



September 1, 2021

Village of Mamaroneck
Harbor & Coastal Zone Management Commission
169 Mt. Pleasant Avenue
Mamaroneck, NY 10543

Attention: Mr. Thomas Burt, Chairman

Reference: Applications for Floating Dock
Goodman, 4 Shore Road

Dear Chairman Burt and Commission Members:

RACE COASTAL ENGINEERING ("RACE"), on behalf of the Applicant/Owner, Robert Goodman, are pleased to submit responses to comments provided by John Kellard, P.E., Consulting Village Engineer. Mr. Kellard's comments are reiterated below by our response.

1. The plan proposes disturbance within a 100-year FEMA Floodplain Zone VE (Elevation 15). The limits and elevation of each shall be illustrated on the plan. A Floodplain Development Permit will be required in accordance with Chapter 186, Flood Damage Prevention, of the Village Code.

The plans have been updated to depict the FEMA flood zones and the proposed disturbance within the flood zone to construct the concrete foundation for the gangway attachment. The disturbance will be limited to approximately 130 square feet / 15 cubic yards. Necessary sedimentation and erosion control measures will be implemented and are noted on the plans. RACE has prepared the form for Floodplain Development Permit (attached).

2. The plan proposes disturbances with the tidal wetland/buffer. A local Wetland Permit will be required in accordance with Chapter 340, Freshwater Wetlands, of the Village Code.

This is noted and a Wetlands Permit application has been previously filed and under review as part of this project.

3. The applicant has received a NYSDEC Permit for Regulated Tidal Wetlands and Coastal Erosion Hazard, dated March 9, 2021. The Permittee's obligations are outlined with the DEC permit.

Correct. No further action on this item.

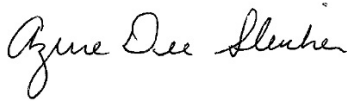
4. The applicant has received a US Department of Army letter of permission for the project, dated April 1, 2021. The Permittee's obligations are outlined within the Permit, inclusive of special conditions.

Correct. No further action on this item.

We look forward to your review and approval of this project.

Very truly yours,

RACE COASTAL ENGINEERING



Azure Dee Sleicher, PE
Vice President, Coastal Engineering

Copy: Amber Nowak, Village Planner
 Frank Tavalacci, Building Inspector

Enclosures: Revised Project Plans (7 Sheets)
 Floodplain Development Permit Application Forms



RESIDENTIAL DOCK
ROBERT GOODMAN
4 SHORE ROAD
MAMARONECK, NY 10580

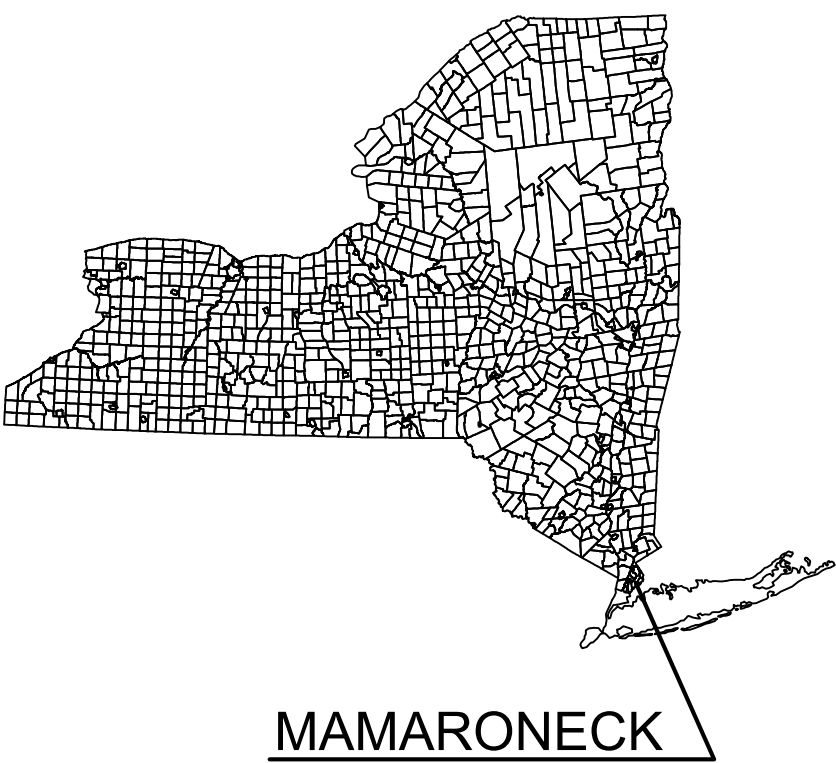
SEPTEMBER 1, 2021

LIST OF DRAWINGS

DWG. No.	DRAWING TITLE
1	TITLE SHEET, DRAWING LIST & VICINITY MAP
2	PROJECT NOTES - 1 of 2
3	PROJECT NOTES - 2 of 2
4	EXISTING SITE PLANS & EXISTING SECTION
5	PARTIAL SITE PLAN & SECTION
6	FLOAT STOP FRAMING AND FOUNDATION PLAN
7	SECTIONS & DETAILS



VICINITY MAP



MAMARONECK



AERIAL PHOTO

REV	DATE	DESCRIPTION
FOR VILLAGE OF MAMARONECK REVIEW		
		611 Access Road Stratford, CT 06615 Tel.: 203-377-0663 racecoastal.com
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Prepared for	ROBERT GOODMAN 1013 COVE ROAD MAMARONECK, NY 10543	
Project	RESIDENTIAL DOCK 4 SHORE ROAD MAMARONECK, NY 10580	
Drawing	TITLE SHEET, DRAWING LIST & VICINITY MAP	
Designed Job No.	Drawn MJW Date 2020131	Checked MJW Date 09/01/2021
		MRR Drawing No. 1 of 7



PROJECT NOTES

DESCRIPTION OF WORK:

1. THE WORK COVERED UNDER THESE CONTRACT DOCUMENTS, INCLUDING THE DRAWINGS, PROJECT NOTES, AND ALL AMENDMENTS, CONSISTS OF PROVIDING ALL PLANT, LABOR, SUPERVISION, EQUIPMENT APPLIANCES AND MATERIALS AND IN PERFORMING ALL OPERATIONS IN CONNECTION WITH AT LEAST, BUT NOT NECESSARILY LIMITED TO, THE FOLLOWING ITEMS:
- DEMOLITION OF PORTION OF EXISTING SEAWALL
 - INSTALL CONCRETE LANDING
 - FURNISH AND INSTALL ROCK SOCKET PILES
 - FURNISH AND INSTALL FLOATING DOCK
 - FURNISH AND INSTALL GANGWAY
 - COORDINATE WORK WITH OWNER AND PROTECT UTILITIES

2. THE CONTRACTOR SHALL PROVIDE ALL ITEMS AND ACCESSORIES REQUIRED TO COMPLETE ALL ASPECTS OF THE WORK NEEDED FOR A COMPLETE AND PROPER INSTALLATION, ALL IN STRICT ACCORDANCE WITH THE CONTRACT DOCUMENTS.

DESIGN CRITERIA:

1. PIER STRUCTURE DESIGNED IN ACCORDANCE WITH THE NY STATE BUILDING CODE.
2. THE FLOATING DOCK AND GANGWAY SUPPORT STRUCTURES HAVE BEEN DESIGNED ACCORDANCE WITH THE APPROPRIATE LOADS AS FOLLOWS:
- ASSOCIATED DEAD LOADS
 - UNIFORM LIVE LOAD OF 40 PSF
 - WIND/WAVE LOAD: 100-YEAR FREQUENCY TIDAL FLOOD ELEVATIONS AS DEFINED BY FEMA WITH 100-YEAR FREQUENCY WIND GENERATED WAVE LEADING ADJUSTED FOR LOCAL BATHYMETRY AS FOLLOWS:
 - LATERAL DOCK LOAD = 115 POUNDS PER FOOT
 - PILE LOAD = 146 POUNDS APPLIED AT EL. +6.5'

GENERAL NOTES:

1. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM 1988 (NAV88).
2. PROPERTY LINES AND UPLAND STRUCTURES TAKEN FROM A DRAWING TITLED "4 SHORE ROAD LANDSCAPE DEVELOPMENT, REVISED GRADING", PREPARED FOR ROBERT GOODMAN, BY JANICE PARKER LANDSCAPE ARCHITECTS, DATED 3/30/2020.
3. ADDITIONAL SITE INFORMATION OBTAINED BY RACE COASTAL ENGINEERING ON 12/09/2020 AND CAN ONLY REPRESENT CONDITIONS AT THE TIME OF THE SURVEY.
4. WORK SHALL COMPLY WITH FEDERAL, STATE, AND LOCAL LAWS AND STATUTES AND THE REQUIREMENTS AND CONDITIONS OF ALL REGULATORY PERMITS ISSUED FOR THE WORK.
5. THESE DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE PROJECT REGULATORY PERMITS. THE CONTRACTOR SHALL COMPLY TO ALL CONDITIONS OF THOSE PERMITS. THE CONTRACTOR IS ADVISED THAT THE REGULATORY PERMITS FOR THIS PROJECT MAY CONTAIN ADDITIONAL REQUIREMENTS THAT, AFTER ANY ADDENDUM, SUPERSEDE THE DRAWING NOTES. THE CONTRACTOR IS FURTHER ADVISED THAT IN THE CASE OF ANY DISCREPANCIES WITHIN THE CONTRACT DOCUMENTS FOUND BEFORE CONSTRUCTION, THE FINAL DECISION AS TO WHAT INFORMATION TAKES PRECEDENCE WILL BE MADE BY THE ENGINEER OF RECORD ON THE BASIS OF THAT INTENT.
6. EXISTING CONDITIONS AND DIMENSIONS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION AND FABRICATION OR ORDERING OF ANY CONSTRUCTION MATERIALS.
7. SECTIONS AND DETAILS APPLY TO SAME AND SIMILAR CONDITIONS UNLESS SPECIFICALLY NOTED OTHERWISE HEREIN.
8. DAMAGE TO ANY PROPERTY, PRIVATE OR OF PUBLIC TRUST, OCCURRING DURING THE CONSTRUCTION BY THE CONTRACTOR, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER. COMPENSATION TO THE CONTRACTOR WILL NOT BE CONSIDERED.
9. THE CONTRACTOR SHALL SAFEGUARD AND PROTECT ALL EXCAVATIONS.
10. THE CONTRACTOR SHALL USE ADEQUATE NUMBERS OF SKILLED WORKMEN WHO ARE THOROUGHLY TRAINED AND EXPERIENCED IN THE NECESSARY CRAFTS AND WHO ARE COMPLETELY FAMILIAR WITH THE SPECIFIED REQUIREMENTS AND METHODS NEEDED FOR PROPER PERFORMANCE OF THE WORK.
11. THE CONTRACTOR SHALL USE EQUIPMENT ADEQUATE IN SIZE, CAPACITY, AND NUMBERS, AND MAINTAINED TO THE REQUIREMENTS OF ALL FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS TO ACCOMPLISH THE WORK.
12. THE CONTRACTOR SHALL PROTECT ALL WETLANDS AND COASTAL RESOURCES FROM INTRUSION BY TURBID WATERS, CONSTRUCTION DEBRIS, CONSTRUCTION EQUIPMENT, OR PERSONNEL DURING ALL WORK ACTIVITIES.
13. THE CONTRACTOR SHALL OBTAIN AND INCLUDE IN ITS FEE, THE COST FOR NECESSARY PERMITS, LICENSES, CERTIFICATES OF INSPECTION, AND LEGAL EXPENSES IN CONNECTION WITH THE WORK OF THIS CONTRACT. THE OWNER HAS OBTAINED NECESSARY REGULATORY PERMITS REQUIRED FOR THE WORK IN REGULATED AREAS. THE CONTRACTOR SHALL REQUEST COPIES OF THOSE REGULATORY PERMITS AND MAKE PROVISION IN THIS WORK AND IN THE COST OF THE WORK FOR ALL APPLICABLE CONDITIONS OF THOSE PERMITS. FAILURE TO CONSIDER ANY CONDITION OF THE REGULATORY PERMITS AS A PART OF THE BID SHALL NOT RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITY TO APPLY THOSE CONDITIONS TO HIS WORK AND SHALL BE INCLUDED IN THE CONTRACT SUM.
14. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE AND PROTECT FROM DAMAGE ALL UTILITIES, UTILITY STRUCTURES, FUEL LINES & TANKS OR ANY UNKNOWN UTILITIES OR STRUCTURES PRIOR TO ANY WORK.
15. LABOR, EQUIPMENT, AND MATERIALS REQUIRED TO PERFORM THE WORK THAT, UPON COMPLETION, ARE NOT A PART OF THE WORK, SHALL BE FURNISHED, INSTALLED, AND SUBSEQUENTLY REMOVED FROM THE SITE BY THE CONTRACTOR.
16. TEMPORARY WORK SHALL BE SUBJECT TO THE REQUIREMENTS OF THE STATE AND APPLICABLE LOCAL BUILDING CODES.

PROJECT LAYOUT:

1. THE CONTRACTOR SHALL HAVE A PROFESSIONAL LAND SURVEYOR, LICENSED IN THE STATE OF NEW YORK, TO LAYOUT THE PROPOSED STRUCTURE. THE CONTRACTOR SHALL PROVIDE THE OWNER WITH AN "AS-BUILT" DRAWING OF THE WORK CONFORMING TO AN A-2 AND T-2 STANDARDS FOLLOWING THE COMPLETION OF THE WORK AT THE SITE. THE COST FOR SUCH ITEMS SHALL BE INCLUDED IN THE CONTRACT SUM FOR THE WORK.
2. ANY STRUCTURES NOT CONSTRUCTED IN THE POSITIONS DEPICTED ON THE PROJECT PLANS SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

SELECTIVE DEMOLITION AND DISPOSAL:

1. SELECTIVE DEMOLITION AND DISPOSAL SHALL BE PERFORMED IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL PERMIT AND BUILDING CODE REQUIREMENTS.

2. THE CONTRACTOR SHALL TAKE REASONABLE CARE IN REMOVING ELEMENTS SELECTED TO BE DEMOLISHED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. DAMAGE OR DESTRUCTION BY THE CONTRACTOR TO EXISTING ELEMENTS DESIGNATED TO REMAIN SHALL BE REPAIRED OR REPLACED IN-KIND AT THE DISCRETION OF THE OWNER AT NO ADDITIONAL COST.
3. PRIOR TO COMMENCEMENT OF SELECTIVE DEMOLITION, THE CONTRACTOR SHALL SUBMIT A DISPOSAL PLAN FOR ITEMS TO BE DEMOLISHED. DEMOLITION MATERIAL DESIGNATED BY THE OWNER TO BE REMOVED FROM THE SITE SHALL BECOME THE PROPERTY OF THE CONTRACTOR. THE DEBRIS DISPOSAL PLAN SHALL ACKNOWLEDGE THIS OWNERSHIP AND SHALL IDENTIFY THE MEANS AND METHODS AND FINAL DISPOSITION FOR DISPOSAL MATERIALS.
4. COMPLETELY REMOVE ITEMS DESIGNATED LEAVING SURFACES CLEAN, SOUND, AND READY TO RECEIVE NEW MATERIALS AS SPECIFIED IN THE CONTRACT DOCUMENTS.

TIMBER PILES:

1. TIMBER PILES SHALL BE GREENHEART (CHLOROCARDIUM RODIEI)
2. GREENHEART (CHLOROCARDIUM RODIEI) PILES SHALL BE UNTREATED W/ MIN. 12" BUTT DIAMETER, AND MEET THE REQUIREMENTS OF PRIME GRADING PER THE GUYANA TIMBER GRADING RULES FOR HARDWOOD, 3RD EDITION, 2002, PUBLISHED BY THE GUYANA FORESTRY COMMISSION, REVISED 2016.
3. GREENHEART (CHLOROCARDIUM RODIEI) PILES PILES SHALL ORIGINATE FROM A SUSTAINABLE SOURCE IN GUYANA. NO LATER THAN THE TIME OF DELIVERY OF MATERIALS TO THE SITE, A CERTIFICATION LETTER FROM THE GREENHEART SUPPLIER SHALL BE PROVIDED TO THE ENGINEER, WHICH SHALL VERIFY: PILE SPECIFICATIONS, VERIFICATION OF SPECIES, LEGAL IMPORTATION, AND SUSTAINABLE HARVEST.
4. TIMBER PILES SHALL BE CUT FROM SOUND LIVE TREES, FREE OF ANY DEFECTS WHICH WILL IMPAIR THEIR STRENGTH, OR USEFULNESS FOR THE PURPOSE INTENDED OR THAT WILL PREVENT PROPER INSTALLATION. ALL TIMBERS SHALL BE DEBARBED AND CLEANLY CUT.
5. TIMBER PILES WILL BE SUBJECT TO INSPECTION BEFORE AND/OR AFTER SHIPMENT TO THE SITE AT THE OPTION OF THE ENGINEER. ANY TIMBER WHICH DOES NOT CONFORM TO ALL THE REQUIREMENTS WILL BE REJECTED.
6. TIMBER PILES TO BE CAPPED WITH CONICAL PILE CAP.

PILE INSTALLATION - DRILLED INTO ROCK:

1. INSTALLATION EQUIPMENT AND METHODS ARE SUBJECT TO ACCEPTANCE OF THE ENGINEER. ALL MEANS OF DRILLING AND PILE INSTALLATION SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO MOBILIZATION TO THE SITE.
2. EQUIPMENT AND METHODS FOR DRILLING PILES SHALL BE SUCH THAT PILES ARE INSTALLED IN THEIR PROPER POSITION AND ALIGNMENT.
3. PILES SHALL BE SET IN MIN. 16"00 HOLE TO A MIN. DEPTH OF 5' EMBEDMENT INTO COMPETENT NATIVE MATERIAL AT EACH POSITION.
4. PILES SHALL BE CENTERED IN EACH HOLE AND GROUTED IN PLACE.
5. PILES SHALL BE SECURED IN POSITION AND PROTECTED FROM MOVEMENT FOR A MINIMUM OF TWO (2) DAYS OR AS APPROVED BY THE ENGINEER.
6. PILES WHICH ARE DAMAGED DURING HANDLING OR DRILLING SHALL BE REMOVED AND DISPOSED OFF-SITE AND REPLACED WITH NEW PILES.
7. THE CONTRACTOR SHALL KEEP AN ACCURATE RECORD OF EACH PILE DRILLED. THE RECORDS SHALL CLEARLY STATE THE FINAL PILE EMBEDMENT INTO ROCK.
8. PILES SHALL BE DRILLED NO LESS THAN DEPTH INDICATED INTO COMPETENT ROCK AND SHALL BE INSTALLED TO THE FULL DEPTH OF THE DRILLED HOLE. DRILLING OPERATION AND PILE INSTALLATION SHALL BE WITNESSED BY THE ENGINEER.
9. CONTRACTOR SHALL SUBMIT TO THE ENGINEER MEANS AND METHODS OF PILE INSTALLATION INCLUDING DRILLING EQUIPMENT FOR REVIEW.
10. SOIL AND ROCK CUTTINGS SHALL BE COLLECTED AND REMOVED FROM THE SITE.
11. GROUT SHALL BE INSTALLED WITH A TREMIE TUBE EXTENDED TO THE BOTTOM OF THE DRILLED HOLE AND SHALL BE PERFORMED IN A CONTINUOUS OPERATION. AT NO TIME SHALL THE TREMIE TUBE BE ALLOWED TO BREECH THE TOP OF GROUT SURFACE.
12. GROUT SHALL BE FIVE STAR CEMENTITIOUS "UNDER-WATER HIGH STRENGTH GROUT" AS MANUFACTURED BY FIVE STAR PRODUCTS SHELTON, CT OR EQUAL AS APPROVED BY ENGINEER.

TIMBER PILE INSTALLATION (ALTERNATE):

1. DRIVEN TIMBER PILES SHALL HAVE A "SAFE LOAD" AS NOTED BELOW, AS DETERMINED BY THE ENGINEERING NEWS FORMULA EVALUATION. AN IMPACT HAMMER WITH A KNOWN RATING WILL BE REQUIRED TO VERIFY THE CAPACITY. IMPACT HAMMER SPECIFICATIONS SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO PILE INSTALLATION. PILES SHALL BE DRIVEN TO A MINIMUM PILE CAPACITY OR MINIMUM EMBEDMENT AS NOTED IN NOTE 2 BELOW, WHICHEVER IS DEEPER.
- TIMBER FOUNDATION PILES - 10 TONS
2. PILES SHALL BE DRIVEN TO A MINIMUM EMBEDMENT BELOW FINISHED GRADE AS NOTED BELOW. EMBEDMENT AND METHODS FOR INSTALLING PILES SHALL BE SUCH THAT PILES ARE INSTALLED IN THEIR PROPER POSITION AND ALIGNMENT.
- TIMBER PILE EMBEDMENT - 15 FT
3. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY IF THE ABOVE CRITERIA IS NOT ABLE TO BE MET DUE TO FIELD CONDITIONS.
4. PILES SHALL BE DRIVEN WITHIN 3 INCHES OF THE POSITIONS INDICATED ON THE DRAWINGS. PILES SHALL BE DRIVEN STRAIGHT AND TRUE WITH DEVIATION FROM LONGITUDINAL AXIS OF NOT MORE THAN 2%.
5. CONTRACTOR SHALL PROVIDE A TEST PILE AND PERFORM A TEST AT (2) PILE LOCATIONS. TEST PILE SHALL BE USED TO DETERMINE DRIVEABILITY AND EMBEDMENT DEPTH. CONTRACTOR MAY USE TEST PILE(S) AS PRODUCTION PILES IF THEY MEET THE REQUIREMENTS SPECIFIED HEREIN.
6. PILES SHALL BE INSTALLED WITH CONSIDERATION FOR STABILITY OF ADJACENT STRUCTURES. PILE DRIVING TECHNIQUE SHALL LEAVE THE STRENGTH OF THE PILES UNIMPAIRED AND IN A STATE WHERE LOAD BEARING RESISTANCE FULLY DEVELOPS AND IS RETAINED. IF CONDITIONS AT THE SITE ARE SUCH THAT THE TIP, THE BODY, OR THE BUTT OF THE PILE IS LIKELY TO SUFFER DAMAGE DURING INSTALLATION, SPECIAL PRECAUTIONS SUCH AS PRE-DRILLING OR SPUDGING MUST BE TAKEN BY THE CONTRACTOR TO AVOID SUCH DAMAGE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE PLACEMENT OF UNDAMAGED PILES TO THE LOADING CAPACITY, REQUIRED TIP ELEVATION, AND EMBEDMENT IN SOUND MATERIAL.
7. ALL PILES SHOWING SIGNS OF HEAVING OR LIFTING OR PILES INSTALLED IN THE WRONG LOCATION SHALL BE EXTRACTED AND REINSTALLED TO THE EMBEDMENT DEPTH AND LOCATION AS SPECIFIED, AT NO ADDITIONAL COST TO THE OWNER.

8. THE PILE DRIVING HAMMER SHALL BE OF SUITABLE SIZE FOR THE PROPER INSTALLATION OF THE PILE AND SHALL BE CAPABLE, IN ANY CASE, OF DELIVERING AN ENERGY PER BLOW AS REQUIRED BY APPROPRIATE DRIVING RESISTANCE METHODS.
9. SUITABLE ANVILS OR CUSHIONS SHALL BE USED TO PREVENT DAMAGE TO THE PILES, AS REQUIRED. ANVIL OR CUSHION TYPES SHALL BE CHOSEN BASED UPON THE PILE SIZE AND MATERIAL TYPE. THE CUSHIONS TO BE USED SHALL PROVIDE SUFFICIENT PROTECTION TO PREVENT DAMAGE TO THE PILE, BUT SHALL NOT SHAL A SIGNIFICANT AMOUNT OF ENERGY FROM THE HAMMER BLOW. IF NECESSARY, STEEL BANDS OR CAPS SHALL BE USED WHILE DRIVING TO PREVENT PILE DAMAGE.
10. THE BUTT ENDS OF THE PILES SHALL BE CUT SQUARE WITH THE AXIS AND THE EDGES CHAMFERED.
11. PILES WHICH ARE DAMAGED AND HAVE HEADS WHICH SPLIT, BROOM, CRACK, OR CRUSH DURING DRIVING SHALL BE REMOVED AND DISPOSED OFF-SITE AND REPLACED WITH NEW PILES. NO ADDITIONAL PAYMENT WILL BE MADE BY THE OWNER FOR REPLACEMENT PILES OR INSTALLATION.
12. PILES SHALL BE DRIVEN TO A STRATUM OF SATISFACTORY MATERIAL AND SHALL BE ACCURATE AS TO LOCATION AND ALIGNMENT. PILE DRIVING SHALL BE CONTINUOUS FOR EACH PILE UNTIL THE REQUIRED RESISTANCE TO DEVELOP THE CAPACITY OF THE PILE IS ACHIEVED OR UNTIL THE MINIMUM EMBEDMENT IS REACHED, WHICHEVER IS DEEPER.
13. THE CONTRACTOR SHALL KEEP AN ACCURATE RECORD OF EACH PILE DRIVEN. THE RECORDS SHALL INCLUDE THE BUTT AND TIP DIAMETERS, PILE LENGTH, DESIGN CAPACITY, PENETRATION DURING DRIVING, CUT-OFF LENGTHS, RESULTS OF ANY TESTS, DRILLING OR PROBING INFORMATION, IF ANY, AND ALL OTHER INFORMATION REGARDING EACH PILE DRIVEN. THESE RECORDS SHALL BE SUBMITTED TO THE ENGINEER ON A DAILY BASIS.

FOUNDATION:

1. THE STRUCTURE HAS BEEN DESIGNED TO REST ON SOIL HAVING A PRESUMPTIVE BEARING VALUE OF 3,000 PSF. AN ENGINEER SHALL REVIEW THE BEARING STRATA PRIOR TO CASTING CONCRETE IN ORDER TO VERIFY THE PRESUMPTIVE BEARING VALUE.
2. FOOTINGS SHALL BE PLACED ON UNDISTURBED VIRGIN SOIL, FREE OF FROST, MUD, OR ICE, OR CONTROLLED FILL.
3. FOOTING SUB-GRADE SHALL BE COMPACTED USING A VIBRATORY TAMPER OR A JUMPING SOIL RAMMER AFTER THE SOIL HAS BEEN INSPECTED AND APPROVED.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEWATERING, SHORING, SHEETING, OR BRACING REQUIRED TO MAINTAIN A SAFE, DRY, AND STABLE EXCAVATION.
5. NO FOOTINGS SHALL BE PLACED IN WATER.
6. SOIL ADJACENT TO AND BELOW FOOTINGS SHALL BE KEPT FROM FREEZING AT ALL TIMES.
7. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITY LINES, SEWERS, AND FUEL STORAGE TANKS TO AVOID ANY DAMAGE TO THESE. CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" PRIOR TO ANY EXCAVATION.
8. BACKFILL OF EXCAVATIONS PERFORMED BY THE CONTRACTOR AS A PART OF THE WORK OR TO ACCOMMODATE THE WORK, SHALL CONSIST OF FREE-DRAINING MATERIAL CONFORMING TO THE FOLLOWING REQUIREMENTS:
- FREE-DRAINING MATERIAL SHALL CONSIST OF A MIXTURE OF SAND, GRAVEL, ROCK FRAGMENTS, QUARRY RUN STONE.
 - AND SHALL NOT HAVE MORE THAN 70%, BY WEIGHT, PASSING THE NO. 40 SIEVE.
 - AND NOT MORE THAN 10%, BY WEIGHT, PASSING THE NO. 200 MESH SIEVE.
2. BACKFILL MATERIAL SHALL BE INSTALLED IN 12" LIFTS AND EACH LAYER SHALL BE COMPACTED TO 95% OF THE MODIFIED PROCTOR TEST ASTM D1557/AASHTO T160.
3. BACKFILL FOR FOUNDATION WALLS AND RETAINING WALLS SHALL BE COMPACTED GRANULAR SOIL WITH NOT MORE THAN 10% PASSING THE #200 SIEVE. IF ON-SITE SOIL DOES NOT MEET THIS SPECIFICATION, THE CONTRACTOR SHALL BRING IN SOIL FROM OFF-SITE AT HIS OWN EXPENSE.
4. WHERE FOOTINGS ARE BELOW THE GROUNDWATER ELEVATION, PLACE 6 INCHES OF CRUSHED STONE UNDER FOOTINGS. CRUSHED STONE SHALL BE PLACED AFTER THE SUBSOIL HAS BEEN INSPECTED, APPROVED, AND TAMPED.

CAST-IN-PLACE CONCRETE:

1. CONCRETE SHALL BE NORMAL WEIGHT WITH A MINIMUM COMPRESSIVE STRENGTH OF 5000 PSI AT 28 DAYS.
2. CAST-IN-PLACE CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF ACI 301 - LATEST EDITION, "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS."
3. CONFORM TO THE RECOMMENDATIONS OF ACI 304 - LATEST EDITION, "RECOMMENDED PRACTICE FOR MEASURING, MIXING, TRANSPORTING, AND PLACING CONCRETE."
4. CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 318-LATEST EDITION, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE."
5. READY MIX PLANT EQUIPMENT AND FACILITIES SHALL CONFORM TO THE "CHECK LIST FOR CERTIFICATION OF READY MIXED CONCRETE PRODUCTION FACILITIES" OF THE NRMCA.
6. SUBMIT CONCRETE MIX DESIGN, WITH KNOWN TEST RESULTS, TO THE ENGINEER FOR REVIEW. THE CONCRETE MIX DESIGN SUBMITTAL SHALL CONSIST OF AT LEAST THE FOLLOWING:
- TYPE OF CEMENT.
 - DRY WEIGHT OF CEMENT.
 - SATURATED SURFACE-DRY WEIGHTS OF FINE AND COARSE AGGREGATES.
 - SPECIFIC GRAVITY OF FINE AND COARSE AGGREGATES.
 - QUANTITIES, TYPE, NAME AND PRODUCER OF ADMIXTURES, AS APPLICABLE.
 - TOTAL WEIGHT OF WATER, INCLUDING THE WATER WHICH IS ABSORBED BY AND ON THE SURFACE OF THE AGGREGATES.
 - WATER TO CEMENT RATIO.
 - SUMP: MAXIMUM SLUMP, TAKEN AT THE TRUCK, WILL BE DETERMINED BASED ON THE PUMP HOSE LENGTH. THE MIX DESIGNS SHALL INCLUDE THE ANTICIPATED LOSS OF SLUMP PER 100 FOOT LENGTH OF SPECIFIED HOSE SIZE.
 - STRENGTH TEST DATA OF THE PROPOSED MIX DESIGN AS SPECIFIED HEREIN.

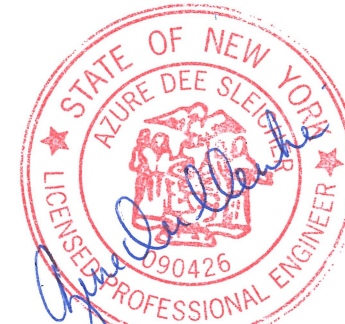
7. SUBMIT CONCRETE BATCH TICKETS FOR EACH TRUCK DELIVERED TO SITE. EACH TICKET SHALL NOTE AT LEAST THE FOLLOWING DATA: DESIGN MIX STRENGTH; BATCH PROPORTIONS INCLUDING ACTUAL WATER AND AGGREGATE MOISTURE CONTENTS; DATE AND BATCH TIME, ARRIVAL TIME AT SITE; DISCHARGE TIME; CONCRETE VOLUME; AND ANY CHANGE TO CONCRETE MADE AT THE SITE.
8. CONCRETE SHALL CONSIST OF THE FOLLOWING MATERIALS:
- PORTLAND CEMENT: TYPE II - LOW ALKALI CONFORMING TO ASTM C 150, "STANDARD SPECIFICATION FOR PORTLAND CEMENT."
 - COARSE AND FINE AGGREGATE SHALL BE NORMAL WEIGHT AND UNIFORMLY GRADED AND CLEAN CONFORMING TO ASTM C33, "STANDARD SPECIFICATION FOR CONCRETE AGGREGATES." DO NOT USE AGGREGATE KNOWN TO CAUSE EXCESSIVE SHRINKAGE.
 - COARSE AGGREGATE SHALL BE CRUSHED ROCK OR WASHED GRAVEL WITH A MAXIMUM SIZE OF 3/4".
 - FINE AGGREGATE SHALL BE NATURAL WASHED SAND OF HARD AND DURABLE PARTICLES VARYING FROM FINE TO PARTICLES PASSING A 3/8" SCREEN, OF WHICH AT LEAST 12% SHALL PASS A 50-MESH SCREEN.
 - WATER SHALL BE CLEAN AND POTABLE.

- AIR ENTRAINING ADMIXTURE SHALL CONFORM TO ASTM C260, "STANDARD SPECIFICATION FOR AIR ENTRAINING ADMIXTURE FOR CONCRETE." THE AIR ENTRAINING AGENT SHALL BE A NON-TOXIC CONCENTRATED SOLUTION OF NEUTRALIZED VINSOL RESIN, SUCH AS "DARAVAIR" AS MANUFACTURED BY W.R. GRACE COMPANY OR EQUIVALENT ACCEPTED BY THE ENGINEER.
- WATER REDUCING ADMIXTURE SHALL CONFORM TO ASTM C494 "STANDARD SPECIFICATION FOR CHEMICAL ADMIXTURES FOR CONCRETE." WATER REDUCING AGENT SHALL BE OF TYPE A, B, C, D, E, F, OR G (AS NOTED IN CONCRETE MIX DESIGN) SUCH AS DARACEM-100" OR WRDA-19" AS MANUFACTURED BY W.R. GRACE COMPANY OR EQUIVALENT ACCEPTED BY THE ENGINEER.
- CURING MATERIALS SHALL CONFORM TO ASTM C309, "STANDARD SPECIFICATION FOR LIQUID MEMBRANE-FORMING COMPOUNDS FOR CURING CONCRETE"; WET BURLAP, OR PLASTIC MEMBRANE.
- CONCRETE SHALL HAVE A MAXIMUM WATER TO CEMENT RATIO OF 0.40.

- CONCRETE SHALL BE PROPORTIONED TO HAVE A SLUMP OF 4 INCHES, ± 1 INCH, AT THE DISCHARGE END OF THE PUMP HOSE. USE WATER REDUCING AGENT AS REQUIRED TO ACHIEVE DESIRED SLUMP RANGE. ADDITION OF WATER AT SITE WILL NOT BE PERMITTED.
- CONCRETE SHALL CONTAIN 5% +/- 1.5% ENTRAINED AIR.
- DESIGN, ERECT, SUPPORT, BRACE, AND MAINTAIN FORMWORK SO IT WILL SAFELY SUPPORT VERTICAL AND LATERAL LOADS WHICH MIGHT BE APPLIED UNTIL SUCH LOADS CAN BE SUPPORTED SAFELY BY THE CONCRETE STRUCTURE IN ACCORDANCE WITH ACI 347 - LATEST EDITION.
- FORM COATING OR WATER SHALL BE APPLIED TO ALL FORMS. IF COATING IS USED, IT SHALL BE APPLIED PRIOR TO PLACEMENT OF REINFORCING STEEL.
- FORM TIES AND SPREADERS SHALL BE OF SUCH TYPE AS TO LEAVE NO METAL CLOSER THAN 3 INCHES FROM ANY EXPOSED CONCRETE SURFACE.
- SLEEVES, INSERTS, ANCHORS, AND EMBEDDED ITEMS REQUIRED FOR ADJOINING WORK OR FOR ITS SUPPORT SHALL BE PLACED PRIOR TO CASTING CONCRETE. ALL EMBEDDED ITEMS SHALL BE POSITIONED ACCURATELY AND SUPPORTED AGAINST DISPLACEMENT
- TRANSIT MIX THE CONCRETE IN ACCORDANCE WITH PROVISIONS OF ASTM C94 - LATEST EDITION.
- DO NOT USE CONCRETE AFTER 90 MINUTES FROM TIME OF INTRODUCTION OF WATER TO THE MIX.
- REMOVE FOREIGN MATTER ACCUMULATED IN THE FORMS.
- RIGIDLY CLOSE OPENINGS LEFT IN THE FORMWORK.
- WET WOOD FORMS IMMEDIATELY PRIOR TO CONCRETE PLACEMENT. WET WOOD FORMS SUFFICIENTLY TO TIGHTEN UP CRACKS. WET OTHER MATERIAL SUFFICIENTLY TO MAINTAIN WORKABILITY OF THE CONCRETE.
- USE ONLY CLEAN TOOLS.
- PERFORM CONCRETE PLACING AT SUCH A RATE THAT CONCRETE WHICH IS BEING INTEGRATED WITH FRESH CONCRETE IS STILL PLASTIC.
- DEPOSIT CONCRETE AS NEARLY AS PRACTICABLE IN ITS FINAL LOCATION SO AS TO AVOID SEPARATION DUE TO REHANDLING AND FLOWING.

- DO NOT USE CONCRETE WHICH BECOMES NON-PLASTIC AND UNWORKABLE, OR DOES NOT MEET REQUIRED QUALITY CONTROL LIMITS, OR HAS BEEN CONTAMINATED BY FOREIGN MATERIALS.
- REMOVE REJECTED AND EXCESS CONCRETE FROM THE JOB SITE.
- FREE-FALL OF CONCRETE DURING PLACEMENT GREATER THAN EIGHT FEET IS PROHIBITED. THE CONTRACTOR SHALL PLACE CONCRETE WITH A TREMIE TUBE FOR DROPS GREATER THAN EIGHT FEET.
- DEPOSIT CONCRETE IN HORIZONTAL LAYERS NOT DEEPER THAN 24 INCHES, AND AVOID INCLINED CONSTRUCTION JOINTS.
- REMOVE TEMPORARY SPREADERS IN FORMS WHEN CONCRETE HAS REACHED THE ELEVATION OF THE SPREADERS.
- CONSOLIDATE EACH LAYER OF CONCRETE IMMEDIATELY AFTER PLACING, BY USE OF INTERNAL CONCRETE VIBRATORS SUPPLEMENTED BY HAND SPADING, RODDING, OR TAMPING.
- DO NOT USE VIBRATORS TO TRANSPORT CONCRETE INSIDE THE FORMS.
- DO NOT USE HORIZONTAL CONSTRUCTION JOINTS, UNLESS SPECIFICALLY SHOWN ON THE DRAWINGS.
- BEGINNING IMMEDIATELY AFTER PLACEMENT, CONCRETE SHALL BE PROTECTED FROM PREMATURE DRYING, EXCESSIVELY HOT OR COLD TEMPERATURES, AND MECHANICAL DAMAGE AND SHALL BE MAINTAINED WITH MINIMAL MOISTURE LOSS AT A RELATIVE CONSTANT TEMPERATURE FOR THE PERIOD NECESSARY FOR HYDRATION OF THE CEMENT AND HARDENING OF THE CONCRETE.

- REINFORCING STEEL SHALL CONFORM TO ASTM 615 GRADE 60, "SPECIFICATION FOR DEFORMED AND PLAIN BILLET STEEL BARS FOR CONCRETE REINFORCEMENT".
- REINFORCING STEEL COATING SHALL CONFORM A767, "STANDARD SPECIFICATION FOR ZINC-COATED STEEL BARS FOR CONCRETE REINFORCEMENT." REINFORCING STEEL SHALL BE CLASS 1 COATING WEIGHT AND SHALL BE FABRICATED PRIOR TO GALVANIZING.
- REINFORCING STEEL SHALL BE ADEQUATELY TIED WITH TIE WIRE AND SUPPORTED WITH CHAIRS THAT HOLD THE BARS TO THE SPECIFIED CLEARANCE. ONE CHAIR SAMPLE SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. NO CLAY OR CONCRETE BRICKS OR ANY OTHER MATERIAL OTHER THAN APPROVED CHAIRS SHALL BE PERMITTED TO SUPPORT REINFORCING STEEL.
- FORM COATING OR WATER SHALL BE APPLIED TO ALL FORMS. IF COATING IS USED, IT SHALL BE APPLIED PRIOR TO PLACEMENT OF REINFORCING STEEL.
- FORM TIES AND SPREADERS SHALL BE OF SUCH TYPE AS TO LEAVE NO METAL CLOSER THAN 3 INCHES FROM ANY EXPOSED CONCRETE SURFACE.



34. IF COLD-WEATHER CONCRETING IS ANTICIPATED, A PRECONSTRUCTION MEETING SHOULD BE HELD TO DEFINE HOW COLD WEATHER CONCRETING METHODS WILL BE USED. WHEN THE MEAN DAILY AMBIENT TEMPERATURE IS AT OR BELOW 40 DEGREES F OR 45 DEGREES F AND FALLING, THE CONTRACTOR SHALL FOLLOW THE REQUIREMENTS OF ACI 306.1 - LATEST EDITION, "STANDARD SPECIFICATION FOR COLD WEATHER CONCRETING".
- SET UP PROPER ENCLOSURE AND HEAT TO 50 DEGREES F FOR AT LEAST TWO (2) HOURS BEFORE STARTING ANY POUR. SET UP INDIVIDUAL THERMOMETERS WITHIN AN ENCLOSURE TO MONITOR AMBIENT TEMPERATURES NEAR THE FACE OF FRESH CONCRETE. THERMOMETERS SHALL BE PLACED AT A MAXIMUM OF 50-FOOT CENTERS, AT MAJOR CORNERS OR RETURNS, AND AT ENDS OF CONCRETE SECTIONS. MONITOR AND RECORD TEMPERATURES IN A LOG AT EARLY MORNING, NOON, AND EARLY EVENING.
 - USE A WATER-REDUCING ADMIXTURE WITH AN ACCELERATED SET, BUT DO NOT USE OR RELY UPON ANY MATERIAL AS AN ANTI-FREEZE. USE OF CALCIUM CHLORIDE IS PROHIBITED.
 - USE VENTED HEATERS WITH BLOWERS SO PLACED THAT THEY DO NOT PRODUCE LOCALIZED HOT SPOTS WHICH MAY DRY OUT THE CONCRETE. EXPOSURE TO EXHAUST GASES FROM COMBUSTION HEATERS IS PROHIBITED FOR THE FIRST 24 HOURS OF THE CURING PERIOD.
 - MAINTAIN THE TEMPERATURE OF THE FORMWORK AT NOT LESS THAN 50 DEGREES F BUT NOT GREATER THAN 70 DEGREES F FOR 48 HOURS AFTER COMPLETION OF POUR. FORMWORK MAY BE STRIPPED AFTER 72 HOURS AFTER COMPLETION OF POUR. AFTER 48 HOURS OF MAINTAINING AT LEAST 50 DEGREES F, THE TEMPERATURE MAY BE ALLOWED TO DROP GRADUALLY AND SHALL BE KEPT ABOVE 32 DEGREES F FOR A PERIOD OF SEVEN (7) DAYS AFTER COMPLETION OF POUR. PROTECTION DURING THIS PERIOD MAY BE PROVIDED BY EXISTING ENCLOSURE OR BY MEANS INDICATED IN NOTE 5 BELOW.
 - PROTECTION MAY BE PROVIDED BY USE OF INSULATION METHODS. ADEQUATE INSULATION SHALL CONSIST OF AT LEAST ONE OF THE FOLLOWING:
 - 12" OF DRY EARTH; PROVIDE MOISTURE COVER IF OVER SLAB CONCRETE.
 - 4" OF HAY UNDER ADEQUATE MOISTURE COVER.
 - 1" OF INSULATION BLANKETS WITH VAPOR BARRIER SEAL.
 - OTHER INSULATING MATERIAL ACCEPTABLE TO THE ENGINEER.
 - CONCRETE SHALL NOT BE PLACED ON FROZEN GROUND.
 - FROZEN CONCRETE SHALL BE REMOVED FROM THE JOB AND REPLACED AT A NO ADDITIONAL COST TO THE OWNER.

35. WHEN THE MEAN DAILY AMBIENT AND SUBSTRATE TEMPERATURE IS ABOVE 80 DEGREES F, THE CONTRACTOR SHALL FOLLOW THE REQUIREMENTS OF ACI 305.1 - LATEST EDITION, STANDARD SPECIFICATION FOR HOT WEATHER CONCRETING. CONCRETE SHALL BE PROTECTED FROM THERMAL DAMAGE. PROVISIONS FOR WINDBREAKS, SHADING, FOG SPRAYING, SPRINKLING, PONDING, OR WET COVERING WITH A LIGHT COLORED MATERIAL SHALL BE MADE IN ADVANCE OF PLACEMENT AND SUCH PROTECTIVE MEASURES SHALL BE TAKEN AS QUICKLY AS CONCRETE HARDENING AND FINISHING OPERATIONS WILL ALLOW.
- NO CONCRETE SHALL BE PLACED WHEN THE AIR TEMPERATURE IS ABOVE 90 DEGREES F UNLESS THE AIR IS STILL AND RELATIVE HUMIDITY IS ABOVE 80%.
 - SET UP PROPER WINDBREAKERS FOR CONCRETE SURFACES WHENEVER THE RELATIVE HUMIDITY IS LESS THAN 70% FOR SLIGHT AIR MOTION OR 80% FOR LIGHT BREEZES.
 - PROVIDE SHADE FOR POURS OTHERWISE EXPOSED TO THE SUN.
 - CONCRETE IS TO BE AT A TEMPERATURE OF 80 DEGREES F OR LESS WHEN PLACED; IF NECESSARY, THE BATCHING PLANT SHALL COOL AGGREGATES BY SPRAYING OR BY USING CHILLED WATER OR ICE. ALL SUCH WATER SHALL BE ACCOUNTED FOR AS PART OF THE MIXING WATER.
 - USE AN ADMIXTURE WITH A RETARDED SET.
 - FORMS SHALL BE THOROUGHLY WETTED AT LEAST DAILY AND MORE OFTEN WHEN THE RELATIVE HUMIDITY IS LOW.
 - FOR SLABS, MAINTAIN THE REQUIRED MATERIALS FOR CURING ON HAND, SO THEY MAY BE PLACED IMMEDIATELY UPON FINISHING. ALL CONCRETE PLACED IN AMBIENT TEMPERATURES OVER 80 DEGREES F SHALL BE KEPT WET FOR A MINIMUM OF 24 HOURS. INTERMITTENT SPRAYING WILL NOT BE PERMITTED. NO WATER SHALL BE APPLIED BEFORE CONCRETE HAS ACQUIRED ITS INITIAL SET. WHEN THE CONCRETE TEMPERATURE OF ANY SLAB GOES ABOVE 100 DEGREES F, PLACE A LAYER OF SAND ON IT AND KEEP IT CONTINUOUSLY WET UNTIL THE TEMPERATURE IS BELOW 80 DEGREES F.

- REMOVE ALL FINIS, BLEMISHES, AND DEFECTIVE CONCRETE AREAS AND PATCH WHERE REQUIRED WITH A PORTLAND CEMENT MORTAR OF THE SAME PROPORTIONS AS THAT USED IN THE CONCRETE.
- FORM TIE HOLES SHALL BE PLUGGED SOLID WITH REWORKED CEMENT MORTAR OF THE SAME PROPORTIONS AS THAT USED IN THE CONCRETE.
- PROVIDE A BROOM FINISH ON WALKING SURFACES AND A GROUT RUB ON VERTICAL SURFACES.

REINFORCING STEEL:

- DETAILING, FABRICATION, AND ERECTION OF REINFORCING STEEL SHALL CONFORM WITH ACI-318 AND ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES."
- REINFORCING STEEL SHALL CONFORM TO ASTM 615 GRADE 60, "SPECIFICATION FOR DEFORMED AND PLAIN BILLET STEEL BARS FOR CONCRETE REINFORCEMENT".
- REINFORCING STEEL COATING SHALL CONFORM A767, "STANDARD SPECIFICATION FOR ZINC-COATED STEEL BARS FOR CONCRETE REINFORCEMENT." REINFORCING STEEL SHALL BE CLASS 1 COATING WEIGHT AND SHALL BE FABRICATED PRIOR TO GALVANIZING.
- REINFORCING STEEL SHALL BE ADEQUATELY TIED WITH TIE WIRE AND SUPPORTED WITH CHAIRS THAT HOLD THE BARS TO THE SPECIFIED CLEARANCE. ONE CHAIR SAMPLE SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. NO CLAY OR CONCRETE BRICKS OR ANY OTHER MATERIAL OTHER THAN APPROVED CHAIRS SHALL BE PERMITTED TO SUPPORT REINFORCING STEEL.
- FORM COATING OR WATER SHALL BE APPLIED TO ALL FORMS. IF COATING IS USED, IT SHALL BE APPLIED PRIOR TO PLACEMENT OF REINFORCING STEEL.
- FORM TIES AND SPREADERS SHALL BE OF SUCH TYPE AS TO LEAVE NO METAL CLOSER THAN 3 INCHES FROM ANY EXPOSED CONCRETE SURFACE.

- PLACE REINFORCEMENT TO OBTAIN THE REQUIRED COVERAGE FOR CONCRETE PROTECTION. MINIMUM CONCRETE COVER FOR ALL REINFORCING SHALL BE 3 INCHES EXCEPT WHERE SPECIFICALLY NOTED OTHERWISE.
- CLEAN REINFORCEMENT AND REMOVE LOOSE DUST, EARTH, AND OTHER MATERIALS WHICH REDUCE BOND OR DESTROY BOND WITH CONCRETE.
- POSITION, SUPPORT, AND SECURE REINFORCEMENT AGAINST DISPLACEMENT BY FORMS, CONSTRUCTION, AND THE CONCRETE PLACEMENT OPERATIONS.
- REINFORCING STEEL SHALL BE CONTINUOUS UNLESS SPECIFICALLY DETAILED OTHERWISE ON THE CONTRACT DRAWINGS. PROVIDE DOWELS OR LAP SPLICES OF THE APPROPRIATE CLASS TO MAINTAIN CONTINUITY. UNLESS OTHERWISE SHOWN ON THE CONTRACT DRAWINGS LAP BARS 40 BAR DIAMETERS MINIMUM. DOWELS OR SPLICES SHALL BE SHOWN ON THE SHOP DRAWINGS AND SHALL BE SUBJECT TO THE FIELD REVIEW OF THE ENGINEER. NO MORE THAN 60% OF THE TOTAL NUMBER OF BARS SHALL BE SPLICED AT ONE LOCATION.

GROUT:

- BEARING GROUT SHALL BE NON-SHRINK, NON-METALLIC, HIGH PERFORMANCE CEMENT BASED GROUT WITH A MINIMUM FLOWABLE WITH A 28 DAY COMPRESSION STRENGTH OF 6500 PSI CONFORMING TO ASTM C827 SUCH AS FIVE STAR GROUT AS MANUFACTURED BY FIVE STAR PRODUCTS, INC OR EQUIVALENT ACCEPTED BY THE ENGINEER.
- ROCK SOCKET GROUT SHALL BE AN UNDERWATER PUMP GRADE, CEMENT-BASED, NON-SHRINK GROUT WITH A MINIMUM PUMPABLE 28 DAY COMPRESSION STRENGTH OF 5000 PSI SUCH AS FIVE STAR CEMENTITIOUS UNDERWATER HIGH-STRENGTH GROUT AS MANUFACTURED BY FIVE STAR PRODUCTS, INC OR EQUIVALENT ACCEPTED BY THE ENGINEER.

TIMBER CONSTRUCTION (ALTERNATE 1):

- THE WORK COVERED UNDER THIS SECTION INCLUDES, BUT IS NOT NECESSARILY LIMITED TO FLOAT SUPPORT FRAMING.
- ALL VISUALLY GRADED STRUCTURAL LUMBER AND WOOD CONSTRUCTION SHALL CONFORM TO THE "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION" (ANSI/NFPA NDS - LATEST EDITION), ITS SUPPLEMENT, AND COMMENTARY BY THE AMERICAN FOREST & PAPER ASSOCIATION / AMERICAN WOOD COUNCIL.
- TIMBER SHALL MEET THE REQUIREMENTS OF THE SOUTHERN PINE INSPECTION BUREAU INSPECTION RULES, LATEST EDITION FOR SOUTHERN YELLOW PINE NO. 1 GRADE MINIMUM.
- NO LATER THAN THE TIME OF DELIVERY OF MATERIALS TO THE SITE, CONTRACTOR SHALL SUBMIT CERTIFICATES AS TO CONFORMANCE WITH THE SPECIFIED SPECIES, GRADE, AND TREATMENT PRIOR TO INSTALLATION OF ANY VISUALLY GRADED STRUCTURAL LUMBER.
- TIMBER SHALL BE HANDLED CAREFULLY, WITHOUT SUDDEN DROPPING, BREAKING OF OUTER FIBERS, BRUISING OR PENETRATING THE SURFACE WITH TOOLS.
- ALL TIMBER SHALL BE CUT AND FRAMED TO A CLOSE FIT IN SUCH A MANNER THAT THE JOINTS SHALL HAVE FULL CONTACT BETWEEN PILES OR MEMBERS. NO SHIMMING WILL BE PERMITTED IN MAKING JOINTS NOR WILL OPEN JOINTS BE ACCEPTED.
- NAILER, BLOCKING, AND FLOAT STOPS SHALL BE PRESSURE TREATED IN ACCORDANCE WITH THE AMERICAN WOOD PRESERVER'S ASSOCIATION (AWPA) CATEGORY C3 WITH A CCA PRESERVATIVE TO A RETENTION OF THE AMOUNT OF 2.5 LBS/FT3.
- ALL CUT ENDS SHALL BE COATED WITH TENINO COPPER NAPHTHANATE SOLUTION MANUFACTURED BY COPPER CARE WPPD PRESERVATIVES, INC. OR APPROVED EQUAL, WITH NO LESS THAN 2% COPPER METAL CONTENT. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR REVIEW PRIOR TO USE.
- ALL MATERIAL SHALL BE SOUND, WELL SEASONED, AND STRAIGHT GRAINED, FREE FROM SHAKES AND LARGE OR LOOSE KNOTS, AND SHALL HAVE NO DECAYED WOOD, WORM HOLES, OR ANY OTHER DEFECTS WHICH THE OWNER DETERMINES WILL IMPAIR ITS STRENGTH OR DURABILITY.
- PIECES OF EXCEPTIONALLY LIGHT WEIGHT WILL NOT BE ACCEPTED.
- ALL MATERIAL SHALL BE STORED OFF OF THE GROUND IN MANNER TO PREVENT DAMAGE AND TO PERMIT EASY INSPECTION.
- TIMBER SHALL BE SURFACED FOUR SIDES (S4S) UNLESS OTHERWISE NOTED.

FOR CONTINUATION, SEE DRAWING 3

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Drawing	PROJECT NOTES - 1 of 2	
Designed	MJW	Checked MRR
Job No.	Date 2020131	Drawing No. 2 of 7

PROJECT NOTES (continued)

GANGWAY:

1. THE ALUMINUM GANGWAY SHALL BE MANUFACTURED BY AN APPROVED MANUFACTURER HAVING A MINIMUM OF TEN YEARS EXPERIENCE IN THE MANUFACTURING AND INSTALLATION OF GANGWAYS, THAT ARE THE SAME TYPE AS PROPOSED FOR THIS PROJECT, ON AT LEAST THREE OTHER INSTALLATIONS.
2. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF THE GANGWAY TO ENGINEER FOR REVIEW PRIOR TO ORDERING. SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NY. SHOP DRAWINGS SHALL INCLUDE PIANO HINGE, ROLLER, AND TRANSITION PLATE DATA. ALL GANGWAY PARTS ARE SUBJECT TO REVIEW AND ACCEPTANCE OF THE ENGINEER.
3. THE CONTRACTOR SHALL COORDINATE THE GANGWAY SYSTEM DESIGN WITH THE FLOATING DOCK SYSTEM DESIGN SUCH THAT THERE IS SUFFICIENT FLOTATION PROVIDED AT THE GANGWAY LOCATIONS.
4. METAL FOR ALUMINUM STRUCTURES SHALL BE 6061-T6 ALUMINUM ALLOY. METAL FOR DECKING AND HANDRAILS SHALL BE 6063-T6 ALUMINUM ALLOY. BOTH 6061-T6 AND 6063-T6 SHALL BE EXTRUDED IN ACCORDANCE WITH THE REQUIREMENTS OF APPLICABLE SECTIONS OF FEDERAL SPECIFICATIONS QQ-A-200. EXTRUDED PIPE FOR HANDRAILS AND STRUCTURES SHALL BE 1-1/2" DIAMETER MINIMUM PIPE. ALUMINUM SHALL BE COMPATIBLE WITH A MARINE ENVIRONMENT. HINGES AND FASTENERS SHALL BE STAINLESS STEEL OR OTHER MATERIALS COMPATIBLE WITH ALUMINUM IN A MARINE ENVIRONMENT.
5. GANGWAY FASTENERS SHALL BE OF TYPE 316 STAINLESS STEEL.
6. ANY INSTALLATION OF DISSIMILAR MATERIALS SHALL BE PROPERLY INSULATED TO AVOID CONTACT OF DISSIMILAR METALS AND TO MINIMIZE OR ELIMINATE CORROSION IN A MARINE ENVIRONMENT.
7. WELDED CONNECTIONS SHALL BE IN ACCORDANCE WITH AWS D1.2.
8. THE GANGWAY SHALL HAVE A MINIMUM CLEARANCE WIDTH BETWEEN RAILINGS OF 2'-6" UNLESS NOTED OTHERWISE.
9. THE GANGWAY TO FIXED STRUCTURE HINGE MOUNT EXTRUSIONS SHALL BE WELDED TO THE FRAME OF THE GANGWAY WITH A CONTINUOUS FILLET WELD UNLESS OTHERWISE NOTED.
10. THE GANGWAY PIN CONNECTION SHALL BE ABLE TO BE REMOVED AT THE FIXED STRUCTURE WITHOUT INTERFERING WITH THE STRUCTURE.
11. ROLLERS SHALL BE FABRICATED FROM UHMW POLYETHYLENE CONFORMING TO ASTM D4976 WITH BLACK ULTRAVIOLET INHIBITOR ADDED.
12. GANGWAYS SHALL BE DESIGNED TO WITHSTAND A DISTRIBUTED VERTICAL LIVE LOAD OF 40 PSF AND A CONCENTRATED LIVE LOAD OF 400 LBS AT ANY LOCATION.
13. DEFLECTION OF THE GANGWAY UNDER LIVE LOAD CONDITIONS SHALL NOT EXCEED L/360 WHERE "L" IS THE LENGTH OF THE GANGWAY IN INCHES.
14. GANGWAYS SHALL BE DESIGNED FOR A LATERAL WIND LOAD OF 30 PSF ON EXPOSED SURFACES.
15. GANGWAY HANDRAILS AND GUARDS SHALL BE SMOOTH, SNAG-FREE, AND DESIGNED TO WITHSTAND A 200 LB. CONCENTRATED LOAD OR A 50LB/FT. LOAD, WHICHEVER IS GREATER, ACTING ON THE TOP OF RAILING, IN ANY DIRECTION, NOT SIMULTANEOUSLY.
16. THE WALKWAY SURFACE SHALL BE OPEN TYPE GRATING WITH INTEGRAL TRANSVERSE NON-SKID PROPERTIES, WITHOUT AFFIXED CROSS CLEATS OR OTHER MECHANICAL DEVICES TO ACHIEVE NON-SKID CAPABILITY.
17. GANGWAYS SHALL REST ON HDPE PLASTIC SKID PLATE ON THE FLOATING DOCK SIDE THAT WILL ALLOW FOR FREE AND SILENT MOVEMENT OF THE GANGWAY WITH CHANGING WATER LEVELS.
18. THE GANGWAY SHALL BE FITTED WITH AN ALUMINUM TRANSITION PLATE TO MAKE A SMOOTH, GAP-FREE TRANSITION FROM THE GANGWAY TO THE FLOATING DOCK. THE TRANSITION PLATE SHALL ALSO HAVE A NON-SKID SURFACE AND BE CONNECTED TO THE GANGWAY.

FLOATING DOCK AND HARDWARE:

1. THE FLOATING DOCK SYSTEM SHALL BE MANUFACTURED BY AN APPROVED MANUFACTURER HAVING A MINIMUM OF TEN YEARS EXPERIENCE IN THE MANUFACTURING AND INSTALLATION OF FLOATING DOCK SYSTEMS, THAT ARE THE SAME TYPE AS PROPOSED FOR THIS PROJECT, ON AT LEAST THREE OTHER INSTALLATIONS.
2. DOCKS SHALL BE COMPLETELY FABRICATED IN THE MANUFACTURERS FACILITY AND SHIPPED TO THE SITE COMPLETED WITH DECKING AND FLOTATION ATTACHED, READY FOR OFF-LOAD DIRECT INTO WATER. KNOCKED DOWN FRAMING SYSTEMS ASSEMBLED AT SITE WILL NOT BE ALLOWED. PANELIZED DECKING SYSTEMS WILL NOT BE ALLOWED.
3. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF THE DOCK SYSTEM TO ENGINEER FOR REVIEW PRIOR TO ORDERING. SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NY.
4. THE CONTRACTOR SHALL FURNISH ALL TOOLS, EQUIPMENT, MATERIALS, AND SUPPLIES AND SHALL PERFORM ALL LABOR, SUPERVISION, ASSEMBLY, AND INSTALLATION OF THE COMPLETE FLOATING DOCK SYSTEMS.
5. FLOATING DOCK DECK SURFACE AND STRUCTURAL FRAMING SHALL BE DESIGNED TO WITHSTAND A UNIFORMLY DISTRIBUTED VERTICAL LIVE LOAD OF 50 PSF AND A CONCENTRATED VERTICAL LOAD OF 400 LBS APPLIED OVER 1 SQUARE FOOT, HOWEVER LOAD CASES SHALL NOT NEED TO BE ANALYZED SIMULTANEOUSLY.
6. FLOTATION SHALL BE DESIGNED TO SUPPORT THE DEAD LOAD PLUS A UNIFORMLY DISTRIBUTED VERTICAL LIVE LOAD OF 30 PSF APPLIED TO THE FULL AREA OF THE DECK SURFACE.
7. FLOATING DOCK SHALL BE DESIGNED TO WITHSTAND THE FORCES OF NON-MOVING ICE.
8. FLOATING DOCK SHALL BE DESIGNED TO WITHSTAND A MINIMUM ALLOWABLE LATERAL WAVE LOAD OF 115 #/FT.
9. FREEBOARD UNDER DEAD LOAD SHALL EQUAL 19" ± 1".
10. FREEBOARD UNDER DEAD LOAD PLUS THE 30 PSF LIVE LOAD SHALL BE NO LESS THAN 12".
11. DEAD LOADS SHALL CONSISTS OF THE ENTIRE WEIGHT OF THE FLOATING STRUCTURE, INCLUDING THE GANGWAY AND OTHER ACCESSORIES AND APPURTENANCES.
12. THE LOSS OF FREEBOARD AFTER ONE YEAR OF SERVICE FROM THE TIME OF ACCEPTANCE SHALL NOT EXCEED 1" AND SHALL NOT EXCEED 2" AFTER FIVE YEARS.
13. THE BOTTOM OF THE DOCK STRUCTURAL FRAMING SHALL NOT BE WITHIN 8" OF THE WATER SURFACE DURING DEAD LOAD CONDITIONS.
14. FLOATING DOCK SURFACES SHALL NOT SLOPE MORE THAN 1/2 INCH PER 6 FEET OF DOCK WIDTH OR LENGTH AT THE TIME OF ACCEPTANCE AND NO MORE THAN 3/4 INCH PER 6 FEET AT THE END OF FIVE YEARS OF SERVICE.

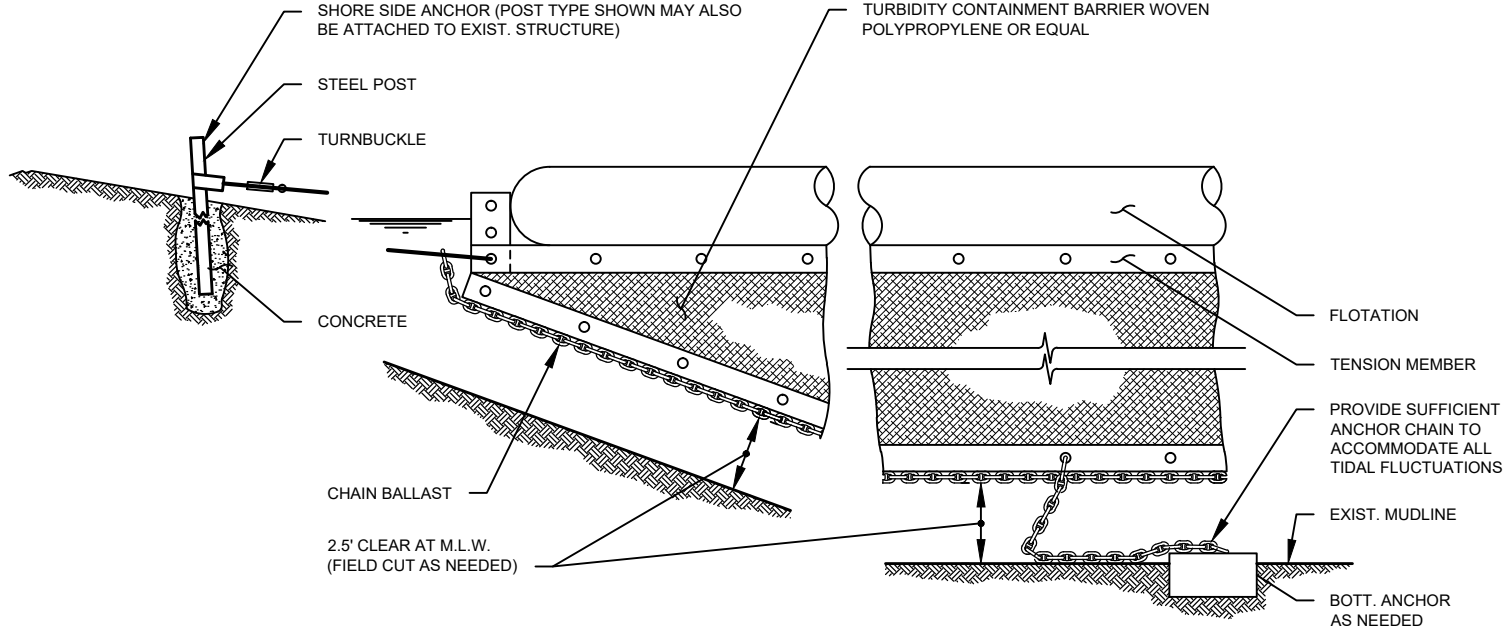
15. DOCK UNITS UNDER GANGWAY LOCATIONS SHALL BE NO MORE THAN 2" HIGHER THAN THE FREEBOARD OF THE REST OF THE FLOATING DOCK SYSTEM DURING DEAD LOAD CONDITIONS.
16. FLOTATION SHALL BE HIGH STRENGTH, HIGH DENSITY, POLYETHYLENE. CORE SHALL BE EXPANDED POLYSTYRENE, FACTORY PRE-MOLDED TO ENSURE COMPLETE EXPANSION TO MINIMUM OF 1.0 LB/CF DENSITY. FLOTATION UNITS SHALL BE DESIGNED TO MAINTAIN THE DESIRED BUOYANCY AND FREEBOARD EVEN IF PUNCTURED OR CRACKED. FLOTATION ATTACHMENT TO STRUCTURAL FRAME SHALL BE POSITIVELY ATTACHED BY MEANS OF A THRU BOLT AND NUT. FLOTATION UNIT AND FRAME TO ACT AS ONE INTEGRAL SECTION.
17. DOCK FRAMING TIMBER SHALL BE VISUALLY GRADED STRUCTURAL LUMBER AND SHALL BE SOUTHERN YELLOW PINE (SYP) NO. 1 GRADE MINIMUM, SPIB GRADING RULES. ALL LUMBER SHALL BE SAWN 4 SIDES (S4S) AND CHROMATED COPPER ARSENATE (CCA) PRESSURE TREATED TO A MINIMUM RETENTION OF 0.6 PCF.
18. DOCK FRAMING TIMBER SHALL BE KILN DRIED AFTER TREATMENT.
19. DOCK FRAMING TIMBER SHALL BE SOUND, WELL SEASONED, AND STRAIGHT GRAINED, FREE FROM SHAKES AND LARGE OR LOOSE KNOTS AND SHALL HAVE NO DEFECTS WHICH WILL IMPAIR ITS STRENGTH OR DURABILITY FOR THE INTENDED PURPOSE.
20. DECKING FOR FLOATING DOCK SHALL BE 2X6 SYP, NO.1, COPPER QUAT (ACQ) PRESSURE TREATED TO A MINIMUM RETENTION OF .060 PCF, OR COMPOSITE. COORDINATE DECKING TYPE WITH OWNER.
21. DECKING SHALL BE FASTENED TO STRUCTURAL FRAMING W/ TWO (2) 3-1/2" LONG #12 - 316 S.S. DECK SCREWS SPACED 1" FROM EACH EDGE OF DECKING.
22. DECKING SCREW HOLES SHALL BE PRE-DRILLED W/ A 5/32" LEAD HOLE. LEAD HOLE SHALL BE NO LONGER THAN THE SCREW EMBEDMENT.
23. GAP BETWEEN DECKING SHALL BE 1/8".
24. STRUCTURAL STEEL CONNECTORS, BRACKETS AND MISCELLANEOUS PARTS TO BE FABRICATED FROM ASTM A 36 GRADE STEEL.
25. STRUCTURAL STEEL, BOLTS, NUTS, AND WASHERS SHALL BE FABRICATED TO ASTM A307 AND HOT DIPPED GALVANIZED IN ACCORDANCE TO ASTM A 123. A MINIMUM COATING OF 2 OUNCES PER SQUARE FOOT SHALL BE APPLIED. FASTENERS SHALL BE A MINIMUM 1/2" DIAMETER.
26. CLEATS SHALL BE 10" MALLEABLE CAST IRON, CONFORMING TO ASTM A47. CLEATS SHALL BE FASTENED TO INTERIOR STEEL ANGLES WITH (2) - 3/8" DIAMETER THRU BOLTS. CLEATS SHALL BE PLACED AT LOCATIONS SPECIFIED ON THE CONTRACT DRAWINGS.
27. FLOATING DOCKS SHALL BE FITTED WITH HIGH DENSITY POLYETHYLENE (HDPE) WEAR PADS AT GANGWAY LOCATIONS. COORDINATE HDPE COLOR W/ OWNER.
28. DOCK BUMPERS & CORNER BUMPERS SHALL BE NON-MARRING WHITE EXTRUDED MARINE GRADE VINYL 3-1/2" WIDE MINIMUM. DOCK BUMPERS SHALL MEET OR EXCEED THE FOLLOWING:
 - DUROMETER HARDNESS - 89
 - SPECIFIC GRAVITY - 1.368
 - BRITTLELY TEMPERATURE - 20° F (ASTM 746052T)
29. DOCK BUMPERS & CORNER BUMPERS SHALL BE FASTENED TO THE DOCK FRAME WITH 316 STAINLESS STEEL SCREWS AT 6" O.C.
30. DOCK BUMPER AND CORNER BUMPER SAMPLES SHALL BE PROVIDED TO OWNER FOR APPROVAL PRIOR TO INSTALLATION.

PILE GUIDES:

1. PILE GUIDES SHALL BE CONSTRUCTED OF STRUCTURAL STEEL CONFORMING TO ASTM A 36/A 36M, ASTM A 572/A 572M, OR ASTM A 500 AND GALVANIZED IN ACCORDANCE WITH ASTM A 123/A 123M. PILE GUIDE ROLLERS AND WEARING PADS SHALL BE LOW FRICTION, ULTRA HIGH MOLECULAR WEIGHT POLYETHYLENE (ASTM D 4020) ON STAINLESS STEEL AXLES.
2. THE CONTRACTOR SHALL FURNISH ALL TOOLS, EQUIPMENT, MEASUREMENTS, MATERIALS, AND SUPPLIES AND SHALL PERFORM ALL LABOR, SUPERVISION, FABRICATION, ASSEMBLY, AND INSTALLATION OF PILE GUIDES.
3. PILE GUIDE ASSEMBLY SHALL INCLUDE FOUR (4) UHMW ROLLERS PER GUIDE.
4. CONTRACTOR TO SUBMIT PILE GUIDE ASSEMBLY SHOP DRAWINGS TO THE ENGINEER FOR REVIEW PRIOR TO ORDERING. SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NY.
5. PILE GUIDE ASSEMBLIES SHALL HAVE A MEANS TO EASILY CONNECT & DISCONNECT TO ALLOW FOR RAPID REMOVAL OF DOCKS IN CASE OF STORMS.
6. PILE GUIDE ASSEMBLIES SHALL BE DESIGNED FOR A 2 KIP MINIMUM FORCE.
7. ISOLATION BARRIERS SHALL BE PROVIDED BETWEEN DISSIMILAR METALS.

EROSION & SEDIMENTATION CONTROLS:

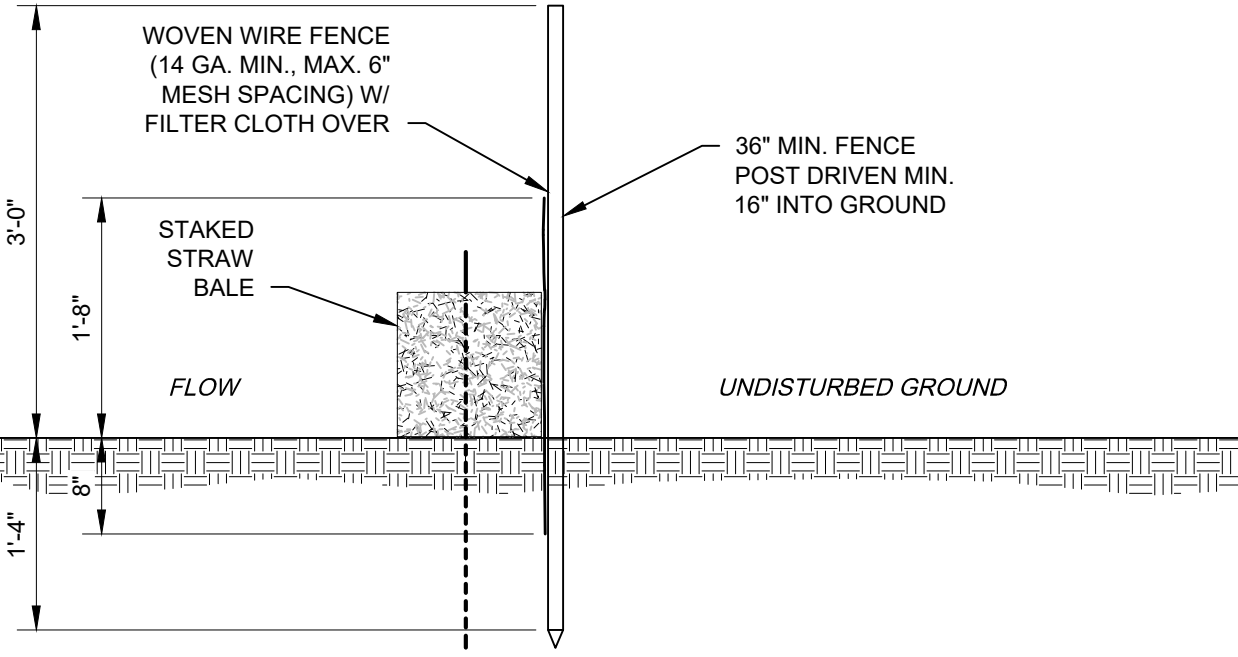
1. CONTRACTOR SHALL PROTECT FROM DISTURBING OR DAMAGE WETLAND AREAS ADJACENT TO WORK AREA.
2. LAND DISTURBANCE SHALL BE KEPT TO A MINIMUM.
3. WHENEVER POSSIBLE, EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO CONSTRUCTION.
4. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE 2016 NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROLS.
5. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED IN EFFECTIVE CONDITION THROUGHOUT THE CONSTRUCTION PERIOD.
6. ADDITIONAL CONTROL MEASURES SHALL BE INSTALLED DURING THE CONSTRUCTION PERIOD AS NECESSARY AND REQUIRED.
7. THE GENERAL CONTRACTOR SHALL UTILIZE APPROVED METHODS/MATERIALS FOR PREVENTING THE BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES ONTO ADJACENT PROPERTIES AND SITE AREAS.
8. THE GENERAL CONTRACTOR SHALL MAINTAIN A SUPPLY OF SILT FENCE (100' MIN.) ON SITE FOR EMERGENCY PURPOSES.
9. ALL DISTURBED LAWN AREAS OUT OF THE MAJOR CONSTRUCTION AREA THAT ARE TO BE LEFT EXPOSED FOR MORE THAN 30 DAYS SHALL BE PROTECTED WITH A TEMPORARY VEGETATIVE COVER. SEED THESE AREAS WITH PERENNIAL RYE GRASS AT THE RATE OF 40 LBS. PER ACRE (1 LB PER 1,000 SQ. FT.).
10. THE GENERAL CONTRACTOR IS ASSIGNED THE RESPONSIBILITY FOR IMPLEMENTING THIS EROSION AND SEDIMENT CONTROL PLAN. THE RESPONSIBILITY INCLUDES SUPERVISING THE INSTALLATION AND MAINTENANCE OF CONTROL MEASURES, INFORMING ALL PARTIES ENGAGED ON THE CONSTRUCTION SITE OF THE REQUIREMENTS AND OBJECTIVES OF THE PLAN, NOTIFYING THE CONSERVATION STAFF PERSON OF ANY TRANSFER OF THIS RESPONSIBILITY AND CONVEYING A COPY OF THE CONTROL PLAN IF THE TITLE TO THE LAND IS TRANSFERRED.



NOTE:
CURTAIN AND ANCHOR MUST RESIST EXPECTED WIND, WAVE AND CURRENT ENVIRONMENT AT SITE.
CONTRACTOR TO SUBMIT WEIGHTED TURBIDITY CURTAIN SPECIFICATIONS FOR REVIEW.

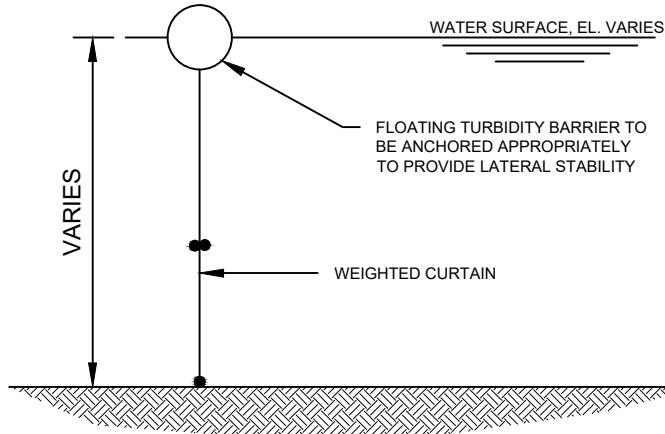
WEIGHTED TURBIDITY CURTAIN DETAIL

SCALE: 1/4" = 1'-0"



SILT FENCE DETAIL

SCALE: 3/4" = 1'-0"

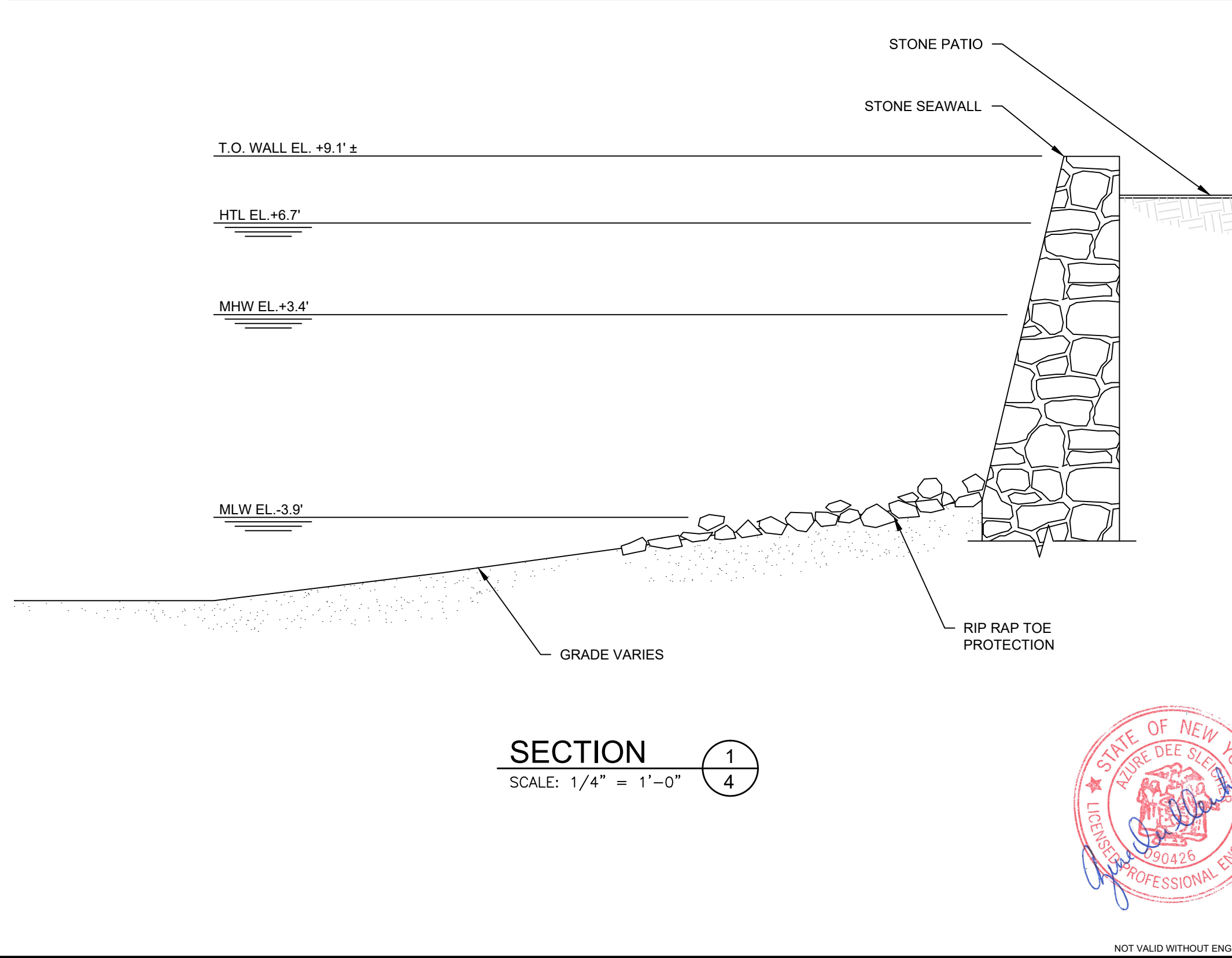
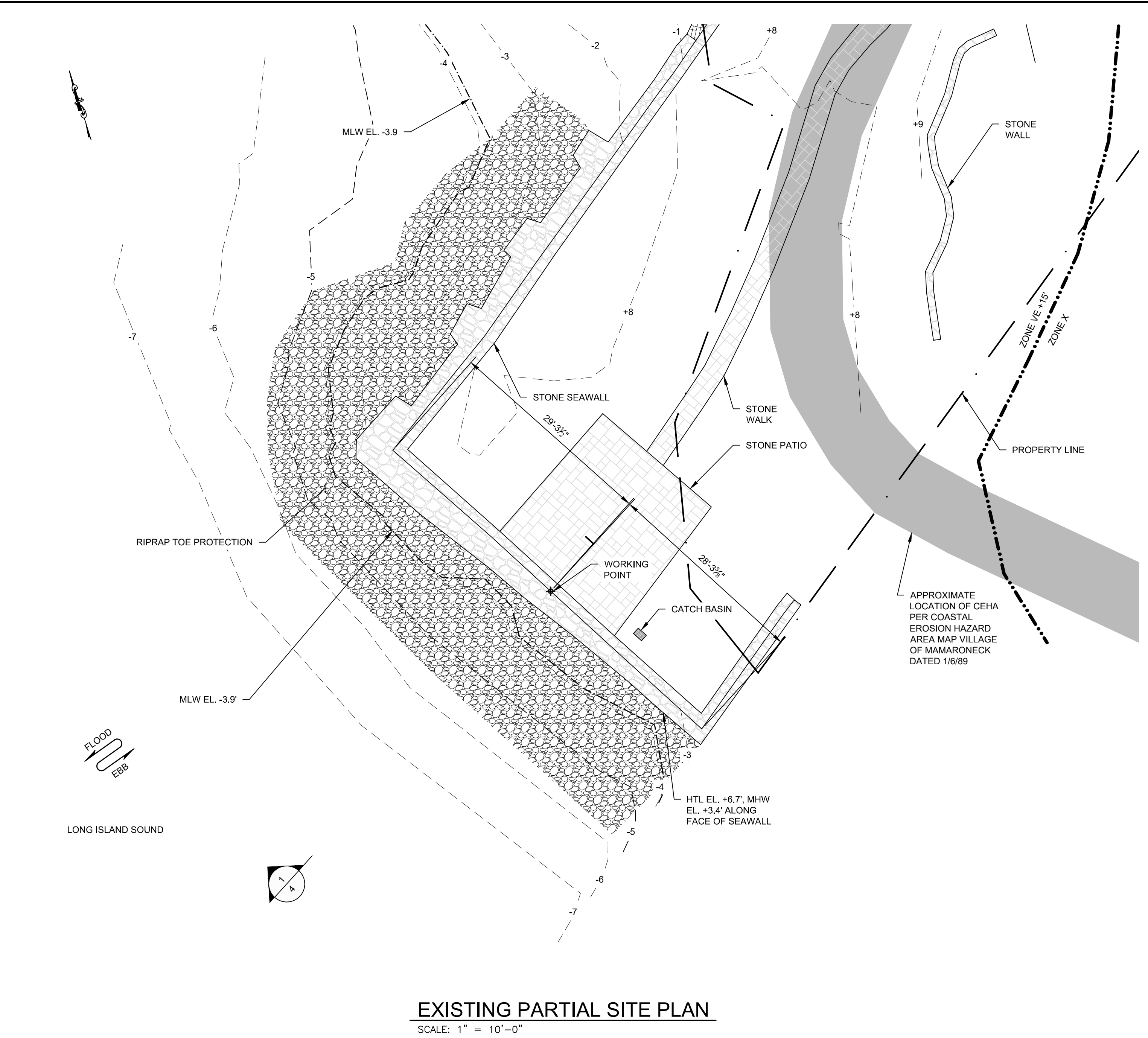
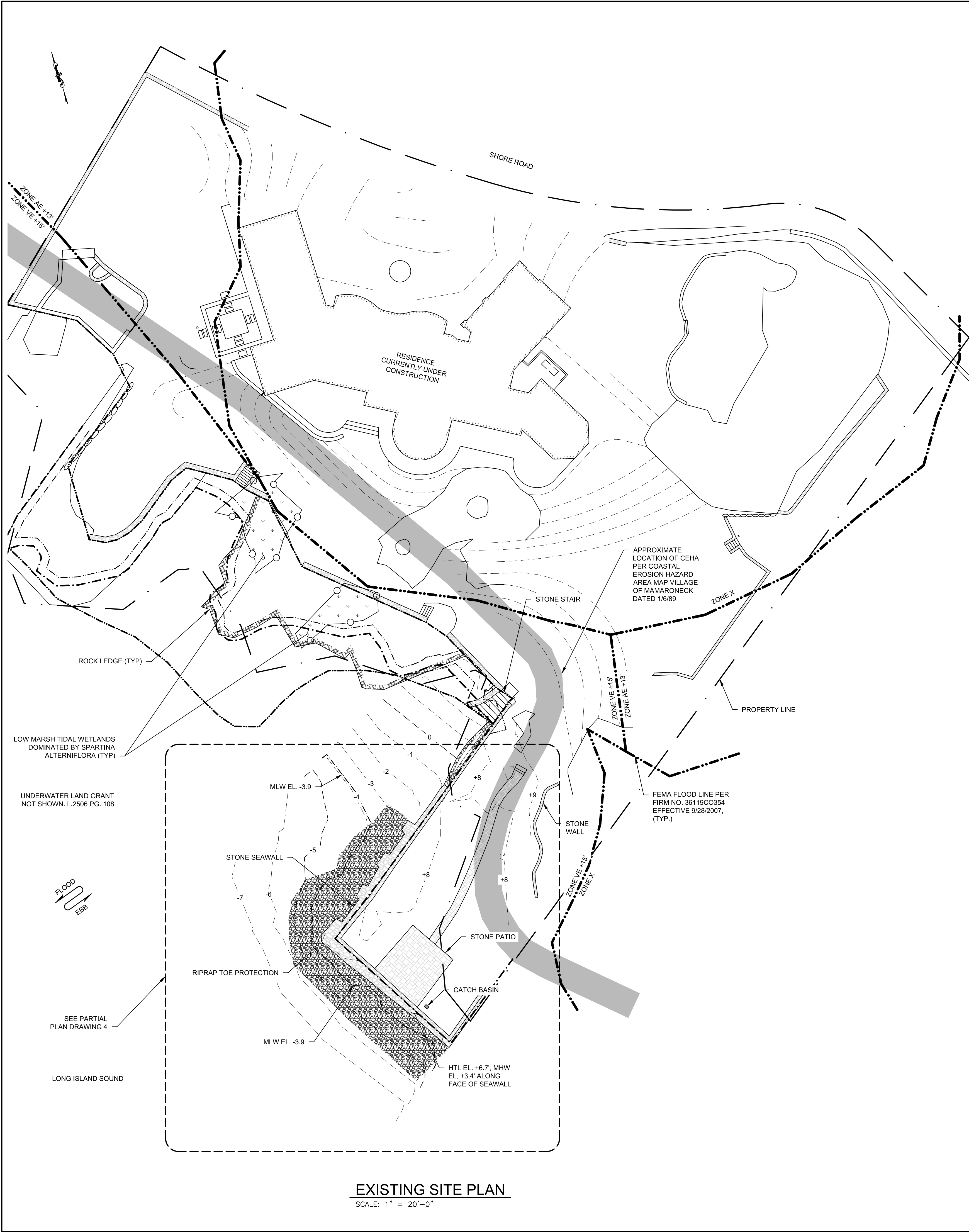


WEIGHTED TURBIDITY CURTAIN DETAIL

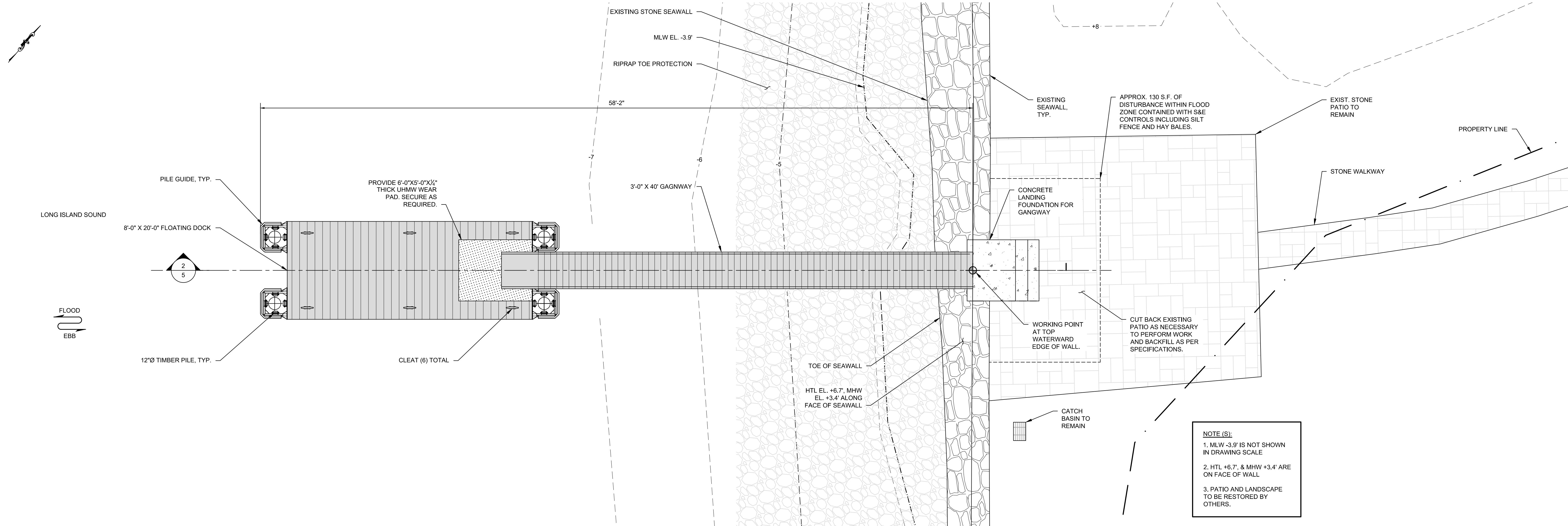
SCALE: 1/2" = 1'-0"



REV	DATE	DESCRIPTION
FOR VILLAGE OF MAMARONECK REVIEW		
RACE COASTAL ENGINEERING		
611 Access Road Stratford, CT 06615 Tel.: 203-377-0663 racecoastal.com		
OWNERSHIP AND CONDITIONS OF USE: Drawings and Specifications, as instruments of professional service, are and shall remain the property of RACE Coastal Engineering, P.C. Documents are not to be used, in whole or in part, for other projects or purposes or by any other parties than those authorized by contract without the specific written authorization of RACE Coastal Engineering, P.C. The use of this document is contingent upon payment to RACE Coastal Engineering, P.C. for services rendered. Non-payment shall give RACE Coastal Engineering, P.C. the authority to bar document use by any and all parties.		
THIS DRAWING IS COPYRIGHTED		
Prepared for	ROBERT GOODMAN 1013 COVE ROAD MAMARONECK, NY 10543	
Project	RESIDENTIAL DOCK 4 SHORE ROAD MAMARONECK, NY 10580	
Drawing	PROJECT NOTES - 2 of 2	
Designed	MJW	Checked MRR
Job No.	2020131	Date 09/01/2021
		Drawing No. 3 of 7

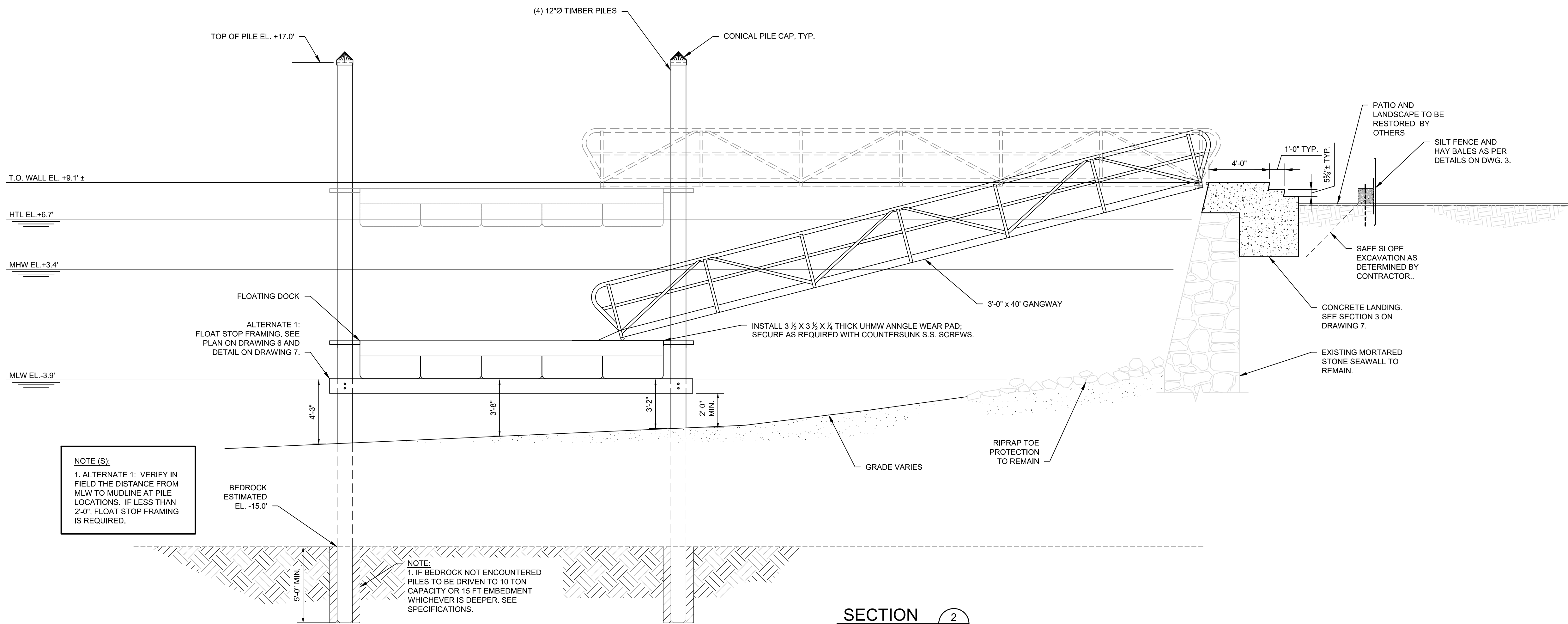


REV	DATE	DESCRIPTION
FOR VILLAGE OF MAMARONECK REVIEW		
RACE COASTAL ENGINEERING		
611 Access Road Stratford, CT 06615 Tel.: 203-377-0663 racecoastal.com		
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THIS DRAWING IS COPYRIGHTED		
Prepared for ROBERT GOODMAN 1013 COVE ROAD MAMARONECK, NY 10543		
Project RESIDENTIAL DOCK 4 SHORE ROAD MAMARONECK, NY 10580		
Drawing EXISTING SITE PLANS & EXISTING SECTION		
Designed MJW	Drawn MJW	Checked MRR
Job No. 2020131	Date 09/01/2021	Drawing No. 4 of 7



PARTIAL SITE PLAN

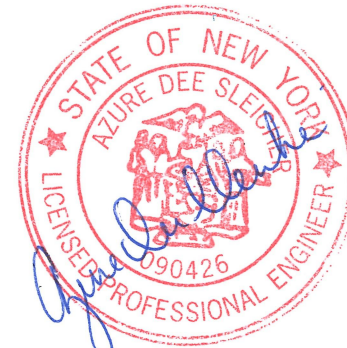
SCALE: 1/4" = 1'-0"



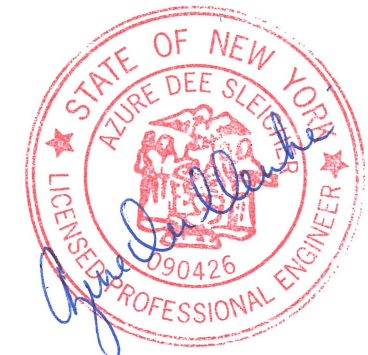
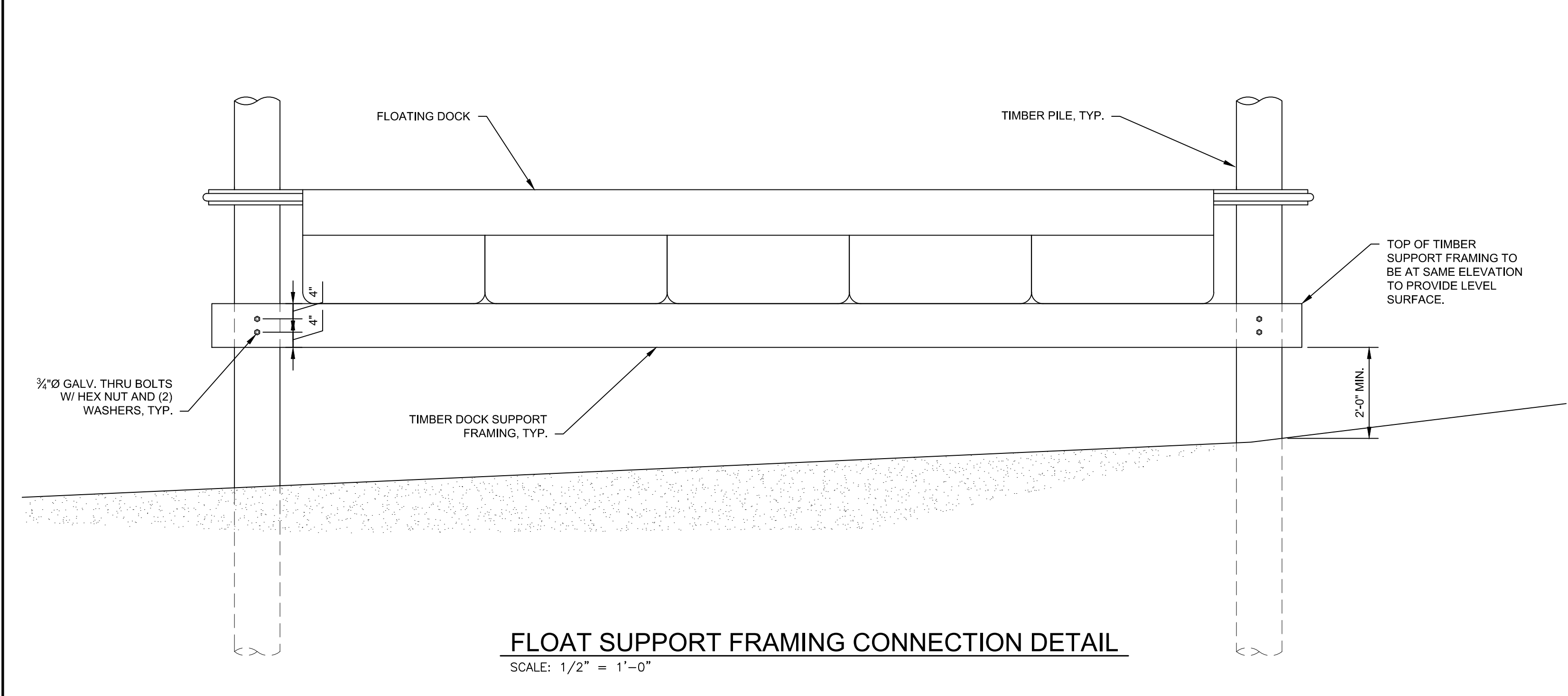
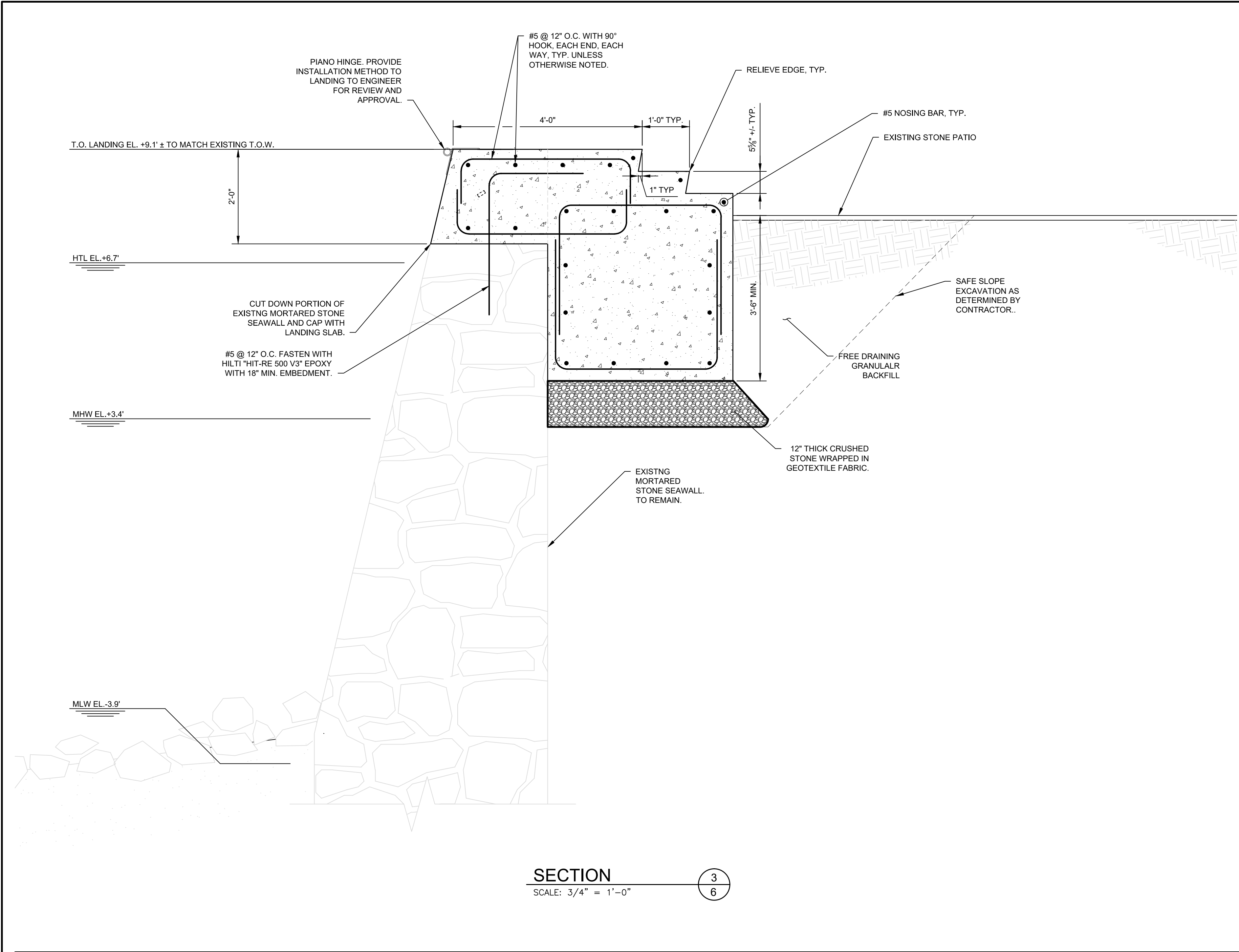
SECTION

SCALE: 1/4" = 1'-0"

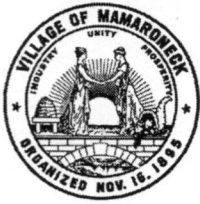
2
5



REV	DATE	DESCRIPTION
FOR VILLAGE OF MAMARONECK REVIEW		
RACE COASTAL ENGINEERING		
611 Access Road Stratford, CT 06615 Tel.: 203-377-0663 racecoastal.com		
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THIS DRAWING IS COPYRIGHTED		
Prepared for	ROBERT GOODMAN 1013 COVE ROAD MAMARONECK, NY 10543	
Project	RESIDENTIAL DOCK 4 SHORE ROAD MAMARONECK, NY 10580	
Drawing	EXISTING SITE PLAN	
Designed	MJW	Checked MRR
Job No.	2020131	Date 09/01/2021 Drawing No. 5 of 7



REV	DATE	DESCRIPTION
FOR VILLAGE OF MAMARONECK REVIEW		
RACE COASTAL ENGINEERING		
611 Access Road Stratford, CT 06615 Tel.: 203-377-0663 racecoastal.com		
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THIS DRAWING IS COPYRIGHTED		
Prepared for	ROBERT GOODMAN 1013 COVE ROAD MAMARONECK, NY 10543	
Project	RESIDENTIAL DOCK 4 SHORE ROAD MAMARONECK, NY 10580	
Drawing	SECTIONS & DETAILS	
Designed	MJW	Checked MRR
Job No.	2020131	Date 09/01/2021
		Drawing No. 7 of 7



Village of Mamaroneck Building Department

169 Mt. Pleasant Avenue

Mamaroneck, N.Y. 10543

914-777-7731 Fax 914-777-7792

www.village.mamaroneck.ny.us

Application # _____

Permit # _____

Flood Plain Development Permit Application

SECTION 1: GENERAL PROVISIONS

1. No work may start until a permit is issued.
2. The permit may be revoked if any false statements are made herein.
3. If revoked, all work must cease until permit is re-issued.
4. Development shall not be used or occupied until a Certificate of Compliance is issued.
5. The permit is invalid if no work is commenced within six months of issuance.
6. Applicant is hereby informed that other permits may be required to fulfill local, state and federal regulatory requirements.
7. Applicant hereby gives consent to the Local Administrator or his/her representative to make reasonable inspections required to verify compliance.

1. Project address:

Section	Block	Lot	What year was your house built ?
---------	-------	-----	----------------------------------

2. Owners name and address :

E-Mail Address :

Phone #:

3. Applicants name and address (Please print) :

E-Mail Address :

Phone #:

4. Architect/Engineer name and address:

E-Mail Address :

Phone # :

5. Contractor name and address:

License # :

Experation date:

Phone #:

6. What is the cost of construction?

7. Description of work:**Structural Development (Please check all that apply)**

- ☐ Repair/ Replacement ☒ New Structure ☐ Residential (1-2 Family) ☐ Demolition
☐ Alteration ☐ Addition ☐ Multi Family ☐ Non-Residential (Flood Proofing ?)

Other Development Activities (Please check all that apply)

- ☐ Grading Property (Up to 6" of Soil)
☐ Filling in Property ☒ Excavation (Except for Structural Development checked above)
☐ Water Course Alteration (Including Dredging or Channel Modifications) ☐ Drainage Improvements
☐ Water or sewer system ☐ Road, Street or Bridge Construction ☐ Subdivision
☐ Other (Please Specify)

I, THE APPLICANT, CERTIFY THAT ALL STATEMENTS HEREIN AND IN ATTACHMENTS TO THIS APPLICATION ARE, TO THE BEST OF MY KNOWLEDGE, TRUE AND ACCURATE.

(APPLICANT'S SIGNATURE)

DATE

SECTION 2:**FLOODPLAIN DETERMINATION (To be completed by LOCAL ADMINISTRATOR)**

The proposed development is located on FIRM Panel No. (Check the one that applies)

- | | | | |
|-------------------------------------|-------|-------------------------|---|
| <input type="checkbox"/> | 0351F | Dated September 28,2007 | The proposed development is in or adjacent to a flood area. |
| <input type="checkbox"/> | 0353F | Dated September 28,2007 | |
| <input checked="" type="checkbox"/> | 0354F | Dated September 28,2007 | The 100 year flood elevation at this site is: <u>15</u> Ft. NAVD |
| <input type="checkbox"/> | 0361F | Dated September 28,2007 | Is the proposed development located in a floodway? |
| <input type="checkbox"/> | 0362F | Dated September 28,2007 | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |

Signed

Date

SECTION 3:**ADDITIONAL INFORMATION REQUIRED (To be completed by LOCAL ADMINISTRATOR)**

The applicant must submit the documents checked below before the application can be processed:

- ☐ A site plan showing the location of all existing structures, water bodies, adjacent roads, lot dimensions and proposed development.
- ☐ Development plans and specifications, drawn to scale, including where applicable: details for anchoring structures, proposed elevation of lowest floor (including basement), types of water resistant materials used below the first floor, details of floodproofing of utilities located below the first floor, details of enclosures below the first floor, openings in
- ☐ Elevation Certificate
- ☐ Subdivision or other development plans (If the subdivision or other development exceeds 50 lots or 5 acres, whichever is the lesser, the applicant must provide 100-year flood elevations if they are not otherwise available).
- ☐ Plans showing the watercourse location, proposed relocations, Floodway location.
- ☐ Topographic information showing existing and proposed grades, location of all proposed fill.

7. Description of work:

Installation of gangway and floating dock for boating access. Gangway will be connected to a new 5'x4' concrete foundation at the top of the seawall. Approximately 130 s.l. 15 cubic yards of disturbance in the flood zone to construct the foundation.

Structural Development (Please check all that apply)

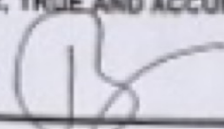
- ☐ Repair/Replacement ☒ New Structure ☐ Residential (1-2 Family) ☐ Demolition
☐ Alteration ☐ Addition ☐ Multi Family ☐ Non-Residential (Flood Proofing ?)

Other Development Activities (Please check all that apply)

- ☐ Grading Property (Up to 6" of Soil)
☐ Filling in Property ☒ Excavation (Except for Structural Development checked above)
☐ Water Course Alteration (Including Dredging or Channel Modifications) ☐ Drainage Improvements
☐ Water or sewer system ☐ Road, Street or Bridge Construction ☐ Subdivision
☐ Other (Please Specify)

I, THE APPLICANT, CERTIFY THAT ALL STATEMENTS HEREIN AND IN ATTACHMENTS TO THIS APPLICATION ARE, TO THE BEST OF MY KNOWLEDGE, TRUE AND ACCURATE.

(APPLICANT'S SIGNATURE)



DATE

9/1/2021

SECTION 2:**FLOODPLAIN DETERMINATION (To be completed by LOCAL ADMINISTRATOR)**

The proposed development is located on FIRM Panel No. (Check the one that applies)

- | | | | |
|-------------------------------------|-------|--------------------------|---|
| <input type="checkbox"/> | 0351F | Dated September 28, 2007 | The proposed development is in or adjacent to a flood area. |
| <input type="checkbox"/> | 0353F | Dated September 28, 2007 | |
| <input checked="" type="checkbox"/> | 0354F | Dated September 28, 2007 | The 100 year flood elevation at this site is: <u>15</u> FL. NAVD |
| <input type="checkbox"/> | 0351F | Dated September 28, 2007 | Is the proposed development located in a floodway? |
| <input type="checkbox"/> | 0352F | Dated September 28, 2007 | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |

Signed

Date

SECTION 3:**ADDITIONAL INFORMATION REQUIRED (To be completed by LOCAL ADMINISTRATOR)**

The applicant must submit the documents checked below before the application can be processed:

- ☐ A site plan showing the location of all existing structures, water bodies, adjacent roads, lot dimensions and proposed development.
☐ Development plans and specifications, drawn to scale, including where applicable: details for anchoring structures, proposed elevation of lowest floor (including basement), types of water resistant materials used below the first floor, details of floodproofing of utilities located below the first floor, details of enclosures below the first floor, openings in
☐ Elevation Certificate
☐ Subdivision or other development plans (if the subdivision or other development exceeds 50 lots or 5 acres, whichever is the lesser, the applicant must provide 100-year flood elevations if they are not otherwise available).
☐ Plans showing the watercourse location, proposed relocations, Floodway location.
☐ Topographic information showing existing and proposed grades, location of all proposed fill.

☐ Top of new fill elevation _____ Ft. G NGVD 1929/ G NAVD 1988 (MSL)

☐ Other:

SECTION 4:

PERMIT DETERMINATION (To be completed by LOCAL ADMINISTRATOR)

I have determined that the proposed activity:

A. ☐ Is

B. ☐ Is not

in conformance with provisions of Local Law # 8-1987. This permit is hereby issued subject to the conditions attached to and made part of this permit.

SIGNED _____, DATE _____

Additional
comments:

If BOX A is checked, the Local Administrator may issue a Development Permit upon payment of designated fee.

If BOX B is checked, the Local Administrator will provide a written summary of deficiencies. Applicant may revise and resubmit an application to the Local Administrator or may request a hearing from the Planning Board.

Variance Requested : ☐ Yes
☐ No

Variance Approved : ☐ Yes
☐ No

Conditions:

SECTION 5:

AS-BUILT ELEVATIONS (To be submitted by APPLICANT before Certificate of Compliance is issued)

The following information must be provided for project structures. This section must be completed by a registered professional engineer or a licensed land surveyor (or attach a certification to this application). Complete 1 or 2 below.

1. Actual (As-Built) Elevation of the top of the lowest floor, including basement (in Coastal High Hazard Areas, bottom of lowest structural member of the lowest floor, excluding piling and columns) is: _____ FT. G NGVD 1929/
NAVD 1988 (MSL).

Attach Elevation Certificate FEMA Form 81-31

2. Actual (As-Built) Elevation of floodproofing protection is _____ FT. G NGVD 1929/ G NAVD 1988 (MSL).

Attach Floodproofing Certificate FEMA Form 81-65

NOTE: Any work performed prior to submittal of the above information is at the risk of the Applicant.

SECTION 6:**COMPLIANCE ACTION** (To be completed by **LOCAL ADMINISTRATOR**)

The **LOCAL ADMINISTRATOR** will complete this section as applicable based on inspection of the project to ensure compliance with the community's local law for flood damage prevention.

INSPECTIONS:

DATE	BY	DEFICIENCIES ?	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
DATE	BY	DEFICIENCIES ?	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
DATE	BY	DEFICIENCIES ?	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No

SECTION 7:**CERTIFICATE OF COMPLIANCE**(To be completed by **LOCAL ADMINISTRATOR**)

Certificate of Compliance issued: DATE: _____

BY: _____