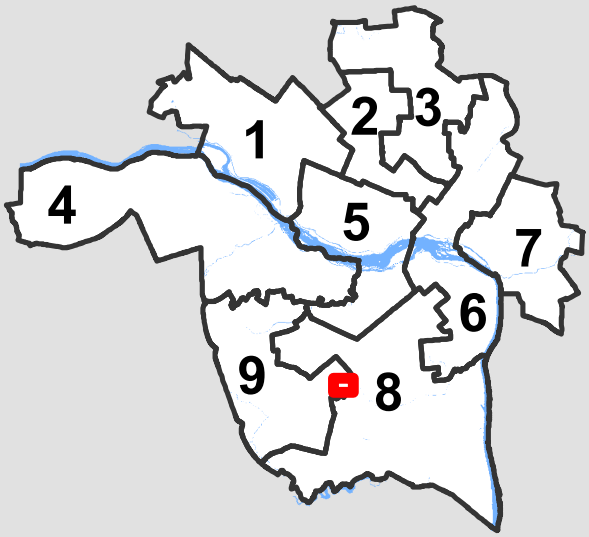
City of Richmond
Department of Planning & Development Review

Location, Character, and Extent

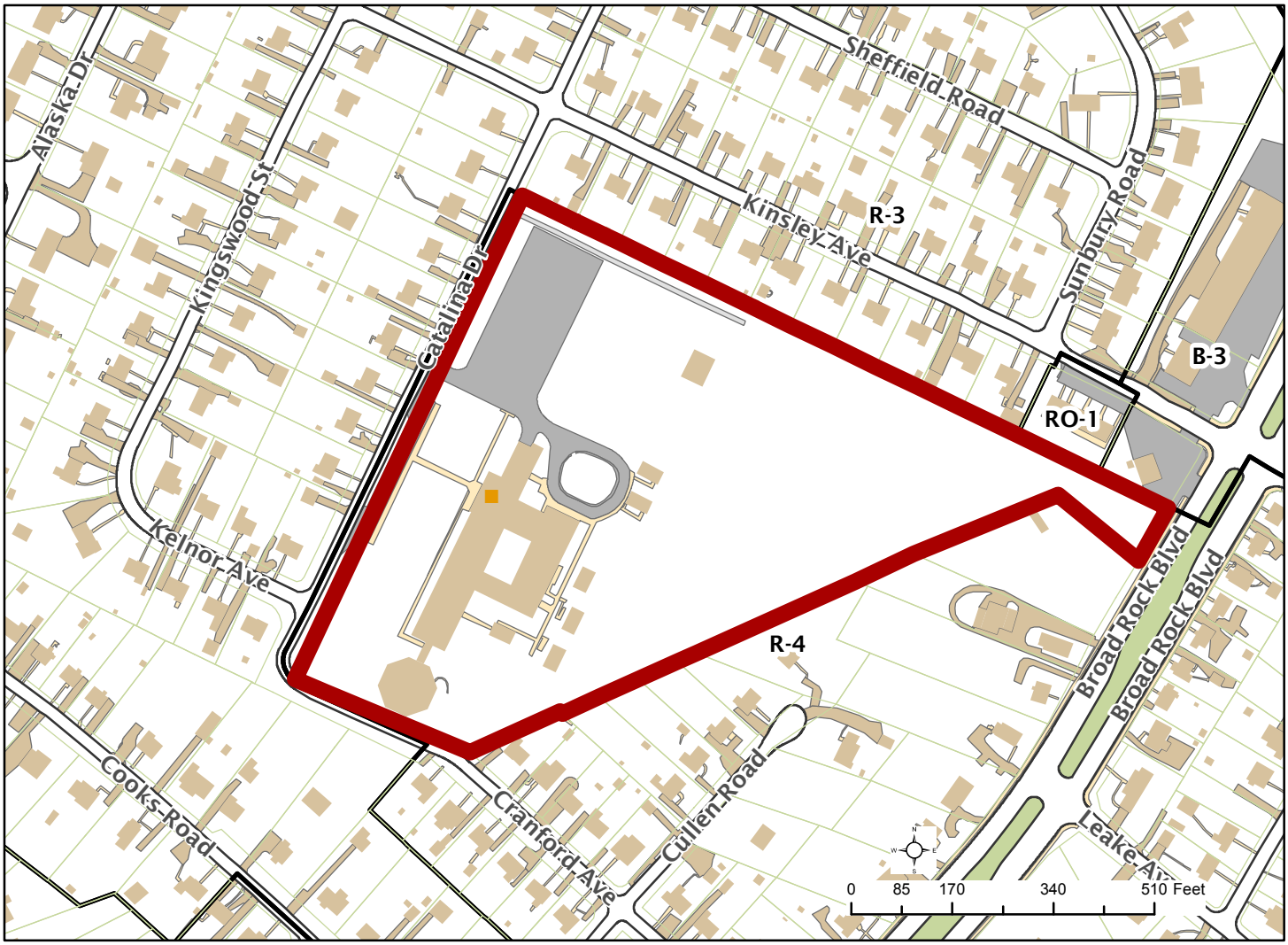
LOCATION: 1745 Catalina Dr

COUNCIL DISTRICT: 9

PROPOSAL: Installation of new modular classrooms & restroom facilities at Greene Elementary



For questions, please contact Kathleen Onufer at 646-5207 or Kathleen.Onufer@richmondgov.com



Application for URBAN DESIGN COMMITTEE Review

Department of Planning and Development Review
Planning & Preservation Division
900 E. Broad Street, Room 510
Richmond, Virginia 23219
(804) 646-6335
http://www.richmondgov.com/CommitteeUrbanDesign

Application Type

__ Addition/Alteration to Existing Structure
X New Construction
__ Streetscape
__ Site Amenity
__ Encroachment
__ Master Plan
__ Sign
__ Other

Review Type

__ Conceptual
X Final

Project Name: ESH Greene Elementary School - Installation of New 8 - Classroom Modular Building w/Restrooms

Project Address: 1745 Catalina Drive, Richmond, Virginia 23224

Brief Project Description (this is not a replacement for the required detailed narrative) : Install temporary new (8) classroom building at ESH Greene. This will add to the current student capacity at this school. The temporary classroom building will be approximately 124'-0" x 65'-0" in size.

Applicant Information

(on all applications other than encroachments, a City agency representative must be the applicant)

Name: Lloyd Schieldge Email: lshield@richmond.k12.va.us

City Agency: Richmond Public Schools Phone: 804-335-5401

Address: 1250 Ingram Avenue, Richmond, Va. 23225

Main Contact (if different from Applicant): N/A

Company: N/A Phone: N/A

Email:

Submittal Deadlines

All applications and support materials must be filed no later than 21 days prior to the scheduled meeting of the Urban Design Committee (UDC). Please see the schedule on page 3 as actual deadlines are adjusted due to City holidays. **Late or incomplete submissions will be deferred to the next meeting.**

Filing

Applications can be mailed or delivered to the attention of "Urban Design Committee" at the address listed at the top of this page. **It is important that the applicant discuss the proposal with appropriate City agencies, Zoning Administration staff, and area civic associations and residents prior to filing the application with the UDC.**

UDC Background

The UDC is a ten member committee created by City Council in 1968 whose purpose is to advise the City Planning Commission on the design of projects on City property or right-of-way. The UDC provides advice of an aesthetic nature in connection with the performance of the duties of the Commission under Sections 17.05, 17.06 and 17.07 of the City Charter. The UDC also advises the Department of Public Works in regards to private encroachments in the public right-of-way.

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Submission Requirements

• 10 copies of the application cover sheet and all support materials (see below), unless the application is for an encroachment, in which case only 6 copies are required. Plan sheets should be 11" x 17", folded to 8 1/2" x 11". If it is not possible to scale plans to these dimensions, please provide one set of larger, scaled plans.
• An electronic copy (PDF preferred) of all application materials, which can be burned to disc, emailed, or delivered by FTP.

All applications must include the attached cover sheet and the following support materials, as applicable to the project:

For Conceptual Review

• A detailed project narrative which includes the following: purpose of the project, project background, project budget and funding sources, description of construction program and estimated construction start date (description should also provide information on the surrounding area to provide context).
• A site plan for the project indicating site characteristics which include: building footprints, parking areas, pedestrian routes, recreation areas, open areas and areas of future expansion.
• A set of floor plans and elevations, as detailed as possible.
• A landscaping plan which shows the general location and character of plant materials and notes any existing tree to be removed.

For Final Review

• A detailed project narrative which includes the following: purpose of the project, project background, project budget and funding sources, description of construction program and estimated construction start date (description should also provide information on the surrounding area to provide context).
• A site plan for the project indicating site characteristics which include: building footprints, parking areas, pedestrian routes, recreation areas, open areas and areas of future expansion.
• A set of floor plans and elevations, as detailed as possible.
• A landscaping plan that includes a complete plant schedule, the precise location of all plant materials, and a landscape maintenance analysis. The plant schedule must show number, size and type of each planting proposed. If existing trees are to be removed, their size, type and location must be noted on the landscape plan.
• The location of all lighting units should be noted on a site plan, including wall-mounted, site and parking lot lighting. Other site details, such as benches, trash containers and special paving materials, should also be located. Include specification sheets for each item.
• Samples of all proposed exterior building materials, including but not limited to brick, mortar, shingles, siding, glass, paint and stain colors. When as actual sample cannot be provided, a product information sheet that shows the item or a photo of an existing item may be substituted.

Review and Processing

Once an application is received, it is reviewed by staff, who compiles a report that is sent to the UDC. A copy of the report and the meeting agenda will be sent to the applicant prior to the meeting. The applicant or a representative should be present at the UDC meeting or the application may be deferred to the next regularly scheduled meeting. It is also strongly suggested that a representative of the City Agency which will have final responsibility for the item be present at the meeting (if the applicant and the representative are not the same). Once the UDC recommends action on the application, it is automatically placed on the agenda for the next City Planning Commission (CPC) meeting. An exception to this is encroachment applications, recommendations for which are forwarded to the Department of Public Works. The applicant or a representative must be present at the CPC meeting or the application may be deferred to the next regularly scheduled meeting.

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MEETING SCHEDULE 2015-2016

UDC Meetings	UDC Submission Deadlines	Anticipated Date of Planning Commission Following the UDC Meeting
December 10, 2015	November 12, 2015*	January 4, 2016
January 7, 2016	December 10, 2015**	January 19, 2016[1]
February 4, 2016	January 14, 2016	February 16, 2016[2]
March 10, 2016	February 18, 2016	March 21, 2016
April 7, 2016	March 17, 2016	April 18, 2016
May 5, 2016	April 14, 2016	May 16, 2016
June 9, 2016	May 19, 2016	June 20, 2016
July 7, 2016	June 16, 2016	July 18, 2016
August 4, 2016	July 14, 2016	September 6, 2016[3]
September 8, 2016	August 18, 2016	September 19, 2016
October 6, 2016	September 15, 2016	October 17, 2016
November 10, 2016	October 20, 2016	November 21, 2016
December 8, 2016	November 10, 2016*	January 3, 2017[4]

[1] Monday, January 18th is a City of Richmond Holiday
[2] Monday, February 15th is a City of Richmond Holiday
[3] Monday, September 5th is a City of Richmond Holiday
[4] Monday, January 2nd, 2017 is a City of Richmond Holiday
* Moved forward to account for Thanksgiving Holiday Schedule
** Moved forward to account for Winter Holiday Schedule

For further information or assistance, please contact the Planning and Preservation Division by phone at (804) 646-6335 or by email at DCDCompPlan@RichmondGov.com.

Information about the UDC along with the application and meeting schedule is available at the City of Richmond website, http://www.richmondgov.com/CommitteeUrbanDesign

Richmond Public Schools
2907 North Boulevard
Richmond, VA 23230-3913
Facility Services
Phone: (804) 780-6251
Cell: (804) 201-8860
Fax: (804)780-8789
Adavis5@richmond.k12.va.us
Andrew Davis, Director

URBAN DESIGN COMMITTEE
June 4, 2015
Richmond Public Schools
Greene Elementary School
1745 Catalina Drive
Richmond, VA 23224

Final Review

Narrative:

Greene Elementary School is faced with a significant deficit of classroom space for the upcoming 2016/2017 school year. Greene Elementary School is already over its functional capacity (394 students), with current enrollment of 592 students as shown in the attached Population and Enrollment Forecast (Refer to **EXHIBIT-A**). Continued growth is expected through years 2019-22, levels off in 2022-24. The District is currently evaluating long-term plans to address the forecast population; however, to address the immediate need, the school board has tasked the RPS Administration with providing temporary (leased) modular classroom space at this school. The proposed eight classroom modular classroom building will replace the existing four portable classrooms in one building with restroom facilities. This temporary modular building will serve the needs of the 4th and 5th grade students.

During the Spring of 2014, the Richmond Public School Board assembled a Facilities Task Force to assess the District's current portfolio of facilities and develop a directional & financial blueprint for the District to follow moving forward.

A Facilities Needs Report was presented to the Richmond Public School Board by the Task Force and the Richmond Public Schools Administration on April 13, 2015. The Facilities Needs Report states to address the overcrowding issues south of the James River, the District would like to implement the following actions:

1. Rezoning
2. Construction of a new elementary school

3. Renovations and additions to the existing elementary schools

These plans are contingent upon the allocation of necessary funding. The Richmond Public Schools Administration and School Board are currently working closely with city officials and the City Council to obtain the necessary funding to implement these tasks, however until funding is allocated, the temporary modular units are proposed as a means to satisfy current capacity issues.

This project is to one temporary (leased) modular building at Reid Elementary School. This building will be a 126'-0" x 65'-0", eight classroom temporary modular building with restrooms. Once this building is in place, the existing two portable classroom buildings will be removed (three portable classrooms are in the process of removal now from a previous project), and the site will be returned to its natural state. The building will have a covered deck and ADA compliant ramp leading to the existing modular buildings. The entire building will meet all ADA requirements. Dominion Power will provide separate power hook-ups needed for the units. Descriptive data on the units has been included in the packet. We intend to have the proposed units installed by the middle of August to allow for power/water/sewer hook-ups, as well as allowing for the teachers to set-up their new temporary classrooms.

Site Plan:

Please see the attached proposed site plan for location of the proposed temporary modular buildings (Refer to **EXHIBIT-C**). Basically, the modular buildings will be placed next to the existing modular classroom buildings.

Floor Plans:

Floor Plans are attached at **EXHIBIT-B**

Landscaping Plan:

Minimal landscaping is proposed for this project due to the temporary nature of the modular buildings, and RPS will work with the City and provide a plan for their ultimate approval.

Exterior lighting:

Exterior lighting will be installed on the temporary modular building at each exit door. No additional trash receptacles, benches or picnic tables will be added beyond what already exists on site today.

Building Materials:

Proposed building materials for the units are described in the attached Data Sheets (Refer to **EXHIBIT-E**), and include:

- HardiPanel exterior siding
- Contrasting color HardiTrim
- Steel clad exterior doors with view block
- Dual-glazed low "e" exterior windows
- Low sloped roof designed to divert drainage away from doors and windows
- Gutters and downspouts
- White EPDM roof

Unit lay-outs are attached. Since these units are temporary, only minimal landscaping is proposed for this project.

Timeline:

The following is the proposed anticipated timeline:

- June 1, 2016 - Submit Building Permit
- June 20, 2016 – Temporary modular buildings delivered to site
- August 15, 2016 – Certificate of Occupancy
- Ongoing – Planning for the overcrowding issues as noted above (redistricting, new elementary school, and renovations & additions to existing elementary schools). The planning will involve Richmond Public Schools administration, school board, city administration, and city council.
- May 2017 – Richmond Public Schools submits for renewal of modular building annual permit.

Note: The above Timeline is contingent upon successful budget submittal, approval, and subsequent appropriations by the City

Once a final plan to address the overcrowding has been implemented, and permanent space provided for the student population, this temporary modular classroom building will be permanently removed from the site, including all associated walkways and utilities. The site will be returned to the existing condition.

The site design and construction administration for this project will be procured utilizing an existing Term Contract with Ballou, Justice, Upton Architects. The temporary modular buildings will be procured utilizing an existing E & I Cooperative's Agreement with Mobile Modular Management – Contract Number CNR01338. Sitework will be competitively bid between pre-qualified RPS Class-A General Contractors.

As noted in the UDC Guidelines, the UDC supports the City Planning Commission's policy,

Adopted July 17, 1995, which states that all future modular unit requests, including renewals of currently approved units, will not be considered unless they are submitted with a cost analysis which compares the cost of the modular unit(s) to the cost of constructing as addition or a new school in lieu of the modular unit(s).

Permanent resolution to overcrowding at Greene Elementary School may involve a renovation and expansion of the existing school facility, or a replacement building. The latest data available indicates the costs associated with renovation and expansion to be in the neighborhood of $11,518,200 (Refer to the RPS 2015 Facility Update Cost Estimate 3-24-15, at **EXHIBIT-F**)

If further information is required, or if clarification is desired, please contact Lloyd Schieldge, with Richmond Public Schools, directly by cell phone, at 335.5401 (804), or email, at lschield@richmond.k12.va.us

Attachments:	EXHIBIT-A:	Population & Enrollment Forecast
	EXHIBIT-B:	Proposed Floor Plans
	EXHIBIT-C:	Proposed Site Plan
	EXHIBIT-D:	Not Used
	EXHIBIT-E:	Data Sheets
	EXHIBIT-F:	RPS 2015 Facility Update Cost Estimate 3-24-15

EXHIBIT-A

Population & Enrollment Forecast

Ginter Park Elementary

	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
K	75	73	60	78	71	65	64	63	62	61	60	59	58	60
1	85	75	70	53	70	68	62	61	60	59	59	58	57	56
2	74	82	57	59	47	62	60	55	54	55	54	54	53	52
3	75	81	64	46	53	42	55	53	49	50	51	50	50	49
4	93	82	66	58	42	49	39	51	49	47	48	48	48	48
5	72	81	53	64	55	39	46	37	48	48	46	47	47	47
Total	474	474	370	358	338	325	326	320	322	320	318	316	313	312
Total: Elementary	474	474	370	358	338	325	326	320	322	320	318	316	313	312
Change		0	-104	-12	-20	-13	1	-6	2	-2	-2	-2	-3	-1
Percent Change		0.00%	-21.94%	-3.24%	-5.59%	-3.85%	0.31%	-1.84%	0.63%	-0.62%	-0.63%	-0.63%	-0.95%	-0.32%

Forecasts Developed February 2015
Green cells (2014-15 and earlier) are historical data
Blue cells (2015-16 and later) are forecasted years

Greene Elementary

	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
K	108	128	135	113	118	119	121	121	120	121	120	119	116	115
1	106	113	96	114	105	107	108	110	110	109	108	107	106	104
2	76	101	78	95	111	102	104	105	107	108	107	106	105	104
3	65	73	67	81	91	107	98	100	101	104	105	104	103	102
4	55	66	61	70	79	89	105	96	98	100	103	104	103	102
5	68	60	46	59	67	75	85	100	91	94	96	99	100	99
Total	478	541	483	532	571	599	621	632	627	636	639	639	633	626
Total: Elementary	478	541	483	532	571	599	621	632	627	636	639	639	633	626
Change		63	-58	49	39	28	22	11	-5	9	3	0	-6	-7
Percent Change		13.18%	-10.72%	10.14%	7.33%	4.90%	3.67%	1.77%	-0.79%	1.44%	0.47%	0.00%	-0.94%	-1.11%

Forecasts Developed February 2015
Green cells (2014-15 and earlier) are historical data
Blue cells (2015-16 and later) are forecasted years

Linwood Holton Elementary

	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
K	118	95	101	101	103	103	102	101	100	101	99	97	96	97
1	106	106	86	92	93	94	94	93	92	91	90	88	87	86
2	99	99	97	83	86	87	88	88	87	87	86	86	84	83
3	97	99	98	80	79	82	83	84	84	84	84	83	83	81
4	91	86	96	91	74	73	76	77	78	79	79	79	78	78
5	72	74	80	95	87	71	70	73	74	76	77	77	77	76
Total	583	559	558	542	522	510	513	516	515	518	515	510	505	501
Total: Elementary	583	559	558	542	522	510	513	516	515	518	515	510	505	501
Change		-24	-1	-16	-20	-12	3	3	-1	3	-3	-5	-5	-4
Percent Change		-4.12%	-0.18%	-2.87%	-3.69%	-2.30%	0.59%	0.58%	-0.19%	0.58%	-0.58%	-0.97%	-0.98%	-0.79%

Forecasts Developed February 2015
Green cells (2014-15 and earlier) are historical data
Blue cells (2015-16 and later) are forecasted years

Schieldge, Lloyd <lschield@richmond.k12.va.us>

Fwd: Student Enrollment

2 messages

STARKES, DEIDRA <dstarkes@richmond.k12.va.us> Thu, Apr 14, 2016 at 12:04 PM
To: Lloyd Schieldge <lschield@richmond.k12.va.us>

---------- Forwarded message ---------
From: **Owens, Andrea** <aowens@richmond.k12.va.us>
Date: Thu, Apr 14, 2016 at 12:02 PM
Subject: Re: Student Enrollment
To: "STARKES, DEIDRA" <dstarkes@richmond.k12.va.us>

Good afternoon,

- Broad Rock - 889
- Greene Elementary School - 592
- G.H. Reid - 691

Thanks,

Andrea

--
Andrea T. Owens, MBA, MSA
Application Administrator, ICTS

Information Communication & Technology Services (ICTS)
Richmond Public Schools
2015 Seddon Way
Richmond, VA 23230
PH (804) 780-7880 option 0
FX (804) 780-4593

On Thu, Apr 14, 2016 at 11:03 AM, STARKES, DEIDRA <dstarkes@richmond.k12.va.us> wrote:

> Good Morning Andrea!
>
> Can I have the actual student enrollment of the following schools:
>
> - Broad Rock
> - Greene Elementary School
> - G.H. Reid
>
> --

EXHIBIT-B

Proposed Floor Plans

GENERAL NOTES:

1. ACCESS TO BUILDING FOR PERSONS IN WHEELCHAIRS IS DESIGNED BY AND FIELD BUILT BY OTHERS AND SUBJECT TO LOCAL JURISDICTION APPROVAL. THE PRIMARY ENTRANCE MUST BE ACCESSIBLE.
2. ALL DOORS SHALL BE OPERABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY, TOOL, SPECIAL KNOWLEDGE OR EFFORT. MANUALLY OPERATED FLUSH BOLTS OR SURFACE BOLTS SHALL NOT BE USED.
3. ALL GLAZING WITHIN A 24 INCH ARC OF DOORS, WHOSE BOTTOM EDGE IS LESS THAN 60 INCHES ABOVE THE FLOOR, AND ALL GLAZING IN DOORS SHALL BE SAFETY, TEMPERED OR ACRYLIC PLASTIC SHEET.
4. ALL STEEL STRAPS REFERENCED ON FLOOR PLAN SHALL BE 1.5 INCH x 25 GA. WITH 8 - 15 GA. x 7/16 INCH CROWN x 1 INCH STAPLES EACH END OF STRAP OR EQUIVALENT FROM RIDGE BEAM TO COLUMN, AND COLUMN TO FLOOR.
5. PORTABLE FIRE EXTINGUISHER PER N.F.P.A. - TO INSTALLED BY OTHERS ON SITE, AND SUBJECT TO LOCAL JURISDICTION.
6. PROVISIONS FOR EXIT DISCHARGE LIGHTING ARE THE RESPONSIBILITY OF THE BUILDING OWNER AND SUBJECT TO LOCAL JURISDICTION APPROVAL WHEN NOT SHOWN ON THE FLOOR PLAN (INCLUDING EMERGENCY LIGHTING, WHEN REQUIRED)
7. WHEN LOW SIDES OF ROOF PROVIDE LESS THAN 6" OF OVERHANG, GUTTERS AND DOWN SPOUTS SHALL BE SITE INSTALLED, DESIGNED BY OTHERS, SUBJECT TO LOCAL JURISDICTION APPROVAL.
8. IN WIND-BORNE DEBRIS REGIONS, EXTERIOR GLAZING SHALL BE IMPACT RESISTANT OR PROTECTED WITH AN IMPACT RESISTANT COVERING MEETING THE REQUIREMENTS OF AN APPROVED IMPACT RESISTANT STANDARD, OR ASTM E1996. WIND-BORNE DEBRIS REGIONS ARE DESIGNATED IN SECTION 1609 OF THE IBC.
9. WINDOWS AND DOORS MUST BE CERTIFIED FOR COMPLIANCE WITH THE WIND DESIGN PRESSURE FOR COMPONENTS AND CLADDING.
10. A FIRE ALARM MUST BE SITE INSTALLED ON SITE BY OTHERS SUBJECT TO LOCAL JURISDICTION APPROVAL.
11. THIS BUILDING IS DESIGNED FOR THERMAL ZONE 4A.
12. WINDOWS AND DOORS MUST BE CERTIFIED FOR COMPLIANCE WITH THE WIND DESIGN PRESSURE FOR COMPONENTS AND CLADDING.

PLUMBING NOTES:

1. TOILETS SHALL BE ELONGATED WITH NONABSORBENT OPEN FRONT SEATS.
2. REST ROOM WALLS SHALL BE COVERED WITH NONABSORBENT MATERIAL TO A MINIMUM HEIGHT OF 48 INCHES A.F.F. FLOORS SHALL HAVE A SMOOTH, HARD, NONABSORBENT SURFACE THAT EXTENDS UPWARD ONTO THE WALLS AT LEAST 6 INCHES.
3. THIS BUILDING SHALL BE CONNECTED TO A PUBLIC WATER SUPPLY AND SEWER SYSTEM IF THESE ARE AVAILABLE.
4. ALL PLUMBING FIXTURES SHALL HAVE SEPARATE SHUTOFF VALVES.
5. WATER HEATER SHALL HAVE SAFETY PAN WITH 1 INCH DRAIN TO EXTERIOR. T & P RELIEF VALVE WITH DRAIN TO EXTERIOR, AND A SHUT OFF VALVE WITHIN 3 FEET ON A COLD WATER SUPPLY LINE.
6. DWV SYSTEM SHALL BE EITHER ABS OR PVC - DWV.
7. WATER SUPPLY LINES SHALL BE CPVC OR COPPER, AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS LIMITATIONS AND INSTRUCTIONS.
8. WATER CLOSETS ARE TANK TYPE AND URINALS ARE FLUSH TANK TYPE UNLESS OTHERWISE SPECIFIED.
9. BUILDING DRAIN AND CLEANOUTS ARE DESIGNED AND SITE INSTALLED BY OTHERS, SUBJECT TO LOCAL JURISDICTION APPROVAL.
10. SHOWERS SHALL BE CONTROLLED BY AN APPROVED MIXING VALVE WITH A MAXIMUM WATER SUPPLY TEMPERATURE OF 120°F. (49°C).
11. THERMAL EXPANSION DEVICE, IF REQUIRED BY WATER HEATER INSTALLED, AND IF NOT SHOWN ON PLUMBING PLAN, IS DESIGNED AND SITE INSTALLED BY OTHERS, SUBJECT TO LOCAL APPROVAL.
12. WATER PIPES INSTALLED IN A WALL EXPOSED TO THE EXTERIOR SHALL BE LOCATED ON THE HEATED SIDE OF THE WALL INSULATION. WATER PIPING INSTALLED IN AN UNCONDITIONED ATTIC SHALL BE INSULATED WITH AN INSULATION OF R-6.5 MINIMUM.
13. PIPING IN UNCONDITIONED SPACES MUST BE PROTECTED WITH INSULATION HAVING A MINIMUM R FACTOR OF 6.5 IN ACCORDANCE WITH SECTION 305.6.

ELECTRICAL NOTES:

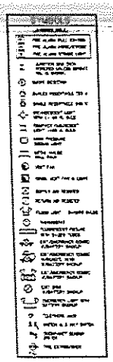
1. ALL CIRCUITS AND EQUIPMENT SHALL BE GROUNDED IN ACCORDANCE WITH THE APPROPRIATE ARTICLES OF THE NATIONAL ELECTRICAL CODE (NEC).
2. WHEN LIGHT FIXTURES ARE INSTALLED IN CLOSETS THEY SHALL BE SURFACE MOUNTED OR RECESSED. INCANDESCENT FIXTURES SHALL HAVE COMPLETELY ENCLOSED LAMPS. SURFACE MOUNTED INCANDESCENT FIXTURES SHALL HAVE A MINIMUM CLEARANCE OF 12 INCHES AND ALL OTHER FIXTURES SHALL HAVE A MINIMUM CLEARANCE OF 6 INCHES FROM "STORAGE AREA" AS DEFINED BY NEC 410-8(a).
3. WHEN WATER HEATERS ARE INSTALLED THEY SHALL BE PROVIDED WITH READILY ACCESSIBLE DISCONNECTS ADJACENT TO THE WATER HEATERS SERVED. THE BRANCH CIRCUIT SWITCH OR CIRCUIT BREAKER SHALL BE PERMITTED TO SERVE AS THE DISCONNECTING MEANS ONLY WHERE THE SWITCH OR CIRCUIT BREAKER IS WITHIN SIGHT FROM THE WATER HEATER OR IS CAPABLE OF BEING LOCKED IN THE OPEN POSITION.
4. HVAC EQUIPMENT SHALL BE PROVIDED WITH READILY ACCESSIBLE DISCONNECTS ADJACENT TO THE EQUIPMENT SERVED. A UNIT SWITCH WITH A MARKED "OFF" POSITION THAT IS A PART OF THE HVAC EQUIPMENT AND DISCONNECTS ALL UNGROUNDED CONDUCTORS SHALL BE PERMITTED AS THE DISCONNECTING MEANS WHERE OTHER DISCONNECTING MEANS ARE ALSO PROVIDED BY A READILY ACCESSIBLE CIRCUIT BREAKER.
5. PRIOR TO ENERGIZING THE ELECTRICAL SYSTEM THE INTERRUPTING RATING OF THE MAIN BREAKER MUST BE DESIGNED AND VERIFIED AS BEING IN COMPLIANCE WITH SECTION 110-9 OF THE NEC BY LOCAL ELECTRICAL CONSULTANT.
6. THE MAIN ELECTRICAL PANEL AND FEEDERS ARE DESIGNED BY OTHERS, SITE INSTALLED AND SUBJECT TO LOCAL JURISDICTION APPROVAL.
7. ALL CIRCUITS CROSSING OVER MODULE MATING LINE(S) SHALL BE SITE CONNECTED WITH APPROVED ACCESSIBLE JUNCTION BOXES, OR CABLE CONNECTORS.
8. ALL RECEPTACLES INSTALLED IN WET LOCATIONS (EXTERIOR) SHALL BE IN WEATHER PROOF (WP) ENCLOSURES. THE INTEGRITY OF WHICH IS NOT AFFECTED WHEN AN ATTACHMENT PLUG CAP IS INSERTED OR REMOVED. THE RECEPT. UNIT SHALL ALSO BE LISTED FOR DAMP AND WET LOCATIONS AS PER 2011 NEC.
9. EXTERIOR LIGHTS NOT INTENDED FOR 24 HOUR USE SHALL BE CONNECTED TO A PHOTOCELL OR TIMER.
10. THE BUILDINGS FIRE ALARM SYSTEM (PROTECTIVE SIGNALING SYSTEMS, FIRE DETECTION SYSTEMS, ETC.) SHALL BE DESIGNED IN ACCORDANCE WITH NFPA 101 AND NFPA 72 AND SITE INSTALLED BY OTHERS SUBJECT TO LOCAL BUILDING OFFICIAL REVIEW AND APPROVAL. THE FIRE ALARM CONTROL PANEL MUST BE INSTALLED IN A HIGHLY VISIBLE LOCATION ACCEPTABLE TO THE LOCAL AUTHORITY HAVING JURISDICTION. (THE FACP CANNOT BE INSTALLED IN A CLOSET OR BATHROOM).

MECHANICAL NOTES:

1. ALL SUPPLY AIR REGISTERS SHALL BE 10 INCHES x 10 INCHES ADJUSTABLE WITH 10 INCHES x 20 INCHES (INSIDE) OVERHEAD FIBERGLASS DUCT, UNLESS OTHERWISE SPECIFIED. DUCTS IN UNCONDITIONED SPACES SHALL HAVE R-5 MINIMUM INSULATION EXCEPT DUCTS EXPOSED TO VENTILATED ATTICS AND CRAWL SPACES SHALL HAVE R-6.5 INSULATION.
2. INTERIOR DOORS SHALL BE UNDERCUT 1.5 INCHES ABOVE FINISHED FLOOR FOR AIR RETURN AND/OR AS NOTED ON FLOOR PLAN.
3. HVAC EQUIPMENT SHALL BE EQUIPPED WITH OUTSIDE FRESH AIR INTAKES PROVIDING 15 CFM PER OCCUPANT.
4. VENTILATION SYSTEM SHALL OPERATE CONTINUOUSLY WHEN BUILDING IS OCCUPIED.
5. VENT FANS SHALL BE DUCTED TO THE EXTERIOR AND TERMINATE AT AN APPROVED VENT CAP.
6. MECHANICAL SYSTEM IS DESIGNED FOR A MAXIMUM OCCUPANT LOAD OF 206 USING 15 CFM PER PERSON BASED ON INTERMITTENT OCCUPANCY. THE OCCUPANT MAY BE INCREASED FOR INTERMITTENT OCCUPANCY BASED UPON ADDITIONAL ENGINEERING ANALYSIS IN ACCORDANCE WITH ASHRAE 62.
7. EXHAUST FANS SHALL PROVIDE A MINIMUM OF 75 CFM FOR EACH WATER CLOSET AND URINAL.

WINDOW & DOOR SPECIFICATIONS

1. DBL. PANE WINDOWS ARE REQUIRED FOR ALL CLIMATE ZONES. SEE THE COMCHECK ENERGY CALCULATIONS FOR THE MAXIMUM ALLOWED U-FACTOR AND SHGC.
2. THE MAXIMUM ALLOWABLE AIR LEAKAGE RATE FOR WINDOWS IS 0.3 CFM PER SQUARE FEET OF WINDOW AREA.
3. THE MAXIMUM ALLOWABLE AIR LEAKAGE RATE FOR EXTERIOR DOORS IS 0.5 CFM PER SQUARE FEET OF DOOR AREA.



STRUCTURAL LOAD LIMITATIONS ALL OTHER STATES

OCCUPANCY CATEGORY: II

FLOOR LIVE LOAD:
A. 40 PSF, 100 PSF CORRIDOR
B. 1000 LB. CONCENTRATED LOAD OVER 30 INCH x 30 INCH AREA LOCATED ANYWHERE ON FLOOR

ROOF LIVE LOAD:
A. 20 PSF

ROOF SNOW LOAD:
A. Pg = 25 PSF GROUND SNOW LOAD
B. Pf = 26.3 PSF FLAT ROOF SNOW LOAD
C. Ce = 1.0 SNOW EXPOSURE FACTOR
D. Is = 1.0 SNOW IMPORTANCE FACTOR
E. Ct = 1.0 SNOW THERMAL FACTOR

WIND LOAD: ASCE 7-05
A. 115 WIND SPEED
B. Iw = 1.0 WIND IMPORTANCE FACTOR
C. C WIND EXPOSURE CATEGORY
D. GCpi = 0.18 INTERNAL PRESSURE COEFFICIENT
E. Pw: ZONE 4 41.2 PSF, ZONE 5 44.8 PSF
Pr: ZONE 1 37.4 PSF, ZONE 2 58.6 PSF, ZONE 3 100.2 PSF

* THIS BUILDING IS NOT DESIGNED FOR PLACEMENT ON THE UPPER HALF OF A HILL OR ESCARPMENT EXCEEDING 15 FEET IN HEIGHT.

SEISMIC LOAD:
A. Ie = 1.0 SEISMIC IMPORTANCE FACTOR
B. D SITE CLASS
C. A13 SEISMIC FORCE RESISTING SYSTEM
D. C SEISMIC DESIGN CATEGORY
E. EQUIVALENT LATERAL FORCE ANALYSIS PROCEDURE
F. Ss = 0.337 MAPPED SPECTRAL RESPONSE COEF
G. S1 = 0.085 MAPPED SPECTRAL RESPONSE COEF
H. SDS = 0.148 SPECTRAL RESPONSE COEFFICIENT
I. SD1 = 0.13 SPECTRAL RESPONSE COEFFICIENT
J. V = [illegible] LB DESIGN BASE SHEAR
K. R = 6.5 RESPONSE MODIFICATION COEFFICIENT
L. Cs = 0.06 SEISMIC RESPONSE COEFFICIENT

FLOOD LOAD:
THIS BUILDING IS NOT DESIGNED TO BE LOCATED IN A FLOOD HAZARD AREA.

STRUCTURAL LOAD LIMITATIONS MARYLAND ONLY

BUILDING RISK CATEGORY: II

FLOOR LIVE LOAD:
A. 40 PSF, 100 PSF CORRIDOR
B. 1000 LB. CONCENTRATED LOAD OVER 30 INCH x 30 INCH AREA LOCATED ANYWHERE ON FLOOR

ROOF LIVE LOAD:
A. 20 PSF

ROOF SNOW LOAD:
A. Pg = 25 PSF GROUND SNOW LOAD
B. Pf = 26.3 PSF FLAT ROOF SNOW LOAD
C. Ce = 1.0 SNOW EXPOSURE FACTOR
D. Is = 1.0 SNOW IMPORTANCE FACTOR
E. Ct = 1.1 SNOW THERMAL FACTOR

WIND LOAD: ASCE 7-10
A1. Vult = 130 MPH WIND SPEED
A2. Vasd = 105 MPH WIND SPEED
B. Iw = 1.0 WIND IMPORTANCE FACTOR
C. C WIND EXPOSURE CATEGORY
D. GCpi = 0.18 INTERNAL PRESSURE COEFFICIENT
E. Pr: ZONE 1 23.8 PSF, ZONE 2 40.0 PSF, ZONE 3 60.2 PSF; Pw: ZONE 4 25.6 PSF, ZONE 5 31.9 PSF

* THIS BUILDING IS NOT DESIGNED FOR PLACEMENT ON THE UPPER HALF OF A HILL OR ESCARPMENT EXCEEDING 15 FEET IN HEIGHT.

SEISMIC LOAD:
A. Ie = 1.0 SEISMIC IMPORTANCE FACTOR
B. D SITE CLASS
C. A13 SEISMIC FORCE RESISTING SYSTEM
D. C SEISMIC DESIGN CATEGORY
E. EQUIVALENT LATERAL FORCE ANALYSIS PROCEDURE
F. Ss = 0.337 MAPPED SPECTRAL RESPONSE COEF
G. S1 = 0.085 MAPPED SPECTRAL RESPONSE COEF
H. SDS = 0.148 SPECTRAL RESPONSE COEFFICIENT
I. SD1 = 0.13 SPECTRAL RESPONSE COEFFICIENT
J. V = [illegible] LB DESIGN BASE SHEAR
K. R = 6.5 RESPONSE MODIFICATION COEFFICIENT
L. Cs = 0.06 SEISMIC RESPONSE COEFFICIENT

FLOOD LOAD:
THIS BUILDING IS NOT DESIGNED TO BE LOCATED IN A FLOOD HAZARD AREA.

ACCESSIBILITY NOTES:

1. THE INTERNATIONAL SYMBOL OF ACCESSIBILITY SIGN SHALL BE DISPLAYED AT ALL ACCESSIBLE RESTROOM FACILITIES AND AT ACCESSIBLE BUILDING ENTRANCES UNLESS ALL ENTRANCES ARE ACCESSIBLE. INACCESSIBLE ENTRANCES SHALL HAVE DIRECTIONAL SIGNS INDICATING THE ROUTE TO THE NEAREST ACCESSIBLE ENTRANCE.
2. ACCESSIBLE DRINKING FOUNTAINS SHALL HAVE A SPOUT HEIGHT NO HIGHER THAN 36 INCHES ABOVE THE FLOOR AND EDGE OF BASIN NO HIGHER THAN 34 INCHES ABOVE THE FLOOR FOR INDIVIDUALS IN WHEELCHAIRS. ADDITIONALLY, DRINKING WATER PROVISIONS SHALL BE MADE FOR INDIVIDUALS WHO HAVE DIFFICULTY BENDING.
3. WHERE STORAGE FACILITIES SUCH AS CABINETS, SHELVES, CLOSETS AND DRAWERS ARE PROVIDED AT LEAST ONE TYPE PROVIDED SHALL CONTAIN STORAGE SPACE COMPLYING WITH THE FOLLOWING: DOORS ETC. TO SUCH SPACES SHALL BE ACCESSIBLE (I.E. TOUCH LATCHES, U-SHAPED PULLS). SPACES SHALL BE 15 INCHES MINIMUM AND 48 INCHES MAXIMUM ABOVE THE FLOOR FOR FORWARD REACH OR SIDE REACH. CLOTHES RODS OR COAT HOOKS SHALL BE A MAXIMUM OF 48 INCHES ABOVE THE FLOOR (46 INCHES MAXIMUM WHEN DISTANCE FROM WHEEL CHAIR TO ROD EXCEEDS 10 INCHES). SHELVES IN KITCHENS OR TOILET ROOMS SHALL BE 40 INCHES MINIMUM AND 48 INCHES MAXIMUM ABOVE THE FLOOR.
4. CONTROLS, DISPENSERS, RECEPTACLES AND OTHER OPERABLE EQUIPMENT SHALL BE NO HIGHER THAN 48 INCHES ABOVE THE FLOOR. RECEPTACLES ON WALLS SHALL BE MOUNTED NO LESS THAN 15 INCHES ABOVE THE FLOOR. EXCEPTION: HEIGHT LIMITATIONS DO NOT APPLY WHERE THE USE OF SPECIAL EQUIPMENT DICTATES OTHERWISE OR WHERE ELECTRICAL RECEPTACLES ARE NOT NORMALLY INTENDED FOR USE BY BUILDING OCCUPANTS.
5. WHERE EMERGENCY WARNING SYSTEMS ARE PROVIDED, THEY SHALL INCLUDE BOTH AUDIBLE AND VISUAL ALARMS. THE VISUAL ALARMS SHALL BE LOCATED THROUGHOUT, INCLUDING RESTROOM, AND PLACED 80 INCHES ABOVE THE FLOOR OR 6 INCHES BELOW CEILING, WHICH-EVER IS LOWER.
6. ALL DOORS SHALL BE OPERABLE BY A SINGLE EFFORT. DOOR CLOSERS SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 90 DEGREES, THE TIME REQUIRED TO MOVE THE DOOR TO AN OPEN POSITION OF 12 DEGREES SHALL BE 5 SECONDS MINIMUM. THE MAXIMUM FORCE REQUIRED FOR PUSHING OR PULLING OPEN DOORS OTHER THAN FIRE DOORS SHALL NOT EXCEED 5 LBS. FOR ALL SLIDING, FOLDING, AND INTERIOR HINGED DOORS.
7. FLOOR SURFACES SHALL BE STABLE, FIRM, AND SLIP-RESISTANT. CHANGES IN LEVEL BETWEEN 0.25 INCH AND 0.5 INCH SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 1:2. CHANGES IN LEVEL GREATER THAN 0.5 INCH REQUIRE RAMPS. CARPET PILE THICKNESS SHALL BE 0.5 MAX. GRATINGS IN FLOOR SHALL HAVE SPACES NO GREATER THAN 0.5 INCH WIDE IN ONE DIRECTION. DOORWAY THRESHOLDS SHALL NOT EXCEED 0.5 INCH IN HEIGHT.
8. ACCESSIBLE WATER CLOSETS SHALL BE 17 INCHES TO 19 INCHES, MEASURED FROM THE FLOOR TO THE TOP OF THE SEAT. GRAB BARS SHALL BE 36 INCHES LONG MINIMUM WHEN LOCATED BEHIND WATER CLOSET AND 42 INCHES MINIMUM WHEN LOCATED ALONG SIDE OF WATER CLOSET, AND SHALL BE MOUNTED 33 INCHES TO 36 INCHES ABOVE THE FLOOR. IN ADDITION, A VERTICAL GRAB BAR 18 INCHES MINIMUM IN LENGTH SHALL BE MOUNTED ON THE SIDEWALL WITH THE BOTTOM OF THE BAR LOCATED BETWEEN 39 AND 41 INCHES ABOVE THE FLOOR, AND WITH THE CENTER LINE OF THE BAR LOCATED BETWEEN 39 INCHES AND 41 INCHES FROM THE REAR WALL.
9. ACCESSIBLE URINALS SHALL BE STALL-TYPE OR WALL HUNG WITH ELONGATED RIMS AT A MAXIMUM OF 17 INCHES ABOVE THE FLOOR.
10. ACCESSIBLE LAVATORIES AND SINKS SHALL BE MOUNTED WITH THE RIM NO HIGHER THAN 34 INCHES ABOVE THE FLOOR. KNEE CLEARANCE OF AT LEAST 27 INCHES HIGH MUST BE PROVIDED WITH A MINIMUM DEPTH OF 8 INCHES BENEATH THE FIXTURE, AND 9 INCHES HIGH MINIMUM WITH A MINIMUM DEPTH OF 11 INCHES BENEATH THE FIXTURE. THE KNEE SPACE MUST BE AT LEAST 30 INCHES WIDE.
11. HOT WATER AND DRAIN PIPES UNDER ACCESSIBLE LAVATORIES AND SINKS SHALL BE INSULATED OR OTHERWISE CONFIGURED TO PROTECT AGAINST CONTACT. INSULATION OR PROTECTION MATERIALS MAY BE SITE INSTALLED. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER ACCESSIBLE LAVATORIES AND SINKS.
12. ACCESSIBLE LAVATORIES AND SINKS SHALL HAVE ACCESSIBLE FAUCETS (I.E. LEVER-OPERATED, PUSH TYPE, ELECTRONICALLY CONTROLLED).
13. MIRRORS LOCATED ABOVE LAVATORIES, SINKS OR COUNTERS SHALL BE MOUNTED WITH THE BOTTOM EDGE OF THE REFLECTING SURFACE A MAXIMUM OF 40 INCHES ABOVE THE FLOOR. OTHER MIRRORS IN TOILET ROOMS SHALL BE MOUNTED WITH THE BOTTOM EDGE OF THE REFLECTING SURFACE 35 INCHES MAXIMUM ABOVE THE FLOOR.
14. GRAB BARS HAVING A CIRCULAR CROSS SECTION SHALL HAVE AN OUTSIDE DIAMETER OF 1.25 INCHES MINIMUM AND 2.0 INCHES MAXIMUM. THE SPACE BETWEEN THE GRAB BAR AND THE WALL SHALL BE 1.5 INCHES.
15. WATER CLOSET FLUSH CONTROL SHALL BE INSTALLED A MAXIMUM OF 36 INCHES ABOVE THE FLOOR AND SHALL BE LOCATED ON THE OPEN SIDE OF THE WATER CLOSET.
16. DOORS TO ALL ACCESSIBLE SPACES SHALL HAVE ACCESSIBLE HARDWARE (I.E. LEVER - OPERATED, PUSHTYPE, U-SHAPED) MOUNTED WITH OPERABLE PARTS BETWEEN 34 INCHES MINIMUM AND 48 INCHES MAXIMUM ABOVE THE FLOOR.
17. TOILET STALL DOORS SHALL BE THE SELF-CLOSING TYPE.
18. A TOWEL DISPENSER SHALL BE LOCATED ADJACENT TO ALL ACCESSIBLE LAVATORIES.

ATTENTION LOCAL INSPECTIONS DEPARTMENT

SITE INSTALLED ITEMS

THE FOLLOWING ITEMS HAVE NOT BEEN COMPLETED BY THE MANUFACTURER, HAVE NOT BEEN INSPECTED BY RADCO AND ARE NOT CERTIFIED BY THE STATE MODULAR LABEL. NOTE THAT THIS LIST DOES NOT NECESSARILY LIMIT THE ITEMS OF WORK AND MATERIAL THAT MAY BE REQUIRED FOR A COMPLETE INSTALLATION. ALL SITE RELATED ITEMS ARE SUBJECT TO LOCAL JURISDICTION APPROVAL. CODE COMPLIANCE MUST BE DETERMINED AT THE LOCAL LEVEL.

1. THE COMPLETE FOUNDATION SUPPORT AND TIE DOWN SYSTEM.
2. RAMPS, STAIRS AND GENERAL ACCESS TO THE BUILDING.
3. PORTABLE FIRE EXTINGUISHER(S)
4. BUILDING DRAINS, CLEANOUTS, AND HOOK-UP TO PLUMBING SYSTEM.
5. ELECTRICAL SERVICE HOOK-UP (INCLUDING FEEDERS) TO THE BUILDING.
6. THE MAIN ELECTRICAL PANEL AND SUB-FEEDERS
7. CONNECTION OF ELECTRICAL CIRCUITS CROSSING OVER MODULE MATELINE(S) - (MULTI-UNITS ONLY)
8. STRUCTURAL AND AESTHETIC INTERCONNECTIONS BETWEEN MODULES (MULTI-UNITS ONLY)
9. FIRE INSPECTION
10. GLAZED OPENING PROTECTION (SEE GENERAL NOTE NO. 8)
11. FIRE ALARM

MARYLAND NOTES:

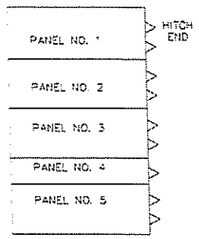
1. REFER TO STATE PACKAGE PAGE NO. D24.0 FOR REQUIRED DUCT PROTECTION AT CONNECTION TO HVAC UNIT.
2. THE FOLLOWING NOTE SHALL BE ON THE BLDG. DATA PLATE: THIS BUILDING HAS NOT BEEN DESIGNED FOR AND IS NOT APPROVED FOR INSTALLATION IN THE FOLLOWING MARYLAND COUNTIES: GARRETT, ALLEGANY, WASHINGTON, FREDERICK, CARROLL
3. HVAC SYSTEM SHALL COMPLY WITH NFPA 90B WHEN BUILDING VOLUME DOES NOT EXCEED 25,000 CUBIC FEET, OTHERWISE HVAC SYSTEM SHALL COMPLY WITH NFPA 90A.
4. THESE PLANS ARE PREPARED TO FACILITATE CONSTRUCTION OF THE PRE-ENGINEERED FACTORY BUILT MODULAR BUILDING, AND THEY INCLUDE MINIMUM ON-SITE SUPPORT AND TIE DOWN REQUIREMENTS FOR THE MODULAR BUILDING. THE PROJECT ARCHITECT OF RECORD IS RESPONSIBLE FOR INCORPORATION AND COORDINATION OF THESE PLANS INTO THE OVERALL PROJECT DESIGN.
5. TO LOCAL BUILDER AND/OR SITE DEVELOPER: ALL SITE WORK INCLUDING THE LOCATION OF THE BUILDING, IS REQUIRED TO BE REVIEWED AND APPROVED BY A MD. REG. ARCH. OR ENG. TO VERIFY CODE COMPLIANCE, INCLUDING BUT NOT LIMITED TO FIRE RESISTANCE RATINGS FOR EXTERIOR PROTECTION, MEANS OF EGRESS, HEIGHT AND AREA LIMITATIONS, OTHER PERTINENT SITE RELATED MATTERS. DOCUMENTS RELATED TO SITE WORK, INCLUDING SITE AND DEVELOPMENT DRAWINGS, SHALL BE SUBMITTED TO THE LOCAL GOVERNMENT AGENCY FOR REVIEW AND APPROVAL.
6. THE INITIAL INSTALLATION OF THIS BUILDING IS NOT IN THE STATE OF MARYLAND, THEREFORE A SITE PLAN CANNOT BE PROVIDED.

ELEVATION NOTES: TYPICAL

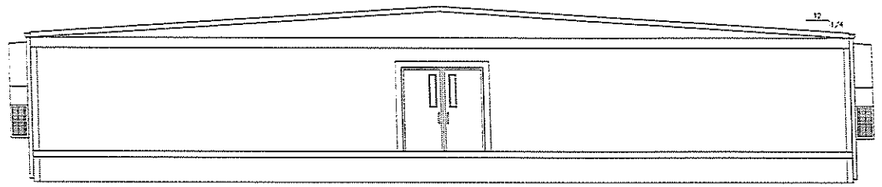
SEE-CROSS SECTION FOR METHOD OF ROOF VENTILATION

ACCESSIBLE RAMP(S), STAIR(S), AND HANDRAILS ARE SITE INSTALLED, DESIGNED BY OTHERS, AND SUBJECT TO LOCAL JURISDICTION.

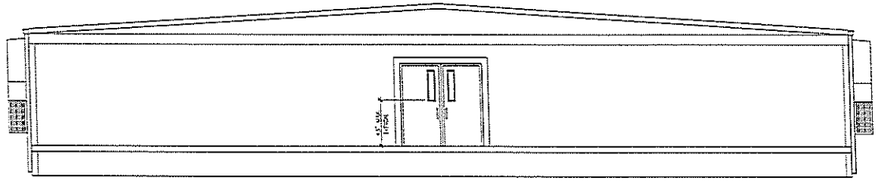
FOUNDATION ENCLOSURE (WHEN PROVIDED) MUST HAVE 1 SQUARE FOOT NET VENT AREA PER 1/150TH OF THE FLOOR AREA, AND AN 18" X 24" MINIMUM CRAWL SPACE ACCESS, SITE INSTALLED BY OTHERS SUBJECT TO LOCAL JURISDICTION.



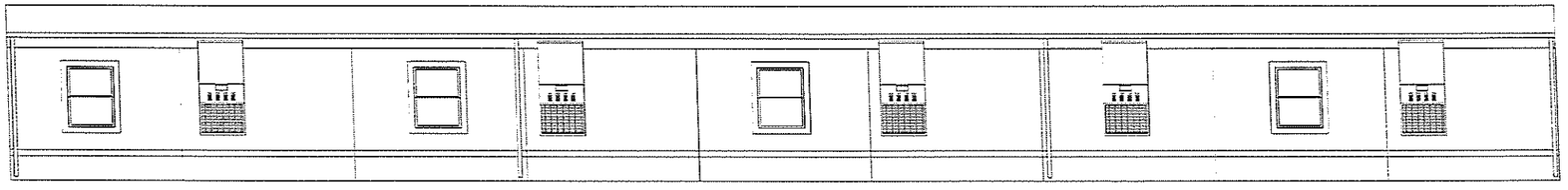
PANEL KEY PLAN



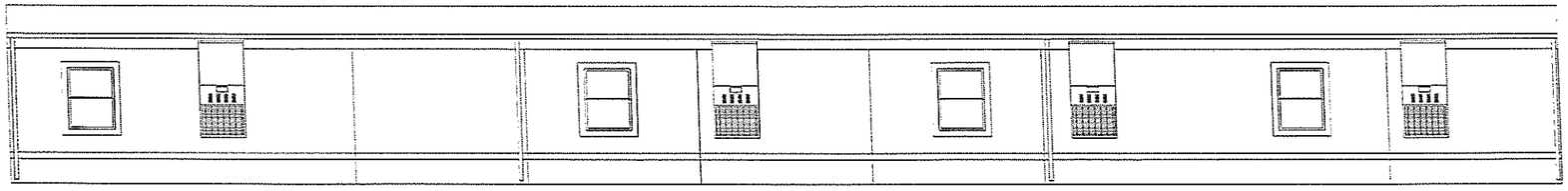
FRONT ELEVATION



REAR ELEVATION



LEFT ELEVATION



RIGHT ELEVATION

NOTE:
NM CABLE SHALL NOT BE USED WHERE INTERIOR FINISH HAS LESS THAN A 15 MIN. FIRE RATING TYPE AC OR OTHER APPROVED WIRING METHODS SHALL BE USED WHEN USING LESS THAN 1/2" GYP. WALL SHEATHING.

PANEL NO. 1

ELECTRICAL SCHEDULE "A"

CIRCUIT	NOMENCLATURE	BREAKER (AMPS)	WIRE (GA.)
1, 3	HVAC	[illegible]	[illegible]
2, 5	RECEPTACLES	20 A	12-2 NC
2, 4	LIGHTING	20 A	12-2 NC

ELECTRICAL PANEL SIZING:

DESCRIPTION	PANEL "A"	KVA
GENERAL LIGHTING [illegible]		2.6
[illegible] RECEPTS AT 180VA/1000		1.2
WATER HEATER 4.5 KW x 1.25		-
FANS AT .3 KW x 1.25		-
HVAC		[illegible]

TOTAL 28.5 KW
TOTAL/240 X 1000 = 119 AMPS
INSTALL 125 AMP PANEL
120/240 V 1Φ

ELECTRICAL SCHEDULE "B"

CIRCUIT	NOMENCLATURE	BREAKER (AMPS)	WIRE (GA.)
1, 3	HVAC	[illegible]	[illegible]
[illegible]	RECEPTACLES	20 A	[illegible]
[illegible]	LIGHTING	20 A	[illegible]

ELECTRICAL PANEL SIZING: [illegible]

TOTAL 28.5 KW
TOTAL/240 X 1000 = 119 AMPS

PANEL N. 2

ELECTRICAL SCHEDULE "A"

ELECTRICAL PANEL SIZING: [illegible]

ELECTRICAL SCHEDULE "B"

ELECTRICAL PANEL SIZING: [illegible]

PANEL NO. 3

ELECTRICAL SCHEDULE "A" — ELECTRICAL SCHEDULE "B"

ELECTRICAL PANEL SIZING: [illegible]

PANEL NO. 4

ELECTRICAL SCHEDULE

CIRCUIT	NOMENCLATURE	BREAKER (AMPS)	WIRE (GA.)
1, 3	HVAC	[illegible]	[illegible]
2, 4	WATER HEATER	30 A/2P	[illegible]
[illegible]	RECEPTACLES	20 A	[illegible]
[illegible]	LIGHTING	20 A	[illegible]

ELECTRICAL PANEL SIZING: [illegible]

PANEL NO. 5

ELECTRICAL SCHEDULE "A" — ELECTRICAL SCHEDULE "B"

ELECTRICAL PANEL SIZING: [illegible]

BUILDING DESIGN PARAMETERS

1. USE/OCCUPANCY: EDUCATION
2. CONSTRUCTION TYPE: VB
3. SPRINKLER SYSTEM: NO
4. BUILDING AREA: 7595 S.F.
5. BUILDING HEIGHT: 5.15 FEET
6. NUMBER OF STORIES: 1
7. NUMBER OF MODULES: 9
8. OCCUPANT LOAD 253 BASED ON 20 NET SF/PERSON
9. EXTERIOR WALL FIRE RATING: NOT RATED
10. THIS BUILDING MUST BE INSTALLED WITH THE FIRE SEPARATION DISTANCES REQUIRED BY IBC TABLE 602 AND SECTION 705.3.
11. ENERGY CODE COMPLIANCE. SEE ATTACHED ENERGY CALCULATIONS.
12. MANUFACTURERS DATA PLATE, STATE LABELS AND RADCO LABELS ARE TO BE LOCATED ADJACENT TO ELECTRICAL PANEL.

CODE SUMMARY:

STATE	BUILDING	ELECTRICAL	MECHANICAL	PLUMBING	ACCESSIBILITY	ENERGY CODE
MARYLAND	2012 IBC 2012 NFPA 101 W/ MD. AMENDMENTS	2011 NEC	2012 IMC	2012 IPC W/ MD. AMEND.	ADAGG	2012 IECC
VIRGINIA	2009 VA. UNIFORM STATEWIDE BLDG. CO.: 2009 IBC 2009 IFC	2008 NEC	2009 IMC	2009 IPC	CC/ANSI 117.1-03 W/VA AMENDS.	2009 IECC
PA.	2009 IBC	2008 NEC	2009 IMC	2009 IPC	CC/ANSI A117.1-03	2009 IECC

CONSULTING ENGINEER: JAMES BRADLEY, P.E. - 272 FOX TRAIL - PARKESBURG, PA. 19365 - (610) 857-2458

PROFESSIONAL CERTIFICATION:

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 8588. EXPIRATION DATE 6-6-14

APPROVED RADCO May 01, 2013 APPROVED

VALID

JAMES E. BRADLEY
Lic. No. 044636

JAMES E. BRADLEY
No. 8588

FIRST STRING SPACE INC.
OUR STRENGTH IS TEAMWORK

FIRST STRING SPACE

892 RAILROAD AVE. EAST
PEARSON, GEORGIA 31642 (912) 422-6455

DATE: 4-15-13
SCALE: NO SCALE
CODES: SEE NOTES
STATES: PA, VA, MD.
REFERENCE: MOD-POD

THIRD PARTY: RADCO
5456 CRENSHAW ST.
TAMPA, FLORIDA 33634
813-243-0370

REVISIONS:

BY: J.B.

FSS2360-64 A-1 126 x 60
MOD-POD EDUCATION

COVER SHEET

DESTINATION: WEST CHESTER, PA

SHEET 1 OF 3

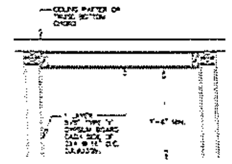
PENETRATION OF FIRE RESISTANT WALLS AND CEILING

1. COMBUSTIBLE CABLES AND WIRES, COMBUSTIBLE PIPES, TUBES, AND CONDUIT SHALL MEET TESTING REQUIREMENTS OF ASTM E119 AS PART OF THE FIRE RESISTANT ASSEMBLY OR SHALL HAVE THROUGH-PENETRATION FIRESTOP SYSTEMS LISTED AND TESTED AS PER ASTM E814 AND BE TESTED AT A POSITIVE PRESSURE DIFFERENTIAL BETWEEN THE EXPOSED AND UNEXPOSED SURFACES OF NOT LESS THAN .01 INCH OF WATER AND HAVE AN F RATING OF AT LEAST 1 HOUR BUT NOT LESS THAN THE RATING OF THE ASSEMBLY.
2. CABLES AND WIRES WITHOUT COMBUSTIBLE INSULATIONS AND NONCOMBUSTIBLE PIPES, TUBES, AND CONDUITS SHALL BE PROTECTED AS DESCRIBED ABOVE OR SHALL HAVE THE ANNULAR SPACE FILLED WITH A MATERIAL MEETING THE REQUIREMENT OF ASTM E119 TESTED UNDER A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF .01 INCH OF WATER FOR A TIME PERIOD EQUIVALENT TO THE RATING OF THE ASSEMBLY.
3. ELECTRICAL BOXES SHALL BE METAL OR LISTED FOR USE IN FIRE RESISTANT ASSEMBLIES AND SHALL NOT EXCEED 16 SQUARE INCHES. BOXES ON OPPOSITE SIDES OF THE RESISTANT WALLS SHALL BE SEPARATED BY A MINIMUM HORIZONTAL DISTANCE OF 24 INCHES.
4. ALL CEILING FIXTURES SHALL BE SURFACE MOUNTED.
5. DUCTS PENETRATING FIRE RESISTANT CEILINGS SHALL HAVE AN ACCESSIBLE LISTED FIRE DAMPER LOCATED AT THE CEILING LINE.
6. ALL FIRE RATED DOORS SHALL HAVE LISTED DOOR, FRAME, AND HARDWARE NO LESS THAN THE TIME RATING SPECIFIED ON THE FLOOR PLAN. IN ADDITION FIRE RATED DOORS SHALL BE EQUIPPED WITH SELF CLOSERS UNLESS OTHERWISE SPECIFIED.

WOOD STUD WALLS: 1 HOUR PER UL NO. U305 – 1 LAYER 5/8" TYPE "X" GYPSUM EACH SIDE OF WALL

CEILING: SAME AS 1-HOUR WALL CONSTRUCTION

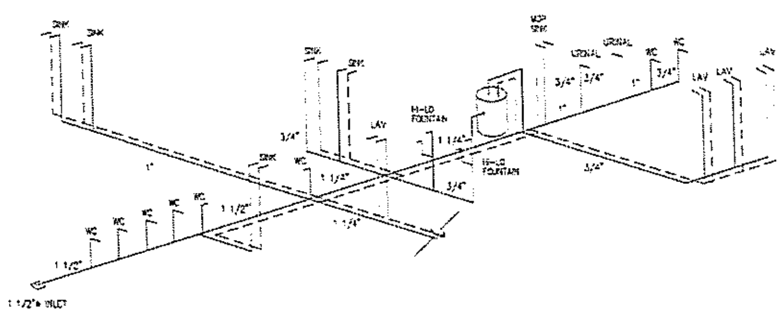
NOTE:
VISION PANELS IN 20 MIN. RATED DOORS MUST COMPLY WITH THE FOLLOWING REQUIREMENTS:
A. THE GLAZING MUST BE SAFETY GLAZED.
B. THE GLAZING MUST BE 20 MINUTE RATED.
C. THE BOTTOM OF THE GLAZED PANEL MUST BE A MAXIMUM OF 43 INCHES ABOVE FINISHED FLOOR.

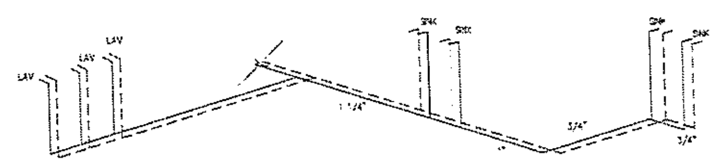


ONE HOUR CONSTRUCTION

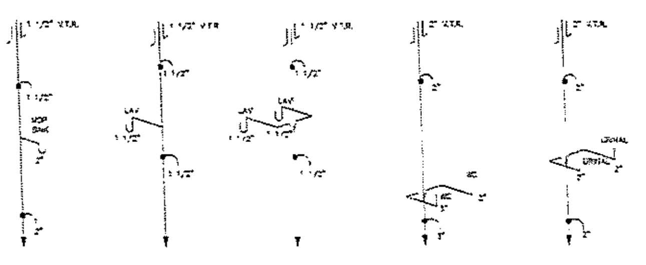
SUPPLY LINE SIZING IS BASED ON AN ASSUMED AVAILABLE PRESSURE OF 46 TO 50 PSI AT MAIN INLET AND SHOULD BE VERIFIED PRIOR TO CONSTRUCTION.

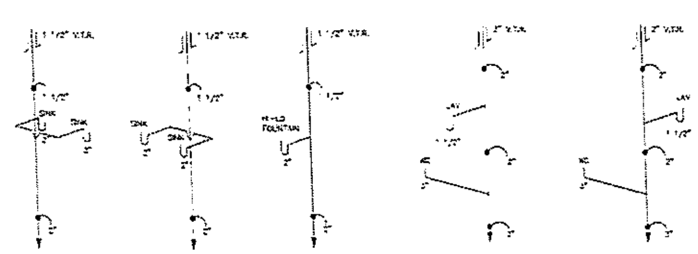
ALL SUPPLY LINES SHALL BE 3/4". ALL STUB-UPS SHALL BE 1/2" UNLESS OTHERWISE SPECIFIED.



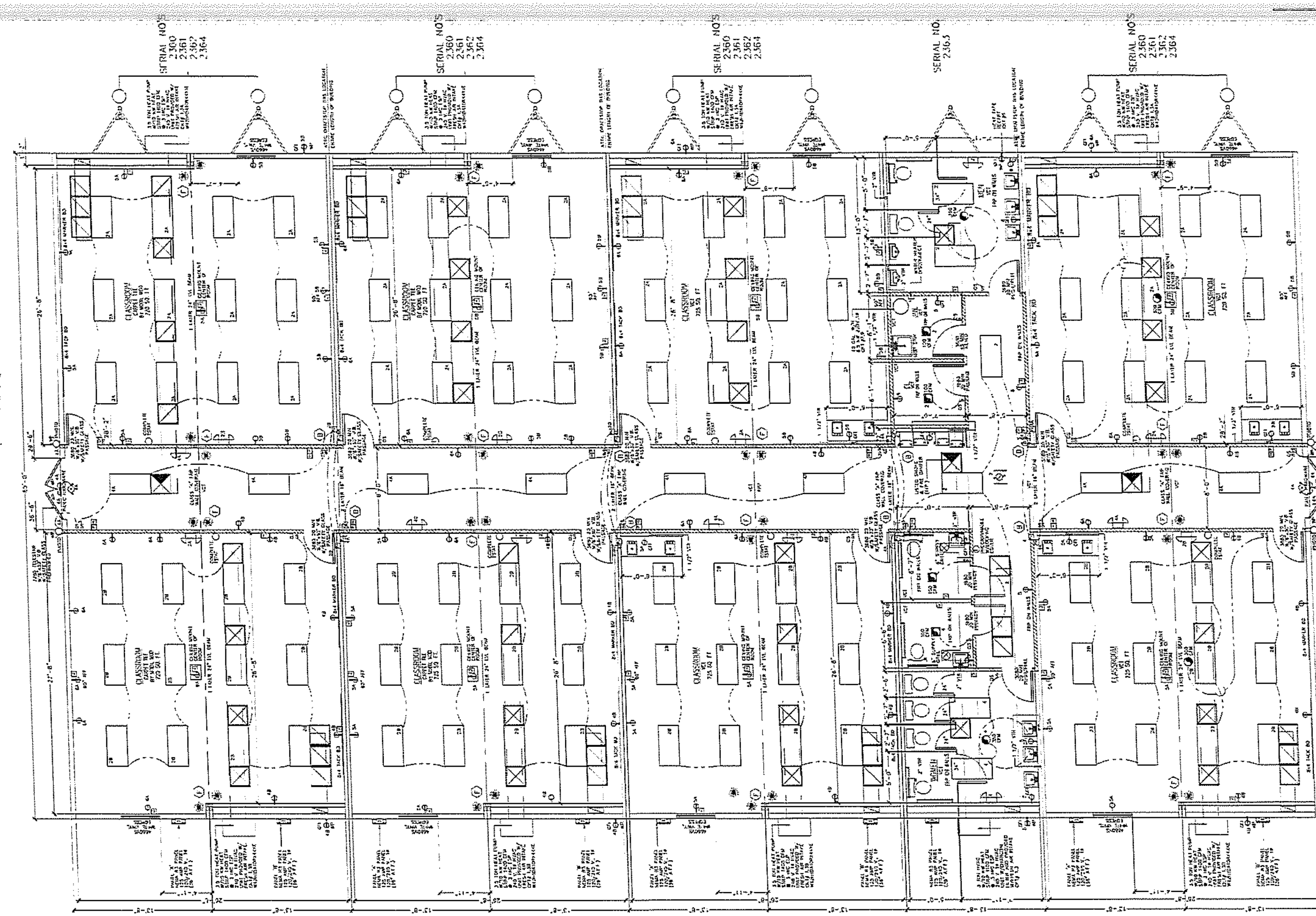


SUPPLY RISER -NTS-





DWV RISER NTS



COLUMN STRAPPING SCHEDULE:	
(A) (2) 2x4 SPF #2 THIS HALF.	(B) (2) 2x4 SPF #2 EACH HALF
(C) (3) 2x4 SPF #2 THIS HALF.	(D) (3) 2x4 SPF #2 EACH HALF
(E) (4) 2x4 SPF #2 THIS HALF.	(F) (4) 2x4 SPF #2 EACH HALF
(G) (5) 2x4 SPF #2 THIS HALF	(H) (2) 2x6 SPF #2 EACH HALF.

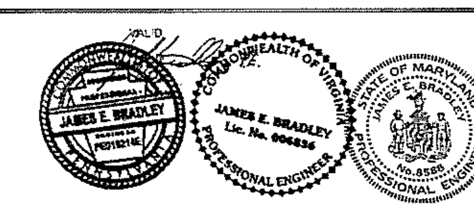
● WITH RIDGE BEAM BEARING STIFFENER

NOTES:
1. ALL COLUMN STUDS SHALL BE GLUE/NAILED TOGETHER PVA GLUE WITH 100% COVERAGE SHALL BE USED.
2. INSTALL TWO STEEL STRAPS AT EACH STUD OF EACH COLUMN.
3. COLUMN STUDS SHALL NOT BE NOTCHED OR BORED.

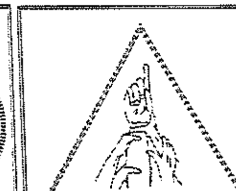
APPROVED RADCO APPROVED
May 01, 2013

PROFESSIONAL CERTIFICATION:

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 8588
EXPIRATION DATE:



CONSULTING ENGINEER: JAMES BRADLEY, P.E. – 212 FOX TRAIL – PARKESBURG, PA. 19365 – (610) 857-2458



FIRST STRING SPACE INC.
OUR STRENGTH IS TEAMWORK

FIRST STRING SPACE
392 RAILROAD AVE. EAST
PEARSON, GEORGIA 31642 (912) 422-6455

DATE: 4-15-13	THIRD PARTY: RADCO 5456 CRENSHAW ST. TAMPA, FLORIDA 33634 813-243-0370	
SCALE: 3/16"=1'-0"		
CODES: SEE NOTES		
STATES: PA, VA, MD.	REVISIONS:	BY: J.B.
REFERENCE: MOD-POD		
FSS2360-64 A-1 126 x 60 MOD-POD EDUCATION		SHEET 2 OF 3
FLOOR PLAN	DESTINATION: WEST CHESTER, PA	

EXTERIOR FINISH MATERIAL:

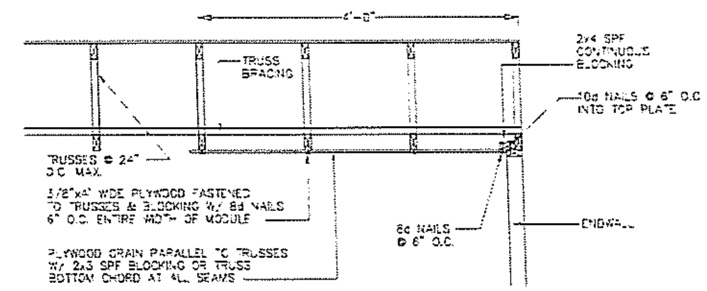
ROOF – MULE-HIDE 45 MIL (WHITE) EPDM FULLY ADHERED IN ACCORDANCE WTH ESR-1776 OVER 7/16" MULE-HIDE FR DECK PANEL 'C' INSTALLED PER MANUFACTURERS SPECIFICATIONS.
OR
ROOF – FIRESTONE 45 MIL (WHITE) EPDM FULLY ADHERED OVER 7/16" FIRESTONE COVER DX INSTALLED PER MANUFACTURERS SPECIFICATIONS.

WALL – HARDI-PANEL SIDING (STUCCO) OVER APPROVED MOISTURE BARRIER OVER 7/16" OSB SHEATHING INSTALLED PER MANUFACTURERS SPECIFICATIONS.

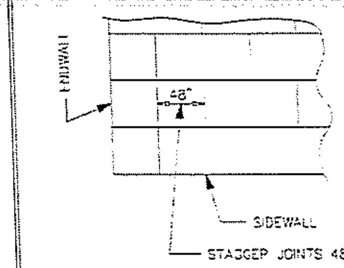
INTERIOR FINISH MATERIAL:

CEILING	–	T-GRID CEILING INSTALLED PER MANUFACTURER'S SPECIFICATIONS
WALL	–	5/8" TYPE 'X' GYP. BOARD (VOG THROUGHOUT) INSTALLED PER MANUFACTURERS SPECIFICATIONS
CORRIDOR, RESTROOM & CLOSET	–	FRP OVER 5/8" TYPE 'X' GYP. BOARD INSTALLED PER MANUFACTURERS SPECIFICATIONS
FLOOR	–	AS NOTED ON PLAN.

NOTE: INTERIOR FINISHES SHALL BE CLASS 'C' OR BETTER.



SECTION A-A
(TYP. EACH ENDWALL)



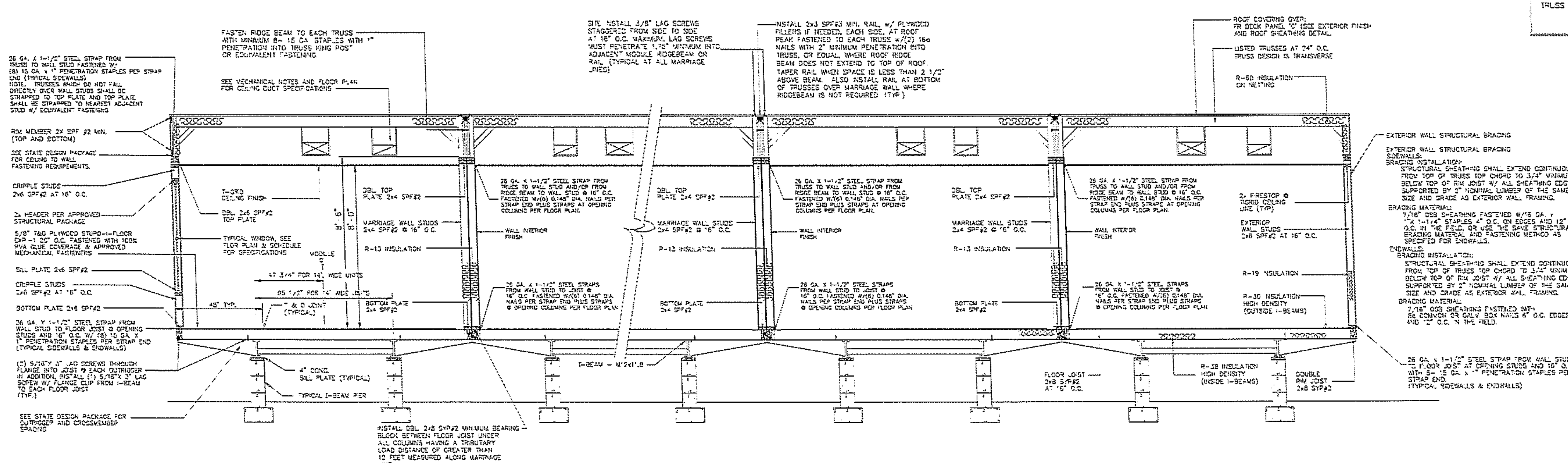
MULEHIDE
FR DECK PANEL 'C' TO BE FASTENED TO TRUSSES W/ 8D NAILS @ 6" O.C. ON EDGES AND 12" O.C. IN FIELD
OR
FIRESTONE:
7/16" COVER DX SHEATHING TO BE FASTENED TO TRUSSES W/ 8D NAILS @ 6" O.C. EDGES AND 12" O.C. IN FIELD

ROOF SHEATHING DETAIL

APPROVED TRUSS DESIGN:

TRUSS MANUF #: UNIVERSAL
TRUSS DRAWING. # F117717 (MARYLAND)
TRUSS DRAWING. # F117707 (OTHER STATES)

SEE ATTACHED DWG.



MICROLAM BEAM CONSTRUCTION

1 LAYER(S) 1 3/4" x 24" MICROLAM, EACH MODULE.

NOTES:

1. MICROLAM F_b = 2750 PSI
2. MICROLAM MUST BE CONTINUOUS OVER CLEARSPAN(S).
3. BEAMS SUPPORTED BY ENDWALL COLUMNS MUST EXTEND CONTINUOUS OVER COLUMNS TO EXTERIOR FACE OF ENDWALL.
4. FASTEN ROOF SHEATHING INTO TOP EDGE OF MICROLAM TO PROVIDE CONTINUOUS LATERAL SUPPORT OF BEAM.
5. INSTALL (2 x 4) x 20" SPF# 3 RIDGE BEAM BEARING STIFFENER OVER SUPPORT COLUMNS WHEN SPECIFIED ON FLOOR PLAN; FASTEN THE FACE OF THE STIFFENER TO THE RIDGE BEAM WITH 100% GLUE COVERAGE AND 6-16 GA. STAPLES WITH 3/4" MINIMUM PENETRATION INTO MICROLAM BEAM.
6. WHEN MORE THAN ONE LAYER OF MICROLAM IS INSTALLED ON EITHER SIDE OF THE MATING LINE, LAYERS ON THAT SIDE OF THE MATING LINE MUST BE FASTENED TOGETHER WITH 16 GA. STAPLES x 7/16" MINIMUM CROWN (INSTALLED PARALLEL TO BEAM SPAN) x 3/4" MINIMUM PENETRATION INTO CONNECTING LAYER STAPLES SHALL BE PLACED AT 6" O.C. MAXIMUM VERTICALLY AND HORIZONTALLY WITH FIRST AND LAST ROW OF STAPLES LOCATED 1" FROM TOP AND BOTTOM EDGE OF BEAM RESPECTIVELY.

GENERAL CROSS-SECTION NOTES:

1. UNLESS OTHERWISE SPECIFIED, ALL STEEL MUST COMPLY W/ ASTM A36, YIELD STRENGTH = 36 KSI.
2. ALL LAG SCREWS MUST COMPLY W/ ANSI/ ASME B18.2.1 F_{yb} = 60 KSI MINIMUM.
3. SEE FOUNDATION PLAN FOR PIER AND TIE-DOWN STRAPPING LOCATIONS, ORIENTATIONS, AND SPECIFICATIONS.

PROFESSIONAL CERTIFICATION:

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 8588, EXPIRATION DATE: 9-6-14

APPROVED RADCO May 01, 2013 APPROVED

JAMES E. BRADLEY — COMMONWEALTH OF VIRGINIA — Lic. No. 006834 — PROFESSIONAL ENGINEER
STATE OF MARYLAND — JAMES E. BRADLEY — No.8588 — PROFESSIONAL ENGINEER

CONSULTING ENGINEER: JAMES BRADLEY, P.E. – 212 FOX TRAIL – PARKESBURG, PA. 19365 – (610) 857-2458

FIRST STRING SPACE INC.
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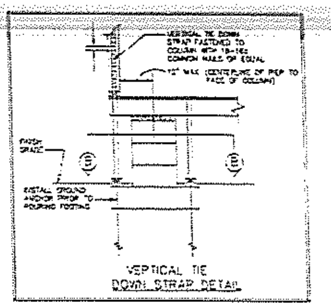
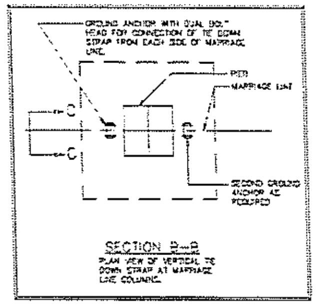
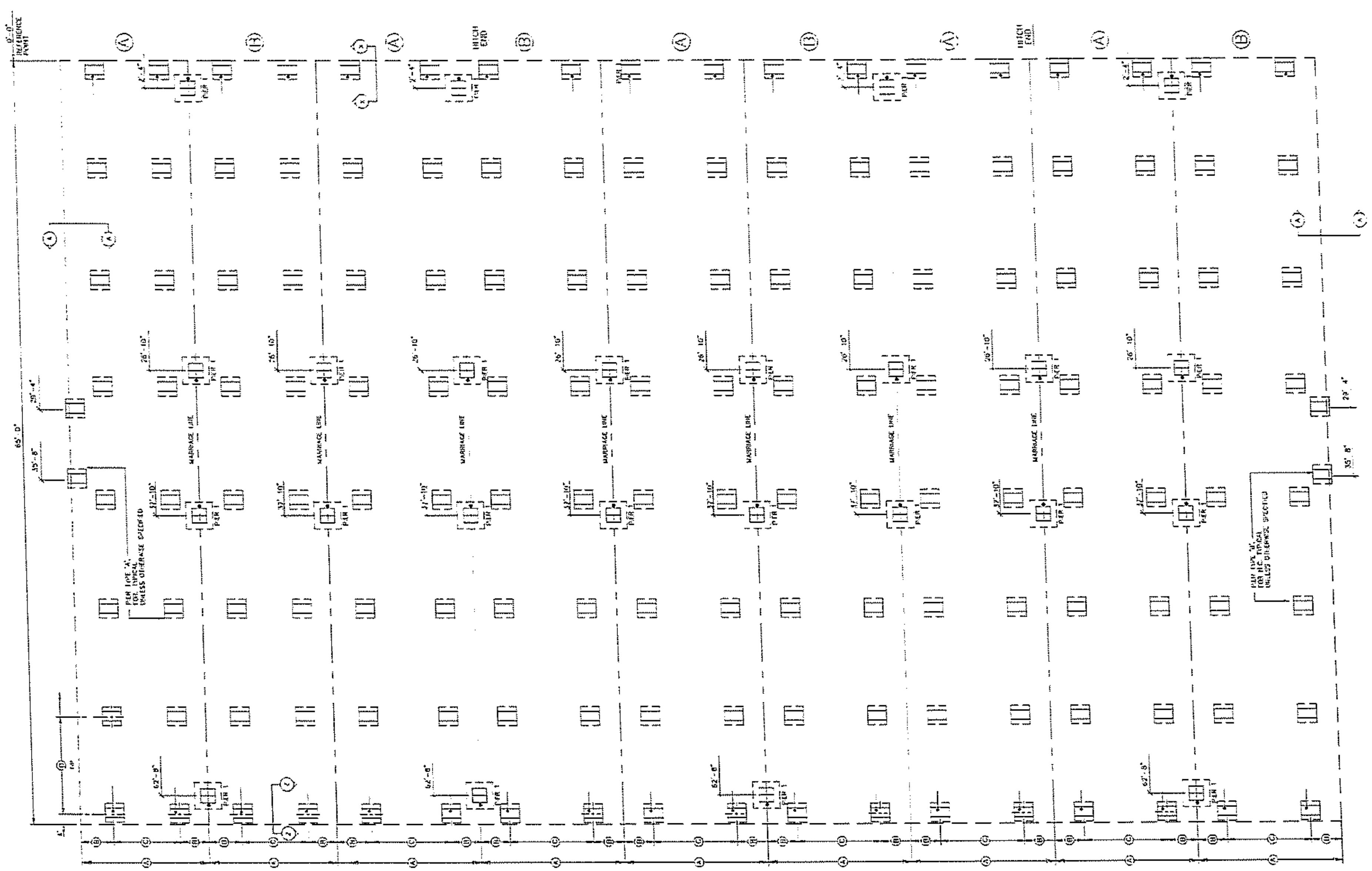
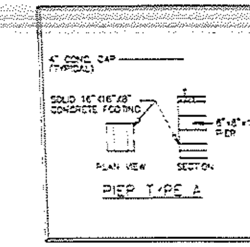
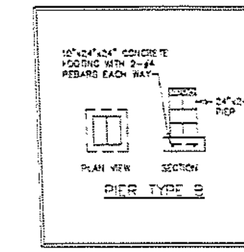
FIRST STRING SPACE 892 RAILROAD AVE. EAST PEARSON, GEORGIA 31642 (912) 422-6455		
DATE: 4-15-13	THIRD PARTY: RADCO 5456 CRENSHAW ST. TAMPA, FLORIDA 33634 813-243-0370	
SCALE: NO SCALE		
CODES: SEE NOTES		
STATES: PA, VA, MD.	REVISIONS:	BY: J.B.
REFERENCE: MOD-POD		
FSS2360-64 A-I 126 x 60 MOD-POD EDUCATION		SHEET 3 OF 3
CROSS SECTION	DESTINATION: WEST CHESTER, PA	

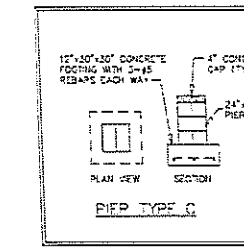


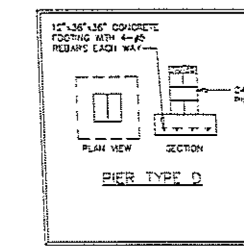


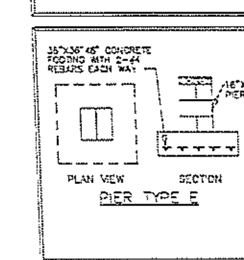












FOUNDATION DIMENSIONS		
A MODULE WIDTH	B PIER TO MODULE EDGE	C STEEL BEAM SPACING
13'-8"	34 1/4"	95 1/2"
D MAXIMUM PIER SPACING	MAXIMUM SOIL BEARING CAPACITY	
4'-10"	2000 PSF	
7'-5"	2000 PSF	

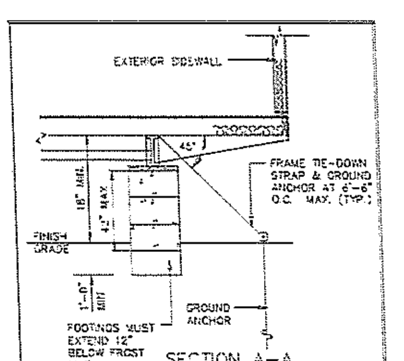
MARRIAGE WALL PIER REQUIREMENTS			
PIER NUMBER	MINIMUM SOIL BEARING CAPACITY	PIER TYPE	NUMBER OF VERTICAL TIE DOWN STRAPS REQ'D (EACH MODULE)
1	2000 PSF	D	1
	3000 PSF	C	1
	2000 PSF		
	3000 PSF		

FOUNDATION NOTES:

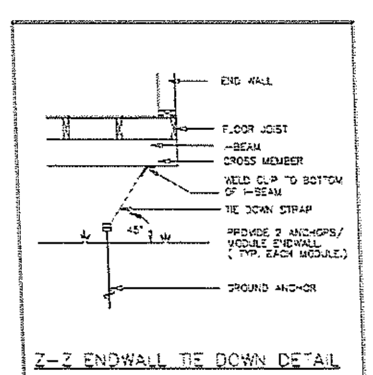
1. ALL FOUNDATION CONSTRUCTION, MATERIALS, AND INSTALLATION SHALL BE IN ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL CODES.
2. TIE-DOWN STRAPS TO BE 1-1/4" x .035" TYPE-1, FINISH B, GRADE 1 ZINC COATED STEEL STRAPPING CERTIFIED BY A REGISTERED ENGINEER OR ARCHITECT AS CONFORMING WITH ASTM D3953-91. TIE DOWN STRAPS AND CONNECTING HARDWARE SHALL HAVE 3150# MINIMUM WORKING CAPACITY.
3. EACH GROUND ANCHOR SHALL HAVE A WORKING CAPACITY NO LESS THAN THE SUM OF THE REQUIRED WORKING CAPACITIES OF ALL TIE DOWN STRAPS CONNECTED TO THE GROUND ANCHOR, AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. DESIGN OF GROUND ANCHOR, INCLUDING SHAFT LENGTH, NUMBER AND DIAMETER OF HELIXES, ETC. TO BE AS SPECIFIED BY THE GROUND ANCHOR MANUFACTURER FOR THE ACTUAL SOIL TYPE ENCOUNTERED. IF THE HOLDING OR PULLOUT CAPACITIES OF GROUND ANCHORS ARE BELOW THE ASSUMED DESIGN VALUES, THE ARCHITECT/ENGINEER MUST BE CONSULTED FOR AN ALTERNATE ANCHORAGE DESIGN.
4. THE FIRST TIE-DOWN STRAP FROM ENDWALLS SHALL NOT EXCEED 12 INCHES.
5. ALL PIERS SHALL BE CONSTRUCTED OF CONCRETE MASONRY UNITS CONFORMING TO ASTM C90. MASONRY UNITS SHALL BE LAID IN TYPE M OR S MORTAR OR COVERED WITH SURFACE BONDING CEMENT INSTALLED IN ACCORDANCE WITH ITS LISTING. PIER FOOTINGS SHALL BE AS DESCRIBED ABOVE.
6. MINIMUM CONCRETE FOOTING COMPRESSIVE STRENGTH 2,500 PSI AT 28 DAYS.
7. ALL REINFORCEMENT BARS SHALL COMPLY WITH ASTM A615, GRADE 60. REINFORCEMENT BARS SHALL BE EQUALLY SPACED AND PLACED WITH 3" CLEARANCE FROM BOTTOM AND SIDES OF THE FOOTING.
8. SEE SHEET 1 OF 3 FOR BUILDING DESIGN LOADS.
9. I-BEAM SUPPORT PIERS MAY BE INSTALLED LATERALLY (90° FROM THE ORIENTATION SHOWN ON THE FOUNDATION PLAN). CENTERLINE OF EACH PIER MUST BE LOCATED DIRECTLY BELOW THE I-BEAM CENTERLINE.
10. SOIL BEARING CAPACITY SHOWN ON THIS PLAN IS ASSUMED. IF THE ACTUAL SOIL BEARING CAPACITY IS LESS THAN 2,000 PSF, THE ARCHITECT/ENGINEER MUST BE CONSULTED FOR REQUIRED ALTERNATE FOUNDATION DESIGN. FOOTINGS SHALL BE PLACED ON NON-EXPANSIVE SOILS ONLY.
11. INSTALL BLOCK PIER ON EACH SIDE OF ALL EXTERIOR DOOR OPENINGS. (MANUFACTURER'S RECOMMENDATION ONLY – OPTIONAL WHEN NOT SHOWN) SLIGHT ADJUSTMENT MAY BE REQUIRED TO INSURE OPERABILITY AFTER INSTALLATION OF BUILDING IS COMPLETE.
12. THE AREA UNDER FOOTINGS AND FOUNDATIONS SHALL HAVE ALL VEGETABLES, STUMPS, ROOTS, AND FOREIGN MATERIALS REMOVED PRIOR TO THEIR CONSTRUCTION.
13. THE FOUNDATION DIMENSIONS SHOWN ARE NOMINAL. AN INCREASE IN MODULE WIDTH SHOULD BE EXPECTED DUE TO MODULE EXPANSION, SETTING TOLERANCES, ETC. THE FOUNDATION CONTRACTOR SHOULD CONSULT WITH THE MANUFACTURER OF THE MODULES PRIOR TO CONSTRUCTION OF THE FOUNDATION TO DETERMINE THE AMOUNT OF INCREASED WIDTH TO BE ADDED TO THE NOMINAL DIMENSIONS SHOWN ABOVE.

NOTE:
THIS FOUNDATION PLAN IS PROVIDED FOR REFERENCE AS A TYPICAL STANDARD. ACTUAL FOUNDATION CONDITIONS MUST BE EVALUATED FOR APPLICABILITY IF THIS PLAN IS TO BE USED. ALTERNATE FOUNDATION PLANS MAY BE DESIGNED BY OTHERS IN ACCORDANCE WITH THE REQUIREMENTS OF THE JURISDICTION HAVING AUTHORITY.

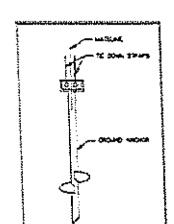
NOTE:
THE NUMBER OF PIERS SHOWN ON THIS FOUNDATION PLAN IS NO INDICATION OF THE AMOUNT OF PIERS REQUIRED AND NEEDED FOR THIS BUILDING. SEE MAXIMUM PIER SPACING CHART TO THE LEFT FOR THE CORRECT NUMBER OF PIERS REQUIRED FOR EACH SOIL BEARING CAPACITY.



SECTION A-A



Z-Z ENDWALL TIE DOWN DETAIL



SECTION C-C

APPROVED RADCO APPROVED
May 01, 2013

PROFESSIONAL CERTIFICATION:

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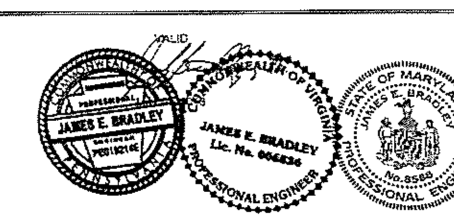


CONSULTING ENGINEER: JAMES BRADLEY, P.E. – 212 FOX TRAIL – PARKESBURG, PA. 19365 – (610) 857-2458

FIRST STRING SPACE INC.
OUR STRENGTH IS TEAMWORK

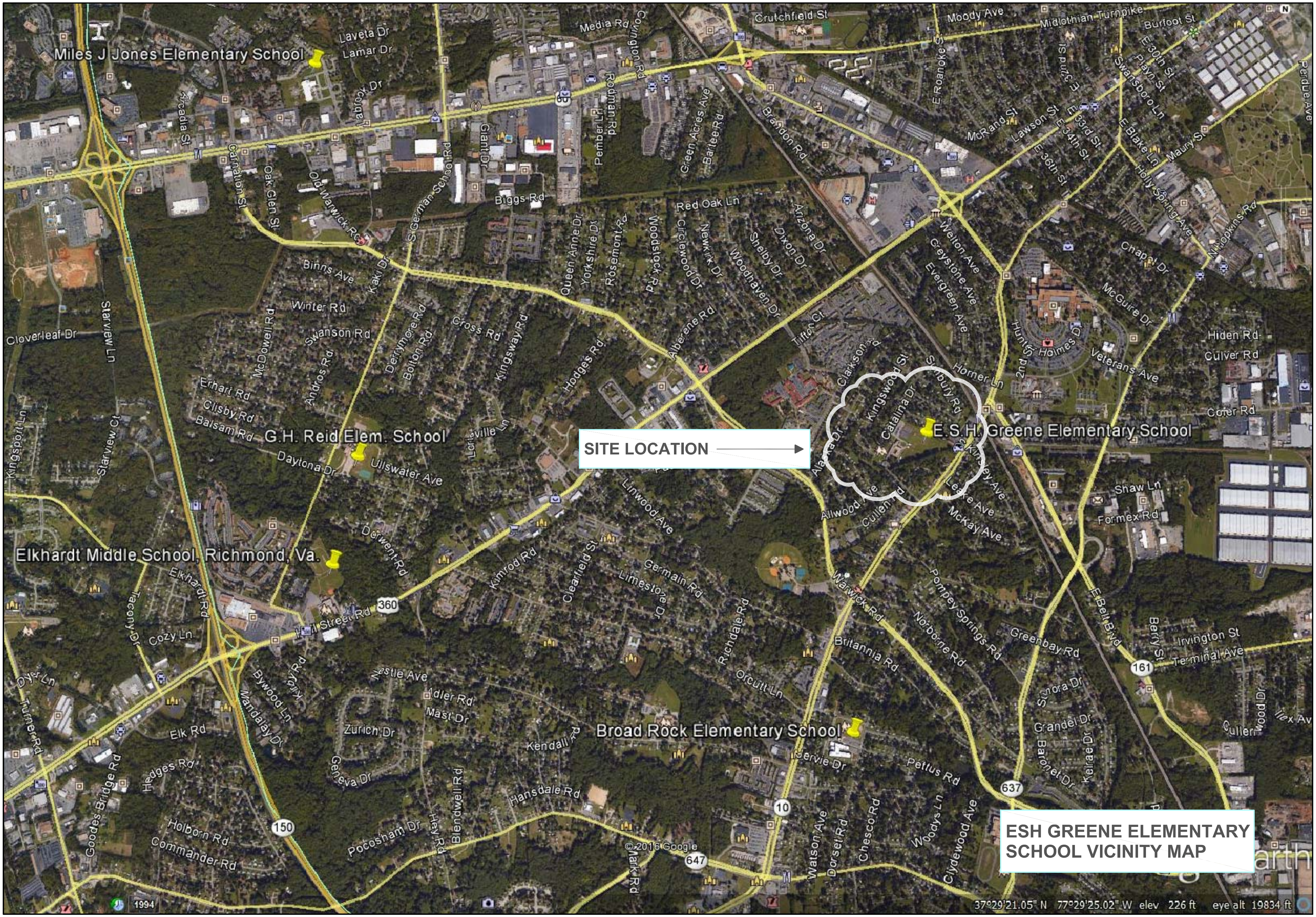
FIRST STRING SPACE
892 RAILROAD AVE. EAST
PEARSON, GEORGIA 31642 (912) 422-6455

DATE: 4-15-13	THIRD PARTY: RADCO 3455 CRENSHAW ST. TAMPA, FLORIDA 33634 813-243-0370		
SCALE: NO SCALE			
CODES: SEE NOTES			
STATES: PA, VA, MD.	REVISIONS:	BY: J.B.	
REFERENCE: MOD-POD			
FSS2360-64 A-1 126 x 60 MOD-POD EDUCATION		SHEET 1 OF 1	
FOUNDATION	DESTINATION: WEST CHESTER, PA		

EXHIBIT – C

Proposed Site Plan


E.S.H. Greene Elementary School
EXISTING PAVED TENNIS COURTS
EXISTING CAFETERIA MODULAR
EXISTING (11) CLASSROOM MODULARS
124'
30'
65'
CR
CR
T
CR
CR
CR
CR
T
CR
CR
PROPOSED LOCATION OF NEW MODULARS (8) CLASSROOMS
EXISTING PAVED BASKETBALL COURTS
Catalina Dr
© 2016 Google
ESH GREENE ELEMENTARY SCHOOL SITE PLAN
1994
37°29'25.17" N 77°28'34.37" W elev 209 ft eye alt 1129 ft



Miles J Jones Elementary School
G.H. Reid Elem. School
Elkhardt Middle School, Richmond, Va.
SITE LOCATION
E.S.H. Greene Elementary School
Broad Rock Elementary School
ESH GREENE ELEMENTARY SCHOOL VICINITY MAP
Midlothian Turnpike
Crutchfield St
Moody Ave
Burfoot St
Biggs Rd
Red Oak Ln
Binns Ave
Winter Rd
Swanson Rd
Cloverleaf Dr
Starview Ln
Erhart Rd
Clisby Rd
Balsam Rd
Daytona Dr
Ullswater Ave
Derwent Rd
Hodges Rd
Linwood Ave
Kimrod Rd
Clearfield St
Germain Rd
Limestone Dr
Richdale Rd
Orcutt Ln
Warwick Rd
Britannia Rd
Pompey Springs Rd
Norborne Rd
Greenbay Rd
Allwood Ave
Cullen Rd
Clarkson Rd
Kingswood St
Catalina Dr
Horner Ln
McKay Ave
Hiden Rd
Culver Rd
Cofer Rd
Shaw Ln
Formex Rd
Veterans Ave
Holmes Dr
McGuire Dr
Chapel Dr
E Belt Blvd
Irvington St
Terminal Ave
Grandel Dr
Baronet Dr
Pettus Rd
Gervie Dr
Kendall Rd
Hansdale Rd
Pocosham Dr
Hey Rd
Blendwell Rd
Zurich Dr
Mast Dr
Geneva Dr
Elk Rd
Hedges Rd
Holborn Rd
Commander Rd
Goodes Bridge Rd
Bywood Ln
Mandalay Dr
Elkhardt Rd
Cozy Ln
Kingsport Ln
Starview Ct
Watson Ave
Dorset Rd
Chesco Rd
Woodys Ln
Clydewood Ave
Street Rd
360
150
10
637
161
647
©2016 Google
1994
37°29'21.05" N 77°29'25.02" W elev 226 ft eye alt 19834 ft

EXHIBIT – E

Data Sheets

Mobile Modular's

CampusMaker ModPod®

The Flexible Solution for Sustainable Learning Spaces

Eco-Friendly Classroom

Serving California, Florida, Texas and Mid-Atlantic states.

campus maker® mobile modular

Adaptable Classrooms for Today's Changing Schools.

Sustainable and customized learning environments.

Fluctuating school enrollment. Shifting demographics. Changing expectations. The CampusMaker ModPod® delivers the flexible solutions for today's rapidly evolving educational needs.

Today's school districts are progressively seeking better, more secure and adaptable ways to make the most of their available space. Now with the revolutionary CampusMaker ModPod, creating a reusable and sustainable learning environment has never been easier.

Constructed of durable materials and designed to be easily configured into a wide variety of self-contained classroom complexes, the CampusMaker ModPod delivers what every school needs: energy efficiency, security and a building design that is easily adaptable to different enrollment needs.

Optimum Flexibility

The expandable and retractable design of the CampusMaker ModPod not only offers the ease of reconfiguration but also a wide variety of configuration options, enabling the Facilities Departments to prepare for most enrollment situations.

These configurations include restrooms, administrative offices, libraries, laboratories, music classrooms and more.

Tangible Savings

The innovative side-by-side installation of the classrooms significantly reduces the length of utility runs, electrical and plumbing connections, walkways, stairs and access ramps.

All perimeter walls of each double classroom contained within a CampusMaker ModPod are finished as exterior walls. This allows for easy reconfiguration of the CampusMaker ModPod to a larger or smaller size based upon enrollment. Further, reconfiguration can be performed with minimal disruption to the adjacent classrooms.

Safety and Security

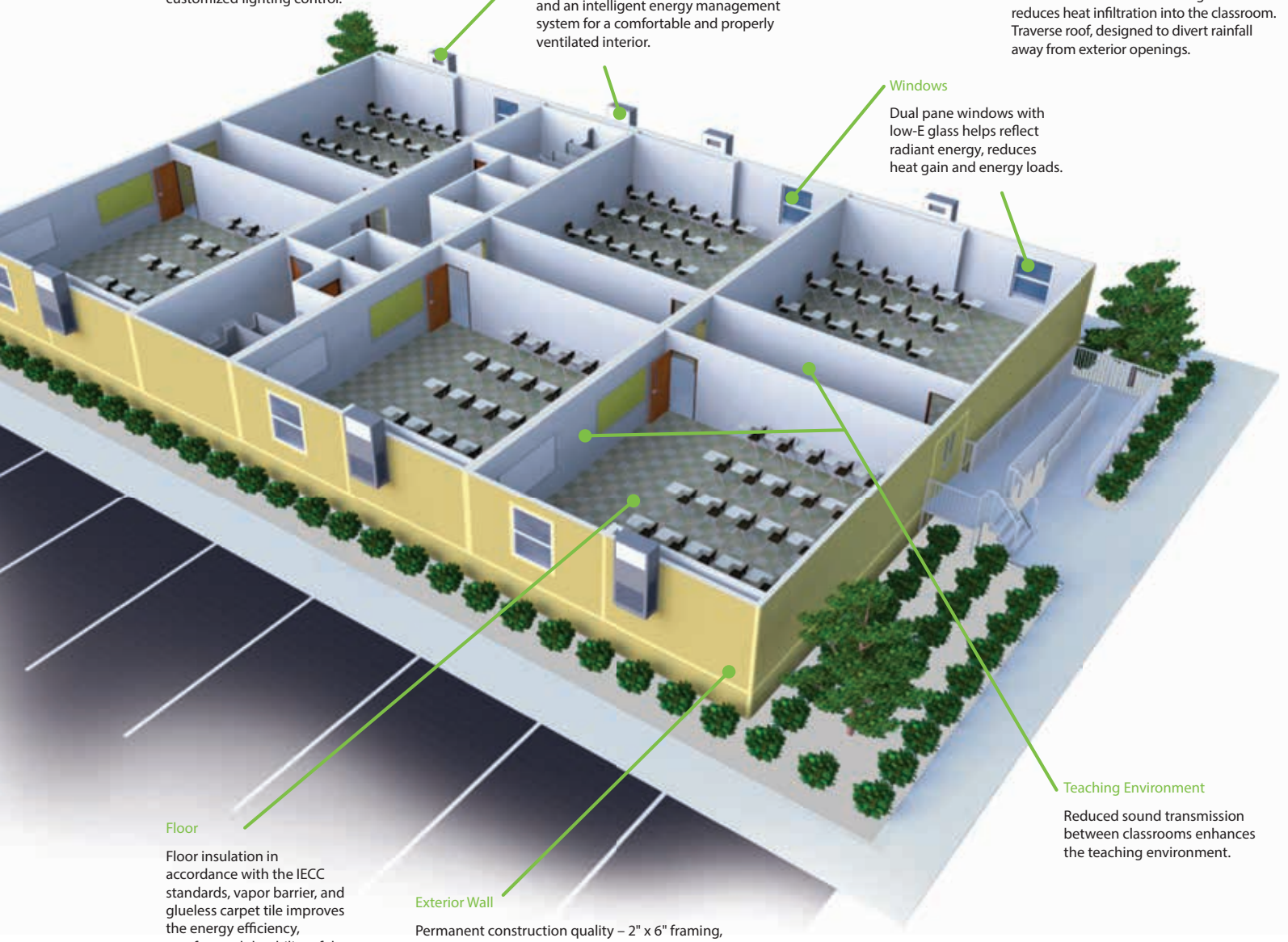
When Mobile Modular designed the CampusMaker ModPod, one of our primary goals was to create a modular classroom system that ensured the safety and security of students and staff.

Each CampusMaker ModPod complex is accessed via an internal corridor with steel clad exterior doors, self-closers and panic hardware. To ensure further safety and security, each classroom is accessed through a solid core fire-rated door with a large view block and locking system.

All doors can be equipped with optional alarms, electronic entry control and easily integrated with each facility's primary security and life safety systems.

Let us take care of all of your space needs.

Mobile Modular's **CampusMaker ModPod®** Complex



Lighting (Not shown)

Energy-efficient T-8 lighting coupled with flexible switching for customized lighting control.

HVAC

High-efficiency HVAC system with Heat Pump and an intelligent energy management system for a comfortable and properly ventilated interior.

Roof (Not shown)

White EPDM cool-roof with batt-insulation in accordance with the IECC regulations reduces heat infiltration into the classroom. Traverse roof, designed to divert rainfall away from exterior openings.

Windows

Dual pane windows with low-E glass helps reflect radiant energy, reduces heat gain and energy loads.

Teaching Environment

Reduced sound transmission between classrooms enhances the teaching environment.

Floor

Floor insulation in accordance with the IECC standards, vapor barrier, and glueless carpet tile improves the energy efficiency, comfort and durability of the CampusMaker ModPod.

Exterior Wall

Permanent construction quality – 2" x 6" framing, plywood sheathing, commercial grade vapor barrier, batt-insulation in accordance with IECC and low maintenance interior and exterior finishes.

The above illustration depicts a six classroom CampusMaker ModPod complex, with a restroom module and integrated interior corridor. A CampusMaker ModPod classroom module is comprised of two classrooms (27'-0" x 28'-0")* with an egress corridor. Each classroom is approximately 790 sq. ft. and can accommodate up to 35 students. The interior corridor is 8'-0" wide and is further enhanced with a one-hour-fire-rated construction to protect the occupants. Sprinklers can be installed for additional protection.

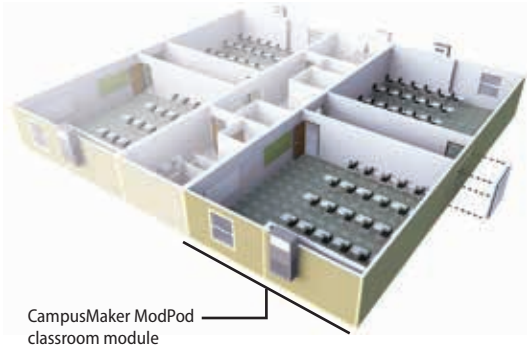
800.944.3442 | www.mobilemodularrents.com

*The availability of the product and its features may vary. Please contact your sales specialist for further information. These specifications are subject to change without notice.

mobile modular
Your Project – Our Commitment

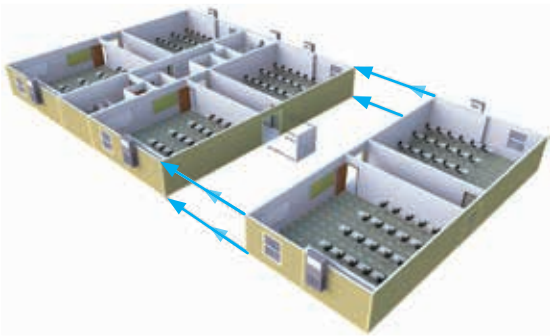
It's as easy as adding and subtracting.
Protected, Flexible and Environmentally Friendly.

Four classroom configuration.



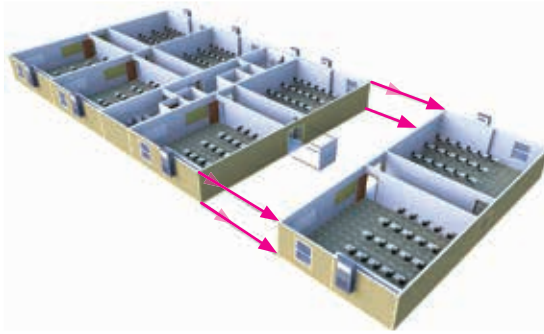
To adjust the size of the CampusMaker ModPod, the two classroom module at either end can be detached and relocated to another site or school. Construction of a new exterior wall is not required as the wall and finishes are already in place. This feature minimizes the down time due to construction and disruption to the remainder of the classroom complex.

Add an additional classroom module to expand the CampusMaker ModPod complex.



By simply removing and relocating the existing security entrance doors to the newly expanded CampusMaker ModPod, this classroom complex is set to operate with six classrooms, a restroom module and corridor. All this can be accomplished with minimal disruption to the occupants and in most cases, the work can be completed in just a few days.

Retract a classroom module to reduce the CampusMaker ModPod complex.



All CampusMaker ModPod® classrooms feature:

- High-efficiency HVAC system with Heat Pump
- Intelligent energy management system, featuring automatic temperature, humidity and fresh air exchange controls
- High-performance building insulation
- Energy-efficient T-8 electronic ballast and lamps
- Commercial grade, heavy duty vapor barrier
- White EPDM Cool Roof
- Traverse roof, designed to divert rainfall drainage away from exterior openings
- Glueless carpet tiles - 100% recyclable, made from post consumer materials
- Dual pane low-E window

Additionally, the CampusMaker ModPod, also offers a comprehensive selection of options to meet the demands of even the most stringent specifications.

CampusMaker ModPod sustainable options include:

- Passive shading devices
- UVC light for HVAC condenser cells
- CO_2 monitoring system
- Radiant heat barrier
- Tubular Daylighting System
- LED fixtures and lamps
- Natural fiber insulation
- Forest Stewardship Council (FSC) certified lumber
- Locally sourced materials
- Low-flush toilet with smart valve
- Tankless hot water heater
- Automated faucet
- Automated paper towel dispenser
- Automated hand soap dispenser

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EXHIBIT – F

RPS 2016 Facility Update Cost Estimate 4-12-16

Richmond Public School Buildings	Type of Project	Existing SF	2015 Costs	Comments	2015 Costs (650 Basis)	Comments
Elementary Schools						
Bellevue ES	Complete renovation/replacement	55,623	$10,012,140	limited site/functional obsolecence	$10,012,140	limited site/functional obsolecence
Blackwell ES	None- newer building	83,251	$0	1998 construction	$0	1998 construction
Broad Rock ES	None- new building	90,810	$0	2012 construction	$0	2012 construction????
Carver, G.W. ES	Major renovation	100,000	$13,000,000		$13,000,000	
Cary, John B. ES	Minor renovation/addition	46,711	$2,335,550	Addition needed to meet program req	$5,179,550	15,800 sf CR addition
Chimborazo ES	Minor renovation	75,370	$3,768,500		$4,668,500	5,000 sf CR addition
Fairfield Court ES	Complete renovation/replacement with addition	44,398	$7,991,640	Addition needed to meet program req	$11,231,640	18,000 sf CR addition w/ multipurpose
Fisher, J.B. ES	Minor renovation/addition	44,222	$2,211,100	Addition needed to meet program req	$5,451,100	18,000 sf CR addition w/ multipurpose
Fox, William ES	Major renovation/addition	58,260	$7,573,800	Addition needed to meet program req	$8,383,800	4,500 sf multipurpose addition
Francis, J. L. ES	Minor renovation/addition	56,954	$2,847,700	Addition needed to meet program req	$4,971,700	11,800 sf addition
Ginter Park ES	Major renovation	60,371	$7,848,230		$7,848,230	
Greene, E.S.H. ES	Complete renovation/replacement with addition	41,490	$7,468,200	Addition needed to meet program req	$11,518,200	22,500 sf CR addition w/ multipurpose
Holton, Linwood ES	None- newer building	80,548	$0	1998 construction	$0	1998 construction
Jones, Miles J ES	None- newer building	80,548	$0	1999 construction	$0	1999 construction
Mason, George ES	Complete renovation/replacement	67,048	$12,068,640		$13,418,640	7,500 sf CR addition
Munford, Mary ES	Moderate renovation	64,468	$5,802,120		$7,926,120	11,800 sf addition
Oak Grove ES	None- new building	90,810	$0	2012 construction	$0	
Overby- Sheppard ES	Moderate renovation	49,300	$4,437,000		$7,677,000	18,000 sf CR addition w/ multipurpose
Redd, E.D. ES	Moderate renovation/addition	56,671	$5,100,390	Addition needed to meet program req	$8,502,390	10,000 sf addition
Reid, G.H. ES	Major renovation/addition	64,964	$8,445,320	Addition needed to meet program req	$9,255,320	4,500 sf multipurpose addition
Southampton ES	Complete renovation/replacement with addition	56,521	$10,173,780	Addition needed to meet program req	$11,973,780	10,000 sf CR addition
Stuart, J.E.B. ES	Major renovation/addition	44,408	$5,773,040	Addition needed to meet program req	$7,033,040	7,000 sf CR addition
Swansboro ES	Complete renovation/replacement with addition	48,183	$8,672,940	Addition needed to meet program req	$12,272,940	20,000 sf CR addition
Westover Hills ES	Moderate renovation/addition	50,008	$4,500,720	Addition needed to meet program req	$7,344,720	15,800 sf CR addition
Woodville ES	Complete renovation/replacement	76,928	$13,847,040		$13,847,040	
Subtotal ES		1,587,865	**$143,877,850**		**$181,515,850**	
Middle Schools						
Binford MS	Complete renovation/replacement	98,013	$18,622,470	limited site/functional obsolecence	$18,622,470	limited site/functional obsolecence
Boushall, T. C. MS	Minor renovation	128,530	$6,426,500		$6,426,500	
Brown, Lucille M. MS	None- newer building	129,775	$0	1998 Construction	$0	1998 Construction
Elkhardt MS	Complete renovation/replacement with addition	91,575	$17,399,250	Addition needed to meet program req	$26,899,250	add 50,000 sf
Henderson, T.H. MS	Major renovation	188,131	$25,397,685		$25,397,685	
Hill, A.H. ES	Major renovation	81,152	$10,955,520	limited site, historic	$10,955,520	limited site, historic
King Jr., Martin Luther MS	None- new building	147,000	$0	Recent replacement	$0	Recent replacement
Thompson MS	Complete renovation/replacement with addition	108,364	$20,589,160	Addition needed to meet program req	$26,289,160	add 30,000 sf
Subtotal MS		972,540	**$99,390,585**		**$114,590,585**	
High Schools						
Armstrong HS	Moderate renovation	237,532	$23,753,200	Former Kennedy HS	$23,753,200	Former Kennedy HS
Huguenot HS	New- recent replacement	253,821	$0		$0	
Jefferson, Thomas HS	Major renovation	179,993	$26,098,985		$26,098,985	
Marshall, John HS	Major renovation	230,994	$33,494,130		$33,494,130	
Wythe, George HS	Major renovation	243,114	$35,251,530		$35,251,530	