



Mark W. Fritz Architects, A.I.A.



133 Fernwood Road • Trumbull, Connecticut 06611

RE: NCSF#1

May 6, 2020

Adam R. Kaufman, AICP
Director of Planning
Town of North Castle
17 Bedford Road
Armonk, NY 10504-1898

Mr. Kaufman

We submit the following project for Planning Board review.

The proposed project is for the expansion of the existing parking lot at North Castle South Fire District 1, located at 621 North Broadway, White Plains, New York.

The project consists of the installation of new retaining walls per the plans, increasing the parking capacity from 12 to 23 spots. Parking lot lighting has also been increased for the additional lot size.

Sincerely

Mark W. Fritz Architect



Benedict A. Salanito, P.E., P.C.

Civil Engineer
609 Brook Street
Mamaroneck, New York 10543



E-mail: bsalanito@aol.com

Telephone (914) 760-5125

30 May 2020

Joseph M. Cermele, P.E., CFM
Kellard Sessions Consulting
Consulting Town Engineers

Re: **Site Development Plan Approval Application**
North Castle South Fire District No. 1
621 North Broadway
Section 122.20, Block 1, Lots 5, 6, 7

An annotated response to Kellard Sessions memo dated May 22, 2020 is provided below in red. Comments addressed by others are provided separately.

GENERAL COMMENTS

2. The Site Plan proposes an access drive with a width of 20 feet. However, as required by Section 355-56 G of the Town Code, access drives serving parking facilities with 21 spaces or more require access drive with of 24 feet. The plan should be revised to accommodate this.

PLANS HAVE BEEN ADJUSTED TO REFLECT THE NEW 24 FOOT WIDTH.

3. The plan proposes shifting the existing driveway access approximately twelve (12) feet to the east, requiring the relocation of an existing fire hydrant and the loss of one on-street parking space. The reduction in on-street parking and required revised signage should be reviewed by the Highway Department and may require approval by the Town Board. The plan should clearly illustrate the limits of removals of existing curb and sidewalk and provide details for new sidewalk, pavement restoration and hydrant relocation.

NOTATIONS HAVE BEEN ADDED TO THE PLAN TO REFLECT LIMITS OF NEW CURBING, ETC.

4. The plan proposes modifications to the driveway access onto North Broadway (NYS Route 22). The applicant will be required to obtain driveway access permits from the New York State Department of Transportation (NYSDOT).

A REFERENCE TO REQUIRING A NYSDOT PERMIT HAS BEEN ADDED TO THE PLAN.

5. The site plan shall include proposed topography and spot elevations, as necessary.

TOPOGRAPHY INFORMATION HAS BEEN ADDED. SEE ER-2.

7. In order to limit disruption to the emergency services parking lot, the applicant has requested that the required soil testing in the stormwater treatment areas be performed before issuance of the Building Permit. Given the circumstances, this office has no objection to that request. *UNDERSTOOD.*

8. The applicant has prepared a stormwater mitigation plan, including sizing calculations demonstrating mitigation of the net increase in runoff generated for the 25-

year storm event, as required by Town Code. In light of the above request to postpone soil testing, a conservative approach was used for soil percolation rates to be confirmed at a later date. It is understood that should the need for additional or modified drainage facilities be required as a result of the testing, a revised plan will be provided for review and approval. However, in review of the drainage plan and without the benefit of proposed grading, as requested above, it appears that the proposed drywells and their associated rim elevations are set at the high points of the parking lot. We would recommend that the applicant reconsider the layout of the proposed infiltration system to a centralized location at the downstream confluence of the existing drainage facilities. In that way stormwater runoff from the entire parking lot could be collected and mitigated in the infiltration system with an emergency overflow to the existing storm facilities in North Broadway.

SHEET ER-2 HAS BEEN UPDATED TO REFLECT THE RELOCATION OF THE PROPOSED DRYWELL TO BE DOWN GRADIENT OF EXISTING FLOWS AS RECOMMENDED.

9. Temporary erosion and sediment controls are shown on both the Architect's and Engineer's plans. For clarity, the erosion controls should be shown on one sheet. The Erosion and Sediment Control Plan should be revised to provide silt fence and/or haybales downgrade of all disturbed areas, as well as temporary inlet protection for all existing and proposed drainage facilities within the project area. Provide details.

AN INLET PROTECTION DETAIL HAS BEEN ADDED TO SHEET ER-1 WITH THE APPROPRIATE CALLOUT. LOCATION OF SILTFENCING HAS BEEN EXPANDED TO INCLUDED THE AREAS OF DISTURBANCE.

14. References to the City of White Plains on the Drainage and Erosion Control Plans shall be corrected to the Town of North Castle.

PLAN NOTE HAS BEEN ADJUSTED.

Should you have any questions on this matter please feel free to contact me.



Benedict A. Salantro, P.E., P.C.
Civil Engineer



Mark W. Fritz Architects, A.I.A.



133 Fernwood Road • Trumbull, Connecticut 06611

May 30th, 2020

Joseph M. Cermele, P.E.,CFM
Kellard Sessions Consulting
Consulting Town Engineers

Re: Site Development Plan Approval Application
North Castle South Fire District No. 1
621 North Broadway
Section 122.20 Block 1, Lots 5,6,7

The following is an annotated response to Kellard Sessions memo dated May 22, 2020. Response noted in red, Comments addressed by others provided separately.

1. The Site Plan shall dimension the ADA accessible parking spaces, standard parking spaces and access aisle to demonstrate compliance with Section 355-56 D and E of the Town Code. The ADA parking stalls and required access aisle shall be a minimum width of eight (8) feet. The required ADA signage shall be located on the site plan and detailed.

PLANS HAVE BEEN ADJUSTED TO REFLECT DIMENSIONED PARKING SPACES AND SIGNAGE AND DETAILS (DWG A-106), HAVE BEEN ADDED

6. The plan includes typical details for a proposed pre-manufactured pre-cast segmental block retaining wall to support the change in grade required for the parking lot expansion. The wall is approximately nine (9) feet tall along the rear of the property. The applicant will be required to provide design details certified by a NYS Licensed Professional Engineer prior to issuance of a Building Permit. In addition, the construction of the wall shall be certified by the Design Professional prior to issuance of a Certificate of Compliance. The plan shall include notes to this effect.

ACKNOWLEDGED AND NOTES ADDED TO THE DRAWINGS SEE DWG A-105

9. Temporary erosion and sediment controls are shown on both the Architect's and Engineer's plans. For clarity, the erosion controls should be shown on one sheet.

DRAWING A001 HASE BEEN REMOVED FROM THE SET FOR CLARITY. REFER TO DRAWINGS ER-1 &ER-2, FOR EROSION CONTROL AND DRAINAGE.

10. The Stone Curb Detail should also the show the location of the retaining wall. The plan proposes a block curb detail, which is appropriate for use on site. However, any curb proposed within the Town right-of-way shall be concrete, unless otherwise approved by the Highway Department. The plan shall include pavement, curb and sidewalk details in accordance with Highway Department standards.

HIGHWAY DEPARTMENT STANDARD DETAILS HAVE BEEN ADDED TO THE DRAWINGS (DWG A-106) NO CURBING ON SITE ADJACENT TO THE RETAINING WALL.

11. The applicant has provided a lighting and photometric plan for consideration by the Planning Board. We note that the proposed locations of the light poles shown on the photometric plan differ from those locations illustrated on the site plans and shall be coordinated.

LIGHT POLE LOCATIONS HAVE BEEN COORDINATED ON THE PLANS.





Mark W. Fritz Architects, A.I.A.



133 Fernwood Road • Trumbull, Connecticut 06611

12. The plan shall illustrate the relocation of the existing trash enclosure. Provide a trash enclosure detail on the plan.

PLANS UPDATED TO SHOW TRASH ENCLOSURE & DETAILS.

13. The Site Plan proposes that a chain-link fence be installed along the top of the new retaining wall. Provide the height, material specifications and detail.

THE CHAIN-LINK FENCE IS EXISTING AND THERE IS NO INTENT TO REPLACE THE FENCE. WHERE NECESSARY DUE TO CONSTRUCTION OF THE RETAINING WALL, THE FENCE WILL BE REMOVED AND REINSTALLED AT IT'S EXISTING LOCATION. IF ANY SECTIONS OF THE EXISTING FENCE REQUIRSE REPLACEMENT, REPLACEMENT WOULD MATCH THE EXISTING.

Should you have any questions on this matter, please feel free to contact me.

Sincerely,



Mark W Fritz Architects



48" HP Manhole Structure Specification

GENERAL

This specification describes the 48" HP Manhole for use in underground storm water applications as indicated on the contract drawings and referenced within the contract specifications. The ductile iron grates for each of these fittings are to be considered an integral part of the surface drainage inlet and shall be furnished by the same manufacturer.

MATERIALS

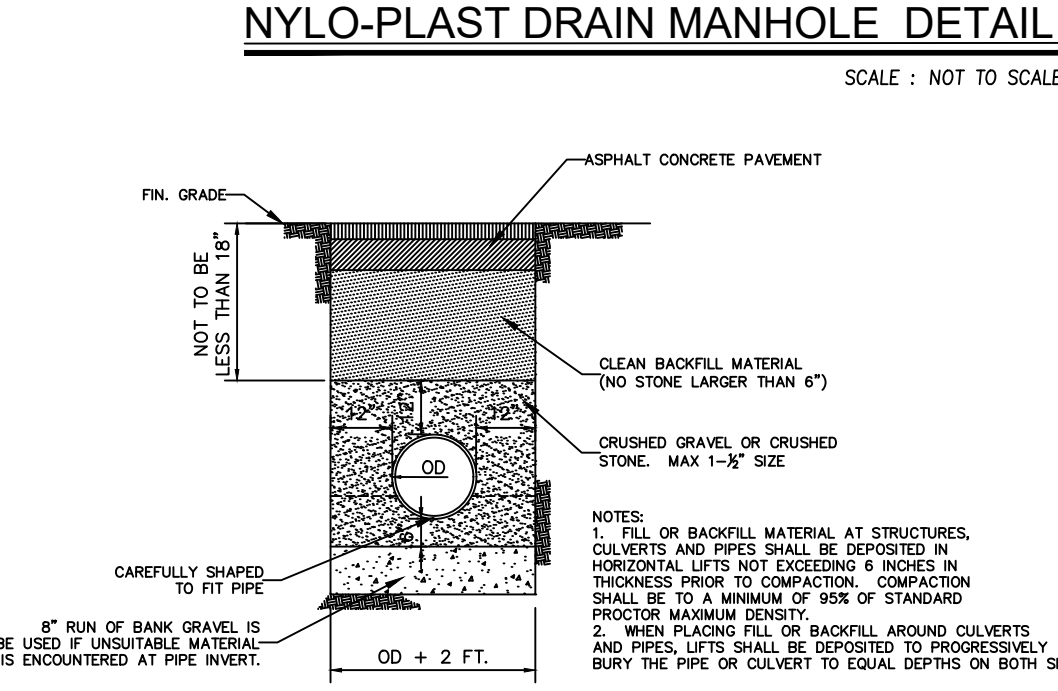
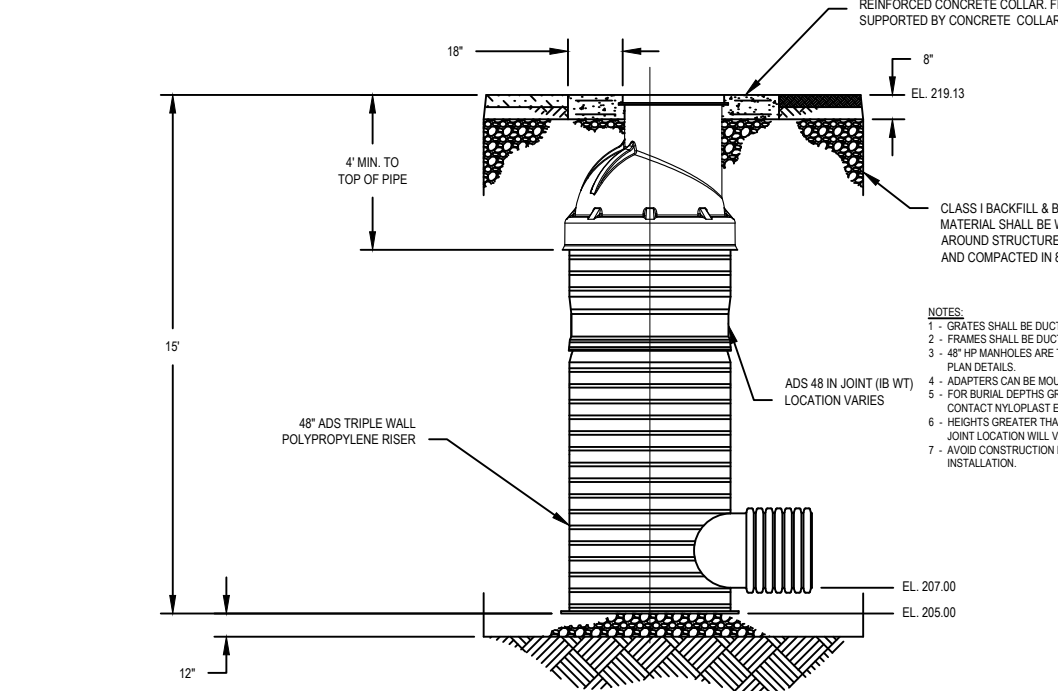
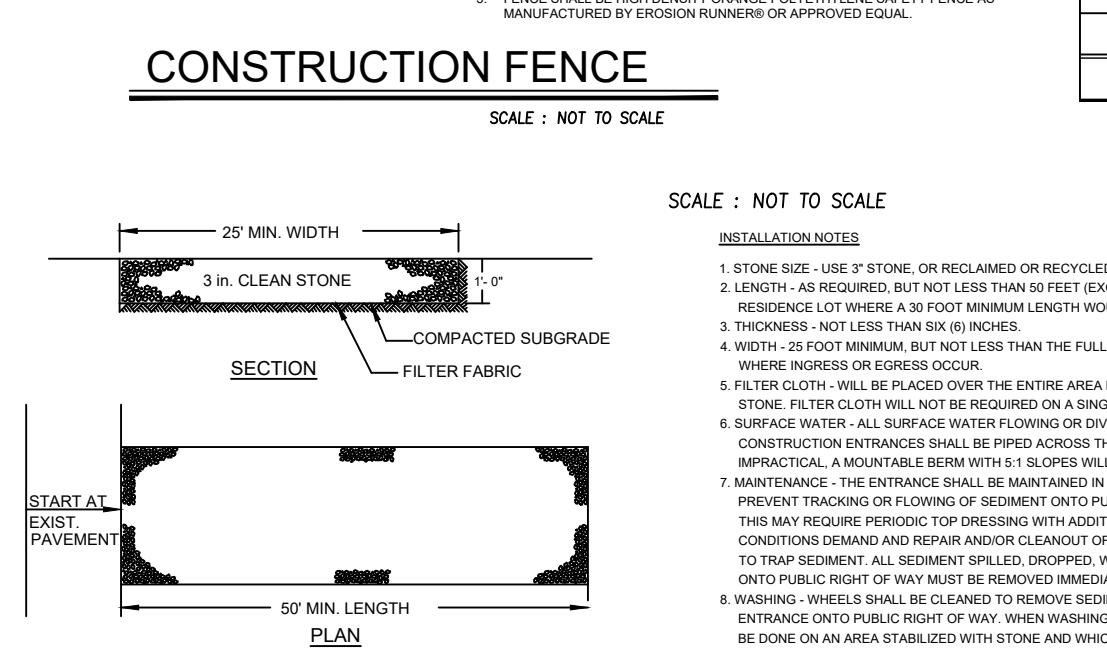
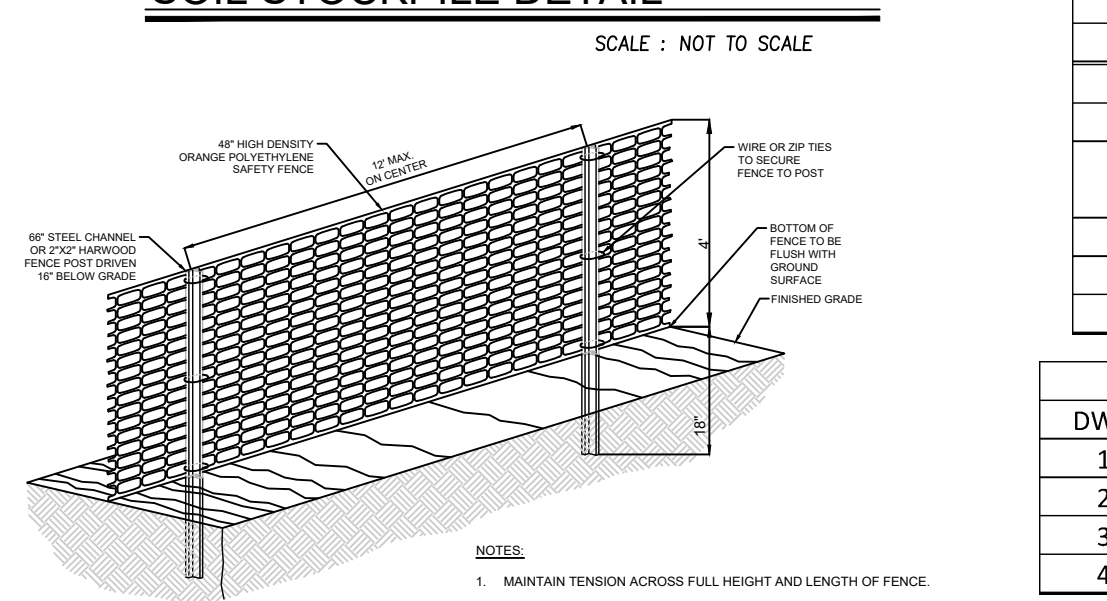
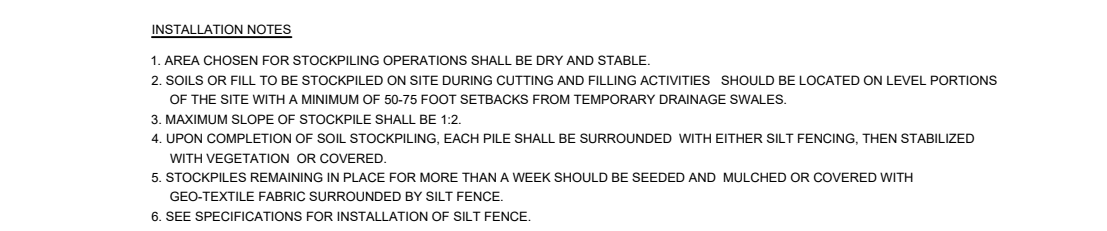
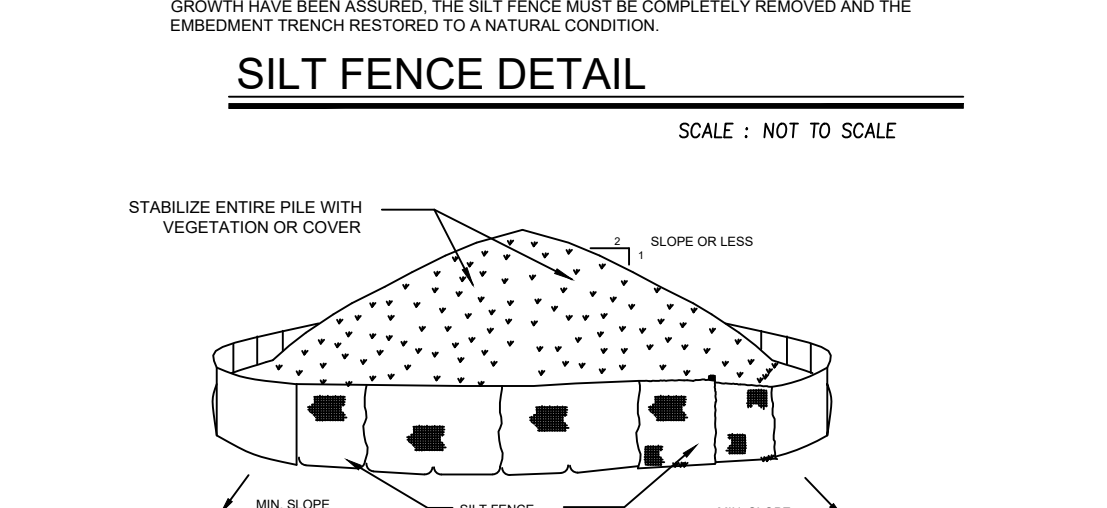
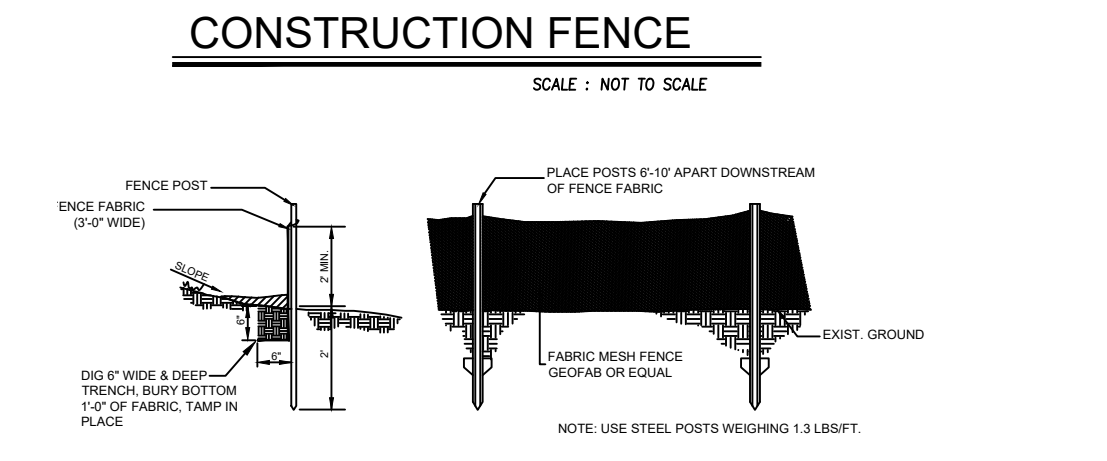
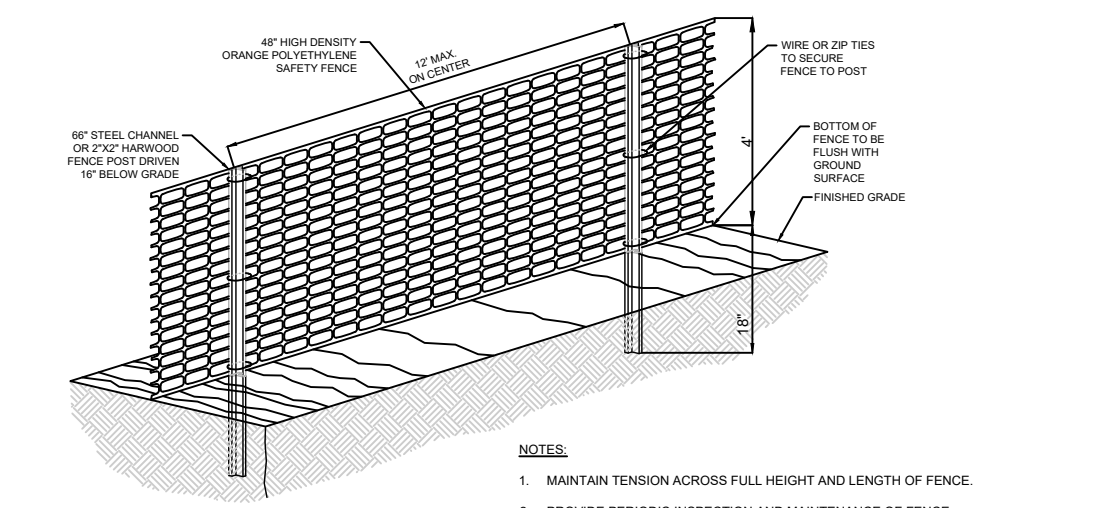
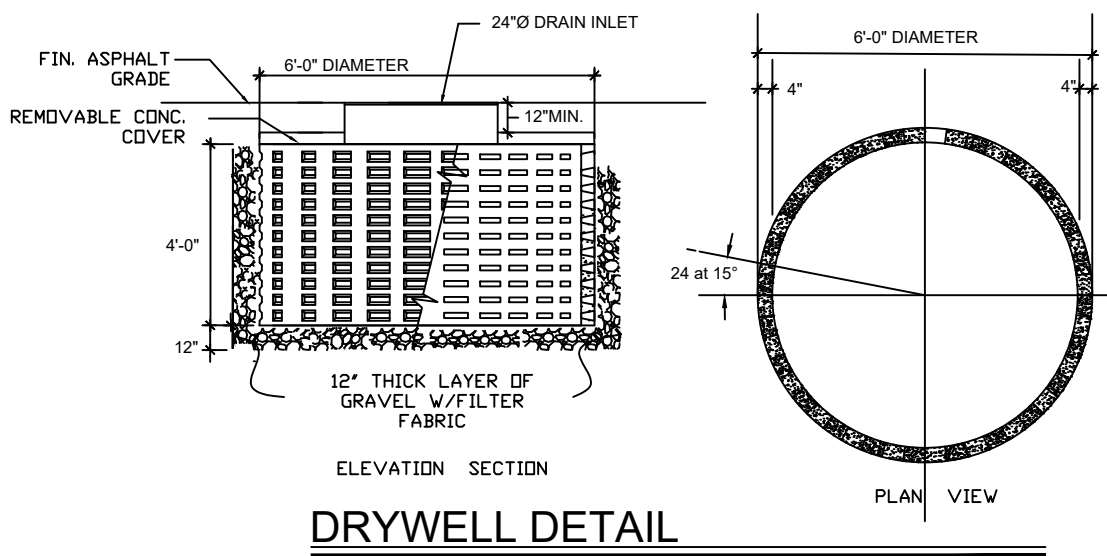
The 48" HP manhole bodies shall be made from an impact modified copolymer polypropylene meeting the material requirements of ASTM F2764. The eccentric cone reducer shall be manufactured from polyethylene material meeting ASTM D3350 cell class 213320C. The joint tightness shall conform to ASTM D3212 for joints for drain and sewer plastic pipe using flexible elastomeric seals. The flexible elastomeric seals used for the polyethylene cone and pipe connections to the structure shall conform to ASTM F477.

The covers, grates and frames furnished for all surface drainage inlets shall be ductile iron. Ductile iron castings used shall conform to ASTM A536 grade 70-50-05 for ductile iron and shall be painted black.

INSTALLATION

Excavate HP manhole location to the depth required and provide a stone base. Stone base shall be a minimum of 6", however a thicker base may be required. Set HP Manhole in place and level the structure. Connect storm pipe into HP manhole. Re-check HP Manhole depth, level and position. The specified 48" HP Manhole shall be installed using conventional flexible pipe backfill materials and procedures. The backfill material shall be crushed stone or other granular material meeting the requirements of class 1 material as defined in ASTM D2321. Bedding and backfill for the HP Manholes shall be well placed and compacted uniformly in accordance with ASTM D2321. No brick, stone or concrete block will be required to set the grate to final grade height. For load rated installations, a concrete slab shall be poured under and around the grate and frame. The frame and grate/cover must be fully supported by the concrete slab. The collar must bear on the surrounding stone and soil backfill and not on the structure. The concrete slab is designed taking into consideration local soil conditions, traffic loading, and other applicable design factors. For other installation considerations such as a migration of fines, ground water, and soft foundations refer to ASTM D2321 guidelines.

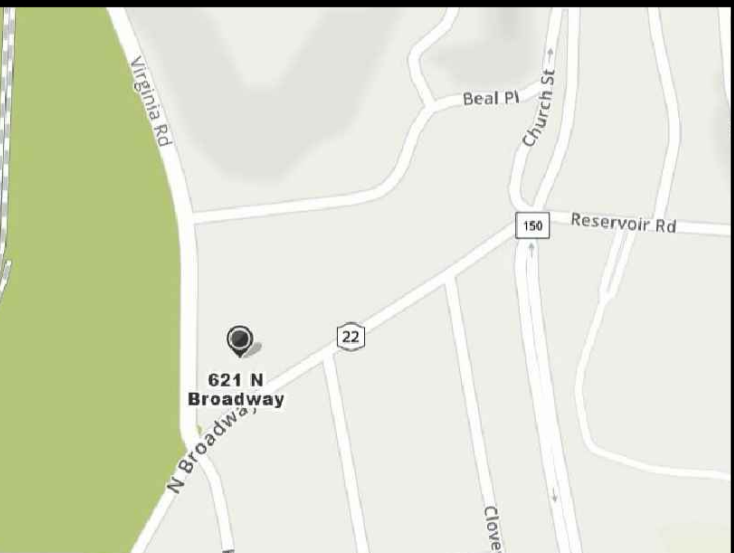
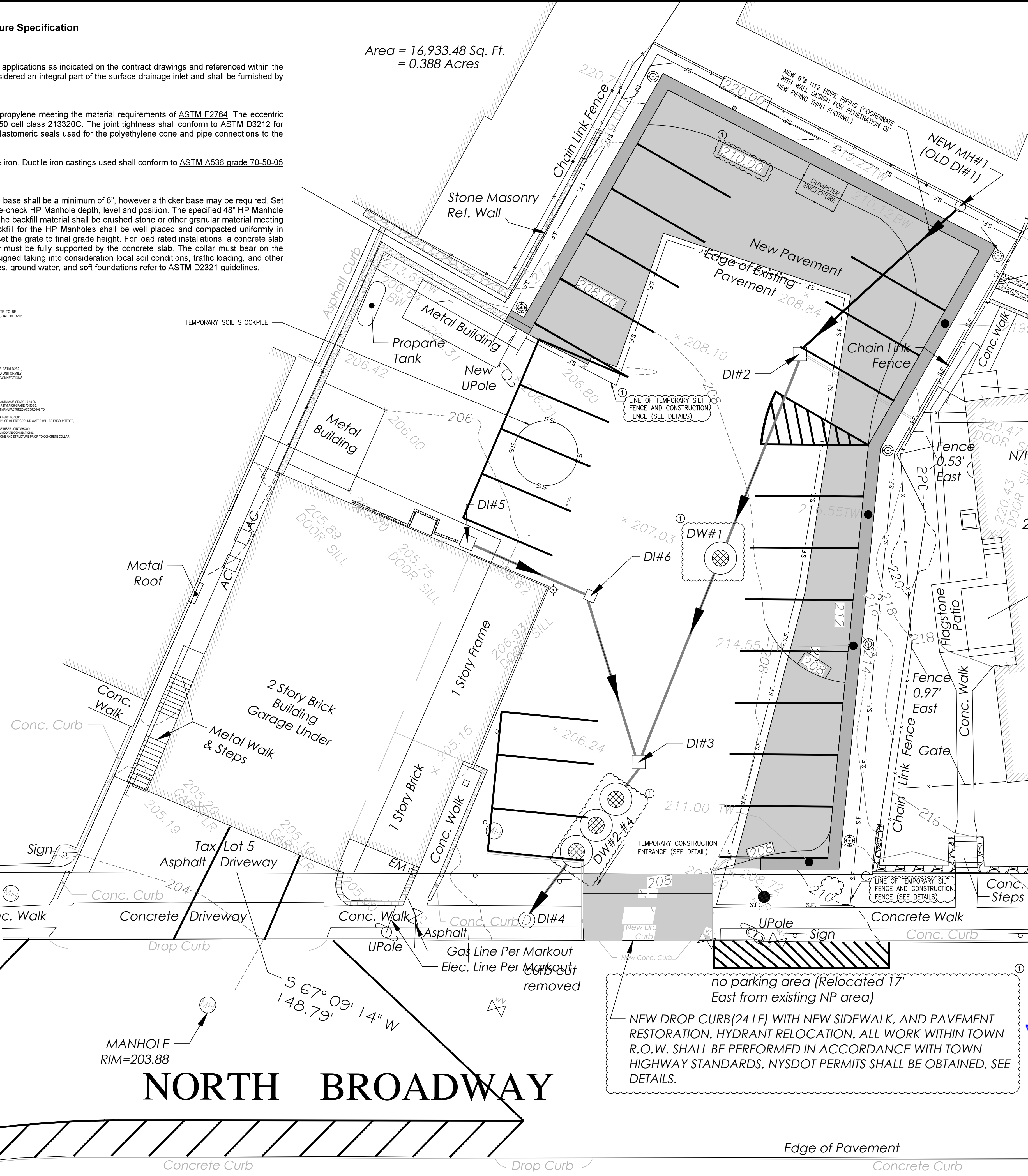
Area = 16,933.48 Sq. Ft.
= 0.388 Acres



EXISTING DRAIN INLETS						
DI #	RIM EL.	INV in	INV out	PIPE SIZE / TYPE	GRATE SIZE	
1	219.13	204.38	213.13	12" HDPE- N12	24" DIAMETER	
2	208.63	204.38	204.38	12" HDPE- N12	30" X 30"	
3	206.18	203.01	202.84	12" HDPE- N12	30" X 30"	
4	206.40	201.65	202.84	8" HDPE- N12	24" DIAMETER	
5	205.39	201.65	203.35	8" HDPE- N12	30" X 30"	
6	206.65	203.15	202.98	8" HDPE- N12	24" X 24"	

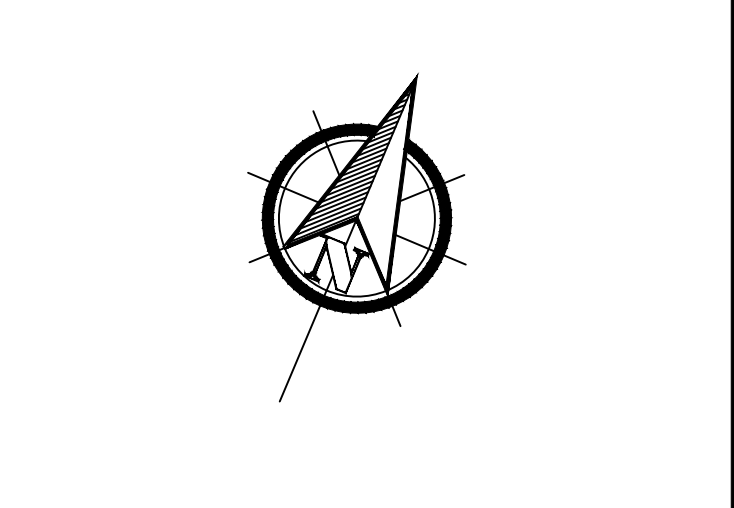
PROPOSED DRYWELL INLETS (6" DIAM. X 4' DEEP)						
DW #	RIM EL.	INV in	INV out	PIPE SIZE / TYPE	GRATE SIZE	TOP OF DRYWELL
1	207.50	203.80	203.80	12" HDPE- N12	24" DIAMETER	205.00
2	206.00	202.80	202.80	6" HDPE- N12	24" DIAMETER	204.00
3	206.00	202.80	202.80	6" HDPE- N12	24" DIAMETER	204.00
4	206.00	202.80	202.80	12" HDPE- N12	24" DIAMETER	204.00

PROPOSED DRAIN MANHOLE UNIT (NYLOPLAST N-12) 48" DIAMETER					
MH #	RIM EL.	BOTTOM	INV out	PIPE SIZE / TYPE	GRATE SIZE
1	219.13	205.00	207.00	6" HDPE- N12	30" DIAMETER



LOCATION MAP
DO NOT SCALE DRAWINGS

1	ENGINEER COMMENTS	05-30-2020
NO	DESCRIPTION	DATE
- REVISIONS -		



DRAINAGE AND
EROSION CONTROL
PLAN
FOR

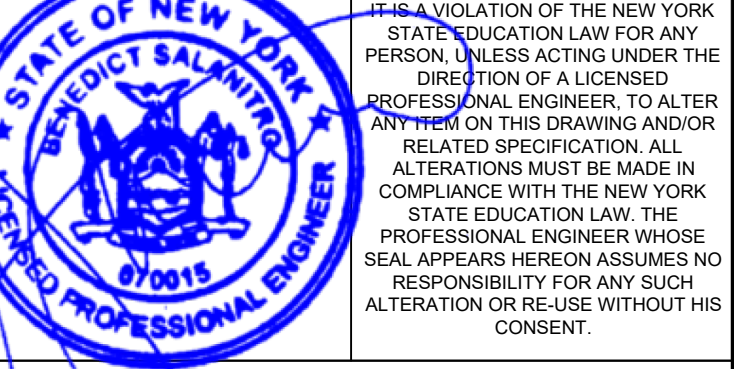
NORTH CASTLE FIRE
DISTRICT

AT
621 NORTH BROADWAY
WHITE PLAINS, NY
10603

SHEET: 122.20
BLOCK: 1
LOT: 5

Benedict A. Salanitro, P.E., P.C.

CIVIL ENGINEER
609 BROOK STREET
Mamaroneck, New York 10543



PROJECT No: 040320
DATE: 04-03-20
SCALE: AS NOTED
DRAWN BY: V.S.
CHECKED BY: B.S.

SHEET No
ER-2



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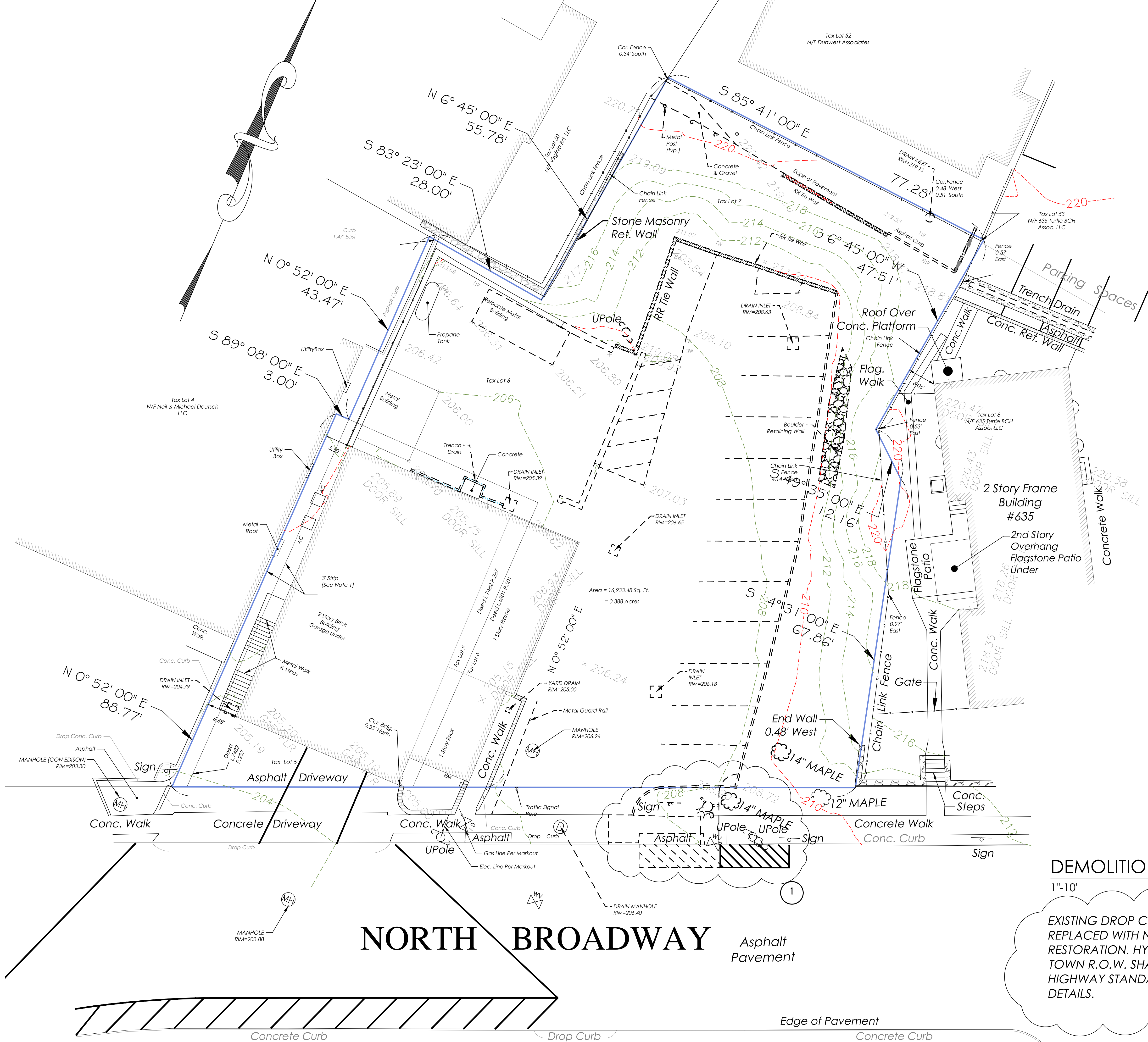
**NORTH CASTLE FIRE
DISTRICT NO 1
RETAINING WALL
& PARKING LOT
MODIFICATIONS
621 NORTH BROADWAY
WHITE PLAINS, NY 10603**



PROJECT NO:	011520
CAD DWG FILE:	115

A-101





NORTH BROADWAY

Asphalt Pavement

DEMOLITION PLAN

1"=10'

EXISTING DROP CURB. APPROX. 29 LF TO BE REMOVED AND REPLACED WITH NEW CONCRETE CURB, SIDEWALK, AND PAVEMENT RESTORATION. HYDRANT RELOCATION AND ALL WORK WITHIN TOWN R.O.W. SHALL BE PERFORMED IN ACCORDANCE WITH TOWN HIGHWAY STANDARDS. NYSDOT PERMITS SHALL BE OBTAINED. SEE DETAILS.

Mark Fritz Architects
133 Fernwood Road, Trumbull
Connecticut, 06611
Phone: 203-880-9800
MWFARCHITECTS@AOL.COM

CONSULTANTS

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OWNER

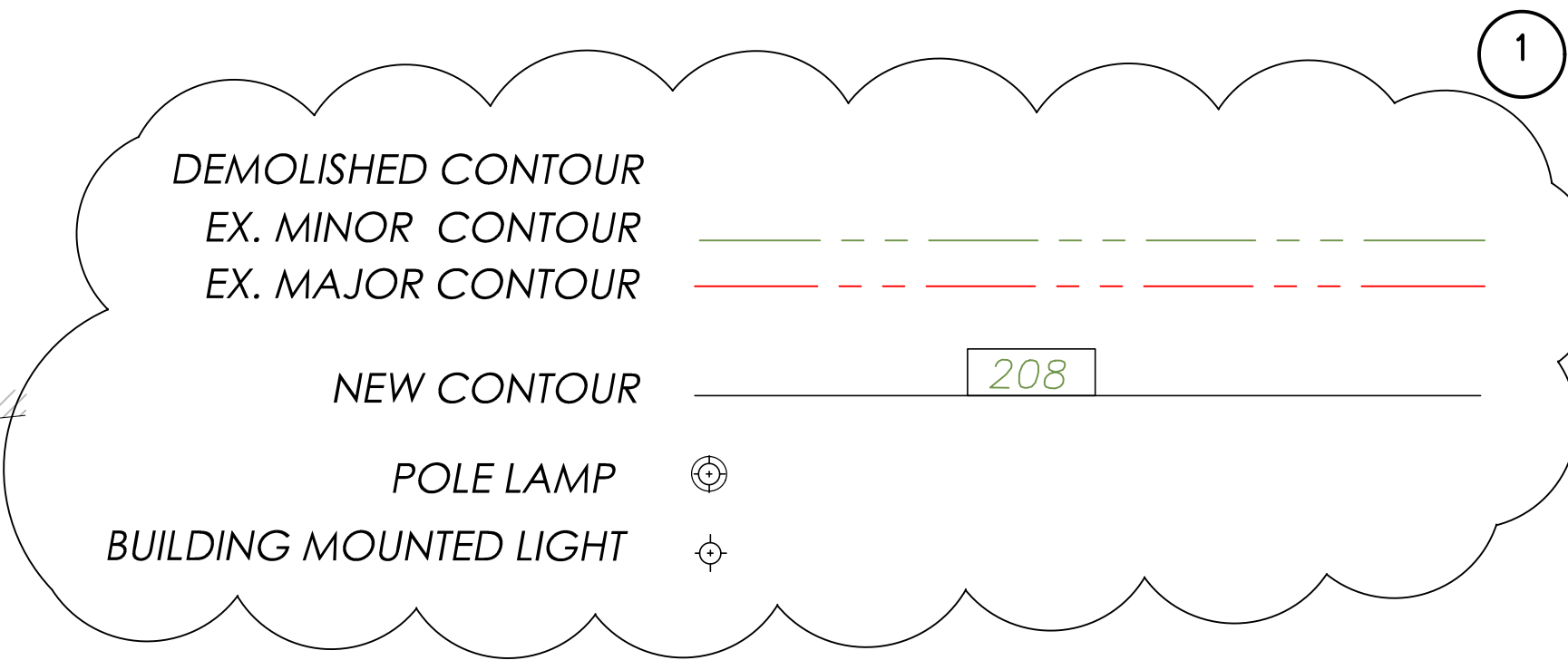
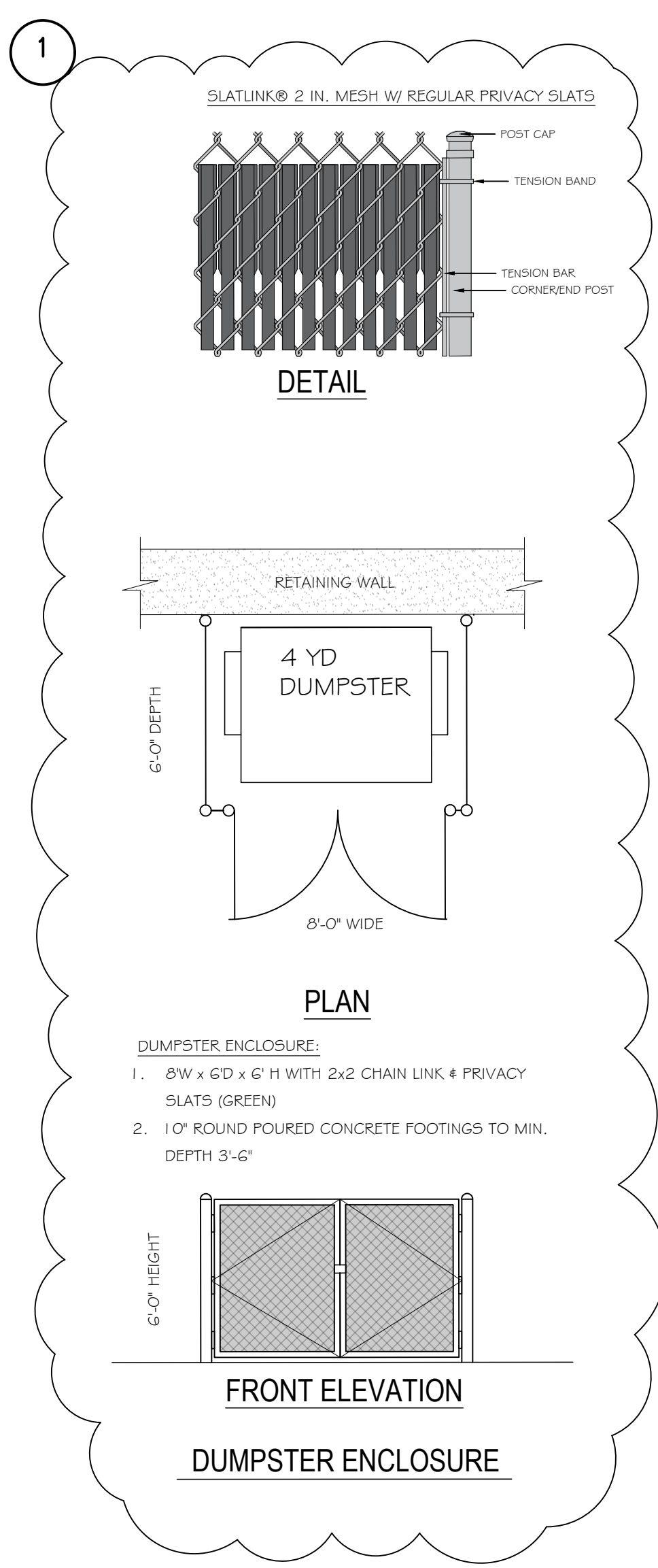
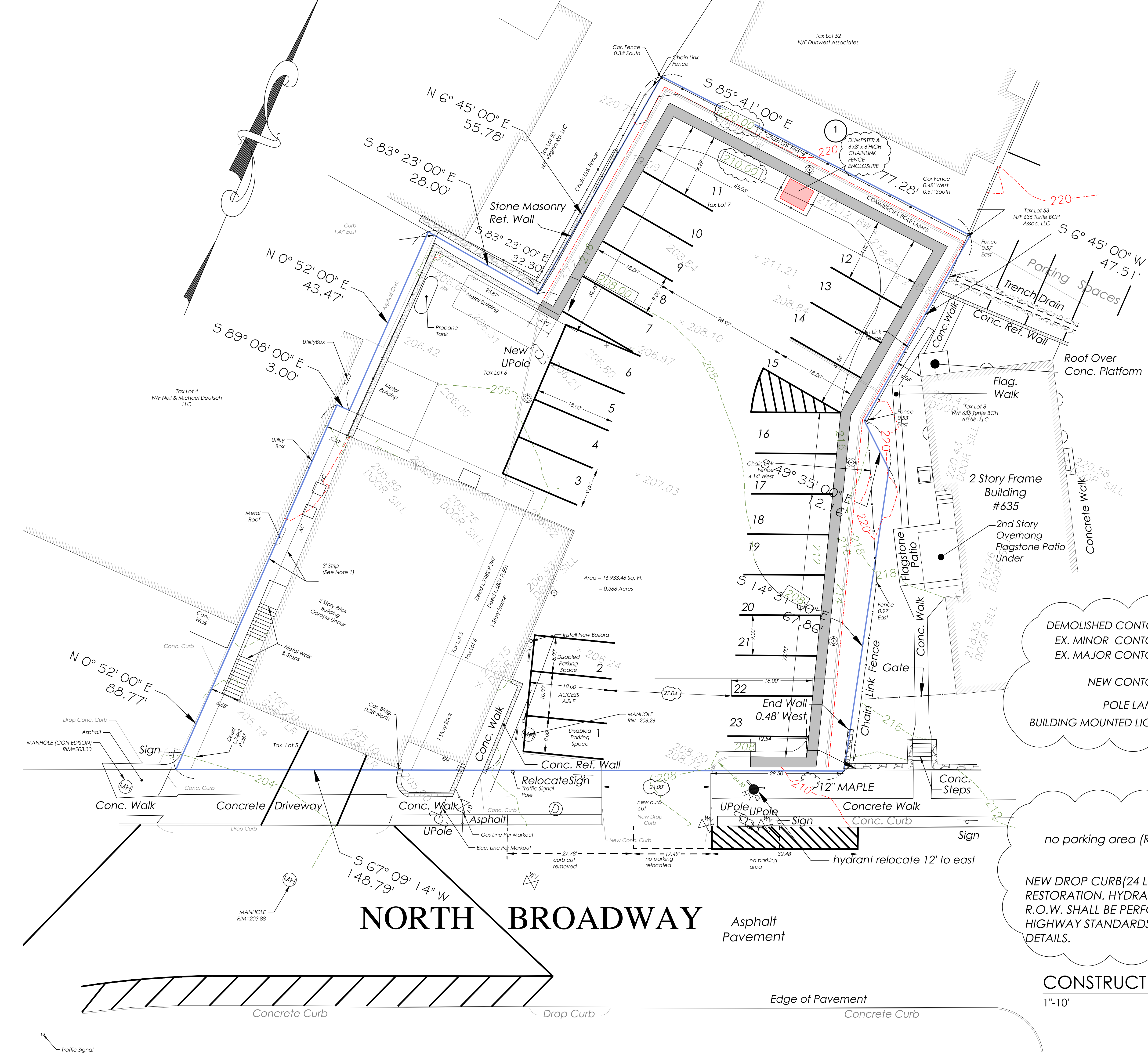
NORTH CASTLE FIRE
DISTRICT NO 1
RETAINING WALL
& PARKING LOT
MODIFICATIONS
621 NORTH BROADWAY
WHITE PLAINS, NY 10603



MARK	DATE	DESCRIPTION
1	2/21/20	PRELIMINARY ISSUE
1	5/30/20	ENGINEERS COMMENT

PROJECT NO:	011520
CAD DWG FILE:	115
SHEET TITLE:	DEMOLITION PLAN

SHEET A-102



no parking area (Relocated 17' East from existing NP area)

NEW DROP CURB(24 LF) WITH NEW SIDEWALK, AND PAVEMENT RESTORATION. HYDRANT RELOCATION. ALL WORK WITHIN TOWN R.O.W. SHALL BE PERFORMED IN ACCORDANCE WITH TOWN HIGHWAY STANDARDS. NYSDOT PERMITS SHALL BE OBTAINED. SEE DETAILS.

CONSTRUCTION PLAN
1"=10'

Mark Fritz Architects
133 Fernwood Road, Trumbull
Connecticut, 06611
Phone: 203-880-9800
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OWNER
NORTH CASTLE FIRE DISTRICT NO 1
RETAINING WALL & PARKING LOT MODIFICATIONS
621 NORTH BROADWAY
WHITE PLAINS, NY 10603



MARK	DATE	DESCRIPTION
1	2/21/20	PRELIMINARY ISSUE
	5/30/20	ENGINEERS COMMENT

PROJECT NO:	011520
CAD DWG FILE:	115

SHEET TITLE
CONSTRUCTION PLAN

SHEET
A-103



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OWNER

NORTH CASTLE FIRE
DISTRICT NO 1
RETAINING WALL
& PARKING LOT
MODIFICATIONS
621 NORTH BROADWAY
WHITE PLAINS, NY 10603

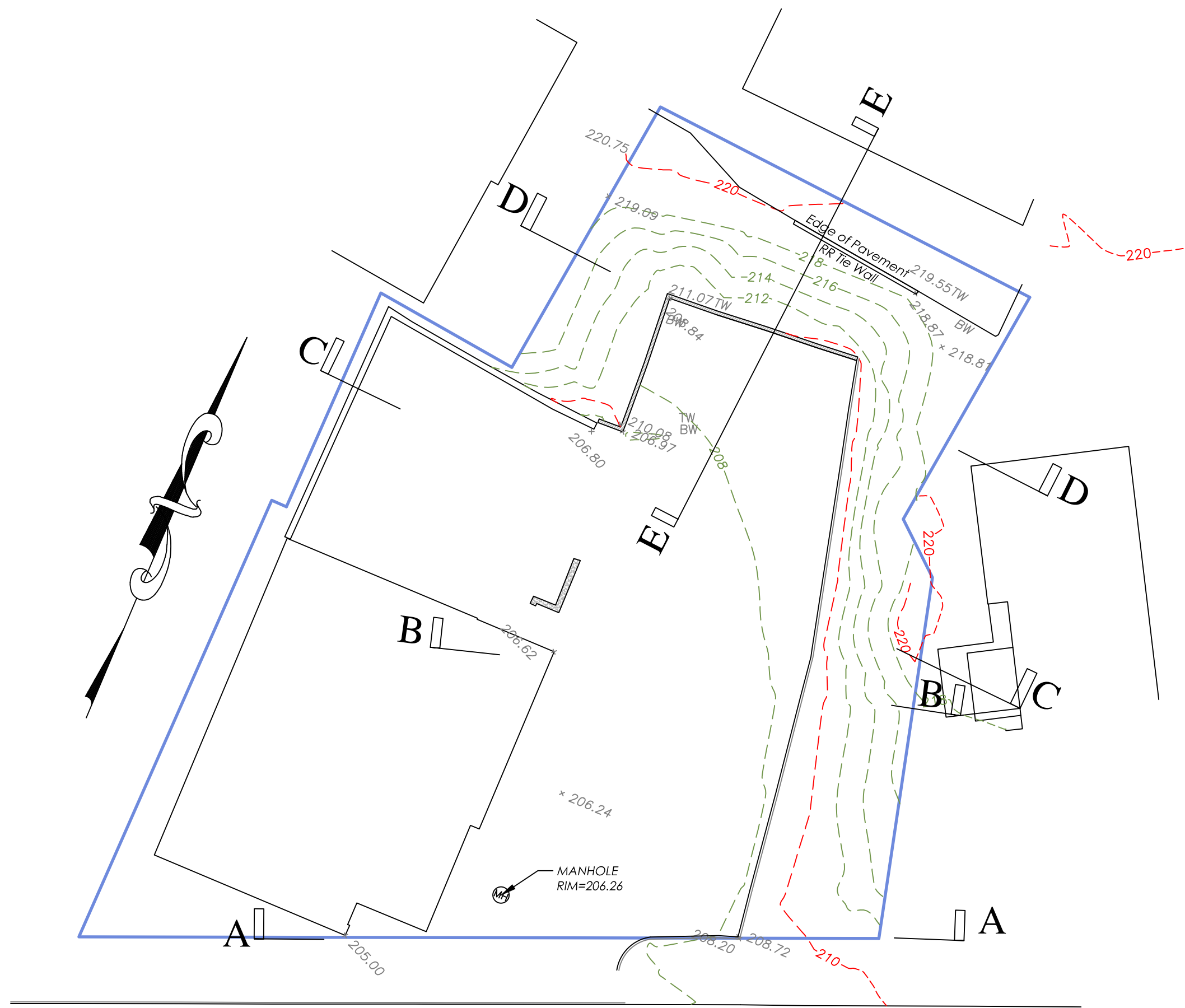


2/21/20	PRELIMINARY ISSUE
MARK	DATE DESCRIPTION

PROJECT NO:	011520
CAD DWG FILE:	115

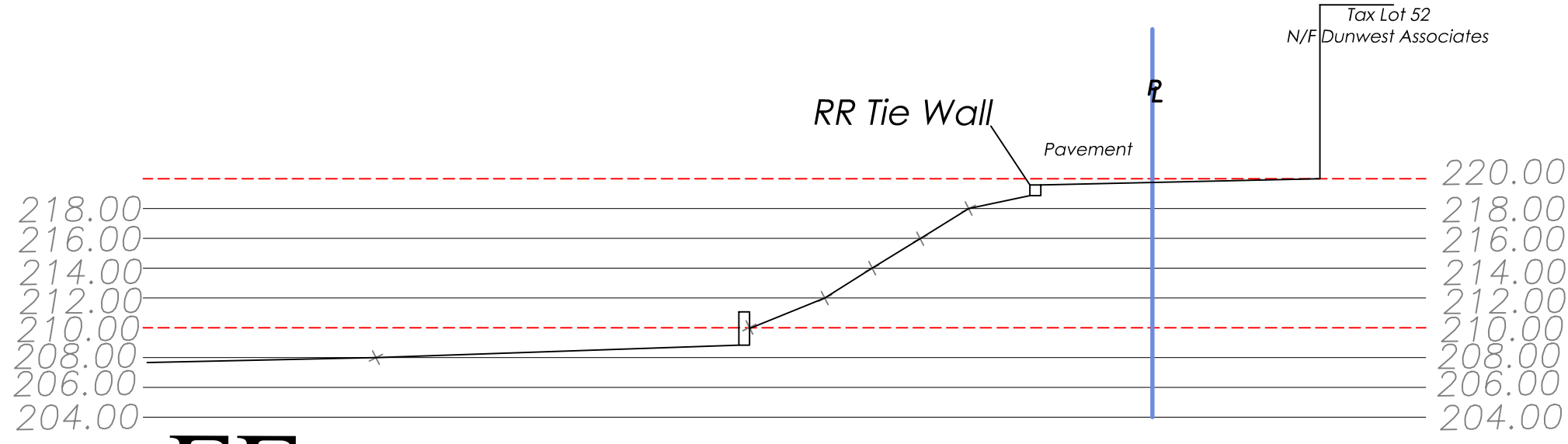
SHEET TITLE
EXISTING SITE
SECTIONS

SHEET
A-104

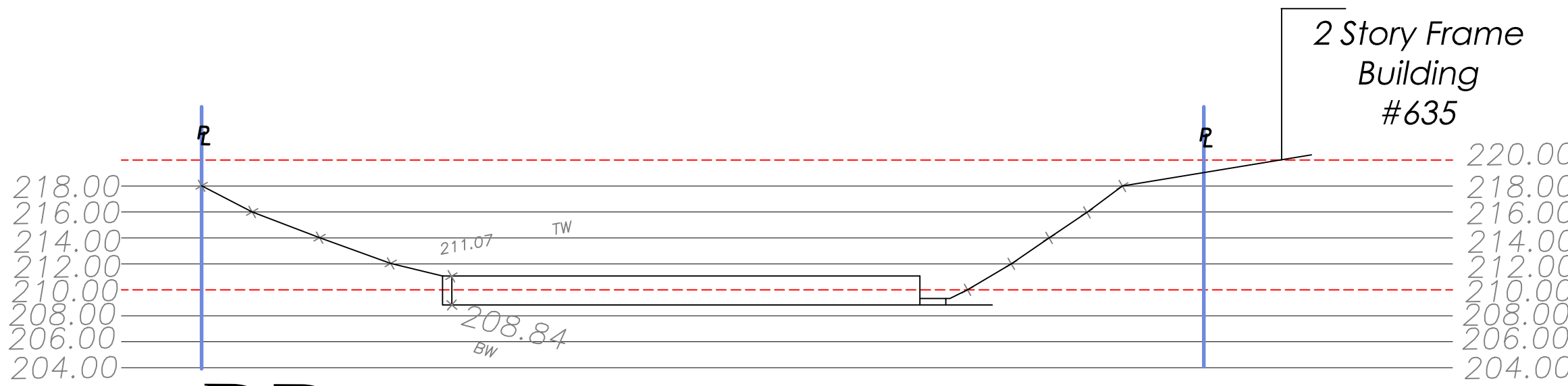


EXISTING SITE SECTIONAL INFORMATION

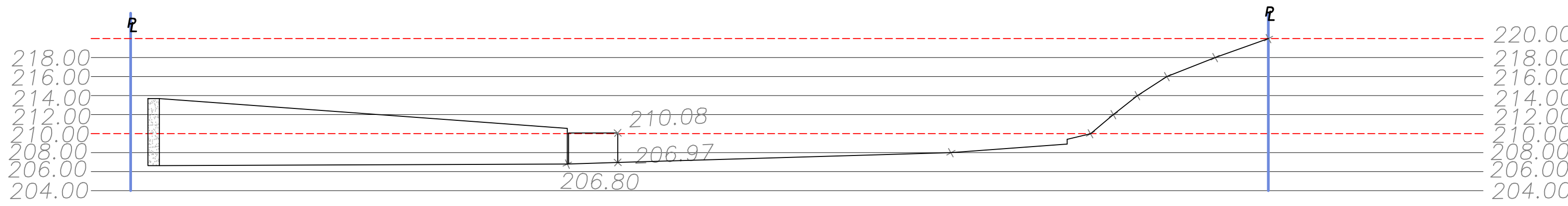
1"=20'



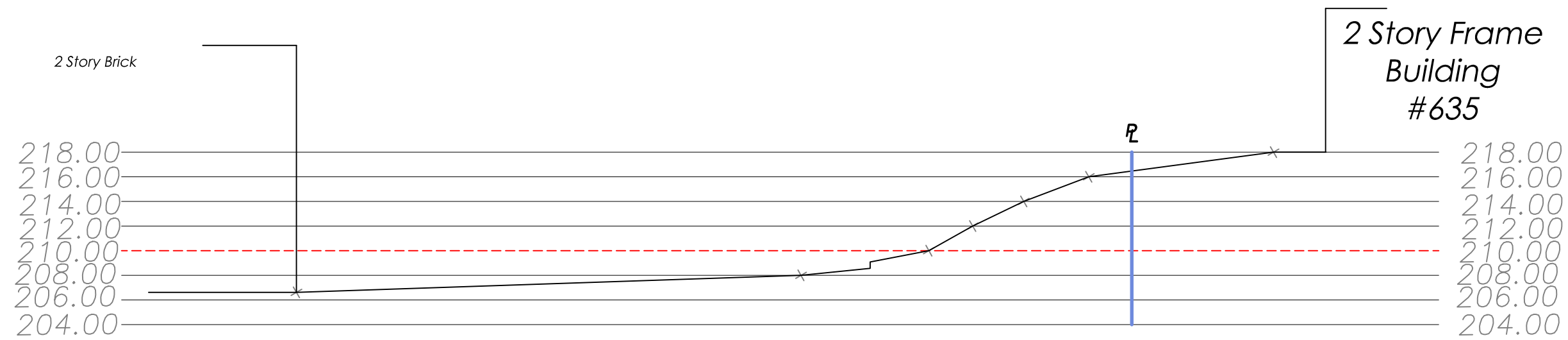
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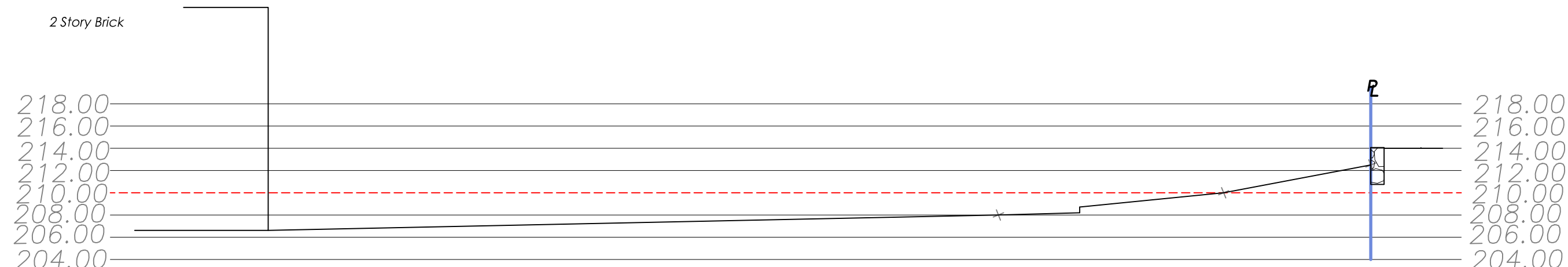
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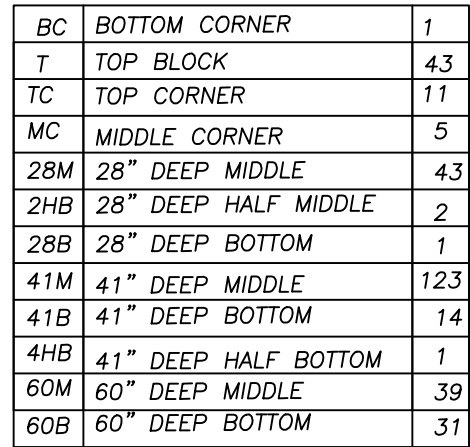
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**NORTH CASTLE FIRE
DISTRICT NO 1
RETAINING WALL
& PARKING LOT
MODIFICATIONS
621 NORTH BROADWAY
WHITE PLAINS, NY 10603**



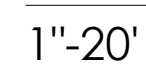
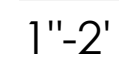
PROJECT NO:	011520
CAD DWG FILE:	115

PROPOSED SITE SECTIONS

SHEET 

1. ALL RETAINING WALL DESIGN DETAILS SHALL BE CERTIFIED BY A NYS LICENSED PROFESSIONAL ENGINEER PRIOR TO ISSUANCE OF A BUILDING PERMIT.
2. THE CONSTRUCTION OF THE WALL SHALL BE CERTIFIED BY THE DESIGN PROFESSIONAL PRIOR TO ISSUANCE OF A CERTIFICATE OF COMPLIANCE.

1"-10'



A. PRECONSTRUCTION MEETING. AS DIRECTED BY THE OWNER, THE GENERAL CONTRACTOR SHALL SCHEDULE A PRECONSTRUCTION MEETING AT THE PROJECT SITE PRIOR TO COMMENCEMENT OF RETAINING WALL CONSTRUCTION. PARTICIPATION IN THE PRECONSTRUCTION MEETING SHALL BE REQUIRED OF THE GENERAL CONTRACTOR, RETAINING WALL DESIGN ENGINEER, RETAINING WALL INSTALLATION CONTRACTOR, GRADING CONTRACTOR AND INSPECTION ENGINEER. THE GENERAL CONTRACTOR SHALL PROVIDE NOTIFICATION TO ALL PARTIES AT LEAST 10 CALENDAR DAYS PRIOR TO THE MEETING.

1.07 QUALITY ASSURANCE

- A. RETAINING WALL INSTALLATION CONTRACTOR QUALIFICATIONS. IN ORDER TO DEMONSTRATE BASIC COMPETENCE IN THE CONSTRUCTION OF PRECAST MODULAR BLOCK WALLS, THE RETAINING WALL INSTALLATION CONTRACTOR SHALL DOCUMENT COMPLIANCE WITH THE FOLLOWING:
1. EXPERIENCE.
 - a. CONSTRUCTION EXPERIENCE OF THE PROPOSED PRECAST MODULAR BLOCK RETAINING WALL SYSTEM.
 - b. CONSTRUCTION OF AT LEAST ONE (1) PRECAST MODULAR BLOCK (LARGE BLOCK) RETAINING WALL STRUCTURES WITHIN THE PAST THREE (3) YEARS.
 2. RETAINING WALL INSTALLATION CONTRACTOR EXPERIENCE. DOCUMENTATION FOR EACH QUALIFYING PROJECT SHALL INCLUDE:
 - a. PROJECT NAME AND LOCATION
 - b. DATE (MONTH AND YEAR) OF CONSTRUCTION COMPLETION
 - c. CONTACT INFORMATION OF OWNER OR GENERAL CONTRACTOR
 - d. TYPE (TRADE NAME) OF PRECAST MODULAR BLOCK SYSTEM BUILT
 - e. MAXIMUM HEIGHT OF THE WALL CONSTRUCTED
 - f. FACE AREA OF THE WALL CONSTRUCTED
 3. IN LIEU OF THE REQUIREMENTS SET FORTH IN ITEMS 1 AND 2 ABOVE, THE RETAINING WALL INSTALLATION CONTRACTOR MUST BE A CERTIFIED PRECAST MODULAR BLOCK RETAINING WALL INSTALLATION CONTRACTOR AS DEMONSTRATED BY SATISFACTORY COMPLETION OF A CERTIFIED PRECAST MODULAR BLOCK RETAINING WALL INSTALLATION TRAINING PROGRAM ADMINISTERED BY THE PRECAST MODULAR BLOCK MANUFACTURER.

1.08 QUALITY CONTROL

- A. THE OWNER'S REPRESENTATIVE SHALL REVIEW ALL SUBMITTALS FOR MATERIALS, DESIGN, RETAINING WALL DESIGN ENGINEER QUALIFICATIONS AND THE RETAINING WALL INSTALLATION CONTRACTOR QUALIFICATIONS.
- B. THE GENERAL CONTRACTOR SHALL RETAIN THE SERVICES OF AN INSPECTION ENGINEER WHO IS EXPERIENCED WITH THE CONSTRUCTION OF PRECAST MODULAR BLOCK RETAINING WALL STRUCTURES TO PERFORM INSPECTION AND TESTING. THE COST OF INSPECTION SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. INSPECTION SHALL BE CONTINUOUS THROUGHOUT THE CONSTRUCTION OF THE RETAINING WALLS.
- C. THE GENERAL CONTRACTOR'S ENGAGEMENT OF THE INSPECTION ENGINEER DOES NOT RELIEVE THE RETAINING WALL INSTALLATION CONTRACTOR OF RESPONSIBILITY TO CONSTRUCT THE PROPOSED RETAINING WALL IN ACCORDANCE WITH THE APPROVED CONSTRUCTION SHOP DRAWINGS AND THESE SPECIFICATIONS.
- D. THE RETAINING WALL INSTALLATION CONTRACTOR SHALL INSPECT THE ON-SITE GRADES AND EXCAVATIONS PRIOR TO CONSTRUCTION AND NOTIFY THE RETAINING WALL DESIGN ENGINEER AND GENERAL CONTRACTOR IF ON-SITE CONDITIONS DIFFER FROM THE ELEVATIONS AND GRADING CONDITIONS DEPICTED IN THE RETAINING WALL CONSTRUCTION SHOP DRAWINGS.

1.09 DELIVERY, STORAGE AND HANDLING

- A. THE RETAINING WALL INSTALLATION CONTRACTOR SHALL INSPECT THE MATERIALS UPON DELIVERY TO ENSURE THAT THE PROPER TYPE, GRADE AND COLOR OF MATERIALS HAVE BEEN DELIVERED.
- B. THE RETAINING WALL INSTALLATION CONTRACTOR SHALL STORE AND HANDLE ALL MATERIALS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AS SPECIFIED HEREIN AND IN A MANNER THAT PREVENTS DETERIORATION OR DAMAGE DUE TO MOISTURE, TEMPERATURE CHANGES, CONTAMINANTS, CORROSION, BREAKING, CHIPPING, UV EXPOSURE OR OTHER CAUSES. DAMAGED MATERIALS SHALL NOT BE INCORPORATED INTO THE WORK.
- C. GEOSYNTHETICS
1. ALL GEOSYNTHETIC MATERIALS SHALL BE HANDLED IN ACCORDANCE WITH ASTM D4873. THE MATERIALS SHOULD BE STORED OFF THE GROUND AND PROTECTED FROM PRECIPITATION, SUNLIGHT, DIRT AND PHYSICAL DAMAGE.
- D. PRECAST MODULAR BLOCKS
1. PRECAST MODULAR BLOCKS SHALL BE STORED IN AN AREA WITH POSITIVE DRAINAGE AWAY FROM THE BLOCKS. BE CAREFUL TO PROTECT THE BLOCK FROM MUD AND EXCESSIVE CHIPPING AND BREAKAGE. PRECAST MODULAR BLOCKS SHALL NOT BE STACKED MORE THAN THREE (3) UNITS HIGH IN THE STORAGE AREA.
- E. DRAINAGE AGGREGATE AND BACKFILL STOCKPILES
1. DRAINAGE AGGREGATE OR BACKFILL MATERIAL SHALL NOT BE PILED OVER UNSTABLE SLOPES OR AREAS OF THE PROJECT SITE WITH BURIED UTILITIES.
 2. DRAINAGE AGGREGATE AND/OR REINFORCED FILL MATERIAL SHALL NOT BE STAGED WHERE IT MAY BECOME MIXED WITH OR CONTAMINATED BY POOR DRAINING FINE-GRAINED SOILS SUCH AS CLAY OR SILT.

2.01 PRECAST MODULAR BLOCK RETAINING WALL UNITS

- A. PREAPPROVED MANUFACTURER.
- MANUFACTURERS OF RED1-ROCK RETAINING WALL SYSTEMS AS LICENSED BY RED1-ROCK INTERNATIONAL, LLC, 05481 US 31 SOUTH, CHARLEVOIX, MI 49720 USA; TELEPHONE (866) 222-8402; WEBSITE WWW.RED1-ROCK.COM.
- 2.02 GEOTGRID REINFORCEMENT
- A. GEOTGRID REINFORCEMENT SHALL BE A WOVEN OR KNITTED PVC COATED GEOTGRID MANUFACTURED FROM HIGH-TENACITY PET POLYESTER FIBER. NO CUTTING OF GEOTGRID REINFORCEMENT DOWN TO THE 12# (300 MM) ROLL WIDTH FROM A LARGER COMMERCIAL ROLL WIDTH WILL BE ALLOWED UNDER ANY CIRCUMSTANCES.

2.03 GEOTEXTILE

- NONWOVEN GEOTEXTILE FABRIC SHALL BE PLACED AS INDICATED ON THE RETAINING WALL CONSTRUCTION SHOP DRAWINGS. ADDITIONALLY, THE NONWOVEN GEOTEXTILE FABRIC SHALL BE PLACED IN THE V-SHAPED JOINT BETWEEN ADJACENT BLOCK UNITS ON THE SAME COURSE.
- B. PREAPPROVED NONWOVEN GEOTEXTILE PRODUCTS
1. MIRAFI 140N
 2. PROPEX GEOTEX 451
 3. SKAPS GT-142
 4. THRACE-LINQ 140EX
 5. CARTHAGE MILLS FX-A015
 6. STRATATEX ST 142

2.04 DRAINAGE AGGREGATE AND WALL INFILL

- A. DRAINAGE AGGREGATE (AND WALL INFILL FOR RETAINING WALLS DESIGNED AS MODULAR GRAVITY STRUCTURES) SHALL BE A DURABLE CRUSHED STONE CONFORMING TO NO. 57 SIZE PER ASTM C393 WITH THE FOLLOWING PARTICLE-SIZE DISTRIBUTION REQUIREMENTS PER ASTM D421.

2.05 REINFORCED FILL

- A. MATERIAL USED AS REINFORCED BACKFILL MATERIAL IN THE REINFORCED ZONE (IF APPLICABLE) SHALL BE A GRANULAR FILL MATERIAL MEETING THE REQUIREMENTS OF USCS SOIL TYPE GW, GP, SW OR SP PER ASTM D1487 OR ALTERNATIVELY BY AASHTO GROUP CLASSIFICATION A-1-A OR A-3 PER AASHTO M 145. THE BACKFILL SHALL EXHIBIT A MINIMUM EFFECTIVE INTERNAL ANGLE OF FRICTION, $\phi = 34$ DEGREES AT A MAXIMUM 2% SHEAR STRAIN AND MEET THE PARTICLE-SIZE DISTRIBUTION REQUIREMENTS PER ASTM D422.
- 2.06 LEVELING PAD
- U. THE PRECAST MODULAR BLOCK UNITS SHALL BE PLACED ON A LEVELING PAD CONSTRUCTED FROM CRUSHED STONE OR UNREINFORCED CONCRETE. THE LEVELING PAD SHALL BE CONSTRUCTED TO THE DIMENSIONS AND LIMITS SHOWN ON THE RETAINING WALL DESIGN DRAWINGS PREPARED BY THE RETAINING WALL DESIGN ENGINEER.
- V. CRUSHED STONE USED FOR CONSTRUCTION OF A GRANULAR LEVELING PAD SHALL MEET THE REQUIREMENTS OF THE DRAINAGE AGGREGATE AND WALL INFILL IN SECTION 2.04 OR A PREAPPROVED ALTERNATE MATERIAL.
- W. CONCRETE USED FOR CONSTRUCTION OF AN UNREINFORCED CONCRETE LEVELING PAD SHALL SATISFY THE CRITERIA FOR AASHTO CLASS B. THE CONCRETE SHOULD BE CURED A MINIMUM OF 12 HOURS PRIOR TO PLACEMENT OF THE PRECAST MODULAR BLOCK WALL RETAINING UNITS AND EXHIBIT A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 2,500 PSI (172 MPa).

2.07 DRAINAGE

- A. DRAINAGE PIPE
1. DRAINAGE COLLECTION PIPE SHALL BE A 4# (100 MM) DIAMETER, 3-HOLE PERFORATED, HDPE PIPE WITH A MINIMUM PIPE STIFFNESS OF 22 PSI (152 KPa) PER ASTM D2412.
 2. THE DRAINAGE PIPE SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM D1248 FOR HDPE PIPE AND FITTINGS.
- B. PREAPPROVED DRAINAGE PIPE PRODUCTS
1. ADS 3000 TRIPLE WALL PIPE AS MANUFACTURED BY ADVANCED DRAINAGE SYSTEMS.

PART 3 – EXECUTION

3.01 GENERAL

- A. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH OSHA SAFETY STANDARDS, STATE AND LOCAL BUILDING CODES AND MANUFACTURER'S REQUIREMENTS.
- B. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UNDERGROUND UTILITIES. ANY NEW UTILITIES PROPOSED FOR INSTALLATION IN THE VICINITY OF THE RETAINING WALL, SHALL BE INSTALLED CONCURRENT WITH RETAINING WALL CONSTRUCTION. THE GENERAL CONTRACTOR SHALL COORDINATE THE WORK OF SUBCONTRACTORS AFFECTED BY THIS REQUIREMENT.

- C. NEW UTILITIES INSTALLED BELOW THE RETAINING WALL SHALL BE BACKFILLED AND COMPACTED TO A MINIMUM OF 98% MAXIMUM DRY DENSITY PER ASTM D698 STANDARD PROCTOR.
- D. THE GENERAL CONTRACTOR IS RESPONSIBLE TO ENSURE THAT SAFE EXCAVATIONS AND EMBANKMENTS ARE MAINTAINED THROUGHOUT THE COURSE OF THE PROJECT.
- E. ALL WORK SHALL BE INSPECTED BY THE INSPECTION ENGINEER AS DIRECTED BY THE OWNER.

3.02 EXAMINATION

- A. PRIOR TO CONSTRUCTION, THE GENERAL CONTRACTOR, GRADING CONTRACTOR, RETAINING WALL INSTALLATION CONTRACTOR AND INSPECTION ENGINEER SHALL EXAMINE THE AREAS IN WHICH THE RETAINING WALL WILL BE CONSTRUCTED TO EVALUATE COMPLIANCE WITH THE REQUIREMENTS FOR INSTALLATION TOLERANCES, WORKER SAFETY AND ANY SITE CONDITIONS AFFECTING PERFORMANCE OF THE COMPLETED STRUCTURE. INSTALLATION SHALL PROCEED ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

3.03 PREPARATION

- A. FILL SOIL.
1. THE INSPECTION ENGINEER SHALL VERIFY THAT REINFORCED BACKFILL PLACED IN THE REINFORCED SOIL ZONE SATISFIES THE CRITERIA OF THIS SECTION.
 2. THE INSPECTION ENGINEER SHALL VERIFY THAT ANY FILL SOIL INSTALLED IN THE FOUNDATION AND RETAINED SOIL ZONES OF THE RETAINING WALL SATISFIES THE SPECIFICATION OF THE RETAINING WALL DESIGN ENGINEER AS SHOWN ON THE CONSTRUCTION DRAWINGS.

B. EXCAVATION.

1. THE GRADING CONTRACTOR SHALL EXCAVATE TO THE LINES AND GRADES REQUIRED FOR CONSTRUCTION OF THE PRECAST MODULAR BLOCK RETAINING WALL AS SHOWN ON THE CONSTRUCTION DRAWINGS. THE GRADING CONTRACTOR SHALL MINIMIZE OVER-EXCAVATION. EXCAVATION SUPPORT, IF REQUIRED, SHALL BE THE RESPONSIBILITY OF THE GRADING CONTRACTOR.
2. OVER-EXCAVATED SOIL SHALL BE REPLACED WITH COMPACTED FILL IN CONFORMANCE WITH THE SPECIFICATIONS OF THE RETAINING WALL DESIGN ENGINEER AND DIVISION 31, SECTION 31.20.00 – EARTHMOVING.
3. EMBANKMENT EXCAVATIONS SHALL BE BENCH CUT AS DIRECTED BY THE PROJECT GEOTECHNICAL ENGINEER AND INSPECTED BY THE INSPECTION ENGINEER FOR COMPLIANCE.

C. FOUNDATION PREPARATION.

1. PRIOR TO CONSTRUCTION OF THE PRECAST MODULAR BLOCK RETAINING WALL, THE LEVELING PAD AREA AND UNDERCUT ZONE (IF APPLICABLE) SHALL BE CLEARED AND GRUBBED. ALL TOPSOIL, BRUSH, FROZEN SOIL AND ORGANIC MATERIAL SHALL BE REMOVED. ADDITIONAL FOUNDATION SOILS FOUND TO BE UNSATISFACTORY BEYOND THE SPECIFIED UNDERCUT LIMITS SHALL BE UNDERCUT AND REPLACED WITH APPROVED FILL AS DIRECTED BY THE PROJECT GEOTECHNICAL ENGINEER. THE INSPECTION ENGINEER SHALL ENSURE THAT THE UNDERCUT LIMITS ARE CONSISTENT WITH THE REQUIREMENTS OF THE PROJECT GEOTECHNICAL ENGINEER AND THAT ALL SOIL FILL MATERIAL IS PROPERLY COMPACTED ACCORDING PROJECT SPECIFICATIONS. THE INSPECTION ENGINEER SHALL DOCUMENT THE VOLUME OF UNDERCUT AND REPLACEMENT.
2. FOLLOWING EXCAVATION FOR THE LEVELING PAD AND UNDERCUT ZONE (IF APPLICABLE), THE INSPECTION ENGINEER SHALL EVALUATE THE IN-SITU SOIL IN THE FOUNDATION AND RETAINED SOIL ZONES.
 - a. THE INSPECTION ENGINEER SHALL VERIFY THAT THE SHEAR STRENGTH OF THE IN-SITU SOIL ASSUMED BY THE RETAINING WALL DESIGN ENGINEER IS APPROPRIATE. THE INSPECTION ENGINEER SHALL IMMEDIATELY STOP WORK AND NOTIFY THE OWNER IF THE IN-SITU SHEAR STRENGTH IS FOUND TO BE INCONSISTENT WITH THE RETAINING WALL DESIGN ASSUMPTIONS.
 - b. THE INSPECTION ENGINEER SHALL VERIFY THAT THE FOUNDATION SOIL EXHIBITS SUFFICIENT ULTIMATE BEARING CAPACITY TO SATISFY THE REQUIREMENTS INDICATED ON THE RETAINING WALL CONSTRUCTION SHOP DRAWINGS PER PARAGRAPH 1.06 I OF THIS SECTION.

D. LEVELING PAD.

1. THE LEVELING PAD SHALL BE CONSTRUCTED TO PROVIDE A LEVEL, HARD SURFACE ON WHICH TO PLACE THE FIRST COURSE OF PRECAST MODULAR BLOCK UNITS. THE LEVELING PAD SHALL BE PLACED IN THE DIMENSIONS SHOWN ON THE RETAINING WALL CONSTRUCTION DRAWINGS AND EXTEND TO THE LIMITS INDICATED.
2. CRUSHED STONE LEVELING PAD. CRUSHED STONE SHALL BE PLACED IN UNIFORM MAXIMUM LIFTS OF 6# (150 MM). THE CRUSHED STONE SHALL BE COMPACTED BY A MINIMUM OF 3 PASSES OF A VIBRATORY COMPACTOR CAPABLE OF EXERTING 2,000 LB (8.9 KN) OF CENTRIFUGAL FORCE AND TO THE SATISFACTION OF THE INSPECTION ENGINEER.

- A. THE PRECAST MODULAR BLOCK STRUCTURE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CONSTRUCTION DRAWINGS, THESE SPECIFICATIONS AND THE RECOMMENDATIONS OF THE RETAINING WALL SYSTEM COMPONENT MANUFACTURERS. WHERE CONFLICTS EXIST BETWEEN THE MANUFACTURER'S RECOMMENDATIONS AND THESE SPECIFICATIONS, THESE SPECIFICATIONS SHALL PREVAIL.

- B. DRAINAGE COMPONENT'S PIPE, GEOTEXTILE AND DRAINAGE AGGREGATE SHALL BE INSTALLED AS SHOWN ON THE CONSTRUCTION SHOP DRAWINGS.

C. PRECAST MODULAR BLOCK INSTALLATION

1. THE FIRST COURSE OF BLOCK UNITS SHALL BE PLACED WITH THE FRONT FACE EDGES TIGHTLY ADJUTED TOGETHER ON THE PREPARED LEVELING PAD AT THE LOCATIONS AND ELEVATIONS SHOWN ON THE CONSTRUCTION DRAWINGS. THE RETAINING WALL INSTALLATION CONTRACTOR SHALL TAKE SPECIAL CARE TO ENSURE THAT THE BOTTOM COURSE OF BLOCK UNITS ARE IN FULL CONTACT WITH THE LEVELING PAD, ARE SET LEVEL AND TRUE AND ARE PROPERLY ALIGNED ACCORDING TO THE LOCATIONS SHOWN ON THE CONSTRUCTION DRAWINGS.
2. BACKFILL SHALL BE PLACED IN FRONT OF THE BOTTOM COURSE OF BLOCKS PRIOR TO PLACEMENT OF SUBSEQUENT BLOCK COURSES. NONWOVEN GEOTEXTILE FABRIC SHALL BE PLACED IN THE V-SHAPED JOINTS BETWEEN ADJACENT BLOCKS. DRAINAGE AGGREGATE SHALL BE PLACED IN THE V-SHAPED JOINTS BETWEEN ADJACENT BLOCKS TO A MINIMUM DISTANCE OF 12# (300 MM) BEHIND THE BLOCK UNIT.
3. DRAINAGE AGGREGATE SHALL BE PLACED IN 9 INCH MAXIMUM LIFTS AND COMPACTED BY A MINIMUM OF THREE (3) PASSES OF A VIBRATORY PLATE COMPACTOR CAPABLE EXERTING A MINIMUM OF 2,000 LB (8.9 KN) OF CENTRIFUGAL FORCE.
4. UNIT CORE FILL SHALL BE PLACED IN THE PRECAST MODULAR BLOCK UNIT VERTICAL CORE SLOT. THE CORE FILL SHALL COMPLETELY FILL THE SLOT TO THE LEVEL OF THE TOP OF THE BLOCK UNIT. THE TOP OF THE BLOCK UNIT SHALL BE BROOM-CLEANED PRIOR TO PLACEMENT OF SUBSEQUENT BLOCK COURSES. NO ADDITIONAL COURSES OF PRECAST MODULAR BLOCKS MAY BE STACKED BEFORE THE UNIT CORE FILL IS INSTALLED IN THE BLOCKS ON THE COURSE BELOW.
5. BASE COURSE BLOCKS FOR GRAVITY WALL DESIGNS (WITHOUT GEOSYNTHETIC SOIL REINFORCEMENT) MAY BE FURNISHED WITHOUT VERTICAL CORE SLOTS. IF SO, DISREGARD ITEM 4 ABOVE, FOR THE BASE COURSE BLOCKS IN THIS APPLICATION.
6. NONWOVEN GEOTEXTILE FABRIC SHALL BE PLACED BETWEEN THE DRAINAGE AGGREGATE AND THE RETAINED SOIL (GRAVITY WALL DESIGN) OR BETWEEN THE DRAINAGE AGGREGATE AND THE REINFORCED FILL (REINFORCED WALL DESIGN) AS REQUIRED ON THE RETAINING WALL CONSTRUCTION DRAWINGS.
7. SUBSEQUENT COURSES OF BLOCK UNITS SHALL BE INSTALLED WITH A RUNNING BOND (HALF BLOCK HORIZONTAL COURSE-TO-COURSE OFFSET). WITH THE EXCEPTION OF 90 DEGREE CORNER UNITS, THE SHEAR CHANNEL OF THE UPPER BLOCK SHALL BE FULLY ENGAGED WITH THE SHEAR KNOBS OF THE BLOCK COURSE BELOW. THE UPPER BLOCK COURSE SHALL BE PUSHED FORWARD TO FULLY ENGAGE THE INTERFACE SHEAR KEY BETWEEN THE BLOCKS AND TO ENSURE CONSISTENT FACE BATTER AND WALL ALIGNMENT. GEOTGRID, DRAINAGE AGGREGATE, UNIT CORE FILL, GEOTEXTILE AND PROPERLY COMPACTED BACKFILL SHALL BE COMPLETE AND IN-PLACE FOR EACH COURSE OF BLOCK UNITS BEFORE THE NEXT COURSE OF BLOCKS IS STACKED.
8. THE ELEVATION OF RETAINED SOIL FILL SHALL NOT BE LESS THAN 1 BLOCK COURSE (8# (457 MM)) BELOW THE ELEVATION OF THE REINFORCED BACKFILL THROUGHOUT THE CONSTRUCTION OF THE RETAINING WALL.
9. IF INCLUDED AS PART OF THE PRECAST MODULAR BLOCK WALL DESIGN, CAP UNITS SHALL BE SECURED WITH AN ADHESIVE IN ACCORDANCE WITH THE PRECAST MODULAR BLOCK MANUFACTURER'S RECOMMENDATION.

D. GEOTGRID REINFORCEMENT INSTALLATION (IF REQUIRED)

1. GEOTGRID REINFORCEMENT SHALL BE INSTALLED AT THE LOCATIONS AND ELEVATIONS SHOWN ON THE CONSTRUCTION DRAWINGS ON LEVEL FILL COMPACTED TO THE REQUIREMENTS OF THIS SPECIFICATION.
2. CONTINUOUS 12# (300 MM) WIDE STRIPS OF GEOTGRID REINFORCEMENT SHALL BE PASSED COMPLETELY THROUGH THE VERTICAL CORE SLOT OF THE PRECAST MODULAR BLOCK UNIT AND EXTENDED TO THE EMBEDMENT LENGTH SHOWN ON THE CONSTRUCTION PLANS. THE STRIPS SHALL BE STAKED OR ANCHORED AS NECESSARY TO MAINTAIN A TAUT CONDITION. REINFORCEMENT LENGTH (L) OF THE GEOTGRID REINFORCEMENT IS MEASURED FROM THE BACK OF THE PRECAST MODULAR BLOCK UNIT. THE CUT LENGTH (L_C) IS TWO TIMES THE REINFORCEMENT LENGTH PLUS ADDITIONAL LENGTH THROUGH THE BLOCK FACING UNIT.
3. THE GEOTGRID STRIP SHALL BE CONTINUOUS THROUGHOUT ITS ENTIRE LENGTH AND MAY NOT BE SPLICED. THE GEOTGRID SHALL BE FURNISHED IN NOMINAL, PREFABRICATED ROLL WIDTHS OF 12# (300 MM)+/- 3# (75 MM). NO FIELD MODIFICATION OF THE GEOTGRID ROLL WIDTH SHALL BE PERMITTED.
4. NEITHER RUBBER TIRE NOR TRACK VEHICLES MAY OPERATE DIRECTLY ON THE GEOTGRID. CONSTRUCTION VEHICLE TRAFFIC IN THE REINFORCED ZONE SHALL BE LIMITED TO SPEEDS OF LESS THAN 5 MPH (8 KM/HR) ONCE A MINIMUM OF 9 INCHES (230 MM) OF COMPACTED FILL HAS BEEN PLACED OVER THE GEOTGRID REINFORCEMENT. SUDDEN BRAKING AND TURNING OF CONSTRUCTION VEHICLES IN THE REINFORCED ZONE SHALL BE AVOIDED.

- E. CONSTRUCTION TOLERANCE. ALLOWABLE CONSTRUCTION TOLERANCE OF THE RETAINING WALL SHALL BE AS FOLLOWS:
1. DEVIATION FROM THE DESIGN BATTER AND HORIZONTAL ALIGNMENT, WHEN MEASURED ALONG A 10' (3 M) STRAIGHT WALL SECTION, SHALL NOT EXCEED 3/4# (19 MM).
 2. DEVIATION FROM THE OVERALL DESIGN BATTER SHALL NOT EXCEED 1/2" (13 MM) PER 10' (3 M) OF WALL HEIGHT.
 3. THE MAXIMUM ALLOWABLE OFFSET (HORIZONTAL BULGE) OF THE FACE IN ANY PRECAST MODULAR BLOCK JOINT SHALL BE 1/2# (13 MM).
 4. THE BASE OF THE PRECAST MODULAR BLOCK WALL EXCAVATION SHALL BE WITHIN 2# (50 MM) OF THE STAKED ELEVATIONS, UNLESS OTHERWISE APPROVED BY THE INSPECTION ENGINEER.
 5. DIFFERENTIAL VERTICAL SETTLEMENT OF THE FACE SHALL NOT EXCEED 1' (300 MM) ALONG ANY 200' (61 M) OF WALL LENGTH.
 6. THE MAXIMUM ALLOWABLE VERTICAL DISPLACEMENT OF THE FACE IN ANY PRECAST MODULAR BLOCK JOINT SHALL BE 1/2" (13 MM).
 7. THE WALL FACE SHALL BE PLACED WITHIN 2# (50 MM) OF THE HORIZONTAL LOCATION STAKED.

3.05 WALL INFILL AND REINFORCED BACKFILL PLACEMENT

- A. BACKFILL MATERIAL PLACED IMMEDIATELY BEHIND THE DRAINAGE AGGREGATE SHALL BE COMPACTED AS FOLLOWS:
1. 98% OF MAXIMUM DRY DENSITY AT ± 2% OPTIMUM MOISTURE CONTENT PER ASTM D698 STANDARD PROCTOR OR 95% RELATIVE DENSITY PER ASTM D4254.

- B. COMPACTIVE EFFORT WITHIN 3' (0.9 M) OF THE BACK OF THE PRECAST MODULAR BLOCKS SHOULD BE ACCOMPLISHED WITH WALK-BEHIND COMPACTORS. COMPACTION IN THIS ZONE SHALL BE WITHIN 95% OF MAXIMUM DRY DENSITY AS MEASURED IN ACCORDANCE WITH ASTM D698 STANDARD PROCTOR OR 80% RELATIVE DENSITY PER ASTM D 4254. HEAVY EQUIPMENT SHOULD NOT BE OPERATED WITHIN 3' (0.9 M) OF THE BACK OF THE PRECAST MODULAR BLOCKS.

- C. BACKFILL MATERIAL SHALL BE INSTALLED IN LIFTS THAT DO NOT EXCEED A COMPACTED THICKNESS OF 3# (230 MM).

- D. AT THE END OF EACH WORK DAY, THE RETAINING WALL INSTALLATION CONTRACTOR SHALL GRADE THE SURFACE OF THE LAST LIFT OF THE GRANULAR WALL INFILL TO A 3% ± 1% SLOPE AWAY FROM THE PRECAST MODULAR BLOCK WALL FACE AND COMPACT IT.

- E. THE GENERAL CONTRACTOR SHALL DIRECT THE GRADING CONTRACTOR TO PROTECT THE PRECAST MODULAR BLOCK WALL STRUCTURE AGAINST SURFACE WATER RUNOFF AT ALL TIMES THROUGH THE USE OF BERMS, DIVERSION DITCHES, SILT FENCE, TEMPORARY DRAINS AND/OR ANY OTHER NECESSARY MEASURES TO PREVENT SOIL STAINING OF THE WALL FACE, SCAR OF THE RETAINING WALL FOUNDATION OR EROSION OF THE REINFORCED BACKFILL OR WALL INFILL.

3.06 OBSTRUCTIONS IN THE INFILL AND REINFORCED FILL ZONE

- A. THE RETAINING WALL INSTALLATION CONTRACTOR SHALL MAKE ALL REQUIRED ALLOWANCES FOR OBSTRUCTIONS BEHIND AND THROUGH THE WALL FACE IN ACCORDANCE WITH THE APPROVED CONSTRUCTION SHOP DRAWINGS.

- B. SHOULD UNPLANNED OBSTRUCTIONS BECOME APPARENT FOR WHICH THE APPROVED CONSTRUCTION SHOP DRAWINGS DO NOT ACCOUNT, THE AFFECTED PORTION OF THE WALL SHALL NOT BE CONSTRUCTED UNTIL THE RETAINING WALL DESIGN ENGINEER CAN APPROPRIATELY ADDRESS THE REQUIRED PROCEDURES FOR CONSTRUCTION OF THE WALL SECTION IN QUESTION.



3.07 COMPLETION

- A. FOR WALLS SUPPORTING UNPAVED AREAS, A MINIMUM OF 12# (300 MM) OF COMPACTED, LOW-PERMEABILITY FILL SHALL BE PLACED OVER THE GRANULAR WALL INFILL ZONE OF THE PRECAST MODULAR BLOCK RETAINING WALL STRUCTURE. THE ADJACENT RETAINED SOIL SHALL BE GRADED TO PREVENT PONDING OF WATER BEHIND THE COMPLETED RETAINING WALL.
- B. FOR RETAINING WALLS WITH GREST SLOPES OF 5H:1V OR STEEPER, SILT FENCE SHALL BE INSTALLED ALONG THE WALL GREST IMMEDIATELY FOLLOWING CONSTRUCTION. THE SILT FENCE SHALL BE LOCATED 3' TO 4' (0.9 M TO 1.2 M) BEHIND THE UPPERMOST PRECAST MODULAR BLOCK UNIT. THE GREST SLOPE ABOVE THE WALL SHALL BE IMMEDIATELY SEEDED TO ESTABLISH VEGETATION. THE GENERAL CONTRACTOR SHALL ENSURE THAT THE SEEDED SLOPE RECEIVES ADEQUATE IRRIGATION AND EROSION PROTECTION TO SUPPORT GERMINATION AND GROWTH.

- C. THE GENERAL CONTRACTOR SHALL CONFIRM THAT THE AS-BUILT PRECAST MODULAR BLOCK WALL GEOMETRIES CONFORM TO THE REQUIREMENTS OF THIS SECTION. THE GENERAL CONTRACTOR SHALL NOTIFY THE OWNER OF ANY DEVIATIONS.

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CONSULTANTS

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OWNER

NORTH CASTLE FIRE
DISTRICT NO 1
RETAINING WALL
& PARKING LOT
MODIFICATIONS
621 NORTH BROADWAY
WHITE PLAINS, NY 10603



----	2/21/20	PRELIMINARY ISSUE
MARK	DATE	DESCRIPTION

PROJECT NO: 011520

CAD DWG FILE: 115

SHEET TITLE

Construction Specifications

A-108

SHEET

GENERAL NOTES:

1. THE GENERAL CONDITIONS OF THE CONTRACT FOR THE CONSTRUCTION OF BUILDINGS, STANDARD FORM OF THE AIA, 2017 EDITION, ARTICLES 1 THROUGH 14 INCLUSIVE, PLUS SUBSEQUENT AMENDMENTS, ARE MADE A PART OF THIS SPECIFICATION TO THE SAME EXTENT AS IF HEREIN WRITTEN OUT IN FULL. UNAUTHORIZED ALTERATION OR ADDITION TO THIS DOCUMENT IS STRICTLY PROHIBITED. THESE DOCUMENTS REMAIN THE EXCLUSIVE PROPERTY OF THE ARCHITECT, AND MAY NOT BE USED FOR ANY PURPOSE WHATSOEVER WITHOUT WRITTEN CONSENT OF THE ARCHITECT.
2. CONTRACTORS SHALL VISIT THE SITE AND BE RESPONSIBLE FOR HAVING RECORDED ALL CONDITIONS WITHIN THE SCOPE OF THE PROJECTS. NO CLAIMS FOR EXTRA COMPENSATION, BASED ON IGNORANCE OF VISIBLE OR IMPLIED EXISTING CONDITIONS WILL BE CONSIDERED.
3. ALL WORK IS TO CONFORM TO ALL APPLICABLE REQUIREMENT OF LOCAL GOVERNING CODES, STATE CONSTRUCTION AND ENERGY CONSERVATION CODES, HEALTH CODE, FIRE DEPARTMENT REGULATIONS, NFPA AND UTILITY CODES, FHA FRAMING STANDARDS, OSHA CODES, AND BEST TRADE PRACTICES.
4. CONTRACTORS ARE TO FILE INSURANCE CERTIFICATED AND OBTAIN AND PAY FOR ALL PERMITS, SCHEDULE ALL REQUIRED INSPECTIONS WITH NOTIFICATION TO INSPECTORS AND ARCHITECT, OBTAIN ALL CODE APPROVALS AND NFPA CERTIFICATE, AND FILE FOR AND OBTAIN CERTIFICATE OF OCCUPANCY. NO WORK TO START PRIOR TO OBTAINING PERMITS.

QUALITY OF WORK

1. WORK INCLUDED IN THIS CONTRACT SHALL BE ALL LABOR, MATERIAL AND EQUIPMENT (UNLESS OTHERWISE NOTED) REQUIRED TO COMPLETE THE CONSTRUCTION AS IMPLIED IN THE CONSTRUCTION DOCUMENTS. WORK INCLUDED IN THIS CONTRACT SHALL BE IN STRICT ACCORDANCE WITH THE INTENT OF THE DRAWINGS AND SPECIFICATIONS, AND SHALL BE FIRST-CLASS IN ALL RESPECTS.
2. THE ARCHITECT SHALL BE THE SOLE JUDGE AS TO THE ADEQUACY OF ANY WORK PERFORMED, AND SHALL RESERVES THE RIGHT TO ORDER THE REMOVAL OF DEFECTIVE WORK AND MATERIAL, AND ITS REPLACEMENT WITHOUT ANY ADDITIONAL COST TO THE OWNER.
3. THE CONTRACTOR IS RESPONSIBLE FOR DIMENSIONS TO BE CONFIRMED AND CORRELATED AT THE JOB SITE, AND FOR ANY INFORMATION THAT PERTAINS TO THE FABRICATION AND INSTALLATION PROCESS FOR ALL MATERIALS AND EQUIPMENT, AND TO TECHNIQUES FOR CONSTRUCTION AND COORDINATION OF THE WORK OF ALL TRADES.

PROGRESS SCHEDULE

THE CONTRACTOR, IMMEDIATELY AFTER BEING AWARDED THE CONTRACT, SHALL PREPARE AND SUBMIT FOR THE ARCHITECT'S APPROVAL AN ESTIMATED PROGRESS SCHEDULE FOR THE WORK. THE PROGRESS SCHEDULE SHALL BE RELATED TO THE ENTIRE PROJECT TO THE EXTENT REQUIRED BY THE CONTRACT DOCUMENTS. THIS SCHEDULE SHALL INDICATE THE DATES FOR THE STARTING AND COMPLETION OF THE VARIOUS STAGES OF CONSTRUCTION AND SHALL BE REVISED AS REQUIRED BY THE CONDITIONS OF THE WORK, SUBJECT TO THE ARCHITECT'S APPROVAL.

USE OF SITE

THIS IS A WORKING FIRE STATION AND WILL BE OPERATIONAL DURING CONSTRUCTION. AT NO TIME SHALL THE GARAGE DOORS BE BLOCKED. THE CONTRACTOR SHALL CONFIN OPERATIONS AT THE SITE TO AREAS PERMITTED BY LAW, ORDINANCES, PERMITS AND THE CONTRACT DOCUMENTS AND SHALL NOT UNREASONABLY ENCUMBER THE SITE WITH MATERIALS OR EQUIPMENT.

ACCESS TO WORK

THE CONTRACTOR SHALL PROVIDE THE OWNER AND ARCHITECT ACCESS TO THE WORK IN PREPARATION AND PROGRESS WHEREVER LOCATED. ACCESS SHALL BE MAINTAINED IN CLEAN, SAFE CONDITION BY THE CONTRACTOR AT ALL TIMES DURING THE PROJECT. NOT WITHSTANDING THE ABOVE, THE CONTRACTOR SHALL BE REQUIRED TO COMPLY WITH THE REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS WITH RESPECT TO MAINTAINING THE SITE, PROTECTING UTILITIES, PROTECTING TREES AND ALL EXISTING CONDITIONS THAT ARE TO REMAIN OR BE UTILIZED IN THE WORK. THE CONTRACTOR SHALL COMPLY WITH ANY AND ALL REGULATIONS (INCLUDING WORK HOURS) OF ANY AGENCY HAVING JURISDICTION OVER THE WORK.

COMMUNICATIONS FACILITATING CONTRACT ADMINISTRATION

EXCEPT AS OTHERWISE PROVIDED IN THE CONTRACT DOCUMENTS OR WHEN DIRECT COMMUNICATIONS HAVE BEEN SPECIFICALLY AUTHORIZED, THE OWNER AND THE CONTRACTOR SHALL ENDEAVOR TO COMMUNICATE THROUGH THE ARCHITECT/CONSTRUCTION MANAGER. COMMUNICATIONS BY AND WITH SUBCONTRACTORS AND MATERIAL SUPPLIERS SHALL BE THROUGH THE CONTRACTOR.

SCHEDULE OF VALUES

BEFORE THE FIRST APPLICATION FOR PAYMENT, THE CONTRACTOR SHALL SUBMIT TO THE ARCHITECT/CONSTRUCTION MANAGER A SCHEDULE OF VALUES ALLOCATED TO VARIOUS PORTIONS OF THE WORK, PREPARED IN SUCH FORM AND SUPPORTED BY SUCH DATA TO SUBSTANTIATE ITS ACCURACY AS THE ARCHITECT MAY REQUIRE. THIS SCHEDULE, UNLESS OBJECTED TO BY THE ARCHITECT, SHALL BE USED AS A BASIS FOR REVIEWING THE CONTRACTOR'S APPLICATION FOR PAYMENT.

BUILDING PERMITS AND SPECIFIC TRADE PERMITS

THE NORTH CASTLE FIRE DEPARTMENT DISTRICT 2 IS EXEMPT FROM MOST REQUIRED PERMITS: IF DETERMINED THAT PERMITS ARE REQUIRED TO PERFORM THE WORK, THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ANY PERMITS REQUIRED BY ANY AGENCIES HAVING JURISDICTION OVER THE PROJECT. THIS INCLUDES COMPLETING AND FILING OF ALL APPLICATIONS. THE BUILDING PERMIT FEE SHALL BE PAID BY THE CONTRACTOR. HOWEVER, THE BUILDING PERMIT FEE SHALL NOT BE A PART OF THIS BID, AS IT SHALL BE A REIMBURSABLE EXPENSE TO THE CONTRACTOR BY THE OWNER.

ALL OTHER REQUIRED APPLICATIONS AND FEES, SUCH AS FOR ELECTRICAL, PLUMBING ETC. SHALL BE APPLIED AND PAID FOR AND OBTAINED BY THE CONTRACTOR, AND SHALL BE INCLUDED AS A PART OF THIS BID. SUCH ADDITIONAL FEES SHALL REMAIN THE RESPONSIBILITY AND EXPENSE OF THE CONTRACTOR, AND WILL NOT BE CONSIDERED REIMBURSABLE TO HIM.

TEMPORARY FACILITIES & CONTROLS

ARRANGE FOR AND PROVIDE TEMPORARY FACILITIES AND CONTROLS AS SPECIFIED HEREIN AND AS REQUIRED FOR THE PROPER AND EXPEDITIOUS PROSECUTION OF THE WORK. PAY ALL COSTS, EXCEPT AS OTHERWISE SPECIFIED, UNTIL FINAL ACCEPTANCE OF THE WORK. UNLESS THE OWNER MAKES ARRANGEMENTS FOR USE OF COMPLETED PORTIONS OF THE WORK AFTER SUBSTANTIAL COMPLETION IN ACCORDANCE WITH THE PROVISIONS OF THE GENERAL CONDITIONS.

TEMPORARY UTILITIES: MAKE ALL TEMPORARY CONDITIONS TO UTILITIES AND SERVICES IN LOCATIONS ACCEPTABLE TO THE OWNER, ARCHITECT, AND LOCAL AUTHORITIES HAVING JURISDICTION THEREOF. FURNISH ALL NECESSARY LABOR AND MATERIALS, AND MAKE ALL INSTALLATIONS IN A MANNER SUBJECT TO THE ACCEPTANCE OF SUCH CONNECTIONS, REMOVE THE TEMPORARY INSTALLATION AND CONNECTIONS, WHEN NO LONGER REQUIRED, RESTORE THE SERVICES AND SOURCES OF SUPPLY TO PROPER OPERATING CONDITION.

TEMPORARY ELECTRICITY: MAKE ALL ARRANGEMENTS WITH THE LOCAL ELECTRIC COMPANY FOR TEMPORARY ELECTRICAL SERVICE TO THE CONSTRUCTION SITE, PROVIDE ALL EQUIPMENT NECESSARY FOR TEMPORARY ELECTRICAL POWER AND PAY ALL CHARGES FOR THIS EQUIPMENT AND THE INSTALLATION THEREOF. THE OWNER SHALL REIMBURSE COST OF ELECTRICAL CURRENT TO THE CONTRACTOR.

WHEN PERMANENT ELECTRICAL POWER SYSTEMS ARE IN OPERATING CONDITION THEY MAY BE USED FOR CONSTRUCTION PURPOSES.

AT THE COMPLETION OF THE CONSTRUCTION WORK, ALL TEMPORARY WIRING AND OTHER TEMPORARY EQUIPMENT AND DEVICES SHALL BE REMOVED.

TEMPORARY LIGHTING: A TEMPORARY LIGHTING SYSTEM SHALL BE FURNISHED, INSTALLED AND MAINTAINED AS REQUIRED TO SATISFY MINIMUM REQUIREMENTS OSHA, GENERAL SAFETY AND SECURITY.

TEMPORARY WATER: PROVIDE ALL WATER NECESSARY FOR CONSTRUCTION PURPOSES.

TEMPORARY SANITARY FACILITIES: PROVIDE AND MAINTAIN IN A SANITARY CONDITION TEMPORARY CHEMICAL TOILETS FOR THE USE OF ALL CONSTRUCTION PERSONNEL. FACILITIES SHALL BE PLACED WITHIN CONTRACT LIMITS AT A LOCATION APPROVED BY THE ARCHITECT.

TEMPORARY FIRE PROTECTION: PROVIDE TEMPORARY FIRE PROTECTION AS REQUIRED BY THE LOCAL FIRE MARSHALL.

TEMPORARY CONSTRUCTION

PROVIDE AND MAINTAIN ALL TEMPORARY CONSTRUCTION SUCH AS TEMPORARY STAIRS, LADDERS, CHUTES, HANDRAILS, SHAF PROTECTION, AND SO ON, AS REQUIRED FOR THE PROPER EXECUTION OF THE WORK. GOOD SAFETY SHALL BE CONTINUOUSLY MAINTAINED.

EXCAVATION ENCLOSURE FENCE: PROVIDE AND MAINTAIN A TEMPORARY EXCAVATION ENCLOSURE FENCES AT EXCAVATIONS IN ACCORDANCE WITH OSHA, GENERAL SAFETY AND GOOD PRACTICE UNTIL SUCH TIME AS RETAINING WALL IS BACKFILLED. GOOD SAFETY SHALL BE CONTINUOUSLY MAINTAINED.

TREE AND PLANT PROTECTION: PROVIDE AND MAINTAIN TEMPORARY PROTECTION FOR TREES AND PLANTS THAT ARE NOT DESIGNATED TO BE REMOVED, FROM DAMAGE FROM CONSTRUCTION ACTIVITIES.

SECURITY

PROVIDE ALL TEMPORARY ENCLOSURES REQUIRED FOR PROTECTING THE PROJECT FROM THE EXTERIOR, FOR PROTECTION OF OPENINGS BOTH EXTERIOR AND INTERIOR, AND ANY OTHER LOCATION WHERE TEMPORARY ENCLOSURES AND PROTECTION MAY BE REQUIRED.

CONSTRUCTION CLEANING: THE CONTRACTOR SHALL KEEP THE PREMISES FREE FROM ACCUMULATION OF WASTE MATERIALS OR RUBBISH CAUSED BY HIS OPERATIONS AT ALL TIMES. THE CONTRACTOR SHALL REMOVE ALL DIRT AND DEBRIS ON A DAILY BASIS.

DUMPSTER: LOCATE DUMPSTER IN AREA IN ACCORDANCE WITH ANY AGENCIES HAVING JURISDICTION OVER THE PROJECT.

DISPOSAL OF WASTE AND RUBBISH: DISPOSE OF REMOVED OR DEMOLISHED ITEMS NOT DESIGNATED FOR RE-USE, OR TO BE SAVED BY THE OWNER, INCLUDING TRASH AND DEBRIS, LEGALLY OFF THE OWNER'S PROPERTY. BURNING OR BURIAL OF WASTE MATERIALS ON SITE IS NOT PERMITTED.

EROSION AND SEDIMENT CONTROL: PROVIDE EROSION AND SEDIMENT CONTROL AS REQUIRED IN THE CONTRACT DOCUMENTS AND THE AGENCIES HAVING JURISDICTION OVER THE PROJECT.

WATER AND SNOW CONTROL: FROM THE COMMENCEMENT TO THE COMPLETION OF THE WORK, KEEP ALL PARTS OF THE SITE AND THE PROJECT FREE FROM ACCUMULATION OF WATER, AND SUPPLY, MAINTAIN AND OPERATE ALL NECESSARY PUMPING AND BAILING EQUIPMENT.

SNOW AND ICE SHALL BE PROMPTLY REMOVED AS NECESSARY FOR THE PROTECTION AND EXECUTION OF THE WORK, AND PROTECT THE WORK AGAINST WEATHER DAMAGE.

WORKMANSHIP

GENERAL: DEMOLITION, REMOVAL, AND ALTERATION WORK AS SHOWN ON THE DRAWINGS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY BRACING AND PROTECTING ALL WORK DURING CONSTRUCTION AGAINST DAMAGE, COLLAPSE, DISTORTION AND MISALIGNMENT ACCORDING TO APPLICABLE STANDARDS AND GOOD PRACTICE. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE THAT MAY BE CAUSED BY SUCH WORK TO ANY PART OR PARTS OF THE EXISTING STRUCTURE OR ITEMS DESIGNATED FOR REUSE.

THE CONTRACTOR SHALL INSPECT ALL EXISTING SURFACES, AND WHERE, AS A RESULT OF DEMOLITION, FINISHED SURFACES DO NOT ALIGN, THE EXISTING SURFACES SHALL BE CHIPPED AWAY AND SURFACED TO A SMOOTH, FLUSH, ALIGNED SURFACE.

PERFORM PATCHING, RESTORATION, AND NEW WORK IN ACCORDANCE WITH APPLICABLE TECHNICAL SECTIONS OF THE SPECIFICATIONS.

MATERIALS AND ITEMS TO BE SALVAGED: REMOVE MATERIALS AND ITEMS DESIGNATED IN THE CONTRACT DOCUMENTS, OR BY THE OWNER, WITH CARE AND STORE THEM IN A LOCATION AT THE SITE TO BE DESIGNATED BY THE OWNER.

MATERIALS AND ITEMS TO BE REMOVED AND REINSTALLED: MATERIALS AND ITEMS TO BE REINSTALLED ARE DESIGNATED IN THE CONTRACT DOCUMENTS. REMOVE SUCH ITEMS WITH CARE UNDER THE SUPERVISION OF THE TRADE RESPONSIBLE FOR REINSTALLATION. PROTECT AND STORE UNTIL REQUIRED, REPLACE MATERIAL OR ITEMS DAMAGED IN ITS REMOVAL WITH SIMILAR MATERIAL.

OTHER MATERIALS OR ITEMS DEMOLISHED: MATERIALS AND ITEMS DEMOLISHED AND NOT DESIGNATED TO BECOME THE PROPERTY OF THE OWNER OR TO BE REINSTALLED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE OWNER'S PROPERTY.

COORDINATION: EXECUTE THE WORK IN A CAREFUL AND ORDERLY MANNER, WITH THE LEAST POSSIBLE DISTURBANCE TO THE OWNER AND THE STRUCTURE TO REMAIN.

STRUCTURAL WORK: DO NOT CUT AND PATCH STRUCTURAL WORK IN A MANNER RESULTING IN A REDUCTION OF LOAD CARRYING CAPACITY.

MASONRY DEMOLITION: IN GENERAL, DEMOLISH MASONRY IN SMALL SECTIONS. WHERE NECESSARY TO PREVENT COLLAPSE OF ANY CONSTRUCTION, INSTALL TEMPORARY SHORES, STRUTS OR BRACING. TEMPORARY SHORING DESIGN AND INSTALLATION IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

JUNCTION OF NEW AND EXISTING WORK: WHERE ALTERATIONS OCCUR, OR NEW AND EXISTING WORK JOIN, CUT, REMOVE, PATCH, REPAIR OR REFINISH THE ADJACENT SURFACES OR SO MUCH THEREOF AS IS REQUIRED BY THE INVOLVED CONDITIONS, AND LEAVE IN AS GOOD A CONDITION AS EXISTED PRIOR TO THE COMMENCING OF THE WORK. THE MATERIALS AND WORKMANSHIP EMPLOYED IN THE ALTERATIONS, UNLESS OTHERWISE SHOWN OR SPECIFIED, SHALL CONFORM TO THAT OF THE ORIGINAL WORK.

FINISH NEW AND ADJACENT SURFACES AS SPECIFIED FOR NEW WORK. CLEAN EXISTING SURFACES OF DIRT, GREASE, AND LOOSE PAINT AND SO ON BEFORE REFINISHING.

REINSTALLATION OF EXISTING EQUIPMENT OR FIXTURES: WHERE EXISTING EQUIPMENT AND/OR FIXTURES ARE INDICATED TO BE REUSED, REPAIR SUCH EQUIPMENT AND/OR FIXTURES AND REFINISH TO PUT IN PERFECT RUNNING ORDER. REFINISH AS DIRECTED.

CLEANING UP: REMOVE DEBRIS AS THE WORK PROGRESSES. MAINTAIN THE PREMISES IN A NEAT AND CLEAN CONDITION.

SEDIMENT & EROSION CONTROL

1. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH ALL SEDIMENT AND EROSION CONTROL PRACTICES. THE SEDIMENT AND EROSION CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCES, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
2. TIMELY MAINTENANCE OF SEDIMENT CONTROL STRUCTURES IS THE RESPONSIBILITY OF THE CONTRACTOR. ALL STRUCTURES SHALL BE MAINTAINED IN GOOD WORKING ORDER AT ALL TIMES. THE SEDIMENT LEVEL IN ALL SEDIMENT TRAPS SHALL BE CLOSELY MONITORED AND SEDIMENT REMOVED PROMPTLY WHEN MAXIMUM LEVELS ARE REACHED OR AS ORDERED BY THE ENGINEER. ALL SEDIMENT CONTROL STRUCTURES SHALL BE INSPECTED ON A REGULAR BASIS, AND AFTER EACH HEAVY RAIN TO INSURE PROPER OPERATION AS DESIGNED. AN INSPECTION SCHEDULE SHALL BE SET FORTH PRIOR TO THE START OF CONSTRUCTION.
3. THE LOCATIONS AND THE INSTALLATION TIMES OF THE SEDIMENT CAPTURING STANDARDS SHALL BE AS ORDERED BY THE ENGINEER, AND IN ACCORDANCE WITH THE STANDARDS SET FORTH IN THIS MANUAL.
4. ALL TOPSOIL NOT TO BE USED FOR FINAL GRADING SHALL BE REMOVED FROM THE SITE IMMEDIATELY AND PLACED IN A STABILIZED STOCKPILE OR FILL AREA. ALL TOPSOIL REQUIRED FOR FINAL GRADING AND STORED ON SITE SHALL BE LIMED, FERTILIZED, TEMPORARILY SEEDED AND MULCHED WITHIN 14 DAYS.
5. ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN 21 DAYS AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, SHALL IMMEDIATELY RECEIVE TEMPORARY SEEDING. MULCH SHALL BE USED IF THE SEASON PREVENTS THE ESTABLISHMENT OF A TEMPORARY COVER. DISTURBED AREAS SHALL BE LIMED AND FERTILIZED PRIOR TO TEMPORARY SEEDING.
6. ALL DISTURBED AREAS WITHIN 500 FEET OF AN INHABITED DWELLING SHALL BE WEETED AS NECESSARY TO PROVIDE DUST CONTROL.
7. THE CONTRACTOR SHALL KEEP THE ROADWAYS WITHIN THE PROJECT CLEAR OF SOIL AND DEBRIS AND IS RESPONSIBLE FOR ANY STREET CLEANING NECESSARY DURING THE COURSE OF THE PROJECT.
8. SEDIMENT AND EROSION CONTROL STRUCTURES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED BY PERMANENT MEASURES.
9. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH NYSDEC STANDARDS FOR SEDIMENT EROSION CONTROL.

SITework

SELECTIVE DEMOLITION

GENERAL: REMOVE PORTIONS OF EXISTING STRUCTURES, FINISHES, BUILDINGS, EQUIPMENT ETC. DESIGNATED TO BE REMOVED OR REQUIRED TO EXECUTE THE WORK.

HAZARDOUS MATERIAL ABATEMENT

UNLESS NOTED ELSEWHERE IN THE CONTRACT DOCUMENTS, HANDLING, STORAGE, REMOVAL AND DISPOSAL OF HAZARDOUS MATERIALS ENCOUNTERED ON SITE ARE NOT PART OF THE CONTRACT.

SITE PREPARATION

PROTECTIONS: PROVIDE TEMPORARY PROTECTION TO PRESERVE EXISTING ITEMS TO REMAIN AND TO PREVENT INJURY OR DAMAGE TO PERSONS OR PROPERTY.

TREE REMOVAL: TREE REMOVAL SHALL INCLUDE THOSE TREES WITHIN THE AREA OF THE STRUCTURE, DRIVEWAY, PAVED AREAS AND WALKS, AND THOSE DESIGNATED BY THE ARCHITECT TO BE REMOVED. PROVIDE ADEQUATE PROTECTION TO ENSURE THE SURVIVAL OF TREES DESIGNATED TO REMAIN.

SITE CLEARING: REMOVE SHRUBS, GRASS, AND OTHER VEGETATION, IMPROVEMENTS, OR OBSTRUCTIONS AS INDICATED OR WHICH INTERFERE WITH NEW CONSTRUCTION. REMOVAL INCLUDES DIGGING OUT STUMPS AND ROOTS.

EARTHWORK

EXISTING UTILITIES: VERIFY LOCATION OF ALL UTILITIES PRIOR TO ANY EXCAVATION.

TRENCHING FOR UTILITIES: TRENCH FOR DRAIN, SANITARY DRAIN, WATER, POWER, TELEPHONE AND CABLE TV LINES AND CONDUITS TO ELEVATIONS REQUIRED BY CONTRACT DOCUMENTS, APPLICABLE UTILITY COMPANIES, AND SUBSURFACE CONDITIONS. PRIOR TO COMMENCING ANY WORK, ALL APPLICABLE PERMITS SHALL BE OBTAINED FROM AGENCIES HAVING JURISDICTION OVER THE WORK.

EXISTING TOPSOIL: REMOVE ALL ROCKS GREATER THAN 3" DIAMETER FROM EXCAVATED TOPSOIL STOCKPILE EXISTING TOPSOIL FOR REUSE.

THE CONTRACTOR SHALL PROVIDE AND PLACE ALL ADDITIONAL TOP SOIL AS REQUIRED TO PROPERLY EXECUTE THE DESIRE FINISH GRADE FOR THE PROJECT. IN ALL CIRCUMSTANCES, WHETHER REUSING EXISTING OR ADDING NEW TOP SOIL, THE MINIMUM DEPTH OF ADEQUATE TOP SOIL SHALL BE AT LEAST 4".

EXCAVATION FOR STRUCTURE: EXCAVATE TO MINIMUM ELEVATIONS AND DIMENSIONS SHOWN, OR TO 10" INTO ELEVATION OF UNDISTURBED SOIL, EXTENDING EXCAVATION A SUFFICIENT DISTANCE TO PERMIT PAVING AND REMOVAL OF OTHER WORK, AND FOR INSPECTION.

BACKFILL AND FILL: PLACE ACCEPTABLE SOIL MATERIAL IN LAYERS TO REQUIRED ELEVATIONS. USE SOIL MATERIAL FREE OF CLAY, ROCK OR GRAVEL LARGER THAN 2" DIAMETER, DEBRIS, ORGANIC MATERIAL, WASTE, OR FROZEN MATERIALS.

PLACE BACKFILL AND FILL IN LAYERS NOT GREATER THAN 12" IN LOOSE DEPTH, COMPACTING EACH LAYER TO REQUIRED DENSITY. DO NOT PLACE MATERIALS ON SURFACES THAT ARE MUDDY, FROZEN, OR CONTAIN ICE OR FROST.

COMPACTION

COMPACT EACH LAYER OF BACKFILL AND FILL SOIL MATERIALS AND THE TOP 12" OF SUBGRADE FOR STRUCTURES, SLABS, STEPS AND PAVEMENTS TO 90% OF MAXIMUM DENSITY FOR COHESIVE SOILS AND 95% RELATIVE DENSITY FOR COHESIONLESS SOILS. BACKFILL ONLY AFTER FRAMING IS IN PLACE.

GRADING

GRADE AREAS SURROUNDING WORK WITH UNIFORM LEVELS OR SLOPES BETWEEN FINISH ELEVATIONS. TRANSITION AREAS BETWEEN NEW AND EXISTING ELEVATIONS SHALL HAVE A MAXIMUM SLOPE OF 30% FOR LAWN AND PLANTED AREAS, SURFACE DRAINAGE AWAY FROM STRUCTURE. FINISH GRADE ADJACENT TO EXISTING WORK SHALL BE 8" BELOW SIDING.

POROUS BASE: 4" THICK BANK RUN GRAVEL.

Lines and GRADES

THE PROPERTY LINES, FOUNDATION CORNERS AND PERIMETER, LOWEST AND MAIN FLOOR ELEVATION SHALL BE ESTABLISHED BY A LICENSED LAND SURVEYOR, AND THE CONTRACTOR SHALL WORK ACCURATELY FROM THESE LINES AND GRADES.

DRAINAGE

RETAINING WALL DRAINAGE

SHALL BE 4" DIAMETER PVC PERFORATED PIPE AS PER DETAILS WITH 4" DIAMETER PIPE PITCHED 1/8" PER FOOT TO EXISTING SYSTEM. BACKFILL FOOTINGS DRAINS WITH BANK RUN GRAVEL WITH MINIMUM COVERAGE OF 12".

LANDSCAPING

COORDINATION: COORDINATE WORK LISTED BELOW WITH ANY ADDITIONAL LANDSCAPING WORK BY OWNER.

SOIL PREPARATION: ALL DISTURBED AREAS OF SITE SHALL BE RECONDITIONED WITH NEW AND/OR STOCKPILED TOPSOIL TO A DEPTH OF 3".

LAWNS AND GRASSES: ALL DISTURBED AREAS OF THE SITE WHERE NO GRASS COVER EXISTS SHALL BE SEEDED TO MATCH EXISTING LAWN. AT COMPLETION OF FINISHED GRADING AND PROTECTED WITH SALT HAY.

PAVING

PRIME COAT

PRIME COAT SHALL BE EMULSIFIED ASPHALT, TYPE AE-F, TAR TYPES RT2 OR RT3, OR CUTBACK ASPHALTS MC 250, MC 70, RC70 OR RC250 AS DEFINED IN SECTION 804 OF THE ALABAMA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, LATEST EDITION. PRIME COAT SHALL BE APPLIED AT THE RATE OF 0.22 TO 0.25 GALLONS PER SQUARE YARD OVER THE ENTIRE AREA TO BE TREATED WITH ASPHALT.

TACK COAT

1. TACK COAT SHALL BE EMULSIFIED ASPHALT TYPE SS-1, SS-1H, OR RS-1 OR ASPHALT CEMENT GRADE AC-10 OR AC-10.
2. TACK COAT SHALL BE APPLIED AT A RATE NOT TO EXCEED 0.10 GALLONS PER SQUARE YARD.

ASPHALT PATCH

- ASPHALT PAVING USED IN PATCHING SHALL BE PLANT MIX BITUMINOUS BASE PRIME & TACK COAT.
- BITUMINOUS MATERIALS SHALL NOT BE PLACED ON WET SURFACES OR WHEN THE AIR TEMPERATURE IS BELOW 60-DEGREES F.
- BITUMINOUS MATERIALS SHALL NOT BE PLACED WHEN THE TEMPERATURE IS EXPECTED TO FALL BELOW FREEZING DURING THE NIGHT REGARDLESS OF THE DAYTIME TEMPERATURE.
- ASPHALT LAYERS OF 200-POUNDS PER SQUARE YARD OR LESS SHALL NOT BE PLACED WHEN THE AIR TEMPERATURE IS BELOW 40-DEGREES F. THE AIR TEMPERATURE MUST BE 40-DEGREES F. AND RISING BEFORE THE SPREADING OPERATION IS STARTED AND THE SPREADING OPERATION SHALL BE STOPPED WHEN THE AIR TEMPERATURE IS 45-DEGREES F. AND FALLING.

ELECTRICAL

1. THE ELECTRICAL CONTRACTOR SHALL VERIFY THE ADEQUACY OF THE CURRENT ELECTRICAL SERVICE. INSTALLATION OF ALL ELECTRICAL EQUIPMENT, LIGHTING SHALL CONFORM TO THE NATIONAL ELECTRIC CODE, NEW YORK STATE, AND ALL OTHER APPLICABLE LOCAL CODES AND REGULATIONS.
2. ALL LIGHTING SHALL BE EITHER LOCATED ON THE EXISTING BUILDING, OR ON LIGHT POLES PER THE PLANS. CONTROLS SHALL BE LOCATED AT INTERIOR OF THE FIREHOUSE.
3. LIGHTING FIXTURES SHALL BE LED TYPE: 10,000 LUMEN, FULLY SHIELDED AND SHALL BE PROVIDED BY THE GENERAL CONTRACTOR. SUBMIT SAMPLE FOR APPROVAL.
4. ALL WORK FURNISHED UNDER THIS SECTION SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE.
5. COMMERCIAL LIGHT POLES SHALL BE SUPPLIED BY THE OWNER.

LIGHTPOLESPLUS.COM

308 N. BROOKE ST., FOND DU LAC, WI 54935

CONTACT: AARON

PHONE #: (888) 791-1463 X714

E-MAIL: TEAM@LIGHTPOLESPLUS.COM

LIGHT FIXTURES

PART #1 NF-12-SPHIC-80-50-WV-9W

[DESCRIPTION] 80 WATT, 12" LED SHOEBOX AREA & FLOOD LIGHT FIXTURE, 120-277V INPUT VAC, 5000K COOL WHITE, 1119 NOMINAL LUMENS, 125-300W HID REPLACE, TYPE 5 MEDIUM DISTRIBUTION, USA MADE, ETL CERTIFIED TO UL 1598 AND CSA STANDARDS, 270,000+ HOURS L70 LED LIFE, 5-YEAR STANDARD LIMITED WARRANTY

DIRECT BURIAL LAMP POSTS

PART #1 NP-SSAD-12-A240-G-FP

[DESCRIPTION] 12' ABOVE GRADE + 3' BELOW GRADE X 40' OD X 0.125" THICK, SQUARE STRAIGHT ALUMINUM, DIRECT BURIAL LIGHT POLE, CONDUIT ENTRY, BELOW GRADE, WIRING HAND HOLE & COVER, STANDARD FIXTURE MOUNTING & FINISH COLOR, USA ENGINEERED & MANUFACTURED

[PART #1 NP-SSAD-12-A240-G-FP

[DESCRIPTION] 10' ABOVE GRADE + 3' BELOW GRADE X 40' OD X 0.125" THICK, SQUARE STRAIGHT ALUMINUM, DIRECT BURIAL LIGHT POLE, CONDUIT ENTRY, BELOW GRADE, WIRING HAND HOLE & COVER, STANDARD FIXTURE MOUNTING & FINISH COLOR, USA ENGINEERED & MANUFACTURED

FOUNDATION MOUNTED LAMP POSTS:

[PART #1 NP-SSAA-15-A240-G-AB-SB-FP

[DESCRIPTION] 15 TALL X 40' OD X 0.125" THICK, SQUARE STRAIGHT ALUMINUM, ANCHOR BASE LIGHT POLE, FULL BASE COVER, WIRING HAND HOLE & COVER, STANDARD FIXTURE MOUNTING & FINISH COLOR, USA ENGINEERED & MANUFACTURED (INCLUDES 5/8" ANCHOR BOLTS)

Mark Fritz Architects

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CONSULTANTS

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OWNER

NORTH CASTLE FIRE
DISTRICT NO 1
RETAINING WALL
& PARKING LOT
MODIFICATIONS
621 NORTH BROADWAY
WHITE PLAINS, NY 10603



----	2/21/20	PRELIMINARY ISSUE
MARK	DATE	DESCRIPTION

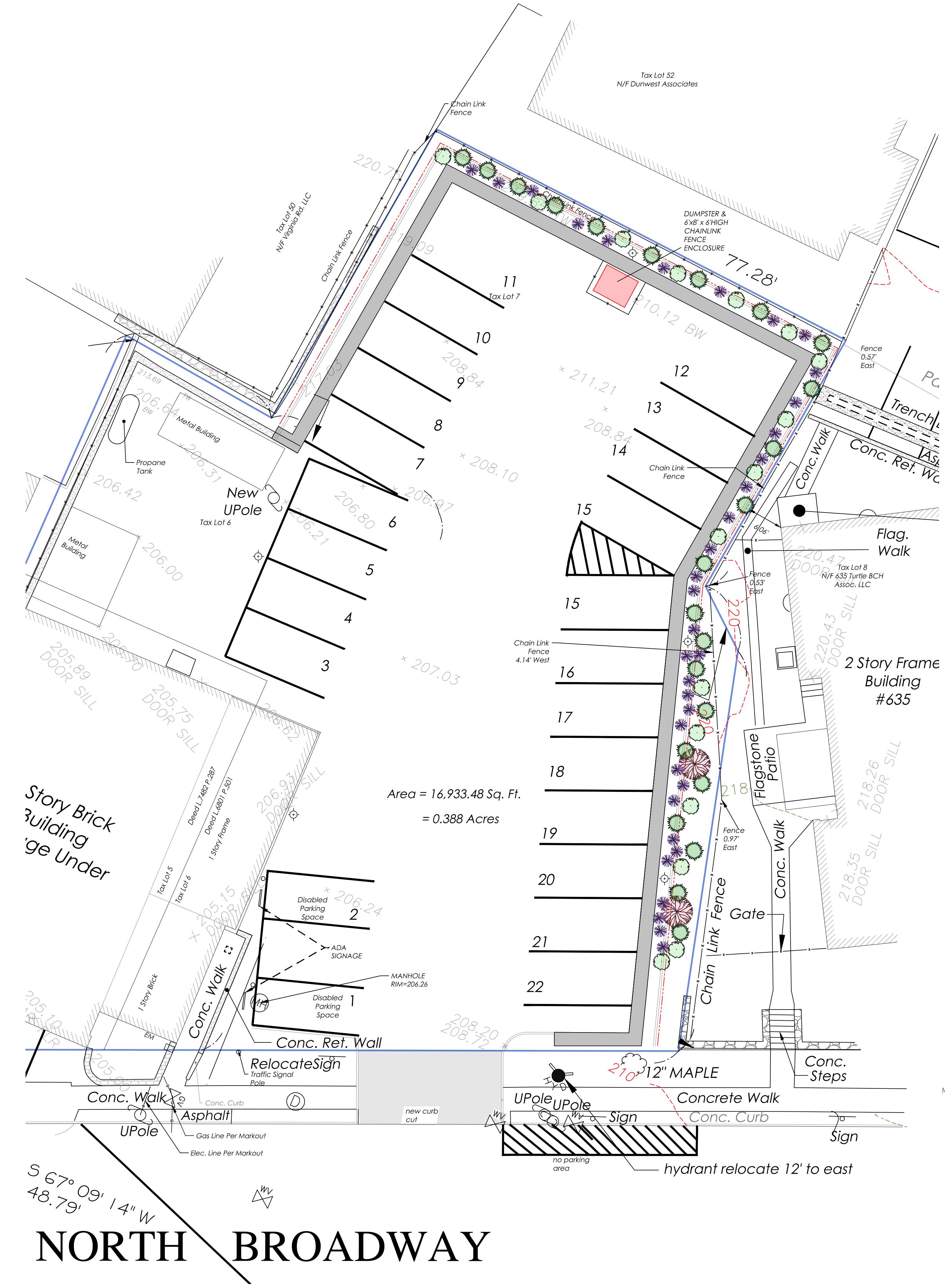
PROJECT NO: 011520
CAD DWG FILE: 115

SHEET TITLE

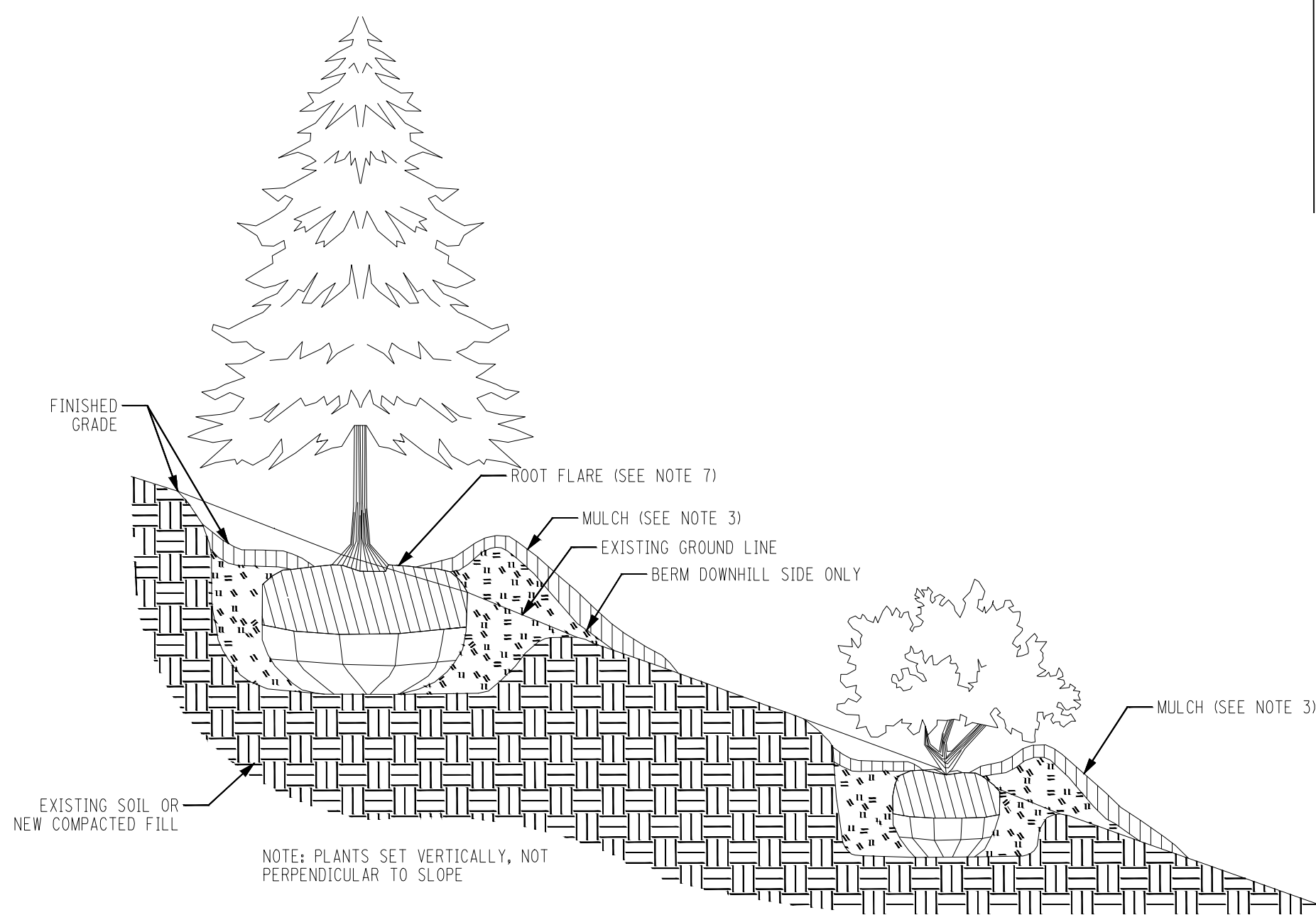
Construction
Specifications

A-109

SHEET



FLOWERING DOGWOOD



- NOTES:
1. PLANTING BALL - ON B&B MATERIAL, BURLAP AND WIRE BASKET OR OTHER CONTAINER SHALL BE REMOVED FROM THE UPPER HALF OF THE ROOT BALL AND DISPOSED OF.
 2. HEIGHT OF PLANTING SAUCER SHALL BE 3".
 3. MULCH SHALL BE A MAXIMUM OF 3" DEEP AND TAPERED DOWN TO LEAVE THE ROOT FLARE EXPOSED. WHEN PLANTING ON SLOPES, DOWNHILL SIDE MUST BE STABILIZED APPROPRIATELY OR SEEDING ON DOWNHILL SIDE MAY BE SPECIFIED.
 4. MATERIALS FOR PROTECTION OF PLANTS SHALL BE A COMMERCIALY AVAILABLE PRODUCT OR SYSTEM FOR SUPPORTING OF TREES.
 5. ALL TAGS, LABELS, ETC. SHALL BE REMOVED FROM THE PLANTS.
 6. THIS DETAIL SHOWS ONE ABOVE GROUND TREE SUPPORT METHOD. ANY OTHER METHOD MUST USE COMMERCIALY AVAILABLE PRODUCTS INSTALLED PER THE MANUFACTURER'S SPECIFICATIONS.
 7. THE ROOT FLARE SHALL BE VISIBLE AND LEVEL WITH SURROUNDING SOIL.

PLANT LIST:

QTY:	BOTANICAL NAME	COMMON NAME	SIZE
2	CORNUS FLORIDA	FLOWERING DOGWOOD	2" CAL. B#B
23	THUJA ACCIDENTALLS "SMARAGD"	EMERALD GREEN ARBORVITAE	5' HT.
16	BUXUS GREEN VELVET	GREEN VELVET BOXWOOD	3 GALLON
35	LIROPE-VARIGATED	VARIGATED LIROPE	1 GALLON



GREEN VELVET BOXWOOD



VARIGATED LIROPE



EMERALD GREEN ARBORVITAE

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621 NORTH BROADWAY
WHITE PLAINS, NY 10603

VARIGATED LIROPE

GREEN VELVET BOXWOOD

EMERALD GREEN ARBORVITAE

FLOWERING DOGWOOD

2/21/20	PRELIMINARY ISSUE
5/29/20	PLANNING BOARD
MARK	DATE DESCRIPTION

PROJECT NO: 011520
CAD DWG FILE: 115

SHEET TITLE
PLANTING PLAN

SHEET
A-110