200' OWNERS LIST Owner's Address LEY, JOHN M & JACQUELINE A 175 NORTH AVE Fanwood NJ 07023 AMATO, MARK, ET ALS 2 RUSSELL RD Fanwood NJ 07023 METZGER, JOSEPH M & JACQUELYN B 16 RUSSELL RD Fanwood NJ 07023 KAMINSKAS, JOHN & PACE M 18 RUSSELL RD Fanwood NJ 07023 28 RUSSELL RD Fanwood NJ 07023 ROTA, PETER S & MERRILE CHRISTMAN, BRIAN & DOHERTY, MAUREEN 146 NORTH AVE Fanwood NJ 07023 150 NORTH AVE Fanwood NJ 07023 22.01 POCHTAR, ANNA MARIA SMITH, SCOTT & EMILY 160 NORTH AVE Fanwood NJ 07023 GRUBMAN, DINAH 170 NORTH AVE Fanwood NJ 07023 MASTROCOLA, ANTONIO & ROSE 180 NORTH AVE Fanwood NJ 07023 JASUL, MENANDRO & CORPUZ, MARIA T 186 NORTH AVE Fanwood NJ 07023 CAMPELL, ALAN B & CAROL D 72 WATSON RD Fanwood NJ 07023 BUETTNER, BERNIE H & BARBARA H 76 WATSON RD Fanwood NJ 07023 DE BIASSE, JOAN P 80 WATSON RD Fanwood NJ 07023 GREANEY, KEVIN M & MARGARET M 33 RUSSELL RD Fanwood NJ 07023 CASHMAN, KEVIN & BRENNICK, MAUREEN A 29 RUSSELL RD Fanwood NJ 07023 WITTENBERG, BRIAN J & ILYSE L 23 RUSSELL RD Fanwood NJ 07023 17 RUSSELL RD Fanwood NJ 07023 BHATIA, SANJIV ZITOFSKY, SUSAN E 157 NORTH AVE Fanwood NJ 07023 WHITNEY, CHARLES & MEGAN 145 NORTH AVE Fanwood NJ 07023 141 NORTH AVE Fanwood NJ 07023 MCMANUS, ELAINE D 20 HUNTER AVE Fanwood NJ 07023 12.01 SCHIMMING, WALTER E & DUVERNAY, ES 54 13 MC ALINDIN, TIMOTHY J & MICHELLE M 24 HUNTER AVE Fanwood NJ 07023

GENERAL NOTES:

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EKA ASSOCIATES, P.A.
398 PARK AVENUE
SCOTCH PLAINS, NJ 07076
DATED 5-5-2021

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 - CONSTRUCTION", AS CURRENTLY AMENDED.

 CURRENT PREVAILING MUNICIPAL AND/OR COUNTY SPECIFICATIONS, STANDARDS, AND REQUIREMENTS.

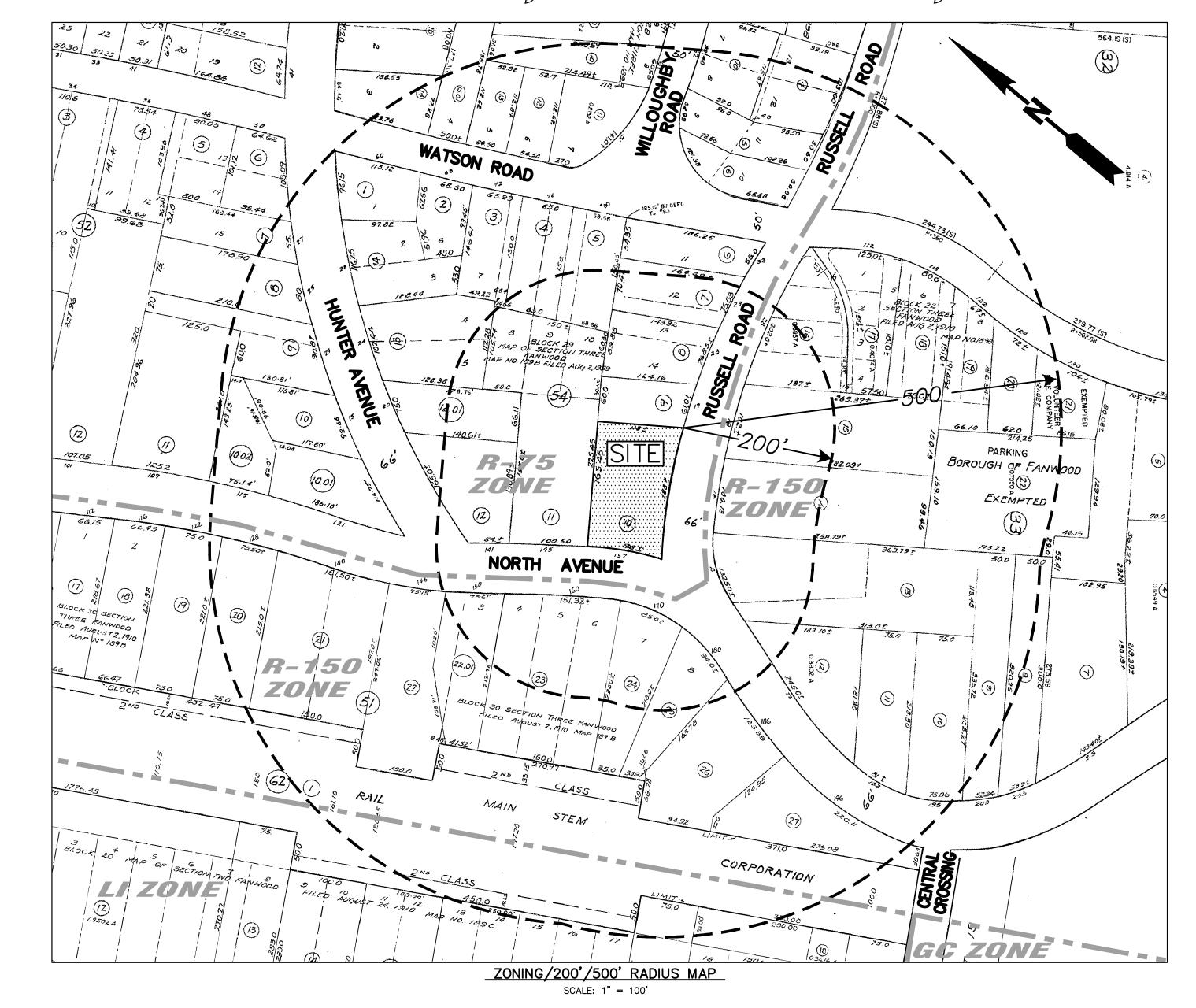
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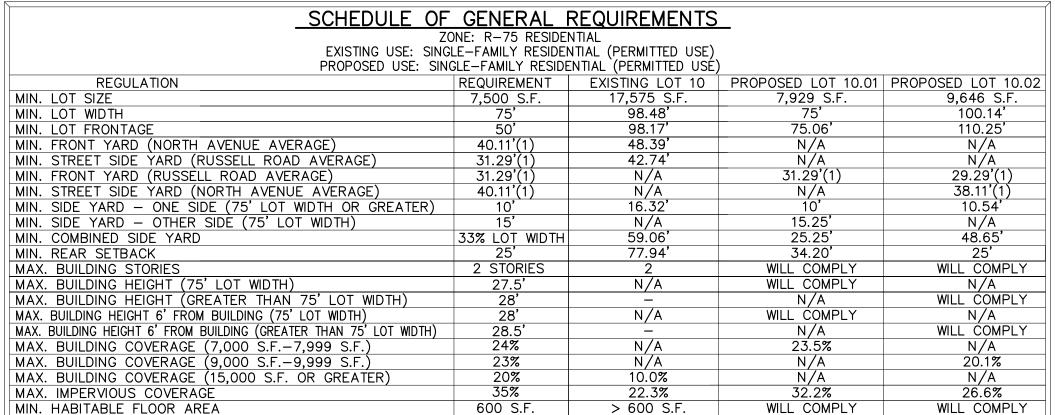
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MINOR SUBDIVISION

TAX LOT 10 BLOCK 54 157 NORTH AVENUE

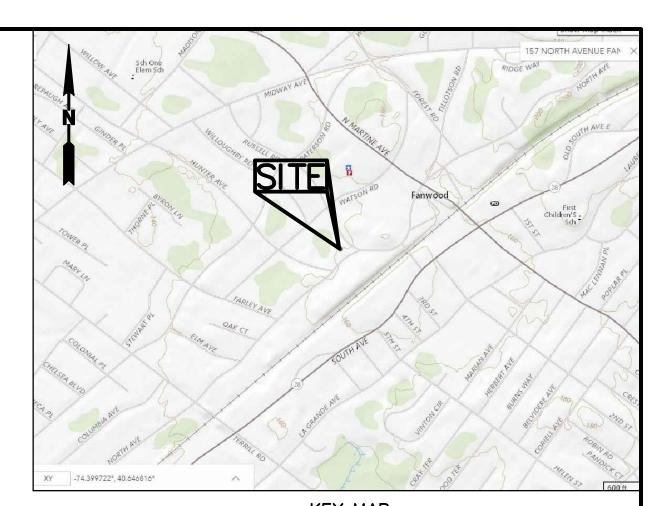
BOROUGH OF FANWOOD, UNION COUNTY, NEW JERSEY





* – EXISTING NON-CONFORMANCE
 (v) – DENOTES VARIANCE REQUIRED

(1) PER SECTION 184-126.D, THE MINIMUM AND MAXIMUM FRONT YARD REQUIREMENT SET FORTH FOR THE R-75 ZONE DISTRICT, WHERE EXISTING BUILDINGS ON THE SAME SIDE OF THE STREET FORM AN ESTABLISHED FRONT YARD DEPTH, THE FRONT YARD ON THE SUBJECT PROPERTY, OR THE STREET SIDE YARD ON A CORNER PROPERTY, SHALL NOT DEVIATE FROM THIS ESTABLISHED YARD DEPTH BY MORE THAN TWO FEET.



KEY MAP

SCALE: 1" =1,000'

OWNER/APPLICANT

JRN CARPENTRY

47 KING STREET

EDISON, NJ 08820

I HEREBY CERTIFY THAT I AM THE OWNER/APPLICANT OF TITLE OF LOT 10 IN BLOCK 54 AND I APPROVE THE FILING OF THIS PLAN WITH THE PLANNING BOARD OF THE BOROUGH OF FANWOOD.

(SIGNATURE) DATE

APPROVED BY:

CHAIRMAN DATE

SECRETARY DATE

ENGINEER DATE

SHEET	TITLE	ISSUED	REVISED
1	COVER SHEET	5/5/2021	N/A
2	MINOR SUBDIVISION PLAN	5/5/2021	N/A
3	CONFORMANCE GRADING PLAN	5/5/2021	N/A
4	SOIL EROSION & SEDIMENT CONTROL PLAN	5/5/2021	N/A
5	SOIL EROSION & SEDIMENT CONTROL NOTES & DETAILS	5/5/2021	N/A
6	CONSTRUCTION DETAILS	5/5/2021	N/A
1 OF 1	BOUNDARY & TOPOGRAPHIC SURVEY	5/5/2021	_

COVER SHEET

MINOR SUBDIVISION

TAX LOT 10 BLOCK 54

BOROUGH OF FANWOOD, UNION COUNTY, NEW JERSEY

/EKAASSOCIATES, P.A.

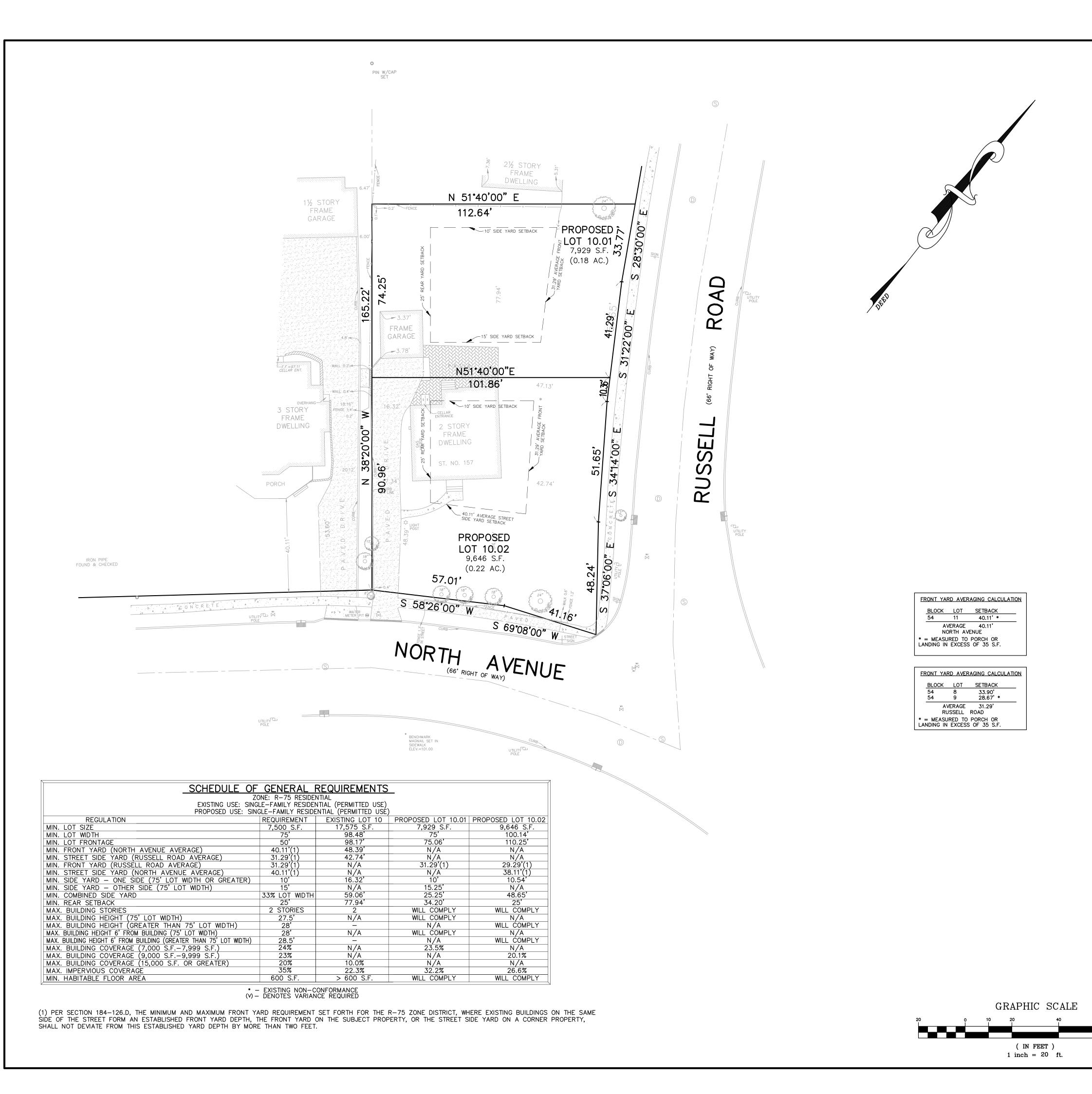
Engineers • Surveyors • Planners
328 Park Avenue, Scotch Plains, N.J. 07076

908-322-2030
REVISIONS:

JAMES R. WATSON P.L.S., P.P.

PROFESSIONAL LAND SURVEYOR PROFESSIONAL PLANNER
N.J. LICENSE NO. 30750
N.Y. LICENSE NO. 50196

Job No. 848260 Date 5/5/2021 Scale AS SHOWN Drawn SK Map No. Sheet 1 of 6



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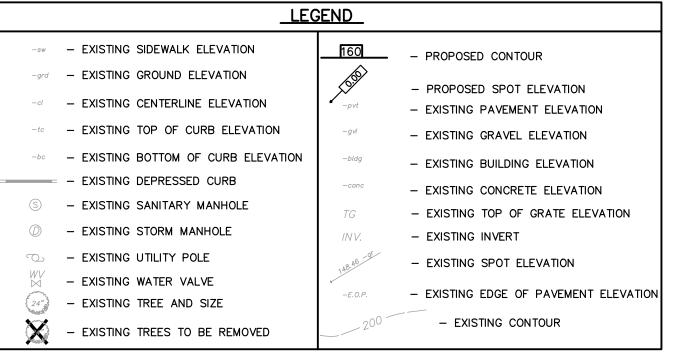
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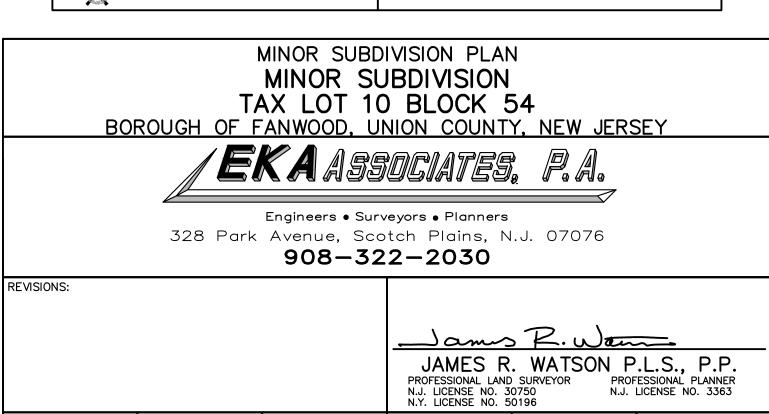
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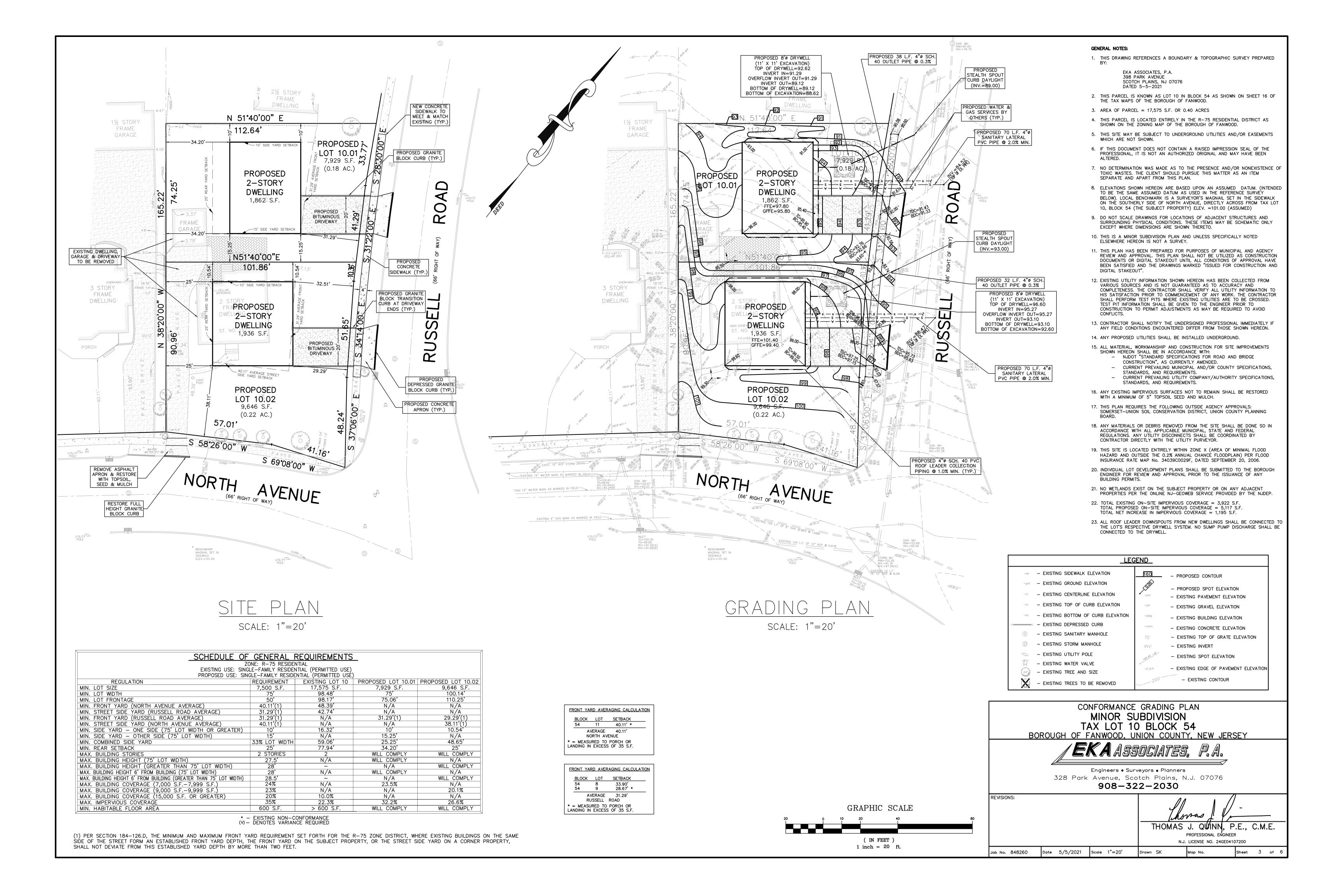
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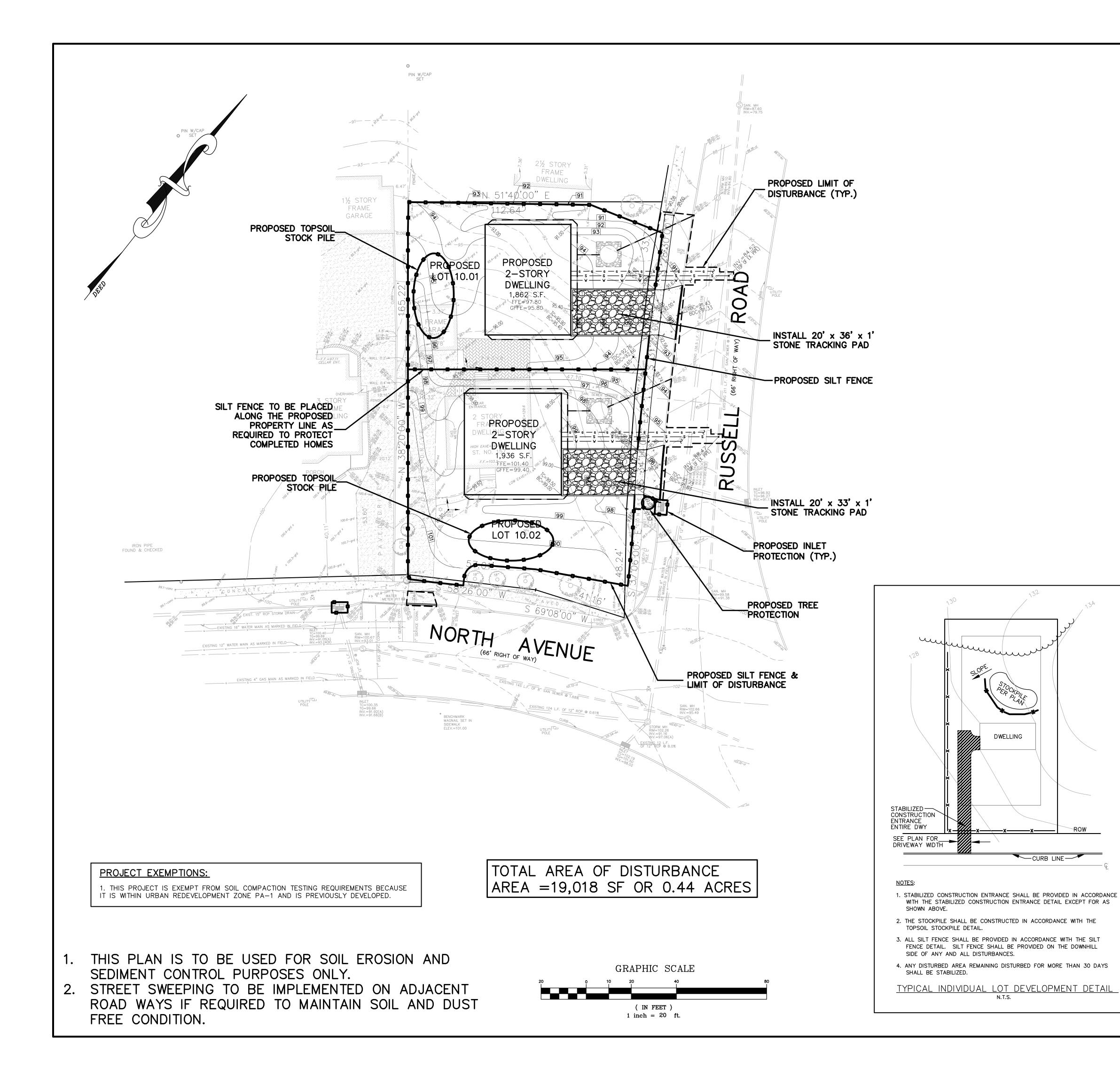
Sheet 2 of 6

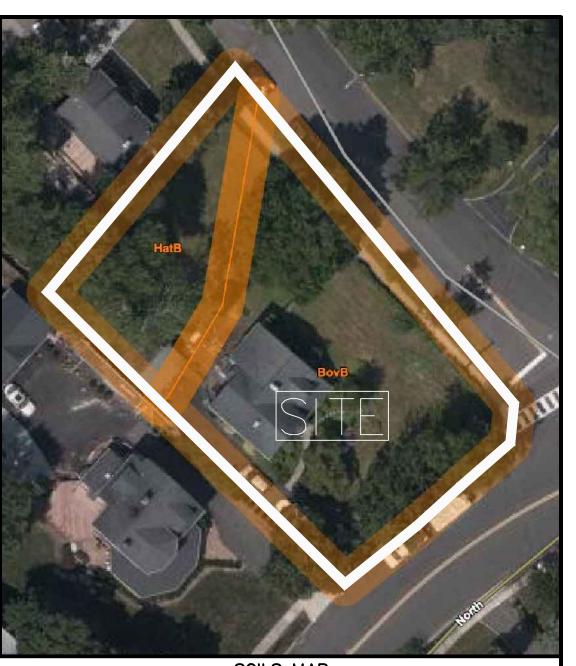
Date 5/5/2021

Job No. 848260

Scale 1"=20'

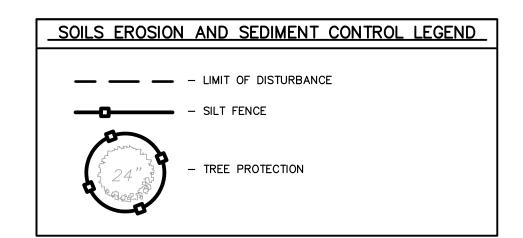


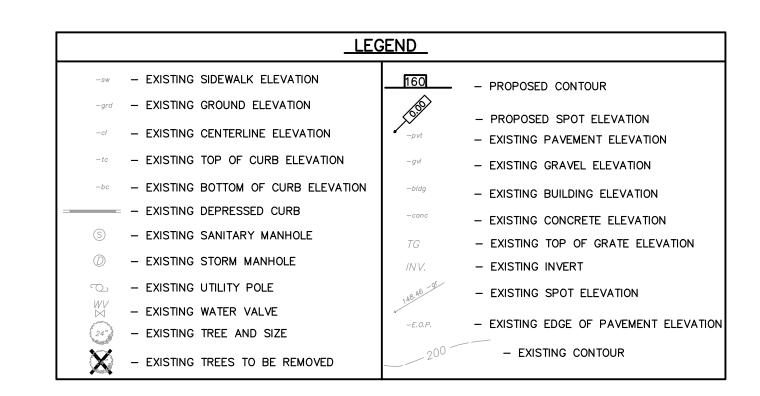




SOILS MAP SCALE: 1"=40'
MAP SOURCED FROM USDA WEB SOIL SURVEY THE SITE IS MADE UP OF:

BovB (BOONTON-URBAN LAND-HALEDON COMPLEX, 0 TO 8 PERCENT SLOPES) HatB (HALEDON-URBAN LAND-HASBROUCK COMPLEX, 0 TO 8 PERCENT SLOPES)





SOIL EROSION & SEDIMENT CONTROL PLAN MINOR SUBDIVISION

TAX LOT 10 BLOCK 54

BOROUGH OF FANWOOD, UNION COUNTY, NEW JERSEY

CURB LINE

Engineers • Surveyors • Planners 328 Park Avenue, Scotch Plains, N.J. 07076

908-322-2030 REVISIONS: THOMAS J. QUINN, P.E., C.M.E. PROFESSIONAL ENGINEER N.J. LICENSE NO. 24GE04107200 Job No. 848260 Date 5/5/2021 Scale 1"=20' Drawn SK Sheet 4 of 6

SOIL EROSION AND SEDIMENT CONTROL NOTES

1. The Somerset—Union Soil Conservation District shall be notified in writing 48 hours in advance of any land disturbing activity.

2. All Soil Erosion and Sediment Control practices shall be installed prior to any major soil disturbances, or in their proper sequence and maintained until permanent protection is

3. Any Disturbed areas that will be left exposed more than 30 Days and not subject to construction traffic, will immediately receive a temporary seeding. If the season prevents the establishment of a temporary cover, the disturbed areas will be mulched with straw, or equivalent material, at a rate of two (2) tons per acre, according to NJ State Standards 4. Permanent Vegetation shall be seeded or sodded on all exposed areas within ten (10) days

after final grading. Mulch will be used for protection until seeding is established 5. All work shall be done in accordance with the NJ State Standards for Soil Erosion and

6. A sub—base course will be applied immediately following rough grading and installation of improvements in order to stabilize streets, roads, driveways and parking areas. In areas where no utilities are present, the sub-base shall be installed within 15 days or

7. Immediately following initial disturbance or rough grading all critical areas subject to erosion (i.e.: steep slopes, roadway embankments) will receive a temporary seeding in combination with straw mulch or a suitable equivalent, at a rate of two (2) tons per acre, according to the NJ State Standards

8. Any steep slopes receiving pipeline installation will be backfilled and stabilized daily, as the installation proceeds (i.e.: slopes greater that 3:1)

9. Traffic control Standards require the installation of a $50^{\circ}x30^{\circ}x6^{\circ}pad$ of $1^{\circ}2^{\circ}$ stone, at all construction driveways, immediately after initial site disturbance

10. At the time when the site preparation for permanent vegetative stabilization is going to be accomplished, any soil that will not provide a suitable environment to support adequate vegetative ground cover, shall be removed or treated in such a way that will permanently adjust the soil conditions and render it suitable for vegetative ground cover. If the removal or treatment of the soil will not provide suitable conditions, non-vegetative means of permanent ground stabilization will have to be employed.

11. In that NJSA 4:24-39 et seq., requires that no Certificate of Occupancy be issued before the provisions of the Certified Plan for Soil Erosion and Sediment Control have been complied with for permanent measures, all site work for site plans and all work around individual lots in subdivisions, will have to be completed prior to the District issuing a Report of Compliance for the issuance of a Certificate of Occupancy by the Municipality

system becoming operational. 13. Any changes to the Certified Soil Erosion and Sediment Control Plan will require the submission of revised Soil Erosion and Sediment Control Plans to the District for recertification. The revised plans must meet all current NJ State Soil Erosion & Sediment

12. Conduit Outlet Protection must be installed at all required outfalls prior to the drainage

14. The Somerset-Union Soil Conservation District shall be notified of any changes in

15. Mulching to the NJ Standards is required for obtaining a Conditional Report of Compliance. Conditionals are only issued when the season prohibits seeding. 16. Contractor is responsible for keeping all adjacent roads clean during life of construction

17. The developer shall be responsible for remediating any erosion or sediment problems that arise as a result of ongoing construction at the request of the Somerset-Union Soil

18. Hydro seeding is a two- step process. The first step includes seed, fertilizer, lime, etc., along with minimal amounts of mulch to promote consistency, good seed to soil contact, and give a visual indication of coverage. Upon completion of seeding operation, hydromulch should be applied at a rate of 1500 lbs. per acre in second step. The use of hydromulch, as opposed to straw, is limited to optimum seeding dates as listed in the NJ

19. Unfiltered dewatering is not permitted. Necessary precautions must be taken during all dewatering operations to minimize soil transfer. Any dewatering methods used must be in accordance with the Standard for Dewatering. Revised 5/15/15

PROPOSED SEQUENCE OF DEVELOPMENT

project.

Construct stabilized construction access. Demolish existing buildings, clear and remove all existing vegetation in those areas where necessary. All remaining vegetation and trees to be properly protected and to remain in its natural state.	Week	1
Commence dwelling construction.	Week	2-19
Layout and location of all proposed utilities.	Week	19
Install drywells	Week	20

nstallation of silt fence prior to any soil disturbance. Install off site

inlet protection. Maintenance until permanent protection is established.

Construct curb and driveway base Fine grading of all lawn and landscape areas. Complete all landscaping and vegetative cover Installation of all pavement surface course Week 23 Removal of all temporary sediment and erosion control devices.

STANDARD FOR TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION

Establishment of temporary vegetative cover on soils exposed for periods of two to 6 months which are not being graded, not under active construction or not scheduled for permanent seeding within 60 days.

To temporarily stabilize the soil and reduce damage from wind and water erosion until permanent stabilization is accomplished

WATER QUALITY ENHANCEMENT

Provides temporary protection against the impacts of wind and rain, slows the over land movement of stormwater runoff, increases infiltration and retains soil and nutrients on site, protecting streams or other stormwater conveyances.

WHERE APPLICABLE On exposed soils that have the potential for causing off—site environmental damage.

METHODS AND MATERIALS SITE PREPARATION

A. Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application, and mulch anchoring. All grading should be done in

accordance with Standards for Land Grading, pg. 19—1.

B. Install needed erosion control practices or facilities such as diversions, grade stabilization structures, channel stabilization measures, sediment basins, and waterways. See Standards 11

C. Immediately prior to seeding, the surface should be scarified 6" to 12" where there has been soil compaction. This practice is permissible only where there is no danger to underground utilities (cables, irrigation systems, etc.).

SEEDBED PREPARATION A. Apply ground limestone and fertilizer according to soil test recommendations such as offered by Rutgers Co-operative Extension. Soil sample mailers are available from the local Rutgers Cooperative Extension offices. Fertilizer shall be applied at the rate of 500 pounds per acre or 11 pounds per 1,000 square feet of 10-20-10 or equivalent with 50% water insoluble nitrogen unless a soil test indicates otherwise. Apply limestone at the rate of 2 tons/acre unless soil testing indicates otherwise. Calcium carbonate is the equivalent and standard for measuring the ability of liming

B. Work lime and fertilizer into the soil as nearly as practical to a depth of 4 inches with a disc springtooth harrow, or other suitable equipment. The final harrowing or disking operation should be on the general contour. Continue tillage until a reasonable uniform seedbed is prepared.

materials to neutralize soil acidity and supply calcium and magnesium to grasses and legumes.

C. Inspect seedbed just before seeding. If traffic has left the soil compacted, the area must be in accordance with the above.

D. Soils high in sulfides or having a pH of 4 or less refer to Standard for Management of High Acid

SEEDING

A. Select seed from recommendations in Table 7-2.

1/4 inch deeper on coarse textured soil.

TABLE 7-2 TEMPORARY VEGETATIVE STABILIZATION GRASSES, SEEDING RATES, DATES AND DEPTH

SEED SELECTIONS	SEEDING (pou	RATE¹		M SEEDING Plant Hardine		OPTIMUM SEEDING
SEED SELECTIONS	Per Acre	Per 1000 Sq. Ft.	ZONE 5b,6s	ZONE 6b	ZONE 7a,b	DEPTH⁴ (inches)
COLD SEASON GRASSES						
1. Perennial ryegrass	100	1.0		3/1-5/15 8/15-10/1	2/15-5/1 8/15-10/15	0.5
2. Spring oats	86	2.0		3/1-5/15 8/15-10/1	2/15-5/1 8/15-10/15	1.0
3. Winter Barley	96	2.2	8/1-9/15	8/15-10/1	8/15-10/15	1.0
4. Annual Ryegrass	100	1.0		3/1-6/1 8/1-9/15	2/15-5/1 8/15-10/15	0.5
5. Winter Cereal Rye	112	2.8	8/1-11/1	8/1-11/15	8/1-12/15	1.0
WARM SEASON GRASSES						
6. Pearl millet	20	0.5	6/1-8/1	5/15-8/15	5/1-9/1	1.0
7. Millet (German or Hungarian)	30	0.7	6/1-8/1	5/15-8/15	5/1-9/1	1.0

Seeding rate for warm season grass, selections 5-7 shall be adjusted to reflect the amount of Pure Line Seed (PLS) as determined by a germination test result. No adjustment is required for cool 2 May be planted throughout summer if soil moisture is adequate or seeded area can be irrigated. 3 Plant Hardiness Zone (see figure 7—1, pg. 7—4.)

4 Twice the depth for sandy soils B. Conventional Seeding. Apply seed uniformly by hand, cyclone (centrifugal) seeder, drop seeder, drill o cultipacker seeder. Except for drilled, hydroseeded or cultipacked seedings, seed shall be incorporated into the soil, to a depth of 1/4 to 1/2 inch, by raking or dragging. Depth of seed placement may be

C. Hydroseeding is a broadcast seeding method usually involving a truck or trailer mounted tank, with an agitation system and hydraulic pump for mixing seed, water and fertilizer and spraying the mix onto the prepared seedbed. Mulch shall not be included in the tank with seed. Short fibered mulch may be applied with a hydroseeder following seeding. (also see Section IV Mulching) Hydroseeding is not a preferred seeding method because seed and fertilizer are applied to the surface and not incorporated into the soil. Poor seed to soil contact occurs reducing seed germination and growth. Hydroseeding may be used for areas too steep for conventional equipment to traverse or too obstructed with rocks.

D. After seeding, firming the soil with a corrugated roller will assure good seed—to—soil contact, restore capillarity, and improve seedling emergence. This is the preferred method. When performed on the contour, sheet erosion will be minimized and water conservation on site will be maximized. MULCHING

Mulching is required on all seeding. Mulch will insure against erosion before grass is established and will promote faster and earlier establishment. The existence of vegetation sufficient to control soil erosion shall be deemed compliance with this mulching requirement.

A. Straw or Hay. Unnrotted small grain straw, hay free of seeds, applied at the rate of 1-1/2 to 2 tons per acre (70 to 90 pounds per 1,000 square feet), except that where a crimper is used instead of a liquid mulch—binder (tackifying or adhesive agent), the rate of application is 3 tons per acre. Mulch chopper-blowers must not grind the mulch. Hay mulch is not recommended for establishing fine turf or lawns due to the presence of weed seed. Application, Spread mulch uniformly by hand or mechanically so that approximately 95% of the soil surface will be covered. For uniform distribution of hand-spread mulch, divide area into approximately 1,000 square feet sections and distribute 70 to 90 pounds within each section. Anchoring shall be accomplished immediately after placement to minimize loss by wind or water. This may be done by one of the following methods, depending upon the size of the area, steepness of slopes, and costs.

1. Peq and Twine. Drive 8 to 10 inch wooden pegs to within 2 to 3 inches of the soil surface every 4 feet in all directions. Stakes may be driven before or after applying mulch. Secure mulch to soil surface by stretching twine between pegs in a cris—cross and a square pattern. Secure

2. Mulch Nettings. Staple paper, jute, cotton, or plastic nettings to the soil surface. Use a degradable netting in areas to be mowed. 3. Crimper (mulch anchoring tool). A tractor-drawn mplement, somewhat like a disc harrow, especially designed to push or cut some of the broadcast ong fiber mulch 3 to 4 inches into the soil so as to anchor it and leave part standing upright. This technique is limited to greas traversable by a tractor, which must operate on the contour of slopes. Straw mulch rate must be 3 tons per acre. No tackifying or adhesive agent is required. 4. Liquid Mulch—Binders. -May be used to anchor hay or straw mulch.

a. Applications should be heavier at edges where wind may catch the mulch, in valleys, and at crests of banks. The remainder of the area should be uniform in appearance.

(1) Organic and Vegetable Based Binders -Naturally occurring, powder based, hydrophilic materials when mixed with water formulates a gel and when applied to mulch under satisfactory curing conditions will form membraned networks of insoluble polymers. he vegetable gel shall be physiologically harmless and not result in a phytotoxic effect or impede arowth of turfarass. Use at rates and weather conditions as recommende the manufacturer to anchor mulch materials. Many new products are available, some of

(2) Synthetic Binders —High polymer synthetic emulsion, miscible with water when diluted and following application to mulch, drying and curing shall no longer be soluble or dispersible in water. It shall be applied at rates recommended by the manufacturer and remain tacky until germination of grass.

Note: All names give above are registered trade names. This does not constitute a commendation of these products to the exclusion of other products.

which may need further evaluation for use in this state.

B. Wood-fiber or paper-fiber mulch. Shall be made from wood, plant fibers or paper containing no growth or germination inhibiting materials, used at the rate of 1,500 ponds per acre (or as recommended by the project manufacturer) and may be applied by a hydroseeder. This mulch shall not be mixed in the tank with seed. Use is limited to flatter slopes and during optimum seeding periods in spring and fall.

C. Pelletized mulch. Compressed and extruded paper and/or wood fiber product, which may contain co-polymers, tackifiers, fertilizers and coloring agents. The dry pellets, when applied to a seeded area and watered, forma mulch mat. Pelletized mulch shall be applies in accordance with the manufacturers recommendations. Mulch may be applied by hand or mechanical spreader at the rate of 60-75 lbs./1.000 square feet and activated with 0.2 to 0.4 inches of water. This material has bee found to be beneficial for use on small lawn or renovation areas, seeded areas where weed-seed free mulch is desired or on sites where straw mulch and tackifier agent are not practical or desirable.

Applying the full 0.2 to 0.4 inches of water after spreading pelletized mulch on the seed bed is extremely important for sufficient activation and expansion of the mulch to provide soil coverage.

STANDARD FOR PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION

DEFINITION Establishment of permanent vegetative cover on exposed soils where perennial vegetation is needed for long term protection.

To permanently stabilize the soil, assuring conservation of soil and water, and to enhance the

Slows the over land movement of stormwater runoff, increases infiltration and retains soil and nutrients on site, protecting streams or other stormwater conveyances. WHERE APPLICABLE

On exposed soils that have the potential for causing off—site environmental damage. SITE PREPARATION

A. Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application, and mulch anchoring. All grading should be done in accordance with Standard for Land Grading.

B. Immediately prior to seeding and topsoil application, the subsoil shall be evaluated for

compaction in accordance with the Standard for Land Grading .

SEEDBED PREPARATION

C. Topsoil should be handled only when it is dry enough to work without damaging the soil structure. A uniform application to a depth of 5 inches (unsettled) is required on all sites. Topsoil shall be amended with organic matter, as needed, in accordance with the Standard for Topsoiling. D. Install needed erosion control practices or facilities such as diversions, grade—stabilization structures, channel stabilization measures, sediment basins, and waterways.

A. Uniformly apply ground limestone and fertilizer to topsoil which has been spread and firmed, according to soil test recommendations such as offered by Rutgers Co-operative Extension Soil sample mailers are available from the local Rutgers Cooperative Extension offices (http://njaes.rutgers.edu/county/). Fertilizer shall be applied at the rate of 500 pounds per acre or

1 pounds per 1,000 square feet of 10-10-10 or equivalent with 50% water insoluble nitrogen unless a soil test indicates otherwise and incorporated into the surface 4 inches. If fertilizer is not incorporated, apply one-half the rate described above during seedbed preparation and repeat another one—half rate application of the same fertilizer within 3 to 5 weeks after seeding.

B. Work lime and fertilizer into the topsoil as nearly as practical to a depth of 4 inches witha disc, spring—tooth harrow, or other suitable equipment. The final harrowing or disking operation should be on the general contour. Continue tillage until a reasonable uniform seedbed is prepared.

C. High acid producing soil. Soils having a pH of 4 or less or containing iron sulfide shall be covered with a minimum of 12 inches of soil having a pH of 5 or more before initiating seedbed reparation. See Standard for Management of High Acid-Producing Soils for specific requirements.

MULCHING

A. Select a mixture from Table 4-3 or use a mixture recommended by Rutgers Cooperative Extension or Natural Resources Conservation Service which is approved by the Soil Conservation District. Seed germination shall have been tested within 12 months of the planting date. No seed shall be accepted with a germination test date more than 12 months old unless retested.

. Seeding rates specified are required when a report of compliance is requested prior to actual establishment of permanent vegetation. Up to 50% reduction in rates may be used when permanent vegetation is established prior to a report of compliance inspection. These rates apply to all methods of seeding. Establishing permanent vegetation means 80% vegetative coverage with the specified seed mixture for the seeded area and mowed once.

2. Warm-season mixtures are grasses and legumes which maximize growth at high temperatures, generally 850 F and above. See Table 4-3 mixtures 1 to 7. Planting rates for warm—season grasses shall be the amount of Pure Live Seed (PLS) as determined by germination testing results.

3. Cool—season mixtures are grasses and legumes which maximize growth at temperatures below 85oF. Many grasses become active at 65oF. See Table 4-3, mixtures 8-20. Adjustment of planting rates to compensate for the amount of PLS is not required for cool season grasses.

B. Conventional Seeding is performed by applying seed uniformly by hand, cyclone (centrifugal) seeder, drop seeder, drill or cultipacker seeder. Except for drilled, hydroseeded or cultipacked seedings, seed shall be incorporated into the soil within 24 hours of seedbed preparation to a depth of 1/4 to 1/2 inch, by raking or dragging. Depth of seed placement may be 1/4 inch deeper on

C. After seeding, firming the soil with a corrugated roller will assure good seed—to—soil contact, restore capillarity, and improve seedling emergence. This is the preferred method. When performed on the contour, sheet erosion will be minimized and water conservation on site will be

D. Hydroseeding is a broadcast seeding method usually involving a truck, or trailer-mounted tank, with an agitation system and hydraulic pump for mixing seed, water and fertilizer and spraying the mix onto the prepared seedbed. Mulch shall not be included in the tank with seed. Shortfibered mulch may be applied with a hydroseeder following seeding. (also see Section 4-Mulching below). Hydroseeding is not a preferred seeding method because seed and fertilizer are applied to the surface and not incorporated into the soil. When poor seed to soil contact occurs, there is a reduced seed germination and growth.

Mulching is required on all seeding. Mulch will protect against erosion before grass is established and will promote faster and earlier establishment. The existence of vegetation sufficient to control soil erosion shall be deemed compliance with this mulching requirement.

A. Straw or Hay. Unrotted small grain straw, hay free of seeds, to be applied at the rate of 1-1/2 to 2

tons per acre (70 to 90 pounds per 1,000 square feet), except that where a crimper is used instead of a liquid mulch—binder (tackifying or adhesive agent), the rate of application is 3 tons per acre. Mulch chopper-blowers must not grind the mulch. Hay mulch is not recommended for establishing fine turf or lawns due to the presence of weed seed. Application - Spread mulch uniformly by hand or mechanically so that at least 85% of the soil surface is covered. For uniform distribution of hand-spread mulch, divide area into approximately 1,000 square feet sections and distribute 70 to 90 pounds within each section. Anchoring shall be accomplished immediately after placement to minimize loss by wind or water. This may be done by one of the following methods, depending upon the size of the area, steepness

1. Peg and Twine. Drive 8 to 10 inch wooden pegs to within 2 to 3 inches of the soil surface every 4 feet in all directions. Stakes may be driven before or after applying mulch. Secure mulch to soil surface by stretching twine between pegs in a criss-cross and a square pattern. Secure twine around each peg with two or more round turns.

2. Mulch Nettings — Staple paper, jute, cotton, or plastic nettings to the soil surface. Use a degradable netting in areas to be mowed.

3. Crimper (mulch anchoring coulter tool) — A tractor—drawn implement, somewhat like a disc

harrow, especially designed to push or cut some of the broadcast long fiber mulch 3 to 4 inches into the soil so as to anchor it and leave part standing upright. This technique is limited to areas traversable by a tractor, which must operate on the contour of slopes. Straw mulch rate must be 3 tons per acre. No tackifying or adhesive agent is required.

4. Liquid Mulch—Binders — May be used to anchor salt hay, hay or straw mulch.

a. Applications should be heavier at edges where wind may catch the mulch, in valleys, and at crests of banks. The remainder of the area should be uniform in appearance.

(1) Organic and Vegetable Based Binders — Naturally occurring, powder—based, hydrophilic materials when mixed with water formulates a gel and when applied to mulch under satisfactory curing conditions will form membraned networks of insoluble polymers. The vegetable gel shall be physiologically harmless and not result in a phytotoxic effect or impede growth of turf grass. Use at rates and weather conditions as recommended by the manufacturer to anchor mulch materials. Many new products are available, some of which may need further evaluation for use in this state.

(2) Synthetic Binders — High polymer synthetic emulsion, miscible with water when diluted and, following application of mulch, drying and curing, shall no longer be soluble or dispersible in water. Binder shall be applied at rates recommended by the manufacturer and remain tacky until germination of grass.

Note: All names given above are registered trade names. This does not constitute a

B. Wood-fiber or paper-fiber mulch - shall be made from wood, plant fibers or paper containing no growth or germination inhibiting materials, used at the rate of 1,500 pounds per acre (or as recommended by the product manufacturer) and may be applied by a hydroseeder. Mulch shall not be mixed in the tank with seed. Use is limited to flatter slopes and during optimum seeding

periods in spring and fall. C. Pelletized mulch — compressed and extruded paper and/or wood fiber product, which may contain co-polymers, tackifiers, fertilizers, and coloring agents. The dry pellets, when applied to a seeded area and watered, form a mulch mat. Pelletized mulch shall be applied in accordance with the manufacturer's recommendations. Mulch may be applied by hand or mechanical spreader at the rate of 60-75 lbs/1,000 square feet and activated with 0.2 to 0.4 inches of water. This material has been found to be beneficial for use on small lawn or renovation areas, seeded areas where weedseed free mulch is desired, or on sites where straw mulch and tackifier agent are not practical or desirable. Applying the full 0.2 to 0.4 inches of water after spreading pelletized mulch on the seed bed is extremely important for sufficient activation and expansion of the mulch to provide soil

IRRIGATION (where feasible)

If soil moisture is deficient supply new seeding with adequate water (a minimum of 1/4 inch applied up to twice a day until vegetation is well established). This is especially true when seedings are made in abnormally dry or hot weather or on droughty sites.

TOPDRESSING Since soil organic matter content and slow release nitrogen fertilizer (water insoluble) are prescribed in Section 2A - Seedbed Preparation in this Standard, no follow-up of topdressing is mandatory. An exception may be made where gross nitrogen deficiency exists in the soil to the extent that turf failure may develop. In that instance, topdress with 10-10-10 or equivalent at 300 pounds per acre or 7

pounds per 1,000 square feet every 3 to 5 weeks until the gross nitrogen deficiency in the turf is

ESTABLISHING PERMANENT VEGETATIVE STABILIZATION

The quality of permanent vegetation rests with the contractor. The timing of seeding, preparing the seedbed, applying nutrients, mulch and other management are essential. The seed application rates in Table 4-3 are required when a Report of Compliance is requested prior to actual establishment of permanent vegetation. Up to 50% reduction in application rates may be used when permanent vegetation is established prior to requesting a Report of Compliance from the district. These rates apply to all methods of seeding. Establishing permanent vegetation means 80% vegetative cover (of the seeded species) and mowed once. Note this designation of mowed once does not guarantee the permanency of the turf should other maintenance factors be neglected or otherwise mismanaged.

PERMANENT STABILIZATION MIXTURES FOR VARIOUS USES DIANTING MINTURES BY SOIL DRAINAGE OLASS /1

	PLANTING MIXTURES BY SOIL DRAINAGE CLASS/1 (see Table 4-3)										
Application	Excessively <u>Drained</u>	Well to Moderately Well <u>Drained</u>	Somewhat Poorly to Poorly <u>Drained</u>								
Residential/commercial lots	10, 12, 15	6, 10, 12, 13, 14, 15	16								
Pond and channel banks, dikes, berms, and dams	2, 5, 6, 10	5, 6, 7, 8, 9, 15	2, 8, 16, 17								
Drainage ditches, swales, detention basins	2, 9, 11	2, 7, 9, 11, 12, 17	2, 9, 16, 17								
Filter Strips	12	11, 12	11, 12								
Grasses waterway, spillways	2, 3, 9, 10, 12	6, 7, 9, 10, 11, 12	2, 9, 11, 12								
Recreation areas, athletic fields	5, 12, 15, 18	12, 13, 14, 15, 18	16								
Special Problem Sites Steep slope and banks, roadsides, borrow areas	2, 3, 4, 6	2, 3, 5, 7, 8, 9, 10, 15, 18	2, 9, 10, 11, 12								
Sand and gravel pits, Sanitary landfills	1, 2, 3, 4, 6, 20	1, 2, 3, 4, 5, 6, 8, 15, 20	2, 8								
Dredged material, spoilbanks, borrow areas	2, 3, 6, 20	2, 3, 6, 11	2, 8								
Streambanks & shorelines²	2, 8, 20, 21a	2, 8, 19b, 20, 21a, 21b	2,8,19a, 21a,b,c,d								
Utility rights—of—way	3, 7, 180	3, 7	8, 9, 17								

. Refer to Soil Surveys for drainage class descriptions. . Refer to Soil Bioengineering Standard for additional seed mixtures.

4. See Appendix E for description of turf grasses and cultivars

. Spillways only

<u>TABLE 4-3</u> PERMANENT VEGETATIVE MIXTURES. PLANTING RATES AND PLANTING DATES'

II MIXTUR

			*****	. 14117	****			* * * * * * * * * * * * * * * * * * * *	- '''		/ 11 12	, , <u>, , , , , , , , , , , , , , , , , </u>	711110 271120
RE²	ANTING				= 0	PLANT ptima ccept	ANCE	REMARKS					
	P.F	₹ Y	Pl	ANT	HARDI	NESS	, EN						
	Zone 5b, 6a Zone 6b Zone 7a, 7b									AINT VEL			
	lbs./	lbs./ 1000	3/15- 5/31	6/1- 7/31	8/1- 10/31	3/1- 4/30	5/1- 8/14	8/15- 10/15	2/1- 4/30	5/1- 8/14	8/15- 10/30	ĔΨ	

	acre	sq. ft.	5/31	7/31	10/31	4/30	8/14	10/15	4/30	8/14	10/30		
WARM SEASON SEED MIXTURES													
1A. For pinelands national reserve seed mixtures see table 4—4 page 4—17			0			0			0				
1. Switchgrass and/or Coastal panicgrass plus or Flatpea	15 15 20 20	.35 .35 .45 .45	0			0			0			C-D	
2. Deertongue or Switchgrass Redtop	15 20 1 10	.35 .45 .10 .23	0			0			0			C-D	Use Deertongue if pH < 4.0. Switchgrass is superior wildlife plant. Use for waterways. Redtop provides quick cover.
3. Switchgrass Deertongue Little Bluestem Sheep fescue plus Partridge pea	15 10 20 20	.35 .25 .45 .45	0			0			0			C-D	Pinelands mixture.
4. Switchgrass Big Bluestem Little Bluestem Sand lovegrass Coastal panicgrass	10 5 5 4	.25 .10 .10 .10	0			0			0			C-D	Native warm — season mixture.
5. Bermudagrass Zoysiagrass(seed) Zoysiagrass (sprigs)	15 30	.35	0			0			0			A-D	Bermudagrass has superior salt tolerance. Zoysia has greater wear tolerance.
COOL SEASON SEED MIXTURES	130	3	Α	A ⁵	0	Α	A ⁵	0	Α	A ⁵	0		General low-maintenance mixture
6. Fine Fescue	45	.1										B-D	White clover can

panicgrass	10	.25											
5. Bermudagrass Zoysiagrass(seed) Zoysiagrass (sprigs)	15 30	.35	0			0			0			A-D	Bermudagrass has superior salt tolerance. Zoysia has greater wear tolerance.
COOL SEASON SEED MIXTURES	130	3	Α	A ⁵	0	Α	\mathbf{A}^{5}	0	Α	A ⁵	0		General low-maintenance mixture
6. Fine Fescue (Blend) Hard Fescue Chewings fescue Strong Creeping Red Fescue Kentucky Bluegrass Perennial ryegrass plus White clover	45 20 5	.1 .5 .10										B-D	White clover can be removed when establish lawns
7. Strong Creeping red fescue Kentucky bluegrass Perennial ryegrass or Redtop plus White clover	130 50 20 10 5	3 1 .5 .25 .10	A	A ⁵	0	A	A ⁵	0	A	A ⁵	0	B-D	Suitable waterwa mix. Canada bluegras: more drought tolerant. Used Redtop for increased drough tolerance.
8. Tall fescue (turf—type) or Strong Creeping red fescue or Perennial ryegrass	30 30 30	.7 .7 .7	0	A ⁶		0	A ⁶		0	A ⁶	0	B-D	Tall fescue best selected for droughty condition Use Creeping red fescue in heavy

13. Hard Fescue Chewing fescue and/ or	175	''U	JSI	E T		S	EE 5	l	MIX	KTU 5		E''	General lawn/recreat
12. Turf—type Tall fescue (Blend of 3 cultivars)	350	8	A	A ⁵	0	Α	A ⁵	0	Α	A ⁵	0	C-D	Use in a ma filter strip fo nutrient upt
11. Kentucky bluegrass Turf—type Tall fescue		0.33 1 5	Α	A ⁵	0	A	A ⁵	0	A	A ⁵	0	C-D	Filter strip u nutrient upt
10. Tall fescue (turf-type) Perennial ryegrass or White clover	265 20 10 5	6 5 .25 .10	0	A ⁵	A ⁵	0	A ⁵	A ⁵	0	A ⁵	A ⁵	C-D	White clover be excluded lawn sites
9. Deertongue Redtop Wild rye(Elymus) Switchgrass	20 2 15 25	.45 .05 .35 .60	0			0			0			C-D	Native wet
red fescue or Perennial ryegrass Flatpea	30 30 25	.7 .7 .60								A			Use Creeping fescue in he shade. Use Flatpea suppress woo vegetation.

Kentucky Bluegro

fine fescue law

.ow maintenance

	Chewing fescue and/or Strong Creeping Red Fescue Perennial ryegrass Ky. bluegrass (blend)	175 45 45	1 1	A	A ⁵	0	A	A ⁵	0	A	A ⁵	0	A-C
	14. Tall Fescue Ky. bluegrass (blend) Prn. ryegrass (blend)	265 20 20	6 .50 .50	A	A ⁵	0	A	A ⁵	0	A	A ⁵	0	A-B
	15. Hard Fescue Creeping fescue Strong Creeping Red Fescue Perennial ryegrass	130 45 45 10	3 1 1 .25	A	A ⁵	0	A	A ⁵	0	A	A ⁵	0	C-D
	16. Rough bluegrass Strong Creeping red fescue	90 130	2.0	A	A ⁵	0	A	A ⁵	0	A	A ⁵	0	C-D

Moist shade. under wetter Creeping red AIAIOIAIAIO Saltgrass will under daline wildflower mi O|A|O|O|A|O|O|A|Oecommended 19. a. Smooth | Planted in the

Saltmeadow Planted above O 0. America be interseede between rows o Also refer to chapters 16 a 18 of USDA . Dwarf willow NRCS engineer . Redosier dogwood veg

Table 4-3 Footnotes . See Appendix B for descriptions of turf grass mixtures and cultivars. The actual amount of grass mixture used in Table 3 (seed mix 1-7) shall be adjusted to reflect the amount of PLS as by germination testing results. No adjustment is required for cool—season grasses (seed mixtures 8-20).

2. Seeding mixtures and/or rates not listed above may be used if recommended by the local Soil District, Natural Resources Conservation Service; recommendations of Rutgers Cooperative Extension may be used if approved by the Soil Conservation District. Legumes (white clover, flatpea, lespedeza) should be mixed with proper innoculant prior to planting.

3. Seeding rates specified are required when a report of compliance is requested prior to actual establishment of permanent vegetation. Up to 50% reduction in rates may be used when permanent vegetation is established prior to a report of compliance inspection. These rates apply to all methods of seeding. Establishing permanent vegetation means 80% vegetative coverage of the seeded area and mowed once. Grass seed mixture checked by the State Seed Analyst, New Jersey Department of Agriculture, Trenton, New Jersey, will assure the purchaser that the mixture obtained is the mixture ordered, pursuant to the N.J.State Seed Law, N.J.S.A. 4:8-17.13 et. seq.

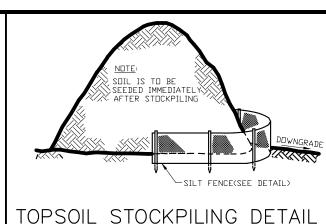
O = optimal planting period A = acceptable planting period

(Examples — roadsides, recreation areas, public open spaces)

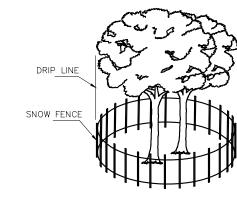
A: Intensive mowing, (2—4 days), fertilization, lime, pest control and irrigation (Examples high-maintenance lawns, commercial and recreation areas, public facilities). B: Frequent mowing, (4-7 days), occasional fertilization, lime and weed control (Examples home lawns, commercial sites, school sites).

C: Periodic mowing (7—14 days), occasional fertilization and lime (Examples — home lawns, D: Infrequent or no mowing, fertilization and lime the first year of establishment

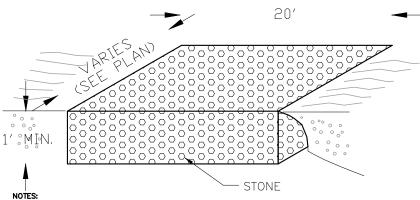
. Summer seedings should only be conducted when the site is irrigated. Mixes including white clover require that at least six weeks of growing season remain after seeding to ensure establishment before freezing conditions.



NTS



NOT TO SCALE



1. STONE SIZE - USE ASTM C-33, SIZE No. 2 (2 ½ TO 1 ½ IN.) OR 3 (2 TO 1 IN.). USE CLEAN CRUSHED ANGILLAR STONE

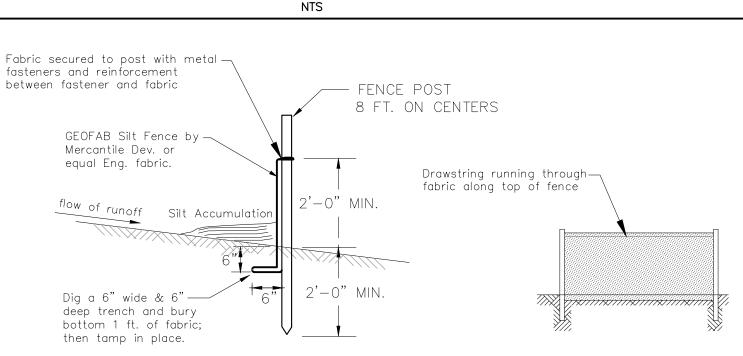
2. THICKNESS - NOT LESS THAN 6 INCHES OR AS SPECIFIED IN THE DETAIL ABOVE. 3. WIDTH - NOT LESS THAN FULL WIDTH OF POINTS OF INGRESS AND EGRESS

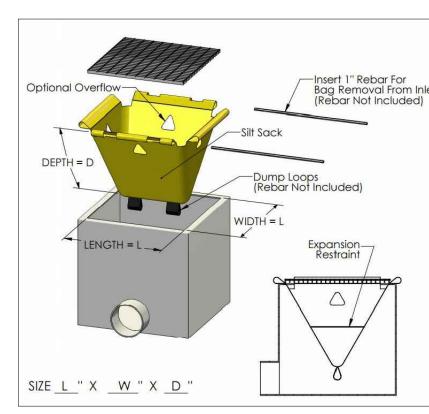
4. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO ROADWAYS. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO ROADWAYS (PUBLIC OR PRIVATE) OR OTHER IMPERVIOUS SURFACES MUST BE REMOVED IMMEDIATELY. 5. WHERE ACCUMULATION OF DUST/SEDIMENT IS INADEQUATELY CLEANED OR REMOVED BY CONVENTIONAL METHODS, A POWER BROOM OR STREET SWEEPER WILL BE REQUIRED TO CLEAN PAVED OR IMPERMIOUS SURFACES. ALL OTHER ACCESS POINTS WHICH ARE NOT STABILIZED SHALL BE BLOCKED OFF.

LENGTH OF STONE REQUIRED FINE GRAINED SOILS COARSE GRAINED SOILS 0 TO 2% 100 FT 2 TO 5% 100 FT 200 FT

STONE ENTRANCE PAD

ENTIRE SURFACE STABILIZED WITH FABC BASE COURSE





<u>SILT SACK INLET PROTECTION DETAIL</u>

SOIL EROSION & SEDIMENT CONTROL NOTES & DETAILS MINOR SUBDIVISION TAX LOT 10 BLOCK 54 BOROUGH OF FANWOOD, UNION COUNTY, NEW JERSEY

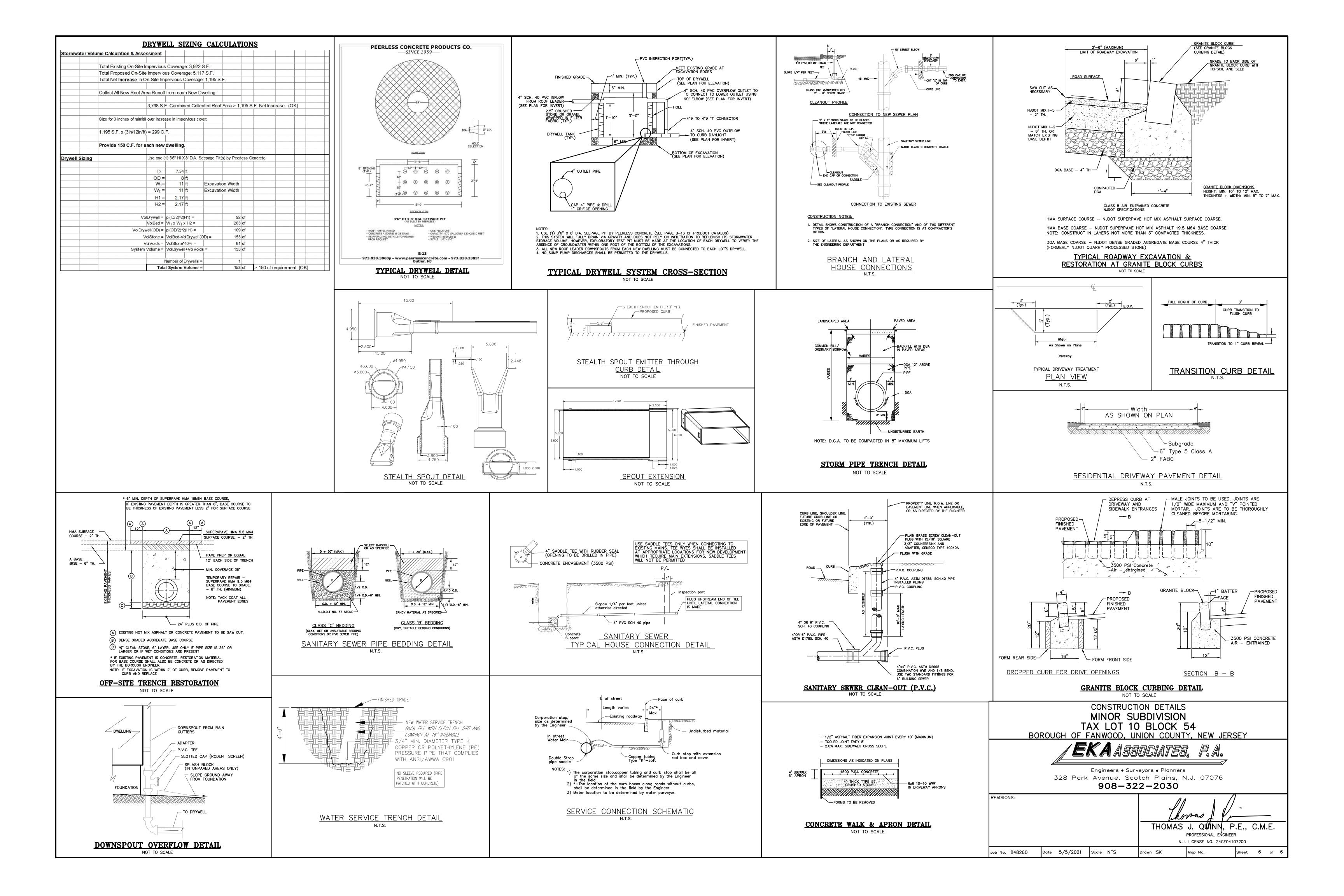


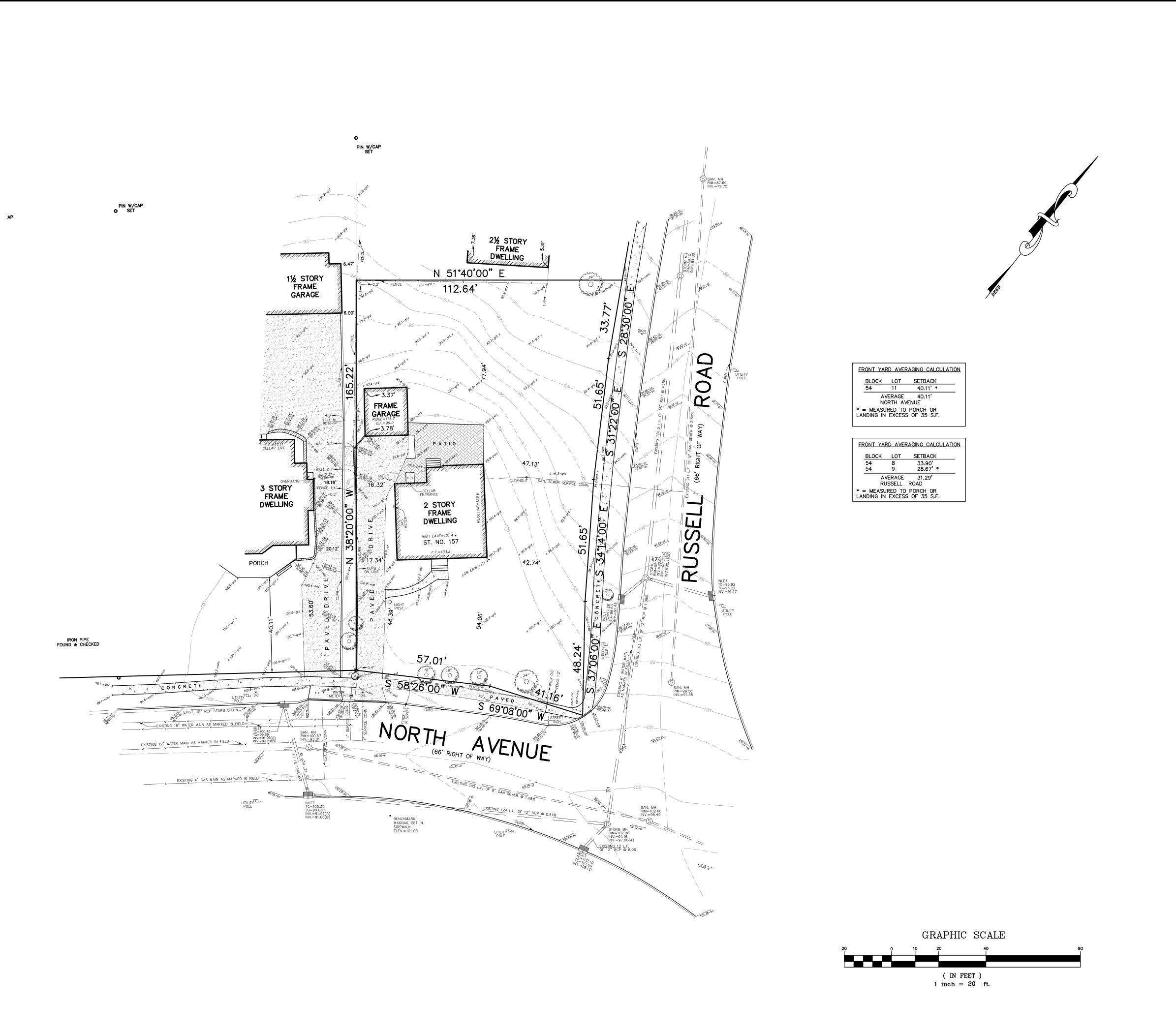
Engineers • Surveyors • Planners 328 Park Avenue, Scotch Plains, N.J. 07076

908-322-2030

THOMAS J. QUINN, P.E., C.M.E.

PROFESSIONAL ENGINEER N.J. LICENSE NO. 24GE04107200 Date 5/5/2021 Sheet 5 of 6 Job No. 848260 Scale NTS





NOTES
1. THIS SURVEY IS BASED UPON THE FOLLOWING DATA AND/OR RECEPTIONS: A. DEED OF RECORD B. FILED MAP FIELD SURVEY TITLE SEARCH TAX MAP ____ F. OTHER (SEE REFERENCES)

2. THIS SURVEY REPRESENTS CONDITIONS VISIBLE ON OR ABOVE THE SURFACE OF THE GROUND AT THE TIME OF THE SURVEY. THE UNDERSIGNED PROFESSIONAL IS NOT RESPONSIBLE FOR THE PRESENCE OF UNDERGROUND UTILITIES OR STRUCTURES IF SAME ARE NOT VISIBLE OR OTHERWISE DISCLOSED BY ANY OF THE ABOVE

3. THIS SURVEY AND PLAN IS MADE FOR AND CERTIFIED TO THE PARTIES NAMED HEREON FOR THE PURPOSE(S) STATED. NO OTHER PURPOSE IS INTENDED NOR IMPLIED. THE UNDERSIGNED SURVEYOR IS NEITHER RESPONSIBLE NOR LIABLE FOR THE USE OF THIS SURVEY FOR ANY OTHER PURPOSE INCLUDING, BUT NOT LIMITED TO, USE OF SURVEY FOR SURVEY AFFIDAVIT, RESALE OF PROPERTY, OR TO ANY OTHER PERSON NOT LISTED IN THE CERTIFICATION, EITHER DIRECTLY OR INDIRECTLY.

4. IF THIS DOCUMENT DOES NOT CONTAIN A RAISED IMPRESSION SEAL OF THE PROFESSIONAL, IT IS NOT AN AUTHORIZED ORIGINAL AND MAY HAVE BEEN ALTERED.

5. PARCEL CONTAINS 17,575 S.F. ±.

6. A WRITTEN WAIVER AND DIRECTION NOT TO SET CORNER MARKERS HAS BEEN OBTAINED FROM THE ULTIMATE USER PURSUANT TO P.L.2003,c.14(C45: 8-36.3) AND N.J.A.C. 13: 40-5.1(d).

7. ELEVATIONS SHOWN HEREON ARE BASED UPON AN ASSUMED DATUM. (INTENDED TO BE THE SAME ASSUMED DATUM AS USED IN THE REFERENCE SURVEY BELOW). LOCAL BENCHMARK IS A SURVEYOR'S MAGNAIL SET IN THE SIDEWALK ON THE SOUTHERLY SIDE OF NORTH AVENUE, DIRECTLY ACROSS FROM TAX LOT 10, BLOCK 54 (THE SUBJECT PROPERTY) ELEV. =101.00 (ASSUMED)

RECORD DEED DEED BOOK 5714, PAGE 635 TAX MAP

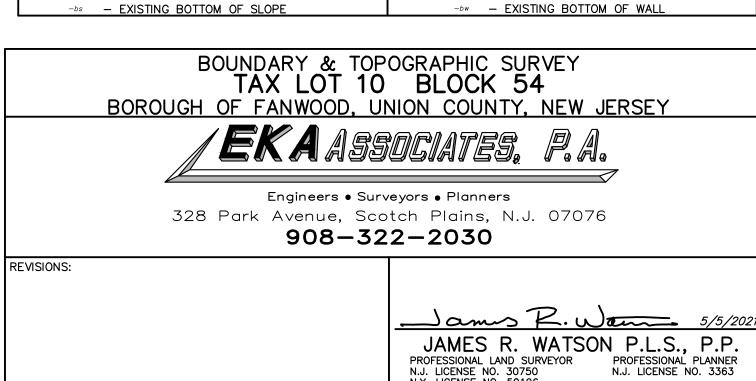
DEED BOOK 4248, PAGE 303

SHEET No. 16

REFERENCE ASBUILT SURVEY PLAN FOR TAX LOT 11, BLOCK 54, PREPARED BY EKA ASSOCIATES, P,A,, DATED 5/22/2020

FILED MAP DATA N/A

<u>LEGEND</u> 160 -sw - EXISTING SIDEWALK ELEVATION - PROPOSED CONTOUR -grd — EXISTING GROUND ELEVATION - PROPOSED SPOT ELEVATION -c/ - EXISTING CENTERLINE ELEVATION EXISTING PAVEMENT ELEVATION -tc - EXISTING TOP OF CURB ELEVATION EXISTING GRAVEL ELEVATION -bc - EXISTING BOTTOM OF CURB ELEVATION EXISTING BUILDING ELEVATION EXISTING FENCE ELEVATION EXISTING SANITARY MANHOLE - EXISTING CONCRETE ELEVATION - EXISTING TOP OF GRATE ELEVATION — EXISTING STORM MANHOLE EXISTING INVERT EXISTING GUY WIRE ¬ EXISTING UTILITY POLE - EXISTING SPOT ELEVATION $\stackrel{WV}{\bowtie}$ – EXISTING WATER VALVE EXISTING EDGE OF PAVEMENT ELEVATION $\overset{GV}{\bowtie}$ – EXISTING GAS VALVE EXISTING CONTOUR - EXISTING TREE AND SIZE -ts - EXISTING TOP OF SLOPE -tw - EXISTING TOP OF WALL



Drawn WKA

Map No. FILE

Sheet 1 of 1

Scale 1" = 20'

Date 5/5/2021

Job No. 848260