VARIANCE PLAN

FOR

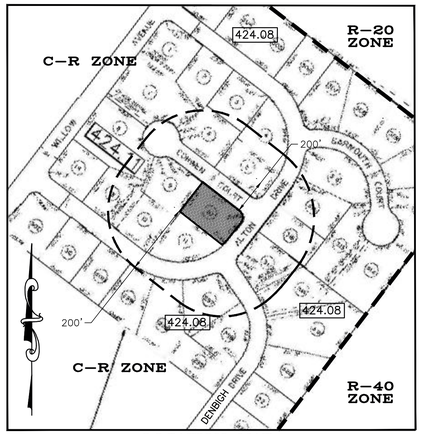
LOT 10 OF BLOCK 424.11

SITUATED IN

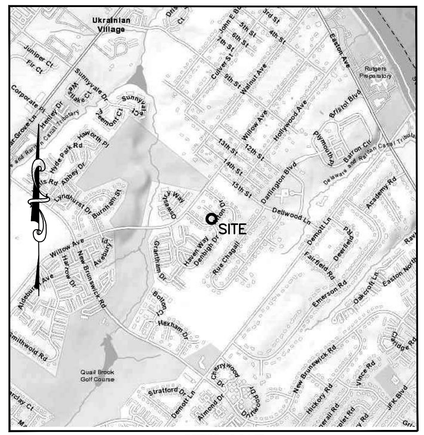
TOWNSHIP OF FRANKLIN, SOMERSET COUNTY, N.J.

PROPERTY OWNERS WITHIN 200'

BLOCK #	LOT #	NAME & ADDRESS
424.08	296	AMIN, PRATIK & DESAI, KINJAL 4 DENBIGH DRIVE, SOMERSET, NJ 08873
424.08	297	MAYASSI, MONZER MICHAEL 47428 TORRINGTON DRIVE NORTH, CANTON, MI 48188
424.08	298	CHANG, STEPHAN B. & MAI LIN 10 ALTON DRIVE, SOMERSET, NJ 08873
424.08	299	LEE, YU HUEI 8 ALTON DRIVE, SOMERSET, NJ 08873
424.08	300	SCIALABBA, PHILIP B. & ELIZABETH M. 6 ALTON DRIVE, SOMERSET, NJ 08873
424.08	314	LIOTINE, JOSEPH & OLGA A. 20 ALTON DRIVE, SOMERSET, NJ 08873
424.08	315	BOYKE, WILLIAM S. & CHRISTINE A. 18 ALTON DRIVE, SOMERSET, NJ 08873
424.08	316	HIGGINS, NICHOLAS JACOB & AMANDA D. 16 ALTON DRIVE, SOMERSET, NJ 08873
424.08	317	BAICHER, YARON & ROBIN M. 14 ALTON DRIVE, SOMERSET, NJ 08873
424.08	318	APPIAH AMANING, RENE & NANA-AMA 5 DENBIGH DRIVE, SOMERSET, NJ 08873
424.11	2	ANDERSON, ANELA 21 ALTON DRIVE, SOMERSET, NJ 08873
424.11	3	AURICH, ANDREW & MICHELLE M. 19 ALTON DRIVE, SOMERSET, NJ 08873
424.11	4	DUNGEE, LACY L. & SHARON 17 ALTON DRIVE, SOMERSET, NJ 08873
424.11	5	BONK, BRYAN J. & FOY, LISA D. 15 ALTON DRIVE, SOMERSET, NJ 08873
424.11	6	ADELMAN, MICHAEL & YELENA 4 CORWEN COURT, SOMERSET, NJ 08873
424.11	7	PENN, LILLIE 6 CORWEN COURT, SOMERSET, NJ 08873
424.11	8	ALEXIS, STEPHAN A. & TRICIA A. 7 CORWEN COURT, SOMERSET, NJ 08873
424.11	9	PATEL, PARUL 5 CORWEN COURT, SOMERSET, NJ 08873
424.11	11	CURTIS, GLENN D. & JANICE M. 9 ALTON DRIVE, SOMERSET, NJ 08873
424.11	12	KIMBER, LINDA L. 7 ALTON DRIVE, SOMERSET, NJ 08873
424.11	13	HEARD, REA C. & BETTY A. 5 ALTON DRIVE, SOMERSET, NJ 08873



LOCATION MAP
1"=200'



KEY MAP
1"=2,000'

GENERAL NOTES

1. DO NOT SCALE DRAWINGS, AS ADJACENT AND SURROUNDING PHYSICAL CONDITIONS, BUILDINGS, STRUCTURES, ET CETERA; ARE SCHEMATIC ONLY. THEY ARE PROVIDED TO GIVE THE REVIEWER A CLEARER OVERALL PICTURE OF THE SITE AND THE SURROUNDING TOPOGRAPHY AND PHYSICAL FEATURES.
2. THIS IS A VARIANCE PLAN, AND, UNLESS SPECIFICALLY NOTED ELSEWHERE HEREON, IS NOT A SURVEY.
3. THIS PRELIMINARY SET OF PLANS HAS BEEN PREPARED FOR PURPOSES OF MUNICIPAL AND AGENCY REVIEW AND APPROVAL. THIS SET OF PLANS SHALL NOT BE UTILIZED AS CONSTRUCTION DOCUMENTS UNTIL ALL CONDITIONS OF APPROVAL HAVE BEEN SATISFIED ON THE DRAWINGS AND EACH DRAWING HAS BEEN REVISED TO INDICATE THE NOTATION "CONSTRUCTION PLAT".
4. EXISTING UTILITY INFORMATION SHOWN HEREON HAS BEEN COLLECTED FROM VARIOUS SOURCES AND IS NOT GUARANTEED AS TO ACCURACY OR COMPLETENESS. THE CONTRACTOR SHALL VERIFY ALL INFORMATION TO HIS SATISFACTION PRIOR TO EXCAVATION. WHERE EXISTING UTILITIES ARE TO BE CROSSED BY PROPOSED CONSTRUCTION, TEST PITS SHALL BE DUG BY THE CONTRACTOR PRIOR TO CONSTRUCTION TO ASCERTAIN EXISTING INVERTS, MATERIALS AND SIZES. TEST PIT INFORMATION SHALL BE GIVEN TO THE ENGINEER PRIOR TO CONSTRUCTION TO PERMIT ADJUSTMENTS AS REQUIRED TO AVOID CONFLICTS.
5. ALL MATERIALS, WORKMANSHIP AND CONSTRUCTION FOR SITE IMPROVEMENTS SHOWN HEREON SHALL BE IN ACCORDANCE WITH:
   - A. DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AS CURRENTLY AMENDED.
   - B. CURRENT, PREVAILING MUNICIPAL AND/OR COUNTY SPECIFICATIONS, STANDARDS AND REQUIREMENTS.
   - C. CURRENT, PREVAILING UTILITY COMPANY/AUTHORITY SPECIFICATIONS, STANDARDS AND REQUIREMENTS.
6. SITE SERVICED BY PUBLIC WATER AND SEWER SYSTEMS.
7. ALL NEW UTILITIES SHALL BE INSTALLED UNDERGROUND.
8. OFFSET DIMENSIONS FROM STRUCTURES TO PROPERTY LINES SHOWN HEREON ARE NOT TO BE USED FOR ESTABLISHING PROPERTY LINES.
9. THE CONTRACTOR SHALL NOTIFY THE UNDERSIGNED PROFESSIONAL IMMEDIATELY IF ANY FIELD CONDITIONS ENCOUNTERED DIFFER MATERIALLY FROM THE THOSE REPRESENTED HEREON, AND/OR IF SUCH CONDITIONS, IN THE CONTRACTOR'S OPINION, WOULD OR COULD RENDER THE DESIGN SHOWN HEREON INAPPROPRIATE OR INEFFECTIVE.

LIST OF DRAWINGS

NUMBER	DESCRIPTION	ORIGINAL DATE	LATEST REV. DATE
1 OF 3	VARIANCE PLAN – COVER SHEET	01/12/21	
2 OF 3	VARIANCE PLAN – SITE PLAN AND S.E. AND S.C. PLAN	01/12/21	
3 OF 3	VARIANCE PLAN – S.E. AND S.C. DETAIL SHEET	01/12/21	

APPLICANT:
ABHISHA DESAI
3 CORWEN COURT
SOMERSET, NJ 08873

I HEREBY CERTIFY THAT I AM THE RECORD TITLE HOLDERS OF THE LANDS DELINEATED ON THIS MAP AND CONSENT TO THE FILING OF THIS MAP.

_____
DATE

APPROVED AS A VARIANCE PLAN FOR A RESIDENTIAL HOME BY THE TOWNSHIP OF FRANKLIN ZONING BOARD ON _____

AS APPLICATION NO._____

_____
BOARD CHAIRMAN DATE

_____
BOARD SECRETARY DATE

_____
TOWNSHIP ENGINEER DATE

ZONING ANALYSIS
ZONE DISTRICT C-R (SF. CORNER LOT)

	REQUIRED	EXISTING	PROPOSED
MINIMUM LOT AREA – CORNER LOT	26,000 SF	16,011 SF *	16,011 SF *
MINIMUM LOT FRONTAGE	130 FT	248.43 FT	248.43 FT
MIN. FRONT YARD SETBACK	35 FT	31.8 FT *	20.2 FT @
MIN. SIDE YARD SETBACK–ONE SIDE	15 FT	25.7 FT ±	25.7 FT ±
MIN. SIDE YARD SETBACK–BOTH SIDES	30 FT	105.7 FT ±	105.7 FT ±
MIN. REAR YARD SETBACK	NA +	NA	NA
MIN. ACCESSORY SIDE YARD – ALTON DRIVE	15 FT	NA	9.8 FT @
MIN. ACCESSORY SIDE YARD – CORWEN COURT	15 FT	NA	14.1 FT @
MIN. ACCESSORY REAR YARD	NA +	NA	NA
MAX. IMPERVIOUS COVERAGE	40%	21.5%	31.7%
MAX. LOT COVERAGE	20%	10.3%	10.3%

\+ THIS PARCEL IS A CORNER LOT, REAR YARD SETBACK REQUIREMENTS ARE NOT APPLICABLE
* INDICATES VARIANCE IS REQUIRED REQUIRED FOR EXISTING CONDITION PER REQUIREMENTS LISTED IN ZONING CHART (ATTACHMENT 2:1)
@ INDICATES VARIANCE IS REQUIRED REQUIRED FOR PROPOSED CONDITION PER REQUIREMENTS LISTED IN ZONING CHART (ATTACHMENT 2:1)

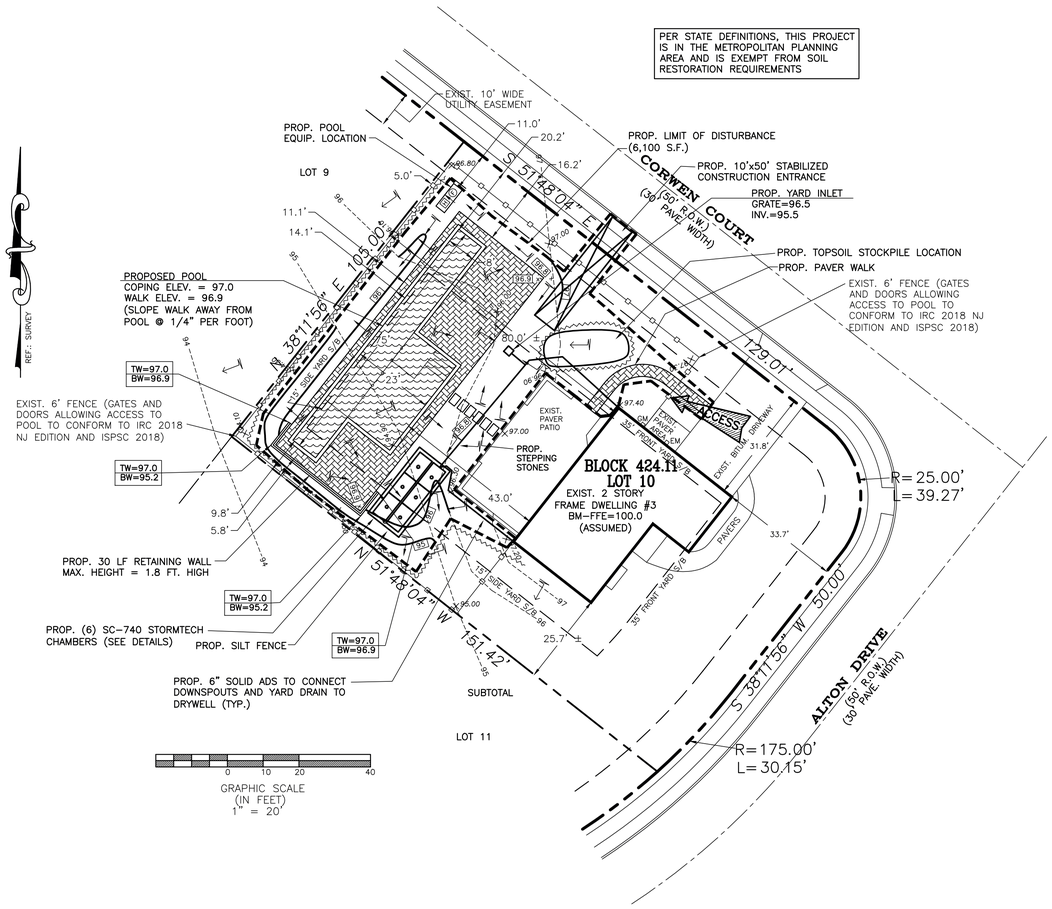
NO.	REVISIONS	DATE	DRAWN	CHECKED

COVER SHEET – VARIANCE PLAN
PREPARED FOR
"DESAI" 3 CORWEN COURT (SEASONAL WORLD)
LOT 10 OF BLOCK 424.11
TAX MAP SHEET NO. 76.14
SITUATED IN
FRANKLIN TOWNSHIP, SOMERSET COUNTY, NEW JERSEY

MIDSTATE ENGINEERING INC.
ENGINEERS, SURVEYORS & PLANNERS
82 WALNUT HILL LANE
FREEHOLD, NEW JERSEY 07728
(732) 308-4226
(FAX) 732-308-4190
CERT. OF AUTHORIZATION NO. GA277692

CHESTER DI LORENZO PE,LS,PP
PE & LS LICENSE NO. 28966 PP LICENSE NO. 2871

DATE	01/12/21
SCALE	1" = 20'
DRAWN	CWM
CHECKED	CDL
FILE NO.	12824
SHEET	1 OF 3



LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING SURFACE DRAINAGE
- PROPOSED SURFACE DRAINAGE
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- EXISTING GAS LINE
- EXISTING WATER LINE
- EXISTING SEWER LINE
- EXISTING OVERHEAD ELECTRIC
- EXISTING UNDERGROUND ELECTRIC
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED SILT FENCE
- PROPOSED FENCE

DRAINAGE CALCULATIONS

Per Township regulations, "Increases in impervious lot coverage shall be mitigated by installation of a drywell. Drywell shall be sufficiently sized to store 3 inches times the increased impervious area".

Total proposed impervious lot coverage is 1,638 sf, then;
V=1,638sf(3")(1'/12")=410 cf

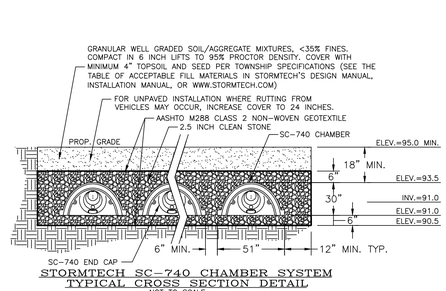
Using Stormtech SC-740 chambers, the contractor shall install enough chambers to collect at least the volume of 410 cubic feet. Each chamber unit has 67.7 cf capacity, for a 6" bed and stone void ratio of 0.3, then;
# of units required = 410/67.7 = 6.0; use 6 units total

Soil logs and permeability testing to be performed to verify soil conditions and water table. drywell design may need to be re-evaluated and revised if conditions warrant.

SOIL EROSION AND SEDIMENT CONTROL NOTES

1. All Soil Erosion and Sediment Control practices shall be installed prior to any major soil disturbances, or in their proper sequence and maintained until permanent protection is established.
2. Any Disturbed areas that will be left exposed more than 30 Days and not subject to construction traffic, will immediately receive a temporary seeding. If the season prevents the establishment of a temporary cover, the disturbed areas will be mulched with straw, or equivalent material, at a rate of two (2) tons per acre, according to NJ State Standards.
3. Permanent Vegetation shall be seeded or sodded on all exposed areas within ten (10) days after final grading. Mulch will be used for protection until seeding is established.
4. All work shall be done in accordance with the NJ State Standards for Soil Erosion and Sediment Control in New Jersey, 7th Edition last revised January 2014.
5. A sub-base course will be applied immediately following rough grading and installation of improvements in order to stabilize streets, roads, driveways and parking areas. In areas where no utilities are present, the sub-base shall be installed within 15 days or preliminary grading.
6. Immediately following initial disturbance or rough grading all critical areas subject to erosion (i.e.: steep slopes, roadway embankments) will receive a temporary seeding in combination with straw mulch or a suitable equivalent, at a rate of two (2) tons per acre, according to the NJ State Standards.
7. Any steep slopes receiving pipeline installation will be backfilled and stabilized daily, as the installation proceeds (i.e.: slopes greater that 3:1).
8. Traffic control Standards require the installation of a 50'x30'x6"pad of 1 1/2" or 2" stone, at all construction driveways, immediately after initial site disturbance.
9. The Somerset-Union Soil Conservation District shall be notified in writing 48 hours in advance of any land disturbing activity.
10. At the time when the site preparation for permanent vegetative stabilization is going to be accomplished, any soil that will not provide a suitable environment to support adequate vegetative ground cover, shall be removed or treated in such a way that will permanently adjust the soil conditions and render it suitable for vegetative ground cover. If the removal or treatment of the soil will not provide suitable conditions, non-vegetative means of permanent ground stabilization will have to be employed. 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.
11. In that NJSA 4:24-39 et seq., requires that no Certificate of Occupancy be issued before the provisions of the Certified Plan for Soil Erosion and Sediment Control have been complied with for permanent measures, all site work for site plans and all work around individual lots in subdivisions, will have to be completed prior to the District issuing a Report of Compliance for the issuance of a Certificate of Occupancy by the Municipality.
12. Conduit Outlet Protection must be installed at all required outfalls prior to the drainage system becoming operational.
13. Any changes to the Certified Soil Erosion and Sediment Control Plan will require the submission of revised Soil Erosion and Sediment Control Plans to the District for re-certification. The revised plans must meet all current NJ State Soil Erosion & Sediment Control Standards.
14. The Somerset-Union Soil Conservation District shall be notified of any changes in ownership.
15. Mulching to the NJ Standards is required for obtaining a Conditional Report of Compliance. Conditionals are only issued when the season prohibits seeding.
16. Contractor is responsible for keeping all adjacent roads clean during life of construction project.
17. The developer shall be responsible for remediating any erosion or sediment problems that arise as a result of ongoing construction at the request of the Somerset-Union Soil Conservation District.
18. Hydro seeding is a two- step process. The first step includes seed, fertilizer, lime, etc., along with minimal amounts of mulch to promote consistency, good seed to soil contact, and give a visual indication of coverage. Upon completion of seeding operation, hydro-mulch should be applied at a rate of 1500 lbs. per acre in second step. The use of hydro-mulch, as opposed to straw, is limited to optimum seeding dates as listed in the NJ Standards.

REV 8/24/20



STORMTECH SC-740 CHAMBER SYSTEM
TYPICAL CROSS SECTION DETAIL
NOT TO SCALE

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2. THIS IS A POOL GRADING PLAN, AND UNLESS SPECIFICALLY NOTED ELSEWHERE HEREON IS NOT A SURVEY.
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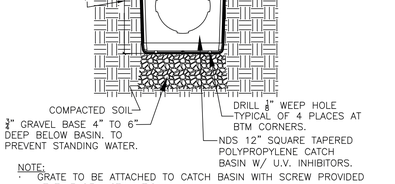
5. ALL MATERIALS, WORKMANSHIP AND CONSTRUCTION FOR SITE IMPROVEMENTS SHOWN HEREON SHALL BE IN ACCORDANCE WITH INTERNATIONAL RESIDENTIAL CODE (IRC), NJ EDITION, LATEST REVISION (2018), AS WELL AS ISPSC 2018.
6. OUTBOUND INFORMATION BASED ON A SURVEY PREPARED BY WILLIAM HELD ASSOCIATES, INC., DATED 02/25/02. TOPOGRAPHIC INFORMATION BASED ON FIELD MEASUREMENTS BY MIDSTATE ENGINEERING INC. ON 11/14/20.
7. THIS PLAN IS SUBJECT TO CONDITIONS WHICH AN ACCURATE TITLE SEARCH MIGHT DISCLOSE.
8. NO ATTEMPT WAS MADE OR LIABILITY IS ASSUMED TO DETERMINE IF ANY PORTION OF THIS PROPERTY IS CLAIMED BY THE STATE OF NEW JERSEY AS TIDELANDS. ENVIRONMENTALLY SENSITIVE AREAS ARE NOT LOCATED BY THIS SURVEY.
9. PROPERTY KNOWN AND DESIGNATED AS LOT 10 OF BLOCK 424.11, SITUATED IN FRANKLIN TOWNSHIP, SOMERSET COUNTY, NEW JERSEY.
10. OFFSET DIMENSIONS FROM STRUCTURES TO PROPERTY LINES SHOWN HEREON ARE NOT TO BE USED FOR ESTABLISHING PROPERTY LINES.
11. UTILITY LOCATIONS TO BE VERIFIED PRIOR TO CONSTRUCTION.
12. POOL COMPANY TO INSTALL A CARTRIDGE TYPE FILTER, THEREFOR NO BACKWASHING IS REQUIRED.
13. THE PUBLIC SIDEWALK AT THE STREET, IF DAMAGED BY POOL CONSTRUCTION ACTIVITY, MUST BE REPLACED USING 4,500 PSI CONCRETE.

LOT COVERAGE:

LOT AREA = 16,011 S.F.

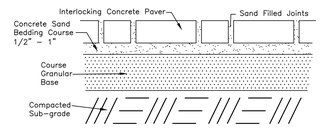
EXISTING:		
DWELLING/PORCH	1,645 S.F.	EXIST. LOT COVERAGE
DRIVEWAY (bitum.)	646 S.F.	1,645 S.F.
FRONT WALK (pavers)	214 S.F.	16,011 S.F. = 10.3%
PATIOS (pavers)	929 S.F.	EXIST. IMPERV. COVERAGE
SUBTOTAL	3,434 S.F.	3,434 S.F.
		16,011 S.F. = 21.5%

PROPOSED:		
POOL WATER SURFACE (1,050 S.F.)	-0- S.F.	
PATIO/COPING	1,440 S.F.	
FILTER PAD	24 S.F.	
PAVER WALK	138 S.F.	PROPOSED COVERAGE
STEPPING STONES	36 S.F.	5,072 S.F.
	1,638 S.F.	16,011 S.F. = 31.7%



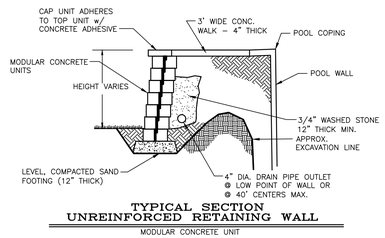
NOTE:
- GRATE TO BE ATTACHED TO CATCH BASIN WITH SCREW PROVIDED AT TIME OF INSTALLATION.
- RISER CAN BE CUT TO ACHIEVE EXACT ELEVATION.
- DO NOT USE OVER 5 RISERS WITH CATCH BASIN.

NDS 12" sq. CATCH BASIN WITH RISER INSTALLATION
N. T. S.

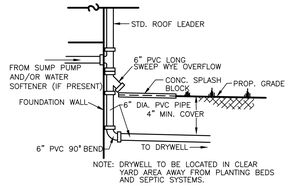


NOTE: 1/8"/FT. MIN. CROSS SLOPE UNLESS OTHERWISE INDICATED ON DRAWINGS.

TYP. PAVER WALK/PATIO CROSS SECTION

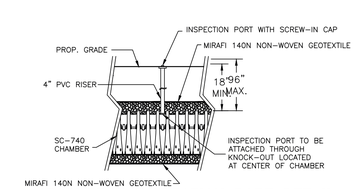


TYPICAL SECTION
UNREINFORCED RETAINING WALL
MODULAR CONCRETE UNIT

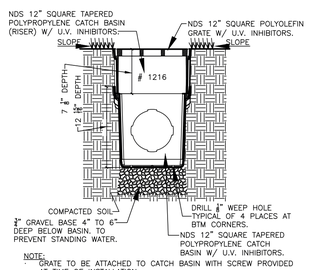


NOTE: DRYWELL TO BE LOCATED IN CLEAR YARD AREA AWAY FROM PLANTING BEDS AND SEPTIC SYSTEMS.

ROOF DRAIN
TO DRYWELL DETAIL
N.T.S.



STORMTECH INSPECTION PORT DETAIL



NOTE:
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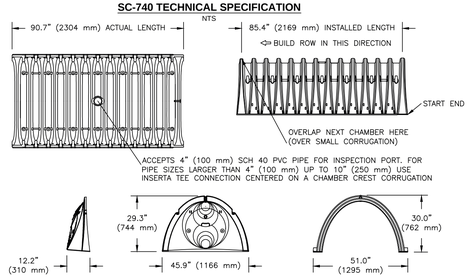
NDS 12" sq. CATCH BASIN WITH RISER INSTALLATION
N. T. S.

SC-740 TECHNICAL SPECIFICATION

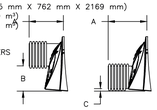
NTS



NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	51.0" X 30.0" X 85.4"	(1295 mm X 762 mm X 2169 mm)
CHAMBER STORAGE	45.9 CUBIC FEET	(1.30 m³)
MINIMUM INSTALLED STORAGE*	74.9 CUBIC FEET	(2.12 m³)
WEIGHT	75.0 lbs.	(33.6 kg)

*ASSUMES 6" (152 mm) STONE ABOVE, BELOW, AND BETWEEN CHAMBERS



STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"

PART #	STUB	A	B	C
SC740EPE06T / SC740EPE06TPC	6" (150 mm)	10.9" (277 mm)	18.5" (470 mm)	---
SC740EPE06B / SC740EPE06BPC			---	0.5" (13 mm)
SC740EPE08T /SC740EPE08TPC	8" (200 mm)	12.2" (310 mm)	16.5" (419 mm)	---
SC740EPE08B / SC740EPE08BPC			---	0.6" (15 mm)
SC740EPE10T / SC740EPE10TPC	10" (250 mm)	13.4" (340 mm)	14.5" (368 mm)	---
SC740EPE10B / SC740EPE10BPC			---	0.7" (18 mm)
SC740EPE12T / SC740EPE12TPC	12" (300 mm)	14.7" (373 mm)	12.5" (318 mm)	---
SC740EPE12B / SC740EPE12BPC			---	1.2" (30 mm)
SC740EPE15T / SC740EPE15TPC	15" (375 mm)	18.4" (467 mm)	9.0" (229 mm)	---
SC740EPE15B / SC740EPE15BPC			---	1.3" (33 mm)
SC740EPE18T / SC740EPE18TPC	18" (450 mm)	19.7" (500 mm)	5.0" (127 mm)	---
SC740EPE18B / SC740EPE18BPC			---	1.6" (41 mm)
SC740EPE24B*	24" (600 mm)	18.5" (470 mm)	---	0.1" (3 mm)

ALL STUBS, EXCEPT FOR THE SC740EPE24B ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694.

* FOR THE SC740EPE24B THE 24" (600 mm) STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 1.75" (44 mm). BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

NOTE: ALL DIMENSIONS ARE NOMINAL

NO.	REVISIONS	DATE	DRAWN	CHECKED

VARIANCE PLAN- SITE PLAN AND SOIL EROSION AND SEDIMENT CONTROL PLAN

PREPARED FOR
"DESAI" 3 CORWEN COURT (SEASONAL WORLD)
LOT 10 OF BLOCK 424.11
TAX MAP SHEET NO. 76.14
SITUATED IN
FRANKLIN TOWNSHIP, SOMERSET COUNTY, NEW JERSEY

MIDSTATE ENGINEERING INC.
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82 WALNUT HILL LANE
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CERT. OF AUTHORIZATION NO. GA277692

CHESTER DI LORENZO PE,LS,PP
PE & LS LICENSE NO. 28966 PP LICENSE NO. 2571

DATE	01/12/21
SCALE	1" = 20'
DRAWN	CWM
CHECKED	CDL
FILE NO.	12824
SHEET	2 OF 3

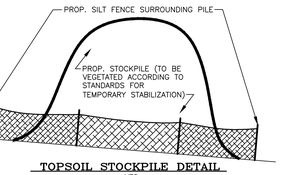
SEEDING MIXES FOR TEMPORARY VEGETATIVE COVER

TABLE 7-2

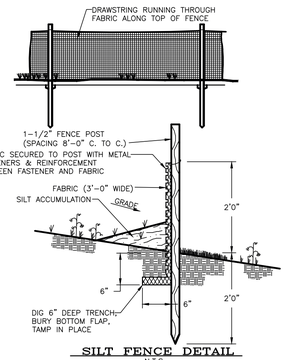
TEMPORARY VEGETATIVE STABILIZATION GRASSES, SEEDING RATES, DATES AND DEPTH.

SEED SELECTIONS	SEEDING RATE (pounds)		OPTIMUM SEEDING DATE Based on Plant Hardiness Zone[3]			OPTIMUM SEED DEPTH[4] (inches)
	Per Acre	Per 1000 Sq. Ft.	ZONE 5b, 6a	ZONE 6b	ZONE 7a, b	
COOL SEASON GRASSES						
1. Perennial ryegrass	100	1.0	3/15-6/1 8/1-9/15	3/1-5/15 8/15-10/1	2/15-5/1 8/15-10/15	0.5
2. Spring oats	86	2.0	3/15-5/15 8/1-9/15	3/1-5/15 8/15-10/1	2/15-5/1 8/15-10/15	1.0
3. Winter Barley	96	2.2	8/1-9/15	8/15-10/1	8/15-10/15	1.0
4. Annual ryegrass	100	1.0	3/15-6/1 8/1-9/15	3/15-6/1 8/1-9/15	2/15-5/1 8/15-10/15	0.5
5. Winter Cereal Rye	112	2.8	8/1 - 11/1	8/1 - 11/15	8/1 - 12/15	1.0
WARM SEASON GRASSES						
6. Pearl millet	20	0.5	6/1-8/1	5/15-8/15	5/1-9/1	1.0
7. Millet (German or Hungarian)	30	0.7	6/1-8/1	5/15-8/15	5/1-9/1	1.0

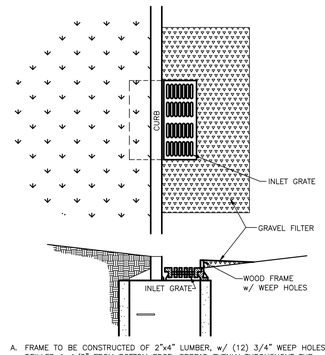
1 Seeding rate for warm season grass, selections 5 - 7 shall be adjusted to reflect the amount of Pure Line Seed (PLS) as determined by a germination test result. No adjustment is required for cool season grasses.
2 May be planted throughout summer if soil moisture is adequate or seeded area can be irrigated.
3 Plant Hardiness Zone (see figure 7-1, pg. 7-4.)
4 Twice the depth for sandy soils



TOPSOIL STOCKPILE DETAIL
NTS

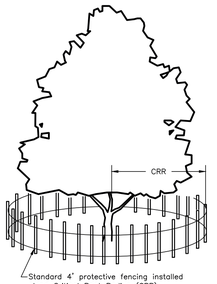


SILT FENCE DETAIL
N.T.S.



A. FRAME TO BE CONSTRUCTED OF 2"x4" LUMBER, w/ (12) 3/4" WEEP HOLES DRILLED 1-1/2" FROM BOTTOM EDGE, SPREAD EVENLY THROUGHOUT THE PERIMETER OF THE FRAME. FRAME TO BE SAME DIMENSIONS AS THE GRATE OF THE INLET.
B. STONE FILTER TO BE 1-1/2" TO 2-1/2" CLEAN STONE AND SHALL TAPER DOWN FROM THE TOP OF THE FRAME TO A POINT 3 FEET FROM THE FRAME.
C. IF THE STONE FILTER BECOMES CLOGGED WITH SEDIMENT SO THAT IT NO LONGER ADEQUATELY PERFORMS FUNCTION, THE STONE MUST BE PULLED AWAY FROM THE INLET, CLEANED AND REPLACED.
D. THIS METHOD OF INLET PROTECTION IS APPLICABLE AT YARD INLETS WHERE PONDING IN FRONT OF THE STRUCTURE IS NOT LIKELY TO CAUSE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED AREAS. THIS METHOD IS DESIGNED TO FILTER RUNOFF FROM THE ONE YEAR STORM EVENT, WHILE ALLOWING LARGER STORMS TO PASS DIRECTLY INTO THE INLET.

GRAVEL CURB INLET SEDIMENT FILTER
N.T.S.



Standard 4' protective fencing installed along Critical Root Radius (CRR)

To determine Critical Root Radius, multiply the diameter of the tree in inches @ 4.5' height by 1.5 or 1.0 and express in feet. (Use 1.5 for older, unhealthy or sensitive species and 1.0 for younger, healthy or tolerant species)

TREE PROTECTION FENCING
N.T.S.

STABILIZATION WITH MULCH ONLY

1. Site Preparation
   A. Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application, and mulch anchoring. All grading should be done in accordance with Standards for Land Grading.
   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.
2. Protective Materials
   A. Unrotted small-grain straw, at 2.0 to 2.5 tons per acre, is spread uniformly at 90 to 115 pounds per 1,000 square feet and anchored with a mulch anchoring tool, liquid mulch binders, or netting tie down. Other suitable materials may be used if approved by the Soil Conservation District. The approved rates above have been met when the mulch covers the ground completely upon visual inspection, i.e. the soil cannot be seen below the mulch.
   C. Synthetic or organic soil stabilizers may be used under suitable conditions and in quantities as recommended by the manufacturer.
   D. Wood-fiber or paper-fiber mulch at the rate of 1,500 pounds per acre (or according to the manufacturer's requirements) may be applied by a hydroseeder.
   E. Mulch netting, such as paper jute, excelsior, cotton, or plastic, may be used.
   F. Woodchips applied uniformly to a minimum depth of 2 inches may be used. Woodchips will not be used on areas where flowing water could wash them into an inlet and plug it.
   G. Gravel, crushed stone, or slag at the rate of 9 cubic yards per 1,000 sq. ft. applied uniformly to a minimum depth of 3 inches may be used. Size 2 or 3 (ASTM C-33) is recommended.
3. Mulch Anchoring – should be accomplished immediately after placement of hay or straw mulch to minimize loss by wind or water. This may be done by one of the following methods, depending upon the size of the area and steepness of slopes.
   A. Peg and Twine – Drive 8 to 10 inch wooden pegs to within 2 to 3 inches of the soil surface every 4 feet in all directions. Stakes may be driven before or after applying mulch. Secure mulch to soil surface by stretching twine between pegs in a criss-cross and a square pattern. Secure twine around each peg with two or more round turns.
   B. Mulch Nettings – Staple paper, cotton, or plastic nettings over mulch. Use degradable netting in areas to be mowed. Netting is usually available in rolls 4 feet wide and up to 300 feet long.
   C. Crimper Mulch Anchoring Coulter Tool – A tractor-drawn implement especially designed to punch and anchor mulch into the soil surface. This practice affords maximum erosion control, but its use is limited to those slopes upon which the tractor can operate safely. Soil penetration should be about 3 to 4 inches. On sloping land, the operation should be on the contour.
   D. Liquid Mulch-Binders
      1. 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.
      2. Use one of the following:
         a. Organic and Vegetable Based Binders – Naturally occurring, powder based, hydrophilic materials that mixed with water formulates a gel and when applied to mulch under satisfactory curing conditions will form membrane networks of insoluble polymers. The vegetable gel shall be physiologically harmless and not result in a phytotoxic effect or impede growth of turfgrass. Vegetable based gels shall be applied at rates and weather conditions recommended by the manufacturer.
         b. Synthetic Binders – High polymer synthetic emulsion, miscible 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 and weather conditions recommended by the manufacturer and remain tacky until germination of grass.

TOPSOILING SPECIFICATIONS

1. Materials
   A. Topsoil should be friable[1], loamy[2], 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). Topsoil hauled in from offsite should have a minimum organic matter content of 2.75 percent. Organic matter content may be raised by additives.
      1. Friable means easily crumbles in the fingers, as defined in most soils texts.
      2. 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.
   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 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 should 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 soil.
   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 the essence.
   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
   E. Employ needed erosion control practices such as diversions, grade stabilization structures, channel stabilization measures, sedimentation basins, and waterways. See Standards 11 through 42.
4. Applying Topsoil
   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 4 inches, firmed in place is required. Alternative depths may be considered where special regulatory and/or industry design standards are appropriate, such as 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 agronomic properties.

TEMPORARY STABILIZATION SPECIFICATIONS

1. Site Preparation
   A. Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application, and mulch anchoring. All grading should be done in accordance with Standard for Land Grading, pg. 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. Seedbed Preparation
   A. 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. 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. 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 soil 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 reasonable uniform seedbed is prepared.
   C. Inspect seedbed just before seeding. If traffic has left the soil compacted, the area must be retilled in accordance with the above.
   D. Soils high in sulfides or having a pH of 4 or less refer to Standard for Management of High Acid Producing Soils, pg. 1-1.
3. Seeding
   A. Select seed from recommendations in Table 7-2.
   B. Conventional Seeding. Apply seed uniformly by hand, cyclone (centrifugal) seeder, drop seeder, drill or cultipacker seeder. Except for drilled, hydroseeded or cultipacked seedings, 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 seedbed. Mulch shall not be included in the tank with seed. Short fibered mulch may be applied with a hydroseeder following seeding. (also see Section IV Mulching) 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, firming the soil with a corrugated roller will assure good seed-to-soil contact, restore capillarity, and improve seedling 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.
   A. Straw or Hay. Unrotted small grain straw, hay free of seeds, 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 crimper is used instead of a 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 mulch uniformly by hand or 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 within each section.

      Anchoring shall 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 wooden pegs to within 2 to 3 inches of the soil surface every 4 feet in all directions. Stakes may be driven before or after applying mulch. Secure mulch to soil surface by stretching twine between pegs in a criss-cross 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 mowed.
      3. Crimper (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 of 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 hay or straw mulch.
         a. Applications should be heavier at edges where wind may catch the mulch, in valleys, and at crests of banks. The remainder of the area should be uniform in appearance.
         b. Use one of the following:
            (1) Organic and Vegetable Based Binders – Naturally occurring, powder based, hydrophilic materials when mixed with water formulates a gel and when applied to mulch under satisfactory curing conditions will form membrane networks of insoluble polymers. The vegetable gel shall be physiologically harmless and not result in a phytotoxic effect or impede growth of turf grass. 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.
            (2) Synthetic Binders – High polymer synthetic emulsion, miscible 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.

            Note: All names give above are registered trade names. This does not constitute a commendation of these products to the exclusion of other products.
   B. 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 ponds per acre (or as recommended by the project manufacturer) and may be applied by a hydroseeder. This mulch shall not be mixed in the tank with seed. Use is limited to flatter slopes and during optimum seeding periods in spring and fall.
   C. Pelletized 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 watered, forma mulch mat. Pelletized mulch shall be applies in accordance with the manufacturers recommendations. Mulch may be applied by hand or mechanical spreader at the rate of 60-75 lbs/1,000 square feet and activated with 0.2 to 0.4 inches of water. This material has been found to be beneficial 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 pelletized mulch on the seed bed is extremely important for sufficient activation and expansion of the mulch to provide soil coverage.

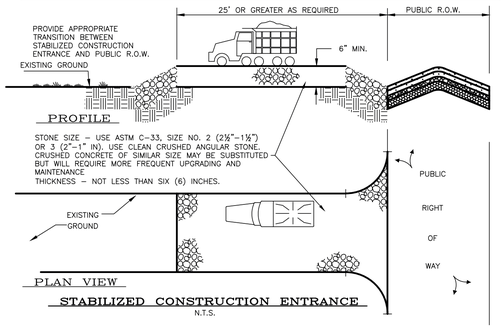
PROPOSED SEQUENCE OF DEVELOPMENT

This project shall consist essentially of the construction of the proposed facilities and completion of the site and landscaping work. The construction will proceed in the following manner.

1. Installation of all sediment and erosion control devices prior to any major soil disturbances or in their proper sequence and maintenance until permanent protection is established (1 day installation period).
2. Clear and remove all existing vegetation in those areas where necessary. All remaining vegetation to be properly protected and to remain in its natural state (1 day installation period).
3. General and preliminary grading of those areas to be developed (1 day installation period).
4. Layout and location of the proposed features and utilities (2 day installation period).
5. Construction of all proposed utilities. Installation of all sediment and erosion control devices which are affected by the proposed utilities and temporary stabilization of swales and detention basin. Restoration of all sediment control devices disturbed by the utilities installation. (1 week installation period).
6. Construction of proposed features (ongoing).
7. Fine grading of the remainder of disturbed areas of the site (1 day installation period).
8. Permanent stabilization of the site with permanent vegetative cover and landscaping (1 day installation period).
9. Removal of all temporary sediment and erosion control devices (1 day installation period).

TABLE 27-1: LENGTHS OF CONSTRUCTIONS EXITS ON SLOPING ROADBEDS

PERCENT SLOPE OF ROADWAY	LENGTH OF STONE REQUIRED	
	COARSE GRAINED SOILS	FINE GRAINED SOILS
0 TO 2%	50 FT	100 FT
2% TO 5%	100 FT	200 FT
>5%	Entire surface stabilized w/ FABC base course (as prescribed by local ordinance or other governing authority)	



STABILIZED CONSTRUCTION ENTRANCE
N.T.S.

PERMANENT STABILIZATION SPECIFICATIONS

1. Site Preparation
   A. Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application, and mulch anchoring. All grading should be done in accordance with Standard for Land Grading.
   B. Immediately prior to seeding and topsoil application, the subsoil shall be evaluated for compaction in accordance with the Standard for Land Grading.
   C. 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. Topsoil shall be amended with organic matter, as needed, in accordance with the Standard for Topsoiling.
   D. Install needed erosion control practices or facilities such as diversions, grade-stabilization structures, channel stabilization measures, sediment basins, and waterways.
2. Seedbed Preparation
   A. Uniformly apply ground limestone and fertilizer to topsoil which has been spread and firmed, 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 of 10-10-10 or equivalent with 50% water insoluble nitrogen unless a soil test indicates otherwise and incorporated into the surface 4 inches. If fertilizer is not incorporated, apply one-half the rate described above during seedbed preparation and repeat another one-half rate application of the same fertilizer within 3 to 5 weeks after seeding.
   B. Work lime and fertilizer into the topsoil as nearly as practical to a depth of 4 inches with 4-1 Standards for Soil Erosion and Sediment Control in New Jersey January 2014
      a disc, spring-tooth harrow, or other suitable equipment. The final harrowing or disking operation should be on the general contour. Continue tillage until a reasonable uniform seedbed is prepared.
   C. High acid producing soil. 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 of 5 or more before initiating seedbed reparation. See Standard for Management of High Acid-Producing Soils for specific requirements.
3. Seeding
   A. Select a mixture from Table 4-3 or use a mixture recommended by Rutgers Cooperative Extension or Natural Resources Conservation Service which is approved by the Soil Conservation District. Seed germination shall have been tested within 12 months of the planting date. No seed shall be accepted with a germination test date more than 12 months old unless retested.
      1. Seeding rates specified are required when a report of compliance is requested prior to actual establishment of permanent vegetation. Up to 50% reduction in rates may be used when permanent vegetation is established prior to a report of compliance inspection. These rates apply to all methods of seeding. Establishing permanent vegetation means 80% vegetative coverage with the specified seed mixture for the seeded area and mowed once.
      2. Warm-season mixtures are grasses and legumes which maximize growth at high temperatures, generally 85o F and above. See Table 4-3 mixtures 1 to 7. Planting rates for warm-season grasses shall be the amount of Pure Live Seed (PLS) as determined by germination testing results.
      3. Cool-season mixtures are grasses and legumes which maximize growth at temperatures below 85oF. Many grasses become active at 65oF. See Table 4-3, mixtures 8-20. Adjustment of planting rates to compensate for the amount of PLS is not required for cool season grasses.
   B. Conventional Seeding is performed by applying seed uniformly by hand, cyclone (centrifugal) seeder, drop seeder, drill or cultipacker seeder. Except for drilled, hydroseeded or cultipacked seedings, seed shall be incorporated into the soil within 24 hours of seedbed preparation 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. After seeding, firming the soil with a corrugated roller will assure good seed-to-soil contact, restore capillarity, and improve seedling emergence. This is the preferred method. When performed on the contour, sheet erosion will be minimized and water conservation on site will be maximized.
   D. 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 seedbed. Mulch shall not be included in the tank with seed. Short-fibered mulch may be applied with a hydroseeder following seeding. (also see Section 4-Mulching below). Hydroseeding is not a preferred seeding method because seed and fertilizer are applied to the surface and not incorporated into the soil. When poor seed to soil contact occurs, there is a reduced seed germination and growth.
4. Mulching
   Mulching is required on all seeding. Mulch will protect against erosion before grass is established and will promote faster and earlier establishment. The existence of vegetation sufficient to control soil erosion shall 4-2 Standards for Soil Erosion and Sediment Control in New Jersey January 2014 be deemed compliance with this mulching requirement.
   A. Straw or Hay. Unrotted small grain straw, hay free of seeds, 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 crimper is used instead of a 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 mulch uniformly by hand or mechanically so that at least 85% of the soil surface is covered. For uniform distribution of hand-spread mulch, divide area into approximately 1,000 square feet sections and distribute 70 to 90 pounds within each section.
      Anchoring shall 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 wooden pegs to within 2 to 3 inches of the soil surface every 4 feet in all directions. Stakes may be driven before or after applying mulch. Secure mulch to soil surface by stretching twine between pegs in a criss-cross 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 mowed.
      3. Crimper (mulch anchoring coulter 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 of 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, hay or straw mulch.
      5. a. Applications should be heavier at edges where wind may catch the mulch, in valleys, and at crests of banks. The remainder of the area should be uniform in appearance.
         b. Use one of the following:
            (1) Organic and Vegetable Based Binders – Naturally occurring, powder-based, hydrophilic materials when mixed with water 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 phytotoxic effect or impede growth of turf grass. 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
            (2) Synthetic Binders – High polymer synthetic emulsion, miscible with water when diluted and, following application of mulch, drying and curing, shall no longer be soluble or dispersible in water. Binder shall be applied at rates recommended by the manufacturer and remain tacky until germination of grass. Note: All names given above are registered trade names. This does not constitute a recommendation of these products to the exclusion of other products.
   B. 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.
   C. Pelletized 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 watered, form a mulch mat. Pelletized mulch shall be applied in accordance with the manufacturer's recommendations. Mulch may be applied by hand or mechanical spreader at the rate of 60–75 lbs/1,000 square feet and activated with 0.2 to 0.4 inches of water. This material has been found to be beneficial 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 pelletized mulch on the seed bed is extremely important for sufficient activation and expansion of the mulch to provide soil coverage.
5. Irrigation (where feasible)
   If soil moisture is deficient supply new seeding with adequate water (a minimum of 1/4 inch applied up to twice a day until vegetation is well established). This is especially true when seedings are made in abnormally dry or hot weather or on droughty sites.
6. Topdressing
   Since soil organic matter content and slow release nitrogen fertilizer (water insoluble) are prescribed in Section 2A – Seedbed Preparation in this Standard, no follow-up of topdressing is mandatory. An exception may be made where gross nitrogen deficiency exists in the soil to the extent that turf failure may develop. In that instance, topdress with 10-10-10 or equivalent at 300 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.
7. Establishing Permanent Vegetative Stabilization
   The quality of permanent vegetation rests with the contractor. The timing of seeding, preparing the seedbed, applying nutrients, mulch and other management are essential. The seed application rates in Table 4-3 are required when a Report of Compliance is requested prior to actual establishment of permanent vegetation. Up to 50% reduction in application rates may be used when permanent vegetation is established prior to requesting a Report of Compliance from the district. These rates apply to all methods of seeding. Establishing permanent vegetation means 80% vegetative cover (of the seeded species) and mowed once. Note this designation of mowed once does not guarantee the permanency of the turf should other maintenance factors be neglected or otherwise mismanaged. Mulch shall not be mixed in the tank with seed. Use is limited to flatter slopes and during optimum seeding periods in spring and fall.

PERMANENT SEED MIXTURE (from Table 4-3)

The following seed mixture shall be used for the lawn area of the property during the warm season (March 1 thru October 15);

For properties in Plant Hardiness Zone 6b (per Figure 4-1);
Tall fescue (turf type) at 265 lb/acre (6 lb/1,000 sf) or,
Perennial ryegrass at 20 lb/acre (5 lb/1,000 sf) or,
Turf type tall fescue (blend of 3 cultivars) at 350 lb/acre (8 lb/1,000 sf)

NO.	REVISIONS	DATE	DRAWN	CHECKED

VARIANCE PLAN – SOIL EROSION AND SEDIMENT CONTROL DETAIL SHEET
PREPARED FOR
"DESAI" 3 CORWEN COURT (SEASONAL WORLD)
LOT 10 OF BLOCK 424.11
TAX MAP SHEET NO. 76.14
SITUATED IN
FRANKLIN TOWNSHIP, SOMERSET COUNTY, NEW JERSEY

MIDSTATE ENGINEERING INC.
ENGINEERS, SURVEYORS & PLANNERS
82 WALNUT HILL LANE
FREEHOLD, NEW JERSEY 07728
(732) 308-4226
(FAX) 332-308-4190
CERT. OF AUTHORIZATION NO. GA277692

CHESTER DI LORENZO PE,LS,PP
PE & LS LICENSE NO. 28966 PP LICENSE NO. 2871

DATE	01/12/21
SCALE	1" = 20'
DRAWN	CWM
CHECKED	CDL
FILE NO.	12824
SHEET	3 OF 3