

MULTIFAMILY HOUSING OR OTHER NON-RESIDENTIAL BUILDING/STRUCTURE

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

## TYPICAL SOIL COMPACTION TESTING LOCATIONS

## SOIL DE-COMPACTION AND TESTING REQUIREMENTS

### SOIL COMPACTION TESTING REQUIREMENTS

SUBGRADE SOILS PRIOR TO THE APPLICATION OF TOPSOIL (SEE PERMANENT SEEDING AND STABILIZATION NOTES FOR TOPSOIL REQUIREMENTS) SHALL BE FREE OF EXCESSIVE COMPACTION TO A DEPTH OF 6.0 INCHES TO ENHANCE THE ESTABLISHMENT OF PERMANENT VEGETATIVE COVER.

- AREAS OF THE SITE WHICH ARE SUBJECT TO COMPACTION TESTING AND/OR MITIGATION ARE GRAPHICALLY DENOTED ON THE CERTIFIED SOIL EROSION CONTROL
- COMPACTION TESTING LOCATIONS ARE DENOTED ON THE PLAN. A COPY OF THE PLAN OR PORTION OF THE PLAN SHALL BE USED TO MARK LOCATIONS OF TESTS. AND ATTACHED TO THE COMPACTION REMEDIATION FORM, AVAILABLE FROM THE LOCAL SOIL CONSERVATION DISTRICT. THIS FORM MUST BE FILLED OUT AND SUBMITTED PRIOR TO RECEIVING A CERTIFICATE OF COMPLIANCE FROM THE DISTRICT.
- 4. IN THE EVENT THAT TESTING INDICATES COMPACTION IN EXCESS OF THE MAXIMUM THRESHOLDS INDICATED FOR THE SIMPLIFIED TESTING METHODS (SEE DETAILS BELOW). THE CONTRACTOR/OWNER SHALL HAVE THE OPTION TO PERFORM EITHER (1) COMPACTION MITIGATION OVER THE ENTIRE MITIGATION AREA DENOTED ON THE PLAN (EXCLUDING EXEMPT AREAS), OR (2) PERFORM ADDITIONAL, MORE DETAILED TESTING TO ESTABLISH THE LIMITS OF EXCESSIVE COMPACTION WHEREUPON ONLY THE EXCESSIVELY COMPACTED AREAS WOULD REQUIRE COMPACTION MITIGATION. ADDITIONAL DETAILED TESTING SHALL BE PERFORMED BY A TRAINED, LICENSED

#### COMPACTION TESTING METHODS

- A. PROBING WIRE TEST (SEE DETAIL) HAND-HELD PENETROMETER TEST (SEE DETAIL)
- TUBE BULK DENSITY TEST (LICENSED PROFESSIONAL ENGINEER REQUIRED D. NUCLEAR DENSITY TEST (LICENSED PROFESSIONAL ENGINEER REQUIRED)

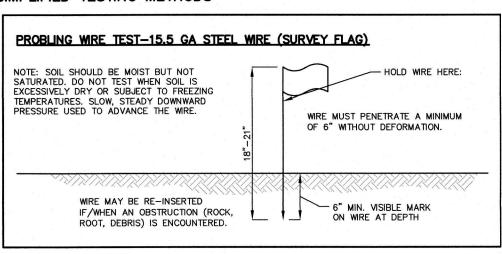
NOTE: ADDITIONAL TESTING METHODS WHICH CONFORM TO ASTM STANDARDS AND SPECIFICATIONS, AND WHICH PRODUCE A DRY WEIGHT, SOIL BULK DENSITY MEASUREMENT MAY BE ALLOWED SUBJECT TO DISTRICT APPROVAL.

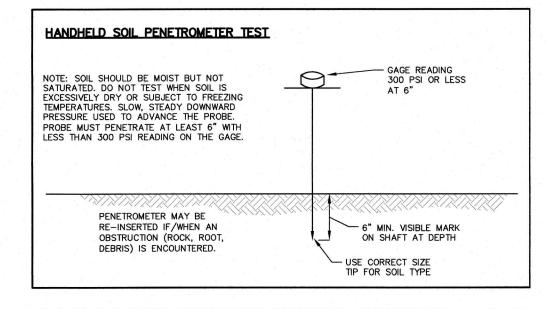
SOIL COMPACTION TESTING IS NOT REQUIRED IF/WHEN SUBSOIL COMPACTION REMEDIATION (SCARIFICATION/TILLAGE (6" MINIMUM DEPTH) OR SIMILAR) IS PROPOSED AS PART OF THE SEQUENCE OF CONSTRUCTION.

PROCEDURES FOR SOIL COMPACTION MITIGATION PROCEDURES SHALL BE USED TO MITIGATE EXCESSIVE SOIL COMPACTION PRIOR TO PLACEMENT OF TOPSOIL AND ESTABLISHMENT OF PERMANENT VEGETATIVE COVER.

RESTORATION OF COMPACTED SOILS SHALL BE THROUGH DEEP SCARIFICATION/TILLAGE 6" MINIMUM DEPTH) WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES. IRRIGATION SYSTEMS, ETC.). IN THE ALTERNATIVE, ANOTHER METHOD AS SPECIFIED BY A NEW JERSEY LICENSED PROFESSIONAL ENGINEER MAYBE SUBSTITUTED SUBJECT TO

#### SIMPLIFIED TESTING METHODS





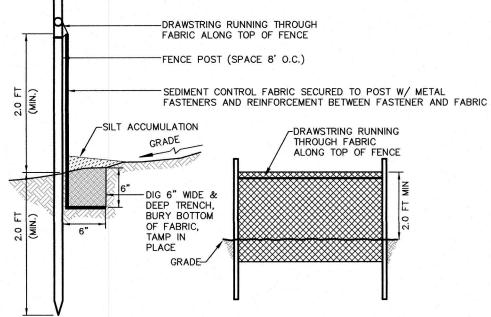
"SOIL COMPACTION MITIGATION VERIFICATION FORM" MUST BE FILLED OUT COMPLETELY AND SUBMITTED TO THE LOCAL SOIL CONSERVATION DISTRICT PRIOR TO THE DISTRICT PERFORMING A REPORT OF COMPLIANCE INSPECTION.

### CONSTRUCTION SEQUENCE

CONSTRUCTION COMMENCEMENT DATE: \_\_\_ 1. INSTALLATION OF SILT FENCE ALONG LIMIT OF DISTURBANCE LINE 4 DAY(S) AT SECTION DELINEATED ON "SOIL EROSION CONTROL PLANS" -INSTALLATION OF STONE AT CONSTRUCTION ENTRANCES -2 DAY(S) 2. CLEARING AND GRUBBING -10 DAY(S) 3. ROUGH GRADING AND TEMPORARY SEEDING -10 WEEK(S) INSTALLATION OF DETENTION FACILITIES 4. INSTALLATION OF UTILITIES AND FOUNDATIONS WITH EROSION CONTROL DEVICES (RIP-RAP OUTFALL, TEMPORARY SEEDING, INLET PROTECTION AND TEMPORARY STABILIZATION). -6 WEEK(S) 2 WEEK(S) 5. CURBING -2 WEEK(S) 6. PAVEMENT SUB-BASE -7. FINISHED GRADING AND LIGHTING -2 WEEK(S) 8. FINAL PAVEMENT -1 WEEK(S) 9. LANDSCAPING WITH PERMANENT SEEDING -1 WEEK(S) NOTE: AS C.O.'S FOR INDIVIDUAL BUILDING ARE APPLIED FOR, ALL SITE WORK

AROUND THE BUILDING TO BE COMPLETED (No. 10 SUBJECT TO WEATHER CONDITIONS AND TO BE COMPLETED WITHIN 6 MONTHS).

THE ABOVE SCHEDULE SUBJECT TO WEATHER CONDITIONS AND MATERIAL AVAILABILITY.

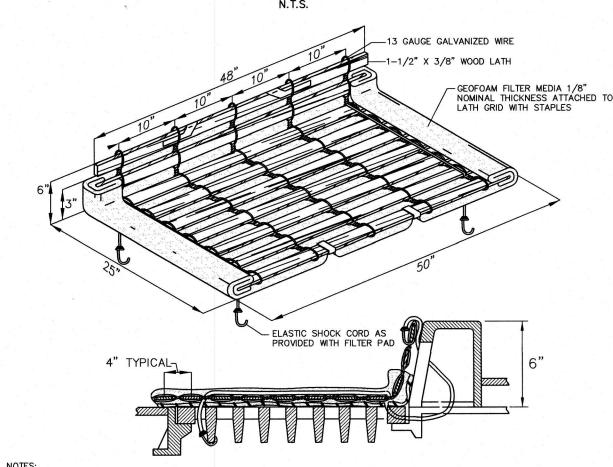


) FENCE POSTS SHALL BE SPACE 8 FEET CENTER-TO-CENTER OR CLOSER. THEY SHALL EXTEND AT LEAST TWO (2) FEET INTO THE GROUND AND EXTEND AT LEAST TWO (2) FEET ABOVE GROUND. POSTS SHALL BE CONSTRUCTED OF HARDWOOD WITH A MINIMUM

2) A METAL FENCE WITH 6-INCH OR SMALLER OPENINGS AND AT LEAST TWO (2) FEET HIGH MAY BE UTILIZED, FASTENED TO THE FENCE POSTS, TO PROVIDE REINFORCEMENT AND SUPPORT TO THE GEO-TEXTILE FABRIC WHERE SPACE FOR OTHER PRACTICES IS

3) A GEO-TEXTILE FABRIC, RECOMMENDED FOR SUCH USE BY THE MANUFACTURER, SHALL BE BURIED AT LEAST 6-INCHES DEEP IN THE GROUND. THE FABRIC SHALL EXTEND AT LEAST TWO (2) FEET ABOVE THE GROUND. THE FABRIC MUST BE SECURELY FASTENED TO THE POSTS USING A SYSTEM CONSISTING OF METAL FASTENERS (NAILS OR STAPLES) AND A HIGH STRENGTH REINFORCEMENT MATERIAL (NYLON WEBBING, GROMMETS, WASHERS ETC.) PLACED BETWEEN THE FASTENER AND THE GEO-TEXTILE FABRIC. THE FASTENING SYSTEM SHALL RESIST TEARING AWAY FROM THE POST. THE FABRIC SHALL INCORPORATE A DRAWSTRING IN THE TOP PORTION OF THE FENCE FOR ADDED STRENGTH

LIMITED AND HEAVY SEDIMENT LOADING IS EXPECTED.



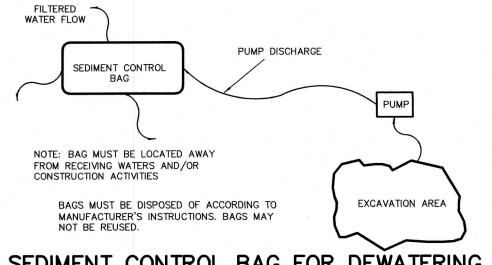
NOTES:
1. FURNISH AND INSTALL INLET FILTER PADS AS MANUFACTURED BY R.B.S. ENTERPRISES, OR APPROVED EQUAL. INSTALL IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS. PAD SHALL CONSIST OF 3/8" NORMAL THICKNESS GEOFOAM FILTER MEDIA ATTACHED T FRAMEWORK, FRAMEWORK SHALL BE COMPRISED ON 1-1/2" x 3/8" x 48" WOOD LATH ON 4" CENTERS FOR A 5 WIRE GRID. FOAM SHALL BE ATTACHED TO LATH GRID WITH STAPLES. PAD SHALL BE ATTACHED TO GRATE WITH THE ELASTIC SHOCK CORD AND HOOKS. 2. THE PROTECTION DEVICE WILL BE DESIGNED TO CAPTURE OR FILTER RUNOFF FROM THE 1 YEAR, 24 HOUR STORM EVENT AND SHALL SAFELY CONVEY HIGHER FLOWS DIRECTLY INTO THE STORM SEWER SYSTEM.

# INLET PROTECTION DETAIL

1. SILT CONTROL BAGS ARE CONTAINERS THROUGH WHICH SEDIMENT LADEN WATER IS PUMPED TO TRAP AND RETAIN THE SEDIMENT A SILT CONTROL BAG IS TO BE LISED ON SITES WERE EXCAVATIONS ARE DEEP, AND SPACES IS LIMITED AND WHERE DIRECT DISCHARGE OF SEDIMENT LADEN WATER TO STREAM AND STORM DRAINAGE SYSTEM IS TO BE AVOIDED.

2. CONTAINERS (BAGS) SHALL BE LOCATED FOR EASE OF CLEAN—OUT AND DISPOSAL OF THE TRAPPED SEDIMENT AND TO MINIMIZE INTERFERENCE WITH CONSTRUCTION ACTIVITIES AND PEDESTRIAN TRAFFIC. BAGS SHALL NOT BE PLACED

3. SEDIMENT CONTROL BAGS MUST BE LOCATED AWAY FROM RECEIVING WATERS AND DISPOSED OF ACCORDING TO



SEDIMENT CONTROL BAG FOR DEWATERING

### SEEDING RATES

SEEDBED PREPARATION: FERTILIZER (10-10-10) 500 LB/AC LIMESTONE 6,000 LB/AC

TEMPORARY SEEDING (NOT FOR ACIDIC SOILS HAVING A PH OF 4 OR LESS)

SEED MIX: PERENNIAL RYEGRASS 200 LB/AC PERMANENT SEEDING (NOT FOR ACIDIC SOILS HAVING A PH OF 4 OR LESS)

(OPTIMAL) ZONE 5b,6a (8/1-10/1); ZONE 6b (8/15-10/15); ZONE 7a,7b (8/15-10/30)

(SEE TABLE 4-2 OF THE SCS STANDARDS FOR ADDITIONAL PLANTING DATES) SCS SEED MIX #14

TURF-TYPE TALL FESCUE 350 LB/AC (3 CULTIVAR BLEND) 30 LB/AC KENTUCKY BLUEGRASS (BLEND) PERENNIAL RYEGRASS (BLEND) 30 LB/AC

MULCHING: UNROTTED SALT HAY OR APPROVED EQUAL 1 1/2 to 2 TONS/AC

HYDROMULCH OR APPROVED EQUAL (USE RATES AS RECOMMENDED BY MANUFACTURER)

FOR ADDITIONAL REQUIREMENTS REFER TO THE SCS STANDARD FOR PERMANENT VEGETATIVE COVER. ) THE FERTILIZER AND LIMESTONE RATES REPRESENT THE UNTESTED SCS REQUIRED RATES. FINAL RATES SUBJECT TO SOIL FERTILITY, PH ANALYSIS AND LAB RECOMMENDATIONS.

NO EROSION SHALL EXIST ) BARE OR THIN SPOTS IN EXCESS OF 5 PERCENT OF ANY AREA WILL NOT BE ACCEPTABLE. 3) ESTABLISHING PERMANENT VEGETATION MEANS 80% VEGETATED COVER (OF THE SEEDED SPECIES) AND MOWED ONCE.

# STANDARD FOR TOPSOILING

DEFINITION TOPSOILING ENTAILS THE DISTRIBUTION OF SUITABLE QUALITY SOIL ON AREAS TO BE VEGETATED.

TO IMPROVE THE SOIL MEDIUM FOR PLANT ESTABLISHMENT AND MAINTENANCE.

WATER QUALITY ENHANCEMENT

GROWTH AND ESTABLISHMENT OF A VIGOROUS VEGETATIVE COVER IS FACILITATED BY TOPSOIL, PREVENTING SOIL LOSS BY WIND AND RAIN OFFSITE AND INTO STREAMS AND OTHER STORMWATER

### WHERE APPLICABLE

TOPSOIL SHALL BE USED WHERE SOILS ARE TO BE DISTURBED AND WILL BE REVEGETATED. METHODS AND MATERIALS

### MATERIALS

A. TOPSOIL SHOULD BE FRIABLE<sup>1</sup>, LOAMY<sup>2</sup>, FREE OF DEBRIS, OBJECTIONABLE WEEDS AND STONES, AND CONTAIN NO TOXIC SUBSTANCE OR ADVERSE CHEMICAL OR PHYSICAL CONDITION THAT MAY BE HARMFUL TO PLANT GROWTH. SOLUBLE SALTS SHOULD NOT BE EXCESSIVE (CONDUCTIVITY LESS THAN 0.5 MILLIMHOS PER CENTIMETER, MORE THAN 0.5 MILLIMHOS MAY DESICCATE SEEDLINGS AND ADVERSELY IMPACT GROWTH). IMPORTED TOPSOIL SHALL HAVE A MINIMUM ORGANIC MATTER CONTENT OF 2.75 PERCENT. ORGANIC MATTER CONTENT MAY BE RAISED BY ADDITIVES.

B. TOPSOIL SUBSTITUTE IS A SOIL MATERIAL WHICH MAY HAVE BEEN AMENDED WITH SAND, SILT, CLAY, ORGANIC MATTER, FERTILIZER OR LIME AND HAS THE APPEARANCE OF TOPSOIL. TOPSOIL SUBSTITUTES MAY BE UTILIZED ON SITES WITH INSUFFICIENT TOPSOIL FOR ESTABLISHING PERMANENT VEGETATION. ALL TOPSOIL SUBSTITUTE MATERIALS SHALL MEET THE REQUIREMENTS OF TOPSOIL NOTED ABOVE. SOIL TESTS SHALL BE PERFORMED TO DETERMINE THE COMPONENTS OF SAND, SILT, CLAY, ORGANIC MATTER, SOLUBLE SALTS AND PH LEVEL

#### 2. STRIPPING AND STOCKPILING

- A. FIELD EXPLORATION SHOULD BE MADE TO DETERMINE WHETHER QUANTITY AND OR QUALITY OF SURFACE SOIL JUSTIFIES STRIPPING.
- B. STRIPPING SHALL BE CONFINED TO THE IMMEDIATE CONSTRUCTION AREA.
- C. WHERE FEASIBLE, LIME MAY BE APPLIED BEFORE STRIPPING AT A RATE DETERMINED BY SOIL TESTS TO BRING THE SOIL PH TO APPROXIMATELY 6.5.
- D. A 4-6 INCH STRIPPING DEPTH IS COMMON, BUT MAY VARY DEPENDING ON THE PARTICULAR
- E. STOCKPILES OF TOPSOIL SHOULD BE SITUATED SO AS NOT TO OBSTRUCT NATURAL DRAINAGE
- OR CAUSE OFF-SITE ENVIRONMENTAL DAMAGE F. STOCKPILES SHOULD BE VEGETATED IN ACCORDANCE WITH STANDARDS PREVIOUSLY DESCRIBED
- HEREIN; SEE STANDARDS FOR PERMANENT (PG. 4-1) OR TEMPORARY (PG. 7-1) VEGETATIVE COVER FOR SOIL STABILIZATION. WEEDS SHOULD NOT BE ALLOWED TO GROW ON STOCKPILES.

### 3. SITE PREPARATION

- A. GRADE AT THE ONSET OF THE OPTIMAL SEEDING PERIOD SO AS TO MINIMIZE THE DURATION AND AREA OF EXPOSURE OF DISTURBED SOIL TO EROSION. IMMEDIATELY PROCEED TO ESTABLISH VEGETATIVE COVER IN ACCORDANCE WITH THE SPECIFIED SEED MIXTURE. TIME IS OF
- B. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION AND ANCHORING, AND MAINTENANCE. SEE THE STANDARD FOR LAND GRADING, PG. 19-1.
- C. AS GUIDANCE FOR IDEAL CONDITIONS, SUBSOIL SHOULD BE TESTED FOR LIME REQUIREMENT. LIMESTONE, IF NEEDED, SHOULD BE APPLIED TO BRING SOIL TO A PH OF APPROXIMATELY 6.5 AND INCORPORATED INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES.
- D. PRIOR TO TOPSOILING, THE SUBSOIL SHALL BE IN COMPLIANCE WITH THE STANDARD FOR LAND GRADING, PG. 19-1.
- EMPLOY NEEDED EROSION CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENTATION BASINS, AND WATERWAYS SEE STANDARDS 11 THROUGH 42.

- A. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING SOIL STRUCTURE; I.E., LESS THAN FIELD CAPACITY (SEE GLOSSARY).
- B. A UNIFORM APPLICATION TO AN AVERAGE DEPTH OF 5.0 INCHES. MINIMUM OF 4 INCHES FIRMED IN PLACE IS REQUIRED. ALTERNATIVE DEPTHS MAY BE CONSIDERED WHERE SPECIAL REGULATORY AND/OR INDUSTRY DESIGN STANDARDS ARE APPROPRIATE SUCH AS ON GOLF COURSES, SPORTS FIELDS, LANDFILL CAPPING, ETC., SOILS WITH A PH OF 4.0 OR LESS OR CONTAINING IRON SULFIDE SHALL BE COVERED WITH A MINIMUM DEPTH OF 12 INCHES OF SOIL HAVING A PH OF 5.0 OR MORE, IN ACCORDANCE WITH THE STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOIL (PG. 1-1).
- C. PURSUANT TO THE REQUIREMENTS IN SECTION 7 OF THE STANDARD FOR PERMANENT VEGETATIVE STABILIZATION, THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT PERMANENT VEGETATIVE COVER BECOMES ESTABLISHED ON AT LEAST 80% OF THE SOILS TO BE STABILIZED WITH VEGETATION, FAILURE TO ACHIEVE THE MINIMUM COVERAGE MAY REQUIRE ADDITIONAL WORK TO BE PERFORMED BY THE CONTRACTOR TO INCLUDE SOME OR ALL OF THE FOLLOWING: SUPPLEMENTAL SEEDING, RE-APPLICATION OF LIME AND FERTILIZERS, AND/OR THE ADDITION OF ORGANIC MATTER (I.E. COMPOST) AS A TOP DRESSING. SUCH ADDITIONAL MEASURES SHALL BE BASED ON SOIL TESTS SUCH AS THOSE OFFERED BY RUTGERS COOPERATIVE EXTENSION SERVICE OR OTHER APPROVED LABORATORY FACILITIES QUALIFIED TO TEST SOIL SAMPLES FOR ACRONOMIC PROPERTIES
- FRIABLE MEANS EASILY CRUMBLES IN THE FINGERS, AS DEFINED IN MOST SOILS TEXTS. LOAMY MEANS TEXTURE GROUPS CONSISTING OF COARSE LOAMY SANDS, SANDY LOAM, FINE AND VERY FINE SANDY LOAM, LOAM, SILT LOAM, CLAY LOAM, SANDY CLAY LOAM AND SILTY CLAY LOAM TEXTURES AND HAVING LESS THAN 35% COARSE FRAGMENTS (PARTICLES LESS THAN 2MM IN SIZE) AS DEFINED IN THE GLOSSARY OF SOIL SCIENCE TERMS, 1996, SOIL SCIENCE SOCIETY OF AMERICA.

### CRITERIA FOR PROTECTING REMAINING TREES:

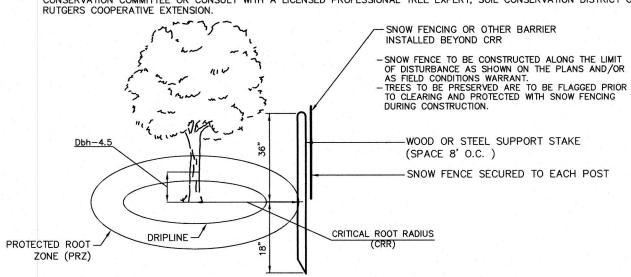
1. GENERAL MECHANICAL DAMAGE - SEE BELOW FOR CORRECT ROOT ZONE CALCULATION AND PLACEMENT OF TREE PROTECTION. 2. BOX TREES WITHIN 25 FEET OF A BUILDING SITE TO PREVENT MECHANICAL INJURY. FENCING OR OTHER BARRIER SHOULD BE INSTALLED BEYOND THE CRITICAL ROOT RADIUS. TREE ROOT SYSTEMS COMMONLY EXTEND WELL BEYOND THE DRIP LINE. 3. BOARDS WILL NOT BE NAILED TO TREES DURING BUILDING OPERATIONS.

4. FEEDER ROOTS SHOULD NOT BE CUT IN AN AREA INSIDE THE PROTECTED ROOT ZONE (PRZ).

5 DAMAGED TRUNKS OR EXPOSED ROOTS SHOULD HAVE DAMAGED BARK REMOVED IMMEDIATELY AND NO PAINT SHALL BE APPLIED

EXPOSED ROOTS SHOULD BE COVERED WITH TOPSOIL IMMEDIATELY AFTER EXCAVATION IS COMPLETE. ROOTS SHALL BE PRUNED O GIVE A CLEAN, SHARP SURFACE AMENABLE TO HEALING. ROOTS EXPOSED DURING HOT WEATHER SHOULD BE IRRIGATED TO PREVENT PERMANENT TREE INJURY. CARE FOR SERIOUS INJURY SHOULD BE PRESCRIBED BY A PROFESSIONAL FORESTER OR

NOTE: FOR MORE SPECIFIC TREE CHARACTERISTICS AND TREE LIMB REMOVAL, SEE THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY PUBLISHED BY THE NEW JERSEY DEPARTMENT OF AGRICULTURE—STATE SOIL CONSERVATION COMMITTEE OR CONSULT WITH A LICENSED PROFESSIONAL TREE EXPERT, SOIL CONSERVATION DISTRICT OR RUTGERS COOPERATIVE EXTENSION.



# ESTIMATE A TREE'S PROTECTED ROOT ZONE (PRZ) BY CALCULATING THE CRITICAL ROOT RADIUS (CRR)

1. MEASURE THE DBH (DIAMETER OF TREE AT BREAST HEIGHT, 4.5 FEET ABOVE GROUND ON THE UPHILL SIDE OF

2. MULTIPLY MEASURED DBH BY 1.5 OR 1.0. EXPRESS THE RESULT IN FEET. DBH X 1.5: CRITICAL ROOT RADIUS FOR OLDER, UNHEALTHY, OR SENSITIVE SPECIES

DBH X 1.0: CRITICAL ROOT RADIUS FOR YOUNGER, HEALTHY OR TOLERANT SPECIES TREE PROTECTION

## STANDARD FOR PERMANENT STABILIZATION WITH SOD

#### DEFINITION

ESTABLISHING PERMANENT VEGETATION USING SOD.

#### <u>PURPOSE</u>

TO PERMANENTLY STABILIZE TOPSOIL WITH AN IMMEDIATE AESTHETIC COVERING, THUS ASSURING CONSERVATION OF SOIL AND WATER, AND TO ENHANCE THE ENVIRONMENT.

### WATER QUALITY ENHANCEMENT

PROVIDES AN IMMEDIATE, PERMANENT VEGETATIVE COVER TO THE SOIL FROM THE IMPACT OF WIND OR RAIN AND PREVENTS SOIL AND NUTRIENT LOSSES TO STREAMS AND OTHER STORMWATER CONVEYANCES FROM STORMWATER RUNOFF.

#### WHERE APPLICABLE

ON EXPOSED SOILS THAT HAVE A POTENTIAL FOR CAUSING OFF-SITE ENVIRONMENTAL DAMAGE WHERE AN IMMEDIATE, PERMANENT, VEGETATIVE COVER IS DESIRED. WATER (RAIN OR IRRIGATION) IS REQUIRED FOR SUCCESS; ACCESS TO IRRIGATION IS ESSENTIAL DURING

#### DROUGH?

- METHODS AND MATERIALS 1. HIGH QUALITY CULTIVATED SOD IS PREFERRED OVER NATIVE OR PASTURE SOD.
- 2. SOD SHOULD BE FREE OF BROADLEAF WEEDS AND UNDESIRABLE COARSE AND FINE
- INCH, AT TIME OF CUTTING (EXCLUDES TOP GROWTH.). 4. SOD SHOULD BE VIGOROUS AND DENSE AND BE ABLE TO RETAIN ITS OWN SHAPE AND WEIGHT WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP FROM THE UPPER 10

3. SOD SHOULD BE OF UNIFORM THICKNESS, TYPICALLY 5/8 INCH, PLUS OR MINUS 1/4

PERCENT OF THE STRIP. BROKEN PADS AND ROLLS OR TORN AND UNEVEN ENDS WILL NOT BE ACCEPTABLE. 5. FOR DROUGHTY SITES, A SOD OF TURF-TYPE TALL FESCUE OR TURF-TYPE TALL FESCUE MIXED WITH KENTUCKY BLUEGRASS IS PREFERRED OVER A 100% KENTUCKY

BLUEGRASS SOD. ALTHOUGH NOT WIDELY AVAILABLE, A SOD OF FINE FESCUE IS ALSO

6. ONLY MOIST, FRESH, UNHEATED SOD SHOULD BE USED. SOD SHOULD BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 24 HOURS OR LESS DURING SUMMER

#### 1. SITE PREPARATION

ACCEPTABLE FOR DROUGHTY SITES.

- A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR LIMING, FERTILIZING, INCORPORATION OF ORGANIC MATTER. AND OTHER SOIL PREPARATION PROCEDURES. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARD FOR LAND GRADING
- B. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING THE SOIL STRUCTURE. A UNIFORM APPLICATION TO A DEPTH OF 5 INCHES (UNSETTLED) IS REQUIRED ON ALL SITES.

### SEE THE STANDARD FOR TOPSOILING FOR TOPSOIL AND AMENDMENT REQUIREMENTS.

C. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS

### 2. SOIL PREPARATION

- A. UNIFORMLY APPLY GROUND LIMESTONE, AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS CO-OPERATIVE EXTENSION. SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS COOPERATIVE EXTENSION OFFICES (HTTP: //NJAES.RUTGERS.EDU/COUNTY/). FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE OR 11 POUNDS PER 1.000 SQUARE FEET USING 10-10-10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE AND INCORPORATED INTO SURFACE 4 INCHES. IF FERTILIZER IS NOT INCORPORATED, APPLY ½ THE RATE DESCRIBED ABOVE DURING SEEDBED PREPARATION AND REPEAT ANOTHER 1/2 RATE APPLICATION OF THE SAME FERTILIZER WITHIN 3 TO 5 WEEKS AFTER SEEDING. APPLY LIMESTONE AT THE RATE OF 2 TONS/ACRE UNLESS SOIL TESTING INDICATE: 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.
- B. WORK LIME, AND FERTILIZER INTO THE TOPSOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRINGTOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISKING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM, FINE SEEDBED IS PREPARED.
- C. REMOVE FROM THE SURFACE ALL OBJECTS THAT WOULD PREVENT GOOD SOD TO TOPSOIL CONTACT AND REMOVE ALL OTHER DEBRIS, SUCH AS WIRE, CABLE, TREE ROOTS, PIECES OF CONCRETE, CLODS, LUMPS, OR OTHER UNSUITABLE MATERIAL.
- D. INSPECT SITE JUST BEFORE SODDING, IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE RETILLED AND FIRMED IN ACCORDANCE WITH THE ABOVE.

SPACES INVITE EROSION.

- A. SOD STRIPS SHOULD BE LAID ON THE CONTOUR, NEVER UP AND DOWN THE SLOPE, STARTING AT THE BOTTOM OF THE SLOPE AND WORKING UP. ON STEEP SLOPES, THE USE OF LADDERS WILL FACILITATE THE WORK AND PREVENT DAMAGE TO THE SOD. DURING PERIODS OF HIGH TEMPERATURE, LIGHTLY IRRIGATE THE SOIL IMMEDIATELY PRIOR TO LAYING THE SOD.
- B. PLACE SOD STRIPS WITH SNUG, EVEN JOINTS (SEAMS) THAT ARE STAGGERED. OPEN
- LIGHTLY ROLL OR TAMP SOD IMMEDIATELY FOLLOWING PLACEMENT TO INSURE SOLID CONTACT OF ROOT MAT AND SOIL SURFACE, DO NOT OVERLAP SOD, ALL JOINTS SHOULD BE BUTTED TIGHTLY TO PREVENT VOIDS WHICH WOULD CAUSE DRYING OF THE ROOTS AND INVASION OF WEEDS.
- D. ON SLOPES GREATER THAN 3 TO 1, SECURE SOD TO SURFACE SOIL WITH WOOD PEGS, WIRE STAPLES BIODEGRADABLE PLASTIC SPIKES, OR SPLIT SHINGLES (8 TO 10 INCHES LONG BY 3/4 INCH WIDE).
- SURFACE WATER CANNOT ALWAYS BE DIVERTED FROM FLOWING OVER THE FACE OF THE SLOPE, BUT A CAPPING STRIP OF HEAVY JUTE OR PLASTIC NETTING, PROPERLY SECURED, ALONG THE CROWN OF THE SLOPE AND EDGES WILL PROVIDE EXTRA PROTECTION AGAINST LIFTING AND UNDERCUTTING OF SOD. THE SAME TECHNIQUE CAN BE USED TO ANCHOR SOD IN WATER-CARRYING CHANNELS AND OTHER CRITICAL AREAS. WIRE STAPLES MUST BE USED TO ANCHOR NETTING IN CHANNEL
- IMMEDIATELY FOLLOWING INSTALLATION, SOD SHOULD BE WATERED UNTIL WATER PENETRATES THE SOIL LAYER BENEATH SOD TO A DEPTH OF 1 INCH. MAINTAIN OPTIMUM WATER FOR AT LEAST TWO WEEKS.

4. TOPDRESSING - SINCE SOIL ORGANIC MATTER AND SLOW RELEASE NITROGEN FERTILIZER (WATER INSOLUBLE) ARE PRESCRIBED IN SECTIONS 1 AND 2IN THIS STANDARD, A FOLLOW-UP TOPDRESSING IS NOT MANDATORY, EXCEPT WHERE GROSS NITROGEN DEFICIENCY EXISTS IN THE SOIL TO THE EXTENT THAT TURF FAILURE MAY DEVELOP TOPDRESSING SHALL THEN BE APPLIED. TOPDRESS WITH 10-0-10 OR EQUIVALENT AT 400 POUNDS PER ACRE OR 7 POUNDS PER 1,000 SQUARE FEET EVERY 3 TO 5 WEEKS UNTIL THE GROSS NITROGEN DEFICIENCY IN THE TURF IS AMELIORATED.

> FOR CLARIFICATIONS AND ADDITIONAL INFORMATION SEE THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY, 7TH EDITION. JANUARY 2014, REVISED JULY 2017

CONSTRUCTION DETAIL NOTES ALL TRAFFIC SIGNS AND PAVEMENT

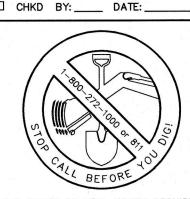
MARKINGS SHALL CONFORM TO THE CURRENT EDITION OF THE MANUAL C UNIFORM TRAFFIC CONTROL DEVICES ALL CONSTRUCTION DETAILS SHALL BI SUPERCEDED BY APPLICABLE MUNICIPAL, COUNTY OR STATE DETAILS UNLESS OTHERWISE NOTED.

STRUCTURAL DETAILS ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY SHOP DRAWINGS SHALL BE PROVIDED TO THE TOWNSHIP ENGINEER FOR ALL WALLS AND STRUCTURAL ELEMENTS PRIOR TO CONSTRUCTION. SHOP DRAWINGS SHALL BE PROVIDED FOR ALL PRECAST STRUCTURES PRIOR TO THE ORDERING OF MATERIALS. . DETAILS ASSUME APPROPRIATE LOAD BEARING CAPACITY AND COMPACTION OF SOILS. ACTUAL FIELD CONDITIONS SHALL BE CONFIRMED BY ON-SITE GEOTECHNICAL ENGINEER. RESIDENTIAL DEVELOPMENTS SHALL

CONFORM TO DETAILS WITHIN THE CURRENT EDITION OF THE RESIDENTIAL SITE IMPROVEMENT STANDARDS ALL CONSTRUCTION DETAILS ARE NOT TO SCALE (N.T.S.) UNLESS OTHERWISE

REVISIONS

THIS DRAWING IS FOR PERMIT PURPOSES ONLY NOT FOR CONSTRUCTION UNTIL THIS BOX HAS BEEN CHECKED AND DATED



THE STATE OF NEW JERSEY REQUIRES NOTIFICATION BY EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE STATE.



associates Civil Engineering Consultant Landscape Architects

Professional Planners

732-846-8585 732-846-9439 🕌

Certificate of Authorization: 24GA27951900

295 CEDAR GROVE LANE

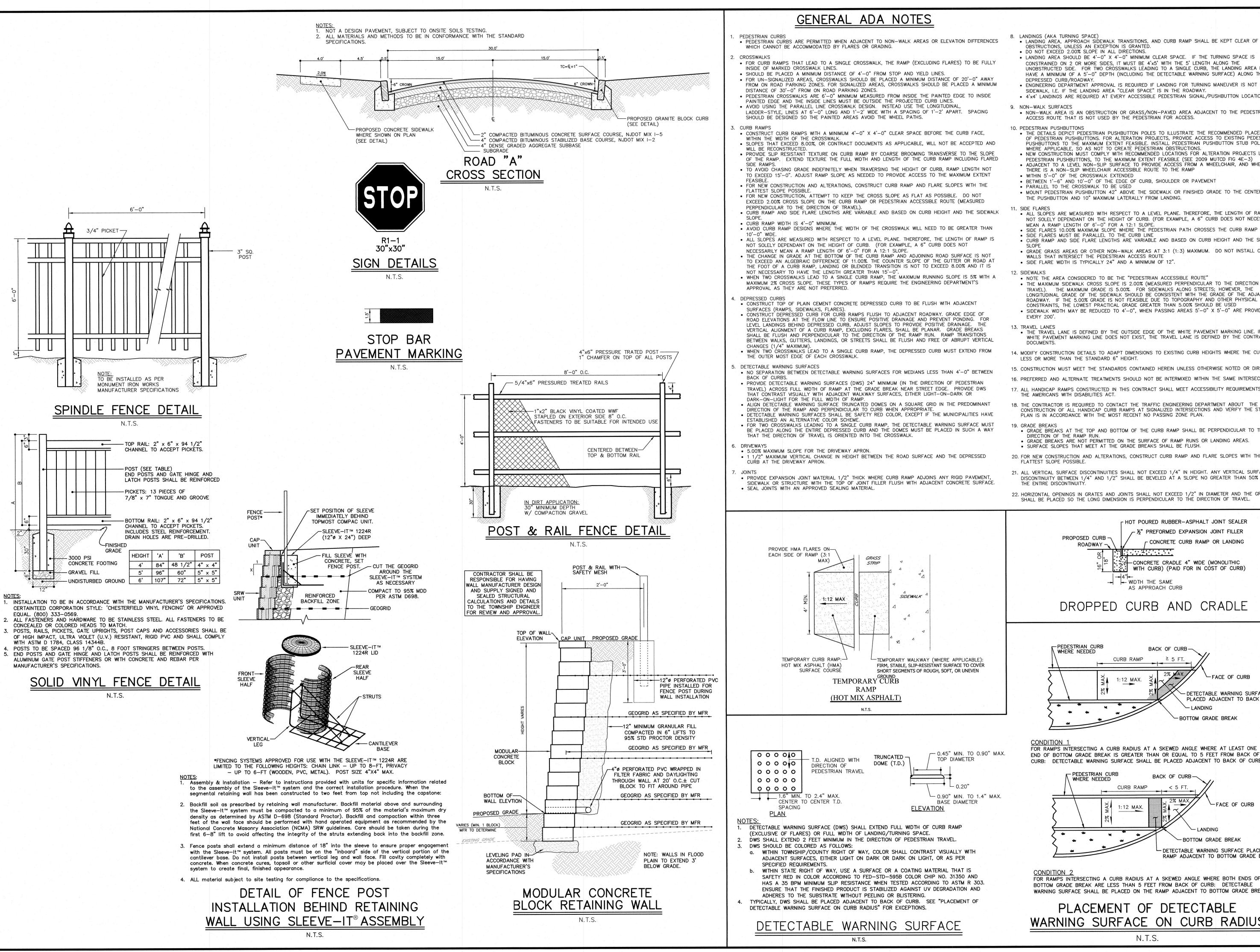
TOWNSHIP OF FRANKLIN SOMERSET COUNTY NEW JERSEY

BLOCK 508.02, LOT 12 TAX MAP SHEET 65 16.54 ACRES

SOIL EROSION & SEDIMENT CONTROL DETAILS

DRAWN BY DESIGNED BY PPROVED BY HIS WORK PREPARED UNDER MY SUPERVISION... GREGORY S. OMAN ROFESSIONAL ENGINEER NJPE# 43441

SED-2 2022.075 MARCH 12, 2024 REVISION



LANDINGS (AKA TURNING SPACE) · LANDING AREA, APPROACH SIDEWALK TRANSITIONS, AND CURB RAMP SHALL BE KEPT CLEAR OF OBSTRUCTIONS, UNLESS AN EXCEPTION IS GRANTED.

• DO NOT EXCEED 2.00% SLOPE IN ALL DIRECTIONS. • LANDING AREA SHOULD BE 4'-0" X 4'-0" MINIMUM CLEAR SPACE. IF THE TURNING SPACE IS CONSTRAINED ON 2 OR MORE SIDES, IT MUST BE 4'x5' WITH THE 5' LENGTH ALONG THE UNOBSTRUCTED SIDE. FOR TWO CROSSWALKS LEADING TO A SINGLE CURB, THE LANDING AREA MUST HAVE A MINIMUM OF A 5'-O" DEPTH (INCLUDING THE DETECTABLE WARNING SURFACE) ALONG THE DEPRESSED CURB/ROADWAY.

 $oldsymbol{ iny}$  ENGINEERING DEPARTMENT APPROVAL IS REQUIRED IF LANDING FOR TURNING MANEUVER IS NOT ON THE SIDEWALK, I.E. IF THE LANDING AREA "CLEAR SPACE" IS IN THE ROADWAY. • 4'x4' LANDINGS ARE REQUIRED AT EVERY ACCESSIBLE PEDESTRIAN SIGNAL/PUSHBUTTON LOCATION.

• NON-WALK AREA IS AN OBSTRUCTION OR GRASS/NON-PAVED AREA ADJACENT TO THE PEDESTRIAN ACCESS ROUTE THAT IS NOT USED BY THE PEDESTRIAN FOR ACCESS.

10. PEDESTRIAN PUSHBUTTONS • THE DETAILS DEPICT PEDESTRIAN PUSHBUTTON POLES TO ILLUSTRATE THE RECOMMENDED PLACEMENT OF PEDESTRIAN PUSHBUTTONS. FOR ALTERATION PROJECTS, PROVIDE ACCESS TO EXISTING PEDESTRIAN PUSHBUTTONS TO THE MAXIMUM EXTENT FEASIBLE. INSTALL PEDESTRIAN PUSHBUTTON STUB POLES, WHERE APPLICABLE, SO AS NOT TO CREATE PEDESTRIAN OBSTRUCTIONS.

 NEW CONSTRUCTION MUST COMPLY WITH RECOMMENDED LOCATIONS FOR ALTERATION PROJECTS LOCATE PEDESTRIAN PUSHBUTTONS, TO THE MAXIMUM EXTENT FEASIBLE (SEE 2009 MUTCD FIG 4E-3) · ADJACENT TO A LEVEL NON-SLIP SURFACE TO PROVIDE ACCESS FROM A WHEELCHAIR, AND WHERE THERE IS A NON-SLIP WHEELCHAIR ACCESSIBLE ROUTE TO THE RAMP

• WITHIN 5'-0" OF THE CROSSWALK EXTENDED • BETWEEN 1'-6" AND 10'-0" OF THE EDGE OF CURB, SHOULDER OR PAVEMENT

• PARALLEL TO THE CROSSWALK TO BE USED . MOUNT PEDESTRIAN PUSHBUTTON 42" ABOVE THE SIDEWALK OR FINISHED GRADE TO THE CENTER OF THE PUSHBUTTON AND 10" MAXIMUM LATERALLY FROM LANDING.

· ALL SLOPES ARE MEASURED WITH RESPECT TO A LEVEL PLANE. THEREFORE, THE LENGTH OF RAMP IS NOT SOLELY DEPENDANT ON THE HEIGHT OF CURB. (FOR EXAMPLE, A 6" CURB DOES NOT NECESSARILY

• CURB RAMP AND SIDE FLARE LENGTHS ARE VARIABLE AND BASED ON CURB HEIGHT AND THE SIDEWALK • GRADE GRASS AREAS OR OTHER NON-WALK AREAS AT 3:1 (1:3) MAXIMUM. DO NOT INSTALL CHEEK

WALLS THAT INTERSECT THE PEDESTRIAN ACCESS ROUTE · SIDE FLARE WIDTH IS TYPICALLY 24" AND A MINIMUM OF 12".

• NOTE THE AREA CONSIDERED TO BE THE "PEDESTRIAN ACCESSIBLE ROUTE" • THE MAXIMUM SIDEWALK CROSS SLOPE IS 2.00% (MEASURED PERPENDICULAR TO THE DIRECTION OF TRAVEL) THE MAXIMUM GRADE IS 5.00%. FOR SIDEWALKS ALONG STREETS: HOWEVER, THE LONGITUDINAL GRADE OF THE SIDEWALK SHOULD BE CONSISTENT WITH THE GRADE OF THE ADJACENT ROADWAY. IF THE 5.00% GRADE IS NOT FEASIBLE DUE TO TOPOGRAPHY AND OTHER PHYSICAL CONSTRAINTS, THE LOWEST PRACTICAL GRADE GREATER THAN 5.00% SHOULD BE USED • SIDEWALK WIDTH MAY BE REDUCED TO 4'-0", WHEN PASSING AREAS 5'-0" X 5'-0" ARE PROVIDED

. THE TRAVEL LANE IS DEFINED BY THE OUTSIDE EDGE OF THE WHITE PAVEMENT MARKING LINE. IF A WHITE PAVEMENT MARKING LINE DOES NOT EXIST, THE TRAVEL LANE IS DEFINED BY THE CONTRACT

14. MODIFY CONSTRUCTION DETAILS TO ADAPT DIMENSIONS TO EXISTING CURB HEIGHTS WHERE THE CURB IS

15. CONSTRUCTION MUST MEET THE STANDARDS CONTAINED HEREIN UNLESS OTHERWISE NOTED OR DIRECTED.

16. PREFERRED AND ALTERNATE TREATMENTS SHOULD NOT BE INTERMIXED WITHIN THE SAME INTERSECTION.

17. ALL HANDICAP RAMPS CONSTRUCTED IN THIS CONTRACT SHALL MEET ACCESSIBILITY REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT.

18. THE CONTRACTOR IS REQUIRED TO CONTACT THE TRAFFIC ENGINEERING DEPARTMENT ABOUT THE CONSTRUCTION OF ALL HANDICAP CURB RAMPS AT SIGNALIZED INTERSECTIONS AND VERIFY THE STRIPING PLAN IS IN ACCORDANCE WITH THE MOST RECENT NO PASSING ZONE PLAN.

. GRADE BREAKS AT THE TOP AND BOTTOM OF THE CURB RAMP SHALL BE PERPENDICULAR TO THE DIRECTION OF THE RAMP RUN. • GRADE BREAKS ARE NOT PERMITTED ON THE SURFACE OF RAMP RUNS OR LANDING AREAS.

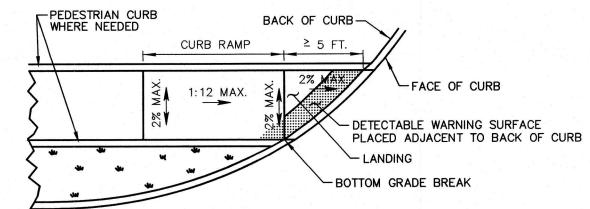
20. FOR NEW CONSTRUCTION AND ALTERATIONS, CONSTRUCT CURB RAMP AND FLARE SLOPES WITH THE

21. ALL VERTICAL SURFACE DISCONTINUITIES SHALL NOT EXCEED 1/4" IN HEIGHT. ANY VERTICAL SURFACE DISCONTINUITY BETWEEN 1/4" AND 1/2" SHALL BE BEVELED AT A SLOPE NO GREATER THAN 50% ACROSS THE ENTIRE DISCONTINUITY.

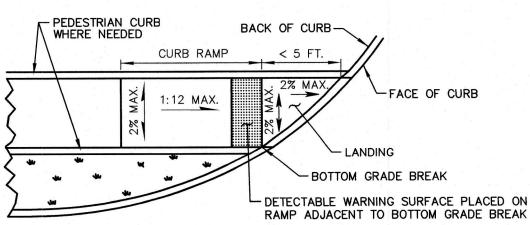
22. HORIZONTAL OPENINGS IN GRATES AND JOINTS SHALL NOT EXCEED 1/2" IN DIAMETER AND THE GRATES SHALL BE PLACED SO THE LONG DIMENSION IS PERPENDICULAR TO THE DIRECTION OF TRAVEL.

> HOT POURED RUBBER-ASPHALT JOINT SEALER - 1/8" PREFORMED EXPANSION JOINT FILLER PROPOSED CURB -CONCRETE CURB RAMP OR LANDING ROADWAY -- CONCRETE CRADLE 4" WIDE (MONOLITHIC WITH CURB) (PAID FOR IN COST OF CURB) - WIDTH THE SAME AS APPROACH CURB

### DROPPED CURB AND CRADLE



FOR RAMPS INTERSECTING A CURB RADIUS AT A SKEWED ANGLE WHERE AT LEAST ONE END OF BOTTOM GRADE BREAK IS GREATER THAN OR EQUAL TO 5 FEET FROM BACK OF CURB: DETECTABLE WARNING SURFACE SHALL BE PLACED ADJACENT TO BACK OF CURB.



FOR RAMPS INTERSECTING A CURB RADIUS AT A SKEWED ANGLE WHERE BOTH ENDS OF BOTTOM GRADE BREAK ARE LESS THAN 5 FEET FROM BACK OF CURB: DETECTABLE WARNING SURFACE SHALL BE PLACED ON THE RAMP ADJACENT TO BOTTOM GRADE BREAK.

PLACEMENT OF DETECTABLE WARNING SURFACE ON CURB RADIUS

N.T.S.

MUNICIPAL. COUNTY OR STATE DETAILS UNLESS OTHERWISE NOTED STRUCTURAL DETAILS ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY SHOP DRAWINGS SHALL BE PROVIDED TO THE TOWNSHIP ENGINEER FOR ALL WALLS AND STRUCTURAL ELEMENTS PRIOR TO CONSTRUCTION. SHOP DRAWINGS SHALL BE PROVIDED FOR ALL PRECAST STRUCTURES PRIOR TO THE ORDERING OF MATERIALS. DETAILS ASSUME APPROPRIATE LOAD BEARING CAPACITY AND COMPACTION OF SOILS. ACTUAL FIELD CONDITIONS SHALL BE CONFIRMED BY ON-SITE GEOTECHNICAL ENGINEER.
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CONSTRUCTION DETAIL NOTES

ALL TRAFFIC SIGNS AND PAVEMENT MARKINGS SHALL CONFORM TO THE CURRENT EDITION OF THE MANUAL ON

UNIFORM TRAFFIC CONTROL DEVICES

ALL CONSTRUCTION DETAILS SHALL BE

SUPERCEDED BY APPLICABLE

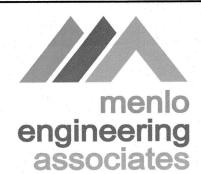
REVISIONS THIS DRAWING IS FOR

PERMIT PURPOSES ONLY NOT FOR CONSTRUCTION UNTIL THIS BOX HAS BEEN CHECKED AND DATED

☐ CHKD BY: \_\_\_\_ DATE: \_\_



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Landscape Architects

**Professional Planners** nland Park, NJ 089

732-846-8585 732-846-9439

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GROVE LANE

TOWNSHIP OF FRANKLIN SOMERSET COUNTY NEW JERSEY

BLOCK 508.02, LOT 12 TAX MAP SHEET 65 16.54 ACRES

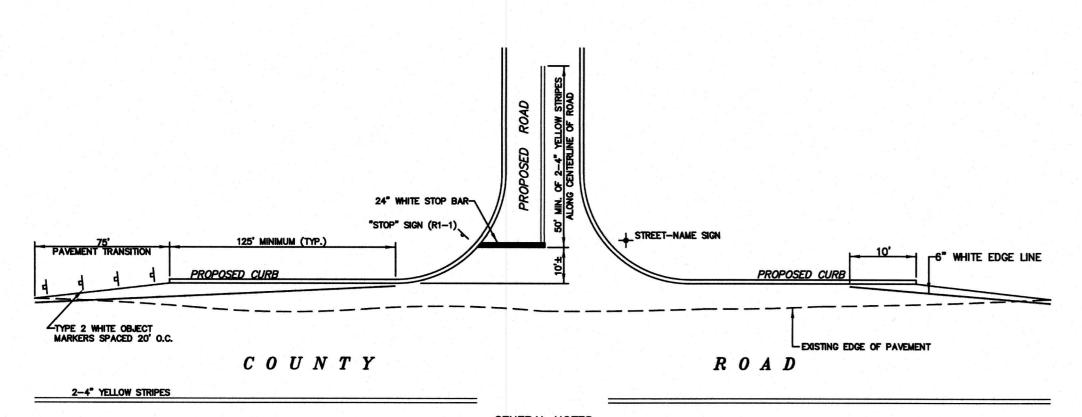
CONSTRUCTION DETAILS

ESIGNED BY PPROVED BY HIS WORK PREPARED UNDER MY CORY S. OMAN ROFESSIONAL ENGINEER NJPE# 43441

DE-2022.075 DATE OF ISSUE MARCH 12, 2024 26 REVISION

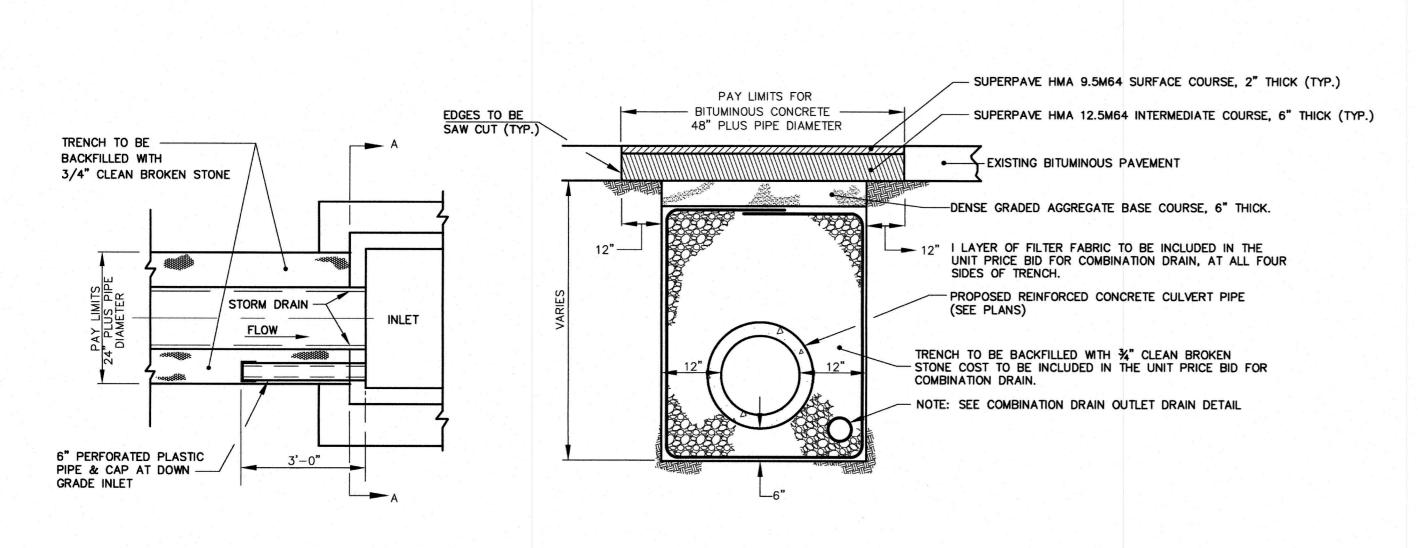


- The Somerset County Traffic Division is to be notified at (909) 231-7162 a minimum of 72 hours prior to the installation of any striping within a County right-of-way. The notification is to be made by the contractor who will install the striping.
- Prior to installing any striping in the County right-of-way the striping contractor must receive approval from the County Traffic Division for the "Mark Out" of all striping.
- All pavement markings shall be alkyd-type thermoplastic with a thickness of
- There shall be a 6-inch space between all double yellow stripes.
- All existing striping and pavement reflectors that do not conform to the proposed striping pattern are to be removed by a method that does not damage the roadway surface. "Black Out" paint will not be permitted.
- All permanent signs shall be a flat aluminum sheet of 6061-T6 alloy with a thickness that shall conform to subsection 911.01.02A of the New Jersey Department of Transportation Standard Specifications of 2007.
- 7. All permanent signs are to be mounted on galvanized square tube steel supports of the "Telespar System" by the Unistrut Corporation and only Type III Breakaway units shall be used or equal as approved by the County Engineer.
- All "Stop" signs (R1-1) are to be a minimum 30-inch diameter.
- The street name sign is to be located on the opposite corner from the "Stop" sign (R1-1).
- Sign facings shall be "Wide Angle Prismatic Retroreflective Sheeting for Visual Impact Performance" manufactured by 3M Brand Scotchlite Prismatic Lens Reflective Sheeting (Diamond Grade<sup>3</sup>) or equal as approved by the County Engineer.
- 11. All traffic control devices shall conform to the current "Manual on Uniform Traffic Control Devices for Streets and Highways".



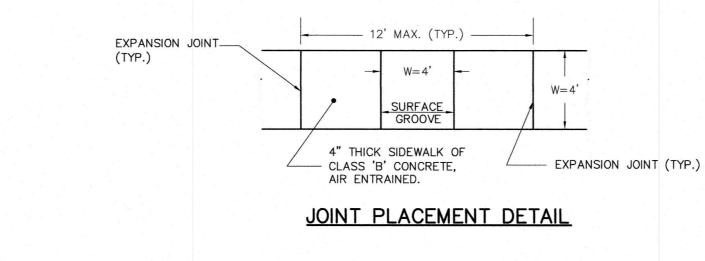
- 1. THE SOMERSET COUNTY TRAFFIC DIVISION IS TO BE NOTIFIED A MINIMUM OF 72 HOURS PRIOR TO THE INSTALLATION OF ANY STRIPING WITHIN A COUNTY R.O.W. THE NOTIFICATION
- IS TO BE MADE BY THE CONTRACTOR WHO WILL INSTALL THE STRIPING 2. PRIOR TO INSTALLING ANY STRIPING IN THE COUNTY R.O.W., THE STRIPING CONTRACTOR MUST RECEIVE APPROVAL FROM THE COUNTY TRAFFIC DIVISION TO "MARK OUT" STRIPING
- 3. ALL PAVEMENT MARKINGS SHALL BE ALKYD-TYPE THERMOPLASTIC WITH A THICKNESS OF
- 4. THERE SHALL BE 6" SPACE BETWEEN ALL DOUBLE YELLOW STRIPES.
- 5. ALL "STOP" SIGNS (R1-1) ARE TO BE 36" IN DIAMETER WITH A TWO-POST INSTALLATION ARE TO HAVE 3M BRAND DIAMOND-GRADE SHEETING.
  - 6. ALL SIGN-SUPPORT POSTS ARE TO BE TELESPAR BRAND SQUARE-TUBE STEEL THAT IS GALVANIZED AND YIELDING-TYPE III. 7. THE STREET-NAME SIGN (IF CALLED FOR ON PLAN) IS TO BE LOCATED ON THE OPPOSITE
  - CORNER FROM THE R1-1 SIGN.
  - 8. IF A STRIPED CROSSWALK IS TO BE INSTALLED, THE STOPBAR SHALL BE LOCATED 5' FROM THE EDGE OF THE CROSSWALK CLOSEST TO THE STOPBAR.

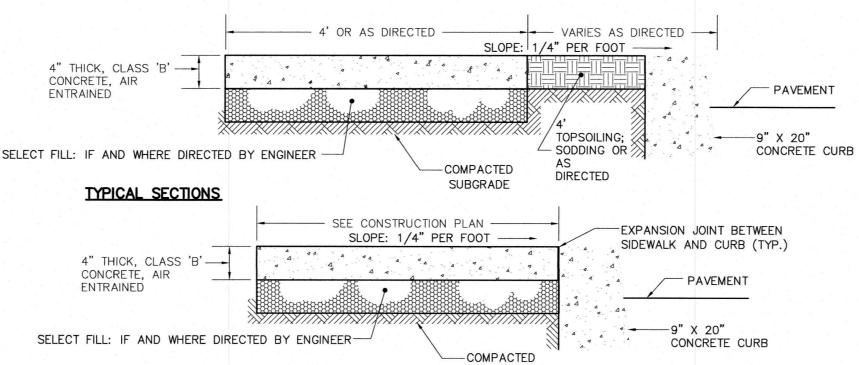
# SIGNING AND STRIPING FOR PROPOSED INTERSECTION



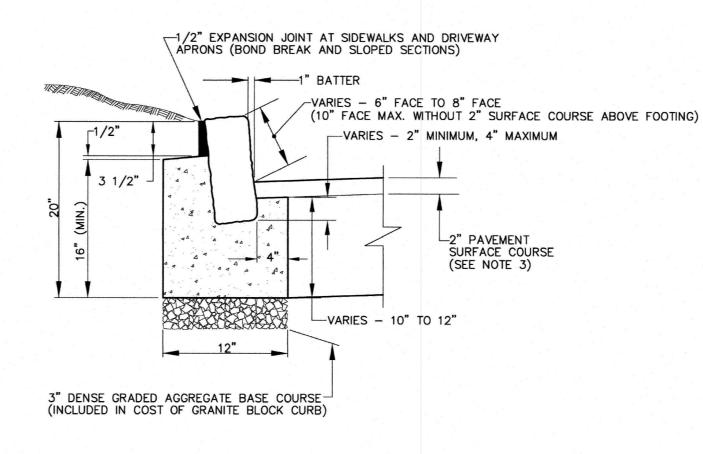
COMBINATION DRAIN

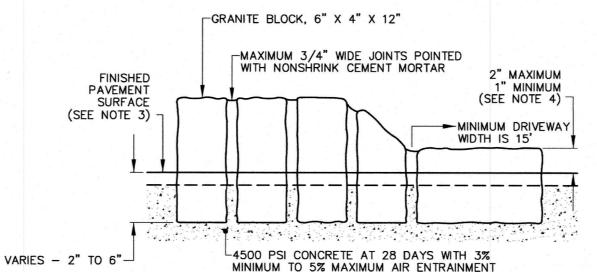
N.T.S.





# **CONCRETE SIDEWALK DETAILS**

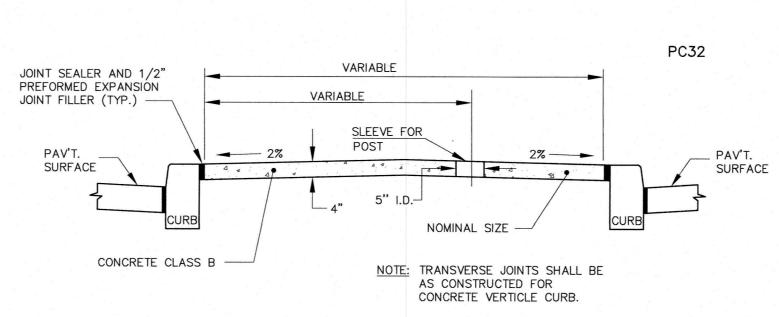




### GRANITE BLOCK CURB

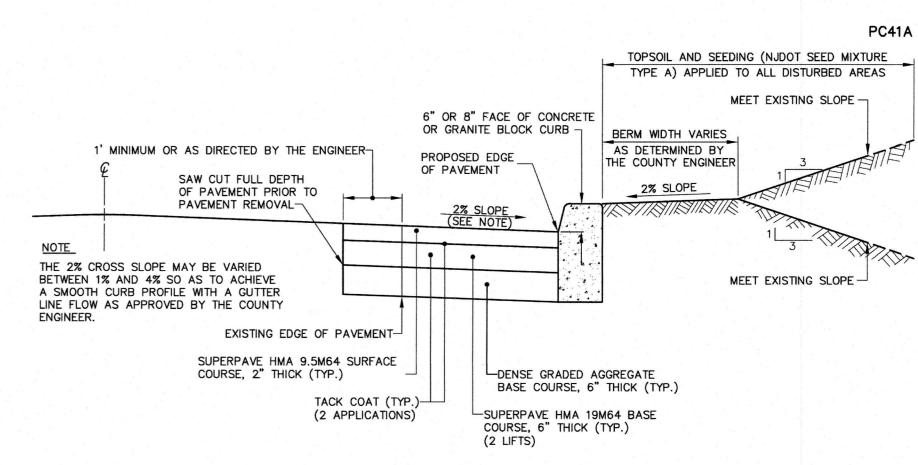
N.T.S.

1. THIS DETAIL SHALL BE USED FOR ALL FULL HEIGHT AND DRIVEWAY DEPRESSED GRANITE BLOCK CURBING WITHIN THE COUNTY'S RIGHT-OF-WAY. 2. BOTTOM OF GRANITE BLOCK CURB MUST BE EMBEDDED A MINIMUM OF 2" AND A MAXIMUM OF 4" INTO THE CONCRETE FOOTING. 3. FOR INTERIM CONDITIONS, CONCRETE FOOTING EDGE SHALL NOT BE LEFT EXPOSED ABOVE TOP PAVING COURSE. TOP INTERIM PAVING COURSE SHALL BE INSTALLED FLUSH OR ABOVE CONCRETE FOOTING. 4. CURB DEPRESSIONS FOR DRIVEWAYS MUST HAVE BETWEEN A 1" AND 2" LIP TO MAINTAIN GUTTER LINE STORMWATER CONVEYANCE.

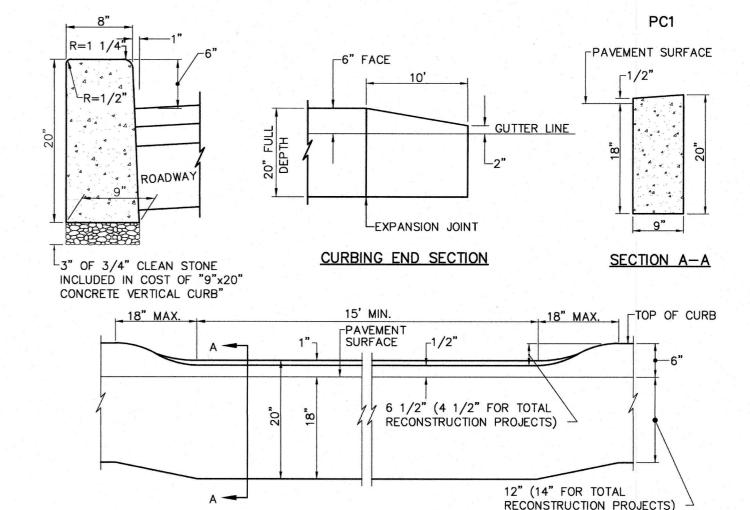


CONCRETE ISLAND, 4" THICK

N.T.S.



ROAD-WIDENING WITH CURB



METHOD OF DEPRESSING CURB AT DRIVEWAYS

- 1. EXPANSION JOINTS ALTERNATE EVERY 10 FEET WITH CONSTRUCTION JOINTS. EXPANSION JOINTS SHALL BE FILLED WITH PREFORMED, BITUMINOUS-IMPREGNATED FIBER JOINT FILLER RECESSED 1/4" FROM THE FACE AND TOP OF THE CURB. SUCH JOINTS SHALL BE INSTALLED BETWEEN CURB AND INLET HEADS.
- 2. ALL JOINTS SHALL EXTEND THE FULL 20" DEPTH OF THE CURB.
- 3. THE CURB SHALL BE COMPOSED OF CLASS "B" CONCRETE.

# 9" x 20" CONCRETE CURB

## STANDARD CONSTRUCTION NOTES FOR ROAD IMPROVEMENTS

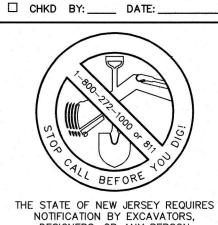
- 1. Prior to the initiation of any excavation or construction within any street, road, or right of way under the jurisdiction of the Somerset County Board of Chosen Freeholders, a Somerset County Road Opening Permit shall be obtained from the Office of the County Engineer.
- 2. The Office of the County Engineer is to be notified seventy-two (72) hours in advance of commencement of construction of any improvements under the jurisdiction of the County of Somerset. Grade construction sheets will be submitted at this time. These grade construction sheets are to be signed and sealed by a professional land surveyor.
- 3. As indicated in the "Manual on Uniform Traffic Control Devices," proper and sufficient construction warning signs are to be provided and maintained by contractors performing construction work along County roads. Said signs are to be maintained until construction is completed and approved by the appropriate County inspection personnel.
- 4. All improvements under the jurisdiction of the County of Somerset are to be constructed in accordance with Somerset County Specifications.
- 5. All mailboxes, located within the construction improvements in the County R.O.W. will be reset in accordance with the owner of the mailbox and the postmaster.
- 6. Information monuments, markers, disks, rivets of the National Geodetic Control Survey may be obtained from the New Jersey Department of Transportation, Geodetic Division, 1035 Parkway Avenue, Trenton, NJ, telephone #(609) 530-5641; or the Somerset County Engineering Division, telephone #(908) 231-7024, ext. 7512.
- 7. The New Jersey Geodetic Control Survey, at the above address, is to be notified two (2) weeks in advance of commencement of construction of any improvements in order to preserve the resetting of existing monuments, or installation of new monuments if required by the County.

Prepared by: Somerset County Department of Public Works

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295 CEDAR GROVE LANE

TOWNSHIP OF FRANKLIN SOMERSET COUNTY **NEW JERSEY** 

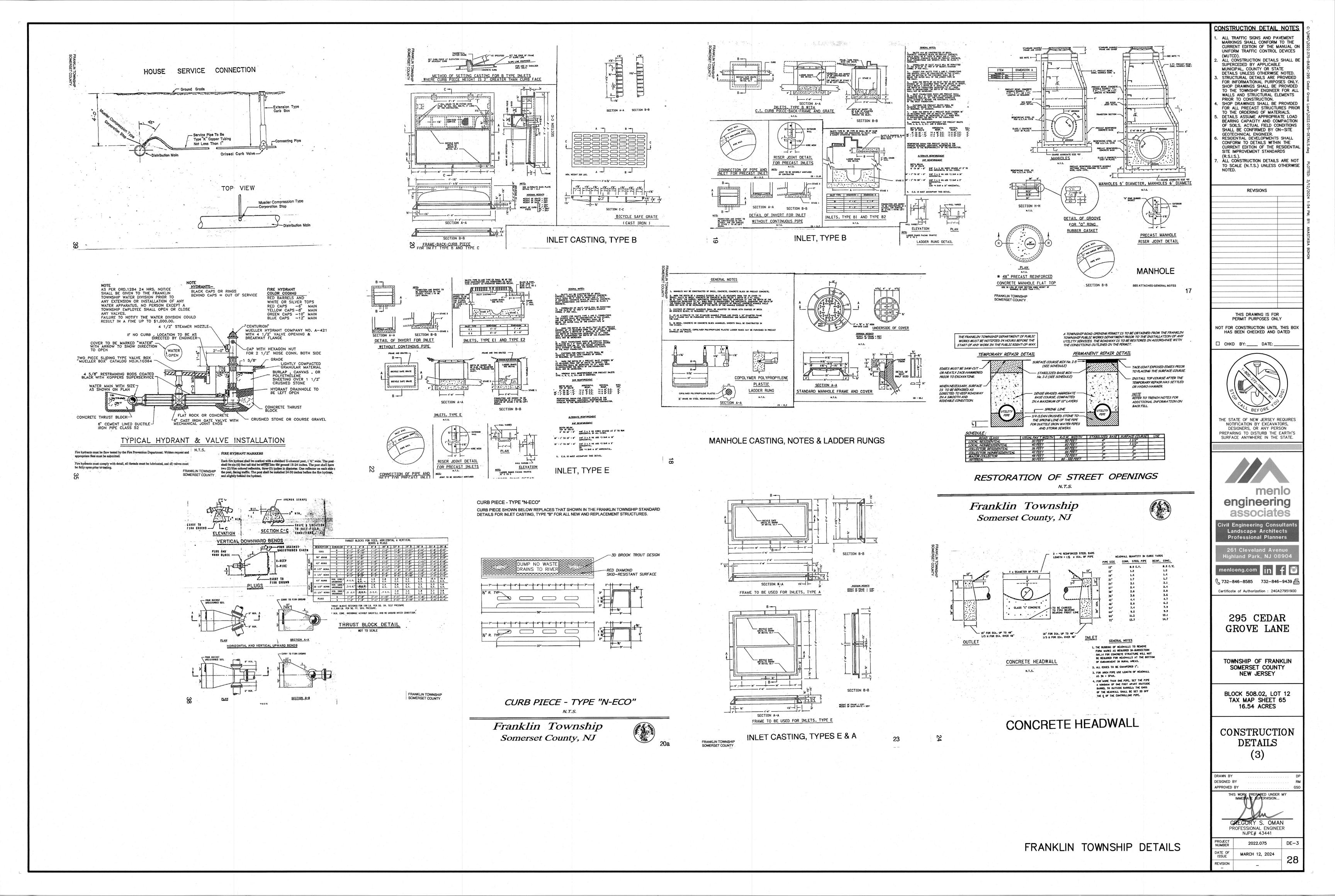
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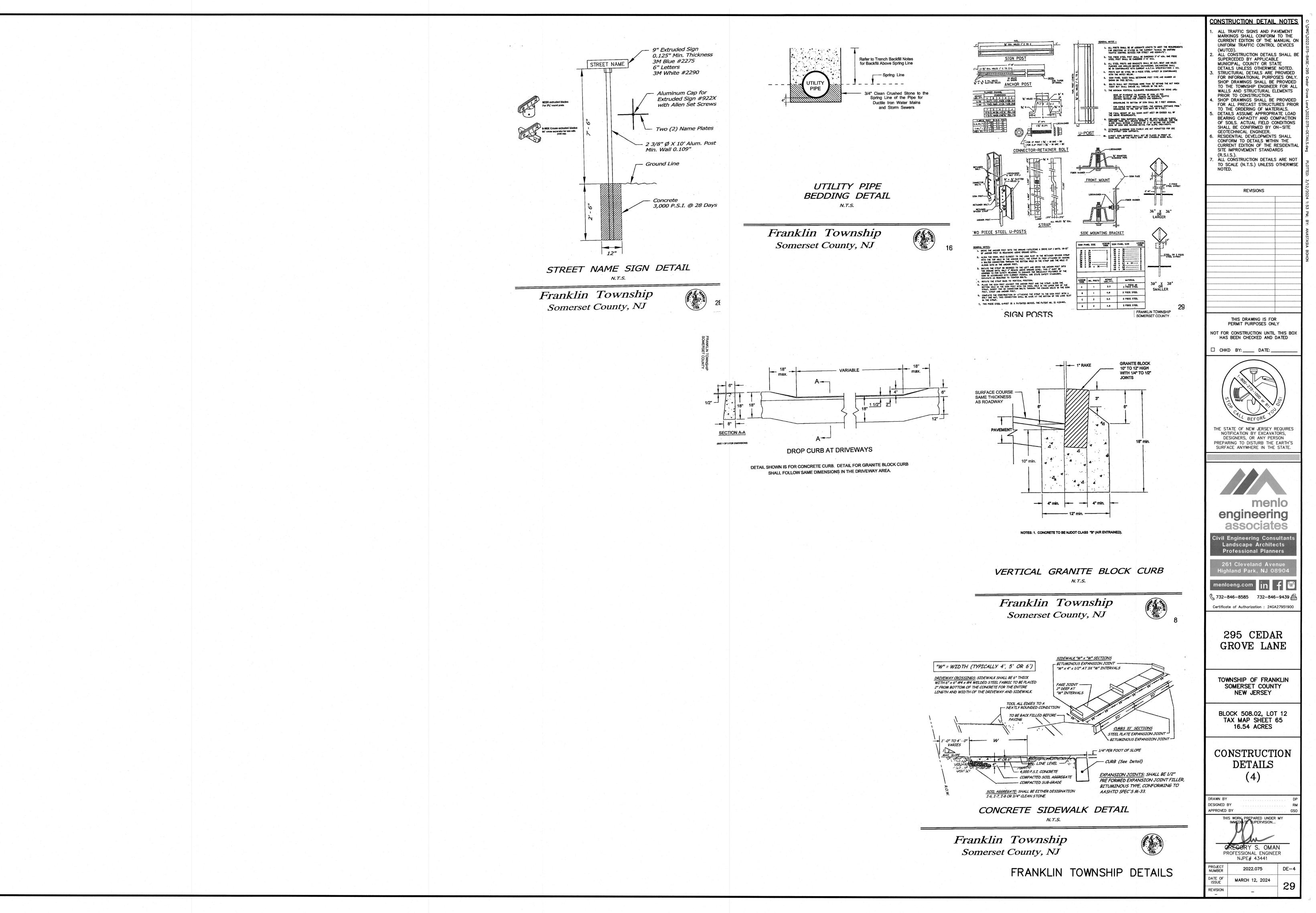
CONSTRUCTION **DETAILS** (2)

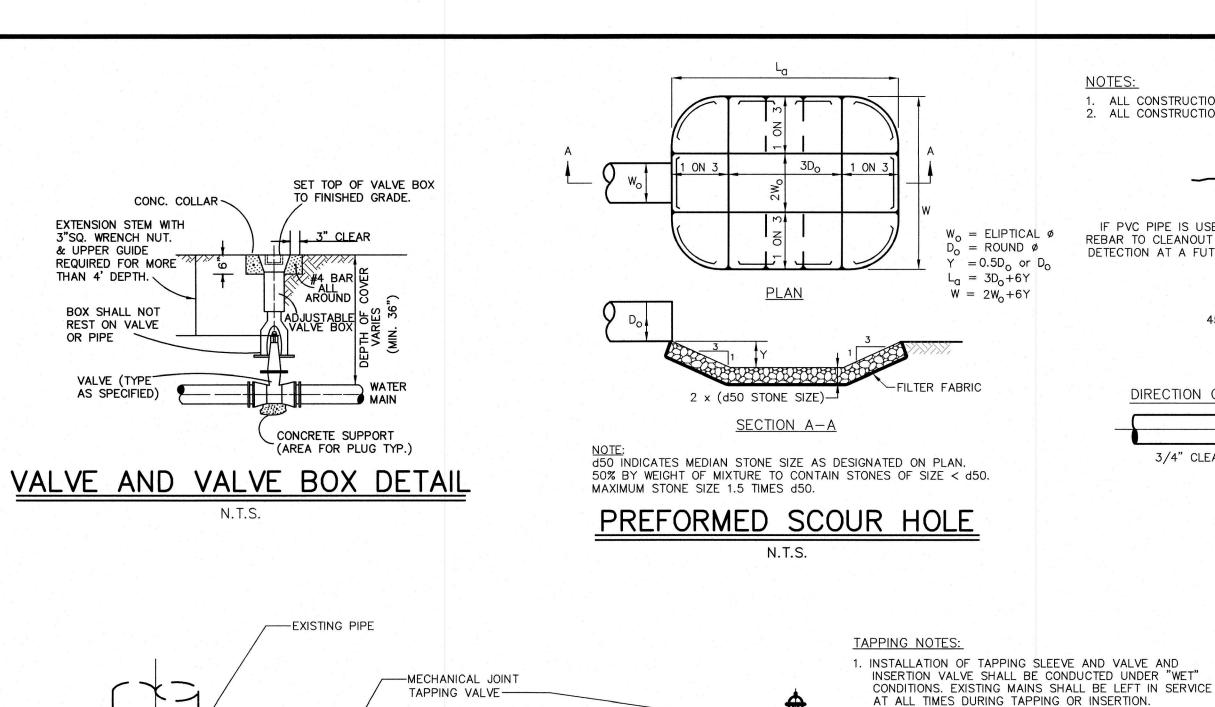
DESIGNED BY APPROVED BY THIS WORK PREPARED UNDER MY
IMMEDIATE SUPERVISION... EGORY S. OMAN ROFESSIONAL ENGINEER NJPE# 43441

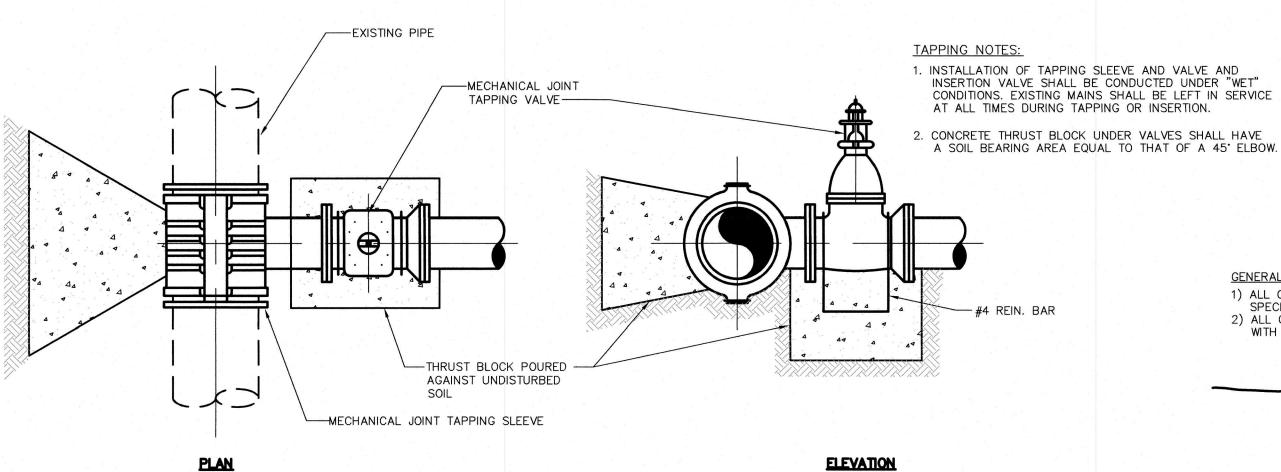
DE-2 2022.075 MARCH 12, 2024 27 REVISION

SOMERSET COUNTY DETAILS

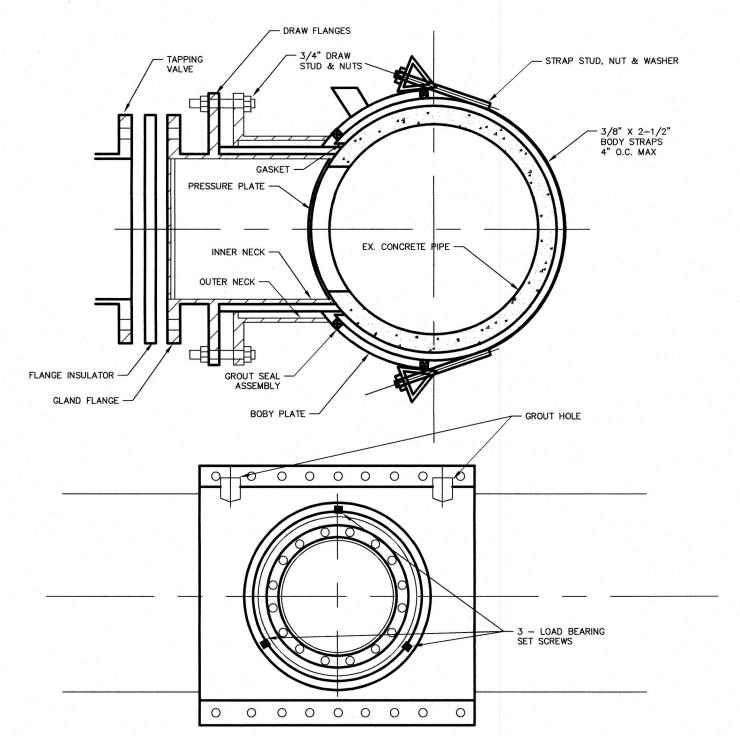








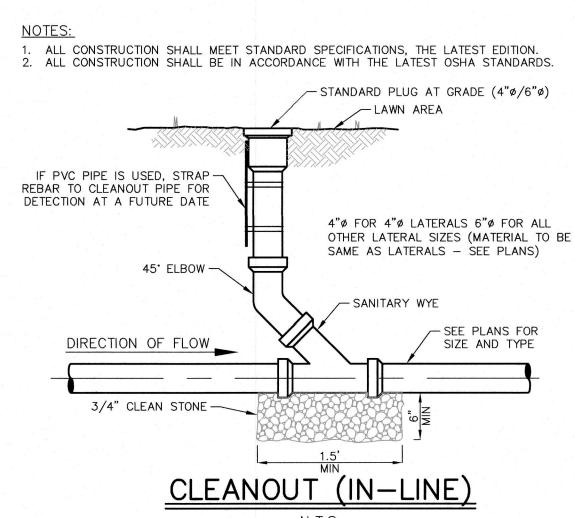
# TAPPING SLEEVE AND VALVE



### TAPPING NOTES:

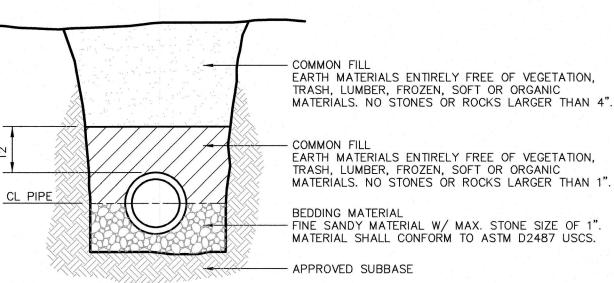
- 1. INSTALLATION OF TAPPING SLEEVE AND VALVE AND INSERTION VALVE SHALL BE CONDUCTED UNDER "WET"
- CONDITIONS. EXISTING MAINS SHALL BE LEFT IN SERVICE AT ALL TIMES DURING TAPPING OR INSERTION. CONCRETE THRUST BLOCK UNDER VALVES SHALL HAVE A SOIL BEARING AREA EQUAL TO THAT OF A 45' ELBOW.
- TAPPING SLEEVE SHALL MEET ALL THE REQUIREMENTS OF THE LATEST AWWA MANUAL INCLUDING THE C-301 STANDARDS PERTAINING TO QUALITY AND TESTING.
- 4. ALL SLEEVES ARE TO HAVE SEPARATE GLAND PIECE WITH A FUSION EPOXY COATED WATERWAY AND HYDROMECHANICAL GASKET SET IN RETAINING GROOVE OF PRESSURE PLATE.
- PRESSURE PLATE TO BE GUSSETED TO THE DRAW FLANGE. THE GLAND IS TO BE FITTED WITH A GROUT HOLE FOR GROUTING OF THE ANNULAR SPACE.
- 7. A PROTECTIVE CEMENT MORTAR COATING TO BE POURED OVER ENTIRE ASSEMBLY WITH A MINIMUM 1" THICKNESS UPON COMPLETION.

# CONCRETE PIPE TAPPING SLEEVE

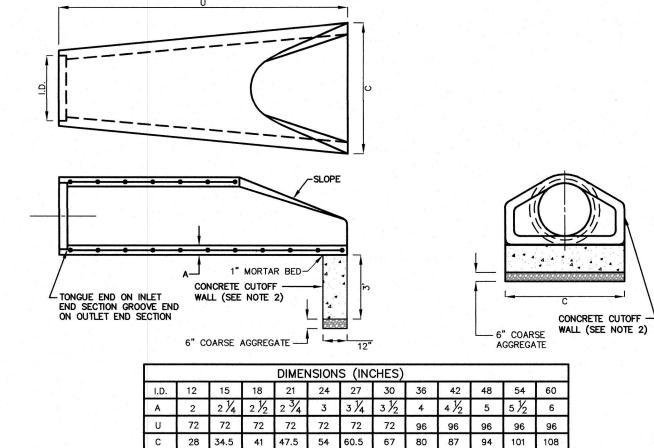


N.T.S.

**GENERAL NOTES:** 1) ALL CONSTRUCTION SHALL MEET STANDARD DOT SPECIFICATIONS, THE LATEST EDITION. 2) ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST OSHA STANDARDS.



### (WATER MAIN) TRÈNCH DETAIL N.T.S.

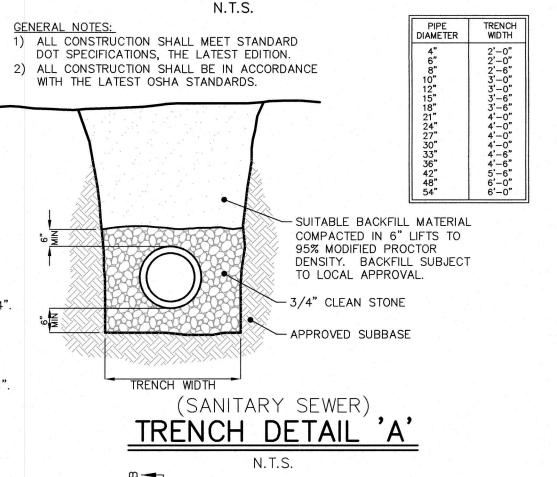


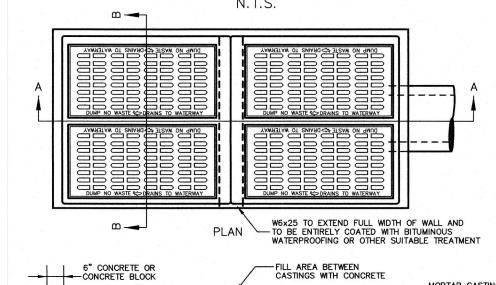
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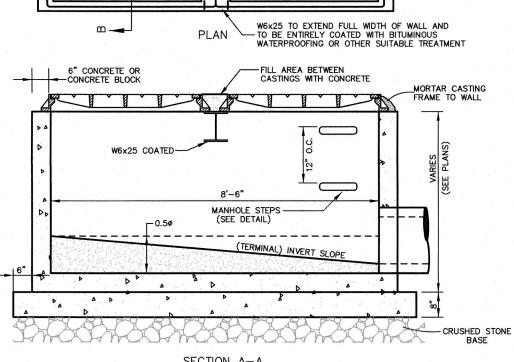
1. MINOR VARIATIONS TO THE ABOVE DIMENSIONS ARE ACCEPTABLE WITH THE EXCEPTION OF THE INSIDE DIAMETER DIMENSION.

- 2. A 1 INCH THICK MORTAR BED AND A 6 INCH DEEP LAYER OF COARSE AGGREGATE ARE REQUIRED WHEN A PRECAST CONCRETE CUTOFF WALL IS USED.
- 3. NO SEPARATE PAYMENT WILL BE MADE FOR THE CONCRETE CUTOFF WALL. THE COST OF THE CONCRETE CUTOFF WALL SHALL BE INCLUDED IN THE COST OF THE END SECTION.
- 4. THE WIDTH OF THE CONCRETE CUTOFF WALL SHALL BE EQUAL TO THE MAXIMUM WIDTH OF THE END SECTION AS INDICATED ON THE DETAIL BY DIMENSION "C". HOWEVER, IF THE ACTUAL MAXIMUM WIDTH EXCEEDS THE CHART VALUE OF "C", THE WIDTH OF THE CONCRETE CUTOFF WALL SHALL EQUAL THE ACTUAL MAXIMUM WIDTH OF THE END SECTION.

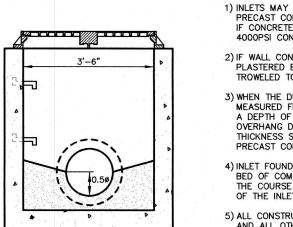
# FLARED END SECTION







SECTION A-A "TERMINAL" INVERT DETAIL



SECTION B-B "THROUGH" INVERT DETAIL 1) INLETS MAY BE CONSTRUCTED OF BRICK, CONCRETE, CONCRETE BLOCK OR PRECAST CONCRETE. WALLS SHALL BE 8" THICK IF BRICK AND 6" THICK IF CONCRETE. FOOTING SHALL BE 3500PSI CONCRETE. WALLS SHALL BE 4000PSI CONCRETE. INVERT (BENCHING) SHALL BE 2500 PSI CONCRETE. 2) IF WALL CONSTRUCTION IS BRICK OR BLOCK, THE WALLS SHALL BE PLASTERED BOTH INSIDE AND OUTSIDE WITH 1/2" THICK CEMENT PLASTER TROWELED TO A SMOOTH FINISH.

GENERAL NOTES:

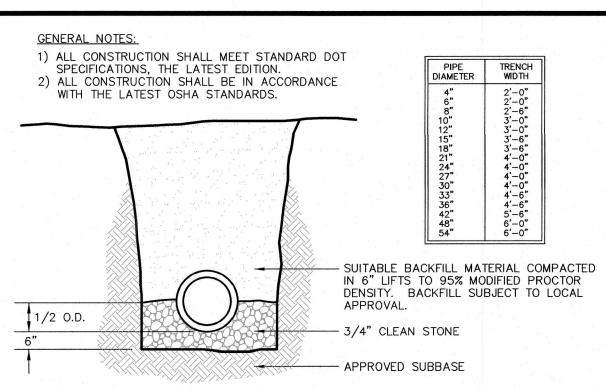
3) WHEN THE DEPTH OF AN INLET THAT IS NOT PRECAST EXCEEDS 8' AS MEASURED FROM THE GRATE TO THE INVERT, THE WALL THICKNESS BELOW
A DEPTH OF 8' SHALL BE INCREASED TO 12" THICK, THE FOUNDATION
OVERHANG DIMENSION SHALL BE INCREASED TO 12". MAXIMUM DEPTH FOR NON
THICKNESS SHALL BE INCREASED TO 12". MAXIMUM DEPTH FOR NON PRECAST CONSTRUCTION SHALL BE 13'

4) INLET FOUNDATIONS WHICH ARE PRECAST SHALL BE PLACED ON A 6" THICK BED OF COMPACTED COURSE AGGREGATE SIZE NO.57 (3/4" CRUSHED STONE). THE COURSE AGGREGATE SHALL EXTEND 6" BEYOND THE HORIZONTAL LIMITS

5) ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ASTM DESIGNATION C478 AND ALL OTHER APPLICABLE STANDARDS. 6) DETAILED SHOP DRAWINGS TO BE SUBMITTED TO ENGINEER FOR APPROVAL

7) FRAME AND GRATE TO BE CAMPBELL FOUNDRY - #3425 - BICYCLE SAFE GRATE W/LETTERING - "DUMP NO WASTE" (FISH) "DRAINS TO WATERWAY" OR APPROVED EQUAL. ADJUST TO GRADE WITH CONCRETE BRICK (MAX 12") OR CONCRETE GRADE RING AS REQUIRED. FRAMES TO BE SET IN FULL BED

DOUBLE "E" INLET



### (STORM SEWER) TRENCH DETAIL

N.T.S. **GENERAL NOTES:** 

BE INCREASED TO 12". MAXIMUM DEPTH FOR NON PRECAST CONSTRUCTION SHALL BE 13'.

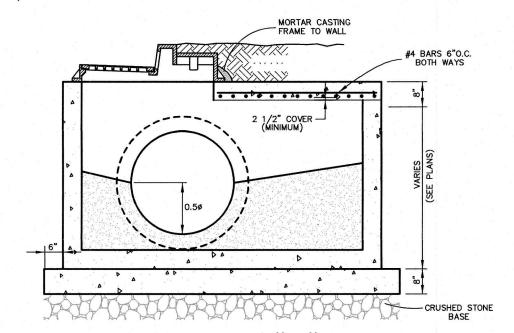
1) INLETS MAY BE CONSTRUCTED OF BRICK, CONCRETE, CONCRETE BLOCK OR PRECAST CONCRETE. WALLS SHALL BE 8" THICK IF BRICK AND 6" THICK IF CONCRETE. FOOTING SHALL BE 3500PSI CONCRETE. WALLS SHALL BE 4000PSI CONCRETE. INVERT (BENCHING) SHALL BE 2500 PSI CONCRETE. 2) IF WALL CONSTRUCTION IS BRICK OR BLOCK, THE WALLS SHALL BE PLASTERED BOTH INSIDE AND OUTSIDE WITH 1/2" THICK CEMENT PLASTER TROWELED TO A SMOOTH FINISH. 3) WHEN THE DEPTH OF AN INLET THAT IS NOT PRECAST EXCEEDS 8' AS MEASURED FROM THE GRATE TO THE INVERT, THE WALL THICKNESS BELOW A DEPTH OF 8' SHALL BE INCREASED TO 12" THICK, THE FOUNDATION OVERHANG DIMENSION SHALL BE INCREASED TO 12" AND THE FOUNDATION THICKNESS SHALL

4) INLET FOUNDATIONS WHICH ARE PRECAST SHALL BE PLACED ON A 6" THICK BED OF COMPACTED COURSE AGGREGATE SIZE NO.57 (3/4" CRUSHED STONE). THE COURSE AGGREGATE SHALL EXTEND 6" BEYOND THE HORIZONTAL LIMITS OF THE FOUNDATION.

5) ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ASTM DESIGNATION C478-7A AND ALL OTHER APPLICABLE STANDARDS.

6) MANHOLE STEPS SHALL BE SPACED 12" O.C. (SEE DETAIL) 7) FRAME AND GRATE TO BE CAMPBELL FOUNDRY — #2618 CURB INLET — NJ TYPE B — WITH BICYCLE SAFE GRATE AND TYPE "N" ECO CURB PIECE W/LETTERING "DUMP NO WASTE" (FISH) "DRAINS TO WATERWAY". ADJUST

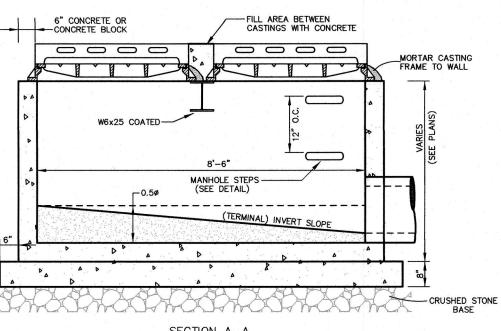
TO GRADE WITH CONCRETE BRICK (MAX 12") OR CONCRETE GRADE RING AS REQUIRED. FRAMES TO BE SET IN FULL BED OF STIFF MORTAR. 8) DETAILED SHOP DRAWINGS TO BE SUBMITTED TO ENGINEER FOR APPROVAL PRIOR TO ORDERING.



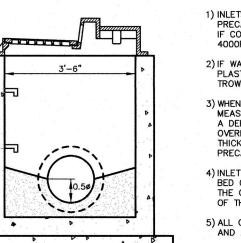
# OVERSIZED "B" INLET

N.T.S. DUMP NO WASTE DRAINS TO WATERWAY DUMP NO WASTE

DRAINS TO WATERWAY W6x25 TO EXTEND FULL WIDTH OF WALL AND TO BE ENTIRELY COATED WITH BITUMINOUS WATERPROOFING OR OTHER SUITABLE TREATMENT 6" CONCRETE OR CONCRETE BLOCK FILL AREA BETWEEN
CASTINGS WITH CONCRETE 000 0000



SECTION A-A "TERMINAL" INVERT DETAIL



SECTION B-B

"THROUGH" INVERT DETAIL

**GENERAL NOTES:** 1) INLETS MAY BE CONSTRUCTED OF BRICK, CONCRETE, CONCRETE BLOCK OR PRECAST CONCRETE. WALLS SHALL BE 8" THICK IF BRICK AND 6" THICK IF CONCRETE. FOOTING SHALL BE 3500PSI CONCRETE. WALLS SHALL BE 4000PSI CONCRETE. INVERT (BENCHING) SHALL BE 2500 PSI CONCRETE. IF WALL CONSTRUCTION IS BRICK OR BLOCK, THE WALLS SHALL BE PLASTERED BOTH INSIDE AND OUTSIDE WITH 1/2" THICK CEMENT PLASTER TROWELED TO A SMOOTH FINISH.

3) WHEN THE DEPTH OF AN INLET THAT IS NOT PRECAST EXCEEDS 8' AS MEASURED FROM THE GRATE TO THE INVERT, THE WALL THICKNESS BELOW A DEPTH OF 8' SHALL BE INCREASED TO 12" THICK, THE FOUNDATION OVERHANG DIMENSION SHALL BE INCREASED TO 12" AND THE FOUNDATION THICKNESS SHALL BE INCREASED TO 12". MAXIMUM DEPTH FOR NON PRECAST CONSTRUCTION SHALL BE 13

4) INLET FOUNDATIONS WHICH ARE PRECAST SHALL BE PLACED ON A 6" THICK BED OF COMPACTED COURSE AGGREGATE SIZE NO.57 (3/4" CRUSHED STONE). THE COURSE AGGREGATE SHALL EXTEND 6" BEYOND THE HORIZONTAL LIMITS OF THE INLET FOUNDATION. 5) ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ASTM DESIGNATION C478 AND ALL OTHER APPLICABLE STANDARDS.

) DETAILED SHOP DRAWINGS TO BE SUBMITTED TO ENGINEER FOR APPROVAL 7) FRAME AND GRATE TO BE CAMPBELL FOUNDRY — #2618 CURB INLET — NJ TYPE B — WITH BICYCLE SAFE GRATE AND TYPE "N" ECO CURB PIECE W/LETTERING "DUMP NO WASTE" (FISH) "DRAINS TO WATERWAY". ADJUST TO GRADE WITH CONCRETE BRICK (MAX 12") OR CONCRETE GRADE RING

AS REQUIRED. FRAMES TO BE SET IN FULL BED OF STIFF MORTAR.

DOUBLE "B" INLET

CONSTRUCTION DETAIL NOTES ALL TRAFFIC SIGNS AND PAVEMENT MARKINGS SHALL CONFORM TO THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES ALL CONSTRUCTION DETAILS SHALL B SUPERCEDED BY APPLICABLE MUNICIPAL, COUNTY OR STATE DETAILS UNLESS OTHERWISE NOTED. STRUCTURAL DETAILS ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY SHOP DRAWINGS SHALL BE PROVIDED TO THE TOWNSHIP ENGINEER FOR ALL WALLS AND STRUCTURAL ELEMENTS PRIOR TO CONSTRUCTION. SHOP DRAWINGS SHALL BE PROVIDED FOR ALL PRECAST STRUCTURES PRIOR TO THE ORDERING OF MATERIALS. DETAILS ASSUME APPROPRIATE LOAD BEARING CAPACITY AND COMPACTION OF SOILS. ACTUAL FIELD CONDITIONS
SHALL BE CONFIRMED BY ON—SITE GEOTECHNICAL ENGINEER.
RESIDENTIAL DEVELOPMENTS SHALL
CONFORM TO DETAILS WITHIN THE CURRENT EDITION OF THE RESIDENTIAL SITE IMPROVEMENT STANDARDS ALL CONSTRUCTION DETAILS ARE NOT TO SCALE (N.T.S.) UNLESS OTHERWISE

REVISIONS THIS DRAWING IS FOR PERMIT PURPOSES ONLY NOT FOR CONSTRUCTION UNTIL THIS BOX

HAS BEEN CHECKED AND DATED ☐ CHKD BY: \_\_\_\_ DATE: \_\_\_





menlo engineering associates

menloeng.com in f

Certificate of Authorization: 24GA27951900

732-846-8585 732-846-9439

295 CEDAR GROVE LANE

TOWNSHIP OF FRANKLIN SOMERSET COUNTY NEW JERSEY

BLOCK 508.02, LOT 12 TAX MAP SHEET 65 16.54 ACRES

CONSTRUCTION DETAILS

RAWN BY

ESIGNED BY APPROVED BY THIS WORK PREPARED UNDER MY IMMEDIATE SUPERVISION... CREGORY S. OMAN PROFESSIONAL ENGINEER NJPE# 43441

DE-5 2022.075 DATE OF ISSUE MARCH 12, 2024 REVISION \_