

REQUEST FOR PROPOSAL

Project Title: Cooley Laboratory Renovation
Location: Montana State University

PPA No.: 10-0023
RFP No.: 15
Date: 12/06/11 Revised 12/12

To: Dick Anderson Construction
4498 Jackrabbit Lane
Bozeman, MT 59718

Attention: Platisha

From: Cecilia Vaniman, Project Manager
Cooley Lab Renovation
Montana State University

Attention: _____

In order to expedite the Work and avoid or minimize delays in the Work the following proposal is requested. Please return a response by: 12/19/11 Date Sent: 12/09/11
Date Received: _____

RFP for Impact Resistant Gypboard

Rooms 099VE, 099CO, 199CM, 199CO, 299CO, 399CO, 499CM, 499CO.

Reference Drawings: RFP15-1, RFP15-2, RFP15-3, RFP15-4 & RFP15-5

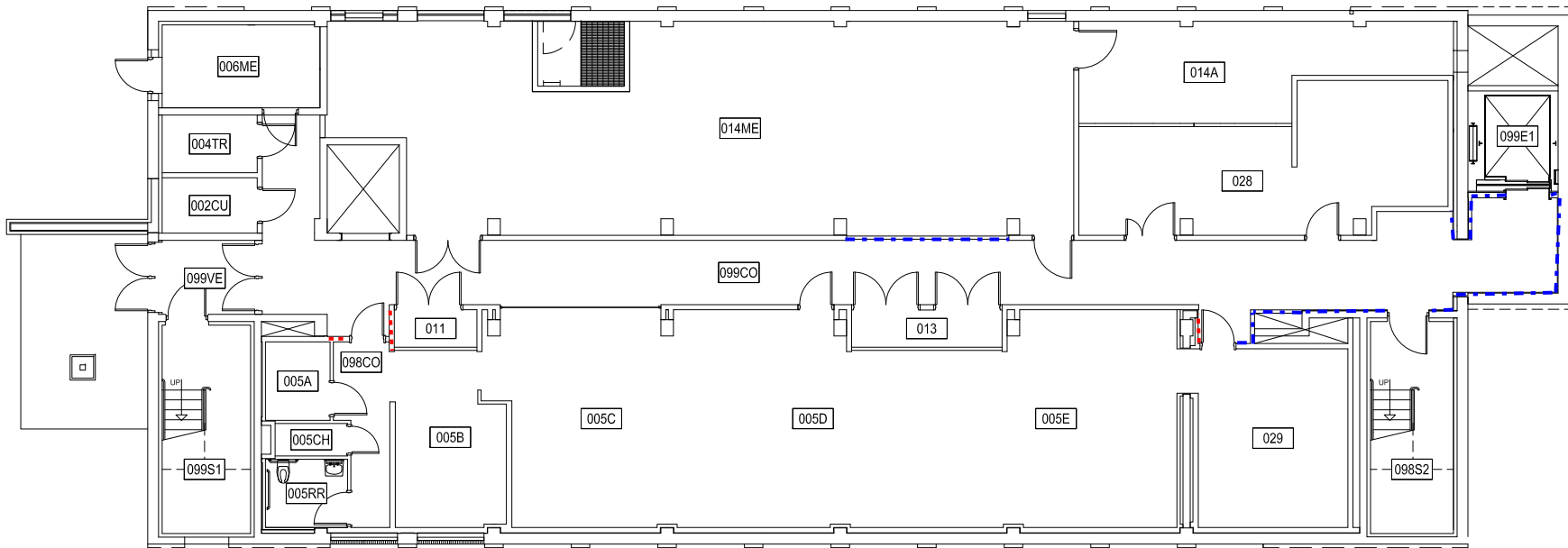
Revise painting requirements Specification Section 9912 3.8.B to meet manufacturer's recommendation for Dens Armor Plus impact resistant panels. Finish to be a Satin Finish. at all Impact Resistant panels from Finished Floor to 6'-0" above Finished Floor

Attachment: Georgia Pacific Dens Armor Plus - Impact Resistant Panels

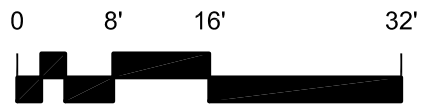
This RFP is for pricing purposes only. The contractor shall not proceed with the scope of work described within until pricing is approved by the owner in writing.

Distribution: Owner Architect Engineer
 Agency Contractor Other

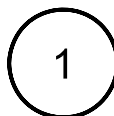
----- GP DensArmor Plus Impact Resistant Panels



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SCALE: 1/16" = 1'



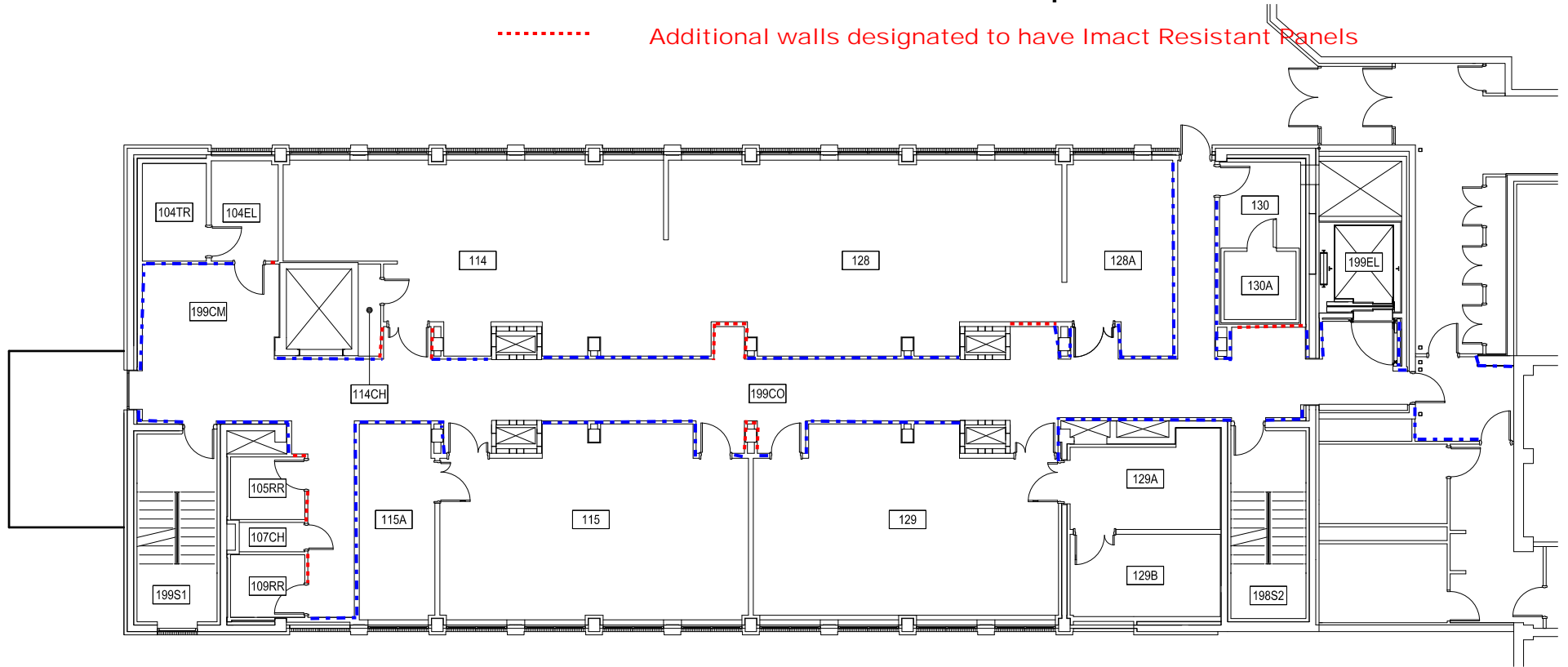
BASEMENT LEVEL

COOLEY LABORATORY

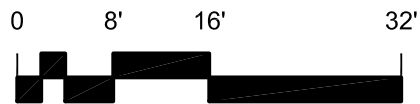


--- GP DensArmor Plus Impact Resistant Panels

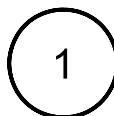
..... Additional walls designated to have Impact Resistant Panels



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SCALE: 1/16" = 1'

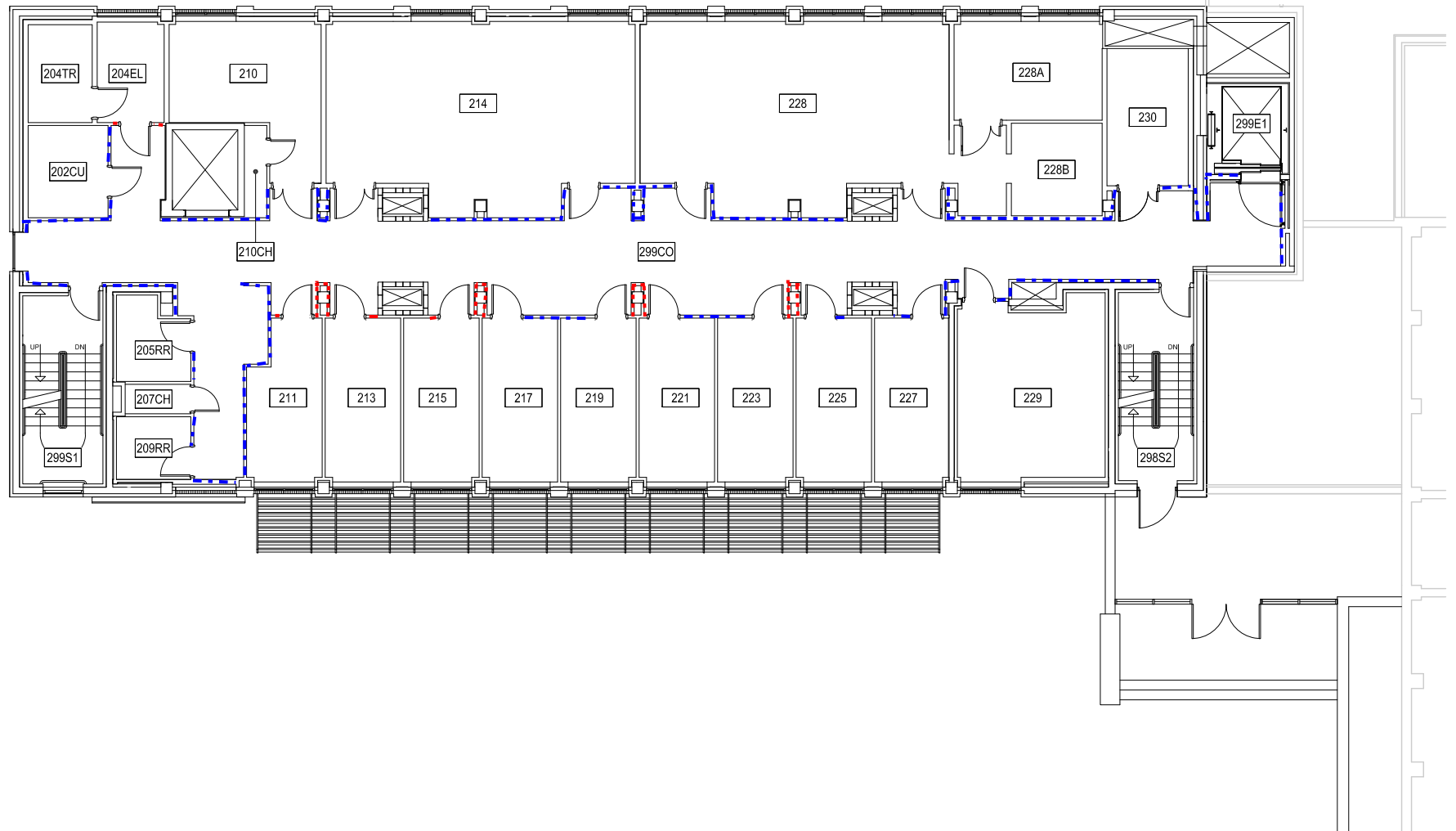


FIRST LEVEL
COOLEY LABORATORY

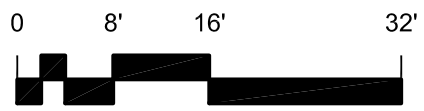


--- GP DensArmor Plus Impact Resistant Panels

..... Additional wall designated to have Impact Resistant Panels



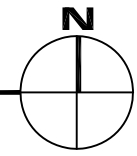
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SCALE: 1/16" = 1'

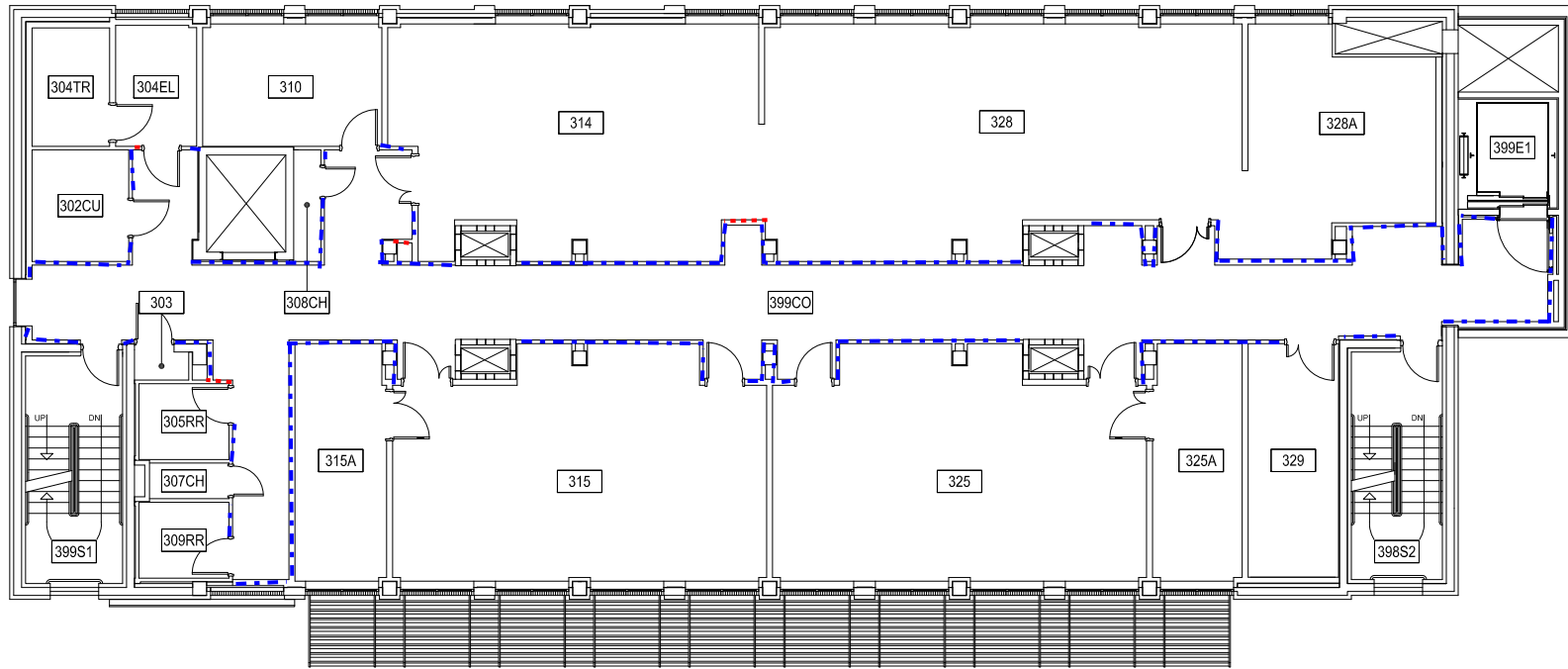
1

SECOND LEVEL
COOLEY LABORATORY

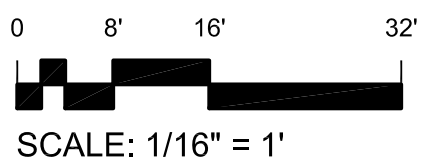


GP DensArmor Plus Impact Resistant Panels

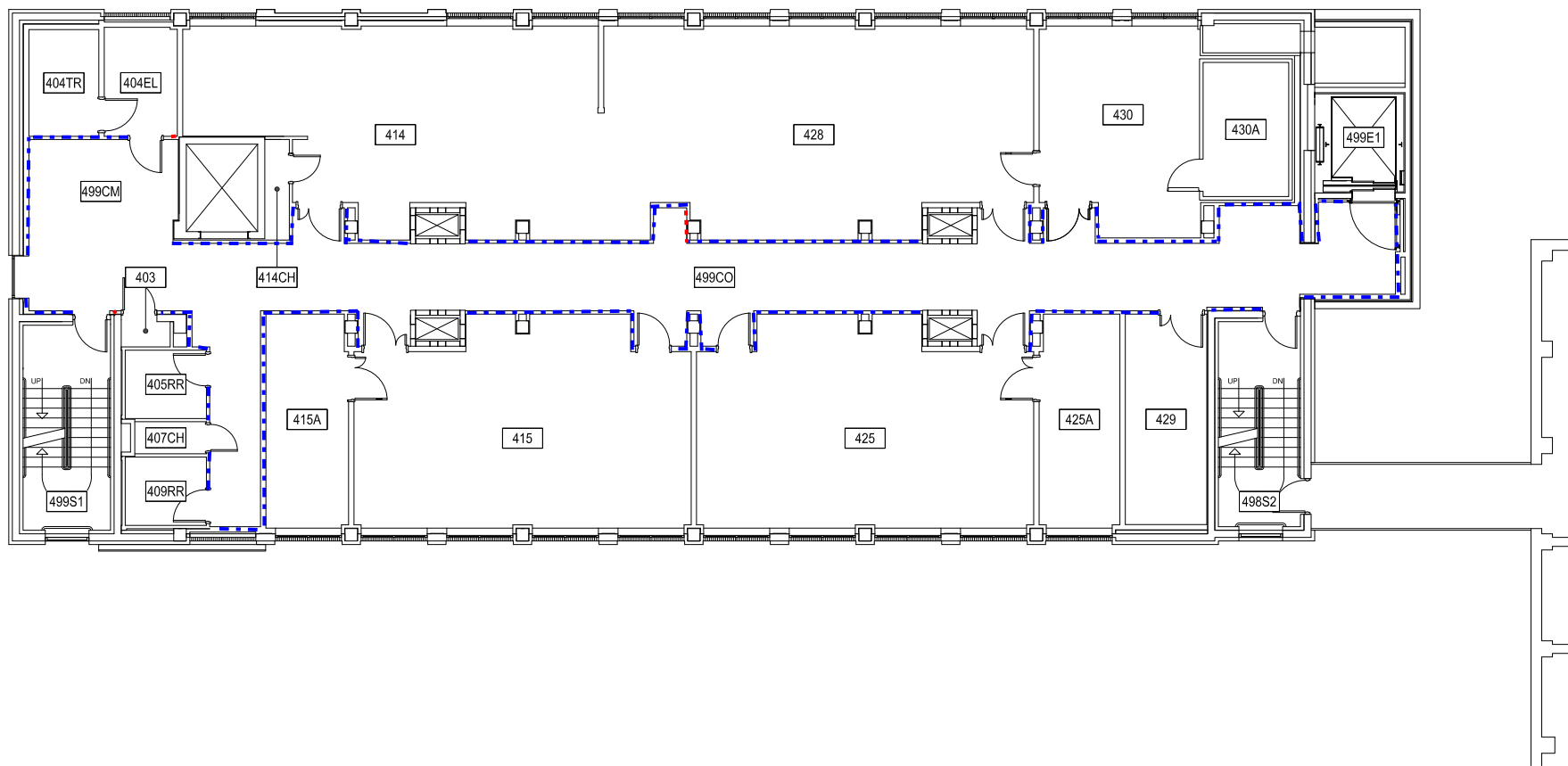
Additional wall designated to have Impact Resistant Panels



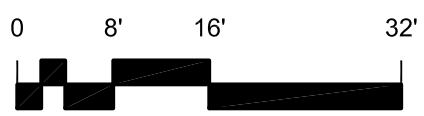
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----- GP DensArmor Plus Impact Resistant Panels



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SCALE: 1/16" = 1'

1 FOURTH LEVEL
COOLEY LABORATORY

A circular north arrow symbol with the letter 'N' at the top and a vertical line with an arrowhead pointing up.

DensArmor Plus®

Impact-Resistant Interior Panel

Manufacturer

Georgia-Pacific Gypsum LLC
133 Peachtree Street
Atlanta, GA 30303

Georgia-Pacific Canada LP
7070 Mississauga Road, Unit 120
Mississauga, ON L5M 7V9

Technical Service Hotline: 1-800-225-6119

Description

DensArmor Plus® Impact-Resistant Interior Panel is an interior panel that consists of a moisture-resistant, noncombustible (per ASTM E 136) dense gypsum core, and a strong layer of embedded fiberglass mesh with abuse-resistant coated fiberglass mats. The mats, the mesh and a dense moisture-resistant gypsum core provide superior abuse and impact-resistance along with protection from incidental moisture. DensArmor Plus Impact-Resistant Interior Panels are highly resistant to the growth of mold, and have scored a 10, the highest level of performance for mold resistance under ASTM D 3273 test method.

DensArmor Plus Impact-Resistant Interior Panel resists surface abrasion, indentation and impact punctures in high-traffic environments. The moisture-resistant fiberglass mats and core resist warping, rippling and buckling. The core of the product is denser than regular gypsum wallboard and is reinforced with glass fibers, increasing the product's strength and offering improved dimensional stability when compared with regular gypsum wallboard.

DensArmor Plus Impact-Resistant Interior Panels are GREENGUARD Indoor Air Quality Certified® and GREENGUARD Children & Schools™ Certified for low emissions of volatile organic compounds (VOCs) by a leading third-party organization, GREENGUARD Environmental Institute. In addition, DensArmor Plus Interior Panels are the first drywall panels listed as GREEN-GUARD microbial resistant. This listing means DensArmor Plus Impact-Resistant Interior Panels, which feature fiberglass mats instead of paper facings used on the surface of traditional gypsum board products, resist mold growth. The microbial resistant test is based on ASTM Standard D 6329-98, a testing standard set by ASTM International, which develops testing guidelines and procedures for building materials, products, systems, and services.

DensArmor Plus Impact-Resistant Interior Panels also are listed in the Collaborative for High Performance Schools® (CHPS™) High Performance Products Database for low emissions of VOCs. CHPS is a national non-profit organization that works with school districts and their design teams to improve the quality of education by using products that have met requirements to receive CHPS credits.

Primary Uses

DensArmor Plus Impact-Resistant Interior Panel is a interior wall or ceiling covering material for use in new construction or renovation work. It is designed for use in areas requiring abuse and impact-resistance such as corridors in hospitals, schools, dormitories and public buildings. It is designed for direct attachment with screws or nails to wood and metal framing or existing surfaces. It may be used as a covering material for flat or curved structures.

DensArmor Plus Impact-Resistant Interior Panel resists indentation and impact punctures. The product is ideal for use in any interior high traffic areas subject to wall or ceiling abuse.

It withstands abrasion common in buildings with high occupancy such as schools, offices, hospitals and many public buildings.

For use in any areas likely to be exposed to incidental moisture where added abuse and impact resistance is desired.

DensArmor Plus Impact-Resistant Interior Panels are backed by a limited warranty against delamination and deterioration for up to 12 months of exposure to normal weather conditions.*

Limitations

DensArmor Plus Impact-Resistant Interior Panel is a non-structural product and should not be used as a nailing base to support heavy wall-mounted objects.

It is intended for interior applications only. It must be kept dry during storage and handling.

DO NOT use DensArmor Plus Impact-Resistant Interior Panel where there is prolonged exposure to temperatures exceeding 125°F (52°C), e.g. adjacent to wood burning stoves, heating appliances, saunas or steam rooms.

Abuse Resistance

Surface Abrasion: Level 3 Tested in accordance with ASTM C 1629.
Surface Indentation: Level 1 Tested in accordance with ASTM C 1629.
Soft-body Impact: Level 3 Tested in accordance with ASTM C 1629.
Hard-body Impact: Level 2 Tested in accordance with ASTM C 1629.

Technical Data

DensArmor Plus Impact-Resistant Interior Panel has scored a 10, the highest score, for resistance to the growth of mold when tested, as manufactured, according to ASTM D 3273.

Flame spread and smoke develop rating of 0/0 when tested in accordance with ASTM E 84 or CAN/ULC S-102.

Noncombustible when tested in accordance with ASTM E 136.

DensArmor Plus® Fireguard® Impact-Resistant panels can be used in many fire-rated assemblies where 5/8" Type X (per ASTM C 1396) drywall is specified. Consult appropriate fire resistance directory for use. UL and ULC Classified as **Type DAP**.

Product Applications

DensArmor Plus Impact-Resistant Interior Panel shall be applied in accordance with ASTM C 840 and GA-216. To apply the product to steel framing, use Type S-12 screws for heavier gauge steel (20 gauge). The product also can be applied to wood framing with drywall nails or screws and with special adhesives in combination with supplemental fasteners.

Decoration

DensArmor Plus Impact-Resistant Interior Panel is designed to accept most types of paints, textures and wall covering materials. Because of the enhanced moisture- and mold-resistant properties of DensArmor Plus Impact-Resistant Interior Panel, drying times for both joint compound and wall coverings may vary.

Always follow paint or wall covering manufacturer's installation instructions when applying either of these finishes. Georgia-Pacific Gypsum strongly recommends priming the surface of DensArmor Plus Impact-Resistant Interior Panel with a quality high build primer before applying a final decorative material. Priming will equalize the texture and suction variations between the joint compounds and the fiberglass mat surfaces.

If glossy paints are used in such areas as kitchens or bathrooms, skim coat joint compound over the entire surface of DensArmor Plus Impact-Resistant Interior Panel to reduce highlighting or joint photographing. This method is also recommended in areas with severe natural or artificial side lighting.

*For complete warranty details, visit www.gpgypsum.com.

continued →

Submittal Approvals

Job Name _____

Contractor _____

Date _____

Handling Precautions

See *Handling and Use—Caution* section at end of this document.

Stack DensArmor Plus® Impact-Resistant Interior Panel flat on a level surface.

As individual sheets are removed for installation, they should be raised up on edge carefully and carried in a vertical position. Appropriate handling for gypsum board is also outlined in Gypsum Association Publications GA-216 and GA 801.

Take care to avoid impact, undue flexing and subsequent damage to board edges, ends and corners.

Note: Material Safety Data Sheet (MSDS) is available at www.gpgypsum.com or call 1-404-652-5119.

Applicable Standards

Manufactured to meet ASTM C 1658, ASTM C 1396 Section 7, and ASTM C 1177. Test standard ASTM C 1629.

Sizes and Edges

DensArmor Plus Impact-Resistant Interior Panel Thickness: 5/8" – 15.9mm;
Width: 4' (1219 mm); Lengths: 8' (2438 mm), 10' (3048 mm) and 12' (3658 mm);
Edges: Tapered

Physical Properties

Properties	DensArmor Plus® Impact-Resistant Interior Panel
Thickness, nominal	5/8" (15.9 mm) ± 1/64" (0.4 mm)
Width, standard	4' (1219 mm) ± 3/32" (2.4 mm)
Length, standard	8' (2438 mm) to 10' (3048 mm) ± 1/4" (6.4 mm)
Weight ¹ , nominal, lbs./sq. ft., (Kg/m ²)	3.0 ¹ (14.6)
Permeance ⁶ , perms (ng/Pa•s•m ²)	>10 (570)
Flexural strength, Parallel, lbf. ^{3,4} (N)	≥100 (444)
Flexural strength, Perpendicular, lbf. ^{3,4} (N)	≥140 (622)
R Value ² , ft ² •°F•hr/BTU (m ² •K/W)	0.67 (0.118)
Nail pull resistance minimum, lbf. ^{3,4} (N)	≥90 (400)
Hardness core, edges and ends, lbf. ^{3,4} (N)	≥15 (67)
Water absorption (% of weight) ^{3,4}	<5%
Surface water absorption ^{3,4}	<1.6 grams
Surface burning characteristics (per ASTM E 84 or Can/ULC-S102): flame spread/smoke developed	0/0
Humidified deflection ^{3,4}	<1/8" (3 mm)
Combustibility ⁵	Noncombustible
Linear expansion with moisture change, in/in %RH (mm/mm %RH)	6.25 x 10 ⁻⁶
Coefficient of thermal expansion, in/in/°F (mm/mm/°C)	8.5 x 10 ⁻⁶ (15.3 x 10 ⁻⁶)

¹Represents approximate weight for design and shipping purposes.

²Tested in accordance with ASTM C 518.

³Tested in accordance with ASTM C 473.

⁴Specified values per ASTM C 1658 and ASTM C 1177.

⁵As designed and tested in accordance with ASTM E 136.

⁶Tested in accordance with ASTM E 96 (dry cup method).



U.S.A. – Georgia-Pacific Gypsum LLC
Canada – Georgia-Pacific Canada LP

SALES INFORMATION AND ORDER PLACEMENT

U.S.A. Midwest: 1-800-876-4746 West: 1-800-824-7503
South: 1-800-327-2344 Northeast: 1-800-947-4497

CANADA Canada Toll Free: 1-800-387-6823
Quebec Toll Free: 1-800-361-0486

TECHNICAL INFORMATION

U.S.A. and Canada: 1-800-225-6119
www.gpgypsum.com

TRADEMARKS Unless otherwise noted, all trademarks are owned by or licensed to Georgia-Pacific Gypsum LLC. GREENGUARD, and GREENGUARD Children & Schools are registered certification marks used under license through the GREENGUARD Environmental Institute. CHPS is a trademark owned by Collaborative for High Performance Schools, Inc.

WARRANTIES, REMEDIES AND TERMS OF SALE For current warranty information for this product, please go to www.gpgypsum.com and select the product for warranty information. All sales of this product by Georgia-Pacific are subject to our Terms of Sale available at www.gpgypsum.com.

UPDATES AND CURRENT INFORMATION The information in this document may change without notice. Visit our website at www.gpgypsum.com for updates and current information.

CAUTION For product fire, safety and use information, go to www.gp.com/safetyinfo or call 1-800-225-6119.

HANDLING AND USE—CAUTION This product contains fiberglass facings which

may cause skin irritation. Dust and fibers produced during the handling and installation of the product may cause skin, eye and respiratory tract irritation. Avoid breathing dust and minimize contact with skin and eyes. Wear long sleeve shirts, long pants and eye protection. Always maintain adequate ventilation. Use a dust mask or NIOSH/MSHA approved respirator as appropriate in dusty or poorly ventilated areas.

FIRE SAFETY CAUTION Passing a fire test in a controlled laboratory setting and/or certifying or labeling a product as having a one-hour, two-hour, or any other fire resistance or protection rating and, therefore, as acceptable for use in certain fire rated assemblies/systems, does not mean that either a particular assembly/system incorporating the product, or any given piece of the product itself, will necessarily provide one-hour fire resistance, two-hour fire resistance, or any other specified fire resistance or protection in an actual fire. In the event of an actual fire, you should immediately take any and all actions necessary for your safety and the safety of others without regard for any fire rating of any product or assembly/system.