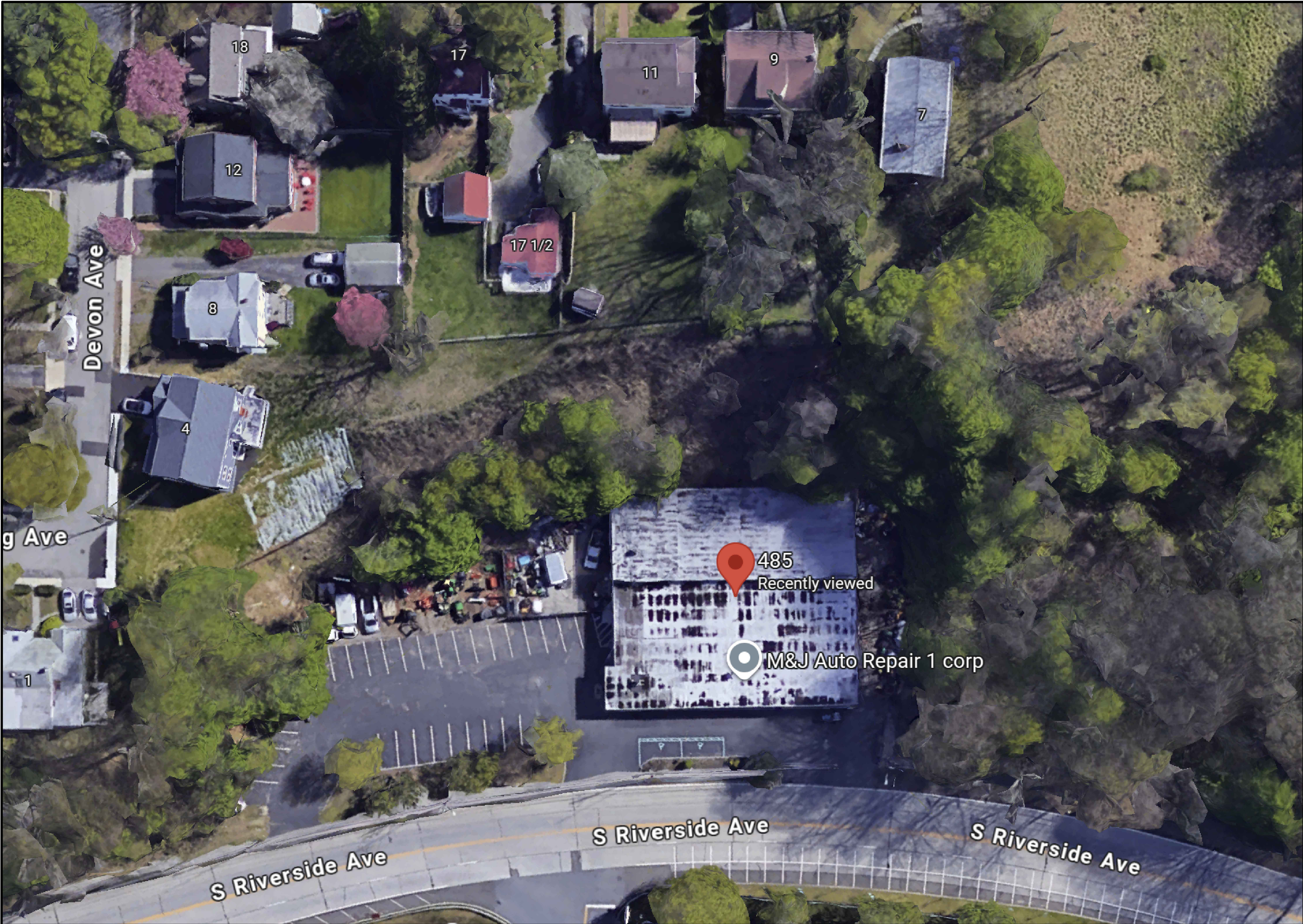


PROPOSED SITE GRADING & RETAINING WALL PLAN

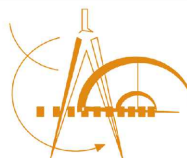
Situated At
425 S. RIVERSIDE AVENUE
VILLAGE OF CROTON ON HUDSON, WESTCHESTER CO., NEW YORK

SEC 79.13 , BLOCK 2, TAX LOT 91



PROJECT MAP

LIST OF DRAWINGS	
C001	TITLE SHEET
C100	PROPOSED SITE GRADING PLAN
C200	PROPOSED SECTIONS
C201	PROPOSED SECTIONS
C202	PROPOSED SECTIONS
C203	PROPOSED SECTIONS
C204	PROPOSED SECTIONS
C205	PROPOSED SECTIONS
C206	PROPOSED SECTIONS
C300	REDI-ROCK RETAINING WALL DETAILS
C301	REDI-ROCK RETAINING WALL DETAILS
C302	SOLDIER PILE RETAINING WALL DETAILS



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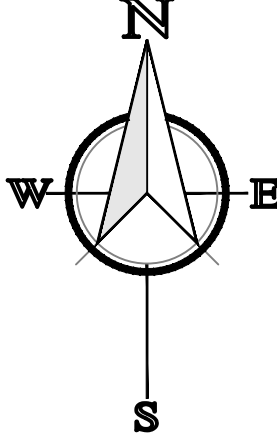
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Revisions	
10.17.2025	Coordinate Building Design
06.02.2026	Update Sections

Drawing North



Client Name and Address

**CARMEL
RIVERSIDE
LLC**
185 ASHFORD AVE
DOBBS FERRY, NY

Project Information

**PROPOSED SITE
GRADING &
RETAINING
WALL PLAN**
Situating At
425 S. RIVERSIDE AVE
VILLAGE OF
CROTON-ON-HUDSON
TOWN OF CORTLANDT
WESTCHESTER CO.
NEW YORK

TAX INFO:
SEC: 79.13
BLOCK: 2
TAX LOT: 91

Job No.	25-021
Scale	AS NOTED
Date	13 SEPT 2024
Drawn By	K.W.
Checked By	M.M.
Sheet	

C001

Seal & Signature



Michael Mastrogiacomo, P.E., L.S.
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Revisions

	10.17.2025	Coordinate Building Design
	06.02.2026	Update Sections
		
		
		
		
		
		
		
		
		

Drawing North

Client Name and Address:

**CARMEL
RIVERSIDE
LLC**
185 ASHFORD AVE
DOBBS FERRY, NY

Project Information

PROPOSED SITE GRADING & RETAINING WALL PLAN

WALL PAPER
Situated At
425 S. RIVERSIDE AVE
VILLAGE OF
CROTON-ON-HUDSON
TOWN OF CORTLANDT
WESTCHESTER CO.
NEW YORK

TAX INFO:
SEC 79.13
BLOCK 2
TAX LOT 91

Job No. 25-021

Scale	AS NOTED
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Scale	AS NOTED
Q. 4	12. 2000000000

Date	13 SEPT 2024
Time	11:23

Drawn By _____ R.W.

Checked By	M.M.
Sheet	

Figure 1

0501

201

C201

Seal & Signature

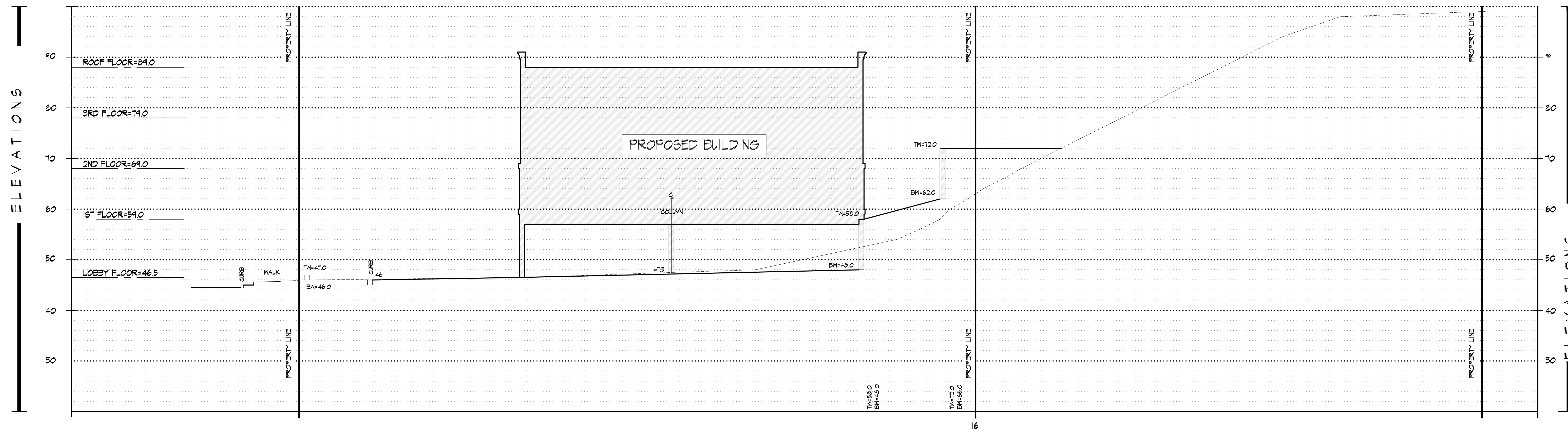



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MICHAEL MASTROGIACOMO, P.E. I.S.

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NEW YORK STATE L.S. LIC. NO. 051124 - Registration Expires 09.30.2036

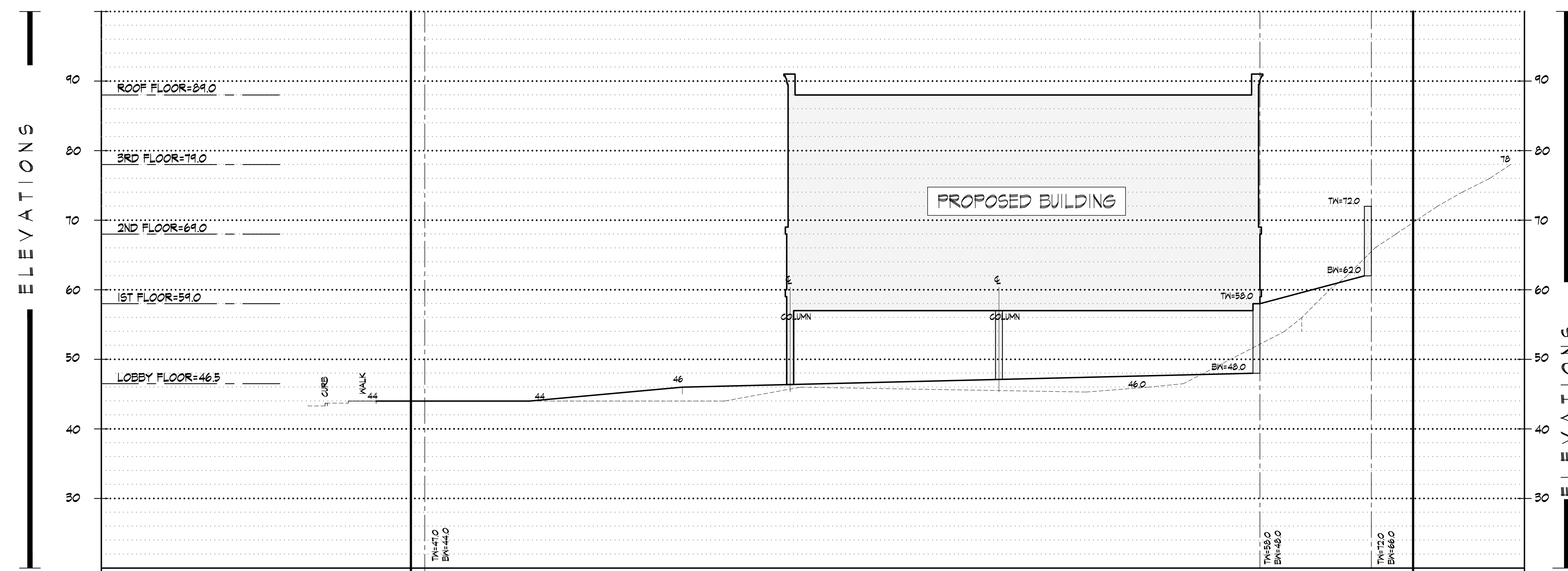
CONNECTICUT STATE P.E. & L.S. LIC. NO. 23713 - Reg. Expires 06/30/2017



SECTION

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NOTE:



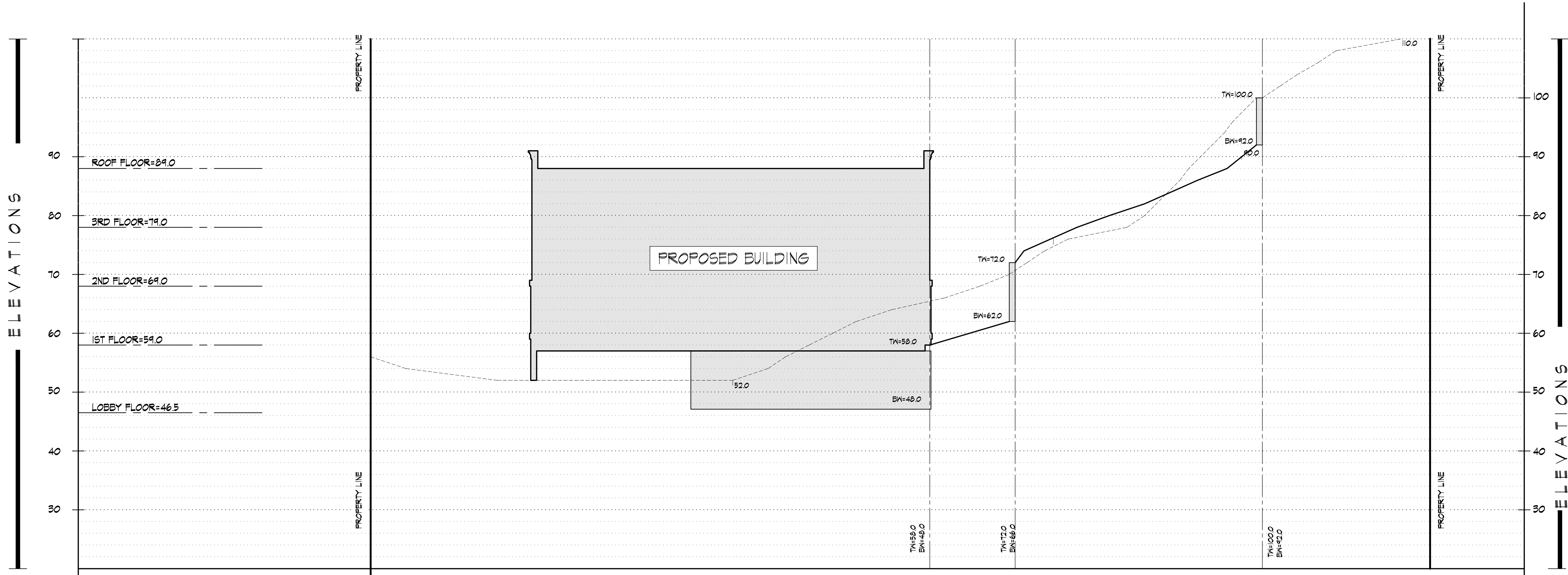
D SECTION

SCALE : 1" = 10'

Sheet Title



MICHAEL MASTROGIACOMO, P.E., L.S.
NEW YORK STATE P.E. LIC. NO. 083853 - Registration Expires 09.30.2036
NEW YORK STATE L.S. LIC. NO. 051124 - Registration Expires 09.30.2036



M  SECTION

SCALE : 1" = 10'

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Revisions	
	10.17.2025 Coordinate Building Design
	06.02.2026 Update Sections
	
	
	
	
	
	
	
	

Drawing North

Client Name and Address

CARMEL
RIVERSIDE
LLC
185 ASHFORD AVE
DOBBS FERRY, NY

Project Information

PROPOSED SITE
GRADING &
RETAINING
WALL PLAN

Situated At
425 S. RIVERSIDE AVE
VILLAGE OF
CROTON-ON-HUDSON
TOWN OF CORTLANDT
WESTCHESTER CO.
NEW YORK

TAX INFO:
SEC: 79.13
BLOCK: 2
TAX LOT: 91

Job No.	25-021
Scale	AS NOTED
Date	13 SEPT 2024
Drawn By	K.W.
Checked By	M.M.
Sheet	

C206

Seal & Signature


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PROPOSED SECTIONS

GENERAL CONDITIONS

- ALL WORK SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE AND GOVERNMENTAL CODES, RULES & REGULATIONS. ALL WORK SHALL ALSO BE PERFORMED WITH THE HIGHEST DEGREE OF SKILL, QUALITY AND COMPLETENESS.
- ENGINEER IS NOT RESPONSIBLE FOR METHODS, MEANS OR SCHEDULING OF CONSTRUCTION ACTIVITIES AND/OR MUNICIPAL INSPECTIONS. THE GENERAL CONTRACTOR SHALL SUPPLY THE OWNER & ENGINEER WITH A CONSTRUCTION SCHEDULE OUTLINING THE DIFFERENT SEQUENCES OF WORK.
- THE GENERAL CONTRACTOR SHALL CAREFULLY EXAMINE THE JOB SITE TO FAMILIARIZE HIMSELF WITH THE EXISTING AND ACTUAL JOB CONDITIONS AND TO VERIFY SAME WITH THESE DRAWINGS AND TO CHECK FOR ANY DISCREPANCIES PRIOR TO COMMENCEMENT OF CONSTRUCTION. IN THE EVENT OF ANY DISCREPANCIES BETWEEN THESE DRAWINGS AND ACTUAL FIELD CONDITIONS, THE GENERAL CONTRACTOR SHALL NOTIFY THE ENGINEER & CLIENT IN WRITING PRIOR TO START OF WORK. FAILURE TO PROVIDE THE AFOREMENTIONED NOTIFICATION SHALL RESULT INTO CONTRACTORS BEING HELD RESPONSIBLE TO COMPLETE ALL WORK TO MEET THE INTENT OF THE CONTRACT DOCUMENTS WITH NO ADDITIONAL EXPENSE (EXTRAS) TO THE CLIENT OR ENGINEER.
- THE GENERAL CONTRACTOR SHALL INCLUDE ALL MATERIALS, LABOR, INCIDENTALS, ETC. FOR SATISFACTORY COMPLETION OF THE WORK. THE GENERAL CONTRACTOR SHALL PERFORM ALL WORK AND PROVIDE ALL REQUIRED LABOR, MATERIAL, ETC. FOR THE TOTAL COMPLETION OF THE PROJECT WHETHER OR NOT INDICATED ON THESE DRAWINGS. THE INTENTION OF THESE DRAWINGS IS FOR A COMPLETE AND PROPER UNDERSTANDING OF THE ENTIRE PROJECT.
- EACH SUBCONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE THEIR WORK WITH THE WORK OF ALL OTHER CONTRACTORS, IN ORDER TO PREVENT ANY INTERFERENCE BETWEEN PIPING, WIRING, LIGHTING, ETC.
- EACH SUBCONTRACTOR SHALL DO HIS OWN CUTTING AS REQUIRED BY HIS WORK. THE GENERAL CONTRACTOR SHALL PERFORM ALL PATCHING FOR CONSISTENCY.
- EACH SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE STORAGE OF HIS MATERIAL, TOOLS, AND EQUIPMENT WITHIN THE DEMISED PREMISES.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THE PREMISES CLEAN AT ALL TIMES AND FOR THE REMOVAL OF ALL CONSTRUCTION DEBRIS IN A LEGAL MANNER.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING A SAFE, HAZARD FREE WORK ENVIRONMENT CONFORMING TO ALL RULES AND REGULATIONS.
- ALL SUBCONTRACTORS SHALL REPAIR OR REPLACE AT HIS OWN EXPENSE ANY WORK OR AREA DAMAGED TO ITS ORIGINAL CONDITION OR BETTER. THE GENERAL CONTRACTOR SHALL HAVE A MINIMUM OF ONE FIRE EXTINGUISHER ON THE JOB SITE AT ALL TIMES FOR ALL SUBCONTRACTORS USE.
- THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL GUARANTEE THEIR WORK FOR A MINIMUM OF ONE YEAR FROM SUBSTANTIAL COMPLETION OF HIS WORK. SUCH GUARANTEE SHALL BE SUBMITTED IN WRITING TO THE CLIENT PRIOR TO RELEASE OF FINAL PAYMENT. IF STATE OR LOCAL REGULATIONS MANDATE LONGER TIME PERIODS, THE CONTRACTORS SHALL GUARANTEE THIS WORK FOR SUCH LONGER PERIOD.

CONCRETE

- DESIGN AND CONSTRUCTION IS TO BE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.
- CONCRETE FOR THIS PROJECT SHALL CONFORM TO THE FOLLOWING:
 - PROPORTIONED, REINFORCED, MIXED, PLACED, FINISHED, PROTECTED, AND CURED IN ACCORDANCE WITH APPLICABLE ACI STANDARDS AND THE SPECIFICATIONS.
 - NORMAL WEIGHT CONCRETE (150 PCF) SHALL BE USED FOR ALL CONCRETE.
 - DESIGN STRENGTH (IN 28 DAYS).....F c = 4000 PSI
 - PORTLAND CEMENT.....ASTM C59 - TYPE I
 - AGGREGATES.....ASTM C33
 - REINFORCING STEEL.....ASTM A615, GRADE 60
 - WELDED WIRE FABRIC.....ASTM A185
 - UNLESS NOTED OTHERWISE ON THE DRAWINGS MINIMUM COVER FOR REINFORCING SHALL BE 3" FROM THE OUTSIDE FACE OF CONCRETE TO REBAR SURFACE.
- CONCRETE QUALITY SHALL CONFORM TO ACI 318 AND ADD MIXTURES, IF ANY USED, SHALL BE SO STATED IN THE MIXED DESIGN PRIOR TO PLACEMENT. THE MIX DESIGN SHALL BE SUBMITTED TO THE ENGINEER OF RECORD PRIOR TO ORDERING AND PLACEMENT OF ANY CONCRETE. ADD MIXTURES SHALL NOT PRODUCE ANY ADVERSE OR DEleterIOUS EFFECTS IN THE PERFORMANCE OR APPEARANCE OF THE CONCRETE.
- WATER USED IN CONCRETE PRODUCTION SHALL BE OF THE OF THE POTABLE TYPE AND FREE OF INJURIOUS AMOUNTS OF OILS, ACIDS, ALKALIS, SALTS, ORGANIC MATERIAL, OR OTHER SUBSTANCES DELETERIOUS TO THE CONCRETE OR REINFORCEMENT.
- ALL CONCRETE PLACEMENT SHALL BE CONTINUOUSLY OBSERVED BY A NYC LICENSED SPECIAL INSPECTION AGENCY WITH TESTING AND SAMPLING IN ACCORDANCE WITH ASTM STANDARDS.
- CONCRETE THAT IS EXPOSED TO FREEZE/THAWING SHALL BE AIR ENTRAINED IN ACCORDANCE WITH SECTION 4.2 ACI 318 WITH A MINIMUM AIR CONTENT OF 6 PERCENT WITH A TOLERANCE OF ±1.5 PERCENT
- PROVIDE 3" CHAMFER AT ALL EXPOSED CORNERS OF BEAMS, WALLS, ETC.
- PROVIDE 1" PRE MOLDED EXPANSION JOINT MATERIAL WHERE SLAB-ON-GRADE IS POURED AGAINST GRADE BEAMS OR WALLS, UNLESS NOTED OTHERWISE.

CONCRETE STEEL REINFORCING

- EMBEDDED STEEL REINFORCING SHALL CONFORM TO ACI DETAILING MANUAL OF STANDARD PRACTICE, UNLESS OTHERWISE NOTED IN ACCORDANCE WITH ACI 318
- DEFORMED BARS SHALL BE UNCOATED ASTM A615 GRADE 60, UNLESS OTHERWISE NOTED, PER "SPECIFICATION FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT".
- WELDED REINFORCING SHALL CONFORM TO ANSII/AWS D1.4 "STRUCTURAL WELDING CODE FOR REINFORCING STEEL". NO WELDED WIRE FABRIC SHALL BE USED IN STRUCTURAL CONCRETE OR SOIL RETAINING WALLS UNLESS SPECIFICALLY NOTED HEREIN.
- WHERE SPLICES IN REINFORCING ARE REQUIRED, THEY SHALL BE LAPPED AND STAGGERED SUCH THAT NO MORE THAN ONE HALF OF THE BARS ARE LAP SPICED WITHIN REQUIRED LAP LENGTH, AND SHALL MEET THE REQUIREMENTS OF A CLASS "B" SPLICE. MINIMUM SPLICE LENGTHS FOR CLASS "B" (GR 60, 4000 PSI CONCRETE):
 - #3 TO #5.....24" MIN.
 - #6 AND LARGER.....36" MIN.
 - OR AS DETAILED WITH NO
 - SPLICE LESS THAN 500 LBS
- HORIZONTAL BARS SHALL BE CONTINUOUS AROUND CORNERS AND FULLY EMBEDDED AT NON CONTINUOUS ENDS.
- ALL REINFORCING SHALL BE HELD SECURELY IN POSITION WITH STANDARD ACCESSORIES IN CONFORMANCE WITH CRSI MANUAL OF STANDARD PRACTICE AND ACI 315 DURING THE PLACEMENT OF CONCRETE.
- ALL HOOKS IN REINFORCING BARS SHALL BE AN ACI STANDARD HOOK UNLESS NOTED OTHERWISE.
- DOWELS SHALL BE PLACED BEFORE CONCRETE IS POURED, THEY SHALL NOT BE PUSHED INTO THE CONCRETE.
- SPLICES IN TOP REINFORCING, SHALL BE MADE AT MID-SPAN, UNLESS NOTED OTHERWISE

REDI-ROCK SPECIFICATIONS

- ALL UNITS FOR THE PROJECT SHALL BE OBTAINED FROM THE SAME MANUFACTURER. THE MANUFACTURER SHALL BE LICENSED AND AUTHORIZED TO PRODUCE THE RETAINING WALL UNITS BY THE PRECAST MODULAR BLOCK SYSTEM PATENT HOLDER/LICENSEOR AND SHALL DOCUMENT COMPLIANCE WITH THE PUBLISHED QUALITY CONTROL STANDARDS OF THE PROPRIETARY PRECAST MODULAR BLOCK SYSTEM LICENSED FOR THE PREVIOUS THREE (3) YEARS, OR THE TOTAL TIME THE MANUFACTURER HAS BEEN LICENSED, WHICHEVER IS LESS.
- CONCRETE USED IN THE PRODUCTION OF THE PRECAST MODULAR BLOCK UNITS SHALL BE FIRST-PURPOSE, FRESH CONCRETE. IT SHALL NOT CONSIST OF RETURNED, RECONSTITUTED, SURPLUS OR WASTE CONCRETE. IT SHALL BE AN ORIGINAL PRODUCTION MIX MEETING THE REQUIREMENTS OF ASTM C94 AND EXHIBIT THE FOLLOWING:
 - MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4,000 PSI (27.6 MPa).
 - SHALL BE FREE OF WATER SOLUBLE CHLORIDES AND CHLORIDE BASED ACCELERATOR ADMIXTURES.
 - 6% +/- 1% AIR-ENTRAINMENT IN CONFORMANCE ASTM C94.
 - MAXIMUM SLUMP OF 5 INCHES +/- 1% INCHES (125 MM +/- 40 MM) PER ASTM C143 FOR CONVENTIONAL CONCRETE MIX DESIGNS.
 - SLUMP FLOW FOR SELF-CONSOLIDATING CONCRETE (SCC) MIX DESIGNS SHALL BE BETWEEN 18 INCHES AND 32 INCHES (450 MM AND 800 MM) AS TESTED IN ACCORDANCE WITH ASTM C1611.

- C. EACH CONCRETE BLOCK SHALL BE CAST IN A SINGLE CONTINUOUS POUR WITHOUT COLD JOINTS. WITH THE EXCEPTION OF HALF-BLOCK UNITS, CORNER UNITS AND OTHER SPECIAL APPLICATION UNITS, THE PRECAST MODULAR BLOCK UNITS SHALL CONFORM TO THE NOMINAL DIMENSIONS LISTED IN THE TABLE BELOW AND BE PRODUCED TO THE DIMENSIONAL TOLERANCES SHOWN.

BLOCK TYPE

TYPE	DIMENSION	NOMINAL VALUE
TOLERANCE	±28" (710 MM)	
BLOCK HEIGHT	18" (457 MM) +/- 3/16" (5 MM)	
LENGTH	46" (1172 MM) +/- 1/2" (13 MM)	
WIDTH	28" (710 MM) +/- 1/2" (13 MM) +/- 1/2" (13 MM) +/- 1/2" (13 MM)	
BLOCK HEIGHT	18" (457 MM) +/- 3/16" (5 MM)	
LENGTH	46" (1172 MM) +/- 1/2" (13 MM)	
WIDTH	40" (1012" (1030 MM) +/- 1/2" (13 MM) +/- 1/2" (13 MM) +/- 1/2" (13 MM)	
BLOCK HEIGHT	18" (457 MM) +/- 3/16" (5 MM)	
LENGTH	46" (1172 MM) +/- 1/2" (13 MM)	
WIDTH	40" (1012" (1030 MM) +/- 1/2" (13 MM) +/- 1/2" (13 MM) +/- 1/2" (13 MM) +/- 1/2" (13 MM)	
D. INDIVIDUAL BLOCK UNITS SHALL HAVE A NOMINAL HEIGHT OF 18 INCHES (457 MM).		

- E. WITH THE EXCEPTION OF HALF-BLOCK UNITS, CORNER UNITS AND OTHER SPECIAL APPLICATION UNITS, THE PRECAST MODULAR BLOCK UNITS SHALL HAVE TWO (2), CIRCULAR DOME SHEAR KNOBS THAT ARE 10 INCHES (254 MM), 7.5 INCHES (190 MM), OR 6.75 INCHES (171 MM) IN DIAMETER AND 4 INCHES (102 MM) OR 2 INCHES (51 MM) IN HEIGHT. THE SHEAR KNOBS SHALL FULLY INDEX INTO A CONTINUOUS SEMI-CYLINDRICAL SHEAR CHANNEL IN THE BOTTOM OF THE BLOCK COURSE ABOVE. THE PEAK INTERLOCK SHEAR BETWEEN ANY TWO (2) VERTICALLY STACKED PRECAST MODULAR BLOCK UNITS, WITH 10 INCH (254 MM) DIAMETER SHEAR KNOBS, MEASURED IN ACCORDANCE WITH ASTM D6916 SHALL EXCEED 6,500 LB/FT (95 KN/MT) AT A MINIMUM NORMAL LOAD OF 500 LB/FT (73 KN/MT), AS WELL AS AN ULTIMATE PEAK INTERFACE SHEAR CAPACITY IN EXCESS OF 11,000 LB/FT (160 KN/MT). THE PEAK INTERLOCK SHEAR BETWEEN ANY TWO (2) VERTICALLY STACKED PRECAST MODULAR BLOCK UNITS, WITH 7.5 INCH (190 MM) OR 6.75 INCH (171 MM) DIAMETER SHEAR KNOBS, MEASURED IN ACCORDANCE WITH ASTM D6916 SHALL EXCEED 1,850 LB/FT (27 KN/MT) AT A MINIMUM NORMAL LOAD OF 500 LB/FT (73 KN/MT) AS WELL AS AN ULTIMATE PEAK INTERFACE SHEAR CAPACITY IN EXCESS OF 10,000 LB/FT (146 KN/MT). TEST SPECIMEN BLOCKS TESTED UNDER ASTM D6916 SHALL BE ACTUAL, FULL-SCALE PRODUCTION BLOCKS OF KNOWN COMPRESSIVE STRENGTH. THE INTERFACE SHEAR CAPACITY REPORTED SHALL BE CORRECTED FOR A 4,000 PSI (27.6 MPa) CONCRETE COMPRESSIVE STRENGTH. REGARDLESS OF PRECAST MODULAR BLOCK CONFIGURATION, INTERFACE SHEAR TESTING SHALL BE COMPLETED WITHOUT THE INCLUSION OF UNIT CORE INFILL AGGREGATE.

- F. THE 28" (710 MM) AND 41" (1030 MM) PRECAST MODULAR BLOCK UNITS MAY BE CAST WITH A 13" (330 MM) WIDE, CONTINUOUS VERTICAL CORE SLOT COMPLETELY THROUGH THE BLOCK, OR SOLID CONCRETE.

- G. WITHOUT FIELD CUTTING OR SPECIAL MODIFICATION, THE PRECAST MODULAR BLOCK UNITS SHALL BE CAPABLE OF ACHIEVING A MINIMUM RADIUS OF 14 FT 6 IN (4.42 M).

- H. THE PRECAST MODULAR BLOCK UNITS SHALL BE MANUFACTURED WITH AN INTEGRALLY CAST SHEAR KNOBS THAT ESTABLISHES A STANDARD HORIZONTAL SET-BACK FOR SUBSEQUENT BLOCK COURSES. THE PRECAST MODULAR BLOCK SYSTEM SHALL BE AVAILABLE IN THE FOUR (4) STANDARD HORIZONTAL SET-BACK FACING BATTER OPTIONS LISTED BELOW:

HORIZONTAL

SET-BACK BLOCK COURSE MAX. FACING BATTER 318" (10 MM) 21" 518" (41 MM) 21" 9318" (238 MM) 27 516" 16" 8" (422 MM) 42 2"

- I. THE PRECAST MODULAR BLOCK UNITS SHALL BE FURNISHED WITH THE REQUIRED SHEAR KNOBS THAT PROVIDE THE FACING BATTER REQUIRED IN THE CONSTRUCTION SHOP DRAWINGS.

- J. THE PRECAST MODULAR BLOCK UNIT FACE TEXTURE SHALL BE SELECTED BY THE OWNER FROM THE AVAILABLE RANGE OF TEXTURES AVAILABLE FROM THE PRECAST MODULAR BLOCK MANUFACTURER. EACH TEXTURED BLOCK FACING UNIT SHALL BE A MINIMUM OF 5.76 SQUARE FEET (0.54 SQUARE METERS) WITH A UNIQUE TEXTURE PATTERN THAT REPEATS WITH A MAXIMUM FREQUENCY OF ONCE IN ANY 15 SQUARE FEET (1.4 SQUARE METERS) OF WALL FACE.

- K. THE BLOCK COLOR SHALL BE SELECTED BY THE OWNER FROM THE AVAILABLE RANGE OF COLORS AVAILABLE FROM THE PRECAST MODULAR BLOCK MANUFACTURER.

- L. PREAPPROVED MANUFACTURERS.
- MANUFACTURERS OF REDI-ROCK RETAINING WALL SYSTEMS AS LICENSED BY REDI-ROCK INTERNATIONAL, LLC, 05481 US 31 SOUTH, CHARLEVOIX, MI 49720 USA; TELEPHONE (866) 222-8400; WEBSITE WWW.EDI-ROCK.COM.
- M. SUBSTITUTIONS. TECHNICAL INFORMATION DEMONSTRATING CONFORMANCE WITH THE REQUIREMENTS OF THIS SPECIFICATION FOR AN ALTERNATIVE PRECAST MODULAR BLOCK RETAINING WALL SYSTEM MUST BE SUBMITTED FOR PRE-APPROVAL AT LEAST 14 CALENDAR DAYS PRIOR TO THE BID DATE. ACCEPTABLE ALTERNATIVE PMB RETAINING WALL SYSTEMS, OTHERWISE FOUND TO BE IN CONFORMANCE WITH THIS SPECIFICATION, SHALL BE APPROVED IN WRITING BY THE OWNER 7 DAYS PRIOR TO THE BID DATE. THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO PROVIDE NO RESPONSE TO SUBMISSIONS MADE OUT OF THE TIME REQUIREMENTS OF THIS SECTION OR TO SUBMISSIONS OF BLOCK RETAINING WALL SYSTEMS THAT ARE DETERMINED TO BE UNACCEPTABLE TO THE OWNER.

- N. VALUE ENGINEERING ALTERNATIVES. THE OWNER MAY EVALUATE AND ACCEPT SYSTEMS THAT MEET THE REQUIREMENTS OF THIS SPECIFICATION AFTER THE BID DATE THAT PROVIDE A MINIMUM COST SAVINGS OF 20% TO THE OWNER. CONSTRUCTION EXPEDENCY WILL NOT BE CONSIDERED AS A CONTRIBUTING PORTION OF THE COST SAVINGS TOTAL.
- 2.02 GEOTEXILE
- A. 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. THE NONWOVEN GEOTEXTILE FABRIC SHALL MEET THE REQUIREMENTS CLASS 3 CONSTRUCTION SURVIVABILITY IN ACCORDANCE WITH AASHTO M 288.
- B. PREAPPROVED NONWOVEN GEOTEXTILE PRODUCTS
- MIRAFI 140N
 - PROPEX GEOTEX 451
 - SKAPS GT-142
 - THRACE-LINQ 140EX
 - CARTHAGE MILLS FX 40H5
 - STRATATEX ST 142

2.03 DRAINAGE AGGREGATE AND WALL INFILL

- A. DRAINAGE AGGREGATE (AND WALL INFILL FOR RETAINING WALLS DESIGNED AS MODULAR GRADY STRUCTURES) SHALL BE A DURABLE CRUSHED STONE CONFORMING TO NO. 57 SIZE PER ASTM C33 WITH THE FOLLOWING PARTICLE-SIZE DISTRIBUTION REQUIREMENTS PER ASTM D422:
- U.S. STANDARD SIEVE SIZE
- % PASSING: 3/4" (3/8 MM) 100% (25 MM) 95-100% (13 MM) 25-60% (4 7/8 MM) 10-10% (2 3/8 MM) 5
- 2.04 LEVELING PAD
- A. 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.
- B. 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.
- C. 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 (17.2 MPa).

2.05 DRAINAGE

- A. DRAINAGE PIPE
- 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.
 - THE DRAINAGE PIPE SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM D1248 FOR HDPE PIPE AND FITTINGS.
- B. PREAPPROVED DRAINAGE PIPE PRODUCTS
- 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. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH OSHA SAFETY STANDARDS, STATE AND LOCAL BUILDING CODES AND MANUFACTURER'S REQUIREMENTS.
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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.

- 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.
- 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.
 - 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.
 - 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.

- 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.
- 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.
- UNREINFORCED CONCRETE LEVELING PAD. THE CONCRETE SHALL BE PLACED IN THE SAME DIMENSIONS AS THOSE REQUIRED FOR THE CRUSHED STONE LEVELING PAD. THE RETAINING WALL INSTALLATION CONTRACTOR SHALL ERECT PROPER FORMS AS REQUIRED TO ENSURE THE ACCURATE PLACEMENT OF THE CONCRETE LEVELING PAD ACCORDING TO THE RETAINING WALL CONSTRUCTION DRAWINGS.

3.04 PRECAST MODULAR BLOCK WALL SYSTEM INSTALLATION

- 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 COMPONENTS. PIPE, GEOTEXTILE AND DRAINAGE AGGREGATE SHALL BE INSTALLED AS SHOWN ON THE CONSTRUCTION SHOP DRAWINGS.

C. PRECAST MODULAR BLOCK INSTALLATION

- THE FIRST COURSE OF BLOCK UNITS SHALL BE PLACED WITH THE FRONT FACE EDGES TIGHTLY ABUTTED TOGETHER ON ADJACENT BLOCKS, 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.
- 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, AND EXTEND TO A MINIMUM DISTANCE OF 12" (300 MM) BEHIND THE BLOCK UNIT.
- 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.
- 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.
- 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.
- NONWOVEN GEOTEXTILE FABRIC SHALL BE PLACED BETWEEN THE DRAINAGE AGGREGATE AND THE RETAINED SOIL (GRAVITY WALL DESIGN) IF REQUIRED ON THE RETAINING WALL CONSTRUCTION DRAWINGS.
- 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 KEYS BETWEEN THE BLOCKS AND TO ENSURE CONSISTENT FACE BATTER AND WALL ALIGNMENT. 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.
- THE ELEVATION OF RETAINED SOIL FILL SHALL NOT BE LESS THAN 1 BLOCK COURSE (18" (457 MM)) BELOW THE ELEVATION OF THE RETAINED BACKFILL THROUGHOUT THE CONSTRUCTION OF THE RETAINING WALL.
- 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. CONSTRUCTION TOLERANCE. ALLOWABLE CONSTRUCTION TOLERANCE OF THE RETAINING WALL SHALL BE AS FOLLOWS:
- 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).
 - DEVIATION FROM THE OVERALL DESIGN BATTER SHALL NOT EXCEED 1/2" (13 MM) PER 10' (3 M) OF WALL HEIGHT.
 - THE MAXIMUM ALLOWABLE OFFSET (HORIZONTAL BULGE) OF THE FACE IN ANY PRECAST MODULAR BLOCK JOINT SHALL BE 1/2" (13 MM).
 - THE BASE OF THE PRECAST MODULAR BLOCK WALL EXCAVATION SHALL BE WITHIN 3" (50 MM) OF THE STAKED ELEVATIONS, UNLESS OTHERWISE APPROVED BY THE INSPECTION ENGINEER.
 - DIFFERENTIAL VERTICAL SETTLEMENT OF THE FACE SHALL NOT EXCEED 1/4" (300 MM) ALONG ANY 200' (61 M) OF WALL LENGTH.
 - THE MAXIMUM ALLOWABLE VERTICAL DISPLACEMENT OF THE FACE IN ANY PRECAST MODULAR BLOCK JOINT SHALL BE 1/2" (13 MM).
 - THE WALL FACE SHALL BE PLACED WITHIN 3" (50 MM) OF THE HORIZONTAL LOCATION STAKED.

3.05 WALL INFILL AND BACKFILL PLACEMENT

- A. BACKFILL MATERIAL PLACED IMMEDIATELY BEHIND THE DRAINAGE AGGREGATE SHALL BE COMPACTED AS FOLLOWS:
- 98% OF MAXIMUM DRY DENSITY AT ± 2% OPTIMUM MOISTURE CONTENT PER ASTM D698 STANDARD PROCTOR OR 85% RELATIVE DENSITY PER ASTM D454.
- B. COMPACTIVE EFFORT WITHIN 3' (0.9 M) OF THE BACK OF THE PRECAST MODULAR BLOCKS SHOULD BE ACCOMPLISHED WITH WALK-BEHIND COMPACTORS. COMPACTON 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 454. 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 9" (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, SCOUR OF THE RETAINING WALL FOUNDATION OR EROSION OF THE REINFORCED BACKFILL OR WALL INFILL.

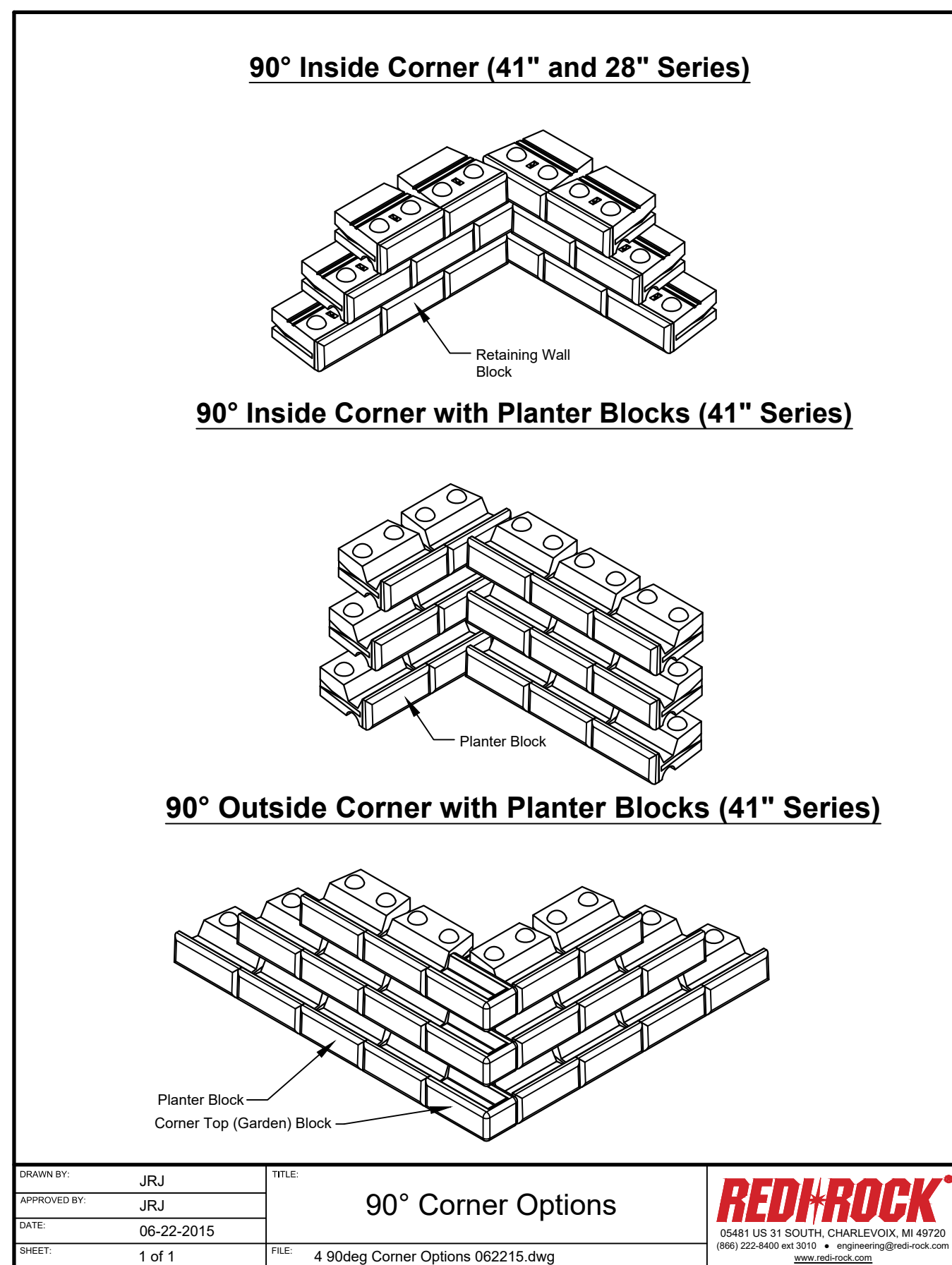
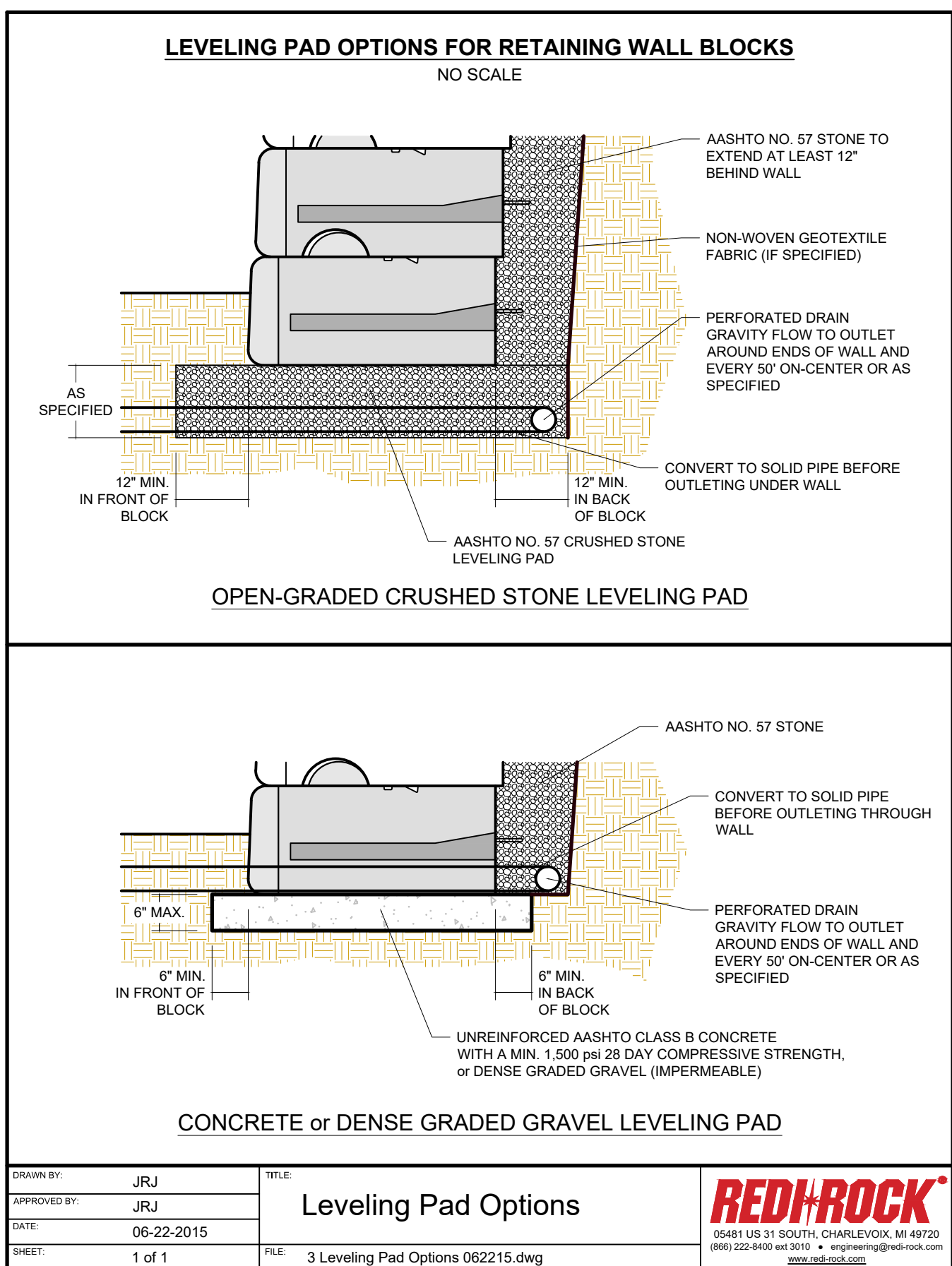
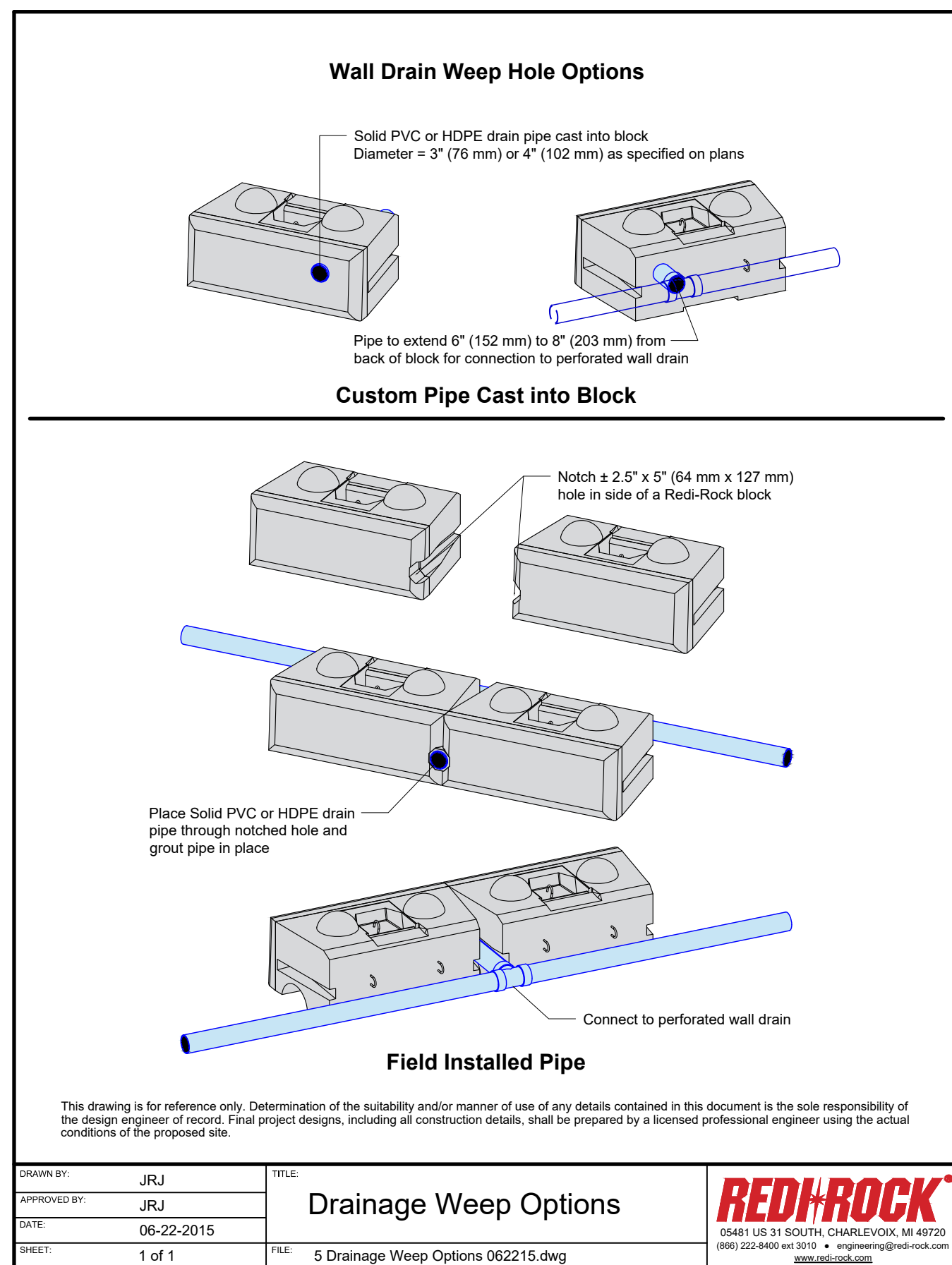
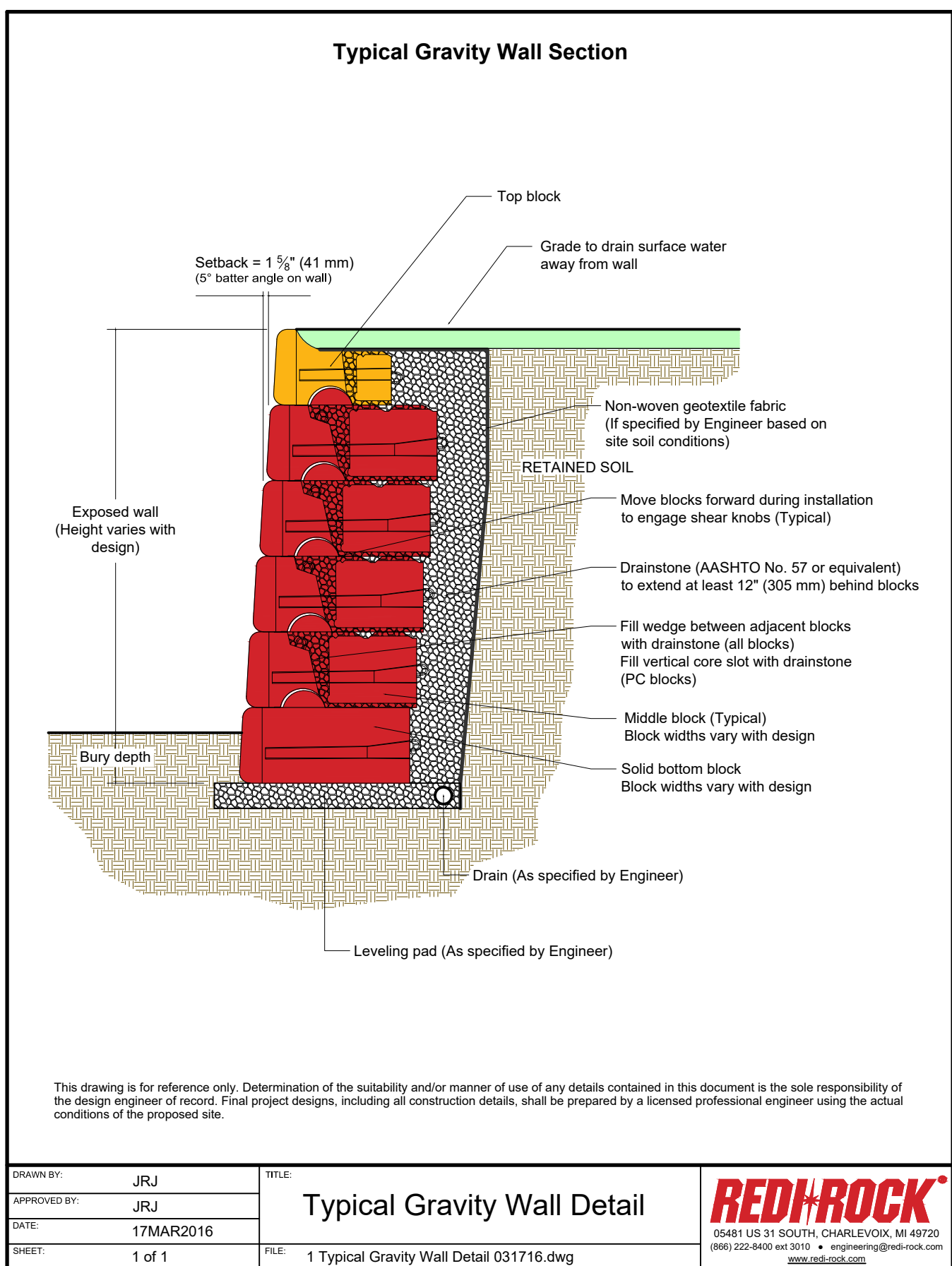
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- A. THE RETAINING WALL INSTALLATION CONTRACTOR SHALL MAKE ALL REQUIRED ALLOWANCES FOR OBSTRUCTIONS BEHIND AND THROUGH THE WALL FACE IN ACCORDANCE WITH THE APPROVED CONSTRUCTION SHOP DRAWINGS.

- B. SHOULD UNPLANN



SITE SAFETY ISSUES REGARDING SUPPORT OF EXCAVATION ARE NOT ADDRESSED IN THESE DRAWINGS. FOR SITE SAFETY REFER TO THE JOB SITE SAFETY PLAN THAT HAS BEEN COMPILED BY OTHERS. THIS PLAN MAY NEED TO BE MODIFIED TO ACCOUNT FOR CONSTRUCTION ACTIVITIES SPECIFIED IN THESE DRAWINGS. THE SAFETY PLAN MUST AT A MINIMUM CONFORM TO OSHA STANDARDS.

2. FIELD CONDITIONS AS ENCOUNTERED DURING CONSTRUCTION MAY REQUIRE MODIFICATIONS TO CONSTRUCTION DETAILS. CONFLICTS BETWEEN DETAILS SHOWN IN THESE DRAWINGS AND ACTUAL CONDITIONS SHALL BE BROUGHT TO THE ARCHITECT AND ENGINEER'S ATTENTION FOR RESOLUTION.

3. SOLDIER PILES, WHICH MAY BE INSTALLED IN ADJACENT OR PUBLIC PROPERTY, OBTAIN ALL NECESSARY CITY PERMITS AND ADJACENT OWNER PERMISSIONS PRIOR TO WORK COMMENCEMENT.

4. THE CONTRACTOR SHALL COMPLY WITH THE ALL RELEVANT PROVISIONS OF THE NY BUILDING CODE.

5. ALL FOUNDATIONS AND EARTHWORK OPERATION SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NY BUILDING CODE AND ALL LOTS, BUILDINGS AND SERVICE FACILITIES ADJOINING THE FOUNDATION AND EARTHWORK AREAS SHALL BE PROTECTED AND SUPPORTED.

6. ALL TEST PITS, BORINGS AND SHORING OPERATIONS ARE SUBJECT TO CONTROLLED INSPECTION.

7. THE OWNER SHALL RETAIN A LICENSED SURVEYOR TO SURVEY ALL LOAD BEARING WALLS, PIERS AND COLUMNS TO BE SHORED. THE SURVEYOR SHALL CHECK THE DATUM OF SUCH STRUCTURAL ELEMENTS EVERY TWO WEEKS FOR THE DURATION OF THE WORK. LANDMARKED BUILDINGS SHALL BE CHECKED EVERY FIVE WORKING DAYS.

8. THERE SHALL BE A PRE-CONSTRUCTION MEETING WITH THE OWNER, ARCHITECT, ENGINEER OF RECORD, GENERAL CONTRACTOR AND SUB-CONTRACTOR(S) PRIOR TO WORK COMMENCING.

9. ALL ADJACENT PROPERTIES, INCLUDING BUT NOT LIMITED TO EXTERIOR WALLS AND FOOTING ARE TO BE OBSERVED BY THE ENGINEER OF RECORD PRIOR TO WORK COMMENCING.

10. THE CONTRACTOR SHALL REQUEST PERMISSION TO ENTER BUILDINGS DIRECTLY ADJACENT TO THE AREAS OF PROPOSED SHORING.

11. NO FOUNDATION OR EARTHWORK PERMIT SHALL BE ISSUED UNTIL AT LEAST FIVE DAYS AFTER A WRITTEN NOTICE OF THE PERMIT APPLICATION HAS BEEN PROVIDED BY THE APPLICANT TO THE OWNER OF ALL ADJOINING LOTS, BUILDINGS AND SERVICE FACILITIES, WHOM MAY BE AFFECTED BY THE PROPOSED FOUNDATION WORK OR EARTHWORK OPERATIONS.

12. SHORING SHALL BEAR ON SUBGRADE HAVING A BEARING CAPACITY EQUAL TO OR GREATER THAN THE SUBGRADE OF THE EXISTING FOUNDATION. THE SUBGRADE AT THE LEVEL OF THE EXISTING FOUNDATION SHALL BE INSPECTED BY A LICENSED PROFESSIONAL ENGINEER RETAINED BY THE OWNER TO VERIFY THE BEARING CAPACITY, AND DEFICIENCIES BROUGHT TO THE ATTENTION OF THE ENGINEER OF RECORD.

13. DO NOT TRANSFER THE BUILDING LOAD ONTO NEW WALLS UNTIL ALL WALLS HAVE ATTAINED 50% OF THE CONCRETE DESIGN STRENGTH, AS CONFIRMED BY THE CYLINDER TESTS, OR 96 HOURS, U.O.N.

14. DO NOT PLACE BACKFILL AGAINST NEW WALLS UNTIL CONFIRMED BY THE CYLINDER TEST, OR 96 HOURS, U.O.N.

15. FOR UNDERPINNING, ALL CONCRETE SHALL BE NORMAL WEIGHT CONCRETE WITH A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS.

16. FOR UNDERPINNING, ALL GROUT SHALL BE NONSHRINK WITH A MINIMUM COMPRESSIVE STRENGTH OF 5,000 PSI.

17. FOR UNDERPINNING, ALL DRYPACK SHALL BE A MIXTURE OF 1 PART CEMENT AND 2 PARTS DAMP SAND, WITH 0" SLUMP.

18. THE EXTENT OF THE SHORING SHALL BE DETERMINED UPON REVIEW OF THE SOILS REPORT, TEST PIT DATA AND EXISTING CONDITIONS BY A LICENSED PROFESSIONAL ENGINEER RETAINED AS REVIEWED AND REPORTED UPON TO THE ARCHITECT.

19. EXCAVATION BELOW THE WATER TABLE SHOULD BE AVOIDED, IF POSSIBLE. DEWATER THE SITE PRIOR TO EXCAVATION. EXCAVATION MAY ONLY PROCEED AFTER REVIEW BY THE ENGINEER OF RECORD.

20. ALL SIDES OR SLOPES OF EXCAVATIONS OR EMBANKMENTS SHALL BE INSPECTED AFTER RAINSTORMS.

21. EXCAVATED MATERIAL AND SUPERIMPOSED LOADS SUCH AS EQUIPMENT AND TRUCKS SHALL NOT BE PLACED CLOSER TO THE EDGE OF THE EXCAVATION THAN A DISTANCE EQUAL TO ONE AND ONE-HALF TIMES THE DEPTH OF SUCH EXCAVATION.

22. THE SHORING SHALL BE INSTALLED IN A MANNER SUCH THAT THE EXPOSED FACE OF THE CONCRETE IS VERTICAL (OR AS OTHERWISE SPECIFIED), CLEAN AND NEAT.

23. EXISTING STONE/RUBBLE WALLS TO BE SHORED SHALL BE TREATED BY PRESSURE INJECTED GROUT AT THE DIRECTION OF THE ENGINEER OF RECORD, AS PER NY BC CHAPTER 33.

B. PROCEDURE FOR INSTALLATION OF SOLDIER PILES:

24. DRIVE SOLDIER PILE INTO HOLE AS PER DETAILS. LEVEL VERTICAL AND SHIM PILE IF AS REQUIRED.

25. AFTER ALL PILES HAVE BEEN SET, PROCEED TO INSTALL SHEETING FOR SOLDIER PILES. PLACE HORIZONTAL SHEETING INSIDE FLANGE OF PILES.

26. WHERE EVIDENCE OF WATER IS ENCOUNTERED, LEAVE 2" VERT. SPACING BETWEEN PLANKS TO ALLOW WATER TO BLEED-OUT, AND TO AVOID BUILD-UP OF WATER PRESSURE. FILL SPACING BETWEEN PLANKS WITH LEAN CONCRETE TO PREVENT SOIL RUN-OFF.

C. EXCAVATION SHORING MATERIALS & TESTING:

29. STRUCTURAL STEEL, W OR HP SOLDIER PILES, WALES, AND RAKERS SHALL MEET OR EXCEED REQUIREMENTS OF ASTM A-572, GRADE 50.

30. MISCELLANEOUS STEEL FOR PLATES OR OTHER CONNECTIONS SHALL BE ASTM A-36

31. TIMBER LAGGING, USE ROUGH CUT FULL SIZE CONSTRUCTION GRADE LAGGING MINIMUM ALLOWABLE BENDING STRESS MUST BE AT LEAST 1200 PSI. USE 3.0 INCH THICK LAGGING UNLESS OTHERWISE NOTED.

32. WELDING, ALL WELDING TO PERFORMED BY CERTIFIED WELDERS. USE E-70XX ELECTRODES. CONFORM TO AWS D1.1 REQUIREMENTS.

D. MONITORING:

34. OPTICAL MONITORING & SURVEY

35. ESTABLISH SUFFICIENT PRE-CONSTRUCTION MONITORING POINTS ON EACH ADJACENT BUILDING. MONITOR BUILDINGS FOR LATERAL & VERTICAL MOVEMENTS.

36. MONITOR SUFFICIENT NUMBER OF TOPS OF SOLDIER PILES FOR LATERAL MOVEMENTS.

37. ESTABLISH & MONITOR SIDEWALK CURB AND STREET SURFACE SETTLEMENT POINTS.

38. SEND E-MAIL AND PRINTED COPY TO ENGINEER ON SAME DAY OF READINGS. PROVIDE TIME-MOVEMENT PLOTS TO ENGINEER ON A DAILY BASIS.

39. PERFORM ONE DAILY READING WHEN EXCAVATION OR UNDERPINNING WORK IS PERFORMED WITHIN 40 FT. (IN PLAN) OF THAT MONITORING POINT, AFTER EXCAVATION WORK IS COMPLETED, PERFORM ONE READING PER WEEK UNTIL FOUNDATION WALLS AND GRADE SLAB ARE CONSTRUCTED. FURTHER MONITORING IS LEFT TO THE DISCRETION OF THE ARCHITECT AND THE STRUCTURAL ENGINEER.

40. IMMEDIATELY NOTIFY ENGINEER WHEN SETTLEMENTS OR LATERAL MOVEMENTS REACH OR SLIGHTLY EXCEED 0.250 INCHES, 0.375 INCHES, AND 0.500 INCHES. IF LATERAL BUILDING MOVEMENT EXCEEDS 0.500 INCHES, FURTHER ACTION MAY BE REQUIRED.

E. VIBRATION MONITORING:

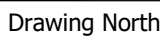
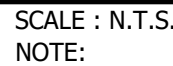
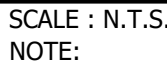
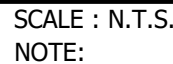
41. MONITOR ADJACENT STRUCTURES FOR VIBRATIONS DURING CONSTRUCTION.

42. DURING SOLDIER PILE INSTALLATION MONITOR PARTICLE VELOCITY AND ACCELERATION BY MEANS OF A SEISMOGRAPH OR OTHER APPROVED EQUIVALENT. LIMITS ON PEAK PARTICLE VELOCITY HAVE TO BE ESTABLISHED WITH THE GEOTECHNICAL ENGINEER AND MUST FOLLOW NY BUILDING CODE CRITERIA.

43. SEND E-MAIL AND PRINTED COPY TO ENGINEER ON SAME DAY OF READINGS.

44. SEND DAILY FIELD REPORT, AND RELATING WORK PROGRESS PICTURES TO ENGINEER VIA E-MAIL AND PRINTED COPY.

45. INDEPENDENT MONITORING FIRM MUTUALLY ACCEPTABLE TO THE ENGINEER AND THE CONTRACTOR HAS TO BE ASSIGNED.



Client Name and Address

Project Information

TAX INFO:

SEC 79.13
BLOCK 2
TAX LOT 91

Job No. 25-021

Scale	AS NOTED
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Date 13 SEPT 2024

Drawn By K.W.

Checked By M.M.

She

Seal & Signature

