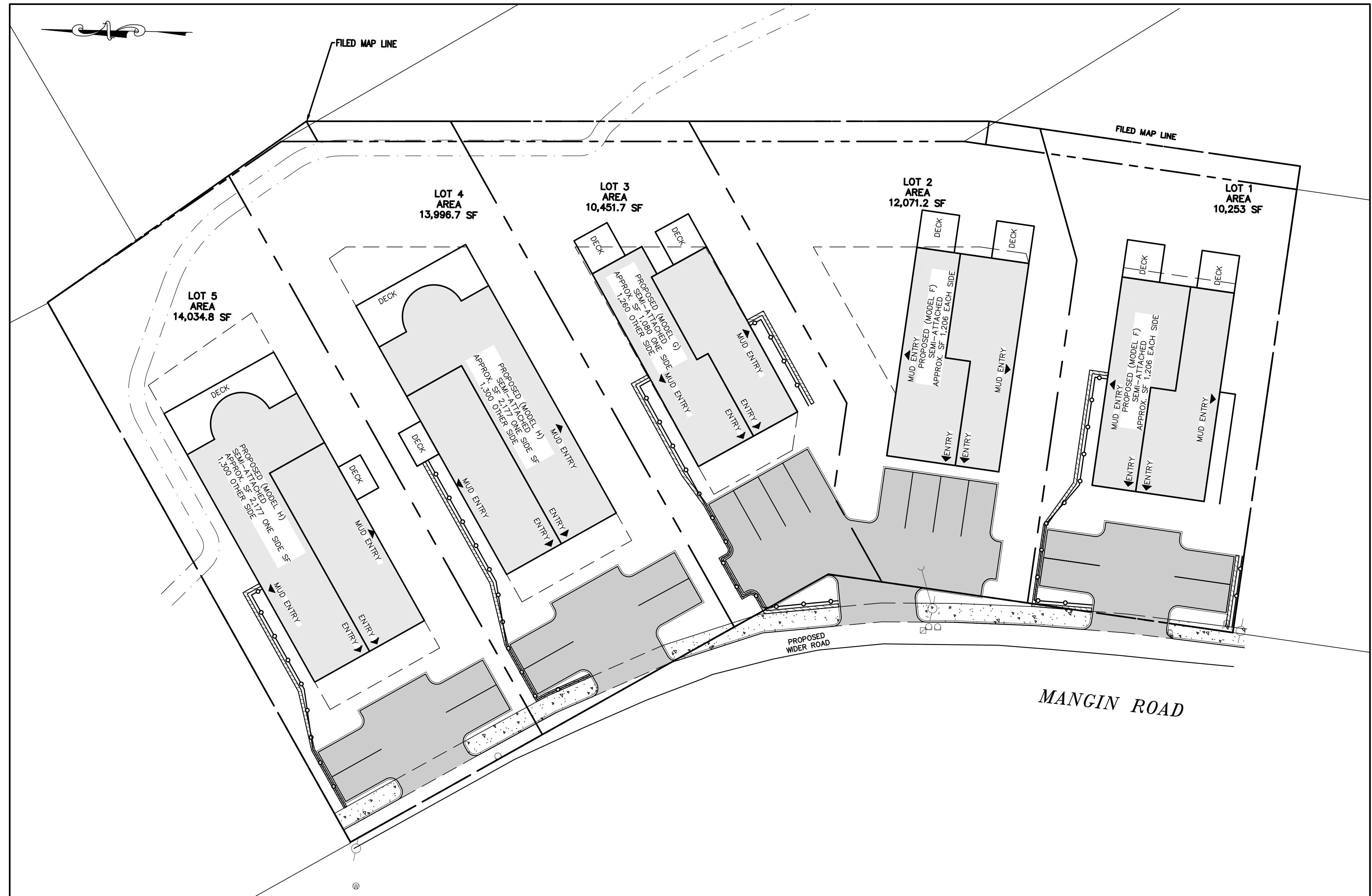


5 LOT SUBDIVISION PREPARED FOR 19-21-23 MANGIN ROAD VILLAGE OF SOUTH BLOOMING GROVE, ORANGE COUNTY, NEW YORK



LOCATION MAP
SCALE: 1"=100'



TITLE SHEET
SCALE: 1"=20'

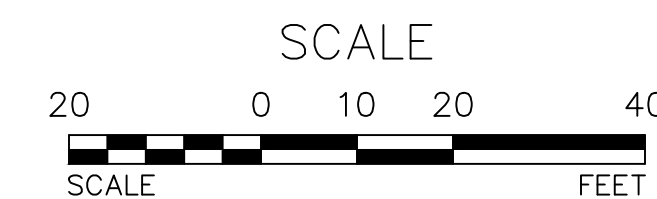
GENERAL NOTES:

1. RECORD OWNER & APPLICANT:
LOT 15: MANGIN RD LLC
19 MANGIN RD
MONROE NY 10950
- LOT 16: GEDALYA FELDMAN
21 MANGIN RD
MONROE NY 10950
- LOT 17: YOEL FELDMAN
19 MANGIN RD
MONROE NY 10950
2. PROPERTY ADDRESS:
19-21-23 MANGIN ROAD,
VILLAGE OF SOUTH BLOOMING GROVE,
ORANGE COUNTY, NEW YORK
3. TAX MAP NUMBER:
SECTION 209, BLOCK 8, LOT 15-16-17
4. DEED REFERENCE:
LOT 15: LIBER 15275, PAGE 1097
LOT 16: LIBER 14745, PAGE 590
LOT 17: LIBER 14742, PAGE 1279
5. PARCEL AREA/SIZE:
LOT 15: 15,000 SF
LOT 16: 25,605 SF
LOT 17: 20,200 SF

SHEET #	SHEET TITLE	ORIGINAL DATE/ LAST REVISED DATE
01 OF 11	TITLE SHEET	06-12-23 /
02 OF 11	EXISTING CONDITIONS PLAN	06-12-23 /
03 OF 11	DEMOLITION PLAN	06-12-23 /
04 OF 11	PROPOSED FIVE LOT SUBDIVISION	06-12-23 /
05 OF 11	GRADING & UTILITY PLAN	06-12-23 /
06 OF 11	EROSION AND SEDIMENT CONTROL PLAN	06-12-23 /
07 OF 11	EROSION AND SEDIMENT CONTROL DETAILS	06-12-23 /
08 OF 11	CONSTRUCTION DETAILS	06-12-23 /
09 OF 11	SANITARY DETAILS	06-12-23 /
10 OF 11	WATER SUPPLY DETAILS	06-12-23 /
11 OF 11	CONSTRUCTION SPECIFICATIONS	06-12-23 /

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REV.	BY	DATE	DESCRIPTION

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MICHAEL A. MORGANTE, P.E.
LIC. NO. 78517

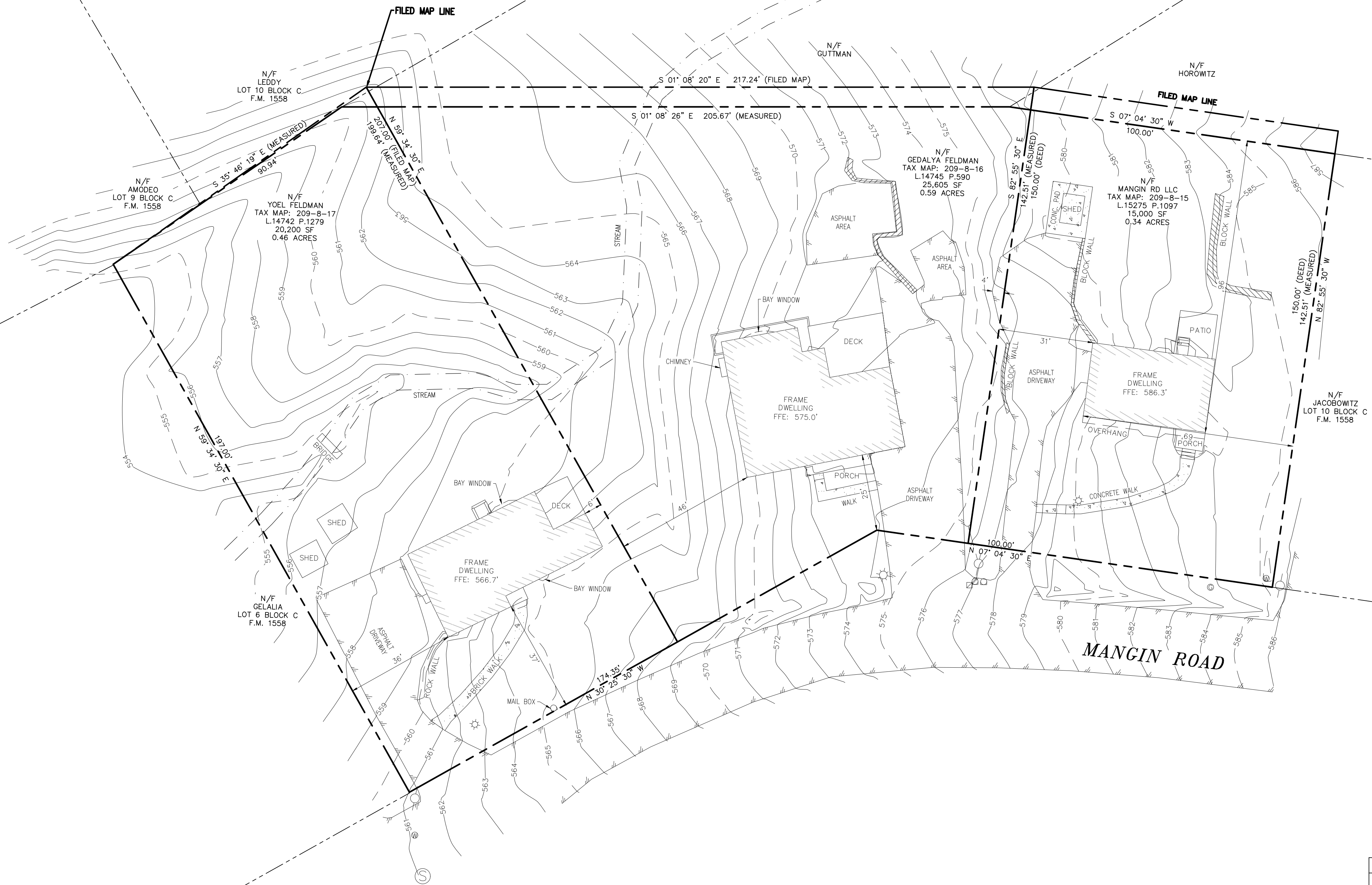
FIVE LOT SUBDIVISION PREPARED FOR
19-21-23 MANGIN ROAD
VILLAGE OF SOUTH BLOOMING GROVE,
ORANGE COUNTY, NEW YORK

JOB#: 23-020
SCALE: AS NOTED
DATE: 06-12-23
DRAWN: MM
CHECKED: MM
SHEET NO. 01 of 11

TITLE SHEET

LEGEND:

	490	EXISTING MAJOR CONTOUR
		EXISTING MINOR CONTOUR
		EXISTING EDGE OF PAVEMENT
		EXISTING PROPERTY LINE
		EXISTING ADJACENT PROPERTY LINE
		EXISTING FENCE
		EXISTING OVERHEAD WIRE
		EXISTING POLE
		EXISTING WELL
		EXISTING SEWER MANHOLE



REV.	BY	DATE	DESCRIPTION

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FIVE LOT SUBDIVISION PREPARED FOR
19-21-23 MANGIN ROAD
VILLAGE OF SOUTH BLOOMING GROVE,
ORANGE COUNTY, NEW YORK

EXISTING CONDITIONS PLAN

JOB#: 23-020
SCALE: AS NOTED
DATE: 06-12-23
DRAWN: MM
CHECKED: MM
SHEET NO. 02 of 11

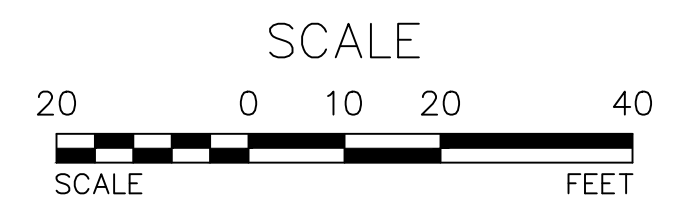
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EXISTING CONDITIONS PLAN
SCALE: 1"=20'



LEGEND:

	490	EXISTING MAJOR CONTOUR
		EXISTING MINOR CONTOUR
		EXISTING EDGE OF PAVEMENT
		EXISTING PROPERTY LINE
		EXISTING ADJACENT PROPERTY LINE
		EXISTING FENCE
		EXISTING OVERHEAD WIRE
		EXISTING POLE
		EXISTING WELL
		EXISTING SEWER MANHOLE
		EXISTING ENTITY TO BE REMOVE

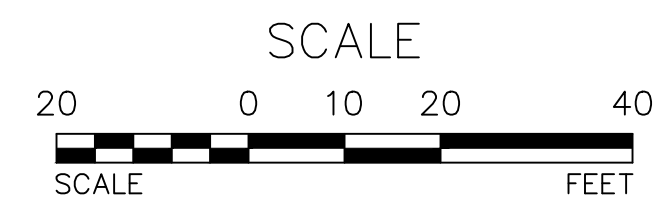


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DEMOLITION PLAN
SCALE: 1"=20'



REV.	BY	DATE	DESCRIPTION

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FIVE LOT SUBDIVISION PREPARED FOR
19-21-23 MANGIN ROAD
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ORANGE COUNTY, NEW YORK

DEMOLITION PLAN

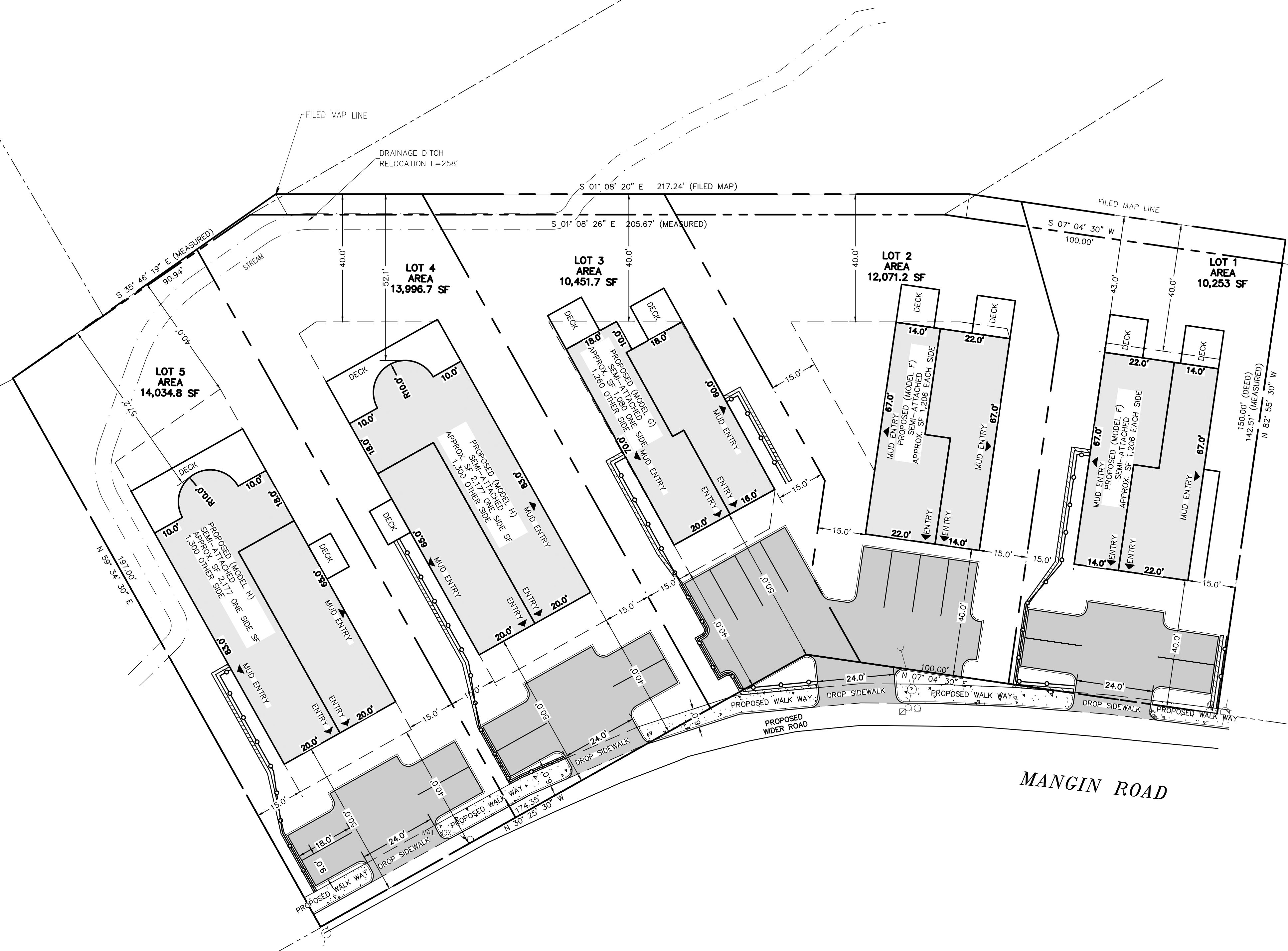
JOB#: 23-020
SCALE: AS NOTED
DATE: 06-12-23
DRAWN: MM
CHECKED: MM
SHEET NO. 03 of 11

MICHAEL A. MORGANTE, P.E.
LIC. NO. 78577



LEGEND:

	EXISTING EDGE OF PAVEMENT
	EXISTING PROPERTY LINE
	EXISTING ADJACENT PROPERTY LINE
	EXISTING FENCE
	EXISTING OVERHEAD WIRE
	EXISTING POLE
	EXISTING WELL
	EXISTING SEWER MANHOLE
	PROPOSED SETBACK
	PROPOSED EDGE OF PAVEMENT
	PROPOSED SPLIT RAIL FENCE



BULK REQUIREMENTS – ZONING DISTRICT: RB (RESIDENCE B)

	REQUIRED	LOT 1	LOT 2	LOT 3	LOT 4	LOT 5
MIN. LOT AREA (GROSS)	12,000 SF					
MIN. LOT AREA (NET)	10,000 SF					
MINIMUM FRONTAGE		66 FT	46.8 FT	51.5 FT	70 FT	70 FT
MAXIMUM BUILDING COVERAGE		23.5%	20%	22.4%	24.8%	24.8%
MIN. FRONT YARD SETBACK		40 FT	40 FT	50 FT	50 FT	50 FT
MIN. REAR YARD SETBACK		43 FT	40 FT	40 FT	52.1 FT	57.2 FT
MIN. SIDE YARD SETBACK		15 FT	15 FT	15 FT	15 FT	15 FT
MAX. HEIGHT (FEET)	35 FT					
MAX. HEIGHT (STORIES)	2 STORIES					

MANGIN ROAD

REV.	BY	DATE	DESCRIPTION

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**FIVE LOT SUBDIVISION PREPARED FOR
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VILLAGE OF SOUTH BLOOMING GROVE,
ORANGE COUNTY, NEW YORK**

JOB#: 23-020
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SHEET NO. 04 of 11

PROPOSED FIVE LOT SUBDIVISION

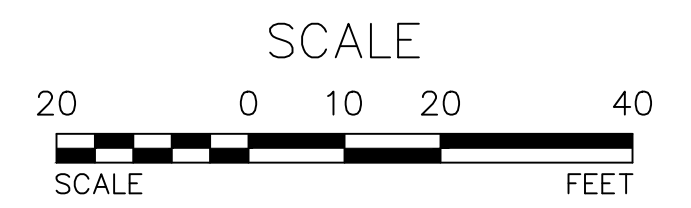
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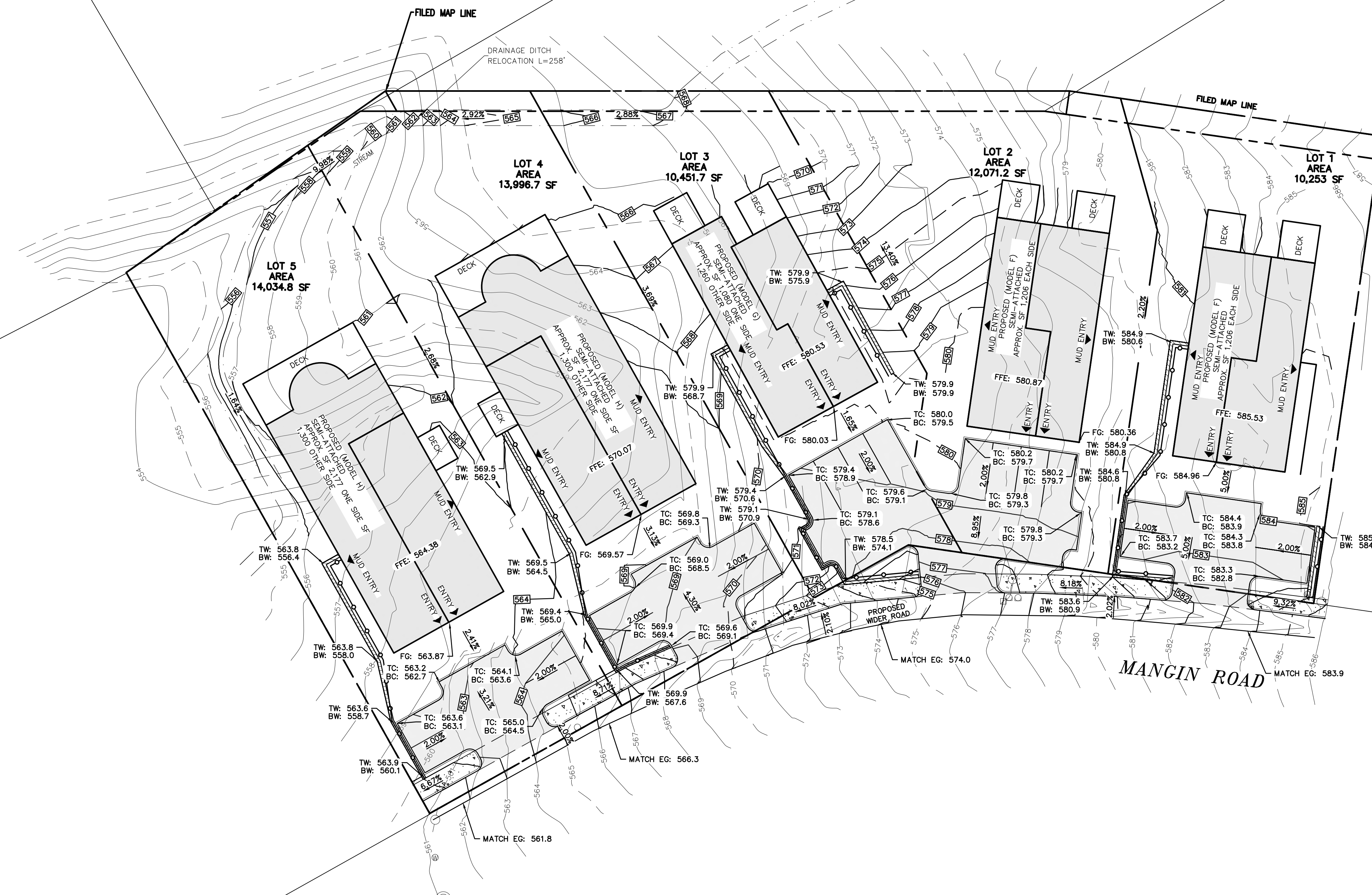


PROPOSED FIVE LOT SUBDIVISION
SCALE: 1"=20'



LEGEND:

	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	EXISTING EDGE OF PAVEMENT
	EXISTING PROPERTY LINE
	EXISTING ADJACENT PROPERTY LINE
	EXISTING FENCE
	EXISTING OVERHEAD WIRE
	EXISTING POLE
	EXISTING WELL
	EXISTING SEWER MANHOLE
	PROPOSED SETBACK
	PROPOSED EDGE OF PAVEMENT
	PROPOSED MAJOR CONTOURS
	PROPOSED MINOR CONTOURS
	PROPOSED SPLIT RAIL FENCE



TREE CLEARING NOTE:
 NO TREE REMOVAL SHALL OCCUR FROM APRIL 1 TO OCTOBER 31 TO MITIGATE POTENTIAL IMPACTS ON NORTHERN LONG EARED BAT

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FIVE LOT SUBDIVISION PREPARED FOR
 19-21-23 MANGIN ROAD
 VILLAGE OF SOUTH BLOOMING GROVE,
 ORANGE COUNTY, NEW YORK



GRADING & UTILITY PLAN

JOB#: 23-020
 SCALE: AS NOTED
 DATE: 06-12-23
 DRAWN: MM
 CHECKED: MM
 SHEET NO: 05 of 11

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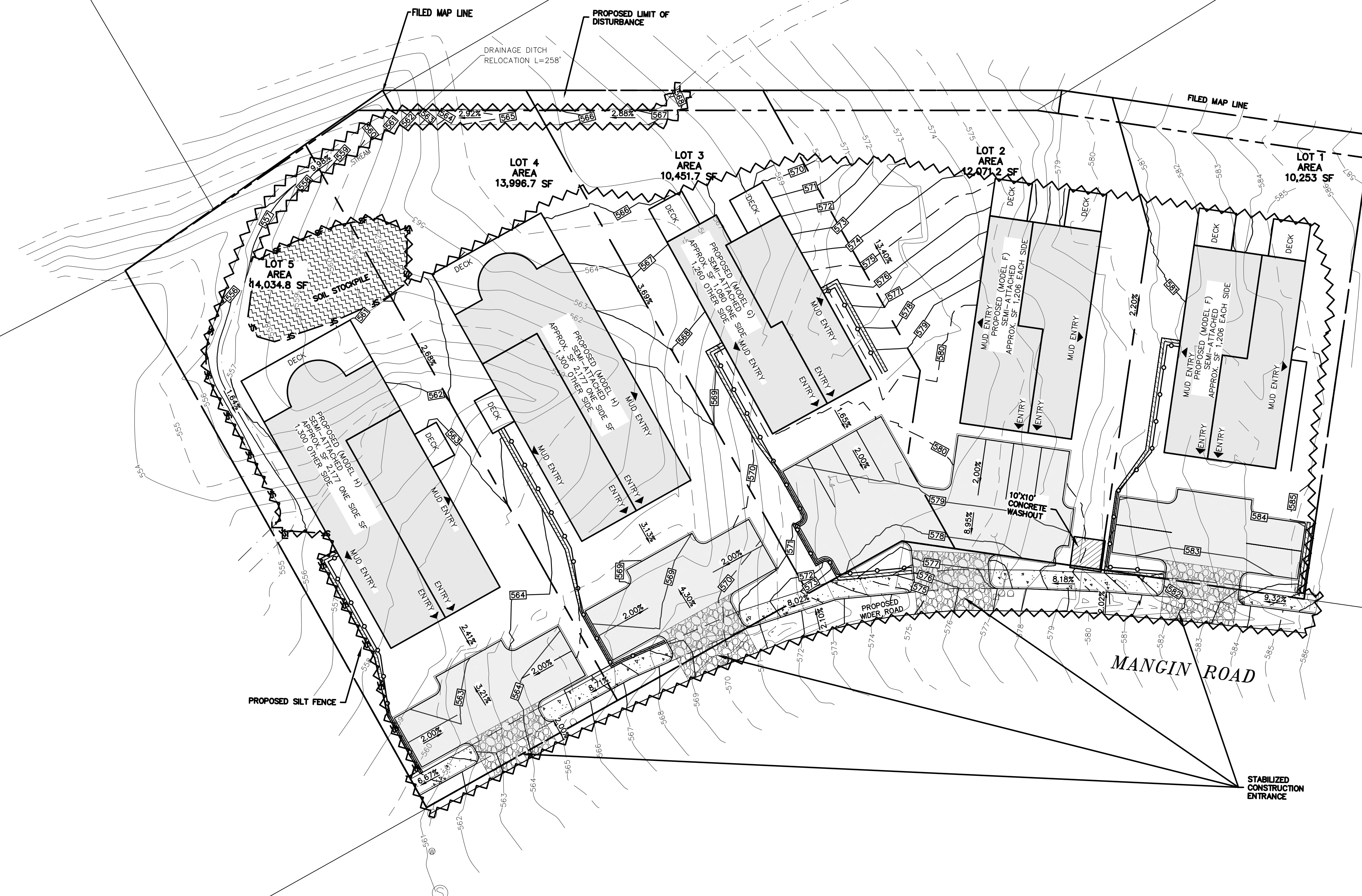
GRADING & UTILITY PLAN
 SCALE: 1"=20'



LEGEND:

	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	EXISTING EDGE OF PAVEMENT
	EXISTING PROPERTY LINE
	EXISTING ADJACENT PROPERTY LINE
	EXISTING FENCE
	EXISTING OVERHEAD WIRE
	EXISTING POLE
	EXISTING WELL
	EXISTING SEWER MANHOLE
	PROPOSED SETBACK
	PROPOSED EDGE OF PAVEMENT
	PROPOSED MAJOR CONTOURS
	PROPOSED MINOR CONTOURS
	PROPOSED SPLIT RAIL FENCE

LIMITS OF DISTURBANCE AREA: 1.175 ACRES



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FIVE LOT SUBDIVISION PREPARED FOR
19-21-23 MANGIN ROAD
VILLAGE OF SOUTH BLOOMING GROVE,
ORANGE COUNTY, NEW YORK

EROSION AND SEDIMENT CONTROL PLAN

JOB#: 23-020
SCALE: AS NOTED
DATE: 06-12-23
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SHEET NO: 06 of 11

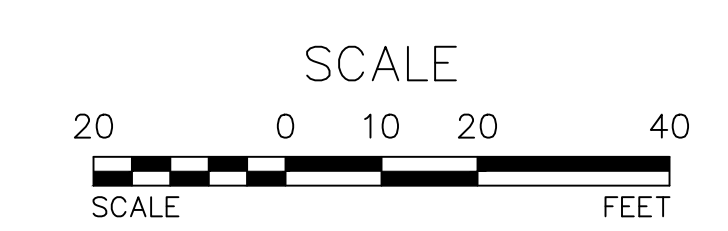
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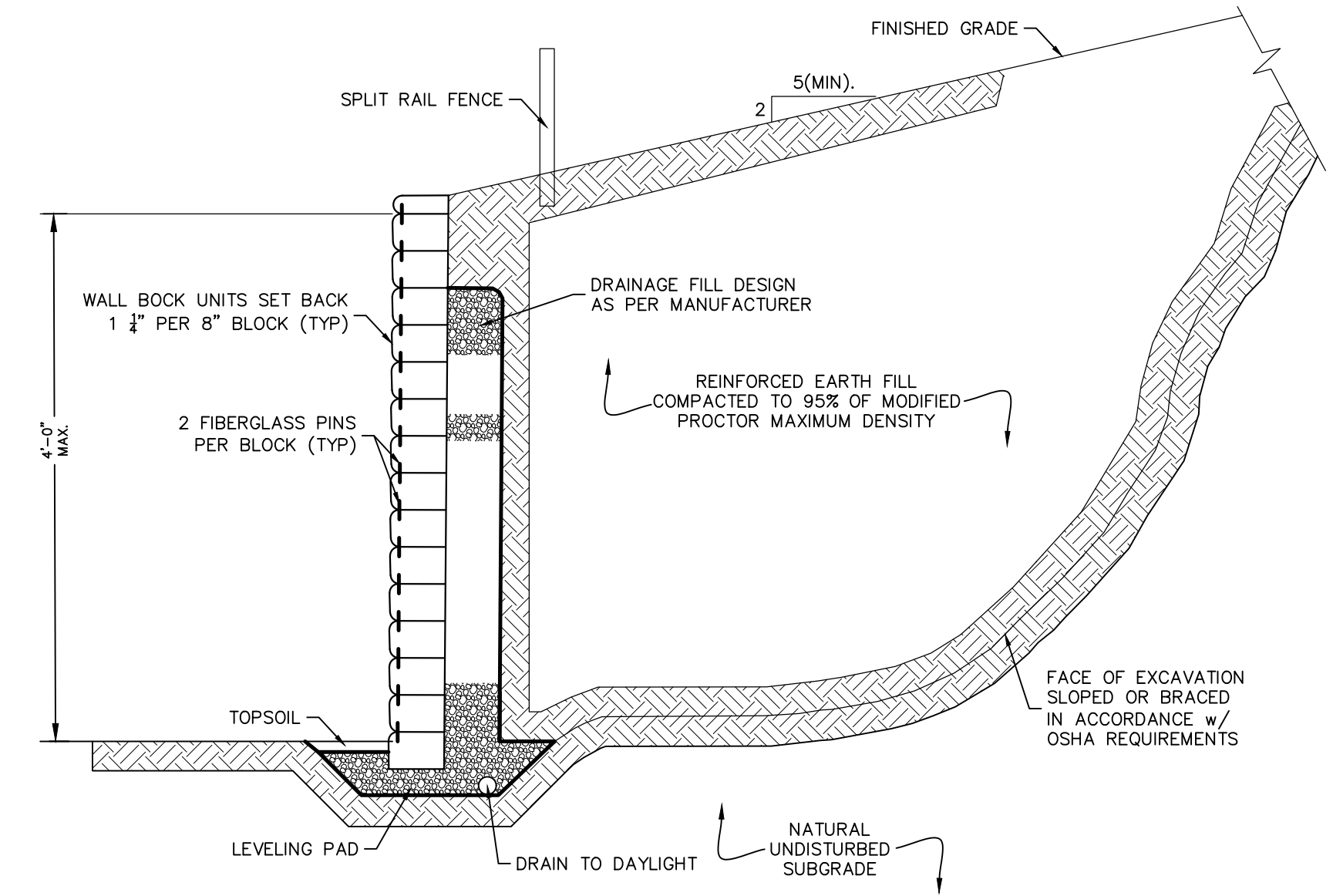
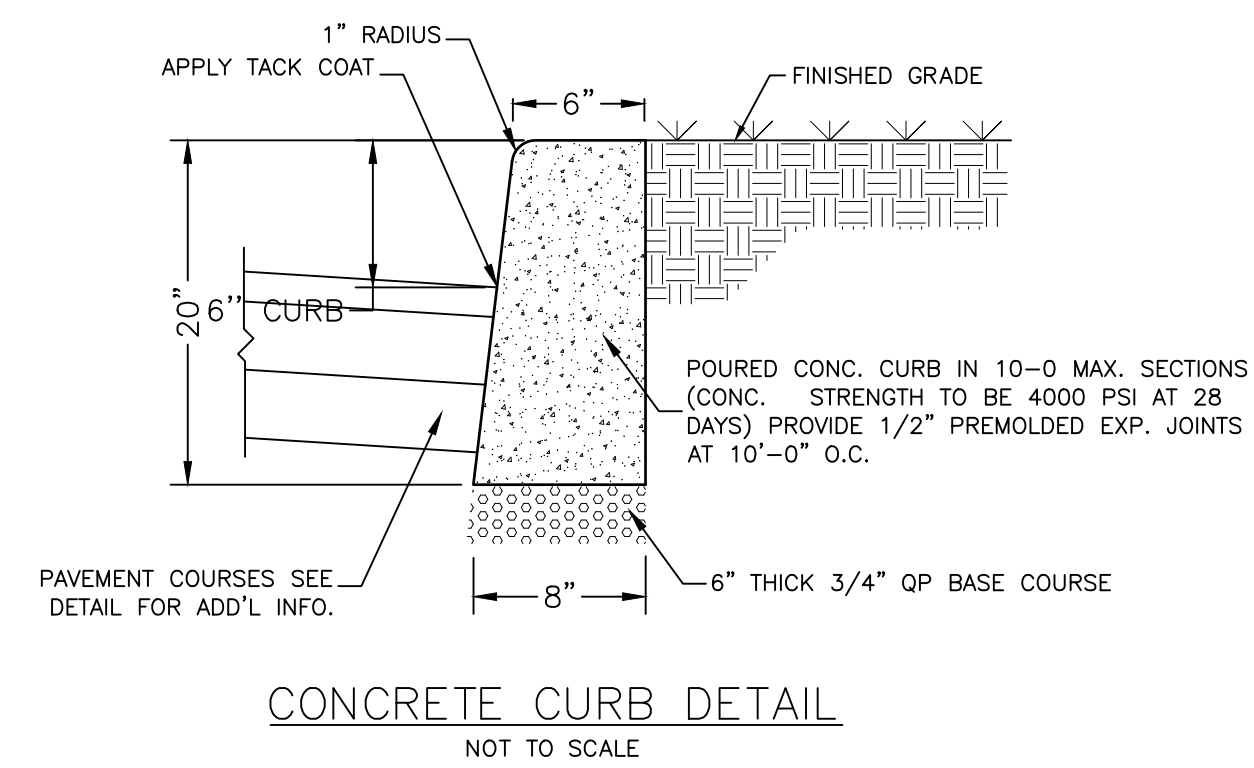
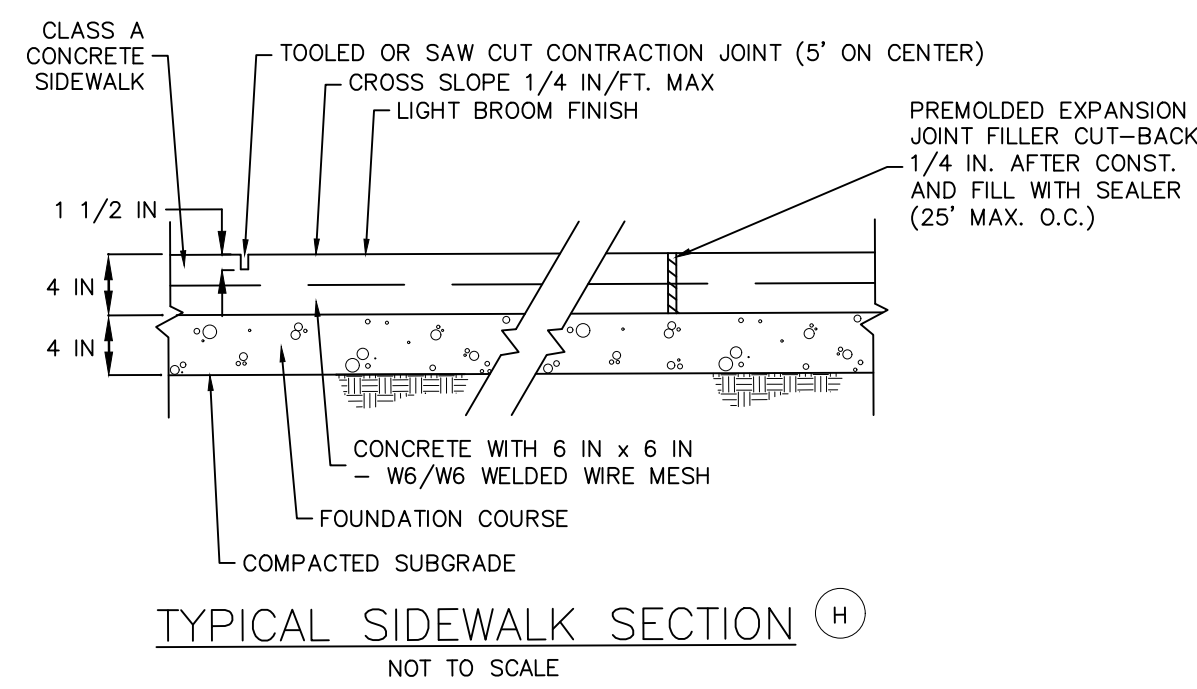
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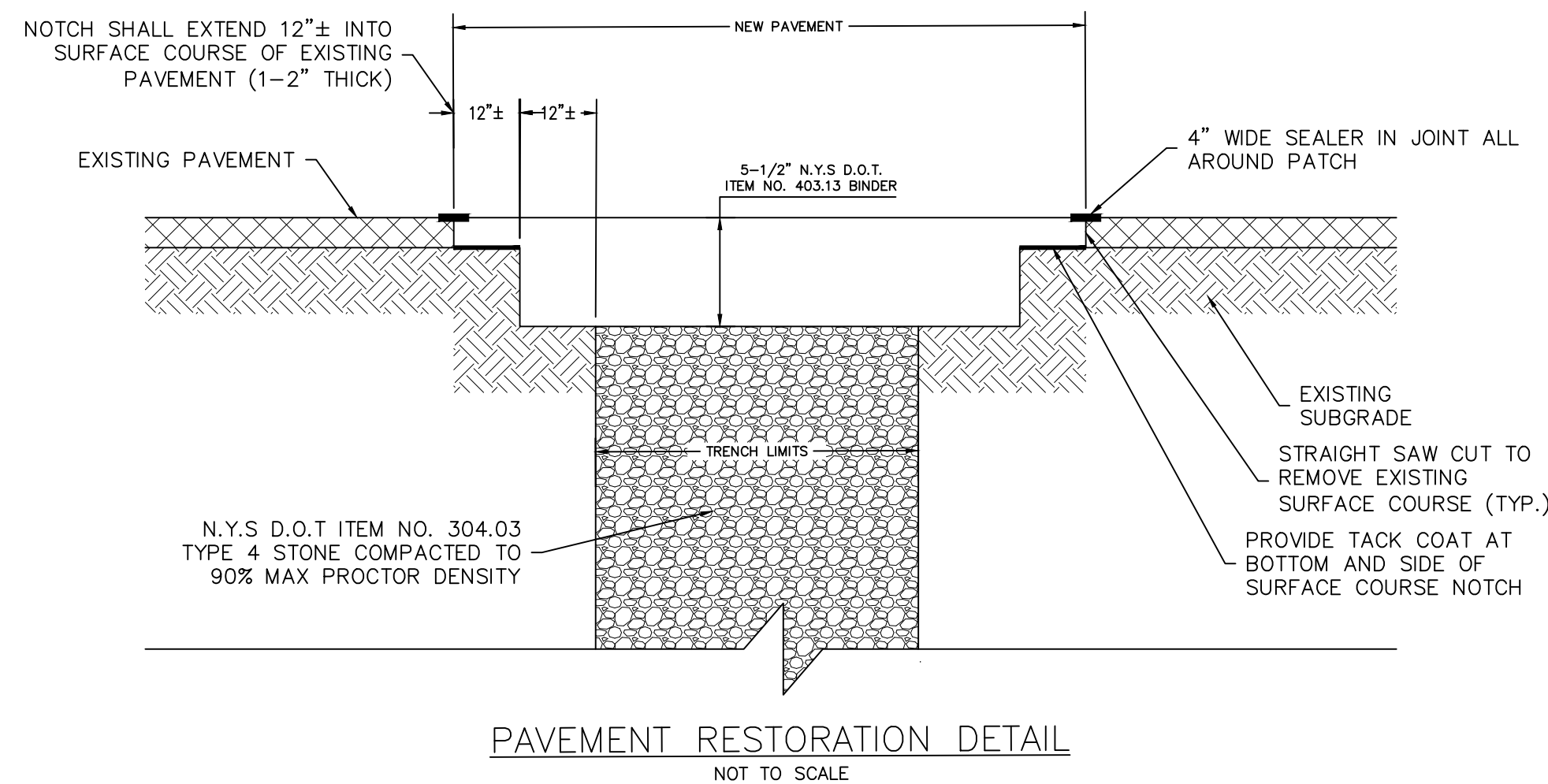
EROSION AND SEDIMENT CONTROL PLAN
SCALE: 1"=20'



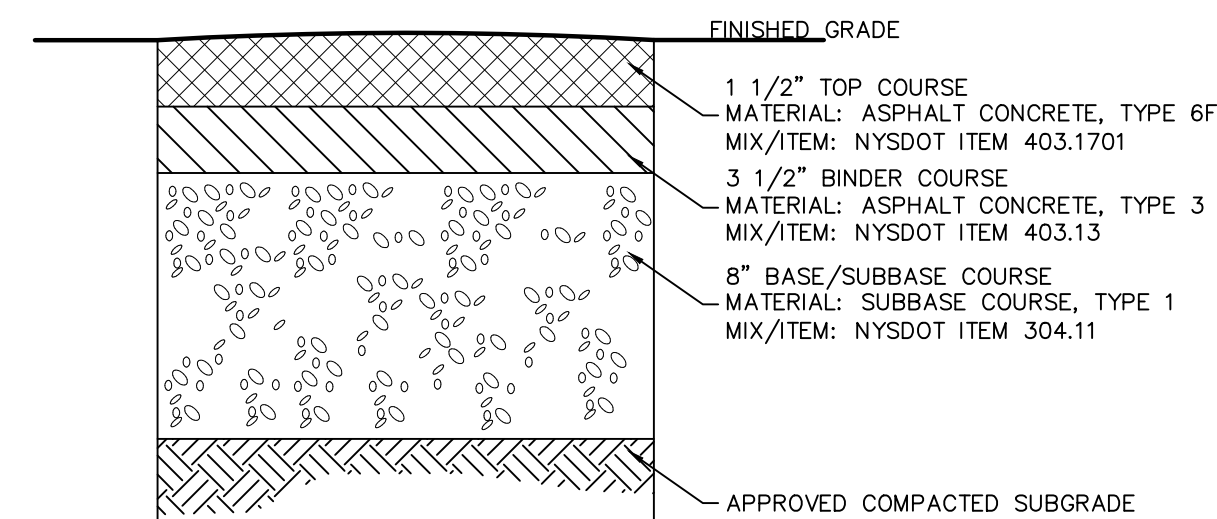


- NOTES:
1. PROPOSED KEYSTONE KS HALF CENTURY RETAINING WALL SHALL BE DESIGNED AS PER THE MANUFACTURER.
 2. FENCING SHALL BE INSTALLED AS SHOWN ON THE PLANS, IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
 3. COLORS TO MATCH FOUNDATION STONE.
 4. DESIGN FOR THE RETAINING WALL SHOWN HEREON SHALL BE PREPARED BY A NYS LICENSED PROFESSIONAL ENGINEER AND SUBMITTED TO THE TOWN BUILDING INSPECTOR FOR RECORD PRIOR TO CONSTRUCTION. SUCH DESIGN DRAWINGS (OR SHOP DRAWINGS) 9041 BEAR THE STAMP AND SIGNATURE OF SUCH ENGINEER, AND SHALL BE SPECIFIC FOR THE SITE AND SPECIFIC TO THE RETAINING WALL SYSTEM TO BE UTILIZED AND SHALL CONSIDER ALL APPROPRIATE AND NECESSARY POSSIBLE LOADINGS AND CONDITIONS RELATED TO THIS PROJECT.
 5. THE AFOREMENTIONED DESIGN AND DETAILS SHALL CONSIDER / IDENTIFY / INCLUDE, BUT SHALL NOT BE LIMITED TO: SIGNED AND SEALED DESIGN CALCULATIONS; COMPLETE MID SPECIFIC CONSTRUCTION PLANS AND DETAILS FOR EACH WALL; APPROPRIATE SING FOR DRAINAGE SYSTEM TO HANDLE INTENSE STORM CONDITIONS; MAINTENANCE ABILITY TO CLEAN STORMWATER PIPING SYSTEMS APPROPRIATE BACKFILL MATERIAL SUFFICIENT POROSITY TO ALLOW FREE DRAINAGE OF WATER; EVALUATE POTENTIAL FAILURE BY INTERNAL/EXTERNAL FAILURE MECHANISMS, GLOBAL FAILURE OR OTHER POTENTIAL FAILURES; AND SEISMIC DESIGN CONSIDERATIONS.
 6. IF THE WALL OR WALLS ARE TIERED WALLS, THE DESIGN SHALL INCLUDE AN ANALYSIS OF THE MINIMUM SPACING OF WALLS TO ALLOW THE INDIVIDUAL WALLS TO ACT AS INDIVIDUAL WALLS BASED ON THE SPECIFIC SITE AND CONSTRUCTION CONDITIONS IF THE WALLS ARE TO BE PLACED CLOSER THAN THE SAME. THE SPECIFIC DESIGN SHALL CONSIDER THE LOADS SUPERIMPOSED BY ONE WALL TO THE OTHER.
 7. DURING CONSTRUCTION THE WORK MUST BE INSPECTED BY A NYS LICENSED PROFESSIONAL ENGINEER WHO SHALL PROVIDE WRITTEN VERIFICATION TO THE TOWN BUILDING INSPECTOR. PRIOR TO THE REQUEST FOR A CERTIFICATE OF OCCUPANCY, THAT HE/SHE HAS PERSONALLY INSPECTED THE WORK, AND THE INSTALLATION IS IN COMPLIANCE WITH THE DESIGN DRAWINGS AND MANUFACTURER'S INSTALLATION RECOMMENDATIONS.
 8. IF DEEMED NECESSARY BY THE DESIGN ENGINEER AND/OR THE TOWN, THIRD PARTY TESTING WILL BE PERFORMED REGARDING MATERIAL COMPACTION, FILL QUALITY, ETC. A COPY OF ALL SUCH TESTING RECORDS SHALL BE PROVIDED TO THE TOWN BUILDING DEPARTMENT FOR RECORD.

TYPICAL MSE RETAINING WALL
NOT TO SCALE

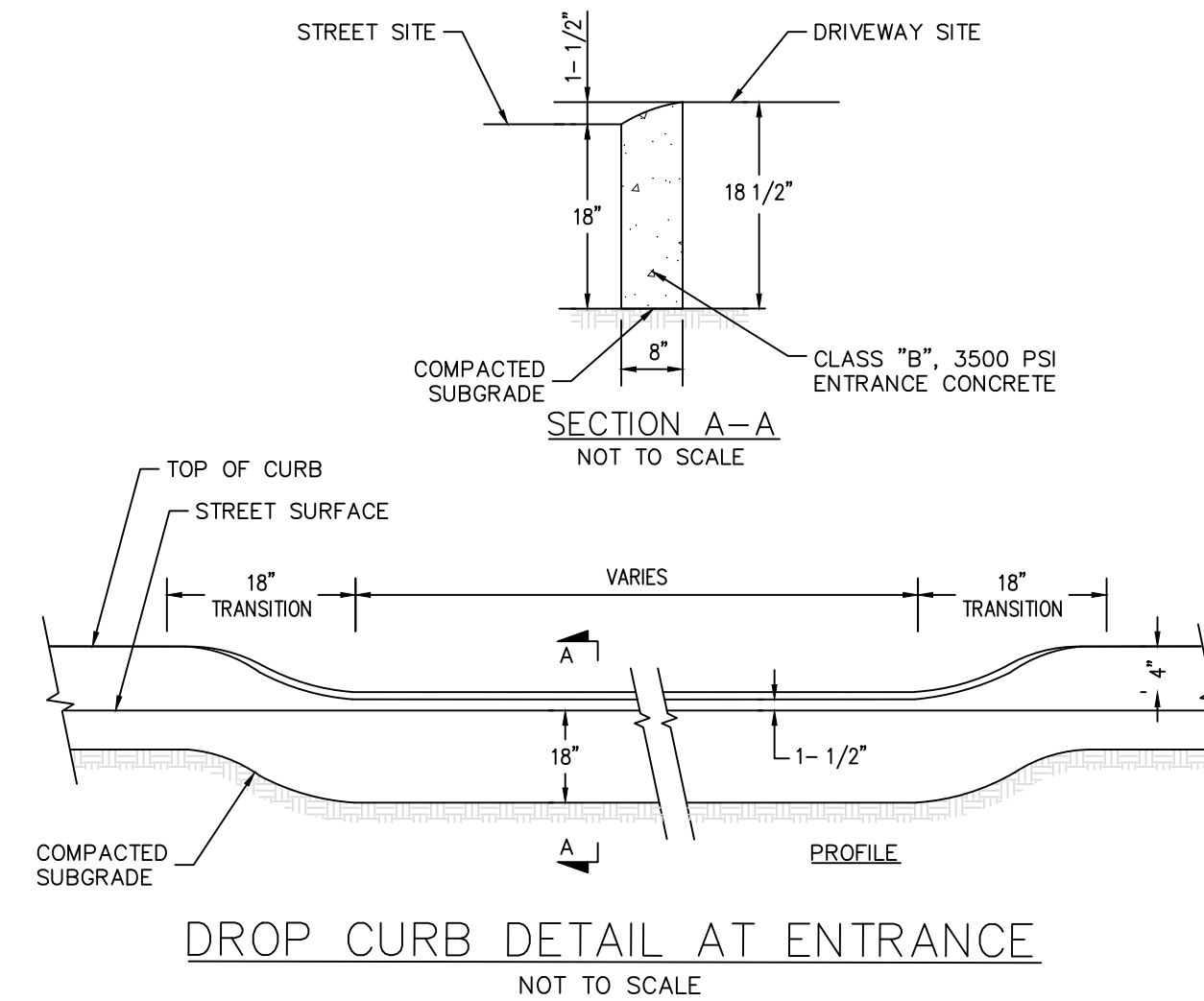


PAVEMENT RESTORATION DETAIL
NOT TO SCALE

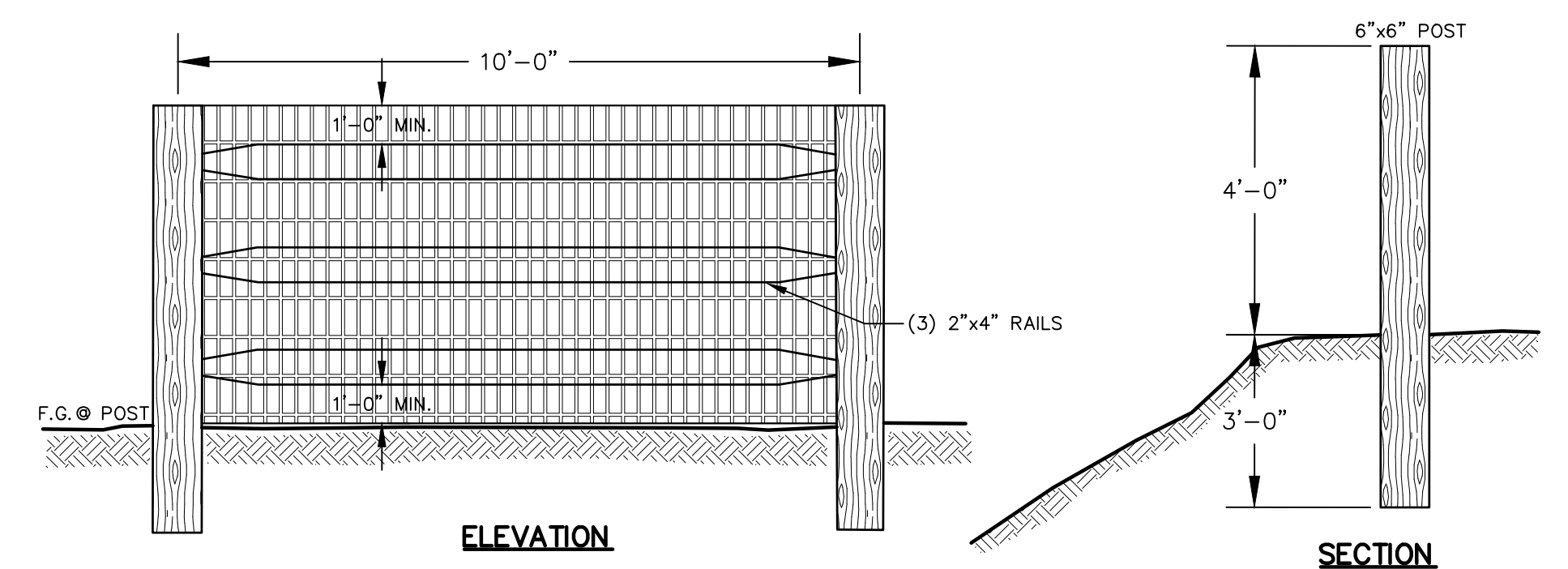


- NOTES:
1. MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, LATEST EDITION, AND ALL ADDENDA THERETO.
 2. SUBBASE MATERIAL SHALL CONFORM WITH SECTION 304 - SUBBASE COURSE OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS AND THE TYPE CALLED OUT IN THESE DRAWINGS.
 3. HOT MIX ASPHALT (HMA) PAVEMENT SHALL CONFORM WITH SECTION 400 HOT MIX ASPHALT OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS AND THE TYPE CALLED OUT IN THESE DRAWINGS. ALTHOUGH SECTION 400 IN ITS ENTIRETY IS REFERENCED, THE HOT MIX ASPHALT (HMA) PAVEMENT(S) SPECIFIED FOR TL-LIS CONTRACT SHALL BE AS SPECIFIED UNDER SECTION 402-HOT MIX ASPHALT (HMA) PAVEMENTS.
 4. TACK COAT SPECIFIED OR CALLED OUT IN THESE DRAWINGS OR REQUIRED BY THE REFERENCED SPECIFICATIONS SHALL CONFORM WITH SECTION 407-TACK COAT OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS.
 5. WHERE IT IS NECESSARY TO PLACE FILL FOR PURPOSES OF BRINGING THE SUBGRADE ELEVATION UP TO A SPECIFIED GRADE, THE FILL MATERIAL PLACED SHALL BE IN CONFORMANCE WITH SECTION 203-EXCAVATION AND EMBANKMENT OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS.
 6. THICKNESS INDICATED REFER TO COMPACTED MEASURE.

TYPICAL ASPHALT DETAIL FOR DRIVEWAY & PARKING AREAS
NOT TO SCALE



DROP CURB DETAIL AT ENTRANCE
NOT TO SCALE



- NOTES:
1. THREE POST SPLIT RAIL RUSTIC FENCE TO BE CEDAR.
 2. 2"x4" x 14 GAUGE PVC BLACK VINYL COATED WELDED WIRE FENCE TO BE ATTACHED TO INTERIOR OF SPLIT RAIL FENCING.
 3. ALL FENCING TO BE INSTALLED WITH WELDED WIRE FENCE AROUND STORMWATER MANAGEMENT FACILITIES, ALONG RETAINING WALLS AND AROUND AREAS AS INDICATED ON PLAN.

SPLIT POST FENCE DETAIL
NOT TO SCALE

REV.	BY	DATE	DESCRIPTION

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FIVE LOT SUBDIVISION PREPARED FOR
19-21-23 MANGIN ROAD
VILLAGE OF SOUTH BLOOMING GROVE,
ORANGE COUNTY, NEW YORK

CONSTRUCTION DETAILS

JOB#: 23-020
SCALE: AS NOTED
DATE: 06-12-23
DRAWN: MM
CHECKED: MM
SHEET NO. 08 of 11

MICHAEL A. MORGANTE, P.E.
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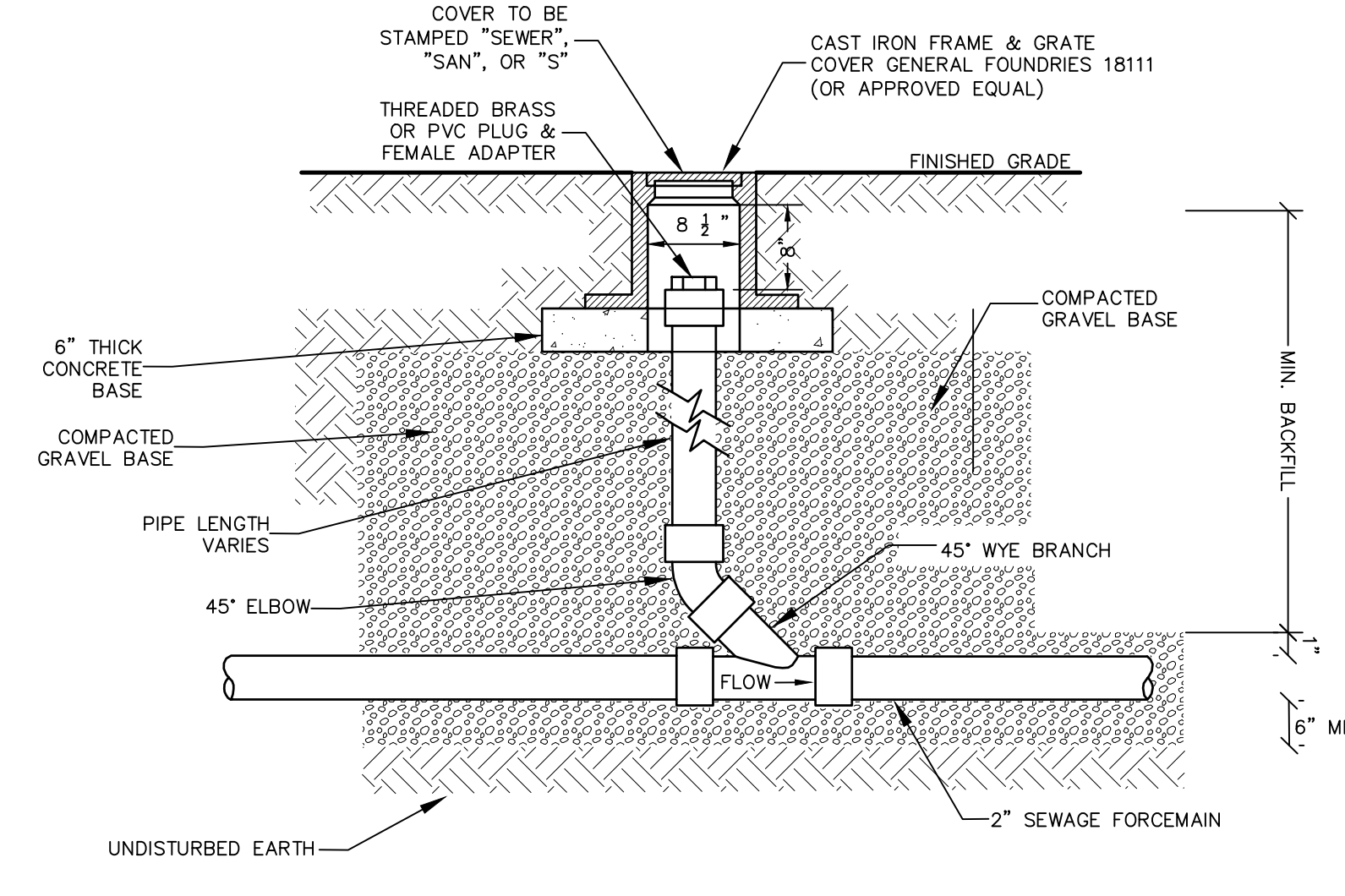
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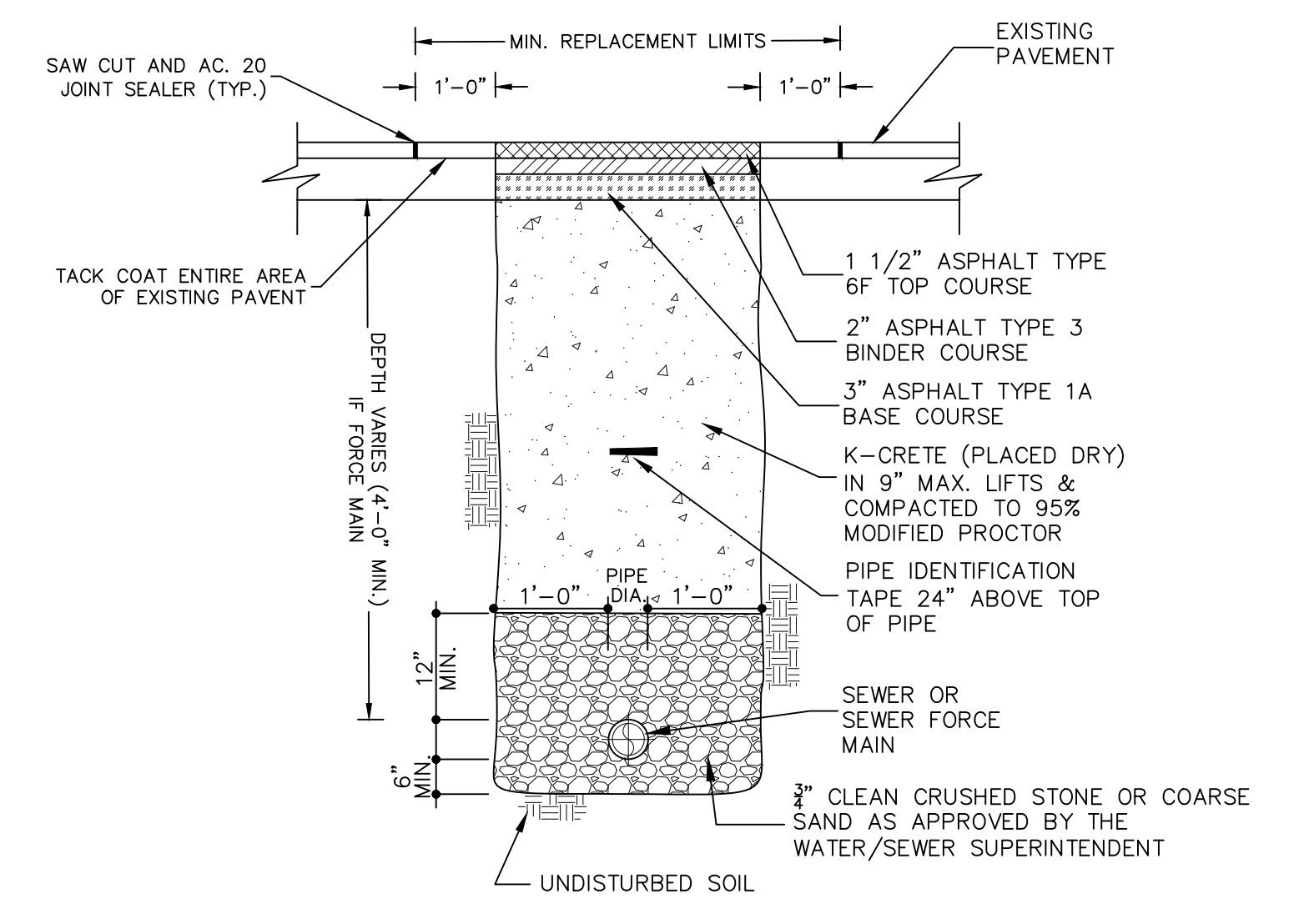
SEWER NOTES:

- UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE. THEIR ACCURACY OR COMPLETENESS ARE NOT GUARANTEED BY THE ENGINEER. MARK OUTS FROM UTILITY COMPANIES AND FIELD CONFIRMATION BY CONTRACTOR MUST BE MADE PRIOR TO CONSTRUCTION SO THAT DISTURBANCE OR DISRUPTION TO THESE UTILITIES MAY BE AVOIDED. ALL EXISTING UTILITIES ARE TO BE COORDINATED WITH THE APPROPRIATE UTILITY FOR CONNECTION/DISCONNECTION WHERE NECESSARY.
- THE CONTRACTOR SHALL DETERMINE THE LOCATION AND DEPTH OF THE EXISTING UTILITY TO WHICH THE CONNECTION IS BEING MADE BEFORE LAYING PIPE, CONDUIT, ETC. DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER. CASES WHERE THE CONSTRUCTION OF ITEMS MEET EXISTING STRUCTURES, SUCH AS CURB, PAVEMENT, SIDEWALK, UTILITIES, ETC. THE CONTRACTOR OR SURVEYOR STAKING SUCH ITEMS SHALL VERIFY THE ELEVATION LOCATION OF THE EXISTING FEATURE PRIOR TO CONSTRUCTION. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
- THE CONTRACTOR SHALL EXERCISE EXTREME CARE IN CONDUCTING EXCAVATIONS TO ESTABLISH LOCATIONS AND DEPTHS OF EXISTING UNDERGROUND UTILITIES, FACILITIES AND STRUCTURES. THE CONTRACTOR SHALL HAND EXCAVATE WHERE APPROPRIATE.
- SANITARY SEWER SHALL BE SEPARATED FROM THE WATER MAINS BY A DISTANCE OF AT LEAST 10 FEET HORIZONTALLY OR 18 INCHES VERTICALLY IF HORIZONTAL SEPARATION IS NOT POSSIBLE.
- ALL SANITARY SEWER PIPE LENGTHS SHALL BE FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
- ALL EQUIPMENT, MATERIALS, ETC. SHALL BE CONFINED TO THE PUBLIC RIGHTS OF WAY OR VILLAGE EASEMENTS. NO ENCROACHMENT ONTO ADJACENT PROPERTIES IS PERMITTED.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION SITE SAFETY. ALL SAFETY PRECAUTIONS MUST BE UNDERTAKEN AND MAINTAINED AS REQUIRED BY LOCAL, STATE AND FEDERAL CODES.
- THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING COMPLIANCE WITH THE NYSDEC AND VILLAGE REGULATIONS REGARDING STORM WATER POLLUTION PREVENTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND PROTECTION OF TRAFFIC (MPT WHEN WORKING ON OR NEAR PUBLIC ROADS: MPT MEASURES MUST BE COORDINATED WITH THE APPROPRIATE HIGHWAY OFFICIALS (TOWN, VILLAGE, AND NYSDOT) HAVING JURISDICTION OVER EACH PARTICULAR ROADWAY.
- IN THE EVENT THAT THE CONTRACTOR OR ITS SUBCONTRACTORS DAMAGE ANY EXISTING UTILITY, FACILITY OR STRUCTURE, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER OF THE DAMAGED PROPERTY AND VILLAGE.
- ALL STRUCTURES AND SURFACES DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO ITS PRE-CONSTRUCTION OR BETTER CONDITION.
- THE CONTRACTOR SHALL REVIEW THE SITE CONDITIONS WITH RESPECT TO DRAINAGE AND GENERAL SOIL CONDITIONS IN THE AREA AND PLAN ITS WORK IN SUCH A MANNER TO WORK EFFICIENTLY AND SAFELY. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE CONTROL OF SURFACE AND GROUNDWATER IN THE CONSTRUCTION AREA.
- THE CONTRACTOR SHALL MAKE ALL NECESSARY ARRANGEMENTS FOR STAGING AREAS FOR MATERIALS AND EQUIPMENT.
- THE CONTRACTOR SHALL ARRANGE FOR A SUITABLE AREA FOR THE STORAGE AND DISPOSAL OF EXCESS EXCAVATED SOIL MATERIALS. THE CONTRACTOR IS RESPONSIBLE FOR ANY PERMITS AND FEES ASSOCIATED WITH THE PROPER DISPOSAL OF SOIL AND OTHER MATERIALS FROM THE PROJECT.
- THE MORE STRICT OF ANY REQUIREMENT, CODE, RULE, REGULATION AND LAW ESTABLISHED BY THE VILLAGE OR OTHER GOVERNMENTAL AGENCY, INCLUDING BUT NOT LIMITED TO THE NEW YORK STATE DEPARTMENT OF HEALTH, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, UNITED STATES ARMY CORP OF ENGINEERS, UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, UNITED STATES OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION AND NEW YORK STATE DEPARTMENT OF LABOR FOR SANITARY SEWER SIZE, SLOPE, ALIGNMENT, MATERIALS OF CONSTRUCTION AND APPURTENANCES AND METHODS FOR EXCAVATING, PIPE PLACEMENT, JOINTING, TESTING AND TRENCH BACKFILLING SHALL BE COMPLIED WITH DURING ALL PHASES OF CONSTRUCTION.
- ALL SANITARY SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS THAT ARE APPROVED BY THE VILLAGE. ANY DEVIATION FROM THE APPROVED PLANS AND/OR SPECIFICATIONS SHALL REQUIRE REVIEW AND APPROVAL BY THE VILLAGE. THE CONTRACTOR SHALL BE RESPONSIBLE TO NOTIFY THE PROJECT ENGINEER AND THE VILLAGE OF ANY PLANNED DEVIATION(S) FROM THE APPROVED PLANS AND/OR SPECIFICATIONS.
- FITTINGS SHALL BE STANDARD LENGTH.
- PIPE JOINTS SHALL BE STANDARD LENGTH.
- CONNECTION TO EXISTING SANITARY MANHOLE SHALL BE CORE BORED FOR A KOR-N-SEAL.



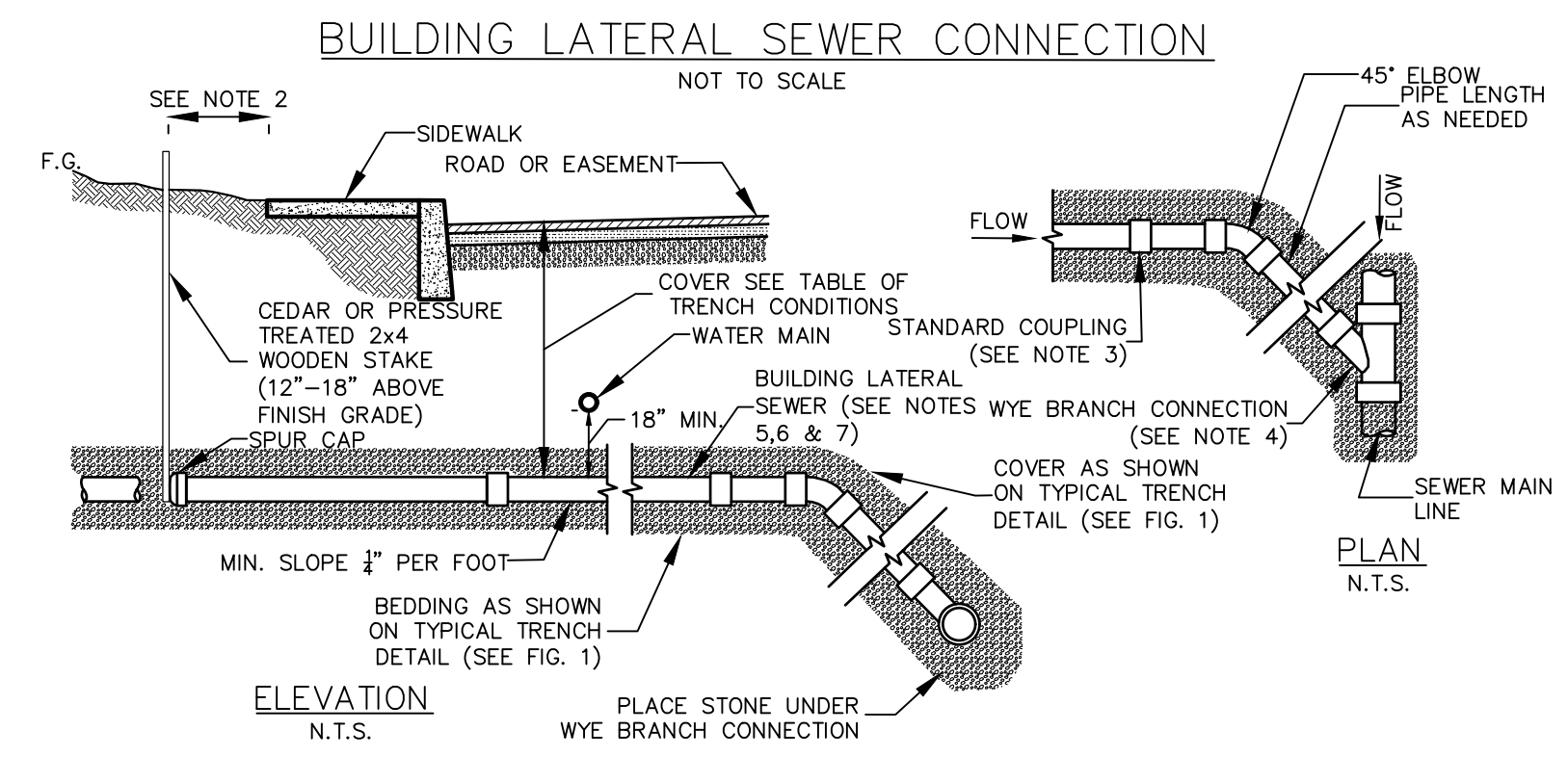
NOTES:
1. CLEANOUT LOCATED IN A ROAD, DRIVEWAY OR PARKING AREA SHALL REQUIRE A CAMBELL FOUNDRY #4164 CAST IRON FRAME AND COVER. (OR APPROVED EQUAL).

BUILDING LATERAL SEWER CLEANOUT (C.O.)
NOT TO SCALE



TYPICAL SEWER MAIN INSTALLATION/RESTORATION DETAIL IN VILLAGE STREET
NOT TO SCALE

NOTE:
1. PAVEMENT AND SUBBASE MATERIAL SHALL AT A MINIMUM, MATCH THE EXISTING TYPES AND THICKNESSES FOUND WITHIN ANY TOWN, COUNTY OR STATE HIGHWAY, WHICHEVER IS GREATER.

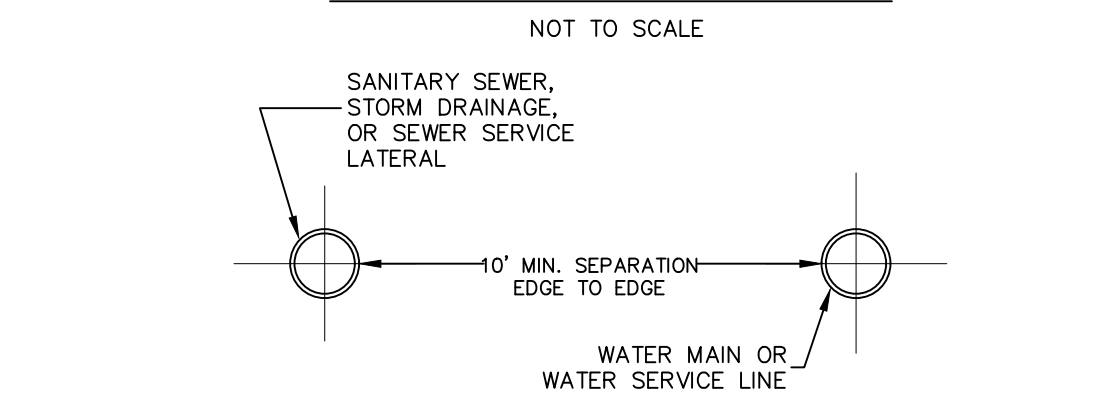
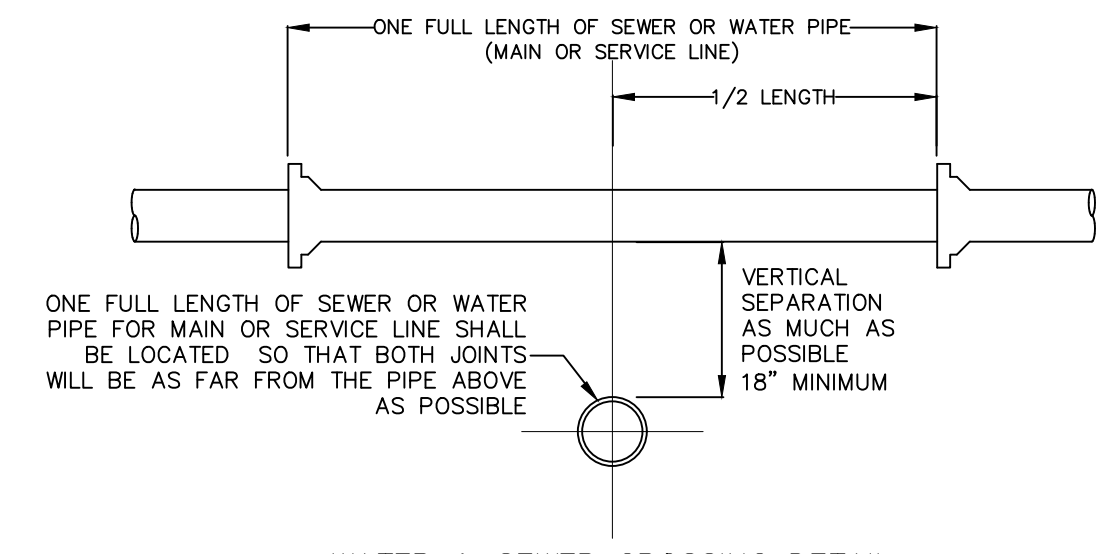


SANITARY SEWER SPECIFICATIONS (FOR BUILDING LATERAL SEWERS AND SEWER MAIN LINE):

- REQUIRED MAIN LINE SEWER (OR APPROVED EQUAL):
 - ABS-TRUSS PIPE:
 - PIPE: STAMPED ASTM D2680
 - FITTINGS: STAMPED ASTM D2680
 - JOINTS: SOLVENT WELD, ASTM D2235
 - PVC-TRUSS PIPE:
 - PIPE: STAMPED ASTM D2680
 - FITTINGS: STAMPED ASTM D2680
 - JOINTS: SOLVENT WELD, ASTM D2564 OR ELASTOMERIC (GASKET)
 - PVC - SDR 26 HEAVY WALL PIPE:
 - PIPE (8" - 15" DIAMETER): STAMPED ASTM D3034. PIPE (18" AND GREATER DIAMETER): STAMPED ASTM F679.
 - FITTINGS: STAMPED ASTM D3034 OR F679.
 - JOINTS: SOLVENT WELD ASTM D2564 OR ELASTOMERIC GASKET.
 - PVC - SDR 35 SOLID WALL PIPE:
 - PIPE (8"-15" DIAMETER): STAMPED ASTM D3034. PIPE (18" AND GREATER DIAMETER): STAMPED ASTM F679.
 - FITTINGS: STAMPED ASTM D3034 OR ASTM F679.
 - JOINTS: BELL AND SPIGOT WITH ELASTOMERIC GASKET ASTM D3034 OR SOLVENT WELD ASTM D2564.
- REQUIRED 4" OR 6" (AS APPROVED) BUILDING LATERAL SEWER (OR APPROVED EQUAL):
 - PVC - SDR 35 SOLID WALL PIPE:
 - PIPE: STAMPED ASTM D3034 AND SDR 35.
 - FITTINGS: STAMPED SDR 35 AND ASTM D3034.
 - JOINTS: BELL AND SPIGOT WITH ELASTOMERIC GASKET ASTM D3034 OR SOLVENT WELD ASTM D2564.
 - SDR 26 HEAVY WALL PIPE:
 - PIPE: STAMPED ASTM D3034 AND SDR 26.
 - FITTINGS: STAMPED SDR 26 AND ASTM D3034.
 - JOINTS: BELL AND SPIGOT WITH ELASTOMERIC GASKET ASTM D3034 OR SOLVENT WELD ASTM D2564.
 - SDR 23.5 ABS SOLID WALL PIPE:
 - PIPE: STAMPED ASTM D2751 AND SDR 23.5
 - FITTINGS: STAMPED SDR 23.5 ASTM D2751
 - JOINTS: SOLVENT WELD, ASTM D2235
- OTHER REQUIRED PIPE MATERIALS FOR BUILDING LATERAL SEWERS AND SEWER MAIN LINE (OR APPROVED EQUAL):
 - CAST IRON, EXTRA HEAVY, COATED, HUB & PLAIN END, ASTM C-74 WITH ELASTOMERIC COMPRESSION GASKET (ASTM C-564)
 - DUCTILE IRON PIPE: CLASS 52, CEMENT LINED AND TAR COATED INSIDE AND OUT.

SPECIAL CONDITIONS FOR SHALLOW TRENCH CONDITIONS	
COVER	PIPE
LESS THAN 4'-0"	CLASS 52 DUCTILE IRON OR CAST IRON EXTRA HEAVY OR APPROVED EQUAL.

- NOTES:**
- ALL APPROVED BUILDING LATERAL SEWER PIPE MATERIAL FOR EACH CONNECTION MADE SHALL BE CONSTRUCTED FROM THE SAME MATERIAL.
 - MINIMUM HORIZONTAL SEPARATION BETWEEN SPUR CAP AND SIDEWALK SHALL BE 2'-0". IN ALL CASES THE SPUR CAP LOCATION SHALL EXTEND A MINIMUM HORIZONTAL DISTANCE OF 2'-0" ONTO ALL BUILDING LOT PROPERTIES.
 - TRANSITION BETWEEN DIFFERENT PIPE MATERIAL (AS APPROVED) SHALL BE MADE BY INSTALLING A TYPE 1, STYLE 62 DRESSER COUPLING OR DRESSER STYLE 262 HYMAX COUPLING (OR APPROVED EQUAL).
 - WYE BRANCH CONNECTION SHALL BE A FITTING CONSTRUCTED SPECIFICALLY FOR THE INSTALLED MAIN LINE SEWER MATERIAL CLASS (OR APPROVED EQUAL).
 - THE BUILDING LATERAL SEWER SHOWN FROM THE MAIN LINE SOURCE WYE BRANCH CONNECTION FITTING TO THE SPUR CAP SHALL MEET THE SPECIFICATIONS SHOWN FOR ii) BUILDING LATERAL SEWER.
 - 4" BUILDING LATERAL SEWER MAY BE APPROVED FOR CONSTRUCTION OF SINGLE (1) AND TWO (2) FAMILY DWELLINGS ONLY. ALL OTHER BUILDING LATERAL SEWERS (INCLUDING ALL COMMERCIAL USES) SHALL BE 6" IN DIAMETER.
 - EACH 6" BUILDING LATERAL SEWER SHALL PROVIDE SERVICE FOR NO MORE THAN TWELVE (12) EQUIVALENT LIVING UNITS, AS DETERMINED BY OCSJ NO. 1, UNLESS A REQUESTED DEVIATION IS APPROVED IN WRITING BY OCSJ NO. 1.



SEWER & WATER SEPARATION NOTES

- WHEN IT IS IMPOSSIBLE TO MAINTAIN PROPER HORIZONTAL OR VERTICAL SEPARATION AS SHOWN, THE SEWER SHALL BE DESIGNED AND CONSTRUCTED EQUAL TO THE WATER MAIN, AND SHALL BE PRESSURE TESTED TO ASSURE WATERTIGHTNESS PRIOR TO BACKFILLING.
 - A FULL LENGTH OF BOTH PIPES CROSSING MUST BE CENTERED AT THE CROSSING.
 - BEDDING MATERIAL SHALL BE INCREASED TO 12" BELOW THE LENGTH OF WATER MAIN PIPE FOR 10' ON EITHER SIDE OF THE CROSSING.
 - TWO LAYERS OF CAUTION TRACER TAPE SHALL BE PLACED 18" MINIMUM ABOVE STORM SEWER MAINS.
- NOTES**
- SEPARATION DISTANCE BETWEEN WATER MAINS AND STORM/SEWER MAINS SHALL BE 10' HORIZONTAL AND 18" AT CROSSINGS. THESE SEPARATION DISTANCES MUST BE MAINTAINED UNLESS SPECIFICALLY SHOWN AND INDICATED OTHERWISE ON THE PLANS. THE PREFERRED CROSSING OPTION IS FOR THE WATER MAIN TO BE CONSTRUCTED ABOVE STORM/SEWER MAINS.
 - SEWER MAIN INCLUDES SEWER LATERALS AND STORM DRAIN.
 - WATER MAIN INCLUDES WATER SERVICE LATERALS.
 - DEFLECT WATER MAIN IN AN ARC BENEATH THE SEWER/STORM LINE. DO NOT USE FITTINGS TO DEFLECT THE WATER MAIN.

WATER OVER SEWER SEPARATION NOTES

- FULL LENGTH OF BOTH PIPES CROSSING MUST BE CENTERED AT THE CROSSING SO THAT PIPE JOINTS WILL BE AS FAR FROM EACH OTHER AS POSSIBLE (10' MIN.).
- CONTRACTOR SHALL PROVIDE STRUCTURAL SUPPORT FOR EXISTING WATER MAIN OVER THE ENTIRE TRENCH WIDTH TO PREVENT DAMAGE TO THE WATER MAIN.
- WATER TIGHT JOINTS WHERE WATERLINES ARE CROSSED ABOVE OR BELOW.

REV.	BY	DATE	DESCRIPTION

THIS SHEET IS NOT VALID WITHOUT ALL OF THE SHEETS THAT COMPRISE THE SET

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FIVE LOT SUBDIVISION PREPARED FOR
19-21-23 MANGIN ROAD
VILLAGE OF SOUTH BLOOMING GROVE,
ORANGE COUNTY, NEW YORK

JOB#: 23-020
SCALE:
AS NOTED
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SHEET NO. 09 of 11

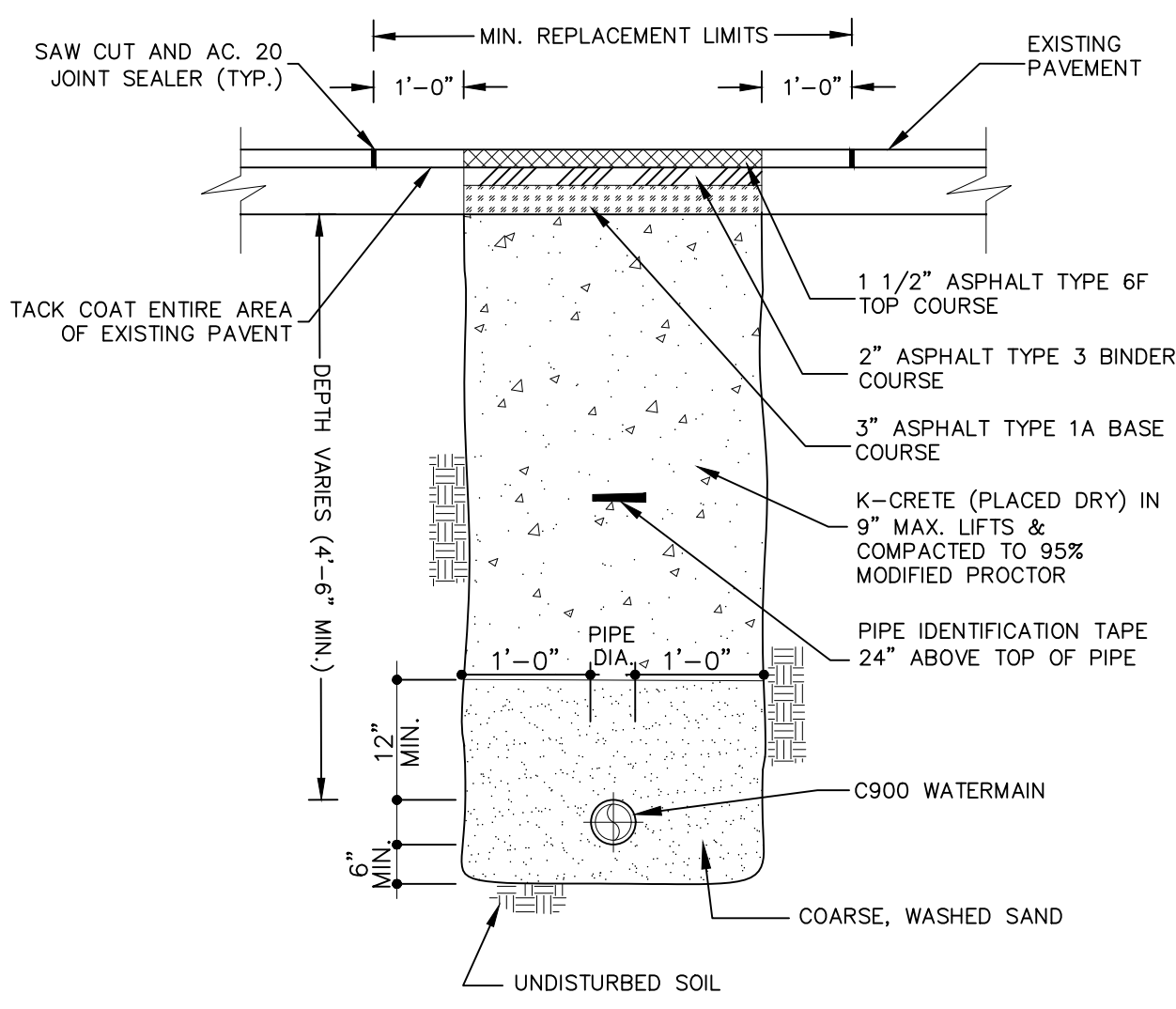
SANITARY DETAILS

MICHAEL A. MORGANTE, P.E.
Lic. No. 78577

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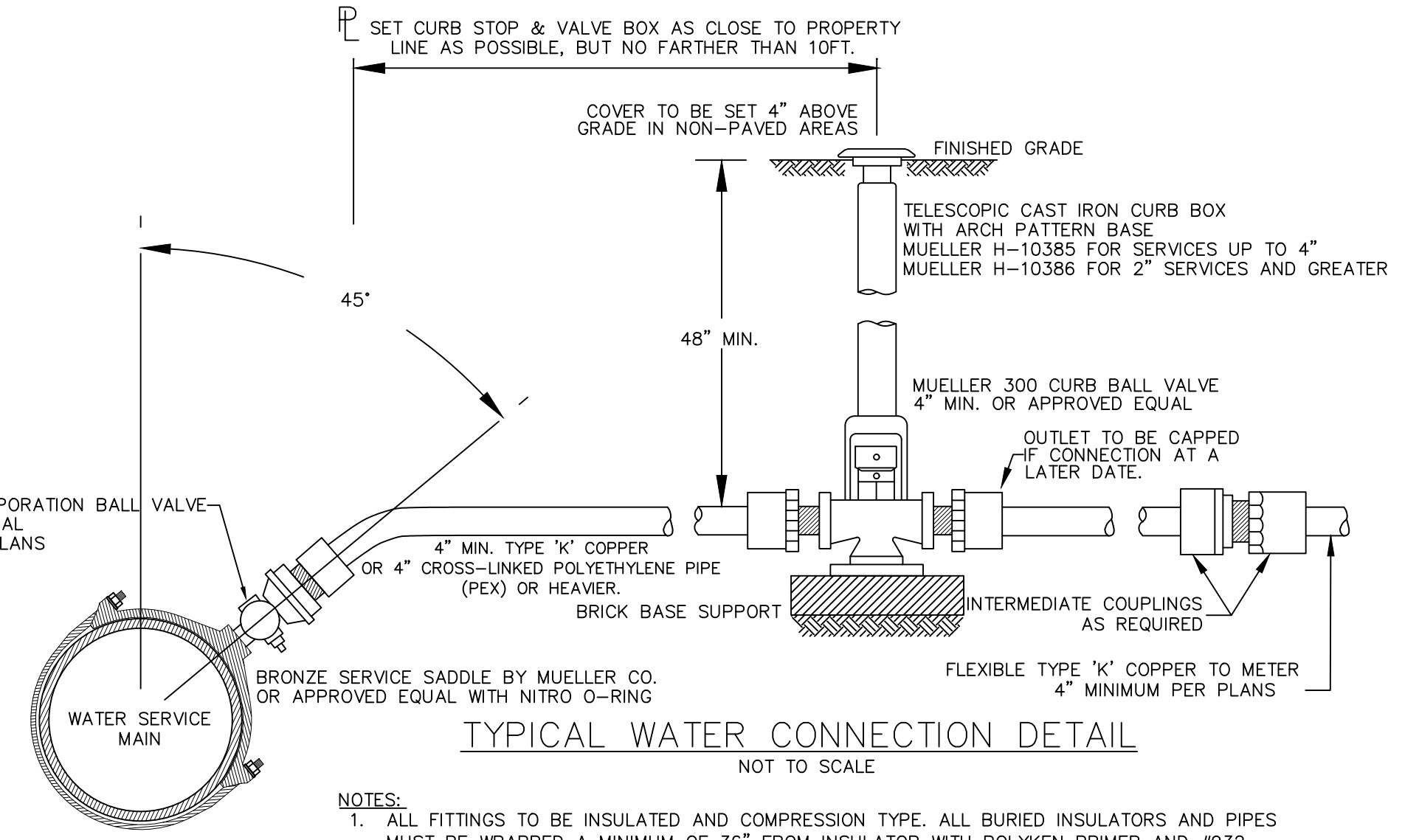


TYPICAL WATER SERVICE INSTALLATION/RESTORATION DETAIL IN VILLAGE STREET
NOT TO SCALE

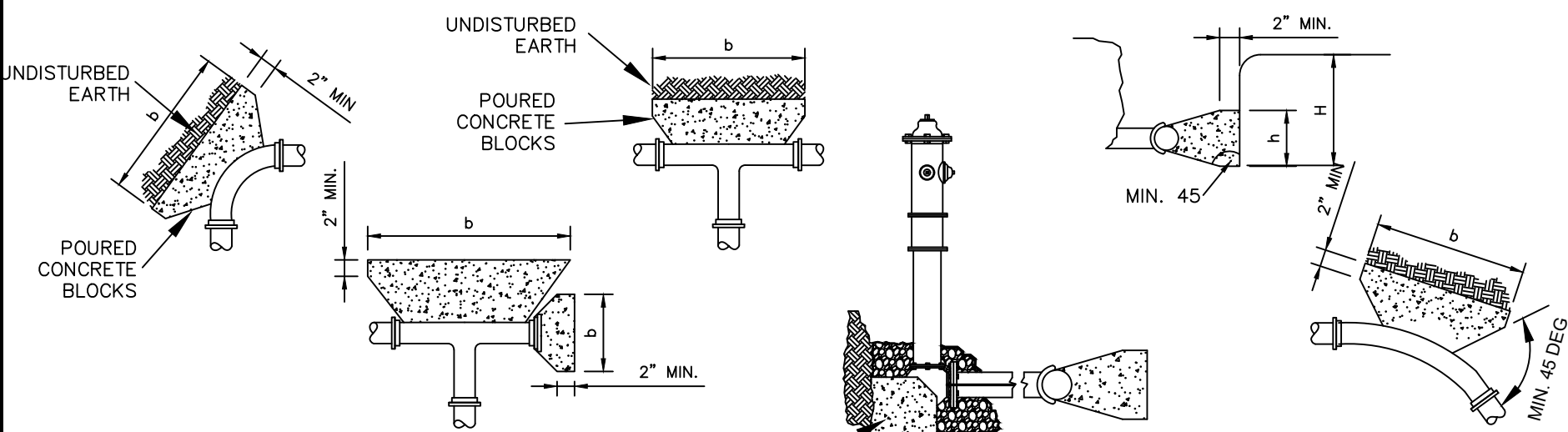
- NOTE:
1. PAVEMENT AND SUBBASE MATERIAL SHALL, AT A MINIMUM, MATCH THE EXISTING TYPES AND THICKNESSES FOUND WITHIN ANY TOWN, COUNTY OR STATE HIGHWAY, WHICHEVER IS GREATER.

WATER NOTES

1. ALL WATER SYSTEM INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE VILLAGE OF SOUTH BLOOMING GROVE, THE ORANGE COUNTY DEPARTMENT OF HEALTH, THE LATEST AWWA STANDARDS, AND "RECOMMENDED STANDARDS FOR WATER WORKS" (2007-GLWM).
2. DISINFECTION AND TESTING SHALL BE IN ACCORDANCE WITH AWWA C651.
3. PRESSURE AND LEAKAGE TESTING SHALL BE IN ACCORDANCE WITH AWWA C600. P 6. SUPPLIERS RECORDS INDICATE ADEQUATE PRESSURE AND CAPACITY IS AVAILABLE.
4. ALL ELEVATIONS BASED ON TOPOGRAPHICAL INFORMATION PREPARED BY EDWARD T. GANNON, PLS.
5. AVAILABLE INFORMATION AS TO THE LOCATION OF EXISTING SUBSTRUCTURES AND UTILITIES HAS BEEN COLLECTED FROM VARIOUS SOURCES THE RESULTS OF SUCH INVESTIGATIONS, AS MAY BE SHOWN ON THE CONTRACT DRAWINGS, ARE NOT GUARANTEED AS TO ACCURACY. ALL EXISTING UTILITIES ARE SHOWN FOR INFORMATION ONLY. THE CONTRACTOR SHALL DIG TEST PITS AS REQUIRED TO VERIFY TRUE AND EXACT LOCATIONS OF UNDERGROUND LINES.
6. ALL PROFILES INDICATE APPROXIMATE GROUND PROFILES.
7. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES, AND DIG SAFELY NEW YORK (1-800-962-7962), A MINIMUM OF 72 HOURS PRIOR TO EXCAVATION, AND SHALL COMPLY WITH ALL CURRENT MARKOUT REQUIREMENTS OF DIG SAFELY NEW YORK.
8. EXCAVATIONS OR TRENCHING WITHIN CLOSE PROXIMITY TO UNDERGROUND FACILITIES OR UTILITY POLES WILL REQUIRE PROTECTION TO PREVENT DAMAGE OR INTERRUPTION OF SERVICE TO UNDERGROUND FACILITIES. THE COST TO PROVIDE THIS PROTECTION WILL BE BORNE BY THE CONTRACTOR.
9. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROTECT EXISTING THRUST BLOCKS WHICH ARE RESTRAINING EXISTING UTILITIES. EXISTING THRUST BLOCKS SHALL NOT BE UNDERMINED.
10. ALL TRENCH LINES SHALL BE CUT OR MILLED.
11. THE CONTRACTOR SHALL COMPLY WITH ALL ROAD OPENING REQUIREMENTS AND ORDINANCES OF THE GOVERNING AGENCY.
12. RESTORATION, INCLUDING THE REMOVAL OF EXCESS EXCAVATED MATERIAL AND PLACEMENT OF TEMPORARY PAVEMENT, SHALL BE PERFORMED AND COMPLETED ON A DAILY BASIS. ALL ROADS SHALL BE PASSABLE TO VEHICULAR TRAFFIC AT THE END OF EACH WORK DAY.
13. ALL TRENCHES SHALL BE BACKFILLED WITHOUT DELAY. OPEN TRENCHES SHALL BE KEPT TO A MINIMUM. OPEN TRENCHES SHALL BE STEEL PLATED. UPON BACKFILLING THE CONTRACTOR SHALL BROOM SWEEP STREETS, USE APPROPRIATE METHODS TO CONTROL DUST AND HOSE DOWN THE PAVEMENT TO KEEP SURFACE CLEAN.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND DISPOSAL OF ALL EXCESS EXCAVATED MATERIAL TO AN OFF-SITE LOCATION.
15. THE CONTRACTOR SHALL FURNISH AND INSTALL CORPORATIONS WHEREVER NECESSARY FOR PRESSURE TESTING AND DISINFECTING THE WATER MAIN. CORPORATIONS SHALL BE 3/4" FOR MAINS SMALLER THAN 16" AND 1" FOR MAINS 16" AND LARGER. THE CONTRACTOR SHALL INSTALL AS MANY CORPORATIONS AS ARE REQUIRED FOR PROPER TESTING, FLUSHING, AIR BLEEDING AND DISINFECTION.
16. TO MAINTAIN THE HORIZONTAL AND VERTICAL ALIGNMENT SHOWN ON THE PLANS, PIPE JOINTS MAY BE DEFLECTED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS, UNLESS THE SPECIFICATIONS INDICATE A MORE STRINGENT REQUIREMENT. IF NECESSARY, EITHER TO MAINTAIN THE ALIGNMENT SHOWN OR TO ADJUST THE ALIGNMENT TO MEET ACTUAL FIELD CONDITIONS, ADDITIONAL FITTINGS SHALL BE INSTALLED AS REQUIRED.
17. ALL STATIONING SHOWN ON PLANS IS APPROXIMATE.
18. ALL CONSTRUCTION ACTIVITIES ARE TO BE CONFINED TO THE PUBLIC RIGHT-OF-WAY OR TO THE LIMITS DEPICTED ON THE CONTRACT DRAWINGS.
19. THE WATER MAIN SHALL BE INSTALLED WITH A MINIMUM OF FOUR AND ONE HALF (4.5) FEET OF COVER. ANY DEVIATION FROM THIS WILL REQUIRE AUTHORIZATION FROM THE VILLAGE OF SOUTH BLOOMING GROVE ENGINEER.
20. THE CONTRACTOR SHALL TAKE STEPS NECESSARY TO PRESERVE EXISTING CURB AND MINIMIZE THE LENGTH OF CURBING THAT MUST BE REPLACED.
21. THE CONTRACTOR IS CAUTIONED THAT ALL SANITARY LATERALS AND UTILITY SERVICES HAVE NOT BEEN LOCATED. WHEN THE CONTRACTOR ENCOUNTERS AN OBSTRUCTION AND CANNOT ADJUST THE ALIGNMENT USING ALLOWABLE JOINT DEFLECTION, THE CONTRACTOR SHALL REFER TO THE WATER MAIN DETAIL SHEETS. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE PROMPT REPAIR OF DAMAGED UTILITIES, AND SHALL RESTORE THE SITES AS NEATLY AS POSSIBLE TO THEIR ORIGINAL CONDITION.
22. THE CONTRACTOR SHALL PROTECT ALL STRUCTURES, ROADS, PIPELINES, TREES, SHRUBBERY, GRASS AREAS, ETC. DURING THE PROGRESS OF THE WORK AND SHALL REMOVE DAILY FROM THE SITE ALL DEBRIS AND UNUSED MATERIALS. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL RESTORE THE SITES AS NEATLY AS POSSIBLE TO THEIR ORIGINAL CONDITION.
23. ALL SIDEWALK AREAS SHALL BE PASSABLE AND BROOM SWEEP AT THE END OF EACH WORK DAY.
24. DURING FLUSHING AND PRESSURE TESTING OF THE MAIN, THE VILLAGE OF SOUTH BLOOMING GROVE SHALL OPERATE ALL VALVES.
25. REFER TO DETAIL SHEET FOR STANDARD DETAILS.



- NOTES:
1. ALL FITTINGS TO BE INSULATED AND COMPRESSION TYPE. ALL BURIED INSULATORS AND PIPES MUST BE WRAPPED A MINIMUM OF 36" FROM INSULATOR WITH POLYKEN PRIMER AND #932 HI-TACK JOINT WRAP TAPE OR APPROVED EQUAL.
2. PROVIDE A TYPICAL HORIZONTAL "S" CURVE BETWEEN THE CORPORATION STOP AND CURB STOP.



- NOTES:
TO DETERMINE THRUST AT PRESSURES OTHER THAN 100 PSI. MULTIPLY THE THRUST OBTAINED IN THE TABLE BY THE RATIO OF THE PRESSURE TO 100.

NOM. PIPE DIA. (IN)	DEAD END	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND
3	1,232	1,742	943	481	241
4	1,810	2,559	1,385	706	355
6	3,739	5,288	2,862	1,459	733
8	6,433	9,091	4,923	2,510	1,261
10	9,677	13,685	7,406	3,776	1,897
12	13,685	19,353	10,474	5,340	2,683
14	18,385	26,001	14,072	7,174	3,604
16	23,779	33,628	18,199	9,278	4,661
18	29,865	42,235	22,858	11,653	5,855
20	36,644	51,822	28,046	14,298	7,183
24	52,279	73,934	40,013	20,398	10,249
30	80,425	113,758	61,554	31,380	15,766
36	115,209	162,931	88,177	44,952	22,585
42	155,528	219,950	119,036	60,684	30,489
48	209,683	290,637	155,127	79,083	39,733
54	260,214	367,999	199,160	101,531	51,011
60	298,121	42,606	228,172	116,321	58,442
64	338,707	479,004	259,235	132,157	66,398

$$\text{BEARING AREA (SF)} = \frac{\text{THRUST FORCE AT FITTING (LB.S)}}{\text{BEARING CAPACITY OF UNDISTURBED SOIL (LB.S/S.F)}}$$

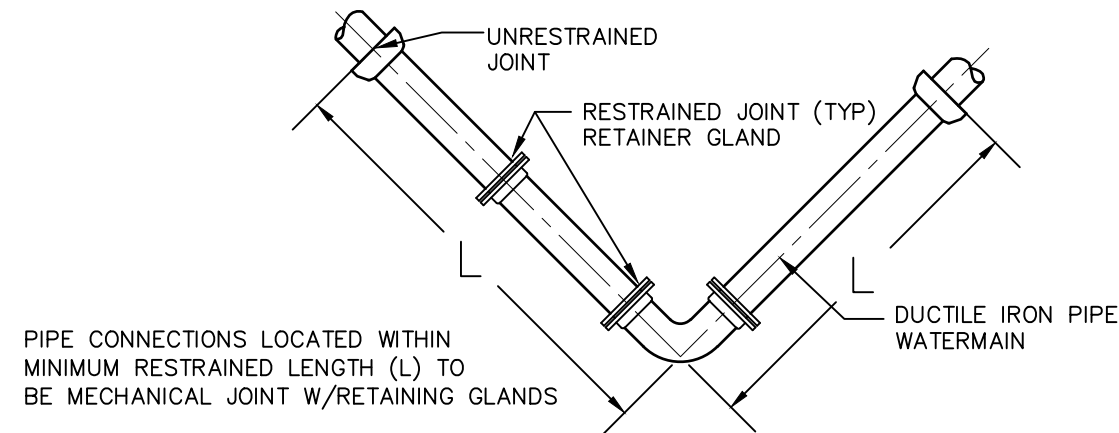
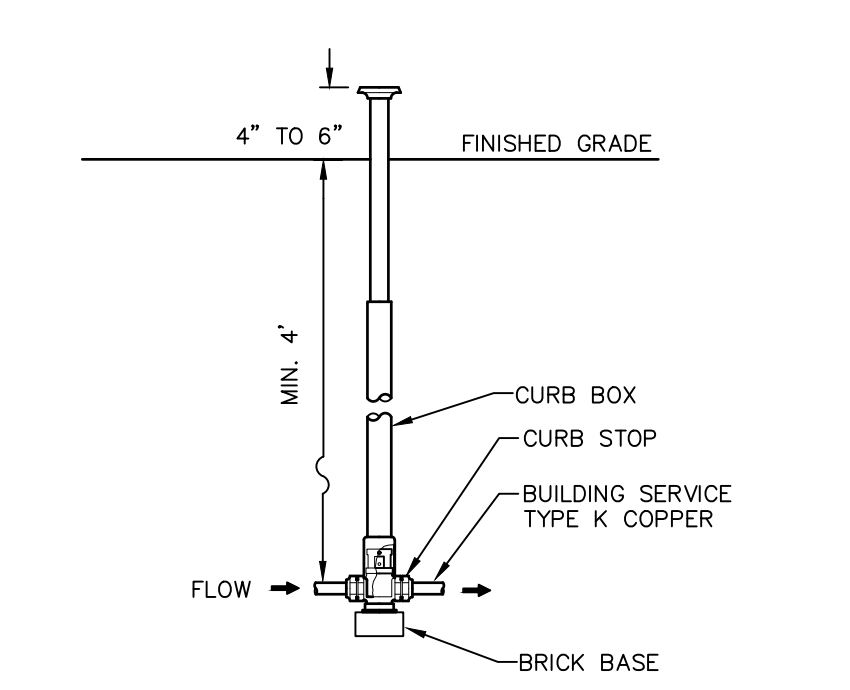
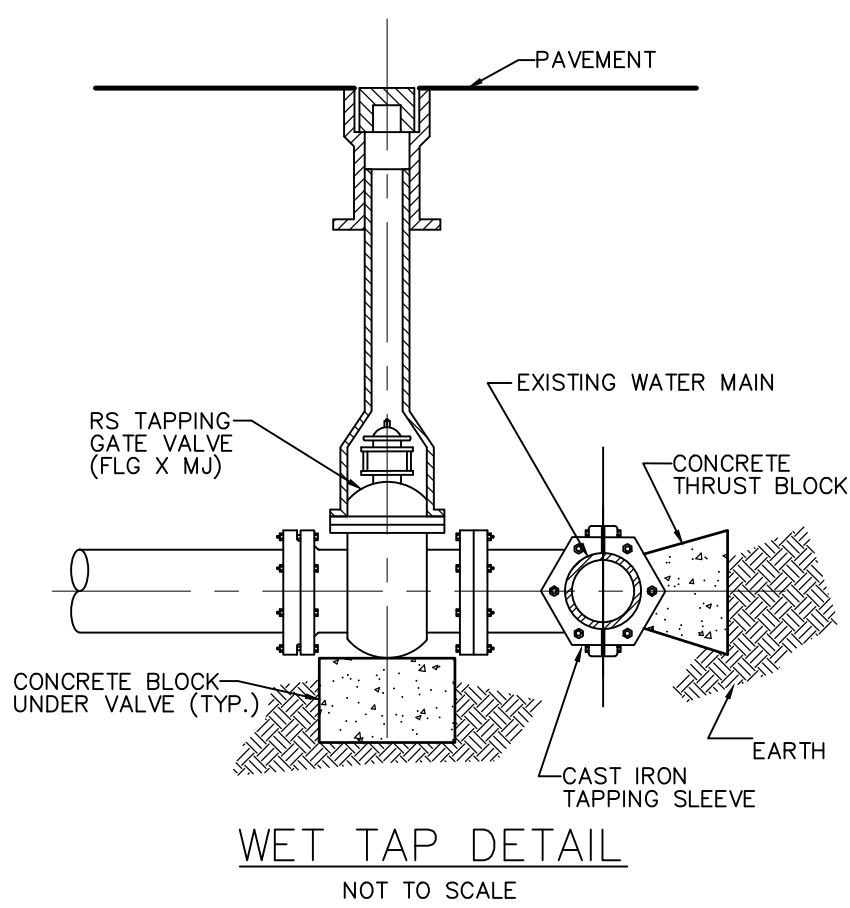
$$\text{GRAVITY BLOCK SIZE (C.F.)} = \frac{\text{THRUST FORCE AT FITTING (LB.S)}}{\text{CONCRETE DENSITY 145 (LB.S/C.F.)}}$$

- NOTES:
1. PLACE 8 MIL. POLYETHYLENE BETWEEN CONCRETE AND FITTING (CONCRETE SHALL NOT INTERFERE WITH JOINT.)
2. MINIMUM CONCRETE THICKNESS SHALL BE 12 INCHES.
3. THE HORIZONTAL DIMENSION (b) OF THE BEARING AREA SHALL BE BETWEEN 1.0 AND 2.0 TIMES THE VERTICAL DIMENSION (h). (h <= b <= 2h)
4. THE VERTICAL DIMENSION (h) OF THE BEARING AREA SHALL BE EQUAL TO ONE-HALF THE TOTAL DEPTH (H) TO THE BOTTOM OF THE THRUST BLOCK BUT NOT LESS THAN THE OUTSIDE DIAMETER (Do) OF THE FITTING (Do < h <= H/2).
5. THRUST BLOCK ORIENTATION SHALL BE SUCH THAT THE CENTER OF FITTING CORRESPONDS WITH THE CENTER OF THE THRUST BLOCK.
6. THE MINIMUM ALLOWABLE ANGLE (EITHER VERTICAL OR HORIZONTAL) SHALL BE 45 DEGREES.

TYPE OF SOIL	ALLOWABLE SOIL BEARING CAPACITY
MUCK, PETE, ETC.	0 LB. / FT. SQ.
SOFT CLAY	500 LB. / FT. SQ.
FINE SAND	1,000 LB. / FT. SQ.
DECOMPOSED GRANITE (D.G.)	1,500 LB. / FT. SQ.
SANDY GRAVEL	2,000 LB. / FT. SQ.
CEMENTED SANDY GRAVEL	4,000 LB. / FT. SQ.
HARD SHALE	5,000 LB. / FT. SQ.
GRANITE	10,000 LB. / FT. SQ.

- NOTES:
* IN MUCK, PEAT OR OTHER INCOMPETENT SOILS, RESISTANCE SHALL BE ACHIEVED BY REMOVAL AND REPLACEMENT WITH BALLAST OF SUFFICIENT STABILITY TO RESIST THE INTENDED THRUSTS. DESIGN OF THRUST RESTRAINT SYSTEMS IN SUCH CASES SHALL BE PREPARED BY A QUALIFIED GEOTECHNICAL ENGINEER AND SHALL BE APPROVED BY THE AGENCY ENGINEER.
** FIRE HYDRANTS THAT DEAD END PIPE RUNS, WILL NEED THRUST BLOCKS. THRUST BLOCKS ARE TO BE DESIGNED BY A NYSPE AND SUBMITTED TO SUEZ UNDER SHOP DRAWING REVIEW PROCESS.

TYPICAL THRUST BLOCK DETAIL
NOT TO SCALE



NOMINAL PIPE SIZE (IN)	BURY DEPTH (FT)	INTERNAL PRESSURE (PSI)	SOIL DESIGNATION	LAYING CONDITION (*)	RESTRAINED LENGTH (FT) = L (**)
6	4.5	150	SAND SILT	5	38 17 7 4 2
8	4.5	150	SAND SILT	5	50 21 16 5 3

- (*) LAYING CONDITION TYPE AS DESCRIBED IN STANDARD ANSI/AWWA C150/A21.50
(**) RESTRAINED LENGTH AS PER "THRUST RESTRAINT DESIGN FOR DUCTILE IRON PIPE", LATEST EDITION, DUCTILE IRON PIPE RESEARCH ASSOCIATION

WATER JOINT RESTRAINT DETAIL
NOT TO SCALE

REV.	BY	DATE	DESCRIPTION

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FIVE LOT SUBDIVISION PREPARED FOR
19-21-23 MANGIN ROAD
VILLAGE OF SOUTH BLOOMING GROVE,
ORANGE COUNTY, NEW YORK

WATER SUPPLY DETAILS

JOB#: 23-020
SCALE: AS NOTED
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CHECKED: MM
SHEET NO. 10 of 11

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