# CERTIFIED OWNER'S LIST BLOCK 170

Ocean County

CERTIFIED LIST BLOCK 170 LOT 3.02

| Block / Lot / Qual | Property Location / Additional Lot / Additional Lot | Property Class | Owner / Address / City, State | Zip Code |
|---|---|---|---|---|
| 126 / 61 | 3 WHITE OAK LANE | 2 | VISCUSI, BETH L<br>3 WHITE OAK LN<br>LITTLE EGG HARBOR NJ | 08087 |
| 169 / 7.02 | 52 FIRE HOUSE DRIVE | 1 | ANDREWS, DAWN<br>3511 FALCON CT<br>MAYS LANDING NJ | 08330 |
| 169 / 7.07 | 11 EDWARDS COURT | 2 | HEITCHEW, TRAVIS & SARA<br>11 EDWARDS CT<br>LITTLE EGG HARBOR NJ | 08087 |
| 170 / 2 | 810 RAILROAD DRIVE | 2 | MANNO, JESSIE M<br>810 RAILROAD DR<br>LITTLE EGG HARBOR NJ | 08087 |
| 170 / 2.01 | 830 RAILROAD DRIVE | 15F | PARKERTOWN VOLUNTEER FIRE CO<br>830 RAILROAD DR<br>LITTLE EGG HARBOR NJ | 08087 |
| 170 / 5 | 160 PARKERTOWN DRIVE | 2 | BAKER, JOHN FRANK IV & KATHERINE<br>160 PARKERTOWN DR<br>LITTLE EGG HARBOR NJ | 08087 |
| 170 / 5.01 | 164 PARKERTOWN DRIVE | 2 | FUNKHOUSER, KENNETH<br>164 PARKERTOWN DR<br>LITTLE EGG HARBOR NJ | 08087 |
| 170 / 5.03 | 158 PARKERTOWN DRIVE | 2 | HILL, JOHN H & BAYHA-HILL,STEPHANIE<br>158 PARKERTOWN DR<br>LITTLE EGG HARBOR NJ | 08087 |
| 170 / 23 | 43 FIRE HOUSE DRIVE | 2 | PITALEFF, GEORGE & INNA<br>43 FIRE HOUSE DR<br>LITTLE EGG HARBOR NJ | 08087 |
| 170 / 27 | 69 FIRE HOUSE DRIVE | 2 | SUROVCIK, MARK<br>69 FIRE HOUSE DR<br>LITTLE EGG HARBOR NJ | 08087 |
| 170 / 28 | 63 FIRE HOUSE DRIVE | 2 | AVERILL, JASON W & HEATHER L<br>63 FIRE HOUSE DR<br>LITTLE EGG HARBOR NJ | 08087 |
| 171 / 1 | 195 PARKERTOWN DRIVE | 2 | LONG, ALLEN & MURPHY, STACY<br>195 PARKERTOWN DR<br>LITTLE EGG HARBOR NJ | 08087 |
| 171 / 11.01 | 163 PARKERTOWN DRIVE | 2 | OCONNOR, MICHAEL & SUZANNE<br>163 PARKERTOWN DR<br>LITTLE EGG HARBOR NJ | 08087 |

Ocean County

VARIANCE REPORT (200 Ft)

| Block / Lot / Qual | Property Location / Additional Lot / Additional Lot | Property Class | Owner / Address / City, State | Zip Code |
|---|---|---|---|---|
| 171 / 13 | 171 PARKERTOWN DRIVE | 2 | HILL, JOHN H & STEPHANIE<br>158 PARKERTOWN DR<br>LITTLE EGG HARBOR NJ | 08087 |
| 171 / 14 | 185 PARKERTOWN DRIVE | 2 | CUMMINGS, DANIEL C<br>185 PARKERTOWN DR<br>LITTLE EGG HARBOR NJ | 08087 |
| 190 / 1 | 855 RAILROAD DRIVE | 15D | CALVARY BAPTIST CHURCH<br>850 RAILROAD DR<br>LITTLE EGG HARBOR NJ | 08087 |
| 190 / 1.01 | 204 FROG POND ROAD | 2 | CUMMINGS, SEAN P<br>204 FROG POND RD<br>LITTLE EGG HARBOR NJ | 08087 |
| 190 / 2.01 | 835 RAILROAD DRIVE | 15D | CALVARY BAPTIST CHURCH<br>850 RAILROAD DR<br>LITTLE EGG HARBOR NJ | 08087 |
| 190 / 2.03 | 829 RAILROAD DRIVE | 15D | CALVARY BAPTIST CHURCH<br>850 RAILROAD DR<br>LITTLE EGG HARBOR NJ | 08087 |
| 190 / 2.10 | RAILROAD DRIVE | 15D | CALVARY BAPTIST CHURCH<br>850 RAILROAD DR<br>LITTLE EGG HARBOR NJ | 08087 |

# CERTIFIED OWNER'S LIST BLOCK 190

06-439

Ocean County

CERTIFIED LIST BLOCK 190 LOTS 1, 2.01, 2.03 & 2.09-2.12

1517 Little Egg Harbor Twp
03/24/26 Page: 1

| Block / Lot / Qual | Property Location / Additional Lot / Additional Lot | Property Class | Owner / Address / City, State | Zip Code |
|---|---|---|---|---|
| 124 / 19 | 217 FROG POND ROAD | 2 | STEELE, LINDA<br>217 FROG POND RD<br>LITTLE EGG HARBOR NJ | 08087 |
| 124 / 57 | 233 FROG POND ROAD | 2 | FLYNN, DENNIS F & ANNE F<br>233 FROG POND RD<br>LITTLE EGG HARBOR NJ | 08087 |
| 124 / 58 | 236 PARKERTOWN DRIVE | 2 | SLOAN, SHANE<br>236 PARKERTOWN DR<br>LITTLE EGG HARBOR NJ | 08087 |
| 124 / 58.01 | 239 FROG POND ROAD | 2 | PETLEY, WILLIAM<br>239 FROG POND RD<br>LITTLE EGG HARBOR NJ | 08087 |
| 124 / 59 | 245 FROG POND ROAD | 2 | PERAGINE, JOSEPH M & CHRISTINE M<br>245 FROG POND RD<br>LITTLE EGG HARBOR NJ | 08087 |
| 126 / 34 | 215 PARKERTOWN DRIVE | 2 | RODGERS, EDWARD C JR ET AL<br>215 PARKERTOWN DR<br>LITTLE EGG HARBOR NJ | 08087 |
| 126 / 61 | 3 WHITE OAK LANE | 2 | VISCUSI, BETH L<br>3 WHITE OAK LN<br>LITTLE EGG HARBOR NJ | 08087 |
| 126 / 62 | 7 WHITE OAK LANE | 2 | DELMERO, RANDOLPH & BARBARA W<br>7 WHITE OAK LN<br>LITTLE EGG HARBOR NJ | 08087 |
| 170 / 1 | 81 FIRE HOUSE DRIVE | 1 | SANTOS, JOSE G<br>513 GRAND ST<br>TRENTON NJ | 08610 |
| 170 / 2 | 810 RAILROAD DRIVE | 2 | MANNO, JESSIE M<br>810 RAILROAD DR<br>LITTLE EGG HARBOR NJ | 08087 |
| 170 / 2.01 | 830 RAILROAD DRIVE | 15F | PARKERTOWN VOLUNTEER FIRE CO<br>830 RAILROAD DR<br>LITTLE EGG HARBOR NJ | 08087 |
| 171 / 1 | 195 PARKERTOWN DRIVE | 2 | LONG, ALLEN & MURPHY, STACY<br>195 PARKERTOWN DR<br>LITTLE EGG HARBOR NJ | 08087 |
| 190 / 1.01 | 204 FROG POND ROAD | 2 | CUMMINGS, SEAN P<br>204 FROG POND RD<br>LITTLE EGG HARBOR NJ | 08087 |

Ocean County

VARIANCE REPORT (200 Ft)

1517 Little Egg Harbor Twp
03/24/26 Page: 2

| Block / Lot / Qual | Property Location / Additional Lot | Property Class | Owner / Address / City, State | Zip Code |
|---|---|---|---|---|
| 190 / 2 | 216 FROG POND ROAD | 2 | BATTISSON, FRANCIS A JOANNE N<br>216 FROG POND RD<br>LITTLE EGG HARBOR NJ | 08087 |
| 190 / 2.02 | 222 FROG POND ROAD | 2 | KLEINOW, JEFF & COLLEEN<br>222 FROG POND RD<br>LITTLE EGG HARBOR NJ | 08087 |
| 190 / 2.07 | 246 FROG POND ROAD | 2 | KNAUER, SETH & ARAUJO, AMANDA<br>246 FROG POND RD<br>LITTLE EGG HARBOR NJ | 08087 |
| 190 / 2.08 | 811 RAILROAD DRIVE | 2 | FISHMAN, JOSEPH<br>PO BOX 1183<br>TUCKERTON NJ | 08087 |
| 190 / 14 | 809 RAILROAD DRIVE | 2 | TYDE, AMANDA T<br>809 RAILROAD DR<br>LITTLE EGG HARBOR NJ | 08087 |
| 190 / 15 | 254 FROG POND ROAD | 2 | DAVIS, MATTHEW<br>254 FROG POND RD<br>LITTLE EGG HARBOR NJ | 08087 |

UTILITY CO. AND ADDRESS

Joseph B. Riding, Manager of R/E & R/W
Atlantic City Electric Company
5100 Harding Highway
Mays Landing, N.J. 08330

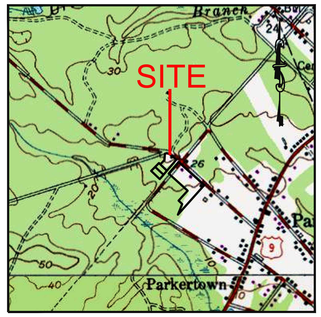
N.J. Natural Gas Co.
C/O Jen Grieco, Right-of-Way Rep.
1415 Wyckoff Road
P.O. Box 1464
Wall, N.J. 07719

CERTIFICATION

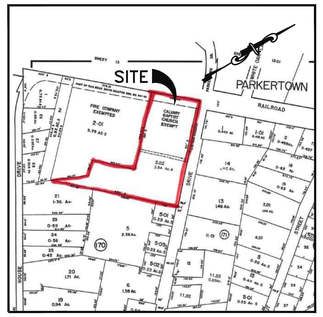
I, Mandi Johnson, Tax Assessor of the Township of Little Egg Harbor, do hereby certify the aforementioned names as the assessed property owners within 200' of the perimeter of Block 190 Lots 1, 2.01, 2.03, & 2.09 – 2.12 as indicated on the Little Egg Harbor Township Tax Map.

DATED: March 20, 2026

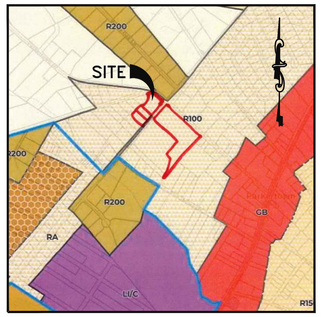
Mandi Johnson, CTA
Little Egg Harbor Tax Assessor




KEY MAP
N.T.S




TAX MAP
N.T.S




ZONING MAP
N.T.S



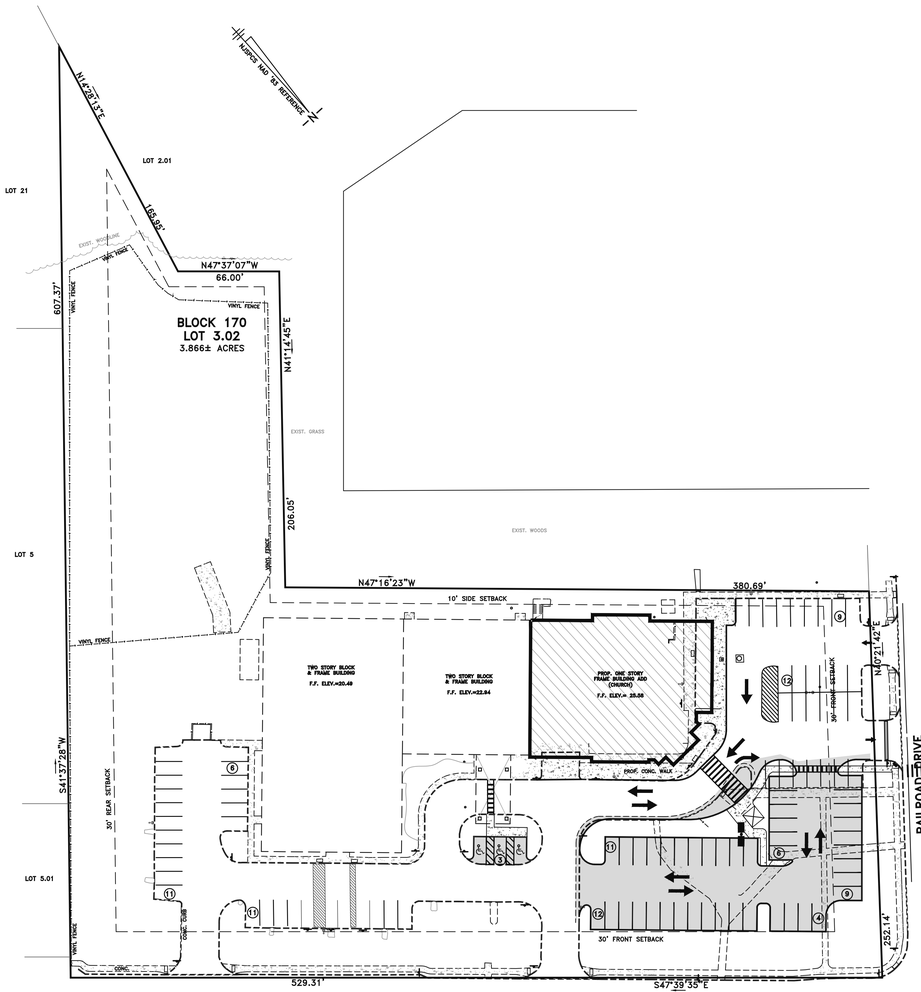

SOILS MAP
N.T.S

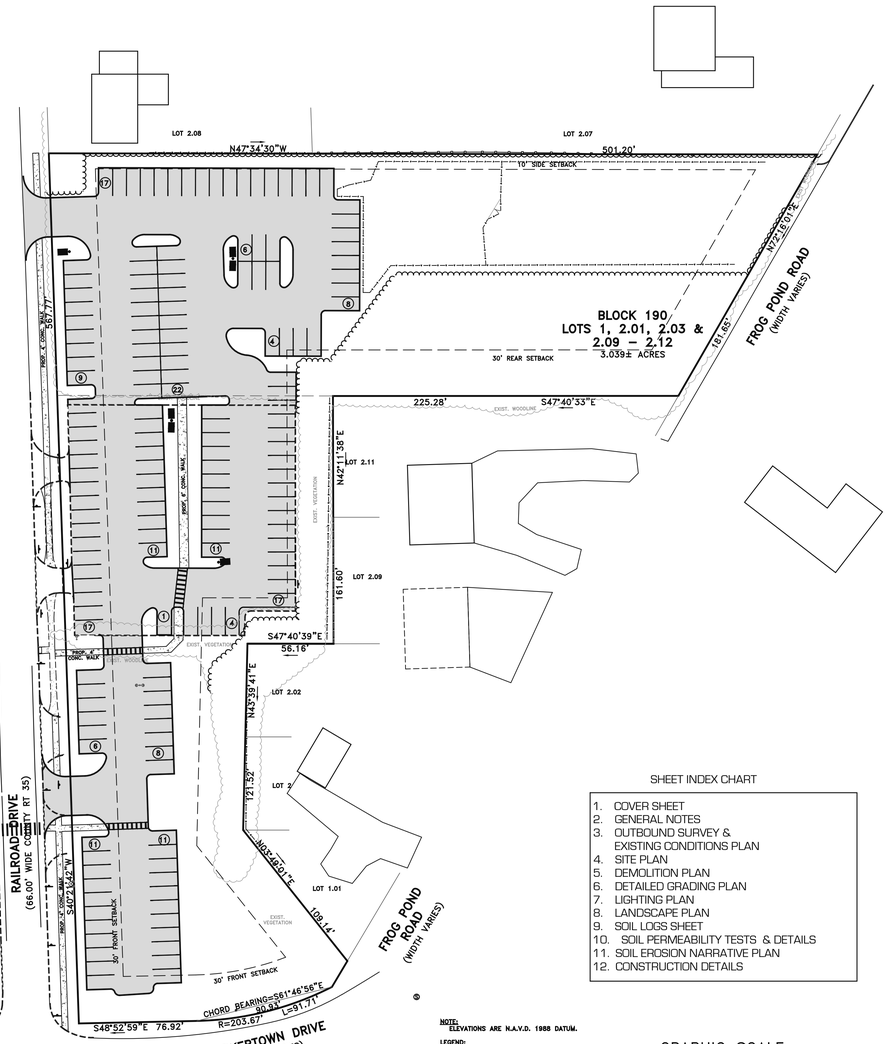
# MAJOR SITE PLAN FOR CAVALRY BAPTIST CHURCH

RAILROAD AVENUE, BLOCK 170 LOT 3.02 & BLOCK 190 LOTS 1, 2.01, 2.03, & 2.09-2.12
TOWNSHIP OF LITTLE EGG HARBOR, OCEAN COUNTY, NEW JERSEY
ZONE: 'R-100' RESIDENTIAL DISTRICT, TAX MAP SHEET 12

APPLICANT:
CAVALRY CHAPEL GATEWAY
850 RAILROAD DRIVE
LITTLE EGG HARBOR TOWNSHIP, 08087

OWNER:
MICHAEL DELLAPERUTE
850 RAILROAD DRIVE
LITTLE EGG HARBOR TOWNSHIP, NJ 08087




SHEET INDEX CHART


1. COVER SHEET
2. GENERAL NOTES
3. OUTBOUND SURVEY & EXISTING CONDITIONS PLAN
4. SITE PLAN
5. DEMOLITION PLAN
6. DETAILED GRADING PLAN
7. LIGHTING PLAN
8. LANDSCAPE PLAN
9. SOIL LOGS SHEET
10. SOIL PERMEABILITY TESTS & DETAILS
11. SOIL EROSION NARRATIVE PLAN
12. CONSTRUCTION DETAILS


NOTE:
ELEVATIONS ARE N.A.V.D. 1988 DATUM.

LEGEND:
EXISTING ELEVATION SPOT SHOT

GRAPHIC SCALE
0 10 20 40 80 160
1 INCH = 40 FT

PLANS FOR PERMIT PURPOSES ONLY


Schaeffer Nassar Scheidegg
CONSULTING ENGINEERS, LLC
Surveyors • Environmentalists • Planners
1425 Cantillon Boulevard • Mays Landing • New Jersey
Telephone: (609) 625 - 7400 • Fax: (609) 909 - 0253
Certificate of Authorization #24GA28103800


THIS PLAN IS WELL AND WAS DRAWN UNDER THE DIRECT SUPERVISION AND SEAL OF THE UNDERSIGNED ENGINEER IN ARTHED HEREIN.

ANDREW F. SCHAEFFER
PROFESSIONAL ENGINEER
NEW JERSEY LIC. NO. 32883
STATE
DATE

| REV # | DATE | REVISION DESCRIPTION | BY |
|---|---|---|---|
| - | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | - | - |

PROPOSED SITE PLAN FOR:
CAVALRY BAPTIST CHURCH
RAILROAD DRIVE, BLOCK 170, LOTS 3.02 & 4 & BLOCK 190, LOTS 1, 2.01, 2.03, 2.09-2.12
TOWNSHIP OF LITTLE EGG HARBOR, OCEAN COUNTY, NEW JERSEY
ZONE: R-100 RESIDENTIAL DISTRICT, TAX MAP SHEET 12

| | |
|---|---|
| DATE | 2-18-26 |
| SCALE | 1"=40' |
| BY | L.B. |
| CHECKED | A.F.S. |
| SHEET NO. | 1 |
| | 1 OF 12 |

FILE# 06-439

## GENERAL NOTES:

1. PROJECT PROPOSES AN ADDITION ONTO THE EXISTING CHURCH BUILDING AND REMOVAL OF THREE SEPARATE STRUCTURES LOCATED ON THE PROJECT SITE, WHICH CONSISTS OF BLOCK 170, LOTS 3, 3.01 & 4 & BLOCK 190, LOTS 1, 2.01, 2.03, & 2.09-2.12 OF THE OFFICIAL TAX MAP OF THE TOWNSHIP OF LITTLE EGG HARBOR.
2. AREA OF TRACT = BLOCK 170: 3.866± ACRES
   BLOCK 190: 3.039± ACRES
3. TRACT IS ZONED "R-100".
4. TOPOGRAPHY DATUM BASED UPON NAVD 1988.
5. THE PROJECT PROPOSES AN ADDITIONAL ONE-STORY CHURCH TO THE EXISTING CHURCH STRUCTURE. THE PROJECT ALSO PROPOSES TO ADD AND RE-STRIPE A TOTAL OF 257 PARKING SPACES FOR THE SITE. THIS WILL ACCOMMODATE THE 0.33 PARKING SPACES/SEAT REQUIREMENT (173 SPACES/525 SEATS), IN WHICH THIS PROJECT PROPOSES A TOTAL OF 524 SEATS AND PROVIDES 257 SPACES (2.04 SEATS/SPACE).
6. ALL EROSION CONTROL DESIGN AND CONSTRUCTION TO BE IN ACCORDANCE WITH STANDARDS SET FORTH BY THE OCEAN COUNTY SOIL CONSERVATION DISTRICT.
7. ALL STORM SEWER DESIGN AND CONSTRUCTION TO BE IN ACCORDANCE WITH STANDARDS SET FORTH BY THE LATEST NJDOT STANDARDS.
8. ALL ON-SITE CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28-DAYS (AASHTO 33-93).
9. TRASH REMOVAL TO BE PRIVATELY COLLECTED. TRASH STORAGE WILL BE LOCATED IN A TRASH ENCLOSURE AS SHOWN ON PLAN.
10. ELECTRIC, CABLE TV, AND TELEPHONE IS TO BE INSTALLED UNDERGROUND THROUGHOUT THE DEVELOPMENT IN ACCORDANCE WITH THE REGULATIONS OF THE LOCAL UTILITY COMPANIES AND THE TOWNSHIP OF LITTLE EGG HARBOR.
11. ALL LANDSCAPING SHALL BE PLANTED IN ACCORDANCE WITH THE TOWNSHIP OF LITTLE EGG HARBOR REQUIREMENTS. TO THE EXTENT POSSIBLE, ALL SPECIMEN TREES SHALL BE RETAINED. AT THE DISCRETION OF THE TOWNSHIP, SPECIMEN TREES MAY BE SUBSTITUTED FOR SHADE TREES.
12. AN INDIVIDUAL MUST BE DESIGNATED AS A SITE SUPERVISOR RESPONSIBLE FOR CONSTRUCTION AND SITE SAFETY 24 HOURS A DAY DURING THE COURSE OF SITE IMPROVEMENT.
13. ALL RUBBISH AND DEBRIS MUST BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS.
14. A REPRESENTATIVE FOR THE DESIGN ENGINEER'S AND THE TOWN ENGINEER'S OFFICE MUST BE PRESENT DURING THE STORM WATER RECHARGE BASIN EXCAVATION PROCESS TO ENSURE THE EXCAVATION OF ANY UNSUITABLE MATERIALS ENCOUNTERED WITHIN FIVE (5) FEET OF THE BOTTOM OF THE RECHARGE AREA AND REPLACEMENT WITH A K-5 MATERIAL.
15. UPON COMPLETION OF THE INSTALLATION OF THE STORM WATER MANAGEMENT FACILITIES AND PRIOR TO THE ISSUANCE OF ANY CERTIFICATE OF OCCUPANCY A DESIGN CERTIFICATION AND AS-BUILT PLAN OF THE STORM WATER RECHARGE SYSTEM MUST BE PROVIDED BY THE DESIGN ENGINEER INDICATING THE SYSTEM WAS CONSTRUCTED AS DESIGNED AND WILL FUNCTION AS REQUIRED BY REQUIRED REGULATIONS.

## SEWER & WATER REPORT:

SEWER:
THE EXISTING CHURCH BUILDING IS CURRENTLY CONNECTED TO PUBLIC SEWER VIA A GRINDER PUMP. THE PROPOSED ADDITION WILL BE HANDLED BY UPGRADING THE EXISTING GRINDER PUMP TO HANDLE THE ADDITIONAL FLOW. AN APPLICATION WILL HAS BEEN APPROVED BY THE LEH MUA FOR APPROVAL.

WATER:
THIS PROJECT PROPOSES TO UTILIZE AN ABOVE GROUND WATER TANK, LOCATION AND DETAILS HAVE BEEN INCLUDED ON THE PLANS.

## NATURAL RESOURCE INVENTORY:

a) SOIL TYPES:
PREDOMINATE SOIL TYPE IS DoA (DOWNER).

b) SOIL DEPTHS TO RESTRICTIVE LAYERS:
RESTRICTIVE LAYERS WILL BE REMOVED PER PLANS.

c) SOIL DEPTH TO BEDROCK:
BEDROCK NOT ENCOUNTERED.

d) PERMEABILITY OF THE SOILS BY LAYERS:
MOSTLY WELL DRAINED SOILS WITH MEASURED PERM RATES OF 12 IN/HR IN THE BASIN AREA ABOVE SEASONAL HIGH WATER.

e) HEIGHT OF SOIL WATER TABLE & TYPE OF WATER TABLE:
MINIMUM WATER TABLE WAS ENCOUNTERED DURING TEST PIT EXCAVATION AT 68".

f) FLOOD PLAIN SOIL (STATUS):
SITE NOT LOCATED IN FLOOD ZONE "A" OR "B".

g) LIMITATION OF FOUNDATIONS:
"SLIGHT" (USDA SOIL SURVEY FOR OCEAN COUNTY).

h) LIMITATION OF SEPTIC TANK ABSORPTION FIELD:
"SLIGHT" (USDA SOIL SURVEY FOR OCEAN COUNTY).

i) LIMITATION FOR LOCAL ROADS AND STREETS:
"SLIGHT" (USDA SOIL SURVEY FOR OCEAN COUNTY).

j) AGRICULTURAL CAPACITY CLASSIFICATIONS:
SOILS HAVE MEDIUM NATURAL FERTILITY AND LOW CONTENT OF ORGANIC MATTER.

k) EROSION HAZARD:
"SLIGHT" (USDA SOIL SURVEY FOR OCEAN COUNTY).

## CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL PROCURE ALL REQUIRED PERMITS, LICENSES AND INSPECTIONS, PAY ALL CHARGES AND FEES AND NOTICES FOR AND INCIDENTAL TO THE DUE AND LAWFUL PROSECUTION OF THE PROJECT.
2. ALL EXISTING UTILITY LOCATIONS ARE APPROXIMATE ONLY AND MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE AWARE OF THIS STATEMENT WHEN SUBMITTING BID PROPOSALS FOR CONSTRUCTION. BEFORE EXCAVATING THE PROJECT AREA THE CONTRACTOR SHALL VERIFY THE LOCATION OF ANY UNDERGROUND UTILITY. SHOULD ANY UNDERGROUND UTILITY INTERFERE WITH CONSTRUCTION THE ENGINEER SHALL BE NOTIFIED BEFORE PROCEEDING WITH WORK. THE CONTRACTOR SHALL NOTIFY ALL UNDERGROUND UTILITY COMPANIES 3-DAYS PRIOR TO COMMENCEMENT OF ANY EXCAVATION FOR ACCURATE FIELD LOCATIONS. FOR MARK OUT CALL 1-800-272-1000. IT SHALL BE THE RESPONSIBILITY OF THE OWNER/CONTRACTOR TO LOCATE ALL EXISTING UTILITIES, BOTH HORIZONTALLY AND VERTICALLY.
3. ALL REQUIRED TRAFFIC CONTROL DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
4. ALL STORM SEWER PIPING TO BE SMOOTH INTERIOR, CORRUGATED HIGH DENSITY POLYETHYLENE PIPE ADS N-12 AND/OR REINFORCED CONCRETE PIPE MEETING THE REQUIREMENTS OF AASHTO C33-93, C443-85A, C507-90 AND AASHTO D3350 AS INDICATED ON PLANS.
5. ALL INLETS SHALL BE NJDOT TYPE "B" UNLESS OTHERWISE NOTED ON THE PLAN. ALL TYPE "B" INLETS TO BE SUPPLIED WITH N-ECO TYPE 6" CAST IRON CURB PIECES AND THE GRATE ELEVATION IS TO BE SET AT PAVING FLOW LINE ELEVATION SO THAT THE TOP OF THE CURB PIECE IS AT THE SAME ELEVATION AS THE ADJOINING CURBING.
6. ALL STORM SEWER SHALL BE CONSTRUCTED WITH CLASS "C" BEDDING, WHEREVER THE TRENCH BOTTOM DOES NOT AFFORD SUFFICIENT BEARING STRENGTH TO SUSTAIN THE WEIGHT OF THE PIPE AND SUPERIMPOSED LOADS, THE TRENCH BOTTOM SHALL BE OVER EXCAVATED AND STABILIZED WITH A 12" MINIMUM THICK LAYER OF CRUSHED STONE.
7. ALL SANITARY SEWER MAINS AND LATERALS SHALL BE POLYVINYL CHLORIDE (PVC) SDR-35 AND SHALL CONFORM TO ASTM D3034.
8. ONE WYE CONNECTION PER PVC LATERAL WITH A VERTICAL INSPECTION RISER AND CLEANOUT WITH THREADED PLUG SHALL BE PROVIDED FOR EACH BUILDING CONNECTION.
9. PVC SANITARY SEWER LATERALS SHALL HAVE A MINIMUM COVER OF 4 FEET. LATERALS WITH LESS THAN 4 FEET OF COVER SHALL BE DIP CLASS 52 PIPING.
10. SANITARY MANHOLES SHALL BE PRECAST REINFORCED CONCRETE. ALL PRECAST MANHOLE SECTIONS SHALL CONFORM TO ASTM C-478.
11. SANITARY SEWER MANHOLES SHALL NOT BE INSTALLED IN STREET GUTTER LINES.
12. SANITARY SEWER MANHOLES SHALL BE PROTECTED FROM INFLOW DURING CONSTRUCTION.
13. PRIOR TO ANY CONSTRUCTION OF ON-SITE IMPROVEMENTS, A PRE CONSTRUCTION MEETING MUST BE SET UP BETWEEN THE APPLICANT, THE CONSTRUCTION CONTRACTOR, AND THE TOWN OFFICIALS TO REVIEW DETAILS, CONSTRUCTION SCHEDULES TESTING REQUIREMENTS, ETC.
14. A SEPARATE STORM WATER MAINTENANCE SCHEDULE, KNOWN AS THE "STORMWATER MANAGEMENT FACILITIES PLAN" INCLUDING ANY REVISIONS HEREAFTER, SHALL BE SUBMITTED TO THE PLANNING BOARD SOLICITOR FOR REVIEW PRIOR TO SAME BEING RECORDED ON THE DEED OF RECORD.
15. THE APPLICANT WILL COMPLY WITH ORDINANCE STANDARDS IN ACCORDANCE WITH ANY ON-SITE CLEARING.
16. ALL ROAD AND DRAINAGE CONSTRUCTION SHALL CONFORM WITH THE REQUIREMENTS OF THE NEW JERSEY DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 1989 AS AMENDED, EXCEPT AS OTHERWISE DETAILED OR SPECIFIED.
17. ALL EXISTING CONDITIONS AND DIMENSIONS TO BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
18. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS, CODES, SPECIFICATIONS, AND ALL APPLICABLE ORDINANCES.
19. CONTRACTOR TO BE RESPONSIBLE FOR MAINTENANCE, CLEANUP, AND SECURITY OF ALL FACILITIES DURING CONSTRUCTION. UPON ACCEPTANCE OF ALL SITE IMPROVEMENTS, OWNER SHALL ASSUME RESPONSIBILITY.
20. DURING DEMOLITION AND CONSTRUCTION, THE CONTRACTOR SHALL USE DUST AND NOISE CONTROL METHODS IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS.
21. ALL SEEPAGE PITS, WELLS, SEPTIC SYSTEMS TO BE ABANDONED ARE TO BE DONE SO PER APPLICABLE NJDEP REGULATIONS. THE LOCATION OF ANY ON-SITE SEPTIC SYSTEMS SHOULD BE VERIFIED IN RELATION TO THE LOCATIONS OF ALL PROPOSED ON-SITE STORMWATER RECHARGE FACILITIES.
22. THE APPLICANT WILL ENTER INTO AN AGREEMENT WITH THE TOWNSHIP OF LITTLE EGG HARBOR AND PROVIDE A TEN YEAR MAINTENANCE GUARANTEE AND MAINTENANCE AND INSPECTION PROGRAM GUARANTEE.
23. UNLESS OTHERWISE NOTED, ALL IMPROVEMENTS ARE TO BE CONSTRUCTED TO NJDOT SPECIFICATIONS AND DETAILS, LATEST EDITION AND AMENDMENTS.

## MODIFICATION REPORT (VARIANCES & WAIVERS):

(GRANTED AT PUBLIC HEARING)

VARIANCES
1. 15-4.10(B) - USE VARIANCE TO ALLOW THE EXPANSION OF A NON-CONFORMING USE.

WAIVERS
1. 15-15.4A(6) - WAIVER FROM PROVIDING EXISTING TOPOGRAPHY EXTENDING 100 FEET PAST THE BOUNDARY OF THE SITE.


Schaeffer Nassar Scheidegg
CONSULTING ENGINEERS, LLC
Surveyors • Environmentalists • Planners
1425 Cantillon Boulevard • Mays Landing • New Jersey
Telephone: (609) 625-7400 • Fax: (609) 909-0253
Certificate of Authorization #24GA28103800


THE PLAN IS VALID ONLY WHEN SIGNED AND SEALED BY THE PROFESSIONAL ENGINEER WHOSE SEAL IS AFFIXED HEREON. ANY ALTERATION OF THE PLAN IS DONE WITHOUT THE WRITTEN CONSENT OF THE SIGNING ENGINEER IS WITHOUT MERIT.

ANDREW F. SCHAEFFER
PROFESSIONAL ENGINEER
NEW JERSEY LIC. NO. 28883
2-18-26
DATE

# GENERAL NOTES SHEET FOR:
# CAVALRY BAPTIST CHURCH

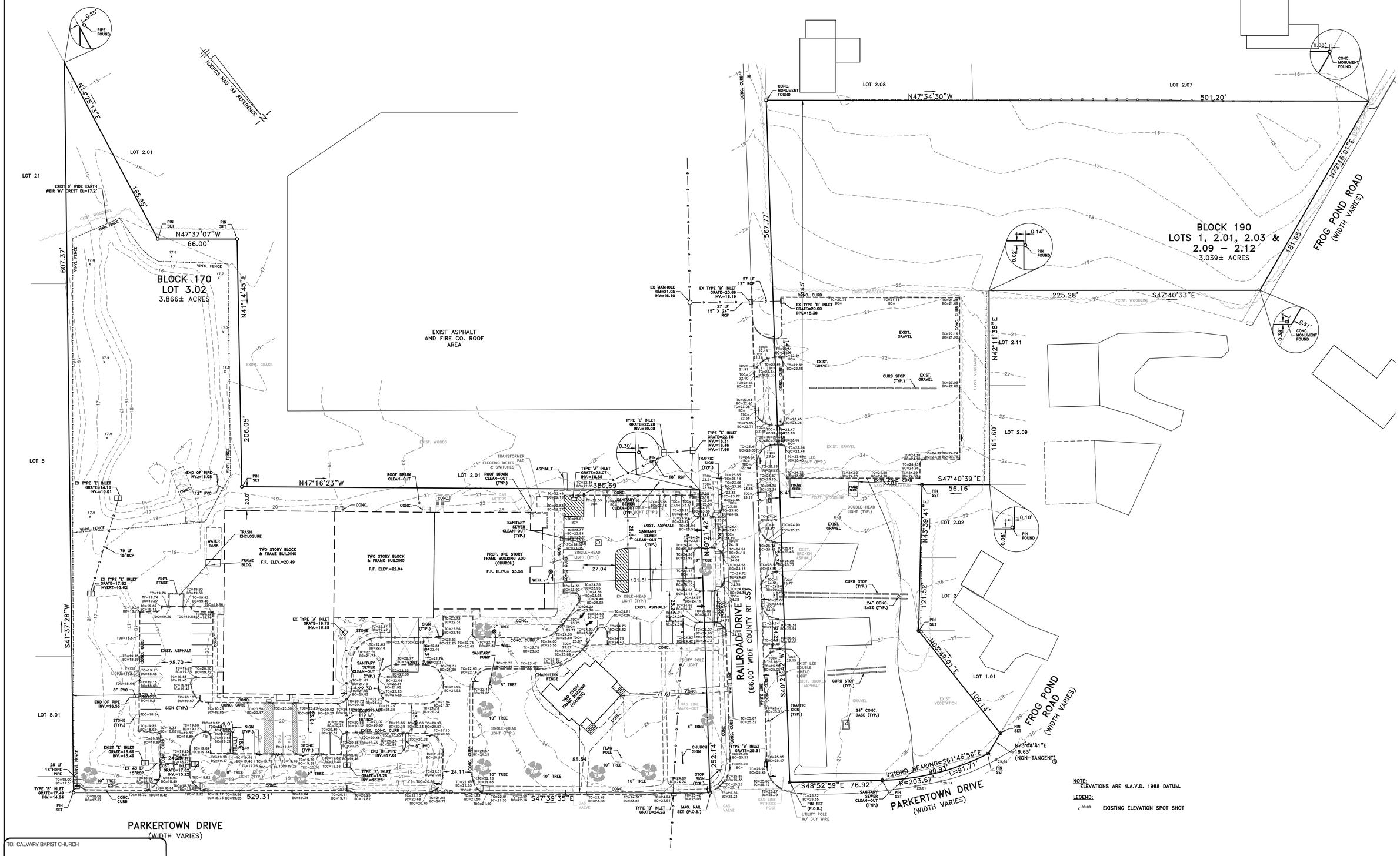
RAILROAD DRIVE, BLOCK 170, LOTS 3, 3.01 & 4 & BLOCK 190, LOTS 1, 2.01, 2.03, 2.09-2.12
TOWNSHIP OF LITTLE EGG HARBOR, OCEAN COUNTY, NEW JERSEY
ZONE: R-100 RESIDENTIAL DISTRICT, TAX MAP SHEET 12

| REV # | DATE: | BY: | REVISION DESCRIPTION |
|---|---|---|---|
| | | | |

DATE 2-18-26
SCALE NONE
BY L.B.
CHECKED A.F.S.
SHEET NO. 2 of 12

FILE# 25-169

PLANS FOR PERMIT PURPOSES ONLY




TO: CALVARY BAPIST CHURCH

I CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THIS MAP OR PLAN IS THE RESULT OF A FIELD SURVEY MADE ON FEBRUARY 5, 2025 BY ME OR UNDER MY DIRECT SUPERVISION, IN ACCORDANCE WITH THE RULES AND REGULATIONS PROMULGATED BY THE "STATE BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS."
THE INFORMATION SHOWN HEREON CORRECTLY REPRESENTS THE CONDITIONS FOUND AT, AND AS OF THE DATE OF THE FIELD SURVEY, EXCEPT SUCH IMPROVEMENTS OR EASEMENTS, IF ANY, BELOW THE SURFACE AND NOT VISIBLE. THIS CERTIFICATION IS GIVEN SOLELY TO THE ABOVE NAMED PARTIES EXCEPT AS FOLLOWS:

A. TO THE TITLE INSURER SO THAT IT MAY INSURE TITLE TO PREMISES SHOWN HEREON
B. TO THE MORTGAGE HOLDER. THE CERTIFICATION SHALL SURVIVE TO ITS SUCCESSORS AND/OR ASSIGNS, AS THEIR INTEREST MAY APPEAR.

HOWARD A. TRANSUE, PROFESSIONAL LAND SURVEYOR
NEW JERSEY LICENSE NO. 33541

**NOTE:**
ELEVATIONS ARE N.A.V.D. 1988 DATUM.

**LEGEND:**
x 00.00 EXISTING ELEVATION SPOT SHOT

GRAPHIC SCALE
30 0 15 30 60 120
1 INCH = 30 FT


Schaeffer Nassar Scheidegg
CONSULTING ENGINEERS, LLC
Surveyors • Environmentalists • Planners
1425 Cantillon Boulevard • Mays Landing • New Jersey
Telephone: (609) 625 - 7400 • Fax: (609) 909 - 0253
Certificate of Authorization #24GA28103800


THIS PLAN IS NULL AND VOID UNLESS THE RAISED IMPRESSION SEAL OF THE SIGNING ENGINEER IS AFFIXED HEREIN.

HOWARD A. TRANSUE
PROFESSIONAL LAND SURVEYOR
NEW JERSEY LIC. NO. 33541
SIGNATURE
DATE

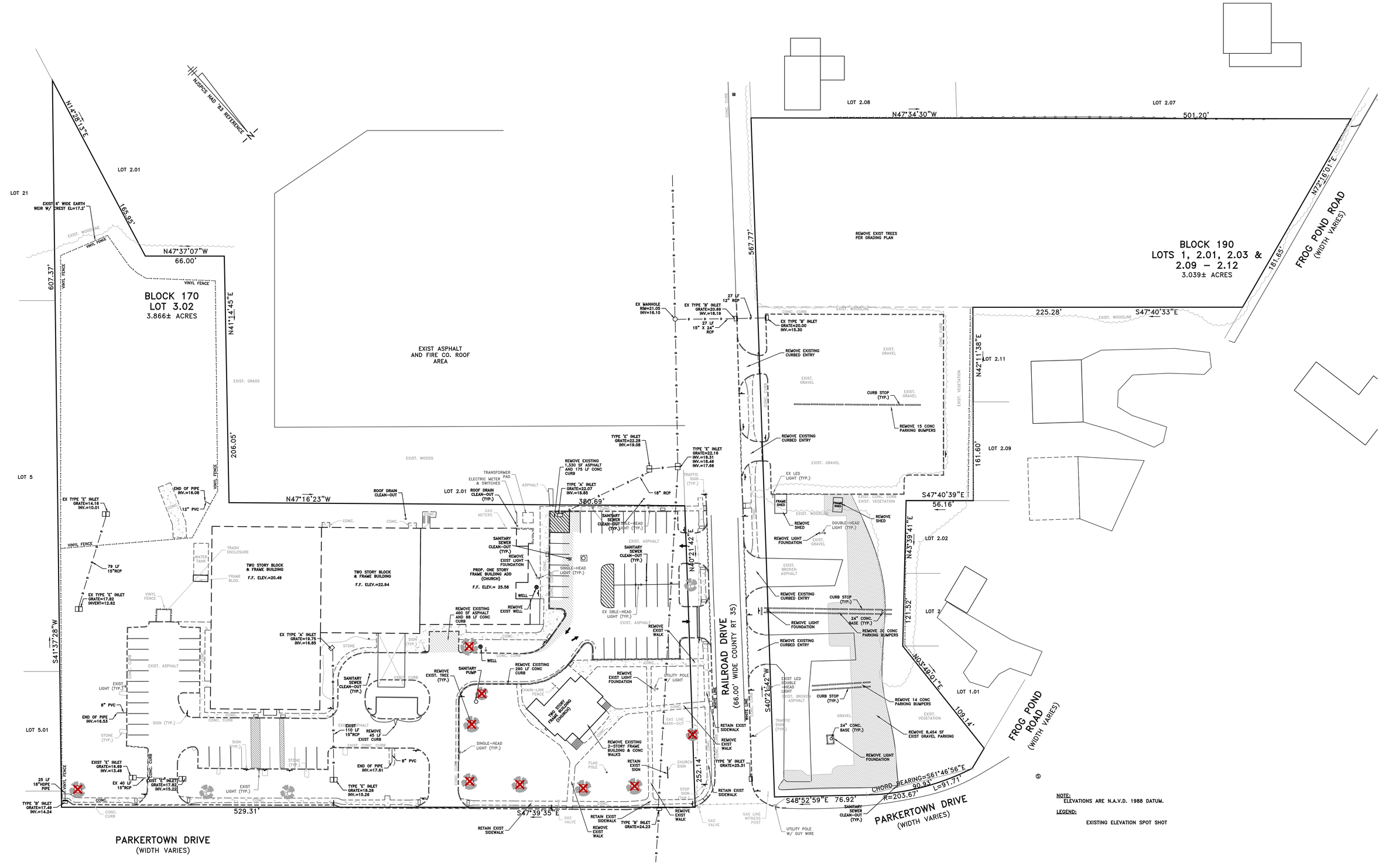
# OUTBOUNDS SURVEY & EXISTING CONDITIONS PLAN FOR:
# CAVALRY BAPTIST CHURCH

RAILROAD DRIVE, BLOCK 170, LOTS 3.01&4 & BLOCK 190, LOTS 1, 2.01, 2.03, 2.09-2.12
TOWNSHIP OF LITTLE EGG HARBOR, OCEAN COUNTY, NEW JERSEY
ZONE: R-10D0 RESIDENTIAL DISTRICT, TAX MAP SHEET 12

| REV # | DATE: | BY: | REVISION DESCRIPTION: |
|---|---|---|---|
| | | | |

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| | |
|---|---|
| DATE | 2-9-26 |
| SCALE | 1"=30' |
| BY | MJE |
| CHECKED | H.A.T. |
| SHEET NO. | 3 |
| | 3 of 12 |
| FILE# | 06-439 |




NOTE:
ELEVATIONS ARE N.A.V.D. 1988 DATUM.

LEGEND:
EXISTING ELEVATION SPOT SHOT

GRAPHIC SCALE
30 0 15 30 60 120
1 INCH = 30 FT

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ANDREW F. SCHAEFFER
PROFESSIONAL ENGINEER
NEW JERSEY LIC. NO. 32883
SIGNATURE
DATE

# PROPOSED DEMOLITION PLAN FOR:
# CAVALRY BAPTIST CHURCH

RAILROAD DRIVE, BLOCK 170, LOTS 3.3.01&4 & BLOCK 190, LOTS 1, 2.01, 2.03, 2.09-2.12
TOWNSHIP OF LITTLE EGG HARBOR, OCEAN COUNTY, NEW JERSEY
ZONE: R-10D0 RESIDENTIAL DISTRICT, TAX MAP SHEET 12

| REV # | DATE | BY | REVISION DESCRIPTION |
|---|---|---|---|
| - | - | - | - |

| | |
|---|---|
| DATE | 2-9-26 |
| SCALE | 1"=30' |
| BY | L.B. |
| CHECKED | A.F.S |
| SHEET NO. | 4 of 12 |
| FILE# | 06-439 |

| ZONING DISTRICT (R100 - RESIDENTIAL) BULK REQUIREMENT SCHEDULE | | | | | | | |
|---|---|---|---|---|---|---|---|
| BLOCK NUMBER | BLOCK 170 | | | | BLOCK 190 | | |
| ITEM | REQUIRED | EXISTING | PROPOSED | STATUS | EXISTING | PROPOSED | STATUS |
| MINIMUM LOT AREA | 10,000 SF | 3.866± ACRES | 3.866± ACRES | CONFORMING | 3.039± ACRES | 3.039± ACRES | CONFORMING |
| MINIMUM LOT WIDTH | 80' | 252.14' | 252.14' | CONFORMING | 567.77' | 567.77' | CONFORMING |
| MINIMUM LOT DEPTH | 100' | 142.75' | 142.75' | CONFORMING | 114.93' | 114.93' | CONFORMING |
| MINIMUM FRONT YARD | 30' | 71.51' | 102.76' | CONFORMING | 8.41' | N/A | CONFORMING |
| MINIMUM SIDE YARD | 10'/25' | 20' | 16.50' | CONFORMING | 314.5' | N/A | CONFORMING |
| MINIMUM REAR YARD | 30' | 125.34' | 125.34' | CONFORMING | 53.03' | N/A | CONFORMING |
| PRINCIPAL BUILDING HEIGHT | 35 FEET 2 1/2 STORIES | <35 FEET 2 1/2 STORIES | 33.5' FEET 2 STORIES | CONFORMING | <35 FEET < 2 1/2 STORIES | N/A | CONFORMING |
| MAXIMUM BUILDING COVERAGE | 30% | 18.8% | 19% | CONFORMING | .2% | 0% | CONFORMING |
| LAND USE | CHURCH | | | | CHURCH | | NOW CONFORMING |
| CAFRA REGULATIONS | | | | | | | |
| MINIMUM FORESTED AREA PRESERVATION | 35% | 4,413 SF EXIST. WOODS | 100% PRESERVED | CONFORMING | 71,554 SF EXIST. WOODS | 37% PRESERVED (26,250 SF) | CONFORMING |

**BLOCK 170, LOT 3.02**
SITE COVERAGE CALCULATIONS FOR FORESTED AND NON–FORESTED SITE IN A DESIGNATED REGIONAL CENTER
(TOTAL AREA = 3.866 AC, 168,403 SF)

| COVERAGE | EXISTING [SF] | EXISTING [AC] | PROPOSED [SF] | PROPOSED [AC] | REQUIRED |
|---|---|---|---|---|---|
| IMPERVIOUS | 80,063 SF | 1.838 AC | 86,031 SF (51%) OF TOTAL LAND | 1.975 AC | MAX 30% OF TOTAL AREA 3.093 AC (134,722 SF) |
| FORESTED LAND | 4,413 SF | 0.101 AC | 4,413 SF (3%) OF EXIST FOREST | 0.101 AC | MIN 35% OF EXIST FORESTED AREA (1,545 SF) |
| NON-FORESTED (HERBACEOUS, SHRUBS, ETC.) | 83,940 SF | 1.927 AC | 77,959 SF (46%) OF TOTAL LAND | 1.790 AC | MIN 10%, IF 80% IMPERVIOUS IS PROPOSED; OTHERWISE, NET BALANCE OF TOTAL LAND MINUS (IMPERVIOUS + FORESTED) |
| TREE PLANTING REQUIREMENT | N/A | N/A | 10,047 SF (6.0%) OF TOTAL LAND | 0.231 AC | MIN 5% OF UNFORESTED AREA (AT MATURE CANOPY SIZE) |
| TOTAL | 168,403 SF | 3.866 AC | 183,043 SF | 4.202 AC | |

**BLOCK 170, LOT 3.02**
PROPSED IMPERVIOUS COVERAGE BREAK DOWN

| PAVING | SIDEWALK | ROOF AREA | PARKING LOT | TOTAL IMPERVIOUS AREA |
|---|---|---|---|---|
| 45,849 SF | 5,750 SF | 32,814 SF (19.5%) | 51,599 SF | 84,413 SF (49%) |

**BLOCK 190, LOT 1, 2.01, 2.03, & 2.09-2.12**
SITE COVERAGE CALCULATIONS FOR FORESTED AND NON–FORESTED SITE IN A DESIGNATED REGIONAL CENTER
(TOTAL AREA = 3.039 AC, 132,379 SF)

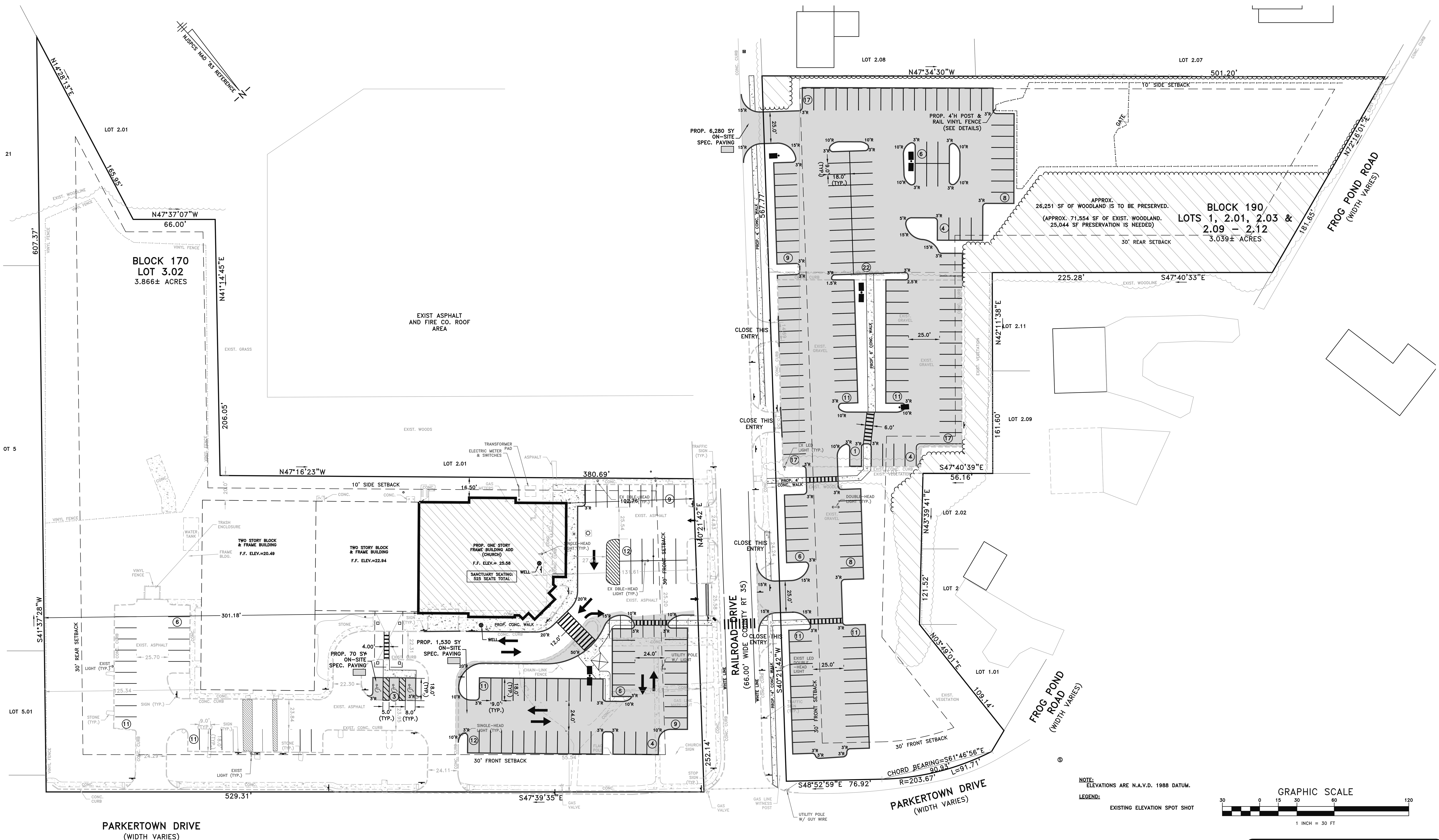
| COVERAGE | EXISTING [SF] | EXISTING [AC] | PROPOSED [SF] | PROPOSED [AC] | REQUIRED |
|---|---|---|---|---|---|
| IMPERVIOUS | 49,057 SF | 1.126 AC | 57,457 (43%) OF TOTAL LAND | 1.319 AC | MAX 30% OF TOTAL AREA 2.431 AC (105,903 SF) |
| FORESTED LAND | 71,554 SF | 1.643 AC | 26,250 SF (20%) OF EXIST FOREST | 0.603 AC | MIN 35% OF EXIST FORESTED AREA (21,466 SF) |
| NON-FORESTED (HERBACEOUS, SHRUBS, ETC.) | 11,768 SF | 0.270 AC | 48,672 SF (37%) OF TOTAL LAND | 1.117 AC | MIN 10%, IF 80% IMPERVIOUS IS PROPOSED; OTHERWISE, NET BALANCE OF TOTAL LAND MINUS (IMPERVIOUS + FORESTED) |
| TREE PLANTING REQUIREMENT | N/A | N/A | 20,660 SF (15.6%) OF TOTAL LAND | 0.474 AC | MIN 5% OF UNFORESTED AREA (AT MATURE CANOPY SIZE) |
| TOTAL | 132,379 SF | 3.039 AC | 168,582 SF | 3.870 AC | |

**BLOCK 190, LOTS 1, 2.01, 2.03, 2.09-2.12**
PROPSED IMPERVIOUS COVERAGE BREAK DOWN

| PAVING | SIDEWALK | PARKING LOT | TOTAL IMPERVIOUS AREA |
|---|---|---|---|
| 56,301 SF | 1,156 SF | 57,457 SF | 57,457 SF (43%) |

**PARKING CALCULATIONS PER ART. XII § 215-12.16A (20)(h)**

| USE | REQUIREMENT | EXISTING | PROPOSED (524 SEATS) | QUANTITY |
|---|---|---|---|---|
| CHURCH, SYNAGOGUE, TEMPLE, OR MOSQUE | 0.33 PARKING SPACES PER SEAT (173 SPACES) (525 SEATS) | 174± SPACES | BLOCK 170 | 94 |
| | | | BLOCK 190 | 163 |
| | | | TOTAL SPACES PROVIDED: | 257 (2.04 SEATS PER PARKING SPACE) |




**NOTE:**
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**LEGEND:**
EXISTING ELEVATION SPOT SHOT

GRAPHIC SCALE
30 0 15 30 60 120
1 INCH = 30 FT

**PLANS FOR PERMIT PURPOSES ONLY**


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Telephone: (609) 625 - 7400 • Fax: (609) 909 - 0253
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ANDREW F. SCHAEFFER
PROFESSIONAL ENGINEER
NEW JERSEY LIC. NO. 32883
3-19-26
DATE

# PROPOSED SITE PLAN FOR: CAVALRY BAPTIST CHURCH

RAILROAD DRIVE, BLOCK 170, LOTS 3,3.01&4 & BLOCK 190, LOTS 1, 2.01, 2.03, 2.09-2.12
TOWNSHIP OF LITTLE EGG HARBOR, OCEAN COUNTY, NEW JERSEY
ZONE: 'R-100' RESIDENTIAL DISTRICT, TAX MAP SHEET 12

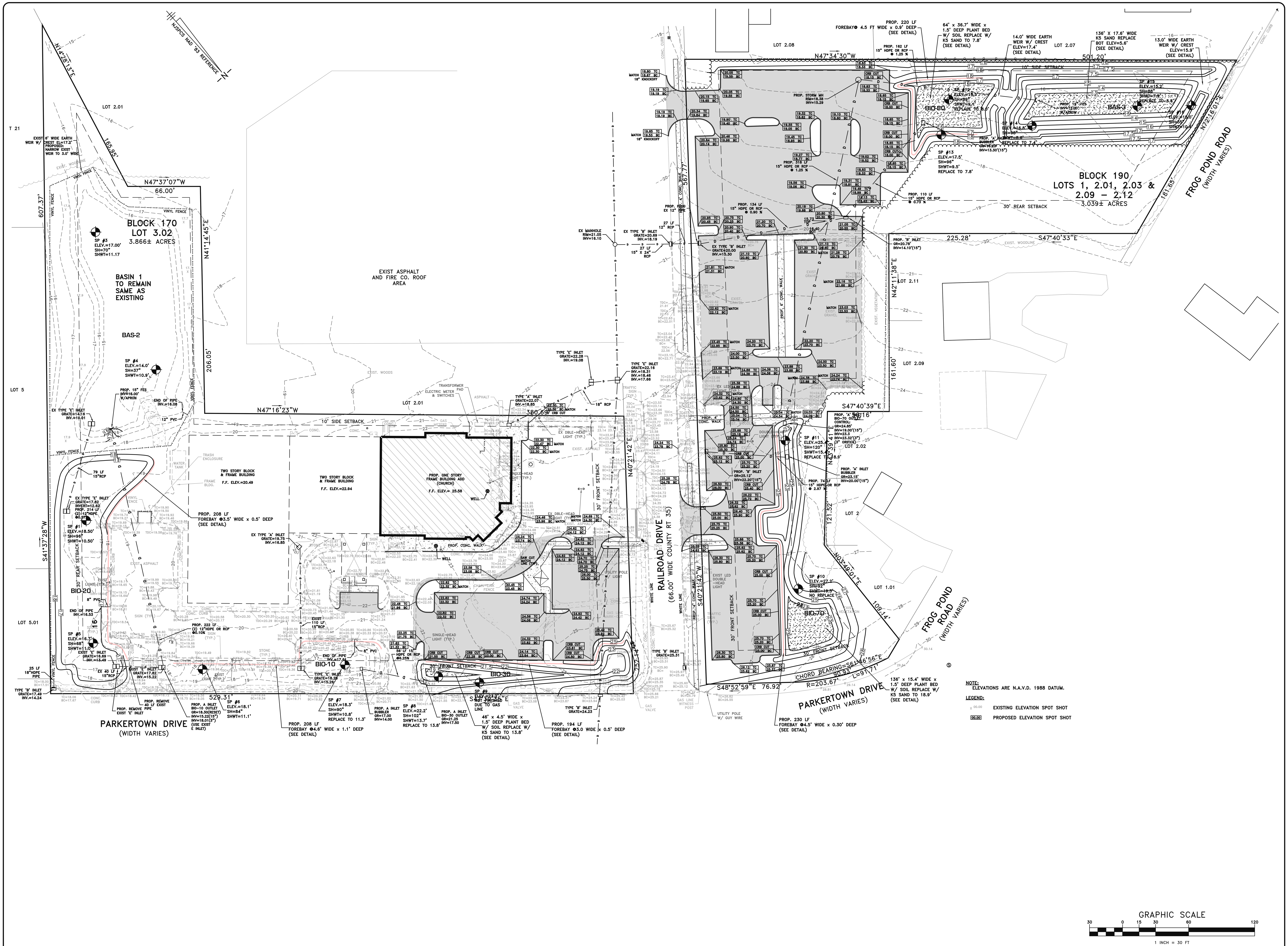

OWNERSHIP AND USE OF DOCUMENTS


| REV # | DATE | BY | REVISION DESCRIPTION |
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| | |
|---|---|
| DATE | 2-18-26 |
| SCALE | 1"=30' |
| BY | L.B. |
| CHECKED | A.F.S. |

SHEET NO.
5


FILE# 06-439




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Telephone: (609) 625 - 7400 • Fax: (609) 909 - 0253
Certificate of Authorization #24GA28103800

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ANDREW F. SCHAEFFER
PROFESSIONAL ENGINEER
NEW JERSEY LIC. NO. 32883
3-19-26
DATE

# PROPOSED DETAILED GRADING PLAN FOR:
# CAVALRY BAPTIST CHURCH

RAILROAD DRIVE, BLOCK 170, LOTS 3,3.01&4 & BLOCK 190, LOTS 1, 2.01, 2.03, 2.09-2.12
TOWNSHIP OF LITTLE EGG HARBOR, OCEAN COUNTY, NEW JERSEY
ZONE: 'R-100' RESIDENTIAL DISTRICT, TAX MAP SHEET 12

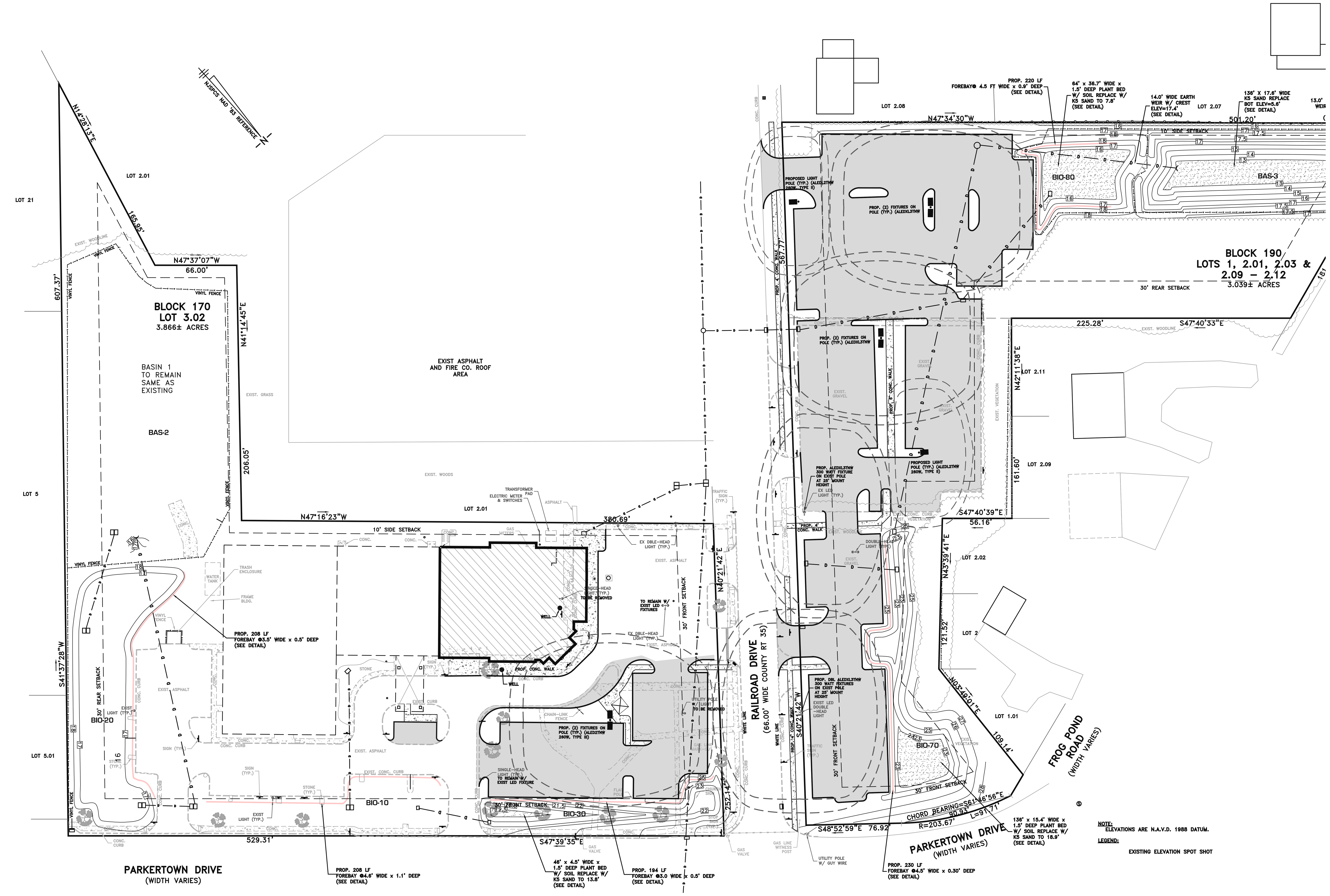
OWNERSHIP AND USE OF DOCUMENTS

| REV # | DATE: | BY: | REVISION DESCRIPTION |
|---|---|---|---|
| - | - | - | - |

| | |
|---|---|
| DATE | 2-18-26 |
| SCALE | 1"=30' |
| BY | L.B. |
| CHECKED | A.F.S. |

SHEET NO.
6


FILE# 06-439




**NOTE:**
ELEVATIONS ARE N.A.V.D. 1988 DATUM.

**LEGEND:**
EXISTING ELEVATION SPOT SHOT

GRAPHIC SCALE

40 0 20 40 80 160

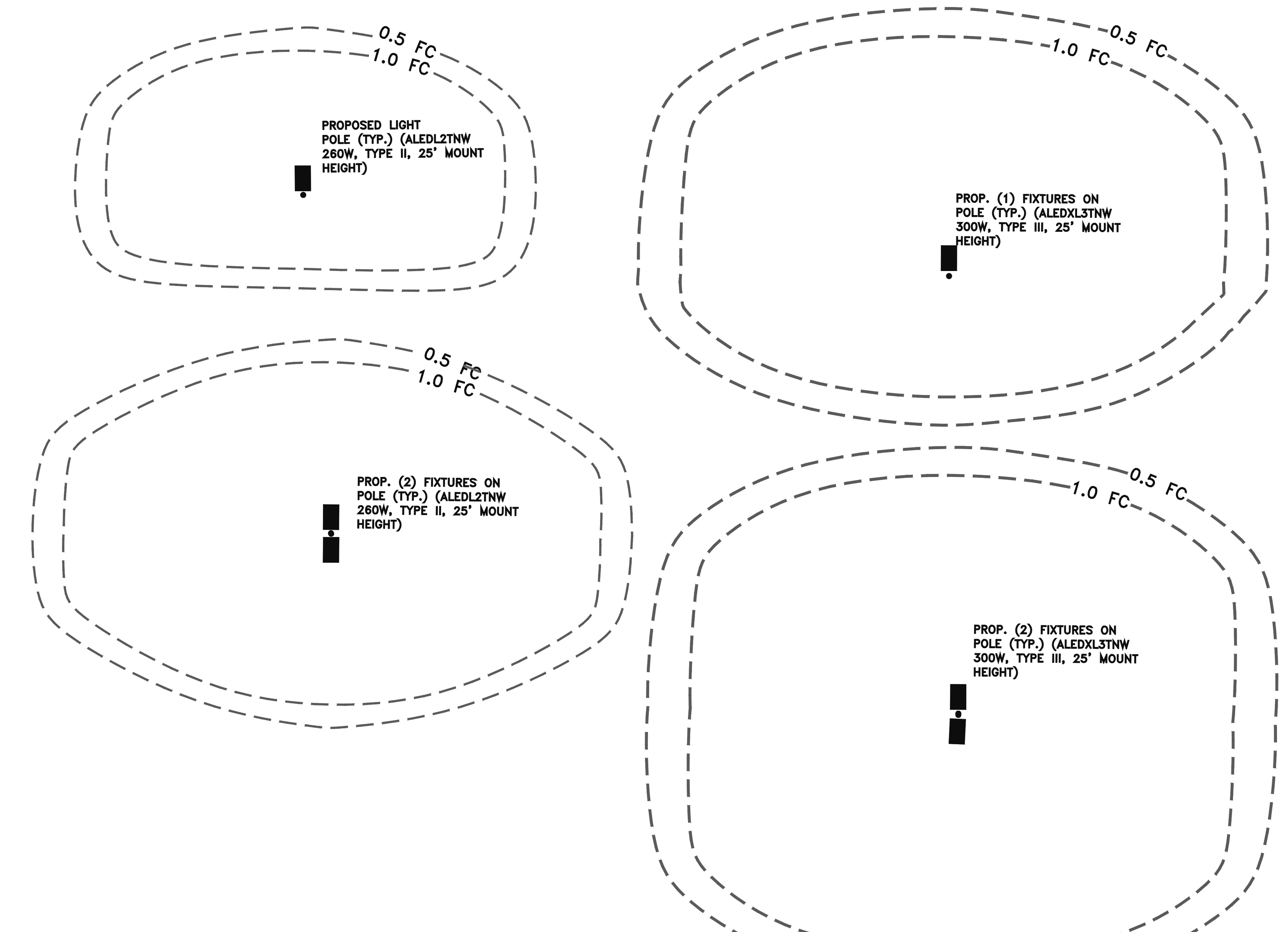
1 INCH = 40 FT

## HOURS OF ILLUMINATION:

DUSK TO DAWN

## LIGHT SHEILDING:

ALL LIGHTS TO BE SHEILDED SO AS TO LIMITE
LIGHT INTENSITY AT THE PROPERTY LINE TO 0.1 FOOT CANDLES.




ISOLUX LINES
1"=30'

## ALEDL2TNW

RAB




Project: Type:
Prepared By: Date:

| Driver Info | |
|---|---|
| Type | Constant Current |
| 120V | 2.20A |
| 208V | 1.25A |
| 240V | 1.10A |
| 277V | 0.94A |
| Input Watts | 172.2/228.4/270.3W |

| LED Info | |
|---|---|
| Watts | 260W |
| Color Temp | 4000K (Neutral) |
| Color Accuracy | 84/84/83 CRI |
| L70 Lifespan | 100,000 Hours |
| Lumens | 24929/31952/36872 lm |
| Efficacy | 144.7/139.9/136.4 lm/W |

### Technical Specifications

**Field Adjustability**

**Field Adjustable (Wattage):** Field adjustable light output in 3 discrete steps: Large Housing: 260W/220W/170W (factory default 260W)

**Compliance**

**UL Listed:** Suitable for wet locations

**IP Rating:** Ingress protection rating of IP66 for dust and water

**IESNA LM-79 & LM-80 Testing:** RAB LED luminaires and LED components have been tested by an independent laboratory in accordance with IESNA LM-79 and LM-80.

**DLC Listed:** This product family is listed with the DesignLights Consortium (DLC). Individual SKUs within this family may carry either a DLC Standard or DLC Premium qualification. Please refer to the individual product specification sheet or the DLC Qualified Products List (QPL) at designlights.org to confirm the qualification status of a specific SKU prior to specification or purchase.

**LED Characteristics**

**LEDs:** Long-life, high-efficacy, discrete, surface-mount LEDs

**Color Consistency:** 7-step MacAdam Ellipse binning to achieve consistent fixture-to-fixture color

**Color Stability:** LED color temperature is warrantied to Shift no more than 200K in color temperature over a 5-year period

**Color Uniformity:** RAB's range of Correlated Color Temperature follows the guidelines of the American National Standard for (SSL) Products, ANSI C78.377-2017.

**Electrical**

**Driver:**
170W: Constant Current, Non-Class 2, 120-277V, 50/60 Hz, 120V: 1.42A, 208V: 0.82A, 240V: 0.71A, 277V: 0.62A

220W: Constant Current, Non-Class 2, 120-277V, 50/60 Hz, 120V: 1.84A, 208V: 1.01A, 240V: 0.92A, 277V: 0.80A

260W: Constant Current, Non-Class 2, 120-277V, 50/60 Hz, 120V: 2.20A, 208V: 1.25A, 240V: 1.10A, 277V: 0.94A

**Dimming Driver:** Driver includes dimming control wiring for 0-10V dimming systems. Requires separate 0-10V DC dimming circuit. Dims down to 10%.

**THD:** 1.63% at 120V, 4.05% at 277V

**Power Factor:** 99.9% at 120V, 96.6% at 277V

**Surge Protection:** Line to Line: 10 kV, Line to Ground: 6 kV

**Performance**

**Lifespan:** 100,000-Hour LED lifespan based on IESlm-80 results and TM-21 calculations

**Wattage Equivalency:** Equivalent to 1,000W Metal Halide

**Optical**

**IES Classification:** The Type II distribution is meant for lighting large areas, located by the roadside. Typically found on wide walkways, on ramps, entrace roadways and bike paths.

Need help? Tech help line: **(888) 722-1000** Email: **techsupport@rablighting.com** Website: **rablighting.com**

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Page 1 of 3

## ALEDXL3TNW

RAB




Project: Type:
Prepared By: Date:

| Driver Info | |
|---|---|
| Type | Constant Current |
| 120V | 3.21A |
| 208V | 1.85A |
| 240V | 1.60A |
| 277V | 1.39A |
| Input Watts | 293.3/318.2/373.2W |

| LED Info | |
|---|---|
| Watts | 385W |
| Color Temp | 4000K (Neutral) |
| Color Accuracy | 83/83/84 CRI |
| L70 Lifespan | 100,000 Hours |
| Lumens | 40170/43050/49283 lm |
| Efficacy | 137/135.3/132.1 lm/W |

### Technical Specifications

**Field Adjustability**

**Field Adjustable (Wattage):** Field adjustable light output in 3 discrete steps: Extra Large Housing: 385W/345W/300W/345W (factory default 385W)

**Compliance**

**UL Listed:** Suitable for wet locations

**IP Rating:** Ingress protection rating of IP66 for dust and water

**IESNA LM-79 & LM-80 Testing:** RAB LED luminaires and LED components have been tested by an independent laboratory in accordance with IESNA LM-79 and LM-80.

**DLC Listed:** This product family is listed with the DesignLights Consortium (DLC). Individual SKUs within this family may carry either a DLC Standard or DLC Premium qualification. Please refer to the individual product specification sheet or the DLC Qualified Products List (QPL) at designlights.org to confirm the qualification status of a specific SKU prior to specification or purchase.

**LED Characteristics**

**LEDs:** Long-life, high-efficacy, discrete, surface-mount LEDs

**Color Consistency:** 7-step MacAdam Ellipse binning to achieve consistent fixture-to-fixture color

**Color Stability:** LED color temperature is warrantied to Shift no more than 200K in color temperature over a 5-year period

**Color Uniformity:** RAB's range of Correlated Color Temperature follows the guidelines of the American National Standard for (SSL) Products, ANSI C78.377-2017.

**Electrical**

**Driver:**
300W: Constant Current, Non-Class 2, 120-277V, 50/60 Hz, 120V: 2.50A, 208V: 1.45A, 240V: 1.25A, 277V: 1.10A

345W: Constant Current, Non-Class 2, 120-277V, 50/60 Hz, 120V: 2.88A, 208V: 1.66A, 240V: 1.44A, 277V: 1.25A

385W: Constant Current, Non-Class 2, 120-277V, 50/60 Hz, 120V: 3.21A, 208V: 1.85A, 240V: 1.60A, 277V: 1.39A

**Dimming Driver:** Driver includes dimming control wiring for 0-10V dimming systems. Requires separate 0-10V DC dimming circuit. Dims down to 10%.

**THD:** 3.22% at 120V, 10.11% at 277V

**Power Factor:** 99.9% at 120V, 96.4% at 277V

**Surge Protection:** Line to Line: 10 kV, Line to Ground: 6 kV

**Performance**

**Lifespan:** 100,000-Hour LED lifespan based on IESlm-80 results and TM-21 calculations

**Wattage Equivalency:** Equivalent to 1,500W Metal Halide

**Optical**

**IES Classification:** The Type III distribution is meant to be located near the side of an area, projecting the light outward to fill the area. Ideal for roadways, general parking areas, lighting applications and where a large pool of light is required.

Need help? Tech help line: **(888) 722-1000** Email: **techsupport@rablighting.com** Website: **rablighting.com**

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Page 1 of 3

Rev. 022526

## DGFGDB 25 Foot Above Grade Round Tapered Direct Burial Fiberglass Light Pole

DuraGuard PRODUCTS INC. A QSSI Company — TAA COMPLIANT

**Project Information**

Project Name: Fixture Type:
Complete Catalog #: Date:
Comments:

BUY AMERICAN ACT COMPLIANT

### Specifications and Features:

**Pole Shaft:** Hand Lay-Up Lamination with Air Pressure Molding.

**Pole top options:** A 2⅜" aluminum tenon is provided. A removable pole cap or open top are optional. This pole does not accommodate holes drilled on the side wall for the purpose of attaching direct mounting arms. Instead, we offer a large variety of tenon adaptors that will fit over the 2⅜" tenon to allow any fixture attachment configuration possible.

**Handhole:** An extra-large reinforced handhole is provided for ease of access and installation. Handhole measures 11.8" X 3.1" and is located 30" above the ground line. A cover with 2 locking mechanisms and mounting screws are provided.

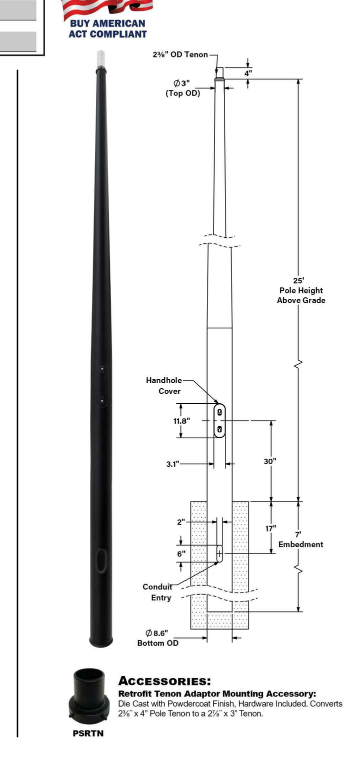
**Color:** Black or Dark Bronze; best in class, extra durable finish provides glossy look.

**Embedment:** Embedment length is 7 ft. A 2" X 6" size slotted opening is provided 17" below the ground line for conduit entry. All Sharp Edges around the Bottom of the shaft and around Conduit Entry are covered with Heavy Duty Rubber Trim.

**Warranty:** 10 Years

**Weight:** 102 lbs.

**Features and Benefits:**
- Does not rust or corrode.
- Much stronger and flexible than steel or aluminum poles.
- Dent-resistant.
- Non-conductive. Safe for public areas.
- Excellent choice for coastal areas and harsh winter zones with corrosion issues due to humidity and salt spray.




**Accessories:**
**Retrofit Tenon Adaptor Mounting Accessory:** Die Cast with Powdercoat Finish, Hardware Included. Converts a 2⅜" x 4" Pole Tenon to a 2⅞" x 3" Tenon.

**Ordering Guide:**
Complete Units Ordering Information
Example: **DGFGDB25BK**

| DGFGDB25 | |
|---|---|
| **Diameter** | **Color** |
| **DGFGDB25**=25 Foot Above Grade Round Tapered Direct Burial Fiberglass Light Pole | **BK**=Black<br>**DBZ**=Dark Bronze |

**Wind Loading and Dimensional Data:**
Maximum EPA with 1.3 Gust Factor (ft²) per AASHTO LRFDLTS-1

| | 80 MPH | 90 MPH | 100 MPH | 110 MPH | 115 MPH | 120 MPH | 130 MPH | 140 MPH | 150 MPH | 160 MPH | 170 MPH | 180 MPH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EPA | 4.4 | 4.0 | 3.5 | 3.2 | 3.0 | 2.8 | 2.4 | 2.0 | 1.7 | 1.3 | 1.0 | 0.7 |
| Max Lbs | 110 | 100 | 88 | 80 | 74 | 70 | 60 | 60 | 60 | 60 | 60 | 60 |

DuraGuard provides this information as a guide only and assumes no liability for its use. Allowable pole EPA for jobsite wind conditions must be equal to or greater than fixture mount EPA. Responsibility lies with the specifier for the correct pole selection based on A.N.S.I. wind map and job location.

Note: Suitability of site soils and backfill material should be determined by a professional engineer based in site-specific parameters.

Specifications subject to change without notice.

12802 Commodity Place • Tampa, FL 33626 • www.duraguard.com • Toll Free: (800) 736-7991

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ANDREW F. SCHAEFFER
PROFESSIONAL ENGINEER
NEW JERSEY LIC. NO. 32883
3-19-26
DATE

# PROPOSED LIGHTING PLAN FOR: CAVALRY BAPTIST CHURCH

RAILROAD DRIVE, BLOCK 170, LOTS 3,3.01&4 & BLOCK 190, LOTS 1, 2.01, 2.03, 2.09-2.12
TOWNSHIP OF LITTLE EGG HARBOR, OCEAN COUNTY, NEW JERSEY
ZONE: 'R-100' RESIDENTIAL DISTRICT, TAX MAP SHEET 12

OWNERSHIP AND USE OF DOCUMENTS
THIS DOCUMENT AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF SCHAEFFER, NASSAR & SCHEIDEGG CONSULTING ENGINEERS, LLC AND IS NOT TO BE USED, IN WHOLE OR PART WITHOUT THE WRITTEN CONSENT OF THE SUBJECT ENGINEERING FIRM. THIS SET OF PLANS HAS BEEN PREPARED FOR PURPOSES OF MUNICIPAL AND AGENCY REVIEW AND APPROVAL. THIS SET OF PLANS IS NOT TO BE UTILIZED AS CONSTRUCTION DOCUMENTS UNTIL ALL CONDITIONS OF APPROVAL HAVE BEEN SATISFIED ON THE DRAWINGS AND EACH DRAWING HAS BEEN REVISED TO INDICATE "ISSUED FOR CONSTRUCTION".

| REV # | DATE: | BY: | REVISION DESCRIPTION |
|---|---|---|---|
| - | - | - | - |

| | |
|---|---|
| DATE | 2-18-26 |
| SCALE | 1"=40' |
| BY | L.B. |
| CHECKED | A.F.S. |

SHEET NO.
**7**


**PLANS FOR PERMIT PURPOSES ONLY**

FILE# 06-439

GENERAL NOTES:
1. Area to be seeded shall consist of the following mix to insure the high quality grass. Tall fescue mixture comparable to "LESCO- ALLPRO TRANSITION SEED BLEND" spread at 12 pounds per 1,000 s.f. Also, fertilizing and liming shall be completed prior to the seeding lawn area twice per year.
2. Planting bed to be constructed as shown on details. Bed to be constructed using the following specs or approved equal:
   a. Beds to be filled with 3" layer of licorice root mulch.
   b. Mulch to be placed over Terra Top Weed Control Fabric.
   c. Planting to be edged with Black Diamond Polyethylene Divider.
   d. The ball shall sit on compacted soil.
   e. The top of burlap shall be untied and removed.
   f. The diameter of the hole shall be 2' larger than the diameter of the ball.
3. The contractor shall be responsible for planting at correct grade an alignment.
4. Plants shall be typical of their species and variety and free from any defects.
5. Contractor shall report any soil or drainage conditions which will be detrimental to plant growth.
6. All plants shall be quarantined by the contractor to be in vigorous growing conditions. Trees should be guaranteed for one year and shrubs for one growing season. Replacement shall be made at the beginning of the first succeeding planting season. All new plants shall have the same guarantees.
7. Plant materials should be planted on the day of delivery in the event this is not possible the contractor should protect stock which is not planted. Plants shall not remain unplanted for longer than three day period after delivery.
8. Quality and size of plants, spread of roots and size of balls shall be in accordance with ANSI Z80 (rev. 1980).
9. All plants shall be planted in topsoil that is thoroughly watered and tamped as backfilling progresses. Nothing but suitable topsoil should be used for planting.
10. Plants shall not be bound with wire or rope at any time as to damage the bark and break branches. Plants shall be handled from the bottom of the ball only.
11. Planting operation shall be performed during periods within the planting season weather permitting. 12. No plant except ground covers, shall be planted less than two feet from existing structures or sidewalks.
13. Set all plants plumb and straight. Set at such level that after settlement, a normal or natural relationship to the crown of the plant with the ground surface will be established. Locate plants in the center of the pit.
14. All injured roots should be pruned to make clean ends before planting. It is advisable to prune approximately 1/3" of the growth of large trees by removing the superfluous branches. Those which cross and run parallel etc. Main leader of trees must not be cut back. Long side branches, however, must be shortened.
15. Each tree and shrub shall be pruned in accordance with the standard horticultural practices to preserve natural character of plant. Pruning shall be done with clean sharp tools. Cut over 3/4" in diameter shall be painted with suitable tree paint.
16. Trees shall be supported immediately after planting. All trees six inches and over in caliper shall be guyed. Smaller trees shall be staked. Guying wire and stakes shall be installed as indicated.
17. The trunk of all trees shall be wrapped as soon as possible after planting according to standard procedures and as indicated on the plans.
18. All shade trees shall be nursery-grown and certified to be disease free.
19. Shade trees with single trunk shall be a minimum diameter of 3" at a point 6" above ground level 20. The Town Planner shall be notified 48 hours in advance of any street tree installation.
21. No shade trees shall be planted within the 10' of a sewer line.
22. Landscaping maintenance plan:
   a. All grass area shall be mowed every two weeks.
   b. All trees and shrubs shall be pruned once a year.
   c. Any planting or replacement of plant material should be done in the fall season.
   d. Fertilization shall be done twice a year.
   e. The Home Owners Association will be responsible to implement the maintenance policy.
23. Existing vegetation to be preserved during construction indicated in the following manner:
   a. The location of all such plant material.
   b. Field markings for identification.
   c. All plant materials to be preserved shall be protected from damage during construction by fencing or similar barrier. Tree protection devices shall be installed before any excavation or grading is initiated and shall be maintained for the duration of the construction period. The location and extent of all protection devices shall be indicated to the landscaping plan.
   d. As a minimum precaution, the contractor shall install snow fencing supported by steel posts adjacent to the areas where plant materials are to be protected.
   e. Any damage incurred to existing trees shall be immediately repaired. Roots exposed and/or damaged during grading operations shall be immediately trimmed, treated and covered with topsoil.
   f. If tree designated for preservation are damaged the applicant shall replace them with plant material similar in size and type as the original specimen. The specific replacement policy with respect to size / survival criteria shall be developed by and Independent Landscape Architect and shall be submitted for review by the Township Professionals.
   g. Trees may be preserved in areas where less than 24 inches of fill is proposed by observing the following procedures: such trees shall be protected by a cylindrical sheath of galvanized metal place within six inches of the trunk on all sides. Before soil is placed over the root area, a layer of broken stone or coarse gravel shall be laid down to within six inches of finished grade. A one-half inch thick fiberglass blanket with seams lapped at least six inches shall be spread over the gravel to enhance air circulation to the root zone. The remaining elevation shall be filled with topsoil. The area to be treated in this manner shall extend to the outer drip line or the branches.

TRANSPORTATION: Trees must be transported to the planting site from nursery or other like places where trees are purchased. While in transit, trees must be protected from drying wind and sun.

a. Bare root tees: Roots should be covered with wet hay or burlap and also covered with tarpaulin or anti-desicant spray.
b. Balled and burlapped trees: Do not need as much care as do bare root trees. However, they do need to be covered with tarpaulin.

LANDSCAPE NOTES:
Topsoil: Fertile, friable, natural topsoil of a loamy character without admixture of clay, hardpan, mulch, marl, shell or fine sand and capable of sustaining vigorous plant growth. It shall be free of stones, lumps, plants or their roots, or sands, sticks and other extraneous matter and shall contain no substance or material inhibitory to plant growth. The results of soil tests by the contractor shall show that topsoil ph is between 5 and 7 and that topsoil is free of excessive soluble salts at a time of use.

Bark Mulch: Shall be splintered decorative pine bark installed as a 4-inch top dressing round the basin of all trees in lawn areas. In planting beds, apply as per noted on drawings. Sod: Nursery grown sod is acceptable as an option to seeded lawn. Sod shall be machine-out at a uniform soil thickness of ½ inches, plus or minus ¼ inch, at the time of cutting. Measurement for thickness shall exclude tap growth and thatch. Sod shall be in rolls no less then 12 inches wide and 4 feet long and not to exceed 10 inches wide and 6 feet long. Grass blades will be cut to a uniform length of 1-½ inches to 2 inches in length.

1. Grass shall be well established (no less than 1 year), vigorous, healthy and growing. It shall be free of disease and noxious perennial weeds. Annual weeds shall be minimal or nonexistent.
2. Sod will be of good and healthy color when delivered. Rolls and strips will be firm and solid without crumbling or bearing. Sod shall be harvested and delivered within a period of 16 hours and all precautions must be taken to prevent sod from drying while in transit.

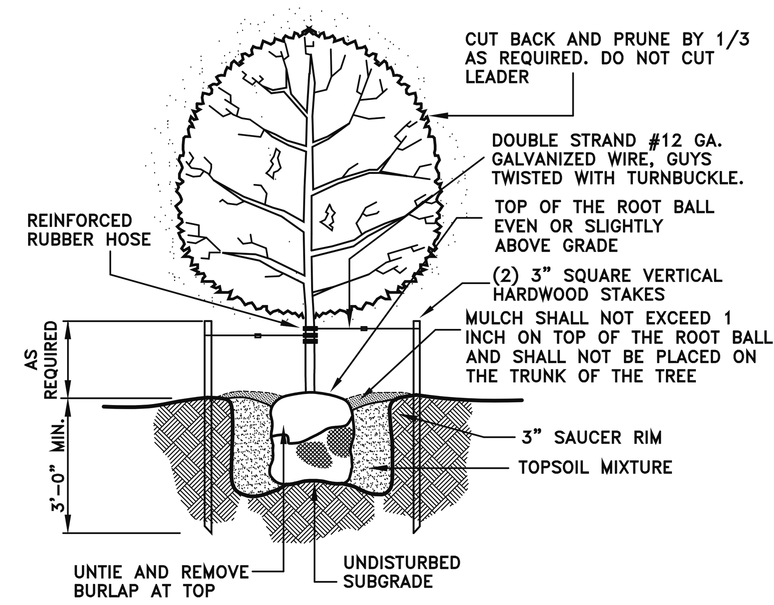
SEED: Seed shall meet the requirements of the United States Department of Agriculture and no "Below Standard" seed will be accepted.
1. Seed shall be furnished in new bags that are sound and not mended.
2. Each bag of seed shall bear the growers guarantee of analysis.

TREES, SHRUBS, GROUND COVER AND BULBS:
All plants shall be placed as specified, except for minor adjustments made necessary by underground obstructions or other unforeseen causes.
1. Only well-shaped plants with substantial root systems are acceptable. No plant shall be pruned until installation is complete. Every tree and shrub must be clearly identified by waterproof label. All plants shall be protected from sun, wind, and handling damage while in transit to the site by tarpaulin or other adequate covering. Plant material quality, size and condition shall be in accordance with the American Standard for Nursery Stock, 1980, as published by the Committee on Horticultural Standards of the American Association of Nurserymen, Inc. the drawings and the following requirements.
   a. All plants shall be typical of their species or variety. All plants shall have normal, well-developed branches and vigorous root systems. They shall be sound, healthy, vigorous, free from defects, disfiguring knots, abrasions of the bark, sun-scald injuries, plant disease, insect eggs, borers and all other forms of infections.
   b. All plants shall be nursery grown and shall be tagged with nursery labels indicating species and variety.
   c. Container growth plant material shall have been grown in its delivery container for not less than six months, but not more than two years. Any root-bound material will not be accepted.
   d. Balled and burlapped plant material shall have a solid ball of earth of minimum specified size held in place securely by burlap and a stout twine or rope. Broken or loose balls will be rejected.
   e. Stock furnished shall be at least the minimum size indicated. Larger stock is acceptable, providing that the larger plants will not be cut back to size indicated.
   f. Trees that have the main trunk forming a "V" shape will not be accepted.
   g. No pruning wounds shall be present with a diameter of more than 1" and such wounds must show vigorous bark on all edges.
   h. Single stemmed or thin shrubs will not be accepted, side branches shall be generous, well twigged.
   i. Container Grown Plant Materials: All container grown plants shall be healthy, vigorous, well rooted and established in the container in which they are sold. An established container grown plant shall be defined as a plant transplanted into a container and grown in that container sufficiently long for the new fibrous roots to have developed so that the root mass will retain its shape and hold together when removed from the container. The container shall be sufficiently rigid to hold the root shape protecting it during shipment. No root bound container grown plants will be permitted. No broken container grown root mass shall be planted.
   j. Ground Cover: Provide plants established and well-rooted in integral peat pots and with not less than minimum number and length of runners required by the American Standard for Nursery stock for the pot size shown or listed.
   k. Bulbs: Provide bulbs that are in healthy, dormant condition free of diseases, insects and mechanical injury. Bulb sizes should conform to standards set forth in the American Standard for Nursery Stock.
   l. Bare Rooted Plant Material: No Bare Rooted Plant Materials will be permitted.
   m. Collected Plant Material: No collected plant materials will be permitted.

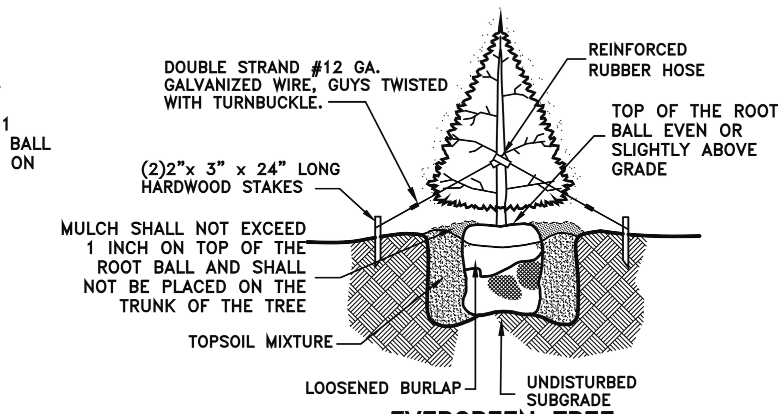
GENERAL:
1. The contractor shall be responsible for planting at correct grade and alignment.
2. The contractor shall flag all underground utilities on structures prior to digging or staking.
3. Perform planting only during periods within the planting season when weather and soil conditions are suitable and in accordance with local accepted practices.

SITE LANDSCAPING SCHEDULE

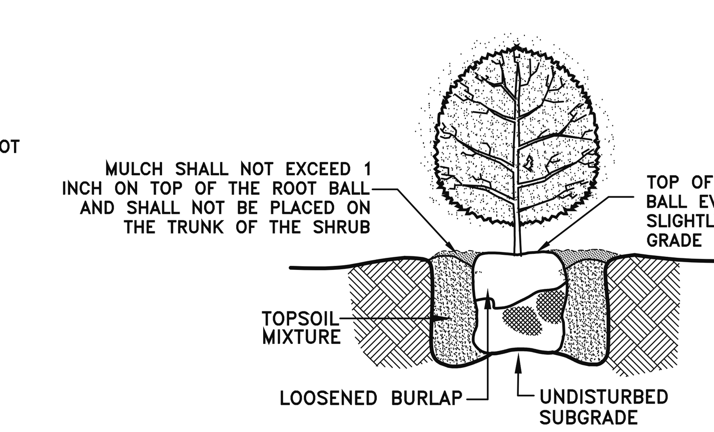
| ABR. | SYMBOL | COMMON NAME | BOTANICAL NAME | PLANTING SIZE | MATURE SIZE | QUANTITY |
|---|---|---|---|---|---|---|
| SHADE TREES | | | | | | |
| BN | | RIVER BIRCH | Betula nigra | B&B, 10' | 40-60' HT., 40-70' SPREAD | 10 |
| AR | | RED MAPLE | Acer rubrum | B&B, 10' | 40-70' HT., 30-50' SPREAD | 5 |
| EVERGREEN TREES | | | | | | |
| JV | | EASTERN RED CEDAR | Juniperus virginiana | B&B, 10' | 30-65' HT., 8-25' SPREAD | 5 |
| SHRUBS | | | | | | |
| HV | | WITCH HAZEL | Hamamelis virginiana | #5 CAN. | 15-20' HT., 15-20' SPREAD | 13 |
| VD | | ARROWWOOD VIBURNUM | Viburnum dentatum | #5 CAN. | 6-10' HT., 6-10' SPREAD | 46 |
| CA | | SWEET PEPPERBUSH | Clethra alnifolia | #3 CAN. | 3-8' HT., 4-6' SPREAD | 101 |
| IG | | COMPACT INKBERRY HOLLY | Ilex glabra 'Compacta' | #3 CAN. | 3-4' HT., 4-6' SPREAD | 54 |



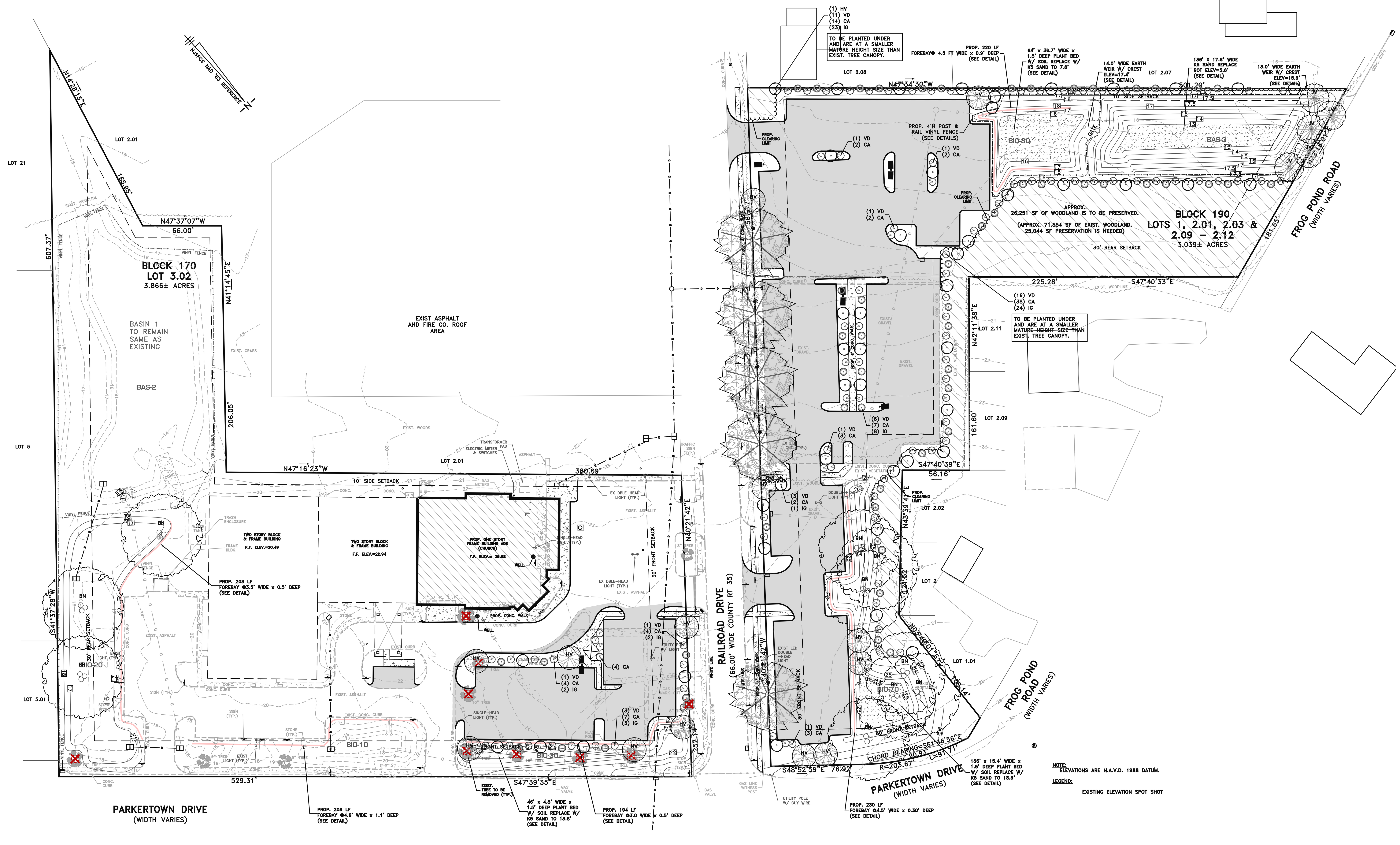
SHADE TREE PLANTING & STAKING DETAIL
N.T.S.



EVERGREEN TREE STAKING DETAIL
NOT TO SCALE



SHRUB PLANTING DETAIL
N.T.S.




NOTE:
ELEVATIONS ARE N.A.V.D. 1988 DATUM.
LEGEND:
EXISTING ELEVATION SPOT SHOT

GRAPHIC SCALE
40 0 20 40 80 160
1 INCH = 40 FT

PLANS FOR PERMIT PURPOSES ONLY


Schaeffer Nassar Scheidegg
CONSULTING ENGINEERS, LLC
Surveyors • Environmentalists • Planners
1425 Cantillon Boulevard • Mays Landing • New Jersey
Telephone: (609) 625-7400 • Fax: (609) 909-0253
Certificate of Authorization #24GA28103800


THIS PLAN IS NULL AND VOID UNLESS THE RAISED IMPRESSION SEAL OF THE SIGNING ENGINEER IS AFFIXED HERETO.

ANDREW F. SCHAEFFER
PROFESSIONAL ENGINEER
NEW JERSEY LIC. NO. 32883
3-19-26
DATE

PROPOSED LANDSCAPE PLAN FOR:
# CAVALRY BAPTIST CHURCH
RAILROAD DRIVE, BLOCK 170, LOTS 3,3.01&4 & BLOCK 190, LOTS 1, 2.01, 2.03, 2.09-2.12
TOWNSHIP OF LITTLE EGG HARBOR, OCEAN COUNTY, NEW JERSEY
ZONE: 'R-100' RESIDENTIAL DISTRICT, TAX MAP SHEET 12

| REV # | DATE | BY | REVISION DESCRIPTION |
|---|---|---|---|
| - | - | - | - |

| | |
|---|---|
| DATE | 2-18-26 |
| SCALE | 1"=40' |
| BY | L.B. |
| CHECKED | A.F.S. |

SHEET NO.
8


FILE# 06-439

## SOIL LOG

PROJECT #: 06-439
BLOCK/LOT: 170/3.01 & 4
SOIL BORING #:
MAPPED SOIL: Downer
COUNTY: Ocean

DATE: 7/18/2010
MUNICIPALITY: Little Egg Harbor
DONE BY: STEVEN P. WHITFORD
TOTAL DEPTH: 144"
PAGE:

| DEPTH (INCHES) | SOIL DESCRIPTION |
|---|---|
| 0-3 | Pale Brown 10YR6/3 Loamy Sand, SAB, Very Friable |
| 3-12 | Dark Yellowish Brown 10YR 4/6 Sandy loam, SAB, friable |
| 12-27 | Yellowish Brown 10YR5/6 Sandy clay loam, SAB, friable, Blocky |
| 27-96 | Yellowish Brown 10YR5/6 Loamy Sand, SAB, Very Friable, **PERMEABILITY = 15.5 IN/HR** |
| 96-96 | Yellowish Brown 10YR5/8 Coarse Sand, single-grained, loose-20% gravel |
| 96-120 | White 10YR8/1 Sandy Clay in bands; Common, Medium, Prominent Strong Brown 7.5YR5/8 mottles, seepage |
| 120-144 | Yellowish Brown 10YR5/6 Loamy Sand, SAB, Very Friable; Common, Fine, Prominent Strong Brown 7.5YR5/8 and Light Gray 10YR7/2 mottles |

Soil sample depth: 72"
Depth to saturation:
Depth to estimated SHWT: 96"
Depth to standing water

## SOIL LOG

PROJECT #: 06-439
BLOCK/LOT: 170/3.01 & 4
SOIL PIT #: 2
MAPPED SOIL: Downer
COUNTY: Ocean

DATE: 7/18/2010
MUNICIPALITY: Little Egg Harbor
DONE BY: STEVEN P. WHITFORD
TOTAL DEPTH: 126"
PAGE:

| DEPTH (INCHES) | SOIL DESCRIPTION |
|---|---|
| 0-11 | Grayish Brown 10YR5/2 Sandy loam, SAB, friable |
| 11-20 | Yellowish Brown 10YR5/6 Sandy Loam, SAB, Very Friable; 10% Small rounded pebbles |
| 20-47 | Yellowish Brown 10YR5/6 Loamy Sand, SAB, Very Friable |
| 47-60 | Brownish Yellow 10YR6/6 Coarse Loamy Sand, SAB, Very Friable |
| 60-66 | Very Pale Brown 10YR7/4 Sand, single-grained, loose |
| 66-86 | Very Pale Brown 10YR7/4 Sand, single-grained, loose; common, fine, prominent Strong Brown 7.5YR5/8 & White 10YR8/1 Mottles |
| 86-125 | White 10YR8/1 Fine Loamy Sand, SAB, Very Friable; 20% Very Pale Brown 10YR7/3 Sandy Clay, Massive, Firm in irregular masses. **PERMEABILITY = 6.2 IN/HR** |

Soil sample depth: 90"
Depth to saturation:
Depth to estimated SHWT: 68"
Depth to standing water

## SOIL LOG

PROJECT #: 06-439
BLOCK/LOT: 170/3.01 & 4
SOIL PIT #: 3
MAPPED SOIL: Downer
COUNTY: Ocean

DATE: 7/18/2010
MUNICIPALITY: Little Egg Harbor
DONE BY: STEVEN P. WHITFORD
TOTAL DEPTH: 138"
PAGE:

| DEPTH (INCHES) | SOIL DESCRIPTION |
|---|---|
| 0-6 | Brown 10YR5/3 Sandy loam, SAB, friable |
| 6-20 | Brownish Yellow 10YR6/6 Loamy Sand, SAB, Very Friable; 30% gravel in bands; Dark Yellowish Brown 10YR4/4 silt bands |
| 20-50 | Brownish Yellow 10YR6/6 Sandy loam, SAB, friable; 20% Small rounded pebbles |
| 50-70 | Yellowish Brown 10YR5/8 Sandy clay loam, SAB, friable, Blocky |
| 70-98 | Light Gray 10YR7/1 Fine Loamy Sand, SAB, Very Friable; Common, Fine, Prominent Strong Brown 7.5YR5/8 & White 10YR8/1 mottles; 20% Very Pale Brown 10YR7/3 Sandy clay loam., SAB, friable **PERMEABILITY = 17.4 IN/HR** |
| 98-138 | White 10YR8/1 Fine Loamy Sand, SAB, Very Friable; 20% Very Pale Brown 10YR8/3 Sandy clay loam, SAB, friable mottles **PERMEABILITY = 3.2 IN/HR** |

Soil sample depth: 80 & 120"
Depth to saturation:
Depth to estimated SHWT: 70"
Depth to standing water 96"

## SOIL LOG

PROJECT: 06-439
TEST PIT# 4 (BACK BASIN)
BLOCK/LOT: BI 170, 190, lot VARIOUS
MUNICIPALITY: Little Egg Harbor Township

DATE: 4/1/26
DONE BY: STEVEN P. WHITFORD
MAPPED SOIL:
COUNTY: Ocean County

| DEPTH (INCHES) | |
|---|---|
| 0-6 | Very pale brown 10YR8/2 sand, single grained, loose (recent deposit) |
| 6-16 | Grayish brown 10YR5/2 loamy sand, SAB, friable |
| 16-37 | Light brownish yellow 10YR6/4 loamy sand, SAB, very friable |
| 37-72 | Pale brown 10YR7/3 Loamy sand, SAB, very friable, few to common, 10YR5/8 and 10YR8/2 mottles, small ½" sandy clay loam/clay bands |
| 72-108 | Light gray 10YR7/1 sand, Single grained, loose, irregular sandy clay/clay bands throughout |
| | |
| | |

Soil sample depth: 40
Restrictive Layer:
Depth to SHWT: 37
Depth to standing water 96" seepage

## SOIL LOG

PROJECT: 06-439
TEST PIT# 5
BLOCK/LOT: BI 170, 190, lot VARIOUS
MUNICIPALITY: Little Egg Harbor Township

DATE: 4/1/26
DONE BY: STEVEN P. WHITFORD
MAPPED SOIL:
COUNTY: Ocean County

| DEPTH (INCHES) | |
|---|---|
| 0-6 | Very pale brown 10YR8/2 sand, single grained, loose (recent deposit) |
| 6-42 | Yellow 10YR7/6 loamy sand, SAB, friable |
| 52-68 | Pale brown 10YR7/3 loamy sand, SAB, very friable, few to common, 10YR5/8 and 10YR8/2 mottles |
| 68-78 | Light gray 10YR8/2 loamy sand, very friable, irregular clumps of yellow 10YR7/6 sandy clay loam |
| 78-115 | Yellow 10YR7/6 sandy clay loam, SAB,friable to firm, common, fine, distinct 10YR5/8 and light gray 10YR7/1 mottles, irregular sandy clay bands throughout |
| | |
| | |

Soil sample depth: 80
Restrictive Layer:
Depth to SHWT: 68
Depth to standing water 108 seepage

## SOIL LOG

PROJECT: 06-439
TEST PIT# 6
BLOCK/LOT: BI 170, 190, lot VARIOUS
MUNICIPALITY: Little Egg Harbor Township

DATE: 4/1/26
DONE BY: STEVEN P. WHITFORD
MAPPED SOIL:
COUNTY: Ocean County

| DEPTH (INCHES) | |
|---|---|
| 0-3 | Brown 10YR4/3 sandy loam, SAB, friable |
| 3-10 | Light yellowish brown 10YR6/4 loamy sand, SAB, very friable |
| 10-64 | Pale brown 10YR7/3 loamy sand, SAB, very friable |
| 64-78 | Yellowish brown 10YR5/8 sandy clay loam, SAB, firm |
| 78-84 | Yellow 10YR7/6 loamy sand, SAB, very friable, |
| 84-108 | Pale brown 10YR7/3 loamy sand, SAB, very friable, common, fine, distinct 7.5YR5/8 and light gray 10YR7/1 mottles |

Soil sample depth: 80
Restrictive Layer: 64-78
Depth to SHWT: 84
Depth to standing water 102

## SOIL LOG

PROJECT: 06-439
TEST PIT# 7
BLOCK/LOT: BI 170, 190, lot VARIOUS
MUNICIPALITY: Little Egg Harbor Township

DATE: 4/1/26
DONE BY: STEVEN P. WHITFORD
MAPPED SOIL:
COUNTY: Ocean County

| DEPTH (INCHES) | |
|---|---|
| 0-3 | Brown 10YR4/3 sandy loam, SAB, friable |
| 3-12 | Light yellowish brown 10YR6/6 loamy sand, SAB, very friable |
| 12-66 | Pale brown 10YR7/3 loamy sand, SAB, very friable |
| 66-83 | Yellowish brown 10YR5/7 sandy clay loam, SAB, firm |
| 83-90 | Yellow 10YR7/6 loamy sand, SAB, very friable, |
| 90-108 | Pale brown 10YR7/3 loamy sand, SAB, very friable, common, fine, distinct 7.5YR5/8 and light gray 10YR7/1 mottles |

Soil sample depth: 86
Restrictive Layer: 66-83
Depth to SHWT: 90
Depth to standing water 104

## SOIL LOG

PROJECT: 06-439
TEST PIT# 8
BLOCK/LOT: BI 170, 190, lot VARIOUS
MUNICIPALITY: Little Egg Harbor Township

DATE: 4/1/26
DONE BY: STEVEN P. WHITFORD
MAPPED SOIL:
COUNTY: Ocean County

| DEPTH (INCHES) | |
|---|---|
| 0-8 | Brown 10YR4/3 sandy loam, SAB, friable |
| 8-28 | Light yellowish brown 10YR6/5 loamy sand, SAB, very friable |
| 28-88 | Pale brown 10YR7/4 loamy sand, SAB, very friable |
| 88-99 | Yellowish brown 10YR5/7 sandy clay loam, SAB, firm |
| 99-102 | Yellow 10YR7/6 loamy sand, SAB, very friable, **Perm 6.6 in/hr** |
| 102-108 | Pale brown 10YR7/2 loamy sand, SAB, very friable, common, fine, distinct 7.5YR5/6 and light gray 10YR7/1 mottles |

Soil sample depth: 101
Restrictive Layer: 88-99
Depth to SHWT: 102
Depth to standing water

## SOIL LOG

PROJECT: 06-439
TEST PIT# 9
BLOCK/LOT: BI 170, 190, lot VARIOUS
MUNICIPALITY: Little Egg Harbor Township

DATE: 4/1/26
DONE BY: STEVEN P. WHITFORD
MAPPED SOIL:
COUNTY: Ocean County

| DEPTH (INCHES) | |
|---|---|
| 0-9 | Brown 10YR4/3 sandy loam, SAB, friable |
| 9-27 | Light yellowish brown 10YR6/5 loamy sand, SAB, very friable |
| 27-45 | Pale brown 10YR7/4 loamy sand, SAB, very friable |
| | Test pit stopped due to gas line present |
| | |
| | |

Soil sample depth:
Restrictive Layer:
Depth to SHWT: undetermined
Depth to standing water

## SOIL LOG

PROJECT: 06-439
TEST PIT# 10
BLOCK/LOT: BI 170, 190, lot VARIOUS
MUNICIPALITY: Little Egg Harbor Township

DATE: 4/1/26
DONE BY: STEVEN P. WHITFORD
MAPPED SOIL:
COUNTY: Ocean County

| DEPTH (INCHES) | |
|---|---|
| 0-8 | Brown 10YR4/3 sandy loam, SAB, friable |
| 8-24 | Light yellowish brown 10YR6/4 loamy sand, SAB, very friable |
| 24-56 | Brownish yellow 10YR6/6 fine loamy sand, SAB, very friable |
| 56-92 | Yellow 10YR7/6 loamy sand, SAB, very friable |
| 92-103 | Pale brown 10YR7/3 loamy sand, SAB, very friable, common, fine, distinct 7.5YR5/8 and light gray 10YR7/1 mottles |
| 103-120 | Light gray 10YR8/2 loamy sand, to sand, single grained, loose |

Soil sample depth: 30
Restrictive Layer:
Depth to SHWT: 92
Depth to standing water

## SOIL LOG

PROJECT: 06-439
TEST PIT# 11
BLOCK/LOT: BI 170, 190, lot VARIOUS
MUNICIPALITY: Little Egg Harbor Township

DATE: 4/1/26
DONE BY: STEVEN P. WHITFORD
MAPPED SOIL:
COUNTY: Ocean County

| DEPTH (INCHES) | |
|---|---|
| 0-4 | Brown 10YR4/3 sandy loam, SAB, friable |
| 4-46 | Dark yellowish brown 10YR4/6 sandy loam, SAB, friable |
| 46-64 | Yellow 10YR7/6 loamy sand, SAB, very friable |
| 64-78 | Yellowish brown 10YR5/8 sandy clay loam, SAB, firm |
| 78-120 | Pale brown 10YR7/3 loamy sand, SAB, very friable |
| | |
| | |

Soil sample depth: 81
Restrictive Layer: 64-78
Depth to SHWT: >120
Depth to standing water

## SOIL LOG

PROJECT: 06-439
TEST PIT# 12
BLOCK/LOT: BI 170, 190, lot VARIOUS
MUNICIPALITY: Little Egg Harbor Township

DATE: 4/1/26
DONE BY: STEVEN P. WHITFORD
MAPPED SOIL:
COUNTY: Ocean County

| DEPTH (INCHES) | |
|---|---|
| 0-3 | Brown 10YR4/3 sandy loam, SAB, friable |
| 3-26 | Yellowish brown 10YR5/6 sandy loam, SAB, friable |
| 26-89 | Brownish yellow 10YR6/6 coarse loamy sand, SAB, very friable |
| 89-99 | Yellowish brown 10YR5/8 sandy clay loam, SAB, firm, common, fine, distinct strong brown 7.5YR5/6 and light gray 10YR7/1 mottles |
| 99-103 | White 10YR8/1 clay, SAB, hard |
| 84-118 | Pale brown 10YR7/3 loamy sand, SAB, very friable, common, fine, distinct 7.5YR5/8 and light gray 10YR7/1 mottles |

Soil sample depth: 88
Restrictive Layer: 90-103
Depth to SHWT: 89
Depth to standing water 103

## SOIL LOG

PROJECT: 06-439
TEST PIT# 13
BLOCK/LOT: BI 170, 190, lot VARIOUS
MUNICIPALITY: Little Egg Harbor Township

DATE: 4/1/26
DONE BY: STEVEN P. WHITFORD
MAPPED SOIL:
COUNTY: Ocean County

| DEPTH (INCHES) | |
|---|---|
| 0-3 | Brown 10YR4/3 sandy loam, SAB, friable |
| 3-34 | Yellowish brown 10YR5/6 sandy loam, SAB, friable |
| 34-96 | Brownish yellow 10YR6/6 coarse loamy sand, SAB, very friable |
| 96-108 | Yellowish brown 10YR5/8 sandy clay loam, SAB, firm, common, fine, distinct strong brown 7.5YR5/6 and light gray 10YR7/1 mottles |
| 108-116 | White 10YR8/1 clay, SAB, hard |
| 116-119 | Pale brown 10YR7/3 loamy sand, SAB, very friable, common, fine, distinct 7.5YR5/8 and light gray 10YR7/1 mottles |

Soil sample depth: 118
Restrictive Layer: 96-116
Depth to SHWT: 96
Depth to standing water 112

## SOIL LOG

PROJECT: 06-439
TEST PIT# 14
BLOCK/LOT: BI 170, 190, lot VARIOUS
MUNICIPALITY: Little Egg Harbor Township

DATE: 4/1/26
DONE BY: STEVEN P. WHITFORD
MAPPED SOIL:
COUNTY: Ocean County

| DEPTH (INCHES) | |
|---|---|
| 0-6 | Brown 10YR4/3 sandy loam, SAB, friable |
| 6-33 | Yellowish brown 10YR5/6 sandy loam, SAB, friable |
| 33-98 | Brownish yellow 10YR6/6 coarse loamy sand, SAB, very friable |
| 98-105 | Yellowish brown 10YR5/8 sandy clay loam, SAB, firm, common, fine, distinct strong brown 7.5YR5/6 and light gray 10YR7/2 mottles |
| 105-113 | White 10YR8/1 clay, SAB, hard |
| 113-118 | Pale brown 10YR7/2 loamy sand, SAB, very friable, common, fine, distinct 7.5YR5/7 and light gray 10YR7/2 mottles |

Soil sample depth: 115
Restrictive Layer: 98-113
Depth to SHWT: 98
Depth to standing water 111

## SOIL LOG

PROJECT: 06-439
TEST PIT# 15
BLOCK/LOT: BI 170, 190, lot VARIOUS
MUNICIPALITY: Little Egg Harbor Township

DATE: 4/1/26
DONE BY: STEVEN P. WHITFORD
MAPPED SOIL:
COUNTY: Ocean County

| DEPTH (INCHES) | |
|---|---|
| 0-6 | Brown 10YR4/3 sandy loam, SAB, friable |
| 6-30 | Yellowish brown 10YR5/5 sandy loam, SAB, friable |
| 30-88 | Brownish yellow 10YR6/6 coarse loamy sand, SAB, very friable |
| 88-101 | Yellowish brown 10YR5/8 sandy clay loam, SAB, firm, common, fine, distinct strong brown 7.5YR5/5 and light gray 10YR7/2 mottles |
| 101-113 | White 10YR8/1 clay, SAB, hard |
| 113-120 | Pale brown 10YR7/2 loamy sand, SAB, very friable, common, fine, distinct 7.5YR5/7 and light gray 10YR7/2 mottles |
| | |
| | |

Soil sample depth: 115
Restrictive Layer: 88-113
Depth to SHWT: 88
Depth to standing water 117

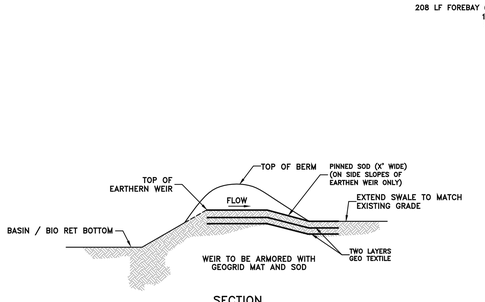
## SOIL LOG

PROJECT: 06-439
TEST PIT# 16
BLOCK/LOT: BI 170, 190, lot VARIOUS
MUNICIPALITY: Little Egg Harbor Township

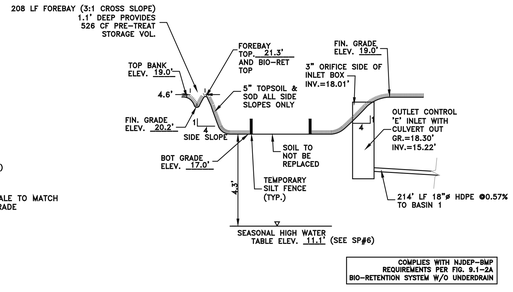
DATE: 4/1/26
DONE BY: STEVEN P. WHITFORD
MAPPED SOIL:
COUNTY: Ocean County

| DEPTH (INCHES) | |
|---|---|
| 0-2 | Very dark grayish brown 10YR3/2 sandy loam, SAB, friable |
| 2-5 | Light brownish gray 10YR6/2 loamy sand, SAB, very friable |
| 5-8 | Yellowish brown 10YR4/6 sandy clay loam, SAB, friable |
| 8-32 | Yellowish brown 10YR5/4 sandy loam, SAB, friable |
| 32-55 | Brownish yellow 10YR6/6 loamy sand, SAB, very friable |
| 55-65 | Pale brown 10YR6/3 fine loamy sand, SAB, very friable, common, fine to medium, prominent strong brown 7.5YR5/6 and light gray 10YR7/1 mottles |
| 65-80 | Gray 10YR6/1 fine sandy clay, SAB, hard layers |
| 80-120 | Light gray 10YR7/1 clay, SAB, hard |
| | |
| | |

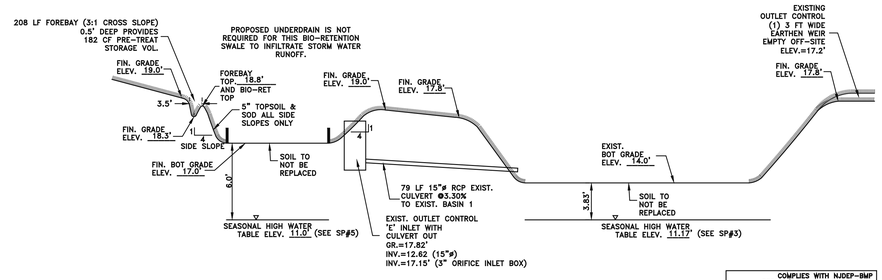
Soil sample depth:
Restrictive Layer: 65-120+
Depth to SHWT: 55"
Depth to standing water 63" seepage




SECTION
TYPICAL EARTHERN WEIR
N.T.S.

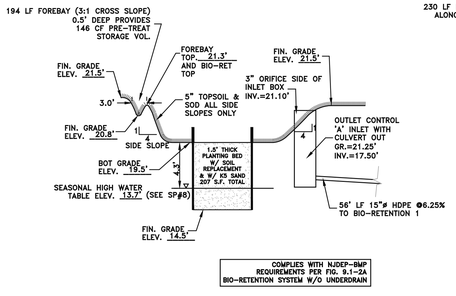



(INFILTRATION SYSTEM)
BIO-RETENTION SWALE 10 W/
FOREBAY ADDED TO EXISTING BIO-RETENTION
CROSS SECTION VIEW
(NOT TO SCALE)

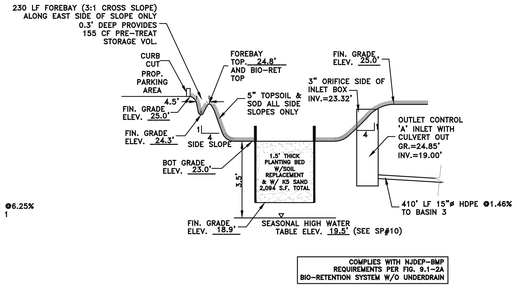



(INFILTRATION SYSTEM)
BIO-RETENTION SWALE 20
EXISTING BIO-RETENTION W/
FOREBAY ADDED AND BIO-RETENTION EXPANDED
CROSS SECTION VIEW
(NOT TO SCALE)

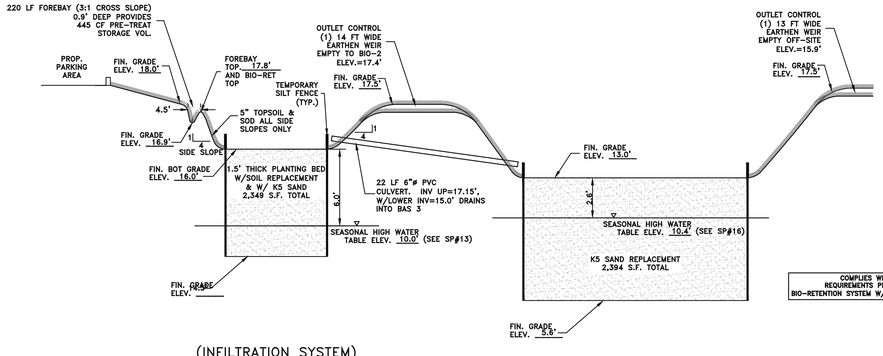
EXISTING BASIN 1
CROSS SECTION VIEW
(NOT TO SCALE)




(INFILTRATION SYSTEM)
BIO-RETENTION SWALE 30
CROSS SECTION VIEW
(NOT TO SCALE)




(INFILTRATION SYSTEM)
BIO-RETENTION SWALE 70
CROSS SECTION VIEW
(NOT TO SCALE)




(INFILTRATION SYSTEM)
BIO-RETENTION SWALE 80
CROSS SECTION VIEW
(NOT TO SCALE)

INFILTRATION BASIN 3
CROSS SECTION VIEW
(NOT TO SCALE)

PLANS FOR PERMIT PURPOSES ONLY

Schaeffer Nassar Scheidegg
CONSULTING ENGINEERS, LLC
Surveyors • Environmentalists • Planners
1425 Cantillon Boulevard • Mays Landing • New Jersey
Telephone: (609) 625 - 7400 • Fax: (609) 909 - 0253
Certificate of Authorization #24GA28103800

THIS PLAN IS WILL AND VOID UNLESS THE RAISED IMPRESSION SEAL OF THE SIGNING ENGINEER IS AFFIXED HEREIN.

ANDREW F. SCHAEFFER
PROFESSIONAL ENGINEER
NEW JERSEY LIC. NO. 32983
3.19.26
DATE

SOIL LOGS & PROPOSED BASIN CROSS-SECTION SHEET FOR:
CAVALRY BAPTIST CHURCH
RAILROAD DRIVE, BLOCK 170, LOTS 3.3, 3.01 & 4, BLOCK 190, LOTS 1, 2.01, 2.03, 2.09-2.12
TOWNSHIP OF LITTLE EGG HARBOR, OCEAN COUNTY, NEW JERSEY
ZONE: R-10D RESIDENTIAL DISTRICT, TAX MAP SHEET 12

| REV.# | DATE: | BY: | REVISION DESCRIPTION: |
|---|---|---|---|
| - | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | - | - |

DATE 2-18-26
SCALE N.T.S.
BY L.B.
CHECKED A.F.S.
SHEET NO.
9
9 of 12

FILE# 06-439

## Schaeffer Nassar Scheidegg
Consulting Engineers, LLC

Project Number: 06-439

**PERMEABILITY TEST**

1425 Cantillon Blvd
Mays Landing, NJ 08330
Phone: (609) 625-7400
Fax: (609) 909-0253

County: Ocean
Municipality: Little Egg Harbor Township
Block: 170
Lot: 3, 3.01, 4
Date: 6/21/10
Test Pit No. 1
Test No. 1
Date collected: 6/18/10
Fill or Native Soil: Native
Depth of Sample: 78 inches

Soil Sample Inside radius [R]: 0.75 in
Soil Sample Length [L]: 4 in
Net Sample Weight Rep "A": gr
Net Sample Weight Rep "B": gr
Resulting Sample Volumes: 115.8 cc
Sample bulk density Rep "A": 0.00 gr/cc
Sample bulk density Rep "B": 0.00 gr/cc
Standpipe inside Radius [r]: 0.18 in

| Replicate A H1 [in] | Replicate A H2[in] | Time Start [Sec] | Time End [Sec] | Replicate A Δ t [Sec] | Replicate A K [in/hr] |
|---|---|---|---|---|---|
| 8 | 6 | 0 | 13.1 | 13.1 | 18.2 |
| 8 | 6 | 0 | 13.1 | 13.1 | 18.2 |
| 8 | 6 | 0 | 13.3 | 13.3 | 17.9 |
| 8 | 6 | 0 | 13.2 | 13.2 | 18.1 |

Replicate "A" Resulting Ave. Permeability Rate = 18.1 in/hr

| Replicate B H1 [in] | Replicate B H2[in] | Time Start [Sec] | Time End [Sec] | Replicate B Δ t [Sec] | Replicate B K [in/hr] |
|---|---|---|---|---|---|
| 8 | 6 | 0 | 15.3 | 15.3 | 15.6 |
| 8 | 6 | 0 | 15.4 | 15.4 | 15.5 |
| 8 | 6 | 0 | 15.3 | 15.3 | 15.6 |
| 8 | 6 | 0 | 15.5 | 15.5 | 15.4 |

Replicate "B" Resulting Ave. Permeability Rate = 15.5 in/hr

Average 16.8

Evaluator Signature: _____ Engineer Signature: _____

## Schaeffer Nassar Scheidegg
Consulting Engineers, LLC

Project Number: 06-439

**PERMEABILITY TEST**

1425 Cantillon Blvd
Mays Landing, NJ 08330
Phone: (609) 625-7400
Fax: (609) 909-0253

County: Ocean
Municipality: Little Egg Harbor Township
Block: 170
Lot: 3, 3.01, 4
Date: 6/21/10
Test Pit No. 2
Test No. 1
Date collected: 6/18/10
Fill or Native Soil: Native
Depth of Sample: 90 inches

Soil Sample Inside radius [R]: 0.75 in
Soil Sample Length [L]: 4 in
Net Sample Weight Rep "A": gr
Net Sample Weight Rep "B": gr
Resulting Sample Volumes: 115.8 cc
Sample bulk density Rep "A": 0.00 gr/cc
Sample bulk density Rep "B": 0.00 gr/cc
Standpipe inside Radius [r]: 0.18 in

| Replicate A H1 [in] | Replicate A H2[in] | Time Start [Sec] | Time End [Sec] | Replicate A Δ t [Sec] | Replicate A K [in/hr] |
|---|---|---|---|---|---|
| 8 | 6 | 0 | 38.5 | 38.5 | 6.2 |
| 8 | 6 | 0 | 38.7 | 38.7 | 6.2 |
| 8 | 6 | 0 | 37.9 | 37.9 | 6.3 |
| 8 | 6 | 0 | 38.1 | 38.1 | 6.3 |

Replicate "A" Resulting Ave. Permeability Rate = 6.2 in/hr

| Replicate B H1 [in] | Replicate B H2[in] | Time Start [Sec] | Time End [Sec] | Replicate B Δ t [Sec] | Replicate B K [in/hr] |
|---|---|---|---|---|---|
| 8 | 6 | 0 | 36.1 | 36.1 | 6.6 |
| 8 | 6 | 0 | 36.3 | 36.3 | 6.6 |
| 8 | 6 | 0 | 36.4 | 36.4 | 6.6 |
| 8 | 6 | 0 | 36.3 | 36.3 | 6.6 |

Replicate "B" Resulting Ave. Permeability Rate = 6.6 in/hr

Average 6.4

Evaluator Signature: _____ Engineer Signature: _____

## Schaeffer Nassar Scheidegg
Consulting Engineers, LLC

Project Number: 06-439

**PERMEABILITY TEST**

1425 Cantillon Blvd
Mays Landing, NJ 08330
Phone: (609) 625-7400
Fax: (609) 909-0253

County: Ocean
Municipality: Little Egg Harbor Township
Block: 170
Lot: 3, 3.01, 4
Date: 6/21/10
Test Pit No. 3
Test No. 1
Date collected: 6/18/10
Fill or Native Soil: Native
Depth of Sample: 120 inches

Soil Sample Inside radius [R]: 0.75 in
Soil Sample Length [L]: 4 in
Net Sample Weight Rep "A": gr
Net Sample Weight Rep "B": gr
Resulting Sample Volumes: 115.8 cc
Sample bulk density Rep "A": 0.00 gr/cc
Sample bulk density Rep "B": 0.00 gr/cc
Standpipe inside Radius [r]: 0.18 in

| Replicate A H1 [in] | Replicate A H2[in] | Time Start [Sec] | Time End [Sec] | Replicate A Δ t [Sec] | Replicate A K [in/hr] |
|---|---|---|---|---|---|
| 8 | 6 | 0 | 69.5 | 69.5 | 3.4 |
| 8 | 6 | 0 | 71.1 | 71.1 | 3.4 |
| 8 | 6 | 0 | 69.7 | 69.7 | 3.4 |
| 8 | 6 | 0 | 70.8 | 70.8 | 3.4 |

Replicate "A" Resulting Ave. Permeability Rate = 3.4 in/hr

| Replicate B H1 [in] | Replicate B H2[in] | Time Start [Sec] | Time End [Sec] | Replicate B Δ t [Sec] | Replicate B K [in/hr] |
|---|---|---|---|---|---|
| 8 | 6 | 0 | 74.1 | 74.1 | 3.2 |
| 8 | 6 | 0 | 73.8 | 73.8 | 3.2 |
| 8 | 6 | 0 | 74.3 | 74.3 | 3.2 |
| 8 | 6 | 0 | 74.1 | 74.1 | 3.2 |

Replicate "B" Resulting Ave. Permeability Rate = 3.2 in/hr

Average 3.3

Evaluator Signature: _____ Engineer Signature: _____

## Schaeffer Nassar Scheidegg
Consulting Engineers, LLC

Project Number: 06-439

**PERMEABILITY TEST**

1425 Cantillon Blvd
Mays Landing, NJ 08330
Phone: (609) 625-7400
Fax: (609) 909-0253

County: Ocean
Municipality: Little Egg Harbor Township
Block: 170
Lot: 3, 3.01, 4
Date: 6/21/10
Test Pit No. 4
Test No. 1
Date collected: 6/18/10
Fill or Native Soil: Native
Depth of Sample: 80 inches

Soil Sample Inside radius [R]: 0.75 in
Soil Sample Length [L]: 4 in
Net Sample Weight Rep "A": gr
Net Sample Weight Rep "B": gr
Resulting Sample Volumes: 115.8 cc
Sample bulk density Rep "A": 0.00 gr/cc
Sample bulk density Rep "B": 0.00 gr/cc
Standpipe inside Radius [r]: 0.18 in

| Replicate A H1 [in] | Replicate A H2[in] | Time Start [Sec] | Time End [Sec] | Replicate A Δ t [Sec] | Replicate A K [in/hr] |
|---|---|---|---|---|---|
| 8 | 6 | 0 | 13 | 13 | 18.4 |
| 8 | 6 | 0 | 12.8 | 12.8 | 18.5 |
| 8 | 6 | 0 | 12.8 | 12.8 | 18.6 |
| 8 | 6 | 0 | 12.7 | 12.7 | 18.8 |

Replicate "A" Resulting Ave. Permeability Rate = 18.6 in/hr

| Replicate B H1 [in] | Replicate B H2[in] | Time Start [Sec] | Time End [Sec] | Replicate B Δ t [Sec] | Replicate B K [in/hr] |
|---|---|---|---|---|---|
| 8 | 6 | 0 | 13.7 | 13.7 | 17.4 |
| 8 | 6 | 0 | 13.8 | 13.8 | 17.3 |
| 8 | 6 | 0 | 13.5 | 13.5 | 17.7 |
| 8 | 6 | 0 | 13.8 | 13.8 | 17.3 |

Replicate "B" Resulting Ave. Permeability Rate = 17.4 in/hr

Average 18.0

Evaluator Signature: _____ Engineer Signature: _____

## Schaeffer Nassar Scheidegg
Consulting Engineers, LLC

Project Number: 06-439

**PERMEABILITY TEST**

1425 Cantillon Blvd
Mays Landing, NJ 08330
Phone: (609) 625-7400
Fax: (609) 909-0253

County: Ocean
Municipality: Little Egg Harbor Twp.
Block: 170 & 190
Lot: various
Date: 4/8/26
Test Pit No. 5
Test No. 1
Date collected: 4/1/26
Fill or Native Soil: Native
Depth of Sample: 40 inches

Soil Sample Inside radius [R]: 0.75 in
Soil Sample Length [L]: 4 in
Net Sample Weight Rep: 190.1 gr
Resulting Sample Volumes: 115.8 cc
Sample bulk density Rep: 1.64 gr/cc
Standpipe inside Radius [r]: 0.18 in

| Replicate A H1 [in] | Replicate A H2[in] | Time Start [Sec] | Time End [Sec] | Replicate A Δ t [Sec] | Replicate A K [in/hr] |
|---|---|---|---|---|---|
| 7 | 5 | 0 | 71.2 | 71.2 | 3.9 |
| 7 | 5 | 0 | 71 | 71 | 3.9 |
| 7 | 5 | 0 | 71.6 | 71.6 | 3.9 |
| 7 | 5 | 0 | 71.5 | 71.5 | 3.9 |

3.9 in/hour

## Schaeffer Nassar Scheidegg
Consulting Engineers, LLC

Project Number: 06-439

**PERMEABILITY TEST**

1425 Cantillon Blvd
Mays Landing, NJ 08330
Phone: (609) 625-7400
Fax: (609) 909-0253

County: Ocean
Municipality: Little Egg Harbor Twp.
Block: 170 & 190
Lot: various
Date: 4/8/26
Test Pit No. 6
Test No. 1
Date collected: 4/1/26
Fill or Native Soil: Native
Depth of Sample: 80 inches

Soil Sample Inside radius [R]: 0.75 in
Soil Sample Length [L]: 4 in
Net Sample Weight Rep: 190.2 gr
Resulting Sample Volumes: 115.8 cc
Sample bulk density Rep: 1.64 gr/cc
Standpipe inside Radius [r]: 0.18 in

| Replicate A H1 [in] | Replicate A H2[in] | Time Start [Sec] | Time End [Sec] | Replicate A Δ t [Sec] | Replicate A K [in/hr] |
|---|---|---|---|---|---|
| 7 | 5 | 0 | 42.5 | 42.5 | 6.6 |
| 7 | 5 | 0 | 42.6 | 42.6 | 6.6 |
| 7 | 5 | 0 | 42.4 | 42.4 | 6.6 |
| 7 | 5 | 0 | 42.5 | 42.5 | 6.6 |

6.6 in/hour

## Schaeffer Nassar Scheidegg
Consulting Engineers, LLC

Project Number: 06-439

**PERMEABILITY TEST**

1425 Cantillon Blvd
Mays Landing, NJ 08330
Phone: (609) 625-7400
Fax: (609) 909-0253

County: Ocean
Municipality: Little Egg Harbor Twp.
Block: 170 & 190
Lot: various
Date: 4/8/26
Test Pit No. 7
Test No. 1
Date collected: 4/1/26
Fill or Native Soil: Native
Depth of Sample: 86 inches

Soil Sample Inside radius [R]: 0.75 in
Soil Sample Length [L]: 4 in
Net Sample Weight Rep: 189.9 gr
Resulting Sample Volumes: 115.8 cc
Sample bulk density Rep: 1.64 gr/cc
Standpipe inside Radius [r]: 0.18 in

| Replicate A H1 [in] | Replicate A H2[in] | Time Start [Sec] | Time End [Sec] | Replicate A Δ t [Sec] | Replicate A K [in/hr] |
|---|---|---|---|---|---|
| 7 | 5 | 0 | 40.2 | 40.2 | 6.9 |
| 7 | 5 | 0 | 40.3 | 40.3 | 6.9 |
| 7 | 5 | 0 | 40.5 | 40.5 | 6.9 |
| 7 | 5 | 0 | 40.2 | 40.2 | 6.9 |

6.9 in/hour

## Schaeffer Nassar Scheidegg
Consulting Engineers, LLC

Project Number: 06-439

**PERMEABILITY TEST**

1425 Cantillon Blvd
Mays Landing, NJ 08330
Phone: (609) 625-7400
Fax: (609) 909-0253

County: Ocean
Municipality: Little Egg Harbor Twp.
Block: 170 & 190
Lot: various
Date: 4/8/26
Test Pit No. 8
Test No. 1
Date collected: 4/1/26
Fill or Native Soil: Native
Depth of Sample: 101 inches

Soil Sample Inside radius [R]: 0.75 in
Soil Sample Length [L]: 4 in
Net Sample Weight Rep: 190.0 gr
Resulting Sample Volumes: 115.8 cc
Sample bulk density Rep: 1.64 gr/cc
Standpipe inside Radius [r]: 0.18 in

| Replicate A H1 [in] | Replicate A H2[in] | Time Start [Sec] | Time End [Sec] | Replicate A Δ t [Sec] | Replicate A K [in/hr] |
|---|---|---|---|---|---|
| 7 | 5 | 0 | 42.5 | 42.5 | 6.6 |
| 7 | 5 | 0 | 42.5 | 42.5 | 6.6 |
| 7 | 5 | 0 | 42.4 | 42.4 | 6.6 |
| 7 | 5 | 0 | 42.6 | 42.6 | 6.6 |

6.6 in/hour

PERM TEST #9
NOT DONE
DUE TO GAS LINE

## Schaeffer Nassar Scheidegg
Consulting Engineers, LLC

Project Number: 06-439

**PERMEABILITY TEST**

1425 Cantillon Blvd
Mays Landing, NJ 08330
Phone: (609) 625-7400
Fax: (609) 909-0253

County: Ocean
Municipality: Little Egg Harbor Twp.
Block: 170 & 190
Lot: various
Date: 4/8/26
Test Pit No. 10
Test No. 1
Date collected: 4/1/26
Fill or Native Soil: Native
Depth of Sample: 30 inches

Soil Sample Inside radius [R]: 0.75 in
Soil Sample Length [L]: 4 in
Net Sample Weight Rep: 191.1 gr
Resulting Sample Volumes: 115.8 cc
Sample bulk density Rep: 1.65 gr/cc
Standpipe inside Radius [r]: 0.18 in

| Replicate A H1 [in] | Replicate A H2[in] | Time Start [Sec] | Time End [Sec] | Replicate A Δ t [Sec] | Replicate A K [in/hr] |
|---|---|---|---|---|---|
| 7 | 5 | 0 | 38.6 | 38.6 | 7.2 |
| 7 | 5 | 0 | 38.4 | 38.4 | 7.3 |
| 7 | 5 | 0 | 38.2 | 38.2 | 7.3 |
| 7 | 5 | 0 | 38.5 | 38.5 | 7.2 |

7.3 in/hour

## Schaeffer Nassar Scheidegg
Consulting Engineers, LLC

Project Number: 06-439

**PERMEABILITY TEST**

1425 Cantillon Blvd
Mays Landing, NJ 08330
Phone: (609) 625-7400
Fax: (609) 909-0253

County: Ocean
Municipality: Little Egg Harbor Twp.
Block: 170 & 190
Lot: various
Date: 4/8/26
Test Pit No. 11
Test No. 1
Date collected: 4/1/26
Fill or Native Soil: Native
Depth of Sample: 81 inches

Soil Sample Inside radius [R]: 0.75 in
Soil Sample Length [L]: 4 in
Net Sample Weight Rep: 189.9 gr
Resulting Sample Volumes: 115.8 cc
Sample bulk density Rep: 1.64 gr/cc
Standpipe inside Radius [r]: 0.18 in

| Replicate A H1 [in] | Replicate A H2[in] | Time Start [Sec] | Time End [Sec] | Replicate A Δ t [Sec] | Replicate A K [in/hr] |
|---|---|---|---|---|---|
| 7 | 5 | 0 | 24.2 | 24.2 | 11.5 |
| 7 | 5 | 0 | 24.5 | 24.5 | 11.4 |
| 7 | 5 | 0 | 24.4 | 24.4 | 11.4 |
| 7 | 5 | 0 | 24.6 | 24.6 | 11.3 |

11.4 in/hour

## Schaeffer Nassar Scheidegg
Consulting Engineers, LLC

Project Number: 06-439

**PERMEABILITY TEST**

1425 Cantillon Blvd
Mays Landing, NJ 08330
Phone: (609) 625-7400
Fax: (609) 909-0253

County: Ocean
Municipality: Little Egg Harbor Twp.
Block: 170 & 190
Lot: various
Date: 4/8/26
Test Pit No. 12
Test No. 1
Date collected: 4/1/26
Fill or Native Soil: Native
Depth of Sample: 88 inches

Soil Sample Inside radius [R]: 0.75 in
Soil Sample Length [L]: 4 in
Net Sample Weight Rep: 188.9 gr
Resulting Sample Volumes: 115.8 cc
Sample bulk density Rep: 1.63 gr/cc
Standpipe inside Radius [r]: 0.18 in

| Replicate A H1 [in] | Replicate A H2[in] | Time Start [Sec] | Time End [Sec] | Replicate A Δ t [Sec] | Replicate A K [in/hr] |
|---|---|---|---|---|---|
| 7 | 5 | 0 | 28.5 | 28.5 | 9.8 |
| 7 | 5 | 0 | 28.7 | 28.7 | 9.7 |
| 7 | 5 | 0 | 28.3 | 28.3 | 9.9 |
| 7 | 5 | 0 | 28.4 | 28.4 | 9.8 |

9.8 in/hour

## Schaeffer Nassar Scheidegg
Consulting Engineers, LLC

Project Number: 06-439

**PERMEABILITY TEST**

1425 Cantillon Blvd
Mays Landing, NJ 08330
Phone: (609) 625-7400
Fax: (609) 909-0253

County: Ocean
Municipality: Little Egg Harbor Twp.
Block: 170 & 190
Lot: various
Date: 4/8/26
Test Pit No. 13
Test No. 1
Date collected: 4/1/26
Fill or Native Soil: Native
Depth of Sample: 118 inches

Soil Sample Inside radius [R]: 0.75 in
Soil Sample Length [L]: 4 in
Net Sample Weight Rep: 191.1 gr
Resulting Sample Volumes: 115.8 cc
Sample bulk density Rep: 1.65 gr/cc
Standpipe inside Radius [r]: 0.18 in

| Replicate A H1 [in] | Replicate A H2[in] | Time Start [Sec] | Time End [Sec] | Replicate A Δ t [Sec] | Replicate A K [in/hr] |
|---|---|---|---|---|---|
| 7 | 5 | 0 | 30.2 | 30.2 | 9.2 |
| 7 | 5 | 0 | 30.5 | 30.5 | 9.2 |
| 7 | 5 | 0 | 30.6 | 30.6 | 9.1 |
| 7 | 5 | 0 | 30.1 | 30.1 | 9.3 |

9.2 in/hour

## Schaeffer Nassar Scheidegg
Consulting Engineers, LLC

Project Number: 06-439

**PERMEABILITY TEST**

1425 Cantillon Blvd
Mays Landing, NJ 08330
Phone: (609) 625-7400
Fax: (609) 909-0253

County: Ocean
Municipality: Little Egg Harbor Twp.
Block: 170 & 190
Lot: various
Date: 4/8/26
Test Pit No. 14
Test No. 1
Date collected: 4/1/26
Fill or Native Soil: Native
Depth of Sample: 115 inches

Soil Sample Inside radius [R]: 0.75 in
Soil Sample Length [L]: 4 in
Net Sample Weight Rep: 189.9 gr
Resulting Sample Volumes: 115.8 cc
Sample bulk density Rep: 1.64 gr/cc
Standpipe inside Radius [r]: 0.18 in

| Replicate A H1 [in] | Replicate A H2[in] | Time Start [Sec] | Time End [Sec] | Replicate A Δ t [Sec] | Replicate A K [in/hr] |
|---|---|---|---|---|---|
| 7 | 5 | 0 | 25.9 | 25.9 | 10.8 |
| 7 | 5 | 0 | 26.4 | 26.4 | 10.6 |
| 7 | 5 | 0 | 26.3 | 26.3 | 10.6 |

10.6 in/hour

## Schaeffer Nassar Scheidegg
Consulting Engineers, LLC

Project Number: 06-439

**PERMEABILITY TEST**

1425 Cantillon Blvd
Mays Landing, NJ 08330
Phone: (609) 625-7400
Fax: (609) 909-0253

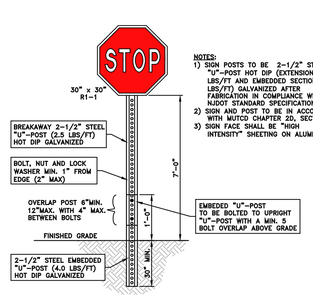
County: Ocean
Municipality: Little Egg Harbor Twp.
Block: 170 & 190
Lot: various
Date: 4/8/26
Test Pit No. 15
Test No. 1
Date collected: 4/1/26
Fill or Native Soil: Native
Depth of Sample: 115 inches

Soil Sample Inside radius [R]: 0.75 in
Soil Sample Length [L]: 4 in
Net Sample Weight Rep: 190.5 gr
Resulting Sample Volumes: 115.8 cc
Sample bulk density Rep: 1.64 gr/cc
Standpipe inside Radius [r]: 0.18 in

| Replicate A H1 [in] | Replicate A H2[in] | Time Start [Sec] | Time End [Sec] | Replicate A Δ t [Sec] | Replicate A K [in/hr] |
|---|---|---|---|---|---|
| 7 | 5 | 0 | 28.5 | 28.5 | 9.8 |
| 7 | 5 | 0 | 28.4 | 28.4 | 9.8 |
| 7 | 5 | 0 | 28.3 | 28.3 | 9.9 |
| 7 | 5 | 0 | 28.4 | 28.4 | 9.8 |

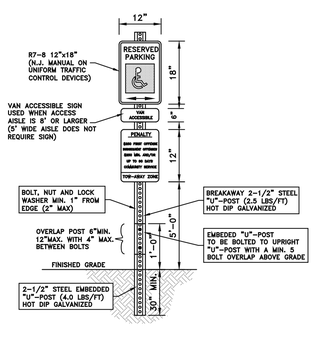
9.8 in/hour

PERM TEST #16
NO PERMEABLE SOILS
FOUND AT BOTTOM OF
SOIL TEST PIT

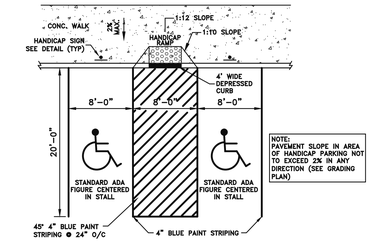



NOTES:
1) SIGN POSTS TO BE 2-1/2" STEEL "U"-POST HOT DIP (EXTENSION 2.5 LBS/FT AND EMBEDDED SECTION 4 LBS/FT) GALVANIZED AFTER FABRICATION IN COMPLIANCE WITH NJDOT STANDARD SPECIFICATIONS.
2) SIGN AND POST TO BE IN ACCORDANCE WITH MUTCD CHAPTER 2D, SECT. 2D.38
3) SIGN FACE SHALL BE "HIGH INTENSITY" SHEETING ON ALUMINUM.

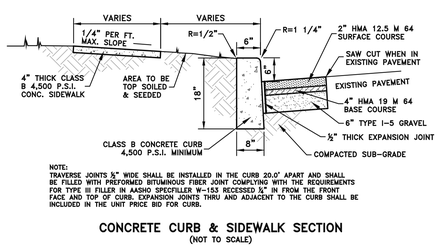
STOP SIGN DETAIL
(NOT TO SCALE)




ACCESSIBLE PARKING SIGN DETAIL
(NOT TO SCALE)

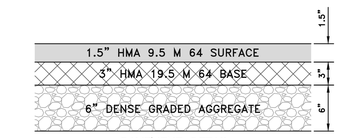



ACCESSIBLE PARKING & RAMP DETAIL
(NOT TO SCALE)

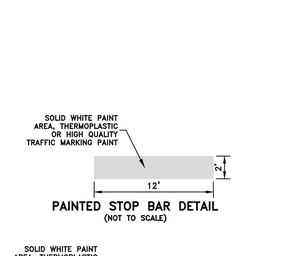



NOTE:
TRAVERSE JOINTS ½" WIDE SHALL BE INSTALLED IN THE CURB 20.0' APART AND SHALL BE FILLED WITH PREFORMED BITUMINOUS FIBER JOINT COMPLYING WITH THE REQUIREMENTS FOR TYPE III FILLER IN AASHO SPECFILLER M-153 RECESSED ½" IN FROM THE FRONT FACE AND TOP OF CURB. EXPANSION JOINTS THRU AND ADJACENT TO THE CURB SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CURB.

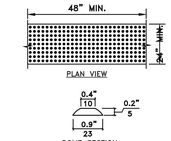
CONCRETE CURB & SIDEWALK SECTION
(NOT TO SCALE)




PAVEMENT DETAIL
(NOT TO SCALE)

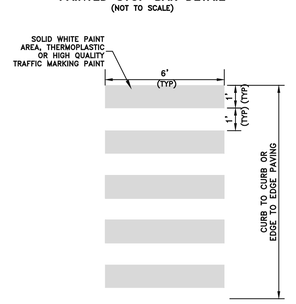



PAINTED STOP BAR DETAIL
(NOT TO SCALE)

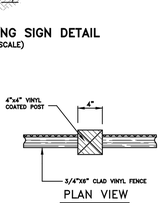


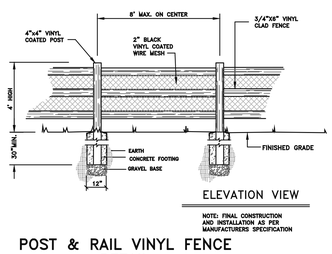

NOTES:
1) DOMES TO BE ALIGNED IN A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL.
2) WHEELS MUST BE ABLE TO ROLL BETWEEN DOMES
3) DOMES ALIGNED IN ROWS, NOT SKEWED DIAGONALLY.
4) THERE SHALL BE A MINIMUM OF 70 PERCENT CONTRAST IN LIGHT REFLECTANCE BETWEEN THE DETECTABLE WARNING AND AN ADJOINING SURFACE. THE MATERIAL USED TO PROVIDE VISUAL CONTRAST SHALL BE AN INTEGRAL PART OF THE DETECTABLE WARNING SURFACE.

DETECTABLE WARNING SURFACE DETAIL (ON-SITE)
(NOT TO SCALE)



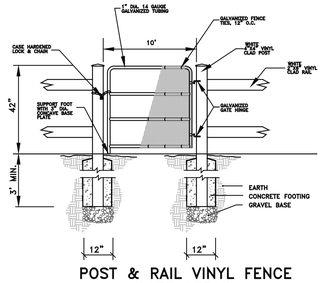

PAINTED CROSS WALK DETAIL
(NOT TO SCALE)




NOTE: FINAL CONSTRUCTION AND INSTALLATION AS PER MANUFACTURERS SPECIFICATION

POST & RAIL VINYL FENCE DETAIL
N.T.S.




POST & RAIL VINYL FENCE GATE DETAIL
N.T.S.

PLANS FOR PERMIT PURPOSES ONLY


Schaeffer Nassar Scheidegg
CONSULTING ENGINEERS, LLC
Surveyors • Environmentalists • Planners
1425 Cantillon Boulevard • Mays Landing • New Jersey
Telephone: (609) 625 - 7400 • Fax: (609) 909 - 0253
Certificate of Authorization #24GA28103800


THIS PLAN IS WELL AND VERY UNLESS THE RAISED IMPRESSION SEAL OF THE SIGNING ENGINEER IS AFFIXED HERETO.

ANDREW F. SCHAEFFER
LICENSED PROFESSIONAL ENGINEER
NEW JERSEY LIC. NO. 32883
3/19/26
DATE

SOIL PERMEABILITY TESTS & DETAILS FOR:
CAVALRY BAPTIST CHURCH
RAILROAD DRIVE BLOCK 170, LOTS 3.3.01&4 & BLOCK 190, LOTS 1, 2.01, 2.03, 2.09,2.12
TOWNSHIP OF LITTLE EGG HARBOR, OCEAN COUNTY, NEW JERSEY
ZONE: R-100 RESIDENTIAL DISTRICT, TAX MAP SHEET 12

| NO. # | DATE | BY | REVISION DESCRIPTION |
|---|---|---|---|
| - | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | - | - |

| | |
|---|---|
| DATE | 2-18-26 |
| SCALE | N.T.S. |
| BY | L.B. |
| CHECKED | A.F.S. |
| SHEET NO. | 10 |
| | 10 of 12 |

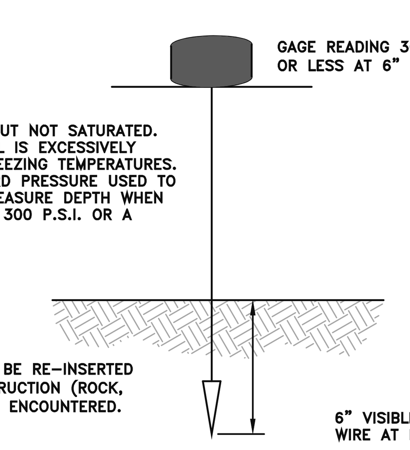
FILE# 06-439

## SOIL EROSION & SEDIMENT CONTROL NOTES:

1. THE SOIL EROSION INSPECTOR MAY REQUIRE ADDITIONAL SOIL EROSION MEASURES TO BE INSTALLED, IN ACCORDANCE WITH THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY, 7TH EDITION, JANUARY 2014, REVISED JULY 2017.
2. THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR ANY EROSION OR SEDIMENTATION THAT MAY OCCUR BELOW STORMWATER OUTFALLS OR OFFSITE AS A RESULT OF CONSTRUCTION OF THE PROJECT.
3. THE SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED 48 HOURS PRIOR TO ANY LAND DISTURBANCE.
4. ALL APPLICABLE EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE IN PLACE PRIOR TO ANY GRADING OPERATION AND/OR INSTALLATION OF PROPOSED STRUCTURES OR UTILITIES.
5. SOIL EROSION AND SEDIMENT CONTROL PRACTICES ON THIS PLAN SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY.
6. APPLICABLE EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE LEFT IN PLACE UNTIL CONSTRUCTION IS COMPLETED AND/OR THE AREA IS STABILIZED.
7. THE CONTRACTOR SHALL PERFORM ALL WORK, FURNISH ALL MATERIALS AND INSTALL ALL MEASURES REQUIRED TO REASONABLY CONTROL SOIL EROSION RESULTING FROM CONSTRUCTION OPERATIONS AND PREVENT EXCESSIVE FLOW OF SEDIMENT FROM THE CONSTRUCTION SITE.
8. ANY DISTURBED AREA THAT IS TO BE LEFT EXPOSED FOR MORE THAN SIXTY (60) DAYS AND NOT SUBJECT TO CONSTRUCTION TRAFFIC SHALL IMMEDIATELY RECEIVE A TEMPORARY SEEDING AND FERTILIZATION IN ACCORDANCE WITH THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY. IF THE SEASON PROHIBITS TEMPORARY SEEDING, THE DISTURBED AREAS WILL BE MULCHED WITH SALT HAY OR EQUIVALENT AND ANCHORED IN ACCORDANCE WITH THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY (I.E. PEG AND TWINE, MULCH NETTING OR LIQUID MULCH BINDER).
9. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO PROVIDE CONFIRMATION OF LIME, FERTILIZER AND SEED APPLICATION AND RATES OF APPLICATION AT THE REQUEST OF THE SOIL CONSERVATION DISTRICT.
10. ALL CRITICAL AREAS SUBJECT TO EROSION WILL RECEIVE A TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH AT A RATE OF 2 TONS PER ACRE, ACCORDING TO THE NEW JERSEY STANDARDS IMMEDIATELY FOLLOWING ROUGH GRADING.
11. THE SITE SHALL AT ALL TIMES BE GRADED AND MAINTAINED SUCH THAT ALL STORMWATER RUNOFF IS DIVERTED TO SOIL EROSION AND SEDIMENT CONTROL FACILITIES.
12. ALL SEDIMENTATION STRUCTURES WILL BE INSPECTED AND MAINTAINED ON A REGULAR BASIS AND AFTER EVERY STORM EVENT.
13. A CRUSHED STONE, TIRE CLEANING PAD WILL BE INSTALLED WHEREVER A CONSTRUCTION ACCESS EXISTS. THE STABILIZED PAD WILL BE INSTALLED ACCORDING TO THE STANDARD FOR STABILIZED CONSTRUCTION ACCESS.
14. ALL DRIVEWAYS MUST BE STABILIZED WITH CRUSHED STONE OR SUBBASE PRIOR TO INDIVIDUAL LOT CONSTRUCTION.
15. REMOVE ANY SEDIMENT THAT MAY BE SPILLED, DROPPED, OR TRACKED OFF THE PROJECT SITE. ALL PAVED RIGHTS-OF-WAY ADJACENT TO THE PROJECT SITE MUST BE MAINTAINED IN A CLEAN, SWEPT CONDITION THROUGHOUT CONSTRUCTION.
16. ALL CATCH BASIN INLETS WILL BE PROTECTED ACCORDING TO THE CERTIFIED PLAN.
17. ALL STORM DRAINAGE OUTLETS WILL BE STABILIZED, AS REQUIRED, BEFORE THE DISCHARGE POINTS BECOME OPERATIONAL.
18. ALL DEWATERING OPERATIONS MUST DISCHARGE DIRECTLY INTO A SEDIMENT FILTER AREA. THE SEDIMENT FILTER SHOULD BE COMPOSED OF A SUITABLE SEDIMENT FILTER FABRIC.
19. NJSA 4:24-39, ET SEQ. REQUIRES THAT NO CERTIFICATE OF OCCUPANCY BE ISSUED BEFORE ALL PROVISIONS OF THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN HAVE BEEN COMPLIED WITH FOR PERMANENT MEASURES. ALL SITE WORK FOR THE PROJECT MUST BE COMPLETED PRIOR TO THE DISTRICT ISSUING A REPORT OF COMPLIANCE AS A PREREQUISITE TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY BY THE MUNICIPALITY.
20. A COPY OF THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN MUST BE MAINTAINED ON THE PROJECT SITE DURING CONSTRUCTION.
21. ANY CONVEYANCE OF THIS PROJECT PRIOR TO ITS COMPLETION WILL TRANSFER FULL RESPONSIBILITY FOR COMPLIANCE WITH THE CERTIFIED PLAN TO ANY SUBSEQUENT OWNERS.
22. IMMEDIATELY AFTER THE COMPLETION OF STRIPPING AND STOCKPILING OF TOPSOIL, THE STOCKPILE MUST BE STABILIZED ACCORDING TO THE STANDARD FOR TEMPORARY VEGETATIVE COVER. STABILIZE TOPSOIL PILE WITH STRAW MULCH FOR PROTECTION IF THE SEASON DOES NOT PERMIT THE APPLICATION AND ESTABLISHMENT OF TEMPORARY SEEDING. ALL SOIL STOCKPILES ARE NOT TO BE LOCATED WITHIN FIFTY (50) FEET OF A FLOODPLAIN, SLOPE, ROADWAY OR DRAINAGE FACILITY AND THE BASE MUST BE PROTECTED WITH A SEDIMENT BARRIER.
23. ANY CHANGES TO THE SITE PLAN WILL REQUIRE THE SUBMISSION OF A REVISED SOIL EROSION AND SEDIMENT CONTROL PLAN TO THE SOIL CONSERVATION DISTRICT. THE REVISED PLAN MUST BE IN ACCORDANCE WITH THE CURRENT STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY.
24. METHODS FOR THE MANAGEMENT OF HIGH ACID PRODUCING SOILS SHALL BE IN ACCORDANCE WITH THE STANDARDS. HIGH ACID PRODUCING SOILS ARE THOSE FOUND TO CONTAIN IRON SULFIDES OR HAVE A PH OF 4 OR LESS.
25. MAXIMUM SIDE SLOPES OF ALL EXPOSED SURFACES SHALL NOT BE CONSTRUCTED STEEPER THAN 3:1 UNLESS OTHERWISE APPROVED BY THE DISTRICT.
26. DUST IS TO BE CONTROLLED BY AN APPROVED METHOD ACCORDING TO THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY AND MAY INCLUDE WATERING WITH A SOLUTION OF CALCIUM CHLORIDE AND WATER.
27. ADJOINING PROPERTIES SHALL BE PROTECTED FROM EXCAVATION AND FILLING OPERATIONS ON THE PROPOSED SITE.
28. USE STAGED CONSTRUCTION METHODS TO MINIMIZE EXPOSED SURFACES, WHERE APPLICABLE.
29. ALL VEGETATIVE MATERIAL SHALL BE SELECTED IN ACCORDANCE WITH AMERICAN STANDARDS FOR NURSERY STOCK OF THE AMERICAN ASSOCIATION OF THE NURSERYMEN AND IN ACCORDANCE WITH THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY.
30. NATURAL VEGETATION AND SPECIES SHALL BE RETAINED WHERE SPECIFIED ON THE LANDSCAPE PLAN.
31. THE PERMANENT VEGETATIVE COVER SUCH AS SEEDING OR SODDING ON ALL AREAS SHALL BE ACCOMPLISHED WITHIN 10 DAYS AFTER FINAL GRADING OPERATIONS HAVE BEEN COMPLETED.
32. EXCAVATED SOIL MATERIAL SHALL NOT BE PLACED ADJACENT TO RIVERS, STREAMS, OR BODIES OF WATER IN A MANNER THAT WILL CAUSE IT TO BE WASHED AWAY BY HIGH WATER OR RUNOFF. EXCESS BORROW MATERIAL REMOVED FROM THE CONSTRUCTION SITE SHALL BE STABILIZED AT THE SITE OF PLACEMENT. 33. THIS CERTIFICATION IS LIMITED TO THE CONTROLS SPECIFIED IN THIS PLAN. IT IS NOT AUTHORIZATION TO ENGAGE IN THE PROPOSED LAND USE UNLESS SUCH USE HAS BEEN PREVIOUSLY APPROVED BY THE MUNICIPALITY, COUNTY, STATE AGENCY OR OTHER CONTROLLING AGENCY.

### GENERAL SOIL EROSION NOTES:

1. A REPORT OF COMPLIANCE MUST BE OBTAINED FROM THE DISTRICT PRIOR TO RECEIVING A CERTIFICATE OF OCCUPANCY FROM THE MUNICIPALITY. A REQUEST FOR A DISTRICT INSPECTION FOR THE RELEASE OF A REPORT OF COMPLIANCE MUST BE MADE 5-WORKING DAYS IN ADVANCE. THIS APPLIES BOTH TO COMPLETE (FINAL) AND CONDITIONAL (TEMPORARY) CERTIFICATES.
2. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAYS MUST BE REMOVED IMMEDIATELY.
3. THE STORM WATER BASIN MUST BE CONSTRUCTED AND PERMANENTLY STABILIZED PRIOR TO THE ESTABLISHMENT OF IMPERVIOUS SURFACES.
4. THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR ANY EROSION OR SEDIMENTATION THAT MAY OCCUR BELOW STORM WATER OUTFALLS OR OFFSITE AS A RESULT OF CONSTRUCTION OF THE PROJECT.
5. REMOVE ANY SEDIMENT THAT MAY BE SPILLED, DROPPED OR TRACKED OFF THE PROJECT SITE. ALL PAVED RIGHT-OF-WAYS ADJACENT TO THE PROJECT SITE MUST BE MAINTAINED IN A CLEAN, SWEPT CONDITION THROUGHOUT CONSTRUCTION.
6. THE SOIL EROSION INSPECTOR MAY REQUIRE ADDITIONAL SOIL EROSION MEASURES TO BE INSTALLED AS DIRECTED BY THE DISTRICT INSPECTOR, IN ACCORDANCE WITH THE "STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY", 7TH EDITION, JANUARY 2014, REVISED JULY 2017.




**HANDHELD SOIL PENETROMETER TEST**
N.T.S.

## MULCH ANCHORING

MULCH ANCHORING – SHOULD BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT OF HAY OR STRAW MULCH TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS, DEPENDING UPON THE SIZE OF THE AREA AND STEEPNESS OF SLOPES.

A. PEG AND TWINE – DRIVE 8 TO 10 INCH WOODEN PEGS TO WITHIN 2 TO 3 INCHES OF THE SOIL SURFACE EVERY 4 FEET IN ALL DIRECTIONS. STAKES MAY BE DRIVEN BEFORE OR AFTER APPLYING MULCH. SECURE MULCH TO SOIL SURFACE BY STRETCHING TWINE BETWEEN PEGS IN A CRISS-CROSS AND A SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.

B. MULCH NETTINGS – STAPLE PAPER, COTTON, OR PLASTIC NETTINGS OVER MULCH. USE A DEGRADABLE NETTING IN AREAS TO BE MOWED. NETTING IS USUALLY AVAILABLE IN ROLLS 4 FEET WIDE AND UP TO 300 FEET LONG.

C. CRIMPER MULCH ANCHORING COULTER TOOL – A TRACTOR-DRAWN IMPLEMENT ESPECIALLY DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE. THIS PRACTICE AFFORDS MAXIMUM EROSION CONTROL, BUT ITS USE IS LIMITED TO THOSE SLOPES UPON WHICH THE TRACTOR CAN OPERATE SAFELY. SOIL PENETRATION SHOULD BE ABOUT 3 TO 4 INCHES. ON SLOPING LAND, THE OPERATION SHOULD BE ON THE CONTOUR.

D. LIQUID MULCH-BINDERS
1. APPLICATIONS SHOULD BE HEAVIER AT EDGES WHERE WIND CATCHES THE MULCH, IN VALLEYS, AND AT CRESTS OF BANKS. REMAINDER OF AREA SHOULD BE UNIFORM IN APPEARANCE.

2. USE ONE OF THE FOLLOWING:
A. ORGANIC AND VEGETABLE BASED BINDERS – NATURALLY OCCURRING, POWDER BASED, HYDROPHILIC MATERIALS THAT MIXED WITH WATER FORMULATES A GEL AND THEN APPLIED TO MULCH UNDER SATISFACTORY CURING CONDITIONS WILL FORM MEMBRANE NETWORKS OF INSOLUBLE POLYMERS. THE VEGETABLE GEL SHALL BE PHYSIOLOGICALLY HARMLESS AND NOT RESULT IN A PHYTOTOXIC EFFECT OR IMPEDE GROWTH OF TURFGRASS. VEGETABLE BASED GELS SHALL BE APPLIED AT RATES AND WEATHER CONDITIONS RECOMMENDED BY THE MANUFACTURER.

B. SYNTHETIC BINDERS – HIGH POLYMER SYNTHETIC EMULSION, MISCIBLE WITH WATER WHEN DILUTED AND FOLLOWING APPLICATION TO MULCH, DRYING AND CURING SHALL NO LONGER BE SOLUBLE OR DISPERSIBLE IN WATER. IT SHALL BE APPLIED AT RATES AND WEATHER CONDITIONS RECOMMENDED BY THE MANUFACTURER AND REMAIN TACKY UNTIL GERMINATION OF GRASS.

## DUST CONTROL MEASURES:

INSTALLATION OF SILT FENCING AROUND THE SITE AS SHOWN ON PLAN AND STABILIZATION OF SOILS BY VEGETATIVE AND MECHANICAL MEANS WILL PREVENT DUST FROM BLOWING OFF OF THE SITE AND IS CONSISTENT WITH THE USE OF "BARRIERS" AS DESCRIBED IN SECTION 16-1 USE OF WETTING PROCEDURES IS ALSO A RECOMMENDED METHOD OF REDUCING DUST BLOWING.

## SOIL DE-COMPACTION AND TESTING REQUIREMENTS:

A. SOIL COMPACTION TESTING REQUIREMENTS

1. SUBGRADE SOILS PRIOR TO THE APPLICATION OF TOPSOIL (SEE PERMANENT SEEDING AND STABILIZATION NOTES FOR TOPSOIL REQUIREMENTS) SHALL BE FREE OF EXCESSIVE COMPACTION TO A DEPTH OF 6.0 INCHES TO ENHANCE THE ESTABLISHMENT OF PERMANENT VEGETATIVE COVER.
2. AREAS OF THE SITE WHICH ARE SUBJECT TO COMPACTION TESTING AND/OR MITIGATION ARE GRAPHICALLY DENOTED ON THE CERTIFIED SOIL EROSION CONTROL PLAN.
3. COMPACTION TESTING LOCATIONS ARE DENOTED ON THE PLAN. LOCATIONS ID'S SHALL BE USED TO COMPLETE THE COMPACTION REMEDIATION FORM, AVAILABLE FROM THE LOCAL SOIL EROSION CONSERVATION DISTRICT. THIS FORM MUST BE FILLED OUT AND SUBMITTED PRIOR TO RECEIVING A CERTIFICATE OF COMPLIANCE FROM THE DISTRICT.
4. IN THE EVENT THAT TESTING INDICATES COMPACTION IN EXCESS OF THE MAXIMUM THRESHOLDS INDICATED FOR THE SIMPLIFIED TESTING METHODS (SEE DETAILS BELOW), THE CONTRACTOR/OWNER SHALL HAVE THE OPTION TO PERFORM EITHER (1) COMPACTION MITIGATION OVER THE ENTIRE MITIGATION AREA DENOTED ON THIS PLAN (EXCLUDING EXEMPT AREAS), OR (2) PERFORM ADDITIONAL, MORE DETAILED TESTING TO ESTABLISH THE LIMITS OF EXCESSIVE COMPACTION WHEREUPON ONLY THE EXCESSIVELY COMPACTED AREAS WOULD REQUIRE COMPACTION MITIGATION. ADDITIONAL DETAILED TESTING SHALL BE PERFORMED BY A TRAINED, LICENSED PROFESSIONAL.

B. COMPACTION TESTING METHODS

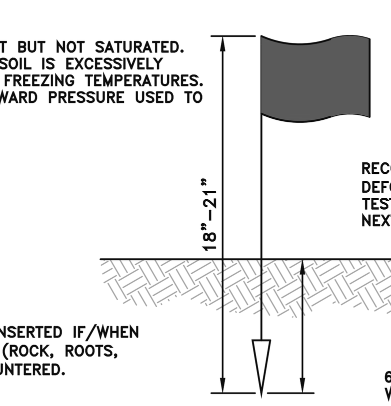
1. PROBING WIRE TEST (SEE DETAIL)
2. HAND-HELD PENETROMETER TEST (SEE DETAIL)
3. TUBE BULK DENSITY TEST (LICENSED PROFESSIONAL REQUIRED)
4. NUCLEAR DENSITY TEST (LICENSED PROFESSIONAL REQUIRED)
5. NOTE: ADDITIONAL TESTING METHODS WHICH CONFORM TO ASTM STANDARDS AND SPECIFICATIONS, AND WHICH PRODUCE A DRY WEIGHT, SOIL BULK DENSITY MEASUREMENT MAY BE ALLOWED SUBJECT TO DISTRICT APPROVAL.
6. DETAILED REQUIREMENTS FOR EACH COMPACTION TESTING METHOD CAN BE FOUND IN SECTION 19 "STANDARDS FOR LAND GRADING" OF THE NJ STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL, LATEST EDITION.
7. SOIL COMPACTION TESTING IS NOT REQUIRED IF/WHEN SUBSOIL COMPACTION REMEDIATION (SCARIFICATION/TILLAGE (6" MINIMUM DEPTH) OR SIMILAR) IS PROPOSED AS PART OF THE SEQUENCE OF CONSTRUCTION.

C. PROCEDURES FOR SOIL COMPACTION MITIGATION

1. PROCEDURES SHALL BE USED TO MITIGATE EXCESSIVE SOIL COMPACTION PRIOR TO PLACEMENT OF TOPSOIL AND ESTABLISHMENT OF PERMANENT VEGETATIVE COVER.
2. RESTORATION OF COMPACTED SOILS SHALL BE THROUGH DEEP SCARIFICATION/TILLAGE (6" MINIMUM DEPTH) WHERE. THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.). IN THE ALTERNATIVE, ANOTHER METHOD AS SPECIFIED BY A NEW JERSEY LICENSED PROFESSIONAL ENGINEER MAYBE SUBSTITUTED SUBJECT TO THE DISTRICT APPROVAL.

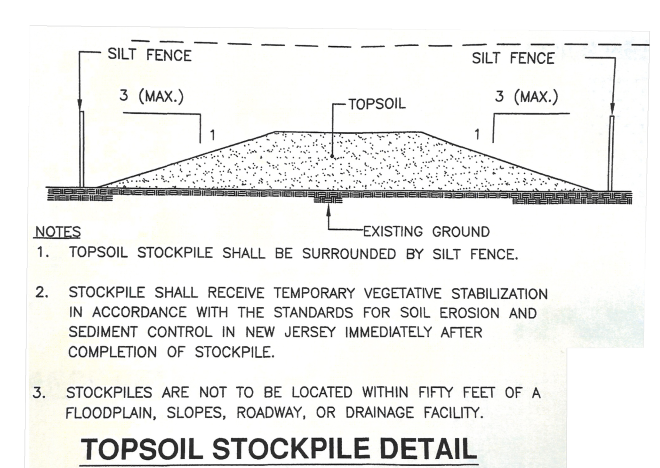
## TOPSOIL & SOIL DE-COMPACTION REQUIREMENTS:

1. A UNIFORM APPLICATION OF 5 INCHES, FIRMED IN PLACE IS REQUIRED ON AREAS TO BE VEGETATED TO IMPROVE THE SOIL MEDIUM FOR PLANT ESTABLISHMENT AND MAINTENANCE PER CHAPTER 8 OF THE "STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY" DATED JULY 2017.
2. SUBGRADE SOILS SHALL BE FREE OF EXCESSIVE COMPACTION TO A DEPTH OF 6 INCHES TO ENHANCE THE ESTABLISHMENT OF PERMANENT VEGETATIVE COVER PER CHAPTER 19 OF THE "STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY" DATED JULY 2017.
3. SUBSOILS ARE TO BE PROACTIVELY DE-COMPACTED OR SOIL COMPACTION TESTED PRIOR TO THE APPLICATION OF TOPSOIL. COMPACTION TESTING METHOD/PRODECURE SHALL BE PERFORMED PER CHAPTER 19 BY THE CONTRACTOR OR OTHER PROJECT OWNER REPRESENTATIVE. IF THE TESTING INDICATES SUBSOIL COMPACTION, THE SUBSOIL SHALL BE DE-COMPACTED TO A DEPTH OF 6 INCHES PRIOR TO THE APPLICATION OF TOPSOIL.
4. IF COMPACTION TESTING IS NOT PERFORMED, SUBSOILS SHALL BE SCARIFIED/TILLED TO A MINIMUM DEPTH OF 6 INCHES AS PART OF THE SEQUENCE OF CONSTRUCTION WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.). IN THE ALTERNATIVE, ANOTHER METHOD AS SPECIFIED BY A NEW JERSEY LICENSED PROFESSIONAL ENGINEER MAYBE SUBSTITUTED SUBJECT TO DISTRICT APPROVAL.




**PROBING WIRE TEST 15.5 GA. STEEL WIRE (SURVEY FLAG)**
N.T.S.

| CONSTRUCTION SEQUENCE | | |
|---|---|---|
| 1 | NOTIFY THE DELATLANTIC CONSERVATION DISTRICT IN WRITING AT LEAST 48-HOURS PRIOR TO ANY LAND DISTURBANCE. | 1-DAY |
| 2 | INSTALLATION OF TEMPORARY SOIL EROSION AND SEDIMENT CONTROL MEASURES MUST BE INSTALLED AT THE INITIATION OF LAND DISTURBANCE ACTIVITIES AND MUST INCLUDE A STABILIZED CONSTRUCTION ENTRANCE AND SILT FENCE. | 1-DAY |
| 3 | CLEARING AND ROUGH GRADE SITE | 1-WEEK |
| 4 | THE STORMWATER BASIN(S) MUST BE CONSTRUCTED DURING THE INITIAL PHASE OF CONSTRUCTION AND SIDE SLOPES MUST BE PERMANENTLY STABILIZED PRIOR TO THE ESTABLISHMENT OF IMPERVIOUS SURFACES. | 1-WEEK |
| 5 | CONSTRUCTION OF ALL SITE IMPROVEMENTS | 4-MONTHS |
| 6 | INSTALL INLET PROTECTION AFTER STORM SEWER INSTALLATION | 1-DAY |
| 7 | FINAL GRADING | 3-DAY |
| 8 | SOIL COMPACTION TESTING AND/OR SUBSOIL COMPACTION REMEDIATION. TESTING AND/OR RESTORATION OF COMPACTED SOILS (THROUGH DEEP SCARIFICATION/TILLAGE-6" MINIMUM DEPTH) SHALL BE DONE PRIOR TO TO THE PLACEMENT OF TOPSOIL. | 3-DAY |
| 9 | TOPSOIL (5" MINIMUM DEPTH) AND FINAL GRADING OF THE SITE. | 1-DAY |
| 10 | PERMANENT STABILIZATION OF THE SITE. | 1-DAY |
| 11 | OBTAIN A FINAL REPORT OF COMPLIANCE FROM THE DELATLANTIC CONSERVATION DISTRICT | 1-DAY |
| 12 | REMOVAL OF SCD MEASURES | 1-DAY |




**STOCKPILE DETAIL**
N.T.S.

GRAPHIC SCALE
50 0 25 50 100 200
1 INCH = 50 FT

**LEGEND**

SOIL COMPACTION TESTING AREAS

RECOMMENDED SOIL COMPACTION TESTING LOCATION (APPOXIMATELY 1 PER 0.5 ACRES)

**PLANS FOR PERMIT PURPOSES ONLY**


Schaeffer Nassar Scheidegg
CONSULTING ENGINEERS, LLC
Surveyors • Environmentalists • Planners
1425 Cantillon Boulevard • Mays Landing • New Jersey
Telephone: (609) 625 - 7400 • Fax: (609) 909 - 0253
Certificate of Authorization #24GA28103800


THIS PLAN IS NULL AND VOID UNLESS THE RAISED IMPRESSION SEAL OF THE SIGNING ENGINEER IS AFFIXED HERETO.

ANDREW F. SCHAEFFER
PROFESSIONAL ENGINEER
NEW JERSEY LIC. NO. 32883
3-19-26
DATE

# PROPOSED SOIL EROSION & SEDIMENT CONTROL PLAN FOR:
# CAVALRY BAPTIST CHURCH

RAILROAD DRIVE, BLOCK 170, LOTS 3,3.01&4 & BLOCK 190, LOTS 1, 2.01, 2.03, 2.09-2.12
TOWNSHIP OF LITTLE EGG HARBOR, OCEAN COUNTY, NEW JERSEY
ZONE: 'R-100' RESIDENTIAL DISTRICT, TAX MAP SHEET 12


OWNERSHIP AND USE OF DOCUMENTS


| REV # | DATE: | BY: | REVISION DESCRIPTION |
|---|---|---|---|
| - | - | - | - |

| | |
|---|---|
| DATE | 2-18-26 |
| SCALE | 1"=50' |
| BY | L.B. |
| CHECKED | A.F.S. |

SHEET NO.
**11**


FILE# 06-439

## STANDARD FOR PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION

### Methods and Materials

1. Site Preparation

A. Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application, and mulch anchoring. All grading should be done in accordance with Standards for Land Grading, p. 19–1.

B. Immediately prior to seeding and topsoil application, the surface should be scarified 6" to 12" where there has been soil compaction. This practice is permissible only where there is no danger to underground utilities (cables, irrigation systems, etc.).

C. Install needed erosion control practices or facilities such as diversions, grade stabilization structures, channel stabilization measures, and waterways. See Standards 11 through 42.

2. Seedbed Preparation

A. Apply ground limestone and fertilizer according to soil test recommendations such as offered by Rutgers Co-operative Extension. Soil sample mailers are available from the local Rutgers Cooperative Extension offices. Fertilizer shall be applied at the rate of 500 pounds per acre or 11 pounds per 1,000 square feet of 10–20–10 or equivalent with 50% water insoluble nitrogen unless a soil test indicates otherwise. Apply limestone in accordance with Table 4–1, pg 4–2 and the results of soil testing. Calcium carbonate is the equivalent and standard for measuring the ability of liming materials to neutralize soil acidity and supply calcium and magnesium to grasses and legumes. Table 4–I is a general guideline for limestone application rates.

TABLE 4 – 1

| Limestone* Application Rate by Soil Texture | | |
|---|---|---|
| SOIL TEXTURE | TONS/ACRE | LBS./1000 SQ. FT. |
| Clay, clay loam, and high organic soil | 3 | 135 |
| Sandy loam, loam, silt loam | 2 | 90 |
| Loamy sand, sand | 1 | 45 |

*Pulverized dolomitic limestone is preferred for most soils south of the New Brunswick–Trenton line.

B. Work lime and fertilizer into the soil as nearly as practical to a depth of 4 inches with a disc, spring tooth harrow, or other suitable equipment. The final harrowing or discing operation should be on the general contour. Continue tillage until a reasonable uniform seedbed is prepared.

C. Immediately prior to seeding, the surface should be scarified 6" to 12" where there has been soil compaction. This practice is permissible only where there is no danger to underground utilities (cables, irrigation systems, etc.).

D. High acid producing soil. Soils having a pH of 4 or less or containing iron sulfide shall be covered with a minimum of 12 inches of soil having a pH of 5 or more before initiating seedbed preparation. See Standard for Management of High Acid Producing Soils, pg. 1–1.

3. Seeding

A. Select a mixture from Table 4–3 (pg. 4–7) or use mixture recommended by Rutgers Cooperative Extension or Natural Resources Conservation Service which is approved by the Soil Conservation District. Seed germination shall have been tested within 12 months of the planting date. No seed shall be accepted with a germination test date more than 12 months old unless retested.

1. Seeding rates specified are required when a report of compliance is requested prior to actual establishment of permanent vegetation. Up to 50% reduction in rates may be used when permanent vegetation is established prior to a report of compliance inspection. These rates apply to all methods of seeding. Establishing permanent vegetation means 80% vegetative coverage with the specified seed mixture for the seeded area and mowed once.

2. Warm season mixtures are grasses and legumes which maximize growth at high temperatures, generally 85°F and above. See Table 4–3 (pg.4–7), mixtures 1 to 7. Planting rates for warm season grasses shall be the amount of Pure Live Seed (PLS) as determined by germination testing results.

3. Cool Season Mixtures are grasses and legumes which maximize growth at temperatures below 85°F. Many grasses become active at 65°F. See Table 3, mixtures 8–20. Adjustment of planting rates to compensate for the amount of Pure Live Seed is not required for cool season grasses.

B. Conventional Seeding is performed by applying seed uniformly by hand, cyclone (centrifugal) seeder, drop seeder, drill or cultipacker seeder. Except for drilled, hydroseeded or cultipacked seedings, seed shall be incorporated into the soil within 24 hours of seedbed preparation to a depth of 1/4 to 1/2 inch, by raking or dragging. Depth of seed placement may be 1/4 inch deeper on coarse textured soil.

C. Hydroseeding is a broadcast seeding method usually involving a truck or trailer mounted tank, with an agitation system and hydraulic pump for mixing seed, water and fertilizer and spraying the mix onto the prepared seedbed. Mulch shall not be included in the tank with seed. Short fibered mulch may be applied with a hydroseeder following seeding. (also see Section IV Mulching below) Hydroseeding is not a preferred seeding method because seed and fertilizer are applied to the surface and not incorporated into the soil. Poor seed to soil contact occurs reducing seed germination and growth. Hydroseeding may be used for areas too steep for conventional equipment to traverse or too obstructed with rocks, stumps, etc.

D. After seeding, firming the soil with a corrugated roller will assure good seed-to-soil contact, restore capillarity, and improve seedling emergence. This is the preferred method. When performed on the contour, sheet erosion will be minimized and water conservation on site will be maximized.

4. Mulching

Mulching is required on all seeding. Mulch will insure against erosion before grass is established and will promote faster and earlier establishment. The existence of vegetation sufficient to control soil erosion shall be deemed compliance with this mulching requirement.

A. Straw or Hay. Unrotted small grain straw, hay free of seeds, or salt hay to be applied at the rate of 1–1/2 to 2 tons per acre (70 to 90 pounds per 1,000 square feet), except that where a crimper is used instead of a liquid mulch-binder (tackifying or adhesive agent), the rate of application is 3 tons per acre. Mulch chopper-blowers must not grind the mulch. Hay mulch is not recommended for establishing fine turf or lawns due to the presence of weed seed.

Application: Spread mulch uniformly by hand or mechanically so that approximately 85% a of the soil surface will be covered. For uniform distribution of hand-spread mulch, divide area into approximately 1,000 square feet sections and distribute 70 to 90 pounds within each section.

Anchoring shall be accomplished immediately after placement to minimize loss by wind or water. This may be done by one of the following methods, depending upon the size of the area, steepness of slopes, and costs.

1. Peg and Twine. Drive 8 to 10 inch wooden pegs to within 2 to 3 inches of the soil surface every 4 feet in all directions. Stakes may be driven before or after applying mulch. Secure mulch to soil surface by stretching twine between pegs in a crisscross and a square pattern. Secure twine around each peg with two or more round turns.

2. Mulch Nettings – Staple paper, jute, cotton, or plastic nettings to the soil surface. Use a degradable netting in areas to be mowed.

3. Crimper (mulch anchoring coulter tool) – A tractor-drawn implement, somewhat like a disc harrow, especially designed to push or cut some of the broadcast long fiber mulch 3 to 4 inches into the soil so as to anchor it and leave part standing upright. This technique is limited to areas traversable by a tractor, which must operate on the contour of slopes. Straw mulch rate must be 3 tons per acre. No tackifying or adhesive agent is required.

4. Liquid Mulch-Binders – May be used to anchor salt hay, hay or straw mulch.
   a. Applications should be heavier at edges where wind may catch the mulch, in valleys, and at crests of banks. The remainder of the area should be uniform in appearance.

   b. Use one of the following:

   (1) Organic and Vegetable Based Binders – Naturally occurring, powder based, hydrophilic materials when mixed with water formulates a gel and when applied to mulch under satisfactory curing conditions will form membraned networks of insoluble polymers. The vegetable gel shall be physiologically harmless and not result in a phytotoxic effect or impede growth of turfgrass. Use at rates and weather conditions as recommended by the manufacturer to anchor mulch materials. Many new products are available, some of which may need further evaluation for use in this state.

   (2) Synthetic Binders – High polymer synthetic emulsion, miscible with water when diluted and following application to mulch, drying and curing shall no longer be soluble or dispersible in water. It shall be applied at rates recommended by the manufacturer and remain tacky until germination of grass.

Note: All names given above are registered trade names. This does not constitute a recommendation of these products to the exclusion of other products.

B. Wood-fiber or paper-fiber mulch – shall be made from wood, plant fibers or paper containing no growth or germination inhibiting materials, used at the rate of 1,500 pounds per acre (or as recommended by the product manufacturer) and may be applied by a hydroseeder. This mulch shall not be mixed in the tank with seed. Use is limited to flatter slopes and during optimum seeding periods in spring and fall.

C. Pelletized mulch – compressed and extruded paper and/or wood fiber product, which may contain copolymers, tackifiers, fertilizers and coloring agents. The dry pellets, when applied to a seeded area and watered, form a mulch mat. Pelletized mulch shall be applied in accordance with the manufacturers recommendations. Mulch may be applied by hand or mechanical spreader at the rate of 60–75 lbs/1,000 square feet and activated with 0.2 to 0.4 inches of water. This material has been found to be beneficial for use on small lawn or renovation areas, seeded areas where weed-seed free mulch is desired or on sites where straw mulch and tackifier agent are not practical or desirable.

Applying the full 0.2 to 0.4 inches of water after spreading pelletized mulch on the seed bed is extremely important for sufficient activation and expansion of the mulch to provide soil coverage.

5. Irrigation (where feasible)

If soil moisture is deficient, and mulch is not used, supply new seedings with adequate water (a minimum of 1/4 inch twice a day until vegetation is well established). This is especially true when seedings are made in abnormally dry or hot weather or on droughty sites.

6. Topdressing

Since slow release nitrogen fertilizer (water insoluble) is prescribed in Section II. A. Seedbed Preparation in this Standard, no follow-up of topdressing is mandatory. An exception may be made where gross nitrogen deficiency exists to the extent that turf failure may develop. In that instance, topdress with 10–10–10 or equivalent at 400 pounds per acre or 10 pounds per 1,000 square feet.

7. Establishing Permanent Vegetative Stabilization

The quality of permanent vegetation rests with the contractor. The timing of seeding, preparing the seedbed, applying nutrients, mulch and other management are essential. The seed application rates in Table 4–3 (pg. 4–7) are required when a Report of Compliance is requested prior to actual establishment of permanent vegetation. Up to 50% reduction in application rates may be used when permanent vegetation is established prior to requesting a Report of Compliance from the district. These rates apply to all methods of seeding. Establishing permanent vegetation means 80% vegetative cover (of the seeded species) and mowed once.

## STANDARD FOR MAINTAINING VEGETATION

Definition
The perpetuation of vegetative cover.

Purpose
To assure the continuing vigor and function of vegetative cover and enhance the environment. It is usually less costly to carry on a maintenance program than it is to make repairs after an extended period of neglect.

Water Quality Enhancement
Assures adequate permanent cover and prevents exposure of soils to erosion and off site sedimentation from storm water runoff impacts.

Where Applicable
On areas where existing vegetation protects or enhances the environment.

Methods and Materials

A preventive maintenance program anticipates requirements and accomplishes work when it can be done with least effort and expense to insure adequate vegetative cover.

Maintenance should occur on a regular basis, consistent with favorable plant growth, soil, and climatic conditions.
This involves regular seasonal work for mowing, fertilizing, liming, watering, pruning, fire control, weed and pest control, reseeding, and timely repairs.

The degree of preventive maintenance needed depends upon the type of vegetation and its proposed function or use.

1. Mowing is a recurring practice and its intensity depends upon the function of the ground cover. On high to moderate (A to B) maintenance areas, such as lawns, certain recreation fields, and picnic areas, mowing will be frequent (2 to 7 day intervals). Low maintenance (D) areas may be left unmowed to permit natural succession. See pg. 4–13 footnote #4, Maintenance Levels A, B, C and D in the Standard for Permanent Vegetative Cover, Table 4–3.

2. Fertilizer and lime should be applied as needed to maintain a dense stand of desirable species. Frequently mowed areas and those on sandy soils will require more fertilization.

3. Lime requirement should be determined by soil testing every 2 or 3 years. Fertilization increases the need for liming.

4. Weed invasion may result from abusive mowing and from inadequate fertilizing and liming. Brush invasion is a common consequence of lack of mowing. The amount of weeds or brush that can be tolerated in any vegetated area depends upon the intended use of the land. Drainage ways are subject to rapid infestation by weed and woody plants. These should be controlled, since they often reduce drainage way efficiency. Control of weeds or brush is accomplished by using herbicides or mechanical methods.

5. Pest and disease controls are more necessary on high maintenance areas than for low maintenance areas. Recommendations for resolving fertilizer, lime, pest and other maintenance problems may be obtained from Rutgers Cooperative Extension.

6. Fire hazard is greater where dry vegetation has accumulated. The taller the vegetation, the greater the hazard.

7. Prune trees and shrubs to remove dead or damaged branches. Remove undesirable or invasive plants to maintain integrity of the landscape and enhance quality of permanent vegetative cover.

## STANDARD FOR TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION

Definition
Establishment of temporary vegetative cover on soils exposed for periods of two to 6 months which are not being graded, not under active construction or not scheduled for permanent seeding within 60 days.

Purpose
To temporarily stabilize the soil and reduce damage from wind and water erosion until permanent stabilization is accomplished.

Water Quality Enhancement
Provides temporary protection against the impacts of wind and rain, slows the over land movement of storm water runoff, increases infiltration and retains soil and nutrients on site, protecting streams or other storm water conveyances.

Where Applicable
On exposed soils that have the potential for causing offset environmental damage.

Methods and Materials

1. Site Preparation

A. Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application, and mulch anchoring. All grading should be done in accordance with Standards for Land Grading, pg. 19–1.

B. Install needed erosion control practices or facilities such as diversions, grade stabilization structures, channel stabilization measures, and waterways. See Standards 11 through 42.

C. Immediately prior to seeding, the surface should be scarified 6" to 12" where there has been soil compaction. This practice is permissible only where there is no danger to underground utilities (cables, irrigation systems, etc.).

2. Seedbed Preparation

A. Apply ground limestone and fertilizer according to soil test recommendations such as offered by Rutgers Cooperative Extension. Soil sample mailers are available from the local Rutgers Cooperative Extension offices. Fertilizer shall be applied at the rate of 500 pounds per acre or 11 pounds per 1,000 square feet of 10–20–10 or equivalent with 5000 water insoluble nitrogen unless a soil test indicates otherwise. Apply limestone at the rate of 2 tons/acre unless soil testing indicates otherwise. Calcium carbonate is the equivalent and standard for measuring the ability of liming materials to neutralize soil acidity and supply calcium and magnesium to grasses and legumes. Table 7–1 is a general guideline for limestone application.

TABLE 7–1

| Limestone* Application Rate by Soil Texture | | |
|---|---|---|
| SOIL TEXTURE | TONS/ACRE | LBS./1000 SQ. FT |
| Clay, clay loam, and high organic soil | 3 | 135 |
| Sandy loam, loam, silt loam | 2 | 90 |
| Loamy sand, sand | 1 | 45 |

*Pulverized dolomitic limestone is preferred for most soils south of the New Brunswick–Trenton line.

B. Work lime and fertilizer into the soil as nearly as practical to a depth of 4 inches with a disc, springtooth harrow, or other suitable equipment. The final harrowing or discing operation should be on the general contour. Continue tillage until a reasonable uniform seedbed is prepared.

C. Inspect seedbed just before seeding. If traffic has left the soil compacted, the area must be retilled in accordance with the above.

D. Soils high in sulfides or having a pH of 4 or less refer to Standard for Management of High Acid Producing Soils, pg. 1–1.

3. Seeding

A. Select seed from recommendations in Table 7–2.

TABLE 7–2

| SEED SELECTIONS | SEEDING RATE 1 (pounds) per acre | per 1,000 sq. ft. | OPTIMUM SEEDING DATE 2 Based on Plant Hardiness Zone: ZONE 5b, 6s | ZONE 6b | ZONE 7a, b | OPTIMUM SEED DEPTH (inches) |
|---|---|---|---|---|---|---|
| COOL SEASON GRASS | | | | | | |
| 1. Perennial rye grass | 100 | 1.0 | 3/15–6/1 8/1–9/15 | 3/1–5/15 8/15–10/1 | 2/15–5/1 8/15–10/15 | 0.5 |
| 2. Spring oats | 86 | 2.0 | 3/15–6/1 8/1–9/15 | 3/1–5/15 8/15–10/1 | 2/15–5/1 8/15–10/15 | 1.0 |
| 3. Winter Barley | 96 | 2.2 | 8/1–9/15 | 8/15–10/1 | 8/15–10/15 | 1.0 |
| 4. Annual Ryegrass | 100 | 2.0 | 3/15–6/1 8/1–9/15 | 3/1–5/15 8/15–10/1 | 2/15–5/1 8/15–10/15 | 1.0 |
| 5. Winter Cereal Rye | 112 | 2.8 | 8/1–11/1 | 8/1–11/15 | 8/1–12/15 | 1.0 |
| WARM SEASON GRASS | | | | | | |
| 6. Pearl millet | 20 | 0.5 | 6/1–8/1 | 5/15–8/15 | 5/1–9/1 | 1.0 |
| 7. Millet (German or Hungarian) | 30 | 0.7 | 6/1–8/1 | 5/15–8/15 | 5/1–9/1 | 1.0 |

1. Seeding rate for warm season grass, selections 5–7 shall be adjusted to reflect the amount of Pure Line Seed (PLS) as determined by a germination test result. No adjustment is required for cool season grasses.
2. May be planted throughout summer if soil moisture is adequate or seeded area can be irrigated
3. Plant Hardiness Zone (see figure 7–1)
4. Twice the depth for sandy soils

B. Conventional Seeding. Apply seed uniformly by hand, cyclone (centrifugal) seeder, drop seeder, drill or cultipacker seeder. Except for drilled, hydroseeded or cultipacked seedings, seed shall be incorporated into the soil, to a depth of 1/4 to 1/2 inch, by raking or dragging. Depth of seed placement may be 1/4 inch deeper on coarse textured soil.

C. Hydroseeding is a broadcast seeding method usually involving a truck or trailer mounted tank, with an agitation system and hydraulic pump for mixing seed, water and fertilizer and spraying the mix onto the prepared seedbed. Mulch shall not be included in the tank with seed. Short fibered mulch may be applied with a hydroseeder following seeding. (also see Section IV Mulching) Hydroseeding is not a preferred seeding method because seed and fertilizer are applied to the surface and not incorporated into the soil. Poor seed to soil contact occurs

D. After seeding, firming the soil with a corrugated roller will assure good seed-to-soil contact, restore capillarity, and improve seedling emergence. This is the preferred method. When performed on the contour, sheet erosion will be minimized and water conservation on site will be maximized.

4. Mulching
See Mulching under Permanent Vegetative Cover for Soil Stabilization.

## STANDARD FOR STABILIZATION WITH MULCH ONLY

Definition
Stabilizing exposed soils with non-vegetative materials.

Purpose
To protect exposed soil surfaces from erosion damage and to reduce off site environmental damage.

Water Quality Enhancement
Provides temporary mechanical protection against wind or rainfall induced soil erosion until permanent vegetative cover may be established.

Where Applicable
This practice is applicable to areas subject to erosion, where the season and other conditions may not be suitable for growing an erosion-resistant cover or where stabilization is needed for a short period until more suitable protection can be applied.

Methods and Materials

1. Site Preparation

A. Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application, and mulch anchoring. All grading should be done in accordance with Standards for Land Grading, pg.19–I

B. Install needed erosion control practices or facilities such as diversions, grade stabilization structures, channel stabilization measures, and waterways. See Standards 11 through 42.

2. Protective Materials

A. Unrotted small-grain straw, or salt hay at 2.0 to 2.5 tons per acre is spread uniformly at 90 to 115 pounds per 1,000 square feet and anchored with a mulch anchoring tool, liquid mulch binders, or netting tie down. Other suitable materials may be used if approved by the Soil Conservation District.

B. Synthetic or organic soil stabilizers may be used under suitable conditions and in quantities as recommended by the manufacturer.

C. Wood-fiber or paper-fiber mulch at the rate of 1,500 pounds per acre (or cording to the manufacturer's requirements) may be applied by a hydroseeder.

D. Mulch netting, such as paper jute, excelsior, cotton, or plastic, may be used.

E. Woodchips applied uniformly to a minimum depth of 2 inches may be used. woodchips will not be used on areas where flowing water could wash them into an inlet and plug it.

F. Gravel, crushed stone, or slag at the rate of 9 cubic yards per 1,000 sq. ft. applied uniformly to a minimum depth of 3 inches maybe used. Size 2 or 3 (ASTM C–33) is recommended.

3. Mulch Anchoring
Should be accomplished immediately after placement of hay or straw mulch to minimize loss by wind or water. this may be done by one of the following methods, depending upon the size of the area and steepness of slopes.

A. Peg and Twine – Drive 8 to 10 inch wooden pegs to within 2 to 3 inches of the soil surface every 4 feet in all directions. Stakes may be driven before or after applying mulch. Secure mulch to soil surface by stretching twine between pegs in a crisscross and a square pattern. Secure twine around each peg with two or more round turns.

B. Mulch Nettings – Staple paper, cotton, or plastic nettings over mulch. Use a degradable netting in areas to be mowed. Netting is usually available in rolls 4 feet wide and up to 300 feet long.

C. Crimper Mulch Anchoring Coulter Tool – A tractor-drawn implement especially designed to punch and anchor mulch into the soil surface. This practice affords maximum erosion control, but its use is limited to those slopes upon which the tractor can operate safely. Soil penetration should be about 3 to 4 inches. On sloping land, the operation should be on the contour.

D. Liquid Mulch-Binders

1. Applications should be heavier at edges where wind catches the mulch, in valleys, and at crests of banks. Remainder of area should be uniform in appearance.

2. Use one of the following:

   a. Organic and Vegetable Based Binders – Naturally occurring, powder based, hydrophilic materials that mixed with water formulates a gel and hen applied to mulch under satisfactory curing conditions will form membrane networks of insoluble polymers. The vegetable gel shall be physiologically harmless and not result in a phytotoxic effect or impede growth of turfgrass. Vegetable based gels shall be applied at rates and weather conditions recommended by the manufacturer.
   b. Synthetic Binders – High polymer synthetic emulsion, miscible with water when diluted and following application to mulch, drying and curing shall no longer be soluble or dispersible in water. It shall be applied at rates and weather conditions recommended by the manufacturer and remain tacky until germination of grass.

## STANDARD FOR PERMANENT STABILIZATION WITH SOD

Definition
Establishing permanent vegetation using sod.

Purpose
To permanently stabilize topsoil with an immediate aesthetic covering, thus assuring conservation of soil and water, and to enhance the environment.

Water Quality Enhancement
Provides an immediate, permanent vegetative cover to the soil from the impacts of wind or rain and prevents soil and nutrient losses to streams and other storm water conveyances from storm water runoff.

Where Applicable
On exposed soils that have a potential for causing off-site environmental damage where an immediate, permanent vegetative cover is desired. Moisture Is required for success; access to irrigation is essential.

Methods and Materials
1. Cultivated sod is preferred over native or pasture sod. Specify "Certified Sod," or other high quality cultivated sod.
2. Sod should be free of weeds and undesirable coarse weedy grasses.
3. Sod should be of uniform thickness, approximately 5/8 inch, plus or minus 1/4 inch, at time of cutting (Excludes top growth.).
4. Sod should be vigorous and dense and be able to retain its own shape and weight when suspended vertically with a firm grasp from the upper 10 percent of the rip. Broken pads or torn and uneven ends will not be acceptable.
5. For droughty sites, a sod of turf-type tall fescue and bluegrass is preferred over a straight bluegrass sod.
6. Only moist, fresh, unheated sod should be used. Sod should be harvested, delivered, and installed within a period of 36 hours or less during summer months.

1. Site Preparation

A. Grade as needed and feasible to permit the use of conventional equipment for liming, fertilizing, and soil preparation. All grading should be done in accordance with Standard for Land Grading, pg. 19–1.

B. Install needed erosion control practices and facilities, such as diversion ditches,, dikes and terraces, erosion stops, and desilting basins. See Standards 11 through 42.

2. Soil Preparation

A. Apply ground limestone and fertilizer according to soil test recommendations such as offered by Rutgers Cooperative Extension. Soil sample mailers are available from the local Rutgers Cooperative Extension offices. Fertilizer shall be applied at the rate of 500 pounds per acre or 11 pounds per 1,000 square feet using 10–20–10 or equivalent with 50% water insoluble nitrogen unless a soil test indicates otherwise. Apply limestone at the rate of 2 tons/acre unless soil testing indicates otherwise. Calcium carbonate is the equivalent and standard for measuring the ability of liming materials to neutralize soil acidity and supply calcium and magnesium to grasses and legumes. Table 6–1 is a general guideline for limestone application rates.

TABLE 6 – 1

| Limestone* Application Rate by Soil Texture | | |
|---|---|---|
| SOIL TEXTURE | TONS/ACRE | LBS./1000 SQ. FT. |
| Clay, clay loam, and high organic soil | 3 | 135 |
| Sandy loam, loam, silt loam | 2 | 90 |
| Loamy sand, sand | 1 | 45 |

*Pulverized dolomitic limestone is preferred for most soils south of the New Brunswick–Trenton line.

B. Work lime and fertilizer into the topsoil as nearly as practical to a depth of

C. Remove from the surface all objects that would prevent good sod to topsoil contact and remove all other debris, such as wire, cable, tree roots, pieces of concrete, clods, lumps, or other unsuitable material.

D. Inspect site just before seeding. If traffic has left the soil compacted, the area must be re-tilled and finned in accordance with the above.

3. Sod Placement

A. Sod strips should be laid on the contour, never up and down the slope, starting at the bottom of the slope and working up. On steep slopes, the use of ladders will facilitate the work and prevent damage to the sod. During periods of high temperature, lightly irrigate the soil immediately prior to laying the sod.

B. Place sod strips with snug, even joints that are staggered. Open spaces invite erosion.

C. Roll or tamp sod immediately following placement to insure solid contact of root mat and soil surface. Do not overlap sod. All joints should be butted tightly in order to prevent voids which would cause drying of the roots.

D. On slopes greater than 3 to 1, secure sod to surface soil with wood pegs, wire staples biodegradable plastic spikes, or split shingles (8 to 10 inches long by 3/4 inch wide).

E. Surface water cannot always be diverted from flowing over the face of the slope, but a capping strip of heavy jute or plastic netting, properly secured, along the crown of the slope and edges will provide extra protection against lifting and undercutting of sod. The same technique can be used to anchor sod in water-carrying channels and other critical areas. Wire staples must be used to anchor netting in channel work.

F. Immediately following installation, sod should be watered until moisture penetrates the soil layer beneath sod to a depth of 1 inch. Maintain optimum moisture for at least two weeks.

4. Topdressing – Since slow release nitrogen fertilizer (water insoluble) is prescribed in Section 2, "Seedbed Preparation" in this Standard, a follow-up topdressing is not mandatory, except where gross nitrogen deficiency exists to the extent that turf failure may develop, topdressing shall then be applied. Topdress with 10–10–10 or equivalent at 400 pounds per acre or 10 pounds per 1,000 square feet.

## STANDARD FOR TOP SOILING

Definition
Top soiling entails the distribution of suitable quality soil on areas to be vegetated.

Purpose
To improve the soil medium for plant establishment and maintenance.

Water Quality Enhancement
Growth and establishment of a vigorous vegetative cover is facilitated by topsoil, preventing soil loss by wind and rain off site and into streams and other storm water conveyances.

Where Applicable
Topsoil shall be used where soils are to be disturbed and will be revegetated..

Methods and Materials
1. Materials
   A. Topsoil should be friable, loamy, free of debris, objectionable weeds and stones, and contain no toxic substance or adverse chemical or physical condition that may be harmful to plant growth. Soluble salts should not be excessive (conductivity less than 0.5 millions per centimeter. More than 0.5 millions may desiccate seedlings and adversely impact growth). Topsoil hauled in from off site should have a minimum organic matter content of 2.75 percent. Organic matter content may be raised by additives.

   B. Topsoil substitute is a soil material which may have been amended with sand, silt, clay, organic matter, fertilizer or lime and has the appearance of topsoil. Topsoil substitutes may be utilized on sites with insufficient topsoil for establishing permanent vegetation. All topsoil substitute materials shall meet the requirements of topsoil noted above. Soil tests shall be performed to determine the components of sand, silt, clay, organic matter, soluble salts and pH level.

2. Stripping and Stockpiling

   A. Field exploration should be made to determine whether quantity and or quality of surface soil justifies stripping.

   B. Stripping should be confined to the immediate construction area.

   C. Where feasible, lime may be applied before stripping at a rate determined by soil tests to bring the soil pH to approximately 6.5. In lieu of soil tests, see lime rate guide in seedbed preparation for Permanent Vegetative Cover for Soil Stabilization, pg. 4–1.

   D. A 4–6 inch stripping depth is common, but may vary depending on the particular soil.

   E. Stockpiles of topsoil should be situated so as not to obstruct natural drainage or cause off-site environmental damage.

   F. Stockpiles should be vegetated in accordance with standards previously described herein; see standards for Permanent (pg. 4–1) or Temporary (pg.7–1) Vegetative Cover for Soil Stabilization. Weeds should not be allowed to grow on stockpiles.

3. Site Preparation
   A. Grade at the onset of the optimal seeding period so as to minimize the duration and area of exposure of disturbed soil to erosion. Immediately proceed to establish vegetative cover in accordance with the specified seed mixture. Time is of the essence

   B. Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application and anchoring, and maintenance. See the Standard for Land Grading, pg. 19–1.

   C. As guidance for ideal conditions, subsoil should be tested for lime requirement. Limestone, if needed, should be applied to bring soil to a pH of approximately 6.5 and incorporated into the soil as nearly as practical to a depth of 4 inches.

   D. Immediately prior to topsoiling, the surface should be scarified 6" to 12" where there has been soil compaction. This will help insure a good bond between the topsoil and subsoil. This practice is permissible only where there is no danger to underground utilities (cables, irrigation systems, etc.).

   E. Employ needed erosion control practices such as diversions, grade stabilization structures, channel stabilization measures, sedimentation basins, and waterways. See Standards 11 through 42.

4. Applying Top Soil

A. Topsoil should be handled only when it is dry enough to work without damaging soil structure; i.e., less than field capacity (see glossary).

B. A uniform application of 5 inches, firmed in place is required. Soils with a PH of 4.0 or less or containing iron sulfide shall be covered with a minimum depth of 12 inches of soil having a pH of 5.0 or more, in accordance with the Standard for Management of High Acid Producing Soil (pg. 1–1).

C. Pursuant to the requirements in Section 7 of the Standard for Permanent Vegetative Stabilization, the contractor is responsible to ensure that permanent vegetative cover becomes established on at least 80% of the soils to be stabilized with vegetation. Failure to achieve the minimum coverage may require additional work to be performed by the contractor to include some or all of the following: supplemental seeding, re-application of lime and fertilizers, and/or the addition of organic matter (i.e. compost) as a top dressing. Such additional measures shall be based on soil tests such as those offered by Rutgers Cooperative Extension Service or other approved laboratory facilities qualified to test soil samples for agronomic properties.

## STANDARD FOR STABILIZED CONSTRUCTION ACCESS

Definition
A stabilized pad of clean crushed stone located at points where traffic will be accessing a construction site.

Purpose
The purpose of a stabilized construction access is to reduce the tracking or flowing of sediment onto paved roadways (or other impervious surfaces).

Conditions Where Practice Applies
A stabilized construction exit applies to points of construction ingress and egress where sediment may be tracked, or flow off, the construction site.*

* Needed at all points where construction vehicles access paved roadways from unpaved areas of the site.

Water Quality Enhancement
In addition to minimizing sediments which can be tracked directly onto pavement during construction, oils, greases and diesel fuels which become mixed with sediment during construction may also migrate into the off site drainage system where they may enter directly into a waterway. By preventing or minimizing the tracking of sediments onto paved areas, a significant reduction in construction related hydrocarbon pollution will also be controlled.

Design Criteria
Stone Size – Use ASTM C–33, size No. 2 (2 1/2 to 1 1/2 in) or 3 (2 to 1 in). Use clean crushed angular stone. Crushed concrete of similar size may be substituted but will require more frequent upgrading and maintenance.

Thickness – not less than six (6) inches.

Width – not less than full width of points of ingress or egress.

Length – 50 feet minimum where the soils are course grained (sands or gravels) or 100 feet minimum where soils are fine grained (clays or silts), except where the traveled length is less than 50 or 100 feet respectively. These lengths may be increased where field conditions dictate. Storm water from up-slope areas shall be diverted away from the stabilized pad (see Standard for Diversions, pg. 15–1). Where diversion is not possible, the length of the stabilized pad shall be as shown in Table 26–I. Where the slope of the access road exceeds 5%, a stabilized base course of fine aggregate bituminous concrete (FABC) shall be installed. The type and thickness of the FABC and use of a dense graded aggregate sub-base shall be as prescribed by local municipal ordinance or other governing authority.

At poorly drained locations, subsurface drainage gravel filter or geotextile shall be installed before installing the stabilized construction entrance.

TABLE 29–1:

| Lengths of Construction Exits on Sloping Roadbeds | | |
|---|---|---|
| Percent Slope of Roadway | Length of Stone Required: Coarse Grained Soils | Fine Grained Soils |
| 0 to 2% | 50 Ft. | 100 ft |
| 2 to 5% | 100 ft | 200 ft |
| >5% | Entire surface stabilized with FABC base course* | |

* As prescribed by local ordinances or other governing authority.

Where a stabilized construction exit traverses between two buildings, it shall be stoned the entire length of the right-of-way. Mountable stone berms placed across the width of the exit may also be required at the transition point between paved and non-paved areas to trap sediments which are carried by storm water flowing along the curbline.

Individual lot entrance and egress– After interior roadways are paved, individual lot ingress/egress points may require a stabilized construction entrance consisting of no. 3 stone ( I" to 2") to prevent or minimize tracking of sediments. Width of the stone ingress/egress shall be equal to lot entrance width and shall be a minimum often feet in length. If space is limited, vehicle tires may be washed with clean water before entering a paved area. A wash station must be located such that wash water will not flow onto paved roadways or into unprotected storm drainage systems.

When the construction access exits onto a major roadway, a paved transition area may be installed between the major roadway and the stoned entrance to prevent loose stones from being transported out onto the roadway by heavy equipment entering or leaving the site.

Maintenance
The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto roadways. This may require periodic top dressing with additional stone or additional length as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed, or tracked onto roadways (public or private) or other impervious surfaces must be removed immediately.

Where accumulation of dust/sediment is inadequately cleaned or removed by conventional methods, a power broom or street sweeper will be required to clean paved or impervious surfaces. All other access points which are not stabilized shall be blocked off.

## STANDARD FOR STORM SEWER INLET PROTECTION

Definition
A temporary barrier and settling facility installed at a storm sewer inlet.

Purpose
The purpose of storm sewer inlet protection is to intercept and retain sediment, thus preventing the entrance of sediment into the storm sewer system.

Conditions Where Practice Applies
1. Contributing drainage area is 3 acres or less.
2. A storm sewer or the outlet channel of a storm sewer needs protection from sediment.
3. Traffic will not destroy or cause constant maintenance of the storm sewer inlet protection.
4. A traffic hazard will not be created.
5. A flooding problem will not be created.

Water Quality Enhancement
The primary benefit to water quality is the removal of sediment from storm water runoff prior to entering the storm sewer system. As an added benefit, other floatable debris, such as vegetative matter and litter may also be filtered out of the runoff.

Design Criteria
The following applies to all methods of storm sewer inlet protection:

1. Must slow the storm water, provide the coarse sediment particles a chance to settle, and provide an area to retain the particles that have settled.
2. In all cases, inlet protection should not completely close off the inlet.
3. The protection device will be designed to capture or filter runoff from the 1 year, 24 hour storm event and shall safely convey higher flows directly into the storm sewer system.

Other methods that accomplish the purpose of storm sewer inlet protection may be used if approved by the Soil Conservation District.

Inspections shall be frequent. Maintenance, repair, and replacement shall be made promptly, as needed. The barrier shall be removed when the area draining toward the inlet has been stabilized.

## STANDARDS FOR DEWATERING

Definition

The removal and discharge of sediment-laden water from an excavated area, construction site or sediment basin.

Purpose

To properly remove suspended sediments and water from excavated areas through filtration and/or settlement prior to discharging water to a receiving water course or body.

Conditions Where Practice Applies

During construction excavated facilities need to be dewatered to facilitate or complete the construction process. The water pumped out of the excavated areas contain sediments that must be removed prior to discharging to receiving bodies of water. This standard does not address the removal of ground water through well points etc. This standard describes the following practices for the removal of sediment laden waters from excavation areas: removable pumping stations, sump pits, portable sedimentation tanks and silt control bags.

Water Quality Enhancement

Water discharged from excavated areas on construction sites may be a significant contributor of sediment to surface waters during construction. Water must be removed and disposed of in order for construction to move forward. Typically, water is pumped or containment berms are breached and sediment laden waters are permitted to flow uncontrolled into surface waters such as streams or lakes. By employing practices described in this standard, the majority of sediment suspended in waters may easily be removed prior to leaving the site. Filters and materials described herein are readily available and are easy to install and maintain.

Design Criteria

1. Removable Pumping Stations are used when long durations of pumping are required. The number of removable stations and their locations shall be shown on the plans and shall conform to detail 14–1. Water pumped from the station shall be discharged into a sediment basin or suitable filter area.

Construction Specifications
A. The suction hose from the pump shall be placed inside the inner pipe to begin dewatering. The discharge hose shall be placed in a stabilized area downslope of unstabilized areas to prevent erosion.

B. Maintenancee– The inner pipe can easily be removed to facilitate changing the geotextile when it clogs. Maintenance must be performed when the pump runs dry and backed up water remains.

C. See Detail 14–1 for additional specifications.

## STANDARD FOR SEDIMENT BARRIERS

Definition
A temporary barrier installed across or at the toe of a slope.

Purpose
The purpose of a sediment barrier is to intercept and detain small amounts of sediment from unprotected areas of limited extent.

Conditions Where Practice Applies
The sediment barrier is used where:

1. No other practice is feasible,

2. There is no concentration of water in a channel or other drainage way above the barrier, and

3. Erosion would occur in the form of sheet and rill erosion.

Design Criteria

A. All types of sediment barriers:

1. Contributing drainage area is less than I acre and the length of slope above the barrier is less than 150 feet.

2. The slope of the contributing drainage area for at least 30 feet adjacent to the barrier shall not exceed 5%.

3. The barrier shall be constructed so water cannot bypass the barrier around the ends.

4. Inspection shall be frequent and repair or replacement shall be made promptly as needed.

5. The barrier shall be removed when the contributing drainage area has been stabilized so as not to block or impede storm flow or drainage.

B. Requirements for bale barrier (e.g., straw, hay, or other acceptable vegetative material):

1. All bales shall be securely tied and staked on the contour (Fig. 25–1).

2. Bales shall be placed in a row with ends tightly abutting the adjacent bales.

3. Each bale shall be embedded in the soil a minimum of 4 inches.

4. Bales shall be securely anchored in place by two stakes or re-bars driven through each bale. The first stake in each bale shall be driven toward previously laid bale to force bales together.

C. Requirements for silt fence:

1. Fence posts shall be spaced 8 feet center-to-center or closer. They shall extend at least 2 feet into the ground and extend at least 2 feet above ground (Fig. 25–2). Posts shall be constructed of hardwood with a minimum diameter thickness of 1 1/2 inches.

2. A metal fence with 6 inch or smaller openings and at least 2 feet high may be utilized, fastened to the fence posts, to provide reinforcement and support to the geotextile fabric where space for other practices is limited and heavy sediment loading is expected.

3. A geotextile fabric, recommended for such use by the manufacturer, shall be buried at least 6 inches deep in the ground. The fabric shall extend at least 2 feet above the ground. The fabric must be securely fastened to the posts using a system consisting of metal fasteners (nails or staples) and a high strength reinforcement material (nylon webbing, grommets, washers etc.) placed between the fastener and the geotextile fabric. The fastening system shall resist tearing away from the post. The fabric shall incorporate a drawstring in the top portion of the fence for added strength.

D. Requirements for stone barrier:

1. The stone shall be piled to a natural angle of repose with a height of at least 2 feet.

2. The stone shall meet ASTM C–33 size No. 2 (2.5 to 1.5) or 3 (2 to 1 inch).

Maintenance

1. Sediment shall be removed from the upstream face of the barrier when it has reached a depth of 1/4 the barrier height.

2. Repair or replace barrier (fabric, posts, bales etc.) when damaged.

3. Barriers shall be inspected daily for signs of deterioration and sediment removal.

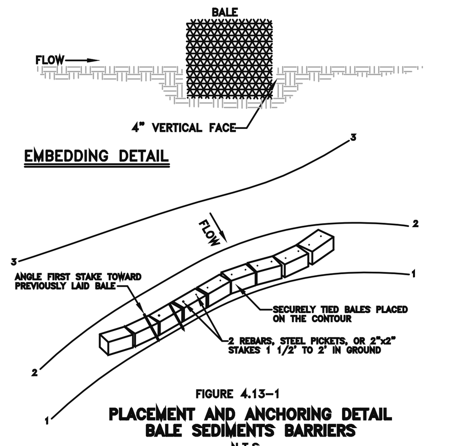
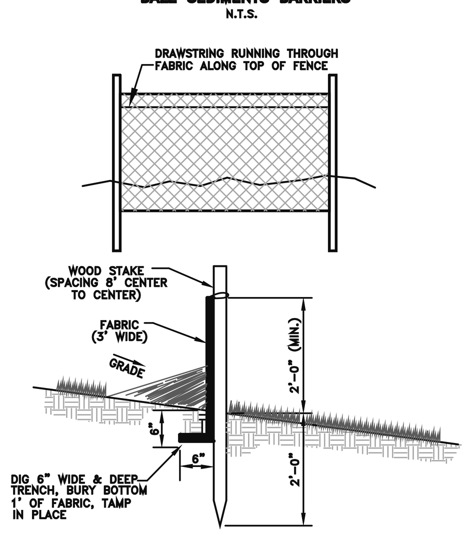
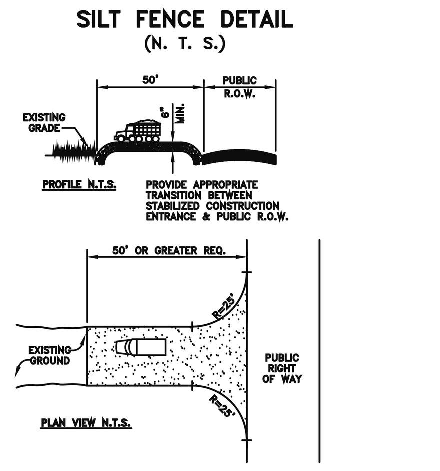


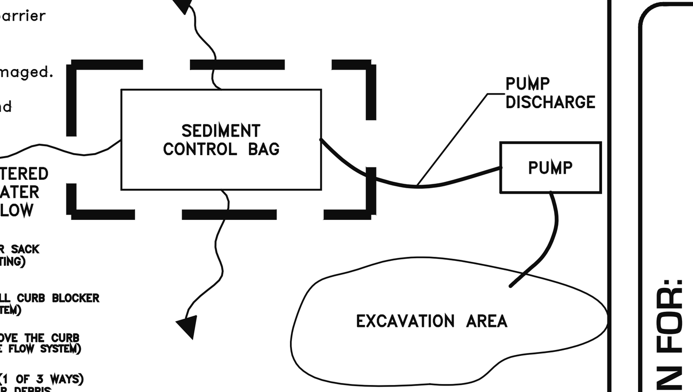

FIGURE 4.13–1
PLACEMENT AND ANCHORING DETAIL BALE SEDIMENTS BARRIERS
N.T.S.




SILT FENCE DETAIL
(N. T. S.)

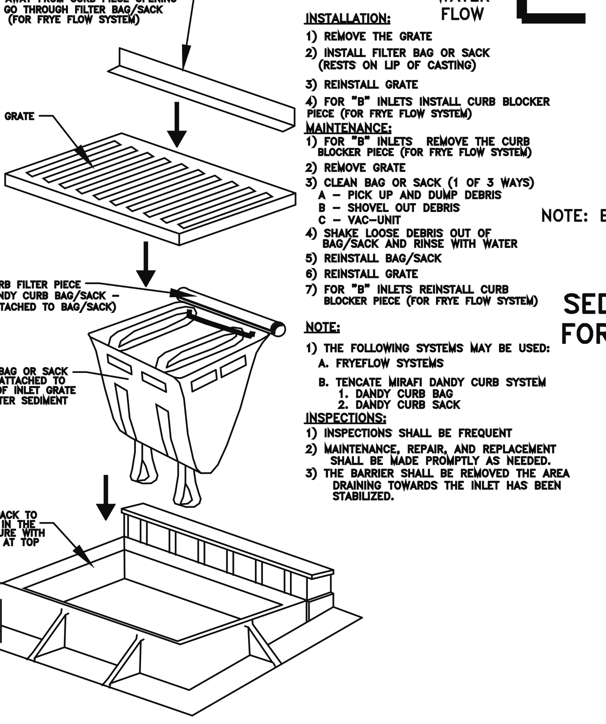



STABILIZED CONSTRUCTION ENTRANCE
(N. T. S.)




NOTE: BAG MUST BE LOCATED AWAY FROM RECEIVING WATERS AND/OR CONSTRUCTION ACTIVITIES

SEDIMENT CONTROL BAG FOR DEWATERING DETAIL
N.T.S.




INSTALLATION:
1) REMOVE THE GRATE
2) INSTALL FILTER BAG OR SACK (RESTS ON LIP OF CASTING)
3) REINSTALL GRATE
4) FOR "B" INLETS INSTALL CURB BLOCKER PIECE (FOR FRYE FLOW SYSTEM)

MAINTENANCE:
1) FOR "B" INLETS REMOVE THE CURB BLOCKER PIECE (FOR FRYE FLOW SYSTEM)
2) REMOVE GRATE
3) CLEAN BAG OR SACK (1 OF 3 WAYS)
   A – PICK UP AND DUMP DEBRIS
   B – SHOVEL OUT DEBRIS
   C – VAC-UNIT
4) SHAKE LOOSE DEBRIS OUT OF BAG/SACK AND RINSE WITH WATER
5) REINSTALL BAG/SACK
6) REINSTALL GRATE
7) FOR "B" INLETS REINSTALL CURB BLOCKER PIECE (FOR FRYE FLOW SYSTEM)

NOTE:
1) THE FOLLOWING SYSTEMS MAY BE USED:
   A. FRYEFLOW SYSTEMS
   B. TENCATE MIRAFI DANDY CURB SYSTEM
      1. DANDY CURB BAG
      2. DANDY CURB SACK

INSPECTIONS:
1) INSPECTIONS SHALL BE FREQUENT
2) MAINTENANCE, REPAIR, AND REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
3) THE BARRIER SHALL BE REMOVED THE AREA DRAINING TOWARDS THE INLET HAS BEEN STABILIZED.

INLET SEDIMENT CONTROL ASSEMBLY
(N. T. S.)

## TABLE 4 – 3

Standards for Soil Erosion and Sediment Control in New Jersey — January 2014

PERMANENT VEGETATIVE MIXTURES, PLANTING RATES AND PLANTING DATES[1]

O = Optimal Planting period A = Acceptable Planting period

PLANT HARDINESS ZONES (see Figure 4-1)

| SEED MIXTURE [2] | PLANTING RATE [3] lbs/acre | lbs/1000 sq. ft. | Zone 5b, 6a: 3/15-5/31 | 6/1-7/31 | 8/1-10/1 | Zone 6b: 3/1-4/30 | 5/1-8/14 | 8/15-10/15 | Zone 7a, 7b: 2/1-4/30 | 5/1-8/14 | 8/15-10/30 | MAINTENANCE LEVEL [4] | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WARM SEASON SEED MIXTURES | | | | | | | | | | | | | |
| 1A. For Pinelands National Reserve Seed mixtures see Table 4-4 page 4-17 | | | O | | | O | | | O | | | | |
| 1. Switchgrass and/or Coastal panicgrass plus or Flatpea | 15 15 20 20 | .35 .35 .45 .45 | O | | | O | | | O | | | C-D | |
| 2. Deertongue or Switchgrass Redtop | 15 20 1 10 | .35 .45 .1 .23 | O | | | O | | | O | | | C-D | Use Deertongue if pH < 4.0. Switchgrass is superior wildlife plant. Use for waterways. Redtop provides quick cover. |
| 3. Switchgrass Deertongue Little Bluestem Sheep fescue plus Partridge pea | 15 10 20 20 10 | .35 .25 .45 .45 .25 | O | | | O | | | O | | | C-D | Pinelands mixture. |
| 4. Switchgrass Big Bluestem Little Bluestem Sand lovegrass Coastal panicgrass | 10 5 5 4 10 | .25 .10 .10 .10 .25 | O | | | O | | | O | | | C-D | Native warm-season mixture. |
| 5. Bermudagrass Zoysiagrass (seed) Zoysiagrass (sprigs) | 15 30 | 0.35 0.70 | O | | | O | | | O | | | A-D | Bermudagrass has superior salt tolerance. Zoysia has greater wear tolerance |
| COOL SEASON SEED MIXTURES | 130 | 3 | A | A[5] | O | A | A[5] | O | A | A[5] | O | | General low-maintenance mixture. |
| 6. Fine Fescue (Blend) Hard Fescue Chewings fescue Strong Creeping Red Fescue Kentucky bluegrass Perennial ryegrass plus White clover (see note at right) | 45 20 5 | .1 .5 .10 | | | | | | | | | | B-D | White clover can be removed when used to establish lawns |
| 7. Strong Creeping red fescue Kentucky bluegrass Perennial ryegrass or Redtop plus White clover | 130 50 20 10 5 | 3 1 .5 .25 .10 | A | A[5] | O | A | A[5] | O | A | A[5] | O | B-D | Suitable waterway mix. Canada bluegrass more drought tolerant. Use Redtop for increased drought-tolerance. |
| 8. Tall fescue (turf-type) or Strong Creeping red fescue or Perennial ryegrass Flatpea | 30 30 30 25 | .7 .7 .7 .60 | O | A[6] | | O | A[6] | | O | A[6] | | B-D | Tall fescue best selected for droughty conditions. Use Creeping red fescue in heavy shade. Use Flatpea to suppress woody vegetation. |
| 9. Deertongue Redtop Wild rye (Elymus) Switchgrass | 20 2 15 25 | .45 .05 .35 .60 | O | | | O | | | O | | | C-D | Native wet mix. |
| 10. Tall fescue (turf-type) Perennial ryegrass or White clover (see note at right) | 265 20 40 5 | 6 5 .25 .10 | O | A[5] | A[5] | O | A[5] | A[5] | O | A[5] | A[5] | C-D | white clover can be excluded on lawn sites |
| 11 Kentucky Bluegrass Turf-type Tall fescue | 45 45 22 | 0.33 1 5 | A | A[5] | O | A | A[5] | O | A | A[5] | O | C-D | Filter strip use for nutrient uptake. |
| 12. Turf-type Tall fescue (Blend of 3 cultivars) | 350 | 8 | A | A[5] | O | A | A[5] | O | A | A[5] | O | C-D | Use in a managed filter strip for nutrient uptake. |
| 13. Hard Fescue and/or Chewing fescue and/or Strong creeping red fescue Perennial ryegrass Ky. bluegrass (blend) | 175 45 45 | 4 1 1 | A | A[5] | O | A | A[5] | O | A | A[5] | O | A-C | General lawn/recreation. |
| 14. Tall fescue Ky. bluegrass (blend) Perennial ryegrass (blend) | 265 20 20 | 6 0.50 0.50 | A | A[5] | O | A | A[5] | O | A | A[5] | O | A-B | Athletic field/ 3 cultivar mix of Kentucky Bluegrass. |
| 15. Hard fescue Chewings fescue Strong Creeping red fescue Perennial ryegrass | 130 45 45 10 | 3 1 1 .25 | A | A[5] | O | A | A[5] | O | A | A[5] | O | C-D | Low-maintenance fine fescue lawn mix. |
| 16. Rough bluegrass Strong Creeping red fescue | 90 130 | 2.0 3 | A | A[5] | O | A | A[5] | O | A | A[5] | O | C-D | Moist shade. |
| 17. Creeping bentgrass Creeping red fescue Alkali saltgrass | 45 45 45 | 1 1 1 | A | A[5] | O | A | A[5] | O | A | A[5] | O | B-D | Use bentgrass under wetter conditions. Saltgrass will only persistent under saline conditions. |
| 18. Hard or Sheeps fescue N. E. wildflower mixture | 25 12 | 0.60 0.35 | O | A | O | O | A | O | O | A | O | C-D | Regional Wildflower mix Hydroseeding not recommended. |
| 19. a. Smooth cordgrass b. Saltmeadow cordgrass | veg veg | | | | | O | Before July 1 | | O | Before July 1 | | D | Planted in the intertidal zone. Planted above mean high tide. |
| 20. American Beachgrass Coastal Panicgrass | Veg 20 | .45 | | | | Before April 1 | | | O | | | D | Coastal Panicgrass may be interseeded between rows of beachgrass |
| 21. a. Purpleosier willow b. Dwarf willow c. Redosier dogwood d. Silky dogwood | veg veg. veg. veg. | | Before May 10 | | | Before May 10 | | | Before May 1 | | | D | Also refer to Chapters 16 and 18 of USDA NRCS Engineering Field Handbook |

Table 4-3 Footnotes:

1. See Appendix B for descriptions of turf grass mixtures and cultivars. The actual amount of warm-season grass mixture used in Table 3 (seed mix 1-7) shall be adjusted to reflect the amount of PLS as determined by germination testing results. No adjustment is required for cool-season grasses (seed mixtures 8-20).

2. Seeding mixtures and/or rates not listed above may be used if recommended by the local Soil Conservation District, Natural Resources Conservation Service; recommendations of Rutgers Cooperative Extension may be used if approved by the Soil Conservation District. Legumes (white clover, flatpea, lespedeza) should be mixed with proper innoculant prior to planting.

3. Seeding rates specified are required when a report of compliance is requested prior to actual establishment of permanent vegetation. Up to 50% reduction in rates may be used when permanent vegetation is established prior to a report of compliance inspection. These rates apply to all methods of seeding. Establishing permanent vegetation means 80% vegetative coverage of the seeded area and mowed once. Grass seed mixture checked by the State Seed Analyst, New Jersey Department of Agriculture, Trenton, New Jersey, will assure the purchaser that the mixture obtained is the mixture ordered, pursuant to the N.J. State Seed Law, N.J.S.A. 4:8-17.13 et. seq.

**O** = optimal planting period **A** = acceptable planting period

4. Maintenance Level:

A: Intensive mowing, (2-4 days), fertilization, lime, pest control and irrigation (Examples – high-maintenance lawns, commercial and recreation areas, public facilities).

B: Frequent mowing, (4-7 days), occasional fertilization, lime and weed control (Examples - home lawns, commercial sites, school sites).

C: Periodic mowing (7-14 days), occasional fertilization and lime (Examples - home lawns, parks).

D: Infrequent or no mowing, fertilization and lime the first year of establishment (Examples - roadsides, recreation areas, public open spaces)

5. Summer seedings should only be conducted when the site is irrigated. Mixes including white clover requi that at least six weeks of growing season remain after seeding to ensure establishment before freezir conditions.

h. Table 4-4 Seeding Rates for Pinelands National Reserve Seed Mixtures

| Name | Common name | Growth habit | Soil Drainage Tolerance | Height | Seeding rate lbs./acre |
|---|---|---|---|---|---|
| **Non-Roadside Pinelands Mixture** | | | | | |
| *Schizachyrium scoparium* | Little bluestem | PIB | EXDR-WD | 2-3' | 5 |
| *Dichanthelium clandestinum* | Deertongue | PIB | EXDR-SWPD | 1-3' | 5 |
| *Panicum virgatum* | Switchgrass | PIB | EXDR-PD | 4-6' | 5 |
| *Chamaecrista fasciculata* | Partridge pea | AB | EXDR-WD | 3' | 5 |
| **Recommended Optional Addition (See recommended Pinelands species for mixture augmentation. Not for Roadsides)** | | | | | |
| *Andropogon virginicus* | Broomsedge | PIB | EXDR-SWPD | 18"-3' | 5 |
| *Solidago bicolor* | White (Silver rod) Goldenrod | P | EXDR-WD | 1-4' | .5 |
| *Lespedeza capitata* | Roundheaded bushclover | PIB | EXDR-WD | 2-4' | 2 |
| *Baptisia tinctoria* | Wild indigo | PIB | EXDR | 1-3' | 5 |
| *Carex pensylvanica* | Pennsylvania sedge | PIS | EXDR-WD | 16" | Plugs |
| **Temporary Seeding/Nurse Crops (choose one as a nurse crop where quick germination is needed)** | | | | | |
| *Hordeum vulgare* | Barley | AsB | EXDR-WD | 8"-3' | 30 |
| *Avena sativa* | Oats | AB | EXDR-WD | 1-3' | 30 |
| *Elymus canadensis* | Canada wildrye | PsB | WD-MWD | 3-6' | 30 |
| **Roadside Native Seed Mixture** | | | | | |
| *Schizachyrium scoparium* | Little bluestem | PIB | EXDR-WD | 2-3' | 5 |
| *Dichanthelium clandestinum* | Deertongue | PIB | EXDR-SWPD | 1-3' | 5 |
| *Chamaecrista fasciculata* | Partridge pea | AB | EXDR-WD | 3' | 5 |
| **Cool Season Turf Mixture** | | | | | |
| *Festuca longifolia* | Hard fescue | PIB | EXWD-WD | 2-3' | 50 |
| *Festuca rubra ssp. rubra* | Strong Creeping red fescue | PIB | EXWD-WD | 1-2' | 50 |
| *Festuca rubra ssp. fallax* | Chewings fescue | PIB | EXWD-MWD | 1-2' | 50 |
| *Lolium perenne* | Turf-type perennial ryegrass | PsB | EXWD-WD | 1-2' | 50 |

Key

| Growth Habit | Soil Drainage Tolerance |
|---|---|
| A-Annual | EXDR-Excessively drained |
| P-Perennial | WD-Well-drained |
| l-Long lived | MWD-Moderately well-drained |
| s-short lived | SWPD-Somewhat poorly drained |
| R-rizomatous | PD-Poorly drained |
| S-stoloniferous | |
| B-bunch | |

PLANS FOR PERMIT PURPOSES ONLY

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ANDREW F. SCHAEFFER
PROFESSIONAL ENGINEER
NEW JERSEY LIC. NO. 32883
3-19-26
DATE

SOIL EROSION NARRATIVE PLAN FOR:
CAVALRY BAPTIST CHURCH
RAILROAD DRIVE, BLOCK 170, LOTS 3,3.01&4 & BLOCK 190, LOTS 1, 2.01, 2.03, 2.09-2.12
TOWNSHIP OF LITTLE EGG HARBOR, OCEAN COUNTY, NEW JERSEY
ZONE: 'R-100' RESIDENTIAL DISTRICT, TAX MAP SHEET 12

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