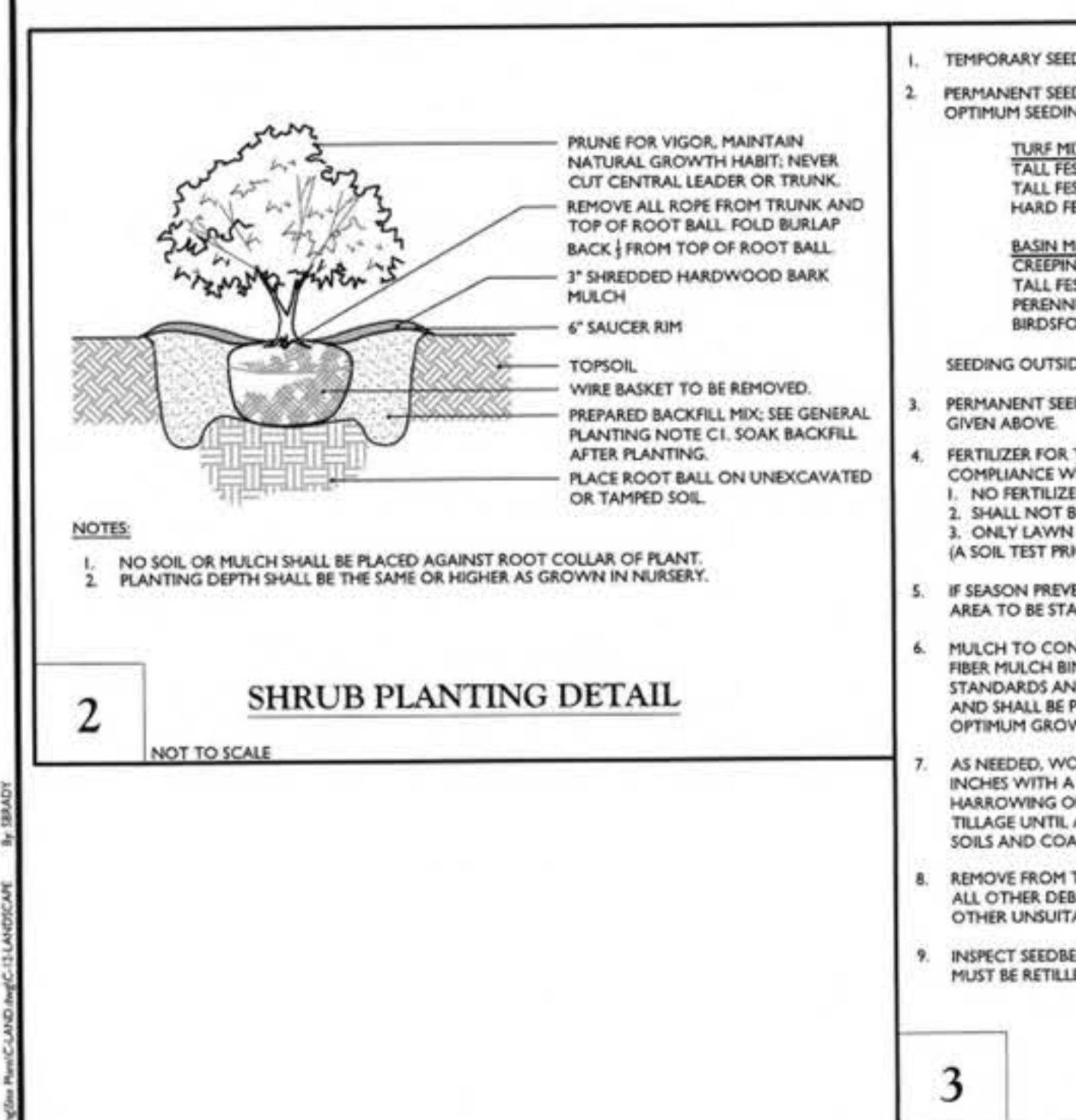
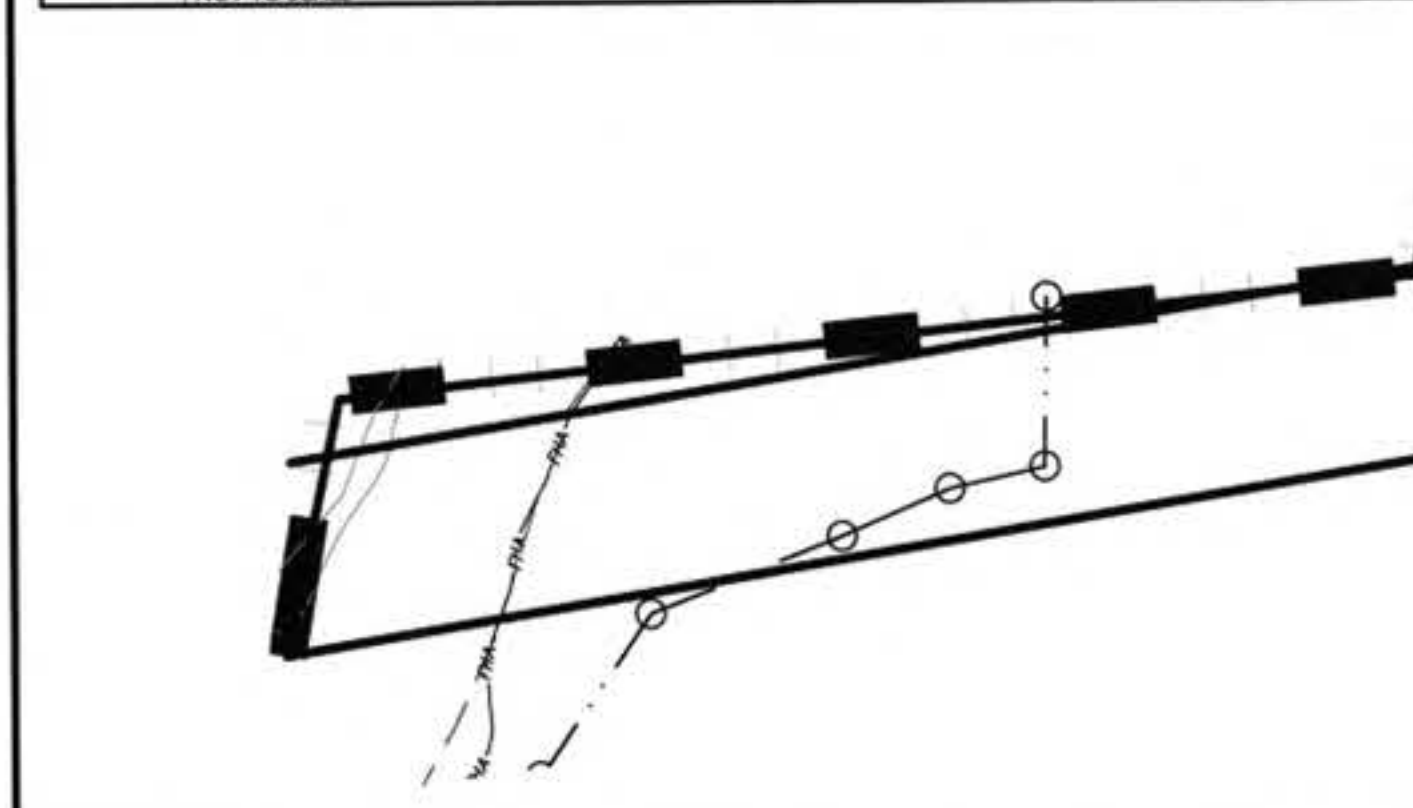
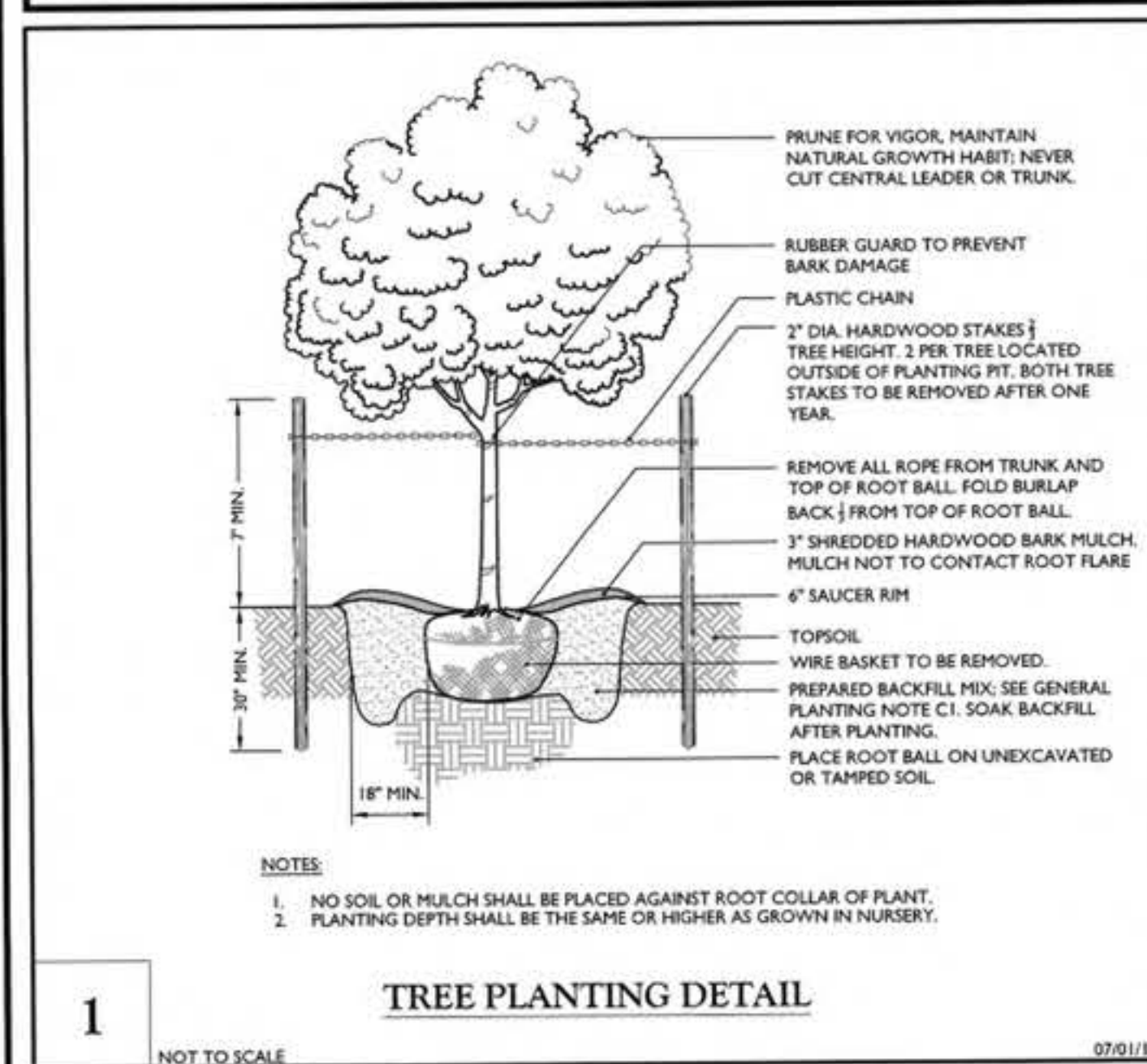


SITE PLANTING SCHEDULE							
KEY	QTY.	BOTANICAL NAME	COMMON NAME	HEIGHT	CALIPER	SPREAD	REMARKS
SHADE/STREET TREES							
AROG	8	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	2'-2-1/2'	B & B		STRAIGHT LEADER/SYM. BRANCHING
GTS	7	GLEDITSIA TRIACANTHOS F. INERMIS 'SKYLINE'	SKYLINE HONEY LOCUST	2'-2-1/2'	B & B		STRAIGHT LEADER/SYM. BRANCHING
QP	15	QUERCUS PALUSTRIS	PIN OAK	2'-2-1/2'	B & B		STRAIGHT LEADER/SYM. BRANCHING
EVERGREEN TREES							
JV	45	JUNIPERUS VIRGINIANA	EASTERN RED CEDAR	6'-7'	CONT.		TYPICAL SPECIES HABIT
PA	25	PICEA ABIES	NORWAY SPRUCE	6'-7'	B & B		DENSE / TYP. SPECIES HABIT
PG	8	PICEA GLAUCA	WHITE SPRUCE	6'-7'	B & B		DENSE / TYP. SPECIES HABIT
PS	17	PRINUS STROBUS	EASTERN WHITE PINE	6'-7'	B & B		DENSE / TYP. SPECIES HABIT
ORNAMENTAL TREES							
BN	1	BETULA NIGRA	RIVER BIRCH	6'-10'	CONT.		MULTI-STEM/TYP. SPECIES HABIT
CVWK	4	CRATAEGUS VIRIDIS 'WINTER KING'	WINTER KING HAWTHORN	1-3/4" - 2"	CONT.		STRAIGHT LEADER/SYM. BRANCHING
SHRUBS							
BHWG	10	BUXUS MICROPHYLLA 'WINTER GEM'	WINTER GEM BOXWOOD	18"-24"	CONT.		TYPICAL SPECIES HABIT
CIB	3	CORNUS SERICEA BAILEYS	BAILEY'S RED TWIG DOGWOOD	24"-30"	CONT.		TYPICAL SPECIES HABIT
FI	5	FORSYTHIA X INTERMEDIA 'LYNWOOD'	LYNWOOD FORSYTHIA	3'-4'	CONT.		TYPICAL SPECIES HABIT
HPL	6	HYDRANGEA PANICULATA 'LIMELIGHT'	LIMELIGHT HYDRANGEA	24"-30"	CONT.		TYPICAL SPECIES HABIT
JCHC	34	JUNIPERUS CHINENSIS 'HETZI COLUMNARIS'	GREEN COLUMNAR JUNIPER	6'-7'	CONT.		TYPICAL SPECIES HABIT
JCSG	17	JUNIPERUS CHINENSIS 'SEA GREEN'	SEA GREEN JUNIPER	24"-30"	CONT.		TYPICAL SPECIES HABIT
JHSH	22	JUNIPERUS HORIZONTALIS 'BAR HARBOR'	BAR HARBOR JUNIPER	18"-24"	CONT.		TYPICAL SPECIES HABIT
SBAW	11	SPIRAEA X BUMALDA 'ANTHONY WATERER'	ANTHONY WATERER SPIREA	18"-24"	CONT.		TYPICAL SPECIES HABIT
SG	16	SPIRAEA JAPONICA 'GOLD MOUND'	GOLD MOUND SPIREA	18"-24"	CONT.		TYPICAL SPECIES HABIT
PERENNIALS							
HSD	40	HEMEROCALLIS 'STELLA DE ORO'	STELLA DE ORO DAYLILY		1 GAL		CLUMPS, 24" O.C.



PLAN NOTE:

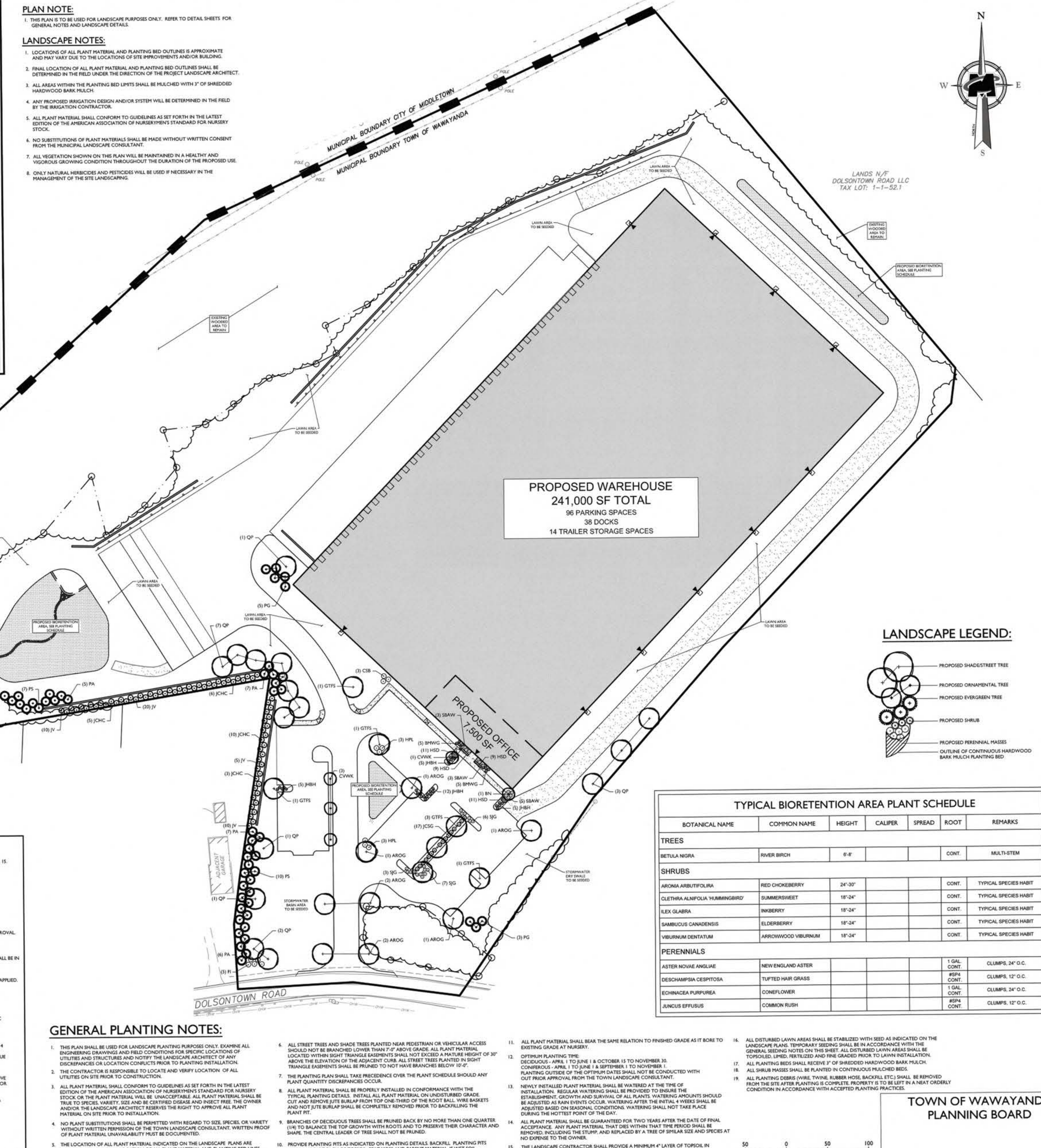
- THIS PLAN IS TO BE USED FOR LANDSCAPE PURPOSES ONLY. REFER TO DETAIL SHEETS FOR GENERAL NOTES AND LANDSCAPE DETAILS.

LANDSCAPE NOTES:

- LOCATIONS OF ALL PLANT MATERIAL AND PLANTING BED OUTLINES IS APPROXIMATE AND MAY VARY DUE TO THE LOCATIONS OF SITE IMPROVEMENTS AND/OR BUILDINGS.
- FINAL LOCATION OF ALL PLANT MATERIAL AND PLANTING BED OUTLINES SHALL BE DETERMINED IN THE FIELD UNDER THE DIRECTION OF THE PROJECT LANDSCAPE ARCHITECT.
- ALL AREAS WITHIN THE PLANTING BED LIMITS SHALL BE MULCHED WITH 3" OF SHREDDED HARDWOOD BARK MULCH.
- ANY PROPOSED IRRIGATION DESIGN AND/OR SYSTEM WILL BE DETERMINED IN THE FIELD BY THE IRRIGATION CONTRACTOR.
- ALL PLANT MATERIAL SHALL CONFORM TO GUIDELINES AS SET FORTH IN THE LATEST EDITION OF THE AMERICAN ASSOCIATION OF NURSERYMEN'S STANDARD FOR NURSERY STOCK.
- NO SUBSTITUTIONS OF PLANT MATERIALS SHALL BE MADE WITHOUT WRITTEN CONSENT FROM THE MUNICIPAL LANDSCAPE CONSULTANT.
- ALL VEGETATION SHOWN ON THIS PLAN WILL BE MAINTAINED IN A HEALTHY AND VIGOROUS GROWING CONDITION THROUGHOUT THE DURATION OF THE PROPOSED USE.
- ONLY NATURAL HERBICIDES AND PESTICIDES WILL BE USED IF NECESSARY IN THE MANAGEMENT OF THE SITE LANDSCAPING.

GENERAL PLANTING NOTES:

- THIS PLAN SHALL BE USED FOR LANDSCAPE PLANTING PURPOSES ONLY. EXAMINE ALL ENGINEERING DRAWINGS AND FIELD CONDITIONS FOR SPECIFIC LOCATIONS OF UTILITIES AND STRUCTURES AND NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES OR LOCATION CONFLICTS PRIOR TO PLANTING INSTALLATION.
- THE CONTRACTOR IS RESPONSIBLE TO LOCATE AND VERIFY LOCATION OF ALL UTILITIES ON SITE PRIOR TO CONSTRUCTION.
- ALL PLANT MATERIAL SHALL CONFORM TO GUIDELINES AS SET FORTH IN THE LATEST EDITION OF THE AMERICAN ASSOCIATION OF NURSERYMEN'S STANDARD FOR NURSERY STOCK OR THE PLANT MATERIAL WILL BE UNACCEPTABLE. ALL PLANT MATERIAL SHALL BE TRUE TO SPECIES, VARIETY, SIZE AND BE CERTIFIED DISEASE AND INSECT FREE. THE OWNER AND/OR THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO APPROVE ALL PLANT MATERIAL ON SITE PRIOR TO INSTALLATION.
- NO PLANT SUBSTITUTIONS SHALL BE PERMITTED WITH REGARD TO SIZE, SPECIES, OR VARIETY WITHOUT WRITTEN PERMISSION OF THE TOWN LANDSCAPE CONSULTANT. WRITTEN PERMISSION OF PLANT MATERIAL UNAVAILABILITY MUST BE DOCUMENTED.
- THE LOCATION OF ALL PLANT MATERIAL INDICATED ON THE LANDSCAPE PLANS ARE APPROXIMATE. THE FINAL LOCATION OF ALL PLANT MATERIAL AND PLANTING BED LINES SHALL BE DETERMINED IN THE FIELD UNDER THE DIRECTION OF THE LANDSCAPE ARCHITECT.
- ALL STREET TREES AND SHADE TREES PLANTED NEAR PEDESTRIAN OR VEHICULAR ACCESS SHOULD NOT BE BRANCHED LOWER THAN 7'-0" ABOVE GRADE. ALL PLANT MATERIAL LOCATED WITHIN RIGHT TRIANGLE BASINMENTS SHALL NOT EXCEED A MATURE HEIGHT OF 30' ABOVE THE ELEVATION OF THE ADJACENT CURB. ALL STREET TREES PLANTED IN RIGHT TRIANGLE BASINMENTS SHALL BE PRUNED TO NOT HAVE BRANCHES BELOW 12'-0".
- THE PLANTING PLAN SHALL TAKE PRECEDENCE OVER THE PLANT SCHEDULE SHOULD ANY PLANT QUANTITY DISCREPANCIES OCCUR.
- ALL PLANT MATERIAL SHALL BE PROPERLY INSTALLED IN CONFORMANCE WITH THE TYPICAL PLANTING DETAILS. INSTALL ALL PLANT MATERIAL ON UNDISTURBED GRADE CUT AND REMOVE SITE BURLAP FROM TOP ONE-THIRD OF THE ROOT BALL WIRE BASKETS AND NOT SITE BURLAP SHALL BE COMPLETELY REMOVED PRIOR TO BACKFILLING THE PLANT PIT.
- BRANCHES OF DECIDUOUS TREES SHALL BE PRUNED BACK BY NO MORE THAN ONE QUARTER (1/4) TO BALANCE THE TOP GROWTH WITH ROOTS AND TO PRESERVE THEIR CHARACTER AND SHAPE. THE CENTRAL LEADER OF TREE SHALL NOT BE PRUNED.
- PROVIDE PLANTING PITS AS INDICATED ON PLANTING DETAILS. BACKFILL PLANTING PITS WITH ONE PART EACH OF TOPSOIL, PEAT MOSS AND PARENT MATERIAL. IF WET SOIL CONDITIONS EXIST THEN PLANTING PITS SHALL BE EXCAVATED AN ADDITIONAL 12" AND FILLED WITH CRUSHED STONE OR UNFILL FREE DRAINING.
- ALL PLANT MATERIAL SHALL BEAR THE SAME RELATION TO FINISHED GRADE AS IT BORE TO EXISTING GRADE AT NURSERY.
- OPTIMUM PLANTING TIME: DECIDUOUS: APRIL 1 TO JUNE 1 & SEPTEMBER 1 TO NOVEMBER 1; CONIFEROUS: APRIL 1 TO JUNE 1 & SEPTEMBER 1 TO NOVEMBER 1. PLANTING OUTSIDE OF THE OPTIMUM DATES SHALL NOT BE CONDUCTED WITHOUT PRIOR APPROVAL FROM THE TOWN LANDSCAPE CONSULTANT.
- NEWLY INSTALLED PLANT MATERIAL SHALL BE WATERED AT THE TIME OF INSTALLATION. REGULAR WATERING SHALL BE PROVIDED TO ENSURE THE ESTABLISHMENT, GROWTH AND SURVIVAL OF ALL PLANTS. WATERING AMOUNTS SHOULD BE ADJUSTED AS RAIN EVENTS OCCUR. WATERING AFTER THE INITIAL 4 WEEKS SHALL BE ADJUSTED BASED ON SEASONAL CONDITIONS. WATERING SHALL NOT TAKE PLACE DURING THE HOTTEST PORTION OF THE DAY.
- ALL PLANT MATERIAL SHALL BE GUARANTEED FOR TWO YEARS AFTER THE DATE OF FINAL ACCEPTANCE. ANY PLANT MATERIAL THAT DIES WITHIN THAT TIME PERIOD SHALL BE REMOVED, INCLUDING THE STUMP, AND REPLACED BY A TREE OF SIMILAR SIZE AND SPECIES AT NO EXPENSE TO THE OWNER.
- THE LANDSCAPE CONTRACTOR SHALL PROVIDE A MINIMUM 4" LAYER OF TOPSOIL IN ALL LAWN AREAS AND A MINIMUM OF 12" OF TOPSOIL IN ALL PLANTING AREAS. A FULL SOIL ANALYSIS IS RECOMMENDED AFTER CONSTRUCTION AND PRIOR TO PLANTING TO DETERMINE THE EXTENT OF SOIL AMENDMENT REQUIRED. SOIL PH SHOULD BE 5.5-6.5.
- ALL DISTURBED LAWN AREAS SHALL BE STABILIZED WITH SEED AS INDICATED ON THE LANDSCAPE PLANS. TEMPORARY SEEDING SHALL BE IN ACCORDANCE WITH THE GENERAL SEEDING NOTES ON THIS SHEET. ALL DISTURBED LAWN AREAS SHALL BE TOPSOILED, LIMED, FERTILIZED AND FINE GRADED PRIOR TO LAWN INSTALLATION.
- ALL PLANTING BEDS SHALL RECEIVE 3" OF SHREDDED HARDWOOD BARK MULCH.
- ALL SHRUB MASSES SHALL BE PLANTED IN CONTINUOUS MULCHED BEDS.
- ALL PLANTING DEBRIS (WIRE, TWINE, RUBBER HOSE, BACKFILL ETC.) SHALL BE REMOVED FROM THE SITE AFTER PLANTING IS COMPLETE. PROPERTY IS TO BE LEFT IN A NEAT ORDERLY CONDITION IN ACCORDANCE WITH ACCEPTED PLANTING PRACTICES.



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JUSTIN E. DATES
NEW YORK REGISTERED LANDSCAPE ARCHITECT - LICENSE NUMBER 001194

SITE PLAN
FOR
RDM GROUP
1081 DOLSONTOWN ROAD

TAX LOT: 6-1-1

TOWN OF WAWAYANDA
ORANGE COUNTY
NEW YORK STATE

NEW WINDSOR OFFICE
353 Hudson Valley Avenue
Suite 101
New Windsor, NY 12553
Phone: 845.544.4495
Fax: 845.587.1023

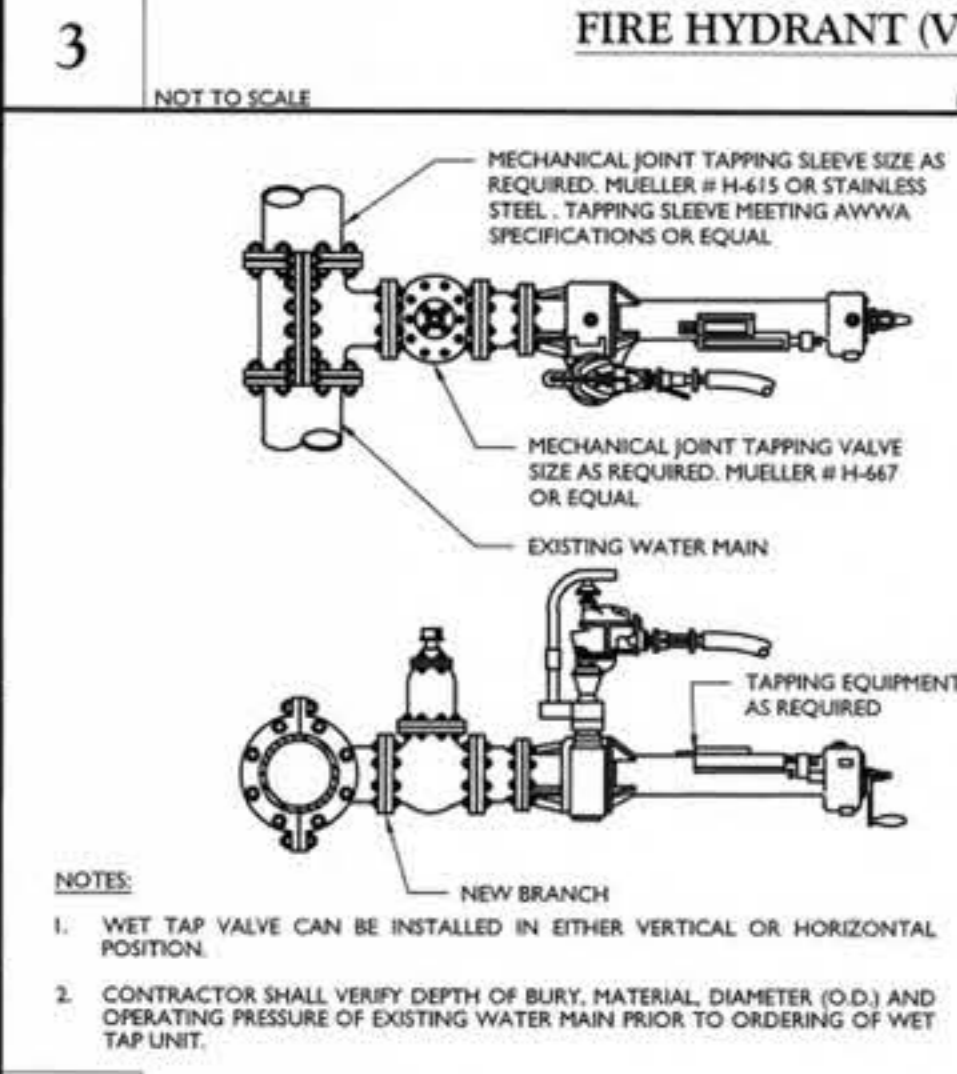
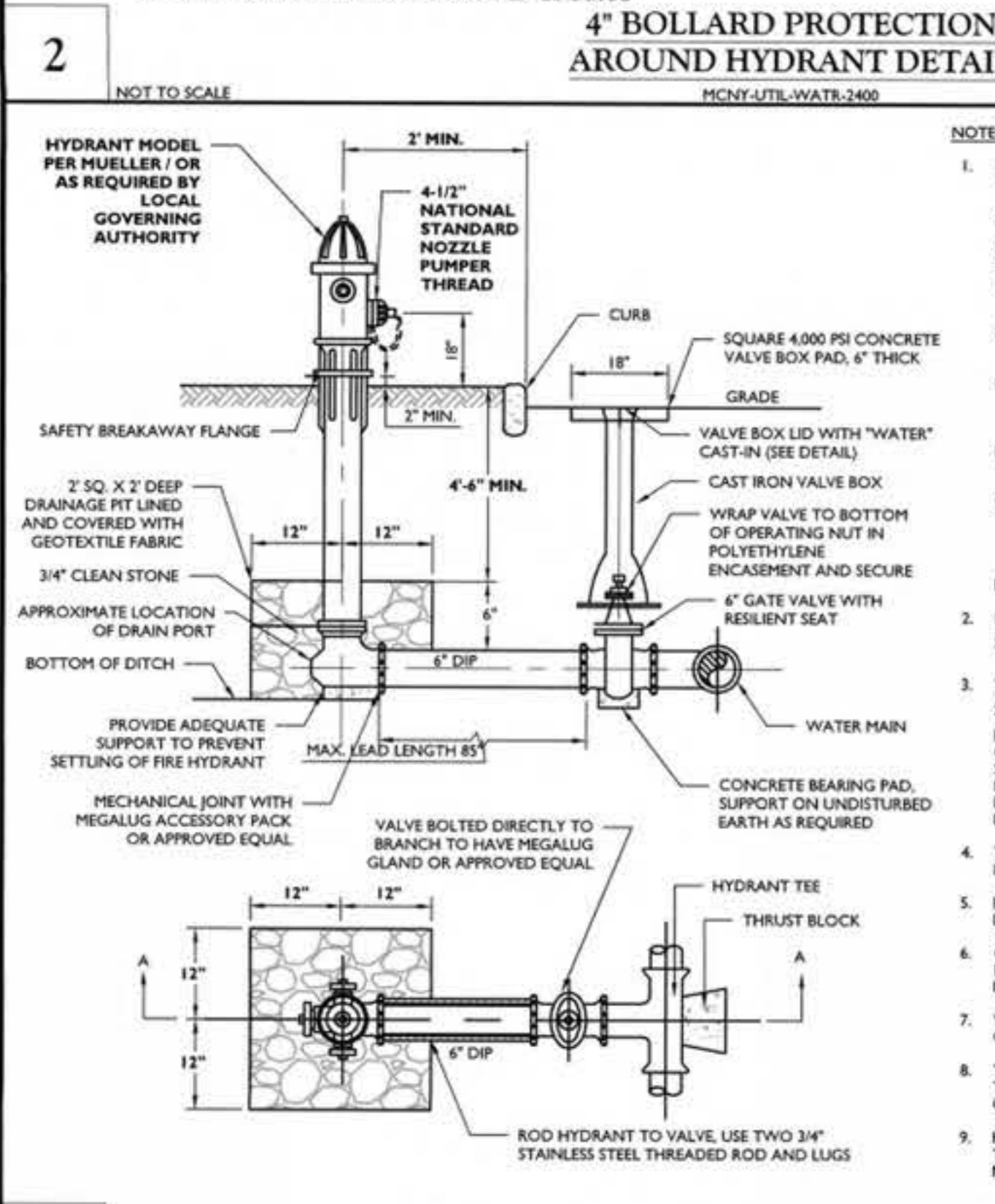
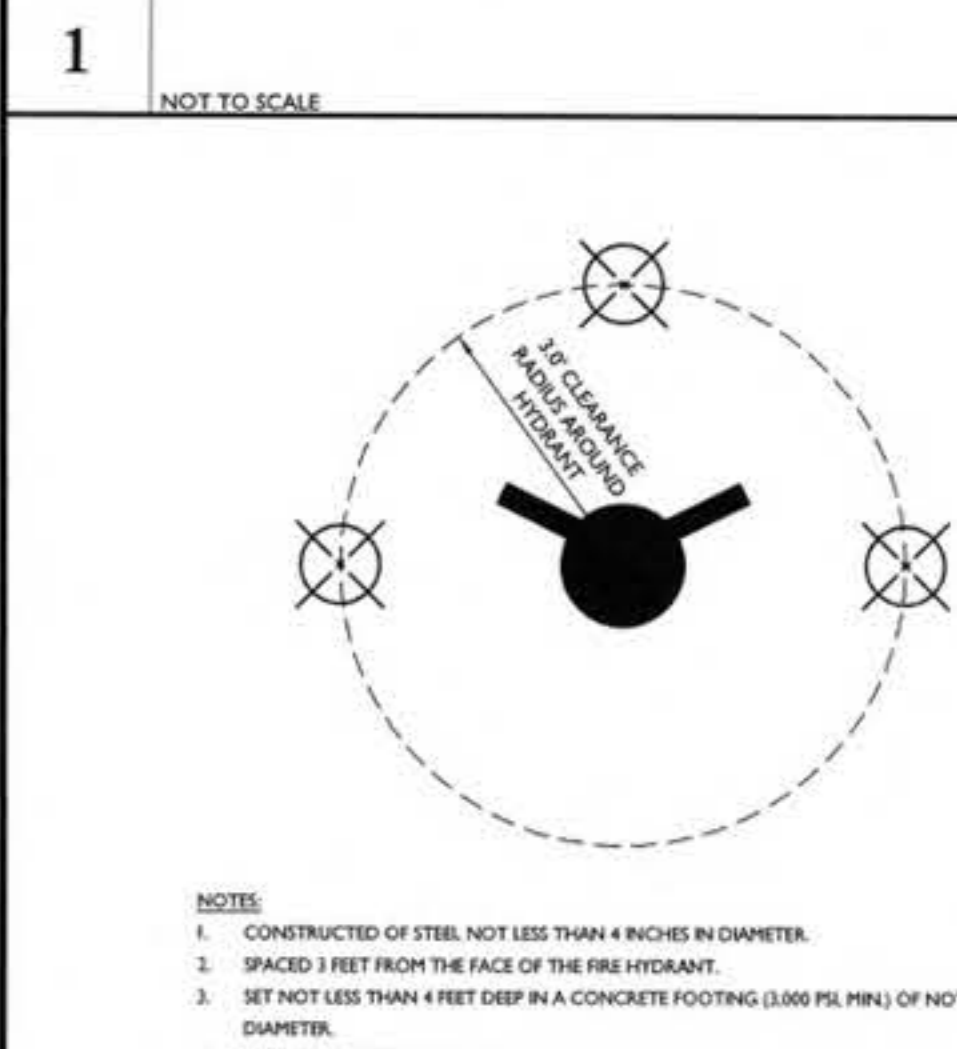
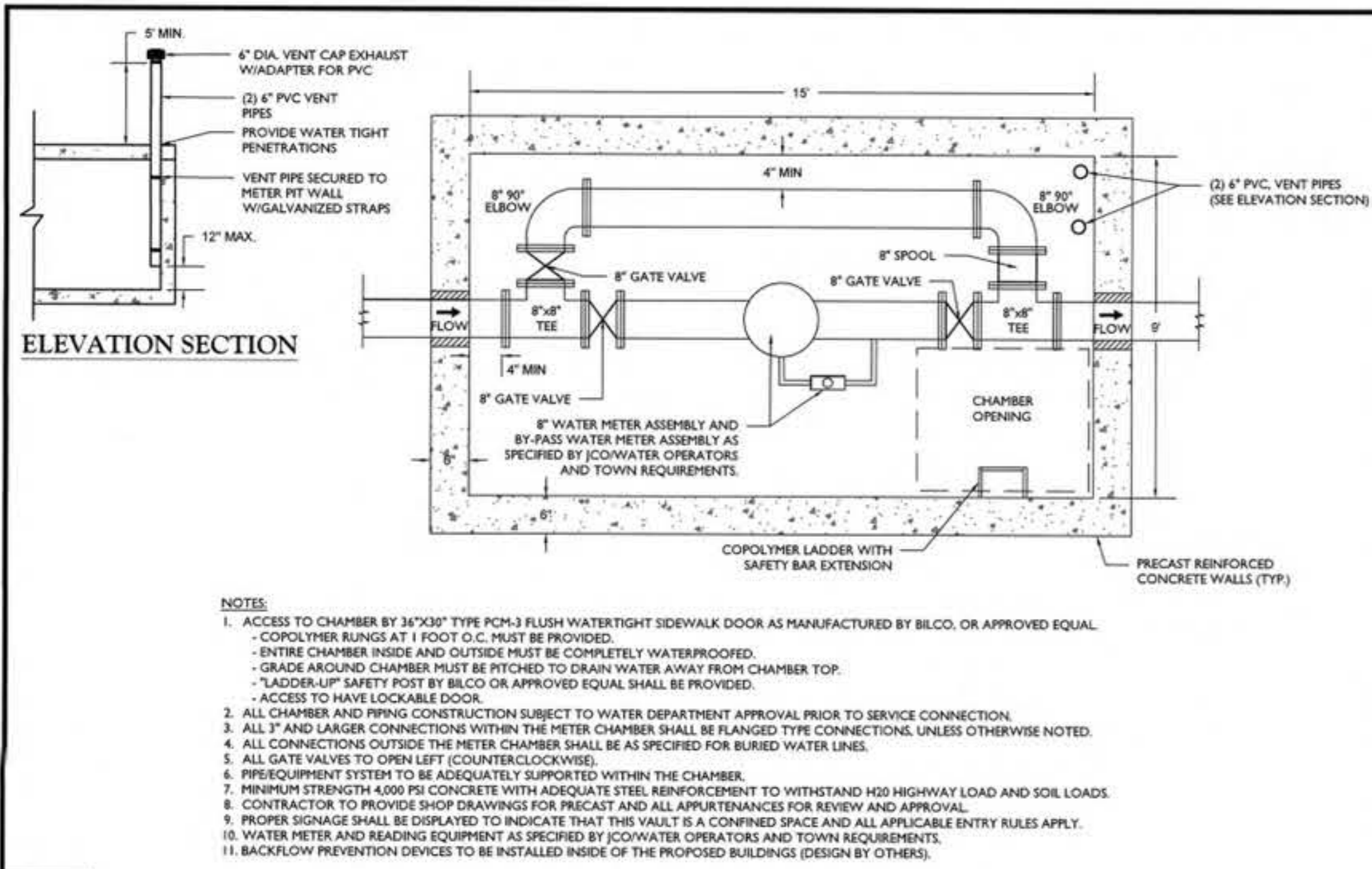
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PROJECT NUMBER: 200005064 DRAWING NAME: CLAND

TOWN OF WAWAYANDA
PLANNING BOARD

LANDSCAPE PLAN

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NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



JOINT RESTRAINT SCHEDULE DETAIL

MOJ: 03/11/20 07/01/19

PIPE SIZE IN INCHES	NUMBER AND SIZE OF RODS REQUIRED AND PIPE LENGTH IN FEET TO BE RESTRAINED								
	90° BEND OR DEAD END PLUG		45° BEND		22 1/2° BEND				
No.	SIZE	L ¹	No.	SIZE	L ¹	No.	SIZE	L ¹	
4	2	3/4"	20'	2	3/4"	10'	2	3/4"	5'
6	2	3/4"	40'	2	3/4"	10'	2	3/4"	5'
8	4	2	3/4"	30'	2	3/4"	15'	2	3/4"
10	4	2	3/4"	40'	2	3/4"	20'	2	3/4"
12	4	3/4"	30'	2	3/4"	20'	2	3/4"	5'
14	4	1"	40'	2	3/4"	25'	2	3/4"	5'
16	4	1"	60'	2	3/4"	25'	2	3/4"	5'

L¹ = LENGTH OF PIPE TO BE RESTRAINED IS FOR EACH SIDE OF BEND

NOTES:

- USE OF MECHANICAL JOINT RESTRAINER GLANDS SHOULD PROVIDE A THRUST RESTRAINT SYSTEM EQUIVALENT TO THAT LISTED IN THE TABLE FOR CLAMPS AND RODS.
- LENGTHS ARE BASED ON THE FOLLOWING CRITERIA: 150 PSI MAXIMUM PRESSURE AND 4" OF COVER. TABLE IS FOR USE WITH CAST IRON PIPE OR DUCTILE IRON PIPE ONLY. IF TEST CONDITIONS ARE MORE SEVERE OR LARGER PIPES ARE PROPOSED, THEN SPECIAL COMPUTATIONS MUST BE PROVIDED BY LICENSED PROFESSIONAL ENGINEER.

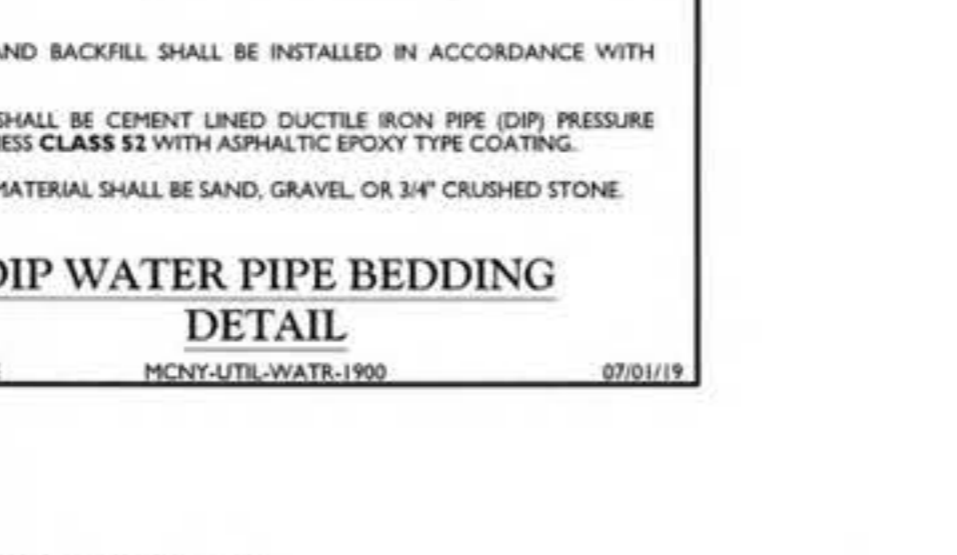
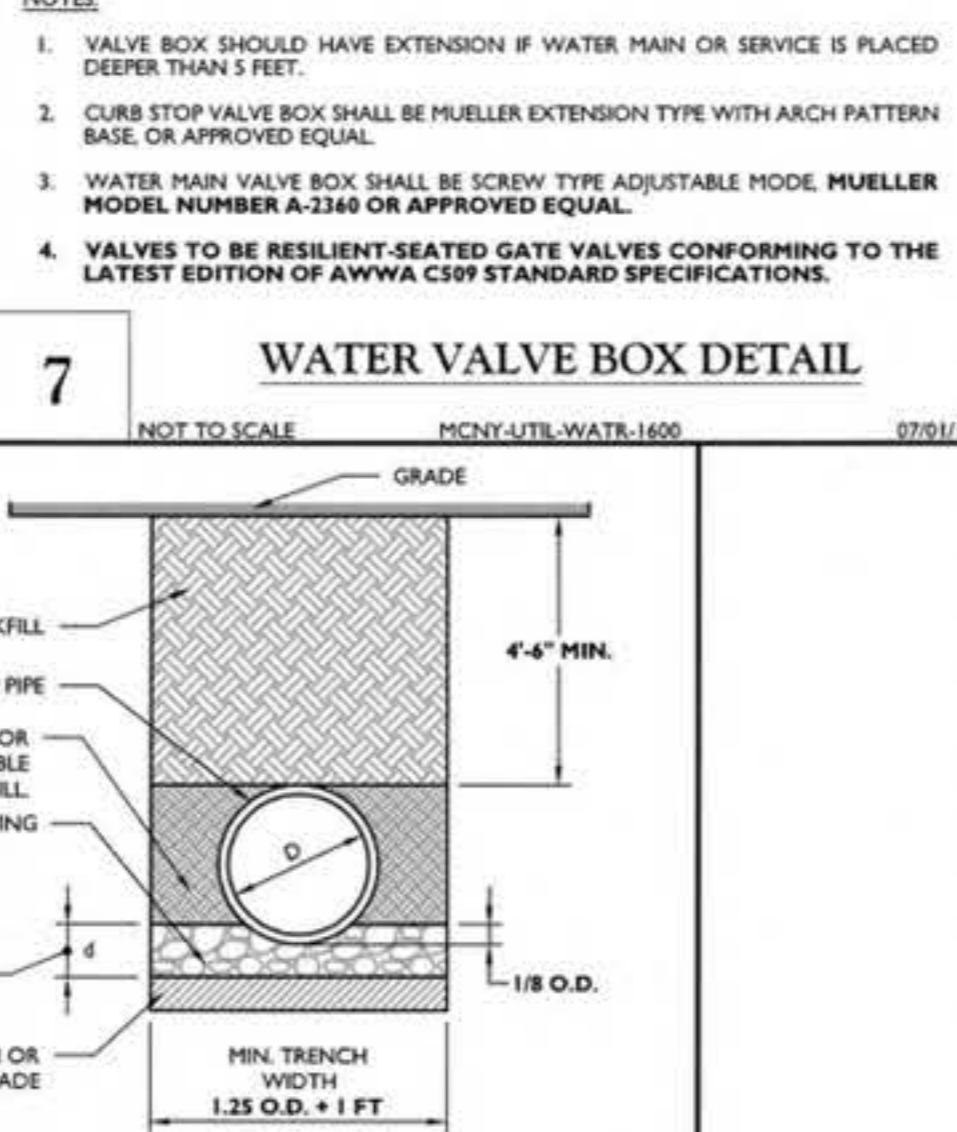
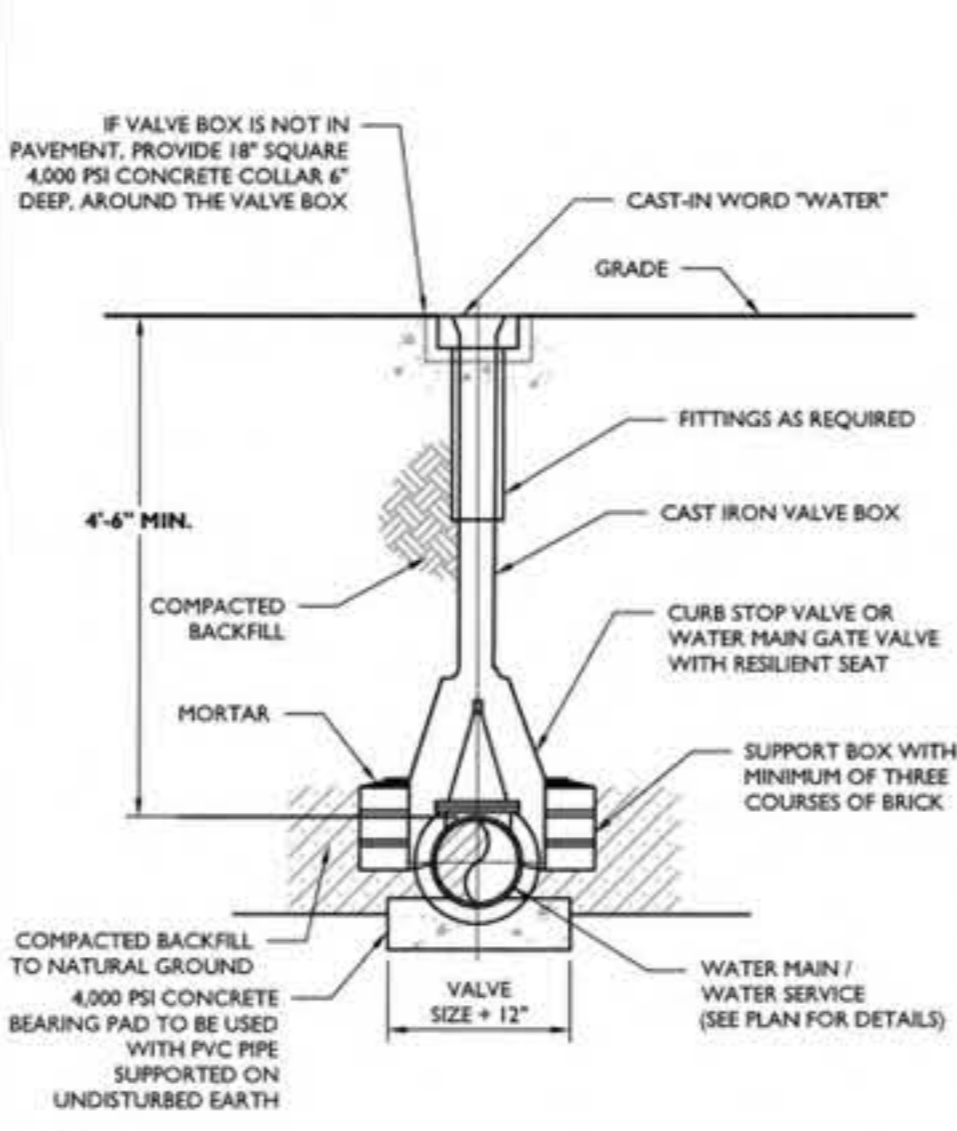
THRUST BLOCKS DETAIL

MOJ: 03/11/20 07/01/19

MINIMUM SIZE OF CONCRETE THRUST BLOCKS	
PIPE SIZE	MINIMUM SIZE
4"	2'-0"
6"	2'-6"
8"	3'-0"
10"	3'-6"
12"	4'-0"
14"	4'-6"
16"	5'-0"
18"	5'-6"
20"	6'-0"
22"	6'-6"
24"	7'-0"
26"	7'-6"
28"	8'-0"
30"	8'-6"
32"	9'-0"
34"	9'-6"
36"	10'-0"
38"	10'-6"
40"	11'-0"
42"	11'-6"
44"	12'-0"
46"	12'-6"
48"	13'-0"
50"	13'-6"
52"	14'-0"
54"	14'-6"
56"	15'-0"
58"	15'-6"
60"	16'-0"
62"	16'-6"
64"	17'-0"
66"	17'-6"
68"	18'-0"
70"	18'-6"
72"	19'-0"
74"	19'-6"
76"	20'-0"
78"	20'-6"
80"	21'-0"
82"	21'-6"
84"	22'-0"
86"	22'-6"
88"	23'-0"
90"	23'-6"
92"	24'-0"
94"	24'-6"
96"	25'-0"
98"	25'-6"
100"	26'-0"

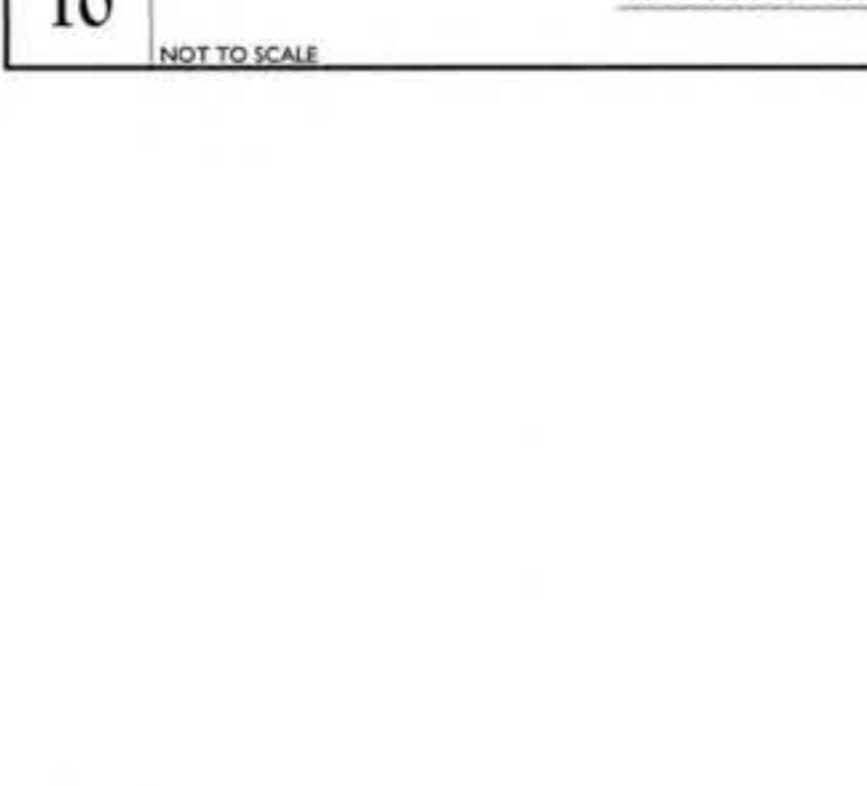
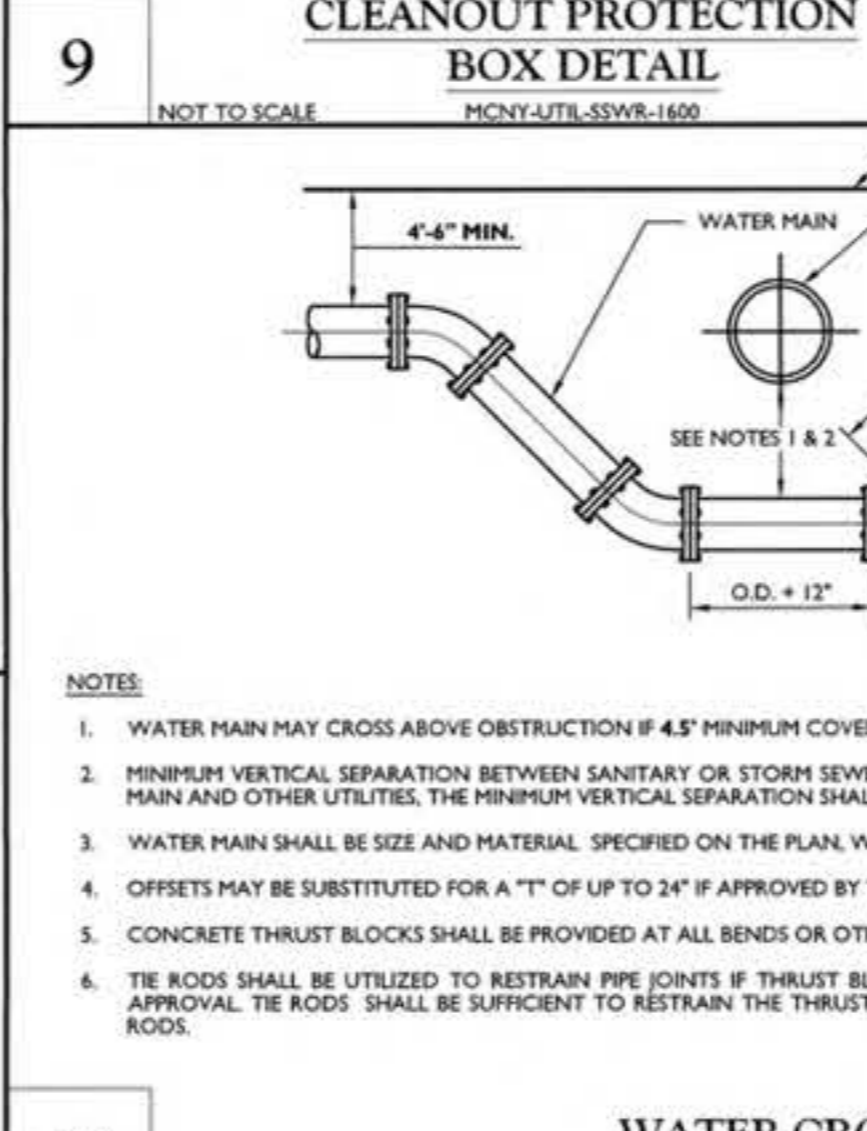
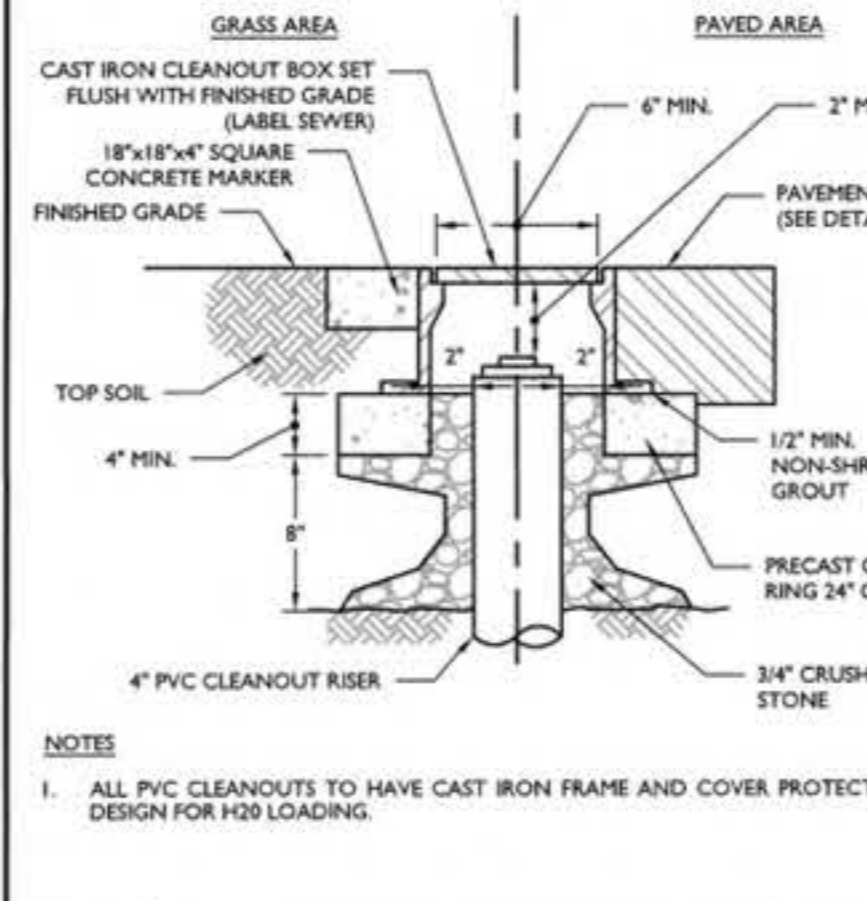
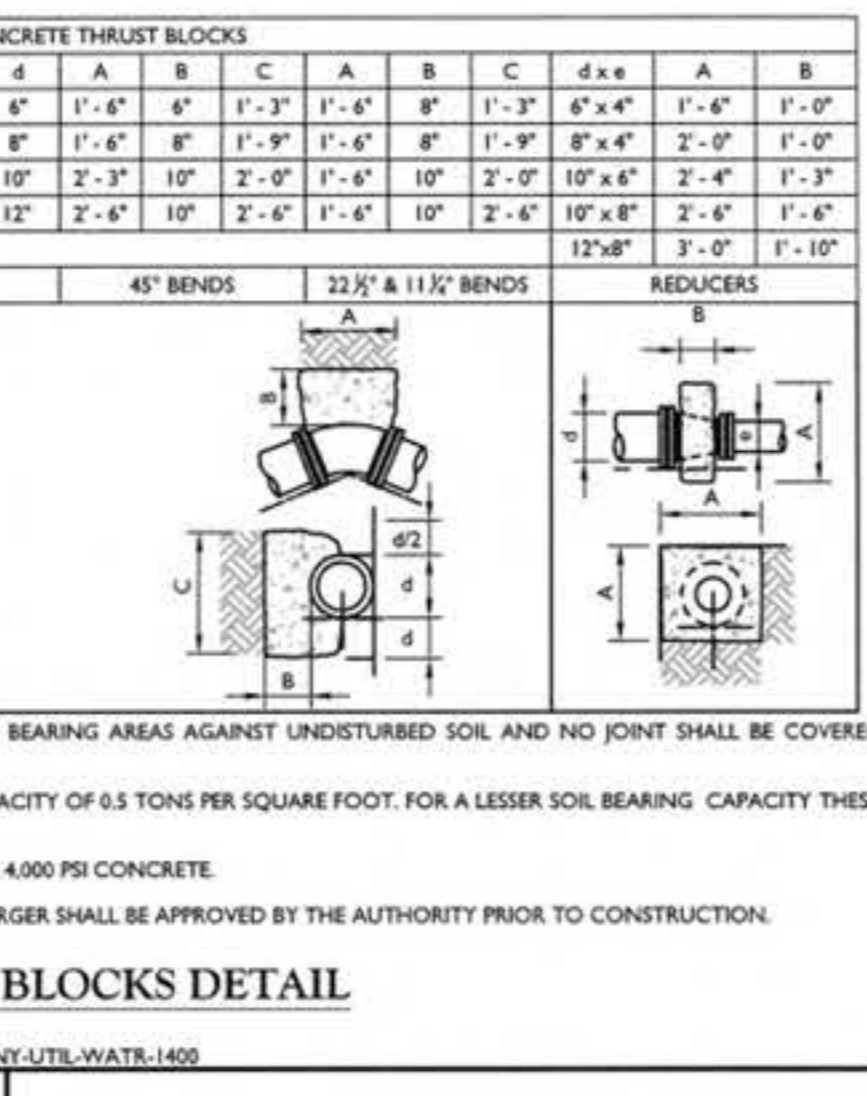
NOTES:

- ALL HORIZONTAL BENDS SHALL HAVE CONCRETE THRUST BLOCKS WITH MINIMUM BEARING AREAS AGAINST UNDISTURBED SOIL AND NO JOINT SHALL BE COVERED WITH CONCRETE.
- BEARING AREAS ARE BASED UPON UNDISTURBED SOIL WITH A MINIMUM BEARING CAPACITY OF 0.5 TONS PER SQUARE FOOT. FOR A LESSER SOIL BEARING CAPACITY THESE AREAS SHALL BE INCREASED ACCORDINGLY.
- THRUST BLOCKS SHALL BE POURED DIRECTLY AGAINST TRENCH WALLS AND SHALL BE 4000 PSI CONCRETE.
- DETAILS FOR SUPPORTS AND BRACING FOR VERTICAL BENDS FOR 12" DIAMETER OR LARGER SHALL BE APPROVED BY THE AUTHORITY PRIOR TO CONSTRUCTION.



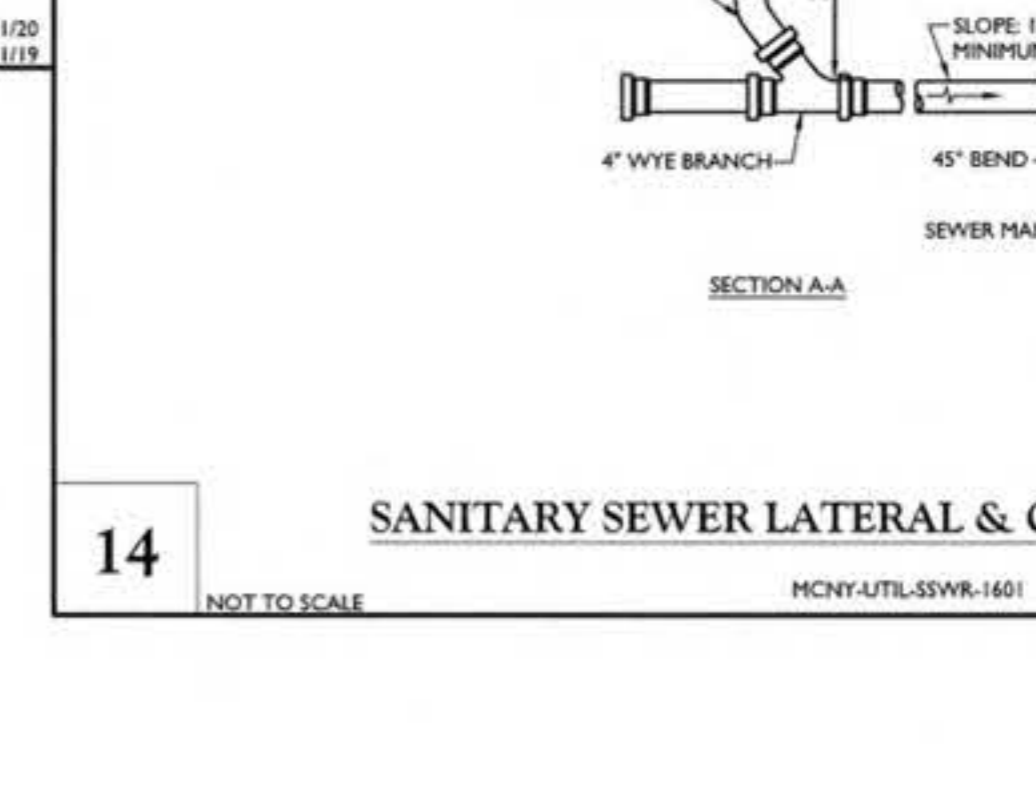
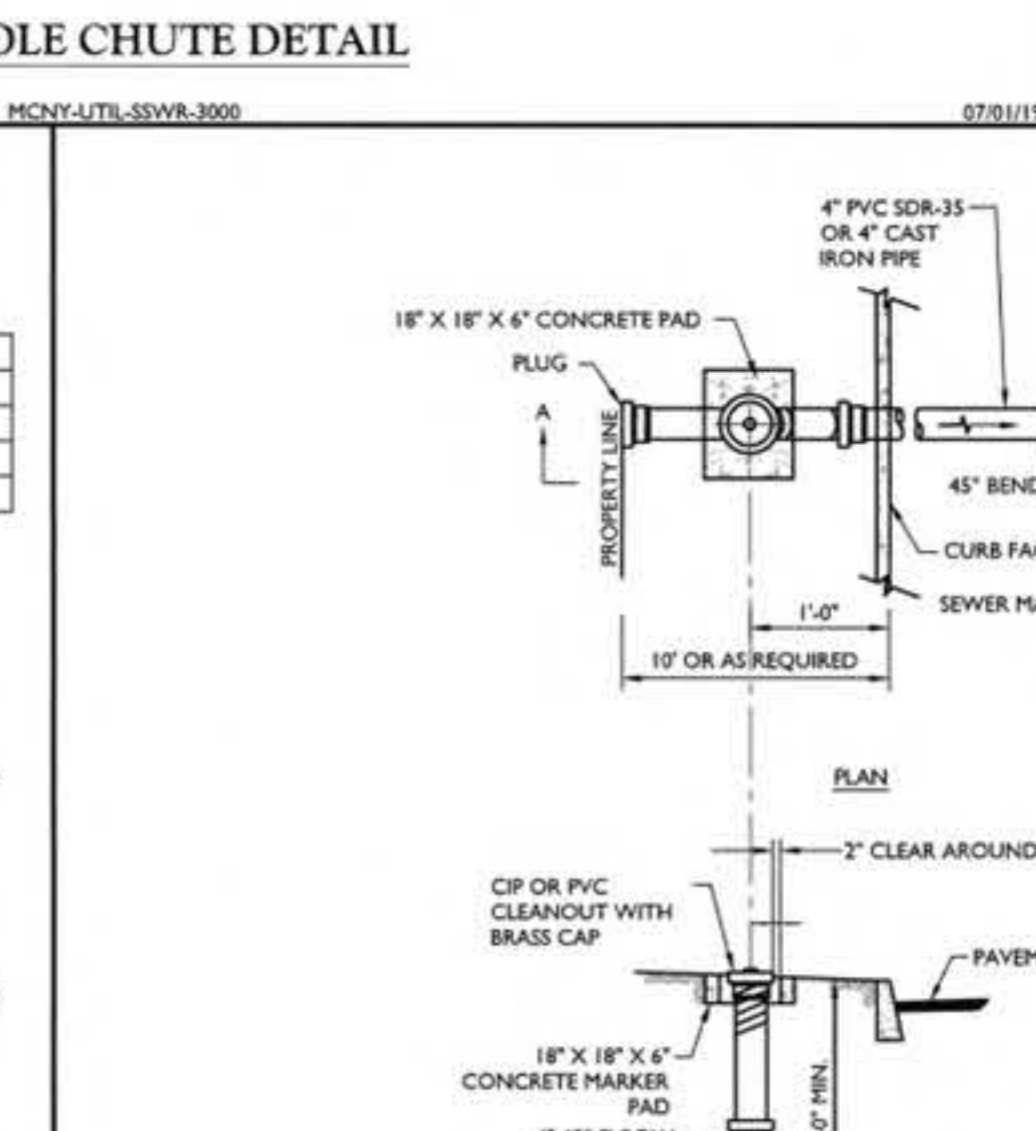
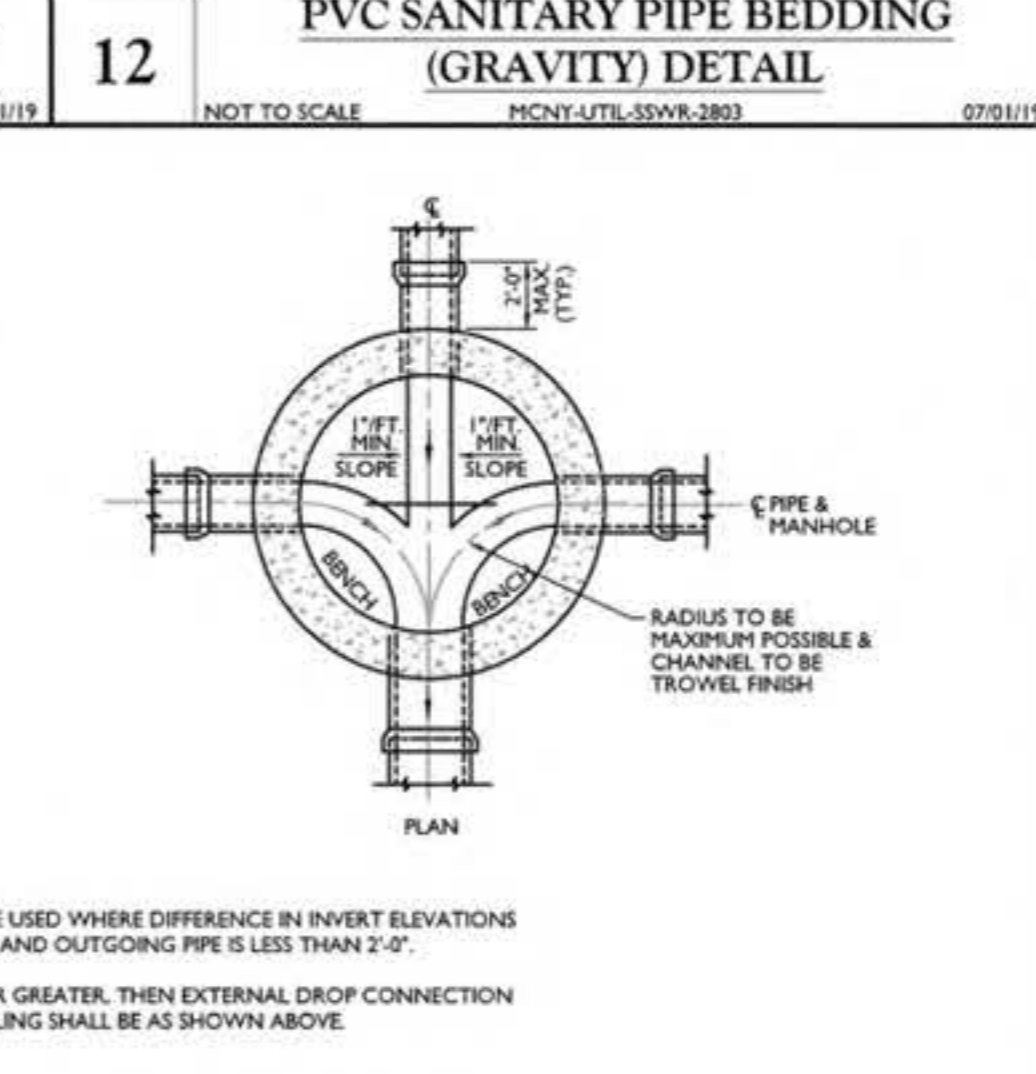
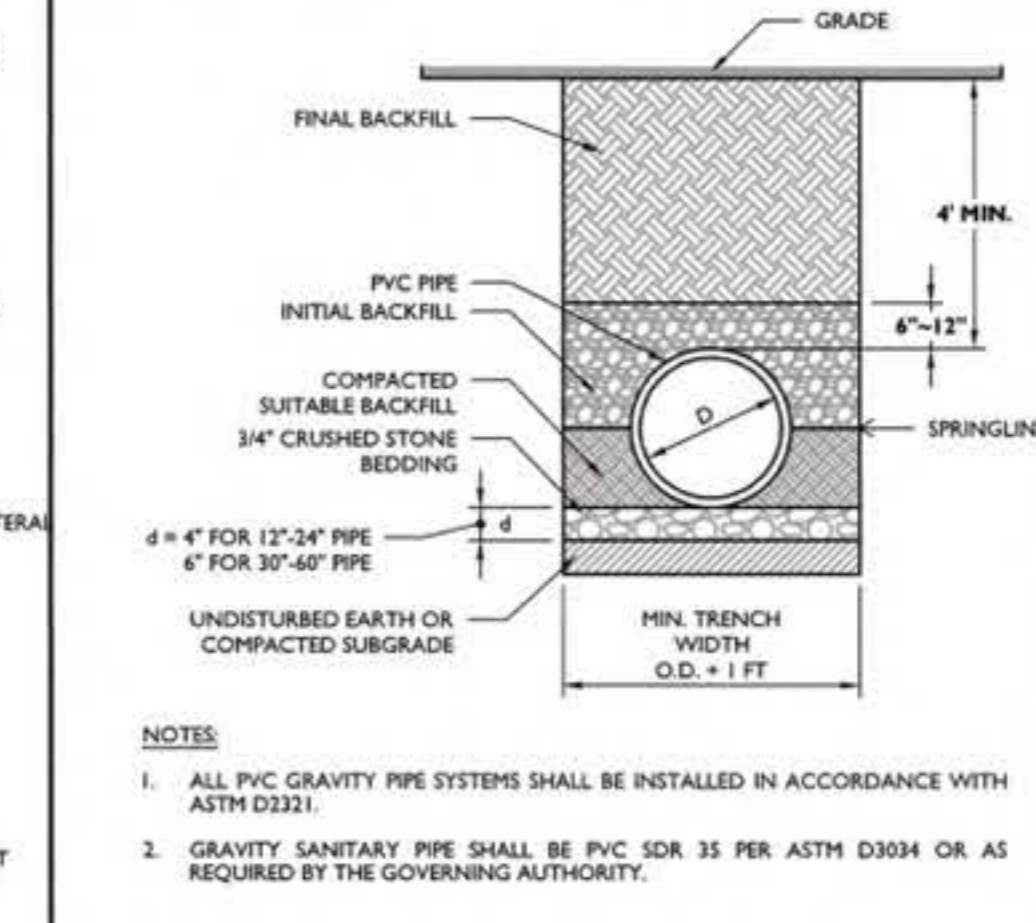
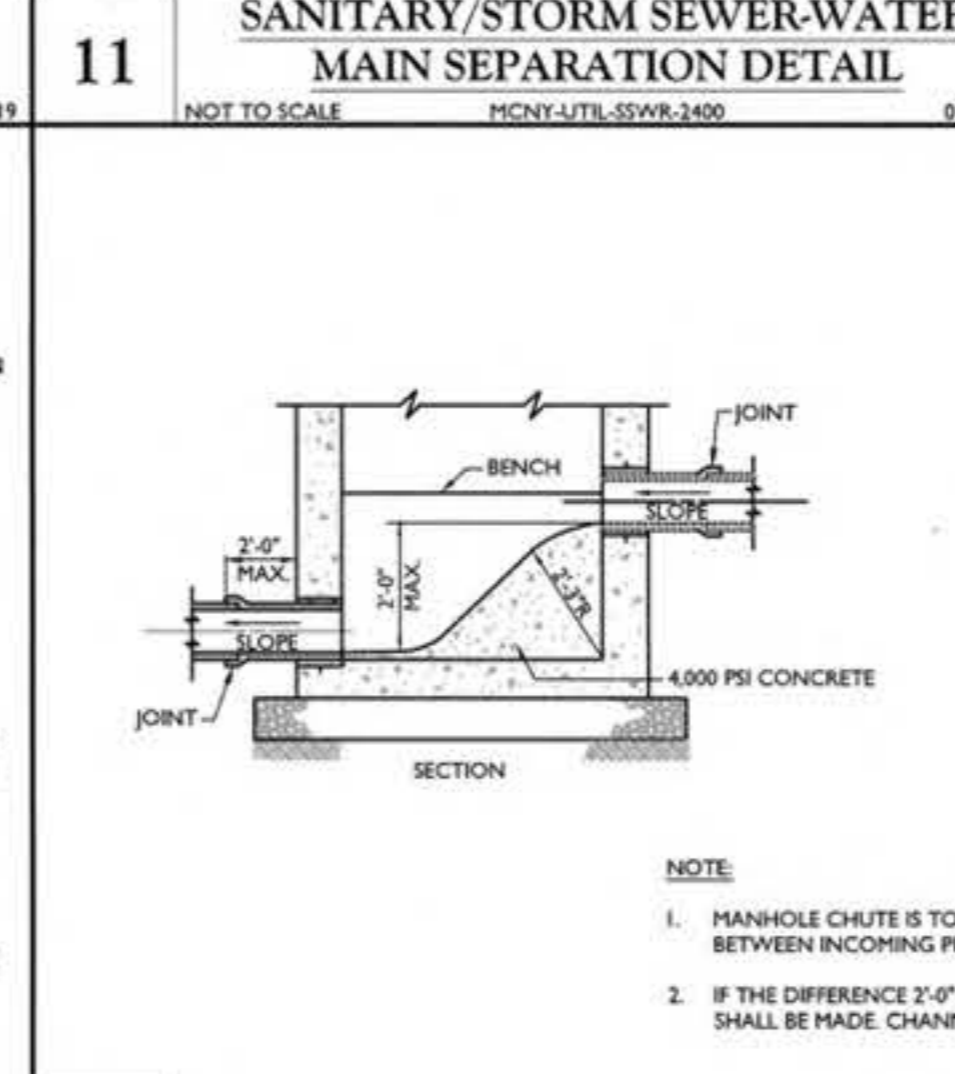
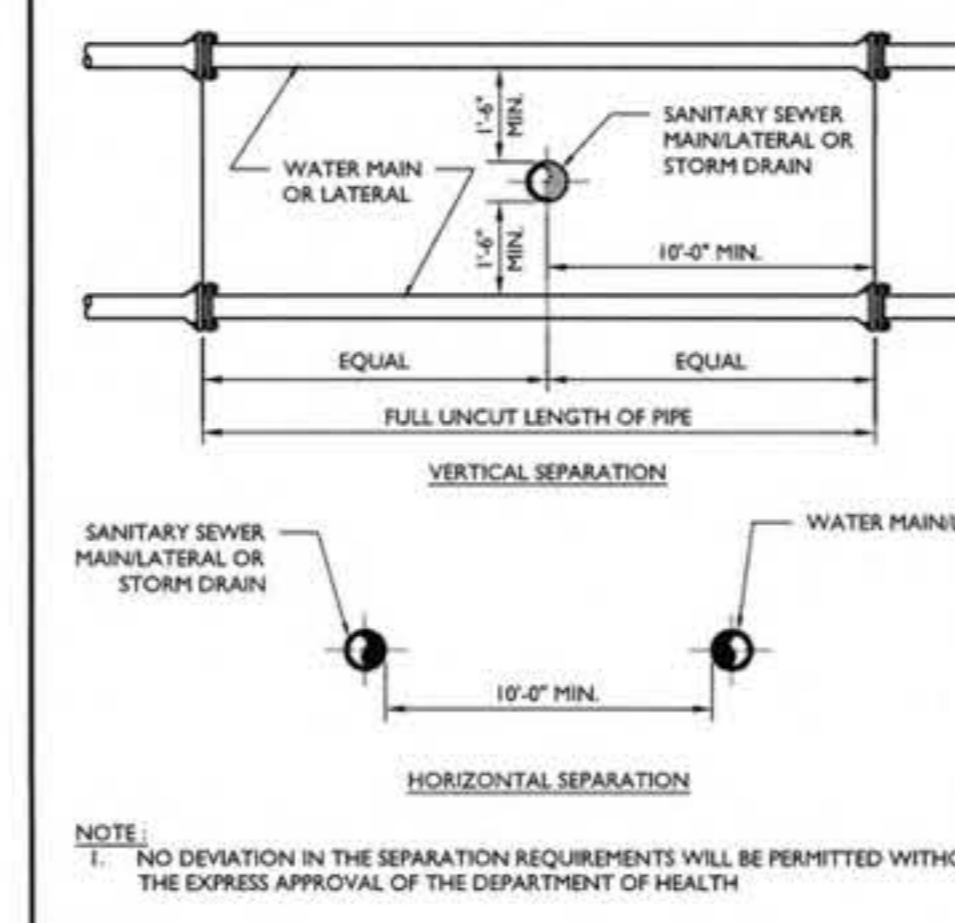
WATER NOTES:

- ALL METHODS, MATERIALS, FITTINGS, DEVICES, DIMENSIONAL REQUIREMENTS AND PROCEDURES NECESSARY TO COMPLETE THE WORK SHOWN HEREON SHALL MEET THE APPROPRIATE CURRENT AWWA SPECIFICATIONS IN EFFECT AS WELL AS ALL REQUIREMENTS DEEMED APPLICABLE BY THE MUNICIPALITY OR ANY OTHER GOVERNMENTAL BODY HAVING JURISDICTION OVER SAID WORK.
- ALL WATER MAIN PIPE SHALL BE AWWA C151 (A2) 51-02 THICKNESS CLASS 80TY-TWO (52) CEMENT LINED DUCTILE IRON PUSH-ON (RUBBER GASKET) TYPE AND INSTALLED WITH THREE (3) BRONZE WEDGES PER JOINT. JOINT INSTALLATION SHALL BE "TYPE 2" AS DESCRIBED IN THE LATEST REVISION OF AWWA C600. MECHANICAL JOINTS SHALL HAVE RETAINER GLAND.
- ALL PIPE FITTINGS SHALL BE IN ACCORDANCE WITH THE LATEST REVISION OF THE AWWA SPECIFICATION C153A1.53-00.
- ALL GATE VALVES SHALL BE "THRU-LEAF" OR APPROVED EQUAL, RESILIENT-SEATED GATE VALVES WITH MECHANICAL JOINT CONNECTIONS. OPENING SHALL BE LEFT (CCW) AND OPERATION SHALL BE BY 2" SQUARE WRENCH NUT. MINIMUM WORKING PRESSURE SHALL BE 350 PSI AND BE IN ACCORDANCE WITH AWWA SPECIFICATION C509.
- ALL VALVE BOXES SHALL BE EXTENSION TYPE BY MUELLER SET ON BRICKS AND POSITIONED PERPENDICULAR TO THE PIPE AND ON COMPACTED BACKFILL.
- ALL CHANGES IN PIPE LINE DIRECTION, BOTH HORIZONTAL AND VERTICAL SHALL BE TIE-RODDED AND THRUST BLOCKED WITH CONCRETE AGAINST UNDISTURBED EARTH AS DIRECTED BY THE ENGINEER.
- FLUSH OUT ALL WATER MAINS AND APPURTENANCES AS DIRECTED BY THE MUNICIPALITY UNTIL THE WATER RUNS CLEAN AND FREE OF RUST AND DIRT. PRESSURIZE ALL LINES AND APPURTENANCES FOR FORTY-EIGHT (48) HOURS, OR AS DIRECTED BY THE MUNICIPALITY, TO REVEAL ANY LEAKS OR BROKEN PIPE. THIS SHALL BE DONE EITHER AS A TOTAL PROJECT OR BETWEEN VALVED SECTIONS AS DIRECTED BY THE TOWN. IF PRESSURE TESTING REVEALS ANY LEAKS OR DIFFICULTIES THE CONTRACTOR SHALL PROMPTLY UNCOVER THE LEAK OR BROKEN PIPE AND IMMEDIATELY REPAIR AND RETEST SAME. THIS SHALL BE REPEATED AS MANY TIMES AS MAY BE REQUIRED TO DEMONSTRATE A TIGHT LINE TO THE SATISFACTION OF THE TOWN. THE NEW WATER MAIN AND APPURTENANCES SHALL BE PRESSURE TESTED IN ACCORDANCE WITH THE LATEST REVISION OF AWWA C400. RESULTS OF TESTS ARE TO BE SUBMITTED AND ACCEPTED BY THE MUNICIPALITY.
- THE MUNICIPAL ENGINEER MUST BE NOTIFIED FORTY-EIGHT (48) HOURS PRIOR TO PRESSURE TESTING.
- ALL WATER LINES AND APPURTENANCES SHALL BE DISINFECTED TO THE SATISFACTION OF THE MUNICIPALITY, AND IN ACCORDANCE WITH THE STANDARDS OF THE DEPT. OF HEALTH, THIS SHALL ALSO BE DONE IN ACCORDANCE WITH THE LATEST REVISION OF AWWA C651. A MINIMUM OF TWO (2) BACTERIAL TESTS TAKEN TWENTY-FOUR (24) HOURS APART ARE REQUIRED. RESULTS OF TESTS ARE TO BE SUBMITTED AND ACCEPTED BY THE MUNICIPALITY. AS PER AWWA C651, LATEST REVISION, WATER MAIN DISINFECTION PROCEDURE SHALL GENERALLY BE AS FOLLOWS:
 - INSPECTING MATERIALS TO BE USED TO ENSURE THEIR INTEGRITY.
 - PREVENTING CONTAMINATION FROM ENTERING THE WATER MAIN DURING CONSTRUCTION OR REPAIR AND NOTING POTENTIAL CONTAMINATION AT THE CONSTRUCTION SITE.
 - REMOVING BY FLUSHING OR OTHER MEANS, THOSE MATERIALS THAT MAY HAVE ENTERED THE WATER MAIN.
 - CHARACTERIZING ANY RESIDUAL CONTAMINATION THAT MAY REMAIN, AND FLUSHING THE CHLORINATED WATER FROM THE MAIN.
 - PROTECTING THE EXISTING DISTRIBUTION SYSTEM FROM BACKFLOW CAUSED BY HYDROSTATIC PRESSURE TEST AND DISINFECTION PROCEDURES.
 - DOCUMENTING THAT AN ADEQUATE LEVEL OF CHLORINE CONTACTED EACH PIPE TO PROVIDE DISINFECTION.
 - DETERMINING THE BACTERIOLOGICAL QUALITY BY LABORATORY TEST AFTER DISINFECTION.
 - FINAL CONNECTION OF THE APPROVED NEW WATER SERVICE TO THE ACTIVE DISTRIBUTION SYSTEM.
- THE CONTINUOUS-FEED METHOD SHALL BE IMPLEMENTED FOR CHLORINATION, AS DESCRIBED IN AWWA C651, LATEST REVISION. AFTER CHLORINATION, THE CONTRACTOR SHALL FLUSH THE MAINS AS PER FINAL FLUSHING REQUIREMENTS OF AWWA C651, LATEST REVISION. WHEN CUTTING INTO OR REPAIRING AN EXISTING MAIN, DISINFECTION PROCEDURES SHALL BE OBSERVED AS DETAILED IN DISINFECTION PROCEDURES WHEN CUTTING INTO OR REPAIRING EXISTING MAINS OF AWWA C651, LATEST REVISION.
- VERIFICATION SHALL BE ACCOMPLISHED VIA BACTERIOLOGICAL TESTS. AFTER FINAL FLUSHING AND BEFORE THE NEW WATER MAIN IS CONNECTED TO THE DISTRIBUTION SYSTEM, TWO CONSECUTIVE SETS OF ACCEPTABLE SAMPLES, TAKEN AT LEAST 24 HR APART, SHALL BE COLLECTED FROM THE NEW MAIN. AT LEAST ONE SET OF SAMPLES SHALL BE COLLECTED FROM EVERY 1,200 FT OF THE NEW WATER MAIN, PLUS ONE SET FROM THE END OF THE LINE AND AT LEAST ONE SET FROM EACH BRANCH. SAMPLES SHALL BE TESTED FOR BACTERIOLOGICAL, CHEMICAL AND PHYSICAL QUALITY IN ACCORDANCE WITH STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, AND SHALL SHOW THE ABSENCE OF COLIFORM ORGANISMS AND THE PRESENCE OF A CHLORINE RESIDUE. SAMPLES FOR BACTERIOLOGICAL ANALYSIS SHALL BE COLLECTED IN STERILE BOTTLES TREATED WITH SODIUM THIOSULFATE, AS REQUIRED BY STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER. NO HOSE OR FIRE HYDRANT SHALL BE USED IN THE COLLECTION OF SAMPLES. THESE SHOULD BE WATER IN THE TRENCH UP TO THE SAMPLING POINT. THE SAMPLING PIPE MUST BE CLEAN AND DISINFECTED AND FLUSHED PRIOR TO SAMPLING. A COPPERATION COCK MAY BE INSTALLED IN THE MAIN WITH A COPPER-TUBE GOOSENECK ASSEMBLY. AFTER SAMPLES HAVE BEEN COLLECTED, THE GOOSENECK ASSEMBLY MUST BE REMOVED AND RETAINED FOR FUTURE USE. IF SAMPLES RESULTS FROM THE LAB INDICATE A THRESHOLD HPC GREATER THAN 500 COLONIES PER ML, FLUSHING SHOULD BE REQUIRED AND ANOTHER COLORIM AND HPC SET OF SAMPLES SHOULD BE TAKEN UNTIL NO COLONIES ARE PRESENT AND THE HPC IS LESS THAN 500 CRU/ML. THE RECORD OF COMPLIANCE SHALL BE THE BACTERIOLOGICAL TEST RESULTS CERTIFYING THAT THE WATER SAMPLED FROM THE NEW WATER MAIN IS FREE OF COLIFORM BACTERIA CONTAMINATION AND IS EQUAL TO OR BETTER THAN THE BACTERIOLOGICAL WATER QUALITY IN THE DISTRIBUTION SYSTEM.
- ALL OTHER REQUIREMENTS OF AWWA C651, LATEST REVISION, SHALL BE OBSERVED.



WATER NOTES:

- ALL METHODS, MATERIALS, FITTINGS, DEVICES, DIMENSIONAL REQUIREMENTS AND PROCEDURES NECESSARY TO COMPLETE THE WORK SHOWN HEREON SHALL MEET THE APPROPRIATE CURRENT AWWA SPECIFICATIONS IN EFFECT AS WELL AS ALL REQUIREMENTS DEEMED APPLICABLE BY THE MUNICIPALITY OR ANY OTHER GOVERNMENTAL BODY HAVING JURISDICTION OVER SAID WORK.
- ALL WATER MAIN PIPE SHALL BE AWWA C151 (A2) 51-02 THICKNESS CLASS 80TY-TWO (52) CEMENT LINED DUCTILE IRON PUSH-ON (RUBBER GASKET) TYPE AND INSTALLED WITH THREE (3) BRONZE WEDGES PER JOINT. JOINT INSTALLATION SHALL BE "TYPE 2" AS DESCRIBED IN THE LATEST REVISION OF AWWA C600. MECHANICAL JOINTS SHALL HAVE RETAINER GLAND.
- ALL PIPE FITTINGS SHALL BE IN ACCORDANCE WITH THE LATEST REVISION OF THE AWWA SPECIFICATION C153A1.53-00.
- ALL GATE VALVES SHALL BE "THRU-LEAF" OR APPROVED EQUAL, RESILIENT-SEATED GATE VALVES WITH MECHANICAL JOINT CONNECTIONS. OPENING SHALL BE LEFT (CCW) AND OPERATION SHALL BE BY 2" SQUARE WRENCH NUT. MINIMUM WORKING PRESSURE SHALL BE 350 PSI AND BE IN ACCORDANCE WITH AWWA SPECIFICATION C509.
- ALL VALVE BOXES SHALL BE EXTENSION TYPE BY MUELLER SET ON BRICKS AND POSITIONED PERPENDICULAR TO THE PIPE AND ON COMPACTED BACKFILL.
- ALL CHANGES IN PIPE LINE DIRECTION, BOTH HORIZONTAL AND VERTICAL SHALL BE TIE-RODDED AND THRUST BLOCKED WITH CONCRETE AGAINST UNDISTURBED EARTH AS DIRECTED BY THE ENGINEER.
- FLUSH OUT ALL WATER MAINS AND APPURTENANCES AS DIRECTED BY THE MUNICIPALITY UNTIL THE WATER RUNS CLEAN AND FREE OF RUST AND DIRT. PRESSURIZE ALL LINES AND APPURTENANCES FOR FORTY-EIGHT (48) HOURS, OR AS DIRECTED BY THE MUNICIPALITY, TO REVEAL ANY LEAKS OR BROKEN PIPE. THIS SHALL BE DONE EITHER AS A TOTAL PROJECT OR BETWEEN VALVED SECTIONS AS DIRECTED BY THE TOWN. IF PRESSURE TESTING REVEALS ANY LEAKS OR DIFFICULTIES THE CONTRACTOR SHALL PROMPTLY UNCOVER THE LEAK OR BROKEN PIPE AND IMMEDIATELY REPAIR AND RETEST SAME. THIS SHALL BE REPEATED AS MANY TIMES AS MAY BE REQUIRED TO DEMONSTRATE A TIGHT LINE TO THE SATISFACTION OF THE TOWN. THE NEW WATER MAIN AND APPURTENANCES SHALL BE PRESSURE TESTED IN ACCORDANCE WITH THE LATEST REVISION OF AWWA C400. RESULTS OF TESTS ARE TO BE SUBMITTED AND ACCEPTED BY THE MUNICIPALITY.
- THE MUNICIPAL ENGINEER MUST BE NOTIFIED FORTY-EIGHT (48) HOURS PRIOR TO PRESSURE TESTING.
- ALL WATER LINES AND APPURTENANCES SHALL BE DISINFECTED TO THE SATISFACTION OF THE MUNICIPALITY, AND IN ACCORDANCE WITH THE STANDARDS OF THE DEPT. OF HEALTH, THIS SHALL ALSO BE DONE IN ACCORDANCE WITH THE LATEST REVISION OF AWWA C651. A MINIMUM OF TWO (2) BACTERIAL TESTS TAKEN TWENTY-FOUR (24) HOURS APART ARE REQUIRED. RESULTS OF TESTS ARE TO BE SUBMITTED AND ACCEPTED BY THE MUNICIPALITY. AS PER AWWA C651, LATEST REVISION, WATER MAIN DISINFECTION PROCEDURE SHALL GENERALLY BE AS FOLLOWS:
 - INSPECTING MATERIALS TO BE USED TO ENSURE THEIR INTEGRITY.
 - PREVENTING CONTAMINATION FROM ENTERING THE WATER MAIN DURING CONSTRUCTION OR REPAIR AND NOTING POTENTIAL CONTAMINATION AT THE CONSTRUCTION SITE.
 - REMOVING BY FLUSHING OR OTHER MEANS, THOSE MATERIALS THAT MAY HAVE ENTERED THE WATER MAIN.
 - CHARACTERIZING ANY RESIDUAL CONTAMINATION THAT MAY REMAIN, AND FLUSHING THE CHLORINATED WATER FROM THE MAIN.
 - PROTECTING THE EXISTING DISTRIBUTION SYSTEM FROM BACKFLOW CAUSED BY HYDROSTATIC PRESSURE TEST AND DISINFECTION PROCEDURES.
 - DOCUMENTING THAT AN ADEQUATE LEVEL OF CHLORINE CONTACTED EACH PIPE TO PROVIDE DISINFECTION.
 - DETERMINING THE BACTERIOLOGICAL QUALITY BY LABORATORY TEST AFTER DISINFECTION.
 - FINAL CONNECTION OF THE APPROVED NEW WATER SERVICE TO THE ACTIVE DISTRIBUTION SYSTEM.
- THE CONTINUOUS-FEED METHOD SHALL BE IMPLEMENTED FOR CHLORINATION, AS DESCRIBED IN AWWA C651, LATEST REVISION. AFTER CHLORINATION, THE CONTRACTOR SHALL FLUSH THE MAINS AS PER FINAL FLUSHING REQUIREMENTS OF AWWA C651, LATEST REVISION. WHEN CUTTING INTO OR REPAIRING AN EXISTING MAIN, DISINFECTION PROCEDURES SHALL BE OBSERVED AS DETAILED IN DISINFECTION PROCEDURES WHEN CUTTING INTO OR REPAIRING EXISTING MAINS OF AWWA C651, LATEST REVISION.
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- ALL OTHER REQUIREMENTS OF AWWA C651, LATEST REVISION, SHALL BE OBSERVED.



SANITARY SEWER LATERAL & CLEANOUT DETAIL

MOJ: 03/11/20 07/01/19

- WATER SERVICE CROSSING SEWER OR STORM SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18" BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER OR STORM. THIS SHALL BE THE CASE WHERE THE WATER MAIN IS EITHER ABOVE OR BELOW THE SEWER