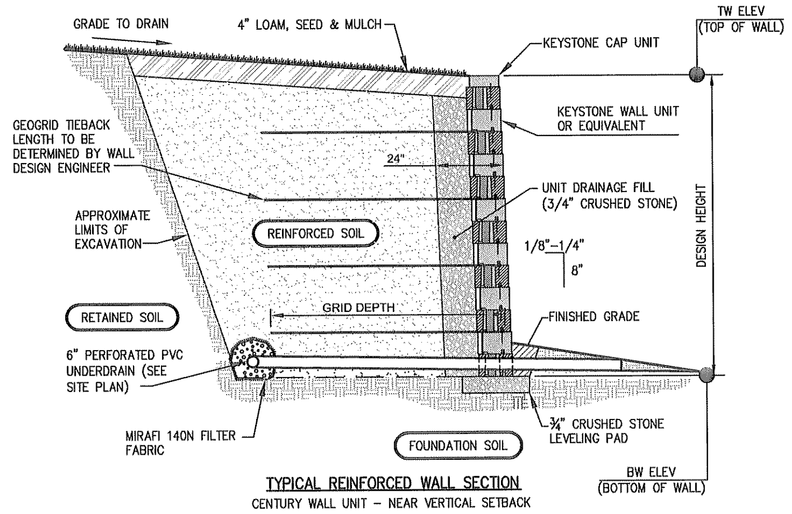
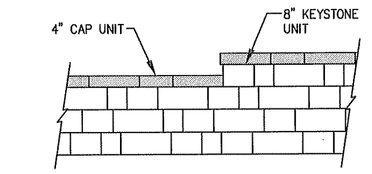
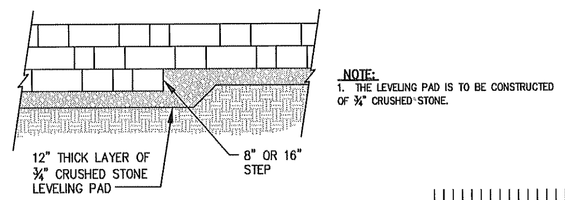


TYPICAL REINFORCED WALL SECTION
CENTURY WALL UNIT – NEAR VERTICAL SETBACK



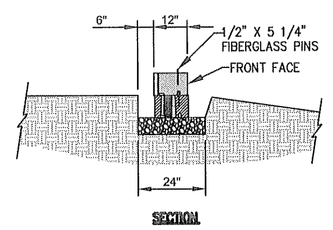
NOTE:
1. SECURE ALL CAP UNITS WITH CONSTRUCTION ADHESIVE.

TOP OF WALL STEPS



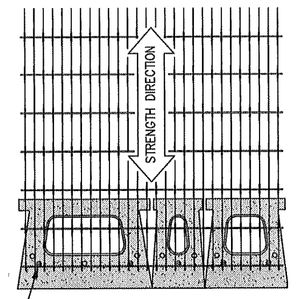
NOTE:
1. THE LEVELING PAD IS TO BE CONSTRUCTED OF 3/4" CRUSHED STONE.

ELEVATION



SECTION

LEVELING PAD DETAIL

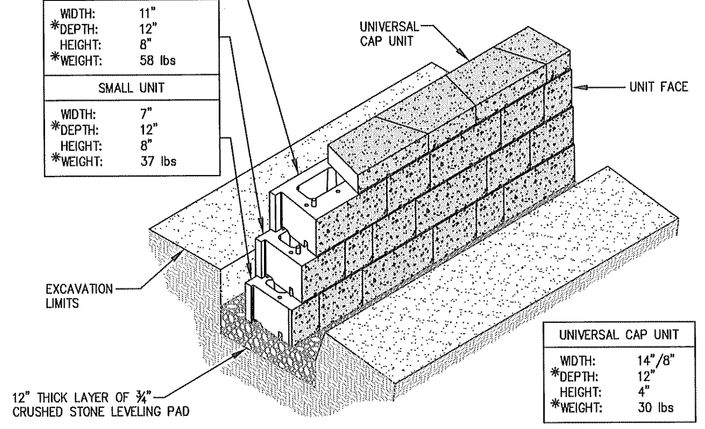


GEOGRID IS TO BE PLACED ON LEVEL BACKFILL AND EXTENDED OVER THE FIBERGLASS PINS. PLACE NEXT UNIT. PULL GRID TAUGHT AND BACKFILL. STAKE AS REQUIRED.

GRID & PIN CONNECTION

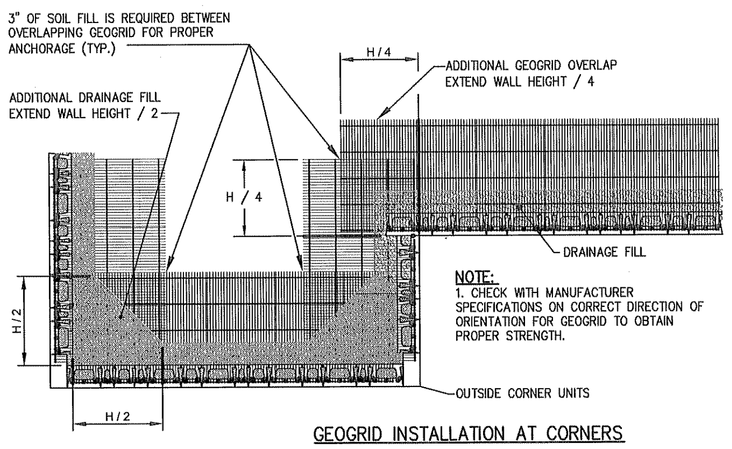
LARGE UNIT	
WIDTH:	18"
*DEPTH:	12"
HEIGHT:	8"
*WEIGHT:	93 lbs
MEDIUM UNIT	
WIDTH:	11"
*DEPTH:	12"
HEIGHT:	8"
*WEIGHT:	58 lbs
SMALL UNIT	
WIDTH:	7"
*DEPTH:	12"
HEIGHT:	8"
*WEIGHT:	37 lbs

BASE LEVELING PAD NOTES:
1. THE LEVELING PAD IS TO BE CONSTRUCTED OF CRUSHED STONE.
2. THE BASE FOUNDATION IS TO BE APPROVED BY THE OWNER PRIOR TO PLACEMENT OF THE LEVELING PAD.



UNIVERSAL CAP UNIT	
WIDTH:	14"/8"
*DEPTH:	12"
HEIGHT:	4"
*WEIGHT:	30 lbs

CENTURY WALL UNIT/BASE PAD ISOMETRIC SECTION VIEW
* DIMENSIONS & WEIGHT MAY VARY BY REGION



NOTE:
1. CHECK WITH MANUFACTURER SPECIFICATIONS ON CORRECT DIRECTION OF ORIENTATION FOR GEOGRID TO OBTAIN PROPER STRENGTH.

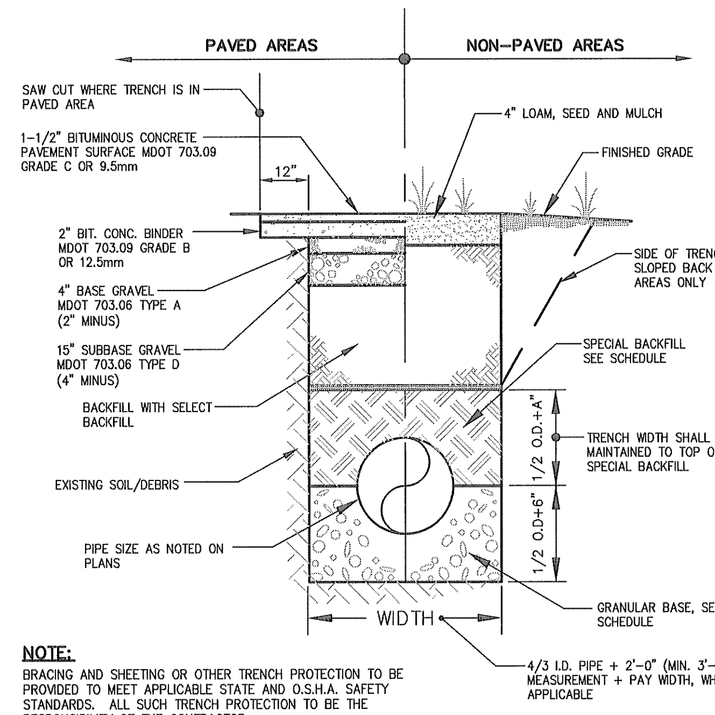
GEOGRID INSTALLATION AT CORNERS

NOTE:
THE CONTRACTOR SHALL BE RESPONSBLE TO PROVIDE RETAINING WALL SHOP DRAWINGS PREPARED BY A QUALIFIED WALL REPRESENTATIVE TO THE OWNER FOR REVIEW PRIOR TO THE START OF WORK.

1. This drawing depicts minimum basic installation of a modular block retaining wall. Variations may be made to fit variable conditions or wall manufacturers requirements; however guidelines depicted on this drawing shall be followed.
2. Modular block retaining walls shall be constructed in accordance with the manufacturer's recommendations.
3. Modular block retaining wall installation procedures shall be submitted to the owner for review and approval in accordance with the following additional information as a minimum:
   * indicate modular block manufacturer, unit, and color.
   * provide manufacturer's specifications and recommendations.
   * "Recent" test data indicating standard unit's conformance to ASTM C-1372 (see note 4 below).
   * Indicate face setback distance.
   * Indicate tieback (engineering geogrid) length if required per manufacturer.
   * Depict proposed method of constructing vertical face returns at locations requiring a vertical face (see note 6 below).
   * Indicate toe detail, if applicable (see note 7 below).
   * Provide manufacturer recommended sealant specifications (see note 11 below).
   * Indicate sealant's conformance to ASTM's e-514, d-1653-93, & d-3273-94 (see note 11 below).
4. Modular block standard units shall conform to astm 1372 and shall be one of the following:
   * anchor wall - diamond - straight face (or an equivalent approved by the owner).
   * Keystone - "straight split" (standard and compact)
   * stone strong - "chiseled granite" - 6 sf block size (or an equivalent approved by owner)
5. Modular block retaining wall color options shall be reviewed with owner prior to construction.
6. Vertical face returns shall be built against adjacent existing walls, steps and/or other structures requiring a vertical face return. The length of returns shall be determined by the owner in the field.
7. Modular block retaining walls shall bury below the top of the sidewalk or finished grade one (1) inch of block face for every one (1) foot of wall height with a minimum of one-half block face buried. Modular block walls six (6) feet or more in height shall submit to the owner for review and approval a proposed toe detail depicting bury depth and horizontal placement of buried block units.
8. Backfill behind the retaining wall shall be compacted in intervals equivalent to the thickness of one (1) course of modular block units by hand operated vibratory machines. No heavy machinery may be used behind the wall.
9. Engineering geogrid if required by the manufacturer shall be installed every three (3) courses maximum, but never within the two (2) courses below the capstone.
10. Maximum finished slope above a modular block wall shall not exceed 3 to 1. Slopes flatter than 3 to 1 are acceptable provided positive drainage toward the street is maintained.
11. All exposed faces of modular block walls shall be coated with a clear, penetrating sealant that resists water, weather, mold, corrosion, de-icing compounds and conforms to astm's e-514, d-1653-93, and d-3273-94. Cost considered incidental to item 611.
12. Native soils equivalent to the thickness of one (1) course of modular block units shall be provided above the drainage aggregate and below the topsoil.
13. All capstones shall be glued.

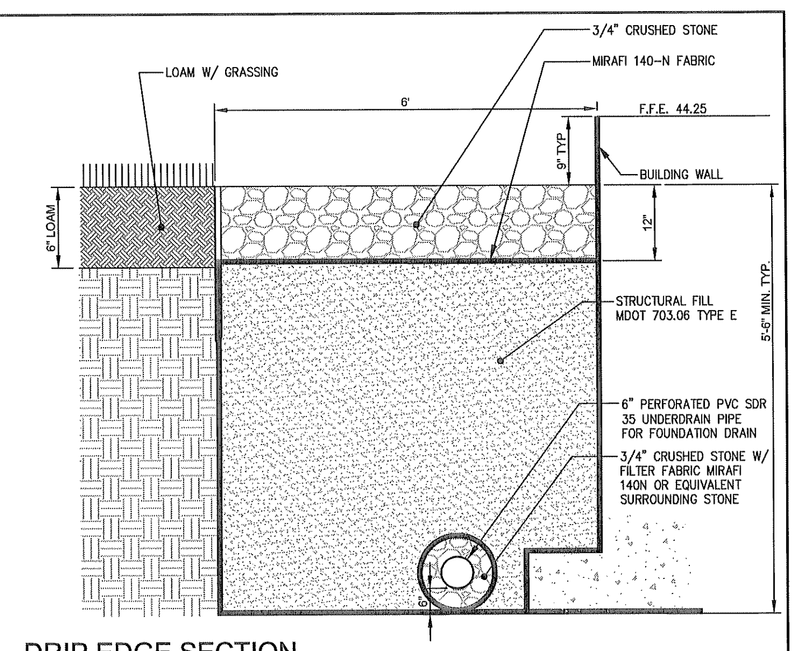
A KEYSTONE MODULAR BLOCK RETAINING WALL DETAIL
N.T.S.

TRENCH SECTION BACKFILL SCHEDULE				
TYPE OF PIPE	GRANULAR BASE MATERIAL	SPECIAL BACKFILL	SPECIAL BACKFILL COVER "A" (IN)	SELECT BACKFILL
CONCRETE	GRANULAR AASHTO M145-49 A-3 OR BETTER	GRANULAR AASHTO M145-49 A-3 OR BETTER	12"	GRANULAR AASHTO M145-49 A-3 OR BETTER
PVC / HDPE	3/4" CRUSHED STONE	GRANULAR AASHTO M145-49 A-3 OR BETTER	6"	GRANULAR AASHTO M145-49 A-3 OR BETTER
DUCTILE IRON	GRANULAR AASHTO M145-49 A-3 OR BETTER	GRANULAR AASHTO M145-49 A-3 OR BETTER	6"	GRANULAR AASHTO M145-49 A-3 OR BETTER
UNDER-DRAINS	3/4" CRUSHED STONE	3/4" CRUSHED STONE	6"	GRANULAR AASHTO M145-49 A-3 OR BETTER

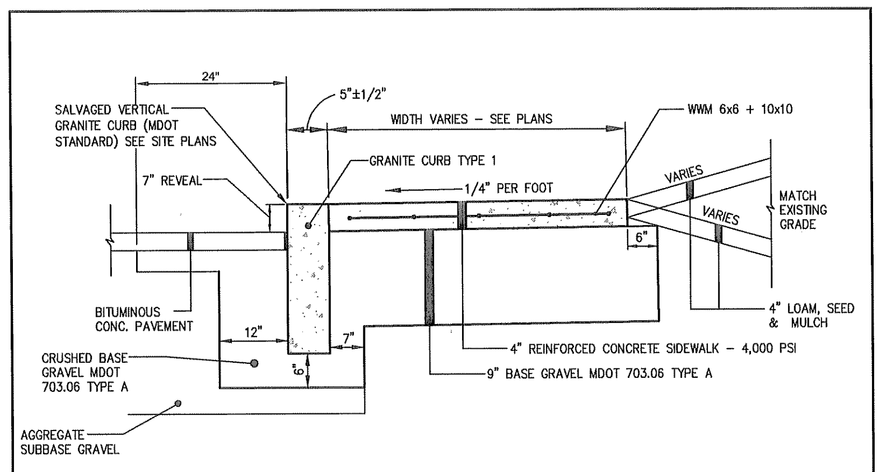


NOTE:
BRACING AND SHEETING OR OTHER TRENCH PROTECTION TO BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A. SAFETY STANDARDS. ALL SUCH TRENCH PROTECTION TO BE THE RESPONSIBILITY OF THE CONTRACTOR.

E TYPICAL UTILITY PIPE TRENCH SECTION DETAIL
N.T.S.

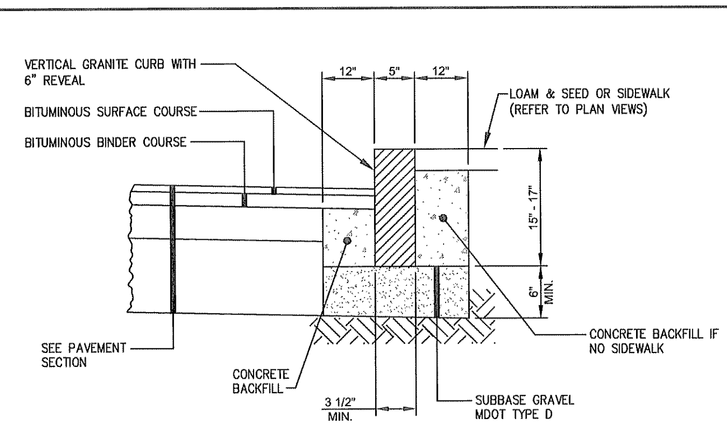


B DRIP EDGE SECTION
N.T.S.



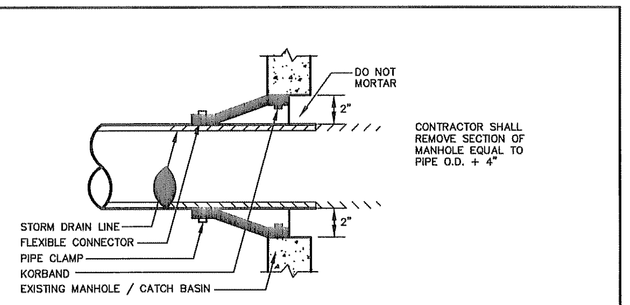
NOTES:
1. INSTALL CONSTRUCTION JOINTS AT 12' SPACING AND CONTROL JOINTS AT 6' SPACING.
2. ALL GRANITE CURB TYPE 1 PLACED WITHIN THE CITY R.O.W. MUST MEET THE CITY OF PORTLAND TECHNICAL STANDARDS.

C CONCRETE SIDEWALK DETAIL WITHIN DANFORTH STREET R.O.W.
N.T.S.



NOTES:
1. VERTICAL GRANITE CURB TO MEET MDOT STANDARD SPECIFICATIONS.
2. REFER TO PLANS FOR LOCATIONS OF GRANITE CURBS.
3. JOINTS SHALL BE MORTARED.
4. JOINT SEPARATION SHALL BE 1/4" AND 5/8".
5. MAX. LENGTH OF STRAIGHT CURB STONES = 8'; MIN. LENGTH = 3'.
6. CIRCULAR CURB REQUIRED FOR RADIUS LESS THAN 50'.

D TYPE 1 VERTICAL GRANITE CURB DETAIL ONSITE AREAS ONLY
N.T.S.



NOTES:
1. A FLEXIBLE PIPE TO MANHOLE CONNECTOR SHALL BE EMPLOYED IN THE CONNECTION OF ALL PIPE TO MANHOLE JUNCTIONS.
2. THE CONNECTOR SHALL BE KOR-N-SEAL AS MANUFACTURED BY NPC SYSTEMS, INC., OF MILFORD, NH OR EQUAL.
3. THE CONNECTOR SHALL BE THE SOLE ELEMENT RELIED ON TO ASSURE A FLEXIBLE WATERTIGHT SEAL OF THE PIPE TO MANHOLE. NO ADHESIVES OR LUBRICANTS SHALL BE EMPLOYED IN THE INSTALLATION OF THE CONNECTOR TO THE MANHOLE. THE RUBBER FOR THE CONNECTOR SHALL COMPLY TO ASTM C443 AND ASTM C923 AND CONSIST OF EPDM AND ELASTOMERS KNOWN TO BE RESISTANT TO OZONE, WEATHER ELEMENTS, CHEMICALS, INCLUDING ACIDS, ALKALIS, ANIMAL AND VEGETABLE FATS, OILS AND PETROLEUM PRODUCTS FROM SPILLS.
4. ALL STAINLESS STEEL ELEMENTS OF THE CONNECTOR SHALL BE TOTALLY NON-MAGNETIC SERIES 304 STAINLESS, EXCLUDING THE WORM SCREW USED FOR TIGHTENING THE STEEL BAND AROUND THE PIPE WHICH SHALL BE SERIES 205 STAINLESS. THE WORM SCREW USED FOR TIGHTENING THE STEEL BAND SHALL BE TORQUED BY A BREAK-AWAY TORQUE WRENCH AVAILABLE FROM THE PRECAST MANHOLE SUPPLIER, AND SET AT 60/70 in/lbs..
5. THE CONNECTOR SHALL BE INSTALLED IN THE MANHOLE WALL BY ACTIVATING THE EXPANDING MECHANISM IN STRICT ACCORDANCE WITH THE RECOMMENDATION OF THE CONNECTOR MANUFACTURER.
6. THE CONNECTOR SHALL BE OF A SIZE SPECIFICALLY DESIGNED FOR THE PIPE MATERIAL AND SIZE BEING UTILIZED ON THE PROJECT.
7. ALL CONNECTORS WHICH ARE CAPPED AWAITING PIPE INSTALLATION AT A LATER DATE MUST BE RESTRAINED.

F CORE AND SEAL CONNECTION TO EXISTING SANITARY SEWER AND STORM DRAINAGE STRUCTURES
N.T.S.

REV	DATE	DESCRIPTION
3	04.21.10	ISSUED FOR BIDDING
2	04.01.10	REVISED AND RESUBMITTED TO CITY
1	02.22.10	SITE PLAN APPLICATION TO CITY OF PORTLAND

REVISIONS

STATE OF MAINE STEPHEN R. BUSHEY No. 7429 LICENSED PROFESSIONAL ENGINEER
P.E. STEPHEN BUSHEY
LIC. # 7429

PROJECT
ACCESSORY BUILDING
501 DANFORTH STREET

SHEET TITLE
DETAILS

OWNER PROPSYS, INC.
55 LISBON STREET SUITE 2400
LEWISTON, MAINE 04240

DeLUCA-HOFFMAN ASSOCIATES, INC.
778 MAIN STREET, SUITE 8
SOUTH PORTLAND, ME 04106
207.775.1121
WWW.DELUCAHOFFMAN.COM

DRAWN:	CMW	DATE:	JAN 2010
DESIGNED:	SRB	SCALE:	AS NOTED
CHECKED:	SRB	JOB NO.	2939
FILE NAME:	2939-DET		
SHEET	7.0		

G:\2939\BID SET\DWG\2939-DET.dwg, 7.0, 4/23/2010 8:20:01 AM, cwintermute