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PURCHASING BID LIMITS

The Purchasing Department shall convert the purchase requisition to a Purchase Order by following the competitive pricing procedures approved by the District Board of Trustees:

- Broward College Procurement Policy/Procedure Requirements, A6Hx2-6.34
- Florida Department of Education, Rules of Community Colleges, Rule 6A-14.0734 and [Florida Statutes 287.017](#)

State Approved Purchasing Dollar Thresholds

Purchases Up to \$10,000.00	\$0.00 to \$10,000: There are no formal or informal competitive requirements for goods and services acquired by the College at this dollar threshold. The requesting department shall obtain one quote identifying the best value for the required commodity or service. A statement of work (SOW) must be provided if services are requested. Small Disadvantage Business (SDB) vendors listed on the College's vendor database should be contacted, if practicable.
\$10,000.01 to \$35,000.00	\$10,000.01 up to Category Two (currently \$35,000) as defined in section 287.017(2), Florida Statutes. The requesting department shall obtain three (3) quotes providing the best value for the required commodity or service. However, a statement of work (SOW) must be provided if services are requested. At least three (3) available vendors should be contacted, of which at least two (2) should be SDB vendors listed on the College's vendor database, if practicable. The award shall go to the lowest priced responsive/responsible vendor who meets the requirements. In those rare instances when the required number of vendors is not available and/or it is in the best interests of the College, the requestor, or a procurement representative must document the situation on the Three Quote Form.
\$35,000.01 to \$65,000.00	Category Two (currently \$35,000) up to Category Three (currently \$65,000) as defined in section 287.017(2)(3), Florida Statutes. The Procurement Department shall process a Request to Quote (RTQ) with detailed specifications of what is required (provided by the requesting department). SDB vendors, if practicable, as listed on the College's vendor database, shall be contacted. The award shall go to the lowest priced responsible/responsive vendor who meets the requirements of the specifications. If two or fewer responses are received, the Procurement Services manager, or his/her designee, may contact one or more non-responding vendors to obtain a backup quote. In those rare instances when the required number of vendors is not available, and/or it is in the best interests of the College, the requestor, or a procurement representative, must document the situation in the RTQ file.

APPENDIX 00 01 PURCHASING BID LIMITS

PROCUREMENT SERVICES

Cypress Creek Center

Phone 954-201-7455

Fax 954-201-7330

www.broward.edu/community/vendor/

<p>\$65,000.00 or Greater</p>	<p>Exceeding Category Three (currently \$65,000) as defined in section 287.017(3), Florida Statutes. The College must release a formal competitive solicitation for goods or services. The College must advertise that it is seeking goods or services, and allow the public at large to compete for award of a contract. Formal solicitations also afford the public with “bid protest rights” as provided by chapter 120, Florida Statutes. The following are different methods of formal competition:</p> <p>a. Invitation To Bid (ITB) is a competitive solicitation requesting pricing on commodities or services based on clearly definable specifications established in the solicitation. An ITB is strictly price driven. It is an advertised formal solicitation for sealed competitive bids, with a specific place, date, and time for public opening of the bids. The award goes to the lowest, responsive and responsible bidder. Pursuant to College Procedure A6Hx2-6.36, the College may establish price preferences on ITBs where most recent annually calculated College utilization data shows underutilization of SDBs in a particular industry category. A price preference of ten percent (10%) of the lowest bid will be utilized for evaluation purposes only.</p> <p>b. Request for Proposals (RFP) is an advertised solicitation for competitive sealed proposals, with a designated place, date and time for opening. An RFP is used when it is not feasible to specifically define the scope of work for contractual services. Instead the College seeks a responsible vendor to present an approach, methodology, price and qualifications for accomplishing the work. All of the qualifications are evaluated by a selection committee. Evaluation criteria and points will be allotted for each factor based on the information in the solicitation. Final terms and price are subject to negotiation by authorized College representatives. An RFP is generally known as “best value procurement” because the award decision is based on a combination of price and non-price factors.</p> <p>c. Request for Qualifications (RFQ) is a process which may be used to determine the qualifications from proposers when the College cannot or has not completely established the scope of services. An RFQ may be used, for example, when creating a pool of qualified vendors to be used on a rotational basis, or in a two-step competitive basis where the scope of services is incomplete and only those firms selected in the qualification phase compete when a project is identified. An RFQ can also be used to establish minimum qualification standards by type of work for consultants, the consultant competitive selection process, and the work performance evaluation system for professional consultants who seek provide professional services to the College pursuant to section 287.055, Florida Statutes, including, but not limited to: acquisition of professional architectural, engineering, landscape architectural, or surveying and mapping services, when a project is identified.</p>
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APPENDIX 00 01 PURCHASING BID LIMITS

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d. Invitation to Negotiate (ITN) as defined by section 287.057(1)(c), Florida Statutes, is a solicitation used by the College which is intended to determine the best method for achieving a specific goal or solving a particular problem and identifies one or more responsive vendors with which the agency may negotiate in order to receive the best value. The ITN must describe the questions being explored, the facts being sought, and the specific goals or problems that are the subject of the solicitation. The criteria that will be used for determining the acceptability of the reply and guiding the selection of the vendors with which the College will negotiate must be specified. The college shall evaluate replies against all evaluation criteria set forth in the invitation to negotiate in order to establish a competitive range with which to commence negotiations. After negotiations are conducted, the College shall award the contract to the responsible and responsive vendor that the College determines will provide the best value to the College, based on the selection criteria.

e. Request for Information (RFI) is used to find out if there are companies that can provide certain goods or services, or to assist the College in better understanding what competitive or non-competitive solicitation process to use for a particular need, or to research general, special, and/or technical specifications for a solicitation. RFI's are therefore seldom the final stage, but instead are often used as the first step of a two-step solicitation process, if the College chooses. The College reserves the right to do the following after issuance of an RFI: 1) issue a formal solicitation, 2) procure goods or services without competitive solicitation based upon the exception available to the College in Florida Administrative Code Rule 6A-14.0734(2), or, 3) not to proceed to the second step of procuring goods and services.

f. Request of a Letter of Interest (RLI) is a method of selecting a vendor whereby vendors are invited to submit a summary of their qualifications and state their interest in performing a specific job or service. A RLI identifies, in general terms, the work required. Responses are evaluated by an authorized panel selected by the College, mostly based on experience and qualifications.



NOTICE TO PROCEED TO CONTRACTOR

Date:
Project:
Project Number:

To: (Name of Construction Manager)

Contract For: (Description of project)

You are hereby notified that the Contract Times stated for the above project will commence on **(Date)**. On that date, start performing the obligations required by the Contract Documents. Duration of the project is _____ **business days** with a required Substantial Completion date of **(Date)**.

Before commencing Work at the Project Site, deliver the certificates of insurance and payment and performance bond as applicable and as required by the Contract Documents to the Owner.

OWNER
Broward College Authorized Owner's Representative

_____ Date _____
Authorized Signature
Name, Senior Project Manager

CONTRACTOR
Contractor's Authorized Representative

_____ Date _____
Authorized Signature
Company: _____
Name: _____
Title: _____

Enclosures: **Approved GMP and Approved PO**

cc: Contract Administrator, Project Manager, Construction Manager, Construction Files

Broward College Facilities Management Access Control Communication Matrix

MISSION:

Our Mission is to support and stimulate the educational goals of the College by constructing and maintaining safe, sustainable and inspirational environments while balancing our financial resources, leveraging the talent of local engineering, design, and construction professionals and maintaining relationships with the communities that support us.

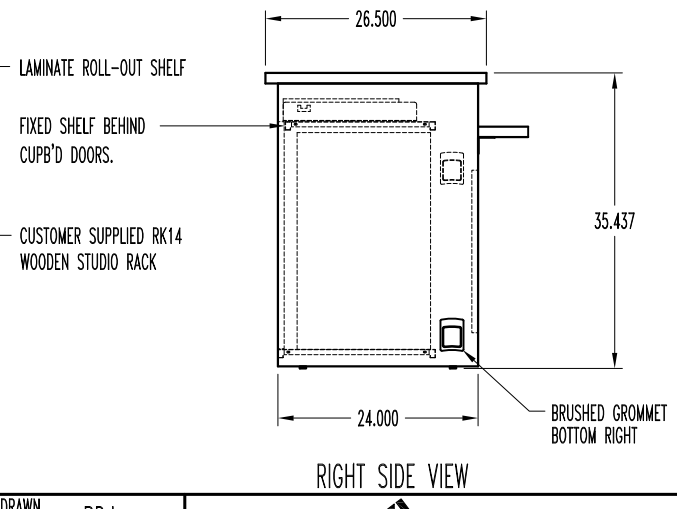
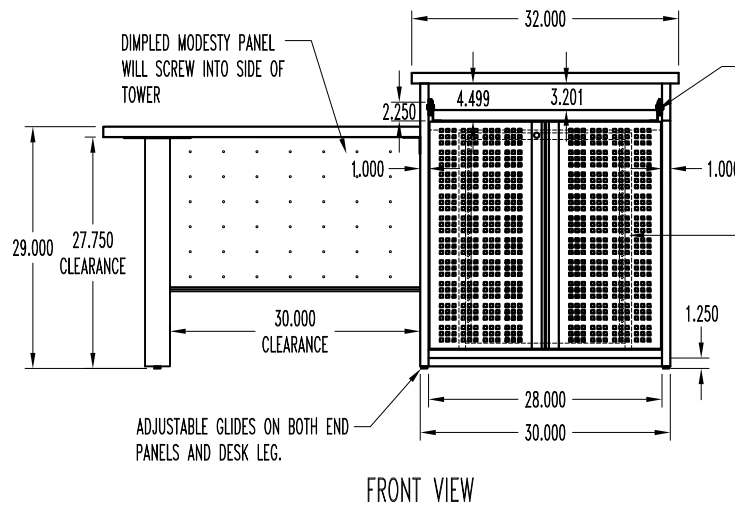
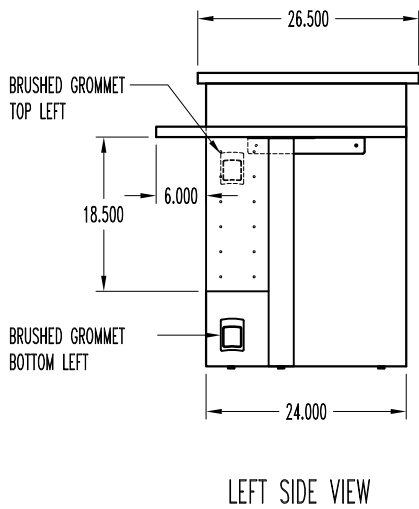
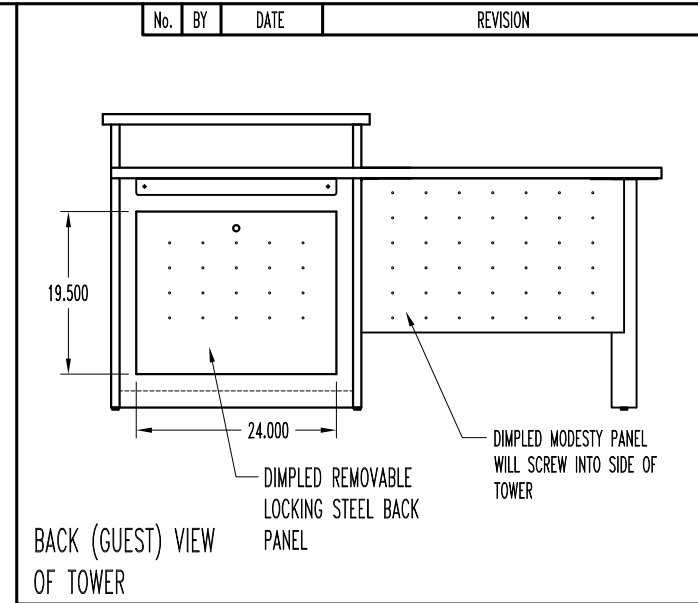
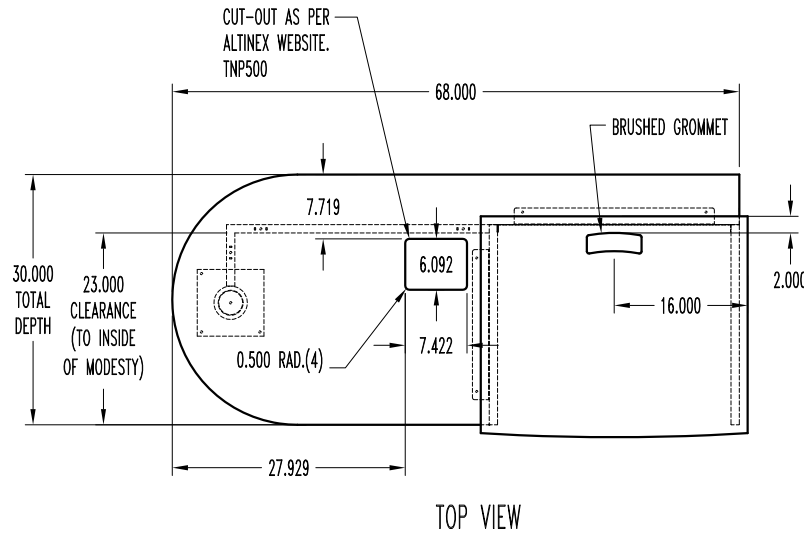
ACCESS CONTROL MANAGER:

Our goal is to involve the Access Control Manager in our projects early on to avoid changes later in the project. The following steps will be taken:

1. The Access Control Manager will be invited to the Facilities Design and Construction monthly meetings to review status of projects.
2. The Access Control Manager will review the Construction Document's at 30% completion to place the location of the devices required.
3. The Access Control Manager will confirm location of the devices and complete scope on the 90% complete Construction Documents.
4. For all new construction and renovation projects the Access Control vendor will submit their proposal to the Construction Manager.
5. The Access Control Manager will assist as the BCSPM during the construction for Access Control scope.
6. The Access Control Manager will be responsible to request proposal and request purchase order for specific access control projects not related to new construction or renovation projects.

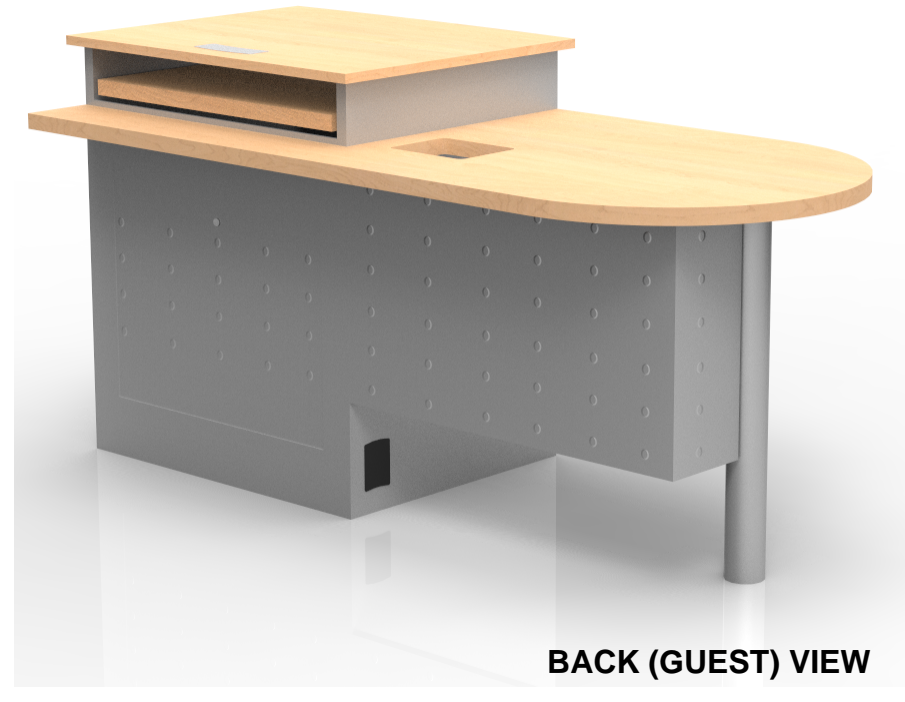
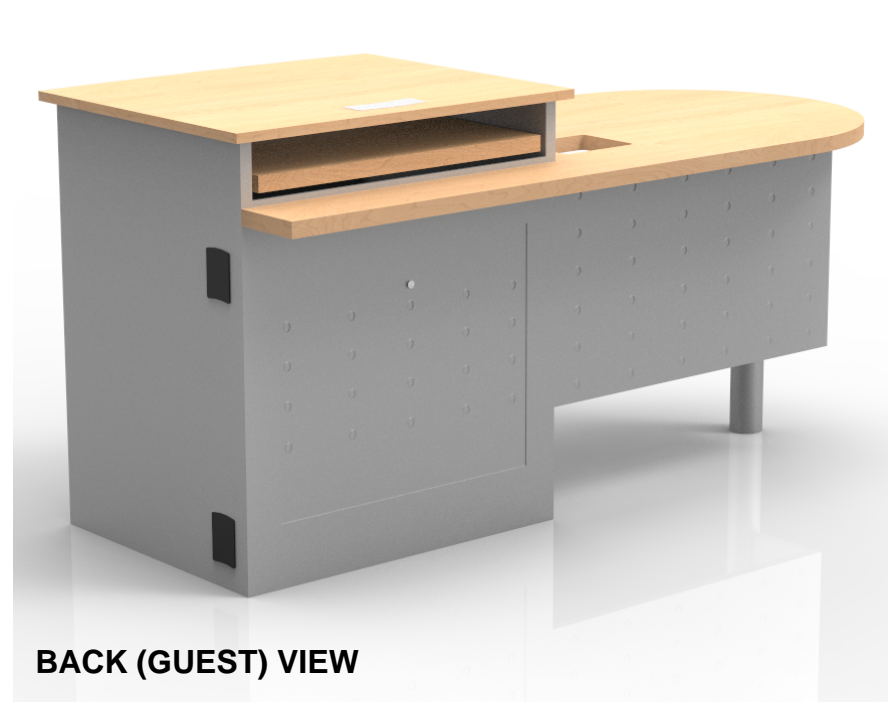
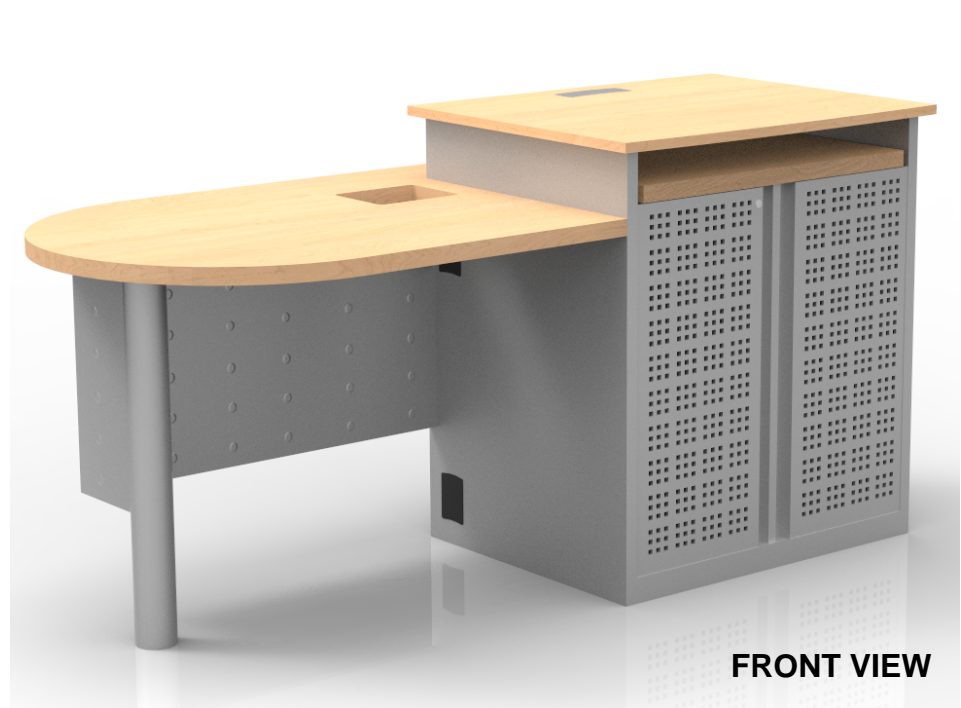
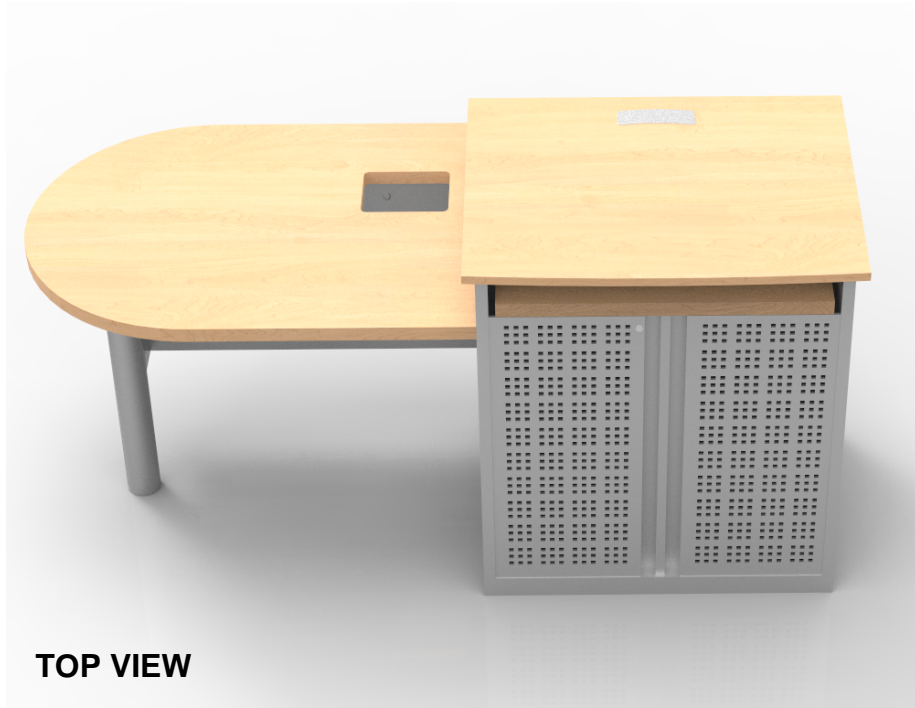
Title	Responsibilities/ Roles	Name	Phone Number	Email Address
Budget and Planning Division				
AVP Facilities Planning & Capital Budgets	Master Plan/ Workday/ Budget/Planning	Ana Ovalles	(954) 201-6512	aovalles@broward.edu
Design and Construction Division				
AVP Facilities Design + Construction	Budget/ Plan/ Oversee Construction. & Renovation Process	Deborah Czubkowski	954-201-6900	dczubkow@broward.edu
Senior Construction PM North Campus	Main contact for North Campus, Cypress Creek & YMCA	Nelson Goris	954-201-2550	ngoris@broward.edu
Senior Construction PM Central Campus	Main contact for Central Campus, Tigertail & DTC	Priscila Fort	954-201-6975	pfort1@broward.edu
Senior Construction PM South Campus	Main contact for South Campus, Miramar, Pembroke Pines & Miramar	Robert Bellot	954-201-8706	rbellot@broward.edu
Captain, Campus Safety	College Wide Access Control Project Manager	Lynda Nation	954-201-5324	lnation@broward.edu
Manager, Physical Security Technology	College Wide Access Control Project Manager	Timothy Andrasek	954-201-5326	tandrased@broward.edu

NOTE: RIGHT UNIT SHOWN.

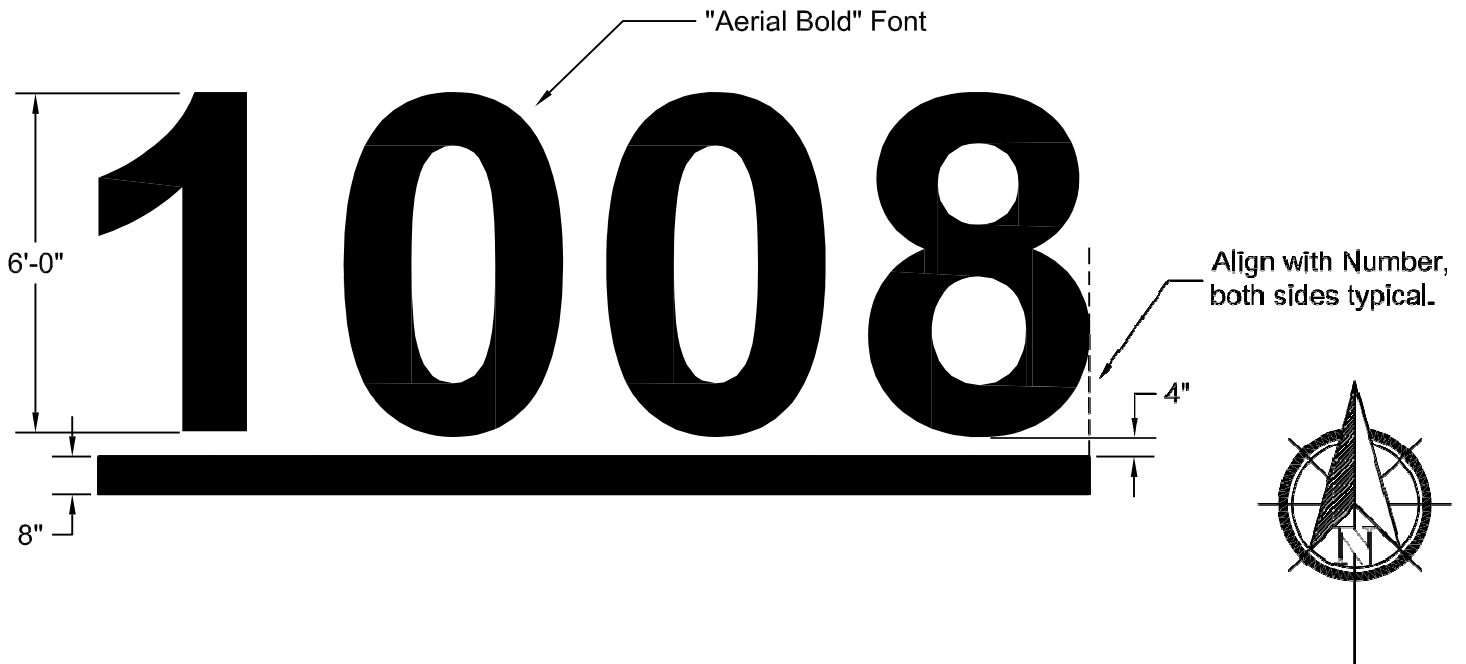


DRAWN	RDJ	Pembroke	
DATE	17 MAR 14	PRODUCT GROUP	CUSTOM DESK
REQUESTED BY	BCC	DRAWING No.	RDR-421
			SHEET No. 1 OF 1
			REV. 00

3D DRAWING - RIGHT UNIT SHOWN



APPENDIX 01 03 ROOF IDENTIFICATION NUMBER



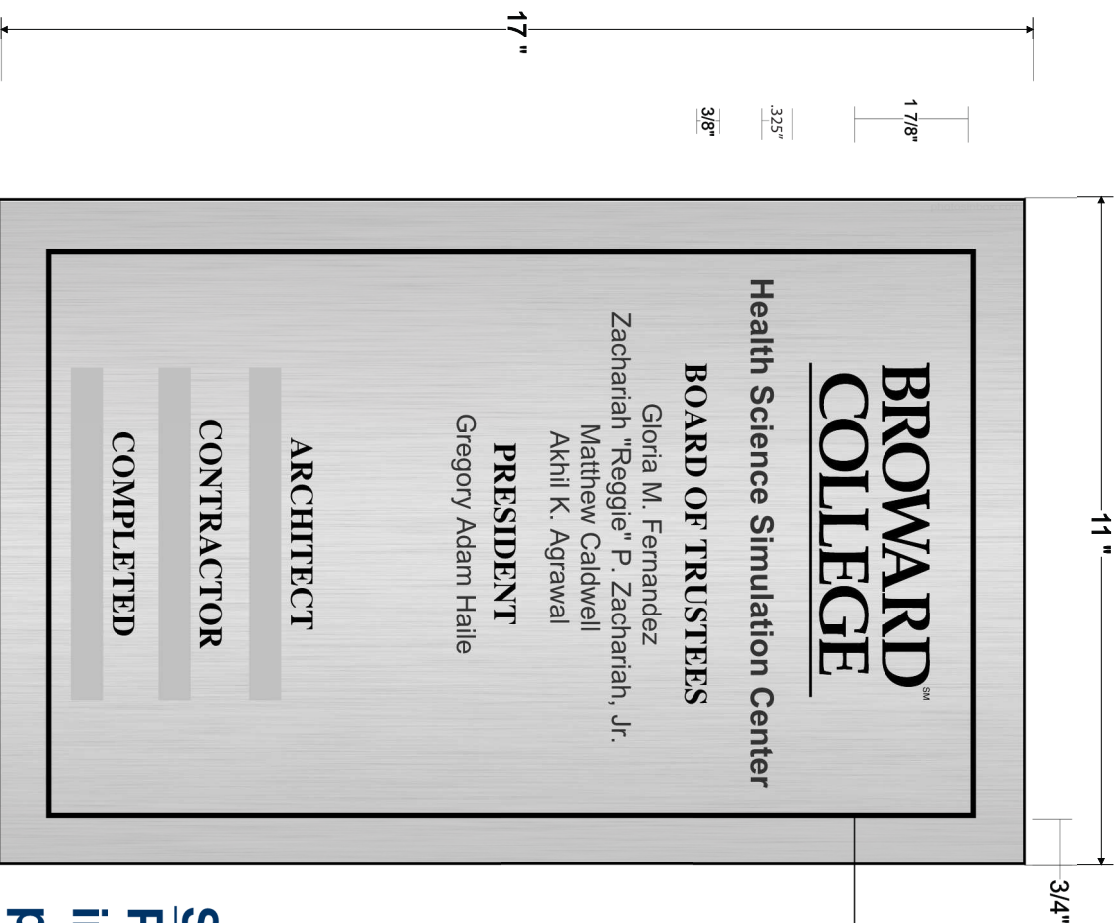
Building Identification Number Specifications:

The contractor shall adhere to the completion of the roof membrane installation. The contractor shall adhere to the manufacturer's cut number to the completed roof, using roofing manufacturers approved adhesive. The font shall be Aerial Bold.

The numbers and underline shall be the same material as the roofing membrane or as approved by the roofing manufacturer. Color shall be contrasting (typically black). The underline shall begin at the edge of the first number, and finish at the edge of the last number.

The contractor shall orient the number so top of the number is to the north.

Confirm location of the number with the Broward College Project Manager.



- SPECIFICATIONS**
- 5/16" aluminum
 - Recessed copy painted Black Semi-gloss Satin
 - Blind mount w/standard studs
 - Qty. 1

Sample:
Please confirm
information prior to
production

Meeting #1

Broward College Facilities Mgmt.
3501 SW Davie Rd.
Davie, Florida 33314
Phone: (954) 201-6971
Fax: (954) 201-6444

Project: Insert Project Name
and brief description

Pre-Construction Meeting (Building) Agenda

MEETING DATE: //

MEETING TIME:

MEETING LOCATION:

OVERVIEW:

The purpose of this meeting is to introduce everyone involve with the project and discuss the pre-construction agenda and project scope.

ATTACHMENTS:

ATTENDEES:

Name	Company	Phone Number	Email
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Introductions & Attendance Sign-In

No	Meeting Origin	Title	Assignment	Due Date	Priority	Status
1.1	1	Intro			High	Open

Communication

No	Meeting Origin	Title	Assignment	Due Date	Priority	Status
2.1	1	Information Distribution			High	Open

Superintendent

No	Meeting Origin	Title	Assignment	Due Date	Priority	Status
3.1	1	Contact on Site			High	Open

Description:

Contractor will have a competent Superintendent on site at all times when work is taking place.

Use of the Site

No	Meeting Origin	Title	Assignment	Due Date	Priority	Status
4.1	1	Project Limits			High	Open

Description:

Contractor will be in charge of the site inside the project limits.

Project Scope and Intent

No	Meeting Origin	Title	Assignment	Due Date	Priority	Status
5.1	1	Demolition			High	Open

Meeting #1

5.2	1	Construction			High	Open
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Construction Schedule / Coordination

No	Meeting Origin	Title	Assignment	Due Date	Priority	Status
6.1	1	Duration			Medium	Open
6.2	1	Contract Dates			Medium	Open
6.3	1	Hours of Operation			High	Open
6.4	1	Moving Occupants, Materials, Equipment, etc.			High	Open

Staging Area and Job Site Use

No	Meeting Origin	Title	Assignment	Due Date	Priority	Status
7.1	1	Requirements			Medium	Open
<p>Description:</p> <ol style="list-style-type: none"> 1. Plans & specs requirements 2. Site access - keys/badges/etc. 3. Job signs - coordinate with BC 4. Job trailer and parking (personal & company vehicles) 5. Security and temporary fencing 6. Material and/or debris storage & disposal 7. Deliveries & daily access 8. Disposal in accordance with documents 9. Salvage materials 10. Owner furnished items - delivery & coordination 11. Hazardous materials 12. Existing conditions of site <ol style="list-style-type: none"> a. document and review with owner & architect/engineer before construction b. correct and /or restore any damage to original conditions 13. Use of owner's property, power, water, telephone & other facilities <ol style="list-style-type: none"> a. notify owner of any changes 						

Jobsite Noise & Dust Control

No	Meeting Origin	Title	Assignment	Due Date	Priority	Status
8.1	1	Important Aspects			High	Open
<p>Description: Respect users. This to include but not limited to students, clients, faculty and staff. No loud music or foul language.</p>						

Utility Locates

No	Meeting Origin	Title	Assignment	Due Date	Priority	Status
9.1	1	Requirement			High	Open
<p>Description: Sunshine 811:</p> <ol style="list-style-type: none"> 1. Every excavation requires public locates. 2. Mark work area appropriately. 						

Meeting #1

3. Request 48 hours prior to starting work.
4. See additional information on their website: <http://www.sunshine811.com/>

Private Utility Location Services:
In addition to public utility locates, GPR (Ground Penetrating Radar) underground utility locates required by BC prior to any excavation.

Underground Utility Plans:
Contact BC Project Manager for underground utility plans.

Meetings & Inspections

No	Meeting Origin	Title	Assignment	Due Date	Priority	Status
10.1	1	Site Inspections			High	Open
10.2	1	Progress / Coordination Meetings			Medium	Open
10.3	1	Architect & Sub-consultants Project Visits			High	Open
10.4	1	Pre-installation & Start-Up Meetings			High	Open

Quality Control

No	Meeting Origin	Title	Assignment	Due Date	Priority	Status
11.1	1	Contractor's Responsibility			High	Open
11.2	1	Owners Expects Good Quality			High	Open
11.3	1	Unacceptable Work			High	Open

Job Site Record Keeping

No	Meeting Origin	Title	Assignment	Due Date	Priority	Status
12.1	1	Contract Documents			High	Open
12.2	1	Maintaining As-Built Conditions			High	Open
12.3	1	Documents			High	Open
Description: RFIs, CCDs, Change Orders, Daily Logs, Submittals, Shop Drawings, etc.						
12.4	1	Photo Documentation			Medium	Open
Description: 1. Provide existing and progress photos 2. Upload photos in Procure - Photo Album - GC Progress Photos						

State Forms

No	Meeting Origin	Title	Assignment	Due Date	Priority	Status
13.1	1	Documentation			High	Open
Description: 1. Contractor must use.						

Meeting #1

2. Can get off web page - <http://architecture.mt.gov/forms/standardforms.asp>

Submittals

No	Meeting Origin	Title	Assignment	Due Date	Priority	Status
14.1	1	Pre-Construction Submittals			High	Open
Description: 1. Schedule - milestone, critical dates and two/three week look ahead 2. Schedule of values - breakdown by division - labor & materials at minimum 3. List of subcontractors & suppliers						
14.2	1	Documents			High	Open
Description: 1. Submittal schedule 2. long lead / special items 3. Number of copies & who gets 4. Response time 5. Substitutions 6. Format						

Request for Payment

No	Meeting Origin	Title	Assignment	Due Date	Priority	Status
15.1	1	Submittal Process			Medium	Open
Description: 1. Procure 2. Pencil copy submitted before original copy 3. Accompanied by updated schedule if changes 4. Lien releases						

Questions & Clarifications

No	Meeting Origin	Title	Assignment	Due Date	Priority	Status
16.1	1	RFIs, Response Time & RFI Log			Medium	Open

Modifications and /or Changes

No	Meeting Origin	Title	Assignment	Due Date	Priority	Status
17.1	1	Prerequisites			High	Open
Description: Approval from architect/engineer before proceeding with the changes						
17.2	1	Steps			High	Open
Description: 1. RFIs 2. Contractor or architect/engineer cost proposal 3. Construction contingency adjustment (CCA) 4. Construction change directive - change order 5. Meeting to discuss change orders & proposals						

Meeting #1

Claims & Delays

No	Meeting Origin	Title	Assignment	Due Date	Priority	Status
18.1	1	Requirements			Medium	Open
Description: 1. Process explained in contract documents 2. Liquidated damages						

Construction Methods and Safety Procedures (Comply with OSHA)

No	Meeting Origin	Title	Assignment	Due Date	Priority	Status
19.1	1	Procedure			High	Open
Description: 1. Means & methods - contractor's sole prerogative 2. Safety - responsibility of the contractor 3. Safety & construction signs - contractor's responsibility						

Testing & Inspections

No	Meeting Origin	Title	Assignment	Due Date	Priority	Status
20.1	1	Responsibilities & Requirements			High	Open
Description: 1. Type of test 2. Testing consultant 3. Who gets copies of reports? 4. Contractor responsible for retest 5. Quality assurance by owner is not substitute for quality control by contractor						

Commissioning

No	Meeting Origin	Title	Assignment	Due Date	Priority	Status
21.1	1	Responsibilities & Requirements			High	Open

Training

No	Meeting Origin	Title	Assignment	Due Date	Priority	Status
22.1	1	Requirements			Medium	Open
Description: 1. Follow outline in specs 2. Submit agenda and list of attendance 3. Coordinate with BC						

Substantial Completion

No	Meeting Origin	Title	Assignment	Due Date	Priority	Status
23.1	1	Completed Prerequisites			High	Open
Description: 1. Contractual obligations fulfilled						

Meeting #1

2. Formerly notify architect or engineer for substantial inspection
3. O & M manuals - submit as package, not bits & pieces
4. As-built Drawings

Warranty

No	Meeting Origin	Title	Assignment	Due Date	Priority	Status
24.1	1	Substantial Completion			High	Open
Description: Starts at substantial completion and ends one (1) year from certificate of completion or certificate of occupancy.						

Final Acceptance / Closeout

No	Meeting Origin	Title	Assignment	Due Date	Priority	Status
25.1	1	Requirements			High	Open
Description: 1. Contractual obligations fulfilled including Consent of Surety and Contractor's Affidavit 2. Date architect/engineer signs final payment application 3. Formally notify architect/engineer for final inspection 4. Punch list completed						

Concerns of the Facility User

No	Meeting Origin	Title	Assignment	Due Date	Priority	Status
26.1	1	Questions			High	Open

Audiovisual Standards

April 23, 2018

Ver 3.0

THIS DOCUMENT IS A WORK IN PROGRESS AND SUBJECT TO CHANGE.
THE DETAILS SHOWN IN THIS DOCUMENT ARE TO BE USED AS REFERENCE AND WILL NEED
TO BE MODIFIED TO EACH INDIVIDUAL PROJECT.

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CLASSROOM STANDARDS

Standard Classroom

Purpose: The standard classroom will typically seat between 20 and 40 students. The largest projection screen possible will be installed based on the ceiling height. In some cases two projectors and screens may need to be installed in wide format rooms.

Furniture:

- Podium and Chair – College standard for most classrooms. Science installations require a different podium with a chemical resistant top. The BC facilities interior designer can obtain these specifications.

Display:

Standard:

- Epson Projector or college approved replacement model
- Draper Recessed 16:10 8' Projection Screen equivalent - 50" H X 80" W
Viewing Area

Computer:

- College standard podium computer
- LCD Monitor with side-mounted USB ports

Audio and Controls:

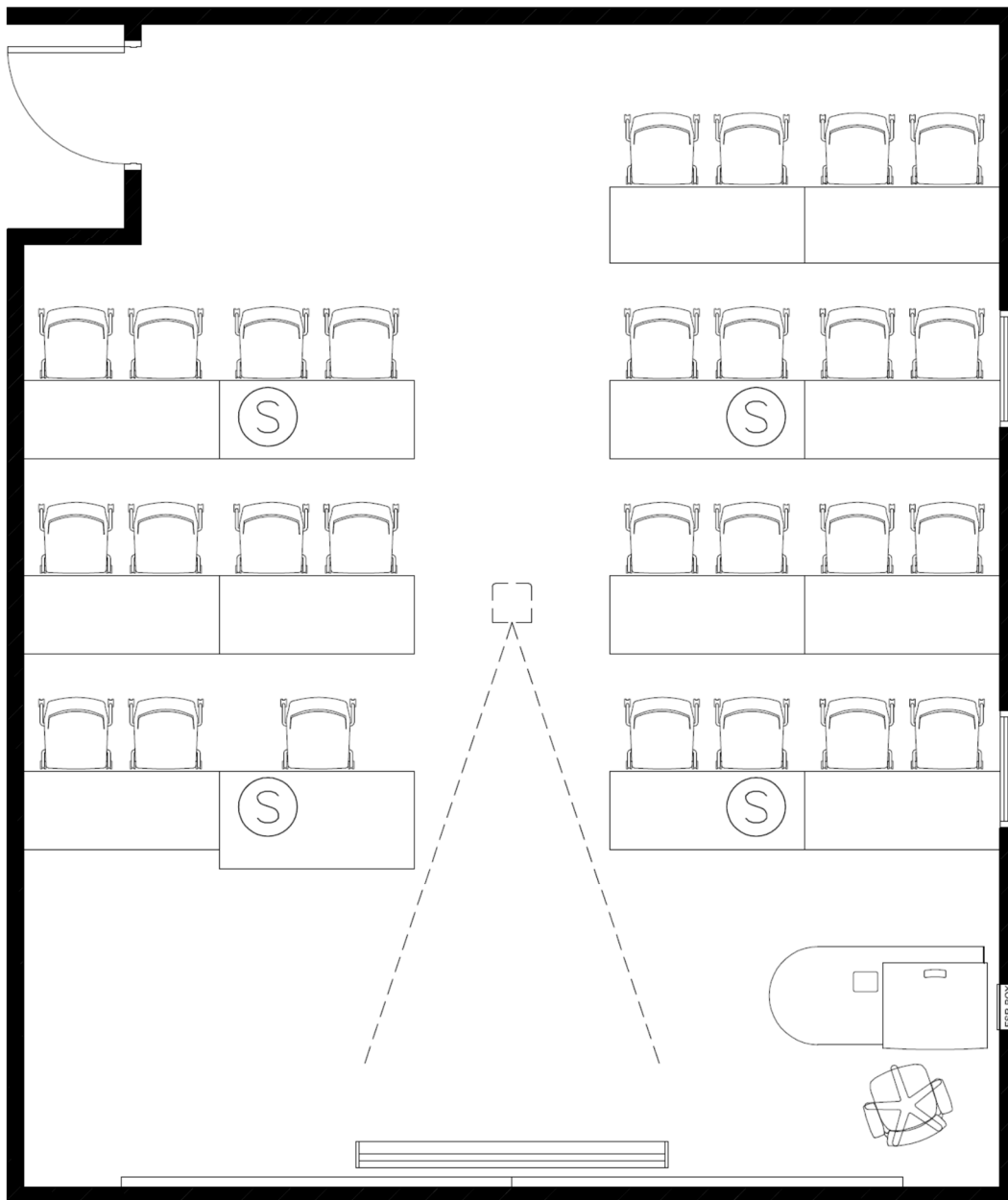
- Ceiling mounted speakers
- Compact audio amp installed in podium
- Crestron Video and Audio switching/amplification
- Crestron LCD Touch Panel Control
- Remote Management via Crestron Fusion
- Crestron Occupancy Sensor

CLASSROOM STANDARDS

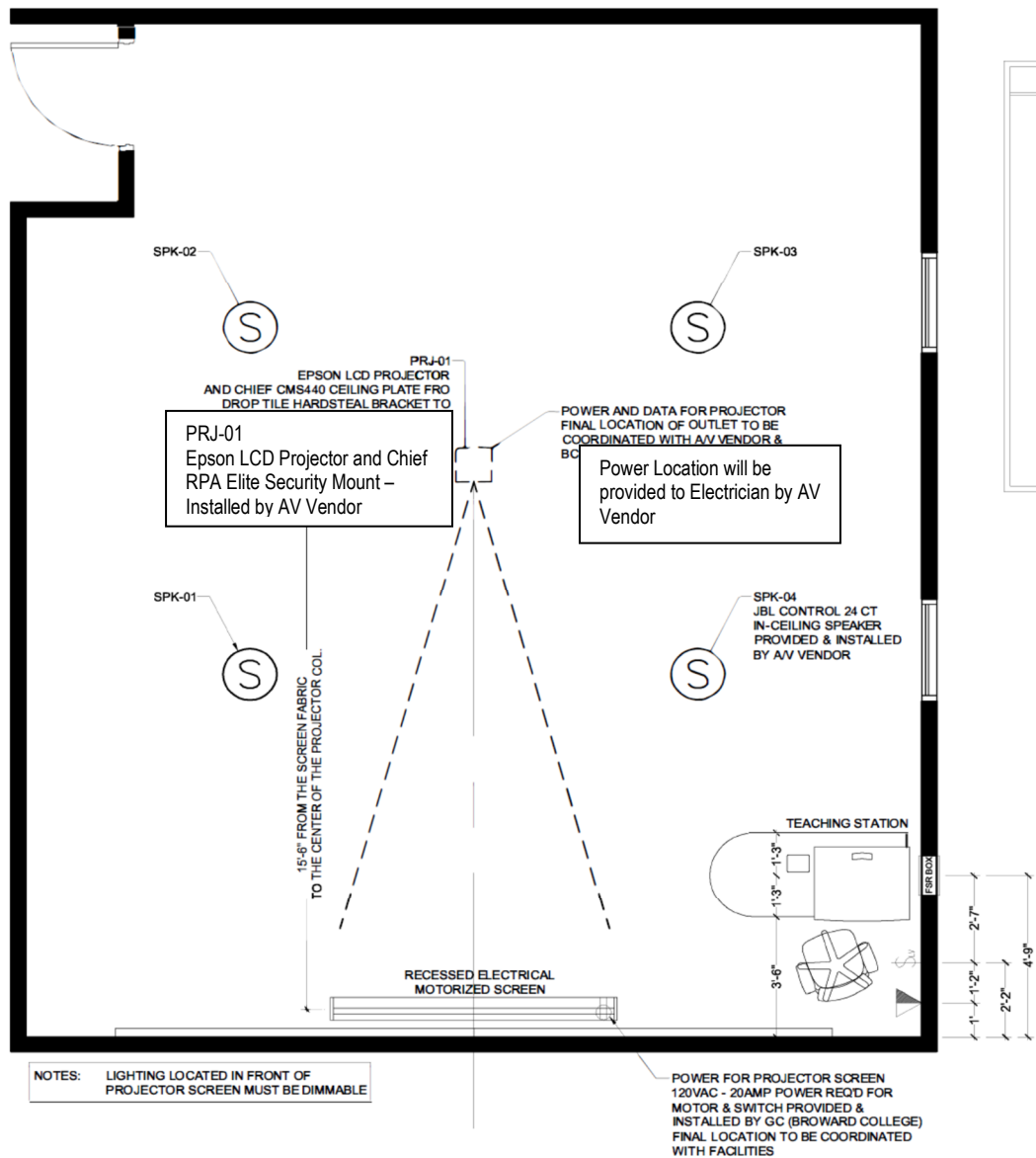


CLASSROOM STANDARDS

CLASSROOM



CLASSROOM STANDARDS



NOTE:
 IN LIMITED CASES POWER, VIDEO, AND DATA TO THE PODIUM WILL TERMINATE FROM A FLOOR BOX. THE CONTRACTOR WILL PROVIDE A FLOOR BOX UNDER TEACHING STATION AND (2) 1-1/2" CONDUITS TERMINATED IN THE CEILING CLOSEST TO THE PODIUM. POWER WILL BE LOCATED UNDER THE TEACHING STATION.
 SEE PODIUM LAYOUT

CLASSROOM STANDARDS

Unless otherwise noted during site inspection the following installation standards shall apply:

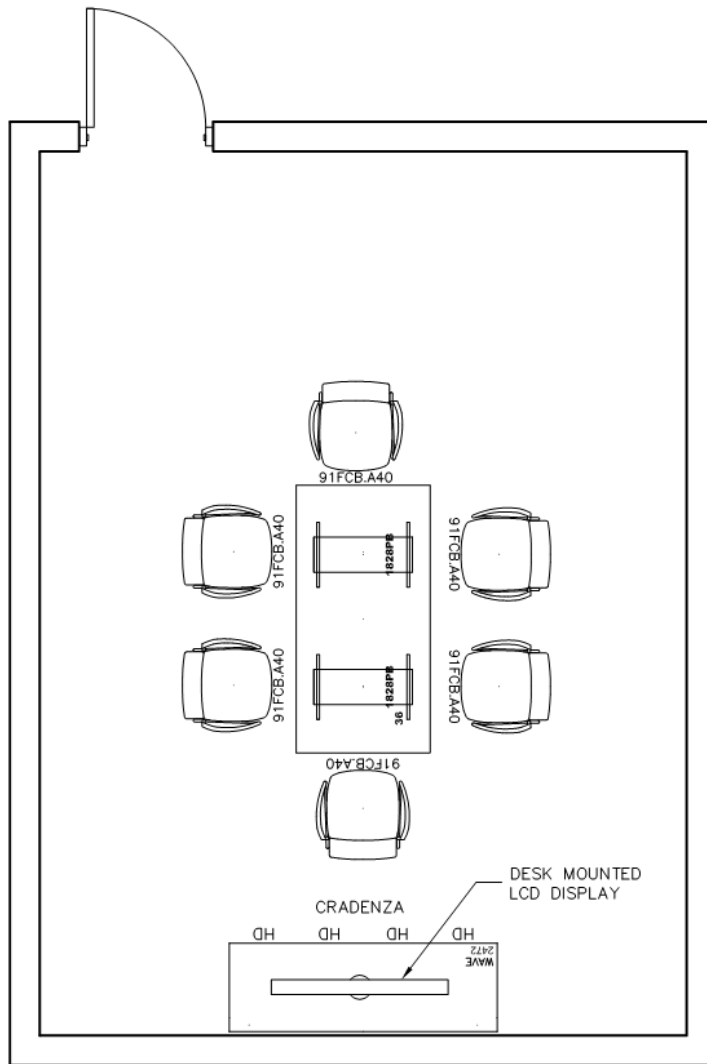
Standard Classroom Layouts:

- 1) Projection Screen will be centered on front wall of classroom if possible. Projector and screen location may change based on ceiling obstructions or other structural features. If a door opening exists, screen will be centered between door and adjacent wall.
- 2) When the front of the class is also the wall with the entry door, the teaching station will be located to the side of the projection screen away from the door (See Fig 1)
- 3) FSR or multimedia box will be in the adjacent wall to the Podium (See Fig. 1 & 2). In the event the FSR box cannot be located at the podium side, the FSR box will be located behind the podium as close to the wall corner as possible to avoid a trip hazard caused by podium umbilical cord.
- 4) Projector screen switch and emergency phone shall be located above the FSR box mounted at proper height to meet Code Compliance. (See Fig. 1)
- 5) When the front of the class is opposite the wall with the entry door, the teaching station will be located to the side of the projection screen diagonal from the door (Fig 1 & 2).
- 6) Projector installed at the midpoint of the throw distance for the projector.
- 7) Speakers will be ceiling mounted to provide consistent sound volume over the seating area. Location and quantity will be identified during site inspection.
- 8) Audiovisual components may vary based on application. BC AV Solutions Leadership and Facilities Management must approve any variation from standard configurations.
- 9) BC AV Solutions Leadership will select computer used in podium.
- 10) Approved specs for Teaching Station/Stool (See Table 1)

Manufacturer	Description	Part Number
AV VENDOR	ROLLING RACK PODIUM	To be provided by awarded vendor
KI	LEFT PODIUM	
KI	RIGHT PODIUM	
KI	STOOL	

**CONFERENCE ROOM
STANDARDS**

CONFERENCE ROOM "A"



CONFERENCE ROOM "A"

6 Seats or Less

CONFERENCE ROOM STANDARDS

CONFERENCE ROOM "A"

CONFERENCE ROOM "A" (6 seats or less)

Purpose: The configuration "A" or Small Conference Room typically seats less than six. The purpose of the conference room is for small team or department meetings and video conferencing using Microsoft Lync. This conference room is not intended for academic instruction.

Furniture:

- Table Dimensions: (Provided by BC Interior Design Specialist)
- Chairs: (Provided by BC Interior Design Specialist)

Display:

Standard:

- Epson Projector or college approved replacement model
- Draper Recessed 16:10 8' Projection Screen equivalent - 50" H X 80" W Viewing Area

Optional:

- 70" Professional Grade LCD/LED Display, wall-mounted
- If necessary, vendor will supply an OTA digital antenna and HD tuner for LCD Displays and projectors in conference room configurations.

Computer:

- College standard podium computer – Installed in credenza or under table
- RF Wireless keyboard and mouse

Audio and Controls:

- Crestron Mercury

Video Conferencing Camera:

Standard:

- Logitech HD Pro Webcam C920, 1080p Video, Auto Focus

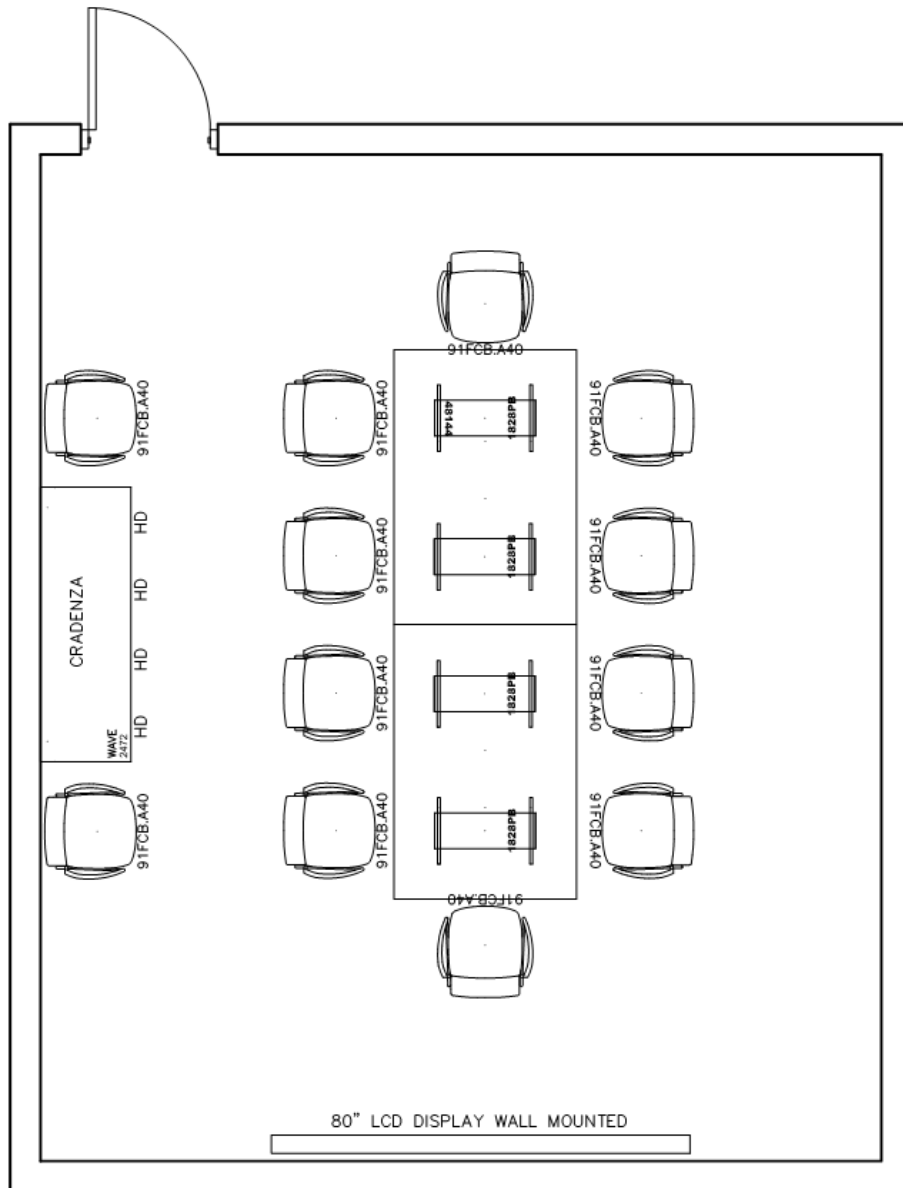
Conference Phone

- Crestron Mercury will provide audio from Skype/MS Teams.



**CONFERENCE
ROOM STANDARDS**

CONFERENCE ROOM "B"



CONFERENCE ROOM "B"

(6 - 10 SEATS)

CONFERENCE ROOM STANDARDS

CONFERENCE ROOM "B"

CONFERENCE ROOM "B" (6 – 12 seats)

Purpose: The configuration "B" or Medium Conference Room typically seats between six and ten users. The purpose of the conference room is for team or department meetings and video conferencing using Microsoft Lync. This conference room is not intended for academic instruction.

Furniture:

- Table Dimensions: (Provided by BC Interior Design Specialist)
- Chairs: (Provided by BC Interior Design Specialist)

Display:

Standard:

- Epson Projector or college approved replacement model
- Draper Recessed 16:10 8' Projection Screen equivalent - 50" H X 80" W Viewing Area

Optional:

- 80" Professional Grade LCD/LED Display, wall-mounted
- If necessary, vendor will supply an OTA digital antenna and HD tuner for LCD Displays and projectors in conference room configurations.

Computer:

- College standard podium computer – Installed in credenza or under table
- RF Wireless keyboard and mouse

Audio and Controls:

- Ceiling mounted speakers
- Ceiling mounted microphones for video conferencing
- Compact audio amp installed in credenza
- Crestron Video and Audio switching/amplification
- Crestron LCD Touch Panel Control
- Remote Management via Crestron Fusion
- Crestron Occupancy Sensor

Video Conferencing Camera and Audio

Standard:

- Vaddio Zoom Shot Camera and Audio Module utilizing ceiling microphones (see photo #4)



CONFERENCE ROOM STANDARDS

CONFERENCE ROOM "B"

Conference Phone

- Polycom SoundStation Duo



Conference Table Pop Ups (video, data, and power access):

- (1) Large Altinex Pop-Up boxes to be located at the center of the Conference Table – **Delete composite – add USB**

See photo



Conference Table Pop-Ups:

- (2) Small Altinex Pop-Up boxes to be located at each end of the Conference Table – See Photo



** Connections in these boxes will change with regard to connectivity requirements of the conference room and technology advances **

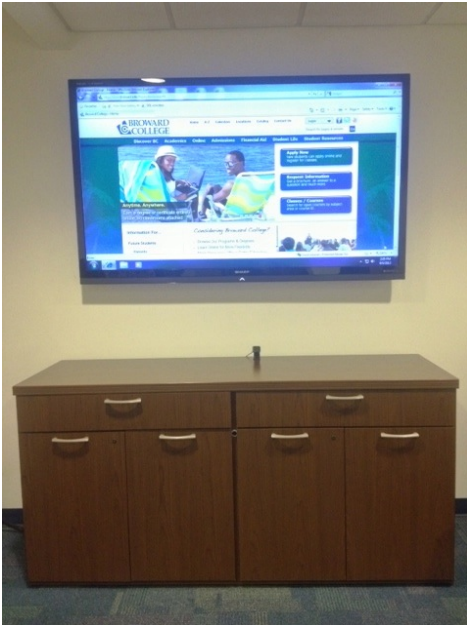
CONFERENCE ROOM STANDARDS

CONFERENCE ROOM "B"

Credenza:

Furniture provided by BC to house the AV equipment

BC Credenza



Typical Rack



Typical rack installed in an approved credenza. The Credenza designed for multimedia components have necessary vents, power, space for equipment racks, and IR extenders (built in the furniture).

**CONFERENCE
ROOM STANDARDS**

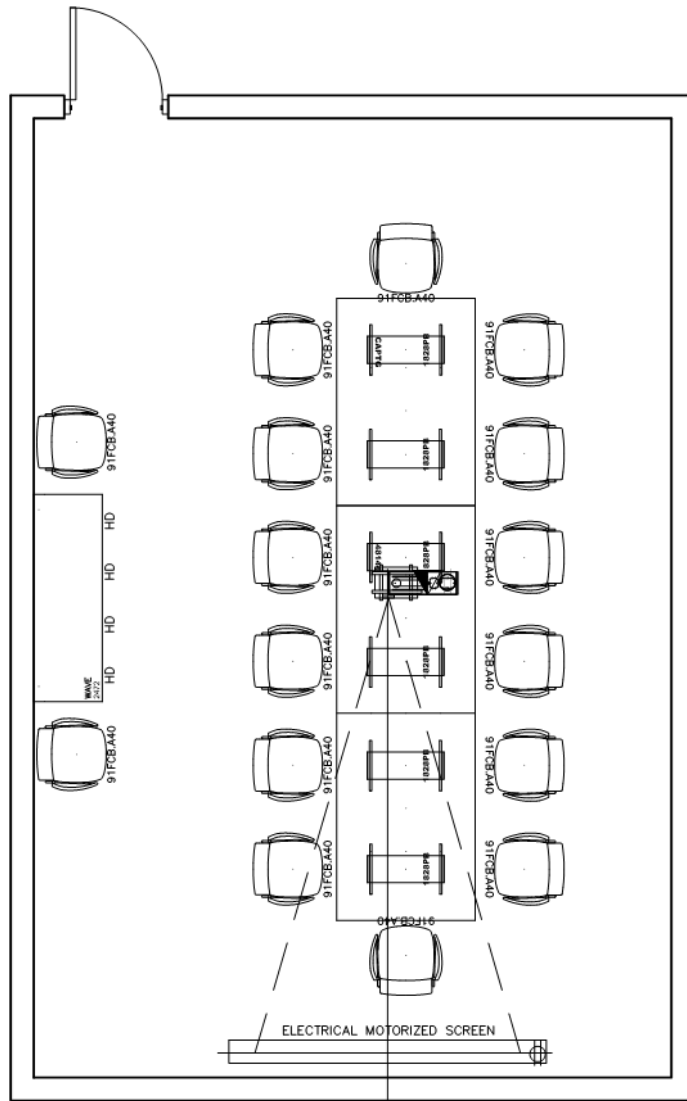
CONFERENCE ROOM “B”



Conference Room “B” (6 – 12 Seats)

**CONFERENCE
ROOM STANDARDS**

CONFERENCE ROOM "C"



CONFERENCE ROOM "C"

(11 - 20 SEATS)

CONFERENCE ROOM STANDARDS

CONFERENCE ROOM “C”

CONFERENCE ROOM “C” (11-20 seats)

Purpose: The configuration “C” or Large Conference Room typically seats between eleven and twenty users. The purpose of the conference room is for division or department meetings and video conferencing using Lync video conferencing. The primary difference between the medium and large conference room is additional ceiling microphones, A DSP, and speakers.. This conference room is not intended for academic instruction.

Furniture:

- Table Dimensions: (Provided by BC Interior Design Specialist)
- Chairs: (Provided by BC Interior Design Specialist)

Display:

Standard:

- Epson Projector or college approved replacement model
- Draper Recessed 16:10 10' Projection Screen equivalent - 65” x 104” W Viewing Area

Optional:

- 90” Professional Grade LCD/LED Display, wall-mounted
- If necessary, vendor will supply an OTA digital antenna and HD tuner for LCD Displays and projectors in conference room configurations.

Computer:

- College standard podium computer – Installed in credenza or under table
- RF Wireless keyboard and mouse

Audio and Controls:

- Ceiling mounted speakers
- Ceiling mounted microphones for video conferencing
- Compact audio amp installed in credenza
- Crestron Video and Audio switching/amplification
- Crestron LCD Touch Panel Control
- Remote Management via Crestron Fusion
- Crestron Occupancy Sensor

CONFERENCE ROOM STANDARDS

CONFERENCE ROOM “C”

Video Conferencing Camera

Standard:

- Vaddio ZoomShot Camera and sound module



Conference Phone

Standard:

- Polycom SoundStation Duo



Conference Room Pop-Ups and Floor Cable Management

These are the same products as used in the Config “B” Medium conference room.

**CONFERENCE
ROOM STANDARDS**

CONFERENCE ROOM “D”

1) **CUSTOM / MULT-PURPOSE CONFERENCE / TRAINING ROOM “D”**

- Any room accommodating more than 20 people will be specified and quoted custom design per room.

**PROJECT
INSTALLATION STANDARDS**

Instructions for Audio Video Contractor:

- 1) BC may provide a storage room at location for staging equipment and Vendor will be responsible for all equipment up until the Installation is complete and final walk-thru (signed-off) by BC.
- 2) All cable installation must meet State Requirement for Educational Facilities (SREF) and Local Code Compliance and BC Specifications as noted below but not limited to:
- 3) The project GC or electrician, will patch and paint all wall penetrations to match existing finishes. In addition, replace baseboard, carpet, chair rail, and ceiling tiles, if disturbed by the installation process.
- 4) All cables shall be routed above ceiling following the building lines. Place the cable where frequent changes in elevation can be avoided.
- 5) Install cable as high as practicable while maintaining a minimum distance of 24" above the finished ceiling.
- 6) Route cables away from equipment or building service areas and access panels ensuring proper working clearance.
- 7) Support cables independently from the building structure at maximum intervals of 48" with J-hooks.
- 8) Do not place cable on or use as a method of support other building systems such as HVAC ductwork, electrical conduits, fire sprinkler systems, water, sewer, drainage piping, etc. Do not attach cable supports to ceiling grid hanger wire.
- 9) When hanging hooks on drywall attach with sheet metal of sufficient length to be secured directly to the framing member.
- 10) When hanging hooks on concrete walls systems attach a plain hook with a plastic anchor and sheet metal screws or Tapcons. The fasteners shall be a minimum of 1" in length.
- 11) When hanging hooks on the building steel use the type with an integral or independent spring steel or set screw style beam clamp. Do not drill or cut structural steel members.
- 12) Support cable in other areas with ¼" all-thread attached to a steel structural member with a beam clamp or concrete anchor directly in the deck above. Attach the lower end of the rod to the ceiling grid using an Erico 3114Z34 drop rod securing clip or approved equal. Trim excess rod to within 1" of the spring steel "batwing". Install cable hooks with spring steel clips that are designed to attach directly to the rod such as Erico CAT214Z34.
- 13) Install all hangers plumb. The cable route selected shall allow for the drop rod clips to be placed at ceiling grid element joints. Clips & hangers maybe installed mid-span only to provide support around an obstacle or meet the minimum support requirements at the grid.

**PROJECT
INSTALLATION STANDARDS**

- 14) Secure cables to the hooks with cable ties. Provide plenum rated cable ties where required.
- 15) All cables that routed in the same direction shall be grouped (no fanning) together with maximum sag of 3" between supports.
- 16) Install a cable support within 24" of projector mast. Dress a 12" diameter service loop in the AV cabling and hang at this interval. Route the cable from the top of the service loop to the projector mast and secure with a cable tie and at maximum intervals of 12" to the finished ceiling. Secure the cable to the mast 6" above the ceiling tile. Secure loop with a minimum of 3 cable ties spaced equally around the loop.
- 17) Install a cable support within 6" of AV outlet conduit stub. Dress a 12" diameter service loop in the AV cabling and hang at this interval. Route the cable from the top of the service loop into the conduit stub. Secure the service loop with a minimum of 3 cables spaced equally around the loop.
- 18) Each room will have teaching station provided by BC. Vendor will install the media touch panel to the left of the monitor on the teaching station.
- 19) For a standard teaching station installation: FSR multimedia box will be installed by the Electrician. The AV Vendor will install the appropriate finish plate (inside the FSR unit) populated () RJ45 Data Connections, Speakon connector (for ceiling speaker output), (1) RJ-45 connection for HDMI over Cat5e, or Cat6. All FSR boxes should have a wire tie restraints for cables inside of box so flap will close.
- 20) Other, non-standard, AV installations may have variations regarding the number of connections and plate/jack termination.
- 21) Cables from workstation to FSR box should be pulled through a cutout on side of workstation and housed in a 12' black snake-skin umbilical. Cradle tie wraps should be used to fasten cables on inside of teacher's desk.
- 22) Altinex popup (Model TNP512C or equivalent) on teacher desk will be populated with (1) HDMI, (1) VGA, (1) audio 3.5 mm. (1) RJ-45, (2) power outlets
- 23) Flat Panel Display installations, Vendor will mount equipment using 3/4" fire treated plywood black backer and the designated wall mount bracket. Wall plate for LCD Display will be populated with (2) RJ45 connectors (1) for HDMI over CAT5e, or CAT6, and (1) Network for the display. A simple antenna to provide access to broadcast television will be installed above the ceiling
- 24) Structure to ceiling tile varies by room. Ceiling tiles size varies. Floor to ceiling height varies in every room. Walls are drywall.
- 25) Remove and discard old AV cabling from previous installations

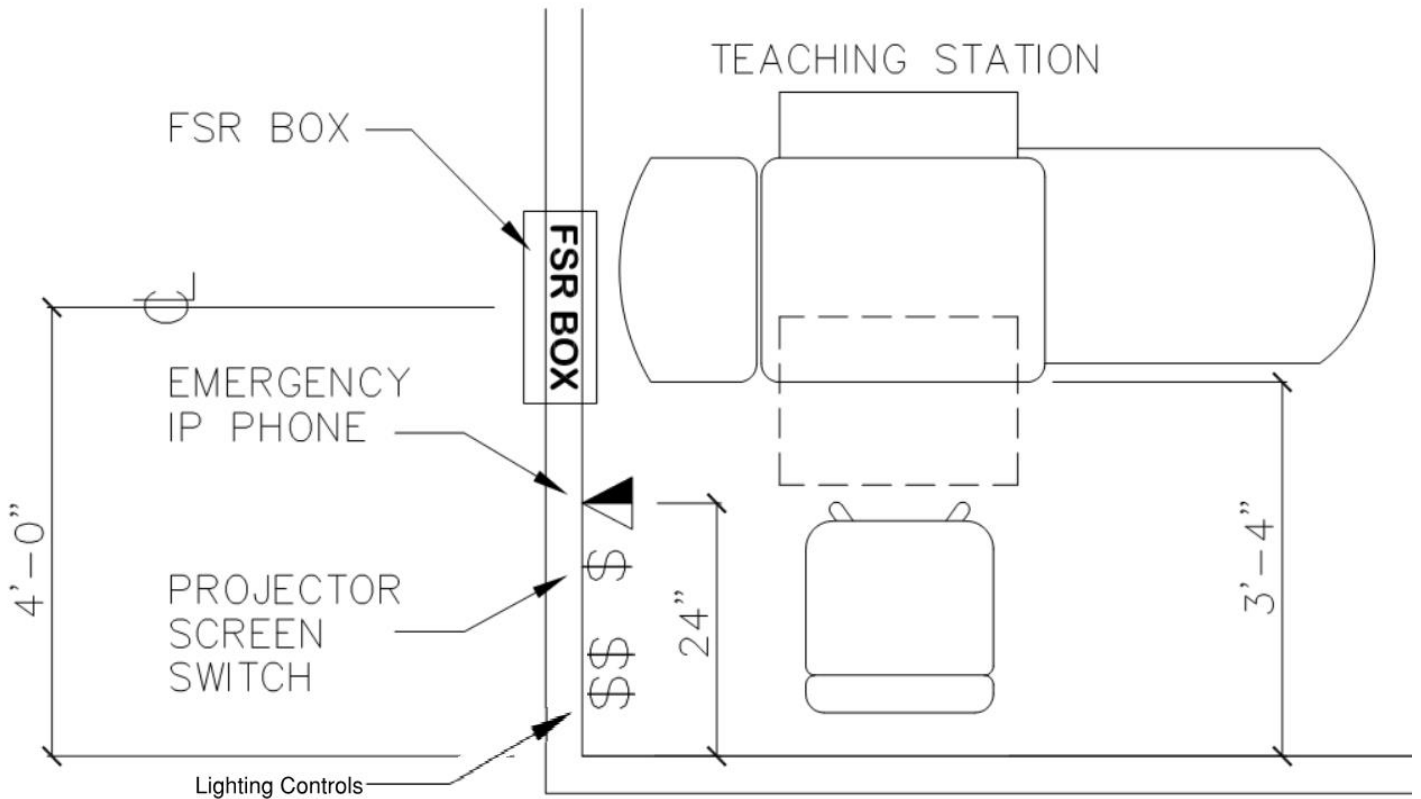
**PROJECT
INSTALLATION STANDARDS**

- 26) BC will indicate final location of screen and projector.
- 27) Vendor will provide all tools and accessories needed. Vendor will not borrow ladders or any other equipment from the college or other vendors.
- 28) Vendor will not stand on desk or chair to reach ceiling. Equipment is not allowed to be placed on furniture.
- 29) Vendor will be responsible for any ceiling tile breakage resulting from the AV installation.
- 30) Vendor will clean up all construction debris by the end of the work period for that day if the installation is taking place in an active classroom.
- 31) All AV cables will be free run and tie wrapped in podium rack to all components and wall plate.
- 32) Quotes must be submitted by line item according to resulting contract and must be valid for at least 90 days.
- 33) AV Vendor shall be responsible for verifying all equipment is installed and operational before scheduling a final inspection with the college and permitting agency. The College must approve any sign-off forms and payment will be made only when an authorized individual signs the form. Once the sign-off forms are signed, a copy of the PO, original proposal, MEP inspection report, and invoice need to be submitted as a package to the job project manager.

**PODIUM
FSR BOX DETAIL**

Figure 2

TEACHER PODIUM



ENLARGE FLOOR PLAN

Figure 3

LCD DISPLAY MOUNTING DETAIL

INTERIOR WALL ELEVATION – LCD DISPLAY

- A. For applications (such as conference rooms) that require the installation of a LCD Display

LCD Display the following installation specs will apply:

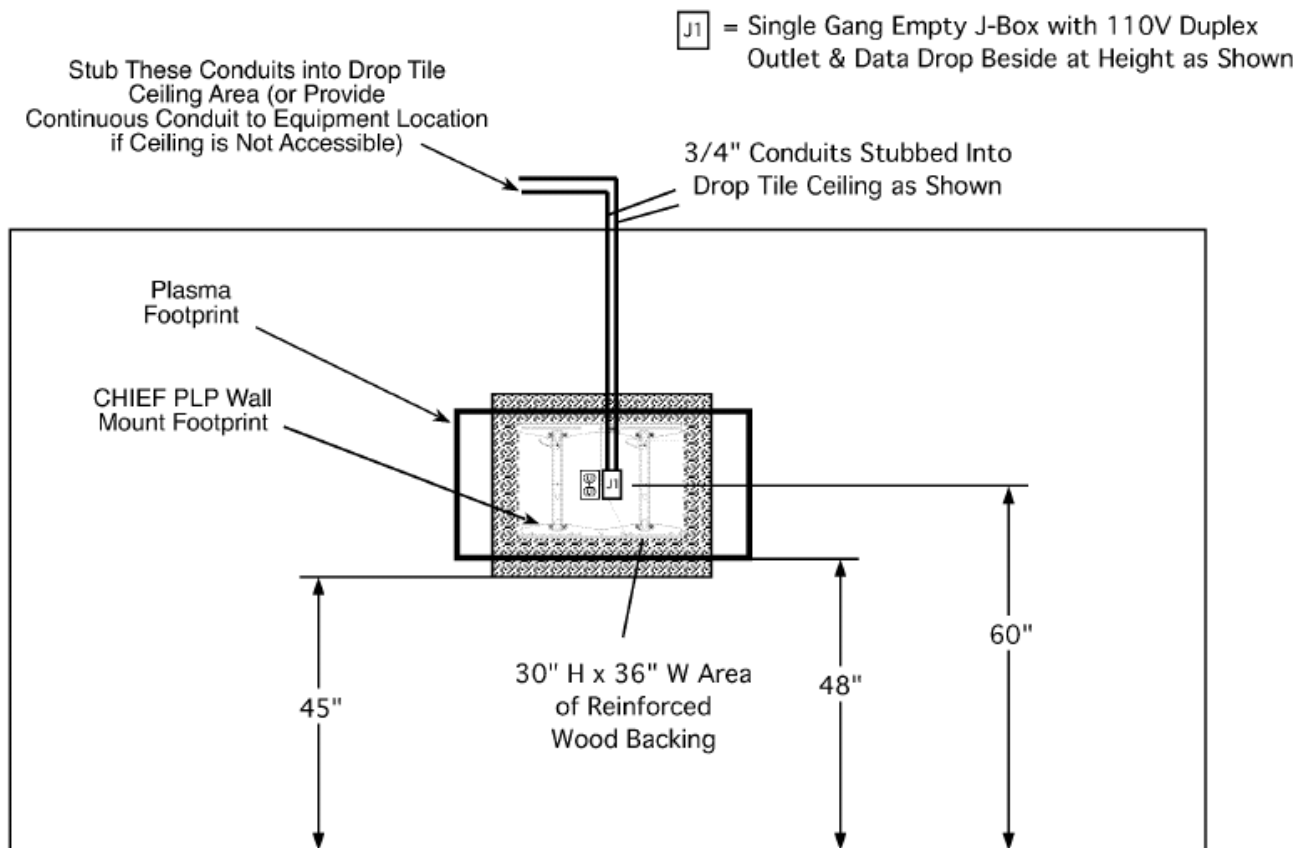


Figure 5

LCD DISPLAY MOUNTING DETAIL

INTERIOR WALL ELEVATION LCD DISPLAY ABOVE CREDENZA

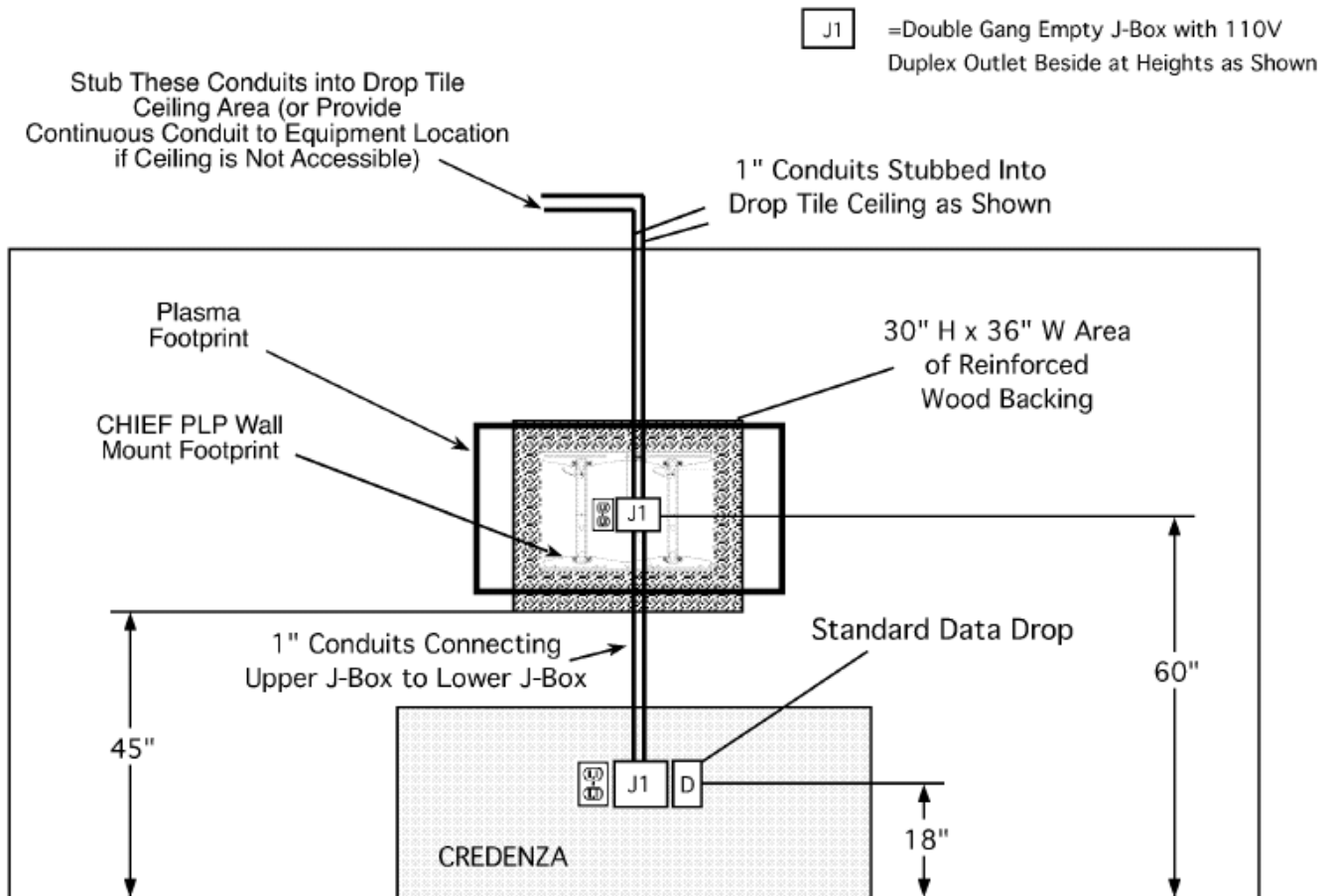


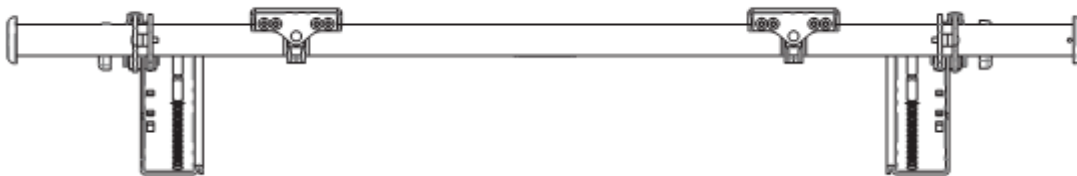
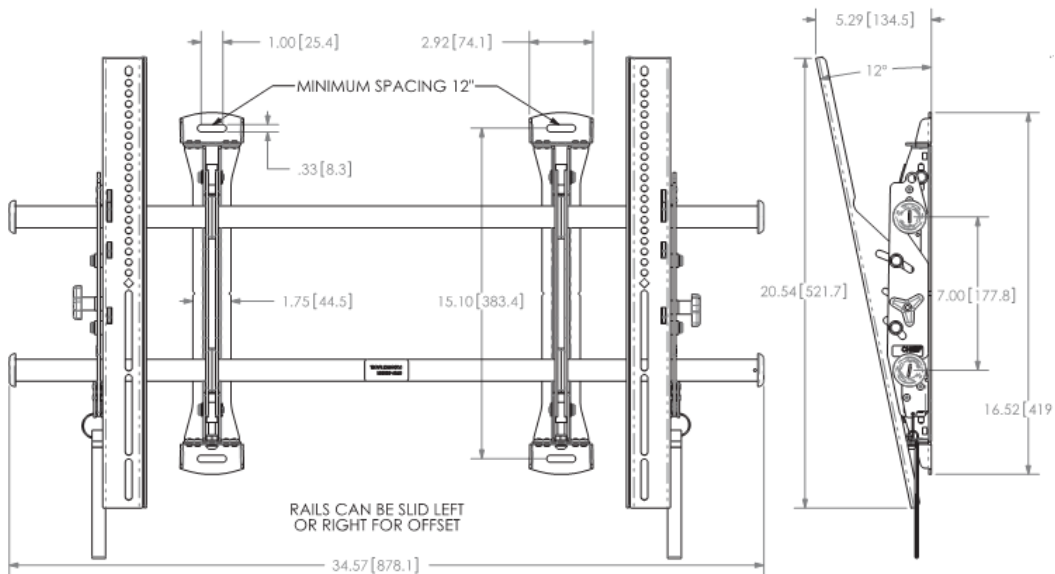
Figure 6

LCD DISPLAY MOUNTING DETAIL

Photo #7 – LCD Wall Brackets



Large FUSION Micro-Adjustable Tilt Wall Mount Overall Dimensions (H x W x D) 16.5" x 34.4" x 2.0"



CLASSROOM INTERACTIVE DISPLAYS

INTERACTIVE BRIGHTLINK

- A. The projector bracket location must be on an existing wall stud within the 12" width of the bracket to support the projector or backing that is installed in the wall at bracket location. For the best results without adding backing, find the wall stud closest to the center of the board location and install the power on one side. Provide a single gang AV box at 100" AFF to the center of the boxes with a (1-1/4" min.) conduit stubbed into the accessible ceiling for AV cabling.

BrightLink (Option)

Owner Responsibilities - Broward College will:

- Provide infrastructure for BrightLink (see attached)
- Remove existing chalk board

AV Vendor Responsibilities:

- Install BrightLink – top of board 81.5" AFF. Center of BrightLink will be different for each installation.
- Install new custom decora plate in FSR box
- Install custom DALITE/DRAPER whiteboard depending on size

Notes:

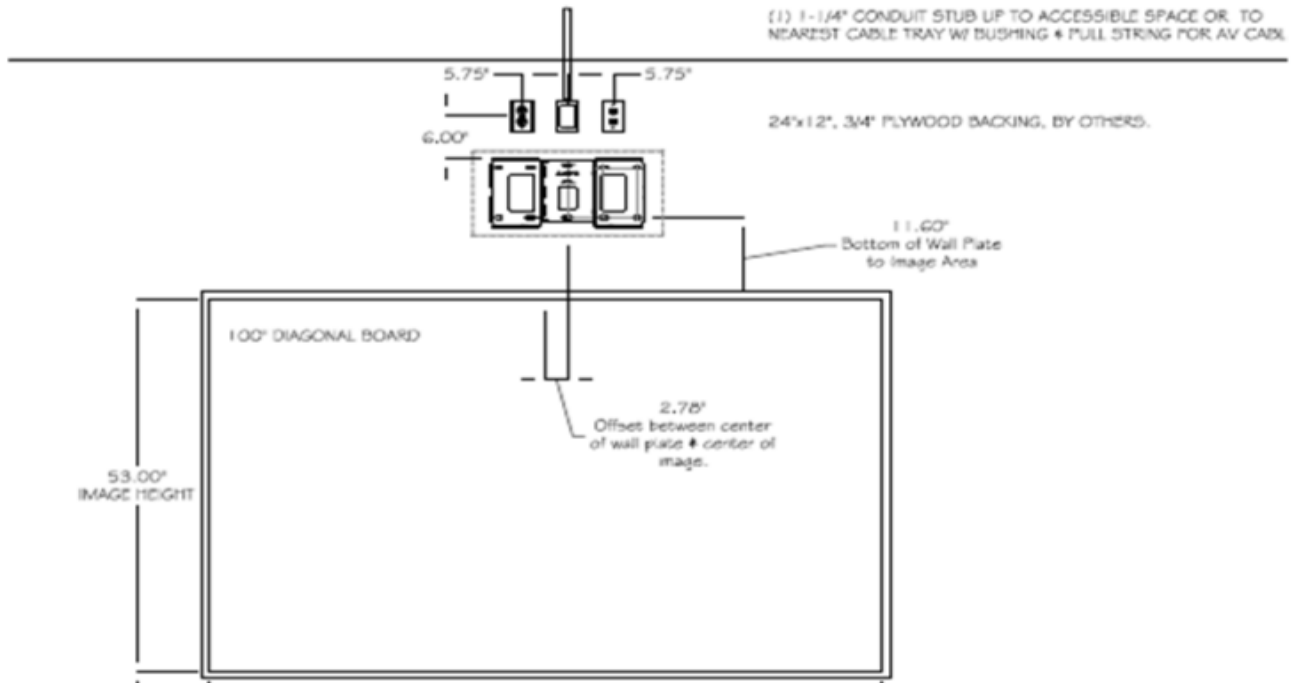
A new processor may be required for this installation.

BrightLink power will be controlled by the existing Crestron touch panel. Only the desktop computer output will be seen on the BrightLink Projector.

- When pulling cables – follow building lines. Cables above ceiling should be run vertically 48" max run between fasteners (sleeve anchors & tapcons). Hiltys can be used when installing hangers. Fender washers should not be used. Threaded rod will be installed where appropriate in every room. Whenever possible, put hooks on wall instead of ceiling.

CLASSROOM INTERACTIVE DISPLAYS

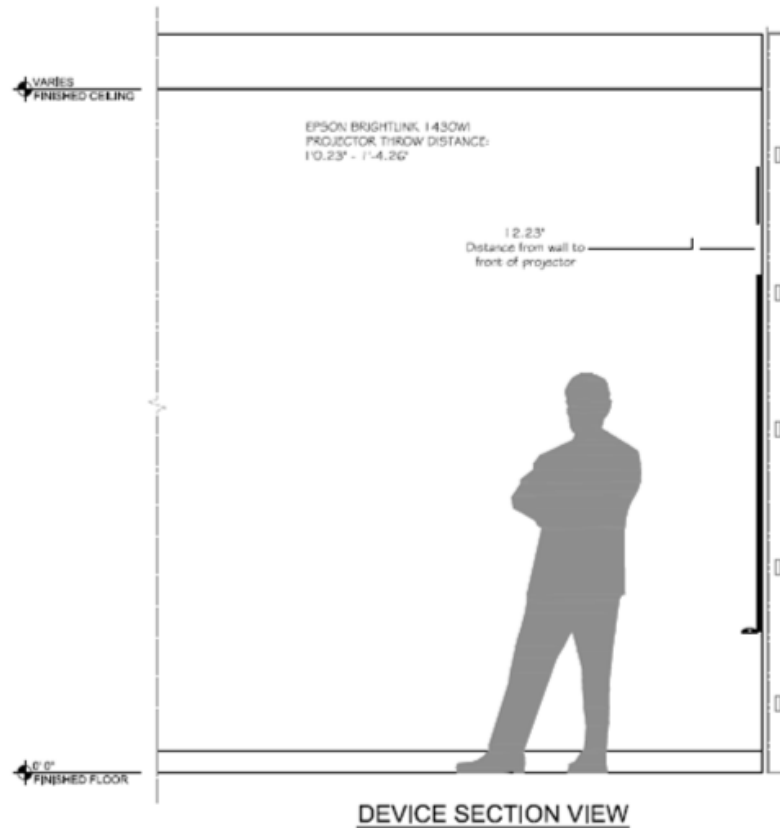
Epson BrightLink



CLASSROOM INTERACTIVE DISPLAYS

Epson BrightLink - ELEVATION

FRONT VIEW



PODIUM MOUNTED AV CONTROLS

AV PODIUM EQUIPMENT

Photo #1 – Crestron Control



Photo #2 – Touch Panel on Teacher's Podium



**PODIUM MOUNTED
AV CONTROLS**

Photo #3 – Podium AV Equipment Rack



**PODIUM MOUNTED
AV CONTROLS**

Photo #4 – Altinex Popup – Composite & Audio - No Longer Supported



**PODIUM MOUNTED
AV CONTROLS**

**AV Conference Table Pop-ups:
(Small Pop-ups Shown)**



**VIDEO
CONFERENCING**

VIDEO CONFERENCING EQUIPMENT

Photo #1 (ZoomShot - Wall Mounted)



Photo #2 (RoboShot - Ceiling or Wall Mounted)



**VIDEO
CONFERENCING**

VIDEO CONFERENCING EQUIPMENT

Photo #3 – Video Conference Phone



Photo #4 – Ceiling Microphone



**INFRASTRUCTURE
DETAIL - FSR BOX**

**FSR MULTI-MEDIA BOX
(COVER MUST BE FLUSH MOUNTED)**



INFRASTRUCTURE DETAIL - FSR BOX

WB-X2

1.65 4.31 4.31 1.88 1.50

12.38 12.38 1.88 4.31 4.31 1.88 3.97 1.50

1" & 1-1/4" CONDUIT KNOCK-OUTS, BOTH SIDES

WB-X2 BACK BOX GENERAL DIMENSIONS

WB-X2-CVR FLUSH-MOUNTED COVER (SHOWN WITH BACK BOX)

WB-X2-SMCVR SURFACE MOUNTED COVER (SHOWN WITH BACK BOX)

MODEL	FEATURES
WB-X2-GNG	BACK BOX, (2) 1 GANG AND (1) 4 GANG OPENINGS IN 2 ROWS w/KO's
WB-X2-IPS	BACK BOX, (24) IPS SLOTS, 2 ROWS OF 12 IPS SLOTS w/KO's
WB-X2-PLT	BACK BOX ONLY w/KO's
WB-X2-XLR	BACK BOX, (24) XLR HOLES, 3 ROWS OF 8 XLR HOLES w/KO's
WB-X2NK-GNG	BACK BOX, (2) 1 GANG AND (1) 4 GANG OPENINGS IN 2 ROWS w/o KO's
WB-X2NK-IPS	BACK BOX, (24) IPS SLOTS, 2 ROWS OF 12 IPS SLOTS w/o KO's
WB-X2NK-PLT	BACK BOX ONLY w/o KO's
WB-X2NK-XLR	BACK BOX, (24) XLR HOLES, 3 ROWS OF 8 XLR HOLES w/o KO's
WB-X2-CVR-BLK	LOCKING COVER, BLACK
WB-X2-CVR-WHT	LOCKING COVER, WHITE
WB-X2-SMCVR-BLK	LOCKING COVER, BLACK (SURFACE MOUNT)
WB-X2-SMCVR-WHT	LOCKING COVER, WHITE (SURFACE MOUNT)

WB-X2-GNG BACK BOX

WB-X2-IPS BACK BOX

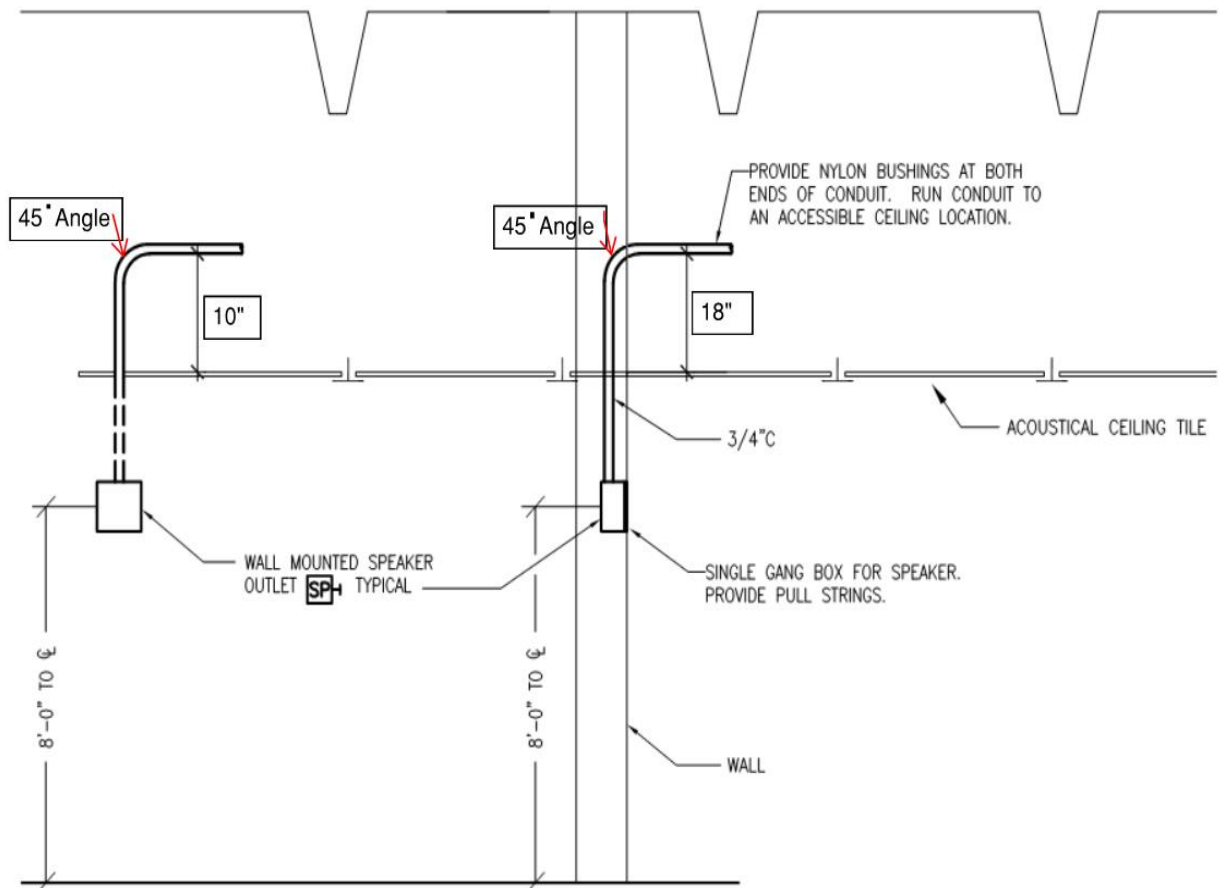
WB-X2-PLT BACK BOX

WB-X2-XLR BACK BOX

Note: If the walls are painted black, select WB-X2-CVR-BLK

INFRASTRUCTURE REQUIREMENTS

BLDG 72 DETAIL

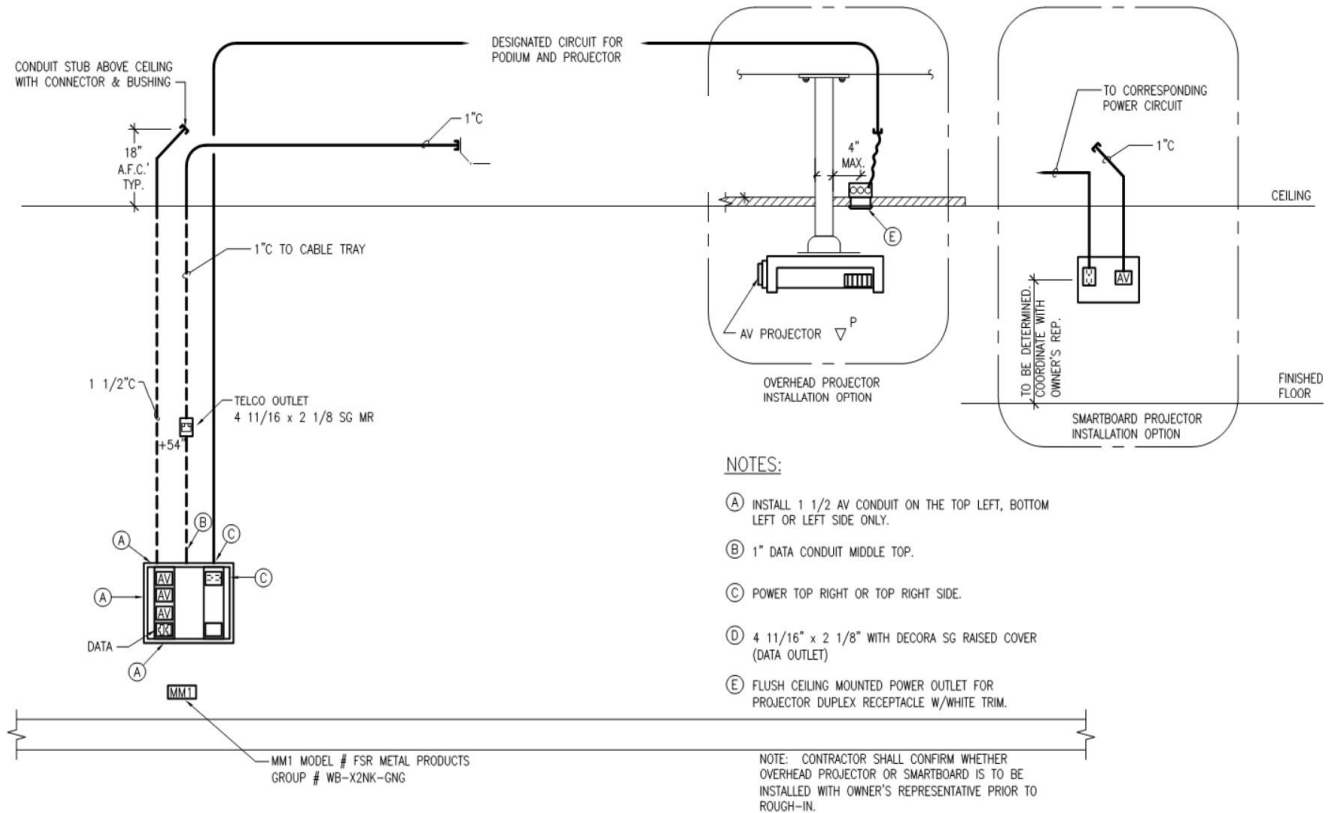


NOTES:

- 1) CEILING MOUNTED SPEAKERS DO NOT SECURE RACEWAY
- 2) SPEAKERS ARE PROVIDED & INSTALLED BY BROWARD COLLEGE A CONTRACTOR TYPICAL CEILING SPEAKER ROUGH-IN INSTALLATION

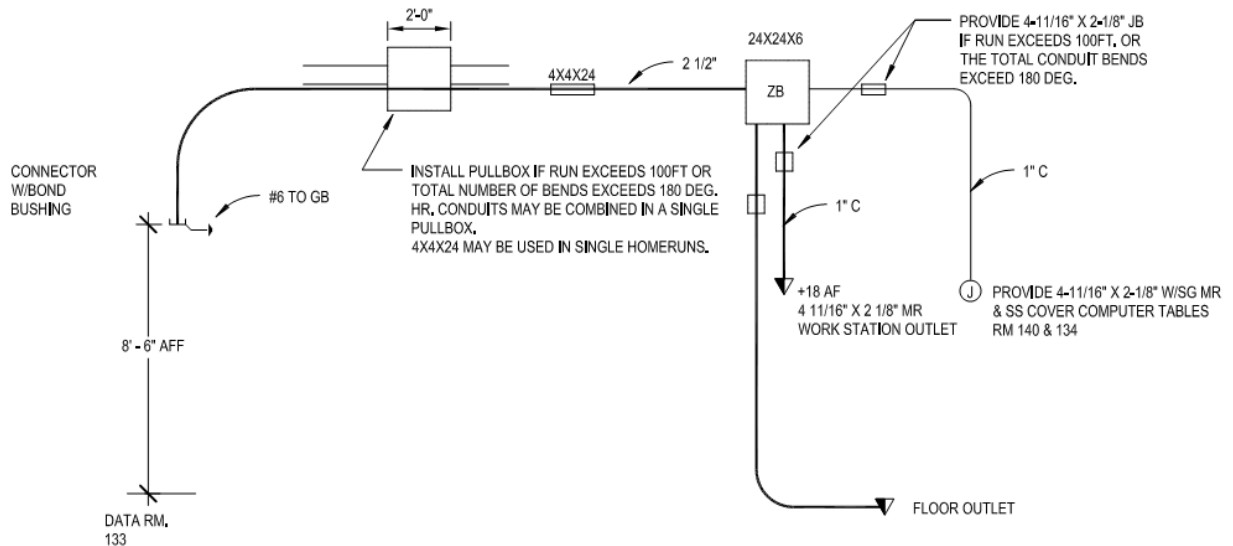
INFRASTRUCTURE REQUIREMENTS

AV OUTLET INSTALLATION

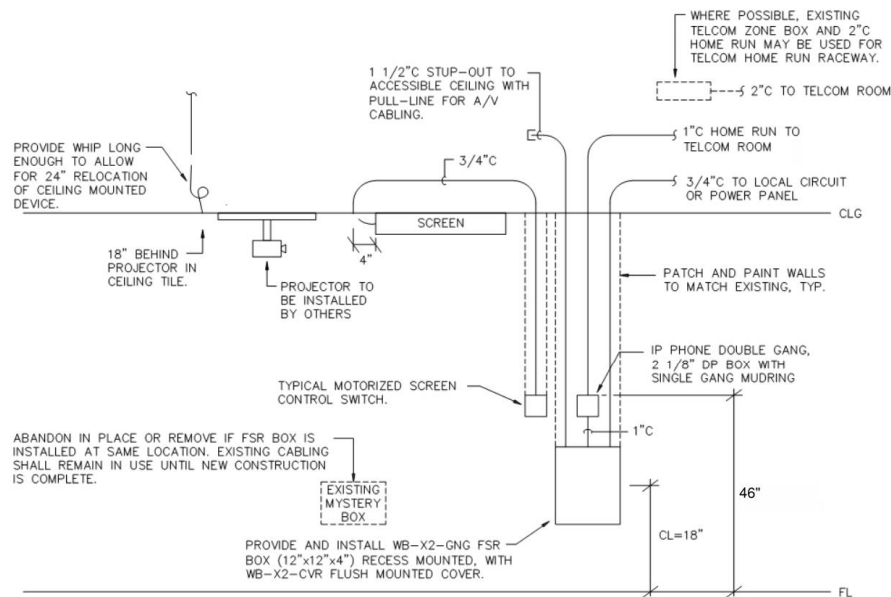


INFRASTRUCTURE REQUIREMENTS

CEILING MOUNTED RECEPTACLE/DATA OUTLET FOR SCREEN PROJECTOR



TYPICAL AV INFRASTRUCTURE REQUIREMENTS

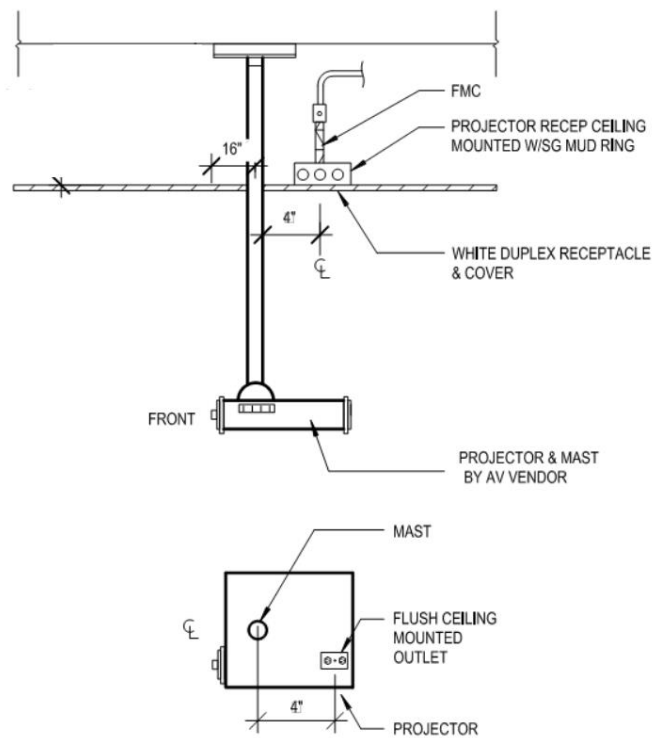


NOTE: AT LOCATIONS WHERE THE FSR BOX IS BEING INSTALLED AT THE SAME LOCATION AS THE EXISTING MYSTERY BOX, THE CONTRACTOR SHALL PULL BACK THE EXISTING CABLING ABOVE CEILING, PULL BACK CEILING TILE AND ALLOW CABLING TO HANG DOWN FOR CONTINUED USE BY FACULTY UNTIL FSR BOX CONSTRUCTION IS COMPLETE.

INFRASTRUCTURE REQUIREMENTS



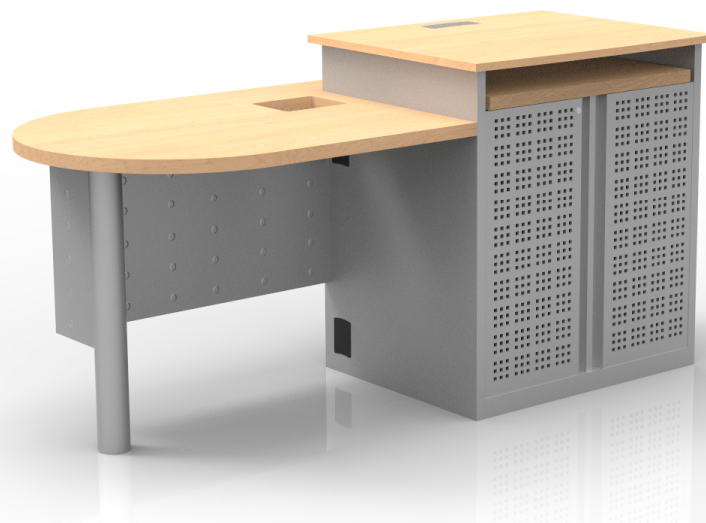
PROJECTOR



PROJECTOR MOUNT DETAIL & PLAN VIEW

**STANDARD
CLASSROOM EQUIPMENT**

**Approved Classroom Podium – designed by BC and KI
INSTRUCTOR SIDE**



STUDENT SIDE – FRONT VIEW



**STANDARD
CLASSROOM EQUIPMENT**

Approved Classroom Podium

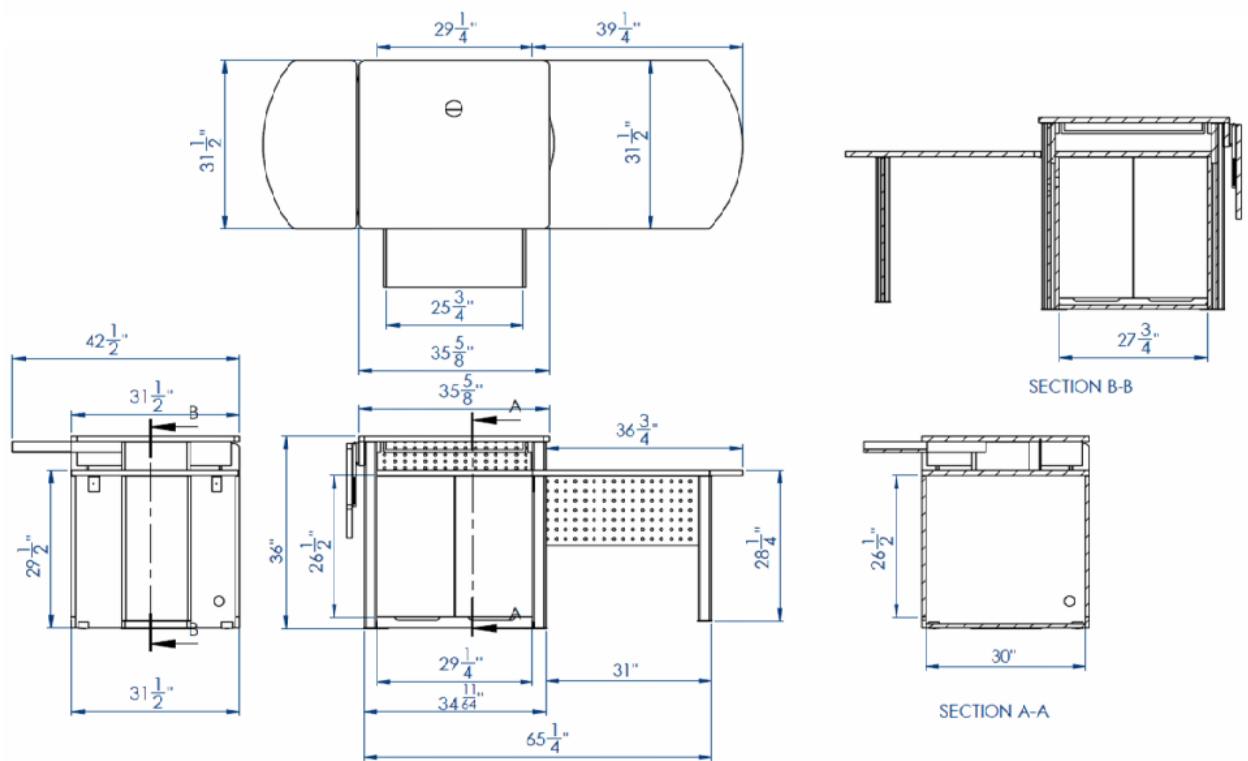


ADD ALTERNATE OPTION:

Broward College custom logo applied to unit. This will typically be used in a large multi-purpose Conference Room. Artwork supplied by Owner. Color and final location to be determined by Owner.

STANDARD CLASSROOM EQUIPMENT

TEACHING STATION (PODIUM) (2013-2017)



FLOOR PLAN AND ELEVATION VIEWS

STANDARD CLASSROOM EQUIPMENT

ROLLING RACK(OPTION "A") MIDDLE ATLANTIC: PTRK-MDK14 14-SPACE (24-1/2"), W/PLEX-FRONT DOOR & MARBLE GRAPHITE LAMINATE TOP, CASTERS & SHELF



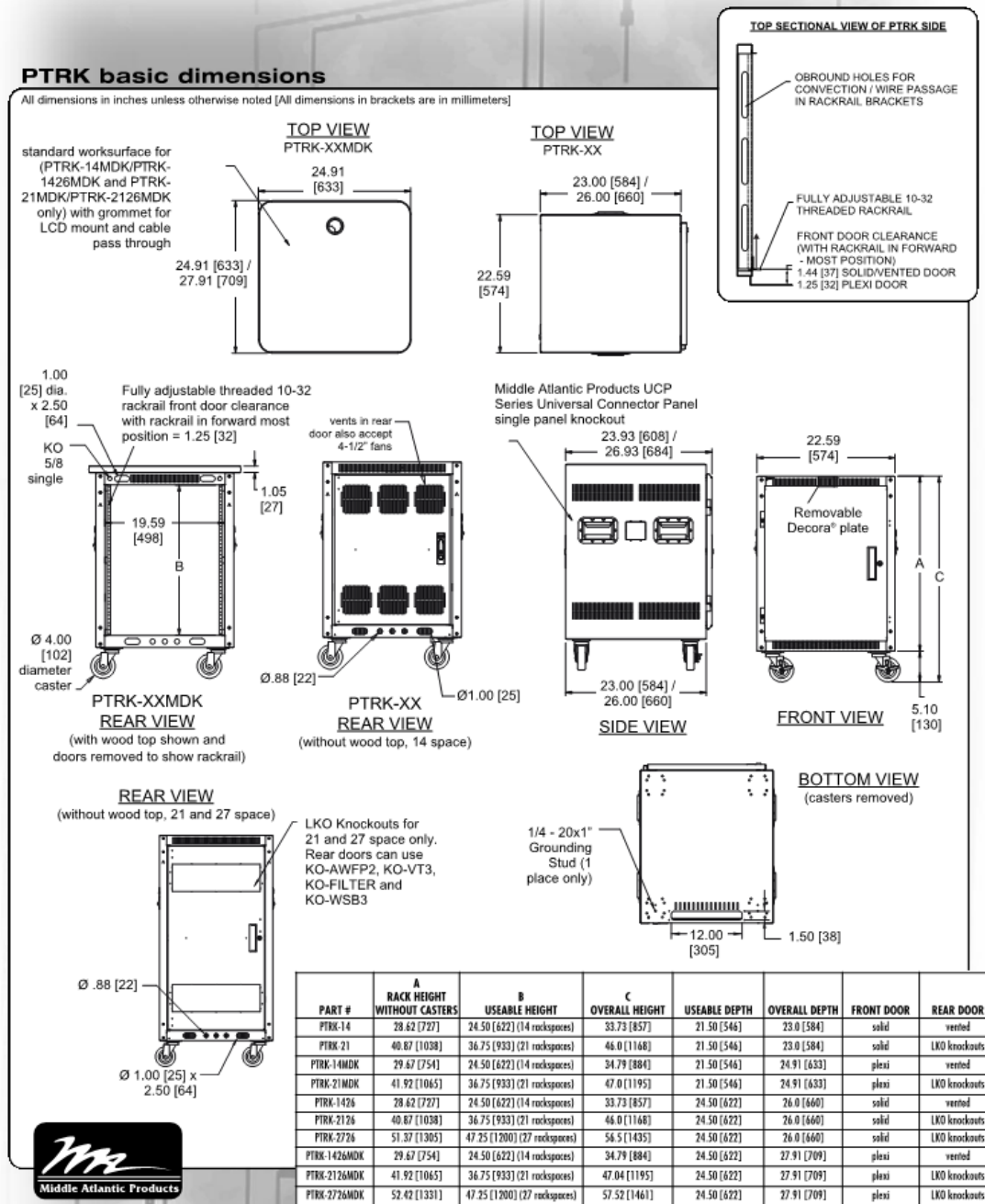
PTRK-21

Comes standard with wood top
and plexi front door as shown

PTRK-14MDK (shown with optional LCD mount)

STANDARD CLASSROOM EQUIPMENT

MIDDLE ATLANTIC: PTRK-MDK14



STANDARD CLASSROOM EQUIPMENT

ROLLING PODIUM W/ FLIP-UP SHELF (OPTION "B") VFI - PD3009

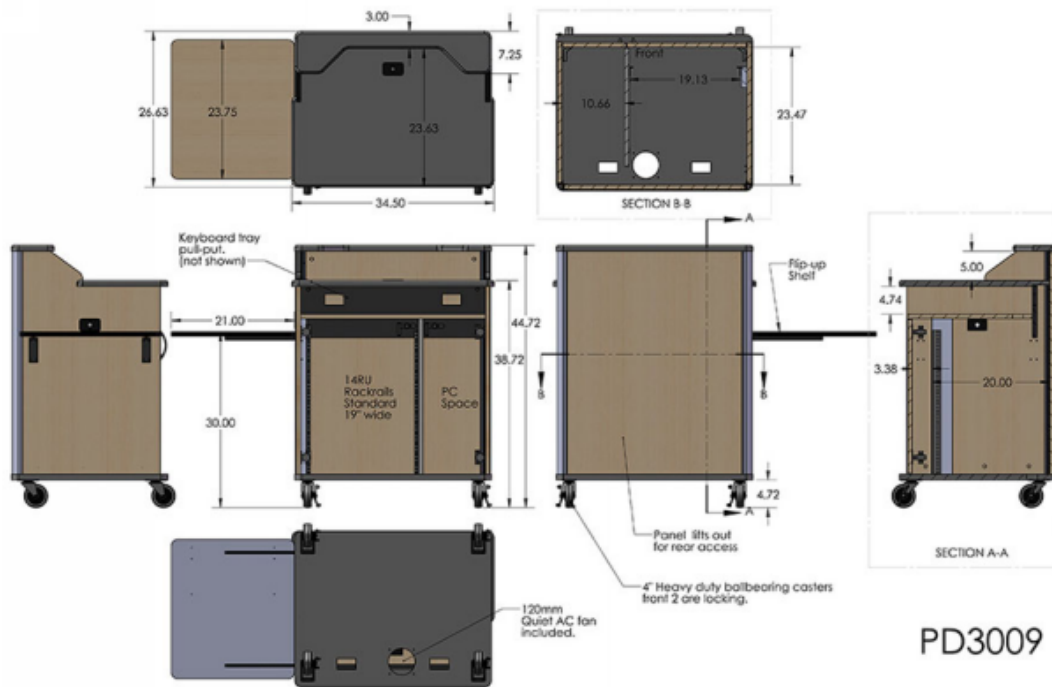


Place your cursor over each image thumbnail for a better view



MODEL	WIDTH	DEPTH	HEIGHT
PD3009	35"	27"	44.5"
MPL - MAPLE	MC - MEDIUM CHERRY	DC - DARK CHERRY	B - BLACK

STANDARD CLASSROOM EQUIPMENT



APPENDIX 01 10 DIGITAL SUBMITTAL PROCEDURES

Broward College utilizes Procore Project Management Software to track Construction Submittals, Construction Contingency Allowance (CCA), and Payment Applications.

I. **Construction Submittals** (i.e., materials data, product data, product samples, shop drawings, and more).

Subcontractor Documentation Preparation & Submittal:

1. CM prepares a list of each submittal that is required for the project, with assigned CSI code, description, vendor who is responsible, and material expediting dates to distribute to BCSPM and subcontractors for reference.
2. Subcontractor obtains/prepares and reviews product data/submittal information and confirms compliance with the specifications/drawings for acceptable materials and attributes.
3. Subcontractor prepares PDF cover sheet by populating information for:
 - a. Specification reference # (i.e. 03300-001 Cast-in-Place Concrete)
 - b. Lead time for material
 - c. Material supplier and contact name and phone number
 - d. Check box that product is in compliance with specifications
 - e. Add comments as needed.
4. Subcontractor binds PDF cover sheet to PDF product data. Product data should be the original digital file from supplier if possible, otherwise a clear/legible scan document.
5. Subcontractor saves the file with the following filename format and sends it to the GC: "03300-001 Concrete Form Release – For Approval 2019-06-06"

CM Submittal Review & Submittal:

1. CM populates received date, verifies compliance with the contract documents, verifies lead time is compliant with the schedule, and adds comments as needed, including comments relating to coordination with other vendors. Review duration should not exceed 7 days, or as identified in contract.
2. CM will save a copy and revise the date (in the file) to match when it is submitted digitally through Procore.

CM Uploads Submittal to Procore:

1. CM will be responsible to upload all construction submittals to Procore.
2. CM shall assign the Architect of Record (or Engineer if Prime) as approver and copy BCSPM.
3. For a step by step guide on how to upload a submittal to Procore please visit: <https://support.procore.com/products/online/user-guide/project-level/submittals/tutorials/create-a-submittal-revision>

APPENDIX 01 10 DIGITAL SUBMITTAL PROCEDURES

Architect Submittal Review:

1. The Architect will be assigned by the CM to approve each submittal first.
2. The Architect or the person in turn to approve shall mark “No Exception Taken” “Implement Exceptions Taken” “Rejected” or “Revised and resubmit” in Procore. This will automatically notify the CM of the change.

Revised Submittal Process:

1. If the Architect or the person in turn to approve has selected “Rejected” or “Revised and resubmit” in Procore. This will automatically notify the CM of the change.
2. The CM shall create a different submittal and rename it in the following format: “03300-001-R1 Concrete Form Release – For Approval 2019-07-06”

II. Construction Contingency Allowance (CCA)

CM Uploads Submittal to Procore:

1. CM will be responsible to upload all CCA’s as a submittal through Procore.
2. CM shall assign the Architect as first approver and BCSPM as second approver.

III. Payment Applications

CM Uploads Submittal to Procore:

1. CM shall send a pencil copy of each Payment Application to the BCSPM through email first including:
 - a. G702 – Payment Application
 - b. G703 – Continuation Sheet
 - c. Backup documentation
 - d. Release of Liens
 - e. Purchase Order copy
2. CM will be responsible to upload all Payment Applications as a submittal through Procore.
3. CM shall assign the Architect as first approver and BCSPM as second approver.
4. CM must copy Juan Rosa (jrosa@broward.edu) & Patsy Lenox (plenox@broward.edu) in the distribution list for Payment Applications only.

DUNE™

Square Lay-in & Tegular

fine texture



Items 1772, 1773, 1774, 1775 & 1776



Dune Square Lay-in with Prelude® XL 15/16" suspension system (Pg. 215); Axiom® Classic Trim (Pg. 236)



Dune Tegular with Interlude® XL 9/16" suspension system (Pg. 211); Axiom® Classic Trim (Pg. 236)

Key Selection Attributes

- Upgrade look at a modest price
- Ceiling-2-Ceiling™ Post-consumer Recycled Content options: Items 1773HRC, 1774HRC, 1775HRC, 1776HRC, 1777HRC (check armstrong.com/greengenie)
- Durable Scratch-resistant
- Non-directional visual reduces installation time and scrap
- 30-Year Limited System Warranty against visible sag (excludes items 1796 and 1798), mold/mildew, and bacterial growth

Typical Applications

- Offices
- Corridors
- Retail
- Hospitality
- Classrooms

Detail (Other Suspension Systems compatible. Refer to listing on page 156.)

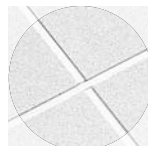
Color



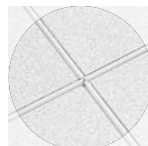
Dune



Dune Square Lay-in with Prelude 15/16" suspension system



Dune Tegular with Suprafine® 9/16" suspension system



Dune Tegular with Interlude XL 9/16" suspension system



Dune Tegular with Silhouette® XL 9/16" suspension system 1/4" Reveal



White (WH)



The post-consumer recycled content of these items is from reclaimed ceilings

Recycled Content: Up to 53%

armstrong.com/greenengine

LEED® Credits

Energy	Waste Mgmt	Recycled Content	Local Materials	Renewable Materials	Daylight & Views
✓	✓	✓	✓	✓	✓

Location Dependent

LEED for Schools

Acoustics	Low Emitting or CHPS
✓	✓

EPD Environmental Product Declaration
Items 1772, 1773, 1774, 1775, 1776, 1777, 1796, 1798



Visual Selection

Performance Selection

Dots represent highest level of performance.

Edge Profile	Grid Drawings Cat. pgs. 226-228 or armstrong.com/ catdwg	Item No.	Dimensions	UL Classified		Fire Rating	Light Reflect	Sag Resist	Anti-Microbial	Durable	Recycle Program	
				Acoustics NRC	CAC							
DUNE Square Lay-in												
	1	1772 1772M	2' x 2' x 5/8" 600 x 600 x 15mm	□	0.50	30	Class A	0.83	HumiGuard+	BioBlock+	Scratch	Yes
	1	1850 1850M	2' x 2' x 5/8" 600 x 600 x 15mm	□	0.50	35	Fire Guard	0.83				
	1	1773 1773M 1773HRC	2' x 4' x 5/8" 600 x 1200 x 15mm	□	0.50	33	Class A	0.83				
	1	1851 1851M	2' x 4' x 5/8" 600 x 1200 x 15mm	□	0.50	35	Fire Guard	0.83				
	1	1796 1796M	20" x 5' x 5/8" 500 x 1500 x 19mm	□	0.50	35	Class A	0.83	Standard			
	1	1798 1798M	30" x 30" x 3/4" 750 x 1500 x 19mm	□	0.50	35	Class A	0.83	Standard			
DUNE Tegular												
	31-34, 54	1775 1775M 1775HRC	2' x 2' x 5/8" 600 x 600 x 15mm	□	0.50	35	Class A	0.83				
	31	1852	2' x 2' x 5/8"	□	0.50	35	Fire Guard	0.83				
	31-34, 54	1777 1777M 1777HRC	2' x 4' x 5/8" 600 x 1200 x 15mm	□	0.50	35	Class A	0.83				
	6	1774 1774M 1774HRC	2' x 2' x 5/8" 600 x 600 x 15mm	□	0.50	35	Class A	0.83				
	6	1853	2' x 2' x 5/8"	□	0.50	35	Fire Guard	0.83				
	6	1776 1776M 1776HRC	2' x 4' x 5/8" 600 x 1200 x 15mm	□	0.50	35	Class A	0.83				

Suspension Systems



Physical Data

Material
Wet-formed mineral fiber

Surface Finish
Factory-applied latex paint

Fire Performance
ASTM E84 and CAN/ULC S102 surface burning characteristics. Flame Spread Index 25 or less. Smoke Developed Index 50 or less. (UL labeled) Fire Guard™: A fire resistive ceiling when used in applicable UL assemblies

ASTM E1264 Classification
Type III, Form 2, Pattern C E
Fire Class A

Sag Resistance
HumiGuard® Plus – superior resistance to sagging in high humidity conditions up to, but not including, standing water and outdoor applications.

VOC/Formaldehyde Emissions
Meets CA Dept. of Health Services Standard Practice for the testing of VOC Emissions and is listed on CHPS High Performance Products Database for Low-Emitting Materials.

Anti Mold/Mildew & Bacteria
BioBlock® Plus contains an anti-microbial treatment and provides guaranteed resistance against growth of mold/mildew and Gram-positive and Gram-negative odor/stain-causing bacteria for 30 years.

Insulation Value
R Factor – 1.6 (BTU units)
R Factor – 0.28 (Watts units)

30-Year Performance Guarantee & Warranty Information
Details in back of catalog or at armstrong.com/warranty

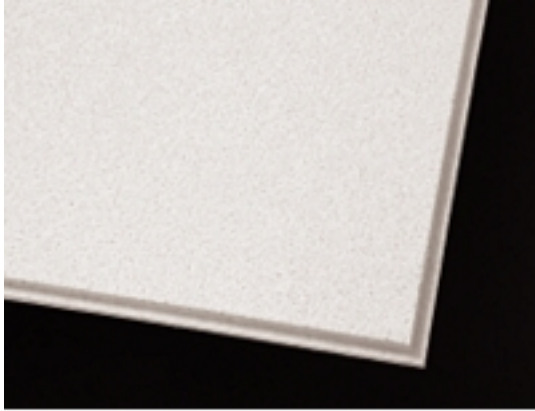
Weight; Square Feet/Carton
1772 – 0.94 lbs/SF; 64 SF/ctn
1773 – 0.88 lbs/SF; 80 SF/ctn
1796 – 1.33 lbs/SF; 67 SF/ctn
1798 – 1.14 lbs/SF; 50 SF/ctn
1850 – 1.19 lbs/SF; 48 SF/ctn
1851 – 1.22 lbs/SF; 64 SF/ctn
1774, 1775 – 0.75 lbs/SF; 64 SF/ctn
1776, 1777 – 0.75 lbs/SF; 80 SF/ctn
1852, 1853 – 1.20 lbs/SF; 48 SF/ctn



EPD

MINERAL FIBER

Dune Square Lay-In and Tegular - Item #1774



RECOMMENDED GRID SYSTEMS

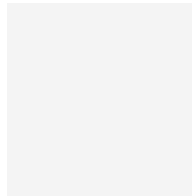
- Formations Axiom
- Prelude ML 15/16" Exposed Tee
- Prelude XL 15/16" Exposed Tee

Item # 1774



VISUAL SELECTION

Dimensions: 24x24x5/8IN
Grid Face: 15/16IN
Edge Profile: Angled Tegular
[Download dwg format](#)
Available Colors:



White





WARRANTY




30 Year Guarantee

Against Visible Sag

PERFORMANCE SELECTION

	Acoustics NRC:	0.50
	Acoustics CAC:	35
	Acoustics AC:	
	Fire Resist/ Flame spread:	Class A (UL)
	Light Reflect:	0.83
	Humidity Resistance:	HumiGuard Plus
	Anti-microbial:	BioBlock+
	VOC Formaldehyde:	Low
	Durability	 Scratch resistance

ENVIRONMENTAL

Total Recycled Content:	41% - 43%
Post-consumer Recycled Content:	1% - 13%
Pre-consumer Recycled Content:	28% - 42%
 Calculate Recycled Content Value	

- LEED Credit Area Contribution**
- [EA Credit 1 Optimize Energy Performance](#)
 - [MR Credit 2.1, 2.2 Construction Waste Management](#)
 - [MR Credit 4.1, 4.2 Recycled Content](#)
 - [MR Credit 5.1, 5.2 Regional Materials](#)
 - [MR Credit 6.0 Rapidly Renewable Materials](#)
 - [MR Pilot Credit 61 Material Disclosure and Assessment](#)
 - [EQ Credit 4.1 to 4.6 Low-Emitting Materials](#)
 - [EQ Credit 8.1, 8.2 Daylight and Views](#)

 **RECYCLING PROGRAM**

This item contributes to the following:

Qualifies as a
USDA
BioPreferred
Product

PHYSICAL DATA

Material:	Mineral Fiber, Wet-formed
Texture:	Fine
Pattern:	No Pattern
Surface Finish:	Factory applied latex paint
Weight:	0.75(lbs/sqft)
Sqft (Sqft/Carton):	64.0
ASTM Classification:	Type: III, Form: 2, Pattern: C E
Insulation Value:	R Factor-BTU:1.6null, R Factor-Watts:0.28null
Hardware Friendly (Y/N):	N
i-Ceilings Compatible:	Wireless Systems,



MATERIAL SAFETY DATA SHEET

Armstrong World Industries, Inc.
 Environment, Health and Safety
 2500 Columbia Avenue, P.O. Box 3001
 Lancaster, PA 17604
 Telephone (717) 396-2328 or 396-2935

Division: Building Products

Date: 9/09 (replaces 7/09)

N/A = Not applicable or Not Available

N/K = None Known or Not Known

Issued By : Safety, Health and
 Industrial Hygiene Department

Department of Transportation Information

Shipping name : Not Classified

Hazard Class : N/A

ID No : N/A

Emergency Only Contact: CHEM-TEL 800-255-3924

HMIS (0 = minimal hazard, 4 = severe hazard)

Health = 1

Flammability = 0

Reactivity = 0

I. Product Information

- A. Product Name : Man-made Vitreous Fiber Ceilings and Wall Panels (Class A) - MSDS #1
- B. Chemical Name and Synonyms : N/A
- C. Chemical or Product Family : Man-made Vitreous Fibers

II. Ingredient Information

A. Hazardous Components (Chemical Identity; Common Name)	<u>C.A.S No.</u>	<u>%</u>	<u>OSHA PEL</u> Respirable:	<u>ACGIH TLV</u> Respirable:
Mineral Wool Fiber	N/A	0-60	1 f/cc	1 f/cc
Fibrous Glass	65997-17-3	0-13	1 f/cc	1 f/cc

This product formulation does not contain asbestos.

III. Physical Data

- A. Appearance and Color : Gray, pressed man-made vitreous fiber panel of various colors
- B. Boiling Point (degrees F) : N/A
- C. Vapor pressure (mm Hg @ 20 degrees C) : N/A
- D. Vapor density (Air = 1) : N/A
- E. Solubility in Water : N/A
- F. Specific Gravity (H₂O = 1) : N/A
- G. Percent Volatile by weight (30 min. @ 275 degrees F) : N/A
- H. Evaporation Rate (Butyl Acetate = 1) : N/A
- I. pH : N/A

IV. Fire and Explosion Data

- A. Flash point : N/A
- B. Flammable Range : LEL = N/A ; UEL = N/A
- C. Extinguishing Media : Water fog, dry chemical ABC rated
- D. Special Fire Fighting Procedures : None
- E. Unusual Fire and Explosion Hazards : None

V. Health Data

A. Primary Route (s) of Entry: Inhalation, skin, and eye contact

B. Target Organs: Lungs, skin and eyes

Effects of Overexposure :

Acute Health Effects: Products are a transient mechanical irritant to the skin, eyes and upper respiratory system.

Refer to special protection information for handling instructions.

Chronic Health Effects:

Mineral Wool Fiber: Mineral wool fiber has been classified as "not classifiable as to its carcinogenicity to human" (Group 3) by the International Agency for Research on Cancer (IARC).

Fibrous Glass : Fibrous glass has been classified as "not classifiable as to its carcinogenicity to human" (Group 3) by the International Agency for Research on Cancer (IARC). Fibrous glass is listed by NTP as 2, reasonably anticipated to be a carcinogen.

C. Carcinogenicity: NTP : Yes IARC Monographs : No OSHA Regulated : No

D. Medical Conditions Generally aggravated by Exposure: Any condition generally aggravated by respiratory and mechanical irritants in the air or on the skin. Pre-existing upper respiratory and lung disease such as, but not limited to bronchitis, emphysema, and asthma.

E. First Aid Procedures:

Skin: Wash with mild soap and running water

Eyes: Flush with flowing water for at least 15 minutes and if symptoms persist, seek immediate medical attention.

VI. Reactivity Data

A. Stability : Material is stable

B. Incompatibility: N/K

C. Hazardous Decomposition Products: Carbon dioxide, and other trace pyrolysis products typical of decomposition of any organic chemical.

D. Hazardous Polymerization: N/A

VII. Spill or Leak Procedures

A. Steps to be taken if material is released or spilled : N/A

B. Recycling Information : Armstrong Ceilings can be recycled through the Armstrong Ceiling Recycling Program. For more information on the program, requirements and local resources, please visit www.armstrong.com/ceilings/recycling or call our Recycling Center at 877-276-7876, press 1 (Ceilings), then press 8.

If the Armstrong Ceiling Recycling Program cannot be used, please dispose in accordance with federal, state and local waste disposal regulations

VIII. Special Protection Information

During the installation, be certain that the work site is well ventilated, and avoid breathing dust.

Wear long-sleeve, loose fitting clothes, gloves and eye protection.

Handle these materials carefully to minimize airborne dust.

If high dust levels are anticipated during installation, such as with the use of power tools, use the appropriate NIOSH approved dust respirator.

All power cutting tools must be equipped with dust collectors.

After using these materials, wash with warm water and mild soap. Do not scratch or rub skin if it becomes irritated.

Wash work clothes separately, and then rinse the washer.

The information presented herein is supplied as a guide to those who handle or use this product. Safe work practices must be employed when working with any materials. It is important that the end user makes a determination regarding the adequacy of the safety procedures employed during the use of this product.

PRELUDE® XL®

15/16" Exposed Tee System



Key Selection Attributes

- **Seismic Rx®** Suspension System saves time and money; ICC-ES approach to installations (ESR-1308)
- **PeakForm®** patented profile increases strength and stability for improved performance during installation
- **SuperLock™2** main beam clip is engineered for a strong, secure connection and fast accurate alignment confirmed with an audible click; easy to remove and relocate
- Hot dipped galvanized coating inhibits red rusting better than electrogalvanized or painted systems
- Rotary-stitched during manufacture by a patented method for additional torsional strength and extra stability during installation
- XL² staked-on stab end detail provides tight, secure locked connection; easy to remove, reuse and relocate
- State-of-the-art expansion relief on Fire Guard™ options; provides greater strength and prohibits distortion of grid face during installation
- 10-year limited warranty; 30-year with **HumiGuard® Plus**

Typical Applications

- Retail
- Education
- Offices
- Hospitality
- Fire Guard applications based on building construction and local fire code requirements

Color Selection

- | | |
|--|--|
| Standard Colors | Premium Colors (cont.) |
| <input type="checkbox"/> WH - White | <input type="checkbox"/> WA - White |
| <input type="checkbox"/> CR - Cream | <input type="checkbox"/> Aluminum |
| <input type="checkbox"/> HA - Haze | <input type="checkbox"/> HDC - Hot Dipped Clear |
| <input type="checkbox"/> AD - Adobe† | <input type="checkbox"/> AR - Brass |
| <input type="checkbox"/> PL - Platinum | <input type="checkbox"/> AM - Mirror |
| <input type="checkbox"/> BL - Tech Black | <input type="checkbox"/> ST - Slate |
| <input type="checkbox"/> SG - Silver Grey | <input type="checkbox"/> WK - Wolf† |
| <input type="checkbox"/> MY - Gun Metal Grey | <input type="checkbox"/> HDC - Hot Dipped Clear Coat |
| <input type="checkbox"/> SA - Silver Satin | <input type="checkbox"/> PW - Pewter† |
| Premium Colors | <input type="checkbox"/> BZ - Bronze† |
| <input type="checkbox"/> CA - Camel | <input type="checkbox"/> SL - Silver† |
| <input type="checkbox"/> CP - Copper | |
| <input type="checkbox"/> BZ - Bronze | NEW Wood Look Finishes* |
| <input type="checkbox"/> PW - Pewter | <input type="checkbox"/> LC - Light Cherry |
| <input type="checkbox"/> AR - Silver | <input type="checkbox"/> WN - Walnut |
| <input type="checkbox"/> AR - Brass | <input type="checkbox"/> OK - Oak |
| <input type="checkbox"/> AM - Mirror | <input type="checkbox"/> BG - Barnwood Grey |
| <input type="checkbox"/> NA - Natural Aluminum | |

* Available Wood Look Finishes

† Only available on 7301, XL7342, XL7328, and 7800
NOTE: Color chips included with samples of Armstrong grid. See your Armstrong representative for sample material.

NOTE: Items 7305, 7302, XL7340, XL7380, XL7357, XL7358, XL7128, XL7148, XL7348, XL7330, XL7318, XL7368, XL7378, XL7390, XL8320, XL8341, XL7341 are available in white only.

NOTE: 8300, XL8340 and XL8323 are available in white and black only.

Product Description

Materials

A. General: ASTM C635 (Intermediate-duty) (Heavy-duty) main beam classification, commercial-quality hot dipped galvanized steel. Exposed surfaces chemically cleansed, galvanized steel or aluminum capping prefinished in baked polyester paint or anodized.

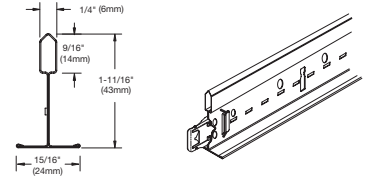
B. Components:

- 1. Main Beams:** Double-web construction, web height 1-11/16" with peaked roof top bulb and 15/16" bottom flange with prefinished steel or aluminum capping*; one fire expansion relief per fire rated main beam.
- 7300 (144", routs 6" OC, Intermediate-duty)
 - 7301_ _* (144", routs 6" OC, Heavy-duty)
 - 7302 (120", routs 6" OC, Intermediate-duty)
 - 7305 (140", routs 10" OC, Intermediate-duty)
 - 734032 (3600mm, routs 150mm OC, Intermediate-duty)

Fire Guard Items

- 8300 (144", routs 6" OC, Intermediate-duty)
- 8301 (144", routs 6" OC, Heavy-duty)
- 834033 (3600mm, routs 150mm OC, Intermediate-duty)
- Other

* NOTE: Fire Guard items available in steel capping only.

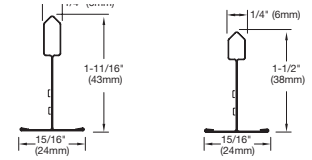


- 2A. Cross Tee:** Double-web construction, web height 1-11/16", 15/16" bottom flange with prefinished steel or aluminum capping and override at each end. Staked-on end detail allows easy cross tee removal and remounting.
- XL7340 (48", routs 12" OC)
 - XL7341 (48", routs 12" OC)
 - XL7330 (36")
 - XL7380 (96", routs 12" OC)
 - XL7357 (60", routs 6" OC)
 - XL7358 (60", routs 20" OC)
 - XL7390 (72", routs 12" OC)

- XL7340 (48", routs 12" OC)
- XL7341 (48", routs 12" OC)
- XL7330 (36")
- XL7380 (96", routs 12" OC)
- XL7357 (60", routs 6" OC)
- XL7358 (60", routs 20" OC)
- XL7390 (72", routs 12" OC)

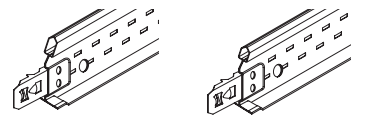
Fire Guard Items

- XL8320_ _* (24")
- XL8340_ _* (48", routs 12" OC)
- XL8341 (48", routs 12" OC)
- 833033 (1200mm, routs 300mm OC)
- Other



- 2B. Cross Tee:** Double-web construction, web height 1-1/2", 15/16" bottom flange with prefinished steel or aluminum capping and override at each end. Staked-on end detail allows easy cross tee removal and remounting.
- XL7342 (48", routs 12" OC)

- XL7342 (48", routs 12" OC)

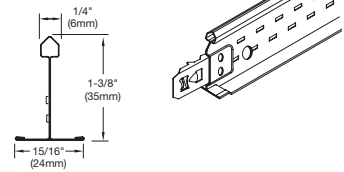


- 2C. Cross Tee:** Double-web construction, web height 1-3/8", 15/16" bottom flange with prefinished steel or aluminum capping and override at each end. Staked-on end detail allows easy cross tee removal and remounting.
- XL7318 (12")
 - XL7368 (20")
 - XL7328 (24")
 - XL7378 (30")
 - XL7348 (48")
 - 312451 (300mm, center rout)
 - 312051 (600mm)
 - 313051 (1200mm, center rout)

- XL7318 (12")
- XL7368 (20")
- XL7328 (24")
- XL7378 (30")
- XL7348 (48")
- 312451 (300mm, center rout)
- 312051 (600mm)
- 313051 (1200mm, center rout)

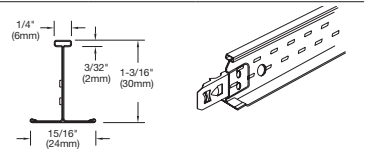
Fire Guard Items

- XL8323 (24")
- 832052 (600mm)
- Other



- 2D. Cross Tee:** Double-web construction, web height 1-3/16", 15/16" bottom flange with prefinished steel cap and override at each end. Staked-on end detail allows easy cross tee removal and remounting.
- XL7148 (48", routs 12" OC)
 - XL7128 (24")

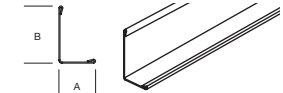
- XL7148 (48", routs 12" OC)
- XL7128 (24")



Wall Moldings:

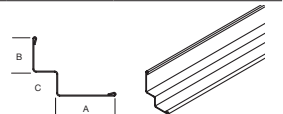
3A. Angle molding: hemmed with prefinished exposed flanges

Item #	Length	(A) Flange	(B) Height
<input type="checkbox"/> 7800_ _*	144"	7/8"	7/8"
<input type="checkbox"/> 7807	120"	2"	1"
<input type="checkbox"/> 7808	120"	2"	2"
<input type="checkbox"/> HD7801	120"	7/8"	7/8"



3B. Shadow molding: hemmed with prefinished exposed flanges

Item #	Length	(A) Flange	(B) Height	(C) Reveal
<input type="checkbox"/> 7875	120"	3/4"	15/16"	1/2"

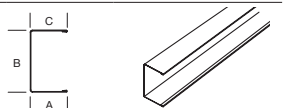


3C. Shadow Molding: (Compatible with Seismic Rx® and BERC 2)

Item #	Length	(A) Flange	(B) Height	(C) Reveal
<input type="checkbox"/> 7877	120"	15/16"	15/16"	1/4"
<input type="checkbox"/> 7878	120"	15/16"	15/16"	3/8"
<input type="checkbox"/> 7897	120"	15/16"	15/16"	1/2"

3D. Channel molding: hemmed with prefinished exposed flanges

Item #	(A) Length	(B) Flange	(C) Height	Flange
<input type="checkbox"/> 7875	120"	3/4"	15/16"	9/16"



PRELUDE® XL®

Grid Systems

Physical Data

Material

Hot dipped galvanized steel

Surface Finish

Baked polyester paint or anodized

Face Dimension

15/16"

Profile

Exposed tee

Cross Tee/Main Beam Interface

Override

End Detail

Main Beam: Staked-on clip

XL Cross Tee: Staked-on clip

Duty Classification

Intermediate or Heavy-duty

Main Beam Load Test Data

MAIN BEAMS	LENGTH	WEB HEIGHT	ASTM CLASS	HANGER SPACING (Lbs./LF, Simple Span)**	
				4'	5'
7300	144"	1-11/16"	Intermediate-duty	13.5	6.35
7301	144"	1-11/16"	Heavy-duty	16.73	8.73
734032	144"	1-11/16"	Intermediate-duty	12.8	6.35
8300/834033	144"	1-11/16"	Intermediate-duty	12.8	6.35
8301	144"	1-11/16"	Heavy-duty	16.73	8.73
7302	120"	1-11/16"	Intermediate-duty	13.5	6.35
7305	140"	1-11/16"	Intermediate-duty	10.73	8.35

Cross Tee Load Test Data

CROSS TEES	LENGTH	WEB HEIGHT	HANGER SPACING (Lbs./LF, Simple Span)**	
			4'	5'
XL7318/312451	12"	1-3/8"	40.45	
XL7368	144"	1-3/8"	36.00	
XL7128	20"	1-3/16"	33.00	
XL7328/312051	24"	1-3/8"	40.45	
XL8323/832052	24"	1-3/8"	40.45	
XL8320	24"	1-1/2"	61.33	
XL7378	30"	1-3/8"	16.54	
XL7330	36"	1-11/16"	23.21	
XL7148	48"	1-3/16"	6.0	
XL8340/833033/ XL7340	48"	1-11/16"	12.25	
XL7341/XL8341	48"	1-1/2"	16.59	
XL7342	48"	1-1/2"	9.0	
XL7348/313051	48"	1-3/8"	8.31	
XL7357	60"	1-11/16"	7.61	
XL7358	60"	1-11/16"	7.61	
XL7380	96"	1-11/16"	12.12	
XL7390	72"	1-11/16"	12.23	

Seismic Performance

MAIN BEAMS

Item	MINIMUM LBS. TO PULL OUT COMPRESSION/TENSION
7300, 7302, 7305, 734032, 8300	335.0
7301, 8301	330.0

CROSS TEES

All XL cross tees exceed 300 lbs. in both compression and tension.

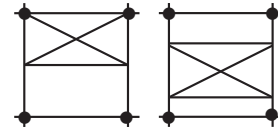
ICC Reports

For areas under ICC jurisdiction, see ICC evaluation report number 1289 for allowable values and/or conditions of use concerning the suspension system components listed on this page. The report is subject to reexamination, revisions and possible cancellation.

Maximum Fixture Weight

LIGHT FIXTURE A. Main Beam to Main Beam

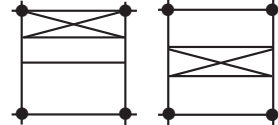
Main Beam ↑
Hanger Wire (•)



1. Fixture*
2. Planning Module
3. Hanger Spacing
4. Item 7300/8300/7302
Item 7301/8301

24" x 48"
48" x 48"
48"
69.27 lbs.
100.0 lbs.

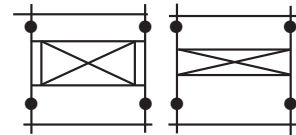
24" x 48"
48" x 48"
48"
49.27 lbs.
72.32 lbs.



1. Fixture*
2. Planning Module
3. Hanger Spacing
4. Item 7300/8300/7302
Item 7301/8301

12" x 48"
48" x 48"
48" x 48"
54.26 lbs.
100.0 lbs.

12" x 48"
48" x 48"
48" x 48"
47.17 lbs.
63.32 lbs.



1. Fixture*
2. Planning Module
3. Hanger Spacing
4. Item 7300/8300/7305
Item 7301/8301

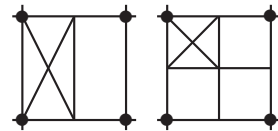
24" x 48"
60" x 60"
48" x 48"
56.47 lbs.
56.47 lbs.

20" x 60"
60" x 60"
43.21 lbs.
65.46 lbs.

Main Beams tested as follows: 7300 tested at 13.0 lbs./LF to 1/360 of 4' span; 7301 tested at 16.5 lbs./LF to 1/360 of 4' span.

LIGHT FIXTURE B. Cross Tee to Cross Tee

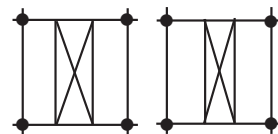
Main beams ↑
Hanger Wire (•)



1. Fixture*
2. Planning Module
3. Hanger Spacing
4. Item XL8340/XL7340
5. Item XL8341/XL7341

24" x 48"
64" x 60"
48"
69.27 lbs.
40.89 lbs.
81.67 lbs.

24" x 24"
48" x 48"
48"
80.55 lbs.
52.26 lbs.
100.0 lbs.



1. Fixture*
2. Planning Module
3. Hanger Spacing
4. Item XL8340/XL7340
5. Item XL8341/XL7341

24" x 48"
48" x 48"
48"
49.27 lbs.
72.32 lbs.

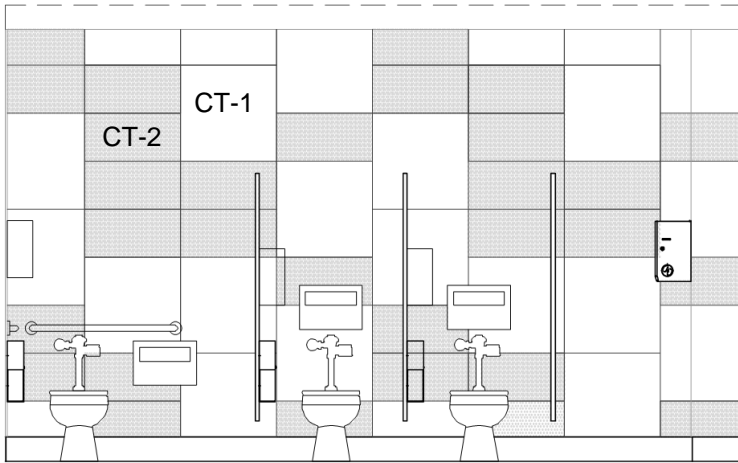
12" x 48"
48" x 48"
48"
42.17 lbs.
63.32 lbs.

*Fixtures weighing more than 56 lbs. should be independently supported. Fixture weight is based on single fixture only. For end-to-end fixtures or other configurations not shown, consult your Armstrong representative.

NOTE: The above data is based on 48" hanger wire spacing, board weight of 1 lb./SF, maximum deflection of tees not to exceed 1/360 of the span, and suspension system installed in accordance with ASTM C636.



APPENDIX 09 02 RESTROOM STANDARDS



Wall Tile (Basis of Design)

1. Porcelain tile and layout based on MOSA USA Porcelain Tile. Basis of Design Pattern: PT 3115
2. Core Selection-Terra
3. Sizes: 12" x 24" and 24" x 24"
4. Color: CT-1 225V; CT-2 226V
5. Grout: Laticrete #89 Smoke Gray (or similar). Apply grout sealer.
6. Install Schluter Quadec aluminum transition strip at all tiled exterior locations.
7. Install Schluter Schiene transition strip between top of epoxy floor base and bottom of wall tile. Finish shall be satin anodized aluminum.

Floors (Basis of Design):

- 1) Manufacturer: Dura-A-Flex
- 2) Product Line: Hybir-Flex EQ
- 3) Color: Architect/Owner to select from standard Q-28 Quartz Color Blends
- 4) Return epoxy up walls 6". Use an aluminum Schluter SCHIENE strip to transition between base and wall tile.
- 5) Threshold shall be installed in bed of sealant to retain water within restroom in the event of a leak.

Toilet Partitions (Basis of Design)-

- 1) Manufacturer: Scranton Products "Hiny Hiders" 1" Solid HDPE with homogeneous color.
- 2) Texture: Standard Orange Peel
- 3) Color: Architect/Owner to select from the standard color palette.
- 4) Urinal screens: Provide double ear continuous aluminum bracket for urinals, single ear for partition adjacent to obstructions (i.e., sink) to avoid a conflict (mount ear on urinal side). Use type "A" wall hung.
- 5) Toilet Partitions: Provide double ear 54" continuous channel for attachment to wall in lieu of stirrup brackets.
- 6) Toilet Partition Doors: Provide continuous aluminum strike full height of door.
- 7) CM to field verify all dimensions.
- 8) Architect to verify all dimensions for code/ADA compliance.
- 9) Use fasteners appropriate for substrate, and for headrail brace (sex bolt).
- 10) Remove all layout markings from all materials and surfaces.

Ceiling:

- 1) Use 2' x 2' acoustical ceiling with Armstrong Optima Health Zone

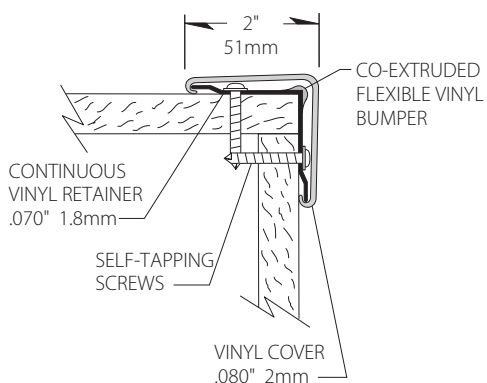
Plumbing Fixtures & Accessories:

- Toilet: 1.28 gallon flush, automatic electronic flush valve, battery operated (American Standard Selectronic, Moen M-Power). Floor Mounted.
- Urinal: 1/8 gallon flush, automatic electronic flush valve, battery operated (American Standard Selectronic, Moen M-Power).
- Lavatory: in counter
- Lavatory Faucet: Low Flow, battery operated, automatic sensor.
- Electric Hand Dryer: World Dryer SLIMdri with brushed Stainless Steel cover. Model #L-973.
- Baby Change Station: Koala Kare KB110-SSWM
- Mirrors: Bobrick B-165 2436 (24 x 36")
- Grab Bars: Bobrick B-6806 Series, Satin finish
- Surface Mounted Seat Cover Dispenser: Bobrick B-221
- Wall faucet: Woodford Anti-Siphon Flush Mount B24 with 3/4" inlet and 3/4" FPT or equivalent.
- Floor drain/s are required in every restroom.
- Paper towel, toilet paper and soap dispensers will be provided by owner, installed by contractor.
- Trash Receptacles: Provided by Owner. Do not use semi-recessed wall mounted trash receptacles.
- Backsplash: 4" high 1/2" solid surface over 3/4" exterior grade plywood core.
- Sink: American Standard "mezzo" semi-counter top lav, model 9960.001 - color white.
- Counter: top and face 1/2" solid surface over 3/4" exterior grade plywood core.
- Pipe protection: provide ADA pipe protection.
- Sealant: Match color solid surface.

160BN BluNose High Impact

Corner Guard

*From Inpro Corp. or equal



- 2" wing (51mm) with 90° corner protection
- Mounted on a .070" (1.8mm) thick continuous vinyl retainer with a co-extruded Biopolymer Flex PVC apex
- Vinyl retainer is four times stronger than our aluminum retainer and six times stronger than any other vinyl retainer
- .080" (2mm) thick scratch and stain resistant rigid vinyl cover
- Manufactured 3' (.91m), 4' (1.22m), 8' (2.44m), 9' (2.74m) and 12' (3.66m) standard heights, custom heights available
- Available in 100 standard colors and Woodland patterns
- Quick Ship applies to 4' (1.22m) and 8' (2.44m) heights and select colors only
- Meets the most rigorous standards and criteria of chemical emissions as prescribed by the GREENGUARD Environmental Institute
- Has been tested and meets GREENGUARD Environmental Institute's and the state of California's requirements for low emitting products as tested by Air Quality Sciences
- Has been tested and meets the GREENGUARD Children & School chemical emissions levels



IPC.382/REV.8

Installation Instructions

Please read all instructions before installing corner guard.

BluNose™ High Impact Corner Guards

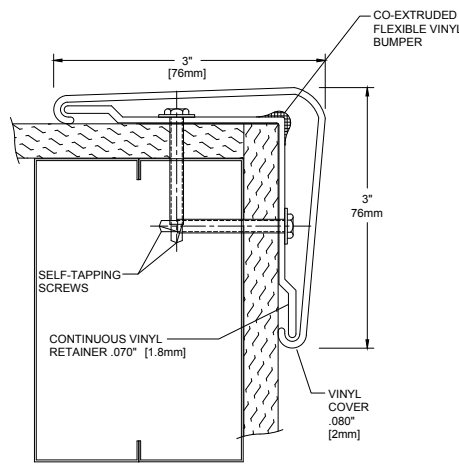
Models: 150BN, 160BN, 170BN, 130BN

Important

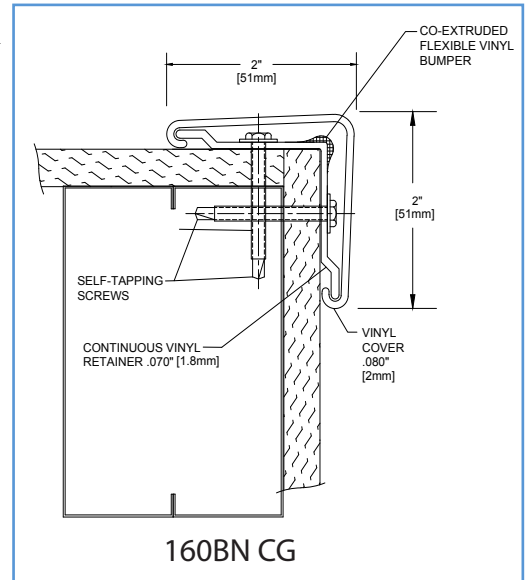
1. Acclimate materials 24 hrs before installation. Maintain temperature controlled environment after installation
2. Install in accordance with manufacturer's installation instructions. Failure to do so will void the warranty.

Installation tips

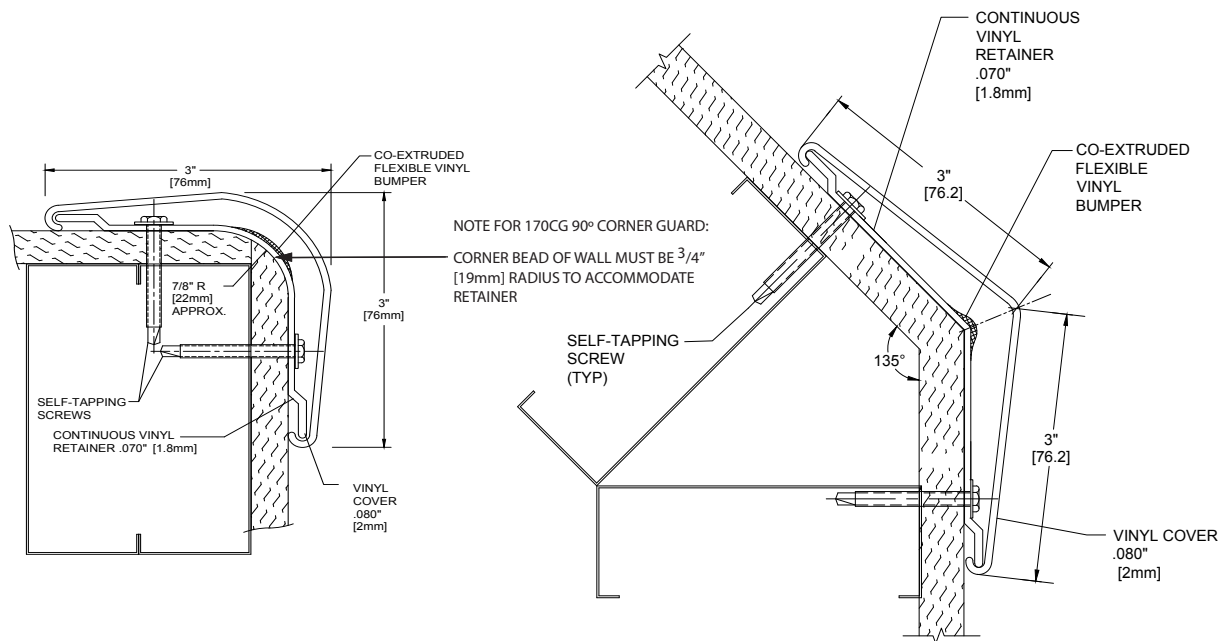
1. Cut covers up to 1/16" (1.6mm) longer to ensure a tight fit.



150BN CG



160BN CG



170BN CG

130BN CG

SECTION VIEWS

Recommended tools

Safety Glasses, Tape Measure, Level, Power Drill, 1/4" Socket, Drill Bits - 1/4" masonry (concrete/concrete block), Power Miter Saw, 10" Blade with 60-80 Carbide Tipped Teeth

IPC.381/REV.5

Installation Hotline • 866.EZINPRO

Inprocorp.com • 800.222.5556 • 262.679.9010

World Headquarters S80 W18766 Apollo Drive, Muskego, WI 53150 USA

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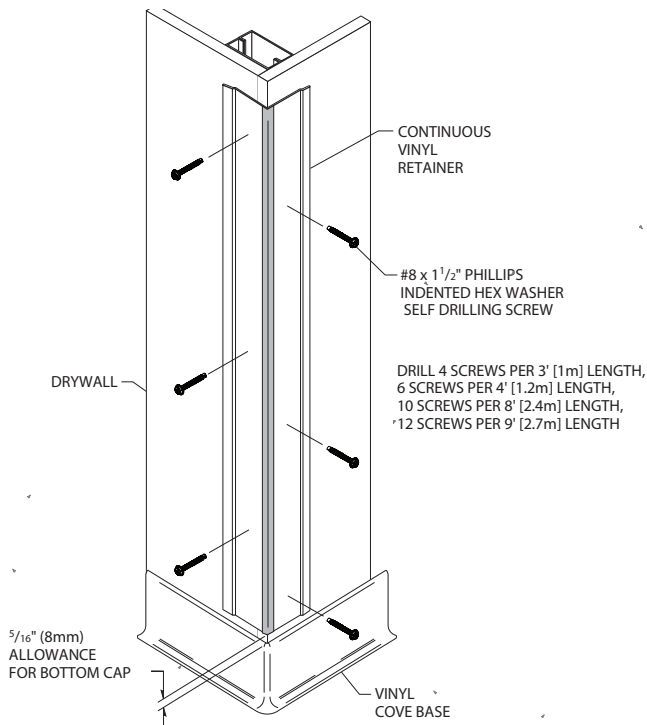
Installation Instructions

Please read all instructions before installing corner guard.

BluNose™ High Impact Corner Guards

Models: 150BN, 160BN, 170BN, 130BN

FIG. 1



Please read all instructions before installing corner guards. Material must be stored, installed and used in environmentally controlled conditions.

1. Position vinyl retainer against wall, leaving allowance for bottom cap. Secure retainer to the wall by staggering fasteners on each wing of the retainer. See Figure 1.

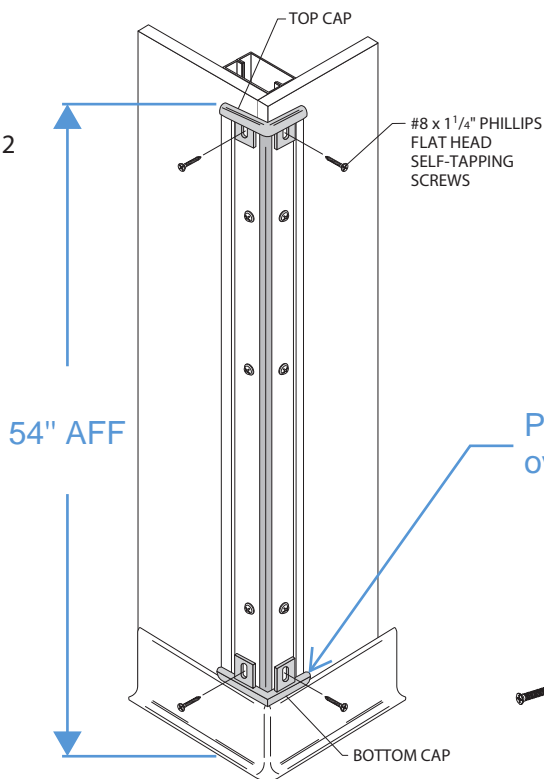
Note for concrete installation: Use the slotted tabs on the top and bottom caps to transfer and drill 1/4" (6.5mm) holes into the ends of the retainer. Also drill 1/4" (6.5mm) holes staggered on each wing of the retainer. Drill 4 holes per 3' (.91m) length, 6 holes per 4' (1.22m) length, 10 holes per 8' (2.44m) length or 12 holes per 9' (2.74m) length. Transfer the location of the mounting holes to the wall. Drill marked holes on wall using a 1/4" (6mm) drill bit and position Alligator anchors into holes. Mount retainer on wall with #10 x 1 3/4" phillips pan head screws and tighten to secure.

2. Overlap the retainer with the mounting tabs of the top and bottom caps and attach them to retainer. Stagger the fasteners on each wing of the cap. See Figure 2.

When installing flexible top caps on custom angle corner guards, use cup washers and flat head screws to fasten the top caps to the retainer. See Figure 2a.

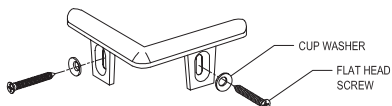
Note for concrete installation: Overlap the retainer with the mounting tabs of the top and bottom caps and attach them to retainer and into the Alligator anchors using two, #8 x 1 1/2" phillips flat head screws per cap.

FIG. 2



Position corner guard over rubber wall base.

FIG. 2a



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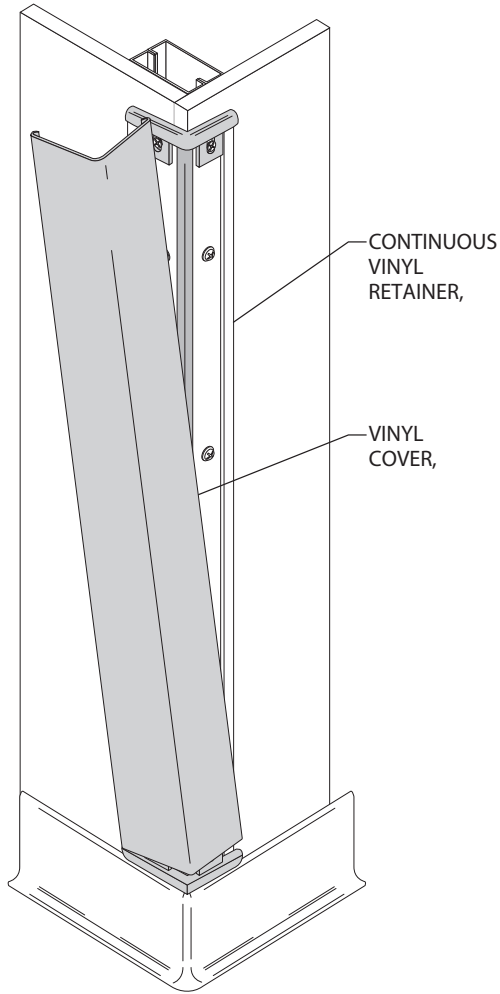
Installation Instructions

Please read all instructions before installing corner guard.

BluNose™ High Impact Corner Guards

Models: 150BN, 160BN, 170BN, 130BN

FIG. 3



3. Position cover on retainer and adjust the top cap for a tight fit. Starting at the top, push cover onto retainer pressing over the entire length until it snaps into place. See Figure 3.

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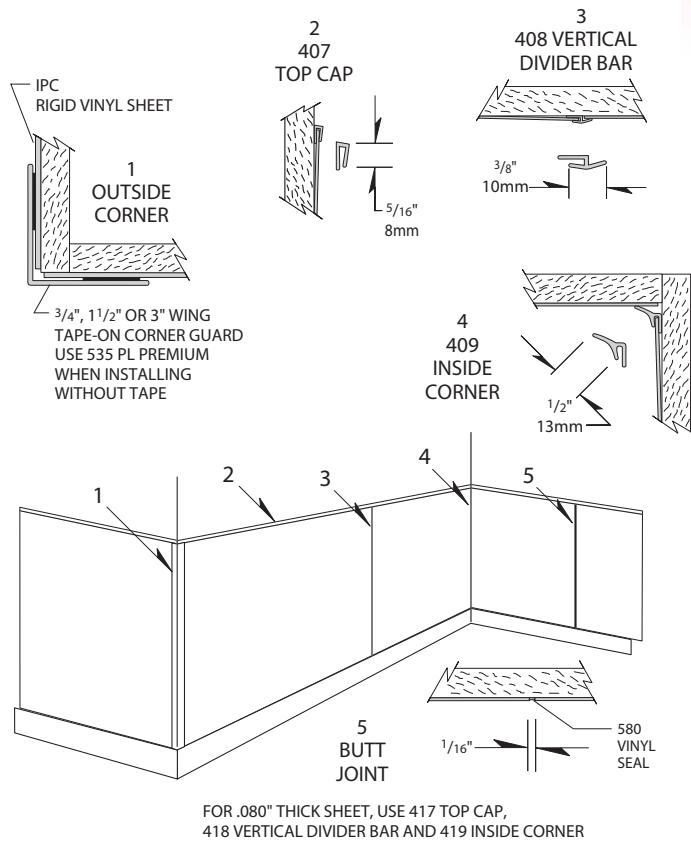
DOOR + WALL PROTECTION SYSTEMS
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Palladium® Rigid Vinyl Sheet

Wall Protection

*From Inpro Corp. or equal

Inside Classrooms except accent walls and walls with white-boards. Please coordinate with BC.



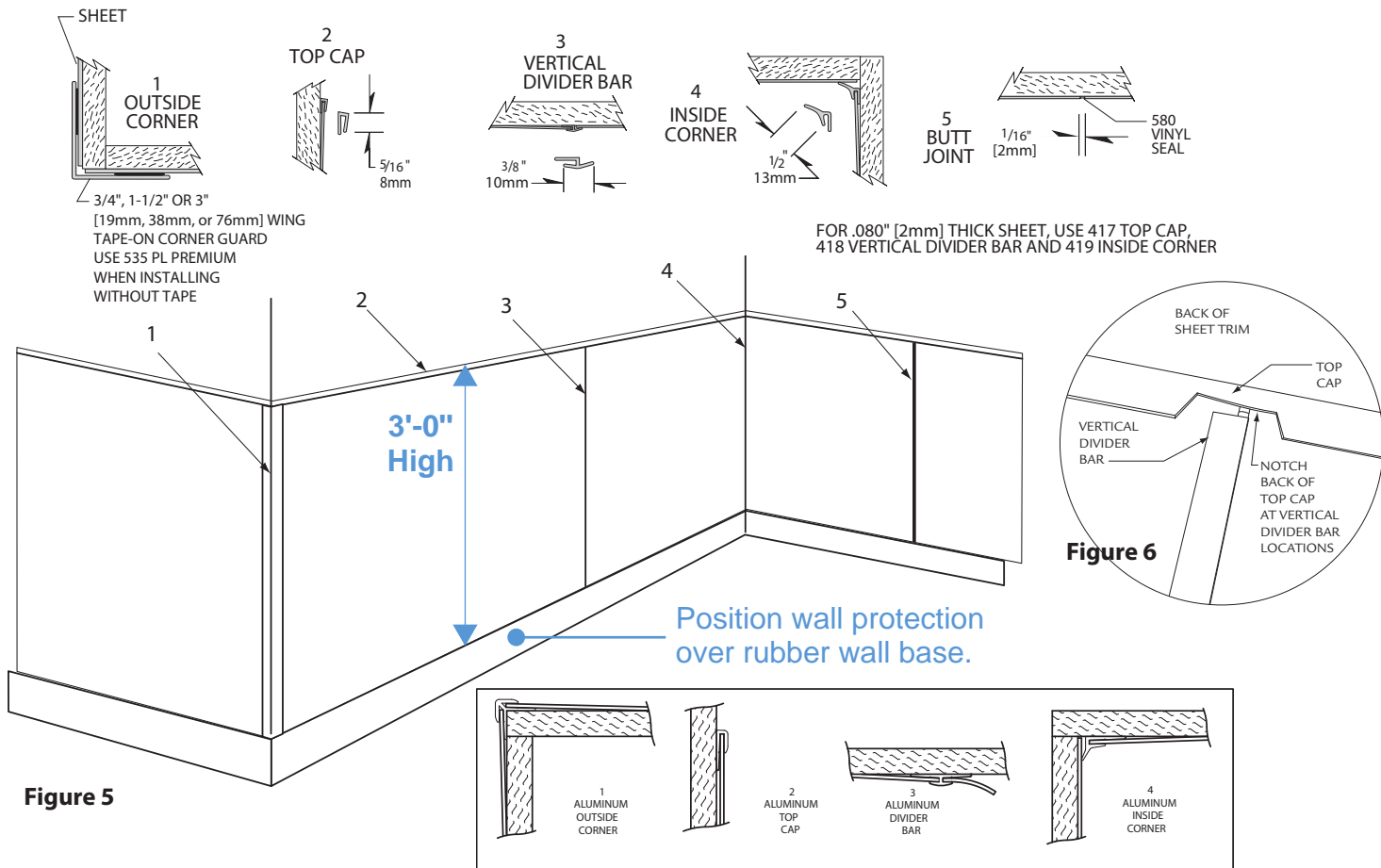
- Provides reliable wall protection and is durable, long lasting and easy to clean
- Available in standard 3' (.91m) and 4' (1.22m) widths and 8' (2.44m) lengths. Custom lengths and rolls up to 120' (36m) available
- Standard thicknesses of .040 (1mm) & .060 (1.5mm), .030 (.8mm) & .080 (2mm) thickness also available
- Vinyl, Aluminum and Stainless Steel trim accessories available
- Scratch and stain resistant rigid vinyl
- Quick Ship applies to .040" (1mm) and .060" (1.5mm) thicknesses in 4' (1.22m) x 8' (2.44m) sheets only
- Meets the most rigorous standards and criteria of chemical emissions as prescribed by the GREENGUARD Environmental Institute
- Has been tested and meets GREENGUARD Environmental Institute's and the state of California's requirements for low emitting products as tested by Air Quality Sciences
- Has been tested and meets the GREENGUARD Children & School chemical emissions levels



IPC.460/REV.19

Installation Instructions

Palladium® Rigid Sheet/Rubrail or Palladium® G2 Sheet/Rubrail



Trim Pieces (see figure 5)

If using trim pieces with an InPro Bond or XT-2000 installation, install the first sheet on the wall. Cut trim pieces with a metal straight edge and sharp utility knife. Slide vertical divider bars or inside corners on the next sheet to be installed. Overlap the edge of the sheet on the wall with the divider bar or inside corner. With aluminum divider bars, slide sheet into the divider bar. When using top caps and vertical divider bars, notch the back of the top cap where it intersects with the divider bar (see figure 6). Install the top cap by sliding it on the top edge of the sheet after the sheet is in place. Roll all trim pieces and the entire sheet with an extension roller (InPro item # 333). Stainless Steel Trim - Cut stainless steel trim with a hack saw or similar. Tape exposed surfaces with painters tape to help protect it when cutting.

- Cut trim pieces with a sharp utility knife.
- Overlap trim piece over the first sheet installed.
- Notch the back of the top cap where it intersects the vertical divider bar.
- Slide top cap on edge of sheet after sheet is on wall.
- Roll all trim pieces and entire sheet with extension roller.
- Cut stainless steel trim with a hack saw or similar.

APPENDIX 10 15 PAPER AND SOAP DISPENSER

Please consult with Broward College's Senior Project Manager for paper and soap dispenser equipment. Custodial vendor will vary per campus.

Soap Dispenser



Paper Dispense



ThermoVeil® Basket Weave

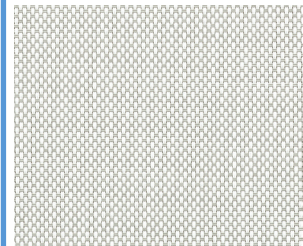
1300 Series (5% open), 1500 Series (3% open), 2100 Series (10% open)

This series is composed of a technically advanced material woven in a 2 x 2 basket weave pattern. Its weave provides a uniform scrim effect at the window wall with an appropriate density for sun control.

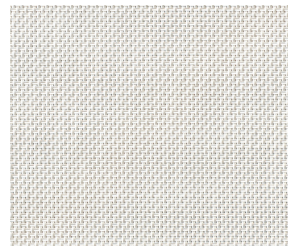
- Content: 75% PVC (coating), 25% polyester (yarn)
- Openness factor (approx.): See below
- Visible Light Transmittance (Tv): See below
- Stocked: 63", 96" and 126" (1300 & 1500 series) wide
- NFPA 701-2015: pass



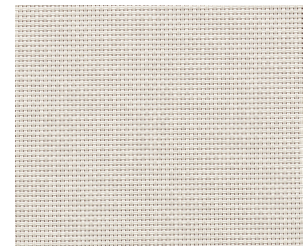
1301 White | Tv: 11%
 1501* White | Tv: 11%
 2101 White | Tv: 18%



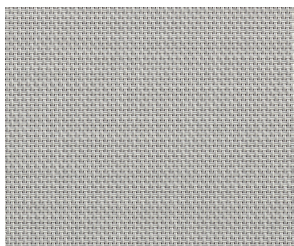
1319 Silver Birch | Tv: 10%
 1519* Silver Birch | Tv: 8%
 2119 Silver Birch | Tv: 18%



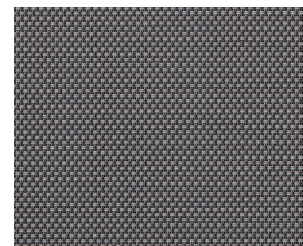
1316 Eggshell | Tv: 10%
 1516* Eggshell | Tv: 7%
 2116 Eggshell | Tv: 16%



1302 Beige | Tv: 9%
 1502* Beige | Tv: 6%
 2102 Beige | Tv: 17%



1313 Grey | Tv: 7%
 1513* Grey | Tv: 6%
 2113 Grey | Tv: 14%



1324 Taupe | Tv: 9%
 1524* Taupe | Tv: 6%



1320 Shadow Grey | Tv: 7%
 1520* Shadow Grey | Tv: 5%
 2120 Shadow Grey | Tv: 12%



1304 Black/Brown | Tv: 7%
 1504* Black/Brown | Tv: 5%
 2104 Black/Brown | Tv: 16%

*Shown



(718) 729-2020
 mechoshade.com

APPENDIX 22 01 WATER FOUNTAIN INSTALLATION GUIDE

Building Code Advisory for Drinking Fountains (Based on FBCP 2020)

Originating Office: Facilities Management

Items for Consideration:

1. Typical BC Building Occupancy Type: Business
2. See FBCP 2020 Table 403.1 for quantity of drinking fountains required in Business Occupancy. Other occupancies such as labs, gymnasiums, etc. will have different requirements. Reference Life Safety Documents for analysis.
3. Per Section 410.3:

Where drinking fountains are required, not fewer than two drinking fountains shall be provided. One drinking fountain shall comply with the requirements for people who use a wheelchair and one drinking fountain shall comply with the requirements for standing persons.

Exceptions:

 1. *A single drinking fountain with two separate spouts that complies with the requirements for people who use a wheelchair and standing persons shall be permitted to be substituted for two separate drinking fountains.*
4. Water coolers or bottled water dispensers shall be permitted to be substituted for not more than 50 percent of the required drinking fountains. (FBCP 410.4)
5. For ADA– Spout cannot be higher than 36” measured from finish floor elevation to spout outlet (FBCA 602.4)
6. Drinking Fountains for Standing Persons shall be between 38” & 43” (FBC 602.7)
7. Water flow must be 4” high minimum, and 5” max. distance from front of the unit (FBCA 602.6 Water Flow). The spout shall provide a flow of water 4 inches (100 mm) high minimum and shall be located 5 inches (125 mm) maximum from the front of the unit. The angle of the water stream shall be measured horizontally relative to the front face of the unit. Where spouts are located less than 3 inches (75 mm) of the front of the unit, the angle of the water stream shall be 30 degrees maximum. Where spouts are located between 3 inches (75 mm) and 5 inches (125 mm) maximum from the front of the unit, the angle of the water stream shall be 15 degrees maximum
8. Cane protection is required to prevent a blind person from bumping into protruding objects that protrude more than 4” above a 27” elevation. (FBCA 307.2 & FBCA 305.7 respectively). Wing walls could be built or an apron that attaches to the taller unit could be used (see Figure 8e). The requirement is to have the apron at 27” (note 27” clear is required under DF’s).
9. Interior drinking fountains cannot be used for exterior installation.

GENERAL

Accessory apron designed to bring Elkay water coolers into compliance with the Americans with Disabilities Act (A.D.A.) when units are mounted on an exposed wall. This apron provides the mandatory 27" (686 mm) floor to underside requirement when mounted in this manner. Suitable for use with models LZSTL8C, LZTL8C, EZSTL8C, EZTL8C, EZSTLR8C, EZTLR8C, EZSTLDDC, EZSTLRDDC and EZOSTL8C.

Construction

Thermo-formed textured ABS plastic. Available in gray only. Equipped with bottom cover plate.

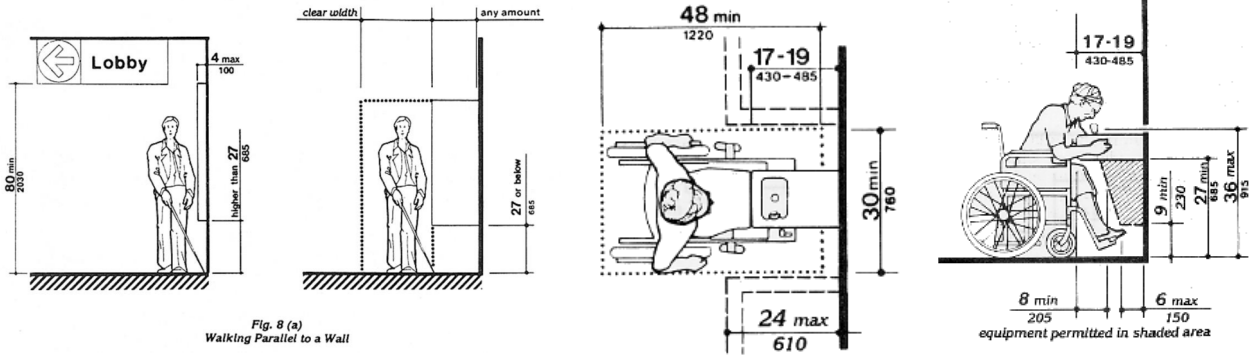
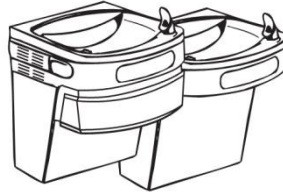


Fig. 8 (a)
Walking Parallel to a Wall

Easy Ordering Guide

Quickly identify the model to meet your specific needs by choosing your application path below:

- **Section (A)** to retrofit a bottle filling station to existing EZ style water cooler installations
- **Section (B)** to install a new combination bottle filling station and water cooler kit as **(B1)** EZH2O® with EZ model coolers, **(B2)** EZH2O® with new EZ Green model coolers or **(B3)** EZH2O with VRCGRN model coolers.
- **Section (C)** to install **(C1)** a new bottle filling station combo kit with EMABF water cooler or **(C2)** retrofit an existing EMABF water cooler installation
- **Section (D)** to install a vandal-resistant bottle filling station and water cooler combination kit.
- **Section (E)** to install a surface mount bottle filling station.
- **Section (F)** to install a recessed in-wall bottle filling station as either **(F1)** stand-alone station or paired with **(F2)** SwirlFlo® GRN or **(F3)** Soft Sides® refrigerated fountain
- **Section (G)** to **(G1)** install a new architectural fountain with integral bottle filling station or **(G2)** retrofit an existing bi-level refrigerated SwirlFlo® or Soft Sides® fountain.
- Outdoor Bottle Filling Order Guide follows Section G.

(A) EZH2O Retro-fit Kit for EZ Style Coolers

Configuration	Model to Order & List Price	Shipped complete in single carton which includes:
Retrofit to existing EZ style* coolers	Filtered Models	
	LZWSRK (\$699)	(1) EZH2O Retro Station (2) EWF3000 WaterSentry® Plus Filter (3) Retro-fit Tools
	Filterless Models	
	EZWSRK (\$634)	(1) EZH2O Retro Station (2) Retro-fit Tools



Model LZWSRK



Model LZSTL8WSLK

*Applicable on 115V/60Hz pushbar-activated EZ style single, bi-level and bi-level reverse water coolers
Bi-level models require (3) electrical receptacles. Optional accessory plug, 36292C (List \$27) is available

(B1) EZH2O Bottle Filling Station – EZ Water Cooler Combo Kits

Configuration			Model to Order & List Price			
Type	Bubbler Style	Chilled Capacity	Light Gray	Stainless Steel	Light Gray	Stainless Steel
			Filtered Models		Filterless Models	
Single	Flexi-Guard ^(R) StreamSaver TM	8GPH	LZS8WSLK (\$1,493)	LZS8WSSK (\$1,549)	EZS8WSLK (\$1,425)	EZS8WSSK (\$1,481)
		Non-Chilled	LZSDWSLK (\$1,295)	LZSDWSSK (\$1,351)	EZSDWSLK (\$1,227)	EZSDWSSK (\$1,283)
	Vandal Resistant	8GPH	LZS8WSVRLK (\$1,556)	LZS8WSVRSK (\$1,612)	EZS8WSVRLK (\$1,488)	EZS8WSVRSK (\$1,544)
		Non-Chilled	LZSDWSVRLK (\$1,358)	LZSDWSVRSK (\$1,414)	EZSDWSVRLK (\$1,290)	EZSDWSVRSK (\$1,346)
Bi-Level	Flexi-Guard ^(R) StreamSaver TM	8GPH	LZSTL8WSLK (\$2,075)	LZSTL8WSSK (\$2,185)	EZSTL8WSLK (\$2,007)	EZSTL8WSSK (\$2,117)
		Non-Chilled	LZSTLDDWSLK (\$1,865)	LZSTLDDWSSK (\$1,975)	EZSTLDDWSLK (\$1,797)	EZSTLDDWSSK (\$1,907)
	Vandal Resistant	8GPH	LZSTL8WSVRLK (\$2,195)	LZSTL8WSVRSK (\$2,305)	EZSTL8WSVRLK (\$2,127)	EZSTL8WSVRSK (\$2,237)
		Non-Chilled	LZSTLDDWSVRLK (\$1,985)	LZSTLDDWSVRSK (\$2,095)	EZSTLDDWSVRLK (\$1,917)	EZSTLDDWSVRSK (\$2,027)
Bi-Level Reverse	Flexi-Guard ^(R) StreamSaver TM	8GPH	LZSTLR8WSLK (\$2,075)	LZSTLR8WSSK (\$2,185)	EZSTLR8WSLK (\$2,007)	EZSTLR8WSSK (\$2,117)
		Non-Chilled	LZSTLRDDWSLK (\$1,865)	LZSTLRDDWSSK (\$1,975)	EZSTLRDDWSLK (\$1,797)	EZSTLRDDWSSK (\$1,907)
	Vandal Resistant	8GPH	LZSTLR8WSVRLK (\$2,195)	LZSTLR8WSVRSK (\$2,305)	EZSTLR8WSVRLK (\$2,127)	EZSTLR8WSVRSK (\$2,237)
		Non-Chilled	LZSTLRDDWSVRLK (\$1,985)	LZSTLRDDWSVRSK (\$2,095)	EZSTLRDDWSVRLK (\$1,917)	EZSTLRDDWSVRSK (\$2,027)

All models shipped in two cartons: (1) EZ Water Cooler and (2) EZH2O Station. Bi-level models require (3) electrical receptacles. Optional accessory plug, 36292C (List \$27) is available.

(B2) EZH2O Bottle Filling– EZ Green Water Cooler Combo Kits

Configuration		Model to Order & List Price			
Type	Chilled Capacity	Light Gray	Stainless Steel	Light Gray	Stainless Steel
		Filtered Models		Filterless Models	
Single	8GPH	LZSG8WSLK (\$1,609)	LZSG8WSSK (\$1,665)	EZSG8WSLK (\$1,541)	EZSG8WSSK (\$1,597)
Bi-Level	8GPH	LZSTLG8WSLK (\$2,205)	LZSTLG8WSSK (\$2,315)	EZSTLG8WSLK (\$2,137)	EZSTLG8WSSK (\$2,247)



(B2) EZH2O Bottle Filling–VRCGRN Water Cooler Combo Kits

Configuration		Model to Order & List Price	
Type	Chilled Capacity	Filtered Models	Filterless Models
Single	8GPH	LVRCGRN8WSK (\$1,780)	VRCGRN8WSK (\$1,612)
Bi-Level	8GPH	LVRCGRNTL8WSK (\$2,438)	VRCGRNTL8WSK (\$2,370)



(C1) EZH2O Bottle Filling-EMABF Water Cooler Combo Kits

Configuration		Model to Order & List Price			
Type	Chilled Capacity	Light Gray	Stainless Steel	Light Gray	Stainless Steel
		Filtered Models		Filterless Models	
Single	8GPH	LMABF8WSLK (\$1,493)	LMABF8WSSK (\$1,549)	EMABF8WSLK (\$1,425)	EMABF8WSSK (\$1,481)
	Non-Chilled	LMABFDWSLK (\$1,295)	LMABFDWSSK (\$1,351)	EMABFDWSLK (\$1,227)	EMABFDWSSK (\$1,283)
Bi-Level	8GPH	LMABFTL8WSLK (\$2,2143)	LMABFTL8WSSK (\$2,253)	EMABFTL8WSLK (\$2,075)	EMABFTL8WSSK (\$2,185)
	Non-Chilled	LMABFTLDDWSLK (\$1,933)	LMABFTLDDWSSK (\$2,043)	EMABFTLDDWSLK (\$1,865)	EMABFTLDDWSSK (\$1,975)



(C2) EZH2O Retro-fit for EMABF coolers

Configuration	Model to Order & List Price	Shipped complete in single carton which includes:
Retrofit to existing EMABF/LMABF coolers	Filtered Models	
	LMABFWS--RF (\$729)	(1) EZH2O Retro Station w/tools (2) EWF3000 WaterSentry® Plus Filter (3) New Basin & Drain assembly
	Filterless Models	
	EMABFWS-RF (\$664)	(1) EZH2O Retro Station w/tools (2) New Basin & Drain assembly

Model LMABFTL8WSK

(D) Vandal-Resistant EZH2O Bottle Filling w/VRC Water Cooler Combination Kits

Configuration		Model to Order & List Price	
Type	Chilled Capacity	Filtered Models	Filterless Models
Single	8GPH	LVRC8WSK (\$2,316)	VRC8WSK (\$2,240)
	Non-Chilled	LVRCDWSK (\$2,136)	VRCDWSK (\$2,060)
Bi-Level	8GPH	LVRCTL8WSK (\$2,946)	VRCTL8WSK (\$2,870)
	Non-Chilled	LVRCTLDDWSK (\$2,764)	VRCTLDDWSK (\$2,688)
Bi-Level Reverse	8GPH	Not available	VRCTL8WSK (\$2,870)
	Non-Chilled	Not available	VRCTLDDWSK (\$2,688)



All cooler combo models shipped in two cartons: (1) Water Cooler and (2) EZH2O Station. Bi-level models require (3) electrical receptacles. Optional accessory plug, 36292C (List \$27) is available.

(E) EZH2O Surface Mount Bottle Filling Station



Configuration	Model to Order & List Price	
Type	Filtered Models	Filterless Models
Electrical Surface Mount	LZWSSM (\$1,217)	EZWSSM (\$1,149)
Mechanical Surface Mount		EMASM (\$849)

Model EMASM



Model LZWSSM

(F1) EZH2O In-Wall Kit

Configuration	Model to Order & List Price		Shipped in multiple cartons. Carton components include:
	Filtered	Filterless	
Refrigerated Model – can be used as stand alone or paired with Soft Sides® non-refrigerated fountains (EDFP214, EDFP217)	LZWSM8K (\$2,560)	EZWSM8K (\$2,492)	(1) EZH2O Station with Louvered Access Panel (2) EWF3000 WaterSentry® Plus Filter (3) Mounting Frame (4) ECH8 Chiller
	LZWSGRNM8K (\$2,763)	EZWSGRNM8K (\$2,695)	
Non-Refrigerated Model – can be used as stand alone, paired with models above or an alternate remote chiller*	LZWSMDK (\$1,597)	EZWSMDK (\$1,529)	(1) EZH2O Station with Solid Access Panel (2) EWF3000 WaterSentry® Plus Filter (3) Mounting Frame
Models to be paired with SwirlFlo® (EDFPB) non-refrigerated fountains (back panel height is slightly taller)	LZWSM8PK (\$2,560)	EZWSM8PK (\$2,492)	(1) EZH2O Station with Louvered Access Panel (2) EWF3000 WaterSentry® Plus Filter (3) Mounting Frame (4) ECH8 Chiller
	LZWSGRNM8PK (\$2,763)	EZWSGRNM8PK (\$2,695)	
	LZWSMDPK (\$1,597)	EZWSMDPK (\$1,529)	(1) EZH2O Station with Solid Access Panel (2) EWF3000 WaterSentry® Plus Filter (3) Mounting Frame

*Remote Chiller ordered separately and located 10-15 feet of unit. Optional EG3 ventilated louvered grill available. (See table below)

*Chiller Options	Capacity (GPH)
ER101Y	9.6
ER191	19
ER301	29.5
ERW201	19.8
ERW321	31.9



Model LZWSM8K



Model LZWSMDK

(F2) EZH2O In-Wall Bottle Filling Station w/SwirlFlo® GRN Refrigerated Ftn Combos

Configuration	Model to Order & List Price		Shipped in multiple cartons. Carton components include:
	Filtered	Filterless	
EZH2O In-Wall with Single SwirlFlo GRN	LZWS-SFGRN8K (\$5,007)	EZWS-SFGRN8K (\$4,939)	(1) EZH2O Station with Solid Lower Access Panel (2) Single SwirlFlo GRN Refrigerated Fountain (3 & 4) MFWS100 & MF100 Mounting Frames (5) ECH8GRN Chiller (6) EWF3000 WaterSentry® Plus Filter, if applicable
EZH2O In-Wall with Bi-Level SwirlFlo GRN	LZWS-SFGRN28K (\$7,443)	EZWS-SFGRN28K (\$7,310)	(1) EZH2O Station with Louvered Lower Access Panel (2) Bi-Level SwirlFlo GRN Refrigerated Fountain; Filtered model also includes one WaterSentry® VII filter (3 & 4) MFWS100 & MF200 Mounting Frames (5 & 6) Two ECH8GRN Chillers (7) EWF3000 WaterSentry® Plus Filter, if applicable



Model LZWS-SFGRN8K



Model LZWS-SFGRN28K

(F3) EZH2O In-Wall Bottle Filling Station w/Soft Sides® Refrigerated Fountain Combos

Configuration	Model to Order & List Price		Shipped in multiple cartons. Carton components include:
	Filtered	Filterless	
EZH2O In-Wall with Single Soft Sides	LZWS-SS8K (\$4,393)	EZWS-SS8K (\$4,325)	(1) EZH2O Station with Solid Lower Access Panel (2) Single Soft Sides Refrigerated Fountain; Filtered model also includes one WaterSentry® VII filter (3 & 4) MFWS100 & MF100 Mounting Frames (5) ECH8 Chiller (6) EWF3000 WaterSentry® Plus Filter, if applicable
EZH2O In-Wall with Bi-Level Soft Sides	LZWS-SS28K (\$6,466)	EZWS-SS28K (\$6,333)	(1) EZH2O Station with Louvered Lower Access Panel (2) Bi-Level Soft Sides Refrigerated Fountain; Filtered model also includes one WaterSentry® VII filter (3 & 4) MFWS100 & MF200 Mounting Frames (5 & 6) Two ECH8 Chillers (7) EWF3000 WaterSentry® Plus Filter, if applicable



Model EZWS-SS8K



Model LZWS-SS28K

(G1) Architectural Fountains with Integral EZH2O

Configuration	Model to Order & List Price		Shipped in multiple cartons including:
	Filtered	Filterless	
Bi-Level Soft Sides Ftn with Integral EZH2O Bottle Filler	LZWS-EDFP217K (\$4,593)	EZWS-EDFP217K (\$4,460)	(1) Architectural bi-level fountain with integral EZH2O with filter, if applicable (2) Mounting frame
Bi-Level SwirlFlo Ftn with Integral EZH2O Bottle Filler	LZWS-EDFPBM117K (\$5,362)	EZWS-EDFPBM117K (\$5,229)	(1) Architectural bi-level fountain with integral EZH2O with filter, if applicable (2) Mounting frame
Bi-Level SwirlFlo Refrigerated Ftn with Integral EZH2O Bottle Filler	LZWS-LRPBM28K (\$6,648)	EZWS-ERPBM28K (\$6,515)	(1) Architectural bi-level fountain with integral EZH2O with filter, if applicable (2) Mounting frame (3) ECH8 Chiller



Model
LZWS-EDFP217K



Model
LZWS-EDFPBM117K



Model
LZWS-LRPBM28K

Optional panel available for front access to bottle filler electricals or drain.

Order part number:
ACCESS12X38-5 (List \$195)

Model EZWS-EDFP217K shown with two optional access panels.



(G2) Retrofit an existing SwirlFlo or Soft Sides Refrigerated Fountain

Configuration	Model to Order & List Price		Shipped in single cartons. Carton components include:
	Filtered	Filterless	
Retrofit for existing SwirlFlo Bi-Level Refrigerated Fountain	LZWS-ERPBM8-RF (\$2,400)	EZWS-ERPBM8-RF (\$2,324)	Upper wall panel with integral EZH2O, lower louvered panel and new mounting frame for the bottle filler section. WaterSentry® Plus filter included in carton, as applicable. Note – these models will reuse one existing fountain, one section of existing mounting frame and the existing remote chiller.
Retrofit for existing Soft Sides Bi-Level Refrigerated Fountain	LZWS-ERFP8-RF (\$2,400)	EZWS-ERFP8-RF (\$2,324)	



Model
LZWS-ERPBM8-RF



Model
LZWS-ERFP8-RF

Contact Information

Website: elkayusa.com
Corporate Headquarters: 630.574.8484
Customer Service: 630.572.3192
Fax: 630.574.5012

Elkay Corporate Headquarters
2222 Camden Court
Oak Brook, Illinois 60523

Replacement Filters

Model #	Quantity	List Price
51300C	One	\$ 125.00
51300C_3PK	Three	\$ 337.50
51300C_12PK	Twelve	\$ 1275.00
51300C_24PK	Twenty-four	\$ 2400.00
51300C_48PK	Forty-eight	\$ 4500.00

Trex[®]

TREX SECLUSIONS[®]
PRIVACY FENCING SYSTEMS



Notes:

- 1) Grade fenceline to minimize racking
- 2) Conduct underground locates prior to excavation, coordinate location of fence based on found conflicts.
- 3) Coordinate footing elevation to allow backfilling that will support grass, or "cone" top of footing if allowable.
- 4) Provide footing detail where fence is to be mounted on existing loading platform.
- 5) Color approved as "Woodland Brown"
- 6) Fence post cap "Pyramid" acceptable.
- 7) Provide fasteners that will not corrode, or mark fence material (Stainless or similar).



WELCOME TO THE BACKYARD REVOLUTION.

Introducing Trex Seclusions® privacy fencing. Stunning looks, low maintenance, lasting durability, and it comes in more colors than wood or vinyl. You simply can't find a better fencing alternative. When you build with Trex Seclusions fencing, each and every post goes in with pride.

OUTSTANDING LOOKS. YEAR AFTER YEAR.

The rich browns, deep tans, and soft grey hues of Trex Seclusions® fencing add beauty, elegance and value to a home. No glaring vinyl/plastic product can compare.



Create a separation from the street without detracting from the house.



Whether it's at a park, a school or at home, Trex® keeps kids safely secured in their play area.



Backyards are more beautiful when Trex is in the picture.

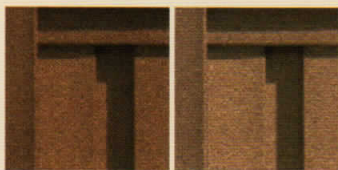


Perfect for poolside privacy.

A CHOICE OF COLOR. YOU SHOULD NEVER FEEL FENCED IN.

Unlike vinyl, Trex Seclusions fencing offers a palette of rich color choices.

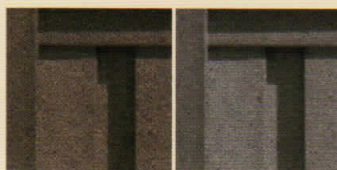
SADDLE



Before Weathering

After Weathering

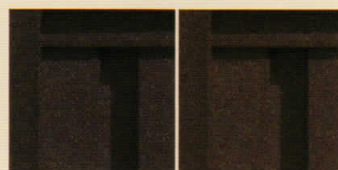
WINCHESTER GREY



Before Weathering

After Weathering

WOODLAND BROWN*



Before Weathering

After Weathering

*Available in July 2007.

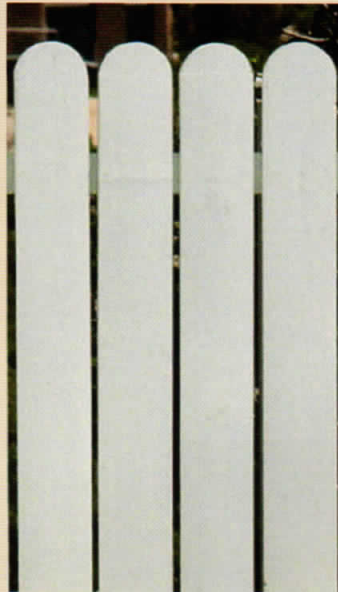


THE LOOK OF WOOD. THE EASE OF PLASTIC.

Trex Seclusions® is made of 50% reclaimed wood fiber and 50% polyethylene. That means you get the best of both worlds. This revolutionary product offers the rich beauty of wood, but requires no staining or painting.



Trex Seclusions – a revolutionary material that provides years of worry-free ownership.



Vinyl is treated with a white UV inhibitor, which limits color choice.



Wood rots and can require a great deal of maintenance.

WITHSTANDS THE ELEMENTS. AND THEN SOME.

Wind, rain, sleet and snow. No problem. Trex® won't buckle, heave, freeze or thaw. Trex is also resistant to insects, including termites. And, while the upfront cost may be higher than wood, over time, the gap closes and Trex proves its value through years of worry-free ownership.



The robust, 6X6 hollow post requires no additional reinforcement. The life of the fence is the life of the post.



A FENCE THAT STANDS ABOVE THE REST.

	Trex Seclusions®	Wood	Vinyl
Stunning Looks	X		
Low Maintenance	X		X
Lasting Durability	X		
Easy to Install	X	X	X
Miami/Dade Wind Load Certification**	X		
Rich Color Choices	X		
True Privacy (No gaps between pickets)	X		
Good Neighbor Fence (No one gets bad side of fence)	X		X
Non-Reflective Surface	X	X	
Standard 6" Nominal Posts	X		
Limited Residential Warranty (years)	25	0-12	20+
Top Building Products Brand	X		

WIND LOAD CERTIFICATION**

Trex Seclusions fencing is proven to withstand some of weather's harshest conditions. It passes Miami/Dade wind load certification tests of 110 mph steady winds and 130 mph wind gusts.

IT'S EASY TO INSTALL THE FENCE OF YOUR DREAMS.

- As easy as installing an ordinary fence.
- Much easier and more convenient to work with—doesn't splinter like wood.
- More detailed instructions are available at trexfencing.com.
- Find your local Trex® installer at trexfencing.com.



1. Stake out the fence line.



2. Dig holes.



3. Set posts in concrete.



4. Install brackets using the TrexExpress™ installation tool.*



5. Slide bottom rail over the metal insert.*



6. Insert bottom rails.



7. Insert pickets.



8. Insert top rails.



9. Affix post caps.

RACKING

Trex Seclusions® has the ability to rack down slopes and around property lines for that beautiful seamless look.



THE BEST FENCING, WITH AN ORDERING PROCESS TO MATCH.

Trex Seclusions® fencing is sold a-la-carte, making it convenient and easy to order. This fence was designed to create any fencing up to 8 ft. per section.

Each fence section includes the following:

1 Fence Post	2 Bottom Rails
1 Fence Post Cap	4 Brackets
1 Top Rail	19 Pickets
1 Bottom Rail Insert	



8 ft. high



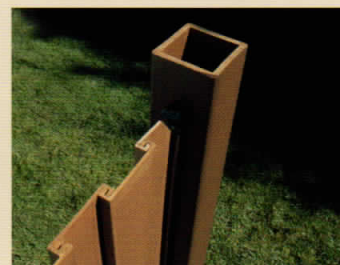
6 ft. high



4 ft. high



To help you achieve a custom look in your backyard, Trex Seclusions fencing is available with two styles of fence caps: pyramid or flat.



Interconnecting pickets for the ultimate in privacy.

GATE OPTIONS

There's no need to stop at just the fence. Your installer can transform Trex Seclusions into a functional gate that provides an attractive entrance to your property.



Decorative entrance gate



RV/boat gate



4ft. entrance gate



Low Maintenance

- Revolutionary, made from wood and plastic
- No painting or staining required

Stunning Looks

- Rich colors and finish

Easy Installation

- Interconnecting pickets provide fast assembly

Wind Load Certification

- Tested up to 110mph

Durability

- Stands up to extreme weather and termites
- Stand-alone posts

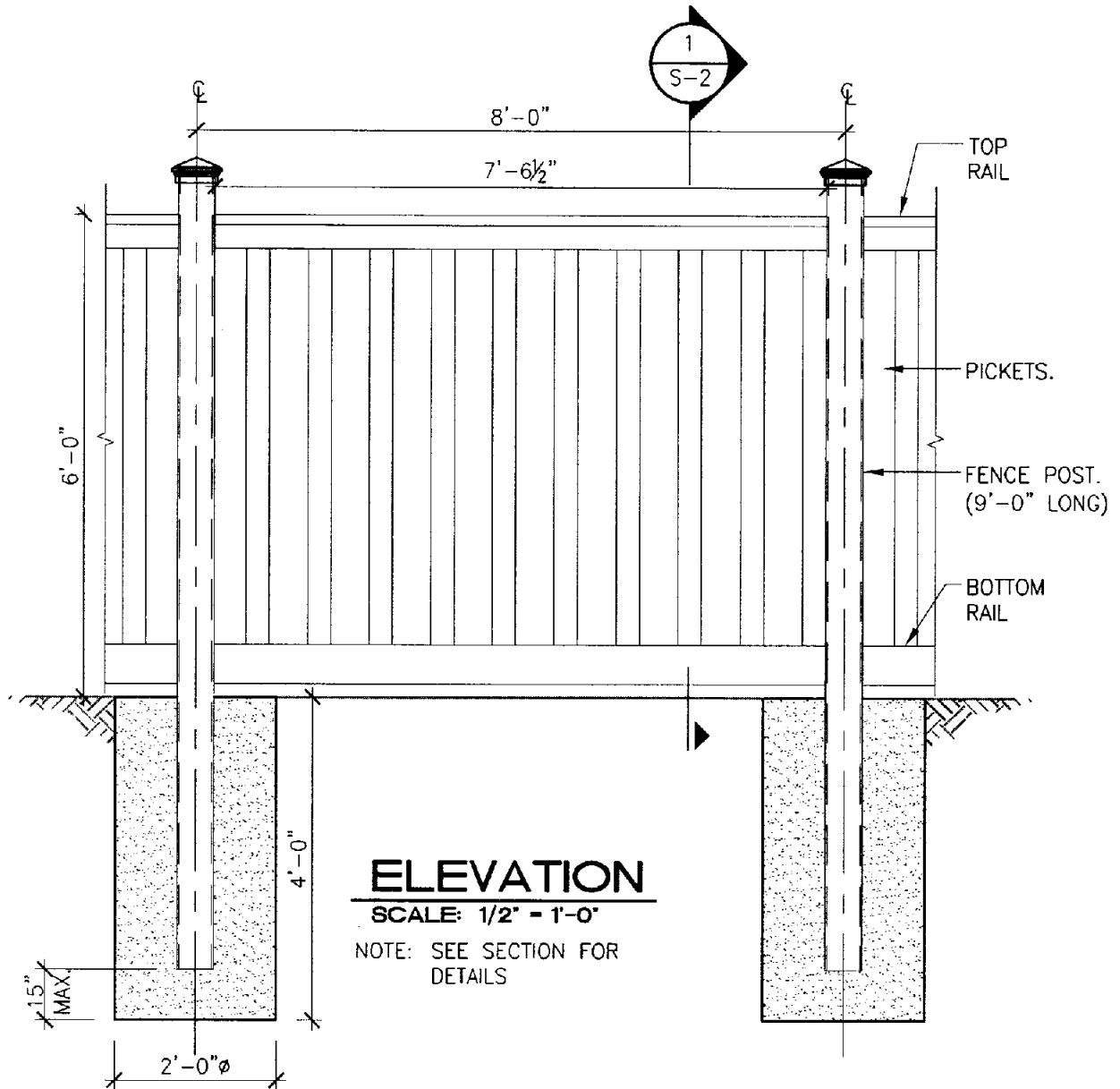
Still on the fence? Visit us at trexfencing.com or call 1-800-BUY-TREX, ext. 925.

All colors shown are "after weathering." Actual colors may vary from photos. Product is subject to regional availability. Check for availability in your area.

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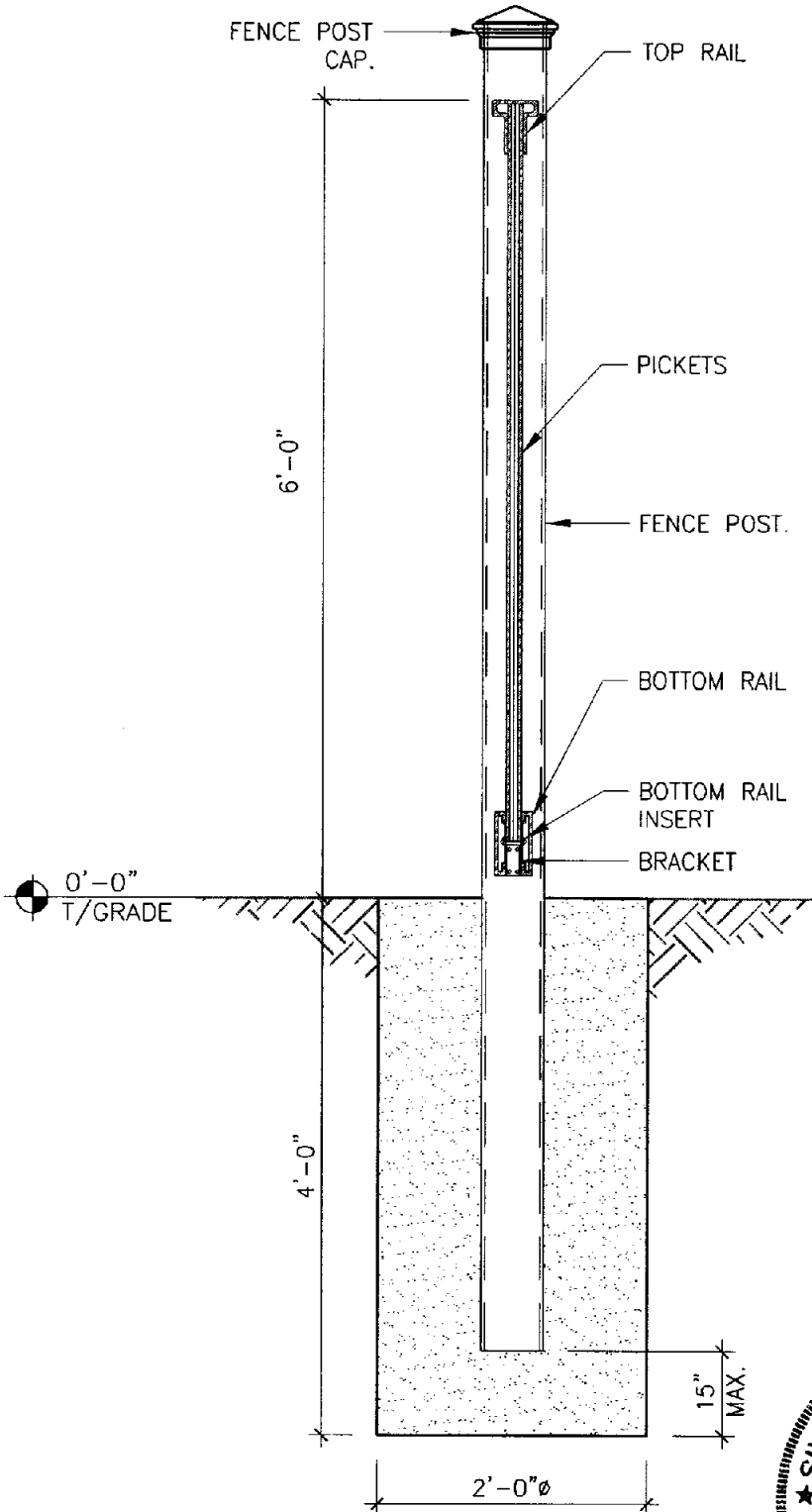


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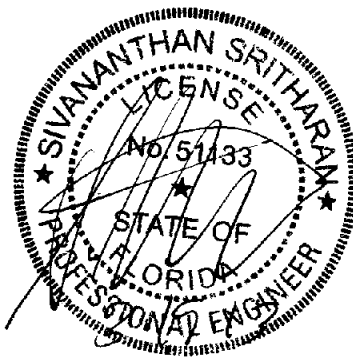


NOTES:

1. THE FENCE FOUNDATION HAS BEEN DESIGNED FOR 115 MPH WIND (3-SEC. GUST) IN ACCORDANCE WITH SECTION 1615.2.1 OF 2010 FLORIDA BUILDING CODE.
2. THE FOUNDATION DESIGN IS BASED ON AN ALLOWABLE LATERAL SOIL BEARING CAPACITY OF 400 PSF/FT. LATERAL SOIL BEARING VALUES HAVE BEEN DOUBLED BASED ON SECTION 1819.6.1 FBC 2010.
3. THE FENCE MANUFACTURER SHALL PROVIDE TEST DATA OR DRAWINGS AND CALCULATIONS WITH THE SIGNATURE AND SEAL OF THE SPECIALTY ENGINEER RESPONSIBLE FOR THE DESIGN OF FENCE AND POSTS.
4. THE CONCRETE USED FOR THE FOUNDATION SHALL BE A MIX DESIGNED TO ACHIEVE 3,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS. MIXING, TRANSPORTING, AND PLACEMENT OF CONCRETE SHALL CONFORM TO ACI STANDARDS.



1 SECTION
 SCALE: 3/4" = 1'-0"



SIVANTHAN SRITHARAN, P.E.
 FLORIDA LICENSE #51133

S & F Engineers, Inc.
 Consulting Structural

2935 W Cypress Creek Rd, Suite 200, Ft. Lauderdale, FL 33309
 Ph.: (954) 938-0020, Fax: (954) 938-0468
 C.A. # 8852 E-Mail: sfe@sfeengineers.com

PROJECT:

TREX FENCE
 MIAMI - DADE COUNTY

CONTRACTOR:
 CARLSON FENCE INC.
 6401 SW 63TH STREET
 MIAMI, FLORIDA 33166

TITLE:
ELEVATION AND SECTION

DRAWN BY: LS
 CHD. BY: SS

SCALE: AS NOTED
 DATE: 03/19/13

SHEET NUMBER:
S-1



MIAMI-DADE COUNTY TEST REPORT

Rendered to:

TREX COMPANY, LLC
245 Capitol Lane
Winchester, Virginia 22602

Report No: 89754.01-119-18
Test Dates: 03/16/09
And: 03/21/09
Report Date: 04/16/09
Expiration Date: 03/16/19
Miami-Dade County Notification No.: ATI 09013

1.0 General Information

1.1 Product

6 ft high *Seclusions*[™] wood-plastic composite privacy fence system with 5 in support posts

1.2 Project Description

Architectural Testing was contracted by Trex Company, Inc. to perform Miami-Dade County Performance tests on their 6 ft high by 8 ft wide *Seclusions*[™] privacy fence system with 5 in support posts. The following tests were performed:

Dynamic Wind Load Testing of Fence System and Lateral, Static Load Testing of Posts.

This report includes comprehensive written and photographic documentation of the testing performed.

2.0 Fence Wind Load Testing

2.1 Test Specimen

A fence section measuring 8 ft wide (post center to post center) by 6 ft high was tested. Trex Company, Inc. provided all test materials. The test specimen was assembled by Architectural Testing at their York, Pennsylvania campus. See Appendix A for component drawings and installation instructions and Appendix B for component and test photographs.

2.2 Test Equipment

The wind generator consists of an engine driven vane axial fan. The fan blades were fixed at a 5-1/2° pitch as marked on the fan. The plenum has an outlet of 8 ft wide by 4 ft high with eight 2 ft by 2 ft baffled outlets. Fence deflections were measured with linear displacement transducers accurate to 0.01 in. Wind speeds were calibrated according to Section 7 of Florida Building Code Test Protocol TAS 100-95 (reference ATI Report No. 72064.02-119-18).

2.3 Test Setup

A steel test fixture was used to simulate a rigid post embedment. The bottom of the bottom rail was fixed at 2 in above the top of the test fixture. The wind generator outlet was located 48 in from the face of the specimen (see photographs in Appendix B). Electronic linear displacement transducers were fixed at mid-span on the top rail, middle of the in-fill area, and mid-span on the bottom rail for deflection measurements.

2.4 Test Procedure

Wind load testing was initiated at 75 mph and held for a duration of 50 seconds, then reduced to zero for at least one minute to determine recovery. Wind speed was then increased to 110 mph and held for a duration of 35 seconds, then reduced to zero for at least one minute to determine recovery. The duration of the applied wind load at each wind speed was determined by the following equation:

$$t = 3600 / V_{fm}$$

where: t = duration, seconds; and V_{fm} = "fastest mile" wind speed, mph.

Wind speeds used in testing correlate with "fastest mile" wind speeds (V_{fm}) for reference to codes and design standards. Maximum deflections were recorded at each wind load level.

2.5 Limitations of Test

Test setup and procedure provide information for evaluation of the fence assembly to resist sustained wind speeds indicated in the test results. This evaluation included the transfer of wind loads to the fence panels, rails, and support posts. The posts only support a single section of fence in this simulation and were therefore not fully evaluated for actual field conditions. Evaluation of the supporting post members is addressed in Section 3 of this report.

2.6 Test Specimen Details

The test specimen was comprised of the following components and attachments:

Top Rail: Wood - plastic composite extrusion: 4-1/8 in wide by 5in high by 1/2 in wall by 91 in long, double-legged "T" profile with center slot to accept pickets

Bottom Rail: 6063-T5 aluminum extrusion: 2-3/4 in wide by 5-1/8 in high by 0.07 in wall by 91 in long, "H" profile

Picket / Bottom Rail Cover: Wood - plastic composite extrusion: 5-7/8 in by 1 in by 1/4 in wall, "C" profile; nineteen 66-1/2 in long as pickets and two 91 in long as bottom rail covers

Post: 5 in square by 0.5 in wall by 97 in long, wood - plastic composite hollow extrusion

Rail Bracket: 3 in high by 1-7/8 in deep by 1.3 in wide by 0.15 in wall, glass filled nylon 6 injection molded part with four 0.21 in diameter holes through surface that contacts post

Fastener: #8 x 1-5/8 in x 9 tpi, coated flat head, Phillips head, steel deck screw - four to attach each bracket to post, one to attach each rail end to top of bracket, three to attach each end picket to post

2.7 Wind Load Test Results

Wind Speed	Duration	Deflection (in)		
		Top	Mid	Bottom
75 mph	50 sec	2.05	2.13	0.45
0 mph	≥ 1 min	0.19	0.01	0.09
110 mph	35 sec	4.51	5.56	0.98
0 mph	≥ 1 min	0.44	0.24	0.14

2.8 Observations

There was no separation of fence components or any visible damage to any fence component at the completion of the test. The *Seclusions*TM privacy fence test specimen withstood a maximum sustained wind speed, V_{fm} , of 110 mph, which is equivalent to a "three-second gust" wind speed, V_{3s} , of 126 mph.

3.0 Post Static Load Testing

3.1 Test Equipment

The support post was tested in a self-contained structural frame designed to accommodate anchorage of the specimen and application of the test loads. The specimen was loaded using an electric winch mounted to a rigid steel test frame. High strength steel cables and nylon lifting straps were used to impose test loads on the specimen. Applied load was measured using an electronic load cell located in-line within the loading system. Deflection at point of load application was measured to the nearest 0.01 in using an electronic linear displacement transducer.

3.2 Test Setup

One end of the tested post was securely anchored and braced in a rigid test frame to simulate post embedment. The test load was applied to the free end of the post 38 in from the test frame. This distance represents the vertical mid-span of the assembled 72 in tall fence section plus the 2 in recommended clearance between the bottom of the fence section and grade. The post and anchorage were arranged in a horizontal orientation to facilitate testing. See Photo No. 5 in Appendix B for typical test setup.

3.3 Test Procedure

Three support posts were preloaded up to a level not exceeding design load. After pre-loading, all load was released and any necessary fixture adjustments were made. Each post was then loaded at a uniform rate until failure.

3.4 Post Test Results

Specimen	Ultimate Test Load (lb)	Deviation from Average
1	1,719	1%
2	1,739	0%
3	1,757	-1%
Average:	1,738	

3.5 Post Test Analysis

The design wind load for a 6 ft high by 8 ft wide fence system was calculated using ASCE 7-98 based on a sustained wind speed of 75 mph, which correlates to a 90 mph three-second gust wind. The average ultimate load for the post was then divided by the corresponding design load to obtain a Factor of Safety for the fence system post. See Appendix C for design wind load calculations.

3.5 Post Test Analysis (Continued)

The analysis results are as follows:

Calculated Design Load (lb)	Average Ultimate Test Load (lb)	Calculated Factor of Safety
749	1,738	2.32

4.0 Closing Statement

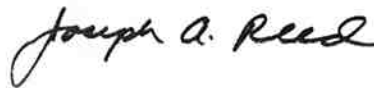
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For ARCHITECTURAL TESTING:



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Attachments (pages): This report is complete only when all attachments listed are included.

- Appendix A - Drawings (10)
- Appendix B - Photographs (3)
- Appendix C - Calculations (1)