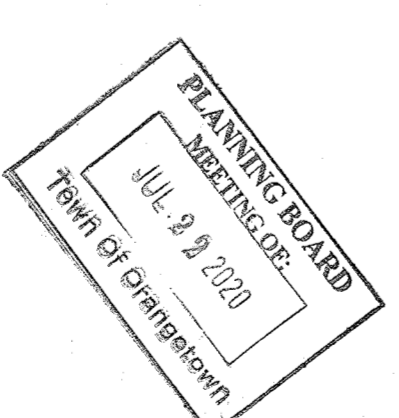
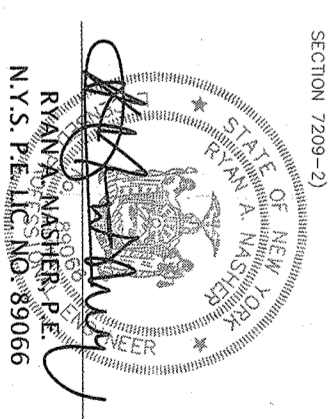


**DRAWING LIST**

- DRAWING NO. 1 - EXISTING CONDITION PLAN
- DRAWING 2 - SITE DEVELOPMENT PLAN
- DRAWING 3 - EROSION & SEDIMENT CONTROL PLAN
- DRAWING 4 - REMAINING WALL PLAN & DETAILS
- DRAWING 5 - REMAINING WALL NOTES & DETAILS

**LEGEND**

- EXISTING 2' CONTOUR
- EXISTING 1' CONTOUR
- EXISTING WATERLINE
- EXISTING FIRE HYDRANT
- EXISTING GAS LINE
- EXISTING CATCH BASIN
- EXISTING STORM DRAIN LINE
- EXISTING SEWER MANHOLE
- EXISTING SEWER LINE
- EXISTING SPOT ELEVATION
- EXISTING STORMWALL
- EXISTING SIGN
- EXISTING UTILITY POLE
- EXISTING UTILITY POLE
- TOP OF CURB
- TOP OF CHIMNEY
- TOP OF WALL
- BOTTOM OF WALL
- EXISTING TREE



THE EDUCATIONAL LAW OF THE STATE OF NEW YORK, CHAPTER 148, SECTION 148-1.1, PROVIDES THAT ANY PERSON WHOSE NAME IS ON THE LIST OF REGISTERED PROFESSIONAL ENGINEERS AND/OR ARCHITECTS IN THE STATE OF NEW YORK SHALL BE DEEMED TO HAVE ACCEPTED THE OATH OF OFFICE AND TO BE SUBJECT TO THE PENALTIES AND SANCTIONS PROVIDED BY THE EDUCATIONAL LAW OF THE STATE OF NEW YORK, CHAPTER 148, SECTION 148-1.1, FOR FAILURE TO COMPLY WITH THE REQUIREMENTS OF SAID LAW.



**ATZL NASHER & ZIEGLER P.C.**  
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 Fax: (914) 634-5843  
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 Web: www.atz.com

**119 TWEED BLVD., LLC**

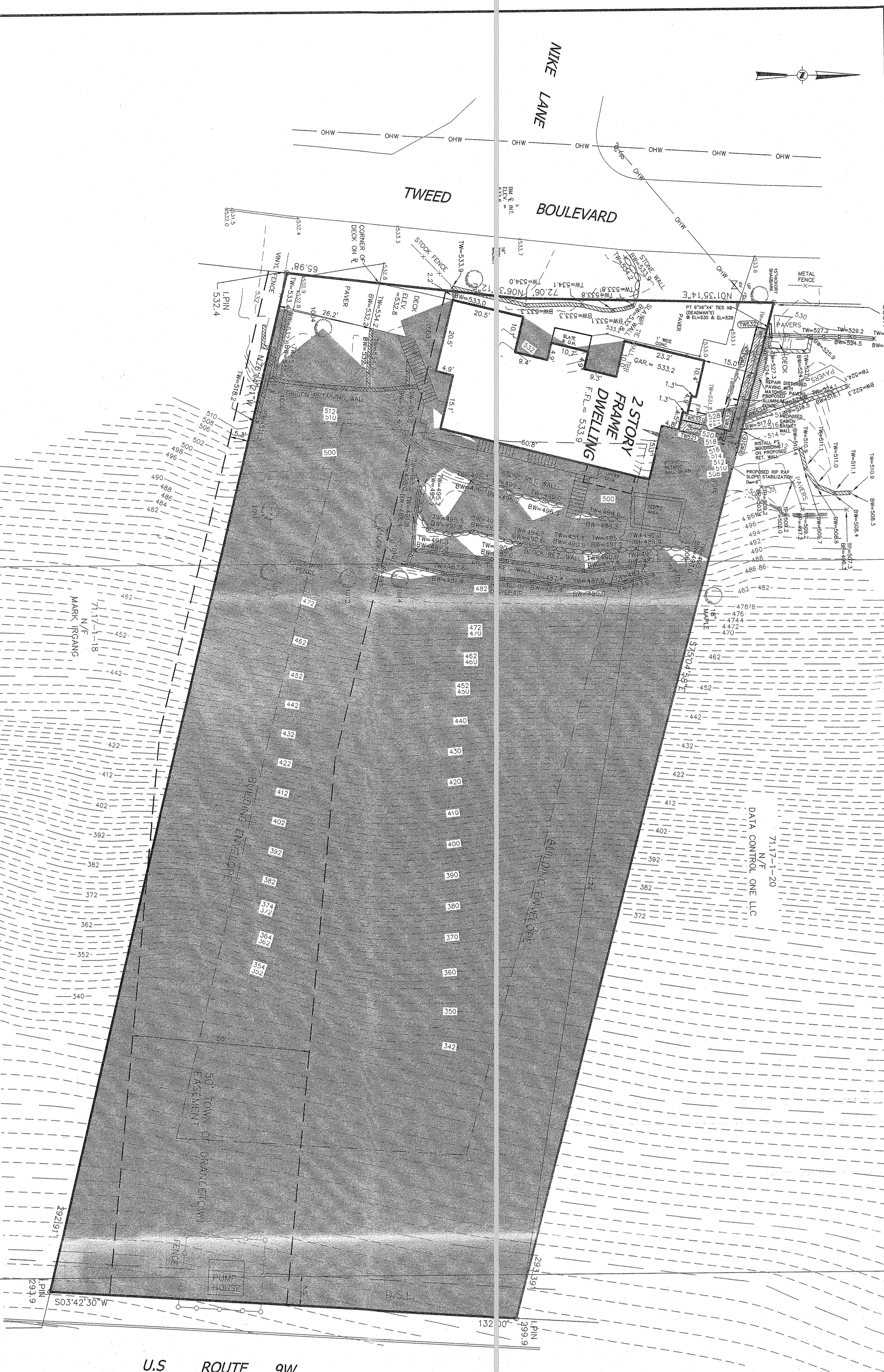
**TOWN OF ORANGETOWN  
 ROCKLAND COUNTY, NEW YORK**

**EXISTING CONDITION PLAN**

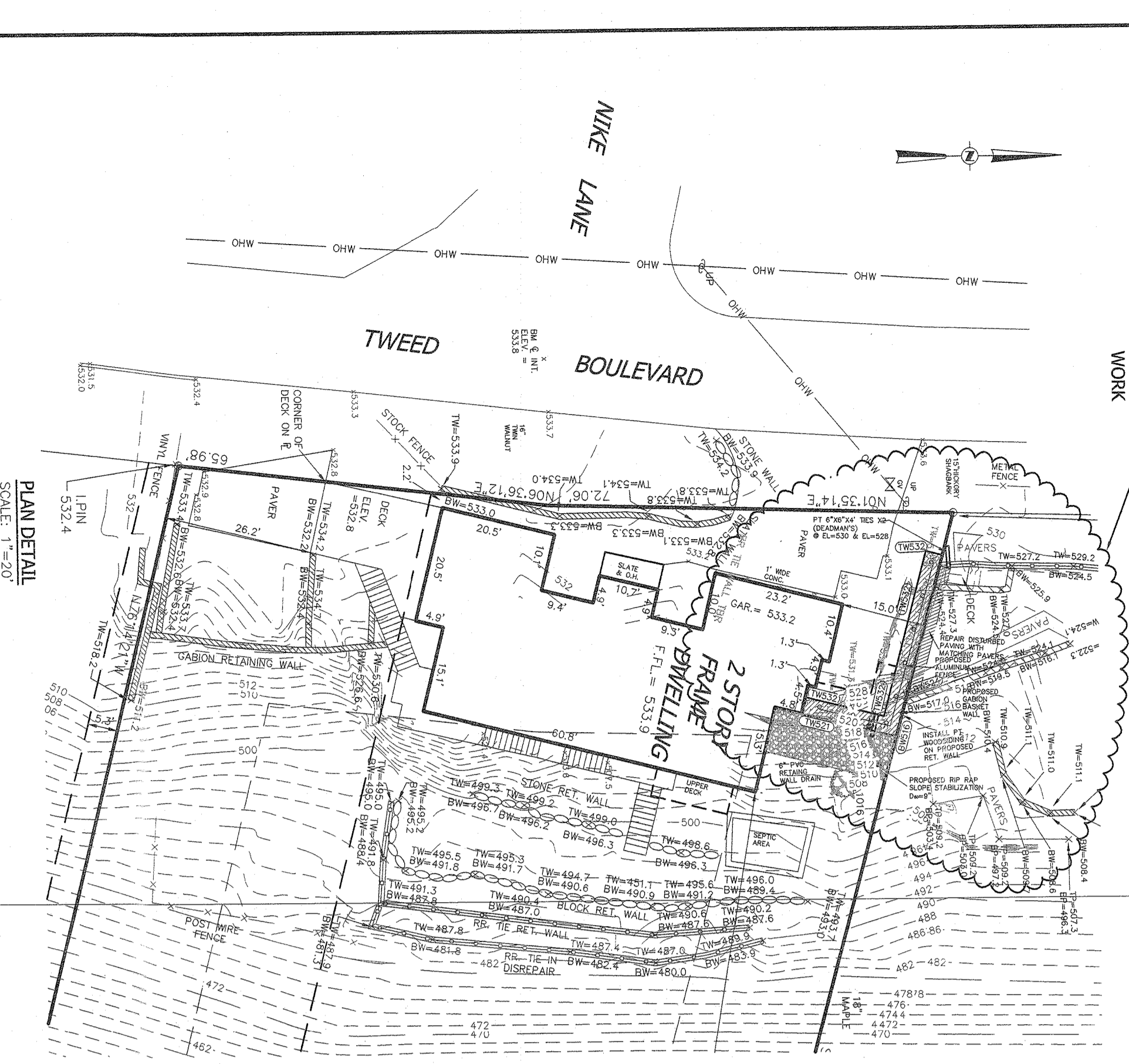
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DATE:	JANUARY 22, 2020	SCALE:	1 IN. = 20 FT.
PROJECT NO.:	4692	DRAWING NO.:	1

REVISION	DATE	DESCRIPTION
1	6-29-20	PER TOWN COMMENTS 07-01-20
2	07-07-20	PER PER MFG 8-01-20





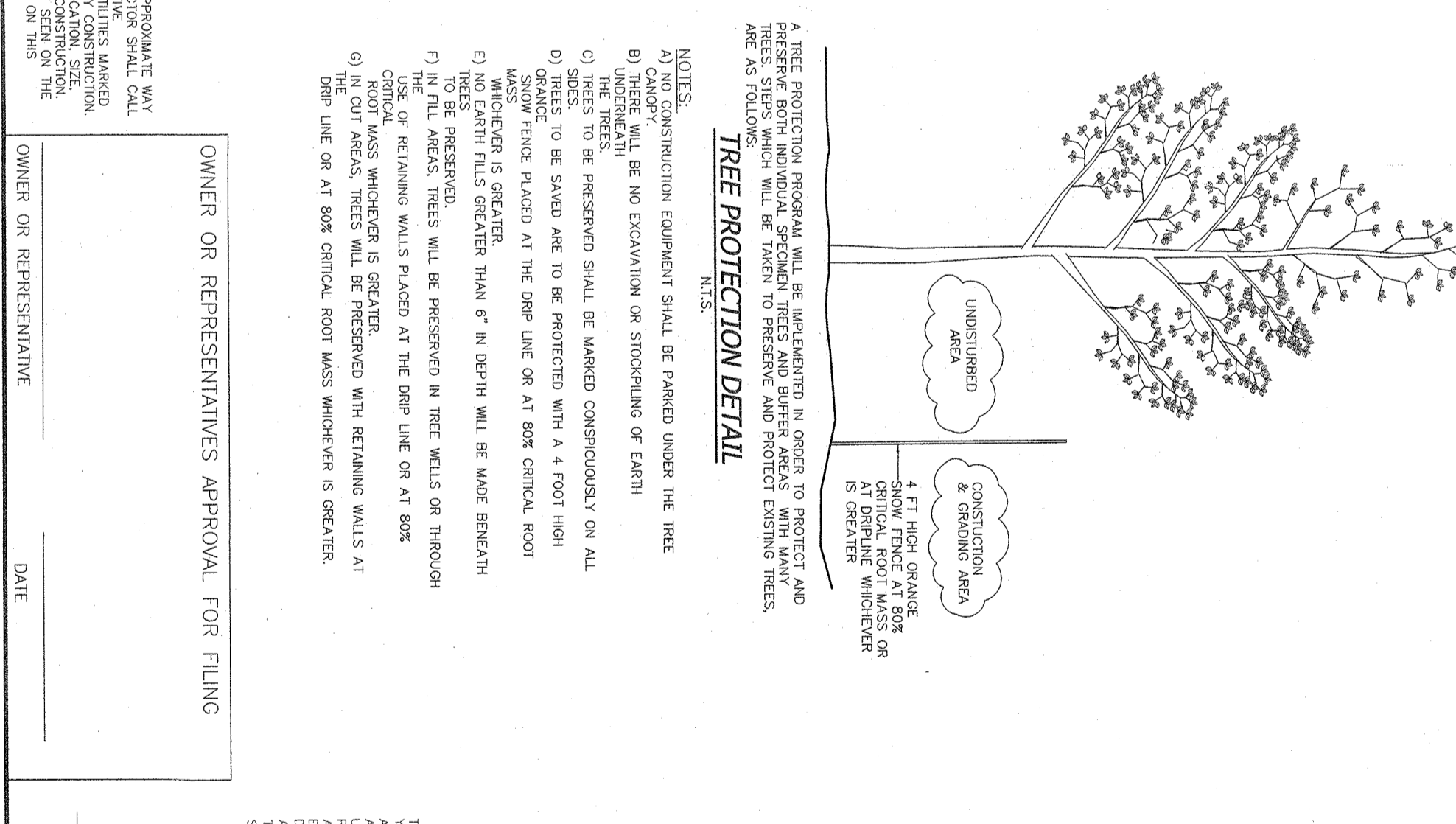
**SITE PLAN**  
SCALE: 1" = 20'



**PLAN DETAIL**  
SCALE: 1" = 20'

**NOTES:**

1. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL FOLLOW UNDERGROUND UTILITIES CALLS, CHECKS, RECORDS AND TELEPHONE SERVICE SHALL BE INSTALLED UNDERGROUND.
2. NO BUILDING SHALL BE CONSTRUCTED WITHIN SERVICE AREAS, ADJACENT TO PUBLIC UTILITIES, OR WITHIN SERVICE AREAS, ADJACENT TO PUBLIC UTILITIES, OR WITHIN SERVICE AREAS, ADJACENT TO PUBLIC UTILITIES.
3. NO BUILDING SHALL BE CONSTRUCTED WITHIN SERVICE AREAS, ADJACENT TO PUBLIC UTILITIES, OR WITHIN SERVICE AREAS, ADJACENT TO PUBLIC UTILITIES, OR WITHIN SERVICE AREAS, ADJACENT TO PUBLIC UTILITIES.
4. LOT BOUNDARY ON THE EAST SHALL BE CONSIDERED AS SHOWN WITH THE EXISTING UTILITY RECORDS.
5. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE ZONING ORDINANCES OF THE TOWN OF ORANGETOWN, NEW YORK.
6. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE ZONING ORDINANCES OF THE TOWN OF ORANGETOWN, NEW YORK.
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21. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE ZONING ORDINANCES OF THE TOWN OF ORANGETOWN, NEW YORK.



**TREE PROTECTION DETAIL**

- NOTES:**
- A) TREE PROTECTION SHALL BE PROVIDED AS SHOWN.
  - B) TREE PROTECTION SHALL BE PROVIDED AS SHOWN.
  - C) TREE PROTECTION SHALL BE PROVIDED AS SHOWN.
  - D) TREE PROTECTION SHALL BE PROVIDED AS SHOWN.
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  - X) TREE PROTECTION SHALL BE PROVIDED AS SHOWN.
  - Y) TREE PROTECTION SHALL BE PROVIDED AS SHOWN.
  - Z) TREE PROTECTION SHALL BE PROVIDED AS SHOWN.

**OWNER OR REPRESENTATIVE'S APPROVAL FOR FILING**

DATE: \_\_\_\_\_

OWNER OR REPRESENTATIVE: \_\_\_\_\_

---

**OWNER & APPLICANT:**  
119 TWEED BLVD., LLC  
150 WHITE PLAINS RD.  
ROCKLAND COUNTY, NY 10993

**TAX MAP REFERENCE:**  
TOWN OF ORANGETOWN  
SECTION 71-117, BLOCK 1, LOT 19  
36-082 S.C.T.

**SUBDIVISION REFERENCE:**  
SUBDIVISION ENTITLED "SCOTCH HILL ACRES" FILED IN ROCKLAND COUNTY, NY, AUGUST 9, 1983, 800K 55, MAP NO. 5523.

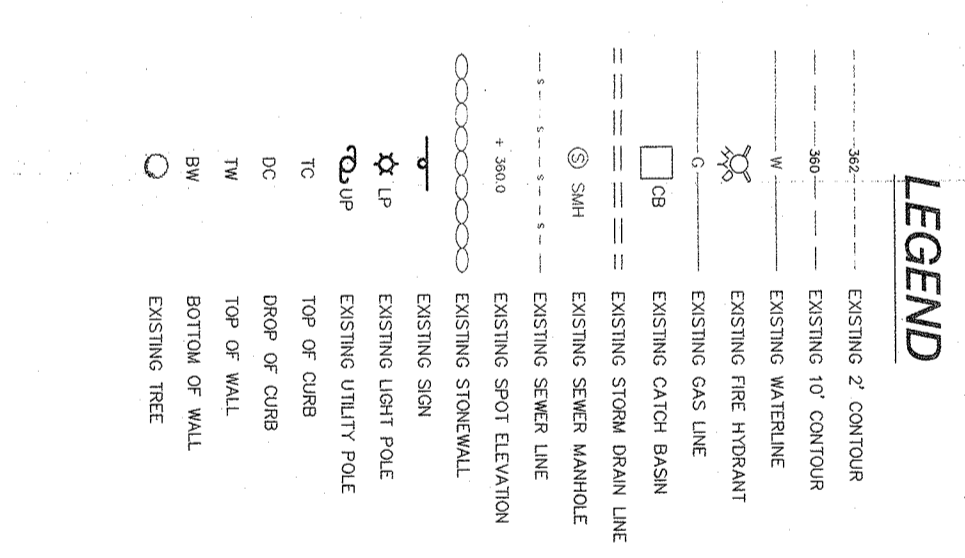
**SITE ADDRESS:**  
119 TWEED BLVD.  
ROCKLAND COUNTY, NY 10990

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**DISTRICTS:**  
SCHOOL DISTRICT - NYACK UNION FREE  
FIRE DISTRICT - SCHOOL DISTRICT  
WATER DISTRICT - UPPER GRANADEN  
SEWER DISTRICT - ORANGETOWN SEWER DISTRICT  
LIGHTING DISTRICT - UPPER GRANADEN

---

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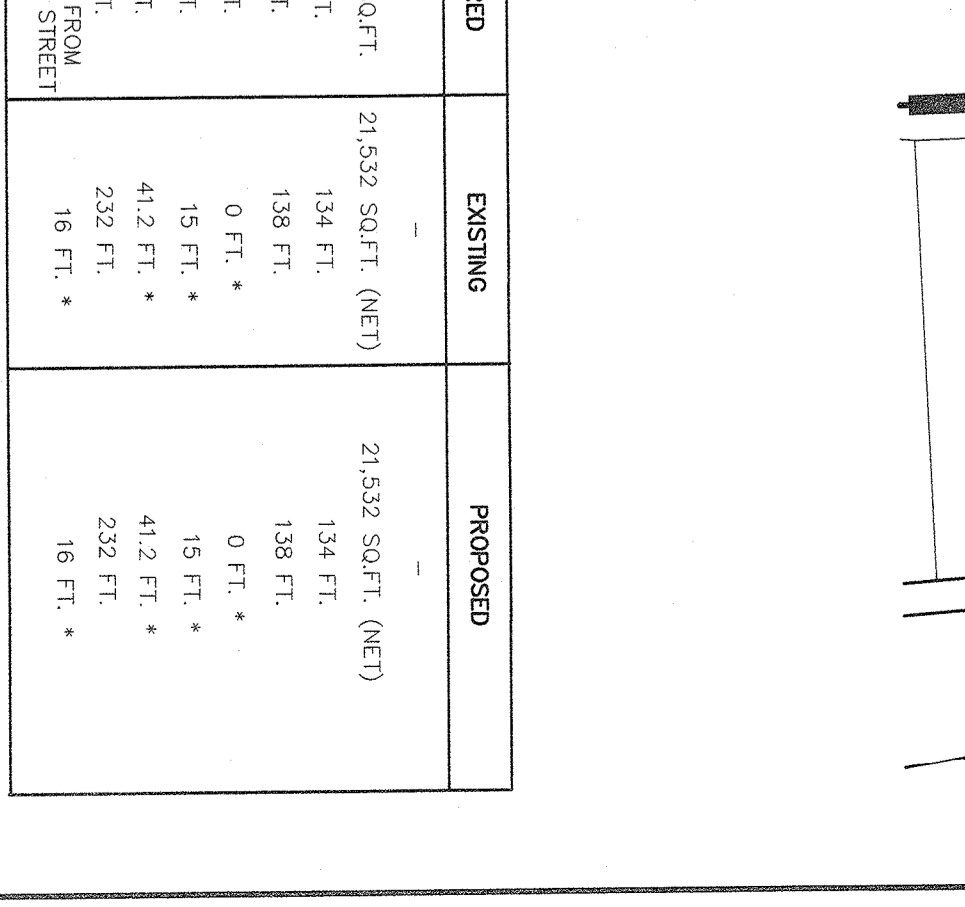
**LOT AREA CALCULATION:**

GROSS AREA: 2,993.9  
SLOPE 25%+  
NET AREA: 2,152.52

36,892 SQ.FT. 17,840 SQ.FT. 2,152 SQ.FT.

**BULK REQUIREMENTS:**

ZONE R-22	USE GROUP T*	REQUIRED	EXISTING	PROPOSED
MAXIMUM FLOOR AREA RATIO	0.20	22,500 SQ.FT. (NET)	21,532 SQ.FT. (NET)	21,532 SQ.FT. (NET)
MINIMUM LOT AREA		125 FT.	134 FT.	138 FT.
MINIMUM LOT WIDTH		75 FT.	138 FT.	138 FT.
MINIMUM STREET FRONTAGE		0 FT.	15 FT.	15 FT.
MINIMUM FRONT YARD		40 FT.	41.2 FT.	41.2 FT.
MINIMUM SIDE YARD		60 FT.	232 FT.	232 FT.
MINIMUM TOTAL SIDE YARD		60 FT.	45 FT.	45 FT.
MINIMUM REAR YARD		16 FT.	16 FT.	16 FT.
MINIMUM BUILDING HEIGHT		9 FT. FROM DESIGNED STREET	16 FT.	16 FT.



**TRAIL LIST:**

UNIVERSITY	TRAIL	SPACES
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**SLOPE LEGEND:**

SLOPE = 25%+

SLOPE = 25%+

**OWNER OR REPRESENTATIVE'S APPROVAL FOR FILING**

DATE: \_\_\_\_\_

OWNER OR REPRESENTATIVE: \_\_\_\_\_

**ATZIL, NASHER & ZIGLER P.C.**  
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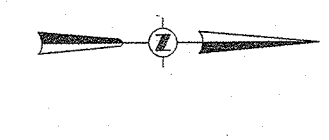
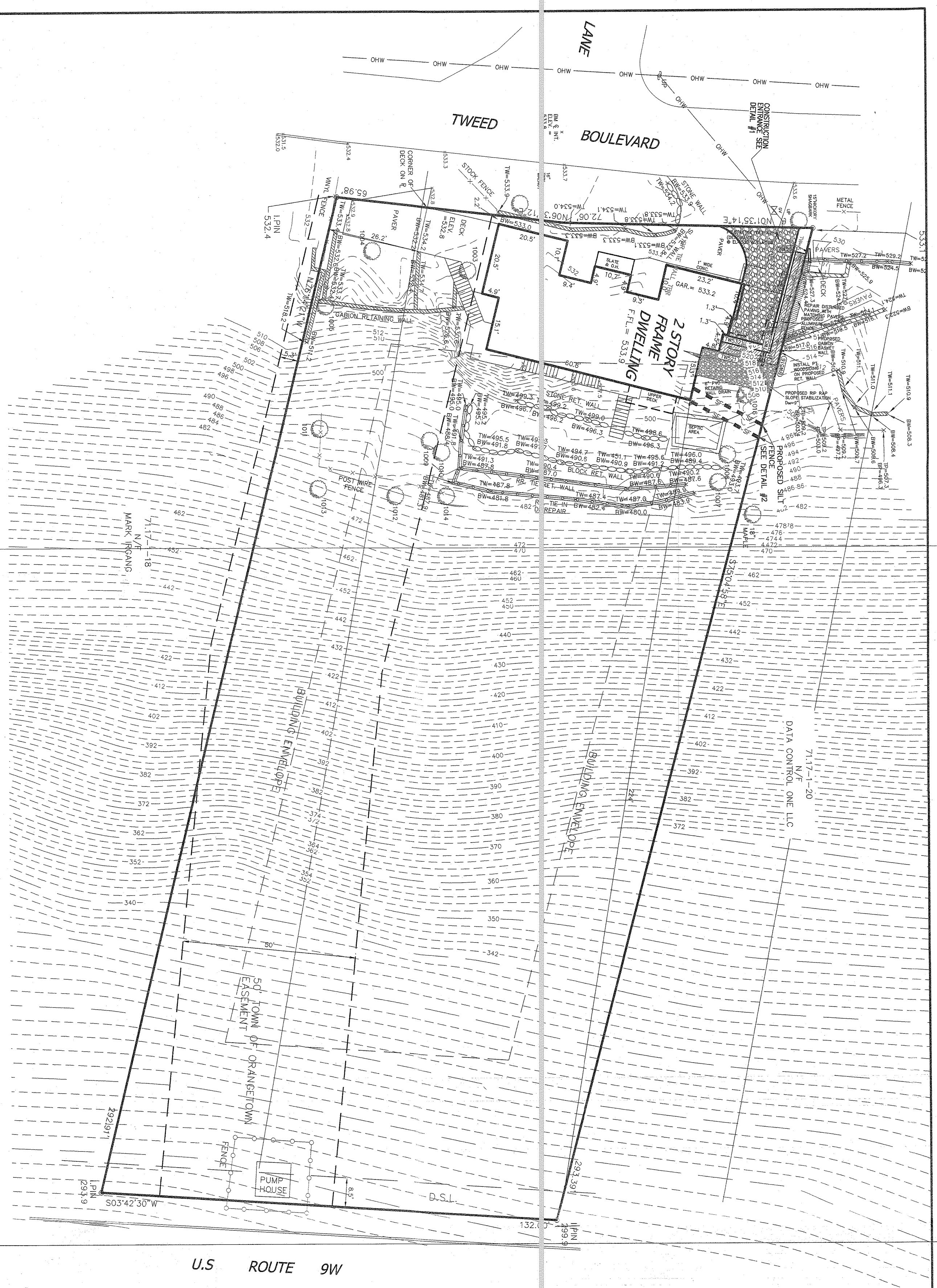
**TOWN OF ORANGETOWN**  
ROCKLAND COUNTY, NEW YORK

**SITE DEVELOPMENT PLAN**

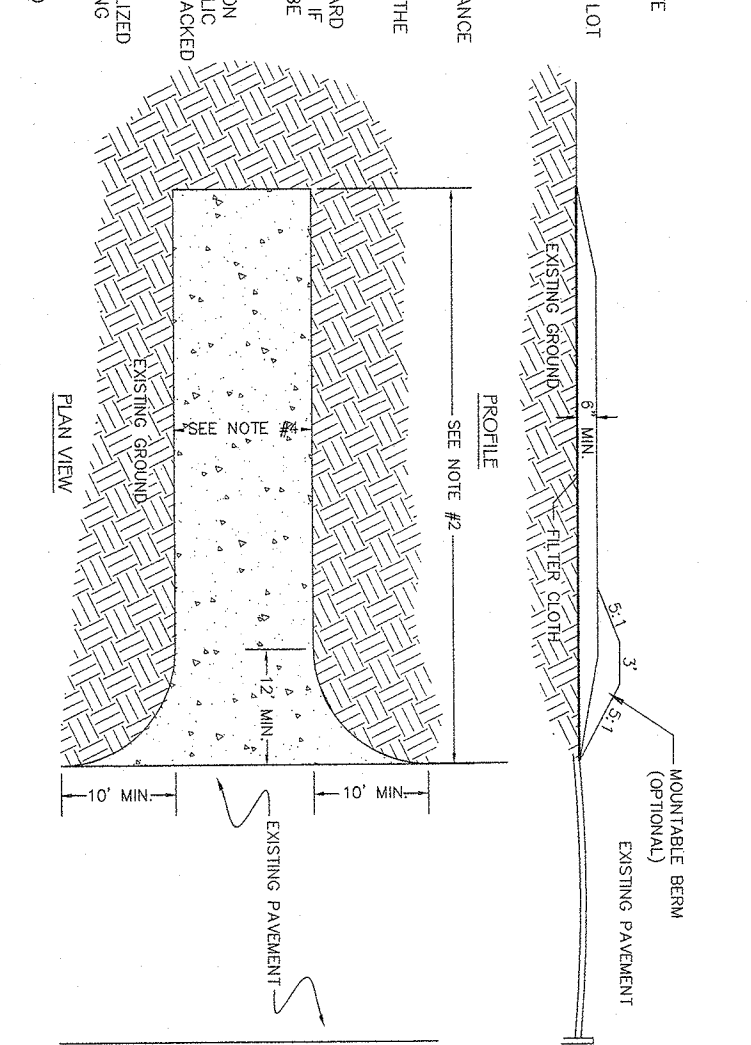
BROWN BR: LK  
DATE: JANUARY 22, 2020  
PROJECT NO: 4692

CHECKED BY: JVA  
SCALE: 1 IN. = 20 FT.  
DRAWING NO: 2

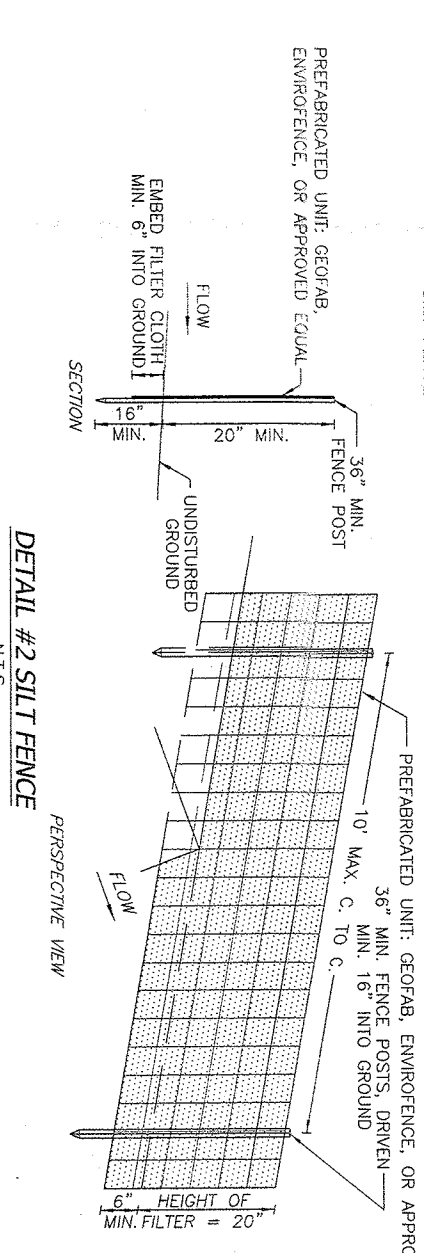




- SPECIFICATIONS FOR CONSTRUCTION ENTRANCE**
1. STONE SIZE - USE 2" STONE OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
  2. LENGTH - NOT LESS THAN 50 FT. EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FT. MINIMUM LENGTH WOULD APPLY.
  3. THICKNESS - NOT LESS THAN 6 IN.
  4. WIDTH - 12 FT. MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT THE POINT OF ENTRY.
  5. RATES, CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO THE PLACEMENT OF STONE.
  6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD THE ENTRANCE SHALL BE COLLECTED AND CONVEYED TO AN APPROPRIATE DRAINAGE SYSTEM OR TO A NEARBY WATERWAY.
  7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PERMIT THE FREE FLOW OF WATER THROUGH THE ENTRANCE.
  8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH GRASS OR OTHER VEGETATION.
  9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

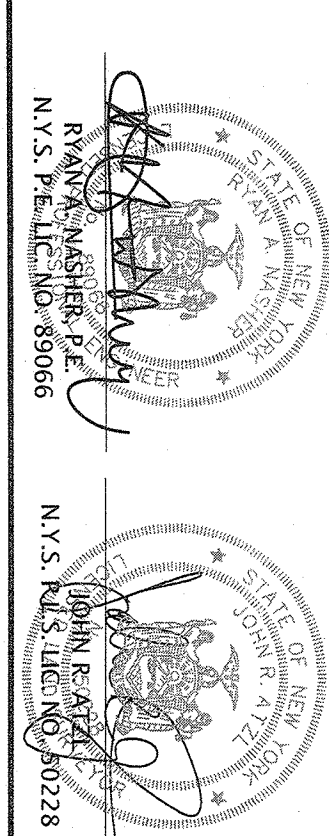


- CONSTRUCTION NOTES FOR PRE-FABRICATED SILT FENCE**
1. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY SIX INCHES AND FASTENED TOGETHER WITH STAPLES OR NAILS.
  2. MAINTENANCE SHALL BE PROVIDED AS REQUIRED AND AS NECESSARY TO KEEP THE SILT FENCE IN GOOD WORKING ORDER.



- SEDIMENT & EROSION CONTROL NOTES**
1. FABRIC FENCE WILL BE INSTALLED ALONG DOWN-HILL SIDE OF ADJACENT PROPERTY OWNERS AND ALONG ALL DISTURBED AREAS.
  2. TEMPORARY SEEDING SHALL BE APPLIED TO DISTURBED AREAS THAT ARE LEFT BARE FOR 15 DAYS UNLESS CONSTRUCTION WILL BE BEGUN WITHIN THAT PERIOD. SEEDING SHALL BE REAPPLIED IMMEDIATELY AND FOR MAINTENANCE. SOIL REPAIR SHALL BE INSTALLED AT THE END OF EACH DAY DURING CONSTRUCTION.
  3. STRUCTURAL MEASURES MUST BE MAINTAINED TO BE EFFECTIVE TO INSURE STRUCTURAL INTEGRITY, OBJECT VANDALISM DAMAGE, AND FOR MAINTENANCE. SOIL REPAIR SHALL BE INSTALLED AT THE END OF EACH DAY DURING CONSTRUCTION.
  4. A STABILIZED CONSTRUCTION ROAD SHALL BE INSTALLED AT THE END OF EACH DAY DURING CONSTRUCTION.
  5. MUCKPAIL SURFACES SHALL BE SWEPT THOROUGHLY AT THE END OF EACH DAY DURING CONSTRUCTION.
  6. CONSTRUCTION EQUIPMENT SHALL BE LIMITED TO AREAS WITHIN THE SILT FENCE SEDIMENT PROTECTION AREA.

- LEGEND**
- EXISTING 2' CONTOUR
  - EXISTING 1' CONTOUR
  - EXISTING FIRE HYDRANT
  - EXISTING GAS LINE
  - EXISTING CATCH BASIN
  - EXISTING STORM DRAIN LINE
  - EXISTING SEWER MANHOLE
  - EXISTING SPOT ELEVATION
  - EXISTING STORMWALL
  - EXISTING SLOPE
  - EXISTING LIGHT POLE
  - EXISTING UTILITY POLE
  - EXISTING UTILITY POLE
  - EXISTING TREE
  - EXISTING TREE



PAUL NASHIER, P.E.  
N.Y.S. LICENSE NO. 89026

JOHN BEATY  
N.Y.S. LICENSE NO. 90228

THE EDUCATIONAL LAW OF THE STATE OF NEW YORK...  
I, PAUL NASHIER, P.E., do hereby certify that this plan was prepared in accordance with the provisions of the Education Law of the State of New York, and that I am a duly Licensed Professional Engineer in the State of New York.

UNDESIGNED ALTERATIONS OR ADDITIONS TO A SURVEY MAP BEARING A PROFESSIONAL ENGINEER'S SEAL OR SEAL, IS A VIOLATION OF SECTION 2206 OF THE EDUCATIONAL LAW OF THE STATE OF NEW YORK.  
ONLY COPIES FROM THE ORIGINAL PRINTING OF THIS PLAN SHALL BE VALID FOR ANY PURPOSE.  
LAND SURVEYOR'S EXERCISED SEAL SHALL BE VALID FOR ANY PURPOSE.  
CONTRACTORS SHALL SIGN ONLY TO INDICATE THEIR AGREEMENT TO THE WORK SHOWN THEREON.  
ATTENTION TO THE DIMENSIONS AND/OR INSTRUCTIONS ON THIS PLAN SHALL BE GIVEN TO ADDITIONAL INDIVIDUALS ASSIGNED OR SUBSEQUENT OWNERS.

**ATZL NASHIER & ZIGLER P.C.**  
ENGINEERS-SURVEYORS-PLANNERS

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PROJECT: **119 TWEED BLVD., LLC**

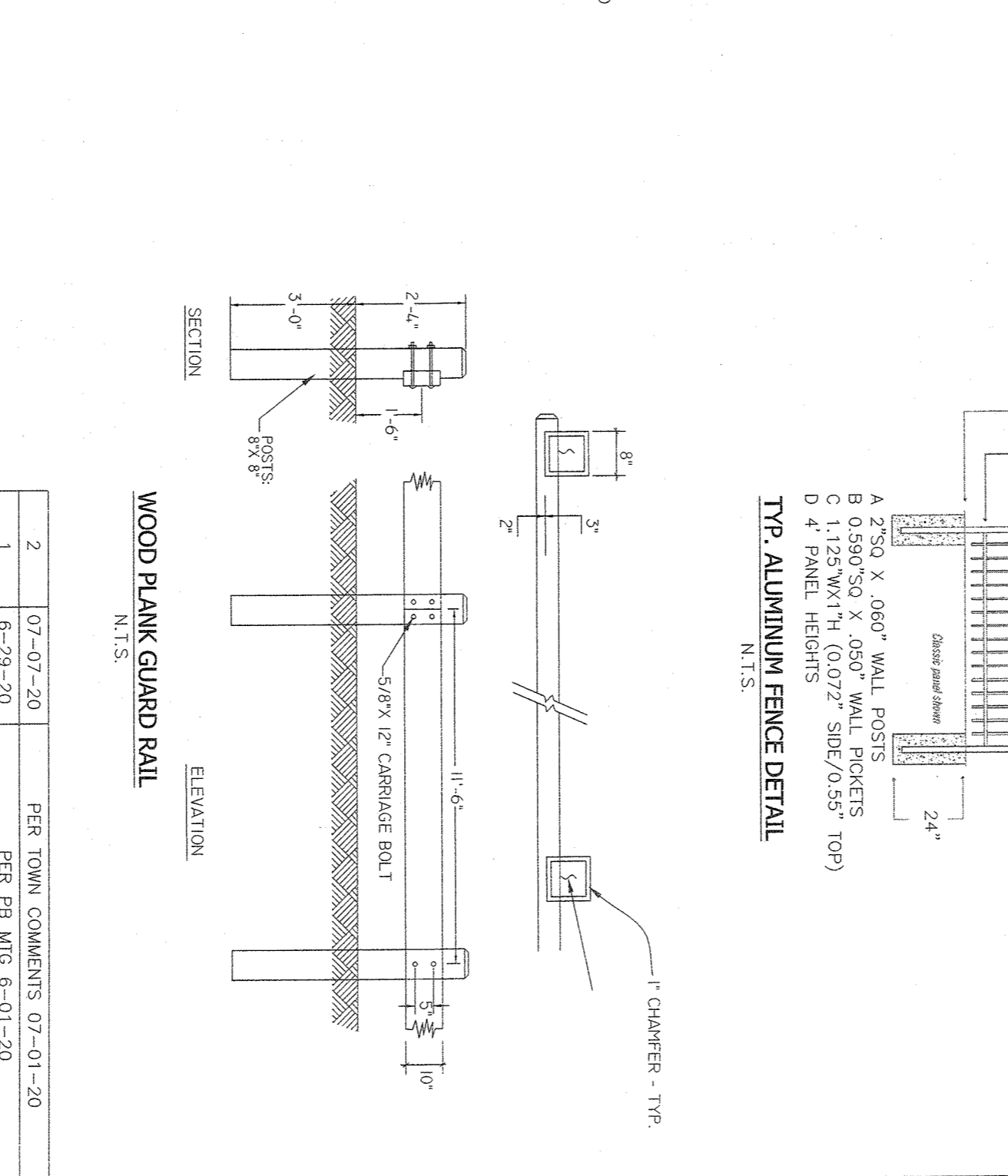
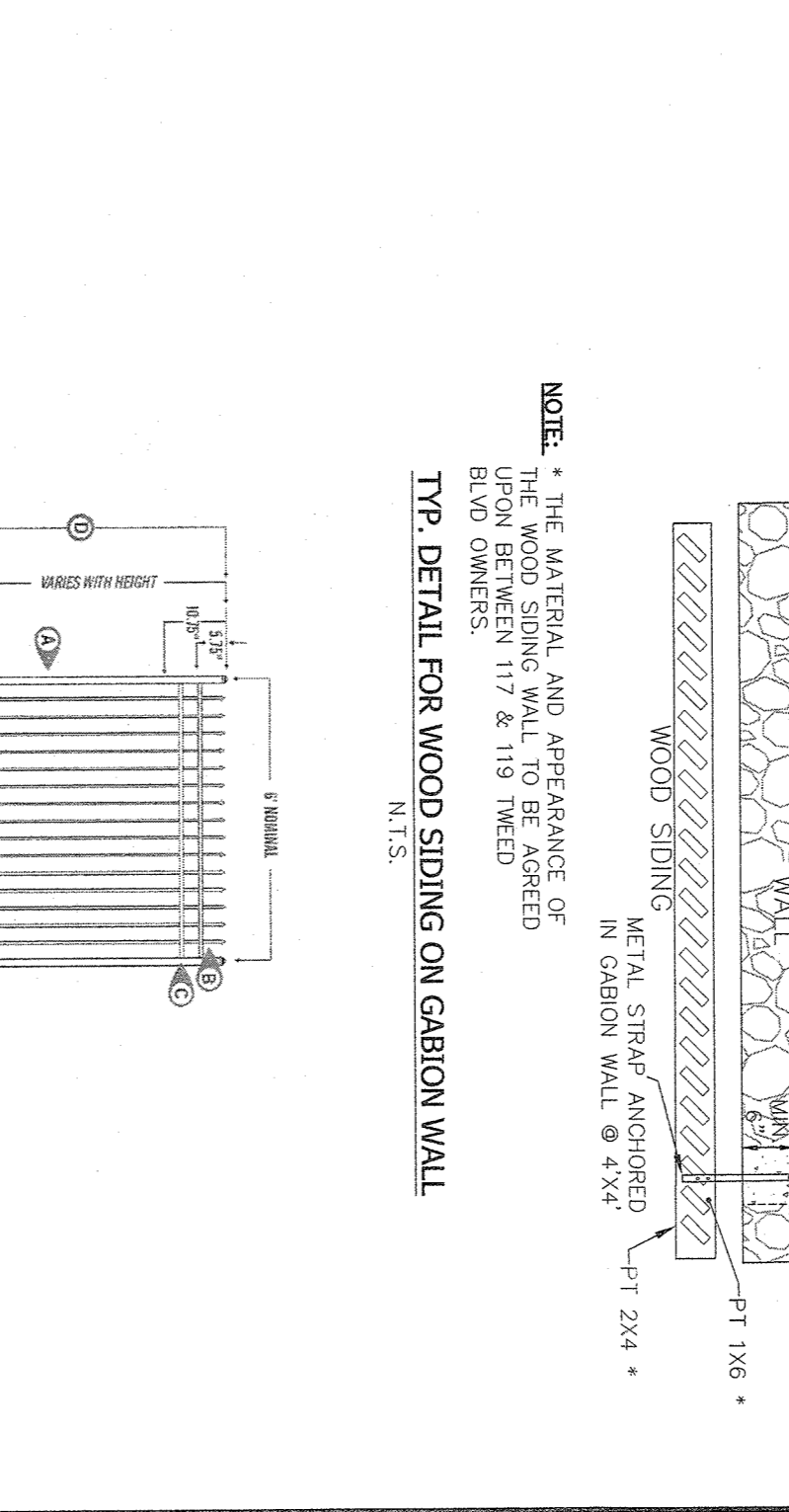
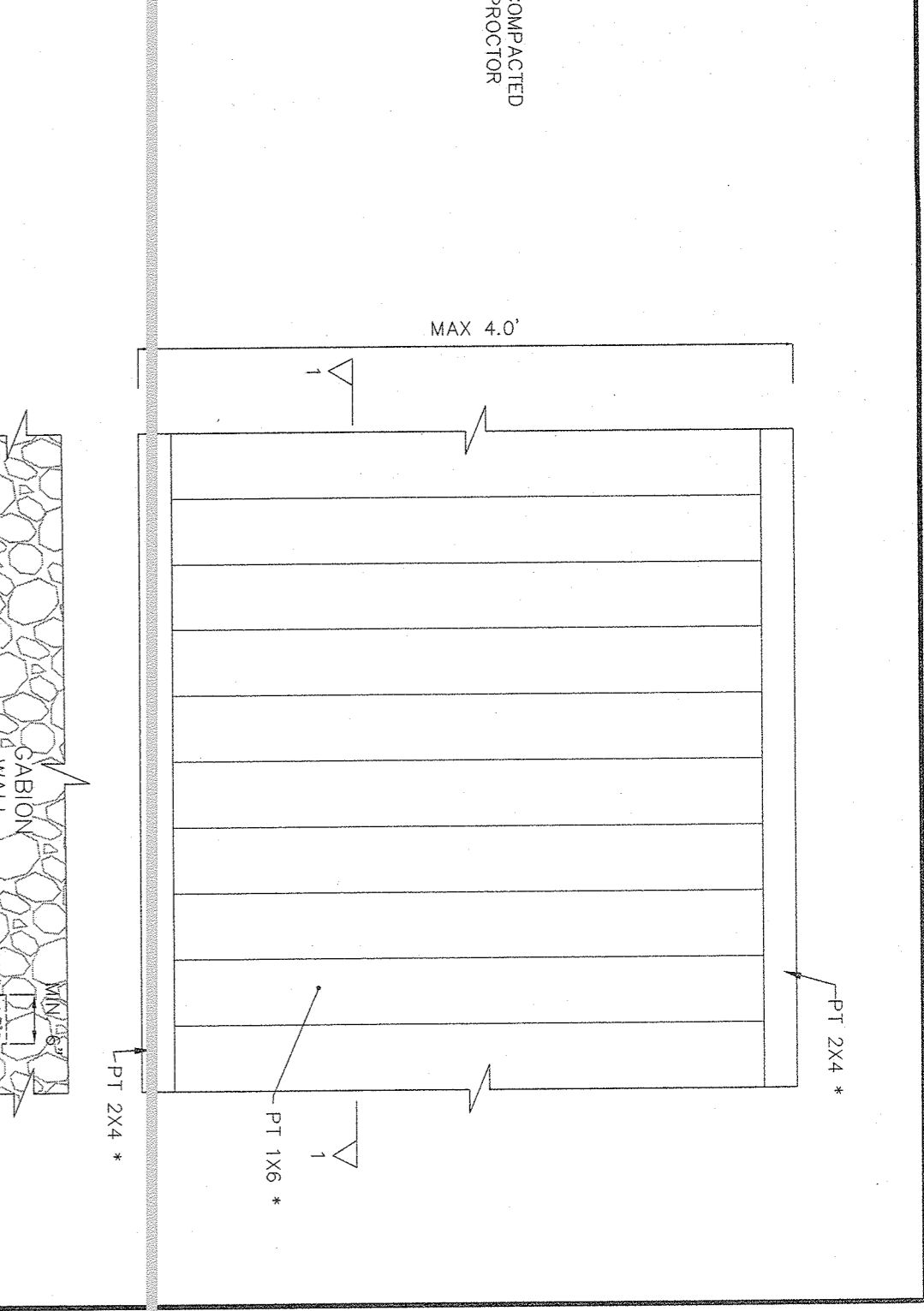
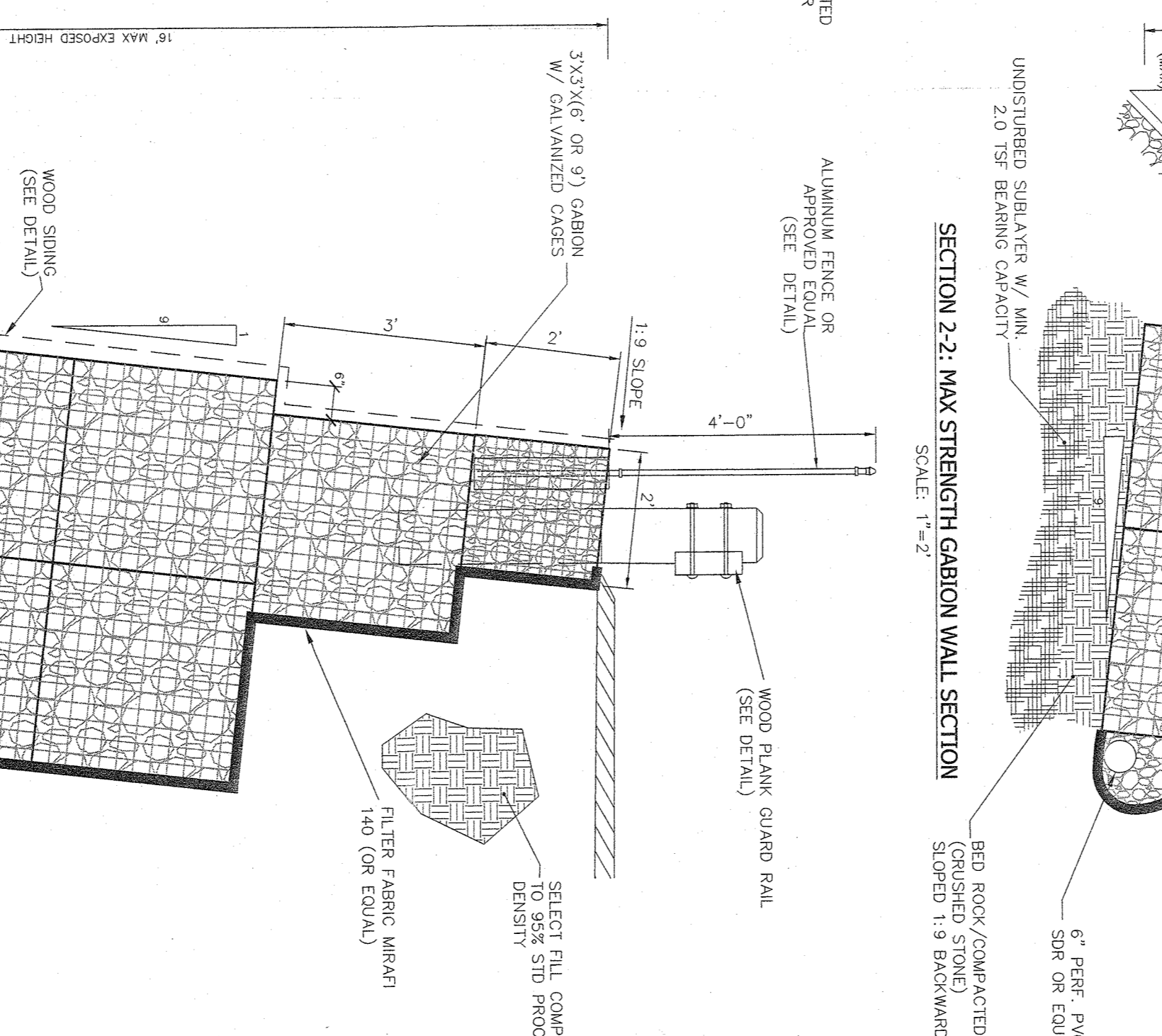
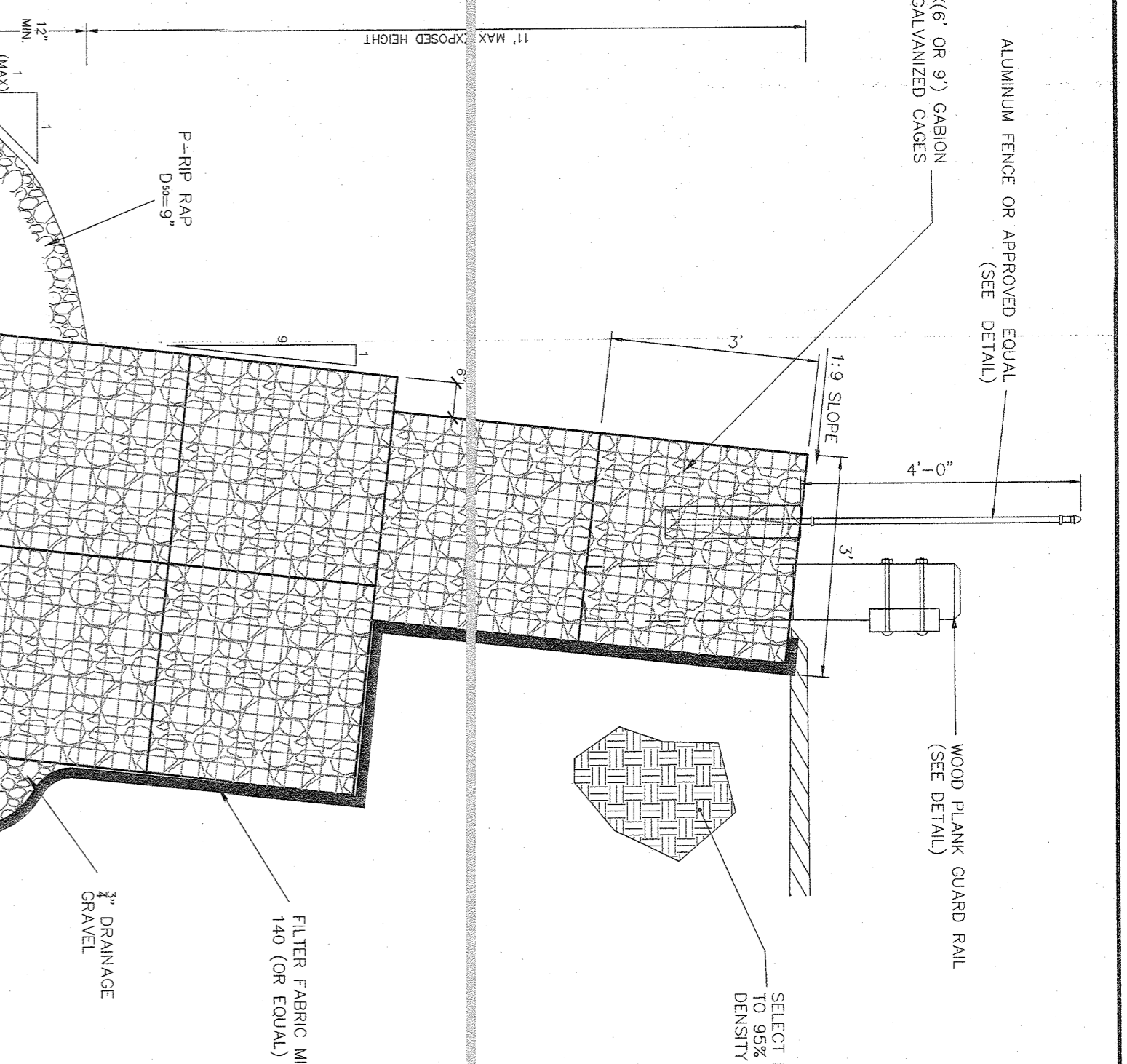
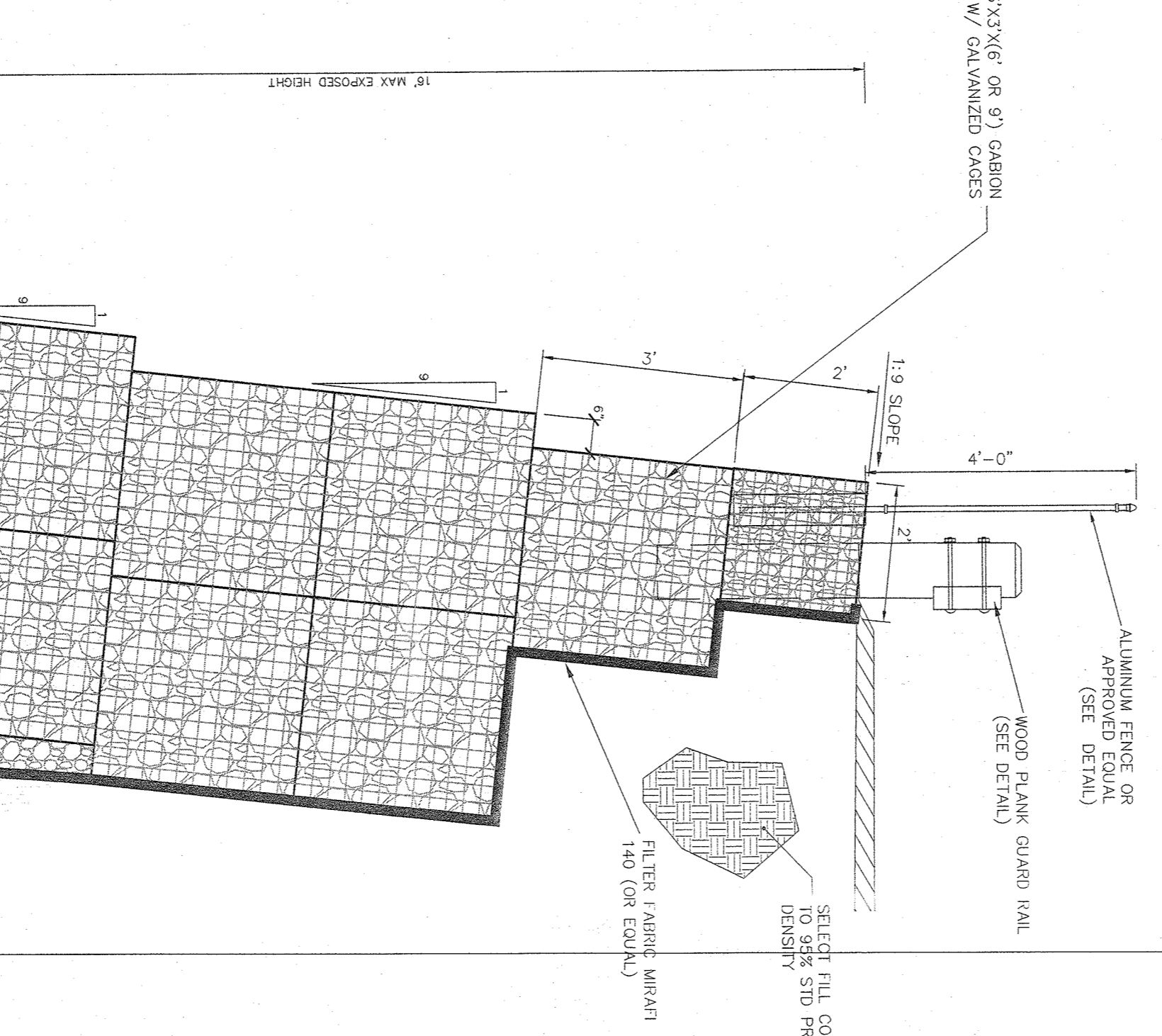
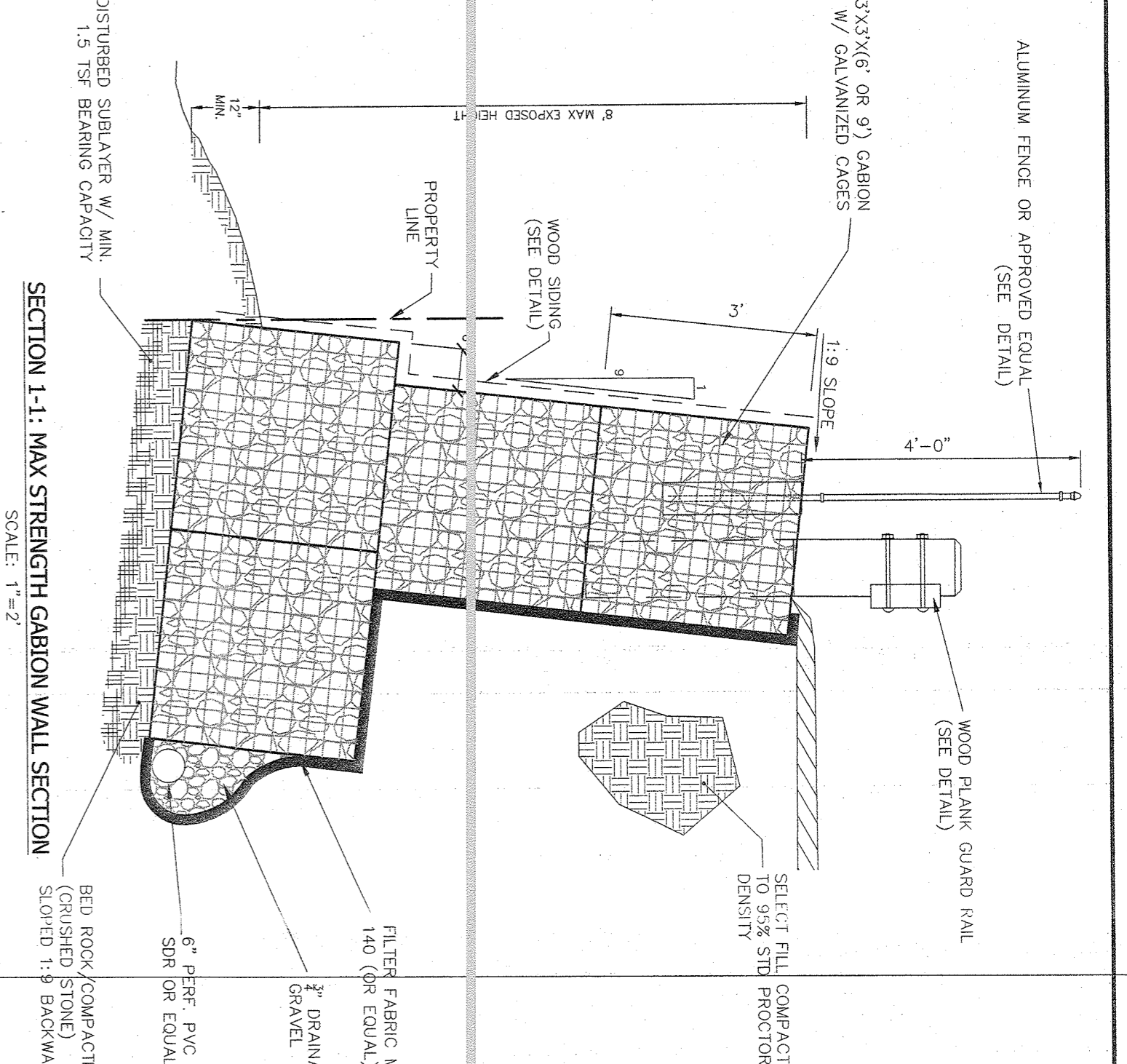
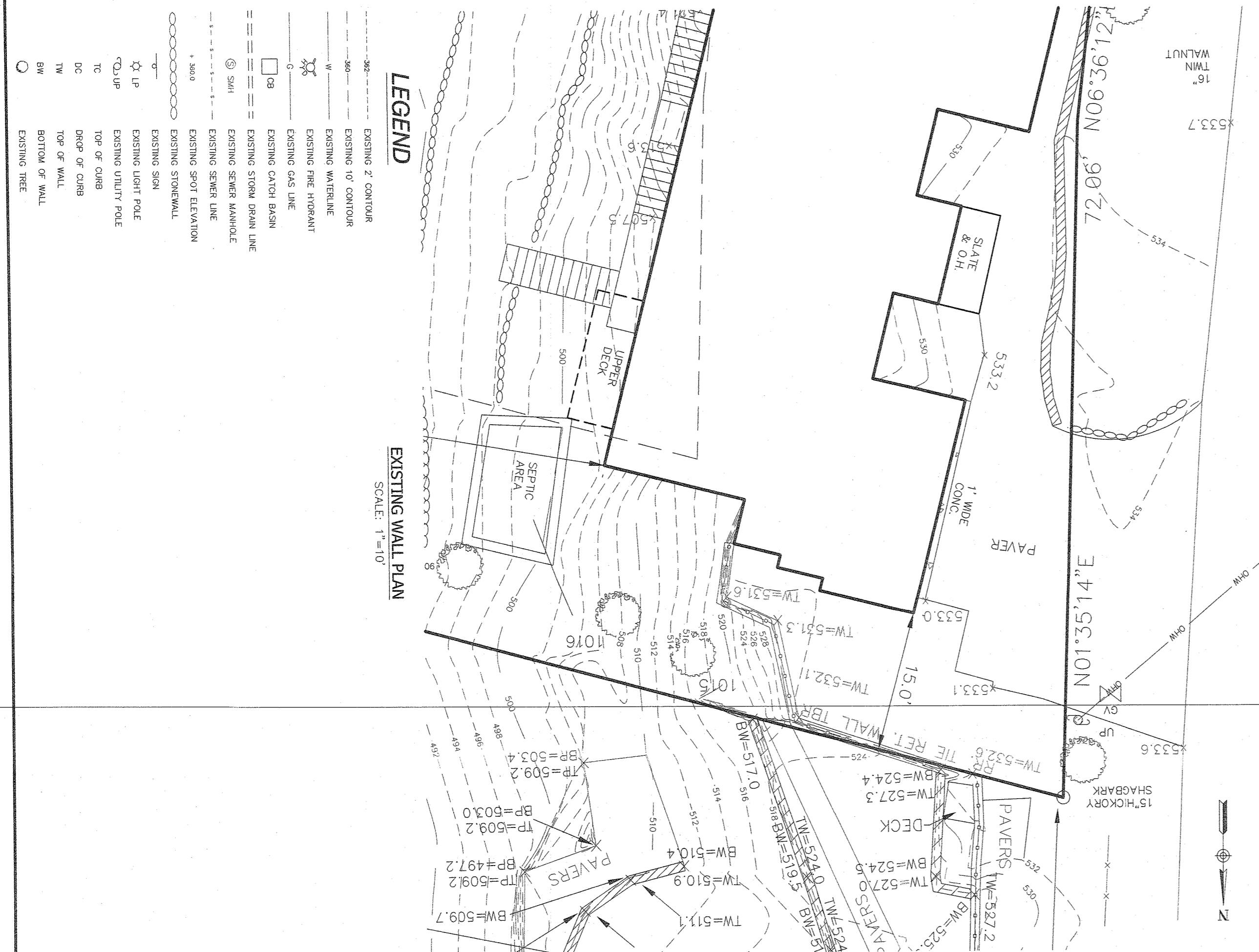
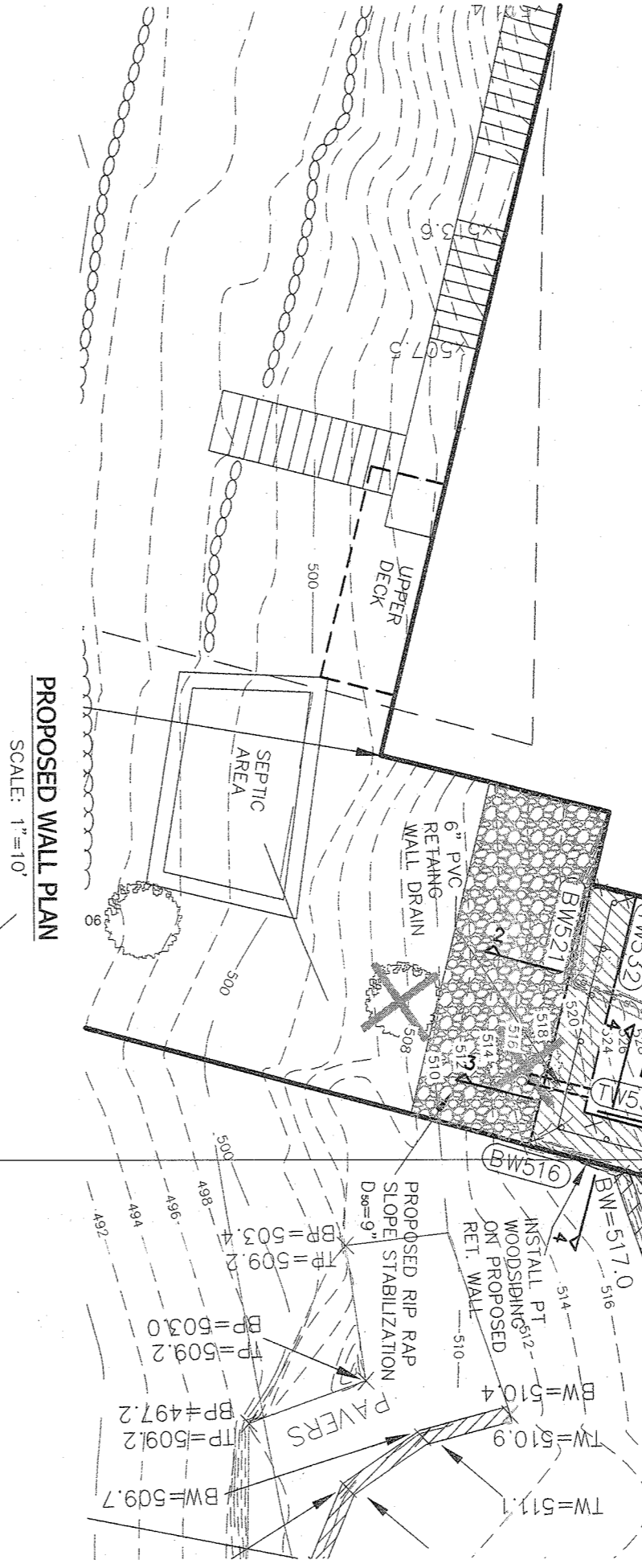
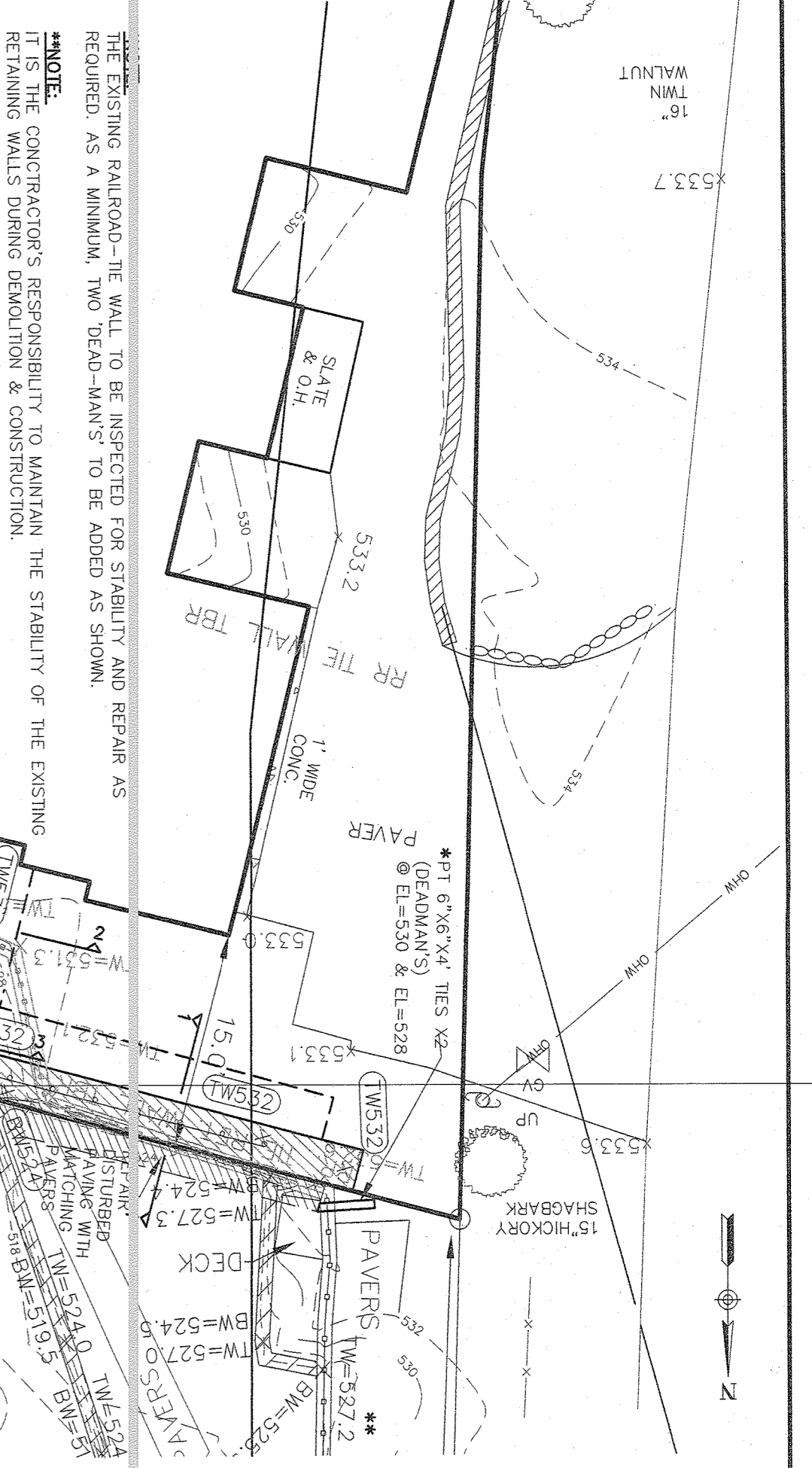
TOWN OF ORANGETOWN  
ROCKLAND COUNTY, NEW YORK

TITLE: **EROSION & SEDIMENT CONTROL PLAN**

REVISION	DATE	DESCRIPTION
1	6-29-20	PER TOWN COMMENTS 07-01-20
2	07-07-20	PER TOWN COMMENTS 07-01-20

DRAWN BY:	MM	CHECKED BY:	JJA
DATE:	JANUARY 22, 2020	SCALE:	1 IN. = 20 FT.
PROJECT NO.:	4692	DRAWING NO.:	3





NOTES:  
 1. CONTRACTOR SHALL PROTECT ALL EXISTING FEATURES IN THE CURRENT & NEIGHBORING PROPERTIES.  
 2. CONTRACTOR TO PROVIDE SEQUENCING PROCEDURE TO PROTECT THE RETAINING WALLS IN THE 117 TWEED BLVD PROPERTY.

THE EDUCATION LAW OF THE STATE OF NEW YORK REQUIRES ANY PERSON ATTEMPTING TO OBTAIN A LICENSE TO PRACTICE AS A PROFESSIONAL ENGINEER OR ARCHITECT TO COMPLETE A COURSE OF CONTINUING EDUCATION. THIS COURSE OF CONTINUING EDUCATION IS REQUIRED FOR THE MAINTENANCE OF THE LICENSE. THE EDUCATION LAW OF THE STATE OF NEW YORK REQUIRES ANY PERSON ATTEMPTING TO OBTAIN A LICENSE TO PRACTICE AS A PROFESSIONAL ENGINEER OR ARCHITECT TO COMPLETE A COURSE OF CONTINUING EDUCATION. THIS COURSE OF CONTINUING EDUCATION IS REQUIRED FOR THE MAINTENANCE OF THE LICENSE.

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 Web: www.atzny.com

**TOWN OF ORANGETOWN**  
**ROCKLAND COUNTY, NEW YORK**

**119 TWEED BLVD., LLC**

**RETAINING WALL PLAN & DETAILS**

DATE:	JANUARY 22, 2020	CHECKED BY:	VR
PROJECT NO.:	4692	SCALE:	AS SHOWN
DRAWN BY:	LK	DESIGNING NO.:	4

STATE OF NEW YORK  
 SEAL OF THE STATE ENGINEER  
 RYAN NASHER, P.E.  
 N.Y.S. REG. NO. 95966

STATE OF NEW YORK  
 SEAL OF THE STATE ARCHITECT  
 ATZIL NASHER, AIA  
 N.Y.S. REG. NO. 90228

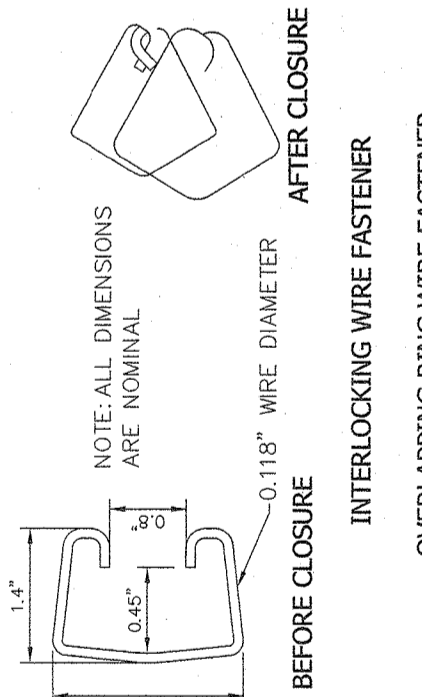
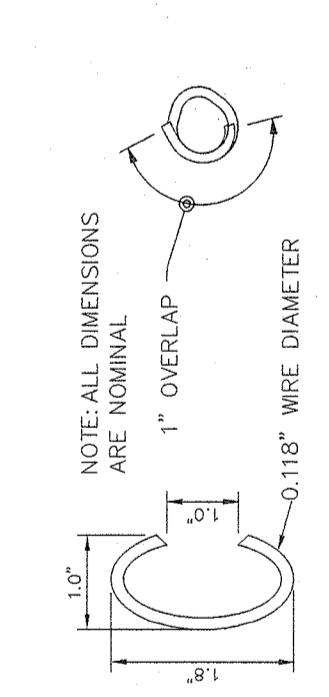


**GENERAL CONSTRUCTION CONDITIONS**

1. THE TERM OF OWNER AS USED IN THESE SPECIFICATIONS AND NOTES SHALL INCLUDE THE OWNER OF THE PROPERTY, THE COMPANY OR PARTY THAT HIRED THE CONTRACTOR, THE COMPANY OR PARTY THAT HIRED THE CONTRACTOR FOR THIS WORK AND THE AGENTS OF EACH OF THE OWNERS REPRESENTATIVE SHALL BE THE INDIVIDUAL OR PARTY ASSIGNED BY THE OWNER TO BE THE OWNER'S REPRESENTATIVE.
2. THE OWNER SHALL BE RESPONSIBLE FOR ALL TEMPORARY PERMITS, CONNECTION PERMITS, FEES, INSPECTIONS AND RECORD KEEPING REQUIRED BY ALL MUNICIPAL, UTILITY, HEALTH, ENVIRONMENTAL, STATE OR FEDERAL AGENCIES THAT MAY HAVE JURISDICTION. FURTHERMORE, THE OWNER SHALL BE RESPONSIBLE TO MEET OR EXCEED ALL REQUIREMENTS OF THE AGENCIES OR AUTHORITIES HAVING JURISDICTION OVER HIS WORK. ALL CONFLICTS IN REQUIREMENTS OF DIFFERENT AGENCIES, AUTHORITIES AND/OR THE DESIGN SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE BEFORE PROCEEDING.
3. THE CONTRACTOR SHALL BE RESPONSIBLE TO LOCATE AND MAINTAIN THE PROPERTY AND PROJECT LIMITS THROUGHOUT THE PROJECT. ALL CONFLICTS BETWEEN THE DESIGN AND THE PROJECT / PROPERTY LIMITS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE BEFORE PROCEEDING UNLESS DESCRIBED IN THE CONTRACT DOCUMENTS OR SHOWN ON THE DRAWINGS THE OWNER HAS NOT SECURED ANY RIGHTS OF WAY, EASEMENTS OR AGREEMENTS WITH OTHER PROPERTY OWNERS OR PROPERTY USERS; THEREFORE IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SECURE AND MAINTAIN ANY TEMPORARY RIGHT OF WAYS, EASEMENTS, PERMITS OR AGREEMENTS HE MAY NEED TO PERFORM HIS WORK. ALL SUCH AGREEMENTS SHALL HOLD THE OWNER, ENGINEER AND HIS AGENTS HARMLESS AND IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BEAR ALL COSTS. THE CONTRACTOR SHALL COPY THE OWNER ON RELEASES OF ALL AGREEMENTS PRIOR TO FINAL PAYMENT BY THE OWNER TO THE CONTRACTOR.
4. UNLESS OTHERWISE NOTED ON THE DRAWINGS OR IN THE CONTRACT DOCUMENTS THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION SURVEY, LAYOUT AND RECORD DRAWINGS FOR THIS CONTRACT. ANY CONFLICTS IN SURVEY/LAYOUT AND THE DESIGN OR AGENCIES REQUIREMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE PRIOR TO PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL PROTECT AND SAFEGUARD ALL EXISTING SURVEY MONUMENTS, CONTROL AND TIE-DOWNS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COST ASSOCIATED WITH ERRORS IN THE STAKE-OUT AND LOCATION OF HIS WORK. THE CONTRACTOR SHALL PAY ALL COSTS TO REPAIR OR REPLACE DAMAGED SURVEY MONUMENTS, CONTROL AND TIE-DOWNS.
5. NO CHANGES TO THE DESIGN OR MATERIALS SPECIFIED MAY BE MADE WITHOUT WRITTEN AUTHORIZATION BY THE ENGINEER OR IN THE CASE OF UTILITIES OR ROAD WORK TO BE DEDICATED, THE AUTHORITY RECEIVING DEDICATION. THE CONTRACTOR SHALL PROVIDE TO THE OWNER AT THE END OF THE CONTRACT A RECORD SET OF DRAWING REFLECTING ALL CHANGES MADE BY THE CONTRACTOR DURING CONSTRUCTION.
6. EROSION CONTROL IS NECESSARY WHEN SEDIMENT, DUST, EROSION, OR CONTAMINATED RUN-OFF MAY OCCUR. THE CONTRACTOR SHALL BE RESPONSIBLE TO PLACE AND MAINTAIN EROSION CONTROL OR RUN-OFF PROTECTION.
7. THE CONTRACTOR SHALL BE FAMILIAR WITH THE PROJECT SITE AND ALL ADJACENT PEDESTRIAN, TRAFFIC AND BUSINESS USES. THE CONTRACTOR SHALL TAKE WHAT EVER PRECAUTIONS AND STEPS NECESSARY TO MAINTAIN SAFETY AND OPERATION OF THESE USES IN ACCORDANCE WITH FEDERAL, STATE, COUNTY AND LOCAL REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COSTS AND DAMAGES CAUSED FROM HIS FAILURE TO TAKE PROPER AND ADEQUATE PRECAUTIONS. THE CONTRACTOR SHALL BE FAMILIAR WITH ALL FEDERAL, STATE AND LOCAL REQUIREMENTS REGARDING THESE USES INCLUDING BUT NOT LIMITED TO THE MAINTENANCE AND PROTECTION OF TRAFFIC REQUIRED BY THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYS D.O.T.) AND CORRESPONDING TOWN.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COSTS AND DELAYS ASSOCIATED WITH WEATHER, GROUNDWATER AND OTHER OCCURRENCES THAT COULD BE EXPECTED OR ARE COMMON WITH THIS TYPE WORK. THE CONTRACTOR SHALL REVIEW ALL PERMIT DOCUMENTS INCLUDING SOILS REPORTS, SOILS BORINGS AND OTHER SOIL OR SITE DATA.
9. THE CONTRACTOR SHALL BE RESPONSIBLE TO SAVE AND PROTECT HIS WORK THROUGHOUT THE CONTRACT. ANY DAMAGES REQUIRING REPAIRS OR REPLACEMENT SHALL BE CORRECTED BY THE CONTRACTOR AT HIS EXPENSE.
10. WHEN WORK IS DONE WITHIN A ROAD, UTILITY OR PRIVATE EASEMENT, RIGHT OF WAY OR OTHER PROPERTY AGREEMENT THE CONTRACTOR SHALL DO ALL WORK WITHIN THAT AREA PER THE AUTHORITY HAVING JURISDICTION.
11. ALL EXISTING UTILITIES ARE SHOWN PER SURFACE SURVEYS AND/OR RECORD MAPS AND MAY VARY FROM ACTUAL IN FIELD LOCATIONS. THE CONTRACTOR IS RESPONSIBLE FOR ALL UTILITY STAKE OUTS AND LOCATING UTILITIES PRIOR TO COMMENCING WORK. ANY DAMAGE TO UTILITIES DUE TO IMPROPER STAKE OUT, LACK OF STAKE OUT OR THE FAILURE TO VERIFY DIFFERENCES BETWEEN DRAWINGS AND ACTUAL FIELD CONDITIONS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR, REPLACE OR PAY DAMAGES AT NO EXPENSE TO THE CONTRACT.
12. CONTRACTOR SHALL FURNISH AND APPLY WATER AND/OR CALCIUM CHLORIDE AS NECESSARY TO CORRECT DUSTY CONDITIONS RESULTING FROM LOCAL TRAFFIC ON THE STREET OR CONTRACTOR'S OPERATIONS.

**EARTHWORK**

1. PRIOR TO STARTING ANY CUTS OR FILLS THE CONTRACTOR SHALL STRIP AND STOCKPILE ALL TOPSOIL. STRIPPING OF TOPSOIL CAN ONLY COMMENCE AFTER THE CLEAR AND GRAB OPERATIONS ARE COMPLETE IN THAT AREA. TOPSOIL SHALL BE STOCKPILED IN AREAS DESIGNATED ON THE PLANS OR APPROVED BY THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL REVIEW THE SOILS REPORTS, BORING LOGS AND WHEN NECESSARY HIS OWN FIELD VERIFICATION SO AS TO BE FAMILIAR WITH THE DEPTH OF TOPSOIL. THE CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS TO PREVENT OVER AND UNDER REMOVAL OF TOPSOIL.
2. UNLESS OTHERWISE NOTED ON THE DRAWINGS OR IN THE CONTRACT DOCUMENTS THE CONTRACTOR SHALL RETAIN AND PAY ALL COST FOR SOIL COMPACTING TESTING TO BE PERFORMED BY AN INDEPENDENT TESTING LABORATORY. TESTING FOR COMPACTION SHALL BE DONE EVERY 2000 SQ. FT. EACH LIFT, IN TRENCHES COMPACTION TESTING SHALL BE DONE EVERY 100 LF. EVERY OTHER LIFT, BUT NOT LESS THAN 1 TEST EVERY OTHER LIFT.
3. COMPACTION REQUIREMENTS SHALL BE THOSE OUTLINED IN THE PLAN. IF THE PLAN IS NOT CLEAR OR DOES NOT GIVE REQUIREMENTS THE FOLLOWING WILL BE USED: THE SUBGRADE SOILS AND BACK FILL AREA SHALL BE COMPACTED TO A MINIMUM OF 85% MAXIMUM DRY DENSITY PER ASTM D1557 (MODIFIED PROCTOR), ALL LANDSCAPE AND LAWN AREAS SHALL BE COMPACTED TO 90% MAXIMUM DRY DENSITY PER ASTM D1557 (MODIFIED PROCTOR). THE TESTING LAB SHALL TEST SOILS IN ACCORDANCE WITH ASTM D2922 (NUCLEAR METHOD) WITH PROCTORS FOR EACH SOIL TYPE.
4. UNLESS OTHERWISE NOTED IN THE SOILS REPORT OR ON THE DRAWINGS THE ON SITE MATERIAL SHALL BE USED TO MAKE FILLS. ALL MATERIAL TO BE USED FOR FILL SHALL BE LARGER THAN 4 INCHES. FOR FILL PLACED WITHIN 1 FOOT OF SUBGRADE NO ROCK SHALL BE GREATER THAN 2 INCHES IN DIAMETER. THE CONTRACTOR SHALL BEAR ALL COST ASSOCIATED WITH DRYING, SEGREGATING OR OTHER REQUIRED METHODS TO TREAT SOILS TO MEET COMPACTION AND OTHER REQUIREMENTS.
5. BACKFILLS SHALL BE PLACED IN LIFTS NOT TO EXCEED 8 INCH.
6. IF IMPORTED MATERIAL IS REQUIRED THE SOURCE AND A RANDOM COMPOSITE SAMPLE SHALL BE REVIEWED BY THE TESTING LABORATORY PRIOR TO BEING BROUGHT TO SITE. IMPORTED MATERIAL SHALL HAVE 100% PASSING THE 3 INCH SIEVE FOR FILL UP TO 1 FOOT OF SUBGRADE AND 100% PASSING THE 2 INCH SIEVE FOR FILLS WITHIN 1 FOOT OF SUBGRADE. THE IMPORTED MATERIAL SHALL HAVE NO MORE THAN 40% PASSING THE NO. 40 SIEVE AND 10% PASSING THE NO. 200 SIEVE. WARNERS TO THESE REQUIREMENTS CAN ONLY BE GIVEN JOINTLY BY THE OWNER AND THE GEOTECHNICAL ENGINEER THAT PREPARED THE SOILS REPORT.
7. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EARTHWORK OPERATIONS FROM WEATHER AND GROUND WATER INCLUDING KEEPING POSITIVE DRAINAGE. DIVERT DRAINAGE, Dewatering and SEALING DISTURBED AREAS WITH A STEEL DRUM ROLLER PRIOR TO INCIDENT WEATHER.
8. ALL FINAL SUBGRADE UNDER PROPOSED PAVEMENT, BUILDING OR OTHER STRUCTURE SHALL BE PROOF ROLLED AS DESCRIBED ABOVE FOR IDENTIFYING OF SOFT AREAS. AREAS FOUND TO BE UNACCEPTABLE SHALL BE SCARIFIED, DRIED AND RECOMPACTED. RETEST BY PROOF ROLL AS NECESSARY.
9. ALL EXCAVATIONS SHALL MAINTAIN SAFE SIDE SLOPES IN ACCORDANCE WITH LOCAL STATE AND OSHA REQUIREMENTS. NO STOCKING OF MATERIAL CLOSE TO AN OPEN CUT OR STEEP SLOPE WILL BE PERMITTED IN AN EFFORT TO PREVENT CAVE-INS.
10. TRENCH EXCAVATIONS SHALL BE MADE UNIFORM AS SHOWN ON PLAN. NO MORE TRENCH SHALL BE OPEN IN ONE DAY THAT CAN BE PROPERLY BACKFILLED IN THAT SAME DAY TO MINIMIZE WEATHER AND SAFETY CONCERNS. COMPACTION REQUIREMENTS ARE NOT RELIEVED IN THESE AREAS AND WILL REMAIN AS STATED ON THE DRAWINGS OR ABOVE.
11. IF ROCK IS ENCOUNTERED THAT WAS NOT INDICATED ON THE PLANS OR SOILS REPORT, THE CONTRACTOR SHALL INFORM THE OWNER / ENGINEER OF THE RECORD FOR ALTERNATIVE DESIGN. NO ROCK EXCAVATION IS EXPECTED.
12. WHERE ROCK IS ADJACENT TO A STRUCTURE OR UTILITY THE ROCK SHALL BE REMOVED TO A MINIMUM OF 6 INCHES BELOW AND 1 TIMES THE DIAMETER BUT NOT LESS THAN 1 FOOT OR GREATER THAN 3 FEET ON ANY SIDE OF THE UTILITY OR STRUCTURE.
13. NO EXPLOSIVES WILL BE ALLOWED. NO BASTING IS ALLOWED AT THIS PROJECT SITE.
14. UNLESS OTHERWISE NOTED ON THE PLANS, THE CONTRACTOR SHALL REMOVE ALL EXCESS TOPSOIL, CUT MATERIAL OR WASTE FROM SITE AND DISPOSE OF IN A LEGAL MANNER.
15. CONTRACTOR SHALL PROVIDE TEMPORARY SUPPORT STRUCTURE FOR EXCAVATION AS REQUIRED.
16. CONTRACTOR SHALL PROTECT ALL UNDERGROUND PIPES AND FACILITIES, INCLUDING UTILITY AND STORMWATER PIPES AND CATCH BASINS THROUGHOUT EXCAVATION AND CONSTRUCTION. ANY DAMAGE TO THE ABOVEMENTIONED FACILITIES SHALL BE REPAIRED AT CONTRACTOR'S COST.



**INTERLOCKING WIRE FASTENER**  
**OVERLAPPING RING WIRE FASTENER**  
**ALTERNATE TYING FASTENERS**  
N.T.S.

**GABION WALL NOTES:**

1. THE SCOPE OF WORK SHALL CONSIST OF FURNISHING, ASSEMBLING AND INSTALLING ROCK FILLED WIRE MESH GABION BASKETS.
2. GABIONS SHALL BE FABRICATED, ASSEMBLED AND INSTALLED IN ACCORDANCE WITH THE NOMINAL WIRE SIZES AND DIMENSIONS FOUND IN TABLE 1, USING THE FOLLOWING MATERIALS:
3. WIRE FOR FABRICATION AND ASSEMBLY SHALL BE 100%+0% GALVANIZED. THE WIRE SHALL HAVE A MINIMUM TENSILE STRENGTH OF 60,000 PSI. GALVANIZED STEEL WIRE SHALL CONFORM TO ASTM A 641, CLASS 3, AND SOFT TEMPER.
4. ALTERNATE FASTENERS FOR USE WITH WIRE MESH GABIONS, SUCH AS RING FASTENERS, SHALL BE FORMED FROM WIRE MEETING THE SAME QUALITY AND COATING THICKNESS REQUIREMENTS AS SPECIFIED FOR THE GABIONS.
5. STANDARD FASTENERS AND ALTERNATE FASTENERS MUST PROVIDE A MINIMUM STRENGTH OF 1,400 LBS. PER LINEAL FOOT FOR GABION BASKETS OR 1,000 LBS. PER LINEAL FOOT FOR GABION MATTRESSES. WHEN USED TO INTERCONNECT GABION BASKETS OR MATTRESSES WITH PVC COATING, RING FASTENERS SHALL BE MADE OF STAINLESS STEEL AND SHALL CONFORM TO THE QUALITY REQUIREMENTS AS FOLLOWS AND AT LEAST 85 PERCENT IF THE ROCK PARTICLES, BY WEIGHT, SHALL BE WITHIN THE PREDOMINANT ROCK SIZE RANGE. RECYCLED CONCRETE MAY BE USED IN LIEU OF THE SPECIFIED AGGREGATE AT THE ENGINEER'S DISCRETION.

GABION BASKET HEIGHT (INCHES)	PREDOMINANT ROCK SIZE (INCHES)	MINIMUM ROCK DIMENSION (INCHES)	MAXIMUM ROCK DIMENSION (INCHES)
12"	4	4	8
18"	4 TO 8	4	8
36"	8	8	16

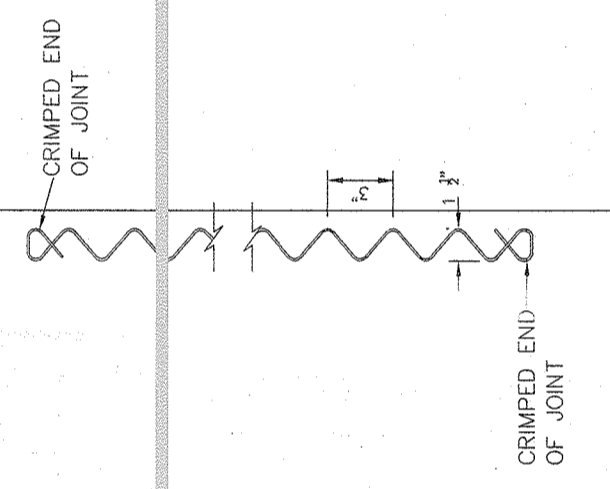
7. THE FOUNDATION ON WHICH THE GABIONS ARE TO BE PLACED SHALL BE CUT OR FILLED AND GRADED TO THE LINES AND GRADES SHOWN ON THE DRAWINGS.
8. SURFACE IRREGULARITIES, LOOSE MATERIAL, VEGETATION, AND ALL FOREIGN MATTER SHALL BE REMOVED FROM FOUNDATION SURFACE AREA.
9. WHEN FILL IS REQUIRED, IT SHALL CONSIST OF MATERIALS CONFORMING TO THE SPECIFIED REQUIREMENTS.
10. GABIONS AND BEDDING OR SPECIFIED GEOTEXTILES SHALL NOT BE PLACED UNTIL THE FOUNDATION PREPARATION IS COMPLETED, AND THE SUBGRADE SURFACES HAVE BEEN INSPECTED AND APPROVED BY THE ENGINEER'S REPRESENTATIVE.
11. COMPACTION BEDDING OR FILTER MATERIAL WILL BE REQUIRED PER PLANS AND SPECIFICATIONS.
12. THE SURFACE OF THE FINISHED MATERIAL SHALL BE TO GRADE AND FREE OF MOUNDS, DIPPS OR WINDROWS. EXTRA CARE SHOULD BE TAKEN WITH FOUNDATION PREPARATIONS IN ORDER TO ENSURE A LEVEL AND SMOOTH SURFACE.
13. THE ASSEMBLY AND PLACEMENT OF GABIONS SHALL BE IN ACCORDANCE WITH THE FOLLOWING PROCEDURES:

**GENERAL RETAINING WALL NOTES**

1. WALL CONSTRUCTION SHALL BE SUPERVISED BY A QUALIFIED ENGINEER OR TECHNICIAN TO VERIFY FIELD AND SITE SOIL CONDITIONS. IF THIS WORK IS NOT PERFORMED BY THE SITE GEOTECHNICAL ENGINEER, A QUALIFIED GEOTECHNICAL ENGINEER/TECHNICIAN SHALL BE CONSULTED IN THOSE MATTERS PERTAINING TO THE SOIL CONDITIONS AND WALL PERFORMANCE.
2. THE FOUNDATION SOILS AT THE BASE OF THE WALL(S) SHALL BE INSPECTED BY THE ENGINEER. ANY UNSUITABLE SOILS OR IMPROPERLY COMPACTED EMBANKMENT MATERIAL SHALL BE REMOVED AND REPLACED AS DIRECTED BY THE ENGINEER PRIOR TO WALL CONSTRUCTION TO PROVIDE ADEQUATE BEARING CAPACITY AND MINIMIZE SETTLEMENT.
3. ALL WALL EXCAVATION AND RETAINED SOILS SHALL BE INSPECTED FOR GROUNDWATER CONDITIONS. ANY ADDITIONAL DRAINAGE PROVISIONS REQUIRED IN THE FIELD SHALL BE INCORPORATED INTO THE WALL CONSTRUCTION AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
4. ALL SOIL BACKFILL SHALL BE TESTED BY THE ENGINEER FOR MOISTURE DENSITY, AND COMPACTION PERCENTAGE (EVERY 2' VERTICALLY, 100'-200' C/C) MEETING THE MINIMUM REQUIREMENTS OF THE APPROVED DESIGN PLANS OR SPECIFICATIONS.
5. ALL WALL ELEVATIONS, GRADES, AND BACKSLOPE CONDITIONS SHALL BE VERIFIED BY THE ENGINEER IN THE FIELD FOR CONFORMANCE WITH APPROXIMATE DESIGN PLANS. ANY DEVIATIONS TO THE STRUCTURE GEOMETRY OR DESIGN CRITERIA SHALL REQUIRE DESIGN MODIFICATIONS PRIOR TO PROCEEDING WITH CONSTRUCTION.
6. DURING WALL CONSTRUCTION, PERIODIC INSPECTION SHALL BE CONDUCTED FROM START TO COMPLETION, AND CERTIFIED THAT THE WALL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THE DESIGN BY A REGISTERED LICENSED PROFESSIONAL ENGINEER IN THE STATE OF NEW YORK.

**INSPECTION AND CERTIFICATION NOTES**

- ANY PROPOSED RETAINING WALLS SHALL BE DESIGNED AND INSPECTED DURING CONSTRUCTION AND CERTIFIED THAT THEY HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE DESIGN BY A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF NEW YORK.
  - TOP OF RETAINING WALL SHALL MATCH PROPOSED GRADE.
- 1) CONTRACTOR TO CONTACT ALL INVOLVED AGENCIES PRIOR TO EXCAVATION.
  - 2) IF REQUIRED, THE CONTRACTOR TO OBTAIN BUILDING PERMIT FROM THE APPROPRIATE GOVERNING AUTHORITY.
  - 3) TESTING INSPECTION SHALL BE AS FOLLOWS:
    - A) MID HEIGHT INSPECTION
    - B) MID HEIGHT INSPECTION
    - C) FINAL INSPECTION

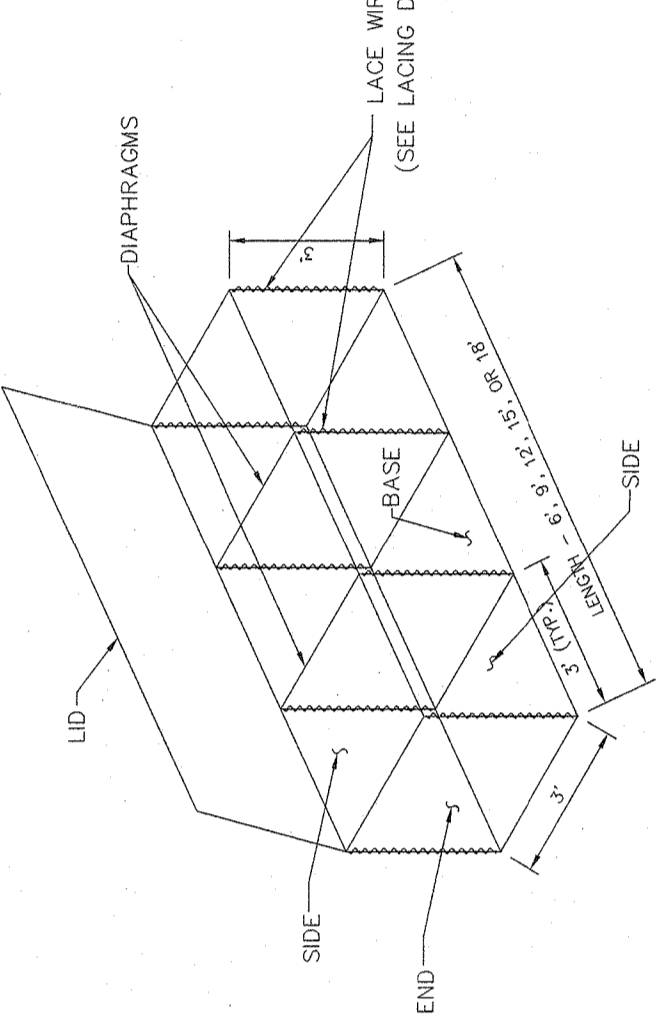


**0.150" DIAMETER SPIRAL BINDER**  
N.T.S.

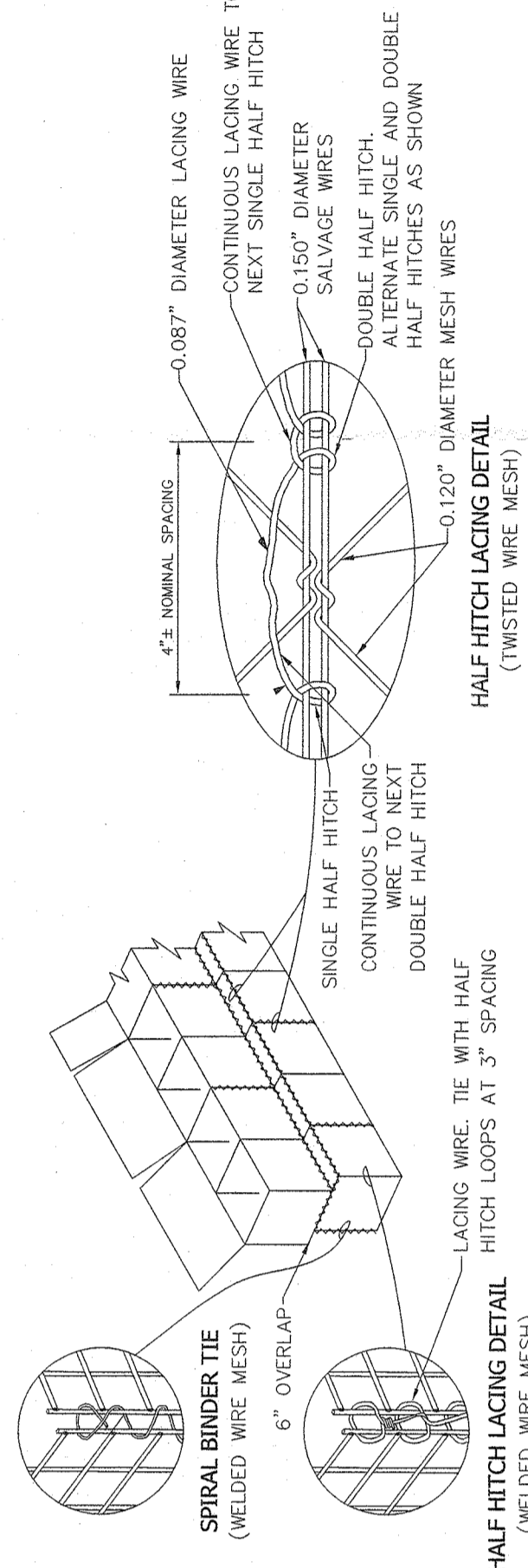
- 13.1. ASSEMBLY: ROTATE THE GABION PANELS IN TO POSITION AND JOIN THE VERTICAL EDGES WITH FASTENERS FOR GABION ASSEMBLY. WHERE LACING WIRE IS USED, WRAP THE WIRE WITH ALTERNATING SINGLE AND DOUBLE HALF HITCHES AT INTERVALS BETWEEN FOUR (4) TO FIVE (5) INCHES. WHERE SPIRAL FASTENERS ARE USED, GRIP THE ENDS TO SECURE THE SPIRALS IN PLACE. WHERE RING TYPE ALTERNATE FASTENERS ARE USED FOR BASKET ASSEMBLY, INSTALL THE FASTENERS AT A MAXIMUM SPACING OF 6 INCHES. USE THE SAME FASTENING PORCEDEX TO INSTALL INTERIOR DIAPHRAGMS WHERE THEY ARE REQUIRED.

- 13.2. INTERIOR DIAPHRAGMS WILL BE REQUIRED WHERE ANY INSIDE DIMENSIONS EXCEEDS THREE (3) FEET FOR GABION BASKETS THICKER THAN 12". DIAPHRAGMS WILL BE INSTALLED TO ASSURE THAT NO OPEN INTERVALS EXCEEDS THREE (3) FEET. FOR BASKETS 12" OR LESS RECTANGULAR CELLS ARE ALLOWED WITH DIMENSIONS 36" IN ONE DIRECTION AND NOT TO EXCEED 72" IN THE PERPENDICULAR DIRECTION. PLACE THE EMPTY GABIONS ON THE FOUNDATION AND INTERCONNECT THE ADJACENT GABIONS ALONG THE TOP, BOTTOM, AND VERTICAL EDGES USING LACING WIRE OR SPIRALS. WRAP THE WIRE WITH ALTERNATING SINGLE AND DOUBLE HALF HITCHES AT INTERVALS BETWEEN FOUR (4) TO SIX (6) INCHES. SPIRAL FASTENERS ARE COMMONLY USED FOR THE ASSEMBLY AND INTERCONNECTION OF WELDED MESH GABIONS. SPIRALS ARE SCHEDULED TO SECURE IT IN PLACE. LACING WIRE BE USED AS NEEDED TO SUPPLEMENT THE INTERCONNECTION OF WELDED MESH GABIONS, AND THE CLOSING OF LIDS.
- 13.4. INTERCONNECT EACH LAYER OF GABIONS TO THE UNDERLYING LAYER OF GABIONS ALONG THE FRONT, BACK, AND SIDES. STAGGER THE VERTICAL JOINTS BETWEEN THE GABIONS OF ADJACENT ROWS AND LAYER BY AT LEAST ONE-HALF OF A CELL LENGTH.

- 14.1. AFTER ADJACENT EMPTY WIRE GABION UNITS ARE SET INLINE AND GRADE AND COMMON SIDES PROPERLY CONNECTED, THEY SHALL BE PLACED IN STRAIGHT-LINE TENSION TO GAIN A UNIFORM ALIGNMENT. STAKING OF THE GABIONS MAY BE DONE TO MAINTAIN THE ESTABLISHED PROPER ALIGNMENT PRIOR TO THE PLACEMENT OF THE ROCK. NO TEMPORARY STAKES SHALL BE PLACED THROUGH GEOTEXTILE MATERIAL. CONNECTING LACING WIRE AND OTHER FASTENERS (AS ALLOWED) SHALL BE ATTACHED DURING THE FILLING OPERATION TO PRESERVE THE STRENGTH AND SHAPE OF THE STRUCTURE.
- 14.2. INTERNAL CONNECTING CROSS-TIE WIRES SHALL BE PLACED IN EACH INTERNAL CONNECTING GABION CELL GREATER THAN 18 INCHES IN HEIGHT, INCLUDING GABION CELLS LEFT CONCURRENTLY UNRESTRAINED. TWO INTERNAL CONNECTING WIRES SHALL BE PLACED CONCURRENTLY WITH ROCK PLACEMENT. AT EACH 12-INCH INTERVAL OF DEPTH.
- 14.3. IN WELDED MESH GABIONS THESE CROSS-TIES OR STIFFENERS WILL BE PLACED ACROSS THE CORNERS OF THE GABIONS (AT 12 INCHES FROM THE CORNERS) PROVIDING DIAGONAL BRACING. LACING WIRE OR PREFORMED WIRE STIFFENERS MAY BE USED.



**TYPICAL ASSEMBLED GABION BASKET**  
N.T.S.



**TYPICAL INSTALLATION GABION BASKETS**  
N.T.S.

- 14.4. THE GABIONS SHALL BE CAREFULLY FILLED WITH ROCKS, EITHER BY MACHINE OR HAND METHODS, ENSURING ALIGNMENT, AVOIDING BULGES, AND PROVIDING A COMPACT MASS THAT MINIMIZES VOIDS. AT NO POINT IN THE FILLING PROCESS MAY ROCK BE MECHANICALLY PLACED FROM A HEIGHT OF OVER 36" FROM MACHINE TO FILL AREA. MACHINE PLACEMENT WILL REQUIRE SUPPLEMENTING WITH HANDWORK TO ENSURE THE DESIRED RESULTS. THE CELLS IN ANY ROW SHALL BE FILLED TO STAGES SO THAT THE DEPTH OF ROCK PLACED IN ANY ONE CELL DOES NOT EXCEED THE DEPTH OF ROCK IN ANY ADJOINING CELL BY MORE THAN 12 INCHES. ALONG THE EXPOSED FACES, THE OUTER LAYER OF STONE SHALL BE CAREFULLY PLACED AND ARRANGED BY HAND TO ENSURE A NEAT, COMPACT PLACEMENT WITH A UNIFORM APPEARANCE.
- 14.5. THE LAST LAYER OF ROCK SHALL BE UNIFORMLY LEVELLED TO THE TOP EDGES OF GABIONS. LIDS SHALL BE PLACED OVER THE ROCK FILLING USING ONLY APPROVED LID CLOSING TOOLS AS NECESSARY. THE USE OF CROWBARS OR OTHER SINGLE POINT LEVERAGE BARS FOR LID CLOSING IS PROHIBITED DUE TO THE POTENTIAL FOR DAMAGE TO BASKETS.
- 14.6. THE GABION LID SHALL THEN BE SECURED TO THE SIDES, ENDS, AND DIAPHRAGMS WITH SPIRAL BINDERS, APPROVED ALTERNATE FASTENERS, OR LACING WIRE WRAPPED WITH ALTERNATING SINGLE AND DOUBLE HALF-HITCHES IN THE MESH OPENINGS.
- 14.7. ANY DAMAGE TO THE WIRE OR COATINGS DURING ASSEMBLY, PLACEMENT AND FILLING SHALL BE REPAIRED PROMPTLY IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS OR REPLACED WITH UNDAUNAGED GABION BASKETS.

**TABLE 1 (MINIMUM REQUIREMENTS)**  
GABION BASKETS - HEIGHT 12, 18, OR 36 INCHES, LENGTH AS SPECIFIED

TYPE OF WIRE	MESH SIZE (INCHES)	WIRE DIAMETER (INCHES)	PVC COATING (INCHES)	TOTAL DIAMETER (INCHES)	GALVANIZED COATING (INCHES)
LACING WIRE	3 X 3	0.086	0.02	0.126	0.70
WELDED MESH	3 X 3	0.118	NONE	0.118	0.80
SPIRAL BINDER	3 X 3	0.105	0.02	0.145	0.80
SPIRAL BINDER	3 X 3	0.105	0.02	0.145	0.80

**DESIGN PARAMETERS**

**SOIL AND DESIGN PARAMETERS**

A. THE FOLLOWING SOIL PARAMETERS HAVE BEEN USED FOR THE PREPARATION OF THE FINAL DESIGN.

SOIL	SOIL UNIT WEIGHT (PCF)	INTERNAL FRICTION ANGLE (LS)
BACKFILL	125	27.0
FOUNDATION SOIL	125	27.0
* SOIL PARAMETERS CONSERVATIVELY ASSUMED FOR DESIGN		

**MINIMUM FACTORS OF SAFETY**

OVERTURNING	SLIDING	BEARING CAPACITY
2.0	1.5	2.0
2.1	1.6	2.1

B. SHOULD THE ACTUAL SOIL CONDITIONS OBSERVED DURING CONSTRUCTION DIFFER FROM THOSE ASSUMED FOR THE DESIGN, DESIGN SHALL BE REVIEWED BY THE DESIGN ENGINEER AT THE OWNER'S GEOTECHNICAL ENGINEERS' DIRECTION.

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TOWN OF ORANGETOWN  
ROCKLAND COUNTY, NEW YORK

RETAINING WALL NOTES & DETAILS

DRAWN BY: LK  
DATE: JANUARY 22, 2020  
CHECKED BY: VR  
SCALE: N/A

PROJECT NO: 4692  
DRAWING NO: 5

