MASTER PLAN PRELIMINARY & FINAL SITE PLAN



PREPARED FOR

THE PENNINGTON SCHOOL

BLOCK 701, LOT 4, BLOCK 502, LOT 4, BLOCK 206, LOT 10 & BLOCK 205, LOT 1

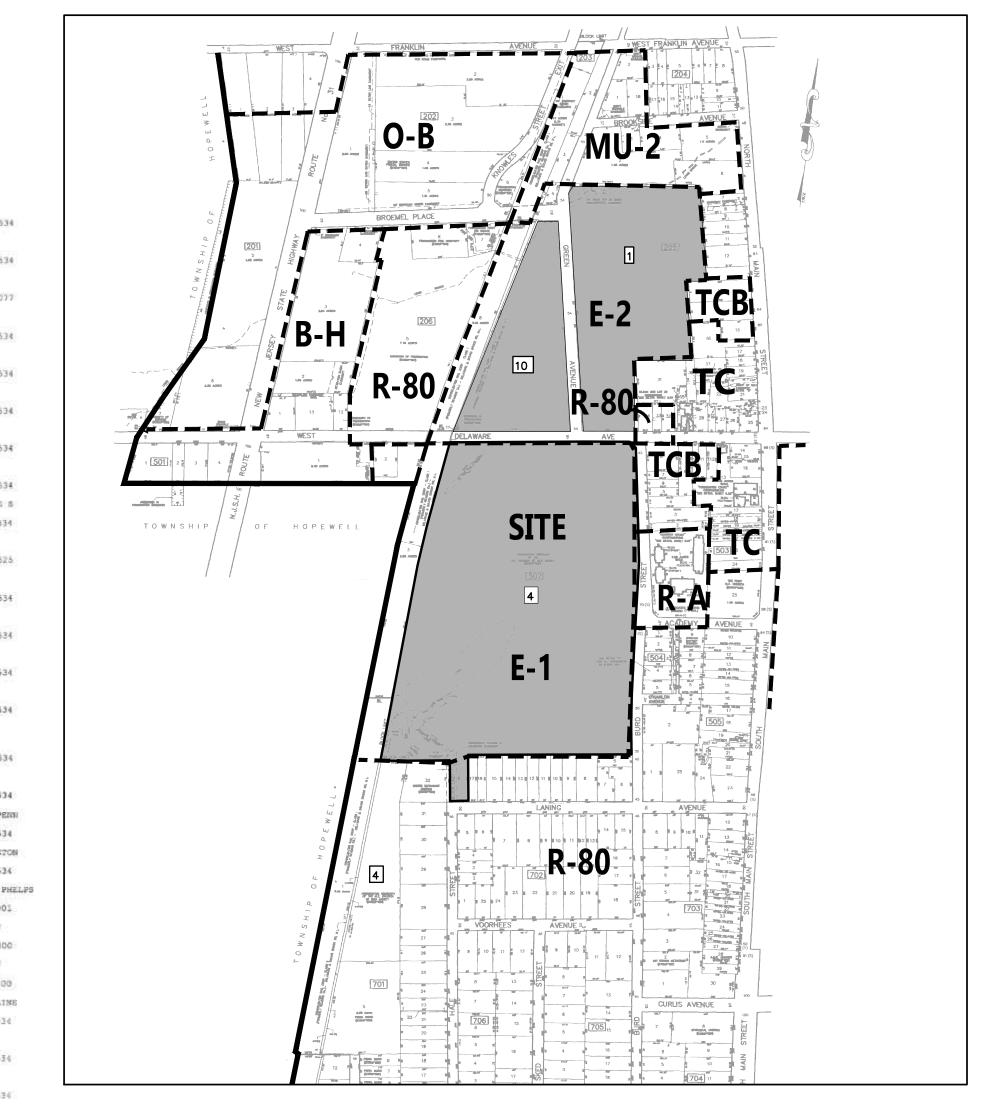
SITUATED IN

PENNINGTON BOROUGH, MERCER COUNTY, NEW JERSEY

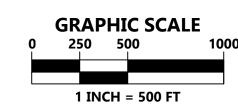
OWNER/APPLICANT
THE PENNINGTON SCHOOL
112 WEST DELAWARE AVE.
PENNINGTON, NEW JERSEY 08534

PROPERTY OWNERS WITHIN 200' OF SITE

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		PENN!	NGTON BOROUGH				KUUGH					KUUGH		
BLOCK/LOT	ADDRESS	158	OWNER THE PENNINGTON BEHOOL		BLOCK/LOT	ADDRESS	22.7	OWNER	T 701442220	BLOCK/LOT	ADDRESS		OWNER	
(4)			W DELAWARE AVENUE PROHIIM/FOR NO	09534	502 1.6	129 LANING AVE.	2	PPRITTEMBERGER GEORGE WIL 129 LANING AVE. PENNINGTON NJ	08534	503.04 3.01	8 ACADEMY COURT	2	HELFANT, CHARLOTTE 8 ACADEMY COURT PENNINGTON, NJ	08534
30	MEST DELAWARE AVE	1	THE BRICE WAIS CONDORNED THE BRICE WAIS CONDORNED	QB534	502 17	191 LANING AVE.	2	NYERS JAMES R & SUSAN R 131 LANING AVE. FENNINGTON NJ	08534	503.04 3.02	9 ACADEMY COURT	2	SIEBER CRAIG H 417 BURD ST SENNINGTON J	09534
205	W EELANARE AVE	40	BLACKWELL A 4 M C/O J NE 115 LEWISBROOK RD PERNINGTON NJ	DB534	503	ACADEMY AVE	1	ACADEMY COURT COMDOMINIUM ACADEMY AVE PENINGTON NJ	3 08534	503.04 3.03	10 ACADEMY COURT	2	LEOWE, BARBARA J PO BOX 711	
205 32	25 W DELAWARE AVE	7	BLACKWELL A 6 M C/O J NE 115 LEWISBROOK RD PERMINGTON NJ	ABY 06534	503 2	25 BURD ST	158	THE PENNINGTON SCHOOL 112 W DELAWARE AVE PENNINGTON NJ	08534	503.04 3.04	11 ACADEMY COURT	2	PETERS, STEPHANIE 11 ACADEMY COURT	18077
205 33	29-31 W DELAWARE AVE	158	THE PENNINGTON SCHOOL 112 WEST DELAWARE AVE PENNINGTON NJ	06534	503 3.01	17-19 BURD 5T	2	171921 SURD ST, LLC 17-19 BURD ET PENNINGTON, NJ	08534	503.04 3.05	12 ACADSMY COURT	2	PERMINSTON, NJ FRANSE ELISABETH J 12 ACADEMY COURT	08534
205 34	35 A@B W DELAWARE AVE	158	THE PENNINGTON SCHOOL 112 WEST DELAWARS AVE PENNINGTON NJ	08534	503 3.02	21 BURD ST	1	171921 BURD ST, LLC 17-19 BURD ST		504	1 ACADEMY STREET	2		06334
205.01	21 W DELAWARE AVE UNIT 1	424	WHYTE FRANK M & MAN M 30 LOCHATONG RD TRENTON NJ	DB 628	503 4	13 BORD ST	2	SABIN CARCLYN M 13 BURD STREET	08534	504	106 CRAWLEY AVE	:2	PENNINGTON, NJ CASE FLORENCE E	08534
205.02	23 W DELAWARE AVE FLR U2	48.	DEBOYACE KIMBERLY & JOHN 5074 BEACON HILL CT	τ.	503 5	11 BURD ST	2	PENNINGTON NJ ANDRESEN BOBERT A 4 CHERY 11 BURD STREET	08534 D P	504	110 CRAWLEY AVE	2	ROBSON ROBERT	08534
205.02	23 W DELAWARE AVENUE	2	DOYLESTONN PA COOKE MATTHEN A & SITA P 18 DELANARE AVE		503	9 BURD ST	2	PENNINGTON MJ UNIDTS ROSLYM 9 HURD ST	08534	504	112 CHAWLEY AVE	2	UMLAUF SCOTT W & QUINTO LY	08534 HNE S
205.03	23 W DEL AVE BEAR UNIT 4	48.	GFSM OF PENNINGTON, ILC 1 VANNOY AVE	08628.2003	503	7 BURD ST	2	PERMITEGION NJ PRAPAS, LORI & PRAPASSIRI 7 BURD ST	08534 PHAN, PITI	504	114 CHANLEY AVE	2	112 CRAWLEY AVE FEMMINGTON NJ WITCHES TRUST	08534
206	W DELAWARE AVENUE	15C	PENNINGTON NJ PENNINGTON BOROUGH 30 N MAIN ST	08534	503	30 W DELAWARE AVE	2	PENNINGTON, NJ AZIENSA, ELENITA U. 4 JAN	DB534 CARMELO A	5 509	17 LANING AVE.	:2	204 BOPEWELL-WERTS ROAD	08525
204	GREEN AVENUE - REAR	SA.	PENNINGTON N.7 CONSOLIDATED RAIL CORPOR	08534 ATION	9.01	32 W DELAWARE	4	30 WEST DELAWARE AVE PENNINGTON, NJ ELLIS JEFFREY & LAUNA	08534	1		19994	17 LANING AVE. PENNINGTON BJ	08534
206	STATE ASSESSED DRSEN AVENUE - REAR	58	COMBOLIDATED RAIL CORPOR.	00000 ATION	8.02	24 W DELAWARE AVE		32 WEST DELAMARE AVE PENNINGTON, NJ HALLEY CHRISTOPHER & MEYE	08534	505 2	131 BURD ST	15F	CTRUS TEMPLE MASONIC LODGE C\OJR HEWMAN, P.O. BOX 55 PENNINGTON NJ	08534
9 206	STATE ASSESSED W DELAMASE AVENUE	158	THE PENNINGTON SCHOOL	00000	9		.e.	24 W DELAWARE AVE PENNINGTON NJ	08534	505	117 CRAWLEY AVE	-1	BOYER DOROTHY R & PHYLLIS 117 CRAWLEY AVE PENNINGTON NJ	C 08534
10		100	112 W DELAWARE AVEROE PEMNINGTON NJ BOROGGE OF PENNINGTON	08534	503.01	13 ACADEMY COURT	2	HANSON, LINDSAY 13 ACADEMY COURT FERNINGTON, NJ CURTISS, EVAN M & KARA L	06534	505 5	113 CRANLEY AVE	2	JOHNSON JAMES A 113 CRAWLRY AVE PENNINGTON, NJ	08534
206	V L W DELAWARE		30 H MAIN ST PENNINGTON, MJ	U8534	503,01	14 ACADEMY COURT	1120	14 ACADEMY COURT PERMINGTON, NJ	08534	505 6	CRAWLEY AVE	150	BETHEL AME CHURCH V L CRAWLEY AVENUE	
502	W DELAWARE AVE	4a.	MONTFEN SC LEC 902 CARNEGIE CENT STE 450 PRINCETON NO	00540,6530	503.01	15 ACADEMY COURT	2	CLEFFI ROCKY F 15 ACADEMY COURT PERNINGTON NJ	08534	505	109 CRAWLEY AVE	2	PERMITHGEON, NJ JGA DEVT LLC 109 CRAWLEY AVE	08534
50Z 2	143 W DHLAWARE AVE	2	LEVIN MICHAEL & MINDY 142 W DELAWARE AVE PENNINGTON NJ	08534	\$03,01	16 ACADEMY COURT	2	MC CARTY, HACKI 16 ACADEMY COURT PERMINGTON BJ	08534	505	CRANLEY AVE	150	PENNINGTON, MJ THE PIRST BAPTIST CHURCH O	06534 F PENN
502 3	W DELAWARS AVENUE STATE ASSESSED	5A	COMBOLIDATED RAIL CORPORA	00000	503.02	17 AGAGENY COURT	2	HEACOCK LINDA M 17 ACADEMY COURT PERMITHSTON NJ	08534	505	CRANLEY AVE	150	1ST BAPTIST CHUNCH OF PENN	09534 INGTON
502 5	80 BURD ST	2	ALLEN WALTER F.C MILLLER 80 BURD ST PENNINGTON NJ	6 N ALLEN DB534	503.02	18 ACADEMY COURT	243	ZAMBRAHO, JOSEPH A. & C'CC) 18 ACADEMY COURT PERMITHOTOX, NJ	OSSSI	505	15 LANSING AVE.	4n	PO BOW 157 PENNINGTON MJ NJ BELL TELEPHONE C/O DUFF	08534 6 PHEL
502 6	103 EANING AVE.	2	HELD ISAAC 6 JOANS 1 103 LAHING AVE. FENNINGTON NJ	OB534	503.02	19 ACADEMY COURT	2	WATSON, GREGORY 19 ACADEMY COURT PERMINSTON, MJ	D8534	701	HALE STREET - REAR	58	PO BOX 2749 ADDISON TX CONSOLIDATED RAIL COMPOSAT.	75001
502 7	105 DANTING AVE.	2	BRADY SUSAN B 105 LAKING AVE. PENNENGTON NJ	08534	563.02 4	20 ACADEMY COURT	2	MALLOY, SHAWNON M. 20 ACADEMY COURT PENNINGTON, NJ	06534	701	STATE ASSESSED HALE STREET - REAR	58	Establishment in the second of	00000
502 8	107 LANING AVE.	2	FINNESSY CONOR G 4 MAURA 107 LANTING AVE.	м	503.0¢ 1.01	1 ACADEMY COURT	2	MARTIN, BICKARL 1 ACADEMY COURT		3	STATE ASSESSED	38		00000
502 9	111 LANING AVE	i	PERNIMITON NJ. FOSTER PROPERTIES, LLC 197 WOOSANONSA RD	08534	503.04 1.02	2 ACADEMY COURT	. 3	PERMINGTON, MJ NEWBAKER, KEN & RICHARDS, 2327 NEBRASKA AVE. NW		701 31	212 MALE S7	:2	WITTEOP, WILLIAM J. & JACO 212 HALE ITHEST SINKINGTON, RZ	DE534
502 11	115 LANING AVE.	2	MCHANINGTON, BJ MCHANINGN EDWARD J III 4 115 LANING AVE:	OR534 CHRISTINA	503.04 2.01	3 ACADEMY COURT	2	MASHINGTON DC AARON DAVID E & MARIE L 1018 RIVER RD	2007€	701 37	210 MALE 57	15)	THE PERMINGTON SCHOOL 112 WEST DELAWARE AVE PERMINGTON, NO	00534
502 12	117 LANING AVE	2	PENNINGTON NJ KENOR, ANDREW N & MATE E 117 LANING AVE	08534	503.04 2.02	4 ACADEMY COURT	7	BEST TRENTON HJ BARTBICK MOSPHY 4 ACADEMY COURT	D#628	702	213 HALE ST	2	MLEY, MEVIN S & ZINNI, JUL 213 HALR STREET PENNINGTON, NJ	IA 08534
502	119 LASING AVE.	2	PERSINGTON, NJ MARGOUX, DAVID & POIRIER, M	OB534 RUDE A	503.04	S ACADEMY COURT	2	PENNINGFON MJ CASTORO, EATHLBEN	08534	702 5	111 SALE STREET	2	PHILLIPS DAVID E & REGINA 211 HALE STREET PENHINGTON, BU	08534
502	121 LOWING AVE.	2	119 LANING AVE PENNINGTON, NJ DOBSON, GERALD E. JR. & S	08534 ARA A.	2.01	€ ACADEMY COURT	2	5 ACADEMY COMET PHREINGROW, NJ BROVIN, KELLY L.	08534	702 6	126 LANING AVE	2	PARRIER, ARTHONY D & KAREN 136 LANING AVE PERMINISTON, NJ	E 08534
502	125 LANTING AVE.	9	121 LANING AVE. PENHINGTON BJ ARTHUR SUSAN	08534	2.04	7 ACADEMY COURT	2	6 ACADEMY COCET PENNINGTON, NJ KARTPENCE, RYAN & MARVIN	09534	702	124 LANING AVE	2	GRINES THOMAS A & ELIZABETH 124 LANING AVE,	1.3
15	The second secon	_	125 LANING AVE. PERMINSTON MJ	08534	2.01	VILLER OF VIETNA	. T	7 ACADEMY CT PENNINGTON, NJ	09534				PENNINGTON NO	08534



SITE LOCATION MAP



DATE: MAY 20, 2022

UTILITIES OPERATING IN PENNINGTON BOROUGH, MERCER COUNTY, NEW JERSEY

Public Service Electric & Gas Co.
Manager – Corporate Properties
80 Park Plaza T6B
Newark, NJ 07102

NUI Corp. – Elizabethtown Gas
One Elizabethtown Plaza
P.O. Box 1208
Newark, NJ 07102

Verizon Communications, Inc.
Corporate Secretary
540 Broad Street
Newark, NJ 07101

Comcast Cable
940 Prospect Street
Trenton, NJ 08618

AT&T
Corporate Secretary
295 North Maple Avenue
Basking Ridge, NJ 07920

Pennington Borough Water and Sewer

Pennington, NJ 08534

Mercer County Planning Division 640 South Broad Street, Room 412

New Jersey Department of Transportation

OTHER

P.O. Box 8068

Trenton, NJ 08650-8068

Trenton, NJ 08625-0600

HOPEWELL TOWNSHIP

BLOCK LOT ASSESSED IN NAME AND ADDRESS

66 1.01 Montpen SC LLC
902 Carnegie Center/ 400
Princeton, NJ 08540

66 2 Richard B. & Joan M. Lutzow
1836 Edmund Road
Abington, PA 19001

66 3 Conrail- Delaware Bound Brook RR
2001 Market St. Flr. 25B
Philadelphia PA 19101

Van Cleef
ENGINEERING WITH FOCUS

VAN CLEEF ENGINEERING ASSOCIATES, LLC

4 AAA DRIVE, SUITE 103, HAMILTON, NJ 08691
WEB: WWW.VANCLEEFENGINEERING.COM
PHONE (609) 689-1100
CERT. OF AUTHORIZATION NO. 24GA28132300

 2
 REV. PER LAYOUT CHANGES
 JAB 6/2/23

 1
 PER TOWNSHIP & OUTSIDE AGENCY COMMENTS
 JAB 9/30/22

 REV DESCRIPTION
 AUTH DATE



SHEET No. TITLE

OVERALL KEY PLAN

EXISTING CONDITIONS & DEMOLITION PLANS

A-4D SITE PLAN

GRADING, DRAINAGE & UTILITY PLANS

6 LANDSCAPING PLAN

1-7D LIGHTING PLANS

A-8D SOIL EROSION & SEDIMENT CONTROL PLANS

9A-9D SOIL MANAGEMENT & PREPARATION PLANS

10 SOIL EROSION & SEDIMENT CONTROL NOTES
11-16 CONSTRUCTION DETAILS

17 FIRE TRUCK TURNING DIAGRAM

	ZONING DATA: BLOCK 50	2, LOT 4 (E-1 EDUC	ATION ZONE)
	REQUIREMENT	REQUIRED	EXISTING	PROPOSE
MIN. LOT	SIZE			
	MIN. LOT AREA	10 ACRES	29.282 AC.	29.282 AC
	MIN. LOT WIDTH	100 FT	809 FT	809 FT
PRINCIPA	L BUILDING			
	MIN. FRONT YARD SETBACK	50 FT	7.8 FT (e)	NO CHANC
	MIN. SIDE YARD SETBACK	20 FT	35.5 FT	NO CHANC
	MIN. REAR YARD SETBACK	50 FT	136.5 FT	NO CHANG
	MAX. LOT COVERAGE	30%	26.09%	29.52%
	MAX. BUILDING HEIGHT	3 STORY (45 FT)	3 STORY	3 STORY
ACCESSOF	RY STRUCTURE (PRESS BOX) PE	R SECTION 215-12		
	MIN. FRONT YARD SETBACK	50 FT		
	MIN. SIDE YARD SETBACK	10 FT	5.6 FT (e)	7.2 FT (v)
	MIN. REAR YARD SETBACK	10 FT		
PARKING:	SPACES			
	TOTAL NUMBER	238*	280	241
	A.D.A PARKING	7	10	12

*NUMBER OF PARKING SPACES APPROVED UNDER PREVIOUS RESOLUTION

I CONSENT TO THE FILING OF THIS SITE PLAN WITH THE PLANNING BOARD

OWNER DATE

112 WEST DELAWARE AVENUE, PENNINGTON, NEW JERSEY 08534
ADDRESS

SITE PLAN OF: PENNINGTON SCHOOL
BLOCK 502, LOT 4
TAX MAP: 2 & 5 DATE: 12/10/07
ADDRESS: 112 WEST DELAWARE AVENUE, PENNINGTON, NEW JERSEY 08534

I HEREBY CERTIFY THAT I HAVE PREPARED THIS SITE PLAN AND THAT ALL DIMENSIONS AND INFORMATION IS CORRECT

5/20/22

JAMES A. BASH
N.O. PROFESSIONAL ENGINEER NO. 24GE05225800

I HAVE REVIEWED THIS SITE PLAN AND CERIFY THAT IT MEETS ALL CODES AND ORDINANCES UNDER MY JURISDICTION

MUNICIPAL ENGINEER

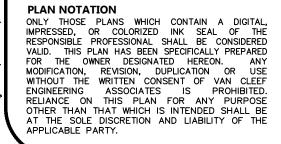
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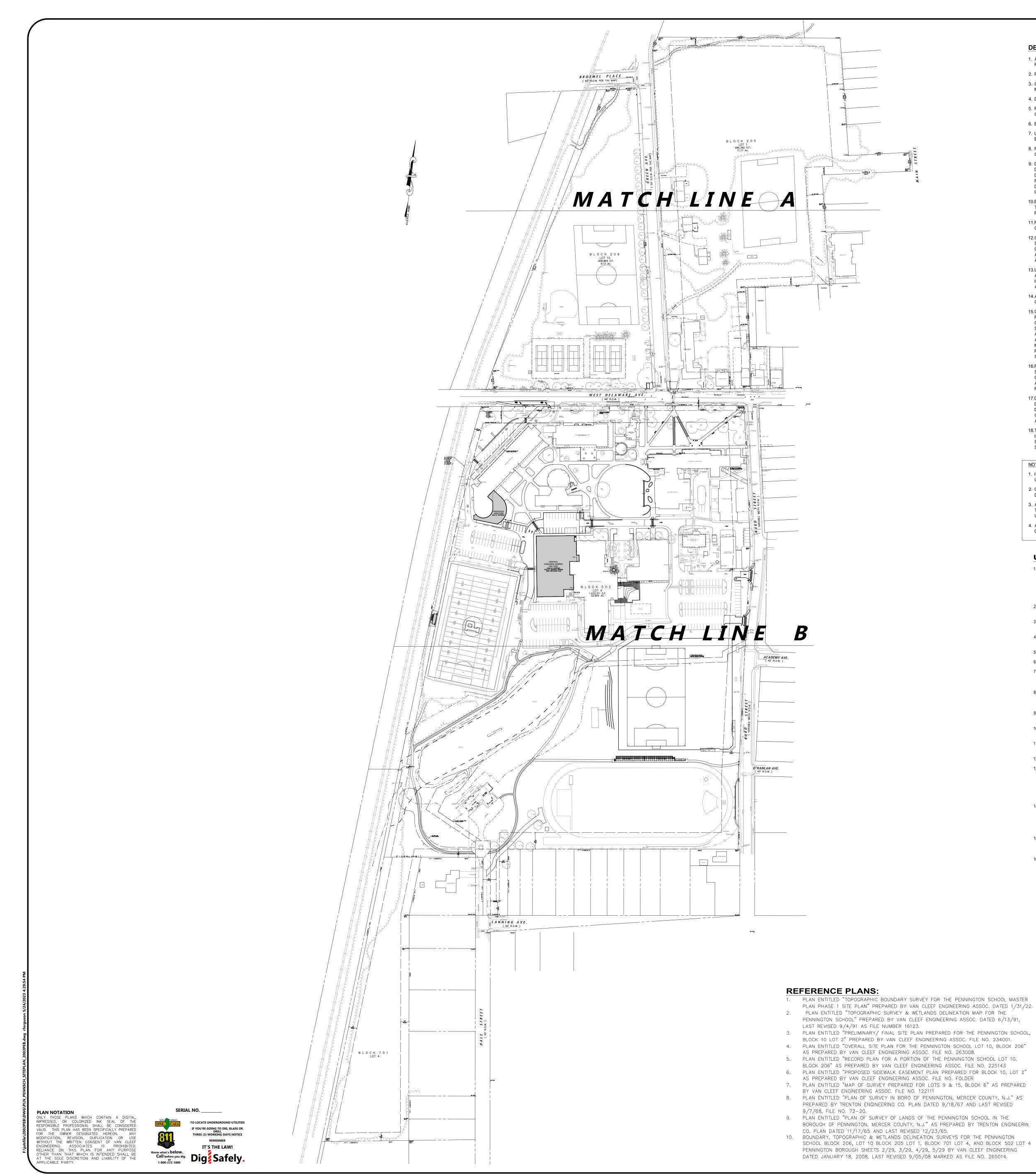
APPROVED BY THE BOROUGH PLANNING BOARD

PLANNING BOARD CHAIRMAN DATE

PLANNING BOARD SECRETARY DATE

JAMES A BASH
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NUMBER 24GE05225800





DEMOLITION NOTES

- 1. ALL DEMOLITION ACTIVITIES ARE TO BE PERFORMED IN STRICT ADHERENCE TO ALL FEDERAL, STATE AND LOCAL
- 2. PROCEED WITH DEMOLITION IN A SYSTEMATIC MANNER, FROM THE TOP OF THE STRUCTURE(S) TO THE GROUND.
- 3. COMPLETE DEMOLITION WORK ABOVE EACH FLOOR OR TIER BEFORE DISTURBING ANY OF THE SUPPORTING MEMBERS OF THE LOWER LEVELS.
- 4. DEMOLISH CONCRETE AND MASONRY IN SMALL SECTIONS.
- 5. REMOVE STRUCTURAL FRAMING MEMBERS AND LOWER THEM TO THE GROUND BY MEANS OF HOISTS, DERRICKS OR OTHER SUITABLE METHODS.
- 6. BREAK UP CONCRETE SLABS-ON-GRADE, UNLESS OTHERWISE DIRECTED BY OWNER.
- 7. LOCATE DEMOLITION EQUIPMENT THROUGHOUT THE STRUCTURE AND REMOVE MATERIALS SO AS TO NOT IMPOSE EXCESSIVE LOADS ON SUPPORTING WALLS, FLOORS, OR FRAMING.
- COLLAPSE OF STRUCTURES TO BE DEMOLISHED (AND ADJACENT FACILITIES, IF APPLICABLE). 9. DEMOLISH AND REMOVE ALL FOUNDATION WALLS, FOOTINGS AND OTHER MATERIALS WITHIN THE AREA OF THE DESIGNATED FUTURE BUILDING. ALL OTHER FOUNDATION SYSTEMS, INCLUDING BASEMENTS, SHALL BE

8. PROVIDE INTERIOR AND EXTERIOR SHORING, BRACING AND SUPPORTS TO PREVENT MOVEMENT, SETTLEMENT OR

- DEMOLISHED TO A DEPTH OF NOT LESS THAN ONE FOOT BELOW PROPOSED PAVEMENT OR, BREAK BASEMENT FLOOR SLABS. SEAL ALL OPEN UTILITY LINES WITH CONCRETE. CONTRACTOR TO REVIEW STRUCTURE PRIOR TO DEMOLITION TO DETERMINE IF BASEMENT, CRAWL SPACE OR ANY SUB-STRUCTURE EXISTS. ANY SUB-STRUCTURE, INCLUDING BASEMENTS SHALL BE REMOVED IN ITS ENTIRETY OR AS DIRECTED BY OWNER.
- 10.ERECT AND MAINTAIN COVERED PASSAGEWAYS IN ORDER TO PROVIDE SAFE PASSAGE FOR PERSONS AROUND THE AREA OF DEMOLITION. CONDUCT ALL DEMOLITION OPERATIONS IN A MANNER THAT WILL PREVENT DAMAGE AND PERSONAL INJURY TO STRUCTURES, ADJACENT BUILDINGS AND ALL PERSONS.
- 11.REFRAIN FROM USING ANY EXPLOSIVES WITHOUT PRIOR WRITTEN CONSENT OF OWNER AND APPLICABLE GOVERNMENT AUTHORITIES.
- 12.CONDUCT DEMOLITION SERVICES IN SUCH A MANNER TO INSURE MINIMUM INTERFERENCE WITH ROADS. STREETS, WALKS AND OTHER ADJACENT FACILITIES. DO NOT CLOSE OR OBSTRUCT STREETS, WALKS, OR OTHER OCCUPIED FACILITIES WITHOUT PRIOR WRITTEN PERMISSION OF OWNER AND ANY APPLICABLE GOVERNMENTAL AUTHORITIES. PROVIDE ALTERNATE ROUTES AROUND CLOSED OR OBSTRUCTED TRAFFIC WAYS, IF REQUIRED BY APPLICABLE GOVERNMENT REGULATIONS.
- 13.USE WATERING, TEMPORARY ENCLOSURES AND OTHER SUITABLE METHODS, AS NECESSARY TO LIMIT THE AMOUNT OF DUST AND DIRT RISING AND SCATTERING IN THE AIR. CLEAN ADJACENT STRUCTURES AND IMPROVEMENTS OF ALL DUST AND DEBRIS CAUSED BY THE DEMOLITION OPERATIONS. RETURN ALL ADJACENT AREAS TO THE CONDITIONS EXISTING PRIOR TO THE START OF WORK.
- 14. ACCOMPLISH AND PERFORM THE DEMOLITION IN SUCH A MANNER AS TO PREVENT THE UNAUTHORIZED ENTRY OF PERSONS AT ANY TIME.
- 15.COMPLETELY FILL BELOW GRADE AREAS AND VOIDS RESULTING FROM THE DEMOLITION OF STRUCTURES AND FOUNDATIONS WITH SOIL MATERIALS IN ACCORDANCE WITH THE GEO-TECHNICAL REPORT, CONSISTING OF STONE, GRAVEL AND SAND, FREE FROM DEBRIS, TRASH, FROZEN MATERIALS, ROOTS AND OTHER ORGANIC MATTER. STONES USED WILL NOT BE LARGER THAN 6 INCHES IN DIMENSION. MATERIAL FROM DEMOLITION MAY NOT BE USED AS FILL PRIOR TO PLACEMENT OF FILL MATERIALS, UNDERTAKE ALL NECESSARY ACTION IN ORDER TO INSURE THAT AREAS TO BE FILLED ARE FREE OF STANDING WATER, FROST, FROZEN MATERIAL, TRASH, AND DEBRIS. PLACE FILL MATERIALS IN HORIZONTAL LAYERS NOT EXCEEDING 6 INCHES IN LOOSE DEPTH AND COMPACT EACH LAYER AT PLACEMENT TO 95% OPTIMUM DENSITY. GRADE THE SURFACE TO MEET ADJACENT CONTOURS AND TO PROVIDE SURFACE DRAINAGE.
- 16.REMOVE FROM THE DESIGNATED SITE, AT THE EARLIEST POSSIBLE TIME, ALL DEBRIS, RUBBISH, AND SALVAGEABLE ITEMS, HAZARDOUS AND COMBUSTIBLE SERVICES. REMOVED MATERIALS MAY NOT BE STORED, SOLD OR BURNED ON THE SITE. REMOVAL OF HAZARDOUS AND COMBUSTIBLE MATERIALS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE PROCEDURES AS AUTHORIZED BY THE FIRE DEPARTMENT OR OTHER APPROPRIATE REGULATORY AGENCIES AND AUTHORITIES.
- 17.DISCONNECT, SHUT OFF AND SEAL IN CONCRETE ALL UTILITIES SERVING THE STRUCTURE(S) TO BE DEMOLISHED BEFORE THE COMMENCEMENT OF THE DESIGNATED DEMOLITION. MARK FOR POSITION ALL UTILITY DRAINAGE AND SANITARY LINES AND PROTECT ALL ACTIVE LINES. CLEARLY IDENTIFY BEFORE THE COMMENCEMENT OF DEMOLITION SERVICES THE REQUIRED INTERRUPTION OF ACTIVE SYSTEMS THAT MAY AFFECT OTHER PARTIES.

AND NOTIFY ALL APPLICABLE UTILITY COMPANIES TO INSURE THE CONTINUATION OF SERVICE.

- 18. THIS DEMOLITION PLAN IS INTENDED TO IDENTIFY THOSE EXISTING CONDITIONS WHICH ARE TO BE REMOVED. IT IS NOT INTENDED TO PROVIDE DIRECTION OTHER THAN THAT ALL PROCEDURES ARE TO BE IN ACCORDANCE WITH STATE, FEDERAL, LOCAL, AND JURISDICTION REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS NECESSARY.
- 1. IN ACCORDANCE WITH STATE LAW, THE CONTRACTOR SHALL BE REQUIRED TO CALL THE BOARD OF PUBLIC UTILITIES ONE CALL DAMAGE PROTECTION SYSTEM OR UTILITY MARK OUT IN ADVANCE OF ANY EXCAVATION.
- 2. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING SITE IMPROVEMENTS AND UTILITIES. ALL DISCREPANCIES SHALL BE IDENTIFIED TO THE ENGINEER IN WRITING.
- 3. ALL EXISTING UTILITIES TO BE ABANDONED SHALL BE DISCONNECTED AND CAPPED AT THE MAIN FOR WATER, AT THE CLEAN-OUT FOR SEWER AND SHUT-OFF VALVE OR MAIN FOR GAS IN ACCORDANCE WITH MUNICIPAL AND LOCAL
- 4. ALL EXISTING DEBRIS SHALL BE REMOVED BY CONTRACTOR IN ACCORDANCE WITH MUNICIPAL AND LOCAL UTILITY COMPANY REQUIREMENTS.

UTILITY NOTES

- 1. LOCATION OF ALL EXISTING AND PROPOSED SERVICES ARE APPROXIMATE AND MUST BE CONFIRMED INDEPENDENTLY WITH LOCAL UTILITY COMPANIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION OR EXCAVATION, SANITARY SEWER AND ALL OTHER UTILITY SERVICES CONNECTION POINTS SHALL BE CONFIRMED INDEPENDENTLY BY THE CONTRACTOR IN FIELD PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. ALL DISCREPANCIES SHALL BE REPORTED IMMEDIATELY IN WRITING TO THE ENGINEER. CONSTRUCTION SHALL COMMENCE BEGINNING AT THE LOWEST INVERT (POINT OF CONNECTION) AND PROGRESS UP GRADIENT. INTERFACE POINTS (CROSSINGS) WITH EXISTING UNDERGROUND UTILITIES SHALL BE FIELD VERIFIED BY TEST PIT PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- 2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY UTILITY "ONE-CALL" NUMBER 72 HOURS PRIOR TO ANY EXCAVATION ON THIS SITE. CONTRACTOR SHALL ALSO NOTIFY LOCAL WATER & SEWER DEPARTMENTS TO MARK OUT THEIR UTILITIES.
- 3. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT BUILDING UTILITY CONNECTION LOCATIONS. WHERE CONFLICTS EXIST WITH THESE SITE PLANS, ENGINEER IS TO BE NOTIFIED PRIOR TO CONSTRUCTION TO RESOLVE SAME. SERVICE SIZES TO BE DETERMINED BY ARCHITECT.
- 4. WATER SERVICE MATERIALS SHALL BE SPECIFIED BY THE LOCAL UTILITY COMPANY. CONTRACTORS PRICE FOR WATER SERVICE SHALL INCLUDE ALL FEES AND APPURTENANCES REQUIRED BY THE UTILITY TO PROVIDE A COMPLETE WORKING SERVICE.
- 5. ALL WATER MAIN SHALL BE CEMENT-LINED, CLASS 52 DUCTILE IRON PIPE, UNLESS OTHERWISE DESIGNATED.
- 6. THE MINIMUM DIAMETER FOR DOMESTIC WATER SERVICES SHALL BE 1 INCH.
- 7. SEWER MAINS SHALL BE SEPARATED FROM WATER MAINS BY A DISTANCE OF AT LEAST 10 FEET HORIZONTALLY. WHERE THIS IS NOT POSSIBLE, THE PIPES SHALL BE IN SEPARATE TRENCHES WITH THE SEWER MAIN AT LEAST 18 INCHES BELOW THE WATER MAIN. ALL SEWER MAINS SHALL BE SDR-35 PVC PIPE UNLESS OTHERWISE DESIGNATED.
- 8. ALL SEWER PIPE INSTALLED WITH LESS THAN 3 FEET OF COVER, GREATER THAN 20 FEET OF COVER OR WITHIN 18 INCHES OF A WATER MAIN. SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE. ALL DUCTILE IRON SEWER PIPE SHALL BE CEMENT-LINED, CLASS 52 PIPE, FURNISHED WITH SEWER COAT, OR APPROVED EQUAL.
- 9. WHERE SANITARY SEWER LATERALS ARE GREATER THAN 10' DEEP AT CONNECTION TO THE SEWER MAIN, CONCRETE DEEP LATERAL CONNECTIONS ARE TO BE UTILIZED.
- 10. LOCATION & LAYOUT OF GAS, ELECTRIC & TELECOMMUNICATION UTILITY LINES AND SERVICES SHOWN ON THESE PLANS ARE SCHEMATIC IN NATURE, ACTUAL LOCATION & LAYOUT OF THESE UTILITIES & SERVICES ARE TO BE PER THE APPROPRIATE UTILITY PROVIDER. 11. ALL SEWER AND WATER FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE REGULATORY AUTHORITY'S RULES AND REGULATIONS.
- 12. ALL PROPOSED UTILITIES TO BE INSTALLED UNDERGROUND UNLESS OTHERWISE NOTED.
- 13. MANUFACTURED REINFORCED CONCRETE STORM PIPE TO CONFORM TO ASTM C-76, CLASS III, UNLESS OTHERWISE DESIGNATED. MANUFACTURED REINFORCED CONCRETE ELLIPTICAL STORM PIPE TO CONFORM TO ASTM C-507, CLASS HE-III, UNLESS OTHERWISE DESIGNATED. REINFORCED CONCRETE STORMWATER PIPE TO BE INSTALLED IN ACCORDANCE WITH AMERICAN CONCRETE PIPE ASSOCIATION INSTALLATION GUIDELINES AND MORTAR OR PERFORMED FLEXIBLE JOINT SEALANTS IN ACCORDANCE WITH THE ASTM C 990 TO BE UTILIZED TO PROVIDE A SILT-TIGHT JOINT. WHERE SPECIFICALLY INDICATED, REINFORCED CONCRETE STORM PIPE JOINTS SHALL BE WATERTIGHT AND CONFORM TO ASTM C-443.
- 14. HDPE DRAINAGE PIPE SHALL HAVE A SMOOTH WALL INTERIOR WITH ANNULAR EXTERIOR CORRUGATIONS AND CONFORM TO ASTM F2306. SOLID PIPE SHALL HAVE GASKETED WATER-TIGHT JOINTS MEETING THE REQUIREMENTS OF ASTM F2306 AND ASTM D3212. PERFORATED PIPE SHALL HAVE GASKETED SILT-TIGHT JOINTS MEETING THE REQUIREMENTS OF ASTM F2306 AND ASTM F477. HDPE PIPE SHALL BE FROM A MANUFACTURER WHO IS AN EASTERN STATES CONSORTIUM (ESC) QUALIFIED MANUFACTURER OF HDPE PIPE AND INSTALLED IN ACCORDANCE WITH PIPE MANUFACTURE RECOMMENDATIONS.
- 15. PIPE LENGTHS ON THIS PLAN HAVE BEEN MEASURED AS THE DISTANCE BETWEEN THE CENTER POINT OF THE 2 CONNECTED STRUCTURES. ACTUAL PHYSICAL PIPE LENGTH FOR INSTALLATION IS EXPECTED TO BE LESS AND SHOULD BE ACCOUNTED FOR BY THE CONTRACTOR
- 16. FIELD VERIFY THAT THE EXISTING WATER MAIN HAS ADEQUATE COVER PER THE GOVERNING UTILITY AUTHORITY SPECIFICATIONS. REPLACE ALL SECTIONS WHERE ADEQUATE COVER IS NOT MET.

1. VERTICAL DATUM USED BASED ON REF. PLAN NO. 1 AND NEW JERSEY STATE PLANE COORDINATE SYSTEM,

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- THIS MAP REFLECTS EXISTING SITE CONDITIONS AS THE RESULT OF A FIELD SURVEY PERFORMED BY VAN CLEEF ENGINEERING ASSOCIATES ON 11/22/21.
- 3. THIS PLAN IS NOT VALID UNLESS EMBOSSED WITH THE SEAL OF THE UNDERSIGNED PROFESSIONAL(S).

4. LOCATION OF ABOVE GROUND UTILITIES AS SHOWN.

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DATE: SCALE: 1"=120' **DESIGNED BY:** DRAWN BY: RRF/RKY REV. PER LAYOUT CHANGES **CHECKED BY:** PER TOWNSHIP & OUTSIDE AGENCY COMMENTS JOB NO. 20-02-PEB AUTH DATE REV DESCRIPTION

5/20/22 DATE NEW JERSEY PROFESSIONAL ENGINEER NUMBER 24GE05225800

ADA NOTES

ALL SLOPES INDICATED ARE ACTUAL. CONTRACTOR TO REFER TO LATEST ADA GUIDELINES AND NJ BARRIER FREE SUBCODE (NJAC 5:23-7) FOR SLOPE LIMITS. AT THE TIME OF PLAN DESIGN, THE SLOPE LIMITS ARE AS

SIDEWALKS / ACCESSIBLE ROUTES

RUNNING SLOPE: 1:20 (5%) MAX.

CROSS SLOPE: 1:48 (2.08%) MAX. 1.0% MIN. INTERSECTION SLOPE: 1.48 (2.08%) MAX. IN ALL DIRECTIONS CHANGE IN LEVELS: 1/4" MAX. HEIGHT OR 1/2" MAX. HEIGHT WITH BEVELED EDGE

BEVELED EDGE SLOPE OF 1:2 (50%) MAX. GAPS: 1/2" MAX. WIDTH ELONGATED OPENINGS SHALL BE PLACED SO LONG DIMENSION IS PERPENDICULAR TO PATH OF TRAVEL

SLOPE: 1:12 (8.3%) MAX. SIDE FLARE SLOPE: 1.10 (10%) MAX. (WHERE PEDESTRIANS CROSS RAMP)

TOP LANDING: 36" MIN. LENGTH WIDTH TO MATCH CURB RAMP; 1:48 MAX. (2.08%) CROSS SLOPE AND 1:20 (5%) RUNNING SLOPE

BOTTOM LANDING: 48" MIN, LENGTH; WIDTH TO MATCH CURB RAMP; 1:48 MAX. (2.08%) IN ALL

ACCESSIBILITY PARKING STALLS SPACE AND ACCESS AISLE SLOPE: 1:48 MAX. (2.08%) IN ALL DIRECTIONS

RUNNING SLOPE: 1:20 (5%) MAX.

CROSS SLOPE: 1:48 (2.08%) MAX. CHANGE IN LEVELS: 1/4" MAX. HEIGHT OR 1/2" MAX. HEIGHT WITH BEVELED EDGE

BEVELED EDGE SLOPE OF 1:2 (50%) MAX. GAPS: 1/2" MAX. WIDTH ELONGATED OPENINGS SHALL BE PLACED SO LONG DIMENSION IS PERPENDICULAR TO PATH OF TRAVEL

SLOPE: 1:12 (8.3%) MAX.

EXISTING RAMPS: SLOPE: 1.10 (10%) MAX FOR RISE OF 6"; 1:8 (12.5%) MAX. FOR MAX. RISE OF 3"

MAX. RISE: 30" MIN. CLEAR WIDTH: 36"

MIN. LANDING CLEAR LENGTH: 60"

MAX. CROSS SLOPE: 1:48 (2.08%)

GRADING NOTES

- 1. SITE GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE SOILS REPORT REFERENCED IN THIS PLAN SET. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND REPLACING ALL SOFT YIELDING OR UNSUITABLE MATERIALS AND REPLACING WITH
- SUITABLE MATERIALS AS SPECIFIED IN THE SOILS REPORT. ALL EXCAVATED OR FILLED AREAS SHALL BE COMPACTED TO 95% OF MODIFIED PROCTOR MAXIMUM DENSITY PER A.S.T.M. TEST D-1557. MOISTURE CONTENT AT TIME OF PLACEMENT SHALL NOT EXCEED 2% ABOVE NOR 3% BELOW OPTIMUM. CONTRACTOR SHALL SUBMIT A COMPACTION REPORT PREPARED BY A QUALIFIED SOILS ENGINEER REGISTERED WITHIN THE STATE WHERE THE WORK IS BEING PERFORMED. VERIFYING THAT ALL FILLED AREAS AND SUBGRADE AREAS WITHIN THE BUILDING PAD AREA AND AREAS TO BE PAVED HAVE BEEN COMPACTED IN
- ACCORDANCE WITH THESE PLANS AND SPECS AND THE RECOMMENDATION SET FORTH IN THE SOILS REPORT. 2. CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF EXISTING TOPOGRAPHIC INFORMATION AND UTILITY INVERT ELEVATIONS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. CONTRACTOR TO ENSURE 0.75% MIN. SLOPE AGAINST ALL ISLAND GUTTERS, CURBS AND 1.0% ON ALL OTHER IMPERVIOUS SURFACES TO PREVENT PONDING. ANY DISCREPANCIES THAT MAY
- PROCEEDING WITH CONSTRUCTION WITH DESIGN DISCREPANCIES IS DONE SO AT THE CONTRACTOR'S OWN RISK. 3. SUBBASE MATERIAL FOR SIDEWALKS, CURB, OR ASPHALT SHALL BE FREE OF ORGANICS AND OTHER UNSUITABLE MATERIALS. SHOULD SUBBASE BE DEEMED UNSUITABLE, SUBBASE IS TO BE REMOVED AND FILLED WITH APPROVED FILL MATERIAL
- COMPACTED TO 95% OPTIMUM DENSITY (AS DETERMINED BY MODIFIED PROCTOR METHOD). 4. REFER TO SITE PLAN FOR ADDITIONAL NOTES.
- 5. IN CASE OF DISCREPANCIES BETWEEN PLANS, THE SITE PLAN WILL SUPERCEDE IN ALL CASES. CONTRACTOR MUST NOTIFY ENGINEER OF RECORD OF ANY CONFLICT IMMEDIATELY.

EFFECT THE PUBLIC SAFETY OR PROJECT COST. MUST BE IDENTIFIED TO THE ENGINEER IN WRITING IMMEDIATELY.

- 6. MAXIMUM CROSS SLOPE OF 2% ON ALL SIDEWALKS. 7. CONTRACTOR TO ENSURE A MAXIMUM OF 2% SLOPE IN ALL DIRECTIONS IN ADA PARKING SPACES AND ADA ACCESS AISLES.
- CONTRACTOR TO ENSURE A MAXIMUM OF 5% RUNNING SLOPE AND 2% CROSS SLOPE ALONG ALL OTHER PORTIONS OF ACCESSIBLE ROUTE, WITH THE EXCEPTION OF RAMPS AND CURB RAMPS. CONTRACTOR SHALL CLARIFY ANY QUESTIONS CONCERNING CONSTRUCTION IN ADA AREAS WITH THE ENGINEER PRIOR TO THE START OF CONSTRUCTION.
- 8. THE OWNER SHALL RETAIN A QUALIFIED GEO-TECHNICAL ENGINEER TO TEST SOIL PERMEABILITY AND PROVIDE CONSTRUCTION PHASE INSPECTION OF THE BASIN BOTTOM SOILS AND ANY FILL MATERIALS WITHIN ANY PROPOSED
- INFILTRATION OR RETENTION BASIN TO COMPARE RESULTS TO DESIGN CRITERIA. 9. CONTRACTOR IS TO REMOVE EXISTING UNSUITABLE OR OVERLY COMPACT SOIL OR ROCK AS NEEDED TO ACHIEVE REQUIRED.

PERMEABILITY AS DIRECTED BY THE OWNERS GEO-TECHNICAL ENGINEER, AND NEW FILL, IF NEEDED, SHALL HAVE AN IN PLACE

- PERMEABILITY GREATER THAN OR EQUAL TO THE DESIGN CRITERIA. 10. CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE OWNER'S GEO-TECHNICAL ENGINEER PRIOR TO ONSET OF CONSTRUCTION TO SUBMIT AND CONFIRM THE CONTRACTOR'S PROPOSED MEANS AND MATERIALS AND TO SCHEDULE
- INSPECTIONS FOR BOTTOM OF BASIN, REMOVAL OF UNSUITABLE SOIL, FILL PLACEMENT, AND FINAL BASIN PERMEABILITY
- 11. THE CONTRACTOR IS RESPONSIBLE FOR AS-BUILT PLANS AND GRADE CONTROL UNLESS DEFINED OTHERWISE ELSEWHERE IN THE CONTRACT DOCUMENTS.

MERCER COUNTY NOTES

- 1. ALL SIDEWALK AND CURB LOCATED ALONG THE PROPERTY FRONTAGE THAT IS DETERIORATED OR PRESENTS A TRIPPING HAZARD SHALL BE REPLACED UNDER THE DIRECTION OF THE COUNTY ENGINEER OR HIS/HER REPRESENTATIVE(S).
- 2. ALL CONSTRUCTION OR RECONSTRUCTION WITHIN THE COUNTY R.O.W. SHALL BE PERFORMED TO COUNTY STANDARDS AND MEET PROWAG STANDARDS. ALL DRIVEWAYS APRONS, CURBS AND SIDEWALKS SHALL BE DESIGNED TO COUNTY STANDARDS AND MEET THE SATISFACTION OF THE COUNTY ENGINEER.

EXISTING		PROPOSED
▶	SANITARY SEWER	-
= = = =	STORM SEWER	
==	FLARED END SECTION	
====	DRAINAGE INLET	— —
==0==	DRAINAGE MANHOLE	
==	HEADWALL	
— — — — — — — — — — — — — — — — — — —	SANITARY SEWER MH	
	FIRE HYDRANT	-
0	SIGN	•
	UTILITY POLE	-
0	VALVE	H
	WATER MAIN	W
—— — G —— —	GAS MAIN	———G——
———Е ———	ELECTRIC LINE	———E——
— — T — —	TELEPHONE LINE	T
X 100.00	GRADE ELEVATION	X 100.00
100-	CONTOUR ELEVATION	100
N/A	CONCRETE REMOVAL	
N/A	PAVEMENT REMOVAL	
N/A	TO BE REMOVED	TBR
N/A	PAVEMENT MILLING	
N/A	ABANDON IN PLACE	AIP

LEGEND

GRAPHIC SCALE 60 120 1 INCH = 120 FT



4 AAA DRIVE, SUITE 103, HAMILTON, NJ 08691

WEB: WWW.VANCLEEFENGINEERING.COM PHONE (609) 689-1100 CERT. OF AUTHORIZATION NO. 24GA28132300

OVERALL KEY PLAN THE PENNINGTON SCHOOL MASTER PLAN PRELIMINARY & FINAL SITE PLAN

BLOCK 701, LOT 4, BLOCK 502, LOT 4, BLOCK 206, LOT 10 & BLOCK 205, LOT 1 PENNINGTON BOROUGH, MERCER COUNTY, NEW JERSEY



Bridges/Highway

Environment

Geotechnical/Dams

Site Developmen

Water/Wastewate

Construction Inspection

Landscape Architecture

Local/Regional Planning

Municipal Engineering

Surveying/Aerial Drones/GIS





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- 4. CONTRACTOR TO PROVIDE EMERGENCY ACCESS TO SCHOOL AT ALL TIMES. 5. ALL SEDIMENT DROPPED, SPILLED OR TRACKED ON PAVED SURFACES TO BE REMOVED IMMEDIATELY.
- 6. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL SOIL IMPORT OR EXPORT PERMIT(S) REQUIRED, INCLUDING FEES.
- 7. THE CONTRACTOR IS RESPONSIBLE FOR ALL ON-SITE SAFETY AND SECURITY. ALL SAFETY PRECAUTIONS MUST BE UNDERTAKEN AND MAINTAINED AS REQUIRED BY LOCAL, STATE AND FEDERAL CODES. NO SEPARATE PAYMENT SHALL BE MADE FOR ON-SITE SAFETY & SECURITY. THE COSTS OF ONSITE SAFETY AND SECURITY SHALL BE INCLUDED IN COST OF THE WORK. 8. ALL CONCRETE SIDEWALK TO BE ADA COMPLIANT WITH A MAX. CROSS SLOPE OF 2.0% AND A MAX. RUNNING SLOPE OF 5.0%. SIDEWALK WITH A RUNNING SLOPE GREATER THAN 5% REQUIRES AN ADA COMPLIANT HANDRAIL. NO SIDEWALK SHALL HAVE A RUNNING SLOPE GREATER THEN 8.33%.

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SCALE: 1"=30' **DESIGNED BY: DRAWN BY:** RRF/RKY REV. PER LAYOUT CHANGES JAB 6/2/23 **CHECKED BY:** PDQ PER TOWNSHIP & OUTSIDE AGENCY COMMENTS JAB 9/30/22 AUTH DATE JOB NO. 20-02-PEB REV DESCRIPTION

NEW JERSEY PROFESSIONAL ENGINEER NUMBER 24GE052258005

5/20/22

DATE

1 INCH = 30 FT

4 AAA DRIVE, SUITE 103, HAMILTON, NJ 08691 WEB: WWW.VANCLEEFENGINEERING.COM Surveying/Aerial Drones/GIS PHONE (609) 689-1100
CERT. OF AUTHORIZATION NO. 24GA28132300 Water/Wastewate **EXISTING CONDITIONS & DEMOLITION PLAN**

Bridges/Highwa

Geotechnical/Dams

Site Development

Landscape Architecture

Local/Regional Planning

Municipal Engineering

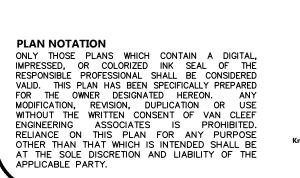
Environmental

Construction Inspection

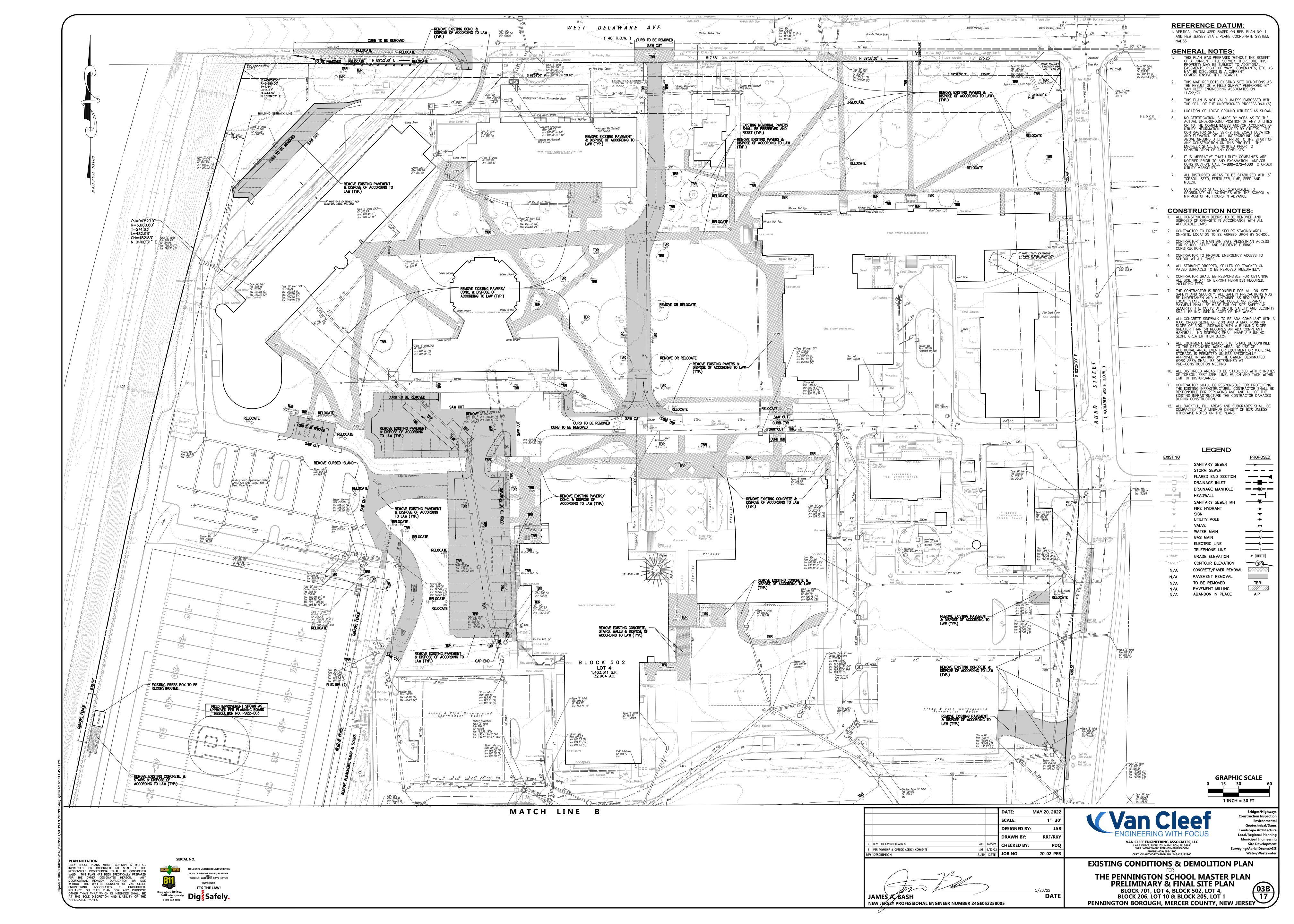
THE PENNINGTON SCHOOL MASTER PLAN PRELIMINARY & FINAL SITE PLAN **BLOCK 701, LOT 4, BLOCK 502, LOT 4,** BLOCK 206, LOT 10 & BLOCK 205, LOT 1

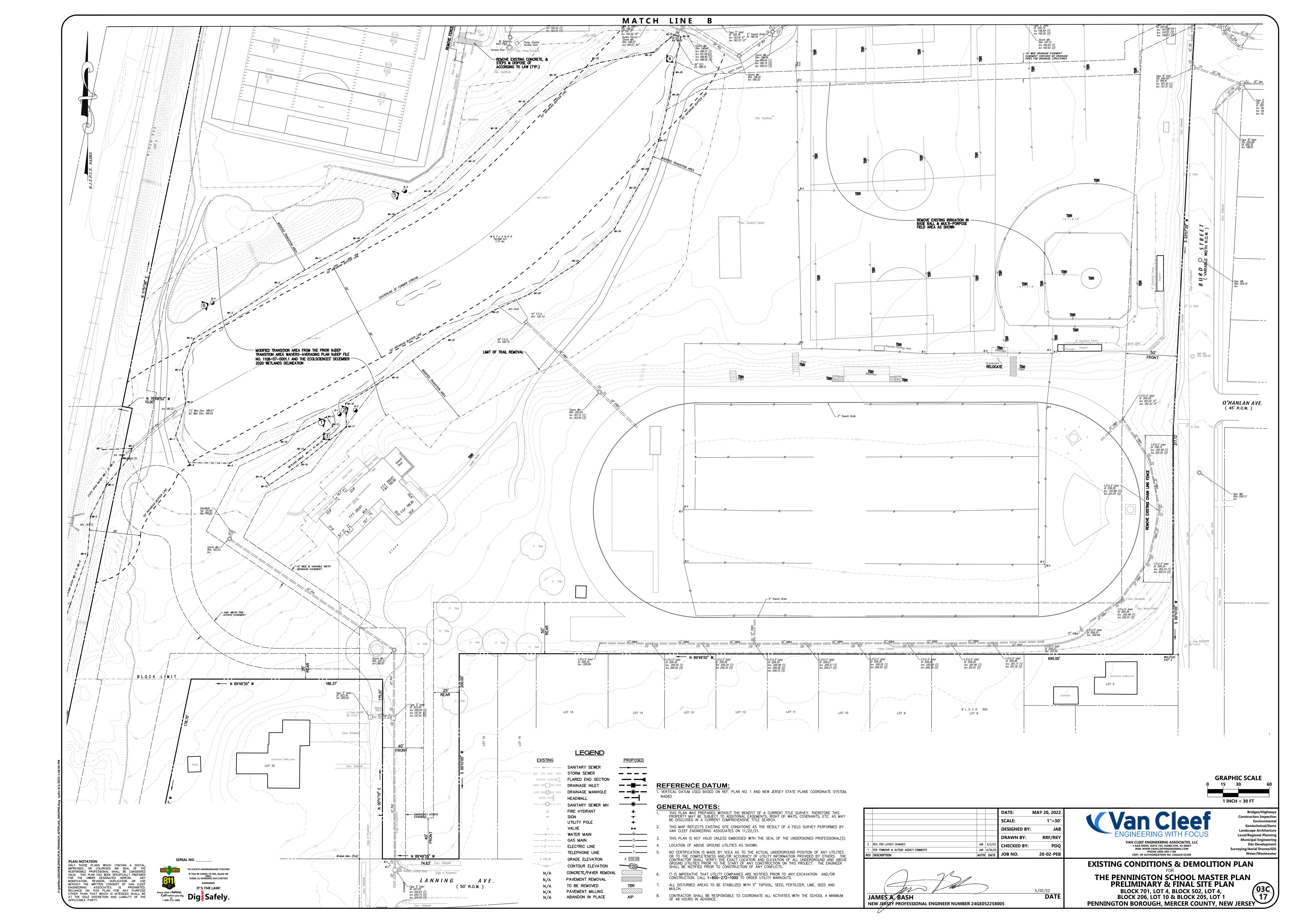
PENNINGTON BOROUGH, MERCER COUNTY, NEW JERSEY

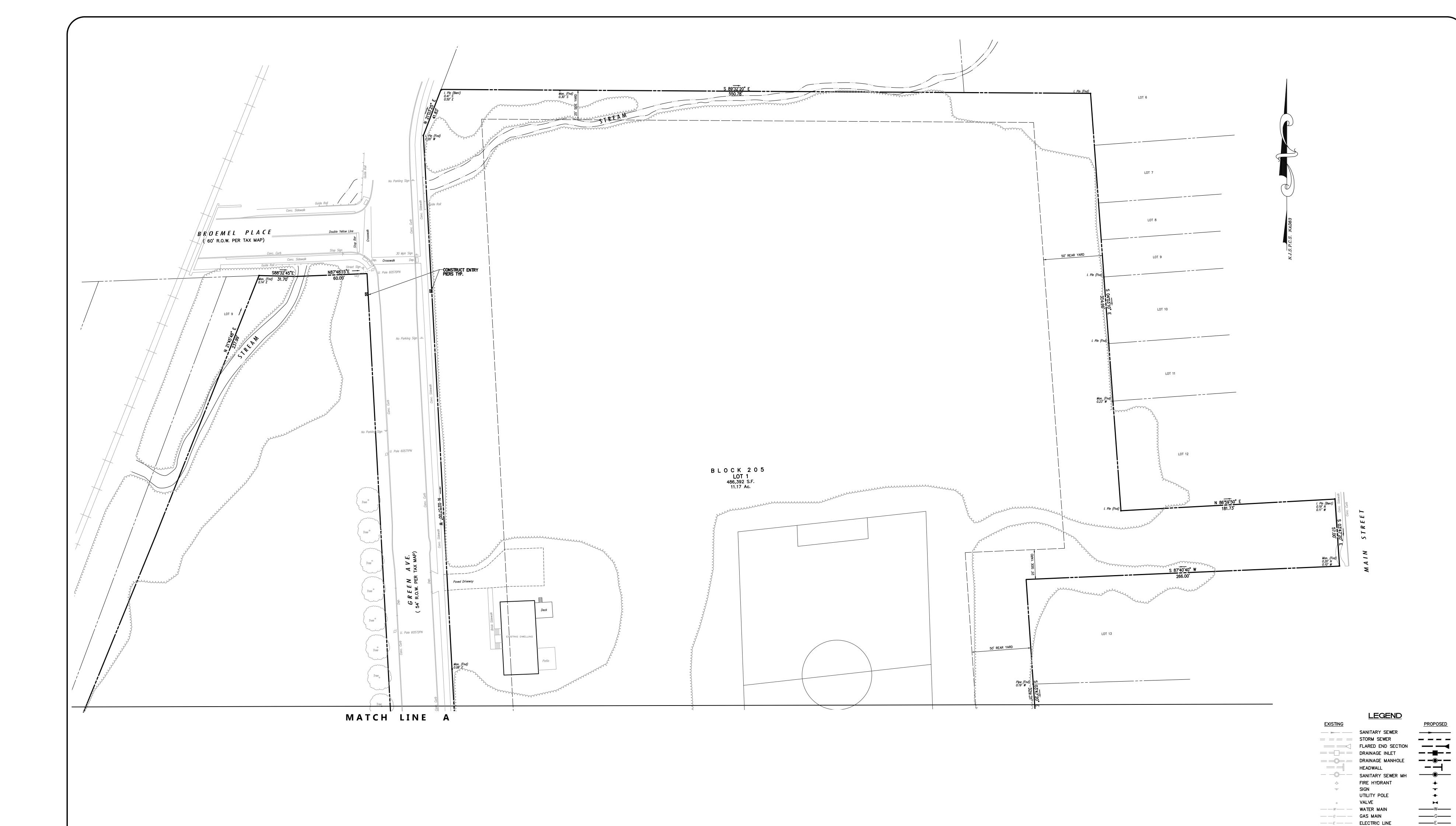
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JAMES A, BASH

NEW JEKSEY PROFESSIONAL ENGINEER NUMBER 24GE052258005

DATE

VAN CLEEF ENGINEERING ASSOCIATES, LLC
4 AAA DRIVE, SUITE 103, HAMILTON, NJ 08691
WEB: WWW.VANCLEEFENGINEERING.COM
PHONE (609) 689-1100
CERT. OF AUTHORIZATION NO. 24GA28132300 Surveying/Aerial Drones/GIS

GRAPHIC SCALE

1 INCH = 30 FT

Bridges/Highway

Environmenta Geotechnical/Dams

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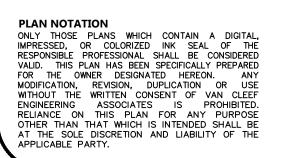
Site Development

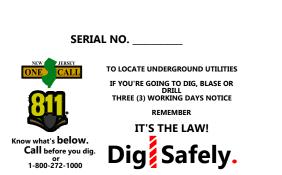
Water/Wastewater

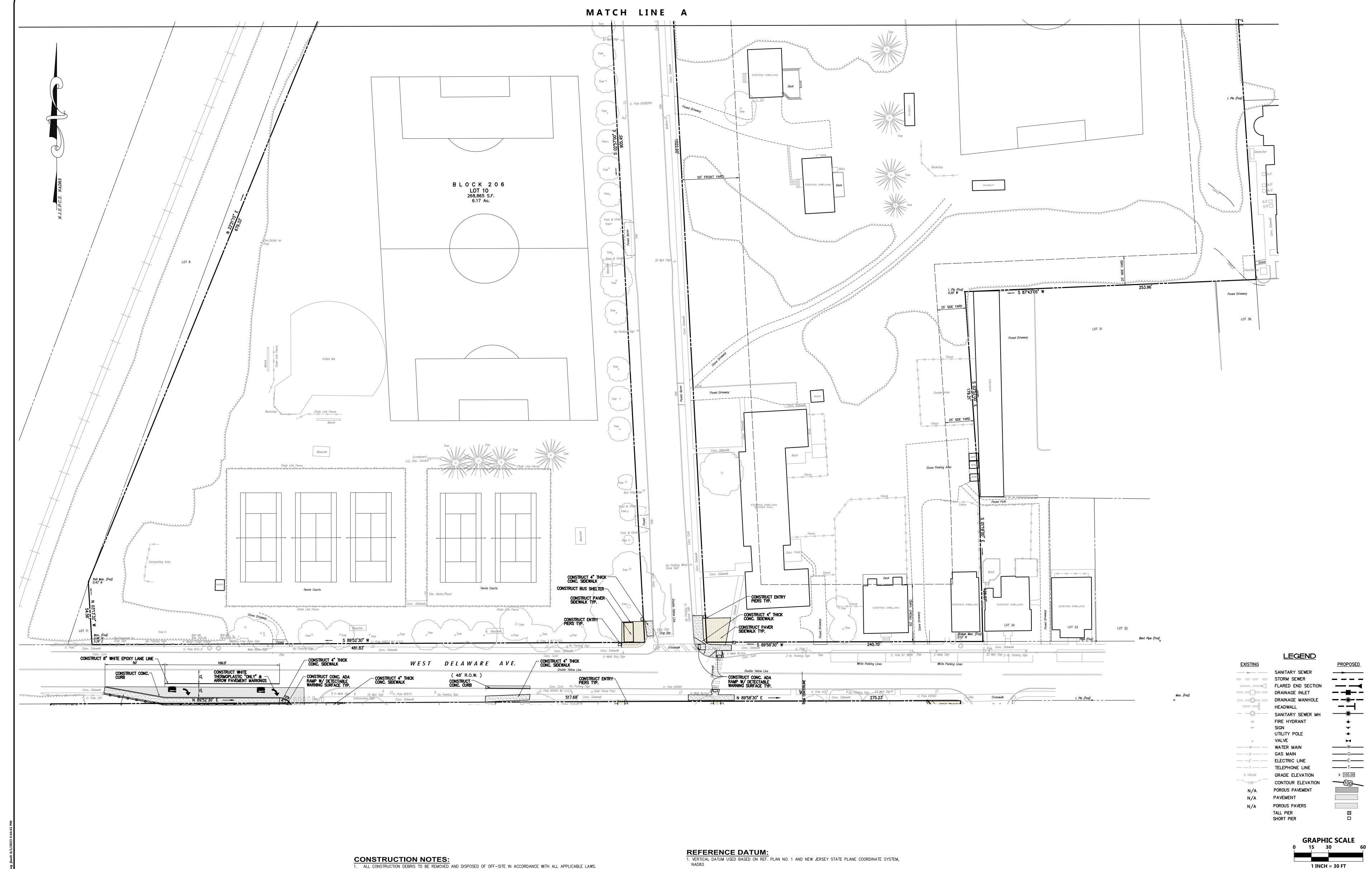
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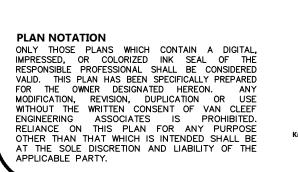
SITE PLAN THE PENNINGTON SCHOOL MASTER PLAN PRELIMINARY & FINAL SITE PLAN BLOCK 701, LOT 4, BLOCK 502, LOT 4, **BLOCK 206, LOT 10 & BLOCK 205, LOT 1**

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SCALE: 1"=30' **DESIGNED BY: DRAWN BY:** RRF/RKY JAB 6/2/23 **CHECKED BY:** PER TOWNSHIP & OUTSIDE AGENCY COMMENTS JAB 9/30/22 AUTH DATE JOB NO. 20-02-PEB REV DESCRIPTION

JAMES A. BASH

NEW JERSEY PROFESSIONAL ENGINEER NUMBER 24GE052258005

5/20/22

DATE



Landscape Architecture **Local/Regional Planning** Municipal Engineerin Site Development Surveying/Aerial Drones/GIS Water/Wastewate

Bridges/Highwa

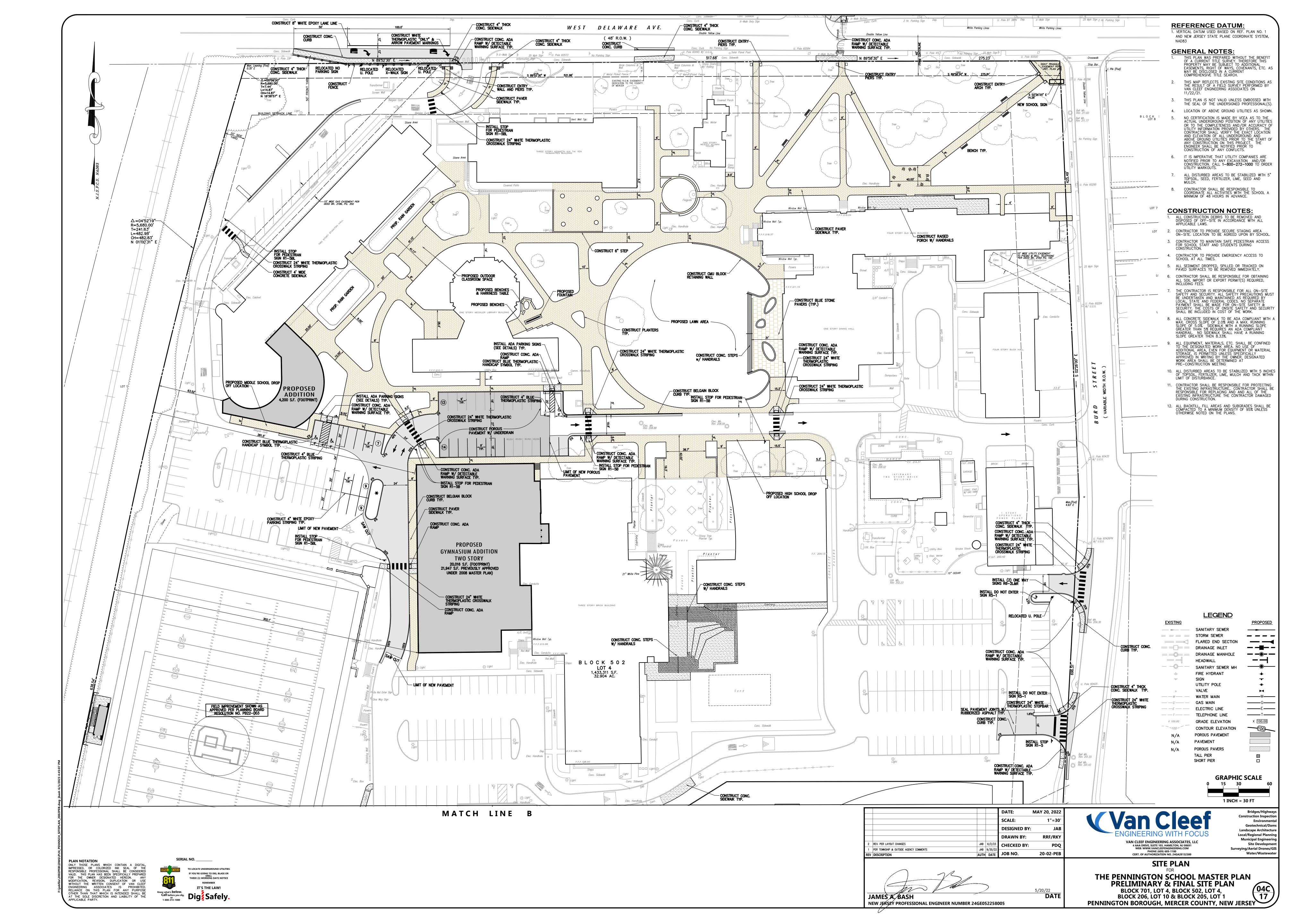
Geotechnical/Dams

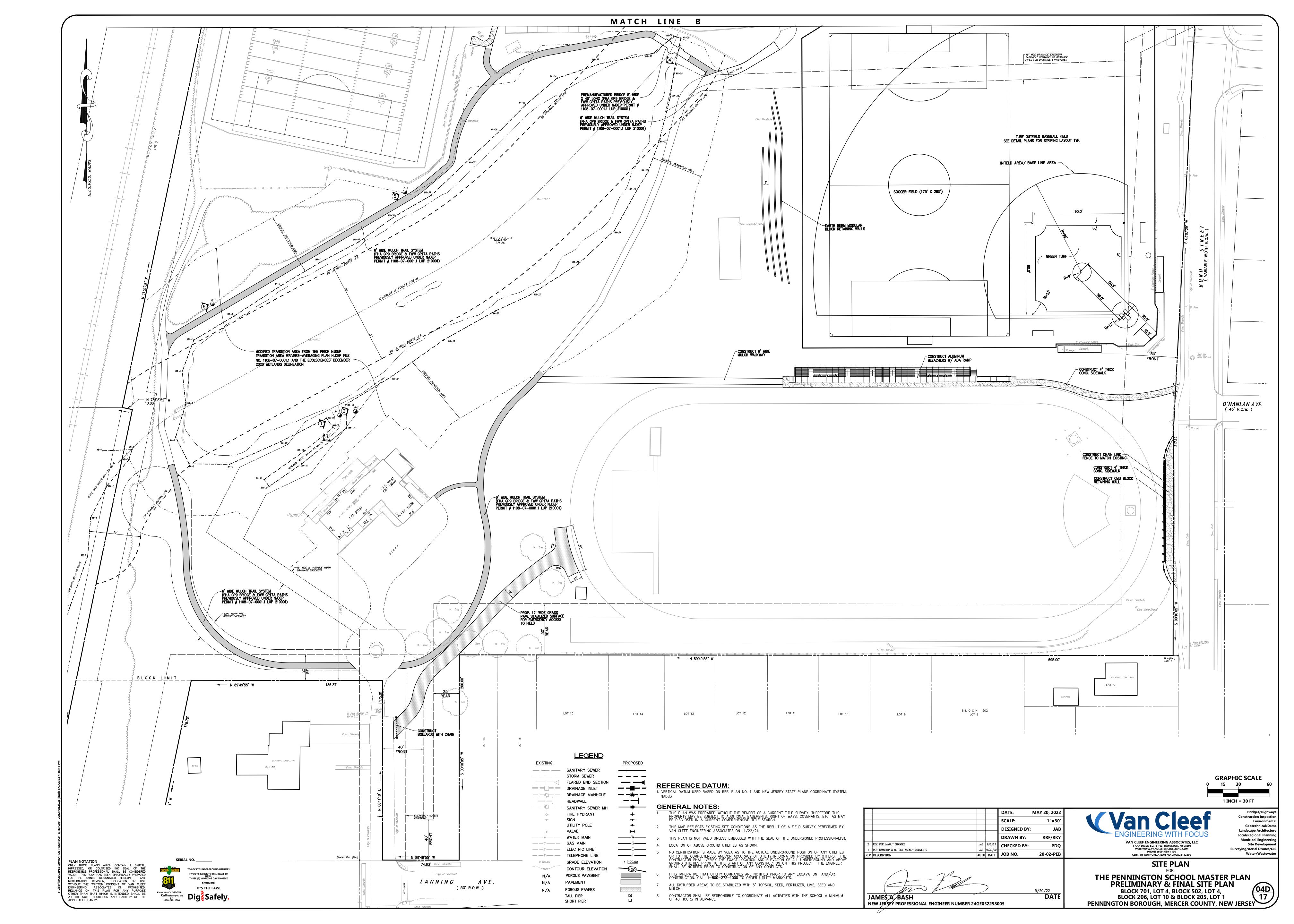
Environmenta

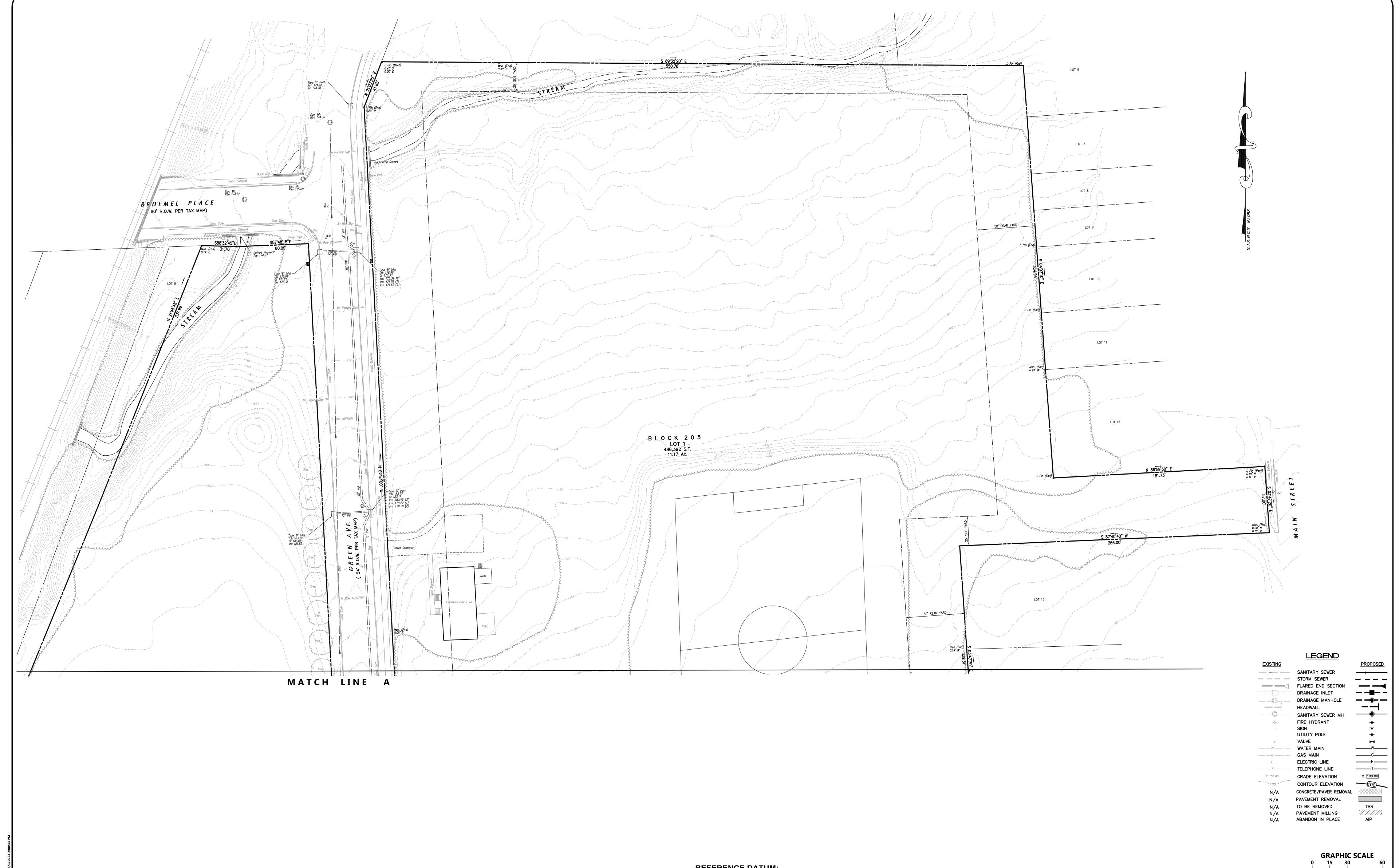
Construction Inspection

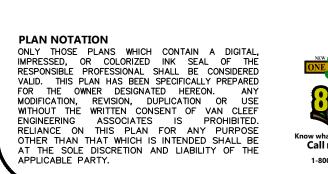
THE PENNINGTON SCHOOL MASTER PLAN PRELIMINARY & FINAL SITE PLAN **BLOCK 701, LOT 4, BLOCK 502, LOT 4,**

BLOCK 206, LOT 10 & BLOCK 205, LOT 1 PENNINGTON BOROUGH, MERCER COUNTY, NEW JERSEY









PLAN NOTATION



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REV	DESCRIPTION	AUTH	DATE	JOB NO.	20-02-PEB	

JAMES A, BASH

NEW JERSEY PROFESSIONAL ENGINEER NUMBER 24GE052258005

DATE

VAN CLEEF ENGINEERING ASSOCIATES, LLC
4 AAA DRIVE, SUITE 103, HAMILTON, NJ 08691
WEB: WWW.VANCLEEFENGINEERING.COM
PHONE (609) 689-1100
CERT. OF AUTHORIZATION NO. 24GA28132300 Surveying/Aerial Drones/GIS

1 INCH = 30 FT

Bridges/Highway

Environmenta Geotechnical/Dams

Construction Inspection

Landscape Architecture

Local/Regional Planning

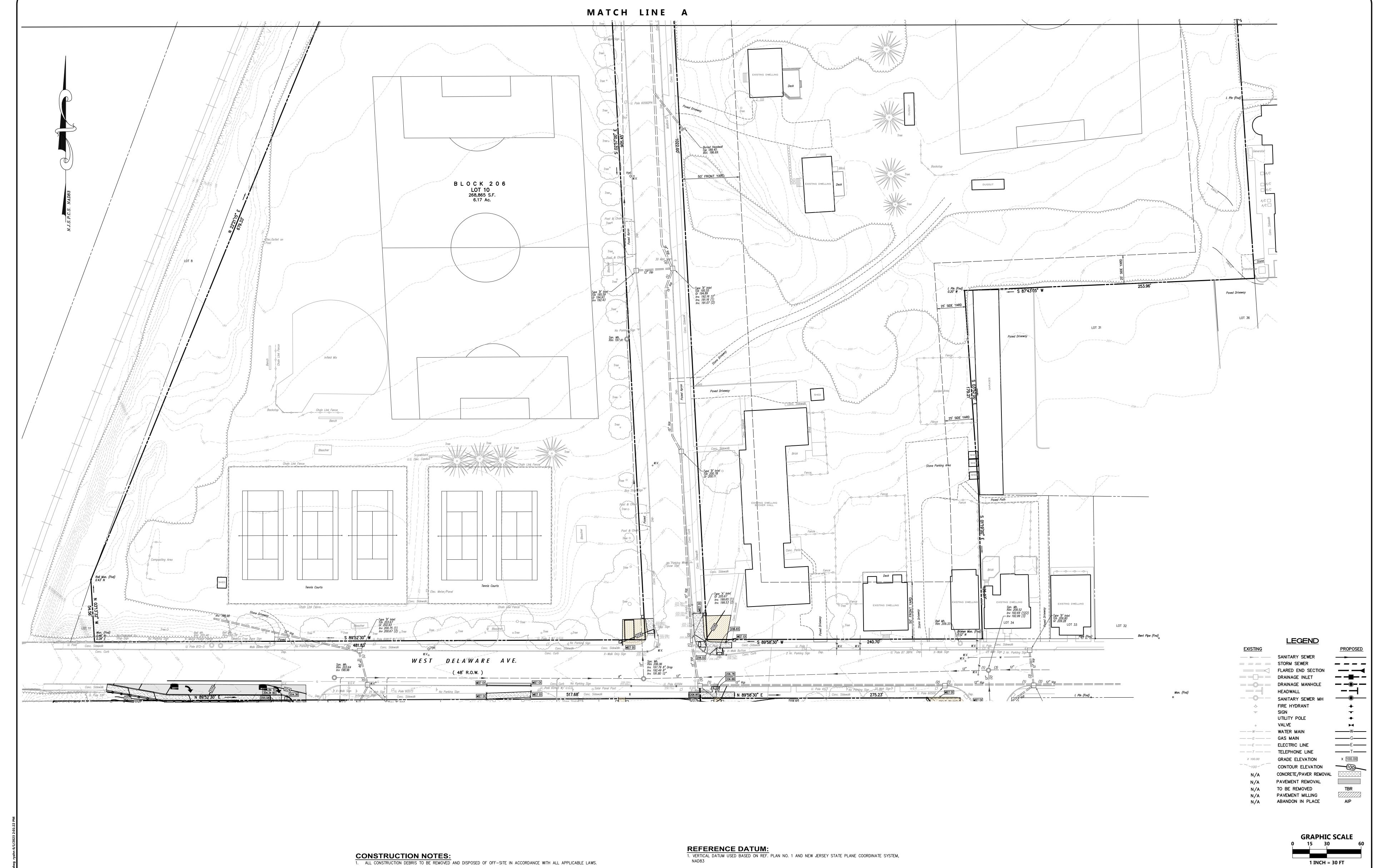
Municipal Engineering

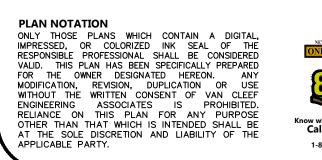
Site Developmen

Water/Wastewater GRADING, DRAINAGE & UTILITY PLAN

THE PENNINGTON SCHOOL MASTER PLAN PRELIMINARY & FINAL SITE PLAN BLOCK 701, LOT 4, BLOCK 502, LOT 4,





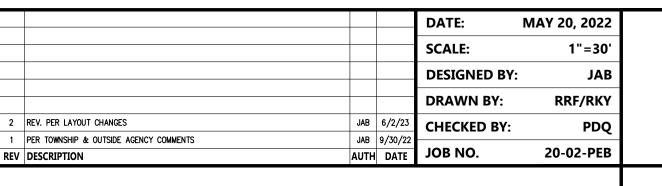




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JAMES A. BASH

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5/20/22

DATE

4 AAA DRIVE, SUITE 103, HAMILTON, NJ 08691 WEB: WWW.VANCLEEFENGINEERING.COM PHONE (609) 689-1100
CERT. OF AUTHORIZATION NO. 24GA28132300

Water/Wastewater **GRADING, DRAINAGE & UTILITY PLAN**

THE PENNINGTON SCHOOL MASTER PLAN PRELIMINARY & FINAL SITE PLAN BLOCK 701, LOT 4, BLOCK 502, LOT 4,

BLOCK 206, LOT 10 & BLOCK 205, LOT 1 PENNINGTON BOROUGH, MERCER COUNTY, NEW JERSEY

Bridges/Highwa

Geotechnical/Dams

Site Development

Landscape Architecture

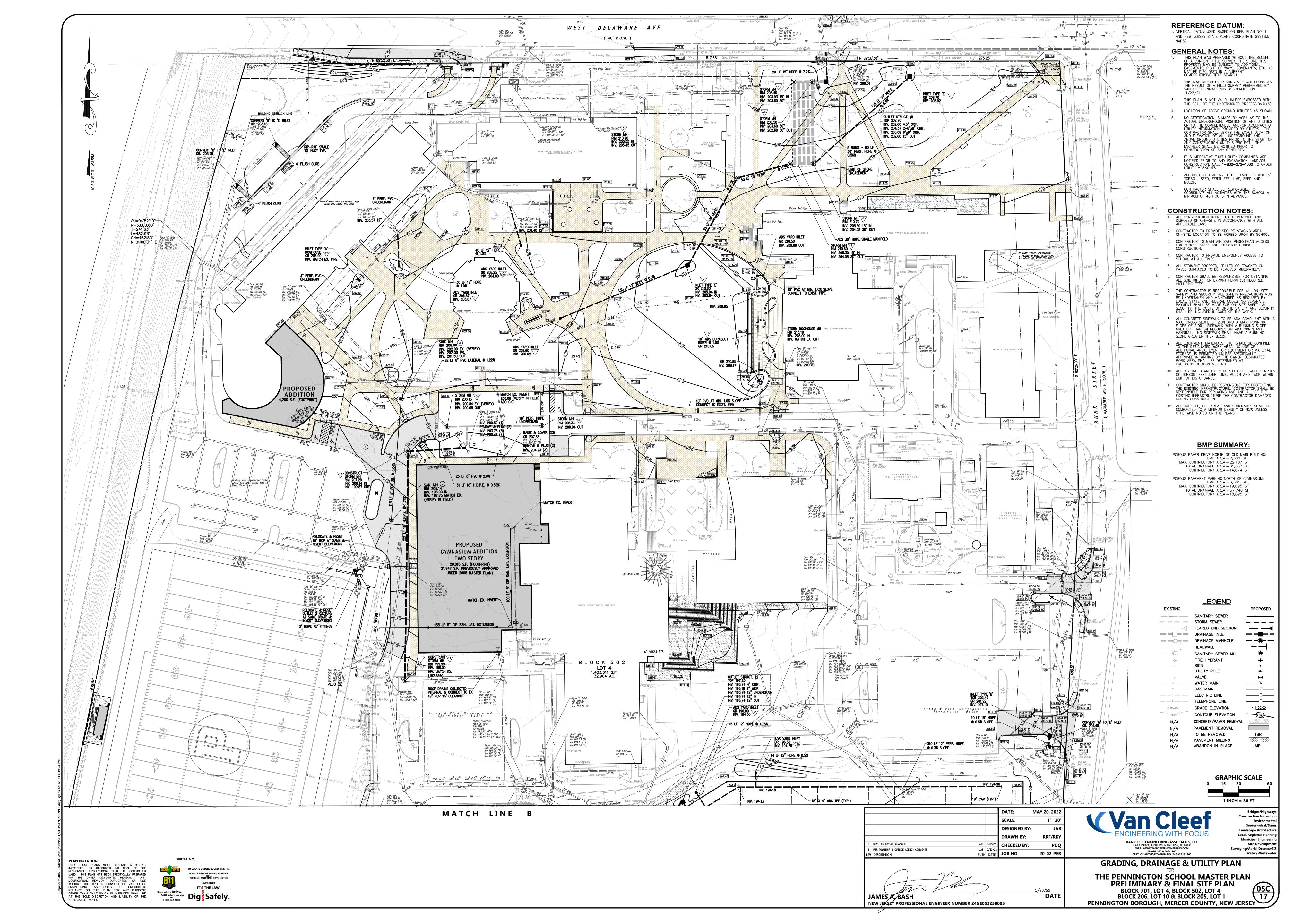
Local/Regional Planning

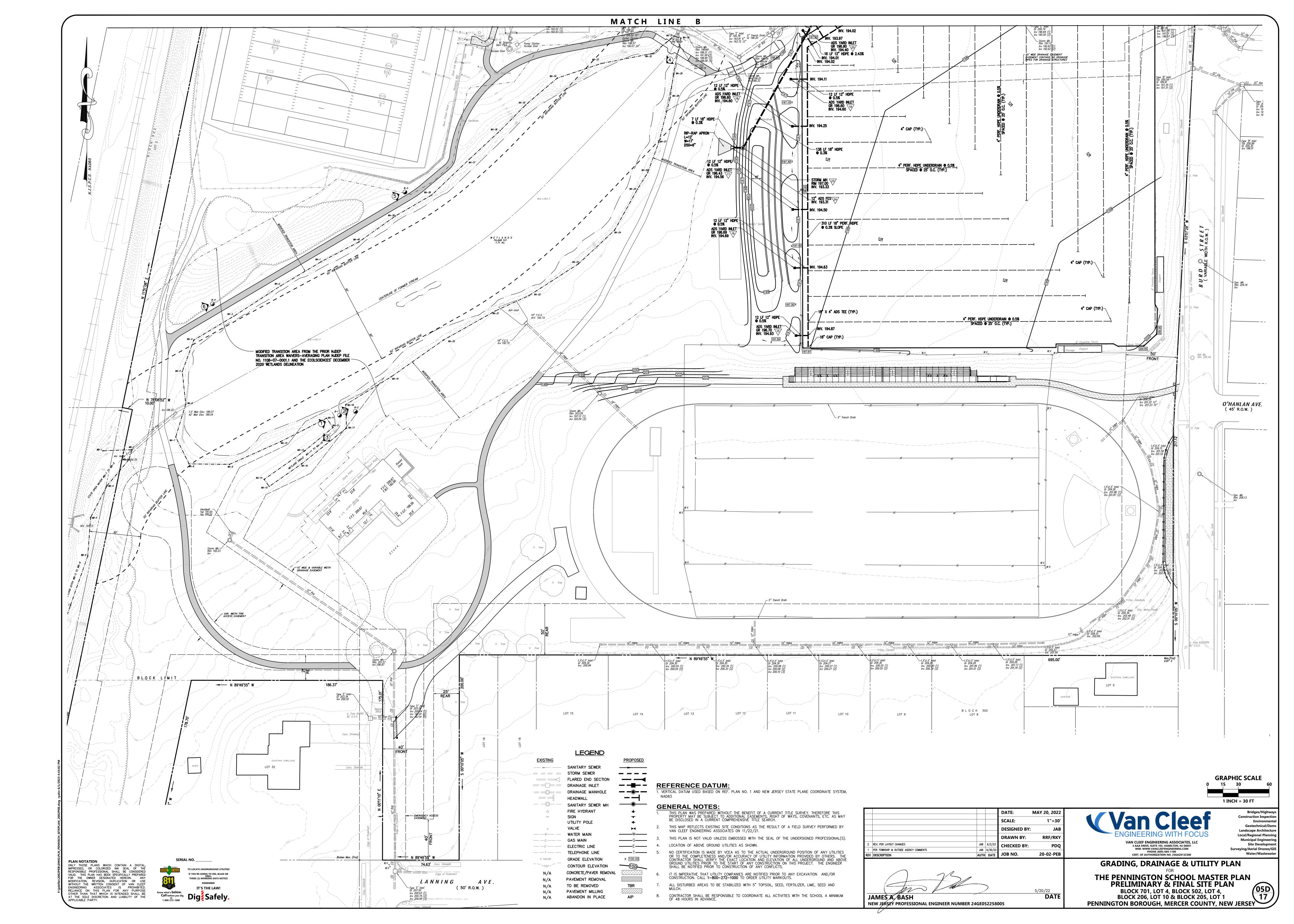
Municipal Engineering

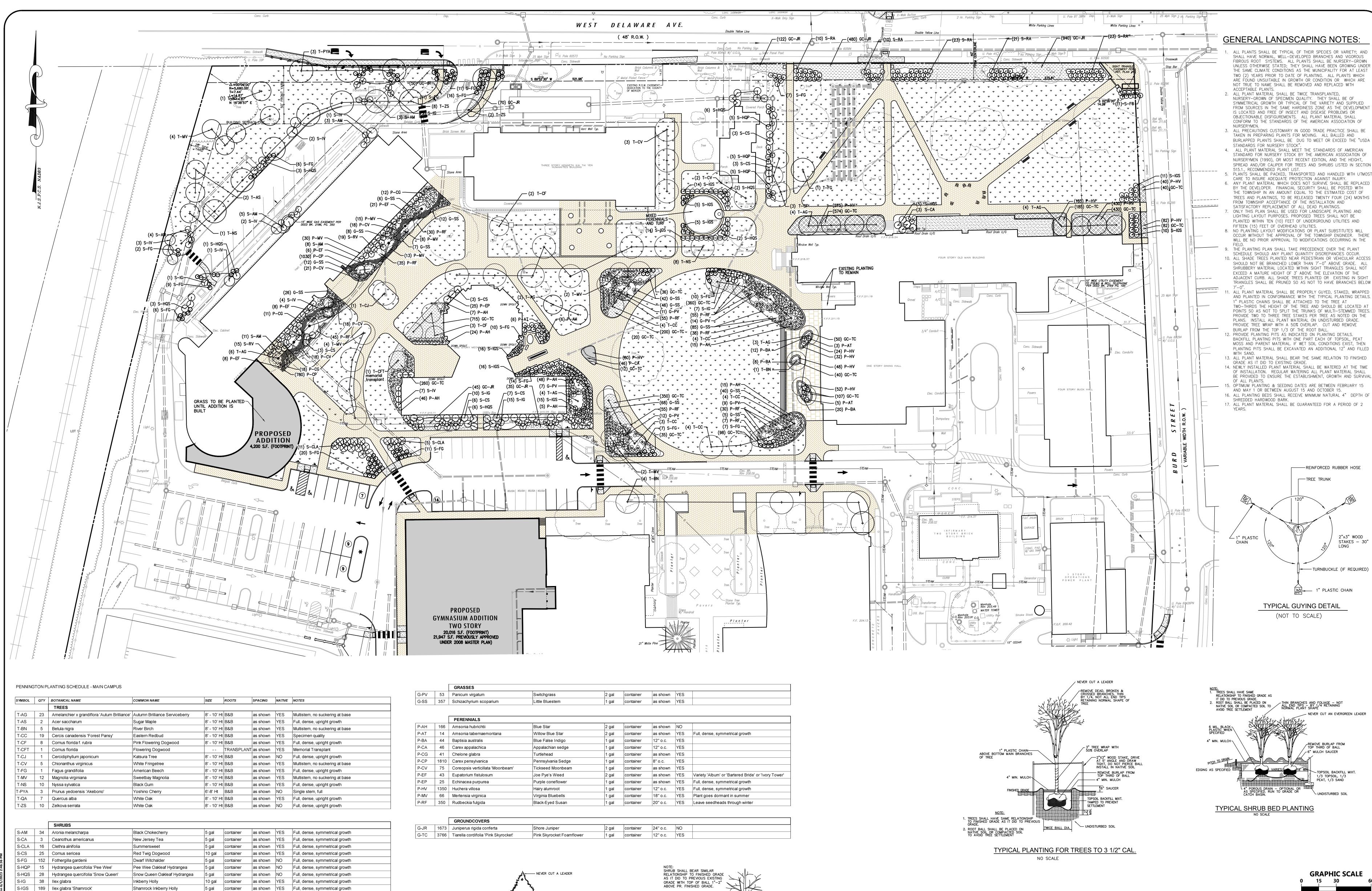
Surveying/Aerial Drones/GIS

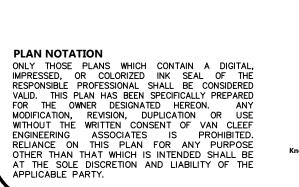
Environmental

Construction Inspection









S-IV 20 | Ilex verticillata

PLAN NOTATION

S-RA 91 Rhus aromatica 'Gro-Low'

S-RV 34 Rhododendrom viscosum



Common Winterberry

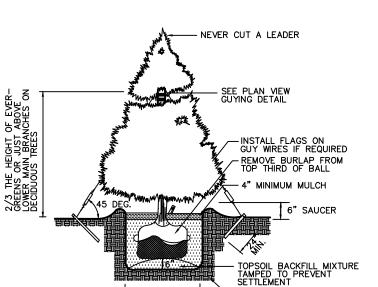
Swamp Azalea

Grow-Low Fragrant Sumac

10 gal | container | as shown | YES | Full, dense, symmetrical growth

5 gal container 24" o.c. YES Full, dense, symmetrical growth

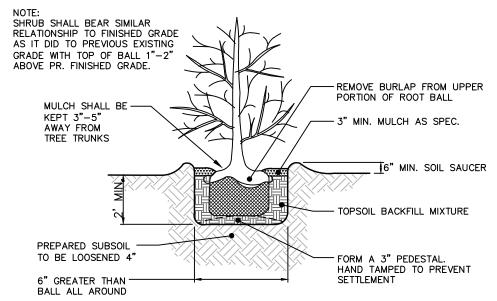
5 gal | container | as shown | YES | Full, dense, symmetrical growth



GUYING FOR EVERGREENS / DECIDUOUS TREES OVER 4" CAL

NO SCALE

- UNDISTURBED SOIL



REV. PER LAYOUT CHANGES PER TOWNSHIP & OUTSIDE AGENCY COMMENTS V DESCRIPTION

JAMES A. BASH

NEW JERSEY PROFESSIONAL ENGINEER NUMBER 24GE052258005

TYPICAL PLANTING FOR EVERGREEN AND DECIDUOUS SHRUBS



JAB 9/30/22

AUTH DATE

JOB NO.

5/20/22

RRF/RKY **VAN CLEEF ENGINEERING ASSOCIATES, LLC** 4 AAA DRIVE, SUITE 103, HAMILTON, NJ 08691 WEB: WWW.VANCLEEFENGINEERING.COM PHONE (609) 689-1100 CERT. OF AUTHORIZATION NO. 24GA28132300 CHECKED BY: 20-02-PEB

LANDSCAPING PLAN

THE PENNINGTON SCHOOL MASTER PLAN PRELIMINARY & FINAL SITE PLAN BLOCK 701, LOT 4, BLOCK 502, LOT 4, **BLOCK 206, LOT 10 & BLOCK 205, LOT 1** PENNINGTON BOROUGH, MERCER COUNTY, NEW JERSEY

Bridges/Highways **Construction Inspection**

Landscape Architecture

Local/Regional Planning

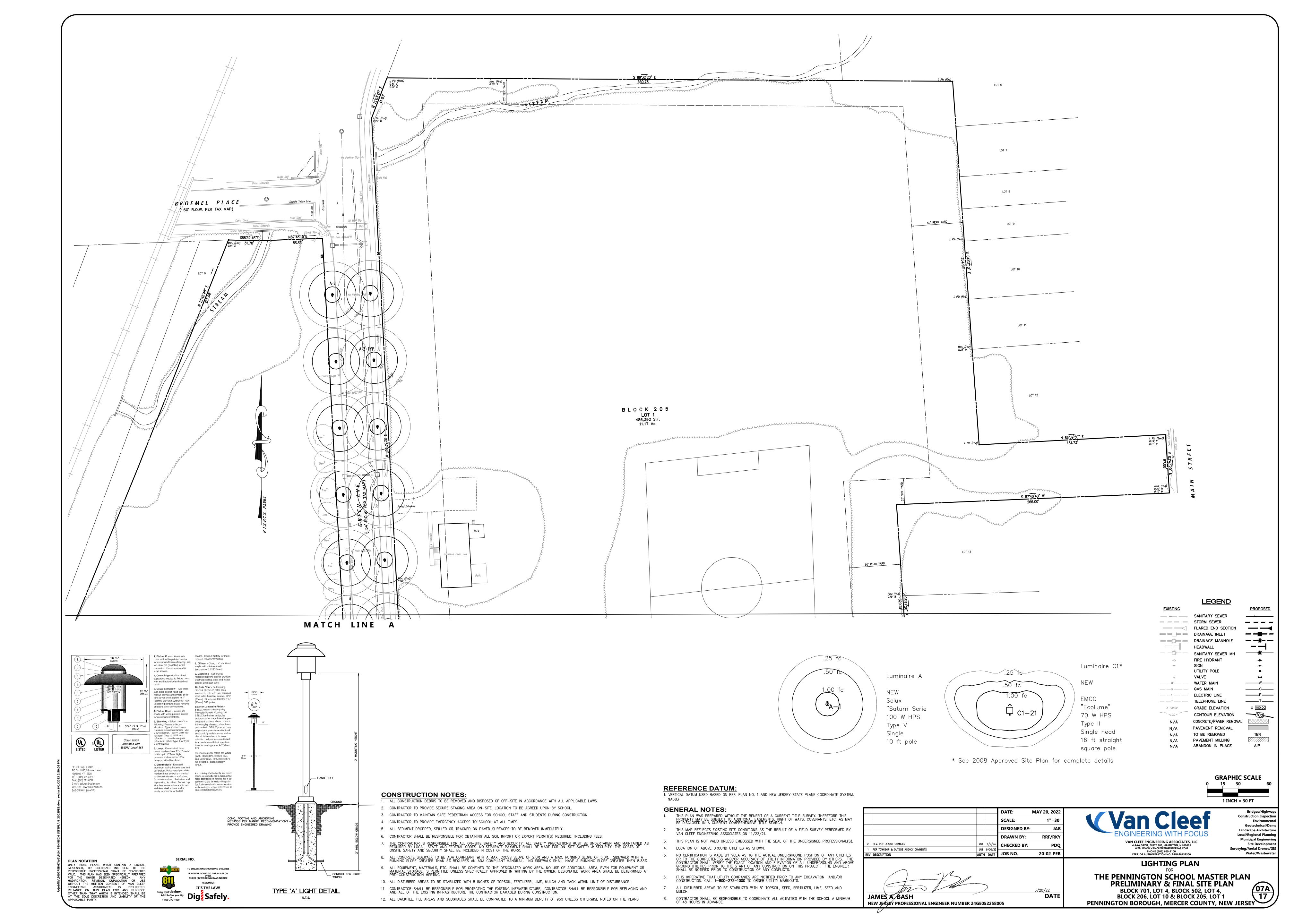
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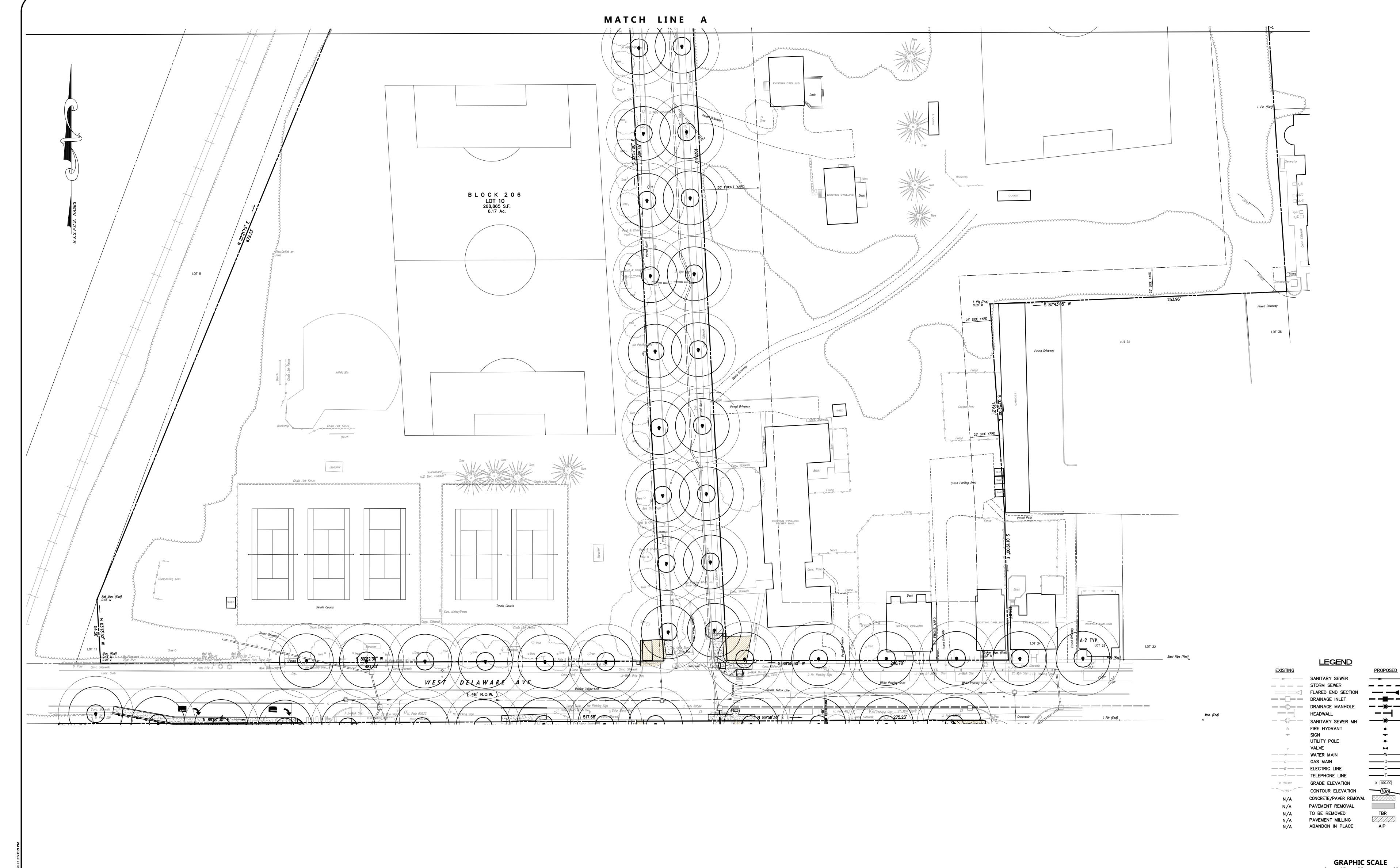
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Site Development

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LIGHTING PLAN

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PENNINGTON BOROUGH, MERCER COUNTY, NEW JERSEY

1 INCH = 30 FT

Bridges/Highwa

Geotechnical/Dams

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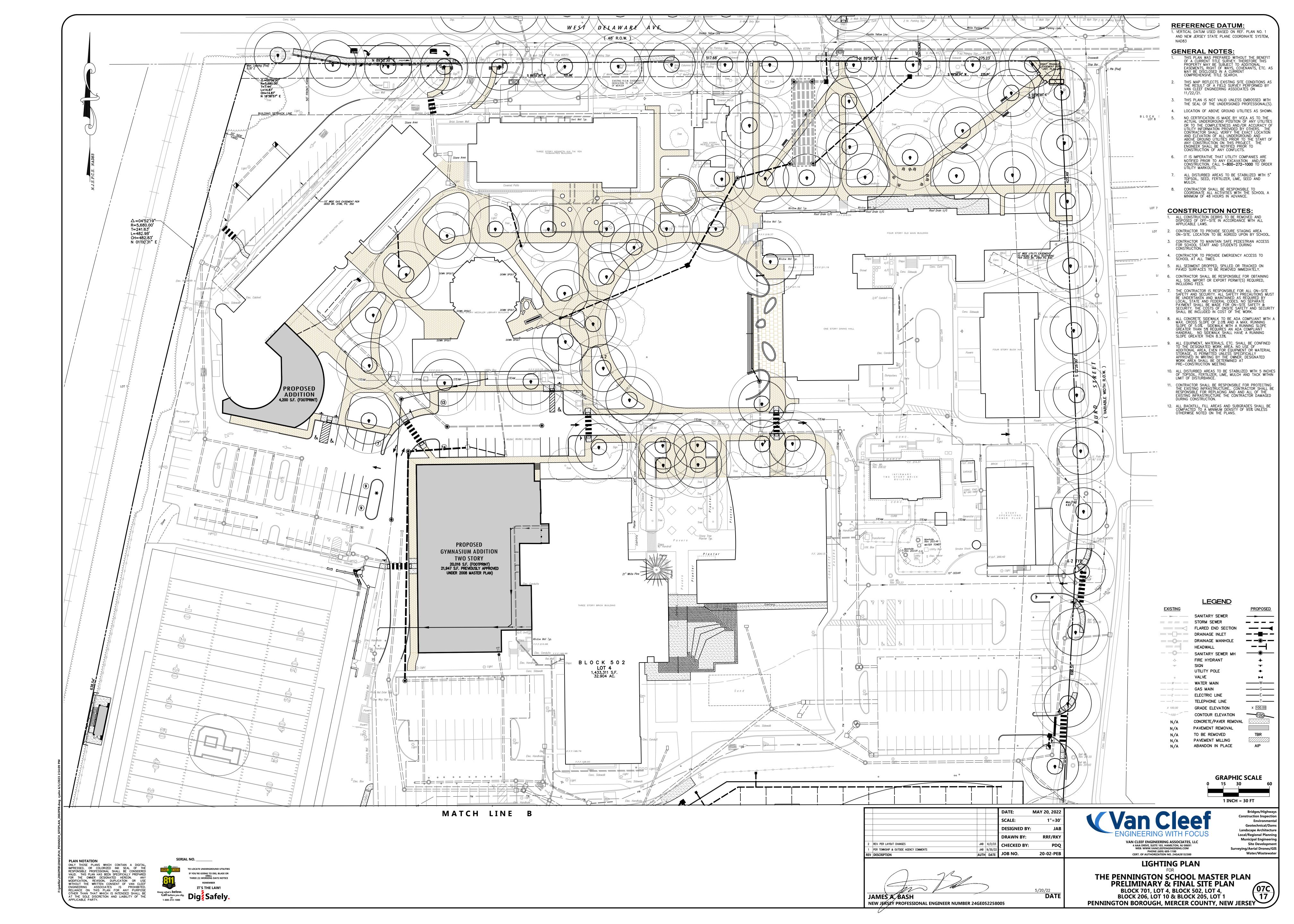
Construction Inspection

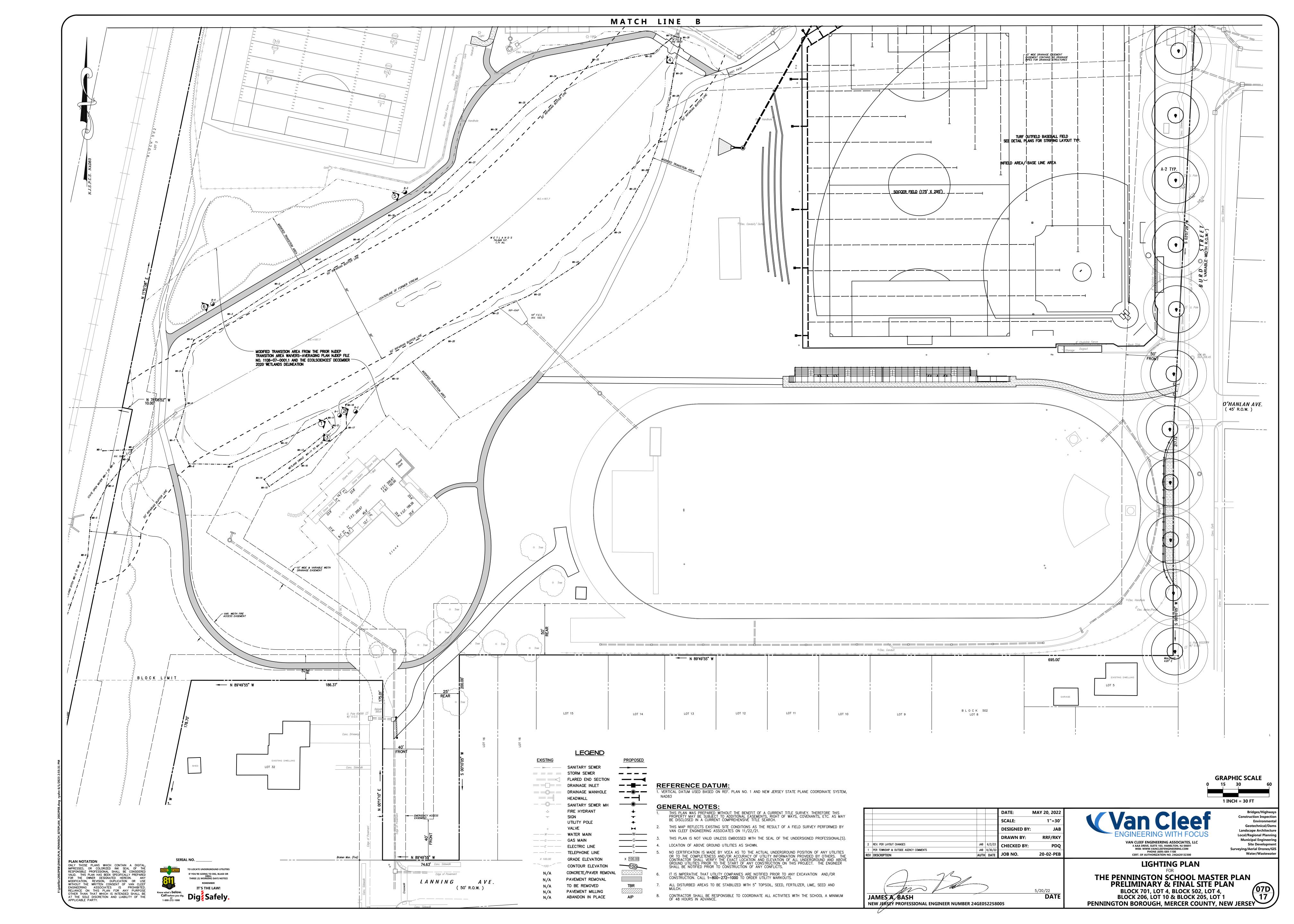
JAMES A. BASH NEW JERSEY PROFESSIONAL ENGINEER NUMBER 24GE052258005

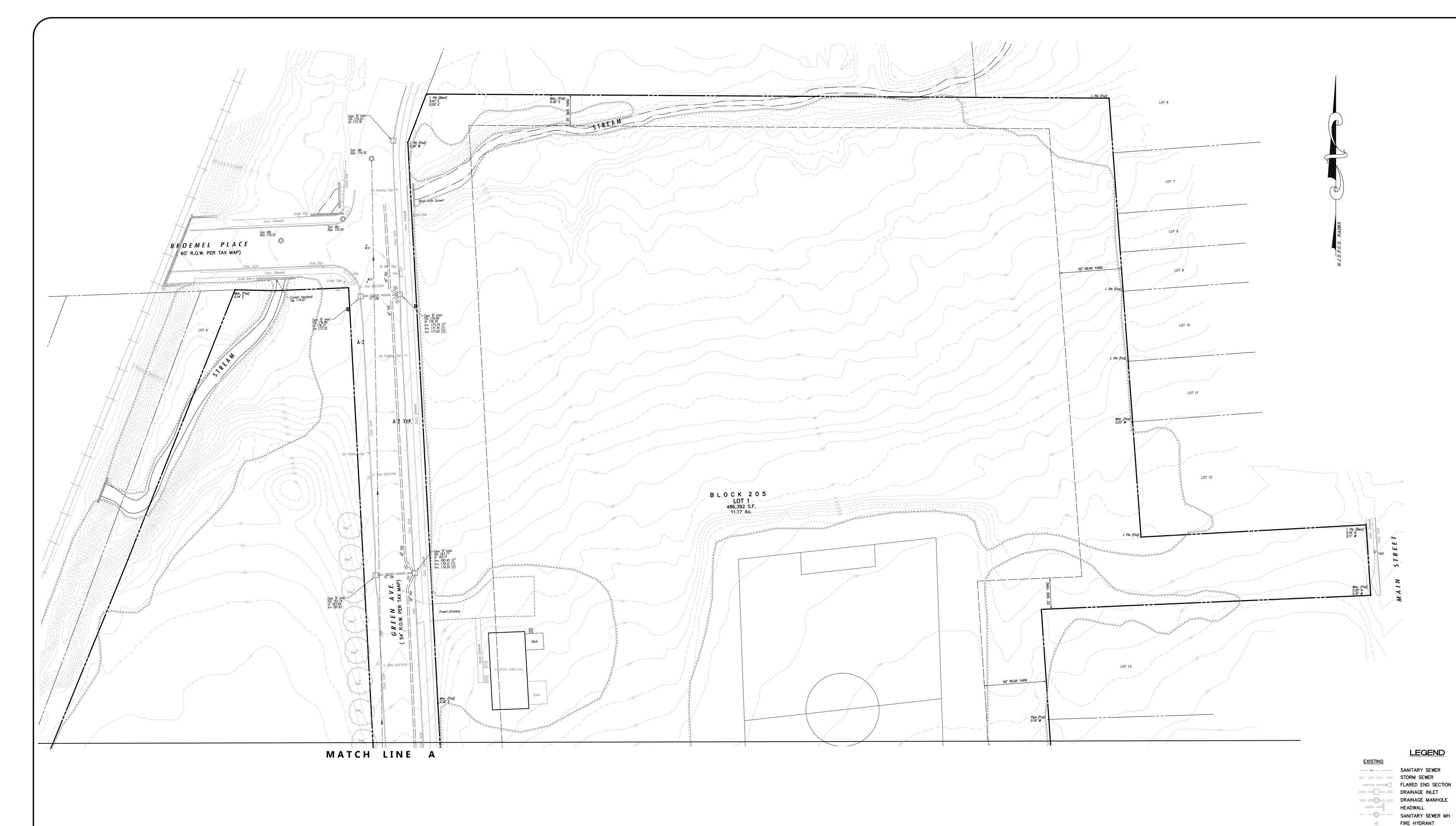
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5/20/22 DATE









TOTAL PROJECT DISTURBANCE:

DATE

UTILITY POLE 393,351 S.F. (9.030 AC.)

CONTOUR ELEVATION LIMIT OF DISTURBANCE ====== SILT FENCE INLET PROTECTION

> **GRAPHIC SCALE** 0 15

> > Bridges/Highway

Environmenta Geotechnical/Dams

Construction Inspection

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WEB: WWW.VANCLEEFENGINEERING.COM
PHONE (609) 689-1100

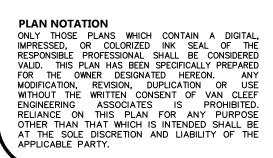
CERT. OF AUTHORIZATION NO. 24GA28132300

Landscape Architecture Local/Regional Planning Municipal Engineering Site Developmen Surveying/Aerial Drones/GIS Water/Wastewate

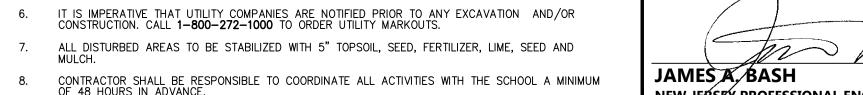
SOIL EROSION & SEDIMENT CONTROL PLAN

THE PENNINGTON SCHOOL MASTER PLAN PRELIMINARY & FINAL SITE PLAN BLOCK 701, LOT 4, BLOCK 502, LOT 4, **BLOCK 206, LOT 10 & BLOCK 205, LOT 1**

PENNINGTON BOROUGH, MERCER COUNTY, NEW JERSEY

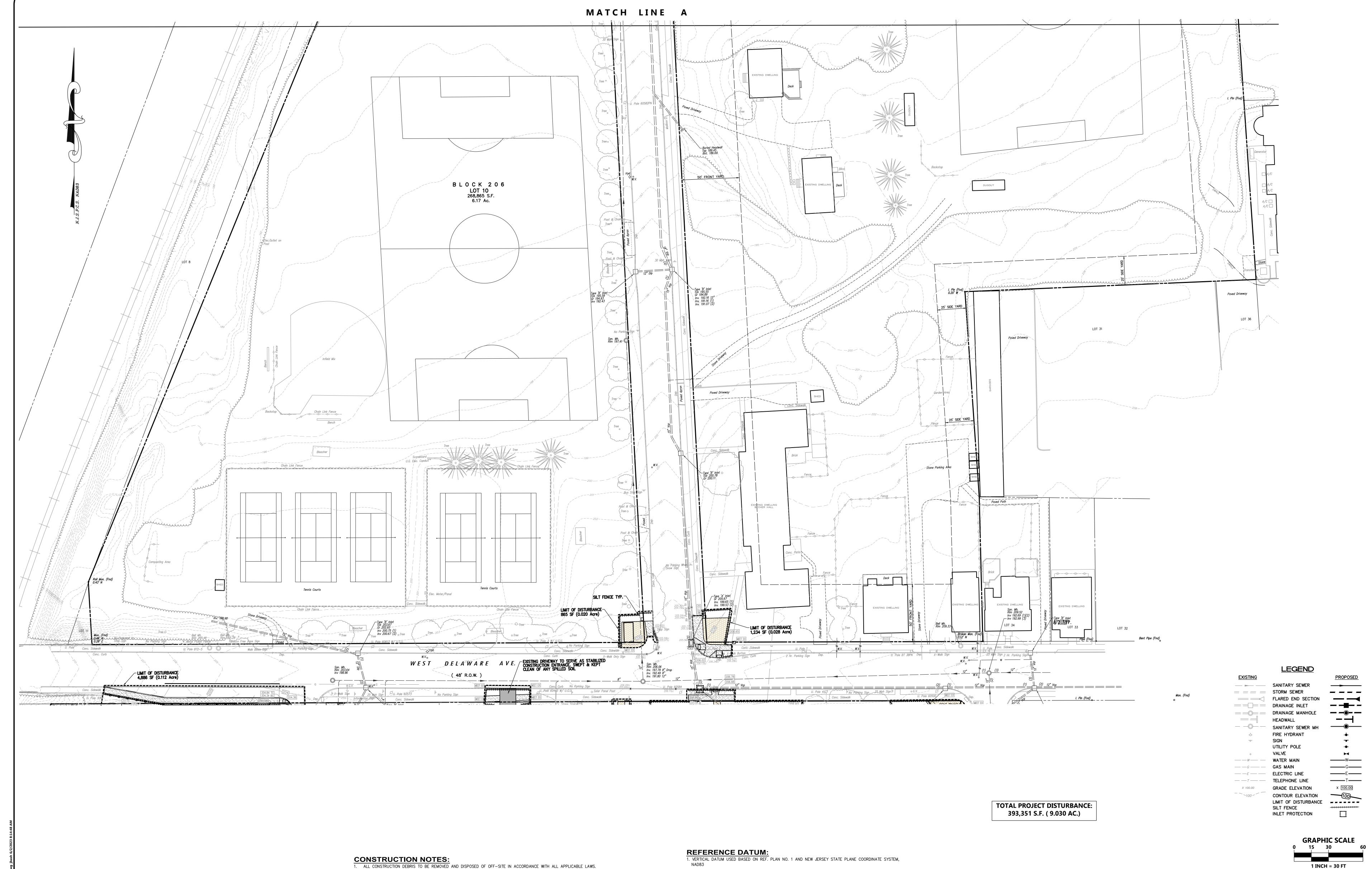






7. ALL DISTURBED AREAS TO BE STABILIZED WITH 5" TOPSOIL, SEED, FERTILIZER, LIME, SEED AND MULCH. 8. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE ALL ACTIVITIES WITH THE SCHOOL A MINIMUM OF 48 HOURS IN ADVANCE.

NEW JEKSEY PROFESSIONAL ENGINEER NUMBER 24GE052258005



SERIAL NO. _____

PLAN NOTATION

ONLY THOSE PLANS WHICH CONTAIN A DIGITAL, IMPRESSED, OR COLORIZED INK SEAL OF THE RESPONSIBLE PROFESSIONAL SHALL BE CONSIDERED VALID. THIS PLAN HAS BEEN SPECIFICALLY PREPARED FOR THE OWNER DESIGNATED HEREON. ANY MODIFICATION, REVISION, DUPLICATION OR USE WITHOUT THE WRITTEN CONSENT OF VAN CLEEF ENGINEERING ASSOCIATES IS PROHIBITED. RELIANCE ON THIS PLAN FOR ANY PURPOSE OTHER THAN THAT WHICH IS INTENDED SHALL BE AT THE SOLE DISCRETION AND LIABILITY OF THE APPLICABLE PARTY.



1. ALL CONSTRUCTION DEBRIS TO BE REMOVED AND DISPOSED OF OFF-SITE IN ACCORDANCE WITH ALL APPLICABLE LAWS.

2. CONTRACTOR TO PROVIDE SECURE STAGING AREA ON-SITE. LOCATION TO BE AGREED UPON BY SCHOOL.

3. CONTRACTOR TO MAINTAIN SAFE PEDESTRIAN ACCESS FOR SCHOOL STAFF AND STUDENTS DURING CONSTRUCTION.

4. CONTRACTOR TO PROVIDE EMERGENCY ACCESS TO SCHOOL AT ALL TIMES. 5. ALL SEDIMENT DROPPED, SPILLED OR TRACKED ON PAVED SURFACES TO BE REMOVED IMMEDIATELY.

6. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL SOIL IMPORT OR EXPORT PERMIT(S) REQUIRED, INCLUDING FEES.

7. THE CONTRACTOR IS RESPONSIBLE FOR ALL ON-SITE SAFETY AND SECURITY. ALL SAFETY PRECAUTIONS MUST BE UNDERTAKEN AND MAINTAINED AS REQUIRED BY LOCAL, STATE AND FEDERAL CODES. NO SEPARATE PAYMENT SHALL BE MADE FOR ON-SITE SAFETY & SECURITY. THE COSTS OF ONSITE SAFETY AND SECURITY SHALL BE INCLUDED IN COST OF THE WORK. 8. ALL CONCRETE SIDEWALK TO BE ADA COMPLIANT WITH A MAX. CROSS SLOPE OF 2.0% AND A MAX. RUNNING SLOPE OF 5.0%. SIDEWALK WITH A RUNNING SLOPE GREATER THAN 5% REQUIRES AN ADA COMPLIANT HANDRAIL. NO SIDEWALK SHALL HAVE A RUNNING SLOPE GREATER THEN 8.33%.

9. ALL EQUIPMENT, MATERIALS, ETC. SHALL BE CONFINED TO THE DESIGNATED WORK AREA. NO USE OF ADDITIONAL AREA, EVEN FOR EQUIPMENT OR MATERIAL STORAGE, IS PERMITTED UNLESS SPECIFICALLY APPROVED IN WRITING BY THE OWNER. DESIGNATED WORK AREA SHALL BE DETERMINED AT PRE-CONSTRUCTION MEETING 10. ALL DISTURBED AREAS TO BE STABILIZED WITH 5 INCHES OF TOPSOIL, FERTILIZER, LIME, MULCH AND TACK WITHIN LIMIT OF DISTURBANCE.

11. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING THE EXISTING INFRASTRUCTURE,. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING AND AND ALL OF THE EXISTING INFRASTRUCTURE THE CONTRACTOR DAMAGED DURING CONSTRUCTION. 12. ALL BACKFILL, FILL AREAS AND SUBGRADES SHALL BE COMPACTED TO A MINIMUM DENSITY OF 95% UNLESS OTHERWISE NOTED ON THE PLANS.

GENERAL NOTES:

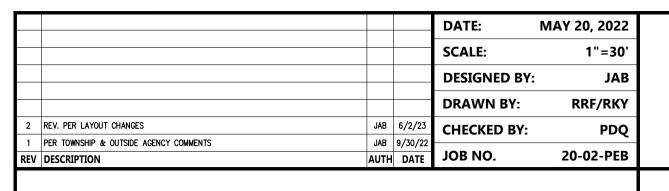
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4. LOCATION OF ABOVE GROUND UTILITIES AS SHOWN. 5. NO CERTIFICATION IS MADE BY VCEA AS TO THE ACTUAL UNDERGROUND POSITION OF ANY UTILITIES OR TO THE COMPLETENESS AND/OR ACCURACY OF UTILITY INFORMATION PROVIDED BY OTHERS. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND ELEVATION OF ALL UNDERGROUND AND ABOVE GROUND UTILITIES PRIOR TO THE START OF ANY CONSTRUCTION ON THIS PROJECT. THE ENGINEER SHALL BE NOTIFIED PRIOR TO CONSTRUCTION OF ANY CONFLICTS.

IT IS IMPERATIVE THAT UTILITY COMPANIES ARE NOTIFIED PRIOR TO ANY EXCAVATION AND/OR CONSTRUCTION. CALL **1-800-272-1000** TO ORDER UTILITY MARKOUTS. 7. ALL DISTURBED AREAS TO BE STABILIZED WITH 5" TOPSOIL, SEED, FERTILIZER, LIME, SEED AND MULCH.

8. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE ALL ACTIVITIES WITH THE SCHOOL A MINIMUM OF 48 HOURS IN ADVANCE.



JAMES A. BASH

NEW JERSEY PROFESSIONAL ENGINEER NUMBER 24GE052258005

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CERT. OF AUTHORIZATION NO. 24GA28132300 Water/Wastewate

Bridges/Highwa

Geotechnical/Dams

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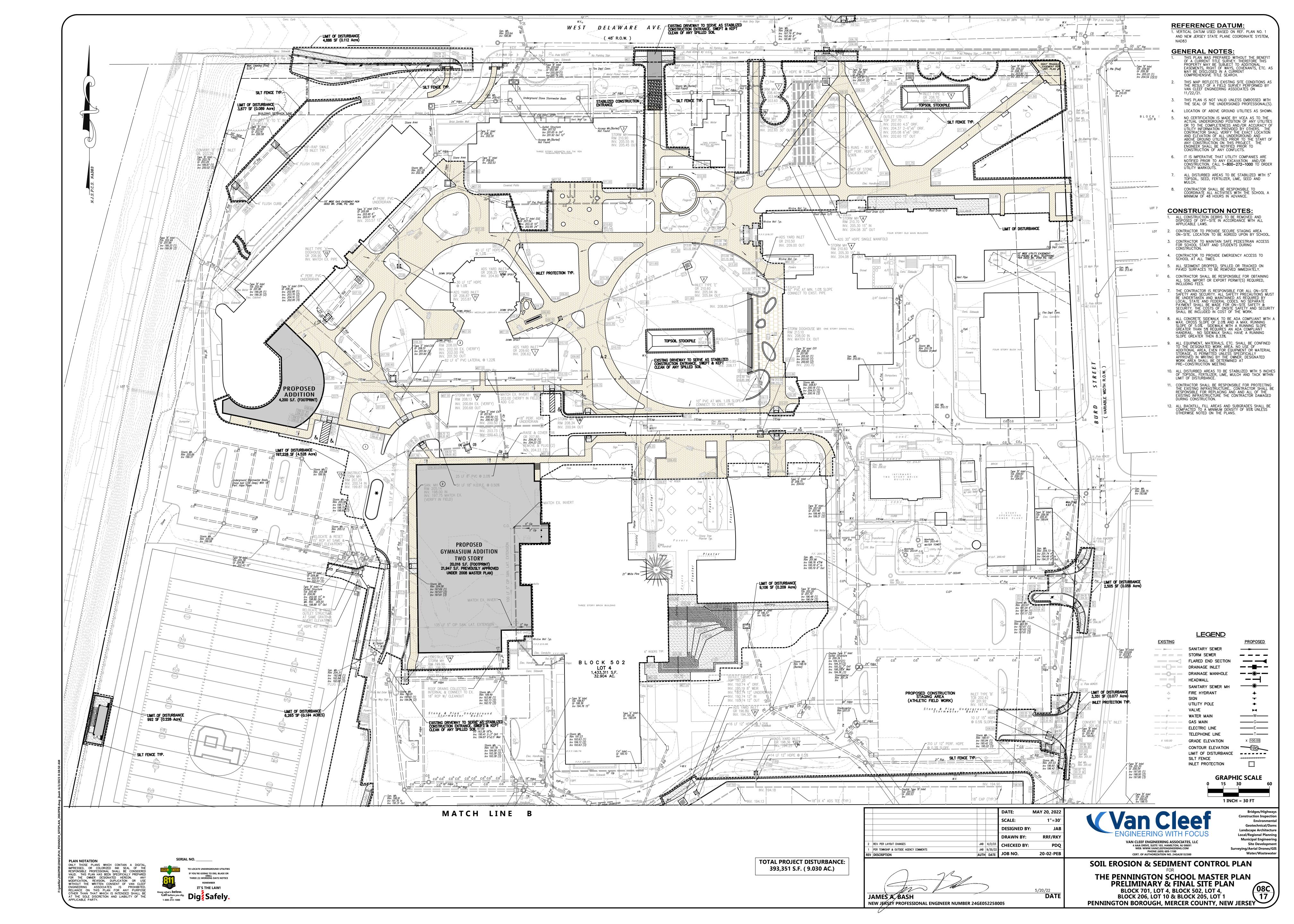
Environmental

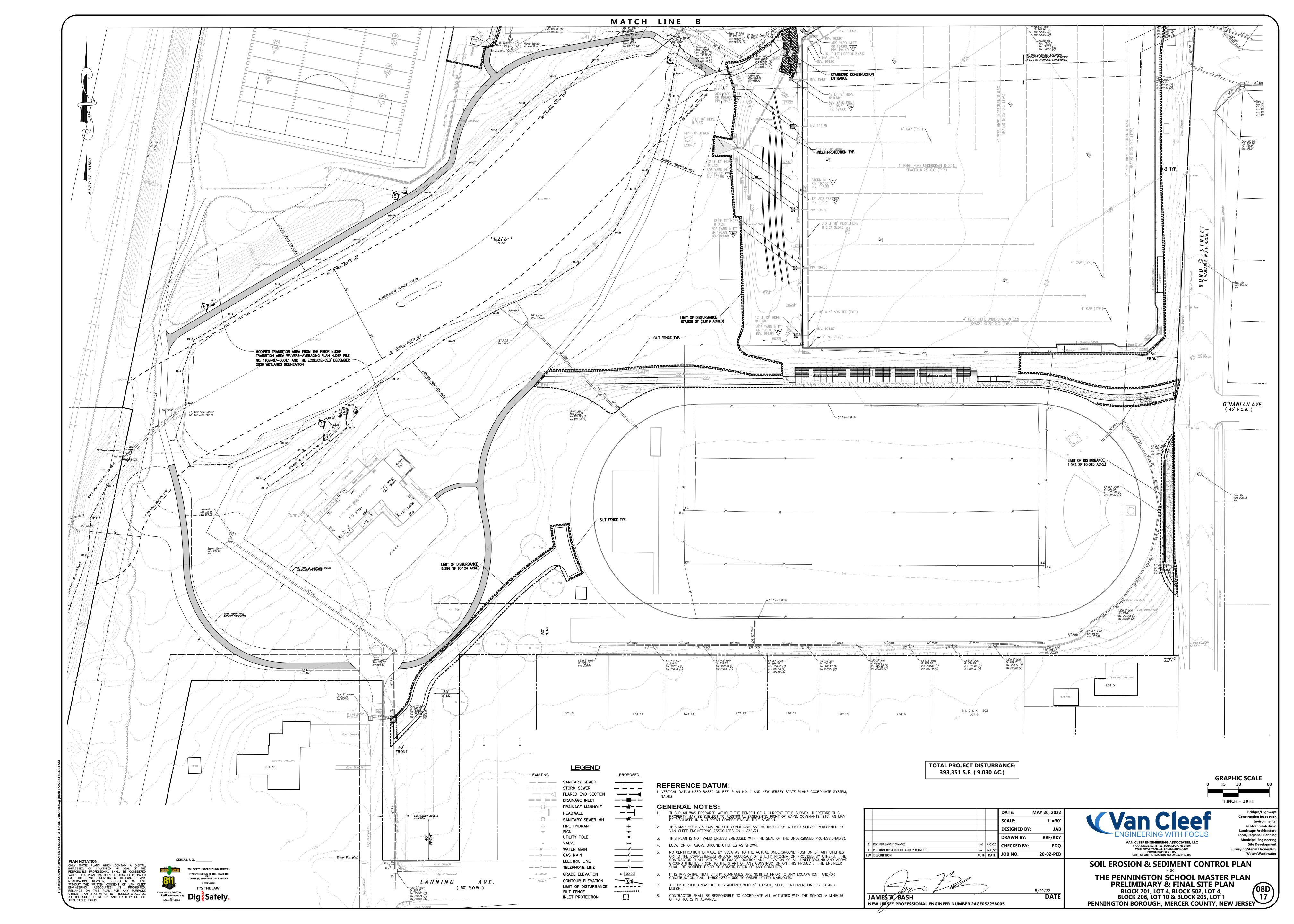
Construction Inspection

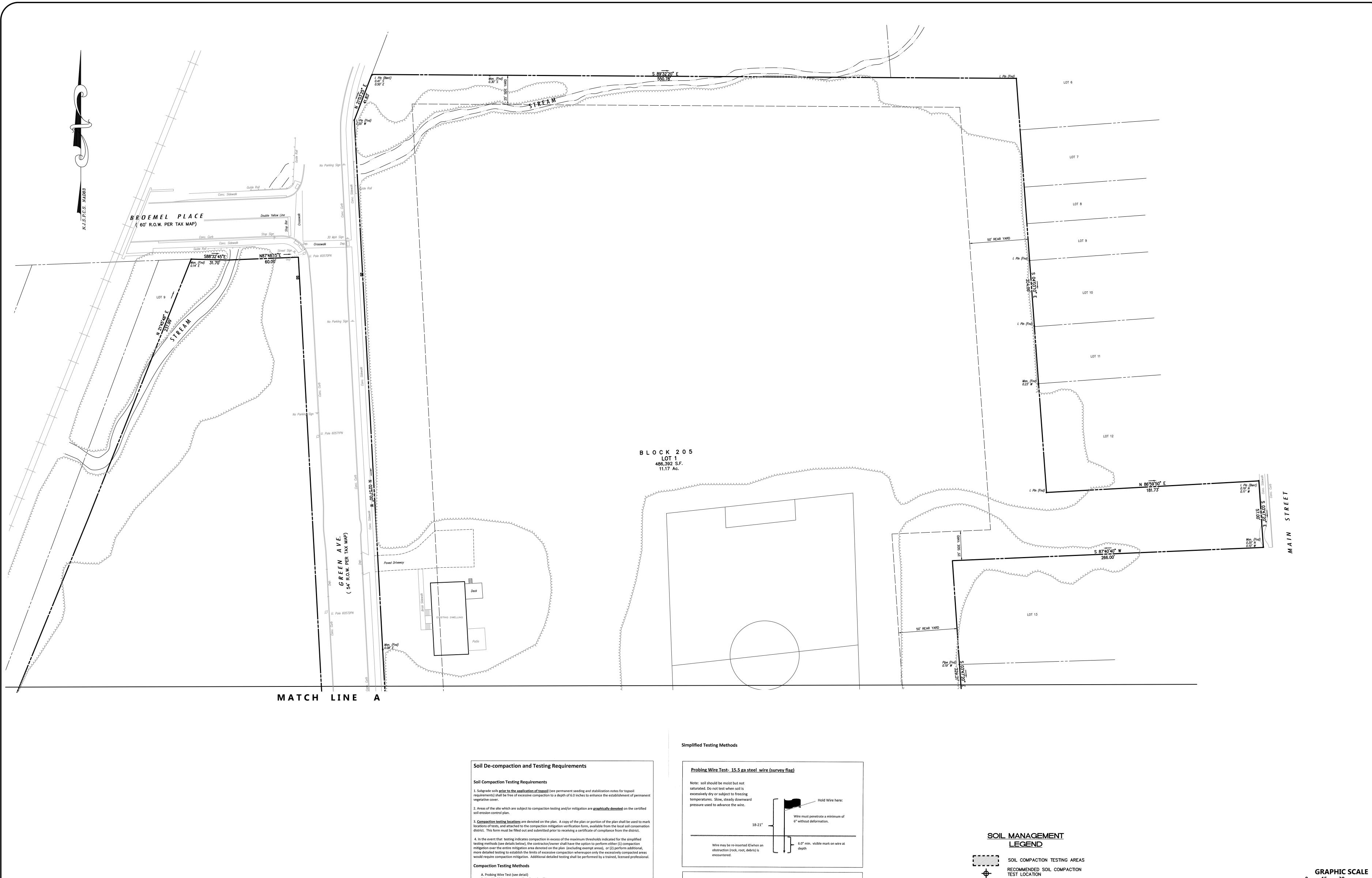
SOIL EROSION & SEDIMENT CONTROL PLAN PRELIMINARY & FINAL SITE PLAN

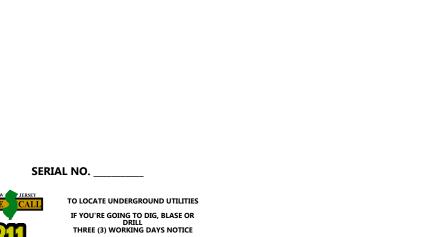
BLOCK 701, LOT 4, BLOCK 502, LOT 4, BLOCK 206, LOT 10 & BLOCK 205, LOT 1 PENNINGTON BOROUGH, MERCER COUNTY, NEW JERSEY

THE PENNINGTON SCHOOL MASTER PLAN 5/20/22 DATE









IT'S THE LAW!

Know what's below.
Call before you dig.
or
1-800-2772-1000

Call before you dig.
Dig Safely.

PLAN NOTATION

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A. Probing Wire Test (see detail) B. Hand-held Penetrometer Test (see detail) C .Tube Bulk Density Test (licensed professional engineer required

D. Nuclear Density Test (licensed professional engineer required) Note: Additional testing methods which conform to ASTM standards and specifications, and which produce a dry weight, soil bulk density measurement may be allowed subject to District approval.

Soil compaction testing is not required if/when subsoil compaction remediation (scarification/tillage (6" minimum depth) or similar) is proposed as part of the sequence of construction.

Procedures for Soil Compaction Mitigation

Procedures shall be used to mitigate excessive soil compaction prior to placement of topsoil and establishment of

Restoration of compacted soils shall be through deep scarification/tillage (6" minimum depth) where there is no danger to underground utilities (cables, irrigation systems, etc.). In the alternative, another method as specified by a New Jersey Licensed Professional Engineer maybe substituted subject to District Approval.

Handheld Soil Penetrometer Test	
Note: 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.	Gage reading 300 psi or less at 6"
Penetrometer may be re-inserted if/when an obstruction (rock, root, debris) is encountered.	6.0" min. visible mark on shaft a depth *Use correct size tip for

				DATE: N	1AY 20, 2022
				SCALE:	1"=30'
				DESIGNED BY:	JAB
				DRAWN BY:	RRF/RKY
2	REV. PER LAYOUT CHANGES	JAB	6/2/23	CHECKED BY:	PDQ
1	PER TOWNSHIP & OUTSIDE AGENCY COMMENTS	JAB	9/30/22		
REV	DESCRIPTION	AUTH	DATE	JOB NO.	20-02-PEB

NEW JEKSEY PROFESSIONAL ENGINEER NUMBER 24GE052258005

5/20/22 **DATE**]



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Surveying/Aerial Drones/GIS Water/Wastewate **SOIL MANAGEMENT & PREPARATION PLAN**

Bridges/Highways

Geotechnical/Dams

Site Development

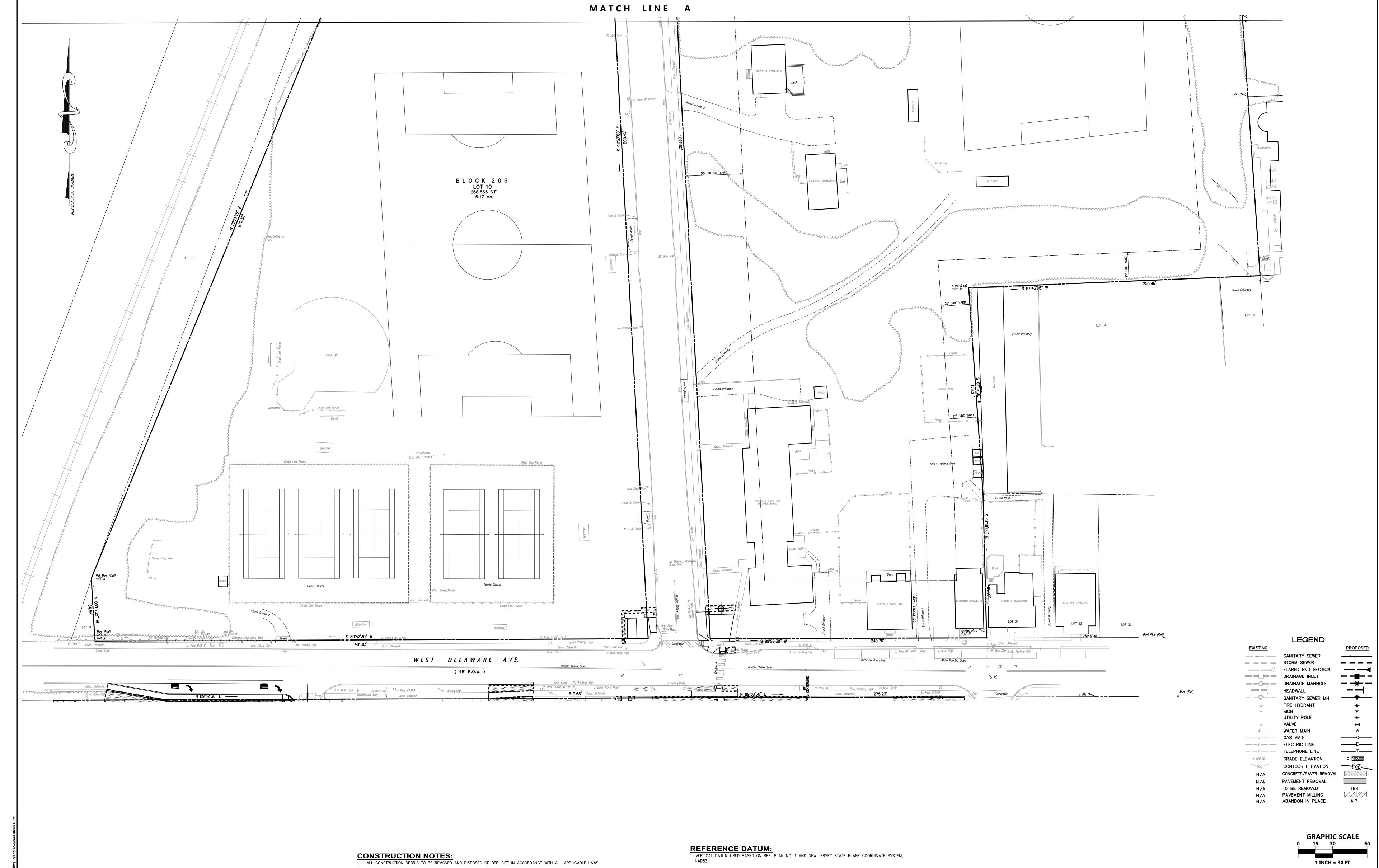
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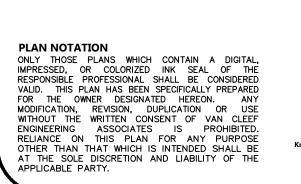
Landscape Architecture

Local/Regional Planning Municipal Engineering

THE PENNINGTON SCHOOL MASTER PLAN PRELIMINARY & FINAL SITE PLAN BLOCK 701, LOT 4, BLOCK 502, LOT 4,









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DESIGNED BY: DRAWN BY: RRF/RKY JAB 6/2/23 **CHECKED BY:** PDQ PER TOWNSHIP & OUTSIDE AGENCY COMMENTS JAB 9/30/22 AUTH DATE JOB NO. 20-02-PEB REV DESCRIPTION 5. NO CERTIFICATION IS MADE BY VCEA AS TO THE ACTUAL UNDERGROUND POSITION OF ANY UTILITIES OR 5/20/22 DATE JAMES A. BASH NEW JERSEY PROFESSIONAL ENGINEER NUMBER 24GE052258005

SCALE:

1"=30'



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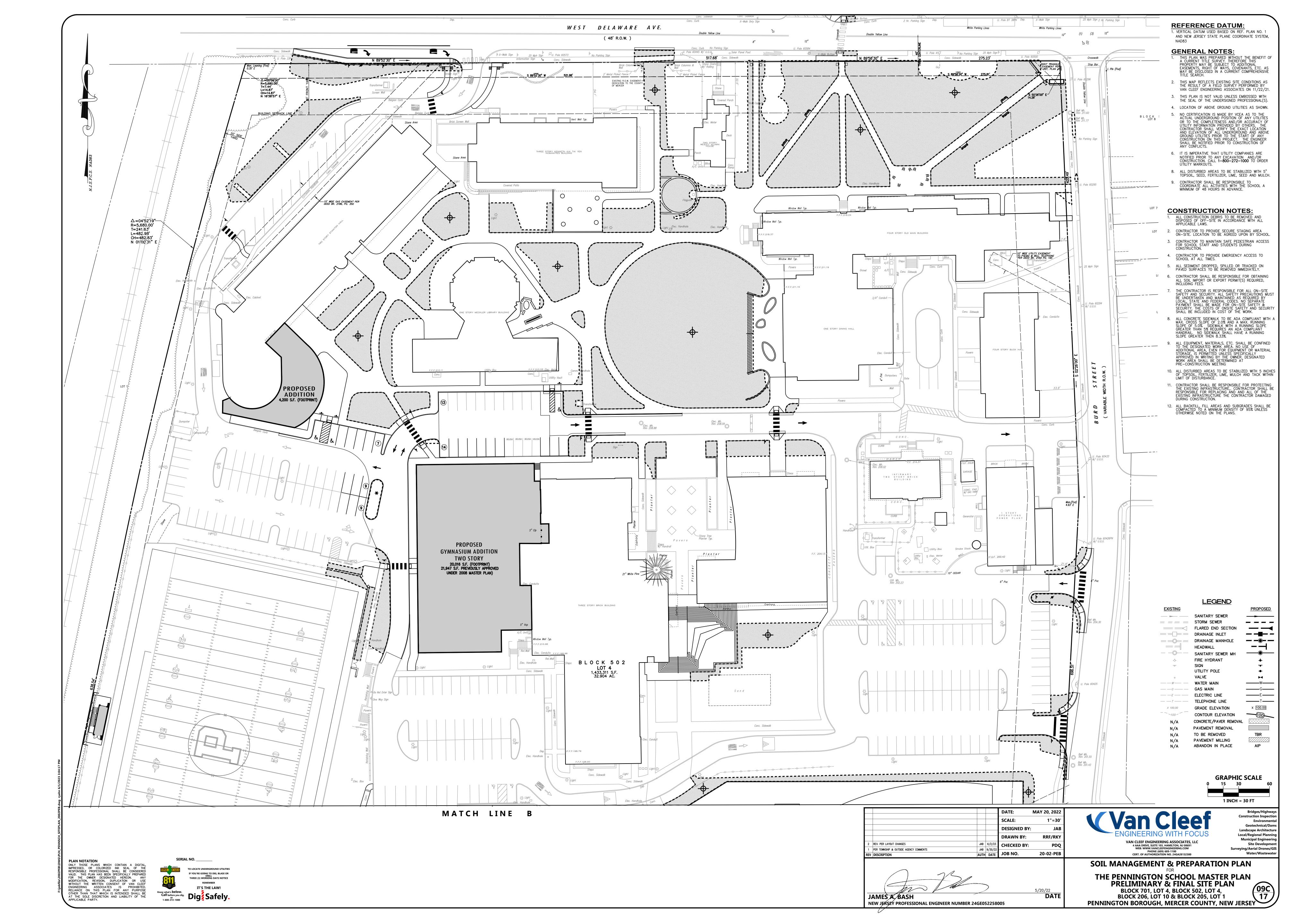
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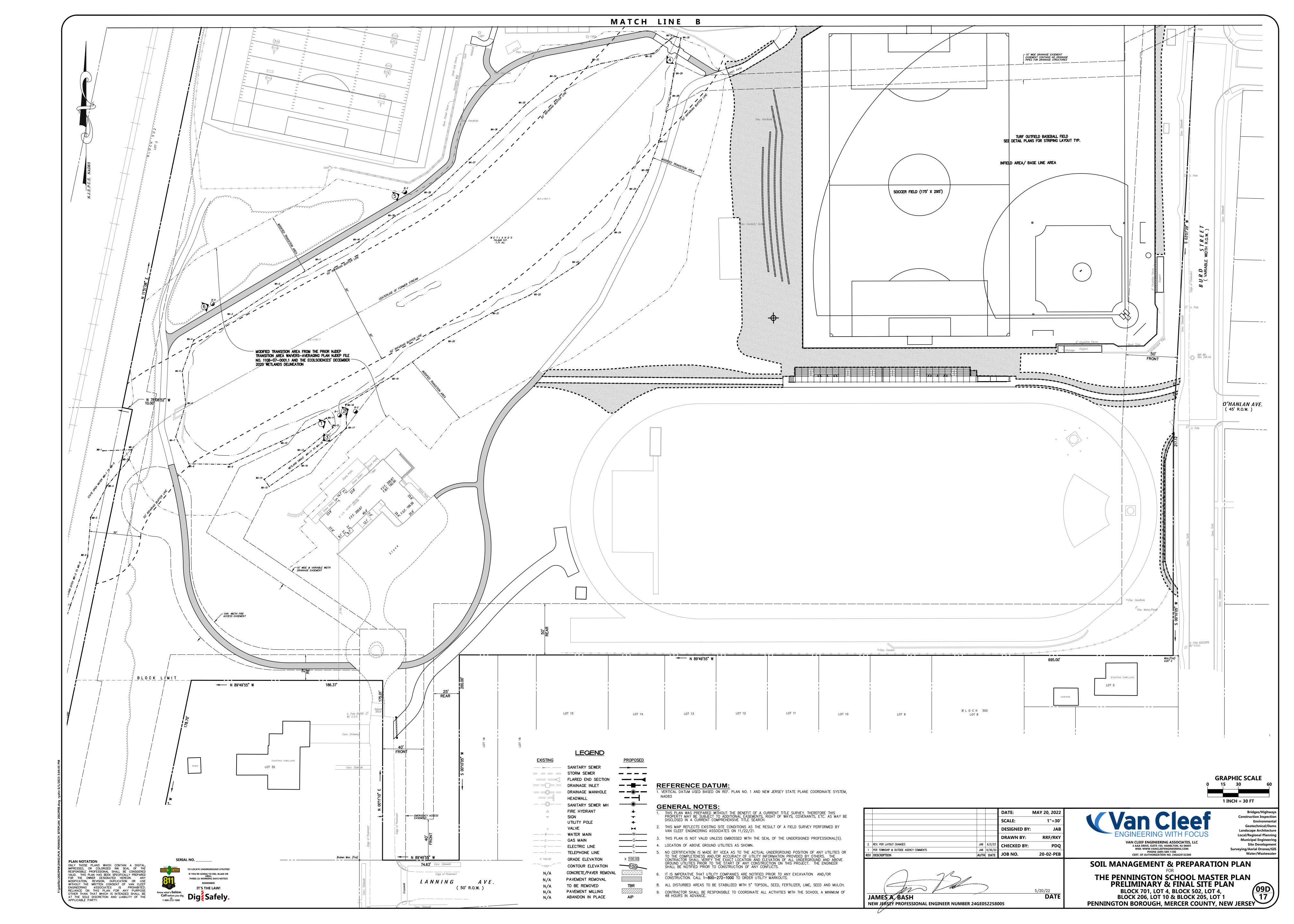
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Construction Inspection

THE PENNINGTON SCHOOL MASTER PLAN PRELIMINARY & FINAL SITE PLAN BLOCK 701, LOT 4, BLOCK 502, LOT 4,

BLOCK 206, LOT 10 & BLOCK 205, LOT 1 PENNINGTON BOROUGH, MERCER COUNTY, NEW JERSEY





Methods and Materials 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 or 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 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
- 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

MAINTAINING VEGETATION <u>Methods and Materials</u>

accelerated rusting.

- A preventive maintenance program anticipates requirements and accomplishes work when it can be done with least effort and expense to insure adequate vegetative cover. Maintenance should occur on a regular basis, consistent with favorable plant growth, soil, and climatic conditions. This involves regular seasonal work for mowing, fertilizing, liming, watering, pruning, fire control, weed and pest control, reseeding, and timely repairs. The degree of preventive maintenance needed depends upon the type of vegetation and its
- 1. Mowing is a recurring practice and its intensity depends upon the function of the ground cover. On high to moderate (A to B) maintenance areas, such as lawns, certain recreation fields, and picnic areas, mowing will be frequent (2 to 7 day intervals) and typically at a height of 2.5 to 3 inches. Return clippings from mowing (mulching mower) to the turf to reduce the amount of fertilizer needed to maintain the turf by as much as 50%. Some turf mixtures can be managed as naturalized stands requiring only one (cool season mixtures) or two (warm season mixtures) mowings per year. Mowing of naturalized areas is typically done at heights no less than 4 inches and should not be done between April 1st and July 15th to avoid disturbing ground nesting birds. The large amount of clipping debris generated by moving naturalized areas will need to be removed and/or dispersed so the vegetation is not smothered. Burning of naturalized areas is another procedure used to manage naturalized turfs. Low maintenance (D) areas may be left unmowed to permit natural
- succession. See pg. 4—13 footnote #4, Maintenance Levels A, B, C and D in the Standard for Permanent Vegetative Cover, Table 4-3. 2. Incorporation of organic matter (for example, mature compost) into the soil will substantially reduce the need for fertilizer and irrigation inputs. 3. Fertilizer and lime should be applied as needed to maintain a dense stand of desirable
- species. Frequently mowed areas and those on sandy soils will require more frequent fertilization but at lower nutrient rates per application 4. Lime requirement should be determined by soil testing every 2 or 3 years. Fertilization may increase the need for liming. Contact the local county extension office for details on soil testing and fertilization and pest control recommendations online at http://niaes.rutaers.edu/county/.
- 5 Fertilization and additions of other soil amendments are not recommended for managing native vegetation such as in the Pinelands National Reserve. See the Standard for Permanent Vegetative Stabilization for specific requirements in the PNR. 6. Weed invasion may result from abusive moving and from inadequate fertilizing and liming. Many newly established grasses will not survive if mowed at heights below 2.5 inches and at intervals greater than 7 days. Brush invasion is a common consequence of lack of mowing. The amount of weeds or brush that can be tolerated in any vegetated area depends upon the intended use of the land. Drainage ways are subject to rapid infestation by weed and woody plants. These should be controlled, since they often reduce drainage way efficiency. Control of weeds or brush is accomplished by using herbicides or mechanical
- 7. Fire hazard is greater where dry vegetation has accumulated. The taller the vegetation, the greater the hazard. 8. Prune trees and shrubs to remove dead or damaged branches. Remove undesirable or PERNANCIANT PRETETAPINE CITY OF REPORT SYNCOLOR STABILLANDER PER and enhance quality of permanent <u>Methods and Materials</u>

requirements.

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 Gradina. 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

Topsoil shall be amended with organic matter, as needed, in accordance with the Standard D. Install needed erosion control practices or facilities such as diversions, grade—stabilization structures, channel stabilization measures, sediment basins, and waterways.

structure. A uniform application to a depth of 5 inches (unsettled) is required on all sites.

- 2. <u>Seedbed Preparation</u> A. Uniformly apply ground limestone and fertilizer to topsoil which has been spread and firmed, 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 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

- A. Select a mixture from Table 4-3 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. 1. Seeding rates specified are required when a report of compliance is requested prior to actual establishment of permanent vegetation. Up to 50% reduction in rates may be used when permanent vegetation is established prior to a report of compliance inspection. These rates apply to all methods of seeding. Establishing permanent vegetation means 80% vegetative coverage with the specified seed mixture for the seeded area and mowed once. 2. Warm—season mixtures are grasses and legumes which maximize growth at high temperatures, generally 850 F and above. See Table 4-3 mixtures 1 to 7. Planting rates for warm—season grasses shall be the amount of Pure Live Seed (PLS) as determined by
- germination testing results. 3. Cool—season mixtures are grasses and legumes which maximize growth at temperatures below 85oF. Many grasses become active at 65oF. See Table 4-3, mixtures 8-20. Adjustment of planting rates to compensate for the amount of PLS is not required for cool season grasses.
- B. Conventional Seeding is performed by applying seed uniformly by hand, cyclone (centrifugal) seeder, drop seeder, drill or cultipacker seeder. Except for drilled, hydroseeded or cultipacked seedings, seed shall be incorporated into the soil within 24 hours of seedbed preparation to a depth of 1/4 to 1/2 inch, by raking or dragging. Depth of seed placement may be 1/4 inch deeper on coarse-textured soil. C. 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
- D. 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. <u>Mulch shall not be included in the tank with</u> 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
- 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 chapper-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 rea, steepness of slopes, and costs.

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

- 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 peas 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 moved.
- 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 hav, hav 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 ael 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 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 greas, seeded greas where weedseed 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)
- 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. Topdressing Since soil organic matter content and slow release nitrogen fertilizer (water insoluble) are prescribed in Section 2A - Seedbed Preparation in this Standard, no follow-up of

If soil moisture is deficient supply new seeding with adequate water (a minimum of 1/4 inch

- topdressing is mandatory. An exception may be made where gross nitrogen deficiency exists in the soil to the extent that turf failure may develop. In that instance, topdress with 10-10-10 or equivalent at 300 pounds per acre or 7 pounds per 1,000 square feet 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 4-3 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 augrantee the permanency of the turf should other maintenance factors be neglected or otherwise mismanaged.

Permaner	Table 4- nt Stabilization Mixture	_							
A 11. 11.	PLANTING MIXTURES BY SOIL DRAINAGE CLASS/1 (see Table 4-3)								
Application	Excessively Drained	Well to Moderately Well Drained	Somewhat Poorly to Poorly Drained						
Residential/commercial lots	10, 12, 15	6, 10, 12, 13, 14, 15	16						
Pond and channel banks, dikes, berms and dams	2, 5, 6, 10	5, 6, 7, 8, 9, 15	2, 8, 16, 17						
Drainage ditches, swales, detention basins	2, 9, 11	2, 7, 9, 11, 12, 17	2, 9, 16, 17						
Filter Strips	12	11, 12	11, 12						
Grasses waterway, spillways	2, 3, 9, 10, 12	6, 7, 9, 10, 11, 12	2, 9, 11,12						
Recreation areas, athletic fields	5, 12, 15, 18	12, 13, 14, 15, 18	16						
Special Problem Sites Steep slopes and banks, roadsides, borrow areas	2, 3, 4 ,6	2, 3, 5, 7, 8, 9, 10, 15, 18	2, 9, 10, 11, 12						
Sand and gravel pits, Sanitary landfills	1, 2, 3, 4, 6, 20	1, 2, 3, 4, 5, 6, 8, 15, 20	2, 8						
Dredged material, spoilbanks, Borrow areas	2, 3, 6, 20	2, 3, 6, 11,	2,8						
Streambanks & shorelines 2	2, 8, 20, 21a	2, 8, 19b, 20, 21a, 21b	2, 8, 19a, 21a,b,c,d						
Utility rights-of-way	3,7,180	3, 7	8, 9, 17						

1. Refer to Soil Surveys for drainage class descriptions. 2. Refer to Soil Bioengineering Standard for additional seed mixtures. 3. Spillways only
4. See Appendix F for description of turf grasses and cultive

Standards for Soil Erosion a		•••				~			uary 201				1
PER ED MIXTURE ²		T VEGE	TATIV	E MIX	TURE		TING R		AND I	PLANT	ING I	MAINTENANCE LEVEL #	REMARKS
				~		ting period	d A = Ad	-	gure 4-1)	g period		MAINT	
		lbs/1000	3/15-	one 5b, 6		3/1-4/30	Zone 6b	8/15-	2/1-	Zone 7a, 7	8/15-		
	lbs/acre	sq.ff.	5/31		10/1	1	8/14	10/1	4/30	8/14	10/3		
RM SEASON ED MIXTURES or Pinelands National serve Seed mixtures see ble 4-4 page 4-17			o			o			o				
Switchgrass and/or Coastal panicgrass plus or Flatpea	15 15 20 20	.35 .35 —.45 .45	o			o	73		o			C-D	
Deertongue or Switchgrass Redtop	15 20 1 10	.35 .45 .1 .23	0			O			O	Α		C-D	Use Deertongue if pH < 4.0. Switchgrass is superior wildlife plant. Use for waterways. Redtop provides quick cover.
Switchgrass Deertongue Little Bluestem Sheep fescue plus Partridge pea	15 10 20 20 10	.35 .25 .45 .45 .25	o			0			O			C-D	Pinelands mixture.
Switchgrass Big Bluestem Little Bluestem Sand lovegrass Coastal panicgrass	10 5 5 4 10	.25 .10 .10 .10	O			O			О			C-D	Native warm-season mixture.
nudagrass yxiagrass (seed) yxiagrass (sprigs)	15 30	0.35 0.70	O			0			O			A-D	Bermudagrass has superior salt tolerance. Zoysia has greater wear tolerance
OL SEASON D MIXTURES	130	3	A	A ⁵	0	A	A ⁵	0	A	A ⁵	0		General low- maintenance mixture.
Pescue (Blend) ard Fescue newings fescue nong Creeping Red Fescue ntucky bluegrass ennial ryegrass is White clover (see note at at)	45 20 5	.1 5 .10										B-D	White clover can be removed when used to establish lawns
strong Creeping red fescue Kentucky bluegrass Perennial ryegrass or Redtop plus White clover	130 50 20 10 5	3 1 .5 .25 .10	A	A^5	0	A	A^5	o	A	A ⁵	o	B-D	Suitable waterway mix. Canada bluegrass more drought tolerant. Use Redtop for increased drought- tolerance.
fescue (turf-type) or ong Creeping red fescue or ennial ryegrass typea	30 30 30 25	.7 .7 .7 .60	O	A^6		О	A^6		0	\mathbf{A}^6		B-D	Tall fescue best selected for droughty conditions. Use Creeping red fescue in heavy shade. Use Flatpea to suppress woody vegetation.
Deertongue Redtop Wild rye (Elymus) Switchgrass	20 2 15 25	.45 .05 .35 .60	О			o			o			C-D	Native wet mix.
fescue (turf-type) nnial ryegrass te clover (see note at right)	265 20 10 5	6 5 25 .10	o	A^5	\mathbf{A}^{5}	o	A ⁵	A^5	o	A ⁵	A^5	C-D	white clover can be excluded on lawn sites
ntucky Bluegrass f-type Tall fescue	15 45 22	0.33 1 5	A	A^5	О	A	A^5	О	A	A^5	О	C-D	Filter strip use for nutrient uptake.
urf-type Tall fescue Blend of 3 cultivars)	350	8	A	A^5	О	A	A^5	О	A	A^5	О	C-D	Use in a managed filter strip for nutrient uptake.
ard Fescue and/or hewing fescue and/or crong creeping red fescue rennial ryegrass y. bluegrass (blend)	175 45 45	4 1 1	A	A^5	О	A	\mathbf{A}^5	0	A	A^5	0	A-C	General lawn/recreation.
l fescue . bluegrass (blend) rennial ryegrass (blend)	265 20 20	6 0.50 0.50	A	A^5	О	A	A^5	0	A	A^5	0	A-B	Athletic field/ 3 cultivar mix of Kentucky Bluegrass.
ard fescue hewings fescue rong Creeping red fescue rennial ryegrass	130 45 45 10	3 1 1 .25	A	A^5	О	A	A^5	О	A	A^5	0	C-D	Low-maintenance find fescue lawn mix.
ough bluegrass ong Creeping red fescue	90 130	2.0	A	A^5	О	A	A^5	О	A	A^5	0	C-D	Moist shade.
eeping bentgrass reeping red fescue Ikali saltgrass	45 45 45	1 1 1	A	A^5	o	A	A^5	o	A	A^5	o	B-D	Use bentgrass under wetter conditions. Saltgrass will only persistent under salins conditions.
ard or Sheeps fescue . E. wildflower mixture	25 12	0.60 0.35	o	A	o	o	A	o	o	A	o	C-D	Regional Wildflower mix Hydroseeding not recommended.
Smooth cordgrass Saltmeadow cordgrass	veg veg					O	Before July 1		O	Before July I		D	Planted in the intertidal zone. Planted above mean high tide.
merican Beachgrass oastal Panicgrass	Veg 20	.45				Before April I			О			D	Coastal Panicgrass may be interseeded between rows of

Table 4-3 Footnotes:

- 1. See Appendix B for descriptions of turf grass mixtures and cultivars. The actual amount of warm-season grass mixture used in Table 3 (seed mix 1-7) shall be adjusted to reflect the amount of PLS as determined by germination testing results. No adjustment is required for
- cool-season grasses (seed mixtures 8-20). 2. Seeding mixtures and/or rates not listed above may be used if recommended by the local Soil Conservation District, Natural Resources Conservation Service; recommendations of Rutgers Cooperative Extension may be used if approved by the Soil Conservation District. Legumes (white clover, flatpea, lespedeza) should be mixed with proper innoculant prior to
- 3. Seeding rates specified are required when a report of compliance is requested prior to actual establishment of permanent vegetation. Up to 50% reduction in rates may be used when permanent vegetation is established prior to a report of compliance inspection. These rates apply to all methods of seeding. Establishing permanent vegetation means 80% vegetative coverage of the seeded area and mowed once. Grass seed mixture checked by the State Seed Analyst, New Jersey Department of Agriculture, Trenton, New Jersey, will assure the purchaser that the mixture obtained is the mixture ordered, pursuant to the N.J. State Seed Law, N.J.S.A. 4:8-17.13 et. sea. O = optimal planting period A = acceptable planting period
- 4. Maintenance Level: A: Intensive mowing, (2-4 days), fertilization, lime, pest control and irrigation (Examples high-maintenance lawns, commercial and recreation areas, public facilities). B: Frequent mowing, (4-7 days), occasional fertilization, lime and weed control (Examples home lawns, commercial sites, school sites). C: Periodic mowing (7-14 days), occasional fertilization and lime (Examples – home lawns, D: Infrequent or no mowing, fertilization and lime the first year of establishment
- (Examples roadsides, recreation areas, public open spaces) 5. Summer seedings should only be conducted when the site is irrigated. Mixes including white clover require that at least six weeks of growing season remain after seeding to ensure establishment before freezing conditions.

STANDARD FOR STABILIZATION WITH MULCH ONLY

Standards for Land Gradina

Where Applicable

This practice is applicable to greas subject to erosion, where the season and other conditions may not be suitable for growing an erosion-resistant cover or where stabilization is needed for a short period until

- more suitable protection can be applied. Methods and Materials
- 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
- B. Install needed erosion control practices or facilities such as diversions, grade stabilization structures, channel stabilization measures, sediment basins, and waterways. See Standards 11 through 42. 2. Protective Materials A. Unrotted small-grain straw, at 2.0 to 2.5 tons per acre, is spread uniformly at 90 to 115 pounds per 1,000 square feet and anchored with a mulch anchoring tool, liquid mulch binders, or netting tie down.

Other suitable materials may be used if approved by the Soil Conservation District. The approved rates

- above have been met when the mulch covers the ground completely upon visual inspection, i.e. the soil cannot be seen below the mulch. C. Synthetic or organic soil stabilizers may be used under suitable conditions and in quantities as recommended by the manufacturer.
- D. Wood-fiber or paper-fiber mulch at the rate of 1,500 pounds per acre (or according to the manufacturer's requirements) may be applied by a hydroseeder. E. Mulch netting, such as paper jute, excelsior, cotton, or plastic, may be used F. Woodchips applied uniformly to a minimum depth of 2 inches may be used. Woodchips will not be
- used on areas where flowing water could wash them into an inlet and plug it. G. Gravel, crushed stone, or slag at the rate of 9 cubic yards per 1,000 sq. ft. applied uniformly to a minimum depth of 3 inches may be used. Size 2 or 3 (ASTM C-33) is recommended. 3. Mulch Anchoring — should be accomplished immediately after placement of hay or straw mulch to minimize loss by wind or water. This may be done by one of the following methods, depending upon the size of the area and steepness of slopes.
- A. Peg and Twine Drive 8 to 10 inch wooden pegs to within 2 to 3 inches of the soil surface every 4 feet in all directions. Stakes may be driven before or after applying mulch. Secure mulch to soil surface by stretching twine between pegs in a criss—cross and a square pattern. Secure twine around each pea with two or more round turns. B. Mulch Nettings — Staple paper, cotton, or plastic nettings over mulch. Use degradable netting in greas to be moved. Netting is usually available in rolls 4 feet wide and up to 300 feet long.
- C. Crimper Mulch Anchoring Coulter Tool A tractor—drawn implement especially designed to punch and anchor mulch into the soil surface. This practice affords maximum erosion control, but its use is limited to those slopes upon which the tractor can operate safely. Soil penetration should be about 3 to 4 inches. On sloping land, the operation should be on the contour. D. Liquid Mulch-Binders . Applications should be heavier at edges where wind catches the mulch, in valleys, and at crests of
- banks. Remainder of area should be uniform in appearance. 2. Use one of the following: a. Organic and Vegetable Based Binders — Naturally occurring, powder based, hydrophilic materials that mixed with water formulates a gel and when applied to mulch under satisfactory curing conditions will form membrane networks of insoluble polymers. The vegetable gel shall be physiologically harmless and not result in a phyto-toxic effect or impede growth of turfgrass. Vegetable based gels shall be applied b. Synthetic Binders — High polymer synthetic emulsion, miscible with water when diluted and following

application to mulch, drying and curing shall no longer be soluble or dispersible in water. It shall be

applied at rates and weather conditions recommended by the manufacturer and remain tacky until

STANDARD FOR PERMANENT STABILIZATION WITH SOD

aermination of arass.

<u>Where Applicable</u> On exposed soils that have a potential for causing off—site environmental damage where an immediate, permanent, vegetative cover is desired. Water (rain or irrigation) is required for success; access to irrigation is essential during drought.

- <u>Methods and Materials</u> 1. High quality cultivated sod is preferred over native or pasture sod. 2. Sod should be free of broadleaf weeds and undesirable coarse and fine weed grasses. 3. Sod should be of uniform thickness, typically 5/8 inch, plus or minus 1/4 inch, at time of
- cutting (excludes top growth.). 4. Sod should be vigorous and dense and be able to retain its own shape and weight when suspended vertically with a firm grasp from the upper 10 percent of the strip. Broken pads and rolls 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.
- A. Grade as needed and feasible to permit the use of conventional equipment for liming fertilizing, incorporation of 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 a depth of 6 inches (unsettled) is required on all sites. See the Standard for Topsoiling for topsoil and amendment requirements.
- C. Install needed erosion control practices or facilities such as diversions, grade stabilization structures, channel stabilization measures, sediment basins, and waterways A. Uniformly 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. Soil testing shall be performed on site and the lime application rate shall be based on the test results. 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. Limestone application rates shall be established through soil testing. 1. Pulverized dolomitic limestone is preferred for most soils south of the New Brunswick-Trenton line; however, this should be confirmed by soil testing. 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 disking 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 retilled and firmed in accordance with the above. 3. Sod Placement
- A. Sod strips should be laid on the contour, never up and down the slope, starting at the bottom of the slope and working up. On steep slopes, the use of ladders will facilitate the Standards for Soil Erosion and Sediment Control in New Jersey January 2014 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 (seams) that are staggered. Open spaces invite
- 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 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 3/4 inch wide). E. Surface water cannot always be diverted from flowing over the face of the slope, but a capping strip of heavy jute or plastic netting, properly secured, along the crown of the slope and edges will provide extra protection against lifting and undercutting of sod. The same technique can be used to anchor sod in water-carrying channels and other critical areas. Wire staples must be used to anchor netting in channel work. beneath sod to a depth of 1 inch. Maintain optimum water for at least two weeks.
- F. Immediately following installation, sod should be watered until water penetrates the soil layer 4. Topdressing — Since soil organic matter and slow release nitrogen fertilizer (water insoluble) are prescribed in Sections 1 and 2in this Standard, a follow-up topdressing is not mandatory, except where gross nitrogen deficiency exists in the soil to the extent that turf failure may develop, topdressing shall then be applied. Topdress with 10-0-10 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 in the turf is ameliorated.

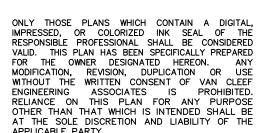
TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION Where Applicable

1. Site Preparation

On exposed soils that have the potential for causing off-site environmental damage. <u>Methods and Materials</u>

A. Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application, and mulch anchoring. All grading should be done in accordance with Standards for Land Grading, pg. 19-1 B. Install needed erosion control practices or facilities such as diversions, grade stabilization structures, channel stabilization measures, sediment basins, and waterways. See Standards 11 C. Immediately prior to seeding, the surface should be scarified 6" to 12" where there has

been soil compaction. This practice is permissible only where there is no danger to



underground utilities (cables, irrigation systems, etc.).



IF YOU'RE GOING TO DIG, BLASE OR DRILL
THREE (3) WORKING DAYS NOTICE IT'S THE LAW! Know what's below.
Call before you dig.
or and
Of the state of the sta 2. Seedbed Preparation A. Apply ground limestone and fertilizer according to soil test recommendations such as offered by Rutgers Co-operative Extension. Soil sample mailers are available from the local Rutgers Cooperative Extension offices. Fertilizer shall be applied at the rate of 500 pounds per acre or 11 pounds per 1.000 square feet of 10-20-10 or equivalent with 50% water insoluble nitrogen unless a soil test indicates otherwise. Soil testing shall be performed on site and the lime application rate shall be based on the test results. 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.

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 disking operation should be on the general contour. Continue tillage until a reasonable uniform seedbed is C. Inspect seedbed just before seeding. If traffic has left the soil compacted, the area must be retilled in accordance with the above. D. Soils high in sulfides or having a pH of 4 or less refer to Standard for Management of

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

High Acid Producing Soils, pg. 1−1.

		IAL	3LE /-2			
TEMPORARY VEGE	TATIVE S	STABILIZATION	N GRASSES,	SEEDING RA	TES, DATES A	AND DEPTH.
SEED SELECTIONS		G RATE 1 inds)		M SEEDING D lant Hardiness	OPTIMUM SEED DEPTH 4	
SEED SELECTIONS	Per Acre	Per 1000 Sq. Ft.	ZONE 5b, 6s	ZONE 6b	ZONE 7a, b	(inches)
		(COOL SEASO	N GRASSES		
1. Perennial ryegrass	100	1.0	3/15-6/1 8/1-9/15	3/1-5/15 8/15-10/1	2/15-5/1 8/15-10/15	0.5
2. Spring oats	86	2.0	3/15-6/1 8/1-9/15	3/1-5/15 8/15-10/1	2/15-5/1 8/15-10/15	1.0
3. Winter Barley	96	2.2	8/1-9/15	8/15-10/1	8/15-10/15	1.0
4. Annual ryegrass	100	1.0	3/15-6/1 8/1-9/15	3/15-6/1 8/1-9/15	2/15-5/1 8/15-10/15	0.5
5. Winter Cereal Rye	112	2.8	8/1-11/1	8/1-11/15	8/1-12/15	1.0
		WAF	RM SEASON	GRASSES		
6. Pearl millet	20	0.5	6/1-8/1	5/15-8/15	5/1-9/1	1.0
7. Millet (German or Hungarian)	30	0.7	6/1-8/1	5/15-8/15	5/1-9/1	1.0

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

B. Conventional Seeding. Apply seed uniformly by hand, cyclone (centrifugal) seeder, drop seeder, drill or cultipacker seeder. Except for drilled, hydroseeded or cultipacked seedings, seed shall be incorporated into the soil, to a depth of 1/4 to 1/2 inch, by raking or dragging. Depth of seed placement may be 1/4 inch deeper on coarse textured soil. C. Hydroseeding is a broadcast seeding method usually involving a truck or trailer mounted tank, with an agitation system and hydraulic pump for mixing seed, water and fertilizer and spraying the mix onto the prepared seedbed. Mulch shall not be included in the tank with seed. Short fibered mulch may be applied with a hydroseeder following seeding. (also see Section IV Mulching) Hydroseeding is not a preferred seeding method because seed and fertilizer are applied to the surface and not incorporated into the soil. Poor seed to soil contact occurs reducing seed germination and growth. Hydroseeding may be used for greas too steep for conventional equipment to traverse or too obstructed with rocks, stumps, etc. D. After seeding, firming the soil with a corrugated roller will assure good seed-to-soil contact, restore capillarity, and improve seedling emergence. This is the preferred method. When performed on the contour, sheet erosion will be minimized and water conservation on site will be maximized.

Mulching is required on all seeding. Mulch will insure against erosion before grass is established and will promote faster and earlier establishment. The existence of vegetation sufficient to control soil erosion shall be deemed compliance with this mulching requirement. A. Straw or Hay. Unnrotted small grain straw, hay free of seeds, applied at the rate of 1-1/2to 2 tons per acre (70 to 90 pounds per 1,000 square feet), except that where a crimper is used instead of a liquid mulch—binder (tackifying or adhesive agent), the rate of application is 3 tons per acre. Mulch chopper-blowers must not grind the mulch. Hay mulch is not recommended for establishing fine turf or lawns due to the presence of weed seed. Application. Spread mulch uniformly by hand or mechanically so that approximately 95% of the soil surface will be covered. For uniform distribution of hand-spread mulch, divide area into approximately 1,000 square feet sections and distribute 70 to 90 pounds within each 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 peas in a cris-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 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-Rinders - May be used to anchor hay or straw mulch a. Applications should be heavier at edges where wind may catch the mulch, in valleys, and at crests of banks. The remainder of the area should be uniform in appearance. b. Use one of the following

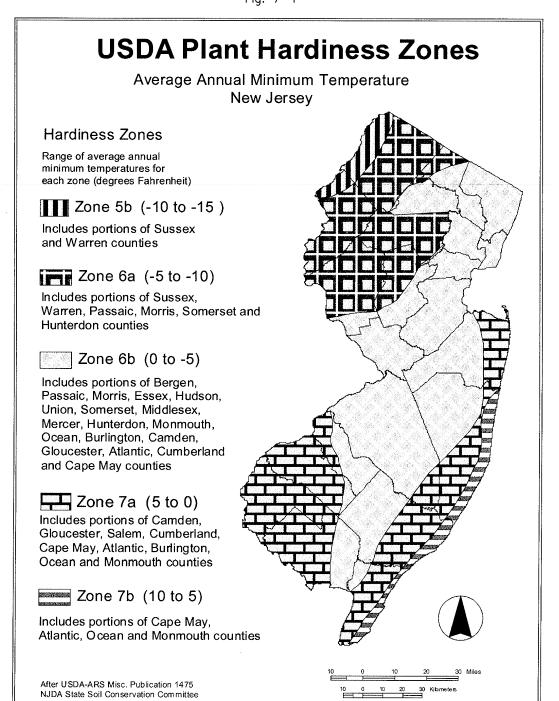
(1) Organic and Vegetable Based Binders - Naturally occurring, powder based, hydrophilic materials when mixed with water formulates a gel and when applied to mulch under satisfactory curing conditions will form membraned networks of insoluble polymers. The vegetable gel shall be physiologically harmless and not result in a phytotoxic effect or impede growth of turfgrass. Use at rates and weather conditions as recommended by the manufacturer to anchor mulch materials. Many new products are available, some of which may need further evaluation for use in this state. (2) Synthetic Binders — Hiah 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

Note: All names give above are registered trade names. This does not constitute a commendation 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 ponds per acre (or as recommended by the project manufacturer) and may be applied by a hydroseeder. This mulch shall not be mixed in the tank with seed. Use is limited to flatter slopes and during optimum seeding periods in spring and fall. C. Pelletized mulch. Compressed and extruded paper and/or wood fiber product, which may tackifiers, fertilizers and coloring agents. The dry pellets, when applied to a seeded area and

watered, forma mulch mat. Pelletized mulch shall be applies in accordance with the manufacturers recommendations. Mulch may be applied by hand or mechanical spreader at the rate of 60-75 lbs./1,000 square feet and activated with 0.2 to 0.4 inches of water. This material has bee 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

Fig. 7-1



REFERENCE STANDARD FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY" ADOPTED FEBRUARY 2014 BY THE NEW JERSEY STATE SOIL CONSERVATION COMMITEE.

GENERAL NOTES 1. THIS PLAN IS NOT VALID UNLESS EMBOSSED WITH THE SEAL OF THE UNDERSIGNED PROFESSIONAL(S, STANDARD FOR TOPSOILING

Methods and Materials

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

A. Topsoil should be friable1, loamy2, free of debris, objectionable weeds and stones, and contain no toxic substance or adverse chemical or physical condition that may be harmful to plant growth. Soluble salts should not be excessive (conductivity less than 0.5 millimhos per centimeter. More than 0.5 millimhos may desicate seedlings and adversely impact growth).

Topsoil hauled in from offsite should have a minimum organic matter content of 2.75 percent. Organic matter content may be raised by additives. B. Topsoil substitute is a soil material which may have been amended with sand, silt, clay, organic matter, fertilizer or lime and has the appearance of topsoil. Topsoil substitutes may be utilized on sites with insufficient topsoil for establishing permanent vegetation. All topsoil substitute materials shall meet the requirements of topsoil noted above. Soil tests shall be performed to determine the components of sand, silt, clay, organic matter, soluble salts and

Friable means easily crumbles in the fingers, as defined in most soils texts. 2 Loamy means texture groups consisting of coarse loamy sands, sandy loam, fine and very fine sandy loam, loam, silt loam, clay loam, sandy clay loam and silty clay loam textures and having less than 35% coarse fragments (particles less than 2mm in size) as defined in the Glossary of Soil Science Terms, 1996, Soil Science Society of America.

2. Stripping and Stockpiling A. Field exploration should be made to determine whether quantity and or quality of surface soil justifies stripping. B. Stripping should be confined to the immediate construction area. . Where feasible, lime may be applied before stripping at a rate determined by soil tests to bring the soil pH to approximately 6.5. In lieu of soil tests, see lime rate guide in seedbed

preparation for Permanent Vegetative Cover for Soil Stabilization, pg. 4—1. D. A 4-6 inch stripping depth is common, but may vary depending on the particular soil. . Stockpiles of topsoil should be situated so as not to obstruct natural drainage or cause off-site environmental damage F. Stockpiles should be vegetated in accordance with standards previously described herein; see standards for Permanent (pg. 4-1) or Temporary (pg.7-1) Vegetative Cover for Soil

Stabilization. Weeds should not be allowed to grow on stockpiles. 3. Site Preparation A. Grade at the onset of the optimal seeding period so as to minimize the duration and area of exposure of disturbed soil to erosion. Immediately proceed to establish vegetative cover in accordance with the specified seed mixture. Time is of the essence

B. Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application and anchoring, and maintenance. See the Standard for Land Grading, pg. 19-1. C. As guidance for ideal conditions, subsoil should be tested for lime requirement. Limestone, if needed, should be applied to bring soil to a pH of approximately 6.5 and incorporated into the soil as nearly as practical to a depth of 4 inches.

D. Immediately prior to topsoiling, the surface should be scarified 6" to 12" where there has been soil compaction. This will help insure a good bond between the topsoil and subsoil. This practice is permissible only where there is no danger to underground utilities (cables, irrigation systems, etc.). F. Employ needed erosion control practices such as diversions, grade stabilization structures. channel stabilization measures, sedimentation basins, and waterways. See Standards 11 through 42.

4. Applying Topsoil A. Topsoil should be handled only when it is dry enough to work without damaging soil structure; i.e., less than field capacity (see glossary). B. A uniform application to a depth of 5 inches, minimum of 4 inches, firmed in place is required. Soils with a pH of 4.0 or less or containing iron sulfide shall be covered with a minimum depth of 12 inches of soil having a pH of 5.0 or more, in accordance with the Standard for Management of High Acid Producing Soil (pg. 1-1).

STANDARD FOR TREE PROTECTION DURING CONSTRUCTION

<u>Where Applicable</u>

On new development sites with existing trees. Methods and Materials

1. Reconnaissance should be performed before land clearing begins to identify dead and weak trees to be removed and healthy trees to remain, to create aesthetically pleasing development site with vegetation rather than the presence of dead or dying trees. Inventory the site and clearly mark the trees and stands of trees to be saved. Consider relocating streets, houses, or other structures if necessary and feasible. Once clearing begins and damage to the trees

occurs, valuable specimens may be lost. A. Characteristics of trees to be protected and saved. The following lists characteristics that should be evaluated before deciding to remove or protect a tree. 1. Tree Vigor

Tree health is the overall condition of the tree. A tree of low vigor is more susceptible to damage by environmental changes than healthy trees and is more susceptible to insect and disease attacks. Indications of poor vigor include the dying of the tips of branches and entire limbs, small annual twig growth, stunted leaf size, sparse foliage, and poor foliage color. Avoid saving hollow or rotten trees, trees cracked, split, leaning or crooked, oozing sap, or with broken tops. Use woodchips generated from removal of trees of poor health and spread them around the root zones to help protect the trees that remain.

Large, picturesque trees may be more aesthetically valuable than smaller, young trees, but also require more extensive protection measures. If leaving an older tree, be sure it is sound and healthy. 3. Species (the right trees for the right locations)

Many species of trees found in New Jersey woodlands are not suitable for shade tree uses ground buildings. Avoid protecting trees that are short-lived, brittle, have soft wood, messy leaves, fruit, or are frequently attacked by insects and disease. Tree root systems which do not adapt well to cuts and fills may not be a suitable alternative. The following are severely affected by compacted construction fills: Aspen, Beech, Paper birch, Eastern red cedar, Black cherry, Dogwood, Katsura tree, Linden, Paperbark maple, Sugar maple, Black oak, Pin oak, Red oak, White oak, Pines, and Tuliptree. 4. Resistant to Insects and Diseases Avoid leaving trees in highly visible areas or specimens that are frequent targets of insects

and diseases. American Elm, for example, could be lost due to Dutch Elm Disease. Wild Cherry, another example, is a favorite host of the tent caterpillar, which causes defoliation of the trees in early summer. The following are susceptible to insects (I) and disease (D): White Ash(D), Birch (I), Butternut (D), Crabapples (D), some Elms (D), Hawthorn (D), Hemlock (I), Linden (I), Sugar Maple (D), Mountain Ash (D), Sassafras (I), Scholartree (D), Redbud (D) Choose trees that are aesthetically pleasing, exhibiting good shape and form. Avoid leaning,

crooked, and misshapen trees. Occasionally, an odd-shaped tree or one of unusual form may add interest to the landscape if strategically located. Be sure the tree is structurally sound and vigorous. 6. Spring and Autumn Coloration Species differ in fall color. Some are bright red, others orange and yellow. Other species exhibit no autumn color, such as walnut, locust, and sycamore.

7. Wildlife Benefits Favor trees that are preferred by wildlife for food, cover, and nesting. A mixture of evergreens and hardwoods is beneficial. Evergreen trees are important for cover during the winter months. The hardwoods are more valuable for food. 8. Air Pollution Susceptibility Tree species vary greatly to susceptibility to air pollution. Symptoms vary from browning on the edges of the leaves and needles, to stunting of growth, to death of the tree. The

following show tolerance to urban stress and are less likely to present problems with sidewalks: Baldcypress, Corktree, Amur maple. Kentucky coffee tree. Crabapple. Dawn redwood Ginkgo (male), Goldenraintree, Hackberry, Hawthorn, Honeylocust, European hornbeam, Horsechestnut, Lindens, Oaks (excluding pin), Pear, Scholartree, Sourgum (tupelo), Sweetgum, Yews, Zelkova. 9. Species Longevity Favor trees whose life span is long, such as oak, beech, and tulip poplar. Short-lived

trees; (Black locust, Gray birch, Aspen) should be avoided for use as shade, lawn or specimen trees. Although some short-lived trees have an attractive form or pleasing coloration in the spring or fall, such trees may not live for a long time and thus may not be worth B. Criteria for protecting remaining trees: 1. General mechanical damage — see Tree Protection During Construction Detail for correct root zone calculation and placement of tree protection. 2. Box trees within 25 feet of a building site to prevent mechanical injury. Fencing or other

barrier should be installed beyond the Critical Root Radius see Tree Protection During Construction Detail. Tree root systems commonly extend well beyond the drip line. 3. Boards will not be nailed to trees during building operations. 4. Feeder roots should not be cut in an area inside the Protected Root Zone (PRZ). 5. 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 licensed tree

6. Tree limb removal, where necessary, will be done as natural target pruning to remove the desired branch as close as possible to the 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.

Note: For more specific data on certain tree characteristics by species, see Table 9.1 of the Standards for Soil Erosion and Sediment Control in New Jersey for 2014, or consult with a Licensed Professional Tree Expert, Soil Conservation District or Rutgers Cooperative Extension.

SEQUENCE OF CONSTRUCTION

- 1.) INSTALL ALL TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. 2.) INSTALL ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN ON PLAN.
- 3.) INSTALL STORM SEWER WHERE REQUIRED. 4.) CONSTRUCT OLD MAIN LOOP ROAD.
- 5.) CONSTRUCT IMPROVEMENTS ON DRIVEWAY BETWEEN LIBRARY AND GYM. 6.) CLOSE EXISTING DRIVEWAY BETWEEN WESLEY HOUSE AND HUMANITIES BUILDING CONSTRUCT OPEN SPACE IMPROVEMENTS.
- 7.) INSTALL PERIMETER LANDSCAPING AND IMPROVEMENTS 8.) CONSTRUCT ATHLETIC FIELD IMPROVEMENTS
- 9.) INSTALL TOPSOIL, SEED, LIME, FERT. AND MULCH. 10.) STABILIZE ANY REMAINING DISTURBED AREAS.
- 11.) REMOVE SOIL EROSION CONTROL MEASURES.
- 12.) REMOVE TRAFFIC CONTROL DEVICES.

NEW JERSEY PROFESSIONAL ENGINEER NUMBER 24GE052258005

SCALE: **DESIGNED BY:** DRAWN BY: REV. PER LAYOUT CHANGES **CHECKED BY:** PER TOWNSHIP & OUTSIDE AGENCY COMMENTS JAB 9/30/ V DESCRIPTION AUTH DATE 20-02-PEB

DATE

STANDARD FOR DUST CONTROL

Water Quality Enhancement

The control of dust on construction sites and roads.

To prevent blowing and movement of dust from exposed soil surfaces, reduced on-site and off—site damage and health hazards and improve traffic safety. Condition Where Practice Applies

This practice is applicable to areas subject to dust blowing and movement where on-site and off—site damage is likely without treatment. Consult with local municipal ordinances on any

Sediments deposited as "dust" are often fine colloidal material which is extremely difficult to remove from water once it becomes suspended. Use of this standard will help to control the generation of dust from construction sites and subsequent blowing and deposition into local Planning Criteria

The following methods should be considered for controlling dust:

Mulches - See Standard of Stabilization with Mulches Only, pg. 5-1 Vegetative Cover — See Standard for: Temporary Vegetative Cover, pg. 7—1, Permanent Vegetative Cover for Soil Stabilization pg. 4—1 and Permanent Stabilization with Sod, pg. 6—1

Spray—On Adhesives — On mineral soils (not effective on muck soils). Keep traffic off these

ureus.			
Table 16-1 Dust Control Materials			
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			instructions. May be used
Polýacrýlamide (PAM) – dry spread	as an additi suspeded co	ve to sediment basins olloids. See sediment b	to flocculate and precipitate asin standard, p 26—1
Acisulated Soy Bean Soap Stick	None	Coarse spray	1200

Tillage — To 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. Sprinkling - Site is sprinkled until the surface is wet.

Barriers - Solid board fences, snow fences, burlap fences, crate walls, bales of hay and similar material can be used to control air currents and soil blowing. Calcium Chloride — Shall be 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. If used on steeper slopes, then use other practices to prevent washing into

streams or accumulation around plants. Stone — Cover surface with crushed stone or coarse gravel.

5. A copy of the certified Soil Erosion and Sediment Control plan shall be maintained on site at all times.

MERCER COUNTY SCD REQUIRED SOIL EROSION AND SEDIMENT CONTROL NOTES (for inclusion on all SESC plans submitted for review and certification)

Updated August 2014

1. The Mercer County Soil Conservation District shall be notified 48 hours prior to starting land disturbance activity. Notice may be mailed, faxed or emailed to: MCSCD, 590 Hughes Drive, Hamilton Square, NJ 08690 Phone: 609-586-9603 Fax: 609-586-1117 Email: Pauls1mercer@aol.com 2. If applicable to this project, the owner should be aware of his or her obligation to file for a NJPDES Construction Activity Stormwater 5G3 Permit (NJG0088323) via the NJDEP

online permitting system (www.nj.gov/dep/online) and to maintain the associated best management practices and Stormwater Pollution Prevention Plan self-inspection logbook

onsite at all times. This permit must be filed prior to the start of soil disturbance. The online application process will require entry of an SCD certification code, which is provided

by the Soil Conservation District upon certification of the Soil Erosion and Sediment Control Plan. The Mercer County Soil Conservation District shall be notified of any changes in ownership. 4. Any changes to the Certified Soil Erosion and Sediment Control Plan, including an increase in the limit of disturbance, will require the submission of revised Soil Erosion and Sediment Control Plans to the District for recertification. The revised plans must meet all current State Soil Erosion & Sediment Control STANDARDS.

6. All Soil Erosion and Sediment Control practices shall be installed prior to any major soil disturbances, or in their proper sequence as outlined within the Sequence of Construction on the Certified Soil Erosion and Sediment Control Plan, and maintained until permanent protection is established. 7. All work shall be done in accordance with the current STANDARDS for Soil Erosion and Sediment Control in NJ. If language contained within any other permit for this project is more restrictive than (but not contradictory to) what is contained within these notes or on the Certified Soil Erosion and Sediment Control Plan, then the more restrictive permit 8. The Standard for Stabilized Construction Access requires the installation of a 1½" to 2½" clean stone tracking pad at all construction driveways immediately after initial site

disturbance, whether identified on the certified plan or not. The width shall span the full width of egress, and length shall be 50 ft. or more, depending on site conditions and as required by the STANDARD. This shall include individual lot access points within residential subdivisions. If the egress is to a County road, then a 20 ft. long paved transition shall be provided between the edge of pavement and the stone access pad. 9. A sub-base course will be applied immediately following rough grading and installation of improvements in order to stabilize streets, roads, driveways and parking areas. In areas where no utilities are present, the sub-base shall be installed within 15 days of preliminary grading, provided that all other requirements related to detention basins, swales and the Sequence of Construction have been met

10. Any disturbed areas that will be left exposed more than 14 days and not subject to construction activity will immediately receive temporary stabilization. If the season prevent establishment of a temporary vegetative cover, or if the area is not topsoiled, then the disturbed areas will be mulched with straw, or equivalent material, at a rate of two (2) tons per acre, according to State STANDARDS. Sloped areas in excess of 3H:1V shall be provided with erosion control blankets. Critical areas subject to erosion (i.e. steep slopes, roadway embankments, environmentally sensitive areas) will receive temporary stabilization immediately after initial disturbance or rough grading 11. Any steep slopes (i.e. slopes greater than 3:1) receiving pipeline or utility installation will be backfilled and stabilized daily, as the installation proceeds. 12. Permanent vegetation shall be seeded or sodded on all exposed areas within ten (10) days after final grading and topsoiling. All agronomic requirements contained within the

STANDARDS and on the Certified Plan shall be employed. Mulch with binder, in accordance with the STANDARDS, shall be used on all seeded areas. Save all tags and/or bags used for seed, lime and fertilizer, and provide them to the District inspector to verify that mixtures and rates meet the STANDARDS. 13. At the time when the 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 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, then non-vegetative means of permanent ground stabilization will have to be employed. 14. During the course of construction, soil compaction may occur within haul routes, staging areas and other project areas. In accordance with the Standard for Topsoiling,

compacted surfaces should be scarified 6" to 12" immediately prior to topsoil application. This will help ensure a good bond between the topsoil and subsoil. This practice is permissible only where there is no danger to underground utilities (cables, irrigation systems, etc.). 5. Prior to seeding, topsoil shall be worked to prepare a proper seedbed. This shall include raking of the topsoil and removal of debris and stones, along with other requirements 16. 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 buried with limestone in accordance with the STANDARD and be covered with a minimum of 12" of soil having a pH of 5 or more prior to topsoil application and seedbed preparation. If the area is to

receive tree or shrub plantings, or is located on a slope, then the area shall be covered with a minimum of 24" of soil having a pH of 5 or more. / Mulching to the STANDARDS is required for obtaining a Conditional Report of Compliance. Conditional ROC's are only issued when the season prohibits seeding. Permanent stabilization must then be completed during the optimum seeding season immediately following the Conditional ROC, or the completion of work in a given area. 18. Hydroseeding is a two-step process. The first step includes seed, fertilizer, lime, etc., along with minimal amounts of mulch to promote consistency, good seed-to-soil contact and give a visual indication of coverage. Upon completion of the seeding operation, hydromulch should be applied at a minimum rate of 1500 lbs. per acre in second step. The

use of hydro-mulch, as opposed to straw, is limited to optimum seeding dates as listed in the STANDARDS. The use of Hydromulch on sloped areas is discouraged. 19. The contractor is responsible for keeping all adjacent roads clean during life of the construction project. All sediment washed, dropped, tracked or spilled onto paved surfaces shall be immediately removed. 20. The developer shall be responsible for remediating any erosion or sediment problems that arise as a result of ongoing construction, and for employing additional erosion an sediment control measures at the request of the Mercer County Soil Conservation District.

22. All detention / retention basins must be fully constructed (inclusive of all structural components and liners) and permanently stabilized prior to paying or prior to the addition of any impervious surfaces. Permanent stabilization includes, but may not be limited to: topsoil, seed, straw mulch and binders or erosion control blankets on all seeding, all agronomic requirements as specified on the Certified Soil Erosion and Sediment Control Plan, installation of the outflow control structures and discharge storm drainage piping low flow channels, conduit outlet protection, emergency spillways, and lap ring protection.

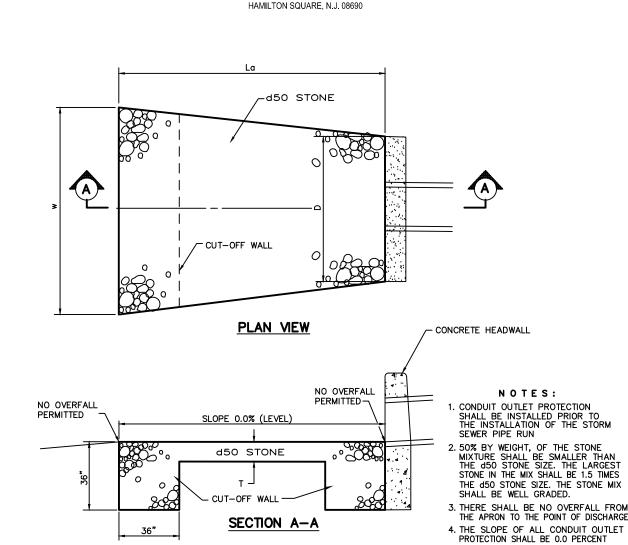
21. Conduit Outlet Protection must be installed at all required outfalls prior to the drainage system becoming operational.

23. The riding surface of all utility trenches within paved areas shall be 3/4" clean stone or base pavement until such time as final pavement has been installed. Temporary soil riding surfaces are prohibited. 24. All construction dewatering (trenches, excavations, etc.) must be done through an inlet or outlet filter in accordance with the Standard for Dewatering or as depicted on the Certified Soil Erosion and Sediment Control Plan. Discharge locations for the dewatering operation must contain perennial vegetation or similar stable surface. 25. All swales or channels that will receive runoff from paved surfaces must be permanently stabilized prior to the installation of pavement. If the season prohibits the

590 HUGHES DRIVE

establishment of permanent stabilization, the swales or channels may be temporarily stabilized in accordance with the STANDARDS.

26. NJSA 4:24-39 et seg. requires that no Certificate of Occupancy or Temporary Certificate of Occupancy be issued by the Municipality before the provisions of the Certified Soil Erosion and Sediment Control Plan have been satisfied. Therefore, all site work for site plans and all work around individual lots in subdivisions must be completed before the District issues a Report of Compliance or Conditional Report of Compliance, which must be forwarded to the Municipality prior to the issuance of a Certificate of Occupancy or Temporary Certificate of Occupancy, respectively. MERCER COUNTY SOIL CONSERVATION DISTRICT



RRF/RKY VAN CLEEF ENGINEERING ASSOCIATES, LLC 4 AAA DRIVE, SUITE 103, HAMILTON, NJ 0869

Site Development Surveying/Aerial Drones/GIS Water/Wastewate

SOIL EROSION & SEDIMENT CONTROL NOTES THE PENNINGTON SCHOOL MASTER PLAN

CERT. OF AUTHORIZATION NO. 24GA28132300

WW.VANCLEEFENGINEERING.C PHONE (609) 689-1100

PRELIMINARY & FINAL SITE PLAN BLOCK 701, LOT 4, BLOCK 502, LOT 4, **BLOCK 206, LOT 10 & BLOCK 205, LOT 1** PENNINGTON BOROUGH, MERCER COUNTY, NEW JERSEY

Construction Inspectio

Landscape Architecture

Local/Regional Planning

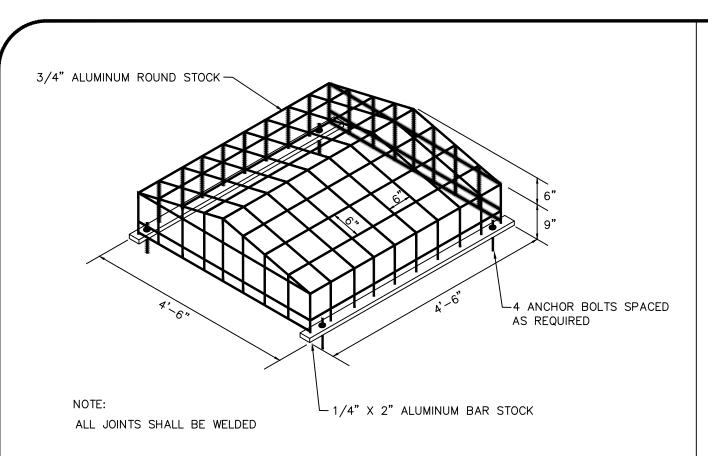
Municipal Engineering

Geotechnical/Dams

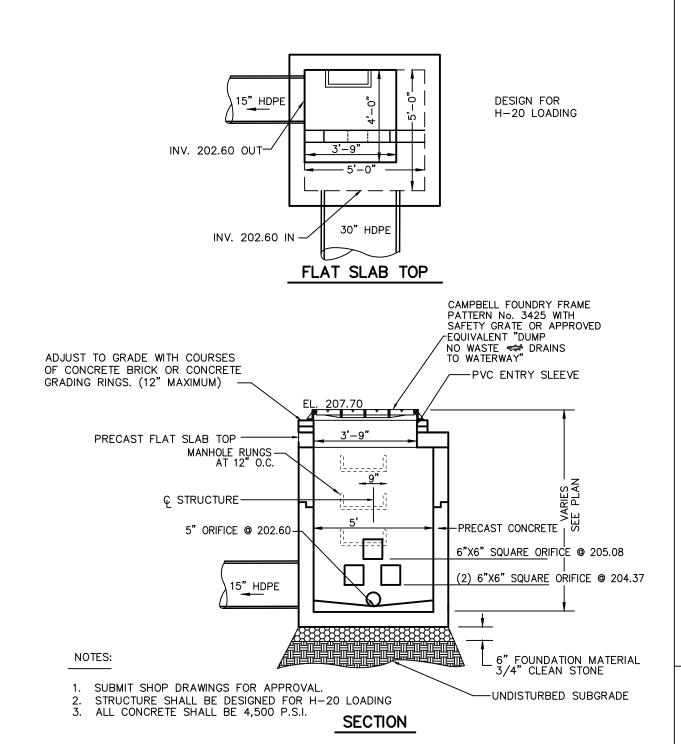
APRON SCHEDULE

FES-1 | 16' | 20' | 6' | 6" | 12" | 18"

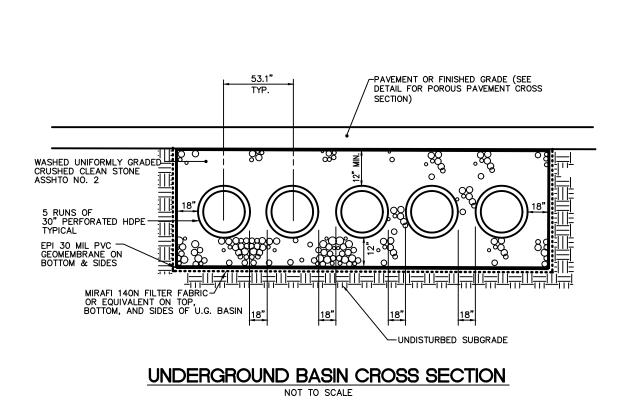
d50 STONE W/ FILTER FABRIC W/O FILTER FABRIC

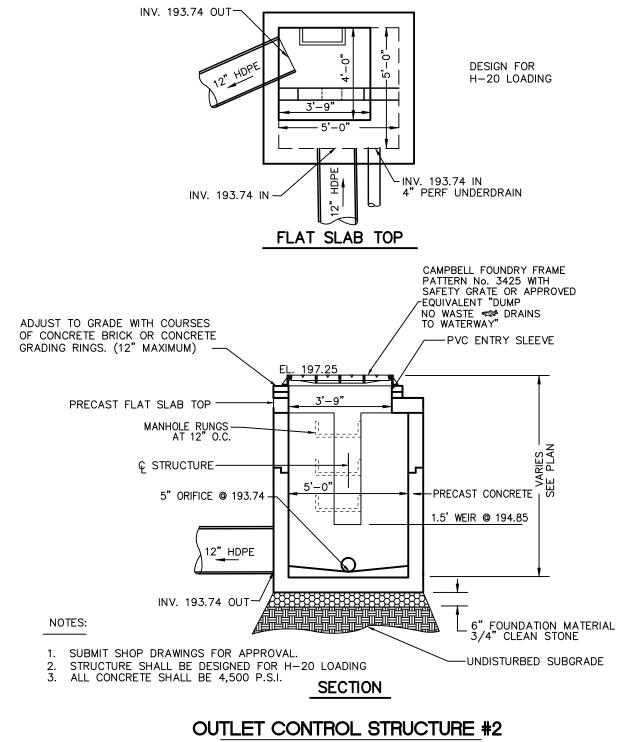


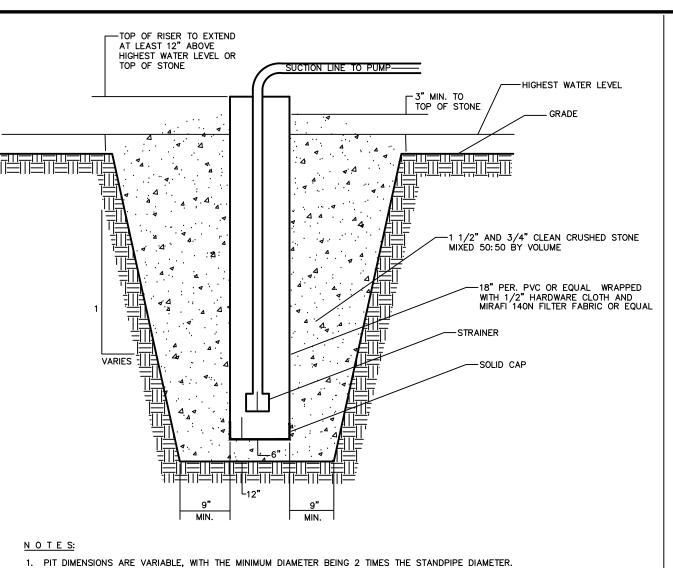
TOP OF STRUCTURE TRASH RACK NOT TO SCALE

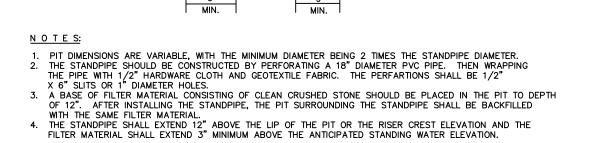


OUTLET CONTROL STRUCTURE #1

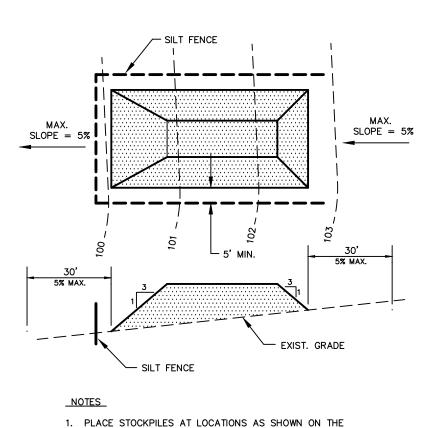








DEWATERING SUMP



- SIOL EROSION AND SEDIMENT CONTROL PLAN. 2. ALL SIDE SLOPES SHALL BE 3 TO 1 OR FLATTER.
- 3. STOCKPILE SHALL RECIEVE A VEGETATIVE COVER IN ACCORDANCE WITH STABILIZATION REQUIREMENTS. 4. SILT FENCE SHALL BE INSTALLED AS DETAILED HEREON.

NOT TO SCALE

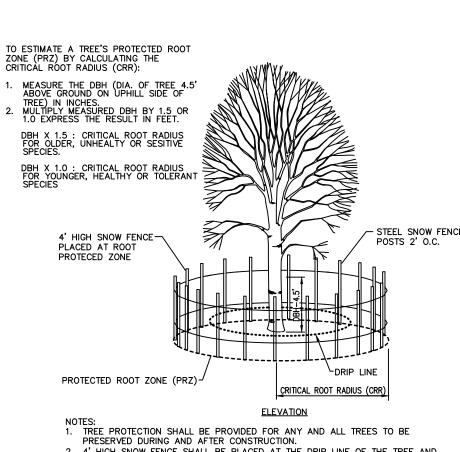
POROUS PAVEMENT UNDERGROUND BASIN CROSS SECTION

-UNDISTURBED SUBGRADE

WASHED UNIFORMLY GRACEUSHED CLEAN STONE ASSHTO NO. 2

18" PERFORATED HI

EPI 30 MIL PVC



- 2. 4' HIGH SNOW FENCE SHALL BE PLACED AT THE DRIP LINE OF THE TREE AND ENCIRCLE THE ENTIRE TREE.

 3. BOARDS SHALL NOT BE NAILED TO TREES DURING CONSTRUCTION.

 4. ROOTS SHALL NOT BE CUT IN AN AREA INSIDE THE DRIP LINE OF THE TREE BRANCHES
- 5. PRUNING OF LIMBS IF NECESSARY SHALL BE IN ACCORDANCE WITH TREE PRUNING DETAIL AND UNDER THE SUPERVISION OF A LICENSED NURSERYMAN.

TREE PROTECTION DURING CONSTRUCTION

AS SHOWN ON PLANS

PROFILE

1. PLACE STABILIZED CONSTRUCTION ENTRANCE AT LOCATION(S) AS

2. STONE SIZE SHALL BE 1 1/2" CLEAN WASHED CRUSHED STONE.

THE THICKNESS OF THE STAB. CONST. ENT. SHALL NOT BE LESS THAN 6".

THE WIDTH AT THE EXIST. PAVEMENT SHALL NOT BE LESS THAN THE FULL WIDTH OF POINT OF INGRESS AND EGRESS.

5. THE STAB. CONST. ENT. SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO THE R.O.W./PAVEMENT. THIS REQUIRES PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURE USED TO TRAP

ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO THE PUBLIC ROADWAY MUST BE REMOVED <u>IMMEDIATELY.</u> 7. WHERE TRACKING OF SOIL ONTO ROADWAYS IS A CONTINUAL

STABILIZED CONSTRUCTION ENTRANCE

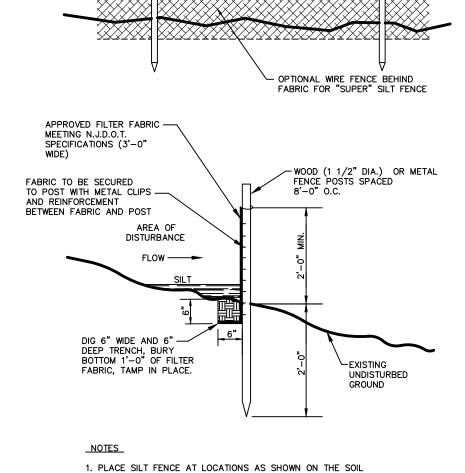
CONSTRUCTION SITE AT THE DAY END.

OCCURRENCE, ALL CONTRACTORS, BOTH SITE AND DWELLING
CONTRACTORS, SHALL BE REQUIRED TO BROOMSWEEP THE ROADWAY AT
TWO—HOUR INTERVALS MINIMUM AND PRIOR TO LEAVING THE

8. WHERE SLOPE OF THE ACCESS ROAD EXCEEDS 5%, A STABILIZED BASE OF OT MIX ASPHALT BASE COURSE HMA19M64 SHALL BE INSTALLED. THICKNESS OF BASE COURSE TO BE PRECRIBED BY THE LOCAL MUNICIPALITY

PROVIDE 8" THICK HMA 19M64 FOR 50' LONG TRANSITION BETWEEN BETWEEN STAB. CONST. ENT. AND PAVEMENT

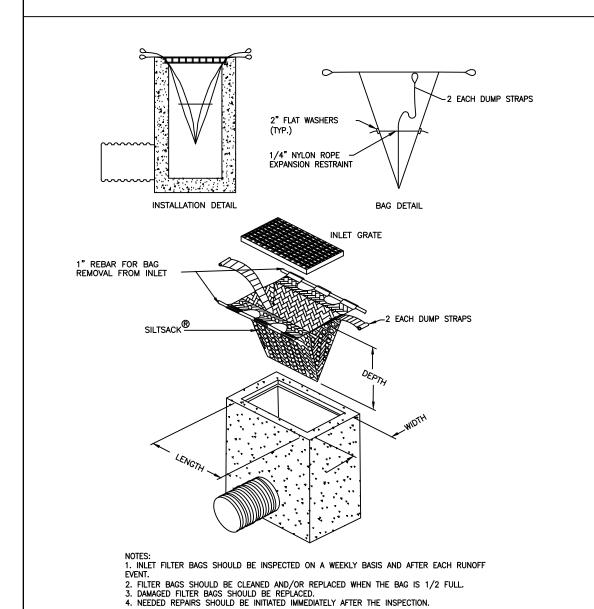
PLAN VIEW



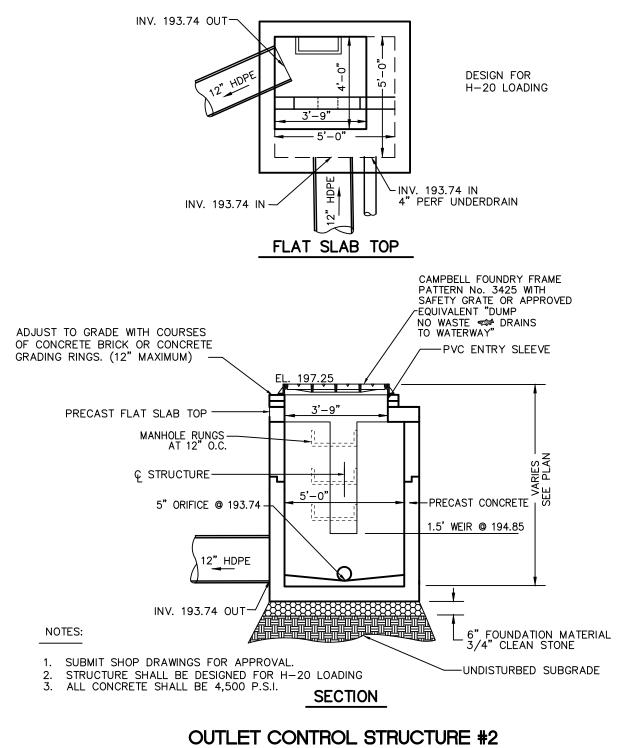
THROUGH FABRIC ALONG — TOP OF FENCE

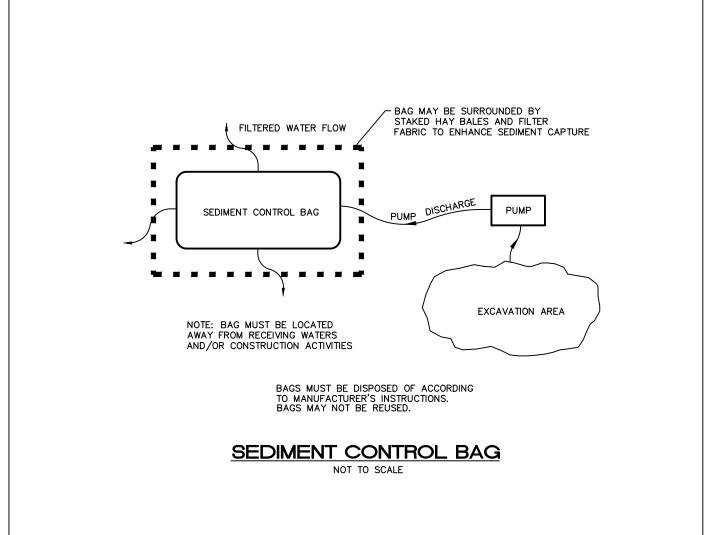
- PLACE SILT FENCE AT LOCATIONS AS SHOWN ON THE SOIL EROSION AND SEDIMENT CONTROL PLAN.
- 2. THE SLOPE OF THE LAND FOR AT LEAST 30 FEET ADJACENT TO ANY SILT FENCE SHALL NOT EXCEED 5%. IF SLOPE EXCEEDS 5%, SILT FENCE SHALL BE BACKED UP WITH SNOW FENCE.
- SILT FENCE SHALL BE INSTALLED SO WATER CANNOT BYPASS THE FENCE AROUND IT'S ENDS.
- INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE AS PROMPTLY AS POSSIBLE.
- 5. SILT FENCE SHALL BE REMOVED WHEN CONTRIBUTARY DRAINAGE AREA HAS BEEN STABLIZED IN AN APPROVED FASHION.

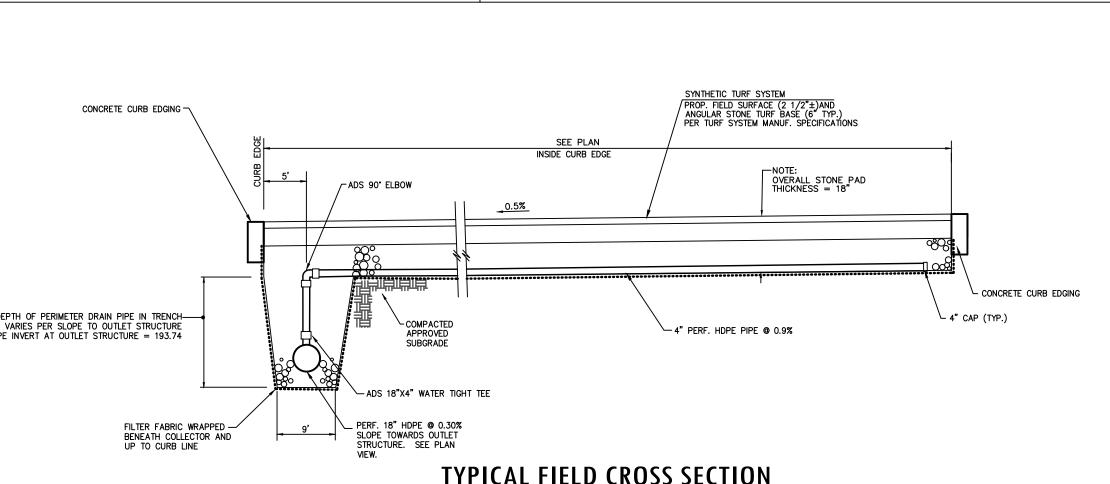
NOT TO SCALE

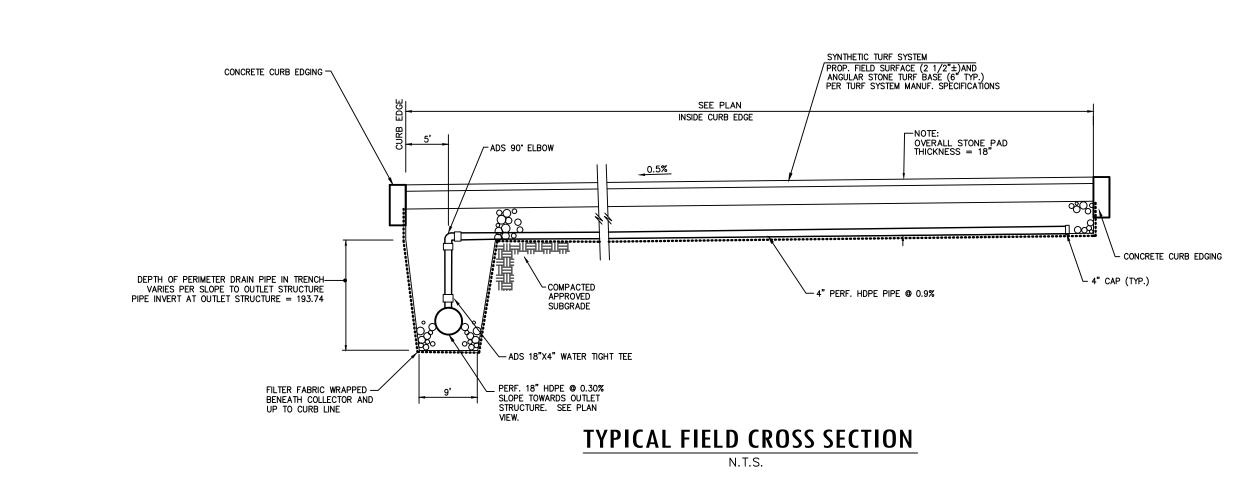


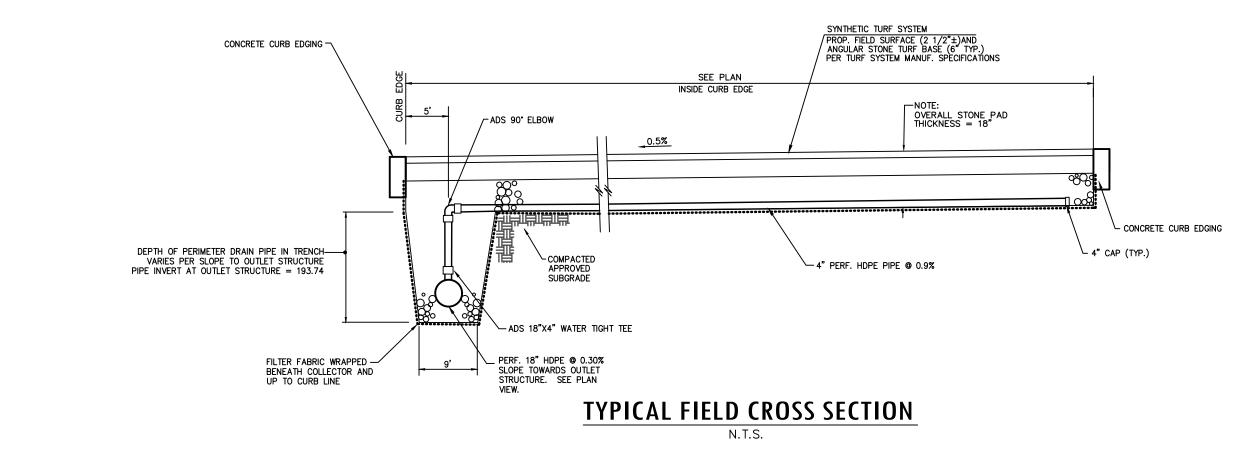
FILTER BAG INLET PROTECTION

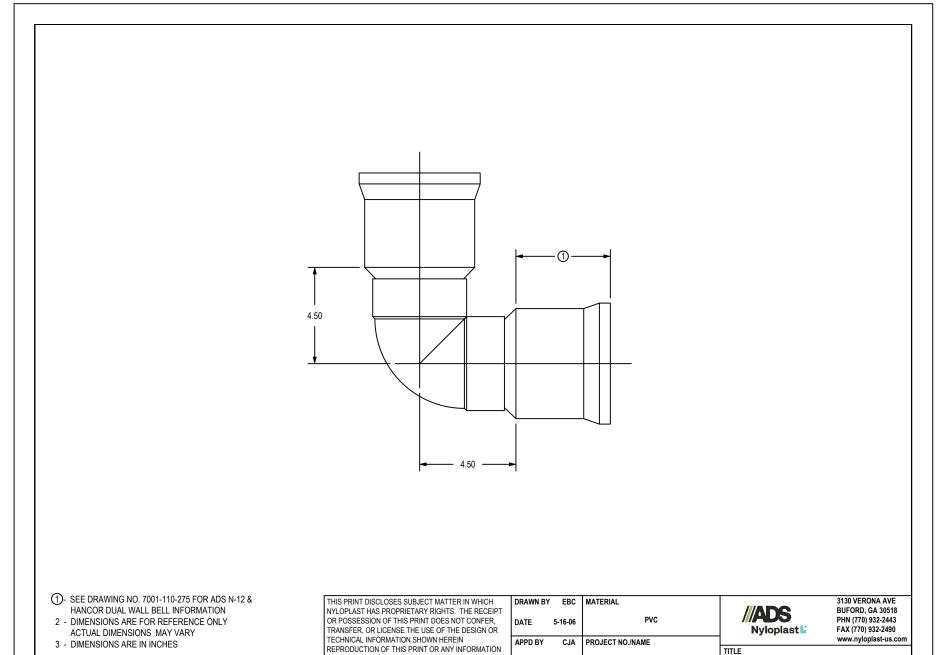




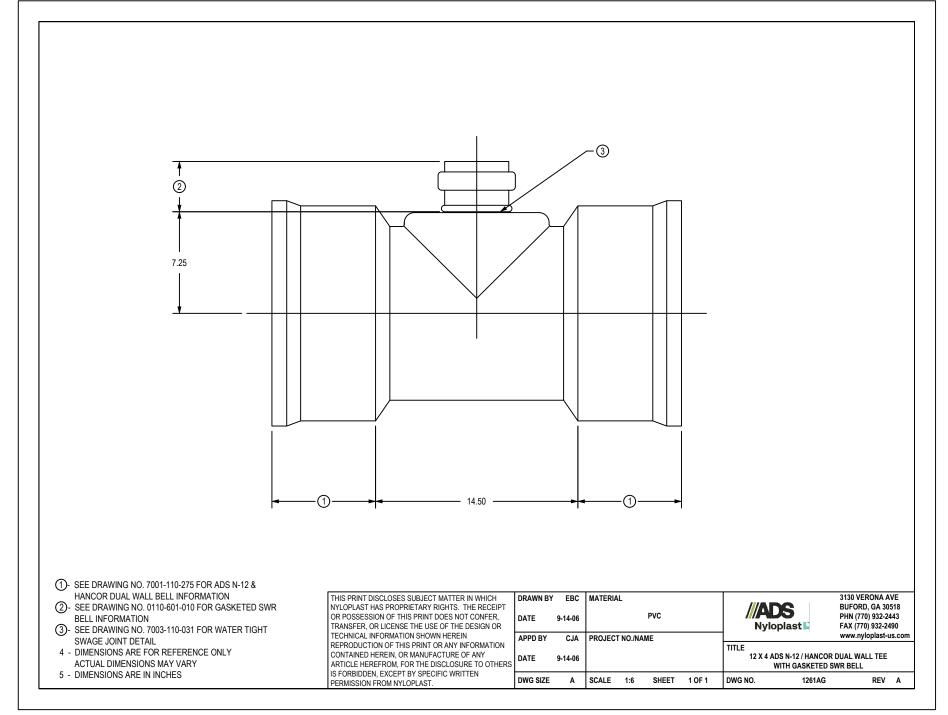


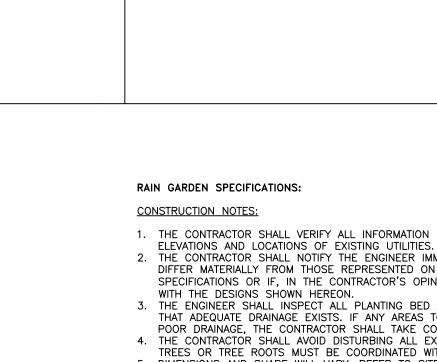






4 IN ADS N-12 / HANCOR DUAL WALL ELBOW - 90 DEGREE





- 1. THE CONTRACTOR SHALL VERIFY ALL INFORMATION PRIOR TO EXCAVATION INCLUDING ELEVATIONS AND LOCATIONS OF EXISTING UTILITIES.

 2. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF ANY FIELD CONDITIONS DIFFER MATERIALLY FROM THOSE REPRESENTED ON THESE DRAWINGS AND THE SPECIFICATIONS OR IF, IN THE CONTRACTOR'S OPINION, SAID CONDITIONS CONFLICT
- WITH THE DESIGNS SHOWN HEREON.

 3. THE ENGINEER SHALL INSPECT ALL PLANTING BED AREAS BEFORE MULCHING TO INSURE THAT ADEQUATE DRAINAGE EXISTS. IF ANY AREAS TO BE MULCHED SHOW EVIDENCE OF POOR DRAINAGE, THE CONTRACTOR SHALL TAKE CORRECTIVE ACTION. 4. THE CONTRACTOR SHALL AVOID DISTURBING ALL EXISTING TREES. ANY DISTURBANCE TO TREES OR TREE ROOTS MUST BE COORDINATED WITH THE PROPERTY OWNER. . DIMENSIONS AND SHAPE WILL VARY, REFER TO SITE PLAN. . RIVER STONE PROTECTION DIMENSIONS ARE TYPICAL AND MAY VARY PER SITE. CONSULT THE ENGINEER AND SITE PLAN FOR DIMENSIONS ON A PER SITE BASIS.
- 8. REFER TO SITE PLAN TO DETERMINE OUTLET TYPE (ROCK-LINED OVERFLOW OR 9. REFER TO SITE PLAN FOR ALL ELEVATIONS AND INVERTS. 9. REFER TO SITE PLAN FOR ALL ELEVATIONS AND INVERTS.

 10. THE CONTRACTOR SHALL EXCAVATE 12" LOWER THAN THE BASE ELEVATION SHOWN ON THE SITE PLANS. THE SLOPES OF THE RAIN GARDEN SHALL BE AT A 2:1 MAXIMUM.

 11. THE SUBGRADE OF THE RAIN GARDEN SHALL BE LEVEL TO ENSURE PROPER DRAINAGE. CONTRACTOR SHALL OBTAIN ENGINEER APPROVAL PRIOR TO BACKFILLING WITH 12" OF BIORETENTION MEDIA.
- 12. THE CONTRACTOR SHALL INSTALL OVERFLOW IF SPECIFIED IN SITE PLANS PRIOR TO BACKFILLING WITH BIORETENTION MEDIA. 13. THE BIORETENTION LAYER SHALL BE LEVEL TO ENSURE PROPER DRAINAGE. CONTRACTOR SHALL OBTAIN ENGINEER APPROVAL PRIOR TO SPREADING MULCH AND PLANTING. 14. THE RIVER STONE SHALL BE PLACED BELOW THE BOTTOM OF THE PIPE. 15. ALL DISTURBED AREAS EXCLUSIVE OF RAIN GARDEN AND SLOPED BERM SHALL BE RESTORED TO ORIGINAL CONDITIONS BY CONTRACTOR. 16. THE CONTRACTOR SHALL HAVE A PRE-CONSTRUCTION MEETING WITH THE PROJECT

ENGINEER PRIOR TO ANY WORK ON SITE.

7. RIVER STONE PROTECTION SHALL SLOPE TO RAIN GARDEN BASE.

3. SAND SHALL AT THE MINIMUM CONFORM TO THE SIEVE ANALYSIS FOR CONCRETE AGGREGATE SAND (ASTM C-33). USGA TEE/GREEN SIEVE GRADATION MIX IS PREFERABLE WHERE AVAILABLE. 4. UNDERLYING SOILS SHALL BE TILLED/SCARIFIED PRIOR TO SPREADING/MIXING OF

SPECIFICATIONS:

- BIORETENTION MEDIA.

 5. ALL BIORETENTION MEDIA SHALL BE PLACED FROM THE SIDES OF THE FACILITIES, AND IN NO EVENT SHALL ANY TRACKED OR WHEELED EQUIPMENT BE PERMITTED TO CROSS THE RAIN GARDEN. 5. RAIN GARDEN SHALL BE CONSTRUCTED TO DIMENSIONS INDICATED ON THE SITE PLAN. 7. 3–5 INCH DELAWARE RIVER STONE SHALL BE USED FOR STONE CHANNEL AND
- INLET/OUTLET PROTECTION. NON-DYED, TRIPLE-SHREDDED HARDWOOD MULCH SHALL BE USED.

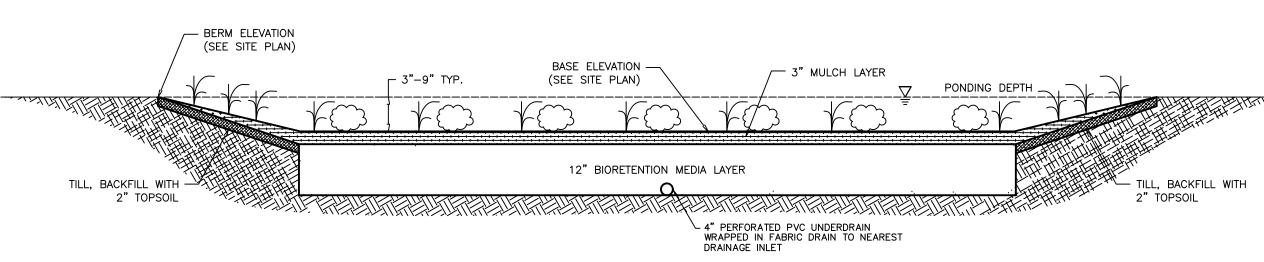
 PLANTING OF RAIN GARDEN AND SLOPED BERM SHALL BE COMPLETED AS INDICATED ON THE SITE PLAN. 10. THE CONTRACTOR SHALL PERFORM ALL WORK IN CONFORMANCE WITH THE NJDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2007 OR LATEST

MAX COVER OVER TOP OF PIPE IS 4 FT. CONTACT ADS IF OTHERWISE GREATER.

THE APPROVAL OF MATERIALS AND MIXING OF SAND, COMPOST, AND SOIL SHALL BE

DONE UNDER THE SUPERVISION OF THE PROJECT ENGINEER/LANDSCAPE ARCHITECT.

BIORETENTION MEDIA SHALL CONSIST OF 70% SAND AND 30% COMPOST MIXTURE.



RAIN GARDEN CROSS SECTION

THE			+-		DATE:	MAY 20, 2022	
2 REV. PER LAYOUT CHANGES 1 PER TOWNSHIP & OUTSIDE AGENCY COMMENTS 3AB 9/30/22 REV DESCRIPTION AUTH DATE DRAWN BY: RRF/RKY CHECKED BY: PDQ JOB NO. 20-02-PEB			+		SCALE:	AS NOTED	
2 REV. PER LAYOUT CHANGES 1 PER TOWNSHIP & OUTSIDE AGENCY COMMENTS 3 JAB 9/30/22 REV DESCRIPTION AUTH DATE CHECKED BY: PDQ 3 JOB NO. 20-02-PEB					DESIGNED BY:	JAB	
1 PER TOWNSHIP & OUTSIDE AGENCY COMMENTS REV DESCRIPTION AUTH DATE JAB 9/30/22 JOB NO. 20-02-PEB THE			+		DRAWN BY:	RRF/RKY	
1 PER TOWNSHIP & OUTSIDE AGENCY COMMENTS REV DESCRIPTION AUTH DATE JAB 9/30/22 JOB NO. 20-02-PEB THE	2	REV. PER LAYOUT CHANGES	JAB	6/2/23	CHECKED BY:	PDQ	
THE	1	PER TOWNSHIP & OUTSIDE AGENCY COMMENTS	JAB	9/30/22			
	REV	DESCRIPTION	AUTH	DATE	JOB NO.	20-02-PEB	
	_	ANAES & BASH		>		5/20/22 DATF	THE
NEW JERSEY PROFESSIONAL ENGINEER NUMBER 24GE052258005 PENNI		AMES A BASH	4650	>		5/20/22 DATE	



CONSTRUCTION DETAILS

Construction Inspection

Landscape Architecture

Local/Regional Planning Municipal Engineering

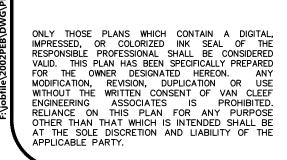
Surveying/Aerial Drones/GIS Water/Wastewate

Environmenta

Geotechnical/Dams

Site Development

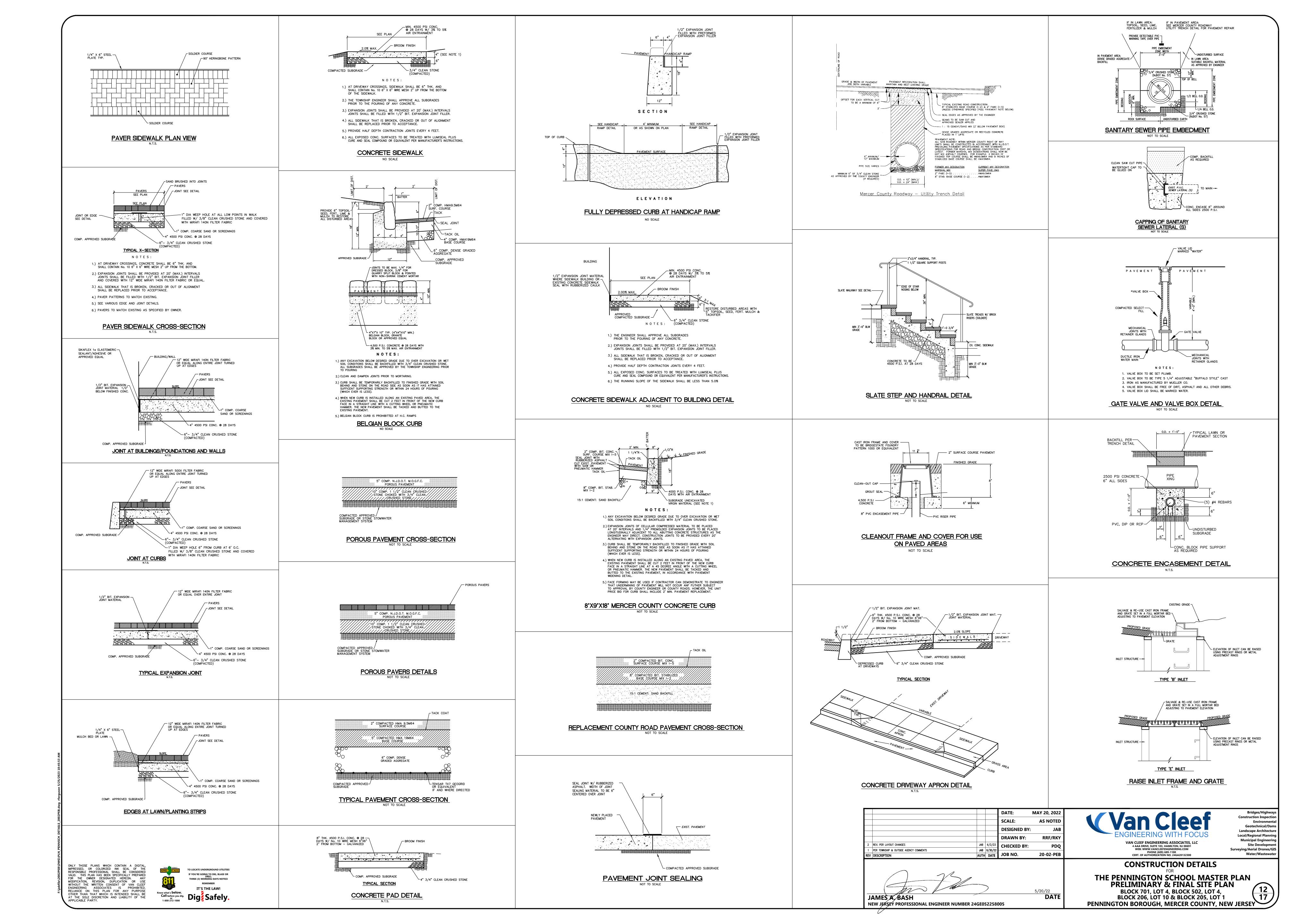
PENNINGTON SCHOOL MASTER PLAN PRELIMINARY & FINAL SITE PLAN **BLOCK 701, LOT 4, BLOCK 502, LOT 4,** BLOCK 206, LOT 10 & BLOCK 205, LOT 1 GTON BOROUGH, MERCER COUNTY, NEW JERSEY`

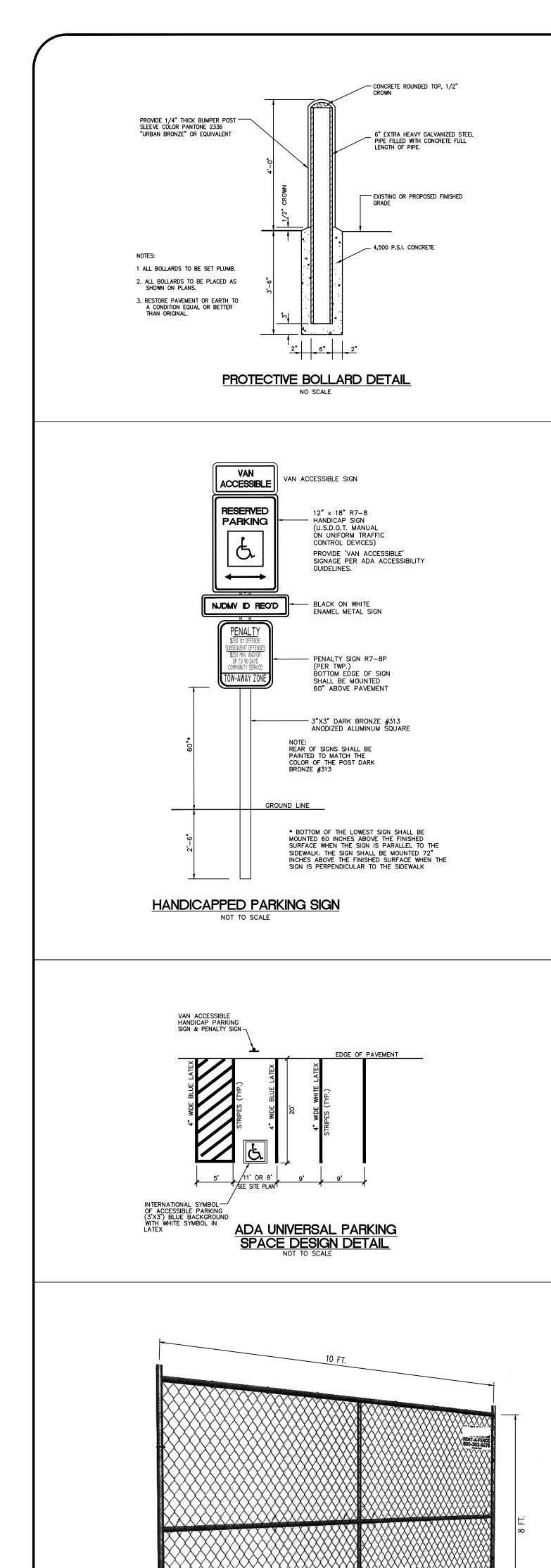


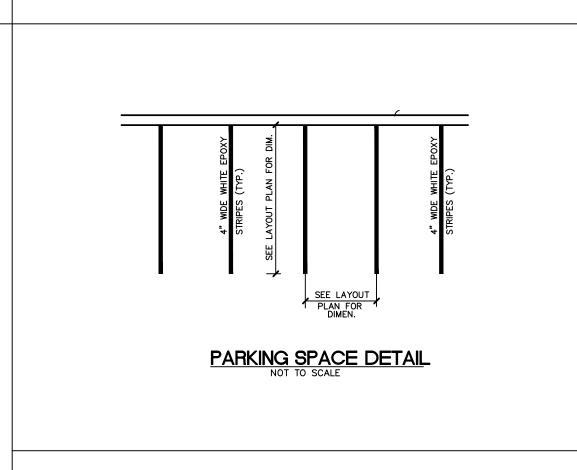


CONTAINED HEREIN, OR MANUFACTURE OF ANY

S FORBIDDEN, EXCEPT BY SPECIFIC WRITTEN







PEDESTRIAN CROSSING SIGN DETAIL

HANDICAPPED PARKING SYMBOL

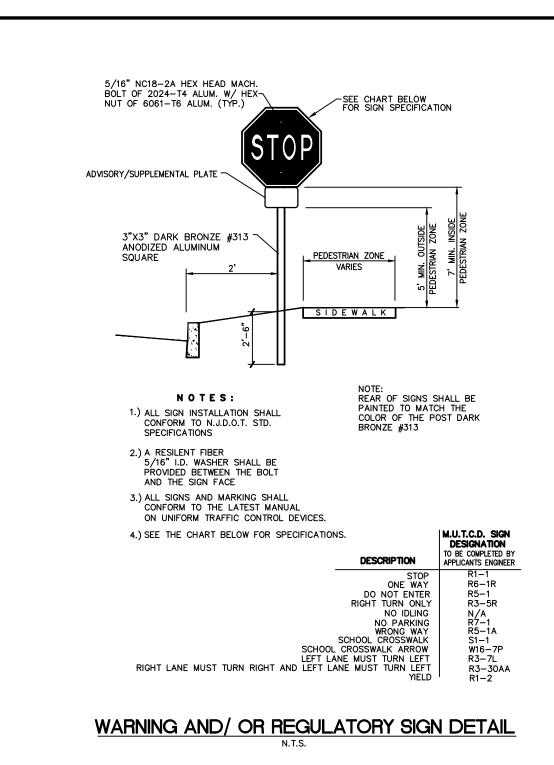
SOLID WHITE LONG LIFE

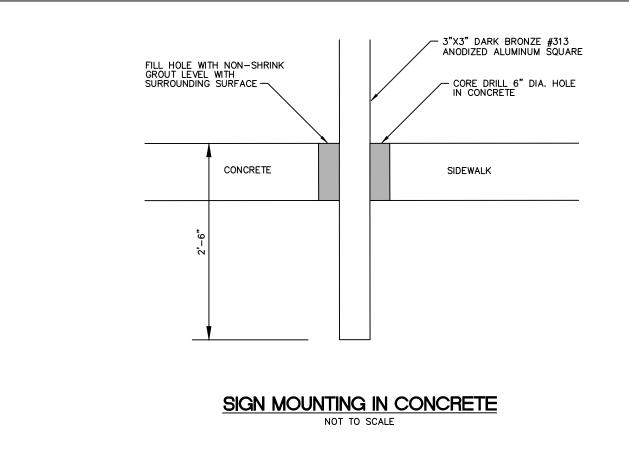
NOTE
SYMBOL SHALL HAVE BLUE
BACKGROUND WITH WHITE
STRIPING (LATEX)

walkway if wider)

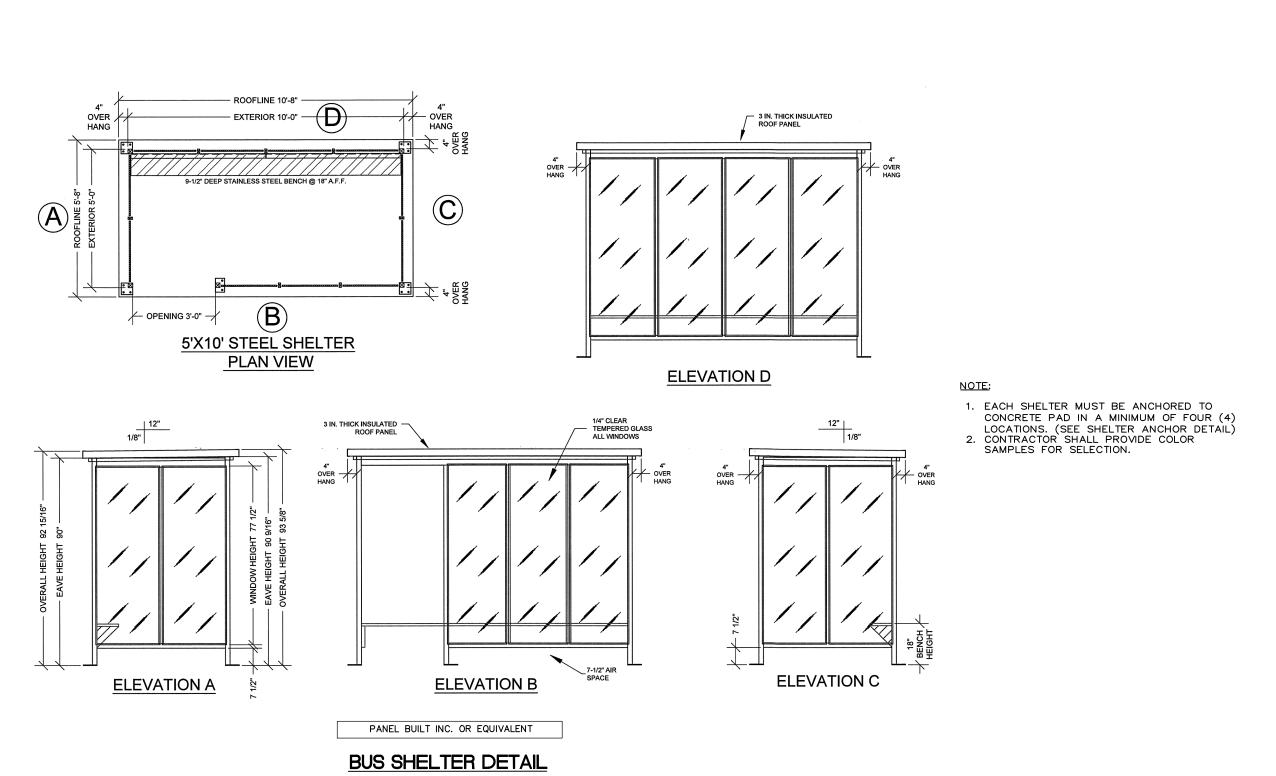
24" 24" 24" (Typical)

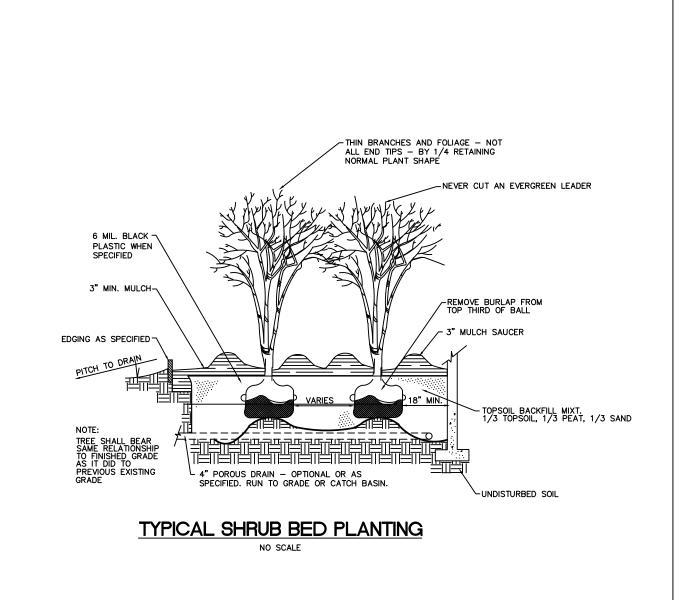
CROSSWALK AND STOP BAR STRIPING DETAIL

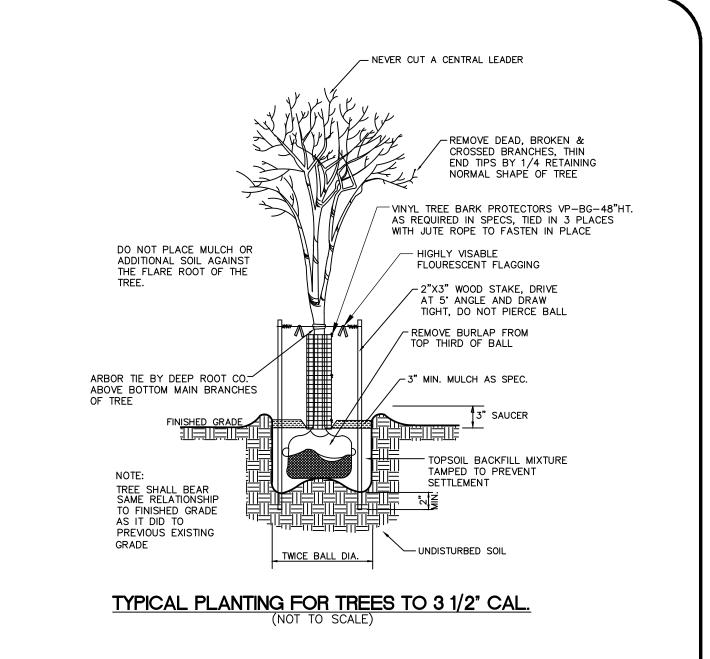


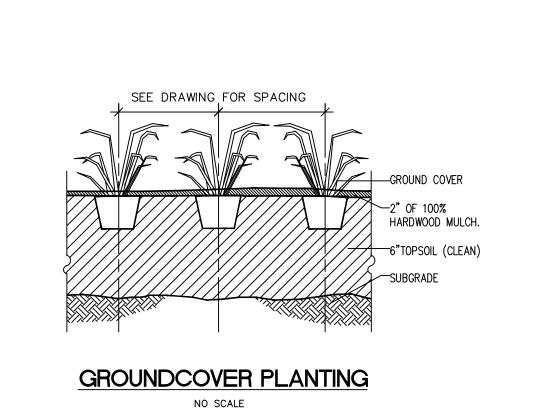


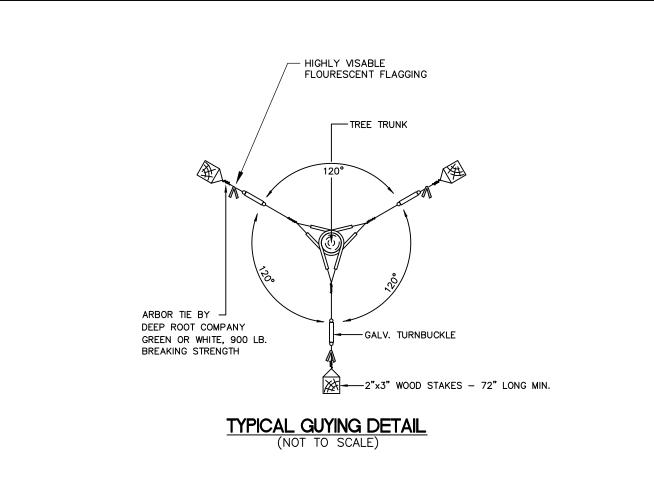


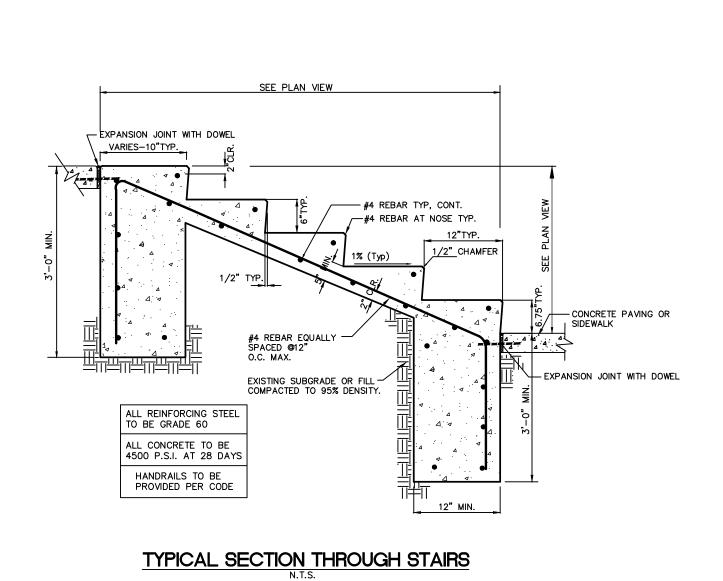


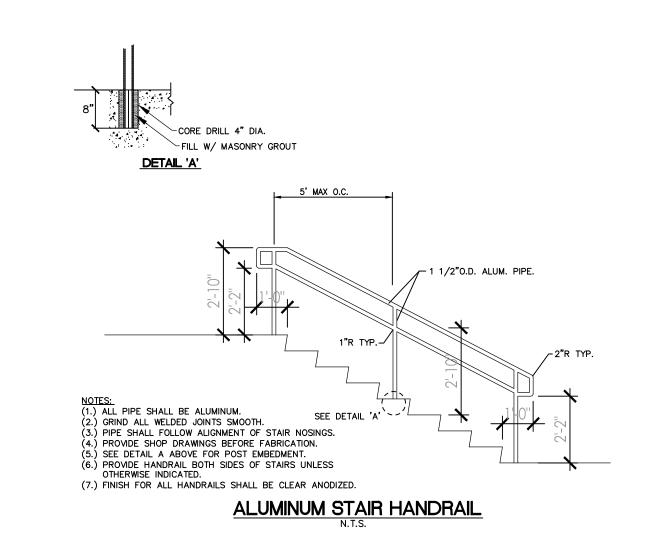


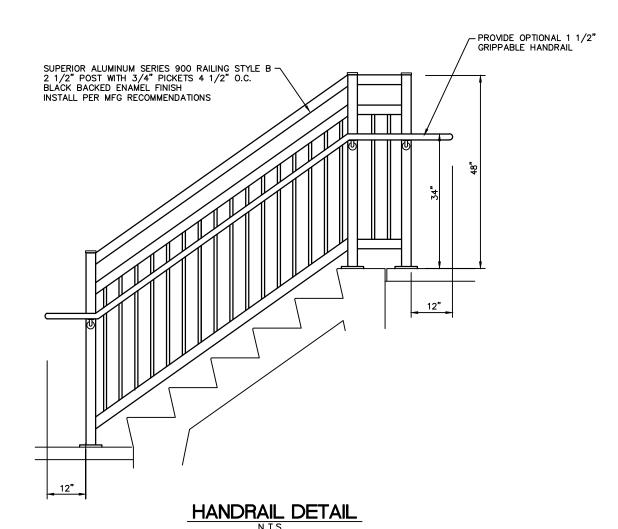






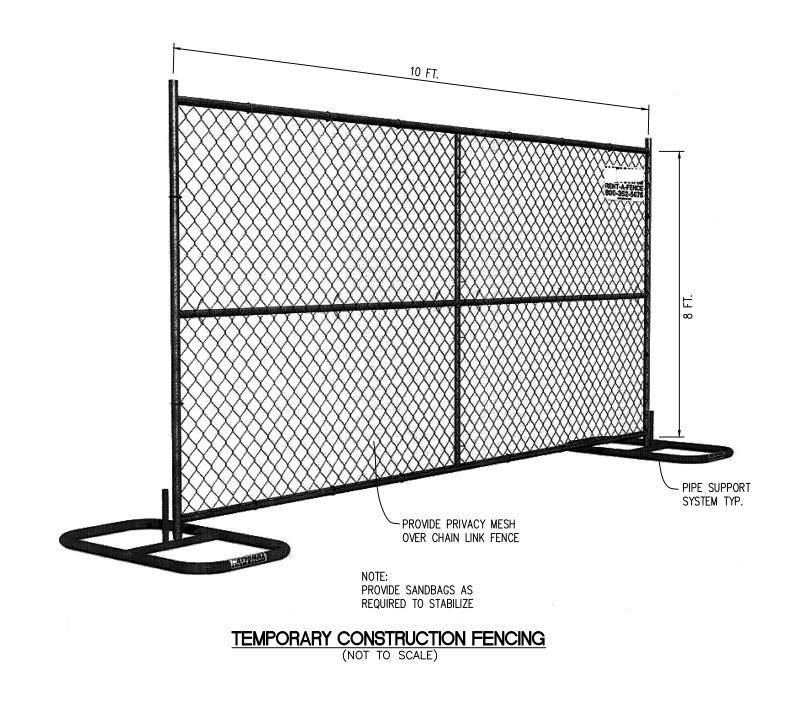


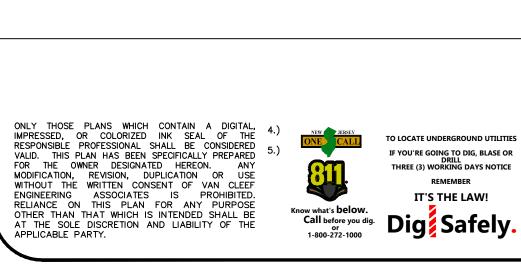


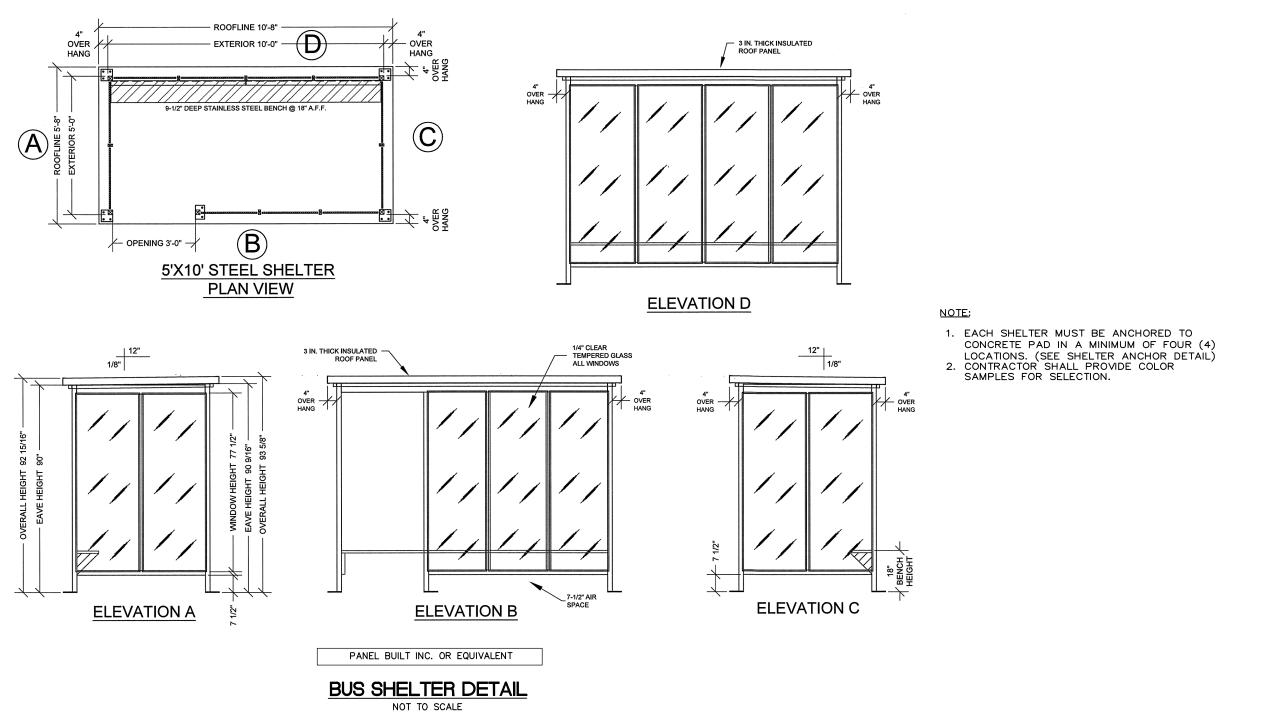


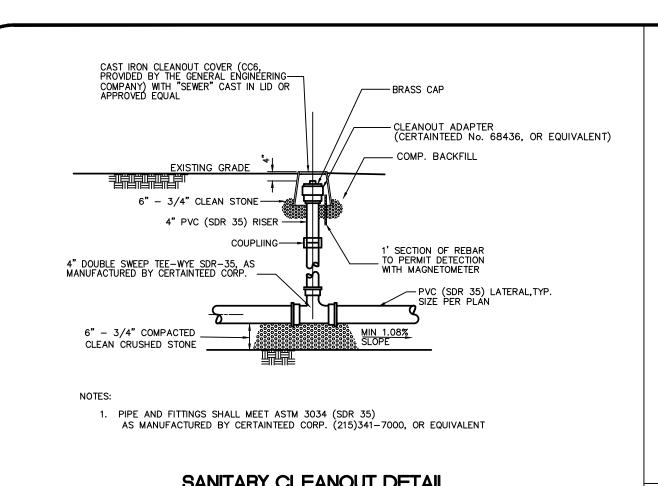
		CONSTRUCTION DETAILS FOR	
	0-02-PEB	PHONE (609) 689-1100 CERT. OF AUTHORIZATION NO. 24GA28132300	Water/Waster
CHECKED BY:	PDQ	VAN CLEEF ENGINEERING ASSOCIATES, LLC 4 AAA DRIVE, SUITE 103, HAMILTON, NJ 08691 WER: WWW VANCI EFFENGINEFERING COM	Site Develop Surveying/Aerial Drone
DRAWN BY:	RRF/RKY	ENGINEERING WITH FOCUS	Local/Regional Plar Municipal Engine
DESIGNED BY:	JAB		Environm Geotechnical Landscape Archite
		/Van Cloof	Bridges/High Construction Inspe
/	SCALE: A DESIGNED BY: DRAWN BY: CHECKED BY:	SCALE: AS NOTED DESIGNED BY: JAB DRAWN BY: RRF/RKY (2/23 CHECKED BY: PDQ	SCALE: AS NOTED DESIGNED BY: JAB DRAWN BY: RRF/RKY C1/2/23 CHECKED BY: PDQ MATE JOB NO. 20-02-PEB CONSTRUCTION DETAILS

DATE BLOCK 206, LOT 10 & BLOCK 205, LOT 1 PENNINGTON BOROUGH, MERCER COUNTY, NEW JERSEY NEW JERSEY PROFESSIONAL ENGINEER NUMBER 24GE052258005

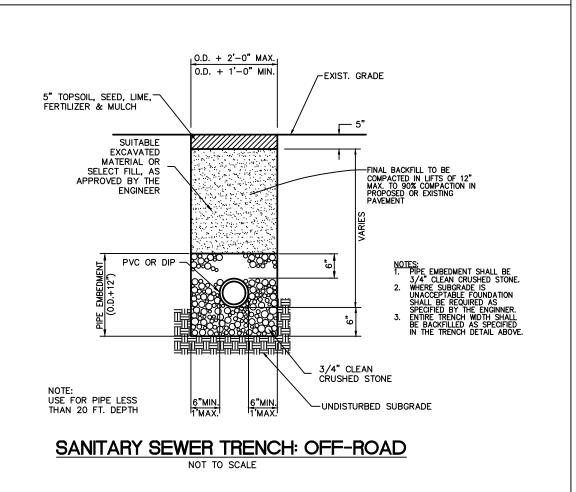


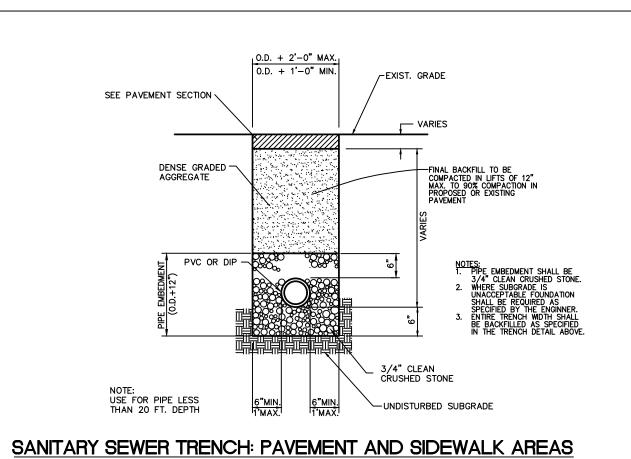


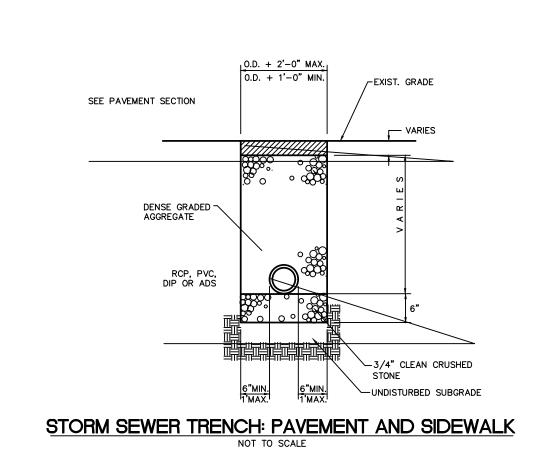


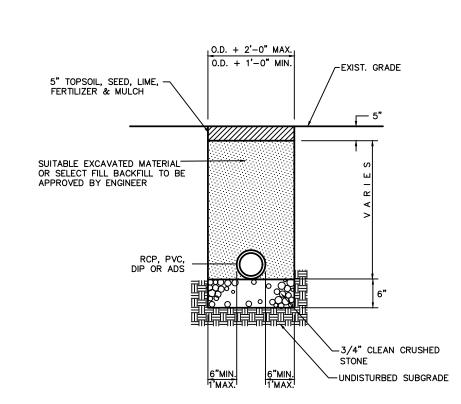


SANITARY CLEANOUT DETAIL

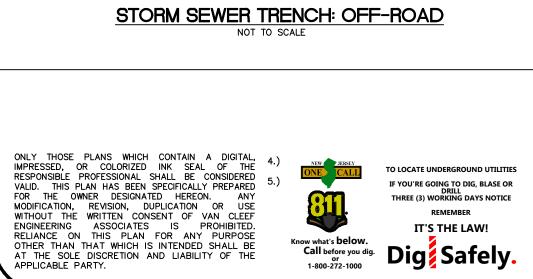


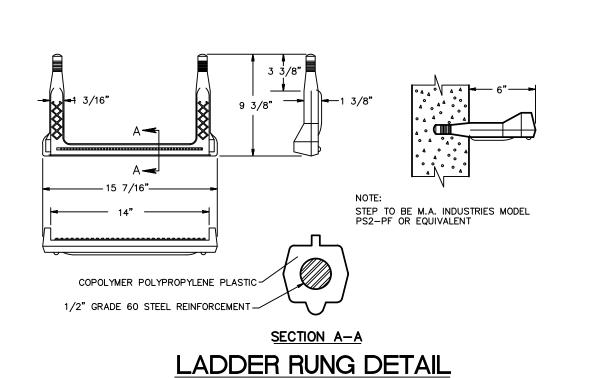


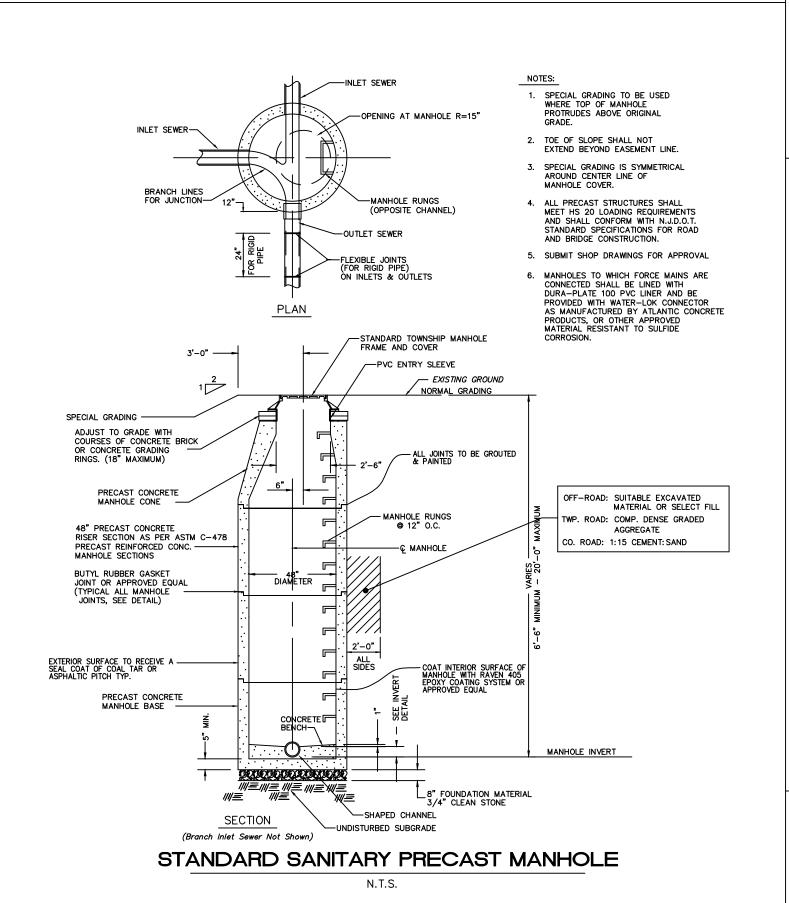


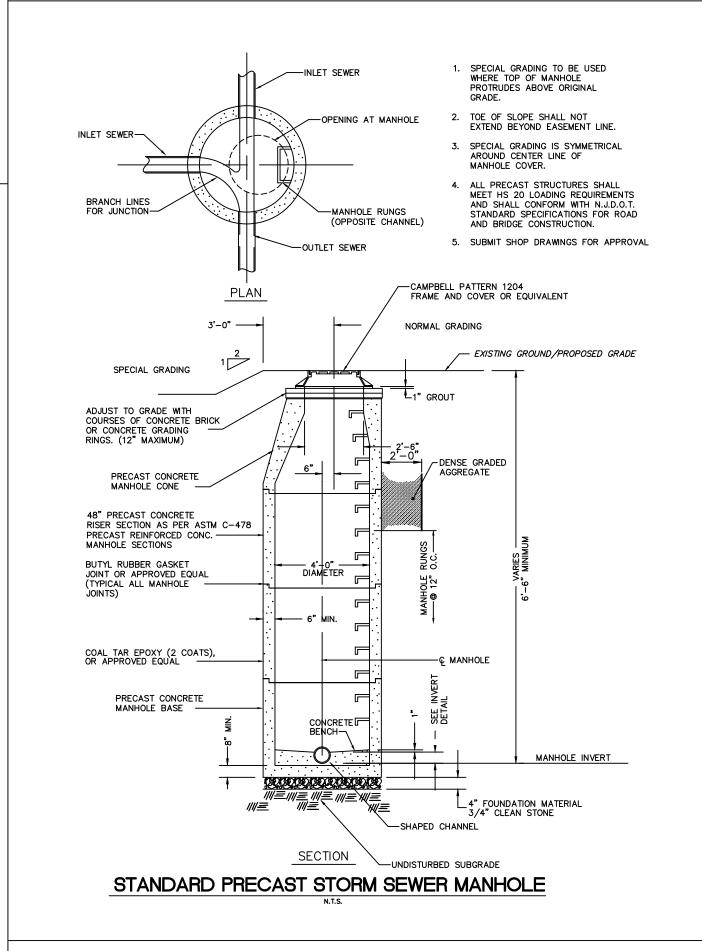


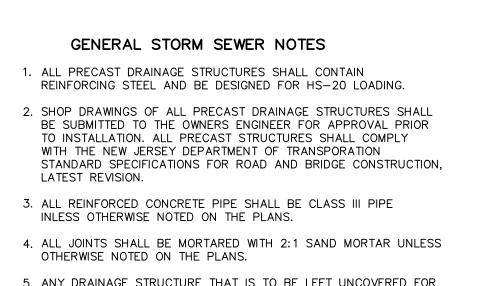
STORM SEWER TRENCH: OFF-ROAD NOT TO SCALE

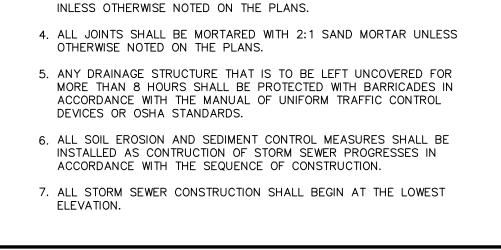


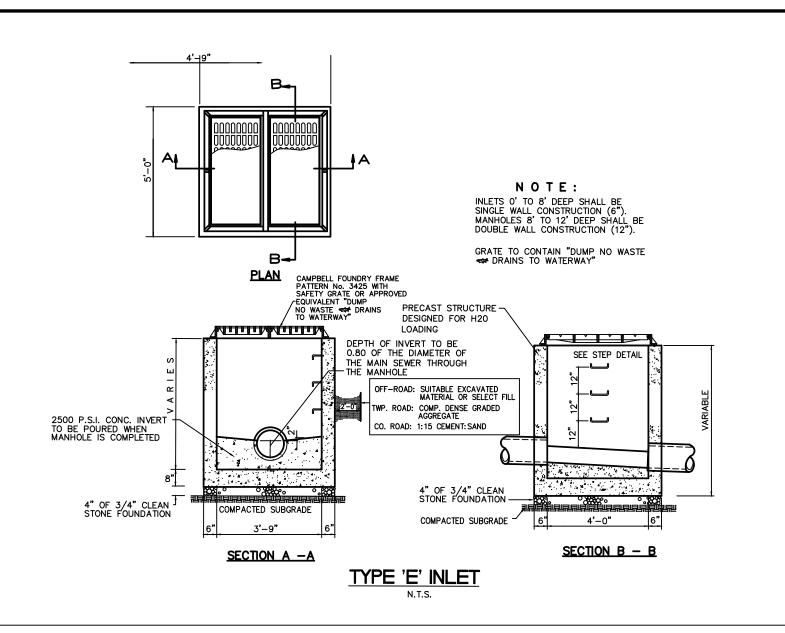


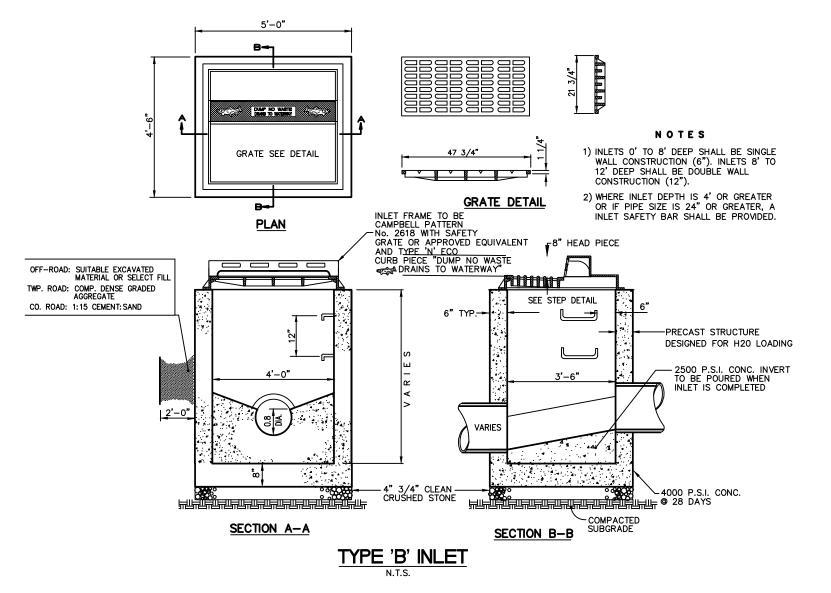


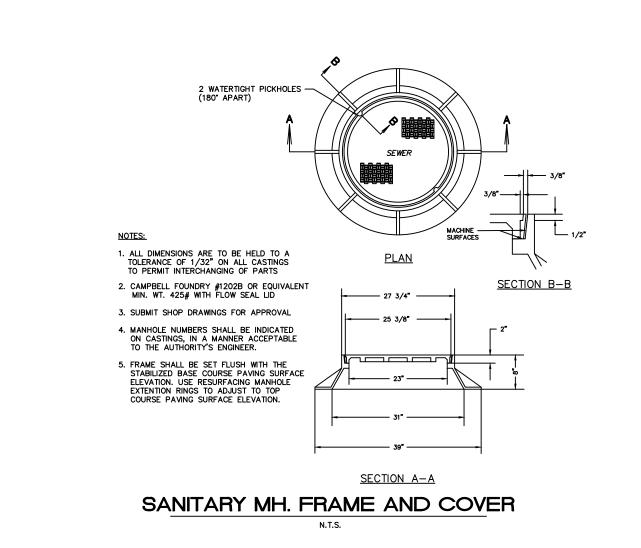


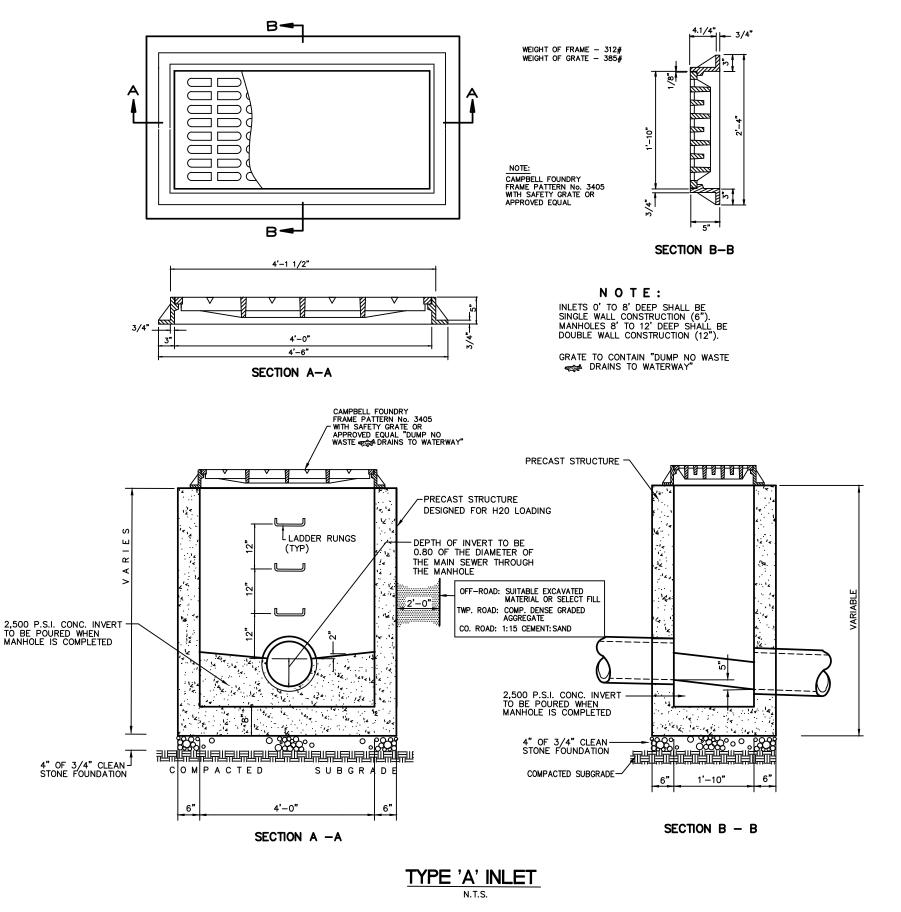


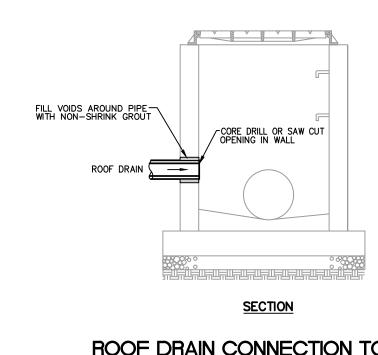




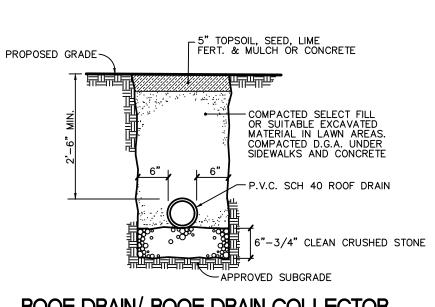






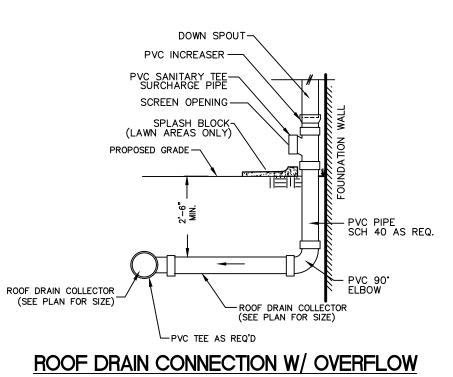


ROOF DRAIN CONNECTION TO INLET

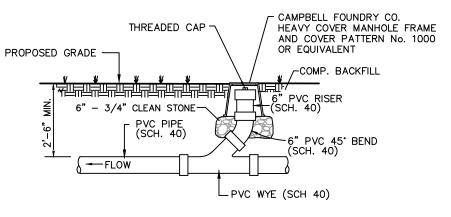


ROOF DRAIN/ ROOF DRAIN COLLECTOR TRENCH DETAIL

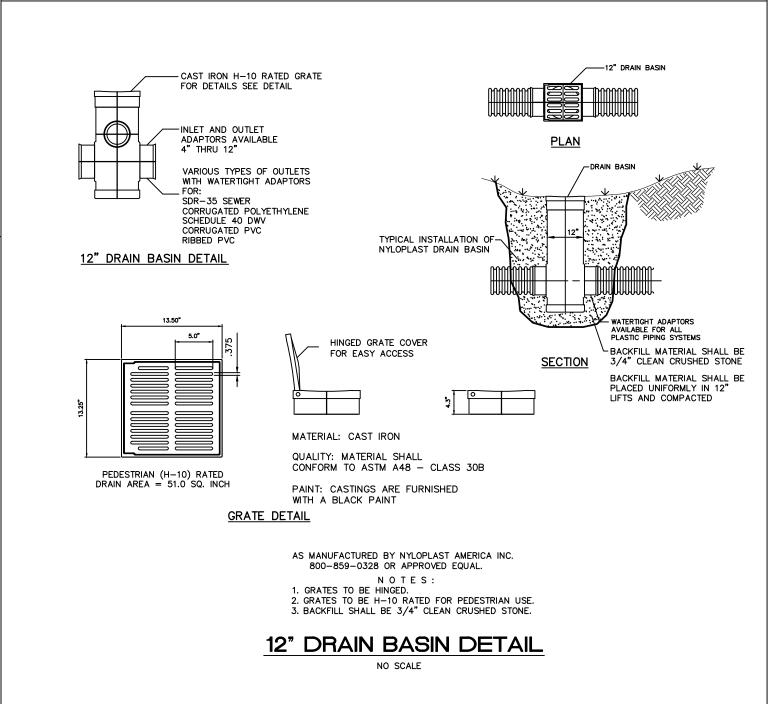
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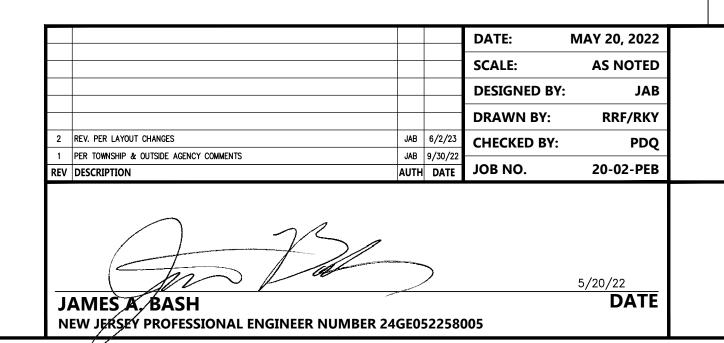


NOT TO SCALE



ROOF DRAIN CLEANOUT DETAIL



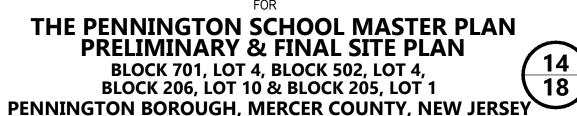




VAN CLEEF ENGINEERING ASSOCIATES, LLC

4 AAA DRIVE, SUITE 103, HAMILTON, NJ 08691
WEB: WWW.VANCLEEFENGINEERING.COM
PHONE (609) 689-1100
CERT. OF AUTHORIZATION NO. 24GA28132300 **CONSTRUCTION DETAILS**

THE PENNINGTON SCHOOL MASTER PLAN PRELIMINARY & FINAL SITE PLAN **BLOCK 701, LOT 4, BLOCK 502, LOT 4, BLOCK 206, LOT 10 & BLOCK 205, LOT 1**



Construction Inspection

Landscape Architecture

Local/Regional Planning

Municipal Engineering

Surveying/Aerial Drones/GIS

Environmenta

Geotechnical/Dams

Site Development

Water/Wastewate

INV. 200.50 18" PERF.

REMOVE & PLUG (2) INV. 203.73 8"

INV. 200.43 18" OUT

8" HDPE INV. 203.73 IN

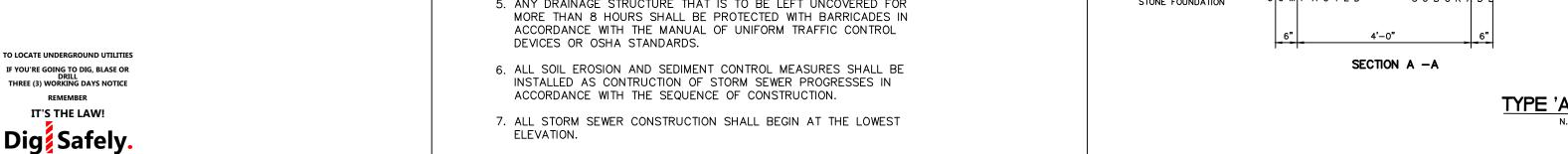
-REMOVE & PLUG EX.

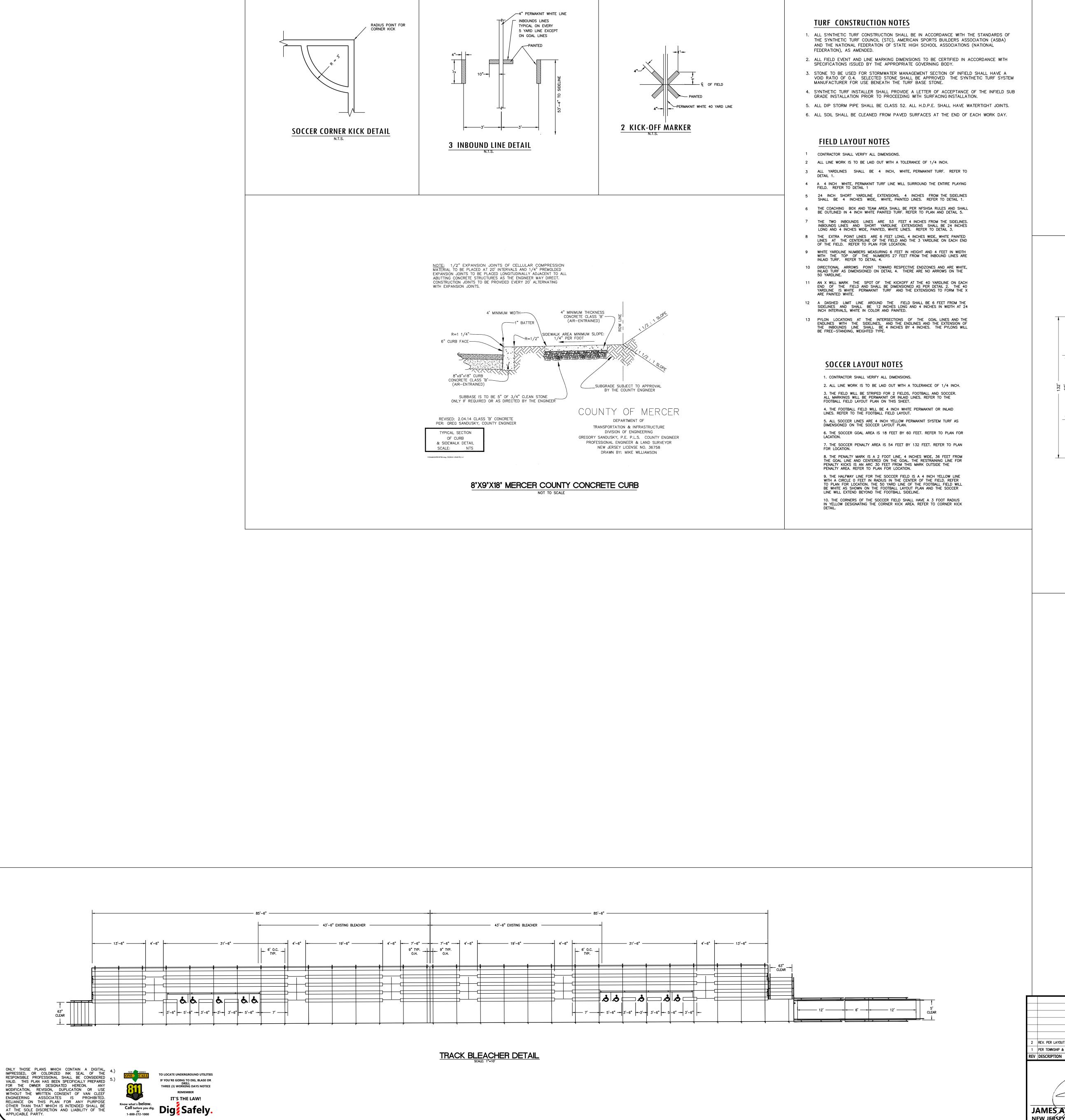
ELEV. = 207.62

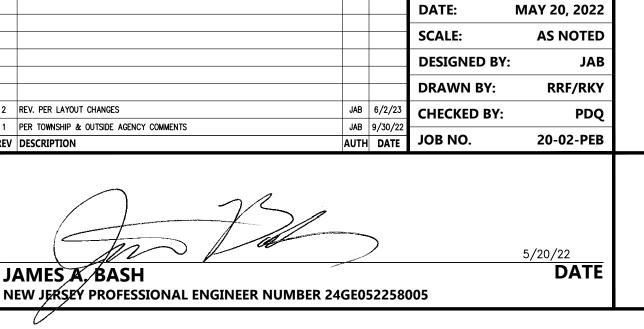
SECTION A-A

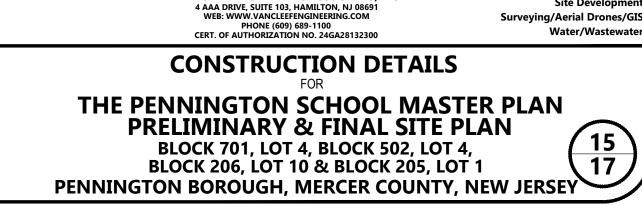
TYPE 'E' INLET EX7 DETAIL

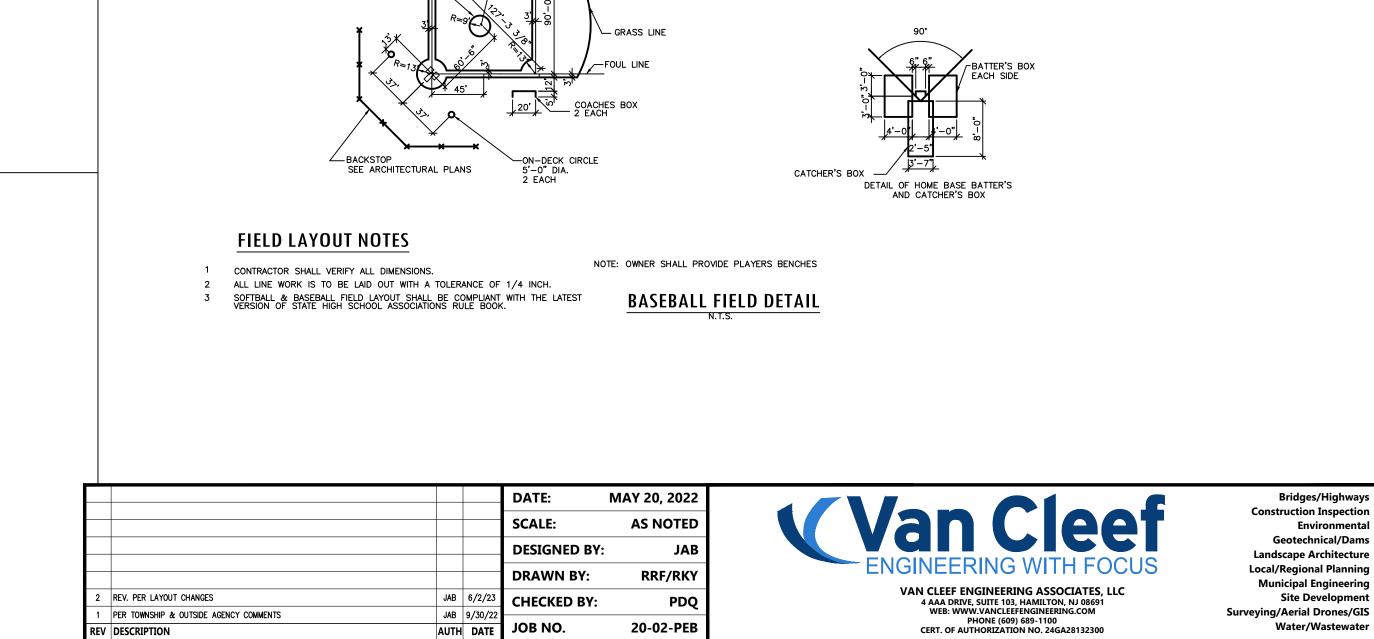
INV. 200.43 IN











1ST AND 3RD 2ND

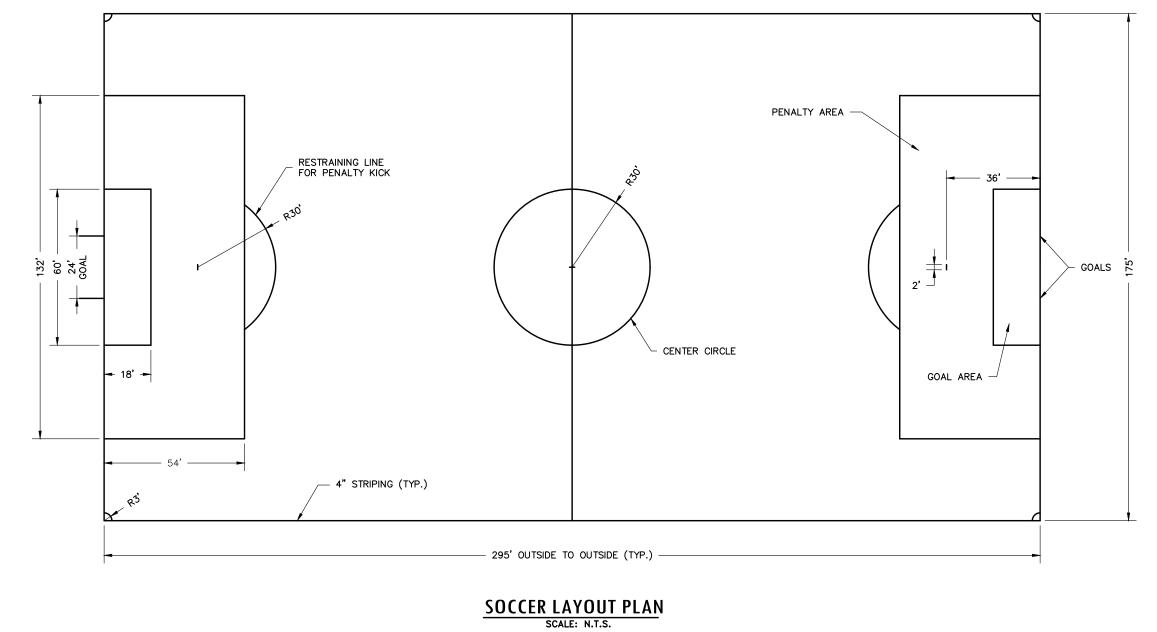
NOTE: PLAYERS BENCHES BY OTHERS

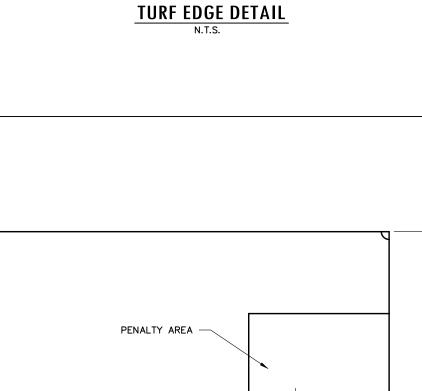
PITCHERS PLATE

DETAIL OF PITCHER'S MOUND

HOME PLATE

PITCHING RUBBER
6" x 6" x 24" 4" DEEP CLAY





TOWARDS HOME PLATE TOWARDS SECOND BASE

PITCHER'S PLATE TO BE 10" ABOVE HOME PLATE, VERTICALLY.
THE DEGREE OF SLOPE FROM A POINT 6" IN FRONT OF THE PITCHER'S PLATE TO A POINT 6'-0" TOWARD HOME PLATE SHALL BE 1" TO 1'-0".

HOME PLATE

NOTES:

1.) ANY EXCAVATION BELOW DESIRED GRADE DUE TO OVER EXCAVATION OR WET SOIL CONDITIONS SHALL BE BACKFILLED WITH 3/4" CLEAN CRUSHED STONE.

2.) CONCRETE CURB SHALL BE PLACED ALONG THE SYNTHETIC TURF INFIELD.

6" X 10" CONCRETE CURB —/ W/ 2 — #4 REINF. BARS 4,500 PSI @ 28 DAYS

APPROVED COMPACTED SUBGRADE-

TOP OF CURB FLUSH WITH THE TOP OF INFILL MATERIAL. BASED ON SYNTHETIC TURF SYSTEM REQUIREMENTS

FASTEN TURF TO LUMBER
PER MANUFACTURER'S SPECIFICATIONS

2"X6" FOUNDATION GRADE LUMBER FASTEN WITH S.S. CONC. SCREWS & WASHERS @ 18" O.C.

FINAL GRADE AGGREGATE

BASE AGGREGATE

FILTER FABRIC (EXTENDED UP CURB FACE)

