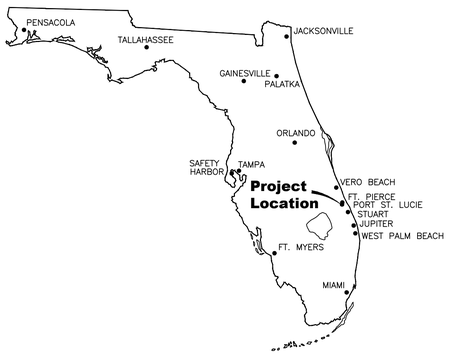
Construction Plans and Specifications
Of
McCARTY RANCH EXTENSION WATER QUALITY RESTORATION PROJECT - AREAS 5 & 6
For
City of Port St. Lucie
Lying In
Secs. 25-27 & 34-36, Twp. 37 S., Rng. 38 E.
St. Lucie County, Florida



LOCATION MAP

NOTES:
THESE PLANS ARE IN ENGLISH UNITS
ALL ELEVATIONS HEREIN REFERENCE N.A.V.D. 1988 DATUM. ADD 1.489 FEET TO CONVERT TO N.G.V.D. 1929 DATUM. ALL CONSTRUCTION IS TO BE IN ACCORDANCE WITH FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS, LATEST EDITION.

CLIENT

CITY OF PORT ST. LUCIE
UTILITY SYSTEMS DEPARTMENT
JOHN EASON, P.E., PROJECT MANAGER
900 SE OGDEN LANE
PORT ST. LUCIE, FL 34983
PHONE: (772) 873-6487

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301 N.W. FLAGLER AVENUE
STUART, FLORIDA 34994
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CAPTEC Engineering, Inc.
Civil Engineering Professionals

Civil Engineering Professionals

Engineering Business
No. EB-0007657

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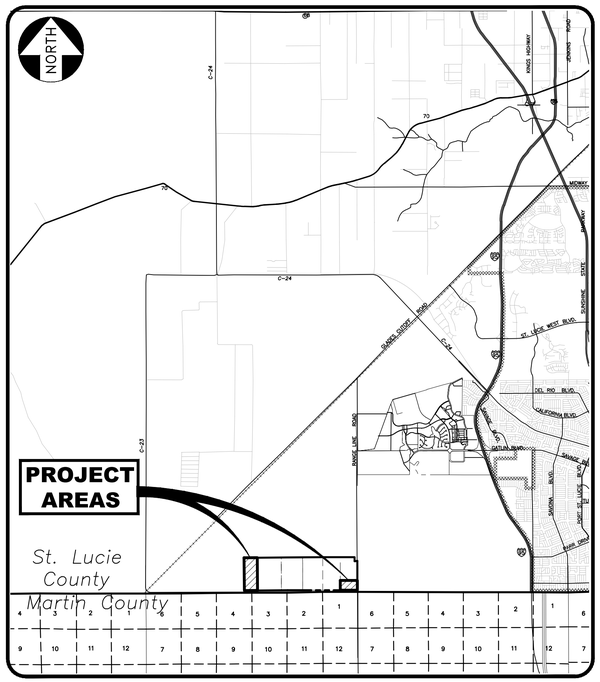
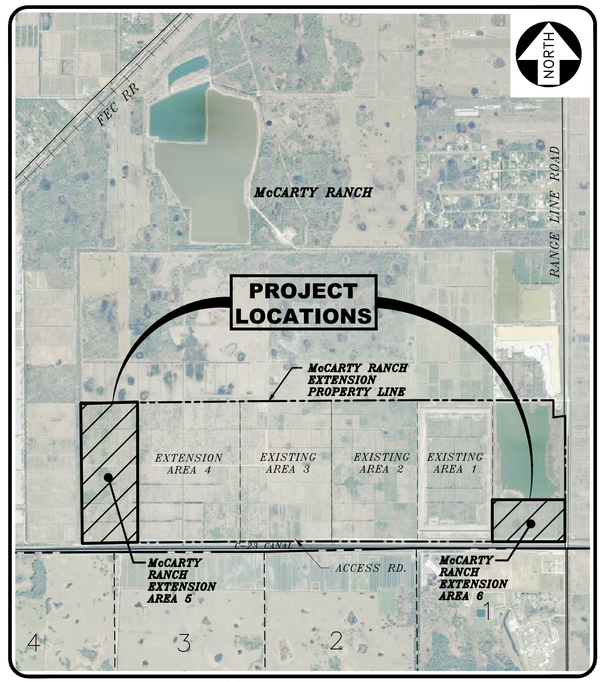


Vicinity Map
N.T.S.



Site Map
N.T.S.

SHEET INDEX

BID SET
3/24/23

Always call 811 two full business days before you dig
Sunshine811.com

Project No. 1682.2-5 McCARTY RANCH EXTENSION PROJECT - AREAS 5-6

p:\1600\1682.2-5 mccarty ranch ext. areas 5-6\dwg\2-Sheets\1682.2-5-01 COVER.dwg, 3/24/2023 11:38:14 AM, rshaw

EXISTING McCARTY RANCH

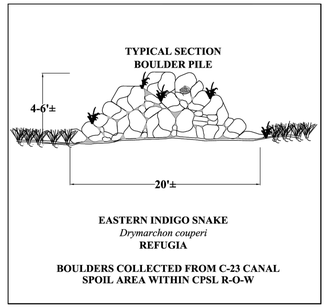
SOUTHERN FRUIT GROVES

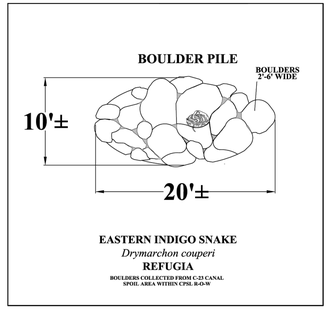
MABEL GROVES

McCARTY RANCH EXTENSION
(CITY OF PORT ST. LUCIE - 1943.11 AC)

RANGE LINE ROAD

C-23 CANAL





INDIGO SNAKE REFUGIA DETAILS

NOTE: ALL CLEARING ACTIVITIES MUST BE OBSERVED BY THE PROJECT ENVIRONMENTAL CONSULTANT TO MONITOR FOR IMPACTS TO EASTERN INDIGO SNAKES

NORTH

GRAPHIC SCALE

600 0 300 600 1200

SCALE: 1" = 600'

LEGEND

- PROPERTY LINE
- EASEMENT LINE
- SECTION LINE
- TOP OF BANK
- TOE OF SLOPE
- CS-1 - CS-14 (EXISTING)
- CS-15 - CS-17 (PROPOSED)
- EXISTING PUMP STATIONS
- TEMPORARY BENCH MARKS
- 290.40 AREA WITHIN BERMS

SET TBM#21 1/2"DIA.x18"REBAR/CAP "WIT.COR.LB205"

75.0' ACCESS EASEMENT (O.R.B. 652, PG. 1675)

CITY OF PORT ST. LUCIE PROPERTY LINE

SET TBM#22 1/2"DIA.x18"REBAR/CAP "WIT.COR.LB205"

PROPOSED INDIGO SNAKE REFUGIA (TYP.)

150' WIDE EASEMENT (O.R.B. 652, PG. 1576)

SET TBM#6 1/2"DIA.x18"REBAR/CAP "WIT.COR.LB205"

EXISTING INDIGO SNAKE REFUGIA

EXISTING MAINTENANCE YARD

SET TBM#7 1/2"DIA.x18"REBAR/CAP "WIT.COR.LB205"

EXISTING ACCESS ROAD

TBM#8 1/2"DIA.x18"REBAR/CAP "WIT.COR.LB205" ELEV. 25.90

BM#52 FOUND "GPS G 667 2006" MONUMENT STAINLESS STEEL PIN IN CASING

EGRESS, INGRESS & REGRESS EASEMENT (O.R.B. 527, PG. 2097)

SET TBM#16 1/2"DIA.x18"REBAR/CAP "WIT.COR.LB205"

EXISTING SEEPAGE DITCH

EXISTING INDIGO SNAKE REFUGIA

EXISTING FLASHBOARD RISER

ACCESS GATE #2 CONSTRUCTION ENTRANCE

EXISTING 15' BERM ℄

EXISTING ACCESS ROAD

EXISTING BORROW DITCH

EXISTING WETLAND LOCATIONS (TYP.)

PROPOSED AREA 5 86.58 AC

50' UNDISTURBED UPLAND BUFFER

EXISTING EMERGENCY OVERFLOW STRUCTURE #14

EXISTING AREA 4 EMERGENCY OVERFLOW STRUCTURE #13

PROPOSED EMERGENCY OVERFLOW STRUCTURE #16

FP&L EASEMENT E 660' OF THE W 700' (O.R.B.229, PG.1890)

EXISTING BORROW DITCH

100' ACCESS EASEMENT (O.R.B. 652, 1675)

EXISTING WETLAND LOCATIONS (TYP.)

50' UNDISTURBED UPLAND BUFFER

PROPOSED EMERGENCY OVERFLOW STRUCTURE #15

EXISTING AREA 4 EMERGENCY OVERFLOW STRUCTURE #12

100.0' ACCESS EASEMENT (O.R.B. 652, PG. 1675)

30' SPOIL EASEMENT

PROPERTY LINE

BM#2 FOUND "C-235 1994" MONUMENT/DISK "SFLA WATER MANAGEMENT DIST."

SET TBM#19 1/2"DIA.x18"REBAR/CAP "WIT.COR.LB205"

AREA 4 ACCESS 20' WIDE ROAD W/ GATE

SET TBM#18 "P-K"/TAB" WIT.COR.LB205" S. FACE OF POLE

EXISTING RLPOA PUMP STATION #3

50.0' EASEMENT (O.R.B. 170, PG. 1346)

EXISTING ACCESS ROAD W/ GATE

EXISTING (2) 75 LF 36" CAP INV = 17.50

100' EASEMENT (O.R.B. 652, PG. 1576)

TBM#11 1/2"DIA.x18" REBAR/CAP "WIT.COR.LB205" ELEV. 26.56

BM#3 FOUND CONCRETE MONUMENT CORP OF ENGINEER SURVEY MARKER / DISK "V-543 2001 CERP" MONUMENT/DISK

90' SPOIL EASEMENT

EXISTING 20' ACCESS ROAD

EXISTING AREA 3 EMERGENCY OVERFLOW STRUCTURE #11

EXISTING SEEPAGE DITCH

EXISTING BORROW DITCH

EXISTING WETLAND LOCATIONS (TYP.)

100.0' ACCESS EASEMENT (O.R.B. 652, PG. 1675)

SET TBM#5 1/2"DIA.x18"REBAR/CAP "WIT.COR.LB205"

AREA 4 286.95 AC (EXISTING)

AREA 3 290.40 AC (EXISTING)

EXISTING BORROW DITCH

EXISTING AREA 3 EMERGENCY OVERFLOW STRUCTURE #10

EXISTING DRAINAGE CANAL

SET TBM#4 1/2"DIA.x18"REBAR/CAP "WIT.COR.LB205"

EXISTING SEEPAGE CANAL & STOCKPILE AREA (CONSTRUCTED WITH AREA 2)

EXISTING AREA 3 ACCESS ROAD W/ GATE

EXISTING AREA 3 EMERGENCY OVERFLOW STRUCTURE #9

SET TBM#11 1/2"DIA.x18"REBAR/CAP "WIT.COR.LB205"

MCR-3 EXISTING 30,000 GPM AXIAL FLOW PUMP W/ DIESEL ENGINE

MCR-3

EXISTING INDIGO SNAKE REFUGIA

EXISTING ACCESS ROAD

EXISTING WETLAND LOCATIONS (TYP.).

TBM#9 1/2"DIA.x18"REBAR/CAP "WIT.COR.LB205" ELEV. 28.07

EXISTING AREA 2 EMERGENCY OVERFLOW STRUCTURE (TYP)

AREA 2 274.94 AC (EXISTING)

WETLAND LOCATION (TYP.)

EXISTING BORROW DITCH

MCR-2 EXISTING 30,000 GPM AXIAL FLOW PUMP W/ DIESEL ENGINE

MCR-2

EXISTING AREA 2 ACCESS ROAD W/ GATE

EXISTING 72" CMP OUTFALL PIPE INV. 15.74

SET TBM#12 1/2"DIA.x18"REBAR/CAP "WIT.COR.LB205"

AREA 1 210.41 AC (EXISTING)

EXISTING BORROW DITCH

SET TBM#17 1/2"DIA.x18"REBAR/CAP "WIT.COR.LB205"

MCR-1 EXISTING 15,000 GPM PUMP STATION AND (2) 4,000 GPM PUMP STATIONS

MCR 1

EXISTING AREA 1 EMERGENCY OVERFLOW STRUCTURE (TYP)

EXISTING CANAL

LAKE / MINE 212.00 AC (EXISTING)

FP&L EASEMENT (O.R.B. 645, PG. 296)

PROPOSED INDIGO SNAKE REFUGIA (TYP.)

PROPOSED STRUCTURES D-5 & D-6

EXISTING 15' BERM ℄

EXISTING AREA 1 ACCESS ROAD W/ GATE

PROPOSED EMERGENCY OVERFLOW STRUCTURE #17

PROPOSED AREA 6 39.87 AC

EXISTING ACCESS ROAD W/ GATE

EXISTING RLPOA PUMP STATION #2

SET TBM#15 1/2"DIA.x18"REBAR/ALUM. CAP "CARTER ASSOC.PCP LB205"

ACCESS GATE #1 CONSTRUCTION ENTRANCE

BM#1 FOUND "C-23 609" MONUMENT/DISK "S.FLA WATER MANAGEMENT DIST." ON TOP OF EXISTING CONCRETE HEADWALL

301 NW Flagler Ave.
Stuart, Florida 34994
Phone: (772) 692-4344
Fax: (772) 692-4341

CAPTEC Engineering, Inc.
Civil Engineering Professionals

Engineering Business No: EB-0007657

DATE: 4/7/20
DRAWN BY: MDR
DESIGNED BY: TJS
CHECKED BY: JWC
PROJECT No.: 1682.2-5
HORZ. SCALE: 1" = 600'
VERT. SCALE: N/A
CADD FILE: Overall

NO.	DATE	BY	REVISIONS
1	3/24/23	JWC	BID SET

SCALE VERIFICATION
0 1
SOLID BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING. ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

McCARTY RANCH EXTENSION WATER QUALITY RESTORATION PROJECT - AREAS 5-6

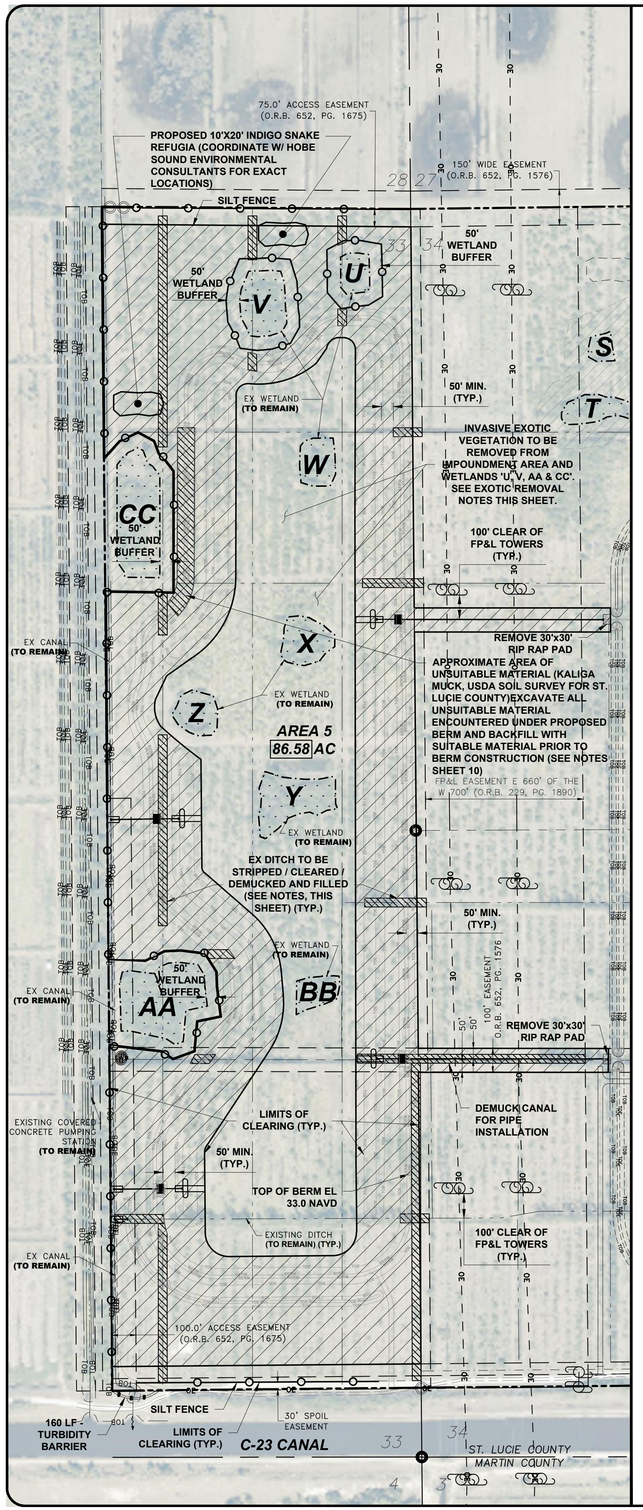
City of Port St. Lucie, Florida

OVERALL SITE PLAN

Joseph W. Capra, P.E.
301 N.W. Flagler Ave.
Stuart, Florida 34994
P.E. No. 37638

Printed Date:

JOB No.: 1682.2-5
SHEET 2 OF 11



GENERAL NOTES

1. UNLESS DENOTED AS CLEARING/GRUBBING THE VEGETATION WITHIN THE IMPOUNDMENT AREAS WILL TYPICALLY NOT BE REMOVED OR ADJUSTED EXCEPT FOR WOODY CATEGORY 1 EXOTIC VEGETATION. THIS AREA WILL BE FLOODED AND VEGETATION WILL REMAIN.

EXOTIC REMOVAL NOTES

1. ALL WOODY CATEGORY 1 INVASIVE EXOTIC VEGETATION TO BE ERADICATED FROM INSIDE THE IMPOUNDMENT AREAS AND FROM INSIDE THE LIMITS OF WETLAND U, V, AA & CC. THIS INCLUDES BUT IS NOT LIMITED TO BRAZILIAN PEPPER, PERUVIAN PRIMROSE WILLOW, DOWNY ROSE MYRTLE, AND EUCALYPTUS. THIS SHALL BE ACCOMPLISHED BY PUSHING OVER THE TREES AND SHRUBS AND BURNING THEM ONSITE. REMOVAL OF EXOTICS MAY BE COMPLETED BY HAND REMOVAL, OR MECHANICALLY AS LONG AS EQUIPMENT IS MINIMALLY INVASIVE AND IS APPROVED BY THE PROJECT ENVIRONMENTAL CONSULTANT.
2. ERADICATION OF EXOTICS SHALL BE COMPLETED DURING CLEARING ACTIVITIES AS EXPEDIENTLY AS POSSIBLE.

CLEARING NOTES

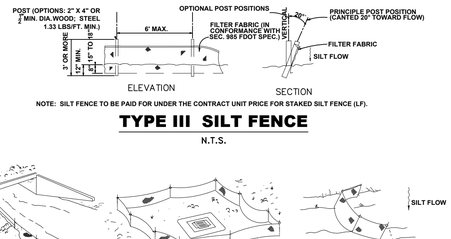
1. CLEARED AREA OUTSIDE OF BERM TO BE LEVELED FOR MAINTENANCE.
2. UNLESS OTHERWISE NOTED, ALL EXISTING CULVERTS WITHIN THE LIMITS OF CLEARING WILL BE REMOVED AND DISPOSED OF BY CONTRACTOR. THIS ITEM TO BE PAID UNDER THE DEMOLITION ITEM.
3. CONTRACTOR SHOULD BE AWARE THAT THERE ARE NUMEROUS UNMARKED IRRIGATION PIPES THROUGHOUT THE SITE. ANY DEBRIS THAT IS EXCAVATED WITH THE BORROW MATERIAL NEEDS TO BE FULLY REMOVED BY HAND OR OTHER METHODS. OTHERWISE, THE EMBANKMENT LIFTS WILL NOT BE TESTED AND ACCEPTED.
4. STRIPPINGS AND MUCK MATERIAL TO BE DISPOSED OF INSIDE THE IMPOUNDMENT AND SPREAD EVENLY SO THAT THE MOUND OF MATERIAL WILL LIE BELOW THE PROPOSED WATER ELEVATION OF 30.00 NAVD (AREA 5) OR 32.00 NAVD (AREA 6).
5. ALL CLEARING ACTIVITIES MUST BE MONITORED BY THE PROJECT ENVIRONMENTAL CONSULTANT TO PROTECT THE ENDANGERED EASTERN INDIGO SNAKE.

SOIL EROSION NOTES

1. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT A SPECIFIC SOIL EROSION PLAN. IN GENERAL, THE SOIL EROSION PLAN SHALL REQUIRE THAT ALL ON-SITE SOILS WILL REMAIN ON-SITE AND WILL NOT ERODE INTO THE ADJACENT SWALES, ADJACENT PROPERTIES, OR RETENTION DITCHES. ALL EXIST. SWALES SHALL REMAIN SODDED/SEEDED & MULCHED (STABILIZED) DURING CONSTRUCTION. THE CONTRACTOR SHALL SCARIFY ONLY AS NECESSARY TO CONSTRUCT THE PROJECT. SILTATION BARRIERS AND HAY BALES SHALL BE UTILIZED AS PER PROVIDED DETAILS. UPON COMPLETION OF THE SITE WORK, ALL AREAS SHALL BE SODDED/SEEDED & MULCHED (STABILIZED) WITHIN SEVEN DAYS TO AVOID EROSION. CONTRACTOR IS REQUIRED TO COMPLY WITH ALL STATE WATER QUALITY CRITERIA, SPECIFICALLY, NO OFF-SITE DISCHARGES WILL BE ALLOWED.
2. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE GUIDELINES AND SPECIFICATIONS IN CHAPTER 6 OF THE FLORIDA LAND DEVELOPMENT MANUAL: A GUIDE TO SOUND LAND AND WATER MANAGEMENT (FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION, 1988).
3. ALL INLETS AND PIPE SHALL BE PROTECTED DURING CONSTRUCTION TO PREVENT SILTATION IN THE DRAINAGE SYSTEMS BY WAY OF TEMPORARY PLUGS AND PLYWOOD OR PLASTIC COVERS OVER THE INLETS.

EXISTING DITCH FILL NOTES

1. DITCHES TO BE FILLED SHOULD BE STRIPPED AND CLEANED OF ALL SURFACE VEGETATION, STUMPS, DEBRIS, ORGANIC TOPSOIL, MUCK, SOFT SEDIMENT, LOOSE SOIL, OR OTHER DELETERIOUS MATERIAL, AS ENCOUNTERED.
2. EXCAVATED UNSUITABLE MATERIAL MAY NOT BE USED AS FILL OR BACKFILL MATERIAL.
3. STRIPPING AND CLEANING OF DITCHES UNDER PROPOSED BERMS MUST BE EXTENDED A MINIMUM OF 10' BEYOND TOE OF BERM.
4. FILL MUST BE PLACED IN INDIVIDUAL LIFTS NOT EXCEEDING 12" AND COMPACTED TO 98% OF MODIFIED PROCTOR, MAXIMUM DRY DENSITY VALUE.
5. REFER TO SUBSURFACE SOIL EXPLORATION, McCARTY RANCH WATER FARMING AREA 5 & 6, BY ARDAMAN & ASSOCIATES.



NOTE: SILT FENCE TO BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR STAKED SILT FENCE (LF).

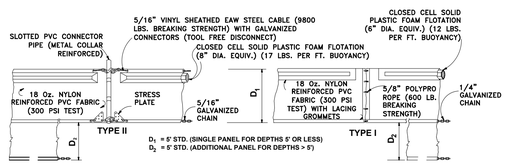
TYPE III SILT FENCE

N.T.S.

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.



CURTAIN TO REACH BOTTOM UP TO DEPTHS OF 10 FEET. TWO (2) PANELS TO BE USED FOR DEPTHS GREATER THAN 10 FEET UNLESS SPECIAL DEPTH CURTAINS SPECIFICALLY CALLED FOR IN THE PLANS OR AS DETERMINED BY THE ENGINEER.

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

FLOATING TURBIDITY BARRIERS

N.T.S.

LEGEND

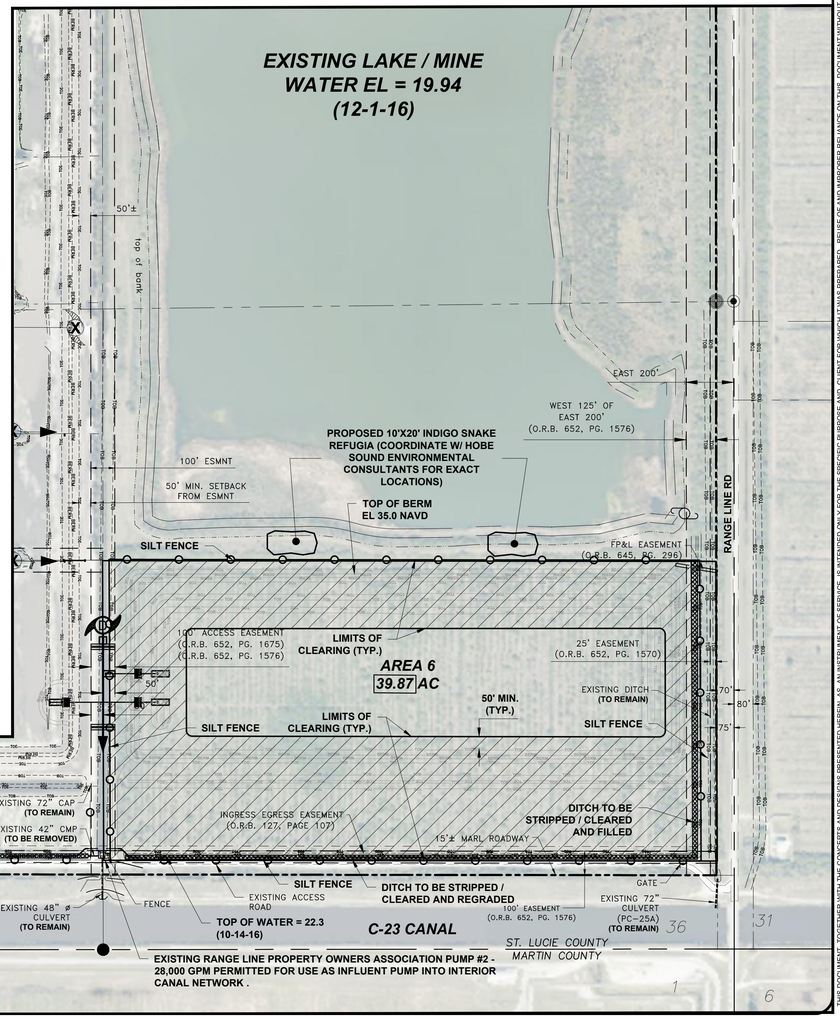
- PROPERTY LINE
- EASEMENT LINE
- SECTION LINE
- SILT FENCE
- TURBIDITY BARRIER
- EX DITCH CENTERLINE
- EX POWER POLE
- TEMPORARY BENCHMARK
- LIMITS OF CLEARING APPROX. 132 ACRES
- 80.00 AREA WITHIN BERMS
- UNDISTURBED WETLAND BUFFER (TYP)
- WETLAND LIMITS
- EXISTING DITCH/CANAL TO BE DEMUCKED AND BACKFILLED / APPROXIMATE LOCATION OF UNSUITABLE MATERIAL
- EXISTING DITCH TO BE STRIPPED FILLED AND REGRADED

NORTH

GRAPHIC SCALE

300' 0 150' 300' 600'

SCALE: 1" = 300'



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DATE: 4/7/20
DRAWN BY: MDR
DESIGNED BY: TJS
CHECKED BY: JWC
PROJECT No.: 1682.2-4
HORZ. SCALE: 1" = 300'
VERT. SCALE: N/A
CADD FILE: Clearing

NO.	DATE	BY	REVISIONS
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SCALE VERIFICATION
0 1
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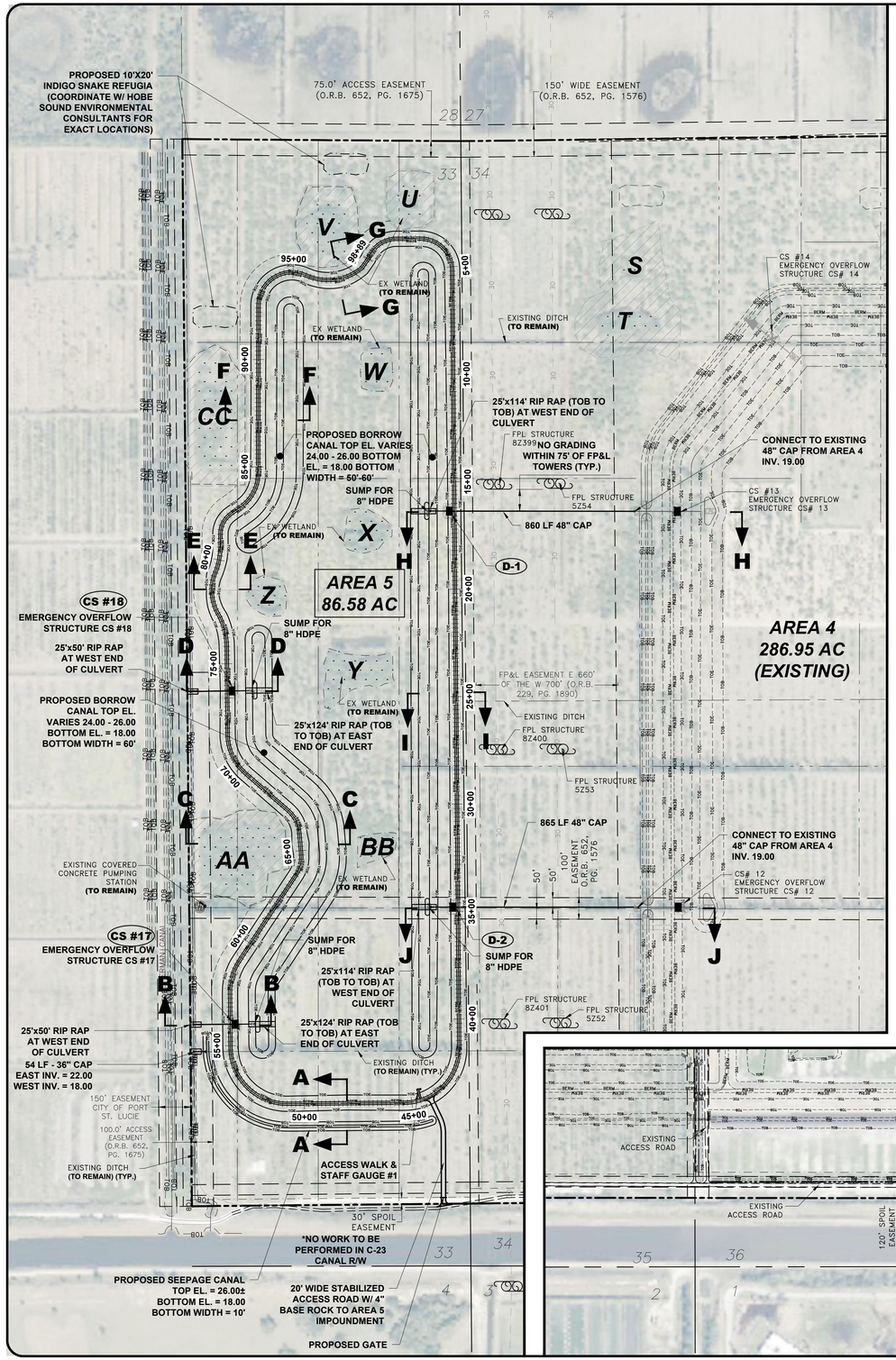
McCARTY RANCH EXTENSION WATER QUALITY RESTORATION PROJECT - AREAS 5-6
City of Port St. Lucie, Florida

CLEARING, STORMWATER POLLUTION PREVENTION PLAN

Joseph W. Capra, P.E.
301 N.W. Flagler Ave.
Stuart, Florida 34994
P.E. No. 37638

Printed Date:

JOB No.: 1682.2-5
SHEET 3 OF 11



NORTH

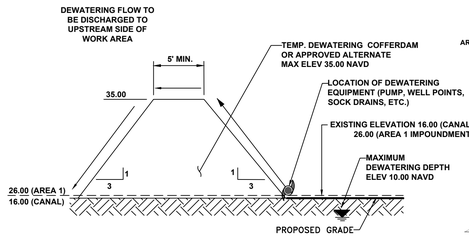
GRAPHIC SCALE

300 0 150 300 600

GRAPHIC SCALE

LEGEND

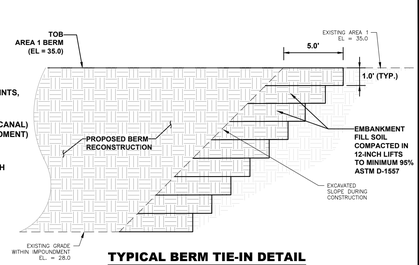
- PROPERTY LINE
- EASEMENT LINE
- SECTION LINE
- BERM — CONST. BERM
- TOB — CONST. TOP OF BANK
- TOE — CONST. TOE OF SLOPE
- EX DITCH CENTERLINE
- EX POWER POLE
- CONST. CONTROL STRUCTURE/ EMERGENCY OVERFLOW CONNECTION - SEE DETAIL.
- EX PUMP STATION
- EXISTING AREA 2 CONTROL STRUCTURE/ EMERGENCY OVERFLOW CONNECTION
- 290.40 — AREA WITHIN BERMS
- UNDISTURBED WETLAND BUFFER (50' TYP. UNLESS OTHERWISE STATED)
- P — WETLAND LIMITS
- D — DEWATERING PUMP



COFFER DAM TYPICAL SECTION

NTS

NOTE: DEWATERING ELEVATIONS DOWNSTREAM AND UPSTREAM NEED TO BE REGULATED TO AVOID ADVERSE IMPACTS (FLOODING UPSTREAM AND DOWNSTREAM)



TYPICAL BERM TIE-IN DETAIL

N.T.S.

CS #17, D-5 & D-6 INSTALLATION NOTES:

1. INSTALL COFFER DAM OR APPROVED ALTERNATIVE.
2. INSTALL 12" PUMP TO MAINTAIN CANAL FLOW
3. DEWATER AS REQUIRED FOR STRUCTURE AND PIPE INSTALLATION.
4. REMOVE AREA 1 AS NECESSARY FOR D-6 INSTALLATION.
5. INSTALL CS #19, D-3 & D-4 AND ASSOCIATED PIPING.
6. AFTER INSTALLATION OF D-4 AND CULVERT, REBUILD AREA 1 BERM IN ACCORDANCE WITH BERM TIE-IN DETAIL.
7. REMOVE 12" PUMP AND COFFER DAM WHEN STRUCTURE AND PIPE INSTALLATION AND BERM TIE-IN IS COMPLETE.

NOTES:

1. THE FOOTPRINT OF THE PROPOSED LEVEE AND THE EXISTING LEVEE BANKS AT THE TIE-IN LOCATIONS SHOULD BE STRIPPED AND CLEANED OF ALL SURFACE VEGETATION, SOD, LOOSE SOILS OR OTHER DELETERIOUS MATERIALS, AS ENCOUNTERED.
2. THE EXTENT OF STRIPING AND CLEANING MUST BE DETERMINED BY VISUAL OBSERVATION, PROBING, AND JUDGMENT DURING THE EARTHWORK OPERATION.
3. THE MEANS AND METHODS SHOULD BE THE RESPONSIBILITY OF THE CONTRACTOR, BUT MUST PROVIDE PROTECTION OF THE EXPOSED AREAS FROM EROSION AND PREVENT SLOUGHING.
4. CONSTRUCTION WILL REQUIRE THE SLOPES TO BE CUT INTO THE EXISTING LEVEE SOILS ON THE ADJACENT AREA 1 WATER FARM.
5. COMPACTION TESTING OF THE EXISTING LEVEE SLOPES' SOILS IS NOT REQUIRED, BUT THE SLOPES SHOULD BE EVALUATED TO VERIFY A FIRM CONDITION BY PROBING WITH A HAND-HELD PENETROMETER.
6. AT THE TIE-IN LOCATIONS, THE FIRST LIFT OF FILL CAN BE PLACED FOLLOWING INSPECTION AND APPROVAL OF THE STRIPPING/GRUBBING OPERATIONS.
7. THE LIFT SHOULD BE BENCHED AND RAMPED AS NECESSARY TO ACCOMMODATE A HEAVY VIBRATORY ROLLER.
8. RECOMMENDED FILL WITH NO MORE THAN 12 PERCENT FINES (UNIFIED SOIL CLASSIFICATIONS SP OR SP-SM) FREE OF ORGANIC MATERIALS, SUCH AS TOPSOIL, ROOTS, AND VEGETATION.
9. ALL FILL TO BE PLACED IN LEVEL "BENCHED" LIFTS NOT TO EXCEED 12" IN UNCOMPACTED THICKNESS.
10. EACH "BENCHED" LIFT SHOULD BE "KEYED" INTO THE FIRM EXISTING LEVEE SOILS AND COMPACTED BY SUITABLE COMPACTION EQUIPMENT TO ACHIEVE AT LEAST 95% OF THE MODIFIED PROCTOR (ASTM D-1557) MAXIMUM DENSITY VALUE. (CONTINUE LIFTS UNTIL DESIRED ELEVATION IS ACHIEVED)
11. IF HAND-HELD COMPACTION IS USED, THE LIFT THICKNESS SHOULD BE REDUCED TO 6".
12. MATERIAL TO BE COMPACTED SHOULD BE CONDITIONED TO NEAR OPTIMUM MOISTURE CONTENT TO OBTAIN THE REQUIRED DENSITY.
13. WETTING OR DRYING OF THE MATERIAL AND ADDITIONAL WORKING TO SECURE UNIFORM MOISTURE CONTENT REQUIRED FOR COMPACTION SHOULD BE PERFORMED.
14. LIFTS SHOULD BE HORIZONTALLY OVER-FILLED SLIGHTLY BEYOND THE DESIRED GEOMETRY SO THAT THE UNSUPPORTED PORTION ALONG THE LEVEE SIDE THAT CANNOT BE COMPACTED WITH THE ROLLER CAN BE SCRAPPED OFF DURING FINAL GRADING OF THE SLOPE, RESULTING IN WELL COMPACTED SOILS PRESENT WITHIN THE FINISHED LEVEE.

301 NW Flagler Ave.
Stuart, Florida 34994
Phone: (772) 692-4344
Fax: (772) 692-4341
Engineering Business No: EB-0007657
CAPTEC Engineering, Inc.
Civil Engineering Professionals

DATE: 4/7/20
DRAWN BY: MDR
DESIGNED BY: TJS
CHECKED BY: JWC
PROJECT No.: 1682.2-5
HORZ. SCALE: 1" = 300'
VERT. SCALE: N/A
CADD FILE: Site Plan

NO.	DATE	BY	REVISIONS
1	3/24/23	JWC	BID SET

SCALE VERIFICATION
0 1
SOLID BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING, ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

McCARTY RANCH EXTENSION WATER QUALITY RESTORATION PROJECT - AREAS 5-6

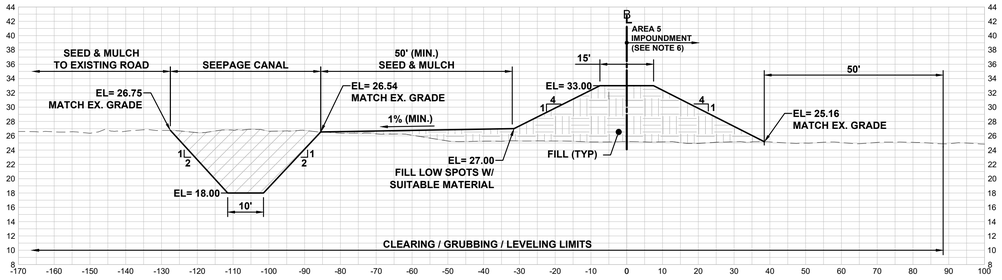
City of Port St. Lucie, Florida

SITE PLAN

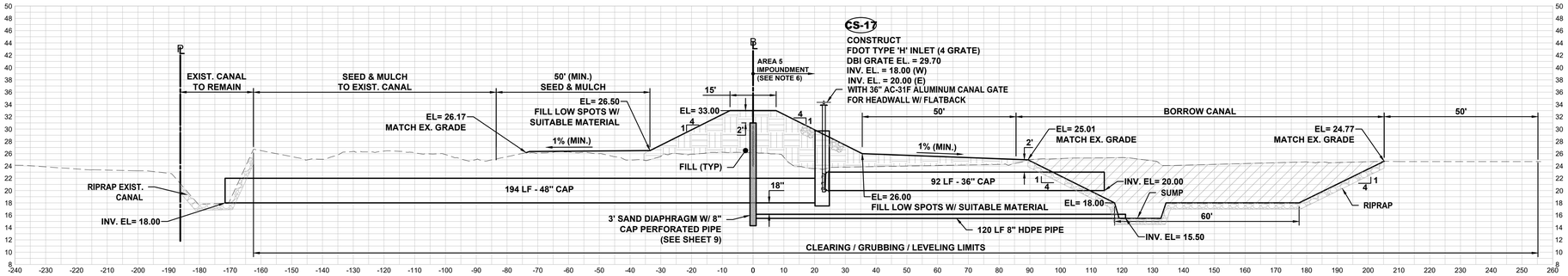
Joseph W. Capra, P.E.
301 N.W. Flagler Ave.
Stuart, Florida 34994
P.E. No. 37638

Printed Date:

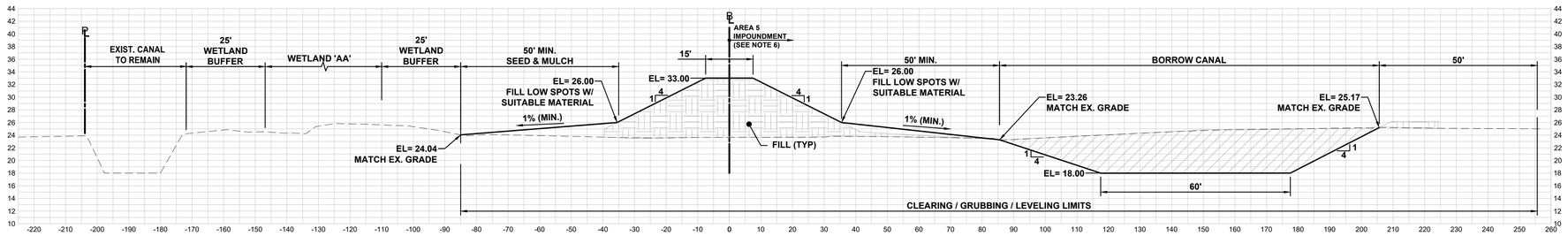
JOB No.: 1682.2-5
SHEET 4 OF 11



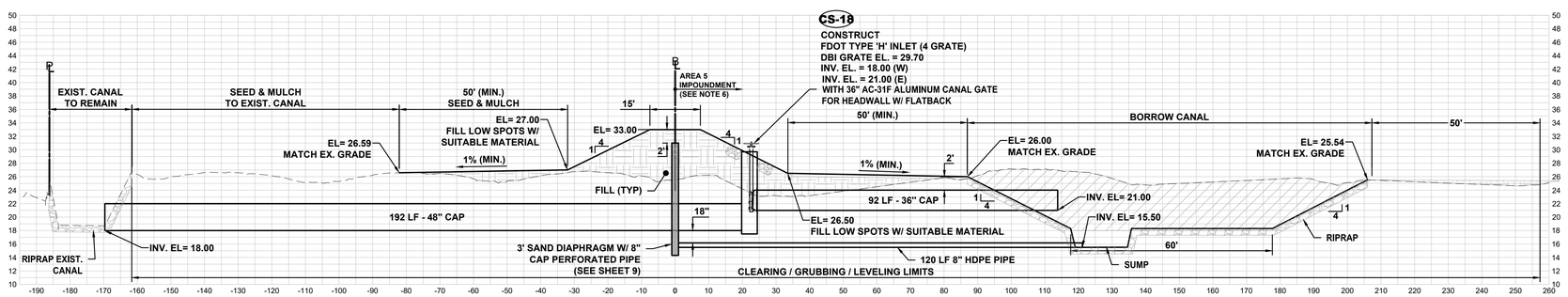
SECTION A-A (SOUTH BERM)
(AREA 5)
STA. 48+00



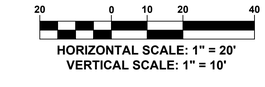
SECTION B-B (WEST BERM)
(AREA 5)
STA. 56+00



SECTION C-C (WEST BERM)
(AREA 5)
STA. 65+34



SECTION D-D (WEST BERM)
(AREA 5)
STA. 73+73



LEGEND

PROPOSED FILL

PROPOSED EXCAVATION

NOTES:

1. ALL DISTURBED AREAS TO BE STABILIZED WITH SOD, HYDROSEED, OR SEED/MULCH.
2. FILL MATERIAL TO BE COMPACTED TO 98% OF THE MAXIMUM DRY DENSITY PER AASHTO T-180.
3. DEPTH, WIDTH, AND SIDE SLOPES OF BORROW CANALS VARIES AND SHALL BE BASED ON AMOUNT OF FILL NEEDED TO CONSTRUCT BERM. DISTANCE BETWEEN BORROW CANAL AND BERM IS 50' MIN.
4. CONTRACTOR TO REFER TO SHEET 3 FOR LIMITS OF CLEARING.
5. CONTRACTOR TO BUILD BERM / EARTHWORK / DEMUCKING / DEWATERING / STABILIZATION IN CONFORMANCE WITH NOTES ON SHEETS 10 & 11.
6. ALL AREAS WITHIN THE AREAS 5 & 6 IMPOUNDMENTS WILL BE REMOVED OF EXOTICS.

CAPTEC Engineering, Inc.
Civil Engineering Professionals
• 301 NW Flagler Ave.
Stuart, Florida 34994
Phone: (772) 692-4344
Fax: (772) 692-4341
Engineering Business No: EB-0007657

DATE:	4/7/20
DRAWN BY:	MDR
DESIGNED BY:	TJS
CHECKED BY:	JWC
PROJECT No.:	1682.2-5
HORZ. SCALE:	1" =20'
VERT. SCALE:	1" = 10'
CADD FILE:	Sections

NO.	DATE	BY	REVISIONS
1	3/24/23	JWC	BID SET

SCALE VERIFICATION
0 1
SOLID BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING. ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

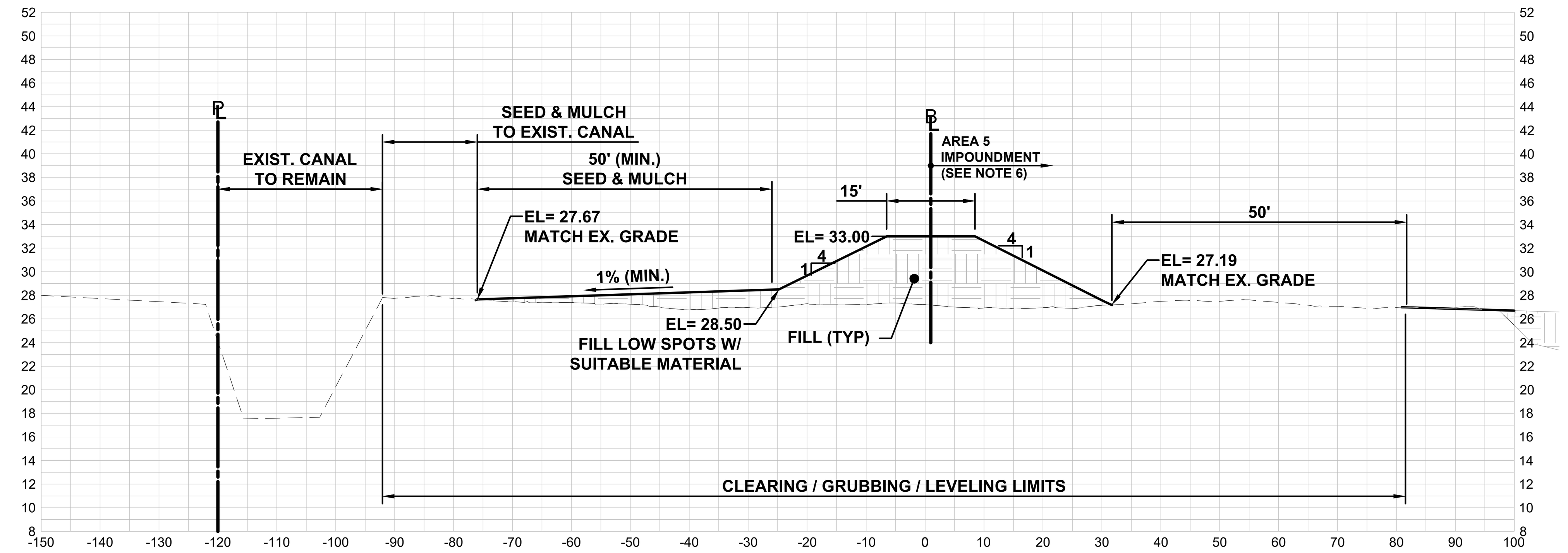
McCARTY RANCH EXTENSION WATER QUALITY RESTORATION
PROJECT - AREA 5
City of Port St. Lucie, Florida

CROSS SECTIONS
SHEET 1 OF 4

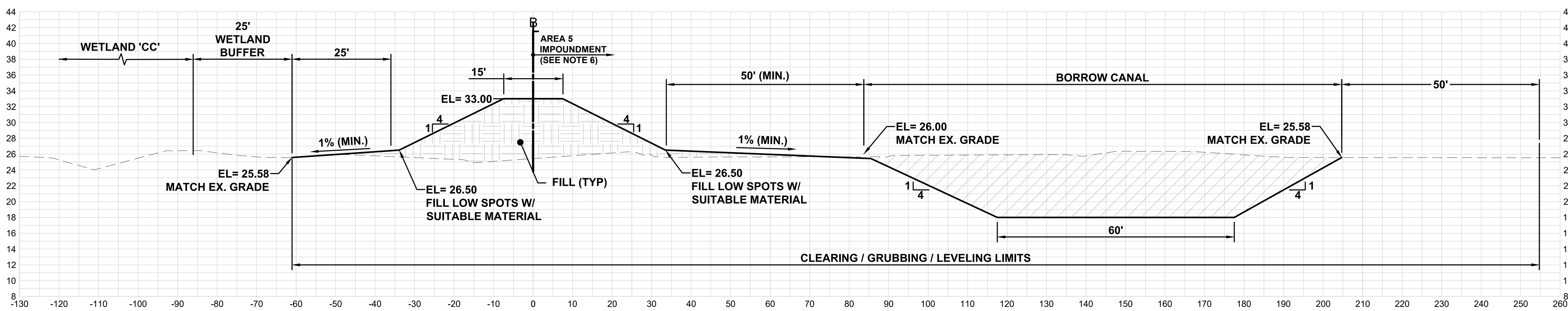
Joseph W. Capra, P.E.
301 N.W. Flagler Ave.
Stuart, Florida 34994
P.E. No. 37638

Printed Date:

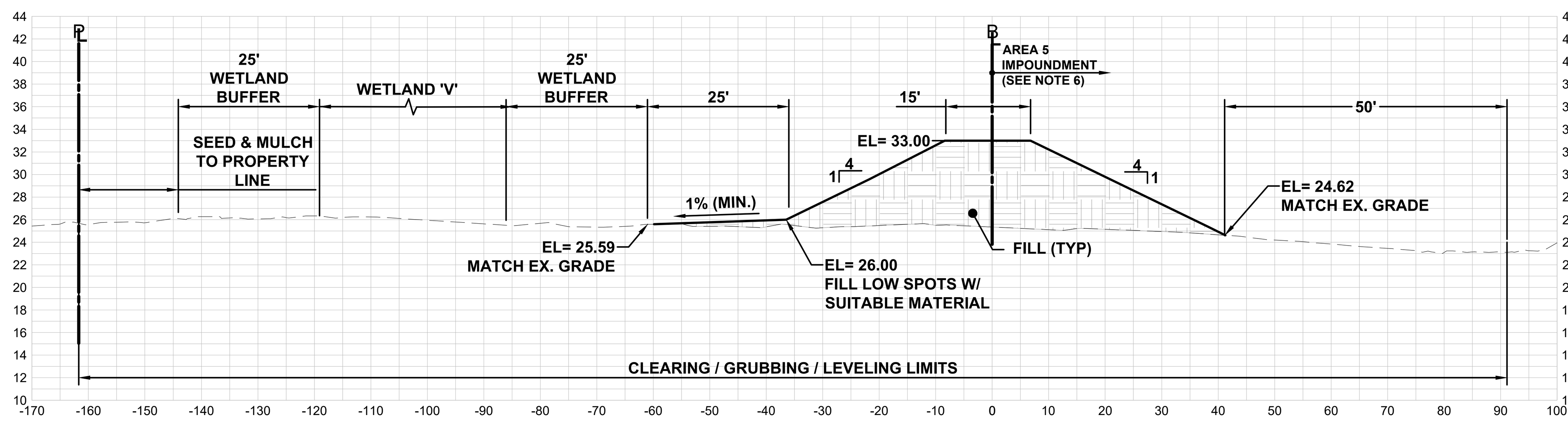
JOB No.: 1682.2-5
SHEET 5 OF 11



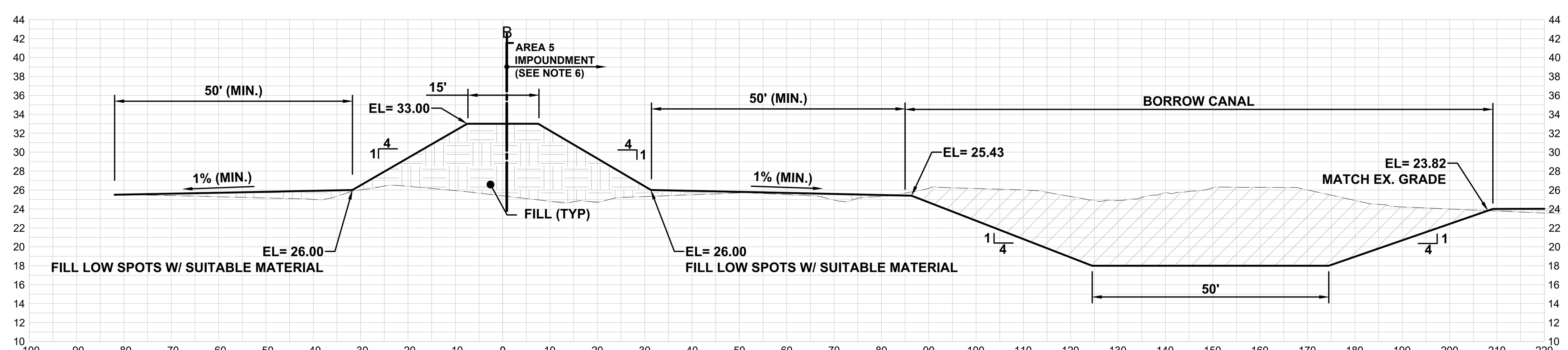
SECTION E-E (WEST BERM)
(AREA 5)
STA. 78+53



SECTION F-F (WEST BERM)
(AREA 5)
STA. 87+00



SECTION G-G (NORTH BERM)
(AREA 5)
STA. 97+16



SECTION I-I (EAST BERM)
(AREA 5)
STA. 24+80

GRAPHIC SCALE

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 10'

LEGEND

PROPOSED FILL

PROPOSED EXCAVATION

NOTES:
1. ALL DISTURBED AREAS TO BE STABILIZED WITH SOD, HYDROSEED, OR SEED/MULCH.
2. FILL MATERIAL TO BE COMPACTED TO 98% OF THE MAXIMUM DRY DENSITY PER AASHTO T-180.
3. DEPTH, WIDTH, AND SIDE SLOPES OF BORROW CANALS VARIES AND SHALL BE BASED ON AMOUNT OF FILL NEEDED TO CONSTRUCT BERM. DISTANCE BETWEEN BORROW CANAL AND BERM IS 50' MIN.
4. CONTRACTOR TO REFER TO SHEET 3 FOR LIMITS OF CLEARING.
5. CONTRACTOR TO BUILD BERM / EARTHWORK / DEMUCKING / DEWATERING / STABILIZATION IN CONFORMANCE WITH NOTES ON SHEETS 10 & 11.
6. ALL AREAS WITHIN THE AREAS 5 & 6 IMPOUNDMENTS WILL BE REMOVED OF EXOTICS.

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Civil Engineering Professionals
301 NW Flagler Ave.
Stuart, Florida 34994
Phone: (772) 692-4344
Fax: (772) 692-4341
Engineering Business No. EB-0007657

DATE:	4/7/20
DRAWN BY:	MDR
DESIGNED BY:	TJS
CHECKED BY:	JWC
PROJECT No.:	1682.2-5
HORZ. SCALE:	1" =20'
VERT. SCALE:	1" = 10'
CADD FILE:	Sections

REVISIONS

NO.	DATE	BY	
1	3/24/23	JWC	BID SET

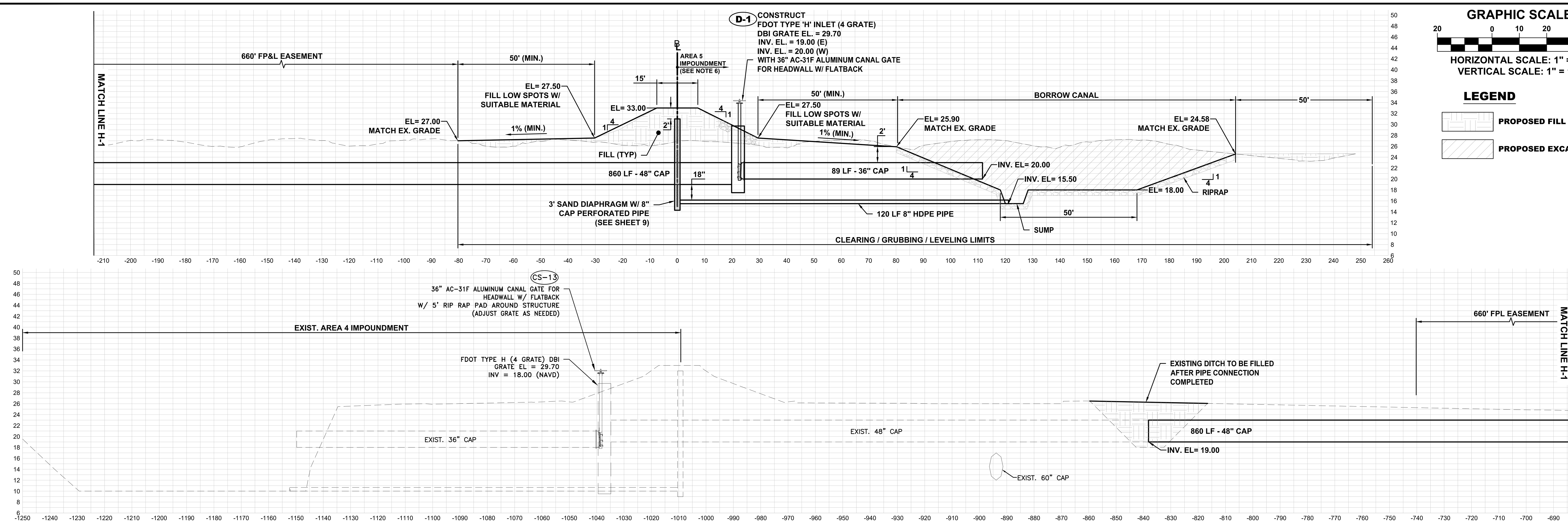
SCALE VERIFICATION
SOLID BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING. ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

McCARTY RANCH EXTENSION WATER QUALITY RESTORATION PROJECT - AREA 5
City of Port St. Lucie, Florida

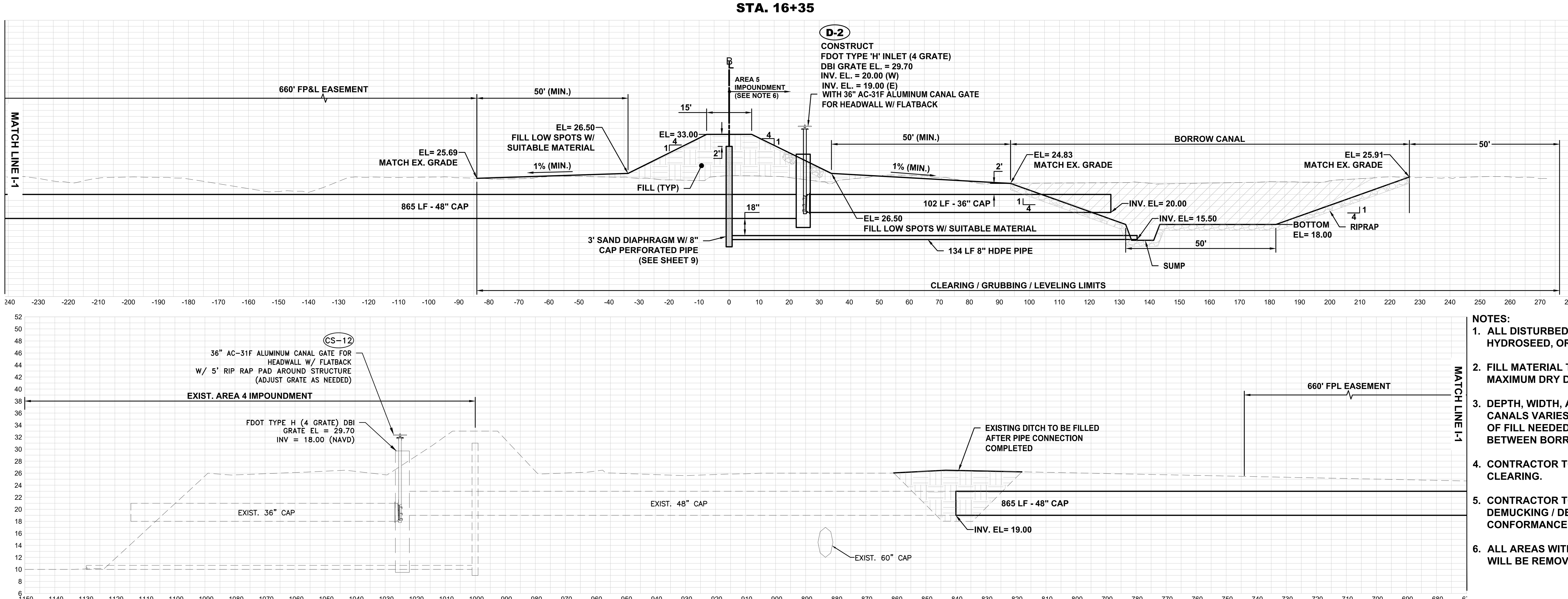
CROSS SECTIONS SHEET 2 OF 4

Joseph W. Capra, P.E.
301 N.W. Flagler Ave.
Stuart, Florida 34994
P.E. No. 37638

Printed Date:



SECTION H-H (EAST BERM)
(AREA 5)
STA. 16+35



SECTION J-J (WEST BERM)
(AREA 5)
STA. 34+79

GRAPHIC SCALE

20 0 10 20 40

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 10'

LEGEND

- PROPOSED FILL
- PROPOSED EXCAVATION

NOTES:

1. ALL DISTURBED AREAS TO BE STABILIZED WITH SOD, HYDROSEED, OR SEED/MULCH.
2. FILL MATERIAL TO BE COMPACTED TO 98% OF THE MAXIMUM DRY DENSITY PER AASHTO T-180.
3. DEPTH, WIDTH, AND SIDE SLOPES OF BORROW CANALS VARIES AND SHALL BE BASED ON AMOUNT OF FILL NEEDED TO CONSTRUCT BERM. DISTANCE BETWEEN BORROW CANAL AND BERM IS 50' MIN.
4. CONTRACTOR TO REFER TO SHEET 3 FOR LIMITS OF CLEARING.
5. CONTRACTOR TO BUILD BERM / EARTHWORK / DEMUCKING / DEWATERING / STABILIZATION IN CONFORMANCE WITH NOTES ON SHEETS 10 & 11.
6. ALL AREAS WITHIN THE AREAS 5 & 6 IMPOUNDMENTS WILL BE REMOVED OF EXOTICS.

CAPTEC Engineering, Inc.
Civil Engineering Professionals
301 NW Flagler Ave.
Stuart, Florida 34994
Phone: (772) 692-4344
Fax: (772) 692-4341
Engineering Business No. EB-0007657

DATE:	4/7/20
DRAWN BY:	MDR
DESIGNED BY:	TJS
CHECKED BY:	JWC
PROJECT No.:	1682.2-5
HORZ. SCALE:	1" = 20'
VERT. SCALE:	1" = 10'
CADD FILE:	Sections

REVISIONS

NO.	DATE	BY	REVISIONS
	3/24/23	JWC	BID SET

SCALE VERIFICATION
SOLID BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING, ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

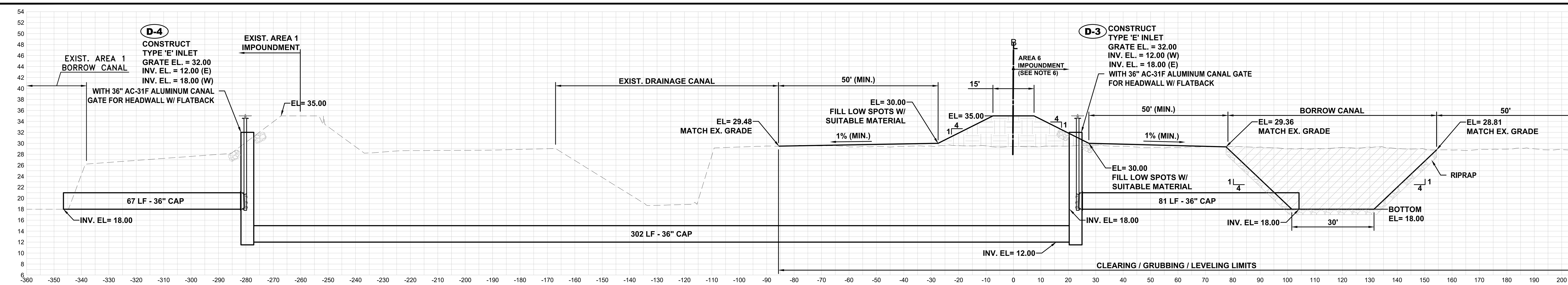
McCARTY RANCH EXTENSION WATER QUALITY RESTORATION PROJECT - AREA 6
City of Port St. Lucie, Florida

CROSS SECTIONS SHEET 3 OF 4

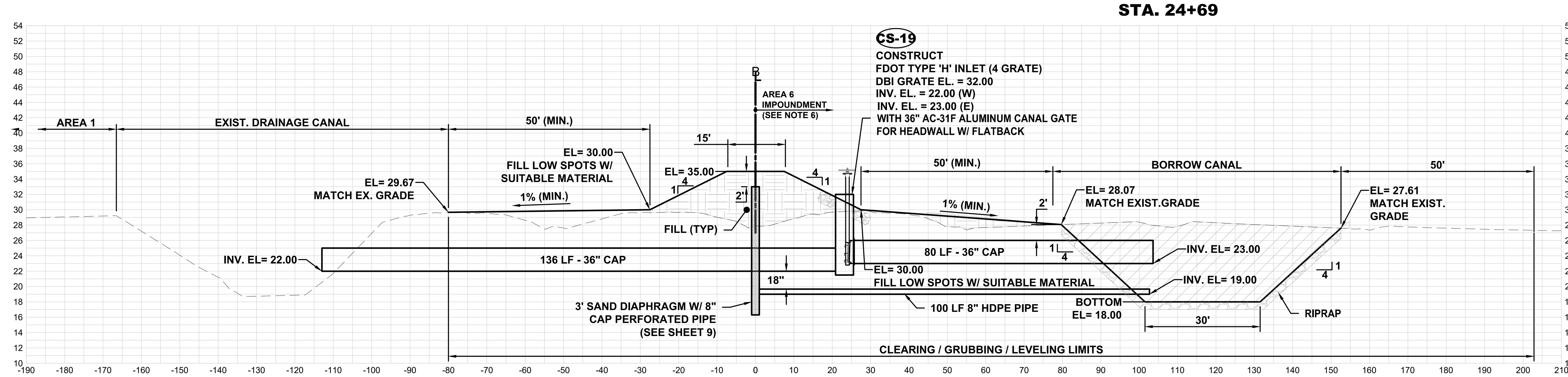
Joseph W. Capra, P.E.
301 N.W. Flagler Ave.
Stuart, Florida 34994
P.E. No. 37638

Printed Date:

JOB No.: 1682.2-5
SHEET 7 OF 11



SECTION K-K (WEST BERM)
(AREA 6)
STA. 24+69



SECTION L-L (WEST BERM)
(AREA 6)
STA. 25+87

GRAPHIC SCALE

20 0 10 20 40

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 10'

LEGEND

PROPOSED FILL

PROPOSED EXCAVATION

811 KNOW WHAT'S BELOW ALWAYS CALL 811 BEFORE YOU DIG

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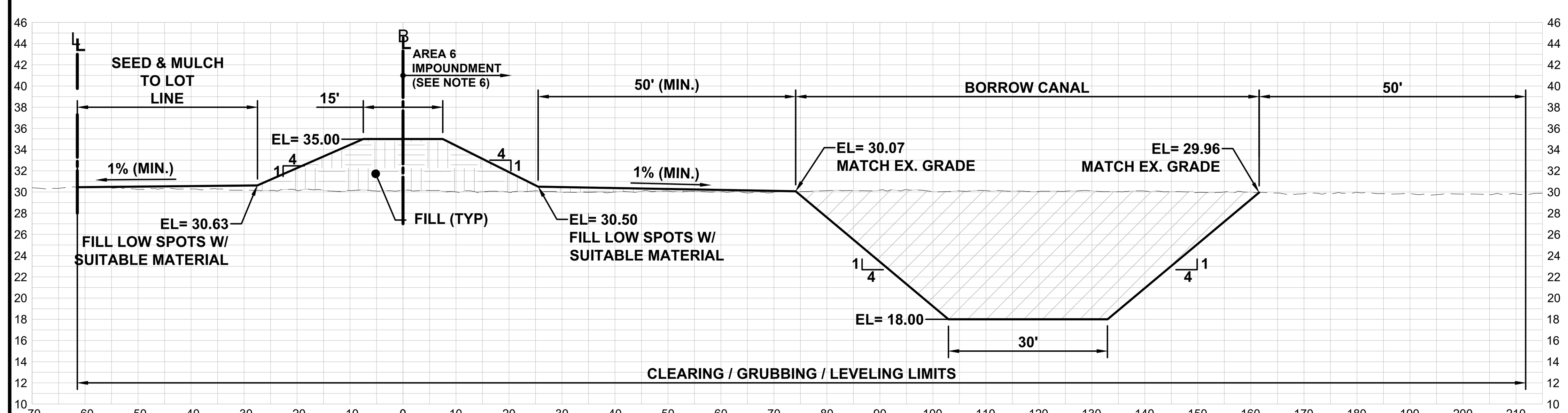
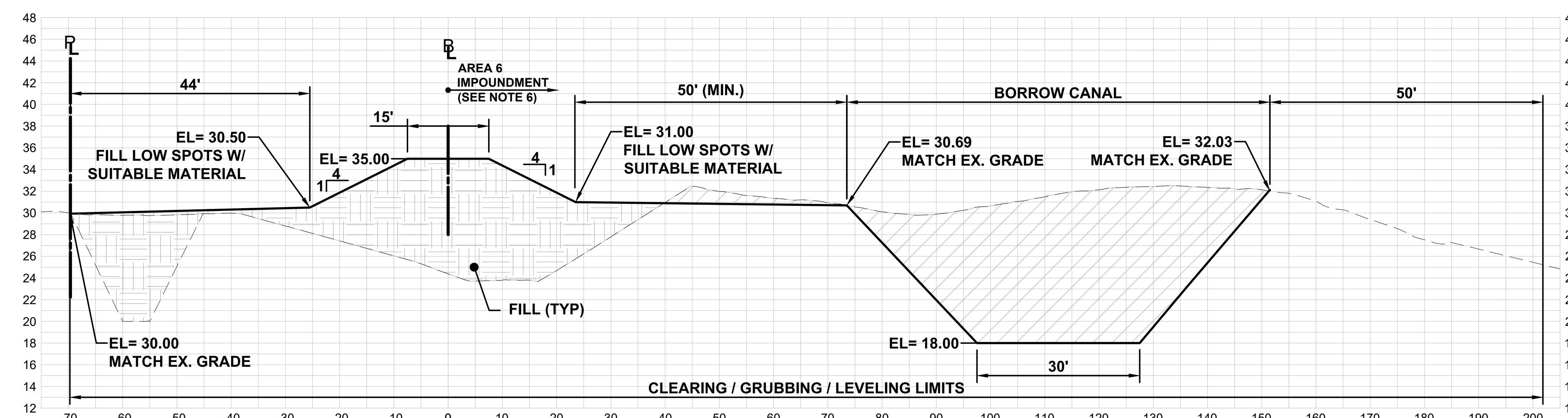


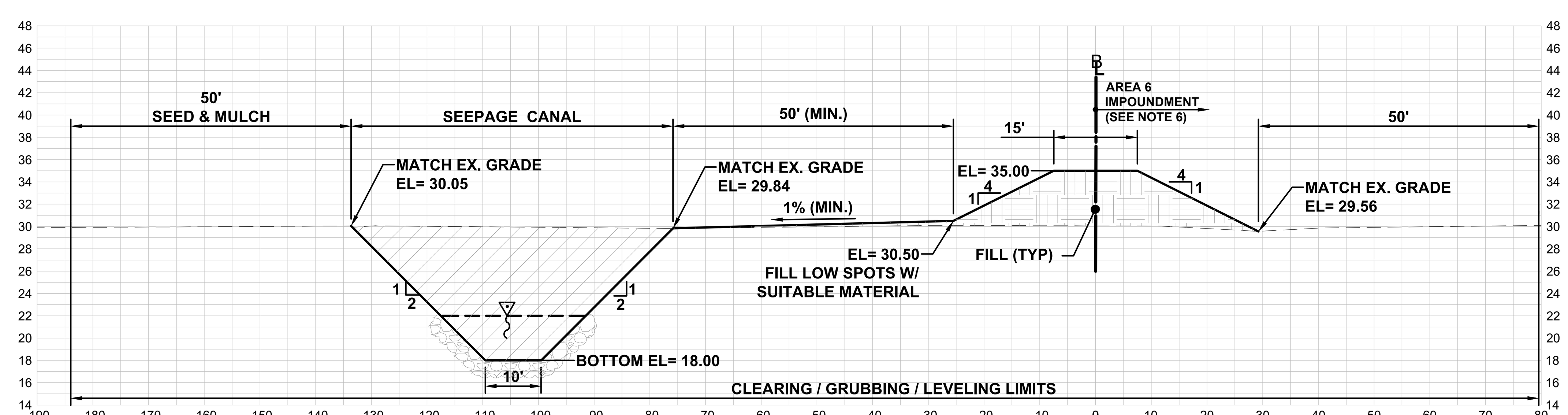
SECTION M-M (NORTH BERM)
(AREA 6)
STA. 41+50



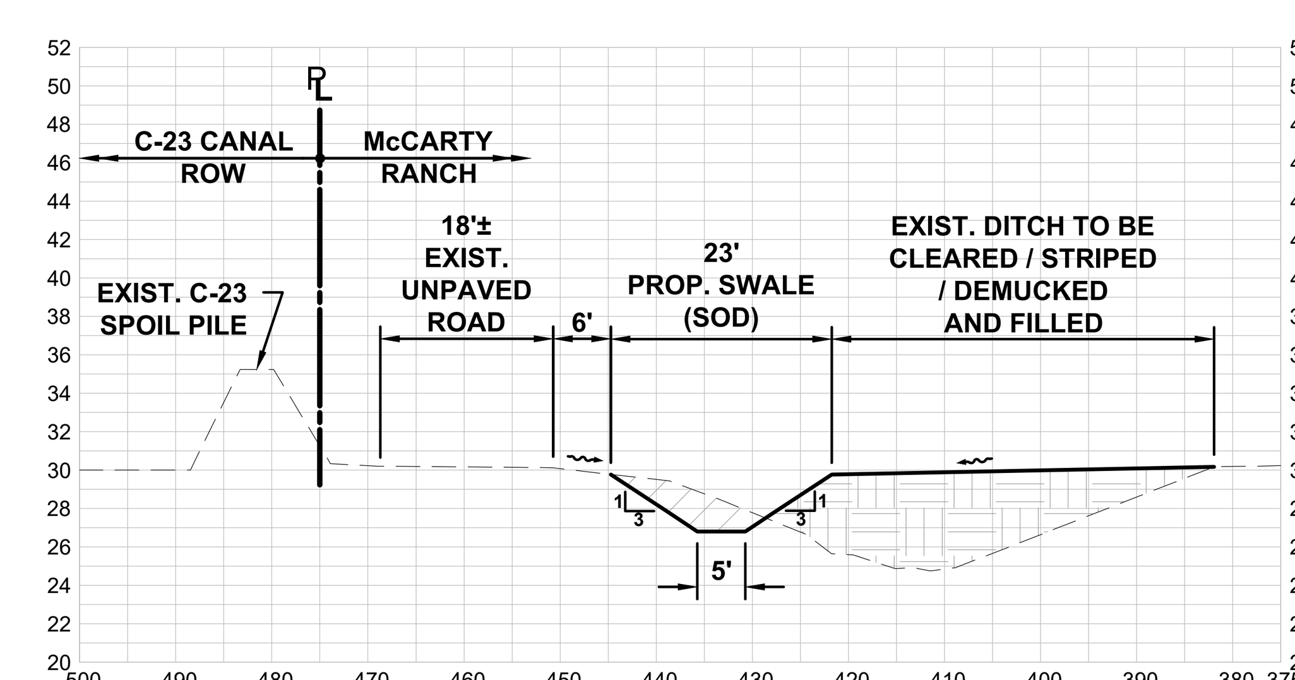
SECTION N-N (EAST BERM)
(AREA 6)
STA. 57+00

NOTES:

1. ALL DISTURBED AREAS TO BE STABILIZED WITH SOD, HYDROSEED, OR SEED/MULCH.
2. FILL MATERIAL TO BE COMPACTED TO 98% OF THE MAXIMUM DRY DENSITY PER AASHTO T-180.
3. DEPTH, WIDTH, AND SIDE SLOPES OF BORROW CANALS VARIES AND SHALL BE BASED ON AMOUNT OF FILL NEEDED TO CONSTRUCT BERM. DISTANCE BETWEEN BORROW CANAL AND BERM IS 50' MIN.
4. CONTRACTOR TO REFER TO SHEET 3 FOR LIMITS OF CLEARING.
5. CONTRACTOR TO BUILD BERM / EARTHWORK / DEMUCKING / DEWATERING / STABILIZATION IN CONFORMANCE WITH NOTES ON SHEETS 10 & 11.
6. ALL AREAS WITHIN THE AREAS 5 & 6 IMPOUNDMENTS WILL BE REMOVED OF EXOTICS.



SECTION O-O (SOUTH BERM)
(AREA 6)
STA. 11+49



SECTION P-P (SOUTH)
(AREA 6)
(TYPICAL)

CAPTEC Engineering, Inc.
Civil Engineering Professionals
301 NW Flagler Ave.
Stuart, Florida 34994
Phone: (772) 692-4344
Fax: (772) 692-4341
Engineering Business No. EB-0007657

DATE:	4/7/20
DRAWN BY:	MDR
DESIGNED BY:	TJS
CHECKED BY:	JWC
PROJECT No.:	1682.2-5
HORZ. SCALE:	1" = 20'
VERT. SCALE:	1" = 10'
CADD FILE:	Sections

REVISIONS

NO.	DATE	BY	
	3/24/23	JWC	BID SET

SCALE VERIFICATION

0 1

SOLID BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING. ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

McCARTY RANCH EXTENSION WATER QUALITY RESTORATION PROJECT - AREA 6

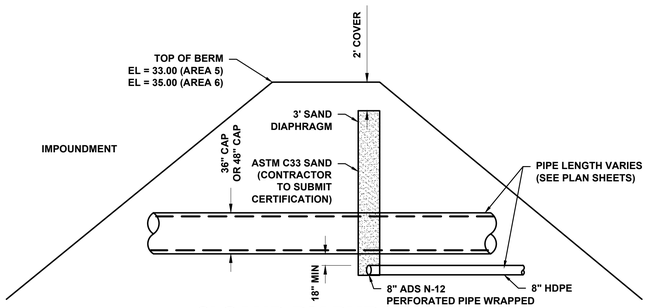
City of Port St. Lucie, Florida

CROSS SECTIONS SHEET 4 OF 4

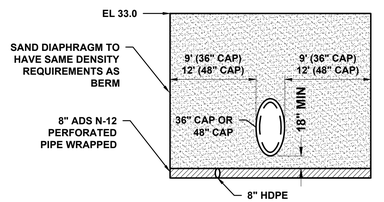
Joseph W. Capra, P.E.
301 N.W. Flagler Ave.
Stuart, Florida 34994
P.E. No. 37638

Printed Date:

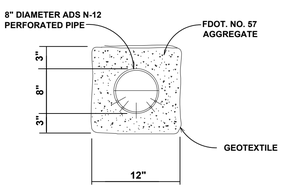
JOB No.: 1682.2-5



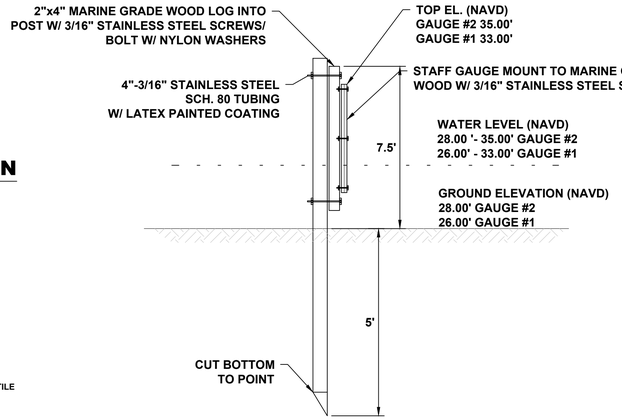
3' SAND DIAPHRAGM DETAIL
TYPICAL PROFILE
NTS



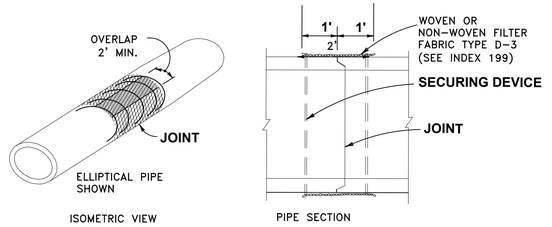
3' SAND DIAPHRAGM
DETAIL TYPICAL SECTION
NTS



PERFORATED PIPE DETAIL
NTS



STAFF GAUGE POST DETAIL
N.T.S.



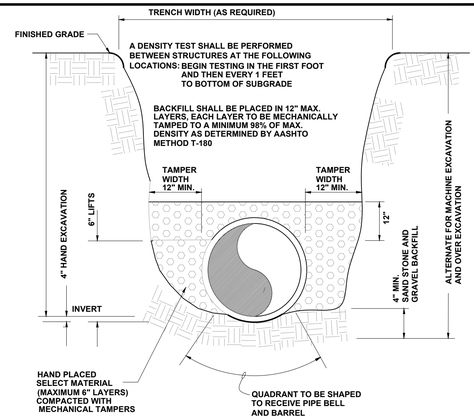
COST OF FILTER FABRIC JACKET TO BE INCLUDED IN COST OF PIPE CULVERTS

FOR ALL PIPE TYPES - CONCRETE PIPE SHOWN

ALL STORM PIPE JOINTS SHALL BE WRAPPED

STORM PIPE JOINTS SHALL BE WRAPPED ACCORDING TO THIS DETAIL. COMPLETELY WRAP THE OUTSIDE OF EACH JOINT WITH EITHER A WOVEN OR NON-WOVEN FILTER FABRIC WHICH PROVIDES AN AOS OF A NO. 70 TO NO. 100 SIEVE (150 TO 212 um), A MINIMUM OF 24 INCHES (600 mm) IN WIDTH AND A LENGTH TO PROVIDE A MINIMUM OVERLAP OF 24 INCHES (600 mm). SECURE FILTER FABRIC AGAINST THE OUTSIDE OF THE PIPE BY STEEL OR PLASTIC STRAPPING OR BY OTHER METHODS APPROVED BY THE ENGINEER. (REF: F.D.O.T. INDEX 280 FOR DETAILS OF CONSTRUCTION).

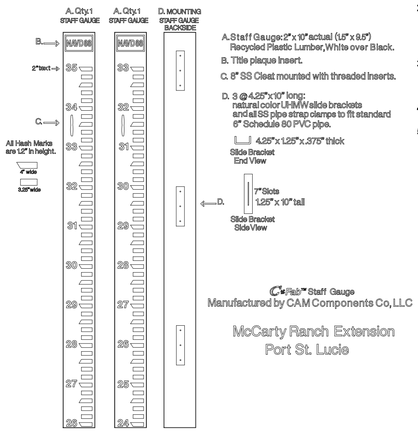
FILTER FABRIC JACKET DETAIL
N.T.S.



NOTES:

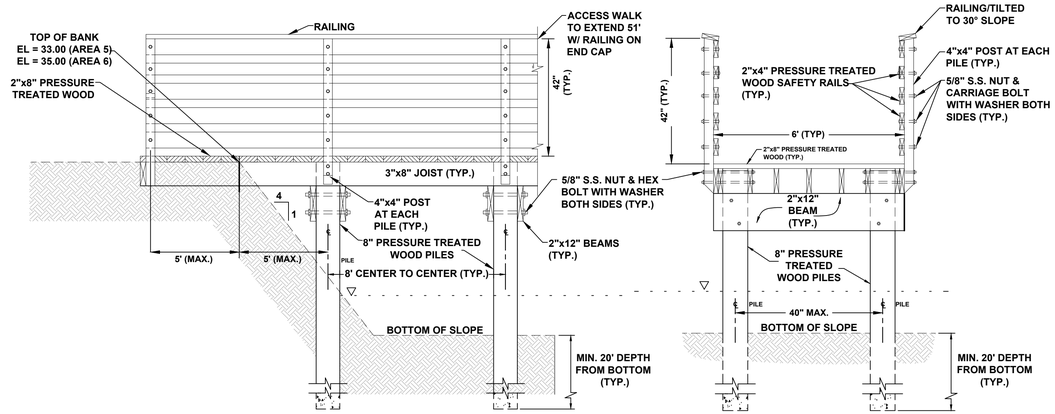
1. FOR TRENCHES REQUIRING SHEETING, SHORING, STAY BRACING, TRENCH JACKS OR TRENCH BOX, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SUPPORTS.
2. IF THE MAXIMUM TRENCH WIDTH MUST BE EXCEEDED, THE AREA OUTSIDE OF THE MAXIMUM EMBEDMENT SHALL BE COMPACTED TO FINAL BACKFILL REQUIREMENTS. IF THE PIPE IS INSTALLED IN A COMPACTED EMBANKMENT, THE EMBANKMENT SHALL BE IN PLACE AND COMPACTED TO 12" MIN. COVER BEFORE INSTALLATION OF UTILITY.
3. IF BEDDING IS REQUIRED TO BRING TRENCH BOTTOM UP TO GRADE AND PROVIDE UNIFORM AND ADEQUATE LONGITUDINAL SUPPORT UNDER THE PIPE, THEN A MINIMUM COMPACTED DEPTH OF 4 TO 6 INCHES OF SELECT EMBEDMENT MATERIAL IS REQUIRED.
4. THE CONTRACTOR SHALL COMPLY WITH REQUIREMENTS OF THE FLORIDA TRENCH SAFETY ACT.
5. ALL UTILITY EXCAVATING, BACKFILLING AND COMPACTING SHALL BE IN ACCORDANCE WITH SECTION 02220 OF THE CITY OF PORT ST. LUCIE UTILITY SYSTEMS DEPARTMENT TECHNICAL SPECIFICATIONS AND CONSTRUCTION STANDARDS, LATEST EDITION.

UTILITY TRENCH DETAIL
N.T.S.

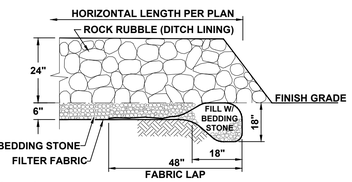


STAFF GAUGE DETAIL
N.T.S.

1. MOUNT STAFF GAUGES TO SIDE OF ACCESS WALK.



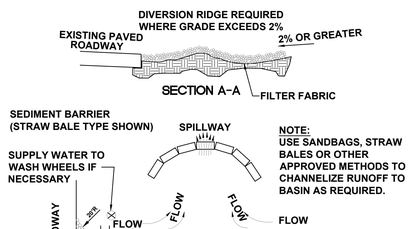
ACCESS WALK DETAIL
N.T.S.



NOTES:

1. INSTALLATION SHALL BE IN ACCORDANCE WITH THESE SPECIFICATIONS. THE AREAS TO RECEIVE DITCH LINING RIP RAP SHALL BE LINED WITH FILTER FABRIC AND 6" OF BEDDING STONE. ROCK RUBBLE SHALL BE PLACED IN 2 LAYERS FOR A TOTAL DEPTH OF 24" TO PRODUCE WELL GRADED MASS OF STONE WITH THE MINIMUM PRACTICAL PERCENTAGE OF VOIDS.
2. THE ROCK RUBBLE SHALL BE BROKEN STONE CONFORMING TO THESE SPECIFICATIONS.
3. THE BEDDING STONE SHALL CONFORM TO SECTION 901-1 OF THE FDOT SPECIFICATIONS FOR NUMBER 4 COURSE AGGREGATE.
4. CONTRACTOR SHALL USE WOVEN GEOTEXTILE FABRIC IN ACCORDANCE WITH FDOT INDEX NO. 985.
5. NO BEDDING STONE IS REQUIRED FOR BANK & SHORE RIP RAP.

RIP RAP DETAIL
N.T.S.



NOTES:

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

STABILIZED CONSTRUCTION ENTRANCE

CAPTEC Engineering, Inc.
Civil Engineering Professionals
• 301 NW Flagler Ave.
Stuart, Florida 34994
Phone: (772) 692-4344
Fax: (772) 692-4341
Engineering Business No. EB-0007657

DATE: 4/7/20
DRAWN BY: MDR
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PROJECT No.: 1682.2-5
HORZ. SCALE: AS NOTED
VERT. SCALE: N/A
CADD FILE: Detail

NO.	DATE	BY	REVISIONS
	3/24/23	JWC	BID SET

SCALE VERIFICATION
0 1"
SOLID BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING. ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

McCARTY RANCH EXTENSION
WATER QUALITY RESTORATION
PROJECT - AREAS 5-6
City of Port St. Lucie, Florida

DETAILS

Joseph W. Capra, P.E.
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Printed Date:

JOB No.: 1682.2-5
SHEET 9 OF 11

GENERAL NOTES

1. ANY DISCREPANCIES ON THE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE COMMENCING WORK. NO FIELD CHANGE OR DEVIATIONS FROM THE DESIGN ARE TO BE MADE WITHOUT PRIOR APPROVAL OF THE ENGINEER.
2. THE CONTRACTOR SHALL CONTACT ENGINEER OF RECORD, THE APPROPRIATE GOVERNMENTAL JURISDICTIONAL AGENCY AND ALL OTHER CONCERNED UTILITIES AT LEAST 2 FULL BUSINESS DAYS IN ADVANCE OF CONSTRUCTION OPERATIONS
3. THE LOCATION AND SIZE OF ALL EXISTING UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE AND ARE BASED ON THE BEST AVAILABLE INFORMATION. ADDITIONAL UTILITIES MAY EXIST WHICH ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITIES BY ELECTRONIC METHODS AND BY HAND EXCAVATION IN COORDINATION WITH ALL UTILITY COMPANIES, PRIOR TO BEGINNING ANY CONSTRUCTION OPERATIONS. ANY AND ALL CONFLICTS OF EXISTING UTILITIES WITH PROPOSED IMPROVEMENTS SHALL BE RESOLVED BY THE ENGINEER AND THE OWNER PRIOR TO BEGINNING ANY CONSTRUCTION OPERATIONS. THIS WORK BY THE CONTRACTOR SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.
4. PROJECT SUPERINTENDENT: THE CONTRACTOR SHALL PROVIDE A QUALIFIED SUPERINTENDENT TO REMAIN ON THE JOB SITE AT ALL TIMES WHEN WORK IS BEING PERFORMED. THE SUPERINTENDENT SHALL BE PRESENT AT THE PRE-CONSTRUCTION MEETING. THE CONTRACTOR SHALL NOTIFY THE LOCAL UTILITY COMPANY BY LETTER PRIOR TO THE PRE-CONSTRUCTION MEETING APPOINTING THE SUPERINTENDENT FOR THIS PROJECT INCLUDING A FORMAL RESUME SHOWING QUALIFICATIONS.
5. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE HIS COMPLETE FAMILIARITY WITH THE PROJECT SITE AND COMPONENTS TO INCLUDE SUBSURFACE CONDITIONS OF SOIL AND GROUNDWATER TABLE. BY SUBMITTAL OF A BID FOR THIS PROJECT, THE CONTRACTOR ACKNOWLEDGES HIS COMPLETE UNDERSTANDING AND RESPONSIBILITIES WITH RESPECT TO THE CONSTRUCTION ACTIVITIES REQUIRED UNDER THE SCOPE OF THIS PROJECT.
6. THE "TRENCH SAFETY ACT" SHALL BE INCORPORATED INTO THIS CONTRACT AS ENHANCED BY THE LEGISLATURE OF THE STATE OF FLORIDA TO BE IN EFFECT AS OF OCTOBER 1, 1990.
7. AS-BUILT PLANS: THE CONTRACTOR SHALL PROVIDE THREE (3) BLACK LINE COPIES AND ONE (1) DIGITAL FORMAT OF A SIGNED AND SEALED CERTIFIED AS-BUILT SURVEY. DRAWINGS SHALL BEAR THE ORIGINAL SIGNATURE AND EMBOSSED SEAL OF THE SURVEYOR AND SHALL BE SUBMITTED AFTER THE COMPLETION OF CONSTRUCTION, BUT PRIOR TO FINAL APPROVAL. THE AS-BUILT SURVEY SHALL BE PREPARED BY A LICENSED PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF FLORIDA AND SHALL COMPLY WITH APPLICABLE PROVISIONS OF THE FLORIDA ADMINISTRATIVE CODE AND CHAPTER 472 OF THE FLORIDA STATUES. THE DRAWINGS SHALL BE AT A SCALE COMPARABLE TO THE DESIGN DRAWINGS PREPARED BY THE ENGINEER AND SHALL REFERENCE THE BASE LINE OF SURVEY APPEARING ON THE ENGINEERING DRAWINGS. THE HORIZONTAL AND VERTICAL LOCATION OF THE DRAINAGE FACILITIES AND ALL APPURTENANCES SHALL BE ACCURATELY DEPICTED TO SCALE AND SHALL BE IDENTIFIED RELATIVE TO THE BASE LINE AND TO READILY IDENTIFIABLE PERMANENT OR SEMI-PERMANENT REFERENCE POINTS EXISTING AFTER THE COMPLETION OF CONSTRUCTION. LOCATIONS SHALL BE SHOWN FOR ALL STRUCTURES AND UNDERGROUND FACILITIES, BOTH HORIZONTAL AND VERTICAL, AND SHALL IDENTIFY SIZE, TYPE, FACILITY, MATERIAL AND CLEARANCE. ALL INFORMATION SHALL BE BASED UPON MEASUREMENTS AND OBSERVATIONS MADE IN THE FIELD BY THE SURVEYOR CERTIFYING THE SURVEY OR BY PERSONNEL UNDER HIS EMPLOYMENT, DIRECTION AND SUPERVISION. THE COST FOR PREPARING AND MAINTAINING THE AS-BUILT PLANS SHALL BE INCIDENTAL TO THE CONSTRUCTION COST.
8. THE CONTRACTOR SHALL PREPARE A PLAN SHOWING THE SCHEDULE OF WORK, INCLUDING A HIGHLIGHTED PLAN SHOWING THE ORDER OF CONSTRUCTION WHICH WILL FACILITATE MAINTAINING EXISTING SERVICES DURING CONSTRUCTION. THIS PLAN SHALL BE IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION MAINTENANCE OF TRAFFIC AND STAGING PLAN.
9. ALL CONSTRUCTION IS TO BE IN ACCORDANCE WITH THE LATEST EDITION OF FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS.
10. ALL PSLUSD, PSL FIBER OPTIC, TELEPHONE, FPL, LOCAL CABLE AND ALL LOCAL UTILITY COMPANY LOCATIONS SHOWN ARE TAKEN FROM INFORMATION PROVIDED BY THAT UTILITY COMPANY. THESE LOCATIONS HAVE NOT BEEN VERIFIED IN THE FIELD. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL EXPOSE ALL CROSSINGS WITH PUBLIC & PRIVATE UTILITIES PRIOR TO BEGINNING CONSTRUCTION AND DELIVERY OF PIPE. THE CONTRACTOR SHALL USE EXTREME CAUTION WITHIN THE VICINITY OF PUBLIC & PRIVATE UTILITY FACILITIES. THE CONTRACTOR WILL REQUEST THE PRESENCE OF THE RESPECTIVE UTILITY REPRESENTATIVES DURING CONSTRUCTION IN THE VICINITY OF THEIR FACILITIES. A PROFILE OF THE UTILITY FACILITIES ARE NOT PROVIDED IN THESE DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE PUBLIC & PRIVATE UTILITIES AND VERIFYING/OBTAINING THE APPROXIMATE LOCATION(S) OF THESE FACILITIES.
11. ANY NGVD 29 AND NAVD 88 MONUMENT WITHIN THE LIMITS OF CONSTRUCTION ARE TO BE PROTECTED. IF IN DANGER OF DAMAGE, THE CONTRACTOR SHOULD NOTIFY,
    GEODETIC INFORMATION CENTER, CITY OF PORT SAINT LUCIE
    ATTN: MARK MAINTENANCE CENTER
    ENGINEERING DEPARTMENT
    ATTN: M/CG - 162
    121 SW PORT SAINT LUCIE BOULEVARD
    6001 EXECUTIVE BOULEVARD
    TELEPHONE: (772) 871-5175
    PORT SAINT LUCIE, FL 34984-5099
12. TEMPORARY BENCHMARK REFERENCED NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
13. ALLOWABLE TOLERANCE FOR BERM, STRUCTURES, PIPE INVERT ELEVATIONS = 0.05'
14. CONTRACTOR TO UTILIZE "APPROVED FOR CONSTRUCTION" PLANS ONLY.
15. SHOP DRAWINGS FOR ALL STRUCTURES SHALL BE SUBMITTED TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ORDERING.

GENERAL NOTES (CONT.)

16. SHOP DRAWINGS ARE REQUIRED ON ALL STRUCTURES. THE ENGINEER REQUIRES FIVE (5) BUSINESS DAYS TO REVIEW SHOP DRAWINGS AFTER RECEIPT.
17. CONCRETE SHALL BE CLASS I 3,000 PSI MINIMUM COMPRESSIVE STRENGTH UNLESS NOTED OTHERWISE. REINFORCING SHALL BE GRADE 60 DEFORMED STEEL BARS IN ACCORDANCE ASTM A-615.
18. CONTRACTOR SHALL PROTECT ALL EXISTING ABOVE OR UNDERGROUND STRUCTURES, LANDSCAPE FEATURES, TREES AND UTILITIES NOT SHOWN ON THE PLANS TO BE REMOVED BY CONSTRUCTION. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY DAMAGE CAUSED BY CONSTRUCTION ACTIVITY.
19. ALL PROPOSED UTILITY MATERIALS, CONSTRUCTION METHODS, TESTING AND DISINFECTION SHALL CONFORM TO THE REQUIREMENTS OF THE CITY OF PORT ST. LUCIE UTILITY SYSTEMS DEPARTMENT 2019 STANDARDS AND AWWA CURRENT STANDARD.
20. ALL HORIZONTAL AND VERTICAL SURVEY CONTROL POINTS SHALL BE PROTECTED AND UNDISTURBED. IN THE EVENT THAT A CONTROL POINT IS DISTURBED OR DESTROYED, THE POINT SHALL BE RE-ESTABLISHED BY A FLORIDA REGISTERED LAND SURVEYOR. IF THE CONSTRUCTION OCCURS IN THE CITY OF PORT ST. LUCIE, THE METHOD TO RE-ESTABLISH THE POINT SHALL BE APPROVED BY THE CITY ENGINEER AT THE EXPENSE OF THE CONTRACTOR.
21. THE CONTRACTOR SHALL PREPARE A COMPLETE VIDEO RECORD OF THE PROJECT SITE BEFORE BEGINNING ANY WORK. THE VIDEO RECORD SHALL INCLUDE ALL ROADWAY, DRAINAGE AND UTILITIES POINTS OF CONNECTION AND SHALL EXTEND A MINIMUM OF 100 FEET BEYOND THE WORK LIMITS TO DOCUMENT THE EXISTING CONDITIONS. THE CONTRACTOR SHALL ALSO VIDEO DOCUMENT ALL HAUL ROUTES NEEDED FOR THE OFFSITE MOVEMENT OF EARTHWORK. COPIES OF THE VIDEO RECORD SHALL BE PROVIDED TO THE ENGINEER OF RECORD AND THE OWNER PRIOR TO SUBMITTAL OF THE FIRST PAY REQUEST.
22. TEMPORARY FENCES OR FENCES SHALL BE MAINTAINED AT ALL TIMES.
23. ALL BRAND NAMES ARE USED FOR DESCRIPTIVE PURPOSES ONLY. "EQUAL" EQUIPMENT OR MATERIAL MUST BE ACCEPTED AND APPROVED IN ACCORDANCE WITH CITY'S STANDARD SPECIFICATIONS GENERAL REQUIREMENTS ARTICLE 4. THE BRAND NAME & MODEL DESIGNATIONS NOTED HEREIN IDENTIFY THE MINIMUM REQUIREMENTS TO ESTABLISH EQUALITY.
24. THE CITY RESERVES THE RIGHT TO MAKE THE FINAL DETERMINATION OF "EQUAL TO" FOR ALL EQUIPMENT AND MATERIALS FOR THIS PROJECT.

DEMUCKING AND DEWATERING

1. DELETERIOUS ORGANIC MUCK/PEAT (IF ENCOUNTERED) SHOULD BE REMOVED (DEMUCKED) TO ITS ENTIRE VERTICAL LIMITS AND TO A MINIMUM HORIZONTAL MARGIN EQUIVALENT TO THE DEPTH OF MUCK OUTSIDE THE DEVELOPMENT AREA. A MINIMUM HORIZONTAL MARGIN OF 5 FEET SHOULD BE USED IF THE DEPTH TO THE BOTTOM OF THE MUCK IS LESS THAN 5 FEET.
2. EXCAVATED ORGANIC MUCK/PEAT MUST NOT BE USED AS FILL MATERIAL. DEMUCKING AND BACKFILLING OPERATIONS SHOULD BE MONITORED CONTINUOUSLY BY THE TESTING COMPANY SELECTED BY THE CITY OF PORT ST. LUCIE TO VERIFY THAT ALL UNSUITABLE MATERIAL IS REMOVED AND THAT BACKFILL SOILS ARE SUITABLE AND WELL COMPACTED.
3. ACTUAL LIMITS OF MUCK REMOVAL WILL BE DETERMINED BASED ON VISUAL OBSERVATION DURING CONSTRUCTION. THE FINAL QUANTITY OF MUCK REMOVAL SHOULD BE DETERMINED AFTER DEMUCKING HAS BEEN COMPLETED USING METHODS SUCH AS TRUCK VOLUME AND/OR SURVEY CONDUCTED DURING REMOVAL OF THE MUCK.
4. DE-MUCKING SHOULD BE CONDUCTED “IN-THE-DRY”. IF THE EXCAVATION EXTENDS BELOW THE GROUNDWATER TABLE, THE CONTROL OF THE GROUNDWATER WILL BE REQUIRED TO ACHIEVE THE NECESSARY STRIPPING AND SUBSEQUENT CONSTRUCTION, BACKFILLING, AND COMPACTION REQUIREMENTS. THE GROUNDWATER TABLE SHOULD BE MAINTAINED AT LEAST 24 INCHES BELOW EARTHWORK AND COMPACTION SURFACES.
5. TRENCH EXCAVATIONS SHALL BE DEWATERED BY USING ONE OR MORE OF THE FOLLOWING METHODS. SOCK DRAINS, WELL POINT SYSTEM, SUMP PUMPS OR OTHER METHOD(S) AS APPROVED BY THE ENGINEER. DEWATERING SYSTEMS SHALL BE UTILIZED IN ACCORDANCE WITH GOOD STANDARD PRACTICE AND MUST BE EFFICIENT ENOUGH TO LOWER THE WATER LEVEL IN ADVANCE OF THE EXCAVATION AND MAINTAIN IT CONTINUOUSLY TO KEEP THE TRENCH BOTTOM AND SIDES FIRM AND DRY. THE ACTUAL METHOD(S) OF DEWATERING SHOULD BE DETERMINED BY THE CONTRACTOR.
6. DEWATERING SHOULD BE ACCOMPLISHED WITH THE KNOWLEDGE THAT THE PERMEABILITY OF SOIL DECREASES WITH AN INCREASING SILT AND CLAY CONTENT. THEREFORE, A SILTY FINE SAND IS LESS PERMEABLE THAN A FINE SAND. THE SP, SP/SM, AND SM TYPE SOILS CAN USUALLY BE DEWATERED BY WELL POINTING OR DITCH/SUMP METHODS.
7. THE CONTRACTOR, AT NO DIRECT COST TO THE OWNER, SHALL PERFORM ALL DEWATERING ACTIVITY.
8. DISCHARGE FROM DEWATERING SHALL BE DISPOSED OF IN SUCH A MANNER THAT IT WILL NOT INTERFERE WITH NORMAL DRAINAGE OF THE AREA IN WHICH THE WORK IS BEING PERFORMED, CREATE A PUBLIC NUISANCE OR FORM PONDING.
9. ALL DISCHARGE SHALL BE IN ACCORDANCE WITH ANY SFWMD ISSUED PERMITS.
10. THE OPERATIONS SHALL NOT CAUSE INJURY TO ANY PORTION OF THE WORK COMPLETED OR IN PROGRESS OR TO THE SURFACE OF STREETS OR TO PRIVATE PROPERTY.
11. THE ENGINEER OF RECORD AND NECESSARY REGULATORY AGENCIES, PRIOR TO CONSTRUCTION, SHALL APPROVE THE PROPOSED DEWATERING METHOD(S) AND SCHEDULE. ADDITIONALLY, WHERE PRIVATE PROPERTY WILL BE INVOLVED, THE CONTRACTOR SHALL OBTAIN ADVANCE PERMISSION FROM THE PROPERTY OWNER.

CLEARING AND GRUBBING

1. THE "FOOTPRINT" OF THE PROPOSED BERM AND ANY ASSOCIATED STRUCTURES, PLUS A MINIMUM MARGIN OF FIVE FEET, SHOULD BE STRIPPED OF ALL SURFACE VEGETATION, STUMPS, DEBRIS, ORGANIC TOPSOIL, MUCK OR OTHER DELETERIOUS MATERIALS, AS ENCOUNTERED. DURING THE GRUBBING OPERATION, ROOTS WITH A DIAMETER GREATER THAN ½ INCH, STUMPS, OR SMALL ROOTS IN A DENSE STATE, SHOULD BE GRUBBED AND COMPLETELY REMOVED.

CLEARING AND GRUBBING (CONT.)

2. THE ACTUAL DEPTH(S) OF STRIPPING AND GRUBBING MUST BE DETERMINED BY VISUAL OBSERVATION AND JUDGMENT DURING THE EARTHWORK OPERATION.

EARTHWORK NOTES

1. EXCAVATION SLOPES AND/OR BRACING ARE THE RESPONSIBILITY OF THE CONTRACTOR. HOWEVER, AT A MINIMUM, ALL EXCAVATIONS SHOULD BE SLOPED AND/OR BRACED TO MEET THE REQUIREMENTS OF THE OCCUPATIONAL HEALTH AND SAFETY ADMINISTRATION (OSHA) LATEST STANDARDS.
2. PROOF-ROLL THE CLEARED SURFACE TO LOCATE ANY UNFORESEEN SOFT AREAS OR UNSUITABLE SURFACE OR NEAR-SURFACE SOILS, TO INCREASE THE DENSITY OF THE SOILS WITHIN THE TOP 3 TO 4 FEET, AND TO PREPARE THE EXISTING SURFACE FOR THE ADDITION OF THE FILL SOILS (AS REQUIRED). PROOF-ROLLING SHOULD CONSIST OF AT LEAST 3 PASSES OF A COMPACTOR CAPABLE OF ACHIEVING THE REQUIRED DEGREE OF COMPACTION. EACH PASS SHOULD OVERLAP THE PRECEDING PASS BY 30 PERCENT TO ACHIEVE COMPLETE COVERAGE. IF DEEMED NECESSARY, IN AREAS THAT CONTINUE TO "YIELD", REMOVE ALL DELETERIOUS MATERIAL AND REPLACE WITH CLEAN, COMPACTED SAND BACKFILL. THE PROOF-ROLLING SHOULD OCCUR AFTER CUTTING AND BEFORE FILLING.
3. ALL BERM FILL MATERIALS SHOULD BE FREE OF ORGANIC MATERIALS, SUCH AS ROOTS AND VEGETATION. THE FINE SAND AND FINE SAND WITH SILT SOILS WITHOUT ROOTS AS ENCOUNTERED IN THE BORINGS ARE SUITABLE FILL MATERIALS. HOWEVER, WE NOTE THAT THESE SOILS MAY ALLOW SEEPAGE THROUGH THE BERM IF USED AS EMBANKMENT FILL MATERIAL. WITH PROPER MOISTURE CONTROL, THESE SOILS SHOULD DENSIFY USING CONVENTIONAL COMPACTION METHODS FOR SANDY MATERIALS. SOILS WITH MORE THAN 10 TO 12 PERCENT PASSING THE NO. 200 SIEVE WILL BE MORE DIFFICULT TO COMPACT DUE TO THEIR INHERENT NATURE TO RETAIN SOIL MOISTURE.
4. ALL ORGANIC MUCK/PEAT ENCOUNTERED IS NOT SUITABLE FOR USE AS STRUCTURAL FILL MATERIAL AND SHOULD BE DISPOSED OF OFFSITE OR OTHERWISE AS DIRECTED BY THE OWNER. CAREFUL ATTENTION SHOULD BE MADE BY THE CONTRACTOR NOT TO MIX THE UNSUITABLE SOILS WITH OTHERWISE SUITABLE SOILS WHILE EXCAVATING THESE ORGANIC SOILS.
5. FILL MATERIALS MUST BE PLACED AND COMPACTED IN A MANNER TO PREVENT THE POSSIBILITY OF HIGH LOCALIZED HYDRAULIC GRADIENTS WHICH COULD RESULT IN INTERNAL EROSION OF THE BERM MATERIALS CAUSED BY PIPING. THIS CONDITION OCCURS WHEN RELATIVELY HIGH PERMEABILITY SANDY AND SHELLY SOILS (E.G.; UNIFIED CLASSIFICATION SYSTEM SP, SP-SM) ARE BOUNDED BY RELATIVELY LOW PERMEABILITY SOILS (E.G.; UNIFIED CLASSIFICATION SYSTEM SM, SC-SM, SC). THEREFORE, THE COMPACTED MATERIAL SHOULD BE HOMOGENIZED TO PREVENT SEEPAGE CONCENTRATION PATHS FROM DEVELOPING.
6. ALL FILL SHOULD BE PLACED IN LEVEL LIFTS NOT TO EXCEED 12 INCHES IN UNCOMPACTED THICKNESS. EACH LIFT SHOULD BE COMPACTED BY SUITABLE COMPACTION EQUIPMENT TO ACHIEVE AT LEAST 98 PERCENT OF THE MODIFIED PROCTOR (ASTM D-1557) MAXIMUM DRY DENSITY VALUE. THE FILLING AND COMPACTION OPERATIONS SHOULD CONTINUE IN LIFTS UNTIL THE DESIRED ELEVATION(S) IS ACHIEVED. IF HAND-HELD COMPACTION EQUIPMENT IS USED, THE LIFT THICKNESS SHOULD BE REDUCED TO 6 INCHES.
7. THE MATERIAL TO BE COMPACTED SHOULD BE MOISTURE-CONDITIONED AND MAINTAINED TO BE WITHIN 2% OF THE OPTIMUM MOISTURE CONTENT DURING PLACEMENT, COMPACTION AND TESTING. WETTING OR DRYING OF THE MATERIAL AND ADDITIONAL WORKING TO SECURE A UNIFORM MOISTURE CONTENT REQUIRED FOR COMPACTION SHOULD BE PERFORMED. WE RECOMMEND THAT EACH SUCCESSIVE COMPACTED LAYER BE SCARIFIED TO ACHIEVE GOOD BONDING BETWEEN LIFTS. THE SURFACE OF THE EMBANKMENT SHOULD ALSO BE SCARIFIED BETWEEN SUCCESSIVE LIFTS IF THE PREVIOUS LIFT CONTAINS CLAYEY SOILS WHICH ARE COMPACTED IN A MANNER WHICH RESULTS IN A SMOOTH SURFACE. THE INTENT OF THIS REQUIREMENT IS TO PREVENT THE CREATION OF SLICK INTERFACES WITHIN EMBANKMENT MATERIALS WHICH MAY HAVE LOWER SHEAR STRENGTH.
8. IT IS IMPORTANT THAT THE ELEVATION OF THE CREST BE KEPT UNIFORM WITH A MAXIMUM GRADE PARALLEL TO THE AXIS OF THE BERM NO STEEPER THAN ONE PERCENT. THE INTENT OF THIS REQUIREMENT IS TO PREVENT RAIN WATER FROM RUNNING ALONG THE CREST OF THE BERM TO LOW PLACES WHERE IT CAN CONCENTRATE AND CAUSE SEVERE EROSION GULLIES ON THE BERM SLOPES.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING CERTIFIED MATERIAL TEST RESULTS TO THE ENGINEER OF THE RECORD PRIOR TO THE RELEASE OF FINAL CERTIFICATION BY THE ENGINEER. TEST RESULTS MUST INCLUDE, BUT MAY NOT BE LIMITED TO, DENSITIES FOR THE BERM EMBANKMENT, INLETS, AND STRUCTURES. DENSITY TESTS SHALL BE PERFORMED AT THREE (3) LOCATIONS AROUND ANY STRUCTURE. BEGIN TESTING IN THE FIRST FOOT ABOVE THE BOTTOM OF THE STRUCTURE AND THEN EVERY TWO FEET TO WITHIN TWO FEET OF THE FINISH GRADE.
10. ALL INLETS AND PIPE SHALL BE PROTECTED DURING CONSTRUCTION TO PREVENT SILTATION IN THE DRAINAGE SYSTEMS BY WAY OF TEMPORARY PLUGS AND PLYWOOD OR PLASTIC COVERS OVER THE INLETS. THE ENTIRE DRAINAGE SYSTEMS SHALL BE CLEANED OF ALL DEBRIS PRIOR TO FINAL ACCEPTANCE. ALL CONCRETE SHALL BE A MINIMUM 3,000 PSI.
11. THE CONTRACTOR MUST OBTAIN A WATER USE PERMIT PRIOR TO CONSTRUCTION DEWATERING UNLESS THE WORK QUALIFIES FOR A GENERAL PERMIT PURSUANT TO SUBSECTION 40E-20.302(4), F.A.C.

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DATE:	4/7/20
DRAWN BY:	MDR
DESIGNED BY:	TJS
CHECKED BY:	JWC
PROJECT No.:	1682.2-5
HORZ. SCALE:	N/A
VERT. SCALE:	N/A
CADD FILE:	Gen Notes

NO.	DATE	BY	REVISIONS
1	3/24/23	JWC	BID SET

SCALE VERIFICATION
SOLID BAR IS EQUAL TO 1 INCH ON ORIGINAL DRAWING. ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

McCARTY RANCH EXTENSION
WATER QUALITY RESTORATION
PROJECT - AREAS 5-6
City of Port St. Lucie, Florida

GENERAL NOTES - 1

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Printed Date:

JOB No.: 1682.2-5
SHEET 10 OF 11

STORM SEWER NOTES

1. ALL DISTURBED OUTFALL DRAINAGE AREAS SHALL BE STABILIZED UPON COMPLETION OF GRADING AFTER AS-BUILT GRADE ELEVATIONS ARE APPROVED BY THE ENGINEER.
2. PRIOR TO FINAL PAYMENT, ALL SLOPES AND SWALES SHALL BE STABILIZED TO AVOID EROSION.
3. THERE IS TO BE NO OFF-SITE HAULING WITHOUT PRIOR APPROVAL AND ALL EXCAVATED MATERIAL SHALL BE USED ON-SITE.
4. THE CONTRACTOR SHALL CONSTRUCT THE PROPOSED PROJECT IN A MANNER SO AS TO MINIMIZE ANY ADVERSE IMPACTS OF THE WORKS ON FISH, WILDLIFE, NATURAL ENVIRONMENTAL VALUES AND WATER QUALITY ON OR OFF-SITE. THE CONTRACTOR SHALL INSTITUTE NECESSARY MEASURES DURING THE CONSTRUCTION PERIOD, INCLUDING FULL COMPACTION OF ANY FILL MATERIAL PLACED AROUND NEWLY INSTALLED STRUCTURES TO REDUCE EROSION, TURBIDITY, NUTRIENT LOADING AND SEDIMENTATION IN THE RECEIVING WATERS.
5. WITHIN THIRTY (30) DAYS AFTER COMPLETION OF CONSTRUCTION OF THE SURFACE WATER MANAGEMENT SYSTEM, THE CONTRACTOR SHALL ASSIST THE DESIGN ENGINEER TO PROVIDE A WRITTEN STATEMENT OF COMPLETION AND CERTIFICATION BY A FLORIDA PROFESSIONAL ENGINEER. THESE STATEMENTS MUST SPECIFY THE ACTUAL DATE OF CONSTRUCTION COMPLETION AND MUST CERTIFY THAT ALL FACILITIES HAVE BEEN CONSTRUCTED IN SUBSTANTIAL CONFORMANCE WITH THE PLANS AND SPECIFICATIONS. THE CONSTRUCTION COMPLETION CERTIFICATION MUST INCLUDE, AT A MINIMUM EXISTING ELEVATIONS, LOCATIONS AND DIMENSIONS OF THE COMPONENTS OF THE SURFACE WATER MANAGEMENT FACILITIES. ADDITIONALLY, IF DEVIATIONS FROM THE APPROVED DRAWINGS ARE DISCOVERED DURING THE CERTIFICATION PROCESS, THE CERTIFICATION MUST BE ACCOMPANIED BY A COPY OF THE APPROVED PERMIT DRAWINGS WITH DEVIATIONS NOTED. SEE ALSO AS-BUILT REQUIREMENTS.
6. A STABLE PERMANENT AND ACCESSIBLE ELEVATION REFERENCE SHALL BE ESTABLISHED ON OR WITHIN ONE HUNDRED (100) FEET OF ALL PERMITTED DISCHARGE STRUCTURES NO LATER THAN THE SUBMISSION OF THE CERTIFICATION TO THE WATER MANAGEMENT DISTRICT. THE LOCATION OF THE ELEVATION REFERENCE MUST BE NOTED ON OR WITHIN THE CERTIFICATION REPORT.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CORRECTION OF ANY EROSION OR SHOALING OF THE WATER QUALITY MANAGEMENT SYSTEM.
8. INLETS (425/430): INCLUDES THE LIST OF MATERIALS/INSTALLATION/DEWATERING STABILIZATION/AS-BUILT SURVEYING/TESTING. ALL STRUCTURES WILL REQUIRE THREE (3) COMPACTION TESTS AT DIFFERENT LOCATIONS AND UNDER STRUCTURES.
9. PIPE CULVERTS AND STORM SEWERS SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH SECTION 430 FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
10. HDPE (HIGH DENSITY POLYETHYLENE) CULVERT SHALL BE N-12 INSTALLED PER MANUFACTURER RECOMMENDATIONS. MANUFACTURER IS ADS (ADVANCED DRAINAGE SYSTEMS, INC.) AIR ENTRENCHED PIPE.
11. REINFORCED CONCRETE PIPE SHALL BE ASTM C-76 CLASS III IN ACCORDANCE WITH SECTION 941 OF THE FDOT STANDARD SPECIFICATIONS.
12. POLYVINYL CHLORIDE (PVC) PIPE SHALL BE DR-18 MANUFACTURED TO DUCTILE IRON PIPE OUTSIDE DIMENSIONS AND IN COMPLIANCE WITH AWWA C905. THE PIPE SHALL BE BLUE IN COLOR AND SHALL CONFORM TO PSL USD UTILITY STANDARDS MANUAL (2019 EDITION).
13. THE CONTRACTOR SHALL WRAP ALL STORM PIPE JOINTS. CONSTRUCTION SHALL BE PER F.D.O.T. INDEX NO. 280 WITH WOVEN GEOTEXTILE TYPE D-3 (F.D.O.T. INDEX NO. 199), SECURED W/STRAPPING. ALL JOINTS SHALL BE WRAPPED FOR A MINIMUM OF 18 INCHES FROM THE BAND OR JOINT OR BELL AND SPIGOT AS APPLICABLE.
14. CULVERT LEGEND:
    RCP- REINFORCED CONCRETE PIPE
    CAP- CORRUGATED ALUMINUM PIPE
    ERCP - ELLIPTICAL REINFORCED CONCRETE PIPE
    MES - MITERED END SECTION

PERFORMANCE TURF (HYDROSEED)

1. INCORPORATE TURF INSTALLATION INTO THE PROJECT AT THE EARLIEST PRACTICAL TIME.
2. IF PEST PLANTS AND/OR NOXIOUS WEEDS MANIFEST THEMSELVES WITHIN 30 DAYS OF PLACEMENT OF THE HYDROSEED DURING THE MONTHS APRIL THROUGH OCTOBER, WITHIN 60 DAYS OF PLACEMENT OF THE HYDROSEED DURING THE MONTHS OF NOVEMBER THROUGH MARCH TREAT AFFECTED AREAS BY MEANS ACCEPTABLE TO THE CITY AT NO EXPENSE TO THE CITY.
3. USE EQUIPMENT SPECIFICALLY DESIGNED FOR MIXING THE MULCH, SEED, FERTILIZER, TACKIFIER AND DYE, AND APPLYING THE SLURRY UNIFORMLY OVER THE AREAS TO BE HYDROSEEDED. USE MULCH THAT DOES NOT CONTAIN REPROCESSED WOOD OR PAPER FIBERS. ENSURE THAT 50% OF THE FIBERS WILL BE RETAINED ON A TWENTY-FIVE MESH SCREEN. MIX FERTILIZER AS REQUIRED INTO THE HYDROSEEDING SLURRY. ENSURE THAT THE DYE DOES NOT CONTAIN GROWTH OR GERMINATION INHIBITING CHEMICALS. WHEN POLYACRYLAMIDE IS USED AS PART OF HYDROSEEDING MIX, ONLY ANIONIC POLYMER FORMULATION WITH FREE ACRYLAMIDE MONOMER RESIDUAL CONTENT OF LESS THAN 0.05% IS ALLOWED. CATIONIC POLYACRYLAMIDE SHALL NOT BE USED IN ANY CONCENTRATION. DO NOT SPRAY POLYACRYLAMIDE-CONTAINING MIXTURES ONTO PAVEMENT. THESE MAY INCLUDE TACKIFIERS, FLOCCULANTS OR MOISTURE-HOLDING COMPOUNDS. TURF TO BE HEAVILY MIXED WITH BERMUDA SEED.
4. MEET THE MINIMUM PHYSICAL AND PERFORMANCE CRITERIA OF THIS SPECIFICATION FOR USE OF BONDED FIBER MATRIX (BFM) IN HYDROSEEDING OPERATIONS OR TEMPORARY NON-VEGETATIVE EROSION AND SEDIMENT CONTROL METHODS. PROVIDE EVIDENCE OF PRODUCT PERFORMANCE TESTING, MANUFACTURER'S CERTIFICATION OF TRAINING AND MATERIAL SAMPLES TO THE ENGINEER AT LEAST SEVEN CALENDAR DAYS PRIOR TO INSTALLATION. PROVIDE DOCUMENTATION TO THE ENGINEER OF MANUFACTURER'S TESTING AT AN INDEPENDENT LABORATORY; DEMONSTRATING SUPERIOR PERFORMANCE OF BFM AS MEASURED BY REDUCED WATER RUNOFF, REDUCED SOIL LOSS AND FASTER SEED GERMINATION IN COMPARISON TO EROSION CONTROL BLANKETS. USE ONLY BFM'S THAT CONTAIN ALL COMPONENTS PRE-PACKAGED BY THE MANUFACTURER TO ASSURE MATERIAL PERFORMANCE. DELIVER MATERIALS IN UV AND WEATHER RESISTANT FACTORY LABELED PACKAGING. STORE AND HANDLE PRODUCTS IN STRICT COMPLIANCE WITH THE MANUFACTURER'S DIRECTIONS. WHEN POLYACRYLAMIDE IS USED AS PART OF HYDROSEEDING MIX, ONLY ANIONIC POLYMER FORMULATION WITH FREE ACRYLAMIDE MONOMER RESIDUAL CONTENT OF LESS THAN 0.05% IS ALLOWED. CATIONIC POLYACRYLAMIDE SHALL NOT BE USED IN ANY CONCENTRATION. DO NOT SPRAY POLYACRYLAMIDE-CONTAINING MIXTURES ONTO PAVEMENT. THESE MAY INCLUDE TACKIFIERS, FLOCCULANTS OR MOISTURE-HOLDING COMPOUNDS. MEET THE FOLLOWING REQUIREMENTS AFTER APPLICATION OF THE FORMED MATRIX: ENSURE THAT THE TACKIFIER DOES NOT DISSOLVE OR DISPERSE UPON REWETTING. ENSURE THAT THE MATRIX HAS NO GAPS BETWEEN THE PRODUCT AND THE SOIL AND THAT IT PROVIDES 100% COVERAGE OF ALL DISTURBED SOIL AREAS AFTER APPLICATION. ENSURE THAT THE MATRIX HAS NO GERMINATION OR GROWTH INHIBITING PROPERTIES AND DOES NOT FORM A WATER-REPELLING CRUST. ENSURE THAT THE MATRIX IS COMPRISED OF MATERIALS THAT ARE 100% BIODEGRADABLE AND 100% BENEFICIAL TO PLANT GROWTH. MIX AND APPLY THE BFM IN STRICT COMPLIANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. APPLY THE BFM TO GEOTECHNICALLY STABLE SLOPES AT THE MANUFACTURER'S RECOMMENDED RATES. DEGRADATION OF BFM WILL OCCUR NATURALLY BECAUSE OF CHEMICAL AND BIOLOGICAL HYDROLYSIS, UV EXPOSURE AND TEMPERATURE FLUCTUATIONS. RE-APPLICATION, AS DETERMINED BY THE ENGINEER, WILL BE REQUIRED IF BFM-TREATED SOILS ARE DISTURBED OR WATER QUALITY OR TURBIDITY TESTS SHOW THE NEED FOR AN ADDITIONAL APPLICATION. THE WORK AND MATERIALS FOR RE-APPLICATION WILL BE PAID FOR AS UNFORESEEABLE WORK.
5. WATER ALL AREAS AS NECESSARY TO PRODUCE A HEALTHY AND VIGOROUS STAND OF TURF.
6. FERTILIZE AS NECESSARY TO PRODUCE A HEALTHY AND VIGOROUS STAND OF TURF. REFER TO SECTION 982 OF THE FDOT SPECIFICATIONS FOR FERTILIZER RATES.
7. PERFORM ALL WORK NECESSARY, INCLUDING WATERING AND FERTILIZING, TO SUSTAIN AN ESTABLISHED TURF UNTIL FINAL ACCEPTANCE, AT NO ADDITIONAL EXPENSE TO THE CITY. PROVIDE THE FILLING, LEVELING, AND REPAIRING OF ANY WASHED OR ERODED AREAS, AS MAY BE NECESSARY. ESTABLISHED TURF IS DEFINED AS FOLLOWS: ESTABLISHED ROOT SYSTEM (LEAF BLADES BREAK BEFORE SEEDLINGS OR SOD CAN BE PULLED FROM THE SOIL BY HAND). NO BARE SPOTS LARGER THAN ONE SQUARE FOOT. NO CONTINUOUS STREAKS RUNNING PERPENDICULAR TO THE FACE OF THE SLOPE. NO BARE AREAS COMPRISING MORE THAN 1% OF ANY GIVEN 1,000 SQUARE FOOT AREA. NO DEFORMATION OF THE TURF AREAS CAUSED BY MOWING OR OTHER CONTRACTOR EQUIPMENT. MONITOR TURF AREAS AND REMOVE ALL COMPETING VEGETATION, PEST PLANTS, AND NOXIOUS WEEDS (AS LISTED BY THE FLORIDA EXOTIC PEST PLANT COUNCIL, CATEGORY I "LIST OF INVASIVE SPECIES", CURRENT EDITION, WWW.FLEPPC.ORG). REMOVE SUCH VEGETATION REGULARLY BY MANUAL, MECHANICAL, OR CHEMICAL CONTROL MEANS, AS NECESSARY. WHEN SELECTING HERBICIDES, PAY PARTICULAR ATTENTION TO ENSURE USE OF CHEMICALS THAT WILL NOT HARM DESIRED TURF. USE HERBICIDES IN ACCORDANCE WITH FDOT SPECIFICATION SECTION 7-1.7.

EXCAVATION FOR STRUCTURES AND PIPES

1. EARTHWORK AND RELATED OPERATIONS PERFORMED ON STRUCTURES AND PIPES SHALL BE CONDUCTED IN ACCORDANCE WITH SECTIONS 125 AND OTHER APPLICABLE SECTIONS OF THE F.D.O.T. STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION (LATEST EDITION) UNLESS OTHERWISE SHOWN ON THE PLANS.
2. REMOVAL OF UNSUITABLE, ORGANIC OR PLASTIC MATERIAL SHALL BE PERFORMED AT THE DIRECTION OF THE ENGINEER UNLESS OTHERWISE SHOWN ON THE PLANS.
3. UTILIZATION OF MATERIALS WITHIN THE WORK LIMITS SHALL BE AS DIRECTED BY THE ENGINEER UNLESS OTHERWISE SHOWN ON THE PLANS.

PIPE AND STRUCTURE BACKFILL

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE IF EXCAVATED SOILS MEET THE REQUIREMENTS OF THE PROJECT PLANS AND SPECIFICATIONS RELATIVE TO MATERIAL CLASSIFICATION. PIPE AND STRUCTURE BACKFILL MATERIAL SHALL BE LIMITED TO MATERIAL CLASSIFIED AS A-1, A-3 AND A-2-4 IN ACCORDANCE WITH AASHTO M-145 AND SHALL BE COMPACTED IN ACCORDANCE WITH F.D.O.T. SECTION 125 REQUIREMENTS.
2. IF THE BACKFILL MATERIAL IS CLASSIFIED AS A-2-4 BASED ON AASHTO M 145 CRITERIA, THE MAXIMUM PERMISSIBLE MOISTURE CONTENT SHALL BE 2 PERCENT ABOVE THE OPTIMUM MOISTURE CONTENT.

RELOCATION OF EXISTING FACILITIES

RELOCATION OF EXISTING FACILITIES SHALL CONFORM TO THE DESIGN AND CONSTRUCTION STANDARDS OF PSLUSD UTILITY STANDARDS MANUAL (2019 EDITION). ALL MATERIALS USED IN CONSTRUCTION SHALL BE ON THE PSLUSD QUALIFIED PRODUCTS LIST (QPL). DESIGN FOR RELOCATION OF EXISTING FACILITIES MUST PROVIDE FOR CONTINUITY OF SERVICE TO EXISTING CUSTOMERS AS WELL AS VERIFICATION THAT THE RELOCATED FACILITIES WILL NOT CAUSE ADDITIONAL OPERATIONAL AND MAINTENANCE EXPENSE TO PSLUSD.

CLEAN-UP

1. THE CONTRACTOR SHALL MAINTAIN THE JOB SITE IN A NEAT CONDITION AT ALL TIMES AND SHALL RESTORE/REPAIR ALL DRIVEWAYS, SIDEWALKS, UTILITIES, LANDSCAPING, IRRIGATION SYSTEMS, ETC., AFFECTED BY CONSTRUCTION ACTIVITIES.
2. THE CONTRACTOR SHALL REMOVE ALL EXCESS MATERIALS, DEBRIS, EQUIPMENT, ETC., FROM THE JOBSITE IMMEDIATELY AFTER COMPLETION OF CONSTRUCTION OPERATIONS.
3. FOR FURTHER SITE MAINTENANCE REQUIREMENTS THE CONTRACTOR IS REFERRED TO THE "AGREEMENT BETWEEN OWNER AND CONTRACTOR.
4. UNLESS OTHERWISE SPECIFIED OR NOTED; ALL DISTURBED AREAS TO BE RESTORED BY CONTRACTOR TO PRE-CONSTRUCTION CONDITION OR BETTER PRIOR TO ACCEPTANCE BY THE CITY OF PORT SAINT LUCIE.

RIP RAP

1. ALL RIP RAP SHALL BE DITCH LINING RIP RAP EXCEPT AS NOTED ON PLANS. BANK & SHORE RIP RAP SHALL BE USED AT THE PUMP DISCHARGE LOCATIONS.
2. DITCH LINING ROCK SHALL BE 12" TO 18" LOCAL COQUINA BOULDERS (160 LB/CF) PLACED IN A 24" AVERAGE THICKNESS UNLESS OTHERWISE NOTED ON PLANS. ROCK SHALL BE UNDERLAIN WITH FILTER FABRIC TOED 12" INTO GROUND AT PERIMETER OF RIPRAP MAT. THE STONES SHALL BE GRADED IN SIZE TO PRODUCE A REASONABLY DENSE MASS. RIPRAP SHALL CONSIST OF DENSE, NATURAL ROCK FRAGMENTS. STONE SHALL BE RESISTANT TO WEATHERING AND TO WATER ACTION; FREE FROM OVERBURDEN, SPOIL, SHALE AND ORGANIC MATERIAL; AND SHALL MEET THE GRADATION REQUIREMENTS SPECIFIED. SHALE AND STONE WITH SHALE SEAMS ARE NOT ACCEPTABLE.
3. ROCK SHALL CONSIST OF DURABLE, SOUND, HARD, ANGULAR ROCK MEETING THE FOLLOWING REQUIREMENTS FOR DURABILITY ABSORPTION RATIO, SOUNDNESS TEST AND ABRASION TEST:

   RATIO ACCEPTABILITY
   GREATER THAN 23 PASSES
   10 TO 23 PASSES ONLY IF DURABILITY INDEX IS 52 OR GREATER
   LESS THAN 10 FAILS

   DURABILITY INDEX (COARSE)
   DURABILITY ABSORPTION RATIO % = ABSORPTION + 1

4. THE DURABILITY INDEX AND PERCENT ABSORPTION SHALL BE DETERMINED BY AASHTO T-210 AND AASHTO T-85, RESPECTIVELY.
5. ROCK RIPRAP SHALL HAVE LESS THAN 10 PERCENT LOSS OF WEIGHT AFTER FIVE CYCLES, WHEN TESTED PER ASTM C-535.
6. RIPRAP STONE OR ROCK SHALL HAVE A WEAR NOT GREATER THAN 40 PERCENT, WHEN TESTED PER ASTM C-88.
7. NEITHER THE BREADTH NOR THICKNESS OF ANY PIECE OF RIPRAP SHALL BE LESS THAN ONE-THIRD ITS LENGTH. MATERIAL SHALL BE OF SHAPES THAT WILL FORM A STABLE PROTECTION STRUCTURE OF REQUIRED DEPTH AS SHOWN. ROUNDED BOULDERS OR COBBLES SHALL NOT BE USED.

ENGINEERING DEPARTMENT CONSTRUCTION FIELD OBSERVATIONS

1. UTILITIES / DRAINAGE PIPE / PAVEMENT REPLACEMENT
   * PIPE LAYING WITHIN SITE
   * JACK AND BORING WITHIN PUBLIC RIGHT OF WAY
   * RESTORATION OF RIGHT OF WAY - SUBGRADE, BASE, & ASPHALT
2. TESTING:
   * FLORIDA BEARING VALUE TEST RESULTS
   * COMPACTION TESTS
   * BASE MATERIAL TESTS
   * ASPHALT TEST RESULTS
   * COMPACTION TESTS REQUIRED BENEATH ALL MANHOLES
3. CERTIFICATION AND RECORD DRAWINGS:
   * SEALED CERTIFICATION BY THE LOCAL UTILITY COMPANY FOR COMPLIANCE WITH APPROVED PLANS AND SPECIFICATIONS ALONG WITH RECORD DRAWINGS FOR THE PROJECT
   * SEE AS-BUILT NOTES

REPORTS

THE FOLLOWING REPORTS ARE HEREBY INCORPORATED INTO THE PLANS BY REFERENCE:

ARDAMAN AND ASSOCIATES, INC.
2200 NORTH FLORIDA MANGO ROAD, SUITE 101,
WEST PALM BEACH, FLORIDA 33409
PHONE (561) 687-8200

1. SUBSURFACE SOIL EXPLORATION
   MCCARTY RANCH WATER FARMING AREAS 5 - 6
   RANGELINE ROAD
   ST. LUCIE COUNTY, FLORIDA (TBD)
2. GROUNDWATER MODELING SERVICES FOR
   MCCARTY RANCH EXTENSION AREAS 5 - 6 WATER FARM,
   CITY OF PORT ST. LUCIE, FLORIDA (TBD)

HOBE SOUND ENVIRONMENTAL CONSULTANTS, INC.
9512 SE BRIDGE ROAD
HOBE SOUND, FL 33455
(772) 545-3676, CELL: (772) 260-0857

1. McCARTY RANCH EXTENSION
   WATER QUALITY RESTORATION PROJECT AREAS 3-6
   PORT SAINT LUCIE, FLORIDA
   ENVIRONMENTAL SITE ASSESSMENT (REVISED 4-2019)
2. McCARTY RANCH EXTENSION
   WATER QUALITY RESTORATION PROJECT
   PORT SAINT LUCIE, FLORIDA
   EASTERN INDIGO SNAKE PROTECTION PLAN (2-21-20)

PERMITS

SFWMD CONCEPTUAL PERMIT
PERMIT NO. 56-00074-S
APRIL 30, 2019 (EXPIRES APRIL 30, 2039)

SFWMD ENVIRONMENTAL RESOURCE PERMIT - AREAS 5 - 6
PERMIT NO. 56-106636-P
MARCH 3, 2022 (EXPIRES MARCH 3, 2027)

ARMY CORPS OF ENGINEERS
PERMIT NO. SAJ-2016-03400 (SP-KDS)
JUNE 24, 2019 (EXPIRES JUNE 24, 2024)

CAPTEC Engineering, Inc.
Civil Engineering Professionals
* 301 NW Flagler Ave.
Stuart, Florida 34994
Phone: (772) 692-4344
Fax: (772) 692-4341
Engineering Business No. EB-0007657

DATE: 4/7/20
DRAWN BY: MDR
DESIGNED BY: TJS
CHECKED BY: JWC
PROJECT No.: 1682.2-5
HORZ. SCALE: N/A
VERT. SCALE: N/A
CADD FILE: Gen Notes

NO.	DATE	BY	REVISIONS
	3/24/23	JWC	BID SET

SCALE VERIFICATION
0 1
SOLID BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING. ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

McCARTY RANCH EXTENSION
WATER QUALITY RESTORATION
PROJECT - AREAS 5-6
City of Port St. Lucie, Florida

GENERAL NOTES - 2

Joseph W. Capra, P.E.
301 N.W. Flagler Ave.
Stuart, Florida 34994
P.E. No. 37638

Printed Date:

JOB No.: 1682.2-5
SHEET
11 OF 11