

SFWMD PERMIT NO: 06-01260-S
 BC EPGMD PERMIT NO: BP6659-15
 BC EPGMD PERMIT NO: DF87-1147

LAKE REMEDIATION PLANS

FOR

O'CONNOR HOLDING PROPERTY

NW 15TH AVENUE
 POMPANO BEACH, FLORIDA 33064

GOLD COAST PLAT EXISTING PERMITS UTILIZING EXISTING LAKE

GOLD COAST MASTER PLAT
 SOUTH FLORIDA WATER MANAGEMENT DISTRICT
 PERMIT NO: 06-01260-S
 APPLICATION NO: 07137-B
 OWNER: GOLD COAST PROPERTY ASSOCIATION

SOUTH PORTION OF PARCEL B
 BROWARD COUNTY ENVIRONMENTAL
 PROTECTION AND GROWTH MANAGEMENT
 DIVISION
 PERMIT NO: 43-27-48-42
 APPLICATION NO: N/A
 OWNER: BOND PLUMBING/POMPANO POWER/TAW

PARCEL A AND PORTION OF PARCEL B
 BROWARD COUNTY ENVIRONMENTAL
 PROTECTION AND GROWTH MANAGEMENT
 DIVISION
 PERMIT NO: SWM2013-008-0
 APPLICATION NO: N/A
 OWNER: JSN NO.1 LLC

**BROWARD COUNTY ENVIRONMENTAL
 PROTECTION AND GROWTH MANAGEMENT
 DIVISION**
 PERMIT NO: 21-27-48-42
 APPLICATION NO: N/A
 OWNER: JSN NO.1 LLC

SOUTH FLORIDA WATER MANAGEMENT DISTRICT
 PERMIT NO: 06-00727-S
 APPLICATION NO: N/A
 OWNER: JSN NO.1 LLC

NORTH PORTION OF PARCEL B
 BROWARD COUNTY ENVIRONMENTAL
 PROTECTION AND GROWTH MANAGEMENT
 DIVISION
 PERMIT NO: SWM2009-012-0
 APPLICATION NO: N/A
 OWNER: 21ST CENTURY

PARCEL C
 BROWARD COUNTY ENVIRONMENTAL
 PROTECTION AND GROWTH MANAGEMENT
 DIVISION
 PERMIT NO: 17-27-48-42
 APPLICATION NO: N/A
 OWNER: BAER'S FURNITURE

PARCEL D
 BROWARD COUNTY ENVIRONMENTAL
 PROTECTION AND GROWTH MANAGEMENT
 DIVISION
 PERMIT NO: SWM1996-016-0
 APPLICATION NO: N/A
 OWNER: OLDCASTLE APG SOUTH

PORTION OF PARCEL G & E
 BROWARD COUNTY ENVIRONMENTAL
 PROTECTION AND GROWTH MANAGEMENT
 DIVISION
 PERMIT NO: SWM1995-124-0
 APPLICATION NO: N/A
 OWNER: BONSAL AMERICAN INC.

SOUTH FLORIDA WATER MANAGEMENT DISTRICT
 PERMIT NO: 06-02197-P
 APPLICATION NO: N/A
 OWNER: BONSAL AMERICAN INC.

PORTION OF PARCEL E
 BROWARD COUNTY ENVIRONMENTAL
 PROTECTION AND GROWTH MANAGEMENT
 DIVISION
 PERMIT NO: SWM2000-161-0
 APPLICATION NO: N/A
 OWNER: FLORIDA WAVE PROJECT

SOUTH FLORIDA WATER MANAGEMENT DISTRICT
 PERMIT NO: 06-1260-02
 APPLICATION NO: N/A
 OWNER: FLORIDA WAVE PROJECT

PARCEL F
 BROWARD COUNTY ENVIRONMENTAL
 PROTECTION AND GROWTH MANAGEMENT
 DIVISION
 PERMIT NO: BP6659-15
 APPLICATION NO: N/A
 OWNER: O'CONNOR HOLDING, LLC

**BROWARD COUNTY ENVIRONMENTAL
 PROTECTION AND GROWTH MANAGEMENT
 DIVISION**
 PERMIT NO: DF87-1147
 APPLICATION NO: N/A
 OWNER: O'CONNOR HOLDING, LLC

NW 15TH AVE
 SOUTH FLORIDA WATER MANAGEMENT DISTRICT
 PERMIT NO: 06-03573-P
 APPLICATION NO: N/A
 OWNER: BROWARD COUNTY

ANDREWS AVE
 SOUTH FLORIDA WATER MANAGEMENT DISTRICT
 PERMIT NO: 06-03573-P
 APPLICATION NO: N/A
 OWNER: BROWARD COUNTY



MAP DATA © 2020 GOOGLE

LOCATION MAP

1" = 500'

PROJECT CONTACT LIST

CIVIL ENGINEER
 KCI TECHNOLOGIES, INC.
 1425 W CYPRESS CREEK RD, SUITE 101,
 FORT LAUDERDALE, FLORIDA 33309
 CONTACT: ROBERT ZUCCARO, PE
 PHONE: (954) 776-1616
 EMAIL: ROBERT.ZUCCARO@KCI.COM

WATER MANAGEMENT AGENCY
 BROWARD COUNTY ENVIRONMENTAL PROTECTION
 AND GROWTH MANAGEMENT DEPARTMENT
 1 NORTH UNIVERSITY DRIVE, MAILBOX 201A,
 PLANTATION, FL 33324
 CONTACT: CARLOS ADORISIO
 PHONE: (954) 819-1483
 EMAIL: CADORISIO@BROWARD.ORG

PROJECT DEVELOPER
 BUTTERS CONSTRUCTION &
 DEVELOPMENT
 6820 LYONS TECHNOLOGY CIR, #100,
 COCONUT CREEK, FLORIDA 33073
 CONTACT: MALCOLM BUTTERS
 PHONE: (954) 312-2400
 EMAIL: MSBUTTER@BUTTERS.COM

PROJECT OWNER
 GOLD COAST PLAT PROPERTY OWNER'S
 ASSOCIATION, INC
 7805 SW 8TH COURT,
 PLANTATION, FLORIDA 33324
 PHONE: N/A
 EMAIL: N/A

INTENT NOTE:

THE INTENT OF THESE PLANS IS TO INDICATE ACTIVITIES TO BE PERFORMED BY THE CONTRACTOR TO RESTORE THE EXISTING 9.6AC PARCEL WITH AN 8.0 AC LAKE AND APPROPRIATE BANK SLOPING IN COMPLIANCE WITH THE 1989 GOLD COAST MASTER PERMIT. WORK ALSO INCLUDES REQUIRED DEMOLITION OF CERTAIN COMPONENTS AND THE REPLACEMENT OF TWO (2) EXISTING OUTFALL PIPES/HEADWALLS THAT ARE DAMAGED AND/OR COMPROMISED AS WELL AS THE INSTALLATION OF A NEW MANHOLE AND NEW 54" RCP OUTFALL PIPE/HEADWALL AT THE N.E. CORNER OF THE LAKE.

LEGAL DESCRIPTION

THE SOUTHEAST 1/4 OF THE NORTHEAST 1/4 OF THE SOUTHWEST 1/4 IN SECTION 27, TOWNSHIP 48 SOUTH, RANGE 42 EAST, LOCATED IN BROWARD COUNTY, FLORIDA.

LESS THE CERTAIN PARCEL DESCRIBED IN WARRANTY DEED RECORDED IN OFFICIAL RECORDS BOOK 3320, PAGE 245 BEING MORE PARTICULARLY DESCRIBED AS THAT PORTION OF THE PROPERTY LYING WITHIN 25.0 FEET OF A CENTERLINE DESCRIBED AS FOLLOWS, TO WIT:

BEGINNING AT A POINT 25.0 FEET WESTERLY OF THE NORTHEAST CORNER AND ON THE NORTH BOUNDARY OF THE SOUTHEAST QUARTER (SE 1/4) OF THE NORTHEAST QUARTER (NE 1/4) OF THE SOUTHWEST QUARTER (SW 1/4) OF SAID SECTION 27; THENCE RUN SOUTHERLY IN A STRAIGHT LINE TO THE SOUTHEAST CORNER OF THE SOUTHWEST QUARTER (SW 1/4) OF SAID SECTION 27.



LOCATION OF PROJECT

OWNER INFORMATION

OWNER: O'CONNOR HOLDINGS, LLC
 ADDRESS: 4060 CORAL HILLS DR,
 CORAL SPRINGS, FLORIDA 33065

SITE INFORMATION

PROJECT AREA: 19.6 ACRES
 PARCEL FOLIO NO.: 4842-27-00-0350
 PROJECT ADDRESS: NW 15TH AVE, POMPANO BEACH, FLORIDA 33069
 CURRENT ZONING: O-IP (OFFICE INDUSTRIAL PARK)
 SECTION: 27
 TOWNSHIP: 48 SOUTH
 RANGE: 42 EAST

SHEET INDEX

- C-1 COVER SHEET
- C-2 EXISTING CONDITIONS AND QUANTITIES PLAN
- C-3 DEMOLITION PLAN
- C-4 SEDIMENT AND EROSION CONTROL PLAN
- C-5 SEDIMENT AND EROSION CONTROL DETAILS
- C-6 PAVING, GRADING AND DRAINAGE PLAN
- C-7 PAVING, GRADING AND DRAINAGE DETAILS
- C-8 PAVING, GRADING AND DRAINAGE DETAILS
- C-9 PAVING, GRADING AND DRAINAGE DETAILS
- C-10 PAVING, GRADING AND DRAINAGE DETAILS
- C-11 PERIMETER FENCE DETAIL
- L-1 PLANT LIST AND DETAILS
- L-2 LANDSCAPE PLAN
- IR-1 IRRIGATION PLAN
- IR-2 IRRIGATION SPEC AND DETAILS
- IR-3 IRRIGATION SPEC AND DETAILS
- E3.1 ELECTRICAL PLAN

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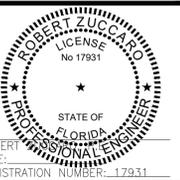
| REV | DATE | DESCRIPTION |
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| | | |
| | | |

DATE: NOVEMBER 10, 2022
 SCALE:
 DESIGNED BY: B.R.
 DRAWN BY: B.R.
 CHECKED BY: R.M.Z.

O'CONNOR HOLDING PROPERTY
 LAKE REMEDIATION PLANS
 NW 15TH AVENUE, POMPANO BEACH, BROWARD COUNTY, FL

COVER SHEET

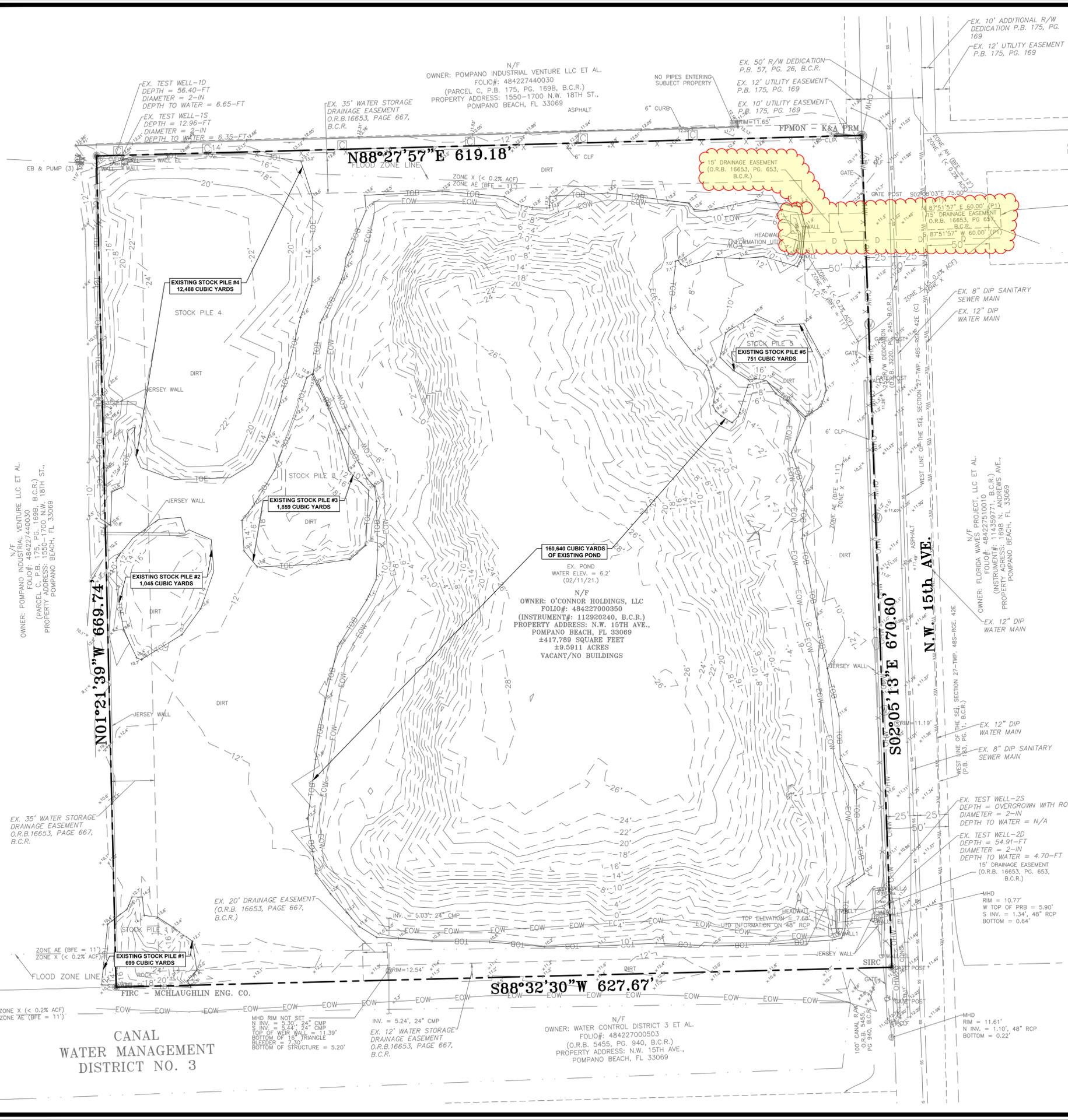
SHEET NO. C-1
 PROJECT NO. 482021748.00



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EXISTING LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- ASPHALT PAVEMENT
- CONCRETE
- EDGE OF PAVEMENT
- CENTERLINE OF ROAD
- OHW OVERHEAD ELECTRIC SERVICE
- CHAIN LINK FENCE
- STM STORM LINE
- FPL EASEMENT
- CONCRETE BLOCK WALL
- ▲ SIGN / CROSSWALK SIGNAL
- FIRE HYDRANT
- METAL LIGHT POLE
- WOOD POWER POLE
- CONCRETE LIGHT POLE
- MONITORING WELL
- CATCH BASIN
- SPOT ELEVATION
- SANITARY SEWER MANHOLE
- WATER VALVE
- GUY ANCHOR
- HAND HOLE
- TREE

STOCK PILE QUANTITIES

| AREA | VOLUME (CU. YD.) |
|---------------|------------------|
| STOCK PILE #1 | 699 |
| STOCK PILE #2 | 1,045 |
| STOCK PILE #3 | 1,859 |
| STOCK PILE #4 | 12,488 |
| STOCK PILE #5 | 751 |

ABBREVIATIONS

- CONC. CONCRETE
- ELEV. ELEVATION
- EX. EXISTING
- O.R.B. OFFICIAL RECORD BOOK
- NO. NUMBER
- R/W RIGHT OF WAY
- TP. TYPICAL

DATUM NOTE

- THE ELEVATIONS SHOWN HEREON ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM 1985 (NAVD 85).

GENERAL SITE NOTES

THE LOCATION AND SIZE OF ALL EXISTING UTILITIES AND TOPOGRAPHY HAVE BEEN PREPARED FROM INFORMATION AVAILABLE TO THE ENGINEER. THIS INFORMATION IS NOT GUARANTEED AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT LOCATION OF ANY EXISTING UTILITIES AND TOPOGRAPHY PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL VERIFY ALL UTILITIES, BY ELECTRONIC METHODS AND BY HAND EXCAVATION IN COORDINATION WITH ALL UTILITY COMPANIES, PRIOR TO BEGINNING ANY CONSTRUCTION OPERATIONS. THIS WORK BY THE CONTRACTOR SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.

I. APPLICABLE CODES

- GENERAL
 - ALL CONSTRUCTION, MATERIALS AND TESTING SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF LOCAL, COUNTY, STATE AND NATIONAL CODES WHERE APPLICABLE. WHEN ANY OF THE GOVERNING REGULATORY AGENCIES' STANDARDS AND SPECIFICATIONS ARE IN CONFLICT, THE MORE STRINGENT OF THE TWO SHALL APPLY.
- CONSTRUCTION SAFETY
 - ALL CONSTRUCTION SHALL BE DONE IN CONFORMANCE WITH THE RULES AND REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
 - TRENCH SAFETY ACT
 - CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLIANCE WITH THE STATE TRENCH SAFETY ACT.
- SURVEY DATA
 - ALL ELEVATIONS ON THE PLANS OR REFERENCED IN THE SPECIFICATIONS UNLESS OTHERWISE NOTED, ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

II. PRECONSTRUCTION RESPONSIBILITIES

- THE CONTRACTOR SHALL OBTAIN A SUNSHINE STATE ONE CALL AT 811 CERTIFICATION NUMBER AT LEAST (48) HOURS PRIOR TO BEGINNING ANY EXCAVATION.
- PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE SIZE, LOCATION, ELEVATION AND MATERIAL OF ALL EXISTING UTILITIES WITHIN THE AREA OF CONSTRUCTION.
- EXISTING UTILITY LOCATIONS SHOWN ON THESE PLANS ARE APPROXIMATE. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF EXISTING UTILITIES SHOWN OR NOT SHOWN.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO ANY EXISTING UTILITIES FOR WHICH HE/SHE FAILS TO REQUEST LOCATIONS FROM THE UTILITY OWNER. HE/SHE IS RESPONSIBLE AS WELL FOR DAMAGE TO ANY EXISTING UTILITIES WHICH ARE PROPERLY LOCATED.

III. PROJECT CLOSEOUT

- CLEANING UP
 - DURING CONSTRUCTION, THE PROJECT SITE AND ALL ADJACENT AREAS SHALL BE MAINTAINED IN A NEAT AND CLEAN MANNER. UPON FINAL CLEAN UP, THE PROJECT SITE SHALL BE LEFT CLEAR OF ALL SURPLUS MATERIAL OR TRASH. THE PAVED AREAS SHALL BE SWEEP BROOM CLEAN AS DIRECTED BY THE ENGINEER.
 - THE CONTRACTOR SHALL RESTORE OR REPLACE, WHEN AND AS DIRECTED BY THE ENGINEER OR OWNER/MUNICIPAL AUTHORITY, ANY PUBLIC OR PRIVATE PROPERTY DAMAGED BY HIS WORK, EQUIPMENT, EMPLOYEES OR THOSE OF HIS SUBCONTRACTORS TO A CONDITION AT LEAST EQUAL TO THAT EXISTING IMMEDIATELY PRIOR TO THE BEGINNING OF OPERATIONS. TO THIS END, THE CONTRACTOR SHALL DO AS REQUIRED ALL NECESSARY HIGHWAY OR DRIVEWAY, WALK, IRRIGATION AND LANDSCAPING WORK.
 - WHERE MATERIAL OR DEBRIS HAS WASHED OR FLOWED INTO OR BEEN PLACED IN WATER COURSES, DITCHES, DRAINS, CATCH BASINS, OR ELSEWHERE AS A RESULT OF THE CONTRACTOR'S OPERATIONS, SUCH MATERIAL OR DEBRIS SHALL BE REMOVED, SATISFACTORILY DISPOSED OF DURING PROGRESS OF THE WORK, AND THE AREA KEPT IN A CLEAN AND NEAT CONDITION AS DIRECTED BY THE ENGINEER.
 - CONTRACTOR SHALL DISPOSE OF ALL SITE DEMOLITION MATERIAL IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS.
- PROJECT RECORDS DOCUMENTS
 - THE CONTRACTOR SHALL MAINTAIN ACCURATE AND COMPLETE RECORDS OF WORK ITEMS COMPLETED.
 - ALL "AS-BUILT" INFORMATION SUBMITTED TO THE ENGINEER SHALL BE SUFFICIENTLY ACCURATE, CLEAR AND LEGIBLE TO THE SATISFACTION OF THE ENGINEER THAT THE INFORMATION PROVIDES A TRUE REPRESENTATION OF THE IMPROVEMENTS CONSTRUCTED.
 - LAKE AS-BUILTS WILL BE CROSS SECTIONED SHOWING THE DESIGNED SECTION AS DASHED, AS-BUILT SECTION AS SOLID, AND HAVE THE TOP OF BANK REFERENCE TO THE LAKE MAINTENANCE EASEMENT. SPACING BETWEEN EACH CROSS-SECTION SHALL BE SUCH AS TO PROVIDE ENOUGH DATA TO DETERMINE IF THE LAKE WAS CONSTRUCTED AS DESIGNED.
 - UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER OF RECORD ONE COMPLETE SET OF "AS-BUILT" CONSTRUCTION DRAWINGS. THESE DRAWINGS SHALL BE MARKED TO SHOW "RECORD DRAWING" OR "AS-BUILT" CONSTRUCTION CHANGES AND DIMENSIONED LOCATIONS AND ELEVATIONS OF ALL IMPROVEMENTS AND SHALL BE SIGNED AND SEALED BY A REGISTERED LAND SURVEYOR OR ENGINEER. FINAL AS-BUILT INFORMATION SHALL BE SUBMITTED ON AN AUTOCAD FORMAT AS DIRECTED BY THE ENGINEER.

IV. STORM WATER POLLUTION PREVENTION PLAN (SWPPP) REQUIREMENTS

- CONTRACTOR IS RESPONSIBLE FOR PREPARING SWPPP, SUBMITTING SWPPP TO FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION, IMPLEMENTING AND MAINTAINING SWPPP DURING CONSTRUCTION ACTIVITIES, INCLUDING TURBIDITY CURTAINS, AND ABIDING BY SWPPP REQUIREMENTS UNTIL FINAL CERTIFICATION OF SITE CONSTRUCTION IS OBTAINED.

V. EARTHWORK NOTES

- IT IS THE CONTRACTOR'S RESPONSIBILITY TO CALCULATE THE CUT/FILL VOLUMES FOR THE PROPOSED IMPROVEMENTS PRIOR TO BIDDING THE JOB.

VI. SODDING REQUIREMENTS

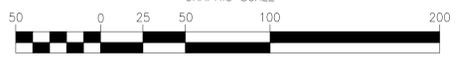
- THE CONTRACTOR SHALL INSTALL ANY SODDING/PLANTING IN ACCORDANCE WITH THE LANDSCAPING PLANS PER SHEET L-1 AND L-2 OF THIS PLAN SET.

VII. UNSUITABLE MATERIAL REMOVAL AND DISPOSAL

- CONTRACTOR IS RESPONSIBLE FOR DETERMINATION/INVESTIGATION OF SUBSURFACE CONDITIONS. ALL UNSUITABLE MATERIAL SURFACE AND SUBSURFACE WITHIN AREAS OF CONSTRUCTION IS TO BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS. UNSUITABLE MATERIAL INCLUDES BUT IS NOT LIMITED TO: DEBRIS, ORGANIC/MUCK, AND PLASTIC MATERIAL. ALL UNSUITABLE MATERIAL REMOVED SHALL BE REPLACED WITH SUITABLE MATERIAL.

VIII. EROSION CONTROL PLAN

- CONTRACTOR TO IMPLEMENT EROSION CONTROL MEASURES. SEE SHEET C-4 AND C-5 FOR EROSION CONTROL PLAN AND SHEETS C-6.0 AND C-6.1 FOR EROSION CONTROL DETAILS.



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DISTRICT NO. 3

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O'CONNOR HOLDING PROPERTY
LAKE REMEDIATION PLANS

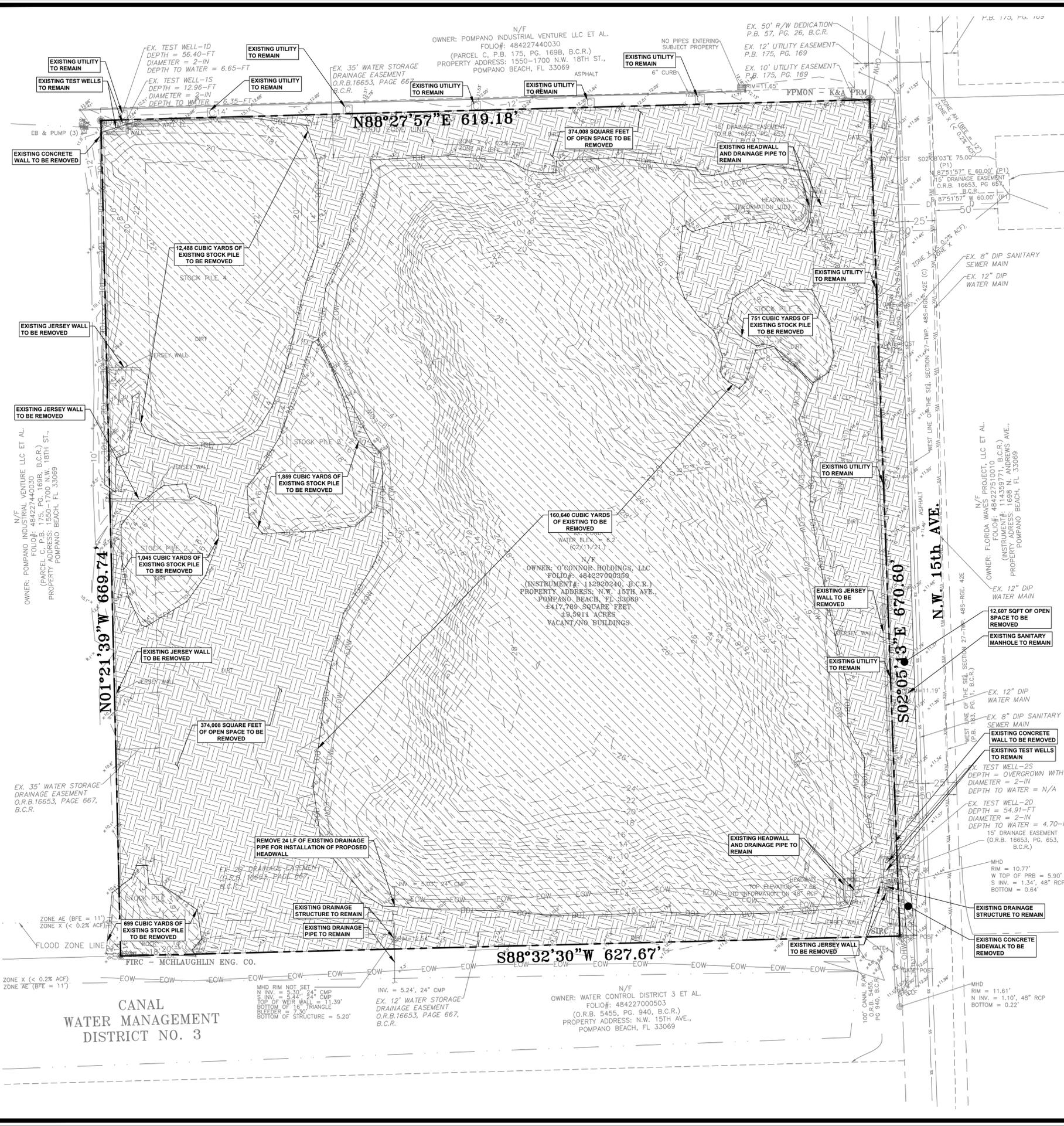
EXISTING CONDITIONS AND
QUANTITIES PLAN

SHEET NO. **C-2**

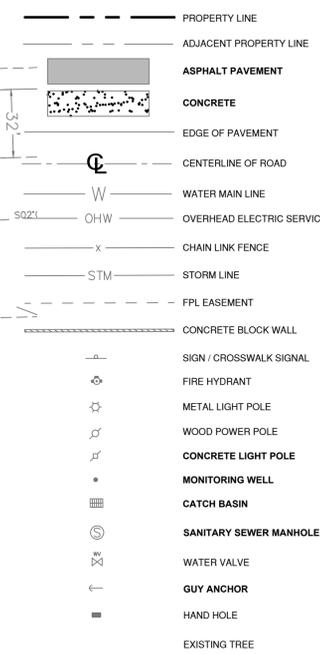
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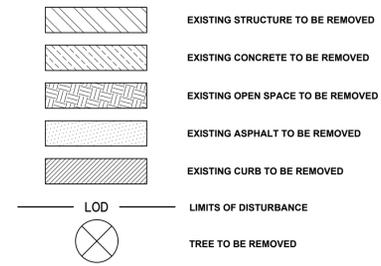
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EXISTING LEGEND



DEMOLITION LEGEND



ABBREVIATIONS

CONC. CONCRETE
ELEV. ELEVATION
EX. EXISTING
O.R.B. OFFICIAL RECORD BOOK
NO. NUMBER
R/W RIGHT OF WAY
TYP. TYPICAL

DATUM NOTE

1. THE ELEVATIONS SHOWN HEREON ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 88).

GENERAL DEMOLITION NOTES

- 1. THE LOCATION OF THE UTILITIES SHOWN HAVE BEEN DETERMINED BY INFORMATION GATHERED AND SHALL NOT BE USED AS EXACT. CONTRACTOR SHALL CONTACT THE APPROPRIATE UTILITY COMPANIES TO VERIFY EXACT LOCATIONS PRIOR TO DEMOLITION.
- 2. THE CONTRACTOR SHALL COORDINATE WITH THE PROPER UTILITY COMPANIES FOR REMOVAL AND RELOCATION OF THE RESPECTIVE UTILITY AS NEEDED. THE CONTRACTOR SHALL VERIFY ANY WORK THAT MAY BE DONE BY THE UTILITY COMPANIES.
- 3. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES.
- 4. CONTRACTOR SHALL PROTECT AND MAINTAIN ALL EXISTING STRUCTURES, PAVEMENT, AND VEGETATION THAT IS NOT TO BE DISTURBED AND IS RESPONSIBLE FOR ANY DAMAGES INCURRED.
- 5. THE CONTRACTOR SHALL PROPERLY DISPOSE OF ALL MATERIALS RESULTING FROM OPERATION ACCORDING TO GOVERNING AUTHORITIES AND SHALL OBTAIN THE PROPER PERMITS REQUIRED FOR DISPOSAL AND DEMOLITION.
- 6. THE CONTRACTOR SHALL MAINTAIN CONTINUOUS ACCESS TO ADJACENT PROPERTIES DURING CONSTRUCTION AND AVOID ANY PROPERTY DAMAGE DURING CONSTRUCTION.
- 7. THE CONTRACTOR SHALL INSTALL EROSION AND SEDIMENT CONTROL DEVICES PRIOR TO DEMOLITION.
- 8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING SERVICES TO ANY NECESSARY UTILITIES DURING CONSTRUCTION.
- 9. FOR ALL ITEMS NOTED TO BE REMOVED, REMOVE NOT ONLY THE ABOVE GROUND ELEMENTS, BUT ALSO REMOVE ALL UNDERGROUND ELEMENTS AS WELL INCLUDING, BUT NOT LIMITED TO: FOUNDATIONS, GRAVEL FILLS, TREE ROOTS, PIPES, TANKS, ETC.
- 10. BACKFILL ALL EXCAVATIONS RESULTING FROM THE DEMOLITION WORK MEETING THE REQUIREMENTS FOR FILL OUTLINED IN THE GEOTECHNICAL INVESTIGATION REPORT FOR THIS SITE.
- 11. ASBESTOS AND ANY OTHER HAZARDOUS MATERIAL SHALL BE PROPERLY PERMITTED AND REMOVED BY THE CONTRACTOR. CONTRACTOR SHALL SECURE ALL PERMITS FOR DEMOLITION AND REMOVAL OF MATERIALS FROM THE SITE.
- 12. LIMIT SAW-CUT AND PAVEMENT REMOVAL TO ONLY THOSE AREAS WHERE IT IS REQUIRED AS SHOWN ON THESE PLANS. ANY DAMAGE TO ANY SURROUNDING AREAS SHALL BE REPAIRED / REPLACED AT THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL PROTECT EXISTING ADJACENT STRUCTURES, PAVEMENT, UTILITIES, LANDSCAPE, ETC. FROM DAMAGE DURING CONSTRUCTION.
- 13. CONTRACTOR SHALL ENSURE THAT SERVICES TO ALL UTILITIES TO BE REMOVED HAS BEEN DISCONTINUED AND SHUT OFF. ALL UTILITY LINES SHALL BE CAPPED PER UTILITY COMPANY STANDARDS.
- 14. EXISTING PERIMETER TREES & LANDSCAPING TO REMAIN WHEREVER POSSIBLE.

CUT/FILL CALCULATIONS *

| AREA | VOLUME (CU. YD.) |
|------|------------------|
| CUT | 98,819.55 |
| FILL | 89.69 |
| NET | 98,729.86 (CUT) |

* QUANTITIES ARE IN PLACE QUANTITIES, NO SHRINKAGE FACTOR APPLIED

ENGINEERS | PLANNERS | SCIENTISTS
CONSTRUCTION MANAGERS
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CLIENT:

| REV | DATE | DESCRIPTION |
|-----|------|-------------|
| | | |
| | | |
| | | |

DATE: NOVEMBER 10, 2022
SCALE: DESIGNED BY: B.R.
DRAWN BY: B.R.
CHECKED BY: R.M.Z.

**O'CONNOR HOLDING PROPERTY
LAKE REMEDIATION PLANS**
NW 15TH AVENUE, POMIPANO BEACH, BROWARD COUNTY, FL

DEMOLITION PLAN

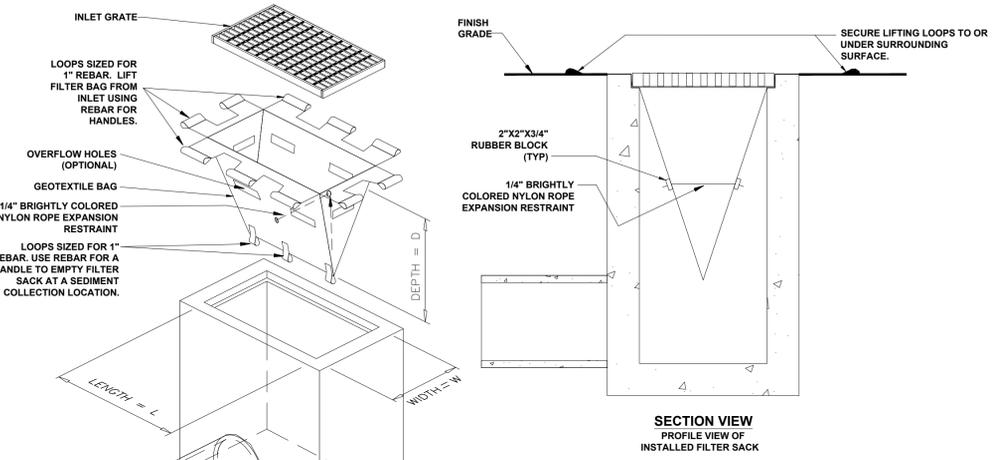
SHEET NO. **C-3**
PROJECT NO. 482021748.00

ROBERT ZUCCARO
PROFESSIONAL ENGINEER
STATE OF FLORIDA
REGISTRATION NUMBER: 17931



PERMIT SUBMITTAL

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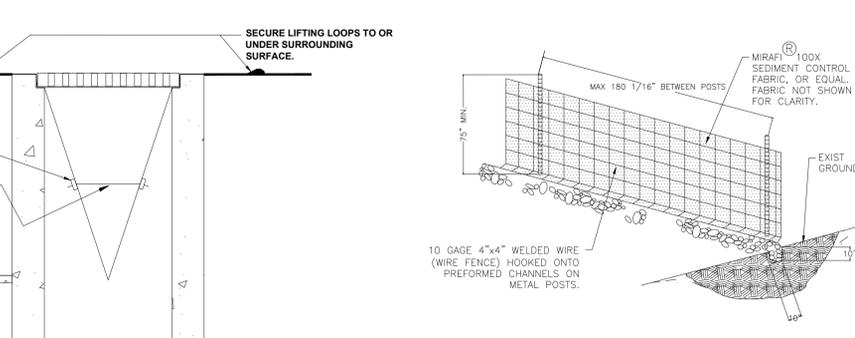
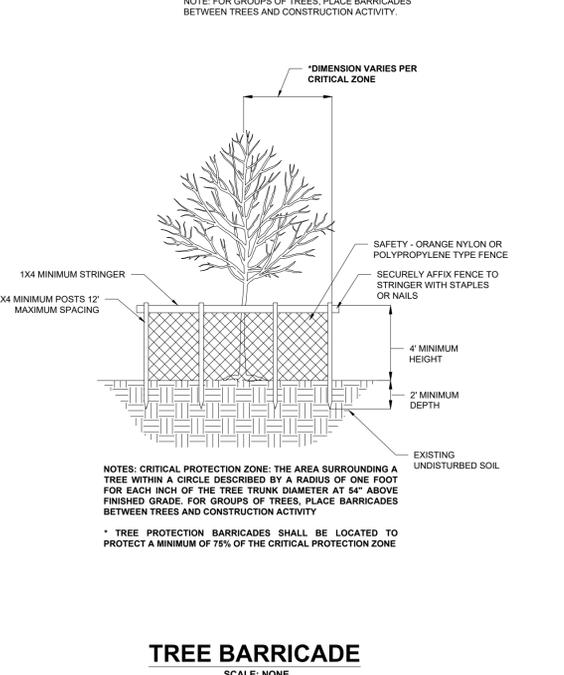
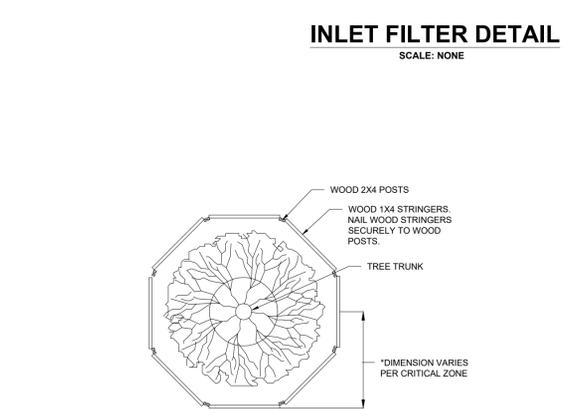
LOW TO MODERATE FLOW GEOTEXTILE FABRIC SPECIFICATION TABLE

| PROPERTIES | TEST METHOD | UNITS |
|-------------------------|-------------|------------------|
| GRAB TENSILE STRENGTH | ASTM D-4632 | 300 LBS |
| GRAB TENSILE ELONGATION | ASTM D-4632 | 20 % |
| PUNCTURE | ASTM D-4633 | 120 LBS |
| MULLEN BURST | ASTM D-3786 | 800 PSI |
| TRAPEZOID TEAR | ASTM D-4633 | 120 LBS |
| UV RESISTANCE | ASTM D-4355 | 80 % |
| APPARENT OPENING SIZE | ASTM D-4761 | 40 US SIEVE |
| FLOW RATE | ASTM D-4491 | 40 GAL/MIN/SQ FT |
| PERMITTIVITY | ASTM D-4491 | 0.55 SEC-1 |

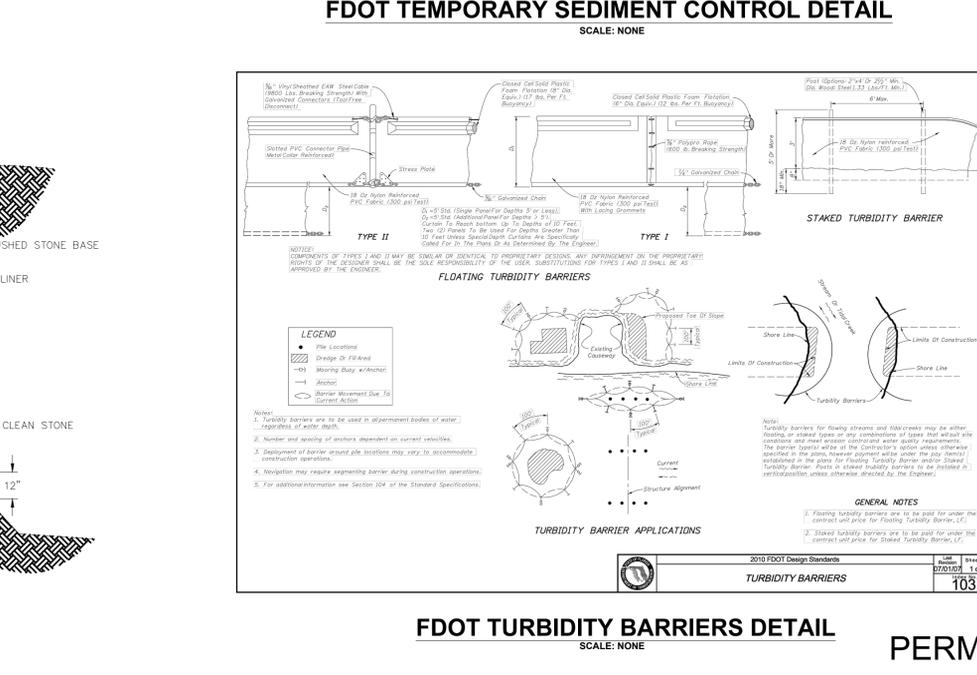
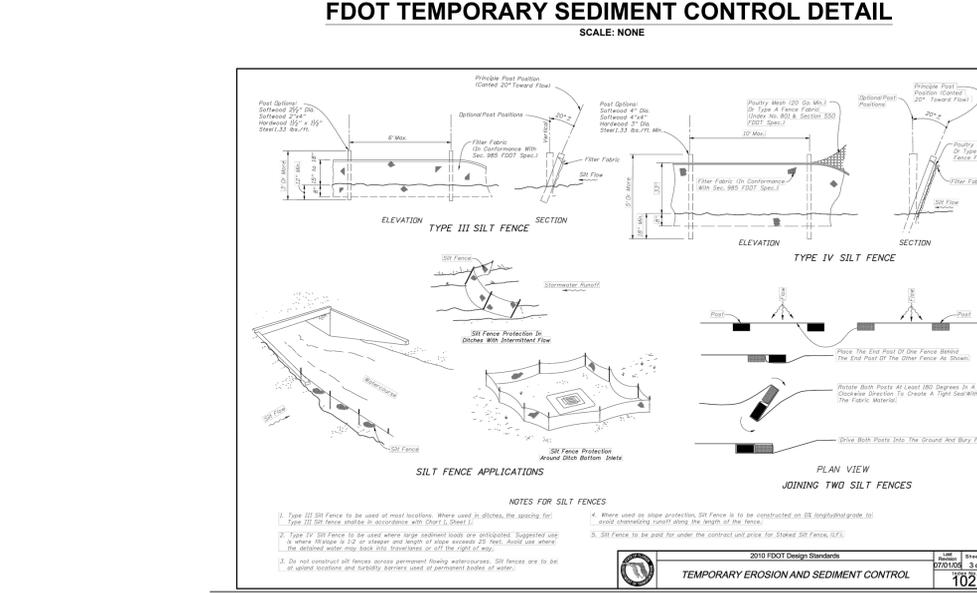
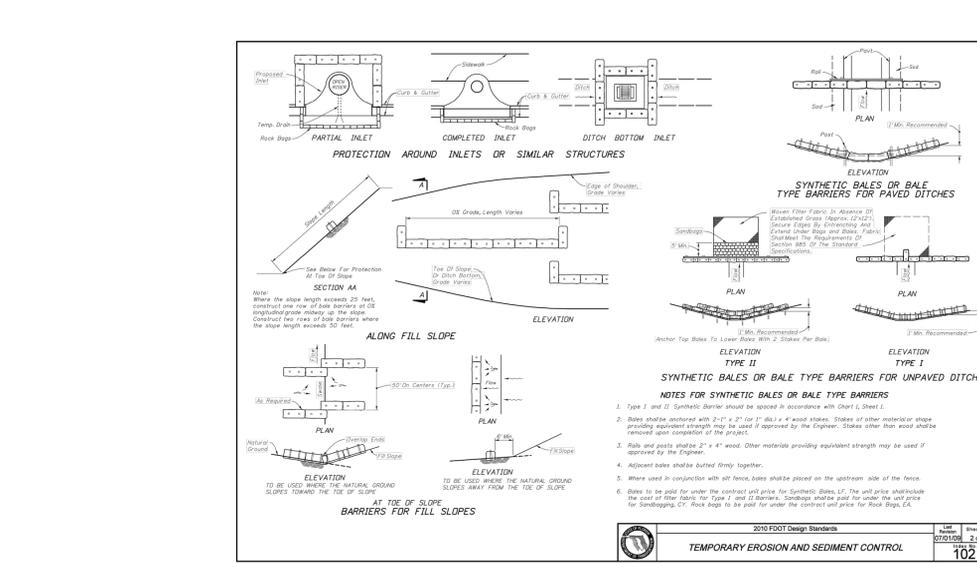
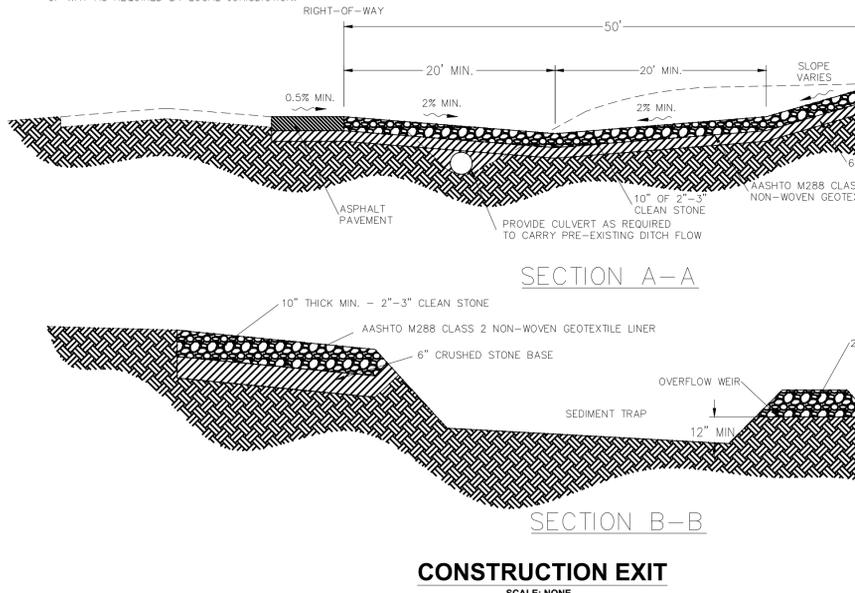
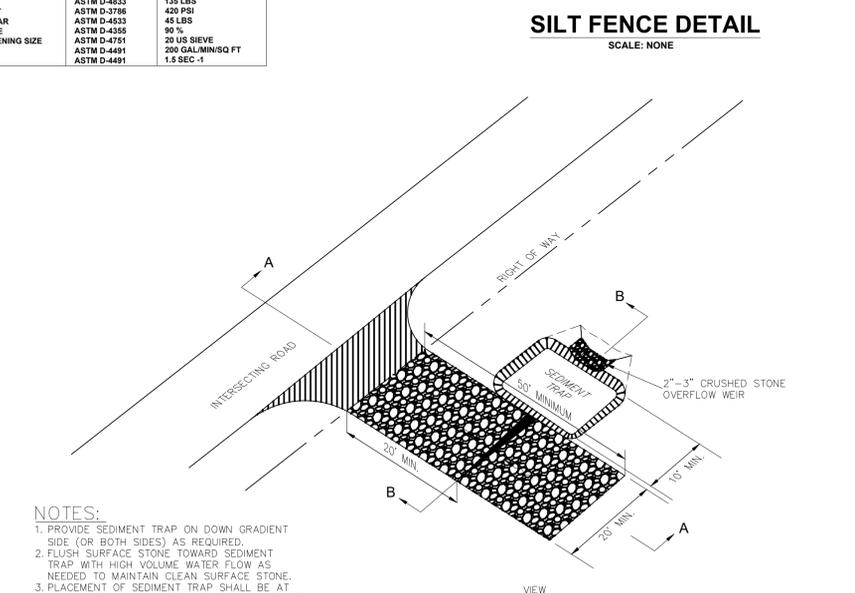
MODERATE TO HIGH FLOW GEOTEXTILE FABRIC SPECIFICATION TABLE

| PROPERTIES | TEST METHOD | UNITS |
|-------------------------|-------------|-------------------|
| GRAB TENSILE STRENGTH | ASTM D-4632 | 265 LBS |
| GRAB TENSILE ELONGATION | ASTM D-4632 | 20 % |
| PUNCTURE | ASTM D-4633 | 135 LBS |
| MULLEN BURST | ASTM D-3786 | 420 PSI |
| TRAPEZOID TEAR | ASTM D-4633 | 45 LBS |
| UV RESISTANCE | ASTM D-4355 | 90 % |
| APPARENT OPENING SIZE | ASTM D-4761 | 20 US SIEVE |
| FLOW RATE | ASTM D-4491 | 200 GAL/MIN/SQ FT |
| PERMITTIVITY | ASTM D-4491 | 1.5 SEC-1 |

- REMOVE TRAPPED SEDIMENT WHEN BRIGHTLY COLORED EXPANSION RESTRAINT CAN NO LONGER BE SEEN.
- GEOTEXTILE SHALL BE A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS REQUIREMENTS IN THE SPECIFICATIONS TABLE.
- PLACE AN OIL ADSORBENT PAD OR PILLOW OVER INLET GRATE WHEN OIL SPILLS ARE A CONCERN.
- INSPECT PER REGULATORY REQUIREMENTS.
- THE WIDTH, "W", OF THE FILTER SACK SHALL MATCH THE INSIDE WIDTH OF THE GRATED INLET BOX.
- THE DEPTH, "D", OF THE FILTER SACK SHALL BE BETWEEN 18 INCHES AND 36 INCHES.
- THE LENGTH, "L", OF THE FILTER SACK SHALL MATCH THE INSIDE LENGTH OF THE GRATED INLET BOX.



- NOTES:
- DRIVE WOOD POSTS (1.3 LBS/FT MIN) 18" MIN INTO GROUND AND EXCAVATE A 4"x4" TRENCH UP/HILL 5" LONG (MIN) ALONG LINE OF POSTS.
 - POSTS 4" IN DIAMETER OR 2"x4" MAY BE USED. ATTACH WIRE FENCE TO POSTS AND EXTEND THE BOTTOM OF THE FENCE 8" INTO THE EXCAVATED TRENCH. ALTERNATE: USE SEDIMENT CONTROL FABRIC WITH PRE-SEWN POCKETS FOR POSTS SO THAT WIRE FENCE IS NOT REQ'D.
 - ATTACH THE SEDIMENT CONTROL FABRIC (36" WIDE) TO THE WIRE FENCE W/METAL CLIPS OR WIRE AND EXTEND THE BOTTOM OF THE FABRIC 6" INTO THE TRENCH.
 - BOTTOM OF SEDIMENT CONTROL FABRIC MUST BE PLACED IN TRENCH AND SECURED WITH GRANULAR FILL TO A HEIGHT OF 6" ABOVE GROUND LEVEL, SO THAT RUNOFF IS FORCED TO GO THROUGH THE FENCE AND CANNOT GO UNDER IT.
 - SILT FENCE SHALL BE MAINTAINED AND TRAPPED SEDIMENTS SHALL BE REMOVED BY THE CONTRACTOR PERIODICALLY AS DETERMINED BY THE ENGINEER OR AS NECESSARY (MAX. 6 MONTHS).
 - THE CONTRACTOR IS REQUIRED TO REMOVE ALL SILT FENCES AND AREA TO BE RESTORED TO THE ORIGINAL CONDITION UPON COMPLETION OF CONSTRUCTION.



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CLIENT:

| REV | DATE | DESCRIPTION |
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DATE: NOVEMBER 10, 2022
SCALE: DESIGNED BY: B.R.
DRAWN BY: B.R.
CHECKED BY: R.M.Z.

O'CONNOR HOLDING PROPERTY
LAKE REMEDIATION PLANS
NW 15TH AVENUE, POMIPANO BEACH, BROWARD COUNTY, FL

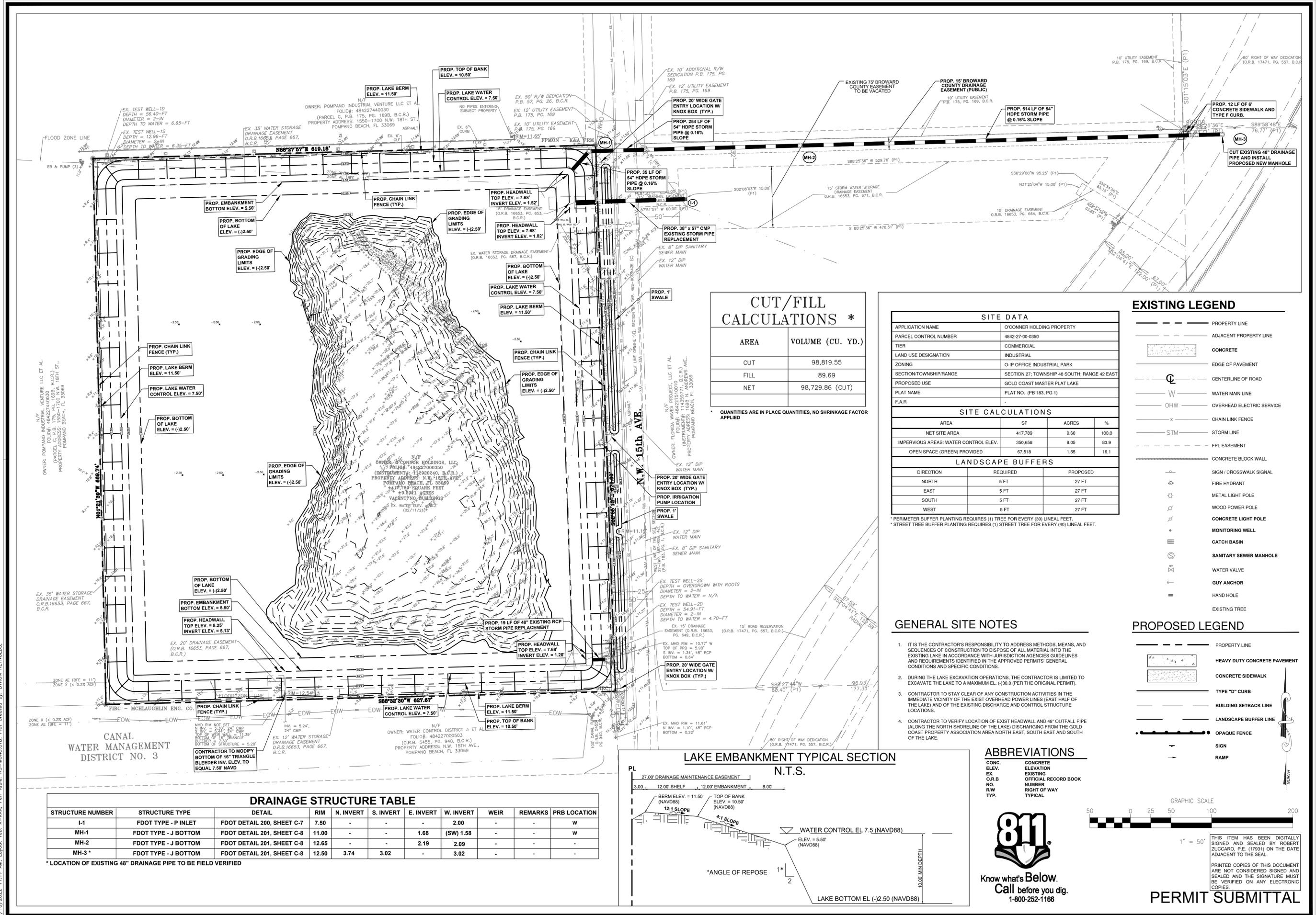
SEDIMENT EROSION CONTROL
DETAILS

SHEET NO. **C-5**
PROJECT NO. **482021748.00**

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ROBERT ZUCCARO
P.E. (17931)
STATE OF FLORIDA
PROFESSIONAL ENGINEER
REGISTRATION NUMBER: 17931



CUT/FILL CALCULATIONS *

| AREA | VOLUME (CU. YD.) |
|------|------------------|
| CUT | 98,819.55 |
| FILL | 89.69 |
| NET | 98,729.86 (CUT) |

* QUANTITIES ARE IN PLACE QUANTITIES, NO SHRINKAGE FACTOR APPLIED

SITE DATA

| | |
|------------------------|--|
| APPLICATION NAME | O'CONNOR HOLDING PROPERTY |
| PARCEL CONTROL NUMBER | 4842-27-00-0350 |
| TIER | COMMERCIAL |
| LAND USE DESIGNATION | INDUSTRIAL |
| ZONING | O-IP OFFICE INDUSTRIAL PARK |
| SECTION/TOWNSHIP/RANGE | SECTION 27; TOWNSHIP 48 SOUTH; RANGE 42 EAST |
| PROPOSED USE | GOLD COAST MASTER PLAT LAKE |
| PLAT NAME | PLAT NO. (PB 183, PG 1) |
| F.A.R. | |

SITE CALCULATIONS

| AREA | SF | ACRES | % |
|---------------------------------------|---------|-------|-------|
| NET SITE AREA | 417,789 | 9.60 | 100.0 |
| IMPERVIOUS AREAS: WATER CONTROL ELEV. | 350,658 | 8.05 | 83.9 |
| OPEN SPACE (GREEN) PROVIDED | 67,518 | 1.55 | 16.1 |

LANDSCAPE BUFFERS

| DIRECTION | REQUIRED | PROPOSED |
|-----------|----------|----------|
| NORTH | 5 FT | 27 FT |
| EAST | 5 FT | 27 FT |
| SOUTH | 5 FT | 27 FT |
| WEST | 5 FT | 27 FT |

* PERIMETER BUFFER PLANTING REQUIRES (1) TREE FOR EVERY (30) LINEAL FEET.
 * STREET TREE BUFFER PLANTING REQUIRES (1) STREET TREE FOR EVERY (40) LINEAL FEET.

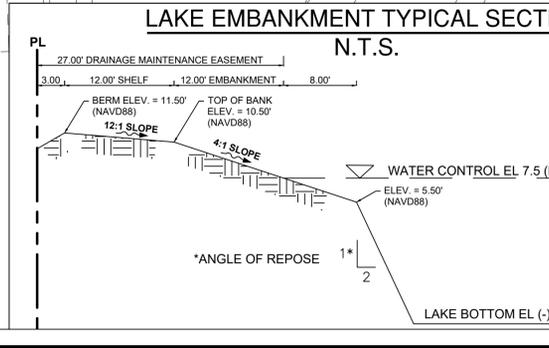
EXISTING LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- CONCRETE
- EDGE OF PAVEMENT
- CENTERLINE OF ROAD
- WATER MAIN LINE
- OVERHEAD ELECTRIC SERVICE
- CHAIN LINK FENCE
- STORM LINE
- FPL EASEMENT
- CONCRETE BLOCK WALL
- SIGN / CROSSWALK SIGNAL
- FIRE HYDRANT
- METAL LIGHT POLE
- WOOD POWER POLE
- CONCRETE LIGHT POLE
- MONITORING WELL
- CATCH BASIN
- SANITARY SEWER MANHOLE
- WATER VALVE
- GUY ANCHOR
- HAND HOLE
- EXISTING TREE

PROPOSED LEGEND

- PROPERTY LINE
- HEAVY DUTY CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- TYPE "D" CURB
- BUILDING SETBACK LINE
- LANDSCAPE BUFFER LINE
- OPAQUE FENCE
- SIGN
- RAMP

- ### GENERAL SITE NOTES
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO ADDRESS METHODS, MEANS, AND SEQUENCES OF CONSTRUCTION TO DISPOSE OF ALL MATERIAL INTO THE EXISTING LAKE IN ACCORDANCE WITH JURISDICTION AGENCIES GUIDELINES AND REQUIREMENTS IDENTIFIED IN THE APPROVED PERMITS' GENERAL CONDITIONS AND SPECIFIC CONDITIONS.
 - DURING THE LAKE EXCAVATION OPERATIONS, THE CONTRACTOR IS LIMITED TO EXCAVATE THE LAKE TO A MAXIMUM EL. (-)30.0 (PER THE ORIGINAL PERMIT).
 - CONTRACTOR TO STAY CLEAR OF ANY CONSTRUCTION ACTIVITIES IN THE IMMEDIATE VICINITY OF THE EXIST OVERHEAD POWER LINES (EAST HALF OF THE LAKE) AND OF THE EXISTING DISCHARGE AND CONTROL STRUCTURE LOCATIONS.
 - CONTRACTOR TO VERIFY LOCATION OF EXIST HEADWALL AND 48" OUTFALL PIPE (ALONG THE NORTH SHORELINE OF THE LAKE) DISCHARGING FROM THE GOLD COAST PROPERTY ASSOCIATION AREA NORTH EAST, SOUTH EAST AND SOUTH OF THE LAKE.



DRAINAGE STRUCTURE TABLE

| STRUCTURE NUMBER | STRUCTURE TYPE | DETAIL | RIM | N. INVERT | S. INVERT | E. INVERT | W. INVERT | WEIR | REMARKS | PRB LOCATION |
|------------------|----------------------|----------------------------|-------|-----------|-----------|-----------|-----------|------|---------|--------------|
| I-1 | FDOT TYPE - P INLET | FDOT DETAIL 200, SHEET C-7 | 7.50 | - | - | - | 2.00 | - | - | W |
| MH-1 | FDOT TYPE - J BOTTOM | FDOT DETAIL 201, SHEET C-8 | 11.00 | - | - | 1.68 | (SW) 1.58 | - | - | W |
| MH-2 | FDOT TYPE - J BOTTOM | FDOT DETAIL 201, SHEET C-8 | 12.65 | - | - | 2.19 | 2.09 | - | - | - |
| MH-3* | FDOT TYPE - J BOTTOM | FDOT DETAIL 201, SHEET C-8 | 12.50 | 3.74 | 3.02 | - | 3.02 | - | - | - |

* LOCATION OF EXISTING 48" DRAINAGE PIPE TO BE FIELD VERIFIED

ABBREVIATIONS

| | |
|-------------|-----------------------------|
| CONC. ELEV. | CONCRETE ELEVATION |
| EX. | EXISTING |
| O.R.B. NO. | OFFICIAL RECORD BOOK NUMBER |
| R/W TYP. | RIGHT OF WAY TYPICAL |



1" = 50'
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O'CONNOR HOLDING PROPERTY
 LAKE REMEDIATION PLANS

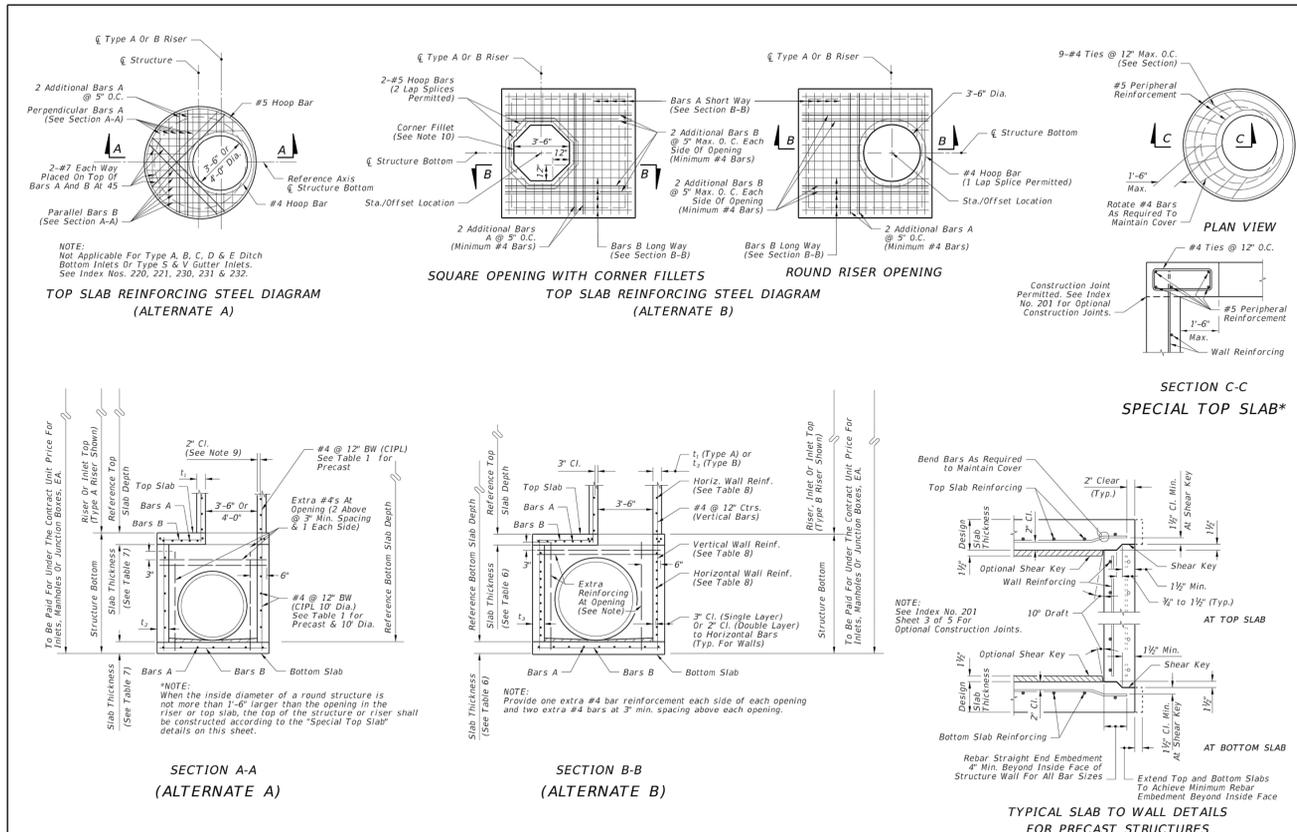
PAVING, GRADING AND DRAINAGE
 PLAN

NW 15TH AVENUE, POMIPANO BEACH, BROWARD COUNTY, FL

CERTIFICATE OF AUTHORIZATION NO. 4898

SHEET NO. C-6

PROJECT NO. 482021748.00



ROUND STRUCTURE BOTTOMS (ALTERNATE A) & ROUND RISERS- TABLE 1
Wall Thickness (t) & Vertical & Horizontal Areas of Reinforcement (A)

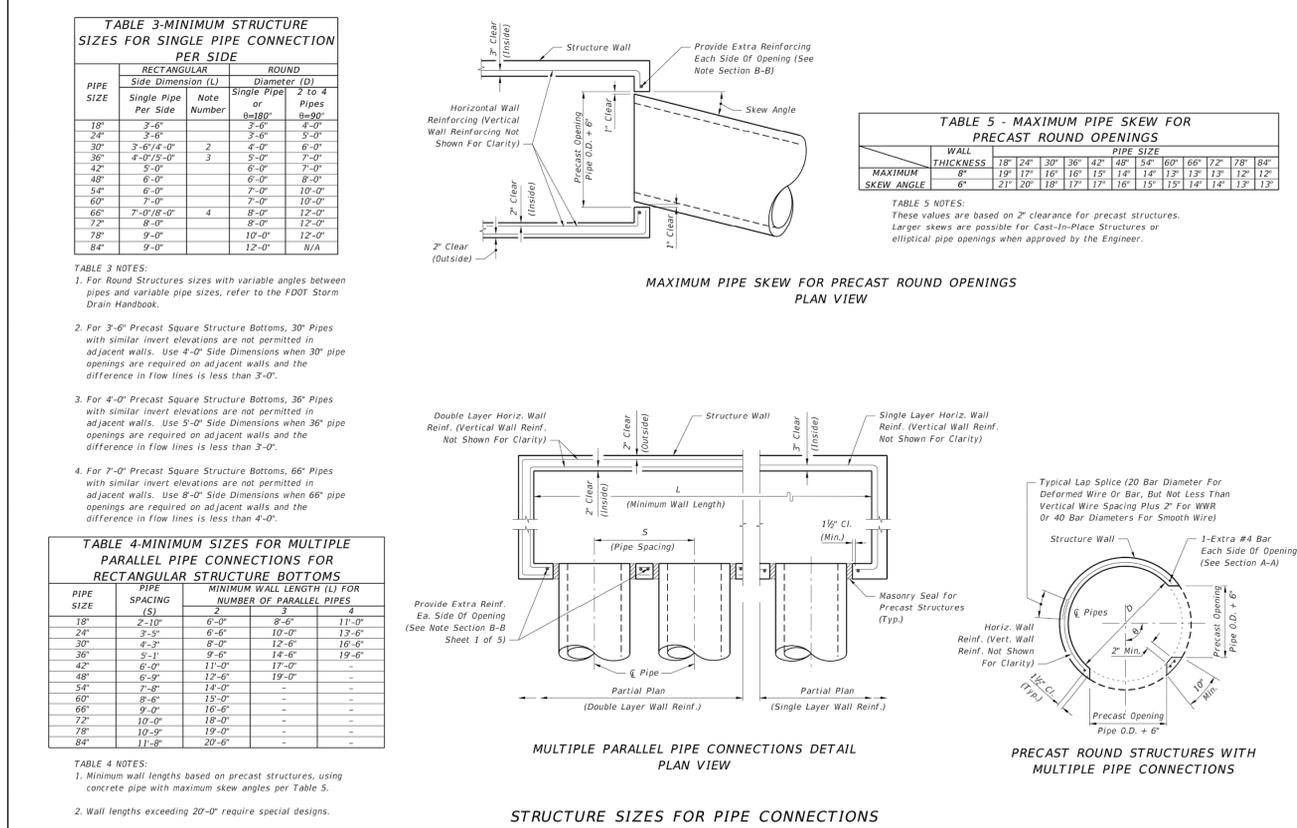
| Type | Structure/Riser Diameter (ft) | Cast-In-Place Items Class II Concrete | | | Precast Items Class II Concrete | | | ASTM C478 | | |
|------|-------------------------------|---------------------------------------|--------------|--|---------------------------------|--------------|--|--|--|--|
| | | Riser (in.) | Bottom (in.) | A _v (in. ² /ft.) | Riser (in.) | Bottom (in.) | A _v (in. ² /ft.) | t _v or t _h (in.) | A _v (in. ² /ft.) | A _v (in. ² /ft.) |
| P | 3'-0" | 6 | 8 | 0.20 | 6 | 8 | 0.20 | 4" | 0.105 | |
| P | 4'-0" | 6 | 8 | 0.20 | 6 | 8 | 0.20 | 5" | 0.120 | |
| J | 5'-0" | - | 8 | 0.20 | - | 8 | 0.20 | 6" | 0.150 | |
| J | 6'-0" | - | 8 | 0.20 | - | 8 | 0.20 | 6 | 0.180 | |
| J | 7'-0" | - | 8 | 0.20 | - | 8 | 0.20 | 7 | 0.210 | |
| J | 8'-0" | - | 8 | 0.20 | - | 8 | 0.20 | 8 | 0.240 | |
| J | 10'-0" | - | 10 | 0.40# | - | 10 | 0.40# | 10 | 0.300 | |
| J | 12'-0" | - | 10 | 0.40# | - | 12 | 0.40# | 12 | 0.360 | |

TABLE 1 NOTES:
 # Provide 0.20 eq. in.²/ft. at each face, 12" max. bar spacing.
 **Modified minimum wall thickness.
 ***Min. total circumferential reinforcement for continuous steel hoops:
 A_v = 0.40 sq. in. for riser section height equal or less than 2'-0" (2 hoop min.)
 A_v = 0.60 sq. in. for riser section height more than 2'-0" up to 4'-0" (3 hoop min.)
 Areas of reinforcing for precast items are based on Grade 60 reinforcing.
 No reduction in the area of reinforcement is allowed for welded wire fabric in Table 1.
 Area of vertical reinforcing may be reduced in accordance with ASTM C478.

- GENERAL NOTES**
- Standard structure bottoms 4'-0" diameter and smaller (Alt. A) and 3'-6" square (Alt. B) are designated Type P. Larger standard structure bottoms are designated Type J. Risers are permitted for all structures. Round risers are designated Type A, square risers are designated Type B.
 - Walls of circular structures (Alt. A) constructed in place may be of brick or reinforced concrete. Precast and rectangular structures (Alt. B) shall be constructed of reinforced concrete only.
 - Wall thickness and reinforcement are for either reinforced cast-in-place or precast concrete units except that precast circular units may be furnished with walls in accordance with ASTM C478 (see modified wall thicknesses in Table 1).
 - Top and bottom slab thickness and reinforcement are for precast and cast-in-place construction. All concrete shall be of Class II concrete, except use Class IV concrete when shown in the Plans. For special applications of structures located in extremely aggressive environments, concrete as specified in ASTM C478 (6000 psi) may be used in lieu of Class II concrete for precast items manufactured in accordance with Specifications Section 449.
 - All reinforcement shown is Grade 60 steel, deformed bar. Equivalent area Grade 40 steel or equivalent area smooth or deformed welded wire reinforcement in accordance with Specification Section 931 may be substituted according to Index No. 201, unless otherwise noted.
 - Alt. A or Alt. B structure bottoms may be used in conjunction with curb inlet tops Types 1, 2, 3, 4, 5, 6, 9, and 10, and any manhole or junction box unless otherwise shown in the plans or other standard drawings. Alt. B structure bottoms may be used in conjunction with curb inlet Types 7 & 8, or any ditch bottom inlet unless otherwise shown in the plans or other standard drawings.
 - Rectangular structures may be rotated as directed by the Engineer in order to facilitate connections between the structure walls and storm sewer pipes.
 - Except when ACI hooks are specifically required, reinforcement in top and bottom slab shall be straight embedment.
 - All reinforcement must have 2" minimum cover except for 3'-6" diameter precast circular units manufactured under ASTM C478, keyed construction otherwise shown. Additional bars used to restrain hole formers for precast structures with grouted pipe connections may be left flush with the hole surface. Cut or bend reinforcement at pipe openings to maintain cover. Exposed ends of reinforcing at precast pipe openings and grouted joints must be removed to 1" below the concrete surface and sealed with a Type F epoxy in accordance with Specification Section 926. Horizontal steel in rectangular structures shall be lapped a minimum of 30 bar diameters or by standard hooks at corners.
 - The corner fillets shown are necessary for rectangular structures used with circular risers and inlet throats and when used on skew with rectangular risers, inlets and inlet throats. Fillets will be required in the top slab of the Alt. A structure bottoms when used with the Alt. B risers. Each fillet shall be reinforced with two #5 bars.
 - Inlet walls, throats, risers or manhole tops shall be secured to structures as shown on Index No. 201 (Sheet 3 of 5) Optional Construction Joints.
 - Structures with depths over 14' below the mean high water table are to be checked for flotation by the designer of the drainage project.
 - Units larger than specified standards may be substituted at the contractor's option when these units will not cause or increase the severity of utility conflicts. Such larger units shall be furnished at no additional cost to the Department. Larger Alt. A units cannot replace Alt. B units without approval of the Engineer. This note applies to this Index only.
 - For manhole and junction box tops, for frames and covers, and, for supplementary details and notes see Index No. 201.
 - Type J structure bottoms must have a minimum 6'-0" wall height when possible, for maintenance access.

| | | | | | |
|---------------------------|----------------------------------|------------|--------------------------------|------------------|---------------------|
| LAST REVISION 11/01/16 | DESCRIPTION: DESIGN STANDARDS | FY 2017-18 | STRUCTURE BOTTOMS TYPE J AND P | INDEX NO. 200 | SHEET NO. 1 of 5 |
|---------------------------|----------------------------------|------------|--------------------------------|------------------|---------------------|

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| LAST REVISION 11/01/16 | DESCRIPTION: DESIGN STANDARDS | FY 2017-18 | STRUCTURE BOTTOMS TYPE J AND P | INDEX NO. 200 | SHEET NO. 2 of 5 |
|---------------------------|----------------------------------|------------|--------------------------------|------------------|---------------------|



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| LAST REVISION 07/01/07 | DESCRIPTION: DESIGN STANDARDS | FY 2017-18 | STRUCTURE BOTTOMS TYPE J AND P | INDEX NO. 200 | SHEET NO. 3 of 5 |
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SLAB DESIGNS - SQUARE AND RECTANGULAR STRUCTURES (TABLE 6)
(ALL SLABS 8" THICK EXCEPT AS NOTED - REINFORCING PARALLEL TO SHORT WAY AND LONG WAY)

| SHORT-WAY | | LONG-WAY | |
|-------------------------|-------------------|------------|-------------------|
| SLAB DEPTH | SCHEDULE (Bars A) | SLAB DEPTH | SCHEDULE (Bars B) |
| SIZE: 3'-6" x UNLIMITED | | | |
| 8" < 13" | B10 | 8" < 13" | B10 |
| 13" < 23" | D7 | 13" < 23" | D7 |
| 23" < 31" | D7 | 23" < 31" | D7 |
| 31" < 40" | C6.5 | 31" < 40" | C6.5 |
| SIZE: 4' x UNLIMITED | | | |
| 8" < 7" | B5.5 | 8" < 7" | B10 |
| 7" < 19" | C6.5 | 19" < 29" | B5.5 |
| 19" < 31" | D7 | 29" < 40" | C6.5 |
| 31" < 40" | E5 | 40" < 40" | E5 |
| SIZE: 5' x 5' | | | |
| 8" < 3" | C6.5 | 8" < 3" | C6.5 |
| 3" < 7" | B5.5 | 7" < 13" | C6.5 |
| 7" < 22" | C6.5 | 13" < 22" | D7 |
| 22" < 29" | D7 | 22" < 29" | D4.5 |
| 29" < 40" | E5 | 29" < 40" | E5 |
| SIZE: 5' x 6' | | | |
| 8" < 12" | C6.5 | 8" < 3" | C6.5 |
| 12" < 26" | D7 | 3" < 9" | B5.5 |
| 26" < 40" | E5 | 9" < 23" | C3.5 |
| | | 23" < 35" | D4.5 |
| | | 35" < 40" | E5 |
| SIZE: 5' x 7' | | | |
| 8" < 10" | C6.5 | 8" < 5" | B5.5 |
| 10" < 20" | D7 | 10" < 31" | C3.5 |
| 20" < 34" | E5 | 31" < 40" | D4.5 |
| 34" < 40" | F5 | 40" < 40" | F5 |
| SIZE: 5' x 8' | | | |
| 8" < 7" | C6.5 | 8" < 8" | B10 |
| 7" < 13" | D7 | 8" < 17" | B5.5 |
| 13" < 24" | E5 | 17" < 25" | C6.5 |
| 24" < 40" | F5 | 25" < 40" | C3.5 |
| SIZE: 5' x 9' | | | |
| 8" < 8" | C6.5 | 8" < 14" | B10 |
| 8" < 14" | D7 | 14" < 24" | B5.5 |
| 14" < 25" | E5 | 24" < 34" | C6.5 |
| 25" < 40" | F5 | 34" < 40" | C3.5 |
| SIZE: 5' x UNLIMITED | | | |
| 8" < 8" | C6.5 | 8" < 5" | B10 |
| 8" < 14" | D7 | 5" < 11" | B5.5 |
| 14" < 25" | E5 | 11" < 22" | C3.5 |
| 25" < 40" | F5 | 22" < 32" | F3 |
| | | 32" < 40" | F3 |
| SIZE: 6' x 6' | | | |
| 8" < 8" | C6.5 | 8" < 8" | B5.5 |
| 8" < 14" | D7 | 8" < 14" | C6.5 |
| 14" < 24" | F5 | 14" < 21" | C3.5 |
| 24" < 34" | G5 | 21" < 25" | D4.5 |
| 34" < 40" | H5 | 25" < 34" | E5 |
| SIZE: 6' x UNLIMITED | | | |
| 8" < 8" | D7 | 8" < 8" | B5.5 |
| 8" < 14" | E5 | 8" < 14" | C6.5 |
| 14" < 24" | F5 | 14" < 21" | C3.5 |
| 24" < 34" | G5 | 21" < 25" | D4.5 |
| 34" < 40" | H5 | 25" < 34" | E5 |
| SIZE: 7' x 7' | | | |
| 8" < 8" | C6.5 | 8" < 5" | C3.5 |
| 8" < 14" | D7 | 5" < 8" | C3.5 |
| 14" < 25" | E5 | 8" < 13" | D4.5 |
| 25" < 40" | F5 | 13" < 22" | E3 |
| | | 22" < 32" | F3 |
| | | 32" < 40" | G3.5 |
| SIZE: 7' x 8' | | | |
| 8" < 8" | C6.5 | 8" < 5" | C3.5 |
| 8" < 14" | D7 | 5" < 8" | C3.5 |
| 14" < 25" | E5 | 8" < 13" | D4.5 |
| 25" < 40" | F5 | 13" < 22" | E3 |
| | | 22" < 32" | F3 |
| | | 32" < 40" | G3.5 |

SLAB DESIGNS - ROUND STRUCTURES (TABLE 7)

| SLAB DEPTH | SLAB THICKNESS | REIN. (2-WAY) SCHEDULE |
|-----------------------|----------------|------------------------|
| SIZE: 3'-6" DIAMETER | | |
| 2'-15" | 6" Precast | C6.5 |
| 0.5' < 30" | 8" | A6 |
| 30" < 40" | 8" | B5.5 |
| SIZE: 4'-0" DIAMETER | | |
| 8" < 19" | 8" | A6 |
| 19" < 30" | 8" | B5.5 |
| 30" < 40" | 8" | C6.5 |
| SIZE: 5'-0" DIAMETER | | |
| 8" < 14" | 8" | B5.5 |
| 14" < 23" | 8" | C3.5 |
| 23" < 31" | 8" | F5 |
| 31" < 40" | 8" | D7 |
| 40" < 40" | 8" | D4.5 |
| SIZE: 6'-0" DIAMETER | | |
| 8" < 9" | 8" | B5.5 |
| 9" < 15" | 8" | C6.5 |
| 15" < 26" | 8" | C6.5 |
| 26" < 35" | 8" | D7 |
| 35" < 40" | 8" | D4.5 |
| SIZE: 7'-0" DIAMETER | | |
| 8" < 8" | 8" | C3.5 |
| 8" < 16" | 8" | E5 |
| 16" < 23" | 8" | E5 |
| 23" < 27" | 8" | F3 |
| 27" < 40" | 8" | F3.5 |
| SIZE: 8'-0" DIAMETER | | |
| 8" < 10" | 8" | D4.5 |
| 10" < 16" | 8" | E5 |
| 16" < 23" | 8" | E5 |
| 23" < 27" | 8" | F3 |
| 27" < 40" | 8" | F3.5 |
| SIZE: 10'-0" DIAMETER | | |
| 8" < 13" | 10" | D4.5 |
| 13" < 18" | 10" | F5 |
| 18" < 26" | 10" | G3.5 |
| 26" < 40" | 12" | G3.5 |

SLAB AND WALL DESIGN TABLE NOTES

- Size is the inside dimension(s) of a structure.
- Slab reinforcement is appropriate for top, intermediate, and bottom slabs.
- Bottom slabs for precast 3'-6" x 3'-6" rectangular structures at 15' depth or less, may be 6" thick.
- Slab depth is measured from finished grade to top of slab.
- Wall thickness and reinforcing for rectangular structures is based on the longer wall length.
- Reinforcing schedules with larger areas of steel may be substituted for schedules with smaller bar or wire spacing, except that Schedule B10 may not be substituted for Schedule A6. See Index 201, Sheet 4 for allowable bar spacing adjustments when larger areas of reinforcing are substituted.

| | | | | | |
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| LAST REVISION 11/01/16 | DESCRIPTION: DESIGN STANDARDS | FY 2017-18 | STRUCTURE BOTTOMS TYPE J AND P | INDEX NO. 200 | SHEET NO. 4 of 5 |
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CERTIFICATE OF AUTHORIZATION NO. 4898

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CLIENT:

| REV | DATE | DESCRIPTION |
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| | | |

DATE: NOVEMBER 10, 2022
 SCALE: DRAWN BY: B.R.
 CHECKED BY: R.M.Z.

O'CONNOR HOLDING PROPERTY
LAKE REMEDIATION PLANS
 NW 15TH AVENUE, POMIPANO BEACH, BROWARD COUNTY, FL

PAVING, GRADING AND DRAINAGE DETAILS

SHEET NO. **C-7**
 PROJECT NO. **482021748.00**

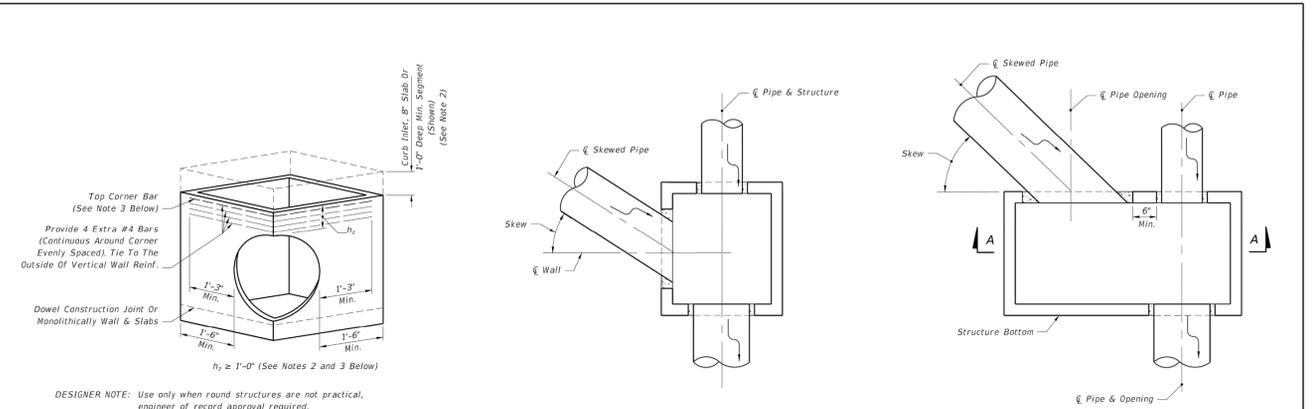
STATE OF FLORIDA
 PROFESSIONAL ENGINEER
 LICENSE NO. 17931
 ROBERT Z. LUCIANO
 REGISTRATION NUMBER: 17931

PERMIT SUBMITTAL

| EXAMPLE TABLE OF EQUIVALENT STEEL AREA | | | | | | | | |
|--|--|----------------------------------|---|---------------------------------------|---|---------------------------------------|---|---------------------------------------|
| SCHEDULE | GRADE 60 REINFORCING BAR | | EQUIVALENT GRADE 40 REINFORCING BAR | | EQUIVALENT 65 KSI SMOOTH WELDED WIRE REINFORCEMENT | | EQUIVALENT 70 KSI DEFORMED WELDED WIRE REINFORCEMENT | |
| | Bar Size & Spacing | Steel Area (in ² /ft) | Bar Size & Spacing | Min. Steel Area (in ² /ft) | Style Designation | Min. Steel Area (in ² /ft) | Style Designation | Min. Steel Area (in ² /ft) |
| A | #3 @ 6" Ctrs. #4 @ 12" Ctrs. | 0.20 | #3 @ 4 1/2" Ctrs. #4 @ 8" Ctrs. #5 @ 12" Ctrs. | 0.30 | 3x3-W4.6xW4.6 4x4-W5.7xW5.7 6x6-W9.2xW9.2 | 0.1846 | 3x3-D4.3xD4.3 4x4-D5.7xD5.7 6x6-D8.6xD8.6 | 0.1714 |
| B | #3 @ 5 1/2" Ctrs. #4 @ 10" Ctrs. | 0.24 | #3 @ 3 1/2" Ctrs. #4 @ 6 1/2" Ctrs. #5 @ 10" Ctrs. | 0.36 | 3x3-W5.5xW5.5 4x4-W7.4xW7.4 6x6-W11.1xW11.1 | 0.2215 | 3x3-D5.1xD5.1 4x4-D6.9xD6.9 6x6-D10.3xD10.3 | 0.2057 |
| Special 1 | #3 @ 5" Ctrs. #4 @ 9" Ctrs. | 0.267 | #3 @ 3" Ctrs. #4 @ 6" Ctrs. #5 @ 9" Ctrs. | 0.40 | 3x3-W6.2xW6.2 4x4-W8.2xW8.2 6x6-W12.3xW12.3 | 0.2465 | 3x3-D5.7xD5.7 4x4-D7.6xD7.6 6x6-D11.4xD11.4 | 0.2289 |
| C | #3 @ 3 1/2" Ctrs. #4 @ 6 1/2" Ctrs. #5 @ 10" Ctrs. | 0.37 | #4 @ 4" Ctrs. #5 @ 6 1/2" Ctrs. #6 @ 9 1/2" Ctrs. | 0.555 | 3x3-W8.5xW8.5 4x4-W11.4xW11.4 6x6-W17.1xW17.1 | 0.3415 | 3x3-D7.9xD7.9 4x4-D10.6xD10.6 6x6-D15.9xD15.9 | 0.3171 |
| D | #4 @ 4 1/2" Ctrs. #5 @ 7" Ctrs. #6 @ 10" Ctrs. | 0.53 | #4 @ 3" Ctrs. #5 @ 4 1/2" Ctrs. #6 @ 6 1/2" Ctrs. | 0.795 | 3x3-D11.4xD11.4 4x4-W16.3xW16.3 6x6-W24.5xW24.5 | 0.4892 | 3x3-D11.4xD11.4 4x4-D15.1xD15.1 6x6-D22.7xD22.7 | 0.4543 |
| E | #4 @ 3" Ctrs. #5 @ 5" Ctrs. #6 @ 7" Ctrs. | 0.73 | #5 @ 3 1/2" Ctrs. #6 @ 4 1/2" Ctrs. #7 @ 6 1/2" Ctrs. | 1.095 | 3x3-W16.3xW16.3 4x4-W23.5xW23.5 6x6-W37.3xW37.3 | 0.6738 | 3x3-D15.6xD15.6 4x4-D20.9xD20.9 6x6-D31.3xD31.3 | 0.6257 |
| F | #5 @ 3 1/2" Ctrs. #6 @ 5" Ctrs. #7 @ 7" Ctrs. | 1.06 | #6 @ 3" Ctrs. #7 @ 4 1/2" Ctrs. #8 @ 6" Ctrs. | 1.59 | 3x3-W24.5xW24.5 4x4-W32.6xW32.6 6x6-W48.9xW48.9 | 0.9785 | 3x3-D22.7xD22.7 4x4-D30.3xD30.3 6x6-D45.4xD45.4 | 0.9086 |
| Special 2 | #5 @ 3" Ctrs. #6 @ 4" Ctrs. #7 @ 5 1/2" Ctrs. | 1.24 | #7 @ 4" Ctrs. #8 @ 5" Ctrs. #9 @ 6" Ctrs. | 1.86 | 3x3-W28.6xW28.6 4x4-W38.2xW38.2 6x6-W57.2xW57.2 | 1.1446 | 3x3-D26.6xD26.6 4x4-D35.4xD35.4 6x6-D53.1xD53.1 | 1.0629 |
| G | #6 @ 3 1/2" Ctrs. #7 @ 5" Ctrs. | 1.46 | #7 @ 3" Ctrs. #8 @ 4" Ctrs. | 2.19 | 3x3-W33.7xW33.7 4x4-W44.9xW44.9 | 1.3477 | 3x3-D31.3xD31.3 4x4-D41.7xD41.7 | 1.2514 |

NOTES FOR PRECAST OPTIONS AND EQUIVALENT REINFORCEMENT SUBSTITUTION

- Details for optional precast inlet construction up to depths of 15' are shown on the inlet indexes.
- When precast units are used in conjunction with Alt. "B" Structure Bottoms, Index No. 200, the interior dimensions of an Alt. "B" Bottom can be adjusted to reflect these inlet interior dimensions.
- Concrete which meets the requirements of ASTM C478 or Class IV must be used for precast structures constructed with 6" wall or slab thickness.
- Reinforcement can be either deformed bar reinforcement or welded wire reinforcement. Bar reinforcement other than 60 ksi may be used, however only two grades are recognized: Grade 40 and Grade 60. Smooth welded wire reinforcement, when having a design strength of 65 ksi and deformed welded wire reinforcement will be recognized as having a design strength of 70 ksi. The area of reinforcement required may be adjusted in accordance with the Equivalent Steel Area Table provided. For bars and spacings not given, the steel area required can be determined by the following equations:
 Grade 40 Steel Area = $A_{s40} = \frac{60}{40} \times A_{s60}$
 Smooth Welded Wire Reinforcement Steel Area = $A_{s65} = \frac{60}{65} \times A_{s60}$
 Deformed Welded Wire Reinforcement Steel Area = $A_{s70} = \frac{60}{70} \times A_{s60}$
 When a reduced area of reinforcement is provided, any maximum bar spacing shown must also be reduced as determined by the following equations, unless otherwise shown:
 Max. Grade 40 Bar Spacing = Grade 60 Bar Spacing
 Max. Smooth Welded Wire Spacing = Grade 60 Bar Spacing x 0.86
 Max. Deformed Welded Wire Spacing = Grade 60 Bar Spacing x 0.74
 When an increased area of reinforcing is provided, then the maximum bar spacing may be increased by the square ratio of increased steel area, but not to exceed 12".
 Max. Bar Spacing Provided \leq Max. Bar Spacing Required x $\left(\frac{\text{Steel Area Provided}}{\text{Min. Steel Area Required}} \right)^2$
 In no case will reinforcement with wires smaller than W3.1 or D4.0, or spacings greater than 6" be permitted. Bar reinforcement shall show the minimum yield designation grade mark or either the number 60 or one (1) grade mark line to be acceptable at the higher value. Maximum bar spacing shall not be greater than two (2) times the slab thickness with a maximum spacing of 12" for vertical bars and 12" for horizontal bars. Wires smaller than W3.1 or D4.0 are permitted in the walls of ASTM C 478 round structure bottoms and round risers.
- Fiber-reinforced concrete may be substituted for conventional steel reinforcement in accordance with the Structures Design Guidelines. Shop drawings corresponding to an approved fiber-reinforced concrete mix design must be submitted for approval to the State Drainage Engineer.



PICTORIAL VIEW

DESIGNER NOTE: Use only when round structures are not practical, engineer of record approval required.

NOTE:

- Submit Shop Drawings of corner openings for approval by the Engineer of Record.
- h_1 may be less than 1'-0" when a minimum 1'-0" deep segment, 6" slab or curb inlet is provided above the corner opening.
- For inlet segments at finish grade elevation substitute a #8 Bar for the top corner bar when 1'-0" \leq h_1 < 2'-0".

RECTANGULAR SEGMENT WITH PIPE OPENING AT CORNER

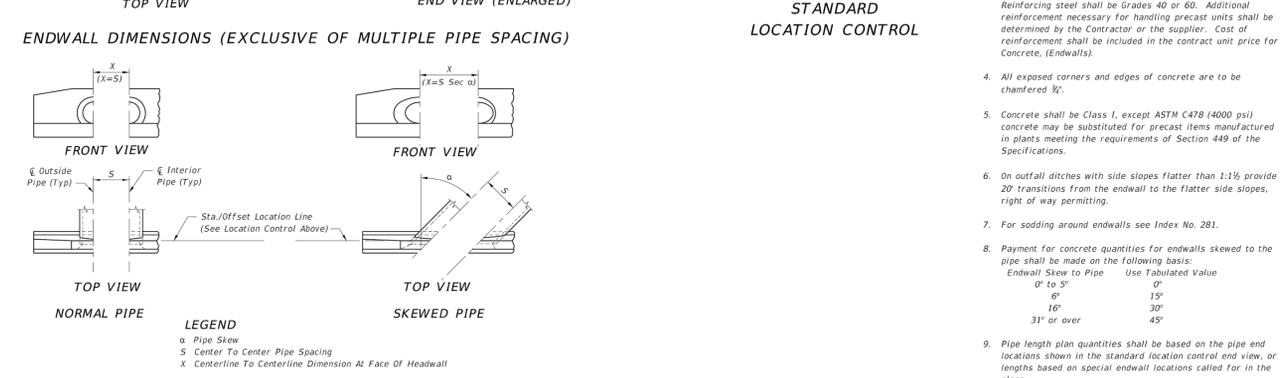
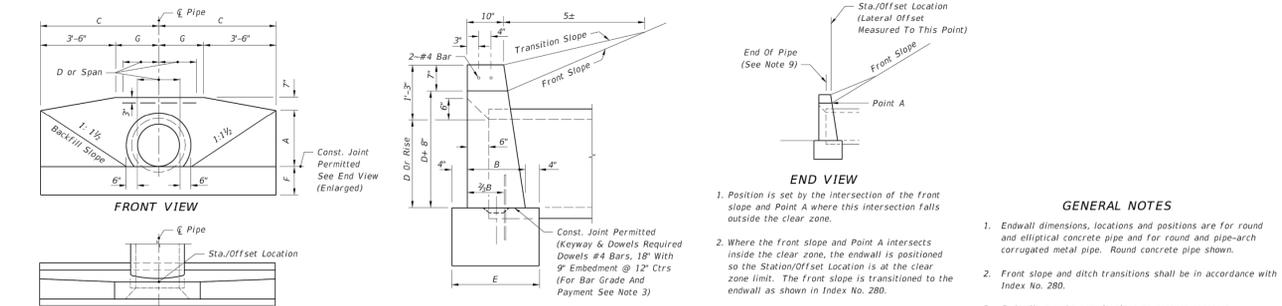
DETAILS FOR SKEWED PIPES IN RECTANGULAR STRUCTURES

GENERAL NOTES

- For square or rectangular precast drainage structures, using either deformed or smooth WWR meeting the requirements of Specification Section 931, WWR shall be continuous around the box and lapped in accordance with Option 1 or 3 as shown in the Wall Reinforcing Splice Details.
- Horizontal steel in the walls of rectangular structures shall be lap spliced in accordance with Option 1, 2 or 3 as shown in the Wall Reinforcing Splice Details.
- Welding of splices and laps is permitted. The requirements and restrictions placed on welding in AASHTO M259 shall apply.
- Rebar straight end embedment of peripheral reinforcement may be used in lieu of ACI standard hooks for top and bottom slabs except when hooks are specifically called for in the plans or standard drawings.
- Concrete as specified in ASTM C478, (4000 psi) may be used in lieu of Class II concrete in precast items manufactured in plants which meet the requirements in accordance with Specification Section 449.
- Precast opening for pipe shall be the pipe OD plus 6" ($\pm 2"$ tolerance). Mortar used to seal the pipe into the opening will be of such a mix that shrinkage will not cause leakage into or out of the structure. Dry-pack mortar may be used in lieu of brick and mortar construction to seal openings less than 24" wide.
- For pay item purposes, the height used to determine if a drainage structure is greater than 10 Feet shall be computed using:
 A. the elevation of the top of the manhole lid,
 B. the grade elevation or the theoretical gutter grade elevation of an inlet, or
 C. the outside top elevation of a junction box less the flow line elevation of the lowest pipe or top of sump floor.

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| LAST REVISION 11/01/16 | DESCRIPTION: | FDOT DESIGN STANDARDS | FY 2017-18 | SUPPLEMENTARY DETAILS FOR MANHOLES & INLETS | INDEX NO. 201 | SHEET NO. 4 of 5 |
|---------------------------|--------------|--------------------------|------------|---|------------------|---------------------|

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| LAST REVISION 07/01/12 | DESCRIPTION: | FDOT DESIGN STANDARDS | FY 2017-18 | SUPPLEMENTARY DETAILS FOR MANHOLES & INLETS | INDEX NO. 201 | SHEET NO. 5 of 5 |
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| LAST REVISION 11/01/16 | DESCRIPTION: | FDOT DESIGN STANDARDS | FY 2017-18 | STRAIGHT CONCRETE ENDWALLS SINGLE AND MULTIPLE PIPE | INDEX NO. 250 | SHEET NO. 1 of 2 |
|---------------------------|--------------|--------------------------|------------|---|------------------|---------------------|

DATA AND ESTIMATED QUANTITIES FOR ONE ENDWALL

| D | Opening Area (SF) | ROUND CONCRETE AND CORRUGATED METAL PIPE | | | | | | | | | | | | | | | | | | | | | | | | D | | | | | | | | | | | | | | | | |
|-----|-------------------|--|------|------|--------|--------|-------|--------|-------|-------|-------|-------|-------|--|-------|------|------|--------|------|------|------|-----------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|
| | | Dimensions | | | | | | | | | | | | Number And Type Of Pipe And Skew Angle Of Pipe | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Number Of Pipes | | | | Single | | | | | | | | Double | | | | Triple | | | | Quadruple | | | | | | | | | | | | | | | | | | | | |
| 15' | 1.23 | 2.46 | 3.69 | 4.92 | 1'-11" | 1'-2" | 4'-0" | 1'-10" | 1'-2" | 0'-6" | 2'-7" | 2'-7" | 2'-8" | 3'-0" | 3'-8" | 1.23 | 1.24 | 1.59 | 1.60 | 1.65 | 1.74 | 1.62 | 1.63 | 1.68 | 1.78 | 1.94 | 1.96 | 2.05 | 2.23 | 1.99 | 2.02 | 2.11 | 2.30 | 2.30 | 2.34 | 2.47 | 2.74 | 2.37 | 2.41 | 2.75 | 2.84 | 15' |

| Span | Rise | Opening Area (SF) | CORRUGATED METAL PIPE ARCH | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------|------|-------------------|----------------------------|-----|-----|-------|--------|--------|--------|-------|-------|-------|-------|-------|---------------------------------------|-------|------|------|--------|------|------|------|-----------|------|------|------|------|------|---------------------------|-----|-----|-----|
| | | | Dimensions | | | | | | | | | | | | Number Of Pipe And Skew Angle Of Pipe | | | | | | | | | | | | Span | Rise | Approx. Equiv. Round Pipe | | | |
| | | | Number Of Pipes | | | | Single | | | | | | | | Double | | | | Triple | | | | Quadruple | | | | | | | | | |
| 17' | 13' | 1.1 | 2.2 | 3.3 | 4.4 | 1'-9" | 1'-2" | 3'-10" | 1'-10" | 1'-2" | 0'-4" | 2'-6" | 2'-6" | 2'-7" | 2'-11" | 3'-6" | 1.16 | 1.47 | 1.48 | 1.52 | 1.60 | 1.78 | 1.80 | 1.88 | 2.04 | 2.09 | 2.12 | 2.23 | 2.48 | 17' | 13' | 15' |

| Rise | Span | Opening Area (SF) | CONCRETE ELLIPTICAL PIPE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------|------|-------------------|--------------------------|-----|-----|-------|--------|-------|--------|-------|-------|--------|--------|--------|---------------------------------------|-------|------|------|--------|------|------|------|-----------|------|------|------|------|------|---------------------------|-----|-----|-----|
| | | | Dimensions | | | | | | | | | | | | Number Of Pipe And Skew Angle Of Pipe | | | | | | | | | | | | Rise | Span | Approx. Equiv. Round Pipe | | | |
| | | | Number Of Pipes | | | | Single | | | | | | | | Double | | | | Triple | | | | Quadruple | | | | | | | | | |
| 12" | 18" | 1.3 | 2.6 | 3.9 | 5.2 | 1'-8" | 1'-2" | 3'-9" | 1'-10" | 1'-2" | 0'-3" | 2'-10" | 2'-10" | 2'-11" | 3'-3" | 4'-0" | 1.09 | 1.45 | 1.46 | 1.51 | 1.60 | 1.80 | 1.82 | 1.91 | 2.09 | 2.16 | 2.20 | 2.33 | 2.60 | 12" | 18" | 15" |

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| LAST REVISION 07/01/01 | DESCRIPTION: | FDOT DESIGN STANDARDS | FY 2017-18 | STRAIGHT CONCRETE ENDWALLS SINGLE AND MULTIPLE PIPE | INDEX NO. 250 | SHEET NO. 2 of 2 |
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PAVING, GRADING AND DRAINAGE DETAILS

SHEET NO. **C-9**
 PROJECT NO. **482021748.00**

STATE OF FLORIDA
 PROFESSIONAL ENGINEER
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 ROBERT L. ZUCCHINO
 REGISTRATION NUMBER: 17931

11/10/2022 11:17 AM: Layout, Tab: X-XXX (3), Plot: Created by: BYRON REMONDIS

