





GENERAL NOTES:

- G-1. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN SITE EXAMINATION AND DETERMINING THE ACTUAL NATURE AND EXTENT OF EXISTING CONDITIONS PRIOR TO UNDERTAKING WORK.
- G-2. THE CONTRACTOR SHALL IMMEDIATELY INFORM THE OWNER AND OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES OR ERRORS DISCOVERED ON THE PLAN. APPARENT CONTRADICTIONS IN CONTRACT DOCUMENTS SHALL BE RESOLVED WITH THE OWNER AND ENGINEER BEFORE AFFECTED WORK PROCEEDS.
- G-3. DEVIATION FROM THESE PLANS AND NOTES WITHOUT THE PRIOR CONSENT OF THE OWNER, OWNER'S REPRESENTATIVE AND/OR THE DESIGN ENGINEER MAY BE CAUSE FOR THE WORK TO BE UNACCEPTABLE.
- G-4. UTILIZE A MOBILE SWEEPER AND WATER TRUCK DAILY FOR DUST CONTROL ALONG HAUL ROUTES AND IN AREAS MADE AVAILABLE FOR CONSTRUCTION.
- G-5. PREVENT WATER PONDING RESULTING FROM CONSTRUCTION OPERATIONS. PROMPTLY REMOVE ANY PONDING WATER TO THE SATISFACTION OF THE ENGINEER.
- G-6. CONTRACTOR SHALL WORK TO MINIMIZE EXCESS SOIL GENERATED. IF IT IS NECESSARY TO REMOVE SOIL FROM THE SITE, IT SHOULD BE DISPOSED OF AT A PERMITTED DISPOSAL FACILITY. PROVIDE THE NAME OF THE DISPOSAL FACILITY AND SOIL SAMPLE RESULTS 7 DAYS PRIOR TO HAULING SOIL. COPIES OF ALL BILLS-OF-LADING SHALL BE PROVIDED TO THE ENGINEER WITHIN 24 HOURS OF SOIL LEAVING THE SITE. CONTRACTOR SHALL ASSUME OWNERSHIP/RESPONSIBILITY OF EARTH OR CONCRETE SPOILS AND/OR DEBRIS GENERATED DURING CONSTRUCTION.
- G-7. ALL AREAS OUTSIDE THE LIMITS OF CONSTRUCTION WHICH ARE DAMAGED BY THE CONTRACTOR SHALL BE RESTORED TO THEIR ORIGINAL CONDITION TO THE SATISFACTION OF THE ENGINEER AND OWNER.
- G-8. VERIFY ALL INDICATED CONDITIONS AND DIMENSIONS IN THE FIELD BEFORE PERFORMING ANY WORK. NOTIFY THE ENGINEER OF ANY CONDITIONS OR DIMENSIONS THAT WOULD PREVENT OR HAMPER THE PERFORMANCE OF THE WORK IN ACCORDANCE WITH THE CONTRACT DRAWINGS AND SPECIFICATIONS.
- G-9. SOILS TESTING AND ON-SITE INSPECTION SHALL BE PERFORMED BY AN INDEPENDENT GEOTECHNICAL ENGINEER. THE SOILS ENGINEER SHALL PROVIDE COPIES OF TEST REPORTS TO THE CONTRACTOR AND THE OWNER, AND SHALL PROMPTLY NOTIFY THE OWNER AND THE CONTRACTOR SHOULD WORK PERFORMED BY THE CONTRACTOR FAIL TO MEET THESE SPECIFICATIONS.
- G-10. THE BOTTOM OF ALL EXCAVATIONS AND COMPACTED EARTHWORK SHALL BE INSPECTED AND APPROVED BY A REGISTERED GEOTECHNICAL ENGINEER PRIOR TO PLACING CONCRETE STRUCTURES AND/OR BACKFILLING. APPROVAL BY THE GEOTECHNICAL ENGINEER, IN WRITING, SHALL INDICATE THAT THE SOIL IS ADEQUATE TO SAFELY SUPPORT A FOUNDATION PRESSURE OF 2,000 PSF. EXCAVATION BELOW THE ANTICIPATED BOTTOMS OF FOOTINGS ALONG WITH PLACEMENT OF COMPACTED BACKFILL MAY BE REQUIRED. A GEOTECHNICAL ENGINEER IS REQUIRED TO INSPECT, TEST, AND CERTIFY TO THE COMPACTION OF ALL LOAD BEARING FILLS.
- G-11. THE CONTRACTOR SHALL PROVIDE ANY AND ALL EXCAVATION AND MATERIAL SAMPLES NECESSARY TO CONDUCT REQUIRED SOIL TESTS. ALL ARRANGEMENTS AND SCHEDULING FOR THE TESTING SHALL BE THE CONTRACTOR'S RESPONSIBILITY. THE CONTRACTOR SHALL PROVIDE TEST AND INSPECTION SERVICES. THE COSTS SHALL BE INCLUDED WITHIN THE VARIOUS ITEMS. THERE SHALL BE NO SEPARATE PAYMENT.
- G-12. THE CONTRACTOR WILL INSURE THAT POSITIVE AND ADEQUATE DRAINAGE IS MAINTAINED AT ALL TIMES WITHIN THE PROJECT LIMITS. THIS MAY INCLUDE, BUT NOT BE LIMITED TO, REPLACEMENT OR RECONSTRUCTION OF EXISTING DRAINAGE STRUCTURES THAT HAVE BEEN DAMAGED OR REMOVED, OR REGRADEING AS REQUIRED BY THE ENGINEER. EXCEPT FOR THOSE AREAS WHERE THE ENGINEER HAS LOCATIONS, NO SEPARATE PAYMENT WILL BE MADE FOR ANY COSTS INCURRED TO COMPLY WITH THIS REQUIREMENT.
- G-13. CONTRACTOR SHALL FURNISH AND MAINTAIN ALL NECESSARY BARRICADES AROUND THE WORK AREA AND SHALL PROVIDE PROTECTION AGAINST WATER DAMAGE AND SOIL EROSION.
- G-14. ALL TRAFFIC CONTROL DEVICES TO BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH "THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST EDITION. SIGN POSTS SHALL BE GALVANIZED STEEL AND ALL SIGN MATERIALS SHALL BE MADE OF REFLECTIVE SHEETING ON ALUMINUM BLANKS IN ACCORDANCE WITH NJDOT STANDARD SPECIFICATIONS.
- G-15. ALL DIMENSIONING IS TO CURB OR BUILDING FACE, UNLESS OTHERWISE NOTED.
- G-16. UNLESS OTHERWISE INDICATED, ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL CONFORM TO THE NEW JERSEY DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, 2007, AS AMENDED AND SUPPLEMENTED TO DATE.
- G-17. ALL CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4,000 PSI, UNLESS OTHERWISE NOTED.
- G-18. ALL NEW CONCRETE PAVING AND CURBING SHALL MEET FLUSH WITH EXISTING.
- G-19. SHOP DRAWINGS FOR PROPOSED CAST-IN-PLACE AND/OR PRECAST CONCRETE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION OR PROCUREMENT.
- G-20. THE CONTRACTOR SHALL NOTIFY THE SOIL CONSERVATION DISTRICT A MINIMUM OF 72 HOURS BEFORE THE BEGINNING OF CONSTRUCTION.
- G-21. ALL WORK SHALL COMPLY WITH APPLICABLE STATE, FEDERAL, AND LOCAL CODES, AND ALL NECESSARY LICENSES AND PERMITS SHALL BE OBTAINED BY THE CONTRACTOR AT HIS EXPENSE UNLESS PREVIOUSLY OBTAINED BY THE OWNER/DEVELOPER.
- G-22. UPON COMPLETION OF THE WORK, REMOVE ALL DEBRIS, EQUIPMENT AND UNUSED MATERIALS FROM OWNERS PROPERTY AND RESTORE THE AREAS TO THEIR ORIGINAL CONDITION, AS APPROVED BY THE ENGINEER.
- G-23. BID QUANTITIES SHOWN HEREIN ARE ALL INCLUSIVE TO THE PAY ITEM TO BE CONSTRUCTED. THERE SHALL BE NO SEPARATE PAYMENT FOR ANY ITEM SHOWN WITHIN THE CONTRACT DOCUMENTS THAT ARE NOT SPECIFICALLY IDENTIFIED AS A PAY ITEM. THERE SHALL BE NO SEPARATE PAYMENTS TO CONSTRUCT ANY INCIDENTAL SITE FEATURE REQUIRED TO FINISH SITE CONSTRUCTION. THE COSTS OF ALL IMPROVEMENTS SHALL BE INCLUDED WITHIN THE VARIOUS PAY ITEMS UNIT COST.
- G-24. THE OWNER RETAINS THE RIGHT TO INCREASE, DECREASE AND/OR ELIMINATE ANY PAY ITEM QUANTITY. PAYMENT SHALL BE BASED UPON THE UNIT COST OF THE INSTALLED PAY ITEM QUANTITY. THERE SHALL NOT BE ANY ADDITIONAL PAYMENT DUE TO CHANGES IN PAY ITEM QUANTITIES.
- G-25. THE CONTRACTOR IS REQUIRED TO PROVIDE ALL TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE MUTCD. THE COSTS OF TRAFFIC CONTROL DEVICES SHALL BE INCLUDED WITHIN THE VARIOUS BID ITEMS UNIT COST. THERE SHALL BE NO SEPARATE PAYMENT.

HIGH VOLTAGE PROXIMITY ACT

THE CONTRACTOR IS NOTIFIED THAT ALL PROVISIONS OF THE HIGH-VOLTAGE PROXIMITY ACT, P.L. 1948, c. 249 AS AMENDED THROUGH MAY 20, 1987 SHALL BE STRICTLY ADHERED TO. THE CONTRACTOR SHALL ALSO ADHERE TO ALL PROVISIONS OF PART 1926.550, SUBPART N OF THE FEDERAL OCCUPATIONAL SAFETY AND HEALTH ACT OF DECEMBER, 1970. PARTICULAR ATTENTION IS DIRECTED TO THE PROVISIONS OF THE ABOVE ACT REQUIRED WARNING SIGNS, NOTIFICATION TO POWER COMPANY AND RESPONSIBILITY FOR SAFEGUARDS AND ALSO PROHIBITED ACTIVITY.

A COPY OF THE HIGH-VOLTAGE PROXIMITY ACT IS AVAILABLE IN THE OFFICE OF THE COUNTY ENGINEER OR MAY BE OBTAINED FROM THE NEW JERSEY DEPARTMENT OF LABOR, DIVISION OF WORKPLACE STANDARDS, OFFICE OF SAFETY COMPLIANCE, TRENTON, NJ 08625. PURSUANT TO N.J.A.C. 15:27-2.21(b) OF THE NEW JERSEY UNIFORM CONSTRUCTION CODE AND CFR 1926.32 (f) (OSHA COMPETENT PERSON), THE GENERAL CONTRACTOR IS DESIGNATED AS THE "RESPONSIBLE PERSON IN CHARGE OF CONSTRUCTION" AND THE SITE SUPERVISOR RESPONSIBLE FOR CONSTRUCTION SITE SAFETY DURING THE COURSE OF SITE IMPROVEMENTS.

UTILITY NOTES:

- C-1. BEFORE STARTING WORK, CONTRACTOR SHALL FURNISH A CONSTRUCTION SCHEDULE TO MONROE TOWNSHIP, ALL UTILITY COMPANIES AND INTERESTED PARTIES AND THE OWNER PRIOR TO CONSTRUCTION. THE SCHEDULE SHALL DETAIL ALL ITEMS ASSOCIATED WITH CARRYING OUT THE CONTRACT ON A DAILY BASIS. CONSTRUCTION SHALL BE SEQUENCED SUCH THAT NO MORE THAN ONE HYDRANT IS OUT OF SERVICE AT ANY GIVEN TIME. CONTRACTOR SHALL COORDINATE DIRECTLY WITH THE FIRE MARSHAL WITH REGARD TO HYDRANT SERVICE INTERRUPTIONS NOT LESS THAN 3 DAYS PRIOR TO INTERRUPTION.
- C-2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES AND TO TAKE THE NECESSARY STEPS NECESSARY TO PROVIDE FOR THEIR PROTECTION. THE ENGINEER HAS ATTEMPTED TO LOCATE AND INDICATE EXISTING FACILITIES ON THESE PLANS; HOWEVER, THIS INFORMATION IS SHOWN FOR THE CONTRACTOR'S CONVENIENCE ONLY. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE LOCATIONS OF UTILITIES SHOWN OR NOT SHOWN. THE CONTRACTOR SHALL CONTACT THE UTILITY COMPANIES FOR EXACT LOCATION OF THEIR UTILITIES PRIOR TO STARTING CONSTRUCTION. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AND REPLACE ANY AND ALL DAMAGE MADE TO UTILITIES BY THE CONTRACTOR.
- C-3. BEFORE EXCAVATING THE PROJECT AREA THE CONTRACTOR IS TO VERIFY THE LOCATION OF ANY UNDERGROUND UTILITY (GAS MAINS, WATER MAINS, SEWER LINES, TELEPHONE LINES, ETC.) SHOULD ANY UNDERGROUND UTILITY INTERFERE WITH PROJECT CONSTRUCTION THE ENGINEER SHALL BE NOTIFIED BEFORE PROCEEDING WITH WORK. CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES THREE (3) DAYS PRIOR TO COMMENCEMENT OF ANY EXCAVATION FOR FIELD LOCATIONS. FOR UTILITY MARKOUT CALL 1-800-272-1000.
- C-4. TREES SHALL BE PLANTED A MINIMUM OF 10' FROM FIRE HYDRANTS AND WATER LINES AND SANITARY LINES.
- C-5. SEWERS AND WATER MAINS GENERALLY SHALL BE SEPARATED A DISTANCE OF AT LEAST 10 FEET HORIZONTALLY. IF SUCH LATERAL SEPARATION IS NOT POSSIBLE, THE PIPES SHALL BE IN SEPARATE TRENCHES WITH THE SEWER AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN. OR SUCH OTHER SEPARATION AS APPROVED BY THE WATER AND SEWER ENTITY SHALL BE MADE. IN GENERAL, THE VERTICAL SEPARATION AT A CROSSING OF SEWER AND WATER LINE SHALL BE AT LEAST 18 INCHES. WHERE THIS IS NOT POSSIBLE, THE SEWER SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE USING MECHANICAL OR SLIP-ON JOINTS FOR A DISTANCE OF AT LEAST 10FT ON EITHER SIDE OF THE CROSSING OR OTHER SUITABLE PROTECTION SHALL BE PROVIDED.
- C-6. PIPE BEDDING REQUIREMENTS SPECIFIED HEREIN ARE TO BE CONSIDERED AS MINIMUMS FOR RELATIVELY DRY, STABLE EARTH CONDITIONS. ADDITIONAL BEDDING SHALL BE REQUIRED FOR ROCK TRENCHES AND WET AREAS. CONTRACTOR SHALL HAVE THE RESPONSIBILITY TO PROVIDE SUCH ADDITIONAL BEDDING AS MAY BE REQUIRED TO PROPERLY CONSTRUCT THE WORK.
- C-7. BACKFILL IN THE TRENCHES SHALL BE COMPACTED TO THE DENSITY OF 95% OF THEORETICAL MAXIMUM DRY DENSITY (ASTM D698). BACKFILL MATERIAL SHALL BE FREE FROM ROOTS, STUMPS, OR OTHER FOREIGN DEBRIS AND SHALL BE PLACED IN LIFTS NOT TO EXCEED 6 INCHES IN COMPACTED FILL THICKNESS. A REPORT FROM A GEOTECHNICAL ENGINEER MAY BE REQUIRED BY THE MUNICIPALITY'S INSPECTOR TO CORRECTED OF ANY TRENCH SETTLEMENT WITHIN A YEAR FROM THE DATE OF APPROVAL WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- C-8. CONTRACTOR SHALL EXCAVATE ONLY ENOUGH TRENCH TO INSTALL NEW UTILITY AND BACKFILL BY THE END OF EACH WORK DAY. OPEN TRENCH SHALL NOT BE PERMITTED AT ANY TIME CONTRACTOR IS NOT ACTIVELY WORKING ON PORTION OF UTILITY REQUIRING OPEN EXCAVATION.
- C-9. EXISTING MAINS TO BE ABANDONED IN PLACE SHALL BE CAPPED AND FILLED WITH AN APPROVED CONTROLLED LOW STRENGTH MATERIAL (CLSM)
- C-10. ALL SANITARY SEWER FORCEMAIN PIPING SHALL BE PVC CLASS 150 (DR18) AWWA C900 UNLESS OTHERWISE NOTED. ALL GRAVITY SANITARY SEWER SHALL BE SDR 26 UNLESS OTHERWISE NOTED.
- C-11. STORM SEWER PIPING: MINIMUM CLASS III RCP, WALL B IN ACCORDANCE WITH CURRENT N.J.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION UNLESS OTHERWISE NOTED.
- C-12. TRENCH DETAILS ARE INTENDED TO PROVIDE INFORMATION REGARDING BACKFILLING MATERIALS AND GENERAL MATERIAL DEPTHS AND PAVEMENT LIMITS ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND SHALL PROVIDE APPROPRIATE SAFETY MEASURES, SHEETING, AND BRACING AS MAY BE REQUIRED DUE TO FIELD CONDITIONS. THE CONTRACTOR SHALL COMPLY WITH APPLICABLE OSHA AND DETAILS FOR TRENCH EXCAVATION. THE DESIGN ENGINEER ASSUMES NO RESPONSIBILITY OR LIABILITY FOR FIELD CONDITIONS, TRENCHING OR BACKFILLING OPERATIONS DURING CONSTRUCTION.
- C-13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEWATERING AND PRECLUDING ANY PONDING OF WATER IN ALL AREAS, EXCEPTING REASONABLE AND SAFE DEPTHS WITHIN THE SEDIMENTATION BASIN.
- C-14. GAS, ELECTRIC, TELEPHONE AND CABLE TV LINES MAY BE INSTALLED BY THE RESPECTIVE UTILITY. THE EXACT LOCATION OF EACH MAIN SHALL BE COORDINATED BY THE OWNER/GENERAL CONTRACTOR AND SUBMITTED TO THE DESIGN ENGINEER FOR REVIEW PRIOR TO INSTALLATION.
- C-15. EXISTING STREET SURFACES AND OTHER SURFACES DISTURBED BY THE CONSTRUCTION OF FACILITIES FOR THIS PROJECT SHALL BE RESTORED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE COUNTY ENGINEER.
- C-16. RESET ALL WATER VALVES BOXES, HYDRANTS, SANITARY CLEANOUTS OR VENTS, GAS VALVES, METERS, SANITARY RIMS, INLET GRATES AND ALL OTHER UTILITY BOXES OR RIMS TO NEW GRADES AS REQUIRED. THE COST SHALL BE INCLUDED WITHIN THE VARIOUS PAY ITEMS. THERE SHALL BE NO SEPARATE PAYMENT.
- C-17. ALL WATER PIPES, FITTINGS AND VALVES SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA REQUIREMENTS.
- C-18. THE MUNICIPALITY'S ENGINEER MUST BE GIVEN 48 HOURS ADVANCE NOTICE OF SANITARY SEWER/WATERMAIN WORK AND THE REPRESENTATIVES MUST WITNESS THE WORK/CONNECTION.
- C-19. ALL PRECAST CONCRETE INLETS SHALL CONFORM TO ASTM-C913 "PRECAST CONCRETE WATER AND WASTEWATER STRUCTURES".
- C-20. ALL INLET AND MANHOLE PIPE OPENINGS SHALL BE SEALED WITH NON-SHRINK GROUT OR APPROVED EQUAL.
- C-21. WATER MAIN APPURTENANCES, SUCH AS BUT NOT LIMITED TO: FITTINGS AND VALVES SHALL BE BLOCKED WITH CONCRETE AS DETAILED HEREIN.
- C-22. THRUST BLOCKS AND RESTRAINTS SHALL BE INSTALLED AT ALL BENDS AND FITTINGS. THRUST BLOCKS SHALL HAVE TWENTY-EIGHT (28) DAY STRENGTH OF 4,000 P.S.I.
- C-23. EXISTING SANITARY SEWERS THAT ARE TO REMAIN IN SERVICE SHALL REMAIN IN ACTIVE OPERATION AT ALL TIMES. EXISTING WATER MAINS SHALL REMAIN IN ACTIVE OPERATION EXCEPT AS NECESSARY FOR CONNECTIONS. PROVIDE A MINIMUM OF TWO WEEKS NOTICE TO THE ENGINEER AND OWNER PRIOR TO SERVICE DISRUPTIONS.
- C-24. ALL UTILITIES TO BE INSTALLED UNDERGROUND EXCEPT WHERE NOTED.
- C-25. ALL SANITARY SEWER, WATER, ELECTRIC, COMMUNICATION LINES SHALL BE INSTALLED WITH DETECTABLE WARNING TAPE WITH THE WORDS "CAUTION BURIED UTILITY LINE BELOW" THE NAME OF THE TYPE OF UTILITY SHALL BE PROVIDED ON THE DETECTABLE WARNING TAPE.

DEMOLITION NOTES

- D-1. ANY WATER METERS DISCOVERED DURING THE COURSE OF DEMOLITION SHALL BE IDENTIFIED AND DOCUMENTED PRIOR TO REMOVAL.
- D-2. ALL DEMOLITION WORK SHALL BE PERFORMED IN ACCORDANCE WITH NFPA 241 AND OSHA STANDARDS.
- D-3. ALL HOLES AND TRENCH AREAS REMAINING AFTER DEMOLITION SHALL BE BACKFILLED TO MATCH EXISTING GRADE. A GEOTECHNICAL ENGINEER IS REQUIRED TO INSPECT, TEST, AND CERTIFY TO THE COMPACTION OF ALL LOAD BEARING FILLS.
- D-4. WHERE A PIPE BEING REMOVED IS CONNECTED TO AN EXISTING STRUCTURE, EITHER REMOVE THE PIPE AND FILL THE WALL OPENING WITH CONCRETE, OR CUT THE PIPE WITHOUT PERCUSSION NOT MORE THAN 6" FROM THE OUTSIDE FACE OF THE STRUCTURE AND FILL THE REMAINING LENGTH OF PIPE WITH CONCRETE.
- D-5. THE REMOVAL OF EXISTING BOLLARDS, FENCE POSTS & FOOTINGS SHALL INCLUDE THE PIPE/ POST AND CONCRETE FOOTING IN ITS ENTIRETY.
- D-6. ALL EXISTING CATCH BASINS AND MANHOLES SHALL BE FIELD LOCATED PRIOR TO WORK AND THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES PERTAINING TO LOCATIONS SHOWN ON THE CONTRACT DRAWINGS.
- D-7. CONTRACTOR SHALL NOTIFY OWNER AND THE ENGINEER 72 HRS. PRIOR TO INITIATING UTILITY ABANDONMENT.
- D-8. IF FIELD CONDITIONS DIFFER FROM THOSE SHOWN ON THIS PLAN THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION AND DIG TEST PITS AS NECESSARY TO VERIFY LOCATION
- D-9. ALL UTILITIES SHALL BE REMOVED TO A MINIMUM OF FOUR (4) FT BELOW EXISTING GROUND SURFACE. DEMOLISH FIRE HYDRANT THRUST BLOCKS IF ENCOUNTERED.
- D-10. ELECTRICAL UTILITIES SHALL BE DISCONNECTED PRIOR TO BEGINNING ANY DEMOLITION WORK. DEMOLITION SHALL INCLUDE THE REMOVAL OF BURIED AND EXPOSED CONDUIT IN THE AREA DESIGNATED FOR DEMOLITION, SEALING ENDS OF ALL BURIED CONDUIT ABANDONED IN PLACE AND REMOVING ALL POWER AND CONTROL WIRING BETWEEN THE DEMOLISHED FACILITY AND THE TERMINAL JUNCTION BOX, CIRCUIT BREAKER, OR METER CONTROL CENTER SUPPLYING POWER TO THE FACILITY.
- D-11. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE DISCONNECTION AND/OR REMOVAL OF ANY SERVICE UTILITIES ATTACHED/CONNECTED/RECEIVING/ SUPPLYING, ETC. TO ANY BUILDING AND/OR STRUCTURE NOTED HEREIN TO BE DEMOLISHED. CONTRACTOR SHALL OBTAIN ANY NECESSARY PERMITS OR APPROVALS ASSOCIATED WITH SAME.
- D-12. ALL ACTIVE CONSTRUCTION SITES AND LOCATIONS SHALL BE PROVIDED WITH NON-COMBUSTIBLE REFUSE CONTAINER(S) IN SUCH NUMBERS AS SHALL BE NECESSARY TO CONTAIN ALL COMBUSTIBLE REFUSE GENERATED BY THE CONSTRUCTION ACTIVITIES. ALL COMBUSTIBLE REFUSE, RUBBISH AND DEBRIS SHALL BE COLLECTED UP AND DEPOSITED IN THE CONTAINER(S) ON A DAILY BASIS. REFUSE CONTAINER(S) SHALL BE LOCATED A MINIMUM OF 20 FEET AWAY FROM ANY BUILDING, STRUCTURE, LOT LINE OR COMBUSTIBLE MATERIAL STORAGE LOCATION.
- D-13. WHILE CONSTRUCTION ACTIVITIES ARE IN PROGRESS, AT LEAST FOUR(4) PORTABLE FIRE EXTINGUISHERS HAVING A RATING OF AT LEAST 10-A, 80-BC SHALL BE PROVIDED, AND SHALL BE MAINTAINED IN A LOCATION APPROVED BY THE FIRE OFFICIAL. PERSONNEL NORMALLY ON THE CONSTRUCTION SITE SHALL BE INSTRUCTED IN THE USE OF THE FIRE EXTINGUISHERS PROVIDED.
- D-14. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING AND PROTECTING EXISTING STRUCTURES AS IDENTIFIED ON THE DEMOLITION PLAN, CS0501. THE CONTRACTOR MUST NOTIFY THE ENGINEER IF ANY DAMAGE OCCURS TO THESE ITEMS. THE ENGINEER/OWNER WILL DETERMINE WHETHER THE DAMAGED ITEMS CAN BE REPAIRED, OR SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER.
- D-15. PRIOR TO REMOVAL OF EXISTING FULL-DEPTH ASPHALTIC AND/OR CONCRETE PAVEMENT, CONTRACTOR SHALL SAWCUT TO FULL DEPTH TO PROVIDE A CLEAN STRAIGHT EDGE. CONCRETE SIDEWALK AND/OR CURB SHALL BE REMOVED TO THE NEAREST CONTROL JOINT.
- D-16. ALL TREES/SHRUBS/BRUSH WITHIN THE LIMITS OF DISTURBANCE SHOWN AND/OR AS DIRECTED BY THE ENGINEER SHALL BE COMPLETELY REMOVED, INCLUDING GRUBBING.

ENVIRONMENTAL NOTES:

- E-1. ALL MATERIAL BROUGHT ON SITE SHALL BE CLEAN FILL, SAMPLED, AND ANALYZED IN ACCORDANCE WITH STANDARD NJDEP QUALITY ASSURANCE STANDARDS AND PRACTICES AT A MINIMUM, AS SPECIFIED IN N.J.A.C. 7:26, TO FULLY CHARACTERIZE THE CONTAMINANTS IN THE LATEST SOIL CLEANUP CRITERIA (SCC). THE CONTRACTOR SHALL SUBMIT TO THE OWNER WRITTEN DOCUMENTATION FROM A LABORATORY CERTIFIED IN NEW JERSEY ENVIRONMENTAL LABORATORY CERTIFICATION PROGRAM (ELCP) AND IN ACCORDANCE WITH N.J.A.C. 7:18 PRIOR TO PLACEMENT OF THE MATERIAL ON SITE. THE MATERIAL MUST NOT CONTAIN CONTAMINANTS ABOVE THE MOST RESTRICTIVE DIRECT CONTACT OR IMPACT TO GROUNDWATER (IGW) SCC.

- E-2. BY GENERAL SITE OBSERVATION AND CONFIRMED BY LETTER, NO FRESHWATER WETLANDS EXIST WITHIN THE PROPOSED LIMIT OF DISTURBANCE.

SITE SAFETY

- THE OWNER, OR HIS REPRESENTATIVE, IS TO DESIGNATE AN INDIVIDUAL RESPONSIBLE FOR CONSTRUCTION SITE SAFETY DURING THE COURSE OF SITE IMPROVEMENTS PURSUANT TO N.J.A.C. 5:23-2.21 (E) OF THE NEW JERSEY UNIFORM CONSTRUCTION CODE AND CFR 1926.32 (F) (OSHA COMPETENT PERSON).
- THE CONTRACTOR SHALL INSTALL CONSTRUCTION FENCE AROUND THE PROPOSED DISTURBANCE AREA.
- THE CONTRACTOR SHALL OBTAIN ROAD OPENING PERMITS IF REQUIRED BY THE LOCAL COMMUNITY AND/OR STATE AGENCY AND FOLLOW ALL TRAFFIC PROVISIONS CONTAINED WITHIN THE PERMIT WHICH WILL INCLUDE FOLLOWING THE REQUIREMENTS OF THE MUTCD.

SURVEY NOTES:

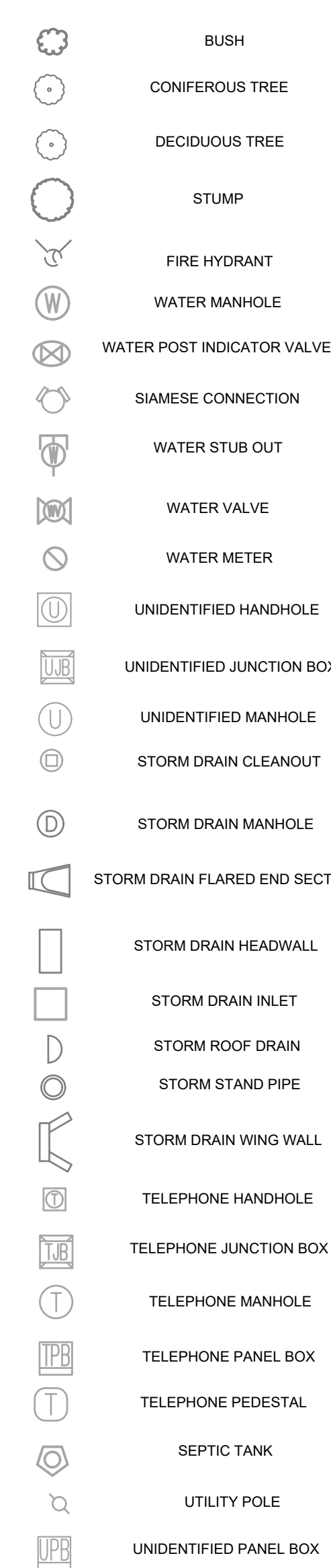
- A TOPOGRAPHIC FIELD SURVEY FOR BLOCK 13001, LOT 16, 24 & 28, TITLED "TOPOGRAPHIC SURVEY", SIGNED AND SEALED BY KEITH M. LUDWIG, WAS PERFORMED BY PENNONI ASSOCIATES ON JUNE 12, 2020.
- SITE TOPOGRAPHY FOR BLOCK 13001, LOT 16 OBTAINED FROM OVERALL SITE SURVEY PERFORMED BY ARH, SIGNED AND SEALED BY RICHARD A. HEGGAN, DATED JULY 11, 2017.
- THE PROPERTY IN QUESTION IS IN MONROE TOWNSHIP, GLOUCESTER COUNTY, NEW JERSEY. BLOCK 13001, LOTS 16 & 28.
- THE HORIZONTAL DATUM FOR THIS PROJECT REFERENCES THE NATIONAL GEODETIC VERTICAL DATUM, NGVD 1988.
- THE VERTICAL DATUM FOR THIS PROJECT REFERENCES THE NORTH AMERICAN DATUM, NAD 1983.

CERTIFIED 200 FOOT PROPERTY OWNER'S LIST

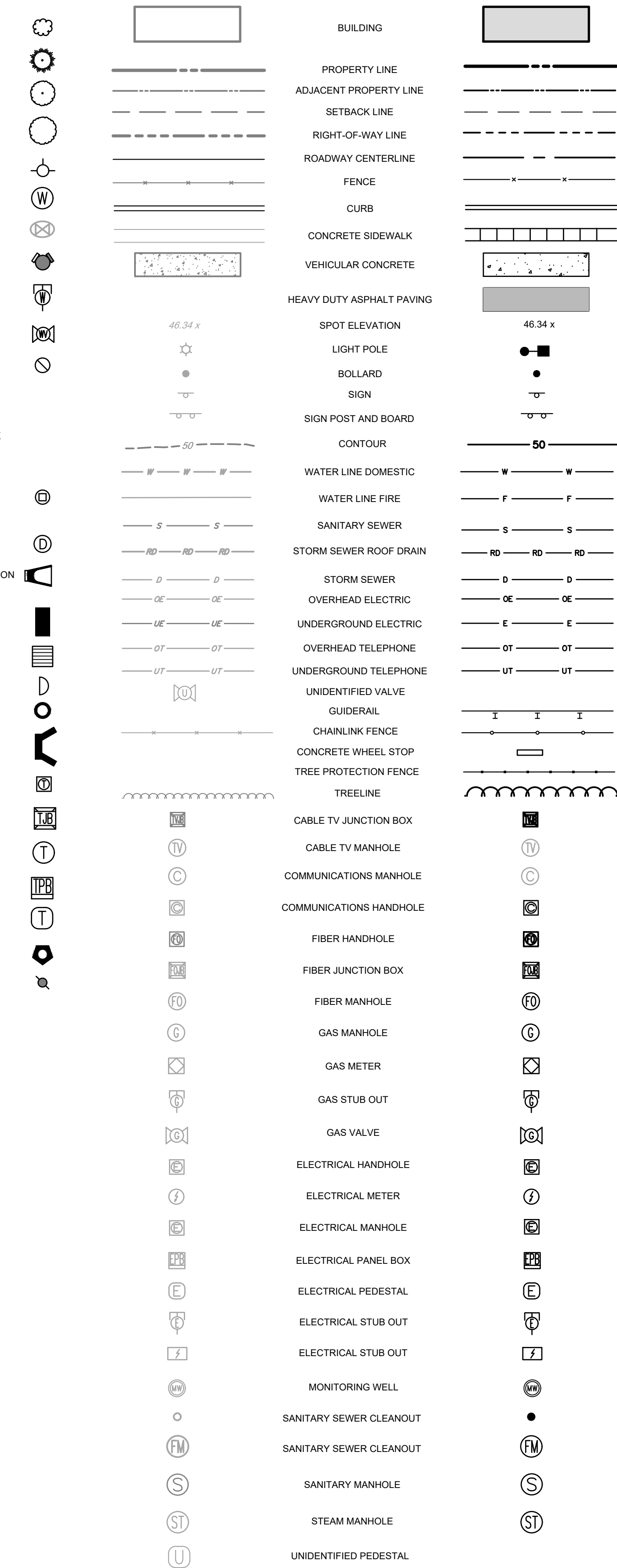
Adjoining Properties (19)

Municipality	Block	Lot	Qualifier	Address	Owner Name	Owner Address	Owner CSE	Additional Lot
Monroe Township	13001	20		840 CLAYTON RD	SHUSTER, ALFRED C & KIMBERLY S	840 CLAYTON RD	WILLIAMSTOWN, NJ 08044	
Monroe Township	13001	21		756 CLAYTON RD	CRISTANZO, JOHN W & ROSALEE	756 CLAYTON RD	WILLIAMSTOWN, NJ 08044	
Monroe Township	13001	2101		CLAYTON RD	TOWNSHIP OF MONROE	125 VIRGINIA AVE	WILLIAMSTOWN, NJ 08044	
Monroe Township	13001	22		762 CLAYTON RD	SENAIRE, SCOTT MIKE JR	762 CLAYTON RD	WILLIAMSTOWN, NJ 08044	
Monroe Township	13001	23		728 CLAYTON RD	GENOVA, JOSEPH S SR	728 CLAYTON RD	WILLIAMSTOWN, NJ 08044	
Monroe Township	13001	24		724 CLAYTON RD	ELSTORANGER & BOGERTS INC	PO 715	MALAGA, NJ 08038	
Monroe Township	13001	2501		720 CLAYTON RD	DAVIS, JOHN J JR & EDOLENS	PO BOX 492	WILLIAMSTOWN, NJ 08044	
Monroe Township	13003	33		1012 CLAYTON RD	NIEL, ANTHONY	840 CLAYTON RD	WILLIAMSTOWN, NJ 08044	
Monroe Township	13001	13		584 N TUCKAHOE RD	MORGAN DEVELOPMENT GROUP LLC	701 COOPER RD SUITE 200	VOORHEES, NJ 08043	
Monroe Township	13001	14		N TUCKAHOE RD	ATLANTIC CITY LLC	5100 HARDING HIGHWAY	MAVS LANDING NJ 08030	
Monroe Township	13001	15		N TUCKAHOE RD	ATLANTIC CITY ELECTRIC CO	5100 HARDING HWY	MAVS LANDING NJ 08030	
Monroe Township	13001	17		721 CLAYTON RD	SCARFALDO, MATTHEW	721 CLAYTON RD	WILLIAMSTOWN, NJ 08044	
Monroe Township	13001	18		711 CLAYTON RD	SCARFALDO, BLAINE	711 CLAYTON RD	WILLIAMSTOWN, NJ 08044	
Monroe Township	13001	1801		701 CLAYTON RD	701 CLAYTON RD LLC	701 CLAYTON RD	WILLIAMSTOWN, NJ 08044	
Monroe Township	13001	19	CFARM	699 CLAYTON RD	PONTANO, BEAUCH M	697 CLAYTON RD	WILLIAMSTOWN, NJ 08044	
Monroe Township	13001	22		551 CLAYTON RD	BOARD OF EDUCATION	75 E ACADEMY ST	WILLIAMSTOWN, NJ 08044	22,23,25,26
Monroe Township	13001	27		700 N TUCKAHOE RD	MONROE TOWNSHIP BOARD OF EDUCATION	75 E ACADEMY ST	WILLIAMSTOWN, NJ 08044	6,27,30
Monroe Township	13001	29		690 N TUCKAHOE RD	MONROE TOWNSHIP BOARD OF EDUCATION	125 VIRGINIA AVE	WILLIAMSTOWN, NJ 08044	29
Monroe Township	13001	30		700 N TUCKAHOE RD	MONROE TOWNSHIP BOARD OF EDUCATION	75 E ACADEMY ST	WILLIAMSTOWN, NJ 08044	6,27,30

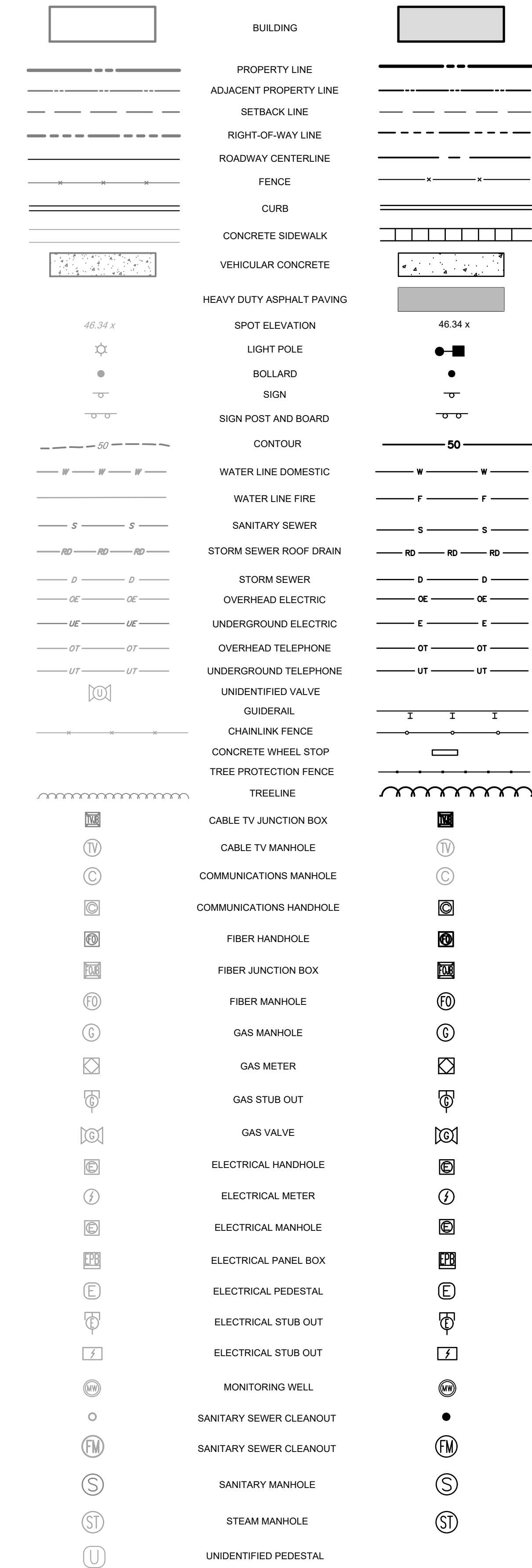
EXISTING



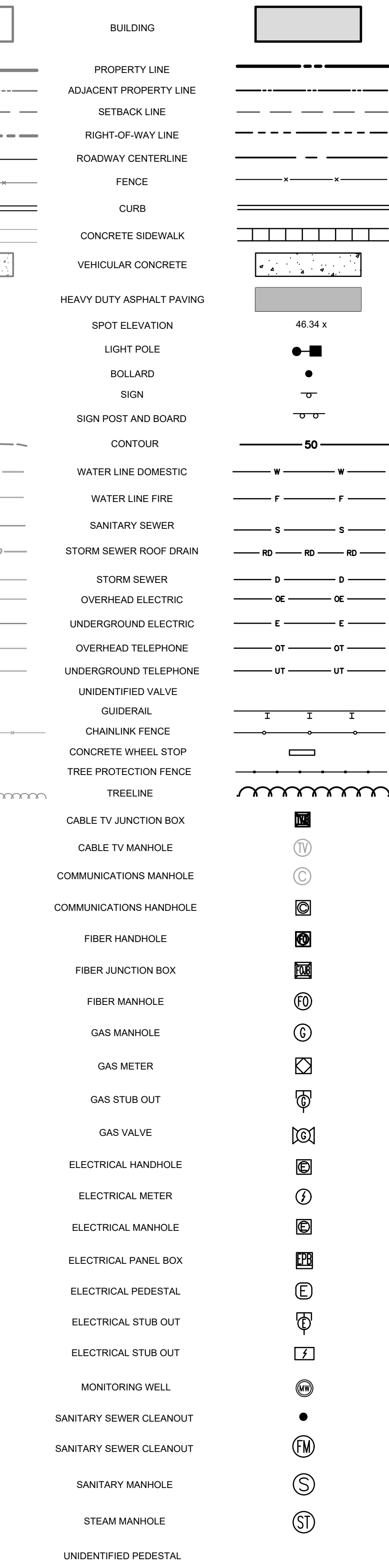
PROPOSED



EXISTING



PROPOSED

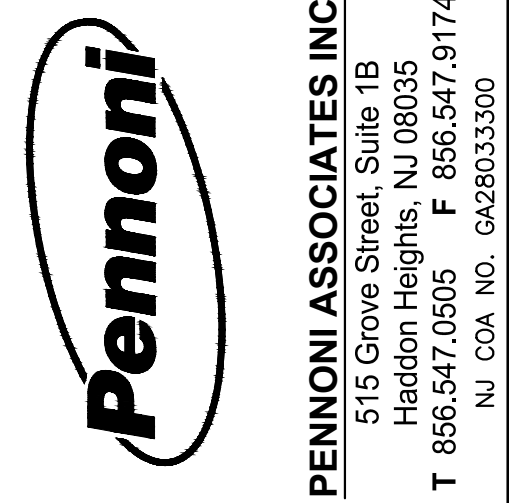


ZONING REQUIREMENTS

REGIONAL GROWTH COMMERCIAL DISTRICT

TOTAL LOT AREA = 1,524,401 SF (35.00 AC.)

SECTION	DESCRIPTION	REQUIRED/ALLOWED	EXISTING	COMPLIANCE
175-161.6	MIN. LOT SIZE (SF)	40,000	1,524,401	C
	MAX. LOT COVERAGE	60%	0	C
	MIN. LOT WIDTH (FT)	150	1,118	C
	LOT FRONTAGE	150	1,118	C
	FRONT YARD (FT)	75	N/A	C
	SIDE YARD (FT)	30	N/A	C
	REAR YARD (FT)	50	N/A	C
175-123	BUILDING HEIGHT (FT)	35	N/A	N/A
	MIN. SPACE REQ.	N/A	0	C
	STALL DIMENSIONS	MIN. 162 SF	N/A	C
	ACCESS DRIVE WIDTH	N/A	N/A	C



ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND DISCREPANCIES BEFORE PROCEEDING WITH WORK

ANDREW T. BANFF  
PROFESSIONAL ENGINEER  
NEW JERSEY LICENSE NO. JE 46121  
07/31/2020

MONROE TOWNSHIP DOG PARK

BLOCK 13001, PO LOT 16 & 28  
WILLIAMSTOWN, NEW JERSEY

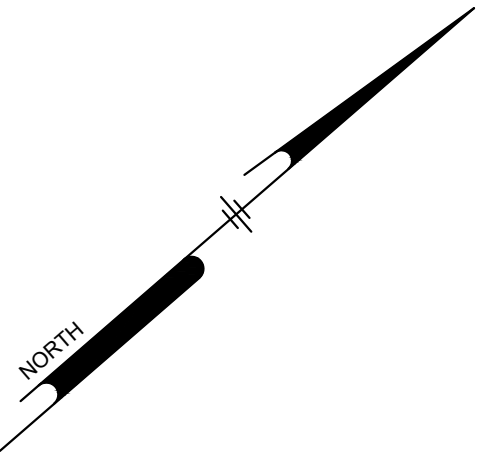
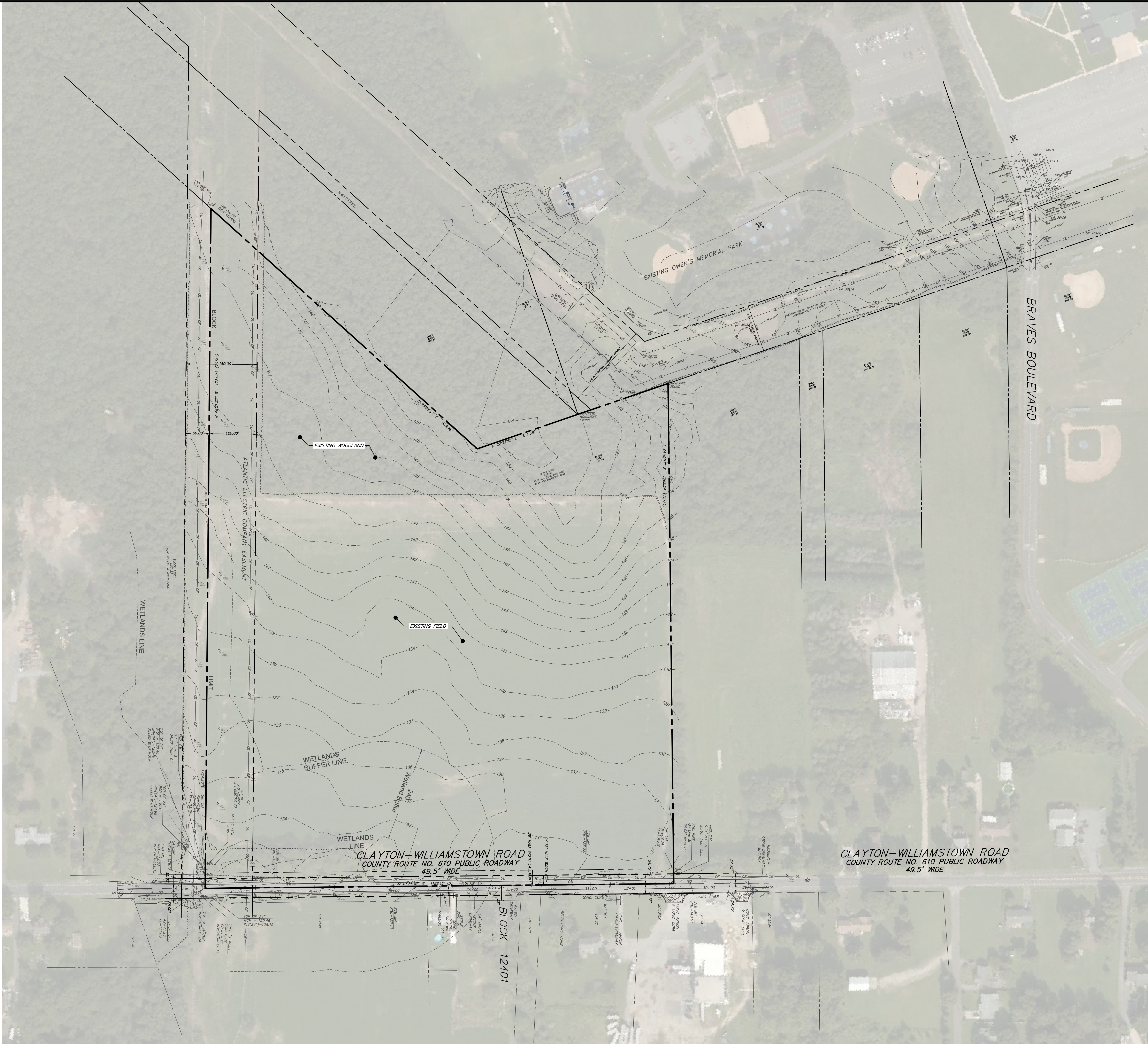
GENERAL NOTES

TOWNSHIP OF MONROE  
125 VIRGINIA AVENUE / 08044  
WILLIAMSTOWN, NEW JERSEY

11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232
----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----



\\monroetown\GIS\MTSPX20052 - Data\DWG\PENNONI\SUBSET\CS0201.dwg PLOTTED: 8/20/2021 11:58 AM BY: KENNEDY, N. PLOTTED BY: PENNONI ASSOCIATES PROJECT STATUS: -



NOTES:

- FOR GENERAL NOTES SEE SHEET CS0002.
- EXISTING INFORMATION SHOWN FOR BLOCK 13001, LOT 16, 24 & 28, IS OBTAINED FROM A FILED SURVEY TITLED "TOPOGRAPHIC SURVEY", SIGNED AND SEALED BY KEITH M. LUDWIG, WAS PERFORMED BY PENNONI ASSOCIATES ON JUNE 12, 2020.
- EXISTING INFORMATION SHOWN FOR BLOCK 13001, LOTS 16 AND 28 BASED ON FIELD SURVEYS PERFORMED BY ARH ASSOCIATES ON JULY 11, 2017, SIGNED AND SEALED BY RICHARD A. HEGGAN.
- IT IS THE RESPONSIBILITY OF ALL DESIGNERS & CONTRACTORS UTILIZING THIS PLAN & THE INFORMATION CONTAINED THEREON TO CALL THE NJ ONE-CALL SYSTEM AT 1-800-272-1000 FOR FIELD LOCATION OF UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
- THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY, RECORD PLANS, AND EXISTING DRAWINGS. PENNONI MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA.



NOT FOR CONSTRUCTION

NO	DATE	REVISIONS	BY

ALL DOCUMENTS PREPARED BY PENNONI ASSOCIATES ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE PROJECT. THEY ARE NOT INTENDED OR REPRESENTED TO BE SEPARATE FROM THE PROJECT OR ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY PENNONI ASSOCIATES FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT OWNERS' SOLE RISK AND WITHOUT LIABILITY ON ACADEMIC EXPOSURE TO PENNONI ASSOCIATES, AND OWNER SHALL INDEMNIFY AND HOLD HARMLESS PENNONI ASSOCIATES FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM.

PROJECT	MTSPX20052
DATE	JULY 31, 2020
DRAWING SCALE	1"=100'
DRAWN BY	BM
APPROVED BY	ATB

**CS0201**  
SHEET 3 OF 14

MONROE TOWNSHIP DOG PARK  
BLOCK 13001, PLO LOT 16 & 28  
WILLIAMSTOWN, NEW JERSEY

EXISTING CONDITIONS PLAN

TOWNSHIP OF MONROE  
125 VIRGINIA AVENUE  
WILLIAMSTOWN, NEW JERSEY 08994

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION. DISCREPANCIES BEFORE PROCEEDING WITH WORK.

**ANDREW T. BANFF**  
PROFESSIONAL ENGINEER  
NEW JERSEY LICENSE NO. CE 45121

07/31/2020

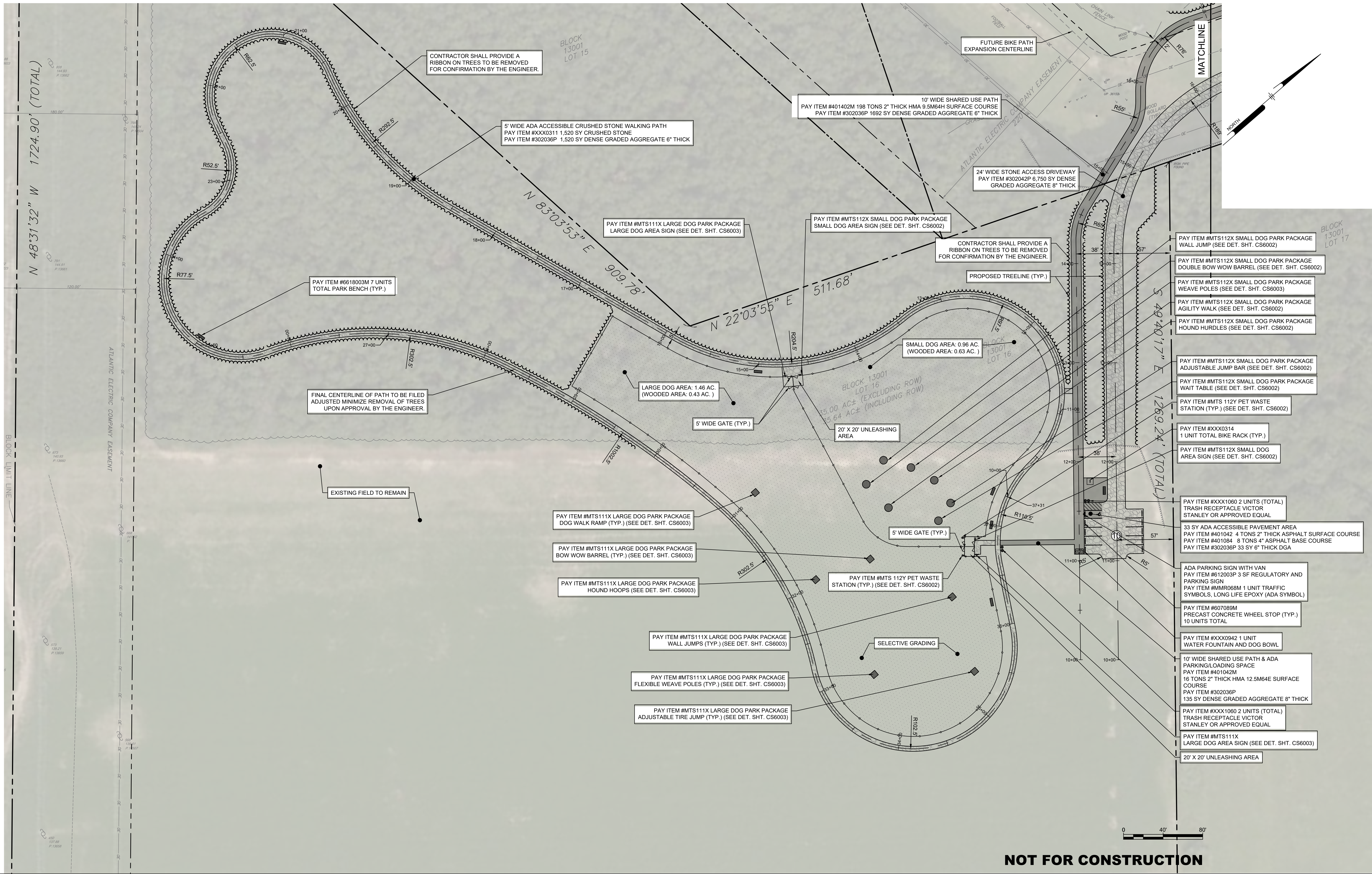
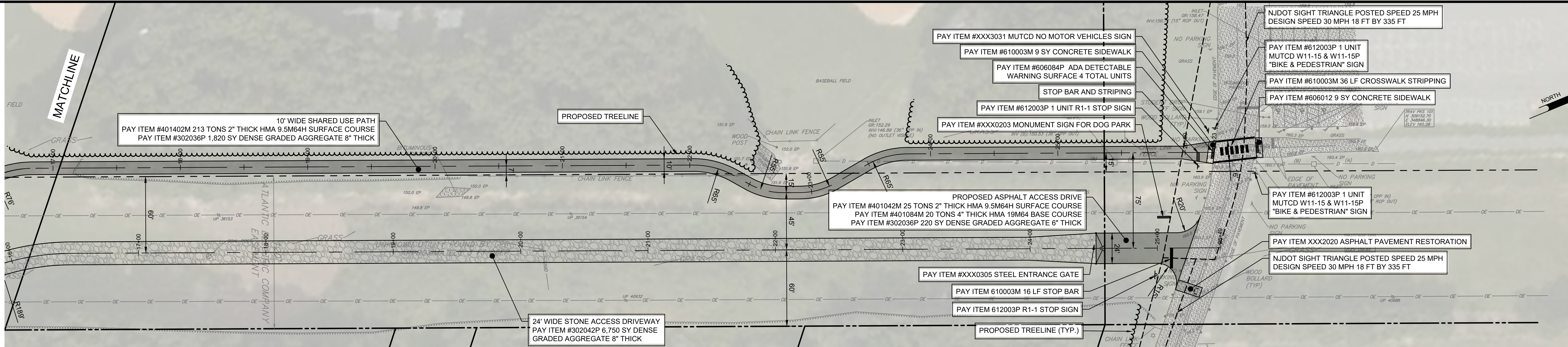


**PENNONI ASSOCIATES INC.**  
515 Grove Street, Suite 1B  
Haddon Heights, NJ 08035  
T 856.547.0505 F 856.547.9174  
NJ CCA NO. G28633500









**PENNONI ASSOCIATES INC.**  
515 Grove Street, Suite 1B  
Haddon Heights, NJ 08035  
T 856.547.0505 F 856.547.9174  
NJ CCA NO. G42633300

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR  
DISCREPANCIES BEFORE PROCEEDING WITH WORK

**ANDREW T. BANFF**  
PROFESSIONAL ENGINEER  
NEW JERSEY LICENSE NO. 3E 45121

07/31/2020

MONROE TOWNSHIP DOG PARK

WILLIAMSTOWN, NEW JERSEY

1225 VIRGINIA AVENUE / 88094

TOWNSHIP OF MONROE

SITE PLAN

WILLIAMSTOWN, NEW JERSEY

1225 VIRGINIA AVENUE / 88094

TOWNSHIP OF MONROE

NO.	DATE	BY	REVISIONS
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
32			
33			
34			
35			
36			
37			
38			
39			
40			
41			
42			
43			
44			
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55			
56			
57			
58			
59			
60			
61			
62			
63			
64			
65			
66			
67			
68			
69			
70			
71			
72			
73			
74			
75			
76			
77			
78			
79			
80			
81			
82			
83			
84			
85			
86			
87			
88			
89			
90			
91			
92			
93			
94			
95			
96			
97			
98			
99			
100			

PROJECT

MTSPX20052

DATE

JULY 31, 2020

DRAWING SCALE

1"=40'

DRAWN BY

BM

APPROVED BY

ATB

**CS1001**

SHEET 5 OF 14

NOT FOR CONSTRUCTION







PLANTING NOTES

- ALL PLANT LOCATIONS SHALL BE STAKED IN THE FIELD AND LOCATIONS APPROVED BY LANDSCAPE ARCHITECT PRIOR TO PLANTING.
- TOPSOIL WITH A QUALITY ORGANIC SOIL AMENDMENT SHALL BE USED FOR ALL PLANTING AND SEEDING OPERATIONS.
- INSTALL 12" MINIMUM TOPSOIL MIXTURE IN GROUNDCOVER BEDS AND 24" IN SHRUB BEDS AND ISLANDS. 6" OF TOPSOIL ARE TO REMAIN ON ALL DISTURBED AREAS TO RECEIVE SOO OR SEED.
- NOTIFY ALL UTILITY COMPANIES AND LOCATE ALL UTILITIES PRIOR TO EXCAVATING PLANT PITS. PLANT LOCATIONS MAY BE ADJUSTED IN THE FIELD TO AVOID INTERFERENCE WITH UNDERGROUND UTILITIES.
- SHOULD ANY DISCREPANCY ARISE BETWEEN THE PLANTING PLAN AND THE PLANTING SCHEDULE, THE DEVELOPER IS RESPONSIBLE FOR THE QUANTITIES SHOWN ON THE LANDSCAPE PLAN.
- ALL PLANT MATERIAL SHALL BE OF NURSERY STOCK QUALITY AS DEFINED BY THE AMERICAN ASSOCIATION OF NURSERYMAN STANDARDS AND SHALL BE FIRST QUALITY NURSERY GROWN STOCK FREE OF DISEASE AND OBJECTIONABLE DISFIGUREMENTS AND PLANTED IN CONFORMANCE WITH SOUND NURSERY PRACTICE AND APPLICABLE CITY STANDARDS.
- ALL NON-BIODEGRADABLE ROOT WRAPPING TO BE REMOVED COMPLETELY BEFORE PLANTING.
- ALL TREES SHALL BE BALLED AND BURLAPED, NURSERY GROWN STOCK.
- ALL PLANT MATERIAL AND LAWNS SHALL BE PLANTED WITHIN THE RECOMMENDED SEASONAL TIME PERIODS AS PRESCRIBED BY ACCEPTED HORTICULTURAL PRACTICE. RECOMMENDED PLANTING TIMES ARE BETWEEN APRIL 15TH THRU MAY 31ST OR AUGUST 17TH THRU OCTOBER 15TH. FALL DIGGING AND TRANSPLANT HAZARD TREE SPECIES (OAKS ETC.) SHALL BE ONLY BE DUG AND PLANTED IN SPRING.
- ALL PLANT MATERIAL SHALL BE APPROVED UPON ARRIVAL TO THE SITE, UNLESS OTHERWISE NOTIFIED.
- PROPOSED PLANT MATERIAL MAY BE SUBSTITUTED BY SIMILAR PLANTS PRIOR TO INSTALLATION, SUBJECT TO APPROVAL BY THE CITY ENGINEER.
- A TEMPORARY FENCE, SUCH AS SNOW FENCE, SHALL BE ERECTED AT THE PERIMETER OF THE DRIPLINE OF ALL EXISTING VEGETATION INDICATED TO REMAIN. PRIOR TO EXCAVATION, CONSTRUCTION OR SITE WORK. THIS FENCE SHALL BE REMOVED ONLY AT THE TIME OF COMPLETION OF ALL CONSTRUCTION AND FINAL GRADING.
- EXISTING TREES TO BE RELOCATED SHALL BE HANDLED ACCORDING TO ACCEPTABLE HORTICULTURE PRACTICE.
- ALL DISTURBED AREAS NOT SHOWN AS PLANTED OR LAWN SHALL BE TOPSOILED AND SEEDED OR RETURNED TO THEIR ORIGINAL STATE BEFORE DISTURBANCE AS DIRECTED BY THE CITY ENGINEER.
- ALL AREAS NOT RELATED TO HE PROPOSED DEVELOPMENT SHALL REMAIN IN THEIR NATURAL STATE. DISTURBANCE OF EXISTING VEGETATION SHALL BE LIMITED TO WORK AREA AND AS DEFINED ON DWGS. CS8501-04 AND CS8001.
- ADDITIONAL LANDSCAPING APPROVED BY THE CITY ENGINEER SHALL BE PROVIDED BY THE APPLICANT TO REPALCE ANY VEGETATION IN ADVERTENTLY REMOVED OUTSIDE THE LIMIT OF DISTURBANCE LINE AS SHOWN ON THE APPROVED GRADING PLAN DURING CONSTRUCTION.
- PROPOSED TREES SHALL NOT BE PLANTED WITHIN EASEMENTS, DRIVEWAYS AND SITE TRIANGLES. THEREFORE, THE TREE LOCATIONS SHALL BE APPROXIMATE AND SHALL BE ADJUSTED IN THE FIELD AS REQUIRED.
- ALL SHADE TREES IN PEDESTRIAN WALKS AREAS SHALL HAVE AN INITIAL LIMBS PRUNED STARTING AT A MINIMUM OF 7 FT. ABOVE FINISHED GRADE.
- ALL TREES SHALL BE MULCHED WITH A THREE INCH (3") MINIMUM DEPTH OF SHREDDED HARDWOOD BARK.
- PLANTS ARRANGED IN CONTINUOUS GROUPINGS SHALL BE SET IN MULCHED BEDS.
- PLANTING DEBRIS SHALL BE REMOVED FROM THE PROPERTY.
- ANY LIVE TREE WHICH IS SUBSTANTIALLY DAMAGED AS A RESULT FO GRADING OR GENERAL CONSTRUCTION MUST BE REMOVED AND REPLACED WITH ANOTHER TREE OR TREES AS APPROVED BY THE CITY ENGINEER.
- TREE REMOVAL FROM ANY SLOPE OR ENVIRONMENTALLY SENSITIVE AREA IS PROHIBITED IF IT WILL CONTRIBUTE, IN THE OPINION OF THE CITY ENGINEER, TO EXTRA RUNOFF OF SURFACE WATER ONTO ADJOINING PROPERTY AND EROSION AND SILTING, UNLESS OTHER MEANS APPROVED BY THE CITY ENGINEER ARE PROVIDED TO PREVENT RUNOFF AND EROSION.
- NO HEALTHY TREE THAT IS SPECIAL BY VIRTUE OF HISTORY, UNUSUAL SIZE, OR AGE OR OF RAE SPECIES, SHALL BE REMOVED EXCEPT AS MAY BE REQUIRED FOR PROTECTION OF PUBLIC HEALTH, SAFETY AND WELFARE.
- SELECTED EXISTING HEALTHY TREES SIX (6) INCHES IN CALIPER OR LESS MEASURED FOUR (4) FEET ABOVE THE GROUND SHALL BE RELOCATED ON-SITE UNDER THE DIRECTION AND APPROVAL OF THE CITY ENGINEER.
- NEWLY INSTALLED PLANT MATERIAL SHALL BE WATERED AT THE TIME OF PLANTING. REGULAR WATERING SHALL BE PROVIDED TO ENSURE THE ESTABLISHMENT AND REGULAR GROWTH OF PLANTS.
- ALL SHRUBS SPACED 7 FT. O.C. OR CLOSER SHALL BE IN CONTINUOUS MULCHED BEDS.
- SEED ALL DISTURBED AREAS WITH REQUIRED SEED MIX (SEE DWG. CS8501 FOR SEEDING MIX SCHEDULE).
- TREES SHOULD BE PLANTED A MIN. OF FIVE (5) FEET FROM SIDEWALKS UNLESS IN TREE PITS.
- GUY WIRES AND STAKES WILL ONLY BE UTILIZED IF CONDITIONS MERIT AND WILL BE REMOVED BY THE DEVELOPER AT THE END OF THE GUARANTEE PERIOD.
- PLANT MATERIAL GUARANTEE: ALL PLANT MATERIAL SHALL BE GUARANTEED FOR A PERIOD OF TWO (2) YEARS FROM DATE OF INSTALLATION, ANY AND ALL PLANT MATERIAL THAT DIES OR FAILS TO THRIVE SHALL BE IMMEDIATELY REPLACED WITH LIKE SPECIES BY THE CONTRACTOR AND SHALL BE IN HEALTHY AND VIGOROUS CONDITION FROM THE DATE OF ACCEPTANCE. IT IS UNDERSTOOD THAT THE CONTRACTOR WILL PROVIDE ADEQUATE AND TIMELY CARE DURING THE GUARANTEE PERIOD TO THE HIGHEST HORTICULTURAL STANDARDS. THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE OF ALL PROPOSED PLANTINGS BY PROVIDING THE CORRECT WEEDING, SPRAYING, WATERING, PRUNING AND FERTILIZING.
- ALL SCREEN PLANTING SHALL BE AT LEAST FOUR (4) FEET TALL AT TIME OF PLANTING.

SEEDING NOTES

- SEED ALL AREAS DISTURBED BY CONSTRUCTION NOT OTHERWISE CONTAINING PLANTING BEDS, SIDEWALKS, BUILDINGS, ETC.
- BEFORE SEEDING, CONTRACTOR SHALL PROVIDE SOIL TESTS AND INCORPORATE NECESSARY SOIL AMENDMENTS PER SOIL TEST RECOMMENDATIONS. CONTRACTOR SHALL PROVIDE A GROUND CLEAR HERBICIDE UPON STRIPING AND CLEARING THE SITE. CLEARED PORTION OF THE SITE SHALL BE LEFT IDE FOR TWO WEEKS, WHEREAS THE CONTRACTOR TO APPLY SECOND APPLICATION OF GROUND CLEAR HERBICIDE.
- PERFORM ALL FINISH GRADING, WITHIN AREAS OF DISTURBANCE, NECESSARY TO BRING SITE TO REQUIRED FINISHED ELEVATIONS. FINISH GRADING SHALL CONSIST OF PREPARING SUBGRADE AND SPREADING TOPSOIL READY FOR SEEDING OPERATIONS.
- TOPSOIL SHALL BE UNIFORMLY SPREAD IN DISTURBED AREAS WITH BLADE GRADER, OR BY ANY OTHER APPROVED METHOD, TO A MINIMUM DEPTH OF 6 INCHES TO PERMIT 1 INCH OF SETTLEMENT. CORRECT ANY SURFACE IRREGULARITIES TO PREVENT FORMATION OF LOW SPOTS AND POCKETS THAT WOULD RETAIN WATER. PRIOR TO FINE GRADING, REMOVE ALL EXISTING ANNUAL TYPE VEGETATION.
- SOW SEED AT THE RECOMMENDED SEEDING RATE AS SHOWN IN THE SEEDING MIX SCHEDULE AS NOTED ON EROSION CONTROL PLANS.
- SEED SHALL BE APPLIED APRIL 15TH THRU MAY 31ST OR AUGUST 17TH THRU OCTOBER 15TH.
- ON ALL SLOPES 3:1 OR GREATER, USE AN ORGANIC SOIL STABILIZER SUCH AS 'CON-TACK' OR EQUAL AT THE RATE OF 25 LBS PER 1,000 GALLONS OR AT RATES RECOMMENDED BY THE MANUFACTURER.
- KEEP NEWLY SEEDED GRASS AREAS MOISTENED DURING SEED GERMINATION AND UNTIL THE GRASS COVERS AT LEAST 75% OF THE SEEDED AREAS TO A HEIGHT OF 2 TO 3 INCHES.
- ALL AREAS AND SPOTS, WHICH DO NOT SHOW A PROMPT CATCH OF GRASS, SHALL THEN BE RE-SEEDED, AND THE OPERATION REPEATED UNTIL COMPLETE COVERAGE IS OBTAINED.
- SEE DWG. CS8501 FOR SEEDING SPECIFICATIONS AND RATES.
- CONTRACTOR TO PREVENT GROWTH OF WEEDS AFTER APPLICATION AND GERMINATION.

LANDSCAPE MAINTENANCE NOTES

- THE CONTRACTOR AND AGENTS OR ASSIGNS SHALL BE RESPONSIBLE FOR THE INSTALLATION, PRESERVATION AND MAINTENANCE OF ALL PLANTING AND PHYSICAL FEATURES SHOWN ON THE PLANS DURING THE GUARANTEE PERIOD.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF SITE VEGETATION DURING THE GUARANTEE PERIOD. TO INCLUDE BUT NOT BE LIMITED TO:
  - FERTILIZER: SPRING AND FALL FERTILIZER APPLICATIONS.
  - PRUNING: PRUNING SHALL BE LIMITED OR REMOVAL OF DEAD WOOD OR BRANCHES FOR TREES OR FOR SIGHT DIFFERENCES/SAFETY REASONS. PRUNING OF SHRUBS AND TREES SHALL BE LIMITED TO THE PRUNING NECESSARY TO MAINTAIN THE NATURAL SHAPE OF THE PLANT EXCEPT FOR SHEARED HEDGES.
  - PEST CONTROL: PRE-EMERGENT WEED CONTROL FOR MOWN LAWNS AND SHRUB BEDS MAY BE APPLIED IN FEBRUARY. CHEMICAL TREATMENT FOR INSECT INFESTATION AND DISEASE MAY BE APPLIED AND SHALL BE SPECIFIC TO THE PROBLEM.
  - MULCHING: MULCHING SHALL BE MAINTAINED AT A DEPTH OF 3" IN PLANT BEDS AND AROUND BASE OF TREES.
  - MOWING: MOWN LAWN SEED MIX SHALL BE MOWN AT REGULAR INTERVALS THROUGHOUT THE GROWING SEASON. GRASS HEIGHT SHOULD NOT EXCEED 4 INCHES BEFORE CUTTING. MOWER BLADES SHALL BE SET AT 3 INCHES UNLESS OTHERWISE DIRECTED.
  - PLANT PROTECTION: AVOID EXCESS INTRUSION INTO THE ROOT ZONE AREA OF ESTABLISHED PLANTINGS.
  - WATERING: UNLESS STATED OTHERWISE IN THESE DOCUMENTS, PROVIDE APPROXIMATELY 1-INCH OF RAINFALL/WATER PER WEEK THROUGHOUT THE GROWING SEASON FOR THE FIRST YEAR.

PERENNIAL AND GROUNDCOVER MAINTENANCE

- WEED CONTROL CAN BE A PROBLEM UNTIL THE GROUNDCOVERS/ PERENNIALS HAVE SPREAD AND FILLED IN THE AREA. CONTROL OF PERSISTENT, PERENNIAL WEEDS, SUCH AS BERBERIS, GRASS AND NUTCRASS SHOULD BE ACHIEVED BEFORE PLANTING. USE A NONSELECTIVE HERBICIDE, SUCH AS ROUNDUP, A MULCH APPLIED AFTER PLANTING AND REPLISHED AS NEEDED TO MAINTAIN A DEPTH OF 3 INCHES WILL REDUCE THE NEED TO WEED BY HAND. PRE-EMERGENCE HERBICIDES CAN BE USED ON MANY TYPES OF GROUNDCOVER TO AID WEED CONTROL. READ THE LABEL CAREFULLY BEFORE APPLYING. AS THE GROUNDCOVER FILLS IN WEEDS WILL BECOME LESS OF A PROBLEM BECAUSE OF THE SHADED SOIL. SOME HAND WEEDING WILL MOST LIKELY BE NEEDED.
- FERTILIZER - MOST GROUNDCOVERS WILL BENEFIT FROM AN APPLICATION OF FERTILIZER IN LATE WINTER TO EARLY SPRING. USE 2 TO 4 POUNDS OF A COMPLETE FERTILIZER PER 1,000 SQUARE FEET. WATER OR BRUSH FERTILIZER OFF THE FOLIAGE AFTER BROADCASTING.

LEGEND

PROPOSED SHADE TREE

PROPOSED TOPSOIL AND SEED PINELAND SEED MIX

PROPOSED ERNST SEEDS MIX # ERNMX-153 SHOWY NORTHEAST NATIVE WILDFLOWER AND GRASS MIX

PROPOSED ERNST SEEDS MIX # ERNMX-180 RAIN GARDEN MIX

PROPOSED SELECTIVELY WOODLAND UNDERSTORY CLEARING

NOTES:

- USE DIGGING FORK NOT SPADE TO PREVENT GLAZING OF PIT EDGES
- PRUNE DEAD AND DAMAGED BRANCHES IN ACCORDANCE WITH RECOGNIZED HORTICULTURAL PRACTICES.
- DO NOT PRUNE LEADER.
- SET PLANTS PLUMB AND FACE TO GIVE THE BEST APPEARANCE OR RELATIONSHIP TO ADJACENT AREAS.
- COMPLETELY REMOVE ALL TREE WRAP AFTER INSTALLATION
- ONLY STAKE TREES OVER 3" CALIPER OR ON SLOPES GREATER THAN 4:1
- ALL NON-BIODEGRADABLE MATERIALS SHALL BE INCLUDING WIRE BASKETS SHALL BE COMPLETELY REMOVED FROM THE ROOTBALL.

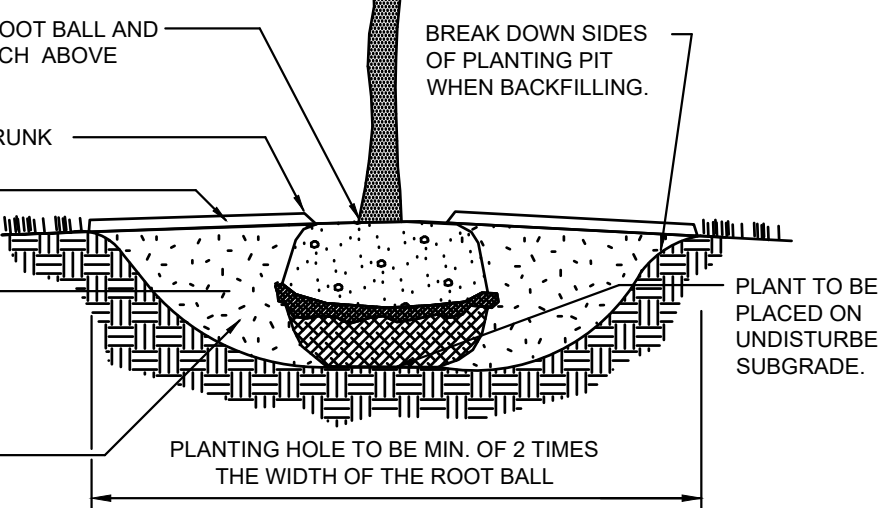
REMOVE EXCESS SOIL FROM TOP OF ROOT BALL AND COLLAR. SET BOTTOM OF COLLAR 1 INCH ABOVE ADJACENT GRADE.

KEEP MULCH 4 INCHES AWAY FROM TRUNK

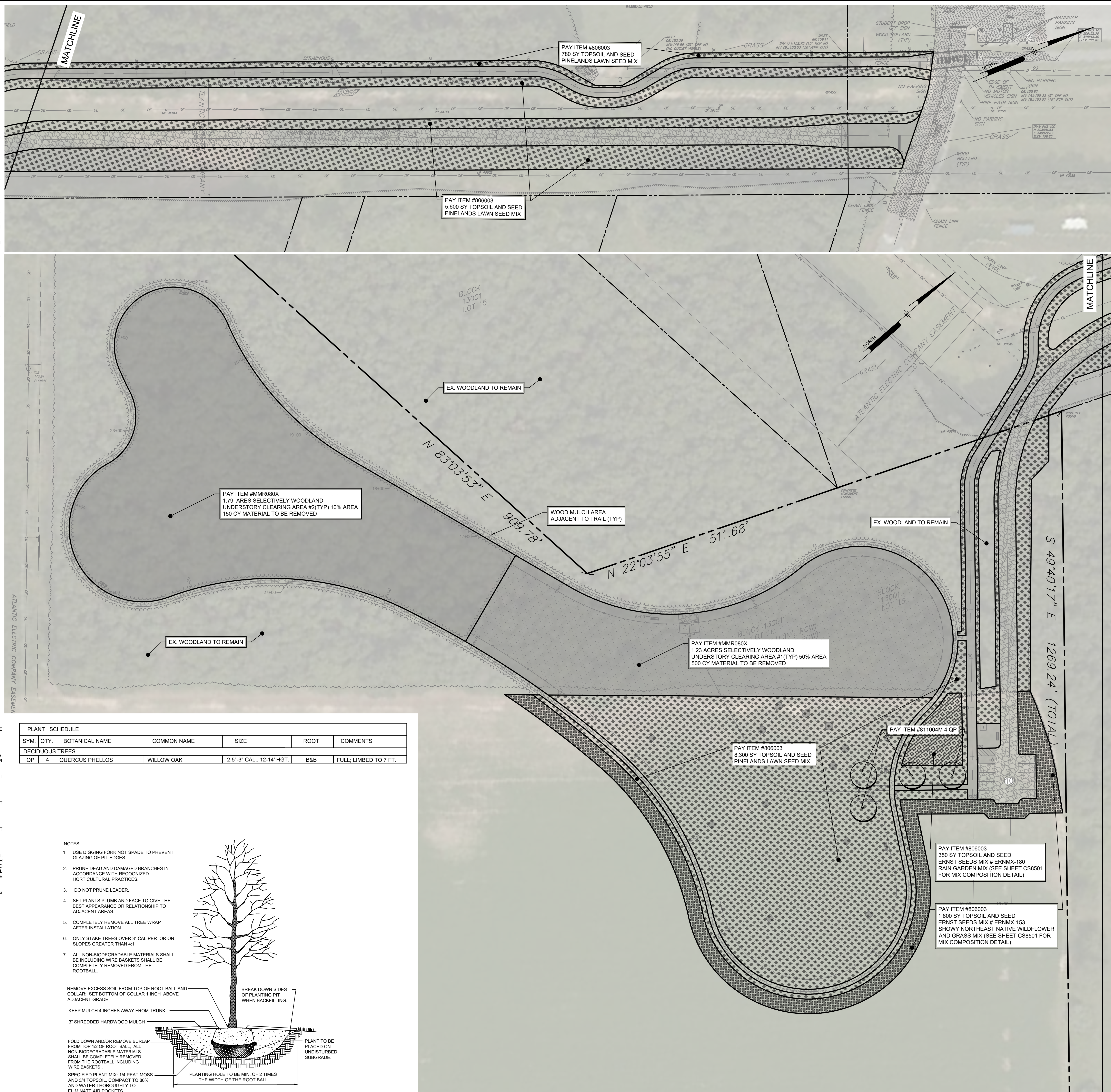
3" SHREDDED HARDWOOD MULCH

FOLD DOWN AND/OR REMOVE BURLAP FROM TOP 10" OF ROOT BALL. ALL NON-BIODEGRADABLE MATERIALS SHALL BE COMPLETELY REMOVED FROM THE ROOTBALL INCLUDING WIRE BASKETS.

SPECIFIED PLANT MIX: 1/4 PEAT MOSS AND 3/4 TOPSOIL, COMPACT TO 80% AND WATER THOROUGHLY TO ELIMINATE AIR POCKETS.



DECIDUOUS TREE PLANTING DETAIL  
N.T.S.



0 40' 80' NOT FOR CONSTRUCTION

**PENNONI ASSOCIATES INC.**  
515 Grove Street, Suite 1B  
Haddon Heights, NJ 08035  
T 856.547.0505 F 856.547.9774  
NJ COA NO. G42633500

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND DISCREPANCIES BEFORE PROCEEDING WITH WORK

**ANDREW T. BANFF**  
PROFESSIONAL ENGINEER  
NEW JERSEY LICENSE NO. CE 46121

07/31/2020

**MONROE TOWNSHIP DOG PARK**  
BLOCK 13001, PLO LOT 16 & 28  
WILLIAMSTOWN, NEW JERSEY

**LANDSCAPE PLAN**

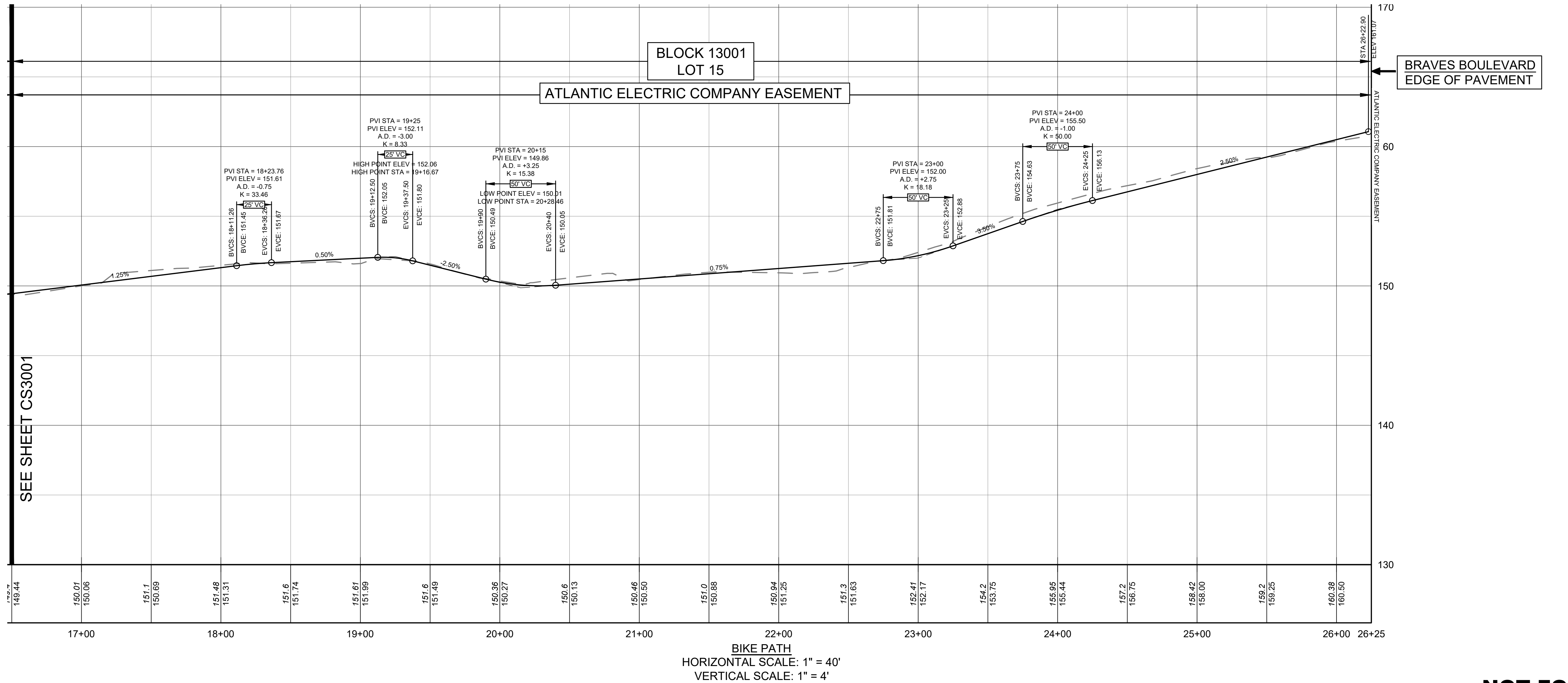
TOWNSHIP OF MONROE  
1125 VIRGINIA AVENUE / 08094  
WILLIAMSTOWN, NEW JERSEY

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	--









**Penloni**

**PENNONI ASSOCIATES INC.**  
515 Grove Street, Suite 1B  
Haddon Heights, NJ 08035  
T 856.547.0505 F 856.547.9174  
NJ COA NO. GA28033300

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR  
AND OWNER MUST BE NOTIFIED OF ANY  
DISCREPANCIES BEFORE PROCEEDING WITH WORK

ANDREW T. BANFF  
PROFESSIONAL ENGINEER  
NEW JERSEY LICENSE NO. GE 45121

07/31/2020

**MONROE TOWNSHIP DOG PARK**  
BLOCK 13001, P/O LOT 16 & 28  
WILLIAMSTOWN, NEW JERSEY

## PLAN & PROFILE ACCESS DRIVE II

TOWNSHIP OF MONROE  
125 VIRGINIA AVENUE  
WILLIAMSTOWN, NEW JERSEY 08094

DATE	NO.	REVISIONS	BY
11	10		
12	11		
13	12		
14	13		
15	14		
16	15		
17	16		
18	17		
19	18		
20	19		
21	20		
22	21		

ALL DOCUMENTS PREPARED BY PENNCON ASSOCIATES ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE PROJECT. THEY ARE NOT INTENDED OR REPRESENTED TO BE SUITABLE FOR REUSE BY OWNER OR OTHERS ON THE EXTENSIONS OF THE PROJECT OR ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY PENNCON ASSOCIATES FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT OWNERS' SOLE RISK AND WITHOUT LIABILITY TO PENNCON. EXPOSURE TO PENNCON ASSOCIATES, AND OWNER SHALL INDEMNIFY AND HOLD HARMLESS PENNCON ASSOCIATES FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM.

PROJECT	MTSPX20052
DATE	JULY 31, 2020
DRAWING SCALE	1"=40'
DRAWN BY	BM
APPROVED BY	ATB

**CS3002**

SHEET 9 OF 14





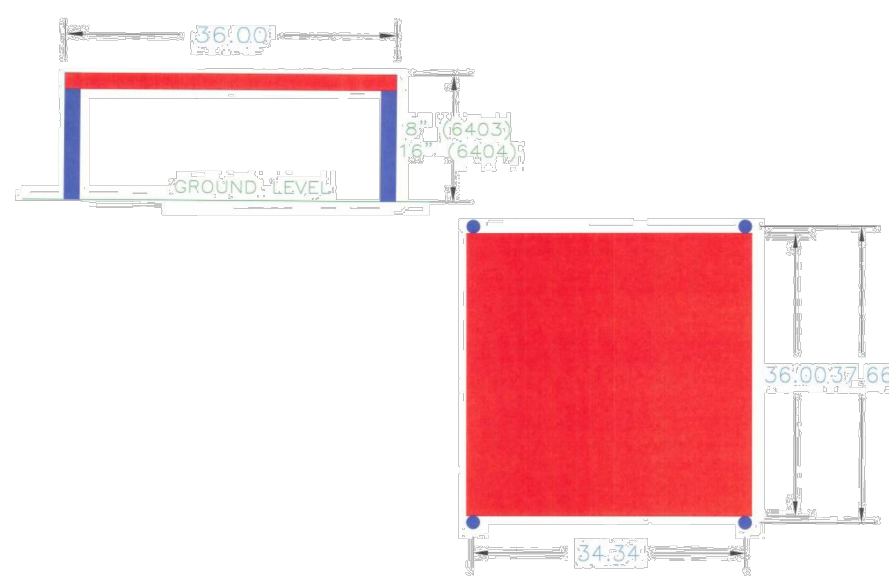




The 8" and 16" Wait Tables help to teach confidence and patience. The lower 8" height is suitable for small dogs and small/ishy dog areas of the park. The Wait Tables feature a flat, solid piece of reinforced, rust proof aluminum and are free of perforations. They are highly textured for slip resistance and assemble easily with stainless steel, vandal resistant hardware. Standard colors are Red or Green, with custom colors available for an additional price.



Top and Side Views:



## 6403/6404 8" & 16" WAIT TABLE

10 gauge, rust proof  
reinforced aluminum

Highly textured  
PawsGrip™ coating  
for maximum slip  
resistance

Free of perforations,  
UV resistant top coat

Dimensions:  
36" x 34 x 8" or 16"

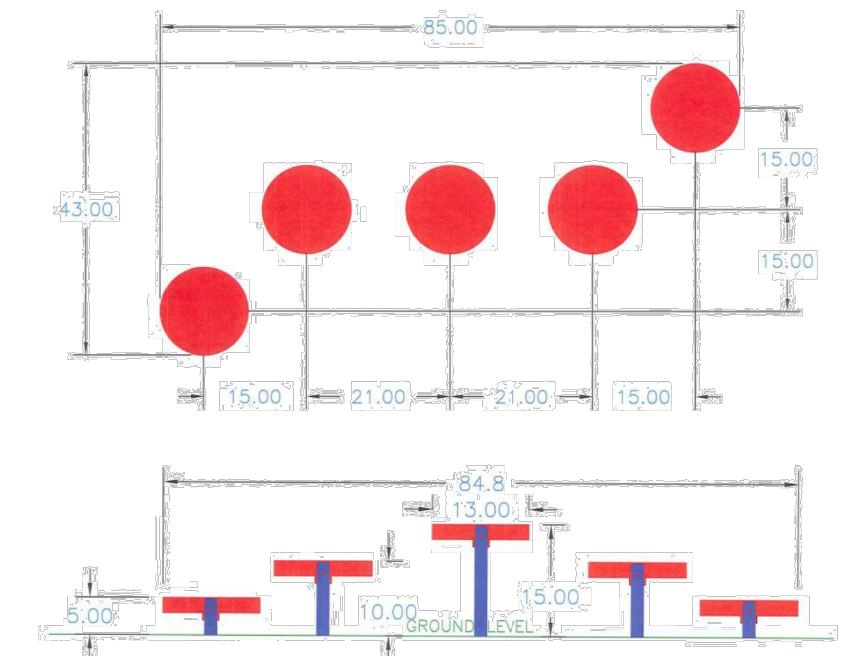
**DOG-ON-IT-PARKS**  
4818 Evergreen Way  
Ste 250  
Everett, WA 98203  
P: 877-348-3647  
www.dog-on-it-parks.com  
Refer to installation manual for  
more detailed specifications  
Copyright 2017



No off-leash area is complete without an Agility Walk! This set of five disks of varying heights encourages your dog to step or hop to each one. The 14", perforation-free diameter is appropriate for dogs of all sizes, and installation in small dog areas of the park is easily modified to accommodate the legs of our more petite friends. Standard colors are Red or Green, with custom colors available at additional charge.



Top and Side Views:



## 6413 AGILITY WALK

Set of five: 10 gauge,  
rust proof reinforced  
aluminum disks free of  
perforations

Highly textured  
PawsGrip™ coating for  
maximum slip  
resistance

Standard Colors: Red or  
Green

Stainless steel, vandal  
resistant hardware

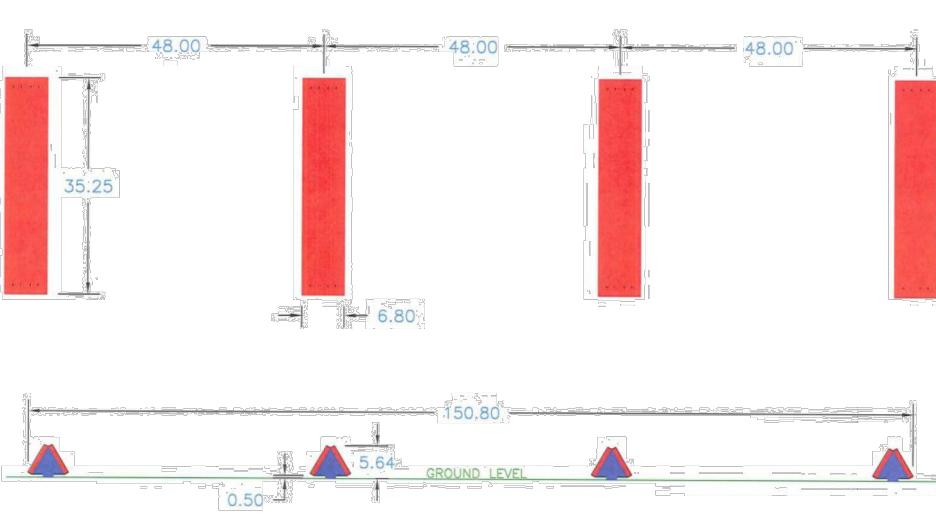
**DOG-ON-IT-PARKS**  
4818 Evergreen Way  
Ste 250  
Everett, WA 98203  
P: 877-348-3647  
www.dog-on-it-parks.com  
Refer to installation manual for  
more detailed specifications  
Copyright 2017



Hound Hurdles help to improve jumping and timing skills. This series of four low hurdles is suitable for dogs of all sizes and is easily modified for small dog areas of the park by narrowing the spacing between each jump. Alternating paw and bone details add an element of fun while also helping to provide depth perception. Standard colors are Red or Green, with custom colors available by request.



Top and Side Views:



## 6509 HOUND HURDLES

Set of four: Features  
eco-friendly and  
durable HDPE plastic

Rust resistant, powder  
coated aluminum  
support posts

Bi-color, routed solid  
poly planks with paw  
and bone details

Standard Colors: Red or  
Green

**DOG-ON-IT-PARKS**  
4818 Evergreen Way  
Ste 250  
Everett, WA 98203  
P: 877-348-3647  
www.dog-on-it-parks.com  
Refer to installation manual for  
more detailed specifications  
Copyright 2017



Weave Poles are one of the more challenging dog park activities. They require patience and timing to develop the skills needed to negotiate all six poles consecutively. Our Flexible Weave Poles are safe and truly designed to flex; the durable urethane can be bent to a 90 degree angle and will slowly and safely return to an upright position.



Top and Side Views:



## 6516 FLEXIBLE WEAVE POLES

Set of six - Constructed  
with 30" length molded  
urethane tube

Tube installed over  
custom lathe-turned  
post free of sharp  
edges

UV stable material

Stainless steel, vandal  
resistant hardware

**DOG-ON-IT-PARKS**  
4818 Evergreen Way  
Ste 250  
Everett, WA 98203  
P: 877-348-3647  
www.dog-on-it-parks.com  
Refer to installation manual for  
more detailed specifications  
Copyright 2016



DOG-ON-IT-PARKS  
877-348-3647

DOG-ON-IT-PARKS  
MODEL NO. 7236 OR APPROVED EQUAL.  
INSTALL ON FENCE NEAR DOG PARK ENTRY GATE

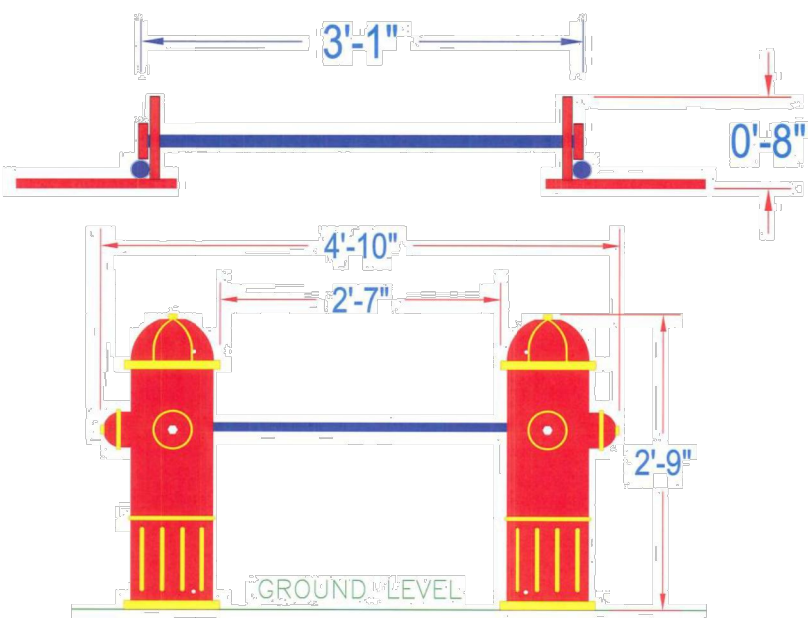
SMALL DOG AREA SIGN DETAIL  
N.T.S.



The Adjustable Jump Bar is an ideal starter jump for dogs of all sizes. The lightweight aluminum alloy bar makes it a snap to modify the height and the shallow guide slots allows the bar to easily fall into the channel, so it's a much safer option than heavy steel bars. The Fire Hydrant details add a touch of fun and also help to guide your dog through the center of the jump. Standard colors are either Red or Green, with custom options available for an additional charge.



Top and Front Views:



## 6521 ADJUSTABLE JUMP BAR

Aircraft grade,  
aluminum alloy jump  
bar

7 height adjustments

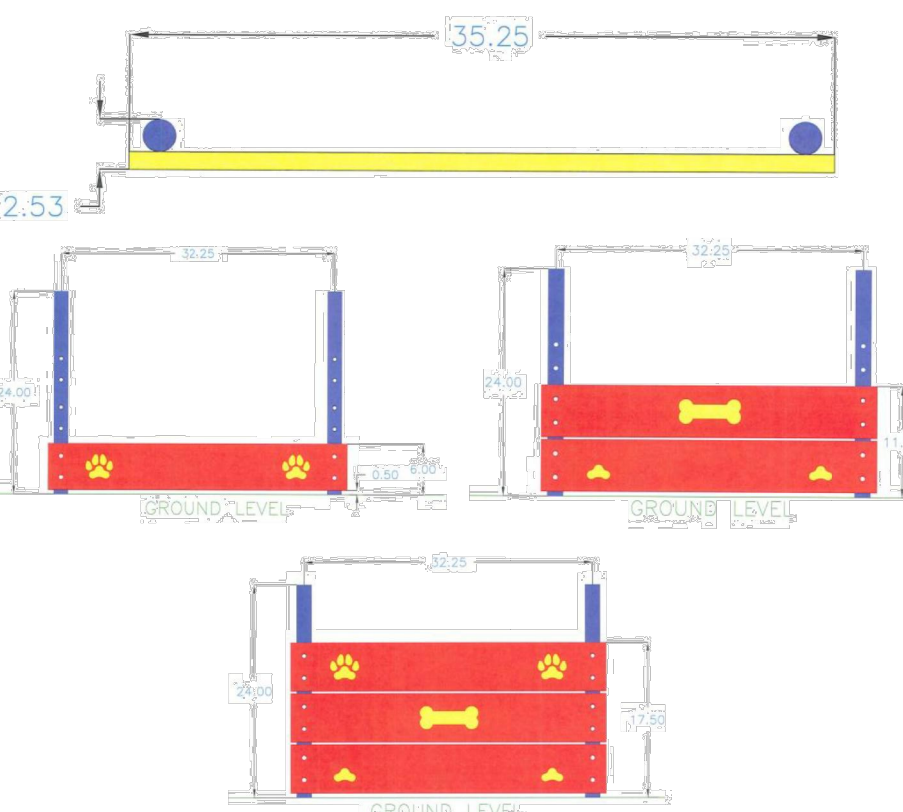
Standard Colors: Red or  
Green

Stainless steel, vandal  
resistant hardware

**DOG-ON-IT-PARKS**  
4818 Evergreen Way  
Ste 250  
Everett, WA 98203  
P: 877-348-3647  
www.dog-on-it-parks.com  
Refer to installation manual for  
more detailed specifications  
Copyright 2017



Wall Jumps are ideal starter pieces for any dog park. They're available in three different heights to help dogs of various sizes and the ability levels develop jumping skills. Manufactured with eco-friendly HDPE plastic and rust-proof aluminum uprights, our customizable planks also feature routed paw and bone details to assist with depth perception. Standard colors are Red or Green, with custom colors available for an additional charge. (2 plank option shown)



## 6601-6603 WALL JUMPS

Bi-color, solid poly  
planks mounted to  
powder coated,  
aluminum guide posts

Customizable,  
precision routed paw  
and bone details help  
provide depth  
perception

Available in 1, 2 and 3  
plank heights

Standard Colors:  
Red or Green

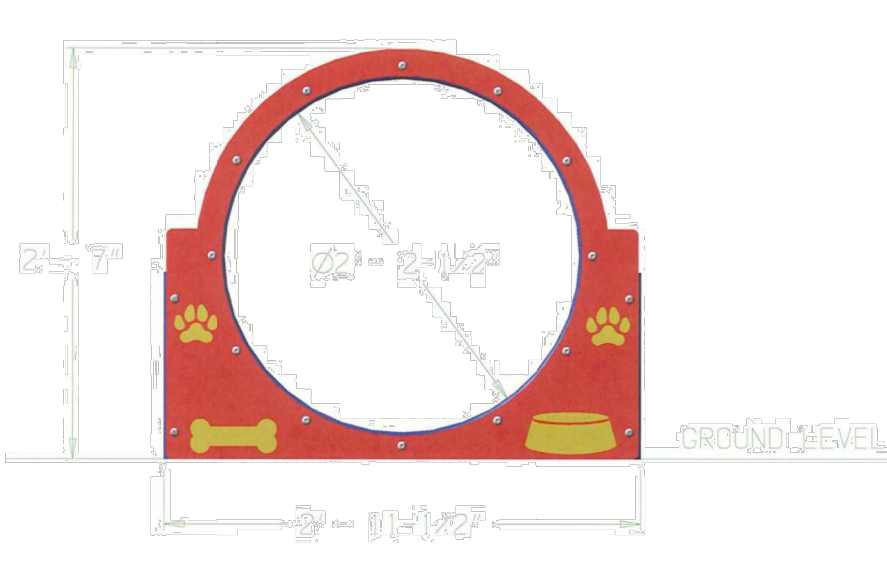
**DOG-ON-IT-PARKS**  
4818 Evergreen Way  
Ste 250  
Everett, WA 98203  
P: 877-348-3647  
www.dog-on-it-parks.com  
Refer to installation manual for  
more detailed specifications  
Copyright 2017



The Double Bow Wow Barrel offers an extra wide diameter to accommodate canines of all shapes and sizes, and the straight tube section allows dogs to easily see through to the other side. Like all of our tunnels, the Double Bow Wow Barrel's interior is highly textured with our exclusive material to provide years of slip resistance. Standard end panels are laser cut in either red/yellow or green/white, with customizable routed dog house options as well.



View:



## 6706 DOUBLE BOW WOW BARREL

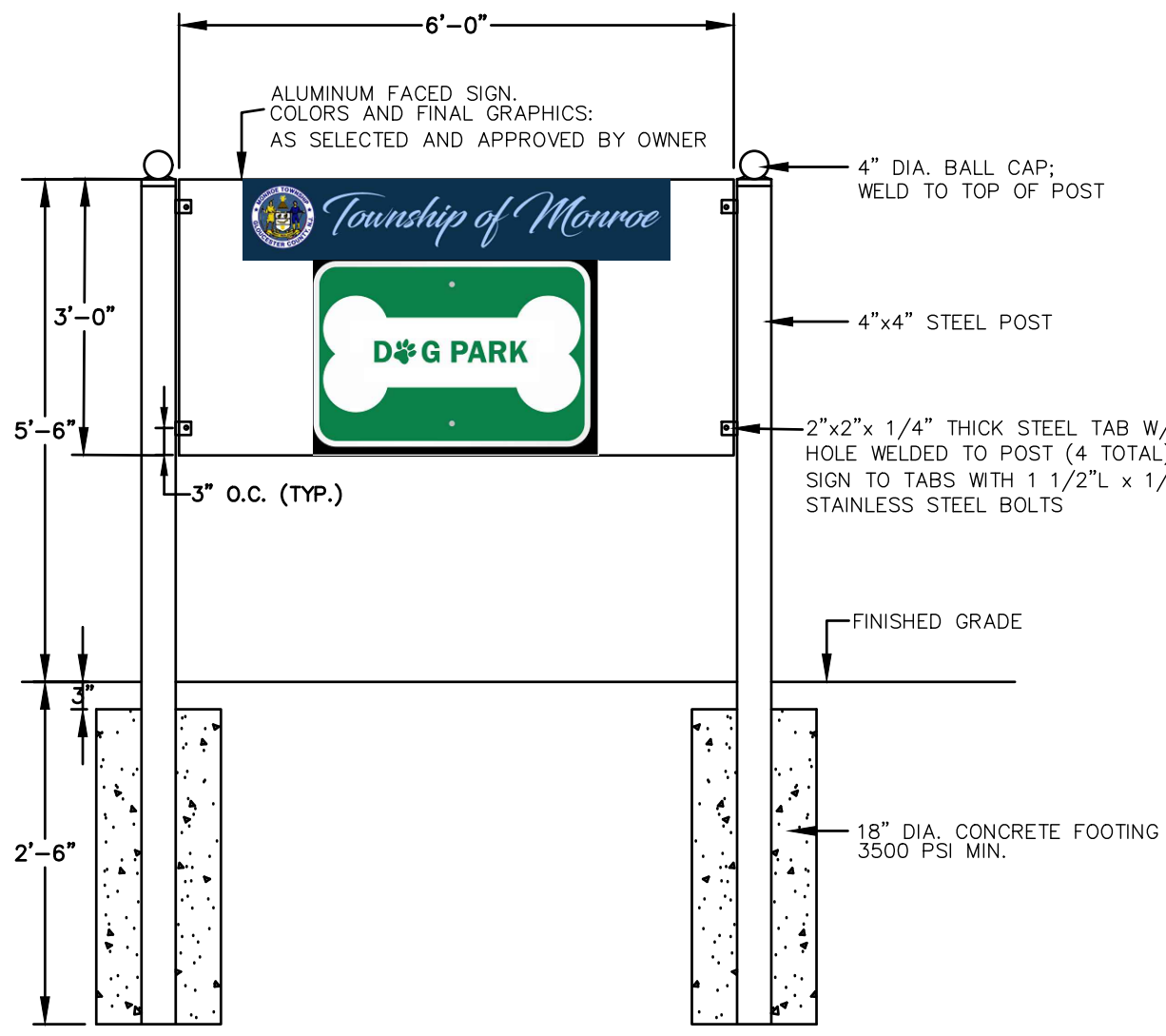
6"L and 27"D

Tube Color: Blue, Red  
or Green

Tunnel interior has  
proprietary texture  
embedded into the  
plastic

Stainless steel, vandal  
resistant hardware.  
Surface mount plates  
also available.

**DOG-ON-IT-PARKS**  
4818 Evergreen Way  
Ste 250  
Everett, WA 98203  
P: 877-348-3647  
www.dog-on-it-parks.com  
Refer to installation manual for  
more detailed specifications  
Copyright 2018



- NOTES:
1. PROVIDE COMPLETE SHOP DRAWINGS
  2. ALL STEEL SHALL BE SHOP PRIMED AND PAINTED WITH TWO (2) COATS OF LATEX ENAMEL PAINT. PAINT SHALL BE MAB "RUST-O-LASTIC(™)" OR EQUAL COLOR: DARK GREEN TO MATCH GREEN ITEMS IN SIGN
  3. TAB WELDS SHALL BE 1/4" MIN. CIRCUMFERENTIAL AND SHALL BE GRIND SMOOTH.

PARK ENTRANCE SIGN DETAIL  
N.T.S.



### MANUFACTURER:

- DOGIPO  
2100 Principal Row, Suite 405  
Orlando, Florida 32837  
PH: 1-800-364-7681  
OR APPROVED EQUAL  
MODEL #1010: POLY PET STATION INCLUDES:  
1. Aluminum DOGIPO® Pet Sign (choice of On or Off Leash)  
2. Poly DOGIPO® Junior Bag Dispenser with two (2) rolls of 200 count DOGIPO® SMART Litter Pick Up Bags™  
3. 10 Gallon Poly DOGIPO® Trash Receptacle with attachable hinged lid Box of 50 count DOGIPO® SMART Litter Trash Bags™  
4. 2" x 2" x 4'-8" square poly telescopic mounting post with installation hardware  
5. Install post in 12" dia. x 30" deep, 4000 psi concrete foundation.  
6. Installation instructions and mounting hardware included

PET WASTE STATION DETAIL  
N.T.S.

### SMALL DOG PARK EQUIPMENT DETAILS N.T.S.

#### NOTE:

1. CONTRACTOR SHALL PROVIDE EQUIPMENT AS MODEL NUMBER SHOWN OR APPROVED EQUAL. PRIOR TO CONSTRUCTION, SHOP DRAWINGS OF FINAL EQUIPMENT SELECTIONS SHALL BE PROVIDED.
2. INSTALL EQUIPMENT PER MANUFACTURERS SPECIFICATIONS.



ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR  
AND PENNONI ASSOCIATES BEFORE PROCEEDING WITH WORK

**ANDREW T. BANFF**  
PROFESSIONAL ENGINEER  
NEW JERSEY LICENSE NO. 3E 45121

07/31/2020

MONROE TOWNSHIP DOG PARK

13001 P.O. LOT 16 & 28  
WILLIAMSTOWN, NEW JERSEY

CONSTRUCTION DETAILS II

TOWNSHIP OF MONROE

125 VIRGINIA AVENUE  
WILLIAMSTOWN, NEW JERSEY 08094

NO.	DATE	NO.	REVISIONS	BY

ALL DOCUMENTS PREPARED BY PENNONI ASSOCIATES  
AND INSTRUMENTS OF SERVICE IN RESPECT OF THE  
PROJECT. THEY ARE NOT INTENDED OR REPRESENTED  
TO BE INSTALLED FOR REUSE BY OWNER OR OTHERS ON  
THE EXTENSIONS OF THE PROJECT OR ON ANY OTHER  
PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION  
OR ADAPTATION BY PENNONI ASSOCIATES FOR THE  
SPECIFIC PURPOSE INTENDED WILL BE AT OWNERS  
SOLE RISK AND WITHOUT LIABILITY OR EQUAL  
EXPOSURE TO PENNONI ASSOCIATES AND OWNER  
SHALL INDemnIFY AND HOLD HARMLESS PENNONI  
ASSOCIATES FROM ALL CLAIMS, DAMAGES, LOSSES AND  
EXPENSES ARISING OUT OF OR RESULTING THEREFROM.

PROJECT	MTSPX20052
DATE	JULY 31, 2020
DRAWING SCALE	AS NOTED
DRAWN BY	BM
APPROVED BY	ATB

**CS6002**  
SHEET 11 OF 14

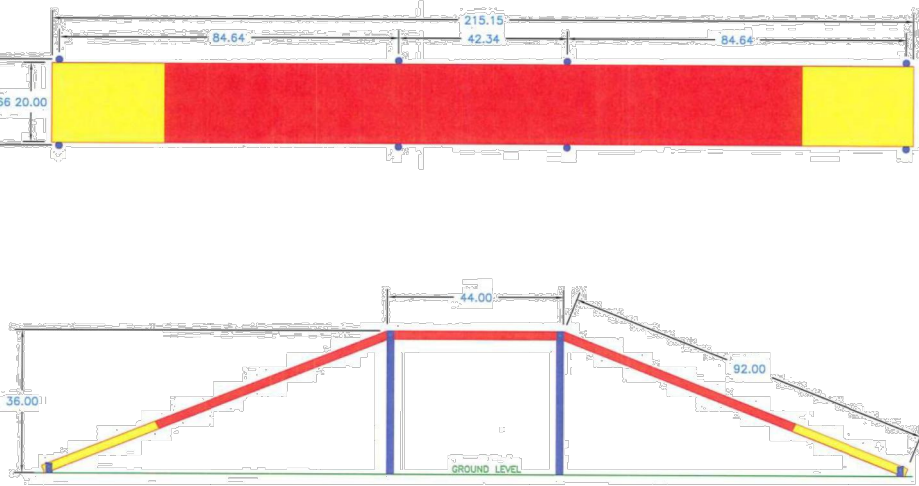




The Dog Walk Ramp requires your dog to walk up an elevated ramp, across the platform and down the other side. The ramp has a highly textured, entirely flat walking surface, is free of unnecessary step strips and is ideal for dogs of all sizes and abilities. Rust-proof aluminum materials, vandal resistant stainless steel hardware and UV stable top coat are suitable for all weather conditions. Standard colors are Red or Green, and custom colors available for an additional price.



Top and Side Views:



## 6402 DOG WALK RAMP

Rust proof 10 gauge, one piece reinforced aluminum planks & schedule 40 aluminum posts

Highly textured PawsGrip™ coating for maximum slip resistance

Standard Colors: Red/Yellow or Green/Gray

Free of unnecessary step strips

**DOG-ON-IT-PARKS**  
4818 Evergreen Way  
Ste 250  
Everett, WA 98203  
P: 877-348-3647

www.dog-on-it-parks.com

Refer to installation manual for more detailed specifications

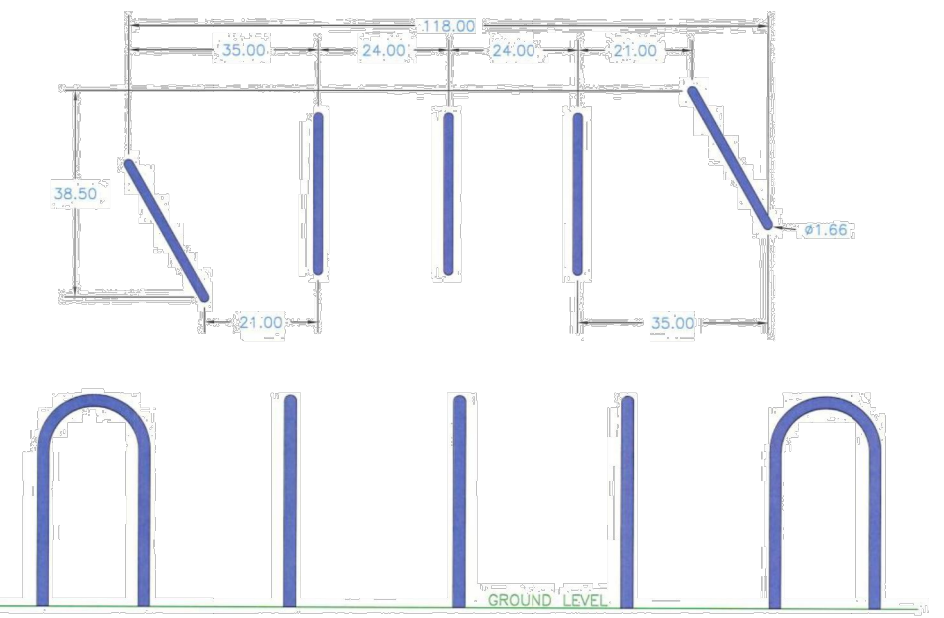
Copyright 2017



Hound Hoops™ feature a set of five, extra-large pipe arches arranged in a serpentine shape. Similar to a tunnel, dogs will enjoy running through the hoops and for extra challenge, encourage your dog to weave in and out as well. Hound Hoops™ are ideal for all size dogs, and can be spaced more closely together in small dog areas of the park. Standard colors are Blue or Black, custom colors available for additional charge.



Top and Side Views:



## 6415 HOUND HOOPS™

Heavy wall, rust proof aluminum pipe

Set of five, 28" wide hoops

Standard Colors: Blue or Black

Dimensions: 118" x 38"

**DOG-ON-IT-PARKS**  
4818 Evergreen Way  
Ste 250  
Everett, WA 98203  
P: 877-348-3647

www.dog-on-it-parks.com

Refer to installation manual for more detailed specifications

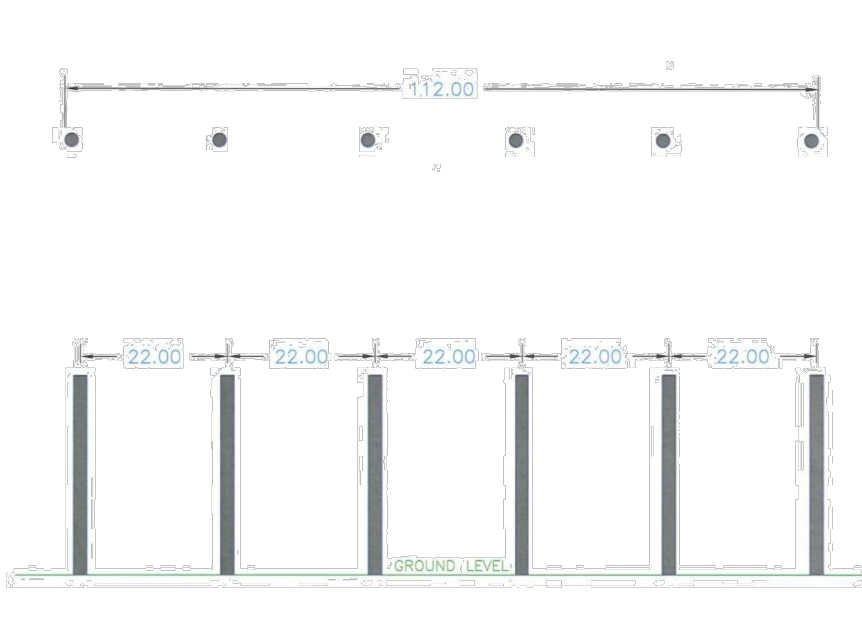
Copyright 2017



Weave Poles are one of the more challenging dog park activities. They require patience and timing to develop the skills needed to negotiate all six poles consecutively. Our Flexible Weave Poles are safe and truly designed to flex; the durable urethane can be bent to a 90 degree angle and will slowly and safely return to an upright position.



Top and Side Views:



## 6516 FLEXIBLE WEAVE POLES

Set of six - Constructed with 30" length molded urethane tube

Tube installed over custom lathe-turned post free of sharp edges

UV stable material

Stainless steel, vandal resistant hardware

**DOG-ON-IT-PARKS**  
4818 Evergreen Way  
Ste 250  
Everett, WA 98203  
P: 877-348-3647

www.dog-on-it-parks.com

Refer to installation manual for more detailed specifications

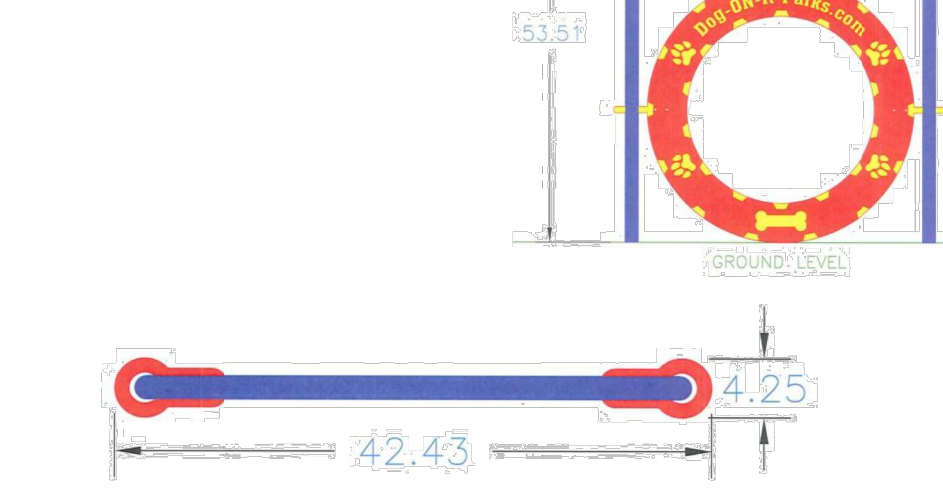
Copyright 2016



Our top selling jump! The Adjustable Tire Jump offers over 12" of height adjustment and the 27" interior diameter of the hoop can accommodate large dogs making this suitable for canines of all shapes and sizes. Made with durable HDPE plastic and routed with our signature paw and bone detail, the hoop can also be customized with your park or community name. Standard colors are Red/Yellow and Green/White, with custom colors available for an additional charge.



Top and Side Views:



## 6520 ADJUSTABLE TIRE JUMP

Standard Colors: Red or Green, custom colors available

Customizable HDPE plastic hoop with paw and bone details

Over 12" of height adjustment and extra wide hoop

Stainless steel, vandal resistant hardware

**DOG-ON-IT-PARKS**  
4818 Evergreen Way  
Ste 250  
Everett, WA 98203  
P: 877-348-3647

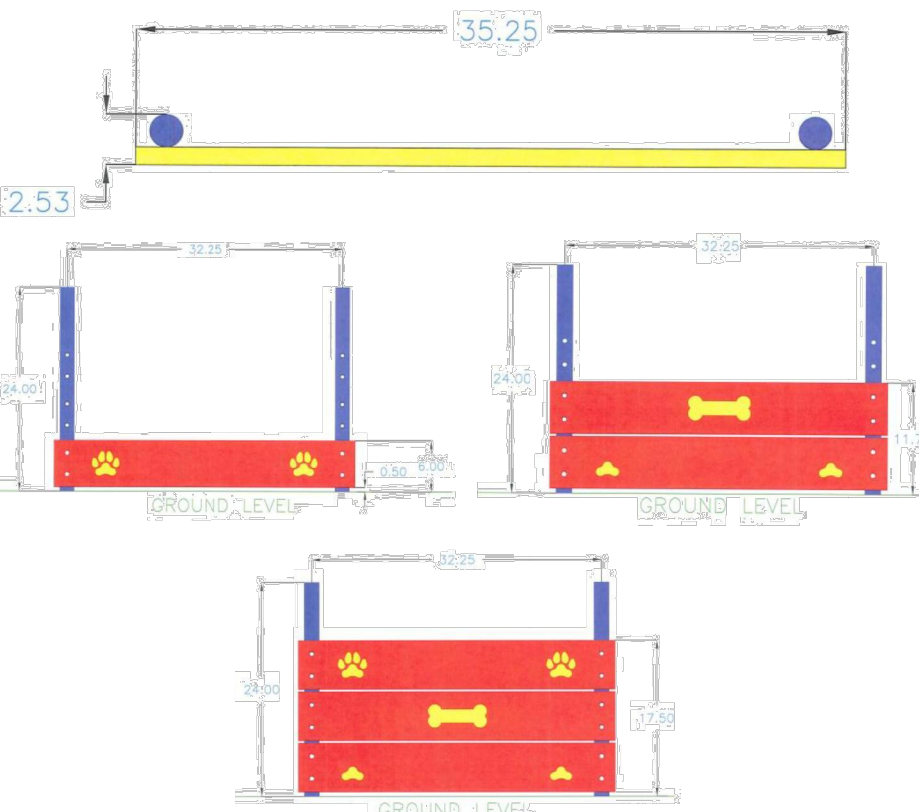
www.dog-on-it-parks.com

Refer to installation manual for more detailed specifications

Copyright 2017



Wall Jumps are ideal starter pieces for any dog park. They're available in three different heights to help dogs of various sizes and ability levels develop jumping skills. Manufactured with eco-friendly HDPE plastic and rust-proof aluminum uprights, our customizable planks also feature routed paw and bone details to assist with depth perception. Standard colors are Red or Green, with custom colors available for an additional charge. (2 plank option shown)



## 6601-6603 WALL JUMPS

Bi-color, solid poly planks mounted to powder coated, aluminum guide posts

Customizable, precision routed paw and bone details help provide depth perception

Available in 1, 2 and 3 plank heights

Standard Colors: Red or Green

**DOG-ON-IT-PARKS**  
4818 Evergreen Way  
Ste 250  
Everett, WA 98203  
P: 877-348-3647

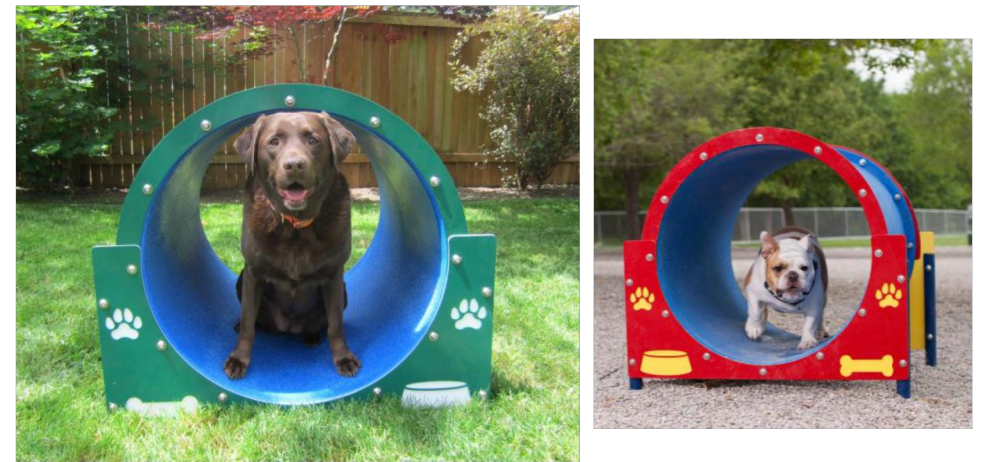
www.dog-on-it-parks.com

Refer to installation manual for more detailed specifications

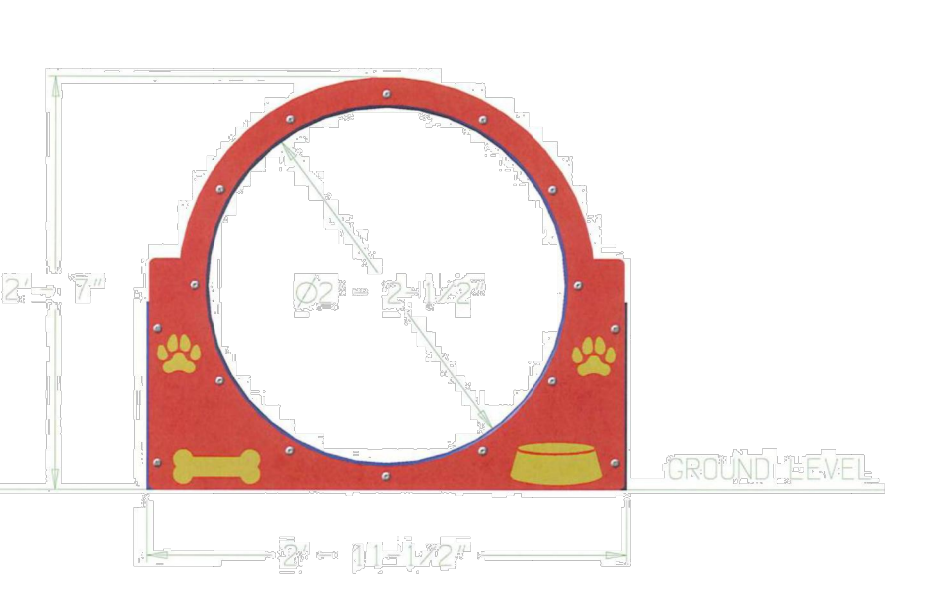
Copyright 2017



The Bow Wow Barrel is an introductory tunnel and ideal for shy/small dog areas, or dogs new to agility. It offers an extra wide diameter to accommodate canines of all shapes and sizes, and the straight tube section allows dogs to easily see through to the other side. Like all of our tunnels, the Bow Wow Barrel's interior is highly textured with our exclusive material to provide years of slip resistance. Laser cut end panels available in standard red or green, with customizable dog house panels available as well.



View:



## 6703 BOW WOW BARREL

36"L and 27"D

Tube Color: Blue, Red or Green

Tunnel interior has proprietary texture embedded into the plastic

Stainless steel, vandal resistant hardware. Surface mount plates also available.

**DOG-ON-IT-PARKS**  
4818 Evergreen Way  
Ste 250  
Everett, WA 98203  
P: 877-348-3647

www.dog-on-it-parks.com

Refer to installation manual for more detailed specifications

Copyright 2017



DOG-ON-IT-PARKS  
877-348-3647

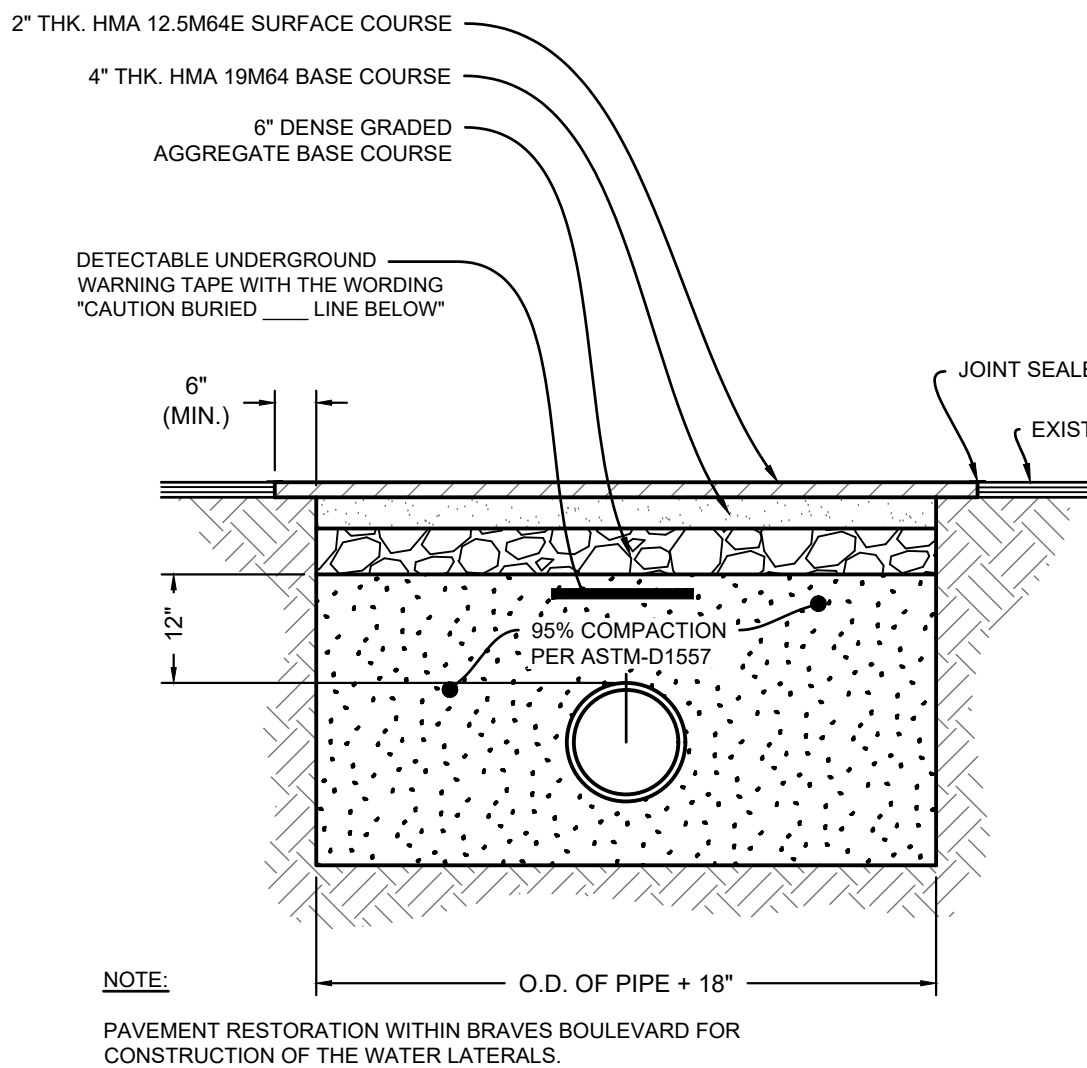
DOG-ON-IT-PARKS  
MODEL NO. 7236 OR APPROVED EQUAL  
INSTALL ON FENCE NEAR DOG PARK ENTRY GATE

LARGE DOG AREA SIGN DETAIL  
N.T.S.

LARGE DOG PARK EQUIPMENT DETAILS  
N.T.S.

### NOTE:

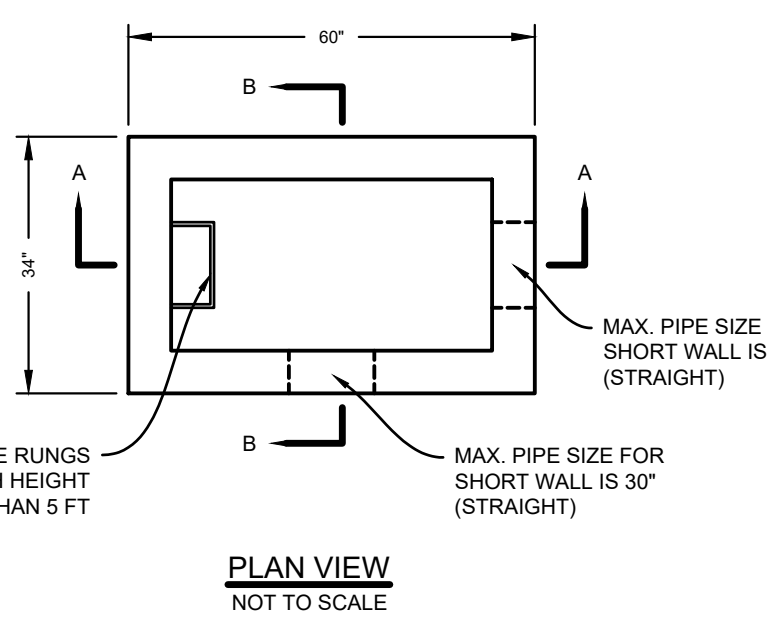
- CONTRACTOR SHALL PROVIDE EQUIPMENT AS MODEL NUMBER SHOWN OR APPROVED EQUAL PRIOR TO CONSTRUCTION. SHOP DRAWINGS OF FINAL EQUIPMENT SELECTIONS SHALL BE PROVIDED.
- INSTALL EQUIPMENT PER MANUFACTURERS SPECIFICATIONS.



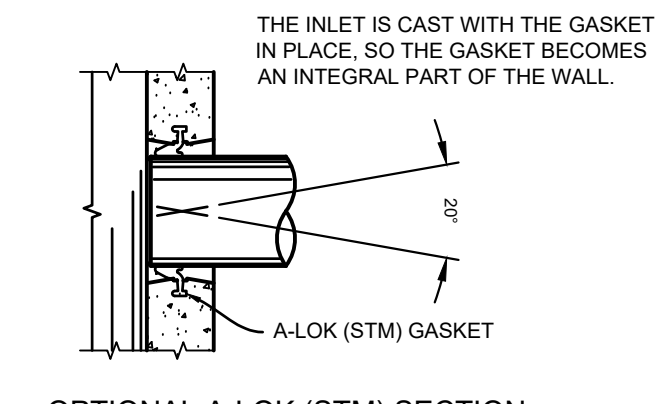
PERMANENT PAVEMENT RESTORATION DETAIL  
N.T.S.

### SPECIFICATIONS:

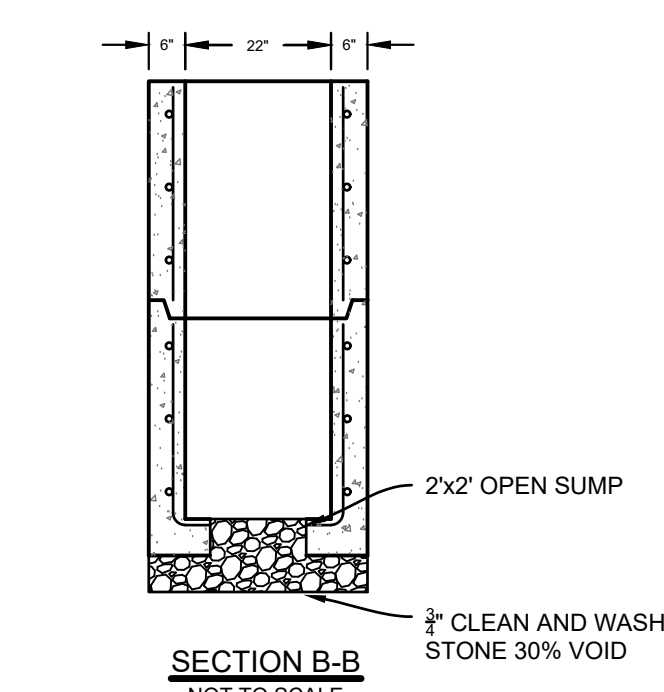
- THE CONCRETE IS DESIGNED TO OBTAIN A STRENGTH OF 4,000 PSI IN 28 DAYS.
- THE REINFORCING STEEL HAS A YIELD STRENGTH OF 60,000 PSI.
- THE INLET SHALL BE DESIGNED TO MEET ASTM C-913, "PRECAST CONCRETE WATER AND WASTEWATER STRUCTURES."
- THE REINFORCED CONCRETE WALLS AND BASE SLAB ARE DESIGNED FOR A MAXIMUM DEPTH OF 10 FT (DEPTH = F.G. TO TOP OF BASE SLAB).
- STRUCTURE IS DESIGNED TO MEET NJDOT SPECS.
- THE OPTIONAL A-LOK STORM GASKET IS DESIGNED TO MEET THE REQUIREMENTS OF ASTM C-1478, "STORM DRAIN RESILIENT CONNECTORS BETWEEN REINFORCED CONCRETE STORM SEWER STRUCTURES, PIPES, AND LATERALS."



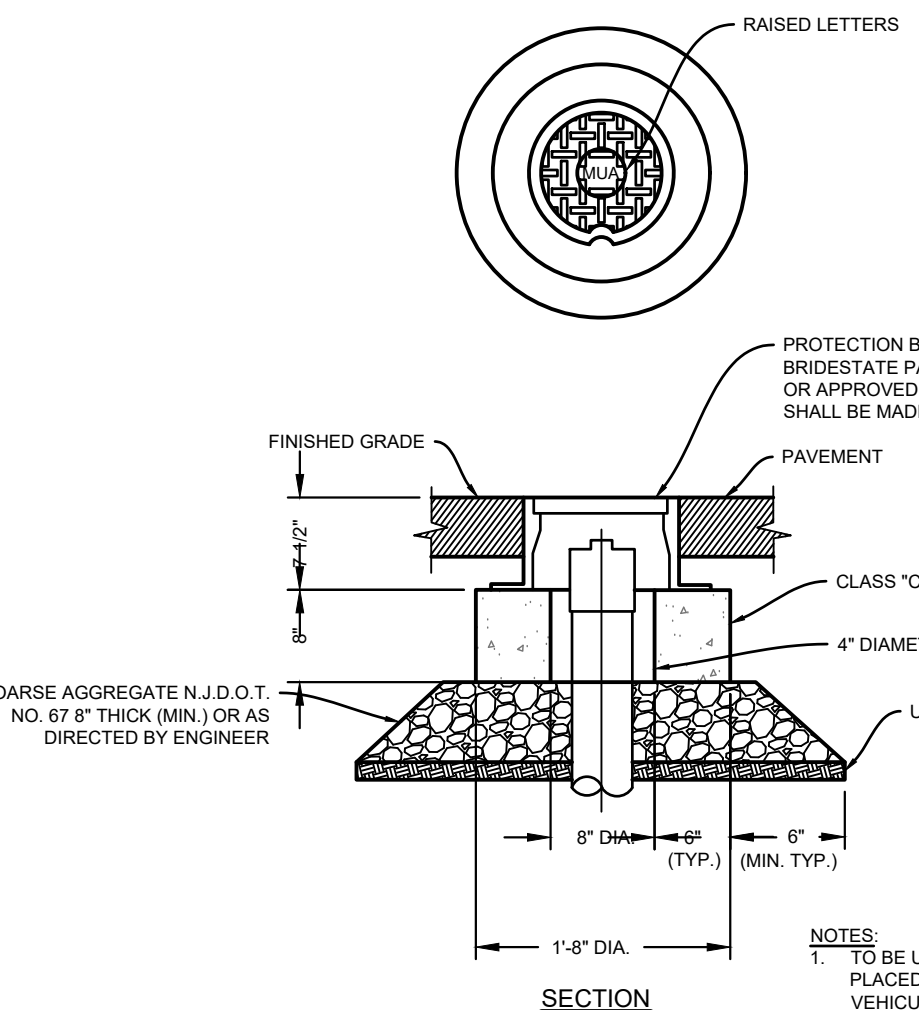
PLAN VIEW  
NOT TO SCALE



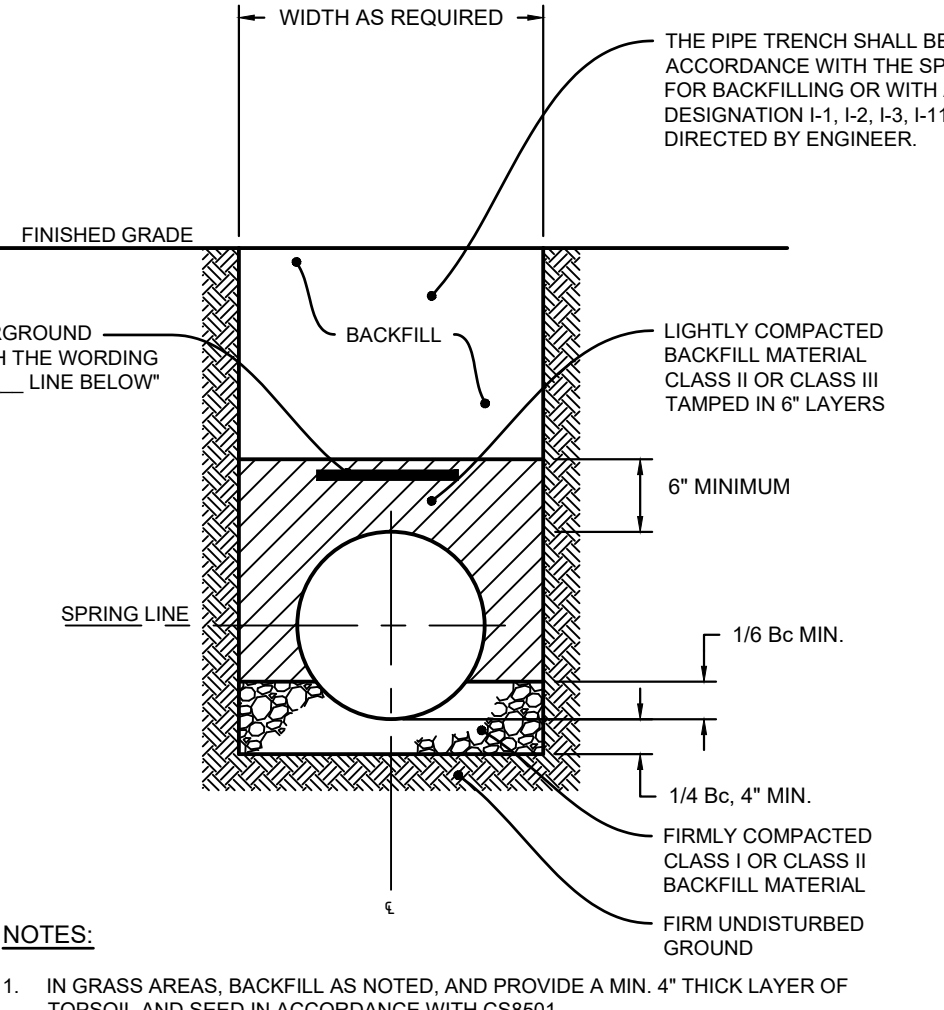
OPTIONAL A-LOK (STM) SECTION  
NOT TO SCALE



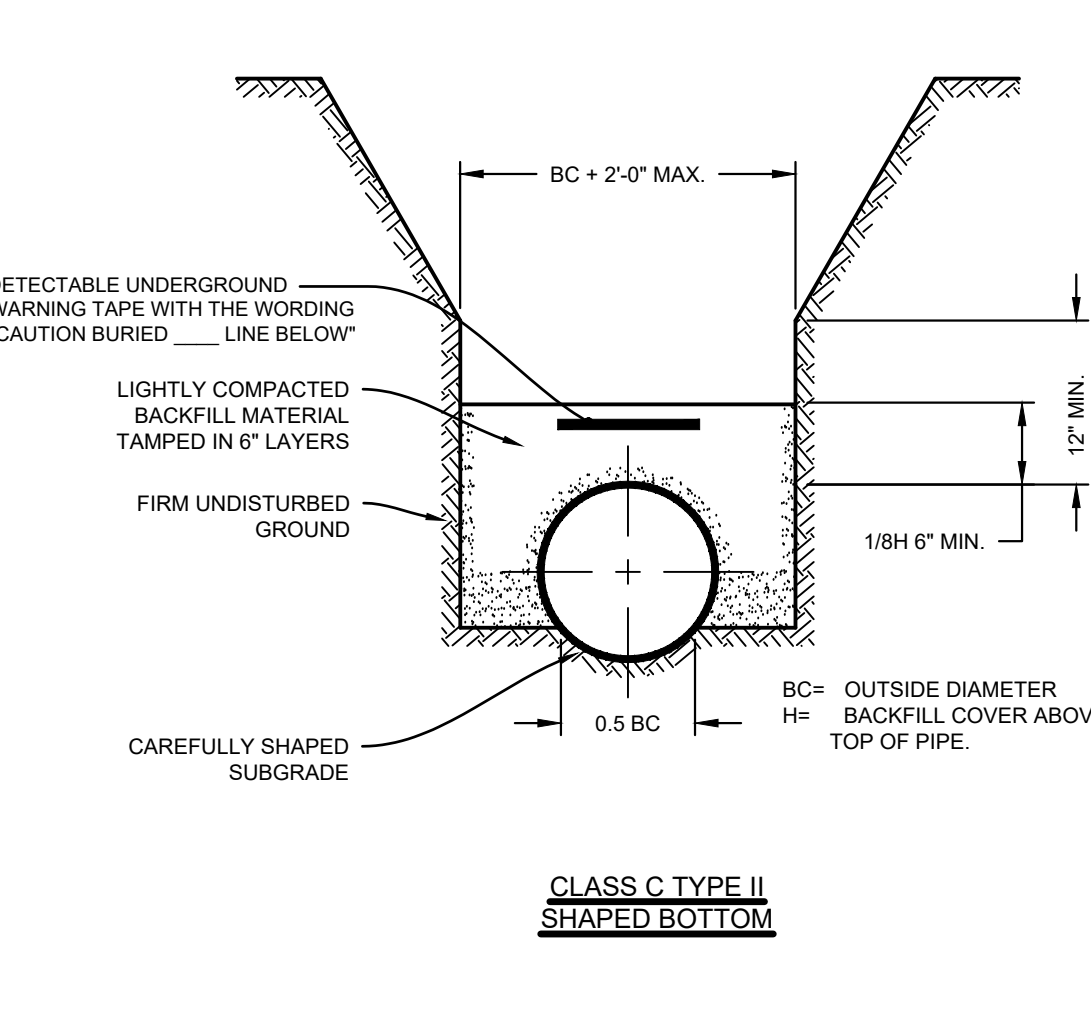
SECTION B-B  
NOT TO SCALE



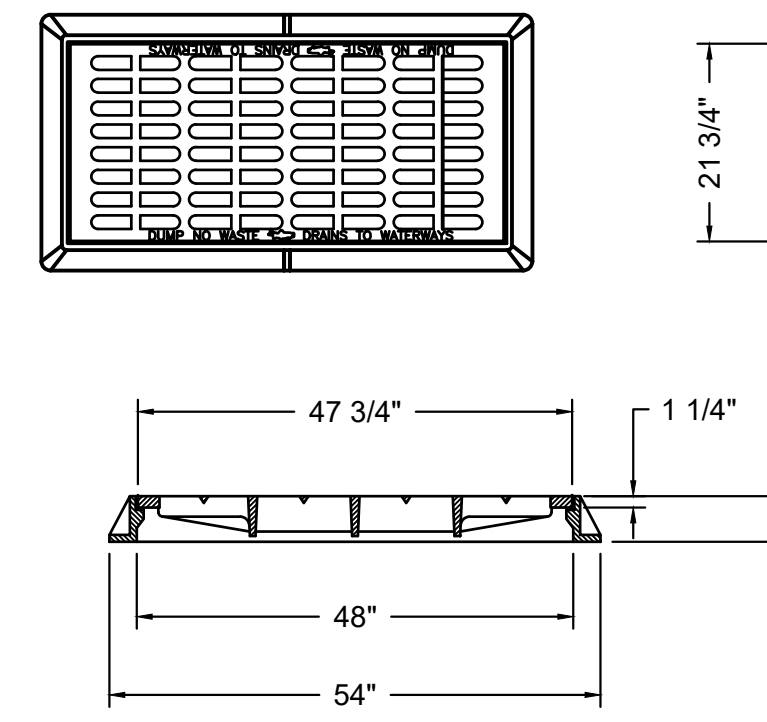
CLEAN-OUT PROTECTION BOX DETAIL  
N.T.S.



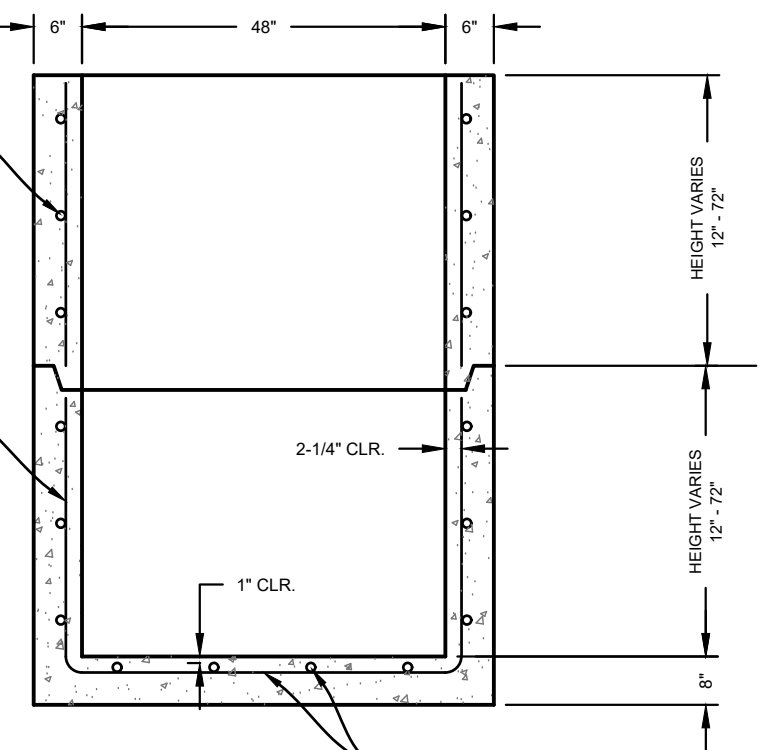
WATER MAIN TRENCH DETAIL  
N.T.S.



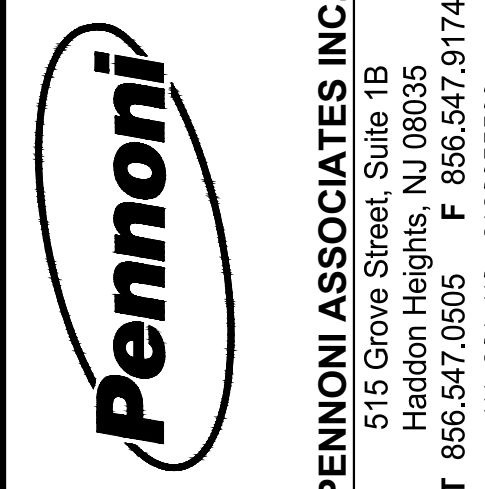
RCP STORM SEWER BEDDING DETAIL  
N.T.S.



NJDOT TYPE "A" INLET WITH BICYCLE SAFE GRATES  
N.T.S.



NJDOT TYPE "A" - SHALLOW INLET BASE AND RISER  
N.T.S.



ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND DISCREPANCIES BEFORE PROCEEDING WITH WORK

**ANDREW T. BANFF**  
PROFESSIONAL ENGINEER  
NEW JERSEY LICENSE NO. JE 45121

07/31/2020

MONROE TOWNSHIP DOG PARK

BLOCK 13001, PLOT 16 & 28  
WILLIAMSTOWN, NEW JERSEY

CONSTRUCTION DETAILS III

TOWNSHIP OF MONROE

1125 VIRGINIA AVENUE, NEW JERSEY 08094

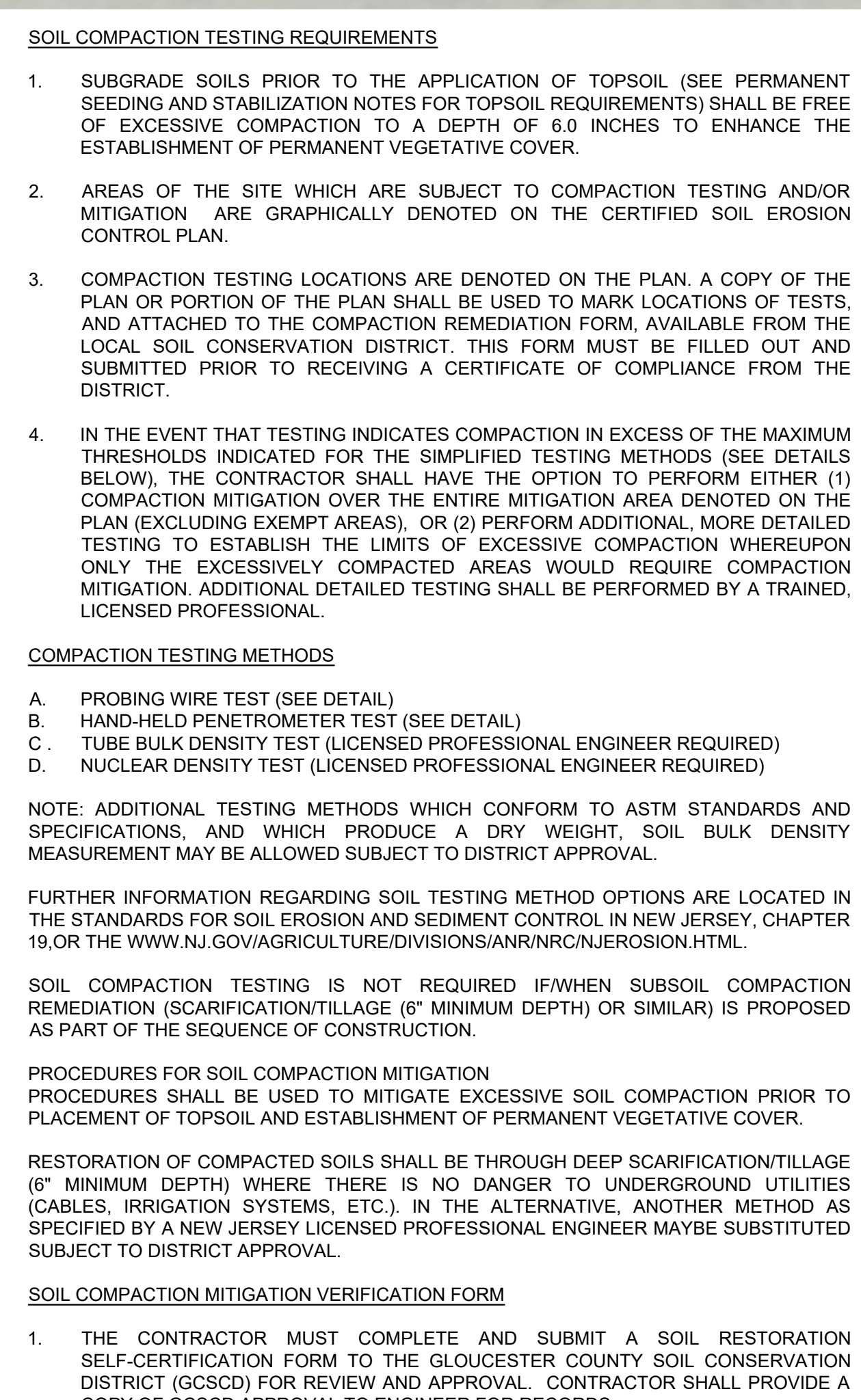
NO.	DATE	REVISIONS
1		BY
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		
32		
33		
34		
35		
36		
37		
38		
39		
40		
41		
42		
43		
44		
45		
46		
47		
48		
49		
50		
51		
52		
53		
54		
55		
56		
57		
58		
59		
60		
61		
62		
63		
64		
65		
66		
67		
68		
69		
70		
71		
72		
73		
74		
75		
76		
77		
78		
79		
80		
81		
82		
83		
84		
85		
86		
87		
88		
89		
90		
91		
92		
93		
94		
95		
96		
97		
98		
99		
100		

ALL DOCUMENTS PREPARED BY PENNONI ASSOCIATES AND INSTRUMENTS OF SERVICE IN RESPECT OF THE PROJECT. THEY ARE NOT INTENDED OR REPRESENTED TO BE SEPARATE FOR REUSE BY OWNER OR OTHERS ON THE EXTENSIONS OF THE PROJECT OR ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY PENNONI ASSOCIATES FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT OWNERS RISK AND WITHOUT LIABILITY OR EQUAL EXPOSURE TO PENNONI ASSOCIATES. AND OWNER SHALL INDEMNIFY AND HOLD HARMLESS PENNONI ASSOCIATES FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM.

PROJECT: MTSPX20052  
DATE: JULY 31, 2020  
DRAWING SCALE: AS NOTED  
DRAWN BY: BM  
APPROVED BY: ATB

**CS6003**  
SHEET 12 OF 14







SOIL EROSION AND SEDIMENTATION  
CONTROL NOTES:

1. ALL APPLICABLE EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE IN PLACE PRIOR TO ANY GRADING OPERATION AND/OR INSTALLATION OF PROPOSED STRUCTURES OR UTILITIES.
2. SOIL EROSION AND SEDIMENT CONTROL PRACTICES ON THIS PLAN SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS FOR SOIL EROSION IN NEW JERSEY.
3. APPLICABLE EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE LEFT IN PLACE UNTIL CONSTRUCTION IS COMPLETED AND/OR THE AREA IS STABILIZED.
4. THE CONTRACTOR SHALL PERFORM ALL WORK, FURNISH ALL MATERIALS AND INSTALL ALL MEASURES REQUIRED TO REASONABLY CONTROL SOIL EROSION RESULTING FROM CONSTRUCTION OPERATIONS AND PREVENT EXCESSIVE FLOW OF SEDIMENT FROM THE CONSTRUCTION SITE.
5. ANY DISTURBED AREA THAT IS TO BE LEFT EXPOSED FOR MORE THAN THIRTY (30) DAYS AND NOT SUBJECT TO CONSTRUCTION TRAFFIC SHALL IMMEDIATELY RECEIVE A TEMPORARY SEEDING AND FERTILIZATION IN ACCORDANCE WITH THE NEW JERSEY STANDARDS AND THEIR RATES SHOULD BE INCLUDED IN THE NARRATIVE. IF THE SEASON PROHIBITS TEMPORARY SEEDING, THE DISTURBED AREAS WILL BE MULCHED WITH SALT HAY OR EQUIVALENT AND ANCHORED IN ACCORDANCE WITH THE NEW JERSEY STANDARDS (I.E. PEG AND TWINE, MULCH NETTING OR LIQUID MULCH BINDER).
6. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO PROVIDE CONFIRMATION OF LIME, FERTILIZER AND SEED APPLICATION RATES AND RATES OF APPLICATION AT THE REQUEST OF THE GLOUCESTER SOIL CONSERVATION DISTRICT.
7. ALL CRITICAL AREAS SUBJECT TO EROSION WILL RECEIVE A TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH AT A RATE OF 3 TONS PER ACRE ACCORDING TO THE NEW JERSEY STANDARDS IMMEDIATELY FOLLOWING ROUGH GRADING.
8. THE SITE SHALL, AT ALL TIMES BE GRADED AND MAINTAINED SUCH THAT ALL STORMWATER RUNOFF IS DIVERTED TO SOIL EROSION AND SEDIMENT CONTROL FACILITIES.
9. ALL SEDIMENTATION STRUCTURES WILL BE INSPECTED AND MAINTAINED ON A REGULAR BASIS AND AFTER EVERY STORM EVENT.
10. A CRUSHED STONE, TIRE CLEANING PAD WILL BE INSTALLED WHEREVER A CONSTRUCTION ACCESS EXISTS. THE STABILIZED PAD WILL BE INSTALLED ACCORDING TO THE STANDARD FOR STABILIZED CONSTRUCTION ACCESS.
11. ALL DRIVEWAYS MUST BE STABILIZED WITH 2 1/2" CRUSHED STONE OR SUBBASE PRIOR TO INDIVIDUAL LOT CONSTRUCTION.
12. PAVED AREAS MUST BE KEPT CLEAN AT ALL TIMES.
13. ALL CATCH BASIN INLETS WILL BE PROTECTED ACCORDING TO THE CERTIFIED PLAN.
14. ALL STORM DRAINAGE OUTLETS WILL BE STABILIZED, AS REQUIRED BEFORE THE DISCHARGE POINTS BECOME OPERATIONAL.
15. ALL DOWNSPOUT OPERATIONS MUST DISCHARGE DIRECTLY INTO A SEDIMENT FILTER AREA. THE SEDIMENT FILTER SHOULD BE COMPOSED OF A SUITABLE SEDIMENT FILTER FABRIC. (SEE DETAIL). THE SEDIMENT FILTER MUST BE DOWNSPOUT TO NORMAL POOL WITHIN 10 DAYS OF THE DESIGN STORM.
16. NJS 4-24.39, ET. SED. REQUIRES THAT NO CERTIFICATE OF OCCUPANCY BE ISSUED BEFORE ALL PROVISIONS OF THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN HAVE BEEN COMPLIED WITH FOR PERMANENT MEASURES. ALL SITE WORK FOR THE PROJECT MUST BE COMPLETED PRIOR TO THE DISTRICT ISSUING A REPORT OF COMPLIANCE A PREREQUISITE TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY BY THE MUNICIPALITY.
17. MULCHING IS REQUIRED ON ALL SEEDED AREAS TO INSURE AGAINST EROSION BEFORE GRASS IS ESTABLISHED TO PROMOTE EARLIER VEGETATION COVER.
18. OFFSITE SEDIMENT DISTURBANCE MAY REQUIRE ADDITIONAL CONTROL MEASURES TO BE DETERMINED BY THE EROSION CONTROL INSPECTOR.
19. A COPY OF THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN MUST BE MAINTAINED ON THE PROJECT SITE DURING CONSTRUCTION.
20. THE GLOUCESTER SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED 48 HOURS PRIOR TO ANY LAND DISTURBANCE.
21. ANY CONVEYANCE OF THIS PROJECT PRIOR TO ITS COMPLETION WILL TRANSFER FULL RESPONSIBILITY FOR COMPLIANCE WITH THE CERTIFIED PLAN TO ANY SUBSEQUENT OWNERS.
22. IMMEDIATELY AFTER THE COMPLETION OF STRIPPING AND STOCKPILING OF TOPSOIL, THE STOCKPILE MUST BE STABILIZED ACCORDING TO THE STANDARD FOR TEMPORARY VEGETATIVE COVER. STABILIZE TOPSOIL STOCKPILE WITH STRAW MULCH FOR PROTECTION IF THE SEASON DOES NOT PERMIT THE APPLICATION AND ESTABLISHMENT OF TEMPORARY SEEDING. ALL SOIL STOCKPILES ARE NOT TO BE LOCATED WITHIN 5 FT (50 FEET) OF A FLOODPLAIN, ROAD, ROADWAY OR DRAINAGE FACILITY AND THE BASE MUST BE PROTECTED WITH A SEDIMENT BARRIER.
23. ANY CHANGES TO THE SITE PLAN WILL REQUIRE THE SUBMISSION OF A REVISED SOIL EROSION AND SEDIMENT CONTROL PLAN TO THE GLOUCESTER SOIL CONSERVATION DISTRICT. THE REVISED PLAN MUST BE IN ACCORDANCE WITH THE CURRENT NEW JERSEY STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL.
24. METHODS FOR THE MANAGEMENT OF HIGH ACID PRODUCING SOILS SHALL BE IN ACCORDANCE WITH THE STANDARDS. HIGH ACID PRODUCING SOILS ARE THOSE FOUND TO CONTAIN IRON SULFIDES OR HAVE A PH OF 4 OR LESS.
25. PHOSPHORUS AND PERMANENT SEEDING MEASURES MUST BE APPLIED ACCORDING TO THE NEW JERSEY STANDARDS, AND MULCHED WITH SALT HAY OR EQUIVALENT AND ANCHORED IN ACCORDANCE WITH THE NEW JERSEY STANDARDS (I.E. PEG AND TWINE, MULCH NETTING OR LIQUID MULCH BINDER).
26. MAXIMUM SIDE SLOPES OF ALL EXPOSED SURFACES SHALL NOT BE CONSTRUCTED STEEPER THAN 3:1 UNLESS OTHERWISE APPROVED BY THE DISTRICT.
27. DUST IS TO BE CONTROLLED BY AN APPROVED METHOD ACCORDING TO THE NEW JERSEY STANDARDS AND MAY INCLUDE WATERING OF CALCIUM CHLORIDE AND WATER.
28. ADJOINING PROPERTIES SHALL BE PROTECTED FROM EXCAVATION AND FILLING OPERATIONS ON THE PROPOSED SITE.
29. USE STAGED CONSTRUCTION METHODS TO MINIMIZE EXPOSED SURFACES WHERE APPLICABLE.
30. ALL VEGETATIVE MATERIAL SHALL BE SELECTED IN ACCORDANCE WITH AMERICAN STANDARDS FOR NURSERY STOCK OF THE AMERICAN ASSOCIATION OF THE NURSERYMAN AND IN ACCORDANCE WITH THE NEW JERSEY STANDARDS.
31. NATURAL VEGETATION AND SPECIES SHALL BE RETAINED WHERE SPECIFIED ON THE LANDSCAPING PLAN.
32. THE SOIL EROSION INSPECTOR MAY REQUIRE ADDITIONAL SOIL EROSION MEASURES TO BE INSTALLED, AS DIRECTED BY THE DISTRICT INSPECTOR.

STANDARD FOR TEMPORARY VEGETATIVE  
COVER FOR SOIL STABILIZATION:

DEFINITION

ESTABLISHMENT OF TEMPORARY VEGETATIVE COVER ON SOILS EXPOSED FOR PERIODS OF TWO TO 6 MONTHS WHICH ARE NOT BEING GRADED, NOT UNDER ACTIVE CONSTRUCTION OR NOT SCHEDULED FOR PERMANENT SEEDING WITHIN 60 DAYS.

PURPOSE

TO TEMPORARILY STABILIZE THE SOIL, AND REDUCE DAMAGE FROM WIND AND WATER EROSION UNTIL PERMANENT STABILIZATION IS ACCOMPLISHED.

WATER QUALITY ENHANCEMENT

PROVIDES TEMPORARY PROTECTION AGAINST THE IMPACTS OF WIND AND RAIN, SLOWS THE OVERLAND MOVEMENT OF STORMWATER RUNOFF, INCREASES INFILTRATION, RETAINS SOIL AND NUTRIENTS ON SITE, PROTECTING STREAMS OR OTHER STORMWATER CONVEYANCES.

WHERE APPLICABLE

ON EXPOSED SOILS THAT HAVE THE POTENTIAL FOR CAUSING OFF-SITE ENVIRONMENTAL DAMAGE AS DETERMINED AND DIRECTED BY ENGINEER.

METHODS AND MATERIALS

1. SITE PREPARATION

- A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARDS FOR LAND GRADING, P. 19-1.
- B. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL, STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS. SEE STANDARDS 11 THROUGH 42.
- C. IMMEDIATELY PRIOR TO SEEDING, THE SURFACE SHOULD BE SCARIFIED 6" TO 12" WHERE THERE HAS BEEN SOIL COMPACTION. THIS PRACTICE IS PERMISSIBLE ONLY WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.).

2. SEEDED PREPARATION

- A. APPLY GROUND LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS SUCH AS THOSE OFFERED BY RUTGERS CO-OPERATIVE EXTENSION. SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS CO-OPERATIVE EXTENSION OFFICES. FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET OF 10-20-10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE. APPLY LIMESTONE AT THE RATE OF 3 TONS PER ACRE UNLESS SOIL TEST INDICATES OTHERWISE. CALCIUM CARBONATE IS THE EQUIVALENT AND STANDARD FOR MEASURING THE ABILITY OF LIMING MATERIALS TO NEUTRALIZE SOIL ACIDITY AND SUPPLY CALCIUM AND MAGNESIUM TO GRASSES AND LEGUMES. TABLE BELOW IS A GENERAL GUIDELINE FOR LIMESTONE APPLICATION.

SOIL TEXTURE	TONS/ACRE	LBS./1,000 S.F.
CLAY, CLAY LOAM, AND HIGH ORGANIC SOIL	3	135
SANDY LOAM, LOAM, SILT LOAM	2	90
LOAMY SAND, SAND	1	45

PULVERIZED DOLOMITIC LIMESTONE IS PREFERRED FOR MOST SOILS SOUTH OF THE NEW BRUNSWICK-TRENTON LINE.

- B. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRINGTOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISCING OPERATION SHOULD BE ON THE GENERAL CONTOUR, CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM SEEDED IS PREPARED.
- C. INSPECT SEEDED JUST BEFORE SEEDING IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE RETILLED AS ABOVE.
- D. SOILS HIGH ON SULFIDES OR HAVING A PH OF 4 OR LESS REFER TO STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS, PG. 1-1 OF THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY.

3. SEEDING

- A. SELECT SEED FROM RECOMMENDATIONS IN TABLE.

SEED MIX SHALL BE AS FOLLOWS

SEED MIXTURE - TO BE PLANTED FROM 21-1 - 430 AND FROM 81-15 - 1030.

KIND OF SEED	MINIMUM PURITY-%	MINIMUM GERMINATION-%	% OF TOTAL WEIGHT MIXTURE	PLANTING RATE POUNDS/ACRE
HARD FESCUE	95	80	25%	50
STRONG CREEPING REED FESCUE	85	75	25%	50
CHEWINGS FESCUE	95	85	25%	50

- B. CONVENTIONAL SEEDING - APPLY SEED UNIFORMLY BY HAND, CYCLONE (CENTRIFUGAL) SEEDER, DROP SEEDER, DRILL OR CULPACKEER SEEDER. EXCEPT FOR DRILLED, HYDROSEEDING OR CULPACKEER SEEDING, SEED SHALL BE INCORPORATED INTO THE SOIL TO A DEPTH OF 1/4 TO 1/2 INCH BY RAKING OR DRAGGING. DEPTH OF SEED PLACEMENT MAY BE 1/4 INCH DEEPER ON COARSE TEXTURED SOIL.
- C. HYDROSEEDING IS A BROADCAST SEEDING METHOD USUALLY INVOLVING A TRUCK OR TRAILER MOUNTED TANK, WITH AN AGITATION SYSTEM AND HYDRAULIC PUMP FOR MIXING SEED, WATER AND FERTILIZER AND SPRAYING THE MIX ONTO THE PREPARED SEEDED. MULCH SHALL NOT BE INCLUDED IN THE TANK WITH SEED. SHORT FIBERED MULCH MAY BE APPLIED WITH A HYDROSEEDER FOLLOWING SEEDING. HYDROSEEDING IS NOT A PREFERRED SEEDING METHOD BECAUSE SEED AND FERTILIZER ARE APPLIED TO THE SURFACE AND NOT INCORPORATED INTO THE SOIL. POOR SEED TO SOIL CONTACT OCCURS REDUCING SEED GERMINATION AND GROWTH. HYDROSEEDING MAY BE USED FOR AREAS TOO STEEP FOR CONVENTIONAL EQUIPMENT TO TRAVERSE OR TOO OBSTRUCTED WITH ROCKS, STUMPS, ETC.
- D. AFTER SEEDING, FIRING THE SOIL WITH A CORRUGATED ROLLER WILL ASSURE GOOD SEED-TO-SOIL CONTACT, RESTORE CAPILLARITY, AND IMPROVE SEEDING EMERGENCE. THIS IS THE PREFERRED METHOD WHEN PERFORMED ON THE CONTOUR. SHEET EROSION WILL BE MINIMIZED AND WATER CONSERVATION ON SITE WILL BE MAXIMIZED.

4. MULCHING

MULCHING IS REQUIRED ON ALL SEEDING. MULCH WILL INSURE AGAINST EROSION BEFORE GRASS IS ESTABLISHED AND WILL PROMOTE FASTER AND EARLIER ESTABLISHMENT. (THE EXISTENCE OF VEGETATION SUFFICIENT TO CONTROL SOIL EROSION SHALL BE DEEMED COMPLIANCE WITH THIS MULCHING REQUIREMENT.)

1. STRAW OR HAY UNROOTED SMALL GRAIN STRAW, HAY FREE OF SEEDS OR SALT HAY TO BE APPLIED AT THE RATE OF 1-1/2 TO 2 TONS PER ACRE (70 TO 90 POUNDS PER 1,000 SQUARE FEET), EXCEPT THAT WHERE A CRUMPER IS USED INSTEAD OF LIQUID MULCH-BINDER (TACKIFYING OR ADHESIVE AGENT), THE RATE OF APPLICATION IS 3 TONS PER ACRE. MULCH CHOPPER-BLOWERS MUST NOT GRIND THE MULCH. HAY MULCH IS NOT RECOMMENDED FOR ESTABLISHING FINE TURF OR LAWNS DUE TO THE PRESENCE OF WEED SEED.

APPLICATION  
SPREAD UNIFORMLY BY HAND MECHANICALLY SO THAT APPROXIMATELY 95% OF THE SOIL SURFACE WILL BE COVERED. FOR UNIFORM DISTRIBUTION OF HAND-SPREAD MULCH, DIVIDE AREA INTO APPROXIMATELY 1,000 SQUARE FEET SECTIONS AND DISTRIBUTE 70 TO 90 POUNDS WITH EACH SECTION.

ANCHORING SHOULD BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS, DEPENDING UPON THE SIZE OF THE AREA, STEEPNESS OF SLOPES, AND COSTS.

1. PEG AND TWINE - DRIVE 8 TO 10 INCH WOOD PEGS TO WITHIN 2 TO 3 INCHES OF THE SOIL SURFACE EVERY 4 FEET IN ALL DIRECTIONS. STAKES MAY BE DRIVEN BEFORE AND AFTER APPLYING MULCH. SECURE MULCH TO SOIL SURFACE BY STRETCHING TWINE BETWEEN PEGS IN A CROSS-GROSS AND A SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.
2. MULCH NETTINGS - STAPLE PAPER, JUTE, COTTON, OR PLASTIC NETTINGS TO THE SOIL SURFACE. USE A DEGRADABLE NETTING IN AREAS TO BE MOVED.
3. CRUMPER (MULCH ANCHORING TOOL) - A TRACTOR-DRAWN IMPLEMENT, SOMEWHAT LIKE A DISC-HARROW, ESPECIALLY DESIGNED TO PUSH OR CUT SOME OF THE BROADCAST LONG FIBER MULCH 3 TO 4 INCHES INTO THE SOIL SO AS TO ANCHOR IT AND LEAVE PART STANDING UPRIGHT. THIS TECHNIQUE IS LIMITED TO AREAS TRAVERSABLE BY A TRACTOR, WHICH MUST OPERATE ON THE CONTOUR OR SLOPES. STRAW MULCH RATE MUST BE 3 TONS PER ACRE. NO TACKIFYING OR ADHESIVE AGENT IS REQUIRED.

4. LIQUID MULCH-BINDERS - MAY BE USED TO ANCHOR SALT HAY OR STRAW MULCHES.

- A. APPLICATIONS SHOULD BE HEAVIER AT EDGES WHERE WIND CATCHES THE MULCH, IN VALLEYS, AND AT CRESTS OF BANKS. REMAINDER OF AREA SHOULD BE UNIFORM IN APPEARANCE.
- B. USE ONE OF THE FOLLOWING:
  1. EMULSIFIED ASPHALT - (SS-1, CSS-1, CMS-2, MS-2, RS-1, RS-2, CRS-1, AND CRS-2) - APPLY 0.04 GAL./SQ. YD. OR 164 GAL./ACRE. IF THE SOIL IS VERY DRY, REDUCES LESS THAN 50% OF THE MORE HIGH USE 0.075 GAL./SQ. YD. OR 363 GAL./ACRE. THESE MATERIALS MAY BE DIFFICULT TO APPLY UNIFORMLY AND WILL DISCOLOR SURFACES.
  2. ORGANIC AND VEGETABLE BASED BINDERS - NATURALLY OCCURRING, POWDER FORMULATES, A GEL, AND WHEN APPLIED TO MULCH UNDER SATISFACTORY CURING CONDITIONS WILL FORM MEMBRANED NETWORKS OF INSOLUBLE POLYMERS. THE VEGETABLE GEL SHALL BE PHYSIOLOGICALLY HARMLESS AND NOT RESULT IN A PHYTOLOGICAL EFFECT OR IMPROVE GROWTH OF TURFGRASS. USE AT RATES AND WEATHER CONDITIONS AS RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH MATERIALS. MANY NEW PRODUCTS ARE AVAILABLE, SOME OF WHICH MAY NEED FURTHER EVALUATION FOR USE IN THIS STATE.
  3. SYNTHETIC BINDERS - HIGH POLYMER SYNTHETIC EMULSION, MISCIABLE WITH WATER WHEN DILUTED AND FOLLOWING APPLICATION TO MULCH, DRYING AND CURING SHALL NO LONGER BE SOLUBLE OR DISPERSIBLE IN WATER. IT SHALL BE APPLIED AT RATES RECOMMENDED BY THE MANUFACTURER AND REMAIN TACKY UNTIL GERMINATION OF GRASS.
- C. WOOD-FIBER OR PAPER-FIBER MULCH SHALL BE MADE FROM WOOD, PLANT FIBERS OR PAPER CONTAINING NO GROWTH OR GERMINATION INHIBITING MATERIALS. USED AT THE RATE OF 1,500 POUNDS PER ACRE OR AS RECOMMENDED BY THE PRODUCT MANUFACTURER, AND MAY BE APPLIED BY A HYDROSEEDER. THE MULCH SHALL NOT BE MIXED IN THE TANK WITH THE SEED. USE IS LIMITED TO FLATTER SLOPES AND DURING OPTIMUM SEEDING PERIODS IN SPRING AND FALL.

- C. PELLETED MULCH, COMPRESSED AND EXTRUDED PAPER AND/OR WOOD FIBER PRODUCT, WHICH MAY CONTAIN CO-POLYMERS, TACKIFIERS, FERTILIZERS AND COLORING AGENTS, THE DRY PELLETS, WHEN APPLIED TO A SEEDED AREA AND WATER, PELLETED MULCH MAY BE USED FOR USE ON SMALL LAWN OR RENOVATION AREAS. SEEDED AREAS WHERE WEED-SEED FREE MULCH IS DESIRED OR ON SITES WHERE STRAW MULCH AND TACKIFIER AGENT ARE NOT PRACTICAL OR DESIRABLE.

APPLYING THE FULL 0.2 TO 0.4 INCHES OF WATER AFTER SPREADING PELLETED MULCH ON THE SEED BED IS EXTREMELY IMPORTANT FOR SUFFICIENT ACTIVATION AND EXPANSION OF THE MULCH TO PROVIDE SOIL COVERAGE.

STANDARD FOR PERMANENT VEGETATIVE COVER  
FOR SOIL STABILIZATION:

DEFINITION

ESTABLISHMENT OF PERMANENT VEGETATIVE COVER ON EXPOSED SOILS WHERE PERENNIAL VEGETATION IS NEEDED FOR LONG TERM PROTECTION.

PURPOSE

TO PERMANENTLY STABILIZE THE SOIL, ASSURING CONSERVATION OF SOIL AND WATER, AND TO ENHANCE THE ENVIRONMENT.

WATER QUALITY ENHANCEMENT

SLOWS THE OVERLAND MOVEMENT OF STORMWATER RUNOFF, INCREASES INFILTRATION AND RETAINS SOIL AND NUTRIENTS ON SITE, PROTECTING STREAMS OR OTHER STORMWATER CONVEYANCES.

WHERE APPLICABLE

ON EXPOSED SOILS THAT HAVE A POTENTIAL FOR CAUSING OFF-SITE ENVIRONMENTAL DAMAGE AS DETERMINED AND DIRECTED BY ENGINEER.

METHODS AND MATERIALS

1. SITE PREPARATION

- A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARDS FOR LAND GRADING, P. 19-1.
- B. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL, STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS. SEE STANDARDS 11 THROUGH 42.
- C. IMMEDIATELY PRIOR TO SEEDING, THE SURFACE SHOULD BE SCARIFIED 6" TO 12" WHERE THERE HAS BEEN SOIL COMPACTION. THIS PRACTICE IS PERMISSIBLE ONLY WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.).

2. SEEDED PREPARATION

- A. APPLY GROUND LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS SUCH AS THOSE OFFERED BY RUTGERS CO-OPERATIVE EXTENSION. SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS CO-OPERATIVE EXTENSION OFFICES. FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET OF 10-20-10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE. APPLY LIMESTONE AT THE RATE OF 3 TONS PER ACRE UNLESS SOIL TEST INDICATES OTHERWISE. CALCIUM CARBONATE IS THE EQUIVALENT AND STANDARD FOR MEASURING THE ABILITY OF LIMING MATERIALS TO NEUTRALIZE SOIL ACIDITY AND SUPPLY CALCIUM AND MAGNESIUM TO GRASSES AND LEGUMES. TABLE BELOW IS A GENERAL GUIDELINE FOR LIMESTONE APPLICATION RATES.

SOIL TEXTURE	TONS/ACRE	LBS./1,000 S.F.
CLAY, CLAY LOAM, AND HIGH ORGANIC SOIL	3	135
SANDY LOAM, LOAM, SILT LOAM	2	90
LOAMY SAND, SAND	1	45

PULVERIZED DOLOMITIC LIMESTONE IS PREFERRED FOR MOST SOILS SOUTH OF THE NEW BRUNSWICK-TRENTON LINE.

- B. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRINGTOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISCING OPERATION SHOULD BE ON THE GENERAL CONTOUR, CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM SEEDED IS PREPARED.
- C. IMMEDIATELY PRIOR TO SEEDING, THE SURFACE SHOULD BE SCARIFIED 6" TO 12" WHERE THERE HAS BEEN SOIL COMPACTION. THIS PRACTICE IS PERMISSIBLE ONLY WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.).
- D. HIGH ACID PRODUCING SOILS  
SOILS HAVING A PH OF 4 OR LESS OR CONTAINING IRON SULFIDE SHALL BE COVERED WITH A MINIMUM OF 12 INCHES OF SOIL HAVING A PH 5 OR MORE BEFORE INITIATING SEEDED PREPARATION. SEE STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS.

3. SEEDING

- A. SELECT SEED FROM RECOMMENDATIONS IN TABLE.

SEED TYPES	SEEDING RATES 1" (POUNDS)		OPTIMUM SEEDING DATE 2" BASED ON PLANT HARDINESS ZONE 3"			OPTIMUM SEED DEPTH 4" (INCHES)
	PER ACRE	PER 1,000 SQ. FT.	ZONE 5	ZONE 6	ZONE 7	
COOL SEASON GRASSES						
HARD FESCUE	75	2.0	3/15 - 7/31 & 8/1 - 10/1	3/1 - 8/14 & 8/15 - 10/15	2/1 - 8/14 & 8/15 - 10/30	1.0
STRONG CREEPING REED FESCUE	75	2.0	3/15 - 7/31 & 8/1 - 10/1	3/1 - 8/14 & 8/15 - 10/15	2/1 - 8/14 & 8/15 - 10/30	1.0
CHEWINGS FESCUE	75	2.0	3/15 - 7/31 & 8/1 - 10/1	3/1 - 8/14 & 8/15 - 10/15	2/1 - 8/14 & 8/15 - 10/30	1.0

1" MAY BE PLANTED THROUGHOUT SUMMER IF SOIL MOISTURE IS ADEQUATE OR CAN BE IRRIGATED.

2" PLANT HARDINESS ZONE (SEE BELOW)

3" TWICE THE DEPTH FOR SANDY SOILS

ZONE 5B - (10 TO 15) PORTIONS OF SUSSEX AND WARREN COUNTIES

ZONE 6A - (5 TO 10) PORTIONS OF SUSSEX, WARREN, PASSAIC, MORRIS, SOMERSET AND HUNTERDON COUNTIES.

ZONE 6B (0 TO 5) PORTIONS OF BERGEN, CAMDEN, ESSEX AND GLOUCESTER, HUNTERDON, MERCER, MIDDLESEX, HUDSON/MONMOUTH, OCEAN, BURLINGTON, MORRIS, PASSAIC, SOMERSET, UNION, ATLANTIC, CUMBERLAND, AND CAPE MAY COUNTIES.

ZONE 7A (6 TO 10) PORTIONS OF CAMDEN, GLOUCESTER, SALEM, CUMBERLAND, CAPE MAY, ATLANTIC, BURLINGTON, OCEAN, AND MONMOUTH COUNTIES. ZONE 7B (10 TO 15) PORTIONS OF CAPEMAY, ATLANTIC, OCEAN AND MONMOUTH COUNTIES.

- B. CONVENTIONAL SEEDING - APPLY SEED UNIFORMLY BY HAND, CYCLONE (CENTRIFUGAL) SEEDER, DROP SEEDER, DRILL OR CULPACKEER SEEDER. EXCEPT FOR DRILLED, HYDROSEEDING OR CULPACKEER SEEDING, SEED SHALL BE INCORPORATED INTO THE SOIL, TO A DEPTH OF 1/4 TO 1/2 INCH, BY RAKING OR DRAGGING. DEPTH OF SEED PLACEMENT MAY BE 1/4 INCH DEEPER ON COARSE TEXTURED SOIL.
- C. HYDROSEEDING IS A BROADCAST SEEDING METHOD USUALLY INVOLVING A TRUCK OR TRAILER MOUNTED TANK, WITH AN AGITATION SYSTEM AND HYDRAULIC PUMP FOR MIXING SEED, WATER AND FERTILIZER AND SPRAYING THE MIX ONTO THE PREPARED SEEDED. MULCH SHALL NOT BE INCLUDED IN THE TANK WITH SEED. SHORT FIBERED MULCH MAY BE APPLIED WITH A HYDROSEEDER FOLLOWING SEEDING. HYDROSEEDING IS NOT A PREFERRED SEEDING METHOD BECAUSE SEED AND FERTILIZER ARE APPLIED TO THE SURFACE AND NOT INCORPORATED INTO THE SOIL. POOR SEED TO SOIL CONTACT OCCURS REDUCING SEED GERMINATION AND GROWTH. HYDROSEEDING MAY BE USED FOR AREAS TOO STEEP FOR CONVENTIONAL EQUIPMENT TO TRAVERSE OR TOO OBSTRUCTED WITH ROCKS, STUMPS, ETC.
- D. AFTER SEEDING, FIRING THE SOIL WITH A CORRUGATED ROLLER WILL ASSURE GOOD SEED-TO-SOIL CONTACT, RESTORE CAPILLARITY, AND IMPROVE SEEDING EMERGENCE. THIS IS THE PREFERRED METHOD WHEN PERFORMED ON THE CONTOUR. SHEET EROSION WILL BE MINIMIZED AND WATER CONSERVATION ON SITE WILL BE MAXIMIZED.

- A. APPLICATIONS SHOULD BE HEAVIER AT EDGES WHERE WIND CATCHES THE MULCH, IN VALLEYS, AND AT CRESTS OF BANKS. REMAINDER OF AREA SHOULD BE UNIFORM IN APPEARANCE.
- B. USE ONE OF THE FOLLOWING:
  1. EMULSIFIED ASPHALT - (SS-1, CSS-1, CMS-2, MS-2, RS-1, RS-2, CRS-1, AND CRS-2) - APPLY 0.04 GAL./SQ. YD. OR 164 GAL./ACRE. IF THE SOIL IS VERY DRY, REDUCES LESS THAN 50% OF THE MORE HIGH USE 0.075 GAL./SQ. YD. OR 363 GAL./ACRE. THESE MATERIALS MAY BE DIFFICULT TO APPLY UNIFORMLY AND WILL DISCOLOR SURFACES.
  2. ORGANIC AND VEGETABLE BASED BINDERS - NATURALLY OCCURRING, POWDER FORMULATES, A GEL, AND WHEN APPLIED TO MULCH UNDER SATISFACTORY CURING CONDITIONS WILL FORM MEMBRANED NETWORKS OF INSOLUBLE POLYMERS. THE VEGETABLE GEL SHALL BE PHYSIOLOGICALLY HARMLESS AND NOT RESULT IN A PHYTOLOGICAL EFFECT OR IMPROVE GROWTH OF TURFGRASS. USE AT RATES AND WEATHER CONDITIONS AS RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH MATERIALS. MANY NEW PRODUCTS ARE AVAILABLE, SOME OF WHICH MAY NEED FURTHER EVALUATION FOR USE IN THIS STATE.
  3. SYNTHETIC BINDERS - HIGH POLYMER SYNTHETIC EMULSION, MISCIABLE WITH WATER WHEN DILUTED AND FOLLOWING APPLICATION TO MULCH, DRYING AND CURING SHALL NO LONGER BE SOLUBLE OR DISPERSIBLE IN WATER. IT SHALL BE APPLIED AT RATES RECOMMENDED BY THE MANUFACTURER AND REMAIN TACKY UNTIL GERMINATION OF GRASS.
- C. WOOD-FIBER OR PAPER-FIBER MULCH SHALL BE MADE FROM WOOD, PLANT FIBERS OR PAPER CONTAINING NO GROWTH OR GERMINATION INHIBITING MATERIALS. USED AT THE RATE OF 1,500 POUNDS PER ACRE OR AS RECOMMENDED BY THE PRODUCT MANUFACTURER, AND MAY BE APPLIED BY A HYDROSEEDER. THE MULCH SHALL NOT BE MIXED IN THE TANK WITH THE SEED. USE IS LIMITED TO FLATTER SLOPES AND DURING OPTIMUM SEEDING PERIODS IN SPRING AND FALL.

- C. PELLETED MULCH, COMPRESSED AND EXTRUDED PAPER AND/OR WOOD FIBER PRODUCT, WHICH MAY CONTAIN CO-POLYMERS, TACKIFIERS, FERTILIZERS AND COLORING AGENTS, THE DRY PELLETS, WHEN APPLIED TO A SEEDED AREA AND WATER, PELLETED MULCH MAY BE USED FOR USE ON SMALL LAWN OR RENOVATION AREAS. SEEDED AREAS WHERE WEED-SEED FREE MULCH IS DESIRED OR ON SITES WHERE STRAW MULCH AND TACKIFIER AGENT ARE NOT PRACTICAL OR DESIRABLE.

APPLYING THE FULL 0.2 TO 0.4 INCHES OF WATER AFTER SPREADING PELLETED MULCH ON THE SEED BED IS EXTREMELY IMPORTANT FOR SUFFICIENT ACTIVATION AND EXPANSION OF THE MULCH TO PROVIDE SOIL COVERAGE.

- C. PELLETED MULCH, COMPRESSED AND EXTRUDED PAPER AND/OR WOOD FIBER PRODUCT, WHICH MAY CONTAIN CO-POLYMERS, TACKIFIERS, FERTILIZERS AND COLORING AGENTS, THE DRY PELLETS, WHEN APPLIED TO A SEEDED AREA AND WATER, PELLETED MULCH MAY BE USED FOR USE ON SMALL LAWN OR RENOVATION AREAS. SEEDED AREAS WHERE WEED-SEED FREE MULCH IS DESIRED OR ON SITES WHERE STRAW MULCH AND TACKIFIER AGENT ARE NOT PRACTICAL OR DESIRABLE.

7. ESTABLISHING PERMANENT VEGETATIVE STABILIZATION

THE QUALITY OF PERMANENT VEGETATION RESTS WITH THE CONTRACTOR. THE TIMING OF SEEDING, PREPARING THE SEEDED, APPLYING NUTRIENTS, MULCH AND OTHER MANAGEMENT ARE ESSENTIAL. THE SEED APPLICATION RATE IS REQUIRED WHEN A REPORT OF COMPLIANCE IS REQUESTED PRIOR TO ACTUAL ESTABLISHMENT OF PERMANENT VEGETATION. THE SEED APPLICATION RATE MAY BE USED WHEN PERMANENT VEGETATION IS ESTABLISHED PRIOR TO REQUESTING A REPORT OF COMPLIANCE FROM THE DISTRICT. THIS RATE APPLIES TO ALL METHODS OF SEEDING. ESTABLISHING PERMANENT VEGETATION MEANS 80% VEGETATIVE COVER OF THE SEEDED SPECIES AND MOWED ONCE.

8. COMPOSITION OF ERNST SEEDS MIX # ERNMX-153 SHOWY NORTHEAST NATIVE WILDFLOWER AND GRASS MIX

- 35.5% SCHIZACHYRIUM SCOPARIUM, 'CAMPER' (LITTLE BLUESTEM, 'CAMPER')  
20.0% ELYMUS VIRGINICUS, PA ECOTYPE (VIRGINIA WILDRYE, PA ECOTYPE)  
4.0% ECHINACEA PURPUREA (PURPLE CONEFLOWER)  
3.0% CHAMAECRISTA FASCICULATA, PA ECOTYPE (PARTRIDGE PEA, PA ECOTYPE)  
3.0% COREOPSIS LANCOLATA (LANCELEAF COREOPSIS)  
3.0% RUDEBECKIA HIRT, COASTAL PLAIN NC ECOTYPE (BLACKEYED SUSAN, COASTAL PLAIN NC ECOTYPE)  
2.0% HELIOPSIS HELIANTHOIDES, PA ECOTYPE (OXYEY SUNFLOWER, PA ECOTYPE)  
1.2% LACTIS SPICATA (MILK BELL)  
1.0% TRIDACNOPSIS CHENSIS, PA ECOTYPE (OHIO SPIDERWORT, PA ECOTYPE)  
0.1% PYCNANTHEMUM TENUIFOLIUM (NARROWLEAF MOUNTAINMINT)  
0.1% SENNA HEBEICARPA, VA & WV ECOTYPE (WILD SENNA, VA & WV ECOTYPE)  
0.5% ASCLEPIAS TUBEROSA (BUTTERFLY MILKWEED)  
0.5% BAPTISIA AUSTRALIS, SOUTHERN WV ECOTYPE (BLUE FALSE INDIGO, SOUTHERN WV ECOTYPE)  
0.4% Zizia aurea (Golden Alexander)  
0.4% ASTER LAEVIS, NY ECOTYPE (SMOOTH BLUE ASTER, NY ECOTYPE)  
0.4% ASTER NOVAE-ANGLIAE, PA ECOTYPE (NEW ENGLAND ASTER, PA ECOTYPE)  
0.4% ASTER OBLONGIFOLIUS, PA ECOTYPE (AROMATIC ASTER, PA ECOTYPE)  
0.4% ASTER PENNSYLANICUS, PA ECOTYPE (ZIPANG ASTER, PA ECOTYPE)  
0.4% EUPATORIUM COLEOSTEMIUM, VA ECOTYPE (MISTFLOWER, VA ECOTYPE)  
0.4% MONARDA FISTULOSA, FORT INDIANTOWN GAP PA ECOTYPE (WILD BERGAMOT, FORT INDIANTOWN GAP PA ECOTYPE)  
0.4% SOLIDAGO SEMPERPARVA, PA ECOTYPE (GRAY GOLDENROD, PA ECOTYPE)  
0.4% EUPATORIUM PERfoliatum, PA ECOTYPE (Bonest, PA ECOTYPE)  
0.3% Helianthus autumnalis, PA Ecotype (Common Sneezeweed, PA Ecotype)  
0.3% Juncea tenuis, PA Ecotype (Path Rush, PA Ecotype)  
0.2% Solidago nemoralis, PA Ecotype (Gray Goldenrod, PA Ecotype)  
0.2% Solidago rugosa, PA Ecotype (Wrinkled Goldenrod, PA Ecotype)

9. COMPOSITION OF ERNST SEEDS MIX # ERNMX-180 RAIN GARDEN MIX

- 33.4% Schizachyrium scoparium, 'Tascan', MN Ecotype (Little Bluestem, 'Tascan', MN Ecotype)  
20.0% Elymus virginicus, PA Ecotype (Virginia Wildrye, PA Ecotype)  
7.0% Carex vulpinoidea, PA Ecotype (Fox Sedge, PA Ecotype)  
3.0% Chamaecrista latifolia, WV Ecotype (River Cane, WV Ecotype)  
5.5% Echinacea purpurea (Purple Coneflower)  
3.0% Chamaecrista fasciculata, PA Ecotype (Partridge Pea, PA Ecotype)  
3.0% Panicum rigidulum, PA Ecotype (Rustling Panicgrass, PA Ecotype)  
3.0% Rudbeckia hirta, Coastal Plain NC Ecotype (Blackeyed Susan, Coastal Plain NC Ecotype)  
2.0% Helopsis helianthoides, PA Ecotype (Oxeye Sunflower, PA Ecotype)  
1.8% Asclepias incarnata, PA Ecotype (Swamp Milkweed, PA Ecotype)  
1.0% Carex scoparia, PA Ecotype (Blunt Sedge, PA Ecotype)  
1.0% Seneca hebeicarpa, VA & WV Ecotype (Wild Seneca, VA & WV Ecotype)  
0.5% Aster novae-angliae, PA Ecotype (New England Aster, PA Ecotype)  
0.5% Aster pennsylvanicus, PA Ecotype (Zipang Aster, PA Ecotype)  
0.5% Baptisia australis, Southern WV Ecotype (Blue False Indigo, Southern WV Ecotype)  
0.5% Zizia aurea (Golden Alexander)  
0.4% Eupatorium perfoliatum, PA Ecotype (Bonest, PA Ecotype)  
0.4% Monarda fistulosa, Fort Indiantown Gap PA Ecotype