Quible

Quible & Associates, P.C.

ENGINEERING • ENVIRONMENTAL SCIENCES • PLANNING • SURVEYING
SINCE 1959

P.O. Drawer 870
Kitty Hawk, NC 27949
Phone: 252-491-8147
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March 27, 2024

Ms. Jennie Turner, CFM
Currituck County
Planning & Community Development
153 Courthouse Road, Suite 110
Currituck, North Carolina 27949

Re: Major Site Plan Application Resubmittal
Athletic Facility – 1559 Waterlily Rd
Coinjock, Currituck County, North Carolina

Ms. Turner,

Thank you for your comments on the above referenced project. On behalf of 85 and Sunny, LLC, Quible & Associates, P.C. hereby submits for your review the following digital documents:

1. One (1) digital copy of the revised Plan Set;
2. One (1) digital copy of the revised Recombination Plat;
3. One (1) digital copy of the State High Density Stormwater Permit and Low-Density Modification for the adjacent site;
4. One (1) digital copy of the State SESC Permit;
5. One (1) digital copy of the NCG01 NPDES Certificate of Coverage;
6. One (1) digital copy of Major Stormwater Plan Form SW-003;
7. One (1) digital copy of the building plans;
8. One (1) digital copy of the revised narrative;
9. One (1) CD containing digital copies of all the documents and plans.

A copy of the TRC review comments dated March 12, 2024 (McAdams) and March 13, 2024, are enclosed for reference, and our responses listed below for ease of review:

Planning (Jennie Turner, 252-232-6031)

1. Staff requests a site visit to review existing conditions.
The Applicant welcomes a site visit to the facilities but respectfully requests that the County provide reasonable advance notice of when they plan to conduct the site visit, check in at the welcome center when they do arrive, and limit visitation to the site area associated with this application, the athletic facility, not campground.

2. The retaining wall and driveway for visitor center should be on separate parcel. Consider required setbacks for development on both properties when locating new property lines.
Acknowledged. The recombination plat will be revised to keep the retaining wall on the campground property.

3. Any required federal or state permits shall be submitted prior to the county's approval of a major site plan including ARHS approval. *Attached to this resubmittal, we have included a copy of the State SESC Permit and High-Density Stormwater Permit. It is our understanding that ARHS has issued approval of the proposed wastewater system to the Applicant. It should also be noted that the low-density campground stormwater permit has also been amended and is included for reference.*

4. The proposed parking demand must be consistent with UDO Section 5.1.3.D. Please provide a narrative on how you propose to establish parking demand in accordance with this section. Specific references to publications must be made. *The Alternative parking plan has been expanded to better establish parking counts with added references.*

5. The proposed driveway needs to be removed from the 50' farmland buffer. Please reevaluate heritage tree impacts and submit a revised plan if needed. Ensure newly planted vegetation is not located in the 25' undisturbed portion of the farmland buffer. *Please see revised plan Sheet 3.*

6. Please provide pool plans and building plans. *Please see attached (also previously provided via email).*

7. Please describe the purpose for the 40 x 40 fenced area. *The proposed 40'x40' fenced in area is a secured exercise area for children of all ages.*

8. If included on recombination plat, please include notes regarding permit status of the water tanks. *Acknowledged, and no longer shown on enclosed draft recombination plat.*

Currituck County GIS (Harry Lee, 252-232-4039)

The address for the building will be 1559 Waterlily Rd. *Acknowledged. This has been updated in the title block and in the notes.*

Currituck County Public Utilities - Water (Will Rumsey 252-232-6065 & Dave Spence, 252-232-4152)

Under Review - Comments forthcoming *Acknowledged. These comments will be addressed under separate cover.*

Stormwater Review, (McAdams, county consultant)

1. Currituck requires that Major Stormwater Plan Form SW-002 and SW-003 be completed and submitted in addition to provided calculations. *Acknowledged. Form SW-002 was provided with the initial submittal. SW-003 has been prepared and is attached as required.*

2. The SHWT elevation is defined in the report to be 3.7 feet. Normal pool elevation of the wet pond is defined as 3.5' throughout the report, except for one instance within the narrative, where it is defined as 3.7'.
    a. Normal pool elevation cannot be below SHWT. Verify SHWT elevation and normal pool elevation of the wet pond and adjust wet pond calculations accordingly. *Please acknowledge that the pond is designed to meet the NCDEQ stormwater*

manual requirements. The SHWT is anticipated to be approximately 3.7' elevation and the permanent pool is designed to be 3.5' elevation. The current NCDEQ stormwater manual does not have requirements listed to dictate the permanent pool design elevation as it relates to SHWT, but the older design standards still listed in the current manual indicate "permanent pool shall be within 6" of the SHWT (either above or below)". This older, more stringent design requirement has been held with this design.

3. Water quality volume surface elevation is unlisted. The calculations for driving head for drawdown are unclear.
    a. Please provide additional information on water quality volume drawdown calculations. *Orifice drawdown calculations are provided on pg 6 of the stormwater calculations. Using a maximum driving head of 1.5', orifice coefficient of 0.6, required storage volume of 13,400 cf, and orifice diameter of 3" the pond would draw down in approximately 3.14 days. This is based on the State's required design storm of 1.5" and is within the 2-5 day drawdown rate.*

4. SESC Sheet #5 – Forebay berm elevation is defined at 8', which is the maximum stage storage elevation for the wet pond. The berm should allow for equalization of the forebay and main pool at the permanent pool elevation. *The forebay berm (top of rip-rap) has been set at elevation 8' (or temporary pool elevation). The intent is to maximize the forebay to settle out solids during all storms. The 8' (temporary pool elevation) up to 9.5' elevation will allow for equalization of the forebay and main pool during temporary storage. The design is set to allow for solids to settle out on within the forebay prior to discharge into the main pool and subsequent release downstream from the overflow structure. The design is not intended to equalize the permanent pool elevation as we feel that would not adequately settle out solids prior to discharge.*

5. SESC Sheet #5 – Upstream and downstream inverts of the outlet pipe in riser structure have a higher elevation than normal pool elevation than the listed normal pool elevation of 3.5'. The wet pond must have the ability to draw down to normal pool elevation. *Acknowledged. The inverts in plan view have been updated to match the outlet structure detail and a downstream swale is now shown.*

6. SESC Sheet #6 – Callouts for the wet pond detail do not match those in the plan view on Sheet #5. Correct slope call out to more accurately reflect the proposed design. *Acknowledged. This detail has been updated.*

7. SESC Sheet #6 – Callout downstream invert elevation of pipe network to the wet pond forebay. *Acknowledged. This invert has been updated.*

8. SESC Sheet #6 – Outlet structure detail call outs don't match those listed on the plan view, specifically pipe invert elevation and size. *Acknowledged. The inverts in plan view have been updated to match the outlet structure detail and a downstream swale is now shown.*

9. SESC Sheet#6 – SHWT and Permanent Pool Elevation are defined as 3.5' in this detail. SHWT is defined as 3.7' throughout the rest of the report. These values should match for

the entire report. Please note the existing SHWT is "±3.7'" so an approximate designation has been provided on this call out.

Please review the enclosed documents and our above responses at your earliest convenience. Please do not hesitate to contact Michael W. Strader, Jr., P.E., or myself at (252) 491-8147, mstrader@quible.com or ndashti@quible.com should you have any questions or require any additional information. We respectfully request that Staff continue reviewing the major site plan application package so that an approval may be issued upon receipt of State Permits and Approvals.

Sincerely,
Quible & Associates, P.C.

Nadeen Dashti, E. I.

Encl.: as stated
Cc: 85 and Sunny, LLC

NOTES

1. OWNER/APPLICANT: 85' AND SUNNY, LLC
   9919 STEPHEN DECATUR HIGHWAY
   OCEAN CITY, MD 21842

2. ENGINEER: QUIBLE & ASSOCIATES, P.C.
   P.O. DRAWER 870
   KITTY HAWK, NC
   TEL: (252) 491-8147

3. PROPERTY INFO: 1559 WATERLILY ROAD
   PID: 0079000004A0000
   PIN: 9908-14-7146

4. EXISTING PARCEL AREA = 13,457,862 SF / 308.95 AC (AREAS BY COORDINATE METHOD.)
   PROPOSED RECONFIGURED PARCEL AREA = 13,527,666 SF / 310.55 AC
   (AREAS BY COORDINATE METHOD.)

5. SCOPE OF WORK: THIS PLAN PROPOSES THE ADDITION OF AN ATHLETIC FACILITY, ASSOCIATED PARKING, DRIVE, AND RELATED SITE IMPROVEMENTS.

6. RECORDED REFERENCE: DB 1449 PG 396, PB R, PG 288;

7. ZONE: SINGLE FAMILY MAINLAND (SFM)

8. BOUNDARY INFORMATION BASED ON QUIBLE & ASSOCIATES FIELD SURVEY DATED 01/22/18 – 02/07/18 AND ALTA SURVEY DATED 6/27/18.

9. FLOOD ZONE: "AE", "SHADED X" AND "X" WITHIN THE PROPERTY BOUNDARY (SUBJECT TO CHANGE BY F.E.M.A.) FIRM PANEL 3720990800K. DATED 12/21/18. SHOWN PER COUNTY GIS.

10. THIS PLAN SUBJECT TO ANY FACTS, INCLUDING BUILDING SETBACK RESTRICTIONS, EASEMENTS, COVENANTS, ETC., THAT MAY BE REVEALED BY A TITLE AND ACCURATE TITLE SEARCH.

11. ALL LANDSCAPING SHALL BE IN ACCORDANCE WITH CHAPTER 5.2 OF THE CURRITUCK COUNTY UNIFIED DEVELOPMENT ORDINANCE.

12. EXTERIOR LIGHTING PLAN UNDER SEPARATE COVER. ALL EXTERIOR LIGHTING SHALL BE IN ACCORDANCE WITH CHAPTER 5.4 OF THE CURRITUCK COUNTY UNIFIED DEVELOPMENT ORDINANCE.

13. REMOVE TREES, GRASSES, SHRUBS AND OTHER VEGETATION, IMPROVEMENTS OR OBSTRUCTIONS INTERFERING WITH INSTALLATION OF NEW CONSTRUCTION UNLESS NOTED OTHERWISE.

DEMOLITION NOTES:

1. CONTRACTOR SHALL LOCATE EXISTING UNDERGROUND SERVICES – TO INCLUDE BUT NOT LIMITED TO ELECTRIC, CABLE, TELEPHONE, GAS, SANITARY SEWER AND WATER – AND SHALL COORDINATE PROPER PROTECTION AND/OR RELOCATE WITH APPROPRIATE OWNER/UTILITY COMPANY.

2. CONTRACTOR SHALL WALK THE SITE AND BE FAMILIAR WITH THE SCOPE OF DEMOLITION REQUIRED. ALL DEMOLITION WORK REQUIRED TO CONSTRUCT NEW IMPROVEMENTS WILL BE PERFORMED BY THE CONTRACTOR AND BE UNCLASSIFIED EXCAVATION.

3. DEMOLITION SHALL INCLUDE BUT IS NOT LIMITED TO THE EXCAVATION, HAULING AND OFFSITE DISPOSAL OF CONCRETE CURBS AND GUTTERS, BITUMINOUS CONCRETE PAVEMENTS AND ALL MATERIALS OR VEGETATION CLEARED AND STRIPPED TO THE EXTENT NECESSARY FOR THE INSTALLATION OF NEW IMPROVEMENTS AND WITHIN THE LIMITS OF CLEARING AND GRADING. COORDINATE WITH APPROPRIATE DRAWINGS.

4. THE CONTRACTOR SHALL PROTECT ALL PROPERTY AND STRUCTURES AND UTILITIES ON THE PROPERTY NOT TO BE DEMOLISHED. DAMAGE TO THE PROPERTY DUE TO THE CONTRACTOR'S ACTIVITIES SHALL BE REPLACED IN KIND BY THE CONTRACTOR AT NO COST TO THE OWNER.

5. ALL EXISTING IMPROVEMENTS INDICATED OR REQUIRED TO BE DEMOLISHED SHALL INCLUDE REMOVAL FROM PROJECT AREA.

6. EXISTING PAVEMENT, CURB AND GUTTER, LIGHTS, FENCES, TREE/VEGETATION AND UTILITIES NOT INTENDED FOR DEMOLITION SHALL BE MAINTAINED, PROTECTED, AND UNDISTURBED DURING DEMOLITION. CONTRACTOR SHALL COORDINATE THE REMOVAL OF BITUMINOUS CONCRETE PAVEMENTS AND CURB AND GUTTER WITH THE SITE PLAN.

7. SMOOTH SAW CUT OF EXISTING PAVEMENTS, CURBS AND CURBS AND GUTTERS TO BE DEMOLISHED SHALL BE PROVIDED.

8. ALL DEMOLITION WORK SHALL BE DONE IN STRICT ACCORDANCE WITH FEDERAL, STATE AND LOCAL LAWS AS WELL AS OSHA REGULATIONS.

9. CONTRACTOR'S ACTIVITIES SHALL NOT IMPEDE USAGE OR INGRESS/EGRESS TO ADJACENT PROPERTIES. COORDINATE WITH OWNER MAINTENANCE OF TRAFFIC/PEDESTRIAN CIRCULATION DURING CONSTRUCTION.

10. MAINTAIN POSITIVE DRAINAGE AWAY FROM BUILDINGS AT ALL TIMES DURING DEMOLITION.

11. DEMOLITION SHALL NOT BEGIN UNTIL WRITTEN AUTHORIZATION IS RECEIVED FROM THE OWNER AND CONTRACTOR HAS OBTAINED THE REQUIRED PERMITS FROM ALL LOCAL, STATE, AND FEDERAL AGENCIES HAVING JURISDICTION TO AUTHORIZE DEMOLITION WORK.

12. DEMOLITION PLAN DOES NOT PURPORT TO SHOW ALL OBJECTS OR UTILITIES EXISTING ON THE SITE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE AND LOCATION OF ALL UTILITIES AND IMPROVEMENTS WITHIN THE LIMITS OF WORK. CONTRACTOR SHALL COORDINATE ALL UTILITY DISCONNECTION, (I.E. SANITARY SEWER, WATER, GAS, TELEPHONE, ELECTRIC, ETC.) TO BUILDINGS, STRUCTURES AND OTHER CONNECTIONS AS NECESSARY FOR DEMOLITION WITH THEIR RESPECTIVE UTILITY PROVIDER. ALL UTILITIES, ABOVE, ON OR BELOW GROUND SHALL BE REMOVED AS DENOTED ON THE PLAN AND SHALL MEET ALL REQUIREMENTS OF UTILITY OWNERS. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING EACH UTILITY COMPANY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES PRIOR TO BEGINNING OF WORK. BEFORE ANY DEMOLITION, THE CONTRACTOR SHALL CALL NORTH CAROLINA ONE-CALL 1-800-632-4949 TO HAVE ALL UNDERGROUND UTILITIES LOCATED ON AND NEAR THE VICINITY OF THE SITE.

13. EXISTING WATER METERS, ELECTRICAL TRANSFORMERS, TELECOMMUNICATION TERMINALS, ETC. ARE THE PROPERTY OF THE UTILITY COMPANIES SERVICING THE SITE AND CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH UTILITY OWNERS THE REMOVAL, TRANSPORTATION, AND STORAGE OF THE SAME.

14. WHERE BUILDING FOUNDATION WALLS, FOOTINGS, CONCRETE SLABS, STOOPS, PAVEMENTS, SIDEWALKS, CURB, OR CURB AND GUTTER ARE INDICATED TO BE REMOVED CONTRACTOR SHALL INCLUDE THE REMOVAL OF BASE MATERIAL DOWN TO SUB-GRADE.

15. DEMOLITION PLAN DOES NOT GUARANTEE THE ACCURACY OR QUANTITIES OF THE DEMOLITION STRUCTURES AND MATERIALS; IT WAS DEVELOPED TO ASSIST THE CONTRACTOR. IT IS EXPRESSLY STATED HEREON THAT THE OWNER OR ENGINEER WILL NOT BE RESPONSIBLE FOR INTERPRETATIONS OR CONCLUSIONS DRAWN THEREFROM BY THE CONTRACTOR.

16. ALL WASTE MATERIALS SHALL BE REMOVED FROM THE SITE DAILY IN A MANNER WHICH PREVENTS INJURY OR DAMAGE TO PERSONS, PRIVATE PROPERTY, AND/OR PUBLIC RIGHTS-OF-WAY; CONTRACTOR SHALL LEGALLY DISPOSE OF ALL DESIGNATED DEMOLITION DEBRIS FROM THE PROJECT SITE TO A DISPOSAL SITE APPROVED BY ALL AUTHORITIES HAVING JURISDICTION.

PERMANENT VEGETATION

SEEDING DATES: APRIL 1 – AUGUST 31:

SEED MIXTURE	APPLICATION RATES/ACRE
REBEL II FESCUE	130 LBS.
COMMON BERMUDA "SAHARA" (HULLED)	215 LBS.

SEEDING DATES: SEPT. 1 – MARCH 31:

SEED MIXTURE	APPLICATION RATES/ACRE
REBEL II FESCUE	250 LBS.
COMMON BERMUDA "SAHARA" (UNHULLED)	215 LBS.

TEMPORARY VEGETATION

SEEDING DATES: AUG. 16 – APRIL 15:

SEED MIXTURE	APPLICATION RATES/ACRE
RYE GRAIN	120 LBS

SEEDING DATES: APRIL 16 – AUG. 15:

SEED MIXTURE	APPLICATION RATES/ACRE
GERMAN MILLET	40 LBS

SEEDBED PREPARATION:

LOOSEN SOILS TO A DEPTH OF 6-8 INCHES USING A RIPPER, HARROW, OR CHISEL PLOW, BREAK UP CLODS, REMOVE UNACCEPTABLE GROWTH (STICKS, ROOTS), STONES (>3"), AND OTHER MATERIALS, AND WORK THE TOP 3-4 INCHES OF THE SOIL INTO A SEEDBED. THE AREA TO BE SEEDED SHALL BE RE-COMPACTED UTILIZING A CULTIPACKER ROLLER AND A SMOOTH EVEN SOIL SURFACE WITH A LOOSE, UNIFORMLY FINE TEXTURE SHALL BE THE FINISHED GRADE.

SOIL AMENDMENTS:

OBTAIN A SOIL TEST TO DETERMINE APPLICATION RATES AND FOLLOW RECOMMENDATIONS OF SOIL TESTS. WHEN A SOIL TEST IS NOT POSSIBLE, APPLY 3,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 1,000 LB/ACRE 10-10-10 STARTER FERTILIZER.

MULCHING:

APPLY 4,000 LB/ACRE GRAIN STRAW OR EQUIVALENT COVER OF ANOTHER SUITABLE MULCH. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, ROVING OR BY CRIMPING WITH A MULCH ANCHORING TOOL.

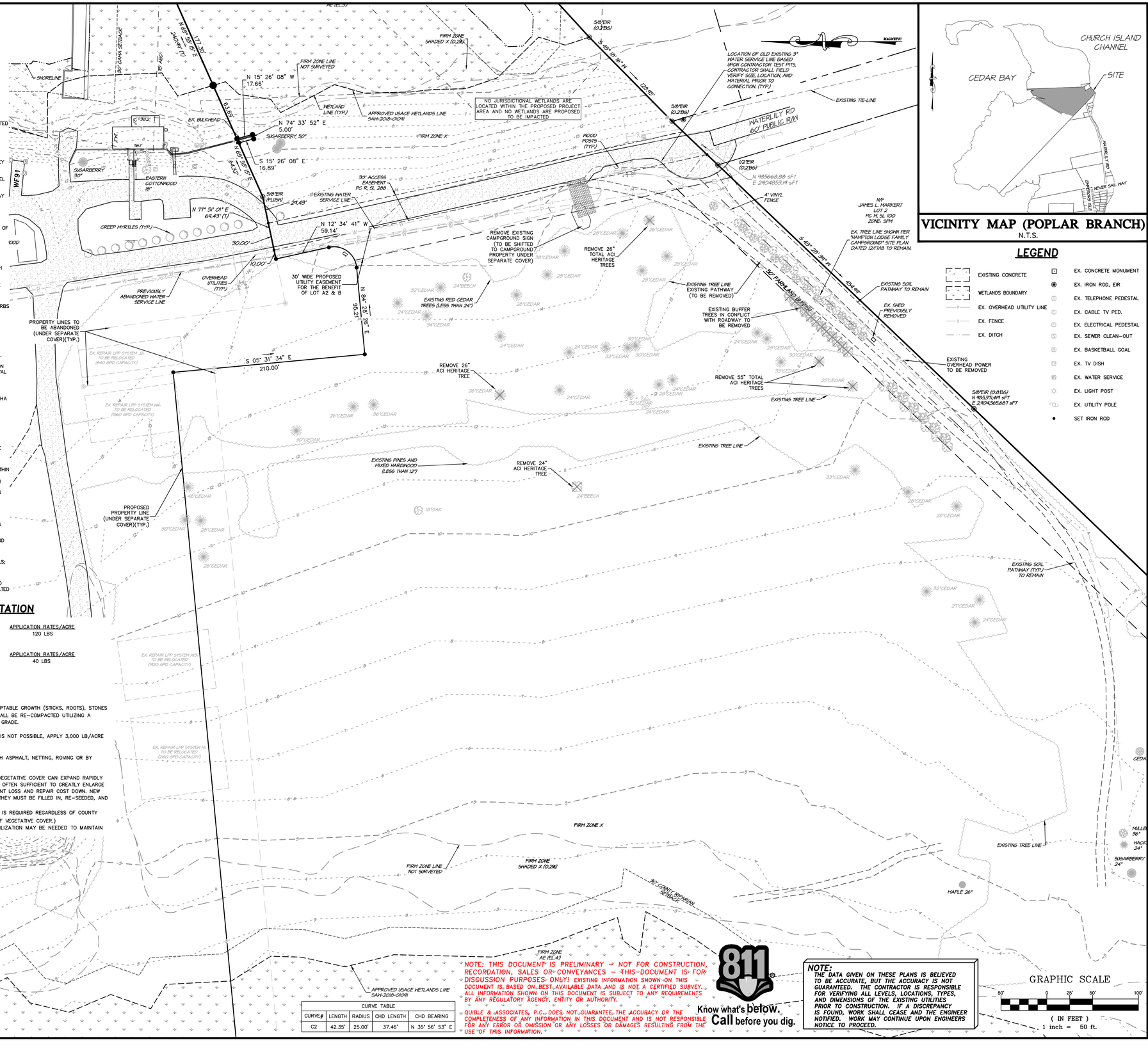
MAINTENANCE:

SATISFACTORY STABILIZATION AND EROSION CONTROL REQUIRES A COMPLETE VEGETATIVE COVER. EVEN SMALL BREACHES IN VEGETATIVE COVER CAN EXPAND RAPIDLY AND, IF LEFT UNATTENDED, CAN ALLOW SERIOUS SOIL LOSS FROM AN OTHERWISE STABLE SURFACE. A SINGLE HEAVY RAIN IS OFTEN SUFFICIENT TO GREATLY ENLARGE BARE SPOTS, AND THE LONGER REPAIRS ARE DELAYED, THE MORE COSTLY THEY BECOME. PROMPT ACTION WILL KEEP SEDIMENT LOSS AND REPAIR COST DOWN. NEW SEEDLINGS SHOULD BE INSPECTED FREQUENTLY AND MAINTENANCE PERFORMED AS NEEDED. IF RILLS AND GULLIES DEVELOP, THEY MUST BE FILLED IN, RE-SEEDED, AND MULCHED AS SOON AS POSSIBLE. DIVERSIONS MAY BE NEEDED UNTIL NEW PLANTS TAKE HOLD.

MAINTENANCE REQUIREMENTS EXTEND BEYOND THE SEEDING PHASE. (COMPLETE VEGETATIVE COVER IS REQUIRED REGARDLESS OF COUNTY ISSUANCE OF A CERTIFICATE OF OCCUPANCY AND FINAL PAYMENT WILL NOT BE AWARDED UNTIL COMPLETE ESTABLISHMENT OF VEGETATIVE COVER.) WEAK OR DAMAGED SPOTS MUST BE RELIMED, FERTILIZED, MULCHED, AND RESEEDED AS PROMPTLY AS POSSIBLE. REFERTILIZATION MAY BE NEEDED TO MAINTAIN PRODUCTIVE STANDS.

SEEDING SPECIFICATIONS

SHEET INDEX



CURVE TABLE				
CURVE #	LENGTH	RADIUS	CHD LENGTH	CHD BEARING
C2	42.35'	25.00'	37.46'	N 35° 56' 53" E

NOTE: THIS DOCUMENT IS PRELIMINARY - NOT FOR CONSTRUCTION, RECORDATION, SALES OR CONVEYANCES - THIS DOCUMENT IS FOR DISCUSSION PURPOSES ONLY! EXISTING INFORMATION SHOWN ON THIS DOCUMENT IS BASED ON BEST AVAILABLE DATA AND IS NOT A CERTIFIED SURVEY. ALL INFORMATION SHOWN ON THIS DOCUMENT IS SUBJECT TO ANY REQUIREMENTS BY ANY REGULATORY AGENCY, ENTITY OR AUTHORITY.

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811 Know what's below. Call before you dig.

NOTE:
THE DATA GIVEN ON THESE PLANS IS BELIEVED TO BE ACCURATE, BUT THE ACCURACY IS NOT GUARANTEED. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL LEVELS, LOCATIONS, TYPES, AND DIMENSIONS OF THE EXISTING UTILITIES PRIOR TO CONSTRUCTION. IF A DISCREPANCY IS FOUND, WORK SHALL CEASE AND THE ENGINEER NOTIFIED. WORK MAY CONTINUE UPON ENGINEERS NOTICE TO PROCEED.

GRAPHIC SCALE
50' 0 25' 50' 100'
(IN FEET)
1 inch = 50 ft.

VICINITY MAP (POPLAR BRANCH)
N.T.S.

LEGEND

EXISTING CONCRETE	EX. CONCRETE MONUMENT
WETLANDS BOUNDARY	EX. IRON ROD, EIR
EX. OVERHEAD UTILITY LINE	EX. TELEPHONE PEDESTAL
EX. FENCE	EX. CABLE TV PED.
EX. DITCH	EX. ELECTRICAL PEDESTAL
	EX. SEWER CLEAN-OUT
	EX. BASKETBALL GOAL
	EX. TV DISH
	EX. WATER SERVICE
	EX. LIGHT POST
	EX. UTILITY POLE
	SET IRON ROD

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ENVIRONMENTAL SCIENCES * SURVEYING**
** NOT OFFERED AT THIS LOCATION
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BLDG 400 POINT, NC 27966
Phone: (252) 491-8147
90 CHURCH STREET
SUITE B
ROCKY MOUNT, NC 27804
Phone: (252) 353-5149

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 042462 ENGINEERING CORPORATE CERTIFICATION

NO.	DATE	REVISIONS
1	02/27/24	ISSUED FOR WASTEWATER PERMITTING
2	03/12/24	ISSUED FOR NCDEQ PERMITTING
3	03/25/24	REVISED PER TRC COMMENTS

EXISTING CONDITIONS

ATHLETIC FACILITY
1559 WATERLILLY RD
POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA

PROJECT NO.	P16099
DESIGNED BY	ND
DRAWN BY	ND
CHECKED BY	MWS
ISSUE DATE	12/12/23

SHEET NO. 1 OF 9 SHEETS

NOTES

1. OWNER/APPLICANT: 85' AND SUNNY, LLC
   9919 STEPHEN DECATUR HIGHWAY
   OCEAN CITY, MD 21842

2. ENGINEER: QUIBLE & ASSOCIATES, P.C.
   P.O. DRAWER 870
   KITTY HAWK, NC
   TEL: (252) 491-8147

3. PROPERTY INFO: 1559 WATERLILY ROAD
   PID: 007900000A0000
   PIN: 9908-14-7146

4. SCOPE OF WORK: THIS PLAN PROPOSES THE ADDITION OF AN ATHLETIC FACILITY BUILDING, ASSOCIATED PARKING, DRIVE, AND RELATED SITE IMPROVEMENTS.

5. EXISTING PARCEL AREA = 13,457,862 SF / 308.95 AC (AREAS BY COORDINATE METHOD.)
   PROPOSED RECONFIGURED PARCEL AREA = 13,527,666 SF / 310.55 AC (AREAS BY COORDINATE METHOD.)
   PARCEL AREA (NOT INCLUDING WETLANDS) = 1,010,334.70 SF / 23.19 AC

   LOT COVERAGE CALCULATIONS

BUILDINGS	958.0 SQ.FT.
POOL & POOL AREA	20,215.5 SQ.FT.
GRAVEL	1,583.0 Q.FT.
ASPHALT	76,334.0 SQ.FT.
EX. ASPHALT MILLINGS TO REMAIN	11,772.4 SQ.FT.
TOTAL	110,862.9 SQ.FT. (0.82%)
	(30% ALLOWED)

6. REQUIRED PARKING:
   NO MORE THAN 221 SWIMMERS
   @ 1 PARKING SPACE PER THREE SWIMMERS = 73.6 SPACES
   16 PLAYERS (PICKLEBALL OR BASKETBALL)
   @ 1 SPACE PER PLAYER = 16 SPACES
   NO MORE THAN 10 EMPLOYEES
   @ PEAK SHIFT @ 1 SPACE PER EMPLOYEE = 10 SPACES
   TOTAL PARKING REQUIRED= 100 SPACES
   TOTAL PARKING PROVIDED= 104 SPACES (2 ADA SPACES)

7. RECORDED REFERENCE: DB 1449 PG 396, PB R, PG 288;

8. ZONE: SINGLE FAMILY MAINLAND (SFM)

9. MAXIMUM BUILDING HEIGHT: 35'

10. BOUNDARY INFORMATION BASED ON QUIBLE & ASSOCIATES FIELD SURVEY DATED 01/22/18 – 02/07/18 AND ALTA SURVEY DATED 6/27/18.

11. FLOOD ZONE: "AE", "SHADED X" AND "X" WITHIN THE PROPERTY BOUNDARY (SUBJECT TO CHANGE BY F.E.M.A.) FIRM PANEL 3720990800K. DATED 12/21/18. SHOWN PER COUNTY GIS.

12. ALL LANDSCAPING SHALL BE IN ACCORDANCE WITH CHAPTER 5.2 OF THE CURRITUCK COUNTY UNIFIED DEVELOPMENT ORDINANCE.

13. ALL UTILITIES SERVING THIS SITE WILL BE PLACED UNDERGROUND.

14. STORMWATER MANAGEMENT:
    RUNOFF FROM ALL PROPOSED IMPROVEMENTS WILL BE COLLECTED AND CONVEYED INTO A WET DETENTION BASIN LOCATED ON THE SOUTHERN SIDE OF THE DEVELOPMENT.

15. THIS PLAN SET TO BE UTILIZED FOR THE INSTALLATION OF SITE LAYOUT IMPROVEMENTS INCLUDING BUT NOT LIMITED TO GRADING & DRAINAGE, INSTALLATION OF SEDIMENT CONTROL MEASURES, WASTEWATER IMPROVEMENTS, AND WATER SYSTEM. FOR BUILDING DESIGN AND ASSOCIATED PLUMBING, SEE APPROPRIATE SEPARATE PLANS.

16. THIS PLAN SUBJECT TO ANY FACTS, INCLUDING BUILDING SETBACK RESTRICTIONS, EASEMENTS, COVENANTS, ETC., THAT MAY BE REVEALED BY A FULL AND ACCURATE TITLE SEARCH.

17. ALL EXTERIOR LIGHTING SHALL BE IN ACCORDANCE WITH CHAPTER 5.4 OF THE CURRITUCK COUNTY UNIFIED DEVELOPMENT ORDINANCE. LIGHTING PLAN PROVIDED UNDER SEPARATE COVER.

18. REMOVE TREES, GRASSES, SHRUBS AND OTHER VEGETATION, IMPROVEMENTS OR OBSTRUCTIONS INTERFERING WITH INSTALLATION OF NEW CONSTRUCTION UNLESS NOTED OTHERWISE.

19. PRIOR TO LAND DISTURBANCE, A STATE APPROVED SOIL EROSION AND SEDIMENTATION CONTROL PLAN IS REQUIRED.

20. BUILDING CONSTRUCTION SHALL COMPLY WITH ALL ASPECTS OF THE NORTH CAROLINA BUILDING AND FIRE CODE.

21. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT ALL PROPERTY MONUMENTS DURING CONSTRUCTION. DISTURBED OR REMOVED PROPERTY MONUMENTS SHALL BE REPLACED BY A NORTH CAROLINA LICENSED PROFESSIONAL LAND SURVEYOR.

22. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE DRAWINGS, APPLICABLE CURRITUCK COUNTY CODES AND ORDINANCES, AND NCDEQ DIVISION OF ENERGY, MINERAL AND LAND RESOURCES REGULATIONS. FILL IS NOT PROPOSED OR ALLOWED WITHIN 10' OF THE PROPERTY LINE.

23. THE LOCATION, DIMENSIONS, AND ELEVATION OF EXISTING STRUCTURES, PIPING, AND UTILITIES SHOWN ARE BASED ON THE BEST AVAILABLE DATA AND ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL DATA IN THE FIELD PRIOR TO CONSTRUCTION TO HIS/HER OWN SATISFACTION. THE CONTRACTOR SHALL PERFORM ANY TEST PIT WORK OR PROVIDE LOCATION SERVICES AS REQUIRED TO AVOID CONFLICTS WITH EXISTING UTILITIES. CONTACT NORTH CAROLINA ONE-CALL AT TELEPHONE NO. 1-800-632-4949, 48 HOURS PRIOR TO PERFORMING ANY EXCAVATION TO HAVE UTILITIES MARKED.

24. THE CONTRACTOR SHALL PROVIDE SMOOTH TRANSITIONS FROM PROPOSED FEATURES TO EXISTING FEATURES AS NECESSARY.

25. THE CONTRACTOR SHALL SEAL THE EDGE OF EXISTING ASPHALT PAVEMENT WITH TACK COAT IN ACCORDANCE WITH THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS WHERE NEW PAVEMENT JOINS EXISTING PAVEMENT. ALL WORK WITHIN NCDOT R/W SHALL BE CONSTRUCTED IN ACCORDANCE WITH NCDOT STANDARDS AND SPECIFICATIONS.

26. ALL PAVEMENT JOINTS SHALL BE SAW-CUT PRIOR TO PAVING TO PROVIDE A DURABLE AND UNIFORM JOINT.

27. ALL PAVEMENT MARKINGS, TEXT AND DIRECTIONAL ARROWS SHALL BE PAINTED WHITE. ALL LETTERING SHALL BE 2ft. IN HEIGHT. LINES SHALL BE 4" WIDE. CROSSWALK AND LOADING AREAS, SET 4" WHITE LINES ON A 45° ANGLE.

28. PROOF ROLL ALL NEW PAVED AREAS. NOTIFY OWNER AND ENGINEER OF ANY UNACCEPTABLE AREAS.

29. WATER IS PROVIDED VIA CURRITUCK COUNTY WATER SYSTEM. ALL WATER IMPROVEMENTS SHALL BE IN ACCORDANCE WITH CURRITUCK COUNTY STANDARD WATER SPECIFICATIONS AND DETAILS.

WASTEWATER NOTES

1. CONTRACTOR IS RESPONSIBLE FOR LOCATING EXISTING UNDERGROUND UTILITIES IN AREAS OF WORK PRIOR TO ANY WORK. PROVIDE ADEQUATE MEANS OF SUPPORT AND PROTECTION IF UTILITIES ARE TO REMAIN IN PLACE.

2. REMOVE TREES, GRASSES, SHRUBS AND OTHER VEGETATION, IMPROVEMENTS OR OBSTRUCTIONS INTERFERING WITH INSTALLATION OF NEW CONSTRUCTION UNLESS NOTED OTHERWISE.

3. NEW WASTEWATER SYSTEM DESIGN PARAMETERS:

   DESIGN FLOW: 104 PARKING SPACES AT 10 GPD, 8 EMPLOYEES AT 25 GPD, AND 2 COURTS AT 50 GPD = 1,340 GPD.

   ACTIVE: LONG TERM APPLICATION RATE (LTAR): 0.25 GPD/SQ.FT. FOR AN LPP SYSTEM.
   (14) 77' LINES @ 5' O.C. (1,078 LN. FT. TOTAL)

   REPAIR: 5,390 SQ. FT.

4. UNLESS OTHERWISE INDICATED ON THE PLAN, CONSTRUCTION OF SEWAGE COLLECTION, TREATMENT AND DISPOSAL SYSTEM IS TO CONFORM WITH SECTION .1900 "LAWS AND RULES FOR SEWAGE TREATMENT AND DISPOSAL SYSTEMS" OF NORTH CAROLINA ADMINISTRATIVE CODE, DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES, DIVISION OF ENVIRONMENTAL HEALTH, ON-SITE WASTEWATER SECTION (15 NCAC 18A.1900).

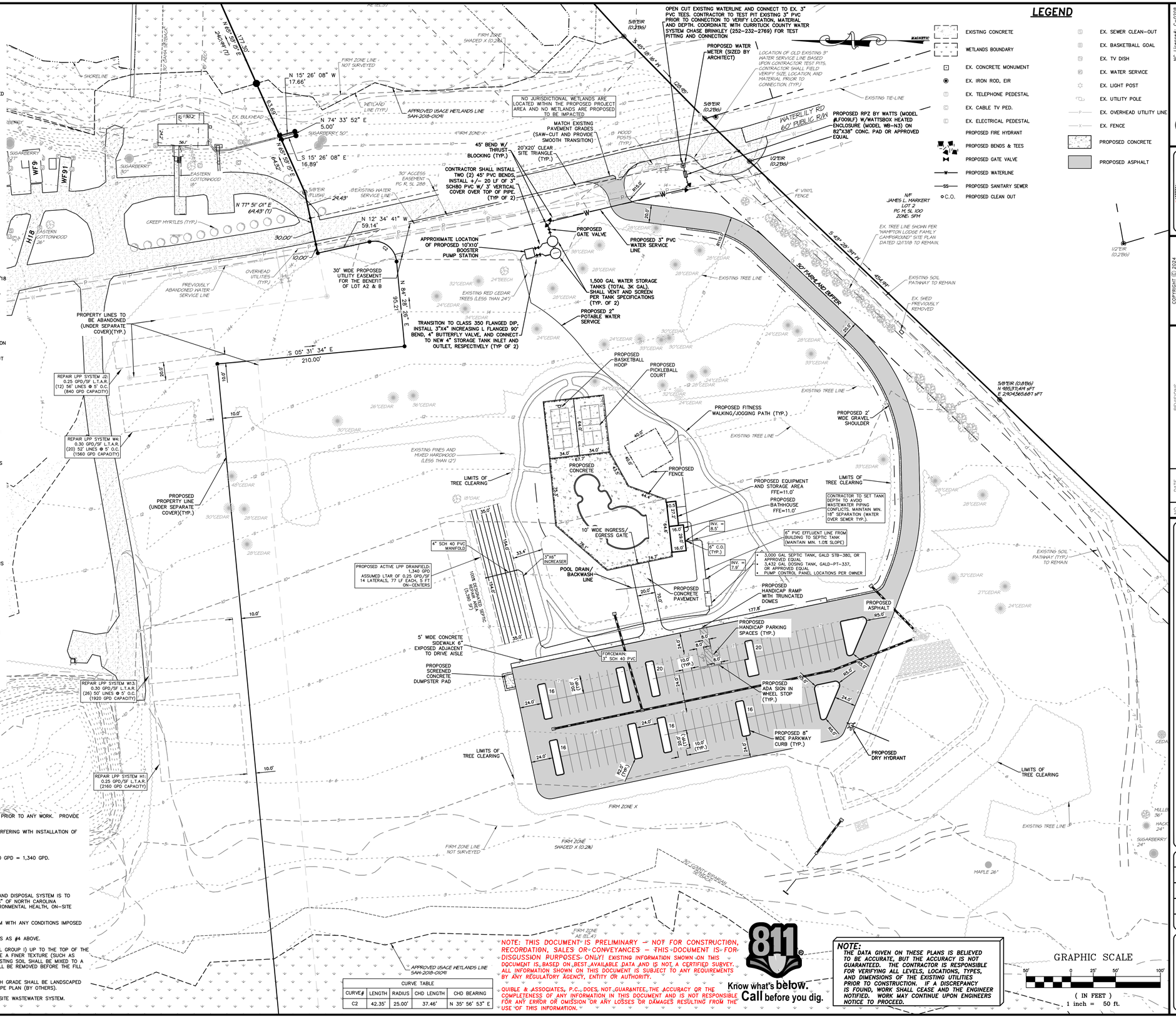
5. CONSTRUCTION OF SEWAGE COLLECTION SYSTEM, TREATMENT AND DISPOSAL SYSTEM IS TO CONFORM WITH ANY CONDITIONS IMPOSED BY THE LOCAL HEALTH DEPARTMENT.

6. MATERIAL USED FOR COLLECTION AND DISPOSAL SYSTEM SHALL CONFORM WITH SAME REQUIREMENTS AS #4 ABOVE.

7. FILL MATERIAL SHALL HAVE SUCH SOIL TEXTURE TO BE CLASSIFIED AS SAND OR LOAMY SAND (SOIL GROUP I) UP TO THE TOP OF THE NITRIFICATION TRENCHES. THE FINAL SIX INCHES OF FILL USED TO COVER THE SYSTEM SHALL HAVE A FINER TEXTURE (SUCH AS GROUP II, III) FOR THE ESTABLISHMENT OF A VEGETATIVE COVER. THE FILL MATERIAL AND THE EXISTING SOIL SHALL BE MIXED TO A DEPTH OF SIX INCHES BELOW THE INTERFACE. HEAVY VEGETATIVE COVER OR ORGANIC LITTER SHALL BE REMOVED BEFORE THE FILL MATERIAL IS INCORPORATED.

8. ALL SURFACE RUNOFF SHALL BE DIVERTED AROUND AND AWAY FROM THE DRAINFIELD AREA. FINISH GRADE SHALL BE LANDSCAPED TO PREVENT PONDING OF SURFACE WATER. VEGETATE DRAINFIELD AREA AS SPECIFIED IN LANDSCAPE PLAN (BY OTHERS).

9. AN AUTHORIZATION TO CONSTRUCT MUST BE OBTAINED FROM ARHS PRIOR TO INSTALLATION OF ONSITE WASTEWATER SYSTEM.



CURVE TABLE				
CURVE#	LENGTH	RADIUS	CHD LENGTH	CHD BEARING
C2	42.35'	25.00'	37.46'	N 35° 56' 53" E

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(IN FEET)
1 inch = 50 ft.

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NC License# C-0208
SINCE 1959
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ENVIRONMENTAL SCIENCES * SURVEYING**
** NOT OFFERED TO THE PUBLIC
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BLDG 400 POINT, NC 27966
Phone: (252) 491-8147
Phone: (828) 357-5149
90 CHURCH STREET
SUITE 8
BILTMORE MOUNTAIN, NC 28711

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 049181 CATHLEEN M. SIMS
PRELIMINARY NOT FOR CONSTRUCTION
CERTIFICATION

NO.	DATE	REVISIONS
1	02/27/24	ISSUED FOR WASTEWATER PERMITTING
2	03/12/24	ISSUED FOR NCDEQ PERMITTING
3	03/25/24	REVISED PER TRC COMMENTS

PROPOSED SITE & UTILITY PLAN

ATHLETIC FACILITY
1559 WATERLILLY RD

NORTH CAROLINA
POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY

PROJECT NO. P16099
DESIGNED BY ND
DRAWN BY ND
CHECKED BY MWS
ISSUE DATE 12/12/23

SHEET NO. 2 OF 9 SHEETS

NOTES

1. OWNER/APPLICANT: 85' AND SUNNY, LLC
   9919 STEPHEN DECATUR HIGHWAY
   OCEAN CITY, MD 21842

2. ENGINEER: QUIBLE & ASSOCIATES, P.C.
   P.O. DRAWER 870
   KITTY HAWK, NC
   TEL: (252) 491-8147

3. PROPERTY INFO: 1559 WATERLILY ROAD
   PID: 0079000004A0000
   PIN: 9908-14-7146

4. EXISTING PARCEL AREA = 13,457,862 SF / 308.95 AC (AREAS BY COORDINATE METHOD.)
   PROPOSED RECONFIGURED PARCEL AREA = 13,527,666 SF / 310.55 AC (AREAS BY COORDINATE METHOD.)
   PARCEL AREA (NOT INCLUDING WETLANDS) = 1,010,334.70 SF / 23.19 AC

5. SCOPE OF WORK: THIS PLAN PROPOSES THE ADDITION OF AN ATHLETIC FACILITY BUILDING, ASSOCIATED PARKING, DRIVE, AND RELATED SITE IMPROVEMENTS.

6. RECORDED REFERENCE: DB 1449 PG 396, PB R, PG 288;

7. ZONE: SINGLE FAMILY MAINLAND (SFM)

8. BUFFERYARDS:
   NORTH N/A
   SOUTH 50' FARMLAND BUFFER (UTILIZE EXISTING VEGETATION, FENCE, 13 PROPOSED LIVE OAKS, AND 13 PROPOSED CEDAR TREES TO BE PROVIDED)
   EAST N/A
   WEST N/A

9. BOUNDARY INFORMATION BASED ON QUIBLE & ASSOCIATES FIELD SURVEY DATED 01/22/18 – 02/07/18 AND ALTA SURVEY DATED 6/27/18.

10. FLOOD ZONE: "AE", "SHADED X" AND "X" WITHIN THE PROPERTY BOUNDARY (SUBJECT TO CHANGE BY F.E.M.A.) FIRM PANEL 3720990800K. DATED 12/21/18. SHOWN PER COUNTY GIS.

11. THIS PLAN SUBJECT TO ANY FACTS, INCLUDING BUILDING SETBACK RESTRICTIONS, EASEMENTS, COVENANTS, ETC., THAT MAY BE REVEALED BY A FULL AND ACCURATE TITLE SEARCH.

12. ALL LANDSCAPING SHALL BE IN ACCORDANCE WITH CHAPTER 5.2 OF THE CURRITUCK COUNTY UNIFIED DEVELOPMENT ORDINANCE.

13. EXTERIOR LIGHTING PLAN UNDER SEPARATE COVER. ALL EXTERIOR LIGHTING SHALL BE IN ACCORDANCE WITH CHAPTER 5.4 OF THE CURRITUCK COUNTY UNIFIED DEVELOPMENT ORDINANCE.

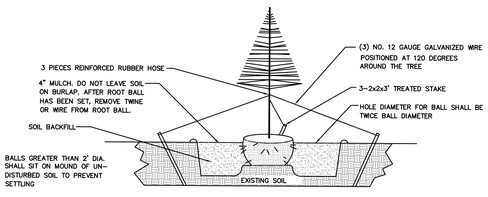
14. REMOVE TREES, GRASSES, SHRUBS AND OTHER VEGETATION, IMPROVEMENTS OR OBSTRUCTIONS INTERFERING WITH INSTALLATION OF NEW CONSTRUCTION UNLESS NOTED OTHERWISE.

15. PRIOR TO LAND DISTURBANCE, A STATE APPROVED SOIL EROSION AND SEDIMENTATION CONTROL PLAN IS REQUIRED.

16. FOUR (4) HERITAGE TREES ARE PROPOSED TO BE REMOVED WITH A TOTAL MITIGATION ACI OF 66". ONSITE MITIGATION TO INCLUDE INSTALLATION OF NINE (9) ADDITIONAL 2" ACI LIVE OAKS AND TWENTY-FOUR (24) 2" ACI TREES WITHIN THE SITE.

LEGEND

- EXISTING ASPHALT PAVEMENT
- EXISTING CONCRETE
- WETLANDS BOUNDARY
- EX. CONCRETE MONUMENT
- EX. IRON ROD, EIR
- EX. TELEPHONE PEDESTAL
- EX. CABLE TV PED.
- EX. ELECTRICAL PEDESTAL
- EXISTING TREES
- PROPOSED TREES/SHRUBS
- EX. SEWER CLEAN-OUT
- EX. BASKETBALL GOAL
- EX. TV DISH
- EX. WATER SERVICE
- EX. LIGHT POST
- EX. UTILITY POLE
- EX. OVERHEAD UTILITY LINE
- EX. FENCE
- PROPOSED CONCRETE
- PROPOSED ASPHALT



TREE PLANTING DETAIL

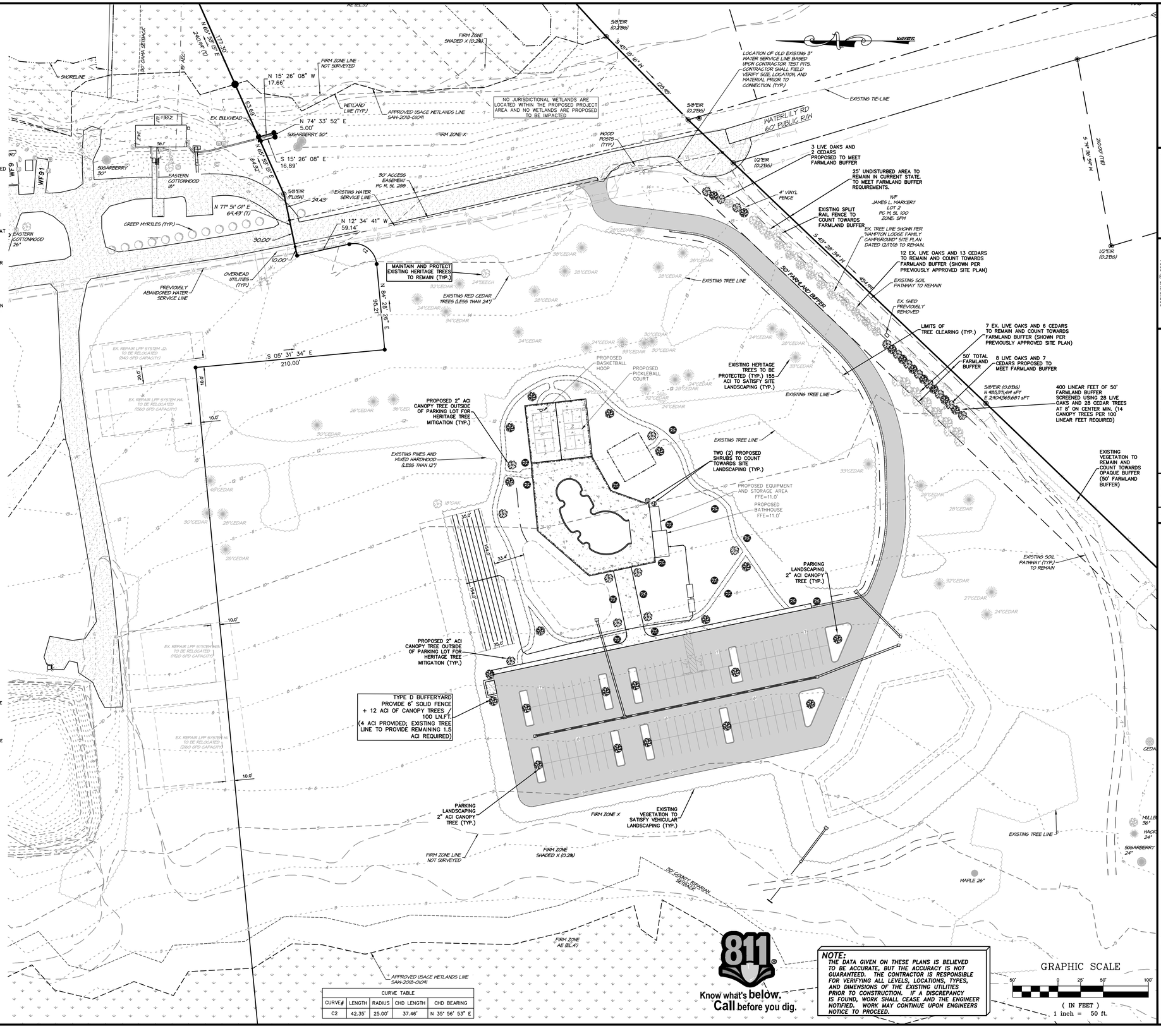
N.T.S.

SYMBOL	QUANTITY	COMMON NAME	HEIGHT	SPREAD	MIN. SIZE @ PLANTING
	20	LIVE OAK	50' – 75'	25' – 40'	2" CAL, 8' HT.
	29	EASTERN RED CEDAR*	30' – 40'	10' – 20'	2" CAL, 8' HT.
	8	BALD CYPRESS*	50' – 100'.	20' – 30'	2" CAL, 8' HT.
	8	RED MAPLE*	40' – 50'	25' – 45'	2" CAL, 8' HT.
	2	DWARF YAUPON HOLLY***	3' – 5'	3' – 6'	3 GALLON

* CANOPY TREE SPECIES MAY BE SUBSTITUTED WITH THE SPECIES IDENTIFIED IN TABLE 3.4.6. OF THE CURRITUCK ADMINISTRATIVE MANUAL WITH COUNTY APPROVAL.

** UNDERSTORY TREE SPECIES MAY BE SUBSTITUTED WITH THE SPECIES IDENTIFIED IN TABLE 3.4.6. OF THE CURRITUCK ADMINISTRATIVE MANUAL WITH COUNTY APPROVAL.

*** COORDINATE INSTALLATION WITH OWNER. ORNAMENTAL SHRUB/GRASS SPECIES MAY BE SUBSTITUTED WITH THE SPECIES IDENTIFIED IN TABLE 3.4.6. OF THE CURRITUCK ADMINISTRATIVE MANUAL WITH COUNTY APPROVAL.



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SUITE B
POINT MOUNTAIN, NC 28711
Phone: (828) 357-5149
quiblesurveying@gmail.com

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 049705 CATHERINE M. SAUNDERS — CERTIFICATION

REVISIONS

NO.	DATE	
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LANDSCAPING PLAN

ATHLETIC FACILITY
1559 WATERLILLY RD
POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA

PROJECT NO.	P16099
DESIGNED BY	ND
DRAWN BY	ND
CHECKED BY	MWS
ISSUE DATE	12/12/23

SHEET NO. 3 OF 9 SHEETS

NOTES

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10. STORMWATER MANAGEMENT: RUNOFF FROM ALL PROPOSED IMPROVEMENTS WILL BE COLLECTED AND CONVEYED INTO AN WET POND LOCATED ON THE SOUTHWESTERN SIDE OF THE DEVELOPMENT.

11. THIS PLAN SUBJECT TO ANY FACTS, INCLUDING BUILDING SETBACK RESTRICTIONS, EASEMENTS, COVENANTS, ETC., THAT MAY BE REVEALED BY A FULL AND ACCURATE TITLE SEARCH.

12. ALL UTILITIES SERVING THIS SITE WILL BE PLACED UNDERGROUND.

13. HANDICAP PARKING SPACES SHALL NOT EXCEED 2% GRADE.

14. AREAS OF FILL SHALL BE EXCAVATED TO COMPACTED SUBGRADE AND BACKFILLED IN 6" LIFTS.

15. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN AND PROTECT ALL UNDERGROUND & ABOVE GROUND UTILITIES, EXISTING PAVEMENT SURFACES, EXISTING CULVERTS AND EXISTING PROPERTY MONUMENTS DURING CONSTRUCTION. DISTURBED OR REMOVED PROPERTY MONUMENTS SHALL BE REPLACED BY A NORTH CAROLINA LICENSED PROFESSIONAL LAND SURVEYOR.

16. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE DRAWINGS, APPLICABLE CURRITUCK COUNTY CODES AND ORDINANCES, AND NCDEQ DIVISION OF ENERGY, MINERAL AND LAND RESOURCES REGULATIONS.

17. THE LOCATION, DIMENSIONS, AND ELEVATION OF EXISTING UTILITIES SHOWN ARE BASED ON THE BEST AVAILABLE DATA. THE CONTRACTOR SHALL VERIFY ALL DATA IN THE FIELD PRIOR TO CONSTRUCTION TO HIS/HER OWN SATISFACTION. THE CONTRACTOR SHALL PERFORM ANY TEST PIT WORK OR PROVIDE LOCATION SERVICES AS REQUIRED TO AVOID CONFLICTS WITH EXISTING UTILITIES. CONTACT NORTH CAROLINA ONE-CALL AT TELEPHONE NO. 1-800-632-4949, 48 HOURS PRIOR TO PERFORMING ANY EXCAVATION TO HAVE UTILITIES MARKED.

18. THE CONTRACTOR SHALL PROVIDE SMOOTH TRANSITIONS FROM PROPOSED FEATURES TO EXISTING FEATURES AS NECESSARY.

19. THE CONTRACTOR SHALL SEAL THE EDGE OF EXISTING ASPHALT PAVEMENT WITH TACK COAT IN ACCORDANCE WITH THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS WHERE NEW PAVEMENT JOINS EXISTING PAVEMENT.

20. ALL PAVEMENT JOINTS SHALL BE SAW-CUT PRIOR TO PAVING TO PROVIDE A DURABLE AND UNIFORM JOINT.

21. PROOF ROLL ALL NEW PAVED AREAS. NOTIFY OWNER AND ENGINEER OF ANY UNACCEPTABLE AREAS.

22. CONTRACTOR SHALL PROVIDE SMOOTH TRANSITION BETWEEN SPOT ELEVATION GRADES AND MAINTAIN POSITIVE DRAINAGE.

23. REMOVE TREES, GRASSES, SHRUBS AND OTHER VEGETATION, IMPROVEMENTS OR OBSTRUCTIONS INTERFERING WITH INSTALLATION OF NEW CONSTRUCTION UNLESS NOTED OTHERWISE.

24. ALL PIPES TO BE CLASS IV REINFORCED CONCRETE, UNLESS OTHERWISE NOTED.

25. ALL REINFORCED CONCRETE PIPES (RCP) TO HAVE END TREATMENTS, EITHER FLARED END SECTIONS (FES) OR END WALLS. END WALLS TO BE CONSTRUCTED AS PER NCDOT STANDARD 838.01.

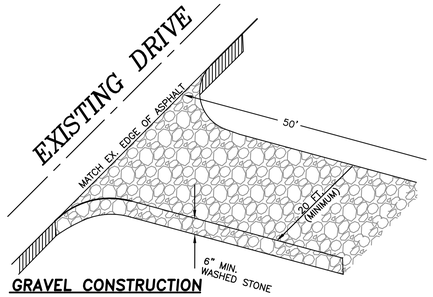
26. PRIOR TO LAND DISTURBANCE, A STATE APPROVED SOIL EROSION AND SEDIMENTATION CONTROL PLAN IS REQUIRED.

27. THIS DEVELOPMENT REQUIRES THE APPROVAL AND ISSUANCE OF A HIGH DENSITY STORWATER PERMIT FROM NORTH CAROLINA DIVISION OF WATER QUALITY (DWQ). THE PROJECT ULTIMATELY DRAINS TO THE CURRITUCK SOUND (30-1) WITHIN THE PASQUOTANK RIVER BASIN AND IS CLASSIFIED SC.

CONSTRUCTION & MAINTENANCE NOTES:

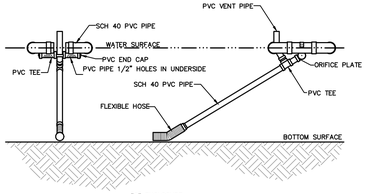
1. CLEAR THE ENTRANCE AND EXIT AREA OF ALL VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL AND PROPERLY GRADE IT.
2. PLACE THE GRAVEL TO THE SPECIFIC GRADE AND DIMENSIONS SHOWN ON THE PLANS, AND SMOOTH IT.
3. PROVIDE DRAINAGE TO CARRY WATER TO A SEDIMENT TRAP OR OTHER SUITABLE OUTLET.
4. USE GEOTEXTILE FABRICS BECAUSE THEY IMPROVE STABILITY OF THE FOUNDATION IN LOCATIONS SUBJECT TO SEEPAGE OR HIGH WATER TABLE.

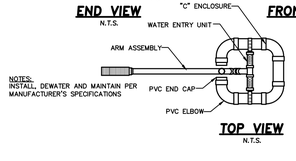
MAINTENANCE: MAINTAIN THE GRAVEL PAD IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 2-INCH STONE. AFTER EACH RAINFALL, INSPECT ANY STRUCTURE USED TO TRAP SEDIMENT AND CLEAN IT OUT AS NECESSARY. IMMEDIATELY REMOVE ALL OBJECTIONABLE MATERIALS SPILLED, WASHED, OR TRACKED ONTO PUBLIC ROADWAYS.



GRAVEL CONSTRUCTION ENTRANCE/EXIT DETAIL

N.T.S





END VIEW N.T.S. FRONT VIEW N.T.S.

TOP VIEW N.T.S.

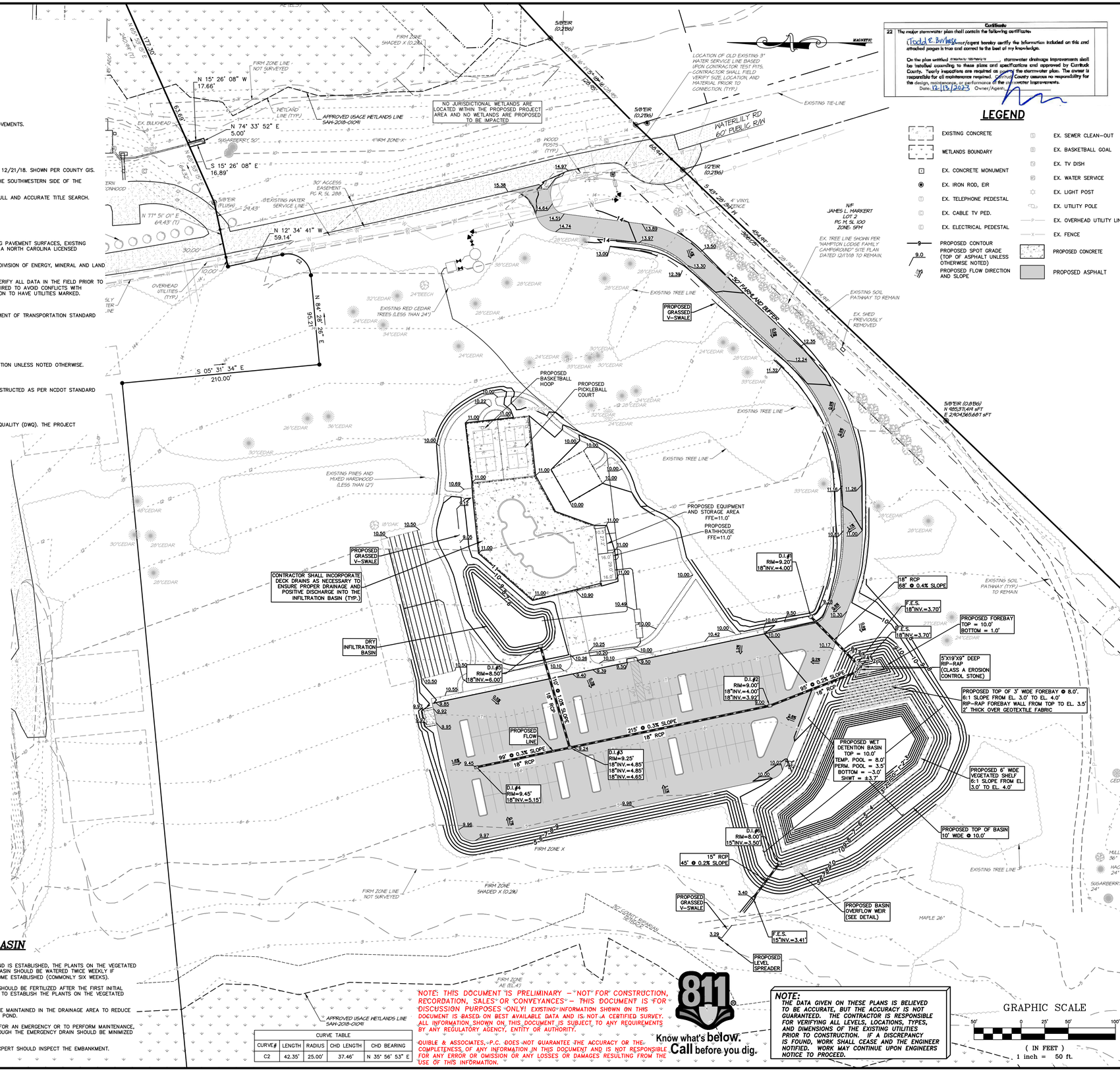
SKIMMER DETAIL

N.T.S.

WET DETENTION BASIN

MAINTENANCE

1. IMMEDIATELY AFTER THE WET POND IS ESTABLISHED, THE PLANTS ON THE VEGETATED SHELF AND PERIMETER OF THE BASIN SHOULD BE WATERED TWICE WEEKLY IF NEEDED, UNTIL THE PLANTS BECOME ESTABLISHED (COMMONLY SIX WEEKS).
2. NO PORTION OF THE WET POND SHOULD BE FERTILIZED AFTER THE FIRST INITIAL FERTILIZATION THAT IS REQUIRED TO ESTABLISH THE PLANTS ON THE VEGETATED SHELF.
3. STABLE GROUNDCOVER SHOULD BE MAINTAINED IN THE DRAINAGE AREA TO REDUCE THE SEDIMENT LOAD TO THE WET POND.
4. IF THE POND MUST BE DRAINED FOR AN EMERGENCY OR TO PERFORM MAINTENANCE, THE FLUSHING OF SEDIMENT THROUGH THE EMERGENCY DRAIN SHOULD BE MINIMIZED AS MUCH AS POSSIBLE.
5. ONCE A YEAR, A DAM SAFETY EXPERT SHOULD INSPECT THE EMBANKMENT.



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50' 0 25' 50' 100'
(IN FEET)
1 inch = 50 ft.

CertBlock

22 The major stormwater plan shall contain the following certificates:

I, Todd E. Burgess, engineer/agent hereby certify the information included on this and attached pages is true and correct to the best of my knowledge.

On the plan entitled athletic facility - 1559 waterlily rd, stormwater drainage improvements shall be installed according to these plans and specifications and approved by Currituck County. Yearly inspections are required to monitor the stormwater plan. The owner is responsible for all maintenance required. Currituck County assumes no responsibility for the design, maintenance, or performance of the stormwater improvements.

Date: 12/13/2023 Owner/Agent:

LEGEND

- EXISTING CONCRETE
- WETLANDS BOUNDARY
- EX. CONCRETE MONUMENT
- EX. IRON ROD, EIR
- EX. TELEPHONE PEDESTAL
- EX. CABLE TV PED.
- EX. ELECTRICAL PEDESTAL
- EX. SEWER CLEAN-OUT
- EX. BASKETBALL GOAL
- EX. TV DISH
- EX. WATER SERVICE
- EX. LIGHT POST
- EX. UTILITY POLE
- EX. OVERHEAD UTILITY LINE
- EX. FENCE
- PROPOSED CONTOUR
- PROPOSED SPOT GRADE (TOP OF ASPHALT UNLESS OTHERWISE NOTED)
- PROPOSED FLOW DIRECTION AND SLOPE
- PROPOSED CONCRETE
- PROPOSED ASPHALT

Quible & Associates, P.C.
NC License# C-0208 SINCE 1959
ENGINEERING** * CONSULTING * PLANNING
ENVIRONMENTAL SCIENCES * SURVEYING**
**NOT FOR BIDDING OR CONSTRUCTION
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BLDG 400 POINT, NC 27966
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90 CHURCH STREET
SUITE B
KITTY HAWK, NC 27949
Phone: (828) 357-5149

NORTH CAROLINA SURVEYING CERTIFICATION
I CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION (DEED DESCRIPTION RECORDED IN BOOK 1449, PAGE 396, ETC.) (OTHER); THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN FROM INFORMATION FOUND IN BOOK 1449, PAGE 396, ETC.; THAT THE RATIO OF PRECISION AS CALCULATED IS 1:10,000+; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED. WITNESS MY ORIGINAL SIGNATURE, REGISTRATION NUMBER AND SEAL THIS 12TH DAY OF DECEMBER, A.D. 2023.
NOT FOR CONSTRUCTION
SEAL L-4884 CATHERINE M. SHOCKLEY

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GRADING & DRAINAGE PLAN

ATHLETIC FACILITY
1559 WATERLILLY RD

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POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY

PROJECT NO. P16099
DESIGNED BY ND
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SHEET NO. 4 OF 9 SHEETS

D:\JOBS\P16099\Drawings\Athletic Facility\P16099 BMP ATHLETIC FACILITY.dwg 3/27/2024 9:27 AM Winston

NOTES

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   KITTY HAWK, NC
   TEL: (252) 491-8147

3. PROPERTY INFO: 1559 WATERLLY ROAD
   PID: 0079000004A0000
   PIN: 9908-14-7146

4. EXISTING PARCEL AREA = 13,457,862 SF / 308.95 AC (AREAS BY COORDINATE METHOD.)
   PROPOSED RECONFIGURED PARCEL AREA = 13,527,666 SF / 310.55 AC (AREAS BY COORDINATE METHOD.)
   PARCEL AREA (NOT INCLUDING WETLANDS) = 1,010,334.70 SF / 23.19 AC

5. SCOPE OF WORK: THIS PLAN PROPOSES THE ADDITION OF AN ATHLETIC FACILITY BUILDING, ASSOCIATED PARKING, DRIVE, AND RELATED SITE IMPROVEMENTS.

6. RECORDED REFERENCE: DB 1449 PG 396, PB R, PG 288;

7. ZONE: SINGLE FAMILY MAINLAND (SFM)

8. BOUNDARY INFORMATION BASED ON QUIBLE & ASSOCIATES FIELD SURVEY DATED 01/22/18 – 02/07/18 AND ALTA SURVEY DATED 6/27/18.

9. FLOOD ZONE: "AE", "SHADED X" AND "X" WITHIN THE PROPERTY BOUNDARY (SUBJECT TO CHANGE BY F.E.M.A.) FIRM PANEL 3720990800K. DATED 12/21/18. SHOWN PER COUNTY GIS.

10. THIS PLAN SUBJECT TO ANY FACTS, INCLUDING BUILDING SETBACK RESTRICTIONS, EASEMENTS, COVENANTS, ETC., THAT MAY BE REVEALED BY A FULL AND ACCURATE TITLE SEARCH.

11. REMOVE TREES, GRASSES, SHRUBS AND OTHER VEGETATION, IMPROVEMENTS OR OBSTRUCTIONS INTERFERING WITH INSTALLATION OF NEW CONSTRUCTION UNLESS NOTED OTHERWISE.

SOIL EROSION & SEDIMENTATION CONTROL NOTES:

1. AREA TO BE DISTURBED: ± 233,526 SF (± 5.4 AC.)

2. PROVIDE A GROUNDCOVER STABILIZATION (TEMPORARY OR PERMANENT) ON ALL DENUDED DOWNSTREAM SURFACES FOLLOWING THE COMPLETION OF LAND DISTURBING ACTIVITIES PER THE CRITERIA LISTED BELOW:
   a. PERIMETER DIKES, BERMS, SWALES, DITCHES AND SLOPES SHALL BE STABILIZED IN 7 DAYS.
   b. HIGH QUALITY WATER (HQW) ZONES SHALL BE STABILIZED IN 7 DAYS.
   c. DOWNSTREAM SLOPES STEEPER THAN 3:1 SHALL BE STABILIZED IN 7 DAYS. IF SLOPES ARE 10' OR LESS AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
   d. DOWNSTREAM SLOPES 3:1 OR FLATTER AND LESS THAN 50' IN LENGTH SHALL BE STABILIZED IN 14 DAYS. SLOPES 3:1 OR FLATTER EXCEEDING 50' IN LENGTH SHALL BE STABILIZED IN 7 DAYS.
   e. ALL OTHER DOWNSTREAM AREAS WITH SLOPES 4:1 OR FLATTER SHALL BE STABILIZED WITHIN 14 DAYS.

3. IF LAND DISTURBING ACTIVITIES OCCUR OUTSIDE THE PERMANENT VEGETATION SEEDING DATES (APR. 1– SEP.30) THEN TEMPORARY VEGETATION SEEDING SPECIFICATIONS SHALL BE FOLLOWED FOR PLANTING UNTIL THE NEXT APPROPRIATE PERMANENT SEEDING PERIOD, AT WHICH TIME PERMANENT VEGETATION SHALL BE ESTABLISHED ACCORDING TO PERMANENT VEGETATION SEEDING SPECIFICATIONS (SEE PERM. & TEMP. SEEDING SPECIFICATIONS).

4. IF EXCESSIVE WIND EROSION OR STORMWATER RUNOFF EROSION DEVELOPS DURING TIME OF CONSTRUCTION ANY LOCATION ON THE PROJECT SITE, ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED IMMEDIATELY AS DIRECTED BY THE ENGINEER TO ADDRESS THE PROBLEM AREA AND PREVENT DAMAGE TO ADJACENT PROPERTIES.

5. SOIL EROSION AND SEDIMENTATION CONTROLS TO BE INSPECTED, MAINTAINED AND REPAIRED AS NECESSARY UNTIL PERMANENT CONTROLS ARE ESTABLISHED.
   a. A RAIN GAUGE MUST MUST BE KEPT ON SITE.
   b. DEDICATED DEMOLITION AND OTHER WASTE AREAS AND EARTHEN MATERIAL STOCKPILES MUST BE LOCATED AT LEAST 50 FEET FROM DRAINS OR STREAMS UNLESS NO ALTERNATIVE IS FEASIBLE.
   c. ALL EROSION AND SEDIMENT CONTROL MEASURES MUST BE INSPECTED AT LEAST ONCE A WEEK AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN A HALF INCH (DURING A 24 HOUR PERIOD). IMMEDIATE CORRECTIVE ACTION MUST BE TAKEN FOR ANY DEVICE FAILURE.
   d. INSPECT ALL OUTLETS WHERE RUNOFF LEAVES SITE AND EVALUATE EFFECT ON NEARBY STREAMS. TAKE CORRECTIVE ACTION IF NECESSARY.
   e. MAINTAIN RECORDS OF INSPECTIONS AND CORRECTIVE ACTIONS.
   f. EARTHWORK NOTE: OFFSITE BORROW MATERIAL SHALL COME FROM AN NCDEQ LAND QUALITY SECTION APPROVED SITE. OFFSITE DISPOSAL OF EXCESS MATERIAL SHALL BE TO AN NCDEQ LAND QUALITY SECTION APPROVED SITE.

CONSTRUCTION SEQUENCE

PRECONSTRUCTION:

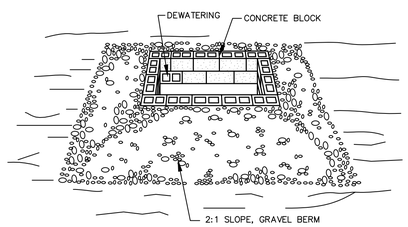
1) OBTAIN PLAN APPROVAL AND OTHER APPLICABLE PERMITS.
2) FLAG AND/OR ROUGH STAKE WORK LIMITS.
3) HOLD PRECONSTRUCTION CONFERENCE (OWNER, CONTRACTOR, ENGINEER, AND APPROPRIATE GOVERNMENT OFFICIALS) AT LEAST ONE WEEK PRIOR TO START OF CONSTRUCTION ACTIVITIES.

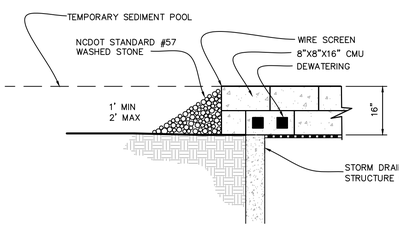
CONSTRUCTION:

4) INSTALL CONSTRUCTION ENTRANCE & SILT FENCING AT LOCATIONS SHOWN ON PLAN.
5) CONSTRUCT TEMPORARY SEDIMENT BASIN. ALL EROSION AND SEDIMENT CONTROL MEASURES MUST BE IN PLACE PRIOR TO ANY DEMOLITION.
6) COMPLETE CLEARING AND GRUBBING PROCEDURES.
7) GRADE SITE ACCORDING TO PLAN AND BEGIN CONSTRUCTION OF PROPOSED IMPROVEMENTS.
8) INSTALL CONTRIBUTING STORM CONVEYANCES INCLUDING RIP–RAP APRONS, MATING AND ASSOCIATED EROSION CONTROLS.
9) COMPLETE FINAL GRADING OF THE GROUNDS, TOPSOIL, PERMANENTLY SEED, LANDSCAPE, AND MULCH.
10) ALL EROSION & SEDIMENTATION CONTROLS SHALL BE INSPECTED WEEKLY AND AFTER HEAVY RAINFALL EVENT. NEEDED REPAIRS AND MAINTENANCE WILL BE MADE IMMEDIATELY. FURTHERMORE, IF ANY WIND OR STORMWATER RUNOFF EROSION DEVELOPS DURING THE CONSTRUCTION OF THE PROJECT, ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED TO ADDRESS THE PROBLEM AREA.
11) ONCE THE SITE CONSTRUCTION IS COMPLETE AND DENUDED SURFACES ARE FULLY STABILIZED; ALL STORMWATER CONVEYANCES, STRUCTURES, PIPING AND BASINS SHALL BE CLEANED OF ALL SILT/DEBRIS WHICH MAY HAVE ACCUMULATED DURING CONSTRUCTION. CONTRACTOR SHALL VERIFY DESIGN GRADES OF ALL STORMWATER CONVEYANCES INCLUDING THE BASIN AND RESTORE TO DESIGN SPECIFICATIONS AS NECESSARY.
12) UPON THE REMOVAL OF ACCUMULATED SEDIMENTS AND SITE STABILIZATION, ALL REMAINING EROSION CONTROLS MAY BE REMOVED FROM THE DEVELOPMENT. ALL DOWNSTREAM EROSION CONTROLS SHALL REMAIN IN PLACE UNTIL THE COMPLETION OF ALL OTHER DEVELOPMENT CONSTRUCTION ACTIVITIES.

LEGEND

- EXISTING ASPHALT PAVEMENT
- EXISTING CONCRETE
- WETLANDS BOUNDARY
- EX. CONCRETE MONUMENT
- EX. IRON ROD, EIR
- EX. TELEPHONE PEDESTAL
- EX. CABLE TV PED.
- EX. ELECTRICAL PEDESTAL
- EX. SEWER CLEAN–OUT
- EX. BASKETBALL GOAL
- EX. TV DISH
- EX. WATER SERVICE
- EX. LIGHT POST
- EX. UTILITY POLE
- PROPOSED SKIMMER
- EX. OVERHEAD UTILITY LINE
- EX. FENCE
- PROPOSED CONCRETE
- PROPOSED SILT FENCE
- PROPOSED LIMITS OF DISTURBANCE
- PROPOSED ASPHALT
- PROPOSED CULVERT PROTECTION
- PROPOSED INLET PROTECTION
- EXISTING CONTOUR
- EXISTING SPOT GRADE
- PROPOSED CONTOUR
- PROPOSED FLOW DIRECTION AND SLOPE





INLET PROTECTIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE NC EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, (LATEST EDITION) SECTION 6.52.

INLET PROTECTION SHALL BE PROVIDED AT ALL DROP INLETS, CURB INLETS YARD INLETS AND ANY OTHER STORMWATER COLLECTION INLET.

INLET PROTECTION

N.T.S

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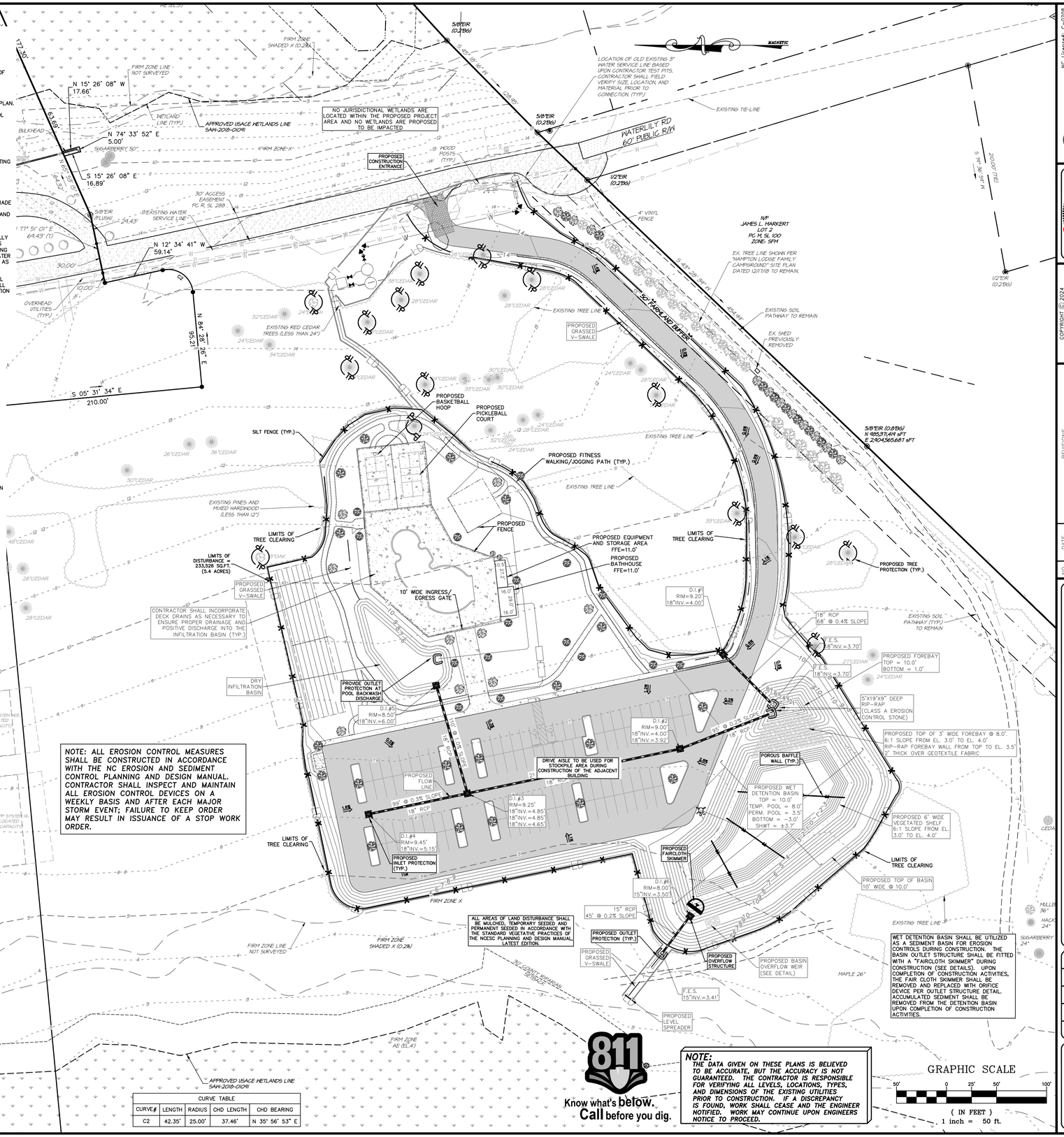

CURVE TABLE				
CURVE #	LENGTH	RADIUS	CHD LENGTH	CHD BEARING
C2	42.35'	25.00'	37.46'	N 35° 56' 53" E

811 Know what's below. Call before you dig.

NOTE: *THE DATA GIVEN ON THESE PLANS IS BELIEVED TO BE ACCURATE, BUT THE ACCURACY IS NOT GUARANTEED. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL LEVELS, LOCATIONS, TYPES, AND DIMENSIONS OF THE EXISTING UTILITIES PRIOR TO CONSTRUCTION. IF A DISCREPANCY IS FOUND, WORK SHALL CEASE AND THE ENGINEER NOTIFIED. WORK MAY CONTINUE UPON ENGINEERS NOTICE TO PROCEED.*

GRAPHIC SCALE
50' 0 25' 50' 100'
(IN FEET)
1 inch = 50 ft.

Quible & Associates, P.C.
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ENVIRONMENTAL SCIENCES * SURVEYING**
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BLDG 400 POINT, NC 27966
Phone: (252) 491-8147
90 CHURCH STREET
SUITE B
BREVARD MOUNTAIN, NC 28711
Phone: (828) 351-5149

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 049140 ENGINEERING CERTIFICATION

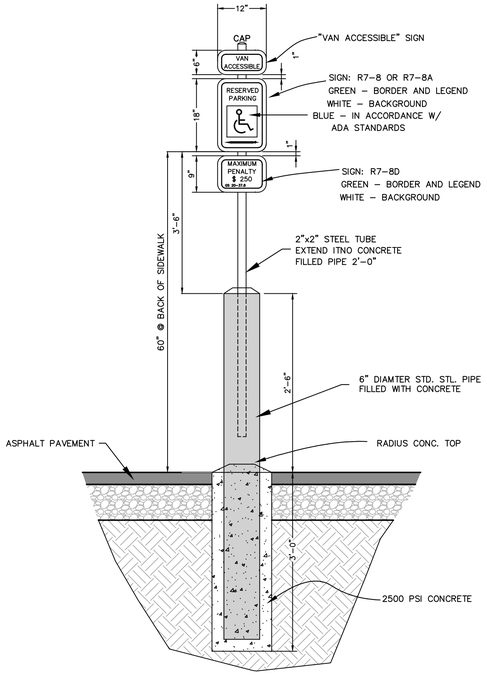
NO.	DATE	REVISIONS
1	02/27/24	ISSUED FOR WASTEWATER PERMITTING
2	03/12/24	ISSUED FOR NCDEQ PERMITTING
3	03/25/24	REVISED PER TRC COMMENTS

SESC PLAN

ATHLETIC FACILITY
1559 WATERLILLY RD
POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA

PROJECT NO. P16099
DESIGNED BY ND
DRAWN BY ND
CHECKED BY MWS
ISSUE DATE 12/12/23

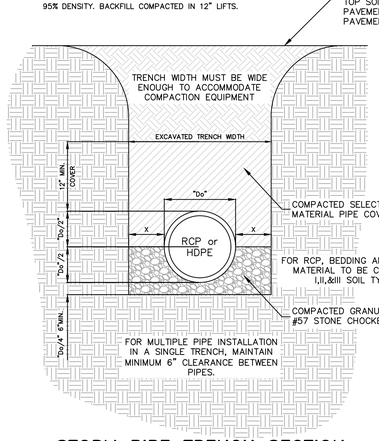
SHEET NO. 5 OF 9 SHEETS



ADA RESERVED PARKING SIGN DETAIL

N.T.S.

NOTES:
1. SELECT MATERIAL PIPE COVER SHALL BE 12" (MINIMUM) DEEP OVER TOP OF PIPE.
2. SELECT MATERIAL BACKFILL SHALL BE CBR 20 COMPACTED TO 95% DENSITY. BACKFILL COMPACTED IN 12" LIFTS.

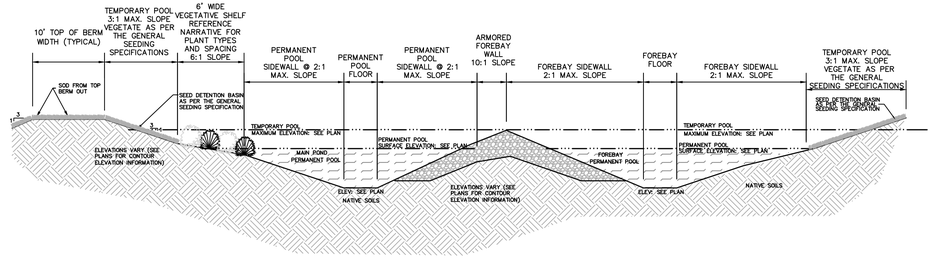


STORM PIPE TRENCH SECTION

N.T.S.

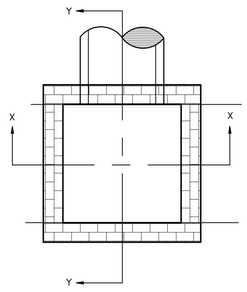
PLANT SPECIES	COMMON NAME	SPACING	LOCATION
Schoenoplectus tabernaemontani	SOFTSTEM BULRUSH	2' O.C.	BELOW (W/IN 1 FOOT) PERM. POOL
Juncus effusus	COMMON RUSH	2' O.C.	BELOW (W/IN 1 FOOT) PERM. POOL
Oladium spp.	SAWGRASS	2' O.C.	BELOW (W/IN 1 FOOT) PERM. POOL
Zizaniopsis miliacae	WATER MILLET	2' O.C.	BELOW (W/IN 1 FOOT) PERM. POOL

NOTES:
THREE ROWS OF PLANTINGS ARE PROPOSED: A SINGLE ROW OF GROUNDSEL BUSH OR WAX MYRTLE AT THE UPPER EDGE OF THE VEGETATED SHELF AND TWO ROWS OF RUSHES, SAWGRASS OR WATER MILLET (MIXTURE) TO BE LOCATED ON THE VEGETATED SHELF WITHIN THE PERMANENT POOL WATERLINE (ON 10:1 SHELF).A MINIMUM OF THREE SPECIES SHALL BE PROVIDED. SUBSTITUTIONS ALLOWED PROVIDED SUBSTITUTE PLANT IS IN ACCORDANCE WITH THE NCDEQ STORMWATER BMP MANUAL, CHAPTER 6 AND CHAPTER 9 REQUIREMENTS. ALL SUBSTITUTIONS SHALL BE APPROVED BY ENGINEER.



TYPICAL WET DETENTION BASIN PLANTING DETAIL

N.T.S.

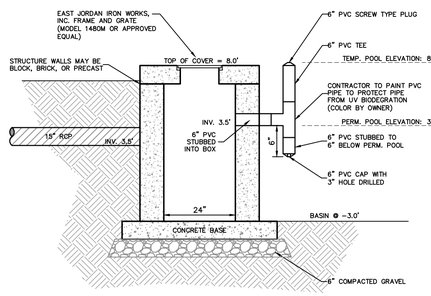


PLAN

WITH COPING REMOVED

NOTE: ALL CATCH BASINS WITHIN CURB AND GUTTER SHALL MEET NCDOT STANDARD DETAIL 840.02 WITH 840.03 STD. FRAME, GRATE, AND HOOD.

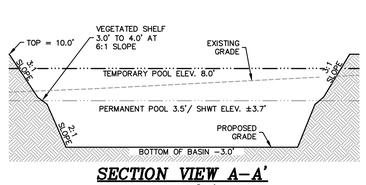
MIN. DIMENSIONS FOR CATCH BASIN (NCDOT 840.05)			
PIPE	SPAN	WIDTH	HEIGHT
D	A	B	H
12"	3'-6"	2'-3"	1'-10"
15"	3'-6"	2'-3"	2'-1"
18"	4'-0"	2'-8"	2'-4"



DRAW-DOWN STRUCTURE DETAIL

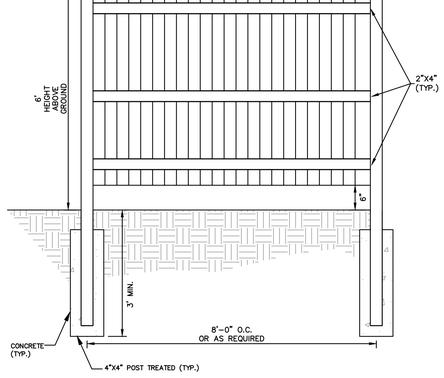
N.T.S.

NOTE: A FAIRCLOTH SKIMMER TO BE INSTALL DURING THE INITIAL CONSTRUCTION OF THE WET BASIN. THE SKIMMER IS TO BE CONNECTED TO THE 8" STUB-OUT ON THE WETBASIN OVERFLOW STRUCTURE. THE WET BASIN WILL SERVE AS A SEDIMENT BASIN DURING THE CONSTRUCTION OF THE SITE. ONCE THE SITE HAS BEEN FULLY STABILIZED THE FAIRCLOTH SKIMMER IS TO BE REMOVED AND THE SPECIFIED DRAW DOWN PIPE IS TO BE INSTALLED PER THE BASIN OVERFLOW STRUCTURE DETAIL. THE STUB-OUT FOR THE DRAW DOWN PIPE SHALL BE CAPPED DURING CONSTRUCTION



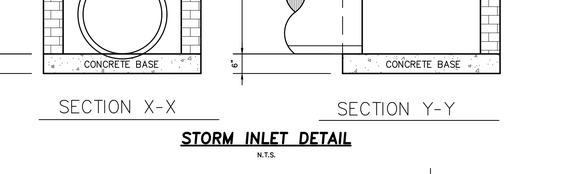
SECTION VIEW A-A'

HORIZONTAL: 1"=50'
VERTICAL: 1"=10'
(EXAGGERATED 5 TIMES)



TYPE D BUFFER FENCE DETAIL

N.T.S



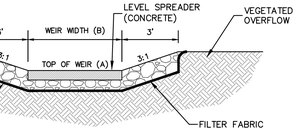
SECTION X-X

SECTION Y-Y

STORM INLET DETAIL

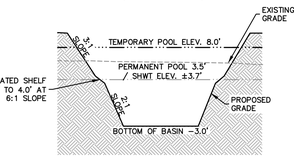
N.T.S.

OVERFLOW WEIR TABLE	
	BASIN 1 (WET POND)
WEIR ELEV. (A)	9.5'
WEIR WIDTH (B)	5.0'
TOP OF BASIN ELEV. (C)	10.0+'



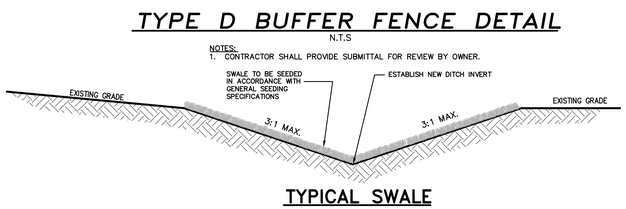
BASIN EMERGENCY OVERFLOW WEIR

N.T.S.



SECTION VIEW B-B'

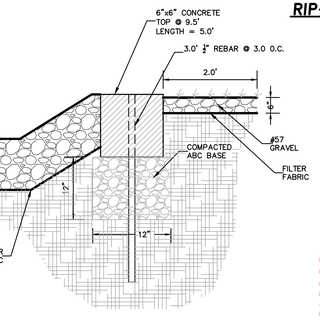
HORIZONTAL: 1"=50'
VERTICAL: 1"=10'
(EXAGGERATED 5 TIMES)



TYPICAL SWALE

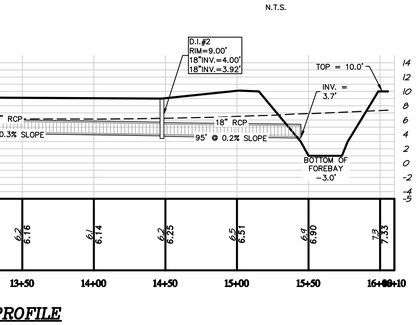
N.T.S.

NOTES:
1. CONTRACTOR SHALL PROVIDE SUBMITTAL FOR REVIEW BY OWNER.



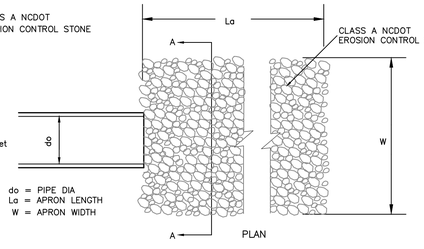
LEVEL SPREADER INSTALLATION DETAIL

N.T.S.



NOTES:

SEE GRADING PLANS FOR DIMENSIONS
- A filter blanket or filter fabric should be installed between the rip rap and soil foundation.

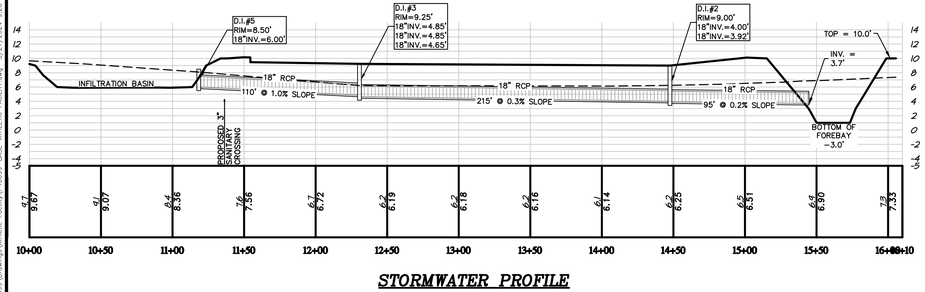


do = PIPE DIA
La = APRON LENGTH
W = APRON WIDTH

PLAN

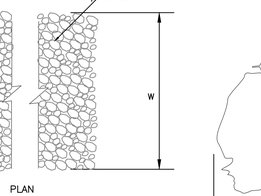
RIP-RAP OUTLET DETAIL

N.T.S.



STORMWATER PROFILE

HORIZONTAL: 1"=50'
VERTICAL: 1"=10'
(EXAGGERATED 5 TIMES)



-WARNING SIGNS TO BE MADE OF DURABLE, WEATHERPROOF MATERIAL.
-LETTER TO BE 3" HIGH MIN., CLEARLY LEGIBLE AND SPACED AS SHOWN BELOW ON SIGN DETAIL.
-PLACE SIGN AT EACH END OF LINEAR TREE PROTECTION AREA AND 50' ON CENTER THEREAFTER.
-FOR TREE PROTECTION AREA LESS THAN 200' IN PERIMETER, PROVIDE NO LESS THAN ONE SIGN PER PROTECTION AREA.
-ATTACH SIGNS SECURELY TO FENCE POSTS AND FABRIC.

NOTES:
1. ALL PLANTS DESIGNATED TO BE SAVED SHALL BE PROTECTED BY FENCING, AS ILLUSTRATED.
2. INSTALL TREE PROTECTION FENCE AT TREE DRIP LINE OR AT EDGE OF DISTURBED AREA, AS SHOWN ON PLANS, PRIOR TO COMMENCEMENT OF CONSTRUCTION.
3. THERE SHALL BE NO STORAGE OF MATERIAL WITHIN THE BOUNDARIES OF THE TREE PROTECTION FENCING.
4. TREE PROTECTION FENCING SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT.

TREE PROTECTION DETAIL

N.T.S

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ENVIRONMENTAL SCIENCES * SURVEYING**
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BLDG 400 PONT, NC 27966
Phone: (252) 491-8147
90 CHURCH STREET
SUITE 8
BILTMORE MOUNTAIN, NC 28711
Phone: (828) 357-5149

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 042324 CATHLEEN M. SHEA
PRELIMINARY NOT FOR CONSTRUCTION
CERTIFICATION

NO.	DATE	REVISIONS
1	02/27/24	ISSUED FOR WASTEWATER PERMITTING
2	03/12/24	ISSUED FOR NCDEQ PERMITTING
3	03/25/24	REVISED PER TRC COMMENTS

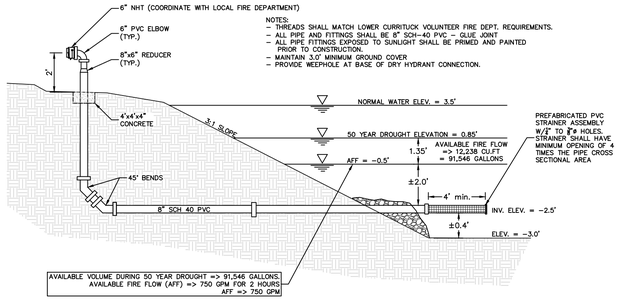
SITE & UTILITY DETAILS

ATHLETIC FACILITY
1559 WATERLILLY RD
POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA

PROJECT NO.	P16099
DESIGNED BY	ND
DRAWN BY	ND
CHECKED BY	MWS
ISSUE DATE	12/12/23

SHEET NO.
6
OF 9 SHEETS

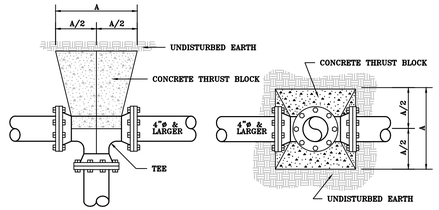
D:\2016\P16099\Drawings\Athletic Facility\P16099-BASE-ATHLETIC FACILITY.dwg 3/27/2024 9:28 AM Wchandler



NOTES:
- THREADS SHALL MATCH LOWER CURRITUCK VOLUNTEER FIRE DEPT. REQUIREMENTS.
- ALL PIPE AND FITTINGS SHALL BE 8" SCH-40 PVC – GLUE JOINT
- ALL PIPE FITTINGS EXPOSED TO SUNLIGHT SHALL BE PRIMED AND PAINTED PRIOR TO CONSTRUCTION.
- MAINTAIN 3.0' MINIMUM GROUND COVER
- PROVIDE WEEPHOLE AT BASE OF DRY HYDRANT CONNECTION.

DRY FIRE HYDRANT DETAIL

N.T.S



PLAN ELEVATION

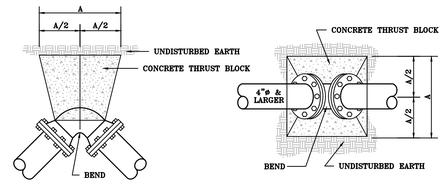
NOTE:
CARE SHALL BE TAKEN WHEN PLACING THRUST BLOCKS TO KEEP THE FITTING BOLTS FREE OF CONCRETE.

SIZE	11 1/4° BEND	22 1/2° BEND	45° BEND	90° BEND	TEE	PLUG
4	12	12	12	16	16	14
6	12	12	12	16	16	14
8	12	12	16	22	22	18
10	12	14	20	28	28	22
12	12	18	24	32	32	28
14	14	20	28	38	38	32
16	16	22	32	42	42	36
18	18	26	36	48	48	40
20	20	28	40	52	52	44
24	24	34	46	64	64	54
30	30	42	58	78	78	66
36	36	50	70	94	94	80
42	40	58	80	108	108	92
48	46	66	90	124	124	104

THRUST BLOCKS – DIMENSION "A"

TYPICAL THRUST BLOCK FOR TEES

N.T.S.



PLAN ELEVATION

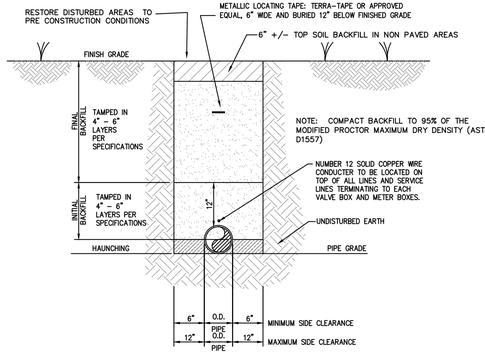
NOTE:
CARE SHALL BE TAKEN WHEN PLACING THRUST BLOCKS TO KEEP THE FITTING BOLTS FREE OF CONCRETE.

SIZE	11 1/4° BEND	22 1/2° BEND	45° BEND	90° BEND	TEE	PLUG
4	12	12	12	16	16	14
6	12	12	12	16	16	14
8	12	12	16	22	22	18
10	12	14	20	28	28	22
12	12	18	24	32	32	28
14	14	20	28	38	38	32
16	16	22	32	42	42	36
18	18	26	36	48	48	40
20	20	28	40	52	52	44
24	24	34	46	64	64	54
30	30	42	58	78	78	66
36	36	50	70	94	94	80
42	40	58	80	108	108	92
48	46	66	90	124	124	104

THRUST BLOCKS – DIMENSION "A"

TYPICAL THRUST BLOCK FOR BENDS

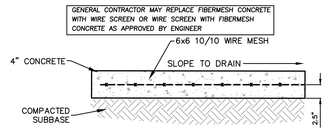
N.T.S.



NOTES:

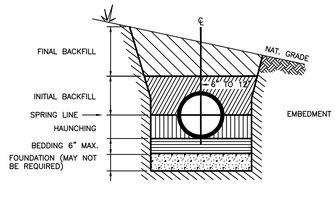
1. FOR TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND BRACING
2. NO ROCKS OR BOULDERS 4" AND LARGER SHALL BE USED IN INITIAL BACKFILL AREA.
3. ALL BACKFILL MATERIAL SHALL BE SATISFACTORY SOIL MATERIALS UNLESS OTHERWISE SPECIFIED BY THE ENGINEER. (SATISFACTORY SOIL FILL SHALL CONSIST OF SAND OR GRAVEL CONTAINING LESS THAN 20% BY WEIGHT OF FINES [SW, SP, SP-SM, SM], HAVING A LIQUID LIMIT LESS THAN 20 AND PLASTIC LIMIT LESS THAN 6, AND FREE OF RUBBLE, ORGANICS, CLAY, DEBRIS, AND OTHER UNSUITABLE MATERIAL.)

WATERLINE BACKFILLING REQUIREMENTS AND TRENCH BOTTOM DIMENSIONS



CONCRETE SECTION (SIDEWALK)

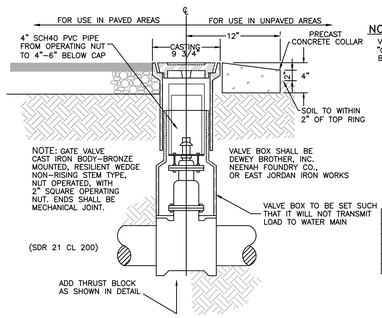
N.T.S.



GRAVITY SEWER EMBEDMENT CONDITIONS FOR FLEXIBLE AND SEMI-RIGID SEWER PIPE

N.T.S.

PIPE INSTALLATION TO CONFORM TO ASTM D 2321



NOTE:
VALVES SHALL BE AMERICAN DARLING, MUELLER "O" RING, OR M & H OR EQUAL AS APPROVED BY ENGINEER

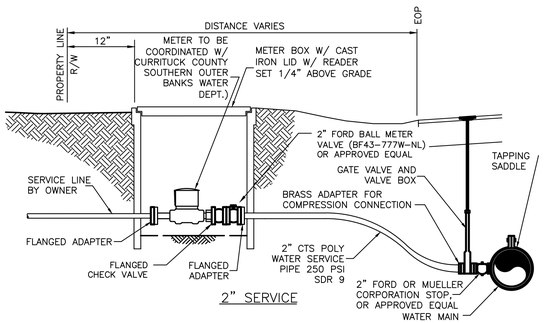
ANCHORAGE OF VALVES

WORKING PRESSURE LB. PER SQ. INCH	SIZE OF VALVE REQUIRING ANCHORAGE
50 – 100	12 INCH AND UP
101 – 150	8 INCH AND UP
151 – 200	ALL SIZES

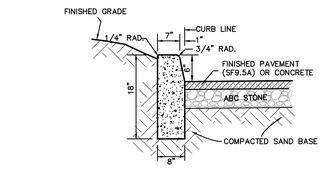
MINIMUM COVER FOR GATE VALVES	
SIZE VALVE	MINIMUM COVERS
6"	36"
8"	38"
10"	43"
12"	46"

TYPICAL VALVE DETAIL

GATE VALVES SHALL COMPLY IN ALL RESPECTS WITH AWWA STANDARD C-500, LATEST REVISION

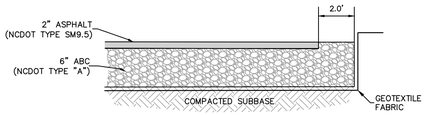


WATER SERVICE CONNECTION



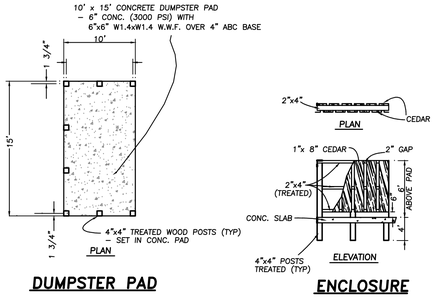
PARKWAY CURB

N.T.S.



HEAVY DUTY ASPHALT SECTION

N.T.S.



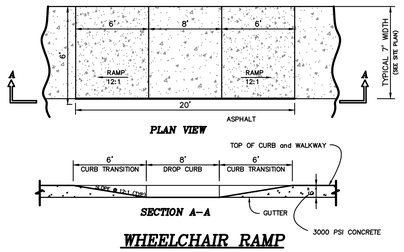
DUMPSTER PAD

ENCLOSURE

CONCRETE DUMPSTER PAD and ENCLOSURE

N.T.S.

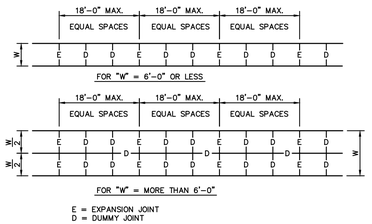
(NOTE: DUMPSTER PAD DRAIN NOT SHOWN)



WHEELCHAIR RAMP

N.T.S.

1. USE ADJACENT TO ALL HANDICAPPED SPACES
2. DETECTABLE WARNING MUST BE INSTALLED AT ACCESS TO VEHICULAR TRAFFIC AREAS AND PEDESTRIAN CROSSINGS.

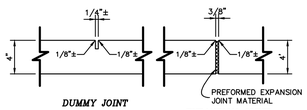


E = EXPANSION JOINT
D = DUMMY JOINT

NOTES:

EXCEPT WHERE SHOWN IN THE PLAN, ALL NEW CONC. WALKS SHALL HAVE JOINTS SPACED AS SHOWN IN THESE DETAILS.
AN EXPANSION JOINT SHALL BE USED TO SEPARATE THE NEW CONC. WALK FROM OTHER NEW OR EXISTING CONCRETE CONSTRUCTION.

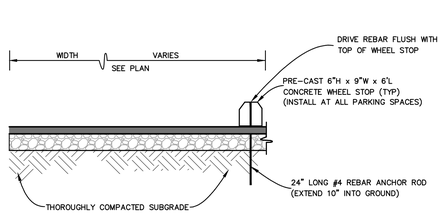
JOINT PATTERN



JOINT DETAIL

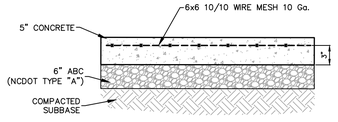
SIDEWALK JOINTS

N.T.S.



WHEEL STOP DETAIL

N.T.S.



CONCRETE SECTION (DUMPSTER PAD)

N.T.S.

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SPECIFICATIONS FOR SIDEWALKS, CURBS, ALLEYS, CONCRETE PAVEMENT

ALL REINFORCING STEEL SHALL BE GRADE 60 (ASTM A615)

ALL WELDED WIRE FABRIC SHALL BE 6 x 6, W1.4 x W1.4 (ASTM A185)

A 1-1/2" CLEAR CONCRETE COVER SHALL BE MAINTAINED ON ALL REINFORCEMENT

ALL CONCRETE SHALL BE 3000 PSI FIBER MESH UNLESS OTHERWISE NOTED

SPECIFICATIONS FOR SUBBASE

ALL SUBBASE SHALL BE COMPACTED TO 95% OF STANDARD PROCTOR (ASTM D698)

TYPICAL SPECIFICATIONS

COMPACTION NOTES:
1. PROOF ROLL ALL NEW PAVED AREAS. NOTIFY OWNER AND ENGINEER OF ANY UNACCEPTABLE AREAS.
2. COMPACT BACKFILL AND SUBGRADE TO 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D1557) ALL BACKFILL MATERIAL SHALL BE SELECT BACKFILL UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
3. SELECT FILL SHALL CONSIST OF SAND OR GRAVEL CONTAINING LESS THAN 20% BY WEIGHT OF FINES [SP, SM, SW, GP, GW] HAVING A LIQUID LIMIT LESS THAN 20 AND PLASTIC LIMIT LESS THAN 6, AND FREE OF RUBBLE, ORGANICS, CLAY, DEBRIS, AND OTHER UNSUITABLE MATERIAL.

COMPACTION NOTES

Quible & Associates, P.C.
ENGINEERING** * CONSULTING * PLANNING
ENVIRONMENTAL SCIENCES * SURVEYING**
NC License# C-0208 SINCE 1959
8446 CASTALIA HWY BLDG 400 PONT, NC 27965 Phone: (252) 491-8147
90 CHURCH STREET SUITE B KILL DEVIL HILL, NC 28711 Phone: (828) 351-5149

NORTH CAROLINA PROFESSIONAL ENGINEERS SEAL 036656 ENGINEER CATHLEEN M. SULLIVAN — COMPLIANCE NOTED FOR CONSTRUCTION — CERTIFICATION

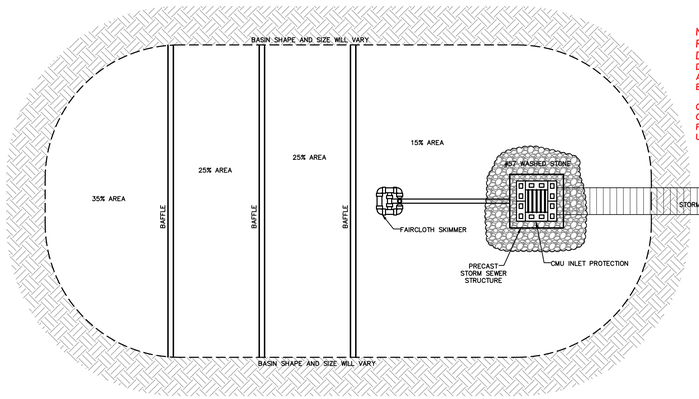
NO.	DATE	REVISIONS
1	02/27/24	ISSUED FOR WASTEWATER PERMITTING
2	03/12/24	ISSUED FOR NCDEQ PERMITTING
3	03/25/24	REVISED PER TRC COMMENTS

WATER DETAILS

ATHLETIC FACILITY
1559 WATERLILLY RD
POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA

PROJECT NO: P16099
DESIGNED BY ND
DRAWN BY ND
CHECKED BY MWS
ISSUE DATE 12/12/23

SHEET NO. 7 OF 9 SHEETS



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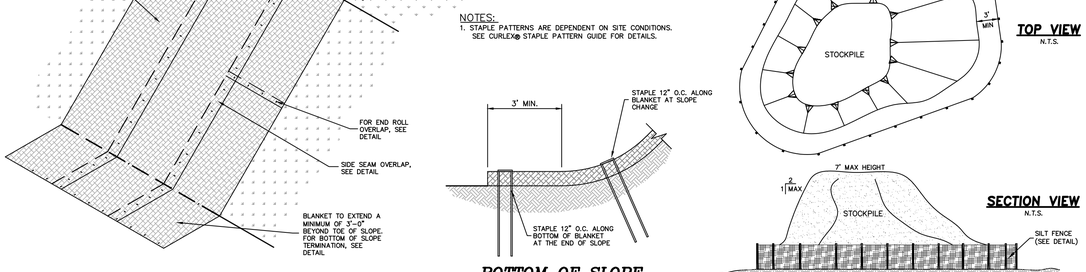


SKIMMER SEDIMENT BASIN DETAIL

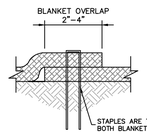
N.T.S.

SLOPE TRENCHING METHOD "B"

N.T.S.

CURLEX® SLOPE APPLICATION DETAIL

AMERICAN EXCELSIOR COMPANY
ARLINGTON, TEXAS



SIDE SEAM OVERLAP STAPLE DETAIL

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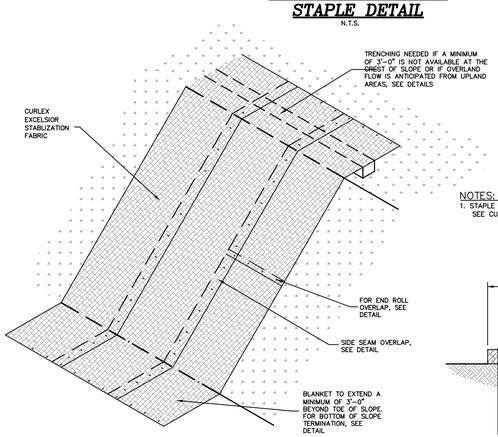


SLOPE DETAIL

N.T.S.

SILT FENCE DETAIL

N.T.S

END ROLL OVERLAP

N.T.S.

NOTES:
1. CONTRACTOR MUST PROTECT TOPSOIL STOCKPILES BY TEMPORARILY SEEDING AS SOON AS POSSIBLE, NO MORE THAN 21 CALENDAR DAYS AFTER THE FORMATION OF THE STOCKPILE
2. CONTRACTOR MUST STABILIZE STOCKPILES WITH PERMANENT VEGETATION TO CONTROL EROSION AND WEED GROWTH IF THE STOCKPILE WILL LAY DORMANT FOR MORE THAN 90 DAYS
3. TEMPORARY STOCKPILES ON THE INTERIOR PORTION OF THE CONSTRUCTION SITE MAY NOT REQUIRE STOCKPILE PERIMETER CONTROLS. OTHER DOWN GRADIENT CONTROLS (INCLUDING SITE PERIMETER CONTROL) MUST BE IN PLACE TO REMOVE STOCKPILE PERIMETER CONTROLS

NOTES:
1. STAPLE PATTERNS ARE DEPENDENT ON SITE CONDITIONS. SEE CURLEX® STAPLE PATTERN GUIDE FOR DETAILS.

BOTTOM OF SLOPE TERMINATION

N.T.S.

STOCKPILE DETAIL

N.T.S.

GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION

Required Ground Stabilization Timeframes		
Site Area Description	**Stabilize within this many calendar days after ceasing land disturbance**	**Timeframe variations**
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
(d) Slopes 3:1 to 4:1	14	-7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed
(e) Areas with slopes flatter than 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

GROUND STABILIZATION SPECIFICATION

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
• Temporary grass seed covered with straw or other mulches and tackifiers • Hydroseeding • Rolled erosion control products with or without temporary grass seed • Appropriately applied straw or other mulch • Plastic sheeting	• Permanent grass seed covered with straw or other mulches and tackifiers • Geotextile fabrics such as permanent soil reinforcement matting • Hydroseeding • Shrubs or other permanent plantings covered with mulch • Uniform and evenly distributed ground cover sufficient to restrain erosion • Structural methods such as concrete, asphalt or retaining walls • Rolled erosion control products with grass seed

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

1. Select flocculants that are appropriate for the soils being exposed during construction, selecting from the *NC DWR List of Approved PAMS/Flocculants*.
2. Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
3. Apply flocculants at the concentrations specified in the *NC DWR List of Approved PAMS/Flocculants* and in accordance with the manufacturer's instructions.
4. Provide ponding area for containment of treated Stormwater before discharging offsite.
5. Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

EQUIPMENT AND VEHICLE MAINTENANCE

1. Maintain vehicles and equipment to prevent discharge of fluids.
2. Provide drip pans under any stored equipment.
3. Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
4. Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
5. Remove leaking vehicles and construction equipment from service until the problem has been corrected.
6. Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

1. Never bury or burn waste. Place litter and debris in approved waste containers.
2. Provide a sufficient number and size of waste containers (e.g dumpster, trash receptacle) on site to contain construction and domestic wastes.
3. Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
4. Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
5. Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
6. Anchor all lightweight items in waste containers during times of high winds.
7. Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
8. Dispose waste off-site at an approved disposal facility.
9. On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

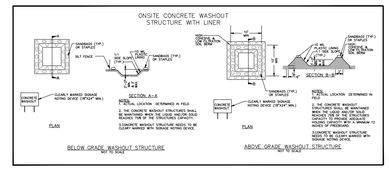
1. Do not dump paint and other liquid waste into storm drains, streams or wetlands.
2. Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
3. Contain liquid wastes in a controlled area.
4. Containment must be labeled, sized and placed appropriately for the needs of site.
5. Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

PORTABLE TOILETS

1. Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
2. Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
3. Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

EARTHEN STOCKPILE MANAGEMENT

1. Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
2. Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
3. Provide stable stone access point when feasible.
4. Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.



CONCRETE WASHOUTS

1. Do not discharge concrete or cement slurry from the site.
2. Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
3. Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
4. Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
5. Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
6. Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
7. Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
8. Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
9. Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
10. At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

HERBICIDES, PESTICIDES AND RODENTICIDES

1. Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
2. Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
3. Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
4. Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE

1. Create designated hazardous waste collection areas on-site.
2. Place hazardous waste containers under cover or in secondary containment.
3. Do not store hazardous chemicals, drums or bagged materials directly on the ground.

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

EFFECTIVE: 04/01/19

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those un-attended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-monitoring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the measures inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Indication of whether the measures were operating properly, 5. Description of maintenance needs for the measure, 6. Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge outfalls (SDOs)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the discharge outfalls inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, 5. Indication of visible sediment leaving the site, 6. Description, evidence, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If visible sedimentation is found outside site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits, 2. Description, evidence, and date of corrective actions taken, and 3. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made: 1. Description, evidence and date of corrective actions taken, and 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item (2)(a) of this permit of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&SC Plan Documentation

The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be documented in the manner described:

Item to Document	Documentation Requirements
(a) Each E&SC Measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC Plan.	Initial and date each E&SC Measure on a copy of the approved E&SC Plan or complete, date and sign an inspection report that lists each E&SC Measure shown on the approved E&SC Plan. This documentation is required upon the initial installation of the E&SC Measures or if the E&SC Measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC Plan.	Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&SC Measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC Measures.	Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

2. Additional Documentation

In addition to the E&SC Plan documents above, the following items shall be kept on the site

and available for agency inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

(a) This general permit as well as the certificate of coverage, after it is received.

(b) Records of inspections made during the previous 30 days. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

(c) All data used to complete the Notice of Intent and older inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that must be reported

Permittees shall report the following occurrences:

(a) Visible sediment deposition in a stream or wetland.

(b) Oil spills if:
- They are 25 gallons or more,
- They are less than 25 gallons but cannot be cleaned up within 24 hours,
- They cause sheen on surface waters (regardless of volume), or
- They are within 100 feet of surface waters (regardless of volume).

(a) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.

(b) Anticipated bypasses and unanticipated bypasses.

(c) Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Division's Emergency Response personnel at (800) 662-7956, (800) 858-0368 or (919) 733-3300.

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days***, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. • If the stream is named on the NC 303(d) list as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.
(b) Oil spills and release of hazardous substances per Item 1(b)-(c) above	• ***Within 24 hours***, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	• ***A report at least ten days before the date of the bypass, if possible***. The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days,*** a report that includes an evaluation of the quality and effect of the bypass.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment [40 CFR 122.41(l)(7)]	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days***, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. [40 CFR 122.41(l)(6). • Division staff may waive the requirement for a written report on a case-by-case basis.

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

EFFECTIVE: 04/01/19

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Phone: (252) 491-8147
90 CHURCH STREET
SUITE 8
BILTMORE MOUNTAIN, NC 28711
Phone: (828) 357-5149

NORTH CAROLINA PROFESSIONAL ENGINEERS — PRELIMINARY NOT FOR CONSTRUCTION — CERTIFICATION

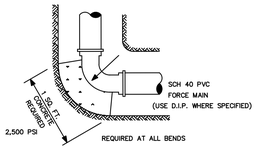
NO.	DATE	REVISIONS
1	02/27/24	ISSUED FOR WASTEWATER PERMITTING
2	03/12/24	ISSUED FOR NCDEQ PERMITTING
3	03/25/24	REVISED PER TRC COMMENTS

SESC & LANDSCAPING DETAILS

ATHLETIC FACILITY
1559 WATERLILLY RD
POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA

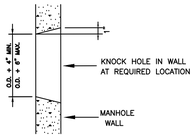
PROJECT NO. P16099
DESIGNED BY ND
DRAWN BY ND
CHECKED BY MWS
ISSUE DATE 12/12/23

SHEET NO. 8 OF 9 SHEETS



FORCE MAIN THRUST BLOCKS @ BENDS

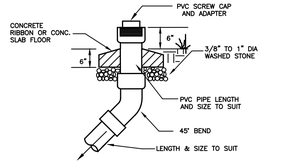
N.T.S.



IN FIELD PIPE OPENINGS

N.T.S.

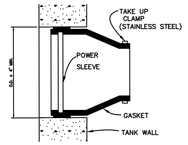
NOTES:
1. THIS APPLIES TO ALL PIPES 6" DIAMETER OR LESS UNLESS OTHERWISE SPECIFIED.
2. CLOSE WITH NON-SHRINK GROUT AFTER PIPE INSTALLATION.



TYPICAL SEWER CLEAN-OUT

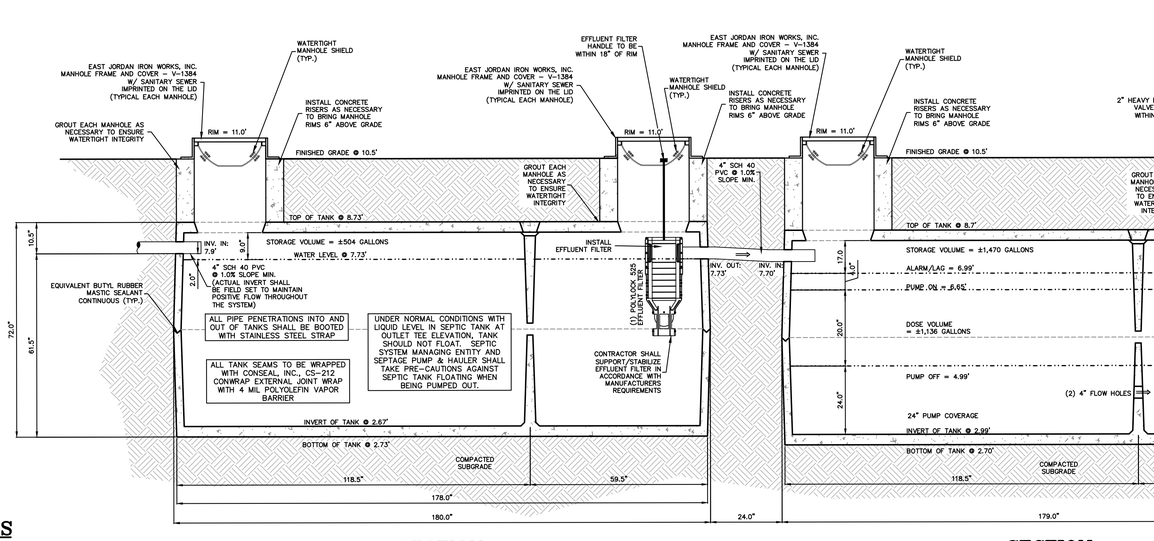
N.T.S.

NOTES:
1. PIPE TO MANHOLE CONNECTION TO CONFORM TO LATEST ASTM C-478 SPECIFICATION.
2. PSX FLEXIBLE BOOT CONNECTOR TO CONFORM TO LATEST ASTM C-923 SPECIFICATION.
3. BOOT CONNECTOR IS MANUFACTURED BY THE PRESS SEAL GASKET CORP. FORT WAYNE, IN.
4. SEE MANUFACTURES LITERATURE FOR FURTHER INFORMATION AND DETAIL.



BOOTED PIPE OPENINGS

N.T.S.



SECTION 3,004 GAL. SEPTIC TANK

N.T.S.

GREEN ACRES LAND DEVELOPMENT STB-380 SEPTIC TANK OR EQUAL AS APPROVED BY ENGINEER
CONCRETE: 4000 PSI AT 28 DAYS
56 GALLONS PER INCH

SECTION 3,432 GAL. PUMP TANK

N.T.S.

GREEN ACRES LAND DEVELOPMENT PT-337 PUMP TANK OR EQUAL AS APPROVED BY ENGINEER
CONCRETE: 4000 PSI AT 28 DAYS
52.6 GALLONS PER INCH

NOTES:
1. SEWER CONTRACTOR TO PLUMB DISCHARGE PIPING IN SUCH A MANNER THAT ALLOWS EASY ACCESS TO GATE VALVE FOR FLOW ADJUSTMENT AND/TO UNION FOR PUMP REMOVAL.
2. CONTRACTOR TO STABILIZE PUMP DISCHARGE PIPING SO NO EXCESSIVE VIBRATION OCCURS DURING OPERATION.
3. PULL CHAIN TO BE STAINLESS STEEL OR NYLON ROPE. PULL CHAIN TO BE ATTACHED TO HATCH COVER OR CONCRETE RISERS WITHIN EASY ACCESS OF TOP OF HATCH.
4. ALL PIPE OPENINGS SHALL BE GROUTED FOR WATERTIGHT SEALS.
5. ALL ELECTRICAL CONDUIT OPENINGS SHALL BE WATERTIGHT AND GASTIGHT.
6. ALL PIPE WITHIN TANK SHALL BE SCH 40 PVC(UNLESS OTHERWISE SPECIFIED)
7. THIS SYSTEM LIES ADJACENT TO CLASS "SC" WATERS. 12 HOURS OF STORAGE PROVIDED

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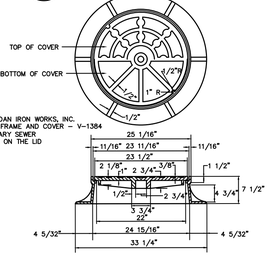
WATERTIGHT MANHOLE INSERT

N.T.S.

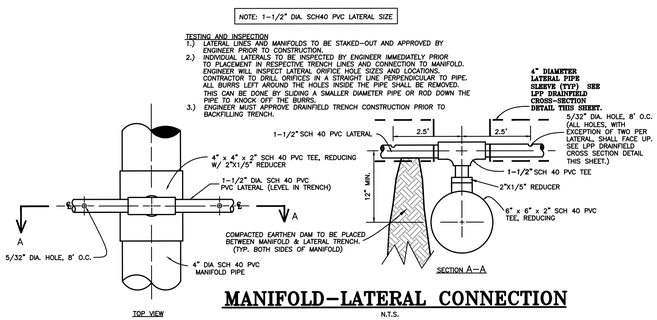
MINIMUM AVERAGE WEIGHTS	
RING	180 LBS
COVER	135 LBS
TOTAL	315 LBS



TYPICAL MANHOLE RING & COVER DETAILS

NTS

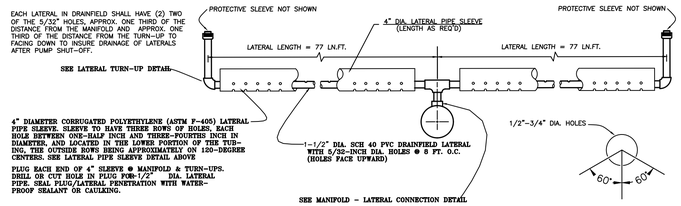
NOTE: 1-1/2" DIA. SCH40 PVC LATERAL SIZE



MANIFOLD-LATERAL CONNECTION

N.T.S.

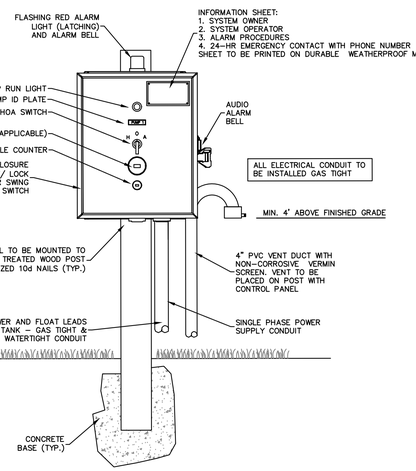
NOTE: HOLE SPACING IS 8 FEET ON CENTERS



LOW-PRESSURE PIPE DRAINFIELD CROSS SECTION

N.T.S.

NOTE: HOLE SPACING IS 8 FEET ON CENTERS



SIMPLEX CONTROL PANEL & VENT MOUNTING

N.T.S.

PERMANENT VEGETATION

SEEDING DATES: APRIL 1– SEPT 30

SEED MIXTURE	APPLICATION RATES/ACRE
BAHIA	50 LBS.
COMMON BERMUDA (UNHULLED)	50 LBS.
GERMAN MILLETT	15 LBS.
FESCUE	20 LBS.

FERTILIZER

26-13-13 @ 500 LB/ACRE

MULCH

APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

TEMPORARY VEGETATION

SEEDING DATES: OCT. 1 – MARCH 31

SEED MIXTURE	APPLICATION RATES/ACRE
RYE GRAIN	175 LBS.

FERTILIZER

10-10-10 @ 1000 LB/ACRE

MULCH

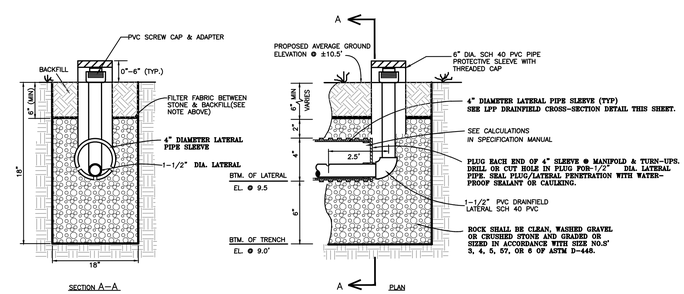
APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

– FERTILIZER RATES SHOWN ARE GENERAL RECOMMENDATIONS; FREQUENCY AND AMOUNT OF FERTILIZATION CAN BEST BE DETERMINED THROUGH SITE SPECIFIC SOIL TESTING.
– MAINTENANCE:
SATISFACTORY STABILIZATION AND EROSION CONTROL REQUIRES A COMPLETE VEGETATIVE COVER. EVEN SMALL BREACHES IN VEGETATIVE COVER CAN EXPAND RAPIDLY AND, IF LEFT UNATTENDED, CAN ALLOW SERIOUS SOIL LOSS FROM AN OTHERWISE STABLE SURFACE. A SINGLE HEAVY RAIN IS OFTEN SUFFICIENT TO GREATLY ENLARGE BARE SPOTS, AND THE LONGER REPAIRS ARE DELAYED, THE MORE COSTLY THEY BECOME. PROMPT ACTION WILL KEEP SEDIMENT LOSS AND REPAIR COST DOWN. NEW SEEDLINGS SHOULD BE INSPECTED FREQUENTLY AND MAINTENANCE PERFORMED AS NEEDED. IF RILLS AND GULLIES DEVELOP, THEY MUST BE FILLED IN, RE-SEEDED, AND MULCHED AS SOON AS POSSIBLE. DIVERSIONS MAY BE NEEDED UNTIL NEW PLANTS TAKE HOLD.

MAINTENANCE REQUIREMENTS EXTEND BEYOND THE SEEDING PHASE.

WEAK OR DAMAGED SPOTS MUST BE RELIMED, FERTILIZED, MULCHED, AND RESEEDED AS PROMPTLY AS POSSIBLE. REFERTILIZATION MAY BE NEEDED TO MAINTAIN PRODUCTIVE STANDS.

GENERAL SEEDING SPECIFICATIONS



DRAINFIELD

LATERAL TURN-UP & TRENCH X-SECTION

N.T.S.

NOTES:
1. ACTIVE DRAINFIELD AREA SHALL BE GRADED SO THAT STORMWATER RUNOFF DOES NOT POND ON DRAINFIELD AREA.
2. VEGETATE DRAINFIELD AND REPAIR AREAS AS PER SEEDING SPECIFICATION.
3. FILTER FABRIC SHALL BE TREVIRA SPUNBOND TYPE 1112 ENGINEERING FABRIC OR EQUAL AS APPROVED BY ENGINEER.
4. ALL TRENCHES, LATERALS, AND MANIFOLDS SHALL BE INSTALLED LEVEL.

NOTE: HOLE SPACING IS 8 FEET ON CENTERS

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BLACK MOUNTAIN, NC 28711
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blackmountain@quible.com

NORTH CAROLINA PROFESSIONAL ENGINEERS SEAL 040181 CATHLEEN M. SIMS PRELIMINARY NOT FOR CONSTRUCTION CERTIFICATION

NO.	DATE	REVISIONS
1	02/27/24	ISSUED FOR WASTEWATER PERMITTING
2	03/12/24	ISSUED FOR NCDEQ PERMITTING
3	03/25/24	REVISED PER TRC COMMENTS

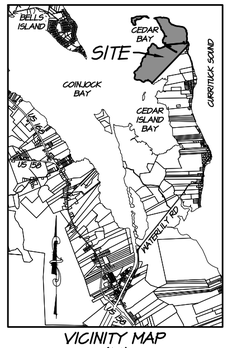
WASTEWATER DETAILS

ATHLETIC FACILITY
1559 WATERLILLY RD

POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA

PROJECT NO. P16099
DESIGNED BY ND
DRAWN BY ND
CHECKED BY MWS
ISSUE DATE 12/12/23

SHEET NO. 9 OF 9 SHEETS



VICINITY MAP
(NTS)

CURRITUCK SOUND

SHORELINE (L355-L425)

CL BULKHEAD (L322-L354)

NOT ALL IMPROVEMENTS SHOWN FOR CLARITY

SHEET 2

WATERLILY RD
60' PUBLIC R/W

FIRM ZONE X

FIRM ZONE SHADED X (0.2%)

FIRM ZONE LINE NOT SURVEYED

FIRM ZONE AE (EL.4)

TRACT A2
6,413,360 SF
147.23 AC

TRACT A1
13,527,580 SF
310.55 AC

NF
JAMES L. MARKERT
RESIDUAL PARCEL
PC M, SL 100

NEW PROPERTY LINE

CANAL

NC GRID NAD83(2011)

N 38° 31' 43" W
62.93' (L199 END-CALC)

N 38° 31' 43" W
32.41' (CALC-L200 END)

FIRM ZONE AE (EL.4)

FIRM ZONE AE (EL.5)

CEDAR BAY

TIE FROM "A-C"
N 47° 27' 10" W
4845.10'

"C"
N 988,977.82 sFT
E 2,901,309.27 sFT

"D"
N 989,007.30 sFT
E 2,900,890.71 sFT

TIE FROM "A-D"
N 51° 42' 55" W
5335.50'

NO APPROVAL REQUIRED

PLANNING DIRECTOR DATE

REVIEW OFFICER'S CERTIFICATE

STATE OF NORTH CAROLINA
COUNTY OF CURRITUCK

I, _____, REVIEW OFFICER OF CURRITUCK COUNTY, CERTIFY THAT THE MAP OR PLAT TO WHICH THIS CERTIFICATION IS AFFIXED MEETS ALL STATUTORY REQUIREMENTS FOR RECORDING.

REVIEW OFFICER DATE

TRACT B
575,194 SF
13.20 AC

SHORELINE (L465-L546)

WATERFRONT PARCEL OWNERSHIP TO SHORELINE. WATER BODY BOUNDARIES ARE DYNAMIC AND WILL CHANGE OVER TIME.

SHORELINE (L3-L321)

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NOTES:
1. CURRENT OWNERS: 85° AND SUNNY, LLC
   9919 STEPHEN DECATUR HWY
   OCEAN CITY, MD 21842
2. PIN / PID: 9908-14-7146 / 007900000A0000 (1555 WATERLILY RD) LOT A1
   9908-37-3430 / 007900000I0A0000 (1631 WATERLILY RD) LOT A2
3. TOTAL PARCEL AREA = 20,516,134 SF / 470.98 AC (AREAS BY COORDINATE METHOD)
4. SUBJECT REFERENCES: DB 1449, PG 381 & 390; PC F, SL 123; PC R, SL 288
5. ADDITIONAL REFERENCES: DB 110, PG 345; DB 178, PG 641; DB 177, PG 647; DB 1139, PG 14; PC M, SL 100; DB 75, PG 321 (UTILITY EASEMENT NOT PLOTTABLE)
6. FIELD SURVEY DATES: 01/22/18 - 02/07/18, 04/15/19 - 05/09/19, 08/05/22 & 08/XX/23.
7. MERIDIAN BASED ON A-B.
8. HORIZONTAL DATUM IS NAD83(2011), DERIVED FROM NC GNSS RTN.
9. VERTICAL DATUM IS NAVD 1988, DERIVED FROM NC GNSS RTN.
10. ALL DISTANCES ARE IN US SURVEY FEET AND HORIZONTAL GROUND.
11. PROPERTY IS LOCATED IN NFIP FLOOD ZONES AS SHOWN AND SUBJECT TO CHANGES. BASED ON COMMUNITY CID NO. 370078; PANEL 9908; SUFFIX K. (MAP NUMBER 37200990800K) EFFECTIVE DATE: 12/21/2018

GRAPHIC SCALE

400' 0 200' 400' 800'

(IN FEET)
1 inch = 400 ft.

SURVEYOR'S CERTIFICATE

I, JOHN M. HURDLE, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION (SEE NOTES); THAT THE BOUNDARIES NOT SURVEYED ARE SHOWN AS DASHED LINES AND ARE CLEARLY INDICATED AS DRAWN FROM INFORMATION FOUND IN (SEE ADDITIONAL REFERENCES IN NOTES); THAT THE RATIO OF PRECISION OR POSITIONAL ACCURACY AS CALCULATED IS 2-CENTIMETERS; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED.

CLASS OF SURVEY: CLASS A
POSITIONAL ACCURACY: 2-CENTIMETERS
TYPE OF GPS FIELD PROCEDURE: NC GNSS RTN
DATES OF SURVEY: JAN. - FEB. 2018, APR - MAY 2019, 08/05/22 & 08/XX/23
DATUM/EPOCH: NC GRID - NAD 83 / EPOCH 2011
PUBLISHED/FIXED-CONTROL USE: NC GNSS RTN
GEOID MODEL: 2012
COMBINATION GRID FACTOR(S): 1.00008043
UNITS: US SURVEY FEET

THAT THE SURVEY IS OF ANOTHER CATEGORY, SUCH AS THE RECOMBINATION OF EXISTING PARCELS, A COURT-ORDERED SURVEY, OR OTHER EXEMPTION OR EXCEPTION TO THE DEFINITION OF SUBDIVISION.

WITNESS MY ORIGINAL SIGNATURE, LICENSE NUMBER AND SEAL THIS 26TH DAY OF MARCH, 2024, A.D.

_____
JOHN M. HURDLE, PLS NC L-5209

NC License#: C-0208
Quible & Associates, P.C.
SINCE 1959
ENGINEERING** * CONSULTING * PLANNING
ENVIRONMENTAL SCIENCES * SURVEYING**
SURVEYING NOT OFFERED AT BLACK MTN. OFFICE
8466 CARATOKE HWY
BLDG 400
POWELLS POINT, NC 27966
Phone: (252) 491-8147
90 CHURCH STREET
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Phone: (828) 357-5149
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PRELIMINARY PLAT-NOT FOR RECORDATION CONVEYANCES OR SALES

CERTIFICATION

RECOMBINATION PLAT (1 of 3)

85 AND SUNNY, LLC

POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA

PROJECT NO.	P16099
DRAWN BY	JMH
CHECKED BY	DLT/JMH
SCALE	1" = 400'
ISSUE DATE	03/26/24

Q:\2016\P16099\Drawings\Survey\P16099-recombo.dwg 3/26/2024 12:41 PM Mhurdle

CURRITUCK SOUND

NC GRID NAD83(2011)

L420

S 47° 22' 36" W 304.89'

N/F DELORES MYERS DB 201, PG 445 PC P, SL 110

5/8"EIR (0.2BG)

S 45° 18' 16" W 128.15'

"A" 5/8"EIR (FLUSH) N 985,701.582 FT E 2,904,878.755 FT NAD83(2011)

S 08° 27' 45" E 12.39' (TIE)

5/8"EIR (0.2BG)

16.39'

36.16'

1/2"EIR (0.2BG)

S 45° 28' 39" W (TOTAL) 454.99' 396.05'

B 5/8"EIR (0.8BG) N 985,371.419 sFT E 2,904,565.687 sFT

641.67'

S 45° 45' 45" W 5076.81' (T) 4435.14'

L410 61.90'

3.07' (CALC–L410 END)

177.30' N 85° 59' 15" E 240.99' (T)

L400

N 15° 26' 08" W 17.66'

63.69'

N 74° 33' 52" E 5.00'

S 15° 26' 08" E 16.89'

5/8"EIR (FLUSH)

N 85° 59' 15" E 64.32'

29.43'

N 77° 51' 01" E 69.43' (T)

N 12° 34' 41" W 59.14'

30.00'

10.00'

C1

N 84° 28' 26" E 95.21'

S 05° 31' 34" E 210.00'

N 77° 51' 01" E 44.39'

S 08° 00' 37" E 230.83'

N 08° 54' 23" E 60.00'

144.21'

N 08° 00' 37" W

PROPERTY LINES TO BE ABANDONED (TYP.)

PROPERTY LINES TO BE ABANDONED

FIRM ZONE AE (EL.5')

FIRM ZONE SHADED X (0.2%)

FIRM ZONE LINE NOT SURVEYED

FIRM ZONE X

RET. WALL

463.48'

N 12° 34' 41" W

30' ACCESS EASEMENT PC R, SL 288

483.90'

N 12° 34' 41" W

CURVE TABLE				
CURVE#	LENGTH	RADIUS	CHD LENGTH	CHD BEARING
C1	42.35'	25.00'	37.46'	N 35° 56' 53" E

WATERLILY RD 60' PUBLIC R/W

MAG

S 16° 42' 19" E 210.00' (TIE)

S 12° 49' 09" E 529.20' (TIE "A"-MAG)

S 16° 54' 10" E 397.27' (TIE)

1/2"EIR (0.2BG)

1/2"EIR (0.2BG)

S 74° 36' 59" W 210.00' (TIE)

N/F JAMES L. MARKERT LOT 1 PC M, SL 100

N/F JAMES L. MARKERT LOT 2 PC M, SL 100

N/F JAMES L. MARKERT RESIDUAL PARCEL PC M, SL 100

1/2"EIR (0.1BG)

L160

LEGEND:
- = EXISTING IRON ROD, EIR
- = MAG NAIL
- = CALCULATED POINT
- = SET IRON ROD, SIR
(T) - TOTAL DISTANCE
AG - ABOVE GRADE
BG - BELOW GRADE

NOT ALL IMPROVEMENTS SHOWN FOR CLARITY

TRACT A2
6,413,360 SF
147.23 AC

TRACT A1
13,527,580 SF
310.55 AC

GRAPHIC SCALE
100' 0 50' 100' 200'
(IN FEET)
1 inch = 100 ft.

NC License#: C-0208
SINCE 1959
Quible & Associates, P.C.
ENGINEERING** * CONSULTING * PLANNING
ENVIRONMENTAL SCIENCES * SURVEYING**
SURVEYING NOT OFFERED AT BLACK MTN. OFFICE
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PRELIMINARY PLAT-NOT FOR RECORDATION CONVEYANCES OR SALES

CERTIFICATION

RECOMBINATION PLAT (2 of 3)

85 AND SUNNY, LLC

POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA

PROJECT NO.	P16099
DRAWN BY	JMH
CHECKED BY	DLT/JMH
SCALE	1" = 100'
ISSUE DATE	03/26/24

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LINE TABLE		
LINE#	LENGTH	DIRECTION
L1	454.99'	S 43° 28' 39" W
L2	5076.81'	S 43° 45' 43" W
L3	30.80'	N 11° 30' 17" E
L4	1214.70'	N 39° 21' 44" W
L5	1205.76'	N 49° 37' 41" W
L6	1271.13'	N 52° 34' 51" W
L7	1390.06'	N 12° 34' 46" W
L8	98.70'	N 21° 39' 44" W
L9	45.94'	S 89° 25' 55" W
L10	23.48'	S 18° 00' 19" W
L11	44.75'	S 08° 26' 38" W
L12	96.74'	S 76° 32' 20" W
L13	86.61'	N 75° 02' 12" W
L14	117.13'	S 74° 57' 52" W
L15	75.73'	S 09° 29' 18" W
L16	1168.83'	S 61° 41' 55" W
L17	213.56'	N 61° 32' 21" W
L18	95.85'	N 42° 10' 57" W
L19	49.33'	N 55° 33' 05" W
L20	74.65'	N 66° 12' 44" W
L21	81.21'	N 87° 10' 03" W
L22	54.04'	N 77° 57' 02" W
L23	64.42'	S 76° 53' 43" W
L24	111.20'	N 14° 15' 29" E
L25	37.16'	S 84° 01' 12" W
L26	262.05'	N 73° 11' 34" W
L27	77.44'	N 21° 06' 16" W
L28	83.64'	N 38° 25' 05" W
L29	111.20'	N 14° 15' 29" E
L30	75.01'	N 27° 00' 09" E
L31	68.10'	N 07° 16' 41" W
L32	116.87'	N 24° 01' 02" E
L33	68.75'	N 04° 27' 03" W
L34	236.24'	N 32° 16' 20" W
L35	124.68'	N 32° 12' 05" E
L36	126.11'	N 50° 04' 25" E
L37	155.27'	N 59° 06' 46" E
L38	62.03'	N 61° 24' 30" E
L39	71.22'	N 14° 57' 39" E
L40	1502.64'	N 38° 26' 36" E
L41	1184.97'	N 40° 05' 35" E
L42	88.20'	N 46° 18' 00" E
L43	54.25'	S 77° 04' 36" E
L44	59.65'	N 77° 33' 32" E
L45	66.41'	N 05° 29' 15" E
L46	36.29'	N 36° 36' 00" E
L47	35.87'	N 34° 42' 54" W
L48	23.30'	N 06° 30' 39" W
L49	56.11'	N 40° 28' 47" E
L50	55.32'	N 18° 06' 25" W
L51	74.93'	N 26° 05' 17" W
L52	112.35'	N 34° 30' 33" E
L53	122.47'	N 24° 52' 43" E
L54	59.39'	N 22° 59' 09" E
L55	66.37'	N 39° 14' 29" E
L56	94.41'	N 05° 44' 59" W
L57	176.59'	N 15° 24' 17" E
L58	130.53'	N 44° 11' 45" E
L59	91.41'	N 40° 07' 24" E
L60	1214.98'	N 89° 36' 40" E
L61	55.32'	N 13° 47' 16" E
L62	67.85'	N 20° 22' 09" W
L63	1124.40'	N 29° 45' 57" E
L64	76.21'	N 59° 01' 51" E
L65	55.56'	N 10° 46' 42" W
L66	1711.49'	N 30° 30' 36" E
L67	55.93'	N 82° 11' 30" E
L68	96.42'	S 82° 26' 05" E
L69	56.79'	N 57° 27' 51" E
L70	82.44'	N 28° 30' 14" W

LINE TABLE		
LINE#	LENGTH	DIRECTION
L71	70.13'	N 14° 17' 52" E
L72	56.51'	N 74° 21' 04" W
L73	72.80'	N 79° 21' 04" W
L74	1341.02'	N 02° 17' 19" E
L75	43.37'	N 13° 18' 24" E
L76	80.35'	N 63° 49' 34" E
L77	655.50'	N 24° 14' 37" E
L78	42.13'	N 14° 45' 39" E
L79	42.13'	N 14° 45' 39" E
L80	126.72'	N 73° 54' 47" E
L81	101.01'	N 41° 57' 02" E
L82	655.10'	N 33° 22' 27" E
L83	64.39'	N 01° 58' 44" E
L84	81.28'	N 57° 07' 00" E
L85	40.40'	N 22° 16' 20" E
L86	32.24'	N 59° 51' 01" E
L87	76.47'	S 70° 19' 32" E
L88	655.81'	N 01° 58' 44" E
L89	665.03'	S 37° 56' 04" E
L90	1314.74'	S 77° 54' 44" E
L91	36.24'	S 07° 54' 03" E
L92	52.67'	S 86° 58' 17" E
L93	1223.36'	S 28° 40' 53" E
L94	54.00'	S 14° 28' 19" E
L95	40.18'	S 34° 02' 11" E
L96	24.56'	S 02° 39' 53" W
L97	17.50'	S 19° 23' 26" W
L98	24.74'	S 83° 03' 11" E
L99	45.32'	S 39° 16' 11" E
L100	55.34'	N 49° 24' 08" E
L101	65.22'	N 73° 49' 01" E
L102	46.02'	S 24° 49' 02" E
L103	45.32'	S 39° 16' 11" E
L104	50.36'	N 41° 46' 10" E
L105	102.18'	S 81° 08' 42" E
L106	67.13'	N 10° 43' 24" E
L107	50.86'	N 60° 25' 33" E
L108	148.55'	N 78° 55' 45" E
L109	106.04'	N 41° 46' 10" E
L110	391.65'	S 70° 50' 58" E
L111	26.12'	S 19° 44' 52" E
L112	54.00'	N 44° 50' 57" E
L113	16.67'	S 82° 58' 36" E
L114	43.98'	N 47° 55' 53" E
L115	48.56'	N 46° 10' 41" E
L116	47.51'	N 25° 41' 18" E
L117	14.54'	N 08° 02' 05" E
L118	153.94'	N 64° 07' 26" E
L119	27.52'	S 80° 21' 30" E
L120	31.21'	S 65° 57' 04" E
L121	24.33'	S 57° 44' 35" E
L122	70.59'	S 62° 02' 12" E
L123	57.63'	S 59° 58' 38" E
L124	34.18'	S 59° 01' 24" E
L125	37.45'	S 61° 01' 44" E
L126	47.35'	S 59° 10' 34" E
L127	15.47'	S 60° 59' 41" E
L128	23.40'	S 49° 02' 00" E
L129	14.66'	S 55° 13' 24" E
L130	11.40'	S 65° 43' 11" E
L131	33.84'	S 62° 31' 12" E
L132	27.29'	S 62° 25' 25" E
L133	27.75'	S 49° 20' 40" E
L134	37.41'	S 59° 37' 44" E
L135	37.41'	S 59° 37' 44" E
L136	52.80'	S 59° 57' 37" E
L137	44.73'	S 58° 30' 56" E
L138	56.42'	S 61° 55' 27" E
L139	33.97'	S 53° 55' 42" E
L140	44.97'	S 62° 40' 57" E

LINE TABLE		
LINE#	LENGTH	DIRECTION
L141	52.10'	S 61° 51' 57" E
L142	38.23'	S 56° 51' 05" E
L143	40.54'	S 59° 46' 22" E
L144	34.97'	S 59° 14' 15" E
L145	67.47'	S 60° 35' 32" E
L146	63.47'	S 54° 37' 44" E
L147	64.80'	S 57° 17' 24" E
L148	54.86'	S 59° 05' 26" E
L149	46.10'	S 56° 30' 17" E
L150	44.22'	S 54° 44' 12" E
L151	32.73'	S 59° 44' 12" E
L152	25.38'	S 59° 42' 06" E
L153	44.84'	S 57° 28' 54" E
L154	23.64'	S 57° 05' 02" E
L155	19.41'	S 74° 22' 15" E
L156	12.60'	N 64° 59' 19" E
L157	9.28'	N 23° 51' 57" E
L158	7.61'	N 07° 57' 01" E
L159	11.45'	N 08° 32' 47" W
L160	2.76'	N 01° 39' 50" E
L161	4.50'	N 33° 39' 22" E
L162	6.06'	N 01° 33' 08" E
L163	7.24'	N 12° 21' 01" E
L164	3.82'	N 24° 22' 46" E
L165	6.34'	N 67° 41' 35" E
L166	7.95'	N 84° 38' 22" E
L167	14.73'	N 02° 50' 44" W
L168	15.33'	N 12° 34' 50" W
L169	130.51'	N 75° 14' 06" W
L170	141.90'	N 61° 19' 24" W
L171	139.21'	N 59° 33' 20" W
L172	122.04'	N 60° 37' 52" W
L173	151.96'	N 59° 06' 25" W
L174	156.83'	N 59° 36' 45" W
L175	141.02'	N 59° 32' 28" W
L176	155.61'	N 59° 10' 34" W
L177	130.34'	N 56° 51' 56" W
L178	42.33'	N 54° 06' 42" W
L179	12.44'	N 55° 25' 36" E
L180	102.14'	S 89° 13' 55" E
L181	113.82'	S 78° 09' 02" E
L182	93.78'	S 78° 17' 55" E
L183	43.52'	S 62° 39' 51" E
L184	41.23'	N 12° 07' 38" E
L185	37.93'	N 69° 09' 02" E
L186	50.49'	S 78° 28' 44" E
L187	5.46'	N 77° 04' 47" W
L188	51.36'	N 64° 07' 03" W
L189	38.41'	S 78° 20' 15" W
L190	38.64'	S 78° 20' 15" W
L191	18.12'	S 84° 01' 55" W
L192	42.59'	N 57° 58' 34" W
L193	64.40'	N 74° 41' 47" W
L194	104.76'	N 75° 57' 09" W
L195	93.55'	N 74° 31' 50" W
L196	25.48'	N 57° 18' 17" W
L197	31.09'	N 38° 26' 13" W
L198	55.84'	N 80° 25' 30" W
L199	77.08'	N 80° 31' 55" W
L200	65.34'	N 38° 31' 43" W
L201	107.86'	N 28° 02' 33" W
L202	28.16'	N 39° 15' 36" E
L203	35.34'	N 12° 54' 30" E
L204	31.41'	N 81° 49' 05" E
L205	48.23'	N 89° 39' 41" E
L206	22.60'	N 12° 12' 42" W
L207	4.44'	N 82° 20' 38" W
L208	9.57'	N 82° 20' 38" W
L209	47.01'	S 86° 45' 32" W
L210	53.72'	S 87° 27' 15" W

LINE TABLE		
LINE#	LENGTH	DIRECTION
L211	41.31'	S 61° 51' 57" E
L212	30.23'	S 56° 51' 05" E
L213	30.19'	N 52° 43' 20" W
L214	48.11'	N 02° 08' 26" W
L215	70.48'	N 14° 58' 20" W
L216	42.34'	N 15° 30' 42" E
L217	16.86'	N 08° 57' 09" E
L218	41.56'	N 08° 57' 09" E
L219	31.43'	N 60° 15' 18" E
L220	68.47'	N 14° 36' 27" E
L221	71.43'	N 57° 18' 10" E
L222	39.18'	N 02° 37' 12" W
L223	36.66'	N 26° 54' 47" W
L224	113.54'	N 46° 36' 49" E
L225	101.12'	N 15° 10' 24" E
L226	44.22'	N 70° 26' 37" E
L227	66.59'	N 81° 51' 47" E
L228	45.33'	S 76° 44' 57" E
L229	20.57'	N 43° 30' 01" W
L230	63.01'	N 78° 08' 14" W
L231	84.65'	N 74° 02' 24" W
L232	31.36'	N 20° 16' 11" W
L233	33.66'	N 08° 09' 32" E
L234	54.66'	N 03° 09' 32" E
L235	44.05'	N 09° 24' 13" W
L236	42.65'	N 26° 55' 24" W
L237	61.11'	N 04° 59' 49" E
L238	97.77'	N 26° 34' 09" W
L239	69.97'	N 52° 56' 45" W
L240	30.09'	S 89° 59' 49" W
L241	81.41'	N 11° 34' 09" W
L242	84.84'	N 24° 36' 55" W
L243	23.40'	N 72° 31' 49" W
L244	23.76'	N 50° 08' 26" W
L245	72.90'	N 09° 28' 47" W
L246	31.11'	N 29° 34' 20" W
L247	81.41'	N 11° 34' 09" W
L248	20.64'	N 12° 37' 07" W
L249	23.50'	N 16° 10' 12" E
L250	35.97'	N 74° 44' 44" W
L251	51.74'	N 52° 14' 13" W
L252	142.71'	N 14° 49' 16" W
L253	112.24'	N 11° 19' 49" W
L254	52.11'	N 25° 10' 50" E
L255	30.16'	S 85° 20' 03" W
L256	24.30'	N 69° 00' 56" W
L257	26.39'	N 29° 29' 23" W
L258	38.55'	N 00° 09' 39" E
L259	31.49'	N 36° 35' 37" W
L260	54.45'	N 24° 24' 31" W
L261	82.31'	N 36° 00' 35" W
L262	100.69'	N 04° 37' 00" W
L263	41.18'	N 43° 49' 57" W
L264	61.58'	N 60° 19' 58" W
L265	24.40'	N 15° 21' 45" W
L266	31.41'	N 32° 10' 46" W
L267	31.07'	N 06° 14' 54" W
L268	27.62'	N 46° 00' 14" W
L269	65.52'	N 23° 30' 45" W
L270	41.97'	N 49° 56' 09" W
L271	56.40'	N 34° 07' 44" W
L272	69.80'	N 05° 47' 27" W
L273	122.62'	N 39° 05' 14" W
L274	30.80'	N 27° 08' 09" W
L275	20.01'	N 77° 05' 04" W
L276	49.42'	N 53° 59' 58" W
L277	41.07'	N 52° 31' 42" W
L278	36.65'	N 62° 08' 09" W
L279	29.34'	N 39° 28' 09" W
L280	46.20'	S 86° 55' 19" W

LINE TABLE		
LINE#	LENGTH	DIRECTION
L281	21.86'	S 88° 14' 36" E
L282	70.79'	N 52° 13' 54" E
L283	43.65'	N 43° 54' 43" E
L284	86.30'	N 51° 23' 54" E
L285	22.64'	S 44° 37' 53" E
L286	30.48'	S 47° 22' 36" W
L287	51.62'	S 76° 28' 11" W
L288	46.45'	N 52° 51' 38" W
L289	34.23'	N 64° 37' 52" W
L290	50.00'	N 66° 32' 05" W
L291	63.75'	N 50° 08' 58" W
L292	51.62'	S 76° 28' 11" W
L293	64.31'	N 61° 28' 57" W
L294	30.73'	N 09° 54' 02" W
L295	112.68'	N 78° 27' 36" W
L296	73.01'	N 84° 17' 33" W
L297	50.46'	S 59° 06' 46" W
L298	102.04'	S 66° 53' 21" W
L299	129.96'	S 55° 57' 05" W
L300	102.26'	S 30° 24' 49" W
L301	63.47'	S 67° 43' 18" W
L302	72.40'	S 77° 40' 41" W
L303	83.08'	S 77° 40' 41" W
L304	103.66'	S 78° 24' 06" W
L305	93.30'	S 86° 37' 56" W
L306	46.26'	S 80° 04' 09" W
L307	16.11'	N 42° 49' 53" W
L308	60.41'	N 44° 58' 23" W
L309	13.03'	N 66° 57' 31" W
L310	11.44'	S 05° 26' 41" W
L311	73.43'	S 52° 34' 50" W
L312	48.05'	S 47° 05' 53" W
L313	82.56'	S 38° 48' 06" W
L314	48.84'	N 66° 26' 51" W
L315	32.36'	N 74° 44' 24" W
L316	4.85'	S 18° 45' 35" W
L317	11.53'	S 69° 01' 03" E
L318	33.81'	S 69° 42' 34" E
L319	19.34'	S 42° 10' 58" E
L320	19.99'	S 31° 41' 55" E
L321	54.03'	S 03° 20' 28" W
L322	101.97'	S 09° 51' 41" W
L323	130.17'	S 22° 46' 38" E
L324	56.76'	S 00° 04' 11" W
L325	37.93'	S 69° 20' 02" E
L326	5.46'	N 32° 41' 21" E
L327	51.36'	N 77° 04' 47" W
L328	39.41'	N 64° 07' 03" W
L329	18.12'	N 20° 20' 15" W
L330	42.59'	N 57° 58' 34" W
L331	64.40'	N 74° 41' 47" W
L332	104.76'	N 75° 57' 09" W
L333	93.55'	N 74° 31' 50" W
L334	31.09'	N 38° 26' 13" W
L335	55.84'	N 80° 25' 30" W
L336	77.08'	N 80° 31' 55" W
L337	65.34'	N 38° 31' 43" W
L338	107.86'	N 28° 02' 33" W
L339	28.16'	N 39° 15' 36" E
L340	35.34'	N 12° 54' 30" E
L341	31.41'	N 81° 49' 05" E
L342	48.23'	N 89° 39' 41" E
L343	22.60'	N 12° 12' 42" W
L344	4.44'	N 82° 20' 38" W
L345	9.57'	N 82° 20' 38" W
L346	47.01'	S 86° 45' 32" W
L347	53.72'	S 87° 27' 15" W

LINE TABLE		
LINE#	LENGTH	DIRECTION
L348	61.80'	S 61° 51' 57" E
L349	54.86'	S 59° 05' 26" E
L350	46.10'	S 56° 30' 17" E
L351	32.73'	S 59° 44' 12" E
L352	25.38'	S 59° 42' 06" E
L353	44.84'	S 57° 28' 54" E
L354	23.64'	S 57° 05' 02" E
L355	19.41'	S 74° 22' 15" E
L356	12.60'	N 64° 59' 19" E
L357	9.28'	N 23° 51' 57" E
L358	7.61'	N 07° 57' 01" E
L359	11.45'	N 08° 32' 47" W
L360	2.76'	N 01° 39' 50" E
L361	4.50'	N 33° 39' 22" E
L362	6.06'	N 01° 33' 08" E
L363	7.24'	N 12° 21' 01" E
L364	3.82'	N 24° 22' 46" E
L365	6.34'	N 67° 41' 35" E
L366	7.95'	N 84° 38' 22" E
L367	14.73'	N 02° 50' 44" W
L368	15.33'	N 12° 34' 50" W
L369	130.51'	N 75° 14' 06" W
L370	141.90'	N 61° 19' 24" W
L371	139.21'	N 59° 33' 20" W
L372	122.04'	N 60° 37' 52" W
L373	151.96'	N 59° 06' 25" W
L374	156.83'	N 59° 36' 45" W
L375	141.02'	N 59° 32' 28" W
L376	155.61'	N 59° 10' 34" W
L377	130.34'	N 56° 51' 56" W
L378	42.33'	N 54° 06' 42" W
L379	12.44'	N 55° 25' 36" E
L380	102.14'	S 89° 13' 55" E
L381	113.82'	S 78° 09' 02" E
L382	93.78'	S 78° 17' 55" E
L383	43.52'	S 62° 39' 51" E
L384	41.23'	N 12° 07' 38" E
L385	37.93'	N 69° 09' 02" E
L386	50.49'	S 78° 28' 44" E
L387	5.46'	N 77° 04' 47" W
L388	51.36'	N 64° 07' 03" W
L389	38.41'	S 78° 20' 15" W
L390	38.64'	S 78° 20' 15" W
L391	18.12'	S 84° 01' 55" W
L392	42.59'	N 57° 58' 34" W
L393	64.40'	N 74° 41' 47" W
L394	104.76'	N 75° 57' 09" W
L395	93.55'	N 74° 31' 50" W
L396	25.48'	N 57° 18' 17" W
L397	31.09'	N 38° 26' 13" W
L398	55.84'	N 80° 25' 30" W
L399	77.08'	N 80° 31' 55" W
L400	65.34'	N 38° 31' 43" W
L401	107.86'	N 28° 02' 33" W
L402	28.16'	N 39° 15' 36" E
L403	35.34'	N 12° 54' 30" E
L404	31.41'	N 81° 49' 05" E
L405	48.23'	N 89° 39' 41" E
L406	22.60'	N 12° 12' 42" W
L407	4.44'	N 82° 20' 38" W
L408	9.57'	N 82° 20' 38" W
L409	47.01'	S 86° 45' 32" W
L410	53.72'	S 87° 27' 15" W

LINE TABLE		
LINE#	LENGTH	DIRECTION
L411	61.80'	S 61° 51' 57" E
L412	54.86'	S 59° 05' 26" E
L413	46.10'	S 56° 30' 17" E
L414	44.22'	N 70° 26' 37" E
L415	66.59'	N 81° 51' 47" E
L416	45.33'	S 76° 44' 57" E
L417	20.57'	N 43° 30' 01" W
L418	63.01'	N 78° 08' 14" W
L419	84.65'	N 74° 02' 24" W
L420	31.36'	N 20° 16' 11" W
L421	33.66'	N 08° 09' 32" E
L422	54.66'	N 03° 09' 32" E
L423	44.05'	N 09° 24' 13" W
L424	42.65'	N 26° 55' 24" W
L425	61.11'	N 04° 59' 49" E
L426	97.77'	N 26° 34' 09" W
L427	69.97'	N 52° 56' 45" W
L428	30.09'	S 89° 59' 49" W
L429	81.41'	N 11° 34' 09" W
L430	84.84'	N 24° 36' 55" W
L431	23.40'	N 72° 31' 49" W
L432	23.76'	N 50° 08' 26" W
L433	72.90'	N 09° 28' 47" W
L434	31.11'	N 29° 34' 20" W
L435	81.41'	N 11° 34' 09" W
L436	20.64'	N 12° 37' 07" W
L437	23.50'	N 16° 10' 12" E
L438	35.97'	N 74° 44' 44" W
L439	52.11'	N 52° 14' 13" W
L440	142.71'	N 14° 49' 16" W
L441	112.24'	N 11° 19' 49" W
L442	52.11'	N 25° 10' 50" E
L443	30.16'	S 85° 20' 03" W
L444	24.30'	N 69° 00' 56" W
L445	26.39'	N 29° 29' 23" W
L446	38.55'	N 00° 09' 39" E
L447	31.49'	N 36° 35' 37" W
L448	54.45'	N 24° 24' 31" W
L449	82.31'	N 36° 00' 35" W
L450	100.69'	N 04° 37' 00" W
L451	41.18'	N 43° 49' 57" W
L452	61.58'	N 60° 19' 58" W
L453	23.64'	N 74° 44' 44" W
L454	23.76'	N 16° 10' 12" E
L455	35.97'	N 74° 44' 44" W
L456	52.11'	N 52° 14' 13" W
L457	142.71'	N 14° 49' 16" W
L458	112.24'	N 11° 19' 49" W
L459	52.11'	N 25° 10' 50" E
L460	30.16'	S 85° 20' 03" W
L461	24.30'	N 69° 00' 56" W
L462	26.39'	N 29° 29' 23" W
L463	38.55'	N 00° 09' 39" E
L464	31.49'	N 36° 35' 37" W
L465	54.45'	N 24° 24' 31" W
L466	82.31'	N 36° 00' 35" W
L467	100.69'	N 04° 37' 00" W
L468	41.18'	N 43° 49' 57" W
L469	61.58'	N 60° 19' 58" W
L470	23.64'	N 74° 44' 44" W
L471	23.76'	N 16° 10' 12" E
L472	35.97'	N 74° 44' 44" W
L473	52.11'	N 52° 14' 13" W
L474	142.71'	N 14° 49' 16" W
L475	112.24'	N 11° 19' 49" W
L476	52.11'	N 25° 10' 50" E
L477	30.16'	S 85° 20' 03" W
L478	24.30'	N 69° 00' 56" W
L479	26.39'	N 29° 29' 23" W
L480	38.55'	N 00° 09' 39" E
L481	31.49'	N 36° 35' 37" W
L482	54.45'	N 24° 24' 31" W
L483	82.31'	N 36° 00' 35" W
L484	100.69'	N 04° 37' 00" W
L485	41.18'	N 43° 49' 57" W
L486	61.58'	N 60° 19' 58" W
L487	23.64'	N 74° 44' 44" W
L488	23.76'	N 16° 10' 12" E
L489	35.97'	N 74° 44' 44" W
L490	52.11'	N 52° 14' 13" W
L491	142.71'	N 14° 49' 16" W
L492	112.24'	N 11° 19' 49" W
L493	52.11'	N 25° 10' 50" E
L494	30.16'	S 85° 20' 03" W
L495	24.30'	N 69° 00' 56" W
L496	26.39'	N 29° 29' 23" W
L497	38.55'	N 00° 09' 39" E
L498	31.49'	N 36° 35' 37" W
L499	54.45'	N 24° 24' 31" W
L500	82.31'	N 36° 00' 35" W
L501	100.69'	N 04° 37' 00" W
L502	41.18'	N 43° 49' 57" W
L503	61.58'	N 60° 19' 58" W
L504	23.64'	N 74° 44' 44" W
L505	23.76'	N 16° 10' 12" E
L506	35.97'	N 74° 44' 44" W
L507	52.11'	N 52° 14' 13" W
L508	142.71'	N 14° 49' 16" W
L509	112.24'	N 11° 19' 49" W
L510	52.11'	N 25° 10' 50" E

LINE TABLE		
LINE#	LENGTH	DIRECTION
L511	30.16'	S 85° 20' 03" W
L512	24.30'	N 69° 00' 56" W
L513	26.39'	N 29° 29' 23" W
L514	38.55'	N 00° 09' 39" E
L515	31.49'	N 36° 35' 37" W
L516	54.45'	N 24° 24' 31" W
L517	82.31'	N 36° 00' 35" W
L518	100.69'	N 04° 37' 00" W
L519	41.18'	N 43° 49' 57" W
L520	61.58'	N 60° 19' 58" W
L521	23.64'	N 74° 44' 44" W
L522	23.76'	N 16° 10' 12" E
L523	35.97'	N 74° 44' 44" W
L524	52.11'	N 52° 14' 13" W
L525	142.71'	N 14° 49' 16" W
L526	112.24'	N 11° 19' 49" W
L527	52.11'	N 25° 10' 50" E
L528	30.16'	S 85° 20' 03" W
L529	24.30'	N 69° 00' 56" W
L530	26.39'	N 29° 29' 23" W
L531	38.55'	N 00° 09' 39" E
L532	31.49'	N 36° 35' 37" W
L533	54.45'	N 24° 24' 31" W
L534	82.31'	N 36° 00' 35" W
L535	100.69'	N 04° 37' 00" W
L536	41.18'	N 43° 49' 57" W
L537	61.58'	N 60° 19' 58" W
L538	23.64'	N 74° 44' 44" W
L539	23.76'	N 16° 10' 12" E
L540	35.97'	N 74° 44' 44" W
L541	52.11'	N 52° 14' 13" W
L542	142.71'	N 14° 49' 16" W
L543	112.24'	N 11° 19' 49" W
L544	52.11'	N 25° 10' 50" E
L545	30.16'	S 85° 20' 03" W
L546	24.30'	N 69° 00' 56" W
L547	26.39'	N 29° 29' 23" W
L548	38.55'	N 00° 09' 39" E
L549	31.49'	N 36° 35' 37" W
L550	54.45'	N 24° 24' 31" W
L551	82.31'	N 36° 00' 35" W
L552	100.69'	N 04° 37' 00" W
L553	41.18'	N 43° 49' 57" W
L554	61.58'	N 60° 19' 58" W
L555	23.64'	N 74° 44' 44" W
L556	23.76'	N 16° 10' 12" E
L557	35.97'	N 74° 44' 44" W
L558	52.11'	N 52° 14' 13" W
L559	142.71'	N 14° 49' 16" W
L560	112.24'	N 11° 19' 49" W
L561	52.11'	N 25° 10' 50" E
L562	30.16'	S 85° 20' 03" W
L563	24.30'	N 69° 00' 56" W
L564	26.39'	N 29° 29' 23" W
L565	38.55'	N 00° 09' 39" E
L566	31.49'	N 36° 35' 37" W
L567	54.45'	N 24° 24' 31" W
L568	82.31'	N 36° 00' 35" W
L569	100.69'	N 04° 37' 00" W
L570	41.18'	N 43° 49' 57" W
L571	61.58'	N 60° 19' 58" W
L572	23.64'	N 74° 44' 44" W
L573	23.76'	N 16° 10' 12" E
L574	35.97'	N 74° 44' 44" W
L575	52.11'	N 52° 14' 13" W
L576	142.71'	N 14° 49' 16" W
L577	112.24'	N 11° 19' 49" W
L578	52.11'	N 25° 10' 50" E
L579	30.16'	S 85° 20' 03" W
L580	24.30'	N 69° 00' 56" W
L581	26.39'	N 29° 29' 23" W
L582	38.55'	N 00° 09' 39" E
L583	31.49'	N 36° 35' 37" W
L584	54.45'	N 24° 24' 31" W
L585	82.31'	N 36° 00' 35" W
L586	100.69'	N 04° 37' 00" W
L587	41.18'	N 43° 49' 57" W
L588	61.58'	N 60° 19' 58" W
L589	23.64'	N 74° 44' 44" W
L590	23.76'	N 16° 10' 12" E
L591	35.97'	N 74° 44' 44" W
L592	52.11'	N 52° 14' 13" W
L593	142.71'	N 14° 49' 16" W
L594	112.24'	N 11° 19' 49" W
L595	52.11'	N 25° 10' 50" E
L596	30.16'	S 85° 20' 03" W
L597	24.30'	N 69° 00' 56" W
L598	26.39'	N 29° 29' 23" W
L599	38.55'	N 00° 09' 39" E
L600	31.49'	N 36° 35' 37" W
L601	54.45'	N 24° 24' 31" W
L602	82.31'	N 36° 00' 35" W
L603	100.69'	N 04° 37' 00" W
L604	41.18'	N 43° 49' 57" W
L605	61.58'	N 60° 19' 58" W
L606	23.64'	N 74° 44' 44" W
L607	23.76'	N 16° 10' 12" E
L608	35.97'	N 74° 44' 44" W
L609	52.11'	N 52° 14' 13" W
L610	142.71'	N 14° 49' 16" W
L611	112.24'	N 11° 19' 49" W
L612	52.11'	N 25° 10' 50" E
L613	30.16'	S 85° 20' 03" W
L614	24.30'	N 69° 00' 56" W
L615	26.39'	N 29° 29' 23" W
L616	38.55'	N 00° 09' 39" E
L617	31.49'	N 36° 35' 37" W
L618	54.45'	N 24° 24' 31" W
L619	82.31'	N 36° 00' 35" W
L620	100.69'	N 04° 37' 00" W

LINE TABLE		
LINE#	LENGTH	DIRECTION
L621	41.18'	N 43° 49' 57" W
L622	61.58'	N 60° 19' 58" W
L623	23.64'	N 74° 44' 44" W
L624	23.76'	N 16° 10' 12" E
L625	35.97'	N 74° 44' 44" W
L626	52.11'	N 52° 14' 13" W
L627	142.71'	N 14° 49' 16" W
L628	112.24'	N 11° 19' 49" W
L629	52.11'	N 25° 10' 50" E
L630	30.16'	S 85° 20' 03" W
L631	24.30'	N 69° 00' 56" W
L632	26.39'	N 29° 29' 23" W
L633	38.55'	N 00° 09' 39" E
L634	31.49'	N 36° 35' 37" W
L635	54.45'	N 24° 24' 31" W
L636	82.31'	N 36° 00' 35" W
L637	100.69'	N 04° 37' 00" W
L638	41.18'	N 43° 49' 57" W
L639	61.58'	N 60° 19' 58" W
L640	23.64'	N 74° 44' 44" W
L641	23.76'	N 16° 10' 12" E
L642	35.97'	N 74° 44' 44" W
L643	52.11'	N 52° 14' 13" W
L644	142.71'	N 14° 49' 16" W
L645	112.24'	N 11° 19' 49" W
L646	52.11'	N 25° 10' 50" E
L647	30.16'	S 85° 20' 03" W
L648	24.30'	N 69° 00' 56" W

ROY COOPER
Governor
ELIZABETH S. BISER
Secretary
WILLIAM E. TOBY VINSON, JR
Interim Director

NORTH CAROLINA
Environmental Quality

March 21, 2024

85 and Sunny, LLC
Attn: Todd Burbage, Managing Member
9919 Stephen Decatur Hwy
Ocean City, MD 21842

Subject: **Stormwater Permit No. SW7181206 MOD**
85 and Sunny (Hampton Lodge Campground)
Low Density Stormwater Project
Currituck County

Dear Todd Burbage:

The Washington Regional Office received a complete Stormwater Management Permit Modification Application for the 85 and Sunny (Hampton Lodge Campground) project on March 14, 2024. Staff review of the plans and specifications has determined that the project, as proposed, will comply with the Stormwater Regulations set forth in Title 15A NCAC 2H.1000. We are forwarding Permit No. SW7181206 MOD dated March 21, 2024 for the construction of the subject project. The modification changes the property boundary to accommodate a new high density area covered by a separate permit.

This permit shall be effective from the date of issuance until rescinded, shall void all previous versions of this permit and shall be subject to the conditions and limitations as specified therein, and does not supercede any other agency permit that may be required. Please pay special attention to the conditions listed in this permit regarding the Operation and Maintenance of the SCM(s), recordation of deed restrictions, certification of the SCM's, procedures for changing ownership, and transferring the permit. Failure to establish an adequate system for operation and maintenance of the stormwater management system, to record deed restrictions, to certify the SCM's, to transfer the permit, or to renew the permit, will result in future compliance problems.

If any parts, requirements, or limitations contained in this permit are unacceptable, you have the right to request an adjudicatory hearing upon written request within thirty (30) days following receipt of this permit. This request must be in the form of a written petition, conforming to Chapter 150B of the North Carolina General Statutes, and filed with the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, NC 27699-6714. Unless such demands are made this permit shall be final and binding.

Please contact me at (252) 946-6481 if you have any questions.

Sincerely,

William Carl Dunn, PE
Environmental Engineer

cc: Cathleen Saunders, PE – Quible & Associates, PC (csaunders@quible.com)
Currituck County Inspections – Bill Newns (Bill.Newns@CurrituckCountyNC.gov)
Washington Regional Office

STATE OF NORTH CAROLINA

DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF ENERGY, MINERAL, AND LAND RESOURCES

STATE STORMWATER MANAGEMENT PERMIT

LOW DENSITY DEVELOPMENT

In accordance with the provisions of Article 21 of Chapter 143, General Statutes of North Carolina as amended, and other applicable Laws, Rules and Regulations

PERMISSION IS HEREBY GRANTED TO

85 and Sunny, LLC

85 and Sunny (Hampton Lodge Campground)

1631 Waterlily Rd, Coinjock, Currituck County

FOR THE

construction, operation and maintenance of a low density project in compliance with the provisions of 15A NCAC 2H .1000 (hereafter referred to as the *"stormwater rules")* and the approved stormwater management plans and specifications, and other supporting data as attached and on file with and approved by the Division of Energy, Mineral, and Land Resources (Division) and considered a part of this permit.

The Permit shall be effective from the date of issuance until rescinded and shall be subject to the following specific conditions and limitations:

I. DESIGN STANDARDS

1. This permit covers the construction of 240,002 square feet of new build-upon area and 110,797 square feet of existing build-upon area for a total of 350,799 square feet of build-upon area on this 44.39 acre project site.

2. The overall tract built-upon area percentage for the project must be maintained at or below 24%, as required by Section 2H .1005 of the stormwater rules. This permit proposes a total of 18.13% BUA for this project.

3. Approved plans and specifications for projects covered by this permit are incorporated by reference and are enforceable parts of the permit and shall be kept on file by the permittee at all times.

4. The only runoff conveyance systems allowed will be vegetated conveyances such as swales with minimum side slopes of 3:1 (H:V) as defined in the stormwater rules and approved by the Division.

5. No piping is allowed except that minimum amount necessary to direct runoff beneath an impervious surface such as a road or to provide access.

6. The built-upon areas associated with this project shall be located at least 50 feet landward of all perennial and intermittent streams or other surface waters.

II. SCHEDULE OF COMPLIANCE

1. The permittee is responsible for verifying that the proposed built-upon area does not exceed the allowable built-upon area.

2. The Director may notify the permittee when the permitted site does not meet one or more of the minimum requirements of the permit. Within the time frame specified in the notice, the permittee shall submit a written time schedule to the Director for modifying the site to meet minimum requirements. The permittee shall provide copies of revised plans and certification in writing to the Director that the changes have been made.

3. This project may not be sold or subdivided in whole or in part without first receiving a permit modification from the Division.

4. Filling in or piping of any vegetative conveyances (ditches, swales, etc.) associated with the permitted development, except for average driveway crossings, is strictly prohibited by any persons.

5. The permittee shall submit to the Director and shall have received approval for revised plans, specifications, and calculations prior to construction, for any modifications to the approved plans, including, but not limited to, those listed below:

   a. Any revision to the approved plans, regardless of size.
   b. Project name change.
   c. Transfer of ownership.
   d. Redesign or addition to the approved amount of built-upon area.
   e. Further subdivision, acquisition, or sale of the project area in whole or in part. The project area is defined as all property owned by the permittee, for which Sedimentation and Erosion Control Plan approval was sought.
   f. Filling in, altering or piping any vegetative conveyance shown on the approved plan.

6. Swales and other vegetated conveyances shall be constructed in their entirety, vegetated, and be operational for their intended use prior to the construction of any built-upon surface.

7. During construction, erosion shall be kept to a minimum and any eroded areas of the swales or other vegetated conveyances will be repaired immediately.

8. The permittee shall at all times provide the operation and maintenance necessary to operate the permitted stormwater management systems at optimum efficiency to include:

   a. Inspections
   b Sediment removal.
   c. Mowing, and re-vegetating of the side slopes.
   d. Immediate repair of eroded areas.
   e. Maintenance of side slopes in accordance with approved plans and specifications.

9. Within 30 days of completion of the project, the permittee shall certify in writing that the project has been constructed in accordance with the approved plans.

10. The permittee shall submit all information requested by the Director or his representative within the time frame specified in the written information request.

III. GENERAL CONDITIONS

1. This permit is not transferable to any person or entity except after notice to and approval by the Director. The Director may require modification or revocation and re-issuance of the permit to change the name and incorporate such other requirements as may be necessary. In the event of a name or ownership change, a completed Name/Ownership Change form, signed by both parties, must be submitted to the Division accompanied by the supporting documentation as listed on page 2 of the form. The approval of this request will be considered on its merits, and may or may not be approved.

2. The permittee is responsible for compliance with all permit conditions until the Director approves a transfer of ownership. Neither the sale of the project nor the transfer of common areas to a third party, such as a homeowner's association, constitutes an approved transfer of the stormwater permit.

3. Failure to abide by the conditions and limitations contained in this permit may subject the Permittee to an enforcement action by the Division, in accordance with North Carolina General Statutes 143-215.6A to 143-215.6C.

4. The issuance of this permit does not prohibit the Director from reopening and modifying the permit, revoking and reissuing the permit, or terminating the permit as allowed by the laws, rules, and regulations contained in Title 15A NCAC 2H.1000 of the North Carolina Administrative Code, Subchapter 2H.1000; and North Carolina General Statute 143-215.1 et. al.

5. In the event that the facilities fail to perform satisfactorily, including the creation of nuisance conditions, the Permittee shall take immediate corrective action, including those as may be required by the Division, such as the construction of additional or replacement stormwater management systems.

6. The permittee grants permission to DEQ Staff to enter the property during normal business hours, for the purpose of inspecting all components of the stormwater management facility.

7. The permit issued shall continue in force and effect until revoked or terminated. The permit may be modified, revoked and reissued or terminated for cause. The filing of a request for a permit modification, revocation and re-issuance, or termination does not stay any permit condition.

8. Unless specified elsewhere, permanent seeding requirements for the swales must follow the guidelines established in the North Carolina Erosion and Sediment Control Planning and Design Manual.

9. Approved plans and specifications for this project are incorporated by reference and are enforceable parts of the permit.

10. The issuance of this permit does not preclude the Permittee from complying with any and all statutes, rules, regulations, or ordinances, which may be imposed by other government agencies (local, state and federal), which have jurisdiction.

11. The permittee shall notify the Division in writing of any name, ownership or mailing address changes at least 30 days prior to making such changes.

Permit issued this the 21st day of March, 2024.

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION

For Toby Vinson, Interim Director
Division of Energy, Mineral and Land Resources
By Authority of the Environmental Management Commission

Permit Number SW8240218

ROY COOPER
Governor
ELIZABETH S. BISER
Secretary
WILLIAM E. TOBY VINSON, JR
Interim Director

NORTH CAROLINA
Environmental Quality

March 21, 2024

85 and Sunny, LLC
Attn: Todd Burbage, Managing Member
9919 Stephen Decatur Hwy
Ocean City, MD 21842

Subject: **State Stormwater Management Permit No. SW7240310**
Athletic Facility – 1559 Water Lily Rd.
High Density Project
Currituck County

Dear Todd Burbage:

The Washington Regional Office received a complete State Stormwater Management Permit Application for the subject project on March 14, 2024. Staff review of the plans and specifications has determined that the project, as proposed, complies with the Stormwater Regulations set forth in Title 15A NCAC 02H.1000 amended on January 1, 2017 (2017 Rules). We are hereby forwarding Permit Number SW7240310 dated March 21, 2024, for the construction of the built-upon areas (BUA) and stormwater control measures (SCMs) associated with the subject project.

This permit shall be effective from the date of issuance until March 20, 2032 and the project shall be subject to the conditions and limitations as specified therein and does not supersede any other agency permit that may be required. Failure to comply with these requirements will result in future compliance problems. Please note that this permit is not transferable except after notice to and approval by the Division.

This cover letter, attachments, and all documents on file with DEMLR shall be considered part of this permit and is herein incorporated by reference.

If any parts, requirements, or limitations contained in this permit are unacceptable, you have the right to request an adjudicatory hearing by filing a written petition with the Office of Administrative Hearings (OAH). The written petition must conform to Chapter 150B of the North Carolina General Statutes and must be filed with the OAH within thirty (30) days of receipt of this permit. You should contact the OAH with all questions regarding the filing fee (if a filing fee is required) and/or the details of the filing process at 6714 Mail Service Center, Raleigh, NC 27699-6714, or via telephone at 919-431-3000, or visit their website at www.NCOAH.com. Unless such demands are made this permit shall be final and binding.

If you have any questions concerning this permit, please contact Carl Dunn in the Washington Regional Office, at (252) 948-3959 or carl.dunn@ncdenr.gov.

Sincerely,

William Carl Dunn, PE
Division of Energy, Mineral and Land Resources

Enclosures: Attachment A – Designer's Certification Form
Application Documents

cc: Cathleen Saunders - Quible & Associates (csaunders@quible.com)
Currituck County Inspections – Bill Newns (Bill.Newns@CurrituckCountyNC.gov)
Washington Regional Office Stormwater File

STATE OF NORTH CAROLINA

DEPARTMENT OF ENVIRONMENTAL QUALITY

DIVISION OF ENERGY, MINERAL AND LAND RESOURCES

STATE STORMWATER MANAGEMENT PERMIT

HIGH DENSITY DEVELOPMENT

In compliance with the provisions of Article 21 of Chapter 143, General Statutes of North Carolina as amended, and other applicable Laws, Rules, and Regulations promulgated and adopted by the North Carolina Environmental Management Commission, including 15A NCAC 02H.1000 amended on January 1, 2017 (2017 Rules) (the "stormwater rules"),

PERMISSION IS HEREBY GRANTED TO

85 and Sunny, LLC

Athletic Facility – 1559 Waterlily Rd

1559 Waterlily Rd, Coinjock, Currituck County

FOR THE

construction, management, operation and maintenance of built-upon area draining to one wet pond ("stormwater control measures" or "SCMs") discharging to Class SC waters as outlined in the application, approved stormwater management, supplement, calculations, operation and maintenance agreement, recorded documents, specifications, and other supporting data (the "approved plans and specifications") as attached and/or on file with and approved by the Division of Energy, Mineral and Land Resources (the "Division" or "DEMLR"). The project shall be constructed, operated and maintained in accordance with these approved plans and specifications. The approved plans and specifications are incorporated by reference and are enforceable part of this permit.

This permit shall be effective from the date of issuance until March 20, 2032 and shall be subject to the following specified conditions and limitations. The permit issued shall continue in force and effect until the permittee files a request with the Division for a permit modification, transfer, renewal, or rescission; however, these actions do not stay any condition. The issuance of this permit does not prohibit the Director from reopening and modifying the permit, revoking and reissuing the permit, or terminating the permit for cause as allowed by the laws, rules, and regulations contained in Title 15A NCAC 2H.1000 and NCGS 143-215.1 et.al.

1. BUA REQUIREMENTS. The maximum amount of BUA allowed for the entire project is 110,862 square feet. The runoff from all BUA within the permitted drainage area of this project must be directed into the permitted SCM. The BUA requirements and allocations for this project are as follows:

a. SCM BUA LIMITS. The SCM has been designed using the runoff treatment method to handle the runoff from 99,090 square feet of BUA within the delineated drainage area, which does not include and allotment for future development within the delineated drainage area.

b. REDEVELOPMENT. The redevelopment portion of this project is exempt from State Stormwater permitting requirements under the following conditions:

   i. The project must be constructed as shown on the plans submitted to this Office.
   ii. The redevelopment area includes a total BUA of 11,772 square feet, which does not exceed the existing BUA of 11,772 square feet. The 11,772 square feet of total allocated BUA includes 11,772 square feet of existing BUA that will remain This permit does not include any allocation of BUA for future development within this redevelopment area.
   iii. The proposed stormwater control provides equal protection of surface waters as the existing stormwater control.

2. PERVIOUS AREA IMPROVEMENTS. At this time, none of the pervious area improvements listed in G.S. 143-214.7(b2) or the Stormwater Design Manual have been proposed for this project. Pervious area improvements will be allowed in this project if documentation is provided demonstrating those improvements meet the requirements of the stormwater rule.

3. SCM REQUIREMENTS. The SCM requirements for this project are as follows:

   a. SCM DESIGN. The SCM is permitted based on the design criteria presented in the sealed, signed and dated supplement and as shown in the approved plans and specifications. This SCM must be provided and maintained at the design condition.

   b. FOUNTAINS. At this time, a decorative spray fountain has not been proposed within the wet pond. Decorative spray fountains will be allowed in the wet pond if documentation is provided demonstrating that the proposed fountain will not cause resuspension of sediment within the pond or cause erosion of the pond side slopes.

   c. IRRIGATION. If the wet pond is to be used for irrigation, it is recommended that some water be maintained in the permanent pool, the vegetated shelf is planted with appropriate species that can handle fluctuating conditions, and human health issues are addressed.

4. STORMWATER OUTLETS. The peak flow from the 10-year storm event shall not cause erosion downslope of the discharge point.

5. VEGETATED SETBACKS. A 50-foot wide vegetative setback must be provided and maintained in grass or other vegetation adjacent to all surface waters as shown on the approved plans. The setback is measured horizontally from the normal pool elevation of impounded structures, from the top of bank of each side of streams or rivers, and from the mean high waterline of tidal waters, perpendicular to the shoreline.

6. RECORDED DOCUMENT REQUIREMENTS. The stormwater rules require the following documents to be recorded with the Office of the Register of Deeds:

a. ACCESS AND/OR EASEMENTS. The entire stormwater conveyance system, including any SCMs, and maintenance accesses must be located in public rights-of-way, dedicated common areas that extend to the nearest public right-of-way, and/or permanent recorded easements that extend to the nearest public right-of-way for the purpose of inspection, operation, maintenance, and repair.

b. OPERATION AND MAINTENANCE AGREEMENT. The operation and maintenance agreement must be recorded with the Office of the Register of Deeds.

c. FINAL PLATS. The final recorded plats must reference the operation and maintenance agreement and must also show all public rights-of-way, dedicated common areas, and/or permanent drainage easements, in accordance with the approved plans.

7. CONSTRUCTION. During construction, erosion shall be kept to a minimum and any eroded areas of the on-site stormwater system will be repaired immediately.

a. PROJECT CONSTRUCTION, OPERATION AND MAINTENANCE. During construction, all operation and maintenance for the project shall follow the Erosion Control Plan requirements until the Sediment-Erosion Control devices are converted to SCMs or no longer needed. Once the device is converted to a SCM, the permittee shall provide and perform the operation and maintenance as outlined in the applicable section below.

b. SCM RESTORATION. If one or more of the SCMs are used as an Erosion Control device and/or removed or destroyed during construction, it must be restored to the approved state stormwater design condition prior to close-out of the erosion control plan and/or project completion and/or transfer of the state stormwater permit. Upon restoration, a new or updated certification will be required for the SCM(s) and a copy must be submitted to the appropriate DEQ regional office.

8. MODIFICATIONS. No person or entity, including the permittee, shall alter any component shown in the approved plans and specifications. Prior to the construction of any modification to the approved plans, the permittee shall submit to the Director, and shall have received approval for modified plans, specifications, and calculations including, but not limited to, those listed below. For changes to the project or SCM that impact the certifications, a new or updated certification(s), as applicable, will be required and a copy must be submitted to the appropriate DEQ regional office upon completion of the modification.

a. Any modification to the approved plans and specifications, regardless of size including the SCM(s), BUA, details, etc.

b. Redesign or addition to the approved amount of BUA or to the drainage area.

c. Further development, subdivision, acquisition, lease or sale of any, all or part of the project and/or property area as reported in the approved plans and specifications.

d. Altering, modifying, removing, relocating, redirecting, regrading, or resizing of any component of the approved SCM(s), stormwater collection system and/or vegetative conveyance shown on the approved plan.

e. The construction of any allocated future BUA.

f. The construction of any permeable pavement, #57 stone area, public trails, or landscaping material within the common areas to be considered a permeable surface that were not included in the approved plans and specifications.

g. Other modifications as determined by the Director.

9. DESIGNER'S CERTIFICATION. Upon completion of the project, the permittee shall determine if the project is in compliance with the approved plans and take the necessary following actions:

   a. If the permittee determines that the project is in compliance with the approved plans, then within 45 days of completion, the permittee shall submit to the Division one hard copy and one electronic copy of the following:

      i. The completed and signed Designer's Certification provided in Attachment A noting any deviations from the approved plans and specifications. Deviations may require approval from the Division;
      ii. A copy of the recorded operation and maintenance agreement;
      iii. Unless already provided, a copy of the recorded deed restrictions and protective covenants; and
      iv. A copy of the recorded plat delineating the public rights-of-way, dedicated common areas and/or permanent recorded easements, when applicable.

   b. If the permittee determines that the project is <u>not</u> in compliance with the approved plans, the permittee shall submit an application to modify the permit within 30 days of completion of the project or provide a plan of action, with a timeline, to bring the site into compliance.

10. OPERATION AND MAINTENANCE. The permittee shall provide and perform the operation and maintenance necessary, as listed in the signed operation and maintenance agreement, to assure that all components of the permitted on-site stormwater system are maintained at the approved design condition. The approved operation and maintenance agreement must be followed in its entirety and maintenance must occur at the scheduled intervals.

    a. CORRECTIVE ACTIONS REQUIRED. If the facilities fail to perform satisfactorily, the permittee shall take immediate corrective actions. This includes actions required by the Division and the stormwater rules such as the construction of additional or replacement on-site stormwater systems. These additional or replacement measures shall receive a permit from the Division prior to construction.

    b. MAINTENANCE RECORDS. Records of maintenance activities must be kept and made available upon request to authorized personnel of the Division. The records will indicate the date, activity, name of person performing the work and what actions were taken.

11. PERMIT RENEWAL. A permit renewal request must be submitted at least 180 days prior to the expiration date of this permit. The renewal request must include the appropriate application, documentation and the processing fee as outlined in 15A NCAC 02H.1045(3).

12. CURRENT PERMITTEE NAME OR ADDRESS CHANGES. The permittee shall submit a completed Permit Information Update Application Form to the Division within 30 days to making any one or more of the following changes:

    a. A name change of the current permittee;

    b. A name change of the project;

    c. A mailing address change of the permittee.

13. TRANSFER. This permit is not transferable to any person or entity except after notice to and approval by the Director. Neither the sale of the project and/or property, in whole or in part, nor the conveyance of common area to a third party constitutes an approved transfer of the permit.

    a. TRANSFER REQUEST. The transfer request must include the appropriate application, documentation and the processing fee as outlined in 15A NCAC 02H.1045(2) and must be submitted upon occurrence of any one or more of the following events:

        i. The sale or conveyance of the project and/or property area in whole or in part;
        ii. Dissolution of the partnership, corporate, or LLC entity, subject to NCGS 55-14-05 or NCGS 57D-6-07 and 08;
        iii. Bankruptcy;
        iv. Foreclosure, subject to the requirements of Session Law 2013-121;

    b. TRANSFER INSPECTION. Prior to transfer of the permit, a file review and site inspection will be conducted by Division personnel to ensure the permit conditions have been met and that the project and the on-site stormwater system complies with the permit conditions. Records of maintenance activities performed to date may be requested. Projects not in compliance with the permit will not be transferred until all permit and/or general statute conditions are met.

14. COMPLIANCE. The permittee is responsible for complying with the terms and conditions of this permit and the approved plans and specifications until the Division approves the transfer request.

    a. REVIEWING AND MONITORING FOR COMPLIANCE. The permittee is responsible for verifying that the proposed BUA within each drainage area and for the entire project does not exceed the maximum amount allowed by this permit. The permittee shall review and routinely monitor the project to ensure continued compliance with the conditions of the permit, the approved plans and specifications.

    b. APPROVED PLANS AND SPECIFICATIONS. A copy of this permit, approved plans, application, supplement, operation and maintenance agreement, all applicable recorded documents, and specifications shall be maintained on file by the permittee at all times.

    c. DIVISION ACCESS. The permittee grants Division Staff permission to enter the property during normal business hours to inspect all components of the permitted project.

d. MAINTENANCE ACCESS. SCMs, stormwater collection systems, and vegetated conveyances must be accessible for inspection, operation, maintenance and repair as shown on the approved plans.

e. ENFORCEMENT. Any individual or entity found to be in noncompliance with the provisions of a stormwater management permit or the requirements of the stormwater rules is subject to enforcement procedures as set forth in NCGS 143 Article 21.

f. ANNUAL CERTIFICATION. The permittee shall electronically submit to the Division an annual certification completed by either the permittee or their designee confirming the projects conformance with permit conditions.

g. OBTAINING COMPLIANCE. The Director may notify the permittee when the permitted site does not meet one or more of the minimum requirements of the permit. Within the time frame specified in the notice, the permittee shall submit a written time schedule to the Director for modifying the site to meet minimum requirements. The permittee shall provide copies of modified plans and certification in writing to the Director that the changes have been made.

h. OTHER PERMITS. The issuance of this permit does not preclude the permittee from obtaining and complying with any and all other permits or approvals that are required for this development to take place, as required by any statutes, rules, regulations, or ordinances, which are imposed by any other Local, State or Federal government agency having jurisdiction. Any activities undertaken at this site that cause a water quality violation or undertaken prior to receipt of the necessary permits or approvals to do so are considered violations of NCGS 143-215.1, and subject to enforcement procedures pursuant to NCGS 143-215.6.

Permit issued this the 21st day of March 2024.

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION

For Toby Vinson, Interim Director
Division of Energy, Mineral and Land Resources
By Authority of the Environmental Management Commission

Permit Number SW7240310

Attachment A

Certification Forms

The following blank Designer Certification forms are included and specific for this project:

- As-Built Permittee Certification
- As-Built Designer's Certification General MDC
- As-Built Designer's Certification for Wet Detention Pond Project

A separate certification is required for each SCM. These blank certification forms may be copied and used, as needed, for each SCM and/or as a partial certification to address a section or phase of the project.

AS-BUILT PERMITTEE CERTIFICATION

I hereby state that I am the current permittee for the project named above, and I certify by my signature below, that the project meets the below listed Final Submittal Requirements found in NCAC 02H.1042(4) and the terms, conditions and provisions listed in the permit documents, plans and specifications on file with or provided to the Division.

☐ Check here if this is a partial certification. Section/phase/SCM #?_____

☐ Check here if this is part of a Fast Track As-built Package Submittal.

Printed Name_____Signature_____

I, _____, a Notary Public in the State of _____

County of _____, do hereby certify that _____

personally appeared before me this _____ day of _____, 20_____

and acknowledge the due execution of this as-built certification. (SEAL)

Witness my hand and official seal

_____

My commission expires _____

Permittee's Certification NCAC .1042(4)	Completed / Provided	N/A
A. DEED RESTRICTIONS / BUA RECORDS		
1. The deed restrictions and protective covenants have been recorded and contain the necessary language to ensure that the project is maintained consistent with the stormwater regulations and with the permit conditions.	Y or N	
2. A copy of the recorded deed restrictions and protective covenants has been provided to the Division.	Y or N	
3. Records which track the BUA on each lot are being kept. (See Note 1)	Y or N	
B. MAINTENANCE ACCESS		
1. The SCMs are accessible for inspection, maintenance and repair.	Y or N	
2. The access is a minimum of 10 feet wide.	Y or N	
3. The access extends to the nearest public right-of-way.	Y or N	
C. EASEMENTS		
1. The SCMs and the components of the runoff collection / conveyance system are located in recorded drainage easements.	Y or N	
2. A copy of the recorded plat(s) is provided.	Y or N	

D. SINGLE FAMILY RESIDENTIAL LOTS - Plats for residential lots that have an SCM include the following:	Y or N	
1. The specific location of the SCM on the lot.	Y or N	
2. A typical detail for the SCM.	Y or N	
3. A note that the SCM is required to meet stormwater regulations and that the lot owner is subject to enforcement action as set forth in NCGS 143 Article 21 if the SCM is removed, relocated or altered without prior approval.	Y or N	
E. OPERATION AND MAINTENANCE AGREEMENT	Y or N	
1. The O&M Agreement is referenced on the final recorded plat.	Y or N	
2. The O&M Agreement is recorded with the Register of Deeds and appears in the chain of title.	Y or N	
F. OPERATION AND MAINTENANCE PLAN – maintenance records are being kept in a known set location for each SCM and are available for review.	Y or N	
G. DESIGNER'S CERTIFICATION FORM – has been provided to the Division.	Y or N	

Note 1- Acceptable records include ARC approvals, as-built surveys, and county tax records.

Provide an explanation for every requirement that was not met, and for every "N/A" below. Attach additional sheets as needed.

AS-BUILT DESIGNER'S CERTIFICATION FOR WET DETENTION POND PROJECT

I hereby state that I am a licensed professional and I certify by my signature and seal below, that I have observed the construction of the project named above to the best of my abilities with all due care and diligence, and that the project meets all of the MDC found in NCAC 02H.1053, in accordance with the permit documents, plans and specifications on file with or provided to the Division, except as noted on the "AS-BUILT" drawings, such that the intent of the stormwater rules and the general statutes has been preserved.

☐ Check here if this is a partial certification. Section/phase/SCM #?_____

☐ Check here if this is part of a Fast-Track As-Built Package Submittal per .1044(3).

☐ Check here if the Designer did not observe the construction, but is certifying the project.

☐ Check here if pictures of the SCM are provided.

Printed Name_____Signature_____

NC Registration Number_____Date_____

SEAL:

Consultant's Mailing Address:

_____

City/State/ZIP _____

Phone Number _____

Consultant's Email address:

_____

① Circle N if the as-built value differs from the Plan/permit. If N is circled, provide an explanation on page 2

②N/E = not evaluated (provide explanation on page 2) ③N/A = not applicable to this project or SCM.

This Certification must be completed in conjunction with the General MDC certification under NCAC 02H.1050

Consultant's Certification (MDC .1053)	①As-built	②N/E	③N/A
A. Forebay / Depths / Fountain			
1. The available Sediment storage is consistent with the approved plan and is a minimum of 6 in.	Y or N		
2. Water flow over the forebay berm into the main pond occurs at a non-erosive velocity.	Y or N		
3. The provided Forebay Volume is 15%-20% of the main pool volume.	Y or N		
4. The Forebay entrance elevation is deeper than the exit elevation into the pond.	Y or N		

5. The Average Design Depth of the main pond below the permanent pool elevation is consistent with the permitted value?	Y or N		
6. Fountain documentation is provided.	Y or N		
B. Side slopes / Banks / Vegetated Shelf			
1. The width of the Vegetated Shelf is consistent with the approved plans and is a minimum of 6 feet.	Y or N		
2. The slope of the Vegetated Shelf is consistent with the approved plans and is no steeper than 6:1.	Y or N		
C. As-built Main Pool / Areas / Volumes / Elevations			
1. The permanent pool surface area provided is consistent with the permitted value.	Y or N		
2. The Temporary Pool Volume provided is consistent with the permitted value.	Y or N		
3. The permanent pool elevation is consistent with the permitted value.	Y or N		
4. The temporary pool elevation is consistent with the permitted value.	Y or N		
	①As-built	②N/E	③N/A
D. Inlets / Outlet / Drawdown			
1. The design volume draws down in 2-5 days.	Y or N		
2. The size of the Orifice is consistent with the permitted value.	Y or N		
3. A trash rack is provided on the outlet structure.	Y or N		
4. Hydrologic impacts to the receiving channel are minimized from the 1 yr 24 hr storm discharge?	Y or N		
5. The inlets and the outlet location are situated per the approved plan and avoid short-circuiting.	Y or N		
E. Vegetation			
1. The vegetated shelf has been planted with a minimum of 3 diverse species.	Y or N		
2. The vegetated shelf plant density is consistent with the approved plans and is no less than 50 plants per 200 sf or no less than 24 inches on center.	Y or N		

Provide an explanation for every MDC that was not met, and for every item marked "N/A" or "N/E" below. Attach additional pages as needed:

AS-BUILT DESIGNER'S CERTIFICATION GENERAL MDC

I hereby state that I am a licensed professional and I certify by my signature and seal below, that I have observed the construction of the project named above to the best of my abilities with all due care and diligence, and that the project meets the below listed General MDC found in NCAC 02H.1050 in accordance with the permit documents, plans and specifications on file with or provided to the Division, except as noted on the "AS-BUILT" drawings, such that the intent of the stormwater rules and statutes has been preserved.

☐ Check here if this is a partial certification. Section/phase/SCM #?_____

☐ Check here if this is a part of a Fast-Track As-Built Package Submittal per .1044(3).
☐ Check here if the designer did not observe the construction, but is certifying the project.
☐ Check here if pictures of the SCM are provided.

Printed Name_____Signature_____

NC Registration Number_____Date_____

SEAL:

Consultant's Mailing Address:

_____

City/State/ZIP _____

Phone Number _____

Consultant's Email address:

_____

① Circle N if the as-built value differs from the Plan. If N is circled, provide an explanation on Page 2.
②N/E = not evaluated (provide explanation on page 2) ③N/A = not applicable to this SCM or project.

Consultant's Certification NCAC .1003((3) & General MDC .1050	①As-built	②N/E	③N/A
A. TREATMENT REQUIREMENTS			
1. The SCM achieves runoff treatment.	Y or N		
2. The SCM achieves runoff volume match.	Y or N		
3. Runoff from offsite areas and/or existing BUA is bypassed.	Y or N		
4. Runoff from offsite areas and/or existing BUA is directed into the permitted SCM and is accounted for at the full build-out potential.	Y or N		

5. The project controls runoff through an offsite permitted SCM that meets the requirements of the MDC.	Y or N		
6. The net area of new BUA increase for an existing project has been accounted for at the appropriate design storm level.	Y or N		
7. The SCM(s) meets all the specific minimum design criteria.	Y or N		
B. VEGETATED SETBACKS / BUA			
1. The width of the vegetated setback has been measured from the normal pool of impounded waters, the MHW line of tidal waters, or the top of bank of each side of rivers or streams.	Y or N		
2. The vegetated setback is maintained in grass or other vegetation.	Y or N		
3. BUA that meets the requirements of NCGS 143-214.7 (b2)(2) is located in the setback.	Y or N		
4. BUA that does not meet the requirements of NCGS 143-214.7 (b2)(2) is located within the setback and is limited to: a. Publicly funded linear projects (road, greenway sidewalk) b. Water-dependent structures c. Minimal footprint uses (utility poles, signs, security lighting and appurtenances)	Y or N		
5. Stormwater that is not treated in an SCM is released at the edge of the setback and allowed to flow through the setback as dispersed flow.	Y or N		
	①As-built	②N/E	③N/A
C. STORMWATER OUTLETS – the outlet handles the peak flow from the 10 year storm with no downslope erosion.	Y or N		
D. VARIATIONS			
1. A variation (alternative) from the stormwater rule provisions has been implemented.	Y or N		
2. The variation provides equal or better stormwater control and equal or better protection of surface waters.	Y or N		
E. COMPLIANCE WITH OTHER REGULATORY PROGRAMS has been met.	Y or N		
F. SIZING -the volume of the SCM takes the runoff from all surfaces into account and is sufficient to handle the required storm depth.	Y or N		
G. CONTAMINATED SOILS – infiltrating SCM's are not located in or on areas with contaminated soils.	Y or N		
H. SIDE SLOPES			
1. Vegetated side slopes are no steeper than 3H:1V.	Y or N		
2. Side slopes include retaining walls, gabion walls, or other surfaces that are steeper than 3H:1V.	Y or N		
3. Vegetated side slopes are steeper than 3H:1V (provide supporting documents for soils and vegetation).	Y or N		
I. EROSION PROTECTION			
1. The inlets do not cause erosion in the SCM.	Y or N		

2. The outlet does not cause erosion downslope of the discharge point during the peak flow from the 10 year storm.	Y or N		
J. EXCESS FLOWS – An overflow / bypass has been provided.	Y or N		
K. DEWATERING – A method to drawdown standing water has been provided to facilitate maintenance and inspection.	Y or N		
L. CLEANOUT AFTER CONSTRUCTION – the SCM has been cleaned out and converted to its approved design state.	Y or N		
M. MAINTENANCE ACCESS			
1. The SCM is accessible for maintenance and repair.	Y or N		
2. The access does not include lateral or incline slopes >3:1.	Y or N		
N. DESIGNER QUALIFICATIONS (FAST-TRACK PERMIT) – The designer is licensed under Chapters 89A, 89C, 89E, or 89F of the General Statutes.	Y or N		

Provide an explanation for every MDC that was not met, and for every item marked "N/A" or "N/E", below. Attach additional pages as needed:

North Carolina Department of Environmental Quality
Division of Energy, Mineral & Land Resources
Land Quality Section

Roy Cooper
Governor
Elizabeth S. Biser
Secretary
William Vinson Jr. (Acting)
Director

03-14-2024

LETTER OF APPROVAL

85' and Sunny, LLC
Attn: Mr. Todd E. Burbage, Managing Member
9919 Stephen Decatur Highway
Ocean City, Maryland 21842

RE: Project Name: Athletic Facility - 1555 Waterlily Rd
Acres Approved: 5.5
Application ID: PA-003831
Permit Number: CURRI-2024-0107
Address: 1555 Waterlily Rd
City: Coinjock
County: Currituck
River Basin: Pasquotank
Stream Classification: SC: Aquatic Life, Secondary Contact Recreation, Tidal Salt Water
Plan Type: New Plan (Express)

Dear Mr. Burbage,

This office has reviewed the subject erosion and sedimentation control plan. We find the plan to be acceptable and hereby issue this Letter of Approval. The Certificate of Approval must be posted at the job site. This plan approval shall expire three (3) years following the date of approval, if no land-disturbing activity has been undertaken, as is required by Title 15A NCAC 4B .0129.

As of April 1, 2019, all new construction activities are required to complete and submit an electronic Notice of Intent (eNOI) form requesting a Certificate of Coverage (COC) under the NCG010000 Construction Stormwater General Permit. After the form is reviewed and found to be complete, you will receive a link with payment instructions for the $120 annual permit fee. After the fee is processed, you will receive the COC via email. As the Financially Responsible Party shown on the FRO form submitted for this project, you MUST obtain the COC prior to commencement of any land disturbing activity. The eNOI form may be accessed at deq.nc.gov/NCG01. Please direct questions about the eNOI form to the Stormwater Program staff in the Raleigh central office. If the owner/operator of this project changes in the future, the new responsible party must obtain a new COC.

Title 15A NCAC 4B .0118(a) and the NCG01 permit require that the following documentation be kept on file at the job site:

1. The approved E&SC plan as well as any approved deviation.
2. The NCG01 permit and the COC, once it is received.
3. Records of inspections made during the previous 12 months.

Also, this letter gives the notice required by G.S. 113A-61.1(a) of our right of periodic inspection to ensure compliance with the approved plan.

North Carolina's Sedimentation Pollution Control Act is performance-oriented, requiring protection of existing natural resources and adjoining properties. If, following the commencement of this project, the erosion and sedimentation control plan is inadequate to meet the requirements of the Sedimentation Pollution Control Act of 1973 (North Carolina General Statute 113A-51 through 66), this office may require revisions to the plan and implementation of the revisions to insure compliance with the Act.

Acceptance and approval of this plan is conditioned upon your compliance with Federal and State water quality laws, regulations, and rules. In addition, local city or county ordinances or rules may also apply to this land-disturbing activity. This approval does not supersede any other permit or approval.

Please note that this approval is based in part on the accuracy of the information provided in the Financial Responsibility/Ownership Form, which you provided. You are requested to file an amended form if there is any change in the information included on the form. In addition, it would be helpful if you notify this office of the proposed starting date for this project. Please notify us if you plan to have a preconstruction conference.

Your cooperation is appreciated.

Sincerely,

J. Randall Jones, Jr., PE for

Samir Dumpor, PE

North Carolina Department of Environmental Quality

North Carolina Department of Environmental Quality | Division of Energy, Mineral and Land Resources
Washington Regional Office | 943 Washington Square Mall | Washington NC, 27889
252-946-6481

Certificate of Coverage

STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF ENERGY, MINERAL, AND LAND RESOURCES

GENERAL PERMIT NO. NCG010000

NC Reference No. NCG01-2024-0864
Certificate of Coverage No. NCC240864

STORMWATER DISCHARGES

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provision of North Carolina General Statute 143-215.1, other lawful standards and regulations promulgated and adopted by the North Carolina Environmental Management Commission, and the Federal Water Pollution Control Act, as amended,

85' and Sunny, LLC

is hereby authorized to discharge stormwater associated with CONSTRUCTION ACTIVITIES to surface waters of North Carolina from a site located at:

Athletic Facility - 1555 Waterlily Rd
1555 Waterlily Rd
Coinjock
Currituck County

in accordance with the effluent limitations, monitoring requirements, and other conditions set forth in N.C. General Permit No. NCG010000.

This Certificate of Coverage is affiliated with **E&SC Plan Project No.** CURRI-2024-0107

This Certificate of Coverage shall become effective 3/26/2024.

This Certificate of Coverage shall remain in effect until rescinded or expired.

This Certificate of Coverage will expire on the anniversary of its effective date unless it is renewed by payment of the annual administration and compliance fee.

William E. Vinson, Jr., PE, CPESC, CPM, Interim Director
Division of Energy, Mineral, and Land Resources
By the Authority of the Environmental Management Commission

Rational Method Peak Flow
Form SW-003

Project Information

Project Location: 1555 Waterlily Rd / 1559 Waterlily Rd

Parcel Identification Number(s): 0079000004A0000

Drainage area: 7.86 ac

Average Slope: 1.0 %

Maximum Slope Length: 379 ft

Calculations

*The Rational Method may only be used where development will impact less than 10 acres

Time of Concentration (Tc) (Use additional sheets if necessary)			
	Pre-	**Post-**	
Sheet Flow			
Manning's roughness, n (Table 2-4)	0.1		
2-year, 24-hour Rainfall, P	4.0	6.0	in
Slope, S	0.01		ft/ft
Length of Sheet Flow, L (<=300 feet)	300		ft
Total Time for Sheet Flow	20.1		**min**
Shallow Concentrated Flow			
Surface Paved (P) or Unpaved (U)	U		
Length of flow, L	379		ft
Slope, S	0.01		ft/ft
Average Velocity, V (Table 2-3)	134.64		ft/min
Total Time for Shallow Concentrated Flow	2.8		**min**
Channel Flow			
Pipe (P) or Channel (C)	N/A		
If pipe: Diameter, D			in
If channel: Bottom Width, w			ft
If channel: side slope 1 (___:1)			
If channel: side slope 2 (___:1)			
Cross sectional flow area, A			sq ft
Wetted perimeter, Wp			ft
Hydraulic radius, R = A/Wp			ft

Time of Concentration (Tc) (Use additional sheets if necessary)			
	Pre-	**Post-**	
Channel slope, S			ft/ft
Manning's roughness, n (Table 2-4)			
Channel velocity			ft/sec
Length of Flow, L			ft/sec
Total Time for Channel Flow	—		**min**
Total Time of Concentration, Tc	22.9		**min**

Pre-development Conditions			
Land Use Description	C	Area (acres)	C*A
Woods	0.2	7.86	1.572
Total			

Intensity for 2-year, 24-hour storm (Table 2-5) 3.29 in/hr

Pre-development peak flow, Q = CiA 5.18 cfs

Post-development Conditions			
Land Use Description	C	Area (acres)	C*A
IMPERVIOUS	0.95	2.27	2.15
OPEN AREA	0.25	5.58	1.39
Totals		7.86	3.54

Area-weighted C: 0.45

5 ← MAJOR SITE PLAN

Intensity for ~~10~~-year, 24-hour storm (Table 2-5) 6.82 in/hr

Post-development peak flow, Q = CiA 24.26 cfs

Minimum Storage Volume Required – Refer to *Section 2.4.4* for Volume Calculations

Storage Volume, V_s 34,152.09 ft³

85° AND SUNNY, LLC
Applicant

3/21/24
Date

NEW SWIMMING POOL
ATHLETIC FACILITY OBX - CURRITUCK SOUND
CURRITUCK COUNTY, NC

SITE PLAN
SCALE: 1/32"=1'-0"

* DIMENSIONS SHOWN FOR REFERENCE ONLY.

REFERENCE
North

NEW POOL CONSTRUCTION NOTES:

USE GROUP TYPE: A-5 (IBC 2015)
CONSTRUCTION TYPE: II-B, (IBC 2015)

USER LOADING FOR SWIMMING POOLS: (15 S.F. WATER SURFACE PER OCCUPANT)

LEISURE POOL: POOL WATER SURFACE AREA = 3,308 S.F.
POOL DECK AREA = 8,748 S.F.

OCCUPANCY LOAD: 3,308 S.F. / 15 S.F. = 221 BATHERS

REFER TO BUILDING PLANS FOR ALL DETAILS ON THE BATH HOUSE.

REFER TO BUILDING PLANS FOR ALL DETAILS ON THE BATH ROOMS.

NOTE: HOSE BIBBS TO BE SPACED AT 150 FT. OR LESS INTERVALS. (BY OTHERS)
REFER TO PLUMBING DRAWINGS FOR NUMBER AND LOCATIONS.

ATHLETIC FACILITY OBX
GENERAL NOTES

SYNOPSIS OF WORK:
Construct one outdoor Leisure pool with attached Beach entry, Pool will be constructed with precast coping stone and its design will include (1) stair entry. Pool dimensions & depth ranges are per Paddock shop drawings. Water depths are to be from 0" at the Beach entry to 4'-3" at the main drains in deep pool area.
The pool will include a complete filtration system.

GENERAL NOTES DEFINITIONS:
PROVIDE: To furnish and install work, including incidental items.
FURNISH: To deliver item/ material to the project, item/ material to be installed by others.
INSTALL: To incorporate into the work an item or material furnished by others.
BY OTHERS: Not part of scope of work.

•• WORK BY PADDOCK:
1. Provide labor and material for the construction of one outdoor Leisure pool, with attached Beach entry. Pool will include (2) underwater benches and wide stair entry. Water depths are from 0" to 4'- 3" at the main drains. Total water surface area to be approximately 3,308 square feet.
2. Provide excavation for the pool with spoils stockpiled within 50 feet, or loaded outo trucks provided by others.
3. Provide a nominal 3" gravel base under the Pool.
4. Provide pool shop drawings sealed by an engineer licensed in the state of North Carolina, and pool building permit.
5. Provide shoterete construction 4,000 PSI.
6. Provide schedule 40 piping featuring corrosion resistant PVC construction ball and butterfly valving.
7. Provide High Rate sand filtration systems as indicated on Paddock drawings. Pools to be equipped with liquid feed and CO^2 pH control sanitation systems, as indicated on Paddock drawings.
8. Interior of pools will be finished in white "Marcite" plaster.
9. Waterline tile to be 6" wide band of frost-proof ceramic tile, w/ white grout and with depth markings of 6" white tile with black numerals.
10. Provide precast bullnose coping around perimeter of the pool, as shown on Paddock drawings. Deck depth markers to be 6" white frost-proof tile with black numerals and international "No Diving" symbol, ***furnished loose to be installed in deck, by others,*** as indicated on Paddock drawings.
11. Pool Beach entry area to have non-slip Paddock BeachKote finish, and will contain six (6) beach wash nozzles. The adjacent area to a water depth of 6", will also be BeachKote finish.
12. Furnish seven (7) underwater LED lights of 55w (500w equivalent), 120v.
13. Provide water features as shown on Paddock drawings.
14. Provide deck equipment as noted on Paddock drawings.
15. Furnish safety and maintenance equipment as noted on Paddock drawings.
16. Provide startup and necessary adjustments of systems after plaster operations and the new pool are filled.
17. Provide laminated operations charts related to laminated valve tags, start up and adjustment of equipment as well as complete owner/operator orientation.

RELATED WORK BY OTHERS:
Earthwork:
1. Pool site shall be received by Paddock at 10" below finished deck elevation with stakeout and benchmark elevations provided by others. Any fill material should be at 95% compaction and min. 2,000 PSF bearing for pool floor with maximum 35 PSF fluid wall pressure, verified by others. The owner/general contractor shall provide access to the site for power excavating equipment and trucks. Pools excavation by Paddock, with spoils stockpiled within 50 feet, or loaded outo trucks provided by others. Pool pricing is based on normal dirt excavation, with the earth walls of the excavation being suitable as a form for the pneumatically placed concrete (gunite), as is typical to swimming pool construction. Should hardpan, rock or other materials be encountered in the excavation requiring use of either a compressor or blasting material, additional costs shall be paid by the Owner/General Contractor. Rock or hardpan excavation will likely result in voids in the soil "backform" and may require extra costs for pool forming, or extra gunite material to fill the voids. If pool area soils are not capable of providing the "backform" because of poor cohesive properties extra forming costs may be required.
2. The cost of removing underground obstructions such as pipelines or masonry, removing, refilling and compacting of filled ground, diversion of or sealing off of water seepage, dewatering, and the cost of changes and additions to the pools structures or other installations necessitated by such conditions will constitute an additional cost to the Owner/General Contractor.
3. Owner/General contractor to provide corner lnibs and benchmark for pool layout elevations.

Electrical:
1. All electrical bonding and grounding, panels, breakers, motor starters/disconnects, switches, wiring, conduit and connections. ***Paddock will set the light niches and will stub out a 1" PVC conduit 30" long behind the pool shell at light locations*** for continuation of conduit, light cord pull, ground wire and connection by others. ***Junction boxes furnished loose by Paddock.***
2. If permanent electric power is either inadequate or not available at the time the pools are completed, temporary power or generators that may be required, are to be provided by others.
3. All electrical work for powering the pool equipment in filter room, is by others.
4. Conduit and wiring for the chemical controller connections to the chemical pump and solenoid for the CO_2 system.

Plumbing/Mechanical:
1. All freshwater work, including fill lines, backwash receptor to waste and backwash holding tank (if required), or any other disposal system to be designed, by others.
2. Hose bibs, drinking fountains, backflow preventer, water connections to fill spout at side of pool ***(Paddock to furnish a chrome plated fill spout loose),*** for installation, by others.

Miscellaneous by Others:
1. Deck, deck drainage, fence, back-fill, final grading, and landscaping.
2. Setting of horizontal tile depth markers in concrete deck.
3. All deck furniture, lounge chairs, etc.,
4. Filter Equipment room design, construction, finishes, etc..
5. Bathhouse design, construction, finishes, etc..
6. Sealant at the deck to pool junction and the deck to bathhouse and filter room junction.
7. Water required to fill the pool, chemicals, and staff for daily maintenance shall be provided by others at the time the pools' interior is completed.

252-655-1056 ATTN: MARK ENGINEERING, PLLC
5306 MULHOLLAND DR GREENVILLE SC 29485
FIRM # 1353070 CERT # P-1281 STRUCTURAL

OWNER: BLUE WATER DEVELOPMENT
9919 STEPHEN DECATUR HWY
OCEAN CITY, MD. 21842

POOL CONTRACTOR: PADDOCK SWIMMING POOL CO.
15120-C SOUTHLAWN LANE
ROCKVILLE, MD 20850

LIST OF DRAWINGS

JS: _____ TS: _____
JF: _____ TP: _____ MW: 2/05/24

PROJECT REVISIONS:

ATHLETIC FACILITY OBX
CURRITUCK SOUND
WATERLILY ROAD
COINJOCK, NC 27923

COVER SHEET

DRAWN BY: TL

PADDOCK
SWIMMING POOL COMPANY

15120-C SOUTHLAWN LANE ROCKVILLE, MD. 20850
PHONE: (301)-424-0790 EMAIL: info@paddockpools.com

REVISIONS:

SCALE:	JOB NO.:
1/32"=1'-0"	-
DATE:	SHT. NO.:
2/13/24	0.0

PLOTTED BY: TL
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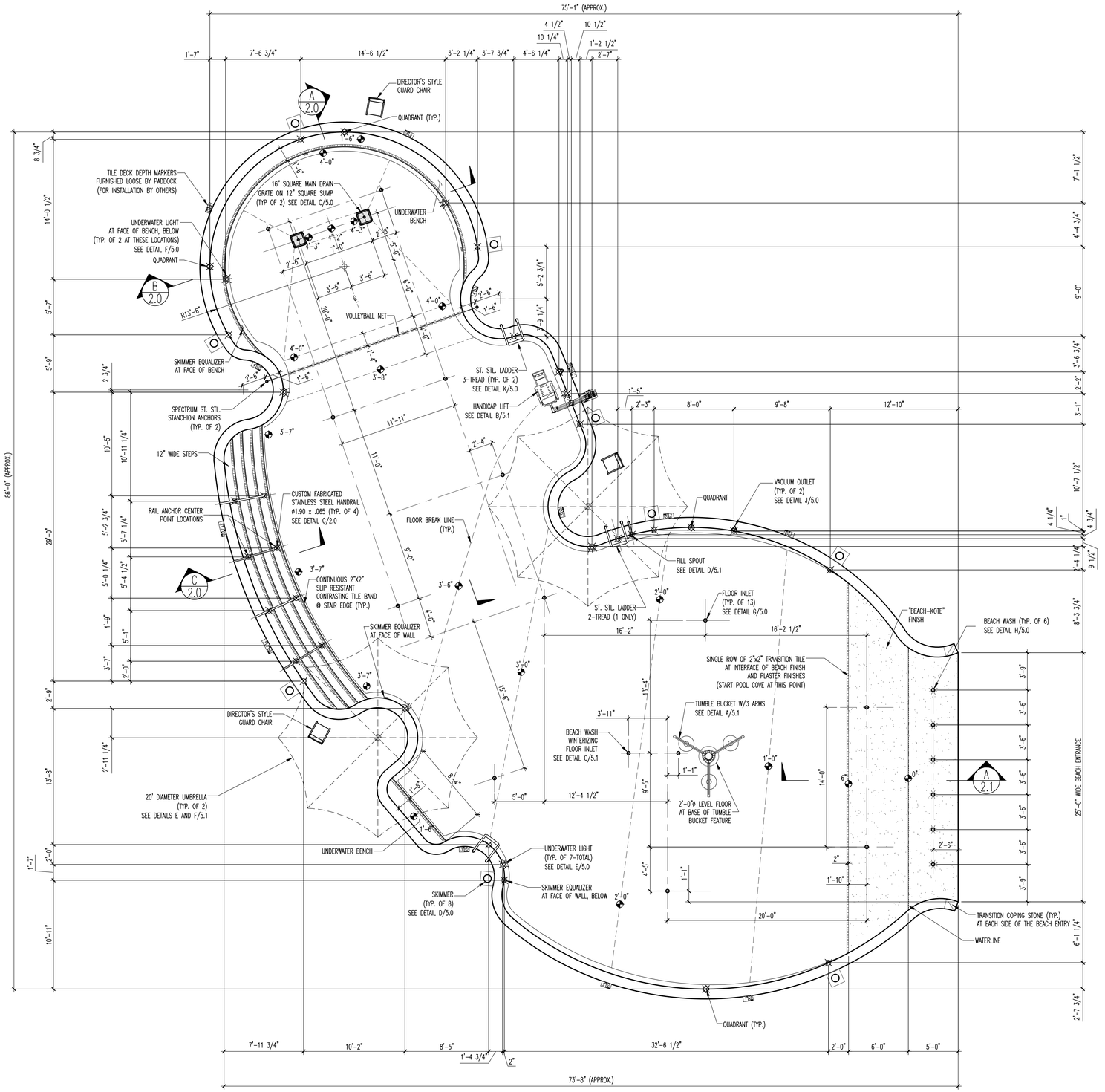
Job #: , NEW SWIMMING POOL @ ATHLETIC FACILITY OBX - CURRITUCK SOUND, WATERLILY ROAD, COINJOCK, NC 27923 - ISSUED FOR APPROVAL: FEBRUARY 13, 2024



SEE SHEET 1.1 "HUB LAYOUT PLAN" FOR WALL RADIAL DIMENSIONS AND CENTER POINT LOCATIONS

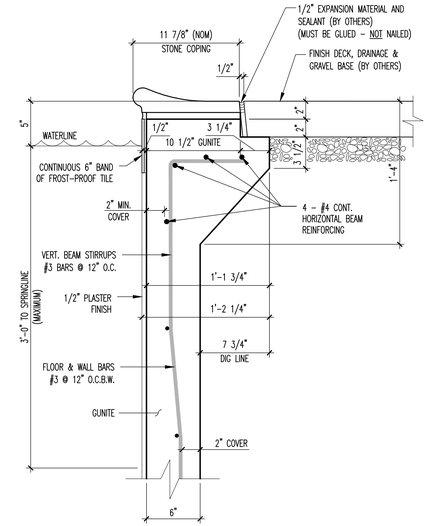
POOL PLAN

SCALE: 3/16"=1'-0"

NOTE: NEW DECK & DRAINAGE CONSTRUCTION TO BE PROVIDED BY OTHERS.

INDICATES IN-POOL WATER DEPTHS (TYPICAL)

INDICATES CENTER LINE OF POOL EQUIPMENT AT FACE OF POOL WALL/FLOOR (TYPICAL)



BEAM DETAIL WALLS TO 5' (STONE COPING)

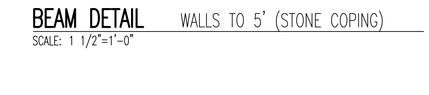
SCALE: 1 1/2"=1'-0"

DECK EQUIPMENT LIST
(ATHLETIC FACILITY OBX)

COPING		PRECAST FEDERAL STONE AQ SERIES 12"x24", WHITE W/ SAFETY GRIP. 2 TRANSITION STONES INCLUDED FOR EACH SIDE OF BEACH ENTRY
BEACH ENTRY FINISH		"BEACH KOTE" AT FLOOR TO 0" WATER DEPTH. COLOR: AS SELECTED
INTERIOR FINISH		"MARCITE" PLASTER FINISH - COLOR: WHITE
WATER LINE TILE		6" BAND OF 2"x2" CERAMIC TILE: DALTILE KEYSTONES, PRICE GROUP (1-3) COLOR: AS SELECTED
DECK DEPTH MARKINGS (10836Z.)		6"x6" WHITE SLIP RESISTANT CERAMIC TILE WITH 5" HIGH BLACK NUMERALS & LETTERS AND INTERNATIONAL "NO-DIVING" TILE SIGN ***(FURNISHED LOOSE TO BE INSTALLED IN THE POOL DECK, BY OTHERS)***
IN-POOL DEPTH MARKERS (VERTICAL)		6"x6" WHITE CERAMIC TILE WITH 5" HIGH BLACK NUMERALS & LETTERS
TRIM TILE AT STAIRS & UNDERWATER BENCHES		2" ROW OF 2"x2" CERAMIC TILE OF CONTRASTING COLOR, DALTILE KEYSTONES. COLOR: AS SELECTED
TRANSITION TILE AT BEACH ENTRY		2" ROW OF 2x2" CERAMIC TILE, BY DALTILE, AT EDGE BETWEEN BEACH ENTRY FINISH & PLASTER FINISH. COLOR: AS SELECTED
STAIR HAND RAIL	4	S.R. SMITH CUSTOM, 1.90x.065", 304 STAINLESS STEEL
LADDER	1	S.R. SMITH STANDARD PLUS #10001 (2 STEP) 1.90"ODx.065" THICK 304 ST. STL. W/ PLASTIC TREADS
	2	S.R. SMITH STANDARD PLUS #10004 (3 STEP) 1.90"ODx.065" THICK, 304 ST. STL. W/ PLASTIC STEPS
WEDGE ANCHORS	14	PERMA CAST 4" CAST 1800NZE #PS-4019-BC FOR 1.90" RAIL
ESCUTCHEON PLATES	14	S.R. SMITH ST. STL. ESCUTCHEON #ID-100F (ROUND)
HANDICAP LIFT	1	S.R. SMITH MultiLift 2 #580-0000N AND ANCHOR KIT, #300-6700A
FILL SPOUT	1	S.R. SMITH, STANDARD 1BRONZE - 1.5", W/ BRACE. ***(FURNISHED LOOSE TO BE INSTALLED AT DECK, BY OTHERS)***
GUARD CHAIRS	3	DIRECTORS STYLE
UNDERWATER LIGHTS	4	PENTAIR INTELLIBRITE #601301 5G WHITE LED LIGHT, 55W (500 W/ EQUIV.), 120V W/ 50' CORD
	3	PENTAIR INTELLIBRITE #601302 5G WHITE LED LIGHT, 55W (500 W/ EQUIV.), 120V W/ 100' CORD
JUNCTION BOXES	7	PENTAIR BRASS BASE W/ POLYCARBONATE COVER #78107(0), LEXAN 3/4"x1"x3/4" POSTS ***(FURNISHED LOOSE)***
VOLLEYBALL NET	1	LINCOLN VOLLEYBALL SET # 63-620 (30' WIDE - INCLUDES NET AND POSTS
STANCHION ANCHORS	2	SPECTRUM STAINLESS STEEL #24060, 1.90", W/ LID AND LID REMOVAL TOOL
FUNBRELLAS & ANCHORS	2	20' DIA. FUNBRELLA W/ ANCHOR&SURROUND SLEEVE #8631320 FROM ANCHOR INDUSTRIES – COLOR: DANDELION YELLOW
SAFETY & MAINTENANCE EQUIPMENT (FURNISHED LOOSE)		
	1	CLEAN KIT 1.5"
	1	SPINE BOARD PACKAGE
	1	HEAD IMMOBILIZER
	1	FIRST AID KIT (50 PEOPLE)
	1	LIFE HOOK, (SHEPHERD'S CROOK) & RESCUE POLE
	1	POLE - TELESCOPIC 8-16'
	1	RESCUE TUBE 50" W/ STRAPS
	1	RING BUOY LINE, 30' W/ EXTENSION ROPE
	1	TEST KIT - TAYLOR K2005
	1	CHEMICAL INITIAL BALANCE ONLY

SHELL EQUIPMENT LIST
(ATHLETIC FACILITY OBX)

MAIN DRAINS	2	ASA 12" SQ. FIBERGLASS SUMP #FHS-50-812-18-6 (6" PORT), WITH AQUASTAR 16" SQ. FRAME & GRATE #1216101 (WHITE) , NSF CERTIFIED, 2017 VGBA COMPLIANT, MAXIMUM FLOW 720 GPM (EACH)
HYDROSTATIC RELIEF VALVES	2	HAYWARD 2" VALVE #1056 W/ #SP-1055 COLLECTOR TUBE
SKIMMERS	9	AQUASTAR #SKR-201, W/ ROUND COVER
SKIMMER EQUALIZER FITTINGS	9	AQUASTAR 6" ROUND SUCTION OUTLET COVER #6HPHA101 - WHITE W/ 6" BULKHEAD ADAPTOR (2" THREADED x 1-1/2" SOCKET) #620T1SS101 - WHITE, VGB APPROVED GRATE W/ BULKHEAD
VACUUM OUTLETS	2	HAYWARD #W400SWHP, WHITE, W/ SELF CLOSING COVER AND HAYWARD #SP1022S2 2" SOCKET PVC FITTING
FLOOR INLETS	13	AQUASTAR FLOOR INLET #4DV101 (WHITE)
WINTERIZING FLOOR INLET	1	AQUASTAR #4DV101 (WHITE), ADJUSTABLE - W/ PLUG INSTALLED IN FIELD W/ 2" PVC THREADED PLUG #PVC-020, FOR BEACH WASH FEATURES
LIGHT NICHES	7	PENTAIR #78206700, PLASTIC W/ 1" BEAR HUB CONNECTION
WATER FEATURES:		
BEACH WASH	6	PADDOCK CUSTOM (OEM) (STRAIGHT NOZZLE)
TUMBLE BUCKET FEATURE	1	RAINDROP TUMBLE BUCKETS-3 BUCKETS-SHORT MAST-OMNIPOD PART #TBK-008-OM-S-ZCS



252-655-1056 x1 PEC TOWE ENGINEERING, PLLC
5306 MULHOLLAND PL HUBERTSVILLE SC 29485
FIRM # 1353070 CERT # P-1281 STRUCTURAL

DESIGN DATA

	LEISURE POOL
DIMENSIONS	FREEFORM
PERIMETER	291'-0"
SURFACE AREA – TOTAL	3,432 S.F.
– WATER SURFACE AREA	3,308 S.F.
– PLASTER AREA	3,110 S.F.
– BEACH FINISH AREA	322 S.F.
– DRY BEACH AREA	124 S.F.
GALLONAGE	58,747 GAL.
DEPTHS	0" TO 4'-3 "
FILTER RATE	250 GPM
TURNOVER TIME	3.92 HOURS

ATHLETIC FACILITY OBX
CURRITUCK SOUND

WATERLILY ROAD
COINJOCK, NC 27923

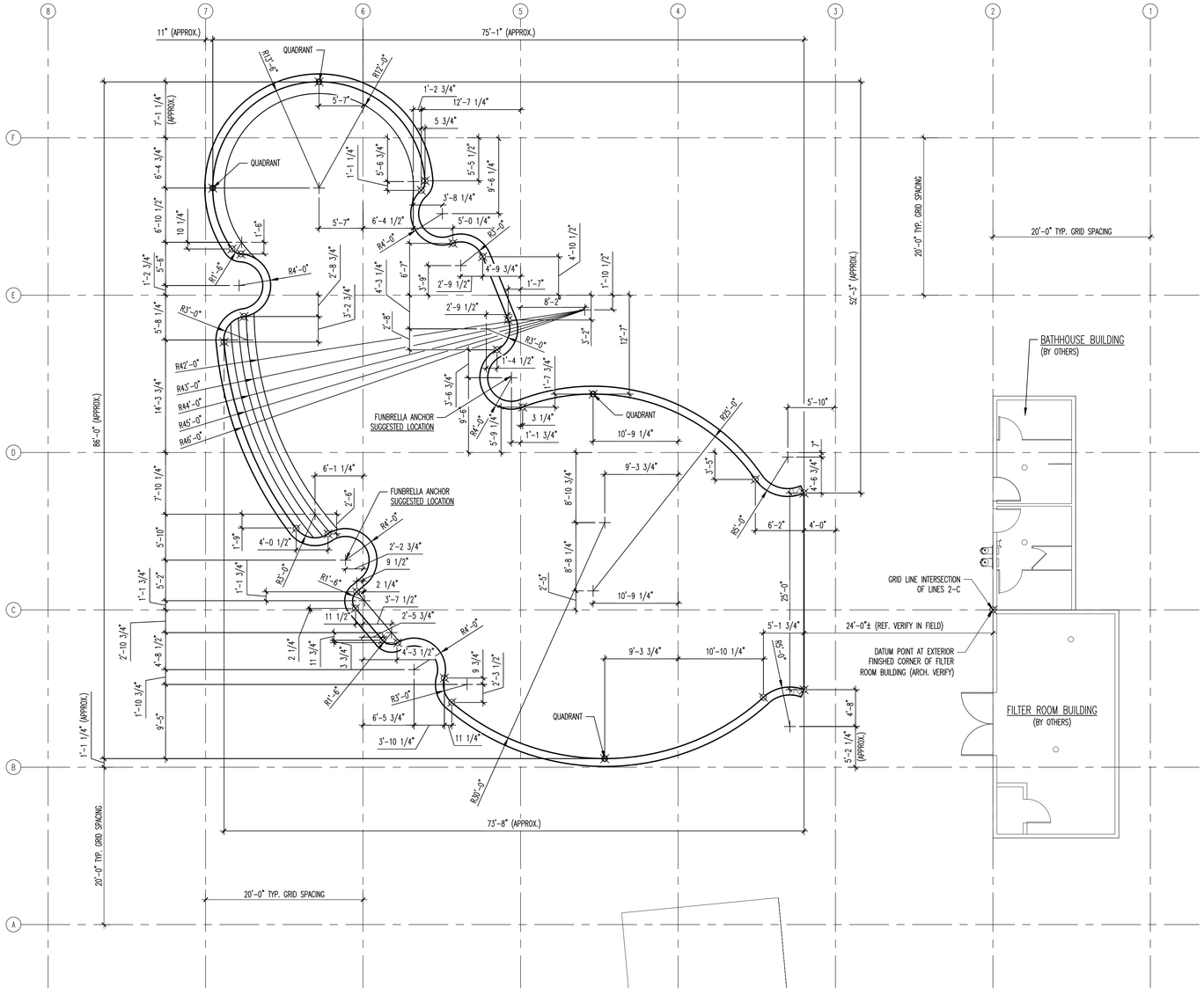
POOL PLAN

DRAWN BY: TL

PADDOCK
SWIMMING POOL COMPANY

15120-C SOUTHLAWN LANE ROCKVILLE, MD. 20850
PHONE: (301)-424-0790 EMAIL: info@paddockpools.com

REVISIONS:	SCALE: 3/16"=1'-0"	JOB NO.: –
	DATE: 2/13/24	SHT. NO.: 1.0



HUB LAYOUT PLAN

SCALE: 1/8"=1'-0"

⊠ DENOTES HUB (DATUM) POINTS, TYPICAL

1. DIMENSIONS SHOWN FOR REFERENCE ONLY, VERIFY IN FIELD.
2. DIMENSIONS SHOWN ARE FROM POOL'S FINISHED FACE OF WALL AND ARE FOR REFERENCE ONLY (V.I.F.)
3. G.C. TO PROVIDE 10' OFFSET STAKES (TYP.) AND DATUM POINT AT MASONRY CORNER OF FILTER ROOM BUILDING WALL.

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 027540 3-8-2024 WILLIAM C. STOCK

252-655-1056 STOCK STOWE ENGINEERING, PLLC
5306 MULHOLLAND DR KINSTON, NC 28504
FIRM # 1353070 CERT # P-1281 STRUCTURAL

ATHLETIC FACILITY OBX CURRITUCK SOUND

WATERLILY ROAD
COINJOCK, NC 27923

HUB LAYOUT PLAN

DRAWN BY: TL

PADDOCK SWIMMING POOL COMPANY

15120-C SOUTHLAWN LANE ROCKVILLE, MD. 20850
PHONE: (301)-424-0790 EMAIL: info@paddockpools.com

REVISIONS:	SCALE: 1/8"=1'-0"	JOB NO.: –
	DATE: 2/13/24	SHT. NO.: 1.1

PLOTTED BY: TL

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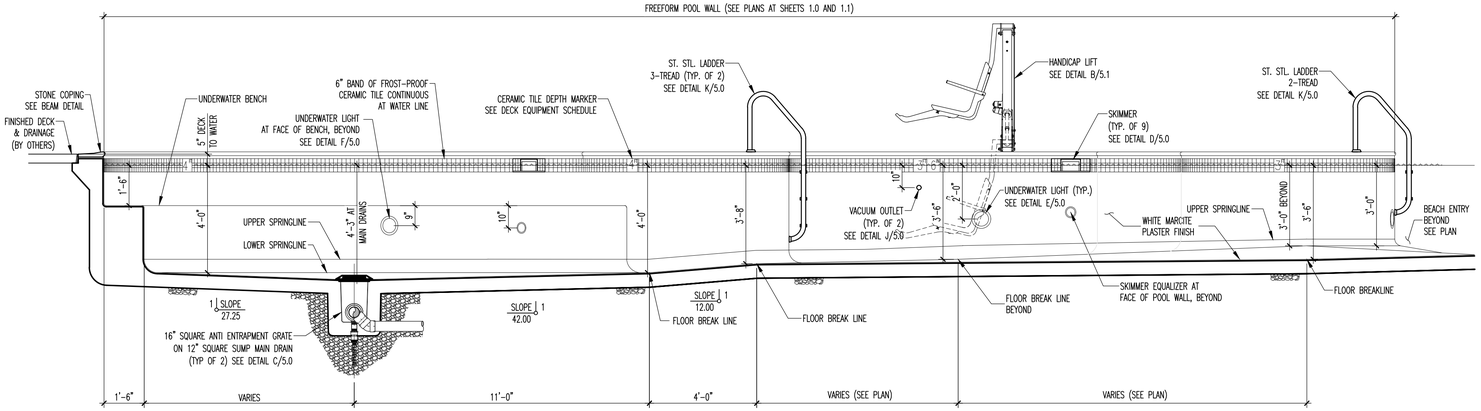
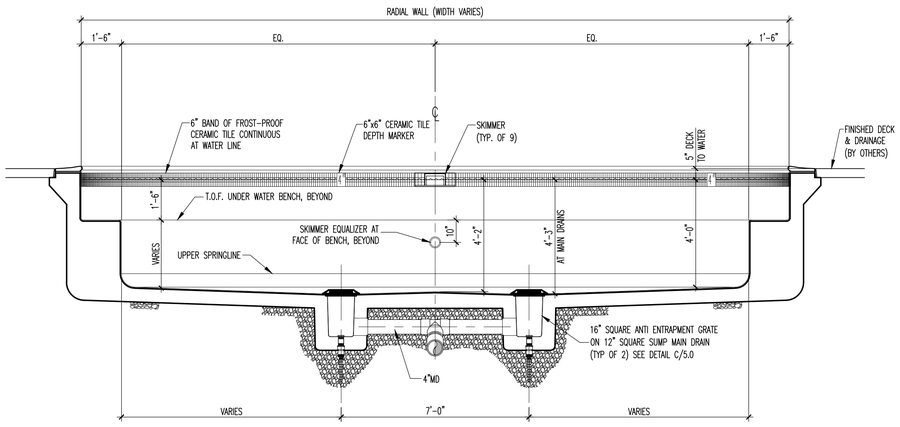


LONGITUDINAL SECTION

SCALE: 3/8"=1'-0"

A 2.0



CROSS SECTION

SCALE: 3/8"=1'-0"

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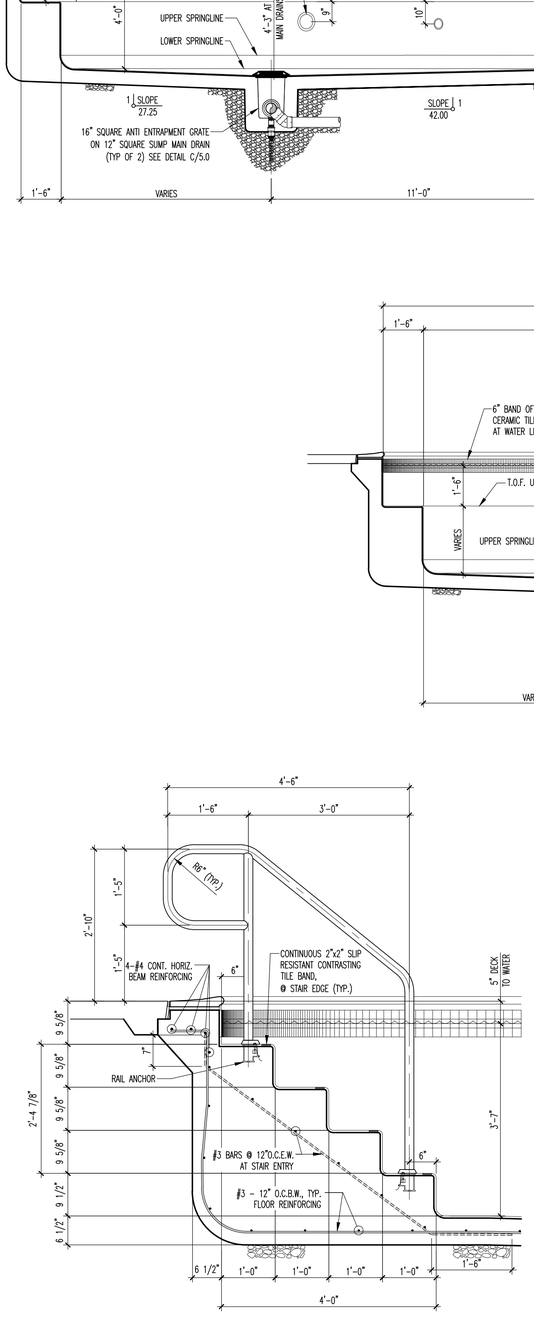
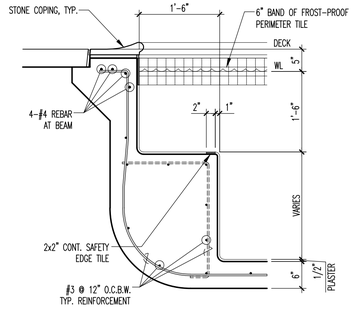


STAIR SECTION (3'-7", 7 RISERS, STONE) SEATING STEPS

SCALE: 3/4"=1'-0"

C 2.0

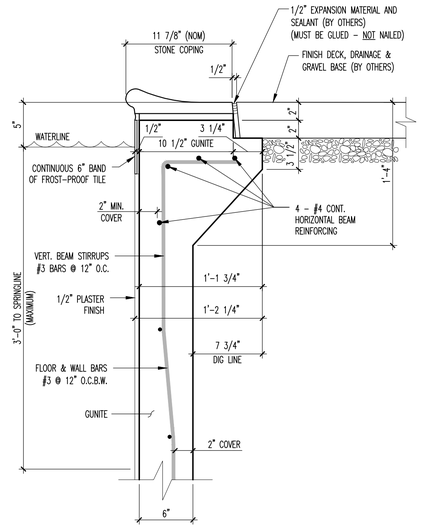


UNDERWATER BENCH

SCALE: 3/4"=1'-0"

W/ STONE COPING

D 2.0

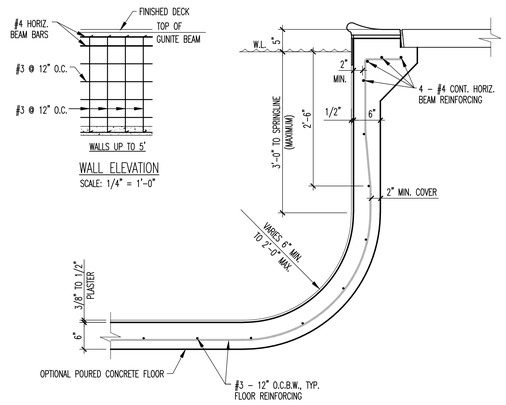


BEAM DETAIL WALLS TO 5' (STONE COPING)

SCALE: 1 1/2"=1'-0"

STRUCTURAL WALL & STEEL SCHEDULE		
WATER DEPTH	WALL THICKNESS	REINFORCING
0'-0" TO 5'-0"	6"	#3 @ 12" O.C.B.W.

NOTE: STEEL SCHEDULE ASSUMES UNDISTURBED SITE w/ SOIL OF MIN. 2000 PSF BEARING CAPACITY & NO SURCHARGES. GRADE 40 STEEL MIN, 3000 PSI GUNITE/CONCRETE



WALL ELEVATION

SCALE: 1/4" = 1'-0"

TYP. WALL DETAIL TO 5' (STONE COPING)

SCALE: 3/4"=1'-0"

ATHLETIC FACILITY OBX
CURRITUCK SOUND

WATERLILY ROAD
COINJOCK, NC 27923

SECTIONS #1

DRAWN BY: TL

PADDOCK SWIMMING POOL COMPANY

15120-C SOUTHLAWN LANE ROCKVILLE, MD. 20850
PHONE: (301)-424-0790 EMAIL: info@paddockpools.com

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 027540 3-8-2024 BARRETT C. COOK

252-655-1056 KITTY HAWK ENGINEERING, PLLC
5306 MUNDY ROAD SUITE 101 WILMINGTON NC 28405
FIRM # 1353070 CERT # P-1281 STRUCTURAL

REVISIONS:	SCALE: AS NOTED	JOB NO.: -
	DATE: 2/13/24	SHT. NO.: 2.0

PLOTTED BY: TL

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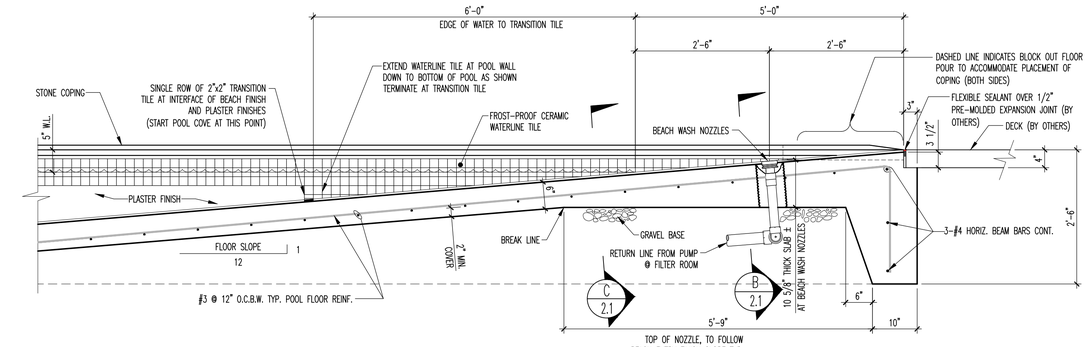
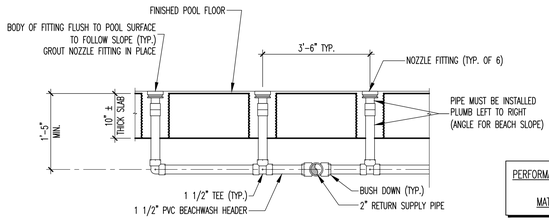
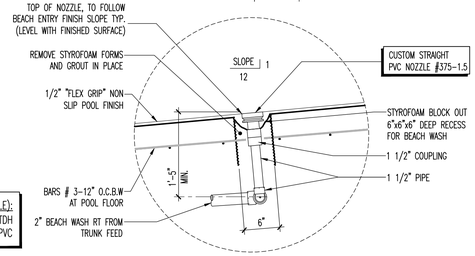




SECTION BEACH WASH MANIFOLD

SCALE: 3/4" = 1'-0"

B 2.1



PERFORMANCE (PER NOZZLE):
11GPM @ 15' TDH
MATERIAL: SCH. 80 PVC

BEACH WASH NOZZLE ENLARGED DETAIL

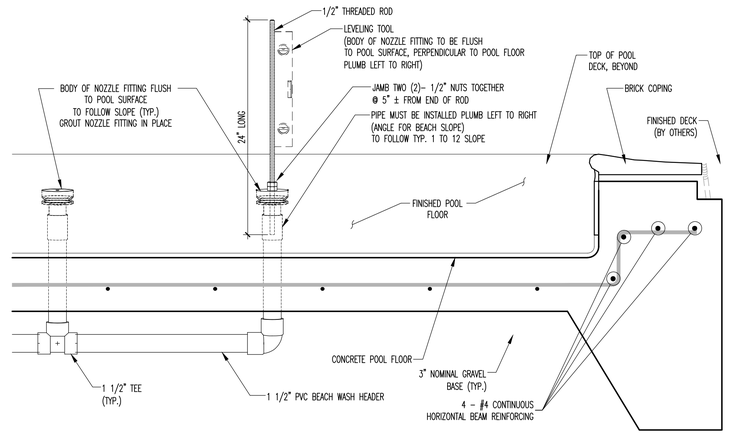
SCALE: 1" = 1'-0"

BEACH WASH DETAIL

SCALE: 3/4" = 1'-0"

STONE COPING BEACH ENTRY

A 2.1



NOZZLE ALIGNMENT ROD DETAIL

SCALE: 1 1/2"=1'-0"

BEACHWASH POOL ENTRY C 2.1

NORTH CAROLINA PROFESSIONAL SEAL 027540 3-8-2024 ENGINEER BARRY E. CROCK

252-455-1066 X1190 JAMES ENGINEERING, PLLC
5306 MULHOLLAND DR JACKSONVILLE SC 28485
FIRM # 1353070 CERT # P-1281 STRUCTURAL

ATHLETIC FACILITY OBX
CURRITUCK SOUND

WATERLILY ROAD
COINJOCK, NC 27923

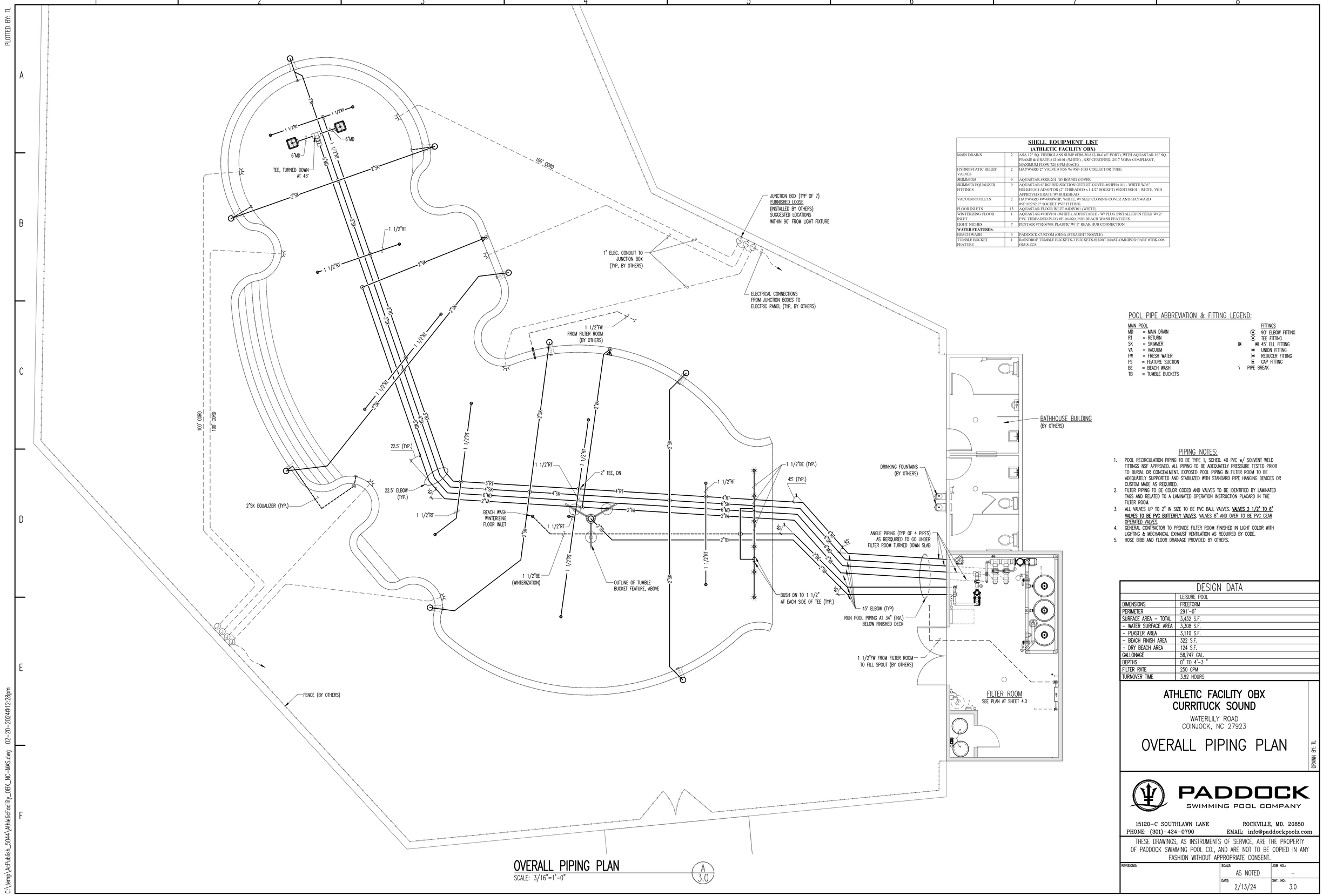
SECTIONS #2

DRAWN BY: TL

PADDOCK SWIMMING POOL COMPANY

15120-C SOUTHLAWN LANE ROCKVILLE, MD. 20850
PHONE: (301)-424-0790 EMAIL: info@paddockpools.com

REVISIONS:	SCALE: AS NOTED	JOB NO.: -
	DATE: 2/13/24	SHT. NO.: 2.1



OVERALL PIPING PLAN

SCALE: 3/16"=1'-0"

A 3.0

SHELL EQUIPMENT LIST
(ATHLETIC FACILITY OBX)

MAIN DRAINS	2	ASA 12" SQ. FIBERGLASS SUMP #FBS-S0-812-18-6 (6" PORT), WITH AQUASTAR 16" SQ. FRAME & GRATE #1216101 (WHITE) , NSF CERTIFIED, 2017 VGBA COMPLIANT, MAXIMUM FLOW 720 GPM (EACH)
HYDROSTATIC RELIEF VALVES	2	HAYWARD 2" VALVE #1056 W/ #SP-1055 COLLECTOR TUBE
SKIMMERS	9	AQUASTAR #SKR-201, W/ ROUND COVER
SKIMMER EQUALIZER FITTINGS	9	AQUASTAR 6" ROUND SUCTION OUTLET COVER #6HPHA101 - WHITE W/ 6" BULKHEAD ADAPTOR (2" THREADED x 1-1/2" SOCKET) #6207158101 - WHITE, VGB APPROVED GRATE W/ BULKHEAD
VACUUM OUTLETS	2	HAYWARD #W400BWHP, WHITE, W/ SELF CLOSING COVER AND HAYWARD #SP1025S2 2" SOCKET PVC FITTING
FLOOR INLETS	13	AQUASTAR FLOOR INLET #4DIV101 (WHITE)
WINTERIZING FLOOR INLET	1	AQUASTAR #4DIV101 (WHITE), ADJUSTABLE - W/ PLUG INSTALLED IN FIELD W/ 2" PVC THREADED PLUG #P106-020, FOR BEACH WASH FEATURES
LIGHT NICHES	7	PENTAIR #75200700, PLASTIC W/ 1" REAR HUB CONNECTION
WATER FEATURES:		
BEACH WASH	6	PADDOCK CUSTOM (OEM) (STRAIGHT NOZZLE)
TUMBLE BUCKET FEATURE	1	RAINDROP TUMBLE BUCKETS-3 BUCKETS-SHORT MAST-OMNIPOD PART #TBK-008-OM-S-ZCS

POOL PIPE ABBREVIATION & FITTING LEGEND:

MAIN POOL
- MD = MAIN DRAIN
- RT = RETURN
- SK = SKIMMER
- VA = VACUUM
- FW = FRESH WATER
- FS = FEATURE SUCTION
- BE = BEACH WASH
- TB = TUMBLE BUCKETS

FITTINGS
- 90° ELBOW FITTING
- TEE FITTING
- 45° ELL FITTING
- UNION FITTING
- REDUCER FITTING
- CAP FITTING
- PIPE BREAK

PIPING NOTES:

1. POOL RECIRCULATION PIPING TO BE TYPE 1, SCHED. 40 PVC w/ SOLVENT WELD FITTINGS NSF APPROVED. ALL PIPING TO BE ADEQUATELY PRESSURE TESTED PRIOR TO BURIAL OR CONCEALMENT. EXPOSED POOL PIPING IN FILTER ROOM TO BE ADEQUATELY SUPPORTED AND STABILIZED WITH STANDARD PIPE HANGING DEVICES OR CUSTOM MADE AS REQUIRED.
2. FILTER PIPING TO BE COLOR CODED AND VALVES TO BE IDENTIFIED BY LAMINATED TAGS AND RELATED TO A LAMINATED OPERATION INSTRUCTION PLACARD IN THE FILTER ROOM.
3. ALL VALVES UP TO 2" IN SIZE TO BE PVC BALL VALVES. **VALVES 2 1/2" TO 6" VALVES TO BE PVC BUTTERFLY VALVES**. VALVES 8" AND OVER TO BE PVC GEAR OPERATED VALVES.
4. GENERAL CONTRACTOR TO PROVIDE FILTER ROOM FINISHED IN LIGHT COLOR WITH LIGHTING & MECHANICAL EXHAUST VENTILATION AS REQUIRED BY CODE.
5. HOSE BIBB AND FLOOR DRAINAGE PROVIDED BY OTHERS.

DESIGN DATA

	LEISURE POOL
DIMENSIONS	FREEFORM
PERIMETER	291'-0"
SURFACE AREA - TOTAL	3,432 S.F.
- WATER SURFACE AREA	3,308 S.F.
- PLASTER AREA	3,110 S.F.
- BEACH FINISH AREA	322 S.F.
- DRY BEACH AREA	124 S.F.
GALLONAGE	58,747 GAL.
DEPTHS	0" TO 4'-3"
FILTER RATE	250 GPM
TURNOVER TIME	3.92 HOURS

ATHLETIC FACILITY OBX
CURRITUCK SOUND

WATERLILY ROAD
COINJOCK, NC 27923

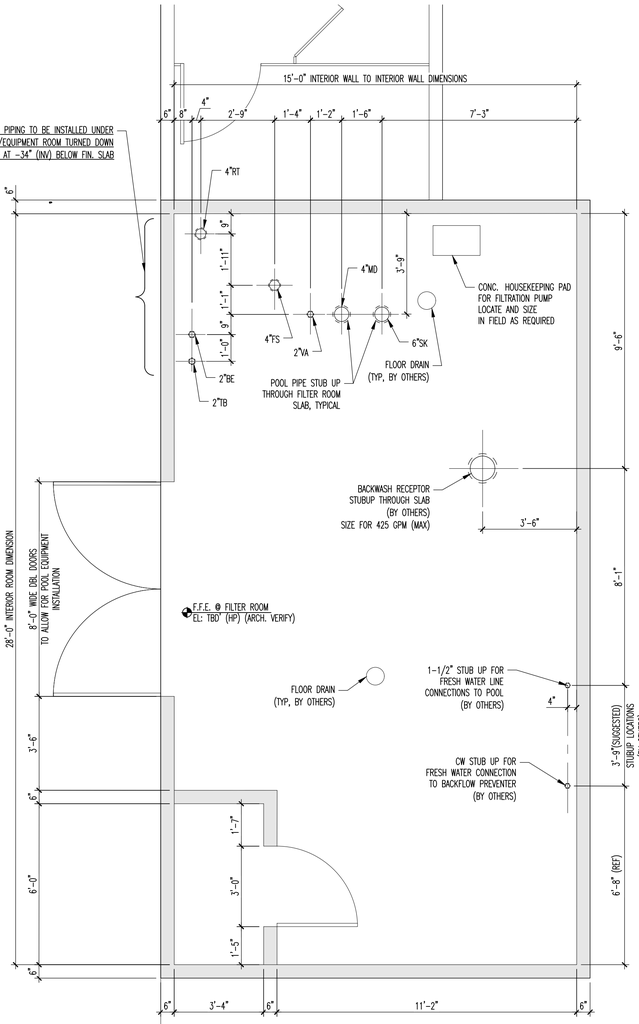
OVERALL PIPING PLAN

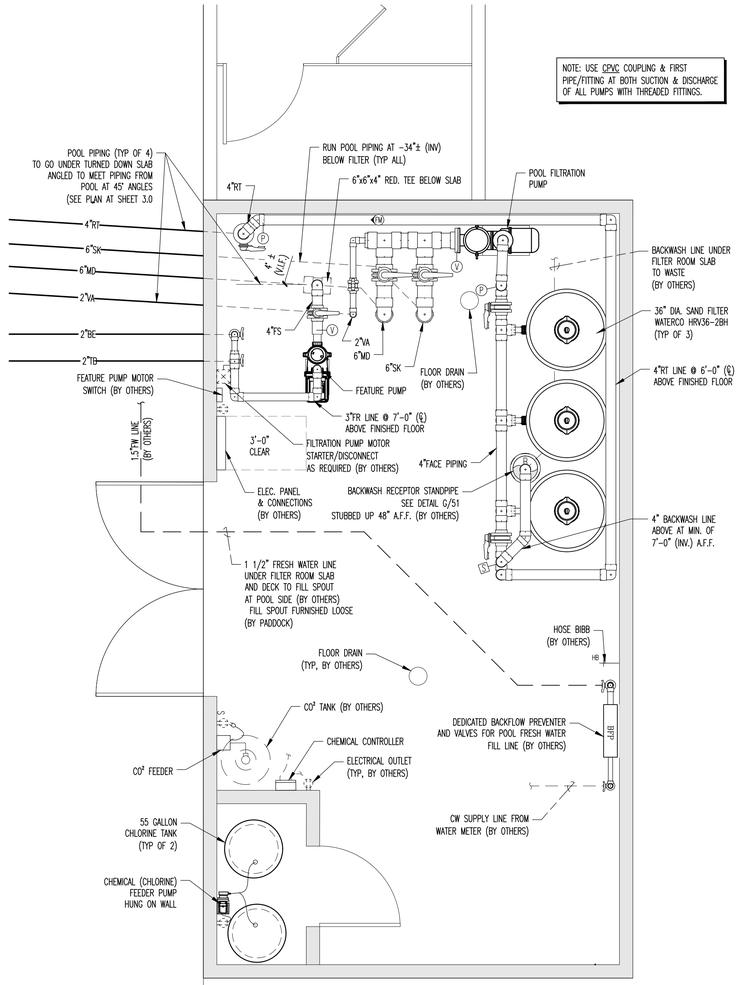
DRAWN BY: TL

PADDOCK
SWIMMING POOL COMPANY

15120-C SOUTHLAWN LANE ROCKVILLE, MD. 20850
PHONE: (301)-424-0790 EMAIL: info@paddockpools.com

REVISIONS:	SCALE:	JOB NO.:
	AS NOTED	-
	DATE: 2/13/24	SHT. NO.: 3.0





MECHANICAL EQUIPMENT LIST

(ATHLETIC FACILITY OBX)

FILTERS	3	WATERCO HRV36-2IH1 #2220736R , 36" DIA. FIBERGLASS, W/ 2" BULKHEAD CONNECTIONS. FILTER AREA: 7.1 SQ. FT., FILTER RATE: 142 GPM MAX, EA. TANK, TOTAL FILTER AREA: 21.3 (3 TANKS). DESIGN FILTRATION RATE: 2500PM, @ 11.74 GPM/SQ. FT., BACKWASH RATE AT 110 (MIN.) TO 140 GPM, MAX. (EACH TANK)
FILTER MEDIA		SAND - 750 LBS., GRAVEL - 50 LBS. (EACH)
PUMP - FILTRATION	1	PENTAIR CHK-75 #347943, 7.5HP, 3PH, 200-208V, 22.3 AMP, 250 GPM @ 85' TDH, COMPLETE W/ HAIR AND LINT STRAINER & SPARE BASKET
PUMP - FEATURES	1	PENTAIR INTELLIFLO3 VSF # 011077, 3.HP, 3-Phase, 208-230V, 12.4-11.2 AMP, W/ 3" PORTS. 120 GPM @ 60' TDH (MAX. SPEED), W/ TOUCH SCREEN HMI. COMPLETE W/ HAIR AND LINT STRAINER AND SPARE BASKET ***NOTE: (ELECTRICIAN TO VERIFY & PROVIDE COMPATIBLE CIRCUITS)***
FLOW METER	1	BLUE-WHITE #F-30400P (125 TO 500 GPM FLOW RANGE)
GAUGES - PRESSURE	2	WIKA 4" PRESSURE, TYPE 111.10 (FILTRATION SYSTEM)
	1	WIKA 4" PRESSURE, TYPE 111.10 (FEATURE SYSTEM)
GAUGES - VACUUM	1	WIKA 4" VACUUM, TYPE 111.10 (FILTRATION SYSTEM)
	1	WIKA 4" VACUUM, TYPE 111.10 (FEATURE SYSTEM)
SIGHT GLASS	1	S.R. SMITH SIGHT GLASS 1.5"
CHLORINE PUMP	1	STENNER #85M5, FRACTIONAL HP, SINGLE PHASE 120V
CO2 FEEDER	1	IECSys-CO2 FEED SYSTEM #2100299 (20-200 SCFH), SINGLE PHASE 115V W/ SINGLE TANK REGULATOR #9680043
CHEMICAL CONTROLLER	1	IECSys-2 #1100187, 115V, 50Hz, W/ FLOW CELL & SENSORS
CO² TANK (CLC)	1	***BULK CO² STORAGE TANK, BY OTHERS***
CHORINE VATS	2	SAINT GOBAIN #11160, HDPE, 55 GALLON VERTICAL TANK W/COVER

FILTER ROOM PIPE ABBREVIATION & FITTING LEGEND:

MAIN POOL
- MD = MAIN DRAIN
- RT = RETURN
- SK = SKIMMER
- VA = VACUUM
- FW = FRESH WATER
- FS = FEATURE SUCTION
- BE = BEACH WASH
- TB = TUMBLE BUCKETS

FITTINGS
- (V) VACUUM GAUGE
- (P) PRESSURE GAUGE
- (T) TEMPERATURE GAUGE
- (FS) FLOW SWITCH
- [S] SIGHT GLASS
- (FM) FLOW METER – PLAN VIEW
- (FM) FLOW METER – ELEVATION VIEW

PIPING COLOR SCHEDULE

(NORTH CAROLINA)

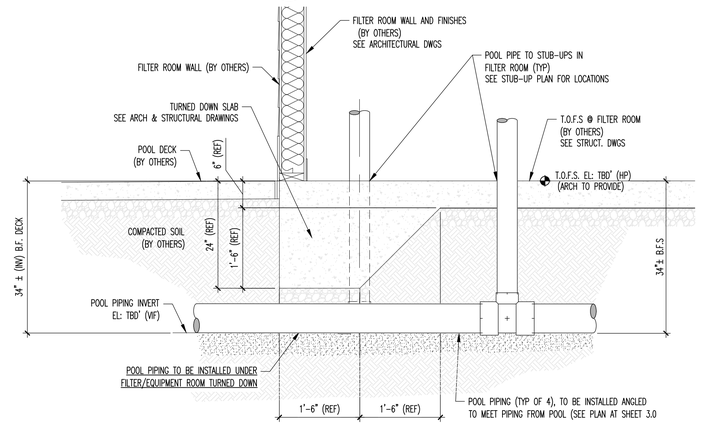
BACKWASH	– BLACK
VACUUM	– ORANGE
SUCTION/SKIMMER	– YELLOW
RETURN	– WHITE
CHEMICAL FEED CONDUIT	– WHITE
FRESH WATER	– BLUE
HEATER (TO ISOLATION VALVE)	– RED
AUXILIARY RECIRC. (SEE NOTE)	– GREEN

AUXILIARY RECIRCULATION NOTE
WATER FEATURES, JETS, FOUNTAINS, WATER FALLS AERATION SYSTEMS OR SIMILAR FEATURES NOT PART OF THE FILTRATION SYSTEM

STUB-UP PLAN

B 4.0

SCALE: 3/8"=1'-0"



FILTER ROOM PLAN

A 4.0

SCALE: 3/8"=1'-0"

PIPING NOTES:

1. POOL RECIRCULATION PIPING TO BE TYPE 1, SCHED. 40 PVC w/ SOLVENT WELD FITTINGS NSF APPROVED. ALL PIPING TO BE ADEQUATELY PRESSURE TESTED PRIOR TO BURIAL OR CONCEALMENT. EXPOSED POOL PIPING IN FILTER ROOM TO BE ADEQUATELY SUPPORTED AND STABILIZED WITH STANDARD PIPE HANGING DEVICES OR CUSTOM MADE AS REQUIRED.
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4. GENERAL CONTRACTOR TO PROVIDE FILTER ROOM FINISHED IN LIGHT COLOR WITH LIGHTING & MECHANICAL EXHAUST VENTILATION AS REQUIRED BY CODE.
5. HOSE BIBB AND FLOOR DRAINAGE PROVIDED BY OTHERS.

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 027540 3-8-2024 REGISTERED

252-655-1066 KITTY HAWK ENGINEERING, PLLC
5306 MUNDLEWOOD DR JACKSONVILLE NC 28455
FIRM # 1353070 CERT # P-1281 STRUCTURAL

DESIGN DATA

	LEISURE POOL
DIMENSIONS	FREEFORM
PERIMETER	291'-0"
SURFACE AREA – TOTAL	3,432 S.F.
– WATER SURFACE AREA	3,308 S.F.
– PLASTER AREA	3,110 S.F.
– BEACH FINISH AREA	322 S.F.
– DRY BEACH AREA	124 S.F.
GALLONAGE	58,747 GAL.
DEPTHS	0" TO 4'-3 "
FILTER RATE	250 GPM
TURNOVER TIME	3.92 HOURS

ATHLETIC FACILITY OBX
CURRITUCK SOUND

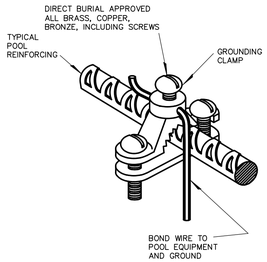
WATERLILY ROAD
COINJOCK, NC 27923

FILTER ROOM PLANS

DRAWN BY: TL

PADDOCK SWIMMING POOL COMPANY
15120-C SOUTHLAWN LANE ROCKVILLE, MD. 20850
PHONE: (301)-424-0790 EMAIL: info@paddockpools.com

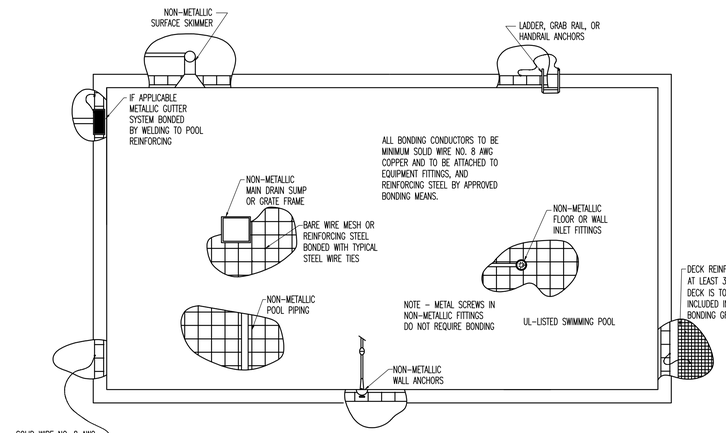
REVISIONS:	SCALE: 3/8"=1'-0"	JOB NO.: –
	DATE: 2/13/24	SHT. NO.: 4.0



NOTE:
THIS DETAIL IS FOR REFERENCE ONLY AND DOES NOT ASSIGN WORK SCOPE RESPONSIBILITY.
ALL ELECTRICAL EQUIPMENT ASSOCIATED WITH THE POOL SHALL BE COORDINATED AND PROVIDED BY THE BASE BUILDING ELECTRICAL CONTRACTOR.

GROUNDING/CLAMPING DETAILS

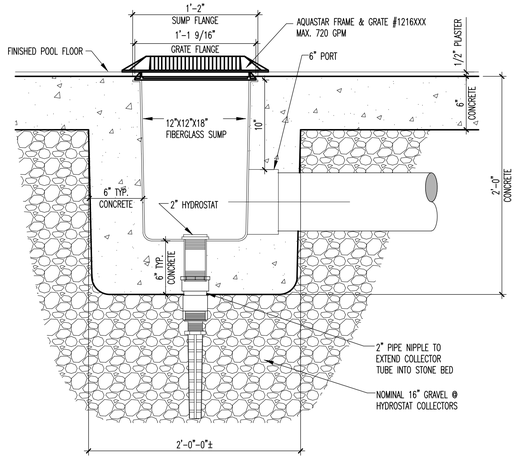
N.T.S (WORK BY OTHERS – TYPICAL) A 5.0



NOTES:
1. ONLY ELECTRICAL EQUIPMENT THAT IS U.L. LISTED UNDER "SWIMMING POOL EQUIPMENT" SHALL BE USED, WHERE U.L. LISTINGS FOR SUCH EQUIPMENT EXIST.
2. THIS DETAIL IS FOR REFERENCE ONLY AND DOES NOT ASSIGN WORK SCOPE RESPONSIBILITY.
3. OVERALL BONDING PER NEC ARTICLE 680.26 (B) (1) THROUGH (B) (5).

SWIMMING POOL ELECTRICAL BONDING & GROUNDING

N.T.S (WORK BY OTHERS – TYPICAL) B 5.0

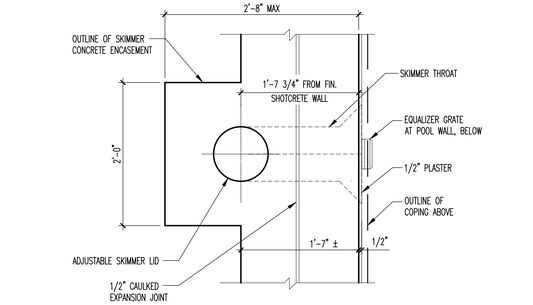


AQUASTAR FRAME AND GRATE #1216XXX
ASA SUMP #FBS-50-812-18-6

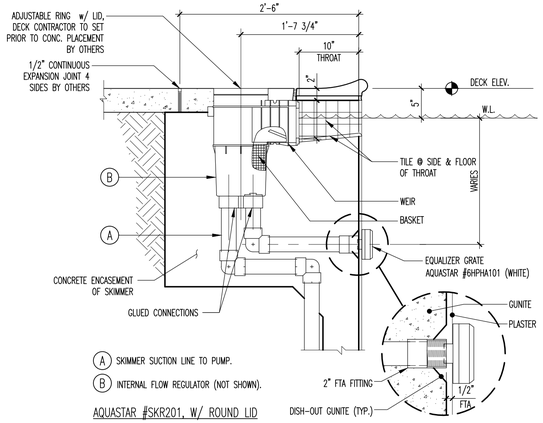
SUMP & GRATE COMBINATION MEETS NATIONAL STANDARDS:
16 CFR PART 1450
ASME/ANSI A112.19.8 2007, 2008, 2009
APSP/ANSI/ICC-16 2011, 2017

12"x12" MAIN DRAIN

SCALE: 1 1/2"=1'-0" SUMP & GRATE MEET OR EXCEED CURRENT ASME/ANSI A112.19.8 NATIONAL STANDARDS C 5.0



TOP VIEW



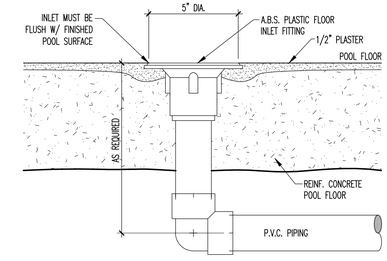
A SKIMMER SUCTION LINE TO PUMP.
B INTERNAL FLOW REGULATOR (NOT SHOWN).

AQUASTAR #SKR201, W/ ROUND LID

EQUALIZER GRATE DETAIL

SKIMMER DETAIL

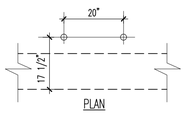
SCALE: 1"=1'-0" STONE COPING D 5.0



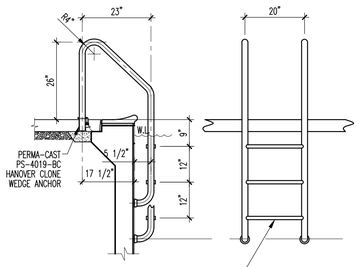
NOTE: FOR PIPE SIZE REFER TO POOL PIPING DRAWING.

RETURN INLET DETAIL

SCALE: 3"= 1'-0" FLOOR G 5.0



PLAN

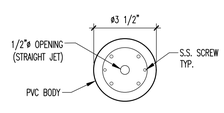


SR SMITH # 10001, (2 STEP)
SR SMITH # 10004, (3 STEP)

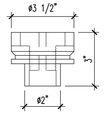
S.R. SMITH STANDARD PLUS LADDER WITH PLASTIC TREADS

LADDER DETAIL

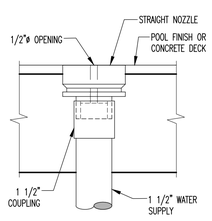
SCALE: 1/2"=1'-0" K 5.0



PLAN (STRAIGHT JET)



SIDE VIEW



INSTALLATION DETAIL

WATER INFLUENCE AREA:
STRAIGHT JET NOZZLE: 6' HIGH, 2' DIA.

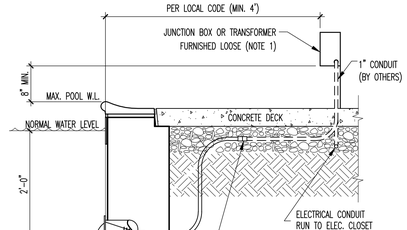
WATER REQUIREMENT:
STRAIGHT JET NOZZLE: 12 GPM @ 5' TDH

BODY MATERIAL: SCHEDULE 80 PVC

NOTE:
1. STRAIGHT NOZZLES TO BE USED IN BOTH BEACH WASH AND FLOOR BUBBLERS.

BEACH WASH NOZZLE DETAIL

SCALE: 3"=1'-0" H 5.0

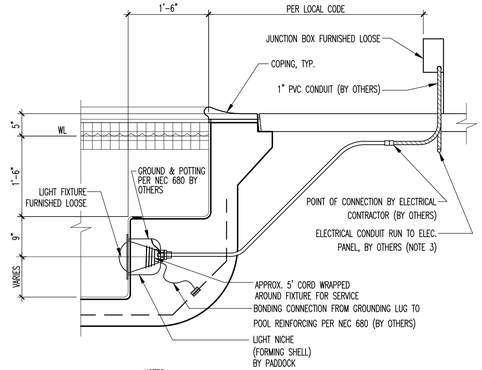


NOTES:
1. ELEVATED JUNCTION BOXES OR TRANSFORMERS TO BE LOCATED UNDER OR ADJACENT TO FIXED STRUCTURES SO AS NOT TO CONSTITUTE A TRIPPING HAZARD TO FOOT TRAFFIC.
2. TYPE OF CONDUIT AS APPROVED BY ELECTRICAL INSPECTION AGENCY HAVING JURISDICTION.
3. UNDERWATER LIGHT CONNECTION TO GFI PROTECTED CIRCUITS PER NEC 680.

PENTAIR LARGE PLASTIC NICHE MODEL #79206700 W/ 1" REAR HUB

UNDERWATER POOL LIGHT DETAIL

SCALE: 3/4"=1'-0" F 5.0

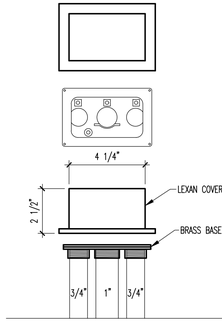


NOTES:
1. ELEVATED JUNCTION BOXES OR TRANSFORMERS TO BE LOCATED UNDER OR ADJACENT TO FIXED STRUCTURES SO AS NOT TO CONSTITUTE A TRIPPING HAZARD TO FOOT TRAFFIC.
2. TYPE OF CONDUIT AS APPROVED BY ELECTRICAL INSPECTION AGENCY HAVING JURISDICTION.
3. UNDERWATER LIGHT CONNECTION TO GFI PROTECTED CIRCUITS PER NEC 680-20.

PENTAIR LARGE PLASTIC NICHE MODEL #79206700 W/ 1" REAR HUB

UNDERWATER BENCH POOL LIGHT DETAIL

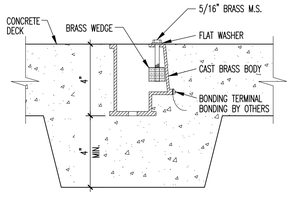
SCALE: 3/4"=1'-0" F 5.0



PENTAIR MODEL #78310700

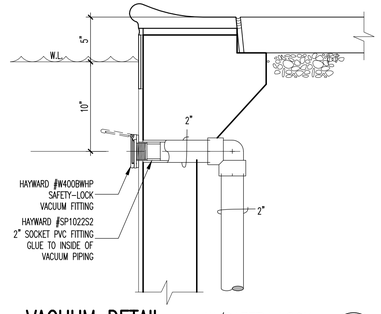
JUNCTION BOX DETAIL

SCALE: 3"=1'-0" M 5.0



WEDGE ANCHOR DETAIL

SCALE: 3"=1'-0" L 5.0



VACUUM DETAIL W/SAFETY LOCK

SCALE: 1 1/2"=1'-0" J 5.0

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 027540 3-8-2024 DANIEL E. CHICK

252-655-1050 ATLANTIC COAST ENGINEERING, PLLC
5306 MULHOLLAND DR. JACKSONVILLE SC 28405
FIRM # 1353070 CERT # P-1281 STRUCTURAL

ATHLETIC FACILITY OBX CURRITUCK SOUND

WATERLILY ROAD
COINJOCK, NC 27923

DETAILS #1

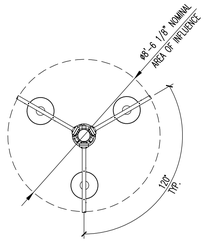
DRAWN BY: TL

PADDOCK SWIMMING POOL COMPANY
15120-C SOUTHLAWN LANE ROCKVILLE, MD. 20850
PHONE: (301)-424-0790 EMAIL: info@paddockpools.com

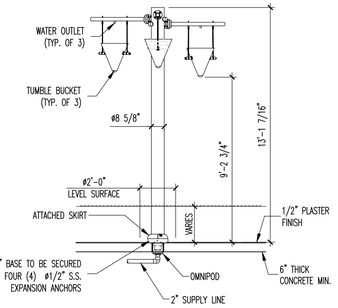
REVISIONS:	SCALE: AS NOTED	JOB NO.: –
	DATE: 2/13/24	SHT. NO.: 5.0

PLOTTED BY: TL

C:\temp\AcPublish_5044\AthleticFacility_OBX_NC-MAS.dwg 02-20-2024@12:28pm



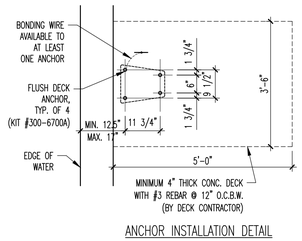
PLAN VIEW



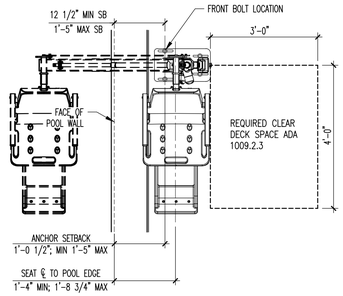
NOTES:
1. VALVE MUST BE INSTALLED ON SUPPLY LINE TO REGULATE FLOW.
2. 15' TDH REQUIRED AT BASE OF FEATURE.
3. CALCULATED FLOW RATE 60 GPM (NOMINAL). (OPERATION RANGE 29.6 TO 63.6 GPM)
4. AREA OF INFLUENCE VARIES WITH FLOW.

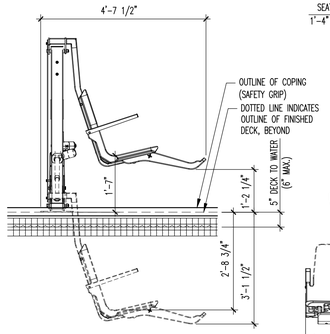
RAINDROP PRODUCTS #TBKT-008-OM

TUMBLE BUCKET — OMNIPOD 3 BUCKETS
SCALE: 1/4"=1'-0" — A 5.1

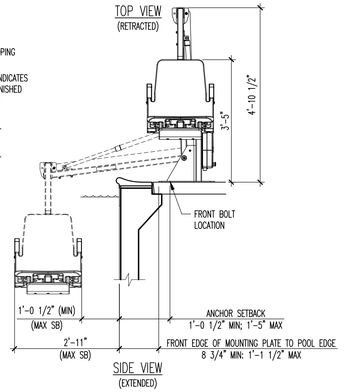


ANCHOR INSTALLATION DETAIL



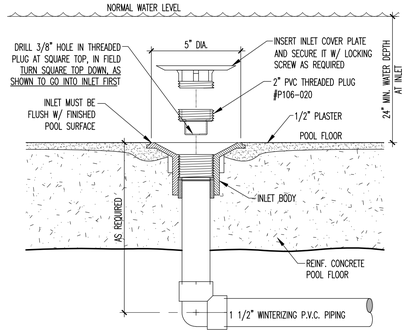


FRONT VIEW (RETRACTED)



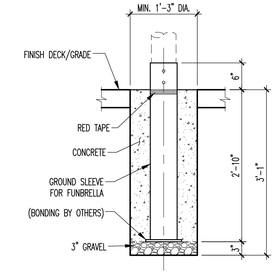
SIDE VIEW (EXTENDED)

HANDICAP LIFT – S.R. SMITH ML2
SCALE: 1/2"=1'-0" — B 5.1

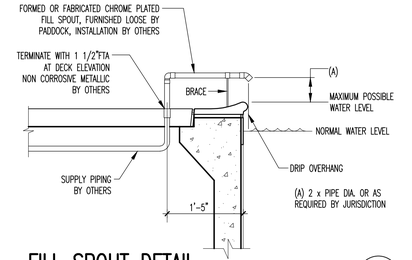


NOTE: FOR PIPE SIZE REFER TO POOL PIPING DRAWING.

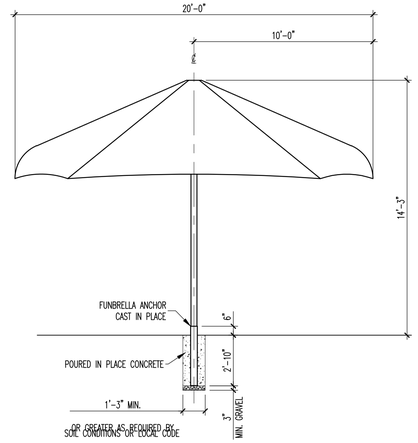
WINTERIZING FLOOR INLET DETAIL
SCALE: N.T.S. — C 5.1



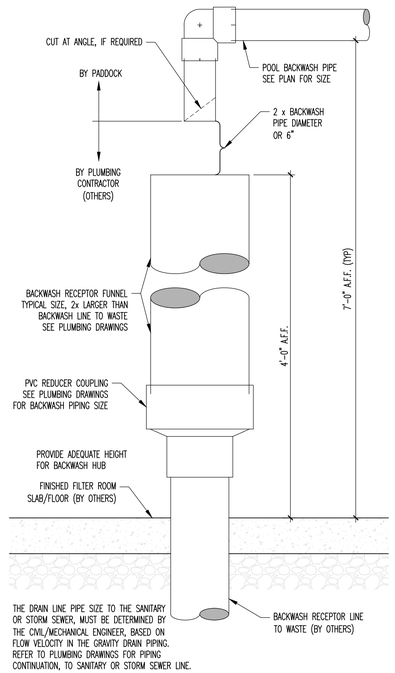
FUNBRELLA ANCHOR DETAIL
SCALE: 3/4"=1'-0" — E 5.1



FILL SPOUT DETAIL
SCALE: 3/4"=1'-0" — D 5.1



FUNBRELLA INSTALLATION DETAIL
SCALE: 1/4"=1'-0" — F 5.1



BACKWASH RECEPTOR
SCALE: N.T.S. — G 5.1

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 027540 3-8-2024 RICHARD COOK

252-655-1050 RICO POWE ENGINEERING, PLLC
5306 MULHOLLAND DR RUNNEMEDE SC 29485
FIRM # 13533070 CERT # P-1281 STRUCTURAL

ATHLETIC FACILITY OBX
CURRITUCK SOUND

WATERLILY ROAD
COINJOCK, NC 27923

DETAILS #2

DRAWN BY: TL

PADDOCK SWIMMING POOL COMPANY
15120-C SOUTHLAWN LANE ROCKVILLE, MD. 20850
PHONE: (301)-424-0790 EMAIL: info@paddockpools.com

REVISIONS:	SCALE: AS NOTED	JOB NO.: –
	DATE: 2/13/24	SHT. NO.: 5.1

SITE PLAN NARRATIVE

Athletic Facility – 1559 Waterlily Rd
Coinjock, Currituck County, North Carolina

Prepared for:
85 AND SUNNY, LLC
9919 Stephen Decatur Hwy
Ocean City, MD 21842

Prepared by:
Quible & Associates, P.C.
PO Drawer 870
Kitty Hawk, NC 27949

March 27, 2024
P16099

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Appendices

Overview

The subject property is located at 1559 Waterlily Road, Corolla, NC in Currituck County. The applicants propose to construct an athletic facility consisting of a swimming pool, associated decking, 285 sf mechanical building serving the pool, 464 sf bathhouse, pickleball court, basketball court, fitness walking/jogging paths, and associated utilities and required infrastructure as shown on the attached plan set. The property is zoned Single Family Mainland (SFM) and athletic facilities are permitted use.

Access

The athletic facility would be accessed from Waterlily Road.

A loading space is not required per Currituck County UDO, Section 5.1.8. for this use. However, if needed, the open drive aisle opposite the swimming pool entrance could be utilized for loading (and designated, if required) as it would not block any through traffic along the adjacent drive aisle and parking.

Alternative Parking Plan

The proposed improvements include a swimming pool, associated decking and bathhouse, pickleball court, basketball court, and fitness walking/jogging paths. As the proposed use varies and is not currently covered within the Uniform Development Ordinance (Table 5.1.3.C, Minimum Off-Street Parking Standards) an alternative parking plan is proposed per Section 5.1.3.E. The following summary, calculations, and supporting information will demonstrate the parameters of the proposed parking design, which will illustrate adequate parking for the facility.

The facility will operate seven days a week from dawn to dusk year-round. The relevant maximum occupant capacity used to calculate parking needs for each use is 221 swimmers, 16 players, and 10 employees at peak shift. As previously proposed and based on maximum occupancy numbers assuming one parking space for every 3 swimmers, 73.6 parking spaces would be needed for the pool element. Please note this ratio is significantly higher than listed in the attached trip generation study prepared for a pool facility prepared by Hexagon Transportation in 2009 [**Appendix E**]. This study determined 4 parking spaces should be required for 1,000 SF of pool area and is consistent with the provided ITE rates for fitness facilities. At 12,056 sf of pool area (including surrounding decking), this standard rate would only require 48 parking spaces. The applicant has kept with the one parking space for 3 swimmers as this has ratio has been found in similar County Ordinances throughout the United States.

As for the other elements of the recreational facility, 1 parking space per ball player and 1 parking space per employee has been assumed. These numbers were conservatively chosen based on the Currituck County UDO that requires 1 parking space per 2 employees for tour operators. Using these figures, a total of 100 parking spaces are needed and 104 spaces are provided, including 2 ADA spaces. The applicant owns and operates similar facilities and based on their understanding of parking needs and the proposed use, 100 parking spaces would be adequate.

Lighting

Use of the facility is during daytime only, and as such no parking lot or other exterior lighting is proposed other than security lighting being provided at the buildings as required. The site lighting plan consists of the provided full cut off lighting fixture submittals for the required

security lighting. A lighting plan has been provided to show anticipated lumens throughout the site.

Soils

The USDA NRCS Soil Survey lists the soil in the vicinity of the stormwater infiltration and wet retention basins as described below. Geotechnical reports for the site indicate the seasonal high-water table is approximately at elevation 3.7. A copy of on-site soils analysis are provided within **Appendix A**. On-site soils analysis was performed by Hardin-Kight Associates, Inc.

- BoA – Bojac Loamy Sand
  This soil typically has 0 to 3 percent slopes. Bojac Loamy Sand typically has a very low runoff rate and is well drained. This soil is categorized in Hydrologic Soil Group: A

Stormwater Management Plan

Per 15A NCAC 02H.1005 (a) (3) (B) High Density Coastal Development is required to meet particular criteria. This development is proposed to have 0.82% of impervious coverage within the existing parcel. The proposed wet detention basin onsite is designed in accordance with NCDEQ Requirements and is designed to store, control, and treat the stormwater runoff from all surfaces, within its drainage area, generated by the one and one-half inch of rainfall event. The majority of stormwater runoff from the project area is proposed to be directed to the proposed wet detention basin designed in accordance with NCDEQ requirements. The basin has been designed to capture runoff into a forebay prior to the main pond which stores, controls, and treats stormwater runoff from the 5-year post-development storm event to the 2-year pre-development wooded condition. In addition to these requirements, a minimum of 50’ vegetative buffer from surface waters is provided.

Collection

Runoff from the proposed access drive will be directed into a flowline in the center of the parking area. This flowline coincides with the stormwater network, which collects and discharges into the wet retention basin forebay. Runoff from the southern portion of the proposed swimming pool deck and pickle ball court area will be collected into a grass swale which collects in an infiltration basin and overflows into the stormwater network. The stormwater network continues to flow toward the forebay The parking and vehicular area is to also be collected and conveyed to the proposed wet detention basin via sheet flow whereby the parking area drains to the centralized flowline prior to being directed into the forebay.

Treatment

The proposed system will offer several methods of treatment prior to release.

Runoff from concrete deck areas will sheet flow over vegetation (grass) and be directed to the infiltration basin The grassed areas will provide the first level of treatment for these areas and will provide filtration of small particulates and nutrients prior to entering the stormwater network and subsequently the wet detention basin.

The primary treatment of runoff from the site will be provided within a wet detention basin, but the pool decking and courts will have preliminary treatment through the infiltration basin. The infiltration basin provides treatment above and beyond what is required for State/Local

permitting. The bottom and side slopes of the infiltration basin will be grassed according to general seeding specifications. The runoff will undergo filtration of fine particulates and pollutants by the vegetation within the infiltration basin. The filtration by vegetation is considered the primary method of treatment. A secondary method of treatment is also available when the stormwater runoff infiltrates into the subsurface. The soil particles between the basin bottom and the season high water table (SHWT) will offer additional filtration and/or absorption of particulates and pollutants prior to reaching the water table. The seasonal high-water table (SHWT) is at an elevation of 3.7'. Separation of greater than 18" between the seasonal high-water table and the bottom of the basin at 6' elevation has been provided.

The remainder of the project area will be managed by the proposed wet retention basin as primary treatment. The wet basin is designed with a forebay which initially receives incoming runoff from multiple directions to allow for energy dissipation and initial settling prior to entering the main pond. The entire wet retention basin is designed to have vegetative shelving and a depth adequate to allow for some sedimentation. The overall depth of the basin allows for water quality treatment but also doubles as fire protection storage volume for a proposed dry hydrant.

Storage

The proposed infiltration basin has been sized to allow for a local requirement of routing the 5-year post developed condition back to the 2-year predeveloped wooded condition. This storage capacity is in excess of the State required 1.5-inch storage of impervious surface runoff. The temporary storage capacity has been calculated between the bottom of the basin and the overflow spillway invert elevation.

The majority of the stormwater storage volume is provided within the proposed wet retention basin. The temporary storage volume is computed within the basin above the main pool elevation of 3.7'. The County stormwater storage volume requirement based upon routing the 5-year post-development rainfall event to the 2-year pre-development wooded condition is approximately 36,340 CF. The proposed wet retention basin provided storage volume is approximately 78,452 CF, equivalent to the 8.8-inch rainfall event.

The season high water table (SHWT) is at an elevation of 3.7' ft., per the attached soils analysis in **Appendix B**.

Disposal

The wet detention basin's primary mode of disposal for elevations between 3.5 and 8.0 ft. is through a 3" drawdown orifice on a structure located inside of the main pool. The invert elevation of the 3" drawdown orifice is proposed to be at an elevation of 3.5 ft. Elevations between 8.0 and 10.0 feet will utilize a grate with on top of this structure as well as the 3" drawdown orifice. The invert elevation of the grate is proposed to be 8.0 feet in elevation. The total drawdown time from an elevation of 8.0 ft. is 4.05 days. Supporting calculations for the drawdown time and storage of the proposed wet pond have been provided within **Appendix B**.

Calculations for the proposed wet detention basin have been provided in **Appendix B**. Currituck County calculations have been provided to demonstrate that the 5-yr post developed storms have been routed to 2-yr pre-developed wooded conditions. The wet detention basin design allows for storage above the permanent pool up to elevation 8'. The basin would discharge into the downstream ditch starting at elevation 8'. A summary of the storage available within the

basin is available in **Appendix B**.

Utilities

A water meter and associated service are proposed to connect to the existing PVC waterline at Waterlily Road. A backflow prevention device will be provided behind the new water meter. The building will be designed for the Needed Fire Flow to be within the Available Fire Flow. There is no nearby existing fire hydrant, so the applicants propose to rely on a dry hydrant that will draw from a strainer located within the deep portion of the new wet retention basin for fire flow. A copy of the Needed Fire Flow based upon ISO Method is included within the appendix demonstrating a NFF of 750 gpm. Based upon a standard 2-hour duration, the required fire storage volume is 91,546 gallons or 12,238 CF. Accounting for the 50-year drought conditions, 2' of freeboard over the top of the available fire storage volume, and keeping the strainer off of the bottom of the basin, the provided fire storage volume (or Available Fire Flow) is greater than the required 12,031 CF. Please see **Appendix C** for calculations.

Changes to the existing waterline within the right-of-way are not proposed, therefore, a permit to construct from NC DEQ Public Water Supply is not required. The proposed water service shall be installed per Currituck County standard water specifications and details. An RPZ would be installed in the location as shown on the attached Site Plan.

The proposed on-site wastewater system is designed to handle 1,340 gallons per day. This anticipated amount is based on 104 parking spaces at 10 GPM, 8 employees at 25 GPD each, and 2 courts at 50 GPD each. An onsite evaluation has been requested of Albemarle Regional Health Services to determine acceptable site characteristics.

Buffers and Site Vegetation

The Currituck County UDO defines a heritage tree as any live oak greater than 12" diameter at breast height and trees or other tree species greater than 24" diameter at breast height, with the exception of pine trees. Heritage trees are shown within the enclosed site plan. It should be noted that five heritage trees are to be removed with a total mitigation ACI of 68". The majority of the impacted trees do not qualify as heritage trees. Onsite mitigation is to include installation of ten (10) additional 2" ACI Live Oaks and twenty-four (24) 2" ACI Trees within the site.

Adjacent Property Zoning

Surrounding properties are zoned Single Family Mainland. Zoning buffer yards are not required as adjacent properties are also zoned SFM. A 50' farmland buffer is required adjacent to the James L. Markert property. The buffer includes maintaining 12 live oaks and 13 cedars as previously installed and permitted. 16 live oaks and 15 cedars are proposed to be installed within this buffer yard.

Site landscaping and vehicular landscaping are provided on the plans, along with refuse area screening adjacent to the proposed dumpster enclosure. The site landscaping is proposed to be met using existing heritage trees for canopy requirements and two (2) shrubs are proposed adjacent to the proposed buildings.

The vehicular landscape buffer around the proposed parking lot will be met using existing landscaping. A 2" ACI canopy tree will be provided within 60' of all parking spaces.

Appendix A – State Stormwater Calculations

Project Name: Athletic Facility
Quible Project Number: P16099
Date: 1/31/2024

Currituck County Stormwater Calculations *(In Lieu of Forms SW-002 and SW-003)*

Step 1: Drainage Area — 342,330.00 square feet; **7.86** acres

Step 2: Determine Runoff Coefficient

C = 0.20

Step 3: Determine Time of Concentration

Sheet Flow

$Tc_1 = \frac{0.42(nL)^{0.8}}{P^{0.5}S^{0.4}}$

n =	0.1 (woods)	Elev. Start =	15.62
L =	300 feet	Elev. End =	11
P =	4 inch		
S =	0.010 ft/ft		
Tc_1 =	**20.1** mins		

Shallow Concentrated Flow

L =	379	feet
S =	0.01	ft/ft
	unpaved	
$V_{unpaved}$ =	134.64	fpm
Tc2=	**2.8**	mins

Channel Flow

(n/a)

Tc = Tc1 + Tc2

Tc = **22.9** mins

Step 4: Determine Peak Rainfall Intensity

Time of Concentration

T (yrs)	5 mins	10 mins	15 mins	30 mins	1 hr	2 hr	3 hr
2	6.06	4.84	4.06	2.8	1.76	1.03	0.731
5	6.82	5.46	4.6	3.27	2.1	1.26	0.897
10	7.82	6.26	5.28	3.82	2.49	1.51	1.09

I = **3.29** in/hr

Interpolation Formula =

$$y_2 = \frac{(x_2 - x_1)(y_3 - y_1)}{(x_3 - x_1)} + y_1$$

X		Y
1	12	4.06
2	22.95	
3	30	2.80

y_2 = **3.29**

Step 5: Determine the 2-year Pre-Development peak discharge, Q

Q = CIA

Q 2= **5.18** cfs

Step 6: Determine the weighted runoff coefficient, Cw for post-development

			C - Value
Impervious Area =	99,090.55	sq.ft.	0.95
Open Area =	243,239.45	sq.ft.	0.25
Total =	**342,330.00**	sq.ft.	
Cw =	**0.45**		

Step 7: Determine Time of Concentration for post-development

Sheet Flow

$Tc_1 = \frac{0.42(nL)^{0.8}}{P^{0.5}S^{0.4}}$

n =	0.011	(smooth pavement)
L =	300.00	feet
P =	5	inch *(From NOAA Rainfall Depth Data)*
S =	0.010	ft/ft
Tc_1 =	**3.1**	mins

Shallow Concentrated Flow

Tc_2 = L =	10.00	ft
	paved	
Slope =	0.024	ft/ft

Paved Areas $V = 1302(S^{0.53})$

Unpaved Areas $V = 972(S^{0.53})$

V =	**180.4**	ft/min
Tc_2 =	**0.1**	mins

Channel Flow

(n/a)

Tc = Tc1 + Tc2

Tc = **5.0** mins **5 min minimum Tc (worst case scenario)*

Step 8: Determine Peak Rainfall Intensity

	Time of Concentration						
T (yrs)	5 mins	10 mins	15 mins	30 mins	1 hr	2 hr	3 hr
2	6.06	4.84	4.06	2.8	1.76	1.03	0.731
5	6.82	5.46	4.6	3.27	2.1	1.26	0.897
10	7.82	6.26	5.28	3.82	2.49	1.51	1.09

I5= **6.82**

Step 9: Determine the 5-year Post-Development peak discharge, Q

Q = CIA

Q5 = **24.26** cfs

Step 10: Determine the weighted curve number, CN, for the post-development conditions.

Hydrologic Soil Type: A *(From NRCS Soils Report)*

Land Use	CN	Area
Impervious Area	98	99,090.55
Open Space	49	243,239.45
	Total =	**342,330.00**
	CN_W =	**63.18**

Step 11: Determine the 5-year post-development runoff depth, Q

$Q = \frac{(P-0.2S)^2}{(P+0.8S)}$ $S = \frac{1000}{CN} - 10$

P =	5	in
S =	**5.83**	
Q =	**1.52**	in

Step 12: Determine the Runoff Volume, V_r

$V_r = \frac{Q}{12} * A$

Q =	1.52	in
A =	7.86	acres
V_r =	**1.00**	ac-ft

Step 13: Determine the Required Storage Volume, V_s

$V_s = 1613.33 * V_r * (1 - \frac{Q_{2\_pre}}{Q_{10\_post}})$

V_r =	1.00	ac-ft
$Q_{2\text{-pre}}$ =	5.18	cfs
$Q_{5\text{-post}}$ =	24.26	cfs
V_s =	**1264.89**	CY
	34,152.09	CF

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Athletic Facility - Currituck, NC
2/16/2024

Athletic Facility Wet Detention Basin
NCDEQ Stormwater Calculations

Drainage Area Calculations

	Combined Drainage Area	
	(sq.ft.)	(acre)
Drainage Area =	342,330.00	7.86
Open Space	243,239.45	5.58
Roadway/Parking =	96,549.55	2.22
Building=	958.00	0.02
Gravel =	1,583.00	0.04
Impervious =	99,090.55	2.27

Runoff generated by 1.5" Rainfall Event (NCDEQ Simplified Method)

Ia = Impervious Percentage = Impervious Area/Drainage Area
Rv= Runoff Coefficient, 0.05+0.9Ia
Rd= Rain fall depth (1.5 in.)
V= Runoff Volume, 3630*Rd*Rv*A

	Area 1
Ia =	29.0%
Rv=	0.31
Rd (in.)=	1.5
A (ac.) =	7.86
V (cf.)=	**13308**

Total Storage Required by NCDEQ = 13,400.00 cf
Total Storage Required by Currituck County = 36,400.00 cf

Permanent pool Storage Provided In Wet Detention Basin 1

Elev	Area (sf)	Avg area (sf)	Volume (cf)	Cum Vol. (cf)
-3	6509			0
		7725.5	23177	
0	8942			23177
		10289.5	30869	
3	11637			54046
		12360.5	6180	
3.5	13084			60226

Total Storage (cf.) Provided in Basin 1: **60226**

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Athletic Facility - Currituck, NC
2/16/2024

Above Permanent Pool Storage Provided In Wet Detention Basin 1

Elev	Area (sf)	Avg area (sf)	Volume (cf)	Cum Vol. (cf)
3.5	13084			0
		13839.5	6920	
4	14595			6920
		15383.5	15384	
5	16172			22304
		18716	56148	
8	21260			78452

Total Storage (cf.) Provided in Basin 1: **78452** 8.79

Volume in Forebay for Basin 1

Elev	Area (sf)	Avg area (sf)	Volume (cf)	Cum Vol. (cf)
1	214			0
		387	774	
3	560			774
		737.5	738	
4	915			1512
		1392.5	2785	
6	1870			4297
		2166	2166	
7	2462			6463
		2787.5	2788	
8	3113			9251

Total Storage (cf.) Provided in Basin 1: **9251**

15%

P16099
Athletic Facility - Currituck, NC
3/22/2024

A_{bot_shelf} =	5615	sf
A_{perm_pool} =	13084	sf
A_{bot_pond} =	6509	sf
V_{perm_pool} =	60226	cf
Depth =	6.5	

Option 1	Dav =	4.6	feet	**SA/DA =**	1.52
				DA =	342,330.00
				Req'd SA =	5,186.30
Option 2	Dav =	7.4	feet		

Wet Detention Basin Supplement Calculations

Orifice Draw Down Calculations Basin 1

Q = CA(2gH)^0.5

H=Driving Head = D/3 =	1.50	ft.
C = orific coefficient =	0.6	
Try orifice diameter =	3	in
A = Area = 3.14*(d^2)/4 =	0.049	sf
Q = CA(2gH)^0.5 =	0.289	cfs

Required Storage Volume = 13400.0 cf

Drawdown = Storage Volume / Q = **3.14 days**

Appendix B – On-site Soils Report and Memo

MEMORANDUM

Quible & Associates, P.C. SINCE 1959
ENGINEERING * CONSULTING * PLANNING
ENVIRONMENTAL SCIENCES * SURVEYING
Phone: (252) 261-3300
Fax: (252) 261-1260
Web: www.quible.com

NORTH CAROLINA LICENSED SEAL 1954 GEOLOGIST WARREN DENNIS EADUS

12/12/23

To: **Nadeen Dashti,**

From: Warren D. Eadus, P.G.

Date: December 12, 2023

Re: **50 Year Drought Water Level Determination-Athletic Facility 1555 Waterlily Road**

A review of available historic groundwater data (available from USGS: http://www.ncwater.org/GWMS/openlayers/ol.php?entrance=home_page&menulist=bl#map=11/-8447016.91/4317555.92/0 and USGS Scientific Investigations Report 2005-5053 (Weaver, J.C., The Drought of 1998-2002 in North Carolina-Precipitation and hydrologic conditions: US Geological Survey Scientific Investigations Report 2005-5053, 88p.) indicates that groundwater levels (and surface water levels which correspond with some lag depending on soils) in the eastern or outer coastal plain dropped between +/-2.0 feet to nearly 2.85 feet in response to the drought conditions that were experienced between 1998-2002. This period is recognized as being a "50 Year Drought".

Therefore, and conservatively, we can use the 2.85 feet fluctuation as a "50 Year Drought" elevation benchmark for groundwater and any surficial aquifer pond that would be constructed (construction of wet pond proposed with permanent pool elevation) to provide a permanent water source. Given our history and the normal water level conditions observed in the past in a nearby pond (OBX KOA property) and based on a recent geotechnical analysis with soil borings and recorded depths to water (normal conditions permanent pool elevation) it is our opinion that the normal groundwater table elevation at the Site is 3.7 feet (NAVD 88). This places the "50 Year Drought" elevation at 0.85 feet NAVD 88.

This is a conservative approach that is derived from the best data available including the USGS Paper cited above, along with queries of the US Drought Monitor, USACE Antecedent Precipitation Tool, NC Drought.gov websites and a working knowledge of the Site and groundwater conditions in the region.

There is limited relevant data that we can draw upon for this analysis and a conservative approach has been taken. We also reviewed a composite of wetlands elevations around the Site, elevations of the adjacent Currituck Sound, biological markers of water level elevations in the Sound (Normal Water Level) and adjacent marsh.

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Currituck County, North Carolina

1555 Waterlily Road Athletic Facility

December 14, 2023

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

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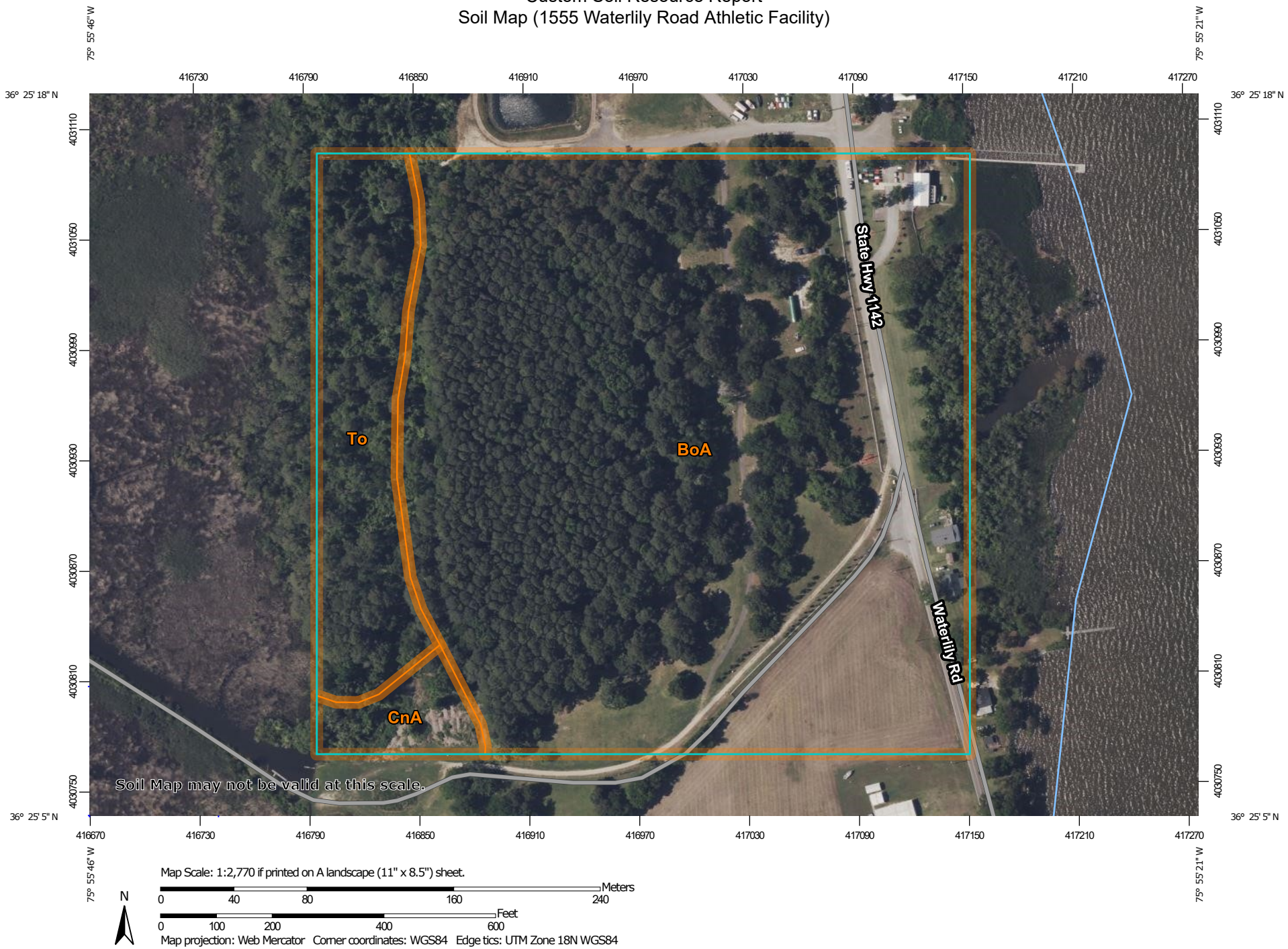
Contents

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map (1555 Waterlily Road Athletic Facility)



Map Scale: 1:2,770 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 40 80 160 240

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Currituck County, North Carolina
Survey Area Data: Version 23, Sep 13, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 18, 2022—May 31, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend (1555 Waterlily Road Athletic Facility)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BoA	Bojac loamy sand, 0 to 3 percent slopes	24.3	84.2%
CnA	Conetoe loamy sand, 0 to 3 percent slopes	0.8	2.9%
To	Tomotley fine sandy loam	3.7	12.9%
Totals for Area of Interest		**28.9**	**100.0%**

Map Unit Descriptions (1555 Waterlily Road Athletic Facility)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Currituck County, North Carolina

BoA—Bojac loamy sand, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 3rnb
Elevation: 0 to 30 feet
Mean annual precipitation: 42 to 58 inches
Mean annual air temperature: 61 to 64 degrees F
Frost-free period: 190 to 270 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Bojac and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bojac

Setting

Landform: Ridges on marine terraces
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loamy and sandy fluviomarine deposits

Typical profile

Ap - 0 to 8 inches: loamy fine sand
Bt - 8 to 47 inches: fine sandy loam
C - 47 to 85 inches: loamy fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: About 48 to 72 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 6.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A
Ecological site: F153BY030NC - Dry Loamy Rises and Flats
Hydric soil rating: No

Minor Components

Conetoe

Percent of map unit: 4 percent
Landform: Ridges on stream terraces, ridges on marine terraces
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Crest

Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F153BY030NC - Dry Loamy Rises and Flats
Hydric soil rating: No

Seabrook

Percent of map unit: 3 percent
Landform: Depressions on marine terraces
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: F153BY020NC - Moist Sands
Hydric soil rating: No

Munden

Percent of map unit: 3 percent
Landform: Marine terraces
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: F153BY040NC - Moist Loamy Rises and Flats
Hydric soil rating: No

CnA—Conetoe loamy sand, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 3rnf
Elevation: 0 to 20 feet
Mean annual precipitation: 42 to 58 inches
Mean annual air temperature: 61 to 64 degrees F
Frost-free period: 190 to 270 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Conetoe and similar soils: 85 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Conetoe

Setting

Landform: Ridges on stream terraces, ridges on marine terraces
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Sandy and loamy fluviomarine deposits and/or marine deposits

Typical profile

Ap - 0 to 8 inches: loamy sand
E - 8 to 22 inches: loamy sand
Bt - 22 to 40 inches: sandy loam
BC - 40 to 46 inches: loamy sand

C - 46 to 80 inches: sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A
Ecological site: F153AY030NC - Dry Loamy Rises and Flats, F153BY030NC - Dry Loamy Rises and Flats
Hydric soil rating: No

Minor Components

Leon

Percent of map unit: 5 percent
Landform: Flats on marine terraces
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: F153BY070NC - Wet Spodosol Flats and Depressions, F153AY070NC - Wet Spodosol Flats and Depressions
Hydric soil rating: Yes

To—Tomotley fine sandy loam

Map Unit Setting

National map unit symbol: 3rp4
Elevation: 0 to 30 feet
Mean annual precipitation: 42 to 58 inches
Mean annual air temperature: 61 to 64 degrees F
Frost-free period: 190 to 270 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Tomotley, drained, and similar soils: 75 percent
Tomotley, undrained, and similar soils: 10 percent
Minor components: 7 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Tomotley, Drained

Setting

Landform: Flats on marine terraces, depressions on stream terraces
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy and loamy fluviomarine deposits and/or marine deposits

Typical profile

Ap - 0 to 7 inches: fine sandy loam
Btg1 - 7 to 12 inches: fine sandy loam
Btg2 - 12 to 42 inches: sandy clay loam
BCg - 42 to 50 inches: sandy loam
Cg - 50 to 80 inches: loamy sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B/D
Ecological site: F153BY060NC - Wet Loamy Flats and Depressions, F153AY090NC - Flooded Mineral Soil Floodplains and Terraces
Hydric soil rating: Yes

Description of Tomotley, Undrained

Setting

Landform: Depressions on stream terraces, flats on marine terraces
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy and loamy fluviomarine deposits and/or marine deposits

Typical profile

A - 0 to 7 inches: fine sandy loam
Btg1 - 7 to 12 inches: fine sandy loam
Btg2 - 12 to 42 inches: sandy clay loam
BCg - 42 to 50 inches: sandy loam
Cg - 50 to 80 inches: loamy sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)

Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: B/D
Ecological site: F153BY060NC - Wet Loamy Flats and Depressions, F153AY090NC - Flooded Mineral Soil Floodplains and Terraces
Hydric soil rating: Yes

Minor Components

Nimmo, undrained

Percent of map unit: 3 percent
Landform: Depressions on marine terraces, flats on marine terraces
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: F153BY060NC - Wet Loamy Flats and Depressions, F153AY060NC - Wet Loamy Flats and Depressions
Hydric soil rating: Yes

Arapahoe, undrained

Percent of map unit: 3 percent
Landform: Flats, depressions
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: F153BY060NC - Wet Loamy Flats and Depressions, F153AY090NC - Flooded Mineral Soil Floodplains and Terraces
Hydric soil rating: Yes

Dragston, undrained

Percent of map unit: 1 percent
Landform: Marine terraces
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F153AY040NC - Moist Loamy Rises and Flats, F153BY040NC - Moist Loamy Rises and Flats
Hydric soil rating: No

Appendix C – Fire Flow Calculations

AFF Calculations

Total Storage Required for NFF = 12,031.00 cf

Storage Provided In Pond

Elev	Area (sf)	Avg area (sf)	Volume (cf)	Cum Vol. (cf)
-0.5	8518			0
		9065.5	12238	
0.85	9613			12238

Total Permanent Pool Storage (cf.) Provided in Basin 1: **12,238.00**

Gallons **91,546.60**

gpm for 2 hours 762.9

Operations
ISO Fire Flow Worksheet
Sample

Needed Fire Flow Work Sheet (ISO formulas)			NFF = (Ci)(Oi)(Xi+P C=18F(Ai)^0.5
Address:	**Waterlily Road, Currituck County, NC**		
Project Name:	**Athletic Facility**	Occupancy Type:	**C-2**
Construction Type	**Typical wood construction**	Number of Stories	**1**

STEP 1 Take the area, which is 100% sq. ft. of the first floor plus the following percentage of the total area of the other floors.

First Floor	750	Sq. Ft. @ 100%

Buildings classified as construction classes I-IV: 25% of all other floors
Buildings classified as construction classes V-VI: 50% of all other floors

Total other floors	0
Total Area All	750

STEP 2 Take the Square Root of the Area: 27

Now mulitiply by "F", which is the coefficient for the construction type:

F = Coefficient related to the class of construction as determined by using the construction type found in SBCCI

Construction Type	Class	F Value
Frame	VI	1.5
Joist Masonry	VI	1
Non-combustible	IV	0.8
Heavy Timber	III	0.8
Modified fire resistance	II	0.6
Fire resistive	I	0.6

F Value Selected	1.5	
Square Root of the Area x F	41	
Square Root of the Area x F x 18	739	= C Value

STEP 3 Round off the C value to the nearest 250 GPM (round up or down)

C values ranging from	Use
500 to 625	500
626 to 875	750
876 to 1125	1000
1126 to 1375	1250
1376 to 1625	1500
1626 to 1875	1750
1876 to 2125	2000
2126 to 2375	2250
2376 to 2625	2500
2626 to 2876	2750
2876 to 3125	3000
3126 to 3375	3250
Rounded to the nearest 250 GPM	750

ISO Fire Flow Worksheet
Sample Continued

STEP 4	Multiply result of rounded off GPM by the Occupancy Factor (Oi)	**Occupancy Factor**
	Noncombustible (C-1) = No active fuel loads such as storage of asbestos, clay, glass, marble, stone, or metal products.	**0.75**
	Limited - Combustible (C-2) = Limited fuel loads such as airports, apartments, art studios, auto repair, auto showroom, aviaries, banks, barber shops, beauty shops, churches, clubs, cold storage warehouses, day care center, educational occupancies, gas stations, green houses, health clubs, hospitals, jails, libraries, medical labs, motels, museums, nursing homes, offices, radio stations, recreation centers, and rooming houses.	**0.85**
	Combustible (C-3) = Moderate fuel loads such as auto part stores, auto repair training center, bakery, bookstores, bowling centers, casinos, commercial laundries, contractor equipment storage, dry cleaners with no flammable fluids, leather processing, municipal storage buildings, nursery sales stores, pavilions, pet shops, photographic supplies, printers, restaurants, shoe repair, supermarkets, theaters, vacant buildings, and most wholesale & retail sales ocuppancies.	**1.0**
	Free-Burning (C-4) = Active fuel loads such as aircraft hangers, cabinet making, combustible metals, dry cleaners using flammable fluids, feed stores, furniture stores, kennels, lumber, packaging and crating, paper products manufacturing, petroleum bulk distribution centers, tire manufacturers, tire recapping or retreading, wax products, and wood working shops.	**1.15**
	Rapid-Burning (C-5) = Contents that burn with great intensity, spontaneously ignite, have flammable or explosive vapors, or large quantities of dust such as ammunition, feed mills, fireworks, flammable compressed gases, flammable liquids, flour mills, highly flammable solids, matches, mattress factories, nitrocellulose-based products, rag storage, upholstery shops, & waste paper storage.	**1.25**
	Occupancy Factor Selected 0.85	
	Rounded GPM x Oi 637.5	

ISO Fire Flow Worksheet
Sample Continued

STEP 5 Now consider the exposure factor (Xi) - (Separation between buildings)

Distance (feet to the exposed building)	Length-Height	Frame (Xi)
0-10	80-100	0.126
	101-200	0.14
	201-300	0.14
11-20	80-100	.098
	101-200	0.126
	201-300	0.14
21-30	80-100	0.056
	101-200	0.098
	201-300	0.126
31-40	80-100	0.028
	101-200	0.07
	201-300	0.098

Distance Selected	100
Xi (from table)	0

**Length-Height Ratio is less than 80'*

Multiply GPM from step 4 by (1+Xi)
637.5 x (1+0)

Fire flow required	638

STEP 6 **Approved Fire Sprinkler System Credit** 0%

Take fire flow from step 5 and multiply by sprinkler credit of 0.25

~~159~~

Now subtract sprinkler credit from fire flow in step 5

~~**Fire Flow Required**~~	~~**478.125**~~	**N/A**

STEP 7 Take value from step 6 and
Round to nearest 250 gpm under 2,500 gpm
Round to nearest 500 gpm over 2,500 gpm

Needed Fire Flow	**750**

Notice: Fire hydrant distribution requirements are based on distance from fire hydrant to the structure. The following restrictions for fire flow apply:

Distance from hydrant to structure	Max Flow Credit (gpm per hydrant)
Within 300 feet	1,000
301 to 600 feet	670
601 to 1,000 feet	250

per LDC 6.4.4 Fire hydrant & flow requirements: Central water systems shall be designed and constructed for an economic service life of not less than 20 years and in accordance with the fire protection requirements of the Insurance Services Office.

Appendix D – Drainage Area Maps

NOTES

1. OWNER/APPLICANT: 85' AND SUNNY, LLC
   9919 STEPHEN DECATUR HIGHWAY
   OCEAN CITY, MD 21842

2. ENGINEER: QUIBLE & ASSOCIATES, P.C.
   P.O. DRAWER 870
   KITTY HAWK, NC
   TEL: (252) 491-8147

3. PROPERTY INFO: 1559 WATERLILY ROAD
   PID: 0079000004A0000
   PIN: 9908-14-7146

4. EXISTING PARCEL AREA = 13,457,862 SF / 308.95 AC (AREAS BY COORDINATE METHOD.)
   PROPOSED RECONFIGURED PARCEL AREA = 13,527,666 SF / 310.55 AC (AREAS BY COORDINATE METHOD.)
   PARCEL AREA (NOT INCLUDING WETLANDS) = 1,010,334.70 SF / 23.19 AC

5. SCOPE OF WORK: THIS PLAN PROPOSES THE ADDITION OF AN ATHLETIC FACILITY BUILDING, ASSOCIATED PARKING, DRIVE, AND RELATED SITE IMPROVEMENTS.

6. RECORDED REFERENCE: DB 1449 PG 396, PB R, PG 288;

7. ZONE: SINGLE FAMILY MAINLAND (SFM)

8. BOUNDARY INFORMATION BASED ON QUIBLE & ASSOCIATES FIELD SURVEY DATED 01/22/18 - 02/07/18 AND ALTA SURVEY DATED 6/27/18.

9. FLOOD ZONE: "AE", "SHADED X" AND "X" WITHIN THE PROPERTY BOUNDARY (SUBJECT TO CHANGE BY F.E.M.A.) FIRM PANEL 3720990800K. DATED 12/21/18. SHOWN PER COUNTY GIS.

LEGEND

- EXISTING CONCRETE
- WETLANDS BOUNDARY
- EX. OVERHEAD UTILITY LINE
- EX. FENCE
- EX. DITCH
- EX. CONCRETE MONUMENT
- EX. IRON ROD, EIR

EX DRAINAGE BASIN
TOTAL AREA = 342,330 SQ.FT. (7.86 AC.)
"WOODED CONDITION" PER COUNTY UDO = 342,330 SQ.FT. (7.86 AC.)
IMPERVIOUS = 0 SQ.FT. (0 AC)

TIME OF CONCENTRATION PATH

CURVE TABLE				
CURVE#	LENGTH	RADIUS	CHD LENGTH	CHD BEARING
C2	42.35'	25.00'	37.46'	N 35° 56' 53" E

N 12° 34' 41" W 59.14'
N 84° 28' 26" E 95.21'
S 43° 28' 39" W 454.99'
50' FARMLAND BUFFER
PROPOSED 30' EASEMENT TO THE BENEFIT OF LOT A2 & B
EX. REPAIR LPP SYSTEM HAS TO BE RELOCATED (920 GPD CAPACITY)
EX. REPAIR LPP SYSTEM HAS TO BE RELOCATED (2160 GPD CAPACITY)
5/8"ER (0.2'BS) N 905,571.44 sFT E 2,404,585.681 sFT
1/2"ER (0.2'BS)
WF90
WF91

Quible & Associates, P.C.
NC License#: C-0208 SINCE 1959
ENGINEERING** * CONSULTING * PLANNING
ENVIRONMENTAL SCIENCES * SURVEYING**
SURVEYING NOT OFFERED AT BLACK MTN. OFFICE
8466 Caratoke Hwy, Powells Point, NC 27966
Phone: (252) 491-8147
90 Church St., Ste. B, Black Mountain, NC 28711
Phone: (828) 357-5149
administrator@quible.com

PRELIMINARY NOT FOR CONSTRUCTION

EXHIBIT A - PRE DEV. DRAINAGE AREA MAP

ATHLETIC FACILITY
1559 WATERLILY ROAD

COINJOCK — CURRITUCK COUNTY — NORTH CAROLINA

GRAPHIC SCALE IN FEET 1"=80'
0 80' 160'

PROJECT	DRAWN BY	CHECKED BY	DATE
P16099.1	CMS	MWS	02/21/24

NOTES

1. OWNER/APPLICANT: 85' AND SUNNY, LLC
   9919 STEPHEN DECATUR HIGHWAY
   OCEAN CITY, MD 21842

2. ENGINEER: QUIBLE & ASSOCIATES, P.C.
   P.O. DRAWER 870
   KITTY HAWK, NC
   TEL: (252) 491-8147

3. PROPERTY INFO: 1559 WATERLILY ROAD
   PID: 0079000004A0000
   PIN: 9908-14-7146

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5. SCOPE OF WORK: THIS PLAN PROPOSES THE ADDITION OF AN ATHLETIC FACILITY BUILDING, ASSOCIATED PARKING, DRIVE, AND RELATED SITE IMPROVEMENTS.

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CURVE TABLE				
CURVE#	LENGTH	RADIUS	CHD LENGTH	CHD BEARING
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LEGEND

- EXISTING CONCRETE
- WETLANDS BOUNDARY
- EX. CONCRETE MONUMENT
- EX. IRON ROD, EIR
- PROPOSED CONTOUR
- PROPOSED SPOT GRADE (TOP OF ASPHALT UNLESS OTHERWISE NOTED)
- PROPOSED FLOW DIRECTION AND SLOPE

PROPOSED DRAINAGE BASIN
TOTAL AREA = 342,330 SQ.FT. (7.86 AC.)
OPEN SPACE = 243,239 SQ.FT. (5.58 AC.)
IMPERVIOUS = 99,090 SQ.FT. (2.27 AC)

N 12° 34' 41" W 59.14'
N 84° 28' 26" E 95.21'
S 43° 28' 39" W 396.05'
S 43° 28' 39" W O'EIR 454.99'
50' FARMLAND BUFFER
35.0' 154.0' 154.0' 35.0'

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administrator@quible.com

PRELIMINARY NOT FOR CONSTRUCTION

EXHIBIT B - POST DEV. DRAINAGE AREA MAP

ATHLETIC FACILITY
1559 WATERLILY ROAD

COINJOCK — CURRITUCK COUNTY — NORTH CAROLINA

GRAPHIC SCALE IN FEET 1"=80'
0 80' 160'

PROJECT	DRAWN BY	CHECKED BY	DATE
P16099.1	CMS	MWS	02/21/24

Appendix E – Parking Data

Health/Fitness Club
(492)

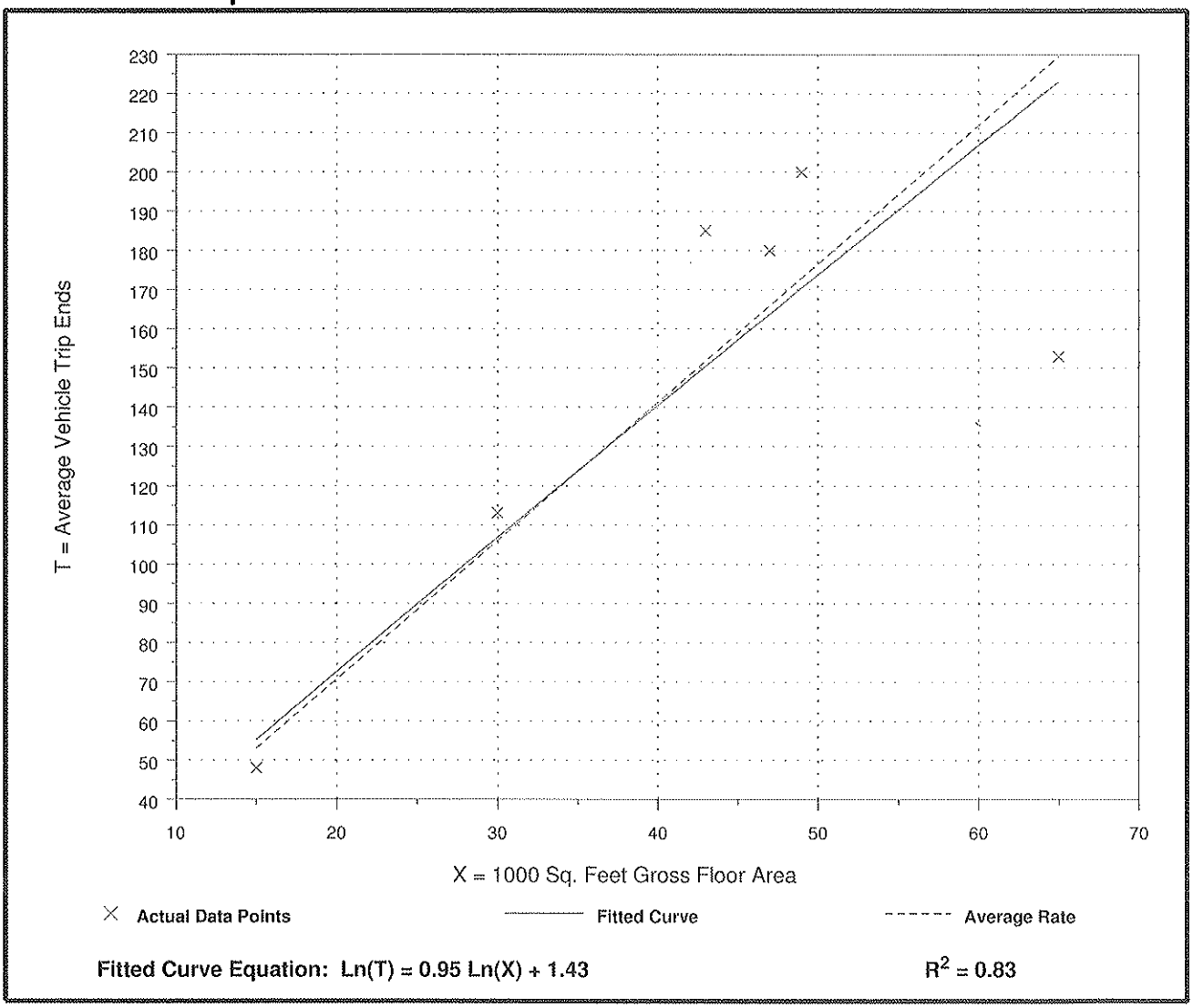
Average Vehicle Trip Ends vs: **1000 Sq. Feet Gross Floor Area**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Number of Studies: 6
Average 1000 Sq. Feet GFA: 42
Directional Distribution: 57% entering, 43% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
3.53	2.35 - 4.30	2.00

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.95 Ln(X) + 1.43

R^2 = 0.83

HEXAGON TRANSPORTATION CONSULTANTS, INC.

MEMORANDUM

TO: Yorke Lee

FROM: Gary Black
Massimo Loporto

DATE: September 4, 2009

SUBJECT: ***Trip Generation and Parking Study for the Proposed Swim Center at 12230 Saratoga Sunnyvale Road in Saratoga, California***

Hexagon Transportation Consultants, Inc. has completed a trip generation and parking analysis for the proposed indoor swim center located at 12230 Saratoga Sunnyvale Road in Saratoga, California. The project proposes to convert the existing flower shop into a swim center with two indoor pools (48 x 40 feet and 48 x 75 feet, 5,520 total s.f.) for swimming lessons. The purpose of this analysis is to estimate the number of trips generated by the proposed project and to identify any parking deficiencies.

Published Surveys and Requirements

Published parking demand ratios and trip generation rates are not available for the proposed land use. Therefore, the evaluation of parking demand and trip generation is based upon data from surveys conducted by Hexagon in August, 2009.

Surveyed Parking Demand Ratio and Trip Generation Rate

Hexagon surveyed two (2) indoor swim centers in the cities of San Jose and Fremont, to develop trip generation rates and parking demand ratios (see Tables 1 and 2). Each of the sites were surveyed on a typical weekday from 4:00-6:00 PM, which represents the peak hours for parking demand and trip generation. It should be noted that the swim center in San Jose is located within a shopping center with other land uses. Data collected was isolated to that associated with the swim center.

DACA Swim Center

DACA Swim Center is located at 1080 South De Anza Boulevard in San Jose, California, and has two (2) 20 x 60 feet (2,400 s.f.) swimming pools and has a total building size of 8,712 s.f.. DACA swim center offers year-round swimming lessons, lap swimming, and competitive teams for youths. The indoor center on De Anza Boulevard focuses on swimming lessons for younger children. The pools are not large enough to serve older children or the swim team. DACA also leases the outdoor swimming pool at De Anza College for their older students and swim teams. The indoor site was surveyed on two different days. On the first day surveyed (August 12, 2009), the swim center had a maximum of 33 parked vehicles, The trip generation was observed to be 101 trips during the PM peak hour with a 50% inbound and 50% outbound split.

Only parking was evaluated on the second day surveyed (August 25, 2009). The swim center had a maximum of 35 parked vehicles.

Calphin Swim Center

Calphin Swim Center is located at 34075 Fremont Boulevard in Fremont, California, and has two (2) indoor swimming pools (30 x 45 feet and 60 x 75 feet, 5,850 total s.f.) and has a total building size of 10,500 s.f. Calphin swim center offers year-round swimming lessons for beginners to competitive swimmers of all ages. Because the Calphin center has a larger pool, it can accommodate all ages of students and the swim teams within the same facility. Only parking was evaluated at this location. On the day the site was surveyed (August 26, 2009), the swim center had a maximum of 44 parked vehicles.

Parking Demand Analysis

It is not clear what to use as an independent variable when evaluating the swimming pool parking data (see Table 2). Hexagon calculated ratios based on building size, pool size, and number of pools. The ratio based on building size had the least variability. The average ratio was found to be 4.0 spaces per 1,000 square feet. It was initially thought that a ratio based on pool size would be useful. However, the two surveyed sites varied markedly on this statistic. The reason for the difference is thought to be the configuration of the pools: the DACA pools are smaller and cater to younger children, so more children can participate simultaneously for a given pool size.

Hexagon believes it would be most accurate to base the parking ratio on the building size, using a parking ratio of 4.0 spaces per 1,000 square feet. The proposed project site has 43 parking spaces. This calculates to an allowable building size of 10,750 square feet. The existing building that the project would occupy is larger than 10,750 square feet. Therefore, Hexagon recommends that the building be reduced in size with the project. Reducing the building size also could make room for additional parking spaces.

Another comparison could be made based on the pool size, using the Calphin center as a standard. The Calphin center had a parking demand of 7.5 spaces per square foot of pool size. Applying this ratio to the project, which is proposing 5,580 square feet of pools, yields a parking demand estimate of 41 spaces.

Trip Generation Analysis

The trip generation rate at the DACA swim center was calculated to be 11.59 PM peak hour trips per 1,000 s.f. of building space with a 50% inbound and 50% outbound split.

Based on the surveyed rates, the project would generate 126 gross PM peak-hour trips (63 inbound trips and 63 outbound trips), assuming a size of 10,750 square feet. Traffic generated by the existing flower shop on the site was obtained via driveway counts. The count indicated that the existing flower shop generates a total of 8 PM peak-hour trips (4 inbound trips and 4 outbound trips). The trips associated with the flower shop were subtracted from the gross project trips to calculate the net project trips. This procedure indicates that the proposed project would generate 118 net new PM peak-hour trips (59 inbound trips and 59 outbound trips). The trip generation estimates for the proposed project are shown in Table 4.

Conclusion

Parking for the proposed project, 43 spaces, would be adequate assuming the building was no larger than 10,750 square feet. The existing building should be reduced to this size. Such a reduction also could create room for additional parking spaces. The proposed project would generate 118 net new PM peak hour vehicle trips.

Table 1
Trip Generation Survey Summary

Location	Name	Surveyed Date	Size	Split		PM Peak Hour			
				In	Out	In	Out	Total	Rate /a/
1080 South De Anza Blvd., San Jose	DACA Swim Center	Wed, 8/12/2009	8,712 s.f.	50%	50%	50	51	101	11.59

Note:
/a/ Rate per 1,000 square feet of building size.

Table 2
Parking Survey Summary

Location	Name	Survey Date	Sizes /a/ Building Size	Pool Size	Number of Pools	Max. # of Cars Parked /b/	Ratios Demand/Building Size (ksf)	Demand/Pool Size (ksf)	Demand/Number of Pools
1080 S. De Anza Blvd., San Jose	DACA Swim Center	Wed., 8/19/2009	8,712 s.f.	2,400 s.f.	2	33	3.8	13.8	16.5
1080 S. De Anza Blvd., San Jose	DACA Swim Center	Tues., 8/25/2009	8,712 s.f.	2,400 s.f.	2	35	4.0	14.6	17.5
34075 Fremont Blvd., Fremont	Calphin Swim Center	Wed., 8/26/09	10,500 s.f.	5,850 s.f.	2	44	4.2	7.5	22
						Average:	*4.0*	*12.0*	*18.7*

Notes:
/a/ Building size, pool size, and number of pools obtained from DACA and Calphin.
/b/ Based on Hexagon studies conducted in August 2009.

Table 3
Parking Demand Analysis for the Proposed Project

Parking Use	Size	Units	Rate /a/	Parking Spaces
Swim Center	10.75	ksf	4	43
Total Parking Spaces Required For Proposed Project				***43***
Proposed Parking Spaces Provided On-Site /c/				43
Number of Surplus Parking Spaces				***0***

Notes:
/a/ Rates expressed in terms of spaces per 1,000 s.f. of swimming pool.
/b/ Parking generation rates obtained from Hexagon surveys conducted in August 2009.
/c/ Number of proposed parking spaces provided on-site obtained from project applicant.

Table 4
Trip Generation Estimate for the Proposed Project

		PM Peak Hour			
Proposed Project	Size	Rate /a/, /b/	In	Out	Total
Swim Center	10.750 ksf	11.59	63	63	126
	Total Gross Trips		63	63	126
Trip Credits Associated with Exisitng Use On Site					
Flower Shop			-4	-4	-8
	Net New Project Trips		59	59	118

Notes:
/a/ Rates expressed in terms of trips per 1,000 s.f. of building size.
/b/ Trip generation rates obtained from Hexagon surveys conducted in August 2009.

Quible

Quible & Associates, P.C.

ENGINEERING • ENVIRONMENTAL SCIENCES • PLANNING • SURVEYING
SINCE 1959

P.O. Drawer 870
Kitty Hawk, NC 27949
Phone: 252-491-8147
Fax: 252-491-8146
web: quible.com

March 27, 2024

Ms. Jennie Turner, CFM
Currituck County
Planning & Community Development
153 Courthouse Road, Suite 110
Currituck, North Carolina 27949

Re: Major Site Plan Application Resubmittal
Athletic Facility – 1559 Waterlily Rd
Coinjock, Currituck County, North Carolina

Ms. Turner,

Thank you for your comments on the above referenced project. On behalf of 85 and Sunny, LLC, Quible & Associates, P.C. hereby submits for your review the following digital documents:

1. One (1) digital copy of the revised Plan Set;
2. One (1) digital copy of the revised Recombination Plat;
3. One (1) digital copy of the State High Density Stormwater Permit and Low-Density Modification for the adjacent site;
4. One (1) digital copy of the State SESC Permit;
5. One (1) digital copy of the NCG01 NPDES Certificate of Coverage;
6. One (1) digital copy of Major Stormwater Plan Form SW-003;
7. One (1) digital copy of the building plans;
8. One (1) digital copy of the revised narrative;
9. One (1) CD containing digital copies of all the documents and plans.

A copy of the TRC review comments dated March 12, 2024 (McAdams) and March 13, 2024, are enclosed for reference, and our responses listed below for ease of review:

Planning (Jennie Turner, 252-232-6031)

1. Staff requests a site visit to review existing conditions.
The Applicant welcomes a site visit to the facilities but respectfully requests that the County provide reasonable advance notice of when they plan to conduct the site visit, check in at the welcome center when they do arrive, and limit visitation to the site area associated with this application, the athletic facility, not campground.

2. The retaining wall and driveway for visitor center should be on separate parcel. Consider required setbacks for development on both properties when locating new property lines.
Acknowledged. The recombination plat will be revised to keep the retaining wall on the campground property.

3. Any required federal or state permits shall be submitted prior to the county's approval of a major site plan including ARHS approval. *Attached to this resubmittal, we have included a copy of the State SESC Permit and High-Density Stormwater Permit. It is our understanding that ARHS has issued approval of the proposed wastewater system to the Applicant. It should also be noted that the low-density campground stormwater permit has also been amended and is included for reference.*

4. The proposed parking demand must be consistent with UDO Section 5.1.3.D. Please provide a narrative on how you propose to establish parking demand in accordance with this section. Specific references to publications must be made. *The Alternative parking plan has been expanded to better establish parking counts with added references.*

5. The proposed driveway needs to be removed from the 50' farmland buffer. Please reevaluate heritage tree impacts and submit a revised plan if needed. Ensure newly planted vegetation is not located in the 25' undisturbed portion of the farmland buffer. *Please see revised plan Sheet 3.*

6. Please provide pool plans and building plans. *Please see attached (also previously provided via email).*

7. Please describe the purpose for the 40 x 40 fenced area. *The proposed 40'x40' fenced in area is a secured exercise area for children of all ages.*

8. If included on recombination plat, please include notes regarding permit status of the water tanks. *Acknowledged, and no longer shown on enclosed draft recombination plat.*

Currituck County GIS (Harry Lee, 252-232-4039)

The address for the building will be 1559 Waterlily Rd. *Acknowledged. This has been updated in the title block and in the notes.*

Currituck County Public Utilities - Water (Will Rumsey 252-232-6065 & Dave Spence, 252-232-4152)

Under Review - Comments forthcoming *Acknowledged. These comments will be addressed under separate cover.*

Stormwater Review, (McAdams, county consultant)

1. Currituck requires that Major Stormwater Plan Form SW-002 and SW-003 be completed and submitted in addition to provided calculations. *Acknowledged. Form SW-002 was provided with the initial submittal. SW-003 has been prepared and is attached as required.*

2. The SHWT elevation is defined in the report to be 3.7 feet. Normal pool elevation of the wet pond is defined as 3.5' throughout the report, except for one instance within the narrative, where it is defined as 3.7'.
    a. Normal pool elevation cannot be below SHWT. Verify SHWT elevation and normal pool elevation of the wet pond and adjust wet pond calculations accordingly. *Please acknowledge that the pond is designed to meet the NCDEQ stormwater*

manual requirements. The SHWT is anticipated to be approximately 3.7' elevation and the permanent pool is designed to be 3.5' elevation. The current NCDEQ stormwater manual does not have requirements listed to dictate the permanent pool design elevation as it relates to SHWT, but the older design standards still listed in the current manual indicate "permanent pool shall be within 6" of the SHWT (either above or below)". This older, more stringent design requirement has been held with this design.

3. Water quality volume surface elevation is unlisted. The calculations for driving head for drawdown are unclear.
    a. Please provide additional information on water quality volume drawdown calculations. *Orifice drawdown calculations are provided on pg 6 of the stormwater calculations. Using a maximum driving head of 1.5', orifice coefficient of 0.6, required storage volume of 13,400 cf, and orifice diameter of 3" the pond would draw down in approximately 3.14 days. This is based on the State's required design storm of 1.5" and is within the 2-5 day drawdown rate.*

4. SESC Sheet #5 – Forebay berm elevation is defined at 8', which is the maximum stage storage elevation for the wet pond. The berm should allow for equalization of the forebay and main pool at the permanent pool elevation. *The forebay berm (top of rip-rap) has been set at elevation 8' (or temporary pool elevation). The intent is to maximize the forebay to settle out solids during all storms. The 8' (temporary pool elevation) up to 9.5' elevation will allow for equalization of the forebay and main pool during temporary storage. The design is set to allow for solids to settle out on within the forebay prior to discharge into the main pool and subsequent release downstream from the overflow structure. The design is not intended to equalize the permanent pool elevation as we feel that would not adequately settle out solids prior to discharge.*

5. SESC Sheet #5 – Upstream and downstream inverts of the outlet pipe in riser structure have a higher elevation than normal pool elevation than the listed normal pool elevation of 3.5'. The wet pond must have the ability to draw down to normal pool elevation. *Acknowledged. The inverts in plan view have been updated to match the outlet structure detail and a downstream swale is now shown.*

6. SESC Sheet #6 – Callouts for the wet pond detail do not match those in the plan view on Sheet #5. Correct slope call out to more accurately reflect the proposed design. *Acknowledged. This detail has been updated.*

7. SESC Sheet #6 – Callout downstream invert elevation of pipe network to the wet pond forebay. *Acknowledged. This invert has been updated.*

8. SESC Sheet #6 – Outlet structure detail call outs don't match those listed on the plan view, specifically pipe invert elevation and size. *Acknowledged. The inverts in plan view have been updated to match the outlet structure detail and a downstream swale is now shown.*

9. SESC Sheet#6 – SHWT and Permanent Pool Elevation are defined as 3.5' in this detail. SHWT is defined as 3.7' throughout the rest of the report. These values should match for

the entire report. Please note the existing SHWT is "±3.7'" so an approximate designation has been provided on this call out.

Please review the enclosed documents and our above responses at your earliest convenience. Please do not hesitate to contact Michael W. Strader, Jr., P.E., or myself at (252) 491-8147, mstrader@quible.com or ndashti@quible.com should you have any questions or require any additional information. We respectfully request that Staff continue reviewing the major site plan application package so that an approval may be issued upon receipt of State Permits and Approvals.

Sincerely,
Quible & Associates, P.C.

Nadeen Dashti, E. I.

Encl.: as stated
Cc: 85 and Sunny, LLC

NOTES

1. OWNER/APPLICANT: 85' AND SUNNY, LLC
   9919 STEPHEN DECATUR HIGHWAY
   OCEAN CITY, MD 21842

2. ENGINEER: QUIBLE & ASSOCIATES, P.C.
   P.O. DRAWER 870
   KITTY HAWK, NC
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3. PROPERTY INFO: 1559 WATERLILY ROAD
   PID: 0079000004A0000
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10. THIS PLAN SUBJECT TO ANY FACTS, INCLUDING BUILDING SETBACK RESTRICTIONS, EASEMENTS, COVENANTS, ETC., THAT MAY BE REVEALED BY A TITLE AND ACCURATE TITLE SEARCH.

11. ALL LANDSCAPING SHALL BE IN ACCORDANCE WITH CHAPTER 5.2 OF THE CURRITUCK COUNTY UNIFIED DEVELOPMENT ORDINANCE.

12. EXTERIOR LIGHTING PLAN UNDER SEPARATE COVER. ALL EXTERIOR LIGHTING SHALL BE IN ACCORDANCE WITH CHAPTER 5.4 OF THE CURRITUCK COUNTY UNIFIED DEVELOPMENT ORDINANCE.

13. REMOVE TREES, GRASSES, SHRUBS AND OTHER VEGETATION, IMPROVEMENTS OR OBSTRUCTIONS INTERFERING WITH INSTALLATION OF NEW CONSTRUCTION UNLESS NOTED OTHERWISE.

DEMOLITION NOTES:

1. CONTRACTOR SHALL LOCATE EXISTING UNDERGROUND SERVICES – TO INCLUDE BUT NOT LIMITED TO ELECTRIC, CABLE, TELEPHONE, GAS, SANITARY SEWER AND WATER – AND SHALL COORDINATE PROPER PROTECTION AND/OR RELOCATE WITH APPROPRIATE OWNER/UTILITY COMPANY.

2. CONTRACTOR SHALL WALK THE SITE AND BE FAMILIAR WITH THE SCOPE OF DEMOLITION REQUIRED. ALL DEMOLITION WORK REQUIRED TO CONSTRUCT NEW IMPROVEMENTS WILL BE PERFORMED BY THE CONTRACTOR AND BE UNCLASSIFIED EXCAVATION.

3. DEMOLITION SHALL INCLUDE BUT IS NOT LIMITED TO THE EXCAVATION, HAULING AND OFFSITE DISPOSAL OF CONCRETE CURBS AND GUTTERS, BITUMINOUS CONCRETE PAVEMENTS AND ALL MATERIALS OR VEGETATION CLEARED AND STRIPPED TO THE EXTENT NECESSARY FOR THE INSTALLATION OF NEW IMPROVEMENTS AND WITHIN THE LIMITS OF CLEARING AND GRADING. COORDINATE WITH APPROPRIATE DRAWINGS.

4. THE CONTRACTOR SHALL PROTECT ALL PROPERTY AND STRUCTURES AND UTILITIES ON THE PROPERTY NOT TO BE DEMOLISHED. DAMAGE TO THE PROPERTY DUE TO THE CONTRACTOR'S ACTIVITIES SHALL BE REPLACED IN KIND BY THE CONTRACTOR AT NO COST TO THE OWNER.

5. ALL EXISTING IMPROVEMENTS INDICATED OR REQUIRED TO BE DEMOLISHED SHALL INCLUDE REMOVAL FROM PROJECT AREA.

6. EXISTING PAVEMENT, CURB AND GUTTER, LIGHTS, FENCES, TREE/VEGETATION AND UTILITIES NOT INTENDED FOR DEMOLITION SHALL BE MAINTAINED, PROTECTED, AND UNDISTURBED DURING DEMOLITION. CONTRACTOR SHALL COORDINATE THE REMOVAL OF BITUMINOUS CONCRETE PAVEMENTS AND CURB AND GUTTER WITH THE SITE PLAN.

7. SMOOTH SAW CUT OF EXISTING PAVEMENTS, CURBS AND CURBS AND GUTTERS TO BE DEMOLISHED SHALL BE PROVIDED.

8. ALL DEMOLITION WORK SHALL BE DONE IN STRICT ACCORDANCE WITH FEDERAL, STATE AND LOCAL LAWS AS WELL AS OSHA REGULATIONS.

9. CONTRACTOR'S ACTIVITIES SHALL NOT IMPEDE USAGE OR INGRESS/EGRESS TO ADJACENT PROPERTIES. COORDINATE WITH OWNER MAINTENANCE OF TRAFFIC/PEDESTRIAN CIRCULATION DURING CONSTRUCTION.

10. MAINTAIN POSITIVE DRAINAGE AWAY FROM BUILDINGS AT ALL TIMES DURING DEMOLITION.

11. DEMOLITION SHALL NOT BEGIN UNTIL WRITTEN AUTHORIZATION IS RECEIVED FROM THE OWNER AND CONTRACTOR HAS OBTAINED THE REQUIRED PERMITS FROM ALL LOCAL, STATE, AND FEDERAL AGENCIES HAVING JURISDICTION TO AUTHORIZE DEMOLITION WORK.

12. DEMOLITION PLAN DOES NOT PURPORT TO SHOW ALL OBJECTS OR UTILITIES EXISTING ON THE SITE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE AND LOCATION OF ALL UTILITIES AND IMPROVEMENTS WITHIN THE LIMITS OF WORK. CONTRACTOR SHALL COORDINATE ALL UTILITY DISCONNECTION, (I.E. SANITARY SEWER, WATER, GAS, TELEPHONE, ELECTRIC, ETC.) TO BUILDINGS, STRUCTURES AND OTHER CONNECTIONS AS NECESSARY FOR DEMOLITION WITH THEIR RESPECTIVE UTILITY PROVIDER. ALL UTILITIES, ABOVE, ON OR BELOW GROUND SHALL BE REMOVED AS DENOTED ON THE PLAN AND SHALL MEET ALL REQUIREMENTS OF UTILITY OWNERS. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING EACH UTILITY COMPANY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES PRIOR TO BEGINNING OF WORK. BEFORE ANY DEMOLITION, THE CONTRACTOR SHALL CALL NORTH CAROLINA ONE-CALL 1-800-632-4949 TO HAVE ALL UNDERGROUND UTILITIES LOCATED ON AND NEAR THE VICINITY OF THE SITE.

13. EXISTING WATER METERS, ELECTRICAL TRANSFORMERS, TELECOMMUNICATION TERMINALS, ETC. ARE THE PROPERTY OF THE UTILITY COMPANIES SERVICING THE SITE AND CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH UTILITY OWNERS THE REMOVAL, TRANSPORTATION, AND STORAGE OF THE SAME.

14. WHERE BUILDING FOUNDATION WALLS, FOOTINGS, CONCRETE SLABS, STOOPS, PAVEMENTS, SIDEWALKS, CURB, OR CURB AND GUTTER ARE INDICATED TO BE REMOVED CONTRACTOR SHALL INCLUDE THE REMOVAL OF BASE MATERIAL DOWN TO SUB-GRADE.

15. DEMOLITION PLAN DOES NOT GUARANTEE THE ACCURACY OR QUANTITIES OF THE DEMOLITION STRUCTURES AND MATERIALS; IT WAS DEVELOPED TO ASSIST THE CONTRACTOR. IT IS EXPRESSLY STATED HEREON THAT THE OWNER OR ENGINEER WILL NOT BE RESPONSIBLE FOR INTERPRETATIONS OR CONCLUSIONS DRAWN THEREFROM BY THE CONTRACTOR.

16. ALL WASTE MATERIALS SHALL BE REMOVED FROM THE SITE DAILY IN A MANNER WHICH PREVENTS INJURY OR DAMAGE TO PERSONS, PRIVATE PROPERTY, AND/OR PUBLIC RIGHTS-OF-WAY; CONTRACTOR SHALL LEGALLY DISPOSE OF ALL DESIGNATED DEMOLITION DEBRIS FROM THE PROJECT SITE TO A DISPOSAL SITE APPROVED BY ALL AUTHORITIES HAVING JURISDICTION.

PERMANENT VEGETATION

SEEDING DATES: APRIL 1 – AUGUST 31:

SEED MIXTURE	APPLICATION RATES/ACRE
REBEL II FESCUE	130 LBS.
COMMON BERMUDA "SAHARA" (HULLED)	215 LBS.

SEEDING DATES: SEPT. 1 – MARCH 31:

SEED MIXTURE	APPLICATION RATES/ACRE
REBEL II FESCUE	250 LBS.
COMMON BERMUDA "SAHARA" (UNHULLED)	215 LBS.

TEMPORARY VEGETATION

SEEDING DATES: AUG. 16 – APRIL 15:

SEED MIXTURE	APPLICATION RATES/ACRE
RYE GRAIN	120 LBS

SEEDING DATES: APRIL 16 – AUG. 15:

SEED MIXTURE	APPLICATION RATES/ACRE
GERMAN MILLET	40 LBS

SEEDBED PREPARATION:

LOOSEN SOILS TO A DEPTH OF 6-8 INCHES USING A RIPPER, HARROW, OR CHISEL PLOW, BREAK UP CLODS, REMOVE UNACCEPTABLE GROWTH (STICKS, ROOTS), STONES (>3"), AND OTHER MATERIALS, AND WORK THE TOP 3-4 INCHES OF THE SOIL INTO A SEEDBED. THE AREA TO BE SEEDED SHALL BE RE-COMPACTED UTILIZING A CULTIPACKER ROLLER AND A SMOOTH EVEN SOIL SURFACE WITH A LOOSE, UNIFORMLY FINE TEXTURE SHALL BE THE FINISHED GRADE.

SOIL AMENDMENTS:

OBTAIN A SOIL TEST TO DETERMINE APPLICATION RATES AND FOLLOW RECOMMENDATIONS OF SOIL TESTS. WHEN A SOIL TEST IS NOT POSSIBLE, APPLY 3,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 1,000 LB/ACRE 10-10-10 STARTER FERTILIZER.

MULCHING:

APPLY 4,000 LB/ACRE GRAIN STRAW OR EQUIVALENT COVER OF ANOTHER SUITABLE MULCH. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, ROVING OR BY CRIMPING WITH A MULCH ANCHORING TOOL.

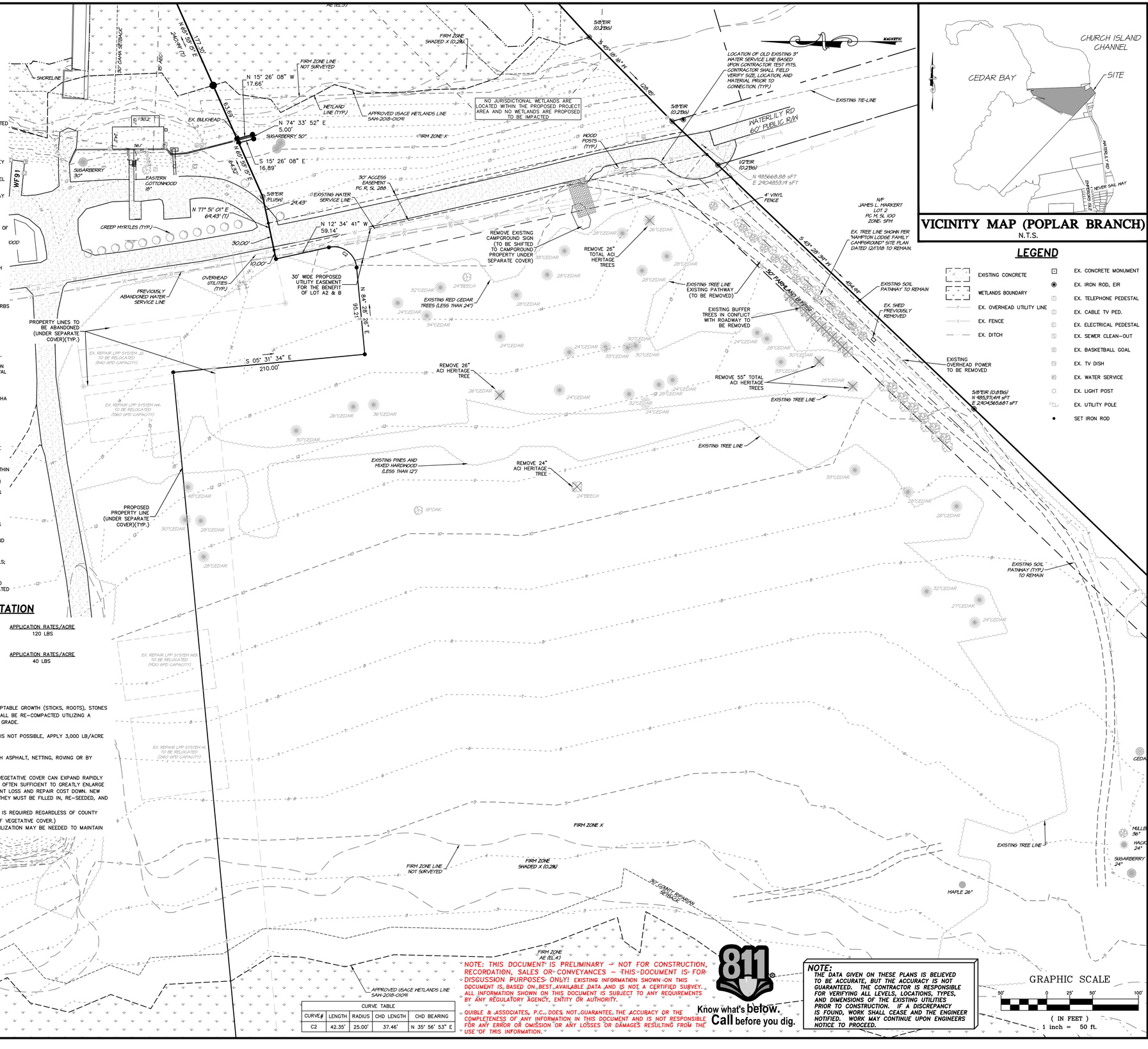
MAINTENANCE:

SATISFACTORY STABILIZATION AND EROSION CONTROL REQUIRES A COMPLETE VEGETATIVE COVER. EVEN SMALL BREACHES IN VEGETATIVE COVER CAN EXPAND RAPIDLY AND, IF LEFT UNATTENDED, CAN ALLOW SERIOUS SOIL LOSS FROM AN OTHERWISE STABLE SURFACE. A SINGLE HEAVY RAIN IS OFTEN SUFFICIENT TO GREATLY ENLARGE BARE SPOTS, AND THE LONGER REPAIRS ARE DELAYED, THE MORE COSTLY THEY BECOME. PROMPT ACTION WILL KEEP SEDIMENT LOSS AND REPAIR COST DOWN. NEW SEEDLINGS SHOULD BE INSPECTED FREQUENTLY AND MAINTENANCE PERFORMED AS NEEDED. IF RILLS AND GULLIES DEVELOP, THEY MUST BE FILLED IN, RE-SEEDED, AND MULCHED AS SOON AS POSSIBLE. DIVERSIONS MAY BE NEEDED UNTIL NEW PLANTS TAKE HOLD.

MAINTENANCE REQUIREMENTS EXTEND BEYOND THE SEEDING PHASE. (COMPLETE VEGETATIVE COVER IS REQUIRED REGARDLESS OF COUNTY ISSUANCE OF A CERTIFICATE OF OCCUPANCY AND FINAL PAYMENT WILL NOT BE AWARDED UNTIL COMPLETE ESTABLISHMENT OF VEGETATIVE COVER.) WEAK OR DAMAGED SPOTS MUST BE RELIMED, FERTILIZED, MULCHED, AND RESEEDED AS PROMPTLY AS POSSIBLE. REFERTILIZATION MAY BE NEEDED TO MAINTAIN PRODUCTIVE STANDS.

SEEDING SPECIFICATIONS

SHEET INDEX



CURVE TABLE				
CURVE #	LENGTH	RADIUS	CHD LENGTH	CHD BEARING
C2	42.35'	25.00'	37.46'	N 35° 56' 53" E

NOTE: THIS DOCUMENT IS PRELIMINARY - NOT FOR CONSTRUCTION, RECORDATION, SALES OR CONVEYANCES - THIS DOCUMENT IS FOR DISCUSSION PURPOSES ONLY! EXISTING INFORMATION SHOWN ON THIS DOCUMENT IS BASED ON BEST AVAILABLE DATA AND IS NOT A CERTIFIED SURVEY. ALL INFORMATION SHOWN ON THIS DOCUMENT IS SUBJECT TO ANY REQUIREMENTS BY ANY REGULATORY AGENCY, ENTITY OR AUTHORITY.

QUIBLE & ASSOCIATES, P.C., DOES NOT GUARANTEE THE ACCURACY OR THE COMPLETENESS OF ANY INFORMATION IN THIS DOCUMENT AND IS NOT RESPONSIBLE FOR ANY ERROR OR OMISSION OR ANY LOSSES OR DAMAGES RESULTING FROM THE USE OF THIS INFORMATION.

811 Know what's below. Call before you dig.

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GRAPHIC SCALE
50' 0 25' 50' 100'
(IN FEET)
1 inch = 50 ft.

VICINITY MAP (POPLAR BRANCH)
N.T.S.

LEGEND

EXISTING CONCRETE	EX. CONCRETE MONUMENT
WETLANDS BOUNDARY	EX. IRON ROD, EIR
EX. OVERHEAD UTILITY LINE	EX. TELEPHONE PEDESTAL
EX. FENCE	EX. CABLE TV PED.
EX. DITCH	EX. ELECTRICAL PEDESTAL
	EX. SEWER CLEAN-OUT
	EX. BASKETBALL GOAL
	EX. TV DISH
	EX. WATER SERVICE
	EX. LIGHT POST
	EX. UTILITY POLE
	SET IRON ROD

Quible & Associates, P.C.
NC License# C-0208
SINCE 1959
ENGINEERING** * CONSULTING * PLANNING
ENVIRONMENTAL SCIENCES * SURVEYING**
** NOT OFFERED AT THIS LOCATION
8446 CASTALIA HWY
BLDG 400 POINT, NC 27966
Phone: (252) 491-8147
90 CHURCH STREET
SUITE B
ROCKY MOUNT, NC 27804
Phone: (252) 353-5149

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 042462 ENGINEERING CORPORATE CERTIFICATION

NO.	DATE	REVISIONS
1	02/27/24	ISSUED FOR WASTEWATER PERMITTING
2	03/12/24	ISSUED FOR NCDEQ PERMITTING
3	03/25/24	REVISED PER TRC COMMENTS

EXISTING CONDITIONS

ATHLETIC FACILITY
1559 WATERLILLY RD
POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA

PROJECT NO.	P16099
DESIGNED BY	ND
DRAWN BY	ND
CHECKED BY	MWS
ISSUE DATE	12/12/23

SHEET NO. 1 OF 9 SHEETS

NOTES

1. OWNER/APPLICANT: 85' AND SUNNY, LLC
   9919 STEPHEN DECATUR HIGHWAY
   OCEAN CITY, MD 21842

2. ENGINEER: QUIBLE & ASSOCIATES, P.C.
   P.O. DRAWER 870
   KITTY HAWK, NC
   TEL: (252) 491-8147

3. PROPERTY INFO: 1559 WATERLILY ROAD
   PID: 007900000A0000
   PIN: 9908-14-7146

4. SCOPE OF WORK: THIS PLAN PROPOSES THE ADDITION OF AN ATHLETIC FACILITY BUILDING, ASSOCIATED PARKING, DRIVE, AND RELATED SITE IMPROVEMENTS.

5. EXISTING PARCEL AREA = 13,457,862 SF / 308.95 AC (AREAS BY COORDINATE METHOD.)
   PROPOSED RECONFIGURED PARCEL AREA = 13,527,666 SF / 310.55 AC (AREAS BY COORDINATE METHOD.)
   PARCEL AREA (NOT INCLUDING WETLANDS) = 1,010,334.70 SF / 23.19 AC

   LOT COVERAGE CALCULATIONS

BUILDINGS	958.0 SQ.FT.
POOL & POOL AREA	20,215.5 SQ.FT.
GRAVEL	1,583.0 Q.FT.
ASPHALT	76,334.0 SQ.FT.
EX. ASPHALT MILLINGS TO REMAIN	11,772.4 SQ.FT.
TOTAL	110,862.9 SQ.FT. (0.82%)
	(30% ALLOWED)

6. REQUIRED PARKING:
   NO MORE THAN 221 SWIMMERS
   @ 1 PARKING SPACE PER THREE SWIMMERS = 73.6 SPACES
   16 PLAYERS (PICKLEBALL OR BASKETBALL)
   @ 1 SPACE PER PLAYER = 16 SPACES
   NO MORE THAN 10 EMPLOYEES
   @ PEAK SHIFT @ 1 SPACE PER EMPLOYEE = 10 SPACES
   TOTAL PARKING REQUIRED= 100 SPACES
   TOTAL PARKING PROVIDED= 104 SPACES (2 ADA SPACES)

7. RECORDED REFERENCE: DB 1449 PG 396, PB R, PG 288;

8. ZONE: SINGLE FAMILY MAINLAND (SFM)

9. MAXIMUM BUILDING HEIGHT: 35'

10. BOUNDARY INFORMATION BASED ON QUIBLE & ASSOCIATES FIELD SURVEY DATED 01/22/18 – 02/07/18 AND ALTA SURVEY DATED 6/27/18.

11. FLOOD ZONE: "AE", "SHADED X" AND "X" WITHIN THE PROPERTY BOUNDARY (SUBJECT TO CHANGE BY F.E.M.A.) FIRM PANEL 3720990800K. DATED 12/21/18. SHOWN PER COUNTY GIS.

12. ALL LANDSCAPING SHALL BE IN ACCORDANCE WITH CHAPTER 5.2 OF THE CURRITUCK COUNTY UNIFIED DEVELOPMENT ORDINANCE.

13. ALL UTILITIES SERVING THIS SITE WILL BE PLACED UNDERGROUND.

14. STORMWATER MANAGEMENT:
    RUNOFF FROM ALL PROPOSED IMPROVEMENTS WILL BE COLLECTED AND CONVEYED INTO A WET DETENTION BASIN LOCATED ON THE SOUTHERN SIDE OF THE DEVELOPMENT.

15. THIS PLAN SET TO BE UTILIZED FOR THE INSTALLATION OF SITE LAYOUT IMPROVEMENTS INCLUDING BUT NOT LIMITED TO GRADING & DRAINAGE, INSTALLATION OF SEDIMENT CONTROL MEASURES, WASTEWATER IMPROVEMENTS, AND WATER SYSTEM. FOR BUILDING DESIGN AND ASSOCIATED PLUMBING, SEE APPROPRIATE SEPARATE PLANS.

16. THIS PLAN SUBJECT TO ANY FACTS, INCLUDING BUILDING SETBACK RESTRICTIONS, EASEMENTS, COVENANTS, ETC., THAT MAY BE REVEALED BY A FULL AND ACCURATE TITLE SEARCH.

17. ALL EXTERIOR LIGHTING SHALL BE IN ACCORDANCE WITH CHAPTER 5.4 OF THE CURRITUCK COUNTY UNIFIED DEVELOPMENT ORDINANCE. LIGHTING PLAN PROVIDED UNDER SEPARATE COVER.

18. REMOVE TREES, GRASSES, SHRUBS AND OTHER VEGETATION, IMPROVEMENTS OR OBSTRUCTIONS INTERFERING WITH INSTALLATION OF NEW CONSTRUCTION UNLESS NOTED OTHERWISE.

19. PRIOR TO LAND DISTURBANCE, A STATE APPROVED SOIL EROSION AND SEDIMENTATION CONTROL PLAN IS REQUIRED.

20. BUILDING CONSTRUCTION SHALL COMPLY WITH ALL ASPECTS OF THE NORTH CAROLINA BUILDING AND FIRE CODE.

21. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT ALL PROPERTY MONUMENTS DURING CONSTRUCTION. DISTURBED OR REMOVED PROPERTY MONUMENTS SHALL BE REPLACED BY A NORTH CAROLINA LICENSED PROFESSIONAL LAND SURVEYOR.

22. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE DRAWINGS, APPLICABLE CURRITUCK COUNTY CODES AND ORDINANCES, AND NCDEQ DIVISION OF ENERGY, MINERAL AND LAND RESOURCES REGULATIONS. FILL IS NOT PROPOSED OR ALLOWED WITHIN 10' OF THE PROPERTY LINE.

23. THE LOCATION, DIMENSIONS, AND ELEVATION OF EXISTING STRUCTURES, PIPING, AND UTILITIES SHOWN ARE BASED ON THE BEST AVAILABLE DATA AND ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL DATA IN THE FIELD PRIOR TO CONSTRUCTION TO HIS/HER OWN SATISFACTION. THE CONTRACTOR SHALL PERFORM ANY TEST PIT WORK OR PROVIDE LOCATION SERVICES AS REQUIRED TO AVOID CONFLICTS WITH EXISTING UTILITIES. CONTACT NORTH CAROLINA ONE-CALL AT TELEPHONE NO. 1-800-632-4949, 48 HOURS PRIOR TO PERFORMING ANY EXCAVATION TO HAVE UTILITIES MARKED.

24. THE CONTRACTOR SHALL PROVIDE SMOOTH TRANSITIONS FROM PROPOSED FEATURES TO EXISTING FEATURES AS NECESSARY.

25. THE CONTRACTOR SHALL SEAL THE EDGE OF EXISTING ASPHALT PAVEMENT WITH TACK COAT IN ACCORDANCE WITH THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS WHERE NEW PAVEMENT JOINS EXISTING PAVEMENT. ALL WORK WITHIN NCDOT R/W SHALL BE CONSTRUCTED IN ACCORDANCE WITH NCDOT STANDARDS AND SPECIFICATIONS.

26. ALL PAVEMENT JOINTS SHALL BE SAW-CUT PRIOR TO PAVING TO PROVIDE A DURABLE AND UNIFORM JOINT.

27. ALL PAVEMENT MARKINGS, TEXT AND DIRECTIONAL ARROWS SHALL BE PAINTED WHITE. ALL LETTERING SHALL BE 2ft. IN HEIGHT. LINES SHALL BE 4" WIDE. CROSSWALK AND LOADING AREAS, SET 4" WHITE LINES ON A 45° ANGLE.

28. PROOF ROLL ALL NEW PAVED AREAS. NOTIFY OWNER AND ENGINEER OF ANY UNACCEPTABLE AREAS.

29. WATER IS PROVIDED VIA CURRITUCK COUNTY WATER SYSTEM. ALL WATER IMPROVEMENTS SHALL BE IN ACCORDANCE WITH CURRITUCK COUNTY STANDARD WATER SPECIFICATIONS AND DETAILS.

WASTEWATER NOTES

1. CONTRACTOR IS RESPONSIBLE FOR LOCATING EXISTING UNDERGROUND UTILITIES IN AREAS OF WORK PRIOR TO ANY WORK. PROVIDE ADEQUATE MEANS OF SUPPORT AND PROTECTION IF UTILITIES ARE TO REMAIN IN PLACE.

2. REMOVE TREES, GRASSES, SHRUBS AND OTHER VEGETATION, IMPROVEMENTS OR OBSTRUCTIONS INTERFERING WITH INSTALLATION OF NEW CONSTRUCTION UNLESS NOTED OTHERWISE.

3. NEW WASTEWATER SYSTEM DESIGN PARAMETERS:

   DESIGN FLOW: 104 PARKING SPACES AT 10 GPD, 8 EMPLOYEES AT 25 GPD, AND 2 COURTS AT 50 GPD = 1,340 GPD.

   ACTIVE: LONG TERM APPLICATION RATE (LTAR): 0.25 GPD/SQ.FT. FOR AN LPP SYSTEM.
   (14) 77' LINES @ 5' O.C. (1,078 LN. FT. TOTAL)

   REPAIR: 5,390 SQ. FT.

4. UNLESS OTHERWISE INDICATED ON THE PLAN, CONSTRUCTION OF SEWAGE COLLECTION, TREATMENT AND DISPOSAL SYSTEM IS TO CONFORM WITH SECTION .1900 "LAWS AND RULES FOR SEWAGE TREATMENT AND DISPOSAL SYSTEMS" OF NORTH CAROLINA ADMINISTRATIVE CODE, DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES, DIVISION OF ENVIRONMENTAL HEALTH, ON-SITE WASTEWATER SECTION (15 NCAC 18A.1900).

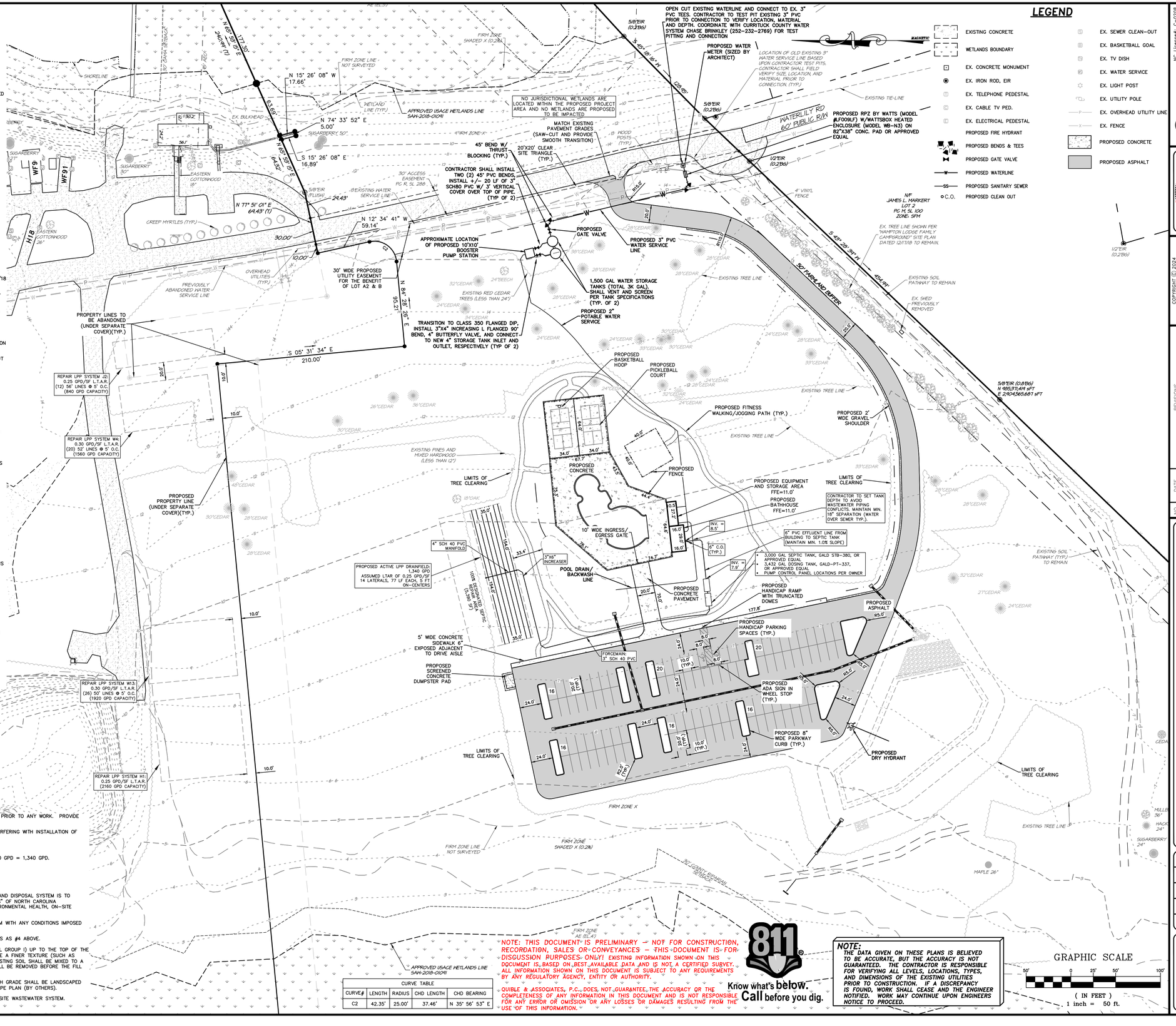
5. CONSTRUCTION OF SEWAGE COLLECTION SYSTEM, TREATMENT AND DISPOSAL SYSTEM IS TO CONFORM WITH ANY CONDITIONS IMPOSED BY THE LOCAL HEALTH DEPARTMENT.

6. MATERIAL USED FOR COLLECTION AND DISPOSAL SYSTEM SHALL CONFORM WITH SAME REQUIREMENTS AS #4 ABOVE.

7. FILL MATERIAL SHALL HAVE SUCH SOIL TEXTURE TO BE CLASSIFIED AS SAND OR LOAMY SAND (SOIL GROUP I) UP TO THE TOP OF THE NITRIFICATION TRENCHES. THE FINAL SIX INCHES OF FILL USED TO COVER THE SYSTEM SHALL HAVE A FINER TEXTURE (SUCH AS GROUP II, III) FOR THE ESTABLISHMENT OF A VEGETATIVE COVER. THE FILL MATERIAL AND THE EXISTING SOIL SHALL BE MIXED TO A DEPTH OF SIX INCHES BELOW THE INTERFACE. HEAVY VEGETATIVE COVER OR ORGANIC LITTER SHALL BE REMOVED BEFORE THE FILL MATERIAL IS INCORPORATED.

8. ALL SURFACE RUNOFF SHALL BE DIVERTED AROUND AND AWAY FROM THE DRAINFIELD AREA. FINISH GRADE SHALL BE LANDSCAPED TO PREVENT PONDING OF SURFACE WATER. VEGETATE DRAINFIELD AREA AS SPECIFIED IN LANDSCAPE PLAN (BY OTHERS).

9. AN AUTHORIZATION TO CONSTRUCT MUST BE OBTAINED FROM ARHS PRIOR TO INSTALLATION OF ONSITE WASTEWATER SYSTEM.



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(IN FEET)
1 inch = 50 ft.

Quible & Associates, P.C.
NC License# C-0208
SINCE 1959
ENGINEERING** * CONSULTING * PLANNING
ENVIRONMENTAL SCIENCES * SURVEYING**
** NOT OFFERED TO THE PUBLIC
8446 CASTALIA HWY
BLDG 400 POINT, NC 27966
Phone: (252) 491-8147
Phone: (828) 357-5149
90 CHURCH STREET
SUITE 8
BILTMORE MOUNTAIN, NC 28711

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 049181 CATHLEEN M. SIMS
PRELIMINARY NOT FOR CONSTRUCTION
CERTIFICATION

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3	03/25/24	REVISED PER TRC COMMENTS

PROPOSED SITE & UTILITY PLAN

ATHLETIC FACILITY
1559 WATERLILLY RD

NORTH CAROLINA
POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY

PROJECT NO. P16099
DESIGNED BY ND
DRAWN BY ND
CHECKED BY MWS
ISSUE DATE 12/12/23

SHEET NO. 2 OF 9 SHEETS

NOTES

1. OWNER/APPLICANT: 85' AND SUNNY, LLC
   9919 STEPHEN DECATUR HIGHWAY
   OCEAN CITY, MD 21842

2. ENGINEER: QUIBLE & ASSOCIATES, P.C.
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   TEL: (252) 491-8147

3. PROPERTY INFO: 1559 WATERLILY ROAD
   PID: 0079000004A0000
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   PARCEL AREA (NOT INCLUDING WETLANDS) = 1,010,334.70 SF / 23.19 AC

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6. RECORDED REFERENCE: DB 1449 PG 396, PB R, PG 288;

7. ZONE: SINGLE FAMILY MAINLAND (SFM)

8. BUFFERYARDS:
   NORTH N/A
   SOUTH 50' FARMLAND BUFFER (UTILIZE EXISTING VEGETATION, FENCE, 13 PROPOSED LIVE OAKS, AND 13 PROPOSED CEDAR TREES TO BE PROVIDED)
   EAST N/A
   WEST N/A

9. BOUNDARY INFORMATION BASED ON QUIBLE & ASSOCIATES FIELD SURVEY DATED 01/22/18 – 02/07/18 AND ALTA SURVEY DATED 6/27/18.

10. FLOOD ZONE: "AE", "SHADED X" AND "X" WITHIN THE PROPERTY BOUNDARY (SUBJECT TO CHANGE BY F.E.M.A.) FIRM PANEL 3720990800K. DATED 12/21/18. SHOWN PER COUNTY GIS.

11. THIS PLAN SUBJECT TO ANY FACTS, INCLUDING BUILDING SETBACK RESTRICTIONS, EASEMENTS, COVENANTS, ETC., THAT MAY BE REVEALED BY A FULL AND ACCURATE TITLE SEARCH.

12. ALL LANDSCAPING SHALL BE IN ACCORDANCE WITH CHAPTER 5.2 OF THE CURRITUCK COUNTY UNIFIED DEVELOPMENT ORDINANCE.

13. EXTERIOR LIGHTING PLAN UNDER SEPARATE COVER. ALL EXTERIOR LIGHTING SHALL BE IN ACCORDANCE WITH CHAPTER 5.4 OF THE CURRITUCK COUNTY UNIFIED DEVELOPMENT ORDINANCE.

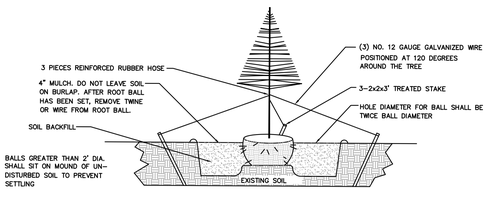
14. REMOVE TREES, GRASSES, SHRUBS AND OTHER VEGETATION, IMPROVEMENTS OR OBSTRUCTIONS INTERFERING WITH INSTALLATION OF NEW CONSTRUCTION UNLESS NOTED OTHERWISE.

15. PRIOR TO LAND DISTURBANCE, A STATE APPROVED SOIL EROSION AND SEDIMENTATION CONTROL PLAN IS REQUIRED.

16. FOUR (4) HERITAGE TREES ARE PROPOSED TO BE REMOVED WITH A TOTAL MITIGATION ACI OF 66". ONSITE MITIGATION TO INCLUDE INSTALLATION OF NINE (9) ADDITIONAL 2" ACI LIVE OAKS AND TWENTY-FOUR (24) 2" ACI TREES WITHIN THE SITE.

LEGEND

- EXISTING ASPHALT PAVEMENT
- EXISTING CONCRETE
- WETLANDS BOUNDARY
- EX. CONCRETE MONUMENT
- EX. IRON ROD, EIR
- EX. TELEPHONE PEDESTAL
- EX. CABLE TV PED.
- EX. ELECTRICAL PEDESTAL
- EXISTING TREES
- PROPOSED TREES/SHRUBS
- EX. SEWER CLEAN-OUT
- EX. BASKETBALL GOAL
- EX. TV DISH
- EX. WATER SERVICE
- EX. LIGHT POST
- EX. UTILITY POLE
- EX. OVERHEAD UTILITY LINE
- EX. FENCE
- PROPOSED CONCRETE
- PROPOSED ASPHALT



TREE PLANTING DETAIL

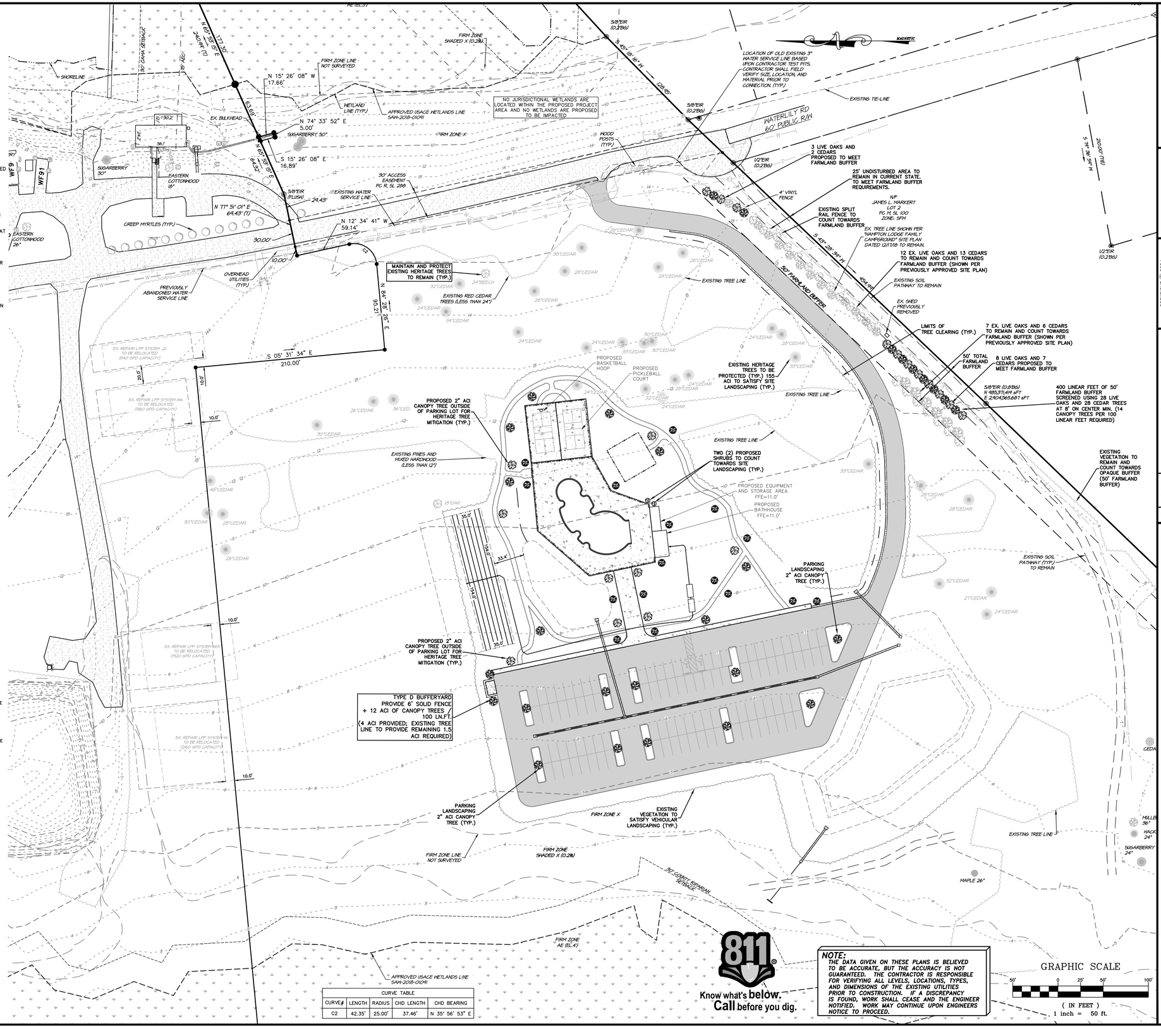
N.T.S.

SYMBOL	QUANTITY	COMMON NAME	HEIGHT	SPREAD	MIN. SIZE @ PLANTING
	20	LIVE OAK	50' – 75'	25' – 40'	2" CAL, 8' HT.
	29	EASTERN RED CEDAR*	30' – 40'	10' – 20'	2" CAL, 8' HT.
	8	BALD CYPRESS*	50' – 100'.	20' – 30'	2" CAL, 8' HT.
	8	RED MAPLE*	40' – 50'	25' – 45'	2" CAL, 8' HT.
	2	DWARF YAUPON HOLLY***	3' – 5'	3' – 6'	3 GALLON

* CANOPY TREE SPECIES MAY BE SUBSTITUTED WITH THE SPECIES IDENTIFIED IN TABLE 3.4.6. OF THE CURRITUCK ADMINISTRATIVE MANUAL WITH COUNTY APPROVAL.

** UNDERSTORY TREE SPECIES MAY BE SUBSTITUTED WITH THE SPECIES IDENTIFIED IN TABLE 3.4.6. OF THE CURRITUCK ADMINISTRATIVE MANUAL WITH COUNTY APPROVAL.

*** COORDINATE INSTALLATION WITH OWNER. ORNAMENTAL SHRUB/GRASS SPECIES MAY BE SUBSTITUTED WITH THE SPECIES IDENTIFIED IN TABLE 3.4.6. OF THE CURRITUCK ADMINISTRATIVE MANUAL WITH COUNTY APPROVAL.



CURVE TABLE				
CURVE #	LENGTH	RADIUS	CHD LENGTH	CHD BEARING
C2	42.35'	25.00'	37.46'	N 35° 56' 53" E

811 Know what's below. Call before you dig.

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GRAPHIC SCALE
50' 0 25' 50' 100'
(IN FEET)
1 inch = 50 ft.

Quible & Associates, P.C.
SINCE 1959
ENGINEERING** * CONSULTING * PLANNING
ENVIRONMENTAL SCIENCES * SURVEYING**
NC License# C-0208
8446 CASTAWAY HWY
BLDG 4D1 POINT, NC 27966
Phone: (252) 491-8147
8446 CASTAWAY HWY
SUITE B
POINT MOUNTAIN, NC 28711
Phone: (828) 357-5149
quiblesurveying@gmail.com

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 049705 CATHERINE M. SAUNDERS — CERTIFICATION

REVISIONS

NO.	DATE	
1	02/27/24	ISSUED FOR WASTEWATER PERMITTING
2	03/12/24	ISSUED FOR NCDEQ PERMITTING
3	03/25/24	REVISED PER TRC COMMENTS

LANDSCAPING PLAN

ATHLETIC FACILITY
1559 WATERLILLY RD
POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA

PROJECT NO.	P16099
DESIGNED BY	ND
DRAWN BY	ND
CHECKED BY	MWS
ISSUE DATE	12/12/23

SHEET NO. 3 OF 9 SHEETS

NOTES

1. OWNER/APPLICANT: 85' AND SUNNY, LLC
   9919 STEPHEN DECATUR HIGHWAY
   OCEAN CITY, MD 21842

2. ENGINEER: QUIBLE & ASSOCIATES, P.C.
   P.O. DRAWER 870
   KITTY HAWK, NC
   TEL: (252) 491-8147

3. PROPERTY INFO: 1559 WATERLILY ROAD
   PID: 0079000004A0000
   PIN: 9908-14-7146

4. EXISTING PARCEL AREA = 13,457,862 SF / 308.95 AC (AREAS BY COORDINATE METHOD.)
   PROPOSED RECONFIGURED PARCEL AREA = 13,527,666 SF / 310.55 AC (AREAS BY COORDINATE METHOD.)
   PARCEL AREA (NOT INCLUDING WETLANDS) = 1,010,334.70 SF / 23.19 AC

5. SCOPE OF WORK: THIS PLAN PROPOSES THE ADDITION OF AN ATHLETIC FACILITY BUILDING, ASSOCIATED PARKING, DRIVE, AND RELATED SITE IMPROVEMENTS.

6. RECORDED REFERENCE: DB 1449 PG 396, PB R, PG 288;

7. ZONE: SINGLE FAMILY MAINLAND (SFM)

8. BOUNDARY INFORMATION BASED ON QUIBLE & ASSOCIATES FIELD SURVEY DATED 01/22/18 – 02/07/18 AND ALTA SURVEY DATED 6/27/18.

9. FLOOD ZONE: "AE", "SHADED X" AND "X" WITHIN THE PROPERTY BOUNDARY (SUBJECT TO CHANGE BY F.E.M.A.) FIRM PANEL 3720990800K. DATED 12/21/18. SHOWN PER COUNTY GIS.

10. STORMWATER MANAGEMENT: RUNOFF FROM ALL PROPOSED IMPROVEMENTS WILL BE COLLECTED AND CONVEYED INTO AN WET POND LOCATED ON THE SOUTHWESTERN SIDE OF THE DEVELOPMENT.

11. THIS PLAN SUBJECT TO ANY FACTS, INCLUDING BUILDING SETBACK RESTRICTIONS, EASEMENTS, COVENANTS, ETC., THAT MAY BE REVEALED BY A FULL AND ACCURATE TITLE SEARCH.

12. ALL UTILITIES SERVING THIS SITE WILL BE PLACED UNDERGROUND.

13. HANDICAP PARKING SPACES SHALL NOT EXCEED 2% GRADE.

14. AREAS OF FILL SHALL BE EXCAVATED TO COMPACTED SUBGRADE AND BACKFILLED IN 6" LIFTS.

15. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN AND PROTECT ALL UNDERGROUND & ABOVE GROUND UTILITIES, EXISTING PAVEMENT SURFACES, EXISTING CULVERTS AND EXISTING PROPERTY MONUMENTS DURING CONSTRUCTION. DISTURBED OR REMOVED PROPERTY MONUMENTS SHALL BE REPLACED BY A NORTH CAROLINA LICENSED PROFESSIONAL LAND SURVEYOR.

16. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE DRAWINGS, APPLICABLE CURRITUCK COUNTY CODES AND ORDINANCES, AND NCDEQ DIVISION OF ENERGY, MINERAL AND LAND RESOURCES REGULATIONS.

17. THE LOCATION, DIMENSIONS, AND ELEVATION OF EXISTING UTILITIES SHOWN ARE BASED ON THE BEST AVAILABLE DATA. THE CONTRACTOR SHALL VERIFY ALL DATA IN THE FIELD PRIOR TO CONSTRUCTION TO HIS/HER OWN SATISFACTION. THE CONTRACTOR SHALL PERFORM ANY TEST PIT WORK OR PROVIDE LOCATION SERVICES AS REQUIRED TO AVOID CONFLICTS WITH EXISTING UTILITIES. CONTACT NORTH CAROLINA ONE-CALL AT TELEPHONE NO. 1-800-632-4949, 48 HOURS PRIOR TO PERFORMING ANY EXCAVATION TO HAVE UTILITIES MARKED.

18. THE CONTRACTOR SHALL PROVIDE SMOOTH TRANSITIONS FROM PROPOSED FEATURES TO EXISTING FEATURES AS NECESSARY.

19. THE CONTRACTOR SHALL SEAL THE EDGE OF EXISTING ASPHALT PAVEMENT WITH TACK COAT IN ACCORDANCE WITH THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS WHERE NEW PAVEMENT JOINS EXISTING PAVEMENT.

20. ALL PAVEMENT JOINTS SHALL BE SAW-CUT PRIOR TO PAVING TO PROVIDE A DURABLE AND UNIFORM JOINT.

21. PROOF ROLL ALL NEW PAVED AREAS. NOTIFY OWNER AND ENGINEER OF ANY UNACCEPTABLE AREAS.

22. CONTRACTOR SHALL PROVIDE SMOOTH TRANSITION BETWEEN SPOT ELEVATION GRADES AND MAINTAIN POSITIVE DRAINAGE.

23. REMOVE TREES, GRASSES, SHRUBS AND OTHER VEGETATION, IMPROVEMENTS OR OBSTRUCTIONS INTERFERING WITH INSTALLATION OF NEW CONSTRUCTION UNLESS NOTED OTHERWISE.

24. ALL PIPES TO BE CLASS IV REINFORCED CONCRETE, UNLESS OTHERWISE NOTED.

25. ALL REINFORCED CONCRETE PIPES (RCP) TO HAVE END TREATMENTS, EITHER FLARED END SECTIONS (FES) OR END WALLS. END WALLS TO BE CONSTRUCTED AS PER NCDOT STANDARD 838.01.

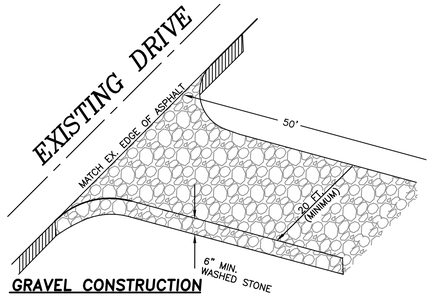
26. PRIOR TO LAND DISTURBANCE, A STATE APPROVED SOIL EROSION AND SEDIMENTATION CONTROL PLAN IS REQUIRED.

27. THIS DEVELOPMENT REQUIRES THE APPROVAL AND ISSUANCE OF A HIGH DENSITY STORWATER PERMIT FROM NORTH CAROLINA DIVISION OF WATER QUALITY (DWQ). THE PROJECT ULTIMATELY DRAINS TO THE CURRITUCK SOUND (30-1) WITHIN THE PASQUOTANK RIVER BASIN AND IS CLASSIFIED SC.

CONSTRUCTION & MAINTENANCE NOTES:

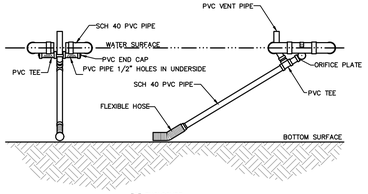
1. CLEAR THE ENTRANCE AND EXIT AREA OF ALL VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL AND PROPERLY GRADE IT.
2. PLACE THE GRAVEL TO THE SPECIFIC GRADE AND DIMENSIONS SHOWN ON THE PLANS, AND SMOOTH IT.
3. PROVIDE DRAINAGE TO CARRY WATER TO A SEDIMENT TRAP OR OTHER SUITABLE OUTLET.
4. USE GEOTEXTILE FABRICS BECAUSE THEY IMPROVE STABILITY OF THE FOUNDATION IN LOCATIONS SUBJECT TO SEEPAGE OR HIGH WATER TABLE.

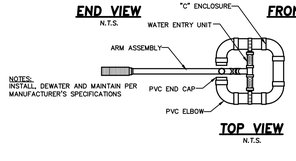
MAINTENANCE: MAINTAIN THE GRAVEL PAD IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 2-INCH STONE. AFTER EACH RAINFALL, INSPECT ANY STRUCTURE USED TO TRAP SEDIMENT AND CLEAN IT OUT AS NECESSARY. IMMEDIATELY REMOVE ALL OBJECTIONABLE MATERIALS SPILLED, WASHED, OR TRACKED ONTO PUBLIC ROADWAYS.



GRAVEL CONSTRUCTION ENTRANCE/EXIT DETAIL

N.T.S





END VIEW N.T.S. FRONT VIEW N.T.S.

TOP VIEW N.T.S.

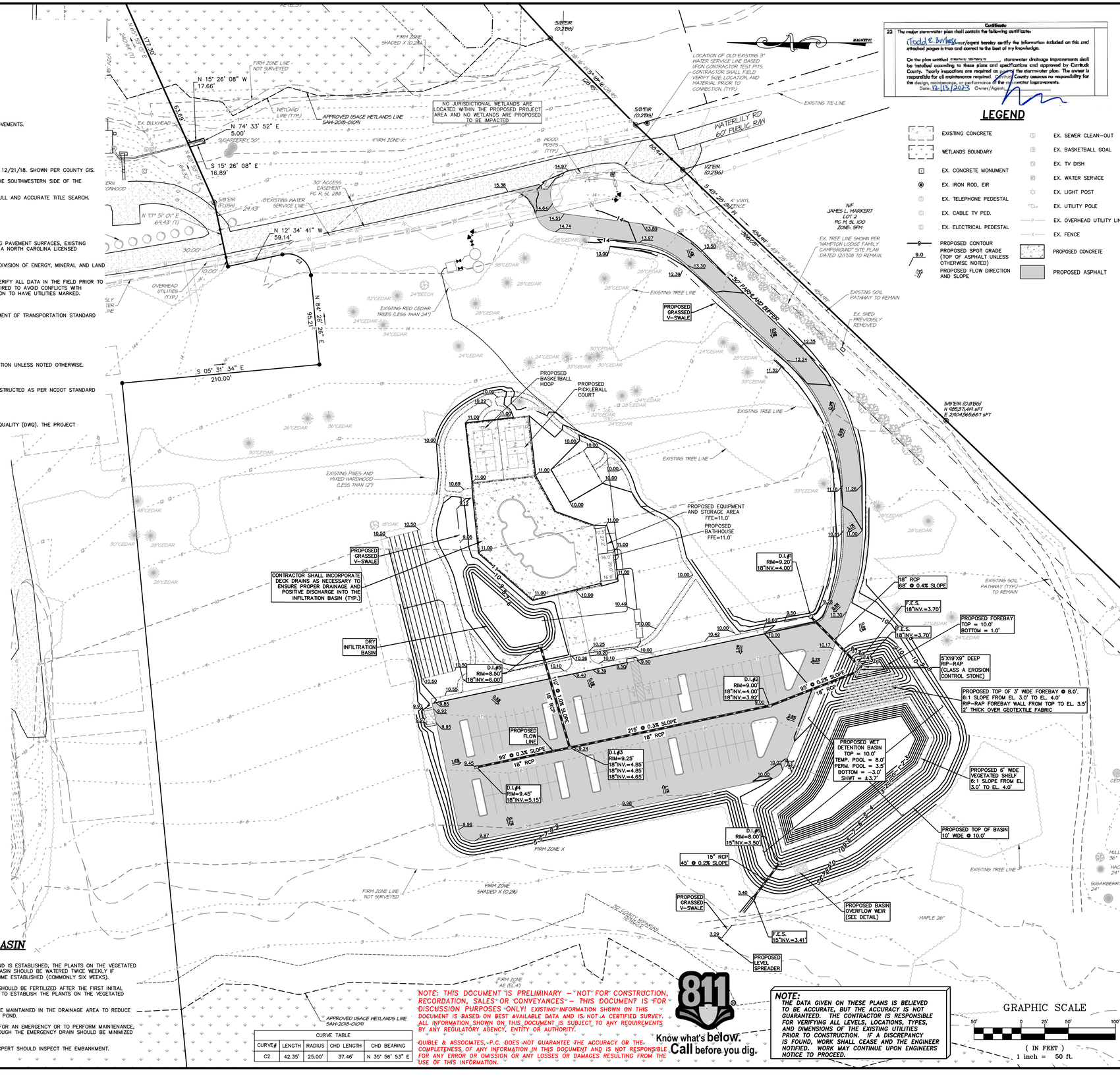
SKIMMER DETAIL

N.T.S.

WET DETENTION BASIN

MAINTENANCE

1. IMMEDIATELY AFTER THE WET POND IS ESTABLISHED, THE PLANTS ON THE VEGETATED SHELF AND PERIMETER OF THE BASIN SHOULD BE WATERED TWICE WEEKLY IF NEEDED, UNTIL THE PLANTS BECOME ESTABLISHED (COMMONLY SIX WEEKS).
2. NO PORTION OF THE WET POND SHOULD BE FERTILIZED AFTER THE FIRST INITIAL FERTILIZATION THAT IS REQUIRED TO ESTABLISH THE PLANTS ON THE VEGETATED SHELF.
3. STABLE GROUNDCOVER SHOULD BE MAINTAINED IN THE DRAINAGE AREA TO REDUCE THE SEDIMENT LOAD TO THE WET POND.
4. IF THE POND MUST BE DRAINED FOR AN EMERGENCY OR TO PERFORM MAINTENANCE, THE FLUSHING OF SEDIMENT THROUGH THE EMERGENCY DRAIN SHOULD BE MINIMIZED AS MUCH AS POSSIBLE.
5. ONCE A YEAR, A DAM SAFETY EXPERT SHOULD INSPECT THE EMBANKMENT.



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(IN FEET)
1 inch = 50 ft.

CertBlock

22 The major stormwater plan shall contain the following certificates:

I, Todd E. Burgess, engineer/agent hereby certify the information included on this and attached pages is true and correct to the best of my knowledge.

On the plan entitled athletic facility - 1559 waterlily rd, stormwater drainage improvements shall be installed according to these plans and specifications and approved by Currituck County. Yearly inspections are required to monitor the stormwater plan. The owner is responsible for all maintenance required. Currituck County assumes no responsibility for the design, maintenance, or performance of the stormwater improvements.

Date: 12/13/2023 Owner/Agent:

LEGEND

- EXISTING CONCRETE
- WETLANDS BOUNDARY
- EX. CONCRETE MONUMENT
- EX. IRON ROD, EIR
- EX. TELEPHONE PEDESTAL
- EX. CABLE TV PED.
- EX. ELECTRICAL PEDESTAL
- EX. SEWER CLEAN-OUT
- EX. BASKETBALL GOAL
- EX. TV DISH
- EX. WATER SERVICE
- EX. LIGHT POST
- EX. UTILITY POLE
- EX. OVERHEAD UTILITY LINE
- EX. FENCE
- PROPOSED CONTOUR
- PROPOSED SPOT GRADE (TOP OF ASPHALT UNLESS OTHERWISE NOTED)
- PROPOSED FLOW DIRECTION AND SLOPE
- PROPOSED CONCRETE
- PROPOSED ASPHALT

Quible & Associates, P.C.
NC License# C-0208 SINCE 1959
ENGINEERING** * CONSULTING * PLANNING
ENVIRONMENTAL SCIENCES * SURVEYING**
**NOT FOR BIDDING OR CONSTRUCTION
846 CABANA HWY
BLDG 400 POINT, NC 27966
Phone: (252) 491-8147
90 CHURCH STREET
SUITE B
KITTY HAWK, NC 27949
Phone: (828) 357-5149

NORTH CAROLINA SURVEYING CERTIFICATION
I CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION (DEED DESCRIPTION RECORDED IN BOOK 1449, PAGE 396, ETC.) (OTHER); THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN FROM INFORMATION FOUND IN BOOK 1449, PAGE 396, ETC.; THAT THE RATIO OF PRECISION AS CALCULATED IS 1:10,000+; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED. WITNESS MY ORIGINAL SIGNATURE, REGISTRATION NUMBER AND SEAL THIS 12TH DAY OF DECEMBER, A.D. 2023.
NOT FOR CONSTRUCTION
SEAL L-4884 CATHERINE M. SHOCKLEY

NO.	DATE	REVISIONS
1	02/27/24	ISSUED FOR WASTEWATER PERMITTING
2	03/12/24	ISSUED FOR NCDEQ PERMITTING
3	03/25/24	REVISED PER TRC COMMENTS

GRADING & DRAINAGE PLAN

ATHLETIC FACILITY
1559 WATERLILLY RD

NORTH CAROLINA
POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY

PROJECT NO. P16099
DESIGNED BY ND
DRAWN BY ND
CHECKED BY MWS
ISSUE DATE 12/12/23

SHEET NO. 4 OF 9 SHEETS

D:\JOBS\P16099\Drawings\Athletic Facility\P16099 BMP ATHLETIC FACILITY.dwg 3/27/2024 9:27 AM Winston

NOTES

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   9919 STEPHEN DECATUR HIGHWAY
   OCEAN CITY, MD 21842

2. ENGINEER: QUIBLE & ASSOCIATES, P.C.
   P.O. DRAWER 870
   KITTY HAWK, NC
   TEL: (252) 491-8147

3. PROPERTY INFO: 1559 WATERLLY ROAD
   PID: 0079000004A0000
   PIN: 9908-14-7146

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7. ZONE: SINGLE FAMILY MAINLAND (SFM)

8. BOUNDARY INFORMATION BASED ON QUIBLE & ASSOCIATES FIELD SURVEY DATED 01/22/18 – 02/07/18 AND ALTA SURVEY DATED 6/27/18.

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11. REMOVE TREES, GRASSES, SHRUBS AND OTHER VEGETATION, IMPROVEMENTS OR OBSTRUCTIONS INTERFERING WITH INSTALLATION OF NEW CONSTRUCTION UNLESS NOTED OTHERWISE.

SOIL EROSION & SEDIMENTATION CONTROL NOTES:

1. AREA TO BE DISTURBED: ± 233,526 SF (± 5.4 AC.)

2. PROVIDE A GROUNDCOVER STABILIZATION (TEMPORARY OR PERMANENT) ON ALL DENUDED DOWNSTREAM SURFACES FOLLOWING THE COMPLETION OF LAND DISTURBING ACTIVITIES PER THE CRITERIA LISTED BELOW:
   a. PERIMETER DIKES, BERMS, SWALES, DITCHES AND SLOPES SHALL BE STABILIZED IN 7 DAYS.
   b. HIGH QUALITY WATER (HQW) ZONES SHALL BE STABILIZED IN 7 DAYS.
   c. DOWNSTREAM SLOPES STEEPER THAN 3:1 SHALL BE STABILIZED IN 7 DAYS. IF SLOPES ARE 10' OR LESS AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
   d. DOWNSTREAM SLOPES 3:1 OR FLATTER AND LESS THAN 50' IN LENGTH SHALL BE STABILIZED IN 14 DAYS. SLOPES 3:1 OR FLATTER EXCEEDING 50' IN LENGTH SHALL BE STABILIZED IN 7 DAYS.
   e. ALL OTHER DOWNSTREAM AREAS WITH SLOPES 4:1 OR FLATTER SHALL BE STABILIZED WITHIN 14 DAYS.

3. IF LAND DISTURBING ACTIVITIES OCCUR OUTSIDE THE PERMANENT VEGETATION SEEDING DATES (APR. 1– SEP.30) THEN TEMPORARY VEGETATION SEEDING SPECIFICATIONS SHALL BE FOLLOWED FOR PLANTING UNTIL THE NEXT APPROPRIATE PERMANENT SEEDING PERIOD, AT WHICH TIME PERMANENT VEGETATION SHALL BE ESTABLISHED ACCORDING TO PERMANENT VEGETATION SEEDING SPECIFICATIONS (SEE PERM. & TEMP. SEEDING SPECIFICATIONS).

4. IF EXCESSIVE WIND EROSION OR STORMWATER RUNOFF EROSION DEVELOPS DURING TIME OF CONSTRUCTION ANY LOCATION ON THE PROJECT SITE, ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED IMMEDIATELY AS DIRECTED BY THE ENGINEER TO ADDRESS THE PROBLEM AREA AND PREVENT DAMAGE TO ADJACENT PROPERTIES.

5. SOIL EROSION AND SEDIMENTATION CONTROLS TO BE INSPECTED, MAINTAINED AND REPAIRED AS NECESSARY UNTIL PERMANENT CONTROLS ARE ESTABLISHED.
   a. A RAIN GAUGE MUST MUST BE KEPT ON SITE.
   b. DEDICATED DEMOLITION AND OTHER WASTE AREAS AND EARTHEN MATERIAL STOCKPILES MUST BE LOCATED AT LEAST 50 FEET FROM DRAINS OR STREAMS UNLESS NO ALTERNATIVE IS FEASIBLE.
   c. ALL EROSION AND SEDIMENT CONTROL MEASURES MUST BE INSPECTED AT LEAST ONCE A WEEK AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN A HALF INCH (DURING A 24 HOUR PERIOD). IMMEDIATE CORRECTIVE ACTION MUST BE TAKEN FOR ANY DEVICE FAILURE.
   d. INSPECT ALL OUTLETS WHERE RUNOFF LEAVES SITE AND EVALUATE EFFECT ON NEARBY STREAMS. TAKE CORRECTIVE ACTION IF NECESSARY.
   e. MAINTAIN RECORDS OF INSPECTIONS AND CORRECTIVE ACTIONS.
   f. EARTHWORK NOTE: OFFSITE BORROW MATERIAL SHALL COME FROM AN NCDEQ LAND QUALITY SECTION APPROVED SITE. OFFSITE DISPOSAL OF EXCESS MATERIAL SHALL BE TO AN NCDEQ LAND QUALITY SECTION APPROVED SITE.

CONSTRUCTION SEQUENCE

PRECONSTRUCTION:

1) OBTAIN PLAN APPROVAL AND OTHER APPLICABLE PERMITS.
2) FLAG AND/OR ROUGH STAKE WORK LIMITS.
3) HOLD PRECONSTRUCTION CONFERENCE (OWNER, CONTRACTOR, ENGINEER, AND APPROPRIATE GOVERNMENT OFFICIALS) AT LEAST ONE WEEK PRIOR TO START OF CONSTRUCTION ACTIVITIES.

CONSTRUCTION:

4) INSTALL CONSTRUCTION ENTRANCE & SILT FENCING AT LOCATIONS SHOWN ON PLAN.
5) CONSTRUCT TEMPORARY SEDIMENT BASIN. ALL EROSION AND SEDIMENT CONTROL MEASURES MUST BE IN PLACE PRIOR TO ANY DEMOLITION.
6) COMPLETE CLEARING AND GRUBBING PROCEDURES.
7) GRADE SITE ACCORDING TO PLAN AND BEGIN CONSTRUCTION OF PROPOSED IMPROVEMENTS.
8) INSTALL CONTRIBUTING STORM CONVEYANCES INCLUDING RIP–RAP APRONS, MATING AND ASSOCIATED EROSION CONTROLS.
9) COMPLETE FINAL GRADING OF THE GROUNDS, TOPSOIL, PERMANENTLY SEED, LANDSCAPE, AND MULCH.
10) ALL EROSION & SEDIMENTATION CONTROLS SHALL BE INSPECTED WEEKLY AND AFTER HEAVY RAINFALL EVENT. NEEDED REPAIRS AND MAINTENANCE WILL BE MADE IMMEDIATELY. FURTHERMORE, IF ANY WIND OR STORMWATER RUNOFF EROSION DEVELOPS DURING THE CONSTRUCTION OF THE PROJECT, ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED TO ADDRESS THE PROBLEM AREA.
11) ONCE THE SITE CONSTRUCTION IS COMPLETE AND DENUDED SURFACES ARE FULLY STABILIZED; ALL STORMWATER CONVEYANCES, STRUCTURES, PIPING AND BASINS SHALL BE CLEANED OF ALL SILT/DEBRIS WHICH MAY HAVE ACCUMULATED DURING CONSTRUCTION. CONTRACTOR SHALL VERIFY DESIGN GRADES OF ALL STORMWATER CONVEYANCES INCLUDING THE BASIN AND RESTORE TO DESIGN SPECIFICATIONS AS NECESSARY.
12) UPON THE REMOVAL OF ACCUMULATED SEDIMENTS AND SITE STABILIZATION, ALL REMAINING EROSION CONTROLS MAY BE REMOVED FROM THE DEVELOPMENT. ALL DOWNSTREAM EROSION CONTROLS SHALL REMAIN IN PLACE UNTIL THE COMPLETION OF ALL OTHER DEVELOPMENT CONSTRUCTION ACTIVITIES.

LEGEND

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- PROPOSED SKIMMER
- EX. OVERHEAD UTILITY LINE
- EX. FENCE
- PROPOSED CONCRETE
- PROPOSED SILT FENCE
- PROPOSED LIMITS OF DISTURBANCE
- PROPOSED ASPHALT
- PROPOSED CULVERT PROTECTION
- PROPOSED INLET PROTECTION
- EXISTING CONTOUR
- EXISTING SPOT GRADE
- PROPOSED CONTOUR
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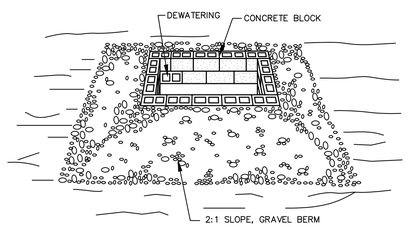

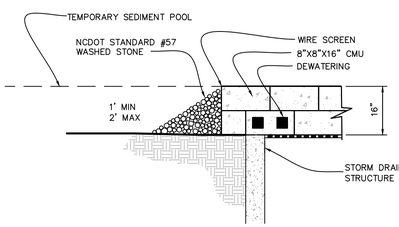

INLET PROTECTIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE NC EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, (LATEST EDITION) SECTION 6.52.

INLET PROTECTION SHALL BE PROVIDED AT ALL DROP INLETS, CURB INLETS YARD INLETS AND ANY OTHER STORMWATER COLLECTION INLET.

INLET PROTECTION

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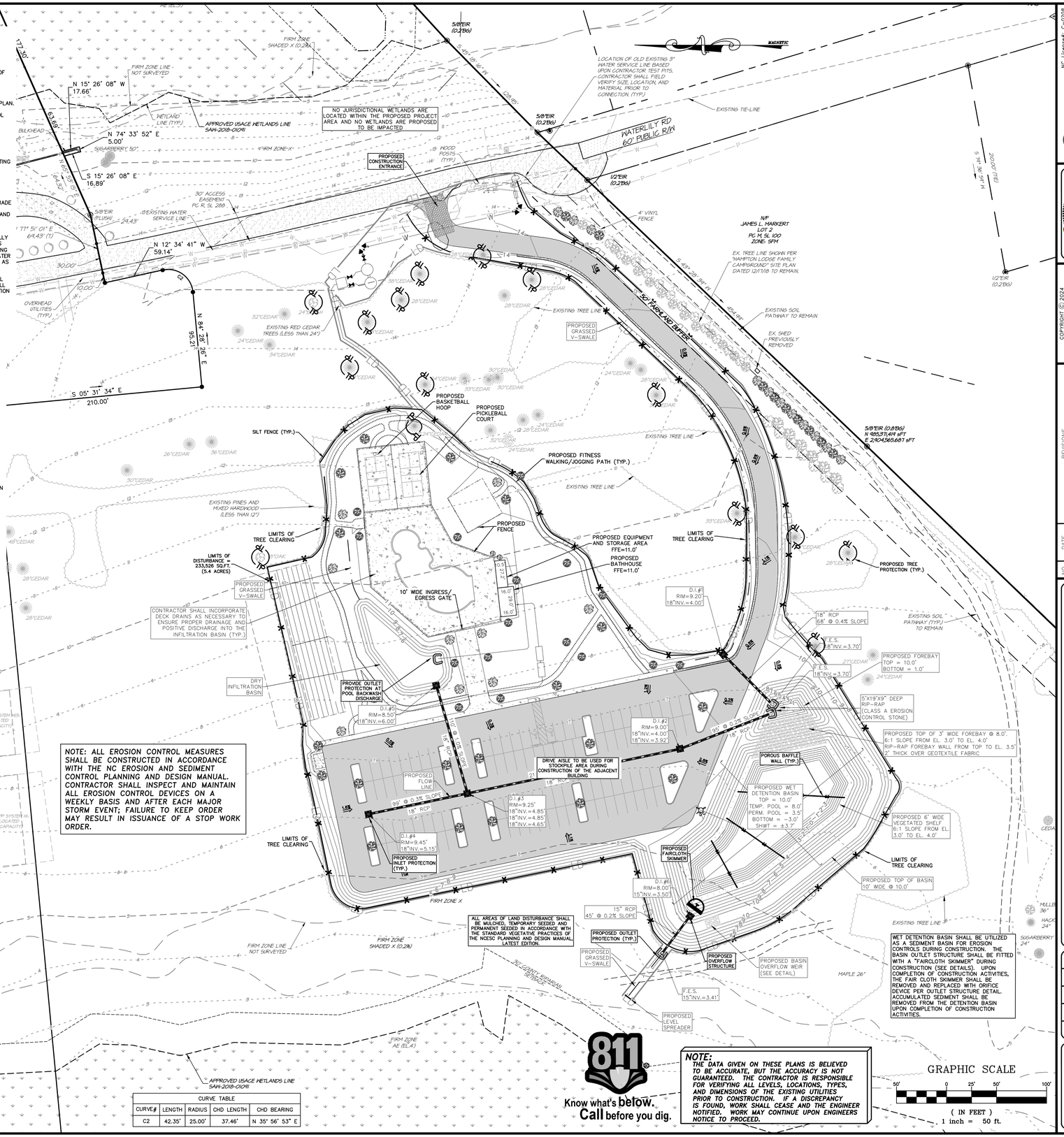

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ENVIRONMENTAL SCIENCES * SURVEYING**
NC License# C-0208 SINCE 1959
8446 CABARRUS HWY
BLDG 400 POINT, NC 27966
Phone: (252) 491-8147
90 CHURCH STREET
SUITE B
BREVARD MOUNTAIN, NC 28711
Phone: (828) 351-5149

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 049140 ENGINEERING CERTIFICATION

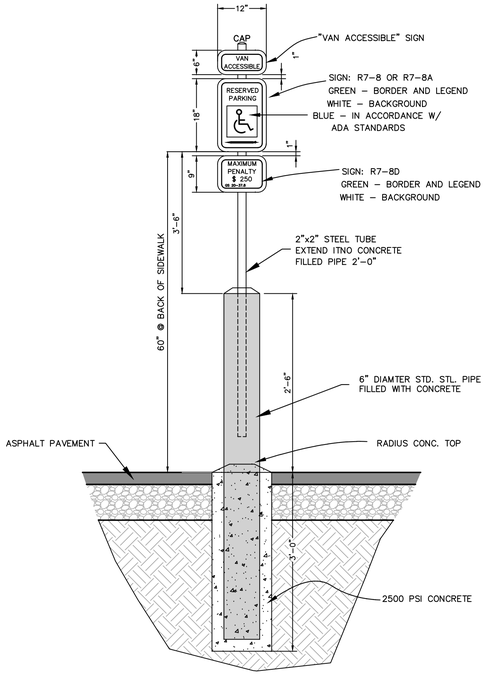
NO.	DATE	REVISIONS
1	02/27/24	ISSUED FOR WASTEWATER PERMITTING
2	03/12/24	ISSUED FOR NCDEQ PERMITTING
3	03/25/24	REVISED PER TRC COMMENTS

SESC PLAN

ATHLETIC FACILITY
1559 WATERLILLY RD
POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA

PROJECT NO. P16099
DESIGNED BY ND
DRAWN BY ND
CHECKED BY MWS
ISSUE DATE 12/12/23

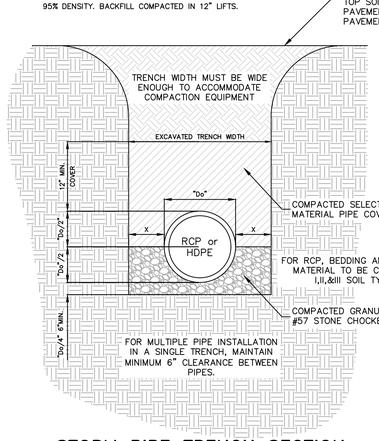
SHEET NO. 5 OF 9 SHEETS



ADA RESERVED PARKING SIGN DETAIL

N.T.S.

NOTES:
1. SELECT MATERIAL PIPE COVER SHALL BE 12" (MINIMUM) DEEP OVER TOP OF PIPE.
2. SELECT MATERIAL BACKFILL SHALL BE CBR 20 COMPACTED TO 95% DENSITY. BACKFILL COMPACTED IN 12" LIFTS.

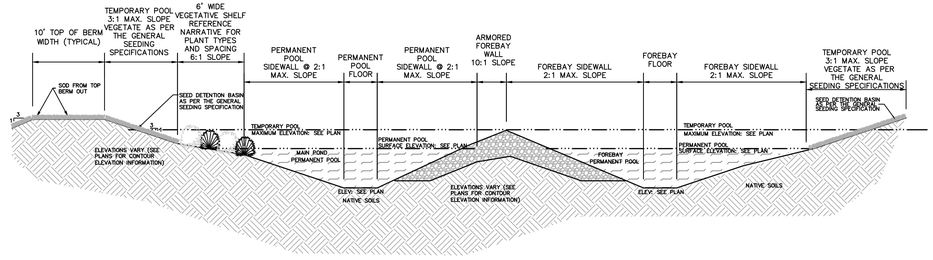


STORM PIPE TRENCH SECTION

N.T.S.

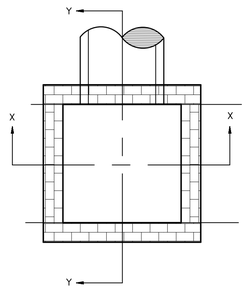
PLANT SPECIES	COMMON NAME	SPACING	LOCATION
Schoenoplectus tabernaemontani	SOFTSTEM BULRUSH	2' O.C.	BELOW (W/IN 1 FOOT) PERM. POOL
Juncus effusus	COMMON RUSH	2' O.C.	BELOW (W/IN 1 FOOT) PERM. POOL
Oladium spp.	SAWGRASS	2' O.C.	BELOW (W/IN 1 FOOT) PERM. POOL
Zizaniopsis miliacae	WATER MILLET	2' O.C.	BELOW (W/IN 1 FOOT) PERM. POOL

NOTES:
THREE ROWS OF PLANTINGS ARE PROPOSED: A SINGLE ROW OF GROUNDSEL BUSH OR WAX MYRTLE AT THE UPPER EDGE OF THE VEGETATED SHELF AND TWO ROWS OF RUSHES, SAWGRASS OR WATER MILLET (MIXTURE) TO BE LOCATED ON THE VEGETATED SHELF WITHIN THE PERMANENT POOL WATERLINE (ON 10:1 SHELF).A MINIMUM OF THREE SPECIES SHALL BE PROVIDED. SUBSTITUTIONS ALLOWED PROVIDED SUBSTITUTE PLANT IS IN ACCORDANCE WITH THE NCDEQ STORMWATER BMP MANUAL, CHAPTER 6 AND CHAPTER 9 REQUIREMENTS. ALL SUBSTITUTIONS SHALL BE APPROVED BY ENGINEER.



TYPICAL WET DETENTION BASIN PLANTING DETAIL

N.T.S.

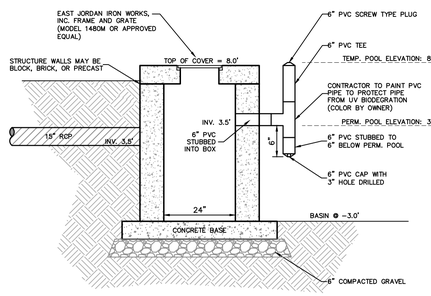


PLAN

WITH COPING REMOVED

NOTE: ALL CATCH BASINS WITHIN CURB AND GUTTER SHALL MEET NCDOT STANDARD DETAIL 840.02 WITH 840.03 STD. FRAME, GRATE, AND HOOD.

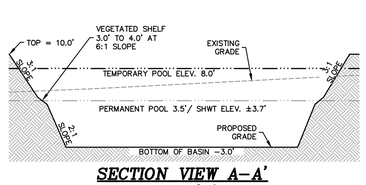
MIN. DIMENSIONS FOR CATCH BASIN (NCDOT 840.05)			
PIPE	SPAN	WIDTH	HEIGHT
D	A	B	H
12"	3'-6"	2'-3"	1'-10"
15"	3'-6"	2'-3"	2'-1"
18"	4'-0"	2'-8"	2'-4"



DRAW-DOWN STRUCTURE DETAIL

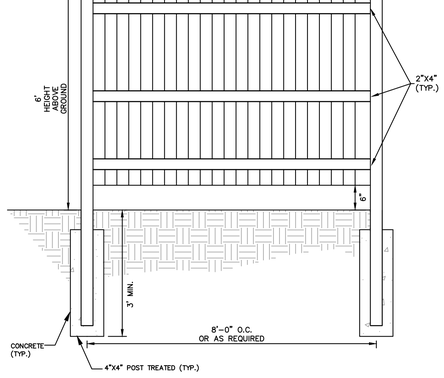
N.T.S.

NOTE: A FAIRCLOTH SKIMMER TO BE INSTALL DURING THE INITIAL CONSTRUCTION OF THE WET BASIN. THE SKIMMER IS TO BE CONNECTED TO THE 8" STUB-OUT ON THE WETBASIN OVERFLOW STRUCTURE. THE WET BASIN WILL SERVE AS A SEDIMENT BASIN DURING THE CONSTRUCTION OF THE SITE. ONCE THE SITE HAS BEEN FULLY STABILIZED THE FAIRCLOTH SKIMMER IS TO BE REMOVED AND THE SPECIFIED DRAW DOWN PIPE IS TO BE INSTALLED PER THE BASIN OVERFLOW STRUCTURE DETAIL. THE STUB-OUT FOR THE DRAW DOWN PIPE SHALL BE CAPPED DURING CONSTRUCTION



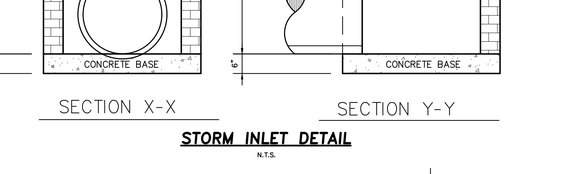
SECTION VIEW A-A'

HORIZONTAL: 1"=50'
VERTICAL: 1"=10'
(EXAGGERATED 5 TIMES)



TYPE D BUFFER FENCE DETAIL

N.T.S



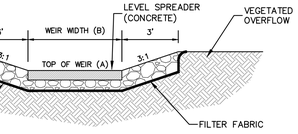
SECTION X-X

SECTION Y-Y

STORM INLET DETAIL

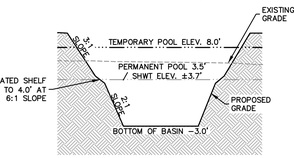
N.T.S.

OVERFLOW WEIR TABLE	
	BASIN 1 (WET POND)
WEIR ELEV. (A)	9.5'
WEIR WIDTH (B)	5.0'
TOP OF BASIN ELEV. (C)	10.0+'



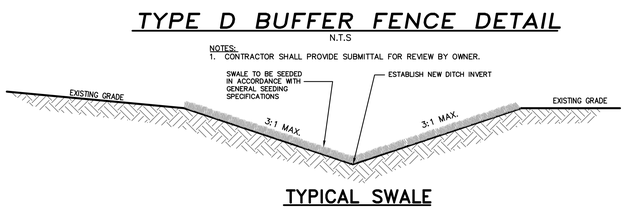
BASIN EMERGENCY OVERFLOW WEIR

N.T.S.



SECTION VIEW B-B'

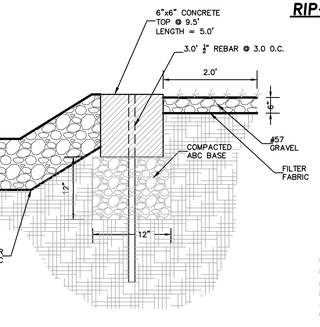
HORIZONTAL: 1"=50'
VERTICAL: 1"=10'
(EXAGGERATED 5 TIMES)



TYPICAL SWALE

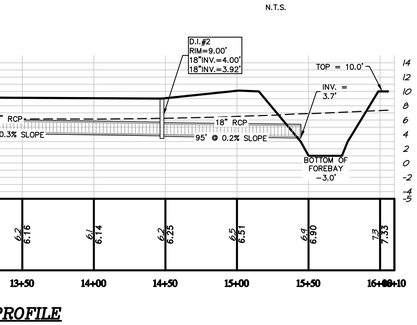
N.T.S.

NOTES:
1. CONTRACTOR SHALL PROVIDE SUBMITTAL FOR REVIEW BY OWNER.



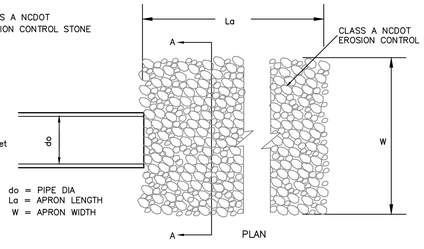
LEVEL SPREADER INSTALLATION DETAIL

N.T.S.



NOTES:

SEE GRADING PLANS FOR DIMENSIONS
- A filter blanket or filter fabric should be installed between the rip rap and soil foundation.

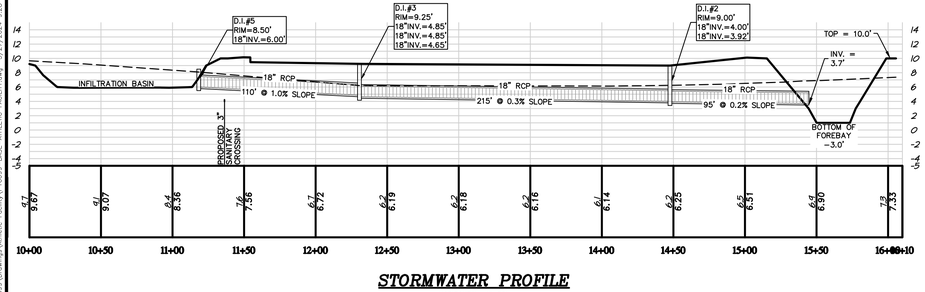


do = PIPE DIA
La = APRON LENGTH
W = APRON WIDTH

PLAN

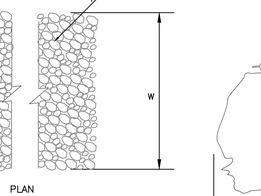
RIP-RAP OUTLET DETAIL

N.T.S.



STORMWATER PROFILE

HORIZONTAL: 1"=50'
VERTICAL: 1"=10'
(EXAGGERATED 5 TIMES)



-WARNING SIGNS TO BE MADE OF DURABLE, WEATHERPROOF MATERIAL.
-LETTER TO BE 3" HIGH MIN., CLEARLY LEGIBLE AND SPACED AS SHOWN BELOW ON SIGN DETAIL.
-PLACE SIGN AT EACH END OF LINEAR TREE PROTECTION AREA AND 50' ON CENTER THEREAFTER.
-FOR TREE PROTECTION AREA LESS THAN 200' IN PERIMETER, PROVIDE NO LESS THAN ONE SIGN PER PROTECTION AREA.
-ATTACH SIGNS SECURELY TO FENCE POSTS AND FABRIC.

NOTES:
1. ALL PLANTS DESIGNATED TO BE SAVED SHALL BE PROTECTED BY FENCING, AS ILLUSTRATED.
2. INSTALL TREE PROTECTION FENCE AT TREE DRIP LINE OR AT EDGE OF DISTURBED AREA, AS SHOWN ON PLANS, PRIOR TO COMMENCEMENT OF CONSTRUCTION.
3. THERE SHALL BE NO STORAGE OF MATERIAL WITHIN THE BOUNDARIES OF THE TREE PROTECTION FENCING.
4. TREE PROTECTION FENCING SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT.

TREE PROTECTION DETAIL

N.T.S

NOTE: THIS DOCUMENT IS PRELIMINARY - NOT FOR CONSTRUCTION, RECORDATION, SALES OR CONVEYANCES - THIS DOCUMENT IS FOR DISCUSSION PURPOSES ONLY! EXISTING INFORMATION SHOWN ON THIS DOCUMENT IS BASED ON BEST AVAILABLE DATA AND IS NOT A CERTIFIED SURVEY. ALL INFORMATION SHOWN ON THIS DOCUMENT IS SUBJECT TO ANY REQUIREMENTS BY ANY REGULATORY AGENCY, ENTITY OR AUTHORITY.

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90 CHURCH STREET
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BILTMORE MOUNTAIN, NC 28711
Phone: (828) 357-5149

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 042324 CATHLEEN M. SHEA
PRELIMINARY NOT FOR CONSTRUCTION
CERTIFICATION

NO.	DATE	REVISIONS
1	02/27/24	ISSUED FOR WASTEWATER PERMITTING
2	03/12/24	ISSUED FOR NCDEQ PERMITTING
3	03/25/24	REVISED PER TRC COMMENTS

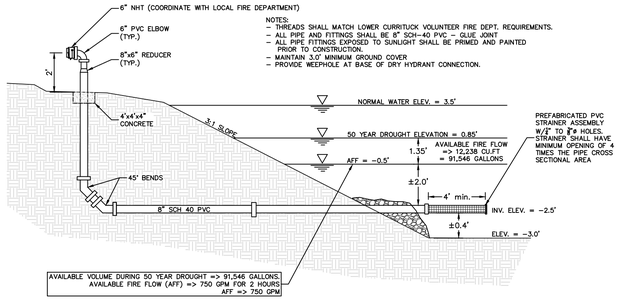
SITE & UTILITY DETAILS

ATHLETIC FACILITY
1559 WATERLILLY RD
POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA

PROJECT NO.	P16099
DESIGNED BY	ND
DRAWN BY	ND
CHECKED BY	MWS
ISSUE DATE	12/12/23

SHEET NO.
6
OF 9 SHEETS

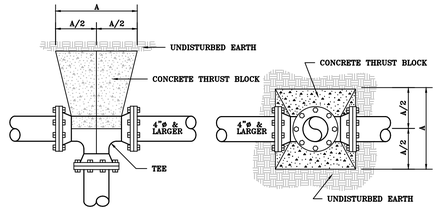
D:\2016\P16099\Drawings\Athletic Facility\P16099-BASE-ATHLETIC FACILITY.dwg 3/27/2024 9:28 AM Wchandler



NOTES:
- THREADS SHALL MATCH LOWER CURRITUCK VOLUNTEER FIRE DEPT. REQUIREMENTS.
- ALL PIPE AND FITTINGS SHALL BE 8" SCH-40 PVC – GLUE JOINT
- ALL PIPE FITTINGS EXPOSED TO SUNLIGHT SHALL BE PRIMED AND PAINTED PRIOR TO CONSTRUCTION.
- MAINTAIN 3.0' MINIMUM GROUND COVER
- PROVIDE WEEPHOLE AT BASE OF DRY HYDRANT CONNECTION.

DRY FIRE HYDRANT DETAIL

N.T.S



PLAN ELEVATION

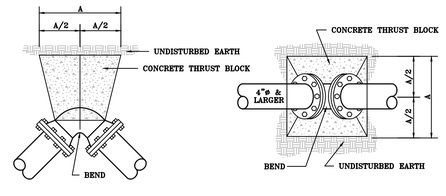
NOTE:
CARE SHALL BE TAKEN WHEN PLACING THRUST BLOCKS TO KEEP THE FITTING BOLTS FREE OF CONCRETE.

SIZE	11 1/4° BEND	22 1/2° BEND	45° BEND	90° BEND	TEE	PLUG
4	12	12	12	16	16	14
6	12	12	12	16	16	14
8	12	12	16	22	22	18
10	12	14	20	28	28	22
12	12	18	24	32	32	28
14	14	20	28	38	38	32
16	16	22	32	42	42	36
18	18	26	36	48	48	40
20	20	28	40	52	52	44
24	24	34	46	64	64	54
30	30	42	58	78	78	66
36	36	50	70	94	94	80
42	40	58	80	108	108	92
48	46	66	90	124	124	104

THRUST BLOCKS – DIMENSION "A"

TYPICAL THRUST BLOCK FOR TEES

N.T.S.



PLAN ELEVATION

NOTE:
CARE SHALL BE TAKEN WHEN PLACING THRUST BLOCKS TO KEEP THE FITTING BOLTS FREE OF CONCRETE.

SIZE	11 1/4° BEND	22 1/2° BEND	45° BEND	90° BEND	TEE	PLUG
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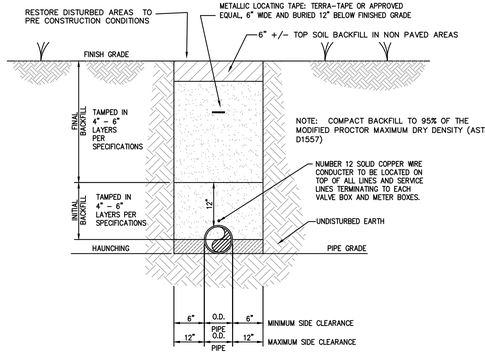
6	12	12	12	16	16	14
8	12	12	16	22	22	18
10	12	14	20	28	28	22
12	12	18	24	32	32	28
14	14	20	28	38	38	32
16	16	22	32	42	42	36
18	18	26	36	48	48	40
20	20	28	40	52	52	44
24	24	34	46	64	64	54
30	30	42	58	78	78	66
36	36	50	70	94	94	80
42	40	58	80	108	108	92
48	46	66	90	124	124	104

THRUST BLOCKS – DIMENSION "A"

TYPICAL THRUST BLOCK FOR BENDS

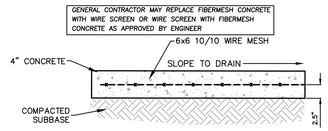
N.T.S.



NOTES:

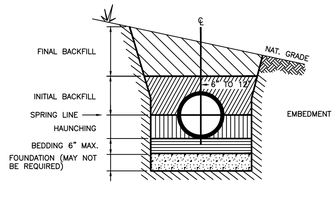
1. FOR TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND BRACING
2. NO ROCKS OR BOULDERS 4" AND LARGER SHALL BE USED IN INITIAL BACKFILL AREA.
3. ALL BACKFILL MATERIAL SHALL BE SATISFACTORY SOIL MATERIALS UNLESS OTHERWISE SPECIFIED BY THE ENGINEER. (SATISFACTORY SOIL FILL SHALL CONSIST OF SAND OR GRAVEL CONTAINING LESS THAN 20% BY WEIGHT OF FINES [SW, SP, SP-SM, SM], HAVING A LIQUID LIMIT LESS THAN 20 AND PLASTIC LIMIT LESS THAN 6, AND FREE OF RUBBLE, ORGANICS, CLAY, DEBRIS, AND OTHER UNSUITABLE MATERIAL.)

WATERLINE BACKFILLING REQUIREMENTS AND TRENCH BOTTOM DIMENSIONS



CONCRETE SECTION (SIDEWALK)

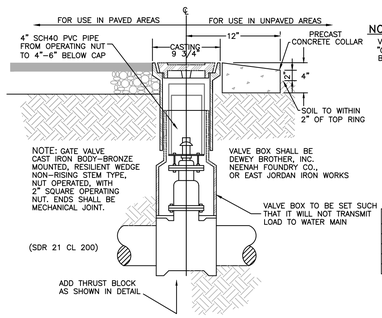
N.T.S.



GRAVITY SEWER EMBEDMENT CONDITIONS FOR FLEXIBLE AND SEMI-RIGID SEWER PIPE

N.T.S.

PIPE INSTALLATION TO CONFORM TO ASTM D 2321



NOTE:
VALVES SHALL BE AMERICAN DARLING, MUELLER "O" RING, OR M & H OR EQUAL AS APPROVED BY ENGINEER

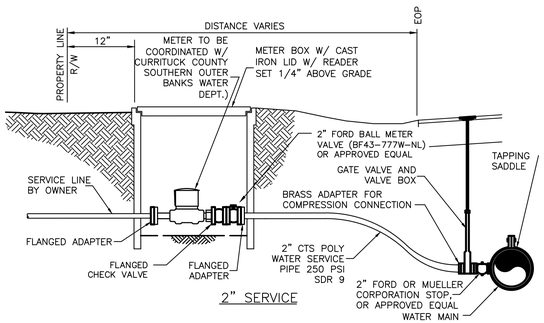
ANCHORAGE OF VALVES

WORKING PRESSURE LB. PER SQ. INCH	SIZE OF VALVE REQUIRING ANCHORAGE
50 – 100	12 INCH AND UP
101 – 150	8 INCH AND UP
151 – 200	ALL SIZES

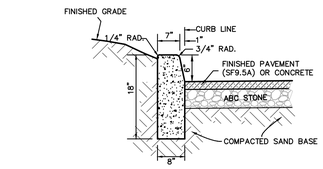
MINIMUM COVER FOR GATE VALVES	
SIZE VALVE	MINIMUM COVERS
6"	36"
8"	38"
10"	43"
12"	46"

TYPICAL VALVE DETAIL

GATE VALVES SHALL COMPLY IN ALL RESPECTS WITH AWWA STANDARD C-500, LATEST REVISION

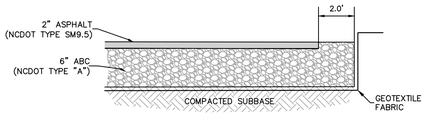


WATER SERVICE CONNECTION



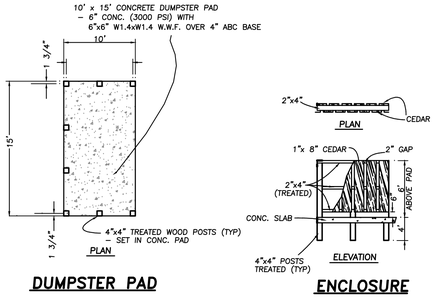
PARKWAY CURB

N.T.S.



HEAVY DUTY ASPHALT SECTION

N.T.S.



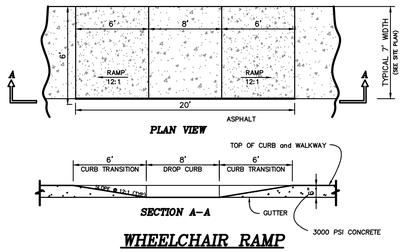
DUMPSTER PAD

ENCLOSURE

CONCRETE DUMPSTER PAD and ENCLOSURE

N.T.S.

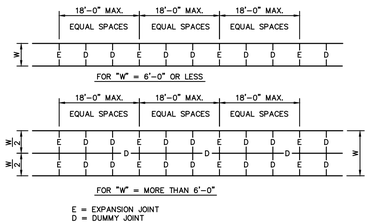
(NOTE: DUMPSTER PAD DRAIN NOT SHOWN)



WHEELCHAIR RAMP

N.T.S.

1. USE ADJACENT TO ALL HANDICAPPED SPACES
2. DETECTABLE WARNING MUST BE INSTALLED AT ACCESS TO VEHICULAR TRAFFIC AREAS AND PEDESTRIAN CROSSINGS.

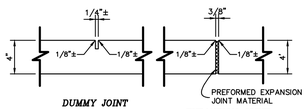


E = EXPANSION JOINT
D = DUMMY JOINT

NOTES:

EXCEPT WHERE SHOWN IN THE PLAN, ALL NEW CONC. WALKS SHALL HAVE JOINTS SPACED AS SHOWN IN THESE DETAILS.
AN EXPANSION JOINT SHALL BE USED TO SEPARATE THE NEW CONC. WALK FROM OTHER NEW OR EXISTING CONCRETE CONSTRUCTION.

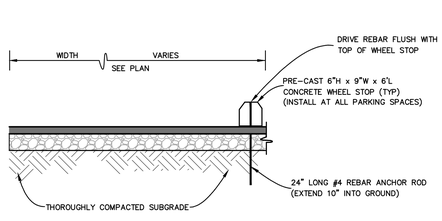
JOINT PATTERN



JOINT DETAIL

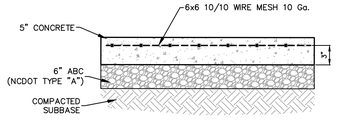
SIDEWALK JOINTS

N.T.S.



WHEEL STOP DETAIL

N.T.S.



CONCRETE SECTION (DUMPSTER PAD)

N.T.S.

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SPECIFICATIONS FOR SIDEWALKS, CURBS, ALLEYS, CONCRETE PAVEMENT

ALL REINFORCING STEEL SHALL BE GRADE 60 (ASTM A615)

ALL WELDED WIRE FABRIC SHALL BE 6 x 6, W1.4 x W1.4 (ASTM A185)

A 1-1/2" CLEAR CONCRETE COVER SHALL BE MAINTAINED ON ALL REINFORCEMENT

ALL CONCRETE SHALL BE 3000 PSI FIBER MESH UNLESS OTHERWISE NOTED

SPECIFICATIONS FOR SUBBASE

ALL SUBBASE SHALL BE COMPACTED TO 95% OF STANDARD PROCTOR (ASTM D698)

TYPICAL SPECIFICATIONS

COMPACTION NOTES:
1. PROOF ROLL ALL NEW PAVED AREAS. NOTIFY OWNER AND ENGINEER OF ANY UNACCEPTABLE AREAS.
2. COMPACT BACKFILL AND SUBGRADE TO 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D1557) ALL BACKFILL MATERIAL SHALL BE SELECT BACKFILL UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
3. SELECT FILL SHALL CONSIST OF SAND OR GRAVEL CONTAINING LESS THAN 20% BY WEIGHT OF FINES [SP, SM, SW, GP, GW] HAVING A LIQUID LIMIT LESS THAN 20 AND PLASTIC LIMIT LESS THAN 6, AND FREE OF RUBBLE, ORGANICS, CLAY, DEBRIS, AND OTHER UNSUITABLE MATERIAL.

COMPACTION NOTES

Quible & Associates, P.C.
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ENVIRONMENTAL SCIENCES * SURVEYING**
NC License# C-0208 SINCE 1959
8446 CASTALIA HWY BLDG 400 PONT, NC 27965 Phone: (252) 491-8147
90 CHURCH STREET SUITE B KILL DEVIL HILL, NC 28711 Phone: (828) 351-5149

NORTH CAROLINA PROFESSIONAL ENGINEERS SEAL 036656 ENGINEER CATHLEEN M. SULLIVAN — COMPLIANCE NOTED FOR CONSTRUCTION — CERTIFICATION

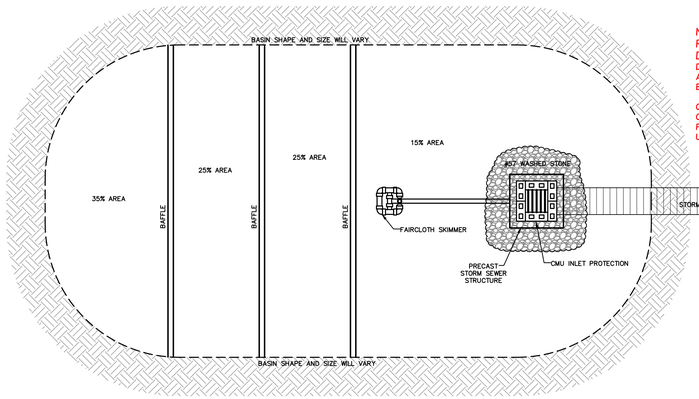
NO.	DATE	REVISIONS
1	02/27/24	ISSUED FOR WASTEWATER PERMITTING
2	03/12/24	ISSUED FOR NCDEQ PERMITTING
3	03/25/24	REVISED PER TRC COMMENTS

WATER DETAILS

ATHLETIC FACILITY
1559 WATERLILLY RD
POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA

PROJECT NO: P16099
DESIGNED BY ND
DRAWN BY ND
CHECKED BY MWS
ISSUE DATE 12/12/23

SHEET NO. 7 OF 9 SHEETS



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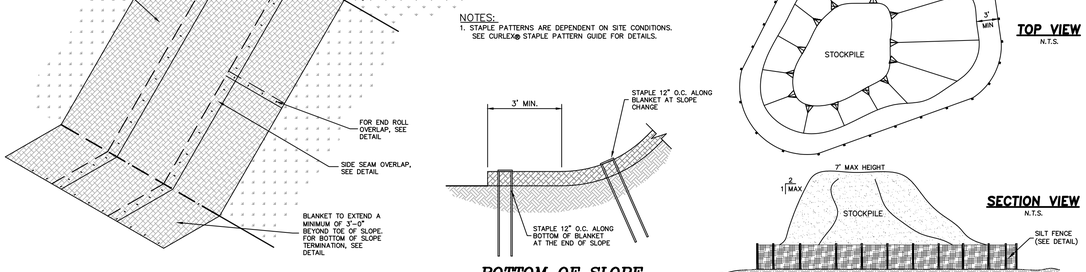


SKIMMER SEDIMENT BASIN DETAIL

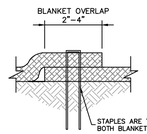
N.T.S.

SLOPE TRENCHING METHOD "B"

N.T.S.

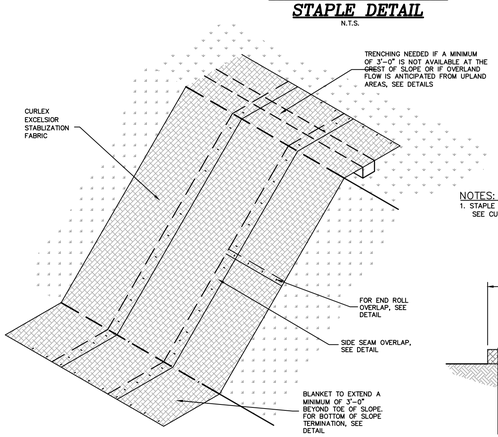
CURLEX® SLOPE APPLICATION DETAIL

AMERICAN EXCELSIOR COMPANY
ARLINGTON, TEXAS



SIDE SEAM OVERLAP STAPLE DETAIL

N.T.S.



SLOPE DETAIL

N.T.S.

SILT FENCE DETAIL

N.T.S

END ROLL OVERLAP

N.T.S.

NOTES:
1. CONTRACTOR MUST PROTECT TOPSOIL STOCKPILES BY TEMPORARILY SEEDING AS SOON AS POSSIBLE, NO MORE THAN 21 CALENDAR DAYS AFTER THE FORMATION OF THE STOCKPILE
2. CONTRACTOR MUST STABILIZE STOCKPILES WITH PERMANENT VEGETATION TO CONTROL EROSION AND WEED GROWTH IF THE STOCKPILE WILL LAY DORMANT FOR MORE THAN 90 DAYS
3. TEMPORARY STOCKPILES ON THE INTERIOR PORTION OF THE CONSTRUCTION SITE MAY NOT REQUIRE STOCKPILE PERIMETER CONTROLS. OTHER DOWN GRADIENT CONTROLS (INCLUDING SITE PERIMETER CONTROL) MUST BE IN PLACE TO REMOVE STOCKPILE PERIMETER CONTROLS

NOTES:
1. STAPLE PATTERNS ARE DEPENDENT ON SITE CONDITIONS. SEE CURLEX® STAPLE PATTERN GUIDE FOR DETAILS.

BOTTOM OF SLOPE TERMINATION

N.T.S.

STOCKPILE DETAIL

N.T.S.

GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION

Required Ground Stabilization Timeframes		
Site Area Description	**Stabilize within this many calendar days after ceasing land disturbance**	**Timeframe variations**
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
(d) Slopes 3:1 to 4:1	14	-7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed
(e) Areas with slopes flatter than 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

GROUND STABILIZATION SPECIFICATION

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
• Temporary grass seed covered with straw or other mulches and tackifiers • Hydroseeding • Rolled erosion control products with or without temporary grass seed • Appropriately applied straw or other mulch • Plastic sheeting	• Permanent grass seed covered with straw or other mulches and tackifiers • Geotextile fabrics such as permanent soil reinforcement matting • Hydroseeding • Shrubs or other permanent plantings covered with mulch • Uniform and evenly distributed ground cover sufficient to restrain erosion • Structural methods such as concrete, asphalt or retaining walls • Rolled erosion control products with grass seed

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

1. Select flocculants that are appropriate for the soils being exposed during construction, selecting from the *NC DWR List of Approved PAMS/Flocculants*.
2. Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
3. Apply flocculants at the concentrations specified in the *NC DWR List of Approved PAMS/Flocculants* and in accordance with the manufacturer's instructions.
4. Provide ponding area for containment of treated Stormwater before discharging offsite.
5. Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

EQUIPMENT AND VEHICLE MAINTENANCE

1. Maintain vehicles and equipment to prevent discharge of fluids.
2. Provide drip pans under any stored equipment.
3. Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
4. Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
5. Remove leaking vehicles and construction equipment from service until the problem has been corrected.
6. Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

1. Never bury or burn waste. Place litter and debris in approved waste containers.
2. Provide a sufficient number and size of waste containers (e.g dumpster, trash receptacle) on site to contain construction and domestic wastes.
3. Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
4. Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
5. Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
6. Anchor all lightweight items in waste containers during times of high winds.
7. Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
8. Dispose waste off-site at an approved disposal facility.
9. On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

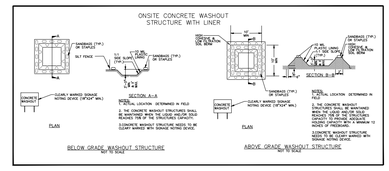
1. Do not dump paint and other liquid waste into storm drains, streams or wetlands.
2. Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
3. Contain liquid wastes in a controlled area.
4. Containment must be labeled, sized and placed appropriately for the needs of site.
5. Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

PORTABLE TOILETS

1. Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
2. Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
3. Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

EARTHEN STOCKPILE MANAGEMENT

1. Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
2. Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
3. Provide stable stone access point when feasible.
4. Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.



CONCRETE WASHOUTS

1. Do not discharge concrete or cement slurry from the site.
2. Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
3. Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
4. Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
5. Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
6. Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
7. Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
8. Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
9. Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
10. At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

HERBICIDES, PESTICIDES AND RODENTICIDES

1. Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
2. Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
3. Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
4. Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE

1. Create designated hazardous waste collection areas on-site.
2. Place hazardous waste containers under cover or in secondary containment.
3. Do not store hazardous chemicals, drums or bagged materials directly on the ground.

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

EFFECTIVE: 04/01/19

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those un-attended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-monitoring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the measures inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Indication of whether the measures were operating properly, 5. Description of maintenance needs for the measure, 6. Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge outfalls (SDOs)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the discharge outfalls inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, 5. Indication of visible sediment leaving the site, 6. Description, evidence, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If visible sedimentation is found outside site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits, 2. Description, evidence, and date of corrective actions taken, and 3. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made: 1. Description, evidence and date of corrective actions taken, and 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item (2)(a) of this permit of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&SC Plan Documentation

The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be documented in the manner described:

Item to Document	Documentation Requirements
(a) Each E&SC Measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC Plan.	Initial and date each E&SC Measure on a copy of the approved E&SC Plan or complete, date and sign an inspection report that lists each E&SC Measure shown on the approved E&SC Plan. This documentation is required upon the initial installation of the E&SC Measures or if the E&SC Measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC Plan.	Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&SC Measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC Measures.	Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

2. Additional Documentation

In addition to the E&SC Plan documents above, the following items shall be kept on the site

and available for agency inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

(a) This general permit as well as the certificate of coverage, after it is received.

(b) Records of inspections made during the previous 30 days. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

(c) All data used to complete the Notice of Intent and older inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that must be reported

Permittees shall report the following occurrences:

(a) Visible sediment deposition in a stream or wetland.

(b) Oil spills if:
- They are 25 gallons or more,
- They are less than 25 gallons but cannot be cleaned up within 24 hours,
- They cause sheen on surface waters (regardless of volume), or
- They are within 100 feet of surface waters (regardless of volume).

(a) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.

(b) Anticipated bypasses and unanticipated bypasses.

(c) Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Division's Emergency Response personnel at (800) 662-7956, (800) 858-0368 or (919) 733-3300.

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days***, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. • If the stream is named on the NC 303(d) list as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.
(b) Oil spills and release of hazardous substances per Item 1(b)-(c) above	• ***Within 24 hours***, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	• ***A report at least ten days before the date of the bypass, if possible***. The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days,*** a report that includes an evaluation of the quality and effect of the bypass.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment [40 CFR 122.41(l)(7)]	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days***, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. [40 CFR 122.41(l)(6). • Division staff may waive the requirement for a written report on a case-by-case basis.

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

EFFECTIVE: 04/01/19

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NORTH CAROLINA PROFESSIONAL ENGINEERS — PRELIMINARY NOT FOR CONSTRUCTION — CERTIFICATION

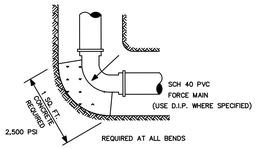
NO.	DATE	REVISIONS
1	02/27/24	ISSUED FOR WASTEWATER PERMITTING
2	03/12/24	ISSUED FOR NCDEQ PERMITTING
3	03/25/24	REVISED PER TRC COMMENTS

SESC & LANDSCAPING DETAILS

ATHLETIC FACILITY
1559 WATERLILLY RD
POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA

PROJECT NO. P16099
DESIGNED BY ND
DRAWN BY ND
CHECKED BY MWS
ISSUE DATE 12/12/23

SHEET NO. 8 OF 9 SHEETS



FORCE MAIN THRUST BLOCKS @ BENDS

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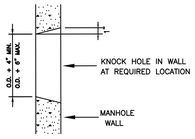
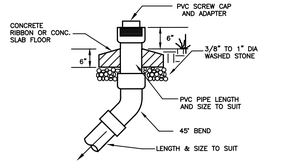


IN FIELD PIPE OPENINGS

N.T.S.

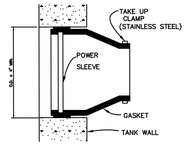
NOTES:
1. THIS APPLIES TO ALL PIPES 6" DIAMETER OR LESS UNLESS OTHERWISE SPECIFIED.
2. CLOSE WITH NON-SHRINK GROUT AFTER PIPE INSTALLATION.



TYPICAL SEWER CLEAN-OUT

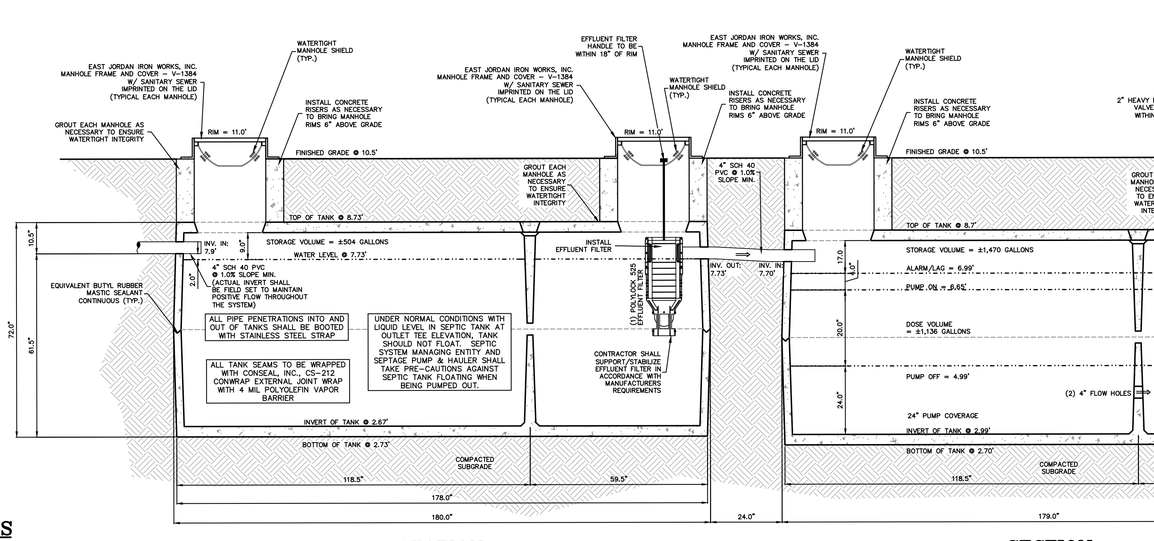
N.T.S.

NOTES:
1. PIPE TO MANHOLE CONNECTION TO CONFORM TO LATEST ASTM C-478 SPECIFICATION.
2. PSX FLEXIBLE BOOT CONNECTOR TO CONFORM TO LATEST ASTM C-923 SPECIFICATION.
3. BOOT CONNECTOR IS MANUFACTURED BY THE PRESS SEAL GASKET CORP. FORT WAYNE, IN.
4. SEE MANUFACTURES LITERATURE FOR FURTHER INFORMATION AND DETAIL.



BOOTED PIPE OPENINGS

N.T.S.



SECTION 3,004 GAL. SEPTIC TANK

N.T.S.

GREEN ACRES LAND DEVELOPMENT STB-380 SEPTIC TANK OR EQUAL AS APPROVED BY ENGINEER
CONCRETE: 4000 PSI AT 28 DAYS
56 GALLONS PER INCH

SECTION 3,432 GAL. PUMP TANK

N.T.S.

GREEN ACRES LAND DEVELOPMENT PT-337 PUMP TANK OR EQUAL AS APPROVED BY ENGINEER
CONCRETE: 4000 PSI AT 28 DAYS
52.6 GALLONS PER INCH

NOTES:
1. SEWER CONTRACTOR TO PLUMB DISCHARGE PIPING IN SUCH A MANNER THAT ALLOWS EASY ACCESS TO GATE VALVE FOR FLOW ADJUSTMENT AND/TO UNION FOR PUMP REMOVAL.
2. CONTRACTOR TO STABILIZE PUMP DISCHARGE PIPING SO NO EXCESSIVE VIBRATION OCCURS DURING OPERATION.
3. PULL CHAIN TO BE STAINLESS STEEL OR NYLON ROPE. PULL CHAIN TO BE ATTACHED TO HATCH COVER OR CONCRETE RISERS WITHIN EASY ACCESS OF TOP OF HATCH.
4. ALL PIPE OPENINGS SHALL BE GROUTED FOR WATERTIGHT SEALS.
5. ALL ELECTRICAL CONDUIT OPENINGS SHALL BE WATERTIGHT AND GASTIGHT.
6. ALL PIPE WITHIN TANK SHALL BE SCH 40 PVC(UNLESS OTHERWISE SPECIFIED)
7. THIS SYSTEM LIES ADJACENT TO CLASS "SC" WATERS. 12 HOURS OF STORAGE PROVIDED

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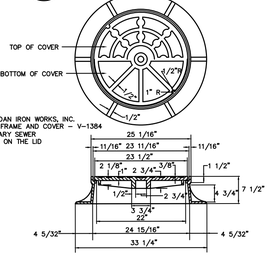
WATERTIGHT MANHOLE INSERT

N.T.S.

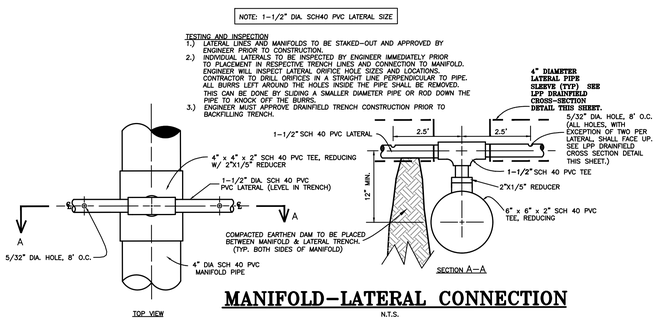
MINIMUM AVERAGE WEIGHTS	
RING	180 LBS
COVER	135 LBS
TOTAL	315 LBS



TYPICAL MANHOLE RING & COVER DETAILS

NTS

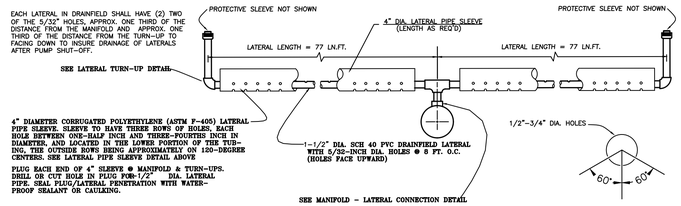
NOTE: 1-1/2" DIA. SCH40 PVC LATERAL SIZE



MANIFOLD-LATERAL CONNECTION

N.T.S.

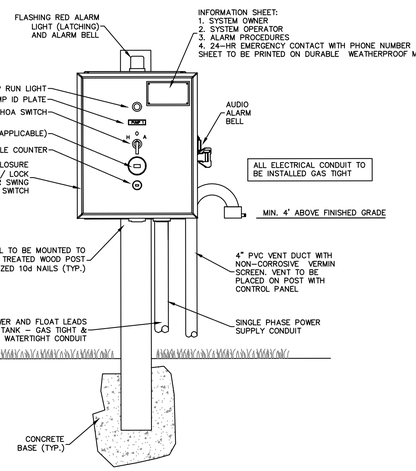
NOTE: HOLE SPACING IS 8 FEET ON CENTERS



LOW-PRESSURE PIPE DRAINFIELD CROSS SECTION

N.T.S.

NOTE: HOLE SPACING IS 8 FEET ON CENTERS



SIMPLEX CONTROL PANEL & VENT MOUNTING

N.T.S.

PERMANENT VEGETATION

SEEDING DATES: APRIL 1– SEPT 30

SEED MIXTURE	APPLICATION RATES/ACRE
BAHIA	50 LBS.
COMMON BERMUDA (UNHULLED)	50 LBS.
GERMAN MILLETT	15 LBS.
FESCUE	20 LBS.

FERTILIZER

26-13-13 @ 500 LB/ACRE

MULCH

APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

TEMPORARY VEGETATION

SEEDING DATES: OCT. 1 – MARCH 31

SEED MIXTURE	APPLICATION RATES/ACRE
RYE GRAIN	175 LBS.

FERTILIZER

10-10-10 @ 1000 LB/ACRE

MULCH

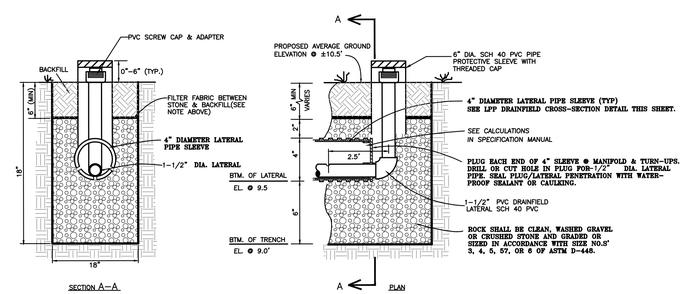
APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

– FERTILIZER RATES SHOWN ARE GENERAL RECOMMENDATIONS; FREQUENCY AND AMOUNT OF FERTILIZATION CAN BEST BE DETERMINED THROUGH SITE SPECIFIC SOIL TESTING.
– MAINTENANCE:
SATISFACTORY STABILIZATION AND EROSION CONTROL REQUIRES A COMPLETE VEGETATIVE COVER. EVEN SMALL BREACHES IN VEGETATIVE COVER CAN EXPAND RAPIDLY AND, IF LEFT UNATTENDED, CAN ALLOW SERIOUS SOIL LOSS FROM AN OTHERWISE STABLE SURFACE. A SINGLE HEAVY RAIN IS OFTEN SUFFICIENT TO GREATLY ENLARGE BARE SPOTS, AND THE LONGER REPAIRS ARE DELAYED, THE MORE COSTLY THEY BECOME. PROMPT ACTION WILL KEEP SEDIMENT LOSS AND REPAIR COST DOWN. NEW SEEDLINGS SHOULD BE INSPECTED FREQUENTLY AND MAINTENANCE PERFORMED AS NEEDED. IF RILLS AND GULLIES DEVELOP, THEY MUST BE FILLED IN, RE-SEEDED, AND MULCHED AS SOON AS POSSIBLE. DIVERSIONS MAY BE NEEDED UNTIL NEW PLANTS TAKE HOLD.

MAINTENANCE REQUIREMENTS EXTEND BEYOND THE SEEDING PHASE.

WEAK OR DAMAGED SPOTS MUST BE RELIMED, FERTILIZED, MULCHED, AND RESEEDED AS PROMPTLY AS POSSIBLE. REFERTILIZATION MAY BE NEEDED TO MAINTAIN PRODUCTIVE STANDS.

GENERAL SEEDING SPECIFICATIONS



DRAINFIELD

LATERAL TURN-UP & TRENCH X-SECTION

N.T.S.

NOTES:
1. ACTIVE DRAINFIELD AREA SHALL BE GRADED SO THAT STORMWATER RUNOFF DOES NOT POND ON DRAINFIELD AREA.
2. VEGETATE DRAINFIELD AND REPAIR AREAS AS PER SEEDING SPECIFICATION.
3. FILTER FABRIC SHALL BE TREVIRA SPUNBOND TYPE 1112 ENGINEERING FABRIC OR EQUAL AS APPROVED BY ENGINEER.
4. ALL TRENCHES, LATERALS, AND MANIFOLDS SHALL BE INSTALLED LEVEL.

NOTE: HOLE SPACING IS 8 FEET ON CENTERS

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NORTH CAROLINA PROFESSIONAL ENGINEERS SEAL 040181 CATHLEEN M. SIMS PRELIMINARY NOT FOR CONSTRUCTION CERTIFICATION

NO.	DATE	REVISIONS
1	02/27/24	ISSUED FOR WASTEWATER PERMITTING
2	03/12/24	ISSUED FOR NCDEQ PERMITTING
3	03/25/24	REVISED PER TRC COMMENTS

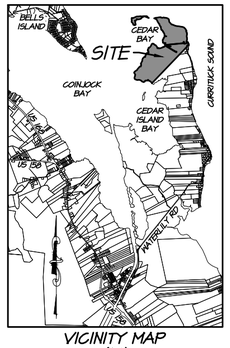
WASTEWATER DETAILS

ATHLETIC FACILITY
1559 WATERLILLY RD

POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA

PROJECT NO. P16099
DESIGNED BY ND
DRAWN BY ND
CHECKED BY MWS
ISSUE DATE 12/12/23

SHEET NO. 9 OF 9 SHEETS



VICINITY MAP
(NTS)

CURRITUCK SOUND

SHORELINE (L355-L425)

CL BULKHEAD (L322-L354)

NOT ALL IMPROVEMENTS SHOWN FOR CLARITY

SHEET 2

WATERLILY RD
60' PUBLIC R/W

FIRM ZONE X

FIRM ZONE SHADED X (0.2%)

FIRM ZONE LINE NOT SURVEYED

FIRM ZONE AE (EL.4)

TRACT A2
6,413,360 SF
147.23 AC

TRACT A1
13,527,580 SF
310.55 AC

NF
JAMES L. MARKERT
RESIDUAL PARCEL
PC M, SL 100

NEW PROPERTY LINE

CANAL

NC GRID NAD83(2011)

N 38° 31' 43" W
62.93' (L199 END-CALC)

N 38° 31' 43" W
32.41' (CALC-L200 END)

FIRM ZONE AE (EL.4)

FIRM ZONE AE (EL.5)

CEDAR BAY

TIE FROM "A-C"
N 47° 27' 10" W
4845.10'

"C"
N 988,977.82 sFT
E 2,901,309.27 sFT

"D"
N 989,007.30 sFT
E 2,900,890.71 sFT

TIE FROM "A-D"
N 51° 42' 55" W
5335.50'

NO APPROVAL REQUIRED

PLANNING DIRECTOR DATE

REVIEW OFFICER'S CERTIFICATE

STATE OF NORTH CAROLINA
COUNTY OF CURRITUCK

I, _____, REVIEW OFFICER OF CURRITUCK COUNTY, CERTIFY THAT THE MAP OR PLAT TO WHICH THIS CERTIFICATION IS AFFIXED MEETS ALL STATUTORY REQUIREMENTS FOR RECORDING.

REVIEW OFFICER DATE

TRACT B
575,194 SF
13.20 AC

SHORELINE (L465-L546)

WATERFRONT PARCEL OWNERSHIP TO SHORELINE. WATER BODY BOUNDARIES ARE DYNAMIC AND WILL CHANGE OVER TIME.

SHORELINE (L3-L321)

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NOTES:
1. CURRENT OWNERS: 85° AND SUNNY, LLC
   9919 STEPHEN DECATUR HWY
   OCEAN CITY, MD 21842
2. PIN / PID: 9908-14-7146 / 007900000A0000 (1555 WATERLILY RD) LOT A1
   9908-37-3430 / 007900000I0A0000 (1631 WATERLILY RD) LOT A2
3. TOTAL PARCEL AREA = 20,516,134 SF / 470.98 AC (AREAS BY COORDINATE METHOD)
4. SUBJECT REFERENCES: DB 1449, PG 381 & 390; PC F, SL 123; PC R, SL 288
5. ADDITIONAL REFERENCES: DB 110, PG 345; DB 178, PG 641; DB 177, PG 647; DB 1139, PG 14; PC M, SL 100; DB 75, PG 321 (UTILITY EASEMENT NOT PLOTTABLE)
6. FIELD SURVEY DATES: 01/22/18 - 02/07/18, 04/15/19 - 05/09/19, 08/05/22 & 08/XX/23.
7. MERIDIAN BASED ON A-B.
8. HORIZONTAL DATUM IS NAD83(2011), DERIVED FROM NC GNSS RTN.
9. VERTICAL DATUM IS NAVD 1988, DERIVED FROM NC GNSS RTN.
10. ALL DISTANCES ARE IN US SURVEY FEET AND HORIZONTAL GROUND.
11. PROPERTY IS LOCATED IN NFIP FLOOD ZONES AS SHOWN AND SUBJECT TO CHANGES. BASED ON COMMUNITY CID NO. 370078; PANEL 9908; SUFFIX K. (MAP NUMBER 37200990800K) EFFECTIVE DATE: 12/21/2018

GRAPHIC SCALE

400' 0 200' 400' 800'

(IN FEET)
1 inch = 400 ft.

SURVEYOR'S CERTIFICATE

I, JOHN M. HURDLE, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION (SEE NOTES); THAT THE BOUNDARIES NOT SURVEYED ARE SHOWN AS DASHED LINES AND ARE CLEARLY INDICATED AS DRAWN FROM INFORMATION FOUND IN (SEE ADDITIONAL REFERENCES IN NOTES); THAT THE RATIO OF PRECISION OR POSITIONAL ACCURACY AS CALCULATED IS 2-CENTIMETERS; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED.

CLASS OF SURVEY: CLASS A
POSITIONAL ACCURACY: 2-CENTIMETERS
TYPE OF GPS FIELD PROCEDURE: NC GNSS RTN
DATES OF SURVEY: JAN. - FEB. 2018, APR - MAY 2019, 08/05/22 & 08/XX/23
DATUM/EPOCH: NC GRID - NAD 83 / EPOCH 2011
PUBLISHED/FIXED-CONTROL USE: NC GNSS RTN
GEOID MODEL: 2012
COMBINATION GRID FACTOR(S): 1.00008043
UNITS: US SURVEY FEET

THAT THE SURVEY IS OF ANOTHER CATEGORY, SUCH AS THE RECOMBINATION OF EXISTING PARCELS, A COURT-ORDERED SURVEY, OR OTHER EXEMPTION OR EXCEPTION TO THE DEFINITION OF SUBDIVISION.

WITNESS MY ORIGINAL SIGNATURE, LICENSE NUMBER AND SEAL THIS 26TH DAY OF MARCH, 2024, A.D.

_____
JOHN M. HURDLE, PLS NC L-5209

NC License#: C-0208
Quible & Associates, P.C.
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SUITE B
BLACK MOUNTAIN, NC 28711
Phone: (828) 357-5149
administrator@quible.com

PRELIMINARY PLAT-NOT FOR RECORDATION CONVEYANCES OR SALES

CERTIFICATION

RECOMBINATION PLAT (1 of 3)

85 AND SUNNY, LLC

POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA

PROJECT NO.	P16099
DRAWN BY	JMH
CHECKED BY	DLT/JMH
SCALE	1" = 400'
ISSUE DATE	03/26/24

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CURRITUCK SOUND

NC GRID NAD83(2011)

L420

S 47° 22' 36" W 304.89'

N/F DELORES MYERS DB 201, PG 445 PC P, SL 110

5/8"EIR (0.2BG)

S 45° 18' 16" W 128.15'

"A" 5/8"EIR (FLUSH) N 985,701.582 FT E 2,904,878.755 FT NAD83(2011)

S 08° 27' 45" E 12.39' (TIE)

5/8"EIR (0.2BG)

16.39'

36.16'

1/2"EIR (0.2BG)

S 45° 28' 39" W (TOTAL) 454.99' 396.05'

B 5/8"EIR (0.8BG) N 985,371.419 sFT E 2,904,565.687 sFT

641.67'

S 45° 45' 45" W 5076.81' (T) 4435.14'

L410 61.90'

3.07' (CALC–L410 END)

177.30' N 85° 59' 15" E 240.99' (T)

L400

N 15° 26' 08" W 17.66'

63.69'

N 74° 33' 52" E 5.00'

S 15° 26' 08" E 16.89'

5/8"EIR (FLUSH)

N 85° 59' 15" E 64.32'

29.43'

N 77° 51' 01" E 69.43' (T)

N 12° 34' 41" W 59.14'

30.00'

10.00'

C1

N 84° 28' 26" E 95.21'

S 05° 31' 34" E 210.00'

N 77° 51' 01" E 44.39'

S 08° 00' 37" E 230.83'

N 08° 54' 23" E 60.00'

144.21'

N 08° 00' 37" W

PROPERTY LINES TO BE ABANDONED (TYP.)

PROPERTY LINES TO BE ABANDONED

FIRM ZONE AE (EL.5')

FIRM ZONE SHADED X (0.2%)

FIRM ZONE LINE NOT SURVEYED

FIRM ZONE X

RET. WALL

463.48'

N 12° 34' 41" W

30' ACCESS EASEMENT PC R, SL 288

483.90'

N 12° 34' 41" W

CURVE TABLE				
CURVE#	LENGTH	RADIUS	CHD LENGTH	CHD BEARING
C1	42.35'	25.00'	37.46'	N 35° 56' 53" E

WATERLILY RD 60' PUBLIC R/W

MAG

S 16° 42' 19" E 210.00' (TIE)

S 12° 49' 09" E 529.20' (TIE "A"-MAG)

S 16° 54' 10" E 397.27' (TIE)

1/2"EIR (0.2BG)

1/2"EIR (0.2BG)

S 74° 36' 59" W 210.00' (TIE)

N/F JAMES L. MARKERT LOT 1 PC M, SL 100

N/F JAMES L. MARKERT LOT 2 PC M, SL 100

N/F JAMES L. MARKERT RESIDUAL PARCEL PC M, SL 100

1/2"EIR (0.1BG)

L160

LEGEND:
- = EXISTING IRON ROD, EIR
- = MAG NAIL
- = CALCULATED POINT
- = SET IRON ROD, SIR
(T) - TOTAL DISTANCE
AG - ABOVE GRADE
BG - BELOW GRADE

NOT ALL IMPROVEMENTS SHOWN FOR CLARITY

TRACT A2
6,413,360 SF
147.23 AC

TRACT A1
13,527,580 SF
310.55 AC

GRAPHIC SCALE
100' 0 50' 100' 200'
(IN FEET)
1 inch = 100 ft.

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PRELIMINARY PLAT-NOT FOR RECORDATION CONVEYANCES OR SALES

CERTIFICATION

RECOMBINATION PLAT (2 of 3)

85 AND SUNNY, LLC

POPLAR BRANCH TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA

PROJECT NO.	P16099
DRAWN BY	JMH
CHECKED BY	DLT/JMH
SCALE	1" = 100'
ISSUE DATE	03/26/24

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LINE TABLE		
LINE#	LENGTH	DIRECTION
L1	454.99'	S 43° 28' 39" W
L2	5076.81'	S 43° 45' 43" W
L3	30.80'	N 11° 30' 17" E
L4	1214.70'	N 39° 21' 44" W
L5	1205.76'	N 49° 37' 41" W
L6	1271.13'	N 52° 34' 51" W
L7	1390.06'	N 12° 34' 46" W
L8	98.70'	N 21° 39' 44" W
L9	45.94'	S 89° 25' 55" W
L10	23.48'	S 18° 00' 19" W
L11	44.75'	S 08° 26' 38" W
L12	96.74'	S 76° 32' 20" W
L13	86.61'	N 75° 02' 12" W
L14	117.13'	S 74° 57' 52" W
L15	75.73'	S 09° 29' 18" W
L16	1168.83'	S 61° 41' 55" W
L17	213.56'	N 61° 32' 21" W
L18	95.85'	N 42° 10' 57" W
L19	49.33'	N 55° 33' 05" W
L20	74.65'	N 66° 12' 44" W
L21	81.21'	N 87° 10' 03" W
L22	54.04'	N 77° 57' 02" W
L23	64.42'	S 76° 53' 43" W
L24	111.20'	N 14° 15' 29" E
L25	37.16'	S 84° 01' 12" W
L26	262.05'	N 73° 11' 34" W
L27	77.44'	N 21° 06' 16" W
L28	83.64'	N 38° 25' 05" W
L29	111.20'	N 14° 15' 29" E
L30	75.01'	N 27° 00' 09" E
L31	68.10'	N 07° 16' 41" W
L32	116.87'	N 24° 01' 02" E
L33	68.75'	N 04° 27' 03" W
L34	236.24'	N 32° 16' 20" W
L35	124.68'	N 32° 12' 05" E
L36	126.11'	N 50° 04' 25" E
L37	155.27'	N 59° 06' 46" E
L38	62.03'	N 61° 24' 30" E
L39	71.22'	N 14° 57' 39" E
L40	1502.64'	N 38° 26' 36" E
L41	1184.97'	N 40° 05' 35" E
L42	88.20'	N 46° 18' 00" E
L43	54.25'	S 77° 04' 36" E
L44	59.65'	N 77° 33' 32" E
L45	66.41'	N 05° 29' 15" E
L46	36.29'	N 36° 36' 00" E
L47	35.87'	N 34° 42' 54" W
L48	23.30'	N 06° 30' 39" W
L49	56.11'	N 40° 28' 47" E
L50	55.32'	N 18° 06' 25" W
L51	74.93'	N 26° 05' 17" W
L52	112.35'	N 34° 30' 33" E
L53	122.47'	N 24° 52' 43" E
L54	59.39'	N 22° 59' 09" E
L55	66.37'	N 39° 14' 29" E
L56	94.41'	N 05° 44' 59" W
L57	176.59'	N 15° 24' 17" E
L58	130.53'	N 44° 11' 45" E
L59	91.41'	N 40° 07' 24" E
L60	1214.98'	N 89° 36' 40" E
L61	55.32'	N 13° 47' 16" E
L62	67.85'	N 20° 22' 09" W
L63	1124.40'	N 29° 45' 57" E
L64	76.21'	N 59° 01' 51" E
L65	55.56'	N 10° 46' 42" W
L66	1711.49'	N 30° 30' 36" E
L67	55.93'	N 82° 11' 30" E
L68	96.42'	S 82° 26' 05" E
L69	56.79'	N 57° 27' 51" E
L70	82.44'	N 28° 30' 14" W

LINE TABLE		
LINE#	LENGTH	DIRECTION
L71	70.13'	N 14° 17' 52" E
L72	56.51'	N 74° 21' 04" W
L73	72.80'	N 79° 21' 04" W
L74	1341.02'	N 02° 17' 19" E
L75	43.37'	N 13° 18' 24" E
L76	80.35'	N 63° 49' 34" E
L77	655.50'	N 24° 14' 37" E
L78	42.13'	N 14° 45' 39" E
L79	42.13'	N 14° 45' 39" E
L80	126.72'	N 73° 54' 47" E
L81	101.01'	N 41° 57' 02" E
L82	655.10'	N 33° 22' 27" E
L83	64.39'	N 01° 58' 44" E
L84	81.28'	N 57° 07' 00" E
L85	40.40'	N 22° 16' 20" E
L86	32.24'	N 59° 51' 01" E
L87	76.47'	S 70° 19' 32" E
L88	655.81'	N 01° 58' 44" E
L89	665.03'	S 37° 56' 04" E
L90	1314.74'	S 77° 54' 44" E
L91	36.24'	S 07° 54' 03" E
L92	52.67'	S 86° 58' 17" E
L93	1223.36'	S 28° 40' 53" E
L94	54.00'	S 14° 28' 19" E
L95	40.18'	S 34° 02' 11" E
L96	24.56'	S 02° 39' 53" W
L97	17.50'	S 19° 23' 26" W
L98	24.74'	S 83° 03' 11" E
L99	45.32'	S 39° 16' 11" E
L100	55.34'	N 49° 24' 08" E
L101	65.22'	N 73° 49' 01" E
L102	46.02'	S 24° 49' 02" E
L103	45.32'	S 39° 16' 11" E
L104	50.36'	N 41° 46' 10" E
L105	102.18'	S 81° 08' 42" E
L106	67.13'	N 10° 43' 24" E
L107	50.86'	N 60° 25' 33" E
L108	148.55'	N 78° 55' 45" E
L109	106.04'	N 41° 46' 10" E
L110	391.65'	S 70° 50' 58" E
L111	26.12'	S 19° 44' 52" E
L112	54.00'	N 44° 50' 57" E
L113	16.67'	S 82° 58' 36" E
L114	43.98'	N 47° 55' 53" E
L115	48.56'	N 46° 10' 41" E
L116	47.51'	N 25° 41' 18" E
L117	14.54'	N 08° 02' 05" E
L118	153.94'	N 64° 07' 26" E
L119	27.52'	S 80° 21' 30" E
L120	31.21'	S 65° 57' 04" E
L121	24.33'	S 57° 44' 35" E
L122	70.59'	S 62° 02' 12" E
L123	57.63'	S 59° 58' 38" E
L124	34.18'	S 59° 01' 24" E
L125	37.45'	S 61° 01' 44" E
L126	47.35'	S 59° 10' 34" E
L127	15.47'	S 60° 59' 41" E
L128	23.40'	S 49° 02' 00" E
L129	14.66'	S 55° 13' 24" E
L130	11.40'	S 65° 43' 11" E
L131	33.84'	S 62° 31' 12" E
L132	27.29'	S 62° 25' 25" E
L133	27.75'	S 49° 20' 40" E
L134	37.41'	S 59° 37' 44" E
L135	37.41'	S 59° 37' 44" E
L136	52.80'	S 59° 57' 37" E
L137	44.73'	S 58° 30' 56" E
L138	56.42'	S 61° 55' 27" E
L139	33.97'	S 53° 55' 42" E
L140	44.97'	S 62° 40' 57" E

LINE TABLE		
LINE#	LENGTH	DIRECTION
L141	52.10'	S 61° 51' 57" E
L142	38.23'	S 56° 51' 05" E
L143	40.54'	S 59° 46' 22" E
L144	34.97'	S 59° 14' 15" E
L145	67.47'	S 60° 35' 32" E
L146	63.47'	S 54° 37' 44" E
L147	64.80'	S 57° 17' 24" E
L148	54.86'	S 59° 05' 26" E
L149	46.10'	S 56° 30' 17" E
L150	44.22'	S 54° 44' 12" E
L151	32.73'	S 59° 44' 12" E
L152	25.38'	S 59° 42' 06" E
L153	44.84'	S 57° 28' 54" E
L154	23.64'	S 57° 05' 02" E
L155	19.41'	S 74° 22' 15" E
L156	12.60'	N 64° 59' 19" E
L157	9.28'	N 23° 51' 57" E
L158	7.61'	N 07° 57' 01" E
L159	11.45'	N 08° 32' 47" W
L160	2.76'	N 01° 39' 50" E
L161	4.50'	N 33° 39' 22" E
L162	6.06'	N 01° 33' 08" E
L163	7.24'	N 12° 21' 01" E
L164	3.82'	N 24° 22' 46" E
L165	6.34'	N 67° 41' 35" E
L166	7.95'	N 84° 38' 22" E
L167	14.73'	N 02° 50' 44" W
L168	15.33'	N 12° 34' 50" W
L169	130.51'	N 75° 14' 06" W
L170	141.90'	N 61° 19' 24" W
L171	139.21'	N 59° 33' 20" W
L172	122.04'	N 60° 37' 52" W
L173	151.96'	N 59° 06' 25" W
L174	156.83'	N 59° 36' 45" W
L175	141.02'	N 59° 32' 28" W
L176	155.61'	N 59° 10' 34" W
L177	130.34'	N 56° 51' 56" W
L178	42.33'	N 54° 06' 42" W
L179	12.44'	N 55° 25' 36" E
L180	102.14'	S 89° 13' 55" E
L181	113.82'	S 78° 09' 02" E
L182	93.78'	S 78° 17' 55" E
L183	43.52'	S 62° 39' 51" E
L184	41.23'	N 12° 07' 38" E
L185	37.93'	N 69° 09' 02" E
L186	50.49'	S 78° 28' 44" E
L187	5.46'	N 77° 04' 47" W
L188	51.36'	N 64° 07' 03" W
L189	38.41'	S 78° 20' 15" W
L190	38.64'	S 78° 20' 15" W
L191	18.12'	S 84° 01' 55" W
L192	42.59'	N 57° 58' 34" W
L193	64.40'	N 74° 41' 47" W
L194	104.76'	N 75° 57' 09" W
L195	93.55'	N 74° 31' 50" W
L196	25.48'	N 57° 18' 17" W
L197	31.09'	N 38° 26' 13" W
L198	55.84'	N 80° 25' 30" W
L199	77.08'	N 80° 31' 55" W
L200	65.34'	N 38° 31' 43" W
L201	107.86'	N 28° 02' 33" W
L202	28.16'	N 39° 15' 36" E
L203	35.34'	N 12° 54' 30" E
L204	31.41'	N 81° 49' 05" E
L205	48.23'	N 89° 39' 41" E
L206	22.60'	N 12° 12' 42" W
L207	4.44'	N 82° 20' 38" W
L208	9.57'	N 82° 20' 38" W
L209	47.01'	S 86° 45' 32" W
L210	53.72'	S 87° 27' 15" W

LINE TABLE		
LINE#	LENGTH	DIRECTION
L211	41.31'	S 61° 51' 57" E
L212	30.23'	S 56° 51' 05" E
L213	30.19'	N 52° 43' 20" W
L214	48.11'	N 02° 08' 26" W
L215	70.48'	N 14° 58' 20" W
L216	42.34'	N 15° 30' 42" E
L217	16.86'	N 08° 57' 09" E
L218	41.56'	N 08° 57' 09" E
L219	31.43'	N 60° 15' 18" E
L220	68.47'	N 14° 36' 27" E
L221	71.43'	N 57° 18' 10" E
L222	39.18'	N 02° 37' 12" W
L223	36.66'	N 26° 54' 47" W
L224	113.54'	N 46° 36' 49" E
L225	101.12'	N 15° 10' 24" E
L226	44.22'	N 70° 26' 37" E
L227	66.59'	N 81° 51' 47" E
L228	45.33'	S 76° 44' 57" E
L229	20.57'	N 43° 30' 01" W
L230	63.01'	N 78° 08' 14" W
L231	84.65'	N 74° 02' 24" W
L232	31.36'	N 20° 16' 11" W
L233	33.66'	N 08° 09' 32" E
L234	54.66'	N 03° 09' 32" E
L235	44.05'	N 09° 24' 13" W
L236	42.65'	N 26° 55' 24" W
L237	61.11'	N 04° 59' 49" E
L238	97.77'	N 26° 34' 09" W
L239	69.97'	N 52° 56' 45" W
L240	30.09'	S 89° 59' 49" W
L241	81.41'	N 11° 34' 09" W
L242	84.84'	N 24° 36' 55" W
L243	23.40'	N 72° 31' 49" W
L244	23.76'	N 50° 08' 26" W
L245	72.90'	N 09° 28' 47" W
L246	31.11'	N 29° 34' 20" W
L247	81.41'	N 11° 34' 09" W
L248	20.64'	N 12° 37' 07" W
L249	23.50'	N 16° 10' 12" E
L250	35.97'	N 74° 44' 44" W
L251	51.74'	N 52° 14' 13" W
L252	142.71'	N 14° 49' 16" W
L253	112.24'	N 11° 19' 49" W
L254	52.11'	N 25° 10' 50" E
L255	30.16'	S 85° 20' 03" W
L256	24.30'	N 69° 00' 56" W
L257	26.39'	N 29° 29' 23" W
L258	38.55'	N 00° 09' 39" E
L259	31.49'	N 36° 35' 37" W
L260	54.45'	N 24° 24' 31" W
L261	82.31'	N 36° 00' 35" W
L262	100.69'	N 04° 37' 00" W
L263	41.18'	N 43° 49' 57" W
L264	61.58'	N 60° 19' 58" W
L265	24.40'	N 15° 21' 45" W
L266	31.41'	N 32° 10' 46" W
L267	31.07'	N 06° 14' 54" W
L268	27.62'	N 46° 00' 14" W
L269	65.52'	N 23° 30' 45" W
L270	41.97'	N 49° 56' 09" W
L271	56.40'	N 34° 07' 44" W
L272	69.80'	N 05° 47' 27" W
L273	122.62'	N 39° 05' 14" W
L274	30.80'	N 27° 08' 09" W
L275	20.01'	N 77° 05' 04" W
L276	49.42'	N 53° 59' 58" W
L277	41.07'	N 52° 31' 42" W
L278	36.65'	N 62° 08' 09" W
L279	29.34'	N 39° 28' 09" W
L280	46.20'	S 86° 55' 19" W

LINE TABLE		
LINE#	LENGTH	DIRECTION
L281	21.86'	S 88° 14' 36" E
L282	70.79'	N 52° 13' 54" E
L283	43.65'	N 43° 54' 43" E
L284	86.30'	N 51° 23' 54" E
L285	22.64'	S 44° 37' 53" E
L286	30.48'	S 47° 22' 36" W
L287	51.62'	S 76° 28' 11" W
L288	46.45'	N 52° 51' 38" W
L289	34.23'	N 64° 37' 52" W
L290	50.00'	N 66° 32' 05" W
L291	63.75'	N 50° 08' 58" W
L292	51.62'	S 76° 28' 11" W
L293	64.31'	N 61° 28' 57" W
L294	30.73'	N 09° 54' 02" W
L295	112.68'	N 78° 27' 36" W
L296	73.01'	N 84° 17' 33" W
L297	50.46'	S 59° 06' 46" W
L298	102.04'	S 66° 53' 21" W
L299	129.96'	S 55° 57' 05" W
L300	102.26'	S 30° 24' 49" W
L301	63.47'	S 67° 43' 18" W
L302	72.40'	S 77° 40' 41" W
L303	83.08'	S 77° 40' 41" W
L304	103.66'	S 78° 24' 06" W
L305	93.30'	S 86° 37' 56" W
L306	46.26'	S 80° 04' 09" W
L307	16.11'	N 42° 49' 53" W
L308	60.41'	N 44° 58' 23" W
L309	13.03'	N 66° 57' 31" W
L310	11.44'	S 05° 26' 41" W
L311	73.43'	S 52° 34' 50" W
L312	48.05'	S 47° 05' 53" W
L313	82.56'	S 38° 48' 06" W
L314	48.84'	N 66° 26' 51" W
L315	32.36'	N 74° 44' 24" W
L316	4.85'	S 18° 45' 35" W
L317	11.53'	S 69° 01' 03" E
L318	33.81'	S 69° 42' 34" E
L319	19.34'	S 42° 10' 58" E
L320	19.99'	S 31° 41' 55" E
L321	54.03'	S 03° 20' 28" W
L322	101.97'	S 09° 51' 41" W
L323	130.17'	S 22° 46' 38" E
L324	56.76'	S 00° 04' 11" W
L325	37.93'	S 69° 20' 02" E
L326	5.46'	N 32° 41' 21" E
L327	51.36'	N 77° 04' 47" W
L328	39.41'	N 64° 07' 03" W
L329	18.12'	N 20° 20' 15" W
L330	42.59'	N 57° 58' 34" W
L331	64.40'	N 74° 41' 47" W
L332	104.76'	N 75° 57' 09" W
L333	93.55'	N 74° 31' 50" W
L334	31.09'	N 38° 26' 13" W
L335	55.84'	N 80° 25' 30" W
L336	77.08'	N 80° 31' 55" W
L337	65.34'	N 38° 31' 43" W
L338	107.86'	N 28° 02' 33" W
L339	28.16'	N 39° 15' 36" E
L340	35.34'	N 12° 54' 30" E
L341	31.41'	N 81° 49' 05" E
L342	48.23'	N 89° 39' 41" E
L343	22.60'	N 12° 12' 42" W
L344	4.44'	N 82° 20' 38" W
L345	9.57'	N 82° 20' 38" W
L346	47.01'	S 86° 45' 32" W
L347	53.72'	S 87° 27' 15" W

LINE TABLE		
LINE#	LENGTH	DIRECTION
L348	61.80'	S 61° 51' 57" E
L349	54.86'	S 59° 05' 26" E
L350	46.10'	S 56° 30' 17" E
L351	32.73'	S 59° 44' 12" E
L352	25.38'	S 59° 42' 06" E
L353	44.84'	S 57° 28' 54" E
L354	23.64'	S 57° 05' 02" E
L355	19.41'	S 74° 22' 15" E
L356	12.60'	N 64° 59' 19" E
L357	9.28'	N 23° 51' 57" E
L358	7.61'	N 07° 57' 01" E
L359	11.45'	N 08° 32' 47" W
L360	2.76'	N 01° 39' 50" E
L361	4.50'	N 33° 39' 22" E
L362	6.06'	N 01° 33' 08" E
L363	7.24'	N 12° 21' 01" E
L364	3.82'	N 24° 22' 46" E
L365	6.34'	N 67° 41' 35" E
L366	7.95'	N 84° 38' 22" E
L367	14.73'	N 02° 50' 44" W
L368	15.33'	N 12° 34' 50" W
L369	130.51'	N 75° 14' 06" W
L370	141.90'	N 61° 19' 24" W
L371	139.21'	N 59° 33' 20" W
L372	122.04'	N 60° 37' 52" W
L373	151.96'	N 59° 06' 25" W
L374	156.83'	N 59° 36' 45" W
L375	141.02'	N 59° 32' 28" W
L376	155.61'	N 59° 10' 34" W
L377	130.34'	N 56° 51' 56" W
L378	42.33'	N 54° 06' 42" W
L379	12.44'	N 55° 25' 36" E
L380	102.14'	S 89° 13' 55" E
L381	113.82'	S 78° 09' 02" E
L382	93.78'	S 78° 17' 55" E
L383	43.52'	S 62° 39' 51" E
L384	41.23'	N 12° 07' 38" E
L385	37.93'	N 69° 09' 02" E
L386	50.49'	S 78° 28' 44" E
L387	5.46'	N 77° 04' 47" W
L388	51.36'	N 64° 07' 03" W
L389	38.41'	S 78° 20' 15" W
L390	38.64'	S 78° 20' 15" W
L391	18.12'	S 84° 01' 55" W
L392	42.59'	N 57° 58' 34" W
L393	64.40'	N 74° 41' 47" W
L394	104.76'	N 75° 57' 09" W
L395	93.55'	N 74° 31' 50" W
L396	25.48'	N 57° 18' 17" W
L397	31.09'	N 38° 26' 13" W
L398	55.84'	N 80° 25' 30" W
L399	77.08'	N 80° 31' 55" W
L400	65.34'	N 38° 31' 43" W
L401	107.86'	N 28° 02' 33" W
L402	28.16'	N 39° 15' 36" E
L403	35.34'	N 12° 54' 30" E
L404	31.41'	N 81° 49' 05" E
L405	48.23'	N 89° 39' 41" E
L406	22.60'	N 12° 12' 42" W
L407	4.44'	N 82° 20' 38" W
L408	9.57'	N 82° 20' 38" W
L409	47.01'	S 86° 45' 32" W
L410	53.72'	S 87° 27' 15" W

LINE TABLE		
LINE#	LENGTH	DIRECTION
L411	61.80'	S 61° 51' 57" E
L412	54.86'	S 59° 05' 26" E
L413	46.10'	S 56° 30' 17" E
L414	44.22'	N 70° 26' 37" E
L415	66.59'	N 81° 51' 47" E
L416	45.33'	S 76° 44' 57" E
L417	20.57'	N 43° 30' 01" W
L418	63.01'	N 78° 08' 14" W
L419	84.65'	N 74° 02' 24" W
L420	31.36'	N 20° 16' 11" W
L421	33.66'	N 08° 09' 32" E
L422	54.66'	N 03° 09' 32" E
L423	44.05'	N 09° 24' 13" W
L424	42.65'	N 26° 55' 24" W
L425	61.11'	N 04° 59' 49" E
L426	97.77'	N 26° 34' 09" W
L427	69.97'	N 52° 56' 45" W
L428	30.09'	S 89° 59' 49" W
L429	81.41'	N 11° 34' 09" W
L430	84.84'	N 24° 36' 55" W
L431	23.40'	N 72° 31' 49" W
L432	23.76'	N 50° 08' 26" W
L433	72.90'	N 09° 28' 47" W
L434	31.11'	N 29° 34' 20" W
L435	81.41'	N 11° 34' 09" W
L436	20.64'	N 12° 37' 07" W
L437	23.50'	N 16° 10' 12" E
L438	35.97'	N 74° 44' 44" W
L439	52.11'	N 52° 14' 13" W
L440	142.71'	N 14° 49' 16" W
L441	112.24'	N 11° 19' 49" W
L442	52.11'	N 25° 10' 50" E
L443	30.16'	S 85° 20' 03" W
L444	24.30'	N 69° 00' 56" W
L445	26.39'	N 29° 29' 23" W
L446	38.55'	N 00° 09' 39" E
L447	31.49'	N 36° 35' 37" W
L448	54.45'	N 24° 24' 31" W
L449	82.31'	N 36° 00' 35" W
L450	100.69'	N 04° 37' 00" W
L451	41.18'	N 43° 49' 57" W
L452	61.58'	N 60° 19' 58" W
L453	23.64'	N 74° 44' 44" W
L454	23.76'	N 16° 10' 12" E
L455	35.97'	N 74° 44' 44" W
L456	52.11'	N 52° 14' 13" W
L457	142.71'	N 14° 49' 16" W
L458	112.24'	N 11° 19' 49" W
L459	52.11'	N 25° 10' 50" E
L460	30.16'	S 85° 20' 03" W
L461	24.30'	N 69° 00' 56" W
L462	26.39'	N 29° 29' 23" W
L463	38.55'	N 00° 09' 39" E
L464	31.49'	N 36° 35' 37" W
L465	54.45'	N 24° 24' 31" W
L466	82.31'	N 36° 00' 35" W
L467	100.69'	N 04° 37' 00" W
L468	41.18'	N 43° 49' 57" W
L469	61.58'	N 60° 19' 58" W
L470	23.64'	N 74° 44' 44" W
L471	23.76'	N 16° 10' 12" E
L472	35.97'	N 74° 44' 44" W
L473	52.11'	N 52° 14' 13" W
L474	142.71'	N 14° 49' 16" W
L475	112.24'	N 11° 19' 49" W
L476	52.11'	N 25° 10' 50" E
L477	30.16'	S 85° 20' 03" W
L478	24.30'	N 69° 00' 56" W
L479	26.39'	N 29° 29' 23" W
L480	38.55'	N 00° 09' 39" E
L481	31.49'	N 36° 35' 37" W
L482	54.45'	N 24° 24' 31" W
L483	82.31'	N 36° 00' 35" W
L484	100.69'	N 04° 37' 00" W
L485	41.18'	N 43° 49' 57" W
L486	61.58'	N 60° 19' 58" W
L487	23.64'	N 74° 44' 44" W
L488	23.76'	N 16° 10' 12" E
L489	35.97'	N 74° 44' 44" W
L490	52.11'	N 52° 14' 13" W
L491	142.71'	N 14° 49' 16" W
L492	112.24'	N 11° 19' 49" W
L493	52.11'	N 25° 10' 50" E
L494	30.16'	S 85° 20' 03" W
L495	24.30'	N 69° 00' 56" W
L496	26.39'	N 29° 29' 23" W
L497	38.55'	N 00° 09' 39" E
L498	31.49'	N 36° 35' 37" W
L499	54.45'	N 24° 24' 31" W
L500	82.31'	N 36° 00' 35" W
L501	100.69'	N 04° 37' 00" W
L502	41.18'	N 43° 49' 57" W
L503	61.58'	N 60° 19' 58" W
L504	23.64'	N 74° 44' 44" W
L505	23.76'	N 16° 10' 12" E
L506	35.97'	N 74° 44' 44" W
L507	52.11'	N 52° 14' 13" W
L508	142.71'	N 14° 49' 16" W
L509	112.24'	N 11° 19' 49" W
L510	52.11'	N 25° 10' 50" E

LINE TABLE		
LINE#	LENGTH	DIRECTION
L511	30.16'	S 85° 20' 03" W
L512	24.30'	N 69° 00' 56" W
L513	26.39'	N 29° 29' 23" W
L514	38.55'	N 00° 09' 39" E
L515	31.49'	N 36° 35' 37" W
L516	54.45'	N 24° 24' 31" W
L517	82.31'	N 36° 00' 35" W
L518	100.69'	N 04° 37' 00" W
L519	41.18'	N 43° 49' 57" W
L520	61.58'	N 60° 19' 58" W
L521	23.64'	N 74° 44' 44" W
L522	23.76'	N 16° 10' 12" E
L523	35.97'	N 74° 44' 44" W
L524	52.11'	N 52° 14' 13" W
L525	142.71'	N 14° 49' 16" W
L526	112.24'	N 11° 19' 49" W
L527	52.11'	N 25° 10' 50" E
L528	30.16'	S 85° 20' 03" W
L529	24.30'	N 69° 00' 56" W
L530	26.39'	N 29° 29' 23" W
L531	38.55'	N 00° 09' 39" E
L532	31.49'	N 36° 35' 37" W
L533	54.45'	N 24° 24' 31" W
L534	82.31'	N 36° 00' 35" W
L535	100.69'	N 04° 37' 00" W
L536	41.18'	N 43° 49' 57" W
L537	61.58'	N 60° 19' 58" W
L538	23.64'	N 74° 44' 44" W
L539	23.76'	N 16° 10' 12" E
L540	35.97'	N 74° 44' 44" W
L541	52.11'	N 52° 14' 13" W
L542	142.71'	N 14° 49' 16" W
L543	112.24'	N 11° 19' 49" W
L544	52.11'	N 25° 10' 50" E
L545	30.16'	S 85° 20' 03" W
L546	24.30'	N 69° 00' 56" W
L547	26.39'	N 29° 29' 23" W
L548	38.55'	N 00° 09' 39" E
L549	31.49'	N 36° 35' 37" W
L550	54.45'	N 24° 24' 31" W
L551	82.31'	N 36° 00' 35" W
L552	100.69'	N 04° 37' 00" W
L553	41.18'	N 43° 49' 57" W
L554	61.58'	N 60° 19' 58" W
L555	23.64'	N 74° 44' 44" W
L556	23.76'	N 16° 10' 12" E
L557	35.97'	N 74° 44' 44" W
L558	52.11'	N 52° 14' 13" W
L559	142.71'	N 14° 49' 16" W
L560	112.24'	N 11° 19' 49" W
L561	52.11'	N 25° 10' 50" E
L562	30.16'	S 85° 20' 03" W
L563	24.30'	N 69° 00' 56" W
L564	26.39'	N 29° 29' 23" W
L565	38.55'	N 00° 09' 39" E
L566	31.49'	N 36° 35' 37" W
L567	54.45'	N 24° 24' 31" W
L568	82.31'	N 36° 00' 35" W
L569	100.69'	N 04° 37' 00" W
L570	41.18'	N 43° 49' 57" W
L571	61.58'	N 60° 19' 58" W
L572	23.64'	N 74° 44' 44" W
L573	23.76'	N 16° 10' 12" E
L574	35.97'	N 74° 44' 44" W
L575	52.11'	N 52° 14' 13" W
L576	142.71'	N 14° 49' 16" W
L577	112.24'	N 11° 19' 49" W
L578	52.11'	N 25° 10' 50" E
L579	30.16'	S 85° 20' 03" W
L580	24.30'	N 69° 00' 56" W
L581	26.39'	N 29° 29' 23" W
L582	38.55'	N 00° 09' 39" E
L583	31.49'	N 36° 35' 37" W
L584	54.45'	N 24° 24' 31" W
L585	82.31'	N 36° 00' 35" W
L586	100.69'	N 04° 37' 00" W
L587	41.18'	N 43° 49' 57" W
L588	61.58'	N 60° 19' 58" W
L589	23.64'	N 74° 44' 44" W
L590	23.76'	N 16° 10' 12" E
L591	35.97'	N 74° 44' 44" W
L592	52.11'	N 52° 14' 13" W
L593	142.71'	N 14° 49' 16" W
L594	112.24'	N 11° 19' 49" W
L595	52.11'	N 25° 10' 50" E
L596	30.16'	S 85° 20' 03" W
L597	24.30'	N 69° 00' 56" W
L598	26.39'	N 29° 29' 23" W
L599	38.55'	N 00° 09' 39" E
L600	31.49'	N 36° 35' 37" W
L601	54.45'	N 24° 24' 31" W
L602	82.31'	N 36° 00' 35" W
L603	100.69'	N 04° 37' 00" W
L604	41.18'	N 43° 49' 57" W
L605	61.58'	N 60° 19' 58" W
L606	23.64'	N 74° 44' 44" W
L607	23.76'	N 16° 10' 12" E
L608	35.97'	N 74° 44' 44" W
L609	52.11'	N 52° 14' 13" W
L610	142.71'	N 14° 49' 16" W
L611	112.24'	N 11° 19' 49" W
L612	52.11'	N 25° 10' 50" E
L613	30.16'	S 85° 20' 03" W
L614	24.30'	N 69° 00' 56" W
L615	26.39'	N 29° 29' 23" W
L616	38.55'	N 00° 09' 39" E
L617	31.49'	N 36° 35' 37" W
L618	54.45'	N 24° 24' 31" W
L619	82.31'	N 36° 00' 35" W
L620	100.69'	N 04° 37' 00" W

LINE TABLE		
LINE#	LENGTH	DIRECTION
L621	41.18'	N 43° 49' 57" W
L622	61.58'	N 60° 19' 58" W
L623	23.64'	N 74° 44' 44" W
L624	23.76'	N 16° 10' 12" E
L625	35.97'	N 74° 44' 44" W
L626	52.11'	N 52° 14' 13" W
L627	142.71'	N 14° 49' 16" W
L628	112.24'	N 11° 19' 49" W
L629	52.11'	N 25° 10' 50" E
L630	30.16'	S 85° 20' 03" W
L631	24.30'	N 69° 00' 56" W
L632	26.39'	N 29° 29' 23" W
L633	38.55'	N 00° 09' 39" E
L634	31.49'	N 36° 35' 37" W
L635	54.45'	N 24° 24' 31" W
L636	82.31'	N 36° 00' 35" W
L637	100.69'	N 04° 37' 00" W
L638	41.18'	N 43° 49' 57" W
L639	61.58'	N 60° 19' 58" W
L640	23.64'	N 74° 44' 44" W
L641	23.76'	N 16° 10' 12" E
L642	35.97'	N 74° 44' 44" W
L643	52.11'	N 52° 14' 13" W
L644	142.71'	N 14° 49' 16" W
L645	112.24'	N 11° 19' 49" W
L646	52.11'	N 25° 10' 50" E
L647	30.16'	S 85° 20' 03" W
L648	24.30'	N 69° 00' 56" W

ROY COOPER
Governor
ELIZABETH S. BISER
Secretary
WILLIAM E. TOBY VINSON, JR
Interim Director

NORTH CAROLINA
Environmental Quality

March 21, 2024

85 and Sunny, LLC
Attn: Todd Burbage, Managing Member
9919 Stephen Decatur Hwy
Ocean City, MD 21842

Subject: **Stormwater Permit No. SW7181206 MOD**
85 and Sunny (Hampton Lodge Campground)
Low Density Stormwater Project
Currituck County

Dear Todd Burbage:

The Washington Regional Office received a complete Stormwater Management Permit Modification Application for the 85 and Sunny (Hampton Lodge Campground) project on March 14, 2024. Staff review of the plans and specifications has determined that the project, as proposed, will comply with the Stormwater Regulations set forth in Title 15A NCAC 2H.1000. We are forwarding Permit No. SW7181206 MOD dated March 21, 2024 for the construction of the subject project. The modification changes the property boundary to accommodate a new high density area covered by a separate permit.

This permit shall be effective from the date of issuance until rescinded, shall void all previous versions of this permit and shall be subject to the conditions and limitations as specified therein, and does not supercede any other agency permit that may be required. Please pay special attention to the conditions listed in this permit regarding the Operation and Maintenance of the SCM(s), recordation of deed restrictions, certification of the SCM's, procedures for changing ownership, and transferring the permit. Failure to establish an adequate system for operation and maintenance of the stormwater management system, to record deed restrictions, to certify the SCM's, to transfer the permit, or to renew the permit, will result in future compliance problems.

If any parts, requirements, or limitations contained in this permit are unacceptable, you have the right to request an adjudicatory hearing upon written request within thirty (30) days following receipt of this permit. This request must be in the form of a written petition, conforming to Chapter 150B of the North Carolina General Statutes, and filed with the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, NC 27699-6714. Unless such demands are made this permit shall be final and binding.

Please contact me at (252) 946-6481 if you have any questions.

Sincerely,

William Carl Dunn, PE
Environmental Engineer

cc: Cathleen Saunders, PE – Quible & Associates, PC (csaunders@quible.com)
Currituck County Inspections – Bill Newns (Bill.Newns@CurrituckCountyNC.gov)
Washington Regional Office

STATE OF NORTH CAROLINA

DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF ENERGY, MINERAL, AND LAND RESOURCES

STATE STORMWATER MANAGEMENT PERMIT

LOW DENSITY DEVELOPMENT

In accordance with the provisions of Article 21 of Chapter 143, General Statutes of North Carolina as amended, and other applicable Laws, Rules and Regulations

PERMISSION IS HEREBY GRANTED TO

85 and Sunny, LLC

85 and Sunny (Hampton Lodge Campground)

1631 Waterlily Rd, Coinjock, Currituck County

FOR THE

construction, operation and maintenance of a low density project in compliance with the provisions of 15A NCAC 2H .1000 (hereafter referred to as the *"stormwater rules")* and the approved stormwater management plans and specifications, and other supporting data as attached and on file with and approved by the Division of Energy, Mineral, and Land Resources (Division) and considered a part of this permit.

The Permit shall be effective from the date of issuance until rescinded and shall be subject to the following specific conditions and limitations:

I. DESIGN STANDARDS

1. This permit covers the construction of 240,002 square feet of new build-upon area and 110,797 square feet of existing build-upon area for a total of 350,799 square feet of build-upon area on this 44.39 acre project site.

2. The overall tract built-upon area percentage for the project must be maintained at or below 24%, as required by Section 2H .1005 of the stormwater rules. This permit proposes a total of 18.13% BUA for this project.

3. Approved plans and specifications for projects covered by this permit are incorporated by reference and are enforceable parts of the permit and shall be kept on file by the permittee at all times.

4. The only runoff conveyance systems allowed will be vegetated conveyances such as swales with minimum side slopes of 3:1 (H:V) as defined in the stormwater rules and approved by the Division.

5. No piping is allowed except that minimum amount necessary to direct runoff beneath an impervious surface such as a road or to provide access.

6. The built-upon areas associated with this project shall be located at least 50 feet landward of all perennial and intermittent streams or other surface waters.

II. SCHEDULE OF COMPLIANCE

1. The permittee is responsible for verifying that the proposed built-upon area does not exceed the allowable built-upon area.

2. The Director may notify the permittee when the permitted site does not meet one or more of the minimum requirements of the permit. Within the time frame specified in the notice, the permittee shall submit a written time schedule to the Director for modifying the site to meet minimum requirements. The permittee shall provide copies of revised plans and certification in writing to the Director that the changes have been made.

3. This project may not be sold or subdivided in whole or in part without first receiving a permit modification from the Division.

4. Filling in or piping of any vegetative conveyances (ditches, swales, etc.) associated with the permitted development, except for average driveway crossings, is strictly prohibited by any persons.

5. The permittee shall submit to the Director and shall have received approval for revised plans, specifications, and calculations prior to construction, for any modifications to the approved plans, including, but not limited to, those listed below:

   a. Any revision to the approved plans, regardless of size.
   b. Project name change.
   c. Transfer of ownership.
   d. Redesign or addition to the approved amount of built-upon area.
   e. Further subdivision, acquisition, or sale of the project area in whole or in part. The project area is defined as all property owned by the permittee, for which Sedimentation and Erosion Control Plan approval was sought.
   f. Filling in, altering or piping any vegetative conveyance shown on the approved plan.

6. Swales and other vegetated conveyances shall be constructed in their entirety, vegetated, and be operational for their intended use prior to the construction of any built-upon surface.

7. During construction, erosion shall be kept to a minimum and any eroded areas of the swales or other vegetated conveyances will be repaired immediately.

8. The permittee shall at all times provide the operation and maintenance necessary to operate the permitted stormwater management systems at optimum efficiency to include:

   a. Inspections
   b Sediment removal.
   c. Mowing, and re-vegetating of the side slopes.
   d. Immediate repair of eroded areas.
   e. Maintenance of side slopes in accordance with approved plans and specifications.

9. Within 30 days of completion of the project, the permittee shall certify in writing that the project has been constructed in accordance with the approved plans.

10. The permittee shall submit all information requested by the Director or his representative within the time frame specified in the written information request.

III. GENERAL CONDITIONS

1. This permit is not transferable to any person or entity except after notice to and approval by the Director. The Director may require modification or revocation and re-issuance of the permit to change the name and incorporate such other requirements as may be necessary. In the event of a name or ownership change, a completed Name/Ownership Change form, signed by both parties, must be submitted to the Division accompanied by the supporting documentation as listed on page 2 of the form. The approval of this request will be considered on its merits, and may or may not be approved.

2. The permittee is responsible for compliance with all permit conditions until the Director approves a transfer of ownership. Neither the sale of the project nor the transfer of common areas to a third party, such as a homeowner's association, constitutes an approved transfer of the stormwater permit.

3. Failure to abide by the conditions and limitations contained in this permit may subject the Permittee to an enforcement action by the Division, in accordance with North Carolina General Statutes 143-215.6A to 143-215.6C.

4. The issuance of this permit does not prohibit the Director from reopening and modifying the permit, revoking and reissuing the permit, or terminating the permit as allowed by the laws, rules, and regulations contained in Title 15A NCAC 2H.1000 of the North Carolina Administrative Code, Subchapter 2H.1000; and North Carolina General Statute 143-215.1 et. al.

5. In the event that the facilities fail to perform satisfactorily, including the creation of nuisance conditions, the Permittee shall take immediate corrective action, including those as may be required by the Division, such as the construction of additional or replacement stormwater management systems.

6. The permittee grants permission to DEQ Staff to enter the property during normal business hours, for the purpose of inspecting all components of the stormwater management facility.

7. The permit issued shall continue in force and effect until revoked or terminated. The permit may be modified, revoked and reissued or terminated for cause. The filing of a request for a permit modification, revocation and re-issuance, or termination does not stay any permit condition.

8. Unless specified elsewhere, permanent seeding requirements for the swales must follow the guidelines established in the North Carolina Erosion and Sediment Control Planning and Design Manual.

9. Approved plans and specifications for this project are incorporated by reference and are enforceable parts of the permit.

10. The issuance of this permit does not preclude the Permittee from complying with any and all statutes, rules, regulations, or ordinances, which may be imposed by other government agencies (local, state and federal), which have jurisdiction.

11. The permittee shall notify the Division in writing of any name, ownership or mailing address changes at least 30 days prior to making such changes.

Permit issued this the 21st day of March, 2024.

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION

For Toby Vinson, Interim Director
Division of Energy, Mineral and Land Resources
By Authority of the Environmental Management Commission

Permit Number SW8240218

ROY COOPER
Governor
ELIZABETH S. BISER
Secretary
WILLIAM E. TOBY VINSON, JR
Interim Director

NORTH CAROLINA
Environmental Quality

March 21, 2024

85 and Sunny, LLC
Attn: Todd Burbage, Managing Member
9919 Stephen Decatur Hwy
Ocean City, MD 21842

Subject: **State Stormwater Management Permit No. SW7240310**
Athletic Facility – 1559 Water Lily Rd.
High Density Project
Currituck County

Dear Todd Burbage:

The Washington Regional Office received a complete State Stormwater Management Permit Application for the subject project on March 14, 2024. Staff review of the plans and specifications has determined that the project, as proposed, complies with the Stormwater Regulations set forth in Title 15A NCAC 02H.1000 amended on January 1, 2017 (2017 Rules). We are hereby forwarding Permit Number SW7240310 dated March 21, 2024, for the construction of the built-upon areas (BUA) and stormwater control measures (SCMs) associated with the subject project.

This permit shall be effective from the date of issuance until March 20, 2032 and the project shall be subject to the conditions and limitations as specified therein and does not supersede any other agency permit that may be required. Failure to comply with these requirements will result in future compliance problems. Please note that this permit is not transferable except after notice to and approval by the Division.

This cover letter, attachments, and all documents on file with DEMLR shall be considered part of this permit and is herein incorporated by reference.

If any parts, requirements, or limitations contained in this permit are unacceptable, you have the right to request an adjudicatory hearing by filing a written petition with the Office of Administrative Hearings (OAH). The written petition must conform to Chapter 150B of the North Carolina General Statutes and must be filed with the OAH within thirty (30) days of receipt of this permit. You should contact the OAH with all questions regarding the filing fee (if a filing fee is required) and/or the details of the filing process at 6714 Mail Service Center, Raleigh, NC 27699-6714, or via telephone at 919-431-3000, or visit their website at www.NCOAH.com. Unless such demands are made this permit shall be final and binding.

If you have any questions concerning this permit, please contact Carl Dunn in the Washington Regional Office, at (252) 948-3959 or carl.dunn@ncdenr.gov.

Sincerely,

William Carl Dunn, PE
Division of Energy, Mineral and Land Resources

Enclosures: Attachment A – Designer's Certification Form
Application Documents

cc: Cathleen Saunders - Quible & Associates (csaunders@quible.com)
Currituck County Inspections – Bill Newns (Bill.Newns@CurrituckCountyNC.gov)
Washington Regional Office Stormwater File

STATE OF NORTH CAROLINA

DEPARTMENT OF ENVIRONMENTAL QUALITY

DIVISION OF ENERGY, MINERAL AND LAND RESOURCES

STATE STORMWATER MANAGEMENT PERMIT

HIGH DENSITY DEVELOPMENT

In compliance with the provisions of Article 21 of Chapter 143, General Statutes of North Carolina as amended, and other applicable Laws, Rules, and Regulations promulgated and adopted by the North Carolina Environmental Management Commission, including 15A NCAC 02H.1000 amended on January 1, 2017 (2017 Rules) (the "stormwater rules"),

PERMISSION IS HEREBY GRANTED TO

85 and Sunny, LLC

Athletic Facility – 1559 Waterlily Rd

1559 Waterlily Rd, Coinjock, Currituck County

FOR THE

construction, management, operation and maintenance of built-upon area draining to one wet pond ("stormwater control measures" or "SCMs") discharging to Class SC waters as outlined in the application, approved stormwater management, supplement, calculations, operation and maintenance agreement, recorded documents, specifications, and other supporting data (the "approved plans and specifications") as attached and/or on file with and approved by the Division of Energy, Mineral and Land Resources (the "Division" or "DEMLR"). The project shall be constructed, operated and maintained in accordance with these approved plans and specifications. The approved plans and specifications are incorporated by reference and are enforceable part of this permit.

This permit shall be effective from the date of issuance until March 20, 2032 and shall be subject to the following specified conditions and limitations. The permit issued shall continue in force and effect until the permittee files a request with the Division for a permit modification, transfer, renewal, or rescission; however, these actions do not stay any condition. The issuance of this permit does not prohibit the Director from reopening and modifying the permit, revoking and reissuing the permit, or terminating the permit for cause as allowed by the laws, rules, and regulations contained in Title 15A NCAC 2H.1000 and NCGS 143-215.1 et.al.

1. BUA REQUIREMENTS. The maximum amount of BUA allowed for the entire project is 110,862 square feet. The runoff from all BUA within the permitted drainage area of this project must be directed into the permitted SCM. The BUA requirements and allocations for this project are as follows:

a. SCM BUA LIMITS. The SCM has been designed using the runoff treatment method to handle the runoff from 99,090 square feet of BUA within the delineated drainage area, which does not include and allotment for future development within the delineated drainage area.

b. REDEVELOPMENT. The redevelopment portion of this project is exempt from State Stormwater permitting requirements under the following conditions:

   i. The project must be constructed as shown on the plans submitted to this Office.
   ii. The redevelopment area includes a total BUA of 11,772 square feet, which does not exceed the existing BUA of 11,772 square feet. The 11,772 square feet of total allocated BUA includes 11,772 square feet of existing BUA that will remain This permit does not include any allocation of BUA for future development within this redevelopment area.
   iii. The proposed stormwater control provides equal protection of surface waters as the existing stormwater control.

2. PERVIOUS AREA IMPROVEMENTS. At this time, none of the pervious area improvements listed in G.S. 143-214.7(b2) or the Stormwater Design Manual have been proposed for this project. Pervious area improvements will be allowed in this project if documentation is provided demonstrating those improvements meet the requirements of the stormwater rule.

3. SCM REQUIREMENTS. The SCM requirements for this project are as follows:

   a. SCM DESIGN. The SCM is permitted based on the design criteria presented in the sealed, signed and dated supplement and as shown in the approved plans and specifications. This SCM must be provided and maintained at the design condition.

   b. FOUNTAINS. At this time, a decorative spray fountain has not been proposed within the wet pond. Decorative spray fountains will be allowed in the wet pond if documentation is provided demonstrating that the proposed fountain will not cause resuspension of sediment within the pond or cause erosion of the pond side slopes.

   c. IRRIGATION. If the wet pond is to be used for irrigation, it is recommended that some water be maintained in the permanent pool, the vegetated shelf is planted with appropriate species that can handle fluctuating conditions, and human health issues are addressed.

4. STORMWATER OUTLETS. The peak flow from the 10-year storm event shall not cause erosion downslope of the discharge point.

5. VEGETATED SETBACKS. A 50-foot wide vegetative setback must be provided and maintained in grass or other vegetation adjacent to all surface waters as shown on the approved plans. The setback is measured horizontally from the normal pool elevation of impounded structures, from the top of bank of each side of streams or rivers, and from the mean high waterline of tidal waters, perpendicular to the shoreline.

6. RECORDED DOCUMENT REQUIREMENTS. The stormwater rules require the following documents to be recorded with the Office of the Register of Deeds:

a. ACCESS AND/OR EASEMENTS. The entire stormwater conveyance system, including any SCMs, and maintenance accesses must be located in public rights-of-way, dedicated common areas that extend to the nearest public right-of-way, and/or permanent recorded easements that extend to the nearest public right-of-way for the purpose of inspection, operation, maintenance, and repair.

b. OPERATION AND MAINTENANCE AGREEMENT. The operation and maintenance agreement must be recorded with the Office of the Register of Deeds.

c. FINAL PLATS. The final recorded plats must reference the operation and maintenance agreement and must also show all public rights-of-way, dedicated common areas, and/or permanent drainage easements, in accordance with the approved plans.

7. CONSTRUCTION. During construction, erosion shall be kept to a minimum and any eroded areas of the on-site stormwater system will be repaired immediately.

a. PROJECT CONSTRUCTION, OPERATION AND MAINTENANCE. During construction, all operation and maintenance for the project shall follow the Erosion Control Plan requirements until the Sediment-Erosion Control devices are converted to SCMs or no longer needed. Once the device is converted to a SCM, the permittee shall provide and perform the operation and maintenance as outlined in the applicable section below.

b. SCM RESTORATION. If one or more of the SCMs are used as an Erosion Control device and/or removed or destroyed during construction, it must be restored to the approved state stormwater design condition prior to close-out of the erosion control plan and/or project completion and/or transfer of the state stormwater permit. Upon restoration, a new or updated certification will be required for the SCM(s) and a copy must be submitted to the appropriate DEQ regional office.

8. MODIFICATIONS. No person or entity, including the permittee, shall alter any component shown in the approved plans and specifications. Prior to the construction of any modification to the approved plans, the permittee shall submit to the Director, and shall have received approval for modified plans, specifications, and calculations including, but not limited to, those listed below. For changes to the project or SCM that impact the certifications, a new or updated certification(s), as applicable, will be required and a copy must be submitted to the appropriate DEQ regional office upon completion of the modification.

a. Any modification to the approved plans and specifications, regardless of size including the SCM(s), BUA, details, etc.

b. Redesign or addition to the approved amount of BUA or to the drainage area.

c. Further development, subdivision, acquisition, lease or sale of any, all or part of the project and/or property area as reported in the approved plans and specifications.

d. Altering, modifying, removing, relocating, redirecting, regrading, or resizing of any component of the approved SCM(s), stormwater collection system and/or vegetative conveyance shown on the approved plan.

e. The construction of any allocated future BUA.

f. The construction of any permeable pavement, #57 stone area, public trails, or landscaping material within the common areas to be considered a permeable surface that were not included in the approved plans and specifications.

g. Other modifications as determined by the Director.

9. DESIGNER'S CERTIFICATION. Upon completion of the project, the permittee shall determine if the project is in compliance with the approved plans and take the necessary following actions:

   a. If the permittee determines that the project is in compliance with the approved plans, then within 45 days of completion, the permittee shall submit to the Division one hard copy and one electronic copy of the following:

      i. The completed and signed Designer's Certification provided in Attachment A noting any deviations from the approved plans and specifications. Deviations may require approval from the Division;
      ii. A copy of the recorded operation and maintenance agreement;
      iii. Unless already provided, a copy of the recorded deed restrictions and protective covenants; and
      iv. A copy of the recorded plat delineating the public rights-of-way, dedicated common areas and/or permanent recorded easements, when applicable.

   b. If the permittee determines that the project is <u>not</u> in compliance with the approved plans, the permittee shall submit an application to modify the permit within 30 days of completion of the project or provide a plan of action, with a timeline, to bring the site into compliance.

10. OPERATION AND MAINTENANCE. The permittee shall provide and perform the operation and maintenance necessary, as listed in the signed operation and maintenance agreement, to assure that all components of the permitted on-site stormwater system are maintained at the approved design condition. The approved operation and maintenance agreement must be followed in its entirety and maintenance must occur at the scheduled intervals.

    a. CORRECTIVE ACTIONS REQUIRED. If the facilities fail to perform satisfactorily, the permittee shall take immediate corrective actions. This includes actions required by the Division and the stormwater rules such as the construction of additional or replacement on-site stormwater systems. These additional or replacement measures shall receive a permit from the Division prior to construction.

    b. MAINTENANCE RECORDS. Records of maintenance activities must be kept and made available upon request to authorized personnel of the Division. The records will indicate the date, activity, name of person performing the work and what actions were taken.

11. PERMIT RENEWAL. A permit renewal request must be submitted at least 180 days prior to the expiration date of this permit. The renewal request must include the appropriate application, documentation and the processing fee as outlined in 15A NCAC 02H.1045(3).

12. CURRENT PERMITTEE NAME OR ADDRESS CHANGES. The permittee shall submit a completed Permit Information Update Application Form to the Division within 30 days to making any one or more of the following changes:

    a. A name change of the current permittee;

    b. A name change of the project;

    c. A mailing address change of the permittee.

13. TRANSFER. This permit is not transferable to any person or entity except after notice to and approval by the Director. Neither the sale of the project and/or property, in whole or in part, nor the conveyance of common area to a third party constitutes an approved transfer of the permit.

    a. TRANSFER REQUEST. The transfer request must include the appropriate application, documentation and the processing fee as outlined in 15A NCAC 02H.1045(2) and must be submitted upon occurrence of any one or more of the following events:

        i. The sale or conveyance of the project and/or property area in whole or in part;
        ii. Dissolution of the partnership, corporate, or LLC entity, subject to NCGS 55-14-05 or NCGS 57D-6-07 and 08;
        iii. Bankruptcy;
        iv. Foreclosure, subject to the requirements of Session Law 2013-121;

    b. TRANSFER INSPECTION. Prior to transfer of the permit, a file review and site inspection will be conducted by Division personnel to ensure the permit conditions have been met and that the project and the on-site stormwater system complies with the permit conditions. Records of maintenance activities performed to date may be requested. Projects not in compliance with the permit will not be transferred until all permit and/or general statute conditions are met.

14. COMPLIANCE. The permittee is responsible for complying with the terms and conditions of this permit and the approved plans and specifications until the Division approves the transfer request.

    a. REVIEWING AND MONITORING FOR COMPLIANCE. The permittee is responsible for verifying that the proposed BUA within each drainage area and for the entire project does not exceed the maximum amount allowed by this permit. The permittee shall review and routinely monitor the project to ensure continued compliance with the conditions of the permit, the approved plans and specifications.

    b. APPROVED PLANS AND SPECIFICATIONS. A copy of this permit, approved plans, application, supplement, operation and maintenance agreement, all applicable recorded documents, and specifications shall be maintained on file by the permittee at all times.

    c. DIVISION ACCESS. The permittee grants Division Staff permission to enter the property during normal business hours to inspect all components of the permitted project.

d. MAINTENANCE ACCESS. SCMs, stormwater collection systems, and vegetated conveyances must be accessible for inspection, operation, maintenance and repair as shown on the approved plans.

e. ENFORCEMENT. Any individual or entity found to be in noncompliance with the provisions of a stormwater management permit or the requirements of the stormwater rules is subject to enforcement procedures as set forth in NCGS 143 Article 21.

f. ANNUAL CERTIFICATION. The permittee shall electronically submit to the Division an annual certification completed by either the permittee or their designee confirming the projects conformance with permit conditions.

g. OBTAINING COMPLIANCE. The Director may notify the permittee when the permitted site does not meet one or more of the minimum requirements of the permit. Within the time frame specified in the notice, the permittee shall submit a written time schedule to the Director for modifying the site to meet minimum requirements. The permittee shall provide copies of modified plans and certification in writing to the Director that the changes have been made.

h. OTHER PERMITS. The issuance of this permit does not preclude the permittee from obtaining and complying with any and all other permits or approvals that are required for this development to take place, as required by any statutes, rules, regulations, or ordinances, which are imposed by any other Local, State or Federal government agency having jurisdiction. Any activities undertaken at this site that cause a water quality violation or undertaken prior to receipt of the necessary permits or approvals to do so are considered violations of NCGS 143-215.1, and subject to enforcement procedures pursuant to NCGS 143-215.6.

Permit issued this the 21st day of March 2024.

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION

For Toby Vinson, Interim Director
Division of Energy, Mineral and Land Resources
By Authority of the Environmental Management Commission

Permit Number SW7240310

Attachment A

Certification Forms

The following blank Designer Certification forms are included and specific for this project:

- As-Built Permittee Certification
- As-Built Designer's Certification General MDC
- As-Built Designer's Certification for Wet Detention Pond Project

A separate certification is required for each SCM. These blank certification forms may be copied and used, as needed, for each SCM and/or as a partial certification to address a section or phase of the project.

AS-BUILT PERMITTEE CERTIFICATION

I hereby state that I am the current permittee for the project named above, and I certify by my signature below, that the project meets the below listed Final Submittal Requirements found in NCAC 02H.1042(4) and the terms, conditions and provisions listed in the permit documents, plans and specifications on file with or provided to the Division.

☐ Check here if this is a partial certification. Section/phase/SCM #?_____

☐ Check here if this is part of a Fast Track As-built Package Submittal.

Printed Name_____Signature_____

I, _____, a Notary Public in the State of _____

County of _____, do hereby certify that _____

personally appeared before me this _____ day of _____, 20_____

and acknowledge the due execution of this as-built certification. (SEAL)

Witness my hand and official seal

_____

My commission expires _____

Permittee's Certification NCAC .1042(4)	Completed / Provided	N/A
A. DEED RESTRICTIONS / BUA RECORDS		
1. The deed restrictions and protective covenants have been recorded and contain the necessary language to ensure that the project is maintained consistent with the stormwater regulations and with the permit conditions.	Y or N	
2. A copy of the recorded deed restrictions and protective covenants has been provided to the Division.	Y or N	
3. Records which track the BUA on each lot are being kept. (See Note 1)	Y or N	
B. MAINTENANCE ACCESS		
1. The SCMs are accessible for inspection, maintenance and repair.	Y or N	
2. The access is a minimum of 10 feet wide.	Y or N	
3. The access extends to the nearest public right-of-way.	Y or N	
C. EASEMENTS		
1. The SCMs and the components of the runoff collection / conveyance system are located in recorded drainage easements.	Y or N	
2. A copy of the recorded plat(s) is provided.	Y or N	

D. SINGLE FAMILY RESIDENTIAL LOTS - Plats for residential lots that have an SCM include the following:	Y or N	
1. The specific location of the SCM on the lot.	Y or N	
2. A typical detail for the SCM.	Y or N	
3. A note that the SCM is required to meet stormwater regulations and that the lot owner is subject to enforcement action as set forth in NCGS 143 Article 21 if the SCM is removed, relocated or altered without prior approval.	Y or N	
E. OPERATION AND MAINTENANCE AGREEMENT	Y or N	
1. The O&M Agreement is referenced on the final recorded plat.	Y or N	
2. The O&M Agreement is recorded with the Register of Deeds and appears in the chain of title.	Y or N	
F. OPERATION AND MAINTENANCE PLAN – maintenance records are being kept in a known set location for each SCM and are available for review.	Y or N	
G. DESIGNER'S CERTIFICATION FORM – has been provided to the Division.	Y or N	

Note 1- Acceptable records include ARC approvals, as-built surveys, and county tax records.

Provide an explanation for every requirement that was not met, and for every "N/A" below. Attach additional sheets as needed.

AS-BUILT DESIGNER'S CERTIFICATION FOR WET DETENTION POND PROJECT

I hereby state that I am a licensed professional and I certify by my signature and seal below, that I have observed the construction of the project named above to the best of my abilities with all due care and diligence, and that the project meets all of the MDC found in NCAC 02H.1053, in accordance with the permit documents, plans and specifications on file with or provided to the Division, except as noted on the "AS-BUILT" drawings, such that the intent of the stormwater rules and the general statutes has been preserved.

☐ Check here if this is a partial certification. Section/phase/SCM #?_____

☐ Check here if this is part of a Fast-Track As-Built Package Submittal per .1044(3).

☐ Check here if the Designer did not observe the construction, but is certifying the project.

☐ Check here if pictures of the SCM are provided.

Printed Name_____Signature_____

NC Registration Number_____Date_____

SEAL:

Consultant's Mailing Address:

_____

City/State/ZIP _____

Phone Number _____

Consultant's Email address:

_____

① Circle N if the as-built value differs from the Plan/permit. If N is circled, provide an explanation on page 2

②N/E = not evaluated (provide explanation on page 2) ③N/A = not applicable to this project or SCM.

This Certification must be completed in conjunction with the General MDC certification under NCAC 02H.1050

Consultant's Certification (MDC .1053)	①As-built	②N/E	③N/A
A. Forebay / Depths / Fountain			
1. The available Sediment storage is consistent with the approved plan and is a minimum of 6 in.	Y or N		
2. Water flow over the forebay berm into the main pond occurs at a non-erosive velocity.	Y or N		
3. The provided Forebay Volume is 15%-20% of the main pool volume.	Y or N		
4. The Forebay entrance elevation is deeper than the exit elevation into the pond.	Y or N		

5. The Average Design Depth of the main pond below the permanent pool elevation is consistent with the permitted value?	Y or N		
6. Fountain documentation is provided.	Y or N		
B. Side slopes / Banks / Vegetated Shelf			
1. The width of the Vegetated Shelf is consistent with the approved plans and is a minimum of 6 feet.	Y or N		
2. The slope of the Vegetated Shelf is consistent with the approved plans and is no steeper than 6:1.	Y or N		
C. As-built Main Pool / Areas / Volumes / Elevations			
1. The permanent pool surface area provided is consistent with the permitted value.	Y or N		
2. The Temporary Pool Volume provided is consistent with the permitted value.	Y or N		
3. The permanent pool elevation is consistent with the permitted value.	Y or N		
4. The temporary pool elevation is consistent with the permitted value.	Y or N		
	①As-built	②N/E	③N/A
D. Inlets / Outlet / Drawdown			
1. The design volume draws down in 2-5 days.	Y or N		
2. The size of the Orifice is consistent with the permitted value.	Y or N		
3. A trash rack is provided on the outlet structure.	Y or N		
4. Hydrologic impacts to the receiving channel are minimized from the 1 yr 24 hr storm discharge?	Y or N		
5. The inlets and the outlet location are situated per the approved plan and avoid short-circuiting.	Y or N		
E. Vegetation			
1. The vegetated shelf has been planted with a minimum of 3 diverse species.	Y or N		
2. The vegetated shelf plant density is consistent with the approved plans and is no less than 50 plants per 200 sf or no less than 24 inches on center.	Y or N		

Provide an explanation for every MDC that was not met, and for every item marked "N/A" or "N/E" below. Attach additional pages as needed:

AS-BUILT DESIGNER'S CERTIFICATION GENERAL MDC

I hereby state that I am a licensed professional and I certify by my signature and seal below, that I have observed the construction of the project named above to the best of my abilities with all due care and diligence, and that the project meets the below listed General MDC found in NCAC 02H.1050 in accordance with the permit documents, plans and specifications on file with or provided to the Division, except as noted on the "AS-BUILT" drawings, such that the intent of the stormwater rules and statutes has been preserved.

☐ Check here if this is a partial certification. Section/phase/SCM #?_____

☐ Check here if this is a part of a Fast-Track As-Built Package Submittal per .1044(3).
☐ Check here if the designer did not observe the construction, but is certifying the project.
☐ Check here if pictures of the SCM are provided.

Printed Name_____Signature_____

NC Registration Number_____Date_____

SEAL:

Consultant's Mailing Address:

_____

City/State/ZIP _____

Phone Number _____

Consultant's Email address:

_____

① Circle N if the as-built value differs from the Plan. If N is circled, provide an explanation on Page 2.
②N/E = not evaluated (provide explanation on page 2) ③N/A = not applicable to this SCM or project.

Consultant's Certification NCAC .1003((3) & General MDC .1050	①As-built	②N/E	③N/A
A. TREATMENT REQUIREMENTS			
1. The SCM achieves runoff treatment.	Y or N		
2. The SCM achieves runoff volume match.	Y or N		
3. Runoff from offsite areas and/or existing BUA is bypassed.	Y or N		
4. Runoff from offsite areas and/or existing BUA is directed into the permitted SCM and is accounted for at the full build-out potential.	Y or N		

5. The project controls runoff through an offsite permitted SCM that meets the requirements of the MDC.	Y or N		
6. The net area of new BUA increase for an existing project has been accounted for at the appropriate design storm level.	Y or N		
7. The SCM(s) meets all the specific minimum design criteria.	Y or N		
B. VEGETATED SETBACKS / BUA			
1. The width of the vegetated setback has been measured from the normal pool of impounded waters, the MHW line of tidal waters, or the top of bank of each side of rivers or streams.	Y or N		
2. The vegetated setback is maintained in grass or other vegetation.	Y or N		
3. BUA that meets the requirements of NCGS 143-214.7 (b2)(2) is located in the setback.	Y or N		
4. BUA that does not meet the requirements of NCGS 143-214.7 (b2)(2) is located within the setback and is limited to: a. Publicly funded linear projects (road, greenway sidewalk) b. Water-dependent structures c. Minimal footprint uses (utility poles, signs, security lighting and appurtenances)	Y or N		
5. Stormwater that is not treated in an SCM is released at the edge of the setback and allowed to flow through the setback as dispersed flow.	Y or N		
	①As-built	②N/E	③N/A
C. STORMWATER OUTLETS – the outlet handles the peak flow from the 10 year storm with no downslope erosion.	Y or N		
D. VARIATIONS			
1. A variation (alternative) from the stormwater rule provisions has been implemented.	Y or N		
2. The variation provides equal or better stormwater control and equal or better protection of surface waters.	Y or N		
E. COMPLIANCE WITH OTHER REGULATORY PROGRAMS has been met.	Y or N		
F. SIZING -the volume of the SCM takes the runoff from all surfaces into account and is sufficient to handle the required storm depth.	Y or N		
G. CONTAMINATED SOILS – infiltrating SCM's are not located in or on areas with contaminated soils.	Y or N		
H. SIDE SLOPES			
1. Vegetated side slopes are no steeper than 3H:1V.	Y or N		
2. Side slopes include retaining walls, gabion walls, or other surfaces that are steeper than 3H:1V.	Y or N		
3. Vegetated side slopes are steeper than 3H:1V (provide supporting documents for soils and vegetation).	Y or N		
I. EROSION PROTECTION			
1. The inlets do not cause erosion in the SCM.	Y or N		

2. The outlet does not cause erosion downslope of the discharge point during the peak flow from the 10 year storm.	Y or N		
J. EXCESS FLOWS – An overflow / bypass has been provided.	Y or N		
K. DEWATERING – A method to drawdown standing water has been provided to facilitate maintenance and inspection.	Y or N		
L. CLEANOUT AFTER CONSTRUCTION – the SCM has been cleaned out and converted to its approved design state.	Y or N		
M. MAINTENANCE ACCESS			
1. The SCM is accessible for maintenance and repair.	Y or N		
2. The access does not include lateral or incline slopes >3:1.	Y or N		
N. DESIGNER QUALIFICATIONS (FAST-TRACK PERMIT) – The designer is licensed under Chapters 89A, 89C, 89E, or 89F of the General Statutes.	Y or N		

Provide an explanation for every MDC that was not met, and for every item marked "N/A" or "N/E", below. Attach additional pages as needed:

North Carolina Department of Environmental Quality
Division of Energy, Mineral & Land Resources
Land Quality Section

Roy Cooper
Governor
Elizabeth S. Biser
Secretary
William Vinson Jr. (Acting)
Director

03-14-2024

LETTER OF APPROVAL

85' and Sunny, LLC
Attn: Mr. Todd E. Burbage, Managing Member
9919 Stephen Decatur Highway
Ocean City, Maryland 21842

RE: Project Name: Athletic Facility - 1555 Waterlily Rd
Acres Approved: 5.5
Application ID: PA-003831
Permit Number: CURRI-2024-0107
Address: 1555 Waterlily Rd
City: Coinjock
County: Currituck
River Basin: Pasquotank
Stream Classification: SC: Aquatic Life, Secondary Contact Recreation, Tidal Salt Water
Plan Type: New Plan (Express)

Dear Mr. Burbage,

This office has reviewed the subject erosion and sedimentation control plan. We find the plan to be acceptable and hereby issue this Letter of Approval. The Certificate of Approval must be posted at the job site. This plan approval shall expire three (3) years following the date of approval, if no land-disturbing activity has been undertaken, as is required by Title 15A NCAC 4B .0129.

As of April 1, 2019, all new construction activities are required to complete and submit an electronic Notice of Intent (eNOI) form requesting a Certificate of Coverage (COC) under the NCG010000 Construction Stormwater General Permit. After the form is reviewed and found to be complete, you will receive a link with payment instructions for the $120 annual permit fee. After the fee is processed, you will receive the COC via email. As the Financially Responsible Party shown on the FRO form submitted for this project, you MUST obtain the COC prior to commencement of any land disturbing activity. The eNOI form may be accessed at deq.nc.gov/NCG01. Please direct questions about the eNOI form to the Stormwater Program staff in the Raleigh central office. If the owner/operator of this project changes in the future, the new responsible party must obtain a new COC.

Title 15A NCAC 4B .0118(a) and the NCG01 permit require that the following documentation be kept on file at the job site:

1. The approved E&SC plan as well as any approved deviation.
2. The NCG01 permit and the COC, once it is received.
3. Records of inspections made during the previous 12 months.

Also, this letter gives the notice required by G.S. 113A-61.1(a) of our right of periodic inspection to ensure compliance with the approved plan.

North Carolina's Sedimentation Pollution Control Act is performance-oriented, requiring protection of existing natural resources and adjoining properties. If, following the commencement of this project, the erosion and sedimentation control plan is inadequate to meet the requirements of the Sedimentation Pollution Control Act of 1973 (North Carolina General Statute 113A-51 through 66), this office may require revisions to the plan and implementation of the revisions to insure compliance with the Act.

Acceptance and approval of this plan is conditioned upon your compliance with Federal and State water quality laws, regulations, and rules. In addition, local city or county ordinances or rules may also apply to this land-disturbing activity. This approval does not supersede any other permit or approval.

Please note that this approval is based in part on the accuracy of the information provided in the Financial Responsibility/Ownership Form, which you provided. You are requested to file an amended form if there is any change in the information included on the form. In addition, it would be helpful if you notify this office of the proposed starting date for this project. Please notify us if you plan to have a preconstruction conference.

Your cooperation is appreciated.

Sincerely,

J. Randall Jones, Jr., PE for

Samir Dumpor, PE

North Carolina Department of Environmental Quality

North Carolina Department of Environmental Quality | Division of Energy, Mineral and Land Resources
Washington Regional Office | 943 Washington Square Mall | Washington NC, 27889
252-946-6481

Certificate of Coverage

STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF ENERGY, MINERAL, AND LAND RESOURCES

GENERAL PERMIT NO. NCG010000

NC Reference No. NCG01-2024-0864
Certificate of Coverage No. NCC240864

STORMWATER DISCHARGES

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provision of North Carolina General Statute 143-215.1, other lawful standards and regulations promulgated and adopted by the North Carolina Environmental Management Commission, and the Federal Water Pollution Control Act, as amended,

85' and Sunny, LLC

is hereby authorized to discharge stormwater associated with CONSTRUCTION ACTIVITIES to surface waters of North Carolina from a site located at:

Athletic Facility - 1555 Waterlily Rd
1555 Waterlily Rd
Coinjock
Currituck County

in accordance with the effluent limitations, monitoring requirements, and other conditions set forth in N.C. General Permit No. NCG010000.

This Certificate of Coverage is affiliated with **E&SC Plan Project No.** CURRI-2024-0107

This Certificate of Coverage shall become effective 3/26/2024.

This Certificate of Coverage shall remain in effect until rescinded or expired.

This Certificate of Coverage will expire on the anniversary of its effective date unless it is renewed by payment of the annual administration and compliance fee.

William E. Vinson, Jr., PE, CPESC, CPM, Interim Director
Division of Energy, Mineral, and Land Resources
By the Authority of the Environmental Management Commission

Rational Method Peak Flow
Form SW-003

Project Information

Project Location: 1555 Waterlily Rd / 1559 Waterlily Rd

Parcel Identification Number(s): 0079000004A0000

Drainage area: 7.86 ac

Average Slope: 1.0 %

Maximum Slope Length: 379 ft

Calculations

*The Rational Method may only be used where development will impact less than 10 acres

Time of Concentration (Tc) (Use additional sheets if necessary)			
	Pre-	**Post-**	
Sheet Flow			
Manning's roughness, n (Table 2-4)	0.1		
2-year, 24-hour Rainfall, P	4.0	6.0	in
Slope, S	0.01		ft/ft
Length of Sheet Flow, L (<=300 feet)	300		ft
Total Time for Sheet Flow	20.1		**min**
Shallow Concentrated Flow			
Surface Paved (P) or Unpaved (U)	U		
Length of flow, L	379		ft
Slope, S	0.01		ft/ft
Average Velocity, V (Table 2-3)	134.64		ft/min
Total Time for Shallow Concentrated Flow	2.8		**min**
Channel Flow			
Pipe (P) or Channel (C)	N/A		
If pipe: Diameter, D			in
If channel: Bottom Width, w			ft
If channel: side slope 1 (___:1)			
If channel: side slope 2 (___:1)			
Cross sectional flow area, A			sq ft
Wetted perimeter, Wp			ft
Hydraulic radius, R = A/Wp			ft

Time of Concentration (Tc) (Use additional sheets if necessary)			
	Pre-	**Post-**	
Channel slope, S			ft/ft
Manning's roughness, n (Table 2-4)			
Channel velocity			ft/sec
Length of Flow, L			ft/sec
Total Time for Channel Flow	—		**min**
Total Time of Concentration, Tc	22.9		**min**

Pre-development Conditions			
Land Use Description	C	Area (acres)	C*A
Woods	0.2	7.86	1.572
Total			

Intensity for 2-year, 24-hour storm (Table 2-5) 3.29 in/hr

Pre-development peak flow, Q = CiA 5.18 cfs

Post-development Conditions			
Land Use Description	C	Area (acres)	C*A
IMPERVIOUS	0.95	2.27	2.15
OPEN AREA	0.25	5.58	1.39
Totals		7.86	3.54

Area-weighted C: 0.45

5 ← MAJOR SITE PLAN

Intensity for ~~10~~-year, 24-hour storm (Table 2-5) 6.82 in/hr

Post-development peak flow, Q = CiA 24.26 cfs

Minimum Storage Volume Required – Refer to *Section 2.4.4* for Volume Calculations

Storage Volume, V_s 34,152.09 ft³

85° AND SUNNY, LLC
Applicant

3/21/24
Date

NEW SWIMMING POOL
ATHLETIC FACILITY OBX - CURRITUCK SOUND
CURRITUCK COUNTY, NC

SITE PLAN
SCALE: 1/32"=1'-0"

* DIMENSIONS SHOWN FOR REFERENCE ONLY.

REFERENCE
North

NEW POOL CONSTRUCTION NOTES:

USE GROUP TYPE: A-5 (IBC 2015)
CONSTRUCTION TYPE: II-B, (IBC 2015)

USER LOADING FOR SWIMMING POOLS: (15 S.F. WATER SURFACE PER OCCUPANT)

LEISURE POOL: POOL WATER SURFACE AREA = 3,308 S.F.
POOL DECK AREA = 8,748 S.F.

OCCUPANCY LOAD: 3,308 S.F. / 15 S.F. = 221 BATHERS

REFER TO BUILDING PLANS FOR ALL DETAILS ON THE BATH HOUSE.

REFER TO BUILDING PLANS FOR ALL DETAILS ON THE BATH ROOMS.

NOTE: HOSE BIBBS TO BE SPACED AT 150 FT. OR LESS INTERVALS. (BY OTHERS)
REFER TO PLUMBING DRAWINGS FOR NUMBER AND LOCATIONS.

ATHLETIC FACILITY OBX
GENERAL NOTES

SYNOPSIS OF WORK:
Construct one outdoor Leisure pool with attached Beach entry, Pool will be constructed with precast coping stone and its design will include (1) stair entry. Pool dimensions & depth ranges are per Paddock shop drawings. Water depths are to be from 0" at the Beach entry to 4'-3" at the main drains in deep pool area.
The pool will include a complete filtration system.

GENERAL NOTES DEFINITIONS:
PROVIDE: To furnish and install work, including incidental items.
FURNISH: To deliver item/ material to the project, item/ material to be installed by others.
INSTALL: To incorporate into the work an item or material furnished by others.
BY OTHERS: Not part of scope of work.

•• WORK BY PADDOCK:
1. Provide labor and material for the construction of one outdoor Leisure pool, with attached Beach entry. Pool will include (2) underwater benches and wide stair entry. Water depths are from 0" to 4'- 3" at the main drains. Total water surface area to be approximately 3,308 square feet.
2. Provide excavation for the pool with spoils stockpiled within 50 feet, or loaded outo trucks provided by others.
3. Provide a nominal 3" gravel base under the Pool.
4. Provide pool shop drawings sealed by an engineer licensed in the state of North Carolina, and pool building permit.
5. Provide shoterete construction 4,000 PSI.
6. Provide schedule 40 piping featuring corrosion resistant PVC construction ball and butterfly valving.
7. Provide High Rate sand filtration systems as indicated on Paddock drawings. Pools to be equipped with liquid feed and CO^2 pH control sanitation systems, as indicated on Paddock drawings.
8. Interior of pools will be finished in white "Marcite" plaster.
9. Waterline tile to be 6" wide band of frost-proof ceramic tile, w/ white grout and with depth markings of 6" white tile with black numerals.
10. Provide precast bullnose coping around perimeter of the pool, as shown on Paddock drawings. Deck depth markers to be 6" white frost-proof tile with black numerals and international "No Diving" symbol, ***furnished loose to be installed in deck, by others,*** as indicated on Paddock drawings.
11. Pool Beach entry area to have non-slip Paddock BeachKote finish, and will contain six (6) beach wash nozzles. The adjacent area to a water depth of 6", will also be BeachKote finish.
12. Furnish seven (7) underwater LED lights of 55w (500w equivalent), 120v.
13. Provide water features as shown on Paddock drawings.
14. Provide deck equipment as noted on Paddock drawings.
15. Furnish safety and maintenance equipment as noted on Paddock drawings.
16. Provide startup and necessary adjustments of systems after plaster operations and the new pool are filled.
17. Provide laminated operations charts related to laminated valve tags, start up and adjustment of equipment as well as complete owner/operator orientation.

RELATED WORK BY OTHERS:
Earthwork:
1. Pool site shall be received by Paddock at 10" below finished deck elevation with stakeout and benchmark elevations provided by others. Any fill material should be at 95% compaction and min. 2,000 PSF bearing for pool floor with maximum 35 PSF fluid wall pressure, verified by others. The owner/general contractor shall provide access to the site for power excavating equipment and trucks. Pools excavation by Paddock, with spoils stockpiled within 50 feet, or loaded outo trucks provided by others. Pool pricing is based on normal dirt excavation, with the earth walls of the excavation being suitable as a form for the pneumatically placed concrete (gunite), as is typical to swimming pool construction. Should hardpan, rock or other materials be encountered in the excavation requiring use of either a compressor or blasting material, additional costs shall be paid by the Owner/General Contractor. Rock or hardpan excavation will likely result in voids in the soil "backform" and may require extra costs for pool forming, or extra gunite material to fill the voids. If pool area soils are not capable of providing the "backform" because of poor cohesive properties extra forming costs may be required.
2. The cost of removing underground obstructions such as pipelines or masonry, removing, refilling and compacting of filled ground, diversion of or sealing off of water seepage, dewatering, and the cost of changes and additions to the pools structures or other installations necessitated by such conditions will constitute an additional cost to the Owner/General Contractor.
3. Owner/General contractor to provide corner lnibs and benchmark for pool layout elevations.

Electrical:
1. All electrical bonding and grounding, panels, breakers, motor starters/disconnects, switches, wiring, conduit and connections. ***Paddock will set the light niches and will stub out a 1" PVC conduit 30" long behind the pool shell at light locations*** for continuation of conduit, light cord pull, ground wire and connection by others. ***Junction boxes furnished loose by Paddock.***
2. If permanent electric power is either inadequate or not available at the time the pools are completed, temporary power or generators that may be required, are to be provided by others.
3. All electrical work for powering the pool equipment in filter room, is by others.
4. Conduit and wiring for the chemical controller connections to the chemical pump and solenoid for the CO_2 system.

Plumbing/Mechanical:
1. All freshwater work, including fill lines, backwash receptor to waste and backwash holding tank (if required), or any other disposal system to be designed, by others.
2. Hose bibs, drinking fountains, backflow preventer, water connections to fill spout at side of pool ***(Paddock to furnish a chrome plated fill spout loose),*** for installation, by others.

Miscellaneous by Others:
1. Deck, deck drainage, fence, back-fill, final grading, and landscaping.
2. Setting of horizontal tile depth markers in concrete deck.
3. All deck furniture, lounge chairs, etc.,
4. Filter Equipment room design, construction, finishes, etc..
5. Bathhouse design, construction, finishes, etc..
6. Sealant at the deck to pool junction and the deck to bathhouse and filter room junction.
7. Water required to fill the pool, chemicals, and staff for daily maintenance shall be provided by others at the time the pools' interior is completed.

252-655-1056 ATTN: MARK ENGINEERING, PLLC
5306 MULHOLLAND DR GREENVILLE SC 29485
FIRM # 1353070 CERT # P-1281 STRUCTURAL

OWNER: BLUE WATER DEVELOPMENT
9919 STEPHEN DECATUR HWY
OCEAN CITY, MD. 21842

POOL CONTRACTOR: PADDOCK SWIMMING POOL CO.
15120-C SOUTHLAWN LANE
ROCKVILLE, MD 20850

LIST OF DRAWINGS

JS: _____ TS: _____
JF: _____ TP: _____ MW: 2/05/24

PROJECT REVISIONS:

ATHLETIC FACILITY OBX
CURRITUCK SOUND
WATERLILY ROAD
COINJOCK, NC 27923

COVER SHEET

DRAWN BY: TL

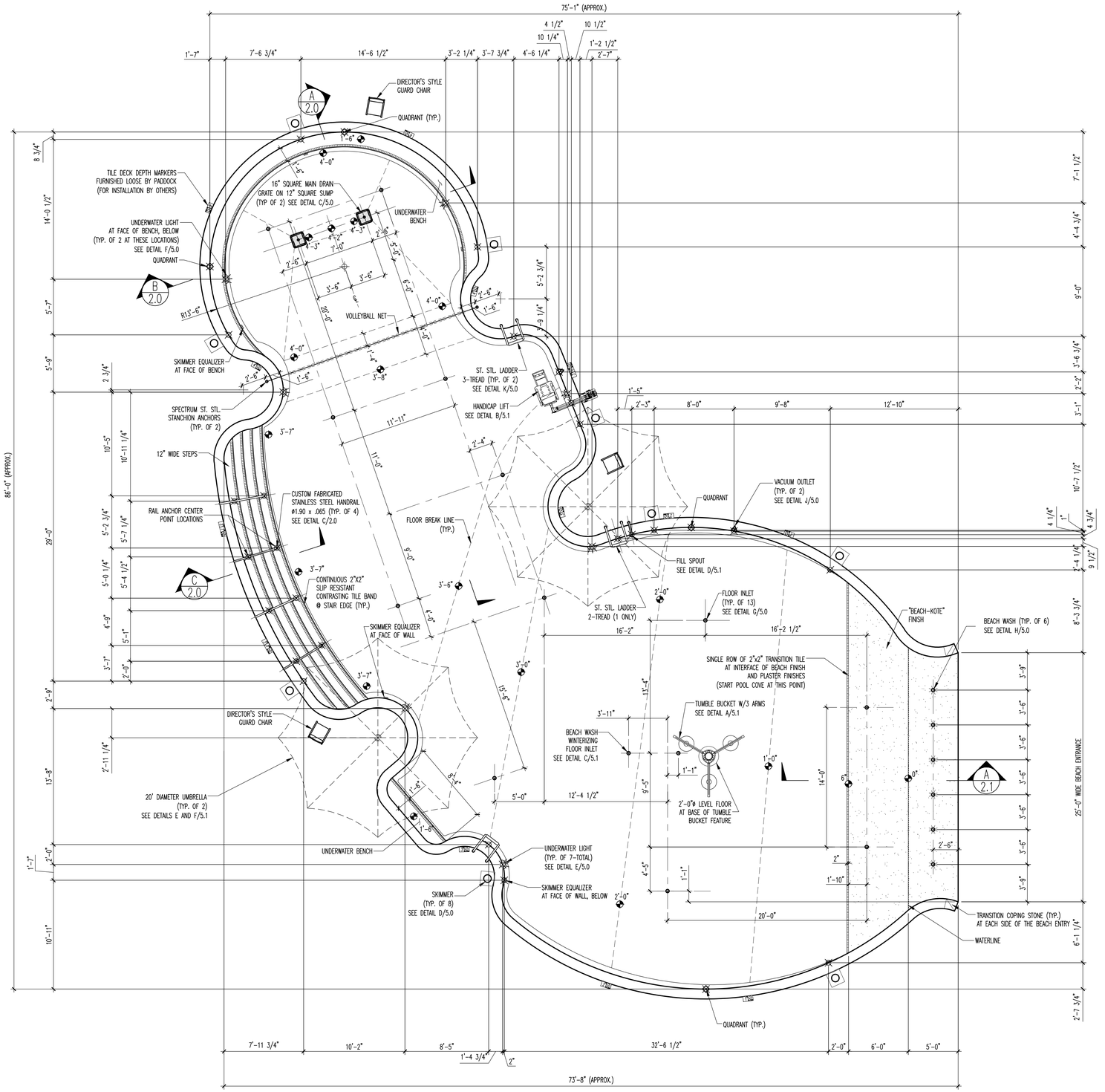
PADDOCK
SWIMMING POOL COMPANY

15120-C SOUTHLAWN LANE ROCKVILLE, MD. 20850
PHONE: (301)-424-0790 EMAIL: info@paddockpools.com

REVISIONS:

SCALE:	JOB NO.:
1/32"=1'-0"	-
DATE:	SHT. NO.:
2/13/24	0.0

PLOTTED BY: TL
C:\temp\ArPublish_5044\AthleticFacility_OBX_NC-IMAS.dwg 02-20-2024@12:27pm
Job #: , NEW SWIMMING POOL @ ATHLETIC FACILITY OBX - CURRITUCK SOUND, WATERLILY ROAD, COINJOCK, NC 27923 - ISSUED FOR APPROVAL: FEBRUARY 13, 2024



SEE SHEET 1.1 "HUB LAYOUT PLAN" FOR WALL RADIAL DIMENSIONS AND CENTER POINT LOCATIONS

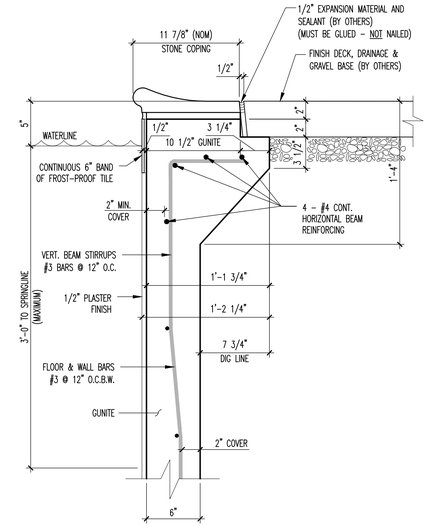
POOL PLAN

SCALE: 3/16"=1'-0"

NOTE: NEW DECK & DRAINAGE CONSTRUCTION TO BE PROVIDED BY OTHERS.

INDICATES IN-POOL WATER DEPTHS (TYPICAL)

INDICATES CENTER LINE OF POOL EQUIPMENT AT FACE OF POOL WALL/FLOOR (TYPICAL)



BEAM DETAIL WALLS TO 5' (STONE COPING)

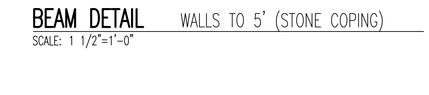
SCALE: 1 1/2"=1'-0"

DECK EQUIPMENT LIST
(ATHLETIC FACILITY OBX)

COPING		PRECAST FEDERAL STONE AQ SERIES 12"x24", WHITE W/ SAFETY GRIP. 2 TRANSITION STONES INCLUDED FOR EACH SIDE OF BEACH ENTRY
BEACH ENTRY FINISH		"BEACH KOTE" AT FLOOR TO 0" WATER DEPTH. COLOR: AS SELECTED
INTERIOR FINISH		"MARCITE" PLASTER FINISH - COLOR: WHITE
WATER LINE TILE		6" BAND OF 2"x2" CERAMIC TILE: DALTILE KEYSTONES, PRICE GROUP (1-3) COLOR: AS SELECTED
DECK DEPTH MARKINGS (10836Z.)		6"x6" WHITE SLIP RESISTANT CERAMIC TILE WITH 5" HIGH BLACK NUMERALS & LETTERS AND INTERNATIONAL "NO-DIVING" TILE SIGN ***(FURNISHED LOOSE TO BE INSTALLED IN THE POOL DECK, BY OTHERS)***
IN-POOL DEPTH MARKERS (VERTICAL)		6"x6" WHITE CERAMIC TILE WITH 5" HIGH BLACK NUMERALS & LETTERS
TRIM TILE AT STAIRS & UNDERWATER BENCHES		2" ROW OF 2"x2" CERAMIC TILE OF CONTRASTING COLOR, DALTILE KEYSTONES. COLOR: AS SELECTED
TRANSITION TILE AT BEACH ENTRY		2" ROW OF 2x2" CERAMIC TILE, BY DALTILE, AT EDGE BETWEEN BEACH ENTRY FINISH & PLASTER FINISH. COLOR: AS SELECTED
STAIR HAND RAIL	4	S.R. SMITH CUSTOM, 1.90x.065", 304 STAINLESS STEEL
LADDER	1	S.R. SMITH STANDARD PLUS #10001 (2 STEP) 1.90"ODx.065" THICK 304 ST. STL. W/ PLASTIC TREADS
	2	S.R. SMITH STANDARD PLUS #10004 (3 STEP) 1.90"ODx.065" THICK, 304 ST. STL. W/ PLASTIC STEPS
WEDGE ANCHORS	14	PERMA CAST 4" CAST 1800NZE #PS-4019-BC FOR 1.90" RAIL
ESCUTCHEON PLATES	14	S.R. SMITH ST. STL. ESCUTCHEON #ID-100F (ROUND)
HANDICAP LIFT	1	S.R. SMITH MultiLift 2 #580-0000N AND ANCHOR KIT, #300-6700A
FILL SPOUT	1	S.R. SMITH, STANDARD 1BRONZE - 1.5", W/ BRACE. ***(FURNISHED LOOSE TO BE INSTALLED AT DECK, BY OTHERS)***
GUARD CHAIRS	3	DIRECTORS STYLE
UNDERWATER LIGHTS	4	PENTAIR INTELLIBRITE #601301 5G WHITE LED LIGHT, 55W (500 W/ EQUIV.), 120V W/ 50' CORD
	3	PENTAIR INTELLIBRITE #601302 5G WHITE LED LIGHT, 55W (500 W/ EQUIV.), 120V W/ 100' CORD
JUNCTION BOXES	7	PENTAIR BRASS BASE W/ POLYCARBONATE COVER #78107(0), LEXAN 3/4"x1"x3/4" POSTS ***(FURNISHED LOOSE)***
VOLLEYBALL NET	1	LINCOLN VOLLEYBALL SET # 63-620 (30' WIDE - INCLUDES NET AND POSTS
STANCHION ANCHORS	2	SPECTRUM STAINLESS STEEL #24060, 1.90", W/ LID AND LID REMOVAL TOOL
FUNBRELLAS & ANCHORS	2	20' DIA. FUNBRELLA W/ ANCHOR&SURROUND SLEEVE #8631320 FROM ANCHOR INDUSTRIES – COLOR: DANDELION YELLOW
SAFETY & MAINTENANCE EQUIPMENT (FURNISHED LOOSE)		
	1	CLEAN KIT 1.5"
	1	SPINE BOARD PACKAGE
	1	HEAD IMMOBILIZER
	1	FIRST AID KIT (50 PEOPLE)
	1	LIFE HOOK, (SHEPHERD'S CROOK) & RESCUE POLE
	1	POLE - TELESCOPIC 8-16'
	1	RESCUE TUBE 50" W/ STRAPS
	1	RING BUOY LINE, 30' W/ EXTENSION ROPE
	1	TEST KIT - TAYLOR K2005
	1	CHEMICAL INITIAL BALANCE ONLY

SHELL EQUIPMENT LIST
(ATHLETIC FACILITY OBX)

MAIN DRAINS	2	ASA 12" SQ. FIBERGLASS SUMP #FHS-50-812-18-6 (6" PORT), WITH AQUASTAR 16" SQ. FRAME & GRATE #1216101 (WHITE) , NSF CERTIFIED, 2017 VGBA COMPLIANT, MAXIMUM FLOW 720 GPM (EACH)
HYDROSTATIC RELIEF VALVES	2	HAYWARD 2" VALVE #1056 W/ #SP-1055 COLLECTOR TUBE
SKIMMERS	9	AQUASTAR #SKR-201, W/ ROUND COVER
SKIMMER EQUALIZER FITTINGS	9	AQUASTAR 6" ROUND SUCTION OUTLET COVER #6HPHA101 - WHITE W/ 6" BULKHEAD ADAPTOR (2" THREADED x 1-1/2" SOCKET) #620T1SS101 - WHITE, VGB APPROVED GRATE W/ BULKHEAD
VACUUM OUTLETS	2	HAYWARD #W400SWHP, WHITE, W/ SELF CLOSING COVER AND HAYWARD #SP1022S2 2" SOCKET PVC FITTING
FLOOR INLETS	13	AQUASTAR FLOOR INLET #4DV101 (WHITE)
WINTERIZING FLOOR INLET	1	AQUASTAR #4DV101 (WHITE), ADJUSTABLE - W/ PLUG INSTALLED IN FIELD W/ 2" PVC THREADED PLUG #PVC-020, FOR BEACH WASH FEATURES
LIGHT NICHES	7	PENTAIR #78206700, PLASTIC W/ 1" BEAR HUB CONNECTION
WATER FEATURES:		
BEACH WASH	6	PADDOCK CUSTOM (OEM) (STRAIGHT NOZZLE)
TUMBLE BUCKET FEATURE	1	RAINDROP TUMBLE BUCKETS-3 BUCKETS-SHORT MAST-OMNIPOD PART #TBK-008-OM-S-ZCS



252-655-1056 x1 PEC TOWE ENGINEERING, PLLC
5306 MULHOLLAND PL HUBERTSVILLE SC 29485
FIRM # 1353070 CERT # P-1281 STRUCTURAL

DESIGN DATA

	LEISURE POOL
DIMENSIONS	FREEFORM
PERIMETER	291'-0"
SURFACE AREA – TOTAL	3,432 S.F.
– WATER SURFACE AREA	3,308 S.F.
– PLASTER AREA	3,110 S.F.
– BEACH FINISH AREA	322 S.F.
– DRY BEACH AREA	124 S.F.
GALLONAGE	58,747 GAL.
DEPTHS	0" TO 4'-3 "
FILTER RATE	250 GPM
TURNOVER TIME	3.92 HOURS

ATHLETIC FACILITY OBX
CURRITUCK SOUND

WATERLILY ROAD
COINJOCK, NC 27923

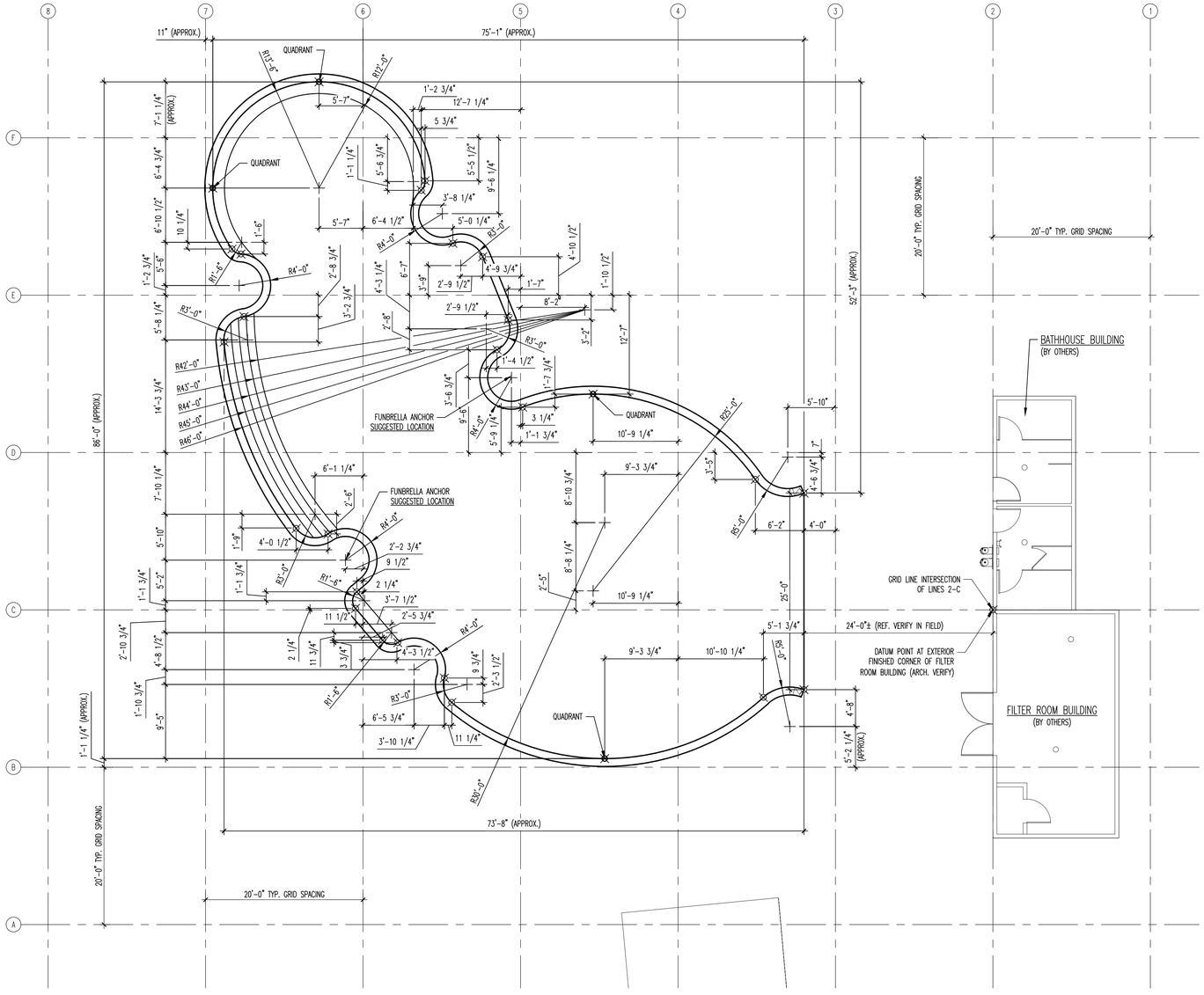
POOL PLAN

DRAWN BY: TL

PADDOCK
SWIMMING POOL COMPANY

15120-C SOUTHLAWN LANE ROCKVILLE, MD. 20850
PHONE: (301)-424-0790 EMAIL: info@paddockpools.com

REVISIONS:	SCALE: 3/16"=1'-0"	JOB NO.: –
	DATE: 2/13/24	SHT. NO.: 1.0



HUB LAYOUT PLAN

SCALE: 1/8"=1'-0"

⊠ DENOTES HUB (DATUM) POINTS, TYPICAL

1. DIMENSIONS SHOWN FOR REFERENCE ONLY, VERIFY IN FIELD.
2. DIMENSIONS SHOWN ARE FROM POOL'S FINISHED FACE OF WALL AND ARE FOR REFERENCE ONLY (V.I.F.)
3. G.C. TO PROVIDE 10' OFFSET STAKES (TYP.) AND DATUM POINT AT MASONRY CORNER OF FILTER ROOM BUILDING WALL.

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 027540 3-8-2024 WILLIAM C. STOCK

252-655-1056 STOCK STOWE ENGINEERING, PLLC
5306 MULHOLLAND DR KINSTON, NC 28504
FIRM # 1353070 CERT # P-1281 STRUCTURAL

ATHLETIC FACILITY OBX CURRITUCK SOUND

WATERLILY ROAD
COINJOCK, NC 27923

HUB LAYOUT PLAN

DRAWN BY: TL

PADDOCK SWIMMING POOL COMPANY

15120-C SOUTHLAWN LANE ROCKVILLE, MD. 20850
PHONE: (301)-424-0790 EMAIL: info@paddockpools.com

REVISIONS:	SCALE: 1/8"=1'-0"	JOB NO.: –
	DATE: 2/13/24	SHT. NO.: 1.1

PLOTTED BY: TL

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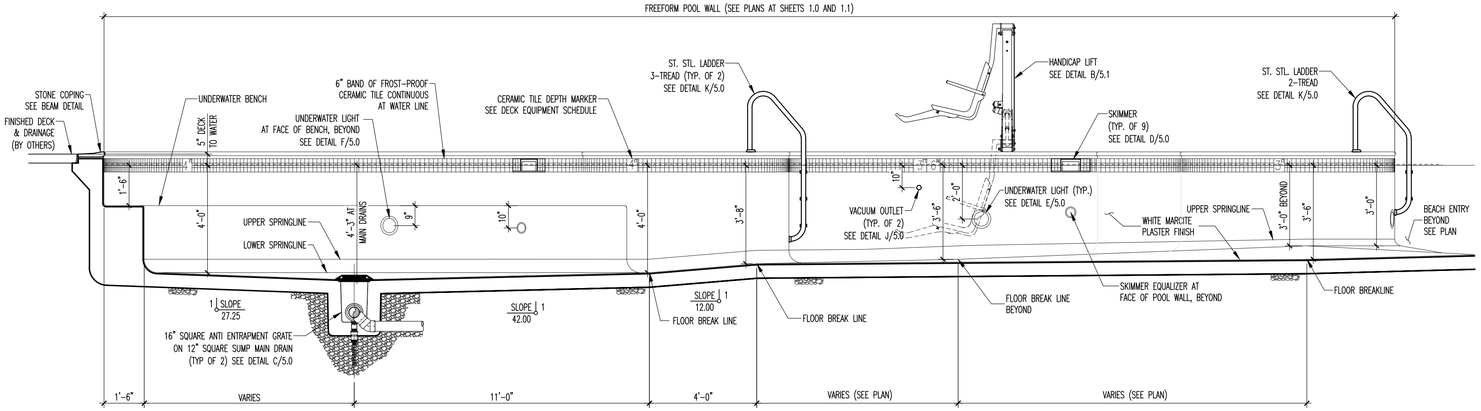
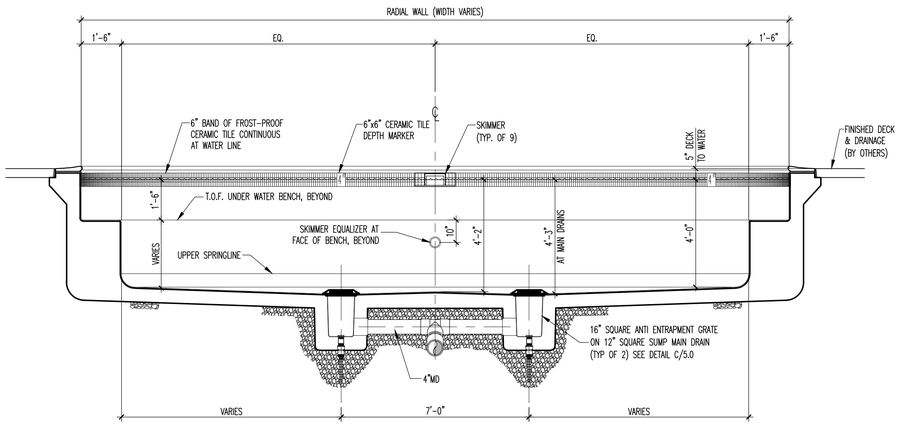


LONGITUDINAL SECTION

SCALE: 3/8"=1'-0"

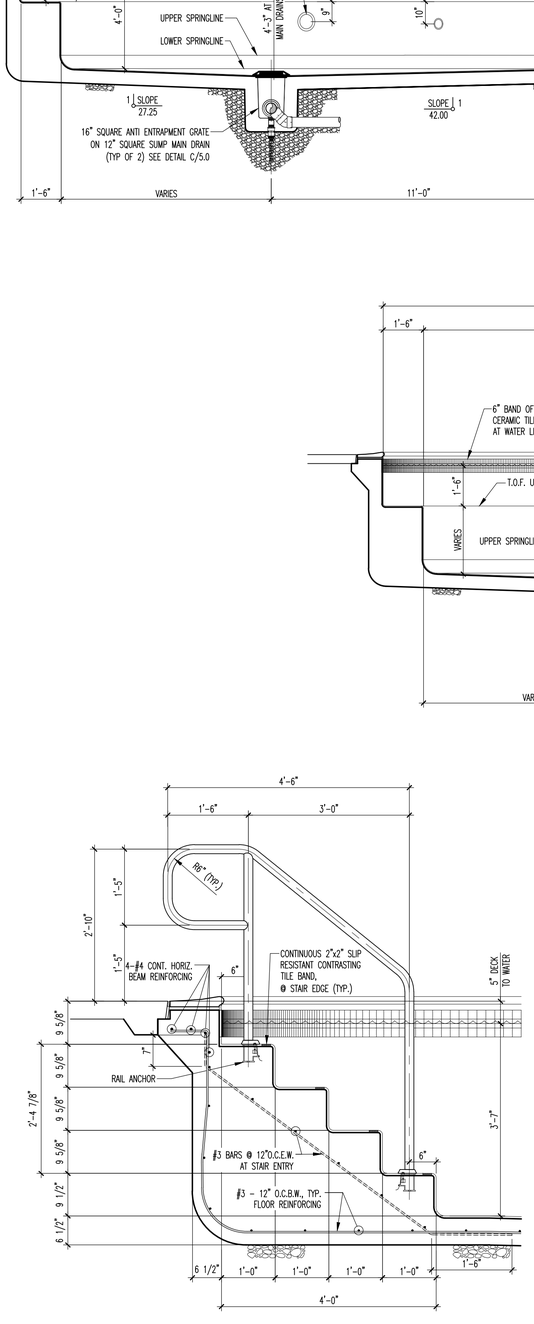
A 2.0



CROSS SECTION

SCALE: 3/8"=1'-0"

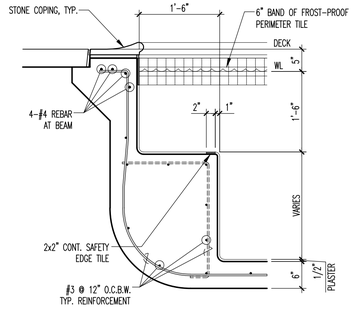
B 2.0



STAIR SECTION (3'-7", 7 RISERS, STONE) SEATING STEPS

SCALE: 3/4"=1'-0"

C 2.0

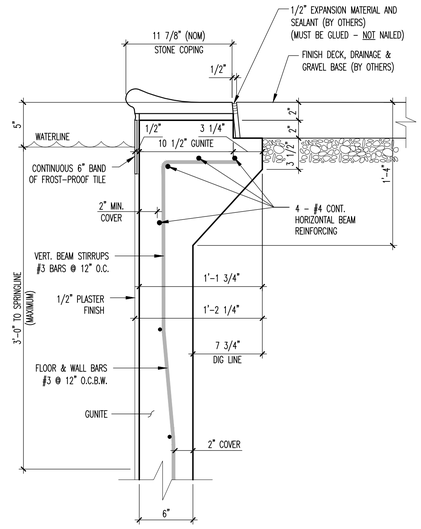


UNDERWATER BENCH

SCALE: 3/4"=1'-0"

W/ STONE COPING

D 2.0

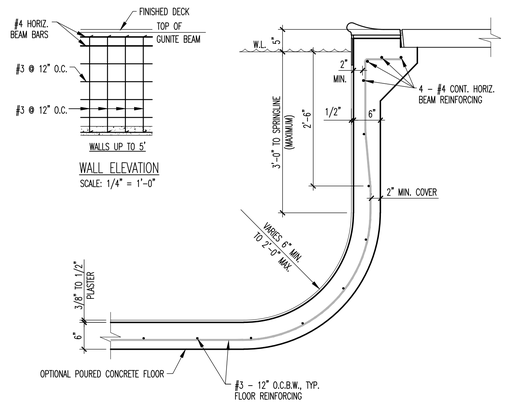


BEAM DETAIL WALLS TO 5' (STONE COPING)

SCALE: 1 1/2"=1'-0"

STRUCTURAL WALL & STEEL SCHEDULE		
WATER DEPTH	WALL THICKNESS	REINFORCING
0'-0" TO 5'-0"	6"	#3 @ 12" O.C.B.W.

NOTE: STEEL SCHEDULE ASSUMES UNDISTURBED SITE w/ SOIL OF MIN. 2000 PSF BEARING CAPACITY & NO SURCHARGES. GRADE 40 STEEL MIN, 3000 PSI GUNITE/CONCRETE



WALL ELEVATION

SCALE: 1/4" = 1'-0"

TYP. WALL DETAIL TO 5' (STONE COPING)

SCALE: 3/4"=1'-0"

ATHLETIC FACILITY OBX
CURRITUCK SOUND

WATERLILY ROAD
COINJOCK, NC 27923

SECTIONS #1

DRAWN BY: TL

PADDOCK SWIMMING POOL COMPANY

15120-C SOUTHLAWN LANE ROCKVILLE, MD. 20850
PHONE: (301)-424-0790 EMAIL: info@paddockpools.com

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 027540 3-8-2024 BARRETT C. COOK

252-655-1056 KITTY HAWK ENGINEERING, PLLC
5306 MUNDY ROAD SUITE 101 WILMINGTON NC 28405
FIRM # 1353070 CERT # P-1281 STRUCTURAL

REVISIONS:	SCALE: AS NOTED	JOB NO.: -
	DATE: 2/13/24	SHT. NO.: 2.0

PLOTTED BY: TL

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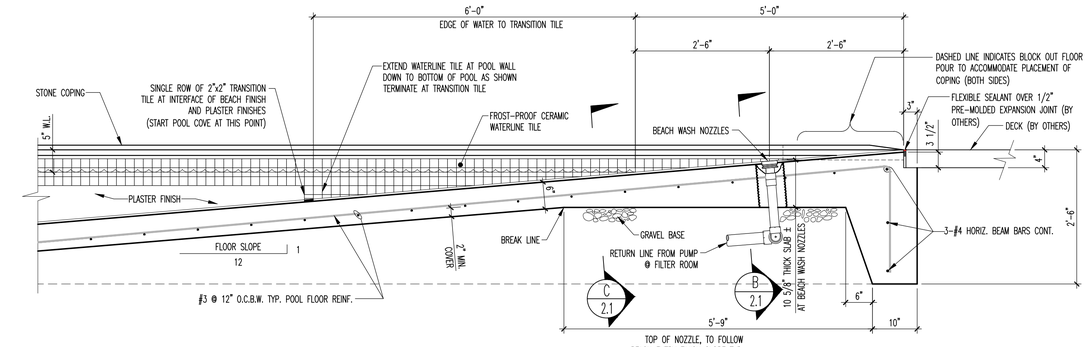
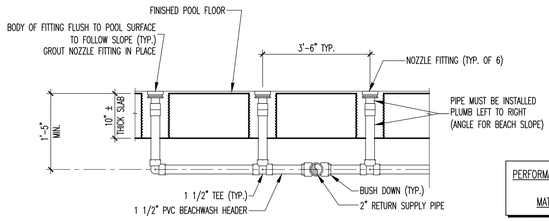
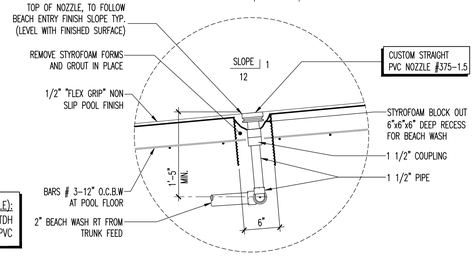




SECTION BEACH WASH MANIFOLD

SCALE: 3/4" = 1'-0"

B 2.1



PERFORMANCE (PER NOZZLE):
11GPM @ 15' TDH
MATERIAL: SCH. 80 PVC

BEACH WASH NOZZLE ENLARGED DETAIL

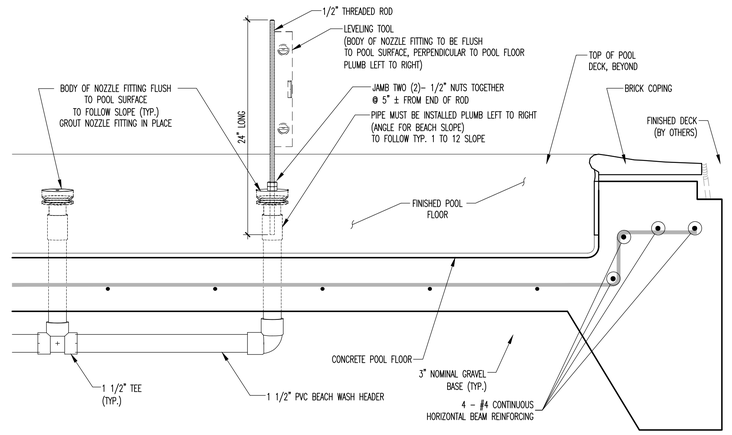
SCALE: 1" = 1'-0"

BEACH WASH DETAIL

SCALE: 3/4" = 1'-0"

STONE COPING BEACH ENTRY

A 2.1



NOZZLE ALIGNMENT ROD DETAIL

SCALE: 1 1/2"=1'-0"

BEACHWASH POOL ENTRY C 2.1

NORTH CAROLINA PROFESSIONAL SEAL 027540 3-8-2024 ENGINEER BARRY E. CROCK

252-455-1066 X1190 JAMES ENGINEERING, PLLC
5306 MULHOLLAND DR JACKSONVILLE SC 28485
FIRM # 1353070 CERT # P-1281 STRUCTURAL

ATHLETIC FACILITY OBX
CURRITUCK SOUND

WATERLILY ROAD
COINJOCK, NC 27923

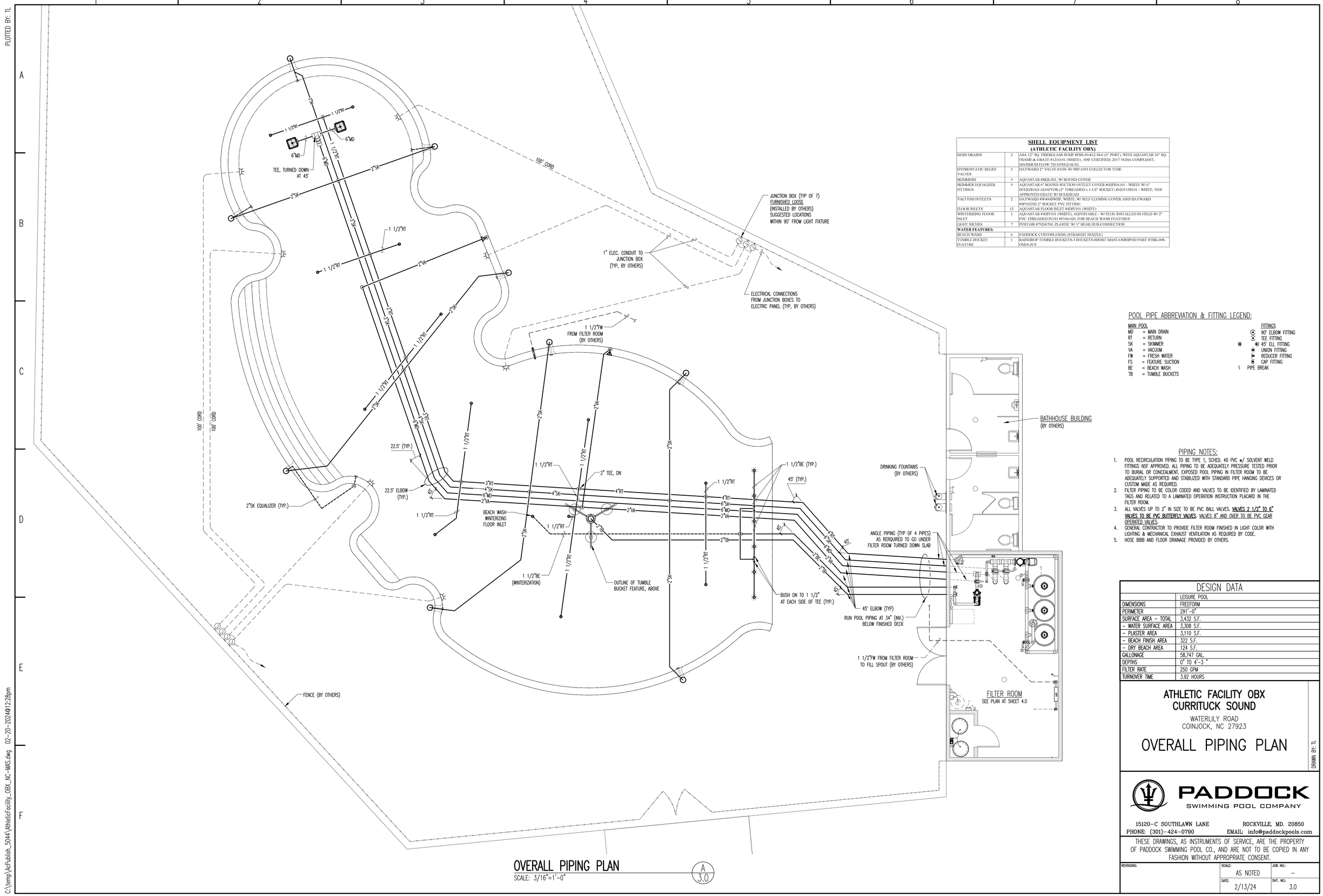
SECTIONS #2

DRAWN BY: TL

PADDOCK SWIMMING POOL COMPANY

15120-C SOUTHLAWN LANE ROCKVILLE, MD. 20850
PHONE: (301)-424-0790 EMAIL: info@paddockpools.com

REVISIONS:	SCALE: AS NOTED	JOB NO.: -
	DATE: 2/13/24	SHT. NO.: 2.1



OVERALL PIPING PLAN

SCALE: 3/16"=1'-0"

A 3.0

SHELL EQUIPMENT LIST
(ATHLETIC FACILITY OBX)

MAIN DRAINS	2	ASA 12" SQ. FIBERGLASS SUMP #FBS-S0-812-18-6 (6" PORT), WITH AQUASTAR 16" SQ. FRAME & GRATE #1216101 (WHITE) , NSF CERTIFIED, 2017 VGBA COMPLIANT, MAXIMUM FLOW 720 GPM (EACH)
HYDROSTATIC RELIEF VALVES	2	HAYWARD 2" VALVE #1056 W/ #SP-1055 COLLECTOR TUBE
SKIMMERS	9	AQUASTAR #SKR-201, W/ ROUND COVER
SKIMMER EQUALIZER FITTINGS	9	AQUASTAR 6" ROUND SUCTION OUTLET COVER #6HPHA101 - WHITE W/ 6" BULKHEAD ADAPTOR (2" THREADED x 1-1/2" SOCKET) #6207158101 - WHITE, VGB APPROVED GRATE W/ BULKHEAD
VACUUM OUTLETS	2	HAYWARD #W400BWHP, WHITE, W/ SELF CLOSING COVER AND HAYWARD #SP1025S2 2" SOCKET PVC FITTING
FLOOR INLETS	13	AQUASTAR FLOOR INLET #4DIV101 (WHITE)
WINTERIZING FLOOR INLET	1	AQUASTAR #4DIV101 (WHITE), ADJUSTABLE - W/ PLUG INSTALLED IN FIELD W/ 2" PVC THREADED PLUG #P106-020, FOR BEACH WASH FEATURES
LIGHT NICHES	7	PENTAIR #75200700, PLASTIC W/ 1" REAR HUB CONNECTION
WATER FEATURES:		
BEACH WASH	6	PADDOCK CUSTOM (OEM) (STRAIGHT NOZZLE)
TUMBLE BUCKET FEATURE	1	RAINDROP TUMBLE BUCKETS-3 BUCKETS-SHORT MAST-OMNIPOD PART #TBK-008-OM-S-ZCS

POOL PIPE ABBREVIATION & FITTING LEGEND:

MAIN POOL
- MD = MAIN DRAIN
- RT = RETURN
- SK = SKIMMER
- VA = VACUUM
- FW = FRESH WATER
- FS = FEATURE SUCTION
- BE = BEACH WASH
- TB = TUMBLE BUCKETS

FITTINGS
- 90° ELBOW FITTING
- TEE FITTING
- 45° ELL FITTING
- UNION FITTING
- REDUCER FITTING
- CAP FITTING
- PIPE BREAK

PIPING NOTES:

1. POOL RECIRCULATION PIPING TO BE TYPE 1, SCHED. 40 PVC w/ SOLVENT WELD FITTINGS NSF APPROVED. ALL PIPING TO BE ADEQUATELY PRESSURE TESTED PRIOR TO BURIAL OR CONCEALMENT. EXPOSED POOL PIPING IN FILTER ROOM TO BE ADEQUATELY SUPPORTED AND STABILIZED WITH STANDARD PIPE HANGING DEVICES OR CUSTOM MADE AS REQUIRED.
2. FILTER PIPING TO BE COLOR CODED AND VALVES TO BE IDENTIFIED BY LAMINATED TAGS AND RELATED TO A LAMINATED OPERATION INSTRUCTION PLACARD IN THE FILTER ROOM.
3. ALL VALVES UP TO 2" IN SIZE TO BE PVC BALL VALVES. **VALVES 2 1/2" TO 6" VALVES TO BE PVC BUTTERFLY VALVES**. VALVES 8" AND OVER TO BE PVC GEAR OPERATED VALVES.
4. GENERAL CONTRACTOR TO PROVIDE FILTER ROOM FINISHED IN LIGHT COLOR WITH LIGHTING & MECHANICAL EXHAUST VENTILATION AS REQUIRED BY CODE.
5. HOSE BIBB AND FLOOR DRAINAGE PROVIDED BY OTHERS.

DESIGN DATA

	LEISURE POOL
DIMENSIONS	FREEFORM
PERIMETER	291'-0"
SURFACE AREA - TOTAL	3,432 S.F.
- WATER SURFACE AREA	3,308 S.F.
- PLASTER AREA	3,110 S.F.
- BEACH FINISH AREA	322 S.F.
- DRY BEACH AREA	124 S.F.
GALLONAGE	58,747 GAL.
DEPTHS	0" TO 4'-3"
FILTER RATE	250 GPM
TURNOVER TIME	3.92 HOURS

ATHLETIC FACILITY OBX
CURRITUCK SOUND

WATERLILY ROAD
COINJOCK, NC 27923

OVERALL PIPING PLAN

DRAWN BY: TL

PADDOCK
SWIMMING POOL COMPANY

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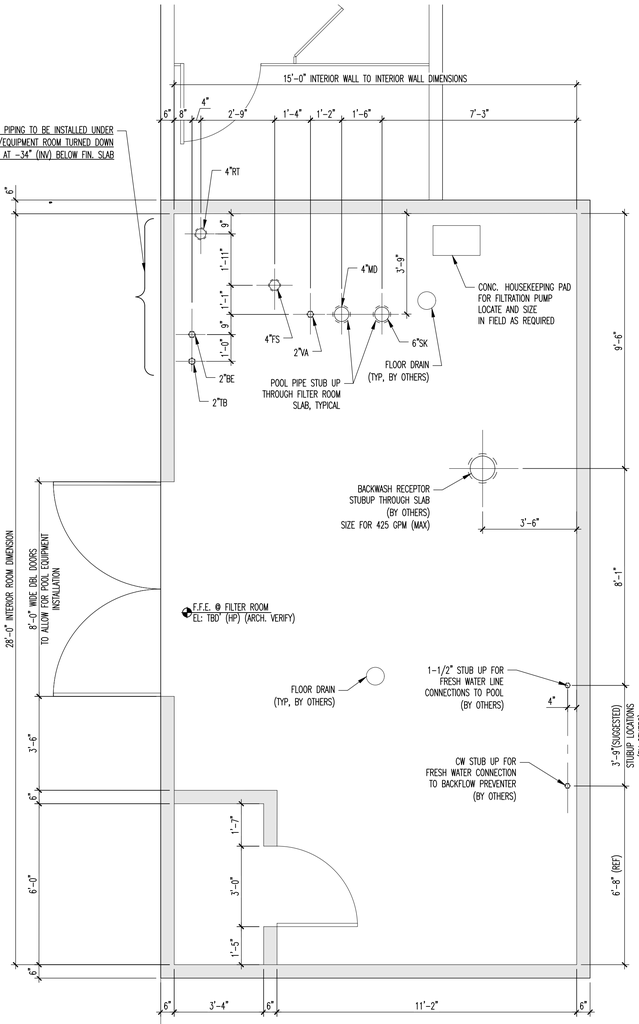
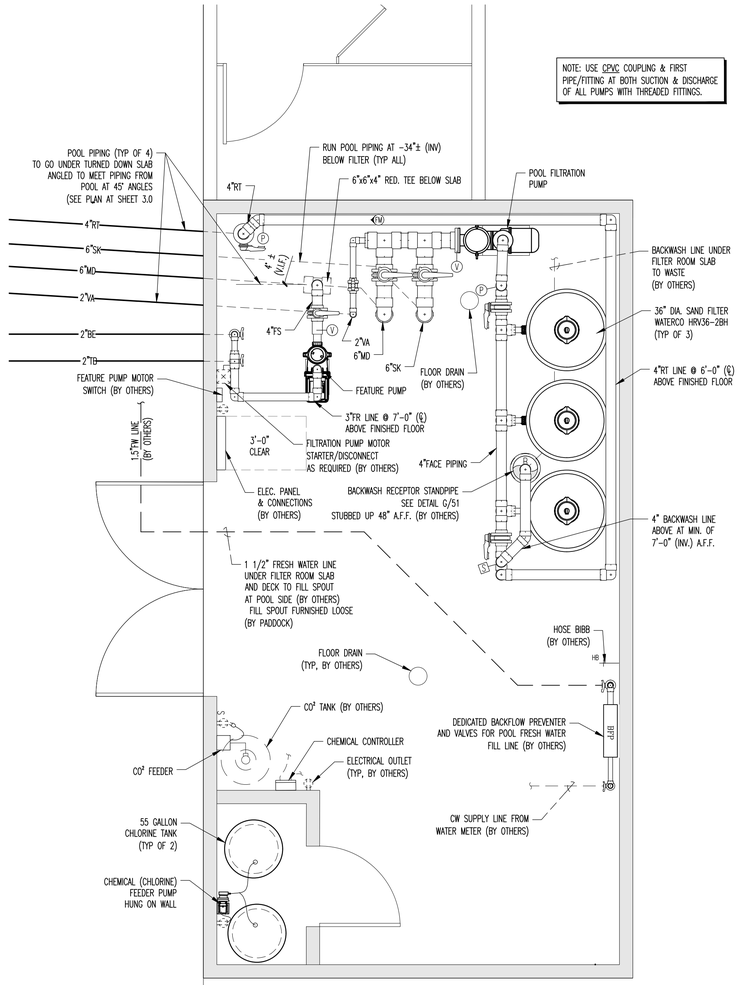
PHONE: (301)-424-0790 EMAIL: info@paddockpools.com

REVISIONS:	SCALE:	JOB NO.:
	AS NOTED	-
	DATE: 2/13/24	SHT. NO.: 3.0





MECHANICAL EQUIPMENT LIST

(ATHLETIC FACILITY OBX)

FILTERS	3	WATERCO HRV36-2IH1 #2220736R , 36" DIA. FIBERGLASS, W/ 2" BULKHEAD CONNECTIONS. FILTER AREA: 7.1 SQ. FT., FILTER RATE: 142 GPM MAX, EA. TANK, TOTAL FILTER AREA: 21.3 (3 TANKS). DESIGN FILTRATION RATE: 2500PM, @ 11.74 GPM/SQ. FT., BACKWASH RATE AT 110 (MIN.) TO 140 GPM, MAX. (EACH TANK)
FILTER MEDIA		SAND - 750 LBS., GRAVEL - 50 LBS. (EACH)
PUMP - FILTRATION	1	PENTAIR CHK-75 #347943, 7.5HP, 3PH, 200-208V, 22.3 AMP, 250 GPM @ 85' TDH, COMPLETE W/ HAIR AND LINT STRAINER & SPARE BASKET
PUMP - FEATURES	1	PENTAIR INTELLIFLO3 VSF # 011077, 3.HP, 3-Phase, 208-230V, 12.4-11.2 AMP, W/ 3" PORTS. 120 GPM @ 60' TDH (MAX. SPEED), W/ TOUCH SCREEN HMI. COMPLETE W/ HAIR AND LINT STRAINER AND SPARE BASKET ***NOTE: (ELECTRICIAN TO VERIFY & PROVIDE COMPATIBLE CIRCUITS)***
FLOW METER	1	BLUE-WHITE #F-30400P (125 TO 500 GPM FLOW RANGE)
GAUGES - PRESSURE	2	WIKA 4" PRESSURE, TYPE 111.10 (FILTRATION SYSTEM)
	1	WIKA 4" PRESSURE, TYPE 111.10 (FEATURE SYSTEM)
GAUGES - VACUUM	1	WIKA 4" VACUUM, TYPE 111.10 (FILTRATION SYSTEM)
	1	WIKA 4" VACUUM, TYPE 111.10 (FEATURE SYSTEM)
SIGHT GLASS	1	S.R. SMITH SIGHT GLASS 1.5"
CHLORINE PUMP	1	STENNER #85M5, FRACTIONAL HP, SINGLE PHASE 120V
CO2 FEEDER	1	IECSys-CO2 FEED SYSTEM #2100299 (20-200 SCFH), SINGLE PHASE 115V W/ SINGLE TANK REGULATOR #9680043
CHEMICAL CONTROLLER	1	IECSys-2 #1100187, 115V, 50Hz, W/ FLOW CELL & SENSORS
CO² TANK (CLC)	1	***BULK CO² STORAGE TANK, BY OTHERS***
CHORINE VATS	2	SAINT GOBAIN #11160, HDPE, 55 GALLON VERTICAL TANK W/COVER

FILTER ROOM PIPE ABBREVIATION & FITTING LEGEND:

MAIN POOL
- MD = MAIN DRAIN
- RT = RETURN
- SK = SKIMMER
- VA = VACUUM
- FW = FRESH WATER
- FS = FEATURE SUCTION
- BE = BEACH WASH
- TB = TUMBLE BUCKETS

FITTINGS
- (V) VACUUM GAUGE
- (P) PRESSURE GAUGE
- (T) TEMPERATURE GAUGE
- (FS) FLOW SWITCH
- [S] SIGHT GLASS
- (FM) FLOW METER – PLAN VIEW
- (FM) FLOW METER – ELEVATION VIEW

PIPING COLOR SCHEDULE

(NORTH CAROLINA)

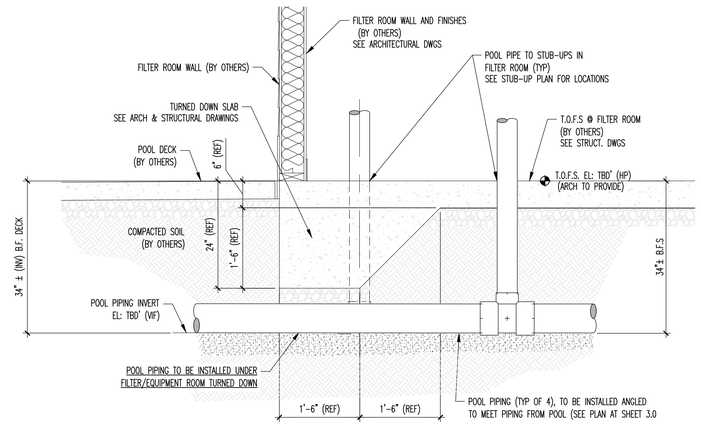
BACKWASH	– BLACK
VACUUM	– ORANGE
SUCTION/SKIMMER	– YELLOW
RETURN	– WHITE
CHEMICAL FEED CONDUIT	– WHITE
FRESH WATER	– BLUE
HEATER (TO ISOLATION VALVE)	– RED
AUXILIARY RECIRC. (SEE NOTE)	– GREEN

AUXILIARY RECIRCULATION NOTE
WATER FEATURES, JETS, FOUNTAINS, WATER FALLS AERATION SYSTEMS OR SIMILAR FEATURES NOT PART OF THE FILTRATION SYSTEM

STUB-UP PLAN

B 4.0

SCALE: 3/8"=1'-0"



FILTER ROOM PLAN

A 4.0

SCALE: 3/8"=1'-0"

PIPING NOTES:

1. POOL RECIRCULATION PIPING TO BE TYPE 1, SCHED. 40 PVC w/ SOLVENT WELD FITTINGS NSF APPROVED. ALL PIPING TO BE ADEQUATELY PRESSURE TESTED PRIOR TO BURIAL OR CONCEALMENT. EXPOSED POOL PIPING IN FILTER ROOM TO BE ADEQUATELY SUPPORTED AND STABILIZED WITH STANDARD PIPE HANGING DEVICES OR CUSTOM MADE AS REQUIRED.
2. FILTER PIPING TO BE COLOR CODED AND VALVES TO BE IDENTIFIED BY LAMINATED TAGS AND RELATED TO A LAMINATED OPERATION INSTRUCTION PLACARD IN THE FILTER ROOM.
3. ALL VALVES UP TO 2" IN SIZE TO BE PVC BALL VALVES. **VALVES 2 1/2" TO 6" VALVES TO BE PVC BUTTERFLY VALVES**. VALVES 8" AND OVER TO BE PVC GEAR OPERATED VALVES.
4. GENERAL CONTRACTOR TO PROVIDE FILTER ROOM FINISHED IN LIGHT COLOR WITH LIGHTING & MECHANICAL EXHAUST VENTILATION AS REQUIRED BY CODE.
5. HOSE BIBB AND FLOOR DRAINAGE PROVIDED BY OTHERS.

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 027540 3-8-2024 REGISTERED

252-655-1066 KITTY HAWK ENGINEERING, PLLC
5306 MUNDLEWOOD DR JACKSONVILLE NC 28455
FIRM # 1353070 CERT # P-1281 STRUCTURAL

DESIGN DATA

	LEISURE POOL
DIMENSIONS	FREEFORM
PERIMETER	291'-0"
SURFACE AREA – TOTAL	3,432 S.F.
– WATER SURFACE AREA	3,308 S.F.
– PLASTER AREA	3,110 S.F.
– BEACH FINISH AREA	322 S.F.
– DRY BEACH AREA	124 S.F.
GALLONAGE	58,747 GAL.
DEPTHS	0" TO 4'-3 "
FILTER RATE	250 GPM
TURNOVER TIME	3.92 HOURS

ATHLETIC FACILITY OBX
CURRITUCK SOUND

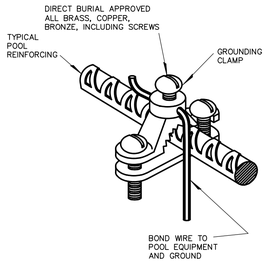
WATERLILY ROAD
COINJOCK, NC 27923

FILTER ROOM PLANS

DRAWN BY: TL

PADDOCK SWIMMING POOL COMPANY
15120-C SOUTHLAWN LANE ROCKVILLE, MD. 20850
PHONE: (301)-424-0790 EMAIL: info@paddockpools.com

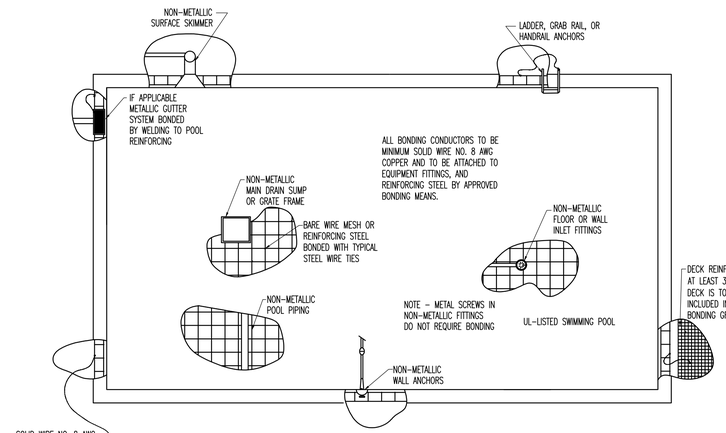
REVISIONS:	SCALE: 3/8"=1'-0"	JOB NO.: –
	DATE: 2/13/24	SHT. NO.: 4.0



NOTE:
THIS DETAIL IS FOR REFERENCE ONLY AND DOES NOT ASSIGN WORK SCOPE RESPONSIBILITY.
ALL ELECTRICAL EQUIPMENT ASSOCIATED WITH THE POOL SHALL BE COORDINATED AND PROVIDED BY THE BASE BUILDING ELECTRICAL CONTRACTOR.

GROUNDING/CLAMPING DETAILS

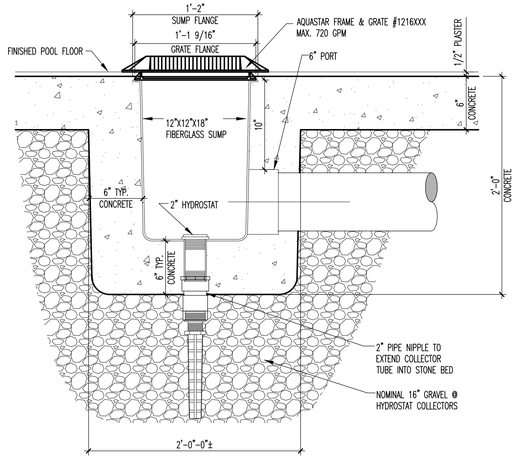
N.T.S (WORK BY OTHERS – TYPICAL) A 5.0



NOTES:
1. ONLY ELECTRICAL EQUIPMENT THAT IS U.L. LISTED UNDER "SWIMMING POOL EQUIPMENT" SHALL BE USED, WHERE U.L. LISTINGS FOR SUCH EQUIPMENT EXIST.
2. THIS DETAIL IS FOR REFERENCE ONLY AND DOES NOT ASSIGN WORK SCOPE RESPONSIBILITY.
3. OVERALL BONDING PER NEC ARTICLE 680.26 (B) (1) THROUGH (B) (5).

SWIMMING POOL ELECTRICAL BONDING & GROUNDING

N.T.S (WORK BY OTHERS – TYPICAL) B 5.0

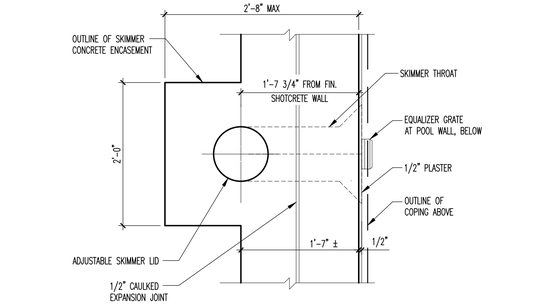


AQUASTAR FRAME AND GRATE #1216XXX
ASA SUMP #FBS-50-812-18-6

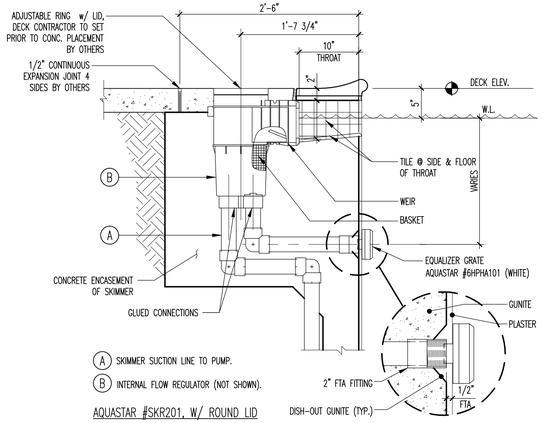
SUMP & GRATE COMBINATION MEETS NATIONAL STANDARDS:
16 CFR PART 1450
ASME/ANSI A112.19.8 2007, 2008, 2009
APSP/ANSI/ICC-16 2011, 2017

12"x12" MAIN DRAIN

SCALE: 1 1/2"=1'-0" SUMP & GRATE MEET OR EXCEED CURRENT ASME/ANSI A112.19.8 NATIONAL STANDARDS C 5.0



TOP VIEW



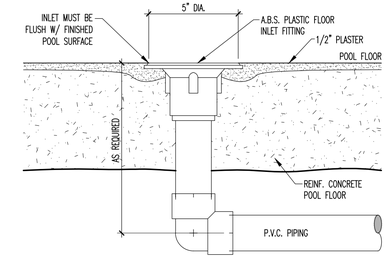
A SKIMMER SUCTION LINE TO PUMP.
B INTERNAL FLOW REGULATOR (NOT SHOWN).

AQUASTAR #SKR201, W/ ROUND LID

EQUALIZER GRATE DETAIL

SKIMMER DETAIL

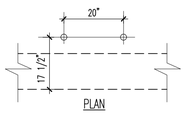
SCALE: 1"=1'-0" STONE COPING D 5.0



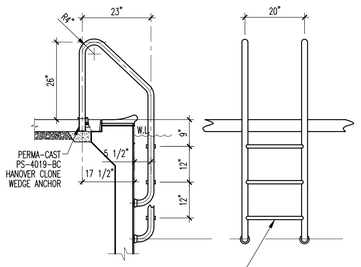
NOTE: FOR PIPE SIZE REFER TO POOL PIPING DRAWING.

RETURN INLET DETAIL

SCALE: 3"= 1'-0" FLOOR G 5.0



PLAN

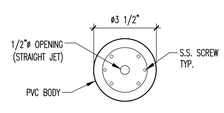


SR SMITH # 10001, (2 STEP)
SR SMITH # 10004, (3 STEP)

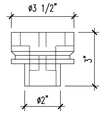
S.R. SMITH STANDARD PLUS LADDER WITH PLASTIC TREADS

LADDER DETAIL

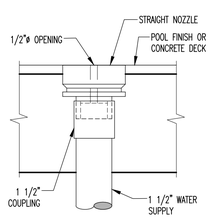
SCALE: 1/2"=1'-0" K 5.0



PLAN (STRAIGHT JET)



SIDE VIEW



INSTALLATION DETAIL

WATER INFLUENCE AREA:
STRAIGHT JET NOZZLE: 6' HIGH, 2' DIA.

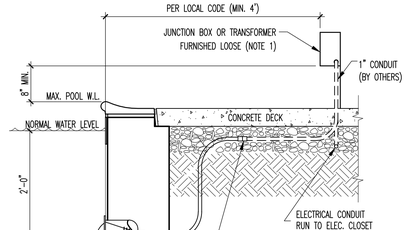
WATER REQUIREMENT:
STRAIGHT JET NOZZLE: 12 GPM @ 5' TDH

BODY MATERIAL: SCHEDULE 80 PVC

NOTE:
1. STRAIGHT NOZZLES TO BE USED IN BOTH BEACH WASH AND FLOOR BUBBLERS.

BEACH WASH NOZZLE DETAIL

SCALE: 3"=1'-0" H 5.0

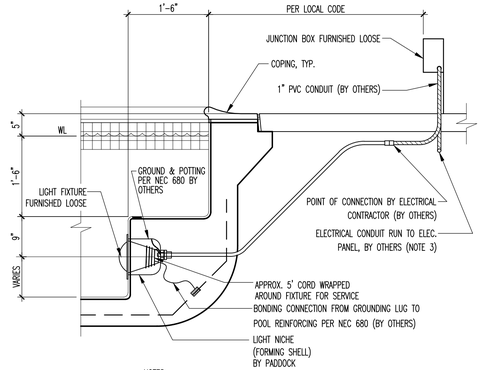


NOTES:
1. ELEVATED JUNCTION BOXES OR TRANSFORMERS TO BE LOCATED UNDER OR ADJACENT TO FIXED STRUCTURES SO AS NOT TO CONSTITUTE A TRIPPING HAZARD TO FOOT TRAFFIC.
2. TYPE OF CONDUIT AS APPROVED BY ELECTRICAL INSPECTION AGENCY HAVING JURISDICTION.
3. UNDERWATER LIGHT CONNECTION TO GFI PROTECTED CIRCUITS PER NEC 680.

PENTAIR LARGE PLASTIC NICHE MODEL #79206700 W/ 1" REAR HUB

UNDERWATER POOL LIGHT DETAIL

SCALE: 3/4"=1'-0" F 5.0

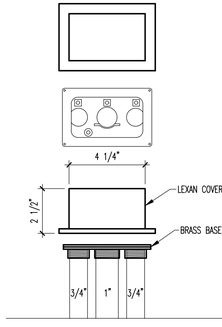


NOTES:
1. ELEVATED JUNCTION BOXES OR TRANSFORMERS TO BE LOCATED UNDER OR ADJACENT TO FIXED STRUCTURES SO AS NOT TO CONSTITUTE A TRIPPING HAZARD TO FOOT TRAFFIC.
2. TYPE OF CONDUIT AS APPROVED BY ELECTRICAL INSPECTION AGENCY HAVING JURISDICTION.
3. UNDERWATER LIGHT CONNECTION TO GFI PROTECTED CIRCUITS PER NEC 680-20.

PENTAIR LARGE PLASTIC NICHE MODEL #79206700 W/ 1" REAR HUB

UNDERWATER BENCH POOL LIGHT DETAIL

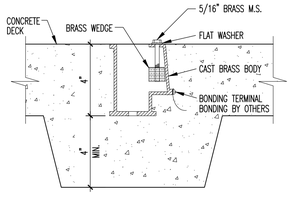
SCALE: 3/4"=1'-0" F 5.0



PENTAIR MODEL #78310700

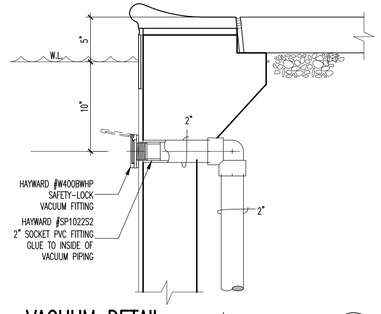
JUNCTION BOX DETAIL

SCALE: 3"=1'-0" M 5.0



WEDGE ANCHOR DETAIL

SCALE: 3"=1'-0" L 5.0



VACUUM DETAIL W/SAFETY LOCK

SCALE: 1 1/2"=1'-0" J 5.0

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 027540 3-8-2024 DANIEL E. CHICK

252-655-1050 ATLANTIC COAST ENGINEERING, PLLC
5306 MULHOLLAND DR. JACKSONVILLE SC 28405
FIRM # 1353070 CERT # P-1281 STRUCTURAL

ATHLETIC FACILITY OBX CURRITUCK SOUND

WATERLILY ROAD
COINJOCK, NC 27923

DETAILS #1

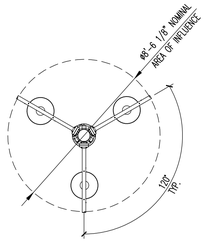
DRAWN BY: TL

PADDOCK SWIMMING POOL COMPANY
15120-C SOUTHLAWN LANE ROCKVILLE, MD. 20850
PHONE: (301)-424-0790 EMAIL: info@paddockpools.com

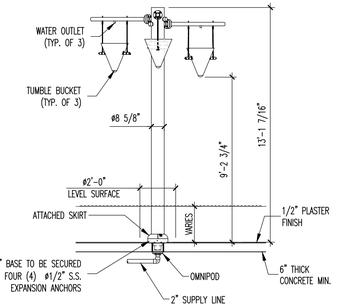
REVISIONS:	SCALE: AS NOTED	JOB NO.: –
	DATE: 2/13/24	SHT. NO.: 5.0

PLOTTED BY: TL

C:\temp\AcPublish_5044\AthleticFacility_OBX_NC-MAS.dwg 02-20-2024@12:28pm



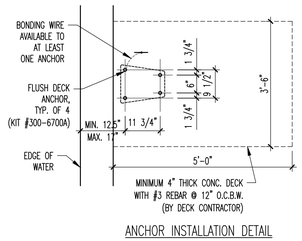
PLAN VIEW



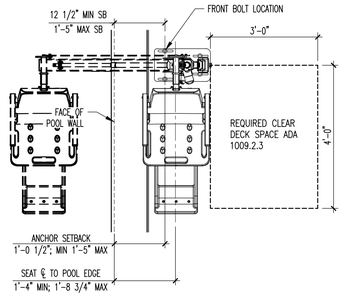
NOTES:
1. VALVE MUST BE INSTALLED ON SUPPLY LINE TO REGULATE FLOW.
2. 15' TDH REQUIRED AT BASE OF FEATURE.
3. CALCULATED FLOW RATE 60 GPM (NOMINAL). (OPERATION RANGE 29.6 TO 63.6 GPM)
4. AREA OF INFLUENCE VARIES WITH FLOW.

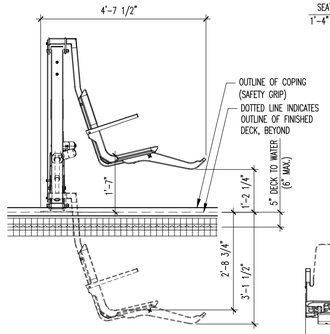
RAINDROP PRODUCTS #TBKT-008-OM

TUMBLE BUCKET — OMNIPOD 3 BUCKETS
SCALE: 1/4"=1'-0" — A 5.1

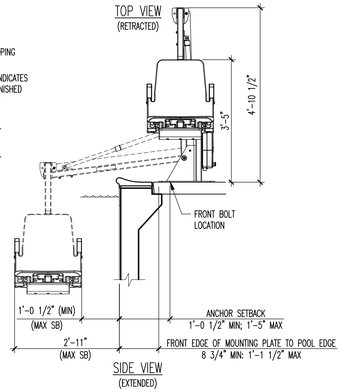


ANCHOR INSTALLATION DETAIL



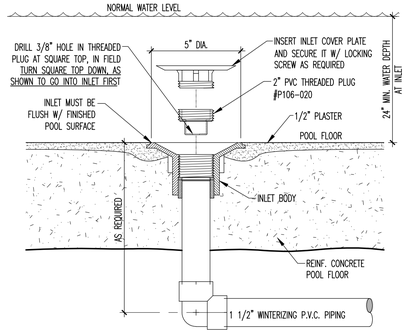


FRONT VIEW (RETRACTED)



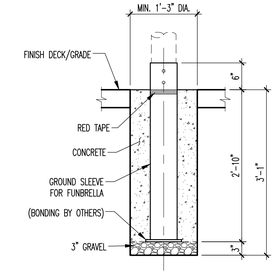
SIDE VIEW (EXTENDED)

HANDICAP LIFT – S.R. SMITH ML2
SCALE: 1/2"=1'-0" — B 5.1

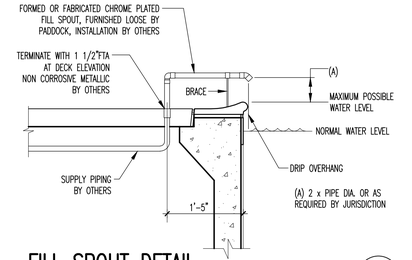


NOTE: FOR PIPE SIZE REFER TO POOL PIPING DRAWING.

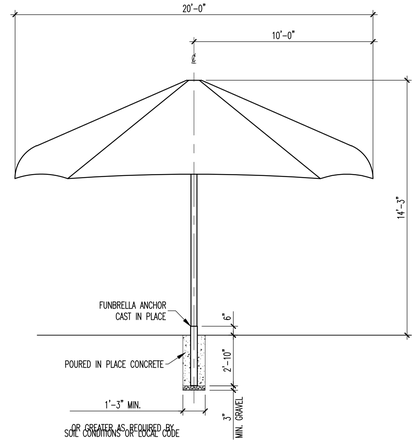
WINTERIZING FLOOR INLET DETAIL
SCALE: N.T.S. — C 5.1



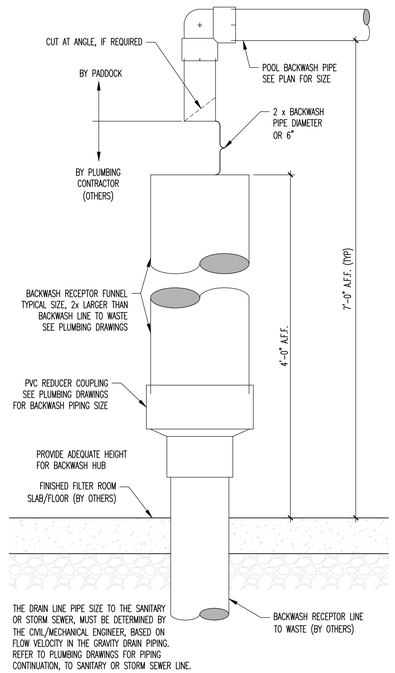
FUNBRELLA ANCHOR DETAIL
SCALE: 3/4"=1'-0" — E 5.1



FILL SPOUT DETAIL
SCALE: 3/4"=1'-0" — D 5.1



FUNBRELLA INSTALLATION DETAIL
SCALE: 1/4"=1'-0" — F 5.1



BACKWASH RECEPTOR
SCALE: N.T.S. — G 5.1

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 027540 3-8-2024 RICHARD COOK

252-655-1050 RICO POWE ENGINEERING, PLLC
5306 MULHOLLAND DR RUNNEMEDE SC 29485
FIRM # 13533070 CERT # P-1281 STRUCTURAL

ATHLETIC FACILITY OBX
CURRITUCK SOUND

WATERLILY ROAD
COINJOCK, NC 27923

DETAILS #2

DRAWN BY: TL

PADDOCK SWIMMING POOL COMPANY
15120-C SOUTHLAWN LANE ROCKVILLE, MD. 20850
PHONE: (301)-424-0790 EMAIL: info@paddockpools.com

REVISIONS:	SCALE: AS NOTED	JOB NO.: –
	DATE: 2/13/24	SHT. NO.: 5.1

SITE PLAN NARRATIVE

Athletic Facility – 1559 Waterlily Rd
Coinjock, Currituck County, North Carolina

Prepared for:
85 AND SUNNY, LLC
9919 Stephen Decatur Hwy
Ocean City, MD 21842

Prepared by:
Quible & Associates, P.C.
PO Drawer 870
Kitty Hawk, NC 27949

March 27, 2024
P16099

Table of Contents

Appendices

Overview

The subject property is located at 1559 Waterlily Road, Corolla, NC in Currituck County. The applicants propose to construct an athletic facility consisting of a swimming pool, associated decking, 285 sf mechanical building serving the pool, 464 sf bathhouse, pickleball court, basketball court, fitness walking/jogging paths, and associated utilities and required infrastructure as shown on the attached plan set. The property is zoned Single Family Mainland (SFM) and athletic facilities are permitted use.

Access

The athletic facility would be accessed from Waterlily Road.

A loading space is not required per Currituck County UDO, Section 5.1.8. for this use. However, if needed, the open drive aisle opposite the swimming pool entrance could be utilized for loading (and designated, if required) as it would not block any through traffic along the adjacent drive aisle and parking.

Alternative Parking Plan

The proposed improvements include a swimming pool, associated decking and bathhouse, pickleball court, basketball court, and fitness walking/jogging paths. As the proposed use varies and is not currently covered within the Uniform Development Ordinance (Table 5.1.3.C, Minimum Off-Street Parking Standards) an alternative parking plan is proposed per Section 5.1.3.E. The following summary, calculations, and supporting information will demonstrate the parameters of the proposed parking design, which will illustrate adequate parking for the facility.

The facility will operate seven days a week from dawn to dusk year-round. The relevant maximum occupant capacity used to calculate parking needs for each use is 221 swimmers, 16 players, and 10 employees at peak shift. As previously proposed and based on maximum occupancy numbers assuming one parking space for every 3 swimmers, 73.6 parking spaces would be needed for the pool element. Please note this ratio is significantly higher than listed in the attached trip generation study prepared for a pool facility prepared by Hexagon Transportation in 2009 [**Appendix E**]. This study determined 4 parking spaces should be required for 1,000 SF of pool area and is consistent with the provided ITE rates for fitness facilities. At 12,056 sf of pool area (including surrounding decking), this standard rate would only require 48 parking spaces. The applicant has kept with the one parking space for 3 swimmers as this has ratio has been found in similar County Ordinances throughout the United States.

As for the other elements of the recreational facility, 1 parking space per ball player and 1 parking space per employee has been assumed. These numbers were conservatively chosen based on the Currituck County UDO that requires 1 parking space per 2 employees for tour operators. Using these figures, a total of 100 parking spaces are needed and 104 spaces are provided, including 2 ADA spaces. The applicant owns and operates similar facilities and based on their understanding of parking needs and the proposed use, 100 parking spaces would be adequate.

Lighting

Use of the facility is during daytime only, and as such no parking lot or other exterior lighting is proposed other than security lighting being provided at the buildings as required. The site lighting plan consists of the provided full cut off lighting fixture submittals for the required

security lighting. A lighting plan has been provided to show anticipated lumens throughout the site.

Soils

The USDA NRCS Soil Survey lists the soil in the vicinity of the stormwater infiltration and wet retention basins as described below. Geotechnical reports for the site indicate the seasonal high-water table is approximately at elevation 3.7. A copy of on-site soils analysis are provided within **Appendix A**. On-site soils analysis was performed by Hardin-Kight Associates, Inc.

- BoA – Bojac Loamy Sand
  This soil typically has 0 to 3 percent slopes. Bojac Loamy Sand typically has a very low runoff rate and is well drained. This soil is categorized in Hydrologic Soil Group: A

Stormwater Management Plan

Per 15A NCAC 02H.1005 (a) (3) (B) High Density Coastal Development is required to meet particular criteria. This development is proposed to have 0.82% of impervious coverage within the existing parcel. The proposed wet detention basin onsite is designed in accordance with NCDEQ Requirements and is designed to store, control, and treat the stormwater runoff from all surfaces, within its drainage area, generated by the one and one-half inch of rainfall event. The majority of stormwater runoff from the project area is proposed to be directed to the proposed wet detention basin designed in accordance with NCDEQ requirements. The basin has been designed to capture runoff into a forebay prior to the main pond which stores, controls, and treats stormwater runoff from the 5-year post-development storm event to the 2-year pre-development wooded condition. In addition to these requirements, a minimum of 50’ vegetative buffer from surface waters is provided.

Collection

Runoff from the proposed access drive will be directed into a flowline in the center of the parking area. This flowline coincides with the stormwater network, which collects and discharges into the wet retention basin forebay. Runoff from the southern portion of the proposed swimming pool deck and pickle ball court area will be collected into a grass swale which collects in an infiltration basin and overflows into the stormwater network. The stormwater network continues to flow toward the forebay The parking and vehicular area is to also be collected and conveyed to the proposed wet detention basin via sheet flow whereby the parking area drains to the centralized flowline prior to being directed into the forebay.

Treatment

The proposed system will offer several methods of treatment prior to release.

Runoff from concrete deck areas will sheet flow over vegetation (grass) and be directed to the infiltration basin The grassed areas will provide the first level of treatment for these areas and will provide filtration of small particulates and nutrients prior to entering the stormwater network and subsequently the wet detention basin.

The primary treatment of runoff from the site will be provided within a wet detention basin, but the pool decking and courts will have preliminary treatment through the infiltration basin. The infiltration basin provides treatment above and beyond what is required for State/Local

permitting. The bottom and side slopes of the infiltration basin will be grassed according to general seeding specifications. The runoff will undergo filtration of fine particulates and pollutants by the vegetation within the infiltration basin. The filtration by vegetation is considered the primary method of treatment. A secondary method of treatment is also available when the stormwater runoff infiltrates into the subsurface. The soil particles between the basin bottom and the season high water table (SHWT) will offer additional filtration and/or absorption of particulates and pollutants prior to reaching the water table. The seasonal high-water table (SHWT) is at an elevation of 3.7'. Separation of greater than 18" between the seasonal high-water table and the bottom of the basin at 6' elevation has been provided.

The remainder of the project area will be managed by the proposed wet retention basin as primary treatment. The wet basin is designed with a forebay which initially receives incoming runoff from multiple directions to allow for energy dissipation and initial settling prior to entering the main pond. The entire wet retention basin is designed to have vegetative shelving and a depth adequate to allow for some sedimentation. The overall depth of the basin allows for water quality treatment but also doubles as fire protection storage volume for a proposed dry hydrant.

Storage

The proposed infiltration basin has been sized to allow for a local requirement of routing the 5-year post developed condition back to the 2-year predeveloped wooded condition. This storage capacity is in excess of the State required 1.5-inch storage of impervious surface runoff. The temporary storage capacity has been calculated between the bottom of the basin and the overflow spillway invert elevation.

The majority of the stormwater storage volume is provided within the proposed wet retention basin. The temporary storage volume is computed within the basin above the main pool elevation of 3.7'. The County stormwater storage volume requirement based upon routing the 5-year post-development rainfall event to the 2-year pre-development wooded condition is approximately 36,340 CF. The proposed wet retention basin provided storage volume is approximately 78,452 CF, equivalent to the 8.8-inch rainfall event.

The season high water table (SHWT) is at an elevation of 3.7' ft., per the attached soils analysis in **Appendix B**.

Disposal

The wet detention basin's primary mode of disposal for elevations between 3.5 and 8.0 ft. is through a 3" drawdown orifice on a structure located inside of the main pool. The invert elevation of the 3" drawdown orifice is proposed to be at an elevation of 3.5 ft. Elevations between 8.0 and 10.0 feet will utilize a grate with on top of this structure as well as the 3" drawdown orifice. The invert elevation of the grate is proposed to be 8.0 feet in elevation. The total drawdown time from an elevation of 8.0 ft. is 4.05 days. Supporting calculations for the drawdown time and storage of the proposed wet pond have been provided within **Appendix B**.

Calculations for the proposed wet detention basin have been provided in **Appendix B**. Currituck County calculations have been provided to demonstrate that the 5-yr post developed storms have been routed to 2-yr pre-developed wooded conditions. The wet detention basin design allows for storage above the permanent pool up to elevation 8'. The basin would discharge into the downstream ditch starting at elevation 8'. A summary of the storage available within the

basin is available in **Appendix B**.

Utilities

A water meter and associated service are proposed to connect to the existing PVC waterline at Waterlily Road. A backflow prevention device will be provided behind the new water meter. The building will be designed for the Needed Fire Flow to be within the Available Fire Flow. There is no nearby existing fire hydrant, so the applicants propose to rely on a dry hydrant that will draw from a strainer located within the deep portion of the new wet retention basin for fire flow. A copy of the Needed Fire Flow based upon ISO Method is included within the appendix demonstrating a NFF of 750 gpm. Based upon a standard 2-hour duration, the required fire storage volume is 91,546 gallons or 12,238 CF. Accounting for the 50-year drought conditions, 2' of freeboard over the top of the available fire storage volume, and keeping the strainer off of the bottom of the basin, the provided fire storage volume (or Available Fire Flow) is greater than the required 12,031 CF. Please see **Appendix C** for calculations.

Changes to the existing waterline within the right-of-way are not proposed, therefore, a permit to construct from NC DEQ Public Water Supply is not required. The proposed water service shall be installed per Currituck County standard water specifications and details. An RPZ would be installed in the location as shown on the attached Site Plan.

The proposed on-site wastewater system is designed to handle 1,340 gallons per day. This anticipated amount is based on 104 parking spaces at 10 GPM, 8 employees at 25 GPD each, and 2 courts at 50 GPD each. An onsite evaluation has been requested of Albemarle Regional Health Services to determine acceptable site characteristics.

Buffers and Site Vegetation

The Currituck County UDO defines a heritage tree as any live oak greater than 12" diameter at breast height and trees or other tree species greater than 24" diameter at breast height, with the exception of pine trees. Heritage trees are shown within the enclosed site plan. It should be noted that five heritage trees are to be removed with a total mitigation ACI of 68". The majority of the impacted trees do not qualify as heritage trees. Onsite mitigation is to include installation of ten (10) additional 2" ACI Live Oaks and twenty-four (24) 2" ACI Trees within the site.

Adjacent Property Zoning

Surrounding properties are zoned Single Family Mainland. Zoning buffer yards are not required as adjacent properties are also zoned SFM. A 50' farmland buffer is required adjacent to the James L. Markert property. The buffer includes maintaining 12 live oaks and 13 cedars as previously installed and permitted. 16 live oaks and 15 cedars are proposed to be installed within this buffer yard.

Site landscaping and vehicular landscaping are provided on the plans, along with refuse area screening adjacent to the proposed dumpster enclosure. The site landscaping is proposed to be met using existing heritage trees for canopy requirements and two (2) shrubs are proposed adjacent to the proposed buildings.

The vehicular landscape buffer around the proposed parking lot will be met using existing landscaping. A 2" ACI canopy tree will be provided within 60' of all parking spaces.

Appendix A – State Stormwater Calculations

Project Name: Athletic Facility
Quible Project Number: P16099
Date: 1/31/2024

Currituck County Stormwater Calculations *(In Lieu of Forms SW-002 and SW-003)*

Step 1: Drainage Area — 342,330.00 square feet; **7.86** acres

Step 2: Determine Runoff Coefficient

C = 0.20

Step 3: Determine Time of Concentration

Sheet Flow

$Tc_1 = \frac{0.42(nL)^{0.8}}{P^{0.5}S^{0.4}}$

n =	0.1 (woods)	Elev. Start =	15.62
L =	300 feet	Elev. End =	11
P =	4 inch		
S =	0.010 ft/ft		
Tc_1 =	**20.1** mins		

Shallow Concentrated Flow

L =	379	feet
S =	0.01	ft/ft
	unpaved	
$V_{unpaved}$ =	134.64	fpm
Tc2=	**2.8**	mins

Channel Flow

(n/a)

Tc = Tc1 + Tc2

Tc = **22.9** mins

Step 4: Determine Peak Rainfall Intensity

Time of Concentration

T (yrs)	5 mins	10 mins	15 mins	30 mins	1 hr	2 hr	3 hr
2	6.06	4.84	4.06	2.8	1.76	1.03	0.731
5	6.82	5.46	4.6	3.27	2.1	1.26	0.897
10	7.82	6.26	5.28	3.82	2.49	1.51	1.09

I = **3.29** in/hr

Interpolation Formula =

$$y_2 = \frac{(x_2 - x_1)(y_3 - y_1)}{(x_3 - x_1)} + y_1$$

X		Y
1	12	4.06
2	22.95	
3	30	2.80

y_2 = **3.29**

Step 5: Determine the 2-year Pre-Development peak discharge, Q

Q = CIA

Q 2= **5.18** cfs

Step 6: Determine the weighted runoff coefficient, Cw for post-development

			C - Value
Impervious Area =	99,090.55	sq.ft.	0.95
Open Area =	243,239.45	sq.ft.	0.25
Total =	**342,330.00**	sq.ft.	
Cw =	**0.45**		

Step 7: Determine Time of Concentration for post-development

Sheet Flow

$Tc_1 = \frac{0.42(nL)^{0.8}}{P^{0.5}S^{0.4}}$

n =	0.011	(smooth pavement)
L =	300.00	feet
P =	5	inch *(From NOAA Rainfall Depth Data)*
S =	0.010	ft/ft
Tc_1 =	**3.1**	mins

Shallow Concentrated Flow

Tc_2 = L =	10.00	ft
	paved	
Slope =	0.024	ft/ft

Paved Areas $V = 1302(S^{0.53})$

Unpaved Areas $V = 972(S^{0.53})$

V =	**180.4**	ft/min
Tc_2 =	**0.1**	mins

Channel Flow

(n/a)

Tc = Tc1 + Tc2

Tc = **5.0** mins **5 min minimum Tc (worst case scenario)*

Step 8: Determine Peak Rainfall Intensity

	Time of Concentration						
T (yrs)	5 mins	10 mins	15 mins	30 mins	1 hr	2 hr	3 hr
2	6.06	4.84	4.06	2.8	1.76	1.03	0.731
5	6.82	5.46	4.6	3.27	2.1	1.26	0.897
10	7.82	6.26	5.28	3.82	2.49	1.51	1.09

I5= **6.82**

Step 9: Determine the 5-year Post-Development peak discharge, Q

Q = CIA

Q5 = **24.26** cfs

Step 10: Determine the weighted curve number, CN, for the post-development conditions.

Hydrologic Soil Type: A *(From NRCS Soils Report)*

Land Use	CN	Area
Impervious Area	98	99,090.55
Open Space	49	243,239.45
	Total =	**342,330.00**
	CN_W =	**63.18**

Step 11: Determine the 5-year post-development runoff depth, Q

$Q = \frac{(P-0.2S)^2}{(P+0.8S)}$ $S = \frac{1000}{CN} - 10$

P =	5	in
S =	**5.83**	
Q =	**1.52**	in

Step 12: Determine the Runoff Volume, V_r

$V_r = \frac{Q}{12} * A$

Q =	1.52	in
A =	7.86	acres
V_r =	**1.00**	ac-ft

Step 13: Determine the Required Storage Volume, V_s

$V_s = 1613.33 * V_r * (1 - \frac{Q_{2\_pre}}{Q_{10\_post}})$

V_r =	1.00	ac-ft
$Q_{2\text{-pre}}$ =	5.18	cfs
$Q_{5\text{-post}}$ =	24.26	cfs
V_s =	**1264.89**	CY
	34,152.09	CF

P16099
Athletic Facility - Currituck, NC
2/16/2024

Athletic Facility Wet Detention Basin
NCDEQ Stormwater Calculations

Drainage Area Calculations

	Combined Drainage Area	
	(sq.ft.)	(acre)
Drainage Area =	342,330.00	7.86
Open Space	243,239.45	5.58
Roadway/Parking =	96,549.55	2.22
Building=	958.00	0.02
Gravel =	1,583.00	0.04
Impervious =	99,090.55	2.27

Runoff generated by 1.5" Rainfall Event (NCDEQ Simplified Method)

Ia = Impervious Percentage = Impervious Area/Drainage Area
Rv= Runoff Coefficient, 0.05+0.9Ia
Rd= Rain fall depth (1.5 in.)
V= Runoff Volume, 3630*Rd*Rv*A

	Area 1
Ia =	29.0%
Rv=	0.31
Rd (in.)=	1.5
A (ac.) =	7.86
V (cf.)=	**13308**

Total Storage Required by NCDEQ = 13,400.00 cf
Total Storage Required by Currituck County = 36,400.00 cf

Permanent pool Storage Provided In Wet Detention Basin 1

Elev	Area (sf)	Avg area (sf)	Volume (cf)	Cum Vol. (cf)
-3	6509			0
		7725.5	23177	
0	8942			23177
		10289.5	30869	
3	11637			54046
		12360.5	6180	
3.5	13084			60226

Total Storage (cf.) Provided in Basin 1: **60226**

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Athletic Facility - Currituck, NC
2/16/2024

Above Permanent Pool Storage Provided In Wet Detention Basin 1

Elev	Area (sf)	Avg area (sf)	Volume (cf)	Cum Vol. (cf)
3.5	13084			0
		13839.5	6920	
4	14595			6920
		15383.5	15384	
5	16172			22304
		18716	56148	
8	21260			78452

Total Storage (cf.) Provided in Basin 1: **78452** 8.79

Volume in Forebay for Basin 1

Elev	Area (sf)	Avg area (sf)	Volume (cf)	Cum Vol. (cf)
1	214			0
		387	774	
3	560			774
		737.5	738	
4	915			1512
		1392.5	2785	
6	1870			4297
		2166	2166	
7	2462			6463
		2787.5	2788	
8	3113			9251

Total Storage (cf.) Provided in Basin 1: **9251**

15%

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3/22/2024

A_{bot_shelf} =	5615	sf
A_{perm_pool} =	13084	sf
A_{bot_pond} =	6509	sf
V_{perm_pool} =	60226	cf
Depth =	6.5	

Option 1	Dav =	4.6	feet	**SA/DA =**	1.52
				DA =	342,330.00
				Req'd SA =	5,186.30
Option 2	Dav =	7.4	feet		

Wet Detention Basin Supplement Calculations

Orifice Draw Down Calculations Basin 1

Q = CA(2gH)^0.5

H=Driving Head = D/3 =	1.50	ft.
C = orific coefficient =	0.6	
Try orifice diameter =	3	in
A = Area = 3.14*(d^2)/4 =	0.049	sf
Q = CA(2gH)^0.5 =	0.289	cfs

Required Storage Volume = 13400.0 cf

Drawdown = Storage Volume / Q = **3.14 days**

Appendix B – On-site Soils Report and Memo

MEMORANDUM

Quible & Associates, P.C. SINCE 1959
ENGINEERING * CONSULTING * PLANNING
ENVIRONMENTAL SCIENCES * SURVEYING
Phone: (252) 261-3300
Fax: (252) 261-1260
Web: www.quible.com

NORTH CAROLINA LICENSED SEAL 1954 GEOLOGIST WARREN DENNIS EADUS

12/12/23

To: **Nadeen Dashti,**

From: Warren D. Eadus, P.G.

Date: December 12, 2023

Re: **50 Year Drought Water Level Determination-Athletic Facility 1555 Waterlily Road**

A review of available historic groundwater data (available from USGS: http://www.ncwater.org/GWMS/openlayers/ol.php?entrance=home_page&menulist=bl#map=11/-8447016.91/4317555.92/0 and USGS Scientific Investigations Report 2005-5053 (Weaver, J.C., The Drought of 1998-2002 in North Carolina-Precipitation and hydrologic conditions: US Geological Survey Scientific Investigations Report 2005-5053, 88p.) indicates that groundwater levels (and surface water levels which correspond with some lag depending on soils) in the eastern or outer coastal plain dropped between +/-2.0 feet to nearly 2.85 feet in response to the drought conditions that were experienced between 1998-2002. This period is recognized as being a "50 Year Drought".

Therefore, and conservatively, we can use the 2.85 feet fluctuation as a "50 Year Drought" elevation benchmark for groundwater and any surficial aquifer pond that would be constructed (construction of wet pond proposed with permanent pool elevation) to provide a permanent water source. Given our history and the normal water level conditions observed in the past in a nearby pond (OBX KOA property) and based on a recent geotechnical analysis with soil borings and recorded depths to water (normal conditions permanent pool elevation) it is our opinion that the normal groundwater table elevation at the Site is 3.7 feet (NAVD 88). This places the "50 Year Drought" elevation at 0.85 feet NAVD 88.

This is a conservative approach that is derived from the best data available including the USGS Paper cited above, along with queries of the US Drought Monitor, USACE Antecedent Precipitation Tool, NC Drought.gov websites and a working knowledge of the Site and groundwater conditions in the region.

There is limited relevant data that we can draw upon for this analysis and a conservative approach has been taken. We also reviewed a composite of wetlands elevations around the Site, elevations of the adjacent Currituck Sound, biological markers of water level elevations in the Sound (Normal Water Level) and adjacent marsh.

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Currituck County, North Carolina

1555 Waterlily Road Athletic Facility

December 14, 2023

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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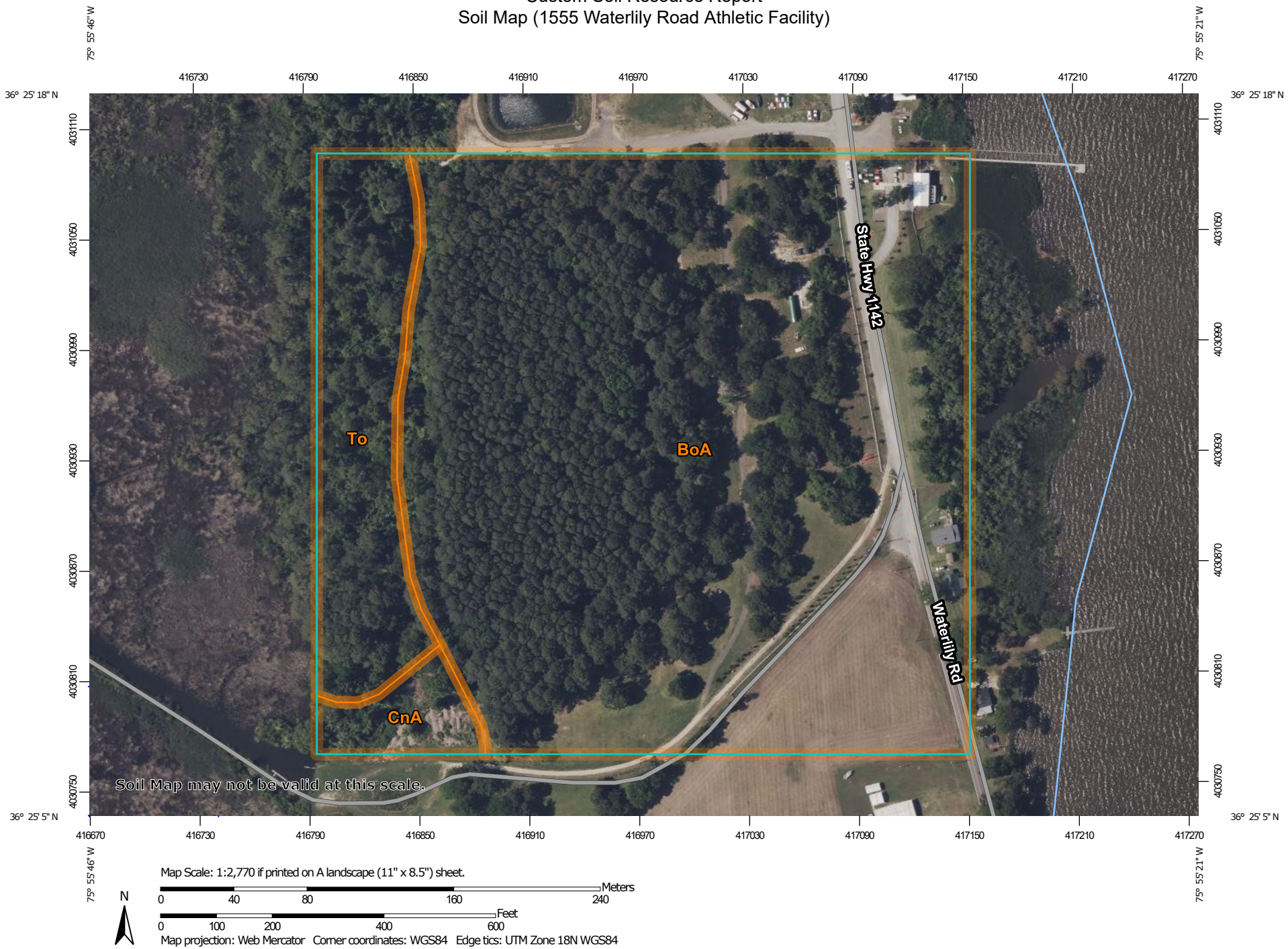
Contents

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map (1555 Waterlily Road Athletic Facility)



Map Scale: 1:2,770 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 40 80 160 240

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Currituck County, North Carolina
Survey Area Data: Version 23, Sep 13, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 18, 2022—May 31, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend (1555 Waterlily Road Athletic Facility)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BoA	Bojac loamy sand, 0 to 3 percent slopes	24.3	84.2%
CnA	Conetoe loamy sand, 0 to 3 percent slopes	0.8	2.9%
To	Tomotley fine sandy loam	3.7	12.9%
Totals for Area of Interest		**28.9**	**100.0%**

Map Unit Descriptions (1555 Waterlily Road Athletic Facility)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Currituck County, North Carolina

BoA—Bojac loamy sand, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 3rnb
Elevation: 0 to 30 feet
Mean annual precipitation: 42 to 58 inches
Mean annual air temperature: 61 to 64 degrees F
Frost-free period: 190 to 270 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Bojac and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bojac

Setting

Landform: Ridges on marine terraces
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loamy and sandy fluviomarine deposits

Typical profile

Ap - 0 to 8 inches: loamy fine sand
Bt - 8 to 47 inches: fine sandy loam
C - 47 to 85 inches: loamy fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: About 48 to 72 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 6.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A
Ecological site: F153BY030NC - Dry Loamy Rises and Flats
Hydric soil rating: No

Minor Components

Conetoe

Percent of map unit: 4 percent
Landform: Ridges on stream terraces, ridges on marine terraces
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Crest

Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F153BY030NC - Dry Loamy Rises and Flats
Hydric soil rating: No

Seabrook

Percent of map unit: 3 percent
Landform: Depressions on marine terraces
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: F153BY020NC - Moist Sands
Hydric soil rating: No

Munden

Percent of map unit: 3 percent
Landform: Marine terraces
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: F153BY040NC - Moist Loamy Rises and Flats
Hydric soil rating: No

CnA—Conetoe loamy sand, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 3rnf
Elevation: 0 to 20 feet
Mean annual precipitation: 42 to 58 inches
Mean annual air temperature: 61 to 64 degrees F
Frost-free period: 190 to 270 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Conetoe and similar soils: 85 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Conetoe

Setting

Landform: Ridges on stream terraces, ridges on marine terraces
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Sandy and loamy fluviomarine deposits and/or marine deposits

Typical profile

Ap - 0 to 8 inches: loamy sand
E - 8 to 22 inches: loamy sand
Bt - 22 to 40 inches: sandy loam
BC - 40 to 46 inches: loamy sand

C - 46 to 80 inches: sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A
Ecological site: F153AY030NC - Dry Loamy Rises and Flats, F153BY030NC - Dry Loamy Rises and Flats
Hydric soil rating: No

Minor Components

Leon

Percent of map unit: 5 percent
Landform: Flats on marine terraces
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: F153BY070NC - Wet Spodosol Flats and Depressions, F153AY070NC - Wet Spodosol Flats and Depressions
Hydric soil rating: Yes

To—Tomotley fine sandy loam

Map Unit Setting

National map unit symbol: 3rp4
Elevation: 0 to 30 feet
Mean annual precipitation: 42 to 58 inches
Mean annual air temperature: 61 to 64 degrees F
Frost-free period: 190 to 270 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Tomotley, drained, and similar soils: 75 percent
Tomotley, undrained, and similar soils: 10 percent
Minor components: 7 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Tomotley, Drained

Setting

Landform: Flats on marine terraces, depressions on stream terraces
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy and loamy fluviomarine deposits and/or marine deposits

Typical profile

Ap - 0 to 7 inches: fine sandy loam
Btg1 - 7 to 12 inches: fine sandy loam
Btg2 - 12 to 42 inches: sandy clay loam
BCg - 42 to 50 inches: sandy loam
Cg - 50 to 80 inches: loamy sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B/D
Ecological site: F153BY060NC - Wet Loamy Flats and Depressions, F153AY090NC - Flooded Mineral Soil Floodplains and Terraces
Hydric soil rating: Yes

Description of Tomotley, Undrained

Setting

Landform: Depressions on stream terraces, flats on marine terraces
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy and loamy fluviomarine deposits and/or marine deposits

Typical profile

A - 0 to 7 inches: fine sandy loam
Btg1 - 7 to 12 inches: fine sandy loam
Btg2 - 12 to 42 inches: sandy clay loam
BCg - 42 to 50 inches: sandy loam
Cg - 50 to 80 inches: loamy sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)

Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: B/D
Ecological site: F153BY060NC - Wet Loamy Flats and Depressions, F153AY090NC - Flooded Mineral Soil Floodplains and Terraces
Hydric soil rating: Yes

Minor Components

Nimmo, undrained

Percent of map unit: 3 percent
Landform: Depressions on marine terraces, flats on marine terraces
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: F153BY060NC - Wet Loamy Flats and Depressions, F153AY060NC - Wet Loamy Flats and Depressions
Hydric soil rating: Yes

Arapahoe, undrained

Percent of map unit: 3 percent
Landform: Flats, depressions
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: F153BY060NC - Wet Loamy Flats and Depressions, F153AY090NC - Flooded Mineral Soil Floodplains and Terraces
Hydric soil rating: Yes

Dragston, undrained

Percent of map unit: 1 percent
Landform: Marine terraces
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F153AY040NC - Moist Loamy Rises and Flats, F153BY040NC - Moist Loamy Rises and Flats
Hydric soil rating: No

Appendix C – Fire Flow Calculations

AFF Calculations

Total Storage Required for NFF = 12,031.00 cf

Storage Provided In Pond

Elev	Area (sf)	Avg area (sf)	Volume (cf)	Cum Vol. (cf)
-0.5	8518			0
		9065.5	12238	
0.85	9613			12238

Total Permanent Pool Storage (cf.) Provided in Basin 1: **12,238.00**

Gallons **91,546.60**

gpm for 2 hours 762.9

Operations
ISO Fire Flow Worksheet
Sample

Needed Fire Flow Work Sheet (ISO formulas)			NFF = (Ci)(Oi)(Xi+P C=18F(Ai)^0.5
Address:	**Waterlily Road, Currituck County, NC**		
Project Name:	**Athletic Facility**	Occupancy Type:	**C-2**
Construction Type	**Typical wood construction**	Number of Stories	**1**

STEP 1 Take the area, which is 100% sq. ft. of the first floor plus the following percentage of the total area of the other floors.

First Floor	750	Sq. Ft. @ 100%

Buildings classified as construction classes I-IV: 25% of all other floors
Buildings classified as construction classes V-VI: 50% of all other floors

Total other floors	0
Total Area All	750

STEP 2 Take the Square Root of the Area: 27

Now mulitiply by "F", which is the coefficient for the construction type:

F = Coefficient related to the class of construction as determined by using the construction type found in SBCCI

Construction Type	Class	F Value
Frame	VI	1.5
Joist Masonry	VI	1
Non-combustible	IV	0.8
Heavy Timber	III	0.8
Modified fire resistance	II	0.6
Fire resistive	I	0.6

F Value Selected	1.5	
Square Root of the Area x F	41	
Square Root of the Area x F x 18	739	= C Value

STEP 3 Round off the C value to the nearest 250 GPM (round up or down)

C values ranging from	Use
500 to 625	500
626 to 875	750
876 to 1125	1000
1126 to 1375	1250
1376 to 1625	1500
1626 to 1875	1750
1876 to 2125	2000
2126 to 2375	2250
2376 to 2625	2500
2626 to 2876	2750
2876 to 3125	3000
3126 to 3375	3250
Rounded to the nearest 250 GPM	750

ISO Fire Flow Worksheet
Sample Continued

STEP 4	Multiply result of rounded off GPM by the Occupancy Factor (Oi)	**Occupancy Factor**
	Noncombustible (C-1) = No active fuel loads such as storage of asbestos, clay, glass, marble, stone, or metal products.	**0.75**
	Limited - Combustible (C-2) = Limited fuel loads such as airports, apartments, art studios, auto repair, auto showroom, aviaries, banks, barber shops, beauty shops, churches, clubs, cold storage warehouses, day care center, educational occupancies, gas stations, green houses, health clubs, hospitals, jails, libraries, medical labs, motels, museums, nursing homes, offices, radio stations, recreation centers, and rooming houses.	**0.85**
	Combustible (C-3) = Moderate fuel loads such as auto part stores, auto repair training center, bakery, bookstores, bowling centers, casinos, commercial laundries, contractor equipment storage, dry cleaners with no flammable fluids, leather processing, municipal storage buildings, nursery sales stores, pavilions, pet shops, photographic supplies, printers, restaurants, shoe repair, supermarkets, theaters, vacant buildings, and most wholesale & retail sales ocuppancies.	**1.0**
	Free-Burning (C-4) = Active fuel loads such as aircraft hangers, cabinet making, combustible metals, dry cleaners using flammable fluids, feed stores, furniture stores, kennels, lumber, packaging and crating, paper products manufacturing, petroleum bulk distribution centers, tire manufacturers, tire recapping or retreading, wax products, and wood working shops.	**1.15**
	Rapid-Burning (C-5) = Contents that burn with great intensity, spontaneously ignite, have flammable or explosive vapors, or large quantities of dust such as ammunition, feed mills, fireworks, flammable compressed gases, flammable liquids, flour mills, highly flammable solids, matches, mattress factories, nitrocellulose-based products, rag storage, upholstery shops, & waste paper storage.	**1.25**
	Occupancy Factor Selected 0.85	
	Rounded GPM x Oi 637.5	

ISO Fire Flow Worksheet
Sample Continued

STEP 5 Now consider the exposure factor (Xi) - (Separation between buildings)

Distance (feet to the exposed building)	Length-Height	Frame (Xi)
0-10	80-100	0.126
	101-200	0.14
	201-300	0.14
11-20	80-100	.098
	101-200	0.126
	201-300	0.14
21-30	80-100	0.056
	101-200	0.098
	201-300	0.126
31-40	80-100	0.028
	101-200	0.07
	201-300	0.098

Distance Selected	100
Xi (from table)	0

**Length-Height Ratio is less than 80'*

Multiply GPM from step 4 by (1+Xi)
637.5 x (1+0)

Fire flow required	638

STEP 6 **Approved Fire Sprinkler System Credit** 0%

Take fire flow from step 5 and multiply by sprinkler credit of 0.25

~~159~~

Now subtract sprinkler credit from fire flow in step 5

~~**Fire Flow Required**~~	~~**478.125**~~	**N/A**

STEP 7 Take value from step 6 and
Round to nearest 250 gpm under 2,500 gpm
Round to nearest 500 gpm over 2,500 gpm

Needed Fire Flow	**750**

Notice: Fire hydrant distribution requirements are based on distance from fire hydrant to the structure. The following restrictions for fire flow apply:

Distance from hydrant to structure	Max Flow Credit (gpm per hydrant)
Within 300 feet	1,000
301 to 600 feet	670
601 to 1,000 feet	250

per LDC 6.4.4 Fire hydrant & flow requirements: Central water systems shall be designed and constructed for an economic service life of not less than 20 years and in accordance with the fire protection requirements of the Insurance Services Office.

Appendix D – Drainage Area Maps

NOTES

1. OWNER/APPLICANT: 85' AND SUNNY, LLC
   9919 STEPHEN DECATUR HIGHWAY
   OCEAN CITY, MD 21842

2. ENGINEER: QUIBLE & ASSOCIATES, P.C.
   P.O. DRAWER 870
   KITTY HAWK, NC
   TEL: (252) 491-8147

3. PROPERTY INFO: 1559 WATERLILY ROAD
   PID: 0079000004A0000
   PIN: 9908-14-7146

4. EXISTING PARCEL AREA = 13,457,862 SF / 308.95 AC (AREAS BY COORDINATE METHOD.)
   PROPOSED RECONFIGURED PARCEL AREA = 13,527,666 SF / 310.55 AC (AREAS BY COORDINATE METHOD.)
   PARCEL AREA (NOT INCLUDING WETLANDS) = 1,010,334.70 SF / 23.19 AC

5. SCOPE OF WORK: THIS PLAN PROPOSES THE ADDITION OF AN ATHLETIC FACILITY BUILDING, ASSOCIATED PARKING, DRIVE, AND RELATED SITE IMPROVEMENTS.

6. RECORDED REFERENCE: DB 1449 PG 396, PB R, PG 288;

7. ZONE: SINGLE FAMILY MAINLAND (SFM)

8. BOUNDARY INFORMATION BASED ON QUIBLE & ASSOCIATES FIELD SURVEY DATED 01/22/18 - 02/07/18 AND ALTA SURVEY DATED 6/27/18.

9. FLOOD ZONE: "AE", "SHADED X" AND "X" WITHIN THE PROPERTY BOUNDARY (SUBJECT TO CHANGE BY F.E.M.A.) FIRM PANEL 3720990800K. DATED 12/21/18. SHOWN PER COUNTY GIS.

LEGEND

- EXISTING CONCRETE
- WETLANDS BOUNDARY
- EX. OVERHEAD UTILITY LINE
- EX. FENCE
- EX. DITCH
- EX. CONCRETE MONUMENT
- EX. IRON ROD, EIR

EX DRAINAGE BASIN
TOTAL AREA = 342,330 SQ.FT. (7.86 AC.)
"WOODED CONDITION" PER COUNTY UDO = 342,330 SQ.FT. (7.86 AC.)
IMPERVIOUS = 0 SQ.FT. (0 AC)

TIME OF CONCENTRATION PATH

CURVE TABLE				
CURVE#	LENGTH	RADIUS	CHD LENGTH	CHD BEARING
C2	42.35'	25.00'	37.46'	N 35° 56' 53" E

N 12° 34' 41" W 59.14'
N 84° 28' 26" E 95.21'
S 43° 28' 39" W 454.99'
50' FARMLAND BUFFER
PROPOSED 30' EASEMENT TO THE BENEFIT OF LOT A2 & B
EX. REPAIR LPP SYSTEM HAS TO BE RELOCATED (920 GPD CAPACITY)
EX. REPAIR LPP SYSTEM HAS TO BE RELOCATED (2160 GPD CAPACITY)
5/8"ER (0.2'BS) N 905,571.44 sFT E 2,404,585.681 sFT
1/2"ER (0.2'BS)
WF90
WF91

Quible & Associates, P.C.
NC License#: C-0208 SINCE 1959
ENGINEERING** * CONSULTING * PLANNING
ENVIRONMENTAL SCIENCES * SURVEYING**
SURVEYING NOT OFFERED AT BLACK MTN. OFFICE
8466 Caratoke Hwy, Powells Point, NC 27966
Phone: (252) 491-8147
90 Church St., Ste. B, Black Mountain, NC 28711
Phone: (828) 357-5149
administrator@quible.com

PRELIMINARY NOT FOR CONSTRUCTION

EXHIBIT A - PRE DEV. DRAINAGE AREA MAP

ATHLETIC FACILITY
1559 WATERLILY ROAD

COINJOCK — CURRITUCK COUNTY — NORTH CAROLINA

GRAPHIC SCALE IN FEET 1"=80'
0 80' 160'

PROJECT	DRAWN BY	CHECKED BY	DATE
P16099.1	CMS	MWS	02/21/24

NOTES

1. OWNER/APPLICANT: 85' AND SUNNY, LLC
   9919 STEPHEN DECATUR HIGHWAY
   OCEAN CITY, MD 21842

2. ENGINEER: QUIBLE & ASSOCIATES, P.C.
   P.O. DRAWER 870
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   PARCEL AREA (NOT INCLUDING WETLANDS) = 1,010,334.70 SF / 23.19 AC

5. SCOPE OF WORK: THIS PLAN PROPOSES THE ADDITION OF AN ATHLETIC FACILITY BUILDING, ASSOCIATED PARKING, DRIVE, AND RELATED SITE IMPROVEMENTS.

6. RECORDED REFERENCE: DB 1449 PG 396, PB R, PG 288;

7. ZONE: SINGLE FAMILY MAINLAND (SFM)

8. BOUNDARY INFORMATION BASED ON QUIBLE & ASSOCIATES FIELD SURVEY DATED 01/22/18 - 02/07/18 AND ALTA SURVEY DATED 6/27/18.

9. FLOOD ZONE: "AE", "SHADED X" AND "X" WITHIN THE PROPERTY BOUNDARY (SUBJECT TO CHANGE BY F.E.M.A.) FIRM PANEL 3720990800K. DATED 12/21/18. SHOWN PER COUNTY GIS.

CURVE TABLE				
CURVE#	LENGTH	RADIUS	CHD LENGTH	CHD BEARING
C2	42.35'	25.00'	37.46'	N 35° 56' 53" E

LEGEND

- EXISTING CONCRETE
- WETLANDS BOUNDARY
- EX. CONCRETE MONUMENT
- EX. IRON ROD, EIR
- PROPOSED CONTOUR
- PROPOSED SPOT GRADE (TOP OF ASPHALT UNLESS OTHERWISE NOTED)
- PROPOSED FLOW DIRECTION AND SLOPE

PROPOSED DRAINAGE BASIN
TOTAL AREA = 342,330 SQ.FT. (7.86 AC.)
OPEN SPACE = 243,239 SQ.FT. (5.58 AC.)
IMPERVIOUS = 99,090 SQ.FT. (2.27 AC)

N 12° 34' 41" W 59.14'
N 84° 28' 26" E 95.21'
S 43° 28' 39" W 396.05'
S 43° 28' 39" W O'EIR 454.99'
50' FARMLAND BUFFER
35.0' 154.0' 154.0' 35.0'

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Phone: (828) 357-5149
administrator@quible.com

PRELIMINARY NOT FOR CONSTRUCTION

EXHIBIT B - POST DEV. DRAINAGE AREA MAP

ATHLETIC FACILITY
1559 WATERLILY ROAD

COINJOCK — CURRITUCK COUNTY — NORTH CAROLINA

GRAPHIC SCALE IN FEET 1"=80'
0 80' 160'

PROJECT	DRAWN BY	CHECKED BY	DATE
P16099.1	CMS	MWS	02/21/24

Appendix E – Parking Data

Health/Fitness Club
(492)

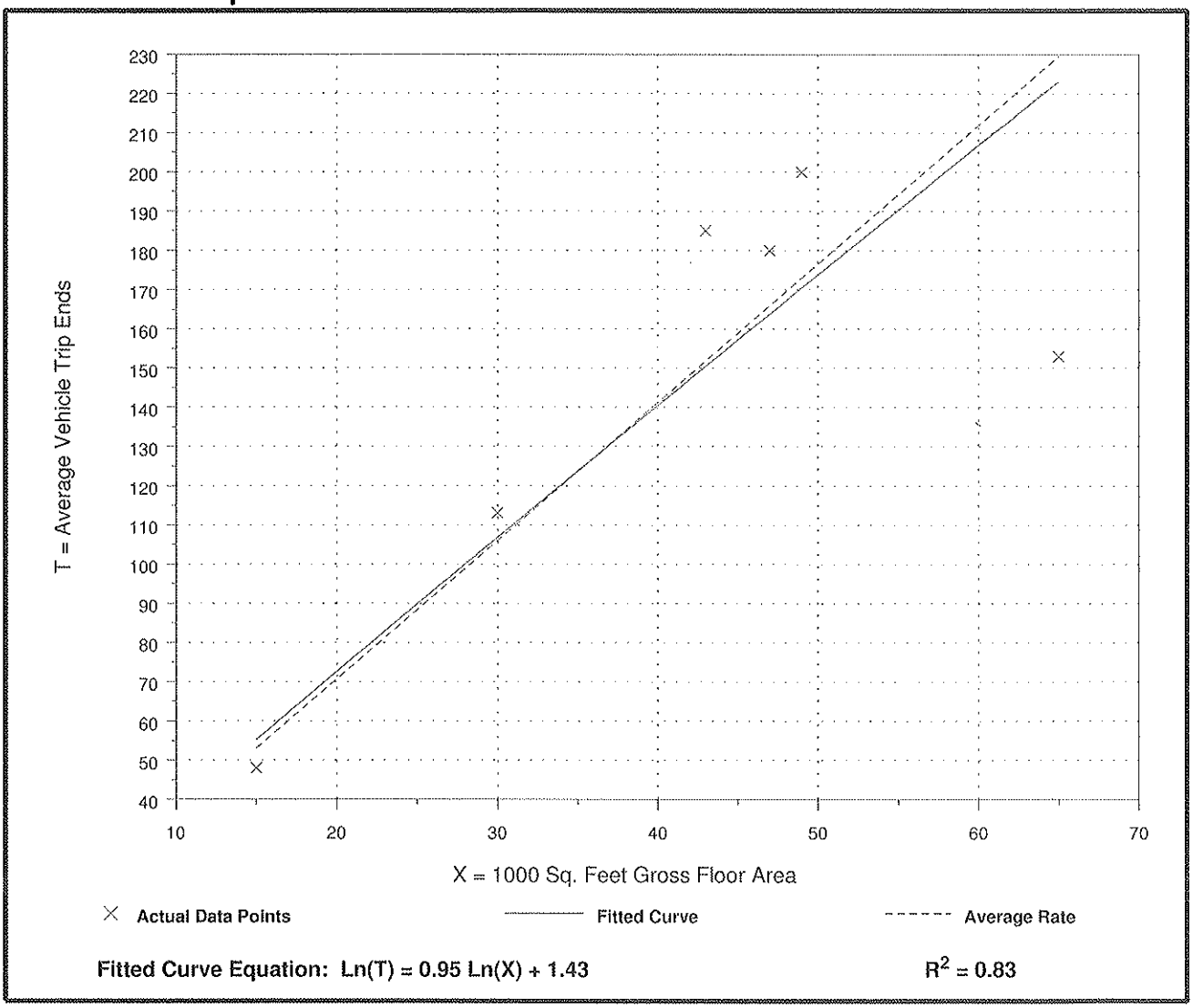
Average Vehicle Trip Ends vs: **1000 Sq. Feet Gross Floor Area**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Number of Studies: 6
Average 1000 Sq. Feet GFA: 42
Directional Distribution: 57% entering, 43% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
3.53	2.35 - 4.30	2.00

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.95 Ln(X) + 1.43

R^2 = 0.83

HEXAGON TRANSPORTATION CONSULTANTS, INC.

MEMORANDUM

TO: Yorke Lee

FROM: Gary Black
Massimo Loporto

DATE: September 4, 2009

SUBJECT: ***Trip Generation and Parking Study for the Proposed Swim Center at 12230 Saratoga Sunnyvale Road in Saratoga, California***

Hexagon Transportation Consultants, Inc. has completed a trip generation and parking analysis for the proposed indoor swim center located at 12230 Saratoga Sunnyvale Road in Saratoga, California. The project proposes to convert the existing flower shop into a swim center with two indoor pools (48 x 40 feet and 48 x 75 feet, 5,520 total s.f.) for swimming lessons. The purpose of this analysis is to estimate the number of trips generated by the proposed project and to identify any parking deficiencies.

Published Surveys and Requirements

Published parking demand ratios and trip generation rates are not available for the proposed land use. Therefore, the evaluation of parking demand and trip generation is based upon data from surveys conducted by Hexagon in August, 2009.

Surveyed Parking Demand Ratio and Trip Generation Rate

Hexagon surveyed two (2) indoor swim centers in the cities of San Jose and Fremont, to develop trip generation rates and parking demand ratios (see Tables 1 and 2). Each of the sites were surveyed on a typical weekday from 4:00-6:00 PM, which represents the peak hours for parking demand and trip generation. It should be noted that the swim center in San Jose is located within a shopping center with other land uses. Data collected was isolated to that associated with the swim center.

DACA Swim Center

DACA Swim Center is located at 1080 South De Anza Boulevard in San Jose, California, and has two (2) 20 x 60 feet (2,400 s.f.) swimming pools and has a total building size of 8,712 s.f.. DACA swim center offers year-round swimming lessons, lap swimming, and competitive teams for youths. The indoor center on De Anza Boulevard focuses on swimming lessons for younger children. The pools are not large enough to serve older children or the swim team. DACA also leases the outdoor swimming pool at De Anza College for their older students and swim teams. The indoor site was surveyed on two different days. On the first day surveyed (August 12, 2009), the swim center had a maximum of 33 parked vehicles, The trip generation was observed to be 101 trips during the PM peak hour with a 50% inbound and 50% outbound split.

Only parking was evaluated on the second day surveyed (August 25, 2009). The swim center had a maximum of 35 parked vehicles.

Calphin Swim Center

Calphin Swim Center is located at 34075 Fremont Boulevard in Fremont, California, and has two (2) indoor swimming pools (30 x 45 feet and 60 x 75 feet, 5,850 total s.f.) and has a total building size of 10,500 s.f. Calphin swim center offers year-round swimming lessons for beginners to competitive swimmers of all ages. Because the Calphin center has a larger pool, it can accommodate all ages of students and the swim teams within the same facility. Only parking was evaluated at this location. On the day the site was surveyed (August 26, 2009), the swim center had a maximum of 44 parked vehicles.

Parking Demand Analysis

It is not clear what to use as an independent variable when evaluating the swimming pool parking data (see Table 2). Hexagon calculated ratios based on building size, pool size, and number of pools. The ratio based on building size had the least variability. The average ratio was found to be 4.0 spaces per 1,000 square feet. It was initially thought that a ratio based on pool size would be useful. However, the two surveyed sites varied markedly on this statistic. The reason for the difference is thought to be the configuration of the pools: the DACA pools are smaller and cater to younger children, so more children can participate simultaneously for a given pool size.

Hexagon believes it would be most accurate to base the parking ratio on the building size, using a parking ratio of 4.0 spaces per 1,000 square feet. The proposed project site has 43 parking spaces. This calculates to an allowable building size of 10,750 square feet. The existing building that the project would occupy is larger than 10,750 square feet. Therefore, Hexagon recommends that the building be reduced in size with the project. Reducing the building size also could make room for additional parking spaces.

Another comparison could be made based on the pool size, using the Calphin center as a standard. The Calphin center had a parking demand of 7.5 spaces per square foot of pool size. Applying this ratio to the project, which is proposing 5,580 square feet of pools, yields a parking demand estimate of 41 spaces.

Trip Generation Analysis

The trip generation rate at the DACA swim center was calculated to be 11.59 PM peak hour trips per 1,000 s.f. of building space with a 50% inbound and 50% outbound split.

Based on the surveyed rates, the project would generate 126 gross PM peak-hour trips (63 inbound trips and 63 outbound trips), assuming a size of 10,750 square feet. Traffic generated by the existing flower shop on the site was obtained via driveway counts. The count indicated that the existing flower shop generates a total of 8 PM peak-hour trips (4 inbound trips and 4 outbound trips). The trips associated with the flower shop were subtracted from the gross project trips to calculate the net project trips. This procedure indicates that the proposed project would generate 118 net new PM peak-hour trips (59 inbound trips and 59 outbound trips). The trip generation estimates for the proposed project are shown in Table 4.

Conclusion

Parking for the proposed project, 43 spaces, would be adequate assuming the building was no larger than 10,750 square feet. The existing building should be reduced to this size. Such a reduction also could create room for additional parking spaces. The proposed project would generate 118 net new PM peak hour vehicle trips.

Table 1
Trip Generation Survey Summary

Location	Name	Surveyed Date	Size	Split		PM Peak Hour			
				In	Out	In	Out	Total	Rate /a/
1080 South De Anza Blvd., San Jose	DACA Swim Center	Wed, 8/12/2009	8,712 s.f.	50%	50%	50	51	101	11.59

Note:
/a/ Rate per 1,000 square feet of building size.

Table 2
Parking Survey Summary

Location	Name	Survey Date	Sizes /a/ Building Size	Pool Size	Number of Pools	Max. # of Cars Parked /b/	Ratios Demand/Building Size (ksf)	Demand/Pool Size (ksf)	Demand/Number of Pools
1080 S. De Anza Blvd., San Jose	DACA Swim Center	Wed., 8/19/2009	8,712 s.f.	2,400 s.f.	2	33	3.8	13.8	16.5
1080 S. De Anza Blvd., San Jose	DACA Swim Center	Tues., 8/25/2009	8,712 s.f.	2,400 s.f.	2	35	4.0	14.6	17.5
34075 Fremont Blvd., Fremont	Calphin Swim Center	Wed., 8/26/09	10,500 s.f.	5,850 s.f.	2	44	4.2	7.5	22
						Average:	*4.0*	*12.0*	*18.7*

Notes:
/a/ Building size, pool size, and number of pools obtained from DACA and Calphin.
/b/ Based on Hexagon studies conducted in August 2009.

Table 3
Parking Demand Analysis for the Proposed Project

Parking Use	Size	Units	Rate /a/	Parking Spaces
Swim Center	10.75	ksf	4	43
Total Parking Spaces Required For Proposed Project				***43***
Proposed Parking Spaces Provided On-Site /c/				43
Number of Surplus Parking Spaces				***0***

Notes:
/a/ Rates expressed in terms of spaces per 1,000 s.f. of swimming pool.
/b/ Parking generation rates obtained from Hexagon surveys conducted in August 2009.
/c/ Number of proposed parking spaces provided on-site obtained from project applicant.

Table 4
Trip Generation Estimate for the Proposed Project

		PM Peak Hour			
Proposed Project	Size	Rate /a/, /b/	In	Out	Total
Swim Center	10.750 ksf	11.59	63	63	126
	Total Gross Trips		63	63	126
Trip Credits Associated with Exisitng Use On Site					
Flower Shop			-4	-4	-8
	Net New Project Trips		59	59	118

Notes:
/a/ Rates expressed in terms of trips per 1,000 s.f. of building size.
/b/ Trip generation rates obtained from Hexagon surveys conducted in August 2009.