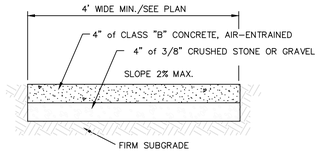
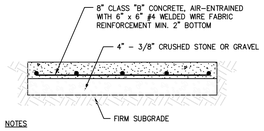


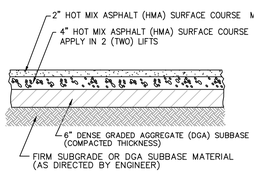
1. TRANSVERSE CRACK CONTROL JOINT (SAW CUT OR TOOLED) SPACING SHALL NOT BE GREATER THAN SIDEWALK WIDTH AND JOINT DEPTH SHALL BE 1/4 OF THE CONCRETE THICKNESS.
2. PROVIDE TRANSVERSE EXPANSION JOINTS 1/2" WIDE, AT 20'-0" (MAXIMUM). TRANSVERSE GROOVES, 1/4 THE THICKNESS OF THE CONCRETE IN DEPTH, SHALL BE PROTECTED AND CURED.

CONCRETE SIDEWALK
NOT TO SCALE

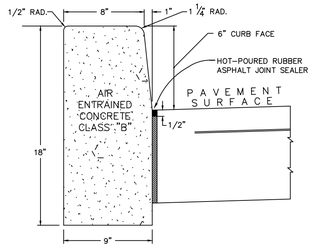


NOTES
1. PROVIDE 1/2" WIDE JOINT OPENING BETWEEN APRON & SIDEWALK OR EXISTING CONCRETE. FILL WITH MASTIC OR OTHER BITUMINOUS COMPOUND, AS SPECIFIED. RECESS 1/4" FROM TOP SURFACE.
2. FALSE JOINTS SHALL BE PROVIDED IN A SQUARE PATTERN AT A DEPTH OF NOT LESS THAN 1/4 OF THE CONCRETE.
3. EXPANSION JOINTS SHALL BE PROVIDED EVERY 10' MIN.

CONCRETE DUMPSTER PAD
NOT TO SCALE

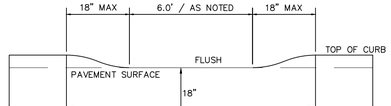


FULL PAVEMENT DETAIL
NOT TO SCALE

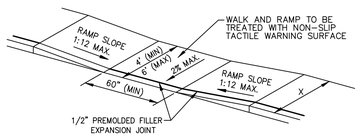


1. 1/2" PREFORMED EXPANSION JOINT FILLER, BITUMINOUS TYPE, CONFORMING TO, AASHTO SPEC M 33 TO BE INSTALLED BETWEEN CURB AND CONCRETE SIDEWALK.
2. TRAVERSE JOINTS 1/2" WIDE SHALL BE INSTALLED IN THE CURB 20'-0" APART AND SHALL BE FILLED WITH PREFORMED BITUMINOUS – IMPREGNATED FILLER JOINT FILLER, COMPLYING WITH THE REQUIREMENTS FOR TYPE III FILLER IN AASHTO SPEC M 153 TYPE II, RECESSED 1/4" IN FROM FRONT FACE AND TOP OF CURB.

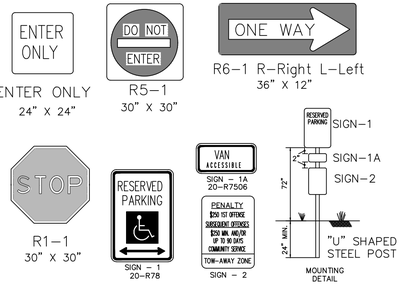
CONCRETE VERTICAL CURB
NOT TO SCALE



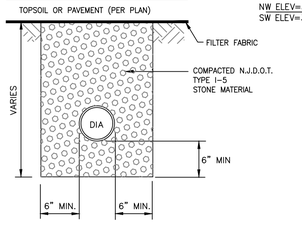
DEPRESSED CURB DETAIL
NOT TO SCALE



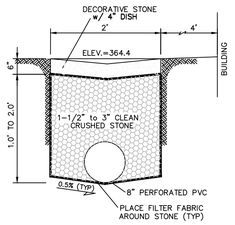
ADA RAMP (SIDE)
NOT TO SCALE



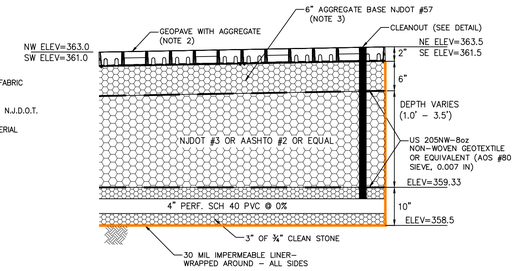
REGULATORY SIGN DETAIL
NOT TO SCALE

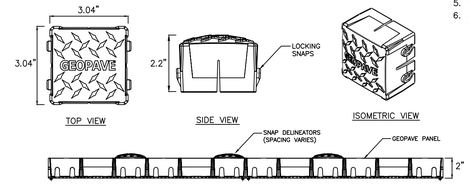


PIPE BEDDING
NOT TO SCALE



STONE TRENCH DETAIL
NOT TO SCALE





GEOPAVE SNAP DELINEATOR POROUS PAVEMENT SYSEM
NOT TO SCALE

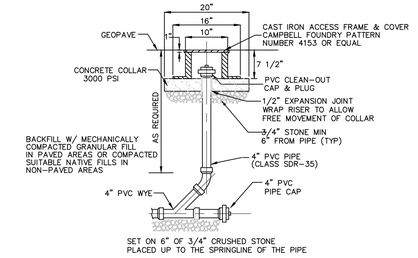
MANUFACTURERS NOTES:
1. THIS INFORMATION IS BASED ON THE USE OF GEOPAVE MANUFACTURED BY PRESTO PRODUCTS CO. ALL RIGHTS RESERVED. ANY USE OF THIS INFORMATION FOR ANY RIGID POROUS PAVER PRODUCT OTHER THAN THAT MANUFACTURED BY PRESTO IS STRICTLY PROHIBITED AND MAKES THIS INFORMATION INVALID.
2. AGGREGATE INFILL SHALL BE 0.375 TO 0.5 INCH (10 TO 13 MM) [NJDOT #7 OR EQUAL] OPEN GRADED CRUSHED AGGREGATE WITH FINE CONTENT LESS THAN 5% TO ALLOW FOR FREE DRAINAGE.
3. AGGREGATE BASE SHALL BE 0.375 TO 1.0 INCH (10 TO 25 MM) [NJDOT #57 OR EQUAL] OPEN GRADED CRUSHED AGGREGATE WITH FINE CONTENT LESS THAN 5% TO ALLOW FOR FREE DRAINAGE.
4. A MINIMUM 2 INCH (50 MM) OF AGGREGATE BASE SHOULD BE PLACED BELOW THE UNITS TO ACT AS DRAINAGE LAYER AND INFILTRATION AREA. THE ENGINEER OF RECORD SHALL BE RESPONSIBLE FOR THE DESIGN AND STABILITY OF THE OPEN GRADED BASE COURSE.
5. PROVIDE A NON–WOVEN GEOTEXTILE SEPARATION LAYER AND INSTALL IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS INCLUDING OVERLAPS BASED ON SUB GRADE CBR.
6. CONNECT GEOPAVE PANELS WITH THE U–CLIP CONNECTION DEVICE AT ALL HALF WALL LOCATIONS, AND DRIVEN COMPLETELY SO THAT ADJACENT SECTIONS HAVE HORIZONTALLY LEVEL PROFILES.
7. REFER TO THE GEOPAVE DESIGN AND CONSTRUCTION OVERVIEW FOR A COMPLETE DESCRIPTION OF THE DESIGN AND CONSTRUCTION METHODS.

SNAP DELINEATOR NOTES:
1. THIS INFORMATION IS BASED ON THE USE OF GEOPAVE AND GEOPAVE SNAP DELINEATORS MANUFACTURED BY PRESTO PRODUCTS CO. ALL RIGHTS RESERVED. ANY USE OF THIS INFORMATION FOR ANY RIGID POROUS PAVER PRODUCT OTHER THAN THAT MANUFACTURED BY PRESTO IS STRICTLY PROHIBITED AND MAKES THIS INFORMATION INVALID.
2. PRODUCED IN HIGH VISIBILITY COLORS TO MARK PARKING SPACES, DRIVE LANES, CENTER LINES OR OTHER DELINEATION.
3. SNAP DELINEATORS INTEGRAL LOCKING SNAPS FUNCTION IN THE GEOPAVE UNIT'S SQUARE OR RECTANGULAR CELLS AT THE PLACEMENT DENSITY TO MEET VISUAL AND LOCAL AGENCY REQUIREMENTS.
4. SNAP DELINEATORS ARE COMPATIBLE WITH AGGREGATE AND ENGINEERED FILL MATERIALS.
5. RAISED PROFILE WITH DIAMOND GRID PATTERN AIDS IN DRIVER VISIBILITY AND VEHICLE TRACTION.
6. REFER TO THE GEOPAVE DESIGN AND CONSTRUCTION OVERVIEW FOR A COMPLETE DESCRIPTION OF THE DESIGN AND CONSTRUCTION METHODS.

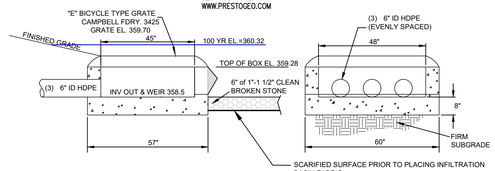
GEOPAVE MATERIAL SPECIFICATION	
MATERIAL	UP TO 100% RECYCLED POLYETHYLENE
COLOR	RANGES DARK SHADES GRAY TO BLACK
CHEMICAL RESISTANCE	SUPERIOR
CARBON BLACK FOR UV STABILIZATION, %	1.5 TO 2.0%
UNIT MIN CRUSH STRENGTH – EMPTY @ 70F (21C)	175 PSI (1,202 KPa)
UNIT MIN CRUSH STRENGTH – FILLED @ 70F (21C)	5,160 PSI (35,625KPa
FLEXURAL MODULUS @ 70F (21C)	35,000 PSI (240,000 KPa)
NOMINAL DIMENSIONS – WIDTH X LENGTH	20 X 40 IN (0.5 X 1.0 M)
NOMINAL UNIT DEPTH	2.0 IN (50 MM)
NOMINAL AREA	5.38 SQFT (0.5 SQMTR)
CELLS PER UNIT	50
SMALL CELL SIZE	3.25 X 3.25 IN (83 X 83 MM)
LARGE CELL SIZE	3.25 X 6.5 IN (83 X 165 MM)
TOP OPEN AREA PER UNIT	90.5%
BOTTOM OPEN AREA PER UNIT	32.6%
BOTTOM MESH OPENING SIZE	0.25 X 0.25 IN (6.35 X 6.35 MM)
NOMINAL WEIGHT PER UNIT	7.6 LBS (3.4 KG)
RUNOFF COEFFICIENT @ 2.5 IN/HR (64 MM) RAINFALL WITH AGGREGATE | WITH ENGINEERED INFILL	0 – 0.15 | 0.10 – 0.35
UNITS PER PALLET	46

DESIGN GUIDELINES – BASE DEPTH		
	AGGREGATE	SURFACE
LOAD DESCRIPTION	CBR 2 – 4%	CBR 2 – 4%
Heavy Fire Truck Access & H/HS–20 loading. Typical 110 psi (758 kPa) tire pressure. Single axle loadings of 32 kips (145 kN), tandem axle loadings of 48 kips (220 kN). Gross vehicle weight of 80,000 lbs) (36.3 MT). Infrequent passes.	6 IN (150 MM)	6 IN (150 MM)

GEOSYSTEMS OR APPROVED EQUAL
PRESTO® PRODUCTS CO.
670 NORTH PERKINS STREET
APPLETON, WI 54914
920–738–1342
WWW.PRESTOGEO.COM

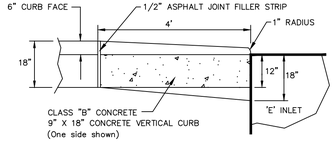


CLEANOUT DETAIL IN TRAFFIC AREAS
NOT TO SCALE

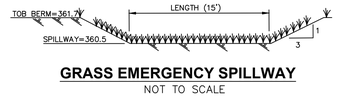


NOTE: SEE INLET TYPE 'E' FOR CONSTRUCTION

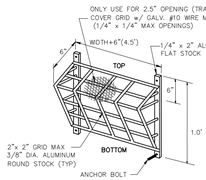
CONTROL STRUCTURE - TYPE 'E' INLET
NOT TO SCALE



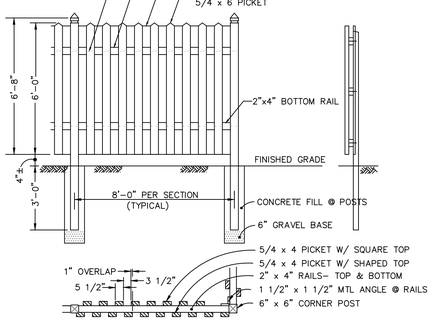
BULL NOSE CURB @ 'E' INLET
NOT TO SCALE



GRASS EMERGENCY SPILLWAY
NOT TO SCALE

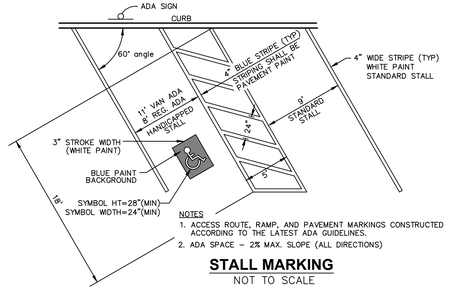


TRASH RACK
NOT TO SCALE



NOTE: ALL WOOD TO BE PRESSURE–TREATED & PAINTED

DUMPSTER ENCLOSURE DETAIL
NOT TO SCALE



NOTES
1. ACCESS ROUTE, RAMP, AND PAVEMENT MARKINGS CONSTRUCTED ACCORDING TO THE LATEST ADA GUIDELINES.
2. ADA SPACE – 2% MAX. SLOPE (ALL DIRECTIONS)

STALL MARKING
NOT TO SCALE

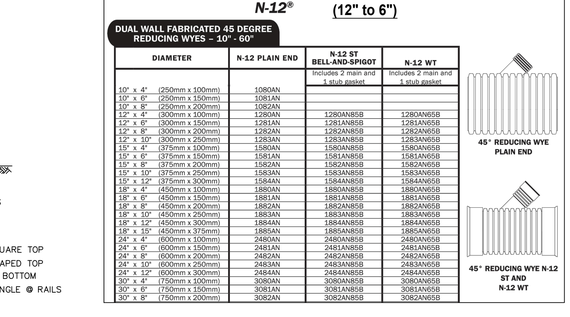
42 FITTINGS
Dual Wall

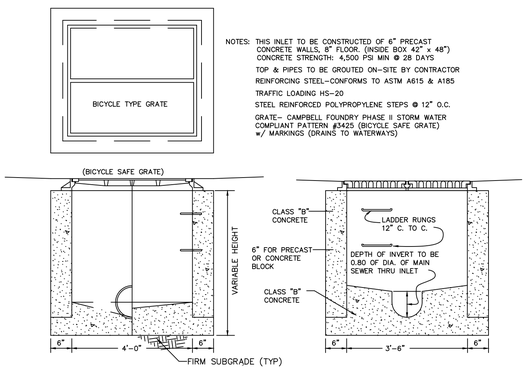
ADS OR APPROVED EQUAL

REDUCING WYES
N-12® (12" to 6")

DUAL WALL FABRICATED 45 DEGREE REDUCING WYES – 10" - 60"

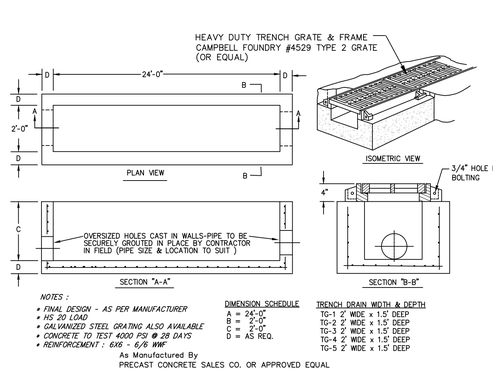
DIAMETER	N-12 PLAIN END	N-12 ST BELL-AND-SPIGOT (Includes 2 main and 1 stub gasket)	N-12 WT (Includes 2 main and 1 stub gasket)
10" x 4" (250mm x 100mm)	1080AN		
10" x 6" (250mm x 150mm)	1081AN		
10" x 8" (250mm x 200mm)	1082AN		
12" x 4" (300mm x 100mm)	1280AN	1280AN85B	1280AN65B
12" x 6" (300mm x 150mm)	1281AN	1281AN85B	1281AN65B
12" x 8" (300mm x 200mm)	1282AN	1282AN85B	1282AN65B
12" x 10" (300mm x 250mm)	1283AN	1283AN85B	1283AN65B
15" x 4" (375mm x 100mm)	1580AN	1580AN85B	1580AN65B
15" x 6" (375mm x 150mm)	1581AN	1581AN85B	1581AN65B
15" x 8" (375mm x 200mm)	1582AN	1582AN85B	1582AN65B
15" x 10" (375mm x 250mm)	1583AN	1583AN85B	1583AN65B
15" x 12" (375mm x 300mm)	1584AN	1584AN85B	1584AN65B
18" x 4" (450mm x 100mm)	1880AN	1880AN85B	1880AN65B
18" x 6" (450mm x 150mm)	1881AN	1881AN85B	1881AN65B
18" x 8" (450mm x 200mm)	1882AN	1882AN85B	1882AN65B
18" x 10" (450mm x 250mm)	1883AN	1883AN85B	1883AN65B
18" x 12" (450mm x 300mm)	1884AN	1884AN85B	1884AN65B
18" x 15" (450mm x 375mm)	1885AN	1885AN85B	1885AN65B
24" x 4" (600mm x 100mm)	2480AN	2480AN85B	2480AN65B
24" x 6" (600mm x 150mm)	2481AN	2481AN85B	2481AN65B
24" x 8" (600mm x 200mm)	2482AN	2482AN85B	2482AN65B
24" x 10" (600mm x 250mm)	2483AN	2483AN85B	2483AN65B
24" x 12" (600mm x 300mm)	2484AN	2484AN85B	2484AN65B
30" x 4" (750mm x 100mm)	3080AN	3080AN85B	3080AN65B
30" x 6" (750mm x 150mm)	3081AN	3081AN85B	3081AN65B
30" x 8" (750mm x 200mm)	3082AN	3082AN85B	3082AN65B





NOTES: THIS INLET TO BE CONSTRUCTED OF 6" PRECAST CONCRETE WALLS, 8" FLOOR. (INSIDE BOX 42" x 48") CONCRETE STRENGTH: 4,500 PSI MIN @ 28 DAYS
TOP & PIPES TO BE GROUTED ON–SITE BY CONTRACTOR
REINFORCING STEEL–CONFORMS TO ASTM A615 & A185
TRAFFIC LOADING HS–20
STEEL REINFORCED POLYPROPYLENE STEPS @ 12" O.C.
GRATE– CAMPBELL FOUNDRY PHASE II STORM WATER COMPLIANT PATTERN #3425 (BICYCLE SAFE GRATE) w/ MARKINGS (DRAINS TO WATERWAYS)

TYPE `E' INLET
NOT TO SCALE



NOTES :
- FINAL DESIGN – AS PER MANUFACTURER
- HS 20 LOAD
- GALVANIZED STEEL GRATING ALSO AVAILABLE
- CONCRETE TO TEST 4000 PSI @ 28 DAYS
- REINFORCEMENT : 6X6 – 6/6 WWF

DIMENSION SCHEDULE
A = 24'-0"
B = 2'-0"
C = 2'-0"
D = AS REQ.

TRENCH DRAIN WIDTH & DEPTH
TG-1 2' WIDE x 1.5' DEEP
TG-2 2' WIDE x 1.5' DEEP
TG-3 2' WIDE x 1.5' DEEP
TG-4 2' WIDE x 1.5' DEEP
TG-5 2' WIDE x 1.5' DEEP

As Manufactured By PRECAST CONCRETE SALES CO. OR APPROVED EQUAL

TRENCH DRAIN
NOT TO SCALE

REV.	DATE	DESCRIPTION	BY
1	07/09/2021	REVISED PER BOA HEARING/PROFESSIONAL REVIEW	JAH

FREY ENGINEERING, LLC
1117 STATE HWY 31
LEBANON, NEW JERSEY 08833
Phone 908-238-0502
www.freyengineering.com
No. 24GA2807300

No. 24GA2807300
Frey Engineering, LLC

STATE OF NEW JERSEY — JAMES A. HILL — 24GA28073300 — PROFESSIONAL ENGINEER

James A. Hill
Digitally signed by James A. Hill
Date: 2021.07.12 08:55:40 -04'00'

Preliminary Site Plan & Major Subdivision
CONSTRUCTION DETAILS
PROPOSED IN–DOOR TENNIS COURTS
BRANT SWITZER

PREPARED FOR:
TAX MAP SHEET 16, BLOCK 55, LOT 2
DELAWARE TOWNSHIP, HUNTERDON COUNTY, NJ

CHK:		SCALE: AS SHOWN	DRAWING NO.	REV. NO.
ENG.	JAH	CAD FILE NO. Switzler SD 2021	C–5	1
DATE:	JULY 2020	SHEET		

JAMES A. HILL
NJ Professional Engineer
License No. 30190

S:\FE-Projects\Sm Comm. Projects\Switzler, B Del Twsp\DRAWINGS\Switzler-SD-2021a.dwg, C-5, 7/12/2021 10:45:50 AM, KellyW