ROLLMAX™
ROLLED EROSION CONTROL

Specification Sheet – EroNet™ S150® Erosion Control Blanket

DESCRIPTION

The short-term double net erosion control blanket shall be a machine-produced mat of 100% agricultural straw with a functional longevity of up to 12 months. *(NOTE: functional longevity may vary depending upon climatic conditions, soil, geographical location, and elevation).* The blanket shall be of consistent thickness with the straw evenly distributed over the entire area of the mat. The blanket shall be covered on the top and bottom sides with a lightweight photodegradable polypropylene netting having an approximate 0.50 x 0.50 in. (1.27 x 1.27 cm) mesh. The blanket shall be sewn together on 1.50 inch (3.81 cm) centers with degradable thread. The blanket shall be manufactured with a colored thread stitched along both outer edges (approximately 2-5 inches [5-12.5 cm] from the edge) as an overlap guide for adjacent mats.

The S150 shall meet Type 2.0 specification requirements established by the Erosion Control Technology Council (ECTC) and Federal Highway Administration's (FHWA) FP-03 Section 713.17

Material Content		
Matrix	100% Straw Fiber	0.5 lbs/sq yd (0.27 kg/sm)
Netting	Top and bottom nets: lightweight photodegradable	1.5 lbs/1000 sq ft (0.73 kg/100 sm)
Thread	Degradable	

Standard Roll Sizes			
Width	6.67 ft (2.03 m)	8 ft (2.4 m)	16.0 ft (4.87 m)
Length	108 ft (32.92 m)	112 ft (34.14 m)	108 ft (32.92 m)
Weight ± 10%	40 lbs (18.14 kg)	50 lbs (22.68 kg)	96 lbs (43.54 kg)
Area	80 sq yd (66.9 sm)	100 sq yd (83.61 sm)	192 sq yd (165.6 sm)

Roughness Coefficients – Univel	
Flow Depth	Manning's n
≤ 0.50 ft (0.15 m)	0.055
0.50 - 2.0 ft	0.055-0.021
≥ 2.0 ft (0.60 m)	0.021

Index Property	Test Method	Typical
Thickness	ASTM D6525	0.32 in. (8.13 mm)
Resiliency	ECTC Guidelines	80.5%
Water Absorbency	ASTM D1117	370%
Mass/Unit Area	ASTM D6475	8.15 oz/sy (277.1 g/sm)
Swell	ECTC Guidelines	15%
Smolder Resistance	ECTC Guidelines	Yes
Stiffness	ASTM D1388	6.06 oz-in
Light Penetration	ASTM D6567	12.4%
Tensile Strength - MD	ASTM D6818	159.6 lbs/ft (2.37 kN/m)
Elongation - MD	ASTM D6818	31.7%
Tensile Strength - TD	ASTM D6818	93.6 lbs/ft (1.39 kN/m)
Elongation - TD	ASTM D6818	26.7%
Biomass Improvement	ASTM D7322	371%

Design Permissible Shear Stress	
Unvegetated Shear Stress	1.75 psf (84 Pa)
Unvegetated Velocity	6.0 fps (1.83 m/s)

NTPEP ASTM D6460 Large-Scale Channel	
Unvegetated Shear Stress	2.42 psf (115.9 Pa)
Unvegetated Velocity	9.0 fps (2.75 m/s)

Slope Design Data: C Factors			
Slope Gradients (S)			
Slope Length (L)	≤ 3:1	3:1 - 2:1	≥ 2:1
≤ 20 ft (6 m)	0.004	0.106	N/A
20-50 ft	0.062	0.118	N/A
≥ 50 ft (15.2 m)	0.12	0.180	N/A

NTPEP Large-scale Slope
ASTM D6459 - C-Factor = 0.029

Tensar.
NORTH AMERICAN GREEN®

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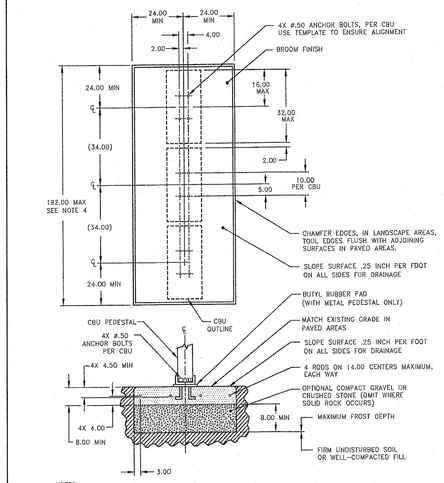
Alpharetta, GA 30009
800-TENSAR-1
tensarcorp.com

Tensar International Corporation warrants that at the time of delivery the product furnished hereunder shall conform to the specification stated herein. Any other warranty including merchantability and fitness for a particular purpose, are hereby excluded. If the product does not meet specifications on this page and Tensar is notified prior to installation, Tensar will replace the product at no cost to the customer. **This product specification supersedes all prior specifications for the product described above and is not applicable to any products shipped prior to January 1, 2016.**

EC_RMX_MP0S_ES150_6-18

USPS APPROVED SPECIFICATIONS – CONCRETE PAD (MULTIPLE UNIT)



NOTES:

1. CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 3000 PSI @ 28 DAYS, CONTAIN 4% MIN – 6% MAX AIR ENTRAINMENT AND BE PLACED WITH A 3.50 – 4.50 SLUMP IN ACCORDANCE WITH ACI 301.
2. REINFORCING STEEL RODS SHALL CONFORM TO ASTM A615, GRADE 60.
3. ANCHOR BOLTS SHALL CONFORM TO ASTM A193, GRADE B8M, TYPE 316 STAINLESS STEEL.
4. A 3 CBU CONFIGURATION IS DEPICTED. A 2 OR 4 CBU CONFIGURATION MAY BE USED AS LONG AS THEY ARE ARRANGED IN GROUPS SUCH THAT THE OVERALL DIMENSION OF THE CONCRETE BASE DOES NOT EXCEED 192 INCHES.

CLUSTER BOX UNIT (CBU)
-ANCHORING METHODS-

CBU's must be level and mounted firmly in concrete, using one of the following methods.

1. The J-bolt method is the preferred method of installation of CBU's on concrete pads; however, the J-bolt pattern must be accurate with the CBU pedestal plate. When using J-bolts, in order to prevent any damage or accidents that could result from the exposed bolts, consideration should be given as to the time lapse between pouring the concrete and the actual installation. Expansion anchors must be installed in accordance with the manufacturer's instructions.
2. The use of anchor bolts for the installation of CBU's on concrete pads is also acceptable as long as the methods described below are followed.
   a. Hilti Kwik bolt II, 1/2" diameter X 5-1/2" overall length
      Catalog Number: 000-453-696, KB II 12-512
      Stainless Steel Catalog Number: 000-454-744
      Minimum embedment in concrete must be no less than 3-1/2"
   b. ITW Ramset Redhead Trublot, galvanized, 1/2" diameter X 7" overall length
   c. Rawl Stud, 1/2" diameter X 5 1/2" overall length, galvanized.
      Catalog Number: 7324
      Minimum embedment in concrete must be no less than 4"

CLUSTER BOX UNIT (CBU)
-CONCRETE PAD REQUIREMENTS-

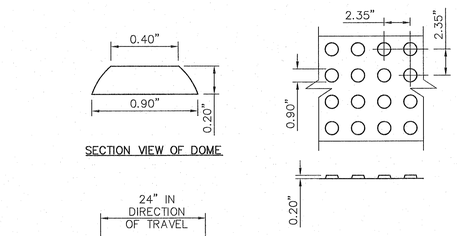
- ALL FREE STANDING PADS MUST BE 8" THICK -

1 UNIT	SINGLE PAD	4' X 4'
2 UNITS	DOUBLE PAD	4' X 7'
3 UNITS	TRIPLE PAD	4' X 10'
4 UNITS	QUAD PAD	4' X 13'

*** **WHEN PLACING A PARCEL LOCKER AT ANY CBU LOCATION, INCREASE THE PAD SIZE BY AN ADDITIONAL 4' X 4'** ***

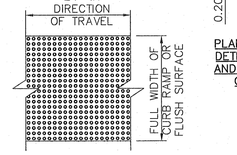
POSTAL SERVICE DETAILS FOR MULTI-UNIT CBU PLACEMENT

ENGINEERS SEAL DOES NOT APPLY TO USPS DETAILS ON THIS SHEET.



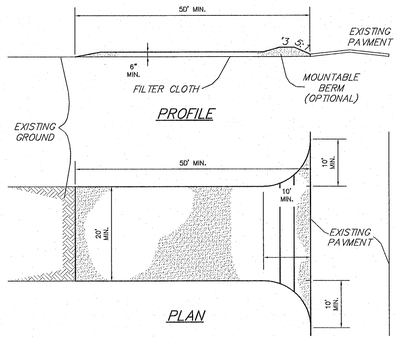
SECTION VIEW OF DOME

PLAN AND SECTION VIEWS OF DETECTABLE WARNING DOMES AND THEIR RELATIVE SPACING ON THE X AND Y AXIS



PLAN VIEW OF A DETECTABLE WARNING SURFACE SHOWING DOMES ALIGNED IN ROWS, NOT SKEWED DIAGONALLY.

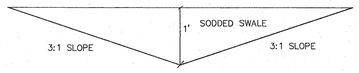
TYPICAL DETAIL OF DETECTABLE WARNING SURFACE
NOT TO SCALE



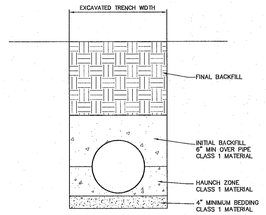
CONSTRUCTION SPECIFICATIONS

1. Stone Size – Use 2" stone, or reclaimed or recycled concrete equivalent.
2. Length – As required, but not less than 50 feet (except on a single residence lat where a 30 foot minimum length would apply).
3. Thickness – Nat less than six (6) inches.
4. Width – Twenty (20) foot minimum, but nat less than the full width at paints where ingress or egress occurs.
5. Filter Cloth – Will be placed over the entire area priar ta placing of stane. Filter will not be required an a single family residence lat.
6. Surface Water – All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mauntable berm with 5:1 slopes will be permitted.
7. Maintenance – The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.
8. Washing – Wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
9. Periodic inspection and needed maintenance shall be provided after each rain.

STABILIZED CONSTRUCTION ENTRANCE/WASHDOWN AREA
NOT TO SCALE



TYPICAL SWALE



1. The use of High Density Polyethylene Corrugated pipe A.D.S. N12 or Equal will be permitted as an acceptable alternative to reinforced concrete pipe. Pipe shall meet A.S.T.M. D-2321 and AASHTO M-294-921. Concrete flared end sections and inlet structures shall be required. Pipe must have smooth interior wall and is not to be used inside the Public Right-of-Way.

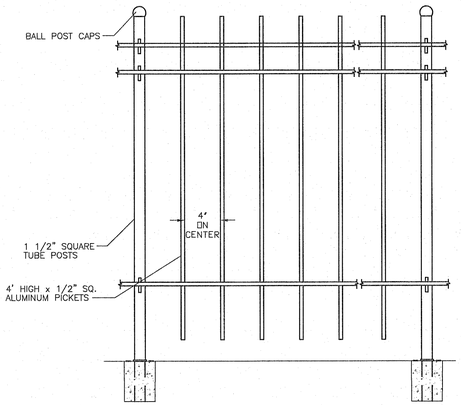
All concrete pipe or HDPE pipe shall be installed with o-ring rubber type gaskets per M.S.D. Standard Construction Specifications or Manufacturer.

2. In typical conditions the minimum trench width is determined by the size of the pipe and the ability to get compaction equipment between the pipe and the trench walls. The minimum trench width shall not be less than the outside diameter of the pipe plus 16 inches. Pipe outside diameters up to 1.25 times the trench width can usually be installed with adequate satisfactory installation of pipe in narrower trenches. Poor insitu soil conditions such as peat, muck, running sands, or expansive clays will require substantially wider backfill as well as deeper foundation and bedding. Trench width and foundation depth should be based on a thorough site investigation.

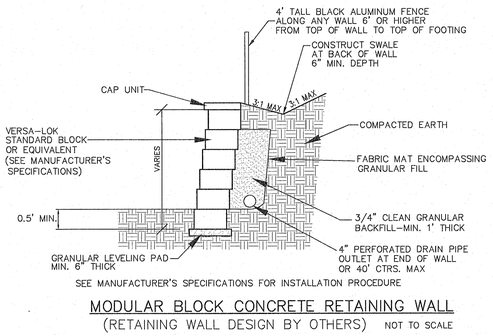
3. Backfill in the area up to the springline should be carefully placed and compacted to achieve a minimum E value of 1,000 psi as detailed in ASTM D2321. A minimum of 12" of backfill should be placed and compacted above the crown of the pipe. It is typical for trenches to be backfilled entirely with Type I or Type II materials when under pavement.

4. Flexible pipe should never be installed in a concrete cradle, as done for rigid pipe in a Class A installation. This type of installation could create concentrated forces at the ends of the cradle when the pipe has deformed.

H.D.P.E. PIPE DETAIL



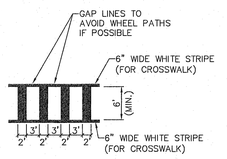
BLACK ALUMINUM FENCE
NOT TO SCALE



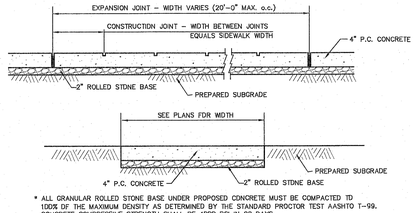
SEE MANUFACTURER'S SPECIFICATIONS FOR INSTALLATION PROCEDURE

MODULAR BLOCK CONCRETE RETAINING WALL
(RETAINING WALL DESIGN BY OTHERS) NOT TO SCALE

* WALL DESIGN TO TAKE INTO ACCOUNT ANY LOADING OR IMPACT THE PROPOSED FENCE WILL HAVE ON SAID WALL.

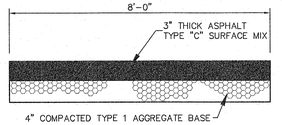


24" WIDE WHITE PAINTED LONGITUDINAL CROSSWALK STRIPE



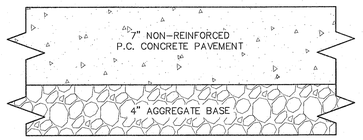
* ALL GRANULAR ROLLED STONE BASE UNDER PROPOSED CONCRETE MUST BE COMPACTED TO 100% OF THE MAXIMUM DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST AASHTO T-99. CONCRETE COMPRESSIVE STRENGTH SHALL BE 4000 PSI IN 28 DAYS.

CONCRETE SIDEWALK DETAIL
NOT TO SCALE



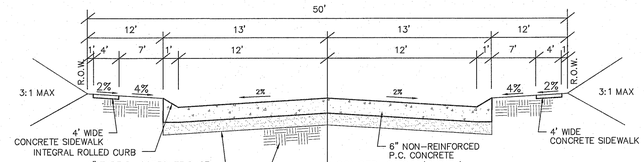
ASPHALT TRAIL DETAIL
NOT TO SCALE

NOTE:
THE ASPHALT SURFACE SHALL BE COMPACTED TO 98% MAXIMUM DENSITY.



CONCRETE PAVEMENT DETAIL
IN RIGHT-OF-WAY OF
KEATON CORPORATE PKWY
NOT TO SCALE

NOTE:
ALL NON-REINFORCED CONCRETE SHALL BE 4,000 P.S.I. AT 28 DAYS.



*SIDEWALK LOCATION MAY VARY. SEE PLANS.

TYPICAL SECTION
NOT TO SCALE
(26' WIDE P.C. CONCRETE PAVEMENT)

NOTE:
ALL NON-REINFORCED CONCRETE SHALL BE 4,000 P.S.I. AT 28 DAYS.

PROJECT TITLE:
THE VILLAS AT KEATON WOODS

Bax Project #15-16469 | Issue Date: 03/25/2016

ENGINEERING
PLANNING
SURVEYING
221 Point West Blvd.
St. Charles, MO 63301
636-928-5552
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DISCLAIMER OF RESPONSIBILITY
I hereby specify that the documents intended to be authenticated by my seal are limited to this sheet, and I hereby disclaim any responsibility for all other Drawings, Specifications, Estimates, Reports or other documents or instruments relating to or intended to be used for any part or parts of the architectural or engineering project or survey.

STATE OF MISSOURI
CLIFFORD L. HEITMANN
NUMBER E-29817
REGISTERED PROFESSIONAL ENGINEER
Clifford L. Heitmann
Civil Engineer
E29817
1-11-19

REVISIONS

12/19/16	P.W.S.D.#2, DUCKETT & CITY COMMENTS
01/05/17	P.W.S.D.#2 COMMENTS
02/20/17	CITY COMMENTS
03/17/17	CITY COMMENTS
09/20/18	CITY COMMENTS
11/06/18	CITY COMMENTS
12/14/18	CITY COMMENTS
12/28/18	CITY COMMENTS

Developer / Owner:
Bridgewater Communities, Inc.
P.O. Box 4607
Chesterfield, Missouri 63005
636-294-6020

CONSTRUCTION DETAILS

P+Z No. 18-003986
June 7, 2018
City No. #18-009384
Permit #RSP18-000006

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