

PRELIMINARY AND FINAL MAJOR SUBDIVISION PLANS

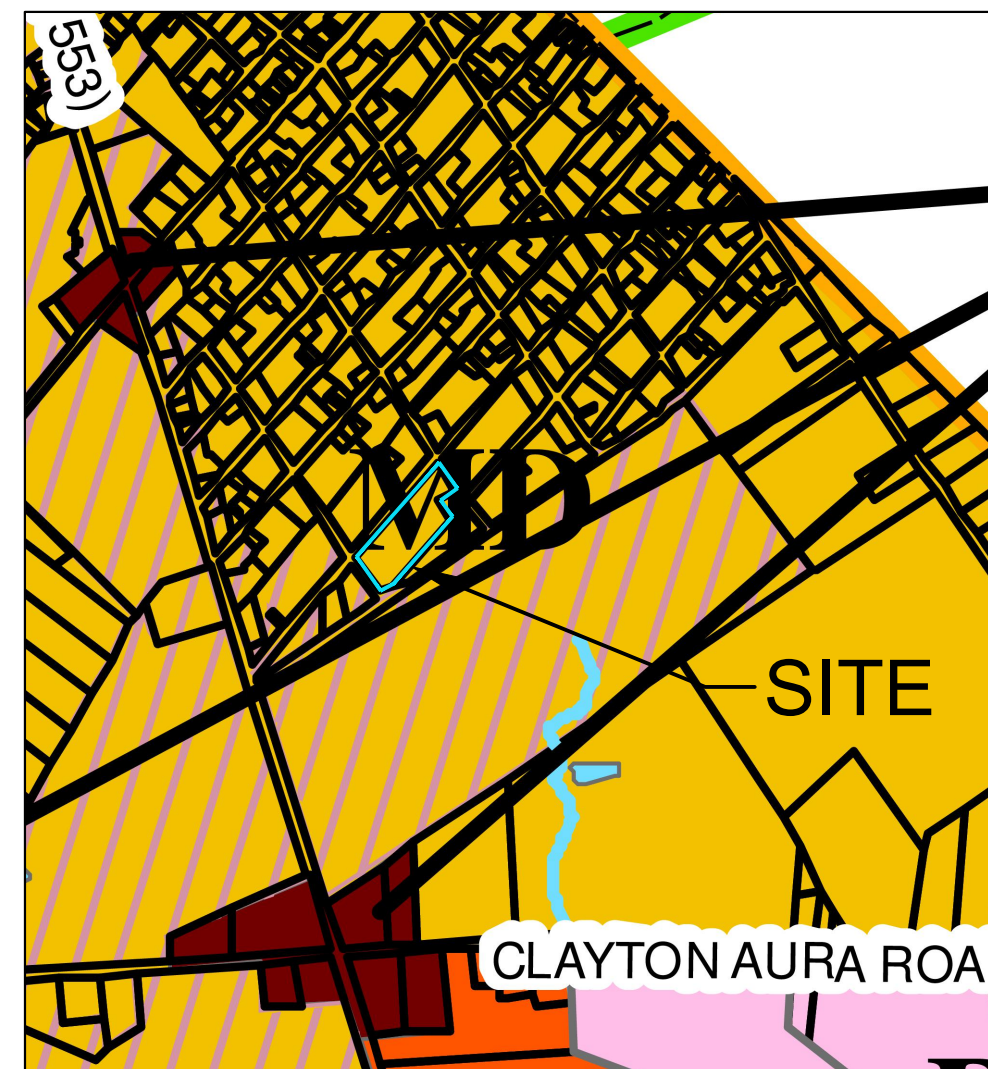
FOR

7TH AVENUE AND DOUGLAS STREET

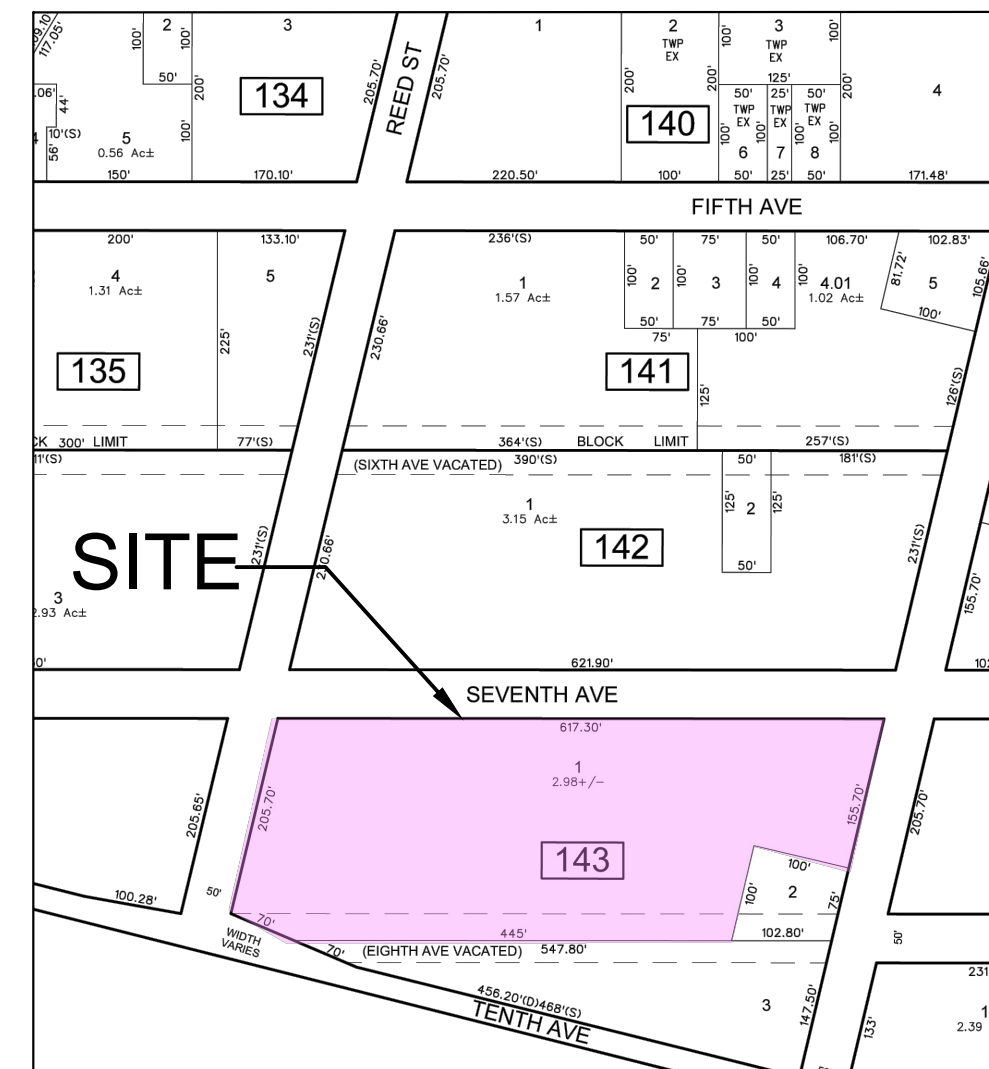
BLOCK 143, LOT 1

ELK TOWNSHIP

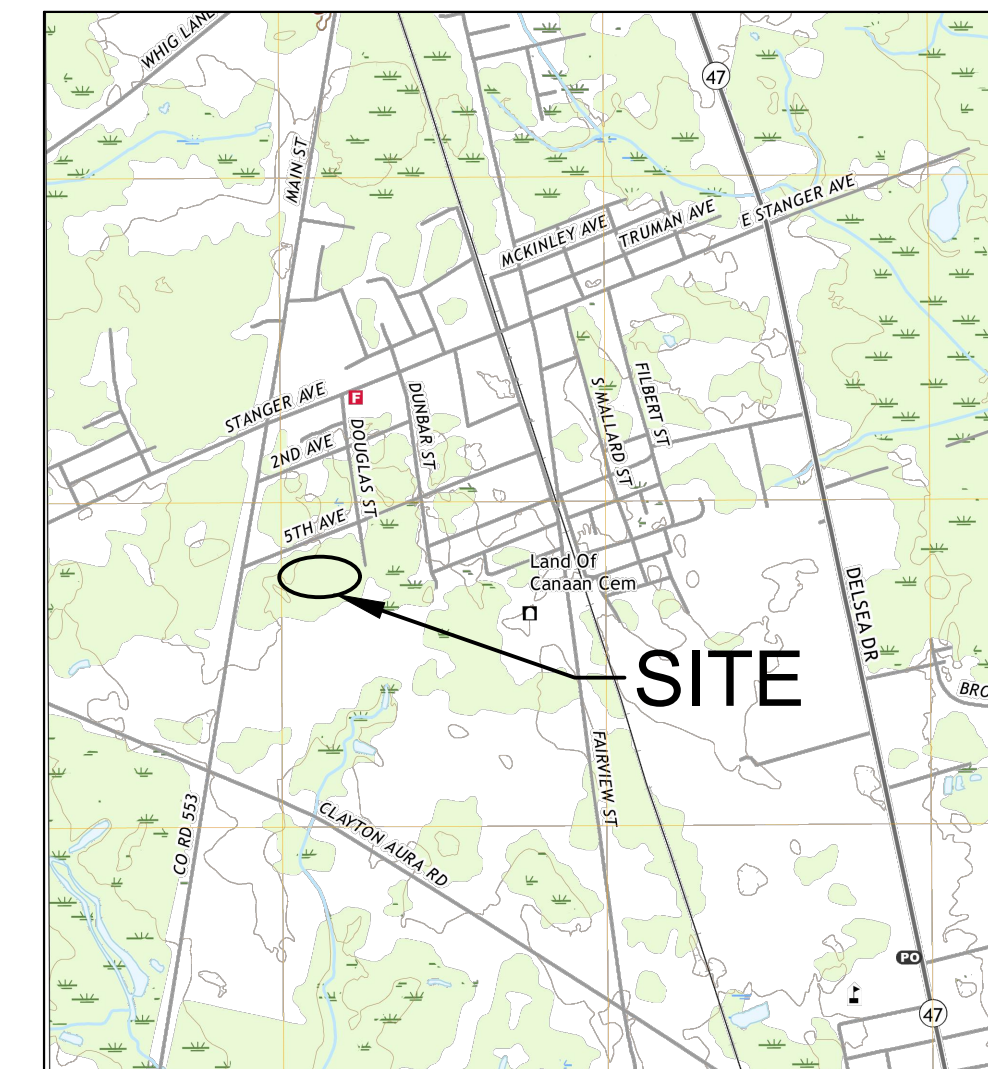
GLOUCESTER COUNTY, NEW JERSEY



ZONING MAP
 SOURCE: ELK TOWNSHIP ZONING MAP (2016)
 SCALE: 1" = 1000'



TAX MAP
 SOURCE: TOWNSHIP OF ELK TAX MAPS (NJ TAX MAPS)
 TAX MAP NO. 37
 NOT TO SCALE



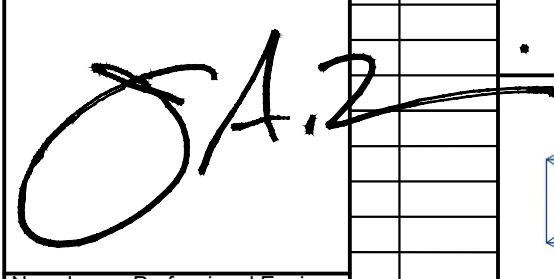

LOCATION MAP
 SOURCE: USGS PITMAN EAST U.S. TOPO
 SCALE: 1"=2000'

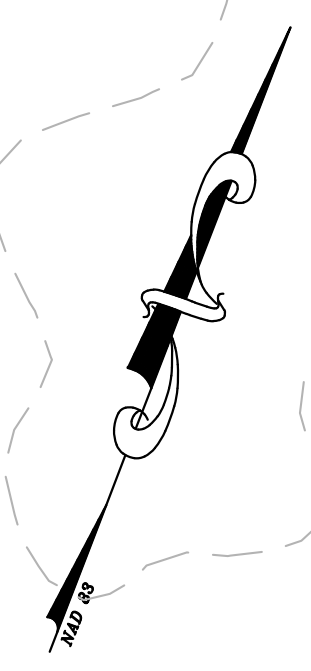
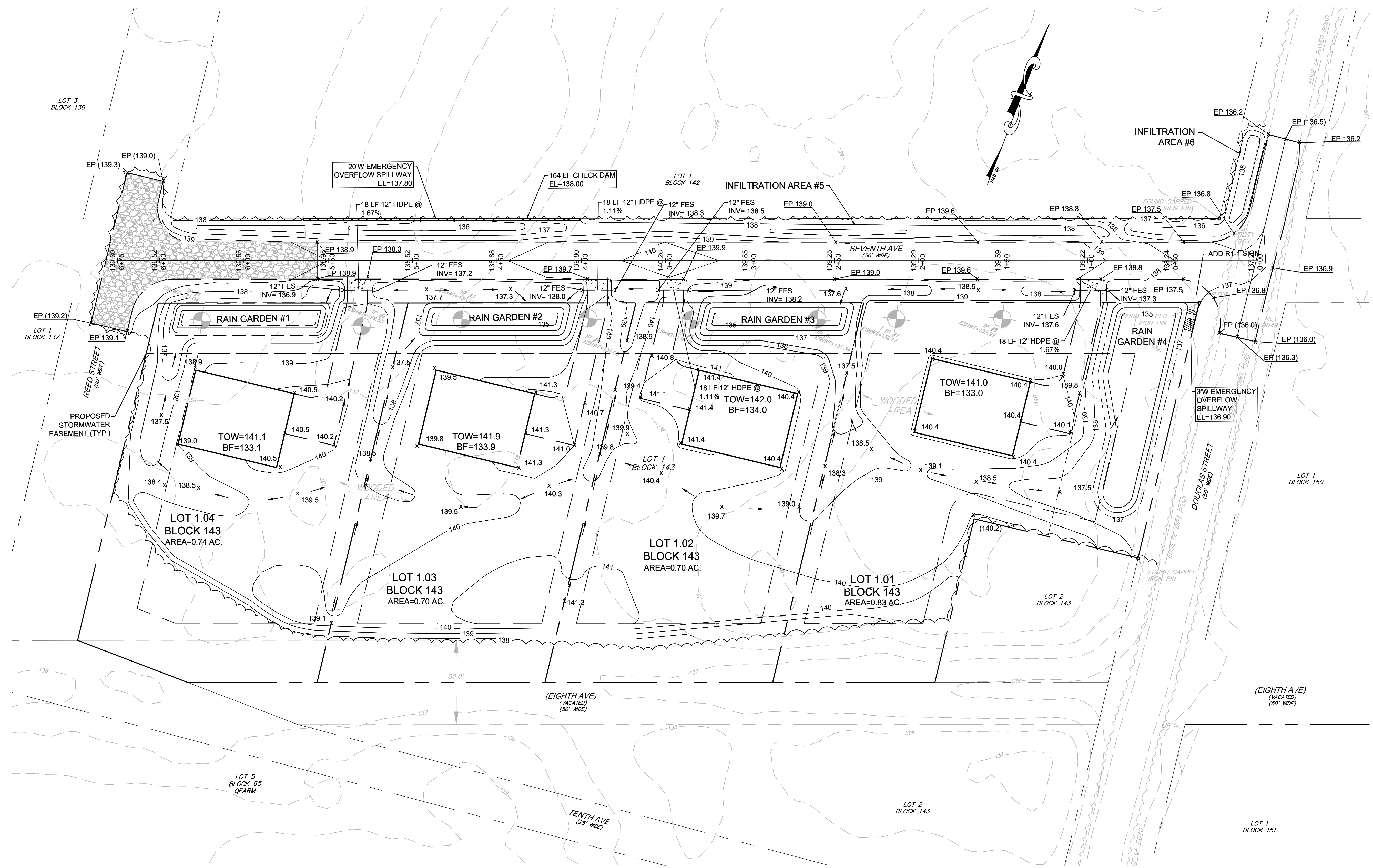
INDEX

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	OVERALL SITE PLAN
3	GRADING PLAN
4	LANDSCAPING PLAN
5	SOIL EROSION AND SEDIMENT CONTROL PLAN
6	SOIL PREPARATION PLAN
7	SOIL EROSION AND SEDIMENT CONTROL DETAILS
8	CONSTRUCTION DETAILS
9	ROADWAY DETAILS

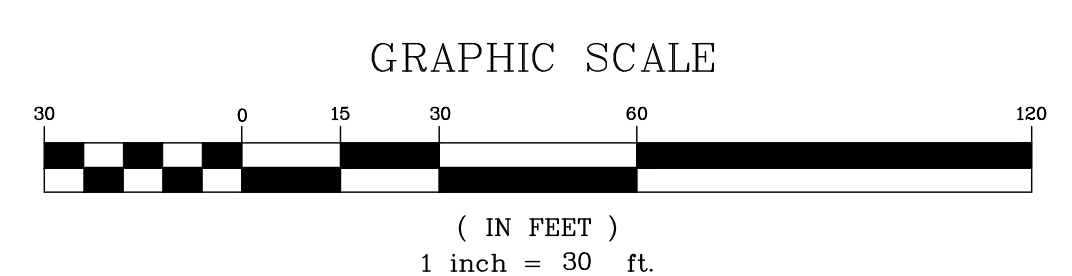
NECESSARY APPROVALS	STATUS
-ELK TOWNSHIP PLANNING BOARD	-PENDING
-GLOUCESTER COUNTY PLANNING BOARD	-TO BE SUBMITTED
-GLOUCESTER COUNTY SOIL CONSERVATION DISTRICT	-TO BE SUBMITTED

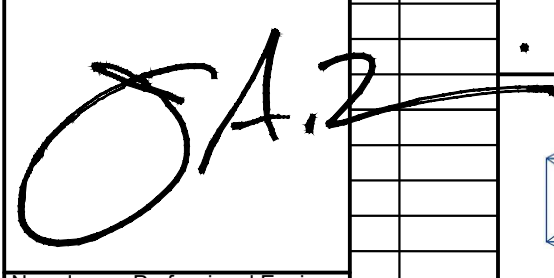
OWNER/APPLICANT	DATE
ELK TOWNSHIP LAND USE BOARD	
THIS PLAN IS HEREBY APPROVED BY THE LAND USE BOARD OF ELK TOWNSHIP.	
CHAIRMAN	DATE
SECRETARY	DATE
ENGINEER	DATE

DESIGNED: JR	DRAWN: DC	CHECKED: JAM	COVER SHEET	
DATE SIGNED:		REVISIONS		7TH AVENUE AND DOUGLAS STREET BLOCK 143, LOT 1 ELK TOWNSHIP GLOUCESTER COUNTY, NEW JERSEY
JOSEPH A. MANCINI 			TRISTATE ENGINEERING AND SURVEYING, PC 	
New Jersey Professional Engineer Lic. No. 24GE04579300			P.O. BOX 1304 BLACKWOOD, NJ 08012 OFFICE: (856) 677-8742 FAX: (856) 879-2024 www.tristatecivil.com	
SCALE: AS SHOWN		DATE: 01/19/2024	PROJECT NO: 23-105 CHENG	SHEET: 1 of 9



EXISTING		PROPOSED	
○	MANHOLE	⊙	MANHOLE
□	INLET	⊠	INLET
△	CONCRETE HEADWALL	▲	CONCRETE HEADWALL
▽	FLARED END SECTION	▼	FLARED END SECTION
⊙	UTILITY POLE	⊙	UTILITY POLE
⊙	FIRE HYDRANT	⊙	FIRE HYDRANT
⊙	SIGN	⊙	SIGN
—	EDGE OF WOODS	—	EDGE OF WOODS
—S—	SANITARY SEWER	—S—	SANITARY SEWER
—ST—	STORM DRAIN	—ST—	STORM DRAIN
—W—	WATER MAIN	—W—	WATER MAIN
—GV—	GATE VALVE	—GV—	GATE VALVE
—T—	TEE	—T—	TEE
—P—	PLUG(CAP)	—P—	PLUG(CAP)
—00—	CONTOUR LINE	—00—	CONTOUR LINE
00X00	GRADE	00X00	GRADE
N/A	MEET EXISTING GRADE	(00X00)	MEET EXISTING GRADE
TC38.50	TOP OF CURB ELEVATION	TC38.50	TOP OF CURB ELEVATION
BC38.00	GUTTER ELEVATION	BC38.00	GUTTER ELEVATION
H	HANDICAP RAMP	H	HANDICAP RAMP
=====	CURB	=====	CURB
-----	EDGE OF PAVEMENT	-----	EDGE OF PAVEMENT
N/A	CONCRETE	N/A	CONCRETE
⊙	SOIL BORING	⊙	SOIL BORING

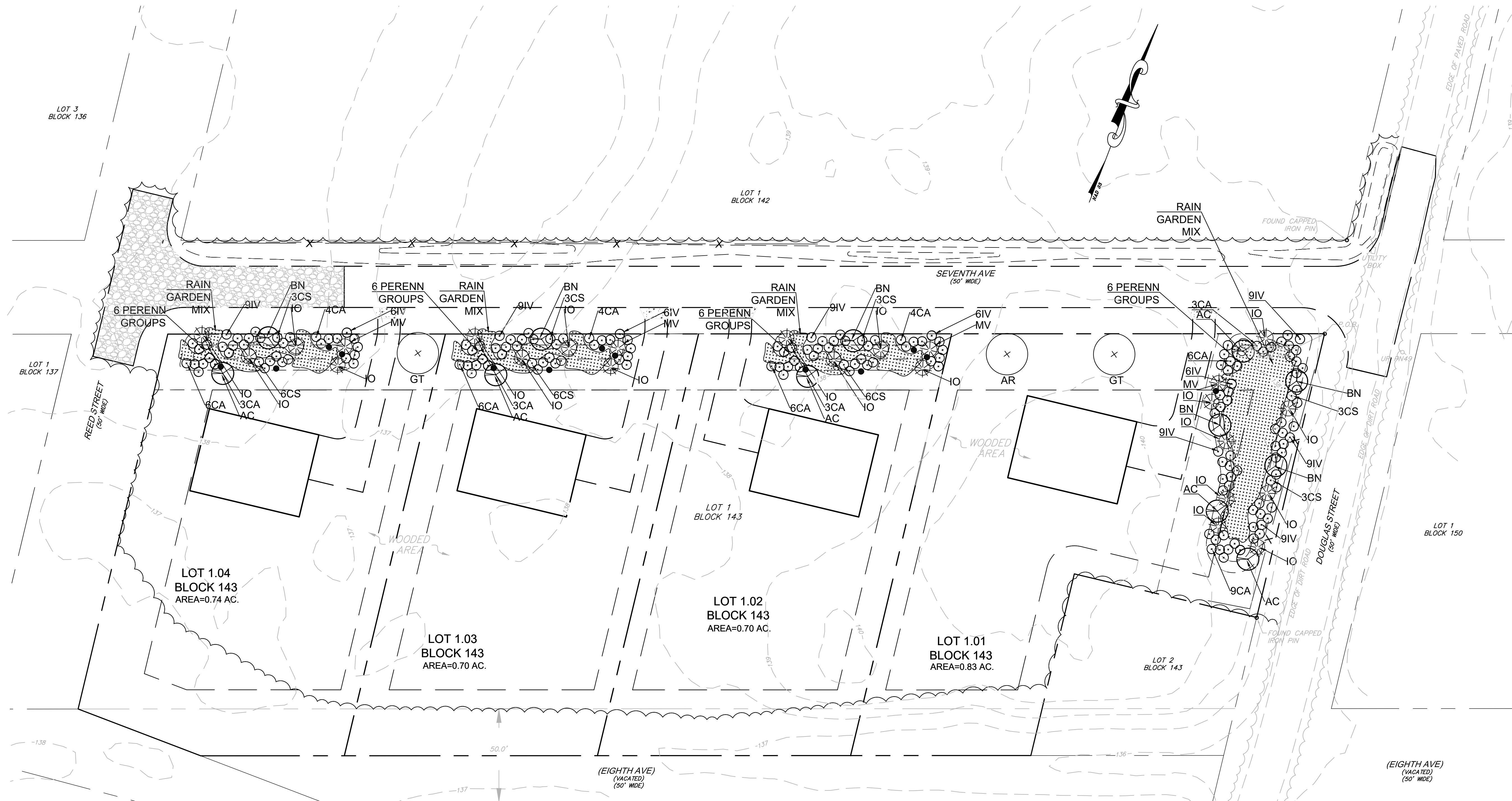


DESIGNED: JR	DRAWN: DC	CHECKED: JAM	GRADING PLAN 7TH AVENUE AND DOUGLAS STREET BLOCK 143, LOT 1 ELK TOWNSHIP GLOUCESTER COUNTY, NEW JERSEY TRISTATE ENGINEERING AND SURVEYING, PC
DATE SIGNED:	NO.	REVISIONS	
JOSEPH A. MANCINI 			P.O. BOX 1304 BLACKWOOD, NJ 08012 OFFICE: (856) 677-8742 FAX: (856) 879-2024 www.tristatecivil.com
New Jersey Professional Engineer Lic. No. 24GE04579300		SCALE: 1" = 30'	DATE: 01/19/2024
PROJECT NO: 23-105 CHENG		SHEET: 3 of 9	

Date: Feb 06, 2024, 12:39pm

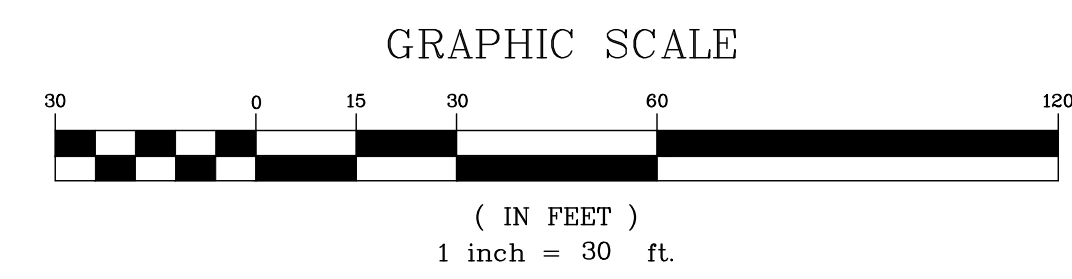
PLANTING NOTES


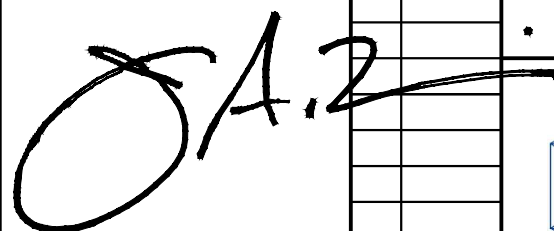
- A COMPLETE LIST OF PLANTS, INCLUDING A SCHEDULE OF QUANTITIES, SIZES, AND OTHER REQUIREMENTS IS SHOWN ON THE PLANT SCHEDULE. IN THE EVENT THAT DISCREPANCIES OCCUR BETWEEN THE QUANTITIES OF PLANTS INDICATED IN THE PLANT LIST AND THOSE INDICATED ON THE PLAN, THE PLANT QUANTITIES INDICATED ON THE PLAN SHALL GOVERN.
- ANY PLANT SCHEDULE MODIFICATIONS SHALL BE SUBJECT TO THE APPROVAL BY THE TOWNSHIP REPRESENTATIVE OR PROJECT LANDSCAPE ARCHITECT PRIOR TO THE PRECONSTRUCTION MEETING REQUEST TO BE MADE IN WRITING TO AUTHORITY.
- ALL PLANTS SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY. ALL PLANTS SHALL HAVE NORMAL, WELL DEVELOPED BRANCHES AND VIGOROUS ROOT SYSTEMS. THEY SHALL BE FREE FROM DEFECTS, DISFIGURING KNOTS, ABRASIONS OF THE BARK, SUNSCALD INJURIES, PLANT DISEASES, INSECT EGGS, BORERS, AND ALL OTHER FORMS OF INFECTIONS. ALL PLANT MATERIAL SHALL BE THOROUGHLY WETTED WITH AN ANTI-TRANSPARENT UPON DELIVERY OF MATERIAL TO THE SITE. ALL EVERGREEN MATERIAL SHALL BE RESPRAYED PRIOR TO THE FIRST WINTER BY THE OWNER.
- SIZE AND GRADING STANDARDS SHALL CONFORM TO ANSI #1, OR BETTER AND SHALL BE GUARANTEED FOR A PERIOD OF 2 YEARS AFTER ACCEPTANCE BY THE OWNER, AS REQUIRED BY ORDINANCE. ALL PLANT MATERIAL NOT SURVIVING FOR A PERIOD OF (2) TWO YEARS SHALL BE REPLACED WITH THE EQUIVALENT SIZE AND SPECIES.
- ALL PLANTS SHALL BE PACKED, TRANSPORTED AND HANDLED WITH THE UTMOST CARE TO INSURE ADEQUATE PROTECTION AGAINST INJURY AND DEHYDRATION. EACH SHIPMENT SHALL BE CERTIFIED TO BE FREE FROM DISEASES AND INFESTATION. ANY INSPECTION CERTIFICATES REQUIRED BY LAW TO THIS EFFECT SHALL ACCOMPANY EACH SHIPMENT INVOICE OR ORDER OF STOCK AND ON ARRIVAL.
- NO PLANT MATERIAL SHALL BE PLANTED BY THE CONTRACTOR UNTIL IT IS INSPECTED AND APPROVED BY THE LANDSCAPE ARCHITECT OR HIS AGENT AT THE SITE. THE LANDSCAPE ARCHITECT OR HIS REPRESENTATIVE SHALL BE THE SOLE JUDGE OF THE QUALITY AND ACCEPTABILITY OF THE MATERIALS. ALL REJECTED MATERIAL SHALL BE IMMEDIATELY REPLACED WITH ACCEPTABLE MATERIAL AT NO ADDITIONAL COST.
- SHADE AND EVERGREEN PLANTS SHALL BE FIELD ADJUSTED TO MAINTAIN A MINIMUM HORIZONTAL SEPARATION OF 10 FEET FROM ANY SEWER MAIN OR STORM SEWER.
- SHADE AND EVERGREEN TREES SHALL BE PLANTED AT LEAST TWO (2) FEET FROM ANY CURBING, PAVING OR SIDEWALK. WHENEVER POSSIBLE THIS DIMENSION SHOULD BE INCREASED TO FOUR (4) FEET.
- PLANTING MIXTURE SHALL CONSIST OF ACCEPTANCE NATURAL TOPSOIL AND 10% BY WEIGHT OF STA-CERTIFIED COMPOST, THOROUGHLY MIXED. ONLY ADD ORGANIC FERTILIZER AND ONLY AFTER SOIL TEST IS PERFORMED BY YOUR LOCAL EXTENSION SERVICE WITH TYPE AND QUANTITY RECOMMENDATIONS.
- WHERE APPLICABLE, PEAT MOSS FOR PLANTING MEDIUM SHALL BE IMPORTED CANADIAN SPHAGNUM PEAT MOSS. BROWN, LOW IN CONTENT OF WOODY MATERIAL AND BE FREE OF MINERAL CONTENT HARMFUL TO PLANT LIFE.
- CONTRACTOR SHALL SCALE PLANT LOCATIONS FROM PLANS AND STAKE LOCATIONS ON SITE FOR APPROVAL BY THE LANDSCAPE ARCHITECT OR HIS AGENT.
- ALL SEEDED AREAS THAT DO NOT SHOW A PROMPT UNIFORM GERMINATION SHALL BE RESEED BY THE LANDSCAPE CONTRACTOR AT INTERVALS OF 45-60 DAYS, UNTIL A GOOD GROWTH IS ESTABLISHED OVER THE ENTIRE LAWN AREA.
- ALL PLANT BEDS SHALL BE MULCHED WITH THREE (3) INCHES OF SHREDDED HARDWOOD MULCH OR OTHER MATERIAL APPROVED BY THE LANDSCAPE ARCHITECT. THE LIMIT OF THIS MULCH FOR TREES SHALL BE THE AREA OF THE PIT AND FOR SHRUBS AND BEDS, THE ENTIRE SHRUB OR BED AREA AS INDICATED ON THE PLAN. DO NOT CREATE MULCH PYRAMIDS. SEE PLANTING DETAIL FOR MULCH APPLICATION.
- ALL PLANTING BEDS SHALL BE ROTOTILLED TO A DEPTH OF TEN (10) INCHES PRIOR TO ANY PLANTING. ALL STONES, WIRE, CONCRETE AND UNSUITABLE MATERIALS SHALL BE REMOVED.
- PLANTING BEDS SHALL BE THOROUGHLY EXCAVATED, AND BACKFILLED WITH THE PLANT MIXTURE DESCRIBED IN 9 ABOVE. ALL PAVEMENT SUBBASE AND UNSUITABLE MATERIAL SHALL BE REMOVED FROM THE ISLAND PLANTING BEDS UNTIL VIRGIN SOIL IS REPLACED.
- IT IS UNDERSTOOD THAT THE OWNER SHALL ASSUME RESPONSIBILITY FOR WATERING ALL PLANT MATERIAL AND LAWN AREAS BEYOND THE GUARANTEE PERIOD COMMENCING WITH THE DATE OF INITIAL ACCEPTANCE.
- THE CONTRACTOR SHALL BECOME RESPONSIBLE FOR VERIFYING LOCATIONS OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES BEFORE EXCAVATING.
- ANY AND ALL IRRIGATION SYSTEMS SHALL CONTAIN A RAIN SENSOR. IT IS RECOMMENDED THAT IF PLANTING BEDS ARE IRRIGATED, DRIP IRRIGATION IS PREFERRED.
- ALL EVERGREEN TREES SHALL BE CONICAL IN SHAPE UNLESS OTHERWISE NOTED. CONICAL SHALL MEAN THE PLANT SHALL HAVE A WIDER BASE (5:3 RATIO) AT A MINIMUM AND TAPER TO THE TOP. PLANT LEADER SHALL BE NO LONGER THAN 12 INCHES. CONICAL SHALL ALSO IMPLY A FULL SHAPE FROM THE BOTTOM OF PLANT (6-12" FROM ROOT BALL) TO TOP LEADER. REFER TO ANSI 260-1996, 4.1.2.5 TYPE 5-CONE TYPE.
- SPECIMEN PLANT MATERIAL SHALL MEAN FOR EVERGREEN SPECIES; EXCEPTIONALLY HEAVY, WELL SHAPED PLANTS WHICH HAVE BEEN TRIMMED TO FORM A PERFECTLY SYMMETRICAL, TIGHTLY KNIT PLANT.
- FOR CONICAL AND EVERGREEN PLANT MATERIAL AVERAGE HEIGHT SHALL BE MEASURED FROM THE UPPER LIMIT OF BRANCH WORK AND MIDPOINT OF LEADER.
- ALL EVERGREEN TREES MUST BE SLIGHTLY SHEARED.

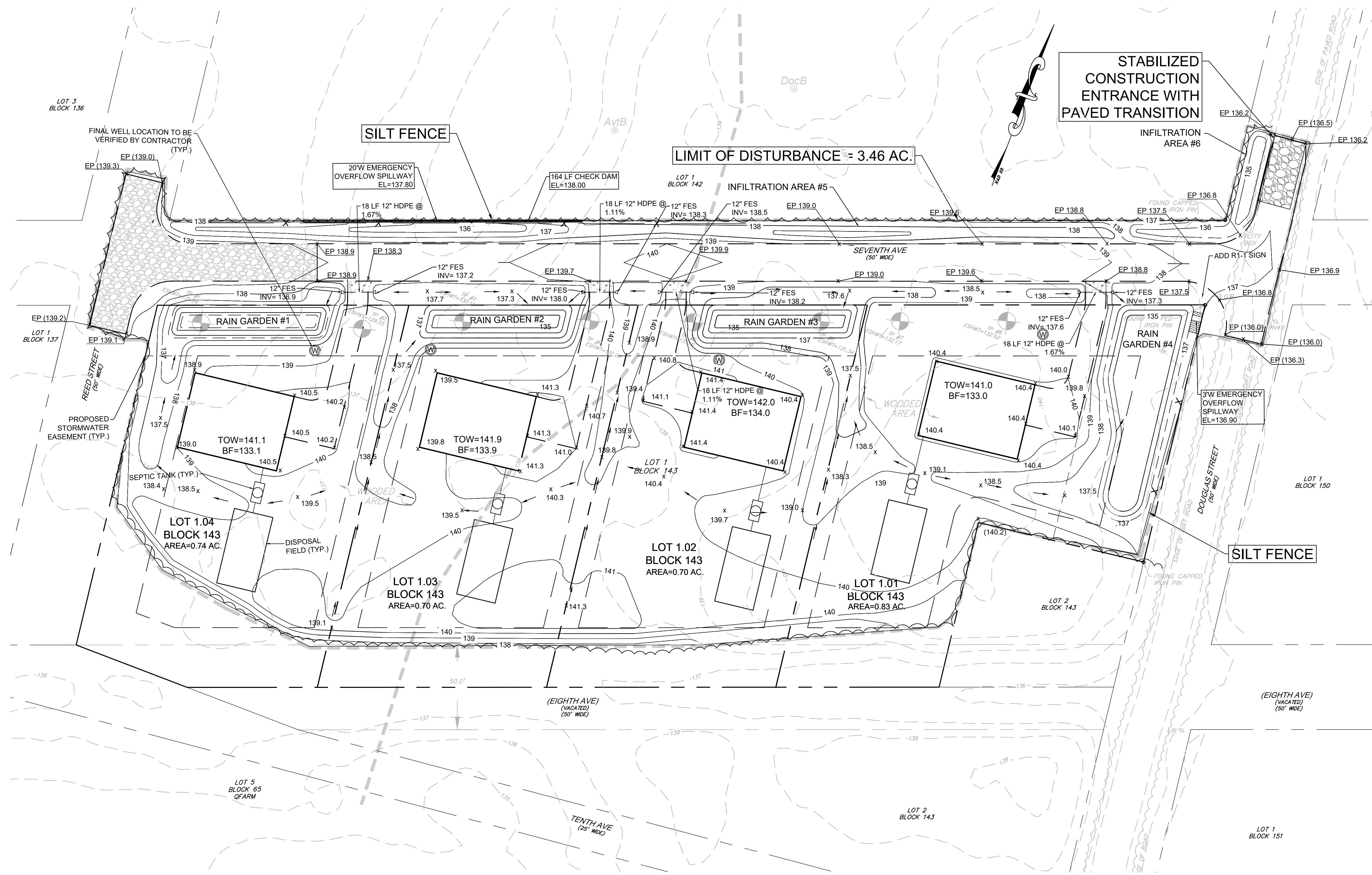


LEGEND	
EXISTING	PROPOSED
○	MANHOLE
□	INLET
△	CONCRETE HEADWALL
▽	FLARED END SECTION
U	UTILITY POLE
⊕	FIRE HYDRANT
⊙	SIGN
—	EDGE OF WOODS
—	SANITARY SEWER
—	STORM DRAIN
—	WATER MAIN
—	GATE VALVE
—	TEE
—	PLUG(CAP)
—	CONTOUR LINE
00X00	GRADE
N/A	MEET EXISTING GRADE
TC38.50	TOP OF CURB ELEVATION
BC38.00	GUTTER ELEVATION
H	HANDICAP RAMP
=====	CURB
-----	EDGE OF PAVEMENT
—	CONCRETE
—	SOIL BORING
○	SHADE TREE
○	EVERGREEN TREE
○	SHRUBS
○	ORNAMENTAL TRESS

PLANTING SCHEDULE: native* - keystone**		Lane/Court		
KEY	BOTANICAL NAME	COMMON NAME	QTY	SIZE/ROOTS/REMARKS
STORMWATER BASINS, BUFFER AREAS & BUFFER PLANTS IN RAIN GARDEN - ie.,IG+,MV+,IV+,VN+,IO+				
TREES				
AC**	Amelanchier X grandiflora	SERVICEBERRY	6	MT 4-5ht., #15 CONTAINER
BN**	Betula nigra 'Dura Heat'	RIVER BIRCH	6	MT 4-5ht., #15 CONTAINER
EVERGREEN TREES				
IO*	Ilex opaca	AMERICAN HOLLY	20	5-6HT., B&B
MV*	Magnolia virginiana	SWEETBAY MAGNOLIA	4	6-7HT., B&B
SHRUBS/PERENNIALS				
CA*	Clethra alnifolia 'Ruby Spice'	SUMMERSWEET	57	#3 CAN
CS*	Sambucus canadensis 'Adam'	AMERICAN ELDER	33	#5 CAN
IV*	Ilex verticillata 'Maryland Beauty' & 'Jim Dandy'	WINTERBERRY HOLLY	87	#5 CAN (IV); 80% MARYLAND BEAUTY-20% JIM DANDY (VN); 80% WINTERHUR-20% BRANDY WINE
DECIDUOUS TREES				
AR*	Acer rubrum 'Red Sunset'	RED SUNSET MAPLE	5	2 1/2" CAL., 12-14HT., B&B
GT*	Glenditsia tricanthos inermis	THORNLESS HONEYLOCUST	5	2 1/2" CAL., 12-14HT., B&B



DESIGNED: JR	DRAWN: DC	CHECKED: JAM	REVISIONS NO. DATE
DATE SIGNED:			
JOSEPH A. MANCINI			LANDSCAPING PLAN 7TH AVENUE AND DOUGLAS STREET BLOCK 143, LOT 1 ELK TOWNSHIP GLOUCESTER COUNTY, NEW JERSEY TRISTATE ENGINEERING AND SURVEYING, PC  P.O. BOX 1304 BLACKWOOD, NJ 08012 OFFICE: (856) 677-8742 FAX: (856) 879-2024 www.tristatecivil.com
			
New Jersey Professional Engineer Lic. No. 24GE04579300	SCALE: 1" = 30'	DATE: 01/19/2024	PROJECT NO: 23-105 CHENG
			SHEET: 4 OF 9



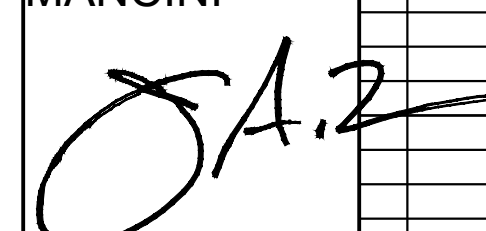

LEGEND	
EXISTING	PROPOSED
○	MANHOLE
□	INLET
△	CONCRETE HEADWALL
▽	FLARED END SECTION
⊕	UTILITY POLE
⊕	FIRE HYDRANT
⊕	SIGN
—	EDGE OF WOODS
—S—	SANITARY SEWER
—ST—	STORM DRAIN
—W—	WATER MAIN
—MV—	GATE VALVE
—T—	TEE
—P—	PLUG(CAP)
—00—	CONTOUR LINE
00X00	GRADE
N/A	MEET EXISTING GRADE
TC38.50	TOP OF CURB ELEVATION
BC38.00	GUTTER ELEVATION
H	HANDICAP RAMP
=====	CURB
-----	EDGE OF PAVEMENT
N/A	CONCRETE
⊕	SOIL BORING

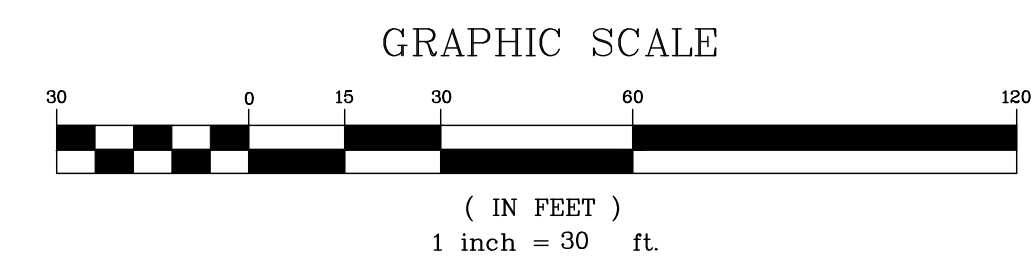
SOIL EROSION CONTROL LEGEND

□	DENOTES INLET PROTECTION
—X—	DENOTES SILT FENCE
—X—	DENOTES REINFORCED SILT FENCE
---	DENOTES LIMIT OF DISTURBANCE
HodA	DENOTES SOIL CLASSIFICATION
---	DENOTES SOIL TYPE LIMIT

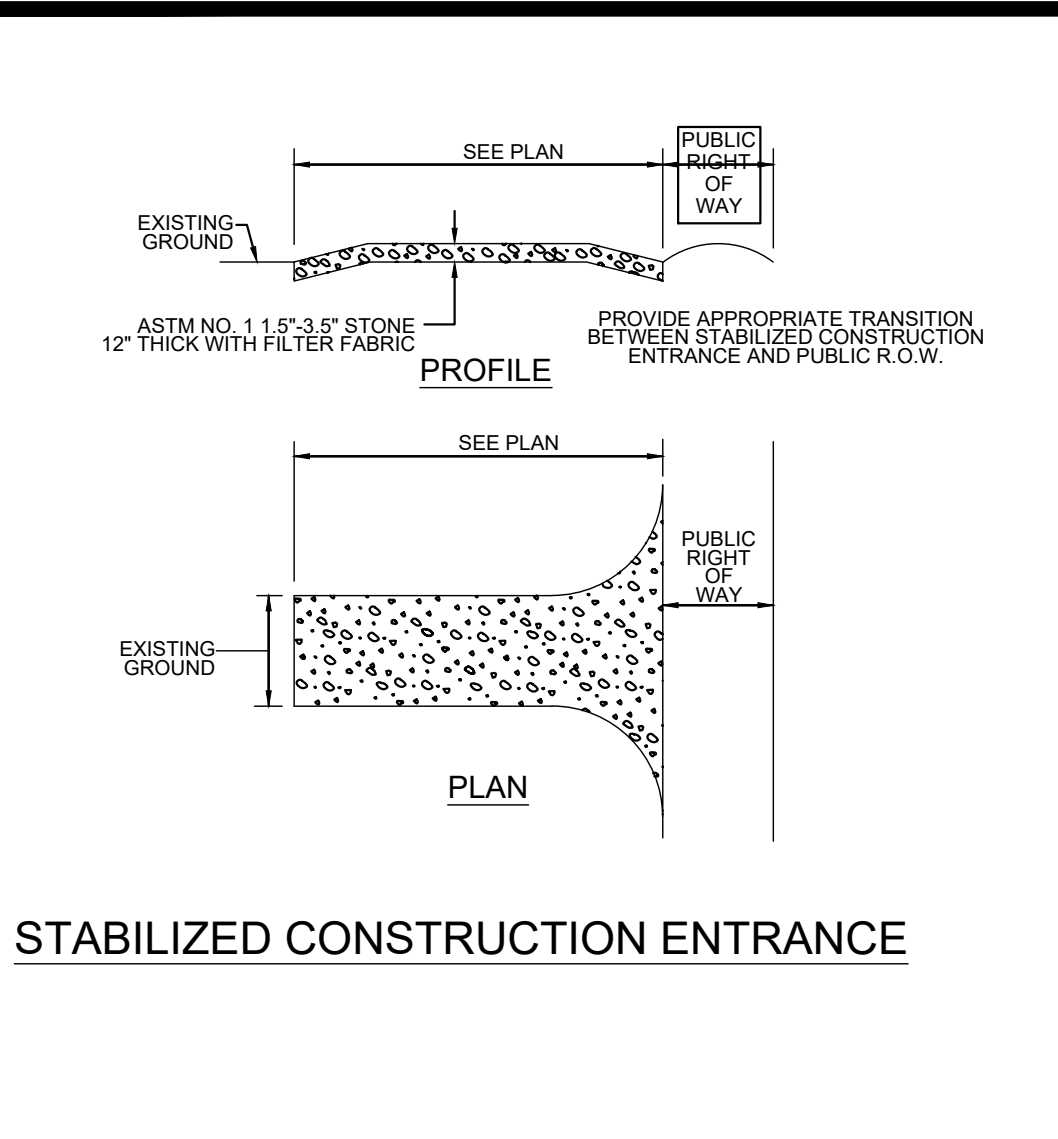
STABILIZED CONSTRUCTION ENTRANCE WITH PAVED TRANSITION

LIMIT OF DISTURBANCE = 3.46 AC.

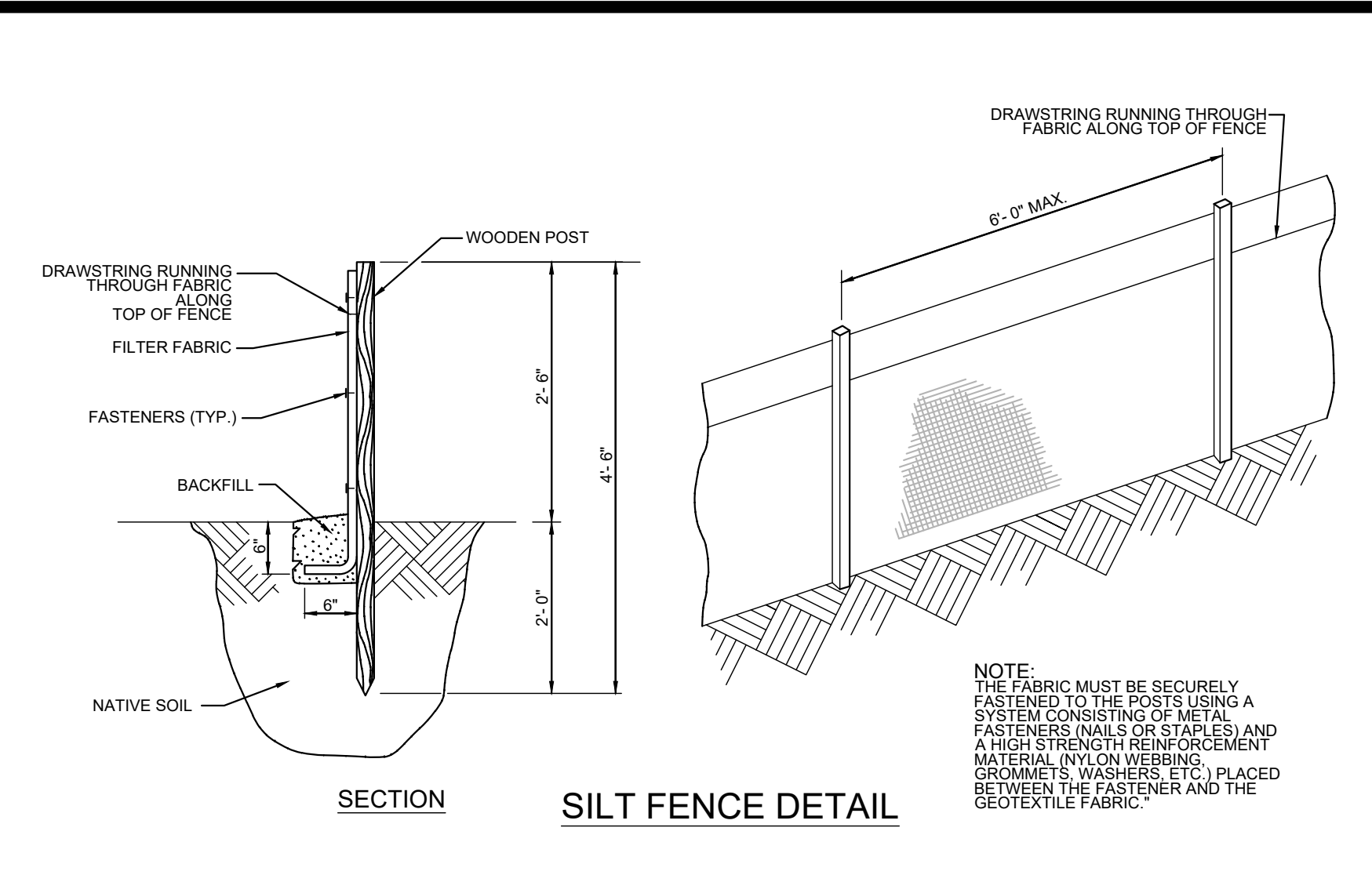
DESIGNED: JK	DRAWN: DC	CHECKED: JAM	SOIL EROSION & SEDIMENT CONTROL PLAN
DATE SIGNED:	NO.	DATE	
JOSEPH A. MANCINI 			7TH AVENUE AND DOUGLAS STREET BLOCK 143, LOT 1 ELK TOWNSHIP GLOUCESTER COUNTY, NEW JERSEY
TRISTATE ENGINEERING AND SURVEYING, PC 			P.O. BOX 1304 BLACKWOOD, NJ 08012 OFFICE: (856) 677-8742 FAX: (856) 879-2024 www.tristatecivil.com
New Jersey Professional Engineer Lic. No. 24GE04579300	SCALE: 1" = 30'	DATE: 01/19/24	PROJECT NO: 23-105 CHENG SHEET: 5 OF 9



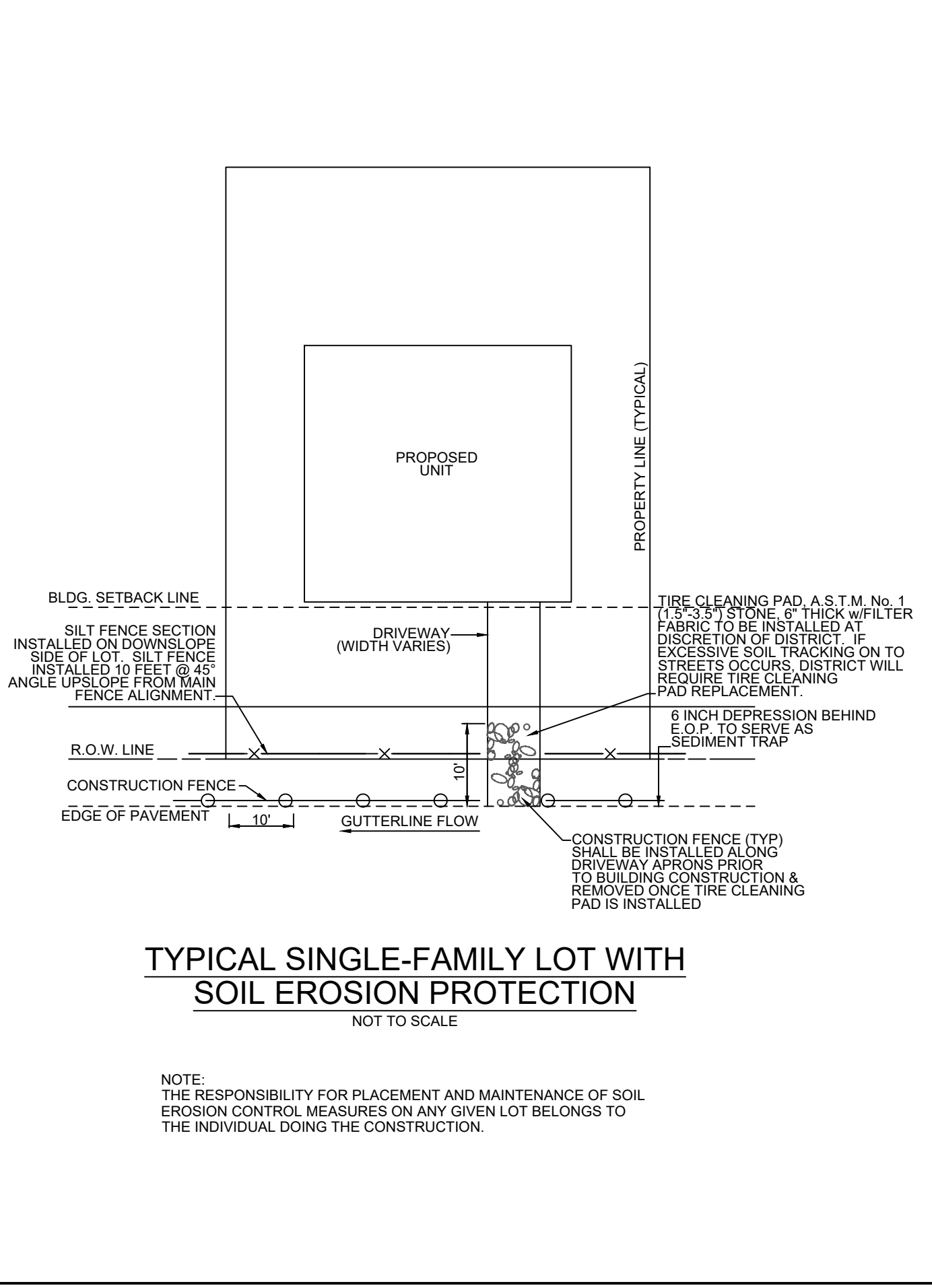
Date: Feb 06, 2024, 12:28pm



STABILIZED CONSTRUCTION ENTRANCE



SECTION SILT FENCE DETAIL



TYPICAL SINGLE-FAMILY LOT WITH SOIL EROSION PROTECTION

NOTE: THE RESPONSIBILITY FOR PLACEMENT AND MAINTENANCE OF SOIL EROSION CONTROL MEASURES ON ANY GIVEN LOT BELONGS TO THE INDIVIDUAL DOING THE CONSTRUCTION.

ACID SOIL CONDITIONS AND MITIGATION PROCEDURES:
GENERAL MITIGATION STANDARDS:

- IN VEGETATED AREAS, THE TOPSOIL SHALL BE STRIPPED AND STOCKPILED SEPARATELY FROM THE MATERIAL TO BE EXCAVATED. IF THE EXPOSED SOIL IS CHARACTERISTIC OF ACID-PRODUCING SOIL, THEN SAMPLES SHALL BE OBTAINED AND TESTED AT A SOIL TESTING LABORATORY. IF ANY SULFIDIC OR SULFURIC MATERIALS (INDICATING THE PRESENCE OF ACID SOILS) ARE IDENTIFIED, THIS MATERIAL AND ANY CONTAMINATED SOIL SHALL NOT BE EXPOSED FOR MORE THAN ONE (1) DAY EXCEPT WHERE NECESSARY FOR THE CONDUCT OF THE PROJECT.
- THE AREA OF ACID-PRODUCING DEPOSITS EXPOSED SHALL BE NO LARGER THAN THAT WHICH IS ABSOLUTELY NECESSARY FOR THE CONDUCT OF THE PROJECT.
- CONSTRUCTION SCHEDULES SHALL BE FORMULATED TO PROVIDE MINIMUM PRACTICABLE EXPOSURE OF ACID-PRODUCING DEPOSITS.

EXCAVATION:

- WHERE THE TOP LAYER OF SOIL (REMAINING AFTER CLEARANCE OF VEGETATION) IS FREE FROM ACID-PRODUCING DEPOSITS, SUCH SOIL SHALL NOT BE EXCAVATED. ACID-PRODUCING DEPOSITS SHALL BE EXPOSED SEPARATELY FROM THE DEEPER, ACID-PRODUCING DEPOSITS TO BE EXPOSED. NO ACID-PRODUCING DEPOSITS SHALL BE INCLUDED IN THIS STOCKPILE.
- ACID-PRODUCING DEPOSITS (INCLUDING SOIL CONTAMINATED WITH SUCH DEPOSITS AND CONTAMINATED SOIL WASHED FROM CONSTRUCTION EQUIPMENT) SHALL NOT BE EXPOSED FOR MORE THAN ONE (1) DAY EXCEPT WHERE ABSOLUTELY NECESSARY FOR THE CONDUCT OF THE PROJECT. SUCH DEPOSITS MUST BE EXPOSED FOR MORE THAN ONE (1) DAY; THEY SHALL BE COVERED WITH PULVERIZED LIMESTONE AT THE RATE OF THIRTY (30) TONS PER ACRE (1.375 LBS. PER 1,000 SQ. FT.) AND THEN COVERED WITH A MINIMUM OF ONE FOOT OF COMPACTED TOPSOIL (FREE OF ACID-PRODUCING DEPOSITS) WITHIN ONE (1) WEEK AFTER EXPOSURE, OR BEFORE THE PH OF A WELL-MIXED SAMPLE FROM THE UPPERMOST TWO (2) INCHES OF THE EXPOSED DEPOSIT DROPS TO 4.0, WHICHEVER OCCURS FIRST.
- EXCAVATED MATERIAL SHALL BE RETURNED TO TRENCHES OR PITS IN THE ORDER OF ITS REMOVAL, I.E. LOWER MATERIAL FIRST, FOLLOWED BY UPPER MATERIAL. HOWEVER, IF ACID-PRODUCING DEPOSITS ARE FOUND ONLY IN THE UPPER MATERIAL, THEN THE UPPER MATERIAL SHOULD BE RETURNED FIRST. THIS EXCEPTION ALSO APPLIES TO THE FOLLOWING SITUATION, WHERE ACID-PRODUCING DEPOSITS ARE STOCKPILED ON SOIL UNCONTAMINATED WITH SUCH DEPOSITS. THE TOP TWO (2) INCHES OF SUCH SOIL SHALL BE SCRAPPED OFF AND BURIED ALONG WITH THE LOWER MATERIAL. THE SURPLUS MATERIAL RESULTING DUE TO PERMANENT GRADE REDUCTION, PLACEMENT OF PIPES OR OTHER STRUCTURES, AND SOIL SCRAPPED FROM AREAS UNDER TEMPORARY STOCKPILES OF ACID-PRODUCING DEPOSITS SHALL BE SUBSTITUTED FOR AN EQUAL QUANTITY OF DEEPER MATERIAL WHICH IN TURN WILL BE REMOVED TO A SUITABLE DISPOSAL SITE. AFTER BACKFILLING THE DEEPER MATERIAL, PULVERIZED LIMESTONE SHOULD BE SPREAD OVER THE TOP OF THE MATERIAL, AT THE RATE OF TEN (10) TONS PER ACRE (0.417 LBS. PER 1,000 SQ. FT.) BEFORE THE APPLICATION OF THE SURFACE LAYER OF SOIL. THIS LIME APPLICATION IS APPLICABLE ONLY IN WELL-DRAINED AREAS. THE TOP LAYER OF SOIL, FREE OF ACID-PRODUCING DEPOSITS, STRIPPED AND STOCKPILED IN ITEM #1 ABOVE, SHALL THEN BE REPLACED. IF NECESSARY, ADDITIONAL QUANTITIES OF TOPSOIL SHALL BE IMPORTED SO AS TO ENSURE AT LEAST ONE (1) FOOT DEEP COVER OF SOIL, FREE OF ACID-PRODUCING DEPOSITS.
- EQUIPMENT USED FOR EXCAVATING OR BACKFILLING ACID-PRODUCING DEPOSITS SHALL BE CLEANED AT THE END OF EACH DAY'S OPERATION TO THE EXTENT PRACTICABLE, IN SUCH A WAY THAT WILL NOT CAUSE THE SPREADING OF ACID-PRODUCING DEPOSITS ONTO UNCONTAMINATED SOIL. THE SOIL REMOVED MUST BE PLACED IN THE TRENCH BELOW A DEPTH OF TWO (2) FEET.
- EVERY EFFORT SHALL BE MADE TO MINIMIZE THE SPREADING OR MIXING OF ACID-PRODUCING DEPOSITS (INCLUDING SOIL CONTAMINATED WITH SUCH DEPOSITS) ONTO OR INTO SOIL, FREE OF SUCH DEPOSITS (ON OR OFF THE CONSTRUCTION SITE), AND CONSTRUCTION SHALL TAKE PLACE DURING SIGNIFICANT RAINSTORMS OR WHILE THE GROUND IS SATURATED. IF SUCH CONSTRUCTION IS LIKELY TO SHEAR OR REMOVE ACID-PRODUCING DEPOSITS OVER UNCONTAMINATED SOIL OR INTO WATERWAYS, IF ACID-PRODUCING DEPOSITS MUST BE STOCKPILED ON TOP OF SOIL, FREE OF SUCH DEPOSITS, THE AREA USED FOR STOCKPIILING SHALL BE MINIMIZED. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE APPLIED WHERE ACID-PRODUCING DEPOSITS ARE EXPOSED OR STOCKPILED, TO PREVENT OR REDUCE THE MOVEMENT OF ACID-PRODUCING MATERIAL INTO STREAMS OR ONTO CONTAMINATED SOIL.
- TEMPORARY VEGETATIVE COVER SHALL NOT BE USED FOR STABILIZATION OF ACID-PRODUCING DEPOSITS UNLESS THE LIME AND TOPSOIL APPLICATION REQUIREMENTS OF ITEM #3 AND THE SURFACE SOIL PH REQUIREMENTS OF ITEM #9 ARE FIRST MET. OTHERWISE TEMPORARY STABILIZATION OF ACID-PRODUCING DEPOSITS SHALL CONSIST OF MULCHING AND SHALL BE IMPLEMENTED BY THE END OF THE CONSTRUCTION DAY.
- MULCHING FOR TEMPORARY STABILIZATION IS NOT A SUBSTITUTE FOR THE LIMESTONE AND TOPSOIL APPLICATION REQUIREMENTS OF ITEMS #2 AND #3. MULCH SHALL NOT BE DIRECTLY APPLIED TO THE EXPOSED SURFACE OF ACID-PRODUCING DEPOSITS, BUT RATHER TO THE TOPSOIL APPLIED TO COVER SUCH DEPOSITS.
- PERMANENT VEGETATION SHALL BEGIN AS SOON AS CONSTRUCTION IS COMPLETE AND AFTER THE RESULTS OF THE INCUBATION TESTS, WHERE NECESSARY, ARE AVAILABLE.
- PRIOR TO RESTORING VEGETATED AREA, THE SOIL SPECIALIST SHALL PERFORM PH TESTS ON THE SOIL. IF THE PH IS BELOW 4.0, THIS IS AN INDICATION THAT ACID SOILS HAVE BEEN MIXED INTO THE SOIL, NECESSITATING AN INTENSIVE LIME EFFORT IN ORDER TO MAKE THE SOIL SUITABLE FOR PLANT SURVIVAL. THE SURFACE LAYER OF SOIL (ONE (1) FOOT MINIMUM THICKNESS) MUST BE RAISED TO 5.0 BEFORE SEEDED PREPARATION.
- THE INCUBATION TEST REQUIRES THAT A SOIL SAMPLE BE OXIDIZED FOR SIX (6) WEEKS IF THE PH IS BELOW 4.0. LIME REQUIREMENT TESTS SHALL BE PERFORMED BY THE SOILS SPECIALIST TO DETERMINE THE LIME APPLICATION RATES.

MITIGATION:

- MITIGATION PROCEDURES MUST BE FOLLOWED IF CONSTRUCTION WILL EXPOSE ACID-PRODUCING DEPOSITS DURING CONSTRUCTION. THE PERIOD OF EXPOSURE SHALL BE HELD TO A MINIMUM AND MEASURES TAKEN TO COVER SUCH DEPOSITS TO PREVENT ACCELERATION OF THE OXIDATION PROCESS.
- ONE (1) FOOT OF SOIL, FREE OF ACID-PRODUCING DEPOSITS SHALL BE SPREAD OVER THE EXPOSED DEPOSIT SURFACE. THE PH OF SUCH SOIL SHALL BE GREATER THAN THE TEXTURE OF THE SOIL SHALL FALL WITHIN THE FOLLOWING TEXTURAL CLASSES (U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE CLASSIFICATION):
CLAY, SILTY CLAY, SANDY CLAY, CLAY LOAM, SILT LOAM, SILT
NO MORE THAN TEN (10) PERCENT OF THE SOIL (BY MASS) MAY CONSIST OF COARSE FRAGMENTS (PARTICLES ABOVE 2MM DIAMETER AND LONG-AXIS LENGTH) AND FRAGMENTS MAY EXCEED THREE (3) INCHES IN DIAMETER OR LONG-AXIS LENGTH.
- THE SOIL THAT IS TO BE SPREAD PURSUANT TO ITEM #2 SHALL BE COMPACTED. THE SOIL SHALL NOT BE COMPACTED TO A BULK DENSITY EXCEEDING 1.7 GRAMS PER CUBIC CENTIMETER, AND THE LIME AND PH REQUIREMENTS OUTLINED ABOVE.
- SINCE THE OXIDATION OF SULFIDE MINERALS AND RESULTING GENERATION OF ACID COMMENCES AS THE ACID-PRODUCING DEPOSITS ARE EXPOSED, THE SOIL LAYER SHALL BE APPLIED PROMPTLY TO THE NEWLY EXPOSED DEPOSITS WITHIN OR ALONG THE BASIN OR CHANNEL. TO ACCOMPLISH THIS, BASIN OR CHANNEL EXCAVATION SHALL PROCEED (WHERE NECESSARY) IN STAGES, SCHEDULED IN SUCH A WAY THAT NO NEWLY EXPOSED ACID-PRODUCING DEPOSITS REMAIN EXPOSED LONGER THAN ONE (1) WEEK, OR THE TIME REQUIRED FOR THE PH OF A WELL-MIXED SAMPLE FROM THE UPPERMOST TWO (2) INCHES OF THE DEPOSIT TO DROP TO 4.0, WHICHEVER IS LESS.
- IN SOME PLACES IT MAY NOT BE PRACTICAL TO COVER THE ACID-PRODUCING DEPOSITS WITH A SOIL-LIMESTONE MIXTURE IN THE MANNER DESCRIBED ABOVE BECAUSE OF STEEP SLOPES OR BECAUSE OF RUNNING WATER THAT CANNOT BE DIVERTED DURING CONSTRUCTION. IN SUCH CASES, PLASTIC LINERS SHALL BE UTILIZED, PLACING THEM OVER THE NEWLY EXPOSED ACID-PRODUCING DEPOSIT WITH SUITABLE PROTECTION. ANY FILL MATERIAL PLACED OVER THE PLASTIC LINER SHALL BE FREE OF ACID-PRODUCING DEPOSITS.

MATERIAL STORAGE & DISPOSAL:

- STOCKPILE SATISFACTORY MATERIALS WHERE DIRECTED UNTIL REQUIRED FOR USE AS BACKFILL OR FILL. STOCKPILES SHALL BE GRADED FOR PROPER DRAINAGE.
- SUITABLE SITES SHALL BE LEVEL, DEVOID OF MATURE STANDS OF NATURAL VEGETATION AND BE REMOVED FROM DRAINAGE FACILITIES AND FEATURES, WETLANDS AND STREAM CORRIDORS.
- THE STOCKPILE AREA SHALL BE SURROUNDED BY SILT FENCING OR ANOTHER ACCEPTABLE EROSION CONTROL MEASURE, WHERE FILL IS TO BE STORED IN EXCESS OF FOURTEEN (14) DAYS. A SUITABLE MEANS OF PROTECTING EXCAVATED MATERIAL FROM EROSION SHALL BE EMPLOYED.
- DISPOSE OF EXCESS SOIL MATERIAL AND WASTE MATERIALS AS HEREIN SPECIFIED. EXCAVATED MATERIAL UNSUITABLE FOR BACKFILLING SHALL BE KEPT SEPARATE FROM OTHER MATERIALS EXCAVATED AND DISPOSED OF MATERIAL SUITABLE FOR BACKFILLING SHALL NOT BE DISPOSED OF UNTIL COMPLETION OF FILLING OR BACKFILLING OPERATIONS.
- ACID-PRODUCING DEPOSITS (INCLUDING EARTH CONTAMINATED WITH SUCH DEPOSITS) THAT ARE NOT BACKFILLED AND COVERED SHALL BE DISPOSED OF ON OR OFF THE PROJECT SITE IN A SUITABLE MANNER AND LOCATION. DISPOSAL OF EXCESS EXCAVATED MATERIAL IN WETLANDS, STREAM CORRIDORS AND FLOODPLAINS IS STRICTLY PROHIBITED.
- ACID-PRODUCING DEPOSITS SHALL NOT BE DISCHARGED INTO STREAMS, INDISCIMINATELY SPREAD OVER UNCONTAMINATED SOIL, OR SOLD OR DISTRIBUTED AS TOPSOIL OR TOPSOIL AMENDMENTS SUITABLE FOR PLANT GROWTH. INSTEAD, SUCH DEPOSITS SHALL BE BURIED AT LEAST TWO (2) FEET BENEATH THE LAND SURFACE IN SUCH A MANNER THAT COVER MATERIAL IS NOT SUBJECT TO ACCELERATED EROSION OR UNDER PROPOSED BUILDING SLABS. STOCKPILES OF ACID-PRODUCING DEPOSITS AWAITING BURIAL SHALL BE COVERED WITH PULVERIZED LIMESTONE AT THE RATE OF THIRTY (30) TONS PER ACRE (1.375 LBS. PER 1,000 SQ. FT.) AND THEN COVERED WITH A MINIMUM OF TWELVE (12) INCHES OF COMPACTED SOIL, FREE OF ACID-PRODUCING DEPOSITS WITHIN ONE (1) WEEK AFTER EXPOSURE, OR BEFORE THE PH OF A WELL-MIXED SAMPLE FROM THE UPPERMOST TWO (2) INCHES OF THE DEPOSIT DROPS TO 4.0, WHICHEVER OCCURS FIRST, WHENEVER PRACTICABLE. THE DEPOSIT SHALL BE BURIED THE SAME DAY IT IS EXCAVATED.

SEEDING, LIMING, FERTILIZING AND MULCHING RATES:

- SEEDED PREPARATION AND SEED APPLICATION RATES

- WORK APPROVED RATES OF LIME AND FERTILIZER INTO THE SOIL TO A DEPTH OF APPROXIMATELY 4 INCHES WITH A DISC, SPRINGTOOTH HARROW OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISCING OPERATION MUST BE ON THE GENERAL CENTER. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM SEEDBED IS PREPARED.
- BY GRASS DRILL OR GRASS SEEDER TO A DEPTH OF APPROXIMATELY 1/2-1 INCH WITH THE FOLLOWING RECOMMENDED SEED MIXTURE:

SEED	APPLICATION MIXTURE	RECOMMENDED PLANTING DATES
CHEWINGS FESCUE	40%	4/1 - 5/31
KENTUCKY BLUEGRASS	40%	8/15 - 10/15
PERENNIAL RYEGRASS	20%	

- FOR SANDY SOILS APPLY PERENNIAL RYEGRASS AT THE RATE OF 3-4 LBS. PER 1,000 SQ. FT. IN ADDITION TO THE ABOVE MIXTURE.

- DETENTION BASIN SIDE SLOPES TO BE SEEDED AT A RATE OF 4 LBS. PER 1,000 SQ. FT. (160 LBS. PER ACRE) WITH THE FOLLOWING RECOMMENDED SEED MIXTURE:

SEED	APPLICATION MIXTURE	RECOMMENDED PLANTING DATES
SWITCH GRASS	35%	4/1 - 5/31
REED CANARY GRASS	25%	OR
CREEPING RED FESCUE	15%	8/15 - 10/15
RELIANT "HARD" FESCUE	15%	
CREEPING BENTGRASS	10%	

- AREAS WITHIN A FIFTY (50) FOOT RADIUS OF THE BASIN OUTLET STRUCTURE SHALL BE OVERSEED WITH SWITCH GRASS AT AN ADDITIONAL RATE OF 0.2 LBS. PER 1,000 SQ. FT. (8 LBS. PER ACRE).

- AREAS THAT ARE TEMPORARILY SEEDED SHALL BE PROTECTED BY PERENNIAL RYEGRASS AND MULCH. SEED SHALL BE APPLIED AT THE RATE OF 2 LBS. PER 1,000 SQ. FT. (160 LBS. PER ACRE), IF THE FINAL SEEDING DOES NOT TAKE. THE AREA SHALL BE RESEEDED.

- ALL CRITICAL AREAS SUBJECT TO EROSION SHALL RECEIVE TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH IMMEDIATELY FOLLOWING ROUGH GRADING.

- VEGETATIVE FILTER STRIP (IF APPLICABLE) TO BE SEEDED AT A RATE OF 2 LBS. PER 1,000 SQ. FT. (160 LBS. PER ACRE) WITH THE FOLLOWING MIXTURE:

SEED	APPLICATION MIXTURE	RECOMMENDED PLANTING DATES
KENTUCKY 431 TALL FESCUE	40%	4/1 - 5/31
CHEWINGS FESCUE	20%	OR
CREEPING RED FESCUE	20%	8/15 - 10/15
PERENNIAL RYEGRASS	20%	

- IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO PROVIDE CONFIRMATION OF SEED APPLICATION AND RATE OF APPLICATION AT THE REQUEST OF THE COUNTY SOIL CONSERVATION DISTRICT.

LIME APPLICATION RATES:

- ALL SEEDED AREAS SHALL BE LIMED AT THE RATE DETERMINED BY SOIL ANALYSIS AND APPROVED BY THE ENGINEER OR THE COUNTY SOIL CONSERVATION DISTRICT, OR THE FOLLOWING RATES SHALL APPLY:
SOIL TEXTURES
CLAY, CLAY LOAM AND HIGH ORGANIC SOIL
SANDY LOAM, LOAM, SILT LOAM
LOAMY SAND, SAND
PULVERIZED DOLOMITIC LIMESTONE IS RECOMMENDED FOR MOST SOILS BELOW PH OF THE NEW BRUNSWICK-TRENTON LINE.

- IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO PROVIDE CONFIRMATION OF LIME APPLICATION AND RATE OF APPLICATION AT THE REQUEST OF THE COUNTY SOIL CONSERVATION DISTRICT.

- FERTILIZER APPLICATION RATES

- ALL SEEDED AREAS SHALL BE FERTILIZED AT THE RATE DETERMINED BY SOIL ANALYSIS AND APPROVED BY THE ENGINEER OR THE COUNTY SOIL CONSERVATION DISTRICT, OR AT A RATE OF 11 LBS. PER 1,000 SQ. FT. (100 LBS. PER ACRE) USING 10-20-10 OR EQUAL.

- IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO PROVIDE CONFIRMATION OF FERTILIZER APPLICATION AND RATE OF APPLICATION AT THE REQUEST OF THE COUNTY SOIL CONSERVATION DISTRICT.

MULCH APPLICATION RATES:

- AREAS RECEIVING PERMANENT SEEDING SHALL BE MULCHED WITH SALT HAY OR SMALL GRAIN STRAW AT A RATE OF 70-90 LBS/1000 SQ. FT. MULCH SHALL BE SECURED BY APPROVED METHODS (LIQUID MULCH BINDER, CRIMPING, PEG AND TWINE).
- AREAS RECEIVING TEMPORARY SEEDING SHALL BE MULCHED WITH SALT HAY OR SMALL GRAIN STRAW AT A RATE OF 70-90 LBS/1000 SQ. FT. MULCH SHALL BE SECURED BY APPROVED METHODS (LIQUID MULCH BINDER, CRIMPING, PEG AND TWINE).
- ALL AREAS EXPOSED MORE THAN 30 DAYS DURING THE NON-GROWING SEASON SHALL BE PROTECTED BY MULCH AND SECURED WITH AN ORGANIC TACK MULCH MULCH SHALL BE APPLIED AT A RATE OF 2-1/2 TONS PER ACRE.
- MULCH 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 SUBJECT TO CONTROL SOIL EROSION SHALL BE DEEMED COMPLIANCE WITH THIS MULCHING REQUIREMENT. METHOD AND APPLICATION FOR MULCHING SHALL BE IN ACCORDANCE WITH SECTION 4 OF THE NEW JERSEY STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL.

DUST CONTROL:

DUST CONTROL SHALL BE IN ACCORDANCE WITH SECTION 16 OF THE NEW JERSEY STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL. THE FOLLOWING METHODS SHALL BE USED FOR CONTROLLING DUST:

- APPLICATION OF MULCH AND/OR VEGETATIVE COVER AS SPECIFIED IN "SEEDING, LIMING, FERTILIZING AND MULCHING RATES" ON THIS SHEET.
- TILLAGE TO ROUGHEN THE SURFACE AND BRING CLODS TO THE SURFACE. THIS IS A TEMPORARY EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. PROCEED FROM THE WINDWARD SIDE OF THE SITE WITH CHISEL TOOTH PLOWS, 12 INCHES APART, OR SPRING TOOTH HARROWS.
- SPRINKLING OF SITE UNTIL SURFACE IS WET. SPRINKLING SHOULD BE DONE PERIODICALLY THROUGHOUT THE CONSTRUCTION PERIOD AS REQUIRED TO CONTROL DUST.

TOPSOILING:

TOPSOILING SHALL BE IN ACCORDANCE WITH SECTION 8 OF THE NEW JERSEY STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL.

- TOPSOIL SHOULD BE FRAGILE, LOAMY, FREE OF DEBRIS, OBJECTIONABLE WEEDS AND STONES, AND CONTAIN NO TOXIC SUBSTANCE OR ADVERSE CHEMICAL OR PHYSICAL CONDITION THAT MAY BE HARMFUL TO PLANT GROWTH.
- A UNIFORM APPLICATION TO A DEPTH OF 5 INCHES (UNSETTLED) IS RECOMMENDED. SOILS WITH A PH OF 4.0 OR LESS OR CONTAINING IRON SULFIDE SHALL BE COVERED WITH A MINIMUM DEPTH OF 12 INCHES OF SOIL HAVING A PH OF 5.0 OR MORE, IN ACCORDANCE WITH THE STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOIL (SECTION 1 OF THE NEW JERSEY STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL).

DEWATERING:

DEWATERING SHALL BE IN ACCORDANCE WITH SECTION 14 OF THE NEW JERSEY STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL. DURING CONSTRUCTION, EXCAVATED FACILITIES NEED TO BE DEWATERED TO FACILITATE OR COMPLETE THE CONSTRUCTION PROCESS. THE WATER PUMPED OUT OF THE EXCAVATED AREAS CONTAIN SEDIMENTS THAT MUST BE REMOVED PRIOR TO DISCHARGING TO RECEIVING BODIES OF WATER.
FIELD PLACEMENT OF DEWATERING DEVICE AND DISCHARGE LOCATION MUST BE APPROVED BY THE DISTRICT SOIL EROSION CONTROL INSPECTOR, PRIOR TO THE COMMENCEMENT OF DEWATERING ACTIVITIES.

DEVELOPMENT SCHEDULE:

- CONSTRUCTION IS SCHEDULED FOR THE WINTER 2022.

DESIGNED	DRAWN	CHECKED	DATE SIGNED	DATE	REVISIONS	NO.	DATE
JOSEPH A. MANCINI							

SOIL EROSION & SEDIMENT CONTROL DETAILS

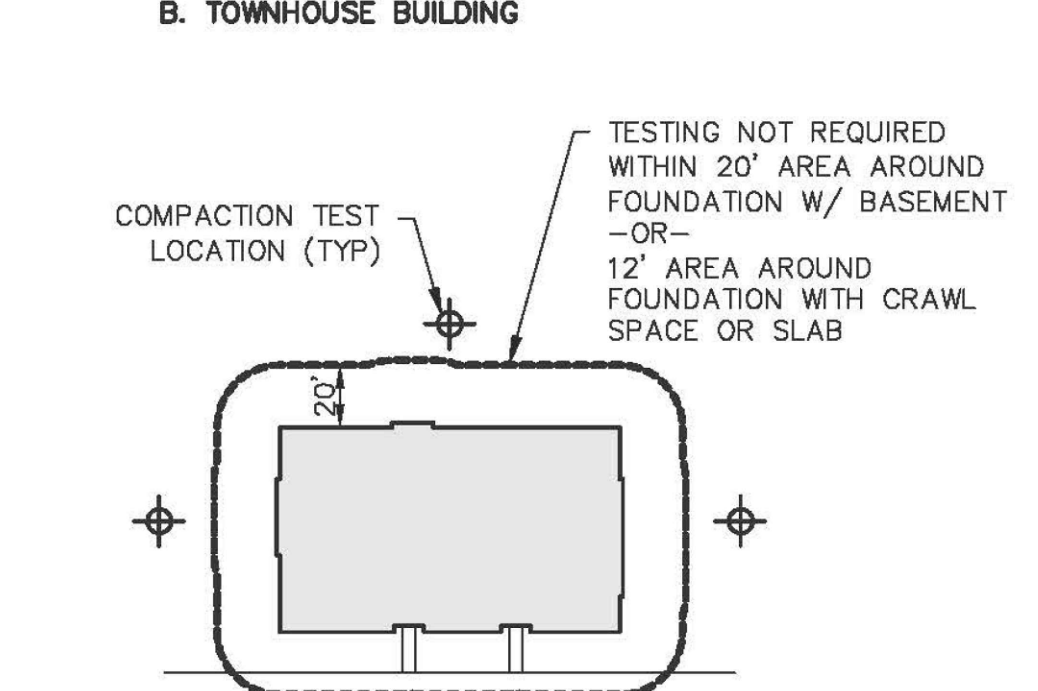
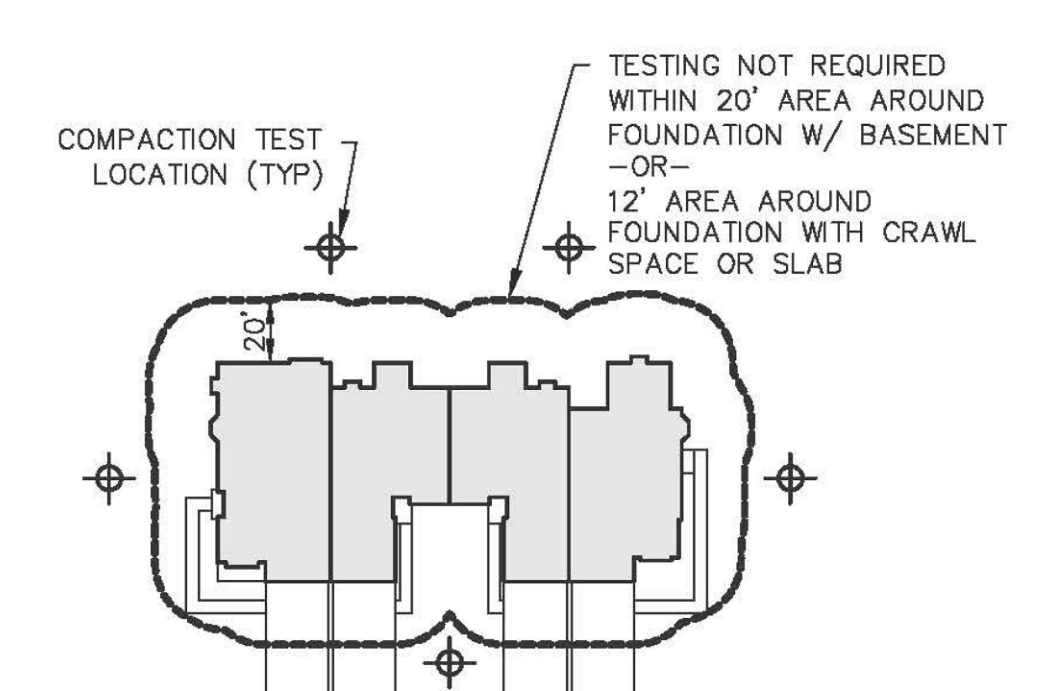
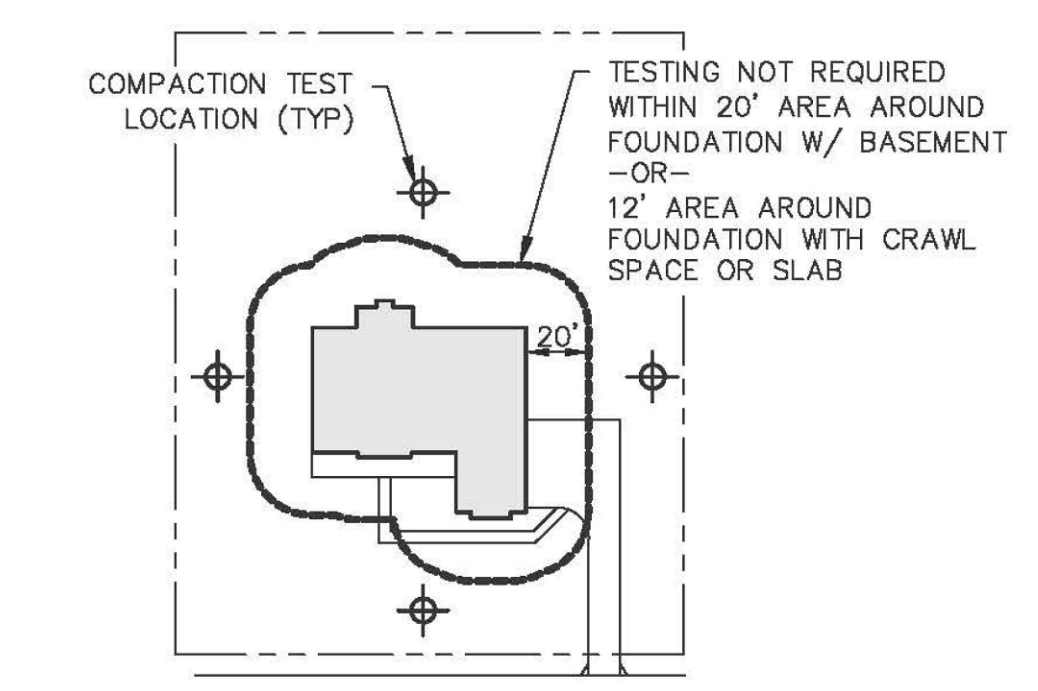
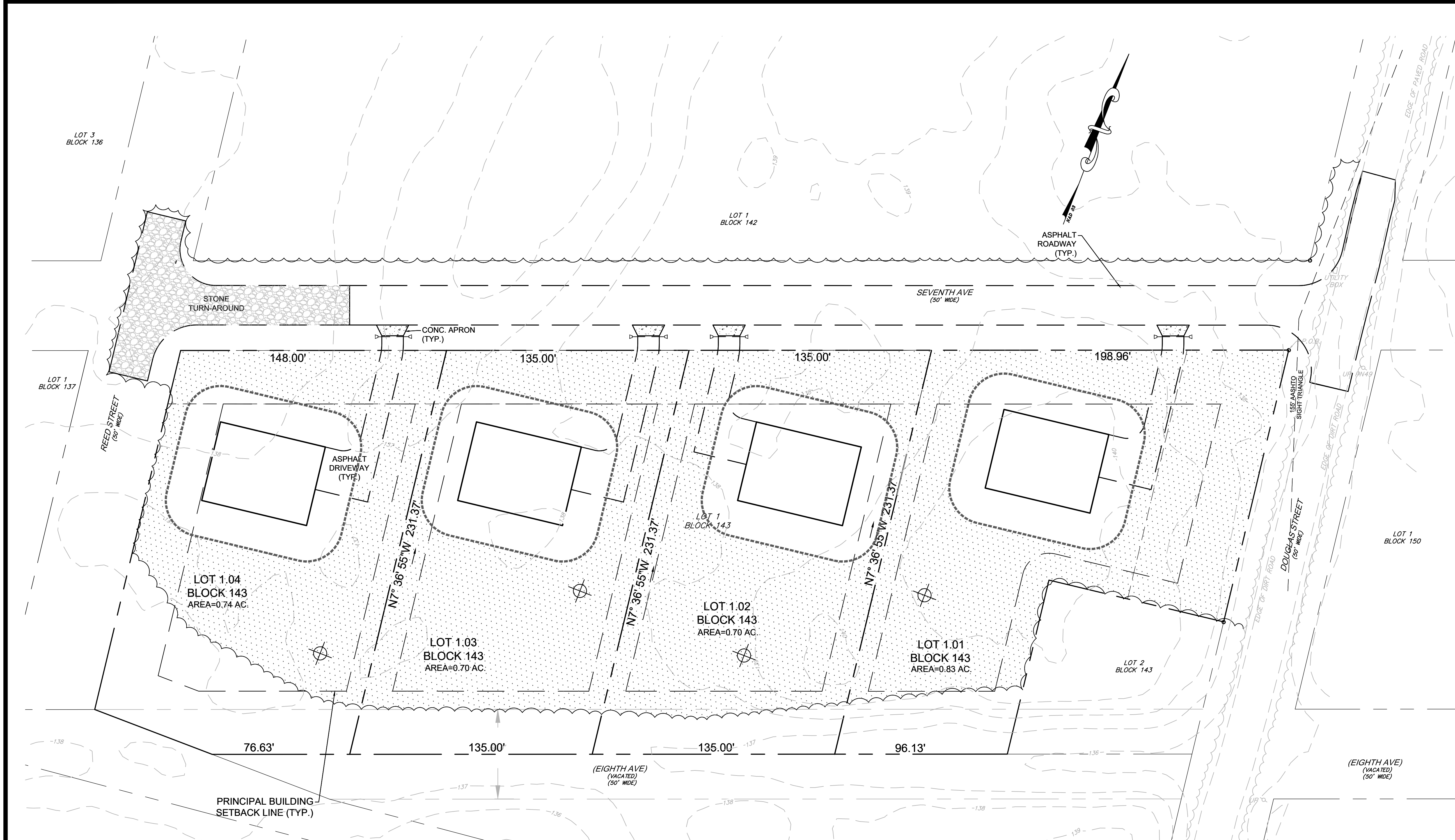
7TH AVENUE AND DOUGLAS STREET BLOCK 143, LOT 1 ELK TOWNSHIP GLOUCESTER COUNTY, NEW JERSEY

TRISTATE ENGINEERING AND SURVEYING, PC

P.O. BOX 1304 BLACKWOOD, NJ 08012
OFFICE: (856) 677-8742 FAX: (856) 879-2024
www.tristatecivil.com

DATE: 01/19/2024	SCALE: AS SHOWN	PROJECT NO: 23-105 CHENG	SHEET: 6 OF 9
------------------	-----------------	--------------------------	---------------


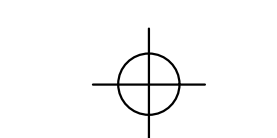
Date: Feb 06, 2024, 12:46pm





















































NOTE: SOIL COMPACTION TESTING LOCATIONS IDENTIFIED ARE RECOMMENDED LOCATIONS FOR GRADED/DISTURBED AREAS WITHIN THE VICINITY OF BUILDINGS AND STRUCTURES OR ON INDIVIDUAL LOTS. FOR GRADED/DISTURBED AREAS WITHIN OPEN OR COMMON SPACES, SOIL COMPACTION TESTING SHALL BE PERFORMED IN ACCORDANCE WITH THE FREQUENCY LISTED IN THE LEGEND (THIS SHEET).

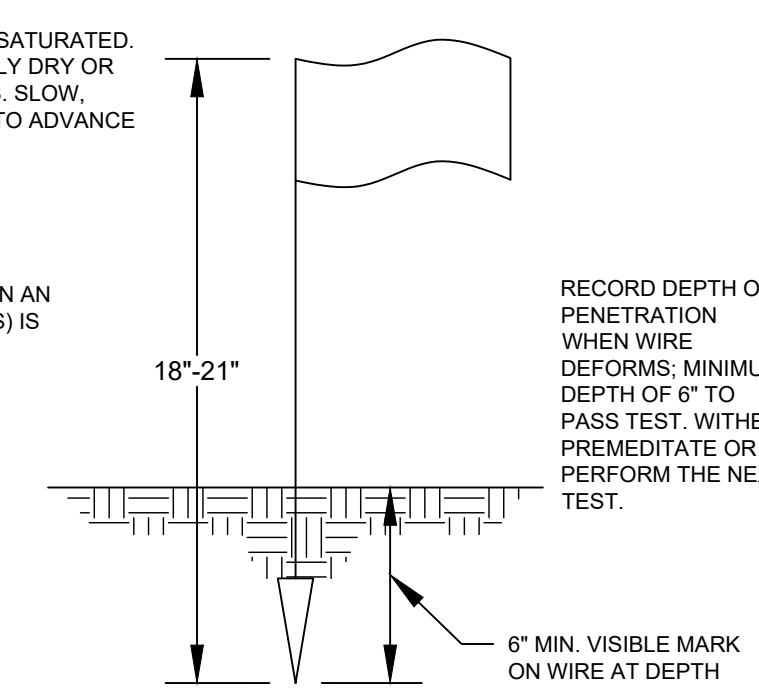
TYPICAL SOIL COMPACTION TESTING LOCATIONS
N.T.S.

LEGEND

-  SOIL COMPACTION TESTING AREAS
-  RECOMMENDED SOIL COMPACTION TEST LOCATION (APPROX. 1 PER .5 ACRES)

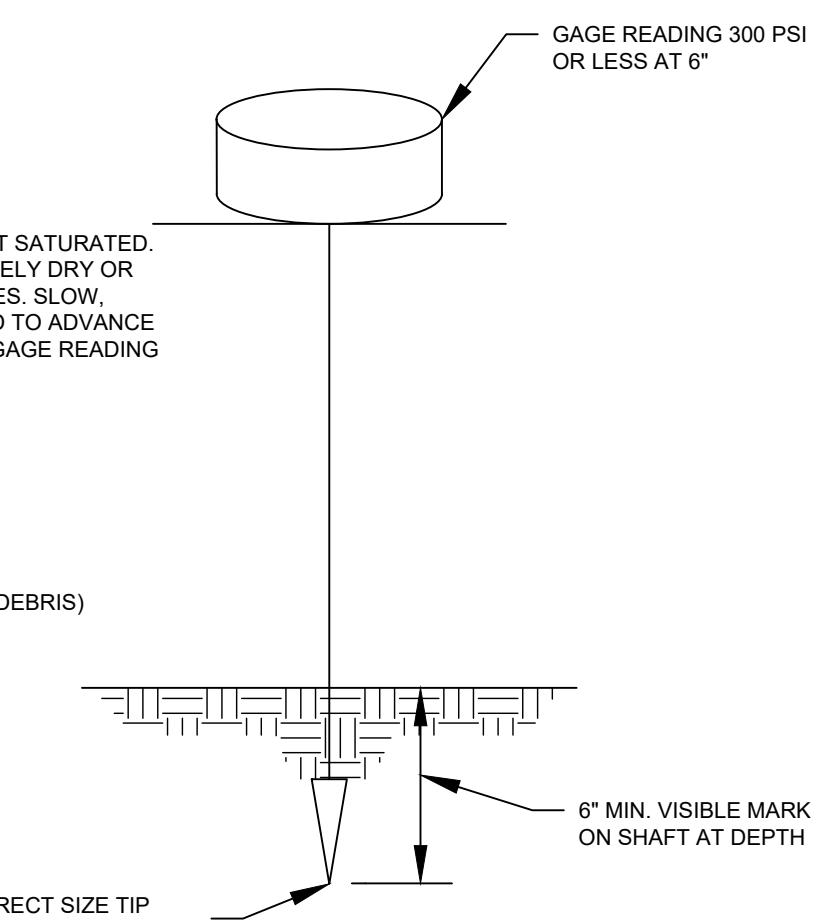
EXISTING	PROPOSED
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	

NOTE: SOIL SHOULD BE MOIST BUT NOT SATURATED. DO NOT TEST WHEN SOIL IS EXCESSIVELY DRY OR SUBJECT TO FREEZING TEMPERATURES. SLOW, STEADY DOWNWARD PRESSURE USED TO ADVANCE THE WIRE.

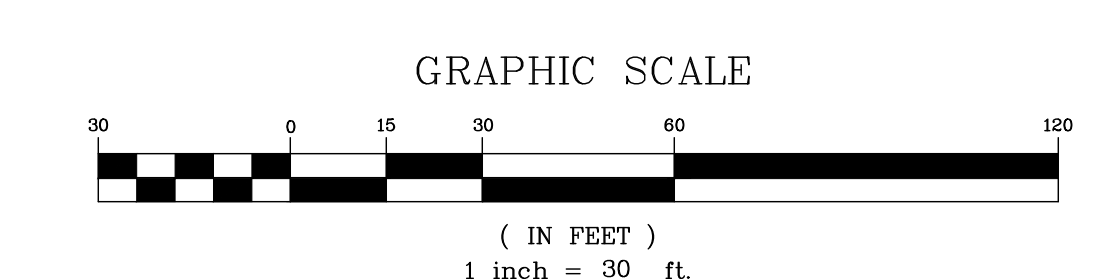



PROBING WIRE TEST
15.5 GA STEEL WIRE (SURVEY FLAG)
N.T.S.

NOTE: SOIL SHOULD BE MOIST BUT NOT SATURATED. DO NOT TEST WHEN SOIL IS EXCESSIVELY DRY OR SUBJECT TO FREEZING TEMPERATURES. SLOW, STEADY DOWNWARD PRESSURE USED TO ADVANCE THE PROBE. MEASURE DEPTH WHEN GAGE READING REACHED 300 PSI OR DEPTH 6".

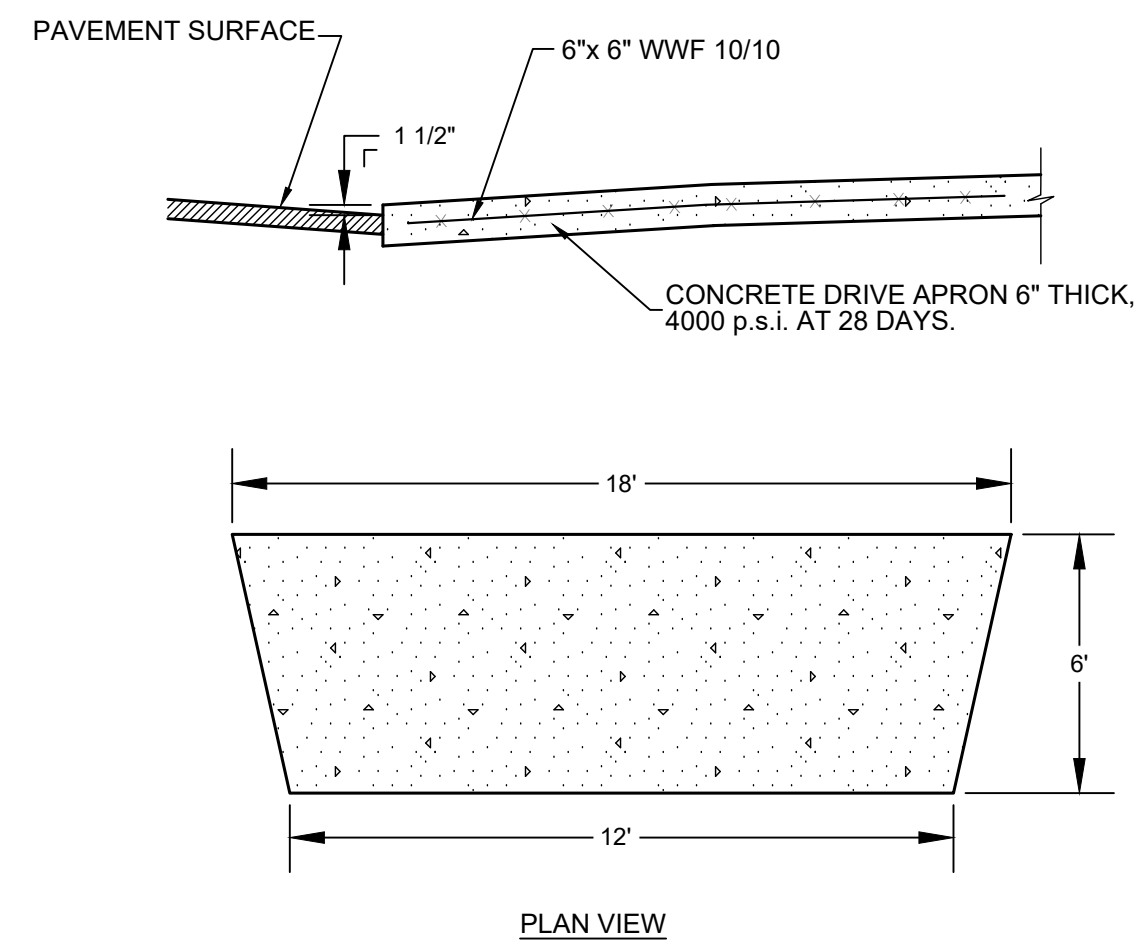


HANDHELD SOIL PENETROMETER TEST
N.T.S.

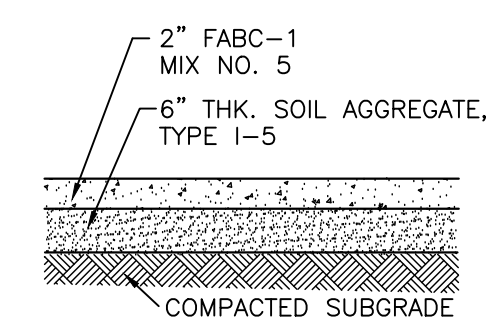


DESIGNED: JK	DRAWN: DC	CHECKED: JAM	DATE SIGNED:	NO.:	DATE:
SOIL PREPARATION PLAN					
7TH AVENUE AND DOUGLAS STREET					
BLOCK 143, LOT 1					
ELK TOWNSHIP					
GLOUCESTER COUNTY, NEW JERSEY					
TRISTATE ENGINEERING AND SURVEYING, PC					
					
P.O. BOX 1304 BLACKWOOD, NJ 08012 OFFICE: (856) 677-8742 FAX: (856) 879-2024 www.tristatecivil.com					
New Jersey Professional Engineer Lic. No. 24GE04579300		SCALE: 1" = 30'		DATE: 01/19/2024	
PROJECT NO. 23-105 CHENG		SHEET: 7		OF 9	

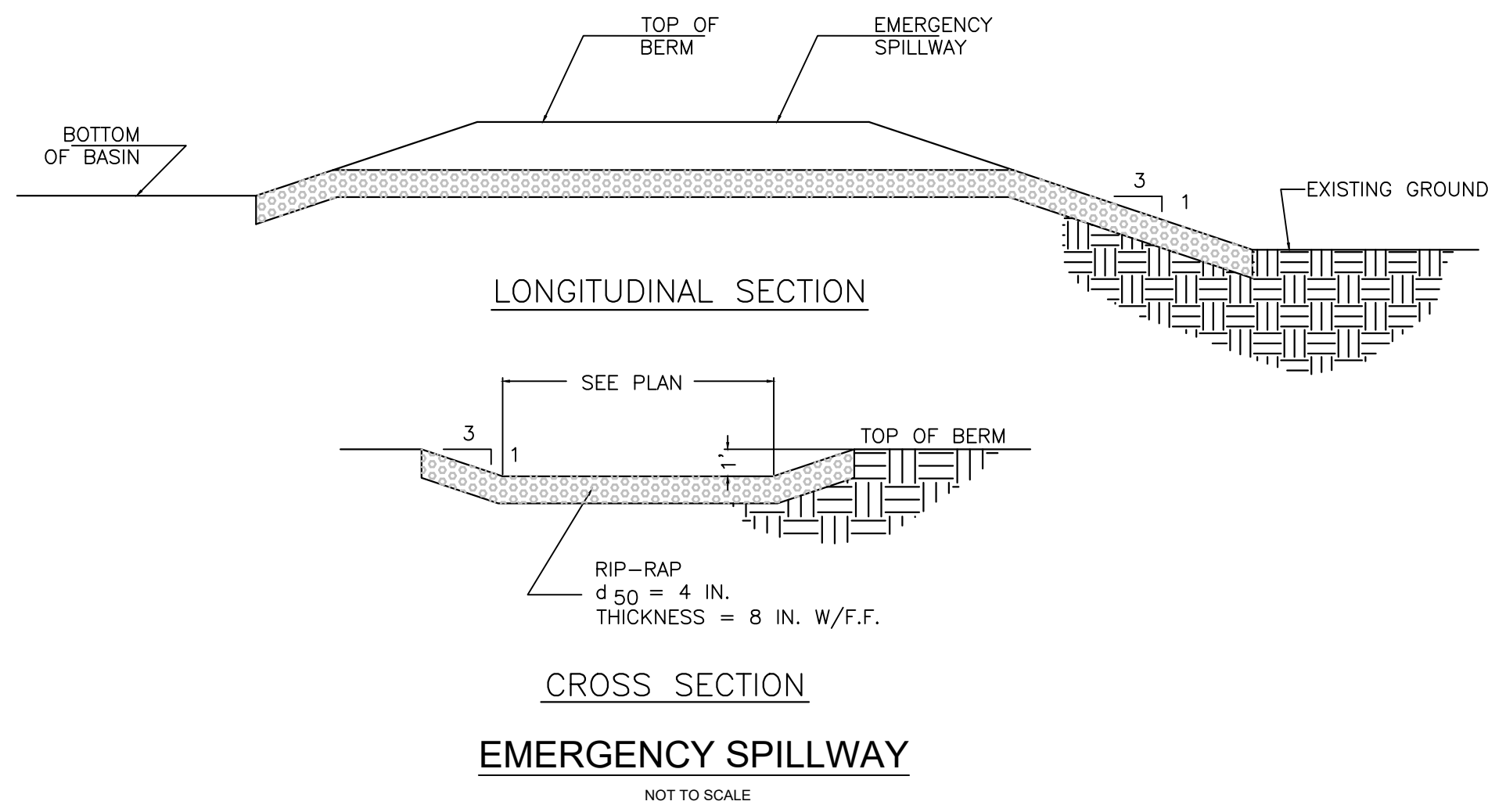
Date: Feb 05, 2024, 12:40pm



DRIVEWAY APRON DETAIL
NOT TO SCALE

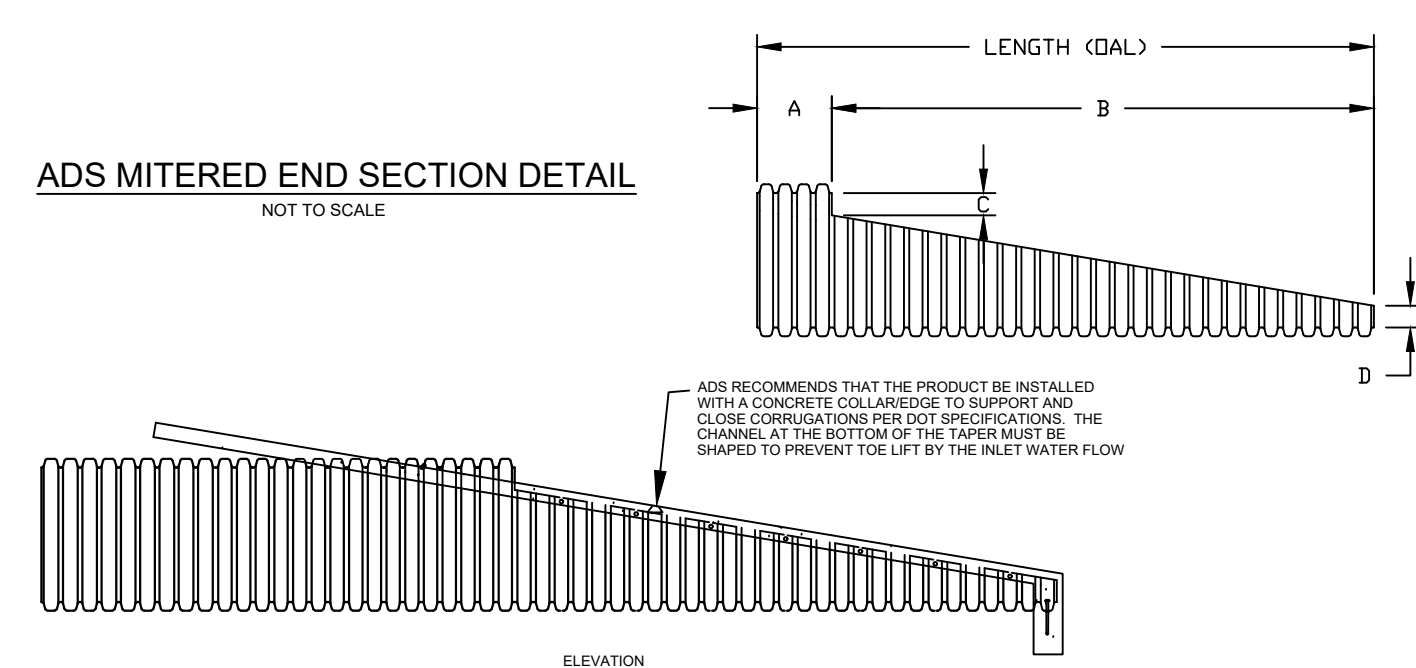


ASPHALT DRIVEWAY CROSS SECTION DETAIL
N.T.S.

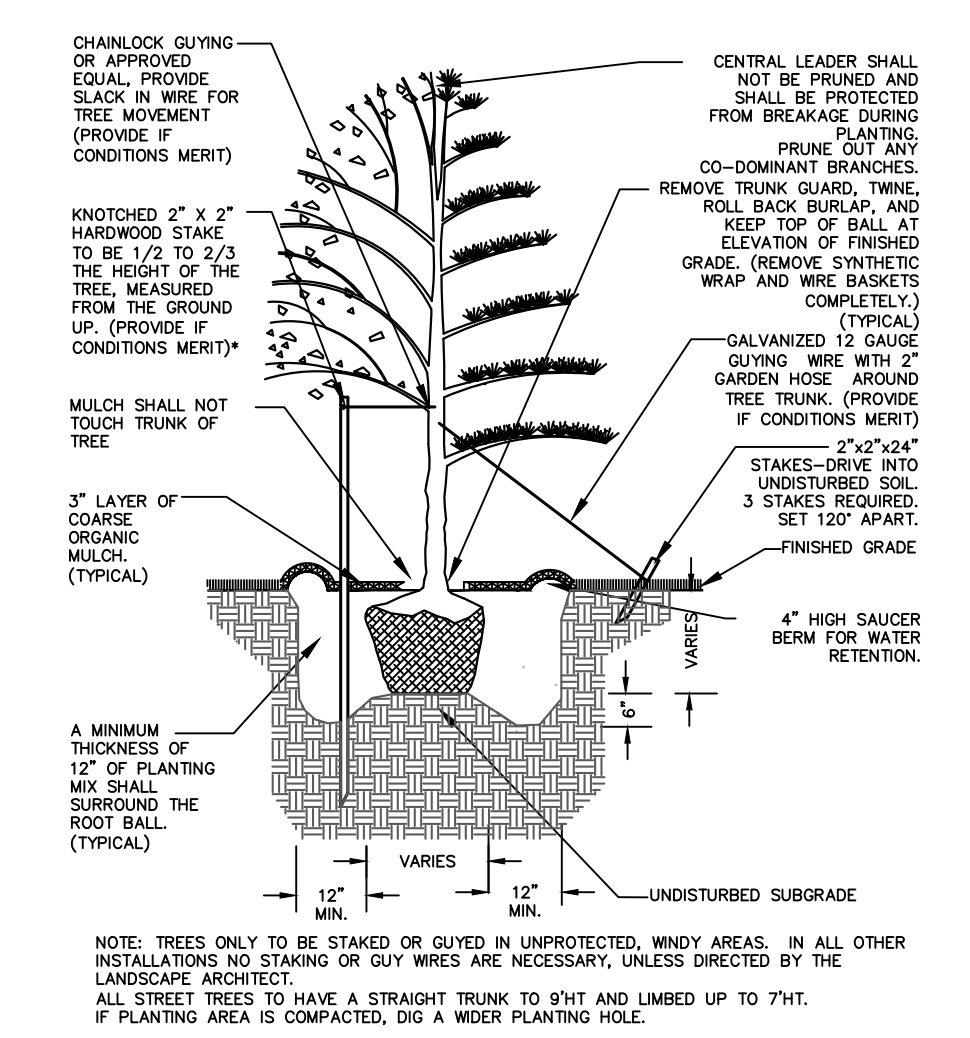


EMERGENCY SPILLWAY
NOT TO SCALE

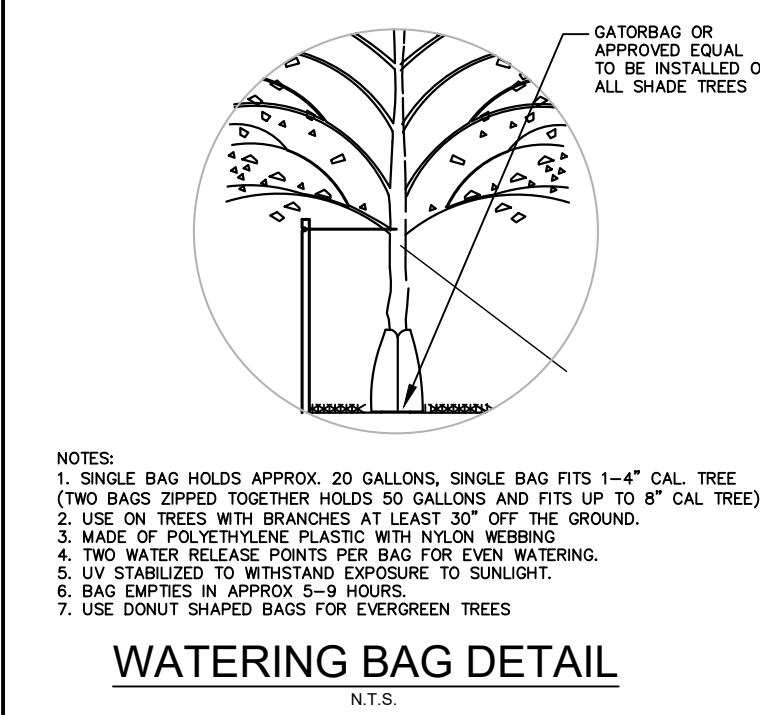
PIPE DIAMETER	3:1 SLOPE				4:1 SLOPE				6:1 SLOPE				
	A	B	C	D	A	B	C	D	A	B	C	D	
12"	8'	18'	3'	3'	26'	8'	24'	3'	3'	32'	8'	36'	3'
18"	12'	27'	4'	4'	39'	12'	36'	4'	4'	48'	12'	54'	4'



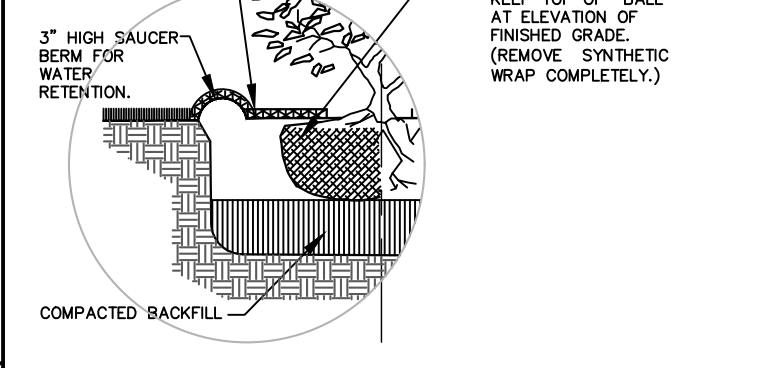
ADS MITERED END SECTION DETAIL
NOT TO SCALE



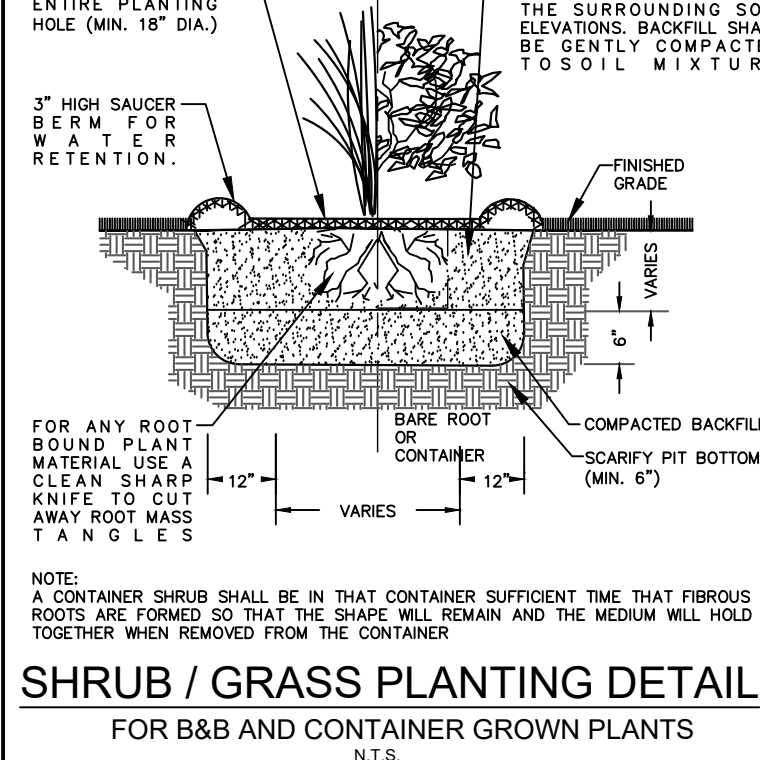
TREE PLANTING DETAIL
SHADE AND EVERGREEN TREES
N.T.S.



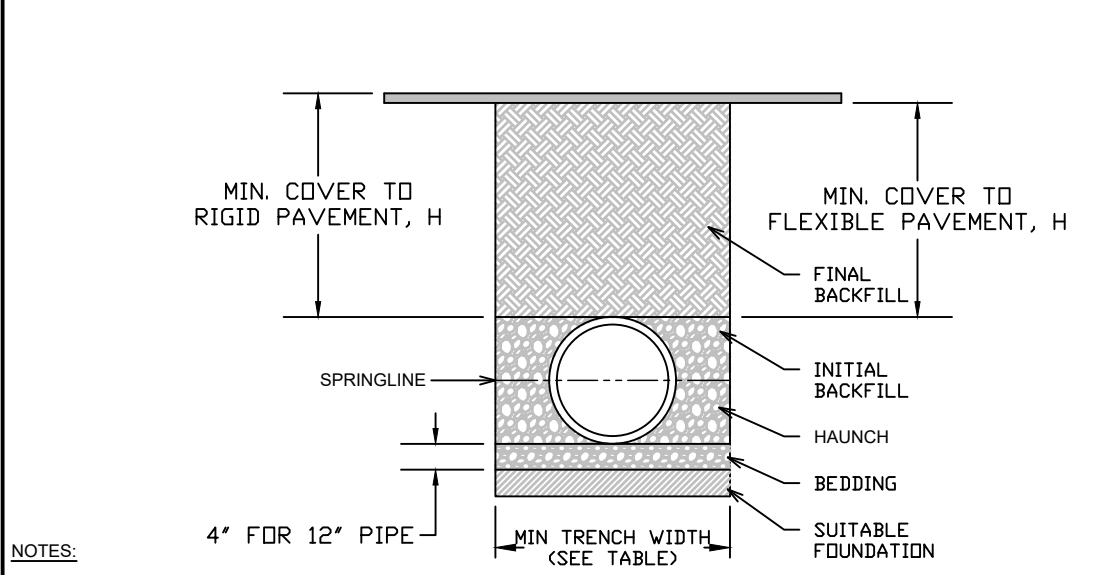
WATERING BAG DETAIL
N.T.S.



FOR B&B SHRUB PLANTINGS



SHRUB / GRASS PLANTING DETAIL
FOR B&B AND CONTAINER GROWN PLANTS
N.T.S.



N-12 HP STORM TRENCH INSTALLATION DETAIL

NOTES:
1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, 'STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS'. LATEST EDITION, WITH THE EXCEPTION THAT THE INITIAL BACKFILL MAY EXTEND TO THE CROWN OF THE PIPE. SOIL CLASSIFICATIONS ARE PER THE LATEST VERSION OF ASTM D2321. CLASS I/II MATERIALS (MH, CH) AS DEFINED IN PREVIOUS VERSIONS OF ASTM D2321 ARE NOT APPROPRIATE BACKFILL MATERIALS.
2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II, III, OR IV. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. COMPACTION SHALL BE SPECIFIED BY THE ENGINEER IN ACCORDANCE WITH TABLE 3 FOR THE APPLICABLE FILL HEIGHTS LISTED. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 12"-24" (300mm-600mm) DIAMETER PIPE, 6" (150mm) FOR 30"-60" (750mm-900mm) DIAMETER PIPE. THE MIDDLE 1/3 BENEATH THE PIPE INVERT SHALL BE LOOSELY PLACED. PLEASE NOTE, CLASS IV MATERIAL HAS LIMITED APPLICATION AND CAN BE DIFFICULT TO PLACE AND COMPACT. USE ONLY WITH THE APPROVAL OF A SOIL EXPERT.
5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II, III, OR IV IN THE PIPE ZONE EXTENDING TO THE CROWN OF THE PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION. COMPACTION SHALL BE SPECIFIED BY THE ENGINEER IN ACCORDANCE WITH TABLE 3 FOR THE APPLICABLE FILL HEIGHTS LISTED. PLEASE NOTE, CLASS IV MATERIAL HAS LIMITED APPLICATION AND CAN BE DIFFICULT TO PLACE AND COMPACT. USE ONLY WITH THE APPROVAL OF A SOIL EXPERT.
6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" (300mm) FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOTATION. FOR TRAFFIC APPLICATIONS, CLASS I OR II MATERIAL COMPACTED TO 90% SPD AND CLASS III COMPACTED TO 90% SPD IS REQUIRED. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" (300mm) UP TO 48" (1200mm) DIAMETER PIPE AND 24" (600mm) COVER FOR 60" (1500mm) DIAMETER PIPE. MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT. CLASS IV MATERIALS ARE NOT RECOMMENDED AS BACKFILL FOR TRAFFIC APPLICATION WITH LESS THAN 72" (1830mm) OF COVER MEASURED FROM TOP OF PIPE TO TOP OF SURFACE.

TABLE 1. RECOMMENDED MINIMUM TRENCH WIDTHS

PIPE DIAM.	MIN TRENCH WIDTH
12" (300mm)	30" (750mm)

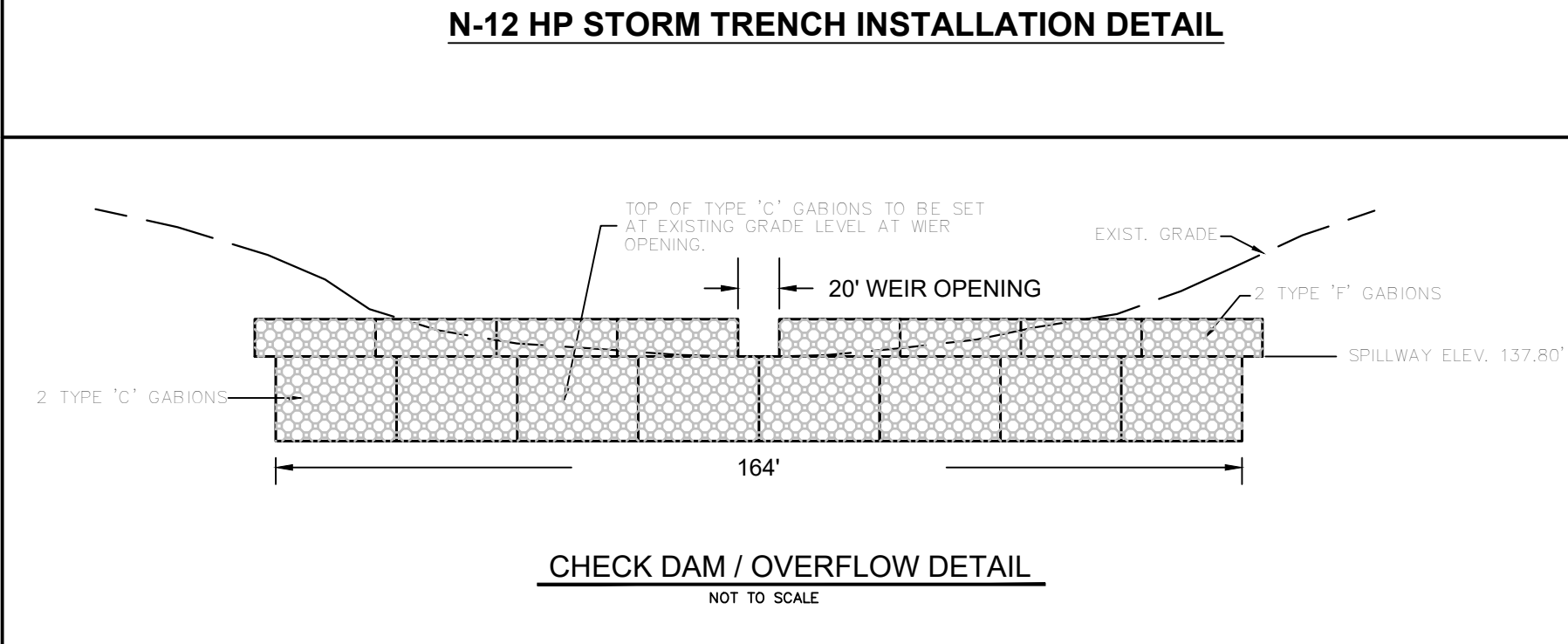
TABLE 2. MINIMUM RECOMMENDED COVER BASED ON SURFACE LIVE LOADING CONDITION (75% LIVE LOAD)

PIPE DIAM.	H-20	HEAVY CONSTRUCTION
12"-48" (300mm - 1200mm)	12" (300mm)	48" (1200mm)

TABLE 3. MAXIMUM COVER FOR ADS N-12 HP PIPE

PIPE DIAM.	CLASS I		CLASS II		CLASS III		CLASS IV	
	95%	85%	90%	85%	90%	85%	85%	
12" (300mm)	20	21	18	21	17	15	14	
18" (450mm)	40	42	36	42	36	30	28	

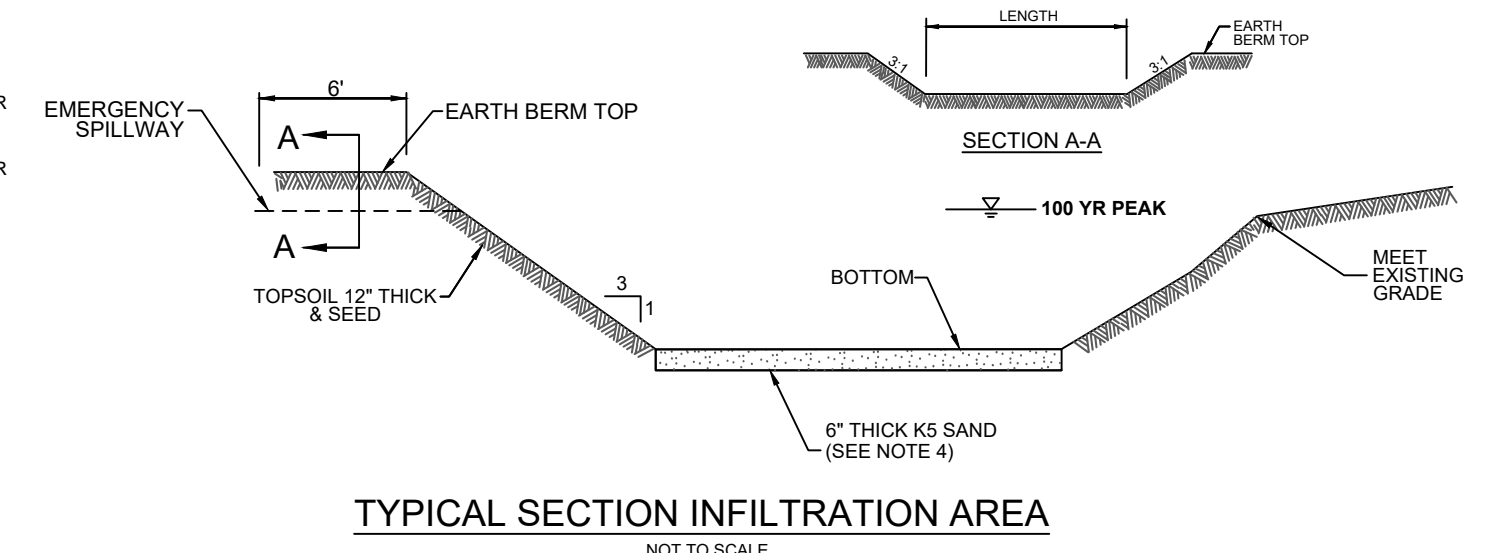
FILL HEIGHT TABLE GENERATED USING AASHTO SECTION 12 LOAD RESISTANCE FACTOR DESIGN (LRFD) PROCEDURE WITH THE FOLLOWING ASSUMPTIONS:
HEIGHT OF WATER (HW) = CROWN +1'
UNIT WEIGHT OF SOIL (γ) = 120 PCF



CHECK DAM / OVERFLOW DETAIL
NOT TO SCALE

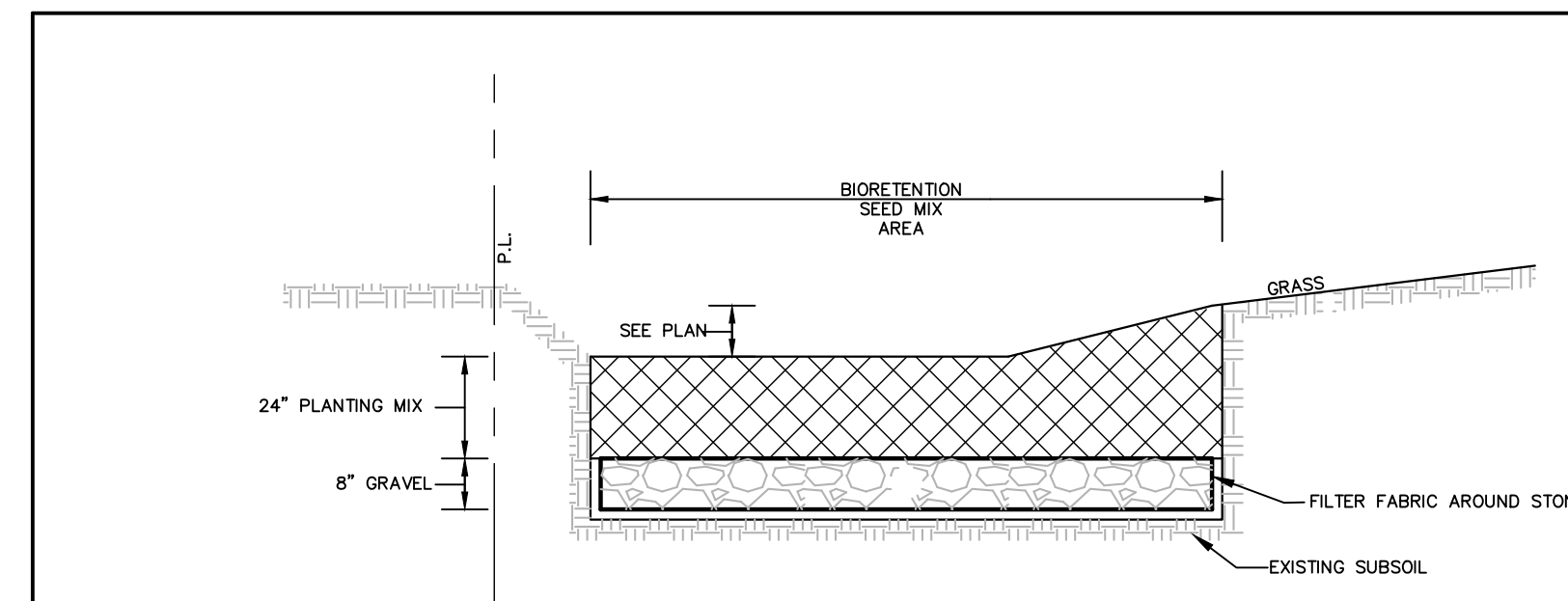
NOTES:
1. FILL MATERIAL IN INFILTRATION BASIN SHALL BE INSPECTED AND APPROVED BY A SOILS ENGINEER LICENSED IN STATE OF NEW JERSEY.
2. EARTHWORK OPERATIONS IN THE INFILTRATION BASIN TO BE PERFORMED WITH MEANS AND METHODS NECESSARY TO LIMIT COMPACTION OF EXISTING OR PROPOSED MATERIALS TO ACCEPTABLE LEVELS.
3. DURING CONSTRUCTION, PRECAUTIONS SHOULD BE TAKEN TO PREVENT BOTH SUBGRADE SOIL COMPACTION AND SEDIMENT CONTAMINATIONS.
EXCAVATION EQUIPMENT SHOULD BE PLACED OUTSIDE THE LIMITS OF CONSTRUCTION. LIGHT WEIGHT, RUBBER-TIRED EQUIPMENT SHALL BE USED WHERE POSSIBLE. CONSTRUCTION SHALL FOLLOW MEASURES AS STATED IN THE NEW JERSEY BMP MANUAL, CHAPTER 9.5.
4. KS SAND SHALL MEET TEXTURAL AND PERMEABILITY SPECIFICATIONS OF A KS SOL AS PROVIDED IN NAC 7.9A, APPENDIX A, FIGURE 6 AND SHALL BE CERTIFIED TO MEET THESE SPECS BY A PROFESSIONAL ENGINEER AND SUBMITTED TO THE TOWNSHIP ENGINEER FOR APPROVAL.

INF. AREA	ESHWT	BOTTOM	100-YEAR PEAK	OVERFLOW	BERM/TOP	LENGTH
5	132.92	136.00	137.58	137.80	138.00	20'
6	132.92	135.00	135.75	N/A	136.00	N/A



TYPICAL SECTION INFILTRATION AREA
NOT TO SCALE

Rain Garden Seed Mix
As supplied by Pinelands Nursery
Native seed mix ZXMIXRNG
Perform a soil test prior to seeding and provide a copy to your seed supplier. Adjust mixture as needed. Prepare ground for seed installation, spread topsoil & any soil additives recommended by seed supplier, rake clean and uniform, remove all debris and stones larger than 1/2 inch diameter, do not fertilize, apply & spread seed using a mechanical drop spreader, apply straw mulch and hand water.
Recommended Seeding Rate: 15 lbs. per acre / straw mulch 1.5tons/acre. Botanical Name & % of Mix (or approved equal)
Asclepias incarnata (Swamp milkweed) 0.30%
Baptisia australis (Blue wild indigo) 0.50%
Carex lupulina (Hop sedge) 1.00%
Carex lurida (Shallow sedge) 6.00%
Carex stricta (Common tussock sedge) 2.00%
Carex vulpinoidea (Fox sedge) 10.00%
Chamaecrista fasciculata (Partridge pea) 3.00%
Coreopsis lanceolata (Lanceleaf tickseed) 2.00%
Echinacea purpurea (Purple coneflower) 5.00%
Elymus virginicus (Virginia wild-rye) 19.00%
Eupatorium perfoliatum (Bonaset) 1.00%
Helianthus autumnalis (Sneezeweed) 2.00%
Helopsis helianthoides (False sunflower) 0.45%
Hibiscus moscheutos (Swamp rose mallow) 1.00%
Iris versicolor (Blue-flag iris) 0.25%
Juncus effusus (Soft rush) 2.00%
Lobelia siphilitica (Blue lobelia) 1.00%
Pycnanthemum incanum (hoary mountain mint) 1.00%
Pycnanthemum tenuifolium (Slender mountain mint) 1.00%
Rudbeckia hirta (Black-eyed Susan) 1.00%
Schizachyrium scoparium (Little bluestem) 28.00%
Solidago juncea (Early goldenrod) 1.00%
Solidago nemoralis (Gray goldenrod) 2.00%
Solidago sempervirens (Seaside goldenrod) 1.00%
Symphyotrichum novae-angliae (New England aster) 2.00%
Symphyotrichum novi-belgii (New York aster) 2.00%
Verbena hastata (Blue vervain) 4.00%
Zizia aurea (Golden Alexander) 0.50%



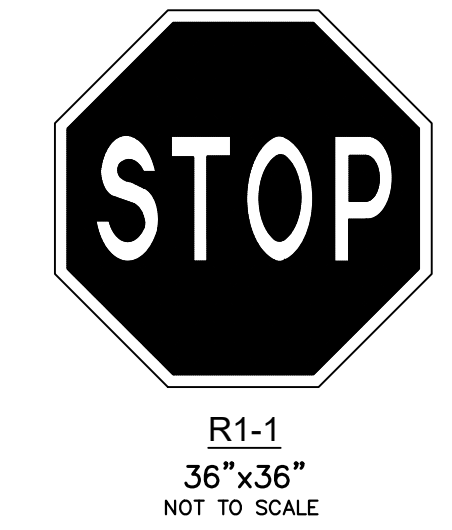
TYP. SECTION BIOFILTRATION (RAINGARDEN) AREA
N.T.S.

BIORETENTION SEED NOTES

SEE THE 'SOIL EROSION AND SEDIMENT CONTROL NOTES & DETAIL S' PLAN FOR TEMPORARY ACTIONS PRIOR TO THE IMPLEMENTATION OF THE BIORETENTION AREA SEEDING.
THE BASE AND SIDE SLOPES OF THE BIORETENTION AREAS ARE TO BE SEEDED WITH THE SPECIFIED GRASS SEED MIXES, AND WITH NATIVE VEGETATION SHOWN ON PLANS. SEED MIX SHOWN IS IN ADDITION TO THAT WHICH IS REQUIRED FOR PERMANENT STABILIZATION AS PER CURRENT NJ SOIL EROSION SEDIMENT CONTROL STANDARDS.
MICRO BIORETENTION PLANTING MIX
1. THE PLANTING MIX FOR THE MICRO BIORETENTION AREAS SHALL BE WELL-MIXED COMPOSITION OF TOPSOIL, COMPOST AND SAND WITH THE FOLLOWING RATIOS BY VOLUME: 3 PARTS TOPSOIL, 1 PART COMPOST, 1 PART SAND.
2. TOPSOIL SHALL BE A CLEAN, FRIABLE, LOAM TOPSOIL, CONTAINING NO ORGANIC MATTER, BRICKS OR OTHER DEBRIS, OR TOXIC MATERIALS. CONTRACTOR SHALL SUBMIT RESULTS OF A TOPSOIL TEST TO THE PROJECT ADMINISTRATOR FOR REVIEW.
3. COMPOST SHALL BE MATURE STABLE AND WEED FREE AND PRODUCED BY AEROBIC DECOMPOSITION OF ORGANIC MATTER. THIS PRODUCT MAY NOT CONTAIN ANY VISIBLE BE REFUSE OR OTHER PHYSICAL CONTAMINANTS SUBSTANCES TOXIC TO PLANTS OR OVER 1% SAND, SILT, CLAY OR ROCK MATERIAL BY DRY WEIGHT. THIS PRODUCT SHALL POSSESS NO OBJECTIONABLE ODORS. THIS PRODUCT SHALL MEET ALL APPLICABLE US EPA CFR TITLE 40 PART 503 STANDARDS FOR CLASS A BIOSOILS.
PHYSICAL REQUIREMENTS FOR COMPOST:
pH BETWEEN 5.8-6.5; SOLUBLE SALTS <1000; MOISTURE 30-40% WET RATE BASIS; ORGANIC MATTER 30-40% DRY WEIGHT BASIS; PARTICLE SIZE 98% PASS THROUGH 3/4" SCREEN OR SMALLER; STABILITY COE: 80% PHYSICAL CONTAMINANTS <1% DRY WEIGHT; CHEMICAL CONTAMINANTS MEET OR EXCEED US EPA CLASS A STANDARD; 40 CFR 503.13 TABLE 1 & 13 LEVELS.
4. SAND SHALL BE NATURAL OR RIVER BANK SAND FREE OF ORGANIC MATERIAL, SILT, CLAY, LOAM AND DEBRIS.

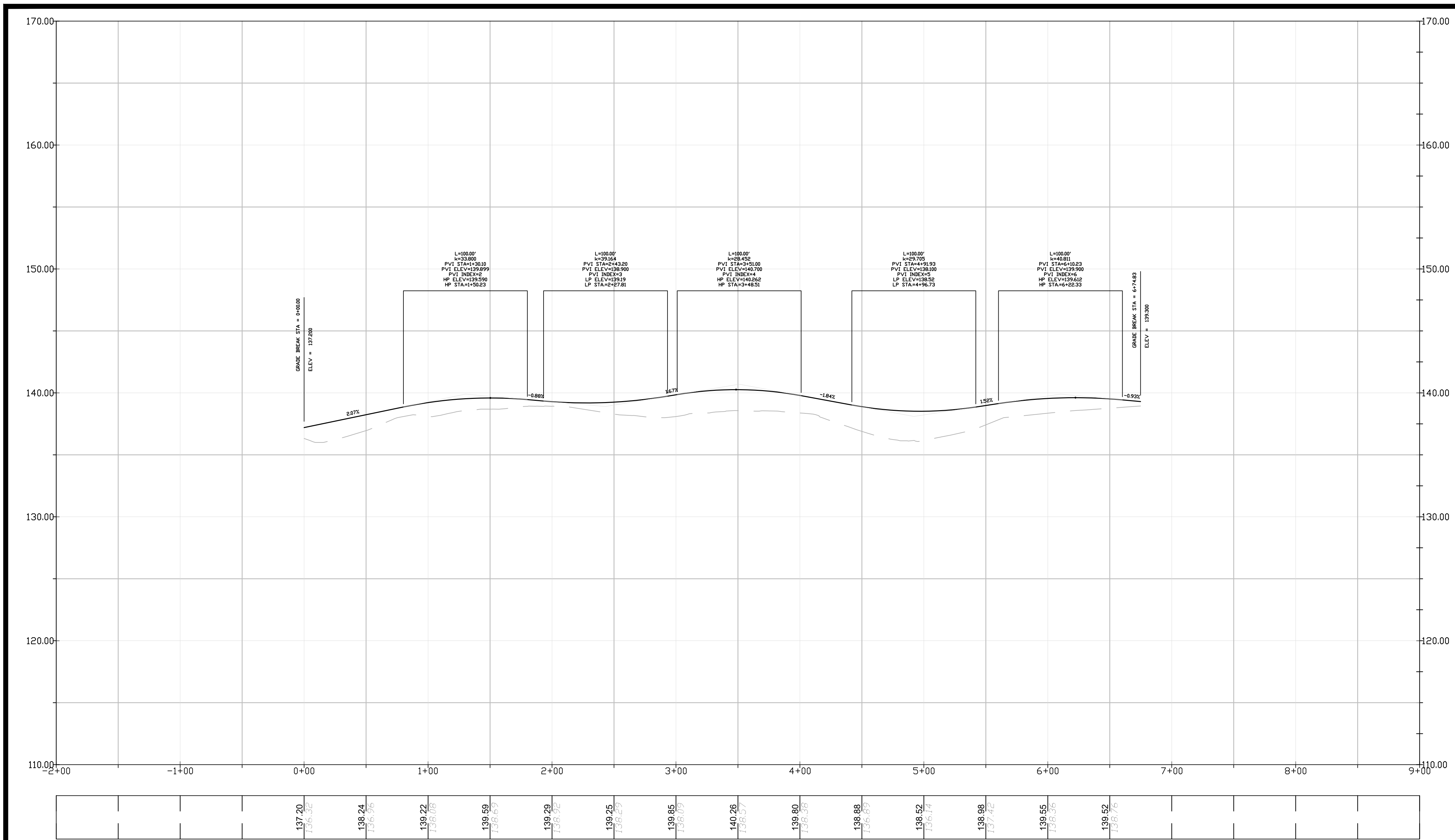
RAIN GARDEN	ESHWT	BOTTOM	100-YEAR PEAK	OVERFLOW	BERM/TOP	LENGTH
1	131.04	134.50	137.34	N/A	137.34	N/A
2	130.00	135.00	138.45	N/A	138.45	N/A
3	131.34	135.00	137.23	N/A	137.23	N/A
4	132.92	135.00	135.57	136.90	137.00	3'

Basin Slope Seed Mix
As supplied by Pinelands Nursery
Native seed mix ZXMIXBASLL or approved equal
Perform a soil test prior to seeding and provide a copy to your seed supplier. Adjust mixture as needed. Prepare ground for seed installation, spread topsoil & any soil additives recommended by seed supplier, rake clean and uniform, remove all debris and stones larger than 1/2 inch diameter, do not fertilize, apply & spread seed using a mechanical drop spreader, apply straw mulch and hand water.
Recommended Seeding Rate: 15 lbs. per acre / straw mulch 1.5tons/acre.
Botanical Name & % of Mix (or approved equal)
Andropogon gerardi (Big bluestem) 12.00%
Chamaecrista fasciculata (Partridge pea) 5.00%
Coreopsis lanceolata (Lanceleaf tickseed) 3.00%
Echinacea purpurea (Purple coneflower) 1.00%
Elymus virginicus (Virginia wild-rye) 11.00%
Eragrostis spectabilis (Purple love grass) 24.00%
Helianthus angustifolius (Swamp sunflower) 1.00%
Monarda fistulosa (Wild bergamot) 0.50%
Monarda punctata (Spotted horsemint) 3.00%
Panicum clandestinum (Deertongue) 1.00%
Panicum virgatum (Switchgrass) 3.00%
Rudbeckia hirta (Black-eyed Susan) 1.00%
Schizachyrium scoparium (Little bluestem) 10.00%
Solidago juncea (Early goldenrod) 1.00%
Solidago nemoralis (Gray goldenrod) 2.00%
Symphyotrichum laeve (Smooth aster) 2.00%
Tridens flavus (Purpletop) 19.00%
Zizia aurea (Golden Alexander) 0.50%



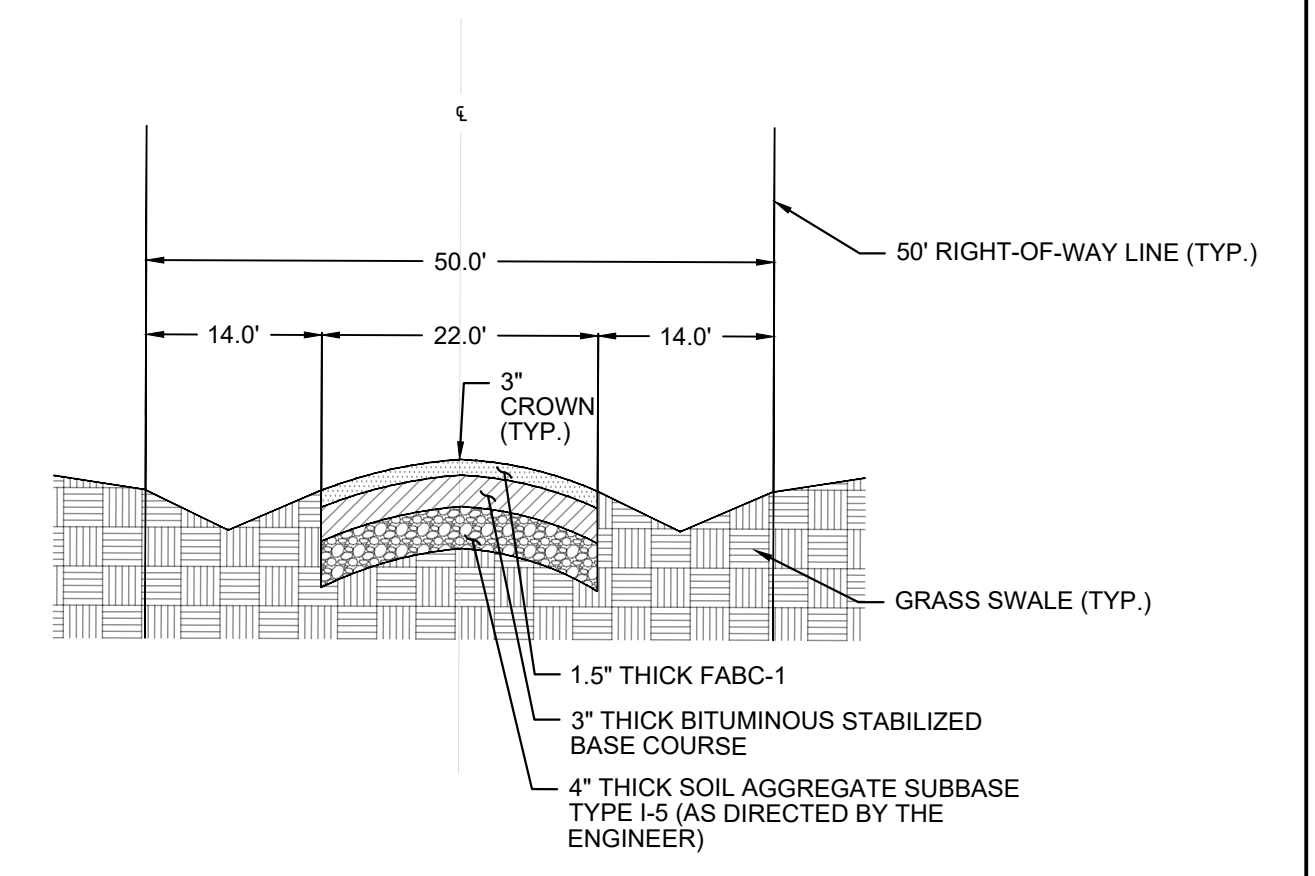
CONSTRUCTION DETAILS
7TH AVENUE AND DOUGLAS STREET
BLOCK 143, LOT 1
ELK TOWNSHIP
GLOUCESTER COUNTY, NEW JERSEY
TRISTATE ENGINEERING AND SURVEYING, PC
P.O. BOX 1304 BLACKWOOD, NJ 08012
OFFICE: (856) 677-8742 FAX: (856) 879-2024
www.tristatecivil.com

DESIGNED: JOSEPH A. MANCINI
DRAWN: DC
CHECKED: [Signature]
DATE SIGNED: [Date]
REVISIONS: [Table]
SCALE: AS SHOWN
DATE: 01/19/2024
PROJECT NO.: 23-105 CHENG
SHEET: 8 OF 9



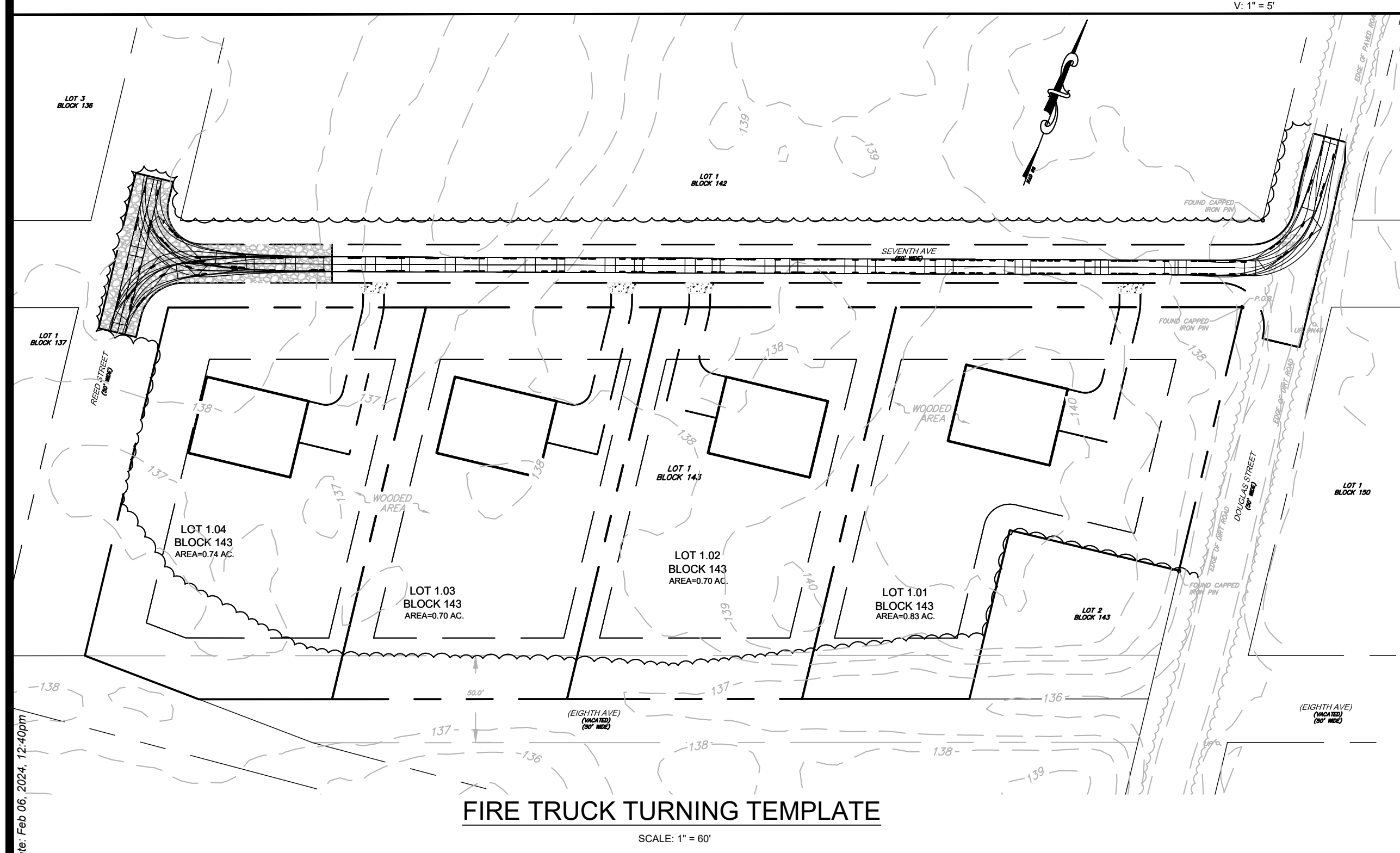
SEVENTH AVENUE PROFILE

SCALE: H: 1" = 50'
V: 1" = 5'



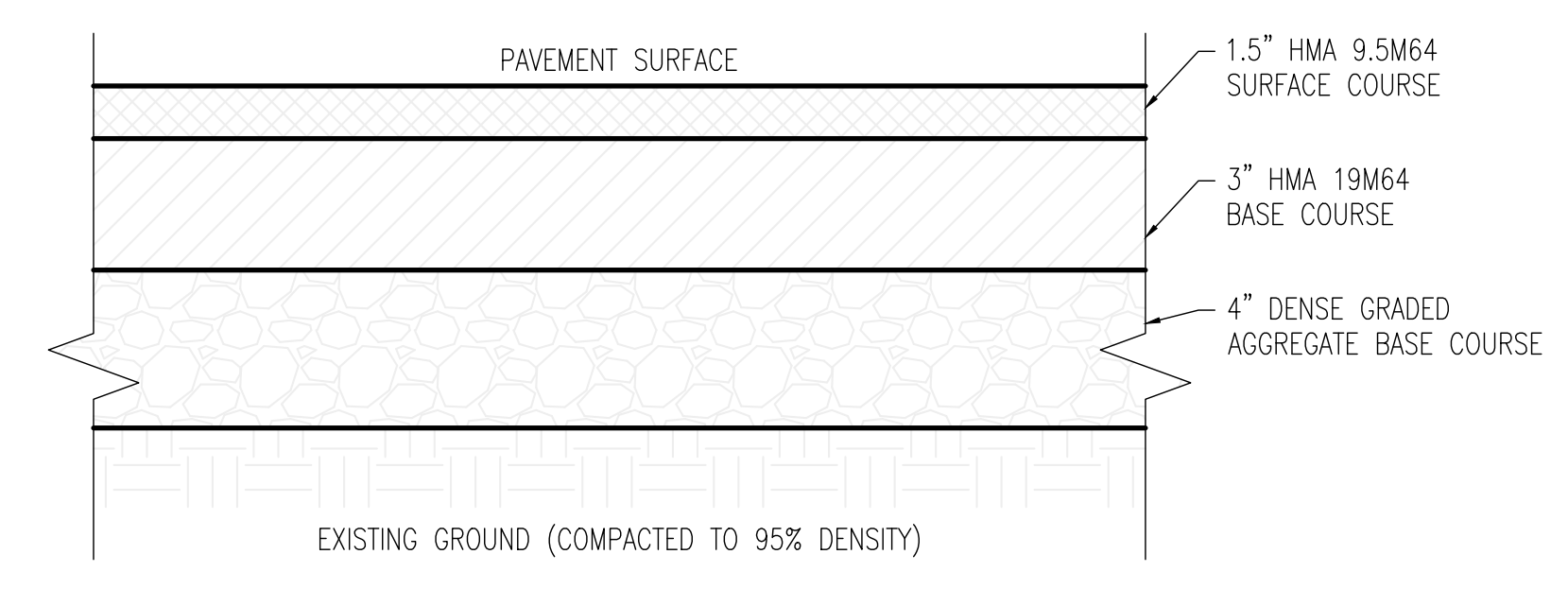
TYPICAL ROAD CROSS-SECTION

NOT TO SCALE




FIRE TRUCK TURNING TEMPLATE

SCALE: 1" = 60'



ROAD PAVING CROSS-SECTION DETAIL

NOT TO SCALE

DESIGNED: JR	DRAWN: DC	CHECKED: JAM	ROADWAY DETAILS	
DATE SIGNED:		REVISIONS:	7TH AVENUE AND DOUGLAS STREET	
		NO. DATE	BLOCK 143, LOT 1	
JOSEPH A. MANCINI			ELK TOWNSHIP	
			GLOUCESTER COUNTY, NEW JERSEY	
			TRISTATE ENGINEERING AND SURVEYING, PC	
				
			P.O. BOX 1304 BLACKWOOD, NJ 08012	
			OFFICE: (856) 677-8742 FAX: (856) 879-2024	
			www.tristatecivil.com	
New Jersey Professional Engineer Lic. No. 24GE04579300	DATE: 1/19/2024	PROJECT NO.: 23-105 CHENG	SHEET: 9 of 9	