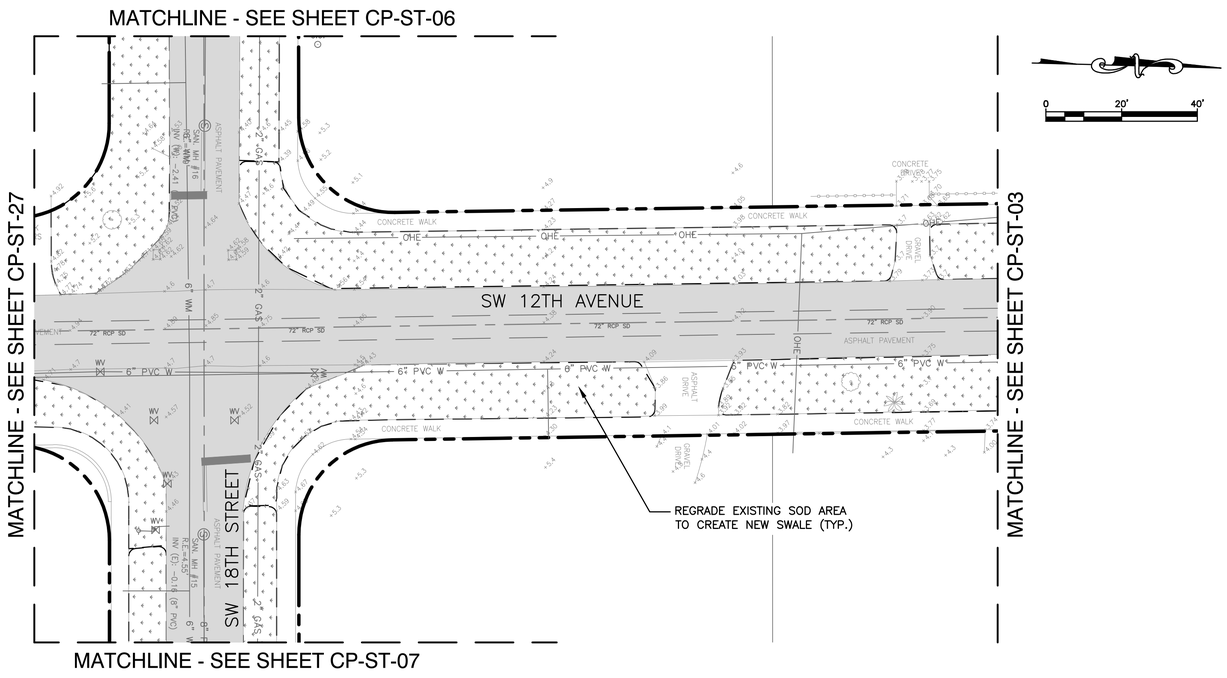

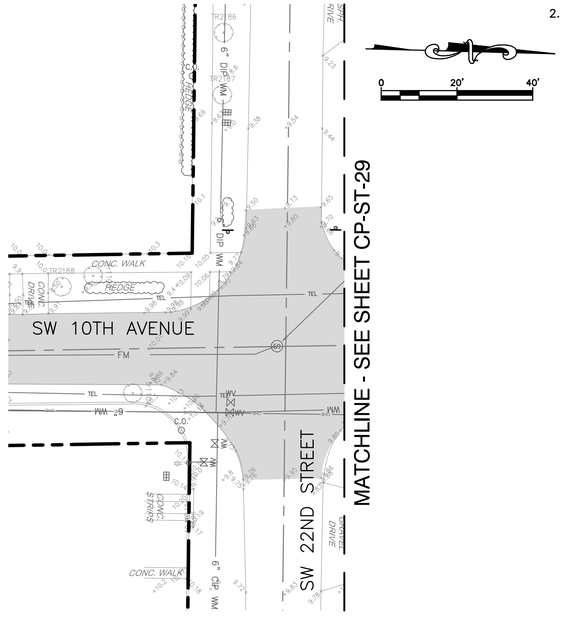

NOTE:
1. SW 22ND STREET FROM DEAD END WEST OF SW 10TH AVENUE TO SW 9TH AVENUE SHALL BE MILLED AND RESURFACED.
2. CONTRACTOR SHALL PROVIDE SWALES IN ACCORDANCE WITH SWALE DETAILS ALONG BOTH SIDES OF SW 12TH AVENUE & SW 18TH STREET.

NOTES:

1. EXISTING UTILITY DEPTHS ARE UNKNOWN UNLESS OTHERWISE INDICATED. LOCATIONS AND DEPTHS ARE ESTIMATED.
2. 4,196 LF OF NEW/RESTORED SWALE PROPOSED FOR ENTIRE PROJECT (SEE DETAIL ON SHEET CZ-DT-22).
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9. EXISTING WATER MAIN/FORCE MAIN TO BE REMOVED AND REPLACED, AND NEW MAIN TO BE TESTED, APPROVED AND SERVICES CONNECTED PRIOR TO CONSTRUCTION OF STORM DRAINAGE.
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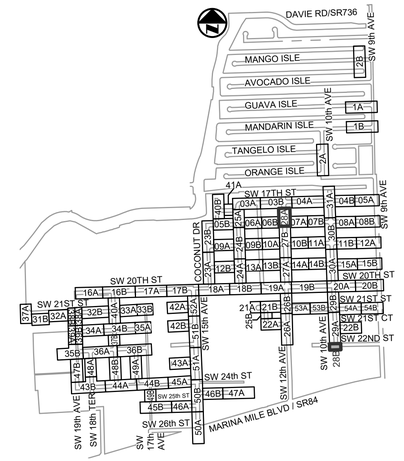
13. ALL NEW ADA CURB RAMPS SHALL INCLUDE DETECTABLE WARNING STRIP PER CITY STD DETAIL-ROAD 013.



KEY MAP
N.T.S.

Hazen

HAZEN AND SAWYER
4000 HOLLYWOOD BLVD, SUITE 750N
HOLLYWOOD, FLORIDA 33021

Certificate of Authorization No: 2771

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FAX: (954) 739-6409 TEL: (954) 739-6400
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FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

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ENGINEER: PATRICK J. GIBNEY
REG. No.: 49428
DATE: 01/22/2021

TEL: 954-987-0066
FAX: 954-987-2949

DRAWN BY: XXX
DATE: 01/07/2019
DESIGNED BY: XXX
SCALE: 1"=20'
CHECKED BY: XXX
FIELD BOOK: XXXX

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

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8/26/2021

CONSTRUCTION SET

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

SHEET NO.
CP-ST-28

TOTAL: 255

CAD FILE: 11868-CP-ST-A

DRAWING FILE NO. 4-142-42

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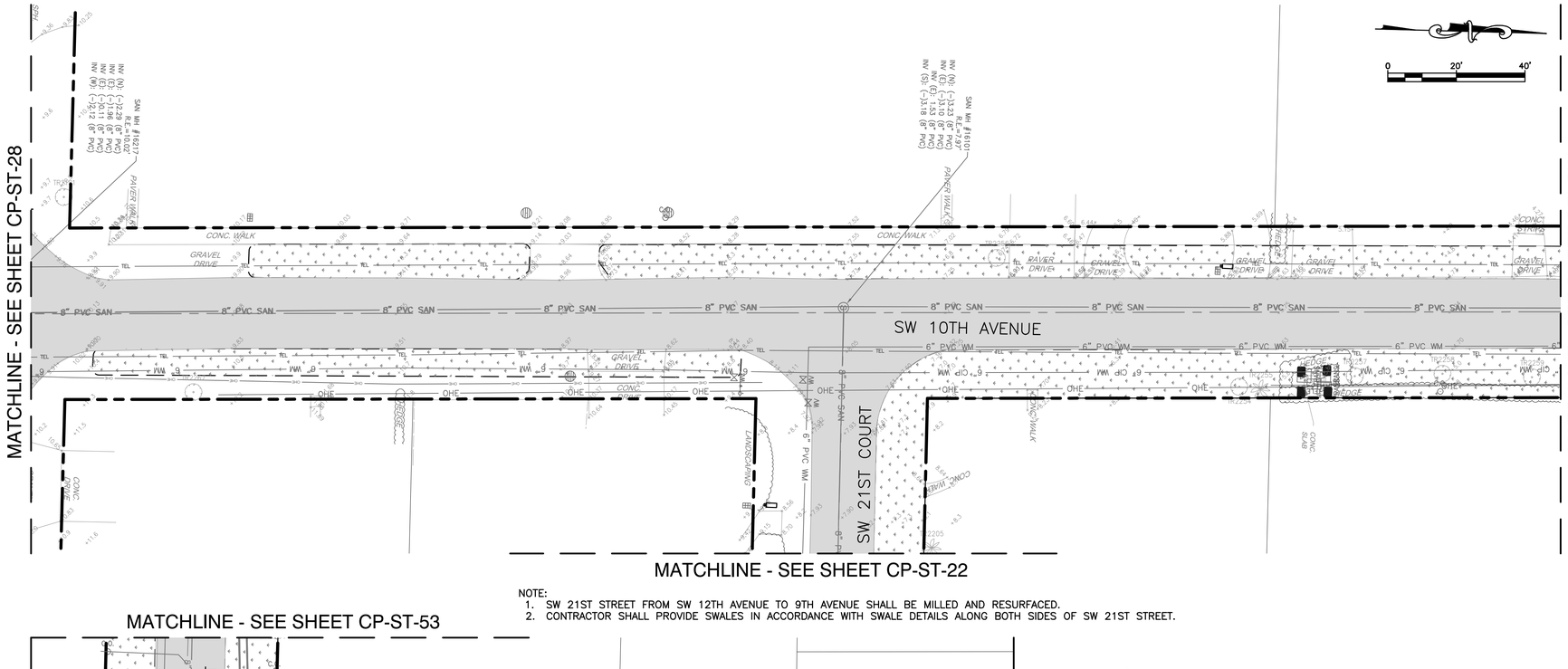
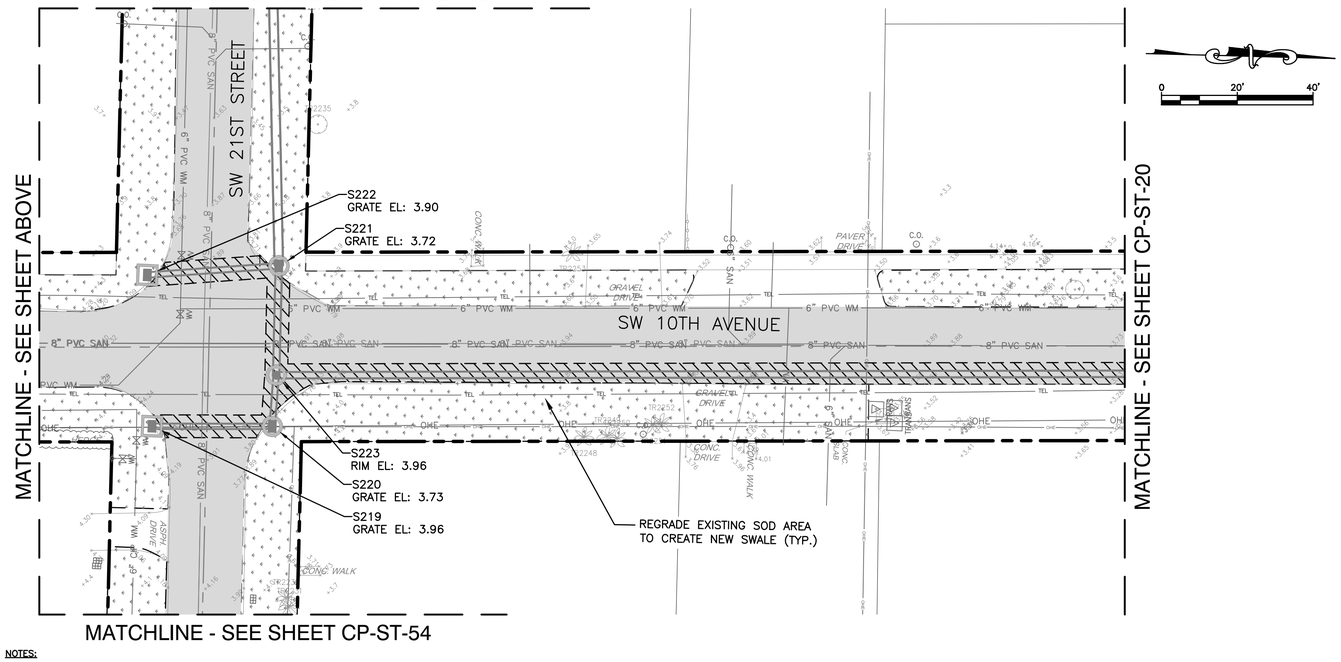
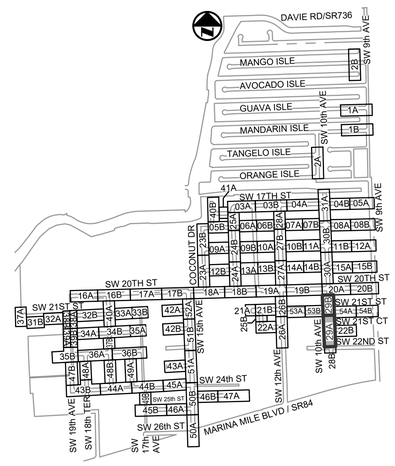
Sunshine811.com



NOTE:
1. SW 21ST STREET FROM SW 12TH AVENUE TO 9TH AVENUE SHALL BE MILLED AND RESURFACED.
2. CONTRACTOR SHALL PROVIDE SWALES IN ACCORDANCE WITH SWALE DETAILS ALONG BOTH SIDES OF SW 21ST STREET.





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Hazen

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HOLLYWOOD, FLORIDA 33021

Certificate of Authorization No: 2771

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ENGINEER:
PATRICK J. GIBNEY
FLORIDA No. 49428
DATE: 01/22/2021

TEL: 954-987-0066
FAX: 954-987-2949

DRAWN BY: XXX
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PUBLIC WORKS DEPARTMENT
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CONSTRUCTION SET

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

SHEET NO.
CP-ST-29

TOTAL: 255

CAD FILE:
11868-CP-ST-A

DRAWING FILE NO.
4-142-42

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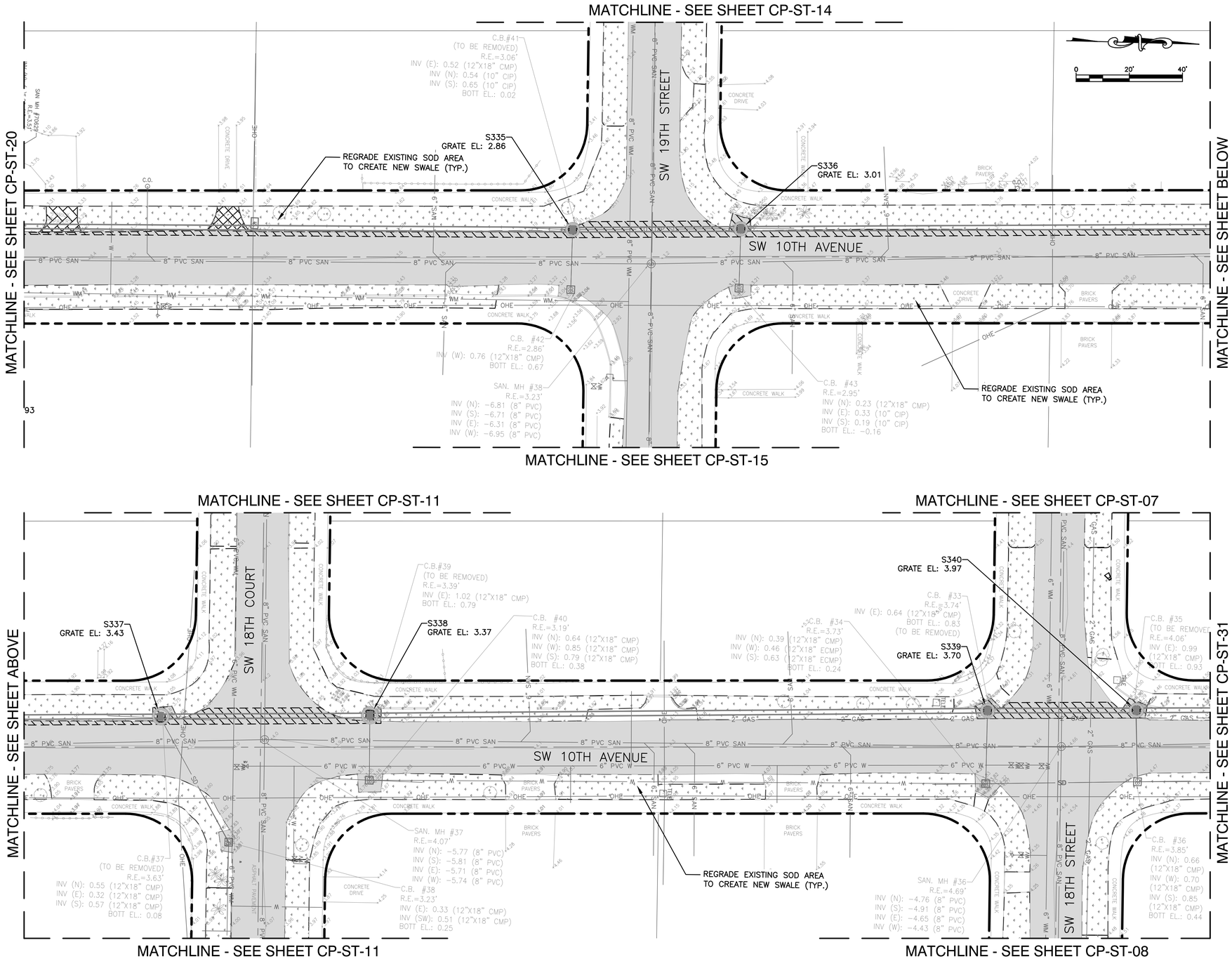

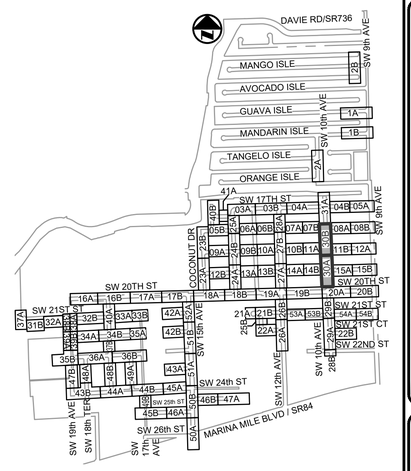

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Certificate of Authorization No: 2771

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ENGINEER: PATRICK J. GIBNEY
REG. No.: 49428
DATE: 01/22/2021

TEL: 954-987-0066
FAX: 954-987-2949

DRAWN BY: XXX
DATE: 01/07/2019
DESIGNED BY: XXX
SCALE: 1"=20'
CHECKED BY: XXX
FIELD BOOK: XXXX

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

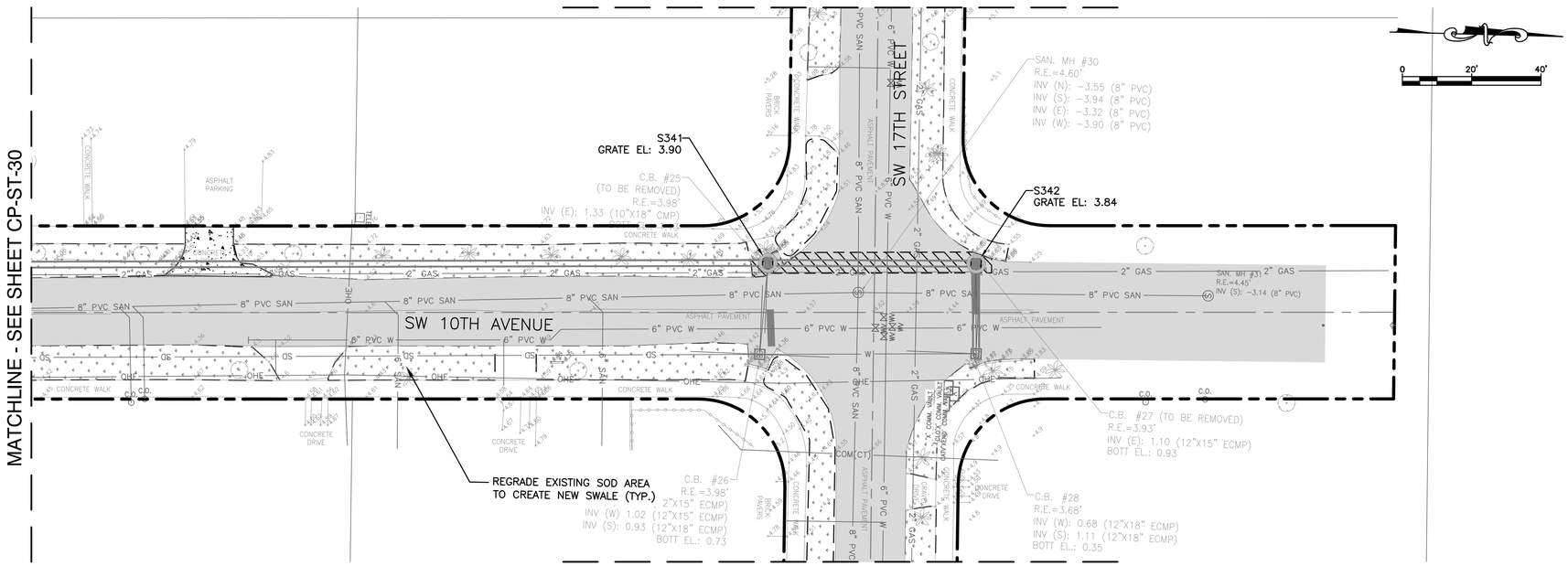
PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

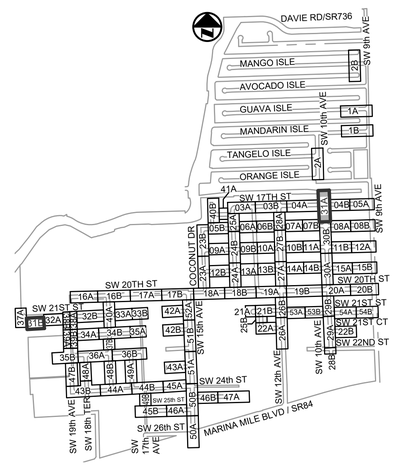
SHEET NO.
CP-ST-30

TOTAL: 255

CAD FILE: 11868-CP-ST-A

DRAWING FILE NO. 4-142-42





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STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

SHEET NO.
CP-ST-31

TOTAL: 255

CAD FILE:
11868-CP-ST-A

DRAWING FILE NO.
4-142-42

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NO.	DATE	BY	CHK'D	DESCRIPTION

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

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PLOT DATE: 8/26/2021 12:29 PM BY: ASCHEFFER
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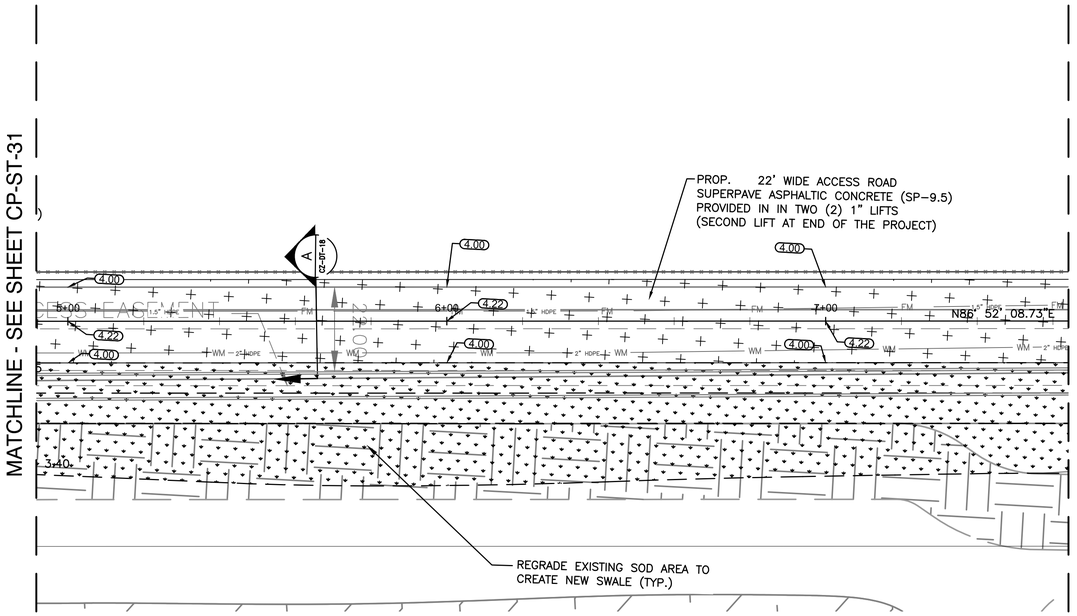

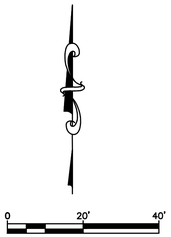

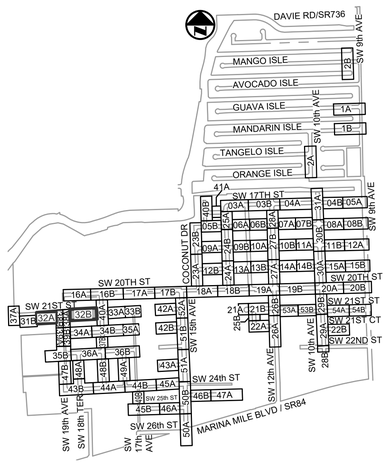

KEY MAP

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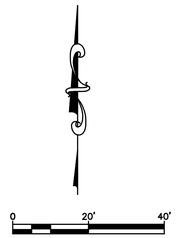

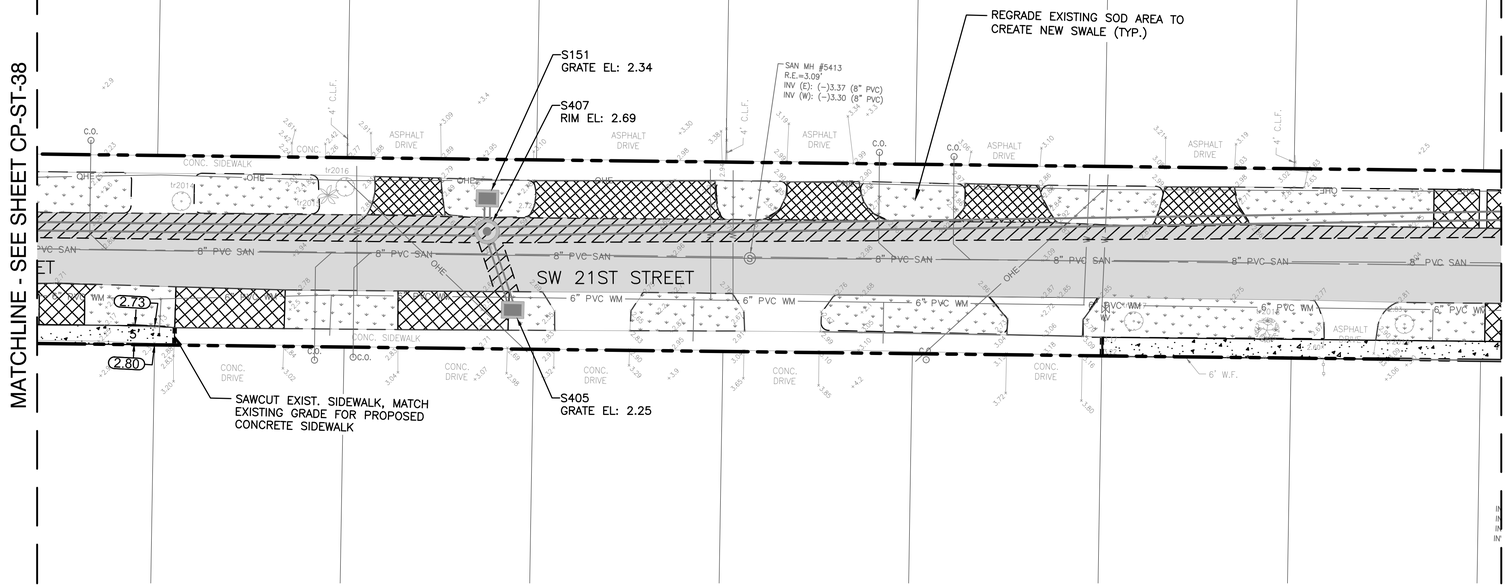

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CONSTRUCTION SET

Patrick J. Gibney, State of Florida, Professional Engineer, License No. 49428. This item has been electronically signed and sealed by Patrick J. Gibney on the date indicated here using an SHA authentication code. Printed copies of this document are not considered signed and sealed and the SHA authentication code must be verified on any electronic copies.

8/26/2021

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

SHEET NO.
CP-ST-32

TOTAL: 255

CAD FILE:
11868-CP-ST-B

DRAWING FILE NO.
4-142-42

REVISIONS

NO.	DATE	BY	CHKD	DESCRIPTION

DRAWN BY: XXX
DESIGNED BY: XXX
DATE: 01/07/2019
SCALE: 1"=20'
CHECKED BY: XXX
FIELD BOOK: XXXX

ENGINEER: PATRICK J. GIBNEY
REG. No.: 49428
DATE: 01/22/2021

TEL: 954-987-0066
FAX: 954-987-2949

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

Hazen

HAZEN AND SAWYER
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Certificate of Authorization No: 2771

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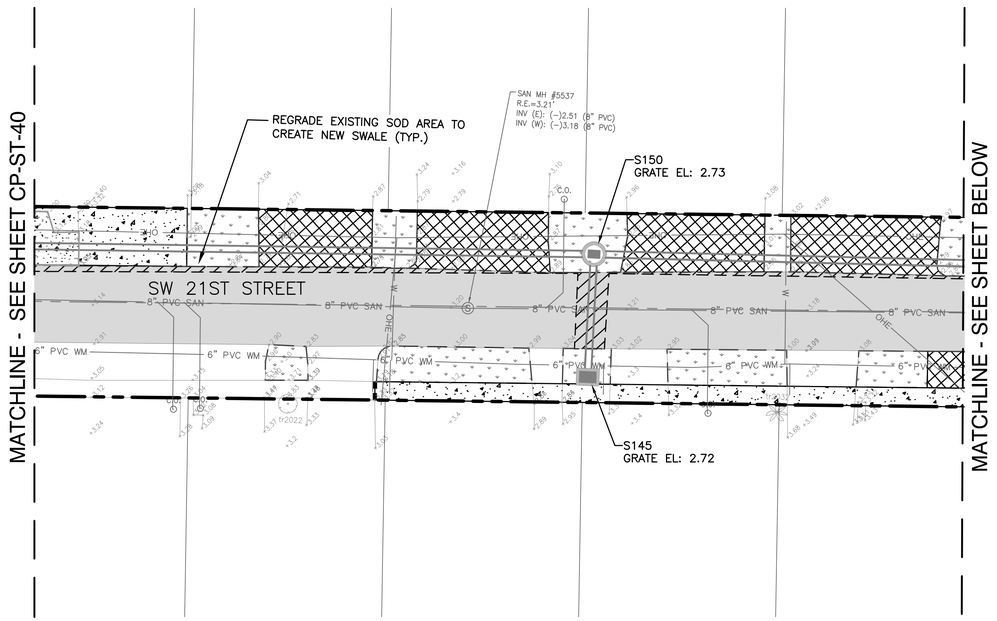

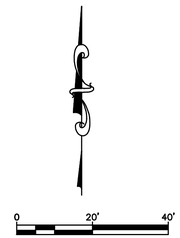

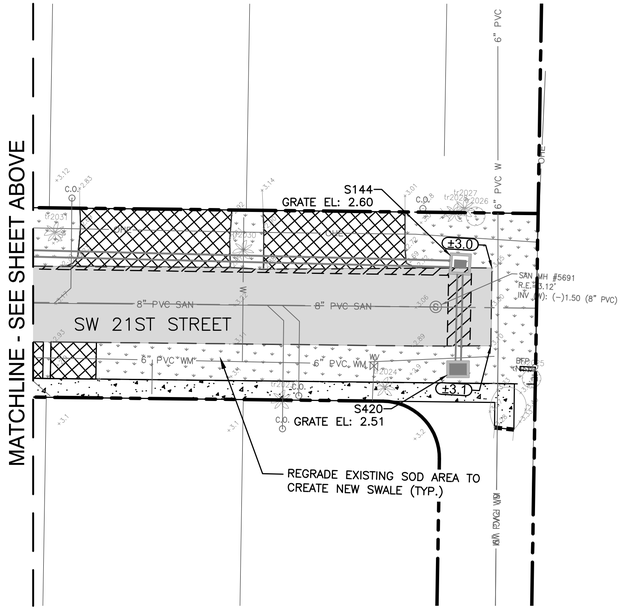

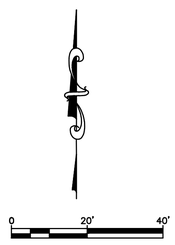

Hazen

HAZEN AND SAWYER
4000 HOLLYWOOD BLVD, SUITE 750N
HOLLYWOOD, FLORIDA 33021

Certificate of Authorization No: 2771

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FAX: (954) 739-6409 TEL: (954) 739-6400
FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

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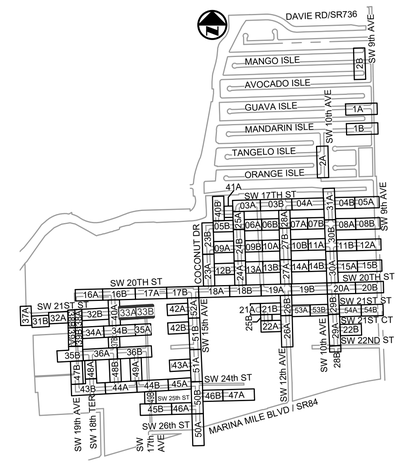

KEY MAP
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8/26/2021

CONSTRUCTION SET

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ENGINEER:
PATRICK J. GIBNEY
REG. No. 49428
DATE: 01/22/2021

TEL: 954-987-0066
FAX: 954-987-2949

DRAWN BY: XXX
DATE: 01/07/2019
DESIGNED BY: XXX
SCALE: 1"=20'
CHECKED BY: XXX
FIELD BOOK: XXXX

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

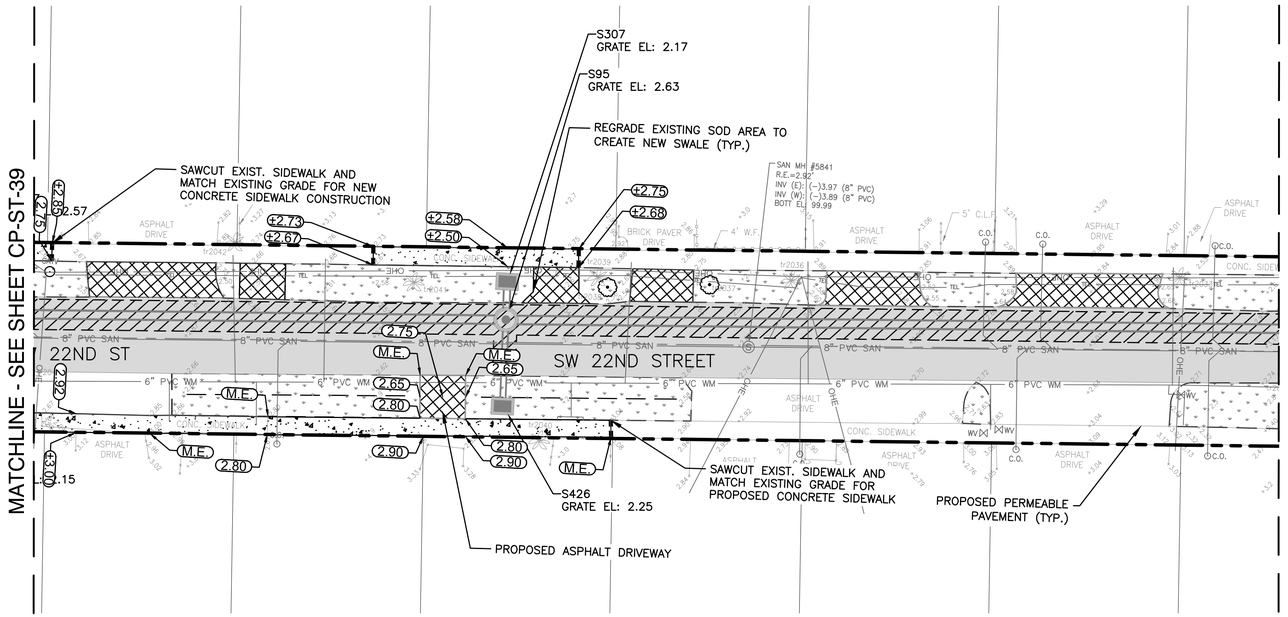
PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

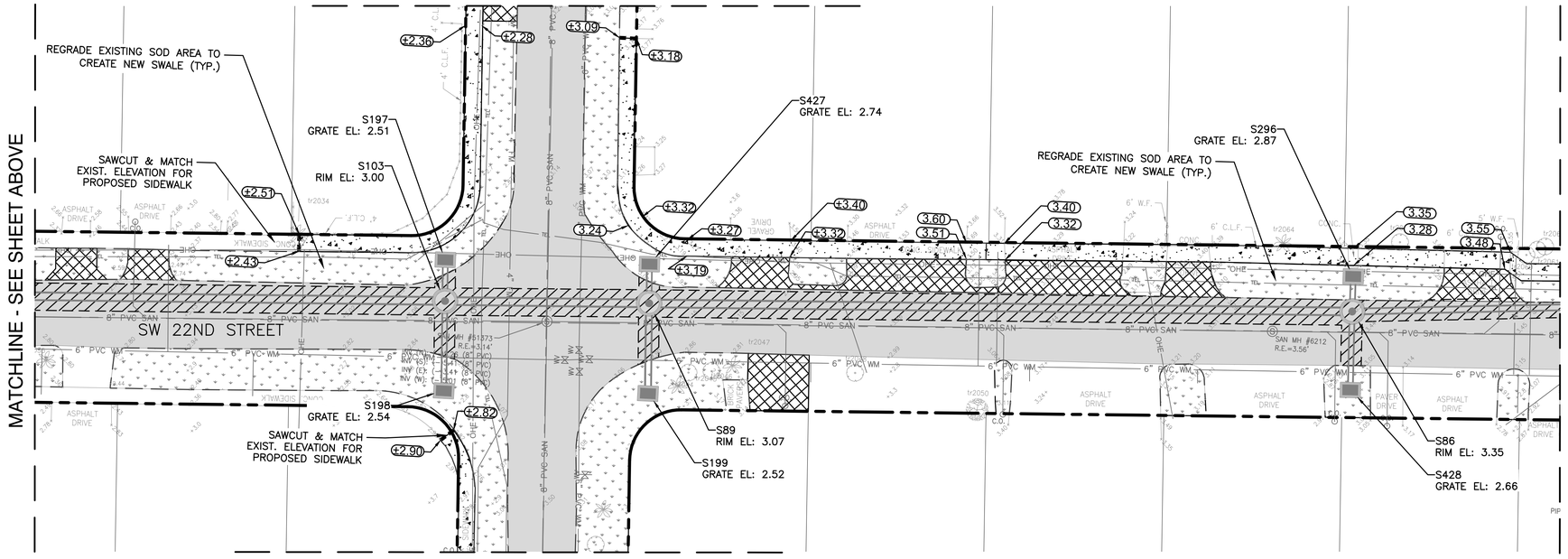
SHEET NO.
CP-ST-33

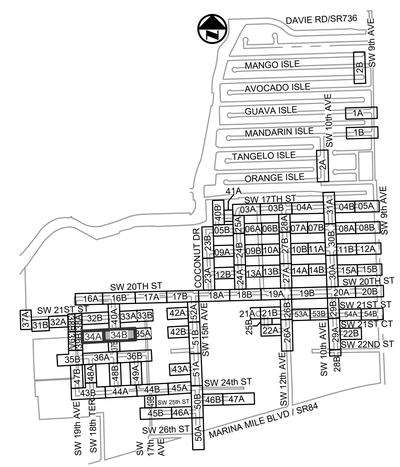
TOTAL: 255

CAD FILE:
11868-CP-ST-B

DRAWING FILE NO.
4-142-42







KEY MAP

N.T.S.

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HAZEN AND SAWYER
4000 HOLLYWOOD BLVD, SUITE 750N
HOLLYWOOD, FLORIDA 33021

Certificate of Authorization No: 2771

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ENGINEER: PATRICK J. GIBNEY
REG. No.: 49428
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TEL: 954-987-0066
FAX: 954-987-2949

DRAWN BY: XXX
DESIGNED BY: XXX
DATE: 01/07/2019
SCALE: 1"=20'
CHECKED BY: CX-ST-34
FIELD BOOK: XXXX

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PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

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CONSTRUCTION SET

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

SHEET NO.
CP-ST-34

TOTAL: 255

CAD FILE: 11868-CP-ST-B

DRAWING FILE NO. 4-142-42

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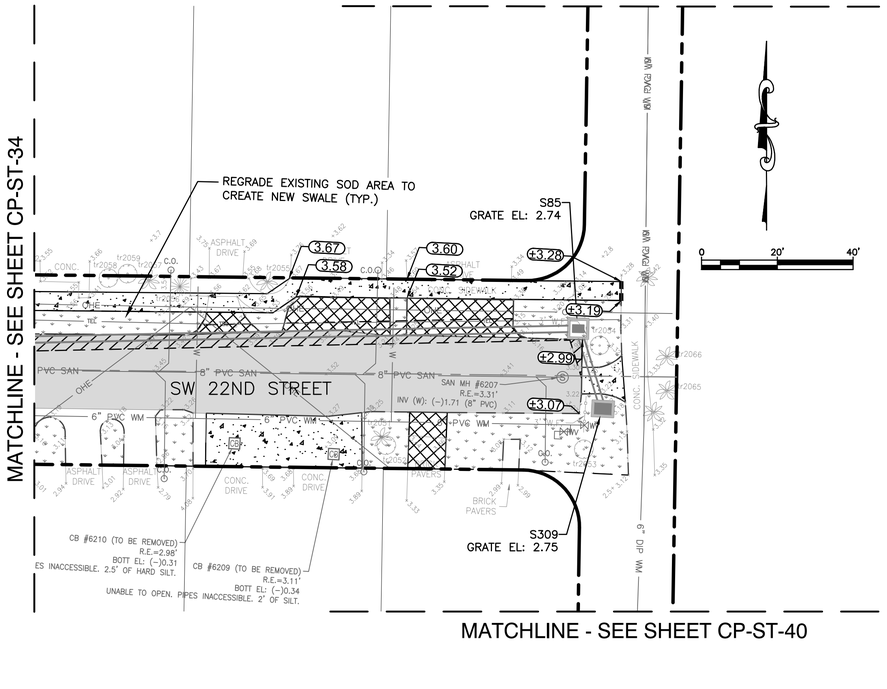
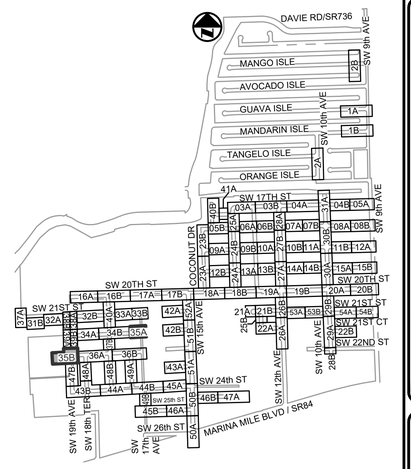


NOTES:

1. EXISTING UTILITY DEPTHS ARE UNKNOWN UNLESS OTHERWISE INDICATED. LOCATIONS AND DEPTHS ARE ESTIMATED.
2. 4,196 LF OF NEW/RESTORED SWALE PROPOSED FOR ENTIRE PROJECT (SEE DETAIL ON SHEET CZ-DT-22).
3. CONTRACTOR SHALL COORDINATE ALL ADJACENT TREE REMOVAL/RELOCATION WITH PROPERTY OWNER. AT OWNER'S DISCRETION CONTRACTOR SHALL MAKE TREE AVAILABLE OR PLAN/RELOCATE AT HOMEOWNER'S REQUEST WITH SIGNED WAIVER TO PLANT WITHIN PRIVATE PROPERTY.
4. ALL EXISTING UTILITIES MAY NOT BE SHOWN ON THIS PLAN. REFER TO EXISTING CONDITIONS PLANS FOR TYPE AND LOCATION OF EXISTING UTILITIES.
5. ALL EXISTING CATCH BASIN AND STORM DRAINS LOCATED WITHIN RIGHT-OF-WAY TO REMAIN UNLESS OTHERWISE SHOWN. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD PRIOR OF ANY REMOVAL OF ANY DRAINAGE STRUCTURE AND/OR PIPING BASINS AND STORM DRAINS REMOVED SHALL BE BACKFILLED PER CITY SPECIFICATIONS.
6. EXISTING CATCH BASINS LOCATED WITHIN RIGHT-OF-WAY MAY BE CONNECTED TO ADJACENT PROPERTY ROOF DRAINS. IF THIS SITUATION IS DISCOVERED DURING CONSTRUCTION THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD AND THE CONTRACTOR SHALL NOT REMOVE ANY PIPE OR CATCH BASINS UNLESS AUTHORIZED TO DO BY THE ENGINEER OF RECORD.
7. CONTRACTOR IS RESPONSIBLE FOR TEMPORARY RELOCATION/COORDINATION OF EXISTING UTILITIES (WATER/SEWER) AS REQUIRED TO FACILITATE PROPOSED INFRASTRUCTURE.
8. ONCE ABANDONED, WATER MAIN CAN BE CUT AND REMOVED TO CONSTRUCT PROPOSED DRAINAGE. PLUG EXPOSED ENDS TO REMAIN.
9. EXISTING WATER MAIN/FORCE MAIN TO BE REMOVED AND REPLACED, AND NEW MAIN TO BE TESTED, APPROVED AND SERVICES CONNECTED PRIOR TO CONSTRUCTION OF STORM DRAINAGE.
10. ALL EXISTING DRAINAGE STRUCTURES TO REMAIN MAY REQUIRE ADJUSTMENT OF FRAME AND GRATE TO MEET PROPOSED GRADES.
11. CRACKED SIDEWALK FLAGS TO BE REMOVED EVEN IN AREAS NOTED TO REMAIN.
12. ALL EXISTING AND PROPOSED DRAINAGE STRUCTURES THAT ARE LOCATED IN A SWALE WITH AN OPEN GRATE SHALL BE PROVIDED WITH AN CONCRETE APRON.
13. ALL NEW ADA SHALL INCLUDE DETECTABLE WARNING STRIP PER CITY STD DETAIL-ROAD 013.



KEY MAP
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0
20'
40'

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HAZEN AND SAWYER
4000 HOLLYWOOD BLVD, SUITE 750N
HOLLYWOOD, FLORIDA 33021

Certificate of Authorization No: 2771

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REG. No.: 49428
DATE: 01/22/2021

TEL: 954-987-0066
FAX: 954-987-2949

DRAWN BY: XXX
DESIGNED BY: XXX
DATE: 01/07/2019
SCALE: 1"=20'
CHECKED BY: CX-ST-35
FIELD BOOK: XXXX

CITY OF FORT LAUDERALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

SHEET NO.
CP-ST-35

TOTAL: 255

CAD FILE: 11868-CP-ST-B

DRAWING FILE NO. 4-142-42

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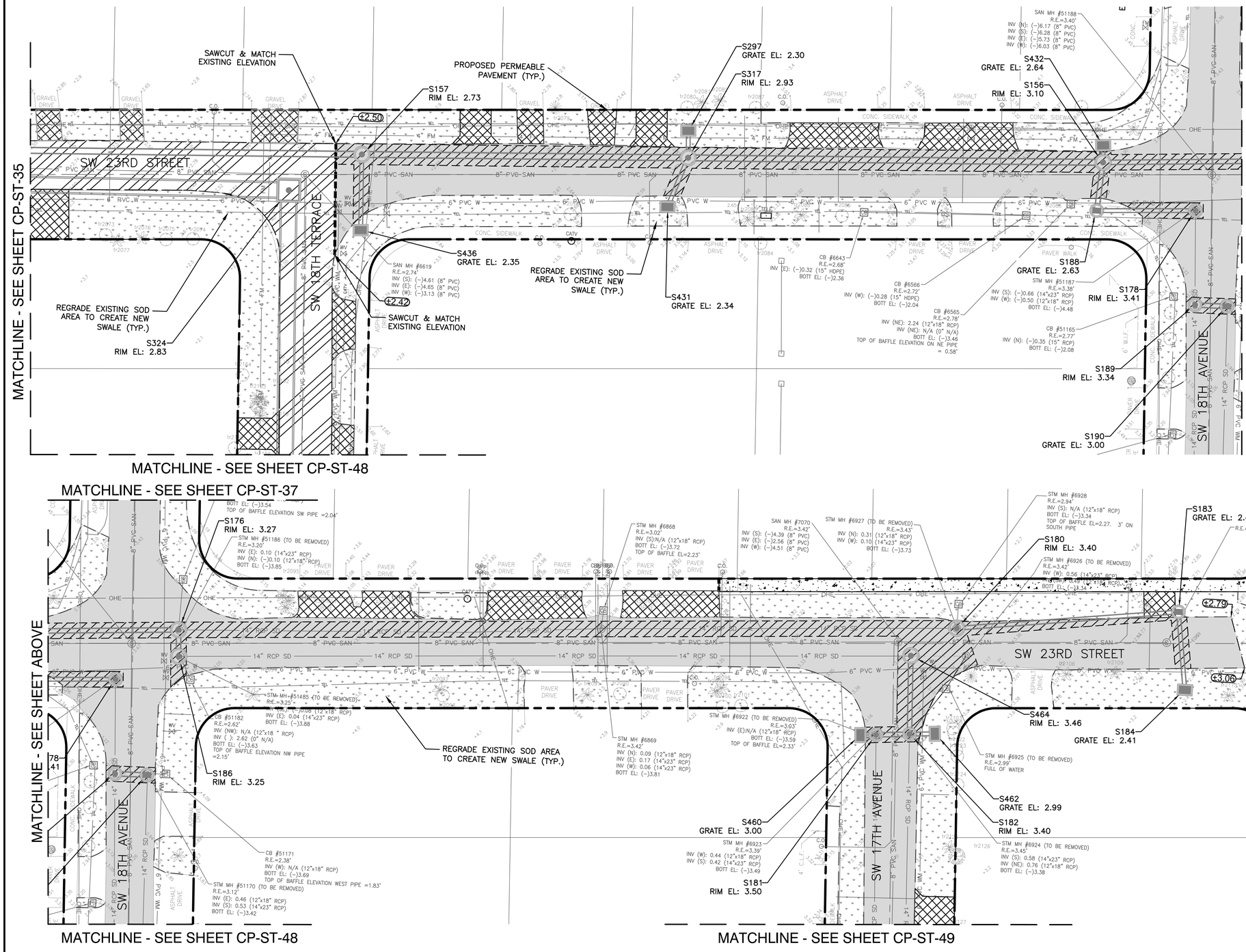

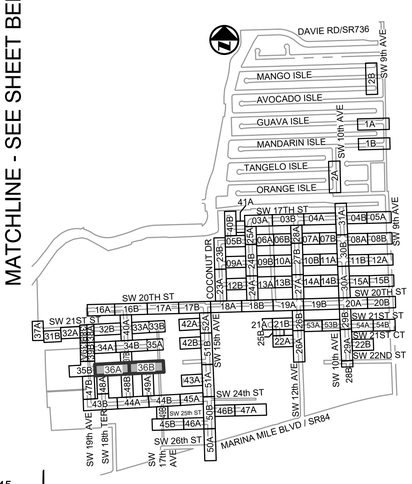

KEY MAP
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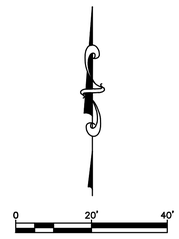

CONSTRUCTION SET

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

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CHECKED BY: XXX
FIELD BOOK: XXXX

ENGINEER: PATRICK J. GIBNEY
REG. # 49428
DATE: 01/22/2021

TEL: 954-987-0066
FAX: 954-987-2949

Hazen
HAZEN AND SAWYER
4000 HOLLYWOOD BLVD, SUITE 750N
HOLLYWOOD, FLORIDA 33021
Certificate of Authorization No: 2771

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SHEET NO.
CP-ST-36

TOTAL: 255

CAD FILE: 11868-CP-ST-B

DRAWING FILE NO. 4-142-42

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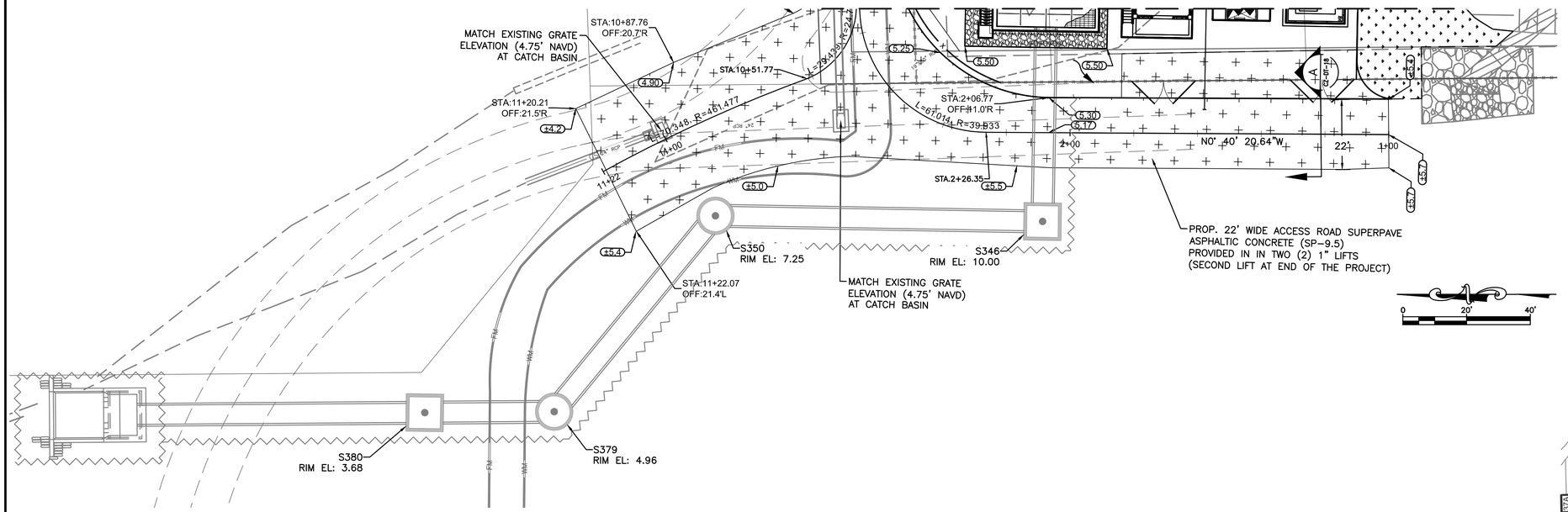
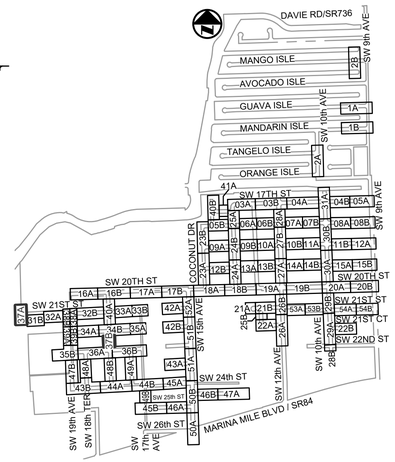
MATCHLINE - SEE SHEET CU-ST-31B





KEY MAP

N.T.S.

Hazen

HAZEN AND SAWYER
4000 HOLLYWOOD BLVD, SUITE 750N
HOLLYWOOD, FLORIDA 33021

Certificate of Authorization No: 2771

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FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

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ENGINEER: PATRICK J. GIBNEY
FL LIC. No. 49428
DATE: 01/22/2021
TEL: 954-987-0066
FAX: 954-987-2949

DRAWN BY: XXX
DATE: 01/07/2019
DESIGNED BY: XXX
SCALE: 1"=20'
CHECKED BY: XXX
FIELD BOOK: XXXX

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PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

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8/26/2021

CONSTRUCTION SET

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

SHEET NO.
CP-ST-37

TOTAL: 255

CAD FILE: 11868-CP-ST-B

DRAWING FILE NO. 4-142-42

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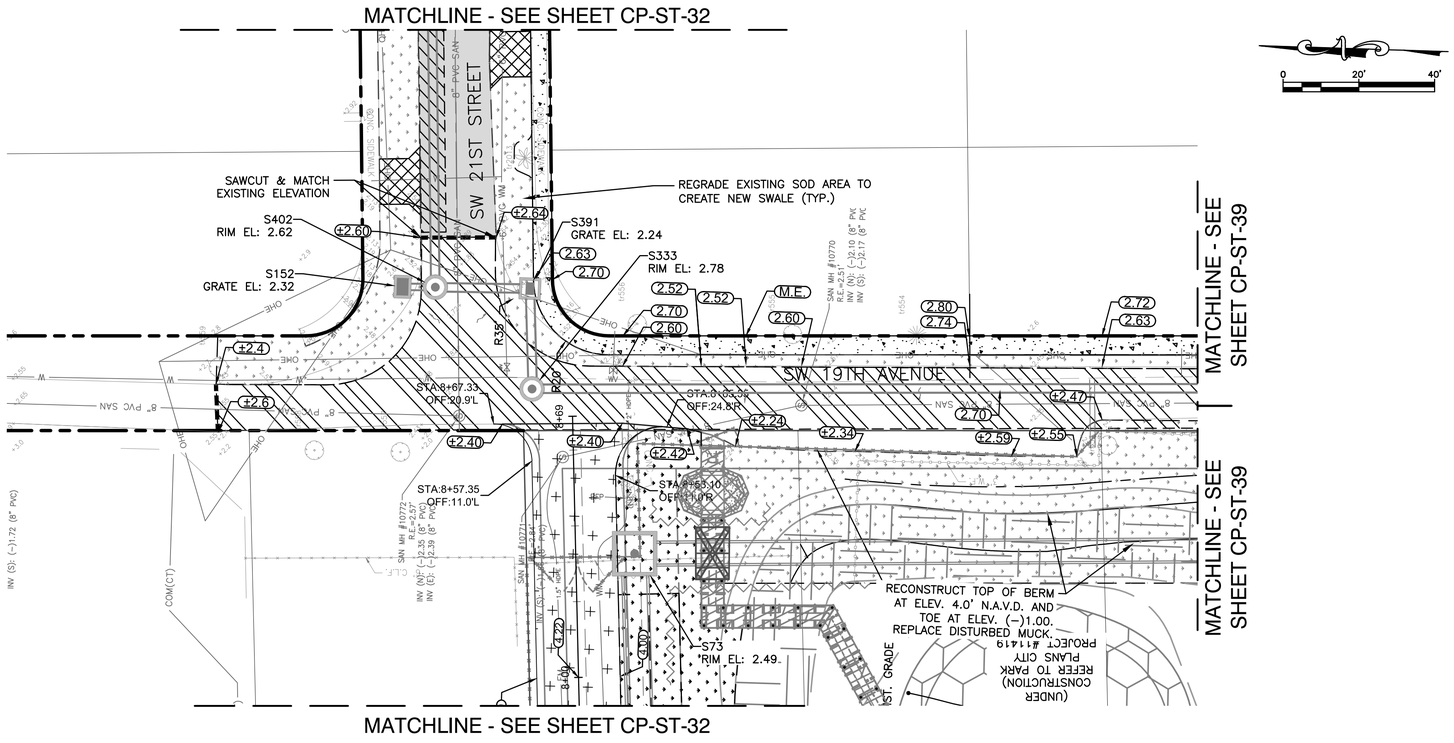

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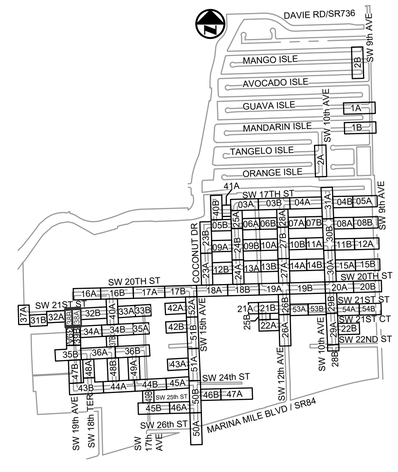

KEY MAP
N.T.S.

ENGINEER: PATRICK J. GIBNEY
REG. No. 49428
DATE: 01/22/2021
TEL: 954-987-0066
FAX: 954-987-2949

DRAWN BY: XXX
DATE: 01/07/2019
DESIGNED BY: XXX
SCALE: 1"=20'
CHECKED BY: XXX
FIELD BOOK: XXXX

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PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

SHEET NO.
CP-ST-38

TOTAL: 255

CAD FILE: 11868-CP-ST-B

DRAWING FILE NO. 4-142-42

CONSTRUCTION SET

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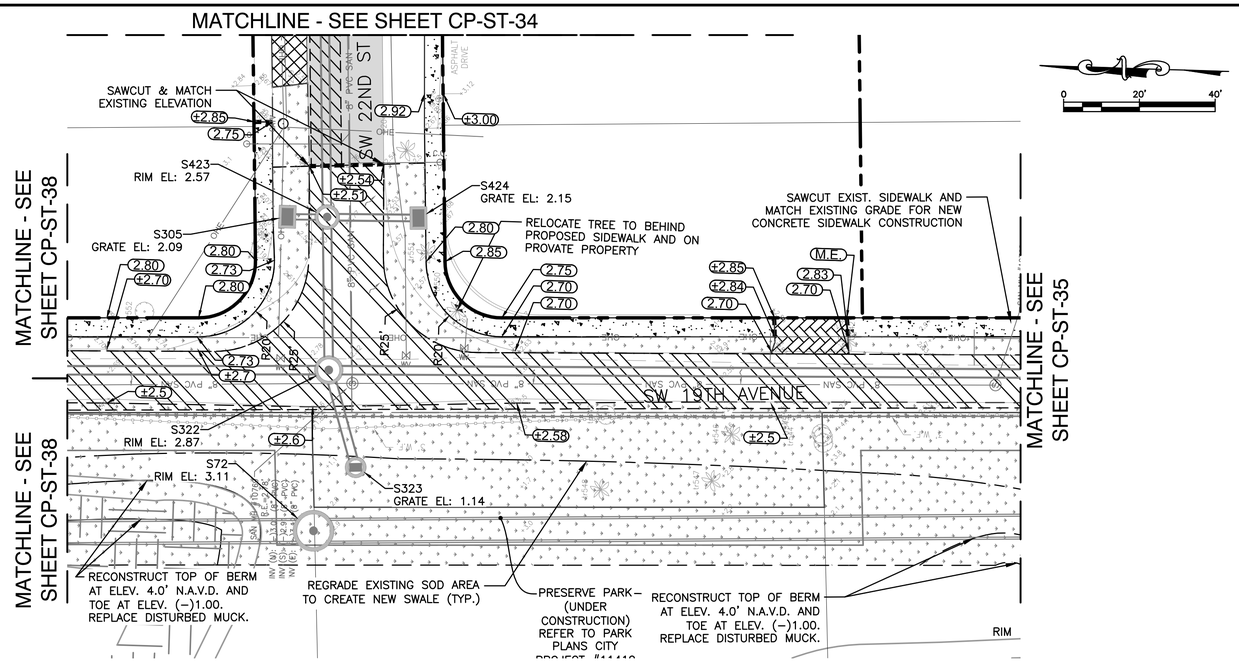

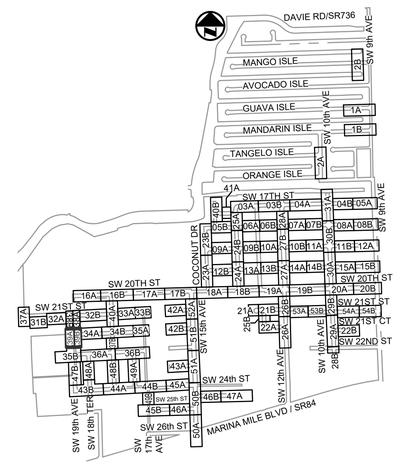

KEY MAP

N.T.S.

Hazen

HAZEN AND SAWYER
4000 HOLLYWOOD BLVD, SUITE 750N
HOLLYWOOD, FLORIDA 33021

Certificate of Authorization No: 2771

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REG. No.: 49428
DATE: 01/22/2021

TEL: 954-987-0066
FAX: 954-987-2949

DRAWN BY: XXX
DATE: 01/07/2019
DESIGNED BY: XXX
SCALE: 1"=20'
CHECKED BY: XXX
FIELD BOOK: XXXX

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

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CONSTRUCTION SET

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

SHEET NO.
CP-ST-39

TOTAL: 255

CAD FILE: 11868-CP-ST-B

DRAWING FILE NO. 4-142-42

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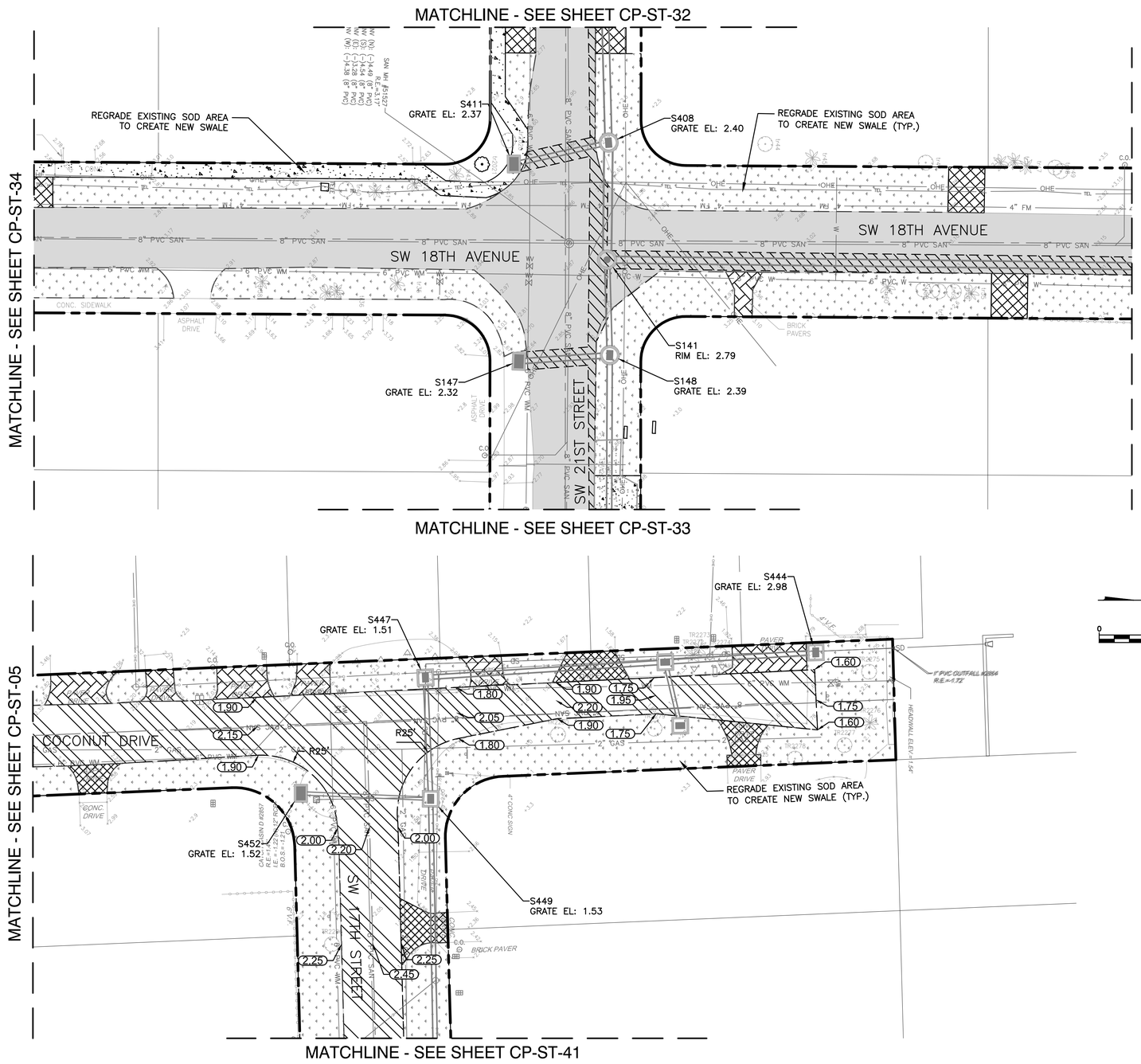

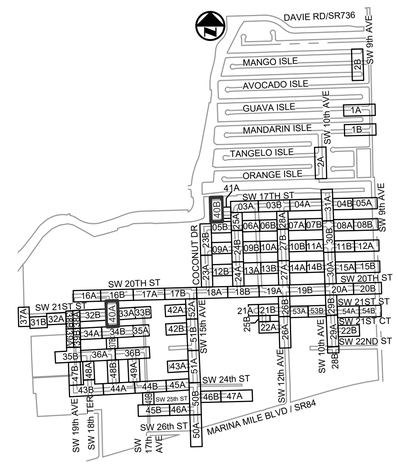

KEY MAP
N.T.S.

Hazen

HAZEN AND SAWYER
4000 HOLLYWOOD BLVD, SUITE 750N
HOLLYWOOD, FLORIDA 33021

Certificate of Authorization No: 2771

CRAVEN • THOMPSON AND ASSOCIATES, INC.
ENGINEERS • PLANNERS • SURVEYORS
3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309
FAX: (954) 739-6409 TEL: (954) 739-6400
FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

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ENGINEER: PATRICK J. GIBNEY
REG. No.: 49428
DATE: 01/22/2021

TEL: 954-987-0066
FAX: 954-987-2949

DRAWN BY: XXX
DATE: 01/07/2019
DESIGNED BY: XXX
SCALE: 1"=20'
CHECKED BY: XXX
FIELD BOOK: XXXX

CITY OF FORT LAUDERALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

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8/26/2021

CONSTRUCTION SET

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

SHEET NO.
CP-ST-40

TOTAL: 255

CAD FILE:
11868-CP-ST-B

DRAWING FILE NO.
4-142-42

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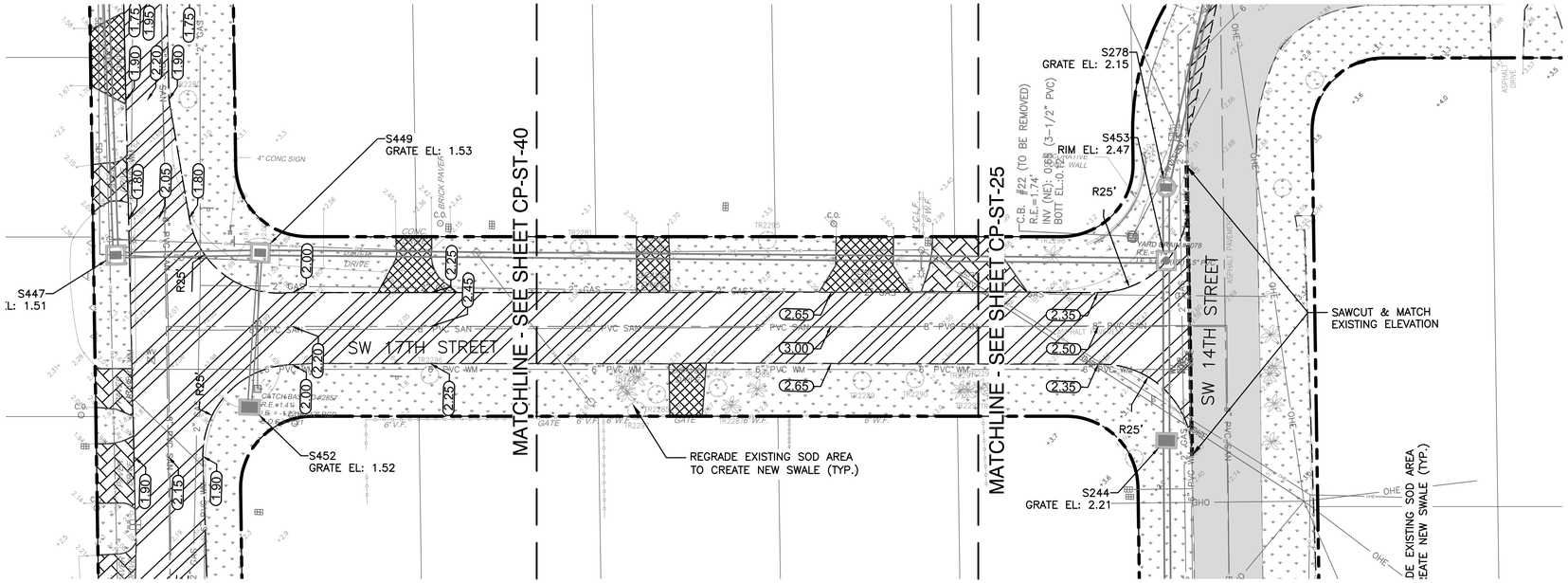
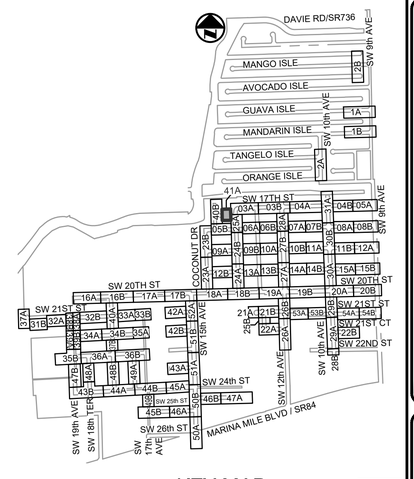
Sunshine811.com





KEY MAP

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HAZEN AND SAWYER
4000 HOLLYWOOD BLVD, SUITE 750N
HOLLYWOOD, FLORIDA 33021

Certificate of Authorization No: 2771

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RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

SHEET NO.
CP-ST-41

TOTAL: 255

CAD FILE:
11868-CP-ST-B

DRAWING FILE NO.
4-142-42

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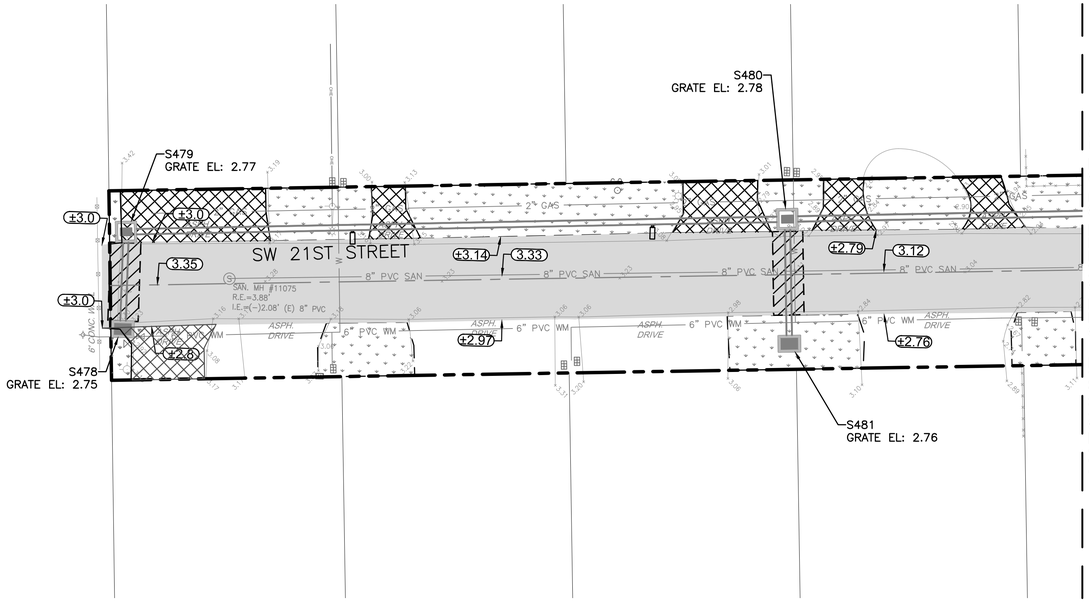

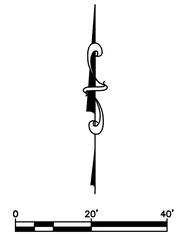

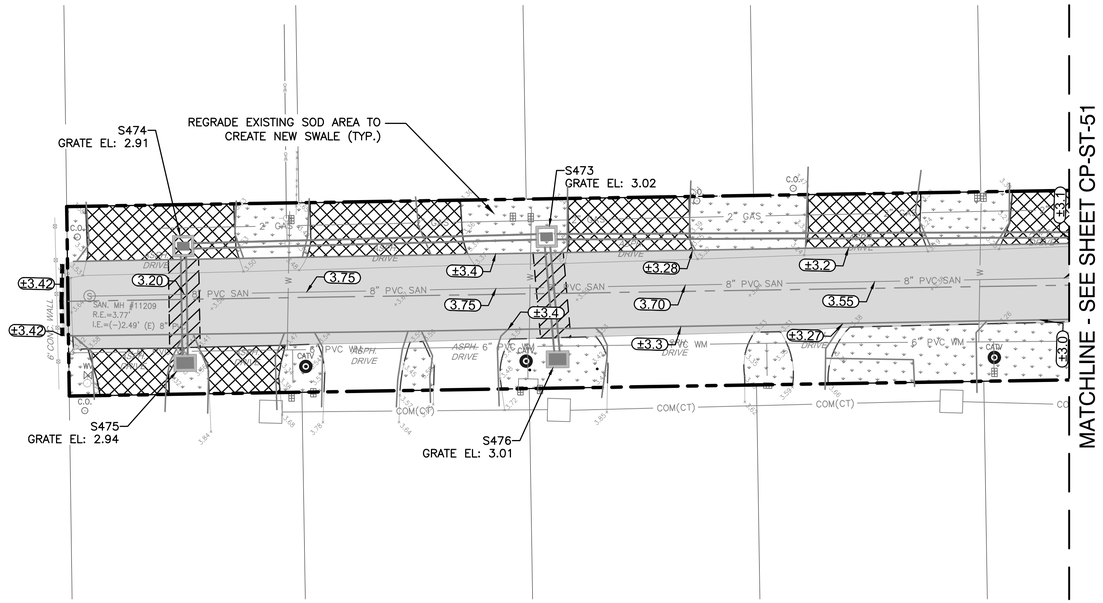

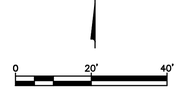

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Hazen

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Certificate of Authorization No: 2771

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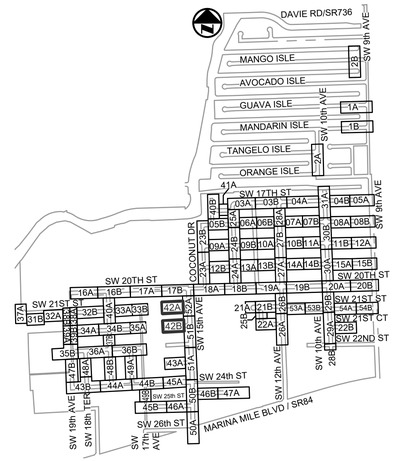

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CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

SHEET NO.
CP-ST-42

TOTAL: 225

CAD FILE: 11868-CP-ST-C

DRAWING FILE NO. 4-142-42

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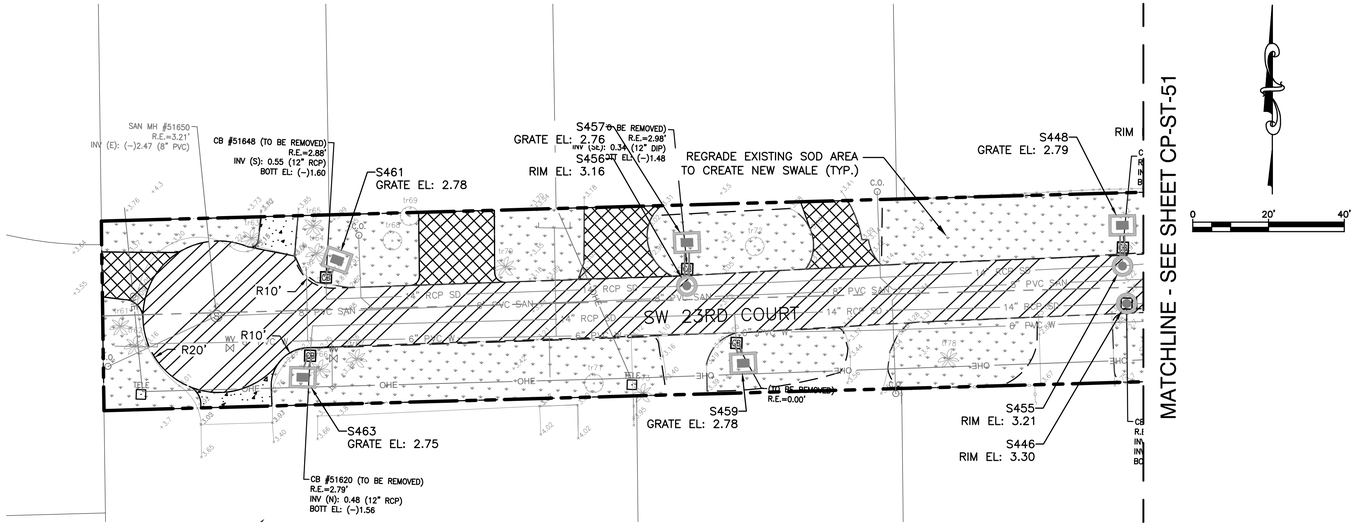
Sunshine811.com



NOTE:
1. SW 18TH TERRACE SHALL BE MILLED AND RESURFACED FROM SW 24TH STREET SOUTH TO MARINA BOULEVARD / SR84.

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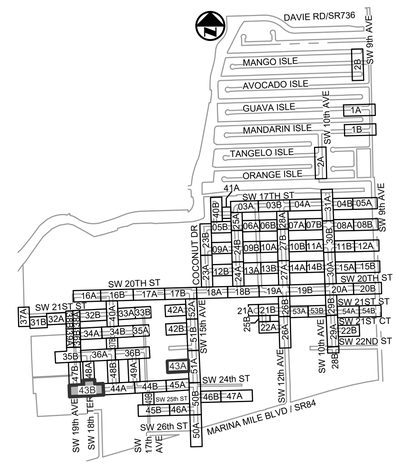

KEY MAP
N.T.S.

Hazen

HAZEN AND SAWYER
4000 HOLLYWOOD BLVD, SUITE 750N
HOLLYWOOD, FLORIDA 33021

Certificate of Authorization No: 2771

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ENGINEER: PATRICK J. GIBNEY
REG. #: 49428
DATE: 01/22/2021

TEL: 954-987-0066
FAX: 954-987-2949

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DATE: 01/07/2019
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FIELD BOOK: XXXX

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

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8/26/2021

CONSTRUCTION SET

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

SHEET NO.
CP-ST-43

TOTAL: 255

CAD FILE: 11868-CP-ST-C

DRAWING FILE NO. 4-142-42

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Sunshine811.com

MATCHLINE - SEE SHEET CP-ST-48

MATCHLINE - SEE SHEET CP-ST-49

MATCHLINE - SEE SHEET CP-ST-43

MATCHLINE - SEE SHEET BELOW

S358
RIM EL: 3.81

5' WIDE CONCRETE SIDEWALK

REGRADE EXISTING SOD AREA TO CREATE NEW SWALE (TYP.)

REMOVE THREE (3) TREES

SAWCUT & MATCH EXISTING ELEVATION

S359
RIM EL: 4.27

SW 24TH STREET

SAWCUT & MATCH EXISTING ELEVATION

MATCHLINE - SEE SHEET CP-ST-49

MATCHLINE - SEE SHEET ABOVE

SW 15TH AVENUE

SAWCUT & MATCH EXISTING ELEVATION

S46
RIM EL: 5.17

S45
RIM EL: 4.84

SW 24TH STREET

CB #10789 (TO BE REMOVED)
R.E.=4.75'
INV (S): 0.45 (15" DIP)
BOTT EL: (–)1.70

S47
GRATE EL: 4.50

REGRADE EXISTING SOD AREA TO CREATE NEW SWALE (TYP.)

PROP. 13' WIDE ACCESS ROAD SUPERPAVE ASPHALTIC CONCRETE (SP–9.5) PROVIDED IN TWO (2) 1" LIFTS (SECOND LIFT AT THE END OF THE PROJECT)

MATCHLINE - SEE SHEET CP-ST-49

MATCHLINE - SEE SHEET CP-ST-45

0 20' 40'

KEY MAP
N.T.S.

DAVIE RD/SR736 · SW 9th AVE · SW 10th AVE · MANGO ISLE · AVOCADO ISLE · GUAVA ISLE · MANDARIN ISLE · TANGELO ISLE · ORANGE ISLE · SW 17TH ST · SW 20TH ST · SW 21ST ST · SW 21ST CT · SW 22ND ST · SW 24th ST · SW 26th ST · SW 15th AVE · SW 12th AVE · SW 19th AVE · SW 18th TER · SW 17th AVE · COCONUT DR · MARINA MILE BLVD / SR84

NOTES:

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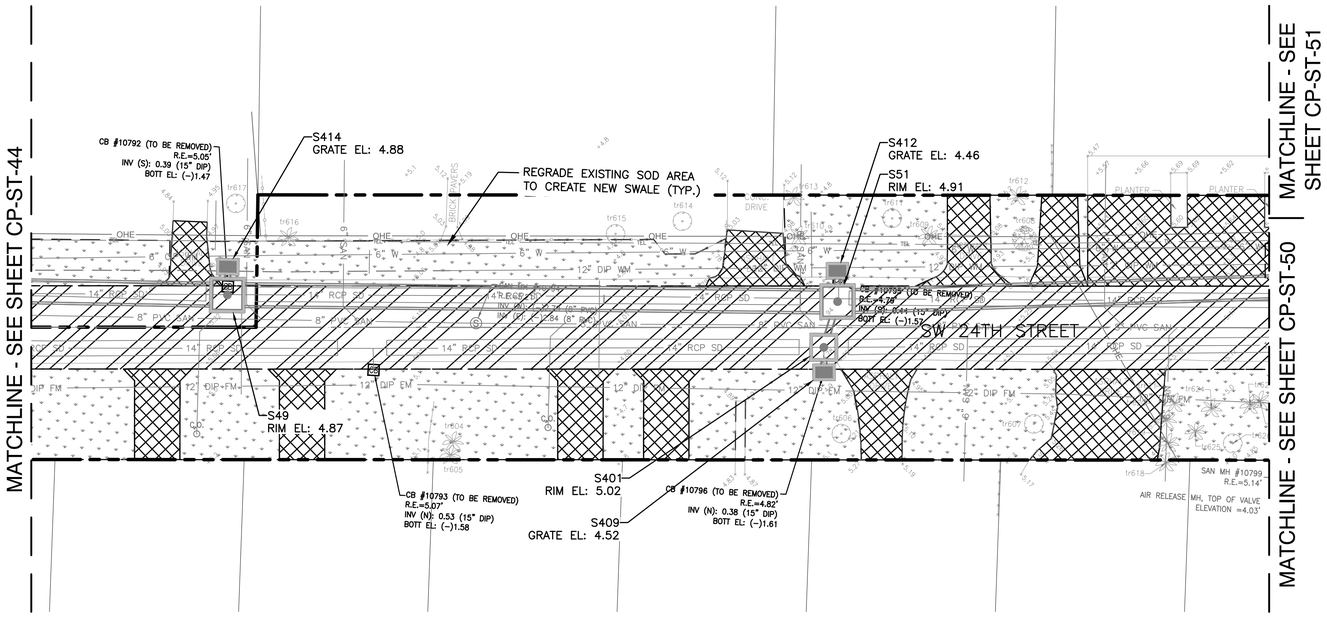
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

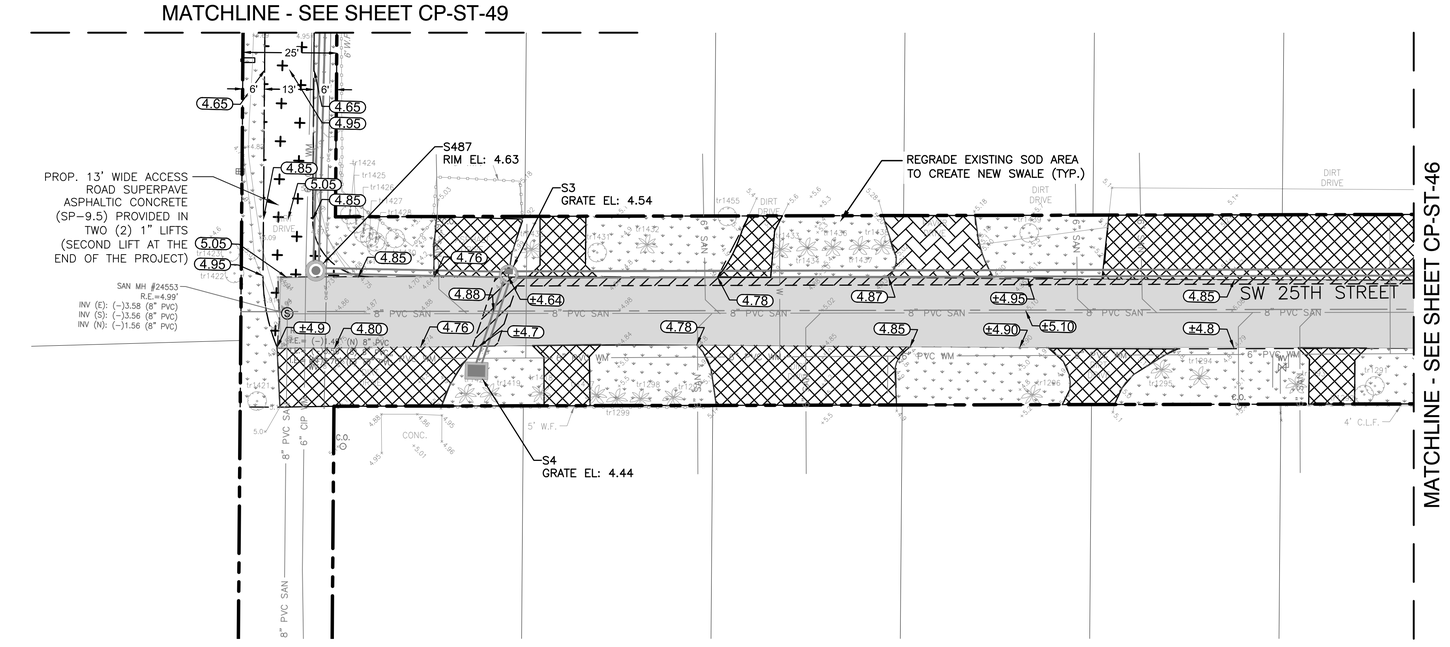
SHEET NO.
CP-ST-44

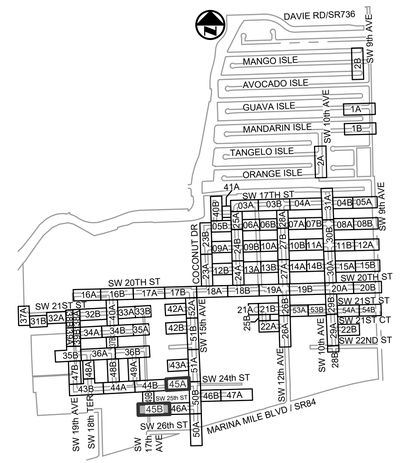
TOTAL: 255

CAD FILE:
11868–CP–ST–C

DRAWING FILE NO.
4–142–42







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HOLLYWOOD, FLORIDA 33021

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ENGINEER: PATRICK J. GIBNEY
REG. #: 49428
DATE: 01/22/2021

TEL: 954-987-0066
FAX: 954-987-2949

DRAWN BY: XXX
DATE: 01/07/2019
DESIGNED BY: XXX
SCALE: 1"=20'
CHECKED BY: XXX
FIELD BOOK: XXXX

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

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8/26/2021

CONSTRUCTION SET

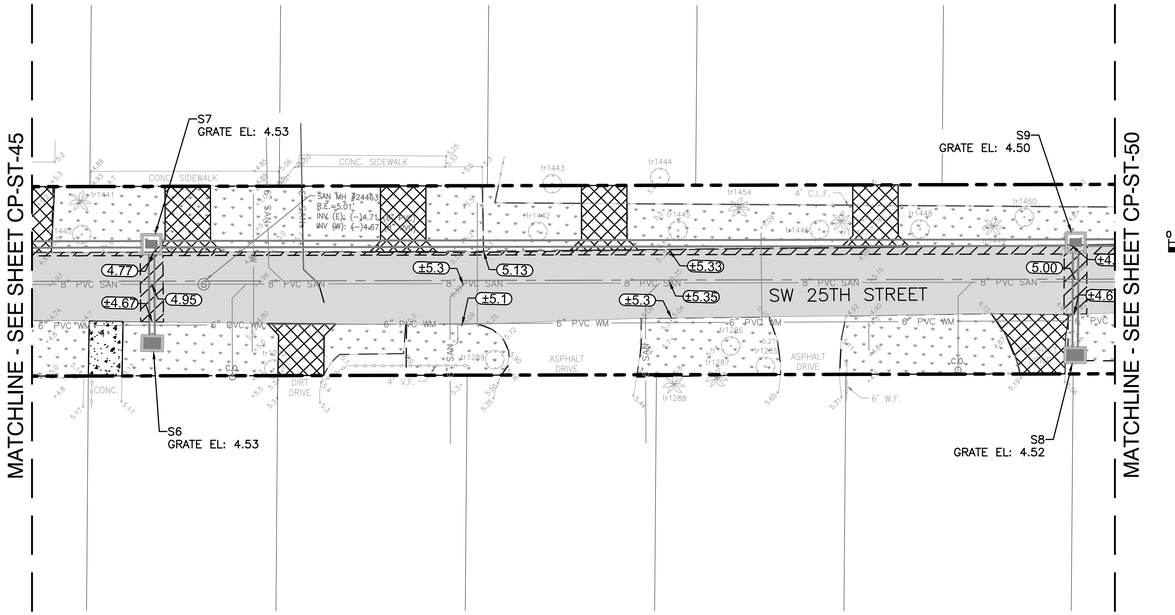
PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

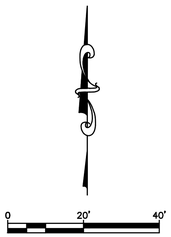
SHEET NO.
CP-ST-45

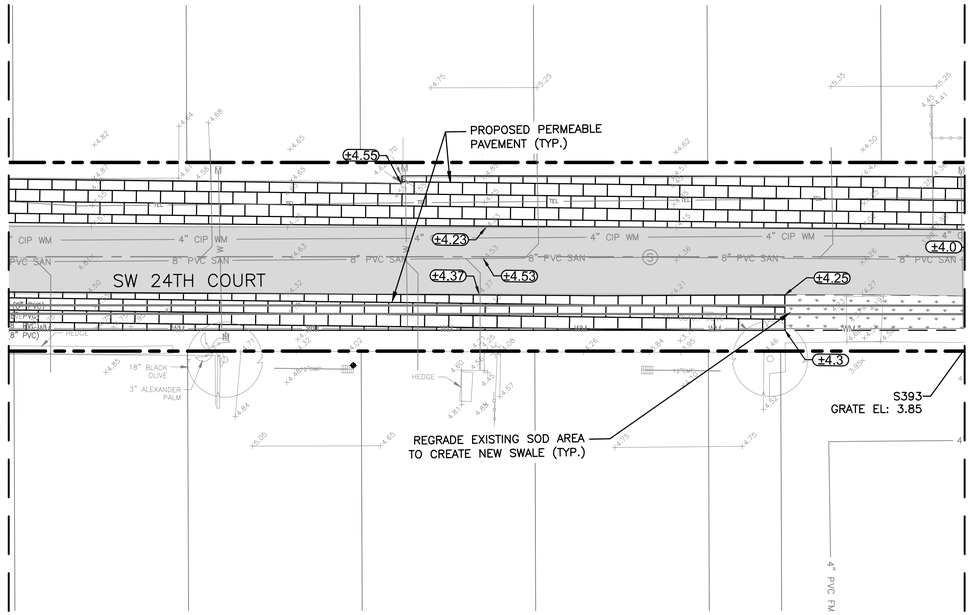
TOTAL: 255

CAD FILE: 11868-CP-ST-C

DRAWING FILE NO. 4-142-42







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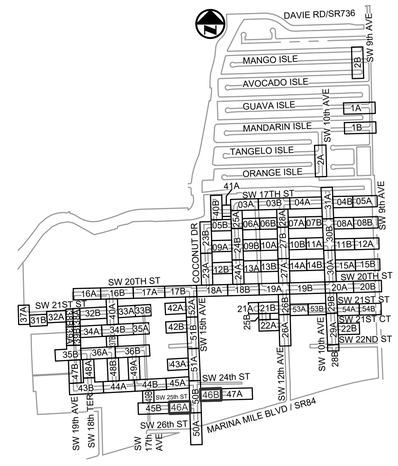

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PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

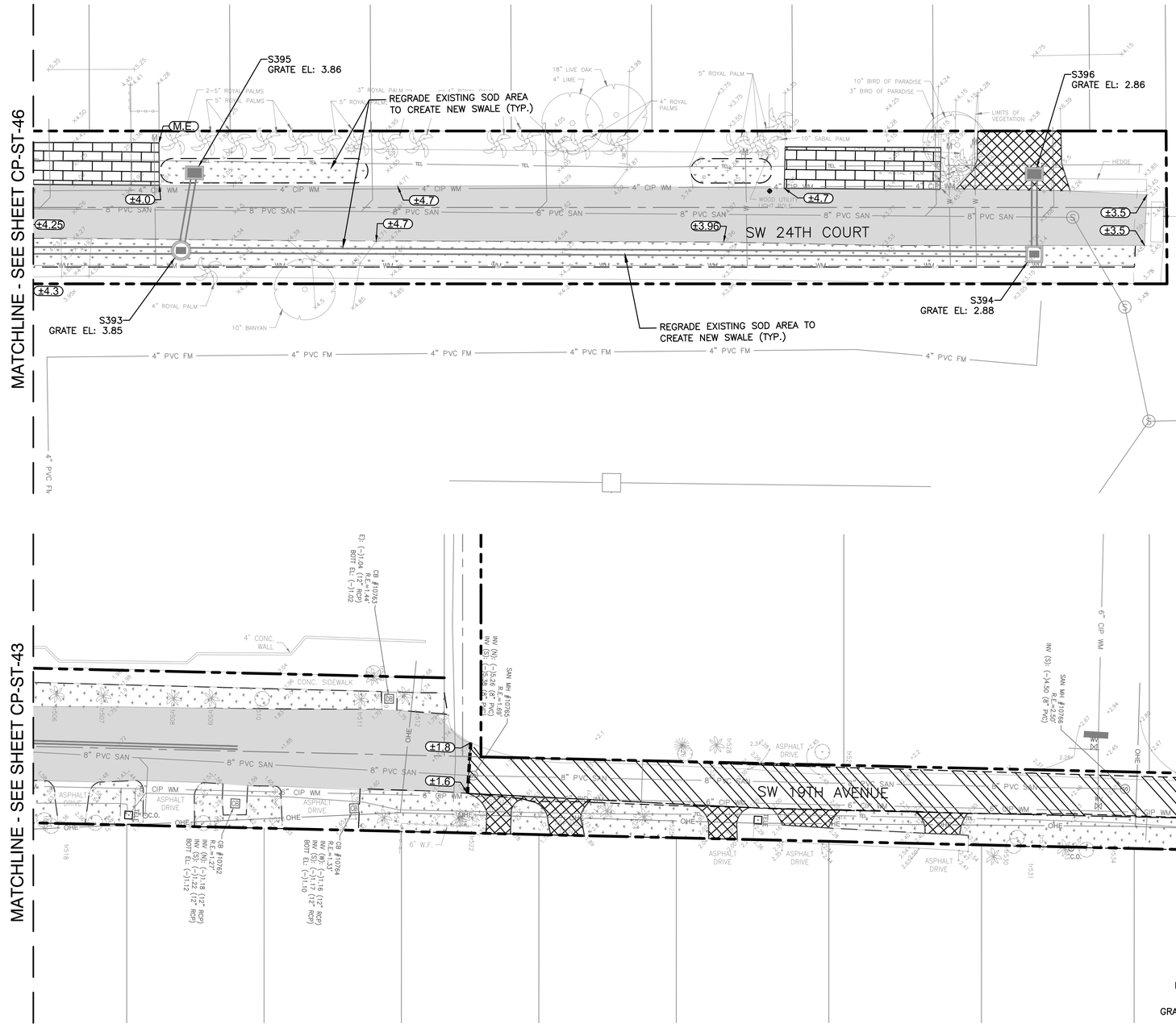
PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

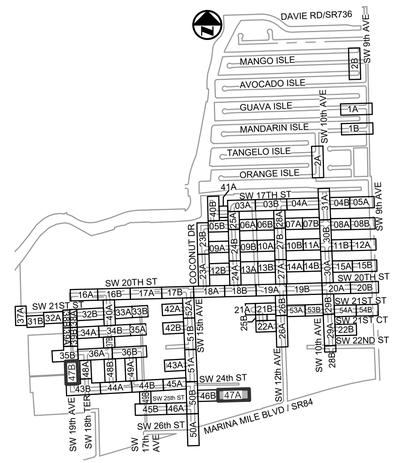
SHEET NO.
CP-ST-46

TOTAL: 255

CAD FILE: 11868-CP-ST-C

DRAWING FILE NO. 4-142-42





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REG. No.: 49428
DATE: 01/22/2021

TEL: 954-987-0066
FAX: 954-987-2949

DRAWN BY: XXX
DATE: 01/07/2019
DESIGNED BY: XXX
SCALE: 1"=20'
CHECKED BY: XXX
FIELD BOOK: XXXX

CITY OF FORT LAUDERALE
PUBLIC WORKS DEPARTMENT
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100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

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8/26/2021

CONSTRUCTION SET

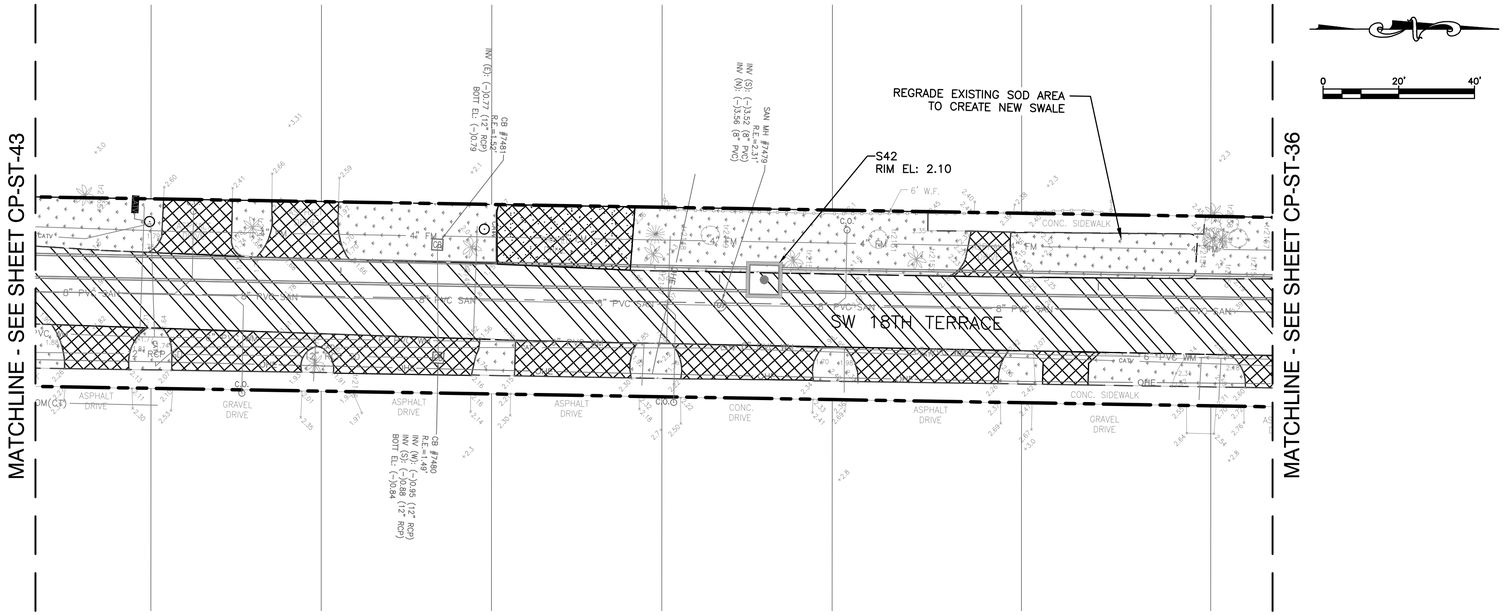
PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

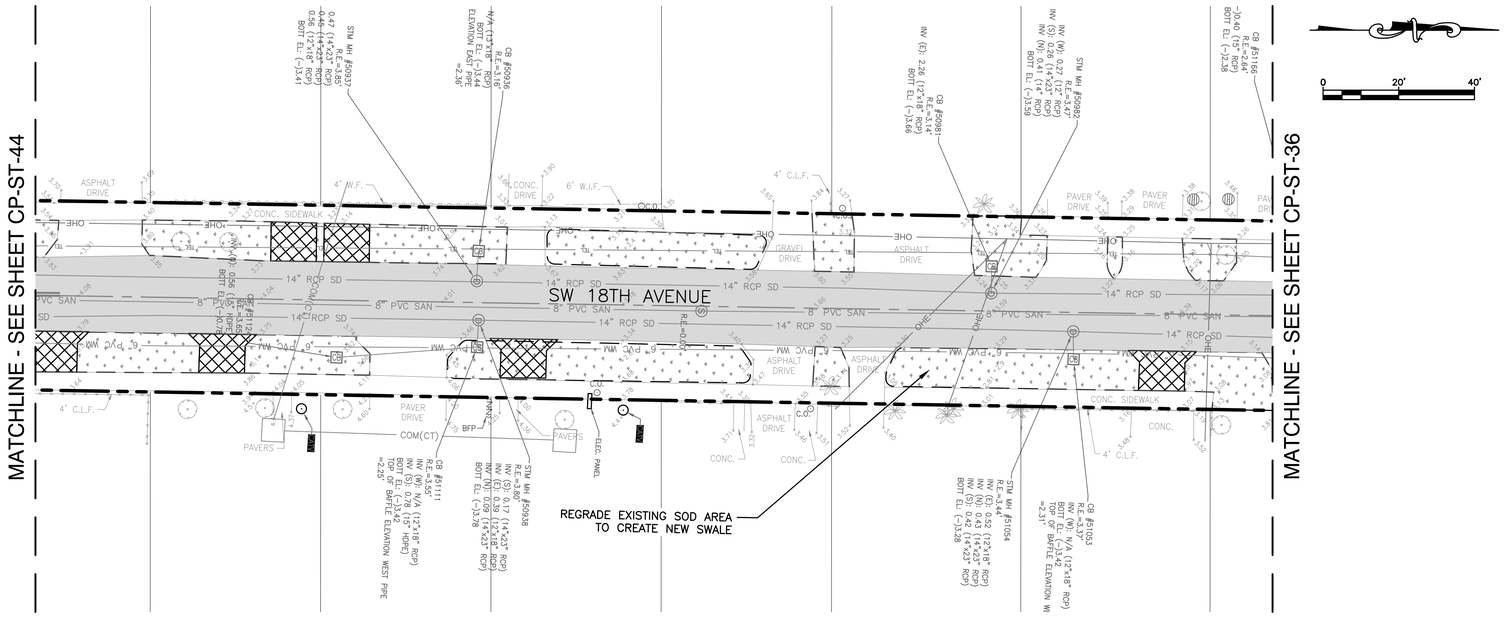
SHEET NO.
CP-ST-47

TOTAL: 255

CAD FILE: 11868-CP-ST-C

DRAWING FILE NO. 4-142-42





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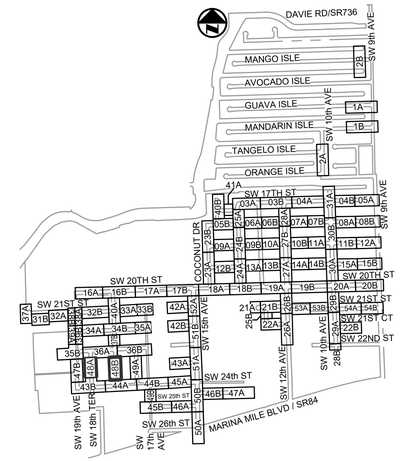

KEY MAP

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PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

SHEET NO.
CP-ST-48

TOTAL: 255

CAD FILE:
11868-CP-ST-C

DRAWING FILE NO.
4-142-42

CAM #22-0947
Exhibit 1D
p. 1622

PLOT DATE: 8/26/2021 1:00 PM BY: ASCHEFFER
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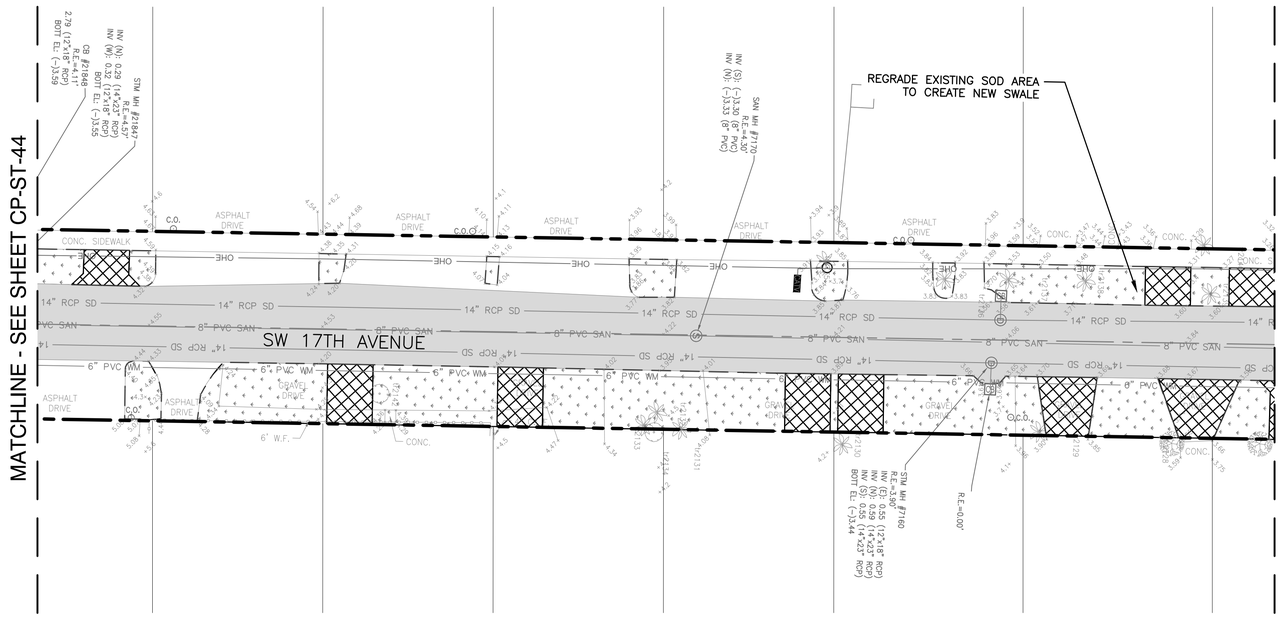

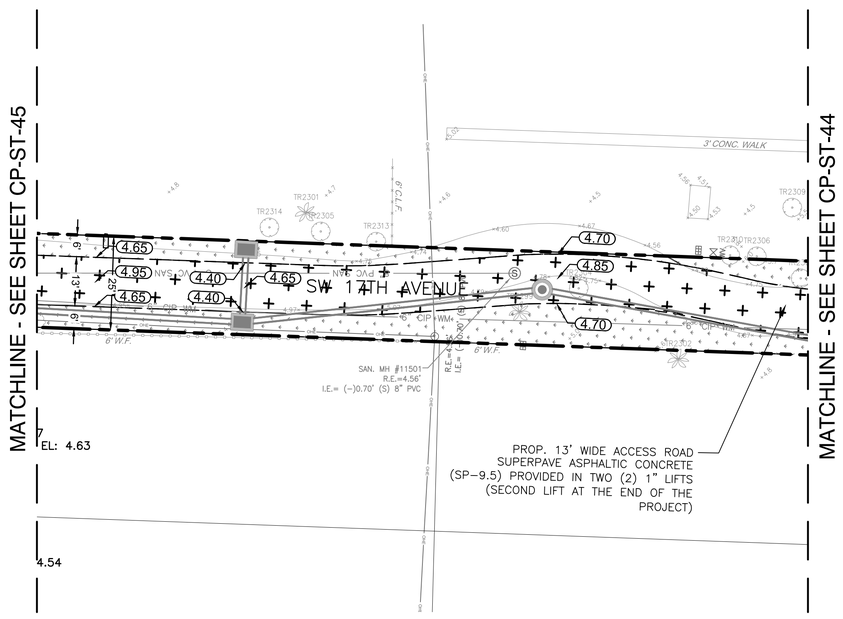

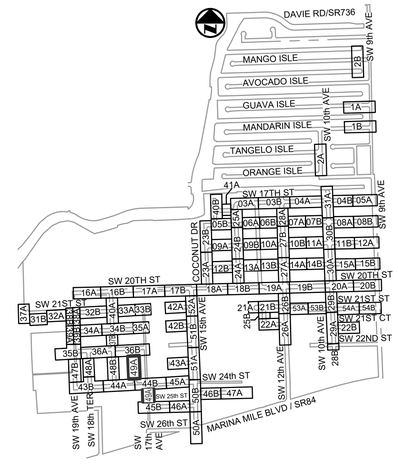

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ENGINEER: PATRICK J. GIBNEY
REG. No.: 49428
DATE: 01/22/2021

TEL: 954-987-0066
FAX: 954-987-2949

DRAWN BY: XXX
DATE: 01/07/2019
DESIGNED BY: XXX
SCALE: 1"=20'
CHECKED BY: XXX
FIELD BOOK: XXXX

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

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8/26/2021

CONSTRUCTION SET

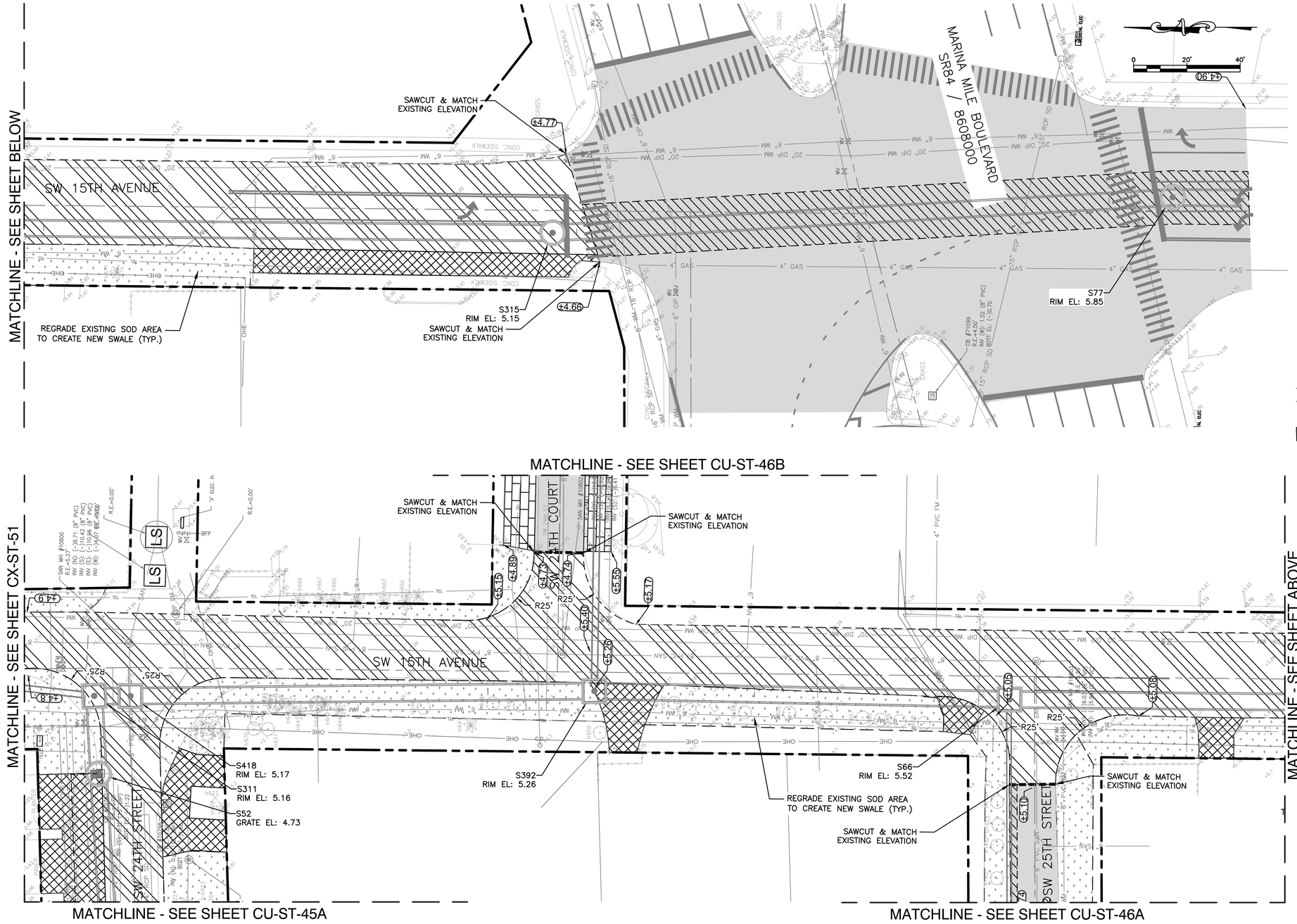
PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

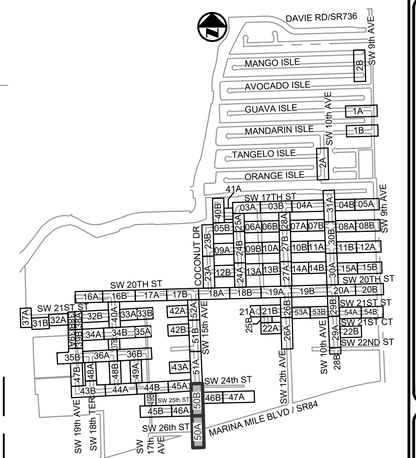
SHEET NO.
CP-ST-49

TOTAL: 255

CAD FILE: 11868-CP-ST-C

DRAWING FILE NO. 4-142-42





KEY MAP
N.T.S.

0
20'
40'

NOTES:

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4000 HOLLYWOOD BLVD, SUITE 750N
HOLLYWOOD, FLORIDA 33021

Certificate of Authorization No: 2771

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8/26/2021

CONSTRUCTION SET

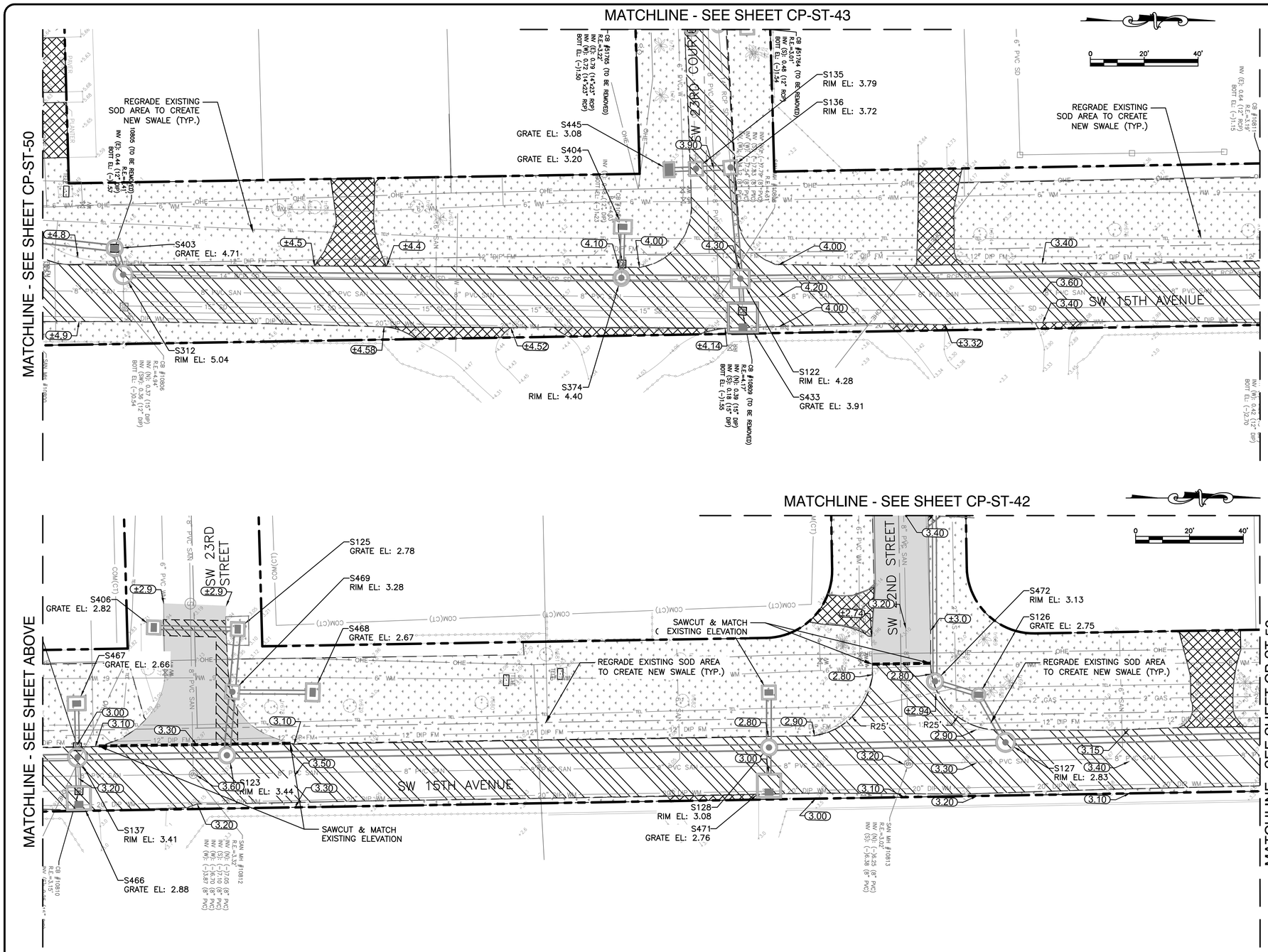
PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

SHEET NO.
CP-ST-50

TOTAL: 255

CAD FILE: 11868-CP-ST-C

DRAWING FILE NO. 4-142-42



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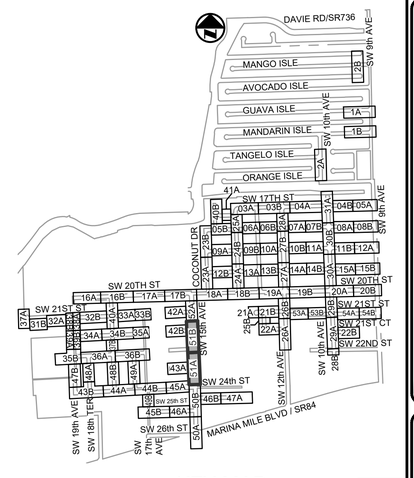

KEY MAP

N.T.S.

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HOLLYWOOD, FLORIDA 33021

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PUBLIC WORKS DEPARTMENT
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100 North Andrews Avenue, Fort Lauderdale, Florida 33301

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8/26/2021

CONSTRUCTION SET

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

SHEET NO.
CP-ST-51

TOTAL: 255

CAD FILE: 11868-CP-ST-C

DRAWING FILE NO. 4-142-42

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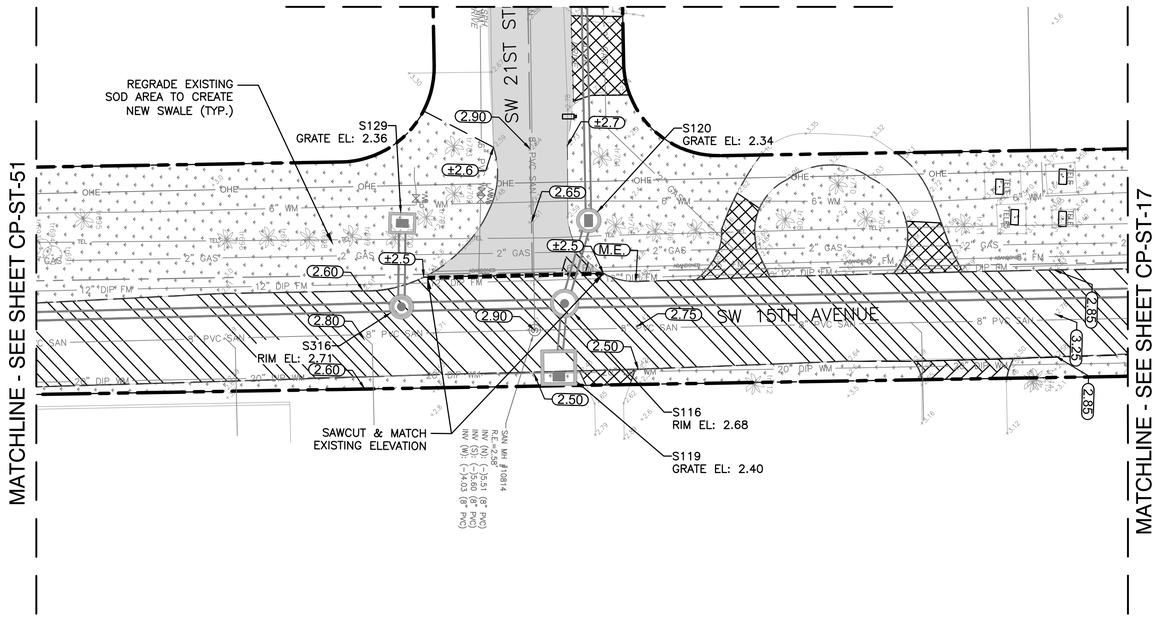

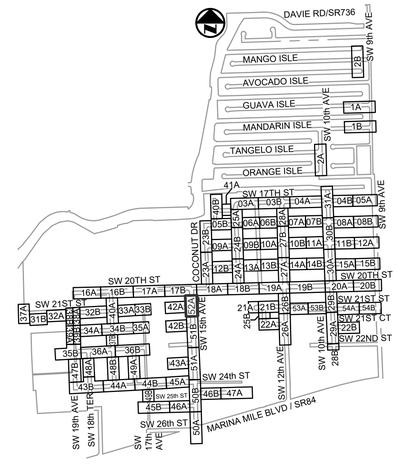

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CONSTRUCTION SET

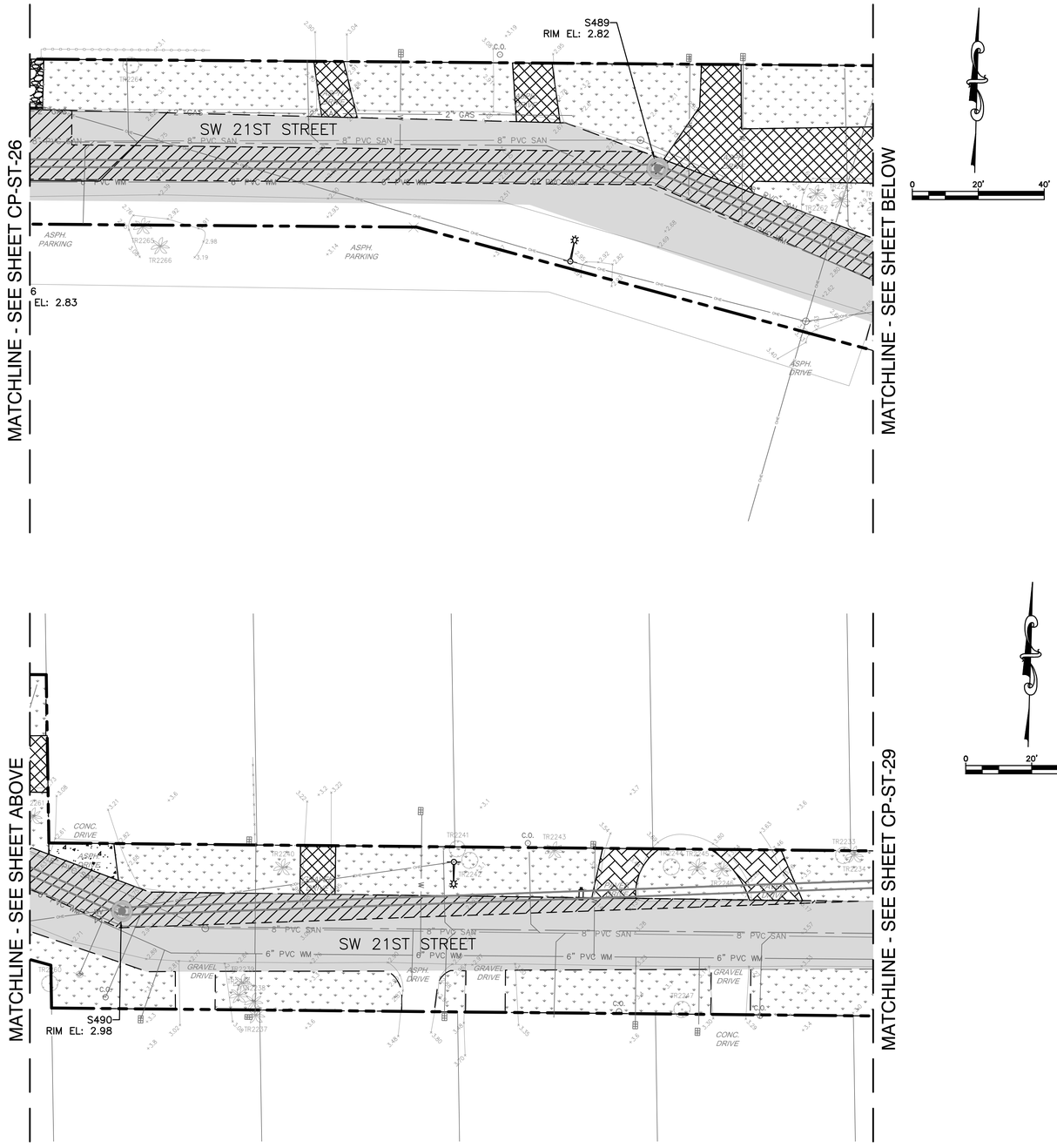
PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

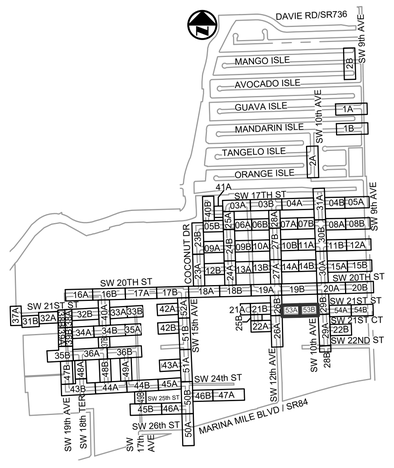
SHEET NO.
CP-ST-52

TOTAL: 255

CAD FILE:
11868-CP-ST-C

DRAWING FILE NO.
4-142-42





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SHEET NO.
CP-ST-53

TOTAL: 255

CAD FILE:
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PLOT DATE: 8/26/2021 1:13 PM BY: ASCHEFFER
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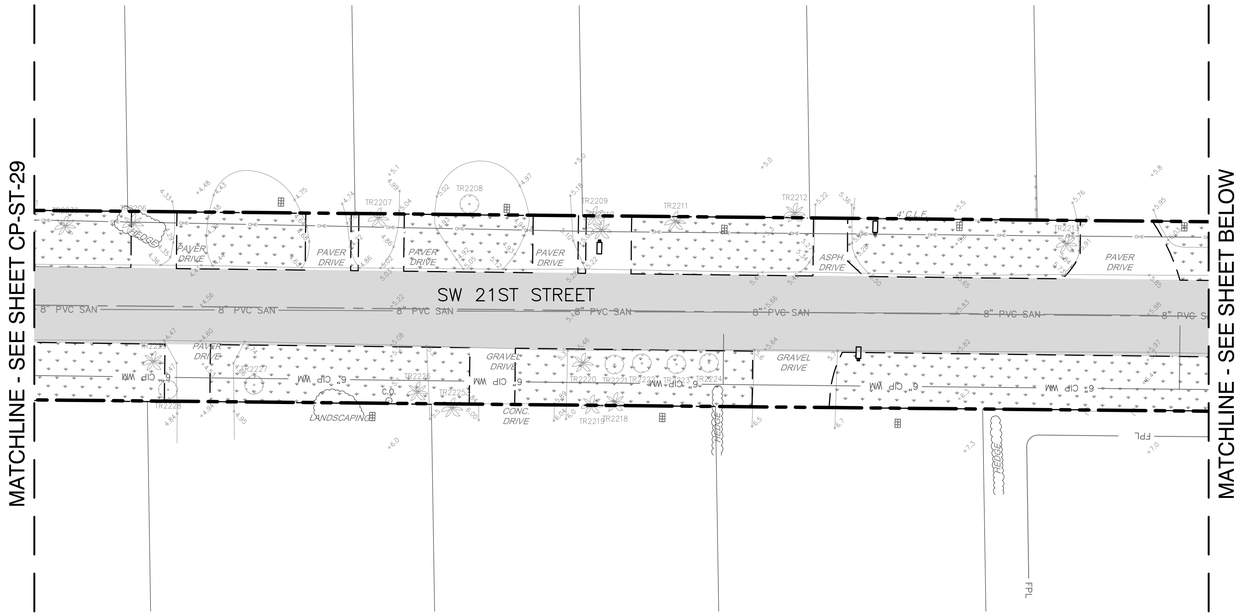

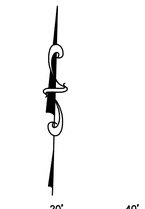

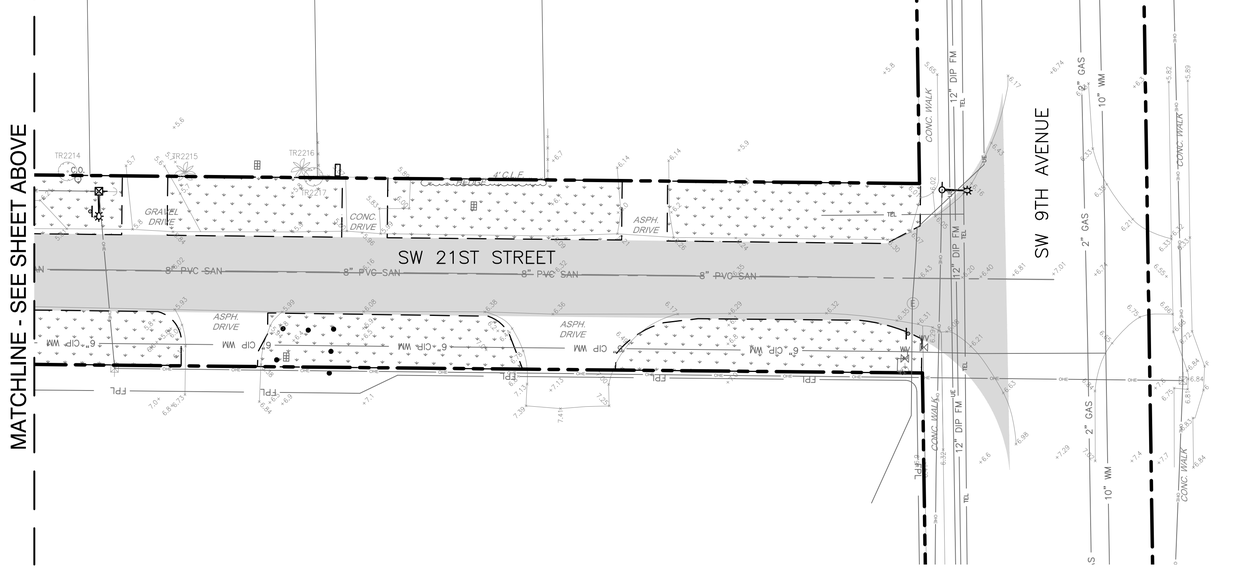

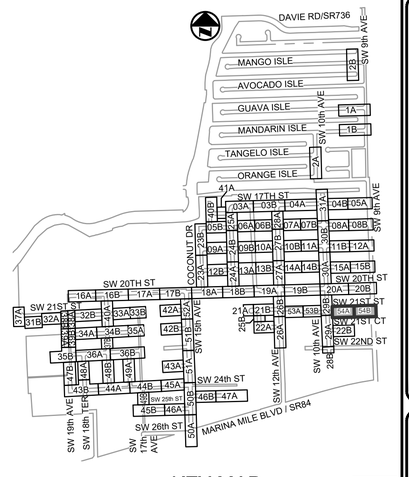

KEY MAP

N.T.S.

NOTES:

1. EXISTING UTILITY DEPTHS ARE UNKNOWN UNLESS OTHERWISE INDICATED. LOCATIONS AND DEPTHS ARE ESTIMATED.
2. 4,196 LF OF NEW/RESTORED SWALE PROPOSED FOR ENTIRE PROJECT (SEE DETAIL ON SHEET CZ-DT-22).
3. CONTRACTOR SHALL COORDINATE ALL ADJACENT TREE REMOVAL/RELOCATION WITH PROPERTY OWNER. AT OWNER'S DISCRETION CONTRACTOR SHALL MAKE TREE AVAILABLE OR PLAN/RELOCATE AT HOMEOWNER'S REQUEST WITH SIGNED WAIVER TO PLANT WITHIN PRIVATE PROPERTY.
4. ALL EXISTING UTILITIES MAY NOT BE SHOWN ON THIS PLAN. REFER TO EXISTING CONDITIONS PLANS FOR TYPE AND LOCATION OF EXISTING UTILITIES.
5. ALL EXISTING CATCH BASIN AND STORM DRAINS LOCATED WITHIN RIGHT-OF-WAY TO REMAIN UNLESS OTHERWISE SHOWN. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD PRIOR OF ANY REMOVAL OF ANY DRAINAGE STRUCTURE AND/OR PIPING BASINS AND STORM DRAINS REMOVED SHALL BE BACKFILLED PER CITY SPECIFICATIONS.
6. EXISTING CATCH BASINS LOCATED WITHIN RIGHT-OF-WAY MAY BE CONNECTED TO ADJACENT PROPERTY ROOF DRAINS. IF THIS SITUATION IS DISCOVERED DURING CONSTRUCTION THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD AND THE CONTRACTOR SHALL NOT REMOVE ANY PIPE OR CATCH BASINS UNLESS AUTHORIZED TO DO BY THE ENGINEER OF RECORD.
7. CONTRACTOR IS RESPONSIBLE FOR TEMPORARY RELOCATION/COORDINATION OF EXISTING UTILITIES (WATER/SEWER) AS REQUIRED TO FACILITATE PROPOSED INFRASTRUCTURE.
8. ONCE ABANDONED, WATER MAIN CAN BE CUT AND REMOVED TO CONSTRUCT PROPOSED DRAINAGE. PLUG EXPOSED ENDS TO REMAIN.
9. EXISTING WATER MAIN/FORCE MAIN TO BE REMOVED AND REPLACED, AND NEW MAIN TO BE TESTED, APPROVED AND SERVICES CONNECTED PRIOR TO CONSTRUCTION OF STORM DRAINAGE.
10. ALL EXISTING DRAINAGE STRUCTURES TO REMAIN MAY REQUIRE ADJUSTMENT OF FRAME AND GRATE TO MEET PROPOSED GRADES.
11. CRACKED SIDEWALK FLAGS TO BE REMOVED EVEN IN AREAS NOTED TO REMAIN.
12. ALL EXISTING AND PROPOSED DRAINAGE STRUCTURES THAT ARE LOCATED IN A SWALE WITH AN OPEN GRATE SHALL BE PROVIDED WITH AN CONCRETE APRON.
13. ALL NEW ADA CURB RAMPS SHALL INCLUDE DETECTABLE WARNING STRIP PER CITY STD DETAIL-ROAD 013.

Always call 811 two full business days before you dig to have underground utilities located and marked.
Sunshine811.com

CONSTRUCTION SET

Patrick J. Gibney, State of Florida, Professional Engineer, License No. 49428. This item has been electronically signed and sealed by Patrick J. Gibney on the date indicated here using an SHA authentication code. Printed copies of this document are not considered signed and sealed and the SHA authentication code must be verified on any electronic copies.

8/26/2021

Hazen

HAZEN AND SAWYER
4000 HOLLYWOOD BLVD, SUITE 750N
HOLLYWOOD, FLORIDA 33021

Certificate of Authorization No: 2771

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ENGINEER: PATRICK J. GIBNEY
REG. No.: 49428
DATE: 01/22/2021

TEL: 954-987-0066
FAX: 954-987-2949

DRAWN BY: XXX
DATE: 01/07/2019
DESIGNED BY: XXX
SCALE: 1"=20'
CHECKED BY: XXX
FIELD BOOK: XXXX

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

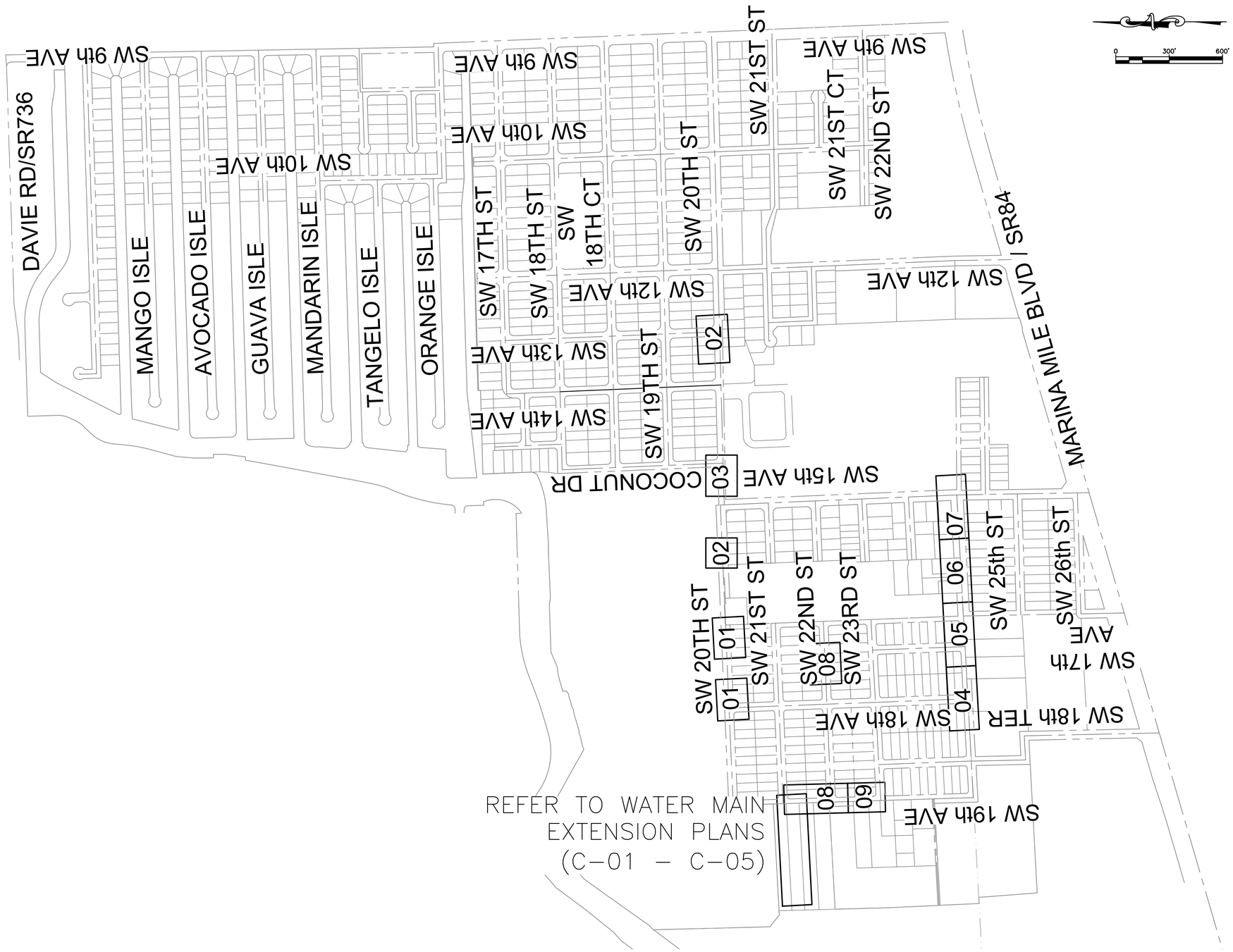
PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PAVING & GRADING PLAN

SHEET NO.
CP-ST-54

TOTAL: 255

CAD FILE:
11868-CP-ST-A

DRAWING FILE NO.
4-142-42



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NOTES:

1. 4,196 LF OF NEW/RESTORED SWALE PROPOSED FOR ENTIRE PROJECT.

Hazen

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4000 HOLLYWOOD BLVD, SUITE 750N
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ENGINEER: PATRICK J. GIBNEY
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DATE: 01/07/2019
DESIGNED BY: XXX
SCALE: VERT 1"=2' HORZ 1"=20'
CHECKED BY: XXX
FIELD BOOK: XXXX

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

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8/26/2021

CONSTRUCTION SET

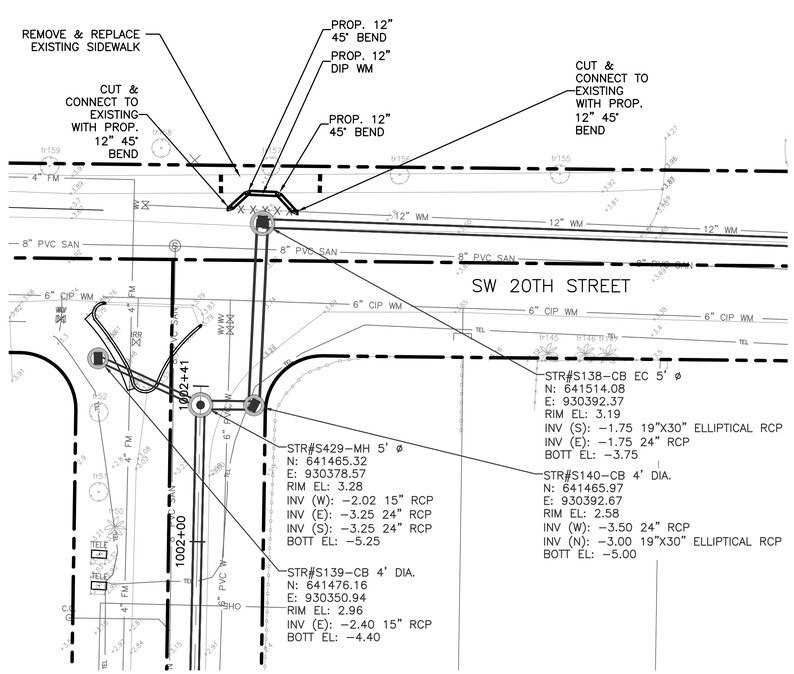
PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
UTILITY RELOCATION SITE KEY MAP

SHEET NO.
CU-UR-KY-01

TOTAL: 255

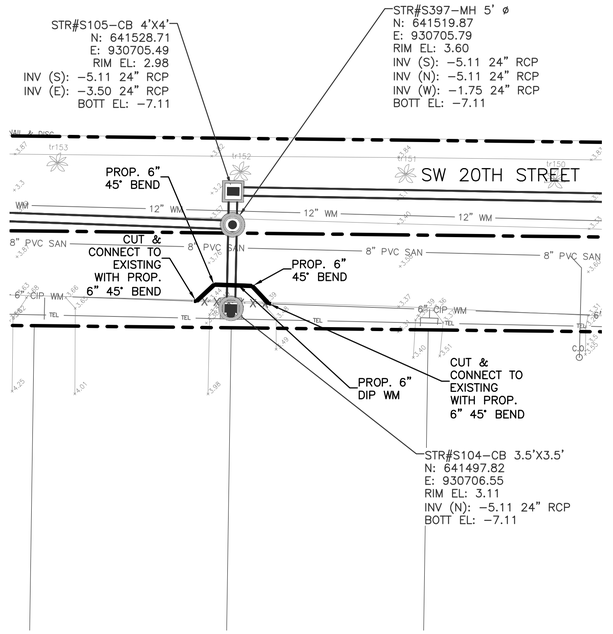
CAD FILE: 11868-CR-KY01

DRAWING FILE NO. 4-142-42



PLAN

SCALE: 1"=20'



PLAN

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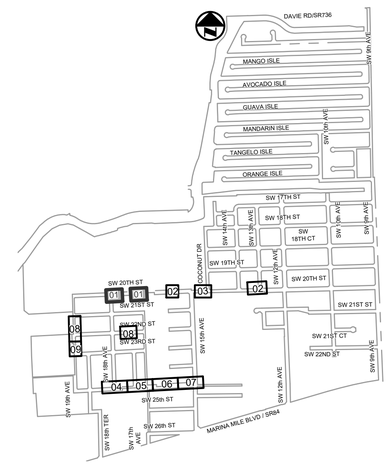

KEY MAP

N.T.S.

ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 1988)

NOTES:

1. EXISTING UTILITY DEPTHS ARE UNKNOWN UNLESS OTHERWISE INDICATED. LOCATIONS AND DEPTHS ARE ESTIMATED.
2. 4,196 LF OF NEW/RESTORED SWALE PROPOSED FOR ENTIRE PROJECT (SEE DETAIL ON SHEET CZ-DT-22).
3. TEMPORARY RELOCATION OF EXISTING SERVICES AND LATERALS MAY BE REQUIRED TO FACILITATE CONSTRUCTION OF THE PROJECT. SEPARATE PAYMENT WILL NOT BE MADE FOR THIS WORK.
4. CONTRACTOR TO REMOVE VALVES AND VALVE BOXES FROM ALL ABANDONED AND/OR GROUT-FILLED WATER MAINS.
5. CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION & MAINTAINING TEMPORARY RELOCATION/COORDINATION OF EXISTING UTILITIES (WATER & SEWER) AS REQUIRED TO FACILITATE PROPOSED INFRASTRUCTURE IMPROVEMENTS.
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CONSTRUCTION SET

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8/26/2021

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Certificate of Authorization No: 2771

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DRAWN BY:	DATE:
XXX	01/07/2019
DESIGNED BY:	SCALE:
XXX	1"=20'
CHECKED BY:	
XXX	
FIELD BOOK:	
XXXX	

CITY OF FORT LAUDERALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

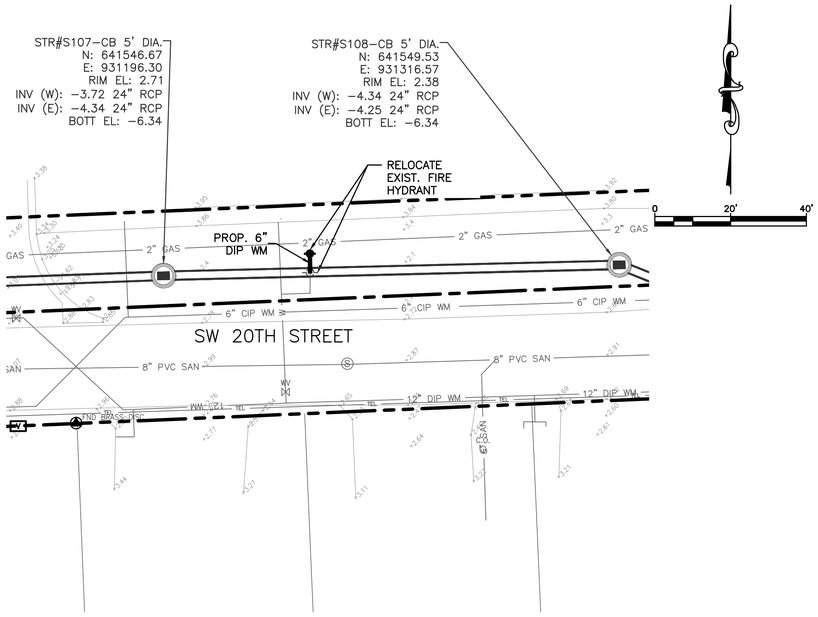
PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
UTILITY RELOCATION PLAN

SHEET NO.
CU-UR-01

TOTAL: 255

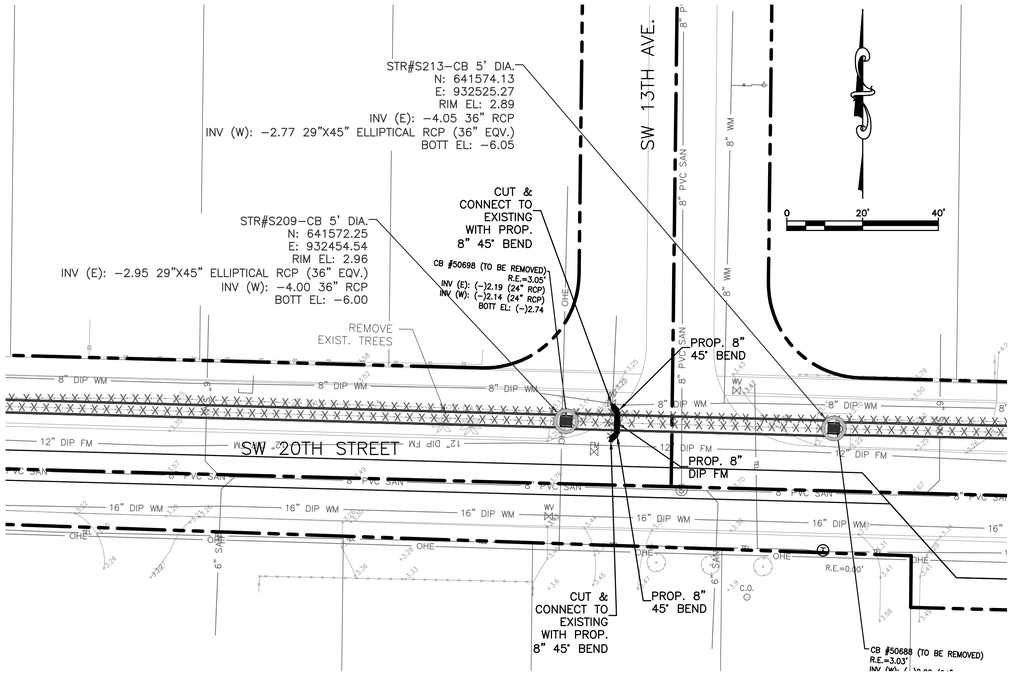
CAD FILE: 11868-CU-UR

DRAWING FILE NO. 4-142-42



PLAN

SCALE: 1"=20'



PLAN

SCALE: 1"=20'

KEY MAP

N.T.S.

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NOTES:

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3. TEMPORARY RELOCATION OF EXISTING SERVICES AND LATERALS MAY BE REQUIRED TO FACILITATE CONSTRUCTION OF THE PROJECT. SEPARATE PAYMENT WILL NOT BE MADE FOR THIS WORK.
4. CONTRACTOR TO REMOVE VALVES AND VALVE BOXES FROM ALL ABANDONED AND/OR GROUT-FILLED WATER MAINS.
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8/26/2021

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Hazen

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HOLLYWOOD, FLORIDA 33021

Certificate of Authorization No: 2771

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ENGINEER: PATRICK J. GIBNEY
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DRAWN BY: XXX
DESIGNED BY: XXX
DATE: 01/07/2019
SCALE: 1"=20'
CHECKED BY: XXX
FIELD BOOK: XXXX

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

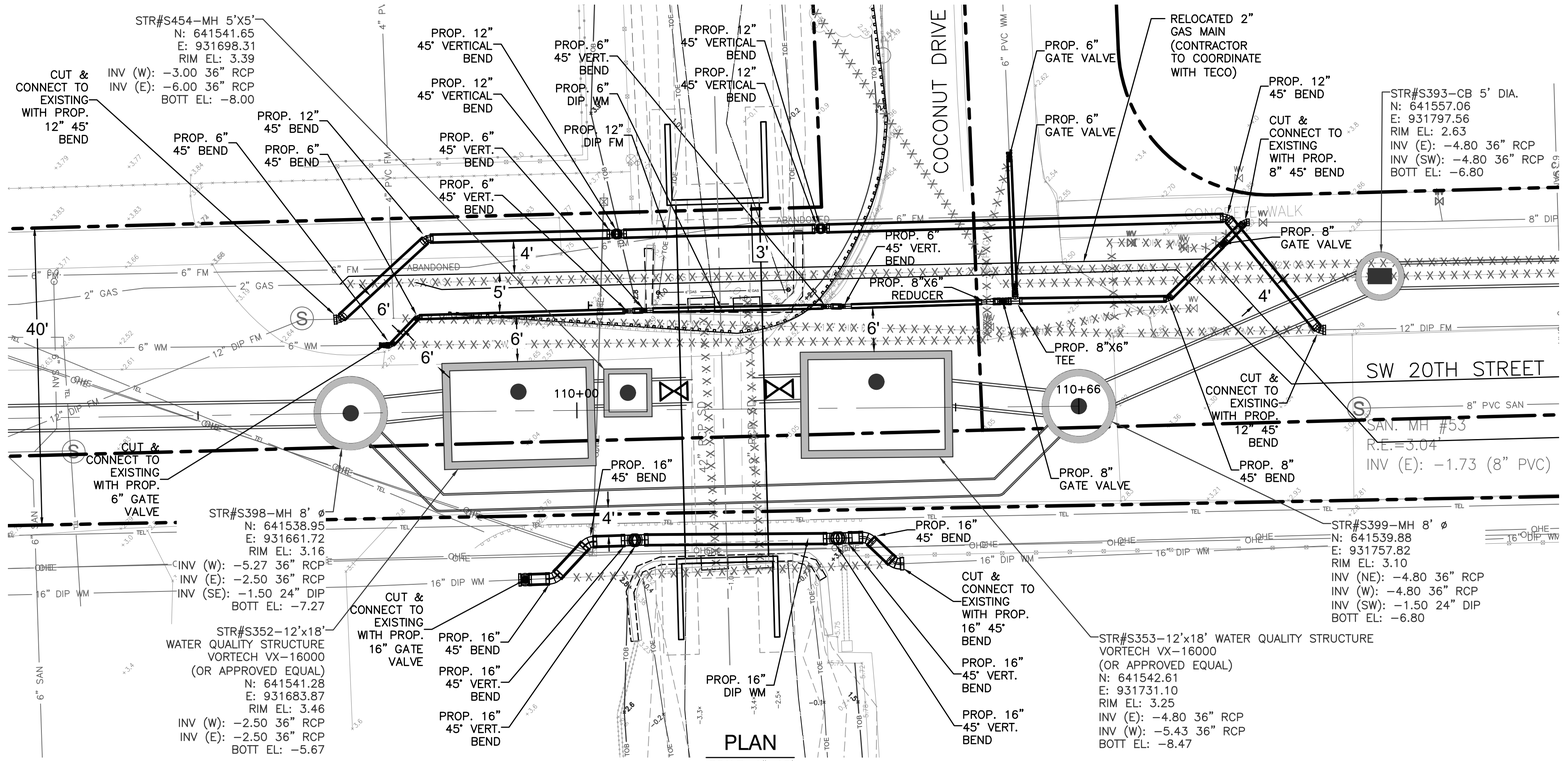
PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
UTILITY RELOCATION PLAN

SHEET NO.
CU-UR-02

TOTAL: 255

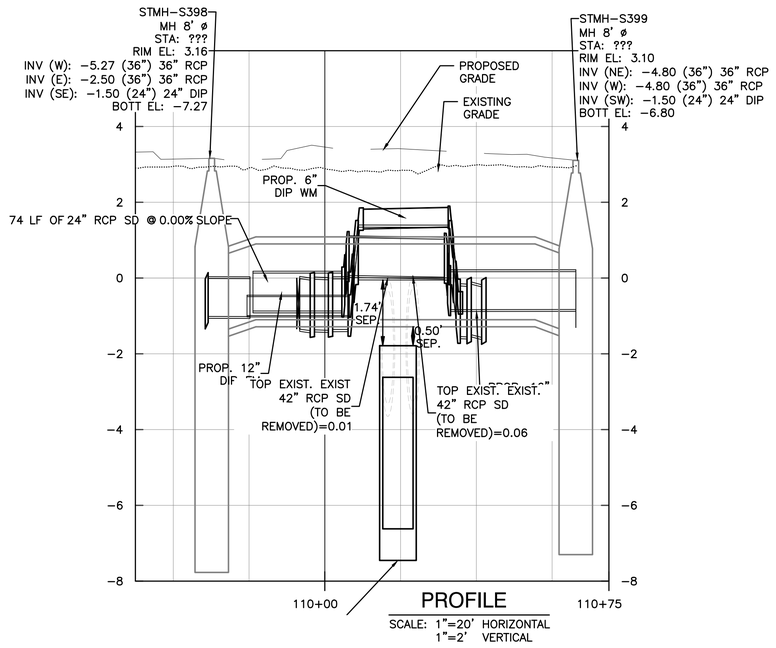
CAD FILE: 11868-CU-UR

DRAWING FILE NO. 4-142-42



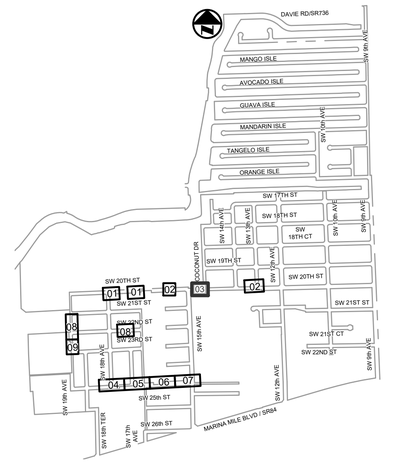
PLAN

SCALE: 1"=10'



PROFILE

SCALE: 1"=20' HORIZONTAL
1"=2' VERTICAL



KEY MAP

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CONSTRUCTION SET

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8/26/2021

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Certificate of Authorization No: 2771

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FIELD BOOK: XXXX

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
UTILITY RELOCATION PLAN

SHEET NO.
CU-UR-03

TOTAL: 255

CAD FILE: 11868–CU–UR

DRAWING FILE NO. 4–142–42

9/20/2022 9:05 AM

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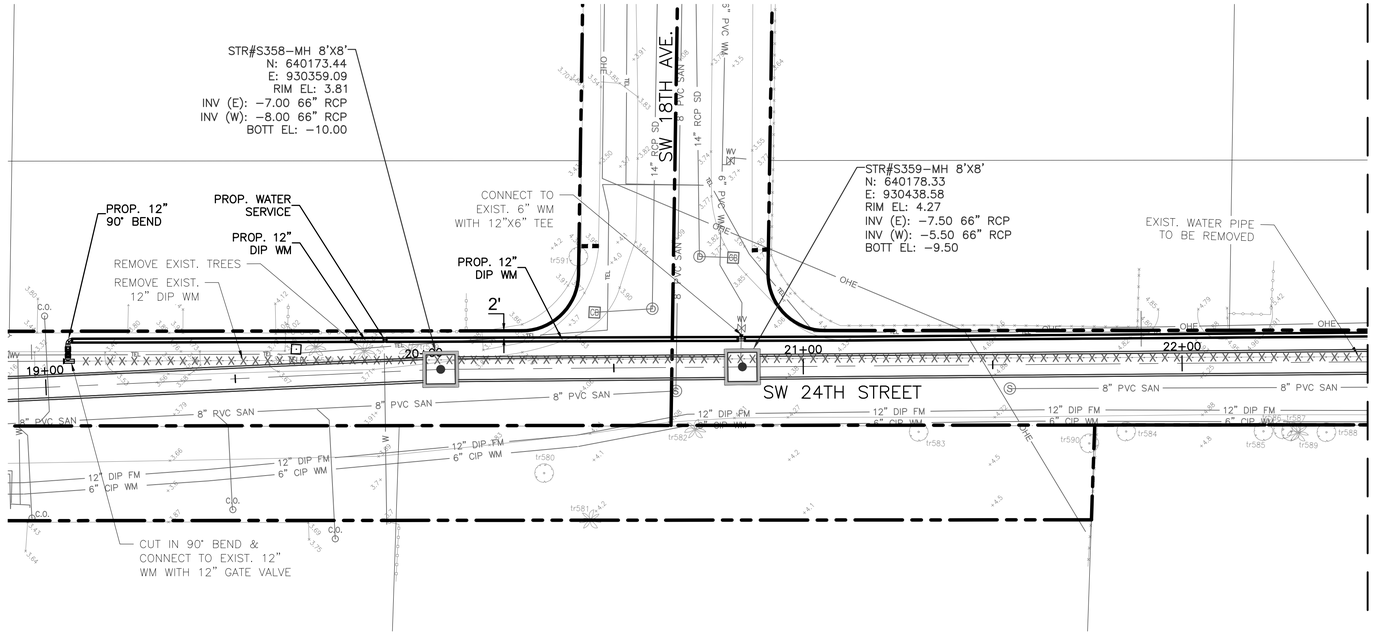
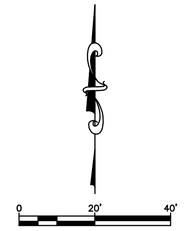
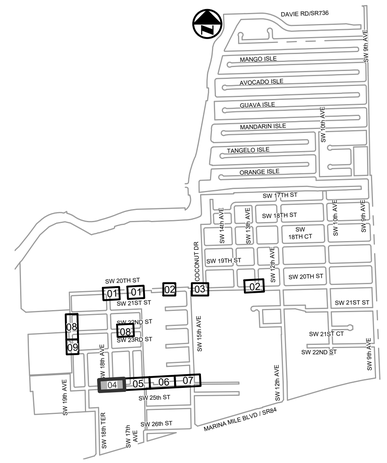


MATCHLINE - SEE SHEET CU-UR-05

PLAN

SCALE: 1"=20'





KEY MAP

N.T.S.

ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 1988)

NOTES:

1. EXISTING UTILITY DEPTHS ARE UNKNOWN UNLESS OTHERWISE INDICATED. LOCATIONS AND DEPTHS ARE ESTIMATED.
2. 4,196 LF OF NEW/RESTORED SWALE PROPOSED FOR ENTIRE PROJECT (SEE DETAIL ON SHEET CZ–DT–22).
3. TEMPORARY RELOCATION OF EXISTING SERVICES AND LATERALS MAY BE REQUIRED TO FACILITATE CONSTRUCTION OF THE PROJECT. SEPARATE PAYMENT WILL NOT BE MADE FOR THIS WORK.
4. CONTRACTOR TO REMOVE VALVES AND VALVE BOXES FROM ALL ABANDONED AND/OR GROUT–FILLED WATER MAINS.
5. CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION & MAINTAINING TEMPORARY RELOCATION/COORDINATION OF EXISTING UTILITIES (WATER & SEWER) AS REQUIRED TO FACILITATE PROPOSED INFRASTRUCTURE IMPROVEMENTS.
6. SANITARY SEWER LATERALS MAY BE REQUIRED TO PASS UNDER PROPOSED STORM DRAIN, WATER MAIN, ETC. IN ORDER TO PROVIDE SERVICE TO EXISTING PROPERTIES AND CONNECT TO EXISTING LATERALS. CONTRACTOR SHALL VERIFY EXISTING LATERAL LOCATIONS AND DEPTHS PRIOR TO CONSTRUCTION.
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HOLLYWOOD, FLORIDA 33021

Certificate of Authorization No: 2771

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ENGINEER:
PATRICK J. GIBNEY
REG. No. 49428
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FAX: 954–987–2949

DRAWN BY: XXX
DATE: 01/07/2019
DESIGNED BY: XXX
SCALE: 1"=20'
CHECKED BY: XXX
FIELD BOOK: XXXX

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

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8/26/2021

CONSTRUCTION SET

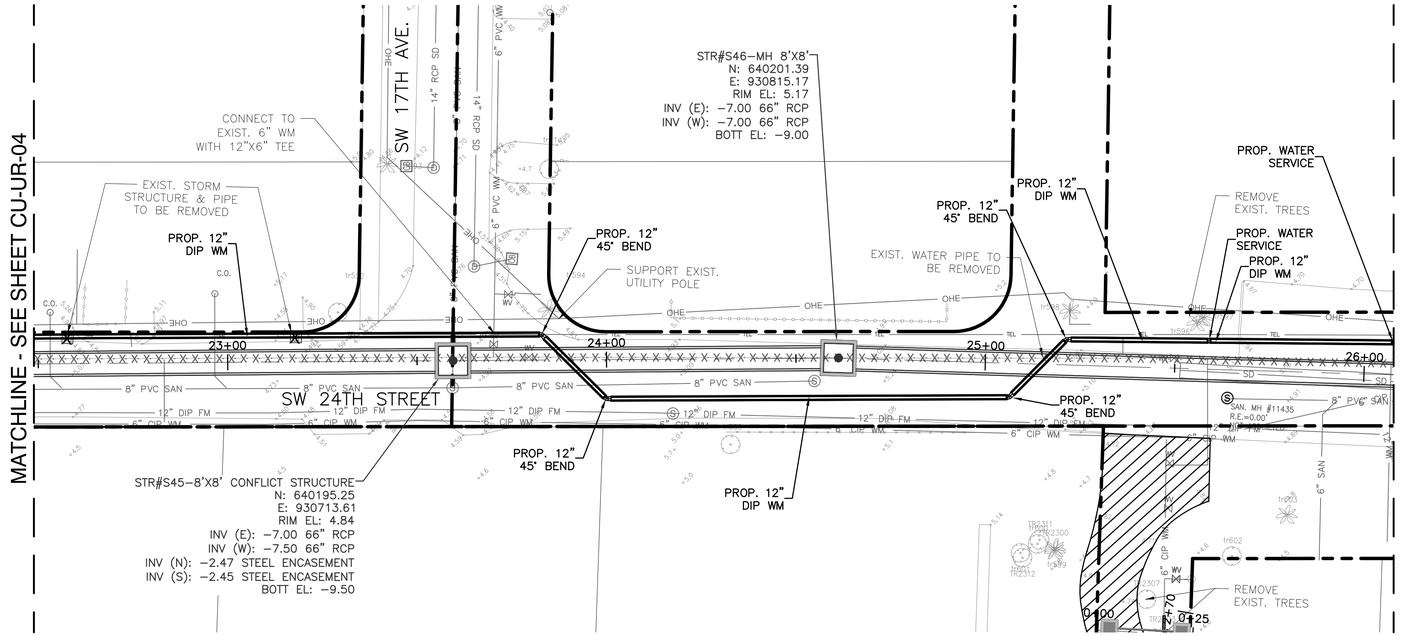
PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
UTILITY RELOCATION PLAN

SHEET NO.
CU-UR-04

TOTAL: 255

CAD FILE: 11868–CU–UR

DRAWING FILE NO. 4–142–42



PLAN

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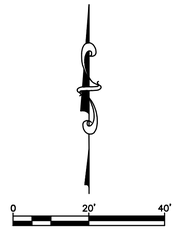

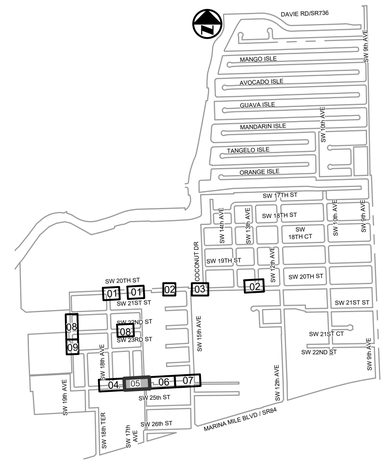

KEY MAP

N.T.S.

ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 1988)

NOTES:

1. EXISTING UTILITY DEPTHS ARE UNKNOWN UNLESS OTHERWISE INDICATED. LOCATIONS AND DEPTHS ARE ESTIMATED.
2. 4,196 LF OF NEW/RESTORED SWALE PROPOSED FOR ENTIRE PROJECT (SEE DETAIL ON SHEET CZ-DT-22).
3. TEMPORARY RELOCATION OF EXISTING SERVICES AND LATERALS MAY BE REQUIRED TO FACILITATE CONSTRUCTION OF THE PROJECT. SEPARATE PAYMENT WILL NOT BE MADE FOR THIS WORK.
4. CONTRACTOR TO REMOVE VALVES AND VALVE BOXES FROM ALL ABANDONED AND/OR GROUT-FILLED WATER MAINS.
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8/26/2021

CONSTRUCTION SET

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4000 HOLLYWOOD BLVD, SUITE 750N
HOLLYWOOD, FLORIDA 33021

Certificate of Authorization No: 2771

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REG. No.: 49428
DATE: 01/22/2021

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FAX: 954-987-2949

DRAWN BY: XXX
DATE: 01/07/2019
DESIGNED BY: XXX
SCALE: 1"=20'
CHECKED BY: XXX
FIELD BOOK: XXXX

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

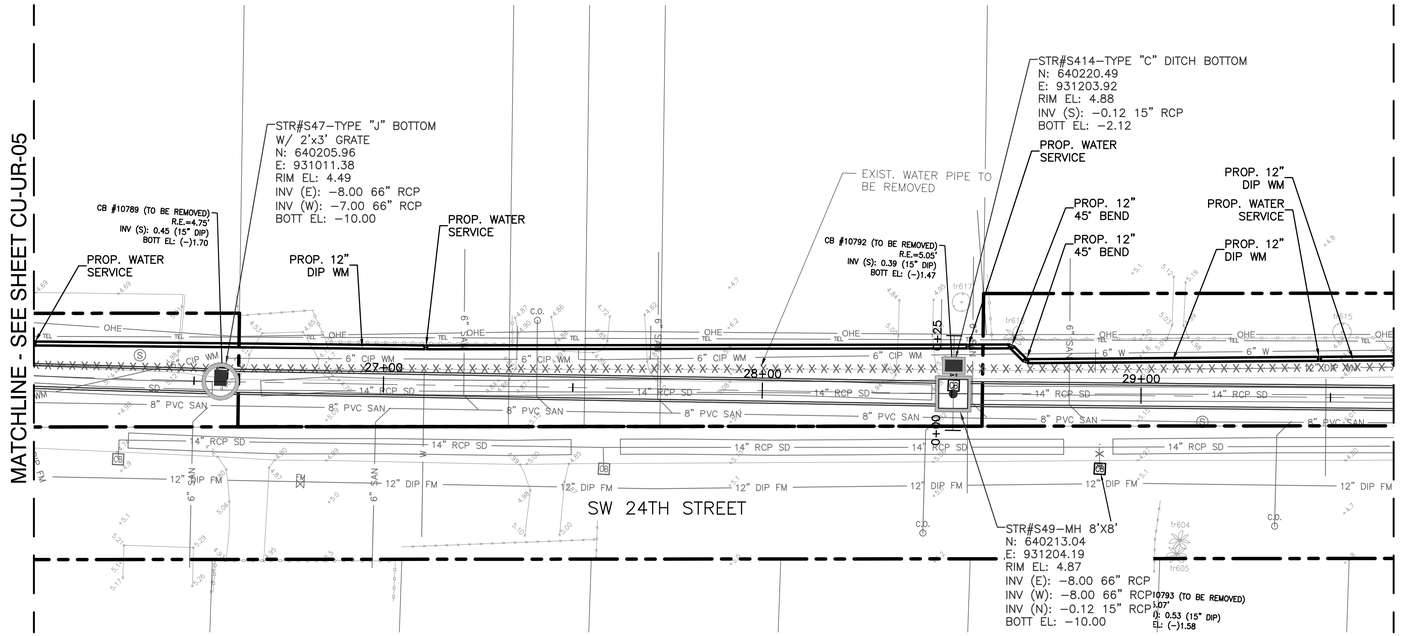
PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
UTILITY RELOCATION PLAN

SHEET NO.
CU-UR-05

TOTAL: 255

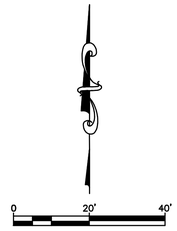
CAD FILE: 11868-CU-UR

DRAWING FILE NO. 4-142-42



PLAN

SCALE: 1"=20'



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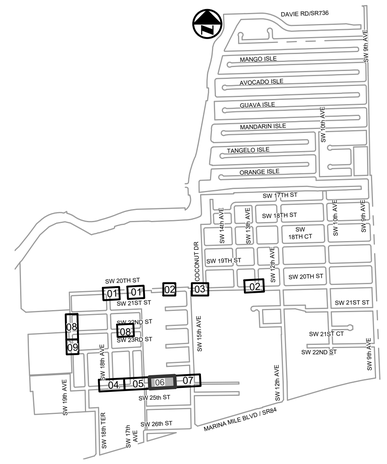

KEY MAP

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8/26/2021

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ENGINEER: PATRICK J. GIBNEY
REG. No.: 49428
DATE: 01/22/2021

TEL: 954-987-0066
FAX: 954-987-2949

DRAWN BY: XXX
DATE: 01/07/2019
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FIELD BOOK: XXXX

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
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100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
UTILITY RELOCATION PLAN

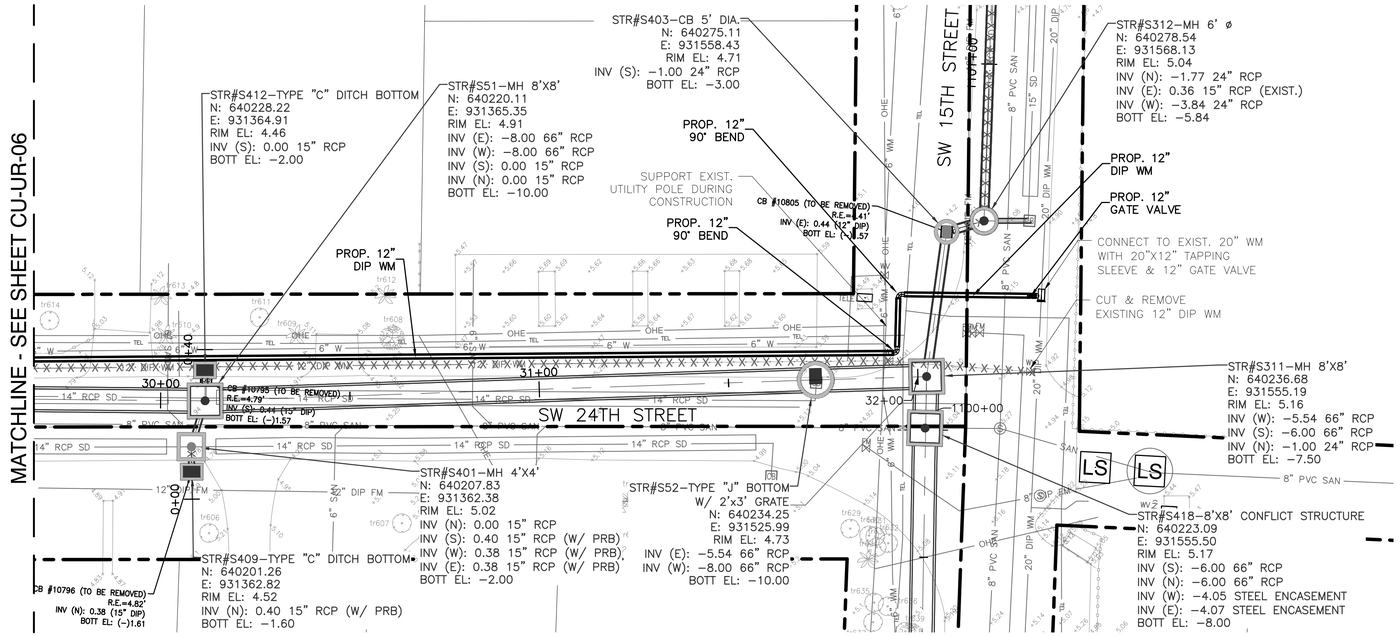
SHEET NO.

CU-UR-06

TOTAL: 255

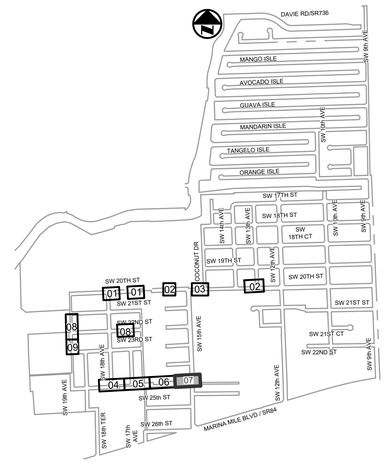
CAD FILE: 11868-CU-UR

DRAWING FILE NO. 4-142-42



PLAN

SCALE: 1"=20'



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REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
UTILITY RELOCATION PLAN

SHEET NO.
CU-UR-07

TOTAL: 255

CAD FILE: 11868-CU-UR

DRAWING FILE NO. 4-142-42

PLOT DATE: 8/26/2021 1:29 PM BY: ASCHEFFER
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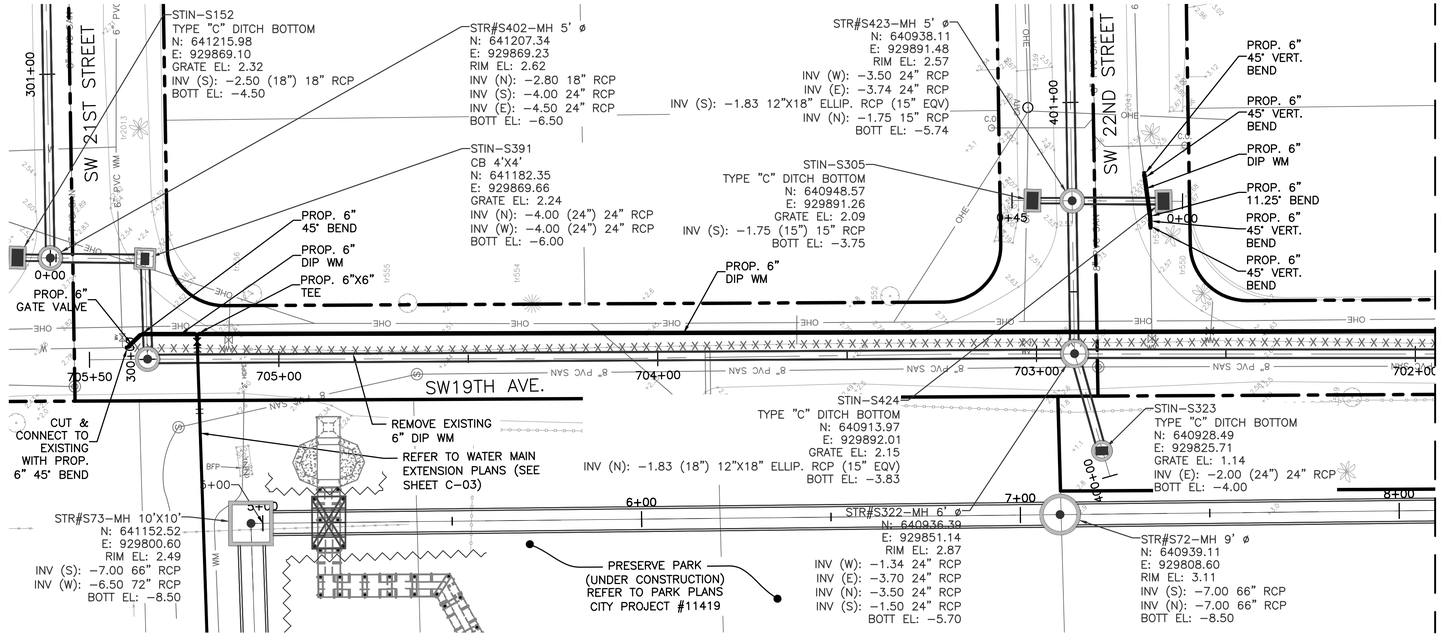

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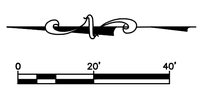
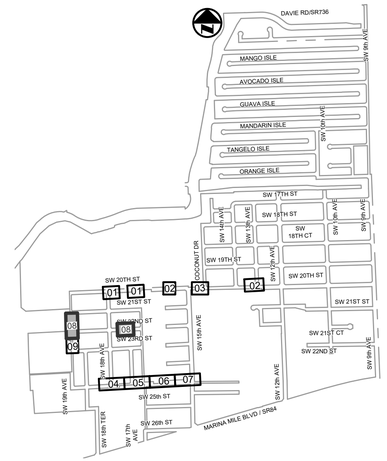
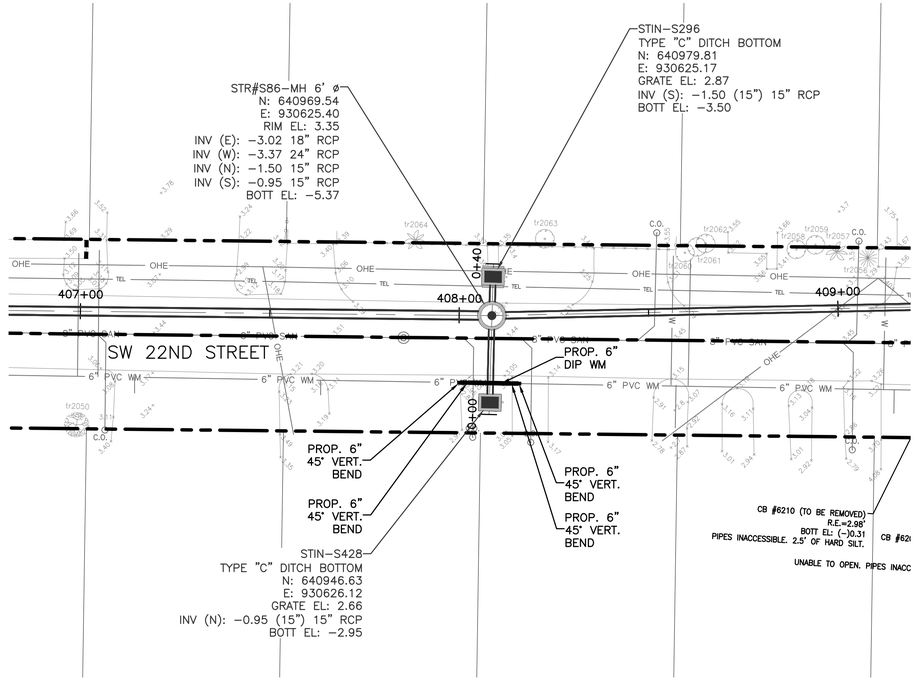




KEY MAP

N.T.S.



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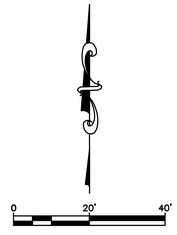

ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 1988)

NOTES:

1. EXISTING UTILITY DEPTHS ARE UNKNOWN UNLESS OTHERWISE INDICATED. LOCATIONS AND DEPTHS ARE ESTIMATED.
2. 4,196 LF OF NEW/RESTORED SWALE PROPOSED FOR ENTIRE PROJECT (SEE DETAIL ON SHEET CZ-DT-22).
3. TEMPORARY RELOCATION OF EXISTING SERVICES AND LATERALS MAY BE REQUIRED TO FACILITATE CONSTRUCTION OF THE PROJECT. SEPARATE PAYMENT WILL NOT BE MADE FOR THIS WORK.
4. CONTRACTOR TO REMOVE VALVES AND VALVE BOXES FROM ALL ABANDONED AND/OR GROUT-FILLED WATER MAINS.
5. CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION & MAINTAINING TEMPORARY RELOCATION/COORDINATION OF EXISTING UTILITIES (WATER & SEWER) AS REQUIRED TO FACILITATE PROPOSED INFRASTRUCTURE IMPROVEMENTS.
6. SANITARY SEWER LATERALS MAY BE REQUIRED TO PASS UNDER PROPOSED STORM DRAIN, WATER MAIN, ETC. IN ORDER TO PROVIDE SERVICE TO EXISTING PROPERTIES AND CONNECT TO EXISTING LATERALS. CONTRACTOR SHALL VERIFY EXISTING LATERAL LOCATIONS AND DEPTHS PRIOR TO CONSTRUCTION.
7. ONE FULL LENGTH OF WATER MAIN PIPE WILL BE CENTERED ABOVE OR BELOW THE PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM OTHER PIPELINE OR THE PIPES WILL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN STORM SEWERS, STORMWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-6110, F.A.C., AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.

Patrick J. Gibney, State of Florida, Professional Engineer, License No. 49428. This item has been electronically signed and sealed by Patrick J. Gibney on the date indicated here using an SHA authentication code. Printed copies of this document are not considered signed and sealed and the SHA authentication code must be verified on any electronic copies.

8/26/2021

CONSTRUCTION SET

Hazen

HAZEN AND SAWYER
4000 HOLLYWOOD BLVD, SUITE 750N
HOLLYWOOD, FLORIDA 33021

Certificate of Authorization No: 2771

CRAVEN • THOMPSON AND ASSOCIATES, INC.
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FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

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ENGINEER: PATRICK J. GIBNEY
REG. NO.: 49428
DATE: 01/22/2021

TEL: 954-987-0066
FAX: 954-987-2949

DRAWN BY: XXX
DATE: 01/07/2019
DESIGNED BY: XXX
SCALE: 1"=20'
CHECKED BY: XXX
FIELD BOOK: XXXX

CITY OF FORT LAUDERALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
UTILITY RELOCATION PLAN

SHEET NO.

CU-UR-08

TOTAL: 255

CAD FILE: 11868-CU-UR

DRAWING FILE NO. 4-142-42

CAM #22-0947
Exhibit 1D
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XREFs= .\11868SURV,.\11868topo,R:\Engineering\2016\16-0042-001-01 Fort Lauderdale Stormwater Master Plan\Drawings\11868\11868XREFNOTES,R:\Engineering\2016\16-0042-001-01 Fort Lauderdale Stormwater Master Plan\Drawings\11868\11868XREFUTIL,.\11868TOPO1,.\11868topo2,R:\16-0042-001-01 FORT LAUDERDALE STORMWATER MASTER PLAN\DRAWINGS\11868\11868SURV-EXHIBIT,.\11868SURV-PROF-ROW,.\11868SURV-PROF-SHA,.\11868SURV-PROF-SHA-ROW,.\11868SURV-PROF-SHA-ROW-2,.\11868SURV-PROF-SHA-ROW-3,.\11868SURV-PROF-SHA-ROW-4,.\11868SURV-PROF-SHA-ROW-5,.\11868SURV-PROF-SHA-ROW-6,.\11868SURV-PROF-SHA-ROW-7,.\11868SURV-PROF-SHA-ROW-8,.\11868SURV-PROF-SHA-ROW-9,.\11868SURV-PROF-SHA-ROW-10,.\11868SURV-PROF-SHA-ROW-11,.\11868SURV-PROF-SHA-ROW-12,.\11868SURV-PROF-SHA-ROW-13,.\11868SURV-PROF-SHA-ROW-14,.\11868SURV-PROF-SHA-ROW-15,.\11868SURV-PROF-SHA-ROW-16,.\11868SURV-PROF-SHA-ROW-17,.\11868SURV-PROF-SHA-ROW-18,.\11868SURV-PROF-SHA-ROW-19,.\11868SURV-PROF-SHA-ROW-20,.\11868SURV-PROF-SHA-ROW-21,.\11868SURV-PROF-SHA-ROW-22,.\11868SURV-PROF-SHA-ROW-23,.\11868SURV-PROF-SHA-ROW-24,.\11868SURV-PROF-SHA-ROW-25,.\11868SURV-PROF-SHA-ROW-26,.\11868SURV-PROF-SHA-ROW-27,.\11868SURV-PROF-SHA-ROW-28,.\11868SURV-PROF-SHA-ROW-29,.\11868SURV-PROF-SHA-ROW-30,.\11868SURV-PROF-SHA-ROW-31,.\11868SURV-PROF-SHA-ROW-32,.\11868SURV-PROF-SHA-ROW-33,.\11868SURV-PROF-SHA-ROW-34,.\11868SURV-PROF-SHA-ROW-35,.\11868SURV-PROF-SHA-ROW-36,.\11868SURV-PROF-SHA-ROW-37,.\11868SURV-PROF-SHA-ROW-38,.\11868SURV-PROF-SHA-ROW-39,.\11868SURV-PROF-SHA-ROW-40,.\11868SURV-PROF-SHA-ROW-41,.\11868SURV-PROF-SHA-ROW-42,.\11868SURV-PROF-SHA-ROW-43,.\11868SURV-PROF-SHA-ROW-44,.\11868SURV-PROF-SHA-ROW-45,.\11868SURV-PROF-SHA-ROW-46,.\11868SURV-PROF-SHA-ROW-47,.\11868SURV-PROF-SHA-ROW-48,.\11868SURV-PROF-SHA-ROW-49,.\11868SURV-PROF-SHA-ROW-50,.\11868SURV-PROF-SHA-ROW-51,.\11868SURV-PROF-SHA-ROW-52,.\11868SURV-PROF-SHA-ROW-53,.\11868SURV-PROF-SHA-ROW-54,.\11868SURV-PROF-SHA-ROW-55,.\11868SURV-PROF-SHA-ROW-56,.\11868SURV-PROF-SHA-ROW-57,.\11868SURV-PROF-SHA-ROW-58,.\11868SURV-PROF-SHA-ROW-59,.\11868SURV-PROF-SHA-ROW-60,.\11868SURV-PROF-SHA-ROW-61,.\11868SURV-PROF-SHA-ROW-62,.\11868SURV-PROF-SHA-ROW-63,.\11868SURV-PROF-SHA-ROW-64,.\11868SURV-PROF-SHA-ROW-65,.\11868SURV-PROF-SHA-ROW-66,.\11868SURV-PROF-SHA-ROW-67,.\11868SURV-PROF-SHA-ROW-68,.\11868SURV-PROF-SHA-ROW-69,.\11868SURV-PROF-SHA-ROW-70,.\11868SURV-PROF-SHA-ROW-71,.\11868SURV-PROF-SHA-ROW-72,.\11868SURV-PROF-SHA-ROW-73,.\11868SURV-PROF-SHA-ROW-74,.\11868SURV-PROF-SHA-ROW-75,.\11868SURV-PROF-SHA-ROW-76,.\11868SURV-PROF-SHA-ROW-77,.\11868SURV-PROF-SHA-ROW-78,.\11868SURV-PROF-SHA-ROW-79,.\11868SURV-PROF-SHA-ROW-80,.\11868SURV-PROF-SHA-ROW-81,.\11868SURV-PROF-SHA-ROW-82,.\11868SURV-PROF-SHA-ROW-83,.\11868SURV-PROF-SHA-ROW-84,.\11868SURV-PROF-SHA-ROW-85,.\11868SURV-PROF-SHA-ROW-86,.\11868SURV-PROF-SHA-ROW-87,.\11868SURV-PROF-SHA-ROW-88,.\11868SURV-PROF-SHA-ROW-89,.\11868SURV-PROF-SHA-ROW-90,.\11868SURV-PROF-SHA-ROW-91,.\11868SURV-PROF-SHA-ROW-92,.\11868SURV-PROF-SHA-ROW-93,.\11868SURV-PROF-SHA-ROW-94,.\11868SURV-PROF-SHA-ROW-95,.\11868SURV-PROF-SHA-ROW-96,.\11868SURV-PROF-SHA-ROW-97,.\11868SURV-PROF-SHA-ROW-98,.\11868SURV-PROF-SHA-ROW-99,.\11868SURV-PROF-SHA-ROW-100,.\11868SURV-PROF-SHA-ROW-101,.\11868SURV-PROF-SHA-ROW-102,.\11868SURV-PROF-SHA-ROW-103,.\11868SURV-PROF-SHA-ROW-104,.\11868SURV-PROF-SHA-ROW-105,.\11868SURV-PROF-SHA-ROW-106,.\11868SURV-PROF-SHA-ROW-107,.\11868SURV-PROF-SHA-ROW-108,.\11868SURV-PROF-SHA-ROW-109,.\11868SURV-PROF-SHA-ROW-110,.\11868SURV-PROF-SHA-ROW-111,.\11868SURV-PROF-SHA-ROW-112,.\11868SURV-PROF-SHA-ROW-113,.\11868SURV-PROF-SHA-ROW-114,.\11868SURV-PROF-SHA-ROW-115,.\11868SURV-PROF-SHA-ROW-116,.\11868SURV-PROF-SHA-ROW-117,.\11868SURV-PROF-SHA-ROW-118,.\11868SURV-PROF-SHA-ROW-119,.\11868SURV-PROF-SHA-ROW-120,.\11868SURV-PROF-SHA-ROW-121,.\11868SURV-PROF-SHA-ROW-122,.\11868SURV-PROF-SHA-ROW-123,.\11868SURV-PROF-SHA-ROW-124,.\11868SURV-PROF-SHA-ROW-125,.\11868SURV-PROF-SHA-ROW-126,.\11868SURV-PROF-SHA-ROW-127,.\11868SURV-PROF-SHA-ROW-128,.\11868SURV-PROF-SHA-ROW-129,.\11868SURV-PROF-SHA-ROW-130,.\11868SURV-PROF-SHA-ROW-131,.\11868SURV-PROF-SHA-ROW-132,.\11868SURV-PROF-SHA-ROW-133,.\11868SURV-PROF-SHA-ROW-134,.\11868SURV-PROF-SHA-ROW-135,.\11868SURV-PROF-SHA-ROW-136,.\11868SURV-PROF-SHA-ROW-137,.\11868SURV-PROF-SHA-ROW-138,.\11868SURV-PROF-SHA-ROW-139,.\11868SURV-PROF-SHA-ROW-140,.\11868SURV-PROF-SHA-ROW-141,.\11868SURV-PROF-SHA-ROW-142,.\11868SURV-PROF-SHA-ROW-143,.\11868SURV-PROF-SHA-ROW-144,.\11868SURV-PROF-SHA-ROW-145,.\11868SURV-PROF-SHA-ROW-146,.\11868SURV-PROF-SHA-ROW-147,.\11868SURV-PROF-SHA-ROW-148,.\11868SURV-PROF-SHA-ROW-149,.\11868SURV-PROF-SHA-ROW-150,.\11868SURV-PROF-SHA-ROW-151,.\11868SURV-PROF-SHA-ROW-152,.\11868SURV-PROF-SHA-ROW-153,.\11868SURV-PROF-SHA-ROW-154,.\11868SURV-PROF-SHA-ROW-155,.\11868SURV-PROF-SHA-ROW-156,.\11868SURV-PROF-SHA-ROW-157,.\11868SURV-PROF-SHA-ROW-158,.\11868SURV-PROF-SHA-ROW-159,.\11868SURV-PROF-SHA-ROW-160,.\11868SURV-PROF-SHA-ROW-161,.\11868SURV-PROF-SHA-ROW-162,.\11868SURV-PROF-SHA-ROW-163,.\11868SURV-PROF-SHA-ROW-164,.\11868SURV-PROF-SHA-ROW-165,.\11868SURV-PROF-SHA-ROW-166,.\11868SURV-PROF-SHA-ROW-167,.\11868SURV-PROF-SHA-ROW-168,.\11868SURV-PROF-SHA-ROW-169,.\11868SURV-PROF-SHA-ROW-170,.\11868SURV-PROF-SHA-ROW-171,.\11868SURV-PROF-SHA-ROW-172,.\11868SURV-PROF-SHA-ROW-173,.\11868SURV-P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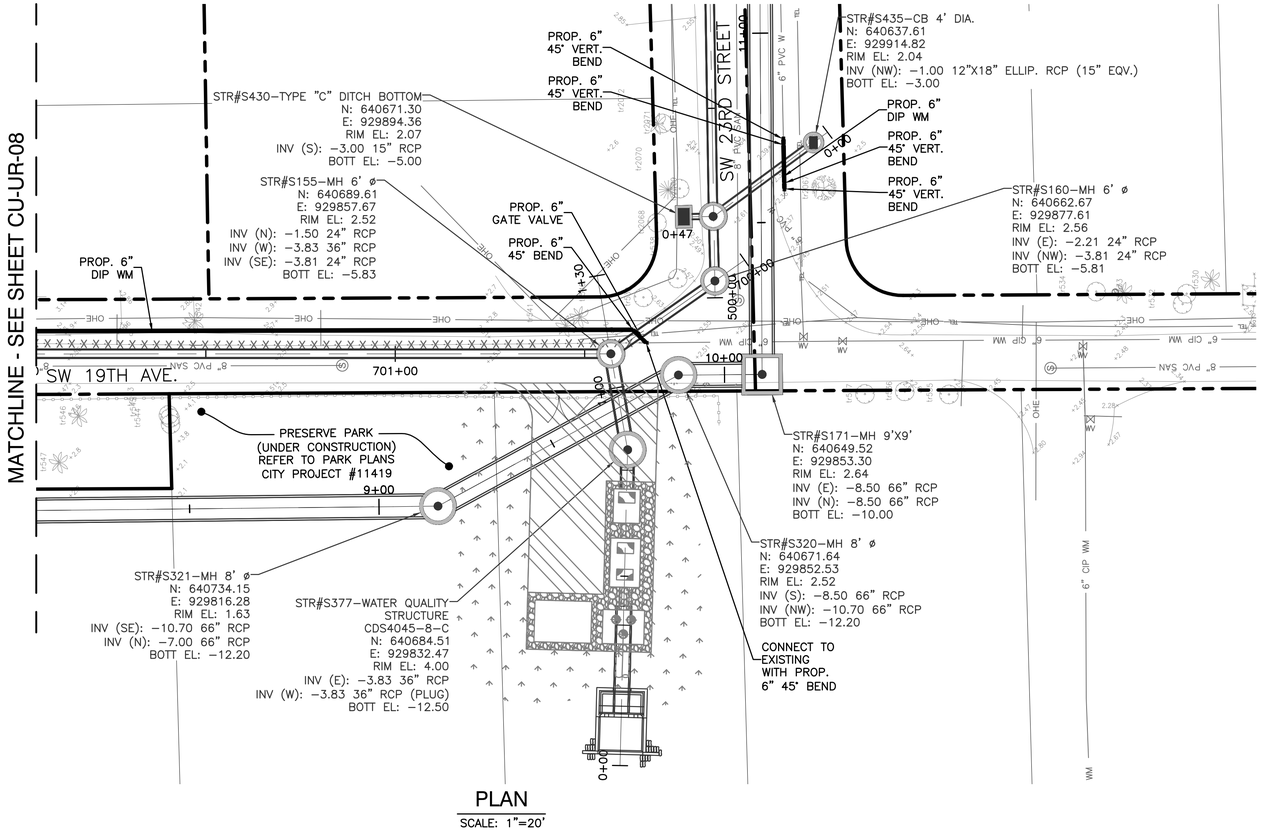

PLAN

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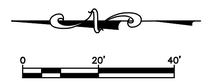

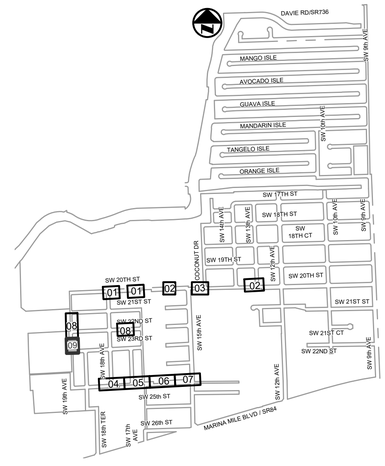

KEY MAP

N.T.S.

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NOTES:

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4. CONTRACTOR TO REMOVE VALVES AND VALVE BOXES FROM ALL ABANDONED AND/OR GROUT-FILLED WATER MAINS.
5. CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION & MAINTAINING TEMPORARY RELOCATION/COORDINATION OF EXISTING UTILITIES (WATER & SEWER) AS REQUIRED TO FACILITATE PROPOSED INFRASTRUCTURE IMPROVEMENTS.
6. SANITARY SEWER LATERALS MAY BE REQUIRED TO PASS UNDER PROPOSED STORM DRAIN, WATER MAIN, ETC. IN ORDER TO PROVIDE SERVICE TO EXISTING PROPERTIES AND CONNECT TO EXISTING LATERALS. CONTRACTOR SHALL VERIFY EXISTING LATERAL LOCATIONS AND DEPTHS PRIOR TO CONSTRUCTION.
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Patrick J. Gibney, State of Florida, Professional Engineer, License No. 49428. This item has been electronically signed and sealed by Patrick J. Gibney on the date indicated here using an SHA authentication code. Printed copies of this document are not considered signed and sealed and the SHA authentication code must be verified on any electronic copies.

8/26/2021

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HAZEN AND SAWYER
4000 HOLLYWOOD BLVD, SUITE 750N
HOLLYWOOD, FLORIDA 33021

Certificate of Authorization No: 2771

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ENGINEERS • PLANNERS • SURVEYORS
3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309
FAX: (954) 739-6409 TEL: (954) 739-6400
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ENGINEER: PATRICK J. GIBNEY
REG. No.: 49428
DATE: 01/22/2021

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FAX: 954-987-2949

DRAWN BY: XXX
DATE: 01/07/2019
DESIGNED BY: XXX
SCALE: 1"=20'
CHECKED BY: XXX
FIELD BOOK: XXXX

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

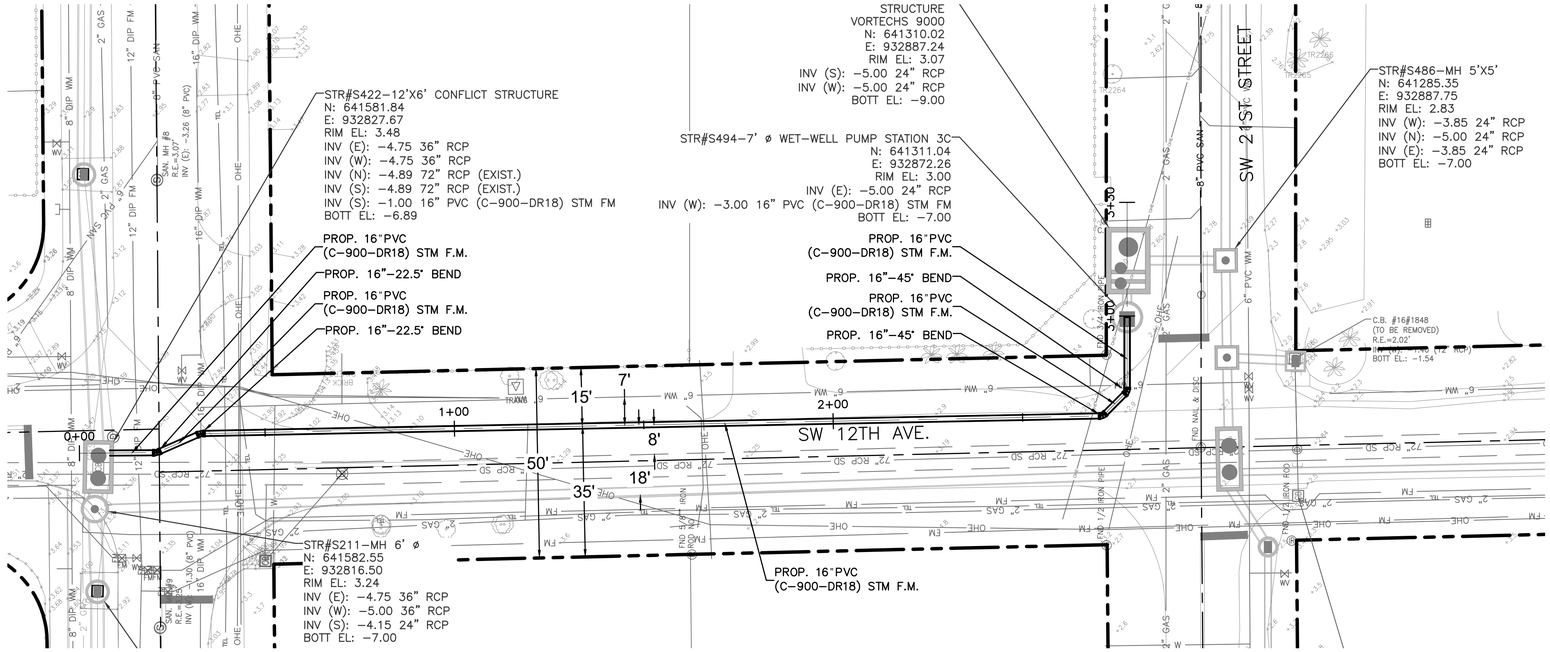
PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
UTILITY RELOCATION PLAN

SHEET NO.
CU-UR-09

TOTAL: 255

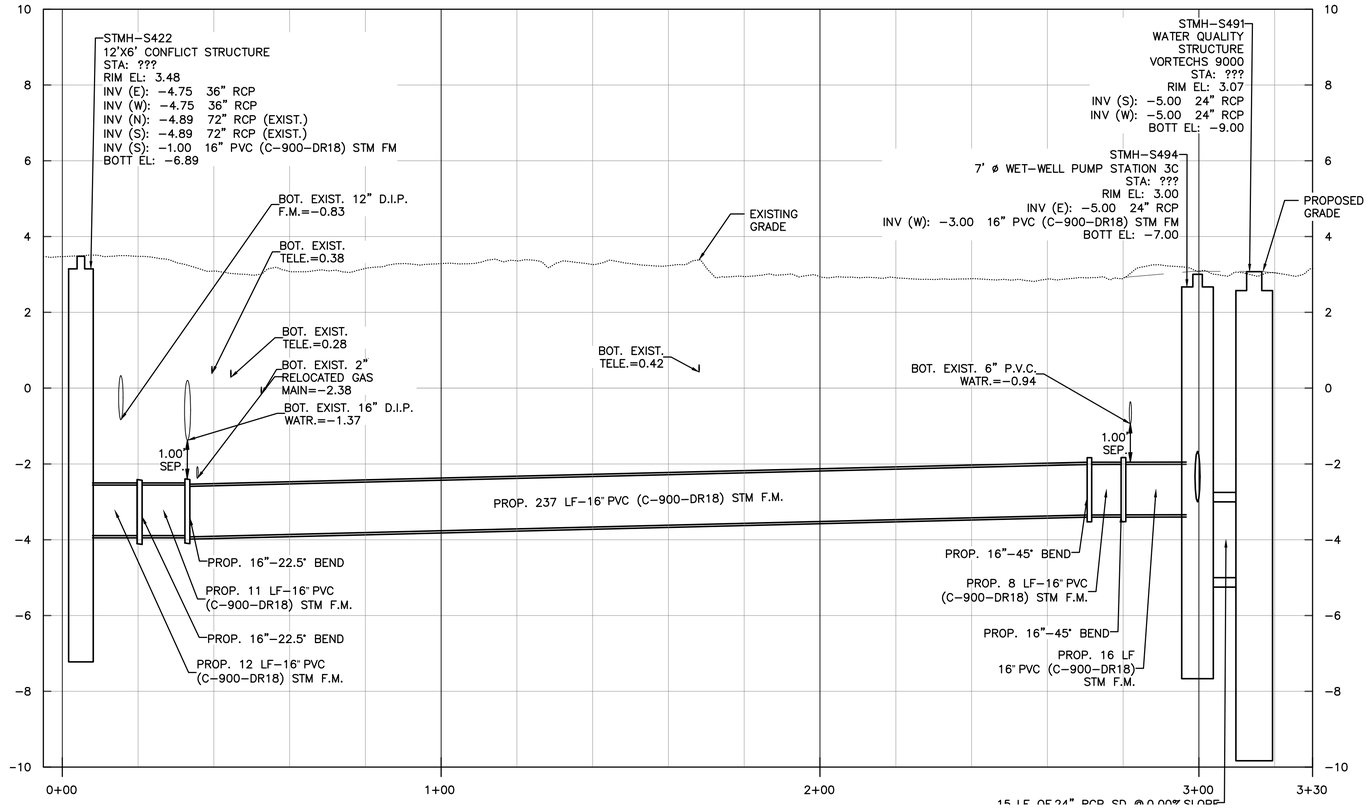
CAD FILE: 11868-CU-UR

DRAWING FILE NO. 4-142-42



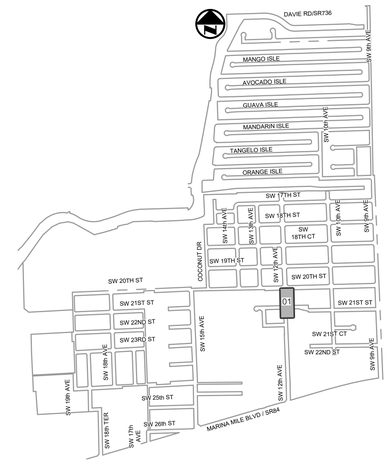
PLAN

SCALE: 1"=20'



PROFILE

SCALE: 1"=20' HORIZONTAL
1"=2' VERTICAL



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Hazen

HAZEN AND SAWYER
4000 HOLLYWOOD BLVD, SUITE 750N
HOLLYWOOD, FLORIDA 33021

Certificate of Authorization No: 2771

CRAVEN • THOMPSON AND ASSOCIATES, INC.
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3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309
FAX: (954) 739-6409 TEL: (954) 739-6400
FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

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ENGINEER: PATRICK J. GIBNEY
P.E. No. 49428
DATE: 01/22/2021

TEL: 954-987-0066
FAX: 954-987-2949

DRAWN BY: XXX
DATE: 01/07/2019
DESIGNED BY: XXX
SCALE: 1"=20'
CHECKED BY: XXX
FIELD BOOK: XXXX

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

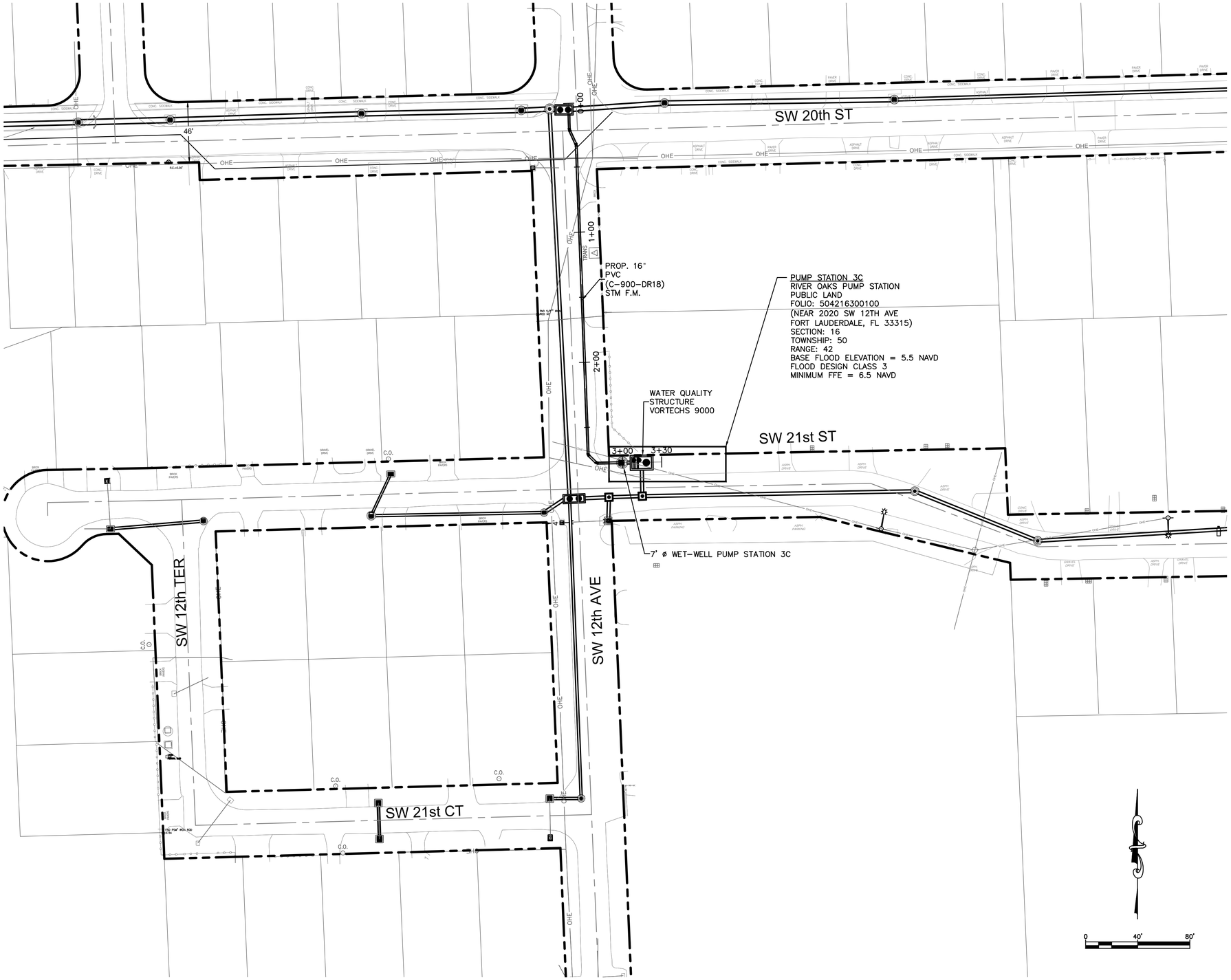
PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
STORMWATER FORCE MAIN PLAN & PROFILE

SHEET NO.
CU-SU-01

TOTAL: 255

CAD FILE: 11868-CU-SU

DRAWING FILE NO. 4-142-42



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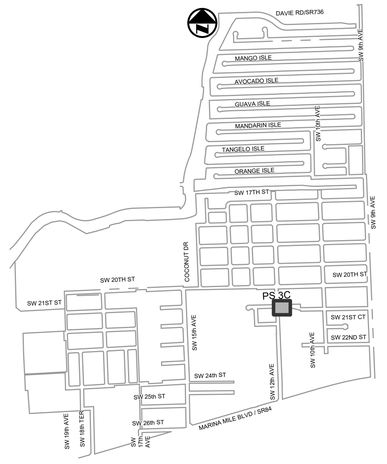

KEY MAP
N.T.S.

ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 1988)

NOTES:

1. EXISTING UTILITY DEPTHS ARE UNKNOWN UNLESS OTHERWISE INDICATED. LOCATIONS AND DEPTHS ARE ESTIMATED.
2. 4,196 LF OF NEW/RESTORED SWALE PROPOSED FOR ENTIRE PROJECT (SEE DETAIL ON SHEET CZ-DT-22).

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8/26/2021

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ENGINEER:
PATRICK J. GIBNEY
REG. No. 49428
DATE: 01/22/2021

TEL: 954-987-0066
FAX: 954-987-2949

DRAWN BY: XXX
DATE: 01/07/2019
DESIGNED BY: XXX
SCALE: SEE PLAN
CHECKED BY: XXX
FIELD BOOK: XXXX

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PUMP STATION KEY MAP

SHEET NO.
CU-3C-01

TOTAL: 255

CAD FILE:
11868-3C-01

DRAWING FILE NO.
4-142-42

PLOT DATE: 8/26/2021 1:38 PM BY: ASCHEFFER
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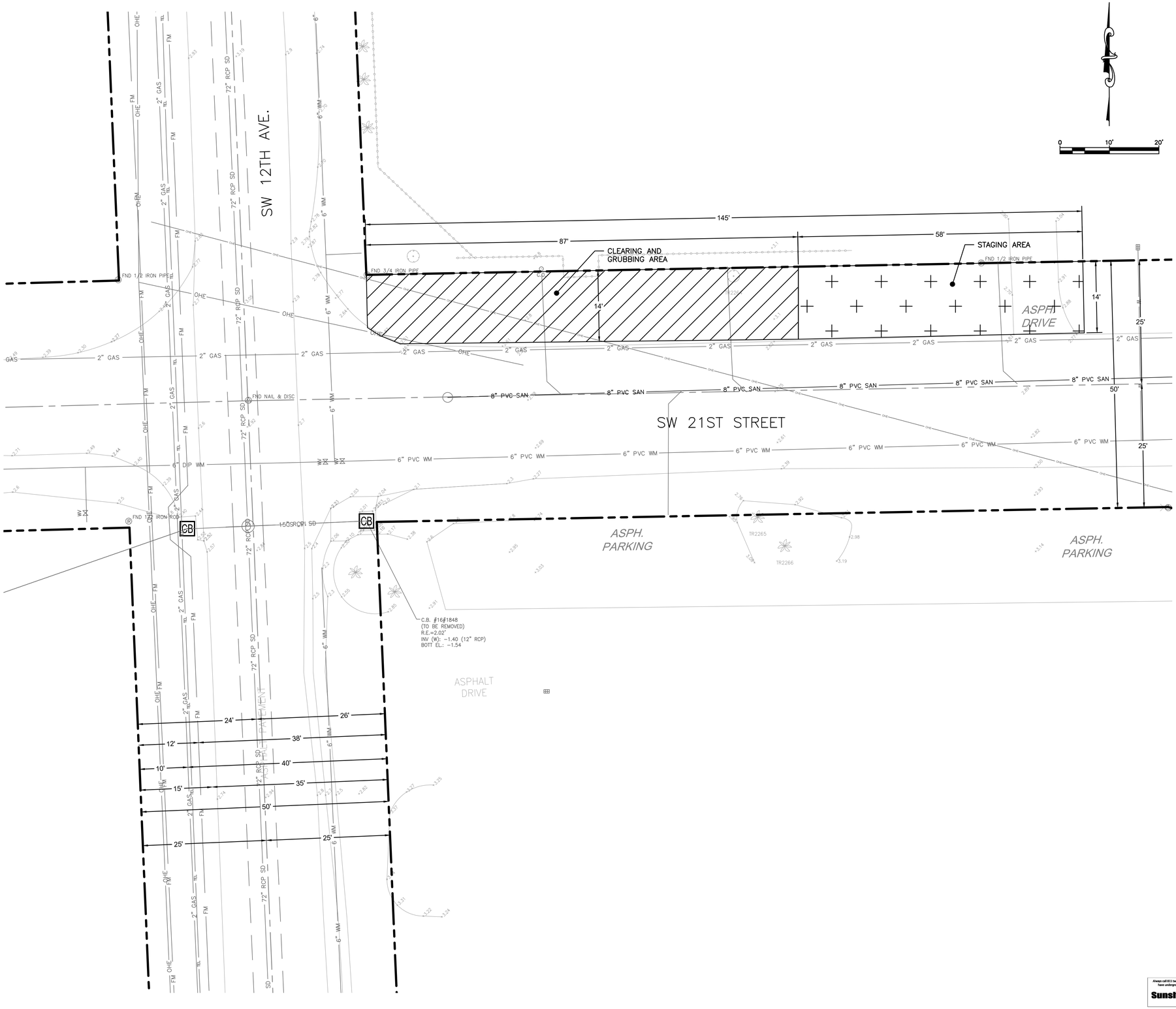

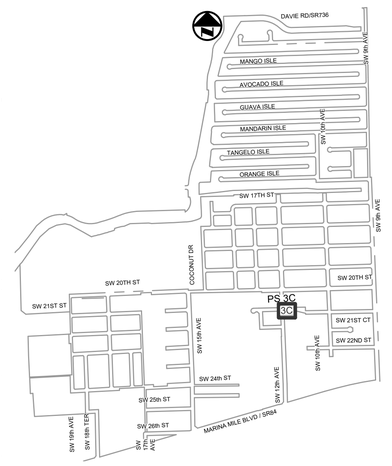

KEY MAP

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8/26/2021

CONSTRUCTION SET

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4000 HOLLYWOOD BLVD, SUITE 750N
HOLLYWOOD, FLORIDA 33021

Certificate of Authorization No: 2771

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ENGINEER: PATRICK J. GIBNEY
REG. No.: 49428
DATE: 01/22/2021

TEL: 954-987-0066
FAX: 954-987-2949

DRAWN BY:	DESIGNED BY:	DETAILED BY:	CHECKED BY:
XXX	XXX		XXX

DATE: 01/07/2019
SCALE: SEE PLAN
FIELD BOOK: XXXX

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

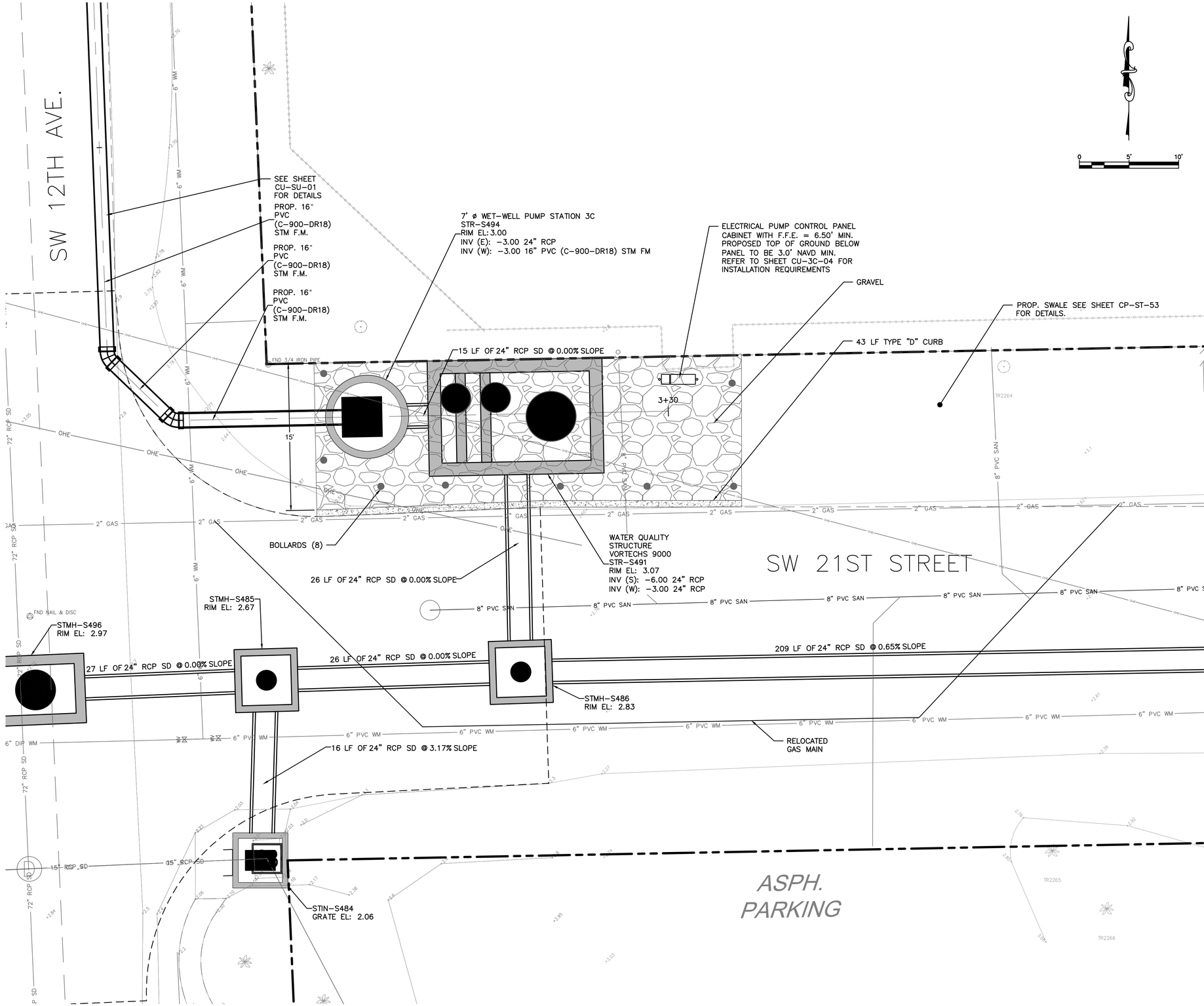
PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PUMP STATION EXISTING SITE
AND DEMOLITION PLAN

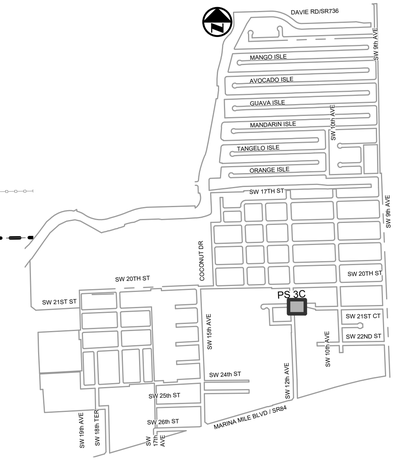
SHEET NO.
CU-3C-02

TOTAL: 255

CAD FILE: 11868-3C-02

DRAWING FILE NO. 4-142-42





KEY MAP

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Hazen

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4000 HOLLYWOOD BLVD, SUITE 750N
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ENGINEER: PATRICK J. GIBNEY
REG. No.: 49428
DATE: 01/22/2021

TEL: 954-987-0066
FAX: 954-987-2949

DRAWN BY:	DESIGNED BY:	CHECKED BY:	FIELD BOOK:
XXX	XXX	XXX	XXXX

DATE: 01/07/2019
SCALE: SEE PLAN

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PUMP STATION PROPOSED SITE PLAN

SHEET NO.
CU-3C-03

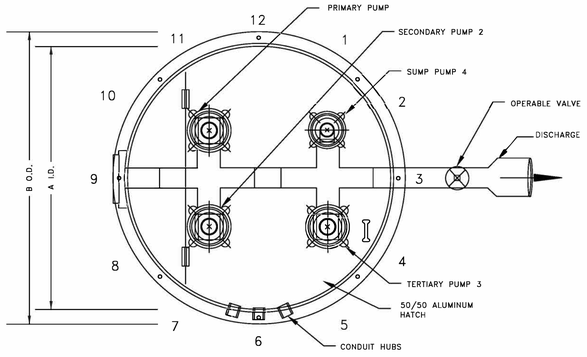
TOTAL: 255

CAD FILE: 11868-3C-03

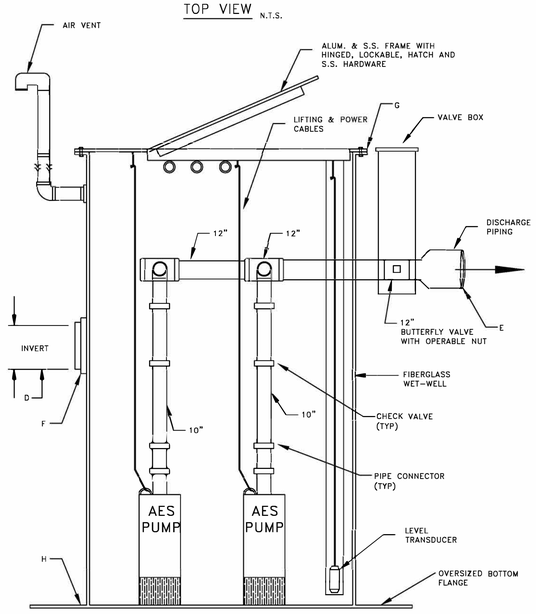
DRAWING FILE NO. 4-142-42

HUB AND INVERT LOCATION

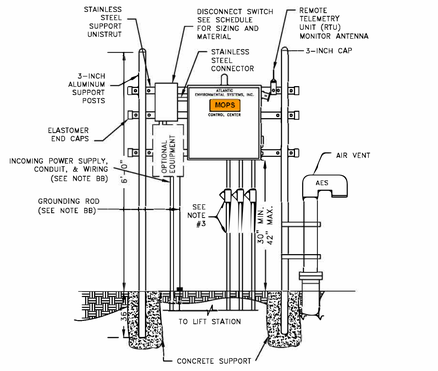
ITEMS	CLOCK POSITION
DISCHARGE LINES	3:00
PRIMARY INVERT	X:00
SECONDARY INVERT	X:00
LOCATION OF CONTROL PANEL	X:00



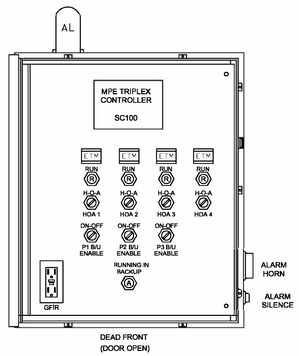
TOP VIEW N.T.S.



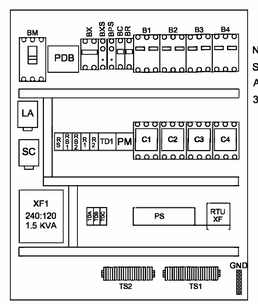
SECTION VIEW N.T.S.



CONTROL CENTER ASSEMBLY AND INSTALLATION N.T.S.



DEAD FRONT (DOOR OPEN)



BACK PANEL

ENCLOSURE

NEMA 4X Stainless Steel
Single Door w/ Padlock Hasp
Aluminum Inner Door(Dead Front)
36"H X 30"W X 10"D

AES

ATLANTIC ENVIRONMENTAL SYSTEMS, INC.
LAKE WORTH, FL 33461
PH: (561) 547-8080 FAX: (561) 547-3999 © 2000

STORMWATER SERIES

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AES PUMP STATION SCHEDULE

SERIES		ITEM DESCRIPTION		
INITIAL DESIGN FLOW (G.P.M.)	SEE BELOW	A	INSIDE DIAMETER OF WET-WELL	84"
INITIAL DESIGN HEAD (T.D.H.)	SEE BELOW	B	OUTSIDE DIAMETER OF WET-WELL'S ANTI-FLOATATION FLANGE	108"
RATED PERFORMANCE SPEED	1750			
RATED MOTOR HORSEPOWER	SUMP/15/20	C	DEPTH OF WET-WELL	10'
SUBMERSIBLE PUMP TYPE (P-1)	STORMWATER	D	INVERT PIPE DIAMETER	24"
PUMP MODEL NUMBER	MOPS	E	FORCE MAIN DIAMETER	16"
SERVICE ENTRANCE VOLTAGE	230	F	INVERT ELEVATION	-3.00'
SERVICE ENTRANCE PHASE	3	G	RIM ELEVATION	3.00'
CONTROL CENTER FULL LOAD AMPS	169	H	BOTTOM ELEVATION	-7.00'

EQUIPMENT IDENTIFICATION	QTY.	MODEL DESIGNATION
PUMP STATION	1	SW410-84120-C-15/20/20
ODOR/GAS SCRUBBER (OGS)	0	N/A
CONTROL CENTER	1	PSC-432-15/20/20
CONTROL CENTER MOUNTING ASSEMBLY	1	CCMA-32AL
DISCONNECT SWITCH	1	FDS-200-3-2-PS
REMOTE STATION MONITOR	0	OPTIONAL
1st YEAR SERVICE/MAINTENANCE CONTRACT	0	OPTIONAL

PUMP STATION OPERATION:

THE PUMP STATION IS DESIGNED TO HANDLE THE EXPECTED RAIN EVENTS AT THE SITE. THE SUMP PUMP WILL PUMP ALL SMALL RAIN WATER FLOWS FROM THE AREA AND KEEP THE WET-WELL WATER LEVEL LOW OR EMPTY TO ELIMINATE POTENTIAL ODORS FROM STAGNANT WATER.

THE PUMPS WILL TURN ON IN SERIES DEPENDING ON THE RAIN EVENT. WHEN PUMP # 1 CANNOT HANDLE THE INCOMING FLOW, THEN PUMP # 2 WILL START PUMPING. SHOULD PUMP # 1 AND PUMP # 2 NOT KEEP UP WITH THE INCOMING WATER, PUMP # 3 WILL START PUMPING. ALL PUMPS WILL REMAIN ON UNTIL THE WATER-LEVEL RECEDES TO A LEVEL WHERE PUMP # 1 IS THE ONLY PUMP REQUIRED TO EVACUATE THE RAIN WATER FROM THE WET-WELL.

THE STORM EVENTS WERE PROVIDED BY THE PRIME ENGINEER. AES DID NOT PERFORM ANY STORMWATER CALCULATIONS. THE STATION WAS DESIGNED AND SIZED PER THE PRIME ENGINEER'S STORMWATER CALCULATIONS.

PUMP STATION PERFORMANCE	PUMP RATE IN GALLONS PER MINUTE
A) PUMP # 1	1,660 GPM @ 13' TDH
B) PUMP # 1 AND PUMP # 2	3,550 GPM @ 18' TDH
C) PUMP #1, PUMP # 2, AND PUMP # 3	5,100 GPM @ 23' TDH

ENGINEER: Bonnie McLeod, P.E.
REG. No: 70797
DATE: 07/02/2021
TEL: 561-547-8080
FAX: 561-547-3999

DRAWN BY: XXX
DATE: 01/07/2019
DESIGNED BY: XXX
SCALE: N.T.S.
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FIELD BOOK: XXXX

CITY OF FORT LAUDERDALE
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100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

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PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PUMP STATION PROPOSED PLAN

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Hazen
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FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. 0000114

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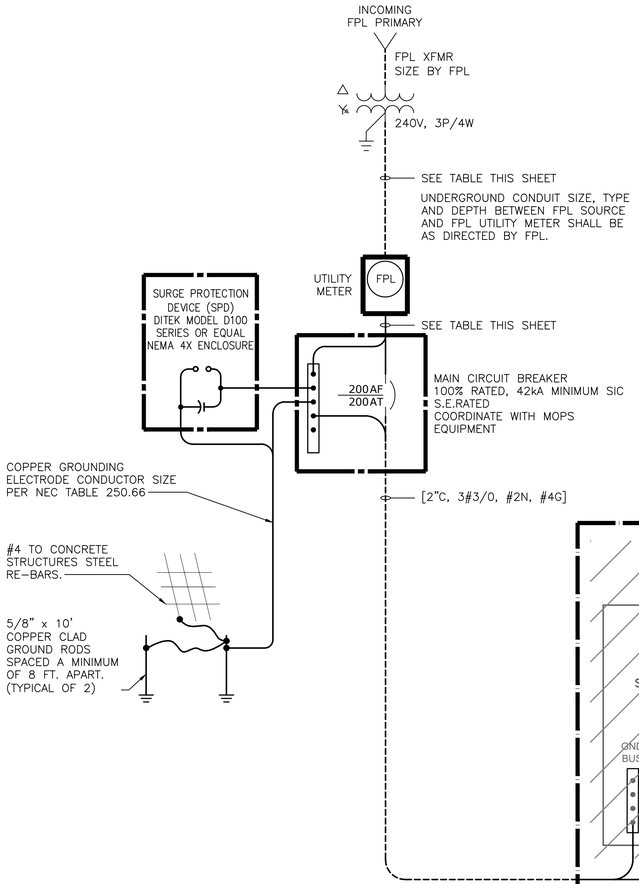
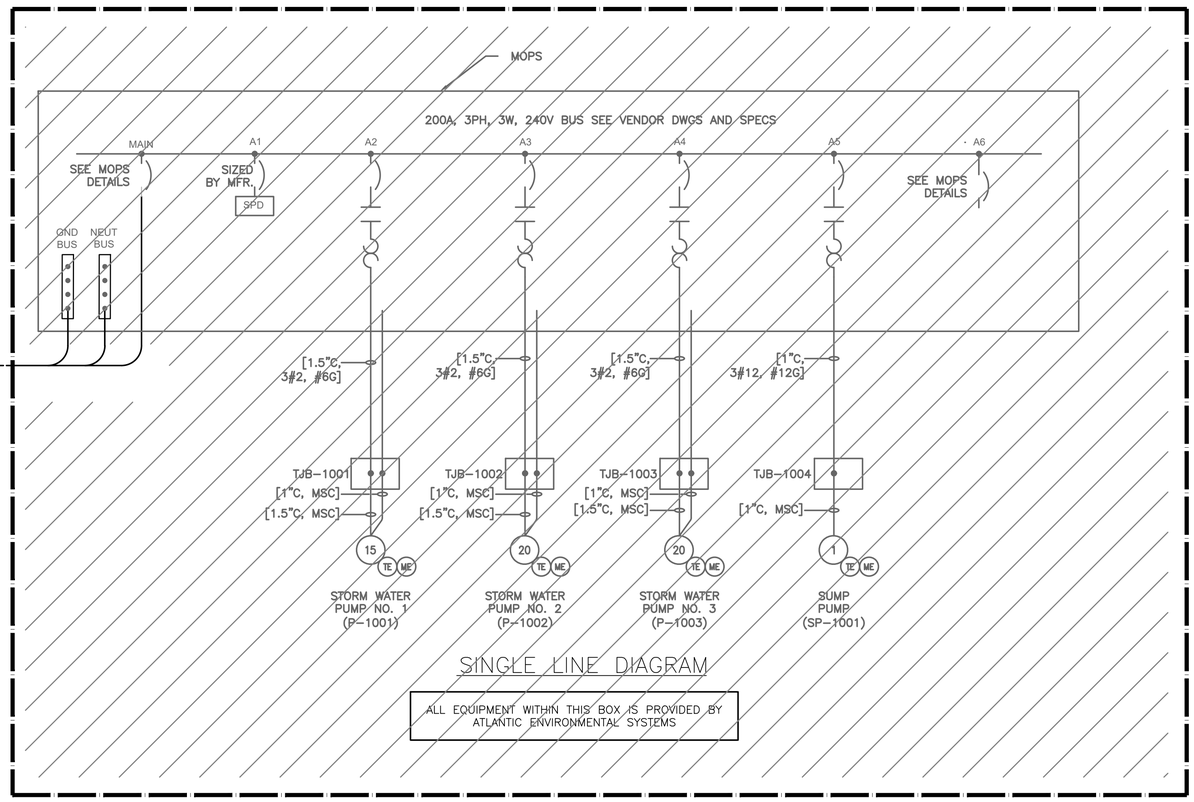
CONSTRUCTION SET

SHEET NO. CU-3C-04
TOTAL: 255
CAD FILE: – RIVER OAKS SW 7-2-2021
DRAWING FILE NO. 4-142-42



RIVER OAKS SWPS ELECTRICAL SERVICE WIRING		
DISTANCE BETWEEN PS AND SERVICE SOURCE POINT	MINIMUM SERVICE CONDUIT	MINIMUM SERVICE WIRE SIZE
<= 200 FT	2" PVC COATED RGS	(3) 3/0, (1)#4
> 200 FT <=300	2.5" PVC COATED RGS	(3) 4/0, (1)#4
> 300 FT <=450	3" PVC COATED RGS	(3) 300 kcmil, (1)#3
DIRECT BURIED SERVICE WIRING CONDUITS SHALL BE A MINIMUM OF 36 INCHES BELOW GRADE AND SHALL HAVE A 3 INCH WIDE RED POLYETHYLENE "CAUTION BURIED ELECTRIC LINE BELOW" WARNING TAPE INSTALLED 18 INCHES BELOW THE SURFACE ABOVE THE UNDERGROUND LINE FOR THE COMPLETE LENGTH OF THE BURIED CONDUIT.		

RIVER OAKS SWPS ELECTRICAL SERVICE LOAD CALCULATIONS		
LOAD DESCRIPTION	CONNECTED AMPS	OPERATING AMPS
PUMP NO. 1 @ 15HP	42	38
PUMP NO. 2 @ 20HP	54	49
PUMP NO. 3 @ 20HP	54	49
PUMP NO. 4 @ 1HP	3	-
LCP AUXILIARY LOADS	12	10
25% OF LARGEST MOTOR LOAD	14	-
TOTALS @ 240V, 3PH	179	145
FPL SERVICE REP & PHONE NO.	Noah Sherbacoff	(954) 717-1430
FPL AVAILABLE FAULT CURRENT:	_,___ A	



SINGLE LINE DIAGRAM

ALL EQUIPMENT WITHIN THIS BOX IS PROVIDED BY ATLANTIC ENVIRONMENTAL SYSTEMS

NOTES:

1. BASIS OF DESIGN IS MOPS PUMP STATION MODEL SW410-84120-C-15/20/20 INCLUDING CONTROL CENTER PSC-432-15/20/20. ANY ADDITIONAL COSTS FOR DESIGN CHANGES WHICH ARISE DUE TO PROCUREMENT OF ALTERNATIVE PUMPS SHALL BE BORNE BY THE CONTRACTOR.
2. ALL CONDUIT SHALL BE PVC COATED RIGID GALVANIZED STEEL. SEE TABLE THIS SHEET FOR RECOMMENDED MINIMUM SIZES.
3. ALL WIRING BELOW GRADE SHALL BE XHHW COPPER.
4. ALL METAL ENCLOSURES AND SUPPORTS SHALL BE BONDED TO THE GROUNDING SYSTEM.
5. SEE ATLANTIC ENVIRONMENTAL SYSTEMS, INC. DRAWINGS FOR ADDITIONAL PUMP STATION DETAILS.
6. CONTRACTOR SHALL ASSUME MAXIMUM DISTANCE OF 450-LF BETWEEN PUMP STATION AND UTILITY ELECTRIC SERVICE POINT FOR PURPOSES OF ESTABLISHING A BID PRICE.

BY ATLANTIC ENVIRONMENTAL SYSTEMS

CONSTRUCTION SET

Hazen

HAZEN AND SAWYER
4000 HOLLYWOOD BLVD, SUITE 750N
HOLLYWOOD, FLORIDA 33021

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FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

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FAX: 954-987-2949

DRAWN BY: JMB
DATE: 04/02/2021
DESIGNED BY: JMB
SCALE: NTS
CHECKED BY: JCB
FIELD BOOK: XXXX

CITY OF FORT LAUDERALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 12074
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PUMP STATION PROPOSED
ELECTRIC UTILITY WIRING

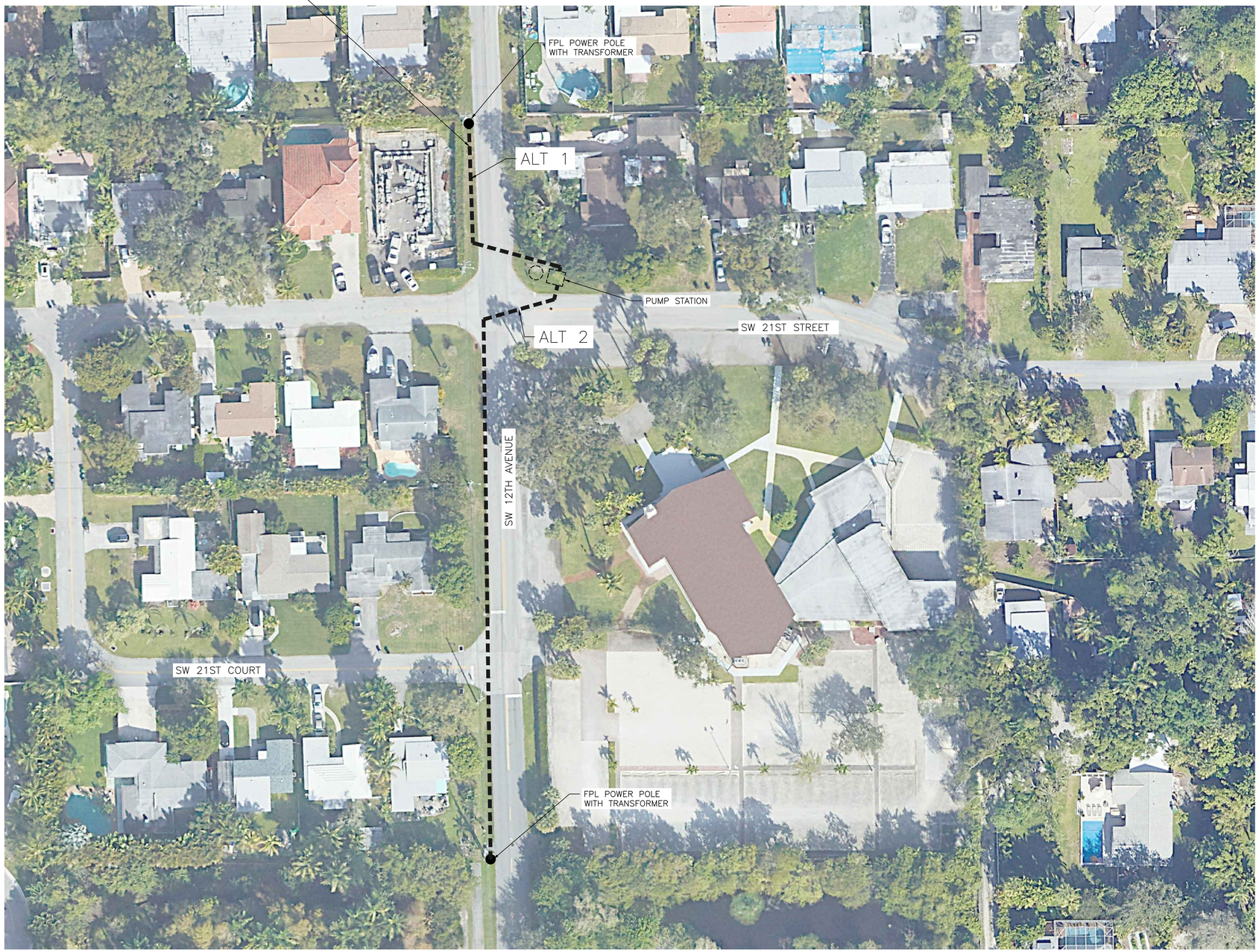
SHEET NO.
CU-3C-05

TOTAL: 246

CAD FILE: CU-3C-05

DRAWING FILE NO. 4-142-42

NEW ELECTRICAL SERVICE CONDUIT, CABLE AND MATERIALS PROVIDED AND INSTALLED BY CONTRACTOR. SEE SHEET CU-3C-05



PLAN
1" = 40'

NOTE:

CONTRACTOR SHALL COORDINATE WITH FPL TO ARRANGE FOR ELECTRICAL SERVICE FOR PUMP STATION. ALL COSTS ASSOCIATED WITH THESE COORDINATION EFFORTS SHALL BE INCLUDED IN THE BID ITEMS FOR THE MOPS STORMWATER PUMP STATION. FPL FEES SHALL BE REIMBURSED AT COST COST IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

0 40' 80'

CONSTRUCTION SET

Hazen

HAZEN AND SAWYER
4000 HOLLYWOOD BLVD, SUITE 750N
HOLLYWOOD, FLORIDA 33021

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FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

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ENGINEER: JOHN C. BURKE
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DESIGNED BY: JMB
CHECKED BY: JCB
DATE: 04/02/2021
SCALE: 1"=40'
FIELD BOOK: XXXX

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 12074
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
PUMP STATION PROPOSED
ELECTRICAL SERVICE PLAN

SHEET NO.
CU-3C-06

TOTAL: 246

CAD FILE:
CU-3C-06

DRAWING FILE NO.
4-142-42

GNRL009 - DEMOLITION NOTES Monday, July 17, 2017

DEMOLITION NOTES:

GENERAL DEMOLITION SPECIFICATIONS:

1. THE LOCATIONS, ELEVATIONS AND DIMENSIONS OF ALL EXISTING UTILITIES SHOWN ON THE DRAWINGS HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY.
2. PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL VERIFY THE LOCATION, ELEVATIONS, AND DIMENSIONS OF ALL EXISTING UTILITIES AND OTHER FEATURES AFFECTING THE WORK. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES THAT MIGHT IMPACT THE WORK.
3. CHAPTER 553.851 OF THE FLORIDA STATUTES REQUIRES THAT AN EXCAVATOR NOTIFY ALL UTILITIES A MINIMUM OF TWO (2) WORKING DAYS PRIOR TO EXCAVATING.
4. THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES BEFORE EXCAVATION.
5. THE CONTRACTOR SHALL FURNISH ALL MATERIALS, LABOR, SUPERVISION, AND EQUIPMENT REQUIRED FOR THE ORDERLY DEMOLITION AND REMOVAL OF EXISTING STRUCTURES, PAVEMENT AND UTILITIES AS SHOWN ON THE DRAWINGS AND DESCRIBED HEREIN.
6. THE CONTRACTOR IS REQUIRED TO FAMILIARIZE HIMSELF WITH THE STRUCTURES TO BE DEMOLISHED.
7. THE FOLLOWING LIST OF STRUCTURES REQUIRING DEMOLITION IS INCLUDED FOR THE CONTRACTOR'S CONVENIENCE ONLY. THE DRAWINGS INDICATE THE SCOPE OF DEMOLITION WHERE DEMOLITION IS REQUIRED.
   - 7.1. DEMOLITION AND REMOVAL OF A 5' MIN.± STRIP OF EXISTING ON-SITE ASPHALT, CONCRETE AND CURBING AROUND THE PERIMETER OF THE EXISTING STRUCTURES AND UTILITIES BEING DEMOLISHED.
   - 7.2. REMOVAL OF EXISTING ON-SITE ABOVEGROUND AND UNDERGROUND UTILITIES, INCLUDING REMOVAL OR PLUGGING OF EXISTING UTILITIES AS SHOWN ON PLANS.
8. PRIOR TO REMOVAL OF ANY UNDERGROUND TANK AND OTHER COMPONENT, CONTRACTOR MUST COMPLETELY DRAIN THE SYSTEMS TO AN APPROVED SANITATION TANK FOR DISPOSAL TO AN APPROVED LOCATION, AS REQUIRED BY DISPOSAL PERMIT.
9. PROTECT ALL UTILITIES, UNLESS OTHERWISE NOTED.
10. ALL THE CONCRETE AND PAVEMENT TO BE REMOVED MUST BE SAW CUT CLEAN PRIOR TO REMOVAL.
11. WET DOWN MASONRY WALLS AND DEBRIS DURING DEMOLITION AND LOADING OPERATIONS TO PREVENT THE SPREAD OF DUST (AS APPLICABLE TO PROJECT).
12. ALL EXISTING STRUCTURES, PAVEMENTS, SLABS, FOUNDATIONS, STEPS AND OTHER ON-SITE EXISTING FEATURES INDICATED ON THE DRAWINGS TO BE REMOVED SHALL BE DEMOLISHED AND REMOVED BY THE CONTRACTOR (AS APPLICABLE TO PROJECT).

CITY OF FORT LAUDERDALE PUBLIC WORKS DEPARTMENT ENGINEERING DETAILS 100 North Andrews Avenue, Fort Lauderdale, Florida 33301	DEMOLITION NOTES SHEET 1	STDDWG. NO. GNRL 009 REVISED 2017/07/13

GNRL009 - DEMOLITION NOTES Monday, July 17, 2017

13. ALL EXISTING SEWERS, PIPING AND UTILITIES SHOWN ON THE DRAWINGS ARE NOT TO BE INTERPRETED AS THE EXACT LOCATION, OR AS THE ONLY OBSTACLES THAT MAY OCCUR ON THE SITE. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND PROCEED WITH CAUTION AROUND ANY ANTICIPATED FEATURES. GIVE NOTICE TO ALL UTILITY COMPANIES REGARDING DESTRUCTION AND REMOVAL OF ALL SERVICE LINES AND CAP ALL LINES BEFORE PROCEEDING WITH THE WORK.
14. THE CONTRACTOR SHALL COORDINATE WITH THE APPROPRIATE UTILITY COMPANY PRIOR TO REMOVAL OR RELOCATION OF ANY ELECTRICAL, TELEPHONE, CABLE AND/OR GAS LINES. SUFFICIENT TIME SHALL BE PROVIDED FOR RELOCATION AND CLOSE COORDINATION WITH THE UTILITY COMPANY TO PROVIDE A SMOOTH TRANSITION IN UTILITY SERVICE.
15. CONTRACTOR MUST STOP OPERATION AND NOTIFY THE OWNER/ENGINEER FOR PROPER DIRECTION IF ANY ENVIRONMENTAL OR HEALTH RELATED CONTAMINANT IS ENCOUNTERED DURING THE DEMOLITION/EXCAVATION PROCESS.
16. FILL FOR LOWER LEVELS OF DEMOLISHED STRUCTURES MAY INCLUDE CONCRETE OR MASONRY RUBBLE RESULTING FROM DEMOLITION, SUBJECT TO THE ENGINEER'S/ARCHITECT'S APPROVAL. RUBBLE SHALL PASS THROUGH A THREE-INCH RING.
17. REMOVE AND LEGALLY DISPOSE OF ALL OTHER RUBBISH, RUBBLE, AND DEBRIS. COMPLY WITH ALL APPLICABLE LAWS AND REGULATIONS GOVERNING DISPOSAL OF WASTES AND DEBRIS.
18. MAINTAIN ACCESS TO SURROUNDING PROPERTIES AND BUILDINGS.
19. PRIOR TO DEMOLITION OCCURRING ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED.
20. ALL TRAFFIC SIGNS OUTSIDE THE DEMOLITION AREA ARE TO REMAIN UNLESS OTHERWISE SPECIFIED.
21. ANY MUCK ENCOUNTERED UNDER PROPOSED STRUCTURES SHALL BE REMOVED TO FIVE-FEET BEYOND THE FOOTPRINT OF THAT STRUCTURE. BACKFILL WITH APPROVED FILL MATERIAL SATISFYING ALL COMPACTION REQUIREMENTS.
22. ALL EXISTING UTILITIES WITHIN THE DEMOLITION SITE AREA SHALL BE ADJUSTED, REMOVED OR RELOCATED AT THE CONTRACTOR'S EXPENSE. WORK SHALL BE COORDINATED BY THE CONTRACTOR DIRECTLY WITH THE APPROPRIATE UTILITY COMPANY. ALL EXPENSES SHALL BE INCLUDED IN THE CONTRACTOR'S BID.
23. ALL TRASH, DEBRIS AND OTHER MATERIAL REMOVED FROM THE SITE SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.

CITY OF FORT LAUDERDALE PUBLIC WORKS DEPARTMENT ENGINEERING DETAILS 100 North Andrews Avenue, Fort Lauderdale, Florida 33301	DEMOLITION NOTES SHEET 2	STDDWG. NO. GNRL 009 REVISED 2017/07/13

GNRL009 - DEMOLITION NOTES Monday, July 17, 2017

PRE-DEMOLITION RESPONSIBILITIES:

1. UPON RECEIPT OF NOTICE OF AWARD, THE CONTRACTOR SHALL ARRANGE A PRE-DEMOLITION CONFERENCE TO INCLUDE ALL INVOLVED GOVERNMENTAL AGENCIES, ALL AFFECTED UTILITY OWNERS, THE OWNER, THE ENGINEER AND THE CONTRACTOR.
2. PRIOR TO DEMOLITION, THE CONTRACTOR SHALL BE REQUIRED TO SUBMIT A DEMOLITION SCHEDULE DEPICTING EACH PHASE OF THE WORK.
3. PRIOR TO DEMOLITION, CONTRACTOR TO PROVIDE FOR THE OWNER A LISTING OF THE FACILITIES THE CONTRACTOR SHALL UTILIZE FOR RECYCLING AND DISPOSAL OF SPECIFIC MATERIALS. CONTRACTOR TO INDICATE THE MATERIALS INTENDED FOR RECYCLING AND THE MATERIALS INTENDED FOR DISPOSAL FOR OWNER'S APPROVAL.
4. PRIOR TO DEMOLITION, CONTRACTOR TO PROVIDE THE OWNER SKETCHES SHOWING PROPOSED HAULING ROUTES TO RECYCLING AND DISPOSAL FACILITIES FOR APPROVAL.
5. PRIOR TO DEMOLITION, THE CONTRACTOR SHALL VERIFY THE SIZE, LOCATION, ELEVATION, AND MATERIAL OF ALL EXISTING UTILITIES WITHIN THE AREA OF DEMOLITION.
6. EXISTING UTILITY LOCATIONS SHOWN ON THESE PLANS ARE APPROXIMATE. THE CITY AND THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF EXISTING UTILITIES SHOWN OR FOR ANY EXISTING UTILITIES NOT SHOWN.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO ANY EXISTING UTILITIES FOR WHICH IT FAILS TO REQUEST LOCATIONS FROM THE UTILITY OWNER. THE CONTRACTOR IS RESPONSIBLE AS WELL FOR DAMAGE TO ANY EXISTING UTILITIES WHICH ARE PROPERLY LOCATED.
8. THE LOCATIONS OF EXISTING UTILITIES AND STORM DRAINAGE SHOWN ON THE PLANS HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. ENGINEER ASSUMES NO RESPONSIBILITY FOR INACCURACY.
9. PRIOR TO THE START OF ANY DEMOLITION ACTIVITY, THE CONTRACTOR SHALL FIELD LOCATE EXISTING UNDERGROUND UTILITIES WITH THE UTILITY OWNERS.
10. THE CONTRACTOR IS RESPONSIBLE FOR RELOCATION'S OF THE VARIOUS EXISTING UTILITIES WITH THE UTILITY OWNERS, WHICH SHALL BE DONE IN A TIMELY MANNER TO MINIMIZE IMPACT ON DEMOLITION SCHEDULE. ANY DELAY CAUSED BY THE CONTRACTOR BY THE RELOCATION OF UTILITIES SHALL BE INCIDENTAL TO THE CONTRACT AND NO EXTRA COMPENSATION WILL BE ALLOWED.
11. SUNSHINE STATE ONE CALL OF FLORIDA, INC. REQUIRES THE CONTRACTOR TO CALL TWO (2) FULL BUSINESS DAYS (BUT NOT MORE THAN FIVE) PRIOR TO BREAKING GROUND TO FIND OUT WHERE BURIED FACILITIES (ELECTRICAL, GAS, TELEPHONE, CABLE, WATER) ARE LOCATED.

CITY OF FORT LAUDERDALE PUBLIC WORKS DEPARTMENT ENGINEERING DETAILS 100 North Andrews Avenue, Fort Lauderdale, Florida 33301	DEMOLITION NOTES SHEET 3	STDDWG. NO. GNRL 009 REVISED 2017/07/13

Hazen

HAZEN AND SAWYER
4000 HOLLYWOOD BLVD, SUITE 750N
HOLLYWOOD, FLORIDA 33021

Certificate of Authorization No: 2771

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FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

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ENGINEER: PATRICK J. GIBNEY
REG. No. 49428
DATE: 01/22/2021

TEL: 954-987-0066
FAX: 954-987-2949

DRAWN BY: XXX
DATE: 01/07/2019
DESIGNED BY: XXX
SCALE: VERT 1"=2' HORZ 1"=20'
CHECKED BY: XXX
FIELD BOOK: XXXX

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

Patrick J. Gibney, State of Florida, Professional Engineer, License No. 49428. This item has been electronically signed and sealed by Patrick J. Gibney, on the date indicated here using an SHA authentication code. Printed copies of this document are not considered signed and sealed and the SHA authentication code must be verified on any electronic copies.
8/26/2021

CONSTRUCTION SET

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
CITY STANDARD DETAILS
DEMOLITION NOTES - SHEET 1

SHEET NO.
CZ-DT-01

TOTAL: 255

CAD FILE: 11868-CZ-DT01

DRAWING FILE NO. 4-142-42

GNRL009 - DEMOLITION NOTES Monday, July 17, 2017

DEMOLITION SAFETY:

1. ALL DEMOLITION SHALL BE DONE IN A SAFE MANNER, SPECIFICALLY, THE RULES AND REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), THE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) SHALL BE STRICTLY OBSERVED.
2. PROVIDE ADEQUATE PROTECTION FOR PERSONS AND PROPERTY AT ALL TIMES. EXECUTE THE WORK IN A MANNER TO AVOID HAZARDS TO PERSONS AND PROPERTY AND PREVENT INTERFERENCE WITH THE USE OF AND ACCESS TO ADJACENT BUILDINGS. STREETS AND SIDEWALKS SHALL NOT BE UNNECESSARILY BLOCKED BY DEBRIS AND EQUIPMENT.
3. BUILDING MATERIALS TO BE REMOVED SHALL BE TESTED FOR ASBESTOS AND LEAD PAINT.
4. IF PETROLEUM PRODUCTS ARE FOUND WHILE DEMOLISHING, DISPOSE OF PETROLEUM WASTE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.

PAVEMENT DEMOLITION:

1. WHERE EXISTING PAVEMENT IS TO BE REMOVED, SAW-CUT THE SURFACING LEAVING A UNIFORM AND STRAIGHT EDGE WITH MINIMUM DISTURBANCE TO THE REMAINING ADJACENT SURFACING. IF DEMOLITION RESULTS IN RAVELING OF SAW CUT SURFACE, RECUT BACK FROM THE RAVELED EDGE PRIOR TO RESTORATION.
2. WHERE EXISTING PAVEMENT, CURB, CURB AND GUTTER, SIDEWALK, DRIVEWAY, OR VALLEY GUTTER IS REMOVED FOR INLETS, MANHOLES, APPURTENANCES, FACILITIES OR STRUCTURES, SAID PAVEMENT, ETC., SHALL BE REPLACED WITH NEW PAVEMENT, ETC. CONTRACTOR SHALL PROVIDE ALL NECESSARY LABOR, MATERIALS, EQUIPMENT, TOOLS, SUPPLIES, AND OTHER EQUIPMENT AS REQUIRED.
3. CONTRACTOR MAY LIMIT SAW-CUT AND PAVEMENT REMOVAL TO ONLY THOSE AREAS WHERE IT IS REQUIRED AS SHOWN ON THE DRAWINGS. HOWEVER, IF ANY DAMAGE IS INCURRED ON ANY OF THE SURROUNDING PAVEMENT, SIDEWALK, BUILDINGS, UTILITIES, ETC., THEN THE CONTRACTOR SHALL BE RESPONSIBLE FOR IT'S REMOVAL AND REPLACEMENT. REPLACEMENT PAVEMENT, SIDEWALK, ETC., SHALL BE NEW.

CITY OF FORT LAUDERDALE PUBLIC WORKS DEPARTMENT ENGINEERING DETAILS 100 North Andrews Avenue, Fort Lauderdale, Florida 33301	DEMOLITION NOTES SHEET 4	STDDWG. NO. GNRL 009 REVISED 2017/07/13

GNRL009 - DEMOLITION NOTES Monday, July 17, 2017

DEMOLITION PERMITTING:

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ANY REQUIRED PERMITS FOR DEMOLITION FROM RESPONSIBLE REGULATORY AGENCIES WHILE FULLY ACKNOWLEDGING AND COMPLYING WITH ALL REQUIREMENTS PRIOR TO COMMENCING DEMOLITION WORK.
2. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE THE EXTENT OF DEMOLITION, RECYCLING OR REUSE REQUIRED TO PERFORM THE CONTRACT WORK FOR THIS PROJECT. THE CONTRACTOR SHALL CONDUCT SITE VISITS AND SHALL EXAMINE ALL THE INFORMATION WITHIN THESE DOCUMENTS. ALL DISCREPANCIES AND/OR OMISSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO BID SUBMITTAL.
3. THE CONTRACTOR SHALL COORDINATE WITH OWNER PRIOR TO COMMENCEMENT OF ANY WORK. ACTUAL REMOVAL AND/OR RELOCATION OF ALL EXISTING LANDSCAPING WITHIN DEMOLITION AREAS TO BE CONDUCTED BY A LANDSCAPE CONTRACTOR. IT IS THE RESPONSIBILITY OF THE SITEWORK DEMOLITION CONTRACTOR TO COORDINATE DEMOLITION ACTIVITIES WITH THE LANDSCAPE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING AND PRESERVING TREES AS INDICATED ON THE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TREE REMOVAL PERMIT OR ANY OTHER APPLICABLE PERMIT TO REMOVE, RELOCATE, OR PRESERVE EXISTING LANDSCAPE AND TREES.
4. ANY TREES FOR REMOVAL FOUND TO BE GREATER THAN OR EQUAL TO THREE (3) INCHES IN DIAMETER AT BREAST HEIGHT (DBH) SHALL REQUIRE A PERMIT WITH THE BROWARD COUNTY ENVIRONMENTAL PROTECTION AND GROWTH MANAGEMENT DEPARTMENT (BCEPGMD).
5. SHOULD REMOVAL AND/OR RELOCATION ACTIVITIES DAMAGE THE LIGHTING, STORM INLET STRUCTURES, OR OTHER STRUCTURES DESIGNATED TO BE SAVED, THEN THE CONTRACTOR SHALL PROVIDE NEW MATERIALS/STRUCTURES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

CITY OF FORT LAUDERDALE PUBLIC WORKS DEPARTMENT ENGINEERING DETAILS 100 North Andrews Avenue, Fort Lauderdale, Florida 33301	DEMOLITION NOTES SHEET 5	STDDWG. NO. GNRL 009 REVISED 2017/07/13

GNRL009 - DEMOLITION NOTES Monday, July 17, 2017

DEMOLITION EROSION AND SEDIMENT CONTROL NOTES:

1. THE SCHEDULING, SEQUENCING AND CONTROL MEASURES, WHICH ARE OUTLINED HEREIN, ARE SUBJECT TO THE FINAL DEFINITION BY THE CONTRACTOR WHO SHALL BE SELECTED TO PERFORM THE WORK AND SHALL BE RESPONSIBLE FOR IMPLEMENTATION AND COMPLIANCE.
2. PRIOR TO DEMOLITION, THE CONTRACTOR SHALL BE REQUIRED TO SUBMIT A DEMOLITION SCHEDULE DEPICTING EACH PHASE OF THE WORK. THE CONTRACTOR SHALL ALSO BE REQUIRED TO SUBMIT AN EROSION AND SEDIMENT CONTROL PLAN ENCOMPASSING THE PRINCIPALS AND THE REQUIREMENTS DESCRIBED HEREIN AND A SCHEDULE FOR THEIR IMPLEMENTATION AND MAINTENANCE FOR THE PROJECT DURATION.
3. DURING DEMOLITION, THE CONTRACTOR SHALL TAKE ALL REASONABLE MEASURES TO ENSURE AGAINST POLLUTING, SILTATION OR DISTURBANCE TO SUCH AN EXTENT AS TO CAUSE AN INCREASE IN TURBIDITY TO THE EXISTING DRAINAGE SYSTEMS AND ADJACENT WATER BODIES AND WETLANDS, IN COMPLIANCE WITH ALL PERMIT REQUIREMENTS RELATED TO SUCH MEASURES.
4. METHODS MAY INCLUDE TEMPORARY EROSION AND SEDIMENT CONTROLS SUCH AS SEDIMENT BASINS, SEDIMENT CHECKS, SILT BARRIERS, SILT SCREENS, TURBIDITY BARRIERS OR THE BEST MANAGEMENT PRACTICES AVAILABLE TO THE INDUSTRY.
5. EROSION AND SEDIMENT CONTROL INSTALLATIONS SHALL BE MAINTAINED THROUGHOUT THE DEMOLITION PERIOD AND UNTIL NEW VEGETATIVE GROWTH HAS BEEN ESTABLISHED.
6. THROUGHOUT THE DEMOLITION PERIOD, THE CONTRACTOR SHALL INSPECT DAILY THE EROSION AND SEDIMENT CONTROL INSTALLATIONS FOR FAILURE OR SIGNS OF FAILURE OR MALFUNCTION. REPAIR OR REPLACE THE EROSION AND SEDIMENT CONTROL INSTALLATIONS IMMEDIATELY UPON DISCOVERY OF FAILURE OR MALFUNCTION.
7. INLETS AND CATCH BASINS, EXISTING ON-SITE AND OFF-SITE, SHALL BE PROTECTED FROM SEDIMENT STORM RUNOFF.
8. THE CONTRACTOR SHALL PROMPTLY REMOVE ALL MUD, DIRT OR OTHER MATERIALS TRACKED OR SPILLED ONTO EXISTING PUBLIC ROADS AND FACILITIES DUE TO DEMOLITION.
9. DEWATERING ACTIVITIES SHALL NOT RESULT IN ANY DISCHARGE OF TURBID WATER FROM THE PROJECT SITE WITHOUT PROPER EROSION AND SEDIMENT CONTROL AND APPROVAL FROM ENGINEER.
10. PHASING OF EROSION CONTROL DEMOLITION SHALL BE RECOMMENDED AS FOLLOWS:
    - 10.1. PLACEMENT OF PERIMETER PROTECTIVE MEASURES (SILT FENCE, HAY BALES, TURBIDITY BARRIERS, ETC.) AROUND ON-SITE FEATURES TO BE RETAINED, AT POINTS OF OFF-SITE DISCHARGE AND AROUND WORK AREAS TO BE EXCAVATED OR FILLED.
    - 10.2. REROUTE RUNOFF FROM AREAS OUTSIDE OF THE DEMOLITION AREA TO MINIMIZE FLOW THROUGH AREAS TO BE DISTURBED BY DEMOLITION. BERMS, SWALES AND OTHER MEANS USED FOR SUCH CONVEYANCE SHALL BE VEGETATED AND MEASURES TAKEN TO PROVIDE PROTECTION UNTIL STABILIZATION OCCURS (AS APPLICABLE TO THE PROJECT).

CITY OF FORT LAUDERDALE PUBLIC WORKS DEPARTMENT ENGINEERING DETAILS 100 North Andrews Avenue, Fort Lauderdale, Florida 33301	DEMOLITION NOTES SHEET 6	STDDWG. NO. GNRL 009 REVISED 2017/07/13

10.3. SELECT LOCATIONS FOR PLACEMENT OF EXCAVATED MATERIAL, WHERE SUITABLE FOR FILL OR UNSUITABLE MATERIAL, AND CONSTRUCT CONTAINMENT BERMS AROUND THE AREA. THE USE OF STRIPING FOR THIS PURPOSE MAY ACCELERATE BERM REVEGETATION. CONSTRUCT TEMPORARY OUTLETS FOR CONTAINMENT AREAS WITH SCREENS, HAY BALES, SETTLING BASINS OR OTHER MEASURES TO PREVENT SILT TRANSPORT.

10.4. SELECT / DESIGNATE ACCESS ROUTING FOR DEMOLITION EQUIPMENT AND VEHICLES AND PROVIDE PERIMETER PROTECTIVE MEASURES WHERE EXISTING TERRAIN SHALL BE SUBJECT TO DISRUPTION BY SUCH TRAFFIC.

10.5. CONSTRUCT ABOVE GROUND OR OTHER CONTAINMENT AREAS FOR DEMOLITION AREA RUNOFF. PROVIDE SCREENS, HAY BALES, ETC. TO FILTER DISCHARGE FROM THOSE AREAS.

10.6. SPOIL MOUNDS SHALL NOT BE LEFT FOR MORE THAN ONE WEEK PRIOR TO REPLACEMENT UNLESS PROTECTIVE CONTAINMENT MEASURES IN THE WORK AREA ARE APPLIED.

10.7. GRASSING, SODDING, ETC. SHALL BE IN PLACE IMMEDIATELY UPON COMPLETION OF REGRADING, SWALE SLOPES AND THE CONSTRUCTED OR DISTURBED AREAS.

11. THE CONTRACTOR IS REQUIRED TO ADHERE TO THE REQUIREMENT OF THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES). THE CONTRACTOR SHALL INSTITUTE BEST MANAGEMENT PRACTICES (BMPS) TO ENSURE COMPLIANCE WITH THE NPDES PROGRAM AND TO MINIMIZE THE IMPACT TO PUBLIC STORMWATER FACILITIES. A NOTICE OF INTENT (NOI) SHALL BE FILED BY THE CONTRACTOR PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES.

12. THE CONTRACTOR SHALL PREPARE A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AND MAINTAIN ALL RECORDS REQUIRED BY ITS NPDES STORMWATER PERMIT FOR ITS CONSTRUCTION ACTIVITIES.

13. PRIOR TO CONSTRUCTION, A SILT FENCE IN ACCORDANCE WITH CITY'S DETAIL SHALL BE ERECTED AS NOTED ON PLANS. ALL PROPOSED CATCH BASINS SHALL HAVE THEIR INLETS PROTECTED BY THE INSTALLATION OF FILTER INLET INSERTS INTO THE FRAME AND GRATE. SILT FENCES AND FILTER INLET INSERTS SHALL REMAIN IN PLACE DURING THE ENTIRE DURATION OF CONSTRUCTION.

14. CONTRACTOR SHALL BRACE ALL EXISTING LANDSCAPING TO REMAIN PRIOR TO BEGINNING ANY WORK AND SHALL ENSURE ITS STABILIZATION THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS. EXISTING SOD DISTURBED BY CONSTRUCTION THAT IS NOT AFFECTED BY PROPOSED GRADING SHALL BE RESTORED TO NEW CONDITION UPON COMPLETION OF CONSTRUCTION. SODDED SLOPES STEEPER THAN FOUR HORIZONTAL TO ONE VERTICAL SHALL BE PEGGED.

15. ALL WASTE GENERATED FROM THE CONSTRUCTION SHALL BE DISCARDED IN ACCORDANCE WITH ALL APPLICABLE STATE, LOCAL AND FEDERAL REGULATIONS. CONTRACTOR SHALL OBTAIN ALL APPLICABLE CODES AND BECOME FAMILIAR WITH STATE, LOCAL AND FEDERAL REGULATIONS PRIOR TO BEGINNING CONSTRUCTION.

16. TO ENSURE THAT OFF-SITE VEHICLE TRACKING OF SEDIMENTS AND THE GENERATION OF DUST IS MINIMIZED, CONTRACTOR SHALL PUT INTO PRACTICE THE METHODS DETAILED IN FLORIDA DEPARTMENT OF TRANSPORTATION INDEX 106 (2010 DESIGN STANDARDS) AND BMPS.

17. DUST GENERATED FROM CONSTRUCTION SHALL BE MINIMIZED BY DAILY WATERING OF THE SITE.

18. AT ANY TIME DURING CONSTRUCTION THAT THE SILT FENCING IS DISTURBED, THE SILT FENCING SHALL BE RESTORED TO ITS ORIGINAL STATE WITHIN 24 HOURS. AT NO TIME DURING CONSTRUCTION SHALL WORK BE PERFORMED WITHOUT THE INTEGRITY OF THE SILT FENCING SECURED.

19. A QUALIFIED INSPECTOR, PROVIDED BY THE CONTRACTOR, SHALL INSPECT ALL POINTS OF DISCHARGE INTO NEARBY SURFACE WATER. THE INSPECTION SHALL OCCUR AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.5 INCHES OR GREATER. INSPECTION INCLUDES THE WRITTEN RECORDING OF THE CONDITION OF ALL DISCHARGE POINTS, INTEGRITY OF SILT FENCING, DAILY DUST CONTROL MEASURES, VEHICULAR TRAFFIC AND CONSTRUCTION MATERIAL STORAGE AND DISPOSAL. WRITTEN RECORD OF ALL INSPECTIONS SHALL BE STORED BY THE CONTRACTOR.

20. THE INSPECTION REPORT SHALL INCLUDE, BUT IS NOT LIMITED TO, THE FOLLOWING INFORMATION: NAME AND QUALIFICATION OF PERSONNEL MAKING THE INSPECTION, DATE OF INSPECTION, RAINFALL DATE, MAJOR OBSERVATIONS RELATING TO THE SWPPP, ACTIONS TAKEN BY CONTRACTOR AND ANY INCIDENT OF NONCOMPLIANCE WITH PERMIT. WHERE AN INSPECTION DOES NOT IDENTIFY ANY INCIDENT OF NONCOMPLIANCE, THE REPORT SHALL CONTAIN A CERTIFICATION THAT THE FACILITY IS IN COMPLIANCE WITH THE SWPPP AND THE PERMIT.

21. THE CONTRACTOR SHALL RETAIN A COPY OF THE SWPPP AND ALL REPORTS, RECORDS AND DOCUMENTATION REQUIRED BY THE PERMIT AT THE CONSTRUCTION SITE, OR AN APPROPRIATE ALTERNATIVE LOCATION AS SPECIFIED IN THE NOTICE OF INTENT, FROM THE DATE OF PROJECT INITIATION TO THE DATE OF FINAL STABILIZATION.

22. THE CONTRACTOR SHALL RETAIN THE SWPPP, NOI AND ALL RECORDS ASSOCIATED THEREWITH FOR A PERIOD OF AT LEAST THREE (3) YEARS FROM THE DATE THAT THE SITE IS FINALLY STABILIZED.

23. SEE LANDSCAPE PLANS FOR TREE REMOVAL AND LANDSCAPE DEMOLITION.

24. CONTRACTOR SHALL COORDINATE THROUGH CITY'S CONSTRUCTION DIVISION AND CITY'S PARKS DEPARTMENT ON HOW TO STOCK AND RE-USE EXCAVATED SOIL FROM SITE (AS APPLICABLE TO THE PROJECT).

INTERRUPTION OF EXISTING UTILITIES:

1. ANY DEMOLITION WORK THAT REQUIRES INTERRUPTION OF SERVICE TO ANY CUSTOMER SHALL BE DONE SO WITH A MINIMUM OF SEVENTY-TWO (72) HOUR WRITTEN NOTICE TO, AND WRITTEN APPROVAL BY, THE APPROPRIATE UTILITY COMPANY.

2. THE CONTRACTOR SHALL ARRANGE A MEETING WITH THE LOCAL JURISDICTIONAL AGENCIES AND OTHER GOVERNING AGENCIES, AND OTHER AFFECTED UTILITIES PRIOR TO SCHEDULING THE SHUT DOWN TO ASSESS THE SCOPE OF WORK.

3. ALL SYSTEM SHUT DOWNS SHALL BE SCHEDULED BY THE CONTRACTOR AT SUCH TIME THAT SYSTEM DEMAND IS LOW. THIS GENERALLY REQUIRES NIGHT TIME WORK BY THE CONTRACTOR AND REQUIRES FULL-TIME INSPECTION BY A REPRESENTATIVE OF THE UTILITY. ALL COST FOR OVERTIME WORK BY THE REPRESENTATIVE OF THE UTILITY SHALL BE BORNE BY THE CONTRACTOR.

4. EACH CUSTOMER AFFECTED BY THE SHUT-DOWN SHALL BE PROVIDED, MINIMUM, FORTY-EIGHT (48) HOURS WRITTEN NOTIFICATION BY THE CONTRACTOR.

TEMPORARY DEMOLITION FACILITIES:

1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE OR SUPPLY TEMPORARY WATER SERVICE, SANITARY FACILITIES AND ELECTRICITY TO ITS EMPLOYEES AND SUBCONTRACTORS FOR THEIR USE DURING DEMOLITION.

2. MAINTENANCE OF TRAFFIC (MOT) IN THE PUBLIC RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS.

3. ALL OPEN TRENCHES AND HOLES ADJACENT TO ROADWAYS OR WALKWAYS SHALL BE PROPERLY MARKED AND BARRICADED TO ASSURE THE SAFETY OF BOTH VEHICULAR AND PEDESTRIAN TRAFFIC.

4. NO TRENCHES OR HOLES NEAR WALKWAYS OR IN ROADWAYS OR THEIR SHOULDERS ARE TO BE LEFT OPEN DURING NIGHTTIME HOURS WITHOUT EXPRESS WRITTEN PERMISSION OF THE CITY OR RESPECTIVE GOVERNING AGENCY.

Hazen

HAZEN AND SAWYER
4000 HOLLYWOOD BLVD, SUITE 750N
HOLLYWOOD, FLORIDA 33021

Certificate of Authorization No: 2771

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FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

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FAX: 954-987-2949

DRAWN BY: XXX
DATE: 01/07/2019
DESIGNED BY: XXX
SCALE: VERT 1"=2' HORZ 1"=20'
CHECKED BY: XXX
FIELD BOOK: XXXX

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

Patrick J. Gibney, State of Florida, Professional Engineer, License No. 49428. This item has been electronically signed and sealed by Patrick J. Gibney, on the date indicated here using an SHA authentication code. Printed copies of this document are not considered signed and sealed and the SHA authentication code must be verified on any electronic copies.

8/26/2021

CONSTRUCTION SET

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
CITY STANDARD DETAILS
DEMOLITION NOTES - SHEET 2

SHEET NO.
CZ-DT-02

TOTAL: 255

CAD FILE: 11868-CZ-DT02

DRAWING FILE NO. 4-142-42

WASTE MANAGEMENT PLAN:

1. IMPLEMENT A WASTE MANAGEMENT PLAN FOR APPROVAL BY THE OWNER. PROVIDE HANDLING, CONTAINERS, STORAGE, SIGNAGE, TRANSPORTATION AND OTHER ITEMS AS NEEDED TO IMPLEMENT THE WASTE MANAGEMENT PLAN DURING THE ENTIRE DURATION OF THE CONTRACT.

2. DESIGNATE A WASTE MANAGEMENT COORDINATOR TO BE RESPONSIBLE FOR IMPLEMENTING, MONITORING AND REPORTING STATUS OF WASTE MANAGEMENT WORK PLAN. COORDINATOR SHALL BE PRESENT AT PROJECT SITE FULL-TIME FOR DURATION OF PROJECT.

3. TRAIN WORKERS, SUBCONTRACTORS AND SUPPLIERS ON PROPER WASTE MANAGEMENT PROCEDURES, AS APPROPRIATE FOR THE WORK AT THE PROJECT SITE.

4. DISTRIBUTE A WASTE MANAGEMENT PLAN BEFORE WORK BEGINS. REVIEW PLAN PROCEDURES AND LOCATION ESTABLISHED FOR SALVAGE, RECYCLING AND DISPOSAL.

RECYCLING DEMOLITION WASTE:

1. SEPARATE RECYCLABLE WASTE FROM OTHER WASTE MATERIALS, TRASH AND DEBRIS. SEPARATE RECYCLABLE WASTE BY TYPE AT THE PROJECT SITE TO THE MAXIMUM EXTENT PRACTICAL.

2. PROVIDE APPROPRIATELY MARKED CONTAINERS OR BINS FOR CONTROLLING RECYCLABLE WASTE UNTIL THEY ARE REMOVED FROM THE PROJECT SITE. INCLUDE A LIST OF ACCEPTABLE AND UNACCEPTABLE MATERIALS AT EACH CONTAINER AND BIN.

3. INSPECT CONTAINERS AND BINS FOR CONTAMINATION AND REMOVE CONTAMINATED MATERIALS IF FOUND.

4. STOCKPILE PROCESSED MATERIALS ON-SITE WITHOUT INTERMIXING WITH OTHER MATERIALS. PLACE, GRADE AND SHAPE STOCKPILES TO DRAIN SURFACE WATER. COVER TO PREVENT WINDBLOWN DUST.

5. STOCKPILE MATERIALS AWAY FROM DEMOLITION AREA. DO NOT STORE WITHIN DRIP LINE OF REMAINING TREES.

6. STORE COMPONENTS OFF THE GROUND AND PROTECT FROM THE WEATHER.

7. REMOVE RECYCLABLE WASTE OFF THE OWNER'S PROPERTY AND TRANSPORT TO RECYCLING RECEIVER OR PROCESSOR.

8. ASPHALTIC CONCRETE PAVING: BREAK UP AND TRANSPORT PAVING TO ASPHALT RECYCLING FACILITY.

9. CONCRETE: REMOVE REINFORCEMENT AND OTHER METALS FROM CONCRETE AND SORT WITH OTHER METALS.

10. MASONRY: MASONRY WASTE SHALL INCLUDE WHOLE OR BROKEN BRICK AND CONCRETE MASONRY UNITS. WHOLE MASONRY UNITS SHALL BE CLEANED AND REUSED OR DONATED. BROKEN MASONRY SHALL BE CRUSHED AND USED AS FILL FOR OFFSITE AREAS. REMOVE METAL REINFORCEMENT, ANCHORS AND TIES FROM MASONRY AND SORT WITH OTHER METALS.

11. METALS: METALS FROM REINFORCED CONCRETE, REINFORCED MASONRY, STRUCTURAL STEEL MEMBERS, FLASHING AND SHEET METAL, CONDUIT PIPE, SIDING, PIPING AND WIRING SHALL BE SEPARATED BY TYPE.

12. STRUCTURAL STEEL: STACK MEMBERS ACCORDING TO THEIR SIZE, TYPE AND LENGTH.

13. NUTS AND BOLTS: REMOVE BOLTS, NUTS, WASHERS AND OTHER ROUGH HARDWARE.

14. SITE-CLEARING WASTE SHALL BE RECYCLED BY CHIPPING BRUSH, BRANCHES AND TREES, THEN HAUL TO WOOD RECYCLING CENTER.

DISPOSAL OF WASTE:

1. GENERAL: EXCEPT FOR ITEMS OR MATERIALS TO BE SALVAGED, RECYCLED OR OTHERWISE REUSED, REMOVE WASTE MATERIALS FROM PROJECT SITE AND LEGALLY DISPOSE OF THEM IN A LANDFILL OR OTHER PERMITTED DISPOSAL FACILITY.

2. EXCEPT AS OTHERWISE SPECIFIED, DO NOT ALLOW WASTE MATERIALS THAT ARE TO BE DISPOSED OF TO ACCUMULATE ON-SITE.

3. REMOVE AND TRANSPORT DEBRIS IN A MANNER THAT SHALL PREVENT SPILLAGE ON ADJACENT SURFACES AND AREAS.

4. BURNING: DO NOT BURN WASTE MATERIALS.

5. DISPOSAL: TRANSPORT WASTE MATERIALS OFF THE OWNER'S PROPERTY AND LEGALLY DISPOSE OF THEM.

TRAFFIC CONTROL PLAN NOTES:

1. THE TRAFFIC CONTROL PLANS FOR THE PROJECT SHALL COMPLY WITH THE LATEST EDITION OF THE FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY AND TRAFFIC DESIGN STANDARDS, INDEX NO. 600-660. MUTCD AND THE STANDARD SPECIFICATIONS. THE CONTRACTOR'S RESPONSE TIME TO ALL REPORTED MALFUNCTIONS OF TRAFFIC SIGNALS WITHIN THE PROJECT LIMITS SHALL BE NO MORE THAN TWO (2) HOURS AND SHALL RESTORE ALL MALFUNCTIONING TRAFFIC SIGNAL EQUIPMENT TO ITS LEVEL OF OPERATION PRIOR TO THE MALFUNCTIONING WITHIN TWENTY-FOUR (24) HOURS. DURING THIS TIME THE CONTRACTOR SHALL PROVIDE AT HIS EXPENSE TEMPORARY TRAFFIC CONTROL DEVICES, FLAGGLER PERSONNEL AND LAW ENFORCEMENT PERSONNEL AS NECESSARY TO MAINTAIN A SAFE AND EFFICIENT FLOW OF TRAFFIC AT THE AFFECTED WORK ZONE. THE ENGINEER OR THE CITY OF FORT LAUDERDALE SHALL APPROVE ALL MODIFICATIONS PRIOR TO THEIR IMPLEMENTATION.
2. THE CONTRACTOR SHALL MAINTAIN PROPER OPERATION OF ALL TRAFFIC SIGNAL LOOP ASSEMBLIES AND LOOP DETECTORS WITHIN THE PROJECT LIMITS. THE CONTRACTOR SHALL CORRECT ALL LOOP ASSEMBLY/DETECTOR MALFUNCTIONS WITHIN 24 HOURS OF NOTIFICATION OF SUCH MALFUNCTIONS BY THE ENGINEER.
3. THE AGENCY RESPONSIBLE FOR MAINTENANCE OF THE TRAFFIC SIGNALS AND RELATED EQUIPMENT IS BROWARD COUNTY TRAFFIC ENGINEERING.
4. A REGULATORY SPEED OF 25 MPH SHALL BE POSTED WITHIN THE LIMITS OF THE WORK ZONE.
5. EXISTING SIGNS AND PAVEMENT MARKINGS THAT CONFLICT WITH CONSTRUCTION SIGNS AND MARKINGS SHALL BE REMOVED DURING CONSTRUCTION. ALL EXISTING SIGNS THAT ARE REMOVED SHALL BE STOCKPILED IN A SECURE PLACE AND REINSTALLED AFTER CONSTRUCTION. REMOVE AND REPLACE ANY GROUND MOUNT SIGN BY USE OF INDEX NO. 611.
6. THE CONTRACTOR SHALL MAINTAIN EXISTING DRAINAGE PATTERNS AND PREVENT ADVERSE FLOODING OF THE TRAVEL LANES DURING CONSTRUCTION.
7. THE CONTRACTOR SHALL OBTAIN WRITTEN AUTHORIZATION FROM THE CITY OF FORT LAUDERDALE FOR ANY AND ALL CONSTRUCTION ACTIVITIES TO BE PERFORMED AT NIGHT. NO LANE CLOSURE SHALL BE ALLOWED BETWEEN THE HOURS OF 6:00 AM TO 9:00 AM AND 4:00 PM TO 7:00 PM, MONDAY THROUGH FRIDAY UNLESS APPROVED BY THE ENGINEER.
8. THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE UTILITY COMPANY TWO (2) BUSINESS DAYS IN ADVANCE OF ANY EXCAVATION INVOLVING ITS UTILITIES SO THAT A COMPANY REPRESENTATIVE CAN BE PRESENT. THE LOCATION OF THE UTILITIES SHOWN IN THE PLANS ARE APPROXIMATE ONLY. THE EXACT LOCATION SHALL BE DETERMINED BY THE CONTRACTOR DURING CONSTRUCTION. SEE SPECS FOR LIST OF UTILITY COMPANIES.
9. TRAFFIC CONTROL ON ALL COUNTY RIGHTS-OF-WAY SHALL MEET THE ADDITIONAL REQUIREMENTS OF THE BROWARD COUNTY ENGINEERING DEPARTMENT.
10. CONTRACTOR SHALL PREPARE AND SUBMIT MAINTENANCE OF TRAFFIC PLAN (MOT) WHERE REQUIRED BY FEDERAL, STATE, COUNTY, OR LOCAL AGENCIES HAVING JURISDICTION. CONTRACTOR SHALL OBTAIN ALL REQUIRED APPROVALS AND PERMITS ASSOCIATED WITH THE MOT'S. ALL MOT'S TO BE ATS CERTIFIED.
11. THE CONTRACTOR SHALL ALSO COORDINATE THE CONSTRUCTION SCHEDULE WITH FDOT, BROWARD COUNTY AND THE CITY OF FORT LAUDERDALE TO AVOID LANE CLOSURES WHICH WOULD ADVERSELY AFFECT TRAFFIC DURING RUSH HOUR.

CITY OF FORT LAUDERDALE PUBLIC WORKS DEPARTMENT ENGINEERING DETAILS 100 North Andrews Avenue, Fort Lauderdale, Florida 33301	TRAFFIC CONTROL PLAN NOTES	SHEET NO. GNRL 002 REVISED 2017/07/13

FDOT GENERAL NOTES:

1. ALL MATERIALS AND CONSTRUCTION WITHIN THE FDOT RIGHT-OF-WAY SHALL CONFORM TO FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS (2010 EDITION). STANDARD SPECIFICATIONS (2010 EDITION) AND THE SUPPLEMENTS THERETO.
2. THE APPLICANT'S ENGINEER RESPONSIBLE FOR CONSTRUCTION INSPECTION SHALL INSURE THAT THE MAINTENANCE OF TRAFFIC PLAN (MOT) FOR THE PROJECT IS IN ACCORDANCE WITH THE APPLICABLE FDOT INDEX NUMBER (600 SERIES) AND THIS DOCUMENT: THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (D.S. DEPARTMENT OF TRANSPORTATION, FHWA).
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 CONTRACTOR'S 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 IS APPROXIMATE ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION 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 954-776-4300 OR 1-800-300-8236. THE APPLICANT AT THE EARLIEST CONVENIENT TIME SHALL NOTIFY IN WRITING ALL RIGHT-OF-WAY USERS AFFECTED BY THE CONSTRUCTION OF THIS PROJECT.
8. ALL MOT LANE CLOSURE SIGNS SHALL BE COVERED WHEN LANES ARE NOT CLOSED. NO LANES ARE TO BE CLOSED EXCEPT AT TIMES PRESCRIBED BY THE DEPARTMENT.
9. SODDING SHALL BE IN ACCORDANCE WITH SECTION 575.
10. ALL CURB CUT RAMPS MUST FACE IN THE DIRECTION OF PEDESTRIAN TRAVEL.
11. SPECIFY THE ALPHANUMERIC IDENTIFICATION FOR THE CURB CUT RAMPS PER STANDARD INDEX 304. A COPY OF THE APPROPRIATE DETAIL(S) MUST BE SHOWN ON THE PLANS.
12. FLAGGERS MUST BE PRESENT DURING THE INGRESS AND EGRESS OF CONSTRUCTION VEHICLES TO AND FROM THE PROJECT SITE. WARNING SIGNS MUST BE ERECTED ADVISING MOTORIST OF TRUCKS ENTERING THE HIGHWAY.

CITY OF FORT LAUDERDALE PUBLIC WORKS DEPARTMENT ENGINEERING DETAILS 100 North Andrews Avenue, Fort Lauderdale, Florida 33301	FDOT GENERAL NOTES	SHEET NO. GNRL 003 REVISED 2016/08/21

BROWARD COUNTY COMMUNICATION NOTES:

1. THE AGENCY RESPONSIBLE FOR MAINTENANCE OF THE TRAFFIC SIGNALS AND RELATED EQUIPMENT IS BROWARD COUNTY TRAFFIC ENGINEERING DIVISION (BCTED). ALL SYSTEM COMMUNICATIONS EQUIPMENT, CABLING AND RELATED MATERIAL SHALL COMPLY WITH BROWARD COUNTY'S LATEST EDITION OF THE MINIMUM STANDARDS AS EXPRESSED IN THE "STANDARDS AND SPECIFICATIONS - COMMUNICATION INFRASTRUCTURE" DOCUMENT. PLEASE REFER TO (BCTED'S) COMMUNICATIONS POLICIES AND PROCEDURES FOR ADDITIONAL INFORMATION. BROWARD COUNTY TRAFFIC ENGINEERING DIVISION WILL NOT ACCEPT ANY PROJECTS THAT DO NOT MEET THESE STANDARDS AND SPECIFICATIONS. IF FIBER OPTIC PULL BOXES ALREADY EXIST AT AN INTERSECTION, NO ADDITIONAL FIBER OPTIC PULL BOXES WILL NEED TO BE INSTALLED. FOR A COPY OF THESE STANDARDS REFER TO THE BROWARD COUNTY WEB SITE AT WWW.BROWARD.ORG/TRAFFIC UNDER PUBLICATIONS.
2. IF THERE ARE COPPER INTERCONNECT CABLE/S WITHIN YOUR PROJECT LIMITS OR WITHIN 1,500 FEET OF YOUR PROJECT LIMITS, CONTACT THE COMMUNICATIONS MANAGER AT TECOMMUNICATIONS@BROWARD.ORG OR 954-847-2745.
3. IF THERE ARE FIBER OPTIC CABLE/S WITHIN YOUR PROJECT LIMITS OR WITHIN 1,500 FEET OF YOUR PROJECT LIMITS, CONTACT THE COMMUNICATIONS MANAGER AT TECOMMUNICATIONS@BROWARD.ORG OR 954-847-2745.
4. IF THERE ARE CELLULAR COMMUNICATIONS WITHIN YOUR PROJECT LIMITS, CONTACT THE COMMUNICATIONS MANAGER AT TECOMMUNICATIONS@BROWARD.ORG OR 954-847-2745.
5. ALL BCTED COMMUNICATIONS CABLES/CONDUIT SHALL BE LOCATED A MINIMUM OF 48 HOURS IN ADVANCE.

BROWARD COUNTY TRAFFIC ENGINEERING DIVISION
PROCEDURE FOR NOTIFICATION OF COMMUNICATION DISRUPTION

COPPER INTERCONNECT CABLE NOTIFICATION CONTACT PERSON:

WHEN COMMUNICATIONS TO AN INTERSECTION MUST BE DISRUPTED BY A CONTRACTOR TO PERFORM WORK, THE CONTRACTOR SHALL PROVIDE TWO DAY ADVANCE NOTICE IN WRITING TO THE BROWARD COUNTY TRAFFIC ENGINEERING DIVISION. THIS NOTIFICATION SHALL BE CONVEYED VIA ELECTRONIC MAIL (EMAIL) TO THE TRAFFIC SIGNAL TECHNICIAN III AT TECOMMUNICATIONS@BROWARD.ORG. NOTIFICATION SHALL INCLUDE CONTACT PERSON, TELEPHONE NUMBER, PURPOSE, LOCATION AND DURATION. THE DISRUPTION SHALL LAST FOR NO MORE THAN 3 CONSECUTIVE BUSINESS DAYS. WHERE POSSIBLE, THE DISRUPTION SHALL BE DURING OFF PEAK HOURS BEGINNING AT 9:00 AM AND ENDING AT 3:00 PM.

FIBER OPTIC CABLE NOTIFICATION CONTACT PERSON :

WHEN COMMUNICATIONS TO AN INTERSECTION MUST BE DISRUPTED BY A CONTRACTOR TO PERFORM WORK, THE CONTRACTOR SHALL PROVIDE TWO DAY ADVANCE NOTICE IN WRITING TO THE BROWARD COUNTY TRAFFIC ENGINEERING DIVISION. THIS NOTIFICATION SHALL BE CONVEYED VIA ELECTRONIC MAIL (EMAIL) TO THE COMMUNICATIONS MANAGER AT TECOMMUNICATIONS@BROWARD.ORG. NOTIFICATION SHALL INCLUDE CONTACT PERSON, TELEPHONE NUMBER, PURPOSE, LOCATION AND DURATION. THE DISRUPTION SHALL LAST FOR NO MORE THAN 3 CONSECUTIVE BUSINESS DAYS. WHERE POSSIBLE, THE DISRUPTION SHALL BE DURING OFF PEAK HOURS BEGINNING AT 9:00 AM AND ENDING AT 3:00 PM.

UTILITY OWNER CONTACT PERSON :

INTERCONNECT COMMUNICATIONS CABLES - (ROBERT BLOUNT) BROWARD COUNTY TRAFFIC ENGINEERING DIVISION (BCTED) 954-847-2745

CITY OF FORT LAUDERDALE PUBLIC WORKS DEPARTMENT ENGINEERING DETAILS 100 North Andrews Avenue, Fort Lauderdale, Florida 33301	BROWARD COUNTY COMMUNICATION NOTES	SHEET NO. GNRL 006 REVISED 2016/08/21

GNRL008 - DRAINAGE NOTES Thursday, July 13, 2017

DRAINAGE NOTES:

1. DRAINAGE PIPE SHALL BE HIGH DENSITY POLYETHYLENE (HDPE) OR REINFORCED CONCRETE (RCP), THE USE OF RCP PIPE FOR PUBLIC ROADWAY CROSSINGS IS PREFERRED.
2. CATCH BASINS, INLETS AND JUNCTION BOXES SHALL NOT BE INSTALLED IN DRIVEWAYS.
3. PRIOR TO BACKFILLING EXFILTRATION TRENCHES, DRAINAGE INLETS OR MANHOLES, THE CONTRACTOR SHALL NOTIFY THE ENGINEERING INSPECTOR FOR AN INSPECTION.
4. DRAINAGE STRUCTURES SHALL BE CLEANED PRIOR TO ACCEPTANCE BY CITY.
5. ALL PIPES SHALL BE LAID IN DRY TRENCH. ALL MUCK OR UNSUITABLE MATERIALS IN TRENCHES, INLETS OR MANHOLES SHALL BE REMOVED AND BACKFILLED WITH SELECTED MATERIAL APPROVED BY THE ENGINEER.
6. MINIMUM COVER FOR HDPE PIPE UNDER ASPHALT SHALL BE 24-INCH COMPACTED LIMEROCK BASE. MINIMUM COVER FOR PIPE UNDER GRASS SHALL BE 18" COMPACTED SUBGRADE.
7. THE CONTRACTOR SHALL MAINTAIN EXISTING DRAINAGE PATTERNS AND PREVENT ADVERSE FLOODING OF THE TRAVEL LANES DURING CONSTRUCTION.
8. MAINTENANCE ACCESS SHALL BE PROVIDED ON BOTH SIDES OF EXFILTRATION TRENCHES IN THE FORM OF MANHOLES OR CATCH BASINS. THE MAXIMUM DISTANCE BETWEEN STORM STRUCTURES SHALL NOT EXCEED TREE HUNDRED (300) FEET).
9. ALL EXFILTRATION SYSTEMS SHALL BE DESIGNED IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION DOCUMENT TITLED "DRAINAGE DESIGN GUIDE", LATEST EDITION.
10. GEOTEXTILE MATERIALS USED IN THE CONSTRUCTION OF EXFILTRATION TRENCHES SHALL BE IN ACCORDANCE WITH THE CRITERIA OF FLORIDA DEPARTMENT OF TRANSPORTATION'S DESIGN STANDARDS LATEST EDITION AND CITY OF FORT LAUDERDALE'S SPECIFICATIONS.

CITY OF FORT LAUDERDALE PUBLIC WORKS DEPARTMENT ENGINEERING DETAILS 100 North Andrews Avenue, Fort Lauderdale, Florida 33301	DRAINAGE NOTES	SHEET NO. GNRL 008 REVISED 2017/07/13

GREN001 - GREEN INFRASTRUCTURE NOTES Monday, May 1, 2017

GENERAL NOTES:

1. FOR RIGHT-OF-WAY (ROW) GREEN INFRASTRUCTURE (GI) FACILITIES WITH DIMENSIONS THAT DEVIATE FROM THE GI STANDARDS AS SHOWN ON CONTRACT PLANS DUE TO FIELD CONDITIONS, REFER TO THE DIMENSION SCHEDULE AND SPECIFICATIONS.
2. THE BOTTOM OF THE GI FACILITY SHOULD BE NO LESS THAN 6" ABOVE OF THE SEASONAL HIGH WATER TABLE (SHWT) AND THE UNDERDRAIN SHOULD BE NO LESS THAN 12" ABOVE THE SHWT.
3. SEE RELATED GI SPECIFICATIONS.

POROUS CONCRETE:

1. MAXIMUM JOINT SPACE IS 1".
2. CONTRACTOR SHALL TRIM (VIA SAWCUT) POROUS CONCRETE PANELS TO NO MORE THAN 6" ON ANY END.
3. NO POROUS CONCRETE PANEL SHALL BE LESS THEN 4' IN LENGTH WITHOUT THE ENGINEER'S APPROVAL.
4. ADJUST THE LIMIT OF WORK TO AVOID END PANELS LESS THEN 4' IN LENGTH.
5. CONTRACTOR SHALL INSTALL #57 STONE IN LIFTS OF 12" (MAX) AND SHALL MAKE TWO PASSES OF A PLATE COMPACTOR (200 LBS MIN) OVER EACH LIFT PRIOR TO INSTALLATION OF #8 LEVELING COURSE.
6. AT THE DIRECTION OF THE ENGINEER, CONTRACTOR TO REPLACE ANY CURB OR DRIVEWAY APRON THAT IS DAMAGED DURING CONSTRUCTION.

STORMWATER BUMP-OUT:

1. THE LOWEST PLANTING MEDIA SURFACE IN STORMWATER BUMP-OUTS SHOULD BE LEVEL ALONG THE ALIGNMENT OF THE STREET. A MILD SLOPE NO GREATER THAN 1 PERCENT IS ACCEPTABLE BUT A LEVEL SURFACE IS RECOMMENDED. IF SURROUNDING SLOPES ARE STEEP, IMPERMEABLE BARRIERS SUCH AS SURFACE CHECK DAMS CAN HELP MAINTAIN A LEVEL SURFACE, AS SHOWN ON CONTRACT DRAWINGS. NOTE THIS DOES NOT APPLY TO THE CROSS-GRADING, IF USED, FROM THE PERIMETER OF THE BUMP-OUT DOWN TO THE LOWEST PLANTING MEDIA SURFACE.
2. WITH THE EXCEPTION OF TREES, MAXIMUM VEGETATION HEIGHT AT MATURITY SHOULD BE NO GREATER THAN 36" ABOVE THE SURROUNDING SIDEWALK ELEVATION, UNLESS OTHERWISE APPROVED BY THE ENGINEER. PLANT SELECTION AND PLACEMENT SHOULD BE DONE TO PREVENT ENCROACHMENT OF PLANTS OUTSIDE OF THE LIMITS OF THE STORMWATER BUMP-OUT AND IN CONSIDERATION OF MAINTAINING ADEQUATE SIGHT LINES BASED ON THE PLACEMENT OF THE STORMWATER BUMP-OUT.
3. ALTHOUGH NOT SHOWN, EXTENDING THE VEGETATED AREA OF A BUMP-OUT INTO THE LIMITS OF THE SIDEWALK IS PERMITTED WHERE SHOWN ON THE CONTRACT DRAWINGS. HOWEVER, ANY REQUIREMENTS/GUIDELINES FOR OTHER STORMWATER CONTROLS LOCATED IN THE SIDEWALK APPLY.

VEGETATION/TREES:

1. THE CONTRACTOR SHALL OBTAIN THE NECESSARY TREE PLANTING PERMIT FROM THE CITY PRIOR TO THE START OF WORK. ALL NECESSARY TREE PLANTING SHALL BE SUPERVISED BY A CERTIFIED ARBORIST.
2. NO TREE SHALL BE REMOVED BY THE CONTRACTOR UNTIL SPECIFICALLY ORDERED IN WRITING TO DO SO BY THE ENGINEER AND WITH APPROVAL FROM THE CITY.
3. TREES SHALL BE STAKED. TREE STAKES ARE TO BE REMOVED BY THE CONTRACTOR NOT LESS THAN ONE YEAR AFTER PLANTING.
4. REPLACEMENT TREES SHALL BE PLANTED WITHIN THE PROJECT AREA AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH STANDARD HIGHWAY SPECIFICATIONS.

CITY OF FORT LAUDERDALE PUBLIC WORKS DEPARTMENT ENGINEERING DETAILS 100 North Andrews Avenue, Fort Lauderdale, Florida 33301	GREEN INFRASTRUCTURE NOTES	SHEET NO. GREN 001 REVISED 2017/5/1

Hazen

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Certificate of Authorization No: 2771

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FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

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DRAWN BY: XXX | DATE: 01/07/2019
DESIGNED BY: XXX | SCALE: VERT 1"=2', HORZ 1"=20'
CHECKED BY: XXX
FIELD BOOK: XXXX

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

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5/26/2021

CONSTRUCTION SET

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
CITY STANDARD DETAILS
GENERAL NOTES

SHEET NO.
CZ-DT-03

TOTAL: 255

CAD FILE:
11868-CZ-DT03

DRAWING FILE NO.
4-142-42

ESC001 - EROSION AND SEDIMENT CONTROL NOTES Saturday, July 08, 2017

EROSION AND SEDIMENT CONTROL:

1. CONTRACTOR TO EMPLOY BEST MANAGEMENT PRACTICES THROUGHOUT CONSTRUCTION IN ORDER TO ENSURE POLLUTION PREVENTION. CONTRACTOR TO COMPLY WITH ALL LOCAL STATE AND OTHER GOVERNMENTAL ENVIRONMENTAL REGULATIONS THROUGHOUT CONSTRUCTION.
2. DURING CONSTRUCTION ALL CATCH BASIN INLETS SHALL BE PROTECTED TO PREVENT SEDIMENT AND DEBRIS FROM ENTERING THE CATCH BASIN.
3. SILT FENCES SHALL BE INSTALLED AS NECESSARY TO CONTROL OR PREVENT DISCHARGE OF SEDIMENT ONTO ADJACENT UNDISTURBED AREAS, OR OFF-SITE AREAS.
4. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE STABILIZED WITHIN A REASONABLE PERIOD OF TIME TO ASSURE MINIMUM EROSION OF SOILS.
5. NO LAND CLEARING OR GRADING SHALL BEGIN UNTIL ALL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
6. ALL EXPOSED AREAS SHALL BE SODDED AS SPECIFIED WITHIN 30 DAYS OF FINAL GRADING.
7. MAINTAIN EROSION CONTROL MEASURES AFTER EACH RAIN AND AT LEAST ONCE A WEEK.
8. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SOIL SEDIMENT FROM LEAVING THE SITE.
9. CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL ORDINANCES THAT APPLY.
10. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY BY CITY, COUNTY, AND STATE OF FLORIDA ON SITE INSPECTION, AT NO ADDITIONAL COST TO THE OWNER.
11. LAND DISTURBING ACTIVITIES SHALL NOT COMMENCE UNTIL APPROVAL TO DO SO HAS BEEN RECEIVED BY GOVERNING AUTHORITIES.
12. IF INSTALLATION OF STORM DRAINAGE SYSTEM SHOULD BE INTERRUPTED BY WEATHER OR NIGHTFALL, THE PIPE ENDS SHALL BE COVERED WITH FILTER FABRIC.
13. BURNING OF DEBRIS WILL NOT BE ALLOWED.
14. CONTRACTOR SHALL BE RESPONSIBLE TO TAKE WHATEVER MEANS NECESSARY TO ESTABLISH PERMANENT SOIL STABILIZATION.
15. CONTRACTOR IS TO PROVIDE EROSION CONTROL/SEDIMENTATION BARRIER (HAY BALES OR SILTATION CURTAIN) TO PREVENT SILTATION OF ADJACENT PROPERTY, STREETS, STORM SEWERS AND WATER WAYS. IN ADDITION CONTRACTOR SHALL PLACE STRAW, MULCH OR OTHER SUITABLE MATERIAL ON GROUND IN AREAS WHERE CONSTRUCTION RELATED TRAFFIC IS TO ENTER AND EXIT SITE IF IN THE OPINION OF THE ENGINEER AND/OR LOCAL AUTHORITIES IF EXCESSIVE QUANTITIES OF EARTH ARE TRANSPORTED OFF-SITE EITHER BY NATURAL DRAINAGE OR BY VEHICULAR TRAFFIC. THE CONTRACTOR IS TO REMOVE AND CLEAN SAID EARTH TO THE SATISFACTION OF THE ENGINEER AND/OR AUTHORITIES. EROSION CONTROL BARRIER SHALL BE ESTABLISHED AS THE FIRST ITEM OF WORK.

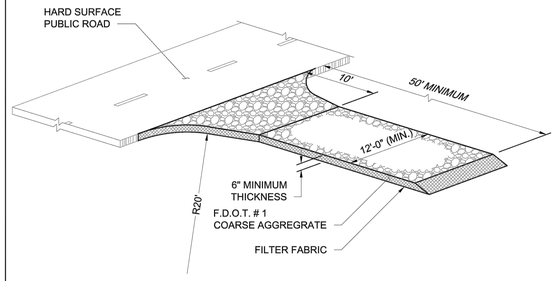
CITY OF FORT LAUDERDALE PUBLIC WORKS DEPARTMENT ENGINEERING DETAILS 100 North Andrews Avenue, Fort Lauderdale, Florida 33301	EROSION AND SEDIMENT CONTROL NOTES SHEET 1	STDRD. NO. ESC 001 REVISED 2017/07/08

ESC001 - EROSION AND SEDIMENT CONTROL NOTES Saturday, July 08, 2017

16. THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION'S STORMWATER PERMITTING PROGRAM APPLIES TO ALL CONSTRUCTION ACTIVITY THAT: 1) CONTRIBUTE STORMWATER DISCHARGES TO SURFACE WATER OF THE STATE OR INTO A MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4); 2) DISTURBS ONE OR MORE ACRES OF LAND; OR 3) LESS THAN ONE ACRE IS INCLUDED IF THE ACTIVITY IS PART OF A LARGER COMMON PLAN OF DEVELOPMENT THAT WILL MEET OR EXCEED THE ONCE ACRE THRESHOLD. DISTURB INCLUDES CLEARING, GRADING AND EXCAVATING.
17. FOR CONSTRUCTION ACTIVITY THAT IS SUBJECT TO THE NPDES FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION'S STORMWATER PERMITTING PROGRAM, THE CONTRACTOR SHALL:
    - 17.1. OBTAIN A GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION DOCUMENT 62-621.300(4)(A).
    - 17.2. COMPLY WITH ALL REQUIREMENTS OF THE GENERIC PERMIT.
    - 17.3. DEVELOP AND IMPLEMENT A STORMWATER POLLUTION PREVENTION PLAN (SWPPP).
    - 17.4. COMPLETE A NOTICE OF INTENT (NOI) FLORIDA DEPARTMENT OF ENVIORNMENTAL PROTECTION FORM 62-621.300(4)(B) IN ITS ENTIRETY USING THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION'S WEBSITE.
18. SUBMIT COPIES OF THE SWPPP AND THE NOI TO THE ENGINEER AS INFORMATIONAL RECORDS. THESE SUBMITTALS WILL NOT BE REVIEWED BY THE ENGINEER.
19. CONTRACTOR TO CLEAN AND REPAIR ALL EXISTING STORMWATER INFRASTRUCTURE THAT IS IMPACTED BY CONSTRUCTION ACTIVITIES, BEFORE LEAVING THE JOBSITE.
20. CONTRACTOR TO REMOVE ALL FILTER FABRIC AND POLLUTION PREVENTION ITEMS BEFORE THE FINAL WALK-THROUGH.

CITY OF FORT LAUDERDALE PUBLIC WORKS DEPARTMENT ENGINEERING DETAILS 100 North Andrews Avenue, Fort Lauderdale, Florida 33301	EROSION AND SEDIMENT CONTROL NOTES SHEET 2	STDRD. NO. ESC 001 REVISED 2017/07/08

ESC002 - GRAVEL CONSTRUCTION ENTRANCE Tuesday, July 11, 2017



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 RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABLIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

CITY OF FORT LAUDERDALE PUBLIC WORKS DEPARTMENT ENGINEERING DETAILS 100 North Andrews Avenue, Fort Lauderdale, Florida 33301	GRAVEL CONSTRUCTION ENTRANCE	STDRD. NO. ESC 002 REVISED 2017/07/08

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DRAWN BY: XXX | DATE: 01/07/2019
DESIGNED BY: XXX | SCALE: VERT 1"=2' HORZ 1"=20'
CHECKED BY: XXX
FIELD BOOK: XXXX

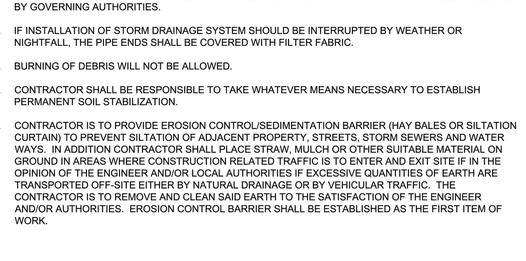
CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

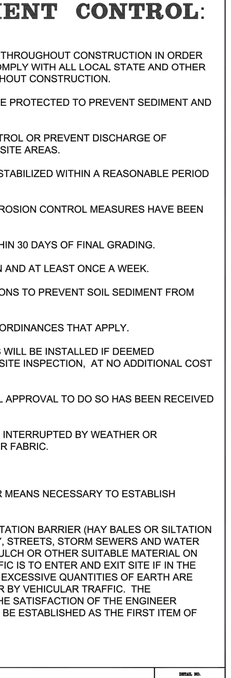
ESC004 - DROP INLET PROTECTION - SEDIMENT BARRIER Tuesday, September 20, 2016

CONTRACTOR'S RESPONSIBILITY:

EROSION AND SEDIMENTATION CONTROLS ARE PERFORMANCE BASED CRITERIA, IT IS THE RESPONSIBILITY OF THE CONTRACTOR AS PART OF HIS CONSTRUCTION SITE MANAGEMENT TO DO WHATEVER IS REQUIRED TO EMPLOY ADDITIONAL PROCEDURES TO PROVIDE CLEAN RUNOFF FROM A SITE.

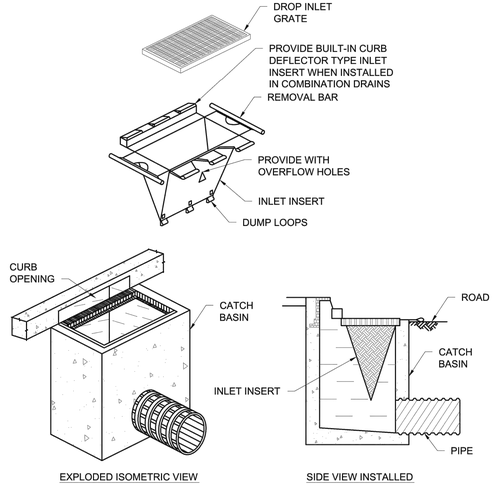
NOTES:
1. DROP INLET SEDIMENT BARRIERS ARE TO BE USED FOR SMALL, NEARLY LEVEL DRAINAGE AREAS. (LESS THAN 5%).
2. USE 2"X4" WOOD OR EQUIVALENT METAL STAKES. (3' MIN. LENGTH).
3. INSTALL 2"X4" WOOD TOP FRAME TO INSURE STABILITY.
4. THE TOP OF THE FRAME (PONDING HEIGHT) MUST BE WELL BELOW THE GROUND ELEVATION DOWNSLOPE TO PREVENT RUNOFF FROM BYPASSING THE INLET.
   A TEMPORARY DIKE MAY BE NECESSARY ON THE DOWNSLOPE SIDE OF THE STRUCTURE.
5. MIRAFI OR APPROVED EROSION CONTROL FABRIC SHALL BE USED AS A FILTER MEDIA.
6. THIS METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS, SUCH AS IN STREET OR HIGHWAY MEDIANS.





CITY OF FORT LAUDERDALE PUBLIC WORKS DEPARTMENT ENGINEERING DETAILS 100 North Andrews Avenue, Fort Lauderdale, Florida 33301	DROP INLET PROTECTION - SEDIMENT BARRIER	STDRD. NO. ESC 004 REVISED 2016/08/21

ESC005 - DROP INLET PROTECTION - INLET INSERT Wednesday, July 12, 2017

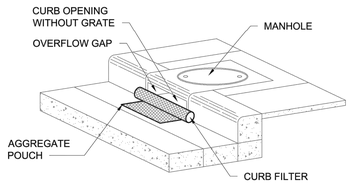


NOTES:

1. THE INLET INSERT SHALL BE A SEDIMENT CONTROL DEVICE DESIGNED FOR DROP INLETS OR COMBINATION DRAINS WHERE A DROP INLET IS COUPLED WITH A CURB INLET.
2. THE INLET INSERT SHALL BE MADE OF A PERMEABLE GEOTEXTILE THAT ALLOWS WATER TO PASS BUT PREVENTS SILT AND SEDIMENT FROM CLOGGING THE DRAIN SYSTEM.
3. THE CONTRACTOR SHALL CLEAN AND INSPECT REGULARLY AND AFTER EVERY MAJOR RAIN EVENT.
4. INLET INSERTS SHALL BE "SILTSACK" BY ACF ENVIRONMENTAL, OR EQUAL. SUBMIT SHOP DRAWINGS IN ACCORDANCE WITH THE SPECIFICATIONS.

CITY OF FORT LAUDERDALE PUBLIC WORKS DEPARTMENT ENGINEERING DETAILS 100 North Andrews Avenue, Fort Lauderdale, Florida 33301	DROP INLET PROTECTION - INLET INSERT	STDRD. NO. ESC 005 REVISED 2017/07/12

ESC006 - CURB INLET PROTECTION - CURB FILTER Wednesday, July 19, 2017



NOTES:

1. INSTALL CURB FILTERS AT ALL INLETS WITHOUT GRATES TO KEEP SILT, SEDIMENT AND CONSTRUCTION DEBRIS OUT OF THE STORM SYSTEM
2. THE CURB FILTER SHALL BE DANDY CURB AS MANUFACTURED BY DANDY PRODUCTS INC., OR EQUAL. SUBMIT SHOP A SHOP DRAWING FOR THE CURB FILTERS.
3. THE CURB FILTER SHALL FORM OF A CYLINDRICAL TUBE PLACED IN FRONT OF AND EXTENDING BEYOND THE INLET OPENING ON BOTH SIDES.
4. THE CURB FILTER SHALL HAVE A POUCH ON THE STREET SIDE OF THE UNIT FOR STONE AGGREGATE TO HOLD THE FILTER IN PLACE.
5. THE CURB FILTER SHALL BE CONSTRUCTED OF A HIGH VISIBILITY ORANGE MONOFILAMENT FABRIC.
6. FILL POUCH WITH FDOT #57 STONE AGGREGATE TO A LEVEL (AT LEAST HALF-FULL) THAT WILL KEEP UNIT IN PLACE DURING A RAIN EVENT AND CREATE A SEAL BETWEEN THE CURB FILTER AND THE SURFACE OF THE STREET.
7. CENTER THE UNIT AGAINST CURB OR MEDIAN INLET OPENING SO THAT THE CURB SIDE OF THE UNIT CREATES A SEAL WITH THE CURB OR MEDIAN BARRIER AND INLET STRUCTURE. THERE WILL BE APPROXIMATELY TWELVE (12) INCHES OF THE INLET PROTECTION UNIT OVERHANGING ON EACH SIDE OF THE OPENING.
8. THE CONTRACTOR SHALL REMOVE ALL ACCUMULATED SEDIMENT AND DEBRIS FROM SURFACE AND VICINITY OF UNIT AFTER EACH RAIN EVENT.

CITY OF FORT LAUDERDALE PUBLIC WORKS DEPARTMENT ENGINEERING DETAILS 100 North Andrews Avenue, Fort Lauderdale, Florida 33301	CURB INLET PROTECTION - CURB FILTER	STDRD. NO. ESC 006 REVISED 2017/07/19

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

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8/26/2021

CONSTRUCTION SET

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
CITY STANDARD DETAILS
EROSION CONTROL - SHEET 1

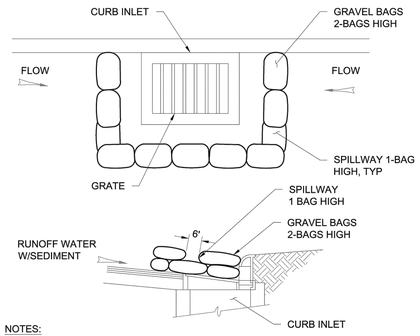
SHEET NO.
CZ-DT-04

TOTAL: 255

CAD FILE: 11868-CZ-DT04

DRAWING FILE NO. 4-142-42

ESC007 - CURB INLET PROTECTION - GRAVEL BAG Saturday, July 08, 2017

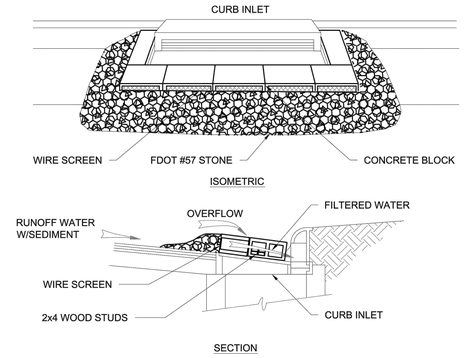


NOTES:

1. A SPILLWAY SHALL BE DESIGNATED FOR EACH DIRECTION OF APPROACHING FLOW AS SHOWN. THE SPILLWAY SHALL BE LOCATED TO ALLOW THE MAXIMUM AMOUNT OF STORMWATER TO POOL WITHOUT FLOODING AREAS UP GRADE OF THE INLET.
2. FOR INLETS THAT ARE NOT ADJACENT TO CURBS, PLACE GRAVEL BAGS ONE BAG HIGH AROUND THE ENTIRETY OF THE INLET TO ACCOMMODATE FLOW FROM ALL DIRECTIONS.
3. BAG MATERIAL: BAGS SHALL BE WOVEN POLYPROPYLENE, POLYETHYLENE OR POLYAMIDE FABRIC, MINIMUM UNIT WEIGHT FOUR OUNCES PER SQUARE YARD, MULLEN BURST STRENGTH EXCEEDING 300 PSI IN CONFORMANCE WITH THE REQUIREMENTS IN ASTM D3786, AND ULTRAVIOLET STABILITY EXCEEDING 70% IN CONFORMANCE WITH THE REQUIREMENTS IN ASTM D4355.
4. BAG SIZE: EACH GRAVEL-FILLED BAG SHALL BE 18-INCHES X 12-INCHES X 3-INCHES AND HAVE A MASS OF APPROXIMATELY 33 LBS. ALTERNATIVE BAG SIZES SHALL BE CONSIDERED BASED ON LOCALLY AVAILABLE MATERIALS.
5. FILL MATERIAL: GRAVEL SHALL BE PEA GRAVEL 3/8 INCHES IN DIAMETER AND SHALL BE CLEAN AND FREE OF CLAY BALLS, ORGANIC MATTER, OR OTHER DELETERIOUS MATERIALS.

CITY OF FORT LAUDERDALE PUBLIC WORKS DEPARTMENT ENGINEERING DETAILS 100 North Andrews Avenue, Fort Lauderdale, Florida 33301 | CURB INLET PROTECTION - GRAVEL BAG | DETAIL No. ESC 007 | REVISED: 2017/08/08

ESC008 - CURB INLET PROTECTION - BLOCK AND STONE Saturday, July 08, 2017



NOTES:

1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE FOR DEWATERING. FOUNDATION SHALL BE 2 INCHES MINIMUM BELOW REST OF INLET AND BLOCKS SHALL BE PLACED AGAINST INLET SUPPORT.
2. HARDWARE CLOTH OR 1/2" WIRE MESH SHALL BE PLACED OVER BLOCK OPENINGS TO SUPPORT STONE.
3. USE CLEAN STONE OR GRAVEL 1/2 - 3/4 INCH IN DIAMETER PLACED 2 INCHES BELOW THE TOP OF THE BLOCK ON A 2:1 SLOPE OR FLATTER.
4. FOR INLETS IN ROADWAYS WITH HEAVY TRAFFIC CONDITIONS PREFABRICATED FILTER INSERTS MAY BE USED.

CITY OF FORT LAUDERDALE PUBLIC WORKS DEPARTMENT ENGINEERING DETAILS 100 North Andrews Avenue, Fort Lauderdale, Florida 33301 | CURB INLET PROTECTION - BLOCK AND STONE | DETAIL No. ESC 007 | REVISED: 2017/07/08

ESC009 - SILT FENCE - SHEET 1 Wednesday, July 12, 2017

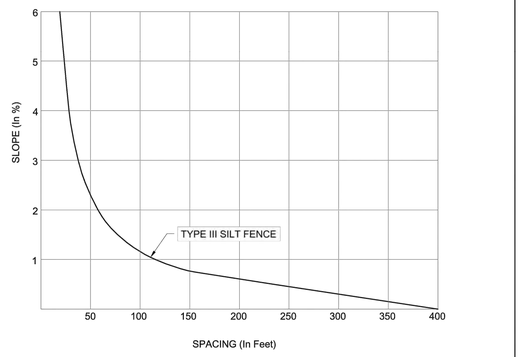
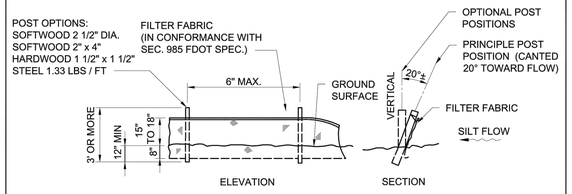


CHART 1: SILT FENCE SPACING



TYPE III SILT FENCE

CITY OF FORT LAUDERDALE PUBLIC WORKS DEPARTMENT ENGINEERING DETAILS 100 North Andrews Avenue, Fort Lauderdale, Florida 33301 | SILT FENCE - SHEET 1 | DETAIL No. ESC 009 | REVISED: 2017/07/12

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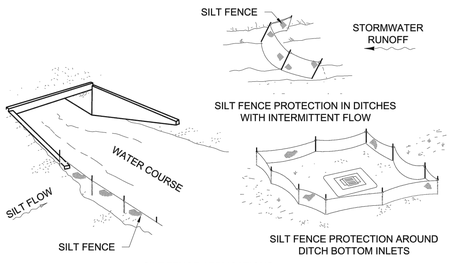
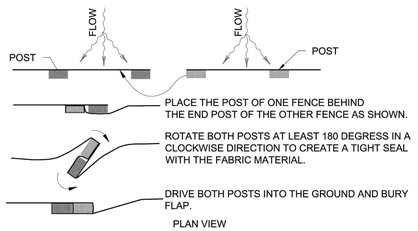
ESC010 - SILT FENCE - SHEET 2 Tuesday, July 11, 2017



SILT FENCE APPLICATIONS



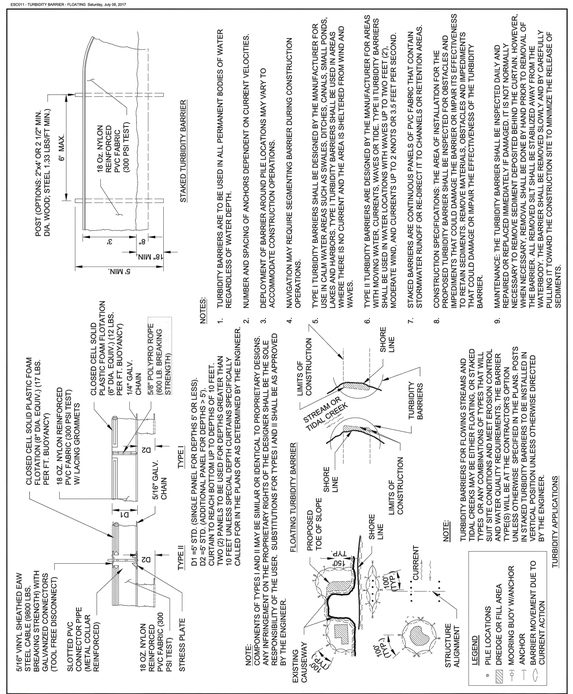
JOINING TWO SILT FENCES

NOTES:

1. WHERE USED IN DITCHES, THE SPACING FOR TYPE III SILT FENCE SHALL BE IN ACCORDANCE WITH CHART 1.
2. DO NOT CONSTRUCT SILT FENCES ACROSS PERMANENT FLOWING WATERCOURSES. SILT FENCES ARE TO BE AT UPLAND LOCATIONS AND TURBIDITY BARRIERS USED AT PERMANENT BODIES OF WATER.
3. WHERE USED AS SLOPE PROTECTION . SILT FENCE IS TO BE CONSTRUCTED ON 0% LONGITUDINAL GRADE TO AVOID CHANNELIZING RUNOFF ALONG THE LENGTH OF THE FENCE.

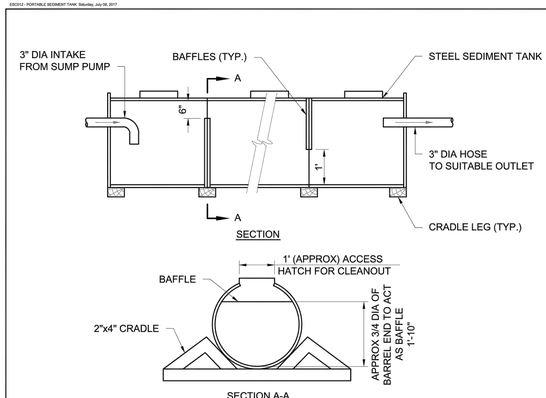
CITY OF FORT LAUDERDALE PUBLIC WORKS DEPARTMENT ENGINEERING DETAILS 100 North Andrews Avenue, Fort Lauderdale, Florida 33301 | SILT FENCE - SHEET 2 | DETAIL No. ESC 010 | REVISED: 2017/07/11

ESC011 - TURBIDITY BARRIER - FLOATING Saturday, July 08, 2017



CITY OF FORT LAUDERDALE PUBLIC WORKS DEPARTMENT ENGINEERING DETAILS 100 North Andrews Avenue, Fort Lauderdale, Florida 33301 | TURBIDITY BARRIER - FLOATING | DETAIL No. ESC 011 | REVISED: 2017/07/08

ESC012 - PORTABLE SEDIMENT TANK Saturday, July 08, 2017



NOTES:

1. CLEAN OUT THE SEDIMENT TANK WHEN ONE THIRD (1/3) FILLED WITH SILT.
2. ALL SEDIMENT COLLECTED IN THE TANK SHALL BE DISPOSED OF IN A SEDIMENT TRAPPING DEVICE, AN APPROVED LOCATION IN WHICH FURTHER SEDIMENT TRANSPORT WILL NOT OCCUR OR AS APPROVED BY THE INSPECTOR.
3. PORTABLE SEDIMENT TANK SHALL BE AN ABOVE GROUND HORIZONTAL SINGLE-WALL UL-142 MANUFACTURED BY HIGHLAND TANK OR WEIR BOX MANUFACTURED BY RAIN FOR RENT OR EQUIVALENT.

CITY OF FORT LAUDERDALE PUBLIC WORKS DEPARTMENT ENGINEERING DETAILS 100 North Andrews Avenue, Fort Lauderdale, Florida 33301 | PORTABLE SEDIMENT TANK | DETAIL No. ESC 012 | REVISED: 2017/07/08

ENGINEER: PATRICK J. GIBNEY
REG. No.: 49428
DATE: 01/22/2021

TEL: 954-987-0066
FAX: 954-987-2949

DRAWN BY: XXX | DATE: 01/07/2019
DESIGNED BY: XXX | SCALE: VERT 1"=2', HORZ 1"=20'
CHECKED BY: XXX
FIELD BOOK: XXXX

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

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8/26/2021

CONSTRUCTION SET

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
CITY STANDARD DETAILS
EROSION CONTROL - SHEET 2

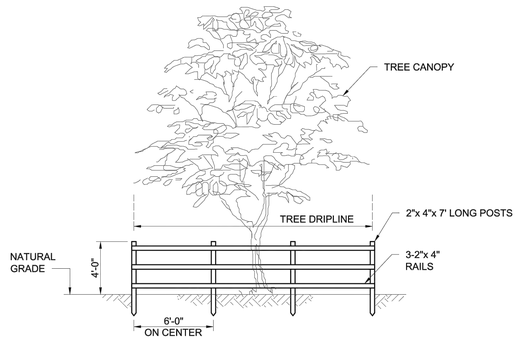
SHEET NO.
CZ-DT-05

TOTAL: 255

CAD FILE:
11868-CZ-DT05

DRAWING FILE NO.
4-142-42

ROAD101 - TREE PROTECTION BARRIER Monday, July 17, 2017



NOTES:

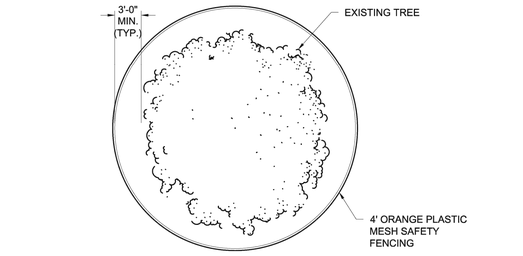
1. BEFORE SITE CLEARING BEGINS PROVIDE NECESSARY MEASURES TO ASSURE SURVIVAL OF VEGETATION.
2. REMOVE BARRIERS AND RESTORE SURFACES PRIOR TO FINAL CLOSEOUT.

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING DETAILS
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

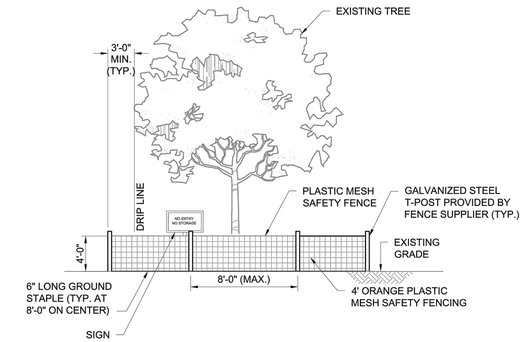
TREE PROTECTION BARRIER

SHEET NO. ROAD 101
REVISED: 2017/07/17

ROAD102 - TREE PROTECTION FENCE Monday, July 24, 2017



PLAN



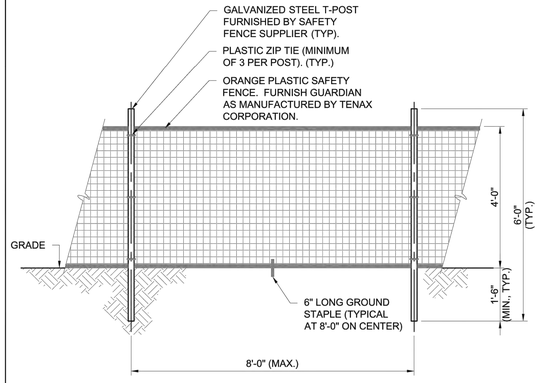
ELEVATION

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING DETAILS
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

TREE PROTECTION FENCE

SHEET NO. ROAD 102
REVISED: 2017/07/24

ROAD103 - PLASTIC SAFETY FENCE Tuesday, September 20, 2016



NOTES:

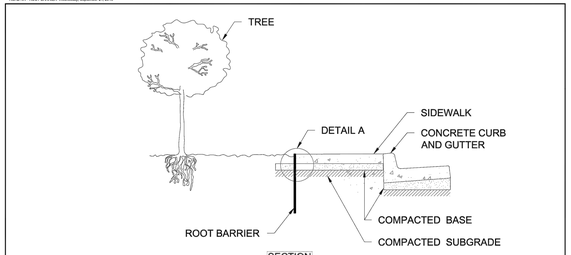
1. REBAR SHALL NOT BE USED FOR SUPPORTING THE FENCE.
2. LOOP THE ZIP TIES THROUGH THE AVAILABLE HOLES OR "TEETH" IN THE POST TO PREVENT THE FENCE FROM SLIDING DOWN THE POST.
3. PLASTIC ZIP TIES SHALL BE AS FOLLOWS:
   A. MINIMUM WIDTH = 0.3 INCHES.
   B. LENGTH = AS REQUIRED.
   C. COLOR = BLACK WITH UV STABILIZER.

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING DETAILS
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

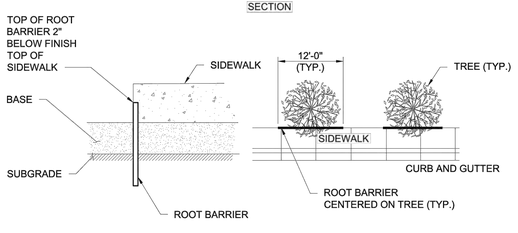
PLASTIC SAFETY FENCE

SHEET NO. ROAD 103
REVISED: 2016/08/21

ROAD104 - ROOT BARRIER Wednesday, September 21, 2016



SECTION



DETAIL A

PLAN

NOTES:

1. ROOT BARRIERS SHALL BE INSTALLED WHEN ROOT BALL IS WITHIN 8'-0" OF SIDEWALK OR AS INDICATED ON THE PLANS.
2. ROOT BARRIER SHALL BE UB 24-2 BY DEEPROOT, OR EQUAL. SUBMIT SHOP DRAWING.
3. TRENCH TO APPROPRIATE DEPTH FOR INSTALLATION OF ROOT BARRIER SO THAT TOP OF BARRIER IS 2" BELOW TOP OF SIDEWALK .
4. PLACE ROOT BARRIER IN TRENCH, VERTICAL RIBS MUST FACE TOWARD TREE ROOTS.
5. BACKFILL AND COMPACT.

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING DETAILS
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

ROOT BARRIER

SHEET NO. ROAD 104
REVISED: 2016/08/21

Hazen

HAZEN AND SAWYER
4000 HOLLYWOOD BLVD, SUITE 750N
HOLLYWOOD, FLORIDA 33021

Certificate of Authorization No: 2771

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ENGINEERS • PLANNERS • SURVEYORS
3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309
FAX: (954) 739-6409 TEL.: (954) 739-6400

FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

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ENGINEER: PATRICK J. GIBNEY
REG. No.: 49428
DATE: 01/22/2021

TEL: 954-987-0066
FAX: 954-987-2949

DRAWN BY: XXX
DATE: 01/07/2019
DESIGNED BY: XXX
SCALE: VERT 1"=2', HORZ 1"=20'
CHECKED BY: XXX
FIELD BOOK: XXXX

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

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8/26/2021

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

CONSTRUCTION SET

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
CITY STANDARD DETAILS
EROSION CONTROL - SHEET 3

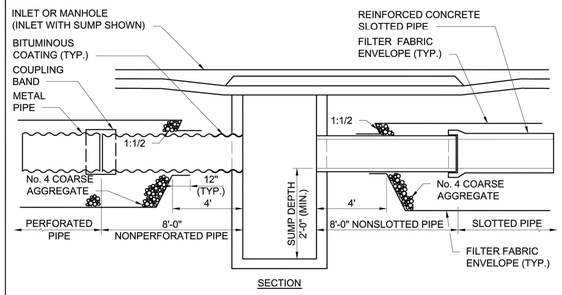
SHEET NO.
CZ-DT-06

TOTAL: 255

CAD FILE: 11868-CZ-DT06

DRAWING FILE NO. 4-142-42

STRM001 - EXFILTRATION TRENCH LONGITUDINAL SECTION Wednesday, September 21, 2016



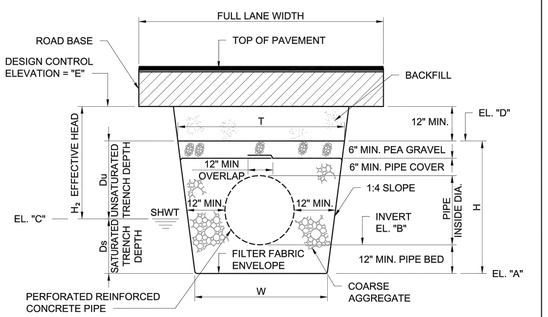
SECTION

NOTES:

1. EXFILTRATION PIPE SHALL COMPLY WITH FDOT STANDARD SPECIFICATION SECTION 443.
2. CONCRETE PIPE SHALL BE PLACED WITH SLOTS POSITIONED ON SIDES.
3. ALIGNMENT JOINTS ARE STANDARD (GASKETS NOT REQUIRED). RECORREGATION OF METAL PIPE ENDS NOT REQUIRED.
4. FILTER FABRIC SHALL BE SUBSURFACE DRAINAGE TYPE PER FDOT SECTION 985. ALL FILTER FABRIC JOINTS SHALL LAP A MINIMUM OF 2 FEET.
5. PREVENT CONTAMINATION OF THE EXFILTRATION TRENCH WITH SAND, SILT AND FOREIGN MATERIALS.
6. NO WEEP HOLES SHALL BE PERMITTED IN STRUCTURES.
7. PIPE INVERT SHALL BE AT OR ABOVE THE WATER TABLE WHEN POSSIBLE.
8. COAT END OF METAL PIPE AT MANHOLE CONNECTION WITH A BITUMINOUS COATING. COATING SHALL EXTEND 12" BEYOND EXTERIOR OF MANHOLE.

CITY OF FORT LAUDERDALE PUBLIC WORKS DEPARTMENT ENGINEERING DETAILS 100 North Andrews Avenue, Fort Lauderdale, Florida 33301	EXFILTRATION TRENCH LONGITUDINAL SECTION	STRM NO. STRM 001 REVISED 2016/08/21

STRM002 - EXFILTRATION TRENCH CROSS SECTION Tuesday, September 20, 2016

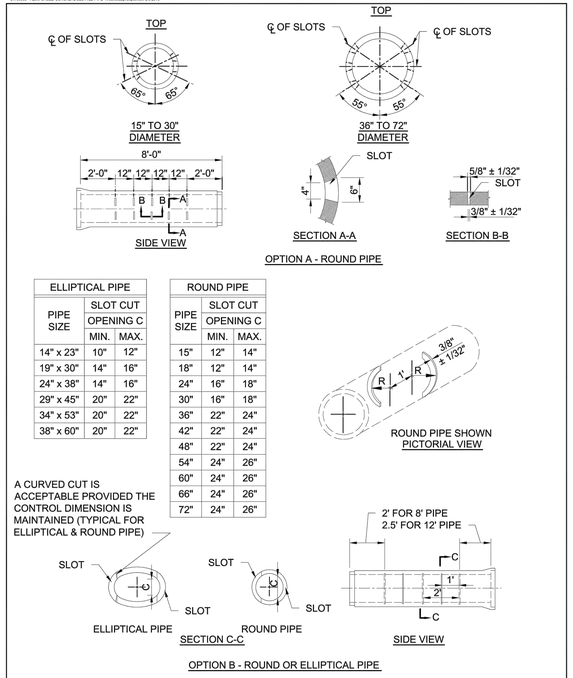


TRENCH SCHEDULE		
PARAMETER	TRENCH 1	TRENCH 2
PIPE DIAMETER		
W		
T		
H		
Ds		
Du		
H_2		
EL. "A"		
EL. "B"		
EL. "C"/(SHWT)		
EL. "D"		
EL. "E" (DCE)		

NOTES:
DCE: DESIGN CONTROL ELEVATION
SHWT: SEASONAL HIGH WATER TABLE

CITY OF FORT LAUDERDALE PUBLIC WORKS DEPARTMENT ENGINEERING DETAILS 100 North Andrews Avenue, Fort Lauderdale, Florida 33301	EXFILTRATION TRENCH CROSS SECTION	STRM NO. STRM 002 REVISED 2016/08/21

STRM003 - REINFORCED CONCRETE SLOTTED PIPE Wednesday, September 21, 2016



ELLIPTICAL PIPE		
PIPE SIZE	SLOT CUT OPENING C	
	MIN.	MAX.
14" x 23"	10"	12"
19" x 30"	14"	16"
24" x 38"	14"	16"
29" x 45"	20"	22"
34" x 53"	20"	22"
38" x 60"	20"	22"

ROUND PIPE		
PIPE SIZE	SLOT CUT OPENING C	
	MIN.	MAX.
15"	12"	14"
18"	12"	14"
24"	16"	18"
30"	16"	18"
36"	22"	24"
42"	22"	24"
48"	22"	24"
54"	24"	26"
60"	24"	26"
66"	24"	26"
72"	24"	26"

ROUND PIPE SHOWN
PICTORIAL VIEW

A CURVED CUT IS ACCEPTABLE PROVIDED THE CONTROL DIMENSION IS MAINTAINED (TYPICAL FOR ELLIPTICAL & ROUND PIPE)

ELLIPTICAL PIPE
SECTION C-C
ROUND PIPE
SIDE VIEW

OPTION B - ROUND OR ELLIPTICAL PIPE

CITY OF FORT LAUDERDALE PUBLIC WORKS DEPARTMENT ENGINEERING DETAILS 100 North Andrews Avenue, Fort Lauderdale, Florida 33301	REINFORCED CONCRETE SLOTTED PIPE	STRM NO. STRM 003 REVISED 2016/08/21

Hazen

HAZEN AND SAWYER
4000 HOLLYWOOD BLVD, SUITE 750N
HOLLYWOOD, FLORIDA 33021

Certificate of Authorization No: 2771

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ENGINEER: PATRICK J. GIBNEY
REG. No.: 49428
DATE: 01/22/2021

TEL: 954-987-0066
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DRAWN BY: XXX
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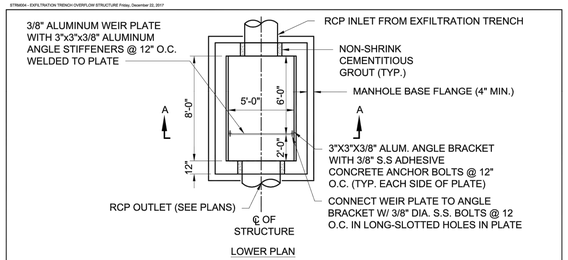
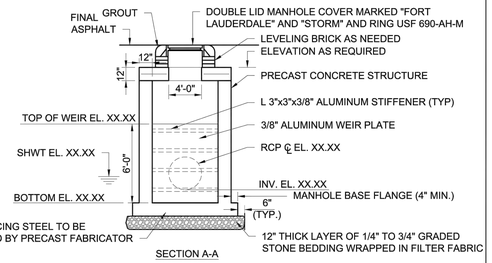
DESIGNED BY: XXX
SCALE: VERT 1"=2' HORZ 1"=20'
CHECKED BY: XXX
FIELD BOOK: XXXX

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

STRM004 - EXFILTRATION TRENCH OVERFLOW STRUCTURE Friday, December 22, 2017



LOWER PLAN



SECTION A-A

NOTES:

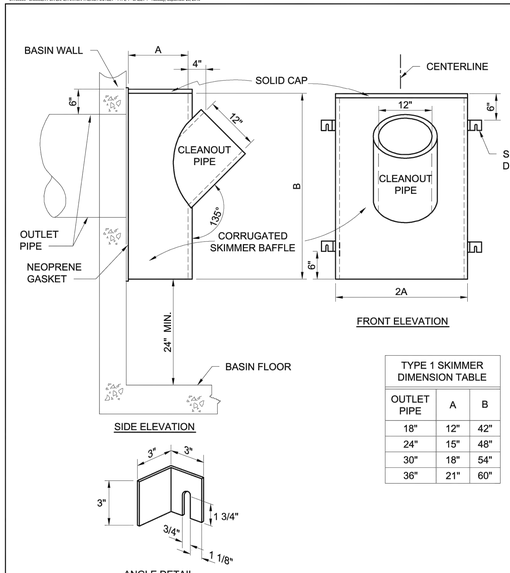
1. ALL PRECAST CONCRETE SECTIONS SHALL CONFORM TO ASTM C478.
2. CONTRACTOR SHALL SUBMIT SHOP DRAWING FOR ENGINEER'S REVIEW AND APPROVAL. SHOP DRAWING SHALL INCLUDE DESIGN CALCULATIONS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA.
3. SHOP DRAWINGS SHALL INCLUDE CALCULATIONS DEMONSTRATING THAT STRUCTURE WILL RESIST FLOATION WHEN EMPTY AND SUBJECT TO GROUNDWATER TO TOP OF STRUCTURE.
4. PRECAST CONCRETE SECTION SHALL BE DESIGNED FOR THE FOLLOWING LOADS:
   a. LATERAL SOIL PRESSURE.
   b. GROUNDWATER ELEVATION = AT GRADE
   c. COMPACTION OF SOIL DURING BACKFILL.
   d. ADDITION STRESSES INDUCED BY TRANSPORTATION AND HANDLING.
   e. PIPE THRUST = 500 LB.
   f. H-20 TRUCK LOAD.

LEGEND:

SHWT : SEASONAL HIGH WATER

CITY OF FORT LAUDERDALE PUBLIC WORKS DEPARTMENT ENGINEERING DETAILS 100 North Andrews Avenue, Fort Lauderdale, Florida 33301	TRENCH OVERFLOW STRUCTURE PLAN AND SECTION SHEET 1	STRM NO. STRM 004 REVISED 2017/12/22

STRM005 - SKIMMER FOR EXFILTRATION TRENCH OUTLET - TYPE 1 - SHEET 1 Tuesday, September 20, 2016



SIDE ELEVATION

FRONT ELEVATION

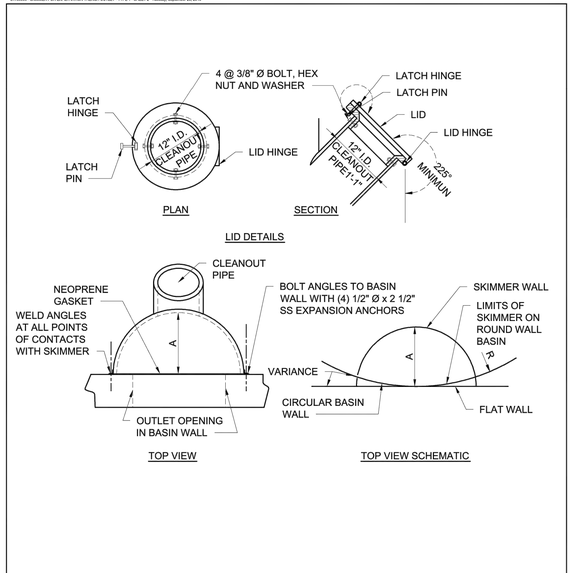
TYPE 1 SKIMMER DIMENSION TABLE		
OUTLET PIPE	A	B
18"	12"	42"
24"	15"	48"
30"	18"	54"
36"	21"	60"

ANGLE DETAIL

ANGLES ON OTHER SIDE OF SKIMMER ARE MIRROR IMAGE

CITY OF FORT LAUDERDALE PUBLIC WORKS DEPARTMENT ENGINEERING DETAILS 100 North Andrews Avenue, Fort Lauderdale, Florida 33301	SKIMMER FOR EXFILTRATION TRENCH OUTLET TYPE 1 - SHEET 1	STRM NO. STRM 005 REVISED 2016/08/21

STRM006 - SKIMMER FOR EXFILTRATION TRENCH OUTLET - TYPE 1 - SHEET 2 Tuesday, September 20, 2016



TOP VIEW

TOP VIEW SCHEMATIC

CITY OF FORT LAUDERDALE PUBLIC WORKS DEPARTMENT ENGINEERING DETAILS 100 North Andrews Avenue, Fort Lauderdale, Florida 33301	2016/09/21 SKIMMER FOR EXFILTRATION TRENCH OUTLET TYPE 1 - SHEET 2	STRM NO. STRM 006 REVISED 2016/08/21

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NO.	DATE	BY	CHK'D	DESCRIPTION

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8/26/2021

CONSTRUCTION SET

PROJECT # 11868
STORMWATER IMPROVEMENTS
RIVER OAKS NEIGHBORHOOD
CITY STANDARD DETAILS STORM
DRAINAGE - SHEET 1

SHEET NO.
CZ-DT-07

TOTAL: 255

CAD FILE:
11868-CZ-DT07

DRAWING FILE NO.
4-142-42