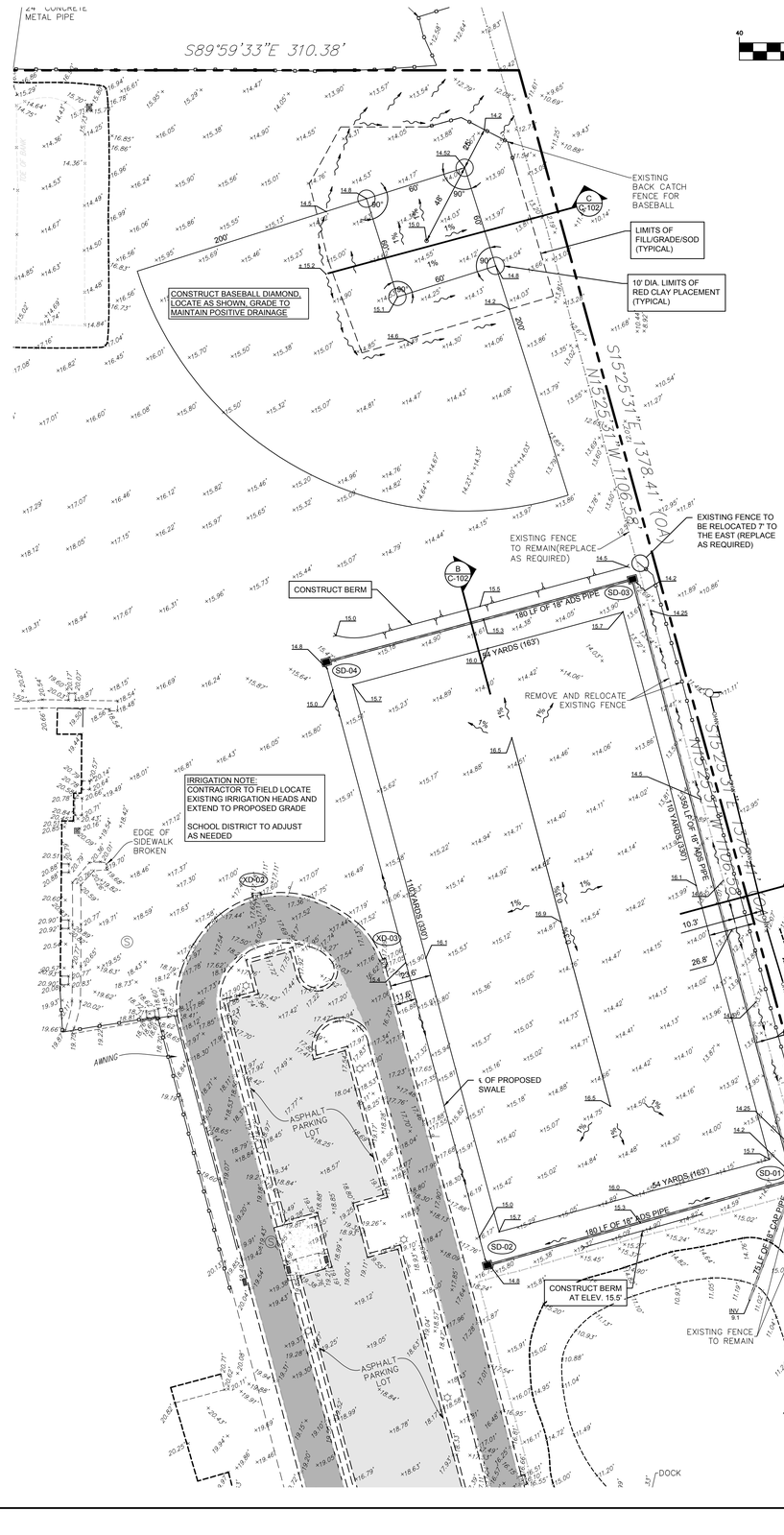
ACCEPTABLE TEST RESULTS MUST BE PROVIDED TO THE ENGINEER PRIOR TO COMMENCING SUCCESSIVE STEPS OF CONSTRUCTION, INCLUDING:
- PIPE BACKFILL AND EMBANKMENT DENSITIES PRIOR TO SUBGRADE PREPARATION.
- SUBGRADE TESTING PRIOR TO BASE PREPARATION, CONCRETE CURB OR SIDEWALK CONSTRUCTION.
- BASE TESTING PRIOR TO APPLICATION OF SURFACE COURSE.

WHERE REFERENCES ARE MADE TO ROADWAY CONSTRUCTION, IT IS INTENDED TO INDICATE CONSTRUCTION FOR ROADWAYS AND/OR PARKING LOTS/DRIVEWAYS.

TRAFFIC/PAVEMENT MARKING NOTES:
1. ALL PARKING SPACE MARKINGS AND ROADWAY MARKINGS ON PRIVATE DRIVEWAYS/STREETS WITH THE EXCEPTION TO THE HANDICAPPED PARKING SPACES SHALL BE MARKED IN REFLECTORIZED TRAFFIC PAINT AND BE IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2015, SECTION NO. 710.
2. ALL HANDICAPPED PARKING SPACES SHALL BE PROPERLY SIGNED AND MARKED IN ACCORDANCE WITH THE F.D.O.T.'S STANDARD INDEX NO. 17324S.
3. TRAFFIC FLOW ARROWS THRU PARKING AREAS ARE FOR DIRECTION AND ARE TO BE PAINTED.
4. STOP BARS SHALL BE 24" WIDE.
5. ALL SIGNS AND PAVEMENT MARKINGS SHALL BE IN WITH F.D.O.T. TRAFFIC DESIGN STANDARDS AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
6. ALL PAVEMENT MARKINGS FOR THE PROPOSED PUBLIC ROADWAYS AND ALL MARKINGS AT INTERSECTIONS OF PRIVATE ROADS/DRIVEWAYS WITH PUBLIC ROADS SHALL BE EXTRUDED TYPE ALKYD BASE THERMOPLASTIC AND SHALL BE IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION'S SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, SECTION NO. 711.
7. SPECIAL MARKINGS (CROSS WALK, STOP BARS, ROADWAY CONTINUOUS STRIPING, THRU ARROWS, PAVEMENT MARKINGS FOR TRAFFIC SEPARATORS, ETC. SHALL BE IN ACCORDANCE WITH THE F.D.O.T. INDEX NO. 17346.

SIGNS:
1. ALL SIGNS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
2. ALL SIGNS SHALL BE TYPE 'C' SINGLE COLUMN GROUND SIGNS IN ACCORDANCE WITH F.D.O.T. INDEX NO. 11860. WIND LOAD SHALL BE 150 M.P.H (INDIAN RIVER COUNTY).
3. ALL SIGNS PLACEMENT SHALL BE IN ACCORDANCE WITH F.D.O.T. INDEX NO. 17302.

ADDITIONAL SPECIFICATIONS FOR WORK WITHIN A PUBLIC R.O.W.:
1. ALL MATERIALS AND CONSTRUCTION WITHIN PUBLIC RIGHT-OF-WAY SHALL CONFORM TO THE FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS (LATEST EDITION), STANDARD SPECIFICATIONS (LATEST EDITION) AND THE SUPPLEMENTS THERETO.
2. THE APPLICANTS ENGINEER (LIAISON) FOR CONSTRUCTION INSPECTION SHALL INSURE THAT THE MAINTENANCE OF TRAFFIC PLAN (MOT)-FOR THE PROJECT IS IN ACCORDANCE WITH THE APPLICABLE FDOT INDEX NUMBERS (600 SERIES) AND THESE DOCUMENTS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (U.S DEPARTMENT OF TRANSPORTATION, FHWA). THE CONTRACTOR SHALL PROVIDE NECESSARY M.O.T. AS SPECIFIED IN THE PLANS AND PERMITS, AND AS DIRECTED IN THE FIELD BY THE ENGINEER OR PUBLIC WORKS/DOT REPRESENTATIVE.
3. AT THE END OF EACH WORK PERIOD, ANY DROP-OFF IN THE AREA ADJACENT TO THE TRAVEL WAY OF THE STATE ROAD SHALL BE BACKFILLED IN ACCORDANCE WITH STANDARD INDEX 600 OR SHALL BE OTHERWISE PROTECTED WITH TEMPORARY BARRIER WALL AT THE CONTRACTORS EXPENSE.
4. IF THE PERMITTED WORK IS ON A ROADWAY THAT HAS BEEN SELECTED AS A HURRICANE OR DISASTER EVACUATION ROUTE, THE APPLICANT, AT THE PRE-CONSTRUCTION CONFERENCE IS REQUIRED TO PRESENT, AS PART OF THE WORK PLAN, AN EMERGENCY FUNCTIONAL RESTORATION PLAN TO ADDRESS EVENTUALITIES SUCH AS HURRICANES.
5. THE CONTRACTOR MUST CALL THE APPROPRIATE COUNTY TRAFFIC ENGINEERING DIVISION, HAVING JURISDICTION OVER THE PROJECT AT LEAST 48 HOURS, BEFORE ANY EXCAVATION WITHIN THE FDOT RIGHT-OF-WAY TO DETERMINE THE LOCATION OF THE EXISTING TRAFFIC SIGNAL INTERCONNECT CABLE.
6. THE LOCATION OF EXISTING UTILITIES SHOWN ARE APPROXIMATE ONLY. THE EXACT LOCATION SHALL BE DETERMINED BY THE CONTRACTOR DURING CONSTRUCTION. RELOCATION OF UTILITIES SHALL BE COORDINATED WITH UTILITY COMPANIES AFTER IDENTIFICATION OF CONFLICT BY CONTRACTOR. CONTRACTOR WILL NOTIFY ENGINEER IN ADVANCE BEFORE ANY RELOCATION.
7. BEFORE PERMIT APPROVAL AND CONSTRUCTION OF THIS PROJECT, THE APPLICANT MUST CONTACT THE FLORIDA DEPARTMENT OF TRANSPORTATION LOCAL MAINTENANCE OFFICE TO SCHEDULE A PRE-CONSTRUCTION MEETING. THE TELEPHONE NUMBER IS 561-465-7396 OR 1-800-305-8236.
8. THE APPLICANT AT THE EARLIEST CONVENIENT TIME SHALL NOTIFY IN WRITING ALL RIGHT-OF-WAY USERS AFFECTED BY THE CONSTRUCTION OF THIS PROJECT.
9. ALL CURB CUT RAMPS MUST FACE IN THE DIRECTION OF PEDESTRIAN TRAVEL.
10. AT THE END OF EACH WORK PERIOD, ANY DROP-OFF IN THE AREA ADJACENT TO THE TRAVEL OF THE STATE ROAD SHALL BE BACKFILLED IN ACCORDANCE WITH STANDARD INDEX 600 OR SHALL BE OTHERWISE PROTECTED WITH TEMPORARY BARRIER WALL AT THE CONTRACTORS EXPENSE. IN ACCORDANCE WITH STANDARD INDEX 600 OR SHALL BE OTHERWISE PROTECTED WITH TEMPORARY BARRIER WALL AT THE CONTRACTORS EXPENSE.
11. ALL MOT LANE CLOSURE SIGNS SHALL BE COVERED WHEN LANES ARE NOT CLOSED. NO LANES ARE TO BE CLOSED BEFORE 9:00 AM AND ALL LANES ARE TO OPENED BY 4:00 PM.
12. PAVEMENT SPECIFICATION: MATCH EXISTING TYPE AND DEPTH OF ASPHALT TO 3 1/2" MAXIMUM., INCLUDING FRICTION COURSE.



GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

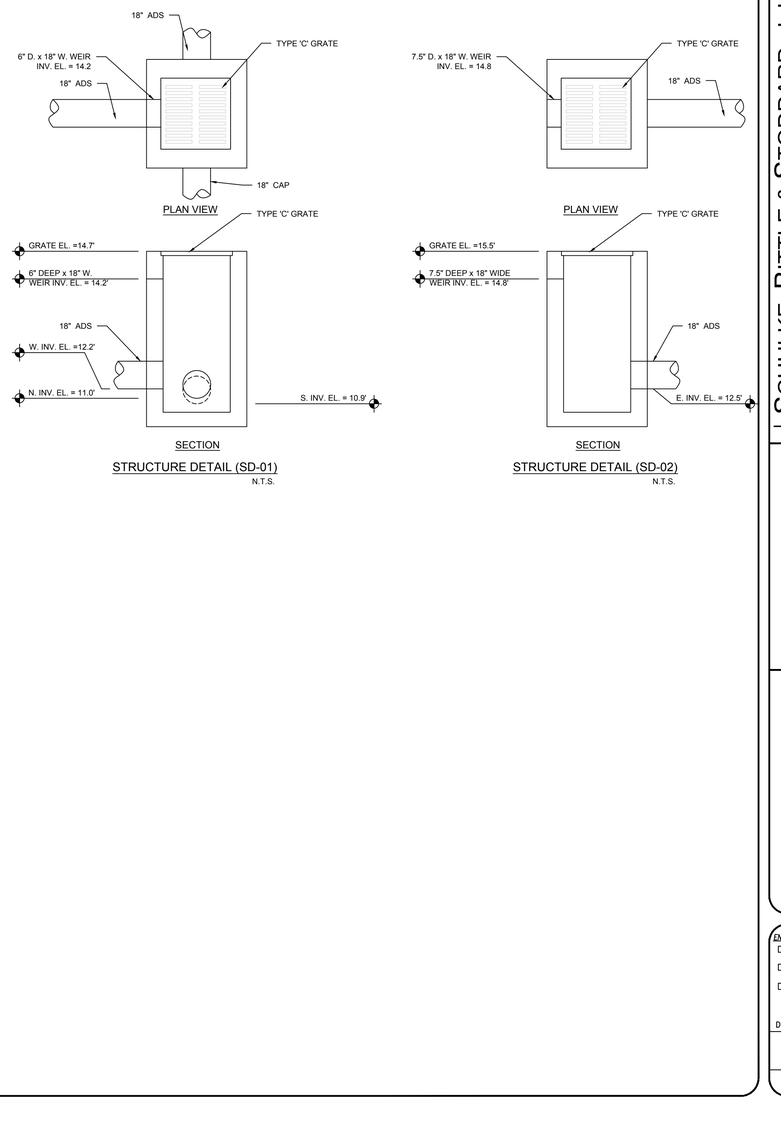
N

EXISTING STORMWATER STRUCTURE SCHEDULE

STRUCTURE NUMBER	DESCRIPTION	TOP ELEV	N INV ELEV	S INV ELEV	E INV ELEV	W INV ELEV	MISCELLANEOUS
XD-01	CATCH BASIN	18.57				13.26	
XD-02	CATCH BASIN	17.17			13.95	13.90	
XD-03	CATCH BASIN	16.62	13.42	13.62			
XD-04	CATCH BASIN	17.39			12.87	12.78	
XD-05	CATCH BASIN	16.10	12.02	12.45	12.37		
XD-06	CATCH BASIN	17.28			8.81		

PROPOSED STORMWATER STRUCTURE SCHEDULE

STRUCTURE NUMBER	DESCRIPTION	TOP ELEV	N INV ELEV	S INV ELEV	E INV ELEV	W INV ELEV	MISCELLANEOUS
SD-01	CATCH BASIN	14.70	11.00	10.90		12.2	6" D. x 18" W. NOTCH AT (N) INV. 14.20'
SD-02	CATCH BASIN	15.50			12.5	-	7.5" D. x 18" W. NOTCH AT (N) INV. 14.80'
SD-03	CATCH BASIN	14.20	-	11.6		11.70	
SD-04	CATCH BASIN	14.80			12.0	-	



STRUCTURE DETAIL (SD-01)
N.T.S.

STRUCTURE DETAIL (SD-02)
N.T.S.

REVISION	DATE

DRAWING	16-191
DESIGNED	C.K.B.
DRAWN	W.A.C.
CHECKED	J.W.S.
SCALE	1" = 40'
DATE	01/05/2017

SCHULKE, BITTLE & STODDARD, L.L.C.
CIVIL & STRUCTURAL ENGINEERING - LAND PLANNING - ENVIRONMENTAL PERMITTING
1717 INDIAN RIVER BLVD, SUITE 201, VERO BEACH, FLORIDA 32960
TEL 772.770-9622 FAX 772.770-9486 EMAIL info@sbsengineers.com

SITE PLAN SOCCER FIELD

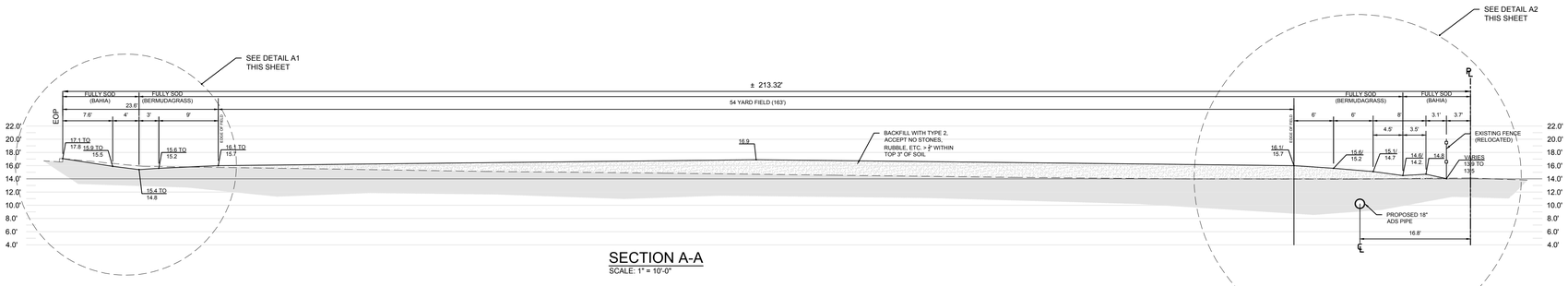
GIFFORD MIDDLE SCHOOL BUS AND SOCCER FIELD IMPROVEMENTS

ENGINEER CERTIFICATION
- ☐ JOSEPH W. SCHULKE FL. REG. NO. 47048
- ☐ JODAH B. BITTLE FL. REG. NO. 57396
- ☐ WILLIAM P. STODDARD FL. REG. NO. 57605

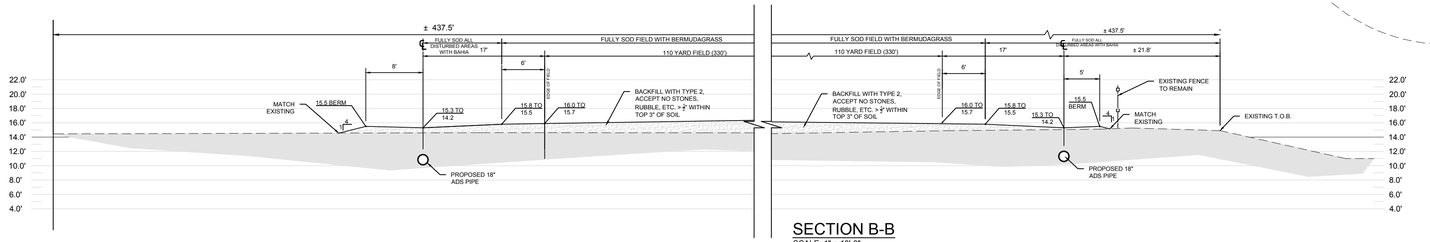
DATE:

SHEET
C-101

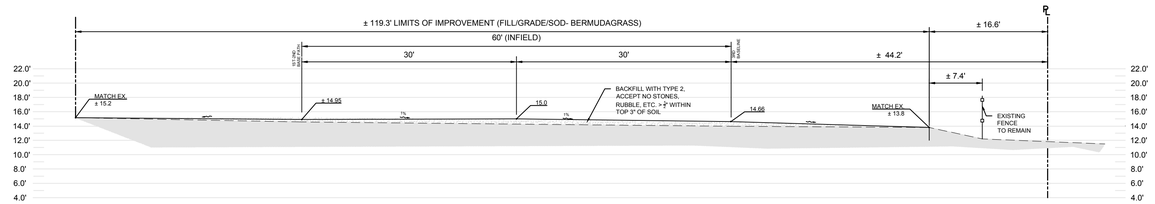
PROJECT NO.
16-191



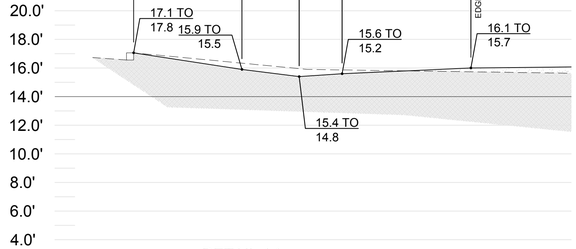
SECTION A-A
SCALE: 1" = 10'-0"



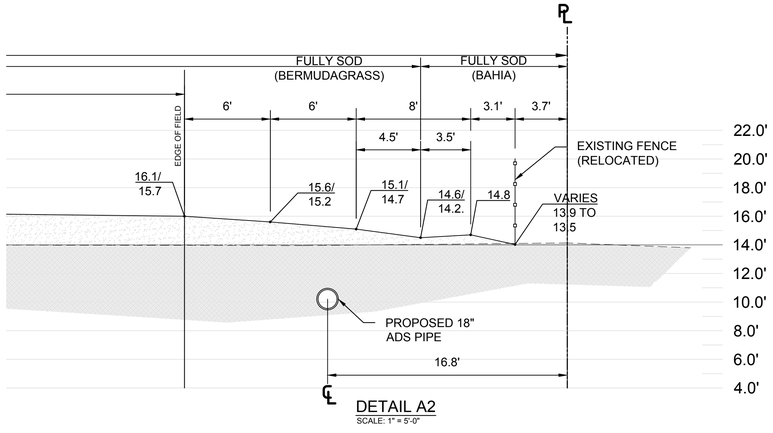
SECTION B-B
SCALE: 1" = 10'-0"



SECTION C-C
SCALE: 1" = 10'-0"



DETAIL A1
SCALE: 1" = 5'-0"



DETAIL A2
SCALE: 1" = 5'-0"

DATE	MARK	REVISION

DRAWING 16-191
DESIGNED C.K.B.
DRAWN W.A.C.
CHECKED J.W.S.
SCALE 1" = 40'
DATE 01/05/2017

SCHULKE, BITTLE & STODDARD, L.L.C.
CIVIL & STRUCTURAL ENGINEERING - LAND PLANNING - ENVIRONMENTAL PERMITTING
CERTIFICATE OF AUTHORIZATION NO. 27000
1717 INDIAN RIVER BLVD, SUITE 201 VERO BEACH, FLORIDA 32960
TEL 772.770-9622 FAX 772.770-9486 EMAIL info@sbsengineers.com

GIFFORD MIDDLE SCHOOL BUS AND SOCCER FIELD IMPROVEMENTS

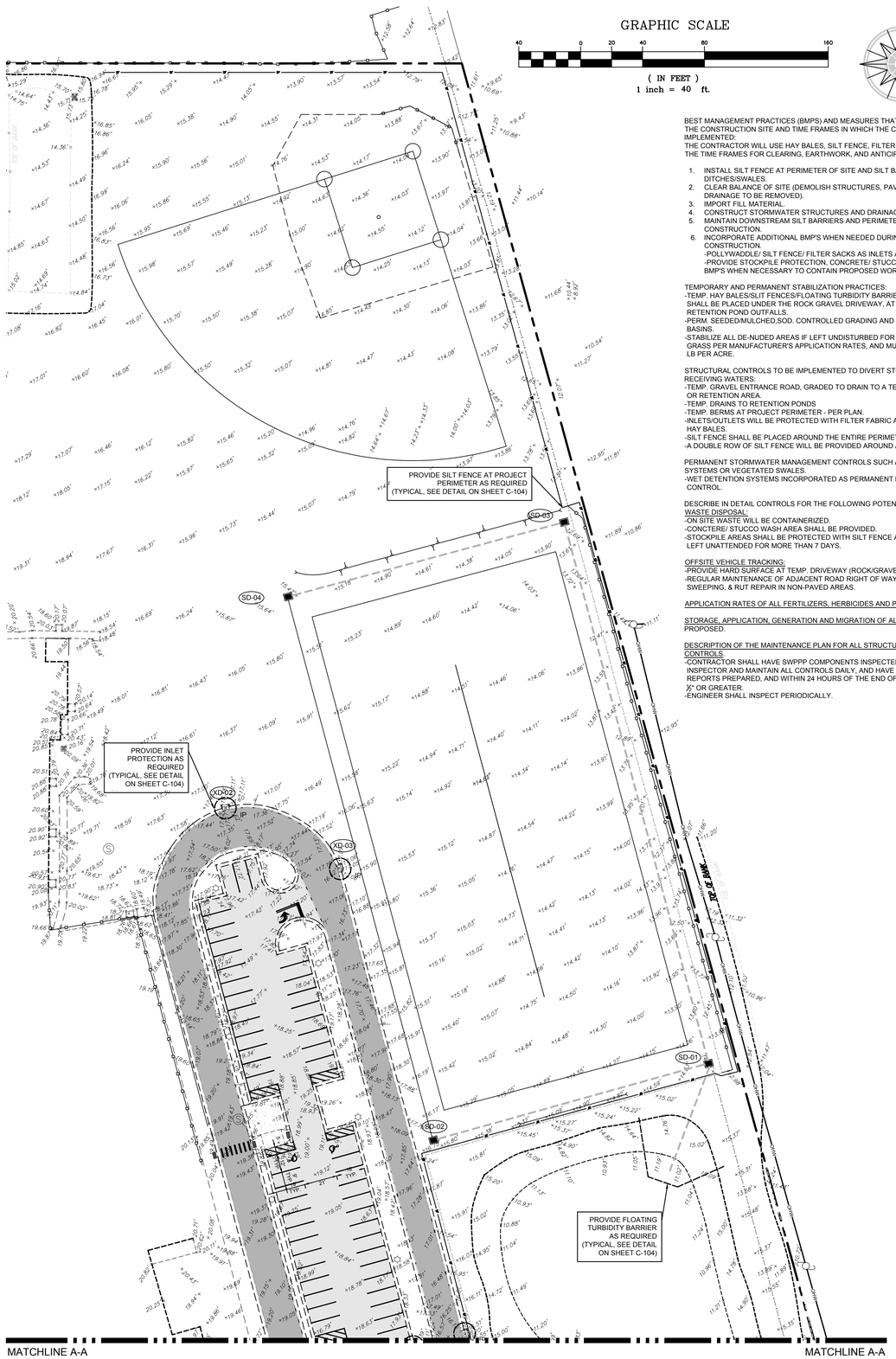
SECTIONS

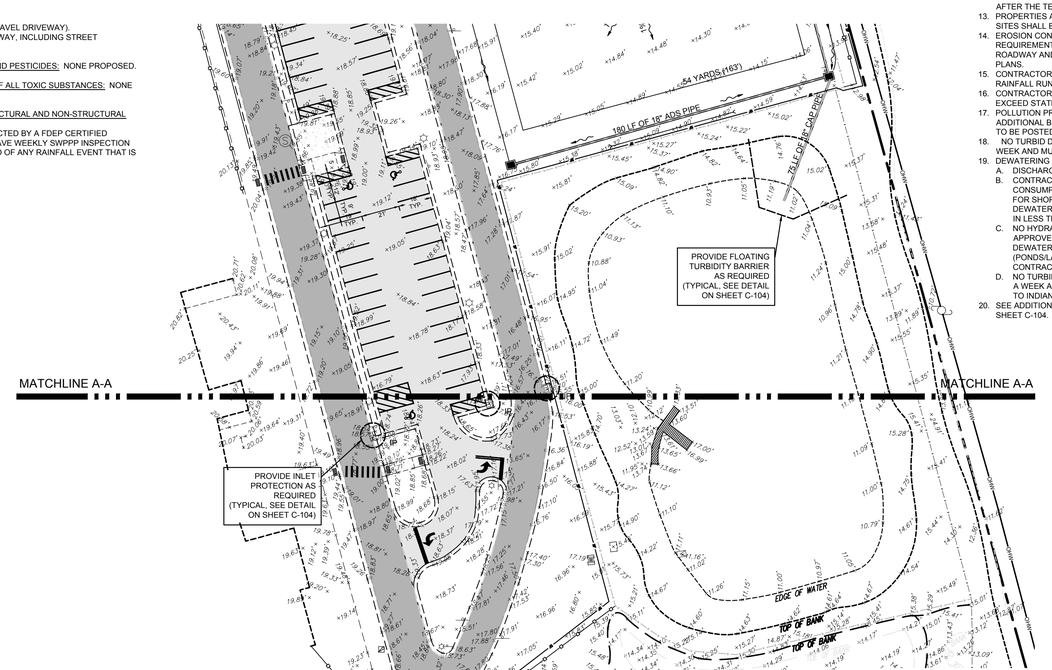
ENGINEER CERTIFICATION
☐ JOSEPH W. SCHULKE FL. REG. NO. 47048
☐ JOSIAH B. BITTLE FL. REG. NO. 57396
☐ WILLIAM P. STODDARD FL. REG. NO. 57605

DATE:

SHEET C-102

PROJECT NO. 16-191





BEST MANAGEMENT PRACTICES (BMPS) AND MEASURES THAT WILL BE IMPLEMENTED AT THE CONSTRUCTION SITE AND TIME FRAMES IN WHICH THE CONTROLS WILL BE IMPLEMENTED:
THE CONTRACTOR WILL USE HAY BALES, SILT FENCE, FILTER BARRIERS, AND OTHER BMPS. THE TIME FRAMES FOR CLEARING, EARTHWORK, AND ANTICIPATED BMP'S ARE:

1. INSTALL SILT FENCE AT PERIMETER OF SITE AND SILT BARRIERS AT DOWNSTREAM DITCHES/SWALES.
2. CLEAR BALANCE OF SITE (DEMOLISH STRUCTURES, PAVEMENT, UTILITIES AND DRAINAGE TO BE REMOVED).
3. IMPORT FILL MATERIAL.
4. CONSTRUCT STORMWATER STRUCTURES AND DRAINAGE PIPING, WHERE POSSIBLE.
5. MAINTAIN DOWNSTREAM SILT BARRIERS AND PERIMETER SILT FENCE, DURING CONSTRUCTION.
6. INCORPORATE ADDITIONAL BMP'S WHEN NEEDED DURING THE COURSE OF CONSTRUCTION.
   -POLLYWADDLE/ SILT FENCE/ FILTER SACKS AS INLETS AND PIPES ARE INSTALLED.
   -PROVIDE STOCKPILE PROTECTION, CONCRETE/ STUCCO WASH AREAS, AND OTHER BMP'S WHEN NECESSARY TO CONTAIN PROPOSED WORK.

TEMPORARY AND PERMANENT STABILIZATION PRACTICES:
-TEMP. HAY BALES/SLIT FENCES/FLOATING TURBIDITY BARRIERS PER PLAN. FILTER FABRIC SHALL BE PLACED UNDER THE ROCK GRAVEL DRIVEWAY, AT ALL SWALE OUTFALLS, AND RETENTION POND OUTFALLS.
-PERM. SEEDED/MULCHED,SOD. CONTROLLED GRADING AND DRAINAGE TO DETENTION BASINS.
-STABILIZE ALL DE-NUDED AREAS IF LEFT UNDISTURBED FOR MORE THAN 7 DAYS - USE RYE GRASS PER MANUFACTURER'S APPLICATION RATES, AND MULCHED WITH STRAW AT 4000 LB PER ACRE.

STRUCTURAL CONTROLS TO BE IMPLEMENTED TO DIVERT STORMWATER FLOW FROM RECEIVING WATERS:
-TEMP. GRAVEL ENTRANCE ROAD, GRADED TO DRAIN TO A TEMPORARY SEDIMENT SWALE OR RETENTION AREA.
-TEMP. DRAINS TO RETENTION PONDS
-TEMP. BERMS AT PROJECT PERIMETER - PER PLAN.
-INLETS/OUTLETS WILL BE PROTECTED WITH FILTER FABRIC AND PROPERLY INSTALLED HAY BALES.
-SILT FENCE SHALL BE PLACED AROUND THE ENTIRE PERIMETER OF DISTURBED AREAS.
-A DOUBLE ROW OF SILT FENCE WILL BE PROVIDED AROUND ALL STOCK PILE AREAS.

PERMANENT STORMWATER MANAGEMENT CONTROLS SUCH AS, DETENTION OR RETENTION SYSTEMS OR VEGETATED SWALES.
-WET DETENTION SYSTEMS INCORPORATED AS PERMANENT BMP FOR WATER QUALITY CONTROL.

DESCRIBE IN DETAIL CONTROLS FOR THE FOLLOWING POTENTIAL POLLUTANTS:
WASTE DISPOSAL:
-ON SITE WASTE WILL BE CONTAINERIZED.
-CONCTERE/ STUCCO WASH AREA SHALL BE PROVIDED.
-STOCKPILE AREAS SHALL BE PROTECTED WITH SILT FENCE AND STABILIZED/ SEEDED IF LEFT UNATTENDED FOR MORE THAN 7 DAYS.

OFFSITE VEHICLE TRACKING:
-PROVIDE HARD SURFACE AT TEMP. DRIVEWAY (ROCK/GRAVEL DRIVEWAY).
-REGULAR MAINTENANCE OF ADJACENT ROAD RIGHT OF WAY, INCLUDING STREET SWEEPING, & RUT REPAIR IN NON-PAVED AREAS.

APPLICATION RATES OF ALL FERTILIZERS, HERBICIDES AND PESTICIDES: NONE PROPOSED.

STORAGE, APPLICATION, GENERATION AND MIGRATION OF ALL TOXIC SUBSTANCES: NONE PROPOSED.

DESCRIPTION OF THE MAINTENANCE PLAN FOR ALL STRUCTURAL AND NON-STRUCTURAL CONTROLS:
-CONTRACTOR SHALL HAVE SWPPP COMPONENTS INSPECTED BY A FDEP CERTIFIED INSPECTOR AND MAINTAIN ALL CONTROLS DAILY, AND HAVE WEEKLY SWPPP INSPECTION REPORTS PREPARED, AND WITHIN 24 HOURS OF THE END OF ANY RAINFALL EVENT THAT IS ½" OR GREATER.
-ENGINEER SHALL INSPECT PERIODICALLY.

A SITE PLAN MUST BE DEVELOPED AND MUST CONTAIN, AT A MINIMUM, THE FOLLOWING INFORMATION:
1. DRAINAGE PATTERNS,- SEE SURVEY AND DRAINAGE PLAN, SHEETS C-500 THRU C-503.
2. APPROXIMATE SLOPES AFTER MAJOR GRADING ACTIVITIES - SEE SHEETS C-500 THRU C-503.
3. AREAS OF SOIL DISTURBANCE, - SEE SHEETS C-200, AND THIS SHEET.
4. OUTLINE ALL AREAS THAT ARE NOT TO BE DISTURBED - THIS SHEET.
5. LOCATION OF ALL MAJOR STRUCTURAL AND NON-STRUCTURAL CONTROLS,-THIS SHEET.
6. THE LOCATION OF EXPECTED STABILIZATION PRACTICES, -THIS SHEET.
7. WETLANDS AND SURFACE WATERS - SHEETS C-200 AND THIS SHEET.
8. LOCATIONS WHERE STORMWATER MAY DISCHARGE TO A SURFACE WATER OR MS4. SEE SHEET C-500 AND THIS SHEET.

DESCRIBE THE NATURE OF THE CONSTRUCTION ACTIVITY:
DEMOLITION AND REMOVE ALL EXISTING BUILDINGS, IMPROVEMENTS AND UTILITIES FOR NEW SUB-DIVISION AND ROADWAY CONSTRUCTION.

DESCRIBE THE INTENDED SEQUENCE OF MAJOR SOIL DISTURBING ACTIVITIES:
1. SITE PREPARATION AND STABILIZE CONSTRUCTION ENTRANCE.
2. INSTALL SILT FENCE AROUND PERIMETER OF SITE. INSTALL TURBIDITY BARRIERS AT ALL OUTFALL LOCATIONS. CLEAR LAND, DEMOLISH EXISTING.
3. RELOCATE TREES - PROVIDE TREE PROTECTION BARRIERS.
4. CLEAR LAND, DEMO BUILDINGS, PAVEMENT AND UNDERGROUND INFRASTRUCTURE.

TOTAL AREA OF THE SITE: 6.02 ACRES
TOTAL AREA OF THE SITE TO BE DISTURBED THIS PHASE: 6.02 ACRES

EXISTING DATA DESCRIBING THE SOIL OR QUALITY OF ANY STORMWATER DISCHARGE:
SEE SOIL BORINGS BY OTHERS. NO DISCHARGE FROM DISTURBED AREAS IS ANTICIPATED.

DRAINAGE AREA SIZE FOR EACH DISCHARGE POINT: 6.02 ACRES

LATITUDE AND LONGITUDE OF EACH DISCHARGE POINT RECEIVING WATER OR MS4 FOR EACH DISCHARGE POINT: N/A

PLAN PREPARATION:
1. THIS PLAN ORIGINALLY PREPARED BY THE OWNER'S ENGINEER. THIS PLAN WILL BE MADE AVAILABLE TO CONTRACTOR TO EDIT, CHANGE, MODIFY, AS IT DEEMS NECESSARY FOR COMPLIANCE WITH FDEP REGULATIONS, PERMIT CONDITIONS, AND AS REQUIRED FOR CONTRACTOR TO SIGN THE CERTIFICATION BELOW.
2. THE FOLLOWING CERTIFICATION SHALL BE SIGNED BY THE ENTITY (CONTRACTOR) RESPONSIBLE FOR SWPP PLAN IMPLEMENTATION:
"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."*

BY: _____ DATE: _____

SIGNATURE _____

GENERAL NOTES:
1. THE LOCATION OF EXISTING UTILITIES SHOWN ARE APPROXIMATE ONLY; THE EXACT LOCATION SHALL BE DETERMINED BY THE CONTRACTOR DURING CONSTRUCTION. RELOCATION OF UTILITIES SHALL BE COORDINATED WITH UTILITY COMPANIES AFTER IDENTIFICATION OF CONFLICT BY CONTRACTOR. CONTRACTOR SHALL NOTIFY ENGINEER IN ADVANCE BEFORE ANY RELOCATION.
2. THE UTILITY COMPANIES SHALL BE NOTIFIED BY THE CONTRACTOR 48 HOURS IN ADVANCE OF ANY EXCAVATION INVOLVING THEIR UTILITIES SO THAT COMPANY REPRESENTATIVES CAN BE PRESENT.
3. PRIOR TO COMMENCEMENT OF ANY EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH FLORIDA STATUTE 553.851 FOR THE PROTECTION OF UNDERGROUND GAS PIPELINES.
4. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES TO REMAIN IN PLACE.
5. THE CONTRACTOR SHALL CALL SUNSHINE (1-800-432-4770) FOR FIELD LOCATIONS 48 HOURS BEFORE DIGGING NEAR UNDERGROUND UTILITIES.
6. KNOWN UTILITIES:
   AT&T
   COMCAST CABLE
   FPL
   INDIAN RIVER COUNTY DEPT. UTILITY SERVICES

FLOOD ELEVATION
THE PARCEL OF LAND SHOWN HEREON APPEARS TO BE IN FLOOD ZONE X PER FLOOD INSURANCE RATE MAP #12061C0241 H, DATED DECEMBER 4, 2012.

ELEVATION DATA
THE ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988. THE PRIMARY BENCHMARK IS INDIAN RIVER COUNTY BENCHMARK #470009 ELEVATION 19.94' NAVD.

ARCHAEOLOGICAL:
IF PREHISTORIC OR HISTORIC ARTIFACTS, SUCH AS POTTERY OR CERAMICS, STONE TOOLS, OR METAL IMPLEMENTS, OR ANY OTHER PHYSICAL REMAINS THAT COULD BE ASSOCIATED WITH THE NATIVE AMERICAN CULTURES, OR EARLY COLONIAL OR AMERICAN SETTLEMENT ARE ENCOUNTERED AT ANY TIME WITHIN THE PROJECT SITE AREA, THE PERMITTED PROJECT SHOULD CEASE ALL ACTIVITIES INVOLVING SUBSURFACE DISTURBANCE IN THE IMMEDIATE VICINITY OF SUCH DISCOVERIES. THE PERMITEE, OR OTHER DESIGNEE, SHOULD CONTACT THE FLORIDA DEPARTMENT OF STATE, DIVISION OF HISTORICAL RESOURCES, REVIEW AND COMPLIANCE SECTION AT (850) 245-6333 OR (800) 847-7278, AS WELL AS THE APPROPRIATE PERMITTING AGENCY OFFICE. PROJECT ACTIVITIES SHOULD NOT RESUME WITHOUT VERBAL AND/OR WRITTEN AUTHORIZATION FROM THE DIVISION OF HISTORICAL RESOURCES. IN THE EVENT THAT UNMARKED HUMAN REMAINS ARE ENCOUNTERED DURING PERMITTED ACTIVITIES, ALL WORK SHALL STOP IMMEDIATELY AND THE PROPER AUTHORITIES NOTIFIED IN ACCORDANCE WITH SECTION 872.05, FLORIDA STATUTES.

EROSION CONTROL NOTES
1. SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UP-SLOPE LAND DISTURBANCE TAKES PLACE.
2. ALL SEDIMENT CONTROL MEASURES ARE TO BE ADJUSTED TO MEET FIELD CONDITIONS AT THE TIME OF CONSTRUCTION AND BE CONSTRUCTED PRIOR TO ANY GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIAL ON BALANCE OF SITE. PERIMETER SEDIMENT BARRIERS SHALL BE CONSTRUCTED TO PREVENT SEDIMENT OR TRASH FROM FLOWING OR FLOATING ON TO ADJACENT PROPERTIES.
3. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN (7) DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN (7) DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN UNDISTURBED FOR LONGER THAN 30 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT UNDISTURBED FOR MORE THAN ONE YEAR.
4. DURING CONSTRUCTION OF THE PROJECT, SOIL STOCK PILES SHALL BE STABILIZED, COVERED OR CONTAINED WITH SEDIMENT TRAPPING MEASURES. THE CONTRACTOR IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.
5. A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED.
6. AFTER ANY SIGNIFICANT RAINFALL, (½" OR GREATER) SEDIMENT CONTROL STRUCTURES WILL BE INSPECTED FOR INTEGRITY, ANY DAMAGED DEVICES SHALL BE CORRECTED IMMEDIATELY.
7. CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME, SLOPE DRAIN STRUCTURE OR APPROVED CONTROL
8. SEDIMENT WILL BE PREVENTED FROM ENTERING ANY STORM WATER SYSTEM, DITCH OR CHANNEL. ALL STORM WATER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.
9. WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENCROACHMENT, CONTROL SEDIMENT TRANSPORT AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION.
10. PERIODIC INSPECTION AND MAINTENANCE OF ALL SEDIMENT CONTROL STRUCTURES MUST BE PROVIDED TO ENSURE INTENDED PURPOSE IS ACCOMPLISHED. THE DEVELOPER, OWNER AND/OR CONTRACTOR SHALL BE CONTINUALLY RESPONSIBLE FOR ALL SEDIMENT CONTROLS. SEDIMENT CONTROL MEASURES SHALL BE IN WORKING CONDITION AT THE END OF EACH WORKING DAY.
11. WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED PUBLIC ROADS,PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY TRACKING ONTO THE PAVED SURFACE. WHERE SEDIMENT IS TRANSPORTED ONTO A PUBLIC ROAD SURFACE, THE ROAD SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER. THIS PROVISION SHALL APPLY TO INDIVIDUAL SUBDIVISION LOTS AS WELL AS TO LARGER LAND-DISTURBING ACTIVITIES.
12. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED.
13. PROPERTIES AND WATERWAYS DOWNSTREAM FROM CONSTRUCTION SITES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION AND EROSION.
14. EROSION CONTROL DESIGN AND CONSTRUCTION SHALL FOLLOW THE REQUIREMENTS IN INDEX NUMBERS 101, 102 AND 103 OF F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS, IN ADDITION TO THESE PLANS.
15. CONTRACTOR IS RESPONSIBLE FOR ALL SURFACE WATER DISCHARGES, RAINFALL RUN-OFF OR DEWATERING ACTIVITIES.
16. CONTRACTOR MUST INCORPORATE ALL BMP'S NECESSARY TO MEET OR EXCEED STATE WATER QUALITY REQUIREMENTS.
17. POLLUTION PREVENTION PLAN IS A MINIMUM GUIDELINE ONLY. ADDITIONAL BMP'S MAYBE NECESSARY AT CONTRACTOR'S EXPENSE. NOI TO BE POSTED ON SITE.
18. NO TURBID DISCHARGE, TURBIDITY READINGS ARE REQUIRED ONCE A WEEK AND MUST BE REPORTED TO THE PROJECT ENGINEER.
19. DEWATERING ACTIVITIES:
   A. DISCHARGE MUST NOT EXCEED STATE WATER QUALITY STANDARDS.
   B. CONTRACTOR MUST HAVE OR OBTAIN A TRANSFERABLE SJRWMD CONSUMPTIVE USE PERMIT KNOWN AS A "NOTICED GENERAL PERMIT FOR SHORT TERM CONSTRUCTION DE-WATERING", UNLESS DEWATERING ACTIVITIES WILL RESULT IN LESS THAN 300,000 GPD FOR 30 DAYS OR LESS.
   C. NO HYDRAULIC PUMPS MAY BE USED FOR DEWATERING UNLESS APPROVED BY THE WATER MANAGEMENT DISTRICT FOR THAT AREA. DEWATERING EXISTING STORMWATER RETENTION AREAS (PONDS/LAKES) MAY BE EXEMPT FROM THIS CONDITION. CONTRACTOR TO CONFIRM WITH SJRWMD.
   D. NO TURBID DISCHARGE. TURBIDITY READINGS ARE REQUIRED ONCE A WEEK AND MUST BE REPORTED TO THE PROJECT ENGINEER AND TO INDIAN RIVER COUNTY.
20. SEE ADDITIONAL DETAILS, SPECIFICATIONS AND REQUIREMENTS ON SHEET C-104.

NOTES:
1. THIS PLAN (SHEETS C-1030 & C-104), COPY OF FDEP NOI (STATE OF FLORIDA GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES) AND ALL REQUIRED INSPECTION REPORTS, TESTS, AND ALL OTHER DOCUMENTATION SHALL BE KEPT AT THE PROJECT SITE.
2. THE FOLLOWING CERTIFICATION SHALL BE COMPLETED BY AL CONTRACTORS/ SUB-CONTRACTORS RESPONSIBLE FOR ANY PORTION OF THE IMPLEMENTATION OF THE S.W.P.P.P.:
   CERTIFICATION:
   "I CERTIFY UNDER THE PENALTY OF LAW THAT I UNDERSTAND AND SHALL COMPLY WITH, THE TERMS AND CONDITIONS OF THE STATE OF FLORIDA GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES AND THIS STORMWATER POLLUTION PREVENTION PLAN PREPARED THEREUNDER."

SWPPP DESCRIPTION OF WORK/ RESPONSIBILITY	NAME TITLE	CONTRACTOR OR SUB CONTRACTOR (NAME, ADDRESS, PHONE)	NAME/SIGNATURE TO CERTIFICATION	DATE
			BY: SIGNATURE	
			BY: SIGNATURE	
			BY: SIGNATURE	

NO.	REVISION	DATE

DRAWING 16-191
DESIGNED G.K.B.
DRAWN W.A.C.
CHECKED J.W.S.
SCALE 1"=40'
DATE 01/05/2017

SCHULKE, BITTLE & STODDARD, L.L.C.
CIVIL & STRUCTURAL ENGINEERING - LAND PLANNING - ENVIRONMENTAL PERMITTING
1717 INDIAN RIVER BLVD, SUITE 201 VERO BEACH, FLORIDA 32960
TEL 772 / 770-9622 FAX 772 / 770-9496 EMAIL info@sbsengineers.com

STORMWATER POLLUTION PROTECTION PLAN

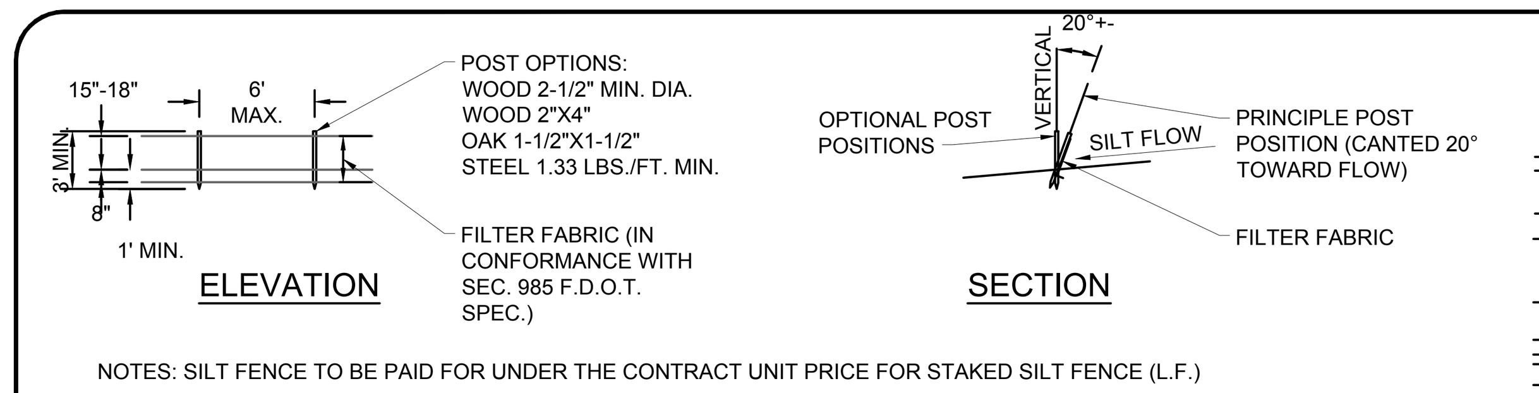
GIFFORD MIDDLE SCHOOL BUS AND SOCCER FIELD IMPROVEMENTS

ENGINEER CERTIFICATION
☐ JOSEPH W. SCHULKE FL. REG. NO. 47048
☐ JODAH B. BITTLE FL. REG. NO. 57396
☐ WILLIAM P. STODDARD FL. REG. NO. 57605

DATE:

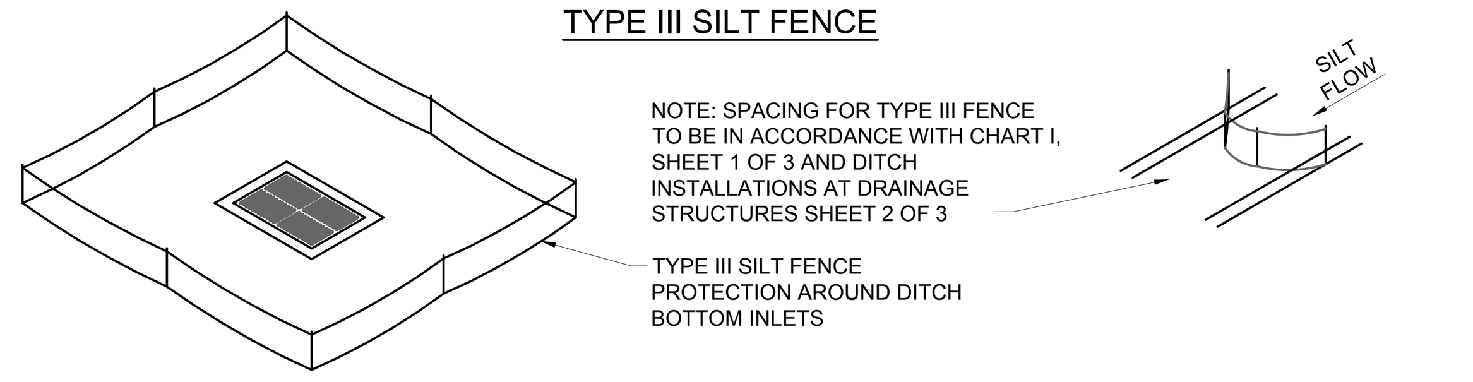
SHEET C-103

PROJECT NO. 16-191



NOTES: SILT FENCE TO BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR STAKED SILT FENCE (L.F.)

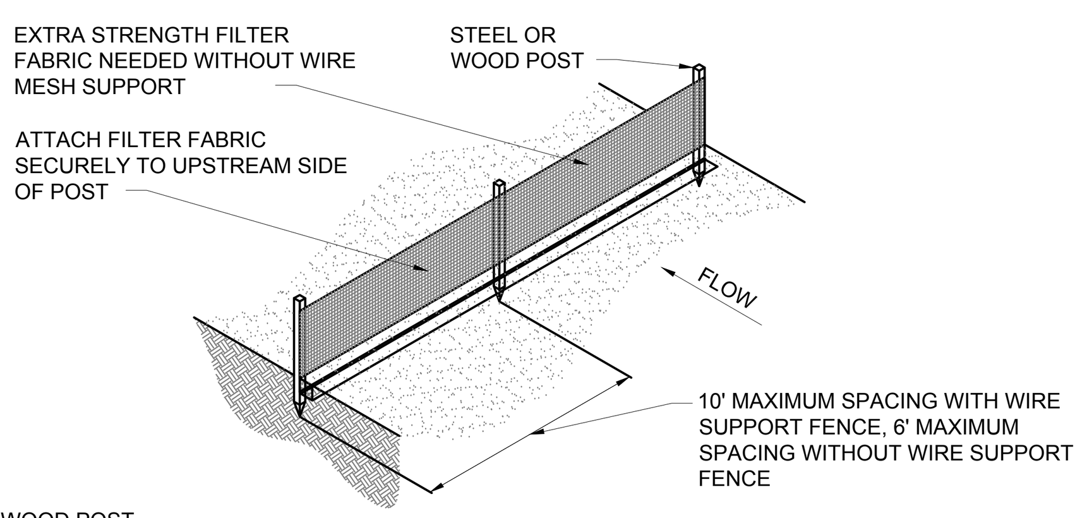
TYPE III SILT FENCE



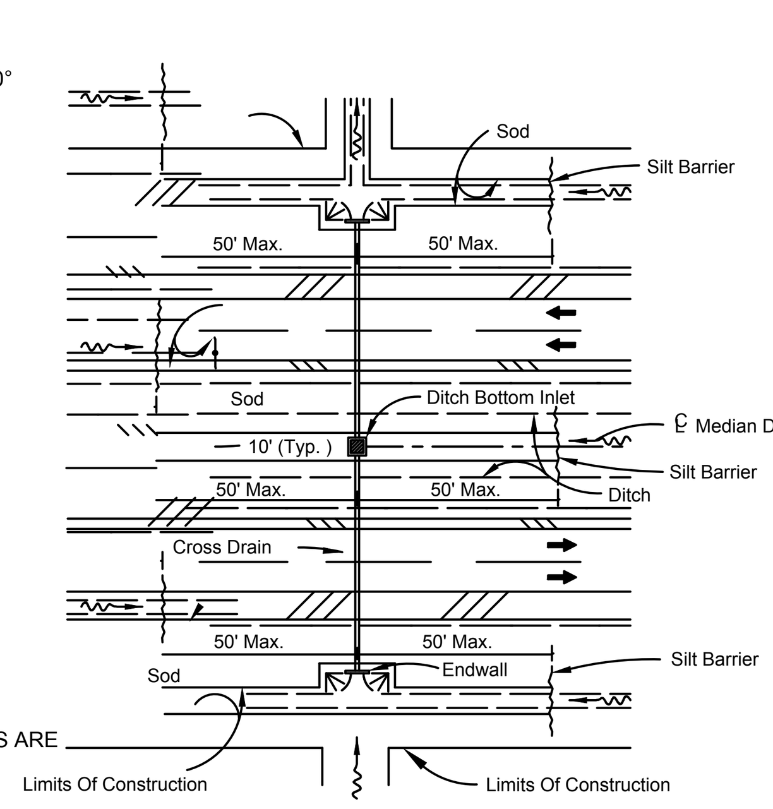
DO NOT DEPLOY IN A MANNER THAT SILT FENCES WILL ACT AS A DAM ACROSS PERMANENT FLOWING WATERCOURSES. SILT FENCES ARE TO BE USED AT UPLAND LOCATIONS AND TURBIDITY BARRIERS USED AT PERMANENT BODIES OF WATER.

SILT FENCE APPLICATIONS-N.T.S.

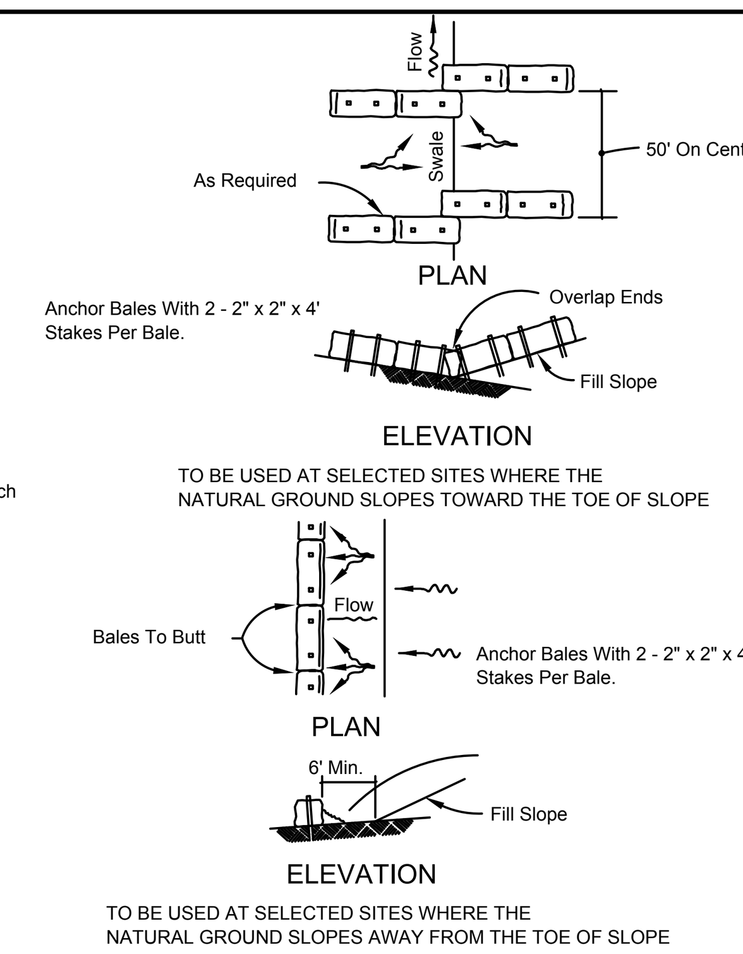
NOTES:
1. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.
2. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY. 9" MAXIMUM RECOMMENDED STORAGE HEIGHT.
3. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.



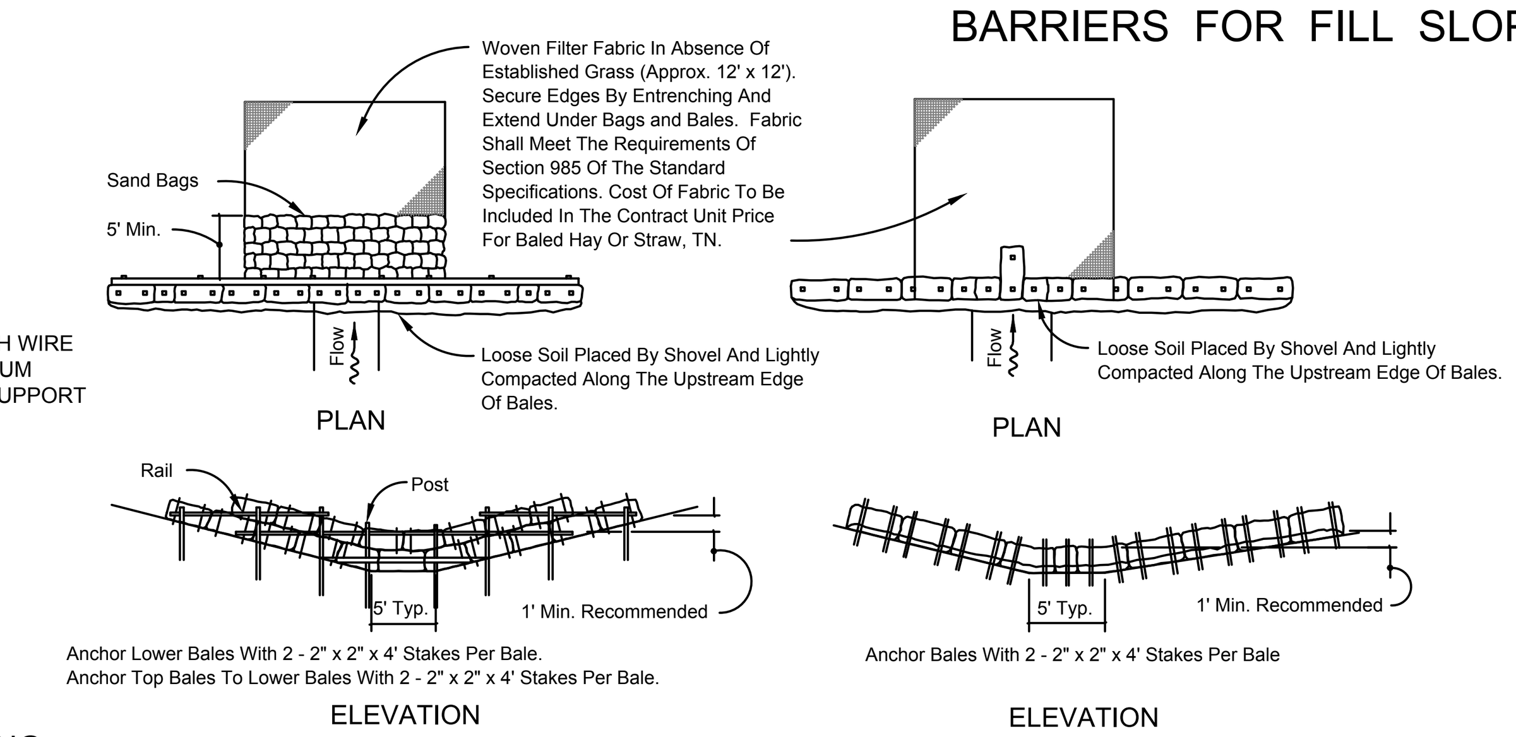
TYPE IV SILT FENCE-N.T.S.



DITCH INSTALLATIONS AT DRAINAGE STRUCTURES



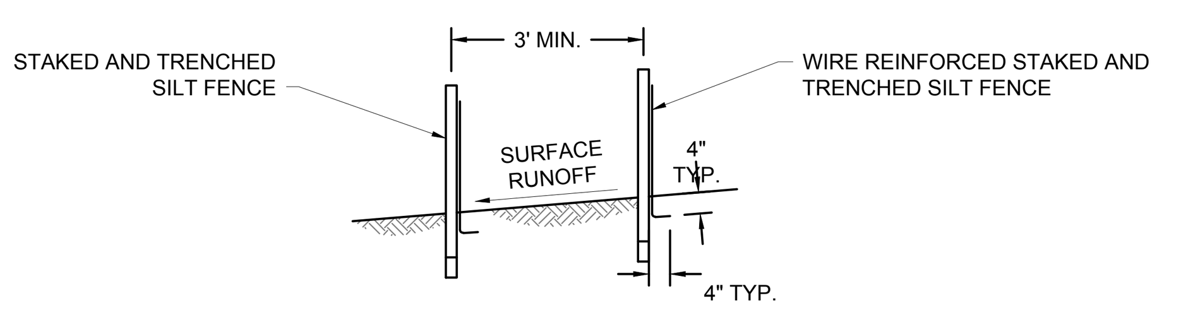
BARRIERS FOR FILL SLOPES



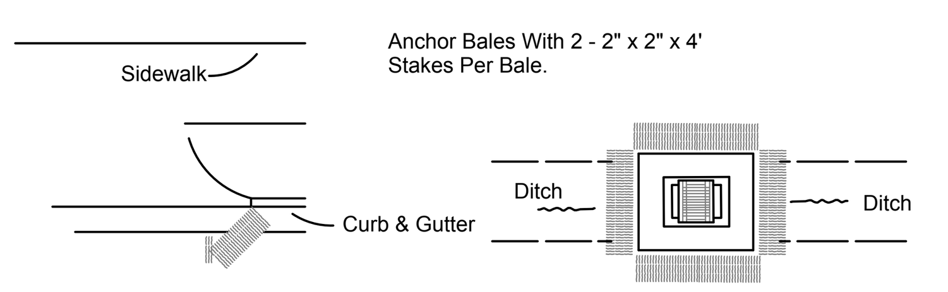
Application and Spacing: The use of Types I & II bale barriers should be limited to the conditions outlined in Chart I, Sheet 1 of 3, Index No. 102

TYPE II TYPE I

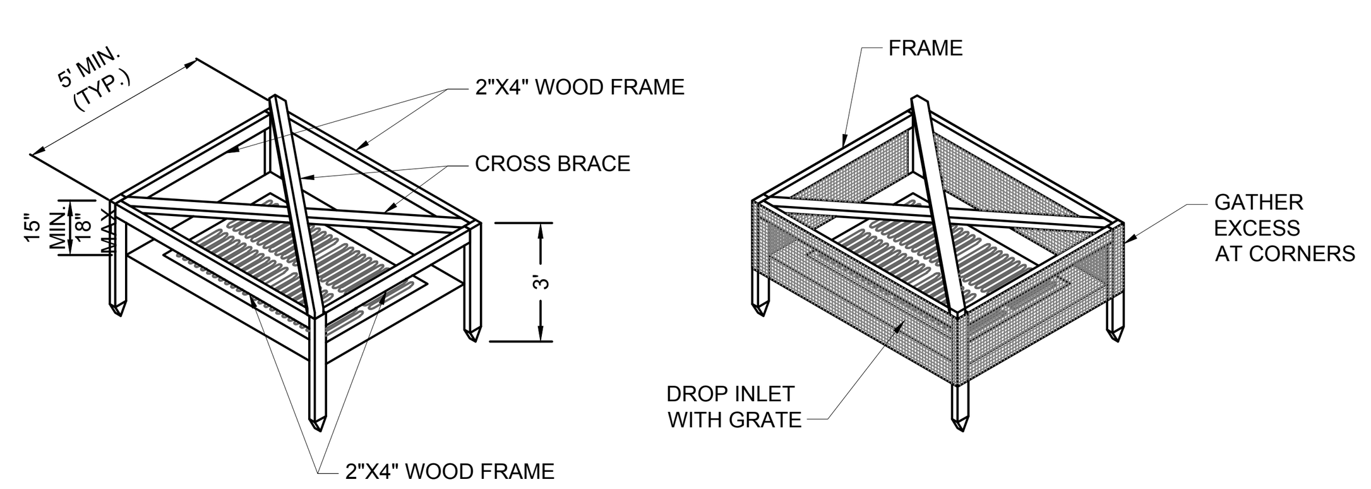
BARRIER FOR UNPAVED DITCHES

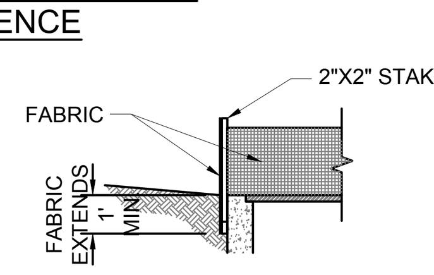


DOUBLE ROW STAKED SILT FENCE FOR USE AROUND WETLANDS-N.T.S.

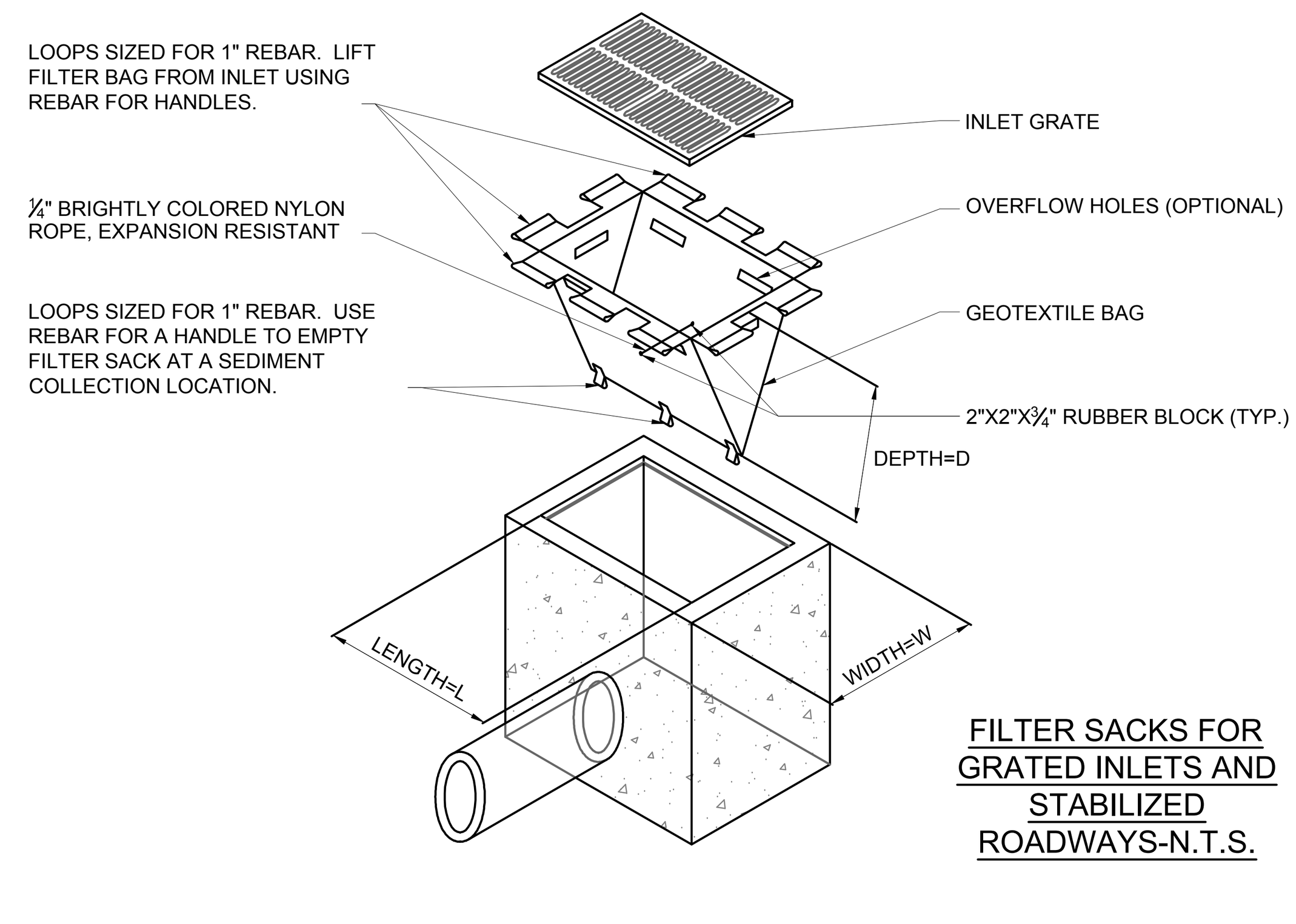


PROTECTION AROUND INLETS OR SIMILAR STRUCTURES

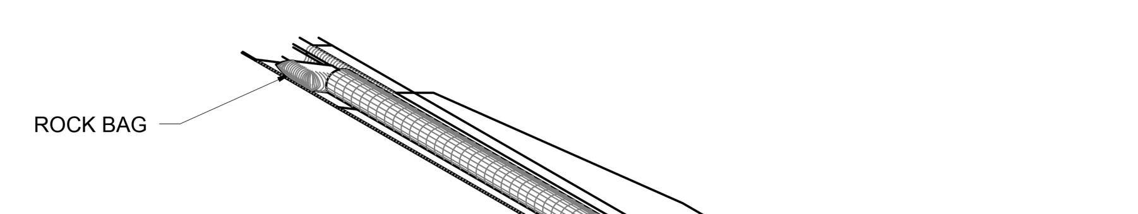




SILT FENCE INLET PROTECTION-N.T.S.

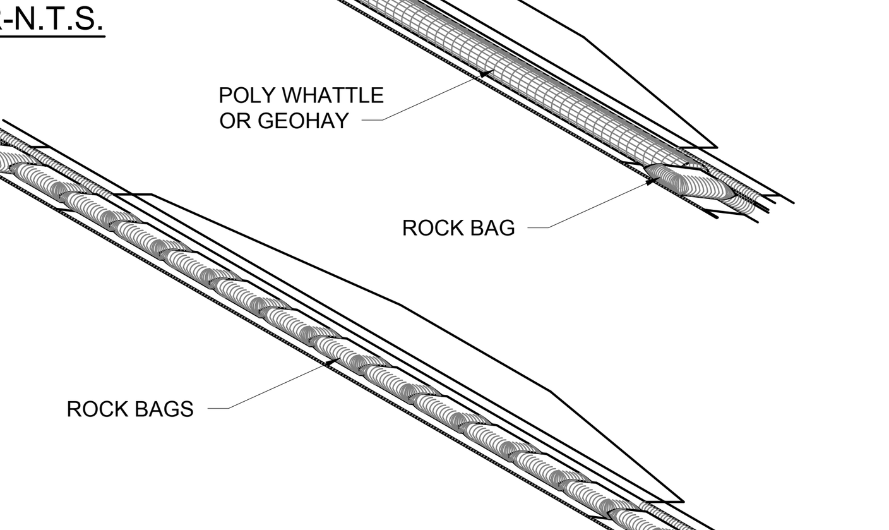


FILTER SACKS FOR GRATED INLETS AND STABILIZED ROADWAYS-N.T.S.

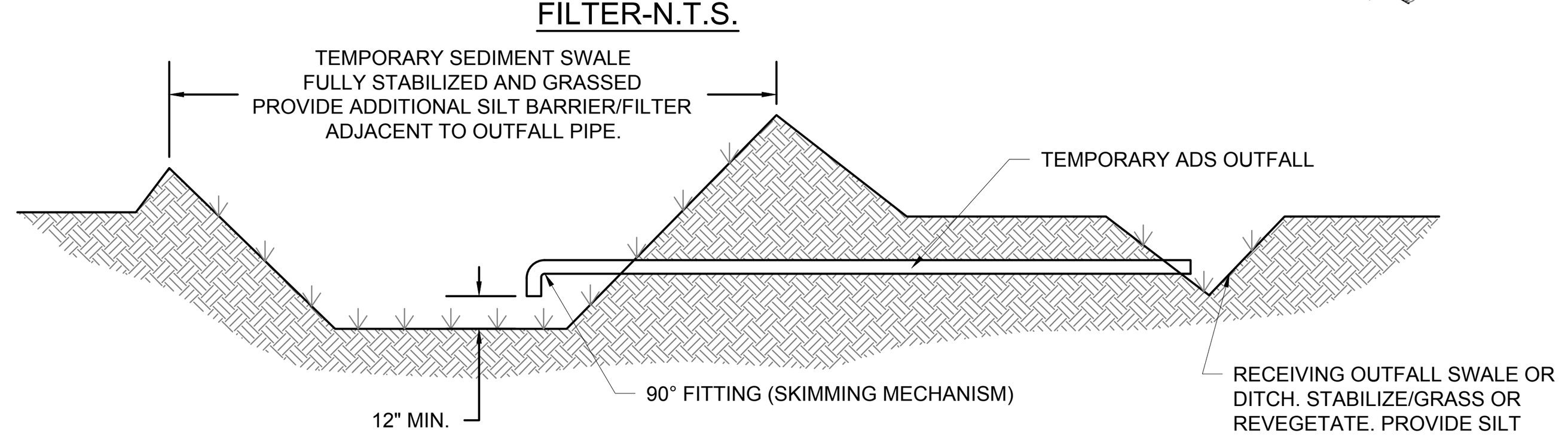


POLY WHATTLES OR GEOHAY CURB INLET FILTER-N.T.S.

LOW TO MODERATE FLOW GEOTEXTILE FABRIC SPECIFICATION TABLE		
PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	300 LBS.
GRAB TENSILE ELONGATION	ASTM D-4632	20%
PUNCTURE	ASTM D-4833	120 LBS.
MULLEN BURST	ASTM D-3786	800 P.S.I.
TRAPEZOID TEAR	ASTM D-4533	120 LBS.
UV RESISTANCE	ASTM D-4355	80%
APPARENT OPENING SIZE	ASTM D-4751	40 US SIEVE
FLOW RATE	ASTM D-4491	40 GAL./MIN./SQ. FT.
PERMITTIVITY	ASTM D-4491	0.55 SEC. -1
MODERATE TO HIGH FLOW GEOTEXTILE FABRIC SPECIFICATION TABLE		
PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	265 LBS.
GRAB TENSILE ELONGATION	ASTM D-4632	20%
PUNCTURE	ASTM D-4833	135 LBS.
MULLEN BURST	ASTM D-3786	420 P.S.I.
TRAPEZOID TEAR	ASTM D-4533	45 LBS.
UV RESISTANCE	ASTM D-4355	90%
APPARENT OPENING SIZE	ASTM D-4751	20 US SIEVE
FLOW RATE	ASTM D-4491	200 GAL./MIN./SQ. FT.
PERMITTIVITY	ASTM D-4491	1.5 SEC. -1



SOCK-PIPE OR ROCK BAG INLET FILTER-N.T.S.



TEMPORARY ADS OUTFALL N.T.S.

- All turbidity, erosion, and sedimentation controls shall be in accordance with `Best Management Practices' as described in the Florida Land Development Manual: A Guide to Sound Land and Water Management.
- Reference F.D.O.T. Index #102.

EROSION CONTROL DETAILS

N.T.S.

NOTES:

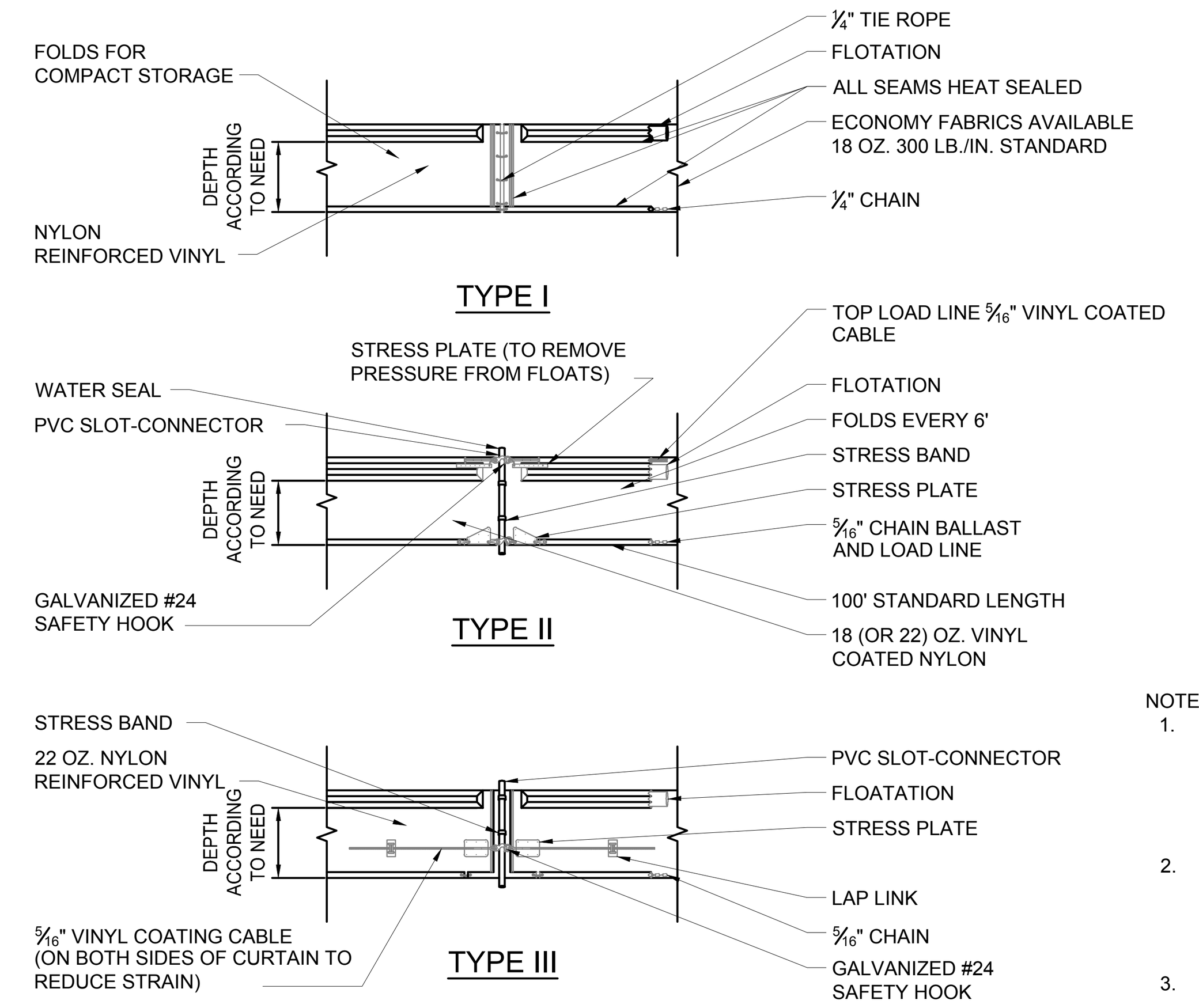
WETLAND PROTECTION PLAN

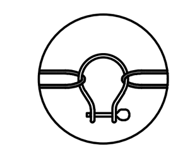
a. SILT FENCE MUST BE INSTALLED BY HAND ALONG SURVEYED CONSERVATION EASEMENT BOUNDARIES (AT TOE OF SLOPE-SEE SECTIONS EE,N,O) PRIOR TO CONSTRUCTION.
b. NO TURBID DISCHARGE TO WETLANDS IS PERMITTED.
c. ALL STOCKPILE AND/OR CONSTRUCTION STAGING AREAS MUST BE LOCATED 100 FT. FROM WETLANDS.

TYPE I. DOT FOR WATERS WITH LOW CURRENTS (NO MORE THAN ONE FOOT PER SECOND) AND LIGHT WINDS: LAKES, PONDS, SMALL STREAMS, MARSHES. FLEXIBLE TOP FLOTATION SECTION WITH ENCAPSULATED EPS FOAM FLOTATION LOGS (6"X8"X4')

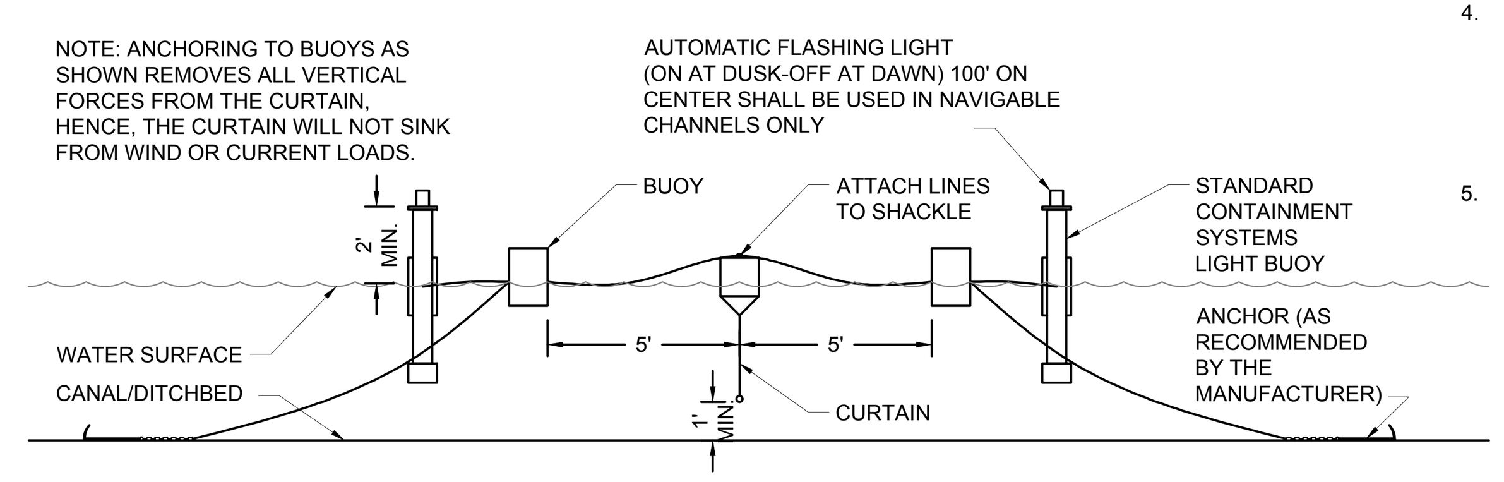
TYPE 2. DOT FOR HIGHER CURRENT WATERS (UP TO FIVE FEET PER SECOND): DEEPER LAKES, STREAMS, INTERCOASTAL AND TIDAL AREAS. INCLUDES AN ENCAPSULATED STEEL LOAD CABLE ALONG TOP OF BARRIER AND 8"X8"X4' FLOTATION LOGS. WEAR STRESS POINTS ARE REINFORCED WITH SHIELDS.

TYPE 3. DOT IS SIMILAR TO TYPE 2. DOT EXCEPT THAT POLYPROPYLENE FILTER FABRIC IS PERMANENTLY INSERTED INTO THE BARRIER SKIRT TO MEET SOME STATE'S SPECIFICATIONS.

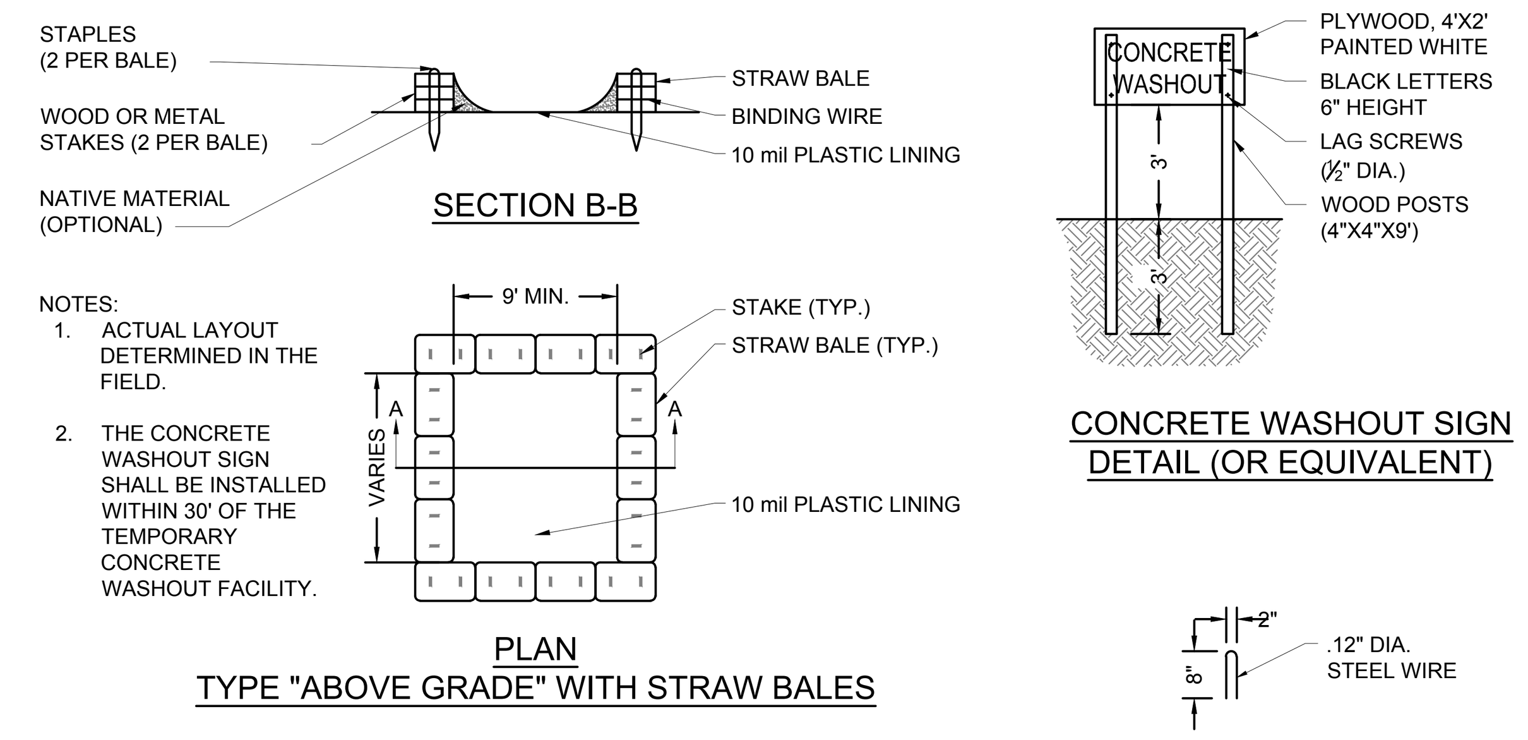




BLOW-UP OF SHACKLE CONNECTION

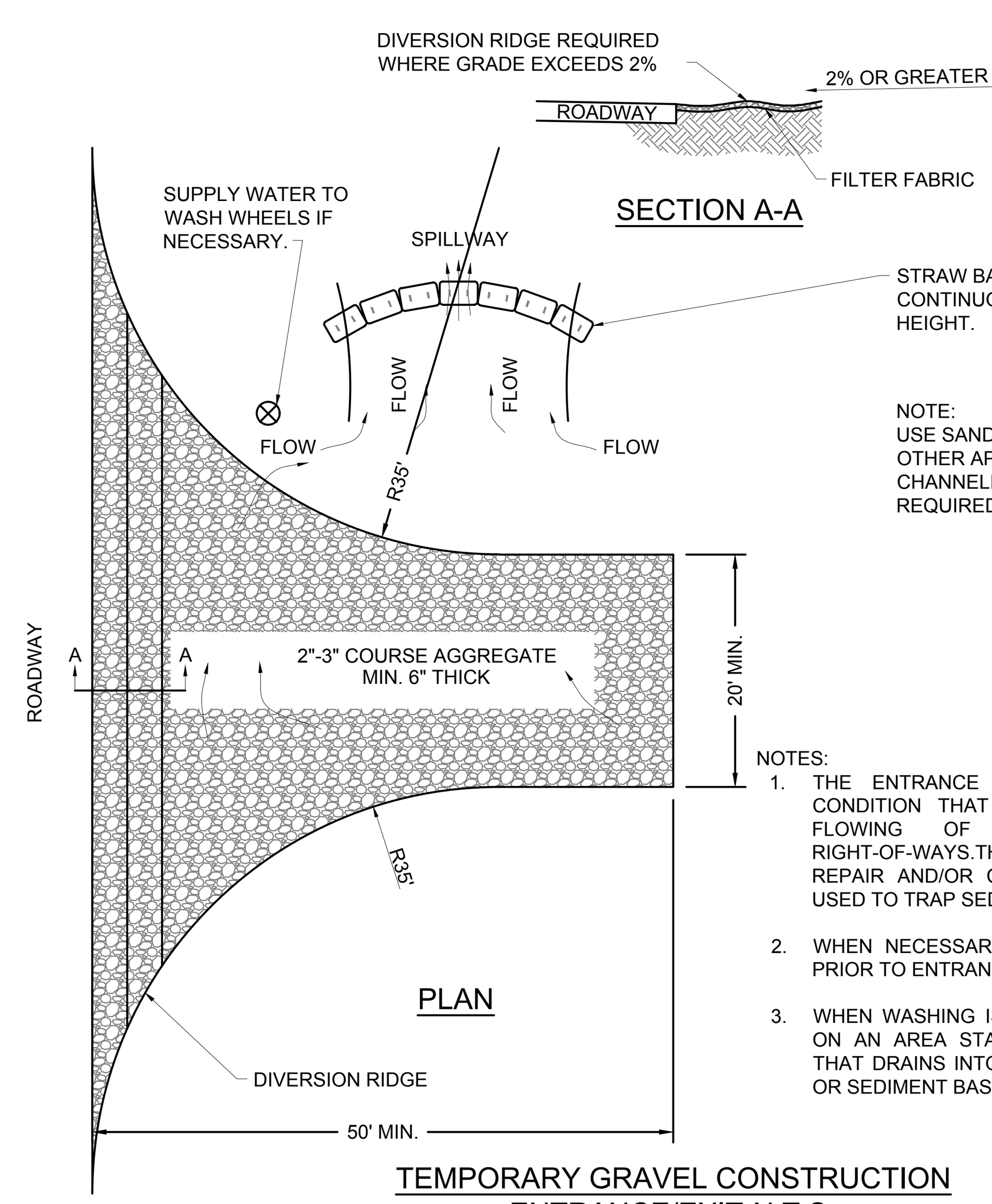


ORIENTATION WHEN INSTALLED (TIDAL SITUATION-TYPE III)-N.T.S.



NOTES:
1. ACTUAL LAYOUT DETERMINED IN THE FIELD.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

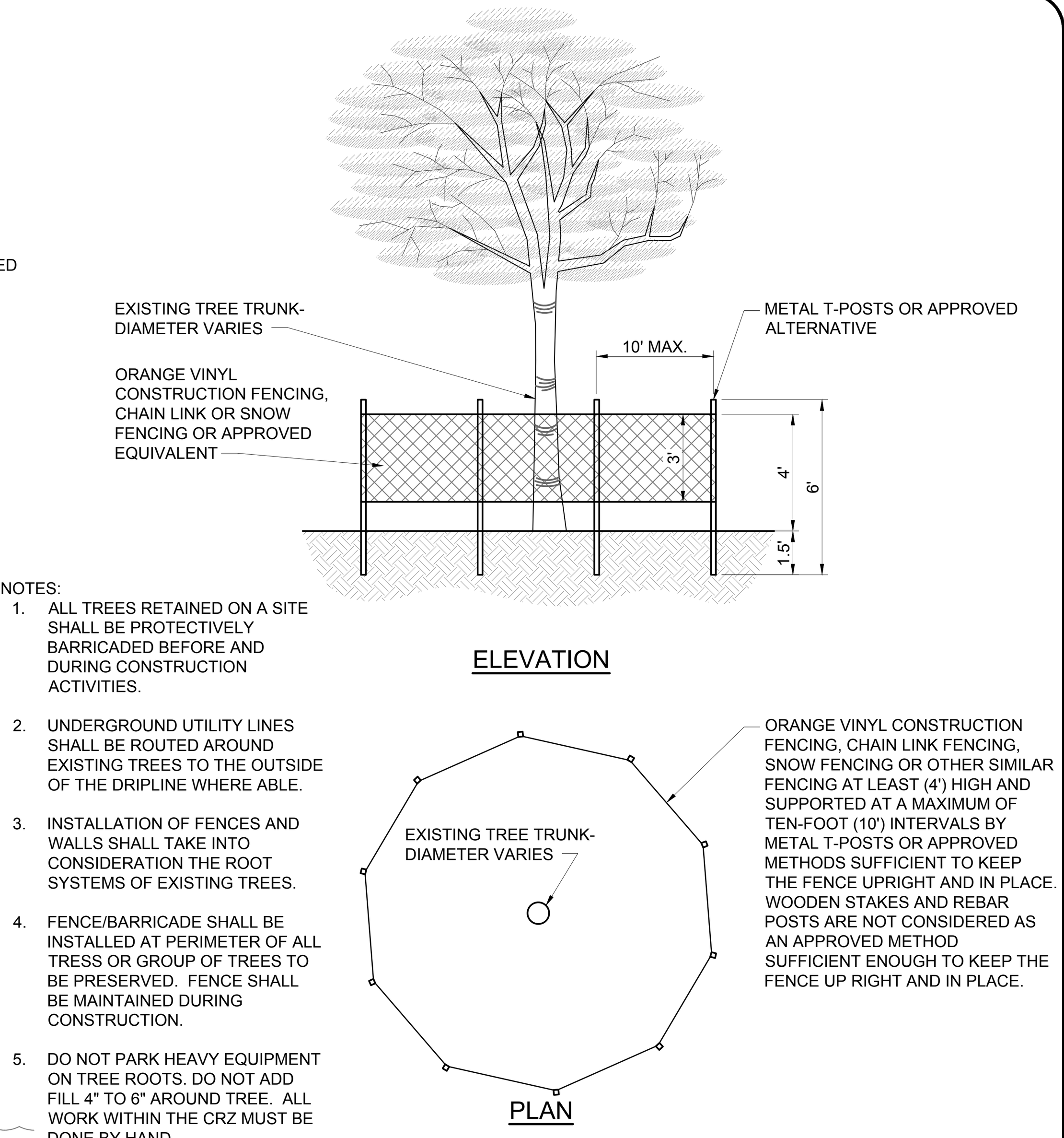
CONCRETE & STUCCO WASTE MANAGEMENT-N.T.S.



NOTE: USE SANDBAGS, STRAW BALES OR OTHER APPROVED METHODS TO CHANNELIZE RUNOFF TO BASIN AS REQUIRED.

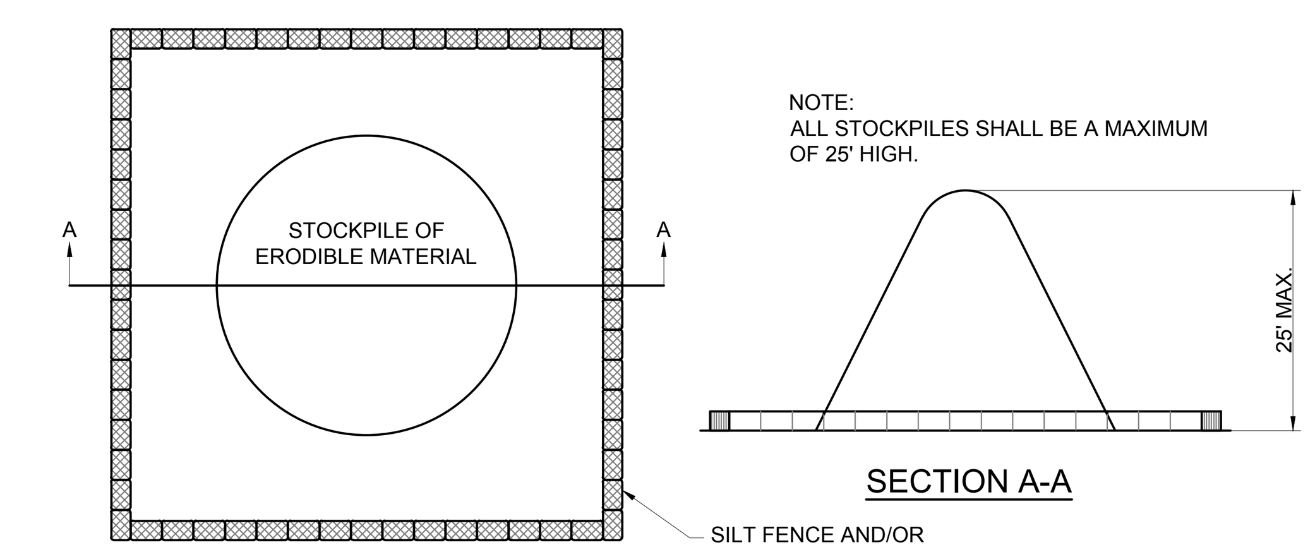
NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS.THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT-N.T.S.



NOTES:
1. ALL TREES RETAINED ON A SITE SHALL BE PROTECTIVELY BARRICADED BEFORE AND DURING CONSTRUCTION ACTIVITIES.
2. UNDERGROUND UTILITY LINES SHALL BE ROUTED AROUND EXISTING TREES TO THE OUTSIDE OF THE DRIPLINE WHERE ABLE.
3. INSTALLATION OF FENCES AND WALLS SHALL TAKE INTO CONSIDERATION THE ROOT SYSTEMS OF EXISTING TREES.
4. FENCE/BARRICADE SHALL BE INSTALLED AT PERIMETER OF ALL TRESS OR GROUP OF TREES TO BE PRESERVED. FENCE SHALL BE MAINTAINED DURING CONSTRUCTION.
5. DO NOT PARK HEAVY EQUIPMENT ON TREE ROOTS. DO NOT ADD FILL 4" TO 6" AROUND TREE. ALL WORK WITHIN THE CRZ MUST BE DONE BY HAND.

PROTECTIVE FENCING FOR TREES-N.T.S.



NOTE: FOR STOCKPILING ERODIBLE MATERIAL FOR EXTENDED PERIODS, THE AREA SHALL BE SEEDED AND MULCHED.

SEDIMENT CONTROL DETAIL FOR STOCKPILING OF ERODIBLE MATERIAL-N.T.S.

EROSION CONTROL AND DEWATERING NOTES

1. SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.
2. ALL SEDIMENT CONTROL MEASURES ARE TO BE ADJUSTED TO MEET FIELD CONDITIONS AT THE TIME OF CONSTRUCTION AND BE CONSTRUCTED PRIOR TO ANY GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIAL ON BALANCE OF SITE. PERIMETER SEDIMENT BARRIERS SHALL BE CONSTRUCTED TO PREVENT SEDIMENT OR TRASH FROM FLOWING OR FLOATING ON TO ADJACENT PROPERTIES.
3. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN UNDISTURBED FOR LONGER THAN 30 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT UNDISTURBED FOR MORE THAN ONE YEAR.
4. DURING CONSTRUCTION OF THE PROJECT, SOIL STOCK PILES SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.
5. A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED.
6. AFTER ANY SIGNIFICANT RAINFALL, SEDIMENT CONTROL STRUCTURES WILL BE INSPECTED FOR INTEGRITY. ANY DAMAGED DEVICES SHALL BE CORRECTED IMMEDIATELY.
7. CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME OR SLOPE DRAIN STRUCTURE.
8. SEDIMENT WILL BE PREVENTED FROM ENTERING ANY STORM DRAIN SYSTEM, DITCH, OR CHANNEL. ALL STORM SEWER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.
9. WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENCROACHMENT, CONTROL SEDIMENT TRANSPORT AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION.
10. PERIODIC INSPECTION AND MAINTENANCE OF ALL SEDIMENT CONTROL STRUCTURES MUST BE PROVIDED TO ENSURE INTENDED PURPOSE IS ACCOMPLISHED. THE CONTRACTOR SHALL BE CONTINUALLY RESPONSIBLE FOR ALL SEDIMENT LEAVING THE PROPERTY. SEDIMENT CONTROL MEASURES SHALL BE IN WORKING CONDITION AT THE END OF EACH WORKING DAY.
11. WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY TRACKING ONTO THE PAVED SURFACE. WHERE SEDIMENT IS TRANSPORTED ONTO A PUBLIC ROAD SURFACE WITH CURBS AND GUTTERS, THE ROAD SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER.
12. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED.
13. PROPERTIES AND WATERWAYS DOWNSTREAM FROM CONSTRUCTION SITES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION AND EROSION.
14. EROSION CONTROL DESIGN AND CONSTRUCTION SHALL FOLLOW THE REQUIREMENTS IN INDEX NOS. 101, 102, AND 103 OF FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS, AND THE DETAILS AND NOTES ON THE PLANS.
15. CONTRACTOR RESPONSIBLE FOR ALL SURFACE WATER DISCHARGES - RAINFALL RUN-OFF OR DEWATERING ACTIVITIES.
16. CONTRACTOR MUST INCORPORATE ALL BMP'S NECESSARY TO MEET OR EXCEED STATE WATER QUALITY REQUIREMENTS.
17. THIS POLLUTION PREVENTION PLAN IS A MINIMUM GUIDELINE ONLY. ADDITIONAL BMP'S MAY BE NECESSARY AT CONTRACTORS EXPENSE.
18. NO TURBID DISCHARGE. TURBIDITY READINGS ARE REQUIRED ONCE A WEEK (BY THE CONTRACTOR) AND MUST BE REPORTED TO THE PROJECT ENGINEER. LOCATION SHALL BE DETERMINED BY THE ENGINEER.
19. DEWATERING ACTIVITIES:
A - DISCHARGE MUST NOT EXCEED STATE WATER QUALITY STANDARDS.
B - CONTRACTOR MUST HAVE A TRANSFERABLE SJRWMD CONSUMPTIVE USE PERMIT KNOWN AS A "NOTICED GENERAL PERMIT FOR SHORT TERM CONSTRUCTION DE-WATERING", UNLESS DE-WATERING ACTIVITIES WILL RESULT IN LESS THAN 300,000 GPD FOR 30 DAYS OR LESS.
C - NO HYDRAULIC PUMPS MAY BE USED FOR DE-WATERING UNLESS APPROVED BY THE WATER MANAGEMENT DISTRICT FOR THAT AREA. DEWATERING EXISTING STORMWATER RETENTION AREAS (PONDS/LAKES) MAY BE EXEMPT FROM THIS CONDITION. CONTRACTOR TO CONFIRM WITH SJRWMD.
D - NO TURBID DISCHARGE. TURBIDITY READINGS ARE REQUIRED ONCE A WEEK AND MUST BE REPORTED TO THE PROJECT ENGINEER.
20. THE CONTRACTOR SHALL OBTAIN GENERIC PERMIT FOR THE DISCHARGE OF PRODUCED GROUND WATER FROM ANY NON-CONTAMINATED SITE ACTIVITY.
A - BEFORE DISCHARGE OF PRODUCED GROUND WATER CAN OCCUR FROM THE SITE, ANALYTICAL TESTS ON SAMPLES OF THE PROPOSED UNTREATED DISCHARGE WATER SHALL BE PERFORMED TO DETERMINE IF CONTAMINATION EXISTS BY CONTRACTOR). IF NONE EXISTS, THE RESULTS SHALL BE SUBMITTED TO THE FDEP INDUSTRIAL WASTEWATER PERMITTING WITHIN ONE WEEK OF COMMENCEMENT OF DISCHARGE (C.O. ALI KAZI, P.E., 3319 MAGUIRE BLVD. SUITE 232, ORLANDO, FL, 32803), WITH A LETTER NOTIFYING THE AGENCY THAT DE-WATERING ACTIVITIES WILL COMMENCE PURSUANT TO 62-621.300(2) F.A.C. AND THE SITE QUALIFIES FOR THE GENERIC PERMIT.
B - THE FACILITY IS AUTHORIZED TO DISCHARGE PRODUCED GROUND WATER FROM ANY NON-CONTAMINATED SITE ACTIVITY WHICH DISCHARGES BY A POINT SOURCE TO SURFACE WATERS OF THE STATE, AS DEFINED IN CHAPTER62-620, F.A.C., ONLY IF THE REPORTED VALUES FOR THE PARAMETERS LISTED IN TABLE 1 DO NOT EXCEED ANY OF THE LISTED SCREENING VALUES.
C - MINIMUM REPORTING REQUIREMENTS FOR ALL PRODUCED GROUND WATER DISCHARGERS. THE EFFLUENT SHALL BE SAMPLED (BY CONTRACTOR) BEFORE THE COMMENCEMENT OF DISCHARGE, AGAIN WITHIN THIRTY (30)DAYS AFTER COMMENCEMENT OF DISCHARGE, AND THEN ONCE EVERY SIX (6)MONTHS FOR THE LIFE OF THE PROJECT TO MAINTAIN CONTINUED COVERAGE UNDER THIS GENERIC PERMIT.SAMPLES TAKEN IN COMPLIANCE WITH THE PROVISIONS OF THIS PERMIT SHALL BE TAKEN PRIOR TO ACTUAL DISCHARGE OR MIXING WITH THE RECEIVING WATERS. THE EFFLUENT SHALL BE SAMPLED FOR THE PARAMETERS LISTED ON TABLE 1.
D - IF ANY OF THE ANALYTICAL TEST RESULTS EXCEED THE SCREENING VALUES LISTED IN TABLE 1, EXCEPT TOC, THE DISCHARGE IS NOT AUTHORIZED BY THIS PERMIT. IF T.O.C. IS EXCEEDED BECAUSE OF NATURALLY OCCURING ORGANIC COMPOUNDS, THE RESULT AND EXPLANATION FOR THE HIGH READING MUST BE SUBMITTED TO THE FDEP FOR REVIEW AND ISSUANCE OF AN EXEMPTION.
E - IF ANY SCREENING VALUES (OTHER THAN TOC) EXCEED THE THRESHOLDS, THEN A GENERIC PERMIT CANNNOT BE ISSUED, AND A SEPERATE INDIVIDUAL WASTERWATER PERMIT APPLICATION MUST BE SUBMITTED AT LEAST 90 DAYS PRIOR TO DATE OF DISCHARGE. THE ENGINEER OF RECORD MUST BE NOTIFIED IF THIS OCCURS.
21. THE CONTRACTOR SHALL OBTAIN A STATE OF FLORIDA GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES, AND SHALL ADHERE TO ALL CONDITIONS OF THE PERMIT, INCLUDING INSPECTIONS, REPORTING, RECORD KEEPING AND CERTIFICATIONS.

	SCREENING VALUES FOR DISCHARGE INTO:	
Parameter	Fresh Waters	Coastal Waters
Total Organic Carbon (TOC)	10.0 mg/L	10.0 mg/L
pH, standard units	6.0-8.5	6.5-8.5
Total Recoverable Mercury	0.012 µg/L	0.025 µg/L
Total Recoverable Cadmium	9.3 µg/L	9.3 µg/L
Total Recoverable Copper	2.9 µg/L	2.9 µg/L
Total Recoverable Lead	0.03 mg/L	5.6 mg/L
Total Recoverable Zinc	86.0 µg/L	86.0 µg/L
Total Recoverable Chromium (Hex.)	11.0 µg/L	50.0 µg/L
Benzene	1.0 µg/L	1.0 µg/L
Naphthalene	100.0 µg/L	100.0 µg/L

SCHULKE, BITTLE & STODDARD, L.L.C.
CIVIL & STRUCTURAL ENGINEERING · LAND PLANNING · ENVIRONMENTAL PERMITTING
CERTIFICATION OF AUTHORIZATION NO.: 00008668
1717 INDIAN RIVER BLVD., SUITE 201 VERO BEACH, FLORIDA 32960
TEL 772 / 770-9622 FAX 772 / 770-9496 EMAIL info@sbsengineers.com

STORMWATER POLLUTION PREVENTION PLAN DETAILS

GIFFORD MIDDLE SCHOOL BUS AND SOCCER FIELD IMPROVEMENTS

DESIGNED	—
DRAWN	KB
CHECKED	JWS
SCALE	AS NOTED
DATE	02/07/2017

MARK | REVISION | DATE

ENGINEER CERTIFICATION
☐ JOSEPH W. SCHULKE FL. REG. NO. 47048
☐ JODAH B. BITTLE FL. REG. NO. 57396
☐ WILLIAM P. STODDARD FL. REG. NO. 57603

DATE:

SHEET C-104

PROJECT NO. 16-191