

# STEM CENTER

## PRELIMINARY AND FINAL SITE PLAN

**6 LLOYD ROAD, TOWNSHIP OF MONTCLAIR,  
ESSEX COUNTY, NEW JERSEY  
LOT 16, BLOCK 302  
SEPTEMBER 5, 2023**

**PREPARED FOR:  
OWNER/DEVELOPER  
MONTCLAIR KIMBERLEY ACADEMY  
201 VALLEY ROAD  
MONTCLAIR, NJ ,07042**

PREPARED BY:  
**PENNONI ASSOCIATES INC.**



103 College Road East  
Princeton, NJ 08540  
T 609-987-2323  
F 609-987-0005

NJ CERTIFICATE OF AUTHORIZATION NO. GA28033300

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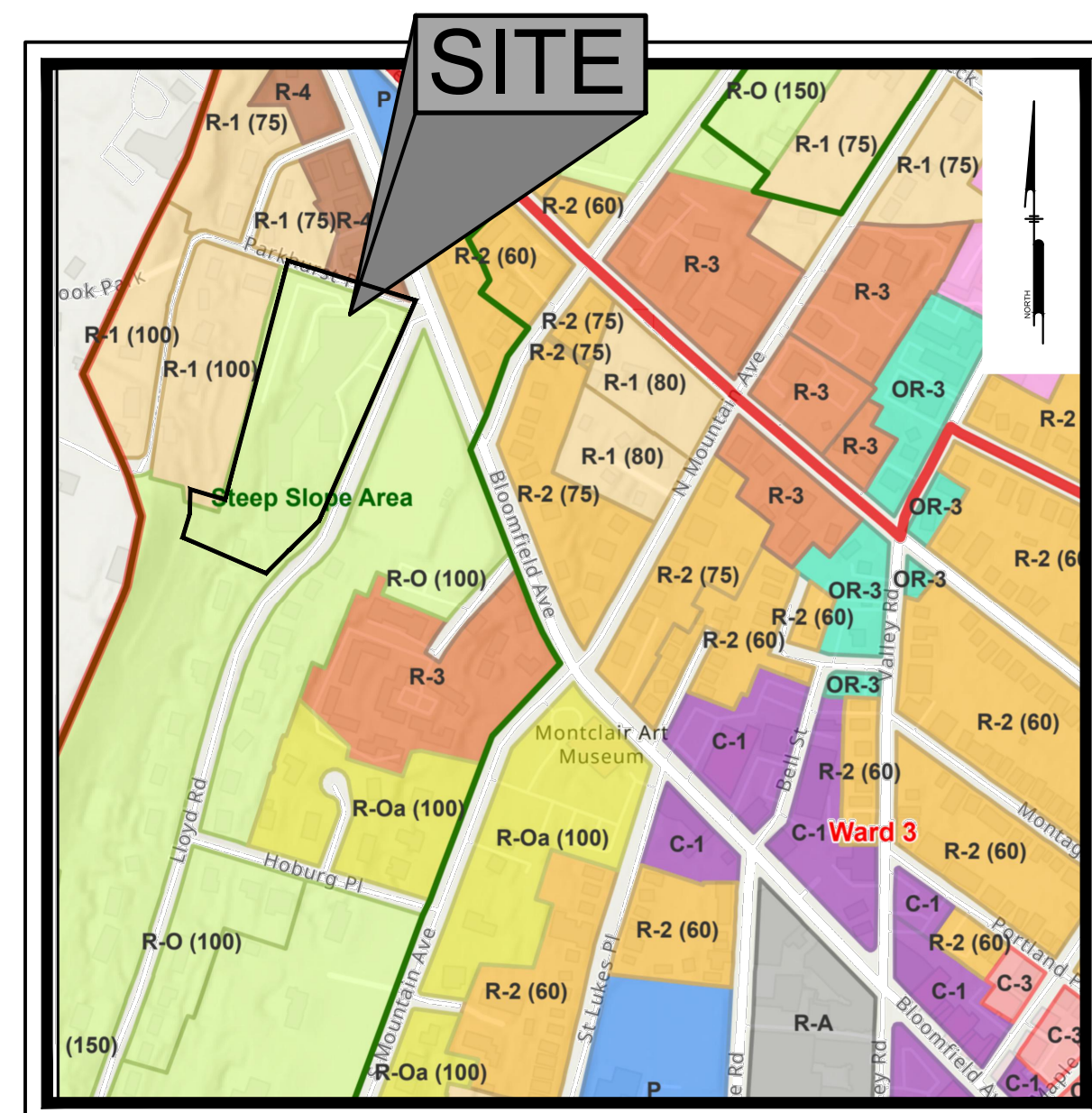
UTILITY CONTACTS		
MONTCLAIR KIMBERLEY ACADEMY, MONTCLAIR, NJ		
COMPANY	CONTACT	ADDRESS
NEW JERSEY BELL TELEPHONE CO.	CORPORATE SECRETARY	540 BROAD STREET, ROOM 1005, NEWARK, NJ 07101
AMERICAN TELEPHONE AND TELEGRAPH CO.	KARL GROSSMANN	50 PATRICIA DRIVE, FLANDERS, NJ, 07836
PUBLIC SERVICE ELECTRIC & GAS CO.	MANAGER CORPORATE PROPERTIES	80 PARK PLACE, T88, NEWARK, NJ, 07102
PASSAIC VALLEY WATER COMMISSION	CORPORATE SECRETARY	1525 MAIN AVENUE, CLIFTON, NJ, 07011
MCI	JOHN SCOCCOLA	10 MARCELLO AVE, WEST ORANGE, NJ, 07052
COMCAST CABLE	N/A	800 RAHWAY AVENUE, UNION, NJ, 07083
VERIZON	N/A	ONE VERIZON WAY, BASKING RIDGE, NJ 07920

NEW JERSEY



**CALL BEFORE YOU DIG  
1-800-272-1000**

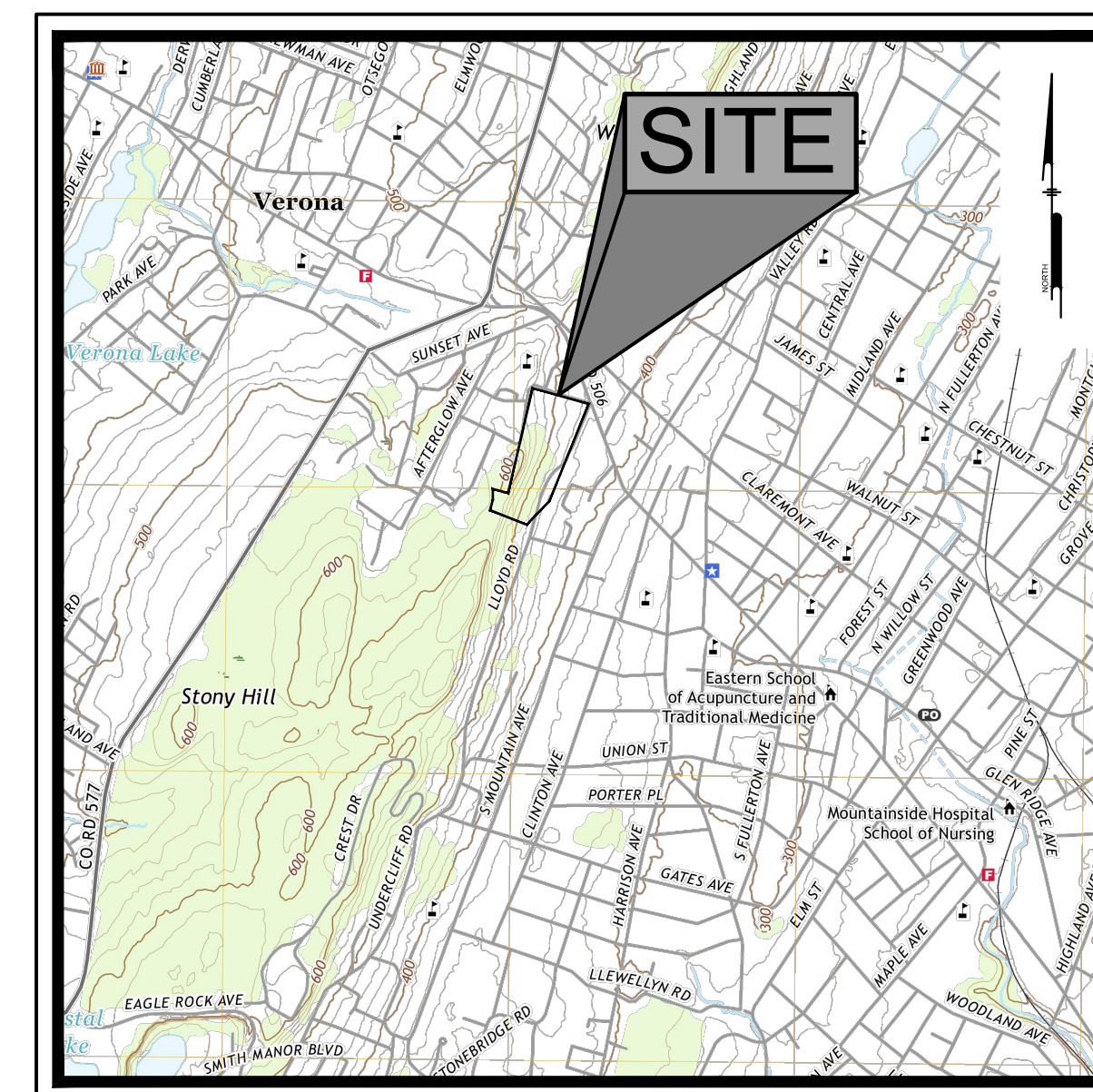
CONTRACTOR SHALL BE RESPONSIBLE TO COMPLY WITH THE REQUIREMENTS OF THE NEW JERSEY ONE-CALL DAMAGE PREVENTION SYSTEM AS STATED IN THE "UNDERGROUND FACILITY PROTECTION ACT". TICKET NUMBER(S):



**ZONING MAP**  
Scale: 1" = 5000'



**LOCATION MAP**  
Scale: 1" = 1000'



**USGS MAP**  
Scale: 1" = 2000'

**NOT FOR CONSTRUCTION**

**Pennoni**  
NJ COA GA28033300  
**PENNONI ASSOCIATES INC.**  
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Princeton, NJ 08540  
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ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

*Mark S. Mayhew*  
DATE: 09/05/2023  
MARK S. MAYHEW  
PROFESSIONAL ENGINEER  
NEW JERSEY LICENSE  
NO. GE355596

STEM CENTER  
6 LLOYD ROAD  
MONTCLAIR, NJ

COVER SHEET

MONTCLAIR KIMBERLEY ACADEMY  
201 VALLEY ROAD  
MONTCLAIR, NJ ,07042

NO.	DATE	REVISIONS	BY

ALL DOCUMENTS PREPARED BY PENNONI ASSOCIATES ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE PROJECT. THEY ARE NOT INTENDED OR REPRESENTED TO BE SUITABLE FOR REUSE BY OWNER OR OTHERS ON THE EXTENSIONS OF THE PROJECT OR ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY PENNONI ASSOCIATES FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT OWNERS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO PENNONI ASSOCIATE, AND OWNER SHALL HOLD PENNONI ASSOCIATES HARMLESS FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM.

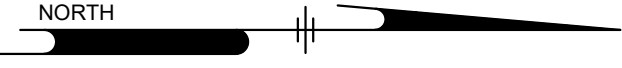
PROJECT	VAMAX22004
DATE	2023-09-05
DRAWING SCALE	AS NOTED
DRAWN BY	0502
APPROVED BY	0502

CS0001  
SHEET 1 OF 16

U:\Documents\AMAX\AMAX22004 - View - Montclair Kimberley Academy\FACILITY\ESSEX\CS0001.dwg PLOTTED: 9/5/2023 1:41:01 PM, Plotted By: Jimmy Bittel PLOTTED BY: Pennoni KCS-48



U:\Projects\10\AMAX\AMAX22004 - View - Montclair Vicinity Area\AMAX22004\CS0101.dwg PLOTTED: 09/20/2023 10:01 AM BY: Jimmy Bittel PLOTTSTYLE: Penmon VCS.dwg



LEGEND:  
 SITE BOUNDARY LINE W/ 200 FT BUFFER  
 MUNICIPAL BOUNDARY



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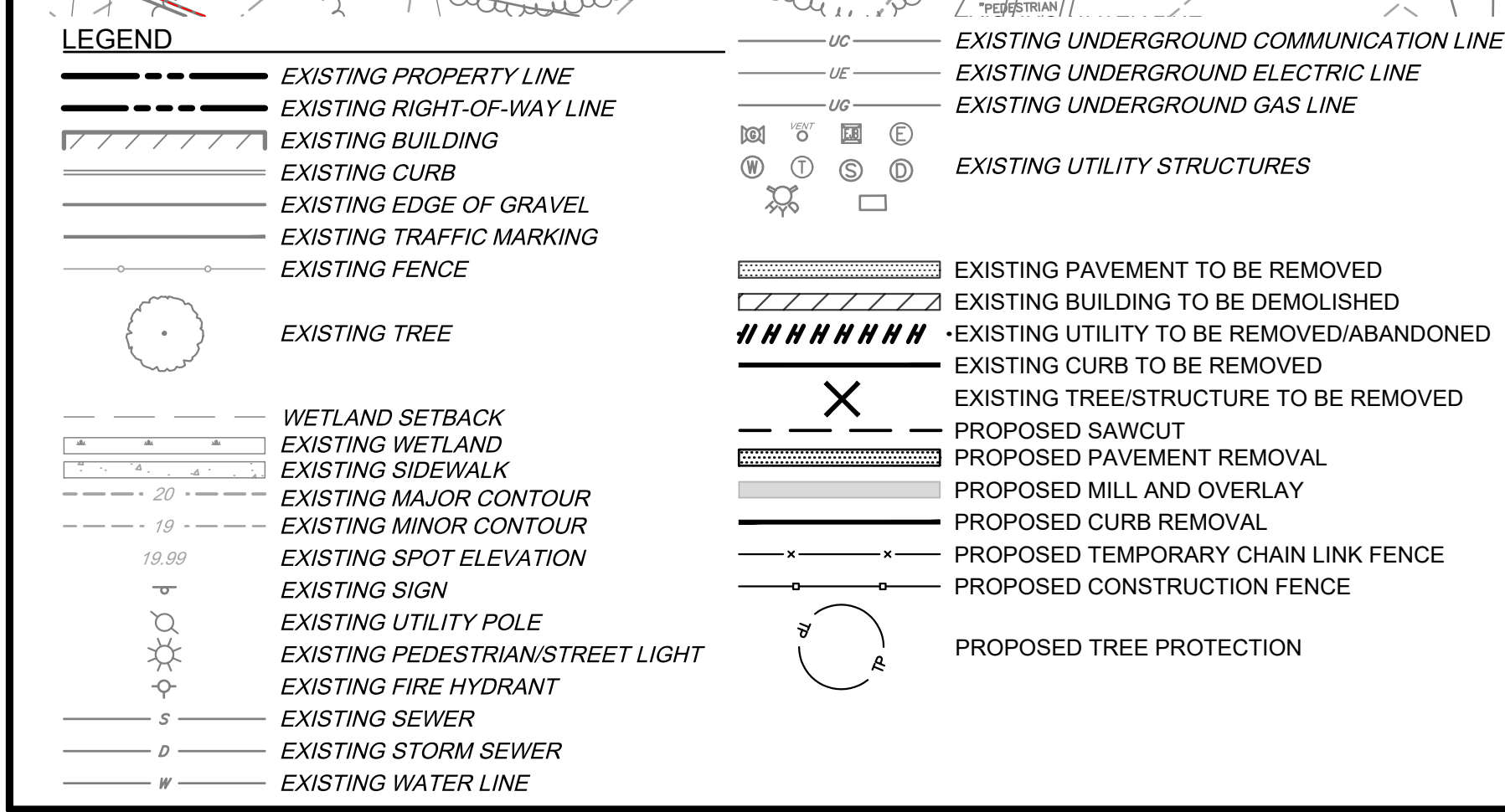
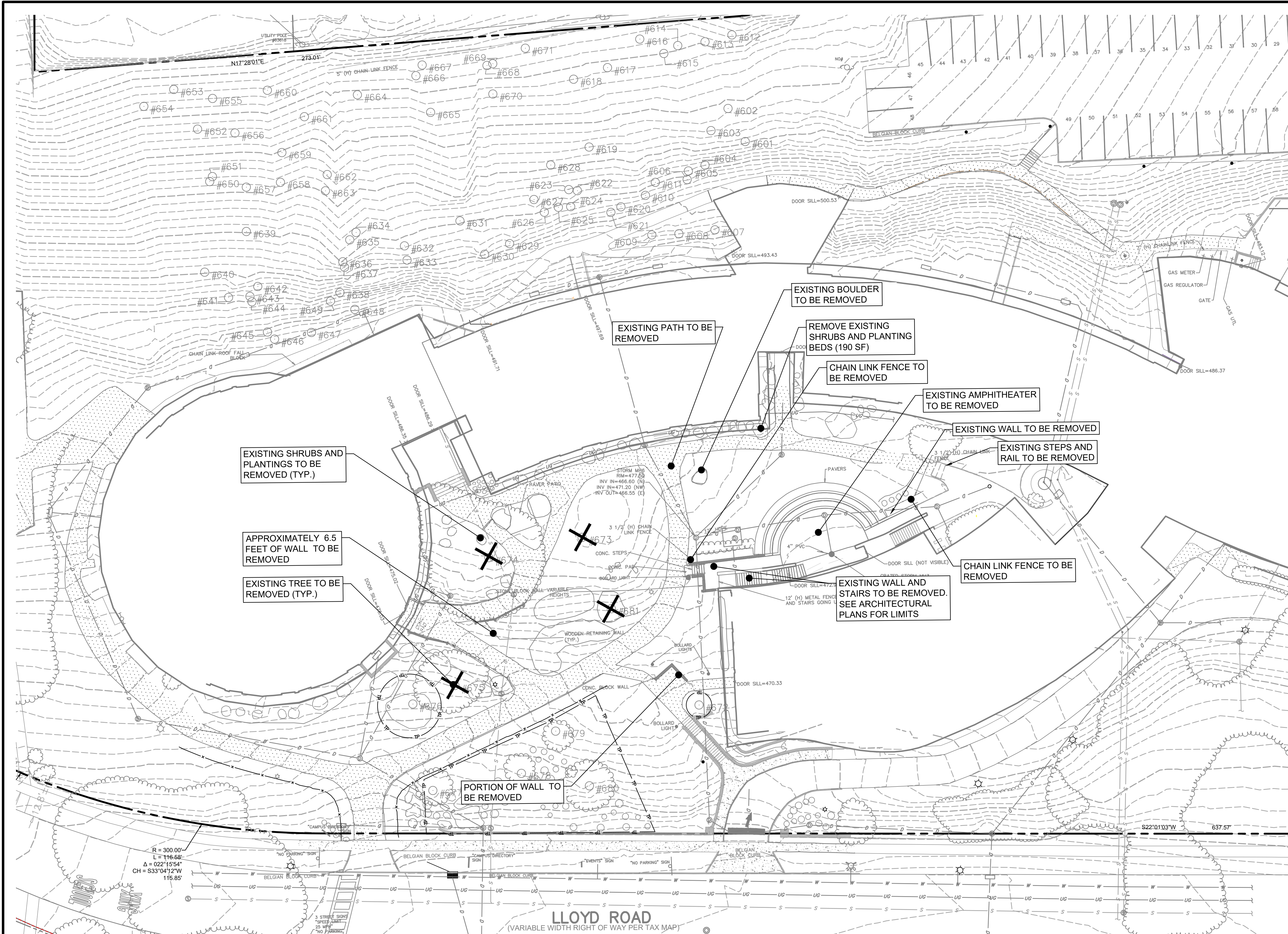
**STEM CENTER**  
 6 LLOYD ROAD  
 MONTCLAIR, NJ  
**AREA AND VICINITY MAP**  
 MONTCLAIR KIMBERLEY ACADEMY  
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 MONTCLAIR, NJ 07042

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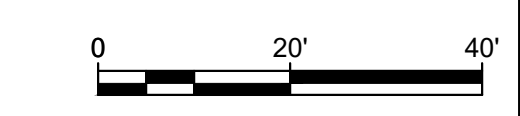
PROJECT: VAMAX22004  
 DATE: 2023-09-05  
 DRAWING SCALE: 1"=100'  
 DRAWN BY: 0502  
 APPROVED BY: 0502

PLOTTED: 8/8/2023 10:08 AM By: Jimmy Bernini PLOTTED FILE: PENNONI VAMAX22004.dwg



- DEMOLITION NOTES:**
- DEMOLITION WILL BEGIN UPON RECEIPT OF ALL NECESSARY APPROVALS AND PERMITS FROM ALL APPLICABLE GOVERNMENTAL AGENCIES. ALL WORK SHALL COMPLY WITH APPLICABLE FEDERAL, STATE, AND LOCAL CODES.
  - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT THE AREAS FOR BOTH VEHICULAR AND PEDESTRIAN TRAFFIC BE SAFE, CLEAN, AND ACCESSIBLE AT ALL TIMES DURING CONSTRUCTION.
  - CONTRACTOR SHALL CONTACT THE NJ ONE CALL SYSTEM (1-800-272-1000), NOT LESS THAN THREE DAYS NOR MORE THAN TEN WORKING DAYS BEFORE COMMENCING WITH DEMOLITION.
  - CONTRACTOR IS RESPONSIBLE FOR UTILIZING APPLICABLE EROSION CONTROL MEASURES PRIOR TO AND DURING DEMOLITION. THE EROSION AND SEDIMENTATION PLANS ARE TO BE SUBMITTED TO THE MUNICIPALITY AND/OR THE COUNTY CONSERVATION DISTRICT. REFER TO CS8000 SERIES FOR THIS PROJECT FOR EROSION AND SEDIMENT CONTROL PROCEDURES.
  - THE CONTRACTOR SHALL ENSURE THAT PROPER MECHANISMS ARE IN PLACE TO CONTROL WASTE MATERIALS THAT COULD ADVERSELY IMPACT WATER QUALITY. DEMOLITION WASTES INCLUDE, BUT ARE NOT LIMITED TO, EXCESS SOIL MATERIALS, BUILDING MATERIAL, CONCRETE WASTE WATER, SANITARY WASTES, ETC. MEASURES SHOULD BE PLANNED AND IMPLEMENTED FOR HOUSE KEEPING, MATERIAL MANAGEMENT AND LITTER CONTROL. WHEREVER POSSIBLE, RECYCLING OF EXCESS MATERIALS IS PREFERRED, RATHER THAN DISPOSAL. DIRECT ALL PUMP DISCHARGES RESULTING FROM DEWATERING OPERATIONS TO A SUITABLE FILTERING DEVICE IN ACCORDANCE WITH THE EROSION AND SEDIMENTATION CONTROL PLANS.
  - SAFETY DEVICES (I.E. BARRICADES, WARNING TAPE, CHAIN LINK FENCING, ETC.) SHALL BE USED DURING DEMOLITION PROCEDURES TO INSURE THE SAFETY OF THE SURROUNDING PUBLIC. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING, PREPARING, AND OBTAINING PERMITS RELATED TO STREET AND SIDEWALK CLOSURES RELATED TO ALL CONSTRUCTION COMPONENTS OF THIS PROJECT.
  - THE CONTRACTOR SHALL IMMEDIATELY REMOVE ANY AND ALL DEBRIS THAT MAY FALL ON THE ROADWAY AND/OR MAY BE TRACKED ONTO THE ROADWAY.
  - STRUCTURES, PAVEMENT, SUBBASE AND MISCELLANEOUS ITEMS SHALL BE REMOVED IN THEIR ENTIRETY. ALL OPEN EXCAVATION AS A RESULT OF DEMOLITION WORK (I.E. FOUNDATIONS, BASEMENTS, TRENCHES, MANHOLES, INLETS, CLEANOUTS AND STORMWATER PIPING) SHALL BE BACKFILLED TO SURROUNDING GRADE LEVEL IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS AFTER DEMOLITION IS COMPLETE.
  - SIGNS, POSTS, FIRE HYDRANTS, VAULTS, VALVES, ETC. IN THE WALKWAYS AND STREETS ARE TO BE PROTECTED AND MAINTAINED IN OPERABLE CONDITION THROUGHOUT DEMOLITION AND CONSTRUCTION.
  - CONTRACTOR TO REVIEW EXISTING SITE FEATURES THAT ARE TO BE DEMOLISHED AND/OR REMOVED WITH THE OWNER. CONTRACTOR TO COORDINATE THE SALVAGE OF ANY EXISTING MATERIALS OR FEATURES AT THE OWNER'S REQUEST.
  - STREET LIGHT CONDUITS AND UG WIRING LOCATED WITHIN THE PUBLIC RIGHT-OF-WAY WILL NOT BE MARKED BY NJ ONE-CALL AND A SEPARATE CONTRACT MUST BE MADE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY/ALL WORK TO RELOCATE ANY/ALL STREET LIGHTING EQUIPMENT.
  - CONTRACTOR TO COORDINATE THE CUTTING, CAPPING, AND SECURING OF UTILITIES TO BE REMOVED AND/OR ABANDONED WITH THE OWNER.
  - ALL LINES TO BE ABANDONED SHALL BE SEALED WITH A MINIMUM OF 12-INCH DEEP MASONRY PLUG UNLESS OTHERWISE NOTED OR REQUIRED BY LOCAL UTILITY REQUIREMENTS.
  - CONTRACTOR SHALL DIG TEST PITS AT ALL UTILITY CROSSINGS TO VERIFY THE ELEVATION OF THE EXISTING UTILITY MAINS A MINIMUM OF TWO WEEKS PRIOR TO COMMENCEMENT OF ANY WORK. THE ENGINEER SHALL BE PROVIDED WITH SURVEYED LOCATIONS AND ELEVATIONS AT PROPOSED TEST PIT. REFER TO PLAN FOR SPECIFIC AREAS OF CONCERN, ALTHOUGH ALL CROSSINGS ARE THE CONTRACTOR'S RESPONSIBILITY.
  - ALL UTILITIES TO BE CAPPED AND REMOVED ARE NOT SHOWN. CONTRACTOR TO RELOCATE OR CAP AND REMOVE EXISTING UTILITIES WHICH INTERFERE WITH PROPOSED SITE CONSTRUCTION. CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FROM UTILITY OWNERS PRIOR TO REMOVAL OF FACILITIES.
  - CONTRACTOR TO PROTECT AND SUPPORT EXISTING UTILITY STRUCTURES DURING DEMOLITION AND CONSTRUCTION.
  - EXISTING UTILITIES AND STRUCTURES ARE TO BE PROTECTED AND MAINTAINED UNLESS OTHERWISE NOTED.
  - CONTRACTOR ONLY TO REMOVE ABANDONED UTILITIES ENCOUNTERED DURING EXCAVATION. UTILITIES NOT ENCOUNTERED MAY REMAIN IN PLACE, AND UNAFFECTED, UNLESS NOTED OTHERWISE ON THE PLANS.
  - NO UNSUITABLE MATERIAL IS TO BE USED ON-SITE. REMOVE ANY SUBGRADE THAT CANNOT BE PROPERLY COMPACTED AND THAT IS UNSUITABLE MATERIAL. UNDERCUTTING AND/OR SUBGRADE STABILIZATION MAY BE REQUIRED.
  - ALL DELETERIOUS MATERIALS AND/OR DEMOLITION DEBRIS SHALL BE REMOVED AND NOT UTILIZED AS BACKFILL.
  - ALL MATERIALS SHALL BE NEW UNLESS USED OR SALVAGED MATERIALS ARE AUTHORIZED BY THE OWNER.
  - REMOVAL OF ANY FIRE HYDRANT SHALL BE REVIEWED AND APPROVED BY THE LOCAL FIRE OFFICIALS. CONTRACTOR TO COORDINATE HYDRANT REMOVAL AND APPROVAL WITH THE MUNICIPALITY AND UTILITY COMPANY. CONTRACTOR TO PROVIDE NEW/TEMPORARY AND OR PERMANENT RELOCATION OF HYDRANTS PER MUNICIPAL REQUIREMENTS.
  - CONTRACTOR WILL BE RESPONSIBLE TO REMOVE ANY UNDERGROUND FOUNDATION OR ABANDONED UTILITY REQUIRED TO FACILITATE THE PROPOSED IMPROVEMENTS.
  - UTILITY REMOVAL/ABANDONMENT SHALL BE IN ACCORDANCE WITH THE FOLLOWING ADDITIONAL SPECIFICATIONS:
    - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES AND TO TAKE WHATEVER STEPS NECESSARY TO PROVIDE FOR THEIR PROTECTION. THE ENGINEER HAS DILIGENTLY ATTEMPTED TO LOCATE AND INDICATE ALL EXISTING FACILITIES ON THESE PLANS; HOWEVER, THIS INFORMATION IS SHOWN FOR THE CONTRACTOR'S CONVENIENCE ONLY. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE LOCATIONS OF UTILITIES SHOWN OR NOT SHOWN. THE CONTRACTOR SHALL CONTACT THE UTILITY COMPANIES FOR EXACT LOCATION OF THEIR UTILITIES PRIOR TO STARTING CONSTRUCTION. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AND REPLACE ANY AND ALL DAMAGE MADE TO UTILITIES BY THE CONTRACTOR.
    - CONTRACTOR TO NOTIFY APPROPRIATE UTILITY COMPANY PRIOR TO INTERRUPTION, RELOCATION, OR REMOVAL/ABANDONMENT OF SUCH UTILITY.
    - REMOVAL/ABANDONMENT OF PRIVATE UTILITY COMPANY SERVICES TO BE IN ACCORDANCE WITH EACH RESPECTIVE UTILITY COMPANY STANDARD SPECIFICATIONS OR THE FOLLOWING PROCEDURE, WHICH EVER IS MORE RESTRICTIVE.
      - ALL PIPES TO BE ABANDONED SHALL BE EITHER EXCAVATED, REMOVED AND THE TRENCH BACKFILLED WITH COURSE AGGREGATE MATERIAL OR ALTERNATE MATERIAL APPROVED BY THE ENVIRONMENTAL ENGINEER OF RECORD OR THE PIPE SHALL BE COMPLETELY FILLED WITH FLOWABLE FILL AND THE ENDS SEALED WITH WATERTIGHT GROUT.
      - ALL STRUCTURES TO BE ABANDONED IN-PLACE SHALL HAVE AT MINIMUM THE FIRST 5 FEET BELOW PROPOSED GRADE REMOVED. THE REMAINING STRUCTURE SHALL BE COMPLETELY FILLED WITH FLOWABLE FILL, CAPPED WITH A WATERTIGHT CONCRETE COVER AND SEALED WITH WATERTIGHT GROUT. WHERE SITE GRADING NECESSITATES STRUCTURE REMOVAL, THE ASSOCIATED PIPES SHALL BE FILLED WITH FLOWABLE FILL AND THE ENDS SEALED WITH WATERTIGHT GROUT. THE CONTRACTOR SHALL FIELD VERIFY THE FLOW PATH OF ALL PIPES TO ENSURE THAT PLUGGING PIPES WILL NOT ADVERSELY AFFECT DRAINAGE ON ANY ADJACENT ROADWAY OR PROPERTY.
  - ALL MATERIALS TO BE REMOVED SHALL BE DISPOSED OF AT AN APPROVED WASTE DISPOSAL SITE, OR SHALL BE RECYCLED IN ACCORDANCE WITH PROJECT REQUIREMENTS.
  - REMOVAL AND DISPOSAL OF BITUMINOUS MATERIAL SHALL BE IN ACCORDANCE WITH DETAILS AND REGULATIONS OF THE MUNICIPALITY, PADEP, AND PENNDOT, AS APPLICABLE AND IS SUBJECT TO INSPECTION AND APPROVAL AS APPROPRIATE.
  - CONTRACTOR TO COLLECT AND REMOVE ALL TRASH/ DEBRIS ON SITE.

**NOT FOR CONSTRUCTION**



**DEMOLITION PLAN**

STEM CENTER  
6 LLOYD ROAD  
MONTCLAIR, NJ

MONTCLAIR KIMBERLEY ACADEMY  
201 VALLEY ROAD  
MONTCLAIR, NJ 07042

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*Mark S. W. Bernini*  
DATE: 09/05/2023  
MARK S. MAVHEW  
PROFESSIONAL ENGINEER  
NEW JERSEY LICENSE NO. GE35596

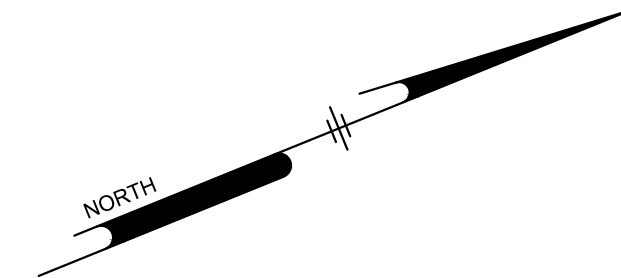
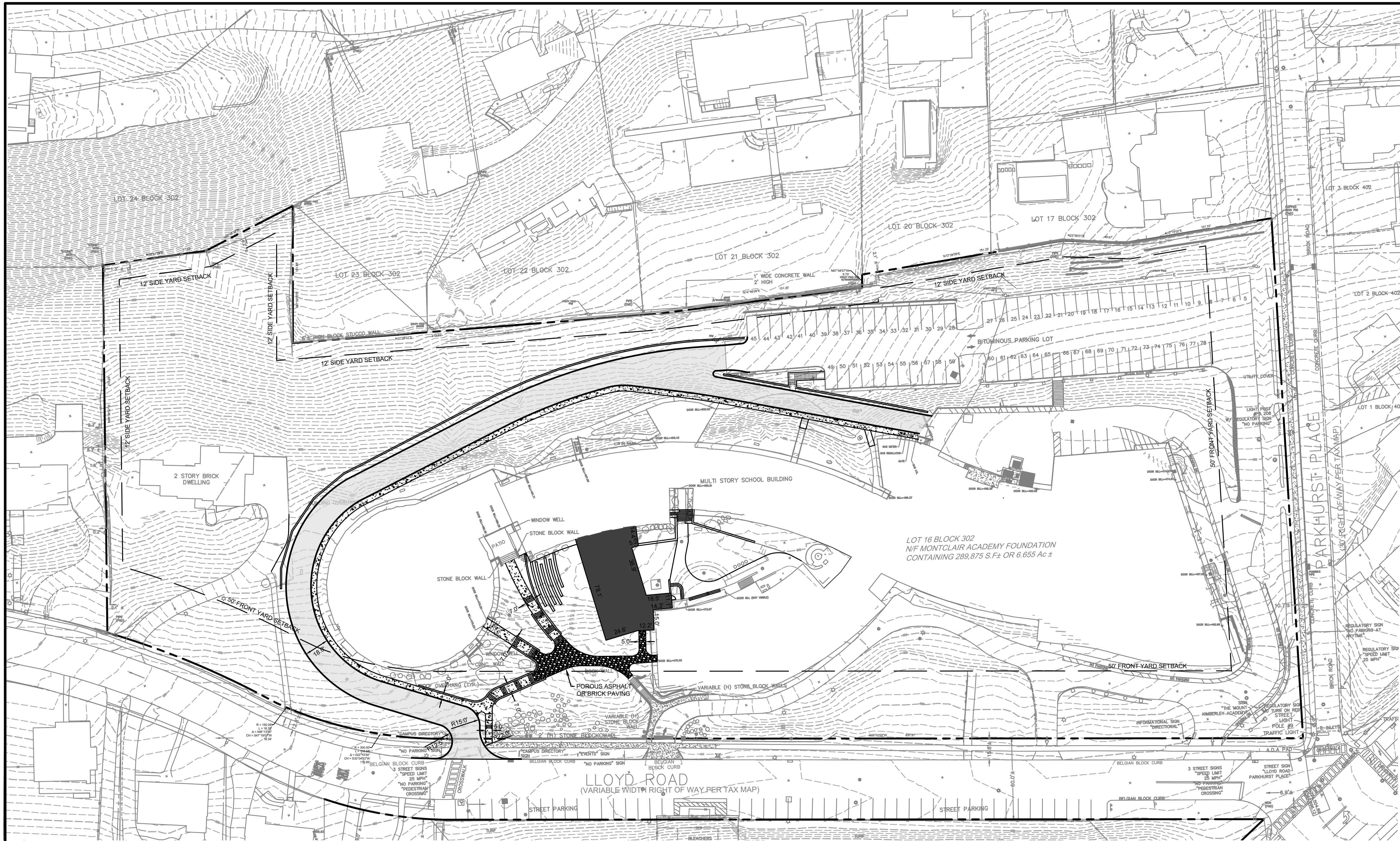
**Pennoni**  
NJ COA GA26033300  
**PENNONI ASSOCIATES INC.**  
103 College Road East  
Princeton, NJ 08540  
T 609-987-2323 F 609-987-0005

NO.	DATE	BY	REVISIONS

PROJECT: VAMAX22004  
DATE: 2023-09-05  
DRAWING SCALE: 1"=20'  
DRAWN BY: 0502  
APPROVED BY: 0502

CS0201

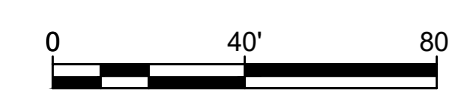
SHEET 4 OF 16



**LEGEND**

	EXISTING PROPERTY LINE
	EXISTING RIGHT-OF-WAY LINE
	EXISTING BUILDING
	EXISTING CURB
	EXISTING EDGE OF GRAVEL
	EXISTING TRAFFIC MARKING
	EXISTING FENCE
	EXISTING TREE
	WETLAND SETBACK
	EXISTING WETLAND
	EXISTING SIDEWALK
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	EXISTING SPOT ELEVATION
	EXISTING SIGN
	EXISTING UTILITY POLE
	EXISTING PEDESTRIAN/STREET LIGHT
	EXISTING FIRE HYDRANT
	EXISTING SEWER
	EXISTING STORM SEWER
	EXISTING WATER LINE
	EXISTING UNDERGROUND COMMUNICATION LINE
	EXISTING UNDERGROUND ELECTRIC LINE
	EXISTING UNDERGROUND GAS LINE
	EXISTING UTILITY STRUCTURES
	PROPOSED POROUS PAVEMENT

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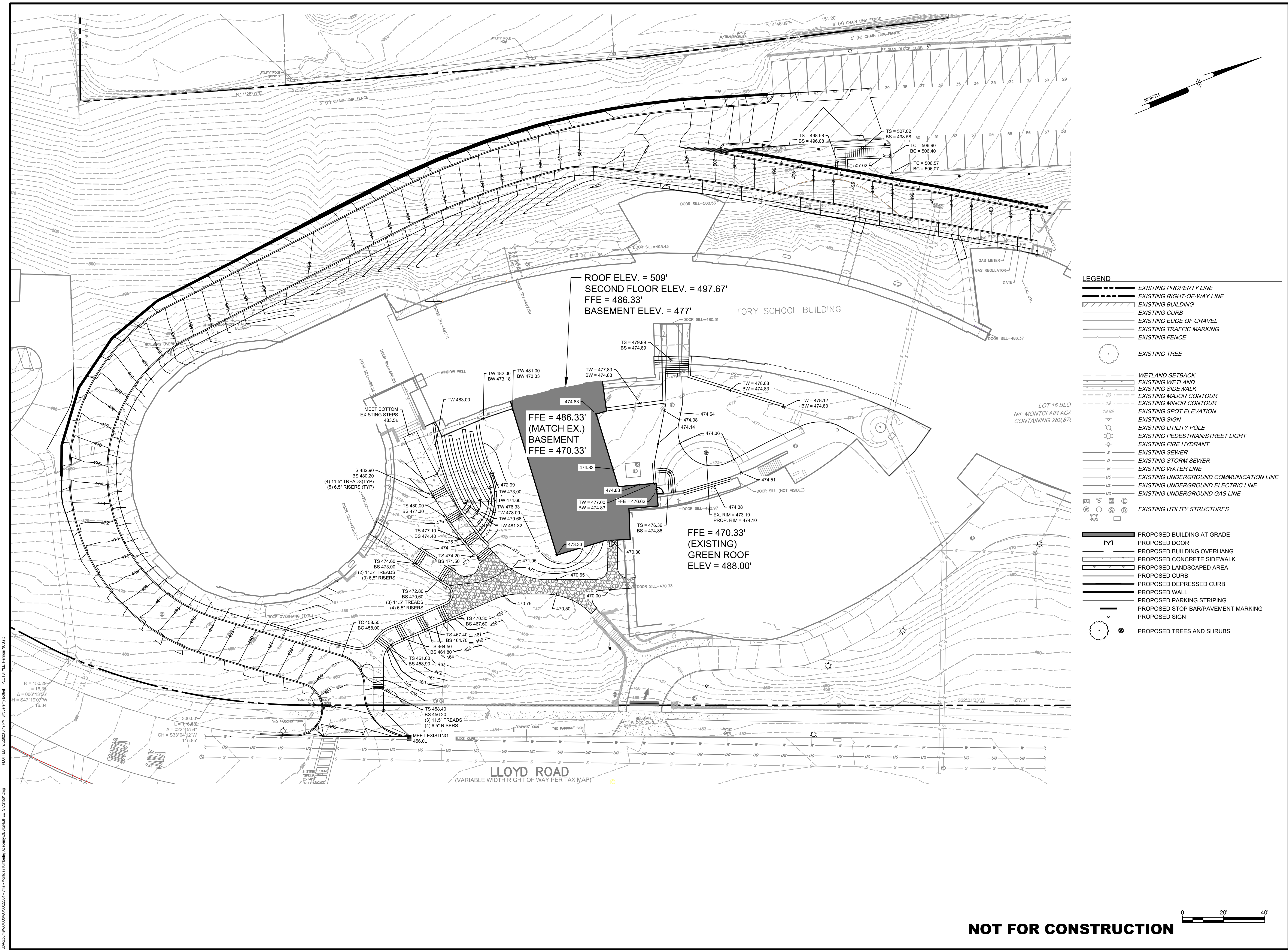
**SITE PLAN**

MONTCLAIR KIMBERLEY ACADEMY  
201 VALLEY ROAD  
MONTCLAIR, NJ 07042

DATE: 09/05/2023  
MARK S. MAYHEW  
PROFESSIONAL ENGINEER  
NEW JERSEY LICENSE NO. GE35596

NO.	DATE	REVISIONS	BY

PROJECT: VAMAX22004  
DATE: 2023-09-05  
DRAWING SCALE: 1"=40'  
DRAWN BY: 0502  
APPROVED BY: 0502



- LEGEND**
- EXISTING PROPERTY LINE
  - EXISTING RIGHT-OF-WAY LINE
  - EXISTING BUILDING
  - EXISTING CURB
  - EXISTING EDGE OF GRAVEL
  - EXISTING TRAFFIC MARKING
  - EXISTING FENCE
  - EXISTING TREE
  - WETLAND SETBACK
  - EXISTING WETLAND
  - EXISTING SIDEWALK
  - EXISTING MAJOR CONTOUR
  - EXISTING MINOR CONTOUR
  - EXISTING SPOT ELEVATION
  - EXISTING SIGN
  - EXISTING UTILITY POLE
  - EXISTING PEDESTRIAN/STREET LIGHT
  - EXISTING FIRE HYDRANT
  - EXISTING SEWER
  - EXISTING STORM SEWER
  - EXISTING WATER LINE
  - EXISTING UNDERGROUND COMMUNICATION LINE
  - EXISTING UNDERGROUND ELECTRIC LINE
  - EXISTING UNDERGROUND GAS LINE
  - EXISTING UTILITY STRUCTURES
  - PROPOSED BUILDING AT GRADE
  - PROPOSED DOOR
  - PROPOSED BUILDING OVERHANG
  - PROPOSED CONCRETE SIDEWALK
  - PROPOSED LANDSCAPED AREA
  - PROPOSED CURB
  - PROPOSED DEPRESSED CURB
  - PROPOSED WALL
  - PROPOSED PARKING STRIPING
  - PROPOSED STOP BAR/PAVEMENT MARKING
  - PROPOSED SIGN
  - PROPOSED TREES AND SHRUBS

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 MARK S. MAYHEW  
 PROFESSIONAL ENGINEER  
 NEW JERSEY LICENSE NO. GE35599

**STEM CENTER**  
 6 LLOYD ROAD  
 MONTCLAIR, NJ

**GRADING PLAN**

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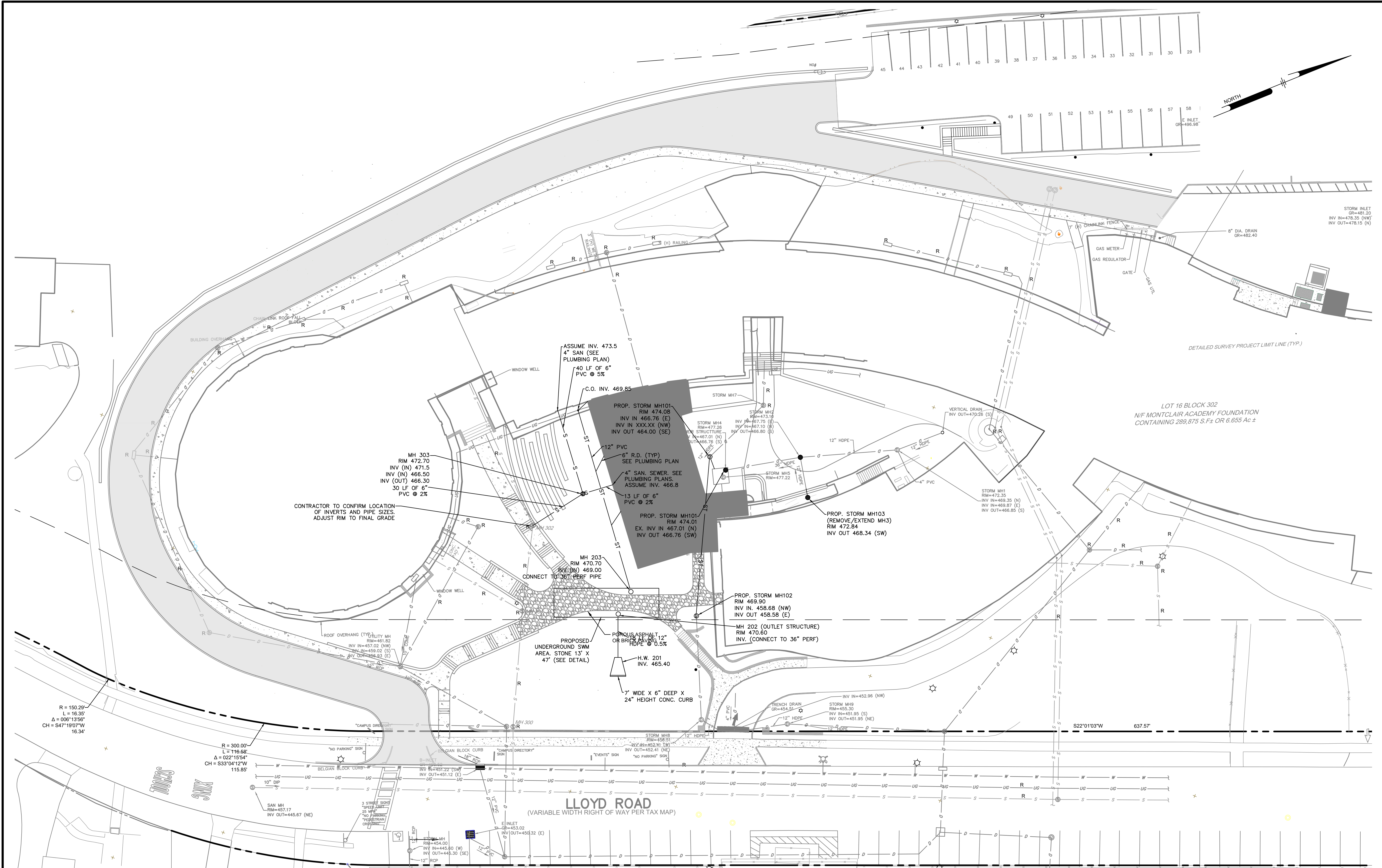
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PROJECT: VAMAX22004  
 DATE: 2023-09-05  
 DRAWING SCALE: 1"=20'  
 DRAWN BY: 0502  
 APPROVED BY: 0502

CS1501  
 SHEET 6 OF 16

**NOT FOR CONSTRUCTION**

PLOTTED: 09/05/2023 10:01 AM Plt: Jimmy Bahrle PLOTTSTYLE: Pennoni VCS.dwg  
 U:\Projects\VAMAX\VAMAX22004 - VCS - Montclair Kimberley Academy\PCS\DRAWING\CS1501.dwg



- LEGEND**
- EXISTING PROPERTY LINE
  - EXISTING RIGHT-OF-WAY LINE
  - EXISTING BUILDING
  - EXISTING CURB
  - EXISTING EDGE OF GRAVEL
  - EXISTING TRAFFIC MARKING
  - EXISTING FENCE
  - EXISTING TREE
  - 19.99 EXISTING SPOT ELEVATION
  - EXISTING SIGN
  - EXISTING UTILITY POLE
  - EXISTING PEDESTRIAN/STREET LIGHT
  - EXISTING FIRE HYDRANT
  - EXISTING SEWER
  - EXISTING STORM SEWER
  - EXISTING WATER LINE
  - EXISTING UNDERGROUND COMMUNICATION LINE
  - EXISTING UNDERGROUND ELECTRIC LINE
  - EXISTING UNDERGROUND GAS LINE
  - EXISTING UTILITY STRUCTURES
  - PROPOSED STORM SEWER
  - PROPOSED UNDER DRAIN
  - PROPOSED STORM INLET
  - PROPOSED STORM MANHOLE



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 DATE: 09/05/2023  
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NO.	DATE	REVISIONS	BY

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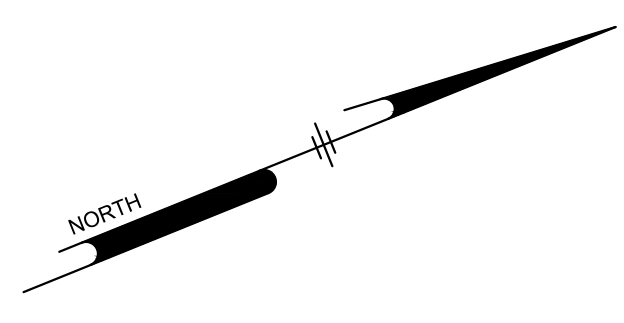
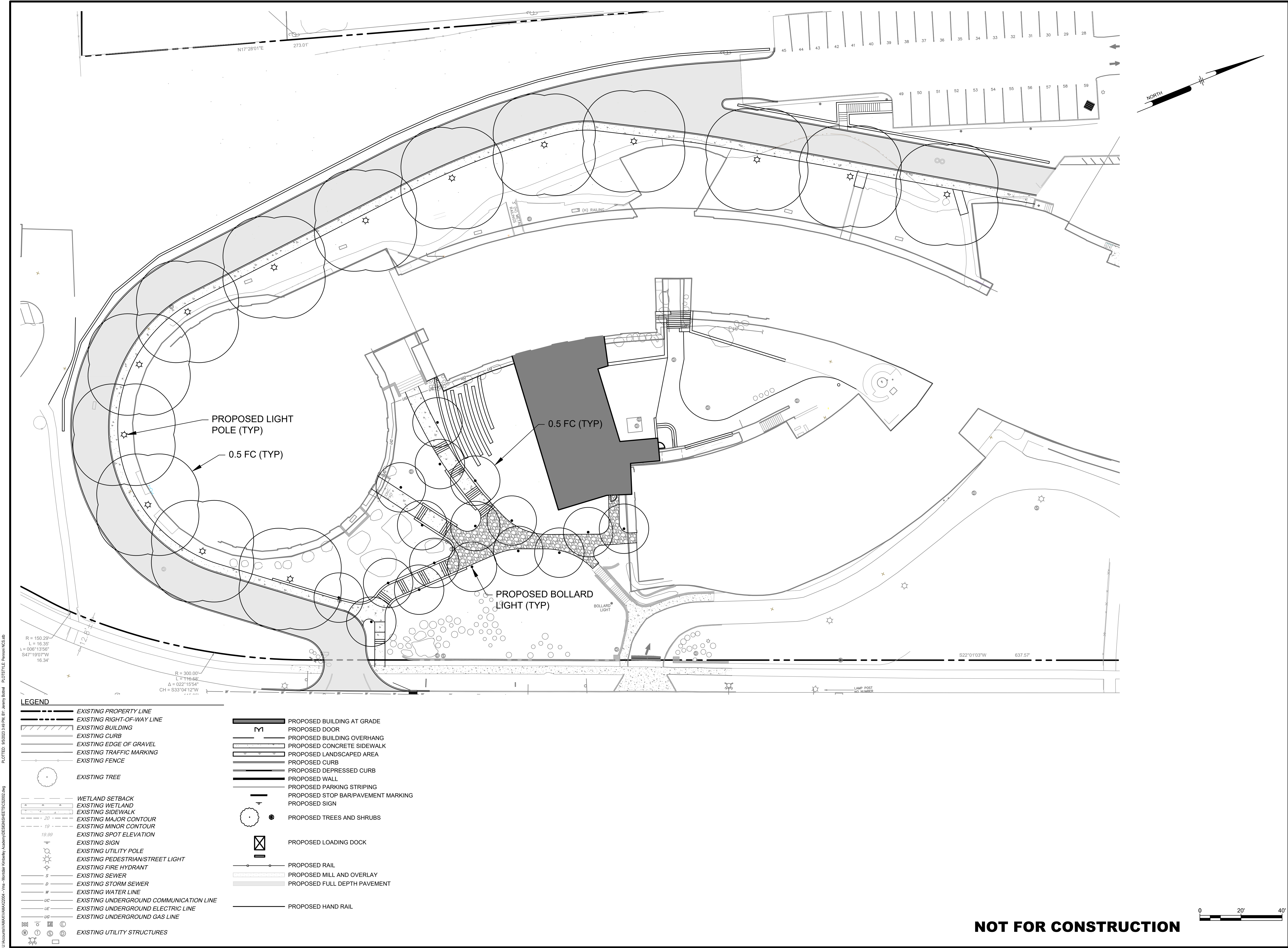
**NOTE:** R = APPROXIMATE LOCATION OF UTILITY LINE AND STRUCTURE PER RECORD PLANS

PROJECT: **VAMAX22004**  
 DATE: 2023-09-05  
 DRAWING SCALE: 1"=20'  
 DRAWN BY: 0502  
 APPROVED BY: 0502

**CS1701**

SHEET 7 OF 16

PLOTTED: 9/5/2023 10:01 AM BY: Jimmy Bantel PLOTTED BY: Pennoni KCS:db  
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**LEGEND**

	EXISTING PROPERTY LINE		PROPOSED BUILDING AT GRADE
	EXISTING RIGHT-OF-WAY LINE		PROPOSED DOOR
	EXISTING BUILDING		PROPOSED BUILDING OVERHANG
	EXISTING CURB		PROPOSED CONCRETE SIDEWALK
	EXISTING EDGE OF GRAVEL		PROPOSED LANDSCAPED AREA
	EXISTING TRAFFIC MARKING		PROPOSED CURB
	EXISTING FENCE		PROPOSED DEPRESSED CURB
	EXISTING TREE		PROPOSED WALL
	WETLAND SETBACK		PROPOSED PARKING STRIPING
	EXISTING WETLAND		PROPOSED STOP BAR/PAVEMENT MARKING
	EXISTING SIDEWALK		PROPOSED SIGN
	EXISTING MAJOR CONTOUR		PROPOSED TREES AND SHRUBS
	EXISTING MINOR CONTOUR		PROPOSED LOADING DOCK
	EXISTING SPOT ELEVATION		PROPOSED RAIL
	EXISTING SIGN		PROPOSED MILL AND OVERLAY
	EXISTING UTILITY POLE		PROPOSED FULL DEPTH PAVEMENT
	EXISTING PEDESTRIAN/STREET LIGHT		PROPOSED HAND RAIL
	EXISTING FIRE HYDRANT		
	EXISTING SEWER		
	EXISTING STORM SEWER		
	EXISTING WATER LINE		
	EXISTING UNDERGROUND COMMUNICATION LINE		
	EXISTING UNDERGROUND ELECTRIC LINE		
	EXISTING UNDERGROUND GAS LINE		
	EXISTING UTILITY STRUCTURES		

**Pennoni**  
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**PENNONI ASSOCIATES INC.**  
 103 College Road East  
 Princeton, NJ 08540  
 T 609-987-2323 F 609-987-0005

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

*Mark S. Mayhew*  
 DATE: 09/05/2023  
 MARK S. MAYHEW  
 PROFESSIONAL ENGINEER  
 NEW JERSEY LICENSE NO. GE35596

**STEM CENTER**  
 6 LLOYD ROAD  
 MONTCLAIR, NJ

**LIGHTING PLAN**

**MONTCLAIR KIMBERLEY ACADEMY**  
 201 VALLEY ROAD  
 MONTCLAIR, NJ 07042

NO.	DATE	REVISIONS	BY

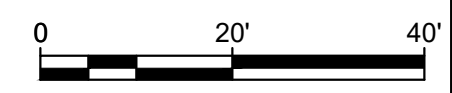
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PROJECT: VAMAX22004  
 DATE: 2023-09-05  
 DRAWING SCALE: 1"=20'  
 DRAWN BY: 0502  
 APPROVED BY: 0502

**CS2002**

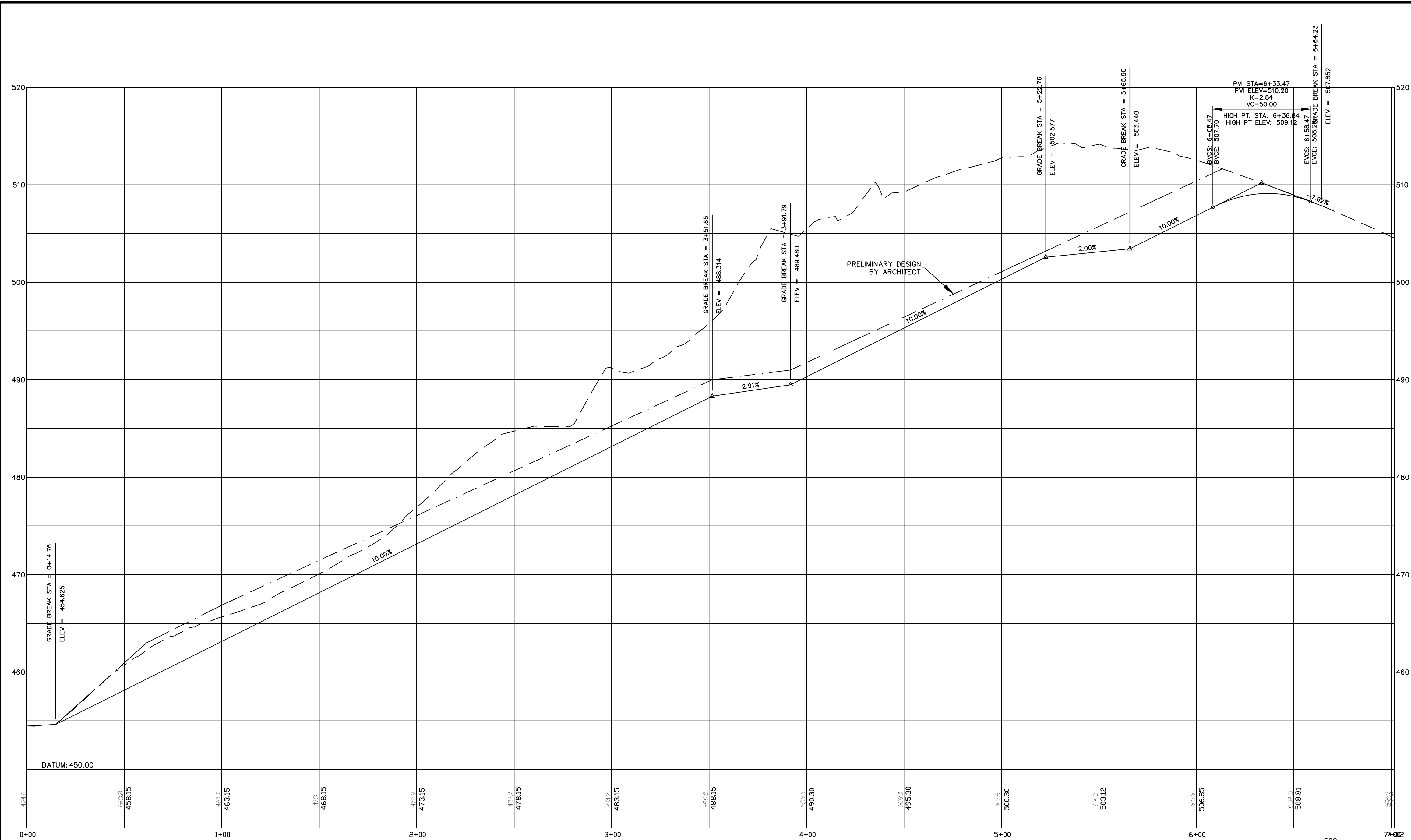
SHEET 8 OF 16

**NOT FOR CONSTRUCTION**

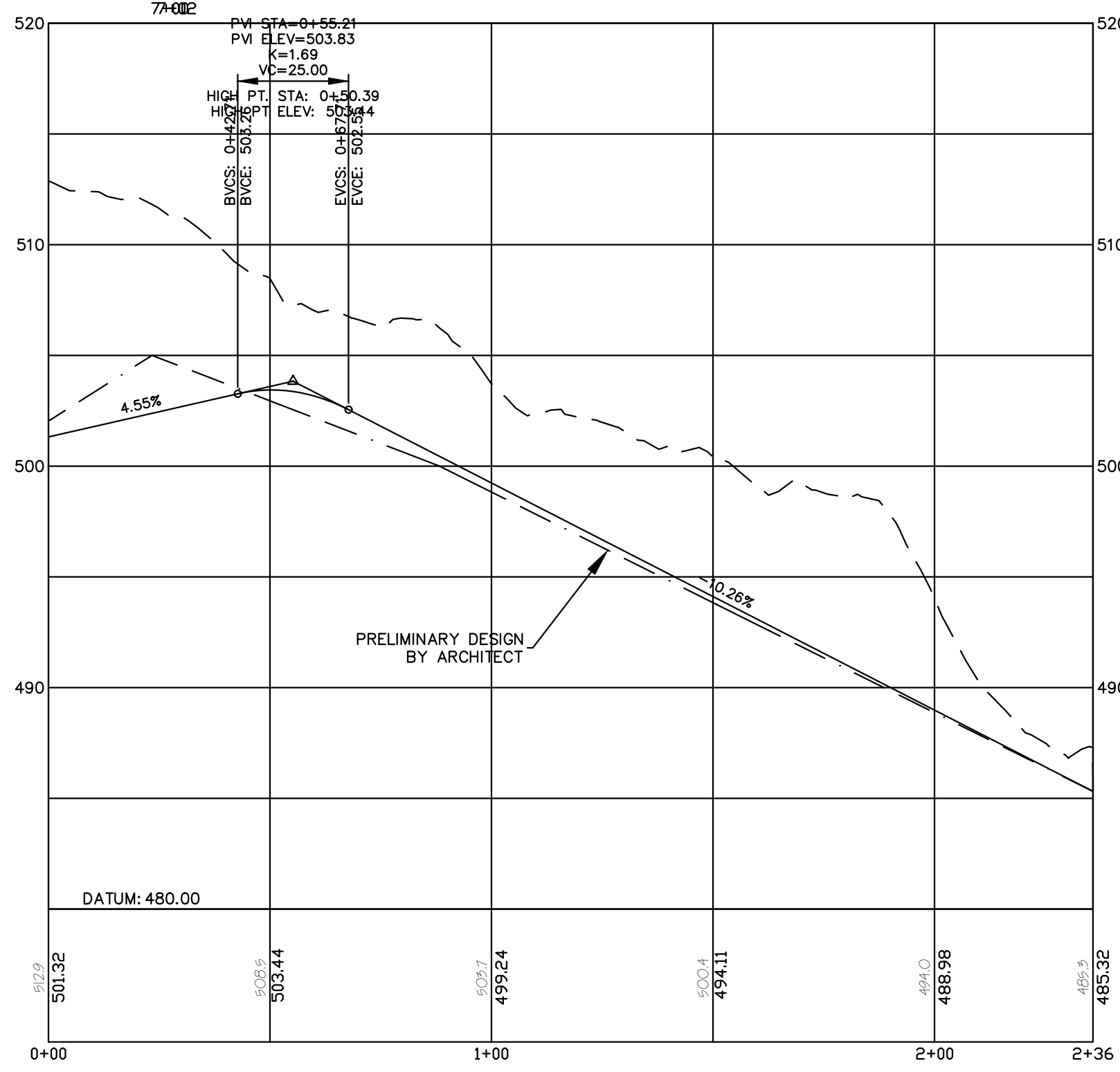


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**ACCESS DRIVE 1**  
 HORIZONTAL SCALE: 1" = 30'  
 VERTICAL SCALE: 1" = 4'



**ACCESS DRIVE 2**  
 HORIZONTAL SCALE: 1" = 30'  
 VERTICAL SCALE: 1" = 4'

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 PLOTTED: 09/05/2023 10:01:04 AM BY: Jimmy Bittel PLOTSTYLE: Penwin VCS.ctb

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*Mark S. Mayhew*  
 DATE: 09/05/2023  
 MARK S. MAYHEW  
 PROFESSIONAL ENGINEER  
 NEW JERSEY LICENSE NO. GE355596

**STEM CENTER**  
 6 LLOYD ROAD  
 MONTCLAIR, NJ

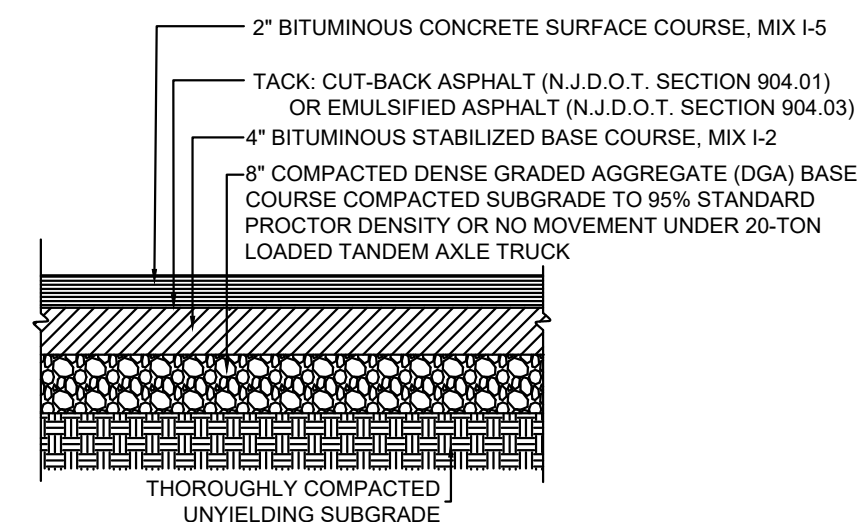
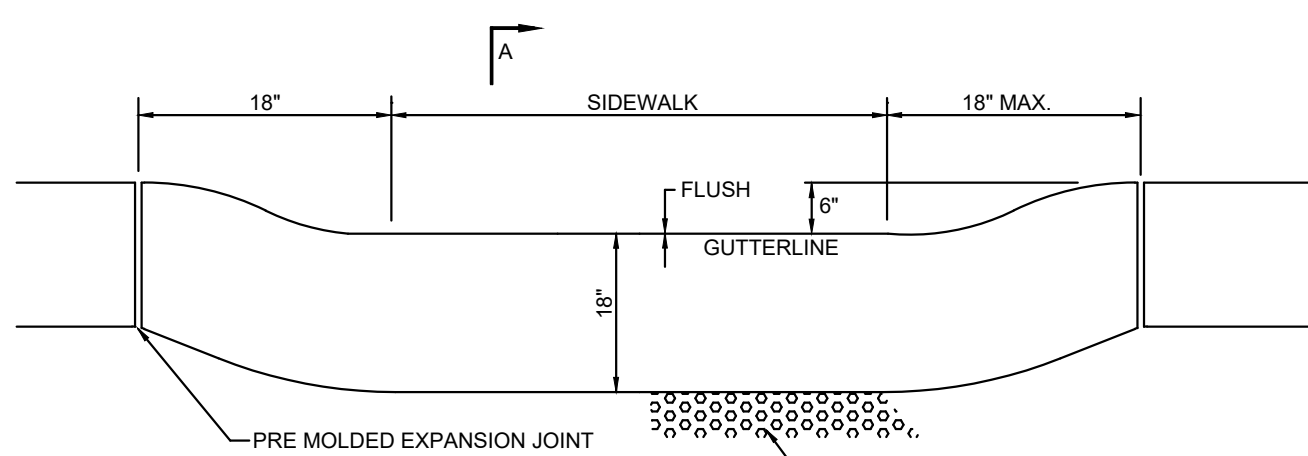
**ROAD PROFILES**

**MONTCLAIR KIMBERLEY ACADEMY**  
 201 VALLEY ROAD  
 MONTCLAIR, NJ 07042

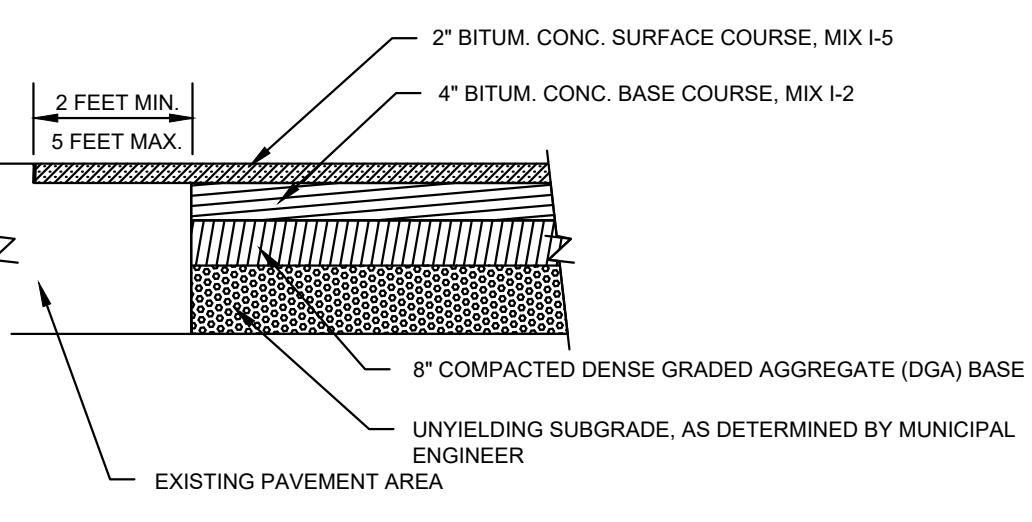
NO.	DATE	REVISIONS	BY

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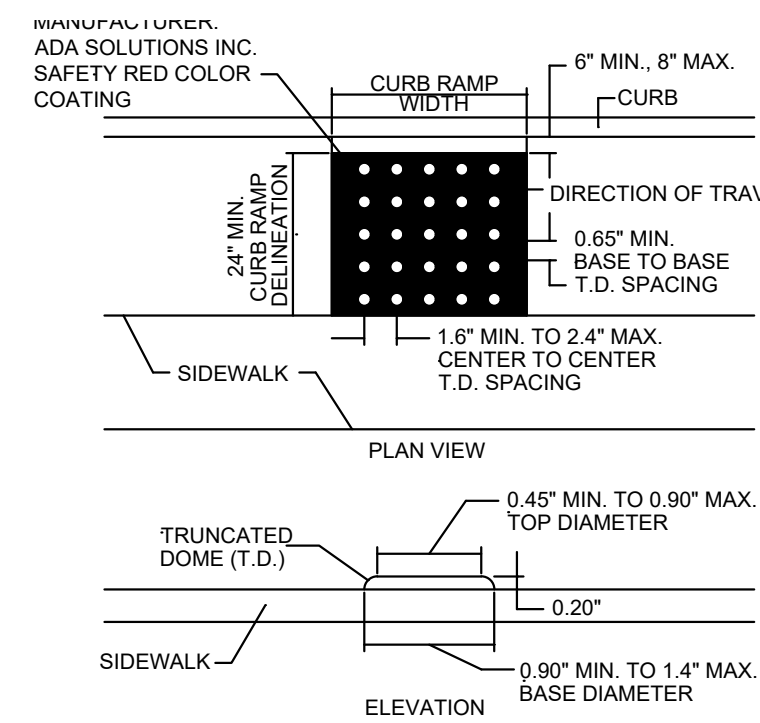
PROJECT	VAMAX22004
DATE	2023-09-05
DRAWING SCALE	AS NOTED
DRAWN BY	0502
APPROVED BY	0502



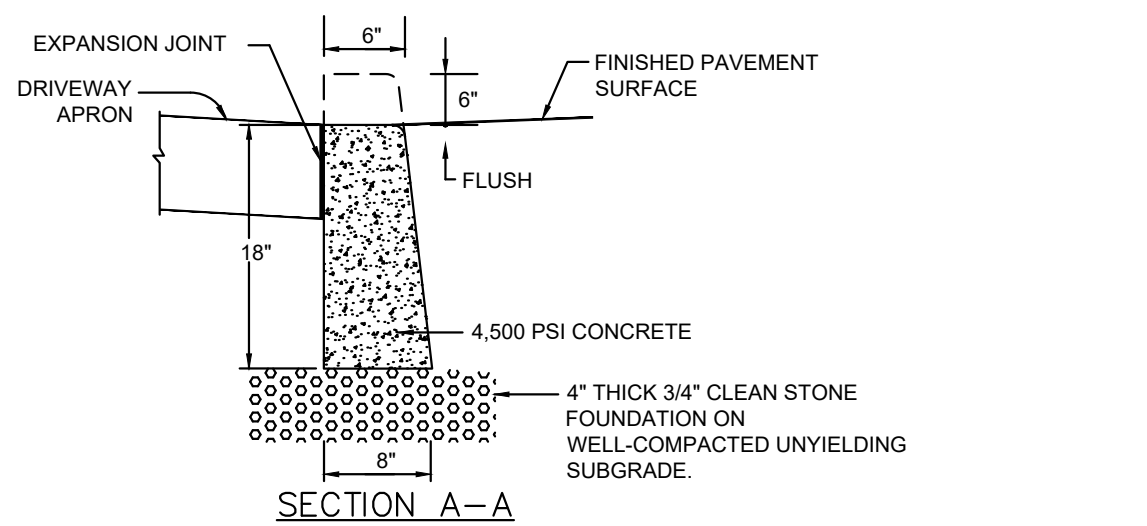
STANDARD PAVEMENT SECTION DETAIL  
NOT TO SCALE



STANDARD PAVEMENT KEY JOINT  
NOT TO SCALE

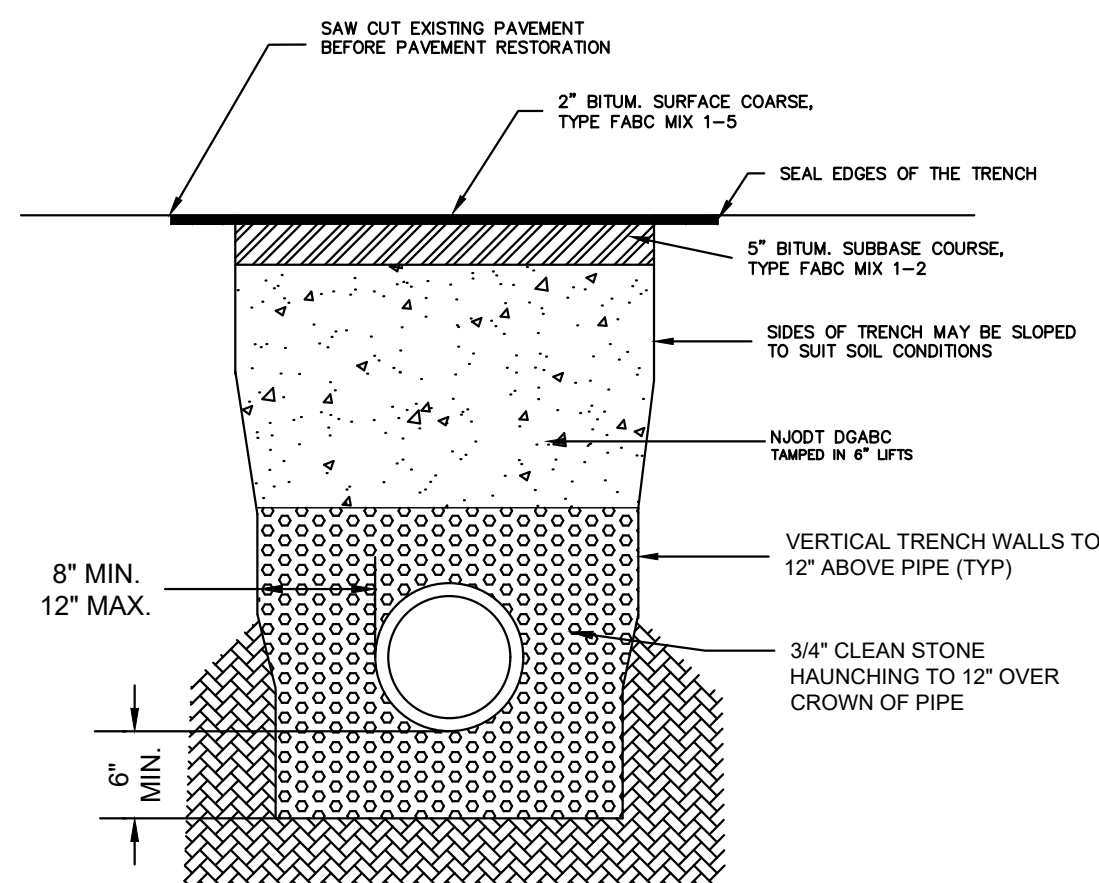


DETECTABLE WARNING SURFACE  
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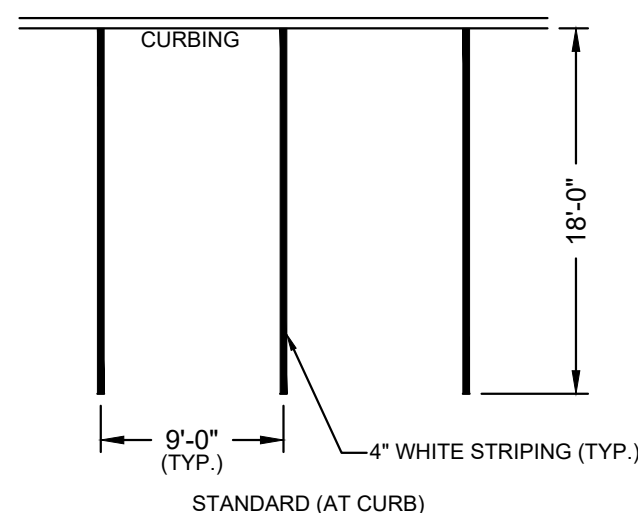
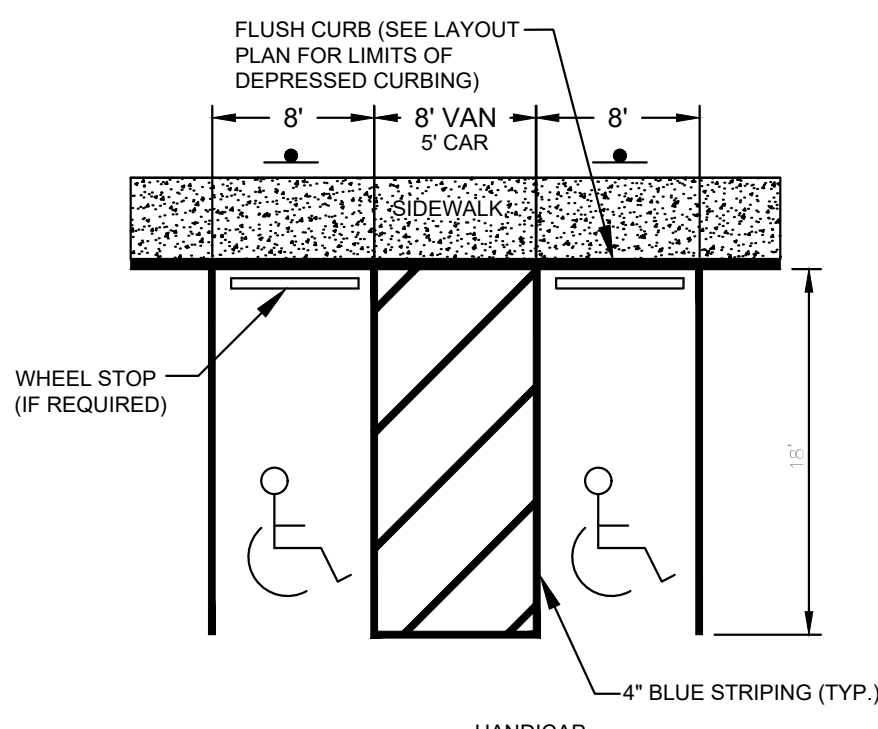
NOTES:  
1. APRONS WIDER THAN 16 FEET REQUIRE PRE MOLDED EXPANSION JOINTS AT CENTER. DIMENSIONS ALSO APPLICABLE TO BELGIAN BLOCK DEPRESSED CURB.  
2. DEPRESSED CURB AT CURB STONE ACCESS AREA TO HAVE AN 1-1/4" REVEAL FOR DRAINAGE.

DEPRESSED CURB AT SIDEWALKS  
NOT TO SCALE

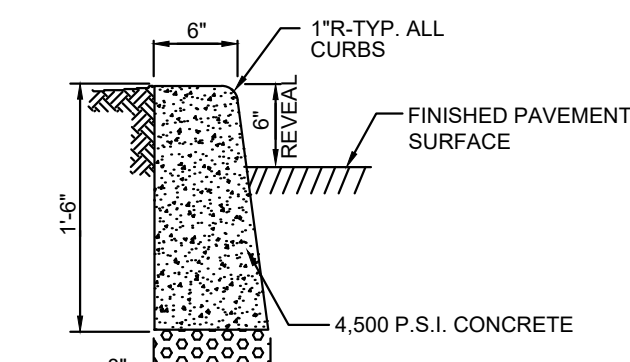


NOTE: THICKNESS OF STABILIZED BASE COURSE COULD INCREASE DEPENDING ON ROAD CLASSIFICATION, DETERMINED BY MUNICIPAL ENGINEER.

ROADWAY TRENCH RESTORATION DETAIL  
NOT TO SCALE

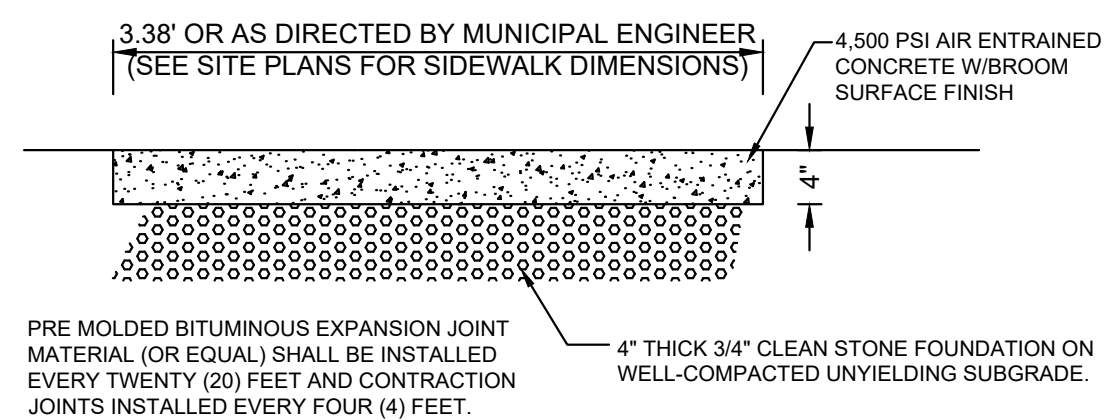


PARKING LOT STRIPING DETAIL  
NOT TO SCALE

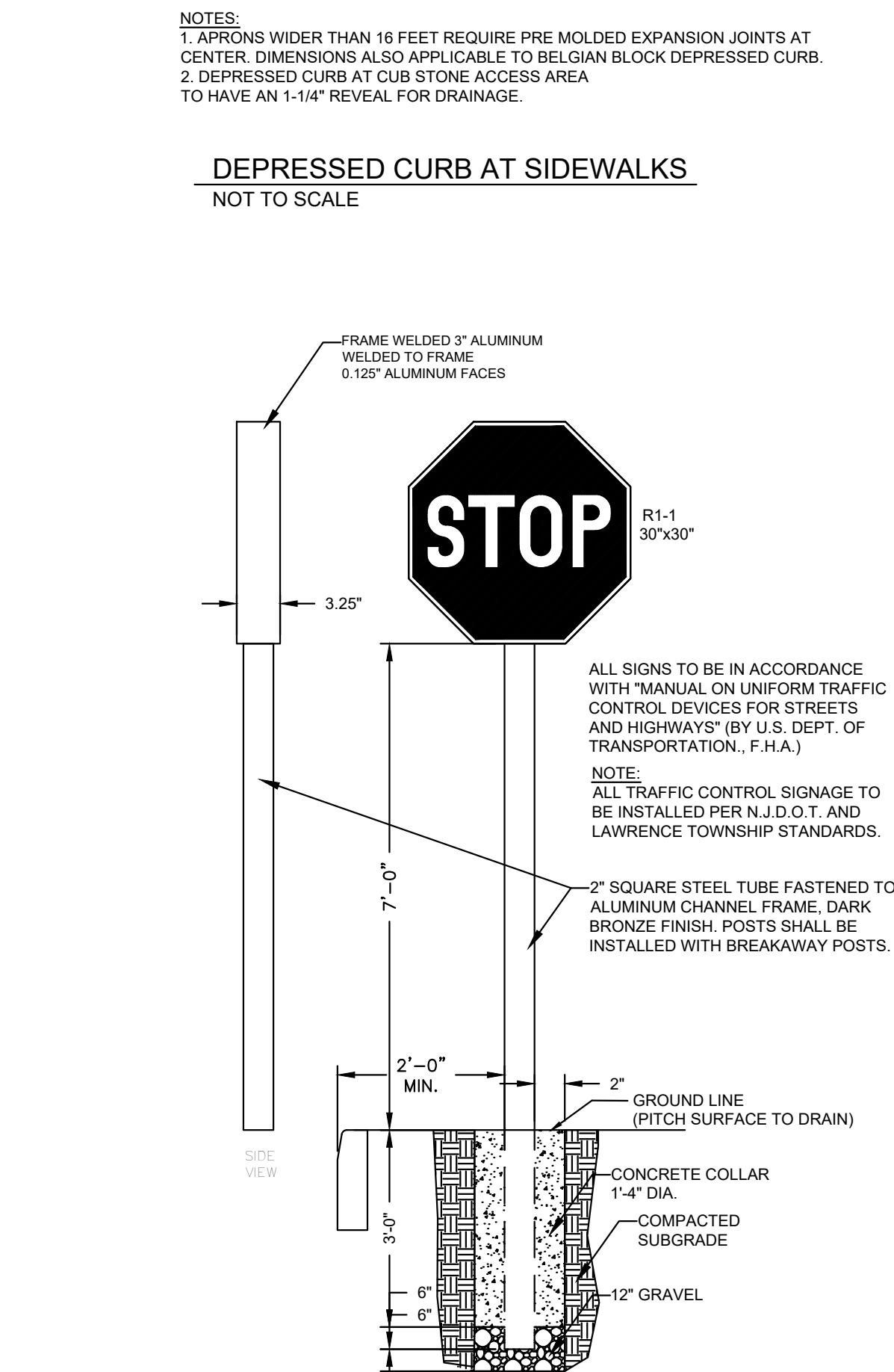


NOTES:  
1. 1/2" EXPANSION JOINTS OF CELLULAR COMPRESSION MATERIAL TO BE PLACED AT 20' INTERVALS AND 1/4" PREMOLDED EXPANSION JOINTS TO BE PLACED LONGITUDINALLY ADJACENT TO ALL ABUTTING CONCRETE STRUCTURES.  
2. CONSTRUCTION JOINTS TO BE PROVIDED EVERY 20', ALTERNATING WITH EXPANSION JOINTS.

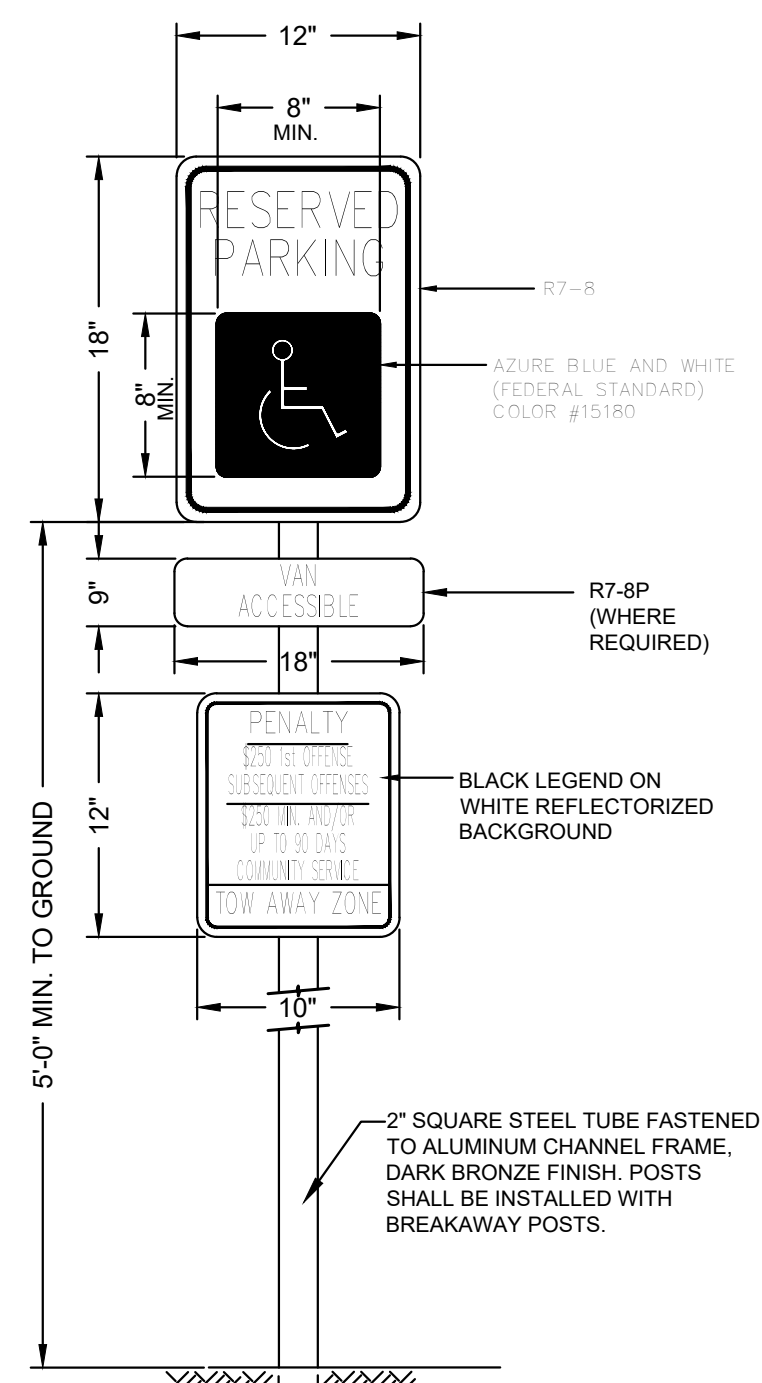
CONCRETE CURB  
NOT TO SCALE



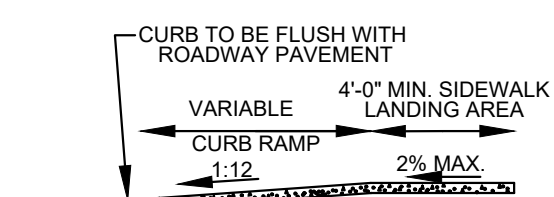
CONCRETE SIDEWALK DETAIL  
NOT TO SCALE



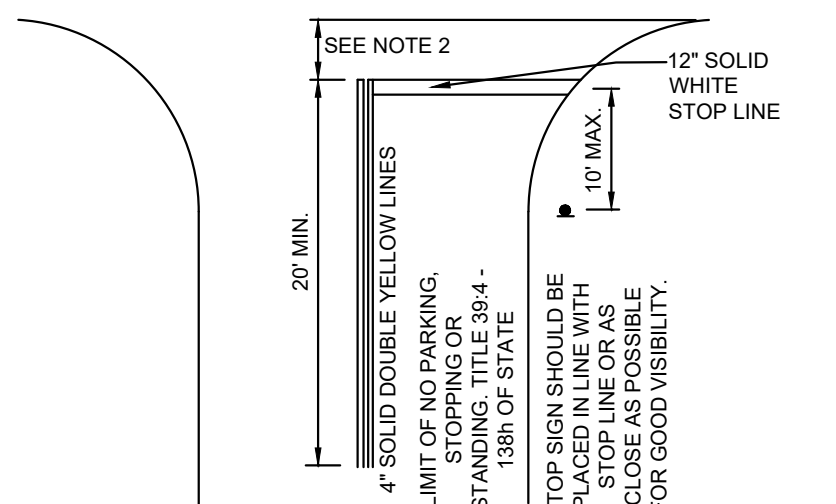
TYPICAL SIGN MOUNTING DETAIL  
NOT TO SCALE



HANDICAP SIGN DETAIL  
NOT TO SCALE

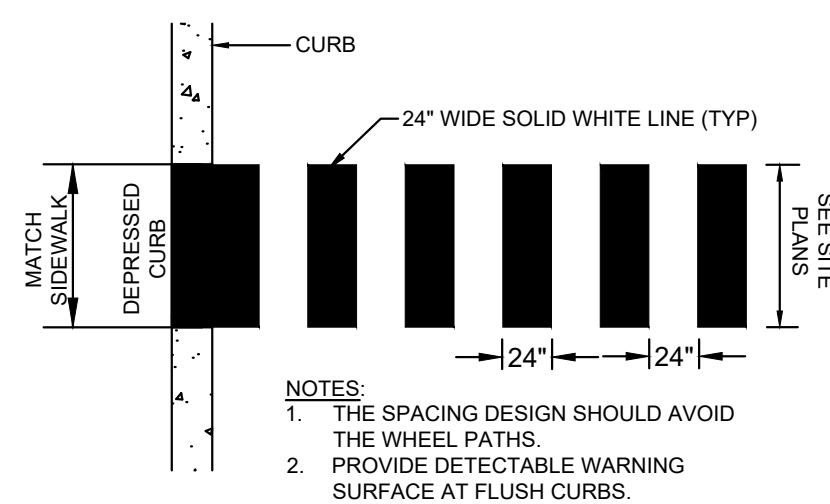


SECTION THROUGH RAMP  
NOT TO SCALE



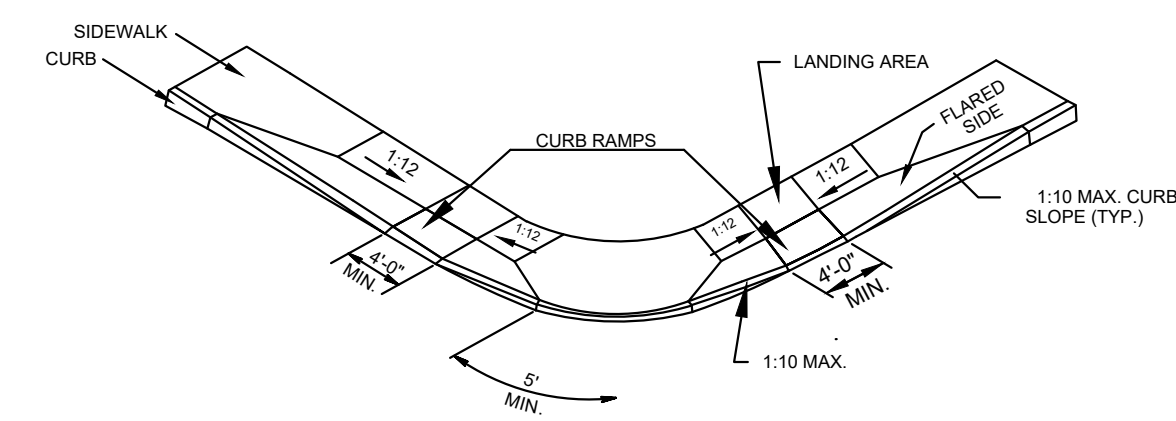
NOTES:  
1. ALL TRAFFIC MARKINGS ARE TO BE THERMOPLASTIC.  
2. WHERE A PAINTED CROSSWALK EXISTS, THE STOP LINE IS TO BE NO CLOSER THAN 4' TO THE NEAREST PAINTED CROSSWALK LINE. IN THE ABSENCE OF A PAINTED CROSSWALK, THE STOP LINE SHOULD BE NO CLOSER THAN 10' TO THE INTERSECTING CURB LINE.  
3. IF STOP BAR PLACEMENT INTERFERES WITH A PARKING SPACE, THE STOP BAR SHALL BE PLACED AS FAR AWAY FROM THE INTERSECTING CURB LINE AS POSSIBLE WITHOUT BEING PLACED IN FRONT OF A PARKING SPACE.

STOP LINE DETAIL  
NOT TO SCALE

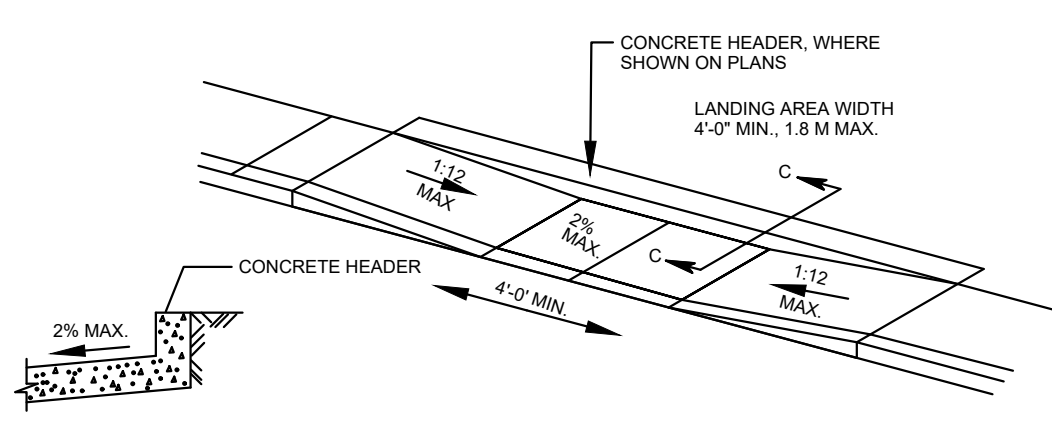


NOTES:  
1. THE SPACING DESIGN SHOULD AVOID THE WHEEL PATHS.  
2. PROVIDE DETECTABLE WARNING SURFACE AT FLUSH CURBS.

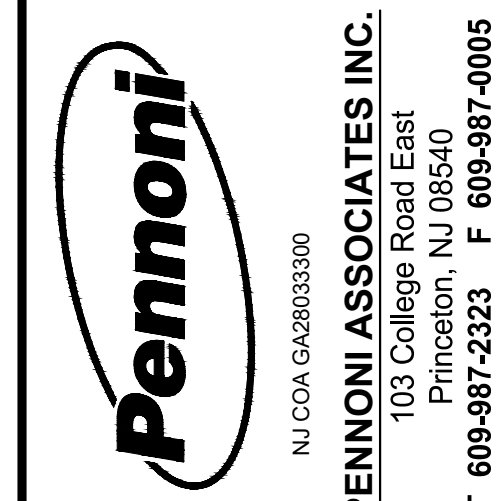
CROSSWALK STRIPING DETAIL  
NOT TO SCALE



HANDICAP RAMP DETAIL  
NOT TO SCALE



HANDICAP RAMP DETAIL  
NOT TO SCALE



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DATE: 09/05/2023  
MARK S. MAYHEW  
PROFESSIONAL ENGINEER  
NEW JERSEY LICENSE NO. GE355596

STEM CENTER  
6 LLOYD ROAD  
MONTCLAIR, NJ  
SITE DETAILS  
MONTCLAIR KIMBERLEY ACADEMY  
201 VALLEY ROAD  
MONTCLAIR, NJ 07042

NO.	DATE	REVISIONS	BY

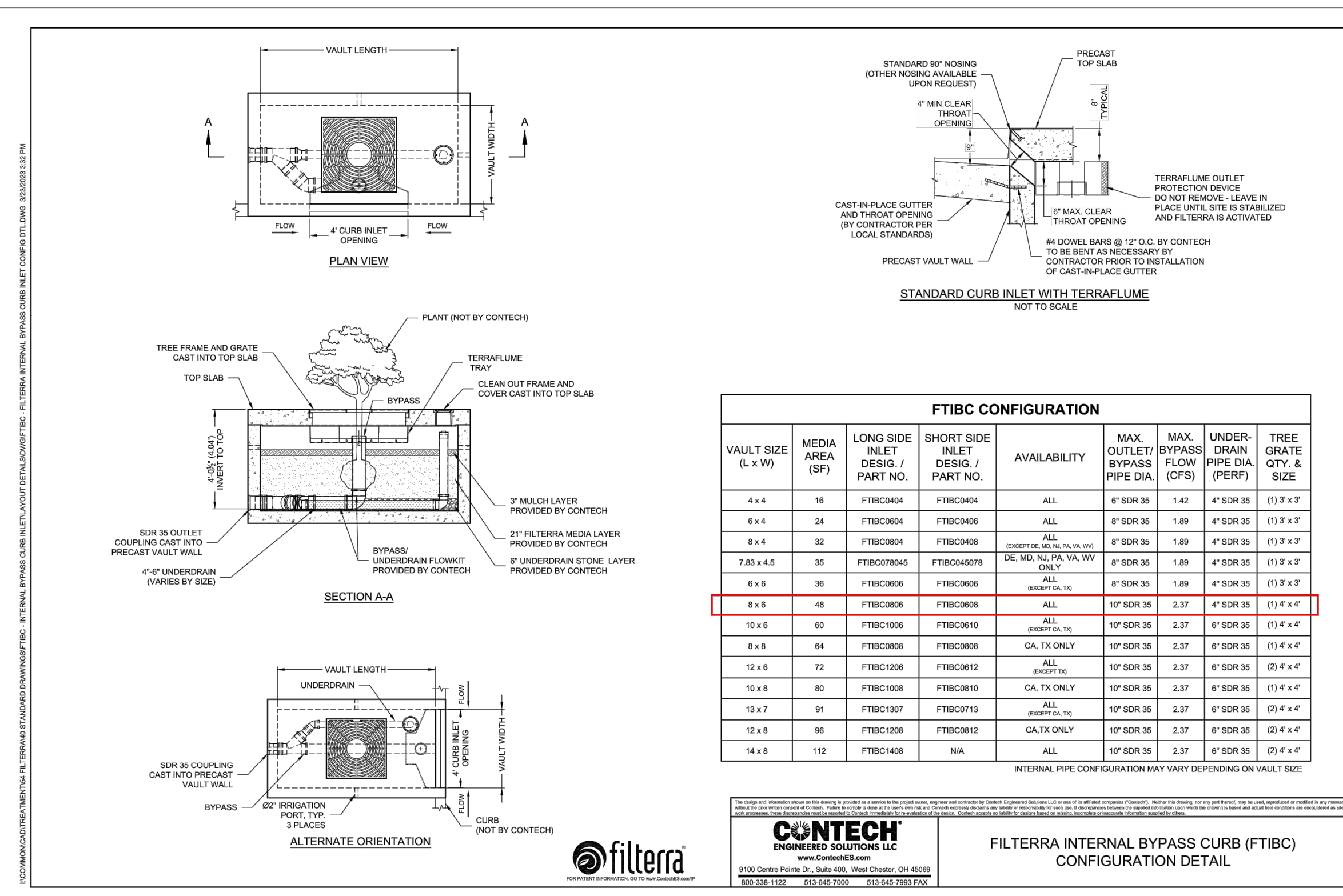
PROJECT: VAMAX22004  
DATE: 2023-09-05  
DRAWING SCALE: AS NOTED  
DRAWN BY: 0502  
APPROVED BY: 0502

CS6001  
SHEET 10 OF 16

NOT FOR CONSTRUCTION



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**SECTION ( )**  
 Filters - Vault Configuration  
 Bioretention System Standard Specification

**1.0 GENERAL**

1.1 This item shall govern the furnishing and installation of the Filterra® Bioretention System by Contech Engineered Solutions LLC, complete and operable as shown and as specified herein, in accordance with the requirements of the plans and contract documents.

1.2 Contractor shall furnish all labor, materials, equipment and incidentals necessary to install the bioretention system, appearances and incidentals in accordance with the Drawings and as specified herein.

1.3 Bioretention system shall utilize the physical, chemical and biological mechanisms of an engineered bioretention media, plant and microbe complex to remove pollutants typically found in urban stormwater runoff. The treatment system shall be a fully equipped, pre-constructed, drop-in-place unit designed for applications in the urban landscape to treat contaminated runoff from impervious surfaces.

1.4 Bioretention system shall be capable of stand-alone stormwater treatment.

1.5 Bioretention plants shall be incorporated into the system with plant material extending into the treatment zone of the engineered media at time of Activation.

1.6 The bioretention system shall be of a type that has been installed and in use for a minimum of five (5) consecutive years preceding the date of installation of the system. The Manufacturer shall have been, during the same consecutive five (5) year period, engaged in the engineering design and production of systems approved for the treatment of stormwater runoff and which have a history of successful production, acceptable to the Engineer of Record and/or the approving Jurisdiction. The Manufacturer of the Filterra Bioretention System shall be, without exception:

Contech Engineered Solutions LLC  
 5100 Centre Pointe Drive  
 West Chester, OH, 45399  
 Tel: 800 338 1122

1.7 Applicable provisions of any Division shall govern work in this section.

**1.8 American Society for Testing and Materials (ASTM) Reference Specifications**

1.8.1 ASTM C87: Standard Practice for Minimum Structural Design Loading for Underground Precast Concrete Utility Structures

1.8.2 ASTM C88: Standard Specification of Underground Precast Concrete Utility Structures

1.8.3 ASTM C90: Standard Specification for Joints for Precast Box Sections Using Preformed Flexible Joint Sealants

1.8.4 ASTM C109: Standard Test Method for Compressive Strength of Hydraulic Cement Mortars

1.9 Manufacturer or authorized supplier to submit shop drawings for bioretention system with the vault, engineered bioretention media and accessory equipment. Drawings shall include principal dimensions, engineered bioretention media placement, location of piping and unit foundation.

1.9.1 Manufacturer or authorized supplier shall submit installation instructions to the contractor.

1.9.2 Manufacturer or authorized supplier shall submit Operations and Maintenance Manual to the contractor.

1.9.3 Before installation of the bioretention system, Contractor shall obtain the written approval of the Engineer of Record for the system drawings.

1.10 No product substitutions shall be accepted unless submitted 10 days prior to project bid date, or as directed by the Engineer of Record. Substitutions require review and approval by the Engineer of Record, for hydraulic performance, impact to project design, equivalent treatment performance, and any required project plan and report (hydrology/hydraulic, water quality, stormwater pollution) modifications that would be required by the approving jurisdiction(s). Contractor to coordinate with the Engineer of Record any applicable modifications to the project estimates of cost, bonding amount determinations, plan check fees for changes to approved documents, and/or any other regulatory requirements resulting from the product substitution.

**2.0 MATERIALS**

2.1 Internal components including engineered bioretention media, underdrain stone, PVC underdrain piping, and mulch must be included as part of the bioretention system and shall be provided by Contech Engineered Solutions LLC. Note that vegetation is an essential component of bioretention systems, and shall be provided at time of activation by the contractor.

2.1.1 Engineered bioretention media shall consist of both organic and inorganic components. Stormwater shall be directed to flow vertically through the media profile, saturating the full media profile without downstream flow control.

2.1.2 Underdrain stone shall be of size and shape to provide adequate bridging between the media and stone for the prevention of migration of fine particles. Underdrain stone must also be able to convey the design flow rate of the system without restriction and be approved for use in the Filterra Bioretention System by Contech Engineered Solutions LLC.

2.1.3 PVC Underdrain Piping shall be SDR35 with perforation pattern designed to convey system design flow rate without restriction.

2.1.4 Mulch shall be double shredded wood or bark mulch approved for use with the Filterra Bioretention System by Contech Engineered Solutions LLC.

2.2 Precast concrete vault shall be provided by Manufacturer or authorized supplier according to ASTM C87 and C88.

2.2.1 Vault joint sealant shall be Con Seal CS-101 or approved equal. Joints shall be sealed with preformed joint sealing compound conforming to ASTM C 990.

2.2.2 If interior concrete baffle walls are provided, baffle walls shall be cast-in or sealed to the interior vault walls and floor with a polyurethane construction sealant rated for use below the waterline. Skaflex 1a or equal. Contractor to provide sealant material and installation unless completed prior to shipment.

2.3 Tree grates and access covers shall be cast iron. Tree grate frames shall be galvanized steel.

2.4 Curb nosing (where applicable) shall be galvanized steel and where specified shall be cast into a top slab designed to support a minimum of H5 loading at the curb.

2.5 All contractor-provided components shall meet the requirements of this section, the plans specifications and contract documents. In the case of conflict, the more stringent specification shall apply.

2.5.1 Crushed rock base material shall be six-inch minimum layer of ¾-inch minus rock. Compact undisturbed sub-grade materials to 95% of maximum density at 4-2% of optimum moisture content. Unsuitable material below sub-grade shall be replaced to engineer's approval.

2.5.2 Concrete shall have an unconfined compressive strength at 28 days of at least 3000 psi, with ¾-inch round rock, a 4-inch slump maximum, and shall be placed within 90 minutes of initial mixing.

2.5.3 Silicone Sealant shall be pure RTV silicone conforming to Federal Specification Number TT S001543A or TT S00230C or Engineer approved.

2.5.4 Grout shall be non-shrink grout meeting the requirements of Corps of Engineers CID-C88. Specimens molded, cured and tested in accordance with ASTM C-109 shall have minimum compressive strength of 6,200 psi. Grout shall not exhibit visible bleeding.

2.5.5 Backfill material shall be ¾-inch minus crushed rock, or approved equal.

2.5.6 Vegetation shall comply with the type and size required by the approved drawings and shall be alive and free of obvious signs of disease. Vegetation shall be of species listed in approved Filterra Plant List or otherwise approved by Manufacturer. Vegetation shall be supplied by Contractor prior to Activation.

**3.0 PERFORMANCE**

3.1 Treatment Capabilities shall be verified via third-party report following either TAPE or TARP protocols.

3.1.1 Engineered bioretention media minimum treatment flow rate shall be 140"/hr. The system shall be designed to ensure that high flow events shall bypass the engineered bioretention media preventing erosion and resuspension of pollutants.

3.1.2 The system shall remove a minimum of 85% Total Suspended Solids (TSS).

3.1.3 The system shall remove a minimum of 62% Total Phosphorus (TP).

3.1.4 The system shall remove a minimum of 34% Total Nitrogen (TN).

3.2 The system shall have General Use Level Designation from Washington Department of Ecology for Basic (TSS), Phosphorus, Enhanced (Metals), and Oil/Grease and have Certification by New Jersey Department of Environment.

3.3 Quality Assurance and Quality Control procedures shall be followed for all batches of engineered bioretention media produced. Engineered bioretention media shall be certified by the Manufacturer for performance and composition.

3.3.1 Media particle size distribution and composition shall be verified as per relevant ASTM Standards.

3.3.2 Media pollutant removal performance shall be verified as per relevant ASTM Standards as well as a minimum of one scientific method approved by the USEPA.

3.3.3 Media hydraulic performance shall be verified as per relevant ASTM Standards.

3.3.4 Media fertility shall be verified as per a minimum of one published scientific method.

3.4 The Manufacturer shall ensure through third party full scale field testing of installed units that the design flow rate of the system is not reduced over time. Studies shall be performed on a minimum of 10 systems of various ages, maintenance requirements, and land uses. At least 80% of the tested systems shall have been installed 2.5 or more years. At least 50% of the systems shall have previous maintenance intervals greater than 2 times the manufacturer's recommendation.

**4.0 EXECUTION**

4.1 Set precast vault on crushed rock base material that has been placed in maximum 6-inch lifts, loose thickness, and compacted to at least 95-percent of the maximum dry density as determined by the standard Proctor compaction test, ASTM D698, at moisture content of +/- 2% of optimum water content.

4.2 Inlet and outlet pipes shall be attached to provided couplers or grouted in and connected to precast concrete vault according to Engineer's requirements and specifications.

4.3 All throat and grate protection covers shall remain in place until the system is activated.

4.4 Contractor to cast-in-place throat inlet to convey stormwater into bioretention system according to Engineer's requirements and specifications.

4.5 Engineered bioretention media shall be delivered installed in the vault, unless otherwise agreed upon with the Manufacturer. Contractor shall take appropriate action to protect the media from sediment and other debris during construction. The method ultimately selected shall be at Contractor's discretion and Contractor's risk.

4.5.1 If media is shipped separately from vault, Manufacturer or a Manufacturer's certified representative shall install media into the vault or be present to supervise installation in order to ensure proper installation.

4.6 The bioretention system shall not be placed in operation (activated) until the project site is clean and stabilized (construction erosion control measures no longer required). The project site includes any surface that contributes storm drainage to the system. All imperviable surfaces shall be clean and free of dirt and debris. All catch basins, manholes and pipes shall be free of dirt and sediment. Activation shall be provided by Manufacturer or authorized supplier, and includes planting of the vegetation provided by the Contractor.

4.7 Each correctly installed system shall include a Final Inspection performed by Manufacturer or authorized supplier upon request between 6-12 months after Activation. The cost of this service shall be included in the price of the system and include the following:

4.7.1 System inspection to help owner establish proper routine maintenance intervals.

4.7.2 Routine maintenance: removal of foreign debris, silt, loose plant material and trash; mulch removal; engineered bioretention media evaluation; plant health evaluation and pruning; replacement of mulch; disposal of all maintenance refuse items; and updating of maintenance records.

4.8 To ensure long term performance of the bioretention system, continuing annual maintenance programs should be performed or purchased by the owner per the latest Filterra Bioretention System Operation and Maintenance manual.

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*Mark S. Maweh*  
 DATE: 09/05/2023  
 MARK S. MAWEH  
 PROFESSIONAL ENGINEER  
 NEW JERSEY LICENSE  
 NO. GE35696

STEM CENTER  
 6 LLOYD ROAD  
 MONTCLAIR, NJ

UTILITY DETAILS 2

MONTCLAIR KIMBERLEY ACADEMY  
 201 VALLEY ROAD  
 MONTCLAIR, NJ 07042

NO.	DATE	REVISIONS	BY

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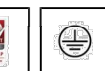
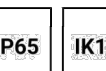


PROJECT **VAMAX22004**  
 DATE **2023-09-05**  
 DRAWING SCALE **AS NOTED**  
 DRAWN BY **0502**  
 APPROVED BY **0502**

**CS6003**  
 SHEET **12** OF **16**

**NOT FOR CONSTRUCTION**

**LIGMAN** Outdoor | Bollards | LIGHTSOFT

**LIGHTSOFT 1 (LH-10665)**

**Product description**  
Ø186 - 1000 mm - Round - IK10

**Luminaire Structure**

- Die-cast aluminium housing
- Extruded aluminium column
- Pre-treated before powder coating ensuring high corrosion resistance
- Single cable entry
- One IP68 connector supplied with 0.2 m of Øx1.0 sgmm outdoor cable
- Stainless steel fasteners in grade-304 with zinc flake coating (ZFC)
- Durable silicone rubber gasket
- High-efficiency polycarbonate lens
- Anodised, high-purity aluminium reflector
- Integral control gear

**Optic**

**Product colour**

**Special finishes upon request**

We reserve the right to make technical and design changes.  
12.10.30-07-2023  
https://www.ligman.com/lightsoft-1-lh-10665/

THAILAND  
LIGMAN Lighting Co.,Ltd.  
17/2 Moo 4, Monthong, Bang Nam Priao,  
24150, Chachoengsao - Thailand  
info@ligman.com

**LIGMAN** Outdoor | Bollards | LIGHTSOFT

**LIGHTSOFT 1 (LH-10665)**

**Technical information**

<b>Material</b>	Aluminium	<b>Optic value</b>	360°	<b>Operating temperature</b>	-20 °C to 40 °C
<b>Light source</b>	12 LED	<b>CCT / CRI</b>	3000K CR180, 4000K CR180	<b>Through wiring</b>	Single cable entry
<b>Power (Luminaire)</b>	27 W	<b>Bug</b>	B1-U3-G1		
<b>Lumen (Luminaire)</b>	1161 - 1188 lm	<b>ULR</b>	8%		
<b>Luminaire luminous efficacy</b>	43 - 44 lm/W	<b>ULOR</b>	8%		
<b>Driver option</b>	Integral control gear	<b>CIE flux code n°3</b>	75		
<b>Driver</b>	Constant current (CC)	<b>Dimming type</b>	1-10V, DALI, On/Off		
<b>Input voltage</b>	220-240 V 50/60 Hz		Black, Dark Grey, White, Matt Silver, Bronze, Concrete - Urban, Softscape - Urban, Stone - Urban, Corten - Urban, Oak - Woodland, Walnut - Woodland, Pine - Woodland		
<b>Optic</b>	G	<b>Product colours</b>			
		<b>Weight</b>	7.7 kg		

**LED**  
High output LEDs offer a minimum estimated operating life of 50,000 hours in 3000K, 3500K, 4000K, or 5000K with CRI>83. LEDs placed on high performance aluminium heatsink for reduced junction temperatures and extended life.

**DRIVER**  
Durable LED driver operates at 120-277V with 0-10V dimming protocol. Power factor: 0.90, 50 to 60 Hz. Driver protections includes: Output open load, over-current and short-circuit, and

**DRIVER PROTECTIONS**

SERIES	SIZE	WATTLUMENS	VOLTAGE	COLOR TEMPERATURE	LENS	MOUNTING	FINISH	OPTIONS
T360LED	A- 14"	10 - 10W/1050lm	UNV - 120V-277V	30 - 3000K	A <sup>1</sup> - Acrylic	400 - 4" Post top OD	82 <sup>2</sup> - Bronze	PC - Photocell 120-277V
		8 - 23"	18 - 18W/1990lm	347 - 347V	35 - 3500K		MTO - Made to order	MTO <sup>3</sup> - Made to order
		30 - 30W/3150lm	480 - 480V	40 - 4000K			MGIO <sup>3</sup> - Marin grade made to order	EM - Emergency battery
		45 - 45W/4725lm		50 - 5000K				SP10 - Surge Protection 10KV
		57 - 57W/5965lm						BS - Bird Spikes

**Notes:**  
1. Standard lens.  
2. Standard finish.  
3. 104 number required.


**Notes:**  
1. Standard finish.  
2. 86 number required.

**RAYON LIGHTING**  
RAYON LIGHTING GROUP, INC. RESERVES THE RIGHT TO CHANGE SPECIFICATIONS WITHOUT NOTICE.  
1517 N. ALAMEDA ST. COMPTON CA 90222 | TEL: 923.446.9234 | FAX: 923.446.2266 | WWW.RAYONLIGHTING.COM

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12.10.30-07-2023  
https://www.ligman.com/lightsoft-1-lh-10665/

THAILAND  
LIGMAN Lighting Co.,Ltd.  
17/2 Moo 4, Monthong, Bang Nam Priao,  
24150, Chachoengsao - Thailand  
info@ligman.com

**T360LED**  
PAGODA LED LUMINAIRE



**USE OF PRODUCT**  
The intended use of this product is for parking lots, roadways, public parking areas, or public access areas.

**HOUSING**  
Heavy gauge spun aluminum housing with spun aluminum hood.

**FINISH**  
Matt finished, thickest polyester oven baked powdercoat. Available in standard dark polyester bronze finish or consult factory for made to order architectural finishes.

**OPTICS**  
"Hi-vue", clear lens available in acrylic lens.

**OPERATING TEMPERATURE**  
The intended use of this product is for parking lots, roadways, public parking areas, or public access areas.

**HOUSING**  
Heavy gauge spun aluminum housing with spun aluminum hood.

**FINISH**  
Matt finished, thickest polyester oven baked powdercoat. Available in standard dark polyester bronze finish or consult factory for made to order architectural finishes.

**OPTICS**  
"Hi-vue", clear lens available in acrylic lens.

**JOB INFORMATION**

Type: \_\_\_\_\_  
Drawing No.: \_\_\_\_\_  
Project Name: \_\_\_\_\_  
Comments: \_\_\_\_\_  
Prepared by: \_\_\_\_\_

T360LED

**B.U.G. RATING**

Mount	Luminaire	B.U.G. Rating
Low	1000mm	B1-U3-G1
Low	1000mm	B1-U3-G2
Low	1000mm	B3-U3-G1
Low	1000mm	B3-U3-G2
Low	1000mm	B3-U3-G1
Low	1000mm	B3-U3-G2

**LED**  
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**Notes:**  
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2. Standard finish.  
3. 104 number required.

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NJ COA GAZ68033300

**PENNONI ASSOCIATES INC.**  
103 College Road East  
Princeton, NJ 08540  
T 609-987-2323 F 609-987-0005

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

DATE: 09/05/2023  
MARK S. MAYHEW  
PROFESSIONAL ENGINEER  
NEW JERSEY LICENSE NO. GE35596

STEM CENTER  
6 LLOYD ROAD  
MONTCLAIR, NJ

LIGHTING DETAILS

MONTCLAIR KIMBERLEY ACADEMY  
201 VALLEY ROAD  
MONTCLAIR, NJ 07042

NO.	DATE	REVISIONS	BY

PROJECT VAMAX22004  
DATE 2023-09-05  
DRAWING SCALE AS NOTED  
DRAWN BY 0502  
APPROVED BY 0502

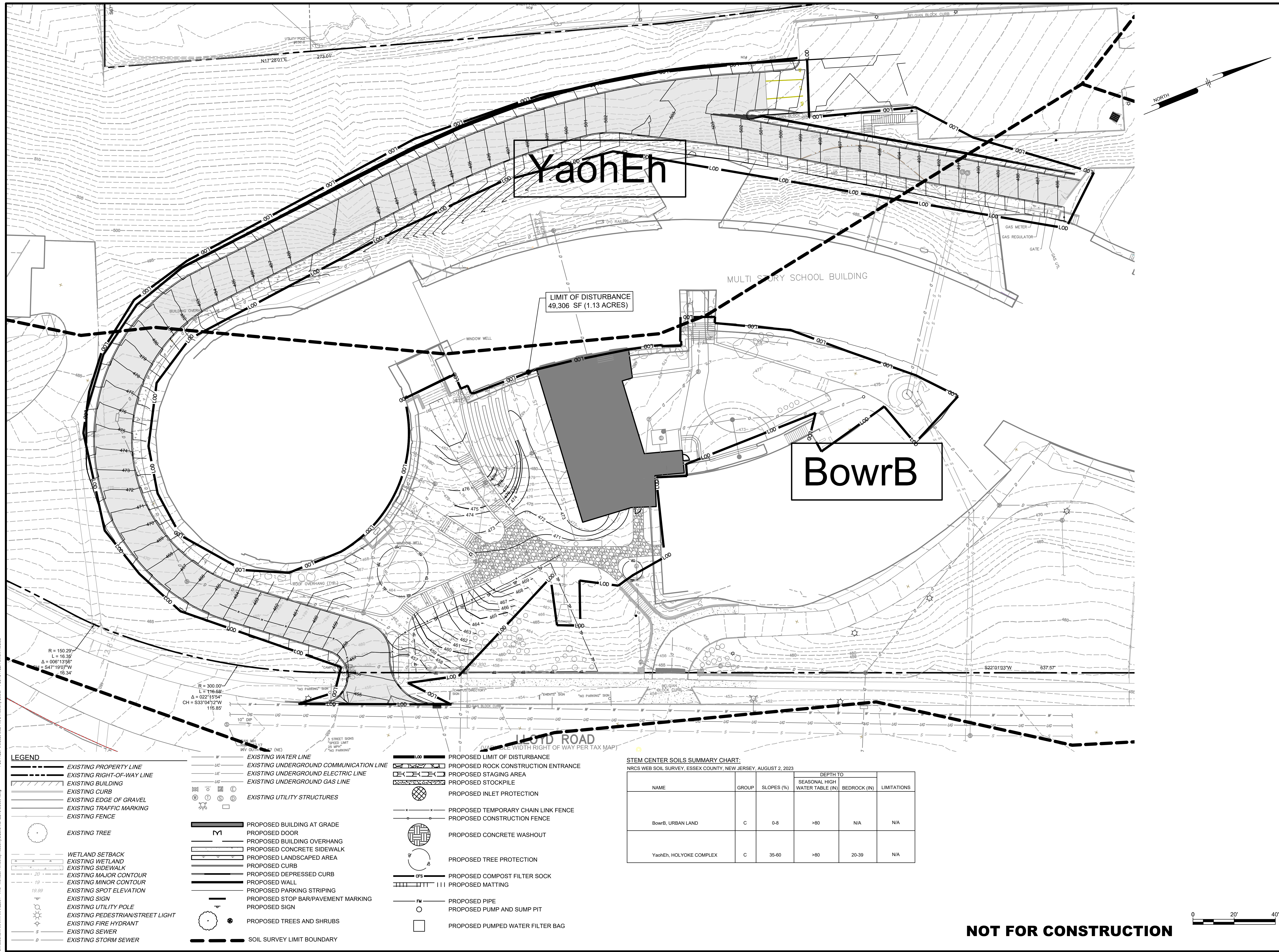
CS6062

SHEET 13 OF 16

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U:\Projects\14\AMAX\22004 - VAM - Montclair Academy\Drawings\CS8501.dwg  
 PLOTTED: 09/05/2023 10:01 AM BY: Jimmy Bittel PLOTTED: 09/05/2023 10:01 AM BY: Jimmy Bittel



**LEGEND**

	EXISTING PROPERTY LINE		EXISTING WATER LINE
	EXISTING RIGHT-OF-WAY LINE		EXISTING UNDERGROUND COMMUNICATION LINE
	EXISTING BUILDING		EXISTING UNDERGROUND ELECTRIC LINE
	EXISTING CURB		EXISTING UNDERGROUND GAS LINE
	EXISTING EDGE OF GRAVEL		EXISTING UTILITY STRUCTURES
	EXISTING TRAFFIC MARKING		PROPOSED BUILDING AT GRADE
	EXISTING FENCE		PROPOSED DOOR
	EXISTING TREE		PROPOSED BUILDING OVERHANG
	WETLAND SETBACK		PROPOSED CONCRETE SIDEWALK
	EXISTING WETLAND		PROPOSED LANDSCAPED AREA
	EXISTING SIDEWALK		PROPOSED CURB
	EXISTING MAJOR CONTOUR		PROPOSED DEPRESSED CURB
	EXISTING MINOR CONTOUR		PROPOSED WALL
	EXISTING SPOT ELEVATION		PROPOSED PARKING STRIPING
	EXISTING SIGN		PROPOSED STOP BAR/PAVEMENT MARKING
	EXISTING UTILITY POLE		PROPOSED SIGN
	EXISTING PEDESTRIAN/STREET LIGHT		PROPOSED TREES AND SHRUBS
	EXISTING FIRE HYDRANT		PROPOSED LIMIT OF DISTURBANCE
	EXISTING SEWER		PROPOSED ROCK CONSTRUCTION ENTRANCE
	EXISTING STORM SEWER		PROPOSED STAGING AREA
			PROPOSED STOCKPILE
			PROPOSED INLET PROTECTION
			PROPOSED TEMPORARY CHAIN LINK FENCE
			PROPOSED CONSTRUCTION FENCE
			PROPOSED CONCRETE WASHOUT
			PROPOSED TREE PROTECTION
			PROPOSED COMPOST FILTER SOCK
			PROPOSED MATTING
			PROPOSED PIPE
			PROPOSED PUMP AND SUMP PIT
			PROPOSED PUMPED WATER FILTER BAG

**STEM CENTER SOILS SUMMARY CHART:**  
 NRCS WEB SOIL SURVEY, ESSEX COUNTY, NEW JERSEY, AUGUST 2, 2023

NAME	GROUP	SLOPES (%)	DEPTH TO		LIMITATIONS
			SEASONAL HIGH WATER TABLE (IN)	BEDROCK (IN)	
BowrB, URBAN LAND	C	0-8	>80	N/A	N/A
YaohEh, HOLYOKE COMPLEX	C	35-60	>80	20-39	N/A

**NOT FOR CONSTRUCTION**

**PENNONI ASSOCIATES INC.**  
 103 College Road East  
 Princeton, NJ 08540  
 T 609-987-2323 F 609-987-0005

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ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

DATE: 09/05/2023  
 MARK S. MAYHEW  
 PROFESSIONAL ENGINEER  
 NEW JERSEY LICENSE NO. GE35596

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**STEM CENTER**  
 6 LLOYD ROAD  
 MONTCLAIR, NJ  
**EROSION AND SEDIMENTATION CONTROL PLAN**  
 MONTCLAIR KIMBERLEY ACADEMY  
 201 VALLEY ROAD  
 MONTCLAIR, NJ 07042

NO.	DATE	REVISIONS	BY

---

PROJECT: **VAMAX22004**  
 DATE: 2023-09-05  
 DRAWING SCALE: 1"=20'  
 DRAWN BY: 0502  
 APPROVED BY: 0502

**CS8501**  
 SHEET 14 OF 16

**A. HUDSON-ESSEX-PASSAIC SOIL CONSERVATION DISTRICT SOIL EROSION AND SEDIMENT CONTROL NOTES**

- 1. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES ON THIS PLAN WILL BE CONSTRUCTED IN ACCORDANCE WITH THE NEW JERSEY STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL... 2. ALL SOIL TO BE EXPOSED OR STOCKPILED FOR A PERIOD OF GREATER THAN 14 DAYS, AND NOT UNDER ACTIVE CONSTRUCTION... 3. SEEDING DATES: THE FOLLOWING SEEDING DATES ARE RECOMMENDED TO BEST ESTABLISH PERMANENT VEGETATIVE COVER... 4. SEDIMENT FENCES ARE TO BE PROPERLY TRENCHED AND MAINTAINED UNTIL PERMANENT VEGETATIVE COVER IS ESTABLISHED... 5. ALL STORM DRAINAGE INLETS SHALL BE PROTECTED BY ONE OF THE PRACTICES ACCEPTED IN THE STANDARDS... 6. MULCH MATERIALS SHALL BE UN-ROTTED SMALL GRASS STRAW APPLIED AT THE RATE OF 70 TO 90 POUNDS PER 1,000 SQUARE FEET... 7. ALL EROSION CONTROL DEVICES SHALL BE PERIODICALLY INSPECTED, MAINTAINED AND CORRECTED BY THE CONTRACTOR... 8. THE HUDSON-ESSEX-PASSAIC SOIL CONSERVATION DISTRICT WILL BE NOTIFIED IN WRITING AT LEAST 48 HOURS PRIOR TO ANY SOIL DISTURBING ACTIVITIES... 9. THE APPLICANT MUST OBTAIN A DISTRICT ISSUED REPORT-OF-COMPLIANCE PRIOR TO APPLYING FOR THE "CERTIFICATE OF OCCUPANCY OR TEMPORARY CERTIFICATE OF OCCUPANCY FROM THE RESPECTIVE MUNICIPALITY... 10. PAVED ROADWAYS MUST BE KEPT CLEAN AT ALL TIMES... 11. ALL SURFACES HAVING LAWN OR LANDSCAPING AS FINAL COVER ARE TO BE PROVIDED TOPSOIL PRIOR TO RE-SEEDING... 12. ALL PLAN REVISIONS MUST BE SUBMITTED TO THE DISTRICT FOR PROPER REVIEW AND APPROVAL... 13. A CRUSHED STONE WHEEL CLEANING TRACKING-PAD IS TO BE INSTALLED AT ALL SITE EXITS USING 2 1/2" CRUSHED ANGLING STONE... 14. STEEP SLOPES INCURRING DISTURBANCE MAY REQUIRE ADDITIONAL STABILIZATION MEASURES... 15. THE HUDSON-ESSEX-PASSAIC SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED IN WRITING FOR THE SALE OF ANY PORTION OF THE PROJECT OR FOR THE SALE OF INDIVIDUAL LOTS...

**B. TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION**

**1. SITE PREPARATION**

- A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION... B. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSION, GRADE STABILIZATION STRUCTURES... C. IMMEDIATELY PRIOR TO SEEDING, THE SURFACE SHOULD BE SCARIFIED TO A 6" MINIMUM DEPTH... 2. SEEDBED PREPARATION A. APPLY GROUND LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS... B. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES... C. INSPECT SEEDBED JUST BEFORE SEEDING... D. SOILS HIGH IN SULFIDES OR HAVING A PH OF 4 OR LESS REFER TO STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS... 3. SEEDING A. APPLY SEED AS FOLLOWS: COOL SEASON PERENNIAL RYEGRASS AT 100 POUNDS/ACRE OR 1 POUND/1000 SQ.FT... WARM SEASON PEARL MILLET AT 20 POUNDS/ACRE OR 0.5 POUNDS/1000 SQ.FT... B. SEEDING RATE FOR WARM SEASON GRASS SHALL BE ADJUSTED TO REFLECT THE AMOUNT OF PURE LIVE SEED (PLS) AS DETERMINED BY A GERMINATION TEST... C. GRASSES MAY BE PLANTED THROUGHOUT SUMMER IF SOIL MOISTURE IS ADEQUATE... D. REFER TO SSESNJ, FIGURE 7-1, PG. 7-5 FOR PLANT HARDINESS ZONES... E. PLANTING DEPTHS SHOULD BE DOUBLED FOR SANDY SOILS... F. CONVENTIONAL SEEDING: APPLY SEED UNIFORMLY BY HAND, CYCLONE (CENTRIFUGAL) SEEDER, DROP SEEDER, DRILL OR CULTIPLACKER SEEDER... G. HYDROSEEDING IS A BROADCAST SEEDING METHOD USUALLY INVOLVING A TRUCK OR TRAILER MOUNTED TANK... H. AFTER SEEDING, FIRING THE SOIL WITH A CORRUGATED ROLLER WILL ASSURE GOOD SEED-TO-SOIL CONTACT... 4. MULCHING MULCHING IS REQUIRED ON ALL SEEDING. MULCH WILL INSURE AGAINST EROSION BEFORE GRASS IS ESTABLISHED...

TABLE B-1

Table with 3 columns: SOIL TEXTURE, TONS/ACRE, LBS./1000 S.F. Rows include Clay, Clay Loam, Sandy Loam, Loamy Sand, Sand.

1. PULVERIZED DOLOMITIC LIMESTONE IS PREFERRED TO MOST SOILS SOUTH OF THE NEW BRUNSWICK-TRENTON LINE.

**C. PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION**

- 1. SITE PREPARATION A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION... B. IMMEDIATELY PRIOR TO SEEDING AND TOPSOIL APPLICATION THE SUBSOIL SHALL BE EVALUATED FOR COMPACTION... C. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING THE SOIL STRUCTURE... D. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS... 2. SEEDBED PREPARATION A. UNIFORMLY APPLY GROUND LIMESTONE AND FERTILIZER TO TOPSOIL WHICH HAS BEEN SPREAD AND FIRMED... B. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES... C. HIGH ACID PRODUCING SOILS HAVING A PH OF 4 OR LESS OR CONTAINING IRON SULFIDE SHALL BE COVERED WITH A MINIMUM OF 12 INCHES OF SOIL... 3. SEEDING A. SELECT A MIXTURE FROM BELOW OR USE A MIXTURE RECOMMENDED BY RUTGERS COOPERATIVE EXTENSION... WATERWAY MIX - STRONG CREEPING RED FESCUE AT 30 POUNDS/ACRE OR 3 POUNDS/1000 SQ.FT... KENTUCKY BLUEGRASS AT 50 POUNDS/ACRE OR 1 POUND/1000 SQ.FT... PERENNIAL RYEGRASS AT 20 POUNDS/ACRE OR 0.5 POUNDS/1000 SQ.FT... OR, REDTOP AT 10 POUNDS/ACRE OR 0.05 POUNDS/1000 SQ.FT PLUS WHITE CLOVER AT 5 POUNDS/ACRE OR 0.1 POUNDS/1000 SQ.FT... GENERAL LAWN/RECREATION - BLEND OF HARD FESCUE AND/OR CHEWING FESCUE AND/OR STRONG CREEPING RED FESCUE AT 175 POUNDS/ACRE OR 4 POUNDS/1000 SQ.FT... B. SEEDING RATES SPECIFIED ARE REQUIRED WHEN A REPORT OF COMPLIANCE IS REQUESTED PRIOR TO ACTUAL ESTABLISHMENT OF PERMANENT VEGETATION... 2. WARM SEASON MIXTURES ARE GRASSES AND LEGUMES WHICH MAXIMIZE GROWTH AT HIGH TEMPERATURES... 3. COOL SEASON MIXTURES ARE GRASSES AND LEGUMES WHICH MAXIMIZE GROWTH AT TEMPERATURES BELOW 85 DEGREES F...

**D. PERMANENT STABILIZATION WITH SOD**

- 1. METHODS AND MATERIALS A. HIGH QUALITY CULTIVATED SOD IS PREFERRED OVER NATIVE OR PASTURE SOD... B. SOD SHOULD BE FREE OF BROADLEAF WEEDS AND UNDESIRABLE COARSE AND FINE WEED GRASSES... C. SOD SHOULD BE OF UNIFORM THICKNESS... D. SOD SHOULD BE VIGOROUS AND DENSE... E. FOR DROUGHTY SITES, A SOD OF TURF-TYPE TALL FESCUE OR TURF-TYPE TALL FESCUE MIXED WITH KENTUCKY BLUEGRASS IS PREFERRED... F. ONLY MOIST, FRESH, UNHEATED SOD SHOULD BE USED... 2. SITE PREPARATION A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR LIMING... B. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING THE SOIL STRUCTURE... C. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS... 3. SOIL PREPARATION A. UNIFORMLY APPLY GROUND LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS... B. WORK LIME AND FERTILIZER INTO THE TOPSOIL AS NEARLY AS PRACTICAL... C. REMOVE FROM THE SURFACE ALL OBJECTS THAT WOULD PREVENT GOOD SOD TO TOPSOIL CONTACT... D. ON SLOPES GREATER THAN 3 TO 1, SECURE SOD TO SURFACE SOIL WITH WOOD PEGS... E. SURFACE WATER CANNOT ALWAYS BE DIVERTED FROM FLOWING OVER THE FACE OF THE SLOPE... F. IMMEDIATELY FOLLOWING INSTALLATION, SOD SHOULD BE WATERED UNTIL MOISTURE PENETRATES THE SOIL LAYER... 4. TOPDRESSING A. SINCE SLOW RELEASE NITROGEN FERTILIZER (WATER INSOLUBLE) IS PRESCRIBED IN SECTION F-2 ABOVE... 5. STANDARD FOR TOPSOILING 1. MATERIALS A. TOPSOIL SHOULD BE FRIABLE (1") LOAMY (2"), FREE OF DEBRIS... B. CONVENTIONAL SEEDING IS PERFORMED BY APPLYING SEED UNIFORMLY BY HAND... C. AFTER SEEDING, FIRING THE SOIL WITH A CORRUGATED ROLLER WILL ASSURE GOOD SEED-TO-SOIL CONTACT... D. HYDROSEEDING IS A BROADCAST SEEDING METHOD USUALLY INVOLVING A TRUCK OR TRAILER MOUNTED TANK... 2. STRIPPING AND STOCKPILING A. FIELD EXPLORATION SHOULD BE MADE TO DETERMINE WHETHER QUANTITY AND OR QUALITY OF SURFACE SOIL JUSTIFIES STRIPPING... B. STRIPPING SHOULD BE CONFINED TO THE IMMEDIATE CONSTRUCTION AREA... C. WHERE FEASIBLE, LIME MAY BE APPLIED BEFORE STRIPPING... D. 4-6 INCH STRIPPING DEPTH IS COMMON... E. STOCKPILES OF TOPSOIL SHOULD BE SITUATED SO AS NOT TO OBSTRUCT NATURAL DRAINAGE... F. STOCKPILES SHOULD BE VEGETATED IN ACCORDANCE WITH STANDARDS PREVIOUSLY DESCRIBED... 3. SITE PREPARATION A. GRADE AT THE ONSET OF THE OPTIMAL SEEDING PERIOD... B. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION... C. AS GUIDANCE FOR IDEAL CONDITIONS, SUBSOIL SHOULD BE TESTED FOR LIME REQUIREMENT... D. PRIOR TO TOPSOILING, THE SUBSOIL SHALL BE IN COMPLIANCE WITH THE STANDARD FOR LAND GRADING... E. EMPLOY NEEDED EROSION AND CONTROL PRACTICES SUCH AS DIVERSIONS... 4. APPLYING TOPSOIL A. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING SOIL STRUCTURE... B. A UNIFORM APPLICATION TO AN AVERAGE DEPTH OF 6.0 INCHES MINIMUM... C. PURSUANT TO THE REQUIREMENTS IN SECTION 7 OF SSESONJ, THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT PERMANENT VEGETATIVE COVER BECOMES ESTABLISHED ON AT LEAST 80% OF THE SOILS...

**F. STABILIZATION WITH MULCH ONLY**

- 1. SITE PREPARATION A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION... B. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSION, GRADE STABILIZATION STRUCTURES... 2. PROTECTIVE MATERIALS A. UNROTTED SMALL-GRAIN STRAW, AT 2.0 TO 2.5 TONS PER ACRE... B. SYNTHETIC OR ORGANIC SOIL STABILIZERS MAY BE USED UNDER SUITABLE CONDITIONS... C. WOOD-FIBER OR PAPER-FIBER MULCH AT THE RATE OF 1,500 POUNDS PER ACRE... D. MULCH NETTING, SUCH AS PAPER JUTE, EXCELSION, COTTON, OR PLASTIC... E. WOODCHIPS APPLIED UNIFORMLY TO A MINIMUM DEPTH OF 2 INCHES... F. GRAVEL, CRUSHED STONE, OR SLAG AT THE RATE OF 9 CUBIC YARDS PER 1,000 SQ. FT... 3. MULCH ANCHORING SHOULD BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT OF STRAW MULCH TO MINIMIZE LOSS BY WIND OR WATER... A. PEG AND TWINE - SEE PARAGRAPH 4 A.1 UNDER TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION... B. MULCH NETTINGS - STAPLE PAPER, COTTON, OR PLASTIC NETTINGS... C. CRIMPER MULCH ANCHORING COULTER TOOL... D. LIQUID MULCH-BINDERS: 1. APPLICATIONS SHOULD BE HEAVIER AT EDGES WHERE WIND MAY CATCH THE MULCH... 2. USE THE FOLLOWING: a. ORGANIC AND VEGETABLE BASED BINDERS - NATURALLY OCCURRING, POWDER BASED... b. SYNTHETIC BENDERS - HIGH POLYMER SYNTHETIC EMULSION... 4. CONSTRUCTION SEQUENCE: 1. NOTIFY THE COUNTY SOIL CONSERVATION DISTRICT OF CONSTRUCTION START/SOIL DISTURBANCE - 2 DAYS... 2. INSTALL EROSION AND SEDIMENT CONTROLS - 3 DAYS... 3. CLEAR, STRIP AND GRADE CONSTRUCTION ACCESS TO SITE... 1 WEEK... 4. CLEAR SITE AND STRIP TOPSOIL... 1 WEEK... 5. REMOVE EXISTING SITE FEATURES AND IMPROVEMENTS AS SHOWN ON THE SITE DEMOLITION PLAN... 3 WEEKS... 6. REMOVE EXISTING STORM DRAINAGE AS SHOWN ON THE SITE DEMOLITION PLAN... 2 WEEKS... 7. ROUGH GRADE CONSTRUCTION AREAS... 2 WEEKS... 8. CONSTRUCT BUILDING ADDITION AND UTILITIES - 12 MONTHS... 9. RECONSTRUCT CURBS, PAVED AREAS, SIDEWALKS, AND LIGHTING - 2 WEEKS... 10. FINISH GRADE LAWN AREAS... 1 WEEK... 11. SCARIFY THE SOIL SURFACE TO A MINIMUM OF 6 INCHES... 1 WEEK... 12. STABILIZE ALL UNPAVED AREAS WITH PERMANENT SEED - 1 WEEK... 13. FINISH PAVE ALL ROADWAYS - 1 WEEK... 14. REMOVE REMAINING SOIL EROSION AND SEDIMENT CONTROL MEASURES... 3 DAYS... 15. SUBMIT A COMPLETED SOIL COMPACTION MITIGATION VERIFICATION FORM... 1 WEEK... NOTES: \*\* DURATION ARE APPROXIMATE AND ARE DEPENDENT ON WEATHER CONDITIONS...



ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK. DATE: 09/05/2023 MARK S. MAYHEW PROFESSIONAL ENGINEER NEW JERSEY LICENSE NO. GE35596

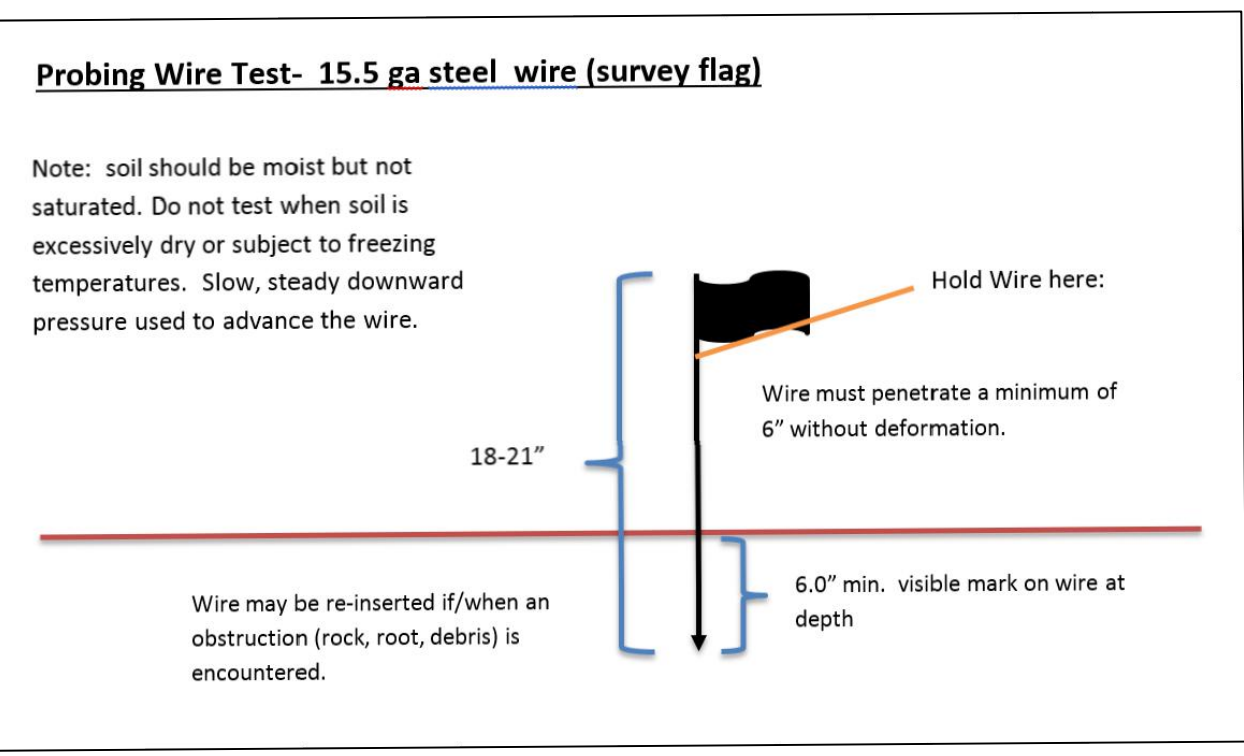
STEM CENTER 6 LLOYD ROAD MONTCLAIR, NJ EROSION AND SEDIMENTATION CONTROL NOTES MONTCLAIR KIMBERLEY ACADEMY 201 VALLEY ROAD MONTCLAIR, NJ 07042

Table with columns: NO., DATE, REVISIONS, BY. Contains revision tracking information.

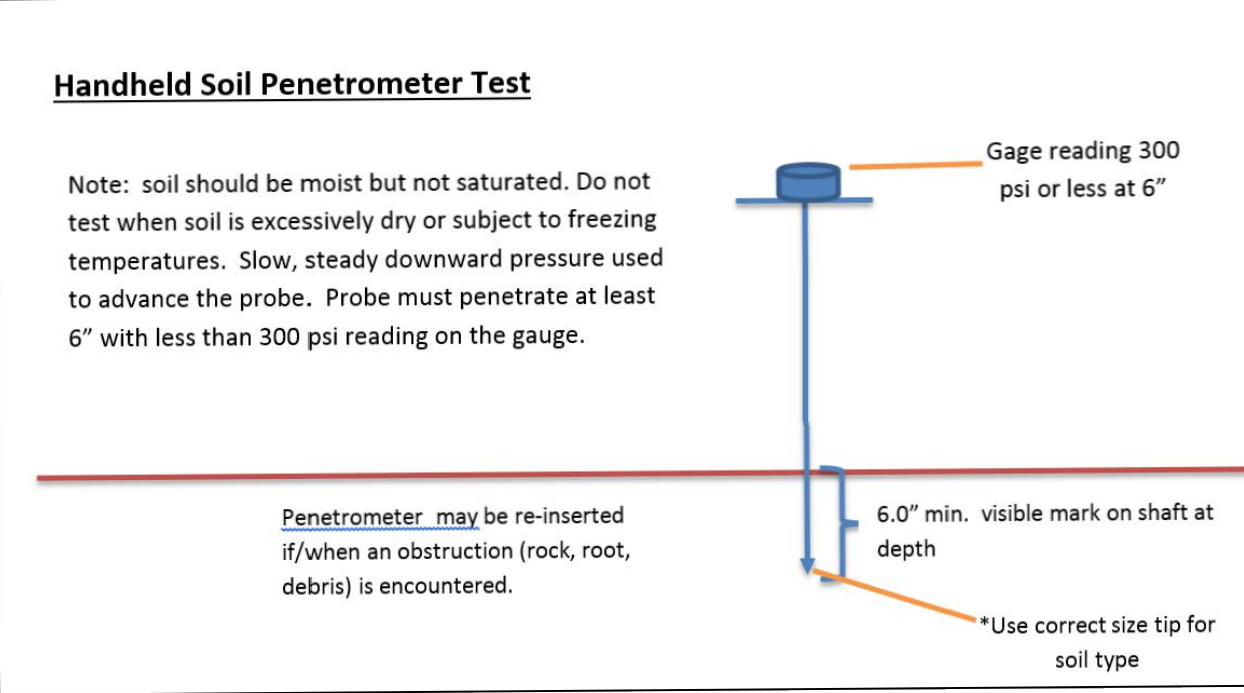
PROJECT VAMAX22004 DATE 2023-09-05 DRAWING SCALE AS NOTED DRAWN BY 0502 APPROVED BY 0502

CS8502 SHEET 15 OF 16

NOT FOR CONSTRUCTION



**PROBING WIRE TEST DETAIL**  
(IF/AS REQUIRED)  
NTS



**HANDHELD SOIL PENETROMETER TEST DETAIL**  
(IF/AS REQUIRED)  
NTS

**SOIL DECOMPACTION AND TESTING REQUIREMENTS (IF/AS REQUIRED)**

**SOIL COMPACTION TESTING REQUIREMENTS**

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

**COMPACTION TESTING METHODS**

- PROBING WIRE TEST (SEE DETAIL)
- HAND-HELD PENETROMETER TEST (SEE DETAIL)
- TUBE BULK DENSITY TEST (LICENSED PROFESSIONAL ENGINEER REQUIRED)
- NUCLEAR DENSITY TEST (LICENSED PROFESSIONAL ENGINEER REQUIRED)

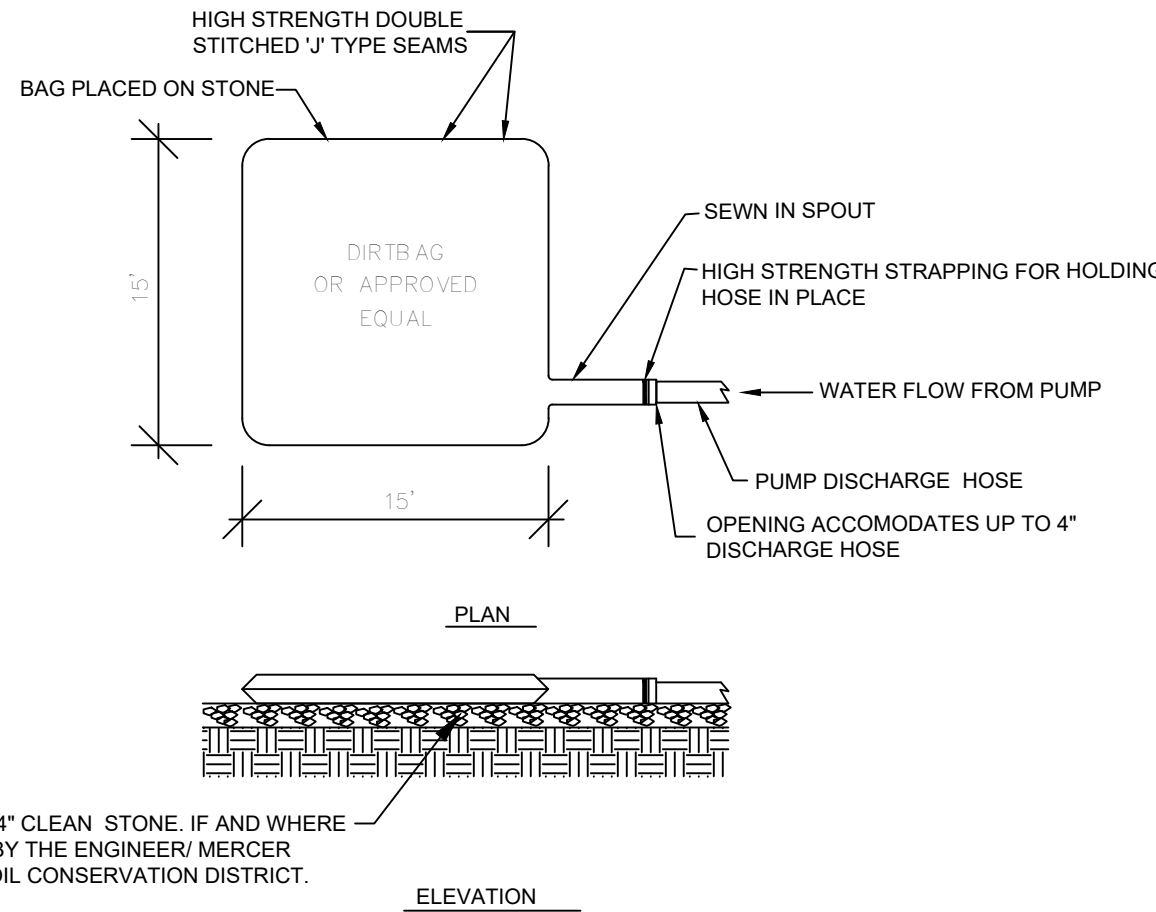
NOTE: ADDITIONAL TESTING METHODS WHICH CONFORM TO ASTM STANDARDS AND SPECIFICATIONS, AND WHICH PRODUCE A DRY WEIGHT, SOIL BULK DENSITY MEASUREMENT MAY BE ALLOWED SUBJECT TO DISTRICT APPROVAL.

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**

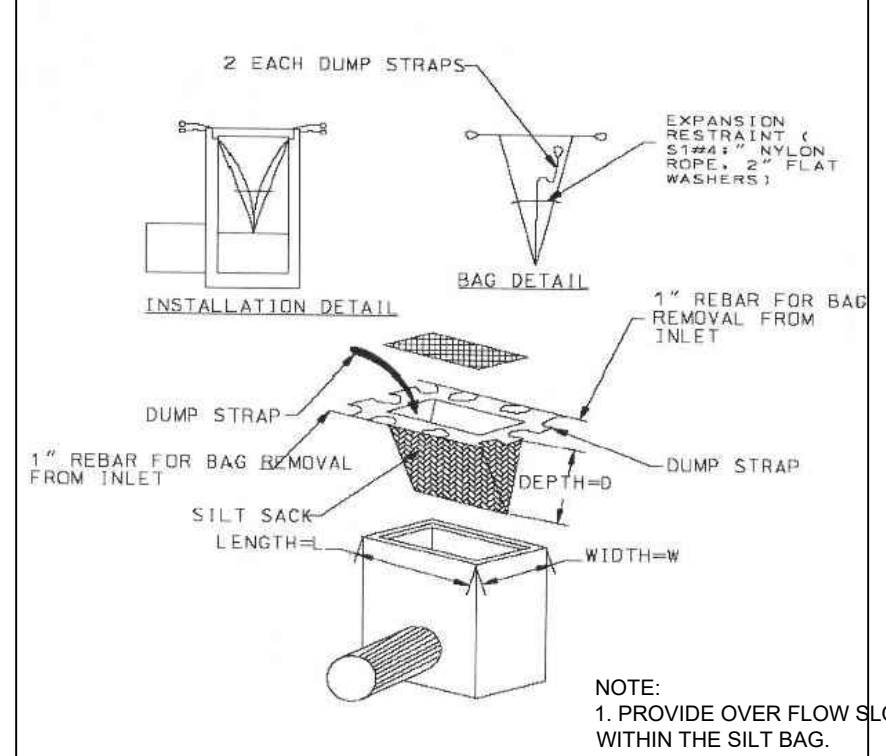
PROCEDURES SHALL BE USED TO MITIGATE EXCESSIVE SOIL COMPACTION PRIOR TO PLACEMENT OF TOPSOIL AND ESTABLISHMENT OF PERMANENT VEGETATIVE COVER.

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 MAY BE SUBSTITUTED SUBJECT TO DISTRICT APPROVAL.

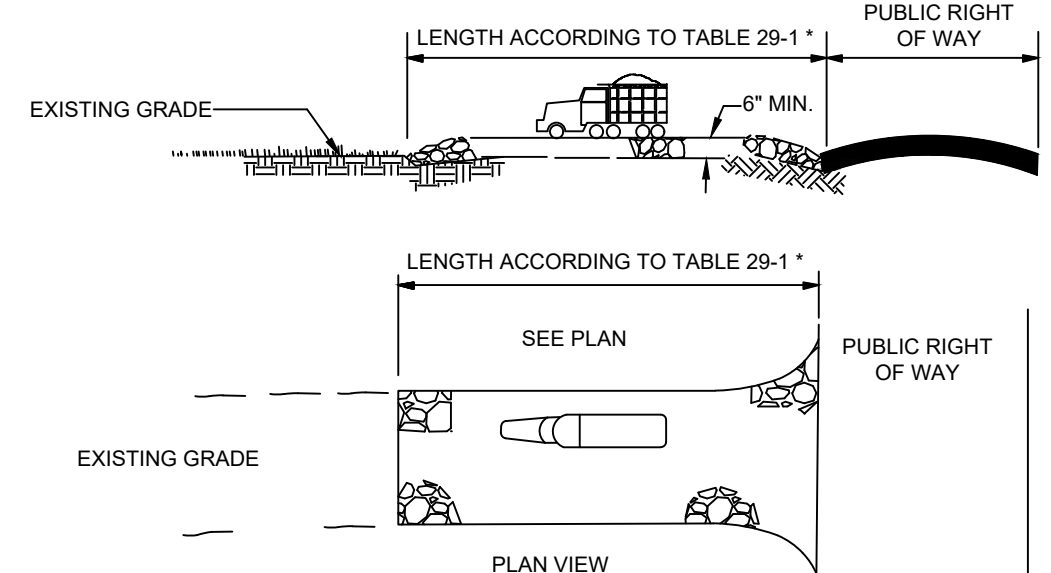


- NOTES:**
- ALL STORM WATER FROM THE CONSTRUCTION SITE SHALL BE DIVERTED TO LOW AREAS AND SHALL BE PUMPED THROUGH SILT FILTRATION BAG.
  - SILT FILTRATION PUMPING STATIONS AND BAGS SHALL BE PROVIDED AS REQUIRED.
  - CONTRACTOR SHALL UTILIZE ALL MEASURES, AS REQUIRED, TO PREVENT SEDIMENT-LOADED WATER FROM EXITING THE CONSTRUCTION SITE.
  - DIRT BAG SHALL BE LOCATED ON A STABLE SURFACE AWAY FROM WATERWAYS AND ACTIVE CONSTRUCTION AREAS.

**SILT FILTRATION BAG DETAIL (IF/AS REQUIRED)**  
NOT TO SCALE



**INLET FILTER PROTECTION DETAIL (IF/AS REQUIRED)**  
NOT TO SCALE

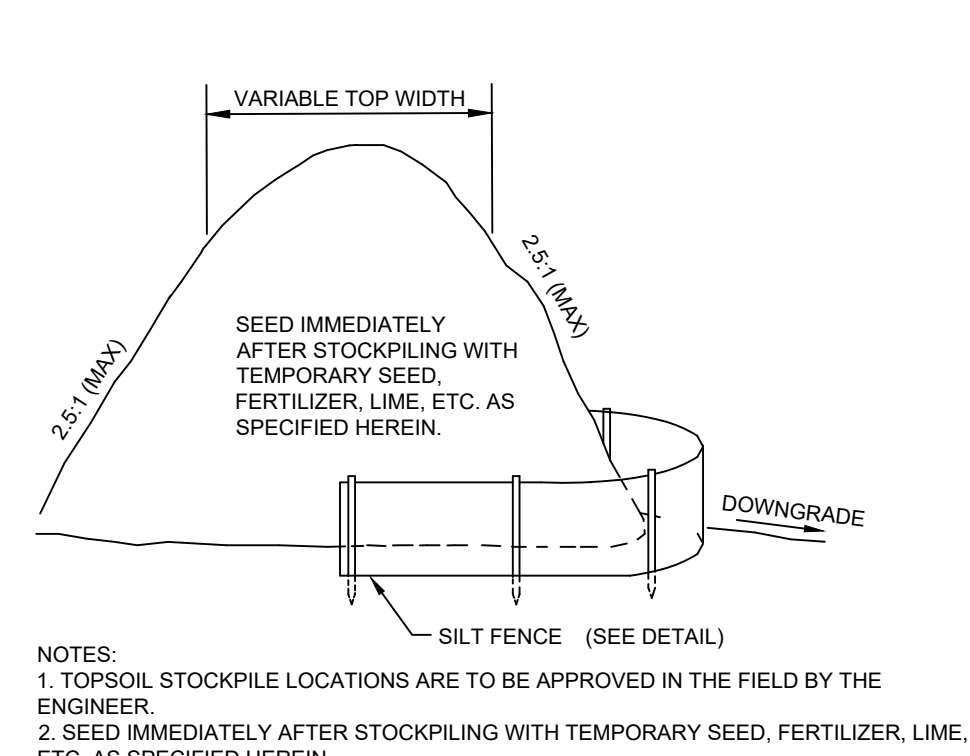


\*AS PRESCRIBED BY LOCAL ORDINANCE OF OTHER GOVERNING AUTHORITY.

**STONE CONSTRUCTION ENTRANCE (IF/AS REQUIRED)**  
NOT TO SCALE

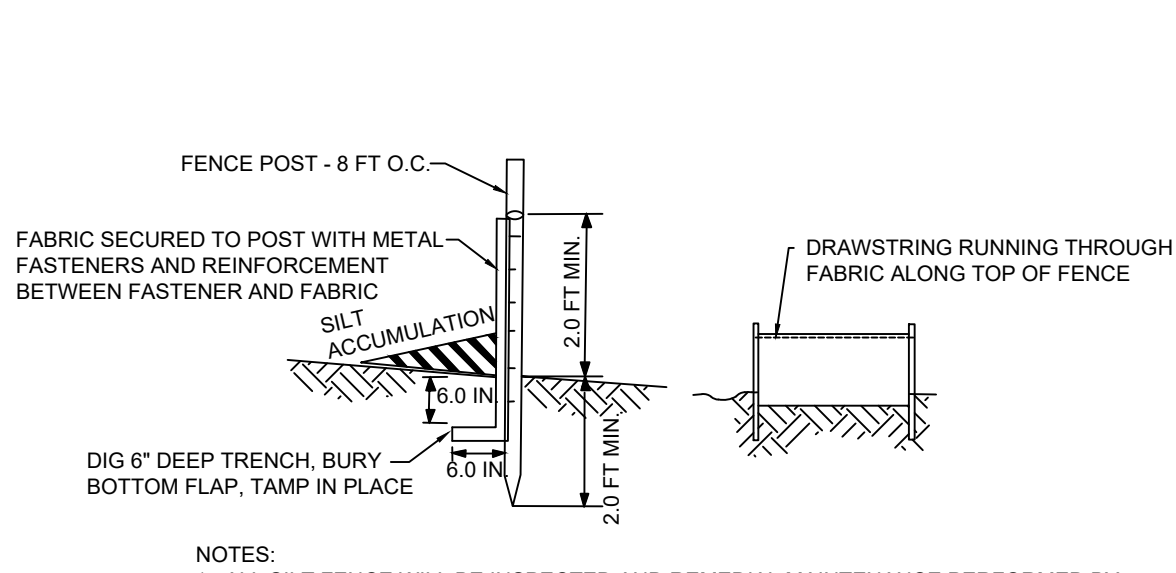
- PLACE STABILIZED CONSTRUCTION ENTRANCE AT LOCATION(S) AS SHOWN ON THE SOIL EROSION AND SEDIMENT CONTROL PLAN.
- STONE SIZE SHALL BE ASTM C-33, SIZE NO. 2 OR 3, CLEAN CRUSHED ANGULAR STONE.
- THE THICKNESS OF THE STABILIZED CONSTRUCTION ENTRANCE SHALL NOT BE LESS THAN TWELVE INCHES (12").
- THE WIDTH AT THE EXISTING PAVEMENT SHALL NOT BE LESS THAN THE FULL WIDTH OF POINTS OF INGRESS AND EGRESS.
- THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO THE R.O.W. OR 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 SEDIMENT.
- ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO THE PUBLIC OR PRIVATE ROADWAY MUST BE REMOVED IMMEDIATELY.

**STONE CONSTRUCTION ENTRANCE (IF/AS REQUIRED)**  
NOT TO SCALE

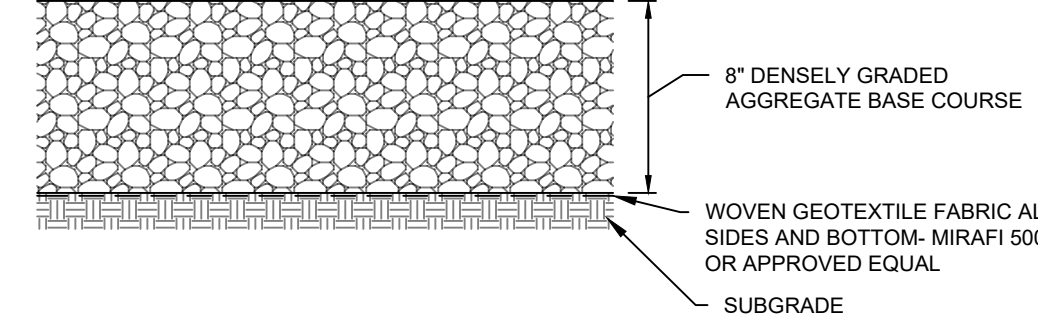


- NOTES:**
- TOPSOIL STOCKPILE LOCATIONS ARE TO BE APPROVED IN THE FIELD BY THE ENGINEER.
  - SEED IMMEDIATELY AFTER STOCKPILING WITH TEMPORARY SEED, FERTILIZER, LIME, ETC. AS SPECIFIED HEREIN.

**TYPICAL TOPSOIL STOCKPILE**  
NOT TO SCALE

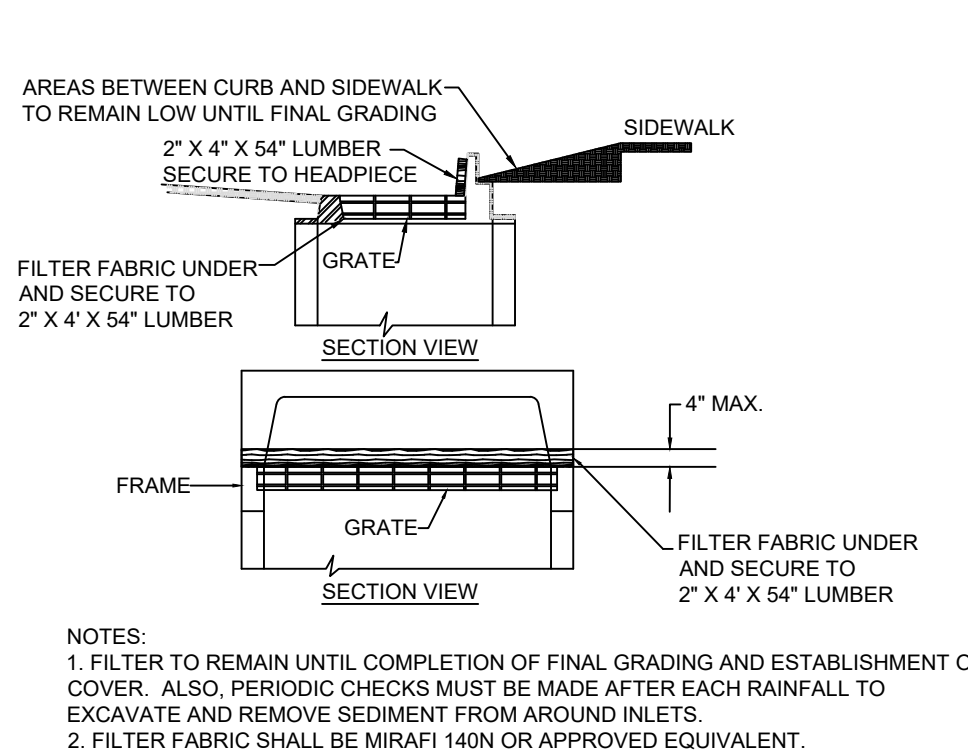


**SILT FENCE DETAIL**  
NOT TO SCALE



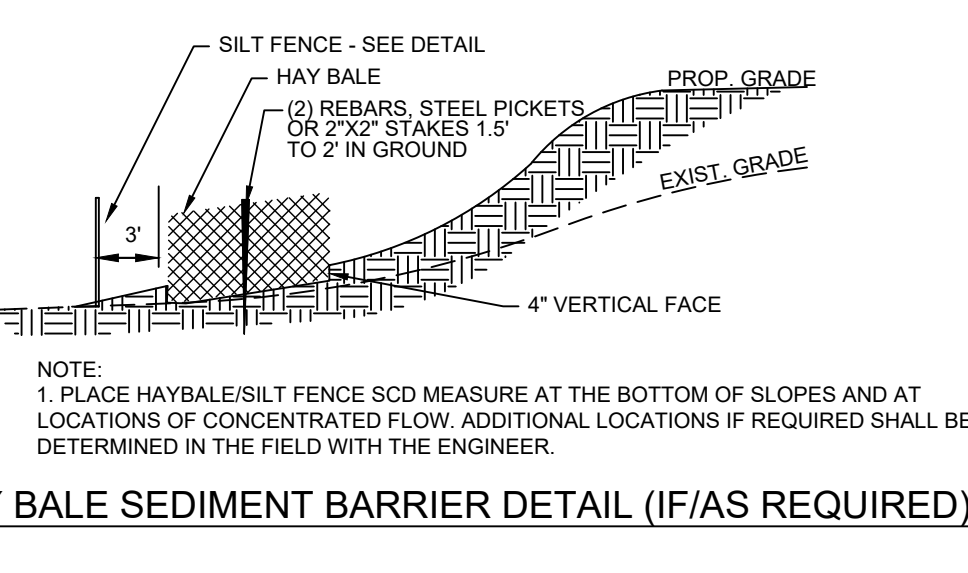
- NOTES:**
- STRIP TOPSOIL PRIOR TO PLACEMENT OF FILTER FABRIC AND STONE.

**CONTRACTOR PARKING/STAGING AREA DETAIL**  
NOT TO SCALE

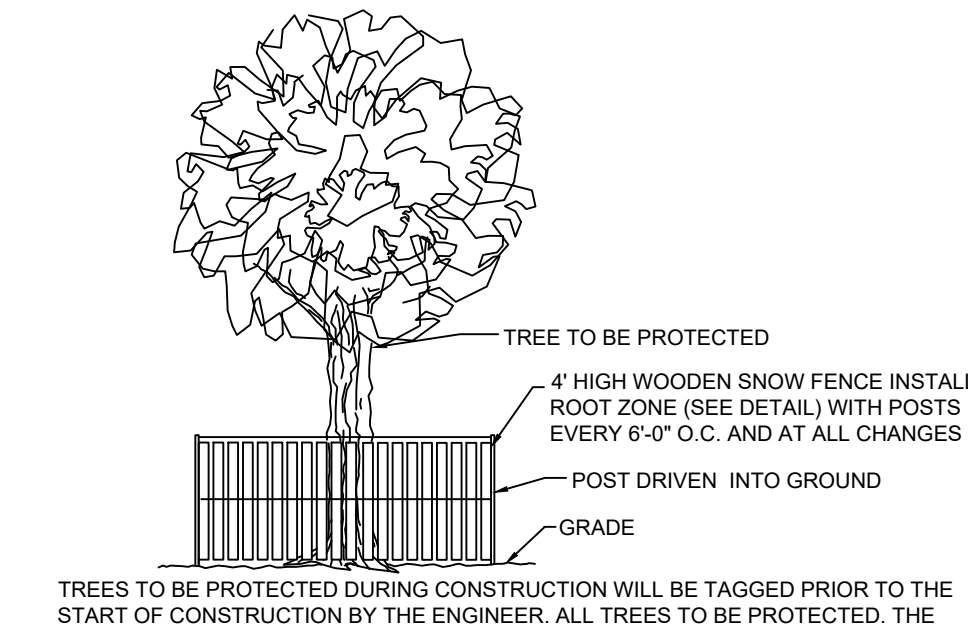


- NOTES:**
- FILTER TO REMAIN UNTIL COMPLETION OF FINAL GRADING AND ESTABLISHMENT OF COVER. ALSO, PERIODIC CHECKS MUST BE MADE AFTER EACH RAINFALL TO EXCAVATE AND REMOVE SEDIMENT FROM AROUND INLETS.
  - FILTER FABRIC SHALL BE MIRAF 140N OR APPROVED EQUIVALENT.

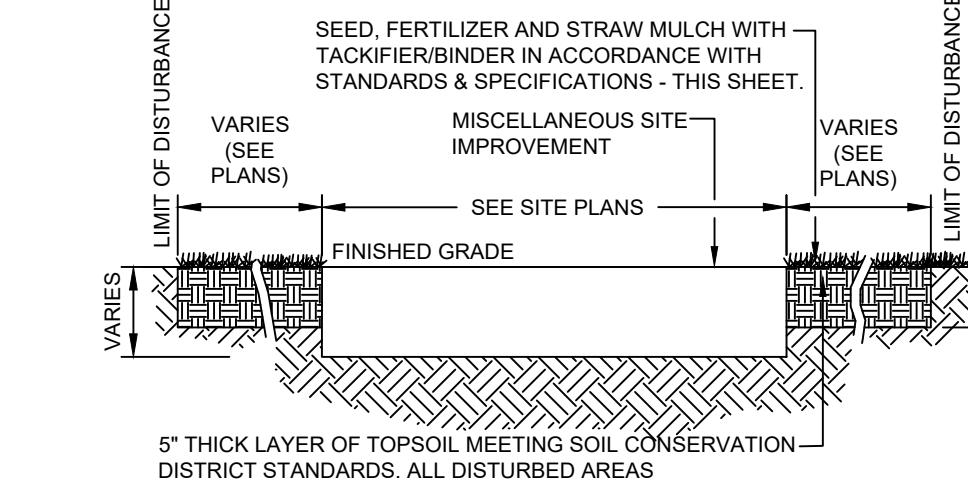
**INLET FILTER CURB TYPE DETAIL (IF/AS REQUIRED)**  
NOT TO SCALE



**STAKED HAY BALE SEDIMENT BARRIER DETAIL (IF/AS REQUIRED)**  
NOT TO SCALE



**TREE PROTECTION DETAIL**  
NOT TO SCALE



- NOTES:**
- ALL DISTURBED AREAS SHALL BE COMPLETELY RESTORED FOLLOWING CONSTRUCTION. RESTORATION INCLUDES THE APPLICATION OF 5' OF TOPSOIL AND PERMANENT STABILIZATION.
  - REFER TO NOTES SHEET CE-12 FOR SOIL EROSION AND SEDIMENT CONTROL STANDARDS AND PERMANENT STABILIZATION REQUIREMENTS.

**TYPICAL RESTORATION DETAIL (IF/AS REQUIRED)**  
NOT TO SCALE



ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

*Mark S. Mayhew*  
DATE: 09/05/2023  
MARK S. MAYHEW  
PROFESSIONAL ENGINEER  
NEW JERSEY LICENSE NO. GE35596

**STEM CENTER**  
6 LLOYD ROAD  
MONTCLAIR, NJ

**EROSION AND SEDIMENTATION CONTROL DETAILS**  
MONTCLAIR KIMBERLEY ACADEMY  
201 VALLEY ROAD  
MONTCLAIR, NJ 07042

NO.	DATE	REVISIONS	BY

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PROJECT: **VAMAX22004**  
DATE: 2023-09-05  
DRAWING SCALE: **AS NOTED**  
DRAWN BY: 0502  
APPROVED BY: 0502

**NOT FOR CONSTRUCTION**