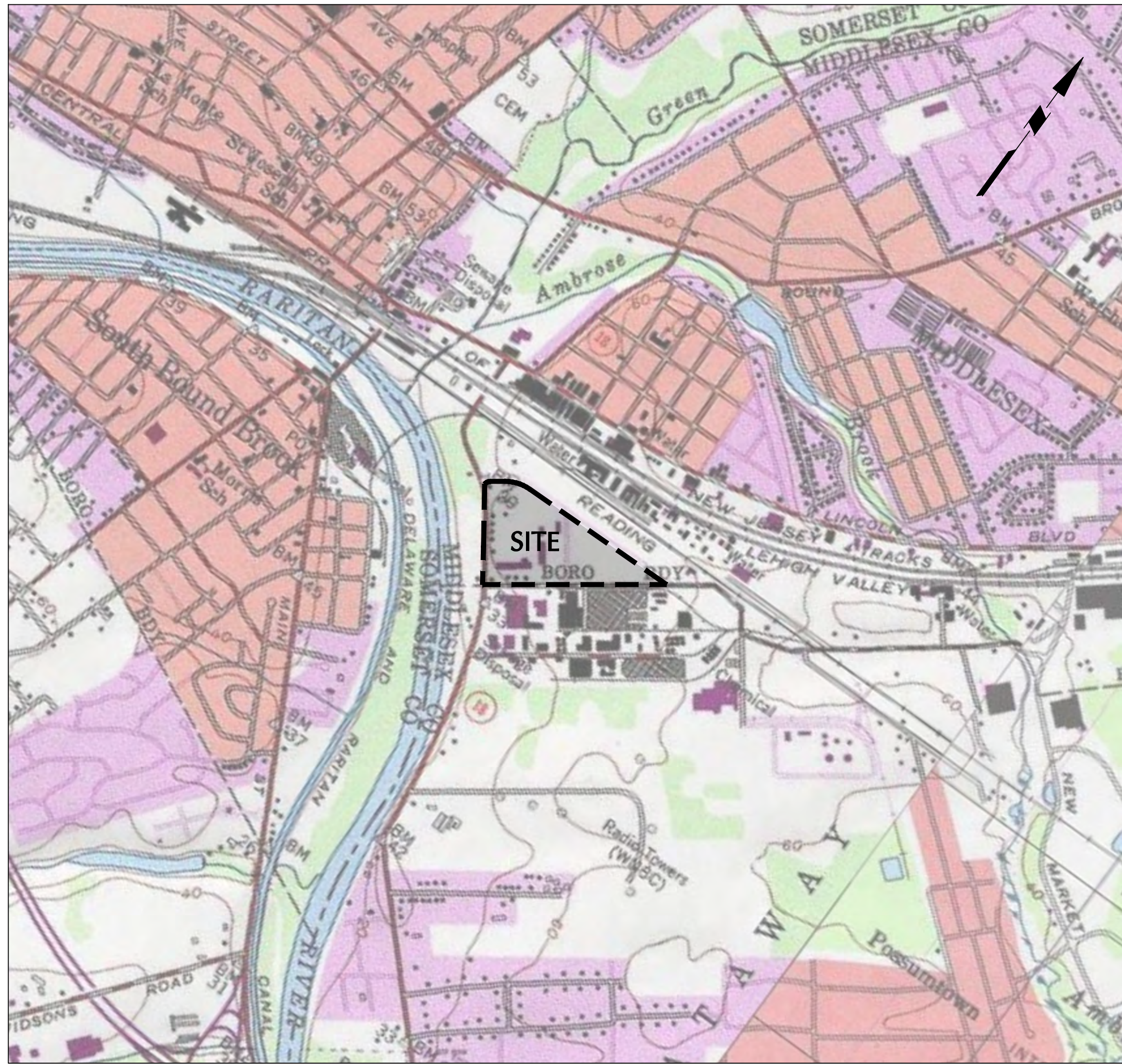


# MIDDLESEX BOROUGH WAREHOUSE PROJECT

## PRELIMINARY AND FINAL SITE PLAN APPLICATION

### BLOCK No. 353, LOTS No. 1.01 AND 1.02

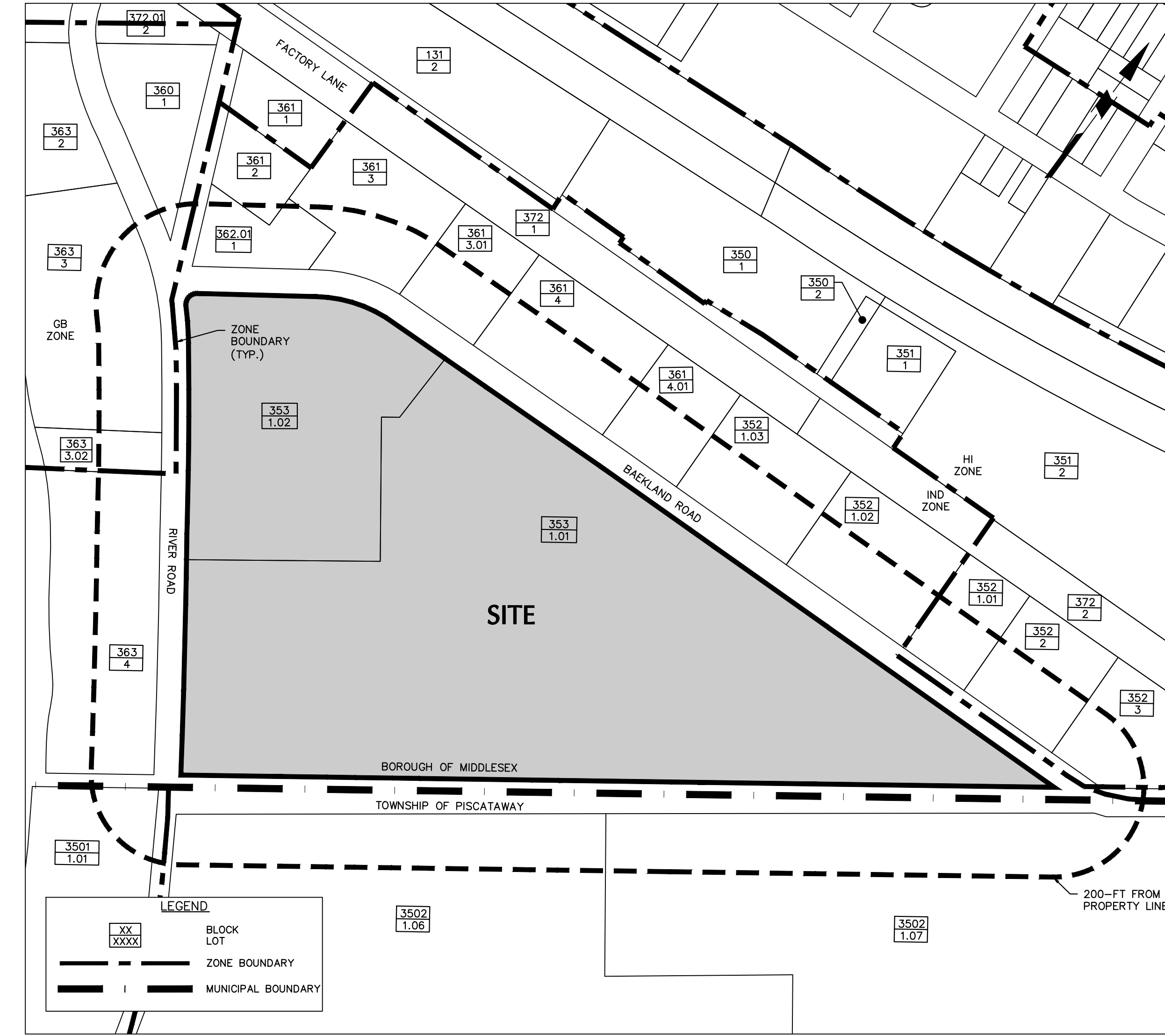
## BOROUGH OF MIDDLESEX, MIDDLESEX COUNTY, NEW JERSEY



MAP REFERENCE:  
USGS TOPOGRAPHIC MAPS FROM 1998 FROM THE BOUND BROOK AND PLAINFIELD QUADS

**SITE LOCATION MAP**

SCALE: 1" = 1000'



MAP REFERENCE:  
PARCEL BOUNDARIES AND BLOCK AND LOT NUMBERS ARE PROVIDED BY THE NJGIS STATEWIDE COMPOSITE PARCEL DATASET IN GIS FORMAT 2018, NEW JERSEY TRANSPORTATION PLANNING AUTHORITY MIDDLESEX COUNTY ZONING DATASET, PROVIDED IN GIS FORMAT, LAST REVISED 2017, THE BOROUGH OF MIDDLESEX TAX MAP SHEET #26 AND THE TOWNSHIP OF PISCATAWAY GIS MAPPING.

**TAX & ZONING MAP**

SCALE: 1" = 200'

**NOTIFICATION LIST OF PROPERTY OWNERS WITHIN 200 FEET OF THE PROJECT SITE**

BLOCK	LOT	PROPERTY OWNER	OWNER'S ADDRESS
352	1.01	IMPORTICO'S INC	120 BAEKELAND AVE MIDDLESEX, NJ 08846
352	1.02	RAPID DISPOSAL SVC % REPUBLIC SVCS	P.O. BOX 29246 PHOENIX, AZ 85038
352	1.03	BAEKELAND, INC	84 BAEKELAND AVE MIDDLESEX, NJ 08846
352	2	IMPORTICO, WILLIAM J	120 BAEKELAND AVE MIDDLESEX, NJ 08846
352	3	LOR-PRIL REALTY LLC	140 BAEKELAND AVE MIDDLESEX, NJ 08846
353	1.01	LEG 171 LLC	1 MEADOWLANDS PLAZA EAST RUTHERFORD, NJ 07073
353	1.02	RCS-LEG PISCATAWAY LLC % LINQUE MGT	1 MEADOWLANDS, STE 803 EAST RUTHERFORD, NJ 07073
361	3	RALYN REALTY LLC	30 BAEKELAND AVE MIDDLESEX, NJ 08846
361	3.01	CONTAINER PROPERTIES LLC	50 BAEKELAND AVE, BOX 428 MIDDLESEX, NJ 08846
361	4	AWARDS REALTY LLC	60 BAEKELAND AVE MIDDLESEX, NJ 08846
361	4.01	TOWEY LLC	80 BAEKELAND AVE MIDDLESEX, NJ 08846
363	3.02	MIDDLESEX COUNTY SEWERAGE AUTH.	CHEVALIER AVENUE SAYREVILLE, NJ 08872
363	4	RCS-LEG PISCATAWAY % DOW TAX DEPT	WASHINGTON ST - 1790 BLDG MIDLAND, MI 48674
3501	1.01	UNION CARBIDE % DOW CHEMICAL	WASHINGTON ST BL 1790 TAX MIDLAND, MI 48674
360	1	145 RIVER ROAD, LLC	79 ROUTE 520 ENGLISHTOWN, NJ 07726
361	2	B & G ENTERPRISES, INC	1 SO RARITAN AVE MIDDLESEX, NJ 08846
362	1.01	LEWIS MANUFACTURING CO LLC	77 IRONIA RD MENDHAM, NJ 07945
363	3	RCS-LEG PISCATAWAY % DOW TAX DEPT	WASHINGTON ST-1790 BLDG MIDLAND, MI 48674

REFERENCE: NOTIFICATION LIST OF PROPERTY OWNERS WITHIN 200 FEET OF THE PROJECT OBTAINED FROM THE BOROUGH OF MIDDLESEX, DATED 7/28/19.

**NOTIFICATION LIST OF PROPERTY OWNERS WITHIN 200 FEET OF THE PROJECT SITE**

BLOCK	LOT	PROPERTY OWNER	OWNER'S ADDRESS
3501	1.01	UNION CARBIDE % DOW CHEMICAL	WASHINGTON ST BL 1790 TAX MIDLAND, MI 48674
3502	1.06	RAR2-100 RIDGE RD URBAN RENEWAL LLC	POB 4900 DEPT 207 % RYAN SCOTTSDALE, AZ 85261
3502	1.07	RAR2-300 RIDGE RD URBAN RENEWAL LLC	POB 4900-#207 % RYAN LLC SCOTTSDALE, AZ 85261

REFERENCE: NOTIFICATION LIST OF PROPERTY OWNERS WITHIN 200 FEET OF THE PROJECT OBTAINED FROM THE TOWNSHIP OF PISCATAWAY, DATED 7/25/19.

**NOTIFICATION LIST OF UTILITY COMPANIES AND ENTITIES**

CABLEVISION OF RARITAN VALLEY  
ATTN: MARGURITE PRENDERVILLE CONSTRUCTION DEPT.  
275 CENTENNIAL AVENUE, CN 6805, PISCATAWAY, NJ 08854

PUBLIC SERVICE ELECTRIC & GAS CO.  
ATTN: MANAGER- CORPORATE PROPERTIES  
80 PARK PLAZA, T6B, NEWARK, NJ 07102

NJ AMERICAN WATER  
ATTN: GIS SUPERVISOR  
1025 LAUREL OAK ROAD, VOORHEES, NJ 08043

NEW JERSEY BELL EXECUTIVE OFFICES  
ATTN: GIS SUPERVISOR  
540 BROAD STREET, NEWARK, NJ 07104

MIDDLESEX CO. PLANNING BOARD  
75 BAYARD STREET, 5TH FLOOR, NEW BRUNSWICK, NJ 08091

STATE DEPT. OF TRANSPORTATION  
ATTN: COMMISSIONER OF TRANSPORTATION  
1035 PARKWAY AVENUE, CN 600, TRENTON, NJ 08625

**NOTIFICATION LIST OF UTILITY COMPANIES AND ENTITIES**

CABLEVISION  
ATTN: PETE MANN  
275 CENTENNIAL AVENUE, PISCATAWAY, NJ 08854

NEW JERSEY AMERICAN WATER COMPANY, INC.  
ATTN: DONNA SHORT  
1025 LAUREL OAK ROAD, VOORHEES, NJ 08043

PISCATAWAY BOARD OF EDUCATION  
ATTN: DAVID OLIVEIRA; BUSINESS ADMINISTRATOR  
1515 STELTON ROAD, PISCATAWAY, NJ 08854

CIVIL SHEET INDEX		
SHEET NUMBER	DRAWING NUMBER	DRAWING TITLE
1	CS001	COVER SHEET
2	CS002	ZONING STATISTICS AND NOTES
3	CS101	SITE PLAN
4	CG101	GRADING PLAN
5	CG201	DRAINAGE PLAN
6	CU101	UTILITY PLAN
7	CE101	SOIL EROSION & SEDIMENT CONTROL PLAN
8	CE102	SESC STORMWATER DIVERSION PLAN
9	CE501	SOIL EROSION AND SEDIMENT CONTROL NOTES
10	CE502	SOIL EROSION AND SEDIMENT CONTROL DETAILS
11	TR101	TREE REMOVAL PLAN
12	LP101	LANDSCAPE PLAN
13	LP501	LANDSCAPE NOTES AND DETAILS
14	LL101	LIGHTING PLAN
15	LL102	LIGHTING CALCULATION EXHIBIT
16	LL501	LIGHTING NOTES AND DETAILS
17	CS501	CONSTRUCTION DETAILS I
18	CS502	CONSTRUCTION DETAILS II
19	CS503	CONSTRUCTION DETAILS III
20	CS504	CONSTRUCTION DETAILS IV
21	CS201	TRUCK CIRCULATION PLAN
22	CD101	UTILITY REMOVAL AND EASEMENT MODIFICATION EXHIBIT

SURVEY SHEET INDEX		
DRAWING NUMBER	DRAWING TITLE	
VT101	ALTA/NSPS LAND TITLE SURVEY	
VL102	ALTA/NSPS LAND TITLE SURVEY	

Date	Description	No.
3/27/2020	REVISED FOR BOROUGH, COUNTY, AND NJDEP COMMENTS	3
1/30/2020	REVISED FOR BOROUGH ENGINEER AND NJDEP COMMENTS	2
9/4/19	REVISED FOR FSCD COMMENTS AND PLANNING BOARD SUBMISSION	1

DATE SIGNED: 04/08/2020  
SIGNATURE: RICHARD BURROW  
PROFESSIONAL ENGINEER NJ Lic. No. 24GE04459300

**APPROVALS**

APPROVED BY THE COUNTY PLANNING BOARD  
COUNTY OF MIDDLESEX, NEW JERSEY

ATTESTED TO BY: \_\_\_\_\_ DATE: \_\_\_\_\_

APPROVED BY THE BOROUGH OF MIDDLESEX PLANNING BOARD

CHAIRMAN (SIGNATURE): \_\_\_\_\_ DATE: \_\_\_\_\_

SECRETARY (SIGNATURE): \_\_\_\_\_ DATE: \_\_\_\_\_

BOARD ENGINEER (SIGNATURE): \_\_\_\_\_ DATE: \_\_\_\_\_

**PROJECT CONTACTS**

OWNER/APPLICANT: RG MIDDLESEX LLC  
92 HEADQUARTERS PLAZA, 9TH FLOOR  
MORRISTOWN, NJ 07960  
(973) 448-3596

CONTACT: HEATH ABRAMSOHN

SITE/CIVIL ENGINEER: **LANGAN**  
300 KIMBALL DRIVE  
PARSIIPPANY, NJ 07054  
(973) 560-4900

CONTACT: RICHARD BURROW, P.E.

ARCHITECT: M+H ARCHITECTS  
2150 SCHUIETZ ROAD, SUITE 200  
ST. LOUIS, MO 63146  
(314) 878-3500

CONTACT: MARK HUGEBACK, AIA

**LANGAN**  
Langan Engineering and Environmental Services, Inc.  
300 Kimball Drive  
Parsippany, NJ 07054

Project: **MIDDLESEX BOROUGH WAREHOUSE PROJECT**  
BLOCK No. 353, LOTS No. 1.01 AND 1.02  
BOROUGH OF MIDDLESEX  
MIDDLESEX COUNTY NEW JERSEY

Drawing Title: **COVER SHEET**

Project No. 100594413  
Date: 7/8/2019  
Scale: N.T.S.  
Drawn By: JEI  
Checked By: MRW  
Drawing No. CS001  
Sheet 1 of 22



**GENERAL NOTES**

- EXISTING BOUNDARY, UTILITY AND TOPOGRAPHIC INFORMATION FOR THE SITE OBTAINED FROM A PLAN ENTITLED "ALTA/NGPS LAND TITLE SURVEY" AS PREPARED BY LANGAN ENGINEERING, DATED 1/9/2019.
- THE MERIDIAN OF THE SURVEY IS REFERENCED TO THE NEW JERSEY STATE PLANE COORDINATE SYSTEM NAD 83 (2011) DERIVED USING SURVEY-GRADE GNSS EQUIPMENT.
- ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAV88) DERIVED USING SURVEY-GRADE GNSS EQUIPMENT.
- THE CONTRACTOR SHALL FURNISH, INSTALL, TEST AND COMPLETE ALL WORK TO THE SATISFACTION OF THE BOROUGH ENGINEER AND OWNER IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION; AS SUCH, THESE PLANS DO NOT COMPLETELY REPRESENT, NOR ARE THEY INTENDED TO REPRESENT, ALL SPECIFIC INSTRUCTIONS REQUIRED FOR SITEWORK CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE TO CONSTRUCT ALL IMPROVEMENTS DEPICTED ON THESE PLANS IN ACCORDANCE WITH ALL APPLICABLE RULES, REGULATIONS AND LAWS IN EFFECT AT THE TIME OF CONSTRUCTION.
- THE CONTRACTOR SHALL QUANTIFY THE SITE AS IS. THE CONTRACTOR SHALL ASSESS CONDITIONS, AND THE KIND, QUALITY AND QUANTITY OF WORK REQUIRED. THE OWNER AND ENGINEER MAKE NO GUARANTEE IN REGARD TO THE ACCURACY OF ANY INFORMATION THAT WAS OBTAINED DURING INVESTIGATIONS. THE CONTRACTOR SHALL MAKE A THOROUGH SITE INSPECTION IN ORDER TO FIELD CHECK EXISTING SITE CONDITIONS, CORRELATE CONDITIONS WITH THE DRAWINGS, AND RESOLVE ANY POSSIBLE CONSTRUCTION CONFLICTS WITH THE OWNER AND ENGINEER PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR SHALL PERFORM ADDITIONAL TOPOGRAPHIC SURVEYS HE/SHE DEEMS NECESSARY, PROVIDED THEY ARE COORDINATED WITH THE OWNER. ANY CONDITIONS DETERMINED BY THE CONTRACTOR THAT DIFFER FROM THE INFORMATION SHOWN ON THE DRAWINGS THAT ARE NOT BROUGHT TO THE ATTENTION OF THE OWNER AND ENGINEER PRIOR TO THE START OF WORK SHALL NOT BE CONSIDERED GROUNDS FOR ADDITIONAL PAYMENT OR CHANGES TO THE CONTRACT DURATION, OR ANY OTHER CLAIMS AGAINST THE OWNER OR OWNER'S ENGINEER.
- THE CONTRACTOR SHALL, WHEN HE/SHE DEEMS NECESSARY, PROVIDE A WRITTEN REQUEST FOR INFORMATION (RFI) TO THE OWNER AND/OR OWNER'S DESIGNATED REPRESENTATIVE, AND ENGINEER PRIOR TO THE CONSTRUCTION OF ANY SPECIFIC SITEWORK ITEM. THE RFI SHALL BE IN A FORM ACCEPTABLE TO OWNER AND/OR OWNER'S DESIGNATED REPRESENTATIVE, AND ENGINEER AND SHALL ALLOW FOR A MINIMUM OF THREE WORK DAYS FOR A WRITTEN REPLY. RFIS SHALL BE NUMBERED CONSECUTIVELY BY DATE SUBMITTED. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR STAKEOUT ITEMS CONSTRUCTED DIFFERENTLY THAN INTENDED OR AS DEPICTED ON THE PLANS.
- INFORMATION RELATED TO ELEVATIONS AND PROPOSED UTILITIES (SUCH AS ROADWAY GRADES, INVERT ELEVATIONS, RIM ELEVATIONS, BUILDING FINISHED FLOOR ELEVATIONS, ETC.) MAY BE FOUND IN MORE THAN ONE LOCATION IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL SUFFICIENTLY REVIEW ALL PLANS, PROFILES AND ANY OTHER INFORMATION IN THE CONTRACT DOCUMENTS FOR CONSISTENCY PRIOR TO BID. ANY INCONSISTENCIES OR DISCREPANCIES THAT ARE FOUND BY THE CONTRACTOR OR HIS ASSIGNS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER AND ENGINEER IN WRITING, IN THE FORMAT OF AN RFI PRIOR TO BID.
- THERE ARE ADDITIONAL NOTES, SPECIFICATIONS AND REQUIREMENTS CONTAINED THROUGHOUT THE PLAN SET AS WELL AS REFERENCES TO SPECIFICATIONS FROM APPLICABLE GOVERNING AUTHORITIES AND INDUSTRY STANDARDS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN, REVIEW AND ADHERE TO ALL THESE DOCUMENTS.
- CONTRACTOR IS SPECIFICALLY CAUTIONED THAT ALL CONSTRUCTION STAKEOUT FOR THIS PROJECT MUST BE COMPLETED FROM THE SITE SPECIFIC SURVEY CONTROL (HORIZONTAL AND VERTICAL) UPON WHICH THE DESIGN IS BASED. THE CONTRACTOR SHOULD NOT RELY ON OR RE-ESTABLISH SURVEY CONTROL BY GPS OR OTHER METHODS FOR USE IN CONSTRUCTION STAKEOUT OR ANY OTHER PURPOSE FOR THIS PROJECT. ANY DISCREPANCIES BETWEEN THE EXISTING HORIZONTAL OR VERTICAL DATA SHOWN ON THESE DRAWINGS AND THAT ENCOUNTERED IN THE FIELD MUST BE REPORTED TO THE DESIGN TEAM PRIOR TO CONSTRUCTION FOR RESOLUTION.

**GRADING AND DRAINAGE NOTES**

- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
- SITE GRADING SHALL NOT PROCEED UNTIL EROSION CONTROL MEASURES HAVE BEEN INSTALLED. SEE SHEETS C601 AND C602 FOR EROSION CONTROL MEASURES AND SHEETS C601 AND C602 FOR SOIL EROSION NOTES AND DETAILS.
- PROPOSED SPOT ELEVATIONS SHOWN AT CURB LINES DENOTE PAVEMENT ELEVATIONS.
- SITE FILL SHALL CONSIST OF MATERIAL FROM APPROVED ONSITE SOURCES OR APPROVED OFFSITE MATERIAL AND SHALL BE CLEAN FILL CERTIFIED. THE LSPP AND GEOTECHNICAL ENGINEER MUST REVIEW AND APPROVE ALL MATERIAL.
- PAVEMENT SUBGRADE PREPARATION WORK SHALL BE INSPECTED BY A QUALIFIED GEOTECHNICAL ENGINEER. SHOULDER ISOLATED AREAS EXHIBIT UNSUITABLE CONDITIONS, THE ISOLATED AREAS SHOULD BE OVER-EXCAVATED TO A DEPTH AS DETERMINED BY THE GEOTECHNICAL ENGINEER AND IMMEDIATELY REPLACED WITH APPROVED COMPACTED FILL OR CRUSHED STONE AT THE EXPENSE OF THE CONTRACTOR.
- ALL CONCRETE DRAINAGE STRUCTURES SHALL BE PRECAST IN ACCORDANCE WITH NJDOT SPECIFICATIONS.
- ALL DRAINAGE STRUCTURES AND STORM SEWER PIPES SHALL MEET HEAVY DUTY TRAFFIC (H20) LOADING AND BE INSTALLED ACCORDINGLY.
- ALL DRAINAGE STRUCTURES SHALL HAVE NO SUMP AND PLACED ON 6 INCHES OF COURSE AGGREGATE.
- CATCH BASIN AND MANHOLE STRUCTURES ARE NOT SHOWN TO SCALE.
- CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR ACTUAL LOCATIONS AND SIZES OF ALL ROOF LEADERS AND COORDINATE WITH PROPOSED STORMWATER SYSTEM PRIOR TO INSTALLATION.
- ALL ROOF DRAINS TO BUILDING SHALL BE BROUGHT TO FIVE FEET OUTSIDE THE BUILDING LIMITS BY THE SITE CONTRACTOR AND SHALL BE PROVIDED WITH A TEMPORARY PLUG AT THE END. BUILDING CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF PIPING WITHIN FIVE FEET OF BUILDING AND CONNECTION OF BUILDING LATERALS TO SITE DRAINAGE SYSTEM.
- CLEANOUTS SHALL BE PROVIDED FLUSH AT ALL LOCATIONS OF ROOF DRAIN INTERSECTIONS, BENDS AND UPSTREAM ENDS.
- ALL PROPOSED STORM DRAINAGE PIPING SHALL BE TEMPORARILY PROTECTED WITH REQUIRED MINIMUM COVER FOR CONSTRUCTION.
- ALL PROPOSED STORM DRAINAGE TO BE INSTALLED UNDERGROUND UNLESS OTHERWISE NOTED.
- PROPOSED SPOT ELEVATIONS SHOWN AT CURB LINES DENOTE PAVEMENT ELEVATIONS.
- PIPE LENGTHS SHOWN REPRESENT PLANNED LENGTHS MEASURED FROM CENTER-OF-STRUCTURE TO CENTER-OF-STRUCTURE.
- PIPE INVERT ELEVATION AT A STRUCTURE REPRESENTS THE PIPE INVERT PROJECTED TO THE CENTER OF THAT STRUCTURE.
- PLAN AND PROFILE STRUCTURES ARE SYMBOLS THAT ARE PROVIDED FOR REFERENCE, AND ARE NOT TO BE USED AS THE BASIS FOR CONSTRUCTION. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS OF ALL DRAINAGE, SANITARY, AND UTILITY STRUCTURES TO ENGINEER.
- HDP PIPING SHALL CONFORM TO AASHTO M 294 AND IS TYPE S (SMOOTH INTERIOR WITH ANNULAR CORRUGATIONS) WITH GASKETED SILT-TIGHT JOINTS.
- ABBREVIATIONS:  
 BT = BOTTOM OF CURB  
 CB = CATCH BASIN  
 CR = CRATE ELEVATION  
 HP = HIGH POINT  
 HDPE = HIGH DENSITY POLYETHYLENE  
 INV = INVERT  
 LP = LINEAR FEET  
 MH = MANHOLE  
 ROP = REINFORCED CONCRETE PIPE  
 RIM = RIM ELEVATION  
 RL = ROOF LEADER

**UTILITY NOTES**

- GENERAL**
- ALL SITE UTILITY CONSTRUCTION SHALL BE COORDINATED WITH STORMWATER AND ROOF LEADER DRAINAGE CONSTRUCTION. RESOLUTION OF ANY POTENTIAL UTILITY CONFLICTS TO BE DETERMINED IN THE FIELD.
  - ALL UTILITY CONSTRUCTION TO BE COORDINATED WITH THE APPROPRIATE UTILITY COMPANIES AND SHALL CONFORM WITH THEIR REQUIREMENTS.
  - CONCRETE ENCASEMENT WILL BE REQUIRED AT UTILITY CROSSINGS WHERE VERTICAL AND/OR HORIZONTAL SEPARATION DOES NOT MEET CURRENT APPLICABLE STANDARDS.
  - SANITARY AND WATER LINES SHALL HAVE A MINIMUM HORIZONTAL SPACING OF 10 FT. SANITARY AND WATER LINES SHALL HAVE A MINIMUM VERTICAL SEPARATION OF EIGHTEEN (18) INCHES.
  - SITE DISTURBANCE SHALL NOT PROCEED UNTIL EROSION CONTROL MEASURES HAVE BEEN INSTALLED AND ALL GOVERNING AGENCIES HAVE BEEN NOTIFIED BY THE CONTRACTOR.
  - THE CONTRACTOR MUST NOTIFY THE BOROUGH OF MIDDLESEX A MINIMUM OF 72 HOURS PRIOR TO CONSTRUCTION, UNLESS FURTHER ADVANCE NOTICE IS REQUIRED BY THE BOROUGH.
  - UNLESS OTHERWISE NOTED, ALL PROPOSED UTILITIES SHALL BE UNDERGROUND WITH THE EXCEPTION OF OVERHEAD ELECTRIC.
  - ALL ABANDONED UTILITY LINES AND STRUCTURES SHALL BE COMPLETELY REMOVED AND CAPPED/PLUGGED AT THE MAIN IN ACCORDANCE WITH THE UTILITY COMPANY OR LOCAL AUTHORITY REQUIREMENTS.
  - TRENCH DEPTH REQUIREMENTS MEASURED FROM FINISHED GRADE OR PAVED SURFACE SHALL MEET THE FOLLOWING REQUIREMENTS WHEN NOT SPECIFIED BY GOVERNING CODES, ORDINANCES, OR AUTHORITIES.
    - WATER MAINS: MINIMUM 4'-FT OF COVER SHALL BE PROVIDED OVER THE PROPOSED WATER MAINS OR AS REQUIRED BY NEW JERSEY AMERICAN WATER COMPANY.
    - SANITARY SEWER: DEPTHS, ELEVATIONS, AND GRADES AS INDICATED ON DRAWINGS.
    - ELECTRICAL CONDUITS: 24 INCHES MINIMUM TO TOP OF CONDUIT OR AS SPECIFIED BY THE UTILITY COMPANY REQUIREMENTS.
    - TV CONDUITS: 18 INCHES MINIMUM TO TOP OF CONDUIT OR AS REQUIRED BY THE UTILITY COMPANY.
    - TELEPHONE CONDUITS: 18 INCHES MINIMUM TO TOP OF CONDUIT OR AS REQUIRED BY THE UTILITY COMPANY.
    - F. GAS MAINS AND SERVICE: 36 INCHES MINIMUM TO TOP OF PIPE, OR AS REQUIRED BY THE UTILITY COMPANY.
- WATER SUPPLY NOTES:**
- ALL WATER CONSTRUCTION SHALL BE COMPLETED IN ACCORDANCE WITH NEW JERSEY AMERICAN WATER COMPANY REQUIREMENTS.
  - ALL EXISTING WATER LATERALS WITHIN THE SITE FROM FORMER BUILDINGS SHALL BE TERMINATED AT THE MAIN AND CURB SHUT-OFFS SHALL BE REMOVED. EXISTING WATER SERVICE LINES SHALL BE PHYSICALLY REMOVED UNLESS NOTED OTHERWISE. CONTRACTOR SHALL NOTIFY OWNER'S ENGINEER PRIOR TO REMOVAL OF ANY WATER LINE.
  - ALL WATER MAINS SHALL BE C900 PVC PIPE.
  - ALL FITTINGS UP TO AND INCLUDING 12-INCH DIAMETER SHALL BE RATED FOR 250 PSI AND ALL FITTINGS OVER 16-INCH DIAMETER SHALL BE RATED FOR 150 PSI.
  - THE MINIMUM HORIZONTAL SEPARATION BETWEEN THE CLOSEST TWO POINTS OF THE WATER AND SEWER MAIN IS TEN FEET (10'). THE MINIMUM VERTICAL SEPARATION BETWEEN THE CLOSEST TWO POINTS OF THE WATER AND SEWER LINE IS EIGHTEEN INCHES (18'). CONCRETE PIPE ENCASEMENTS WILL BE REQUIRED WHERE THE MINIMUM SEPARATION CANNOT BE ACHIEVED. LATERAL SEPARATION SHALL BE AS REQUIRED BY LOCAL CODE.
  - THRUST BLOCKS SHALL BE PROVIDED AT ALL BENDS, TEES, ELBOWS, PLUGS, AND FIRE HYDRANTS.
  - ALL FIRE HYDRANTS SHALL BE PROVIDED WITH AN APPROVED GATE VALVE AND SHALL CONFORM TO THE REQUIREMENTS OF THE LOCAL AUTHORITY. LOCATIONS OF ALL HYDRANTS SHALL BE APPROVED BY THE FIRE MARSHALL.
  - ALL GATE VALVES SHALL OPEN BY TURNING IN A COUNTER-CLOCKWISE (LEFT) DIRECTION AND SHALL CONFORM TO THE REQUIREMENTS OF THE LOCAL AUTHORITY.
  - ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS.
  - BACKFLOW PREVENTION DEVICES FOR DOMESTIC AND FIRE SERVICE CONNECTIONS SHALL CONFORM TO THE REQUIREMENTS OF THE LOCAL AUTHORITY.
  - ALL NEW WATER LINES SHALL BE PRESSURE TESTED AND LEAKAGE TESTED IN ACCORDANCE WITH THE LATEST EDITION OF AWWA STANDARD C600, OR LOCAL REQUIREMENTS, WHICHEVER IS MORE RESTRICTIVE.
  - ALL NEW WATER MAINS SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA STANDARD C651, OR LOCAL REQUIREMENTS, WHICHEVER IS MORE RESTRICTIVE.
  - CONTRACTOR SHALL NOTIFY THE BOROUGH OF MIDDLESEX AND NEW JERSEY AMERICAN WATER AT LEAST 48 HOURS PRIOR TO WET TAP INSTALLATION.
- SANITARY SEWER NOTES:**
- ALL SEWER CONSTRUCTION SHALL BE COMPLETED IN ACCORDANCE WITH THE LOCAL AUTHORITY.
  - MATERIAL OF SANITARY PIPES SHALL BE SDR 35 PVC. ALL CONSTRUCTION METHODS EMPLOYED SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR THE GOVERNING LOCAL MUNICIPAL UTILITY AUTHORITY.
  - WHERE LESS THAN 18" OF VERTICAL AND 10' OF HORIZONTAL CLEARANCE IS PROVIDED BETWEEN THE SANITARY SEWER AND OTHER UTILITIES, THE SEWER SHALL BE ENCASED IN 6 INCHES OF 4,500 PSI CONCRETE ON ALL FOUR SIDES AND SHALL EXTEND 10 FEET BEYOND CROSSING IN BOTH DIRECTIONS. DUCTILE IRON PIPE MAY BE UTILIZED IN PLACE OF CONCRETE ENCASEMENT PER NJAC 7:14A 23.6.b.4.
  - WHEN SANITARY LATERALS ARE DIRECTLY INTO MANHOLES, AN APPROPRIATE OPENING WITH AN "A-LOCK" OR APPROVED EQUAL JOINT SHALL BE PRECAST IN THE MANHOLE BASE. ALL MAINS SHALL BE TESTED FOR LEAKAGE IN ACCORDANCE WITH THE LOW PRESSURE AIR TEST METHOD OR AS OTHERWISE SPECIFIED BY LOCAL AUTHORITY OR PROJECT SPECIFICATIONS.
- ELECTRIC, TELEPHONE, AND GAS NOTES:**
- ELECTRIC, TELEPHONE AND GAS LOCATIONS SHOWN ON PLAN ARE PRELIMINARY. CONTRACTOR SHALL COORDINATE FINAL LOCATION WITH UTILITY COMPANY AND SHALL INFORM THE OWNER'S ENGINEER OF THE FINAL LOCATION PRIOR TO CONSTRUCTION.
  - CONTRACTOR TO COORDINATE GAS MAIN, ELECTRIC, AND TELEPHONE INSTALLATION WITH APPROPRIATE UTILITY COMPANIES.
  - ALL GAS WORK AND OTHER ASSOCIATED APPURTENANCES SHALL BE IN CONFORMANCE WITH APPLICABLE LOCAL COUNTY, STATE, AND FEDERAL GUIDELINES AND REQUIREMENTS.
  - ALL ELECTRICAL WORK, TRANSFORMER PAD, AND ASSOCIATED APPURTENANCES SHALL BE IN CONFORMANCE WITH APPLICABLE LOCAL COUNTY, STATE, AND FEDERAL GUIDELINES AND REQUIREMENTS.

**MIDDLESEX BOROUGH WAREHOUSE PROJECT  
BOROUGH OF MIDDLESEX, MIDDLESEX COUNTY, NEW JERSEY**

**BLOCK 353, LOTS 1.01 & 1.02 AND BLOCK 356, LOT 1**

**ZONING STATISTICS TABLE**

ZONING DISTRICT: WAREHOUSE/LIGHT INDUSTRIAL REDEVELOPMENT OVERLAY ZONE				
CODE SECTION	DESCRIPTION	REQUIRED / PERMITTED	PROPOSED	COMPLIANCE
<b>USE REGULATIONS</b>				
REDEVELOPMENT PLAN 15.2.1	PRINCIPAL PERMITTED USES	WAREHOUSING AND STORAGE	WAREHOUSING	COMPLIES
REDEVELOPMENT PLAN 15.2.2	ACCESSORY USES	OFF-STREET PARKING, FENCES, OFF-STREET TRAILER STORAGE, OFF-STREET LOADING AND TRASH/RECYCLING AREA, ENTRY GATHOUSES AND GATES	OFF-STREET PARKING, FENCES, OFF-STREET TRAILER STORAGE, AND OFF-STREET LOADING	COMPLIES
<b>MAXIMUM BUILDING HEIGHT</b>				
REDEVELOPMENT PLAN 15.3.1-9	MAXIMUM PRINCIPAL BUILDING HEIGHT	NO PRINCIPAL BUILDING SHALL EXCEED SIXTY FEET (60') IN HEIGHT. MEZZANINE AREAS ARE PERMITTED WITHIN THE BUILDINGS, AND SHALL NOT BE TREATED AS A "STORY".	≤ 60 FT	COMPLIES
REDEVELOPMENT PLAN 15.3.1-6	MAXIMUM ACCESSORY BUILDING HEIGHT	NO ACCESSORY BUILDING SHALL EXCEED THIRTY-FIVE FEET (35') IN HEIGHT AND TWO STORES.	NONE PROPOSED	COMPLIES
<b>MAXIMUM INTENSITY OF DEVELOPMENT</b>				
REDEVELOPMENT PLAN 15.3.4	MAXIMUM BUILDING COVERAGE	THE AGGREGATE MAXIMUM COVERAGE OF BUILDINGS % OF GROSS LOT AREA WITHIN THE REDEVELOPMENT AREA WITHIN A MULTI-BUILDING/MULTI-LOT PROJECT (INCLUDING ACCESSORY STRUCTURES) IS 40 PERCENT.	30.3%	COMPLIES
REDEVELOPMENT PLAN 15.3.6	MAXIMUM FLOOR AREA RATIO (FAR)	THE AGGREGATE MAXIMUM FLOOR AREA RATIO (FAR) IS 0.50 OF GROSS LOT AREA PROVIDED THAT MEZZANINE AREAS WITHIN WAREHOUSE/LIGHT INDUSTRIAL BUILDINGS SHALL NOT BE INCLUDED IN THE CALCULATION OF FAR.	0.30	COMPLIES
REDEVELOPMENT PLAN 15.3.5	MAXIMUM IMPERVIOUS LOT COVERAGE	80 PERCENT	61.9%	COMPLIES
<b>SETBACK REQUIREMENTS</b>				
REDEVELOPMENT PLAN 15.3.2-9	STREET AND EXTERNAL LOT LINE SETBACKS	ALL COMMERCIAL BUILDINGS SHALL BE SET BACK AT LEAST TWENTY-FIVE FEET (25') FROM ALL STREET LINES AND ALL EXTERNAL LOT LINES, EXCEPT THAT A ZERO (0) FEET LOT LINE SETBACK SHALL BE PERMITTED FOR A LOT LINE AT THE PISCATAWAY TOWNSHIP BORDERS. TO ACCOMMODATE PLANNED DEVELOPMENT OF BUILDINGS AND IMPROVEMENTS THAT MAY CROSS THE DEVELOPMENTAL BOUNDARIES, THE BOUNDARY LINES SHALL BE SET BACK TO DEVELOPMENT SHALL NOT CREATE SETBACK REQUIREMENTS BETWEEN SUCH LOTS.	96.1 FT	COMPLIES
REDEVELOPMENT PLAN 15.3.2-7	RESIDENTIAL SETBACK	NO COMMERCIAL BUILDING SHALL BE LOCATED WITHIN TWO HUNDRED FEET (200') OF A PERMITTED RESIDENTIAL USE.	NO RESIDENTIAL USE LOCATED 200 FEET FROM THE PROPOSED BUILDING	COMPLIES
<b>GENERAL REQUIREMENTS</b>				
REDEVELOPMENT PLAN 15.10.1	MULTIPLE PRINCIPAL USES	BUILDINGS MAY CONTAIN MORE THAN ONE (1) PRINCIPAL USE, PROVIDED THAT EACH USE OCCUPIES A MINIMUM GROSS FLOOR AREA OF TEN THOUSAND (10,000) SQUARE FEET.	BUILDING MAY CONTAIN MORE THAN ONE TENANT. EACH TENANT SPACE TO BE A MINIMUM OF 10,000 SF.	COMPLIES
REDEVELOPMENT PLAN 15.6.1	WASTE DISPOSAL REQUIREMENTS	UNLESS OTHERWISE SPECIFICALLY APPROVED BY THE BOROUGH AS PART OF A SITE PLAN APPLICATION, NO UNENCLOSED WASTE (E.G., PALLETS, TRASH, CARBONADO, OLD TIRES, OR TILES) SHALL BE DISPLAYED OR STORED OUTSIDE.	NO UNENCLOSED WASTE PROPOSED TO BE DISPLAYED OR STORED OUTSIDE	COMPLIES
REDEVELOPMENT PLAN 15.10.2.2	SCREENING OF MECHANICAL EQUIPMENT	MECHANICAL EQUIPMENT SERVING A BUILDING, WHETHER ROOF OR GROUND MOUNTED, SHALL BE SCREENED FROM PUBLIC VIEW BY FEATURES INTEGRATED INTO THE ARCHITECTURAL DESIGN OF THE BUILDING AND WITH FOUNDATION LANDSCAPING.	ALL MECHANICAL EQUIPMENT WILL BE SCREENED	COMPLIES
REDEVELOPMENT PLAN 15.6.1.b	LANDSCAPING REQUIREMENT	ALL AREAS NOT UTILIZED FOR BUILDINGS, PARKING, LOADING, ACCESS, ASILES AND DRIVEWAYS OR PEDESTRIAN WALKWAYS SHALL BE SUITABLY LANDSCAPED WITH GRASS, SHRUBS, GROUND COVER, OR TREES AND SHALL BE CONTINUOUSLY MAINTAINED IN GOOD CONDITION.	ALL AREAS NOT UTILIZED FOR BUILDINGS, PARKING, LOADING, ACCESS ASILES AND DRIVEWAYS OR PEDESTRIAN WALKWAYS SHALL ARE PROPOSED TO BE LANDSCAPED	COMPLIES
<b>OFF-STREET PARKING AND LOADING REQUIREMENTS</b>				
REDEVELOPMENT PLAN 15.4.1.2	MIN. NUMBER OF CAR PARKING SPACES	EACH INDIVIDUAL USE SHALL PROVIDE ADEQUATE ON-SITE PARKING SPACES TO ACCOMMODATE THE PROPOSED USES, AS DETERMINED BY THE PLANNING BOARD DURING SITE PLAN REVIEW, BASED UPON PARKING DEMAND STUDIES PREPARED BY APPROPRIATE TRAFFIC PROFESSIONALS AND CONFIRMED BY A BOROUGH RETAINED TRAFFIC PROFESSIONAL. WHERE A PERMITTED USE OF LAND INCLUDES DIFFERENT SPECIFIC ACTIVITIES WITH DIFFERENT SPECIFIC PARKING REQUIREMENTS, THE TOTAL NUMBER OF REQUIRED PARKING SPACES SHALL BE CALCULATED IN THE DEMAND STUDY BY INDIVIDUALLY COMPUTING THE PARKING DEMAND FOR EACH DIFFERENT ACTIVITY AND ADDING THE RESULTING NUMBERS TOGETHER.	334 SPACES (INCLUDES 58 LANDBANKED STALLS)	COMPLIES
REDEVELOPMENT PLAN 15.4.3	MIN. CAR PARKING SPACE DIMENSIONS	EACH PARKING SPACE SHALL BE NOT LESS THAN 9 FEET WIDE NOR LESS THAN 18 FEET DEEP.	9 FT X 18 FT	COMPLIES
REDEVELOPMENT PLAN 15.5	MIN. NUMBER OF LOADING SPACES	EACH WAREHOUSE/LIGHT INDUSTRIAL BUILDING MAY PROVIDE OFF-STREET TRUCK LOADING BAYS AND PARKING AT THE BUILDING AS NEEDED TO MEET MARKET AND/OR TENANT DEMAND WITHIN THE LIMITS OF IMPERVIOUS COVERAGE.	96 LOADING DOCKS	COMPLIES
15248-17-B-6	MIN. INTERIOR DRIVEWAY WIDTH	24 FT AT 90 DEGREE PARKING	24 FT AT 90 DEGREE PARKING	COMPLIES
15248-17-B-6	MAX. DRIVEWAY WIDTH	A DRIVEWAY, EXCLUSIVE OF CURB RETURN RADIUS, SHALL BE NOT LESS THAN 12 FEET NOR MORE THAN 24 FEET IN WIDTH.	40 FT	WAIVER REQUIRED
15248-17-B-20	PARKING, LOADING, AND DRIVEWAY SETBACK	NOT PERMITTED IN FRONT YARD	NONE PROPOSED	COMPLIES
15248-17-B-23 (G)	MIN. 2 FT FROM OTHER PROPERTY LINES	MIN. 2 FT FROM OTHER PROPERTY LINES	3.2 FT	COMPLIES
15248-17-B-22	MIN. LOADING SPACE DIMENSIONS	12 FT WIDE X 48 FT LONG AND 10 FT OF OVERHEAD CLEARANCE	13.6 FT X 60 FT	COMPLIES
<b>SIGNS (SEE NOTE 3)</b>				
REDEVELOPMENT PLAN 15.7.2	MONUMENT SIGNS	ONE (1) MONUMENT IDENTIFICATION SIGNS SHALL BE PERMITTED AT EACH ENTRANCE INTO THE REDEVELOPMENT AREA IDENTIFYING THE NAME OF THE PROJECT AND TENANTS WITHIN THE REDEVELOPMENT AREA. THE SIGN SHALL NOT EXCEED SIX FEET (6') IN HEIGHT AND FIFTY (50) SQUARE FEET IN AREA AND SHALL BE SET BACK AT LEAST TEN FEET (10') FROM THE BACKLAND AVENUE RIGHT-OF-WAY. THE SIGN MAY BE INTERNALLY LIT, AND HAVE APPROPRIATE LANDSCAPING.	TWO (2) MONUMENT SIGNS WITH MAXIMUM HEIGHT OF 6-FT AND AREA OF 50 SF PROPOSED	COMPLIES
REDEVELOPMENT PLAN 15.7.4	SIGNS ATTACHED TO FACADE	EACH PRINCIPAL USE IN THE LIGHT INDUSTRIAL BUILDINGS SHALL BE PERMITTED ONE (1) ATTACHED SIGN ON EACH FACADE OF THE BUILDING, PROVIDED AND IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS: *THE SIGN SHALL IDENTIFY THE NAME AND/OR LOGO OF THE USER ONLY. *THE TOP OF THE SIGN SHALL BE LOCATED IN NO CASE HIGHER THAN THIRTY-FIVE FEET (35') ABOVE GRADE. *THE SIZE OF AN ATTACHED FACADE SIGN SHALL NOT EXCEED 250 SQUARE FEET IN AREA. *ATTACHED FACADE SIGNS MAY BE INTERNALLY OR EXTERNALLY ILLUMINATED.	SIGNS WILL BE A MAXIMUM OF 250 SF AND LOCATED NO HIGHER THAN 35' ABOVE GRADE	COMPLIES

- NOTES:**
- ZONING INFORMATION OBTAINED FROM DOCUMENT ENTITLED "BOROUGH OF MIDDLESEX, MIDDLESEX COUNTY, NEW JERSEY, REDEVELOPMENT PLAN FOR BLOCK 353, LOTS 1.01 & 1.02 AND BLOCK 356, LOT 1", DATED JULY 22, 2019.
  - FENCES AS MAY BE SPECIFICALLY APPROVED BY THE TOWNSHIP AS PART OF SITE PLAN APPROVAL, INCLUDING SECURITY FENCES UP TO TEN FEET (10') IN HEIGHT.
  - ADDITIONAL SIGNAGE MAY BE PERMITTED BY THE BOROUGH FOR GOOD CAUSE SHOWN BY THE APPLICANT, PROVIDED THAT SUCH ADDITIONAL SIGNAGE MUST BE SPECIFICALLY APPROVED AS PART OF SITE PLAN REVIEW AND APPROVAL. GOOD CAUSE SHALL INCLUDE ADDRESSING WAYFINDING, BUILDING LOCATION, VISIBILITY FROM PUBLIC AND/OR PRIVATE ROADWAYS, TRAFFIC MOVEMENT AND SAFETY, TENANT DRIVEN STANDARDS, AND SUCH OTHER FACTORS DEEMED APPROPRIATE BY THE BOARD OF JURISDICTION.

Date	Description	No.
3/27/2020	REVISED FOR BOROUGH, COUNTY, AND NJDEP COMMENTS	2
1/30/2020	REVISED FOR BOROUGH ENGINEER AND NJDEP COMMENTS	1
REVISIONS		

04/08/2020  
 SIGNATURE RICHARD BURROW DATE SIGNED  
 PROFESSIONAL ENGINEER NJ Lic. No. 24GE04459300

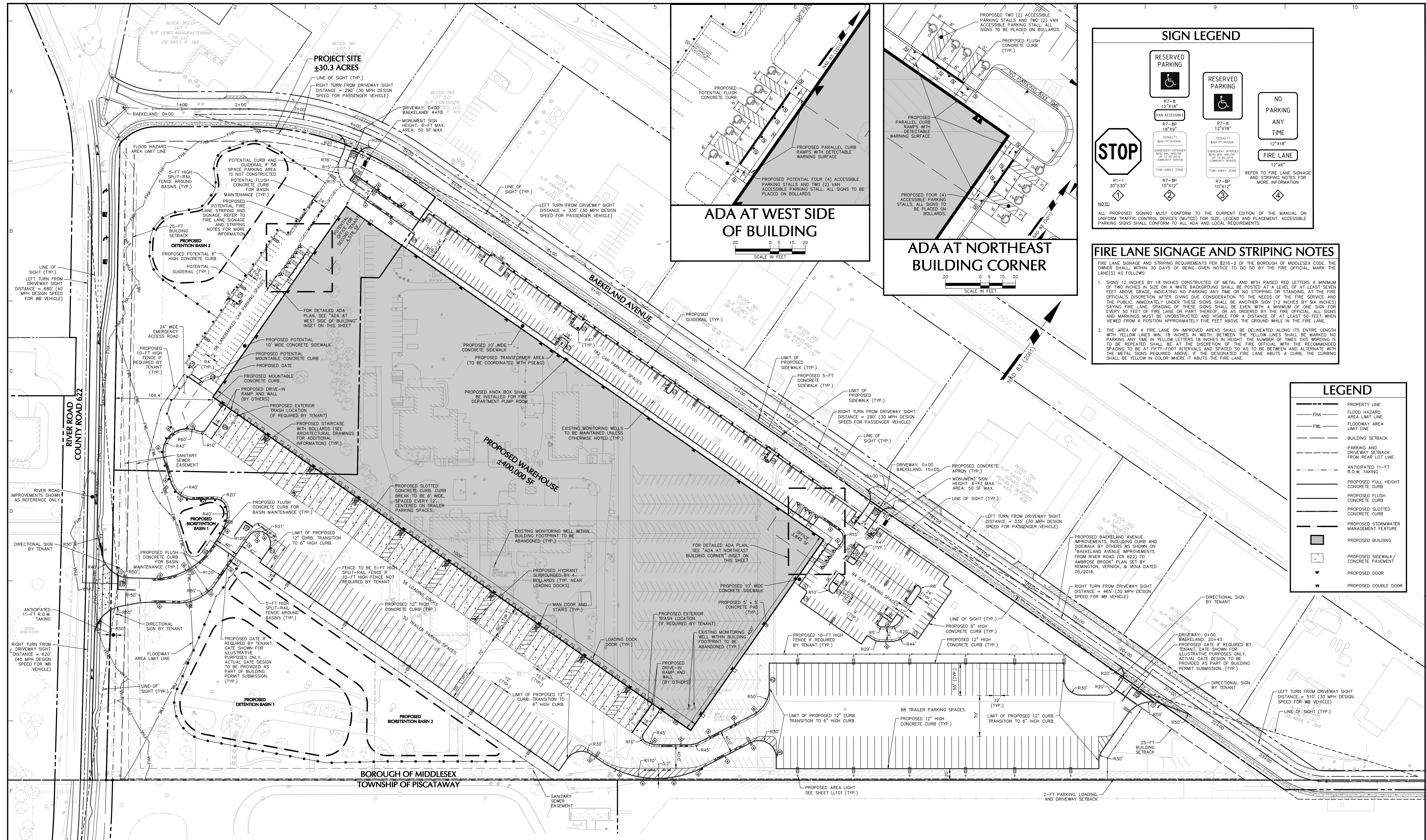
**LANGAN**  
 Langan Engineering and Environmental Services, Inc.  
 300 Kimball Drive  
 Parsippany, NJ 07054  
 T: 973.560.4900 F: 973.560.4901 www.langan.com  
 NJ CERTIFICATE OF AUTHORIZATION NO. 24GA27996400

Project **MIDDLESEX BOROUGH WAREHOUSE PROJECT**  
 BLOCK No. 353, LOTS No. 1.01 AND 1.02  
 BOROUGH OF MIDDLESEX  
 MIDDLESEX COUNTY NEW JERSEY

Drawing Title **ZONING STATISTICS AND NOTES**

Project No. <b>100594413</b>	Drawing No. <b>CS002</b>
Date <b>7/8/2019</b>	
Scale <b>N.T.S.</b>	
Drawn By <b>JEI</b>	Checked By <b>MRW</b>
Sheet 2 of 22	

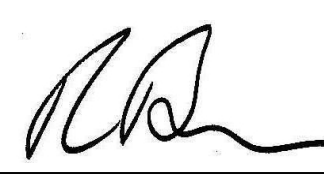




**TOTAL BUILDING COVERAGE: 30.3%**  
**TOTAL LOT COVERAGE: 61.9%**

**REFER TO CS002 FOR GENERAL NOTES**

Date	Description	No.
3/27/2020	REVISED FOR BOROUGH, COUNTY, AND NJDEP COMMENTS	3
1/30/2020	REVISED FOR BOROUGH ENGINEER AND NJDEP COMMENTS	2
9/4/19	REVISED FOR FSCD COMMENTS AND PLANNING BOARD SUBMISSION	1
Date	Description	No.

  
 SIGNATURE RICHARD BURROW DATE SIGNED 04/08/2020  
 PROFESSIONAL ENGINEER NJ Lic. No. 24GE04459300



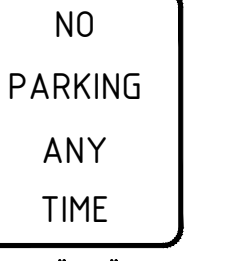
**LANGAN**  
 Langan Engineering and Environmental Services, Inc.  
 300 Kimball Drive  
 Parsippany, NJ 07054  
 T: 973.560.4900 F: 973.560.4901 www.langan.com  
 NJ CERTIFICATE OF AUTHORIZATION No. 24GA2799640





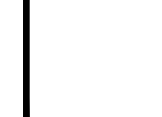
Project **MIDDLESEX BOROUGH WAREHOUSE PROJECT**  
 BLOCK No. 353, LOTS No. 1.01 AND 1.02  
 BOROUGH OF MIDDLESEX  
 MIDDLESEX COUNTY NEW JERSEY

Drawing Title **SITE PLAN**  
 Project No. **100594413**  
 Date **7/8/2019**  
 Scale **1" = 60'**  
 Drawn By **SLK** Checked By **MRW**

Drawing No. **CS101**  
 Sheet 3 of 22

### SIGN LEGEND

 RESERVED PARKING R7-B 12"x18" VAN ACCESSIBLE R7-BP 18"x9" PENALTY \$100 MIN. AND/OR UP TO 90 DAYS COMMUNITY SERVICE TOW-AWAY ZONE	 RESERVED PARKING R7-B 12"x18" PENALTY \$100 MIN. AND/OR UP TO 90 DAYS COMMUNITY SERVICE TOW-AWAY ZONE	 NO PARKING ANY TIME 12"x18" <b>FIRE LANE</b> 12"x6" REFER TO FIRE LANE SIGNAGE AND STRIPING NOTES FOR MORE INFORMATION
---	---	---

  
 STOP  
 R1-1 30"x30"  
  
 R7-BP 10"x12"  
  
 R7-BP 10"x12"  
  
 R7-BP 10"x12"  
  
 R7-BP 10"x12"















NOTE: ALL PROPOSED SIGNING MUST CONFORM TO THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FOR SIZE, LEGEND AND PLACEMENT. ACCESSIBLE PARKING SIGNS SHALL CONFORM TO ALL ADA AND LOCAL REQUIREMENTS.

### FIRE LANE SIGNAGE AND STRIPING NOTES

FIRE LANE SIGNAGE AND STRIPING REQUIREMENTS PER §216-2 OF THE BOROUGH OF MIDDLESEX CODE, THE OWNER SHALL, WITHIN 30 DAYS OF BEING GIVEN NOTICE TO DO SO BY THE FIRE OFFICIAL, MARK THE FIRE LANE(S) AS FOLLOWS:

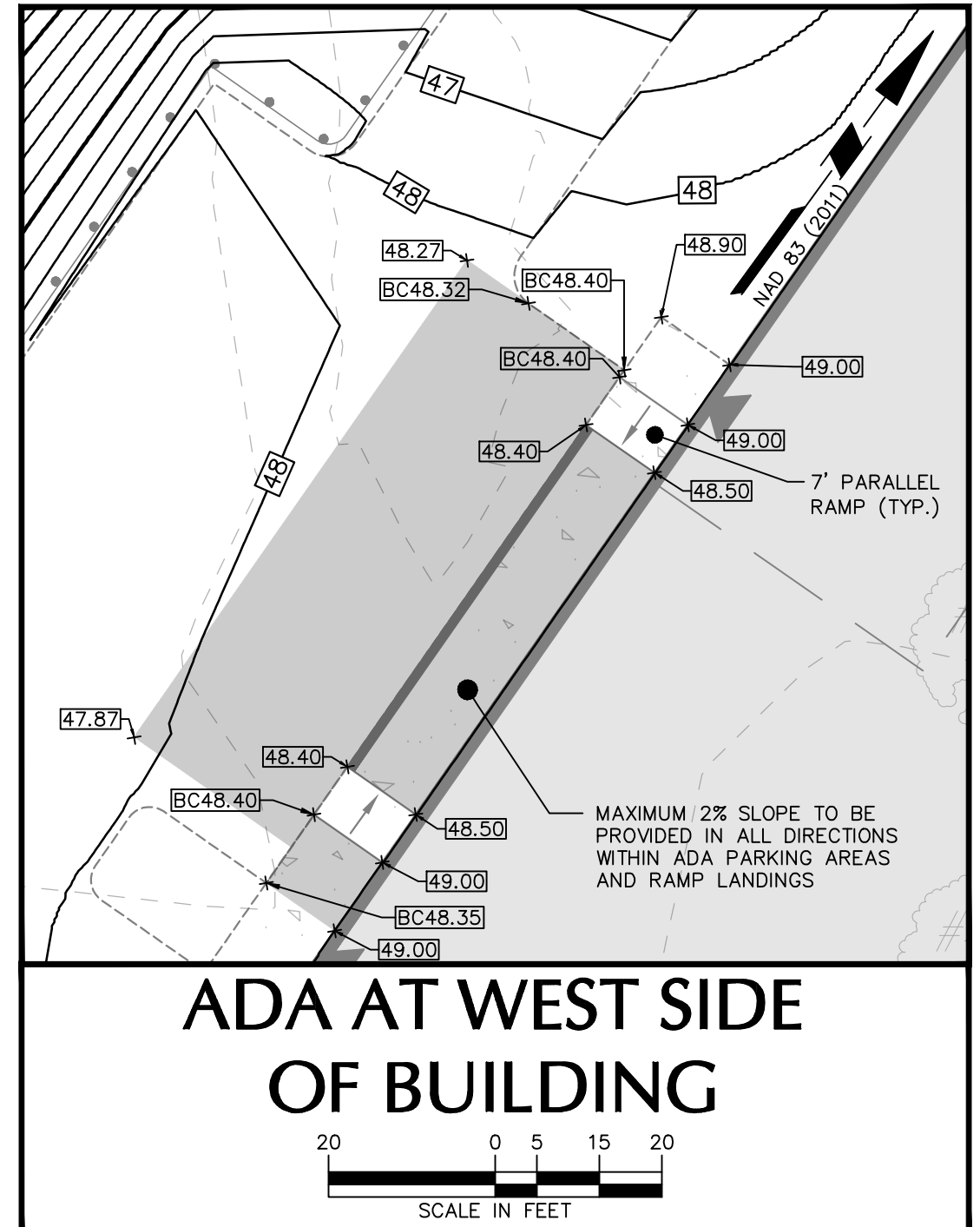
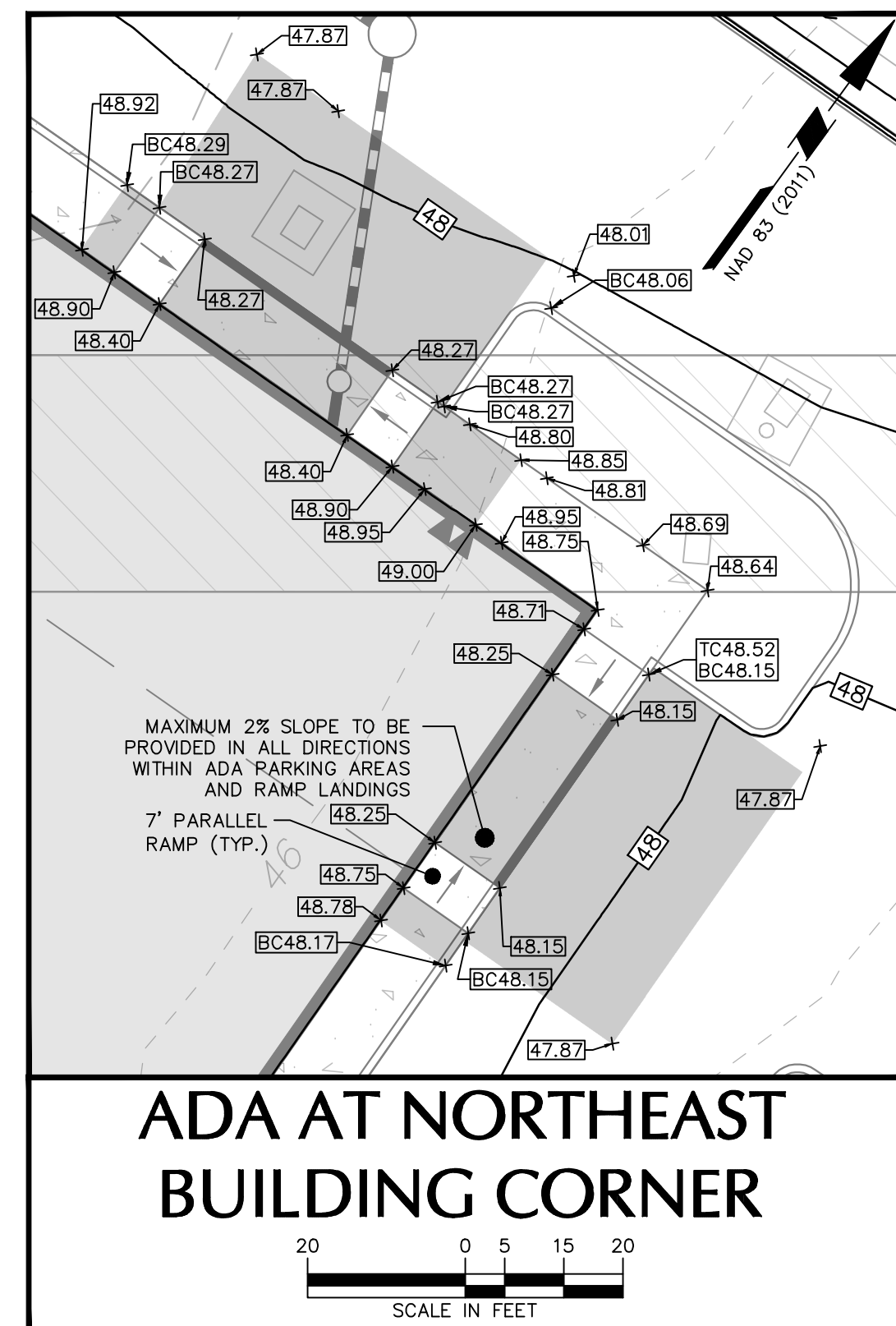
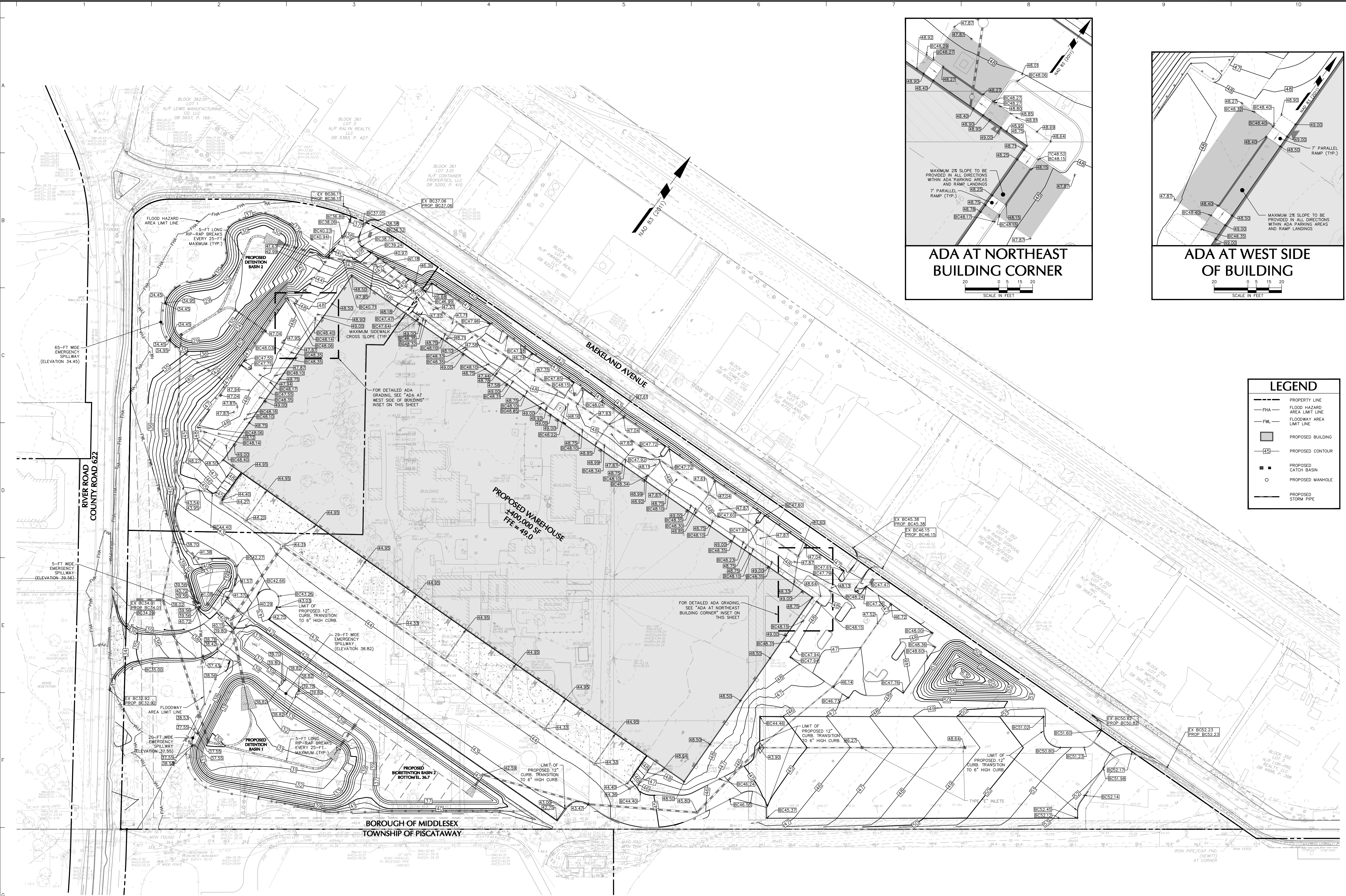
- SIGNS 12 INCHES BY 18 INCHES CONSTRUCTED OF METAL AND WITH RAISED RED LETTERS A MINIMUM OF TWO INCHES IN SIZE ON A WHITE BACKGROUND SHALL BE POSTED AT A LEVEL OF AT LEAST SEVEN FEET ABOVE GRADE, INDICATING NO PARKING ANY TIME OR NO STOPPING OR STANDING, AT THE FIRE OFFICIAL'S DISCRETION AFTER GIVING DUE CONSIDERATION TO THE NEEDS OF THE FIRE SERVICE AND THE PUBLIC. IMMEDIATELY UNDER THESE SIGNS SHALL BE ANOTHER SIGN (12 INCHES BY 18 INCHES) SAYING FIRE LANE. SPACING OF THESE SIGNS SHALL BE EVEN WITH A MINIMUM OF ONE SIGN FOR EVERY 50 FEET OF FIRE LANE OR PART THEREOF, OR AS ORDERED BY THE FIRE OFFICIAL. ALL SIGNS AND MARKINGS MUST BE UNRESTRICTED AND VISIBLE FOR A DISTANCE OF AT LEAST 50 FEET WHEN VIEWED FROM A POSITION APPROXIMATELY FIVE FEET ABOVE THE GROUND WHILE IN THE FIRE LANE.
- THE AREA OF A FIRE LANE ON IMPROVED AREAS SHALL BE DELINEATED ALONG ITS ENTIRE LENGTH WITH YELLOW LINES MIN. 18 INCHES IN WIDTH. BETWEEN THE YELLOW LINES SHALL BE MARKED NO PARKING ANY TIME IN YELLOW LETTERS 18 INCHES IN HEIGHT. THE NUMBER OF TIMES THIS WORDING IS TO BE REPEATED SHALL BE AT THE DISCRETION OF THE FIRE OFFICIAL WITH THE RECOMMENDED SPACING TO BE AT FIFTY-FOOT INTERVALS AND SPACED 50 AS TO BE BETWEEN AND ALTERNATE WITH THE METAL SIGNS REQUIRED ABOVE. IF THE DESIGNATED FIRE LANE ABUTS A CURB, THE CURBING SHALL BE YELLOW IN COLOR WHERE IT ABUTS THE FIRE LANE.

### LEGEND

	FHA	PROPERTY LINE
	FLA	FLOOD HAZARD AREA LIMIT LINE
	FWL	FLOODWAY AREA LIMIT LINE
		BUILDING SETBACK
		PARKING AND DRIVEWAY SETBACK FROM REAR LOT LINE
		ANTICIPATED 11-FT R.O.W. TAKING
		PROPOSED FULL HEIGHT CONCRETE CURB
		PROPOSED FLUSH CONCRETE CURB
		PROPOSED SLOTTED CONCRETE CURB
		PROPOSED STORMWATER MANAGEMENT FEATURE
		PROPOSED BUILDING
		PROPOSED SIDEWALK/CONCRETE PAVEMENT
		PROPOSED DOOR
		PROPOSED DOUBLE DOOR








LEGEND	
---	PROPERTY LINE
---	FLOOD HAZARD AREA LIMIT LINE
---	FLOODWAY AREA LIMIT LINE
▭	PROPOSED BUILDING
○	PROPOSED CONTOUR
■	PROPOSED CATCH BASIN
○	PROPOSED MANHOLE
---	PROPOSED STORM PIPE

**REFER TO CS002 FOR GENERAL AND GRADING AND DRAINAGE NOTES**

Date	Description	No.
3/27/2020	REVISED FOR BOROUGH, COUNTY, AND NJDEP COMMENTS	4
1/30/2020	REVISED FOR BOROUGH ENGINEER AND NJDEP COMMENTS	3
10/22/19	REVISED FOR NJDEP SUBMISSION 2	2
9/4/19	REVISED FOR FSCD COMMENTS AND PLANNING BOARD SUBMISSION	1

  
 04/08/2020  
 SIGNATURE RICHARD BURROW DATE SIGNED  
 PROFESSIONAL ENGINEER NJ Lic. No. 24GE04459300

**LANGAN**  
 Langan Engineering and Environmental Services, Inc.  
 300 Kimball Drive  
 Parsippany, NJ 07054  
 T: 973.560.4900 F: 973.560.4901 www.langan.com  
 NJ CERTIFICATE OF AUTHORIZATION No. 24G042996400

Project **MIDDLESEX BOROUGH WAREHOUSE PROJECT**  
 BLOCK No. 353, LOTS No. 1.01 AND 1.02  
 BOROUGH OF MIDDLESEX  
 MIDDLESEX COUNTY NEW JERSEY

Drawing Title **GRADING PLAN**

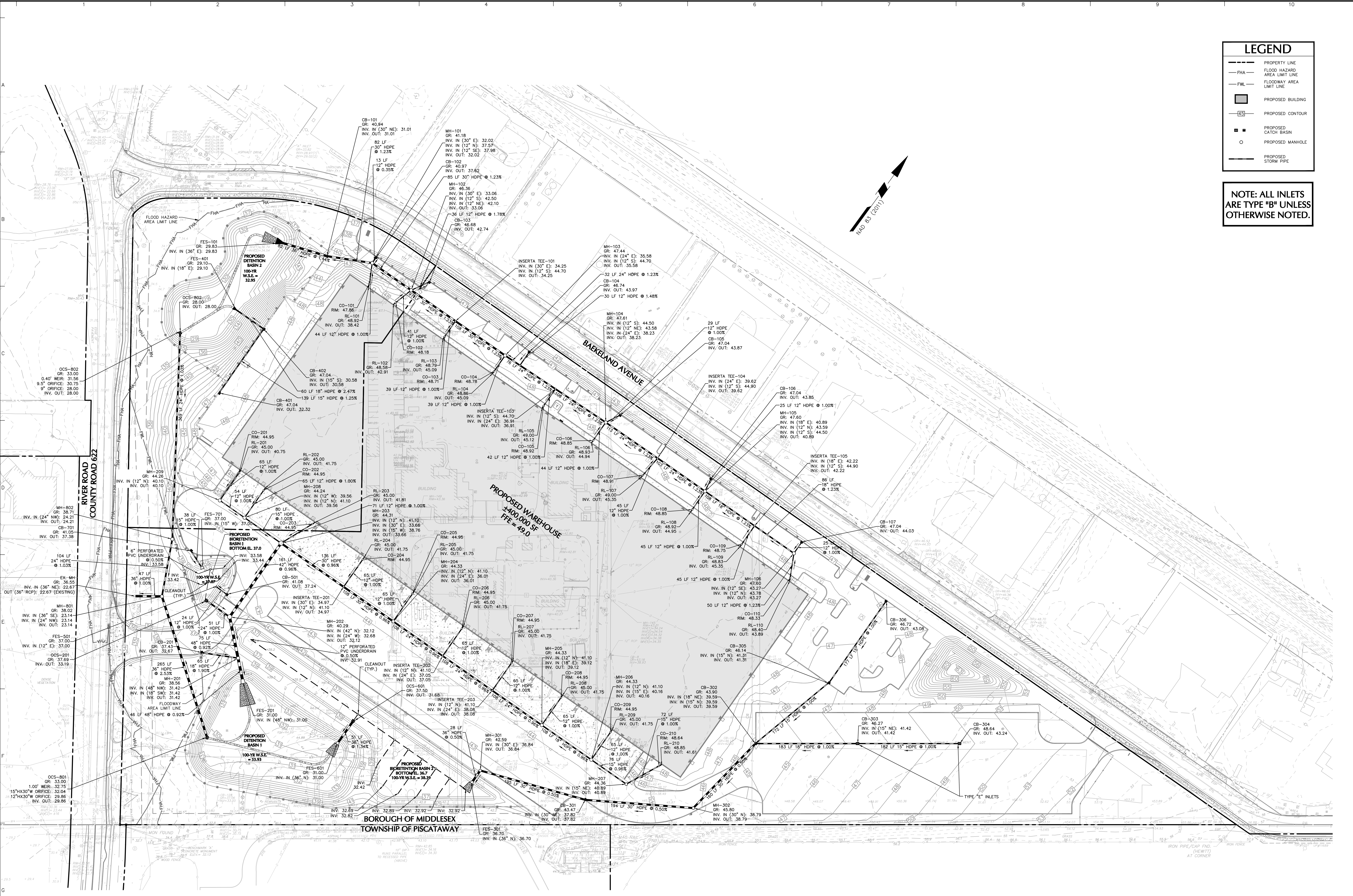
Project No. **10059413**  
 Date **7/8/2019**  
 Scale **1" = 60'**  
 Drawn By **SLK** Checked By **MRW**  
**CG101**  
 Sheet 4 of 22



**LEGEND**

- PROPERTY LINE
- FLOOD HAZARD AREA LIMIT LINE
- FLOODWAY AREA LIMIT LINE
- PROPOSED BUILDING
- PROPOSED CONTOUR
- PROPOSED CATCH BASIN
- PROPOSED MANHOLE
- PROPOSED STORM PIPE

**NOTE: ALL INLETS ARE TYPE "B" UNLESS OTHERWISE NOTED.**



**REFER TO CS002 FOR GENERAL AND GRADING AND DRAINAGE NOTES**

Date	Description	No.
3/27/2020	REVISED FOR BOROUGH, COUNTY, AND NJDEP COMMENTS	3
1/30/2020	REVISED FOR BOROUGH ENGINEER AND NJDEP COMMENTS	2
9/4/19	REVISED FOR FSCD COMMENTS AND PLANNING BOARD SUBMISSION	1

04/08/2020  
 SIGNATURE: RICHARD BURROW  
 PROFESSIONAL ENGINEER NJ Lic. No. 24GE04459300

**LANGAN**  
 Langan Engineering and Environmental Services, Inc.  
 300 Kimball Drive  
 Parsippany, NJ 07054  
 T: 973.560.4900 F: 973.560.4901 www.langan.com  
 NJ CERTIFICATE OF AUTHORIZATION No. 24GA2796420

Project: **MIDDLESEX BOROUGH WAREHOUSE PROJECT**  
 BLOCK No. 353, LOTS No. 1.01 AND 1.02  
 BOROUGH OF MIDDLESEX  
 MIDDLESEX COUNTY NEW JERSEY

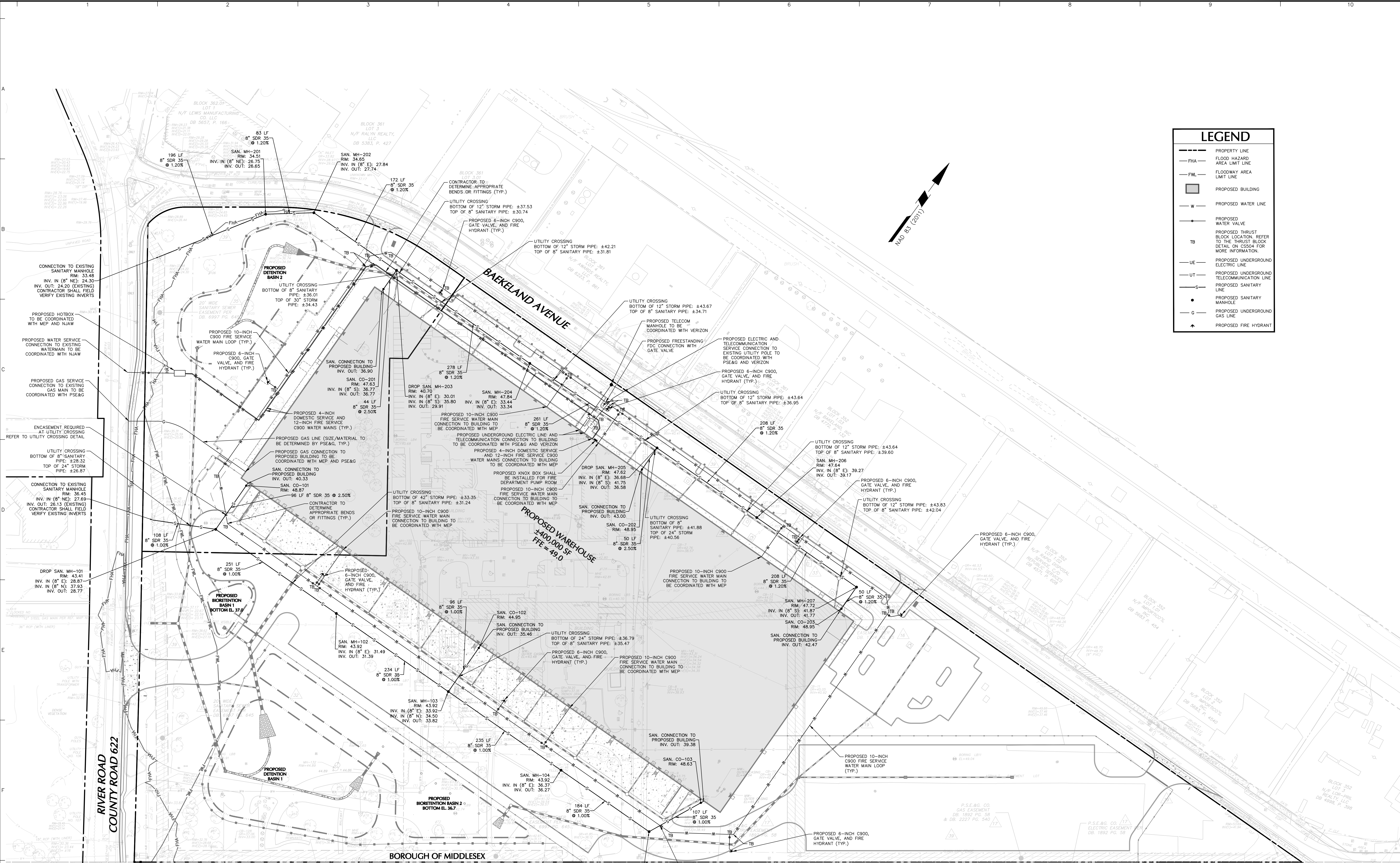
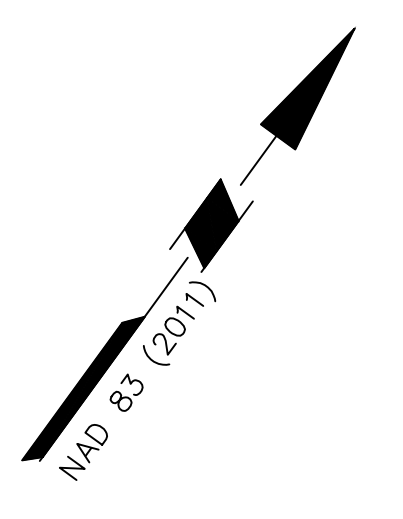
Drawing Title: **DRAINAGE PLAN**

Project No. 10059413  
 Date: 7/8/2019  
 Scale: 1" = 60'  
 Drawn By: SLK  
 Checked By: MRW  
 Drawing No. CG201  
 Sheet 5 of 22



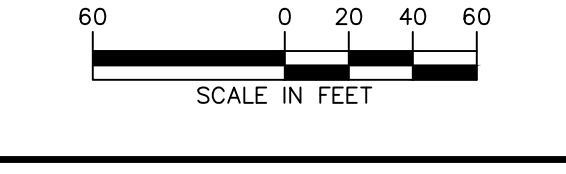
### LEGEND

- PROPERTY LINE
- - - FHA FLOOD HAZARD AREA LIMIT LINE
- - - FWL FLOODWAY AREA LIMIT LINE
- ▭ PROPOSED BUILDING
- - - W PROPOSED WATER LINE
- PROPOSED WATER VALVE
- PROPOSED THRUST BLOCK LOCATION, REFER TO THE THRUST BLOCK DETAIL ON CS002 FOR MORE INFORMATION.
- UE PROPOSED UNDERGROUND ELECTRIC LINE
- UT PROPOSED UNDERGROUND TELECOMMUNICATION LINE
- S PROPOSED SANITARY LINE
- PROPOSED SANITARY MANHOLE
- G PROPOSED UNDERGROUND GAS LINE
- ▲ PROPOSED FIRE HYDRANT



BOROUGH OF MIDDLESEX  
TOWNSHIP OF PISCATAWAY

REFER TO CS002 FOR  
GENERAL AND  
UTILITY NOTES



Date	Description	No.
3/27/2020	REVISED FOR BOROUGH, COUNTY, AND NJDEP COMMENTS	3
1/30/2020	REVISED FOR BOROUGH ENGINEER AND NJDEP COMMENTS	2
9/4/19	REVISED FOR FSCD COMMENTS AND PLANNING BOARD SUBMISSION	1

SIGNATURE: *[Signature]*  
RICHARD BURROW DATE SIGNED: 04/08/2020  
PROFESSIONAL ENGINEER N.J. Lic. No. 24GE04459300

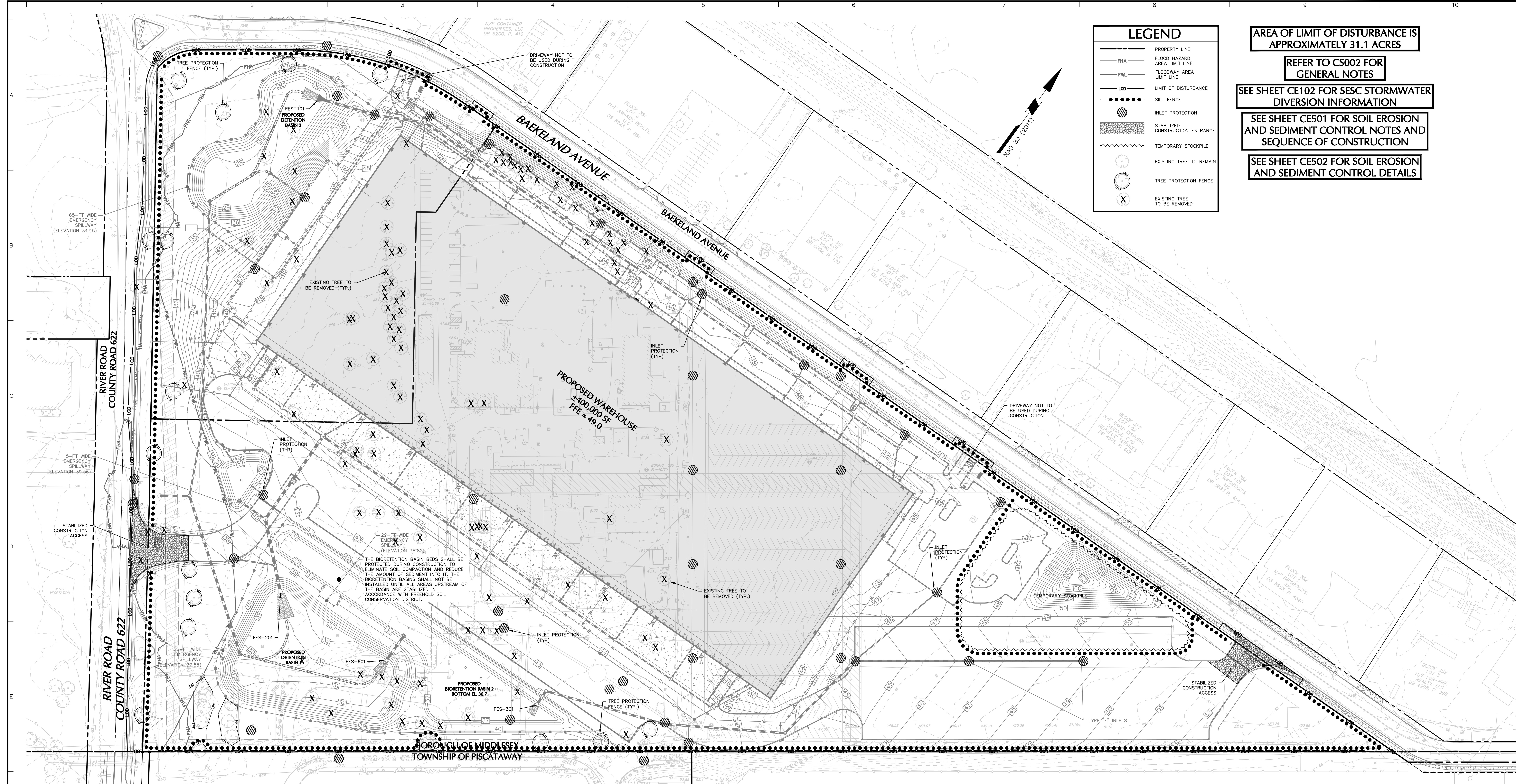
**LANGAN**  
Langan Engineering and Environmental Services, Inc.  
300 Kimball Drive  
Parsippany, NJ 07054  
T: 973.560.4900 F: 973.560.4901 www.langan.com  
NJ CERTIFICATE OF AUTHORIZATION No. 24G02796620

Project: **MIDDLESEX BOROUGH WAREHOUSE PROJECT**  
BLOCK No. 353, LOTS No. 1.01 AND 1.02  
BOROUGH OF MIDDLESEX  
MIDDLESEX COUNTY NEW JERSEY

Drawing Title: **UTILITY PLAN**

Project No. 100594413  
Date 7/8/2019  
Scale 1" = 60'  
Drawn By SLK Checked By MRW  
Sheet 6 of 22





**LEGEND**

- PROPERTY LINE
- - - FLOOD HAZARD AREA LIMIT LINE
- - - FLOODWAY AREA LIMIT LINE
- - - LOD
- ..... SILT FENCE
- INLET PROTECTION
- ▨ STABILIZED CONSTRUCTION ENTRANCE
- ~ TEMPORARY STOCKPILE
- EXISTING TREE TO REMAIN
- TREE PROTECTION FENCE
- X EXISTING TREE TO BE REMOVED

AREA OF LIMIT OF DISTURBANCE IS APPROXIMATELY 31.1 ACRES

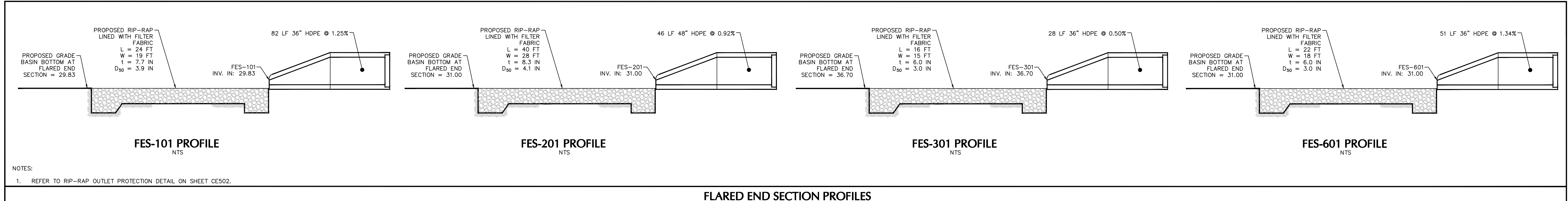
REFER TO CS002 FOR GENERAL NOTES

SEE SHEET CE102 FOR SESC STORMWATER DIVERSION INFORMATION

SEE SHEET CE501 FOR SOIL EROSION AND SEDIMENT CONTROL NOTES AND SEQUENCE OF CONSTRUCTION

SEE SHEET CE502 FOR SOIL EROSION AND SEDIMENT CONTROL DETAILS

THE BIOTENTION BASIN BEDS SHALL BE PROTECTED DURING CONSTRUCTION TO ELIMINATE SOIL COMPACTION AND REDUCE THE AMOUNT OF SEDIMENT INTO IT. THE BIOTENTION BASINS SHALL NOT BE INSTALLED UNTIL ALL AREAS UPSTREAM OF THE BASIN ARE STABILIZED IN ACCORDANCE WITH FRESHOLD SOIL CONSERVATION DISTRICT.



NOTES:  
1. REFER TO RIP-RAP OUTLET PROTECTION DETAIL ON SHEET CE502.

FLARED END SECTION PROFILES

Date	Description	No.
3/27/2020	REVISED FOR BOROUGH, COUNTY, AND NJDEP COMMENTS	3
1/30/2020	REVISED FOR BOROUGH ENGINEER AND NJDEP COMMENTS	2
9/4/19	REVISED FOR FSCD COMMENTS AND PLANNING BOARD SUBMISSION	1

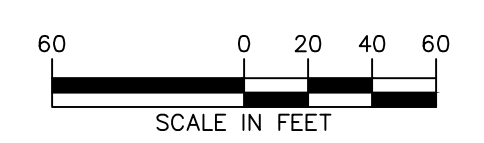
SIGNATURE: *[Signature]* RICHARD BURROW  
 PROFESSIONAL ENGINEER NJ Lic. No. 24GE04459300  
 DATE SIGNED: 04/08/2020

**LANGAN**  
 Langan Engineering and Environmental Services, Inc.  
 300 Kimball Drive  
 Parsippany, NJ 07054  
 T: 973.560.4900 F: 973.560.4901 www.langan.com  
 NJ CERTIFICATE OF AUTHORIZATION No. 24GA2799640

Project: **MIDDLESEX BOROUGH WAREHOUSE PROJECT**  
 BLOCK No. 353, LOTS No. 1.01 AND 1.02  
 BOROUGH OF MIDDLESEX  
 MIDDLESEX COUNTY NEW JERSEY

Drawing Title: **SOIL EROSION & SEDIMENT CONTROL PLAN**

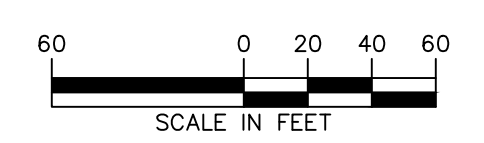
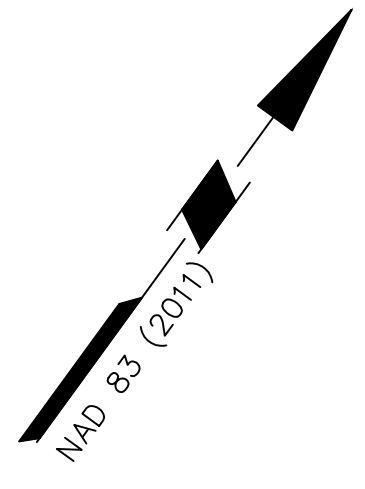
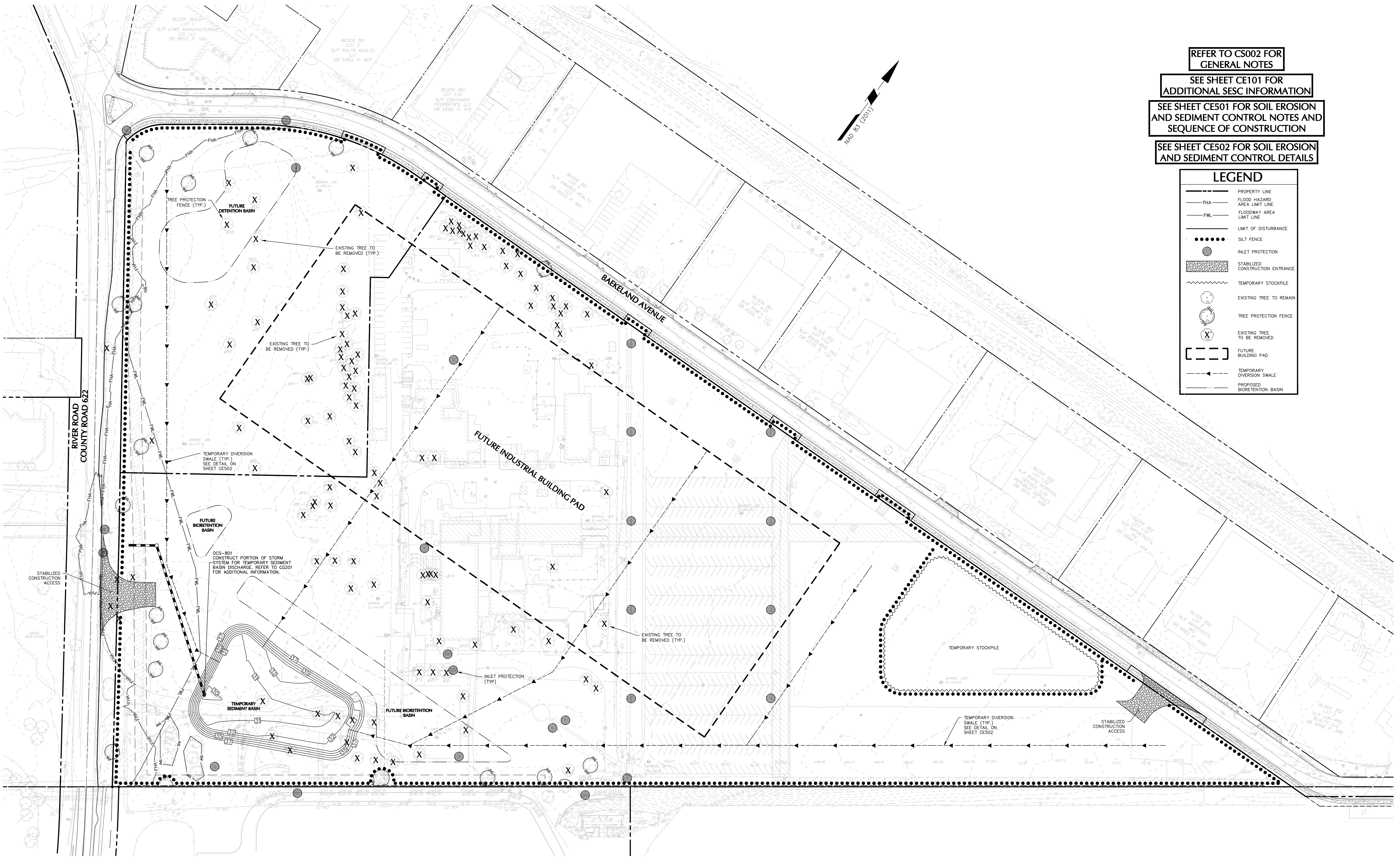
Project No. 100594413  
 Date: 7/8/2019  
 Scale: 1" = 60'  
 Drawn By: JEI  
 Checked By: MRW  
 Drawing No. CE101  
 Sheet 7 of 22





REFER TO CS002 FOR GENERAL NOTES  
 SEE SHEET CE101 FOR ADDITIONAL SESC INFORMATION  
 SEE SHEET CE501 FOR SOIL EROSION AND SEDIMENT CONTROL NOTES AND SEQUENCE OF CONSTRUCTION  
 SEE SHEET CE502 FOR SOIL EROSION AND SEDIMENT CONTROL DETAILS

LEGEND	
---	PROPERTY LINE
---	FLOOD HAZARD AREA LIMIT LINE
---	FLOODWAY AREA LIMIT LINE
---	LIMIT OF DISTURBANCE
●●●●●	SILT FENCE
○	INLET PROTECTION
▨	STABILIZED CONSTRUCTION ENTRANCE
~	TEMPORARY STOCKPILE
○	EXISTING TREE TO REMAIN
○	TREE PROTECTION FENCE
⊗	EXISTING TREE TO BE REMOVED
---	FUTURE BUILDING PAD
---	TEMPORARY DIVERSION SWALE
---	PROPOSED BIORETENTION BASIN



Date	Description	No.
3/27/2020	REVISED FOR BOROUGH, COUNTY, AND NJDEP COMMENTS	3
1/30/2020	REVISED FOR BOROUGH ENGINEER AND NJDEP COMMENTS	2
9/4/19	REVISED FOR FSCD COMMENTS AND PLANNING BOARD SUBMISSION	1

SIGNATURE: *[Signature]* RICHARD BURROW DATE SIGNED: 04/08/2020  
 PROFESSIONAL ENGINEER NJ Lic. No. 24GE04459300

**LANGAN**  
 Langan Engineering and Environmental Services, Inc.  
 300 Kimball Drive  
 Parsippany, NJ 07054  
 T: 973.560.4900 F: 973.560.4901 www.langan.com  
 NJ CERTIFICATE OF AUTHORIZATION No. 24GA2796420

Project: MIDDLESEX BOROUGH WAREHOUSE PROJECT  
 BLOCK No. 353, LOTS No. 1.01 AND 1.02  
 BOROUGH OF MIDDLESEX  
 MIDDLESEX COUNTY NEW JERSEY

Drawing Title: SESC STORMWATER DIVERSION PLAN

Project No. 100594413  
 Date 7/8/2019  
 Scale 1" = 60'  
 Drawn By LMR Checked By MRW  
 Drawing No. CE102  
 Sheet 8 of 22



**SOIL EROSION AND SEDIMENT CONTROL NOTES**

1. THE FREEHOLD SOIL CONSERVATION DISTRICT SHALL 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 DISTRICT 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 DISTRICT 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 DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN SIXTY (60) 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 1/2 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 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.

**TREE PROTECTION NOTES**

1. ALL EXISTING TREES WITHIN THE LIMITS OF TREE PROTECTION FENCING SHALL BE PROTECTED THROUGHOUT THE DURATION OF WORK. THE LIMIT OF TREE PROTECTION FENCE RADIUS SHALL BE 18 TIMES THE MEASURED DIAMETER-AT-BREAST-HEIGHT (DBH), UNLESS CONDITIONS WARRANT THE FENCE TO BE LOCATED CLOSER TO THE TREE. THE PROJECT LANDSCAPE ARCHITECT TO APPROVE THE LOCATION OF ALL FENCING PRIOR TO EXCAVATION.
2. TREE PROTECTION FENCING SHALL BE INSTALLED ON ALL EXISTING TREES WHERE WORK IS TO BE DONE WITHIN THE LIMIT OF TREE PROTECTION FENCING. REFER TO DETAIL ON SHEET CES02.
3. IF TREE PROTECTION FENCING NEEDS TO BE MOVED OR BREACHED DUE TO TEMPORARY CONSTRUCTION ACTIVITY WITHIN THE TREE PROTECTION ZONE, THE FENCING WILL BE RESET TO ITS ORIGINAL LOCATION IMMEDIATELY AFTER CONSTRUCTION WITHIN THE TREE PROTECTION ZONE IS COMPLETE.
4. TREE PROTECTION FENCING SHALL BE MAINTAINED TO PROTECT TREES AT ALL TIMES. ANY DAMAGED FENCING SHALL BE IMMEDIATELY REPLACED WHEN DAMAGED.
5. DEMOLITION WORK WITHIN THE TREE PROTECTION FENCE OF PROTECTED TREES SHALL BE PERFORMED BY NON-MECHANICAL METHODS. CONTRACTOR TO PROTECT ROOT MASS AGAINST DAMAGE DURING EXCAVATION. ANY TREE ROOTS THAT ARE DISTURBED, BROKEN, OR CUT SHALL BE PRUNED BACK WITH CLEAN SHARP TOOLS. ROOTS SHALL NOT BE OTHERWISE DAMAGED, BROKEN OR RIPPED. ANY ROOTS FOUND GREATER THAN 2 INCHES DIAMETER WITHIN THE AREA TO BE DISTURBED WILL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE PROJECT LANDSCAPE ARCHITECT FOR FURTHER CONSIDERATION PRIOR TO ROOT PRUNING. ROOT PRUNED TREES SHALL BE MAINTAINED BY WATERING, WEEDING, MOWING, SPRAYING, FERTILIZING, AND OTHER HORTICULTURE PRACTICES THROUGHOUT THE DURATION OF CONSTRUCTION. IMMEDIATELY AFTER ROOT PRUNING, BACKFILL WITH GOOD ROOTING MEDIUM AND FERTILIZE WITH ORGANIC FERTILIZER TO PROMOTE ROOT GROWTH. PER MANUFACTURER'S RECOMMENDATIONS, FEED WITH A DILUTED SOLUTION OF N-P-K, AND MYCORRHIZAL POWDER AS NEEDED, WITH A SOIL NEEDLE TO PROVIDE WATER, AIR AND NUTRIENTS. THE SOIL AROUND EACH TREE SHALL BE THOROUGHLY SATURATED WITH WATER AND SHALL BE THOROUGHLY WATERED AS SEASONABLE CONDITIONS REQUIRE THROUGHOUT THE ENTIRE BOND PERIOD.
6. ALL TEMPORARILY EXPOSED TREE ROOTS SHALL BE COVERED WITH 2 INCHES OF SHREDED HARDWOOD MULCH TO REDUCE WEEDS, DISCOURAGE FOOT TRAFFIC, CONSERVE MOISTURE, AND MINIMIZE TEMPERATURE FLUCTUATION UNTIL PERMANENT SOIL EROSION CONTROL IS IMPLEMENTED. EXPOSED TREE ROOTS SHALL BE THOROUGHLY IRRIGATED ON A DAILY BASIS AS DIRECTED BY THE PROJECT LANDSCAPE ARCHITECT.
7. ANY TREE SHOWN TO BE PROTECTED WHICH IS OBSERVED TO HAVE 25% OR MORE OF ITS BRANCHING OR LEAVES DEAD OR DYING WITHIN THREE YEARS OF COMPLETED CONSTRUCTION, AND WHICH CANNOT BE REASONABLY PRUNED TO MAINTAIN THE HABIT KNOWN FOR THE SPECIES, SHALL BE REPLACED WITH A QUANTITY OF TREES OF THE SAME SPECIES AND AT A SIZE THAT, WHEN PUT TOGETHER, EQUALS THE TOTAL CANOPY SIZE OF THE TREE TO BE REPLACED.
8. CHANGES OF GRADE PROPOSED (CUT/FILL) WITHIN TREE PROTECTION FENCING SHALL BE PERFORMED AS FOLLOWS:
  - A. RAISING GRADES:
    1. WHERE FILL NOT EXCEEDING 16 INCHES IS REQUIRED, CLEAN, WASHED GRAVEL GRADED FROM 1 INCH TO 2 INCHES IN SIZE SHALL BE PLACED DIRECTLY AROUND TREE TRUNK. EXTEND GRAVEL OUT FROM TRUNK ON ALL SIDES TO A MINIMUM OF 18 INCHES AND FINISH APPROXIMATELY 2 INCHES ABOVE FINISHED GRADE AT TREE. INSTALL GRAVEL BEFORE ANY EARTH FILL IS PLACED. NEW EARTH FILL SHALL NOT BE LEFT IN CONTACT WITH TRUNKS OF TREES REQUIRING FILL.
    2. WHERE FILL EXCEEDING 16 INCHES IS REQUIRED, CONSTRUCT DRY-LAD TREE WELL AROUND TRUNK OF TREE. TREE WELL SHALL EXTEND OUT FROM TRUNK ON ALL SIDES MINIMUM OF 3 FEET AND TO 3 INCHES ABOVE FINISH GRADE. PLACED ROUGH GRADED ROCK DIRECTLY AROUND TREE WELL EXTENDING OUT TO DRIP LINE OF TREE. PLACE CLEAN, WASHED GRAVEL GRADED FROM 1 INCH TO 2 INCHES IN SIZE DIRECTLY ON COARSE ROCK TO DEPTH OF 3 INCHES. PLACE APPROVED BACKFILL MATERIAL DIRECTLY OVER WASHED GRAVEL TO DESIRED FINISH GRADE.
  - B. LOWERING GRADES: EXISTING TREES IN AREAS WHERE NEW FINISH GRADE IS TO BE LOWERED SHALL HAVE REGRADING WORK DONE BY HAND TO ELEVATION INDICATED ON THE DRAWINGS. ROOTS AS REQUIRED SHALL BE CUT AND MAINTAINED PER THE NOTES ABOVE IN #2.
  - C. TREES MARKED FOR PRESERVATION THAT ARE MORE THAN 6 INCHES ABOVE PROPOSED GRADES SHALL STAND ON BROAD ROUNDED MOUNDS AND GRADED SMOOTHLY INTO LOWER LEVEL. TREES LOCATED MORE THAN 16 INCHES ABOVE PROPOSED GRADES SHALL HAVE DRY-LAD STONE WALL OR OTHER RETAINING STRUCTURE AS DETAIL ON THE DRAWINGS CONSTRUCTED MINIMUM OF 5 FEET FROM TRUNK. EXPOSED OR BROKEN ROOTS SHALL BE CUT CLEAN AND COVERED WITH TOPSOIL.
9. ALL WORK TO BE PERFORMED UNDER THE DIRECT SUPERVISION OF EITHER THE OWNER'S REPRESENTATIVE, CERTIFIED ARBORIST, OR THE PROJECT LANDSCAPE ARCHITECT.

**PERMANENT STABILIZATION NOTES**

- PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION**  
 PERMANENT SEEDING SHALL BE IN ACCORDANCE WITH "STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY" REFER TO SHEET LP 501 FOR PERMANENT STABILIZATION DETAILS.
- SITE PREPARATION**
- A. IMMEDIATELY PRIOR TO SEEDING AND TOPSOIL APPLICATION, THE SUBSOIL SHALL BE EVALUATED FOR COMPACTION IN ACCORDANCE WITH THE 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 A DEPTH OF 5 INCHES (UNSETTLED) IS REQUIRED ON ALL SITES. TOPSOIL SHALL BE AMENDED WITH ORGANIC MATTER, AS NEEDED, IN ACCORDANCE WITH THE STANDARD FOR TOPSOILS.
  - C. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE-STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS.
- SEEDING PREPARATION**
- A. APPLY GROUND LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS CO-OPERATIVE EXTENSION. SOIL SAMPLE MALERS ARE AVAILABLE FROM THE LOCAL RUTGERS CO-OPERATIVE EXTENSION OFFICES. 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. LIMESTONE IN ACCORDANCE WITH THE BELOW TABLE AND THE RESULTS OF SOIL TESTING. CALCIUM CARBONATE IS THE EQUIVALENT AND STANDARD FOR MEASURING THE ABILITY OF LIMING MATERIALS TO NEUTRALIZE SOIL ACIDITY AND SUPPLY CALCIUM AND MAGNESIUM TO GRASSES AND LEGUMES. THE TABLE BELOW IS A GENERAL GUIDELINE FOR LIMESTONE APPLICATION RATES.
- | Limestone Application Rate by Soil Texture |           |                  |
|--|-----------|------------------|
| Soil Texture                               | Tons/Acre | Lbs/1000 Sq. Ft. |
| Coarse clay loam, fine high organic soil   | 13        | 130              |
| Stony loam, loam, till loam                | 2         | 60               |
| Clay loam, silt loam                       | 2         | 60               |
1. The above general application rates are preferred for most soils south of the New Brunswick-Trenton line.
- B. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRINGTOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISCING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLE UNIFORM SEEDBED IS PREPARED.

- GENERAL SEEDING NOTES:**
1. FINAL SEED MIXTURES, RATES & SPECIES TO BE DETERMINED BASED ON SCD REVIEW.
  2. ELIMINATE UNWANTED VEGETATION PRIOR TO SEEDING USING A BROAD-SPECTRUM NON-SELECTIVE HERBICIDE PER MANUFACTURER'S SPECIFICATIONS.
  3. IT IS RECOMMENDED THAT CONTRACTOR INSTALL SEED MIXTURE USING A NO-TILL TRUAX-TYPE DRILL WHERE APPLICABLE.
  4. CONTINUOUS MOISTURE FOR 4-6 WEEKS MUST BE INSURED TO ALLOW PROPER GERMINATION. SOIL TO REMAIN CONTINUOUSLY MOIST FOR THE TOP 4 INCHES OF TOPSOIL. DO NOT SATURATE.

- MULCHING**
- MULCHING IS REQUIRED ON ALL SEEDING. MULCH WILL INSURE AGAINST EROSION BEFORE GRASS IS ESTABLISHED AND WILL PROMOTE FASTER AND EARLIER ESTABLISHMENT. THE EXISTENCE OF VEGETATION SUFFICIENT TO CONTROL SOIL EROSION SHALL BE DEMED COMPLIANT WITH THIS MULCHING REQUIREMENT.

- A. WOOD-FIBER OR COMPOST MULCH - SHALL BE MADE FROM WOOD, PLANT FIBERS OR NATURAL COMPOST MATERIAL CONTAINING TAKENAWAY SYNTHETIC BINDERS\*, BUT 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 HYDROSEDER, IN AREAS WHERE USING A NO-TILL TRUAX-TYPE DRILL IS NOT PREFERRED, MIX THE SEED MIXTURE WITH THIS MULCH PRIOR TO SPRAY DOWN APPLICATION, UNLESS DISCOURAGED BY THE LOCAL SOIL CONSERVATION DISTRICT. CONTRACTOR SHALL CONFIRM RECOMMENDED APPLICATION METHODS WITH THE LOCAL SOIL CONSERVATION DISTRICT.
- \*SYNTHETIC BINDERS AS ANCHORING - HIGH POLYMER SYNTHETIC EMULSION, MISCIBLE WITH WATER WHEN DILUTED, AND FOLLOWING APPLICATION TO MULCH, DRYING AND CURING SHALL NO LONGER BE SOLUBLE OR DISPERSIBLE IN WATER. IT SHALL BE APPLIED AT RATES RECOMMENDED BY THE MANUFACTURER AND REMAIN TACKY UNTIL GERMINATION OF SEED.

- WEED CONTROL / MAINTENANCE**
1. DURING THE ESTABLISHMENT YEAR, CONTRACTOR SHALL MOW SEEDING IF WEED HEIGHT EXCEEDS MEADOW MIX HEIGHT. MOW AT A HEIGHT OF 8"-10". DO NOT MOW CLOSE, AS SOME OF THE MEADOW MIX MAY BE DAMAGED.
  2. AFTER THE FIRST GROWING SEASON, AND IF MEADOW MIX IS WELL ESTABLISHED, THE MEADOW MIX SHALL BE MOWED ONLY ONCE ANNUALLY. ANNUAL MAINTENANCE MOWING SHALL BE DONE IN LATE WINTER DURING THE MONTH OF MARCH.

**SOIL COMPACTION REMEDIATION EXEMPTION**

THIS SITE IS CONSIDERED AN URBAN REDEVELOPMENT AND IS IDENTIFIED IN THE STATE PLAN POLICY MAP (SPPM) AS A METROPOLITAN PLANNING AREA (PAT). ACCORDING TO THE "STANDARD FOR LAND GRADING" IN THE "NEW JERSEY STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL" 7TH EDITION LAST REVISED DECEMBER 2017, URBAN REDEVELOPMENT AREAS ARE EXEMPT FROM SOIL COMPACTION REMEDIATION.

**TEMPORARY STABILIZATION NOTES**

**TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION**

DISTURBED AREAS SHALL BE MAINTAINED IN A ROUGH GRADED CONDITION AND TEMPORARILY SEEDED AND HAY MULCHED (OR HYDROSEDED) UNTIL PROPER WEATHER EXISTING FOR THE ESTABLISHMENT OF PERMANENT VEGETATIVE COVER. THE FOLLOWING SCHEDULE SHALL BE USED FOR TEMPORARY SEEDING:

- A. LIME - 90 lbs/1,000 sf of GROUND LIMESTONE.
- B. FERTILIZER - 14 lbs/1,000 sf, 10-20-10 OR EQUIVALENT, WITH 50% WATER INSOLUBLE NITROGEN, WORKED INTO SOIL TO A DEPTH OF 4 INCHES.
- C. SEED - PERENNIAL RYEGRASS - 100 lbs/acre; PLANT BETWEEN MARCH 1 AND MAY 15 OR BETWEEN AUGUST 15 AND OCTOBER 1.
- D. MULCH - SALT HAY OR SMALL GRAIN STRAW AT A RATE OF 70 TO 90 LBS/1,000 SF. TO BE APPLIED ACCORDING TO NEW JERSEY STANDARDS. MULCH SHALL BE SECURED BY APPROVED METHODS (I.E. PEG AND TWINE, MULCH NETTING, OR LIQUID MULCH BINDING).

**STABILIZATION WITH MULCH ONLY**

NON-GROWING STABILIZATION MEASURES SHALL BE USED WHERE THE SEASON AND OTHER CONDITIONS MAY NOT BE SUITABLE FOR GROWING AN EROSION RESISTANT COVER OR WHERE STABILIZATION IS NEEDED FOR A SHORT PERIOD UNTIL MORE SUITABLE PROTECTION CAN BE APPLIED.

SALT HAY OR SMALL GRAIN STRAW AT A RATE OF 90 TO 115 LBS/1,000 SF TO BE APPLIED ACCORDING TO THE NEW JERSEY STANDARDS. MULCH SHALL BE SECURED BY APPROVED METHODS (I.E. PEG AND TWINE, LIQUID MULCH BINDER, OR MULCH NETTING).

**SECC STORMWATER DIVERSION NOTES**

CONTRACTOR SHALL MAINTAIN DIVERSION SWALES THROUGH THE SITE DURING INTERIM GRADING PHASES TO DIRECT STORMWATER RUNOFF TO THE PROPOSED STORMWATER BASINS. DIVERSION SWALES TO REMAIN FUNCTIONAL UNTIL STORMWATER CONVEYANCE SYSTEMS ARE CONSTRUCTED. THE FOLLOWING IS A RECOMMEND SEQUENCE ON CONSTRUCTION FOR DIVERSION SWALES.


1. CLEAR TREES - STUMP AND VEGETATION REMOVAL SHALL NOT OCCUR UNTIL ITEMS 2 & 3 (BELOW) ARE COMPLETED.
2. EXCAVATE AND ROUGH GRADE STORMWATER BASINS FROM ELEVATION 31 TO 36. CONTRACTOR SHALL AVOID OVER COMPACTING WITHIN THE BASIN FOOTPRINTS DURING GRADING OPERATIONS.
3. CONSTRUCT DIVERSION SWALES DURING INTERIM GRADING TO DIRECT WATER TO TEMPORARY SEDIMENT BASIN.
4. REMOVE STUMPS AND VEGETATION WITHIN LIMIT OF DISTURBANCE AS NECESSARY TO CONSTRUCT IMPROVEMENTS.
5. ROUGH GRADE SITE AND PORTIONS OF BUILDING PAD BETWEEN DIVERSION SWALES.
6. INSTALL STORMWATER CONVEYANCE AND UTILITIES.
7. EXCLUDE FES-101, FES-401, FES-501, AND FINAL DESIGN PIPES INTO BASINS DURING THE TEMPORARY BASIN CONDITIONS.
8. INSTALL TEMPORARY PIPES FROM LAST STRUCTURE IN THE CONVEYANCE SYSTEM TO THE BASIN DISCHARGE LOCATION AND NON-GROUTED RIP-RAP APRON UNTIL BASIN IS EXCAVATED TO FINAL OPERATING DEPTH.
9. INSTALL SECC MEASURES AT ALL INLETS.
10. CONSTRUCT ADDITIONAL DIVERSION SWALES AS NECESSARY.
11. COMPLETE ROUGH GRADING OF SITE AND BUILDING PAD.
12. FINE GRADE SITE.
13. INSTALL BASE COURSE PAVEMENT AND SIDEWALKS.
14. EXCAVATE BASIN TO PROPOSED FINAL GRADES AND COMPLETE STORM CONVEYANCE CONSTRUCTION. CONTRACTOR SHALL AVOID OVER COMPACTING WITHIN THE BASIN FOOTPRINTS.
15. CLEAN ALL STORMWATER STRUCTURES AND CONVEYANCE PIPES OF SILT AND DEBRIS.
16. FINE GRADE DETENTION BASIN, INSTALL SAND BOTTOM, CONSTRUCT BIOTRETMENT BASIN, AND INSTALL PERMANENT VEGETATION.

**SEQUENCE OF CONSTRUCTION**

CONSTRUCTION ACTIVITY	DURATION
1. NOTIFY THE FREEHOLD SOIL CONSERVATION DISTRICT AT LEAST 48 HOURS PRIOR TO ANY SITE DISTURBANCES.	1 DAY
2. INSTALL A CRUSHED STONE, VEHICLE WHEEL-CLEANING BLANKET OF 1 IN. TO 24 IN. WASHED STONE 6 IN. DEEP AT THE CONSTRUCTION ENTRANCE(S) IMMEDIATELY AFTER INITIAL DISTURBANCES AS PER STANDARDS ON DRAWINGS. SITE TRAFFIC SHOULD USE ONLY THESE AREAS FOR INGRESS AND EGRESS.	1 DAY
3. EQUIP ALL EXISTING CATCH BASINS WITH FILTER FABRIC INLET PROTECTION AND INSTALL SILT FENCE IMMEDIATELY UPON START OF CONSTRUCTION.	1 WEEK
4. CLEAR AND GRUB AREAS CONTAINING VEGETATION AS REQUIRED TO COMMENCE CONSTRUCTION.	1 DAY
5. CONSTRUCT TEMPORARY SEDIMENT BASIN, PERMANENT OUTFALL FOR SEDIMENT BASIN, AND TEMPORARY DIVERSION BASIN.	1 MONTH
6. DEMOLISH EXISTING STRUCTURES AND SURFACE MATERIALS.	1 MONTH
7. UTILIZE EXISTING SOIL STOCKPILE TO RAISE SITE GRADES AND IMPORT MATERIAL AS REQUIRED.	1 MONTH
8. COMPLETE CONSTRUCTION STORM OF IMPROVEMENTS, BELOW-GRADE UTILITIES, AND STRUCTURES.	6 MONTHS
9. AFTER STORM DRAINAGE SYSTEM AND CATCH BASINS ARE CONSTRUCTED PLACE FILTER FABRIC INLET PROTECTION ON EACH CATCH BASIN WHICH SHALL REMAIN UNTIL THE SITE IS PAVED. REPLACE AS NECESSARY.	ON-GOING
10. COMPLETE FINAL SITE GRADING, CURB AND SIDEWALK INSTALLATION.	1 MONTH
11. ALL SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED UNTIL ALL PERMANENT IMPROVEMENTS TO THE SITE ARE COMPLETE AND THE ROADS ARE PAVED. WATERING VIA WATER TRUCKS FOR DUST CONTROL SHALL OCCUR THROUGHOUT DISTURBANCE AS NECESSARY.	ON-GOING
12. LANDSCAPE ALL APPROPRIATE AREAS AS INDICATED ON THE LANDSCAPE PLAN AND REMOVE ALL TEMPORARY SEDIMENT CONTROL STRUCTURES. CONVERT TEMPORARY SEDIMENT BASIN INTO DETENTION BASIN.	1 MONTH
13. CLEAN ALL SITE DRAINAGE STRUCTURES AND PIPES OF SILT AND DEBRIS. DOWNSTREAM/OFF-SITE DRAINAGE FACILITIES SHALL BE INSPECTED AND CLEANED OF SILT AND DEBRIS RESULTING FROM SITE CONSTRUCTION PRIOR TO FINAL TURNOVER.	1 WEEK
14. NOTIFY THE FREEHOLD SOIL CONSERVATION DISTRICT AT COMPLETION OF CONSTRUCTION.	1 DAY
ESTIMATED DURATION	±12 MONTHS

REFER TO CS002 FOR GENERAL NOTES

Date	Description	No.
3/27/2020	REVISED FOR BOROUGH, COUNTY, AND NJDEP COMMENTS	3
1/30/2020	REVISED FOR BOROUGH ENGINEER AND NJDEP COMMENTS	2
9/4/19	REVISED FOR FSCD COMMENTS AND PLANNING BOARD SUBMISSION	1
REVISIONS		

SIGNATURE:  DATE SIGNED: 04/08/2020  
 RICHARD BURROW  
 PROFESSIONAL ENGINEER NJ Lic. No. 24GE04459300

**LANGAN**  
 Langan Engineering and Environmental Services, Inc.  
 300 Kimball Drive  
 Parsippany, NJ 07054  
 T: 973.560.4900 F: 973.560.4901 www.langan.com  
 NJ CERTIFICATE OF AUTHORIZATION No. 24G4279640

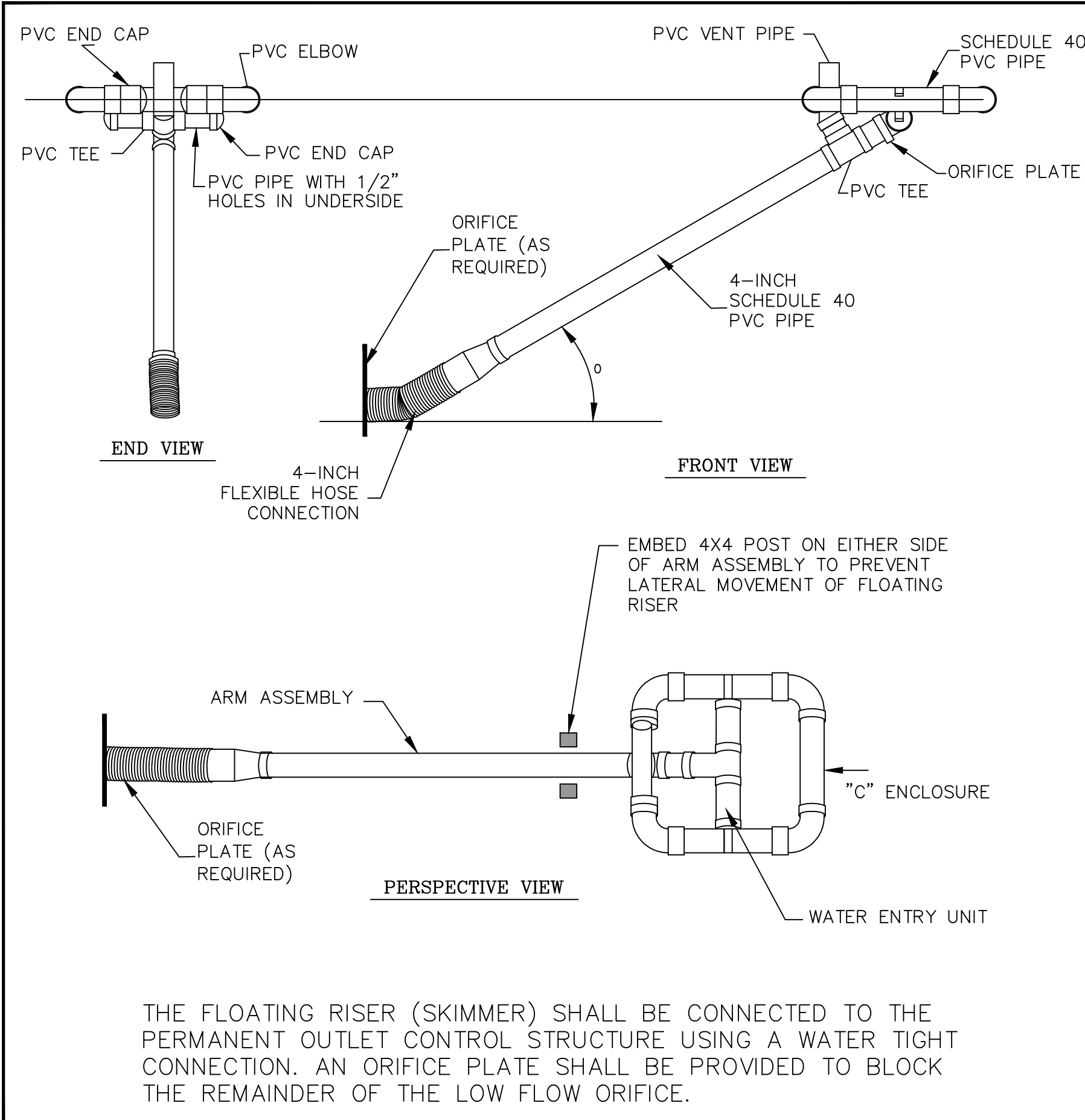
Project: **MIDDLESEX COUNTY BOROUGH PROJECT**  
**WAREHOUSE PROJECT**  
 BLOCK No. 353, LOTS No. 1.01 AND 1.02  
 BOROUGH OF MIDDLESEX  
 NEW JERSEY

Drawing Title: **SOIL EROSION AND SEDIMENT CONTROL NOTES**

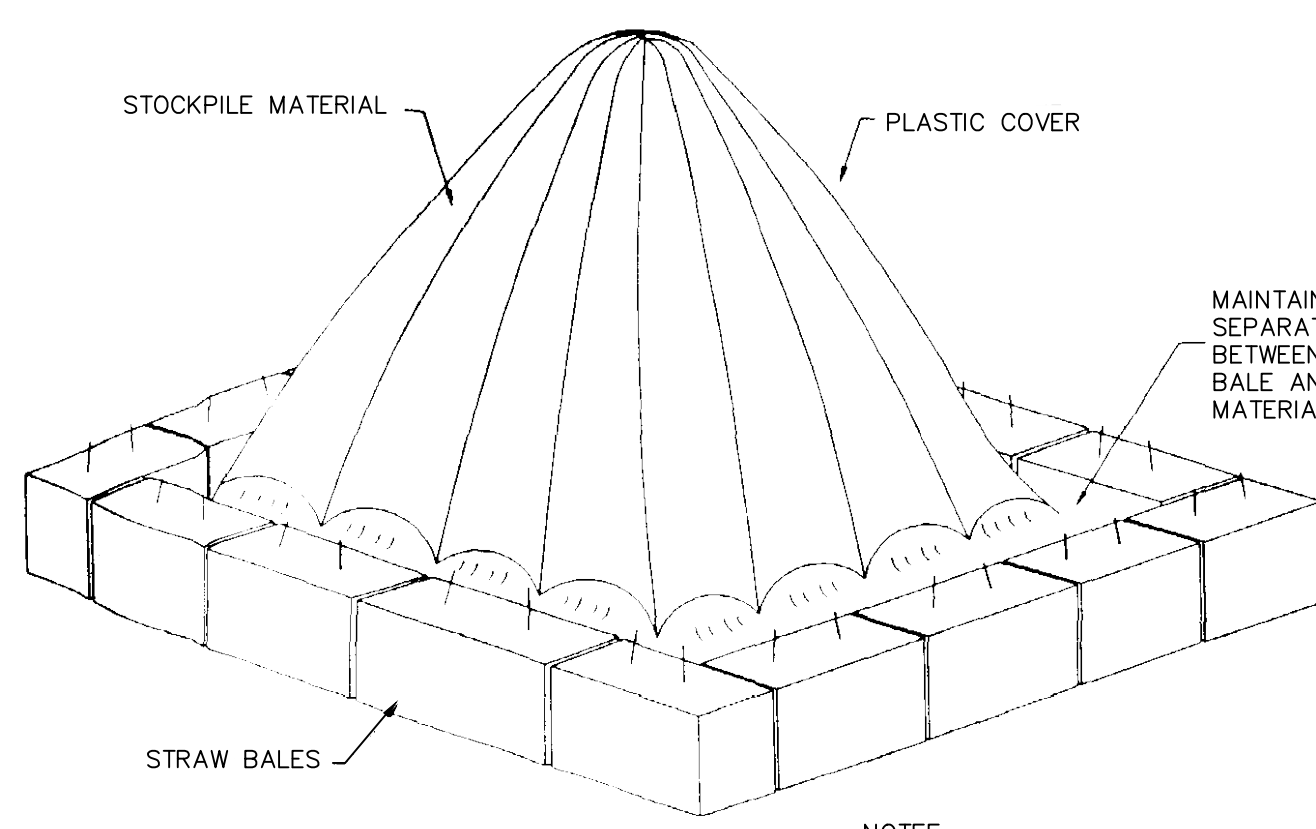
Project No. **100594413**  
 Date: **7/8/2019**  
 Scale: **N.T.S.**  
 Drawn By: **JBI** Checked By: **MRW**

Drawing No. **CE501**  
 Sheet 9 of 22





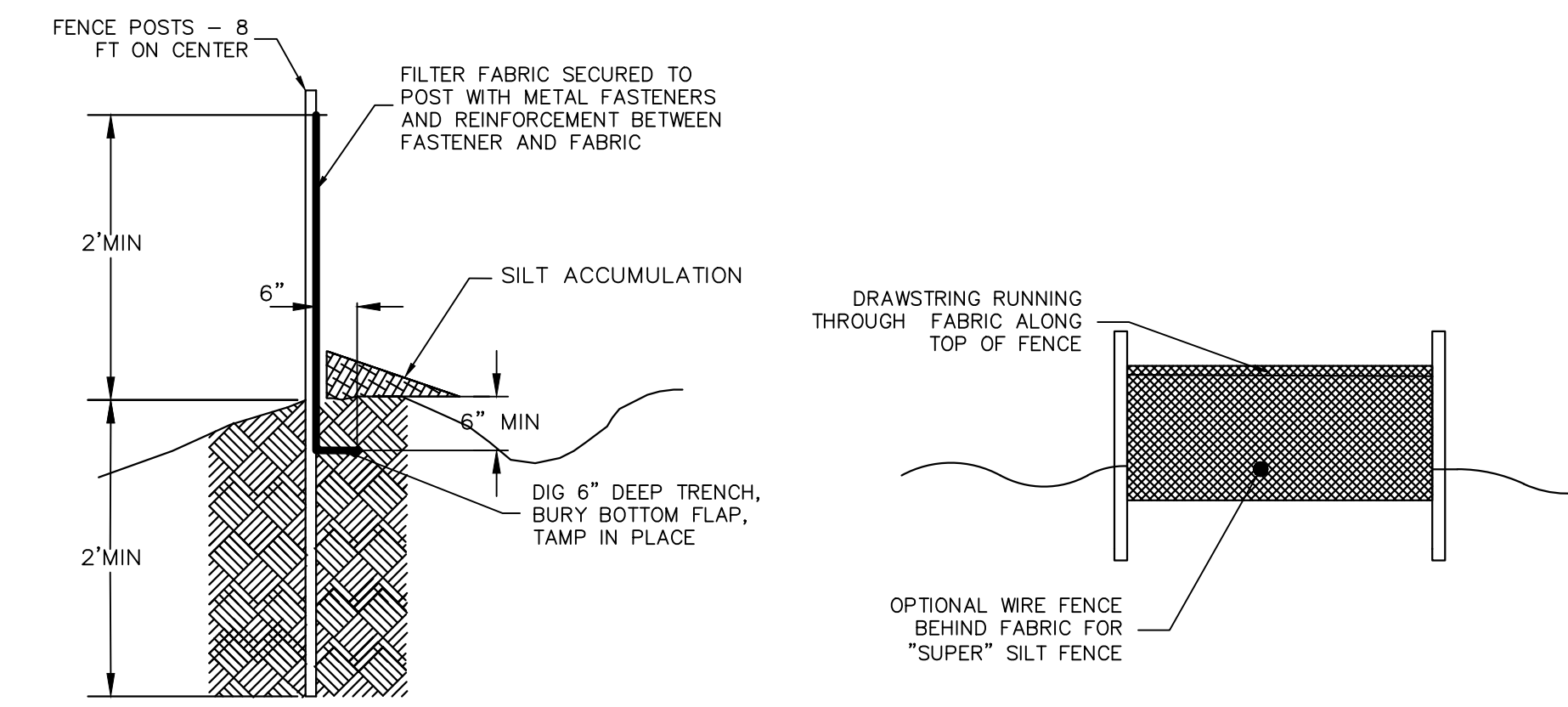
FLOATING RISER DETAIL



NOTES:

1. DISTURBED AREAS SHALL BE MULCHED WITH STRAW OR HAY IF THE FALL SEEDING PERIOD CANNOT BE SUCCESSFULLY MET.
2. MULCH TO BE APPLIED AT A RATE OF 1.5 TO 2 TONS PER ACRE. TACK MATERIAL TO BE CUTBACK ASPHALT-RAPID CURING (RC-70, PC-250 AND RC-800) OR MEDIUM CURING (MC-250 OR MC-800). APPLY 0.4 GAL/S.Y. OR 194 GAL/ACRE ON FLAT AREAS AND ON SLOPES LESS THAN 8 FEET HIGH. ON SLOPES 8 FEET OR MORE HIGH USE .075 GAL/S.Y. OR 363 GAL/ACRE.

TEMPORARY SOIL / CONSTRUCTION DEBRIS STOCKPILE

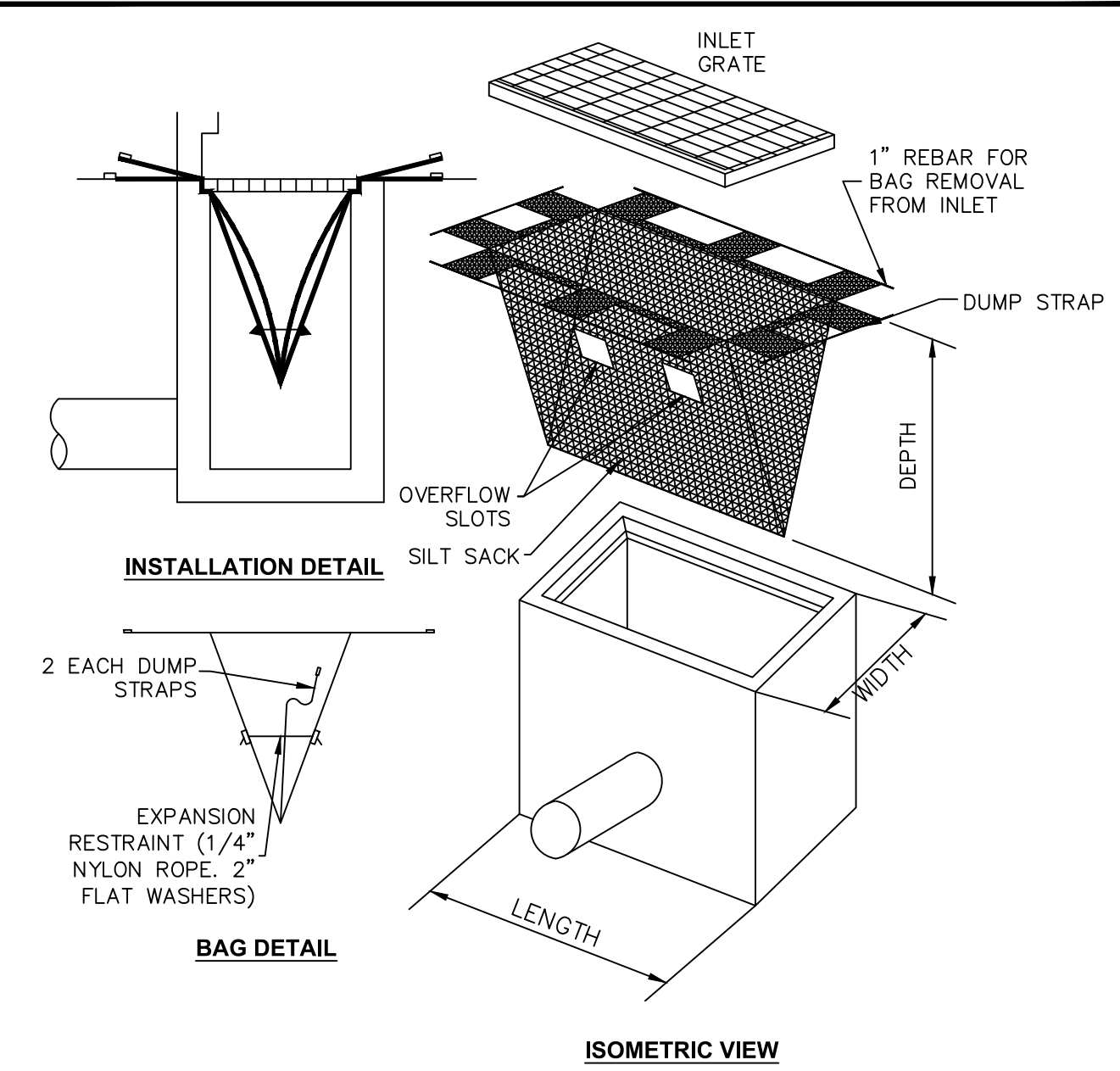


REQUIREMENTS FOR SILT FENCE:

1. FENCE POSTS SHALL BE SPACED 8 FEET CENTER-TO-CENTER OR CLOSER. THEY SHALL EXTEND AT LEAST 2 FEET INTO THE GROUND AND EXTEND AT LEAST 2 FEET ABOVE GROUND. POSTS SHALL BE CONSTRUCTED OF HARDWOOD WITH A MINIMUM DIAMETER THICKNESS OF 1 1/2 INCHES.
2. "SUPER" SILT FENCE - A METAL FENCE WITH 6 INCH OR SMALLER MESH OPENINGS AND AT LEAST 2 FEET HIGH MAY BE UTILIZED, FASTENED TO THE FENCE POSTS, TO PROVIDE REINFORCEMENT AND SUPPORT TO THE GEOTEXTILE FABRIC. POSTS MAY BE SPACED LESS THAN 8 FEET ON CENTER AND MAY BE CONSTRUCTED OF HEAVIER WOOD OR METAL AS NEEDED TO WITHSTAND HEAVY SEDIMENT LOADING. THIS PRACTICE IS APPROPRIATE WHERE SPACE FOR OTHER PRACTICES IS LIMITED AND HEAVY SEDIMENT LOADING IS EXPECTED. "SUPER" SILT FENCE IS NOT TO BE USED IN PLACE OF PROPERLY DESIGNED DIVERSIONS WHICH MAY BE NEEDED TO CONTROL SURFACE RUNOFF RATES AND VELOCITIES.
3. A GEOTEXTILE FABRIC, RECOMMENDED FOR SUCH USE BY THE MANUFACTURER, SHALL BE BURIED AT LEAST 6 INCHES DEEP IN THE GROUND. THE FABRIC SHALL EXTEND AT LEAST 2 FEET ABOVE THE GROUND. THE FABRIC MUST BE SECURELY FASTENED TO THE POSTS USING A SYSTEM CONSISTING OF METAL FASTENERS (NAILS OR STAPLES) AND A HIGH STRENGTH REINFORCEMENT MATERIAL (NYLON WEBBING, GROMMETS, WASHERS ETC.) PLACED BETWEEN THE FASTENER AND THE GEOTEXTILE FABRIC. THE FASTENING SYSTEM SHALL RESIST TEARING AWAY FROM THE POST. THE FABRIC SHALL INCORPORATE A DRAWSTRING IN THE TOP PORTION OF THE FENCE FOR ADDED STRENGTH.

REF: THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY (2014)

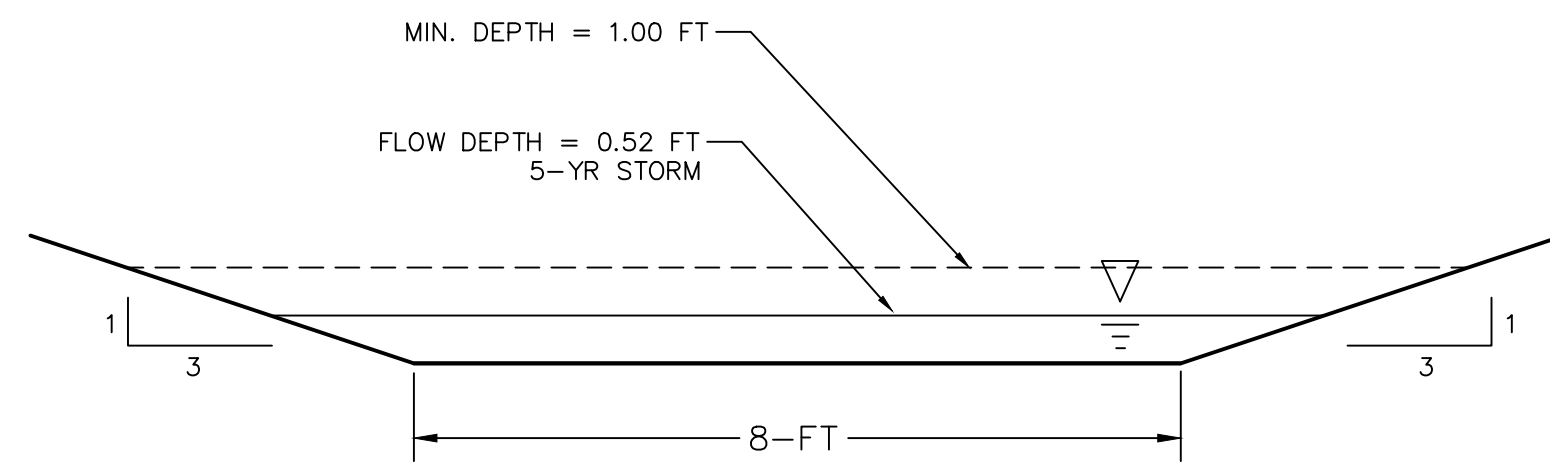
SILT FENCE



REQUIREMENTS FOR INLET PROTECTION:

1. IN ALL CASES, INLET PROTECTION SHOULD NOT COMPLETELY CLOSE OFF THE INLET.
2. THE PROTECTION DEVICE WILL BE DESIGNED TO CAPTURE OR FILTER RUNOFF FROM THE 1 YEAR, 24 HOUR STORM EVENT AND SHALL SAFELY CONVEY HIGHER FLOWS DIRECTLY INTO THE STORM SEWER SYSTEM.
3. INSPECTIONS SHALL BE FREQUENT.
4. MAINTENANCE, REPAIR, AND REPLACEMENT SHALL BE MADE PROMPTLY, AS NEEDED.
5. THE BARRIER SHALL BE REMOVED WHEN THE AREA DRAINING TOWARD THE INLET HAS BEEN STABILIZED.

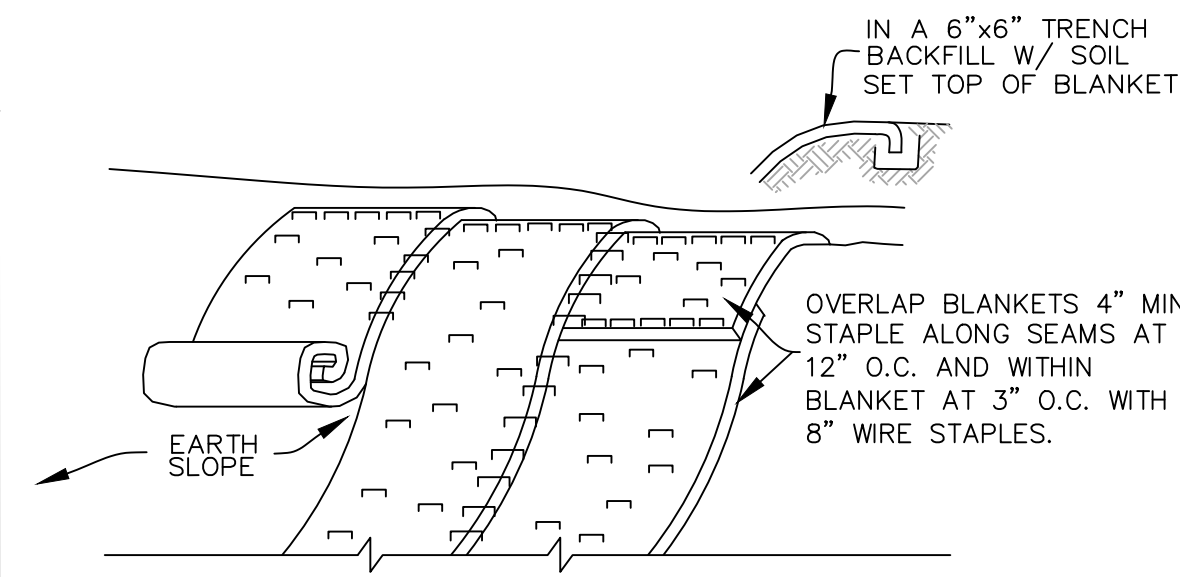
SILT SACK INLET PROTECTION



NOTES:

1. SLOPE OF TEMPORARY DIVERSION SHALL BE 1%.
2. DIVERSION BOTTOMS AND SIDE SLOPES SHALL BE STABILIZED WITH NORTH AMERICAN GREEN S150 EROSION CONTROL BLANKET.
3. DIVERSIONS SHALL BE MAINTAINED UNTIL SUFFICIENT STORM SEWERS HAVE BEEN CONSTRUCTED TO CONVEY STORMWATER RUNOFF INTO THE SEDIMENTATION BASIN.
4. ELEVATIONS OF SWALE SHALL BE FIELD LOCATED BY CONTRACTOR BASED ON THE STATUS OF EARTHWORK ACTIVITIES ON SITE. AS FILL IS PLACED ON SITE, THE DIVERSION SHALL BE RAISED IN ORDER TO MAINTAIN SPECIFIED DIMENSIONS.

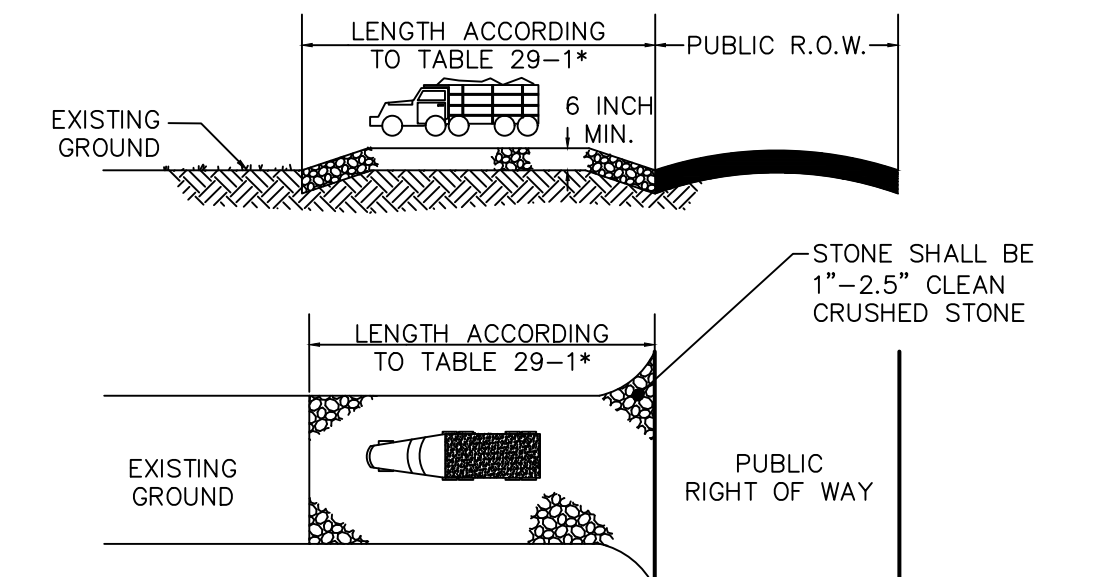
TEMPORARY DIVERSION SWALE



NOTES:

1. STABILIZE PREPARED EARTHEN SLOPE WITH A BIODEGRADABLE NATURAL FIBER NETTING. APPROVED TYPES ARE AS FOLLOWS:  
 - C350 - NORTH AMERICAN GREEN #1-800-772-2040  
 - ECOCOR 9000 - EASTERN PRODUCTS, INC. #1-201-234-5050  
 - ERO-MAT V125C - EROSION CONTROL TECH. #1-800-245-0551
2. SEE SLOPE PRIOR TO INSTALLING EROSION CONTROL NETTING.
3. AFTER NETTING IS INSTALLED, PLANT GRASS-COVER, TREES & FORSYTHIA THROUGH SLITS CUT IN FABRIC.

TEMPORARY SLOPE STABILIZATION



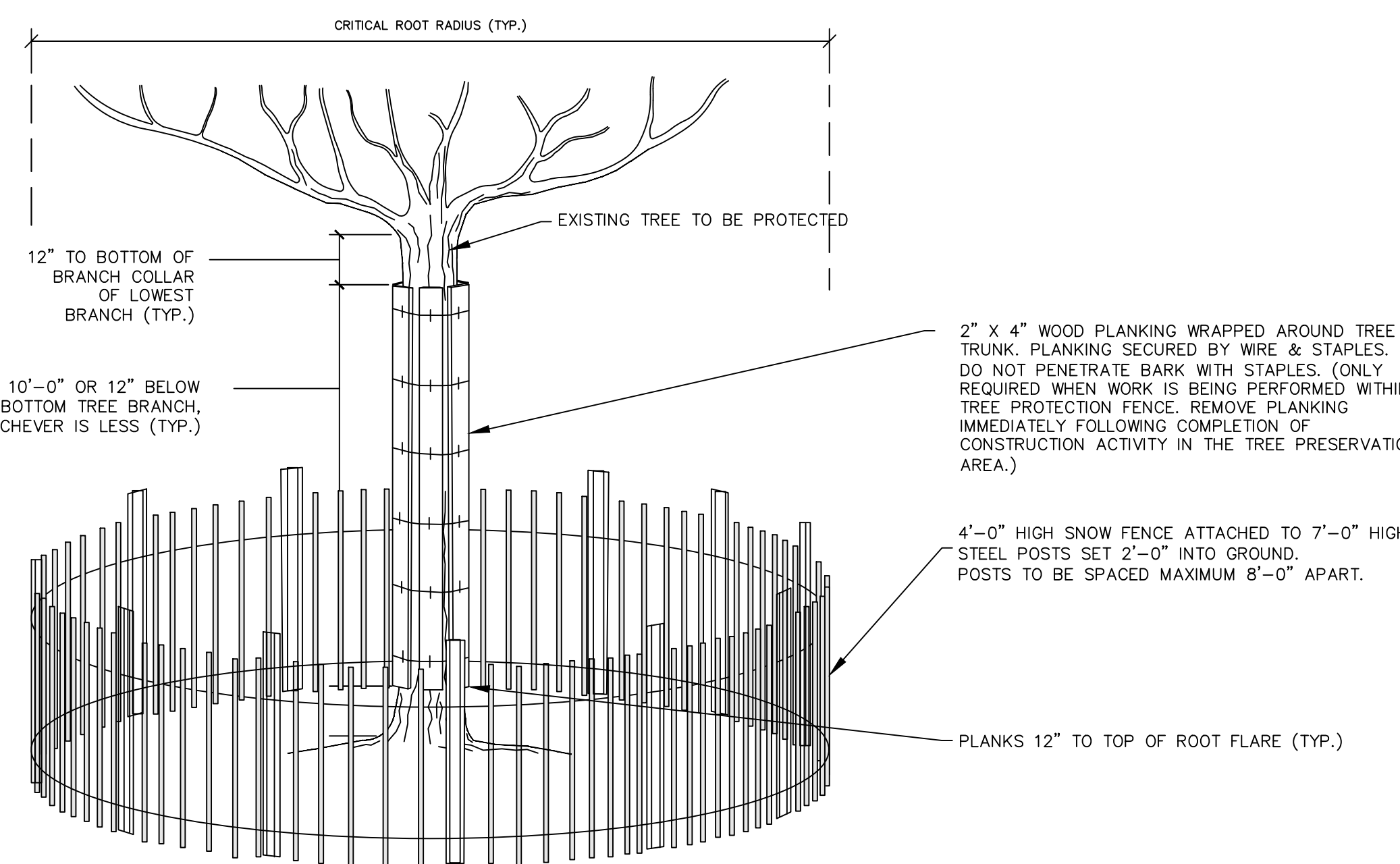
NOTE: INDIVIDUAL LOT ACCESS POINTS MAY REQUIRE STABILIZATION. THICKNESS SHOWN IS FOR STONE CONSTRUCTION ENTRANCE ONLY (TYP.).

TABLE 29-1: LENGTHS OF CONSTRUCTION EXITS ON SLOPING BEDS

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 1-2"	

\* AS PRESCRIBED BY LOCAL ORDINANCE OR OTHER GOVERNING AUTHORITY.  
 REF: THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY (2014)

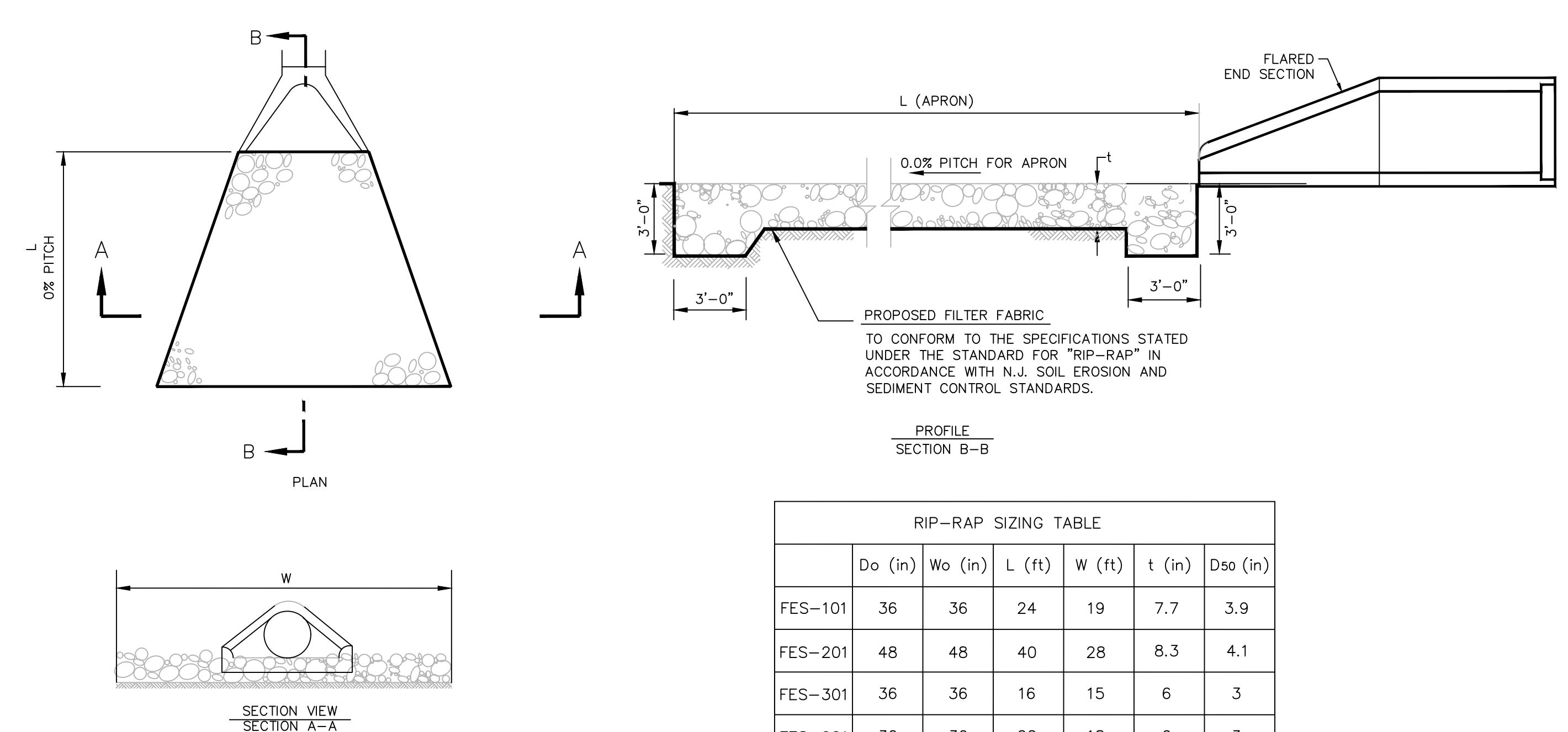
STABILIZED CONSTRUCTION ENTRANCE



TREE PROTECTION NOTES:

1. ALL EXISTING TREES WITHIN THE LIMITS OF TREE PROTECTION FENCING SHALL BE PROTECTED THROUGHOUT THE DURATION OF WORK. THE LIMIT OF TREE PROTECTION FENCE RADIUS SHALL BE 18 TIMES THE MEASURED DIAMETER-AT-BREAST-HEIGHT (DBH), UNLESS CONDITIONS WARRANT THE FENCE TO BE LOCATED CLOSER TO THE TREE. THE PROJECT LANDSCAPE ARCHITECT TO APPROVE THE LOCATION OF ALL FENCING PRIOR TO EXCAVATION.
2. TREE PROTECTION PLANKING SHALL BE INSTALLED ON ALL EXISTING TREES ONLY WHEN WORK IS TO BE DONE WITHIN THE LIMIT OF TREE PROTECTION FENCING. REFER TO DETAIL ON THIS SHEET.
3. IF TREE PROTECTION FENCING NEEDS TO BE MOVED OR BREACHED DUE TO TEMPORARY CONSTRUCTION ACTIVITY WITHIN THE TREE PROTECTION ZONE, THE FENCING WILL BE RESET TO ITS ORIGINAL LOCATION IMMEDIATELY AFTER CONSTRUCTION WITHIN THE TREE PROTECTION ZONE IS COMPLETE.
4. TREE PROTECTION FENCING SHALL BE MAINTAINED TO PROTECT TREES AT ALL TIMES. ANY DAMAGED FENCING SHALL BE IMMEDIATELY REPLACED WHEN DAMAGED.
5. DEMOLITION WORK WITHIN THE TREE PROTECTION FENCE OF PROTECTED TREES SHALL BE PERFORMED BY NON-MECHANICAL METHODS. CONTRACTOR TO PROTECT ROOT MASS AGAINST DAMAGE DURING EXCAVATION. ANY TREE ROOTS THAT ARE DISTURBED, BROKEN, OR CUT SHALL BE PRUNED BACK WITH CLEAN SHARP TOOLS.
6. ALL TEMPORARILY EXPOSED TREE ROOTS SHALL BE COVERED WITH 2 INCHES OF SHREDED HARDWOOD MULCH AND THOROUGHLY IRRIGATED ON A DAILY BASIS AS DIRECTED BY THE PROJECT LANDSCAPE ARCHITECT.
7. ALL WORK TO BE PERFORMED UNDER THE DIRECT SUPERVISION OF EITHER THE OWNER'S REPRESENTATIVE OR THE PROJECT LANDSCAPE ARCHITECT.

TREE PROTECTION



RIP-RAP SIZING TABLE						
	D <sub>50</sub> (in)	W <sub>0</sub> (in)	L (ft)	W (ft)	t (in)	D <sub>50</sub> (in)
FES-101	36	36	24	19	7.7	3.9
FES-201	48	48	40	28	8.3	4.1
FES-301	36	36	16	15	6	3
FES-601	36	36	22	18	6	3

NOTES:

1. THE INDICATED D<sub>50</sub>, APRON LENGTH, WIDTH AND THICKNESS HAS BEEN DESIGNED IN ACCORDANCE WITH THE NEW JERSEY SOIL EROSION AND SEDIMENT CONTROL STANDARDS.
2. FOR ALL PIPE SIZES, SLOPES AND INVERTS, SEE DRAINAGE PLAN (C0201).

RIP-RAP OUTLET PROTECTION

REFER TO CS002 FOR GENERAL NOTES

Date	Description	No.
3/27/2020	REVISED FOR BOROUGH, COUNTY, AND NJDEP COMMENTS	3
1/30/2020	REVISED FOR BOROUGH ENGINEER AND NJDEP COMMENTS	2
9/4/19	REVISED FOR FSCD COMMENTS AND PLANNING BOARD SUBMISSION	1

SIGNATURE: *[Signature]* RICHARD BURROW DATE SIGNED: 04/08/2020  
 PROFESSIONAL ENGINEER NJ Lic. No. 24GE04459300

**LANGAN**  
 Langan Engineering and Environmental Services, Inc.  
 300 Kimball Drive  
 Parsippany, NJ 07054  
 T: 973.560.4900 F: 973.560.4901 www.langan.com  
 NJ CERTIFICATE OF AUTHORIZATION No. 24G02796400

Project: **MIDDLESEX BOROUGH WAREHOUSE PROJECT**  
 BLOCK No. 353, LOTS No. 1.01 AND 1.02  
 BOROUGH OF MIDDLESEX  
 MIDDLESEX COUNTY NEW JERSEY

Drawing Title: **SOIL EROSION AND SEDIMENT CONTROL DETAILS**

Project No. 100594413  
 Date: 7/8/2019  
 Scale: N.T.S.  
 Drawn By: JEI  
 Checked By: MRW  
 Drawing No. CE502  
 Sheet 10 of 22



LEGEND	
	PROPERTY LINE
	FLOOD HAZARD AREA LIMIT LINE
	FLOODWAY AREA LIMIT LINE
	LIMIT OF DISTURBANCE
	EXISTING TREE TO REMAIN
	TREE PROTECTION FENCE
	EXISTING TREE TO BE REMOVED

**NOTE: THIS TREE REPLACEMENT PLAN COMPLIES WITH THE REQUIREMENTS OF ARTICLE 395-15.**

TREE SURVEY																								
Trees Surveyed Within Zone of Work With DBH 4" or Greater																								
65 Bakeland Avenue, Middlesex, New Jersey																								
11/14/2019																								
Tree #	Species	Latin Name	DBH	Condition	Tree #	Species	Latin Name	DBH	Condition	Tree #	Species	Latin Name	DBH	Condition	Tree #	Species	Latin Name	DBH	Condition					
1	Pin oak	Quercus palustris	32	Good	37	White pine	Pinus strobus	21	Fair	73	White pine	Pinus strobus	21	Fair	74	Pin oak	Quercus palustris	38	Fair	110	Green ash	Fraxinus pennsylvanica	12	Fair
2	White pine	Pinus strobus	20	Fair	38	White pine	Pinus strobus	24	Fair	74	Pin oak	Quercus palustris	40	Fair	75	Pin oak	Quercus palustris	40	Fair	111	Green ash	Fraxinus pennsylvanica	11	Poor
3	White pine	Pinus strobus	25	Fair	39	White pine	Pinus strobus	17	Fair	75	Pin oak	Quercus palustris	25	Poor	76	Silver maple	Acer saccharinum	25	Poor	112	Removed	NA	NA	NA
4	White pine	Pinus strobus	20	Fair	40	White pine	Pinus strobus	22	Fair	76	Silver maple	Acer saccharinum	25	Poor	77	Crabapple	Malus spp.	10	Fair	113	Removed	NA	NA	NA
5	White pine	Pinus strobus	18	Fair	41	White pine	Pinus strobus	24	Fair	77	Crabapple	Malus spp.	10	Fair	78	Kousa dogwood	Cornus kousa	9	Good	114	Removed	NA	NA	NA
6	White pine	Pinus strobus	23	Fair	42	White pine	Pinus strobus	14	Fair	78	Kousa dogwood	Cornus kousa	9	Good	79	Scarlet oak	Quercus coccinea	30	Fair	115	Removed	NA	NA	NA
7	White pine	Pinus strobus	25	Fair	43	White pine	Pinus strobus	26	Good	79	Scarlet oak	Quercus coccinea	30	Fair	80	Northern white cedar	Thuja occidentalis	6	Poor	116	Removed	NA	NA	NA
8	White pine	Pinus strobus	25	Fair	44	Black cherry	Prunus serotina	11	Fair	80	Northern white cedar	Thuja occidentalis	6	Poor	81	Red maple	Acer rubrum	13	Fair	117	Removed	NA	NA	NA
9	Pin oak	Quercus palustris	26	Fair	45	Autumn olive	Elaeagnus umbellata	20	Fair	81	Red maple	Acer rubrum	13	Fair	82	Red maple	Acer rubrum	15	Good	118	Japanese cryptomeria	Cryptomeria japonica	13	Fair
10	White pine	Pinus strobus	29	Fair	46	Pin oak	Quercus palustris	36	Poor	82	Red maple	Acer rubrum	15	Good	83	Flowering dogwood	Cornus florida	22	Dead	119	European hornbeam	Carpinus betulus	8	Fair
11	White pine	Pinus strobus	26	Good	47	Pin oak	Quercus palustris	31	Dead	83	Flowering dogwood	Cornus florida	22	Dead	84	Linden	Tilia spp.	22	Dead	120	European hornbeam	Carpinus betulus	10	Good
12	White pine	Pinus strobus	19	Fair	48	White pine	Pinus strobus	21	Fair	84	Linden	Tilia spp.	22	Dead	85	Honeylocust	Gleditsia triacanthos	23	Fair	121	European hornbeam	Carpinus betulus	7	Poor
13	Pin oak	Quercus palustris	24	Fair	49	White pine	Pinus strobus	28	Fair	85	Honeylocust	Gleditsia triacanthos	23	Fair	86	Japanese zelkova	Zelkova serrata	14	Fair	122	Japanese cryptomeria	Cryptomeria japonica	10	Fair
14	Pin oak	Quercus palustris	31	Poor	50	White pine	Pinus strobus	18	Fair	86	Japanese zelkova	Zelkova serrata	14	Fair	87	Japanese zelkova	Zelkova serrata	13	Good	123	Pin oak	Quercus palustris	36	Good
15	White pine	Pinus strobus	23	Fair	51	White pine	Pinus strobus	24	Fair	87	Japanese zelkova	Zelkova serrata	13	Good	88	Japanese zelkova	Zelkova serrata	13	Good	124	Pin oak	Quercus palustris	40	Fair
16	White pine	Pinus strobus	23	Fair	52	White pine	Pinus strobus	25	Fair	88	Japanese zelkova	Zelkova serrata	13	Good	89	Scarlet oak	Quercus coccinea	33	Fair	125	Pin oak	Quercus palustris	29	Fair
17	White pine	Pinus strobus	18	Fair	53	Pin oak	Quercus palustris	32	Poor	89	Scarlet oak	Quercus coccinea	33	Fair	90	Blue spruce	Picea pungens	9	Good	126	Red oak	Quercus rubra	25	Poor
18	White pine	Pinus strobus	15	Fair	54	Pin oak	Quercus palustris	30	Dead	90	Blue spruce	Picea pungens	9	Good	91	Blue spruce	Picea pungens	11	Fair	127	Removed	NA	NA	NA
19	White pine	Pinus strobus	13	Fair	55	Pin oak	Quercus palustris	29	Poor	91	Blue spruce	Picea pungens	11	Fair	92	Blue spruce	Picea pungens	8	Fair	128	Red oak	Quercus rubra	42	Fair
20	White pine	Pinus strobus	20	Fair	56	Pin oak	Quercus palustris	27	Dead	92	Blue spruce	Picea pungens	8	Fair	93	Blue spruce	Picea pungens	9	Fair	129	Red oak	Quercus rubra	34	Good
21	White pine	Pinus strobus	22	Fair	57	Pin oak	Quercus palustris	31	Fair	93	Blue spruce	Picea pungens	9	Fair	94	Blue spruce	Picea pungens	10	Good	130	White pine	Pinus strobus	30	Fair
22	White pine	Pinus strobus	16	Fair	58	Pin oak	Quercus palustris	36	Fair	94	Blue spruce	Picea pungens	10	Good	95	Saucer magnolia	Magnolia x soulangeana	15	Fair	131	Pin oak	Quercus palustris	30	Fair
23	White pine	Pinus strobus	21	Fair	59	Pin oak	Quercus palustris	30	Fair	95	Saucer magnolia	Magnolia x soulangeana	15	Fair	96	Pin oak	Quercus palustris	30	Fair	132	Pin oak	Quercus palustris	30	Good
24	Pin oak	Quercus palustris	31	Poor	60	Pin oak	Quercus palustris	37	Fair	96	Pin oak	Quercus palustris	30	Fair	97	White pine	Pinus strobus	27	Fair	133	Norway spruce	Picea abies	24	Good
25	White pine	Pinus strobus	26	Dead	61	White pine	Pinus strobus	21	Fair	97	White pine	Pinus strobus	27	Fair	98	Pin oak	Quercus palustris	30	Dead	134	Red maple	Acer rubrum	31	Fair
26	White pine	Pinus strobus	21	Fair	62	White pine	Pinus strobus	25	Fair	98	Pin oak	Quercus palustris	30	Dead	99	Pin oak	Quercus palustris	31	Fair	135	Norway maple	Acer platanoides	19	Poor
27	White pine	Pinus strobus	26	Dead	63	Mugo pine	Pinus mugo	17	Fair	99	Pin oak	Quercus palustris	31	Fair	100	Pin oak	Quercus palustris	41	Fair	136	Norway maple	Acer platanoides	23	Poor
28	White pine	Pinus strobus	23	Fair	64	Pin oak	Quercus palustris	21	Fair	100	Pin oak	Quercus palustris	41	Fair	101	Silver maple	Acer saccharinum	22	Poor	137	River birch	Betula nigra	39	Fair
29	White pine	Pinus strobus	24	Fair	65	Sugar maple	Acer saccharum	11	Good	101	Silver maple	Acer saccharinum	22	Poor	102	Red maple	Acer rubrum	33	Fair	138	Green ash	Fraxinus pennsylvanica	33	Fair
30	White pine	Pinus strobus	25	Fair	66	Sugar maple	Acer saccharum	8	Fair	102	Red maple	Acer rubrum	33	Fair	103	Silver maple	Acer saccharinum	34	Fair	139	Flowering dogwood	Cornus florida	15	Fair
31	White pine	Pinus strobus	22	Poor	67	Sugar maple	Acer saccharum	10	Good	103	Silver maple	Acer saccharinum	34	Fair	104	Flowering dogwood	Cornus florida	9	Dead	140	American elm	Ulmus americana	63	Fair
32	White pine	Pinus strobus	19	Fair	68	Sugar maple	Acer saccharum	10	Fair	104	Flowering dogwood	Cornus florida	9	Dead	105	Norway maple	Acer platanoides	22	Fair	141	Flowering dogwood	Cornus florida	8	Fair
33	White pine	Pinus strobus	25	Fair	69	White ash	Fraxinus americana	33	Poor	105	Norway maple	Acer platanoides	22	Fair	106	Sugar maple	Acer saccharum	26	Fair	142	American linden	Tilia americana	43	Fair
34	White pine	Pinus strobus	14	Fair	70	Pin oak	Quercus palustris	62	Poor	106	Sugar maple	Acer saccharum	26	Fair	107	Pin oak	Quercus palustris	35	Fair	143	Norway maple	Acer platanoides	28	Fair
35	White pine	Pinus strobus	25	Fair	71	Pin oak	Quercus palustris	35	Fair	107	Pin oak	Quercus palustris	35	Fair	108	Norway spruce	Picea abies	33	Good	144	Siberian elm	Ulmus pumila	9	Fair
36	White pine	Pinus strobus	17	Fair	72	Elm	Ulmus spp.	13	Fair	108	Norway spruce	Picea abies	33	Good										

SavATree Consulting Group  
550 Bedford Road  
Bedford Hills, NY 10507

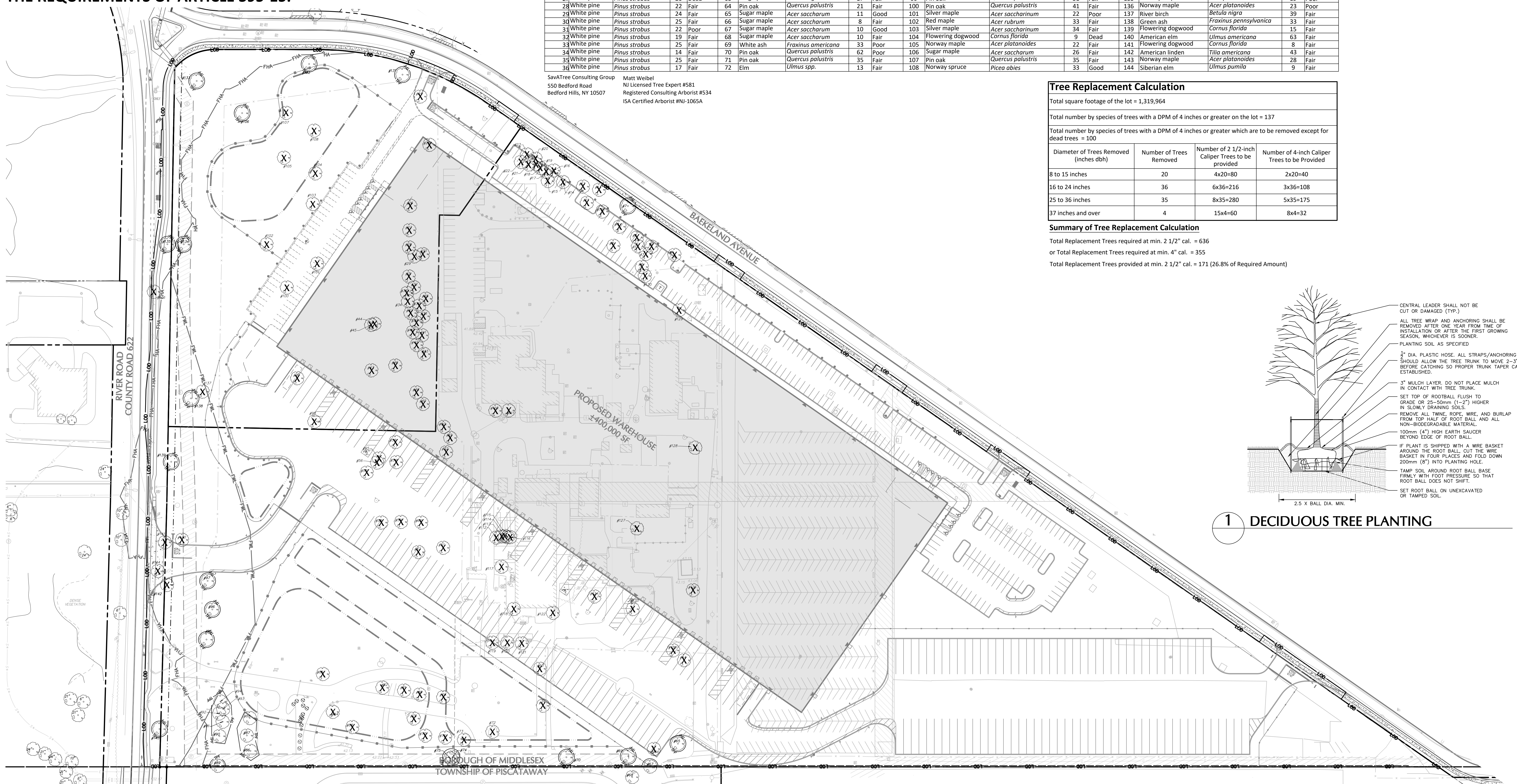
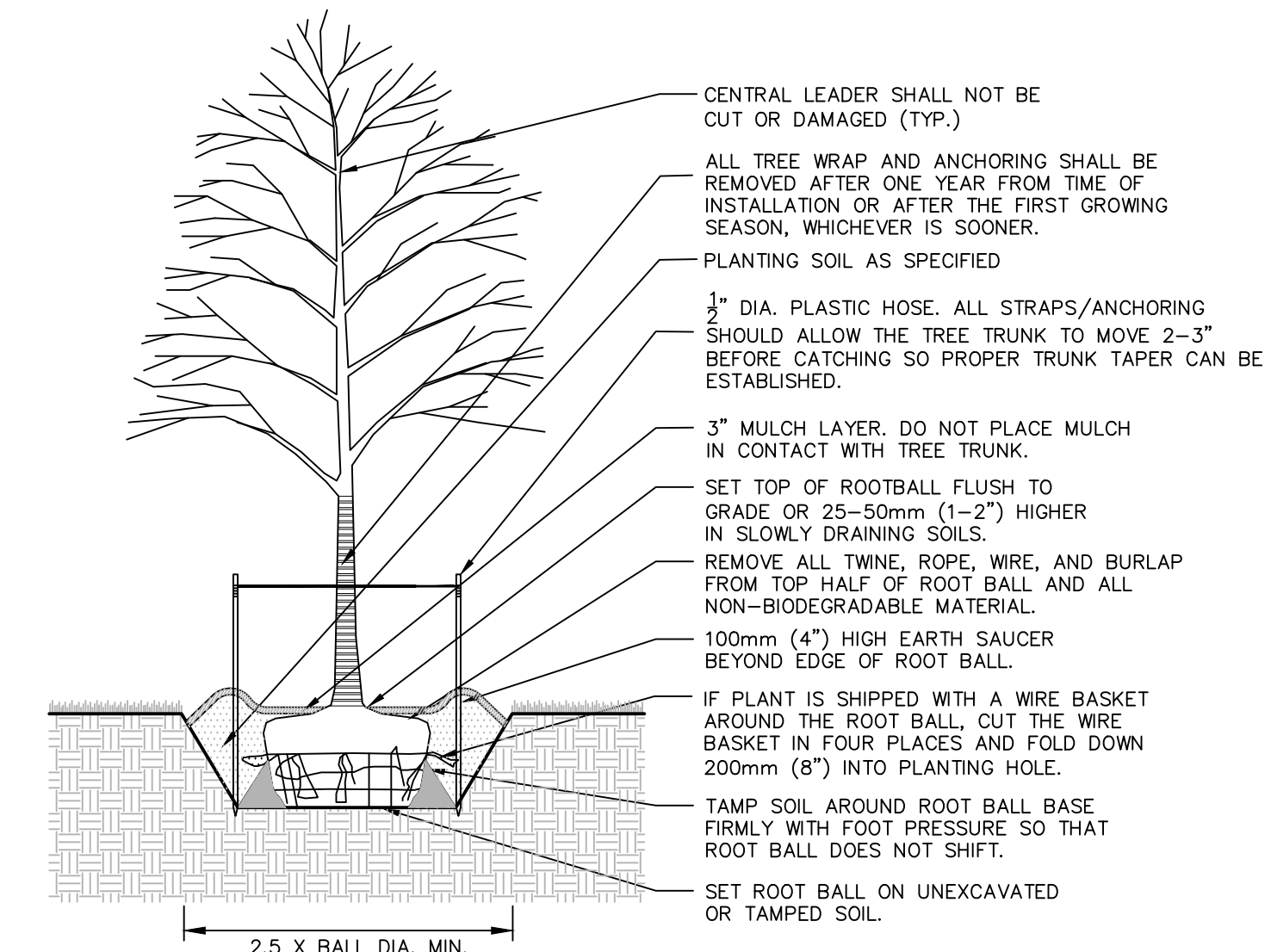
Matt Weibel  
NJ Licensed Tree Expert #591  
Registered Consulting Arborist #534  
ISA Certified Arborist #NJ-1065A

Tree Replacement Calculation			
Total square footage of the lot = 1,319,964			
Total number by species of trees with a DPM of 4 inches or greater on the lot = 137			
Total number by species of trees with a DPM of 4 inches or greater which are to be removed except for dead trees = 100			
Diameter of Trees Removed (inches dbh)	Number of Trees Removed	Number of 2 1/2-inch Caliper Trees to be provided	Number of 4-inch Caliper Trees to be Provided
8 to 15 inches	20	4x20=80	2x20=40
16 to 24 inches	36	6x36=216	3x36=108
25 to 36 inches	35	8x35=280	5x35=175
37 inches and over	4	15x4=60	8x4=32

**Summary of Tree Replacement Calculation**

Total Replacement Trees required at min. 2 1/2" cal. = 636  
or Total Replacement Trees required at min. 4" cal. = 355

Total Replacement Trees provided at min. 2 1/2" cal. = 171 (26.8% of Required Amount)



<p>3/27/2020 REVISED FOR BOROUGH, COUNTY, AND NJDEP COMMENTS 2</p> <p>1/30/2020 REVISED FOR BOROUGH ENGINEER AND NJDEP COMMENTS 1</p> <p>Date Description No.</p> <p>REVISIONS</p>	<p>04/08/2020</p> <p>SIGNATURE JAYNE O. SPECTOR DATE SIGNED</p> <p>PROFESSIONAL LANDSCAPE ARCHITECT</p> <p>NJ LICENSE No. 21AS00045700</p>	<p><b>LANGAN</b></p> <p>Langan Engineering and Environmental Services, Inc. 300 Kimball Drive Parsippany, NJ 07054</p> <p>T: 973.560.4900 F: 973.560.4901 www.langan.com NJ CERTIFICATE OF AUTHORIZATION No. 246A2796620</p>	<p>Project</p> <p><b>MIDDLESEX BOROUGH WAREHOUSE PROJECT</b></p> <p>BLOCK No. 353, LOTS No. 1.01 AND 1.02</p> <p>BOROUGH OF MIDDLESEX</p> <p>MIDDLESEX COUNTY NEW JERSEY</p>	<p>Drawing Title</p> <p><b>TREE REPLACEMENT PLAN</b></p>	<p>Project No. 100594413</p> <p>Date 9/4/2019</p> <p>Scale 1" = 60'</p> <p>Drawn By YW Checked By JS</p>	<p>Drawing No. TR101</p> <p>Sheet 11 of 22</p>
--	--	--	--	--	--	--