PROPERTY OWNERS WITHIN 200 FT.

BOROUGH OF SAYREVILLE

BLOCK 56 LOT 1.02		Borough of Sayreville 167 Main Street Sayreville, NJ 08872
BLOCK 56.01 LOT 1		Borough of Sayreville 167 Main Street Sayreville, NJ 08872
BLOCK 57.01 LOT 1		Leaf Industries, LLC 26 Brick Yard Road Cranbury, NJ 08512
BLOCK 57.01 LOT 1.01		Hercules, Inc. c/o Intax, Inc. P.O. Box 55348 Lexington, KY 40555
BLOCK 58 LOT 1.01		Gillette Enterprises, Inc. 251 Jernee Mill Road Sayreville, NJ 08872
BLOCK 58 LOT 1.03		DZZ Properties, Inc. 45 Grove Street South River, NJ 08882
BLOCK 58 LOT 5		John C. Polak, Sr. 41 Onka Drive Hillsborough, NJ 08844
BLOCK 58 LOT 8		DuPont Specialty Products USA, LLC P.O. Box 2899 Wilmington, DE 19805
BLOCK 58.01 LOT 1 QUALIFIER QFARM		Daniel Kilcomons 17 Embroidery Street Sayreville, NJ 08872
ACCESS EASEMENT		AES Red Oak, LLC 832 Red Oak Lane Sayreville, NJ 08872
EASEMENT		New Jersey Natural Gas Company 1415 Wyckoff Road Wall Township, NJ 07727
RIGHT OF WAY 58 8		DuPont Specialty Products USA, LLC P.O. Box 2899 Wilmington, DE 19805
RIGHT OF WAY		Hercules, Inc. c/o Intax, Inc. P.O. Box 55348 Lexington, KY 40555
RIGHT OF WAY		Middlesex County Utilities Authority P.O. Box 159 Sayreville, NJ 08872

SAYREVILLE UTILITIES LIST (2022):

NJDEP
36 West State Street
P.O. Box 42
Trenton, NJ 08625

Middlesex County Planning Board
75 Bayard Street—5th Floor
New Brunswick, NJ 08902
732-745-3812

NJDOT
David Goldberg Transportation Center
1035 Parkway Avenue
P.O. Box 600
Trenton, NJ 08625

NJ Natural Gas Company
John Wyckoff Road
P.O. Box 1464
Wall, NJ 07719

Cablevision
275 Centennial Avenue CN8805
Piscataway, NJ 08855-6805
Attn: Construction Department
732-583-0606

Middlesex County Landfill
53 Edgeboro Road
East Brunswick, NJ 08816-1636
732-246-4313

Consolidated Rail Corporation
1717 Arch Street or 2001 Market Street
Philadelphia, PA 19103

Verizon New Jersey
7000 Hadley Road
South Plainfield, NJ 07080
908-753-0801
OR:
540 Broad Street – 20th Floor
Newark, NJ 07102

PSE&G
15 Hoes Lane
New Brunswick, NJ 08902
732-721-7000
OR:
80 Park Plaza
Newark, NJ 07102

JCP&L c/o 1st Energy
300 Madison Avenue
P.O. Box 1911
Morristown, NJ 07962-1911
Attn: Corporate Properties
732-723-6609 or 1-800-662-3115

Borough of Sayreville Water & Sewer
167 Main Street
Sayreville, NJ
732-390-7060

Middlesex County Utilities Authority (MCUA)
P.O. Box 159
2571 Main Street
Sayreville, NJ 08872-0086

Transcontinental Gas Pipeline
315 Cold Soil Road
Lawrenceville, NJ 08540
Attn: Robert Ford
1-800-440-8475
OR:
P.O. Box 1396
Houston, TX 77251

BOROUGH OF SOUTH RIVER

MAYOR: Peter S. Guindi

BOROUGH COUNCIL:
Oliveira Jason, President
Donna M. Balazs
Tony Ciulla
Henry Dziemian
James E. Gurchensky
John M. Krenzel

BOROUGH OF SOUTH RIVER
OFFICE OF PLANNING AND ZONING
MIDDLESEX COUNTY
48 WASHINGTON STREET
SOUTH RIVER, NJ 08882-1247

March 5, 2024

Tracey Feary
Colliers Engineering & Design
Holmdel, New Jersey

Re: Block: 58 Lots: 2.01, 9
Sayreville Borough, NJ

Dear Ms. Feary,

After reviewing the Middlesex County's property records site, the referenced block and lots in Sayreville Borough does not touch upon any property lines belonging to the Borough of South River.

Thank you,

Arthur Londensky
Borough Administrator
e: alondensky@southrivernj.org
p: (732) 257–1999 Ext. 519

t: 732-257-1999 Ext. 516 | f: 732-613-6105 | w: https://www.southrivernj.org

INDEX OF SHEETS

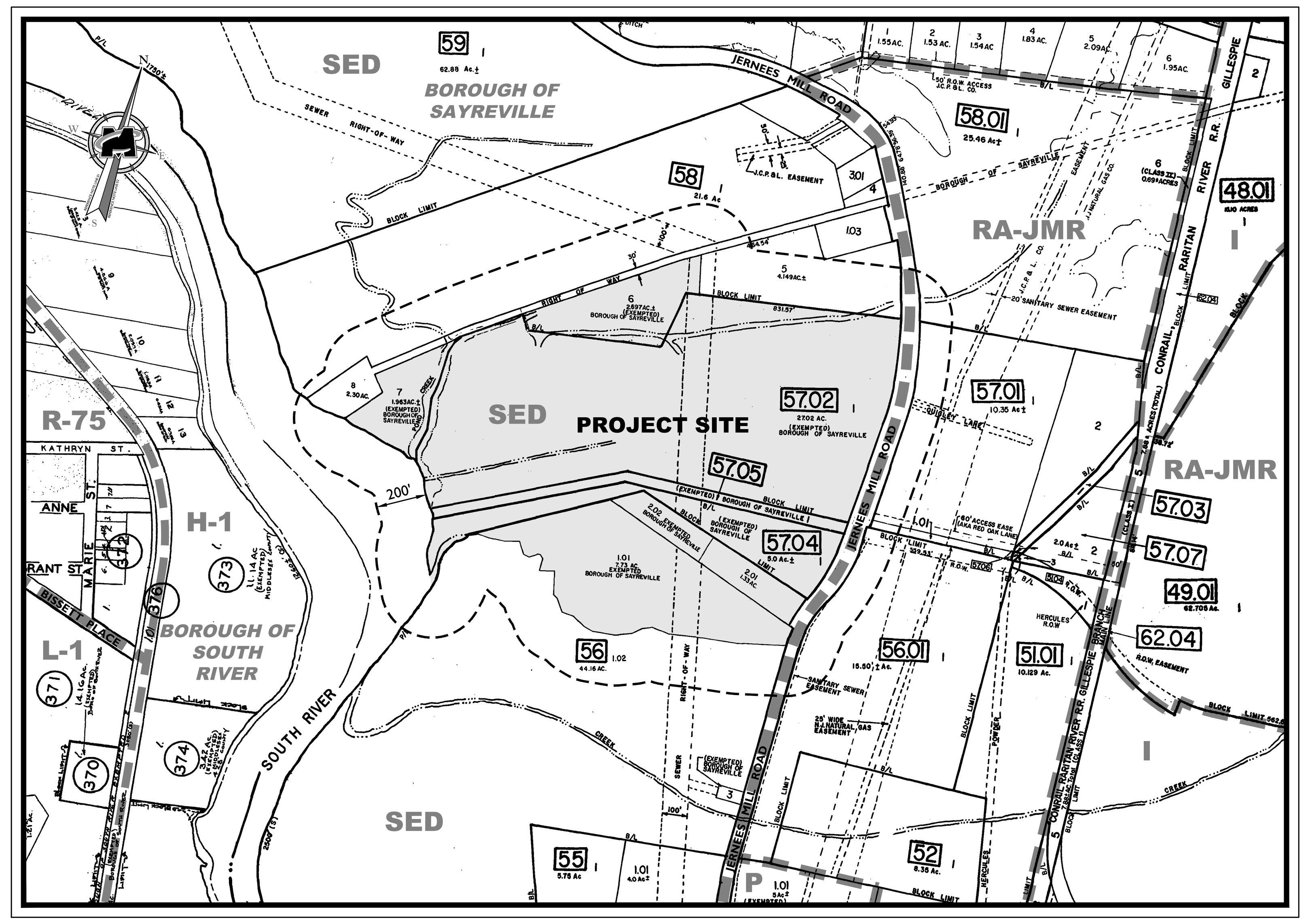
PRELIMINARY AND FINAL MAJOR SITE PLAN

FOR

JERNEE MILL INDUSTRIAL

BLOCK 58, LOTS 2.01 & 9

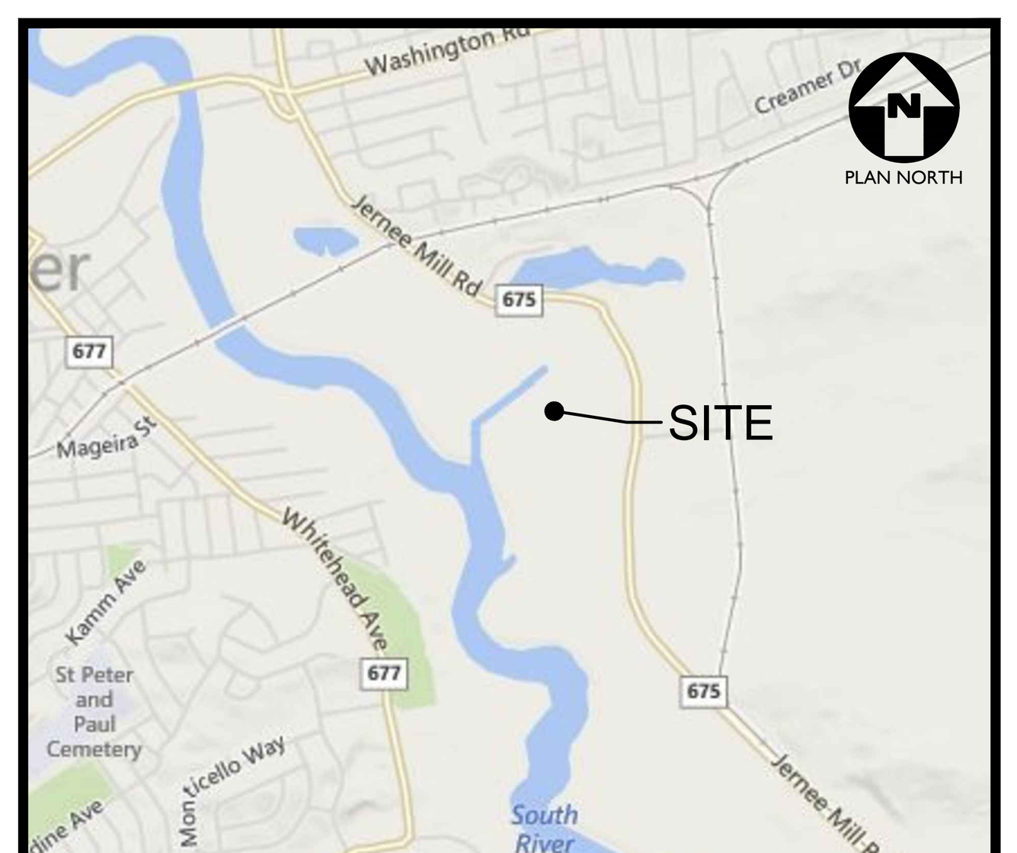
BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY
NEW JERSEY



ZONE BOUNDARY

KEY & ZONING MAP

SCALE : 1" = 400'



LOCATION MAP (SCALE: 1"=2,000')

APPROVED BY THE PLANNING BOARD OF THE BOROUGH OF SAYREVILLE ON ______________________.

BOARD CHAIRPERSON	DATE	COUNTY PLANNING BOARD	DATE
BOARD SECRETARY	DATE	COUNTY PLANNING BOARD SECRETARY	DATE
BOARD ENGINEER	DATE	COUNTY PLANNING DIRECTOR	DATE

GENERAL INFORMATION

GENERAL NOTES:

1. THE SUBJECT PROPERTY IS KNOWN AS BLOCK 58 LOTS 2.01 AND 9, AS SHOWN ON SHEETS 24 & 25 OF THE OFFICIAL TAX MAP OF THE BOROUGH OF SAYREVILLE, MIDDLESEX COUNTY, NEW JERSEY. BLOCK 58, LOT 2.01 IS FORMERLY KNOWN AS BLOCK 56, LOT 2.01. BLOCK 58, LOT 9 IS FORMERLY KNOWN AS BLOCK 56 LOTS 1.01 AND 2.02, BLOCK 57.02 LOT 1, BLOCK 57.04 LOT 1, BLOCK 57.05 LOT 1, AND BLOCK 58 LOTS 6 AND 7.
2. THE PROPERTY IS LOCATED IN THE ECO-INDUSTRIAL REDEVELOPMENT AREA (RA-EI) AND CONTAINS A TOTAL TRACT AREA ± 46.485 ACRES (2,024,895 SF).
3. THE APPLICANT IS PROPOSING TO CONSTRUCT UP TO TWO (2) COLD STORAGE WAREHOUSE BUILDINGS WITH ASSEMBLED TRAILER STORAGE AREAS AND ASSOCIATED SITE IMPROVEMENTS. THIS SET OF PLANS HAS BEEN PREPARED FOR BOROUGH SITE PLAN APPROVAL.
4. PROPERTY OWNERS: (BLOCK 58, LOT 9)
   BOROUGH OF SAYREVILLE
   167 MAIN STREET
   SAYREVILLE, NJ 08872

   (BLOCK 58, LOT 2.01)
   JERNEE MILL ASSOCIATES, LLC
   190 ROUTE 18, SUITE 205
   EAST BRUNSWICK, NJ 08816

   APPLICANT: CP MD JERNEE MILL ROAD LLC
   31 SPRING BROOK ROAD
   MORRISTOWN, NJ 07960
5. THE MAJORITY OF THE SITE (BLOCK 58, LOT 9) IS PART OF THE FORMER SAYREVILLE LANDFILL #3 AND IS BOUNDED ON THE EAST BY JERNEE MILL ROAD AND SOUTH RIVER ON THE WEST.
6. THE SITE WAS FORMERLY OPERATED AS A SOLID WASTE DISPOSAL FACILITY FROM 1971 TO 1977 BY THE BOROUGH OF SAYREVILLE. IN 1983 THE USEPA INCLUDED THE SITE ON THE FEDERAL SUPERFUND NATIONAL PRIORITY LIST (NPL) BASED UPON THE PRESENCE OF HAZARDOUS WASTE ON SITE. (EPA ID#: NJD980505754). THE SITE IS UNDER THE OVERSIGHT OF NJDEP (NJEMS PREFERRED ID # 5286). REMEDIAL ACTION ACTIVITIES WERE COMPLETED IN 1999 WITH THE INSTALLATION OF A COMPOSITE CAP SYSTEM AND PASSIVE VENTILATION SYSTEM. THE SITE IS ENTIRELY COVERED BY CLASSIFICATION EXCEPTION AREA (CEA) FOR GROUNDWATER AND LANDFILL GAS MONITORING FOR METHANE HAS BEEN ONGOING SINCE 2000.
7. THE APPLICANT IS OBTAINING A PERMIT TO MODIFY THE LANDFILL CLOSURE AND POST-CLOSURE CARE PLAN FOR THE SITE. THE CONTRACTOR WILL BE RESPONSIBLE TO COMPLY WITH THE CONDITIONS OF THE PERMIT.
8. BULK REQUIREMENTS:

BULK STANDARD	REQUIRED	PROPOSED
MINIMUM LOT SIZE (AC.)	5 AC.	± 46.485 AC.
FRONT YARD SETBACK - PRINCIPAL & ACCESSORY BUILDINGS (FT)	50 FT	86.5 FT
SIDE YARD SETBACK - PRINCIPAL & ACCESSORY BUILDINGS (FT)	50 FT	201.90 FT
REAR YARD SETBACK - PRINCIPAL & ACCESSORY BUILDINGS (FT)	50 FT	276.10 FT
HEIGHT - PRINCIPAL BUILDING (FT)	75 FT	75 FT
HEIGHT - ACCESSORY BUILDINGS & OUTDOOR MATERIAL STORAGE (FT)	40 FT (STORAGE 25 FT)	N/A
MAX. IMPERVIOUS LOT COVERAGE (%)	85 %	36.66 %

9. PARKING:

   REQUIRED: COLD STORAGE WAREHOUSE (INCLUSIVE OF ANY ANCILLARY OFFICE FLOOR AREA)
   WAREHOUSE USE: 1 SPACE/EMPLOYEE + 10%
   OFFICE USE: 1 SPACE/300 SF GFA

   BUILDING 1
   7,700 SF OFFICE USE = 26 SPACES REQUIRED
   250,158 SF WAREHOUSE USE (MAX. 56 EMPLOYEES) = 62 SPACES REQUIRED (MAX. EMPLOYEES + 10%)
   TOTAL = 88 SPACES REQUIRED
   PROVIDED = 88 SPACES

   BUILDING 2
   7,500 SF OFFICE USE = 25 SPACES REQUIRED
   92,020 SF WAREHOUSE USE (MAX. 30 EMPLOYEES) = 33 SPACES REQUIRED (MAX. EMPLOYEES + 10%)
   TOTAL = 58 SPACES REQUIRED
   PROVIDED = 58 SPACES

   REQUIRED: ACCESSIBLE PARKING SPACES

   BUILDING 1 (76-100 SPACES PROVIDED) = 4 ACCESSIBLE SPACES REQUIRED
   PROVIDED - 4 ACCESSIBLE SPACES

   BUILDING 2 (51-75 SPACES PROVIDED) = 3 SPACES REQUIRED
   PROVIDED - 8 ACCESSIBLE SPACES

   REQUIRED: EV PARKING SPACES

   BUILDING 1 (76-100 SPACES PROVIDED) = 3 EV SPACES REQUIRED
   PROVIDED - 4 EV SPACES

   BUILDING 2 (51-75 SPACES PROVIDED) = 2 EV SPACES REQUIRED
   PROVIDED - 4 EV SPACES
10. THE APPLICANT IS REQUESTING THE FOLLOWING CHECKLIST WAIVERS:

   PRELIMINARY SITE PLAN CHECKLIST:
   - ITEM #2, A WAIVER IS REQUESTED AS EIGHT (8) PLAN SHEETS ARE AT SCALES OTHER THAN 1" = 30'.
   - ITEM #4, A WAIVER IS REQUESTED AS 30" x 42" PLANS ARE PROVIDED.
   - ITEM #5, A WAIVER IS REQUESTED AS APPLICANT, OWNER, AND ZONING INFORMATION ONLY APPEAR ON THE COVER SHEET.
   - ITEM #22, A TEMPORARY WAIVER IS BEING REQUESTED. WILL BE PROVIDED AS A CONDITION OF APPROVAL
   - ITEM #23, A WAIVER IS BEING REQUESTED AS CONSTRUCTION STAGING FOR THE PROPOSED DEVELOPMENT, LOCATED ON AN EXISTING LANDFILL, WILL BE PROVIDED IN ACCORDANCE WITH THE PROPOSED LANDFILL CLOSURE & POST-CLOSURE CARE PLAN, AS SUBMITTED TO NJDEP AND CURRENTLY PENDING APPROVAL.
   - ITEM #25, A TEMPORARY WAIVER IS BEING REQUESTED PENDING DETERMINATION OF LOCATION AND EXTENT OF REQUIRED EASEMENTS.
   - ITEM #26, A TEMPORARY WAIVER IS BEING REQUESTED AS IT WILL BE PROVIDED AS A CONDITION OF AFFIRMATIVE ACTION BY THE BOARD.

   FINAL SITE PLAN CHECKLIST:
   - ITEM #2, A WAIVER IS REQUESTED AS EIGHT (8) PLAN SHEETS ARE AT SCALES OTHER THAN 1" = 30'.
   - ITEM #4, A WAIVER IS REQUESTED AS 30" x 42" PLANS ARE PROVIDED.
   - ITEM #5, A WAIVER IS REQUESTED AS APPLICANT, OWNER, AND ZONING INFORMATION ONLY APPEAR ON THE COVER SHEET.
   - ITEM #7, A TEMPORARY WAIVER IS BEING REQUESTED AS IT WILL BE PROVIDED WHEN THE LIMITS OF EASEMENTS, RIGHTS-OF-WAY, ETC. ARE DETERMINED BY THE BOARD.
   - ITEM #10-13 AND 15, A WAIVER IS REQUESTED AS PRELIMINARY AND FINAL APPROVAL IS BEING SOUGHT SIMULTANEOUSLY.
11. THE BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN HEREON WAS TAKEN FROM A PLAN ENTITLED "ALTA/NSPS LAND TITLE SURVEY FOR BLOCK 58, LOTS 2.01 & 9, JERNEES MILL ROAD, BOROUGH OF SAYREVILLE, MIDDLESEX COUNTY, NEW JERSEY", PREPARED BY COLLIERS ENGINEERING & DESIGN, DATED SEPTEMBER 9, 2022 AND REVISED THROUGH FEBRUARY 1, 2024.
12. THE VERTICAL DATUM IS RELATIVE TO NAVD 88 AND THE HORIZONTAL DATUM IS RELATIVE TO NAD 1983, NEW JERSEY STATE PLANE COORDINATE SYSTEM.
13. THIS PLAN IS NOT DEPICTING ENVIRONMENTAL CONDITIONS.
14. THE CONTRACTOR SHALL BE FAMILIAR WITH THE APPLICABLE ENVIRONMENTAL REPORTS
15. THE FOLLOWING PERMITS ARE REQUIRED FOR THE PROPOSED DEVELOPMENT:
   - BOROUGH OF SAYREVILLE PLANNING BOARD
   - MIDDLESEX COUNTY PLANNING BOARD
   - NJDEP DIVISION OF WATER QUALITY - RFA
   - NJDEP DIVISION OF LAND USE -WETLANDS
   - NJDEP DIVISION OF LAND USE -FLOOD HAZARD
   - NJDEP DIVISION OF LAND USE - WATERFRONT DEVELOPMENT
   - NJDEP LANDFILL CLOSURE AND POST-CLOSURE CARE PLAN MODIFICATION
   - UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
   - SAYREVILLE ECONOMIC REDEVELOPMENT AUTHORITY
   - BOROUGH OF SAYREVILLE TREE REMOVAL PERMIT
   - BOROUGH OF SAYREVILLE FILL PLACEMENT AND SOIL REMOVAL PERMIT
20. THE SITE CONTRACTOR IS RESPONSIBLE TO OBTAIN ANY NECESSARY DEWATERING PERMITS FROM THE NJDEP, SOIL CONSERVATION DISTRICT AND/OR BOROUGH REQUIRED FOR CONSTRUCTION.
21. EXISTING UTILITY INFORMATION SHOWN HEREON HAS BEEN COLLECTED FROM VARIOUS SOURCES AND IS NOT GUARANTEED AS TO ACCURACY OR COMPLETENESS. THE CONTRACTOR SHALL VERIFY ALL INFORMATION TO HIS SATISFACTION PRIOR TO EXCAVATION. WHERE EXISTING UTILITIES ARE TO BE CROSSED BY PROPOSED CONSTRUCTIONS, TEST PITS SHALL BE DUG BY THE CONTRACTOR PRIOR TO CONSTRUCTION TO ASCERTAIN EXISTING INVERTS, MATERIALS, AND SIZES. TEST PIT INFORMATION SHALL BE GIVEN TO THE ENGINEER PRIOR TO CONSTRUCTION TO PERMIT ADJUSTMENTS AS REQUIRED TO AVOID CONFLICTS. THE CONTRACTOR SHALL NOTIFY THE UNDER SIGNED PROFESSIONAL IMMEDIATELY IF ANY FIELD CONDITIONS ENCOUNTERED DIFFER MATERIALLY FROM THOSE REPRESENTED HEREON. SUCH CONDITIONS COULD RENDER THE DESIGNS HEREON INAPPROPRIATE OR INEFFECTIVE.
22. ALL STRUCTURES, CONCRETE PADS, BURIED PIPE AND UTILITIES ENCOUNTERED WITHIN THE CONSTRUCTION LIMITS SHALL BE REMOVED (UNLESS NOTED OTHERWISE) AND DISPOSED OF IN ACCORDANCE WITH THE MATERIAL HANDLING PROVISIONS CONTAINED WITHIN THE RAWP.
23. CONTRACTOR IS RESPONSIBLE TO ENSURE NO CONTAMINATED MATERIAL OR WATER IS DISCHARGED FROM THE SITE, INCLUDING AS A RESULT OF CONSTRUCTION ACTIVITIES, STORM EVENTS, TIDAL EVENTS, ETC.
24. THE WETLANDS SHOWN HEREON ARE TAKEN FROM A PLAN ENTITLED "ALTA/NSPS LAND TITLE SURVEY FOR BLOCK 58, LOTS 2.01 & 9, JERNEES MILL ROAD, BOROUGH OF SAYREVILLE, MIDDLESEX COUNTY, NEW JERSEY", PREPARED BY COLLIERS ENGINEERING & DESIGN, DATED SEPTEMBER 9, 2022 AND REVISED THROUGH FEBRUARY 1, 2024. FRESHWATER WETLANDS/WATERS BOUNDARY LINE AS VERIFIED BY NJDEP LOI FILE NO. 1219-08-0004.1.
25. THE TIDAL FLOOD HAZARD LIMITS SHOWN HEREON WERE TAKEN FROM THE FEMA PRELIMINARY FLOOD INSURANCE RATE MAP DATED JANUARY 31, 2014. THE FLOOD HAZARD AREA ZONE AE ELEVATION IS 14 FT VERTICAL DATUM NAVD 88.

   THE NON-TIDAL FLOOD HAZARD LIMITS SHOWN HEREON WERE TAKEN FROM PLAN ENTITLED "FLOOD HAZARD VERIFICATION PLAN FOR JERNEE MILL INDUSTRIAL" PREPARED BY COLLIERS ENGINEERING & DESIGN, DATED JUNE 12, 2023.
26. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARATION AND SUBMISSION OF CATALOG CUTS, SHOP DRAWINGS AND/OR DESIGN CALCULATIONS FOR APPROVAL BY THE MUNICIPAL ENGINEER.
27. SOIL INFORMATION FOR PORTIONS OF THE SITE IS PROVIDED WITHIN A REPORT ENTITLED "GEOTECHNICAL ENGINEERING REPORT, JERNEE MILL INDUSTRIAL", PREPARED BY GEO-TECHNOLOGY ASSOCIATES, INC., DATED MARCH 29, 2024.
28. ARCHITECTURAL INFORMATION FOR THE PROPOSED BUILDINGS IS TAKEN FROM A PLAN ENTITLED "OVERALL FLOOR PLAN, CLAREMONT DEVELOPMENT, SAYREVILLE NJ", PREPARED BY RKB ARCHITECTS, INC., DATED APRIL 3, 2024.
29. STORM SEWERS SHALL BE CLASS IV (OR HIGHER IF NOTED) REINFORCED CONCRETE PIPE WITH 'O' RING GASKETS OR INTERNALLY PRELUBRICATED GASKET (TYLOX SUPERSEAL OR EQUIVALENT). PROPER PIPE COVERAGE SHALL BE MAINTAINED DURING ALL PHASES OF CONSTRUCTION. PIPE LENGTHS SHOWN HEREON ARE FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.

   ALL STORMWATER STRUCTURES TO BE INSTALLED SATISFYING ASSHTO H-20 LOADING REQUIREMENTS.

   GROUNDWATER ELEVATIONS, SOIL CONDITIONS AND OVERALL GEOTECHNICAL PROPERTIES VARY THROUGHOUT THE SITE. CONTRACTOR TO PROVIDE PIPE AND STRUCTURE STABILIZATION WHEN THESE CONDITIONS ARE ENCOUNTERED DURING CONSTRUCTION. CONTRACTOR TO FOLLOW ALL PIPE MANUFACTURE SPECIFICATIONS.
30. A STORMWATER MAINTENANCE AGREEMENT WILL BE FILED WHICH SETS FORTH DOCUMENTATION THAT ANY PROPOSED DRAINAGE SYSTEM AND ANY AND ALL STORMWATER DETENTION FACILITIES WILL BE ADEQUATELY MAINTAINED IN ACCORDANCE WITH THE STANDARDS OF MIDDLESEX COUNTY. REFER TO THE PARAGRAPH IN THE STORMWATER MAINTENANCE AGREEMENT ENTITLED 'RIGHT OF COUNTY OF MIDDLESEX TO MAINTAIN DRAINAGE BASINS'. CONDITIONS THAT AFFECT NON-COUNTY FACILITIES SHOULD BE REVIEWED AND APPROVED BY THE APPROPRIATE JURISDICTIONAL AGENCY.
31. POTABLE WATER SERVICE IS TO BE PROVIDED FROM THE EXISTING WATER MAIN IN JERNEE MILL ROAD. PROPOSED WATER MAIN EXTENSIONS AND FIRE HYDRANT LOCATIONS ARE SUBJECT TO MUNICIPAL REVIEW AND APPROVAL, ACCORDING TO THE NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION REGULATIONS, AMERICAN WATERWORKS ASSOCIATION STANDARDS AND BOROUGH OF SAYREVILLE REGULATIONS. PIPE MATERIALS SHALL BE CEMENT LINED DUCTILE IRON PIPE, CLASS 52 WITH ASPHALTIC EPOXY TYPE COATING OR HIGH DENSITY POLYETHYLENE (HDPE) PIPE MANUFACTURED IN DUCTILE IRON PIPE SIZES IN ACCORDANCE WITH AWWA STANDARD C906. ALL WATER MAINS SHALL BE INSTALLED TO PROVIDE A MINIMUM 4 FEET OF COVER OVER THE TOP OF PIPE TO PROPOSED GRADE EXCEPT WHERE SHALLOWER DEPTHS ARE PERMITTED BY THE MUNICIPALITY OR UTILITY AUTHORITY. ALL OFF-SITE WATER MAINS SHALL BE DUCTILE IRON PIPE AND ON-SITE WATER MAINS MAY BE DUCTILE IRON PIPE OR HIGH DENSITY POLYETHYLENE PIPE (HDPE).
32. SANITARY SEWER SERVICE SHALL BE PROVIDED BY A GRAVITY SEWER CONNECTION TO THE EXISTING SANITARY SEWER LINE IN JERNEE MILL ROAD. ONSITE GRAVITY SEWER PIPE MATERIAL SHALL BE PVC SDR-35, FOR DEPTHS LESS THAN 20 FEET AND SDR-26 FOR PIPES DEEPER THAN 20 FEET. SEWER LINES, LATERALS, SHALL BE INSTALLED TO PROVIDE A MINIMUM 3 FEET OF COVER FROM THE TOP OF PIPE TO PROPOSED GRADE EXCEPT WHERE SHALLOWER DEPTHS ARE PERMITTED BY THE MUNICIPALITY OR UTILITY AUTHORITY. GRAVITY SEWER PIPE TO BE CONSTRUCTED IN ACCORDANCE WITH PIPE MATERIAL SPECIFICATIONS OUTLINED IN N.J.A.C. 5:21-6.2(C)6.
33. ALL WATER MAINS AND SANITARY SEWER LINES SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF 10 FEET. IF SUCH LATERAL SEPARATION IS NOT POSSIBLE, THE WATER AND SEWER LINES SHALL BE IN SEPARATE TRENCHES (STEP TRENCHES ARE PROHIBITED) WITH THE TOP OF THE SEWER LINE AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN OR WITH SUCH SEPARATION EXPRESSLY APPROVED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION. AT CROSSINGS OF SEWER LINES AND WATER MAINS, THE TOP OF THE SEWER LINES SHALL BE AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN (SEWER SERVICE LATERALS ARE NOT SUBJECT TO THIS REQUIREMENT).

   IF SUCH VERTICAL SEPARATION IS NOT POSSIBLE, THE SEWER LINE SHALL BE OF WATERTIGHT CONSTRUCTION (THAT IS DUCTILE IRON PIPE WITH MECHANICAL RESTRAINT JOINTS), WITH WATERTIGHT JOINTS THAT ARE A MINIMUM OF 10 FEET FROM THE WATER MAIN. CONTRACTOR SHALL USE TRANSITION COUPLING, POWERSEAL MODEL #3501-8AAB OR EQUIVALENT AT DIP/PVC JOINTS.
34. CONTRACTOR TO HAND DIG UTILITIES WITHIN EXISTING LANDFILL LIMIT (STONE TRENCH) WHEN EXCAVATING BELOW EXISTING GRADE. IF LANDFILL CAP MEMBRANE IS ENCOUNTERED, EXCAVATION SHALL STOP AND THE CONTRACTOR SHALL IMMEDIATELY CONTACT PROJECT ENVIRONMENTAL CONSULTANT.
35. MATERIALS, WORKMANSHIP, AND CONSTRUCTION FOR THE SITE IMPROVEMENTS SHOWN HEREON SHALL BE IN ACCORDANCE WITH:
   A. NEW JERSEY DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", 2019; AS SUPPLEMENTED.
   B. CURRENT PREVAILING MUNICIPAL, COUNTY, AND/OR STATE AGENCY SPECIFICATIONS, STANDARDS, CONDITIONS, AND REQUIREMENTS.
   C. CURRENT PREVAILING UTILITY COMPANY/AUTHORITY SPECIFICATIONS, STANDARDS, AND REQUIREMENTS.
   D. CURRENT MANUFACTURER SPECIFICATIONS, STANDARDS, AND REQUIREMENTS.
36. CABLE, TELEPHONE, ELECTRIC, AND GAS LINES SHALL BE INSTALLED UNDERGROUND.
37. CURBS SHALL BE DEPRESSED FLUSH WITH PAVEMENT AND HANDICAPPED ACCESSIBLE RAMPS IN ACCORDANCE WITH APPLICABLE NJDOT, FEDERAL & STATE ADA STANDARDS INSTALLED WHERE SIDEWALKS AND CROSSWALKS INTERSECT SAME. DETECTABLE WARNINGS SHALL BE INCLUDED ON HANDICAP ACCESSIBLE RAMPS.
38. THE SITE COMPLIES WITH CURRENT ADA AND NJ BARRIER FREE REQUIREMENTS.
39. TRAFFIC SIGNAGE AND STRIPING SHALL CORRESPOND TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. LONGITUDINAL TRAFFIC STRIPING WITHIN ROADWAY TO BE THERMOPLASTIC.
40. THE CONTRACTOR IS RESPONSIBLE FOR PROJECT SAFETY, INCLUDING PROVISION OF ALL APPROPRIATE SAFETY DEVICES AND TRAINING REQUIRED. THE SITE HAS DOCUMENTED CONTAMINATED SURFACE AND SUBSURFACE SOIL. A HEALTH AND SAFETY PLAN HAS BEEN PREPARED AND SHALL BE REVIEWED AND IMPLEMENTED BY THE CONTRACTOR AT ALL TIMES.
41. EARTHWORK ACTIVITIES WILL BE LIMITED BY THE MATERIALS ENCOUNTERED WHICH MAY RESULT IN INCREASED HANDLING COSTS AND QUANTITY OF IMPORTED FILL MATERIALS IN LIEU OF REUSING EXCAVATED SITE MATERIALS. SUBSURFACE EXPLORATIONS SHOULD BE PERFORMED TO BETTER QUANTIFY THE REUSABILITY OF ONSITE EXCAVATED MATERIALS.
42. PURSUANT TO THE "ONE CALL" LAW, CONTRACTOR SHALL CALL 1-800-272-1000 OR 811 PRIOR TO ANY EXCAVATION TO REQUEST A MARKOUT OF UNDERGROUND UTILITIES.
43. MANY FACTORS WILL AFFECT THE FINAL EARTHWORK RESULTS. THESE FACTORS MAY INCLUDE BUT ARE NOT LIMITED TO, WEATHER CONDITIONS DURING CONSTRUCTION, EARTH MOVING EQUIPMENT USED, EXPERIENCE OF EQUIPMENT OPERATORS, COMPACTION ACCURACY, PRIOR DISTURBANCE, ASSUMPTIONS REGARDING EXISTING TOPOGRAPHY, VARIABLE SHRINK/SWELL CHARACTERISTICS, ETC.
44. ALL SIGNAGE AND STRIPING OF FIRE ZONES/LANES SHALL BE APPROVED BY THE BOROUGH FIRE OFFICIAL. THE DESIGN AND ADEQUACY OF FIRE SUPPRESSION SYSTEMS AND BOTH PUBLIC AND PRIVATE FIRE HYDRANT LOCATIONS SHALL BE SUBJECT TO THE REVIEW AND APPROVAL OF THE BOROUGH FIRE OFFICIAL.
45. ALL GRADING WITHIN LAWN AREAS SHALL BE A MINIMUM OF 2% AND A MAXIMUM OF 3 FT HORIZONTALLY TO 1 FT VERTICALLY AND AWAY FROM ALL PROPOSED AND EXISTING BUILDINGS.
46. ALL GRADING WITHIN PAVED AREAS SHALL BE A MINIMUM OF 0.75%.
47. PLANS AND DETAILS OF PROPOSED RETAINING WALL ARE TO BE PREPARED BY A NEW JERSEY LICENSED PROFESSIONAL ENGINEER AND SUBMITTED TO THE BOROUGH ENGINEER PRIOR TO CONSTRUCTION.
48. ALL SANITARY SEWER LATERAL PIPES SHALL BE INSTALLED AND TESTED IN ACCORDANCE WITH BOROUGH STANDARDS AND REQUIREMENTS.
49. ALL WATER MAINS SHALL BE INSTALLED, DISINFECTED AND TESTED IN ACCORDANCE WITH BOROUGH STANDARDS AND REQUIREMENTS.
50. THE INSTALLATION OF ALL WATER METERS SHALL BE REVIEWED AND APPROVED BY THE BOROUGH WATER DEPARTMENT.
51. ALL WATER MAIN FITTINGS SHALL BE MECHANICAL JOINT AND UTILIZE TWO MEANS OF RESTRAINT.
52. IF REQUIRED, STRUCTURAL CALCULATIONS SHALL BE PROVIDED FOR REVIEW AND APPROVAL BY THE BOROUGH ENGINEER FOR ANY OVERSIZED DRAINAGE STRUCTURES.
53. ALL SITE IMPROVEMENTS SHALL BE IN ACCORDANCE WITH THE BOROUGH CONSTRUCTION STANDARDS.
54. TRASH AND RECYCLABLES TO BE PICKED UP BY PRIVATE HAULER.
55. NO LOADING OR UNLOADING OF MATERIALS SHALL BE PERFORMED IN THE PROPOSED PARKING AREAS.
56. THESE GENERAL NOTES SHALL APPLY TO ALL SHEETS.

Colliers Engineering & Design

www.colliersengineering.com

Doing Business as MASER CONSULTING

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

PROTECT YOURSELF
ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN ANY STATE

FOR STATE SPECIFIC DIRECT PHONE NUMBERS
VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION
1	8/28/23	RM	REVISED PER NJDEP
2	4/19/24	TL	REVISED PER CLIENT & ARCHITECT
3	6/28/24	RM	REVISED PER BOROUGH ENGINEER'S REVIEW

Digitally signed by Michael Stickle
Date: 2024.06.28 21:24:29-04'00'

Michael Stickle
NEW JERSEY LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: GE57838
COLLIERS ENGINEERING & DESIGN, INC.
N.J. C.O.A. #: 24GA27986500

PRELIMINARY AND FINAL MAJOR SITE PLAN

FOR

JERNEE MILL INDUSTRIAL

BLOCK 58
LOTS 2.01 & 9

BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY
NEW JERSEY

Colliers Engineering & Design
HOLMDEL (Headquarters)
101 Crawfords Corner Road,
Suite 3400
Holmdel, NJ 07733
Phone: 732.383.1950
COLLIERS ENGINEERING & DESIGN, INC.
DOING BUSINESS AS MASER CONSULTING

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	6/12/2023	RM	DB

PROJECT NUMBER: 10000657C
DRAWING NAME: C-CVER

SHEET TITLE: COVER SHEET

SHEET NUMBER: 1 of 37

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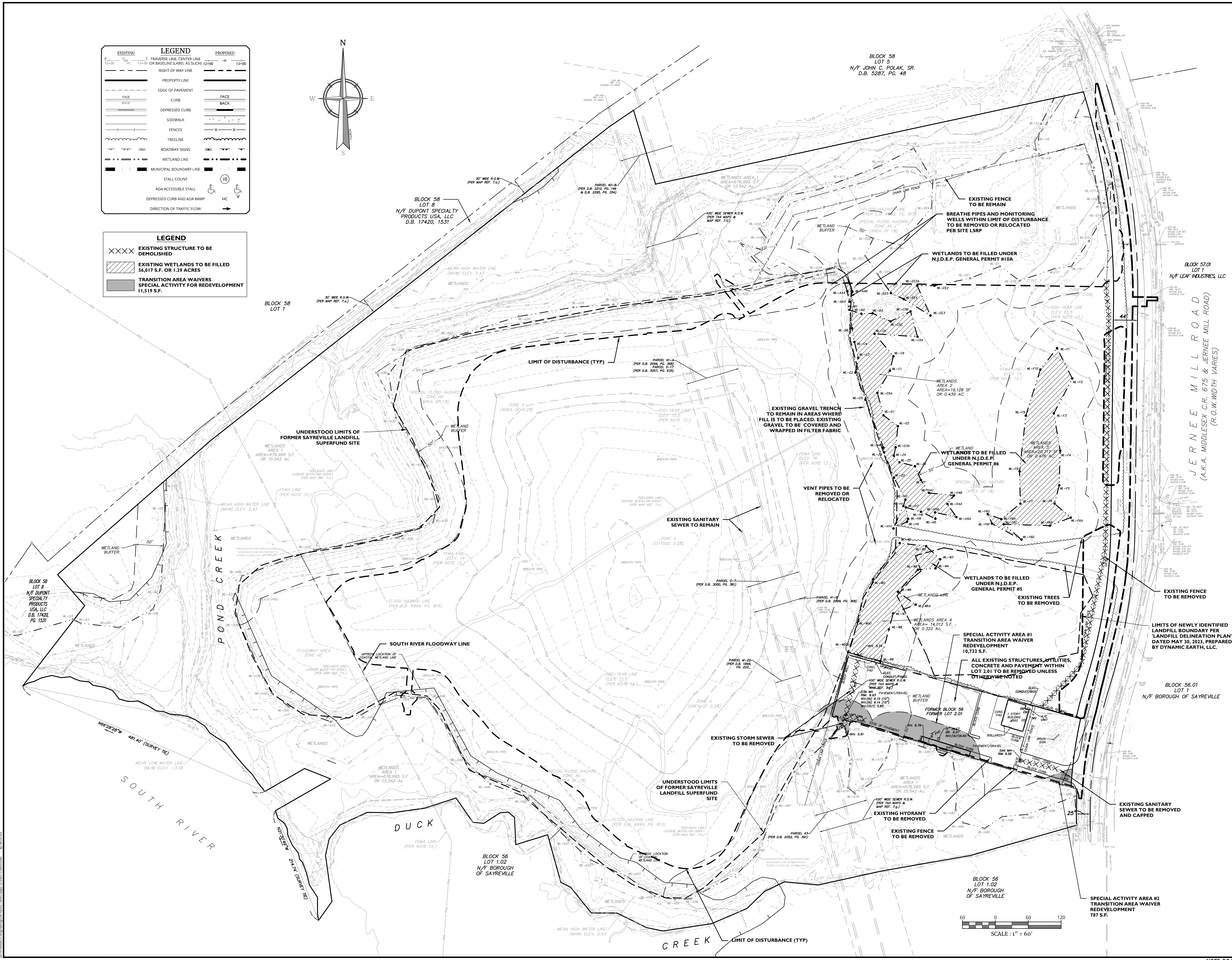

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3	6/28/24	RM	REVISED PER BOROUGH ENGINEER'S REVIEW

Digitally signed by Michael Stickle Date: 2024.06.28 21:25:52-04'00'

[illegible]

Michael Stickle
NEW JERSEY LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: GE57838
COLLIERS ENGINEERING & DESIGN, INC.
N.J. C.O.A. #: 24GA27986500

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SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	6/12/2023	RM	DB
PROJECT NUMBER: 10000657C	DRAWING NAME: C-DEMO		

SHEET TITLE:
EXISTING CONDITIONS/ DEMOLITION PLAN

SHEET NUMBER:

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

N
W E
S

PHASE LIMIT

PHASE 1

PROPOSED FREEZER SPACE BUILDING
250,000 SF BUILDING FOOTPRINT
257,858 SF TOTAL BUILDING AREA

206,250 SF FREEZER SPACE
36,540 SF COLD DOCK
7,700 SF OFFICE (INC. MEZZANINE)
6,720 SF MAINTENANCE AREA
(INC. MECHANICAL MEZZANINE)
648 SF ELECTRICAL PLATFORM

88 PARKING SPACES
30 LOADING BAYS
76 TRAILER PARKING STALLS

PHASE 2

PROPOSED FREEZER SPACE BUILDING
99,320 SF TOTAL
92,020 SF FREEZER SPACE
7,300 SF OFFICE

58 PARKING SPACES
26 LOADING BAYS
40 TRAILER PARKING STALLS

WETLAND BUFFER COMPENSATION AREA #1
7,573 S.F.

WETLAND BUFFER REDUCTION AREA #1 (ASSOCIATED WITH GP 10A ACTIVITY)
10,776 S.F.

WETLAND BUFFER REDUCTION AREA #2
3,697 S.F.

WETLAND BUFFER REDUCTION AREA #6
6,353 S.F.

WETLAND BUFFER COMPENSATION AREA #2
8,833 S.F.

UNDERSTOOD LIMITS OF FORMER SAYREVILLE LANDFILL SUPERFUND SITE

WETLAND BUFFER REDUCTION AREA #3
41 S.F.

WETLAND BUFFER REDUCTION AREA #5
1,179 S.F.

WETLAND BUFFER REDUCTION AREA #4
517 S.F.

SMALL-SCALE BIORETENTION BASIN #1

SMALL-SCALE BIORETENTION BASIN #2

SMALL-SCALE BIORETENTION BASIN #3

SMALL-SCALE BIORETENTION BASIN #4

18 LF DEPRESSED CURB (TYP.)

APPROX. LOCATION OF COASTAL WETLAND LINE

LIMITS OF NEWLY IDENTIFIED LANDFILL BOUNDARY PER 'LANDFILL DELINEATION PLAN' DATED MAY 30, 2023, PREPARED BY DYNAMIC EARTH, LLC.

JERNEE MILL ROAD
(A.K.A. MIDDLESEX C.R. 675 & JERNEE MILL ROAD)
(R.O.W. WIDTH VARIES)

POND CREEK

SOUTH RIVER

DUCK CREEK

LEGEND

EXISTING		PROPOSED
12+00 PI 13+00	TRAVERSE LINE, CENTER LINE OR BASELINE (LABEL AS SUCH)	12+00 PI 13+00
	RIGHT OF WAY LINE	
	PROPERTY LINE	
	EDGE OF PAVEMENT	
FACE BACK	CURB	FACE BACK
	DEPRESSED CURB	
	SIDEWALK	
X X	FENCES	X X
	TREELINE	
	ROADWAY SIGNS	
	WETLAND LINE	
	MUNICIPAL BOUNDARY LINE	
	STALL COUNT	10
	ADA ACCESSIBLE STALL	V
	DEPRESSED CURB AND ADA RAMP	HC
	DIRECTION OF TRAFFIC FLOW	

PAVEMENT LEGEND

- HEAVY DUTY ASPHALT PAVEMENT
- STANDARD ASPHALT PAVEMENT
- POROUS PAVEMENT
- CONCRETE PAVEMENT AREA

60 0 60 120
SCALE : 1" = 60'

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PROJECT NUMBER: 10000657C
DRAWING NAME: C-LAYT

SHEET TITLE: OVERALL SITE PLAN

SHEET NUMBER: 3 of 37

J:\2019\10000657C\Engineering\Site Plans\C-LAYT.dwg, C-LAYT, 6/12/2024 11:47:14 AM, RMITCHELL

MATCH LINE SEE SHEET 7

MATCH LINE SEE SHEET 5

WETLAND BUFFER COMPENSATION AREA #1
7,573 S.F.

WETLAND BUFFER REDUCTION AREA #2
3,697 S.F.

WETLAND BUFFER REDUCTION AREA #6
6,353 S.F.

WETLAND BUFFER REDUCTION AREA #1 (ASSOCIATED WITH GP 10A ACTIVITY)
10,776 S.F.

PROPOSED 4' HIGH SAFETY FENCE ON TOP OF RETAINING WALL

50' FRONT YARD SETBACK

50' REAR YARD SETBACK

PROPOSED FREEZER SPACE BUILDING
250,000 SF BUILDING FOOTPRINT
257,858 SF TOTAL BUILDING AREA

206,250 SF FREEZER SPACE
36,540 SF COLD DOCK
7,700 SF OFFICE (INC. MEZZANINE)
6,720 SF MAINTENANCE AREA
(INC. MECHANICAL MEZZANINE)
648 SF ELECTRICAL PLATFORM

88 PARKING SPACES
30 LOADING BAYS
76 TRAILER PARKING STALLS

MECHANICAL MEZZANINE

76 TRAILER PARKING STALLS

30 LOADING BAYS
CONCRETE PAD

ELECTRICAL PLATFORM

RISER ROOM (TYP. OF 3)

15'X15' TRANSFORMER PAD

POROUS PAVEMENT #1

SMALL-SCALE BIORETENTION BASIN #5

SMALL-SCALE BIORETENTION BASIN #4

PROPOSED 4' HIGH SAFETY FENCE ON TOP OF RETAINING WALL

18 LF DEPRESSED CURB (TYP.)

MONUMENT SIGN

END BOROUGH OF SAYREVILLE CURB

BEGIN MIDDLESEX COUNTY CURB

885' SIGHT DISTANCE PER AASHTO

GRAVEL PATH

BREATH PIPE

EDGE OF PAVEMENT

UP LIGHT W/ UTILITY

8" PVC

18" PVC

10" WAT

16" WAT

8" WAT

R-1144'

R-1180'

R-150'

R-118'

R-25'

R-15'

R-30'

R-35'

R-20'

R-100'

R-50'

R-75'

R-225'

R-300'

R-1-1
R3-1

R6-1

R5-2A

44

PAVEMENT LEGEND

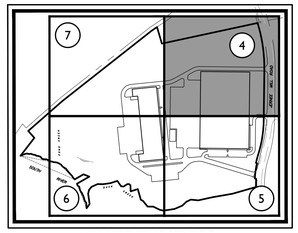
- HEAVY DUTY ASPHALT PAVEMENT
- STANDARD ASPHALT PAVEMENT
- POROUS PAVEMENT
- CONCRETE PAVEMENT AREA

LEGEND

EXISTING		PROPOSED
12+00 PI 13+00	TRAVERSE LINE, CENTER LINE OR BASELINE (LABEL AS SUCH)	12+00 13+00
	RIGHT OF WAY LINE	
	PROPERTY LINE	
	EDGE OF PAVEMENT	
FACE / BACK	CURB	FACE / BACK
	DEPRESSED CURB	
	SIDEWALK	
X X	FENCES	X X
	TREELINE	
	ROADWAY SIGNS	
	WETLAND LINE	
	MUNICIPAL BOUNDARY LINE	
	STALL COUNT	(10)
	ADA ACCESSIBLE STALL	P / E V
	DEPRESSED CURB AND ADA RAMP	HC
	DIRECTION OF TRAFFIC FLOW	

30 0 30 60
SCALE : 1" = 30'

SHEET INDEX
N.T.S.



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LOT'S 2.01 & 9

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NEW JERSEY

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AS SHOWN	6/12/2023	RM	DB

PROJECT NUMBER:	DRAWING NAME:
10000657C	C-LAYT

SHEET TITLE:
DIMENSION PLAN

SHEET NUMBER:
4 of 37

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

MATCH LINE SEE SHEET 4

ELECTRICAL PLATFORM

PROPOSED FREEZER SPACE BUILDING
250,000 SF BUILDING FOOTPRINT
257,858 SF TOTAL BUILDING AREA

206,250 SF FREEZER SPACE
36,540 SF COLD DOCK
7,700 SF OFFICE (INC. MEZZANINE)
6,720 SF MAINTENANCE AREA
(INC. MECHANICAL MEZZANINE)
648 SF ELECTRICAL PLATFORM

88 PARKING SPACES
30 LOADING BAYS
76 TRAILER PARKING STALLS

OFFICE MEZZANINE

76 TRAILER PARKING STALLS

30 LOADING BAYS
CONCRETE PAD

4,800 SF ELECTRICAL PAD

UNDERGROUND DETENTION BASIN #1

UNDERGROUND DETENTION BASIN #2

CURB RAMP TYPE I (TYP.) (SEE DETAIL)

HAIRPIN STRIPING (TYP.) (SEE DETAIL)

RISER ROOM (TYP. OF 3)

18 LF DEPRESSED CURB (TYP.)

END BOROUGH OF SAYREVILLE CURB

BEGIN MIDDLESEX COUNTY CURB

50' FRONT YARD SETBACK

85' SIGHT DISTANCE PER AASHTO

PROPOSED 4' HIGH SAFETY FENCE ON TOP OF RETAINING WALL

SMALL-SCALE BIORETENTION BASIN #3

SMALL-SCALE BIORETENTION BASIN #2

WETLAND BUFFER REDUCTION AREA #5
1,179 S.F.

WETLAND BUFFER REDUCTION AREA #4
517 S.F.

PERVIOUS PAVEMENT AREA 3

POROUS PAVEMENT #3

MONUMENT SIGN

GATE

MATCH LINE SEE SHEET 6

BREATH PIPE

GRAVEL

16" WAT

8" PVC

18" PVC

UP ITTISSEE

EDGE OF PAVEMENT

WATER POST

UTILITY BOX

R=978'

R=357'

R=315'

R=235'

R=100'

R=50'

R=40'

R=25'

R=15'

R=5'

R=3'

55' (TYP)

75' (TYP)

60' (TYP)

18' (TYP)

9' (TYP)

24' (TYP)

10' (TYP)

14.5'

25'

30'

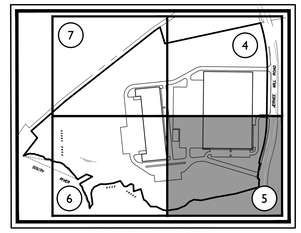
35'

R1-1
RS-2A

RS-1

N
S
E
W

SHEET INDEX
N.T.S.



PAVEMENT LEGEND

- HEAVY DUTY ASPHALT PAVEMENT
- STANDARD ASPHALT PAVEMENT
- POROUS PAVEMENT
- CONCRETE PAVEMENT AREA

LEGEND

EXISTING		PROPOSED
12+00 PI 13+00	TRAVERSE LINE, CENTER LINE OR BASELINE (LABEL AS SUCH)	12+00 13+00
	RIGHT OF WAY LINE	
	PROPERTY LINE	
	EDGE OF PAVEMENT	
FACE BACK	CURB	FACE BACK
	DEPRESSED CURB	
	SIDEWALK	
X X	FENCES	X X
	TREELINE	
	ROADWAY SIGNS	
	WETLAND LINE	
	MUNICIPAL BOUNDARY LINE	
	STALL COUNT	10
	ADA ACCESSIBLE STALL	P / V
	DEPRESSED CURB AND ADA RAMP	HC
	DIRECTION OF TRAFFIC FLOW	

30 0 30 60
SCALE : 1" = 30'

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100006657C	C-LAYT

SHEET TITLE:
DIMENSION PLAN

SHEET NUMBER:
5 of 37

MATCH LINE SEE SHEET 7

WETLAND BUFFER REDUCTION AREA #3
41 S.F.

MEAN HIGH WATER LINE (MHW) ELEV. 2.43

POND CREEK

BREATH PIPE

SMALL-SCALE BIORETENTION BASIN #1

20 TRAILER PARKING STALLS

POROUS PAVEMENT #2

18 LF DEPRESSED CURB (TYP.)

R=5'

55' (TYP)

75' (TYP)

60' (TYP)

13.5' (TYP)

11' (TYP)

24.75'

CONCRETE PAD

26 LOADING BAYS

PROPOSED FREEZER SPACE BUILDING
99,520 SF TOTAL
92,020 SF FREEZER SPACE
7,500 SF OFFICE
58 PARKING SPACES
26 LOADING BAYS
40 TRAILER PARKING STALLS

HAURPIN STRIPING (TYP.) (SEE DETAIL)

CURB RAMP TYPE I (TYP.) (SEE DETAIL)

4,800 SF ELECTRICAL PAD

40'

30'

R=10'

R=40'

R=40'

209'

49'

28'

R=3'

R=1'

R=5'

24'

18' (TYP)

43'

57'

26

16

10

5

6

7

4

R=5'

35' (TYP)

70' (TYP)

POROUS PAVEMENT #3

PERVIOUS PAVEMENT AREA 3

20 TRAILER PARKING STALLS

55' (TYP)

18 LF DEPRESSED CURB (TYP.)

SMALL-SCALE BIORETENTION BASIN #2

MATCH LINE SEE SHEET 5

35' REAR YARD SETBACK

201.9'

BREATH PIPE

T" PIPE

DUCK CREEK

MEAN HIGH WATER LINE (MHW) ELEV. 2.43

N

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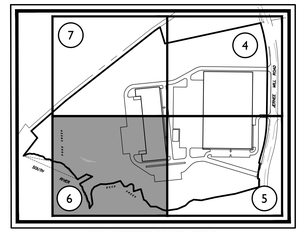

SHEET INDEX
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PAVEMENT LEGEND

- HEAVY DUTY ASPHALT PAVEMENT
- STANDARD ASPHALT PAVEMENT
- POROUS PAVEMENT
- CONCRETE PAVEMENT AREA

LEGEND

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	SIDEWALK	
X X	FENCES	X X
	TREELINE	
	ROADWAY SIGNS	
	WETLAND LINE	
	MUNICIPAL BOUNDARY LINE	
	STALL COUNT	10
	ADA ACCESSIBLE STALL	
	DEPRESSED CURB AND ADA RAMP	HC V
	DIRECTION OF TRAFFIC FLOW	

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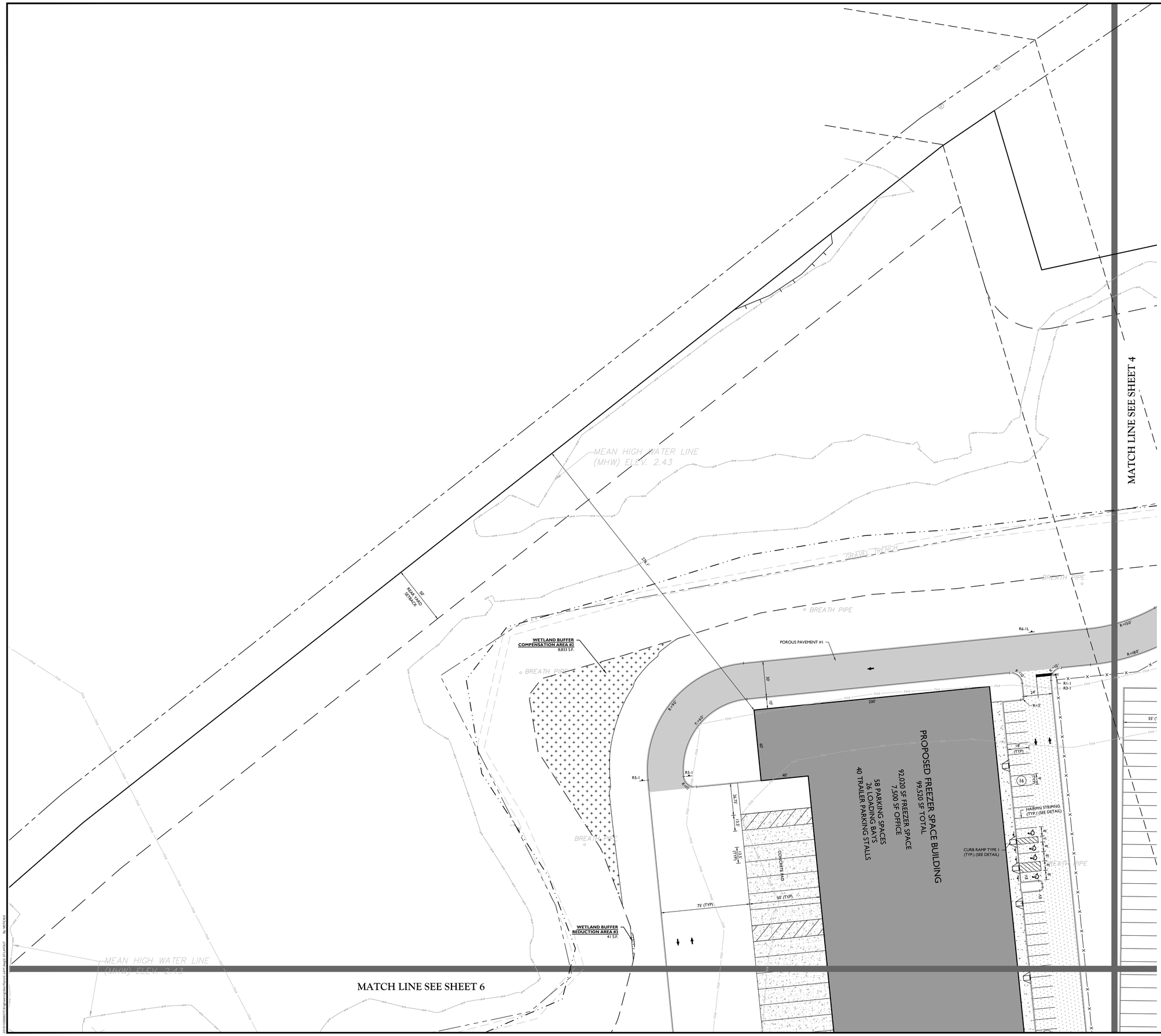

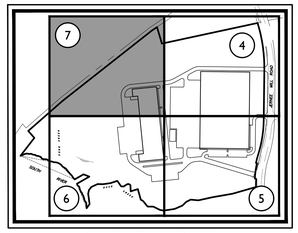

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PAVEMENT LEGEND

- HEAVY DUTY ASPHALT PAVEMENT
- STANDARD ASPHALT PAVEMENT
- POROUS PAVEMENT
- CONCRETE PAVEMENT AREA

LEGEND

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	ADA ACCESSIBLE STALL	
	DEPRESSED CURB AND ADA RAMP	HC V
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COLLIERS ENGINEERING & DESIGN, INC.
N.J. C.O.A. #: 24GA27986500

PRELIMINARY AND FINAL MAJOR SITE PLAN

FOR

JERNEE MILL INDUSTRIAL

BLOCK 58
LOTS 2.01 & 9

BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY
NEW JERSEY

Colliers Engineering & Design
HOLMDEL (Headquarters)
101 Crawfords Corner Road, Suite 3400
Holmdel, NJ 07733
Phone: 732.383.1950
COLLIERS ENGINEERING & DESIGN, INC. DOING BUSINESS AS MASER CONSULTING

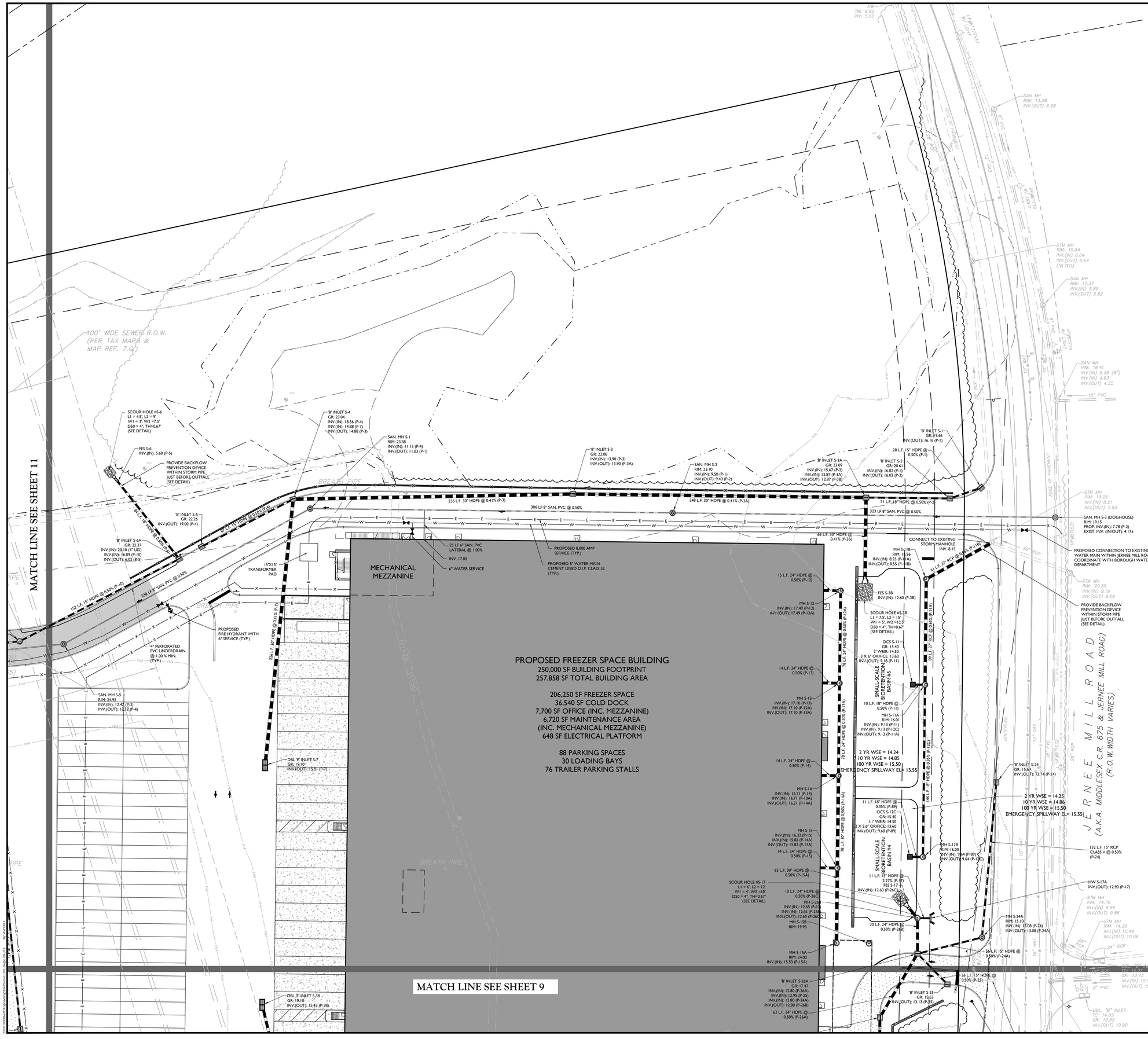
SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	6/12/2023	RM	DB

PROJECT NUMBER:	DRAWING NAME:
10000657C	C-LAYT

SHEET TITLE:
DIMENSION PLAN

SHEET NUMBER:
7 of 37

J:\10000657C\Engineering\Site Plans\Final\C-LAYT.dwg, 6/12/2023 8:47:39 AM, RM



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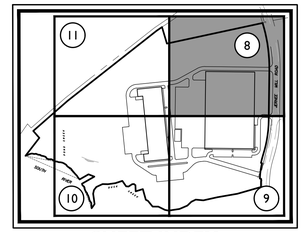

SHEET INDEX

N.T.S.

PAVEMENT LEGEND

- HEAVY DUTY ASPHALT PAVEMENT
- STANDARD ASPHALT PAVEMENT
- POROUS PAVEMENT
- CONCRETE PAVEMENT AREA

LEGEND

EXISTING		PROPOSED
12+00	TRAVERSE LINE, CENTER LINE OR BASELINE (LABEL AS SUCH)	12+00 13+00
	RIGHT OF WAY LINE	
	PROPERTY LINE	
	EDGE OF PAVEMENT	
FACE / BACK	CURB	FACE / BACK
	DEPRESSED CURB	
	SIDEWALK	
X X	FENCES	X X
	TREELINE	
	ROADWAY SIGNS	
	WETLAND LINE	
	MUNICIPAL BOUNDARY LINE	
	TYPE '9' INLET	
	TYPE 'C', 'D', 'E' INLET	
D	STORM MANHOLE	D
S	SANITARY MANHOLE	S
	FLARED END SECTION	
	HEADWALL	
	HYDRANT	
	POLE MOUNTED LIGHT	
CATV	CABLE TV CONDUIT	CATV
W	WATER MAIN	W
G	GAS MAIN	G
T	TELEPHONE CONDUIT	T
E	ELECTRIC CONDUIT	E
	SANITARY PIPE	
	STORM PIPE	

30 0 30 60

SCALE : 1" = 30'

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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REV	DATE	DRAWN BY	DESCRIPTION
1	8/30/23	RM	REVISED PER NJNHP
2	4/19/24	TL	REVISED PER CLARK & ARCHITECT
3	6/20/24	RM	REVISED PER BOROUGH ENGINEER'S REVIEW

Digitally signed by Michael Stickle
Date: 2024.06.28 15:25:57 -04'00'

Michael Stickle
NEW JERSEY LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: GE57838
COLLIERS ENGINEERING & DESIGN, INC.
N.J. C.O.A. #: 24GA27986500

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PROJECT NUMBER: 10000657C
DRAWING NAME: C-UTIL

SHEET TITLE:
UTILITIES PLAN

SHEET NUMBER:
8 of 37

MATCH LINE SEE SHEET 8

MATCH LINE SEE SHEET 10

PROPOSED FREEZER SPACE BUILDING
250,000 SF BUILDING FOOTPRINT
257,858 SF TOTAL BUILDING AREA

206,250 SF FREEZER SPACE
36,540 SF COLD DOCK
7,700 SF OFFICE (INC. MEZZANINE)
6,720 SF MAINTENANCE AREA
(INC. MECHANICAL MEZZANINE)
648 SF ELECTRICAL PLATFORM

88 PARKING SPACES
30 LOADING BAYS
76 TRAILER PARKING STALLS

OFFICE MEZZANINE

50'X96' ELECTRICAL PAD

PARCEL S-7 (PER D.B. 3080, PG. 351)

PARCEL 41-B (PER D.B. 2099, PG. 368)

PARCEL M-22 (PER D.B. 1898, PG. 222)

PARCEL 43 (PER D.B. 2052, PG. 391)

100' WIDE SEWER R.O.W. (PER TAX MAPS & MAP REF. 7.g.)

100' SANITARY SEWER EASEMENT

2 YR WSE = 17.16
10 YR WSE = 18.06
100 YR WSE = 19.34

SMALL-SCALE BIORETENTION BASIN #2

SMALL-SCALE BIORETENTION BASIN #3

2 YR WSE = 11.65
10 YR WSE = 11.92
100 YR WSE = 12.24
EMERGENCY SPILLWAY EL= 12.25

PROVIDE BACKFLOW PREVENTION DEVICE WITHIN STORM PIPE JUST BEFORE OUTFALL (SEE DETAIL)

PROPOSED FIRE HYDRANT WITH 6" SERVICE (TYP.)

4" PERFORATED PVC UNDERDRAIN @ 1.00 % MIN. (TYP.)

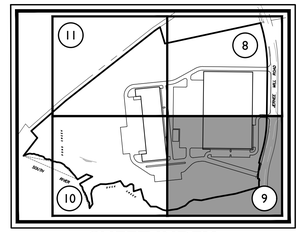
PERVIOUS PAVEMENT AREA 3

PROPOSED 8" WATER MAIN CEMENT LINED D.I.P. CLASS 52 (TYP.)

EXISTING UTILITY POLE TO BE RELOCATED/REPLACED BEHIND PROPOSED CURB (TYP.)

PROPOSED CONNECTION TO EXISTING WATER MAIN WITHIN JERNEE MILL ROAD COORDINATE WITH BOROUGH WATER DEPARTMENT

SHEET INDEX
N.T.S.



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10	8/7/2024	RM	REVISED PER BOROUGH ENGINEER'S REVIEW
9	9/2024	RM	REVISED PER BOROUGH ENGINEER'S REVIEW
8	10/2024	RM	REVISED PER BOROUGH ENGINEER'S REVIEW
7	11/2024	RM	REVISED PER BOROUGH ENGINEER'S REVIEW
6	12/2024	RM	REVISED PER BOROUGH ENGINEER'S REVIEW
5	1/2025	RM	REVISED PER BOROUGH ENGINEER'S REVIEW
4	2/2025	RM	REVISED PER BOROUGH ENGINEER'S REVIEW
3	3/2025	RM	REVISED PER BOROUGH ENGINEER'S REVIEW
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Digitally signed by Michael Stickle
Date: 2024.08.26 21:26:37 -04'00'

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PROJECT NUMBER: 100006572
DRAWING NAME: C-UTIL

SHEET TITLE: UTILITIES PLAN

SHEET NUMBER: 9 of 37

MATCH LINE SEE SHEET 11

'B' INLET S-66
GR: 21.47
INV.(OUT): 18.21 (P-66)

'B' INLET S-67
GR: 22.65
INV.(IN): 17.50 (P-66)
INV.(IN): 17.50 (P-71)
INV.(OUT): 17.50 (P-67)

MH S-68
RIM: 22.19
INV.(IN): 17.19 (P-67)
INV.(OUT): 16.19 (P-68)

61 L.F. 30" HDPE @ 0.50% (P-67)

INSPECTION PORT
RIM = 21.95
INV. (OUT) = 18.61 (4" UD)

38 L.F. 30" HDPE @
0.50% (P-68)

RIP-RAP APRON #S-69
L = 10', W = 12'
D50 = 4", TH=0.67'
(SEE DETAIL)

FES S-69
INV.(IN): 16.00 (P-68)

4" PERFORATED PVC UNDERDRAIN
@ 1.00 % MIN. (TYP.)

DBL 'B' INLET S-64
GR: 20.94
INV.(IN): 17.60 (4" UD)
INV.(OUT): 16.22 (P-64)

FES S-65
INV.(IN): 16.00 (P-64)

RIP-RAP APRON #S-65
L = 10', W = 9'
D50 = 4", TH=0.67'
(SEE DETAIL)

SMALL-SCALE
BIORETENTION
BASIN #1

2 YR WSE = 18.06
10 YR WSE = 18.34
100 YR WSE = 18.99
EMERGENCY SPILLWAY EL= 19.00

15 L.F. 18" HDPE @
1.50% (P-64)

OCS S-88
GR: 18.85
3.5' WEIR: 18.00
2.5' ORIFICE: 16.90
INV.(OUT): 3.54 (P-88)

107 L.F. 24" HDPE @ 0.50% (P-88)

PROVIDE BACKFLOW
PREVENTION DEVICE
WITHIN STORM PIPE
JUST BEFORE OUTFALL
(SEE DETAIL)

FES S-89
INV.(IN): 3.00 (P-88)

SCOUR HOLE #S-89
L1 = 6', L2 = 12'
W1 = 4', W2 =10'
D50 = 5", TH=0.83'
(SEE DETAIL)

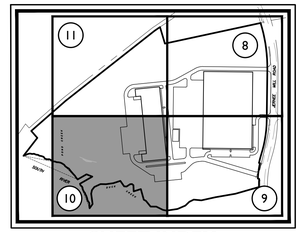
INSPECTION PORT
RIM = 22.15
INV. (OUT) = 18.81 (4" UD)

PERVIOUS PAVEMENT AREA 2
WQDS WSE = 17.98
2 YR WSE = 18.45
10 YR WSE = 19.02
100 YR WSE = 20.17
SHWT / LANDFILL CAP EL = ±13.0
DRAIN TIME = 4.12 HRS

PROPOSED FREEZER SPACE BUILDING
99,320 SF TOTAL
92,020 SF FREEZER SPACE
7,500 SF OFFICE
58 PARKING SPACES
26 LOADING BAYS
40 TRAILER PARKING STALLS

15 L.F. 15" HDPE @ 0.50% (P-74)
MH S-75
RIM: 23.85
INV.(IN): 18.60 (P-74)
INV.(IN): 18.60 (P-77)
INV.(OUT): 18.60 (P-75)
50 L.F. 24" HDPE @ 0.50% (P-75)
15 L.F. 15" HDPE @ 0.50% (P-77)
'B' INLET S-47
GR: 26.46
INV.(IN): 21.96 (P-42)
INV.(OUT): 21.96 (P-43)
15 L.F. 15" HDPE @ 0.50% (P-71)
MH S-73
RIM: 23.85
INV.(IN): 18.35 (P-72)
INV.(IN): 18.35 (P-75)
INV.(OUT): 18.35 (P-73)
50 L.F. 24" HDPE @ 0.50% (P-73)
15 L.F. 15" HDPE @ 0.50% (P-70)
'B' INLET S-44
GR: 26.46
INV.(IN): 21.36 (P-43)
INV.(OUT): 21.36 (P-44)
MH S-71
RIM: 23.85
INV.(IN): 18.10 (P-70)
INV.(IN): 18.10 (P-73)
INV.(IN): 18.10 (P-81)
INV.(OUT): 18.10 (P-71)
50 L.F. 18" HDPE @ 0.50% (P-81)
15 L.F. 15" HDPE @ 0.50% (P-80)
MH S-81
RIM: 23.85
INV.(IN): 18.35 (P-80)
INV.(IN): 18.35 (P-83)
INV.(OUT): 18.35 (P-81)
50 L.F. 18" HDPE @ 0.50% (P-83)
15 L.F. 15" HDPE @ 0.50% (P-82)
'B' INLET S-45
GR: 26.46
INV.(IN): 20.76 (P-44)
INV.(OUT): 20.76 (P-45)
MH S-83
RIM: 23.85
INV.(IN): 18.60 (P-82)
INV.(IN): 18.60 (P-85)
INV.(OUT): 18.60 (P-83)
50 L.F. 15" HDPE @ 0.50% (P-85)
15 L.F. 15" HDPE @ 0.50% (P-84)
MH S-85
RIM: 23.85
INV.(IN): 18.85 (P-84)
INV.(IN): 18.85 (P-87)
INV.(OUT): 18.85 (P-85)
50 L.F. 15" HDPE @ 0.50% (P-87)
15 L.F. 15" HDPE @ 0.50% (P-86)
MH S-87
RIM: 23.85
INV.(IN): 19.10 (P-86)
INV.(OUT): 19.10 (P-87)
'B' INLET S-46
GR: 26.46
INV.(IN): 19.56 (P-45)
INV.(IN): 19.56 (P-46A)
INV.(OUT): 19.56 (P-46)
105 L.F. 18" HDPE @ 0.50% (P-45)
50'X96' ELECTRICAL PAD
105 L.F. 18" HDPE @ 0.50% (P-41)
15 L.F. 15" HDPE @ 0.50% (P-58)
15 L.F. 15" HDPE @ 0.50% (P-60)
15 L.F. 15" HDPE @ 0.50% (P-62)
15 L.F. 15" HDPE @ 0.50% (P-59)
15 L.F. 15" HDPE @ 0.50% (P-56)
90 L.F. 15" HDPE @ 0.50% (P-63)
90 L.F. 15" HDPE @ 0.50% (P-61)
MH S-57
RIM: 26.71
INV.(IN): 19.85 (P-56)
INV.(IN): 19.85 (P-59)
INV.(OUT): 19.35 (P-57)
MH S-59
RIM: 25.71
INV.(IN): 20.10 (P-58)
INV.(IN): 20.10 (P-61)
INV.(OUT): 20.10 (P-59)
MH S-63
RIM: 23.71
INV.(IN): 20.60 (P-62)
INV.(OUT): 20.60 (P-63)
MH S-61
RIM: 24.71
INV.(IN): 20.35 (P-60)
INV.(IN): 20.35 (P-63)
INV.(OUT): 20.35 (P-61)
PROPOSED 8" WATER MAIN
CEMENT LINED D.I.P. CLASS 52
(TYP.)
'B' INLET S-50
GR: 21.35
INV.(OUT): 18.21 (P-50)
131 L.F. 18" HDPE @ 0.50% (P-50)
PERVIOUS PAVEMENT AREA 3
WQDS WSE = 17.90
2 YR WSE = 19.06
10 YR WSE = 19.62
100 YR WSE = 21.08
SHWT / LANDFILL CAP EL = ±12.5
DRAIN TIME = 3.85 HRS
4" PERFORATED
PVC UNDERDRAIN
@ 1.00 % MIN.
(TYP.)
PERVIOUS
PAVEMENT
AREA 3
'B' INLET S-50A
GR: 20.18
INV.(IN): 17.55 (P-50)
INV.(OUT): 17.55 (P-50A)
54 L.F. 18" HDPE @ 0.50% (P-50A)
'B' INLET S-51
GR: 21.27
INV.(IN): 17.52 (4" UD)
INV.(IN): 17.27 (P-50A)
INV.(OUT): 17.27 (P-51)
FES S-49
INV.(IN): 17.00 (P-48)
RIP-RAP
APRON #S-49
L = 9', W = 10'
D50 = 4"
TH=0.67'
(SEE DETAIL)
SMALL-SCALE
BIORETENTION
BASIN #2
18 LF DEPRESSED C. INLET
(TYP.)
53 L.F. 24" HDPE @
0.50% (P-51)
INSPECTION PORT
RIM = 24.00
INV. (OUT) = 19.75 (4" UD)
2 YR WSE = 19.08
10 YR WSE = 19.46
100 YR WSE = 20.01
EMERGENCY SPILLWAY EL= 20.10
FES S-52
INV.(IN): 17.00 (P-51)
RIP-RAP APRON #S-52
L = 6', W = 9'
D50 = 4", TH=0.67'
(SEE DETAIL)
GRASS TRENCH
MATCH LINE SEE SHEET 9
BREATH PIPE
PROPOSED
PERVIOUS PAVEMENT AREA 1
WQDS WSE = 17.98
2 YR WSE = 18.45
10 YR WSE = 19.02
100 YR WSE = 20.17
SHWT / LANDFILL CAP EL = ±13.0
DRAIN TIME = 4.12 HRS
POND CREEK
DUCK RIVER
CREEK

N
W E
S
NORTH



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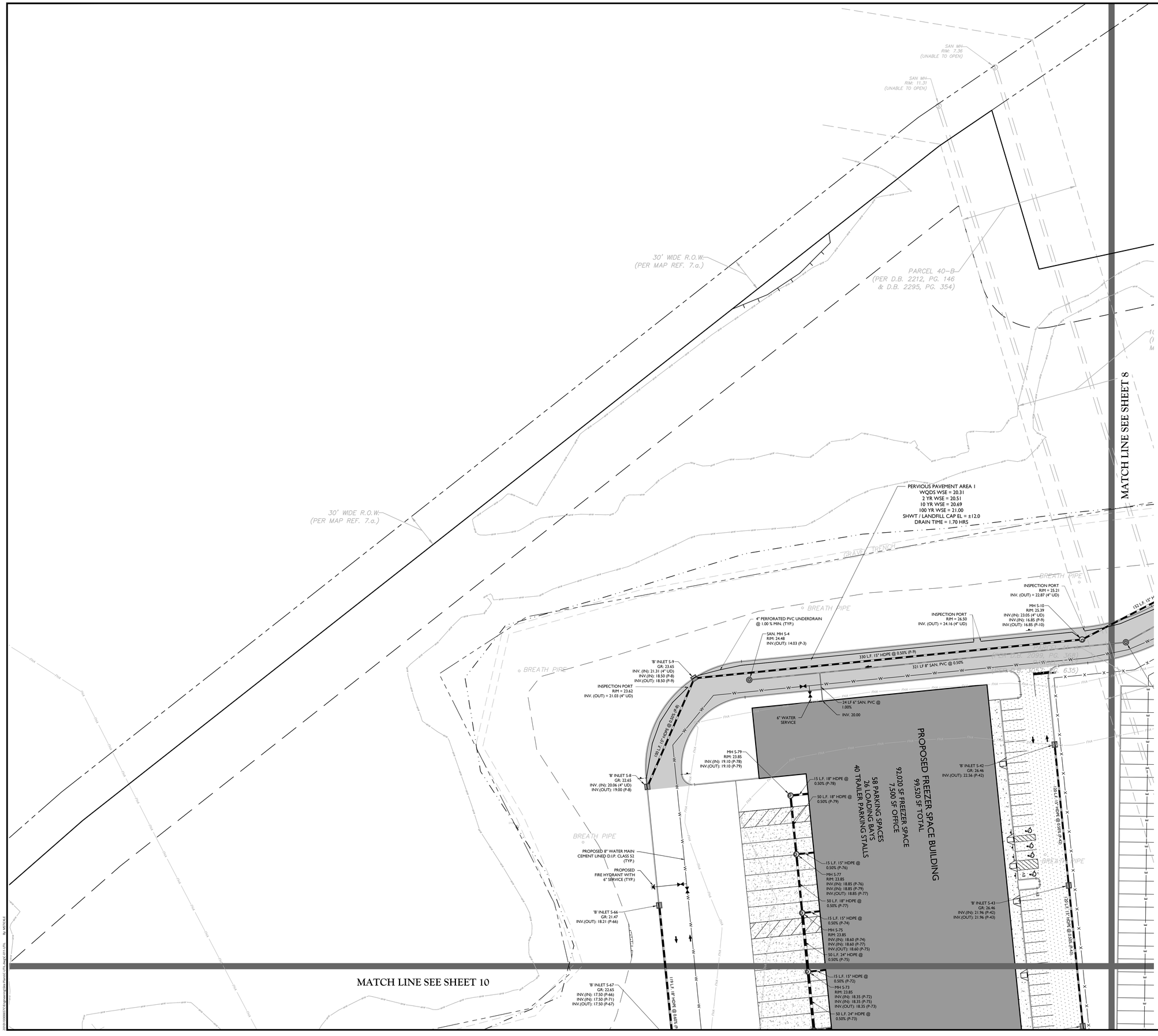

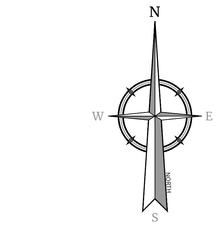

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REV	DATE	DRAWN BY	DESCRIPTION
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2	9/19/24	TL	REVISED PER CLIENT & ARCHITECT
3	12/20/24	RM	REVISED PER BOROUGH ENGINEER'S REVIEW

Digitally signed by Michael Stickle
Date: 2024.06.28 21:29:36-04'00'

Michael Stickle
NEW JERSEY LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: GE57838
COLLIERS ENGINEERING & DESIGN, INC.
N.J. C.O.A. #: 24GA27986500

PRELIMINARY AND FINAL
MAJOR SITE PLAN

FOR

JERNEE MILL INDUSTRIAL

BLOCK 58
LOT'S 2.01 & 9

BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY
NEW JERSEY

Colliers Engineering & Design
HOLMDEL (Headquarters)
101 Crawfords Corner Road,
Suite 3400
Holmdel, NJ 07733
Phone: 732.383.1950
COLLIERS ENGINEERING & DESIGN, INC.
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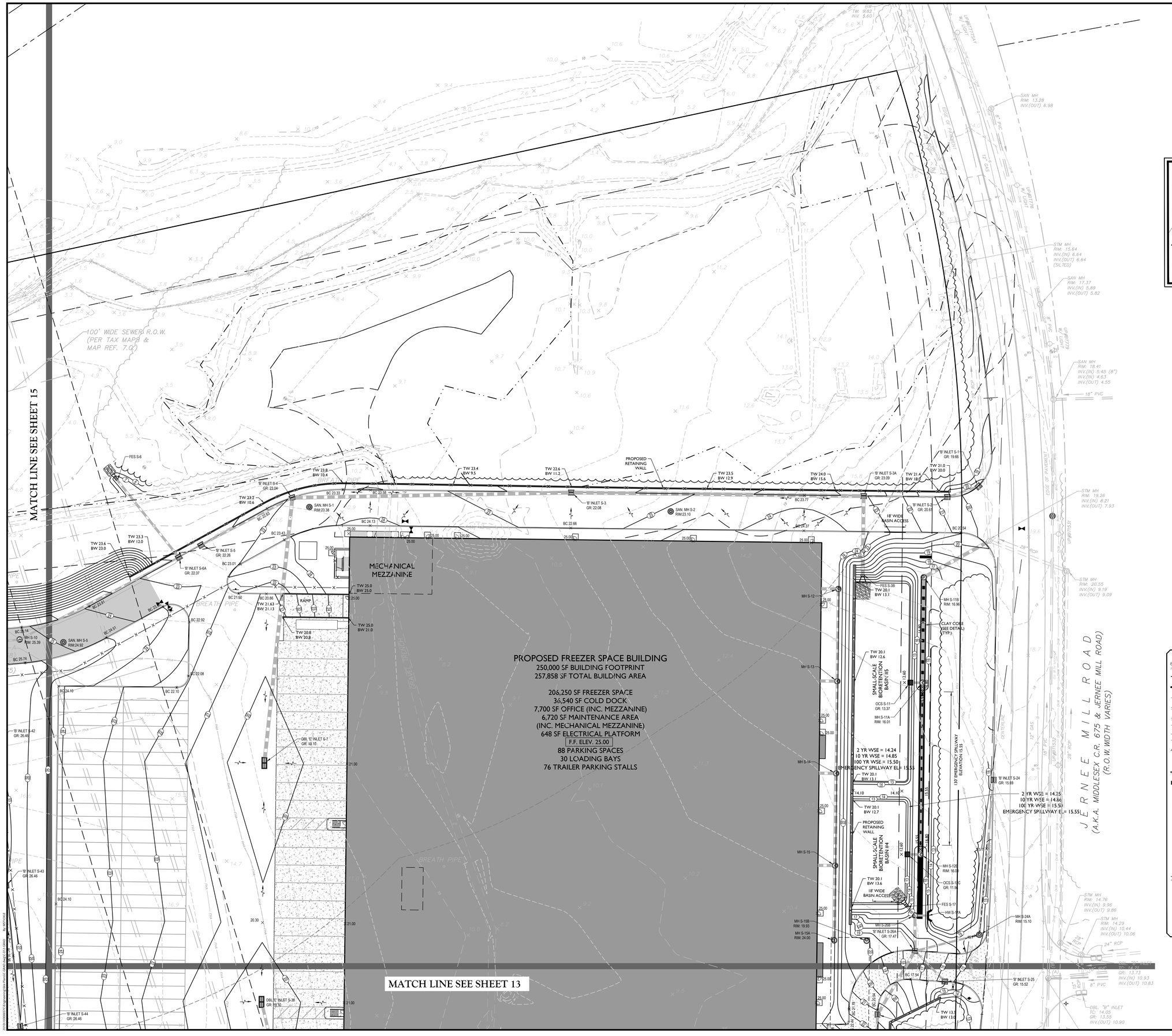
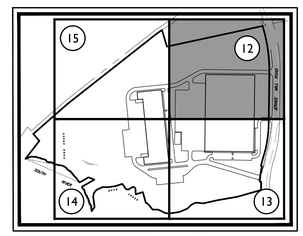
SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	6/12/2023	RM	DB

PROJECT NUMBER:	DRAWING NAME:
10000657C	C-UTIL

SHEET TITLE:
UTILITIES PLAN

SHEET NUMBER:
11 of 37





SHEET INDEX

N.T.S.

PAVEMENT LEGEND

- HEAVY DUTY ASPHALT PAVEMENT
- STANDARD ASPHALT PAVEMENT
- POROUS PAVEMENT
- CONCRETE PAVEMENT AREA

LEGEND

EXISTING		PROPOSED
12+00 PI 13+00	TRAVERSE LINE, CENTER LINE OR BASELINE (LABEL AS SUCH)	12+00 13+00
	RIGHT OF WAY LINE	
	PROPERTY LINE	
	EDGE OF PAVEMENT	
FACE / BACK	CURB	FACE / BACK
	DEPRESSED CURB	
	SIDEWALK	
X X	FENCES	X X
	TREELINE	
	ROADWAY SIGNS	
	WETLAND LINE	
	MUNICIPAL BOUNDARY LINE	
	TYPE 'I' INLET	
	TYPE 'C', 'D', 'E' INLET	
D	STORM MANHOLE	D
S	SANITARY MANHOLE	S
	FLARED END SECTION	
	HEADWALL	
	HYDRANT	
	POLE MOUNTED LIGHT	
75 / 74	CONTOURS	75 / 74
× G 29.0	SPOT ELEVATION	× G 29.0
	DIRECTION OF OVERLAND FLOW	
× TC 29.0	TOP OF CURB ELEVATION	× TC 29.0
× BC 29.0	BOTTOM OF CURB ELEVATION	× BC 29.0
	TOP OF DEPRESSED CURB ELEVATION	× TDC 29.0

30 0 30 60

SCALE : 1" = 30'

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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N.J. C.O.A. #: 24GA27986500

PRELIMINARY AND FINAL MAJOR SITE PLAN

FOR

JERNEE MILL INDUSTRIAL

BLOCK 58
LOTS 2.01 & 9

BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY
NEW JERSEY

Colliers Engineering & Design

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SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	6/12/2023	RM	DB

PROJECT NUMBER:	DRAWING NAME:
10000657C	C-GRAD

SHEET TITLE:

GRADING PLAN

SHEET NUMBER:

12 of 37

MATCH LINE SEE SHEET 12

PROPOSED FREEZER SPACE BUILDING
250,000 SF BUILDING FOOTPRINT
257,858 SF TOTAL BUILDING AREA

206,250 SF FREEZER SPACE
36,540 SF COLD DOCK
7,700 SF OFFICE (INC. MEZZANINE)
6,720 SF MAINTENANCE AREA
(INC. MECHANICAL MEZZANINE)
648 SF ELECTRICAL PLATFORM
F.F. ELEV. 25.00
88 PARKING SPACES
30 LOADING BAYS
76 TRAILER PARKING STALLS

ELECTRICAL PLATFORM

OFFICE MEZZANINE

2 YR WSE = 17.16
10 YR WSE = 18.06
100 YR WSE = 19.34

SMALL-SCALE BIORETENTION BASIN #3
BOTTOM OF BASIN EL. = 10.50
2 YR WSE = 11.65
10 YR WSE = 11.92
100 YR WSE = 12.24
EMERGENCY SPILLWAY EL= 12.25
18' WIDE BASIN ACCESS

SMALL-SCALE BIORETENTION BASIN #2
OCS S-53 GR: 20.05
MH S-54 RIM: 21.02

PARCEL 41-B (PER D.B. 3099, PG. 368)
PARCEL 5-7 (PER D.B. 3000, PG. 381)
PARCEL 43 (PER D.B. 2052, PG. 391)
PARCEL 44 (PER D.B. 1807, PG. 222)

100' WIDE SEWER R.O.W. (PER TAX MAPS & MAP REF. 7.g.)

100' SANITARY SEWER EASEMENT

1106 LF SAN PIPE
1106 LF SAN PIPE

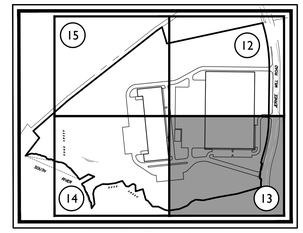
PROPOSED RETAINING WALL

CLAY CORE (SEE DETAIL) (TYP.)

PERVIOUS PAVEMENT AREA 2

MATCH LINE SEE SHEET 14

SHEET INDEX
N.T.S.



PAVEMENT LEGEND

- HEAVY DUTY ASPHALT PAVEMENT
- STANDARD ASPHALT PAVEMENT
- POROUS PAVEMENT
- CONCRETE PAVEMENT AREA

LEGEND

EXISTING		PROPOSED
12+00 PI 13+00	TRAVERSE LINE, CENTER LINE OR BASELINE (LABEL AS SUCH)	12+00 13+00
	RIGHT OF WAY LINE	
	PROPERTY LINE	
	EDGE OF PAVEMENT	
FACE / BACK	CURB	FACE / BACK
	DEPRESSED CURB	
	SIDEWALK	
X X	FENCES	X X
	TREELINE	
	ROADWAY SIGNS	
	WETLAND LINE	
	MUNICIPAL BOUNDARY LINE	
	TYPE 'S' INLET	
	TYPE 'C', 'D', 'E' INLET	
P	STORM MANHOLE	D
S	SANITARY MANHOLE	S
	FLARED END SECTION	
	HEADWALL	
	HYDRANT	
	POLE MOUNTED LIGHT	
74 / 75	CONTOURS	75
× G 29.0	SPOT ELEVATION	× G 29.0
	DIRECTION OF OVERLAND FLOW	
× TC 29.0	TOP OF CURB ELEVATION	× TC 29.0
× BC 29.0	BOTTOM OF CURB ELEVATION	× BC 29.0
	TOP OF DEPRESSED CURB ELEVATION	× TDC 29.0

30 0 30 60
SCALE : 1" = 30'

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3	12/20/24	RM	REVISED PER BOROUGH ENGINEER'S REVIEW

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PRELIMINARY AND FINAL MAJOR SITE PLAN
FOR
JERNEE MILL INDUSTRIAL

BLOCK 58
LOTS 2.01 & 9

BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY
NEW JERSEY

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AS SHOWN	6/12/2023	RM	DB

PROJECT NUMBER:	DRAWING NAME:
10000657C	C-GRAD

SHEET TITLE:
GRADING PLAN

SHEET NUMBER:
13 of 37

MATCH LINE SEE SHEET 15

MATCH LINE SEE SHEET 13

'B' INLET S-66
GR: 21.47

MH S-75
RIM: 23.85

MH S-73
RIM: 23.85

MH S-71
RIM: 23.85

'B' INLET S-67
GR: 22.69

'B' INLET S-44
GR: 26.46

MH S-68
RIM: 22.19

MH S-91
RIM: 23.85

MH S-83
RIM: 23.85

MH S-85
RIM: 23.85

MH S-87
RIM: 23.85

'B' INLET S-46
GR: 26.46

FES S-69

18' WIDE BASIN ACCESS

DBL 'B' INLET S-64
GR: 20.94

FES S-65

SMALL-SCALE
BIORETENTION
BASIN #1

2 YR WSE = 18.06
10 YR WSE = 18.34
100 YR WSE = 18.99
EMERGENCY SPILLWAY EL= 19.00

OCS S-88
GR: 18.85

CLAY CORE
(SEE DETAIL)
(TYP.)

PERVIOUS PAVEMENT AREA 2
WQDS WSE = 17.98
2 YR WSE = 19.45
10 YR WSE = 19.02
100 YR WSE = 20.17
SHWT / LANDFILL CAP EL = ±13.0
DRAIN TIME = 4.12 HRS

PERVIOUS
PAVEMENT AREA 2

PROPOSED FREEZER SPACE BUILDING
99,320 SF TOTAL
92,020 SF FREEZER SPACE
7,500 SF OFFICE
58 PARKING SPACES
26 LOADING BAYS
40 TRAILER PARKING STALLS
F.F. ELEV.= 28.00

FES S-89

'B' INLET S-50
GR: 21.35

PERVIOUS PAVEMENT AREA 3
WQDS WSE = 17.90
2 YR WSE = 19.06
10 YR WSE = 19.62
100 YR WSE = 21.08
SHWT / LANDFILL CAP EL = ±12.5
DRAIN TIME = 3.85 HRS

'B' INLET S-50A
GR: 20.18

'B' INLET S-51
GR: 21.77

PERVIOUS
PAVEMENT
AREA 3

PERVIOUS
PAVEMENT
AREA 3

CLAY CORE
(SEE DETAIL)
(TYP.)

18' WIDE BASIN ACCESS

18" RCP (TYP.)

FES S-49

FES S-52

SMALL-SCALE
BIORETENTION
BASIN #2

2 YR WSE = 19.08
10 YR WSE = 19.46
100 YR WSE = 20.01
EMERGENCY SPILLWAY EL= 20.10

OCS S-53
GR: 20.05

'B' INLET S-45
GR: 26.46

TW 25.0
BW 25.0

TW 26.0
BW 25.0

TW 27.0
BW 25.0

BREATH PIPE

POND

DUCK CREEK

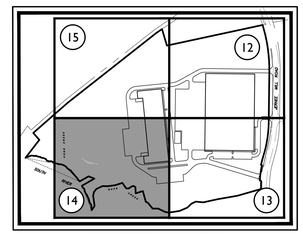
DUCK RIVER

N

S

E

W



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N.T.S.

PAVEMENT LEGEND

- HEAVY DUTY ASPHALT PAVEMENT
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LEGEND

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FACE / BACK	CURB	FACE / BACK
	DEPRESSED CURB	
	SIDEWALK	
X X	FENCES	X X
	TREELINE	
	ROADWAY SIGNS	
	WETLAND LINE	
	MUNICIPAL BOUNDARY LINE	
	TYPE 'B' INLET	
	TYPE 'C', 'D', 'E' INLET	
D	STORM MANHOLE	D
S	SANITARY MANHOLE	S
	FLARED END SECTION	
	HEADWALL	
	HYDRANT	
	POLE MOUNTED LIGHT	
75 / 74	CONTOURS	75 / 74
× G 29.0	SPOT ELEVATION	× G 29.0
	DIRECTION OF OVERLAND FLOW	
× TC 29.0	TOP OF CURB ELEVATION	× TC 29.0
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30 0 30 60
SCALE : 1" = 30'

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2	3/7/2025	RM	REVISED PER BOROUGH ENGINEER'S REVIEW
1	6/12/2023		

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Michael Stickle
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LICENSE NUMBER: GE57838
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N.J. C.O.A. #: 24GA27986500

PRELIMINARY AND FINAL
MAJOR SITE PLAN

FOR

JERNEE MILL
INDUSTRIAL

BLOCK 58
LOTS 2.01 & 9

BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY
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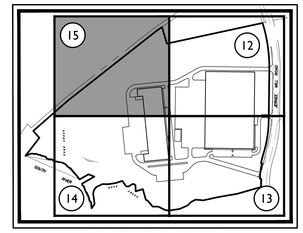
PROJECT NUMBER: 10000657C
DRAWING NAME: C-GRAD

SHEET TITLE:
GRADING PLAN

SHEET NUMBER:
14 of 37



SHEET INDEX
N.T.S.

PAVEMENT LEGEND

- HEAVY DUTY ASPHALT PAVEMENT
- STANDARD ASPHALT PAVEMENT
- POROUS PAVEMENT
- CONCRETE PAVEMENT AREA

LEGEND

EXISTING		PROPOSED
12+00 PI 13+00	TRAVERSE LINE, CENTER LINE OR BASELINE (LABEL AS SUCH)	12+00 13+00
	RIGHT OF WAY LINE	
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FACE / BACK	CURB	FACE / BACK
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	TREELINE	
	ROADWAY SIGNS	
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	TYPE 'S' INLET	
	TYPE 'C', 'D', 'E' INLET	
D	STORM MANHOLE	D
S	SANITARY MANHOLE	S
	FLARED END SECTION	
	HEADWALL	
	HYDRANT	
	POLE MOUNTED LIGHT	
75 / 74	CONTOURS	75 / 74
× G 29.0	SPOT ELEVATION	× G 29.0
	DIRECTION OF OVERLAND FLOW	
× TC 29.0	TOP OF CURB ELEVATION	× TC 29.0
× BC 29.0	BOTTOM OF CURB ELEVATION	× BC 29.0
	TOP OF DEPRESSED CURB ELEVATION	× TDC 29.0

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MAJOR SITE PLAN

FOR

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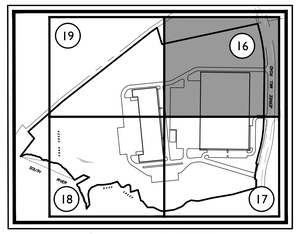
PROJECT NUMBER:	DRAWING NAME:
10000657C	C-GRAD

SHEET TITLE:
GRADING PLAN

SHEET NUMBER:
15 of 37

LOCATION MAP (SCALE: 1"=2,000')



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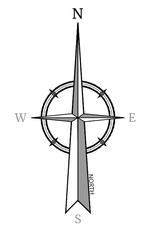

MATCH LINE SEE SHEET 19

MATCH LINE SEE SHEET 17

LIMIT OF DISTURBANCE (TYP.)

LIMIT OF CLEARING (TYP.)

SUPER SILT FENCE ALONG LIMIT OF DISTURBANCE (TYP.)

STABILIZED CONSTRUCTION ACCESS (TYP.)

CONCRETE WASHOUT AREA (TYP.)

INLET PROTECTION (TYP.)

STABILIZED CONSTRUCTION ACCESS (TYP.)

CONSTRUCTION STAGING AREA (TYP.)

SOIL EROSION MATTING (SEE DETAIL)

PROPOSED FREEZER SPACE BUILDING
250,000 SF BUILDING FOOTPRINT
257,858 SF TOTAL BUILDING AREA

206,250 SF FREEZER SPACE
36,540 SF COLD DOCK
7,700 SF OFFICE (INC. MEZZANINE)
6,720 SF MAINTENANCE AREA
(INC. MECHANICAL MEZZANINE)
648 SF ELECTRICAL PLATFORM

88 PARKING SPACES
30 LOADING BAYS
76 TRAILER PARKING STALLS

MECHANICAL MEZZANINE

ELECTRICAL PLATFORM

JERNEE MILL ROAD
(A.K.A. MIDDLESEX C.R. 675 & JERNEE MILL ROAD)
(R.O.W. WIDTH VARIES)

2 YR WSE = 14.24
10 YR WSE = 14.85
100 YR WSE = 15.50
EMERGENCY SPILLWAY EL= 15.55

2 YR WSE = 14.25
10 YR WSE = 14.86
100 YR WSE = 15.50
EMERGENCY SPILLWAY EL= 15.55

SMALL-SCALE BIORETENTION BASIN #5

SMALL-SCALE BIORETENTION BASIN #4

LEGEND

- INLET PROTECTION
- SILT FENCE
- LIMIT OF DISTURBANCE
- SILT FENCE & LIMIT OF DISTURBANCE
- SUPER SILT FENCE & LIMIT OF DISTURBANCE
- STABILIZED CONSTRUCTION ENTRANCE
- SOIL STOCKPILE
- CONCRETE WASHOUT

30 0 30 60

SCALE : 1" = 30'

THIS PLAN IS FOR SOIL EROSION AND SEDIMENT CONTROL PURPOSES ONLY
TOTAL LIMIT OF DISTURBANCE = 1,046,341± S.F. (24.020± ACRES)

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LOTS 2.01 & 9

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PROJECT NUMBER: 10000657C
DRAWING NAME: C-SESC

SHEET TITLE:
SOIL EROSION & SEDIMENT CONTROL PLAN

SHEET NUMBER:
16 of 37

MATCH LINE SEE SHEET 16

PROPOSED FREEZER SPACE BUILDING
250,000 SF BUILDING FOOTPRINT
257,858 SF TOTAL BUILDING AREA

206,250 SF FREEZER SPACE
36,540 SF COLD DOCK
7,700 SF OFFICE (INC. MEZZANINE)
6,720 SF MAINTENANCE AREA
(INC. MECHANICAL MEZZANINE)
648 SF ELECTRICAL PLATFORM

88 PARKING SPACES
30 LOADING BAYS
76 TRAILER PARKING STALLS

OFFICE MEZZANINE

CONSTRUCTION STAGING AREA (TYP.)

SOIL STOCKPILE (TYP.)

SOIL EROSION MATTING (SEE DETAIL)

INLET PROTECTION (TYP.)

SUPER SILT FENCE ALONG LIMIT OF DISTURBANCE (TYP.)

LIMIT OF CLEARING (TYP.)

CONCRETE WASHOUT AREA (TYP.)

SILT FENCE (TYP.)

STABILIZED CONSTRUCTION ACCESS (TYP.)

LIMIT OF DISTURBANCE (TYP.)

SMALL-SCALE BIORETENTION BASIN #2
2 YR WSE = 19.08
10 YR WSE = 19.46
100 YR WSE = 20.01
EMERGENCY SPILLWAY EL= 20.10

SMALL-SCALE BIORETENTION BASIN #3
2 YR WSE = 11.65
10 YR WSE = 11.92
100 YR WSE = 12.24
EMERGENCY SPILLWAY EL= 12.25

2 YR WSE = 17.16
10 YR WSE = 18.06
100 YR WSE = 19.34

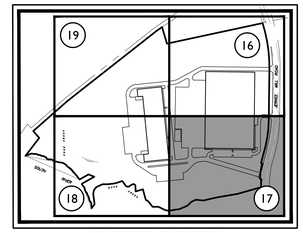
MATCH LINE SEE SHEET 18

LEGEND

- INLET PROTECTION
- SILT FENCE
- LIMIT OF DISTURBANCE
- SILT FENCE & LIMIT OF DISTURBANCE
- SUPER SILT FENCE & LIMIT OF DISTURBANCE
- STABILIZED CONSTRUCTION ENTRANCE
- SOIL STOCKPILE
- CONCRETE WASHOUT

30 0 30 60
SCALE : 1" = 30'

N
W E
S



SHEET INDEX
N.T.S.

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION
1	8.28.23	RM	REVISED PER NJDEP
2	4.19.24	TL	REVISED PER CLIENT & ARCHITECT
3	8.22.24	RM	REVISED PER BOROUGH ENGINEER'S REVIEW

Digitally signed by Michael Stickle
Date: 2024.08.28 21:28:39 -04'00'

Michael Stickle
NEW JERSEY LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: GE57838
COLLIERS ENGINEERING & DESIGN, INC.
N.J. C.O.A. #: 24GA27986500

PRELIMINARY AND FINAL MAJOR SITE PLAN

FOR

JERNEE MILL INDUSTRIAL

BLOCK 58
LOTS 2.01 & 9

BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY
NEW JERSEY

Colliers Engineering & Design
HOLMDEL (Headquarters)
101 Crawfords Corner Road, Suite 3400
Holmdel, NJ 07733
Phone: 732.383.1950
COLLIERS ENGINEERING & DESIGN, INC. DOING BUSINESS AS MASER CONSULTING

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	6/12/2023	RM	DB

PROJECT NUMBER: 10000657C
DRAWING NAME: C-SESC

SHEET TITLE:
SOIL EROSION & SEDIMENT CONTROL PLAN

SHEET NUMBER:
17 of 37

MATCH LINE SEE SHEET 19

MATCH LINE SEE SHEET 17

POND CREEK

DUCK CREEK

RIVER

BREATH PIPE

GRATE INLET

SMALL-SCALE BIORETENTION BASIN #1

2 YR WSE = 18.06
10 YR WSE = 18.34
100 YR WSE = 18.99
EMERGENCY SPILLWAY EL= 19.00

PERVIOUS PAVEMENT AREA 2
WQDS WSE = 17.98
2 YR WSE = 18.45
10 YR WSE = 19.02
100 YR WSE = 20.17
SHWT / LANDFILL CAP EL = ±13.0'
DRAIN TIME = 4.12 HRS

PROPOSED FREEZER SPACE BUILDING
99,520 SF TOTAL
92,020 SF FREEZER SPACE
7,500 SF OFFICE
58 PARKING SPACES
26 LOADING BAYS
40 TRAILER PARKING STALLS

PERVIOUS PAVEMENT AREA 3
WQDS WSE = 17.90
2 YR WSE = 19.06
10 YR WSE = 19.62
100 YR WSE = 21.08
SHWT /LANDFILL CAP EL = ±12.5
DRAIN TIME = 3.85 HRS

SMALL-SCALE BIORETENTION BASIN #2

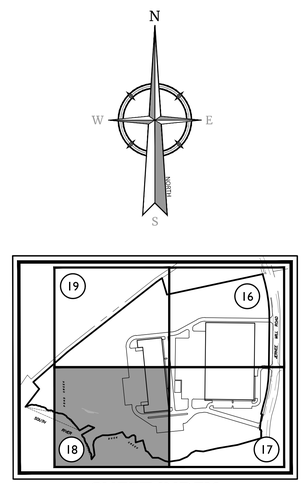
2 YR WSE = 19.08
10 YR WSE = 19.46
100 YR WSE = 20.01
EMERGENCY SPILLWAY EL= 20.10

SOIL EROSION MATTING (SEE DETAIL)

SUPER SILT FENCE ALONG LIMIT OF DISTURBANCE (TYP.)

INLET PROTECTION (TYP.)

SCALE : 1" = 30'



SHEET INDEX
N.T.S.

LEGEND

- INLET PROTECTION
- SILT FENCE
- LIMIT OF DISTURBANCE
- SILT FENCE & LIMIT OF DISTURBANCE
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PRELIMINARY AND FINAL MAJOR SITE PLAN

FOR

JERNEE MILL INDUSTRIAL

BLOCK 58
LOTS 2.01 & 9

BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY
NEW JERSEY

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PROJECT NUMBER: 10000657C
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SOIL EROSION & SEDIMENT CONTROL PLAN

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18 of 37

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PRELIMINARY AND FINAL
MAJOR SITE PLAN
FOR
JERNEE MILL INDUSTRIAL

BLOCK 58
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SHEET NUMBER:
19 of 37

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BOROUGH OF SAYREVILLE SOIL CONSERVATION DISTRICT NOTES

DTL_NUMBER — MODIFIED DTL_DATE

1. THE BOROUGH OF SAYREVILLE HALL BE NOTIFIED FORTY-EIGHT (48) HOURS IN ADVANCE OF ANY SOIL DISTURBING ACTIVITY.
2. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO SOIL DISTURBANCE, OR IN THEIR PROPER SEQUENCE, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
3. ANY CHANGES TO THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLANS WILL REQUIRE THE SUBMISSION OF REVISED SOIL EROSION AND SEDIMENT CONTROL PLANS TO THE BOROUGH OF SAYREVILLE FOR RE-CERTIFICATION. THE REVISED PLANS MUST MEET ALL CURRENT STATE SOIL EROSION AND SEDIMENT CONTROL STANDARDS.
4. N.J.S.A 4:24-39 ET. SEQ. REQUIRES THAT NO CERTIFICATES OF OCCUPANCY BE ISSUED BEFORE THE BOROUGH OF SAYREVILLE DETERMINES THAT A PROJECT OR PORTION THEREOF IS IN FULL COMPLIANCE WITH THE CERTIFIED PLAN AND STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY AND A REPORT OF COMPLIANCE HAS BEEN ISSUED. UPON WRITTEN REQUEST FROM THE APPLICANT, THE DISTRICT MAY ISSUE A REPORT OF COMPLIANCE WITH CONDITIONS ON A LOT-BY-LOT OR SECTION-BY-SECTION BASIS, PROVIDED THAT THE PROJECT OR PORTION THEREOF IS IN SATISFACTORY COMPLIANCE WITH THE SEQUENCE OF DEVELOPMENT AND TEMPORARY MEASURES FOR SOIL EROSION AND SEDIMENT CONTROL HAVE BEEN IMPLEMENTED, INCLUDING PROVISIONS FOR STABILIZATION AND SITE WORK.
5. ANY STOCKPILE OR DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN **FOURTEEN (14) DAYS**, AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, WILL IMMEDIATELY RECEIVE A TEMPORARY SEEDING. IF THE SEASON PREVENTS THE ESTABLISHMENT OF TEMPORARY COVER, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW, OR EQUIVALENT MATERIAL, AT A RATE OF 2 TO 2 ½ TONS PER ACRE, ACCORDING TO THE STANDARD FOR STABILIZATION WITH MULCH ONLY.
6. IMMEDIATELY FOLLOWING INITIAL DISTURBANCE OR ROUGH GRADING, ALL CRITICAL AREAS SUBJECT TO EROSION (I.E. SOIL STOCKPILES, STEEP SLOPES AND ROADWAY EMBANKMENTS) WILL RECEIVE TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH OR A SUITABLE EQUIVALENT, AND A MULCH ANCHOR, IN ACCORDANCE WITH STATE STANDARDS.
7. A SUB-BASE COURSE WILL BE APPLIED IMMEDIATELY FOLLOWING ROUGH GRADING AND INSTALLATION OF IMPROVEMENTS TO STABILIZE STREETS, ROADS, DRIVEWAYS, AND PARKING AREAS. IN AREAS WHERE NO UTILITIES ARE PRESENT, THE SUB-BASE SHALL BE INSTALLED WITHIN FIFTEEN (15) DAYS OF THE PRELIMINARY GRADING.
8. THE STANDARD FOR STABILIZED CONSTRUCTION ACCESS REQUIRES THE INSTALLATION OF A PAD OF CLEAN CRUSHED STONE AT POINTS WHERE TRAFFIC WILL BE ACCESSING THE CONSTRUCTION SITE. AFTER INTERIOR ROADWAYS ARE PAVED, INDIVIDUAL LOTS REQUIRE A STABILIZED CONSTRUCTION ACCESS CONSISTING OF ONE INCH TO TWO INCH (1" - 2") STONE FOR A MINIMUM LENGTH OF TEN FEET (10') EQUAL TO THE LOT ENTRANCE WIDTH. ALL OTHER ACCESS POINTS SHALL BE BLOCKED OFF.
9. ALL SOIL WASHED, DROPPED, SPILLED, OR TRACKED OUTSIDE THE LIMIT OF DISTURBANCE OR ONTO PUBLIC RIGHT-OF-WAYS WILL BE REMOVED IMMEDIATELY.
10. PERMANENT VEGETATION IS TO BE SEEDED OR SODDED ON ALL EXPOSED AREAS WITHIN TEN (10) DAYS AFTER FINAL GRADING.
11. AT THE TIME THAT SITE PREPARATION FOR PERMANENT VEGETATIVE STABILIZATION IS GOING TO BE ACCOMPLISHED, ANY SOIL THAT WILL NOT PROVIDE A SUITABLE ENVIRONMENT TO SUPPORT ADEQUATE VEGETATIVE GROUND COVER SHALL BE REMOVED OR TREATED IN SUCH A WAY THAT IT WILL PERMANENTLY ADJUST THE SOIL CONDITIONS AND RENDER IT SUITABLE FOR VEGETATIVE GROUND COVER. IF THE REMOVAL OR TREATMENT OF THE SOIL WILL NOT PROVIDE SUITABLE CONDITIONS, NON-VEGETATIVE MEANS OF PERMANENT GROUND STABILIZATION WILL HAVE TO BE EMPLOYED.
12. IN ACCORDANCE WITH THE STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS, ANY SOIL HAVING A PH OF 4 OR LESS OR CONTAINING IRON SULFIDES SHALL BE ULTIMATELY PLACED OR BURIED WITH LIMESTONE APPLIED AT THE RATE OF 10 TONS/ACRE, (OR 450 LBS/1,000 SQ FT OF SURFACE AREA) AND COVERED WITH A MINIMUM OF 12" OF SETTLED SOIL WITH A PH OF 5 OR MORE, OR 24" WHERE TREES OR SHRUBS ARE TO BE PLANTED.
13. CONDUIT OUTLET PROTECTION MUST BE INSTALLED AT ALL REQUIRED OUTFALLS PRIOR TO THE DRAINAGE SYSTEM BECOMING OPERATIONAL.
14. UNFILTERED DEWATERING IS NOT PERMITTED. NECESSARY PRECAUTIONS MUST BE TAKEN DURING ALL DEWATERING OPERATIONS TO MINIMIZE SEDIMENT TRANSFER. ANY DEWATERING METHODS USED MUST BE IN ACCORDANCE WITH THE STANDARD FOR DEWATERING.
15. SHOULD THE CONTROL OF DUST AT THE SITE BE NECESSARY, THE SITE WILL BE SPRINKLED UNTIL THE SURFACE IS WET, TEMPORARY VEGETATIVE COVER SHALL BE ESTABLISHED OR MULCH SHALL BE APPLIED AS REQUIRED BY THE STANDARD FOR DUST CONTROL.
16. STOCKPILE AND STAGING LOCATIONS ESTABLISHED IN THE FIELD SHALL BE PLACED WITHIN THE LIMIT OF DISTURBANCE ACCORDING TO THE CERTIFIED PLAN. STAGING AND STOCKPILES NOT LOCATED WITHIN THE LIMIT OF DISTURBANCE WILL REQUIRE CERTIFICATION OF A REVISED SOIL EROSION AND SEDIMENT CONTROL PLAN. CERTIFICATION OF A NEW SOIL EROSION AND SEDIMENT CONTROL PLAN MAY BE REQUIRED FOR THESE ACTIVITIES IF AN AREA GREATER THAN 5,000 SQUARE FEET IS DISTURBED.
17. ALL SOIL STOCKPILES ARE TO BE TEMPORARILY STABILIZED IN ACCORDANCE WITH SOIL EROSION AND SEDIMENT CONTROL NOTE #6.
18. 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.

BOROUGH OF SAYREVILLE
167 MAIN STREET, SAYREVILLE, NJ 08872
PHONE (732) 390-7000

SEQUENCE OF COMMERCIAL CONSTRUCTION

MCNJ-SOIL-NOTE-1500 — 05/01/18

1. CLEARING OF ENTRANCE AND LIMIT OF DISTURBANCE FOR INSTALLATION OF SILT FENCE AND CONSTRUCTION ENTRANCE PAD (1 WEEK).
2. CLEARING AND ROUGH GRADING (2 WEEKS)
3. CONSTRUCTION OF STORM WATER BASINS (2 WEEKS)
4. INSTALL STORM DRAINAGE SYSTEM, CONDUIT OUTLET PROTECTION AND ALL OTHER UTILITIES. INSTALL INLET PROTECTION (3 WEEKS)
5. CONSTRUCT CURBS AND PLACE ROAD SUBBASE (2 WEEKS).
6. CLEAR AND GRADE BUILDING AREAS AND CONSTRUCT BUILDINGS. ALL DISTURBED AREAS SHALL BE STABILIZED AS DEFINED IN SOIL EROSION AND SEDIMENT CONTROL NOTES. (ONGOING FROM COMMENCEMENT OF PROJECT).
7. ESTABLISH FINISH GRADES. CONDUCT SOIL COMPACTION TESTING AS REQUIRED, OR SCARIFY/TILL 6" MINIMUM DEPTH OF SUBSOIL IN THE LANDSCAPED AND LAWN AREA. (2 WEEKS)
8. ALL SURFACES HAVING LAWN OR LANDSCAPING AS FINAL COVER ARE TO BE PROVIDED 5" OF TOPSOIL, FIRM IN PLACE, PRIOR TO SEEDING, SODDING OR PLANTING. PLACE PERMANENT VEGETATION COVER. (1 WEEK)
9. PAVE SITE AND COMPLETE FINAL LANDSCAPING (1 MONTH)
10. REMOVE TEMPORARY ACCESS PROTECTION, SILT FENCE, AND INLET PROTECTION AFTER ALL DISTURBED AREAS HAVE BEEN STABILIZED.

STANDARD FOR VEGETATIVE COVER

MCNJ-SOIL-NOTE-1100

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 STANDARD FOR LAND GRADING.
   B. IMMEDIATELY PRIOR TO SEEDING AND TOPSOIL APPLICATION, THE SUBSOIL SHALL BE EVALUATED FOR COMPACTION IN ACCORDANCE WITH THE STANDARD FOR LAND GRADING.
   C. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING THE SOIL STRUCTURE. A UNIFORM APPLICATION TO AN AVERAGE DEPTH OF 5 INCHES, MINIMUM OF 4 INCHES, FIRMED IN PLACE IS REQUIRED. ALTERNATIVE DEPTHS MAY BE CONSIDERED WHERE SPECIAL REGULATORY AND/OR INDUSTRY DESIGN STANDARDS ARE APPROPRIATE SUCH AS ON GOLF COURSES, SPORTS FIELDS, LANDFILL CAPPING ETC. TOPSOIL SHALL BE AMENDED WITH ORGANIC MATTER, AS NEEDED, IN ACCORDANCE WITH THE STANDARD FOR TOPSOILING.
   D. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE-STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS.
2. SEEDBED PREPARATION
   A. UNIFORMLY APPLY GROUND LIMESTONE AND FERTILIZER TO TOPSOIL WHICH HAS BEEN SPREAD AND FIRMED, ACCORDING TO SITE SPECIFIC SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS CO-OPERATIVE EXTENSION. SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS COOPERATIVE EXTENSION OFFICES (HTTP://NJAES.RUTGERS.EDU/COUNTY/).
      a. FOR TEMPORARY SEEDING: 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. LIMING RATE SHALL BE ESTABLISHED PER SOIL TESTING.
      b. FOR PERMANENT SEEDING: FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET OF 10-10-10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE AND INCORPORATED INTO THE SURFACE 4 INCHES. IF FERTILIZER IS NOT INCORPORATED, APPLY ONE-HALF THE RATE DESCRIBED ABOVE DURING SEEDBED PREPARATION AND REPEAT ANOTHER ONE-HALF RATE APPLICATION OF THE SAME FERTILIZER WITHIN 3 TO 5 WEEKS AFTER SEEDING.
   B. WORK LIME AND FERTILIZER INTO THE TOPSOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRING-TOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISKING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLE UNIFORM SEEDBED IS PREPARED.
   C. 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 REPARATION. SEE STANDARD FOR MANAGEMENT OF HIGH ACID-PRODUCING SOILS FOR SPECIFIC REQUIREMENTS.
   D. 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.). SEE "SOIL DECOMPACTION AND TESTING REQUIREMENTS".
   E. REMOVE FROM THE SURFACE ALL STONES 2 INCHES OR LARGER IN ANY DIMENSION AND OTHER DEBRIS SUCH AS WIRE, TREE ROOTS, PIECES OF CONCRETE, CLODS, LUMPS OR OTHER UNSUITABLE MATERIAL.
3. SEEDING
   A. TEMPORARY SEEDING SPECIFICATIONS - TEMPORARY VEGETATIVE COVER SHALL CONSIST OF PERENNIAL RYEGRASS APPLIED UNIFORMLY AT A RATE OF 1.0 POUNDS PER 1,000 SQ.FT. (100 LBS/ACRE), OR A MIXTURE FROM TABLE 7-2 OF THE STANDARDS APPROVED BY THE SOIL CONSERVATION DISTRICT.
   B. PERMANENT SEEDING SPECIFICATIONS - SELECT AN APPROVED MIXTURE FROM THOSE LISTED BELOW, AN APPROVED MIXTURE FROM TABLE 4-3 OF THE STANDARDS, OR USE A 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. SEED SHALL BE APPLIED AS NOTED BELOW WITHIN THE DATES SPECIFIED IN THE STANDARDS:

      1. LAWN AREAS:

      MIX #16 (POORLY DRAINED SOIL)

ROUGH BLUEGRASS	90 LBS/ACRE
STRONG CREEPING RED FESCUE	130 LBS/ACRE

      OPTIMUM SEEDING DATES:
      8/15 - 10/15 (ZONE 6b)

      ACCEPTABLE SEEDING DATES:
      3/1 - 4/30 (ZONE 6b)

      SUMMER SEEDING DATES * :
      5/1 - 8/14 (ZONE 6b)

      * NOTE: SUMMER SEEDING SHOULD ONLY BE CONDUCTED WHEN THE SITE IS IRRIGATED. MIXES INCLUDING WHITE CLOVER REQUIRE THAT AT LEAST SIX WEEKS OF GROWING SEASON REMAIN AFTER SEEDING TO ENDURE ESTABLISHMENT BEFORE FREEZING CONDITIONS.

      2. DETENTION BASINS:

      MIX #9:

DEERTONGUE	20 LBS/ACRE
REDTOP	2 LBS/ACRE
WILD RYE (ELYMUS)	15 LBS/ACRE
SWITCHGRASS	25 LBS/ACRE

      OPTIMUM SEEDING DATES:
      3/1 - 4/30 (Zone 6b)

   C. 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.
   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.
   E. 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 4 - MULCHING BELOW). HYDROSEEDING IS NOT A PREFERRED SEEDING METHOD BECAUSE SEED AND FERTILIZER ARE APPLIED TO THE SURFACE AND NOT INCORPORATED INTO THE SOIL. WHEN POOR SEED TO SOIL CONTACT OCCURS, THERE IS A REDUCED SEED GERMINATION AND GROWTH.
4. MULCHING
   MULCHING IS REQUIRED ON ALL SEEDING. MULCH WILL PROTECT 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, 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 AT LEAST 85% OF THE SOIL SURFACE IS 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 CRISS-CROSS 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 TURF GRASS. 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 OF MULCH, DRYING AND CURING, SHALL NO LONGER BE SOLUBLE OR DISPERSIBLE IN WATER. BINDER 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. 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 CO-POLYMERS, 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 MANUFACTURER'S 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 SUPPLY NEW SEEDING WITH ADEQUATE WATER (A MINIMUM OF 1/4 INCH APPLIED UP TO 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:
   NO FOLLOW-UP TOPDRESSING IS MANDATORY UNLESS WHERE GROSS NITROGEN DIFICIENCY EXISTS IN THE SOIL TO THE EXTENT THAT TURF FAILURE MAY DEVELOP. IN THAT INSTANCE, TOPDRESS WITH 10-10-10 OR EQUIVALENT AT 300 LB PER ACRE OR 7 LB PER 1,000 SF EVERY 3 TO 5 WEEKS UNTIL THE GROSS NITROGEN DEFICIENCY IN THE TURF IS AMELIORATED.
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 4-2 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**. NOTE THIS DESIGNATION OF MOWED ONCE DOES NOT GUARANTEE THE PERMANENCY OF THE TURF SHOULD OTHER MAINTENANCE FACTORS BE NEGLECTED OR OTHERWISE MISMANAGED.

DUST CONTROL

MCNJ-SOIL-NOTE-1400 — 05/01/17

DUST CONTROL METHODS:

1. APPLY MULCHES OR VEGETATIVE COVER AS PER NJ SOIL EROSION AND SEDIMENT CONTROL STANDARDS.
2. TILL AND ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. THIS IS A TEMPORARY EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEGIN PLOWING ON WINDWARD SIDE OF SITE. CHISEL-TYPE PLOWS SPACED ABOUT 12 INCHES APART AND SPRING-TOOTHED HARROWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.
3. SPRINKLE THE SITE UNTIL THE SURFACE IS WET.
4. ERECT BARRIERS SUCH AS SOLID BOARD FENCES, SNOW FENCES, BURLAP FENCES, CRATE WALLS, BALES OF HAY AND SIMILAR MATERIAL TO CONTROL AIR CURRENTS AND SOIL BLOWING.
5. APPLY CALCIUM CHLORIDE IN THE FORM OF LOOSE, DRY GRANULES OR FLAKES FINE ENOUGH TO FEED THROUGH COMMONLY USED SPREADERS AT A RATE THAT WILL KEEP SURFACE MOIST BUT NOT CAUSE POLLUTION OR PLANT DAMAGE. NOT SUITABLE ON STEEPER SLOPES NEAR THE STREAMS OR POTENTIALLY ACCUMULATE AROUND PLANTS.
6. COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.
7. USE SPRAY-ON ADHESIVE ON MINERAL SOILS (NOT EFFECTIVE ON MUCK SOILS). KEEP TRAFFIC OFF THESE AREAS. MATERIALS AS FOLLOWS:

MATERIAL	WATER DILUTION	TYPE OF NOZZLE	APPLY GALLONS/ACRE
ANIONIC ASPHALT EMULSION	7:1	COARSE SPRAY	1200
LATEX EMULSION	12.5:1	FINE SPRAY	235
RESIN IN WATER	4:1	FINE SPRAY	300
POLYACRYLAMIDE (PAM) - SPRAY ON POLYACRYLAMIDE (PAM) - DRY SPREAD	APPLY ACCORDING TO MANUFACTURER'S INSTRUCTIONS. MAY ALSO BE USED AS AN ADDITIVE TO SEDIMENT BASINS TO FLOCCULATE AND PRECIPITATE SUSPENDED COLLOIDS. SEE SEDIMENT BASIN STANDARD, P. 26-1		
ACIDULATED SOY BEAN SOAP STICK	NONE	COARSE SPRAY	1200

MITIGATION NOTES FOR ACIDIC SOIL

MCNJ-SOIL-NOTE-1700 — 05/01/17

1. LIMIT THE EXCAVATION AREA AND EXPOSURE TIME WHEN HIGH-ACID PRODUCING SOILS ARE ENCOUNTERED.
2. TOPSOIL STRIPPED FROM THE SITE SHALL BE STORED SEPARATELY FROM TEMPORARILY STOCKPILED HIGH ACID PRODUCING SOILS.
3. STOCKPILES OF HIGH ACID-PRODUCING SOIL SHOULD BE LOCATED ON LEVEL LAND TO MINIMIZE ITS MOVEMENT, ESPECIALLY WHEN THIS MATERIAL HAS A HIGH CLAY CONTENT.
4. TEMPORARILY STOCKPILED HIGH ACID-PRODUCING SOIL MATERIAL TO BE STORED MORE THAN 48 HOURS SHOULD BE COVERED WITH PROPERLY ANCHORED, HEAVY GRADE SHEETS OF POLYETHYLENE WHERE POSSIBLE. IF NOT POSSIBLE, STOCKPILES SHALL BE COVERED WITH A MINIMUM OF 3 TO 6 INCHES OF WOOD CHIPS TO MINIMIZE EROSION OF THE STOCKPILE. SILT FENCE SHALL BE INSTALLED AT THE TOE OF THE SLOPE TO CONTAIN MOVEMENT OF THE STOCKPILED MATERIAL. TOPSOIL SHALL NOT BE APPLIED TO THE STOCKPILES TO PREVENT TOPSOIL CONTAMINATION WITH HIGH ACID-PRODUCING SOIL.
5. HIGH ACID PRODUCING SOILS WITH A pH OF 4.0 OR LESS OR CONTAINING IRON SULFIDE (INCLUDING BORROW FROM CUTS OR DREDGED SEDIMENT) SHALL BE ULTIMATELY PLACED OR BURIED WITH LIMESTONE APPLIED AT THE RATE OF 10 TONS PER ACRE (OR 450 POUNDS PER 1,000 SQUARE FEET OF SURFACE AREA) AND COVERED WITH A MINIMUM OF 12 INCHES OF SETTLED SOIL WITH A pH OF 5.0 OR MORE EXCEPT AS FOLLOWS:
   A. AREAS WHERE TREES OR SHRUBS ARE TO BE PLANTED SHALL BE COVERED WITH A MINIMUM OF 24 INCHES OF SOIL WITH A pH OF 5 OR MORE.
   B. DISPOSAL AREAS SHALL NOT BE LOCATED WITHIN 24 INCHES OF ANY SURFACE OF A SLOPE OR BANK, SUCH AS BERMS, STREAM BANKS, DITCHES, AND OTHERS, TO PREVENT POTENTIAL LATERAL LEACHING DAMAGES.
6. EQUIPMENT USED FOR MOVEMENT OF HIGH ACID-PRODUCING SOILS SHOULD BE CLEANED AT THE END OF EACH DAY TO PREVENT SPREADING OF HIGH ACID-PRODUCING SOIL MATERIALS TO OTHER PARTS OF THE SITE, INTO STREAMS OR STORMWATER CONVEYANCES, AND TO PROTECT MACHINERY FROM ACCELERATED RUSTING.
7. NON-VEGETATIVE EROSION CONTROL PRACTICES (STONE TRACKING PADS, STRATEGICALLY PLACED LIMESTONE CHECK DAM, SEDIMENT BARRIER, WOOD CHIPS) SHOULD BE INSTALLED TO LIMIT THE MOVEMENT OF HIGH ACID-PRODUCING SOILS FROM, AROUND, OR OFF THE SITE.
8. FOLLOWING BURIAL OR REMOVAL OF HIGH ACID-PRODUCING SOIL, TOPSOILING AND SEEDING OF THE SITE (SEE TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION, PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION, AND TOPSOILING), MONITORING MUST CONTINUE FOR A MINIMUM OF 6 MONTHS TO ENSURE THERE IS ADEQUATE STABILIZATION AND THAT NO HIGH ACID-PRODUCING SOIL PROBLEMS EMERGE. IF PROBLEMS STILL EXIST, THE AFFECTED AREA MUST BE TREATED AS INDICATED ABOVE TO CORRECT THE PROBLEM.
9. THE PROJECT SITE IS LOCATED WITHIN THE RARITAN (Kr) GEOLOGIC FORMATION.

CONSTRUCTION SITE WASTE CONTROL COMPONENT OF THE STORMWATER POLLUTION PREVENTION PLAN (SPPP)

MCNJ-SOIL-NOTE-1200 — 12/07/07/17

1. THE CONSTRUCTION SITE WASTE CONTROL COMPONENT OF THE SPPP CONSISTS OF THE REQUIREMENTS IN 2., 3., AND 4. BELOW. THESE REQUIREMENTS BECAME OPERATIVE ON MARCH 3, 2004 AND APPLY TO CONSTRUCTION ACTIVITIES THAT COMMENCE ON OR AFTER MARCH 3, 2004. ANY NEW CONSTRUCTION ACTIVITY FOR WHICH AN RFA IS SUBMITTED ON OR AFTER MARCH 3, 2004 OR WHICH RECEIVE AUTOMATIC RENEWAL OF AUTHORIZATION UNDER THIS PERMIT AFTER MARCH 3, 2004 ALSO SHALL COMPLY WITH THESE REQUIREMENTS.
2. MATERIAL MANAGEMENT TO PREVENT OR REDUCE WASTE - ANY PESTICIDES, FERTILIZERS, FUELS, LUBRICANTS, PETROLEUM PRODUCTS, ANTI-FREEZE, PAINTS AND PAINT THINNERS, CLEANING SOLVENTS AND ACIDS, DETERGENTS, CHEMICAL ADDITIVES, AND CONCRETE CURING COMPOUNDS SHALL BE STORED IN CONTAINERS IN A DRY COVERED AREA. MANUFACTURERS' RECOMMENDED APPLICATION RATES, USES, AND METHODS SHALL BE STRICTLY FOLLOWED TO THE EXTENT NECESSARY TO PREVENT OR MINIMIZE THE PRESENCE OF WASTE FROM SUCH MATERIALS IN THE STORMWATER DISCHARGE AUTHORIZED BY THIS PERMIT. (THE PRECEDING SENTENCE DOES NOT APPLY TO ANY MANUFACTURERS' RECOMMENDATIONS ABOUT FERTILIZER OR OTHER MATERIAL THAT CONFLICT WITH THE EROSION AND SEDIMENT CONTROL COMPONENT OF THE FACILITY'S SPPP.)
3. WASTE HANDLING - THE FOLLOWING REQUIREMENTS APPLY ONLY TO CONSTRUCTION SITE WASTE THAT HAS THE POTENTIAL TO BE TRANSPORTED BY THE STORMWATER DISCHARGE AUTHORIZED BY THIS PERMIT. THE HANDLING AT THE CONSTRUCTION SITE OF WASTE BUILDING MATERIAL AND RUBBLE AND OTHER CONSTRUCTION SITE WASTES, INCLUDING LITTER AND HAZARDOUS AND SANITARY WASTES, SHALL CONFORM WITH THE STATE SOLID WASTE MANAGEMENT ACT, N.J.S.A. 13:1E-1 ET SEQ., AND ITS IMPLEMENTING RULES AT N.J.A.C. 7:26, 7:26A, AND 7:26G; THE NEW JERSEY PESTICIDE CONTROL CODE AT N.J.A.C. 7:30; THE STATE LITTER STATUTE (N.J.S.A. 13:1E-99.3); AND OSHA REQUIREMENTS FOR SANITATION AT 29 C.F.R. 1926 (EXCEPT WHERE SUCH CONFORMANCE IS NOT RELEVANT TO THE STORMWATER DISCHARGE AUTHORIZED BY THIS PERMIT). CONSTRUCTION SITES SHALL HAVE ONE OR MORE DESIGNATED WASTE COLLECTION AREAS ONSITE OR ADJACENT TO THE SITE, AND AN ADEQUATE NUMBER OF CONTAINERS (WITH LIDS OR COVERS) FOR WASTE. WASTE SHALL BE COLLECTED FROM SUCH CONTAINERS BEFORE THEY OVERFLOW, AND SPILLS AT SUCH CONTAINERS SHALL BE CLEANED UP IMMEDIATELY.
   A. CONSTRUCTION SITE WASTES INCLUDE BUT ARE NOT LIMITED TO:
      i. "CONSTRUCTION AND DEMOLITION WASTE," AS DEFINED IN N.J.A.C. 7:26-1.4 AS FOLLOWS: "WASTE BUILDING MATERIAL AND RUBBLE RESULTING FROM CONSTRUCTION, REMODELING, REPAIR, AND DEMOLITION OPERATIONS ON HOUSES, COMMERCIAL BUILDINGS, PAVEMENTS AND OTHER STRUCTURES. THE FOLLOWING MATERIALS MAY BE FOUND IN CONSTRUCTION AND DEMOLITION WASTE: TREATED AND UNTREATED WOOD SCRAP; TREE PARTS, TREE STUMPS AND BRUSH; CONCRETE, ASPHALT, BRICKS, BLOCKS AND OTHER MASONRY; PLASTER AND WALLBOARD; ROOFING MATERIALS; CORRUGATED CARDBOARD AND MISCELLANEOUS PAPER; FERROUS AND NON-FERROUS METAL; NON-ASBESTOS BUILDING INSULATION; PLASTIC SCRAP; DIRT; CARPETS AND PADDING; GLASS (WINDOW AND DOOR); AND OTHER MISCELLANEOUS MATERIALS; BUT SHALL NOT INCLUDE OTHER SOLID WASTE TYPES."
      ii. ANY WASTE BUILDING MATERIAL AND RUBBLE RESULTING FROM SUCH OPERATIONS THAT IS HAZARDOUS FOR PURPOSES OF N.J.A.C. 7:26G (THE HAZARDOUS WASTE RULES).
      iii. DISCARDED (INCLUDING SPILLED) PESTICIDES, FERTILIZERS, FUELS, LUBRICANTS, PETROLEUM PRODUCTS, ANTI-FREEZE, PAINTS AND PAINT THINNERS, PAINT CHIPS AND SANDBLASTING GRITS, CLEANING SOLVENTS, ACIDS FOR CLEANING MASONRY SURFACES, DETERGENTS, CHEMICAL ADDITIVES USED FOR SOIL STABILIZATION (E.G., CALCIUM CHLORIDE), AND CONCRETE CURING COMPOUNDS.
      iv. OTHER "LITTER," AS DEFINED AT N.J.S.A. 13:1E-215.D AS FOLLOWS: "ANY USED OR UNCONSUMED SUBSTANCE OR WASTE MATERIAL WHICH HAS BEEN DISCARDED WHETHER MADE OF ALUMINUM, GLASS, PLASTIC, RUBBER, PAPER, OR OTHER NATURAL OR SYNTHETIC MATERIAL, OR ANY COMBINATION THEREOF, INCLUDING, BUT NOT LIMITED TO, ANY BOTTLE, JAR OR CAN, OR ANY TOP, CAP OR DETACHABLE TAB OF ANY BOTTLE, JAR OR CAN, ANY UNLIGHTED CIGARETTE, CIGAR, MATCH OR ANY FLAMING OR GLOWING MATERIAL OR ANY GARBAGE, TRASH, REFUSE, DEBRIS, RUBBISH, GRASS CLIPPINGS OR OTHER LAWN OR GARDEN WASTE, NEWSPAPERS, MAGAZINES, GLASS, METAL, PLASTIC OR PAPER CONTAINERS OR OTHER PACKAGING OR CONSTRUCTION MATERIAL, BUT DOES NOT INCLUDE THE WASTE OF THE PRIMARY PROCESSES OF MINING OR OTHER EXTRACTION PROCESSES, LOGGING, SAWMILLING, FARMING OR MANUFACTURING."
      v. SANITARY SEWAGE AND SEPTAGE.
      vi. CONTAMINATED SOILS ENCOUNTERED OR DISCOVERED DURING EARTHMOVING ACTIVITIES OR DURING THE CLEANUP OF A LEAK OR DISCHARGE OF A HAZARDOUS SUBSTANCE.
   B. CONCRETE WASHOUT - CONCRETE WASHOUT ONSITE IS PROHIBITED OUTSIDE DESIGNATED AREAS. WASHOUT ACTIVITIES INCLUDE, BUT NOT LIMITED TO, THE WASHING OF TRUCKS, CHUTES, HOSES, MIXERS, HOPPERS, AND TOOLS.
      i. DESIGNATED WASHOUT AREAS SHALL BE LINED AND BERMED TO PREVENT DISCHARGES TO SURFACE AND GROUNDWATER.
      ii. HARDENED CONCRETE FROM THE CONCRETE WASHOUT WASHOUT SHALL BE REMOVED AND PROPERLY DISPOSED OF.
      iii. THE CONCRETE WASHOUT AREA SHALL BE CLEARLY DESIGNATED WITH A SIGN INDICATING THE AREAS USES.
   C. SANITARY SEWAGE/SEPTAGE DISPOSAL - DISCHARGES OF RAW SANITARY SEWAGE OR SEPTAGE ONSITE ARE STRICTLY PROHIBITED. ADEQUATE FACILITIES WITH PROPER DISPOSAL SHALL BE PROVIDED AND MAINTAINED ONSITE OR ADJACENT TO THE SITE FOR ALL WORKERS AND OTHER SANITARY NEEDS.
4. SPILLS; DISCHARGES OF HAZARDOUS SUBSTANCES; FEDERALLY REPORTABLE RELEASES.
   A. SPILL KITS SHALL BE AVAILABLE ONSITE OR ADJACENT TO THE SITE FOR ANY MATERIALS THAT ARE LISTED IN 2. ABOVE AND USED OR APPLIED ONSITE. ALL SPILLS OF SUCH MATERIAL SHALL BE CONTAINED AND CLEANED UP IMMEDIATELY. CLEANED UP MATERIALS SHALL BE PROPERLY DISPOSED OF.
   B. DISCHARGES OF HAZARDOUS SUBSTANCES (AS DEFINED IN N.J.A.C. 7:1E-1.6) IN CONSTRUCTION SITE WASTES ARE SUBJECT TO THE PROVISIONS OF THE SPILL COMPENSATION AND CONTROL ACT, N.J.S.A. 58:10-23.11 ET SEQ., AND OF DEPARTMENT RULES FOR DISCHARGES OF PETROLEUM AND OTHER HAZARDOUS SUBSTANCES AT N.J.A.C. 7:1E. NO DISCHARGE OF HAZARDOUS SUBSTANCES RESULTING FROM AN ONSITE SPILL SHALL BE DEEMED TO BE "PURSUANT TO AND IN COMPLIANCE WITH [THIS] PERMIT" WITHIN THE MEANING OF THE SPILL COMPENSATION AND CONTROL ACT AT N.J.S.A. 58:10-23.11C.
   C. RELEASES IN EXCESS OF REPORTABLE QUANTITIES (RQ) ESTABLISHED UNDER 40 C.F.R. 110, 117, AND 302 THAT OCCUR WITHIN A 24-HR PERIOD MUST BE REPORTED TO THE NATIONAL RESPONSE CENTER (800 424-8802).

STANDARD FOR STABILIZATION WITH SOD

MCNJ-SOIL-NOTE-1300 — 05/01/17

1. HIGH QUALITY CULTIVATED SOD IS PREFERRED OVER NATIVE OR PASTURE SOD.
2. SOD SHOULD BE FREE OF WEEDS AND UNDESIRABLE COARSE WEEDY GRASSES.
3. SOD SHOULD BE UNIFORM THICKNESS, APPROXIMATELY 5/8 INCH, PLUS OR MINUS ¼ 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 STRIP. BROKEN PADS OR TORN AND UNEVEN ENDS WILL NOT BE ACCEPTABLE.
5. FOR DROUGHTY SITES, A SOD OF TURF-TYPE TALL FESCUE OR TURF-TYPE TALL FESCUE MIXED WITH KENTUCKY BLUEGRASS IS PREFERRED OVER A 100% KENTUCKY BLUEGRASS SOD. ALTHOUGH NOT WIDELY AVAILABLE, A SOD OF FINE FESCUE IS ALSO ACCEPTABLE FOR DROUGHTY SITES.
6. ONLY MOIST, FRESH, UNHEATED SOD SHOULD BE USED. SOD SHOULD BE HARVESTED, DELIVERED AND INSTALLED WITHIN A PERIOD OF 24 HOURS OR LESS DURING SUMMER MONTHS.

   I. SITE PREPARATION
   A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR LIMING, FERTILIZING , INCORPORATING ORGANIC MATTER, AND OTHER SOIL PREPARATION PROCEDURES. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARD FOR LAND GRADING.
   B. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING THE SOIL STRUCTURE. A UNIFORM APPLICATION TO DEPTH OF 5 INCHES (UNSETTLED) IS REQUIRED ON ALL SITES. SEE STANDARD FOR TOPSOILING FOR TOPSOIL AMENDMENT REQUIREMENTS.
   C. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS.

   II. SOIL 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 (HTTP://NJAES.RUTGERS.EDU/COUNTY/). FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET USING 10-10-10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE AND INCORPORATED INTO THE SURFACE 4 INCHES. IF FERTILIZER IS NOT INCORPORATED, APPLY ½ THE RATE DESCRIBED ABOVE DURING SEEDBED PREPARATION AND REPEAT ANOTHER ½ RATE APPLICATION OF THE SAME FERTILIZER WITHIN 3 TO 5 WEEKS AFTER SEEDING. 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. UNIFORMLY APPLY GROUND LIMESTONE TO TOPSOIL, WHICH HAS BEEN SPREAD AND FIRMED, ACCORDING TO SITE SPECIFIC SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS CO-OPERATIVE EXTENSION. SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS COOPERATIVE EXTENSION OFFICES (HTTP://NJAES.RUTGERS.EDU/COUNTY/).
   B. WORK LIME AND FERTILIZER INTO THE TOPSOIL 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 REASONABLY UNIFORM, FINE SEEDBED IS PREPARED.
   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 SODDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE RETILED AND FIRMED IN ACCORDANCE WITH THE ABOVE.

   III. 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. LIGHTLY 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 AND INVASION OF WEEDS.
   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 ¾ 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.

   IV. TOP DRESSING

   SINCE SOIL ORGANIC MATTER AND SLOW RELEASE NITROGEN FERTILIZER (WATER SOLUBLE) ARE PRESCRIBED IN SECTIONS 1 AND 2 IN THIS STANDARD, A FOLLOW-UP TOP DRESSING IS NOT MANDATORY, EXCEPT WHERE GROSS NITROGEN DEFICIENCY EXISTS TO THE EXTENT THAT TURF FAILURE MAY DEVELOP, TOP DRESSING SHALL THEN BE APPLIED. TOP DRESS WITH 10-10-10 OR EQUIVALENT AT 400 POUNDS PER ACRE OR 7 POUNDS PER 1,000 SQUARE FEET EVERY 3 TO 5 WEEKS UNTIL THE GROSS NITROGEN DEFICIENCY IS THE TURF IS AMELIORATED.

SPPP REQUIRED INSPECTIONS AND REPORTS

MCNJ-SOIL-NOTE-1201 — 09/01/17

A COPY OF THE AUTHORIZATION SHALL BE POSTED ONSITE AT A SAFE, PUBLICLY ACCESSIBLE LOCATION IN CLOSE PROXIMITY OF THE CONSTRUCTION SITE AT ALL TIMES UNTIL A NOTICE OF COMPLETION HAS BEEN ISSUED. THE PERMITTEE SHALL POST THE NJDEP HOTLINE NUMBER (1-877-WARN-DEP) WITH THE COPY OF THE AUTHORIZATION.

1. ROUTINE INSPECTIONS
   A. THE PERMITTEE SHALL CONDUCT AND DOCUMENT WEEKLY (MINIMUM) INSPECTIONS OF THE FACILITY TO IDENTIFY AREAS CONTRIBUTING TO THE STORMWATER DISCHARGE AUTHORIZED BY THIS PERMIT AND EVALUATE WHETHER THE STORMWATER POLLUTION PREVENTION PLAN (SPPP) IDENTIFIED UNDER E.1 OF THE CONSTRUCTION ACTIVITY STORMWATER (GP) PART 1 NARRATIVE REQUIREMENTS, INCLUDING THIS SOIL EROSION AND SEDIMENT CONTROL PLAN IS BEING PROPERLY IMPLEMENTED AND MAINTAINED, OR WHETHER ADDITIONAL MEASURES ARE NEEDED TO IMPLEMENT THE SPPP.
   B. ONCE INSTALLATION OF ANY REQUIRED OR OPTIONAL EROSION CONTROL DEVICE OR MEASURE HAS BEEN IMPLEMENTED, ROUTINE INSPECTIONS, MINIMUM WEEKLY, OF EACH MEASURE SHALL BE PERFORMED BY THE CONTRACTOR'S INSPECTION PERSONNEL AND THE RESULTS RECORDED TO INVENTORY AND REPORT THE CONDITION OF EACH MEASURE TO ASSIST IN MAINTAINING THE EROSION AND SEDIMENT CONTROL MEASURES IN GOOD WORKING ORDER.
   C. THESE REPORT FORMS SHALL BECOME AN INTEGRAL PART OF THE SPPP AND SHALL BE MADE READILY ACCESSIBLE TO GOVERNMENTAL INSPECTION OFFICIALS, THE OPERATOR'S ENGINEER, AND THE OPERATOR FOR REVIEW UPON REQUEST DURING VISITS TO THE PROJECT SITE. IN ADDITION, COPIES OF THE REPORTS SHALL BE PROVIDED TO ANY OF THESE PERSONS, UPON REQUEST, VIA MAIL OR FACSIMILE TRANSMISSION.
   D. OTHER RECORD-KEEPING REQUIREMENTS

      THE CONTRACTOR SHALL KEEP THE FOLLOWING RECORDS RELATED TO CONSTRUCTION ACTIVITIES AT THE SITE:
      - DATES WHEN MAJOR GRADING ACTIVITIES OCCUR AND THE AREAS WHICH WERE GRADED
      - DATES AND DETAILS CONCERNING THE INSTALLATION OF STRUCTURAL CONTROLS
      - DATES WHEN CONSTRUCTION ACTIVITIES CEASE IN AN AREA
      - DATES WHEN AN AREAS IS STABILIZED, EITHER TEMPORARILY OR PERMANENTLY
      - DATES OF RAINFALL AND THE AMOUNT OF RAINFALL
      - DATES AND DESCRIPTIONS OF THE CHARACTER AND AMOUNT OF AN SPILLS OF HAZARDOUS MATERIALS
      - RECORDS OF REPORTS FILED WITH REGULATORY AGENCIES IF REPORTABLE QUANTITIES OF HAZARDOUS MATERIALS SPILLED
2. STORMWATER POLLUTION PREVENTION PLAN (SPPP)
   A. CONSTRUCTION ACTIVITY THAT MAY RESULT IN A STORMWATER DISCHARGE AUTHORIZED BY THIS PERMIT SHALL BE EXECUTED ONLY IN ACCORDANCE WITH A SPPP THAT CONSISTS OF THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN, AND (WHERE APPLICABLE) THE CONSTRUCTION SITE WASTE CONTROL COMPONENT SET FORTH IN ATTACHMENT B TO THE GENERAL PERMIT. A COPY OF THIS SPPP SHALL BE RETAINED BY THE PERMITTEE FOR A PERIOD OF AT LEAST FIVE (5) YEARS AFTER THE COMPLETION OF CONSTRUCTION. THIS PERIOD MAY BE EXTENDED BY WRITTEN REQUEST OF THE DEPARTMENT AT ANY TIME (SEE N.J.A.C. 7:14A-6.6):
3. REPORTS OF NONCOMPLIANCE
   A. ALL INSTANCES OF NONCOMPLIANCE NOT REPORTED UNDER N.J.A.C. 7:14A-6.10 SHALL BE REPORTED TO THE DEPARTMENT ANNUALLY.
4. NOTIFICATION OF COMPLETION
   A. THE SOIL CONSERVATION DISTRICT WILL PROVIDE THE DEPARTMENT A COPY OF THE REPORT OF COMPLIANCE ISSUED UNDER N.J.A.C. 2:90-1 FOR COMPLETED CONSTRUCTION ACTIVITIES, EXCEPT SINGLE FAMILY HOME CONSTRUCTION UNDER B. BELOW. THE REPORT OF COMPLIANCE SHALL SERVE AS THE NOTIFICATION OF COMPLETION
   B. THE BUILDER OF A SINGLE FAMILY HOME THAT IS AUTHORIZED UNDER THIS PERMIT, BUT NOT WITHIN THE DEFINITION OF "PROJECT AT N.J.S.A. 4:24-41G, SHALL SEND A COPY OF THE FINAL CERTIFICATE OF OCCUPANCY TO THE SOIL CONSERVATION DISTRICT. THE SOIL CONSERVATION DISTRICT WILL PROVIDE A COPY OF THE FINAL CERTIFICATE OF OCCUPANCY TO THE DEPARTMENT, WHICH WILL SERVE AS NOTIFICATION OF COMPLETION.
   C. THE DOT SHALL PROVIDE WRITTEN NOTIFICATION TO THE DEPARTMENT WHEN DOT CERTIFIED PROJECTS ARE COMPLETED.
5. COPIES OF ALL OF THE ABOVE, INCLUDING THE SPPP (WITH THE CERTIFIED PLAN), THE CERTIFICATION, AUTHORIZATION UNDER NJPDES CONSTRUCTION ACTIVITY STORMWATER GENERAL PERMIT, ALL CORRESPONDENCE AND NOTES TO AND FROM THE NJDEP AND SOIL CONSERVATION DISTRICT (OR DESIGNATED MUNICIPALITY) SHALL BE MAINTAINED ON-SITE.

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REV	DATE	DRAWN BY	DESCRIPTION
1	8/28/23	RM	REVISED PER NJDEP
2	4/19/24	TL	REVISED PER CLIENT & ARCHITECT
3	6/28/24	RM	REVISED PER BOROUGH ENGINEER'S REVIEW

Digitally signed by Michael Stickle
Date: 2024.06.28 21:26:09-04'00'

Michael Stickle
NEW JERSEY LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: GE57838
COLLIERS ENGINEERING & DESIGN, INC.
N.J. C.O.A. #: 24GA27986500

PRELIMINARY AND FINAL MAJOR SITE PLAN

FOR

JERNEE MILL INDUSTRIAL

BLOCK 58
LOTS 2.01 & 9

BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY
NEW JERSEY

Colliers Engineering & Design
HOLMDEL (Headquarters)
101 Crawfords Corner Road,
Suite 3400
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COLLIERS ENGINEERING & DESIGN, INC.
DOING BUSINESS AS MASER CONSULTING

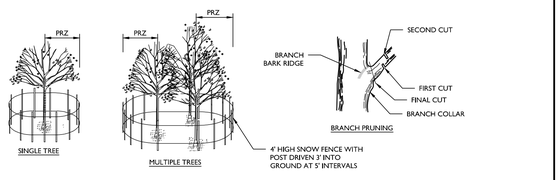
SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	6/12/2023	RM	DB
PROJECT NUMBER: 10000657C	DRAWING NAME: C-SESC		

SHEET TITLE: SOIL EROSION & SEDIMENT CONTROL PLAN

SHEET NUMBER: 20 of 37

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

2010\10000657C\Engineering\Site Plans\C-SESC.dwg\C-020-SOIL EROSION DETAILS By: MSTICKLE

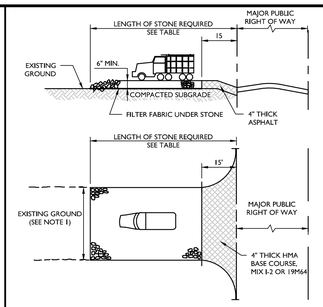


NOTES:

1. PROTECTIVE FENCING IS TO BE ERECTED PRIOR TO CONSTRUCTION AND MAINTAINED DURING CONSTRUCTION AS DIRECTED BY THE LANDSCAPE ARCHITECT, SOIL CONSERVATION DISTRICT AND/OR MUNICIPAL ENGINEER.
2. NO CONSTRUCTION ACTIVITY IS PERMITTED WITHIN THE PROTECTIVE FENCING.
3. AS CONSTRUCTION NEARS COMPLETION THE FENCING WILL BE REMOVED AS DIRECTED.
4. AT THE COMPLETION OF CONSTRUCTION, ALL TREES WILL BE PRUNED AS NECESSARY TO CORRECT ANY DAMAGE RESULTING FROM CONSTRUCTION ACTIVITY.
5. GENERAL MECHANICAL DAMAGE - SEE CRITICAL ROOT ZONE CALCULATION (CRZ) FOR CORRECT PLACEMENT OF TREE PROTECTION.
6. BOX TREES WITHIN 25 FEET OF A BUILDING SITE TO PREVENT MECHANICAL INJURY, FENCING OR OTHER BARRIER SHOULD BE INSTALLED BEYOND THE CRITICAL ROOT ZONE.
7. BOARDS WILL NOT BE NAILED TO TREES DURING BUILDING OPERATIONS.
8. FEEDER ROOTS SHOULD NOT BE CUT IN AN AREA INSIDE THE PROTECTED ROOT ZONE (PRZ) OR CRITICAL ROOT ZONE (CRZ). TREE ROOT SYSTEM COMMONLY EXTEND BEYOND THE DRIP LINE.
9. DAMAGED TRUNKS OR EXPOSED ROOTS SHOULD HAVE DAMAGED BARK REMOVED IMMEDIATELY AND NO PAINT SHALL BE APPLIED. EXPOSED ROOTS SHOULD BE COVERED WITH TOPSOIL IMMEDIATELY AFTER EXCAVATION IS COMPLETE. ROOTS SHALL BE PRUNED TO GIVE A CLEAN, SHARP SURFACE AMENABLE TO HEALING. ROOTS EXPOSED DURING HOT WEATHER SHOULD BE IRRIGATED TO PREVENT PERMANENT TREE INJURY. CARE FOR SERIOUS INJURY SHOULD BE PRESCRIBED BY A PROFESSIONAL FORESTER OR CERTIFIED TREE EXPERT.
10. TREE LIMB REMOVAL WHERE NECESSARY, WILL BE DONE AS NATURAL TARGET PRUNING TO REMOVE THE DESIRED BRANCH COLLAR. THERE SHOULD BE NO FLUSH CUTS. FLUSH CUTS DESTROY A MAJOR DEFENSE SYSTEM OF THE TREE. NO TREE PAINT SHALL BE APPLIED. ALL CUTS SHALL BE MADE AT THE OUTSIDE EDGE OF THE BRANCH COLLAR. CUTS MADE TOO FAR BEYOND THE BRANCH COLLAR MAY LEAD TO EXCESS SPROUTING, CRACKS AND ROT. REMOVAL OF A "V" CROTCH SHOULD BE CONSIDERED FOR FREE STANDING SPECIMEN TREES TO AVOID FUTURE SPLITTING DAMAGE.
11. CRITICAL ROOT ZONE (CRZ) OR PROTECTED ROOT ZONE (PRZ) CALCULATION:
    MEASURE DHB OF THE TREE (DIAMETER OF TREE IN BREAST HEIGHT OR 4.5' ABOVE GROUND ON THE UPHILL SIDE) IN INCHES.
    CRZ OR PRZ = DHB TIMES 1.5 (FOR OLD/UNHEALTHY/SENSITIVE TREES) OR DHB X 1.0 (FOR YOUNG/HEALTHY/TOLERANT TREES), EXPRESS IN FEET.

TEMPORARY TREE PROTECTION DETAIL

NOT TO SCALE | MCNJ-SOIL-EROS-2100 | 05/01/17



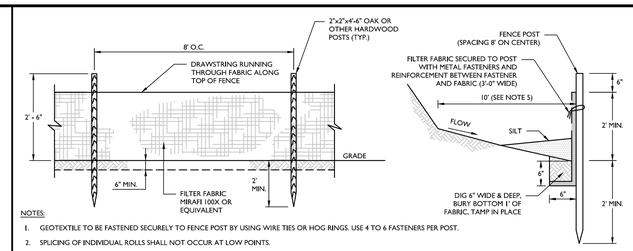
NOTES:

1. THE WIDTH OF CONSTRUCTION ENTRANCE SHALL NOT BE LESS THAN THE FULL WIDTH OF POINTS OF INGRESS OR EGRESS, OR AS SHOWN ON THE PLAN.
2. THICKNESS SHOWN IS FOR STONE CONSTRUCTION ENTRANCE ONLY.
3. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO ROADWAYS.
4. THE ENTRANCE SHALL BE PERIODICALLY TOP DRESSED WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS ON-SITE CONDITIONS REQUIRE.
5. SPILLED, DROPPED, WASHED, OR TRACKED SEDIMENT ONTO ROADWAYS OR OTHER IMPERVIOUS SURFACES SHALL BE REMOVED IMMEDIATELY.
6. WHERE ACCUMULATION OF DUST AND SEDIMENT IS INADEQUATELY CLEANED OR REMOVED BY CONVENTIONAL METHODS, A POWER BROOM OR STREET SWEEPER SHALL BE USED TO CLEAN PAVED AREAS.
7. ALL OTHER ACCESS POINTS TO THE SITE WHICH DO NOT CONTAIN A CONSTRUCTION ACCESS PAD SHALL BE BLOCKED OFF.
8. STONE SIZE PER ASTM C-33, SIZE #2 (2 ½" TO 1 ½") OR #3 (2" TO 1") STONE.
9. INDIVIDUAL INTERIOR LOT INGRESS/EGRESS CONSTRUCTION ACCESS SHALL HAVE # 3 (1" TO 2") STONE, MINIMUM 10' (L) X 10' (W) AND 6" THICK.

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 HOT MIX ASPHALT BASE COURSE, MIX I-2	

STABILIZED CONSTRUCTION ACCESS (WITH PAVEMENT) DETAIL

NOT TO SCALE | MCNJ-SOIL-EROS-1001 | MOD: 06/27/24 05/01/17



NOTES:

1. GEOTEXTILE TO BE FASTENED SECURELY TO FENCE POST BY USING WIRE TIES OR HOG RINGS. USE 4 TO 6 FASTENERS PER POST.
2. SPLICING OF INDIVIDUAL ROLLS SHALL NOT OCCUR AT LOW POINTS.
3. ALL SILT FENCE TO BE INSPECTED AND REMEDIAL MAINTENANCE PERFORMED BY THE CONTRACTOR WITHIN 24 HOURS AFTER EACH RAINFALL. REMOVE THE SILT ACCUMULATION WHEN IT REACHES 1/3 OF THE FENCE FABRIC HEIGHT.
4. FOR EVERY 100 FEET OF SILT FENCE, OR 1/4 ACRE OF DRAINAGE AREA, PROVIDE AN OVERFLOW POINT TO REDUCE PONDING IN FRONT OF THE FENCE.
5. IF SPACE PERMITTED, LOCATE SILT FENCE 10' AWAY FROM TOE OF SLOPE IF THE SLOPE IS STEEPER THAN 1:1.

SILT FENCE DETAIL

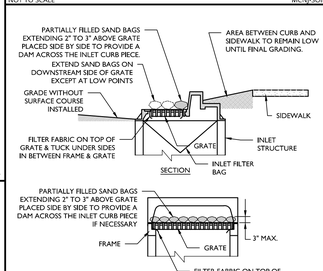
NOT TO SCALE | MCNJ-SOIL-EROS-1100 | 11/01/18

NOTES:

1. CONCRETE WASHOUTS ARE REQUIRED ON ALL CONSTRUCTION SITES INVOLVING CONCRETE AND STUCCO USE.
2. THE CONTRACTOR SHALL REQUIRE ALL CONCRETE DRIVERS TO UTILIZE THE CONCRETE WASHOUTS ONSITE.
3. WASHOUT FACILITIES SHALL BE LOCATED AT LEAST 50 YARDS AWAY FROM STORM SEWER DRAIN INLETS, GUTTERS, OPEN DITCHES, AND WATER COURSES.
4. APPROPRIATE STONE SHOULD COVER PATHS TO CONCRETE WASHOUT.
5. THE NUMBER OF CONCRETE WASHOUTS DEPENDS ON THE EXPECTED DEMAND FOR STORAGE CAPACITY. LARGE SITES WITH EXTENSIVE CONCRETE WORK SHALL BE PLACED AT MULTIPLE LOCATIONS FOR USE BY CONCRETE TRUCK DRIVERS.
6. CONCRETE WASHOUT AREAS SHALL BE IDENTIFIED BY POSTING SIGNS ONSITE.
7. CONCRETE WASHOUTS ARE TO BE INSPECTED DAILY BY THE CONTRACTOR FOR LEAKS OR TEARS IN PLASTIC LINER.
8. REMOVE AND DISPOSE OF ALL MATERIAL WHEN THE WASHOUT HAS BEEN FILLED TO 75% CAPACITY.
9. PRIOR TO ANY RAINFALL, ALL CONCRETE WASHOUTS ARE TO BE CLEANED OUT OR COVERED.
10. ONCE THE MATERIAL HAS BEEN CLEANED OUT OF THE CONCRETE WASHOUT FACILITY, THE FACILITY MUST BE INSPECTED FOR REPAIR, RECONSTRUCTION OR REPLACEMENT. ALL PLASTIC LINING SHALL BE REMOVED AND REPLACED.
11. PRE-FABRICATED OR ONSITE FABRICATED CONCRETE WASHOUTS MAY BE USED.
12. OPTIONS FOR ONSITE CONCRETE WASHOUTS:
    A. DIG A PIT AND LINE WITH 10 MIL PLASTIC SHEETING.
    B. CREATE AN ABOVE-GROUND STRUCTURE FROM STRAW BALES OR SANDBAGS, WITH 10 MIL PLASTIC LINING.

CONCRETE WASHOUT NOTES

MCNJ-SOIL-EROS-2300 | 05/01/17

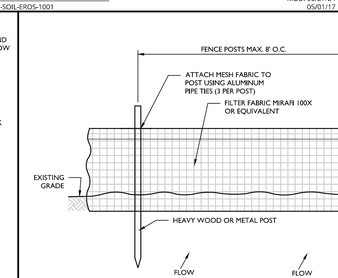


NOTES:

1. INLET FILTER BAG TO REMAIN UNTIL COMPLETION OF FINAL GRADING, PAVING AND ESTABLISHMENT OF COVER. PERIODICALLY CHECK AFTER EACH RAINFALL TO EXCAVATE AND REMOVE EXCESS SEDIMENT FROM AROUND INLETS.
2. FILTER FABRIC SHALL BE MIRAFI 140N OR APPROVED EQUIVALENT.

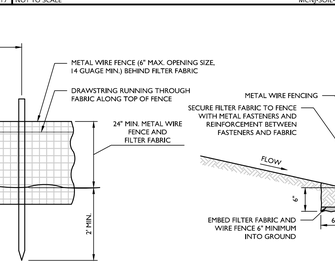
INLET PROTECTION (SAND BAG) DETAIL

NOT TO SCALE | MCNJ-SOIL-EROS-1501 | 05/01/17



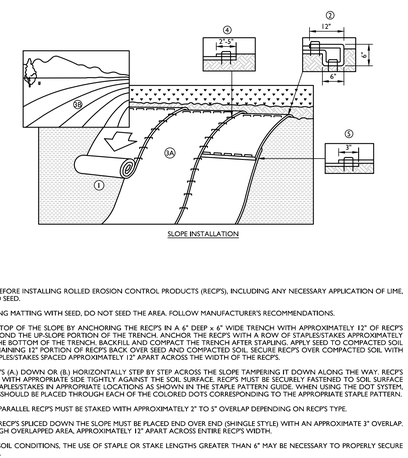
SUPER SILT FENCE (WITH WIRE FENCE) DETAIL

NOT TO SCALE | MCNJ-SOIL-EROS-1101 | 11/01/18



NOTES:

1. GEOTEXTILE TO BE FASTENED SECURELY TO FENCE POST BY USING WIRE TIES OR HOG RINGS. USE 4 TO 6 FASTENERS PER POST.
2. SPLICING OF INDIVIDUAL ROLLS SHALL NOT OCCUR AT LOW POINTS.
3. ALL SILT FENCE TO BE INSPECTED AND REMEDIAL MAINTENANCE PERFORMED BY THE CONTRACTOR WITHIN 24 HOURS AFTER EACH RAINFALL. REMOVE THE SILT ACCUMULATION WHEN IT REACHES 1/3 OF THE FENCE FABRIC HEIGHT.
4. FOR EVERY 100 FEET OF SILT FENCE, OR 1/4 ACRE OF DRAINAGE AREA, PROVIDE AN OVERFLOW POINT TO REDUCE PONDING IN FRONT OF THE FENCE.
5. IF SPACE PERMITTED, LOCATE SILT FENCE 10' AWAY FROM TOE OF SLOPE IF THE SLOPE IS STEEPER THAN 1:1.

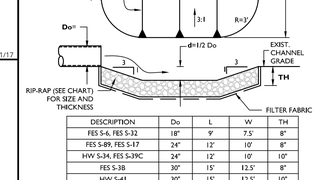


NOTES:

1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECPS), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER AND SEED.
   * WHEN USING MATTING WITH SEED, DO NOT SEED THE AREA. FOLLOW MANUFACTURER'S RECOMMENDATIONS.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECPS IN A 6" DEEP x 6" WIDE TRENCH WITH APPROXIMATELY 12" OF RECPS EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECPS WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF RECPS BACK OVER SEED AND COMPACTED SOIL. SECURE RECPS OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE RECPS.
3. ROLL THE RECPS (A.) DOWN OR (B.) HORIZONTALLY STEP BY STEP ACROSS THE SLOPE TAMPERING IT DOWN ALONG THE WAY. RECPS SHALL UNROLL WITH APPROPRIATE SIDE TIGHTLY AGAINST THE SOIL SURFACE. RECPS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKESHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL RECPS MUST BE STAKED WITH APPROXIMATELY 2" TO 5" OVERLAP DEPENDING ON RECPS TYPE.
5. CONSECUTIVE RECPS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE RECPS WIDTH.
   * IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE RECPS.

EROSION MATTING (CURLEX ENFORCER I) DETAIL

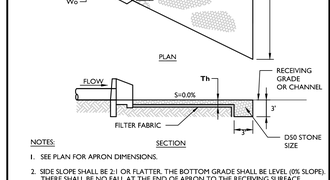
NOT TO SCALE | MCNJ-SOIL-EROS-2200 | 05/01/17



DESCRIPTION	Do	L	W	TH
FES S-6, FES S-32	18"	9'	7.5'	8"
FES S-89, FES S-17	24"	12'	10'	8"
HW S-34, FES S-39C	24"	12'	10'	10"
FES S-38	30"	15'	12.5'	8"
HW S-41	30"	15'	12.5'	10"

PREFORMED SCOUR HOLE DETAIL

NOT TO SCALE | MCNJ-SOIL-EROS-1700 | 05/01/17



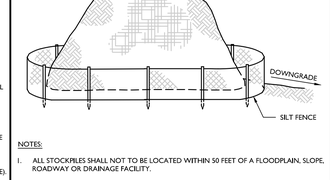
NOTES:

1. SEE PLAN FOR APRON DIMENSIONS.
2. SIDE SLOPE SHALL BE 2:1 OR FLATTER. THE BOTTOM GRADE SHALL BE LEVEL (0% SLOPE). THERE SHALL BE NO FALL AT THE END OF APRON TO THE RECEIVING SURFACE.

SECTION

CONDUIT OUTLET PROTECTION DETAIL

NOT TO SCALE | MCNJ-SOIL-EROS-1600 | 05/01/17



NOTES:

1. ALL STOCKPILES SHALL NOT TO BE LOCATED WITHIN 50 FEET OF A FLOODPLAIN, SLOPE, ROADWAY OR DRAINAGE FACILITY.

TOPSOIL STOCKPILE DETAIL

NOT TO SCALE | MCNJ-SOIL-EROS-2500 | 05/01/17

REV	DATE	DRAWN BY	DESCRIPTION
4	8/20/23	RM	REVISED PER NJDEP
3	4/19/24	TL	REVISED PER LOCAL & ARCHITECT
2	6/20/24	RM	REVISED PER BOROUGH ENGINEER'S REVIEW
1			

Digitally signed by Michael Stickle
Date: 2024.06.28 15:28:36 -04'00'

Michael Stickle
NEW JERSEY LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: GE57838
COLLIERS ENGINEERING & DESIGN, INC.
N.J. C.O.A. #: 24GA27986500

PRELIMINARY AND FINAL MAJOR SITE PLAN

FOR

JERNEE MILL INDUSTRIAL

BLOCK 58
LOTS 2.01 & 9

BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY
NEW JERSEY

Colliers Engineering & Design
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101 Crawfords Corner Road, Suite 3400
Holmdel, NJ 07733
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COLLIERS ENGINEERING & DESIGN, INC. DOING BUSINESS AS MASER CONSULTING

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	6/12/2023	RM	DB

PROJECT NUMBER: 10000657C
DRAWING NAME: C-SESC

SHEET TITLE: SOIL EROSION & SEDIMENT CONTROL PLAN

SHEET NUMBER: 21 of 37

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

SOIL DECOMPACTION AND TESTING REQUIREMENTS

MCNJ-SOIL-NOTE-2000 05/01/18

A. SOIL COMPACTION TESTING REQUIREMENTS

1. COMPACTION TESTING RESULTS SHALL BE SUBMITTED TO THE BOROUGH ENGINEER'S OFFICE PRIOR TO REQUESTING A SOIL EROSION CONTROL INSPECTION. TEST RESULTS MUST BE PROVIDED ON A SOIL VERIFICATION FORM OBTAINED FROM THE BOROUGH ENGINEER'S OFFICE.
2. SUBGRADE SOILS **PRIOR TO THE APPLICATION OF TOPSOIL** "STANDARD FOR VEGETATIVE COVER" NOTES SHALL BE FREE OF EXCESSIVE COMPACTION TO A **DEPTH OF 6.0 INCHES** TO ENHANCE THE ESTABLISHMENT OF PERMANENT VEGETATIVE COVER (SEE "STANDARD FOR VEGETATIVE COVER" NOTES FOR TOPSOIL REQUIREMENTS).
3. AREAS OF THE SITE WHICH ARE SUBJECT TO COMPACTION TESTING AND/OR MITIGATION ARE **GRAPHICALLY DENOTED** ON THE SOIL EROSION CONTROL PLAN. MINIMUM 2 TESTS FOR LIMIT OF DISTURBANCE UP TO 1 ACRE, PLUS 2 TESTS PER ACRE OF LIMIT OF DISTURBANCE THEREAFTER, SPACED EVENLY THROUGHOUT THE SITE.
4. COMPACTION TESTING LOCATIONS ARE DENOTED ON THE PLAN. A COPY OF THE PLAN SHALL BE USED TO MARK THE LOCATIONS OF TESTS AND ATTACHED TO THE **COMPACTION REMEDIATION FORM**, AVAILABLE FROM THE LOCAL SOIL CONSERVATION DISTRICT. THIS FORM MUST BE FILLED OUT AND SUBMITTED PRIOR TO RECEIVING A CERTIFICATE OF COMPLIANCE FROM THE DISTRICT.
5. IN THE EVENT THAT TESTING INDICATES COMPACTION IN EXCESS OF THE MAXIMUM THRESHOLDS INDICATED FOR THE PROBING OR PENETRATION TESTING METHODS (SEE DETAILS), THE CONTRACTOR/OWNER SHALL HAVE THE OPTION TO PERFORM EITHER (1) COMPACTION MITIGATION OVER THE ENTIRE MITIGATION AREA DENOTED ON THE PLAN (EXCLUDING EXEMPT AREAS), OR (2) PERFORM ADDITIONAL DENSITY TESTING TO ESTABLISH THE LIMITS OF EXCESSIVE COMPACTION WHEREUPON ONLY THE EXCESSIVELY COMPACTED AREAS WOULD REQUIRE COMPACTION MITIGATION. ADDITIONAL DENSITY TESTING SHALL BE PERFORMED BY A TRAINED, LICENSED PROFESSIONAL.

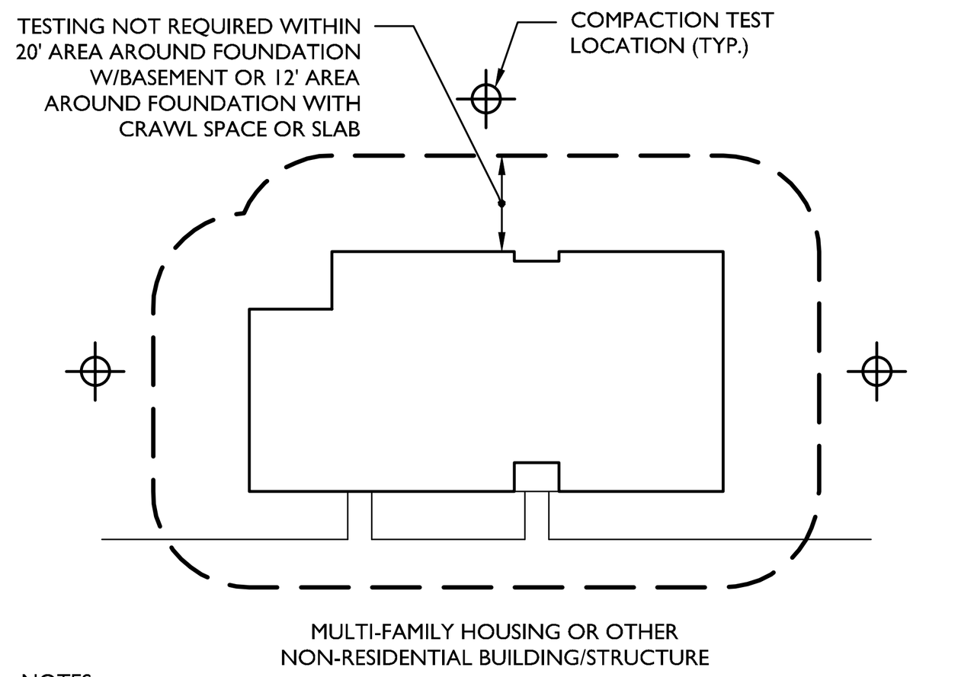
B. COMPACTION TESTING METHODS

1. PROBING WIRE TEST (SEE DETAIL)
2. HANDHELD PENETROMETER TEST (SEE DETAIL).
3. TUBE BULK DENSITY TEST (LICENSED PROFESSIONAL ENGINEER REQUIRED)
4. NUCLEAR DENSITY TEST (LICENSED PROFESSIONAL ENGINEER REQUIRED)
5. 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.

NOTE: SOIL COMPACTION TESTING IS NOT REQUIRED IF/WHEN SUBSOIL COMPACTION MITIGATION IS PROPOSED AS PART OF THE SEQUENCE OF CONSTRUCTION. FOR ADDITIONAL REQUIREMENTS AND EXEMPTIONS SEE SECTION 19 "STANDARD FOR LAND GRADING" OF THE STANDARD.

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.).
3. IN THE ALTERNATIVE, ANOTHER METHOD AS SPECIFIED BY A NEW JERSEY LICENSED PROFESSIONAL ENGINEER MAY BE SUBSTITUTED SUBJECT TO DISTRICT APPROVAL.

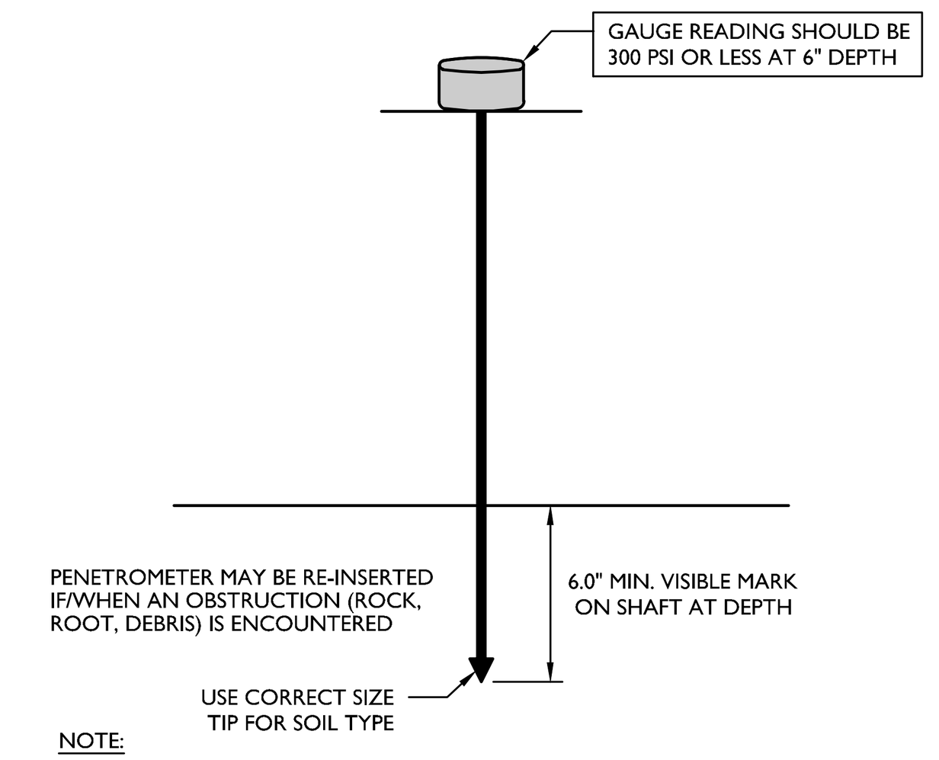


NOTES:

1. SOIL COMPACTION TESTING LOCATIONS IDENTIFIED ARE RECOMMENDED LOCATIONS FOR GRADED/DISTURBED AREAS WITHIN THE VICINITY OF BUILDINGS AND STRUCTURES OR ON INDIVIDUAL LOTS. MINIMUM TWO (2) TEST PITS PER LOT UP TO 1 ACRE OF DISTURBANCE.
2. FOR GRADED/DISTURBED AREAS WITHIN OPEN OR COMMON SPACES, SOIL COMPACTION TESTING SHALL BE PERFORMED AT TWO (2) TEST PITS PER ACRE OF OVERALL LIMIT OF DISTURBANCE, EVENLY DISTRIBUTED.

TYPICAL SOIL COMPACTION TESTING LOCATIONS DETAIL

NOT TO SCALE MCNJ-SOIL-EROS-2802 12/01/17

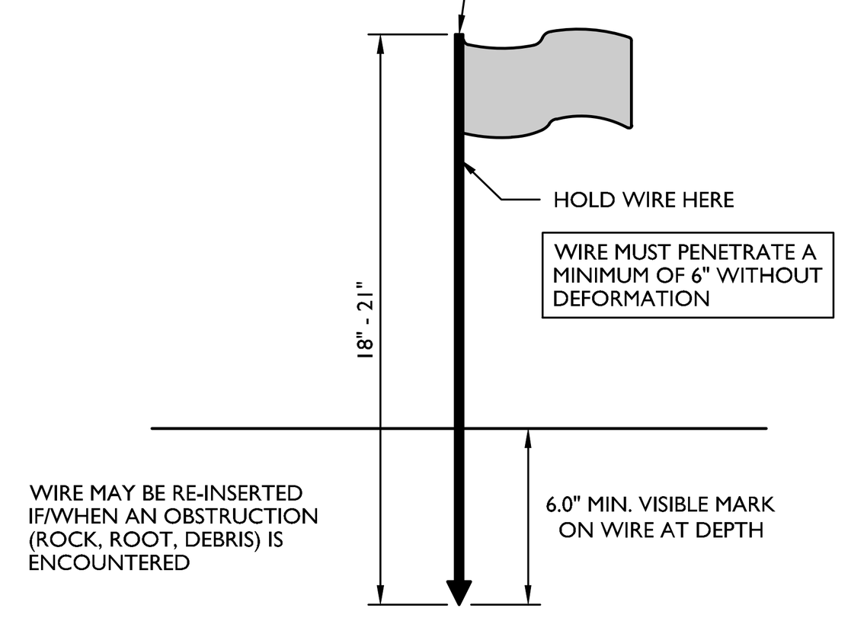


NOTE:

1. SOIL SHOULD BE MOIST BUT NOT SATURATED. DO NOT TEST WHEN SOIL IS EXCESSIVELY DRY OR SUBJECT TO FREEZING TEMPERATURES. SLOW, STEADY DOWNWARD PRESSURE USED TO ADVANCE THE PROBE. PROBE MUST PENETRATE AT LEAST 6" WITH LESS THAN 300 PSI READING ON THE GAUGE.
2. USE 1/2" TIP FOR FIRM SOIL, 3/4" TIP FOR SOFT SOIL.

HANDHELD SOIL PENETROMETER TEST DETAIL

NOT TO SCALE MCNJ-SOIL-EROS-2801 12/01/17

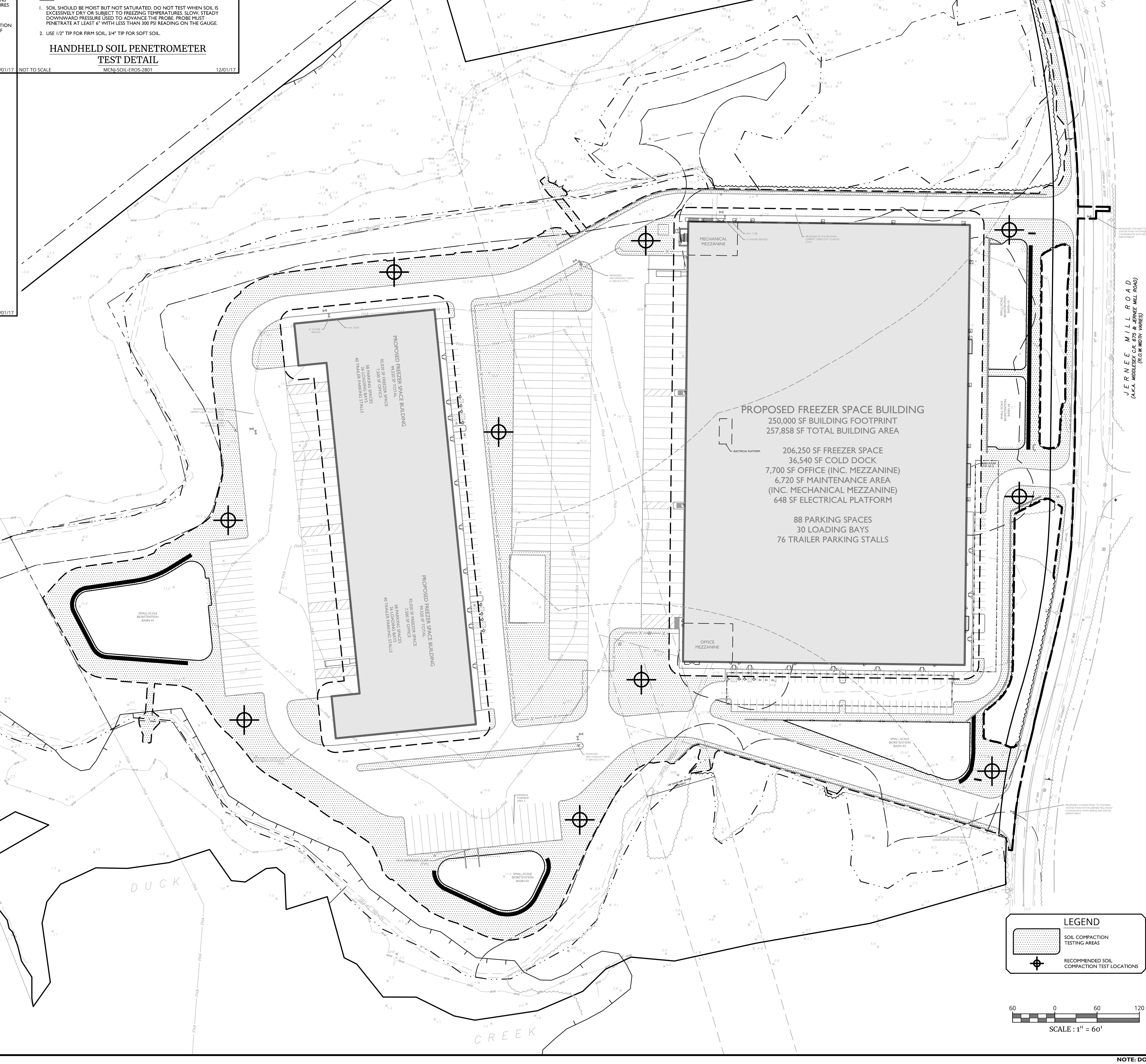


NOTES:

1. SOIL SHOULD BE MOIST BUT NOT SATURATED. DO NOT TEST WHEN SOIL IS EXCESSIVELY DRY OR SUBJECT TO FREEZING TEMPERATURES. SLOW, STEADY DOWNWARD PRESSURE USED TO ADVANCE THE WIRE.
2. RECORD THE DEPTH OF PENETRATION WHEN WIRE IS DEFORMED.

PROBING WIRE TEST DETAIL

NOT TO SCALE MCNJ-SOIL-EROS-2800 12/01/17



LEGEND

SOIL COMPACTION TESTING AREAS

RECOMMENDED SOIL COMPACTION TEST LOCATIONS

Colliers Engineering & Design

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Digitally signed by Michael Stickle Date: 2024.06.28 21:26:16-04'00'

Michael Stickle
NEW JERSEY LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: GE57838
COLLIERS ENGINEERING & DESIGN, INC.
N.J. C.O.A. #: 24GA27986500

PRELIMINARY AND FINAL MAJOR SITE PLAN

FOR

JERNEE MILL INDUSTRIAL

BLOCK 58
LOTS 2.01 & 9

BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY
NEW JERSEY

Colliers Engineering & Design
HOLMDEL (Headquarters)
101 Crawfords Corner Road, Suite 3400
Holmdel, NJ 07733
Phone: 732.383.1950
COLLIERS ENGINEERING & DESIGN, INC. DOING BUSINESS AS MASER CONSULTING

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PROJECT NUMBER:	DRAWING NAME:
10000657C	C-SESC

SHEET TITLE:
SOIL MANAGEMENT & PREPARATION PLAN

SHEET NUMBER:

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

2010\10000657C\Engineering\Site Plans\C-SESC.dwg\C-022-SOIL PREP PLAN By: MSTICKLE

LANDSCAPING REQUIREMENTS
(PER CHAPTER 26, ART. 5 (ORD. #637-99))

§96.7 LANDSCAPE DESIGN*

	REQUIRED	PROPOSED	
20% LOT COVERAGE	SF	SF	
- LOT TOTAL: 2,024,583 SF	404,917	1,281,880	
(46.48 AC)		63.3%	COMPLIES
5% SETBACK MINIMUM (OF 20%)	SF	SF	
	20,245	39,450	
		9.7%	COMPLIES

§97.2 STREET TREES**

	REQUIRED	PROPOSED	
JERNEE MILL ROAD	SHADE TREES (1 / 50 LF)		
- FRONTAGE LENGTH: 1,345 LF	27	--	
(WITHOUT EXISTING TREES: ~93 LF)	2	2**	COMPLIES

§98 OFF-STREET PARKING AREAS***

	REQUIRED	PROPOSED	
10% INTERIOR PARKING COVERAGE	SF	SF	
- PARKING TOTAL: 393,184 SF	39,320	86,530	
		22.0%	COMPLIES
TREES (PARKING)	SHADE TREES (1 / 20 SPACES)		
- 146 SPACES	8	8*	COMPLIES
TREES (LOADING)	SHADE TREES (1 / 10 SPACES)		
- 172 SPACES	18	18*	COMPLIES

CHAPTER 30-7c TREE STANDARDS (AIR POLLUTION COMPENSATION)

	REQUIRED	PROPOSED	
ONE (1) TREE PER EVERY 2 PARKING SPACES (MULTIPLIER OF 1.15 FOR INDUSTRIAL USES)	SEE BELOW 82	SEE BELOW 82*	COMPLIES

NOTES:

* 26-98.1 OFF-STREET PARKING AREA TREES SHALL HAVE A MIN. OF 3" CALIPER WITH BRANCHES NO LOWER THAN SIX (6') WITH A GUARANTEE OF ONE (2) GROWING SEASONS

** 26-97.2 STREET TREES SHALL HAVE MIN. 3" CALIPER. NO PLANTS IN SIGHT TRIANGLES ABOVE 3 FT. WITH BRANCHES COMMENCING NOT LESS THAN EIGHT (8') ABOVE GRADE

*** 26-98.1 DECIDOUS TREES SHALL HAVE MIN. 3" CALIPER. AND EVERGREEN TREES SHALL BE A MIN. OF 4' HT.PLANTS SHALL HAVE A 2-YEAR GUARANTEE.

PROPOSED FREEZER SPACE BUILDING
99,520 SF TOTAL
92,020 SF FREEZER SPACE
7,500 SF OFFICE
58 PARKING SPACES
26 LOADING BAYS
40 TRAILER PARKING STALLS

PROPOSED FREEZER SPACE BUILDING
250,000 SF BUILDING FOOTPRINT
257,858 SF TOTAL BUILDING AREA

206,250 SF FREEZER SPACE
36,540 SF COLD DOCK
7,700 SF OFFICE (INC. MEZZANINE)
6,720 SF MAINTENANCE AREA
(INC. MECHANICAL MEZZANINE)
648 SF ELECTRICAL PLATFORM

88 PARKING SPACES
30 LOADING BAYS
76 TRAILER PARKING STALLS

UNDERGROUND BASIN

1 FT WIDE STONE BED

1 FT WIDE STONE BED

I FT WIDE STONE BED

SEED MIX A

SEED MIX B

SEED MIX C

LAWN

TREES TO BE PLANTED WITHIN THE GAPS OF WOODLAND BORDER UNDER THE DIRECTION OF LANDSCAPE ARCHITECT

TREES TO BE PLANTED WITHIN THE GAPS OF WOODLAND BORDER UNDER THE DIRECTION OF LANDSCAPE ARCHITECT

EXISTING TREES TO REMAIN

EXISTING TREES TO REMAIN

EXISTING TREES TO REMAIN

EXISTING TREELINE (TYP.)

DUCK CREEK

LANDSCAPE LEGEND

- DECIDUOUS TREE
- EVERGREEN TREE
- ORNAMENTAL OR UNDERSTORY TREE
- SHRUB
- PERENNIAL / ANNUAL / ORNAMENTAL GRASS
- MULCH BED LINE

NOTES:
1. LANDSCAPE SYMBOLS ON THE PLAN VARY AND MAY DEVIATE FROM THE LANDSCAPE LEGEND SYMBOLS SHOWN ABOVE.

HATCH & SEED MIX KEY

SEED MIX A 122 | SEED MIX B 127 | SEED MIX C 181 | LAWN MIX

GENERAL NOTES

1. THIS SHEET IS TO BE USED FOR LANDSCAPE PURPOSES ONLY.
2. REFER TO SHEET I FOR GENERAL NOTES.

LANDSCAPE PLAN NOTES

1. REFER TO SHEET **24** FOR GENERAL PLANTING NOTES AND LANDSCAPE DETAILS.
2. REFER TO SHEET **24** FOR PLANT SCHEDULES.
3. PLANT LOCATIONS INDICATED ON THE LANDSCAPE PLAN ARE APPROXIMATE; ACTUAL LOCATION OF PLANT MATERIAL IS SUBJECT TO SITE CONDITIONS.
4. THE LANDSCAPE PLAN SHALL TAKE PRECEDENCE OVER THE PLANT SCHEDULE SHOULD ANY PLANT MATERIAL DISCREPANCIES OCCUR.
5. LAWN AREAS SHALL BE STABILIZED WITH SEED UNLESS OTHERWISE INDICATED ON THE PLAN. REFER TO THE LAWN SEED MIX NOTES ON THE LANDSCAPE DETAILS SHEET AND THE SOIL EROSION AND SEDIMENT CONTROL PLAN FOR APPROVED SEED MIXTURES.
6. ALL SHADE TREES PLANTED ADJACENT TO PEDESTRIAN WALKWAYS, VEHICLE ACCESSES, OR WITHIN A SIGHT TRIANGLE OR SIGHT EASEMENT SHALL BE BRANCHED A MINIMUM OF 8'-00" ABOVE GRADE AND/OR APPROPRIATELY PRUNED TO BE 8'-00" ABOVE GRADE. ALL SHRUBS WITHIN A SIGHT TRIANGLE OR SIGHT EASEMENT SHALL NOT EXCEED 30" ABOVE THE ELEVATION OF THE ADJACENT CURB AND ARE TO BE APPROPRIATELY PRUNED.

PLANT SCHEDULE

CODE	QTY	BOTANICAL NAME	COMMON NAME	MAT. WID.	MAT. HT.	INST. SIZE	COND.	REMARKS
DECIDUOUS TREES								
AS	34	ACER RUBRUM 'RED SUNSET'	RED SUNSET MAPLE	30' - 40'	40' - 50'	3" MIN. CAL., 12'-14' HT.	B&B	HEALTHY LEADER, FULLY FURNISHED
AM	36	ACER SACCHARUM 'PNI 0285'	GREEN MOUNTAIN® SUGAR MAPLE	35' - 70'	50' - 80'	3" MIN. CAL., 12'-14' HT.	B&B	HEALTHY LEADER, FULLY FURNISHED
BN	28	BETULA NIGRA 'DURAHEAT'	RIVER BIRCH MULTI-TRUNK	25' - 35'	25' - 30'	12'-14' HT.	B&B, MULTISTEM	(3) TRUNK MINIMUM, FULLY FURNISHED
GT	22	GLEDITSIA TRIACANTHOS INERMIS 'HALKA'	HALKA THORNLESS HONEY LOCUST	25' - 40'	30' - 70'	3" MIN. CAL., 12'-14' HT.	B&B	HEALTHY LEADER, FULLY FURNISHED
LS	16	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	40' - 50'	60' - 100'	3" MIN. CAL., 12'-14' HT.	B&B	HEALTHY LEADER, FULLY FURNISHED
NS	38	NYSSA SYLVATICA 'GREEN GABLE'	BLACK GUM TUPELO	20' - 30'	30' - 50'	3" MIN. CAL., 12'-14' HT.	B&B	HEALTHY LEADER, FULLY FURNISHED
QB	23	QUERCUS BICOLOR	SWAMP WHITE OAK	50' - 60'	50' - 60'	3" MIN. CAL., 12'-14' HT.	B&B	FALL DIGGING HAZARD, FULLY FURNISHED
TC	13	TILIA CORDATA	LITTLELEAF LINDEN	35' - 50'	50' - 70'	3" MIN. CAL., 12'-14' HT.	B&B	HEALTHY LEADER, FULLY FURNISHED
ZG	22	ZELKOVA SERRATA 'GREEN VASE'	SAWLEAF ZELKOVA	40' - 50'	60' - 80'	3" MIN. CAL., 12'-14' HT.	B&B	HEALTHY LEADER, FULLY FURNISHED
EVERGREEN TREES								
IA	21	ILEX OPACA 'DAN FENTON'	AMERICAN HOLLY	15' - 20'	30' - 40'	6' - 8' HT.	B&B	DENSE, FULLY FURNISHED
JE	124	JUNIPERUS VIRGINIANA 'CORCORCOR'	EASTERN REDCEDAR	7' - 10'	10' - 15'	6' - 8' HT.	B&B	DENSE, FULLY FURNISHED
PD	5	PSEUDOTSUGA MENZIESII	DOUGLAS FIR	12' - 20'	40' - 80 '	6' - 8' HT.	B&B	DENSE, FULLY FURNISHED
FLOWERING TREES								
CC	30	CERCIS CANADENSIS	EASTERN REDBUD	25' - 35'	20' - 30'	3" MIN. CAL., 12'-14' HT.	B&B	FALL DIGGING HAZARD
CF	6	CORNUS FLORIDA	EASTERN DOGWOOD	15' - 30'	15' - 30'	3" MIN. CAL., 12'-14' HT.	B&B	
SHRUBS								
CA	357	CLETHRA ALNIFOLIA 'PINK SPIRES'	SUMMERSWEET CLETHRA	4' - 6'	3' - 8'	24" - 30" HT.	#5 CAN	
IG	65	ILEX GLABRA 'COMPACTA'	INKBERRY HOLLY	4' - 6'	3' - 4'	24" - 30" HT.	#5 CAN	
IV-M	22	ILEX VERTICILLATA 'JIM DANDY'	JIM DANDY WINTERBERRY	4' - 8'	3' - 6'	24" - 30" HT.	#5 CAN	
IV	127	ILEX VERTICILLATA 'RED SPRITE'	WINTERBERRY	2.5' - 3'	2.5' - 3'	24" - 30" HT.	#5 CAN	
IT	69	ITEA VIRGINICA	VIRGINIA SWEETSPIRE	3' - 5'	3' - 5'	24" - 30" HT.	#5 CAN	
JC	58	JUNIPERUS CHINENSIS 'SEA GREEN'	SEA GREEN JUNIPER	6' - 8'	4' - 8'	30" - 36" HT.	B&B	
TM	62	TAXUS X MEDIA 'HICKSII'	HICKS ANGLO-JAPANESE YEW	8' - 12'	12' - 20'	30" - 36" HT.	B&B	
VM	194	VIBURNUM ACERIFOLIUM	MAPLELEAF VIBURNUM	2' - 4'	3' - 6'	30" - 36" HT.	B&B	
VD	339	VIBURNUM DENTATUM 'ARROWWOOD'	ARROWWOOD VIBURNUM	6' -10'	6' -10'	30" - 36" HT.	B&B	
CODE	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**MAT. WID.**	**MAT. HT.**	**SPACING**	**COND.**	**REMARKS**
GROUND COVERS								
CE	228	COREOPSIS GRANDIFLORA 'EARLY SUNRISE'	EARLY SUNRISE TICKSEED	1.5' - 2'	1.5' - 2'	12" O.C.	#1 CAN	FULLY ROOTED
RF	36	RUDBECKIA FULGIDA	BLACK EYED SUSAN	2' - 2.5'	2' - 3'	18" O.C.	#1 CAN	FULLY ROOTED
SS	115	SALVIA SPLENDENS 'SALSA PURPLE'	SALSA PURPLE SAGE	.75' - 1.5'	1' - 2'	18" O.C.	#1 CAN	FULLY ROOTED
SB	1,032	SCHIZACHYRIUM SCOPARIUM 'BLUE HEAVEN'	BLUE HEAVEN LITTLE BLUESTEM	1.75' - 2'	3' - 3.5'	18" O.C.	#1 CAN	FULLY ROOTED

50 0 50 100

SCALE : 1" = 50'

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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Date: 2024.06.28 21:08:26 -04'00'

Michael Stickle
NEW JERSEY LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: GE57838
COLLIERS ENGINEERING & DESIGN, INC.
N.J. C.O.A. #: 24GA27986500

PRELIMINARY AND FINAL MAJOR SITE PLAN

FOR

JERNEE MILL INDUSTRIAL

BLOCK 58
LOTS 2.01 & 9

BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY
NEW JERSEY

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PROJECT NUMBER: 10000657C
DRAWING NAME: C-LAND

SHEET TITLE: LANDSCAPE PLAN

SHEET NUMBER: 23 of 37

10000657C\Engineering\Site Plans\Landscape\C-LAND.dwg 6/28/2024 3:08:26 PM EDT RMASER

GENERAL PLANTING NOTES

LAND-GENL-PLNT-NOTE

MOD: 05/05/22
10/14/2021

A. GENERAL

1. THIS PLAN SHALL BE USED FOR LANDSCAPE PLANTING PURPOSES ONLY. EXAMINE ALL ENGINEERING DRAWINGS AND FIELD CONDITIONS FOR SPECIFIC LOCATIONS OF UTILITIES AND STRUCTURES. NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES OR LOCATION CONFLICTS PRIOR TO PLANTING INSTALLATION.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UTILITIES MARKOUTS AND COMPLIANCE WITH ALL FEDERAL, STATE, OR LOCAL CODES, LAWFUL ORDERS OR REGULATIONS GOVERNING UPON THIS WORK.

3. OWNER OR HIS/HER REPRESENTATIVE SHALL BE NOTIFIED PRIOR TO BEGINNING PLANTING OPERATIONS.

B. PLANT MATERIAL

1. PLANT MATERIAL:

1.1. PLANT MATERIAL SHALL CONFORM WITH THE ANSI Z60.1-2014 'AMERICAN STANDARD FOR NURSERY STOCK' AS PUBLISHED BY AMERICANHORT IN REGARD TO QUALITY, SIZE OF PLANTING, SPREAD OF ROOTS, SIZE OF ROOTBALL, AND BRANCHING PATTERN.

1.2. PLANTS SHALL BE TYPICAL OF THEIR SPECIES AND VARIETY, HAVE NORMAL GROWTH HABITS, WELL DEVELOPED BRANCHES, DENSELY FOLIATED, VIGOROUS ROOT SYSTEMS, AND FREE FROM DEFECTS, INJURY, DISEASE, AND/OR INFESTATION, WITH ROOT BALLS INTACT.

1.3. ALL PLANT MATERIAL SHALL BEAR THE SAME RELATION TO FINISHED GRADE AT THE NURSERY. THE PLANT MATERIAL SHALL BE PLANTED AT THE SAME LEVEL WHEN PLANTED.

1.4. PLANT MATERIAL SHALL BE PLANTED ON THE DAY OF DELIVERY TO THE SITE. IN THE EVENT THIS IS NOT POSSIBLE, THE CONTRACTOR SHALL TAKE APPROPRIATE STEPS TO PROTECT THE PLANT MATERIAL FROM DAMAGE PRIOR TO INSTALLATION.

1.5. THE LANDSCAPE ARCHITECT OR OWNER SHALL HAVE THE RIGHT, AT ANY STAGE OF THE OPERATION, TO REJECT ANY AND ALL PLANT MATERIAL WHICH IN THEIR OPINION DOES NOT MEET THE REQUIREMENTS OF THESE PLANS.

2. PLANT QUANTITIES: THE LANDSCAPE PLAN SHOULD TAKE PRECEDENCE OVER THE PLANT SCHEDULE IF ANY PLANT DISCREPANCIES OCCUR.

3. PLANT SIZE: THE CONTRACTOR SHALL FURNISH PLANT MATERIAL IN THE CALIPER, HEIGHT, SIZE OR SPREAD INDICATED IN THE PLANT SCHEDULE.

4. SUBSTITUTIONS: NO PLANT SUBSTITUTIONS SHALL BE PERMITTED WITH REGARD TO SIZE, SPECIES, OR VARIETY WITHOUT WRITTEN PERMISSIONS OF THE MUNICIPALITY, LANDSCAPE ARCHITECT, OR OWNER. WRITTEN PROOF OF THE PLANT MATERIAL UNAVAILABILITY MUST BY DOCUMENTED BY THE CONTRACTOR.

5. GUARANTEE: PLANT MATERIAL SHALL BE GUARANTEED FOR **TWO (2) YEARS** AFTER THE DATE OF FINAL ACCEPTANCE. ANY PLANT MATERIAL THAT IS DEAD WITHIN THAT TIME PERIOD SHALL BE REMOVED, INCLUDING STUMP, AND REPLACED WITH A SIMILAR SIZE AND SPECIES AT THE EXPENSE OF THE CONTRACTOR WITHIN **TWO YEARS OR TWO** GROWING SEASONS. TREE STAKES AND ARBOR TIES SHALL BE REMOVED AT THE END OF THE GUARANTEE PERIOD.

C. TOPSOIL REQUIREMENTS:

1. TOPSOIL REQUIREMENTS: SEE NJDOT SECTION 917 FOR REFERENCE AND SOIL ADDITIVES.

1.1. UNACCEPTABLE TOPSOIL SOURCES: DO NOT OBTAIN TOPSOIL FROM THE FOLLOWING SOURCES: AREAS CONTAINING CHEMICALLY CONTAMINATED SOILS. AREAS FROM WHICH THE ORIGINAL SURFACE HAS BEEN STRIPPED OR COVERED OVER, SUCH AS BORROW PITS, OPEN MINES, DEMOLITION SITES, DUMPS, LANDFILLS. NO TOPSOIL FROM WET EXCAVATION OR ACID PRODUCING SOILS.

1.2. TOPSOIL SHALL BE UNIFORM QUALITY, FREE FROM HARD CLODS, STIFF CLAY, HARD PAN, SODS, LARGE STONE, CEMENT, ASH, SLAG, CONCRETE, TAR, BOARDS, CHIPS, MULCH, OR ANY OTHER UNDESIRABLE MATERIALS. NO TOPSOIL SHALL BE DELIVERED IN A FROZEN OR MUDDY CONDITION.

1.3. TOPSOIL PH REQUIREMENTS ARE AS FOLLOWS: PH < 4.1 TOPSOIL IS UNACCEPTABLE. 4.1 ≤ PH < 5.8 ADD PULVERIZED LIME TO INCREASE THE PH TO 6.5 BEFORE USE. 5.8 ≤ PH < 7.0 TOPSOIL IS ACCEPTABLE. NO REMEDIATION NEEDED. 7.0 ≤ PH < 7.2 DECREASE PH TO AT LEAST 6.8 BEFORE USE. PH ≥ 7.2 TOPSOIL IS UNACCEPTABLE.

1.4. ORGANIC CONTENT. ENSURE THAT TOPSOIL HAS A MINIMUM ORGANIC CONTENT OF 2.75% BY WEIGHT. IF THE ORGANIC CONTENT IS LESS THAN 2.75%, INCREASE THE ORGANIC CONTENT BY ADDING SOIL ADDITIVES AT A RATE NECESSARY TO ATTAIN THE MINIMUM ORGANIC CONTENT. THE ORGANIC CONTENT SHALL NOT EXCEED 8% BY WEIGHT AND SHALL BE SAMPLED IN ACCORDANCE WITH THE ASSOCIATION OF AGRICULTURAL CHEMISTS.

1.5. GRADATION/PARTICLE SIZE. PROVIDE TOPSOIL CONFORMING TO THE PARTICLE SIZE REQUIREMENTS IN TABLE 917.01-2 AND THAT HAS NO MORE THAN 20 PERCENT RETAINED ON A NO. 10 SIEVE WHEN MECHANICALLY GRADED. THE DEPARTMENT WILL DETERMINE THE PARTICLE SIZE DISTRIBUTION FOR THE PORTION OF THE TOPSOIL PASSING THE NO. 10 SIEVE USING HYDROMETER ANALYSIS ACCORDING TO AASHTO T 88. SAND (2.0 MM TO 0.05 MM) 40 - 80% COMPOSITION. SILT (0.05 MM TO 0.005 MM) 0 - 30% COMPOSITION. CLAY (0.005 MM AND SMALLER) 10 - 30% COMPOSITION.

2. PREPARATION OF SUBGRADE:

2.1. HOLLOWS, DEPRESSIONS, AND GULLIES SHALL BE FILLED WITH ACCEPTABLE SANDY LOAM AS OUTLINED ABOVE OR SOIL AS DESCRIBED HEREON: SOIL TO BE ONE PART EACH OF TOPSOIL, MOISTENED PEAT MOSS, AND PARENT MATERIAL.

2.2. LOOSEN SUBSOIL BY SCARIFYING, RIPPING OR TILLING USING DISKS, HARROWS OR OTHER SUITABLE EQUIPMENT TO A DEPTH OF 4"-6" IMMEDIATELY BEFORE PLACING ANY TOPSOIL. REPEAT IN AREAS WHERE SEED OR PLANTINGS ARE PROPOSED AND THERE HAS BEEN COMPACTED SOIL.

3. TESTING AND APPROVAL OF SOILS:

3.1. THE CONTRACTOR SHALL SUBMIT A CERTIFIED REPORT SHOWING THE ANALYSIS OF REPRESENTATIVE SAMPLES OF TOPSOIL. TESTING SHALL BE PERFORMED BY RUTGERS COOPERATIVE RESEARCH & EXTENSION TESTING LABORATORIES OR EQUIVALENT AS APPROVED BY STATE AND LOCAL REGULATIONS. PRICE BID SHALL INCLUDE ALL INSPECTION AND LABORATORY FEES.

D. PLANTING PROCEDURES

1. PLANTING BEDS:

1.1. PROVIDE PLANTING PITS AS INDICATED ON PLANTING DETAILS. BACKFILL PLANTING PITS WITH SOILS AS OUTLINED IN SECTION C PRIOR. BACKFILL SOIL TO BE AT MINIMUM ONE PART EACH OF TOPSOIL, MOISTENED PEAT MOSS, AND PARENT MATERIAL.

1.2. PLANTING BEDS SHALL RECEIVE FOUR (4) INCHES OF DOUBLE SHREDDED HARDWOOD MULCH AND TREATED WITH A PRE-EMERGENT HERBICIDE. NO MULCH SHALL COME IN DIRECT CONTACT WITH ROOT FLARE/COLLAR; UNDER NO CIRCUMSTANCES SHALL THE ROOT CROWN BE BURIED.

1.3. SHRUB MASSES SHALL BE PLANTED IN CONTINUOUS MULCHED BEDS.

2. PLANT LOCATIONS: THE LOCATION OF ALL PLANT MATERIAL INDICATED ON THE LANDSCAPE PLANS ARE APPROXIMATE. THE FINAL LOCATION OF ALL PLANT MATERIAL AND PLANTING BEDLINES SHALL BE DETERMINED IN THE FIELD AT THE TIME OF INSTALLATION FOLLOWING THE BASIC INTENT OF THE APPROVED PLANS, UNLESS THERE IS A SPECIFIC DIMENSION OR LOCATION SHOWN.

3. PLANTING DATES: PLANTING OPERATIONS SHALL BE PERFORMED DURING PERIODS WITHIN THE PLANTING SEASON WHEN WEATHER AND SOIL CONDITIONS ARE SUITABLE AND IN ACCORDANCE WITH ACCEPTED LOCAL PRACTICES. PLANTING SEASONS ARE DEFINED AS MARCH 15 THROUGH MAY 15 AND SEPT 15 THROUGH NOV 15. PLANTING IS ACCEPTABLE DURING THE WINTER MONTHS IF WEATHER PERMITS AND THE GROUND IS NOT FROZEN, AND IN THE SUMMER IF SUPPLEMENTAL WATERING IS PROVIDED. SOIL MUST BE FROST FREE, FRIABLE, AND NOT MUDDY AT TIME OF PLANTING.

4. PLANTING METHODS:

4.1. TREES SHALL BE SUPPORTED IMMEDIATELY AFTER PLANTING. PLANT MATERIAL SHALL BE PROPERLY GUYED, STAKED, AND PLANTED IN CONFORMANCE WITH THE TYPICAL PLANTING DETAILS.

4.1.1. STAKES SHALL BE EIGHT TO TEN FEET LONG, OF SOUND, DURABLE UNFINISHED LUMBER CAPABLE OF WITHSTANDING ABOVEGROUND AND UNDERGROUND CONDITIONS DURING THE PERIOD OF GUARANTEE WITH TOP AND BOTTOM DIMENSIONS OF TWO INCHES BY TWO INCHES IN DIAMETER

4.1.2. THREE STAKES SHALL BE EQUALLY SPACED ABOUT THE TREE IN A TRIANGULAR FASHION AND SHALL BE DRIVEN VERTICALLY INTO THE GROUND $2\frac{1}{2}$ TO 3 FEET IN A MANNER THAT DOES NOT INJURE THE ROOT BALL.

4.1.3. TREES SHALL BE FASTENED TO EACH STAKE AT A HEIGHT OF FIVE FEET BY MEANS OF ARBOR TIE TREE TIE ($\frac{7}{16}$" WIDE RECOMMENDED FOR TREES UP TO $2\frac{1}{2}$ INCHES IN CALIPER).

4.2. SET 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 CENTER OF PIT.

4.3. AT TIME OF INSTALLATION, THE CONTRACTOR SHALL WATER NEWLY INSTALLED PLANT MATERIAL. THE CONTRACTOR SHALL PROVIDE REGULAR WATERING TO ENSURE THE ESTABLISHMENT, GROWTH, AND SURVIVAL OF ALL PLANTS.

4.4. B&B PLANTS SHALL BE HANDLED FROM THE BOTTOM OF THE ROOTBALL ONLY. PLANTS WITH BROKEN, SPLIT, OR DAMAGED ROOTBALLS SHALL BE REJECTED.

4.5. CORD BINDING OF ALL B&B PLANTS SHALL BE CUT AND REMOVED, ALONG WITH THE BURLAP OF THE UPPER $\frac{1}{3}$ OF THE ROOT BALL. ALL WIRE BASKETS ARE TO BE REMOVED PRIOR TO BACKFILLING PLANTING PIT.

E. MAINTENANCE

1. PRUNING:

1.1. EACH TREE AND SHRUB SHALL BE PRUNED IN ACCORDANCE WITH AMERICAN STANDARD FOR NURSERY STOCK TO PRESERVE THE NATURAL CHARACTER OF THE PLANT. ALL DEAD WOOD OR SUCKERS AND ALL BROKEN OR BADLY BRUISED BRANCHES SHALL BE REMOVED. PRUNING SHALL BE DONE WITH CLEAN, SHARP TOOLS.

1.2. SHADE TREES PLANTED NEAR PEDESTRIAN OR VEHICULAR ACCESS SHOULD NOT BE BRANCHED LOWER THAN 7'-0" ABOVE GRADE. PLANT MATERIAL LOCATED WITHIN SIGHT TRIANGLE EASEMENTS SHALL NOT EXCEED A MATURE HEIGHT OF 30" ABOVE THE ELEVATION OF THE ADJACENT CURB. STREET TREES PLANTED IN SIGHT TRIANGLE EASEMENTS SHALL BE PRUNED TO NOT TO HAVE BRANCHES BELOW 7'-0".

1.3. THE CENTRAL LEADER SHALL NOT BE CUT OR DAMAGED.

2. LAWN AREAS:

2.1. THE LANDSCAPE CONTRACTOR SHALL TEST THE SOIL TO CONFIRM SUITABILITY FOR THE PROPOSED SEED MIX AND SUPPLEMENT AS REQUIRED TO MEET THE REQUIRED PH & NUTRIENT LEVELS.

2.2. ALL DISTURBED AREAS SHALL BE STABILIZED WITH SEED UNLESS OTHERWISE INDICATED ON THE LANDSCAPE PLANS. SEED SHALL BE IN ACCORDANCE WITH THE LAWN SEED MIX NOTES AND THE SOIL EROSION AND SEDIMENT CONTROL DISTRICT'S SEED SPECIFICATIONS AS NOTED ON THE SOIL EROSION AND SEDIMENT CONTROL DETAILS SHEET.

2.3. SOD, IF SPECIFIED, SHALL CONSIST OF A STATE CERTIFIED MIXTURE. ALL DISTURBED AREAS INDICATED AS LAWN OR SOD SHALL BE TOPSOILED, LIMED, AND FERTILIZED & FINE GRADED PRIOR TO LAWN INSTALLATION.

3. EXISTING VEGETATION: EXISTING TREES AND SHRUBS TO BE PRESERVED ON SITE SHALL BE PROTECTED AGAINST CONSTRUCTION DAMAGE BY SNOW FENCING. FENCING SHALL BE PLACED OUTSIDE THE INDIVIDUAL TREE CANOPY. TREES TO REMAIN SHALL BE IDENTIFIED IN THE FIELD PRIOR TO COMMENCEMENT OF CONSTRUCTION. TREE PROTECTION FENCING SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF CONSTRUCTION, GRADING, OR CLEARING. EXISTING VEGETATION BEING PRESERVED AND LOCATED AT THE EDGE OF THE NEW TREELINE SHALL BE PRUNED AND TRIMMED TO REMOVE ALL DEAD, DAMAGED, OR DISEASED BRANCHES.

4. SITE CLEANUP: PLANTING DEBRIS (WIRE, TWINE, RUBBERHOSE, BACKFILL, ETC.) SHALL BE REMOVED FROM THE SITE AFTER PLANTING IS COMPLETE. THE PROPERTY IS TO BE LEFT IN A NEAT, ORDERLY CONDITION IN ACCORDANCE WITH ACCEPTED PLANTING PRACTICES.

ERNMX-122 - MIX 'A'

FACW WETLAND MEADOW MIX
BY ERNST CONSERVATION SEEDS
HEIGHT: 0.3 - 7.0 FEET
SEEDING RATE: 20-30 LBS PER ACRE

MIX COMPOSITION
33.0% CAREX VULPINOIDEA, PA ECOTYPE (FOX SEDGE, PA ECOTYPE)
20.0% ELYMUS VIRGINICUS, PA ECOTYPE (VIRGINIA WILDRYE, PA ECOTYPE)
16.8% CAREX SCOPARIA, PA ECOTYPE (BLUNT BROOM SEDGE, PA ECOTYPE)
6.4% CAREX LURIDA, PA ECOTYPE (LURID SEDGE, PA ECOTYPE)
5.2% CINNA ARUNDINACEA, PA ECOTYPE (WOOD REEDGRASS, PA ECOTYPE)
4.0% VERBENA HASTATA, PA ECOTYPE (BLUE VERVAIN, PA ECOTYPE)
3.0% JUNCUS EFFUSUS (SOFT RUSH)
2.0% ASCLEPIAS INCARNATA, PA ECOTYPE (SWAMP MILKWEED, PA ECOTYPE)
2.0% BIDENS CERNUA, PA ECOTYPE (NODDING BUR MARIGOLD, PA ECOTYPE)
2.0% HELIOPSIS HELIANTHOIDES, PA ECOTYPE (OXEYE SUNFLOWER, PA ECOTYPE)
1.0% HELENIUM AUTUMNALE, PA ECOTYPE (COMMON SNEEZEWEED, PA ECOTYPE)
1.0% ZIZIA AUREA (GOLDEN ALEXANDERS)
0.6% ASTER PUNICEUS, PA ECOTYPE (PURPLESTEM ASTER, PA ECOTYPE)
0.5% ALISMA SUBCORDATUM, PA ECOTYPE (MUD PLANTAIN, PA ECOTYPE)
0.4% ASTER NOVAE-ANGLIAE, PA ECOTYPE (NEW ENGLAND ASTER, PA ECOTYPE)
0.4% ASTER PRENANTHOIDES, PA ECOTYPE (ZIGZAG ASTER, PA ECOTYPE)
0.4% ASTER UMBELLATUS, PA ECOTYPE (FLAT TOPPED WHITE ASTER, PA ECOTYPE)
0.4% EUPATORIUM FISTULOSUM, PA ECOTYPE (JOE PYE WEED, PA ECOTYPE)
0.3% LOBELIA SIPHILITICA, PA ECOTYPE (GREAT BLUE LOBELIA, PA ECOTYPE)
0.3% SCIRPUS CYPERINUS, PA ECOTYPE (WOOLGRASS, PA ECOTYPE)
0.2% PENTHORUM SEDOIDES, PA ECOTYPE (DITCH STONECROP, PA ECOTYPE)
0.1% SOLIDAGO RUGOSA, PA ECOTYPE (WRINKLELEAF GOLDENROD, PA ECOTYPE)

ERNMX-127 - MIX 'B'

RETENTION BASIN WILDLIFE MIX
BY ERNST CONSERVATION SEEDS
HEIGHT: 1.0 - 8.0 FEET
SEEDING RATE: 20-30 LBS PER ACRE

MIX COMPOSITION
30.0% PANICUM CLANDESTINUM, TIOGA (DEERTONGUE, TIOGA)
29.5% CAREX VULPINOIDEA, PA ECOTYPE (FOX SEDGE, PA ECOTYPE)
20.0% ELYMUS VIRGINICUS, 'MADISON' (VIRGINIA WILDRYE, 'MADISON')
7.0% CAREX LURIDA, PA ECOTYPE (LURID SEDGE, PA ECOTYPE)
7.0% CAREX SCOPARIA, PA ECOTYPE (BLUNT BROOM SEDGE, PA ECOTYPE)
3.0% VERBENA HASTATA, PA ECOTYPE (BLUE VERVAIN, PA ECOTYPE)
1.5% JUNCUS EFFUSUS (SOFT RUSH)
0.5% AGROSTIS PERENNANS, ALBANY PINE BUSH-NY ECOTYPE (AUTUMN BENTGRASS, ALBANY PINE BUSH-NY ECOTYPE)
0.5% ASCLEPIAS INCARNATA, PA ECOTYPE (SWAMP MILKWEED, PA ECOTYPE)
0.3% SCIRPUS CYPERINUS, PA ECOTYPE (WOOLGRASS, PA ECOTYPE)
0.2% HELENIUM AUTUMNALE, PA ECOTYPE (COMMON SNEEZEWEED, PA ECOTYPE)
0.1% ASTER NOVAE-ANGLIAE, PA ECOTYPE (NEW ENGLAND ASTER, PA ECOTYPE)
0.1% ASTER PUNICEUS, PA ECOTYPE (PURPLESTEM ASTER, PA ECOTYPE)
0.1% ASTER UMBELLATUS, PA ECOTYPE (FLAT TOPPED WHITE ASTER, PA ECOTYPE)
0.1% EUPATORIUM PERFOLIATUM, PA ECOTYPE (BONESET, PA ECOTYPE)
0.1% LOBELIA SIPHILITICA, PA ECOTYPE (GREAT BLUE LOBELIA, PA ECOTYPE)

ERNMX-181 - MIX 'C'

NATIVE STEEP SLOPE MIX WITH ANNUAL RYEGRASS
BY ERNST CONSERVATION SEEDS
HEIGHT: 1.0 - 6.3 FEET
SEEDING RATE: 60 LBS PER ACRE OR 1.5 LBS PER 1,000 SQ. FT

MIX COMPOSITION
31.10% SORGHASTRUM NUTANS, NEW ENGLAND 2 ECOTYPE (INDIANGRASS, NEW ENGLAND 2 ECOTYPE)
20.0% LOLIUM MULTIFLORUM (ANNUAL RYEGRASS)
14.0% ANDROPOGON GERARDII, 'NIAGARA' (BIG BLUESTEM, 'NIAGARA')
10.0% ELYMUS VIRGINICUS, MADISON-NY ECOTYPE (VIRGINIA WILDRYE, MADISON-NY ECOTYPE)
7.0% ELYMUS CANADENSIS (CANADA WILDRYE)
4.0% AGROSTIS PERENNANS, ALBANY PINE BUSH-NY ECOTYPE AUTUMN BENTGRASS (ALBANY PINE BUSH-NY ECOTYPE)
4.0% PANICUM VIRGATUM, 'CARTHAGE', NC ECOTYPE SWITCHGRASS ('CARTHAGE', NC ECOTYPE)
3.0% PANICUM CLANDESTINUM, TIOGA (DEERTONGUE, TIOGA)
1.5% ECHINACEA PURPUREA (PURPLE CONEFLOWER)
1.3% CHAMAECRISTA FASCICULATA, PA ECOTYPE (PARTRIDGE PEA, PA ECOTYPE)
1.2% HELIOPSIS HELIANTHOIDES, PA ECOTYPE (OXEYE SUNFLOWER, PA ECOTYPE)
1.0% COREOPSIS LANCEOLATA (LANCELEAF COREOPSIS)
1.0% RUDBECKIA HIRTA (BLACKEYED SUSAN)
0.3% MONARDA FISTULOSA, FORT INDIANTOWN GAP-PA ECOTYPE (WILD BERGAMOT, FORT INDIANTOWN GAP-PA ECOTYPE)
0.2% ASCLEPIAS SYRIACA (COMMON MILKWEED)
0.2% SOLIDAGO RUGOSA, PA ECOTYPE (WRINKLELEAF GOLDENROD, PA ECOTYPE)
0.1% ASTER LATERIFLORUS (CALICO ASTER)
0.1% ASTER PILOSUS, PA ECOTYPE (HEATH ASTER, PA ECOTYPE)

ERNMX-122 -SEED MIX 'A' MEADOW NOTES

SCHEDULE: MEADOW SEEDING SHOULD BE CONDUCTED ONLY BETWEEN MARCH 1 AND MAY 15, UNLESS SPECIFICALLY AUTHORIZED BY THE TOWNSHIP LANDSCAPE ARCHITECT. OUTSIDE OF THIS PLANTING SEASON A TEMPORARY SEEDING MAY BE REQUIRED FOR STABILIZATION PURPOSES AND SHOULD BE COORDINATED WITH THE SOIL CONSERVATION DISTRICT. TEMPORARY SEEDING SHOULD BE DONE WITH ANNUAL SPECIES ONLY. PERENNIAL SPECIES MUST BE REMOVED PRIOR TO FINAL SEEDING.

SUBMITTALS: CONTRACTOR SHALL SUPPLY SEED TAGS OR OTHER EVIDENCE OF SPECIES AND QUANTITIES OF SEED INSTALLED. CONTRACTOR SHALL NOTIFY TOWNSHIP LANDSCAPE ARCHITECT WHEN SEEDING IS TO OCCUR FOR INSPECTION AS REQUIRED AND PROVIDE A WRITTEN SUMMARY OF SEEDING METHOD AND MATERIALS.

SITE PREPARATION: ERADICATE EXISTING VEGETATION BY HAVING A LICENSED SPRAY TECHNICIAN APPLY AN APPROVED HERBICIDE OR AQUATIC HERBICIDE FORMULATION, TO CONTROL UNDESIRABLE VEGETATION SUCH AS MULTIFLORA ROSE, HONEYSUCKLE AND WOODY SPECIES. SOME PERSISTENT SPECIES SUCH AS PURPLE LOOSESTRIFE, PHAGMITES, JAPANESE KNOTWEED, OR REED CANARYGRASS, MAY REQUIRE MULTIPLE APPLICATIONS. PERENNIAL WEEDS NOT ADDRESSED BEFORE ESTABLISHMENT WILL BE MORE DIFFICULT TO REMOVE LATER. NEWLY CONSTRUCTED WETLANDS, RETENTION BASINS, AND WET CONSTRUCTION SITES SHOULD BE SEEDED AS SOON AFTER CONSTRUCTION AS POSSIBLE. LEAVING THE SURFACE ROUGH BY CREATING MOUNDS AND KETTLES FOR AN UNDULATING MICROTOPOGRAPHY CAN BE VERY BENEFICIAL IN OBLIGATE WETLANDS.

IMPLEMENTATION: A SOIL TEST SHOULD BE PERFORMED PRIOR TO IMPLEMENTATION AND SUPPLIED TO THE LANDSCAPE ARCHITECT. SEEDING AND PLANTING SHOULD BEGIN IMMEDIATELY WHILE THE SOIL IS STILL FRIABLE AND BEFORE WEEDS EMERGE. IF HERBICIDES WERE USED TO REMOVE EXISTING VEGETATION TIME SHOULD BE GIVEN FOR THE REMAINING HERBICIDE TO BREAKDOWN BEFORE SEEDING. BROADCAST SEED EVENLY OVER EACH AREA BY HAND SEEDING OR HYDROSEEDING. SEEDING RATE AS SPECIFIED. SEEDED AREAS SHOULD BE IRRIGATED UNTIL SEEDLINGS BECOME ESTABLISHED.

FIRST GROWING SEASON MAINTENANCE: WHEN FEASIBLE, POST PLANTING MAINTENANCE WILL PROVIDE THE BEST RESULTS FOR WET MEADOWS AND WETLANDS. WHENEVER THE CANOPY HEIGHT (OVERALL VEGETATION) REACHES 18"-24", TRIM THE MEADOW TO 8" USING A STRING TRIMMER. TRIMMING REDUCES COMPETITION BY FAST GROWING WEEDS FOR SUNLIGHT AND NUTRIENTS NEEDED BY SLOWER GROWING PERENNIAL NATIVES. TRIMMING SHOULD CEASE BY MID-SEPTEMBER. PROBLEM WEEDS SHOULD BE HAND PULLED OR SPOT SPRAYED WITH AN APPROVED AQUATIC HERBICIDE.

SECOND AND SUBSEQUENT GROWING SEASONS MAINTENANCE: PROBLEM WEEDS SHOULD BE HAND PULLED OR SPOT SPRAYED WITH AN APPROVED AQUATIC HERBICIDE.

ACCEPTANCE: MEADOW SEEDING MAY BE DEEMED COMPLETE WHEN GERMINATION IS EVIDENT FOR GREATER THAN 50% OF THE SPECIES IN THE MIX AND THE SOIL IS SUFFICIENTLY STABILIZED TO PREVENT EROSION. AS MANY MEADOW SPECIES ARE SLOW TO GERMINATE AND ESTABLISH, THE CONTRACTOR IS URGED TO INSTALL THE MEADOW SEEDING AS SOON AS POSSIBLE SO AS NOT TO DELAY FINAL ACCEPTANCE.

ERNMX-127 -SEED MIX 'B' MEADOW NOTES

SCHEDULE: MEADOW SEEDING SHOULD BE CONDUCTED ONLY BETWEEN MARCH 1 AND MAY 15, UNLESS SPECIFICALLY AUTHORIZED BY THE TOWNSHIP LANDSCAPE ARCHITECT. OUTSIDE OF THIS PLANTING SEASON A TEMPORARY SEEDING MAY BE REQUIRED FOR STABILIZATION PURPOSES AND SHOULD BE COORDINATED WITH THE SOIL CONSERVATION DISTRICT. TEMPORARY SEEDING SHOULD BE DONE WITH ANNUAL SPECIES ONLY. PERENNIAL SPECIES MUST BE REMOVED PRIOR TO FINAL SEEDING.

SUBMITTALS: CONTRACTOR SHALL SUPPLY SEED TAGS OR OTHER EVIDENCE OF SPECIES AND QUANTITIES OF SEED INSTALLED. CONTRACTOR SHALL NOTIFY TOWNSHIP LANDSCAPE ARCHITECT WHEN SEEDING IS TO OCCUR FOR INSPECTION AS REQUIRED AND PROVIDE A WRITTEN SUMMARY OF SEEDING METHOD AND MATERIALS.

SITE PREPARATION: PRIOR TO PLANTING THE SITE, INVASIVE SPECIES PARTICULARLY ADAPTED TO WET CONDITIONS SHOULD BE REMOVED OR SPRAYED USING AN APPROVED HERBICIDE BY A LICENSED SPRAY TECHNICIAN. PERENNIAL WEEDS NOT ADDRESSED BEFORE ESTABLISHMENT WILL BE DIFFICULT TO REMOVE LATER. NORMAL VEGETATION CAN BE WORKED INTO THE TOPSOIL WHICH SHOULD BE STOCKPILED UNTIL THE FINAL GRADE HAS BEEN ESTABLISHED.

THE INFILTRATION AND PLANT GROWTH AREAS SHOULD BE LOOSE AND FRIABLE, HIGH IN ORGANIC MATTER, AND COMPLETED WITHOUT COMPACTION BY HEAVY EQUIPMENT. AN EXCAVATOR MAY BE USED TO DIG AND DROP EACH AREA OF THE BOTTOM SOIL IN A LOOSE MANNER. LIME OR COMPOST CAN THEN BE INCORPORATED. THE EXCAVATION MACHINE DOES NOT MOVE OVER THE FINISHED SURFACE THEREBY AVOIDING UNNECESSARY COMPACTION. NATIVE VEGETATION CAN BE PLANTED OR SEEDED OVER THIS UNEVEN ABSORBENT SURFACE.

IMPLEMENTATION: A SOIL TEST SHOULD BE PERFORMED PRIOR TO IMPLEMENTATION AND SUPPLIED TO THE LANDSCAPE ARCHITECT. SEEDING AND PLANTING SHOULD BEGIN IMMEDIATELY UPON COMPLETION OF THE STRUCTURE WHILE THE SOIL IS STILL FRIABLE AND BEFORE WEEDS EMERGE. PLAN SEEDING AND PLANTING BEFORE THE BASIN IS FLOODED OR ALLOW THE BASIN TO DRAIN BEFORE SEEDING. BROADCAST SEED EVENLY OVER EACH UNIT BY HAND SEEDING OR HYDROSEEDING. SEEDING RATE AS SPECIFIED. STRAW MULCH OR STRAW COCONUT MATS SHOULD BE USED TO CONTROL EROSION AND PROTECT EMERGING SEEDLINGS FROM EXTREME TEMPERATURES AND DRYING OUT. MULCH SHOULD BE USED SPARINGLY AND ALLOW SUNLIGHT TO REACH THE GROUND. SEEDED AREAS SHOULD BE IRRIGATED UNTIL SEEDLINGS BECOME ESTABLISHED.

FIRST GROWING SEASON MAINTENANCE: WHEN MEADOW HEIGHT REACHES 18"-24", USE A STRING TRIMMER TO TRIM THE MEADOW TO 8". IF BIOENGINEERING OR CONTAINERIZED WOODY MATERIALS WERE USED IN THE PLANTING OR SEED OF SHRUBS/TREES WERE PART OF THE MIIX, THE SITE SHOULD NOT BE TRIMMED AFTER THE ESTABLISHMENT YEAR. PROBLEM WEEDS SHOULD BE HAND PULLED OR SPOT SPRAYED WITH AN APPROVED HERBICIDE BY A LICENSED SPRAY TECHNICIAN.

SECOND & SUBSEQUENT GROWING SEASONS MAINTENANCE: PRIOR TO NEW SPRING GROWTH REACHING 2", TRIM ANY MATERIAL STANDING FROM THE PREVIOUS YEAR TO THE SAME HEIGHT (2"). IF BIOENGINEERING OR CONTAINERIZED WOODY MATERIALS WERE USED ON THE SITE OR SEED OF SHRUBS/TREES WERE PART OF THE MIX, THE SITE SHOULD NOT TRIMMED AFTER THE FIRST ESTABLISHMENT YEAR. PROBLEM WEEDS SHOULD BE HAND PULLED OR SPOT SPRAYED WITH AN APPROVED HERBICIDE BY A LICENSED SPRAY TECHNICIAN.

SPECIAL CIRCUMSTANCES - SECOND GROWING SEASON: IF THERE IS A HEAVY INFESTATION OF RAGWEED OR FOXTAIL IN THE SECOND GROWING SEASON, TRIM THE MEADOW TO 8". IF BIOENGINEERING OR CONTAINERIZED WOODY MATERIALS WERE USED, TRIMMING SHOULD BE ABOVE OR AROUND NEW GROWTH OF THE PLANTS. TRIMMING OPERATIONS SHOULD CEASE AFTER MID-SEPTEMBER.

GENERAL MAINTENANCE: IN ADDITION TO STRUCTURAL MAINTENANCE, SILTATION SHOULD BE REMOVED AS REQUIRED. CLOSE MOWING THROUGHOUT THE GROWING SEASON OR EXTENSIVE CHEMICAL USE IS NOT PERMITTED.

ACCEPTANCE: MEADOW SEEDING MAY BE DEEMED COMPLETE WHEN GERMINATION IS EVIDENT FOR GREATER THAN 50% OF THE SPECIES IN THE MIX AND THE SOIL IS SUFFICIENTLY STABILIZED TO PREVENT EROSION. AS MANY MEADOW SPECIES ARE SLOW TO GERMINATE AND ESTABLISH, THE CONTRACTOR IS URGED TO INSTALL THE MEADOW SEEDING AS SOON AS POSSIBLE SO AS NOT TO DELAY FINAL ACCEPTANCE.

ERNMX-181 -SEED MIX 'C' MEADOW NOTES

SCHEDULE: MEADOW SEEDING SHOULD BE CONDUCTED ONLY BETWEEN MARCH 1 AND MAY 15, UNLESS SPECIFICALLY AUTHORIZED BY THE TOWNSHIP LANDSCAPE ARCHITECT. OUTSIDE OF THIS PLANTING SEASON A TEMPORARY SEEDING MAY BE REQUIRED FOR STABILIZATION PURPOSES AND SHOULD BE COORDINATED WITH THE SOIL CONSERVATION DISTRICT. TEMPORARY SEEDING SHOULD BE DONE WITH ANNUAL SPECIES ONLY. PERENNIAL SPECIES MUST BE REMOVED PRIOR TO FINAL SEEDING.

SUBMITTALS: CONTRACTOR SHALL SUPPLY SEED TAGS OR OTHER EVIDENCE OF SPECIES AND QUANTITIES OF SEED INSTALLED. CONTRACTOR SHALL NOTIFY TOWNSHIP LANDSCAPE ARCHITECT WHEN SEEDING IS TO OCCUR FOR INSPECTION AS REQUIRED AND PROVIDE A WRITTEN SUMMARY OF SEEDING METHOD AND MATERIALS.

SITE PREPARATION: ERADICATE EXISTING VEGETATION BY HAVING A LICENSED SPRAY TECHNICIAN APPLY AN APPROVED HERBICIDE. PERENNIAL WEEDS NOT ADDRESSED BEFORE ESTABLISHMENT WILL BE DIFFICULT TO REMOVE LATER. FOR AREAS WITH SLOPE GREATER THAN 3:1, FINAL TRACKING SHOULD BE PERPENDICULAR TO THE SLOPE. THE TRACKS WILL AID IN REDUCING EROSION AND REATIANING SEED AND MOISTURE. MULCHING WITH STRAW, HYDROMULCH, OR STRAW/COCONUT FIBER MATS IS RECOMMENDED ON THESE SITES TO PROTECT THE SEED FROM DRYING OUT OR WASHING AWAY. FOR AREAS STEEPER THAN 3:1, THE USE OF EROSION CONTROL BLANKETS OR FLEXIBLE GROWTH MEDIUM IS RECOMMENDED. WHEN USING EROSION CONTROL BLANKETS, BE SURE THEY ARE TOED IN AT THE TOP OF THE SLOPE.

IMPLEMENTATION: A SOIL TEST SHOULD BE PERFORMED PRIOR TO IMPLEMENTATION AND SUPPLIED TO THE LANDSCAPE ARCHITECT. SEEDING AND PLANTING SHOULD BEGIN IMMEDIATELY UPON COMPLETION OF THE STRUCTURE WHILE THE SOIL IS STILL FRIABLE AND BEFORE WEEDS EMERGE. PLAN SEEDING AND PLANTING BEFORE THE BASIN IS FLOODED OR ALLOW THE BASIN TO DRAIN BEFORE SEEDING. BROADCAST SEED EVENLY OVER EACH UNIT BY HAND SEEDING OR HYDROSEEDING. SEEDING RATE AS SPECIFIED. STRAW MULCH OR STRAW COCONUT MATS SHOULD BE USED TO CONTROL EROSION AND PROTECT EMERGING SEEDLINGS FROM EXTREME TEMPERATURES AND DRYING OUT. MULCH SHOULD BE USED SPARINGLY AND ALLOW SUNLIGHT TO REACH THE GROUND. SEEDED AREAS SHOULD BE IRRIGATED UNTIL SEEDLINGS BECOME ESTABLISHED.

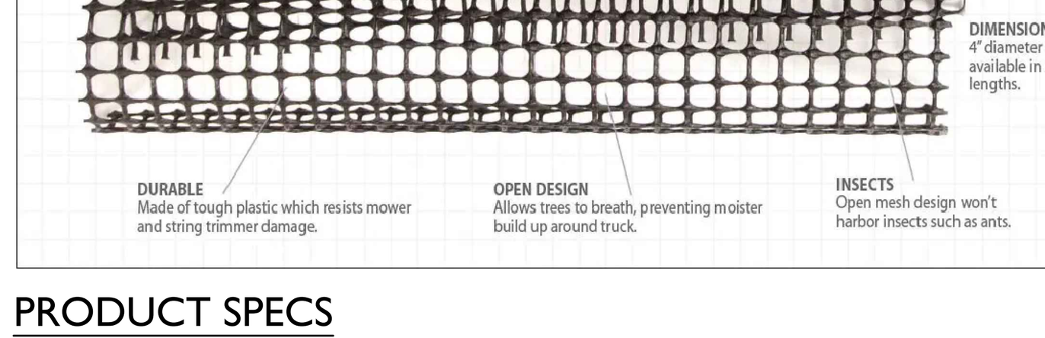
FIRST GROWING SEASON MAINTENANCE: POST PLANTING MAINTENANCE WILL PROVIDE IMPROVED RESULTS IF THE GROUND IS NOT TOO ROUGH OR STEEP. WHENEVER CANOPY HEIGHT (OVERALL VEGETATION) REACHES 18"-24", USE A BRUSH HOG MOWER OR STRING TRIMMER TO TRIM THE MEADOW TO 8". TRIMMING REDUCES COMPETITION BY FAST GROWING WEEDS FOR SUNLIGHT, WATER AND NUTRIENTS NEEDED BY SLOWER GROWING PERENNIAL NATIVES. A LAWN MOWER IS NOT RECOMMENDED AS THE MOWER HEIGHT WILL BE TOO LOW AND THE NATIVE SEEDLINGS WILL BE KILLED. TRIMMING SHOULD CEASE BY MID-SEPTEMBER. PROBLEM WEEDS SHOULD BE HAND PULLED OR SPOT SPRAYED WITH AN APPROVED HERBICIDE.

SECOND & SUBSEQUENT GROWING SEASONS MAINTENANCE: PRIOR TO NEW SPRING GROWTH REACHING 2", TRIM ANY MATERIAL STANDING FROM THE PREVIOUS YEAR TO THE SAME HEIGHT (2"). IF BIOENGINEERING OR CONTAINERIZED WOODY MATERIALS WERE USED ON THE SITE OR SEED OF SHRUBS/TREES WERE PART OF THE MIX, THE SITE SHOULD NOT TRIMMED AFTER THE FIRST ESTABLISHMENT YEAR. PROBLEM WEEDS SHOULD BE HAND PULLED OR SPOT SPRAYED WITH AN APPROVED HERBICIDE BY A LICENSED SPRAY TECHNICIAN.

SPECIAL CIRCUMSTANCES - SECOND GROWING SEASON: IF THERE IS A HEAVY INFESTATION OF RAGWEED OR FOXTAIL IN THE SECOND GROWING SEASON, TRIM THE MEADOW TO 8". IF BIOENGINEERING OR CONTAINERIZED WOODY MATERIALS WERE USED, TRIMMING SHOULD BE ABOVE OR AROUND NEW GROWTH OF THE PLANTS. TRIMMING OPERATIONS SHOULD CEASE AFTER MID-SEPTEMBER.

ACCEPTANCE: MEADOW SEEDING MAY BE DEEMED COMPLETE WHEN GERMINATION IS EVIDENT FOR GREATER THAN 50% OF THE SPECIES IN THE MIX AND THE SOIL IS SUFFICIENTLY STABILIZED TO PREVENT EROSION. AS MANY MEADOW SPECIES ARE SLOW TO GERMINATE AND ESTABLISH, THE CONTRACTOR IS URGED TO INSTALL THE MEADOW SEEDING AS SOON AS POSSIBLE SO AS NOT TO DELAY FINAL ACCEPTANCE.

AM LEONARD 4IN DIA X 36IN PREMIUM RIGID PLASTIC MESH TREE GUARD



PRODUCT SPECS

MATERIAL: HDPE

DIAMETER (INCHES): 4

LENGTH (INCHES): 36

COLOR: BLACK

CONTACT INFORMATION:
A.M. LEONARD
P: 1 (800)-543-8955
E: CUSTOMERCARE@AMLEO.COM
W: WWW.AMLEO.COM

LAWN SEED MIX NOTES

MIX #13 (WELL TO MODERATELY DRAINED SOIL):

HARD FESCUE AND/OR	
CHEWING FESCUE AND/OR	
STRONG CREEPING RED FESCUE	175 LBS/ACRE
PERENNIAL RYEGRASS	45 LBS/ACRE
KENTUCKY BLUE GRASS (BLEND)	45 LBS/ACRE

MIX #14 (EXCESSIVELY TO MODERATELY DRAINED SOIL):

TALL FESCUE	265 LBS/ACRE
KENTUCKY BLUE GRASS (BLEND)	20 LBS/ACRE
PERENNIAL RYE GRASS (BLEND)	20 LBS/ACRE

MIX #15 (WELL TO MODERATELY DRAINED SOIL):

HARD FESCUE	130 LBS/ACRE
CHEWING FESCUE	45 LBS/ACRE
STRONG CREEPING RED FESCUE	45 LBS/ACRE
PERENNIAL RYEGRASS	10 LBS/ACRE

MIX #16 (POORLY DRAINED SOIL)

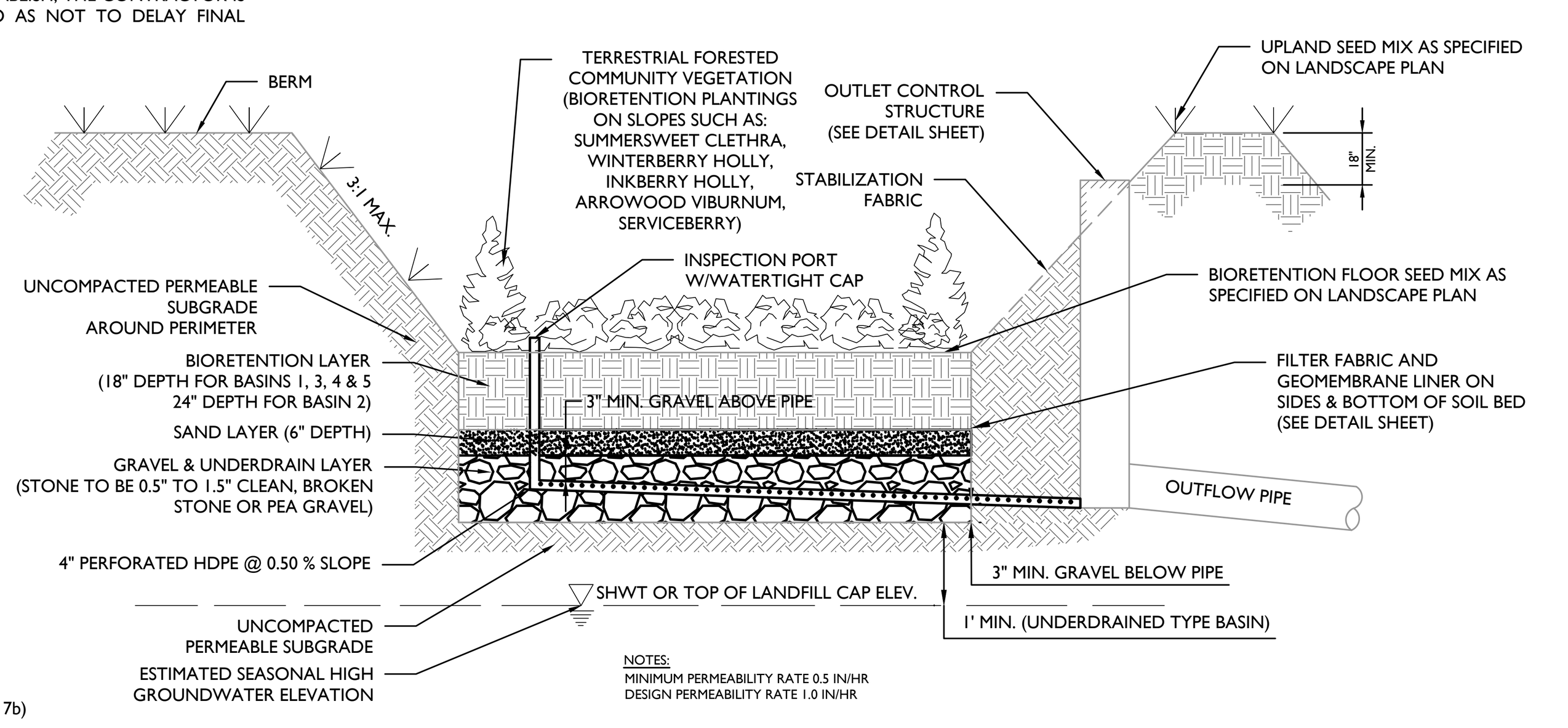
ROUGH BLUEGRASS	90 LBS/ACRE
STRONG CREEPING RED FESCUE	130 LBS/ACRE

OPTIMUM SEEDING DATES:
8/1 - 10/1 (ZONE 5b, 6a); 8/15 - 10/15 (ZONE 6b); 8/15 - 10/30 (ZONE 7a, 7b)

SUMMER SEEDING DATES *:
6/1 - 7/31 (ZONE 5b, 6a); 5/1 - 8/14 (ZONE 6b, 7a, 7b)

ACCEPTABLE SEEDING DATES:
3/15 - 5/31 (ZONE 5b, 6a); 3/1 - 4/30 ZONE 6b); 2/1 - 4/30 (ZONE 7a, 7b)

* NOTE: SUMMER SEEDING SHOULD ONLY BE CONDUCTED WHEN THE SITE IS IRRIGATED. MIXES INCLUDING WHITE CLOVER REQUIRE THAT AT LEAST SIX WEEKS OF GROWING SEASON REMAIN AFTER SEEDING TO ENDURE ESTABLISHMENT BEFORE FREEZING CONDITIONS.

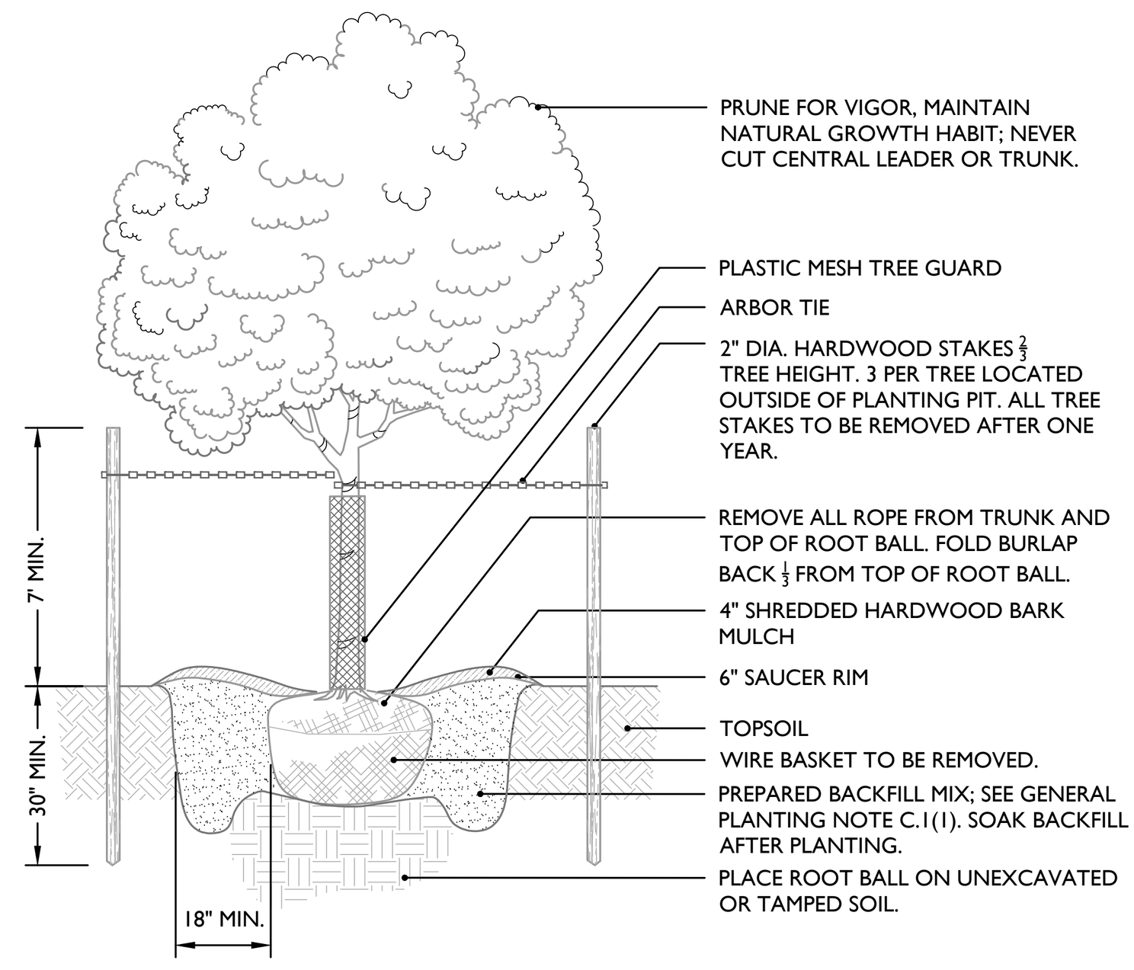


BIORETENTION BASIN CROSS SECTION DETAIL

NOT TO SCALE

BIORETENTION BASIN NOTES:

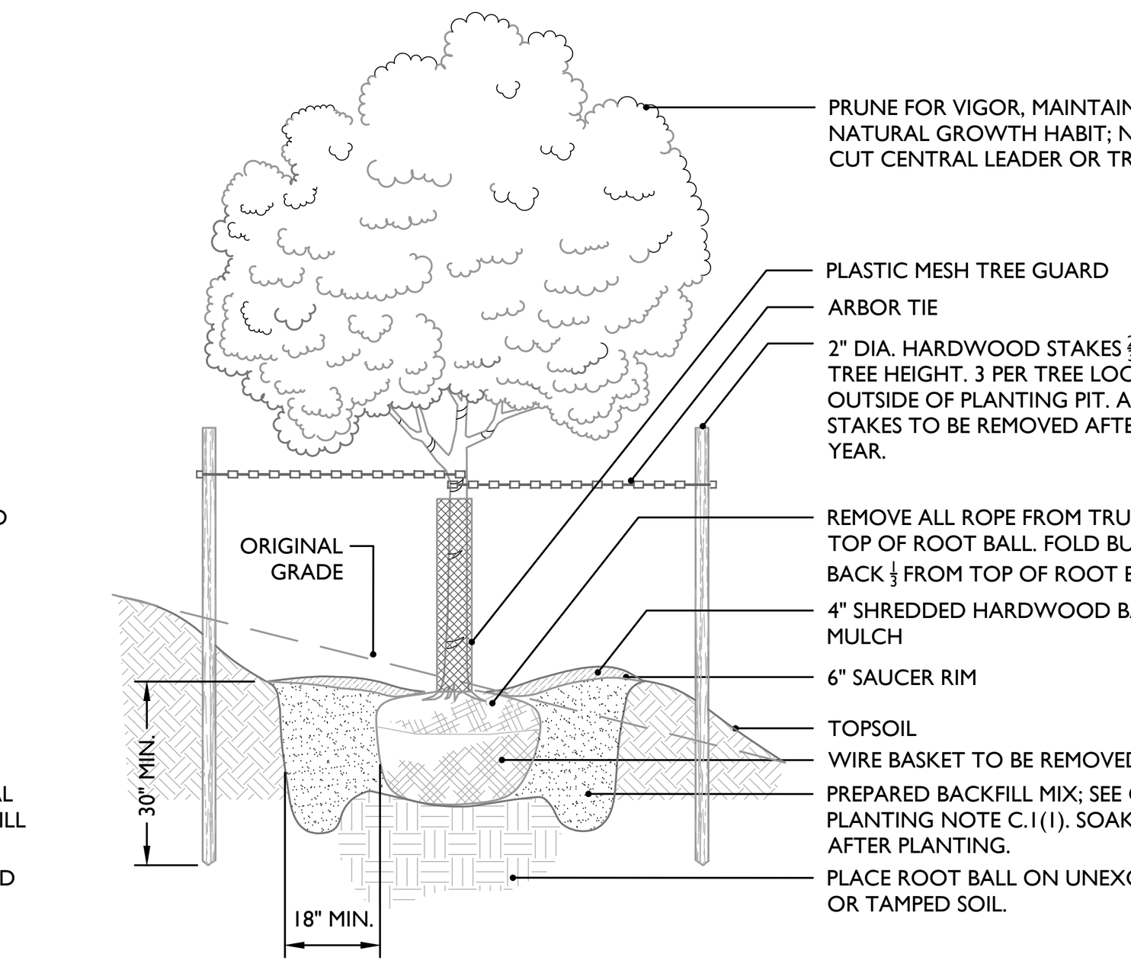
1. ALL EARTHWORK OPERATIONS, INCLUDING EXCAVATION, PROOFROLLING, GRADING AND BACKFILL OPERATIONS SHALL BE CONDUCTED UNDER THE SUPERVISION OF A NEW JERSEY LICENSED PROFESSIONAL ENGINEER.
2. PRIOR TO INSTALLATION OF THE SAND LAYER THE PERMEABILITY RATE OF THE UNDERLYING OR REPLACEMENT SOILS SHALL BE CONFIRMED BY A NEW JERSEY LICENSED PROFESSIONAL ENGINEER TO MEET THE MINIMUM DESIGN PERMEABILITY RATE. THE BASIN INFILTRATION RATE SHALL BE CERTIFIED BY A NEW JERSEY LICENSED PROFESSIONAL ENGINEER, THAT IT MEETS THE MINIMUM DESIGN PERMEABILITY RATE.
3. EXCAVATIONS TO REMOVE HYDRAULICALLY RESTRICTIVE MATERIAL SHALL EXTEND A MINIMUM OF 1' BELOW THE IMPERMEABLE LAYER AND SHALL BE CERTIFIED BY A PROFESSIONAL ENGINEER.
4. ALL BASIN EXCAVATION MUST BE PERFORMED BY EQUIPMENT PLACED OUTSIDE THE BASIN WHENEVER POSSIBLE TO PREVENT THE COMPACTION OF THE BASIN SUBGRADE SOILS. DO NOT STOCKPILE MATERIAL OR DRIVE EQUIPMENT WITHIN THE AREA OF THE BASIN.
5. ONCE THE FINAL GRADING PHASE OF THE BASIN IS REACHED, THE BOTTOM OF THE BASIN SHALL BE DEEPLY TILLED WITH A ROTARY TILLER OR DISC HARROW AND THEN SMOOTHED OUT WITH A LEVELING DRAG OR EQUIVALENT GRADING EQUIPMENT. THESE PROCEDURES SHOULD PREFERABLY BE PERFORMED WITH EQUIPMENT LOCATED OUTSIDE THE BASIN BOTTOM. IF THIS IS NOT POSSIBLE, IT SHOULD BE PERFORMED WITH LIGHT-WEIGHT, RUBBER-TIRED EQUIPMENT.
6. THE BOTTOM SOIL LAYER MUST MEET THE FOLLOWING SPECIFICATIONS: 85 TO 95% SAND, WITH NO MORE THAN 25% OF THE SAND AS FINE OR VERY FINE SANDS; NO MORE THAN 15% SILT AND CLAY WITH 2% TO 5% CLAY CONTENT. THE ENTIRE MIX MUST THEN BE AMENDED WITH 3 TO 7% ORGANICS, BY WEIGHT. THE PH OF THE SOIL BED MATERIAL IS TO RANGE FROM 5.5 TO 6.5.
7. THE NATIVE SOIL BELOW THE BASIN MUST TEST AT A MINIMUM OF 20 INCHES/HOUR PERMEABILITY RATE. THIS MUST BE CERTIFIED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW JERSEY.
8. DO NOT PLACE THE BASIN INTO OPERATION UNTIL THE CONTRIBUTARY DRAINAGE AREA(S) ARE COMPLETELY STABILIZED.
9. THE CONTRACTOR SHALL NOTIFY THE UNDERSIGNED PROFESSIONAL IMMEDIATELY IF SOIL CONDITIONS ENCOUNTERED IN THE FIELD DIFFER FROM WHAT IS SHOWN HEREON. SUCH CONDITIONS COULD RENDER THE DESIGN HEREON INAPPROPRIATE OR INEFFECTIVE.
10. DURING CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE THE BASIN TO WITHIN 18" OF THE BASIN FINISHED GRADE. WHEN UPSTREAM AREAS ARE STABILIZED, THE BASIN BOTTOM SHALL BE CLEARED OF SEDIMENT AND SCARIFIED AND/OR UNSUITABLE MATERIALS SHALL BE REMOVED AND THE PERMEABLE MATERIALS AND SAND LAYER CAN BE INSTALLED.
11. SAFETY LEDGES WERE DESIGNED FOR BASIN A USING THE 100 YEAR WATER SURFACE ELEVATION WITHOUT INFILTRATION. COUNTING INFILTRATION THE 100 YR WATER SURFACE ELEVATION IS LESS THAN 2 FT ABOVE THE BASIN BOTTOM.



NOTES:

1. NO SOIL OR MULCH SHALL BE PLACED AGAINST ROOT COLLAR OF PLANT.
2. PLANTING DEPTH SHALL BE THE SAME OR HIGHER AS GROWN IN NURSERY.
3. STAKES AND GUIDE WIRES SHALL ONLY BE USED IF CONDITIONS MERIT.
4. ALL NON-BIODEGRADABLE MATERIAL SHALL BE REMOVED FROM THE ROOTBALL.
5. TRUNK FLARE SHOULD BE VISIBLE AT TIME OF PLANTING AND SHOULD NOT COME IN CONTACT WITH MULCH.
6. MULCH SHALL BE A CONTINUOUS BED FOR MASS LANDSCAPE PLANTINGS.

DECIDUOUS TREE PLANTING DETAIL



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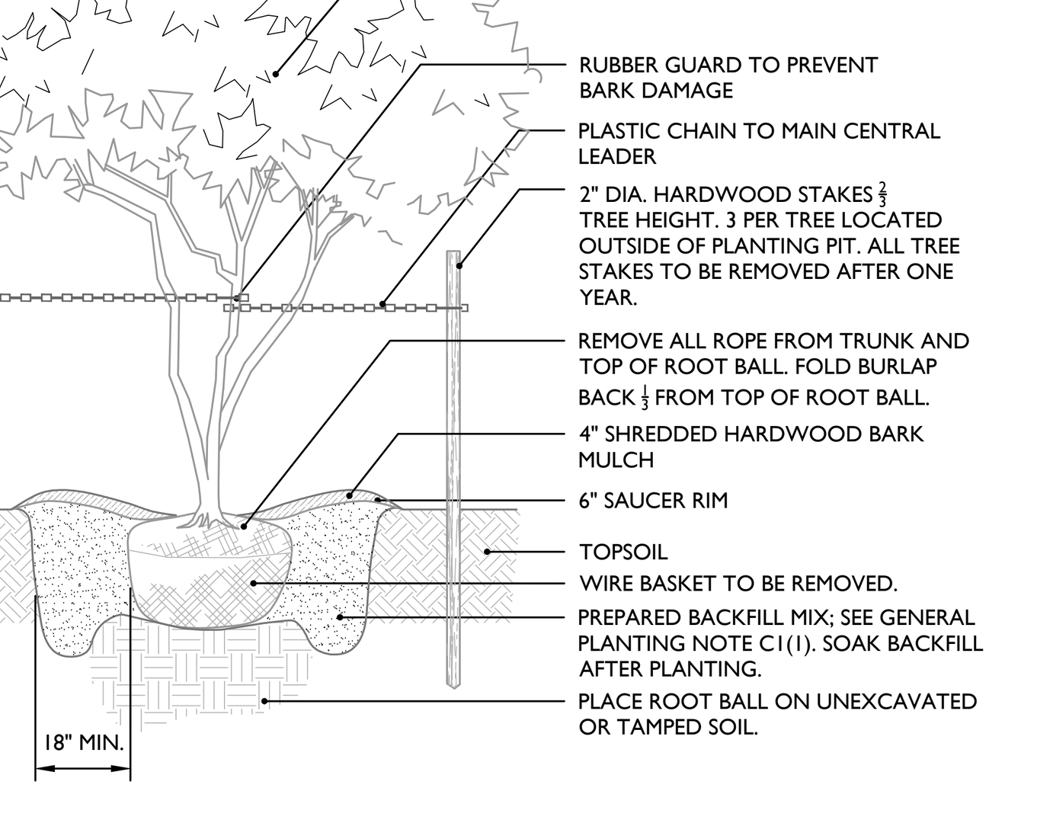
6. MULCH SHALL BE A CONTINUOUS BED FOR MASS LANDSCAPE PLANTINGS.

DECIDUOUS TREE SLOPE PLANTING DETAIL



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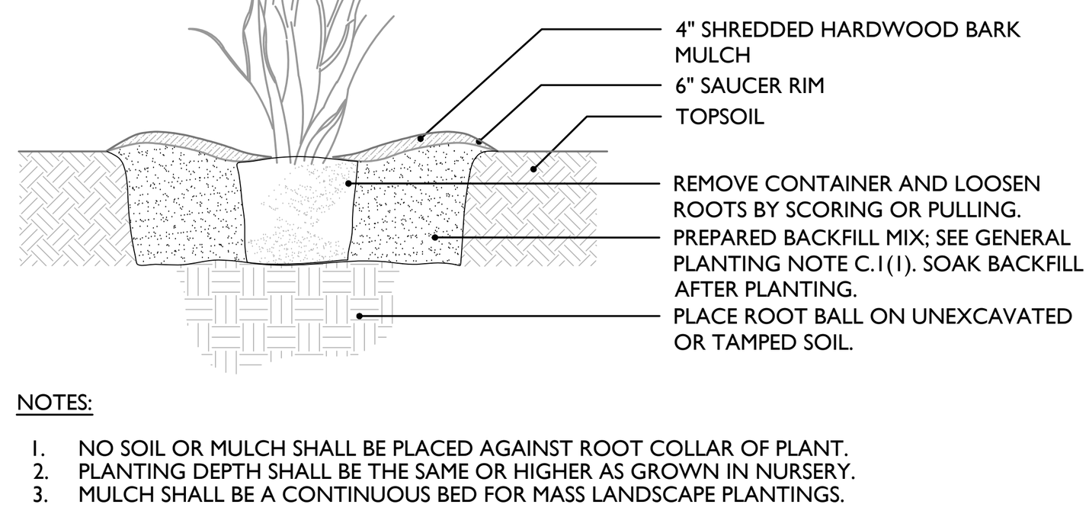
MULTI-LEADER TREE PLANTING DETAIL



NOTES:

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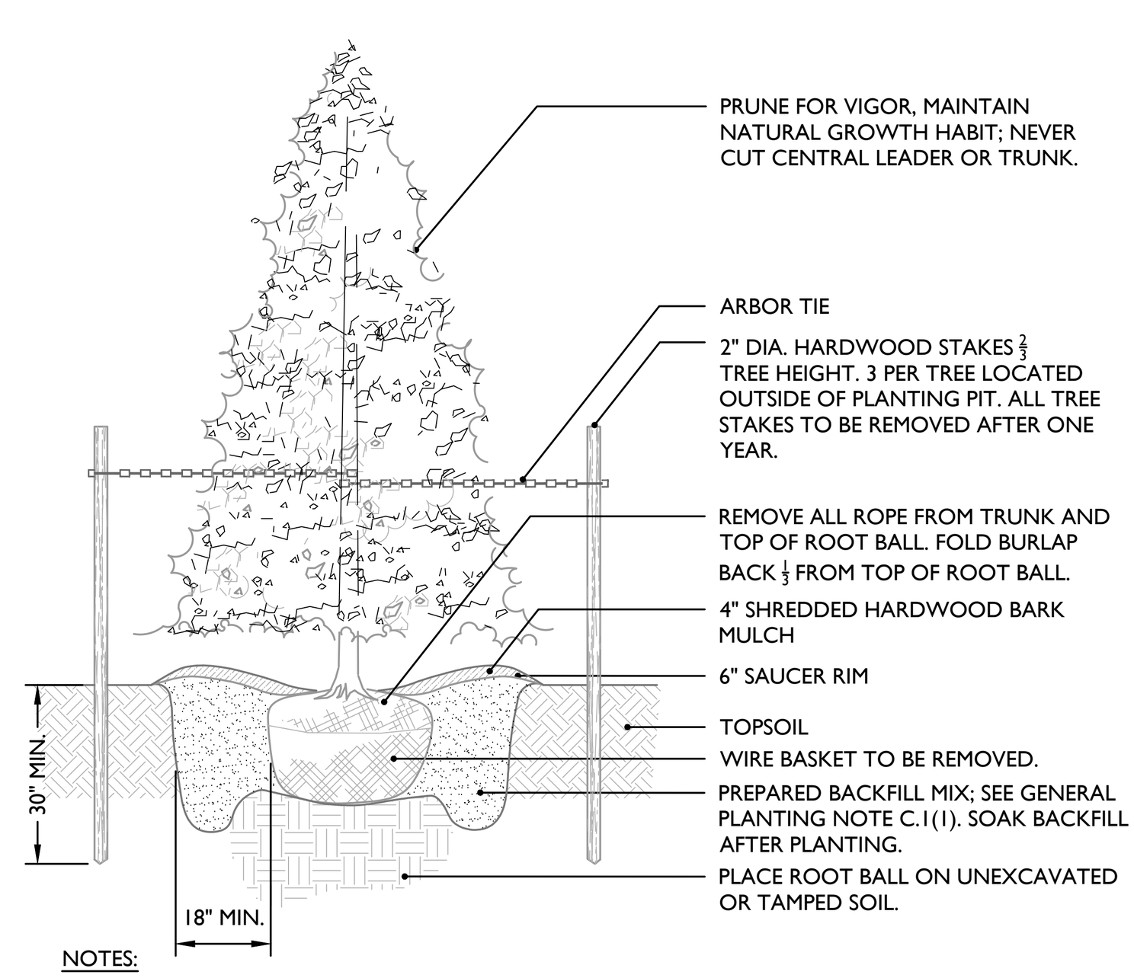
2. PLANTING DEPTH SHALL BE THE SAME OR HIGHER AS GROWN IN NURSERY.
3. MULCH SHALL BE A CONTINUOUS BED FOR MASS LANDSCAPE PLANTINGS.

ORNAMENTAL GRASS PLANTING DETAIL



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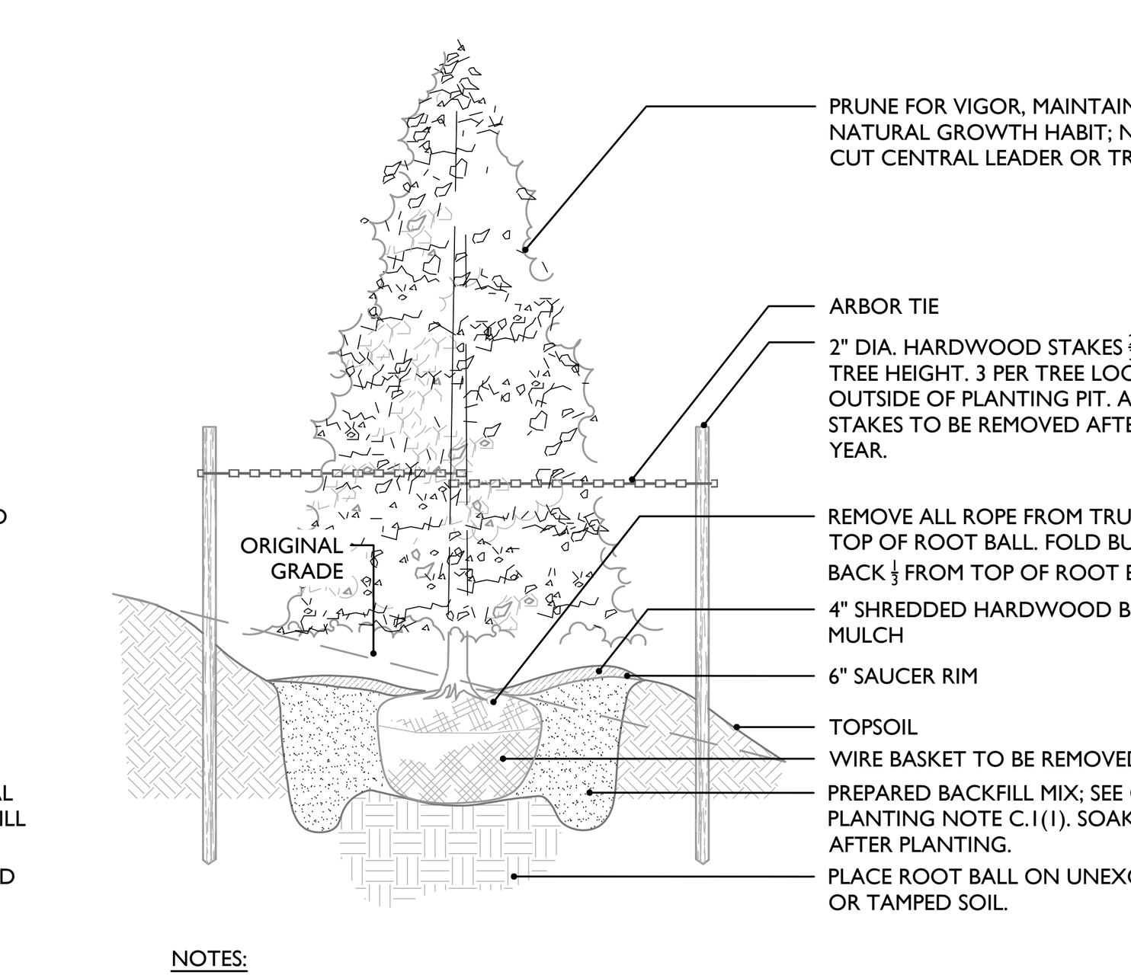
EVERGREEN TREE PLANTING DETAIL



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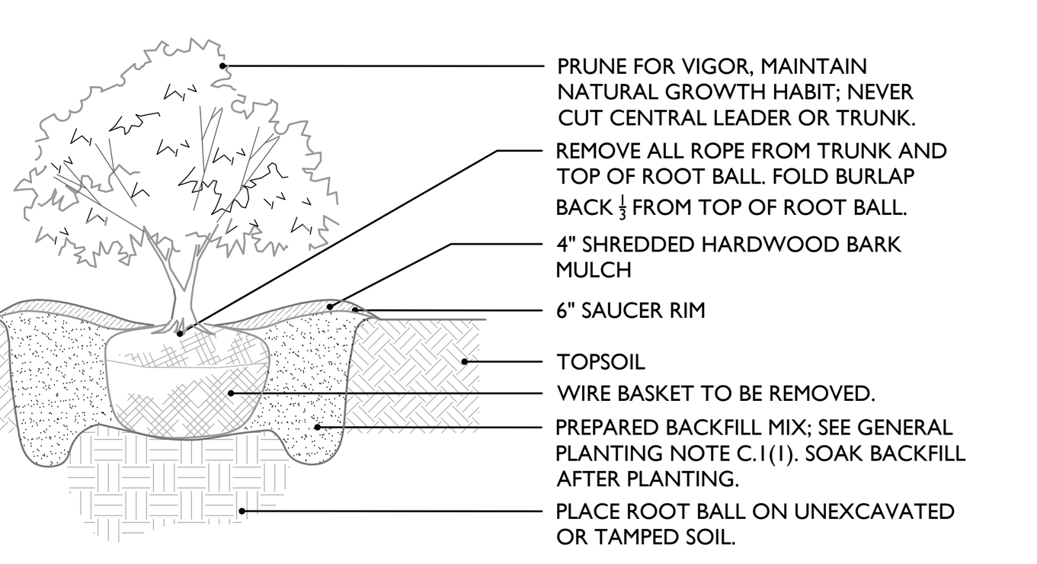
EVERGREEN TREE SLOPE PLANTING DETAIL



NOTES:

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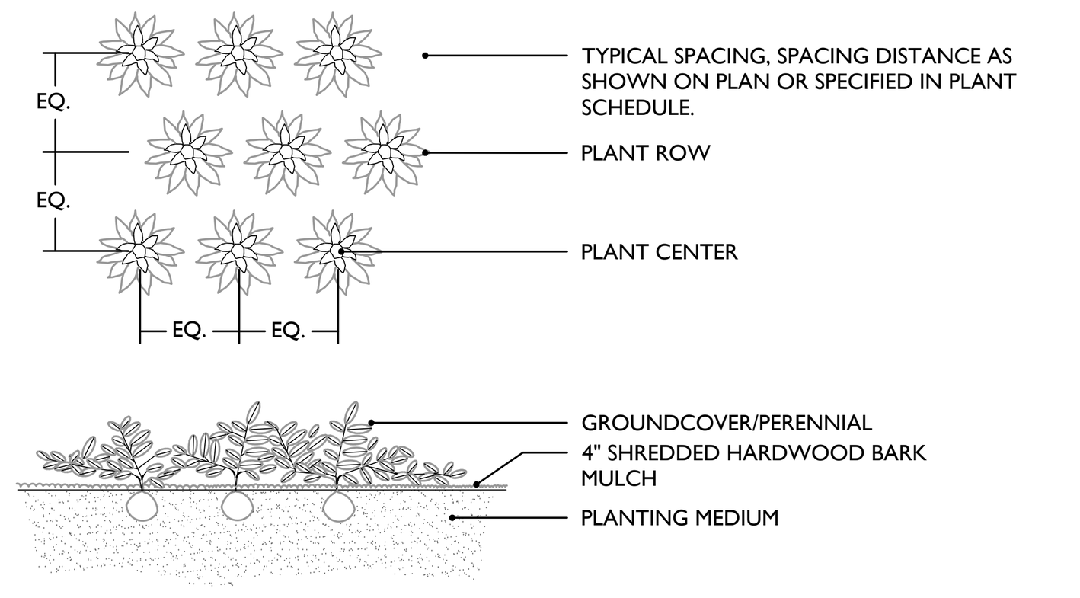
3. MULCH SHALL BE A CONTINUOUS BED FOR MASS LANDSCAPE PLANTINGS.

SHRUB PLANTING DETAIL



NOTES:

1. PLANTING DEPTH SHALL BE THE SAME OR HIGHER AS GROWN IN NURSERY.
2. MULCH SHALL BE A CONTINUOUS BED FOR MASS LANDSCAPE PLANTINGS.

GROUNDCOVER/PERENNIAL PLANTING DETAIL

GENERAL PLANT MAINTENANCE RECOMMENDATIONS:

TREES, SHRUBS, PERENNIALS

FERTILIZATION:
- TREES AND SHRUBS: ONCE PER YEAR (USUALLY LATE FALL-EARLY WINTER.
- PERENNIALS: TWICE PER YEAR (USUALLY EARLY SPRING AND LATE SPRING/EARLY SUMMER).
- EVERGREENS: ONCE PER YEAR, AS NEEDED.

SOIL TESTING:
- ONCE PER YEAR FROM AT LEAST (3) AREAS ACROSS SITE, USUALLY IN EARLY SPRING DURING THE ESTABLISHMENT PERIOD (2 GROWING SEASONS). SOIL TESTS AFTER THE ESTABLISHMENT PERIOD AS NECESSARY.

WEED CONTROL:
- MULCHED TREE RINGS, MULCHED SHRUB AND PERENNIAL BEDS: WEED ENTIRE SITE ONCE EVERY (2) WEEKS. WEEDING SHOULD BE DONE ALL AT ONCE.

PEST/DISEASE CONTROL:
- MONITOR THE SITE MONTHLY FOR DISEASE AND PEST INFESTATIONS.
- ANY TREATMENTS SHOULD BE CONSIDERED AN ALTERNATE (ONLY NEEDED AS NECESSARY)

PRUNING:
- ANY TREE OR SHRUB PRUNING SHOULD BE IN ACCORDANCE WITH THE PRUNING SECTION OF THE GENERAL NOTES.
- ORNAMENTAL GRASSES SHOULD BE CUT BACK IN LATE WINTER/EARLY SPRING.

MULCH:
- MULCH BEDS TO 4" IN DEPTH AS NOTED IN THE PLANTING DETAILS. INSTALL NEW MULCH AS NECESSARY TO MAINTAIN A 4" DEPTH.
- MULCHING SHOULD TAKE PLACE IN SPRING, ONCE A YEAR.
- PULL MULCH AWAY FROM SHRUB, PERENNIAL, AND GRASS CROWNS AS WELL AS AWAY FROM TREE TRUNKS PER PLANTING DETAILS.

BED EDGING:
- BEDS AND TREE MULCH RINGS SHOULD BE EDGED AT THE TIME OF SPRING MULCHING.

WINTER PROTECTION:
- APPLY ANTI DESICCANT TO EVERGREENS MONTHLY DURING WINTER - UP TO 4 APPLICATIONS (PER RUTGERS COOPERATIVE EXTENSION).

EARLY SPRING START UP
- CLEAN UP MISCELLANEOUS PLANT DEBRIS.
- PRUNE DEAD WOOD OUT OF PLANT MATERIAL
- DEADHEAD ANY PERENNIALS LEFT STANDING OVER WINTER.
- REMOVE ANY PLANT THAT APPEAR DISEASED OR UNHEALTHY AND REPLACE WITH SAME SPECIES, PER PLANTING SCHEDULE.
- REPLACE PLANTS THAT HAVE DIED OVER WINTER; FILL SPOTS IN PLANT BEDS APPEARING BARE, PER PLANTING SCHEDULE.

LAWN CARE

FERTILIZATION:
- (2) TIMES A YEAR; GENERALLY SPRING AND FALL (PER THE PENN STATE EXTENSION OFFICE).

MOWING:
- MOW WHEN TURF REACHES 2"-3" TALL IN SPRING AND FALL, 3" TALL IN SUMMER; MOWING SHOULD TYPICALLY TAKE PLACE FROM MARCH THROUGH EARLY NOVEMBER (PER THE PENN STATE EXTENSION OFFICE).

WEED CONTROL:
- (1) PRE-EMERGENT HERBICIDE APPLICATION IN MARCH TO MID-APRIL FOR CRABGRASS AND OTHER ANNUAL GRASS WEED CONTROL. AND (1) PRE-EMERGENT APPLICATION IN APRIL FOR ANNUAL BROADLEAF WEED CONTROL (PER THE PENN STATE EXTENSION OFFICE).
- (2) POST-EMERGENT BROADLEAF HERBICIDE APPLICATIONS: IN SPRING (MID-MARCH THROUGH MID-MAY) AND AGAIN IN FALL (LATE AUGUST THROUGH OCTOBER) FOR BROADLEAF WEEDS (PER THE PENN STATE EXTENSION OFFICE).

PEST/DISEASE CONTROL:
- MONITOR THE SITE MONTHLY FOR DISEASE AND PEST INFESTATIONS
- ANY TREATMENTS SHOULD BE CONSIDERED AN ALTERNATE (ONLY NEEDED AS NECESSARY).

MISCELLANEOUS LAWN CARE:
- RESEED: RESEED ANY BARE LAWN AREAS IN SEPTEMBER THROUGH EARLY OCTOBER.
- DETHATCH: DETHATCH LAWN EVERY (2) YEARS IN EITHER EARLY SPRING OR FALL.
- AERATE: AERATE LAWNS EVERY (2) YEARS IN BOTH SPRING AND FALL
- LIME: APPLY LIME ANY TIME OF THE YEAR BUT ONLY IF A SOIL TEST SHOW pH IS LOWER THAN 6.0; SOIL TESTS WILL GIVE SPECIFIC RECOMMENDATIONS FOR AMOUNT OF LIME NEEDED.

Colliers
Engineering & Design
www.colliersengineering.com

REV	DATE	DRAWN BY	DESCRIPTION
1	8/28/23	RM	REVISED PER NJDEP
2	4/19/24	TL	REVISED PER CLIENT & ARCHITECT
3	6/28/24	RM	REVISED PER BOROUGH ENGINEER'S REVIEW

Digitally signed by Michael Stickle Date: 2024.06.28 21:26:20-04'00'
Michael Stickle
NEW JERSEY LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: GE57838
COLLIERS ENGINEERING & DESIGN, INC.
N.J. C.O.A. #: 24GA27986500

PRELIMINARY AND FINAL MAJOR SITE PLAN

FOR

JERNEE MILL INDUSTRIAL

BLOCK 58
LOTS 2.01 & 9

BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY
NEW JERSEY

Colliers Engineering & Design
HOLMDEL (Headquarters)
101 Crawfords Corner Road, Suite 3400
Holmdel, NJ 07733
Phone: 732.383.1950
COLLIERS ENGINEERING & DESIGN, INC. DOING BUSINESS AS MASER CONSULTING

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	6/12/2023	JL	DWB

PROJECT NUMBER: 10000657C
DRAWING NAME: C-LAND

SHEET TITLE: LANDSCAPE PLAN

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

2010\10000657C\Engineering\Site Plans\C-LAND.dwg\C-024-DTLS By: MSTICKLE

BLOCK 58
LOT 8
N/F DUPONT SPECIALTY
PRODUCTS USA, LLC
D.B. 17420, 1531

BLOCK 58
LOT 9
N/F LEAF I

SMALL-SCALE BIORETENTION BASIN #1

SMALL-SCALE BIORETENTION BASIN #2

SMALL-SCALE BIORETENTION BASIN #3

MATCH LINE SEE SHEET 26

LIGHTING LEGEND

- POLE MOUNT LUMINAIRE
- WALL MOUNT LUMINAIRE
- WALL MOUNT LUMINAIRE

- 0.25 FOOTCANDLES
- 0.50 FOOTCANDLES
- 1.00 FOOTCANDLES

40 0 40 80

SCALE : 1" = 40'

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

Colliers
Engineering & Design
www.colliersengineering.com

Doing Business as MASER CONSULTING

PROTECT YOURSELF
ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN ANY STATE
FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION
4	8/19/24	RM	REVISED PER CLIENT & ARCHITECT
3	4/29/24	TL	REVISED PER BOROUGH ENGINEER'S REVIEW
2	8/19/24	RM	
1	6/12/23	CDC	

Digitally signed by Michael Stickle
Date: 2024.08.26 15:39:21 -04'00'

Michael Stickle
NEW JERSEY LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: GE57838
COLLIERS ENGINEERING & DESIGN, INC.
N.J. C.O.A. #: 24GA27986500

PRELIMINARY AND FINAL MAJOR SITE PLAN

FOR

JERNEE MILL INDUSTRIAL

BLOCK 58
LOTS 2.01 & 9

BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY
NEW JERSEY

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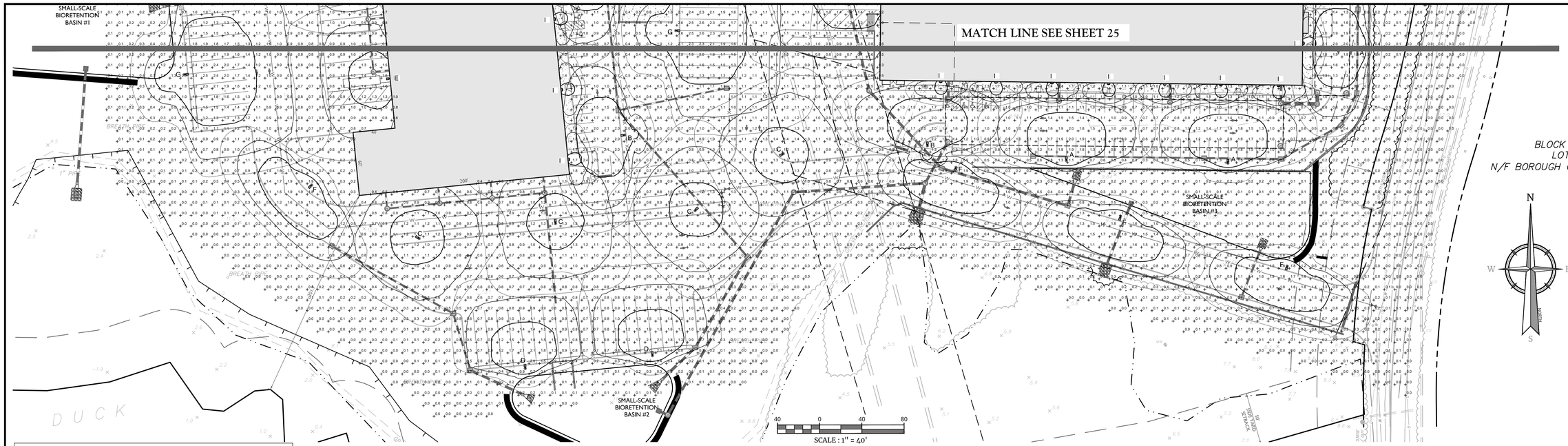
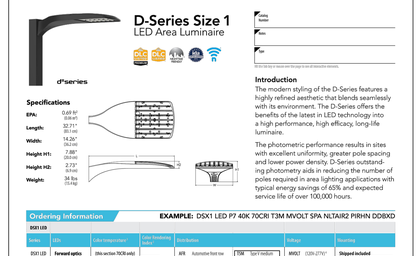
SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	6/12/2023	CDC	MFS

PROJECT NUMBER:	DRAWING NAME:
10000657C	C-LGHT

SHEET TITLE:
LIGHTING PLAN

SHEET NUMBER:
25 of 37





D-Series Size 1
LED Area Luminaire

d-series

Specifications

EPA:	0.69 ft² (0.06 m²)
Length:	32.71" (83.1 cm)
Width:	14.26" (36.2 cm)
Height H1:	7.08" (18.0 cm)
Height H2:	2.73" (6.9 cm)
Weight:	36 lbs (15.4 kg)

Ordering Information **EXAMPLE:** DSX1 LED P7 40K 70CRI T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX1 LED

Series	LEDs	Color temperature*	Color Rendering Index*	Distribution		Voltage		Mounting
DSX1 LED	**Forward optics**	(Min section 70CRI only)		AFR Automotive front row	T5M Type V medium	MVOLT (120V-277V)*	**Shipped included**	
	P1 P6	30K 3000K	70CRI	FTS Type I short	T5W Type V short	HVOLT (347V-480V)**	SPA Square pole mounting (#8 drilling)	
	P2 P7	40K 4000K	70CRI*	T1M Type I medium	TFTM Type V forward throw medium	XVOLT (277V - 480V)**	RPA Round pole mounting (#8 drilling)	
	P3 P8	50K 5000K	70CRI	T2M Type II medium			SPS2 Square pole mounting (4" drilling)*	
	P4 P9	(Min section 80CRI only, extended lead times apply)		T2VS Type II short glare*			RPA5 Round pole mounting (4" drilling)*	
	P5			T4AL Type IV medium			SPUMA Square narrow pole mounting adapter	
	Related options	27K 2700K	80CRI	T4LG Type IV low glare*			NRA Wall bracket *	
	P10* P12*	30K 3000K	80CRI	BLC Type III backlight control*			WA Wall arm adapter (mounts to 2 3/8" OD horizontal tenon)	
	P11* P13*	35K 3500K	80CRI	BLCA Type III backlight control*				
		40K 4000K	80CRI	LCCO Left corner cutoff*				
		50K 5000K	80CRI	RCCO Right corner cutoff*				

Control options	Other options	Finish (required)
Shipped installed	PS20* Sensor pre-receptacle only (controls ordered separate) 24,25	**Shipped included**	**DDBXD** Dark Bronze
NLTAIR2 PIRHN nLight AIR gen 2 enabled with bi-level motion / ambient sensor, 8-40' mounting height, ambient sensor enabled at 20', 5,16,17	PS20EP* Sensor pre-receptacle only, factory pre-configured 24,25	HS Houseside shield (black finish standard)* 27	**DBLXD** Black
PIR High/low, motion/ambient sensor, 8-40' mounting height, ambient sensor enabled at 20', 5,16,17	DS* Dual switching 4,26	CSA* CSA bird spikes*	**DNAXD** Natural Aluminum
PER NEMA twist-lock receptacle only (controls ordered separate) 26		RSE Right-seated optics*	**DWHXD** White
PERS Five-pin receptacle only (controls ordered separate) 26,28		CCE Coastal Construction 28	**DSSTXD** Textured dark bronze
		HA 50°C ambient operation 28	**DBLBXD** Textured black
		Shipped separately	**DNATXD** Textured natural aluminum
		BSDB External Super Shield (reversible, field install required, matches housing finish)	**DWHGXD** Textured white
		BSBB Bird Spikes (field installed required)	

One Lithonia Way • Conyers, Georgia 30012 • Phone: 1-800-705-SERV (7378) • www.lithonia.com
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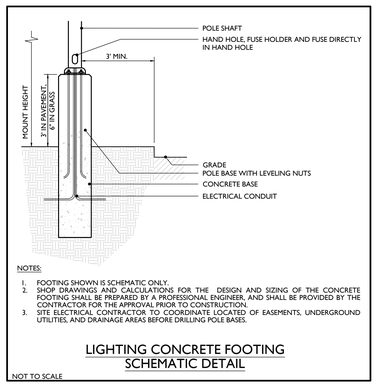
DSX1 LED
Rev. 04/20/23
Page 1 of 10
COMMERCIAL OUTDOOR

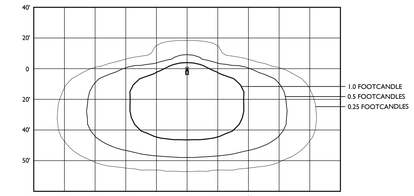
LIGHT FIXTURES A - H



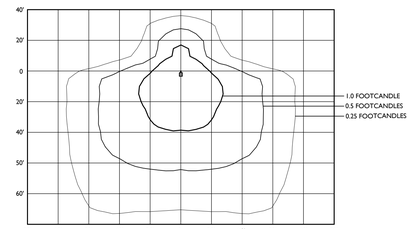
NOTES:
1. FOOTING SHOWN IS SCHEMATIC ONLY.
2. SHOP DRAWINGS AND CALCULATIONS FOR THE DESIGN AND SIZING OF THE CONCRETE FOOTING SHALL BE PREPARED BY A PROFESSIONAL ENGINEER, AND SHALL BE PROVIDED BY THE CONTRACTOR FOR THE APPROVAL PRIOR TO CONSTRUCTION.
3. SITE ELECTRICAL CONTRACTOR TO COORDINATE LOCATED OF EASEMENTS, UNDERGROUND UTILITIES, AND DRAINAGE AREAS BEFORE DRILLING POLE BASES.

LIGHTING CONCRETE FOOTING SCHEMATIC DETAIL

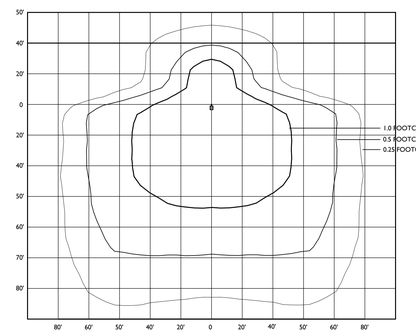
NOT TO SCALE



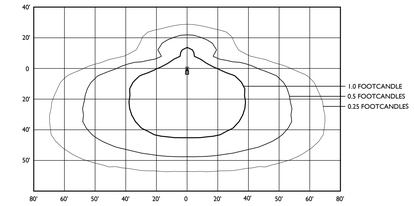
FIXTURE A BY LITHONIA LIGHTING
25' MOUNTING HEIGHT



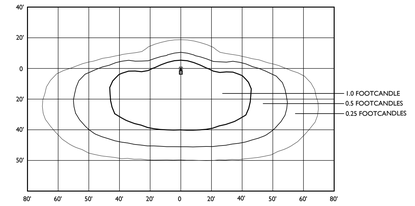
FIXTURE E BY LITHONIA LIGHTING
25' MOUNTING HEIGHT ABOVE FINISH FLOOR



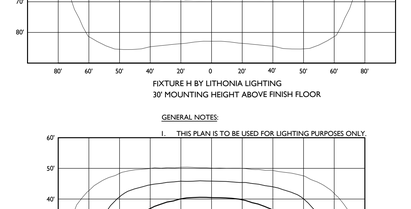
FIXTURE H BY LITHONIA LIGHTING
30' MOUNTING HEIGHT ABOVE FINISH FLOOR



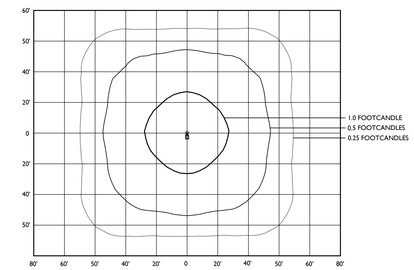
FIXTURE B BY LITHONIA LIGHTING
25' MOUNTING HEIGHT



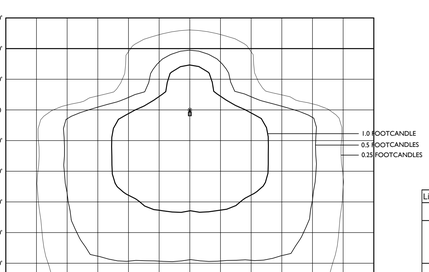
FIXTURE F BY LITHONIA LIGHTING
25' MOUNTING HEIGHT



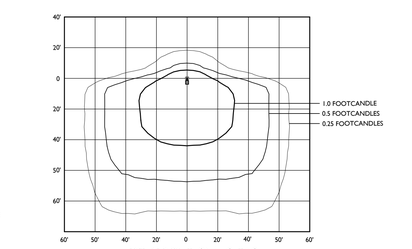
FIXTURE J BY LITHONIA LIGHTING
25' MOUNTING HEIGHT



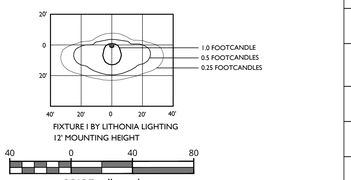
FIXTURE C BY LITHONIA LIGHTING
25' MOUNTING HEIGHT



FIXTURE G BY LITHONIA LIGHTING
35' MOUNTING HEIGHT



FIXTURE D BY LITHONIA LIGHTING
25' MOUNTING HEIGHT



FIXTURE I BY LITHONIA LIGHTING
12' MOUNTING HEIGHT

40 0 40 80
SCALE : 1" = 40'

LIGHTING LEGEND

- POLE MOUNT LUMINAIRE
- WALL MOUNT LUMINAIRE
- WALL MOUNT LUMINAIRE

- 0.25 FOOTCANDLES
- 0.50 FOOTCANDLES
- 1.00 FOOTCANDLES

GENERAL NOTES:

1. THIS PLAN IS TO BE USED FOR LIGHTING PURPOSES ONLY.

Lighting Schedule

Symbol	Label	Pole & Fixture Color	Mounting Height	Quantity	Manufacturer	Catalog Number	Description	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
	A	Black	25'	4	Lithonia Lighting	DSX1 LED P3 30K 70CRI T3M HS	D-Series Size 1 Area Luminaire P3 Performance Package 3000K CCT 70 CRI Type 3 Medium Housesside Shield	DSX1 LED P3 30K 70CRI T3M.ies	11447	0.95	102.1727
	B	Black	25'	5	Lithonia Lighting	DSX1 LED P3 30K 70CRI T3M	D-Series Size 1 Area Luminaire P3 Performance Package 3000K CCT 70 CRI Type 3 Medium	DSX1 LED P3 30K 70CRI T3M.ies	13206	0.95	102.17
	C	Black	25'	5	Lithonia Lighting	DSX1 LED P3 30K 70CRI T5M	D-Series Size 1 Area Luminaire P3 Performance Package 3000K CCT 70 CRI Type 5 Medium	DSX1 LED P3 30K 70CRI T5M.ies	13790	0.95	102.17
	D	Black	25'	2	Lithonia Lighting	DSX1 LED P3 30K 70CRI TFTM HS	D-Series Size 1 Area Luminaire P3 Performance Package 3000K CCT 70 CRI Forward Throw Housesside Shield	DSX1 LED P3 30K 70CRI TFTM HS.ies	11318	0.95	102.1727
	E	Black	25' Above Finish Floor	4	Lithonia Lighting	DSX1 LED P3 30K 70CRI TFTM	D-Series Size 1 Area Luminaire P3 Performance Package 3000K CCT 70 CRI Forward Throw	DSX1 LED P3 30K 70CRI TFTM.ies	13496	0.95	102.17
	F	Black	25'	13	Lithonia Lighting	DSX1 LED P3 30K 70CRI T2M HS	D-Series Size 1 Area Luminaire P3 Performance Package 3000K CCT 70 CRI Type 2 Medium Housesside Shield	DSX1 LED P3 30K 70CRI T2M HS.ies	11327	0.95	102.1727
	G	Black	30'	5	Lithonia Lighting	DSX1 LED P9 30K 80CRI TFTM	D-Series Size 1 Area Luminaire P9 Performance Package 3000K CCT 80 CRI Forward Throw	DSX1 LED P9 30K 80CRI TFTM.ies	30271	0.95	277.07
	H	Black	30' Above Finish Floor	3	Lithonia Lighting	DSX1 LED P9 30K 80CRI TFTM	D-Series Size 1 Area Luminaire P9 Performance Package 3000K CCT 80 CRI Forward Throw	DSX1 LED P9 30K 80CRI TFTM.ies	30271	0.95	277.07
	I	Black	12'	19	Lithonia Lighting	WDGE2 LED P1 30K 70CRI T2M	WDGE2 LED WITH P1 - PERFORMANCE PACKAGE, 3000K, 70CRI, TYPE 2 MEDIUM OPTIC	WDGE2 LED P1 30K 70CRI T2M.ies	1325	0.95	11.1658
	J	Black	25'	1	Lithonia Lighting	DSX1 LED P3 30K 70CRI T2M HS	D-Series Size 1 Area Luminaire P3 Performance Package 3000K CCT 70 CRI Type 2 Medium Housesside Shield	DSX1 LED P3 30K 70CRI T2M HS.ies	11327	0.95	204.3454

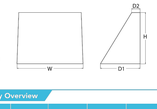
Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Paved & Pedestrian Areas	+	1.1 fc	2.7 fc	0.5 fc	5.4:1	2.2:1

WDGE2 LED
Architectural Wall Sconce
Precision Refractive Optic

Specifications

Depth (D1):	7"
Depth (D2):	1.5"
Height:	9"
Width:	11.5"
Weights (without options):	13.5 lbs



Ordering Information **EXAMPLE:** WDGE2 LED P3 40K 80CRI VF MVOLT SRM DDBXD

Series	Package	Color Temperature	CRI	Distribution	Voltage	Mounting
WDGE2 LED	P1*	27K 2700K	70CRI*	SYM Type I Short	MVOLT	**Shipped included**	**Shipped separately**
	P2*	30K 3000K	80CRI	T2M Type II Medium	347*	SRM Surface mounting bracket	AWS 3.0inch Architectural wall spacer
	P3*	40K 4000K	LW* Limited Wavelength	T3LG Type III Medium Long Throw	480*	ICW Indoor Canopy (Ceiling Mounting Bracket for ceiling applications only)*	PBBW 1-Gang mounted back box (NB, right cutout entry). Use when there is no junction box available.
	P4*	50K 5000K	AMB* Amber	T3M Type III Medium			
				TFTM Forward Throw Medium			

Options	Finish
EYWH Emergency battery backup, Certified in CA Title 20 MAEDBS (10W, CPT, red)	**Standalone Sensors/Controls**	**DDBXD** Dark Bronze
E20WC Emergency battery backup, Certified in CA Title 20 MAEDBS (10W, -20°C min)	PIR Bi-level (100/35%) motion sensor for 8-15' mounting heights, Intended for use on switched circuits with external dusk to dawn switching.	**DBLXD** Black
PE* Photocell, Button Type	PIRH Bi-level (100/35%) motion sensor for 15-30' mounting heights, Intended for use on switched circuits with external dusk to dawn switching.	**DNAXD** Natural Aluminum
DMG* 0-10V dimming wires pulled outside fixture (for use with an external control, ordered separately)*	PIRTFCW Bi-level (100/35%) motion sensor for 8-15' mounting heights with photocell pre-programmed for dusk to dawn operation.	**DWHXD** White
BCE Internal conduit entry for back box (PBBW). Total of 4 entry points.	PIRHTFCW Bi-level (100/35%) motion sensor for 15-30' mounting heights with photocell pre-programmed for dusk to dawn operation.	**DSSTXD** Sandstone
BAA Buy America(n) Act Compliant	**Networked Sensors/Controls**	**DDBTXD** Textured dark bronze
	NLTAIR2 PIR nLight AIR internet-enabled bi-level motion/ambient sensor for 8-15' mounting heights.	**DBLBXD** Textured black
	NLTAIR2 PIRH nLight AIR Wireless enabled bi-level motion/ambient sensor for 15-30' mounting heights. See page 4 for out of box functionality.	**DNATXD** Textured natural aluminum
		DWHGXD Textured white
		DSSTXD Textured sandstone

One Lithonia Way • Conyers, Georgia 30012 • Phone: 1-800-705-SERV (7378) • www.lithonia.com
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WDGE2 LED
Rev. 11/01/22
COMMERCIAL OUTDOOR

LIGHT FIXTURE I

LITHONIA LIGHTING

Catalog Number
Notes
Type

FEATURES & SPECIFICATIONS

INTENDED USE — These specifications are for 15ft standards only. Square Straight Aluminum is a general purpose light pole for up to 15-foot mounting heights. This pole provides a lighter and naturally corrosion resistant option for mounting area light fixtures and floodlights.

CONSTRUCTION —

Pole Shaft: The pole shaft is of uniform wall thickness and is made of extruded 6063 series aluminum alloy tubing that is heat treated to a T6 temper to provide maximum strength. The shaft is uniformly square in cross-section with flat sides, small corner radii and excellent torsional qualities. Available shaft widths are 4", 5", 6" and 8".

Pole Top: Options include crown top, drilled for side mount fixture, crown with drilling (includes extra handhole) and open top. A removable cast aluminum top cap with set screws is provided for all poles that will receive drilling patterns for side mount luminaire arm assemblies or when ordered with open top (PT) option. The top cap resists intrusion of moisture and environmental contaminants.

Handhole: A handhole opening with grounding provision is provided near the base. Standard positioning varies with shaft width as follows: 4" shaft, handhole at 12"; 5" shaft, handhole at 14"; 6" and 6.75" shaft, handhole at 16". Positioning the handhole lower than standard may not be possible and requires engineering review; consult Tech Support-Outdoor for further information. Standard and extra handholes come with cover and attachment hardware. The handhole for a pole specified with a 4" or 5" shaft width has a nominal dimension of 2" x 4"; the handhole for a pole specified with a 6" or 6.75" width has a nominal dimension of 2.63" x 5" Standard and extra handholes come with cover and attachment hardware.

Bolt Caps/Base Cover: Pole base plate utilizes cast aluminum A356 tool-cover discs to cover anchor bolt and nut assembly. 2 piece, open aluminum base cover available as an option.

Anchor Base/Bolts: Anchor base is cast from A356 alloy aluminum. Anchor bolts are manufactured to ASTM F1554 Standards Grade 55, (55 KSI minimum yield strength and tensile strength of 75-95 KSI). Upper portion of anchor bolt is galvanized per ASTM A-153; bolts have an "L" bend on bottom end and are galvanized a minimum of 12" on the threaded end.

HARDWARE — All structural and non-structural fasteners are stainless steel.

FINISH — Extra durable painted finish is coated with TGIC (Triglycidyl Isocyanurate) Polyester powder that meets SAE and SEI classifications of ASTM D3359. Standard powder coat finishes include Dark Bronze, White, Black, and Natural Aluminum colors. Other finishes include Bronzed Aluminum, and Anodized Dark Bronze, Anodized Natural Aluminum and Anodized Black. Architectural Colors and Special Finishes are available by quote and include, but are not limited to RAL Colors, Custom Colors and Extended Delivery Finishes.

GROUNDING: Grounding provision is located in handhole near the base. Grounding hardware is not included (provided by others).

INSTALLATION — Do not erect poles without having fixtures installed. Factory-supplied templates must be used when setting anchor bolts. Lithonia Lighting will not accept claim for incorrect anchor/pole placement due to failure to use Lithonia Lighting factory templates. If poles are stored outside, all protective wrapping must be removed immediately upon delivery to prevent finish damage. Lithonia Lighting is not responsible for finish damage done after delivery.

WARRANTY — 5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

NOTE: Actual performance may differ as a result of end-user environment and application.
Specifications subject to change without notice.

Anchor Base Poles

SSA

SQUARE STRAIGHT ALUMINUM

LIGHT POLE

LIGHTING PLAN NOTES

1. REFER TO LIGHTING SCHEDULE FOR ORDERING INFORMATION.
2. LUMINAIRE AND POLE AS MANUFACTURED BY LITHONIA OR APPROVED EQUAL.
3. FIXTURES SHALL BE FLUSH MOUNTED WITH LED LAMPS.
4. WALL MOUNT LOCATIONS TO BE COORDINATED WITH ARCHITECTURAL PLANS.
5. LUMINAIRES AND POLES ARE TO BE BLACK.
6. LIGHTING HAS BEEN DESIGNED TO PROVIDE A MINIMUM OF 0.5 FC IN PARKING LOTS IN ACCORDANCE WITH THE TOWNSHIP ORDINANCE.
7. LIGHT LEVELS IN PLAN REPRESENT AVERAGE MAINTAINED FOOTCANDLE LEVELS.
8. POLE LOCATIONS ARE APPROXIMATE AND MAY VARY DUE TO SITE CONDITIONS. THE CONTRACTOR SHALL FIELD VERIFY POLE LOCATIONS PRIOR TO INSTALLATION TO ACCOMMODATE UTILITIES, PAVEMENT, CURB, ETC.
9. ALIGN POLES BETWEEN PARKING SPACES AS SHOWN ON THE PLANS.
10. CONCRETE FOOTINGS SHALL HAVE SIX (6) INCHES EXPOSED ABOVE FINISHED GRADE IN GRASS, OR THREE (3) FEET IN PAVEMENT.
11. ELECTRICAL WIRING DESIGN FOR SITE LIGHTING TO BE DESIGNED BY OTHERS.
12. CONCRETE LIGHT POLE FOOTING DESIGN SHALL BE PREPARED BY A PROFESSIONAL ENGINEER AND SHALL BE PROVIDED BY THE CONTRACTOR FOR APPROVAL PRIOR TO CONSTRUCTION.
13. PROPOSED LIGHT FIXTURES TO INCLUDE TIMERS TO PROVIDE REDUCED LIGHTING LEVELS FOR SECURITY OUTSIDE OF HOURS OF OPERATION.

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FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION
1	8/24/23	RM	REVISED PER CLIENT & ARCHITECT
2	9/19/24	TL	REVISED PER BOROUGH ENGINEER'S REVIEW
3	2/28/25	RM	REVISED PER BOROUGH ENGINEER'S REVIEW

Digitally signed by Michael Stickle
Date: 2024.06.28 21:05:32 -04'00'

Michael Stickle
NEW JERSEY LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: GE57838
COLLIERS ENGINEERING & DESIGN, INC.
N.J. C.O.A. #: 24GA27986500

PRELIMINARY AND FINAL MAJOR SITE PLAN

FOR

JERNEE MILL INDUSTRIAL

BLOCK 58
LOTS 2.01 & 9

BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY
NEW JERSEY

Colliers Engineering & Design
HOLMDEL (Headquarters)
101 Crawfords Corner Road, Suite 3400
Holmdel, NJ 07733
Phone: 732.383.1950
COLLIERS ENGINEERING & DESIGN, INC.
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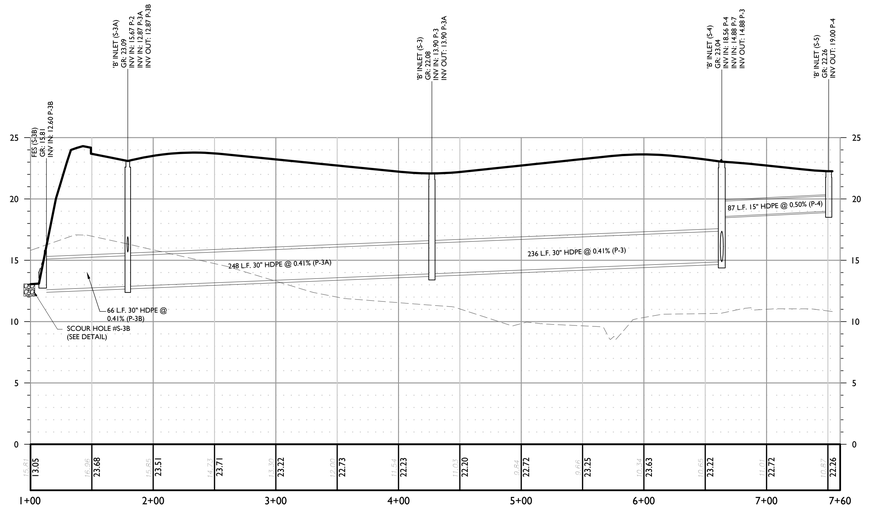
SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	6/12/2023	CDC	MFS

PROJECT NUMBER: 10000657C
DRAWING NAME: C-LGHT

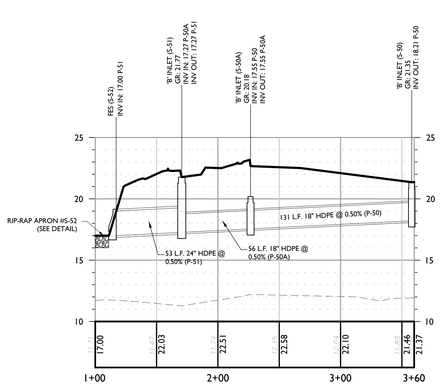
SHEET TITLE:
LIGHTING PLAN

SHEET NUMBER:
26 of 37

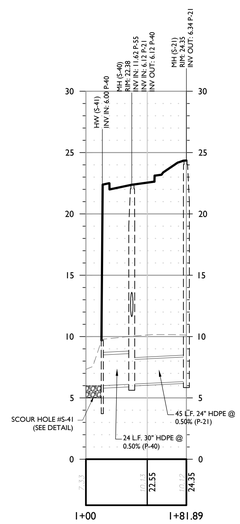
NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



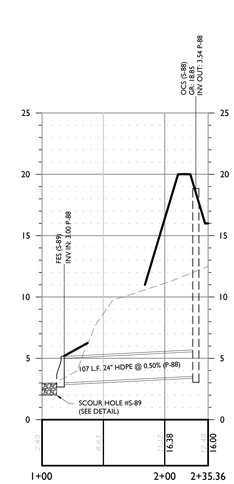
PROFILE OF STORM S-3B
HORIZONTAL : 1" = 50'
VERTICAL : 1" = 5'



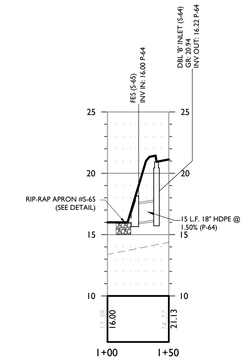
PROFILE OF STORM S-52
HORIZONTAL : 1" = 50'
VERTICAL : 1" = 5'



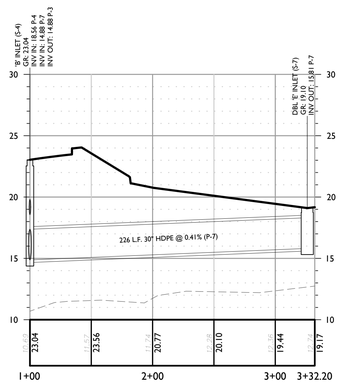
PROFILE OF STORM S-41
HORIZONTAL : 1" = 50'
VERTICAL : 1" = 5'



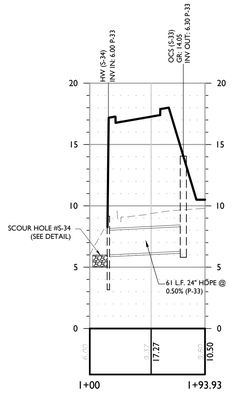
PROFILE OF STORM S-89
HORIZONTAL : 1" = 50'
VERTICAL : 1" = 5'



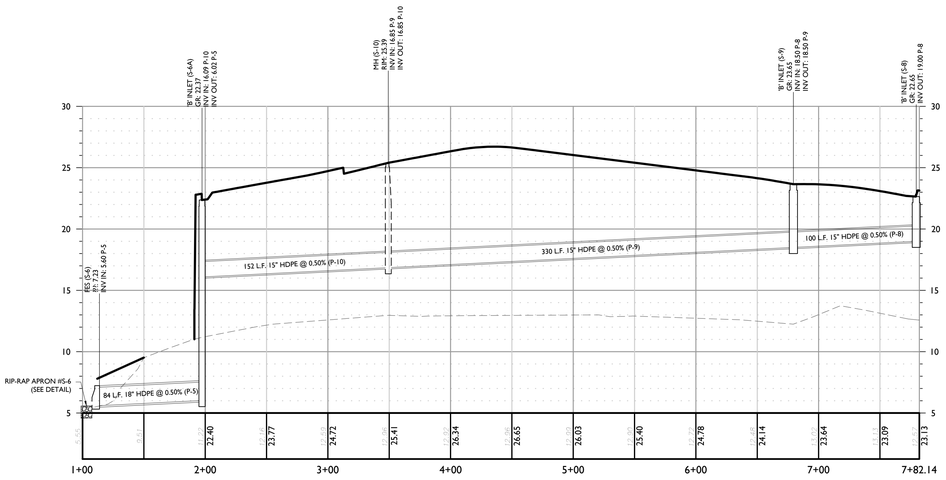
PROFILE OF STORM S-65
HORIZONTAL : 1" = 50'
VERTICAL : 1" = 5'



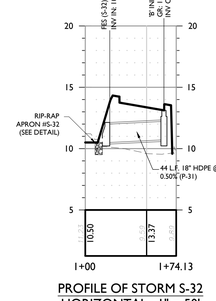
PROFILE OF STORM S-7
HORIZONTAL : 1" = 50'
VERTICAL : 1" = 5'



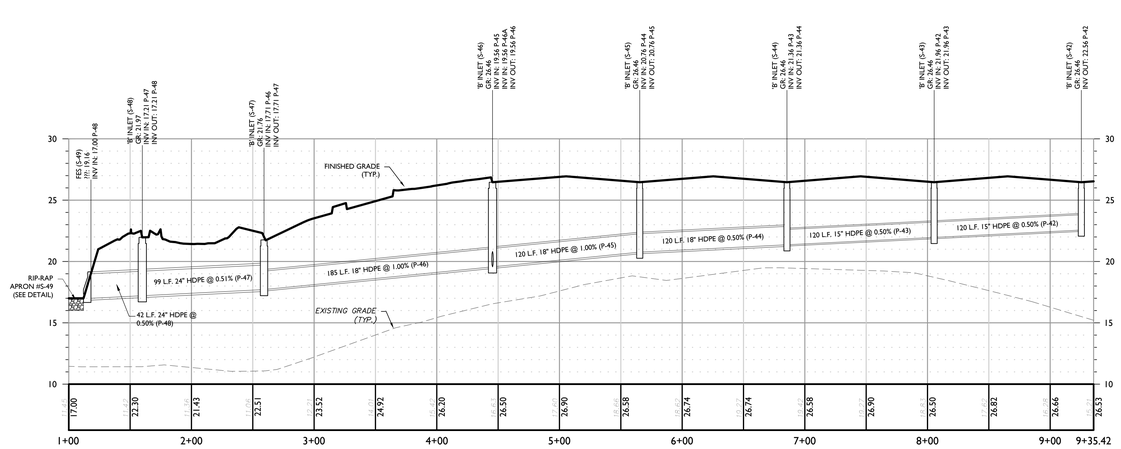
PROFILE OF STORM S-34
HORIZONTAL : 1" = 50'
VERTICAL : 1" = 5'



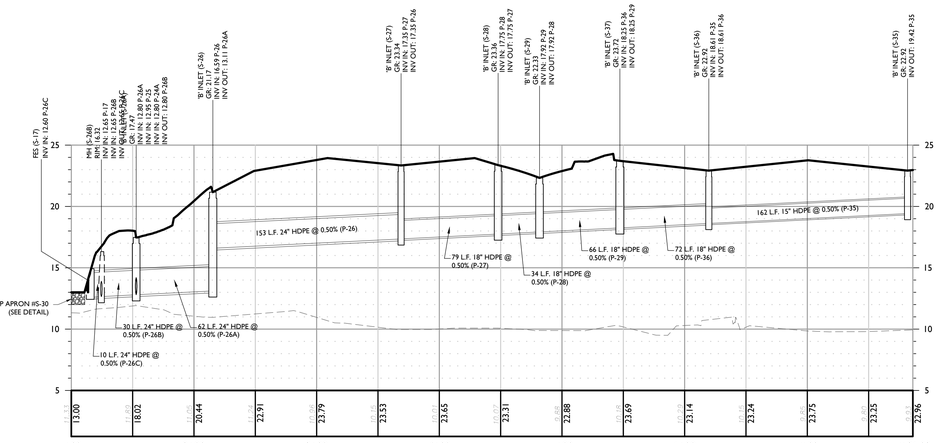
PROFILE OF STORM S-6
HORIZONTAL : 1" = 50'
VERTICAL : 1" = 5'



PROFILE OF STORM S-32
HORIZONTAL : 1" = 50'
VERTICAL : 1" = 5'



PROFILE OF STORM S-49
HORIZONTAL : 1" = 50'
VERTICAL : 1" = 5'



PROFILE OF STORM S-17
HORIZONTAL : 1" = 50'
VERTICAL : 1" = 5'

REV	DATE	DRAWN BY	DESCRIPTION
1	8/1/2024	RM	REVISED PER NRDP
2	8/19/24	TL	REVISED PER CLIENT & ARCHITECT
3	9/2/2024	RM	REVISED PER BOROUGH ENGINEER'S REVIEW

Digitally signed by Michael Stickle
Date: 2024.09.20 11:28:12 -04'00'

Michael Stickle
NEW JERSEY LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: GE57838
COLLIERS ENGINEERING & DESIGN, INC.
N.J. C.O.A. #: 24GA27986500

PRELIMINARY AND FINAL MAJOR SITE PLAN

FOR

JERNEE MILL INDUSTRIAL

BLOCK 58
LOTS 2.01 & 9

BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY
NEW JERSEY

Colliers Engineering & Design
HOLMDEL (Headquarters)
101 Crawfords Corner Road, Suite 3400
Holmdel, NJ 07733
Phone: 732.383.1950
COLLIERS ENGINEERING & DESIGN, INC. DOING BUSINESS AS MASER CONSULTING

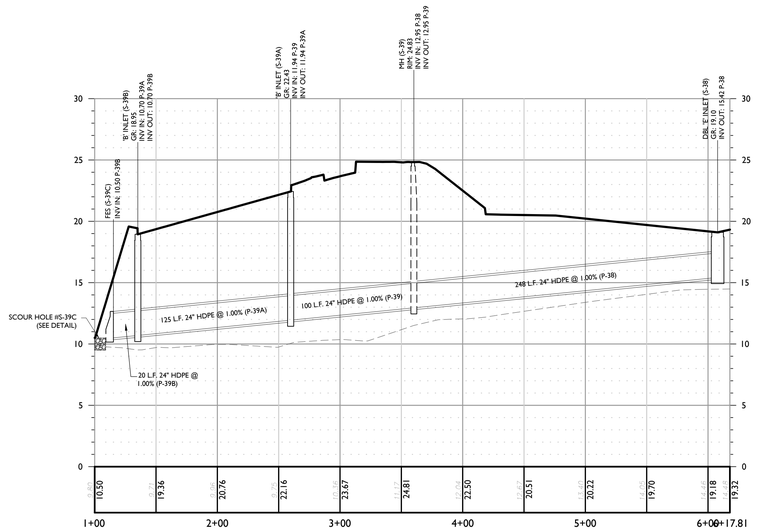
SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	6/12/2023	RM	DB

PROJECT NUMBER: 100000657C
DRAWING NAME: C-PROF

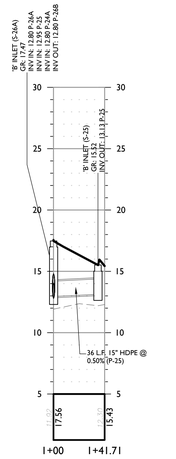
SHEET TITLE: PROFILES

SHEET NUMBER: 27 of 37

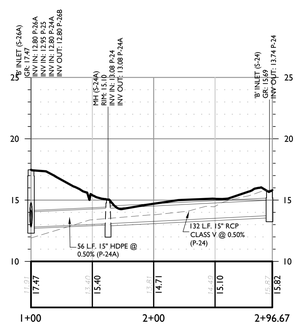
NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



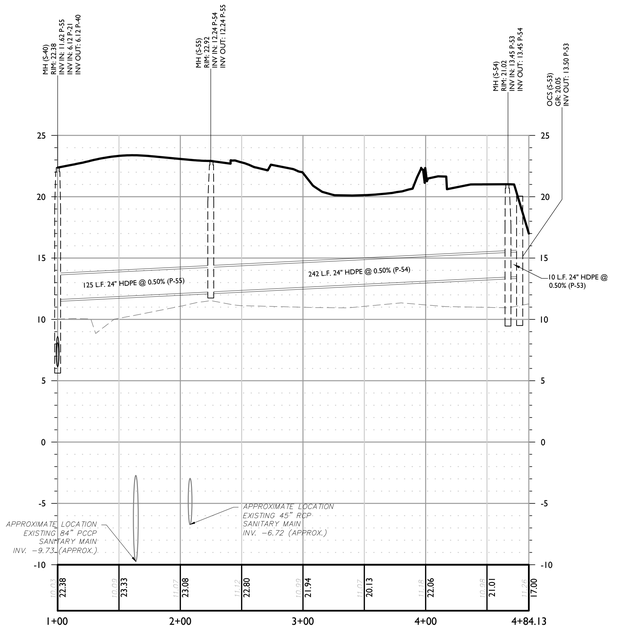
PROFILE OF STORM S-39C
HORIZONTAL : 1" = 50'
VERTICAL : 1" = 5'



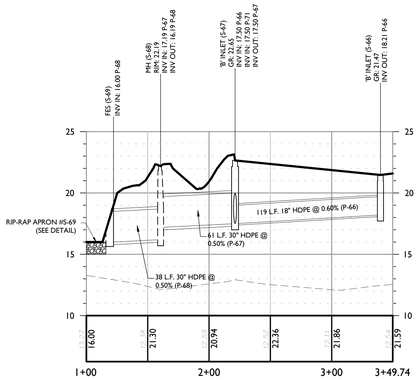
PROFILE OF STORM S-25
HORIZONTAL : 1" = 50'
VERTICAL : 1" = 5'



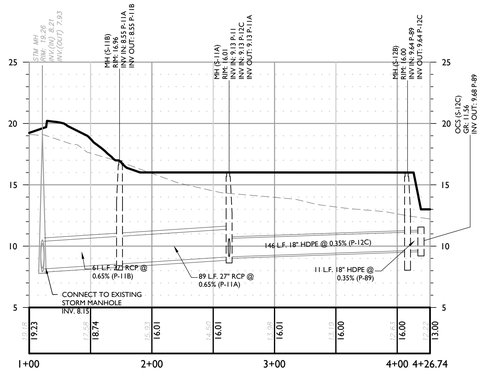
PROFILE OF STORM S-24
HORIZONTAL : 1" = 50'
VERTICAL : 1" = 5'



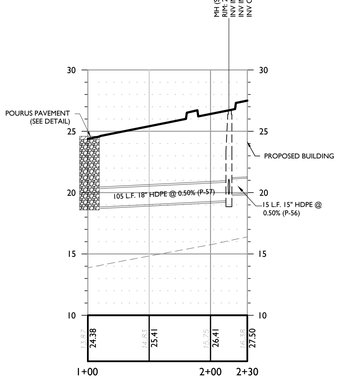
PROFILE OF STORM S-40
HORIZONTAL : 1" = 50'
VERTICAL : 1" = 5'



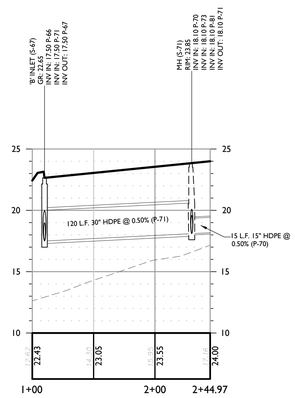
PROFILE OF STORM S-69
HORIZONTAL : 1" = 50'
VERTICAL : 1" = 5'



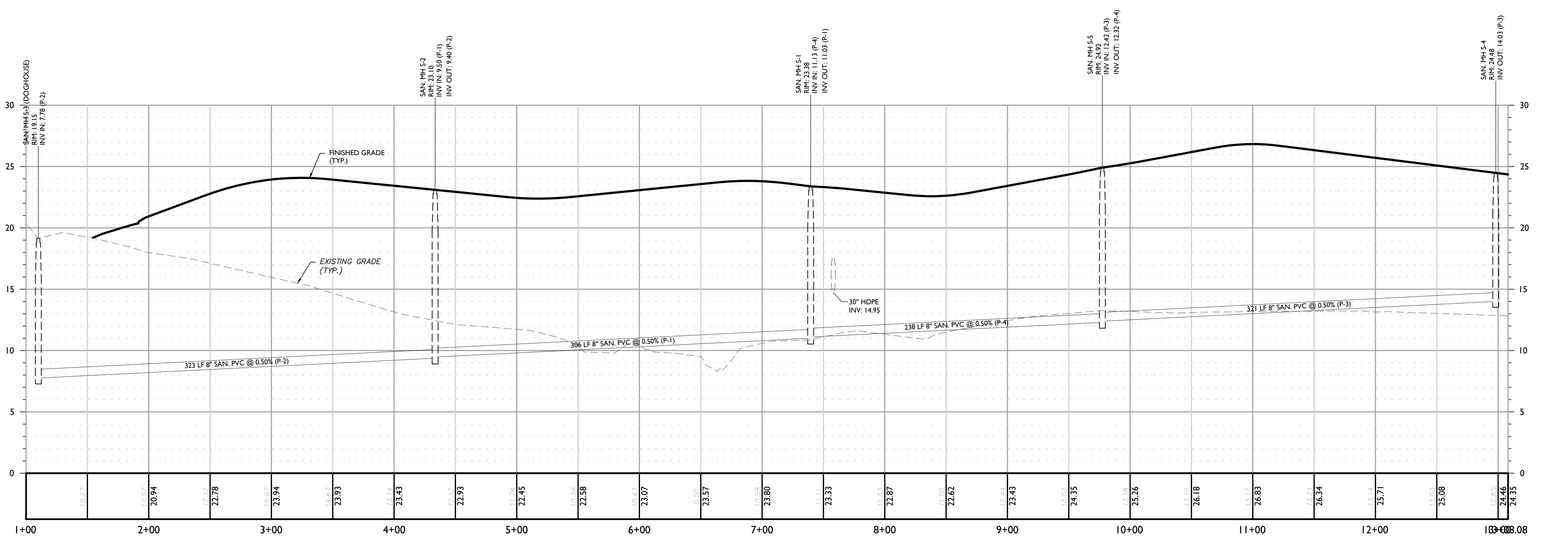
PROFILE OF EX. STM MH
HORIZONTAL : 1" = 50'
VERTICAL : 1" = 5'



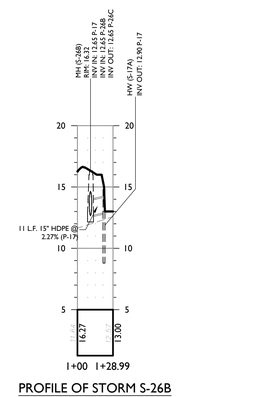
PROFILE OF STORM S-57
HORIZONTAL : 1" = 50'
VERTICAL : 1" = 5'



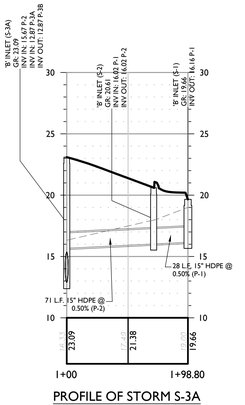
PROFILE OF STORM S-67
HORIZONTAL : 1" = 50'
VERTICAL : 1" = 5'



PROFILE OF SANITARY 001
HORIZONTAL : 1" = 50'
VERTICAL : 1" = 5'



PROFILE OF STORM S-26B
HORIZONTAL : 1" = 50'
VERTICAL : 1" = 5'



PROFILE OF STORM S-3A
HORIZONTAL : 1" = 50'
VERTICAL : 1" = 5'

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REV	DATE	DRAWN BY	DESCRIPTION
1	8/23/23	RM	REVISED PER NJDEP
2	4/19/24	TL	REVISED PER CLIENT & ARCHITECT
3	6/12/24	RM	REVISED PER BOROUGH ENGINEER'S REVIEW

Digitally signed by Michael Stickle
Date: 2024.06.28 21:35:25 -04'00'

Michael Stickle
NEW JERSEY LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: GE57838
COLLIERS ENGINEERING & DESIGN, INC.
N.J. C.O.A. #: 24GA27986500

PRELIMINARY AND FINAL
MAJOR SITE PLAN

FOR

JERNEE MILL
INDUSTRIAL

BLOCK 58
LOTS 2.01 & 9

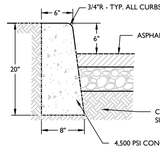
BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY
NEW JERSEY

Colliers
Engineering & Design
HOLMDEL (Headquarters)
101 Crawfords Corner Road, Suite 3400
Holmdel, NJ 07733
Phone: 732.383.1950
COLLIERS ENGINEERING & DESIGN, INC. DOING BUSINESS AS MASER CONSULTING

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	6/12/2023	RM	DB
PROJECT NUMBER: 10000657C	DRAWING NAME: C-PROF		

SHEET TITLE:
PROFILES

SHEET NUMBER:
28 of 37

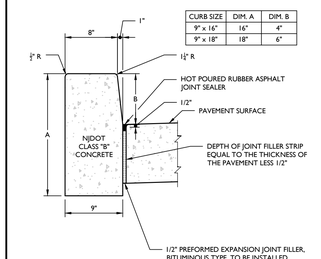


NOTES:

1. SIX (6") INCH FACE TO BE PROVIDED
2. PROVIDE PRE FORMED BITUMINOUS FIBER EXPANSION JOINTS, 1/2" THICK AT 20'-0" (MAX.) INTERVALS, PROVIDE DUMMY JOINTS (FORMED) MIDWAY BETWEENEXPANSION JOINTS.

CONCRETE CURB (ASPHALT PAVEMENT) DETAIL

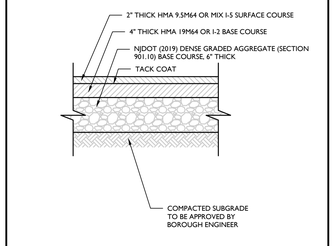
NOT TO SCALE | MCNJ-SITE-CURB-1000 | MOD: 06/21/24 | 05/01/17



CURB SIZE	DIM. A	DIM. B
9" x 16"	16"	4"
9" x 18"	18"	6"

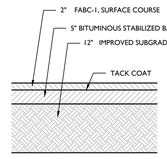
NJDOT VERTICAL CURB (CONCRETE PAVEMENT) DETAIL

NOT TO SCALE | MCNJ-SITE-CURB-1100 | 05/01/17



STANDARD-DUTY PAVEMENT FOR AREAS WITH GRANULAR SUBGRADE DETAIL

NOT TO SCALE | MCNJ-SITE-PVMT-1100 | MOD: 06/21/24 | 05/01/17



NOTES:

1. SUBGRADE TO BE COMPACTED TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM DRY DENSITY, AS DETERMINED BY THE MODIFIED PROCTOR TEST, ASTM D 1557, AND SHALL CONSIST OF LOAD-BEARING FILL OR EXISTING STRATUM A MATERIALS CAPABLE OF ACHIEVING A CBR VALUE OF 5. THE MOISTURE CONTENT OF THE MATERIAL SHOULD ALSO BE MAINTAINED WITHIN +/- 2 PERCENT OF THE OPTIMUM MOISTURE CONTENT. TO BE APPROVED BY BOROUGH ENGINEER.

HEAVY-DUTY PAVEMENT DETAIL

NOT TO SCALE | MCNJ-SITE-PVMT-1300 | MOD: 06/21/24 | 03/01/20

COLORS:
LEGEND = WHITE (RETROREFLECTIVE)
BACKGROUND = RED (RETROREFLECTIVE)

30" x 30"

R1-1 SIGN DETAIL

NOT TO SCALE | MCCM-SIGN-REGU-R1-1 | MOD: 06/28/24 | 12/01/20

36" x 12"

COLORS:
LEGEND = BLACK
BACKGROUND = BLACK
ARROW = WHITE (RETROREFLECTIVE)

R6-1R SIGN DETAIL

NOT TO SCALE | MCCM-SIGN-REGU-R6-1 | MOD: 06/28/24 | 12/01/20

36" x 36"

COLORS:
LEGEND = WHITE (RETROREFLECTIVE)
CIRCLE BACKGROUND = RED (RETROREFLECTIVE)

R5-1 SIGN DETAIL

NOT TO SCALE | MCCM-SIGN-REGU-R5-1 | MOD: 06/28/24 | 12/01/20

36" x 12"

COLORS:
LEGEND = BLACK
BACKGROUND = BLACK
ARROW = WHITE (RETROREFLECTIVE)

R6-1L SIGN DETAIL

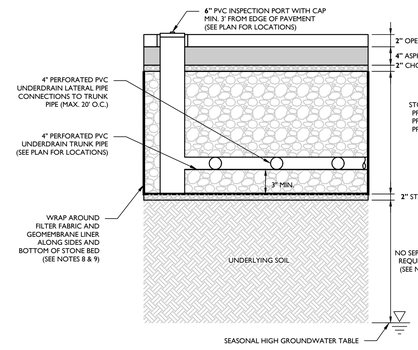
NOT TO SCALE | MCCM-SIGN-REGU-R6-1 | MOD: 06/28/24

NOTES:

1. CONTRACTOR MUST PREPARE SHOP DRAWINGS OF EACH CURB RAMP FOR SUBMISSION AND APPROVAL OF THE UNDERSIGNED PROFESSIONAL AND THE MUNICIPAL, COUNTY, STATE OR OTHER AGENCY'S ENGINEER HAVING JURISDICTION. DEVIATIONS FROM THE CURB RAMP DETAILS REQUIRE WRITTEN APPROVAL OF THE UNDERSIGNED PROFESSIONAL AND THE MUNICIPAL, COUNTY, STATE OR OTHER AGENCY'S ENGINEER HAVING JURISDICTION.
2. ACCESSIBLE RAMPS:
   a. ON-SITE RAMP OR CURB RAMPS MUST BE INSTALLED IN CONFORMANCE WITH THE CURRENT ADA STANDARDS FOR ACCESSIBLE DESIGN AS PUBLISHED BY THE UNITED STATES DEPARTMENT OF JUSTICE AND MUST ALSO MEET OTHER APPLICABLE LOCAL AND STATE REQUIREMENTS IN EFFECT AT THE DATE OF CONSTRUCTION.
   b. PUBLIC RIGHT OF WAY ACCESSIBLE OR CURB RAMPS MUST BE INSTALLED PURSUANT WITH THE CURRENT UNITED STATES ACCESS BOARD "ACCESSIBILITY GUIDELINES FOR PEDESTRIAN FACILITIES IN THE PUBLIC RIGHT-OF-WAY" (PROWAG).
3. CURB RAMP SLOPE AS CONSTRUCTED IN THE DIRECTION OF TRAVEL CANNOT EXCEED 12H:1V. RAMP SLOPES OF 14H:1V ARE THE PREFERRED SLOPE TO MAINTAIN A LEVEL OF CONSTRUCTION TOLERANCE. MINIMUM CURB RAMP CROSS-SLOPE IS TO BE 0.50%, MAXIMUM CANNOT EXCEED 2.00%.
4. CURB RAMP SIDE FLARE SLOPES ARE TO BE 14H:1V DESIRABLE, 12H:1V MAXIMUM, BUT MAY BE 10H:1V UPON APPROVAL OF THE ENGINEER. WHERE SIDE FLARES ARE NOT REQUIRED, PROVIDE AN 18" CURB TAPER TO THE FLUSH CURB PER THE DETAIL.
5. LANDING AREA AT THE TOP AND BOTTOM OF THE CURB RAMP (AKA. CLEAR OR TURNING SPACE) MUST BE KEPT CLEAR OF OBSTRUCTIONS. THE LANDING AREA IS TO BE 4' X 4' MINIMUM AND MATCH THE WIDTH OF THE CURB RAMP. INCREASED THE DEPTH OF MINIMUM LANDING AREA TO 5 FEET IF CONSTRAINED AT THE BACK OF THE SIDEWALK.
6. THE LANDING AREA MUST HAVE AN ABSOLUTE MINIMUM SLOPE OF 0.5% AND A MAXIMUM SLOPE OF 2%, WHEREAS 1.0% TO 1.5% IS THE DESIRED DESIGN SLOPE IN THE DIRECTION OF TRAVEL AND FOR THE CROSS SLOPE.
7. SIDEWALK CROSS SLOPE MUST BE A MINIMUM OF 1% AND MAXIMUM 2%, WHEREAS 1.5% IS THE DESIRED DESIGN CROSS SLOPE. SIDEWALK BEYOND LANDING AREA MUST HAVE A MINIMUM 1% TO MAXIMUM 5% OF LONGITUDINAL SLOPE IN THE DIRECTION OF TRAVEL, AND A 1% TO 2% MAX. CROSS SLOPE.
8. FLUSH CURB AT CURB RAMP MUST BE MINIMUM 4' WIDE AND FLUSH WITH PAVEMENT. THE SEGMENT OF FLUSH CURB MUST BE MADE WITH CONCRETE CURB REGARDLESS OF THE CURB MATERIAL USED THROUGHOUT THE SITE.
9. GUTTER SLOPE THE ALONG CURB RAMP MUST MAINTAIN POSITIVE DRAINAGE WITH A 1.0 % TO 1.5% GUTTER SLOPE PREFERRED, WHEREAS 0.5% AS THE ABSOLUTE MINIMUM AND 2.0% IS MAXIMUM ALONG THE LENGTH OF THE FLUSH CURB.
10. CROSSWALKS AND PAVEMENT MARKINGS MUST BE INSTALLED AS DENOTED ON SITE PLAN. CURB RAMP MUST BE WHOLLY CONTAINED WITHIN THE CROSSWALK CROSSING.
11. THE RAMP SURFACE MUST HAVE A SLIP RESISTANT, BROOM FINISH PERPENDICULAR TO THE PATH OF TRAVEL.
12. CONCRETE EXPANSION JOINTS MUST HAVE A FIRM SURFACE WITH ¼" BEVELED CONCRETE EDGES. THE JOINT SURFACE SHALL NOT BE MORE THAN ¼" BELOW THE ADJOINING CONCRETE SURFACE.
13. DETECTABLE WARNING SURFACES ARE TO BE PROVIDED AT CURB RAMPS, BLENDED TRANSITION AT PEDESTRIAN STREET CROSSINGS AND PEDESTRIAN REFUGE ISLANDS WHEN THOSE ARE WITHIN THE PUBLIC RIGHT-OF-WAY, AND WHERE AS SHOWN ON THE PLANS.
14. SEE SEPARATE DETAILS FOR "DETECTABLE WARNING SURFACE" AND "CURB RAMP SECTIONS".

CURB RAMP NOTES

NOT TO SCALE | MCNJ-SITE-HADA-2500 | 07/01/20

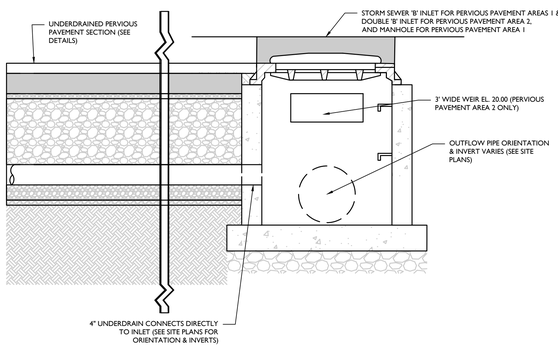


NOTES:

1. **ASPHALT SURFACE COURSE** - OPEN GRADED FRICTION COURSE (OGFC) WITH POLYMER-MODIFIED BINDER 64E-22. (NJDOT SPECIFICATION 902.03)
2. **ASPHALT BASE COURSE** - ASPHALT STABILIZED DRAINAGE COURSE (ASDC) (NJDOT SPECIFICATION 902.06)
3. **CHOKER COURSE** - CLEAN, WASHED BROKEN STONE (AASHTO NO. 57; NJDOT SPECIFICATION 901.3)
4. **STONE STORAGE BED** - 1.5" TO 3" CLEAN, WASHED, UNIFORMLY OPEN-GRADED BROKEN STONE (AASHTO NO. 2, 3 OR 4; NJDOT SPECIFICATION 901.03)
5. **UNDERDRAIN** PVC SCHEDULE 40 PERFORATED PIPE WRAPPED WITH FILTER FABRIC CONNECTING TO THE NEAREST DRAINAGE STRUCTURE. PROVIDE UNDERDRAIN TRUNK PIPES AS NOTED ON PLAN. REFER TO TYPICAL UNDERDRAIN LATERAL DETAIL FOR TYPICAL UNDERDRAIN LATERAL LAYOUT.
6. **STABILIZATION COURSE** - ½" STONE (AASHTO NO. 7; NJDOT SPECIFICATION 901.03). USED WHEN THERE IS A POTENTIAL FOR SUBGRADE TO COMPRESS OR SUBJECT TO LATERAL MOVEMENT DURING CONSTRUCTION.
7. **INSPECTION PORTS** - PVC SCHEDULE 40 PIPE, LOCATED AS INDICATED ON THE PLAN, 3' AWAY FROM ANY EDGE OF PAVEMENT. INSPECTION PORT IS TO BE CAPPED WITH A REMOVABLE METAL CAP, SET FLUSH WITH THE PAVEMENT SURFACE, AND RATED FOR H20 LOADING.
8. **FILTER FABRIC** - NON-WOVEN GEOTEXTILE FABRIC, SUCH AS MIRAFI 140N, AMOCO 4547, GEOTEX 451, OR APPROVED EQUAL (AASHTO M288 CLASS 2; NJDOT SPECIFICATION 919.01). FILTER FABRIC SHALL BE OVERLAPPED BY MINIMUM 16" AT THE SEAM AND EXTENDED BY 4' TO WRAP OVER THE TOP OF THE RECHARGE BED.
9. **GEOMEMBRANE LINER** - 30 MIL (MIN.) GEOMEMBRANE LINER SHALL BE INSTALLED WITH FILTER FABRIC ON BOTH THE TOP AND BOTTOM FACES OF THE LINER.
10. POROUS PAVEMENT AREAS SHALL BE PROTECTED FROM SEDIMENT-LADEN RUNOFF AND EXCESSIVE COMPACTION FROM CONSTRUCTION TRAFFIC DURING AND AFTER CONSTRUCTION TO PREVENT PAVEMENT CLOGGING.
11. POROUS ASPHALT PAVEMENT SHALL BE CONSTRUCTED PER NJDOT SPECIFICATION 402. NO PAVING OF SURFACE COURSE UNDER 50° F AMBIENT TEMPERATURE.
12. NO VEHICULAR TRAFFIC FOR 48 HOURS AFTER PAVEMENT INSTALLATION.
13. POST CONSTRUCTION TESTING SHALL BE PERFORMED PER ASTM C1781. AT LEAST 3 TEST LOCATIONS EVENLY SPACED ACROSS THE POROUS PAVEMENT SYSTEM TO CHECK FOR PERMEABILITY AFTER CONSTRUCTION (NJDEP BMP REQUIRES 6.4"/HR. MIN. FOR WATER QUALITY AND 20"/HR. FOR WATER QUANTITY CONTROL).
14. POROUS ASPHALT PAVEMENT SECTIONS WITH UNDERDRAINS ARE PROPOSED WITH GEOMEMBRANE LINERS AND THEREFORE DO NOT REQUIRE SEPARATION FROM THE SEASONAL HIGH GROUNDWATER TABLE.
15. POROUS PAVEMENT SHALL BE INSTALLED UNDER THE SUPERVISION OF A NEW JERSEY LICENSED PROFESSIONAL ENGINEER.

POROUS ASPHALT PAVEMENT DETAIL (WITH UNDERDRAIN AND LINER)

NOT TO SCALE | NOT TO SCALE | MCNJ-SITE-PVMT-1500 | MOD: 03/01/24 | 06/01/19

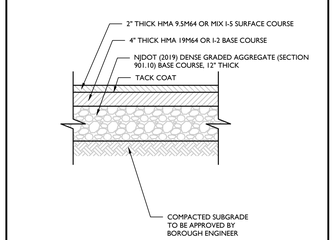


NOTES:

1. CONTRACTOR TO SUBMIT SHOP DRAWING FOR REVIEW AND APPROVAL.
2. ALL CONCRETE TO BE 4,500 PSI.
3. REFER TO UTILITY PLAN FOR OUTLET PIPE INFORMATION.

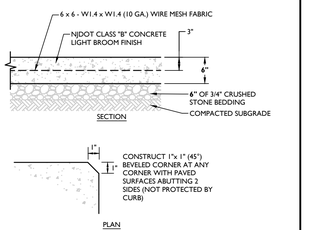
OUTLET CONTROL STRUCTURE FOR PERVIOUS PAVEMENT AREAS DETAIL

NOT TO SCALE



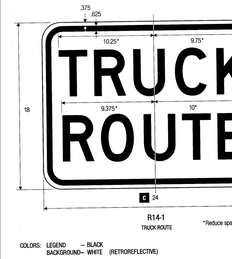
STANDARD-DUTY PAVEMENT FOR AREAS WITH CLAY SUBGRADE DETAIL

NOT TO SCALE | MCNJ-SITE-PVMT-1100 | MOD: 06/21/24 | 05/01/17



CONCRETE LOADING PAD DETAIL

NOT TO SCALE | MCNJ-SITE-PVMT-1800 | 10/01/18



COLORS: LEGEND – BLACK
BACKGROUND– WHITE (RETROREFLECTIVE)

R14-1 SIGN DETAIL

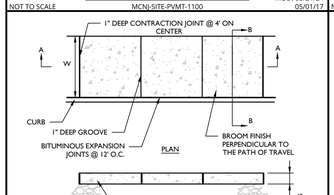
NOT TO SCALE | MCCM-SIGN-REGU-R14-11 | 12/01/20

24" x 24"

COLORS:
LEGEND = BLACK
BACKGROUND = WHITE (RETROREFLECTIVE)

R5-2A SIGN DETAIL

NOT TO SCALE | MCCM-SIGN-REGU-R5-2A | MOD: 06/28/24 | 07/01/21

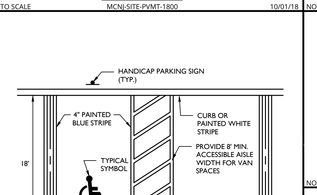


NOTES:

1. CONCRETE TO TEST 4,500 PSI MINIMUM ON 28 DAY COMPRESSIVE TEST.
2. ALL CONCRETE IS TO BE PROPERLY CURED USING A CURING COMPOUND, SALT HAY, BURLAP OR OTHER METHOD ACCEPTABLE TO MUNICIPAL ENGINEER.
3. CONCRETE SLUMP TO BE A MAXIMUM OF 3 INCHES OR AS DIRECTED BY THE MUNICIPAL ENGINEER.
4. CONCRETE IS TO BE BROOM FINISHED TO PROVIDE A NON-SLIP SURFACE.
5. 1" DEEP CONTRACTION JOINTS ARE TO BE STRUCK AT 4' C-C.
6. A 1/2" EXPANSION JOINT OF PRE-MOLDED ASPHALT IMPREGNATED BITUMASTIC MATERIAL SHALL BE PLACED ON 12 FOOT CENTERS MAXIMUM AND RECESSED 1/4" MAXIMUM BELOW THE SURFACE.
7. CONTRACTORS TO NOTIFY MUNICIPAL ENGINEER TWO DAYS PRIOR TO POURING.
8. A 1/2" EXPANSION JOINT OF A NON-EXTRUDABLE, FIBROUS BITUMASTIC MATERIAL SHALL BE ADDED CONTINUOUSLY BETWEEN THE CURB AND SIDEWALK WHERE A GRASS AREA IS NOT PROVIDED.
9. CONCRETE SIDEWALK SHALL BE CONSTRUCTED PER THE LATEST ADA REQUIREMENTS.

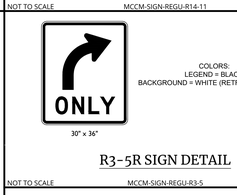
CONCRETE SIDEWALK (NEXT TO CURB) DETAIL

NOT TO SCALE | MCNJ-SITE-PVMT-2000 | MOD: 06/21/24 | 08/01/20



ACCESSIBLE PARKING HAIRPIN STRIPE STALL DETAIL

NOT TO SCALE | MCNJ-SITE-MRKG-1800 | MOD: 03/01/18 | 03/01/18

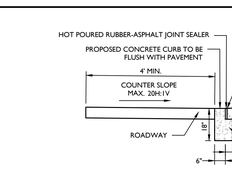


30" x 36"

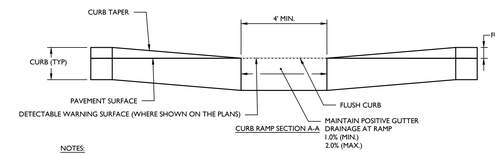
COLORS:
LEGEND = BLACK
BACKGROUND = WHITE (RETROREFLECTIVE)

R3-5R SIGN DETAIL

NOT TO SCALE | MCCM-SIGN-REGU-R3-5 | MOD: 06/28/24 | 12/01/20



CURB RAMP SECTION B-B

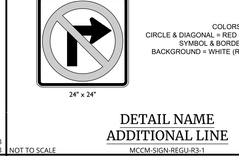


NOTES:

1. FLUSH CURB AT DETECTABLE WARNING SURFACE (WHERE SHOWN ON PLAN) IS TO BE A SMOOTH LEVEL SURFACE THAT IS FLUSH WITH THE ADJOINING PAVEMENT. NO BUMPS OR ROUGH SURFACE ARE ALLOWED. SUCH UNEVENNESS MUST BE MILLED OR GRINDED SMOOTH.
2. CURB TO BE FLUSH WITH ROADWAY PAVEMENT AND CONSTRUCTED WITH CONCRETE REGARDLESS OF THE CURB MATERIAL WHERE AS 1.0% USED THROUGHOUT THE SITE.
3. POSITIVE DRAINAGE IS TO BE MAINTAINED AT RAMP. RAMP IS TO SLOPE TOWARDS PAVEMENT NO PONDING OF WATER IS PERMITTED AT CURB RAMP. PAVEMENT GRADES TO BE ADJUSTED AS NECESSARY TO PROVIDE POSITIVE GUTTER DRAINAGE.
4. AS CONSTRUCTED GUTTER DRAINAGE GRADE ALONG FLUSH CURB AND WITHIN THE CROSSWALK AREA TO BE 1.0% MINIMUM, 2.00% MAXIMUM, WHERE AS 0.5% ABSOLUTE MINIMUM IF DUE TO SITE CONSTRAINTS.
5. DEVIATION FROM THIS DETAIL REQUIRES THE WRITTEN APPROVAL OF THE UNDERSIGNED PROFESSIONAL.

CURB RAMP SECTIONS DETAIL

NOT TO SCALE | MCNJ-SITE-HADA-2000 | 07/01/20



TYPICAL PARKING STALL STRIPING (HAIRPIN STRIPE) DETAIL

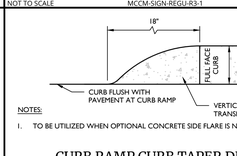
NOT TO SCALE | MCNJ-SITE-MRKG-1001 | MOD: 06/28/24 | 02/01/19

NOTES:

1. TO BE UTILIZED WHEN OPTIONAL CONCRETE SIDE FLARE IS NOT SHOWN ON PLAN.

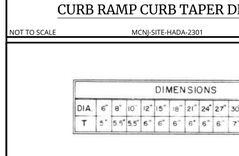
CURB RAMP CURB TAPER DETAIL

NOT TO SCALE | MCNJ-SITE-HADA-2301 | 05/01/17



TYPICAL STOP BAR DETAIL

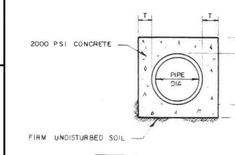
NOT TO SCALE | MCNJ-SITE-MRKG-1100 | 05/01/17



STROKE WIDTH: MINIMUM/STANDARD = 3"

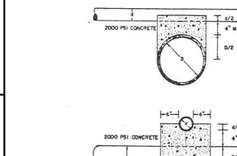
ADA SYMBOL DETAIL

NOT TO SCALE | MCNJ-SITE-MRKG-2000 | 05/01/17



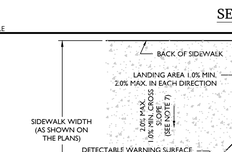
STRAIGHT PAVEMENT ARROW DETAIL

NOT TO SCALE | MCNJ-SITE-MRKG-1200 | 05/01/17



STANDARD DETAIL CONCRETE ENCASEMENT & CRADLE

NOT TO SCALE



NOTE:

1. SEE CURB RAMP NOTES.

CURB RAMP TYPE 1 DETAIL

NOT TO SCALE | MCNJ-SITE-HADA-1000 | 07/01/20

Colliers Engineering & Design
www.colliersengineering.com
Doing Business as MASER CONSULTING

PROTECT YOURSELF
ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN ANY STATE
FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION
1	8/23/23	RM	REVISED PER NJDEP
2	4/19/24	TL	REVISED PER CLIENT & ARCHITECT
3	6/12/24	KM	REVISED PER BOROUGH ENGINEER'S REVIEW

Michael Stickle
NEW JERSEY LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: GE57838
COLLIERS ENGINEERING & DESIGN, INC.
N.J. C.O.A. #: 24GA27986500

Digitally signed by Michael Stickle
Date: 2024.06.28 21:25:16 -04'00'

PRELIMINARY AND FINAL MAJOR SITE PLAN

FOR

JERNEE MILL INDUSTRIAL

BLOCK 58
LOTS 2.01 & 9

BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY
NEW JERSEY

Colliers Engineering & Design
HOLMDEL (Headquarters)
101 Crawfords Corner Road, Suite 3400
Holmdel, NJ 07733
Phone: 732.383.1950
COLLIERS ENGINEERING & DESIGN, INC. DOING BUSINESS AS MASER CONSULTING

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	6/12/2023	RM	DB

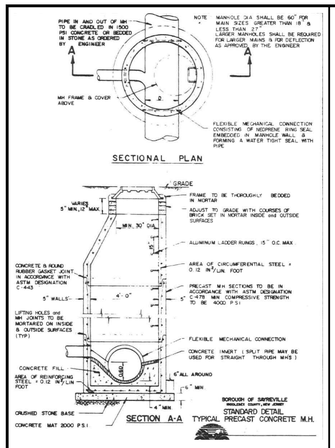
PROJECT NUMBER: 10000657C
DRAWING NAME: C-DTLS

SHEET TITLE:
CONSTRUCTION DETAILS

SHEET NUMBER:
29 of 37

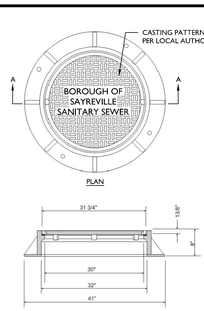
NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

2020\10000657C\Engineering\Dwg\Plans\C-DTLS.dwg, 6/12/2023 8:29:57 AM, By: MSTICKLE



TYPICAL PRECAST CONCRETE M.H. DETAIL

NOT TO SCALE MCNJ-UTIL-STRM-1600

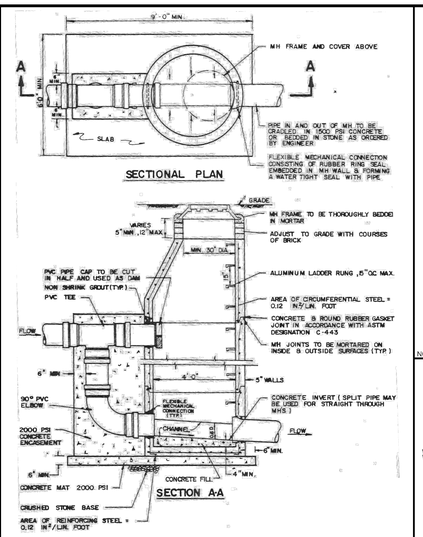


NOTES:

1. MANHOLE FRAME AND COVER SHALL BE CAMPBELL FOUNDRY PATTERN # 12028 WITH FLOW-SEAL COVER OR APPROVED EQUAL OR AS OTHERWISE REQUIRED BY JURISDICTIONAL AUTHORITY.
2. MANHOLE FRAME AND COVER TO BE HEAVY DUTY, CONFORMING TO ASTM SPECIFICATION A-48 CLASS 30.B WITH SHOP COAT OF ASPHALTIC PITCH.
3. IN EASEMENTS AND REMOTE AREAS, COVER LOCKING DEVICES OF BRONZE AND KEY SHALL BE PROVIDED.
4. WATERTIGHT MANHOLE FRAME AND COVER SHALL BE PATTERN # **6547** AS MANUFACTURED BY CAMPBELL FOUNDRY COMPANY OR APPROVED EQUAL.
5. LETTER HEIGHT SHALL BE 1.5 INCHES.

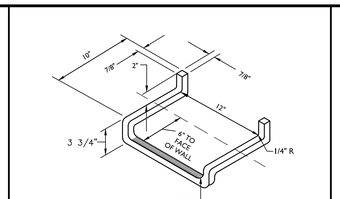
SANITARY MANHOLE FRAME AND COVER DETAIL

NOT TO SCALE



SAYREVILLE TYPICAL PRECAST DROP MANHOLE

NOT TO SCALE

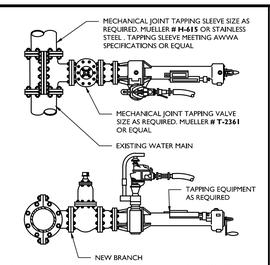


NOTE:

PORTION EMBEDDED IN MASONRY TO BE COATED WITH COAL TAR PITCH, VARNISH OR OTHER SPECIFIED MATERIAL.

ALUMINUM LADDER RUNG DTAIL

NOT TO SCALE

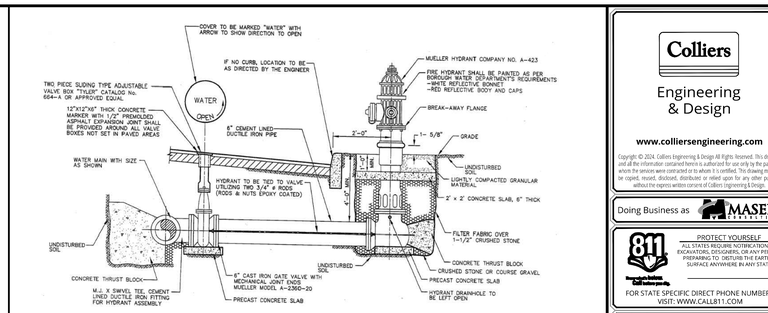


NOTES:

1. WET TAP VALVE CAN BE INSTALLED IN EITHER VERTICAL OR HORIZONTAL POSITION.
2. CONTRACTOR SHALL VERIFY DEPTH OF BURY, MATERIAL, DIAMETER (O.D.) AND OPERATING PRESSURE OF EXISTING WATER MAIN PRIOR TO ORDERING OF WET TAP UNIT.

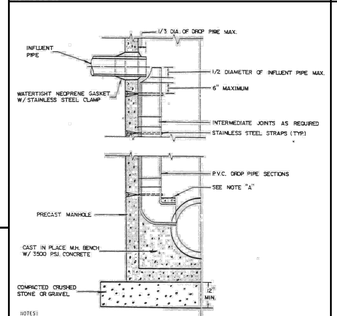
WET TAP DETAIL

NOT TO SCALE MCNJ-UTIL-WATR-1200 03/01/20



SAYREVILLE FIRE HYDRANT ASSEMBLY DETAIL

NOT TO SCALE



NOTES:

A. SOFFIT OF DROP PIPE ELBOW AT CHANNEL FACE IS EQUAL TO THE SOFFIT OF THE INFLUENT INTERCEPTOR PIPE. BENCH ELEVATION AT CHANNEL TO PROVIDE 1" MIN. CONCRETE COVER OVER ELBOW 12" MIN. ABOVE INFLUENT INTERCEPTOR SOFFIT (SEE.). CHANNEL EDGE ON EACH SIDE TO BE SAME ELEVATION.

B. INFLUENT PIPE SECTION INTO MANHOLE MUST BE DUCTILE IRON.

C. NOMINAL DIAMETER OF P.V.C. DROP SECTION TO BE EQUAL TO INFLUENT PIPE I.D. PLUS 2 INCHES (MINIMUM).

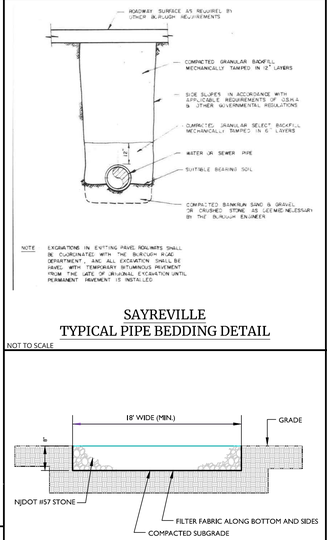
D. STAINLESS STEEL STRAPS TO BE ANCHOR BOLTED TO MANHOLE WALL IN A MANNER TO ALLOW FOR FUTURE REMOVAL. FIRST STRAP TO BE PLACED A MAXIMUM DISTANCE OF 6 INCHES BELOW THE INLET PIPE INVERT. REMAINING STRAPS TO BE A MIN. OF 3'0" ON CENTER AND WITHIN 8" BELOW AN REQUIRED INTERMEDIATE JOINTS.

E. ALL JOINTS ON DROP SECTION TO BE RUBBER GASKET OR FRICTION TYPE (SOLVENT CEMENT JOINTS PROHIBITED).

F. WHERE DROP PIPE IS GREATER THAN 15" IN DIAMETER IT SHALL BE FILAMENT WOUND PIPE OR FIBERGLASS REINFORCED PRESSURE CLASS 125 PSI.

SAYREVILLE TYPICAL DROP CONNECTION SECTION DETAIL

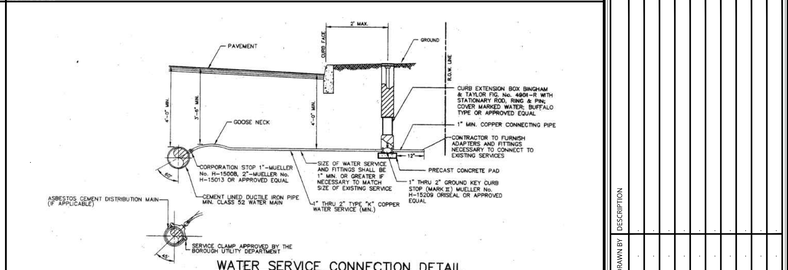
NOT TO SCALE



NOTE EXCAVATIONS IN EXITING PAVED ROADWAYS SHALL BE COORDINATED WITH THE BOROUGH ROAD DEPARTMENT, AND ALL EXCAVATION SHALL BE PAVED WITH TEMPORARY BITUMINOUS PAVEMENT FROM THE SIDE OF ORIGINAL EXCAVATION UNTIL PERMANENT PAVEMENT IS INSTALLED

SAYREVILLE TYPICAL PIPE BEDDING DETAIL

NOT TO SCALE MOD: 06/21/24 05/01/17

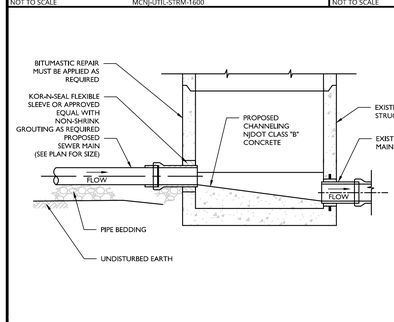


WATER SERVICE CONNECTION DETAIL

N.T.S.

WATER SERVICE CONNECTION DETAIL

NOT TO SCALE MCNJ-UTIL-WATR-1100

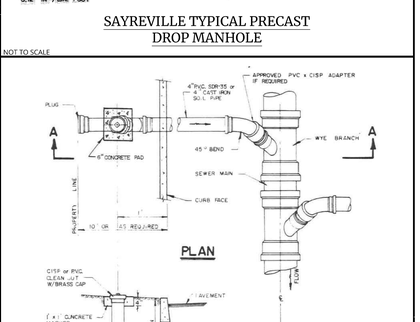


NOTES:

1. CONSTRUCTION OF THE NEW SEWER MAIN SHALL NOT IMPEDE THE OPERATION OF THE EXISTING SEWER.
2. WHERE NEW PIPE IS TO BE CONNECTED INTO AN EXISTING MANHOLE, THE CONTRACTOR SHALL CORE DRILL ALL HOLES INTO MANHOLE AND SHALL PERFORM ALL CUTTING AND PATCHING NECESSARY FOR CHANNEL AND BENCH RECONSTRUCTION TO CHANNEL FLOW INTO EXISTING SEWER.
3. PIPE SHALL BE SEALED USING KOR-N-SEAL MANHOLE ADAPTERS OR APPROVED EQUAL, AND NON-SHRINK GROUT.
4. EXISTING BENCH SHALL BE CHIPPED AND CUT AWAY TO ALLOW FOR NEW CHANNEL TO BE CONSTRUCTED AND TO PROVIDE GOOD, SOUND SURFACE FOR BONDING WITH NEW CONCRETE CHANNEL AND BENCH. REMOVE ALL LOOSE MATERIALS AND CLEAN INSIDE OF THE STRUCTURE.
5. THE CONCRETE USED TO CONSTRUCT BENCHES AND CHANNELS SHALL BE NJDOT CLASS "B" CONCRETE APPLY EPOXY BONDING AGENT PRIOR TO POURING CONCRETE.
6. ANY DAMAGE TO THE EXISTING MANHOLE CAUSED BY THE CONSTRUCTION OPERATIONS SHALL BE REPAIRED BY THE CONTRACTOR.

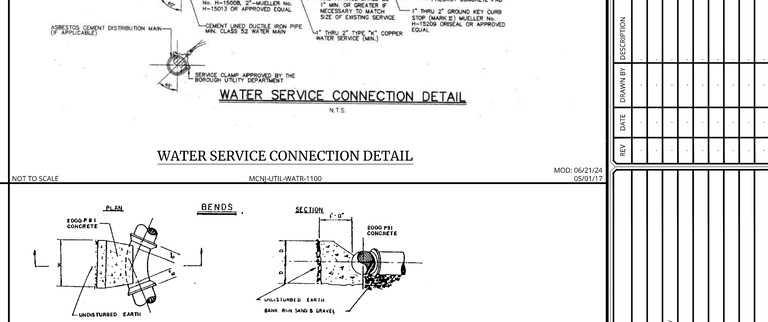
CONNECTION TO EXISTING MANHOLE DETAIL

NOT TO SCALE MCNJ-UTIL-SSWR-2000 05/01/17



SAYREVILLE SANITARY SEWER LATERAL & CLEANOUT DETAIL

NOT TO SCALE



JOINT RESTRAINT NOTES

1. BEARING AREAS SHOWN ARE BASED ON 2000 PSF ALLOWABLE BEARING PRESSURE, WHERE SOILS HAS DIFFERENT BEARING CAPACITY, THE CONTRACTOR SHALL ENLARGE THE BEARING AREA AS MAY BE DIRECTED BY THE ENGINEER OR SHOP DRAWINGS AS APPROVED BY THE ENGINEER.
2. ALL THRUST BLOCKS SHALL BE POURED DIRECTLY AGAINST UNDISTURBED EARTH.
3. NO JOINTS SHALL BE COVERED WITH CONCRETE.
4. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI
5. ALL THRUST BLOCKS FOR VERTICAL BENDS SHALL BE CURED WITH 6 MIL POLYETHYLENE SHEETING AND SHALL NOT BE BACKFILLED FOR 24 HOURS.
6. ALL THRUST BLOCKS MUST BE DESIGNED FOR PSI MAXIMUM OPERATING PRESSURE. THE MINIMUM BEARING AREA SHALL BE AS SPECIFIED BY THE ENGINEER.

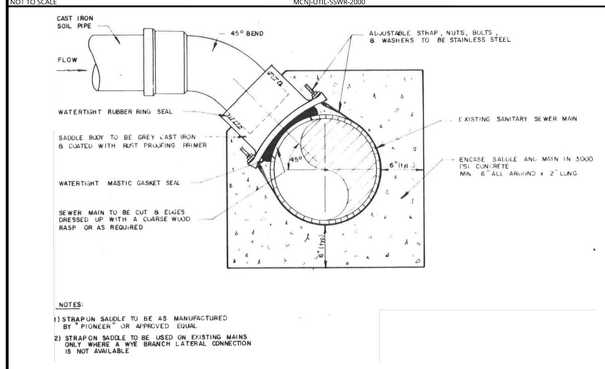
SAYREVILLE THRUST BLOCKS DETAIL

NOT TO SCALE

THRUST BLOCK SCHEDULE

DESCRIPTION OF FITTINGS	MINIMUM DIMENSIONS IN FEET	DIAMETER OF PIPE 6"	8"	10"	12"	14"	16"	
TEES	W	1.25	1.5	1.75	2.0	2.25	2.5	
	D	1.75	2.0	2.25	2.5	2.75	3.0	
90° BENDS	W	2.0	2.0	3.5	4.0	4.5	5.0	
	D	1.5	2.0	2.25	2.5	3.0	3.5	
45° BENDS	W	1.5	2.0	2.5	3.0	3.5	4.0	
	D	1.0	1.25	1.75	2.0	2.5	2.75	
22 1/2° BENDS	W	1.5	1.5	2.0	2.5	3.0	3.5	
	D	1.0	1.0	1.5	1.5	2.0	2.0	
11 1/4° BENDS	W	1.0	1.25	1.5	1.5	2.0	2.5	
	D	1.0	1.0	1.25	1.5	1.5	1.5	
CAPS	W	1.25	1.5	1.75	2.0	2.25	2.5	
	D	1.25	2.0	2.25	2.5	2.75	3.0	

NOTE ALL W&D DIMENSIONS IN FEET



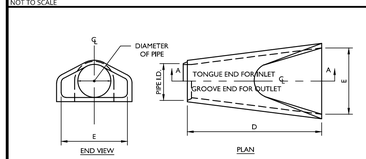
NOTES:

1) STRAP-ON SADDLE TO BE AS MANUFACTURED BY " PIONEER " OR APPROVED EQUAL

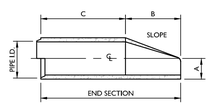
2) STRAP-ON SADDLE TO BE USED ON EXISTING MAINS ONLY WHERE A WYE BRANCH LATERAL CONNECTION IS NOT AVAILABLE

SAYREVILLE STANDARD 90° STRAP-ON SADDLE ASSEMBLY

NOT TO SCALE



PIPE INNER DIA.	WALL THICK	A	B	C	D	E	SLOPE
12"	2"	4"	24"	48 3/4"	72 3/4"	30"	3:1
15"	2 1/2"	6"	27"	46"	73"	30"	3:1
18"	2 1/2"	9"	27"	46"	73"	36"	3:1
24"	3"	9 1/2"	43 1/2"	30"	73 1/2"	48"	3:1
30"	3 1/2"	12"	54"	19 1/2"	73 1/2"	60"	3:1
36"	4"	15"	63"	34 1/2"	97 1/2"	72"	3:1
42"	4 1/2"	21"	63"	35"	98"	78"	3:1
48"	5"	24"	72"	26"	98"	84"	3:1
54"	5 1/2"	27"	65"	35"	100"	90"	2.4:1
60"	6"	30"	60"	39"	99"	96"	2:1
66"	6 1/2"	32"	78"	21"	99"	102"	2:1
72"	7"	34"	78"	21"	99"	108"	2:1



NOTES:

1. REINFORCING IN THE "C" PORTION SHALL BE THE SAME AS SPECIFIED FOR CONCRETE PIPE ASTM C76 AND AASHTO M170 CLASS III FOR THE SIZE OF CONNECTING PIPE.
2. ALL CONCRETE SHALL BE NJDOT CLASS "B".
3. VARIATIONS IN MANUFACTURING DIMENSIONS SHALL BE AS CALLED FOR IN ASTM C76 AND AASHTO M170.
4. PIPE END SECTION CONNECTION SHALL MATCH JOINTS OF STANDARD PIPE DETAILS.

CONCRETE FLARED END SECTION DETAIL

NOT TO SCALE MCNJ-UTIL-STRM-2200 05/01/17

CheckMates® can be made for any pipe I.D. Built to fit in sizes from 3" to 78".

Flange shape and bolt pattern can be customized. Flangeless thimble inserts are available.

CHECKMATE® VALVE

NOMINAL PIPE SIZE I.D.		OVERALL LENGTH*		NUMBER OF CLAMPS	CUFF DEPTH		BACK PRESSURE RATING**		WEIGHT	
Inches	Millimeters	Inches	Millimeters		Inches	Millimeters	Feet	Meters	lbs	Kg
Flange Mount 3	75	5.1	130	1	1.5	38	5	1.5	1.5	0.7
4	100	7.9	201	1	1.5	38	5	1.5	1.5	0.7
Standard Mount 3	75	5.1	130	1	1.5	38	85	26.0	3	1.4
4	100	7.9	201	1	1.5	38	85	26.0	3	1.5
5	125	9.5	241	1	1.5	38	83	25.3	4	2
6	150	11.0	279	1	2.0	51	83	25.3	9	4
7	175	12.8	325	1	2.0	51	79	24.1	11	5
8	200	15.2	386	1	2.0	51	79	24.1	13	6
9	225	15.4	391	1	2.0	51	75	22.9	17	8
10	250	16.1	408	1	2.0	51	71	21.6	20	10
12	300	19.8	503	1	2.0	51	68	20.1	37	17
14	350	25.8	655	1	4.0	102	64	20.0	110	50
16	400	28.6	726	1	4.0	102	60	18.3	133	52
18	450	31.0	787	1	4.0	102	56	17.1	143	65
20	500	42.1	1069	2	8.0	203	53	16.2	223	102
24	600	47.5	1207	2	8.0	203	45	13.7	304	137
30	750	54.9	1395	2	8.0	203	38	11.6	500	227
36	900	62.3	1582	2	8.0	203	30	9.1	828	376
42	1050	70.6	1793	2	8.0	203	26	7.9	1423	646
48	1200	79.0	2007	2	8.0	203	23	7.0	1801	817
54	1350	86.4	2195	2	8.0	203	17	5.2	2700	1225
60	1500	96.8	2459	2	9.0	229	15	4.6	3315	1504
72	1800	119.0	3023	3	12.0	305	13	4.0	6100	2767
78	1950	119.0	3023	3	12.0	305	13	4.0	7000	3176

*Shorter lengths available. **Back pressure measured from pipe invert. Higher back pressure ratings available. Consult factory.

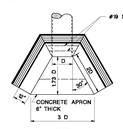
6 | www.tideflex.com/checkmate

TIDEFLEX CHECKMATE INLINE CHECK VALVE DETAIL

NOT TO SCALE

VOLUME OF CONCRETE IN HEADWALLS AND APRONS IN CUBIC YARDS

PIPE DIA.	CORR. STEEL PIPE	REINF. CONC. PIPE	APRONS
12"	1.6	1.7	0.4
15"	2.0	2.1	0.5
18"	2.4	2.5	0.6
21"	2.8	3.0	0.8
24"	3.3	3.4	0.9
27"	3.7	4.0	1.1
30"	4.2	4.5	1.2
36"	5.3	5.6	1.5
42"	7.2	7.9	1.9
48"	9.4	10.4	2.3
54"	12.0	13.3	2.7
60"	15.0	16.6	3.2
66"	18.5	20.5	3.7
72"	22.4	24.8	4.2



CONCRETE HEADWALLS AND APRONS

GENERAL NOTES:

1. ALL EDGES TO BE CHAMFERED 1 INCH.
2. THE RUBBING OF HEADWALLS TO REMOVE FORM MARKS AS REQUIRED IN THE NJDOT SPECIFICATIONS FOR CONCRETE STRUCTURES, WILL NOT BE REQUIRED FOR HEADWALLS AT THE BOTTOM OF EMBANKMENTS IN RURAL AREAS.
3. FOR SLOPE DRAIN HEADWALLS, DIMENSIONS AND APRON GRADES SHALL BE SET BY ENGINEER.
4. FOR MORE THAN ONE PIPE, SET THE PIPES A MINIMUM OF ONE FOOT APART (OUTSIDE BARREL TO OUTSIDE BARREL); THERE SHALL BE 12 INCHES ABOVE THE TOP OF A PIPE IN A WING-WALL. THE TERMINUS OF THE WINGWALL SHALL BE 2 X DIAMETER FROM THE CENTERLINE OF THE PIPE IN A WINGWALL.
5. THE TERMINUS FOR OUTLET AND INLET APRONS SHALL BE SET BY EXTENDING THE PIPE GRADE AHEAD AND BACK, RESPECTIVELY.
6. FOR ARCH PIPE, THE SPAN SHALL BE SUBSTITUTED FOR D.

SAYREVILLE THRUST BLOCKS DETAIL

NOT TO SCALE

REV	DATE	DRAWN BY	DESCRIPTION
1	4/24/23	RM	REVISED PER COUNTY & ARCHITECT
2	6/12/23	TL	REVISED PER BOROUGH ENGINEER'S REVIEW
3	4/29/24	KM	-
4	5/24/24	KM	-
5	6/21/24	KM	-

Colliers Engineering & Design

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ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN ANY STATE
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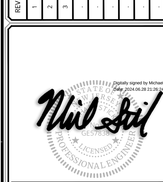


Michael Stickle
NEW JERSEY LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: GE57838
COLLIERS ENGINEERING & DESIGN, INC.
N.J. C.O.A. #: 24GA27986500

PRELIMINARY AND FINAL MAJOR SITE PLAN

FOR

JERNEE MILL INDUSTRIAL

BLOCK 58
LOTS 2.01 & 9

BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY
NEW JERSEY

Colliers Engineering & Design
HOLMDEL (Headquarters)
101 Crawfords Corner Road, Suite 3400
Holmdel, NJ 07733
Phone: 732.383.1950
COLLIERS ENGINEERING & DESIGN, INC. DOING BUSINESS AS MASER CONSULTING

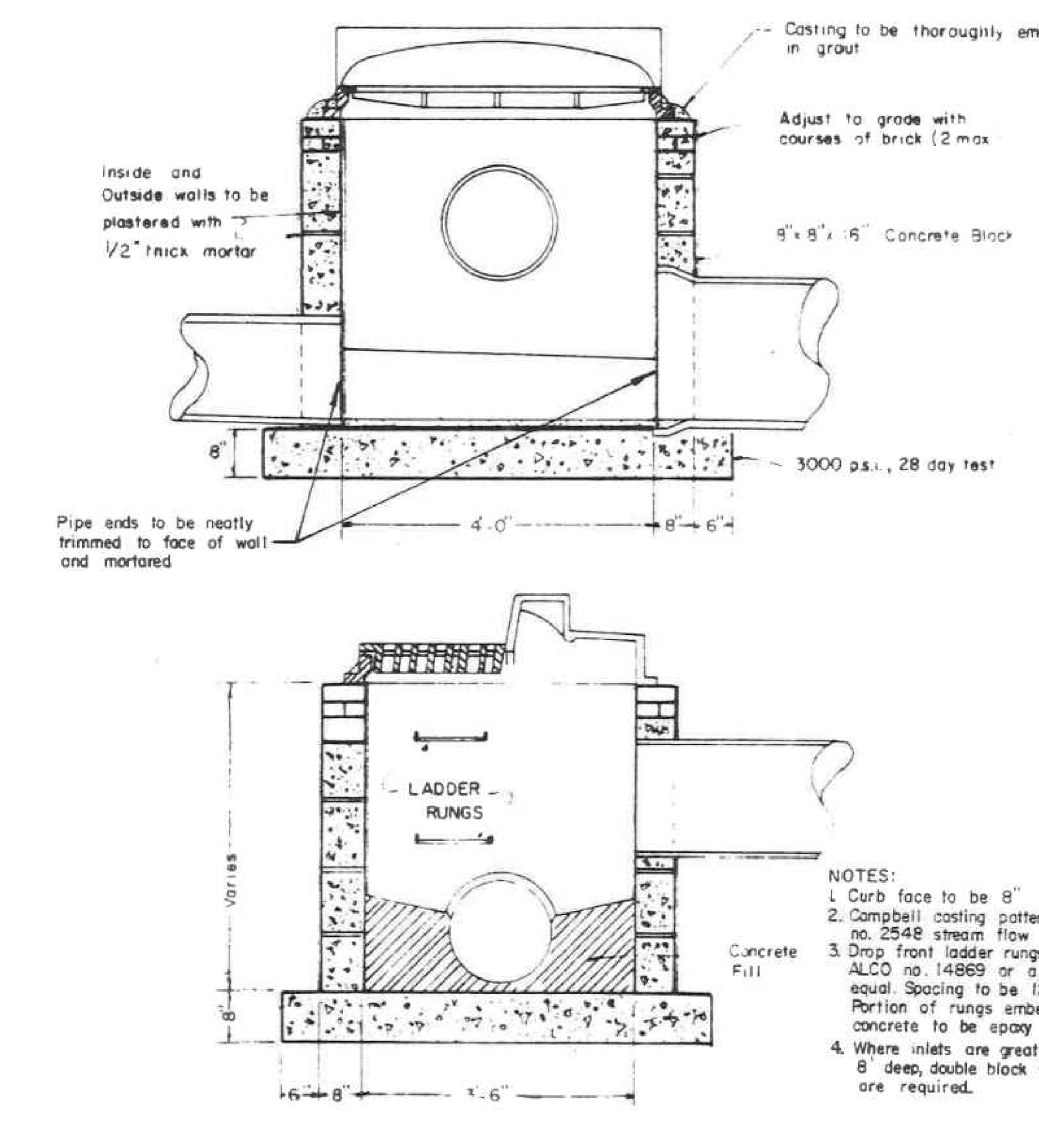
SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	6/12/2023	RM	DB

PROJECT NUMBER: 10000657C
DRAWING NAME: C-DTLS

SHEET TITLE: CONSTRUCTION DETAILS

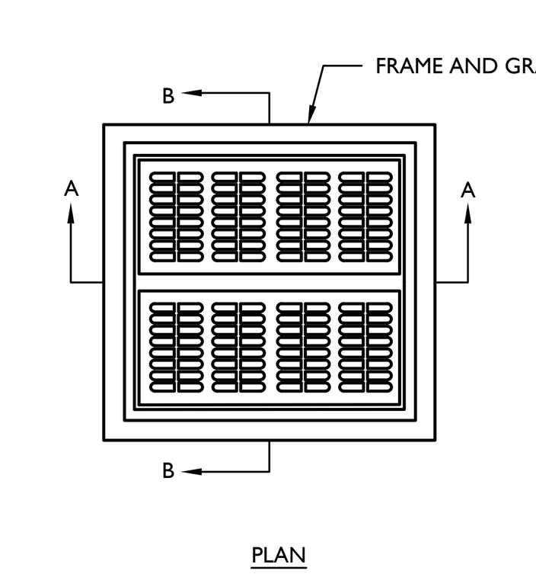
SHEET NUMBER: 30 of 37

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



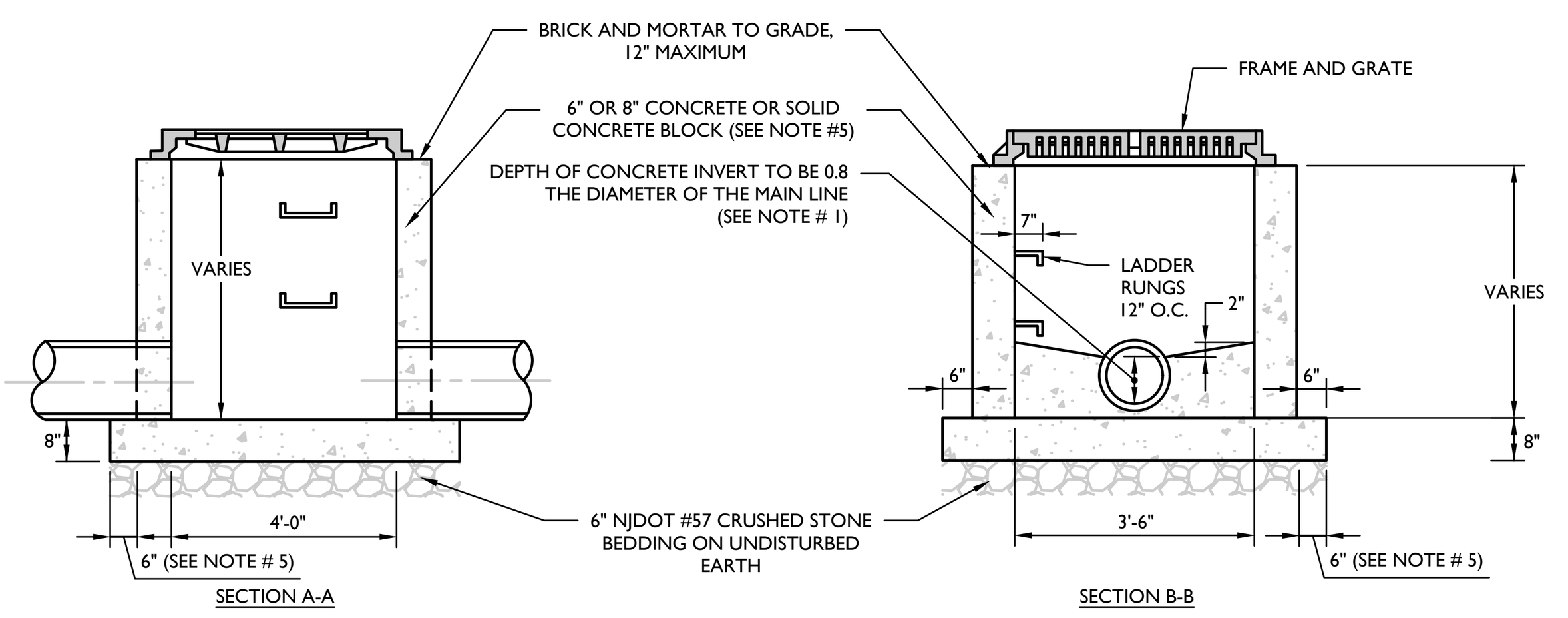
TYPE 'B' INLET DETAIL

NOT TO SCALE — MCNJ-UTIL-STRM-1100 — MOD: 06/21/24 02/01/19



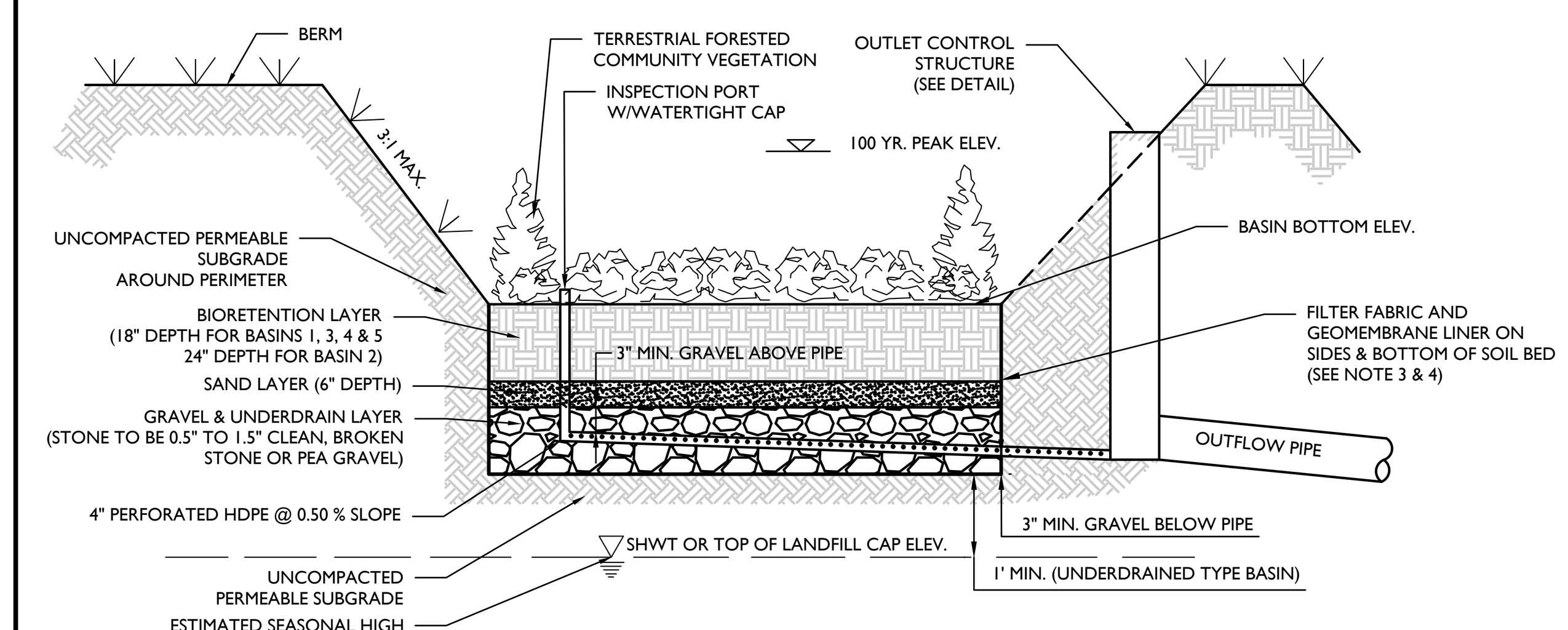
NOTES:

1. INVERTS TO BE ELIMINATED IN BOTTOM OF TERMINAL INLETS, BOTTOMS SHALL BE DISHED AND SLOPED TOWARDS THE OUTLET PIPE AT A RATE OF GRADE OF 2 INCHES PER FOOT.
2. THIS INLET SHALL BE CONSTRUCTED OF CONCRETE OR PRECAST CONCRETE. IF CONCRETE BLOCK IS USED, THE BOTTOM SHALL BE AS SHOWN FOR CONCRETE & THE OUTSIDE OF THE WALLS SHALL BE PLASTERED WITH 1/2" COAT OF 1:2 CEMENT SAND MORTAR. THE INSIDE WALLS JOINTS SHALL BE STRUCK AND POINTED.
3. PROVIDE 7/8" DIA. X 7" X 12", 12" O.C. COPOLYMER POLYPROPYLENE PLASTIC STEPS WITH 1/2" DIA. GRADE 60 STEEL REINFORCEMENT, PS2-PF OR PS2-B WITH PRECAST PRESS FIT INSERTS, OR APPROVED EQUIVALENT.
4. INLET FRAME AND GRATES TO BE CAMPBELL FOUNDRY PATTERN **# 3425** OR APPROVED EQUAL.
5. WHEN DEPTH IS GREATER THEN 12' THE WALLS SHOULD BE EITHER 8" THICK CONCRETE OR 8" SOLID CONCRETE BLOCK AND THE FOOTING SHALL BE EXTENDED TO 12" BEYOND THE OUTSIDE WALLS.
6. ALL CONCRETE TO BE NJDOT CLASS "B"
7. IN ACID SOILS, TWO COATS OF BITUMASTIC WATER PROOFING SHALL BE APPLIED PER MANUFACTURER'S SPECIFICATION.
8. INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH H-20 LOADING REQUIREMENTS.



TYPE "E" INLET DETAIL

MCNJ-UTIL-STRM-1200 — 02/01/19



PROPOSED STORMWATER BMP INFO

BMP ID	BMP TYP	SHWT / TOP OF LANDFILL CAP EL.	BOTTOM OF STONE EL. (STONE W/ PIPES FOR UNDERDRAINED BMPS)	UNDERDRAIN INV.	BOTTOM OF BIO MEDIA LAYER EL.	BMP SURFACE BOTTOM EL.	WQ STORM EL.	100-YR STORM EL.	EMERGENCY SPILLWAY BOTTOM EL.	TOP OF BMP BERM EL.
1	BIO (18" MEDIA) W/ UNDERDRAIN	±11.50	12.50	12.75	14.50	16.00	16.90	18.99	19.00	20.50
2	BIO (18" MEDIA) W/ UNDERDRAIN	±10.50	13.60	13.85	15.50	17.00	17.96	20.01	20.10	21.50
3	BIO (18" MEDIA) W/ UNDERDRAIN	± 6.00	7.00	7.25	9.00	10.50	11.25	12.24	12.25	13.50
4	BIO (18" MEDIA) W/ UNDERDRAIN	± 8.25	9.45	9.70	11.10	12.60	13.57	15.50	15.55	16.80
5	BIO (18" MEDIA) W/ UNDERDRAIN	± 8.25	9.45	9.70	11.10	12.60	13.56	15.50	15.55	16.80

NOTES:

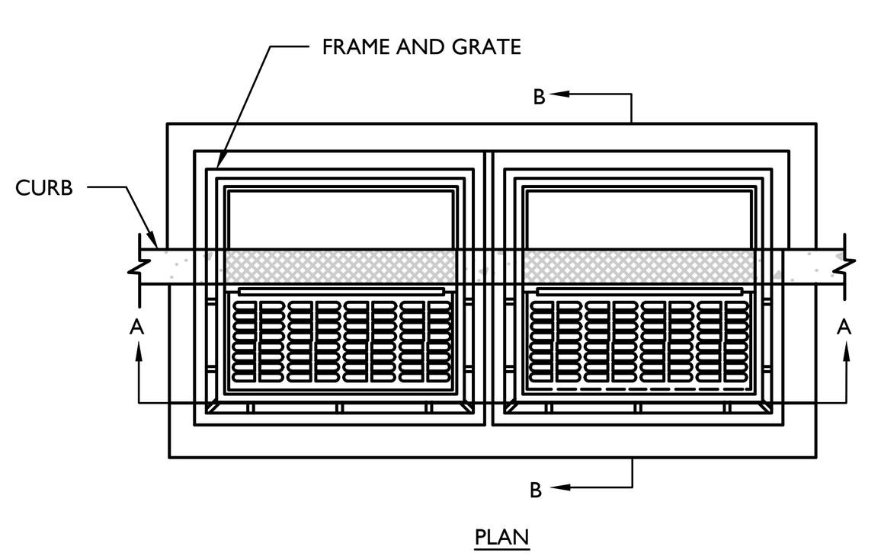
1. THE BIORETENTION SYSTEM CONSISTING OF A SOIL BED PLANTED WITH TERRESTRIAL FORESTED COMMUNITY VEGETATION PER LANDSCAPE PLAN SHALL BE CONSTRUCTED AND INSTALLED AS PER N.J.D.E.P. STORMWATER BEST MANAGEMENT PRACTICES MANUAL DESIGN CRITERIA.
2. THE PLANTING SOIL BED MATERIAL SHALL CONSIST OF THE FOLLOWING MIX, BY VOLUME: 85-95% SAND, WITH NO MORE THAN 25% OF THE SAND AS FINE OR VERY FINE SANDS; NO MORE THAN 15% SILT AND CLAY WITH 2-3% CLAY CONTENT. THE ENTIRE MIX SHALL BE AMENDED WITH 3-7% ORGANICS, BY WEIGHT, AND CERTIFIED BY THE VENDOR. THE MATERIAL'S PH SHOULD RANGE FROM 5.5 TO 6.5. THE MATERIAL SHALL BE PLACED IN 6" LIFTS. THE TOTAL DEPTH OF PLANTING SOIL BED SHALL BE A MINIMUM OF 1.5 FEET.
3. FILTER FABRIC SHALL BE PLACED ALONG SIDES OF PLANTING SOIL BED TO PREVENT THE MIGRATION OF SOIL PARTICLES FROM ADJACENT SOIL INTO THE PLANTING SOIL BED. WHERE AN UNDERDRAIN IS PROVIDED, FILTER FABRIC SHALL ALSO BE PROVIDED BELOW THE STONE IN WHICH THE UNDERDRAIN IS CONTAINED (FILTER FABRIC SHALL NOT BE INSTALLED ALONG THE BOTTOM OF NON-UNDERDRAINED BASINS). FILTER FABRIC SHALL BE NON-WOVEN GEOTEXTILE FABRIC, SUCH AS MIRAFI 140N, AMOCO 4547, GEOTEX 451, OR APPROVED EQUAL (AASHTO M288 CLASS 2; NJDOT SPECIFICATION 919.01). FILTER FABRIC SHALL BE OVERLAPPED BY MINIMUM 16" AT THE SEAM.
4. GEOMEMBRANE LINER SHALL BE INSTALLED WITH FILTER FABRIC ON BOTH THE TOP AND BOTTOM FACES OF THE LINER FOR ALL UNDERDRAINED BASINS. LINER SHALL BE 30 MIL MINIMUM.
5. THE VEGETATION IN THE BIORETENTION SYSTEM SHALL BE OF TERRESTRIAL FORESTED COMMUNITY VEGETATION.
6. DURING CLEARING AND GRADING OF THE SITE, MEASURES MUST BE TAKEN TO ELIMINATE SOIL COMPACTION AT THE LOCATION OF THE PROPOSED BIORETENTION SYSTEM. THE LOCATION OF THE PROPOSED BIORETENTION SYSTEM MUST BE CORDONED OFF DURING CONSTRUCTION TO PREVENT COMPACTION OF THE SUBSOIL BY CONSTRUCTION EQUIPMENT OR STOCKPILES.
7. THE LOCATION OF THE PROPOSED BIORETENTION SYSTEM SHOULD NOT BE USED TO PROVIDE SEDIMENT CONTROL DURING CONSTRUCTION; HOWEVER, WHEN UNAVOIDABLE, THE BOTTOM OF THE SEDIMENT CONTROL BASIN SHOULD BE AT LEAST 2 FEET ABOVE THE FINAL DESIGN ELEVATION OF THE BOTTOM OF THE SOIL BED IN THE BIORETENTION BASIN.
8. THE CONTRIBUTING DRAINAGE AREA MUST BE COMPLETELY STABILIZED PRIOR TO BIORETENTION SYSTEM USE.
9. THE BIORETENTION BED SOIL MUST BE TESTED BEFORE DELIVERY TO THE SITE AND CONFORM TO THE SPECIFICATIONS OF DESIGN PERMEABILITY RATES. A CERTIFICATION FROM THE SUPPLIER OR ACCREDITED LABORATORY WILL BE REQUIRED.
10. POST-CONSTRUCTION TESTING MUST BE PERFORMED ON THE AS-BUILT BIORETENTION SYSTEM IN ACCORDANCE WITH THE CONSTRUCTION AND POST-CONSTRUCTION OVERSIGHT AND SOIL PERMEABILITY TESTING SECTION IN CHAPTER 12: SOIL TESTING CRITERIA OF THE N.J.D.E.P. BMP MANUAL. TO ENSURE THAT THE AS-BUILT SYSTEM FUNCTIONS AS DESIGNED, POST-CONSTRUCTION TESTING MUST INCLUDE A DETERMINATION OF THE PERMEABILITY RATES OF THE SOIL BED AND THE HYDRAULIC CAPACITY OF THE UNDERDRAIN, IN UNDERDRAINED SYSTEMS, OR THE PERMEABILITY OF THE SUBSOIL, IN INFILTRATION SYSTEMS.

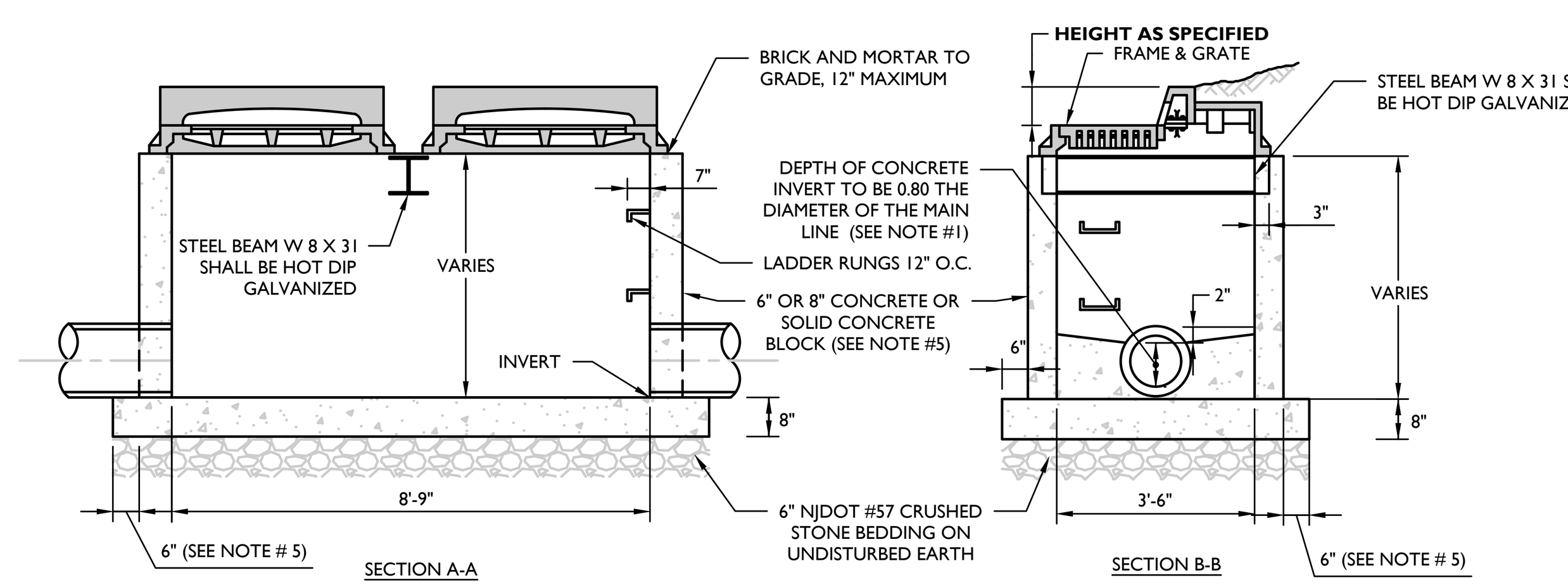
BIORETENTION BASIN CROSS-SECTION DETAIL

NOT TO SCALE — GNRL-DTLS-STND-GRID — XX/XX/XX

NOTES:

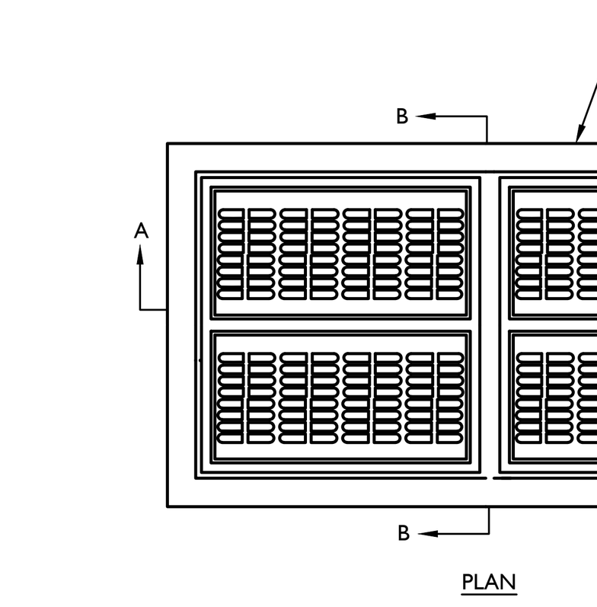
1. INVERTS TO BE ELIMINATED IN BOTTOM OF TERMINAL INLETS, BOTTOMS SHALL BE DISHED AND SLOPED TOWARDS THE OUTLET PIPE AT A RATE OF GRADE OF 2 INCHES PER FOOT.
2. THIS INLET SHALL BE CONSTRUCTED OF CONCRETE OR PRECAST CONCRETE. IF CONCRETE BLOCK IS USED, THE BOTTOM SHALL BE AS SHOWN FOR CONCRETE & THE OUTSIDE OF THE WALLS SHALL BE PLASTERED WITH 1/2" COAT OF 1:2 CEMENT SAND MORTAR. THE INSIDE WALL JOINTS SHALL BE STRUCK AND POINTED.
3. PROVIDE 7/8" DIA. X 7" X 12", 12" O.C. COPOLYMER POLYPROPYLENE PLASTIC STEPS WITH 1/2" DIA. GRADE 60 STEEL REINFORCEMENT, PS2-PF OR PS2-B WITH PRECAST PRESS FIT INSERTS, OR APPROVED EQUIVALENT.
4. INLET FRAME AND GRATES TO BE CAMPBELL FOUNDARY **# 2618** WITH **6"** OR **8"** TYPE **N** ECO CURB PIECE OR APPROVED EQUAL.
5. WHEN DEPTH IS GREATER THAN 12' THE WALLS SHOULD BE 8" THICK CONCRETE OR 8" SOLID CONCRETE BLOCK AND THE FOOTING SHALL BE EXTENDED TO 12" BEYOND THE OUTSIDE WALLS.
6. ALL CONCRETE TO BE NJDOT CLASS "B".
7. IN ACID SOILS, TWO COATS OF BITUMASTIC WATER PROOFING SHALL BE APPLIED PER MANUFACTURER'S SPECIFICATION.
8. INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH H-20 LOADING REQUIREMENTS.





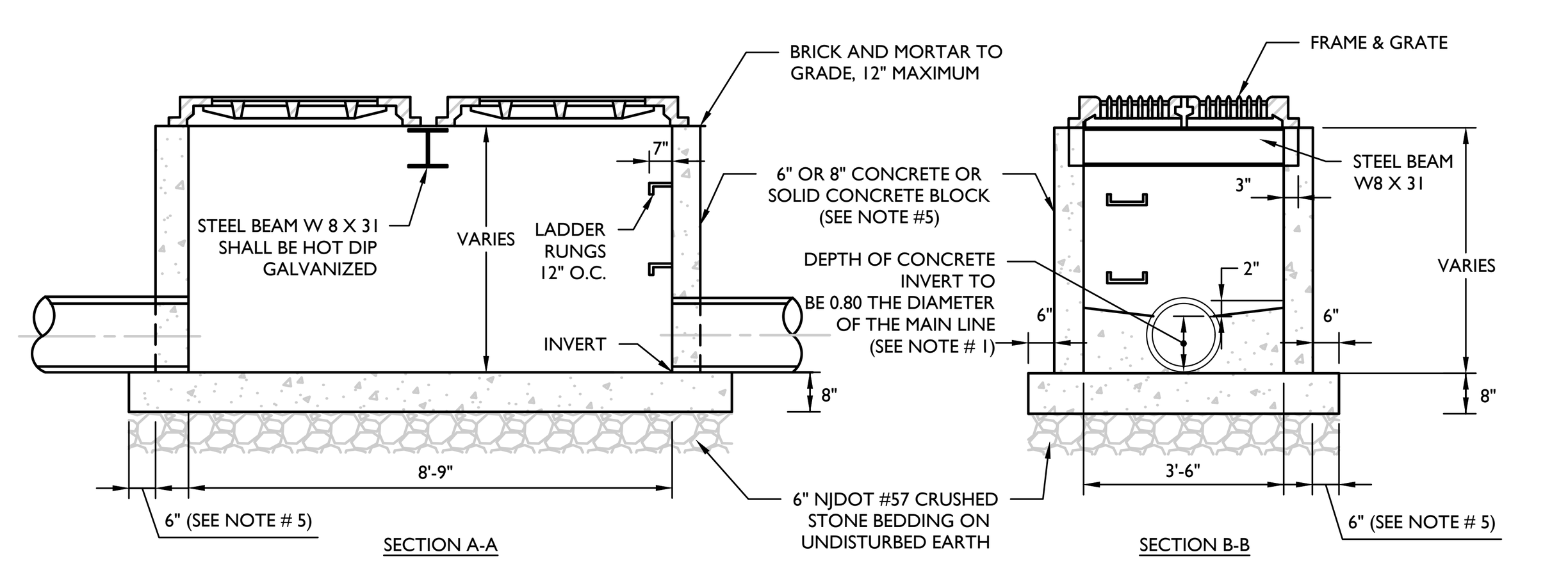
TYPE "DOUBLE B" INLET DETAIL

NOT TO SCALE — MCNJ-UTIL-STRM-1101 — 02/01/19



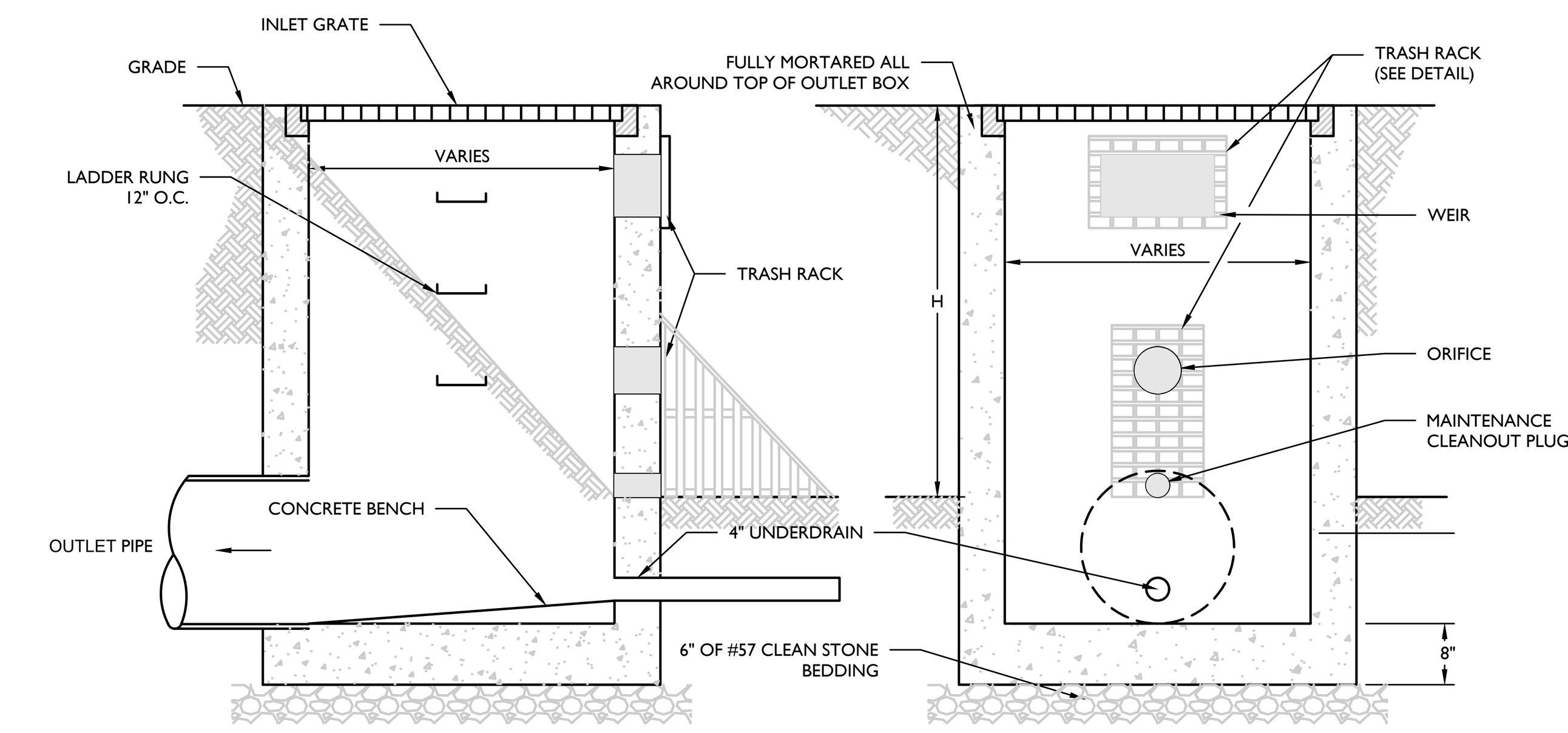
NOTES:

1. INVERTS TO BE ELIMINATED IN BOTTOM OF TERMINAL INLETS. BOTTOMS SHALL BE DISHED AND SLOPED TOWARDS THE OUTLET PIPE AT A RATE OF GRADE OF 2 INCHES PER FOOT.
2. THIS INLET SHALL BE CONSTRUCTED OF CONCRETE OR PRECAST CONCRETE. IF CONCRETE BLOCK IS USED, THE BOTTOM SHALL BE AS SHOWN FOR CONCRETE & THE OUTSIDE OF THE WALLS SHALL BE PLASTERED WITH 1/2" COAT OF 1:2 CEMENT SAND MORTAR, THE INSIDE WALL JOINTS SHALL BE STRUCK AND POINTED.
3. PROVIDE 7/8" DIA. X 7" X 12", 12" O.C. COPOLYMER POLYPROPYLENE PLASTIC STEPS WITH 1/2" DIA. GRADE 60 STEEL REINFORCEMENT, PS2-PF OR PS2-B WITH PRECAST PRESS FIT INSERTS, OR APPROVED EQUIVALENT.
4. INLET FRAME AND GRATES TO BE CAMPBELL FOUNDRY PATTERN **# 3425** OR APPROVED EQUAL.
5. WHEN DEPTH IS GREATER THAN 12' THE WALLS SHOULD BE EITHER 8" THICK CONCRETE OR SOLID CONCRETE BLOCK AND THE FOOTING SHALL BE EXTENDED TO 12" BEYOND THE OUTSIDE WALLS.
6. ALL CONCRETE TO BE NJDOT CLASS "B".
7. IN ACID SOILS, TWO COATS OF BITUMASTIC WATER PROOFING SHALL BE APPLIED PER MANUFACTURER'S SPECIFICATION.
8. INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH H-2O LOADING REQUIREMENTS.



TYPE "DOUBLE E" INLET DETAIL

NOT TO SCALE — MCNJ-UTIL-STRM-1201 — 02/01/19



BASIN #	OCS ID	GRATE ELEVATION	ORIFICE / WEIR #1	ORIFICE / WEIR #2	ORIFICE / WEIR #3	ORIFICE / WEIR #4
1	S-88	EL. 18.85	2.5 IN AT EL. 16.90	3.5 FT WEIR AT EL. 18.00	N/A	N/A
2	S-53	EL. 20.05	2.5 IN AT EL. 18.00	3.5 FT WEIR AT EL. 19.00	N/A	N/A
3	S-33	EL. 12.10	3.5 FT WEIR AT EL. 11.25	N/A	N/A	N/A
4	S-12C	EL. 15.40	2 X 5.6 IN AT EL. 13.60	1.1 FT WEIR AT EL. 14.50	N/A	N/A
5	S-11	EL. 15.40	3 X 6 IN AT EL. 13.60	2.0 FT WEIR AT EL. 14.50	N/A	N/A
UG 1 & 2	S-21	N/A	2.5 IN AT EL. 14.50	2 X 4.8 IN AT EL. 15.50	2 X 4.0 IN AT EL. 17.10	2.7 FT WEIR AT EL. 18.50

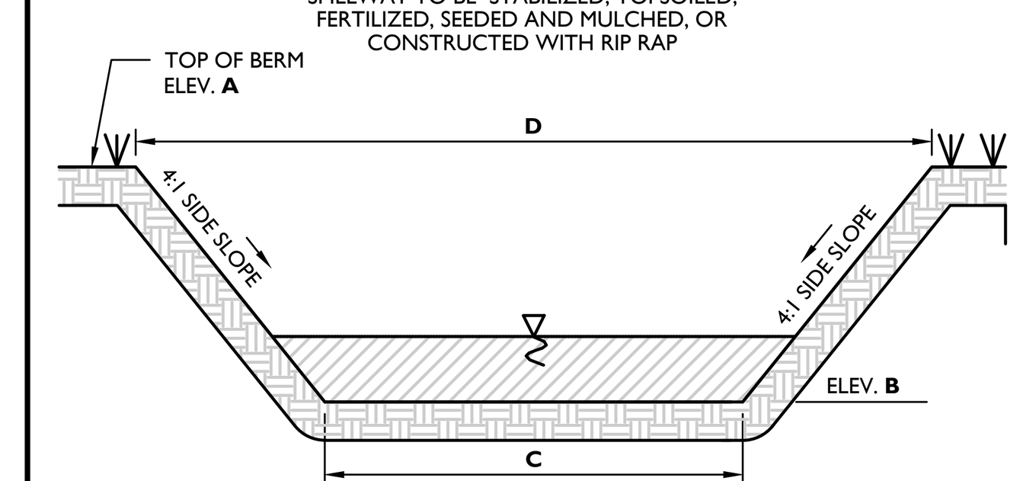
NOTES:

1. CONTRACTOR TO SUBMIT SHOP DRAWING FOR REVIEW AND APPROVAL.
2. ALL CONCRETE TO BE 4,500 PSI.
3. REFER TO UTILITY PLAN FOR OUTLET PIPE INFORMATION.

OUTLET CONTROL STRUCTURE DETAIL (SINGLE CHAMBER)

NOT TO SCALE — MCNJ-UTIL-STMW-18001 — MOD: 06/27/24 06/01/19

SPILLWAY TO BE STABILIZED, TOPSOILED, FERTILIZED, SEEDED AND MULCHED, OR CONSTRUCTED WITH RIP RAP



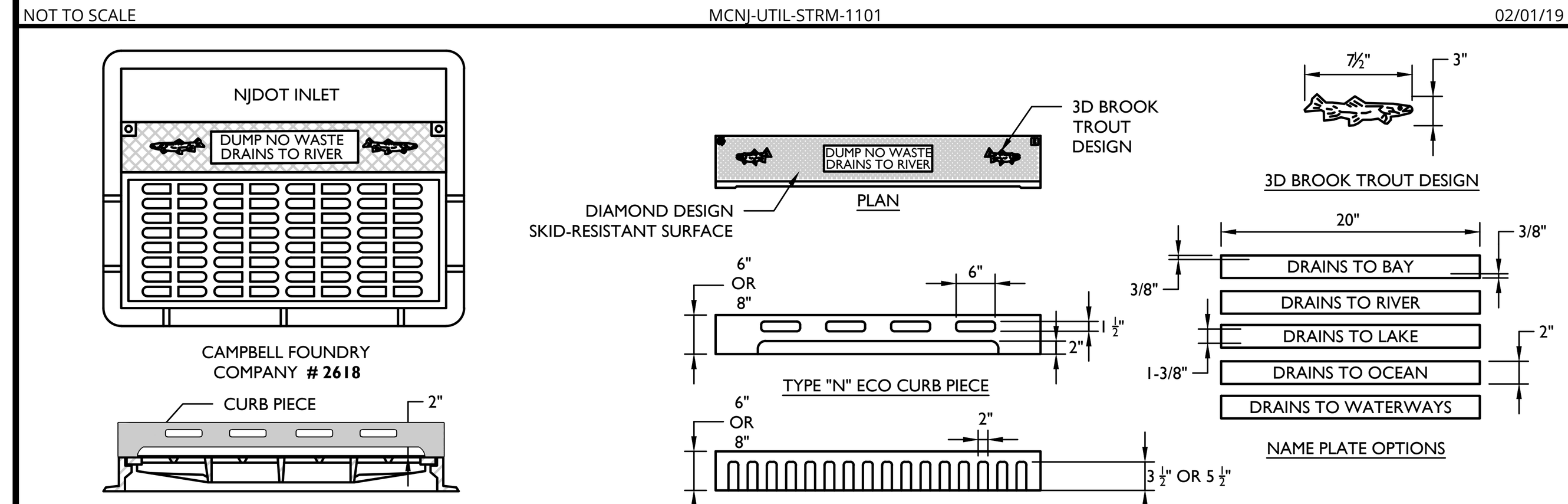
BASIN #	A	B	C	D
1	EL. 20.50	EL. 19.00	50 FT.	62 FT.
2	EL. 21.50	EL. 20.10	40 FT.	51.2 FT.
3	EL. 13.55	EL. 12.25	60 FT.	70.4 FT.
4 / 5	EL. 16.80	EL. 15.55	130 FT.	140 FT.

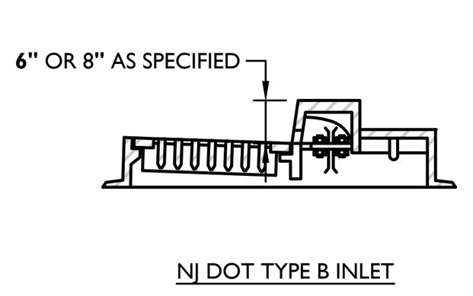
NOTES:

1. 0% SLOPE ACROSS EMERGENCY SPILLWAY.
2. SPILLWAY SURFACE TO BE STABILIZED AS SHOWN ON THE PLANS.

EMERGENCY SPILLWAY DETAIL

NOT TO SCALE — MCNJ-UTIL-STMW-2300 — 05/01/17



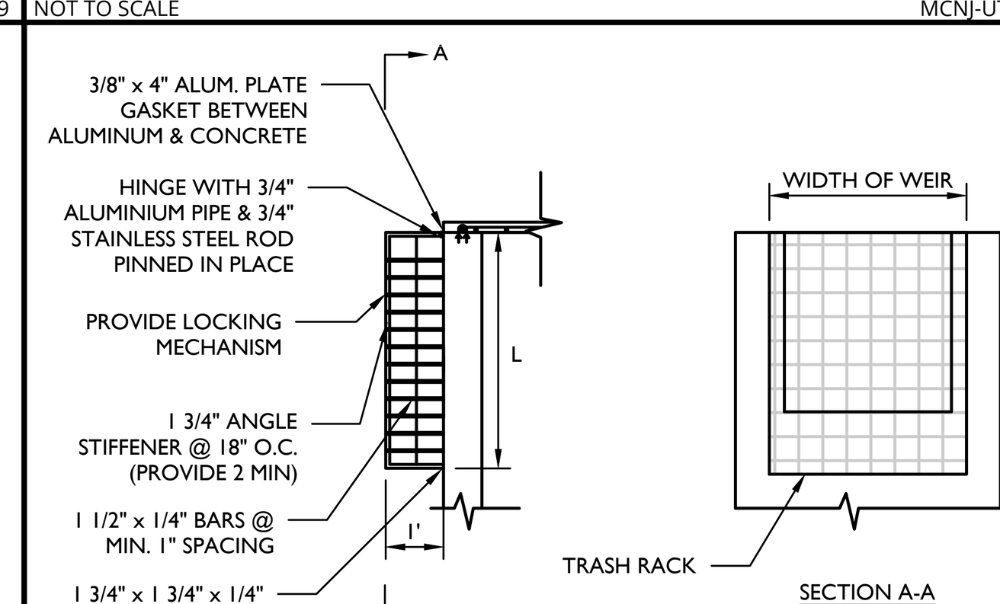


NOTES:

1. MATERIALS: GREY CAST IRON ASTM A48-83, CLASS 30B
2. IN RETROFIT SITUATIONS THIS CURB PIECE (HEAD) WILL FIT EXISTING CAMPBELL FOUNDARY CO. MANUFACTURED CURB INLETS FOR NJDOT TYPES B, B-1, B-2, D, D-1, AND D-2.
3. NAMEPLATE MESSAGE CAN BE MODIFIED TO PROJECT SPECIFIC NEEDS WITHIN AREA SHOWN.
4. CASTING SUPPLIED WITHOUT SURFACE COATING.
5. TYPE "N" OR "J" ECO CURB PIECE PER LOCAL REQUIREMENTS.

ECO CURB PIECE DETAIL

NOT TO SCALE — MCNJ-UTIL-STRM-2001 — 05/01/17

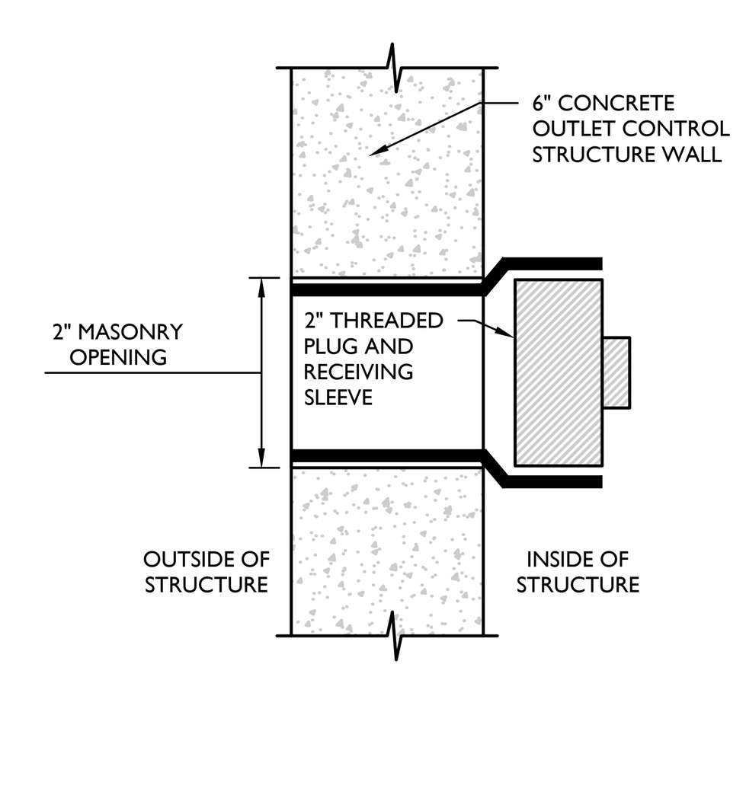


TRASH RACK NOTES:

1. MINIMUM BAR SPACING: 1 INCH.
2. MAXIMUM BAR SPACING: 1/3 THE DIAMETER OF THE ORIFICE OR 1/3 THE WIDTH OF WEIR, WITH A MAXIMUM SPACING OF 6 INCHES, FOR ELEVATIONS IN EXCESS OF WATER QUALITY DESIGN STORM.
3. MAXIMUM AVERAGE VELOCITY OF FLOW THROUGH CLEAN RACK: 2.5 FEET/SECOND.
4. CONSTRUCTED OR RIGID, DURABLE AND CORROSION RESISTANT MATERIAL, AND
5. DESIGNED TO WITHSTAND A PERPENDICULAR LIVE LOADING OF 300 LBS./SF.
6. CONTRACTOR TO SUBMIT SHOP DRAWINGS.

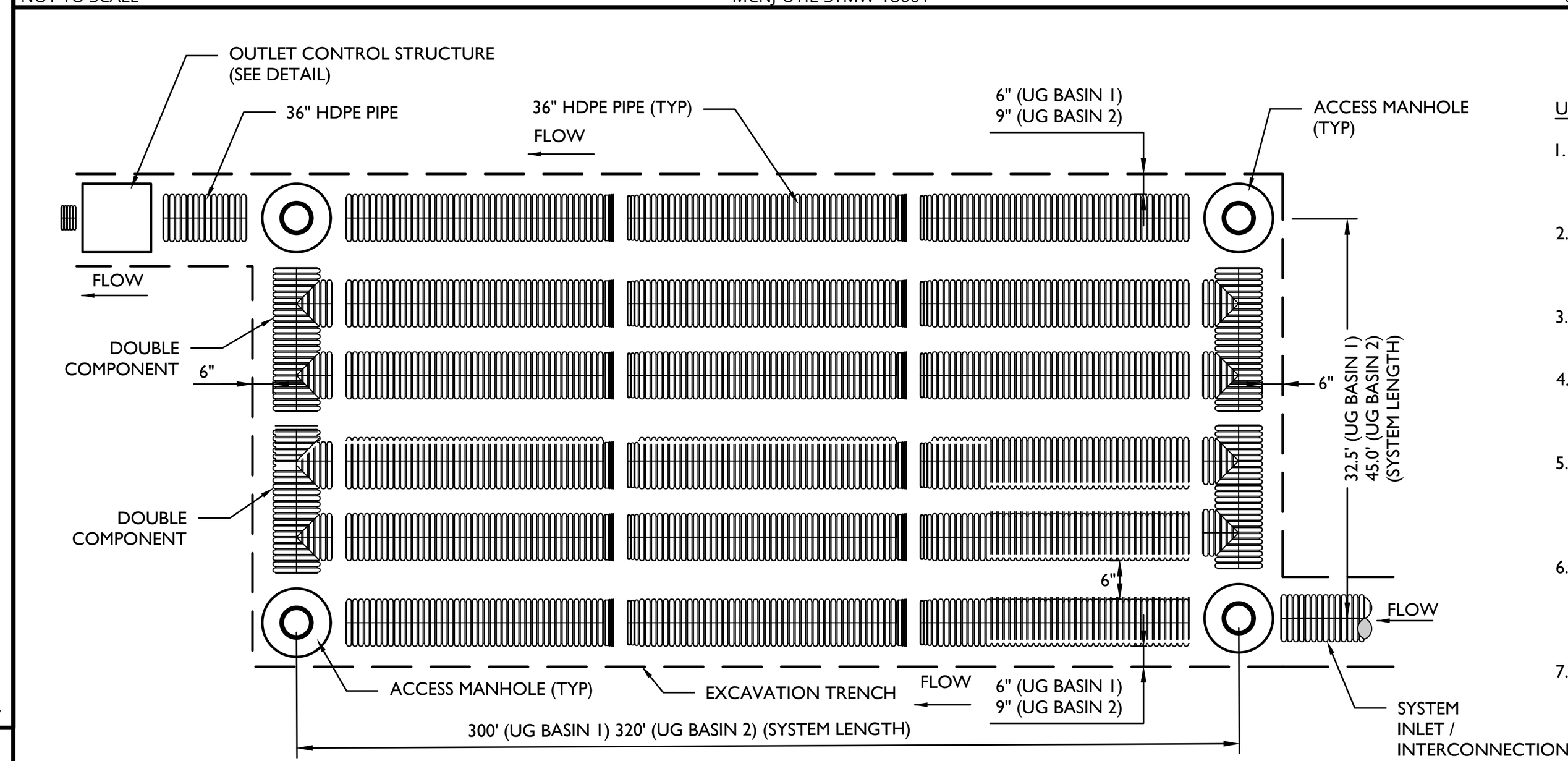
FLAT TRASH RACK DETAIL

NOT TO SCALE — MCNJ-UTIL-STMW-2000 — 05/01/17



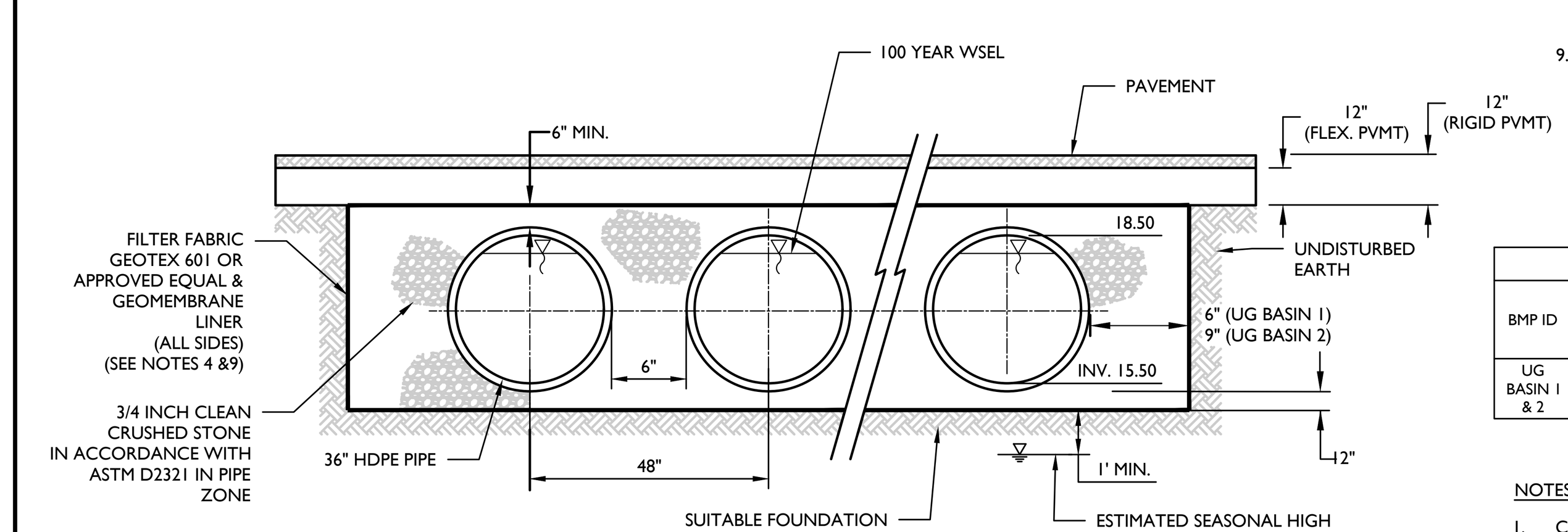
OUTLET CONTROL STRUCTURE MAINTENANCE CLEANOUT PLUG

NOT TO SCALE — MCNJ-UTIL-STMW-4000 — 05/01/17



UNDERGROUND HDPE SYSTEM NOTES:

1. ALL REFERENCES TO CLASS I OR II MATERIAL ARE PER ASTM D2321 "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST EDITION.
2. ALL RETENTION AND DETENTION SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, LATEST EDITION AND THE MANUFACTURER'S PUBLISHED INSTALLATION GUIDELINES.
3. MEASURES SHOULD BE TAKEN TO PREVENT THE MIGRATION OF NATIVE FINES INTO THE BACKFILL MATERIAL, WHEN REQUIRED. SEE ASTM D2321.
4. FILTER FABRIC: A GEOTEXTILE FABRIC MAY BE USEDAS SPECIFIED BY THE ENGINEER TO PREVENT THE MIGRATION OF FINES FROM THE NATIVE SOIL INTO THE SELECT BACKFILL MATERIAL.
5. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
6. BEDDING: SUITABLE MATERIAL SHALL BE CLASS IOR II. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" FOR 4"-24" PIPES; 6" FOR 30"-60" PIPES.
7. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I OR II INTHE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
8. MINIMUM COVER: MINIMUM COVER OVER ALL RETNETION/DETENTION SYSTEMS IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER IS 12" UP TO 36" DIAMETER PIPE AND 24" OF COVER FOR 42" - 60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.
9. GEOMEMBRANE LINER - 30 MIL (MIN.) GEOMEMBRANE LINER SHALL BE INSTALLED WITH FILTER FABRIC ON BOTH THE TOP AND BOTTOM FACES OF THE LINER.



PROPOSED STORMWATER BMP INFO

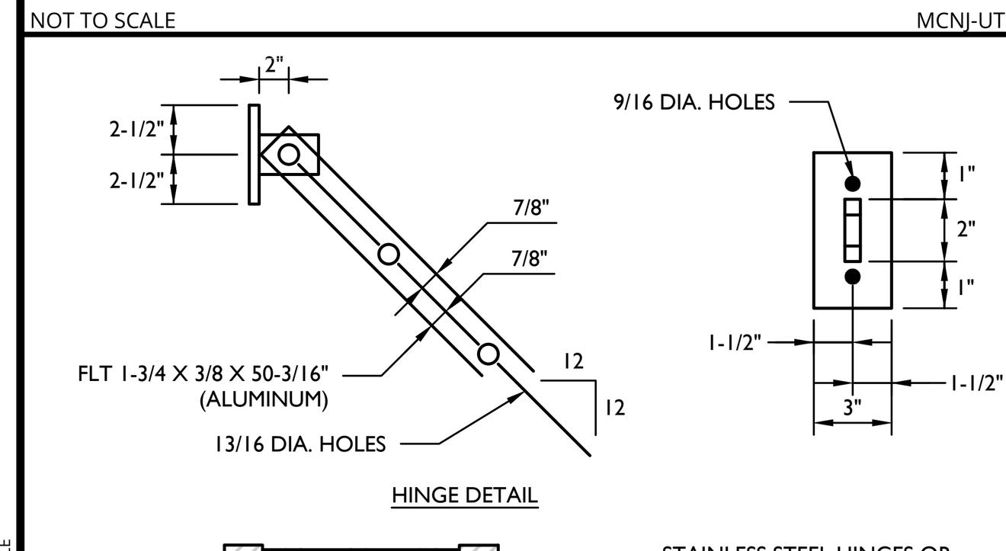
BMP ID	SHWT / TOP OF LANDFILL CAP EL.	TOP OF STONE EL.	BOTTOM OF STONE EL.	PIPE INVERT OF SYSTEM	WQ STORM EL.	100-YR STORM EL.
UG BASIN 1 & 2	±7.00 (B-4)	19.50	14.50	15.50	16.25	19.34

NOTES:

1. CLASS 1A BACKFILL MATERIAL PER ASTM 2321 REQUIRED FOR PIPES 60" DIAMETER OR LARGER.

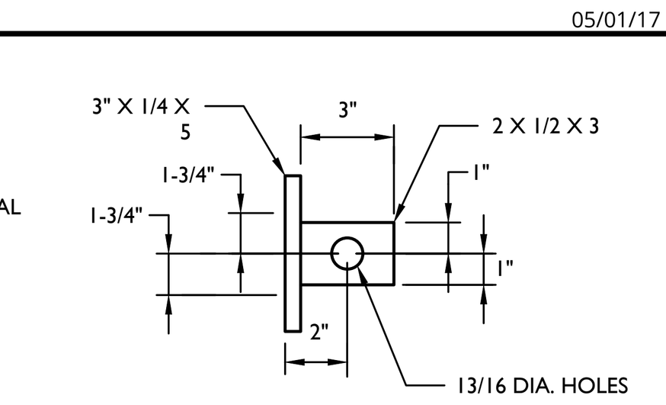
UNDERGROUND DETENTION BASIN (CLOSED SYSTEM) DETAIL

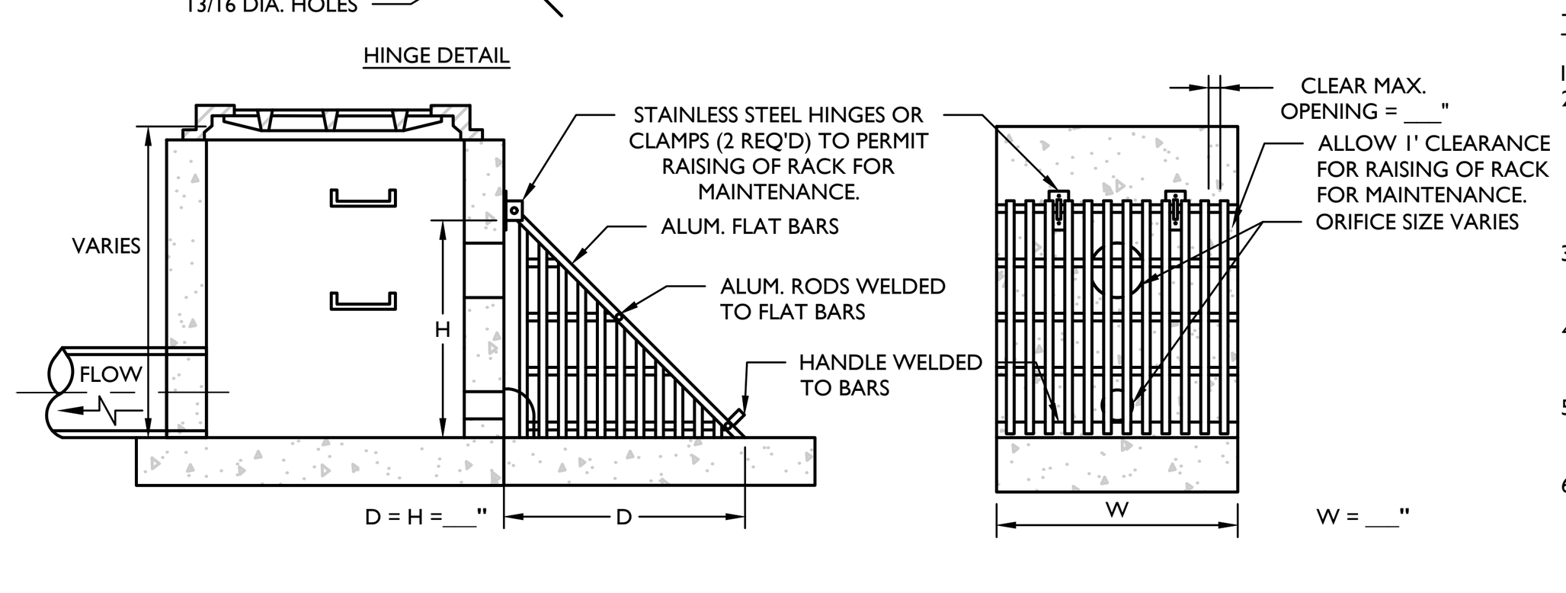
NOT TO SCALE — MCNJ-UTIL-STMW-14001 — 05/01/18



NOTES:

ALL GRATING AND BAR MATERIAL TO BE 6061-T6 ALUMINUM ALL HARDWARE TO BE TYPE 304 STAINLESS STEEL.



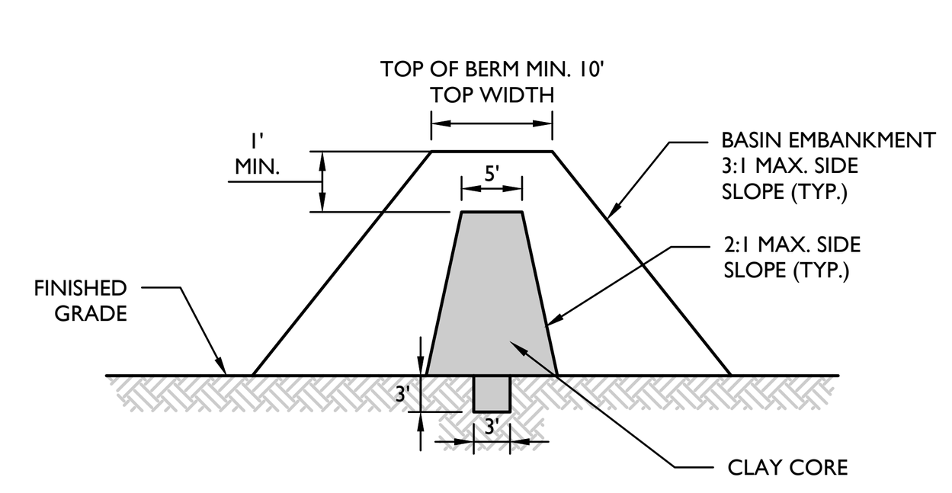


TRASH RACK NOTES:

1. MINIMUM BAR SPACING: 1 INCH.
2. MAXIMUM BAR SPACING: 1/3 THE DIAMETER OF THE ORIFICE OR 1/3 THE WIDTH OF WEIR, WITH A MAXIMUM SPACING OF 6 INCHES, FOR ELEVATIONS IN EXCESS OF WATER QUALITY DESIGN STORM.
3. MAXIMUM AVERAGE VELOCITY OF FLOW THROUGH CLEAN RACK: 2.5 FEET/SECOND.
4. CONSTRUCTED OR RIGID, DURABLE AND CORROSION RESISTANT MATERIAL, AND
5. DESIGNED TO WITHSTAND A PERPENDICULAR LIVE LOADING OF 300 LBS./SF.
6. CONTRACTOR TO SUBMIT SHOP DRAWINGS.

SLANTED TRASH RACK DETAIL

NOT TO SCALE — MCNJ-UTIL-STMW-2002 — 06/01/19



NOTES:

1. EMBANKMENT CORE TO BE UNIFIED SOIL CLASSIFICATION GROUP CL OR APPROVED EQUAL. COMPACT TO 95% MAXIMUM DENSITY (ASTM D-1557).
2. ON-SITE MATERIAL MAY BE USED TO FORM THE EMBANKMENT CORE IF THE MATERIAL MEETS THE CRITERIA IN NOTE # 1 ABOVE.
3. CLAY CORE SHALL BE PLACE WITHIN THE "FILL" PORTION OF THE DETENTION OR RETENTION BASIN.

BASIN CLAY CORE DETAIL

NOT TO SCALE — MCNJ-UTIL-STMW-2100 — 05/01/17

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811 Know what's below. Call before you dig.
FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION
1	8/28/23	RM	REVISED PER NJDEP
2	4/19/24	TL	REVISED PER CLIENT & ARCHITECT
3	6/28/24	RM	REVISED PER BOROUGH ENGINEER'S REVIEW

Digitally signed by Michael Stickle Date: 2024.06.28 21:26:25-04'00'

Michael Stickle
NEW JERSEY LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: GE57838
COLLIERS ENGINEERING & DESIGN, INC.
N.J. C.O.A. #: 24GA27986500

PRELIMINARY AND FINAL MAJOR SITE PLAN

FOR

JERNEE MILL INDUSTRIAL

BLOCK 58
LOTS 2.01 & 9

BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY
NEW JERSEY

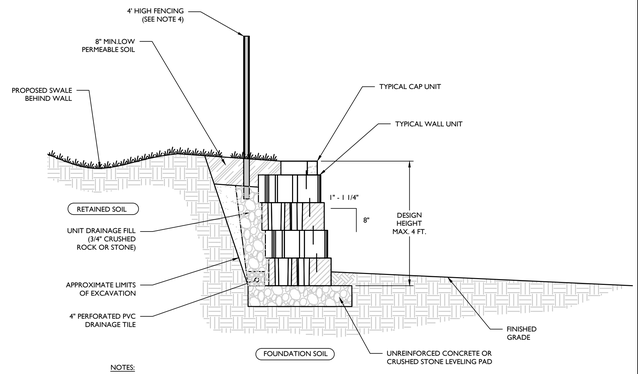
Colliers Engineering & Design
HOLMDEL (Headquarters)
101 Crawfords Corner Road, Suite 3400
Holmdel, NJ 07733
Phone: 732.383.1950
COLLIERS ENGINEERING & DESIGN, INC. DOING BUSINESS AS MASER CONSULTING

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	6/12/2023	RM	DB
PROJECT NUMBER: 10000657C	DRAWING NAME: C-DTLS		

SHEET TITLE: CONSTRUCTION DETAILS

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

2010\10000657C\Engineering\Site Plans\C-DTLS.dwg\C-031-DETAILS By: MSTICKLE

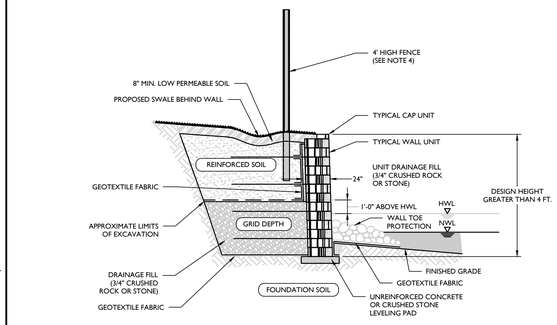


NOTES:

1. THIS DETAIL IS A SCHEMATIC REPRESENTATION FOR MUNICIPAL AND/OR AGENCY APPROVALS AND IS NOT INTENDED TO BE USED FOR CONSTRUCTION.
2. CONTRACTOR TO PROVIDE SITE-SPECIFIC SHOP DRAWINGS AND STRUCTURAL DESIGN CALCULATIONS FOR EACH RETAINING WALL PREPARED BY A STATE LICENSED PROFESSIONAL ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
3. MODULAR CONCRETE BLOCK WALL TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
4. A SAFETY BARRIER (FENCING) IS REQUIRED ON ALL WALLS WHERE THE WALL HEIGHT EXCEEDS 30". PLACEMENT AND INSTALLATION METHOD OF THE PROPOSED FENCING TO BE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

TYPICAL GRAVITY WALL SECTION (MAXIMUM 4FT. DESIGN HEIGHT) DETAIL

NOT TO SCALE | MCCM-SITE-WALL-1000 | 10/01/19



NOTES:

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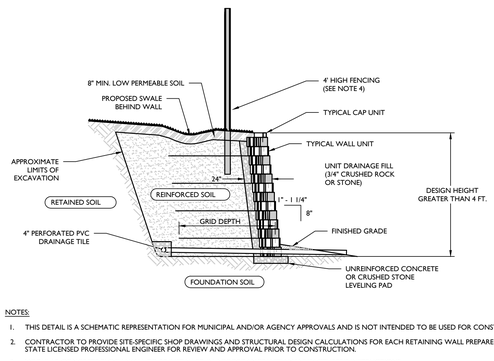
2. CONTRACTOR TO PROVIDE SITE-SPECIFIC SHOP DRAWINGS AND STRUCTURAL DESIGN CALCULATIONS FOR EACH RETAINING WALL PREPARED BY A STATE LICENSED PROFESSIONAL ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
3. MODULAR CONCRETE BLOCK WALL TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
4. A SAFETY BARRIER (FENCING) IS REQUIRED ON ALL WALLS WHERE THE WALL HEIGHT EXCEEDS 30". PLACEMENT AND INSTALLATION METHOD OF THE PROPOSED FENCING TO BE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

TYPICAL REINFORCED WATER WALL SECTION (POND) DETAIL

NOT TO SCALE | MCCM-SITE-WALL-1102 | 10/01/19



NOTES:

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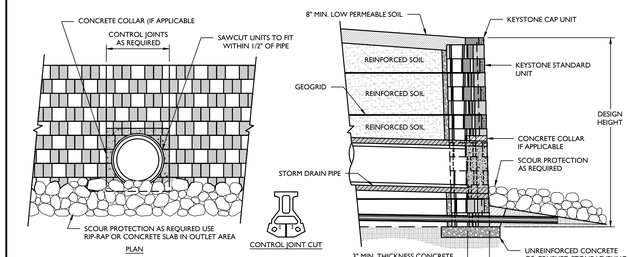
2. CONTRACTOR TO PROVIDE SITE-SPECIFIC SHOP DRAWINGS AND STRUCTURAL DESIGN CALCULATIONS FOR EACH RETAINING WALL PREPARED BY A STATE LICENSED PROFESSIONAL ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
3. MODULAR CONCRETE BLOCK WALL TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
4. A SAFETY BARRIER (FENCING) IS REQUIRED ON ALL WALLS WHERE THE WALL HEIGHT EXCEEDS 30". PLACEMENT AND INSTALLATION METHOD OF THE PROPOSED FENCING TO BE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

TYPICAL REINFORCED WALL SECTION (1" TO 1-1/4" SETBACK) DETAIL

NOT TO SCALE | MCCM-SITE-WALL-1101 | 10/01/19



NOTE:

1. FOR PIPES LARGER THAN 24", A CONCRETE COLLAR MAY BE CAST AROUND PIPE FOR EASE OF CONSTRUCTION AND APPEARANCE.

TYPICAL PIPE OUTLET DETAIL

NOT TO SCALE | MCCM-SITE-WALL-1300 | 07/01/19

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REV	DATE	DRAWN BY	DESCRIPTION
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2	4/19/24	TL	REVISED PER CLIENT & ARCHITECT
3	6/12/24	RM	REVISED PER BOROUGH ENGINEER'S REVIEW

Digitally signed by Michael Stickle
Date: 2024.06.28 15:26:36 -04'00'

Michael Stickle
NEW JERSEY LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: GE57838
COLLIERS ENGINEERING & DESIGN, INC.
N.J. C.O.A. #: 24GA27986500

PRELIMINARY AND FINAL MAJOR SITE PLAN

FOR

JERNEE MILL INDUSTRIAL

BLOCK 58
LOTS 2.01 & 9

BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY
NEW JERSEY

Colliers Engineering & Design
HOLMDEL (Headquarters)
101 Crawfords Corner Road, Suite 3400
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COLLIERS ENGINEERING & DESIGN, INC. DOING BUSINESS AS MASER CONSULTING

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	6/12/2023	RM	DB

PROJECT NUMBER: 10000657C
DRAWING NAME: C-DTLS

SHEET TITLE: CONSTRUCTION DETAILS

SHEET NUMBER: 32 of 37

BLOCK 58
LOT 5
N/F JOHN C. POLAK, SR.
D.B. 5287, PG. 48

BLOCK 58
LOT 8
N/F DUPONT SPECIALTY PRODUCTS USA, LLC
D.B. 17420, 1531

BLOCK 58
LOT 1

BLOCK 58
LOT 8
N/F DUPONT SPECIALTY PRODUCTS USA, LLC
D.B. 17420, PG. 1531

BLOCK 58
LOT 1.02
N/F BOROUGH OF SAYREVILLE

BLOCK 56.01
LOT 1
N/F BOROUGH OF SAYREVILLE

BLOCK 57.01
LOT 1
N/F LEAF INDUSTRIES

BLOCK 56
LOT 1.02
N/F BOROUGH OF SAYREVILLE

PROPOSED TREELINE (TYP.)

PROPOSED LIMIT OF DISTURBANCE (TYP.)

100' X 100' STUDY BLOCK (TYP.)

STUDY BLOCK #3

STUDY BLOCK #2

STUDY BLOCK #1

WETLANDS AREA 1
AREA=676,995 S.F.
OR 15.542 Ac.

WETLANDS AREA 2
AREA=19,128 SF
OR 0.439 AC.

WETLANDS AREA 3
AREA=20,717 SF
OR 0.476 AC.

WETLANDS AREA 4
AREA= 14,012 S.F. ±
OR 0.322 Ac.

WETLAND BUFFER
50'

POND CREEK

SOUTH RIVER

DUCK

JERNEE MILL ROAD
(A.K.A. MIDDLESEX CR. 675 & JERNEE MILL ROAD)
(VARIABLE WIDTH WIDES)

MEAN HIGH WATER LINE (MHW) ELEV. 2.43

MEAN LOW WATER LINE (MLW) ELEV. -3.08

FEMA LINE ELEV. 14 (PER NOTE 12.)

500-YEAR LINE ELEV. 15.5' (PER NOTE 12.)

FLOOD HAZARD LINE (PER D.B. 6849, PG. 815)

APPROX. LOCATION OF COASTAL WETLAND LINE

DEED LINE (PER D.B. 6866 PG. 397)

R.O.W. LINE (PER D.B. 4251, PG. 419)

330'± (DEED) (TRACT FIVE)

N78°07'13"W 320.99 (DEED TIE – TRACT FIVE)

N66°28'28"W 481.40' (SURVEY TIE) (TRACTS ONE & FIVE)

N47°22'47"W 105.82 (DEED TIE – TRACT TWO)

372± (DEED) (TRACT TWO)

N37°32'45"W 214.74' (SURVEY TIE)

360± (DEED) (TRACT TWO)

60 0 60 120
SCALE : 1" = 60'

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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PRELIMINARY AND FINAL MAJOR SITE PLAN

FOR

JERNEE MILL INDUSTRIAL

BLOCK 58
LOTS 2.01 & 9

BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY
NEW JERSEY

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SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	6/12/2023	RM	DB
PROJECT NUMBER:	DRAWING NAME:		
100006657C	C-TREE		

SHEET TITLE:
TREE PRESERVATION PLAN

SHEET NUMBER:
33 of 37

STUDY BLOCK 1

No.	Common Name	Botanical Name	Total Caliper Inches	Condition	Comments
1	Red Oak	Quercus Rubra	18	OK	Broken Branches, Co-Dominant Leader, Unbalanced Canopy
2	Red Maple	Acer Rubrum	10	Poor	Vine Covered, Broken Branches
3	Sweet Gum	Liquidambar Styraciflua	10	Poor	Contorted Form, Co-Dominant Leader
4	White Oak	Quercus Alba	5	Poor	Leaning, Contorted Form, Co-Dominant Leader,
5	Black Cherry	Prunus Serotina	11	Very Poor	Broken Leader, Contorted Form, Co-Dominant Leader
6	Red Maple	Acer Rubrum	4	OK	Unbalanced Canopy, Contorted Form
7	Red Oak	Quercus Rubra	10	OK	Co-Dominant Leader, Unbalanced Canopy, Contorted Form
8	Red Maple	Acer Rubrum	10	OK	Contorted Form, Some Vines
9	Black Gum	Nyssa Sylvatica	7	OK	Vine Covered, Broken Branches, Contorted Form
10	Black Gum	Nyssa Sylvatica	4	Poor	Contorted Form, Vine Covered, Broken Branches
11	Black Locust	Robinia Pseudoacacia	7	Poor	Contorted Form, Broken Leader, Leaning
12	Sweet Gum	Liquidambar Styraciflua	6	Poor	Contorted Form, Unbalanced Canopy, Vine Covered
13	Black Cherry	Prunus Serotina	12	Poor	Co-Dominant Leader, Broken Branches
14	Sweet Gum	Liquidambar Styraciflua	7	Poor	Vine Covered, Broken Branches, Unbalanced Canopy
15	Sweet Gum	Liquidambar Styraciflua	6	Poor	Unbalanced Canopy, Contorted Form
16	Sweet Gum	Liquidambar Styraciflua	12	OK	No Lower Branches, Unbalanced Canopy, Contorted Form
17	Black Gum	Nyssa Sylvatica	7	Poor	Co-Dominant Leader, Contorted Form, Vine Covered
18	Black Gum	Nyssa Sylvatica	16	OK	Co-Dominant Leader, Contorted Form, Unbalanced Canopy
19	Sweet Gum	Liquidambar Styraciflua	14	OK	Broken Branches, Co-Dominant Leader, Contorted Form
20	Black Gum	Nyssa Sylvatica	5	Poor	Broken Leader, Co-Dominant Leader
21	Black Gum	Nyssa Sylvatica	7	Poor	Contorted Form, Unbalanced Canopy
22	Sweet Gum	Liquidambar Styraciflua	4	Poor	Contorted Form, Vine Covered
23	Sweet Gum	Liquidambar Styraciflua	6	Poor	Vine Covered, Contorted Form
24	Sweet Gum	Liquidambar Styraciflua	6	Poor	Sparse Canopy, No Lower Branches, Contorted Form
25	Black Cherry	Prunus Serotina	7	Poor	Contorted Form, Unbalanced Canopy, Vine Covered
26	Black Cherry	Prunus Serotina	6	Poor	Leaning, Co-Dominant Leader, Broken Branches
27	Sweet Gum	Liquidambar Styraciflua	9	Poor	Vine Covered, Contorted Form, Broken Branches
28	Black Locust	Robinia Pseudoacacia	4	Very Poor	Leaning, Broken Branches, Broken Leader
29	Black Locust	Robinia Pseudoacacia	7	Very Poor	Vine Covered, Leaning, Co-Dominant Leader
30	Sweet Gum	Liquidambar Styraciflua	13	OK	Broken Branches, No Lower Branches
31	Black Cherry	Prunus Serotina	4	Very Poor	Broken Leader, Contorted Form, Broken Branches
32	Sweet Gum	Liquidambar Styraciflua	9	Poor	Vine Covered, No Lower Branches
33	Black Locust	Robinia Pseudoacacia	12	Poor	Vine Covered, Broken Branches, Contorted Form
34	Red Maple	Acer Rubrum	22	OK	Co-Dominant Leader, Broken Branches
35	Red Maple	Acer Rubrum	ML 6, 5	OK	Co-Dominant Leader, Contorted Form, Broken Branches
36	Red Maple	Acer Rubrum	20	OK	Leaning, Co-Dominant Leader, Sonw Vines
37	Red Maple	Acer Rubrum	7	OK	Contorted Form, Some Vines
38	Sweet Gum	Liquidambar Styraciflua	7	Poor	Vine Covered, Contorted Form, Unbalanced Canopy
39	Black Cherry	Prunus Serotina	6	Poor	Co-Dominant Leader, Vine Covered, Broken Branches
40	Black Cherry	Prunus Serotina	ML 7, 6	Poor	Co-Dominant Leader, Vine Covered, Broken Branches
41	Black Cherry	Prunus Serotina	4	Poor	Leaning, Contorted Form, Unbalanced Canopy
42	Red Maple	Acer Rubrum	7	Poor	Co-Dominant Leader, Contorted Form, Vine Covered
43	Sweet Gum	Liquidambar Styraciflua	ML 12, 12, 9	Poor	Vine Covered, Co-Dominant Leader, Broken Branches
44	Black Gum	Nyssa Sylvatica	ML 12, 12, 9	OK	Contorted Form, Co-Dominant Leader, No Lower Branches
45	Black Gum	Nyssa Sylvatica	16	OK	Co-Dominant Leader, Contorted Form
46	Black Cherry	Prunus Serotina	6	Poor	Contorted Form, Sparse Canopy,
47	Red Maple	Acer Rubrum	11	OK	Co-Dominant Leader, Contorted Form
48	Red Maple	Acer Rubrum	10	OK	Co-Dominant Leader, Contorted Form, Unbalanced Canopy
49	Black Locust	Robinia Pseudoacacia	10	Poor	Vine Covered, Leaning, Unbalanced Canopy
50	Black Cherry	Prunus Serotina	5	Poor	Leaning, Contorted Form, Co-Dominant Leader
51	Black Cherry	Prunus Serotina	9	Poor	Contorted Form, Broken Branches, Co-Dominant Leader
52	Black Locust	Robinia Pseudoacacia	8	Poor	Contorted Form, Broken Leader, Broken Branches
53	Red Maple	Acer Rubrum	10	Poor	Leaning, Co-Dominant Leader, Contorted Form
54	Black Locust	Robinia Pseudoacacia	8	Poor	Unbalanced Canopy, Leaning, Contorted Form

ML=Multi-Leader

STUDY BLOCK 2

No.	Common Name	Botanical Name	Total Caliper Inches	Condition	Comments
1	White Oak	Quercus Alba	7	Poor	Broken Branches, Sparse Canopy, Unbalanced Canopy
2	White Oak	Quercus Alba	6	Poor	Leaning, Unbalanced Canopy
3	Red Maple	Acer Rubrum	ML 10, 8, 6	OK	Co-Dominant Leader, Unbalanced Canopy
4	White Oak	Quercus Alba	12	OK	Broken Branches, No Lower Branches, Co-Dominant Leader
5	Pin Oak	Quercus Palustris	13	OK	Vine Covered
6	White Oak	Quercus Alba	14	Poor	Broken Branches, Co-Dominant Leader, Unbalanced Canopy
7	Pitch Pine	Pinus Rigida	14	Poor	No Lower Branches, Sparse Canopy,
8	Pin Oak	Quercus Palustris	11	Poor	Broken Branches, Dead Branches
9	Pin Oak	Quercus Palustris	4	OK	Leaning, Unbalanced Canopy
10	Black Gum	Nyssa Sylvatica	4	OK,	Broken Branches
11	Red Maple	Acer Rubrum	4	Poor	Contorted Form, Broken Branches, Unbalanced Canopy
12	Black Gum	Nyssa Sylvatica	6	OK,	Broken Branches
13	Pin Oak	Quercus Palustris	10	Poor	Broken Branches, Vine Covered, Contorted Form
14	Pin Oak	Quercus Palustris	20	Poor	Broken Branches, Dead Branches, Contorted Form
15	Pin Oak	Quercus Palustris	7	Poor	Unbalanced Canopy, Broken Branches
16	White Oak	Quercus Alba	7	Poor	Contorted Form, Broken Branches, Co-Dominant Leader
17	White Oak	Quercus Alba	8	Very Poor	Co-Dominant Leader, Broken Branches, Unbalanced Canopy
18	Sweet Gum	Liquidambar Styraciflua	9	Poor	No Lower Branches, Unbalanced Canopy, Broken Branches
19	Sweet Gum	Liquidambar Styraciflua	4	OK,	Leaning, Contorted Form
20	White Oak	Quercus Alba	7	OK	Contorted Form, Unbalanced Canopy, No Lower Branches
21	Pin Oak	Quercus Palustris	10	OK	Contorted Form, Unbalanced Canopy
22	Black Gum	Nyssa Sylvatica	5	Poor	Leaning, Contorted Form, Sparse Canopy
23	Black Gum	Nyssa Sylvatica	14	OK	No Lower Branches, Broken Branches
24	Sweet Gum	Liquidambar Styraciflua	7	OK,	No Lower Branches, Broken Branches
25	Red Maple	Acer Rubrum	5	OK	Co-Dominant Leader, Unbalanced Canopy
26	Scarlet Oak	Quercus Coccinea	7	OK,	Broken Branches
27	Scarlet Oak	Quercus Coccinea	10	OK,	No Lower Branches, Broken Branches, Unbalanced Canopy
28	Sweet Gum	Liquidambar Styraciflua	7	OK,	No Lower Branches, Unbalanced Canopy
29	Red Maple	Acer Rubrum	6	OK	Contorted Form, Unbalanced Canopy
30	Red Maple	Acer Rubrum	5	Poor	Co-Dominant Leader, Leaning, Contorted Form, Unbalanced Canopy
31	Scarlet Oak	Quercus Coccinea	10	OK,	Vine Covered, No Lower Branches
32	Sweet Gum	Liquidambar Styraciflua	5	Poor	Contorted Form, Unbalanced Canopy, Broken Branches
33	Pin Oak	Quercus Palustris	7	Poor	Co-Dominant Leader, Leaning, Unbalanced Canopy
34	White Oak	Quercus Alba	6	Poor	Co-Dominant Leader, Broken Branches
35	White Oak	Quercus Alba	11	Poor	Broken Branches, Co-Dominant Leader, Unbalanced Canopy
36	White Birch	Betula Papyrifera	5	Very Poor	Leaning, Broken Leader, Co-Dominant Leader
37	Pin Oak	Quercus Palustris	5	Poor	Leaning, Contorted Form, Unbalanced Canopy
38	Pin Oak	Quercus Palustris	6	Poor	Unbalanced Canopy
39	Sweet Gum	Liquidambar Styraciflua	7	Poor	No Lower Branches, Unbalanced Canopy, Sparse Canopy
40	Red Maple	Acer Rubrum	6	OK,	Co-Dominant Leader, Unbalanced Canopy
41	Red Maple	Acer Rubrum	11	OK,	Co-Dominant Leader, No Lower Branches
42	Red Maple	Acer Rubrum	10	OK,	Co-Dominant Leader, Unbalanced Canopy, Contorted Form
43	Red Maple	Acer Rubrum	4	Poor	Leaning, Contorted Form, Unbalanced Canopy
44	Scarlet Oak	Quercus Coccinea	13	Very Poor	Co-Dominant Leader, Broken Branches, Dead Branches
45	Scarlet Oak	Quercus Coccinea	7	Poor	Leaning, Contorted Form, Unbalanced Canopy
46	Red Maple	Acer Rubrum	8	Poor	Unbalanced Canopy, Co-Dominant Leader, Contorted Form
47	White Oak	Quercus Alba	4	Poor	Co-Dominant Leader, Contorted Form
48	Black Gum	Nyssa Sylvatica	4	Poor	Contorted Form, No Lower Branches, Leaning
49	White Oak	Quercus Alba	5	Poor	Contorted Form, Broken Branches
50	Hickory	Carya	5	OK	Leaning, Unbalanced Canopy
51	Pin Oak	Quercus Palustris	19	OK,	Contorted Form, Broken Branches
52	White Birch	Betula Papyrifera	4	Poor	Leaning, Broken Branches, Contorted Form
53	Black Gum	Nyssa Sylvatica	4	Poor	Leaning, Contorted Form, Sparse Canopy
54	Sweet Gum	Liquidambar Styraciflua	4	Poor	Contorted Form, No Lower Branches, Unbalanced Canopy
55	White Oak	Quercus Alba	5	Poor	Unbalanced Canopy, Co-Dominant Leader, Contorted Form
56	White Oak	Quercus Alba	11	OK,	No Lower Branches, Unbalanced Canopy
57	White Oak	Quercus Alba	ML 9, 9	OK	No Lower Branches, Unbalanced Canopy, Sparse Canopy
58	White Oak	Quercus Alba	10	Poor	Leaning, Contorted Form, Unbalanced Canopy

ML=Multi-Leader

STUDY BLOCK 3

No.	Common Name	Botanical Name	Total Caliper Inches	Condition	Comments
1	Red Maple	Acer Rubrum	7	OK	No Lower Branches, Co-Dominant Leader, Unbalanced Canopy
2	Red Maple	Acer Rubrum	10	OK	No Lower Branches, Sparse Canopy, Unbalanced Canopy
3	Red Maple	Acer Rubrum	10	OK	Co-Dominant Leader, No Lower Branches, Unbalanced Canopy
4	Red Maple	Acer Rubrum	8	OK	No Lower Branches, Co-Dominant Leader, Unbalanced Canopy
5	Red Maple	Acer Rubrum	10	Poor	Co-Dominant Leader, Contorted Form, Unbalanced Canopy
6	Red Maple	Acer Rubrum	8	Poor	Contorted Form, Broken Leader, Unbalanced Canopy
7	Black Gum	Nyssa Sylvatica	6	Poor	Contorted Form, Unbalanced Canopy
8	Sweet Gum	Liquidambar Styraciflua	12	OK	No Lower Branches, Contorted Form, Sparse Canopy
9	Sweet Gum	Liquidambar Styraciflua	9	Poor	No Lower Branches, Co-Dominant Leader
10	Sweet Gum	Liquidambar Styraciflua	11	OK	No Lower Branches, Co-Dominant Leader
11	Sweet Gum	Liquidambar Styraciflua	ML 20,15	OK	Leaning, Unbalanced Canopy, Contorted Form
12	Sweet Gum	Liquidambar Styraciflua	ML 21, 11	OK	No Lower Branches, Leaning, Unbalanced Canopy
13	Black Gum	Nyssa Sylvatica	10	Poor	Leaning, Contorted Form, Unbalanced Canopy
14	Black Gum	Nyssa Sylvatica	9	Poor	Open Wounds, Contorted Form, Co-Dominant Leader
15	White Oak	Quercus Alba	10	Poor	Co-Dominant Leader, Broken Branches, Unbalanced Canopy
16	Scarlet Oak	Quercus Coccinea	8	Poor	Broken Branches, No Lower Branches, Contorted Form
17	Scarlet Oak	Quercus Coccinea	10	Poor	Leaning, Unbalanced Canopy, Sucker Growth
18	Red Maple	Acer Rubrum	8	Poor	Contorted Form, Co-Dominant Leader, Unbalanced Canopy
19	Red Maple	Acer Rubrum	7	Poor	Unbalanced Canopy, Broken Leadr, Contorted Form
20	Red Maple	Acer Rubrum	10	Poor	No Lower Branches, Co-Dominant Leader, Sparse Canopy
21	Red Maple	Acer Rubrum	5	Poor	Co-Dominant Leader, Unbalanced Canopy, Contorted Form
22	Red Maple	Acer Rubrum	6	Poor	Contorted Form, Co-Dominant Leader, Sparse Canopy
23	Red Maple	Acer Rubrum	5	Poor	Sucker Growth, Sparse Canopy, Unbalanced Canopy
24	Red Maple	Acer Rubrum	5	Poor	Contorted Form, Leaning, No Lower Branches
25	Red Maple	Acer Rubrum	4	Poor	Sucker Growth, Sparse Canopy, No Lower Branches
26	Red Maple	Acer Rubrum	ML 5, 7	OK	Leaning, Contorted Form, Dead Branches
27	Red Oak		15	OK	No Lower Branches, Co-Dominant Leader, Broken Branches
28	White Oak	Quercus Alba	ML 6, 8	Poor	Unbalanced Canopy, Sucker Growth
29	Red Oak		13	Poor	No Lower Branches, Sparse Canopy, Unbalanced Canopy
30	Pitch Pine	Pinus Rigida	16	Poor	No Lower Branches, Sparse Canopy, Broken Branches
31	Scarlet Oak	Quercus Coccinea	12	OK	Broken Branches, Unbalanced Canopy, No Lower Branches
32	Black Gum	Nyssa Sylvatica	ML 20, 20	OK	Leaning, Unbalanced Canopy, Broken Branches
33	Black Gum	Nyssa Sylvatica	ML 10, 12	OK	Contorted Form, Unbalanced Canopy
34	Sweet Gum	Liquidambar Styraciflua	10	OK	No Lower Branches, Contorted Form, Unbalanced Canopy
35	White Oak	Quercus Alba	4	OK	Leaning, Unbalanced Canopy
36	Sweet Gum	Liquidambar Styraciflua	13	Poor	Broken Branches, Unbalanced Canopy, No Lower Branches
37	Sweet Gum	Liquidambar Styraciflua	12	OK	No Lower Branches, Contorted Form, Unbalanced Canopy
38	Sweet Gum	Liquidambar Styraciflua	12	OK	Contorted Form, No Lower Branches, Unbalanced Canopy
39	Sweet Gum	Liquidambar Styraciflua	8	Poor	Open Wounds, Contorted Form
40	Sweet Gum	Liquidambar Styraciflua	ML 8, 7	OK	Leaning, Contorted Form, Broken Branches
41	Sweet Gum	Liquidambar Styraciflua	5	Poor	Contorted Form, Unbalanced Canopy
42	Sweet Gum	Liquidambar Styraciflua	5	Poor	Open Wounds, Contorted Form
43	Sweet Gum	Liquidambar Styraciflua	6	Poor	Contorted Form, Co-Dominant Leader
44	Sweet Gum	Liquidambar Styraciflua	5	OK	Co-Dominant Leader, Contorted Form, Sucker Growth
45	Red Maple	Acer Rubrum	12	Poor	Sucker Growth, Open Wounds, Unbalanced Canopy
46	Red Maple	Acer Rubrum	9	OK	Sucker Growth, Contorted Form, Unbalanced Canopy
47	Red Maple	Acer Rubrum	5	Poor	Contorted Form, Open Wounds
48	Red Maple	Acer Rubrum	15	Poor	Co-Dominant Leader, Contorted Form
49	Red Maple	Acer Rubrum	5	Poor	Leaning, Sparse Canopy
50	Black Gum	Nyssa Sylvatica	6	OK	Co-Dominant Leader, Contorted Form
51	Sweet Gum	Liquidambar Styraciflua	20	OK	Co-Dominant Leader, Contorted Form, No Lower Branches
52	Red Maple	Acer Rubrum	16	Poor	Open Wounds, Co-Dominant Leader, Contorted Form
53	Black Gum	Nyssa Sylvatica	5	Poor	Contorted Form, Co-Dominant Leader, Sparse Canopy
54	Black Gum	Nyssa Sylvatica	9	Poor	Co-Dominant Leader, Contorted Form, Sparse Canopy
55	Black Gum	Nyssa Sylvatica	10	OK	No Lower Branches, Co-Dominant Leader
56	Black Gum	Nyssa Sylvatica	7	Poor	Contorted Form, No Lower Branches, Co-Dominant Leader
57	Black Gum	Nyssa Sylvatica	ML 10, 8, 8, 5	Poor	Contorted Form, Co-Dominant Leader, Open Wounds
58	Black Gum	Nyssa Sylvatica	5	Poor	Contorted Form, Unbalanced Canopy
59	Black Gum	Nyssa Sylvatica	11	Poor	Open Wounds, Sucker Growth, No Lower Branches
60	Black Gum	Nyssa Sylvatica	9	Very Poor	Open Wounds, Contorted Form
61	White Oak	Quercus Alba	5	Poor	Contorted Form, Sparse Canopy
62	White Oak	Quercus Alba	6	Poor	No Lower Branches, Sparse Canopy
63	Red Maple	Acer Rubrum	11	OK	No Lower Branches, Dead Branches
64	Red Maple	Acer Rubrum	11	OK	No Lower Branches, Co-Dominant Leader, Unbalanced Canopy
65	Red Maple	Acer Rubrum	6	Poor	Dead Branches, Sucker Growth
66	Black Gum	Nyssa Sylvatica	8	OK	Co-Dominant Leader, Unbalanced Canopy, Sucker Growth
67	Black Gum	Nyssa Sylvatica	9	OK	Co-Dominant Leader, Unbalanced Canopy, Sucker Growth
68	Black Gum	Nyssa Sylvatica	5	Poor	Sucker Growth, Sparse Canopy

STUDY BLOCK 3 (CONT.)

69	Black Gum	Nyssa Sylvatica	10	OK	Co-Dominant Leader, Unbalanced Canopy, No Lower Branches
70	Black Gum	Nyssa Sylvatica	7	OK,	Contorted Form, Sparse Canopy
71	Red Maple	Acer Rubrum	7	Poor	Dead Branches, No Lower Branches, Co-Dominant Leador
72	Red Maple	Acer Rubrum	15	OK,	Co-Dominant Leader, No Lower Branches
73	Black Gum	Nyssa Sylvatica	13	Poor	Co-Dominant Leader, No Lower Branches
74	Black Gum	Nyssa Sylvatica	11	Poor	Contorted Form, Co-Dominant Leader, Unbalanced Canopy
75	Red Maple	Acer Rubrum	10	Poor	No Lower Branches, Unbalanced Canopy
76	Red Maple	Acer Rubrum	11	Poor	Co-Dominant Leader, No Lower Branches
77	Red Maple	Acer Rubrum	ML 8, 8	OK,	Contorted Form, Broken Leadr
78	White Oak	Quercus Alba	5	OK	Unbalanced Canopy, Vine Covered

ML=Multi-Leader

TREE REPLACEMENT CALCULATIONS

Study Block Size = 100' x 100' = 10,000 SF

EXISTING WOODLAND AREA = 13.80 AC

PROPOSOSED WOODLAND REMOVAL = 6.96 AC

PERCENTAGE OF WOODLAND REMOVAL = 50%

TREES BETWEEN FOUR (4") AND SIXTEEN (16") INCHES DIAMETER AT BREAST HEIGHT (DBH)

STUDY BLOCK 1 = 47 TREES = 205 TREES PER ACRE
STUDY BLOCK 2 = 54 TREES = 235 TREES PER ACRE
STUDY BLOCK 3 = 69 TREES = 301 TREES PER ACRE
AVERAGE TREES PER ACRE = 247 4"-16" DBH TREES PER ACRE

PERCENTAGE OF TREES TO BE REPLACED PER ORDINANCE SECTION 30-7 = 40%

TREE REMOVAL = 247 TREES PER ACRES * 6.96 ACRES REMOVED = 1,719 TREES REMOVED

TREE REPLACEMENT = 1,719 TREES REMOVED * 40% = **688 REPLACEMENT TREES**

TREES OF SIXTEEN (16") INCHES OR GREATER DIAMETER AT BREAST HEIGHT (DBH)

	LESS THAN 18"	LESS THAN 21"	LESS THAN 24"	LESS THAN 27"	LESS THAN 30"	LESS THAN 33"	LESS THAN 36"	LESS THAN 39"	LESS THAN 41"	41" AND GREATER
STUDY BLOCK 1	2	2	1	0	0	0	2	0	0	0
STUDY BLOCK 2	0	3	0	1	0	0	0	0	0	0
STUDY BLOCK 3	3	1	1	0	0	2	1	0	1	0
AVG. PER STUDY BLOCK	1.67	2.00	0.67	0.33	0.00	0.67	1.00	0.00	0.33	0.00
AVERAGE PER ACRE	7.26	8.712	2.904	1.452	0	2.904	4.356	0	1.452	0
TOTAL REMOVED	51	61	20	10	0	20	30	0	10	0
REPLACEMENT TREES REQ.	3	4	5	6	7	8	10	12	14	15
TOTAL TREES REQ.	152	243	101	61	0	162	303	0	141	0

REPLACEMENT TREES REQUIRED (16" OR GREATER) = **1,163 REPLACEMENT TREES**

SUBTOTAL TREES REQUIRED (FOR TREE PLOTS, 4"-16" & 16" AND GREATER COMBINED) = 688 + 1,163 = **1,851 SUBTOTAL TREES**

INDUSTRIAL USE REQUIREMENT MULTIPLIER (FOR TREE PLOTS) = 15% MORE TREES = 1.15*1,851 = **2,129 TREES**

AIR POLLUTION TREES REQUIRED = ONE (1) TREE PER EVERY TWO (2) PARKING SPACES = 146 PARKING SPACES / 2 = **73 TREES**

INDUSTRIAL USE REQUIREMENT MULTIPLIER (PARKING AREA TREES) = 15% MORE TREES = 1.15*73 = **84 TREES**

TOTAL REPLACEMENT TREES REQUIRED = 2,129 (TREE PLOTS) + 84 (PARKING AREAS) = **2,213 REPLACEMENT TREES**

TOTAL REPLACEMENT TREE PROVIDED = 268 **TREES** (232 DECIDUOUS SHADE TREES + 36 FLOWERING TREES; **SEE LANDSCAPE PLAN**)

CONTRIBUTION TO THE BOROUGH TREE BANK REQUIRED FOR 1,945 TREES

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2	4/19/24	TL	REVISED PER CLIENT & ARCHITECT
3	6/20/24	RM	REVISED PER BOROUGH ENGINEER'S REVIEW

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Michael Stickle
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N.J. C.O.A. #: 24GA27986500

PRELIMINARY AND FINAL MAJOR SITE PLAN

FOR

JERNEE MILL INDUSTRIAL

BLOCK 58
LOTS 2.01 & 9

BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY
NEW JERSEY

Colliers Engineering & Design
HOLMDEL (Headquarters)
101 Crawfords Corner Road, Suite 3400
Holmdel, NJ 07733
Phone: 732.383.1950
COLLIERS ENGINEERING & DESIGN, INC. DOING BUSINESS AS MASER CONSULTING

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	6/12/2023	RM	DB

PROJECT NUMBER: 10000657C
DRAWING NAME: C-TREE

SHEET TITLE: TREE PRESERVATION PLAN

SHEET NUMBER: 34 of 37

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

LEGEND

EXISTING		PROPOSED
12+00 PI 13+00	TRAVERSE LINE, CENTER LINE, OR BASELINE (LABEL AS SUCH)	12+00 13+00
	RIGHT OF WAY LINE	
	PROPERTY LINE	
	EDGE OF PAVEMENT	
FACE / BACK	CURB	FACE / BACK
	DEPRESSED CURB	
	SIDEWALK	
X X	FENCES	X X
	TREELINE	
	ROADWAY SIGNS	
	WETLAND LINE	
	MUNICIPAL BOUNDARY LINE	
	STALL COUNT	10
	ADA ACCESSIBLE STALL	P / V
	DEPRESSED CURB AND ADA RAMP	HC
	DIRECTION OF TRAFFIC FLOW	

N

W E

S

NORTH

PHASE LIMIT

PHASE 1

PROPOSED FREEZER SPACE BUILDING
250,000 SF BUILDING FOOTPRINT
257,858 SF TOTAL BUILDING AREA

206,250 SF FREEZER SPACE
36,540 SF COLD DOCK
7,700 SF OFFICE (INC. MEZZANINE)
6,720 SF MAINTENANCE AREA (INC. MECHANICAL MEZZANINE)
648 SF ELECTRICAL PLATFORM

88 PARKING SPACES
30 LOADING BAYS
76 TRAILER PARKING STALLS

PHASE 2

PROPOSED FREEZER SPACE BUILDING
99,520 SF TOTAL
92,020 SF FREEZER SPACE
7,500 SF OFFICE

58 PARKING SPACES
26 LOADING BAYS
40 TRAILER PARKING STALLS

400'
625'
200'
472'
201'

76 TRAILER PARKING STALLS
30 LOADING BAYS
20 TRAILER PARKING STALLS
4,800 SF ELECTRICAL PAD
15'X15' TRANSFORMER PAD
ELECTRICAL PLATFORM
MONUMENT SIGN
PROPOSED 4' HIGH SAFETY FENCE ON TOP OF RETAINING WALL
PROPOSED 4' HIGH SAFETY FENCE ON TOP OF RETAINING WALL (TYP.)
ROOF ACCESS (TYP. OF 5)
SMALL-SCALE BIORETENTION BASIN #1
SMALL-SCALE BIORETENTION BASIN #2
SMALL-SCALE BIORETENTION BASIN #3
SMALL-SCALE BIORETENTION BASIN #4
SMALL-SCALE BIORETENTION BASIN #5
PERVIOUS PAVEMENT AREA 3
18 LF DEPRESSED CURB (TYP.)
GRAVEL TRENCH
IRON PIN w/CAP SET
CAPPED REBAR FOUND
REBAR "BENT" FOUND
DRILL HOLE FOUND
WALL 0.4'
WALL 0.6'
FENCE 0.4'
0.3'
0.1'
1.2'
1.4'
1.6'
44'
113'
36.5'
40'
89'
R5-1
R1-1
R5-2A
R3-1
R6-1L
R3-2
SB1
SB2
SB3
SB4
EV
HC
P
V

JERNEE MILL ROAD
(A.K.A. MIDDLESEX CR. 675 & KERNEE MILL ROAD)
(R.O.W. WIDTH VARIES)

WB-67 - Interstate Semi-Trailer	
Overall Length	73.501ft
Overall Width	8.500ft
Overall Body Height	13.500ft
Min Body Ground Clearance	1.354ft
Max Track Width	8.500ft
Lock-to-lock time	6.00s
Max Steering Angle (Virtual)	28.40°

SCALE : 1" = 40'

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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3	4/30/24	RM	REVISED PER BOROUGH ENGINEER'S REVIEW

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Michael Stickle
NEW JERSEY LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: GE57838
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N.J. C.O.A. #: 24GA27986500

PRELIMINARY AND FINAL MAJOR SITE PLAN

FOR

JERNEE MILL INDUSTRIAL

BLOCK 58
LOTS 2.01 & 9

BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY
NEW JERSEY

Colliers Engineering & Design
HOLMDEL (Headquarters)
101 Crawfords Corner Road, Suite 3400
Holmdel, NJ 07733
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SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	6/12/2023	RM	DB

PROJECT NUMBER: 10000657C
DRAWING NAME: C-OVAL-LAYT

SHEET TITLE:
TRUCK CIRCULATION PLAN

SHEET NUMBER:
35 of 37

J:\10010000\10010657C\Engineering\Site Plans\C-OVAL-LAYT.dwg(C-35 Truck Circulation) By: MSTICKLE

LEGEND

EXISTING		PROPOSED
12+00 / PI / 13+00	TRAVERSE LINE, CENTER LINE OR BASELINE (LABEL AS SUCH)	12+00 / 13+00
	RIGHT OF WAY LINE	
	PROPERTY LINE	
	EDGE OF PAVEMENT	
FACE / BACK	CURB	FACE / BACK
	DEPRESSED CURB	
	SIDEWALK	
X X	FENCES	X X
	TREELINE	
	ROADWAY SIGNS	
	WETLAND LINE	
	MUNICIPAL BOUNDARY LINE	
	STALL COUNT	10
	ADA ACCESSIBLE STALL	EV
	DEPRESSED CURB AND ADA RAMP	HC
	DIRECTION OF TRAFFIC FLOW	

N

W E

S

NORTH

PHASE LIMIT

PHASE 1

PROPOSED FREEZER SPACE BUILDING
250,000 SF BUILDING FOOTPRINT
257,858 SF TOTAL BUILDING AREA

206,250 SF FREEZER SPACE
36,540 SF COLD DOCK
7,700 SF OFFICE (INC. MEZZANINE)
6,720 SF MAINTENANCE AREA (INC. MECHANICAL MEZZANINE)
648 SF ELECTRICAL PLATFORM

88 PARKING SPACES
30 LOADING BAYS
76 TRAILER PARKING STALLS

PHASE 2

PROPOSED FREEZER SPACE BUILDING
99,520 SF TOTAL
92,020 SF FREEZER SPACE
7,500 SF OFFICE

58 PARKING SPACES
26 LOADING BAYS
40 TRAILER PARKING STALLS

PROPOSED 4' HIGH SAFETY FENCE ON TOP OF RETAINING WALL

15'X15' TRANSFORMER PAD

MONUMENT SIGN

SMALL-SCALE BIORETENTION BASIN #5

SMALL-SCALE BIORETENTION BASIN #4

SMALL-SCALE BIORETENTION BASIN #1

SMALL-SCALE BIORETENTION BASIN #2

SMALL-SCALE BIORETENTION BASIN #3

76 TRAILER PARKING STALLS

30 LOADING BAYS

4,800 SF ELECTRICAL PAD

20 TRAILER PARKING STALLS

ELECTRICAL PLATFORM

KIOSK BOOTH (TYP. OF 5)

PERVIOUS PAVEMENT AREA 3

18 LF DEPRESSED CURB (TYP.)

JERNEE MILL ROAD
(A.K.A. MIDDLESEX CR. 675 & JERNEE MILL ROAD)
(R.O.W. WIDTH VARIES)

Garbage - US - Heavy - Medium	
Overall Length	30.000ft
Overall Width	8.500ft
Overall Body Height	12.359ft
Min Body Ground Clearance	1.048ft
Track Width	8.500ft
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	38.160ft

SCALE : 1" = 40'

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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3	4.22.24	KW	REVISED PER BOROUGH ENGINEER'S REVIEW

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Michael Stickle
NEW JERSEY LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: GE57838
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N.J. C.O.A. #: 24GA27986500

PRELIMINARY AND FINAL MAJOR SITE PLAN

FOR

JERNEE MILL INDUSTRIAL

BLOCK 58
LOTS 2.01 & 9

BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY
NEW JERSEY

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Holmdel, NJ 07733
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AS SHOWN	6/12/2023	RM	DB

PROJECT NUMBER: 10000657C
DRAWING NAME: C-VAL-LAYT

SHEET TITLE:
REFUSE VEHICLE CIRCULATION PLAN

SHEET NUMBER:
36 of 37

J:\10000657C\Engineering\Design\Plans\C-CIVIL-LAYT.dwg(C-3) Refuse Circulation By: MITCH.K

LEGEND

EXISTING		PROPOSED
12+00 PI 13+00	TRAVERSE LINE, CENTER LINE, OR BASELINE (LABEL AS SUCH)	12+00 13+00
	RIGHT OF WAY LINE	
	PROPERTY LINE	
	EDGE OF PAVEMENT	
FACE / BACK	CURB	FACE / BACK
	DEPRESSED CURB	
	SIDEWALK	
X X	FENCES	X X
	TREELINE	
	ROADWAY SIGNS	
	WETLAND LINE	
	MUNICIPAL BOUNDARY LINE	
	STALL COUNT	10
	ADA ACCESSIBLE STALL	P / V
	DEPRESSED CURB AND ADA RAMP	HC
	DIRECTION OF TRAFFIC FLOW	

N

W E

S

NORTH

JERNEE MILL ROAD
(A.K.A. MIDDLESEX CR. 675 & KERNEE MILL ROAD)
(R.O.W. WIDTH VARIES)

PROPOSED 4' HIGH SAFETY FENCE ON TOP OF RETAINING WALL

GRAVEL TRENCH

PHASE LIMIT

PHASE 1

PROPOSED FREEZER SPACE BUILDING
250,000 SF BUILDING FOOTPRINT
257,858 SF TOTAL BUILDING AREA

206,250 SF FREEZER SPACE
36,540 SF COLD DOCK
7,700 SF OFFICE (INC. MEZZANINE)
6,720 SF MAINTENANCE AREA (INC. MECHANICAL MEZZANINE)
648 SF ELECTRICAL PLATFORM

88 PARKING SPACES
30 LOADING BAYS
76 TRAILER PARKING STALLS

400'

625'

15'X15' TRANSFORMER PAD

ELECTRICAL PLATFORM

MONUMENT SIGN

44

397 SIGHT DISTANCE PER AASHTO

PROVIDED 6' HIGH SAFETY FENCE ON TOP OF RETAINING WALL

SMALL-SCALE BIORETENTION BASIN #5

SMALL-SCALE BIORETENTION BASIN #4

113'

PHASE 2

PROPOSED FREEZER SPACE BUILDING
99,520 SF TOTAL

92,020 SF FREEZER SPACE
7,500 SF OFFICE

58 PARKING SPACES
26 LOADING BAYS
40 TRAILER PARKING STALLS

200'

472'

76 TRAILER PARKING STALLS

30 LOADING BAYS

4,800 SF ELECTRICAL PAD

20 TRAILER PARKING STALLS

SMALL-SCALE BIORETENTION BASIN #1

SMALL-SCALE BIORETENTION BASIN #3

PROPOSED 4' HIGH SAFETY FENCE ON TOP OF RETAINING WALL

WALL 1 0.4'

WALL 1 0.6'

FENCE 0.4'

CAPPED REBAR FOUND

REBAR FOUND "BENT"

CAPPED REBAR FOUND 1.2'

DRILL HOLE FOUND 1.6'

IRON PIN w/CAP SET

GRAVEL TRENCH

PERVIOUS PAVEMENT AREA 3

20 TRAILER PARKING STALLS

18 LF DEPRESSED CURB (TYP.)

SMALL-SCALE BIORETENTION BASIN #2

201'

25'

KIOSK BOOTH (TYP. OF 5)

47.6

12

10.25
41.75

Fire - US - Aerial - 100' Pierce

Overall Length	47.600ft
Overall Width	8.000ft
Overall Body Height	10.432ft
Min Body Ground Clearance	0.862ft
Track Width	8.000ft
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	36.990ft

40 0 40 80

SCALE : 1" = 40'

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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Michael Stickle
NEW JERSEY LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: GE57838
COLLIERS ENGINEERING & DESIGN, INC.
N.J. C.O.A. #: 24GA27986500

PRELIMINARY AND FINAL MAJOR SITE PLAN

FOR

JERNEE MILL INDUSTRIAL

BLOCK 58
LOTS 2.01 & 9

BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY
NEW JERSEY

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PROJECT NUMBER: 10000657C
DRAWING NAME: C-EVAL-LAYT

SHEET TITLE:
EMERGENCY VEHICLE CIRCULATION PLAN

SHEET NUMBER:
37 of 37

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