UNFINISHED BUSINESS #2

Anastasia Mosquito Control District of St. Johns County

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2020 MEMO

DISTRICT DIRECTOR
Dr. Rui-De Xue

BOARD OF COMMISSIONERS:
Jeanne Moeller, Chairperson
Trish Becker, Vice-Chairperson
Don Girvan, Secretary/Treasurer
Gary Howell, Commissioner
Gina LeBlanc, Commissioner

TO: Board of Commissioners

FROM: Dr. Rui-De Xue, Director

CC: Charolette M. Hall, Administrative Assistant

DATE: April 23, 2020

RE: Update Report on Education Building Draft Plan

Based on committee meetings, as well as input from Board members, employees, the construction company and many places being visited by staff; we worked out this draft plan for your discussion and further input. *(Please see separate binder).*

The draft plan has been sent to all Committee members and related collaborators and the majority gave us positive feedback and like this draft plan. A couple of members suggested adding fossils of mosquitoes, new control techniques, and other things.

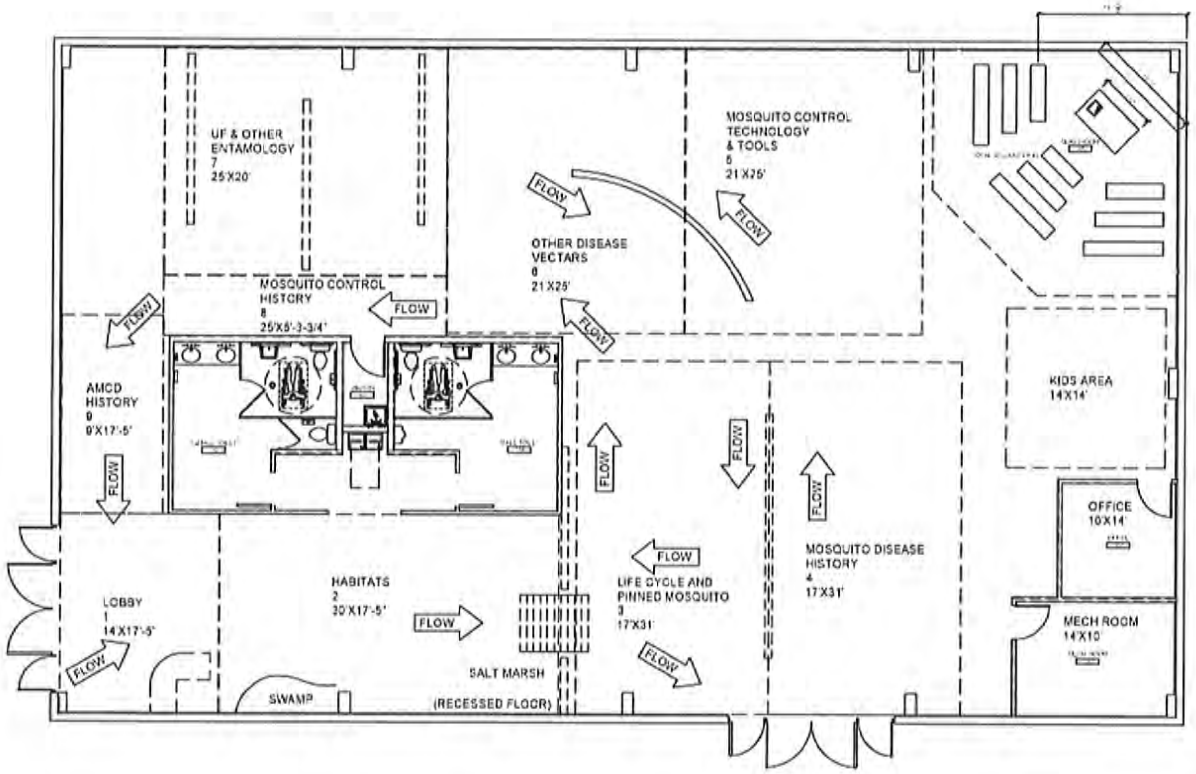
If you have any more information and/or questions; please contact Mr. Richard Weaver.

We plan to submit the draft plan to our construction company for the development of blue prints by the end of May.

Thank you for your support.

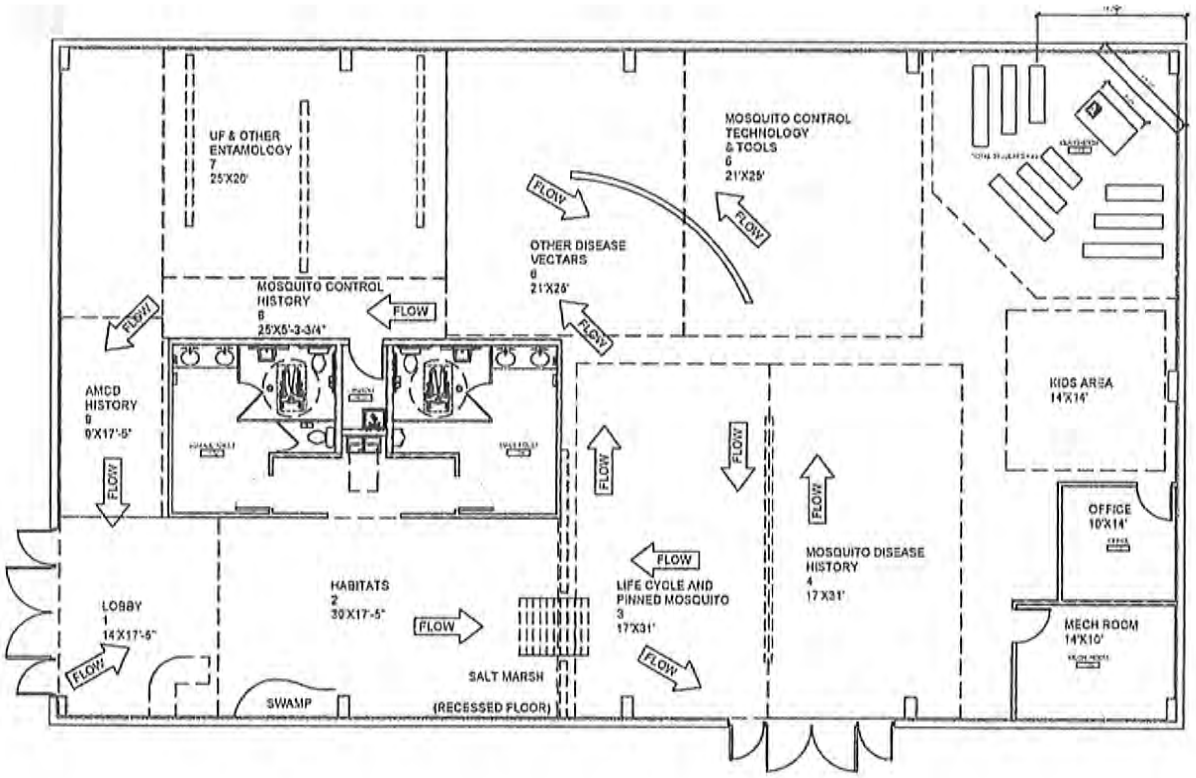
Anastasia Mosquito Control District

Disease Vector Education Center



Detail of interior layout and section by section written descriptions of the display areas and display components with photographic examples

Anastasia Mosquito Control District
Disease Vector Education Center



Detail of interior layout and section by section written descriptions of the display areas and display components with photographic examples

Disease Vector Education Center

This document is a draft of ideas. At this point anything can be changed. The layout seams to flow very well and I think that the square footage allowed is adequate. The display ideas are at this point rough drafts. It is important to note that each display component listed in this document will need its own multipage descriptions with display types, sizes, shapes, colors, text, photographs, layout, lighting, power needs, data needs, handicapped accessibility, etc. Because of the depth of the design work the Director, Board and committee members need to agree or disagree on the concepts laid out in this document. I will need back comments, suggestions, ideas, etc. soon. The contractor and architect will be using this document to develop and fine tune the design. AMCD staff will meet with the architect after basic comments are submitted. This document will also be used for the contractor to develop a budget for the outside and interior space. The current architectural floor plan is being used to develop the building cost. If anyone has questions please let me know.

Richard Weaver

April 16, 2020

Index of Display Sections

Architectural Floor Plan

Outside

1. Lobby & Habitats
2. Life Cycle & Pinned Mosquitos
3. Mosquito Disease History
4. Kids Area
5. Classroom/Movie Theater
6. Mosquito Control Technology & Tools
7. Other Disease Vectors
8. University of Florida and Other Entomology
9. Mosquito Control History
10. AMCD History

Architectural Floor Plan

PLUMBING FIXTURE COUNT PER TABLE 403.1 FLORIDA PLUMBING CODE	
ASSEMBLY (A-3)	
WATER CLOSETS	1 WC PER 125 MALE 1 WC PER 65 FEMALE
LAVATORIES	1 LAV PER 200 MALE/FEMALE
DRINKING FOUNTAINS	1 LAV PER 1,000
SERVICE SINK	1 SERVICE SINK
	TOTAL OCCUPANT LOAD - 161 81 MEN 81 WOMEN
	MEN: 1 REQUIRED WATERCLOSET WOMEN: 2 REQUIRED WATERCLOSETS
	3 REQUIRED WATERCLOSETS/URINALS; 3 WATERCLOSETS & 1 URINAL PROVIDED
	2 REQUIRED LAVATORIES; 4 LAVATORIES PROVIDED
	1 REQUIRED "HI-LO" DRINKING FOUNTAIN CAN ACCOMMODATE 2,000 PEOPLE
	1 SERVICE SINK REQUIRED; 1 SERVICE SINK PROVIDED

125P
32"

INDICATES EXIT OR EXIT ACCESS, NUMBER OF PERSONS (P) DISCHARGING AT EXIT OR EXIT ACCESS, AND EGRESS CLEAR WIDTH (AT DOORS).

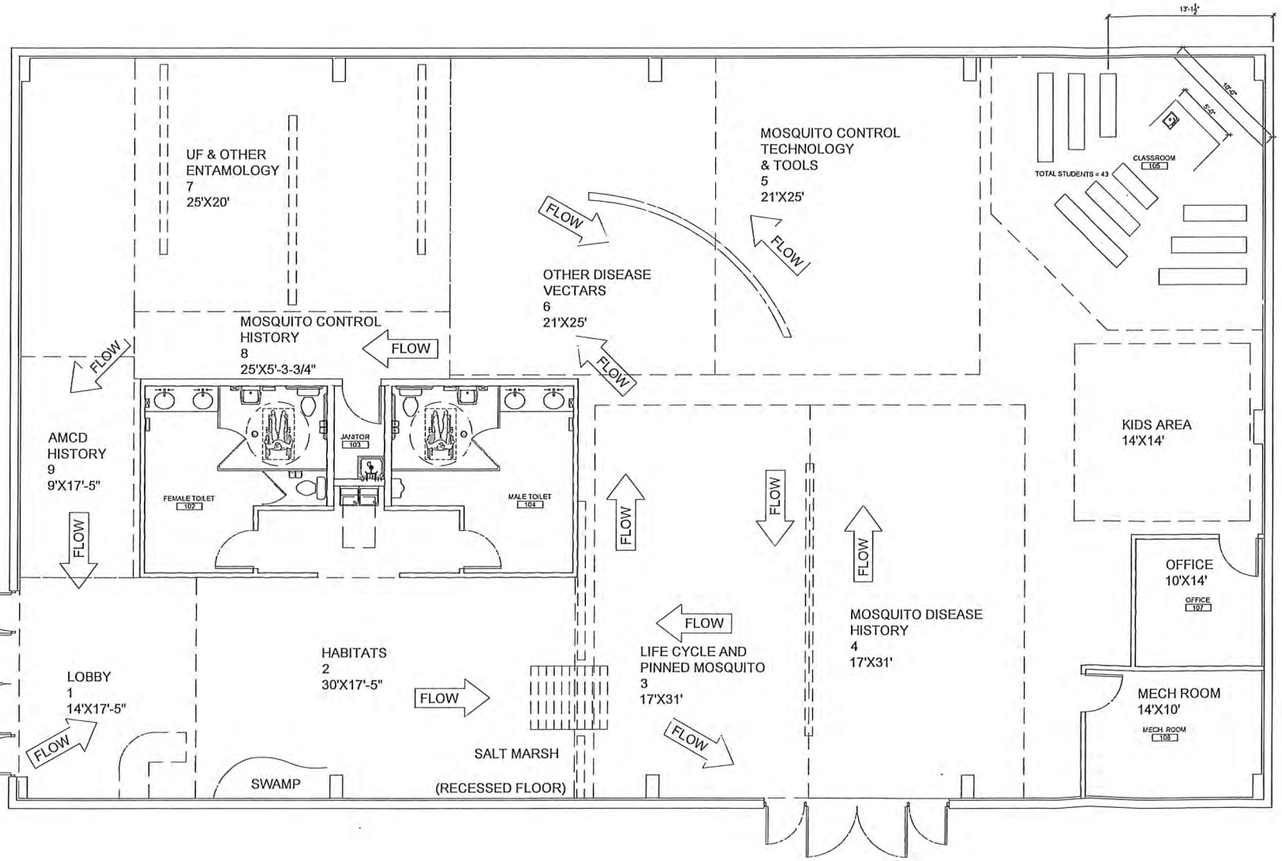
SAMPLE EGRESS TRAVEL PATH AND DISTANCE

FIRE EXTINGUISHER (UL RATING 3A-40B:C) 5 LB MULTIPURPOSE DRY CHEMICAL
EQUAL TO BADGER MODEL #5MB-6H (A KIDDE COMPANY)
FIRE EXTINGUISHERS SHALL BE CERTIFIED BY A LICENSE FIRE PROTECTION COMPANY
FIRE EXTINGUISHERS SHALL BE INSTALLED BY TENANTS IN THEIR LEASED SPACES

CLASS A FIRES (ORDINARY COMBUSTIBLE MATERIALS SUCH AS WOOD, CLOTH, PAPER RUBBER AND MANY PLASTICS)
CLASS B FIRES (LIQUIDS, TARS, OILS, GASES)
CLASS C FIRES (ELECTRICAL EQUIPMENT)

MAXIMUM FLOOR AREA PER UNIT OF A = 1,500 SF
MAXIMUM FLOOR AREA PER 2A UNIT = 3,000 SF
MAXIMUM TRAVEL DISTANCE TO AN EXTINGUISHER = 75 FT
MAXIMUM FLOOR AREA PER EXTINGUISHER = 11,250 SF

FIRE ALARM SYSTEM: A MANUAL FIRE ALARM SYSTEM IS REQUIRED PER FBC 907.2.3 AS THE OCCUPANT LOAD EXCEEDS 50 PEOPLE



ARCHITECTURAL FLOOR PLAN

SCALE: 3/16"=1'-0"

CODE REQUIREMENTS

THE PROJECT IS A SHELL PRE-ENGINEERED METAL BUILDING FOR A FUTURE EXHIBIT HALL FOR THE ANASTASIA MOSQUITO CONTROL DISTRICT

A FIRE ALARM AND AN AUTOMATIC FIRE SPRINKLER SYSTEM WILL BE REQUIRED

FLORIDA BUILDING CODE, BUILDING, FBC-B, 6TH EDITION-2017
FLORIDA BUILDING CODE, EXISTING BUILDING, FBC-B, 6TH EDITION-2017
FLORIDA ACCESSIBILITY CODE, FBC-ACCESSIBILITY, 6TH EDITION-2017
FLORIDA BUILDING CODE, MECHANICAL, FBC-M, 6TH EDITION-2017
FLORIDA BUILDING CODE, ENERGY CONSERVATION, FBC-EC, 6TH EDITION-2017
FLORIDA BUILDING CODE, PLUMBING, FBC-P, 6TH EDITION-2017
FLORIDA FIRE PREVENTION CODE, FFPC, 6th EDITION-2015 (ENCOMPASSING THE 2015 EDITIONS OF NFPA 1 & NFPA 101)
NATIONAL ELECTRICAL CODE, NEC, 2014 EDITION

OCCUPANCY CLASSIFICATION OF TENANT SPACE: ASSEMBLY (A-3) FBC 303.4; NFPA 3 3.3.190.6 AND CHAPTER 14. EXHIBITION HALL

CONSTRUCTION: FBC SECTION 602.2 - TYPE VB, SPRINKLED

ALLOWABLE HEIGHTS AND BUILDING AREAS: TABLES 504.3, 504.4 & 506.2 - TYPE VB, SPRINKLED, SINGLE STORY BUILDING
MAX. HEIGHT - 60'-0"
MAX. STORIES - 2
BASIC ALLOWABLE AREA - 24,000 SQ. FT. (ASSEMBLY S1)
FRONTAGE INCREASE (506.3.3) = [F/P -0.25] x W/30 = .75 x 6,000 = 4,500 SF
TOTAL ALLOWABLE AREA: 28,500 SF

BUILDING AREA: 6,000 SF

TYPE VB - TABLE FBC 601

BUILDING ELEMENT	TYPE VB
STRUCTURAL FRAME INCLUDING COLUMNS, GIRDERS, TRUSSES	0
BEARING WALLS EXTERIOR INTERIOR	0
NONBEARING WALLS AND PARTITIONS EXTERIOR	0
NONBEARING WALLS AND PARTITIONS INTERIOR	0
FLOOR CONSTRUCTION INCLUDING SUPPORTING BEAMS AND JOISTS	0
ROOF CONSTRUCTION INCLUDING SUPPORTING BEAMS AND JOISTS	0

TYPE VB - TABLE FBC 602

FIRE SEPARATION DISTANCE (FT)	TYPE OF CONSTRUCTION	GROUP A-3
< 5	OTHERS	1
≥ 5 < 10	OTHERS	1
≥ 10 < 30	VB	0
≥ 30	ALL	0

SEPARATED ACCESSORY OCCUPANCIES (FBC TABLE 508.4):
SEPARATION OF AN ASSEMBLY OCCUPANCY FROM A STORAGE OCCUPANCY
N - NO SEPARATION REQUIREMENT (SPRINKLER SYSTEM)

SEPARATED ACCESSORY OCCUPANCIES (FLORIDA FIRE PREVENTION CODE TABLE 6.1.14.4.1(a & b):
SEPARATION OF ASSEMBLY OCCUPANCY FROM A STORAGE OCCUPANCY.
1 HOURS (2 HOURS WITH A ONE HOUR REDUCTION FOR A SPRINKLER SYSTEM)

OCCUPANT LOAD:
MINIMUM OCCUPANT LOAD - FBC TABLE 1004.1.2 (NFPA TABLE 7.3.1.2 & 42.1.7):
EXHIBIT GALLERY & MUSEUM: 30 NET SQ FT PER PERSON (FBC) 15 SF PER PERSON (FFPC)
BUSINESS AREAS: 100 GROSS SQ FT PER PERSON

		FBC	FFPC
EXHIBIT HALL	4,774 SF / 30 NET SF PER PERSON	= 159 OCCUPANTS	= 318 OCCUPANTS
STORAGE	510 SF / 300 SF PER PERSON	= 2 OCCUPANTS	= 2 OCCUPANTS
TOTAL		= 161 OCCUPANTS	= 320 OCCUPANTS

INTERIOR FINISHES:
MINIMUM AS REQUIRED BY FBC TABLE 803.11 (SPRINKLED):

OCCUPANCY	VERTICAL EXITS	EXIT ACCESS CORRIDORS	ROOMS & ENCLOSED SPACES
ASSEMBLY	B	B	C

AS REQUIRED BY NFPA 101 TABLE A.10.2.2:

OCCUPANCY	VERTICAL EXITS	EXIT ACCESS	OTHER SPACES
ASSEMBLY	A I OR II	A OR B I OR II	A,B OR C NA

CLASS A INTERIOR WALL AND CEILING FINISH - FLAME SPREAD 0-25; SMOKE DEVELOPED 0-450
CLASS B INTERIOR WALL AND CEILING FINISH - FLAME SPREAD 26-75; SMOKE DEVELOPED 0-450
CLASS C INTERIOR WALL AND CEILING FINISH - FLAME SPREAD 76-200; SMOKE DEVELOPED 0-450
CLASS I INTERIOR FLOOR FINISH - CRITICAL RADIANT FLUX, NOT LESS THAN 0.45 W/cm2
CLASS II INTERIOR FLOOR FINISH - CRITICAL RADIANT FLUX, NOT MORE THAN 0.22 W/cm2 BUT LESS THAN 0.45 W/cm2

MEANS OF EGRESS:
MAXIMUM TRAVEL DISTANCE, DEAD END LENGTH, EXIT AND MEANS OF EGRESS WIDTH: FBC 1005.3.1 & 1005.3.2 & TABLE 1017.2; NFPA TABLE A.7.6.1:
MAXIMUM TRAVEL DISTANCE TO EXIT (SPRINKLED): 250 FT;
NFPA 101 - 250 FT (NFPA 36.2.6.1)
MAXIMUM DEAD END CORRIDOR LENGTH (SPRINKLED): 20 FT; (FBC 1018.3)
NFPA 101 - 20 FT
OTHER EGRESS COMPONENTS (WIDTH PER PERSON SERVED):
LEVEL = .02" (0.2" x 161 OCCUPANTS = 32.2" REQUIRED)
MINIMUM CORRIDOR AISLE WIDTH: 72" (FBC TABLE 1020.2)
MINIMUM CLEAR WIDTH OPENING OF EXIT DOORS: 32" (32"/0.2" PER PERSON = 160 PERSONS)
COMMON PATH OF TRAVEL: 75 FT; OCCUPANT LOAD OVER 30 & A SPRINKLER SYSTEM (FBC TABLE 1006.2.1);
NFPA 101 - 20 FT
DOORS SHALL SWING IN THE DIRECTION OF EGRESS EXCEPT WHEN SERVING AN OCCUPANT LOAD OF LESS THAN 50 (FBC 1008.1.2)
CORRIDOR FIRE-RESISTANCE RATING: CORRIDOR FIRE RATING WITH OVER 30 PEOPLE & A SPRINKLER SYSTEM (FBC 1020.1) - 0 HOURS

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NEW BUILDING
AMCD EDUCATIONAL BUILDING
ST. JOHNS COUNTY, FLORIDA

NO.	DATE	REVISION

SHEET TITLE: FLOOR PLAN

DRAWN BY: CAS
CHECKED BY: CAS
DATE: 03-11-2020

SHEET
A-1

Outside

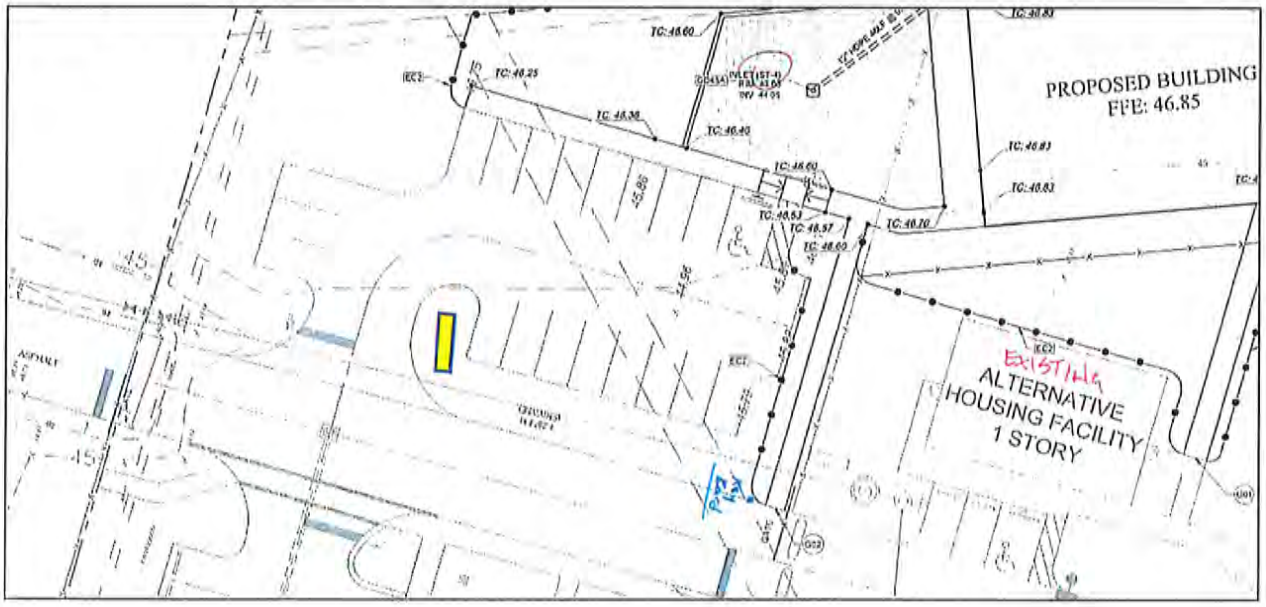
EDU Center Design Detail Outside

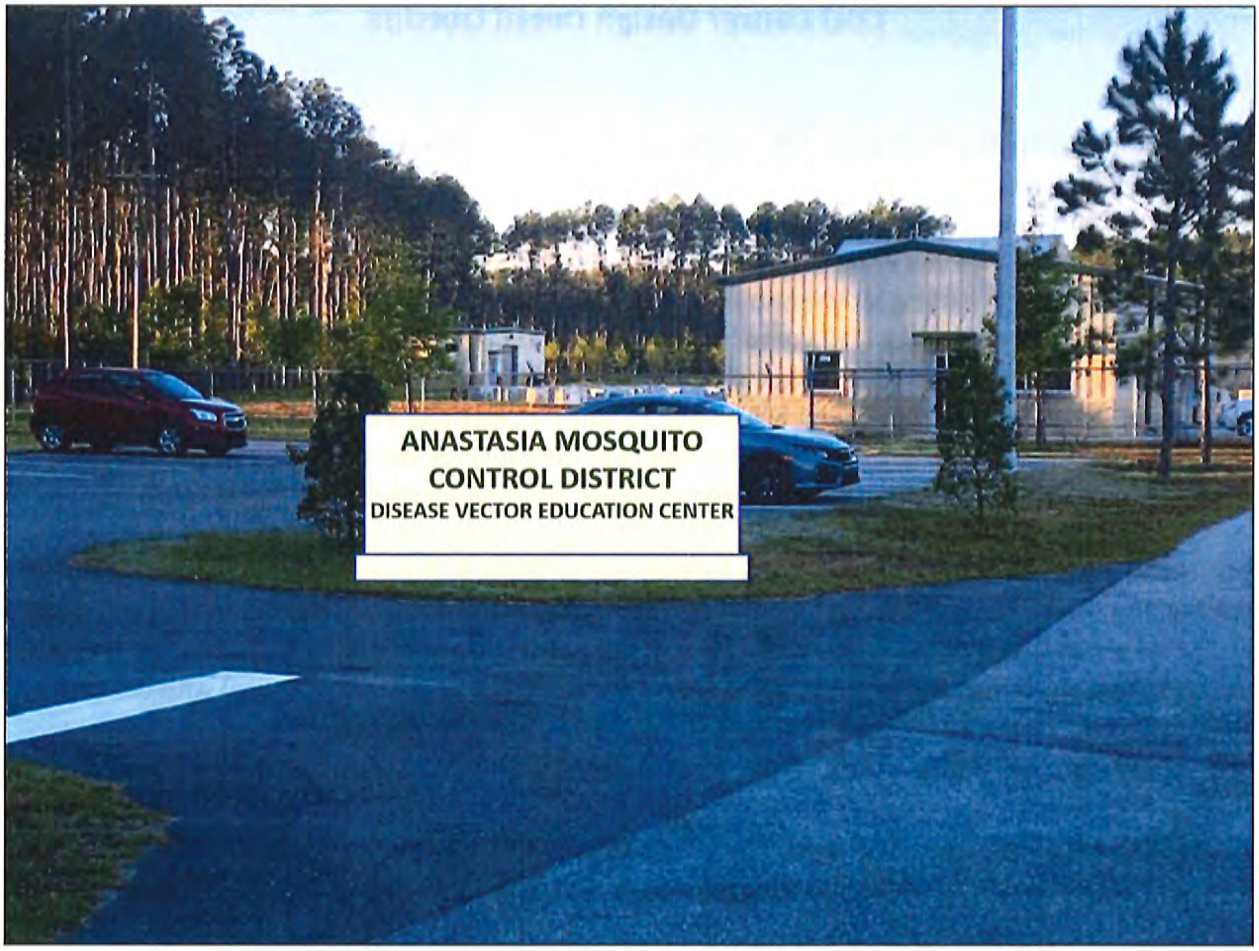
Description:

As you enter the front gate of the AMCD property on the right is the administrative building and the main parking lot and, on the left, will be a large wedge-shaped building with parking. At the entrance to the EDU Center parking lot there will be a sign "Anastasia Mosquito Control District Disease Vector Education Center". Once you enter the parking lot on the east side you will see a playground area, a plaza and south of the parking lot the entrance to the building. After you get out of your car you will also see a garden to the west of the EDU Center between the EDU Center building and the dormitory (fenced in). The playground area will have swings, climbing area, spring rockers and other typical playground equipment. All playground equipment will be bug shaped (for example the spring rockers), have bugs mounted on them (for example the swings) or be made from sources like tires. Next will be the plaza area, the main feature will be a large mosquito sculpture (with recessed light for night) surrounded by benches and picnic tables. The garden west of the building will have examples of native plants, bad plants and some habitats, these plants and habitats will be labeled. The green space on the east side of the building will be the bee area with bee hives. The front of the building will have entry and exit doors on the west (right) side of the building, the front of the building may have more than standard metal siding, to be determined (TBD). The building will have a shed roof (slight wedge shape) with the west (right) side being 20 to 23 feet high and the east (left) side 15 to 17 feet high.

Detail:

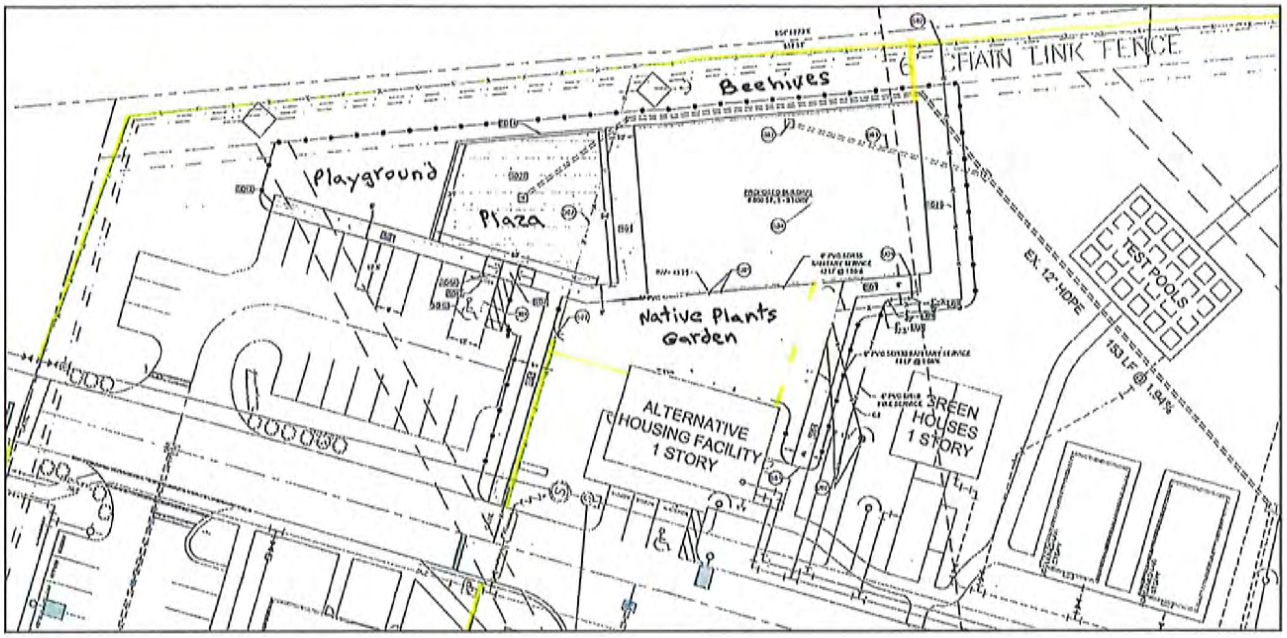
1. **Entrance Sign:** Located at the at the south side of the EDU Center parking lot entrance.



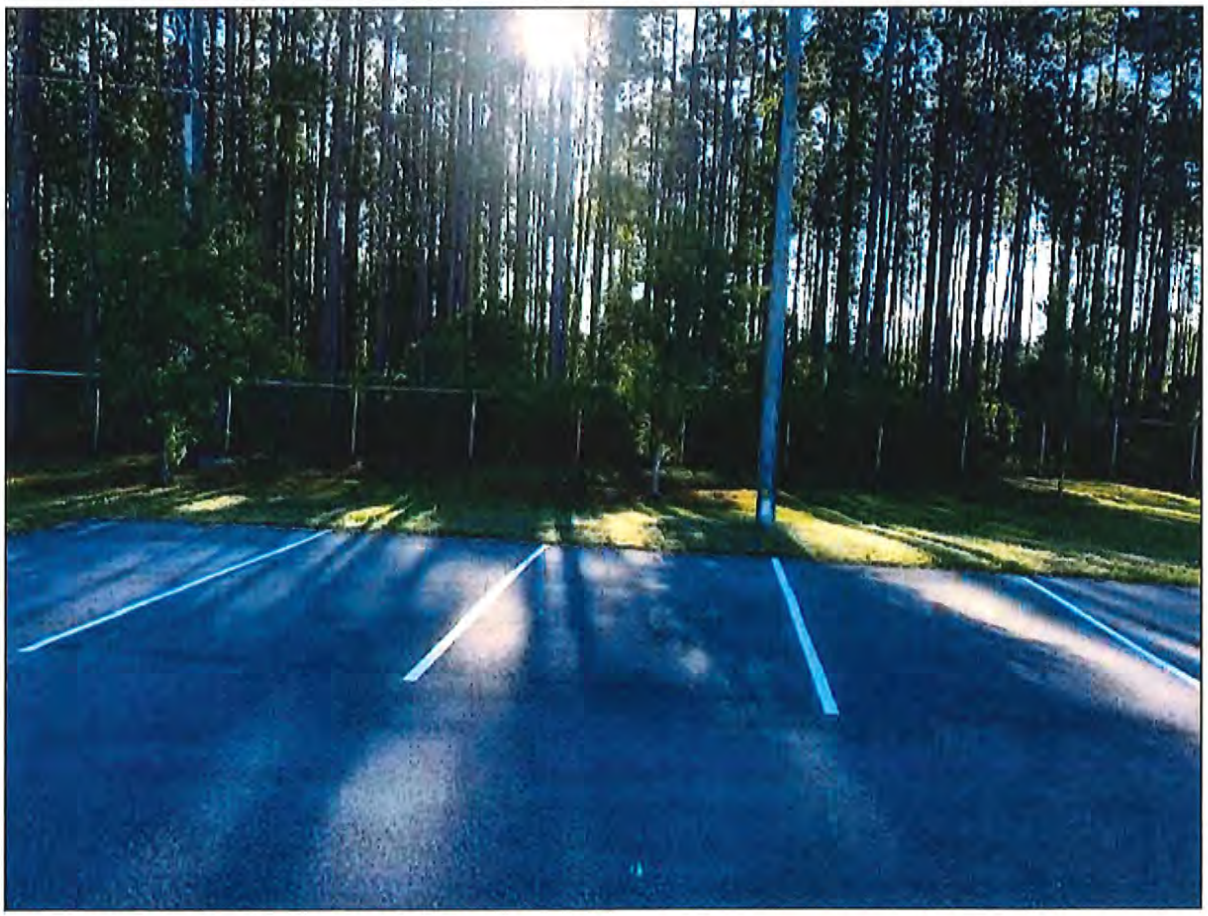


a. Ground mounted sign, concrete or stucco.
b. Ground spot lights at night.
c. Color to match buildings in complex or EDU building front if a different color.
d. 8' W X 4.5' to 5' H X 1.5' to 2' D Approximately (TBD by architect).
e. Can have some garden accents (flower bed, shrubs) around base and to hide the spot lights.

Playground, Plaza, Garden, Beehive's Locations



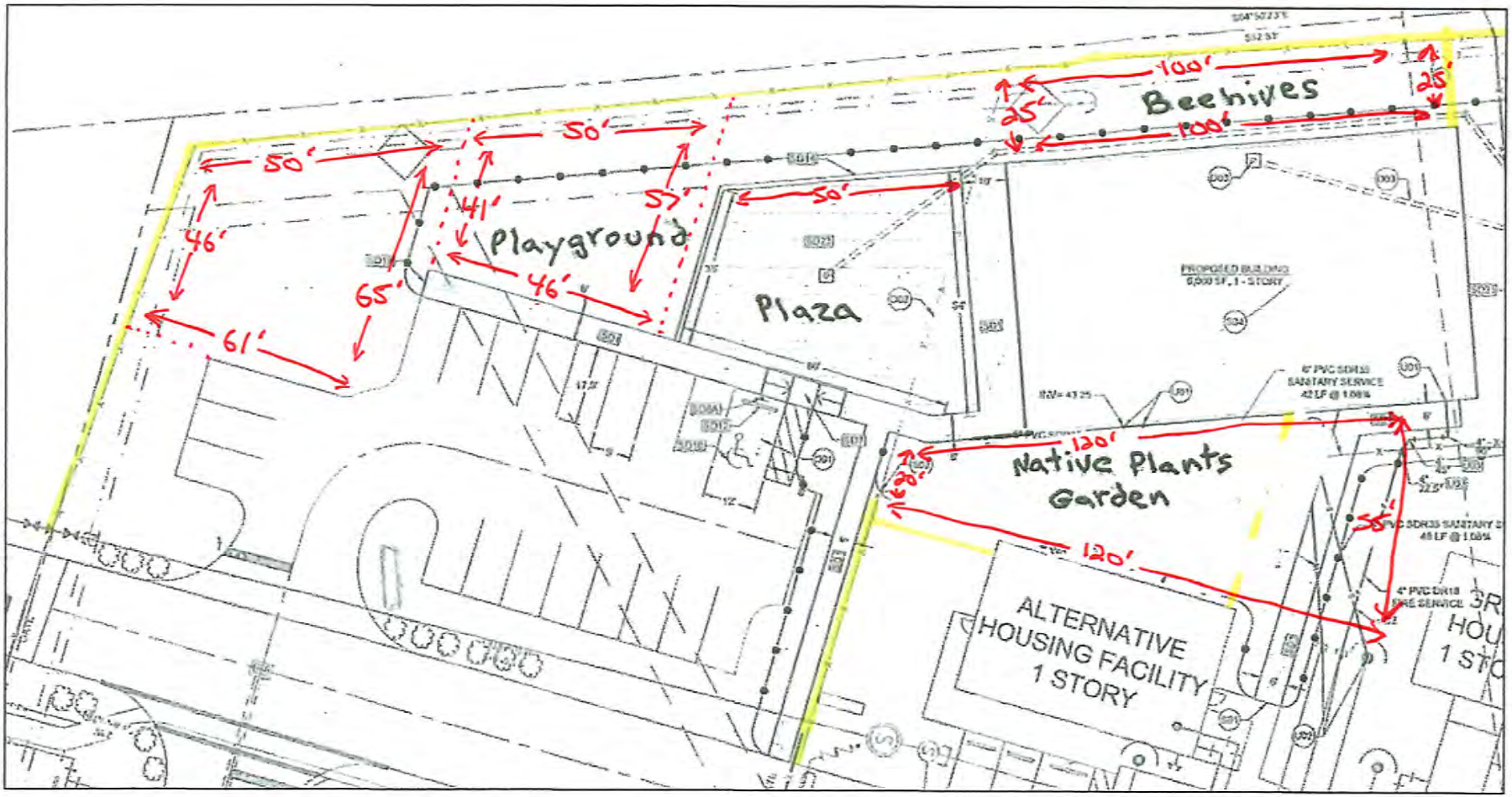
2. **Playground:** Located east of the EDU Center parking lot, north of the plaza and EDU Center building.



a. The area would be approximately 46' X 57' X 50' X 41' or 2,352 sq. ft. of area.
b. There is additional space for more playground area adjacent to and north of the playground if wanted or needed, 61' X 65' X 50' X 46' or 3,080 sq. ft.
c. Playground would be a combination of grass and playground material.
d. Playground material could be made of ground up tires to highlight source reduction and recycling.
e. Plaza would border on the north side the playground and have seating for adults.
f. Playground would be surrounded and separated from parking by some type of barrier fence.
g. Playground equipment ideas:
    I. Swing set (mosquitos or bugs on or around the equipment).
    II. Tire swing (source & source reduction).
    III. Spring rider(s) (bug shaped).
    IV. Tire climber (source & source reduction).
    V. Climber (mosquitos or bugs on or around the equipment).

3. **Plaza: Located east of the EDU Center parking lot, south of the playground, north of the EDU Center building and is part of the building entry area and focal point.**
    a. The area would be approximately 60' X 54' X 50' X 35' or 2475 sq. ft. of area.
    b. Centerpiece would be a metal (or some other long-lasting material) sculpture of a mosquito, dimensions would be approximately 15'L X 15'H X 8'W.
    c. Center piece sculpture would be lit with in pavement lights, plaza would be lit with wall or pole mounted lights.
    d. The plaza would be paved with semi porous pavers.
    e. There would be benches on the north and west side and picnic tables on the east side of the plaza.
4. **Garden: Located west of the EDC Center between the Dormitory building and the EDU Center, and from the parking lot south to the Greenhouse.**
    a. The area would be approximately 120' X 55' X 120' X 20' or 4,500 sq. ft. of area.
    b. This would be a closed in garden (access only after entering the EDU Center) and an outdoor extension of the EDU Centers displays.
    c. Glass doors similar to the entrance doors would allow natural light to enter the EDU Center and allow the visitors to have access to the garden have the garden be part of the tour.
    d. Garden would feature native plants, plants that are known for breeding and habitats (bromeliads).
    e. This area could also feature some large static displays, like a bat house for example.
    f. There would be signage on the trees, plants and displays explaining what is good or bad about these display items.
    g. Fish pond with gambusia "mosquito fish" could be featured.
    h. Enlist the help of the Master Gardeners and the Agriculture Center to help build, fund, plan, maintain the garden. Have a plaque at the garden entrance thanking them.
5. **Beehive area: Located along the east side of the EDU Building.**
    1. The area would be approximately 100' X 25' X 100' X 25' or 2,500 sq. ft. of area.
    2. This area would contain a small group of bee hives.

3. This area would also have the entrance tunnel to the indoor beehive.
4. Viewing of the beehives would be from a distance and the beehives would be behind a fence so visitors would not get near the beehives.
5. The beehive viewing area would be at the front south east corner of the EDU building.



Beehives
100'
25'
100'
25'
50'
50'
50'
46'
41'
57'
Playground
46'
65'
61'
Plaza
PROPOSED BUILDING
6,000 SF, 1 - STORY
6" PVC SDR35
SANITARY SERVICE
42 LF @ 1.08%
120'
Native Plants
Garden
20'
120'
55'
4" PVC DR18
FIRE SERVICE
ALTERNATIVE
HOUSING FACILITY
1 STORY

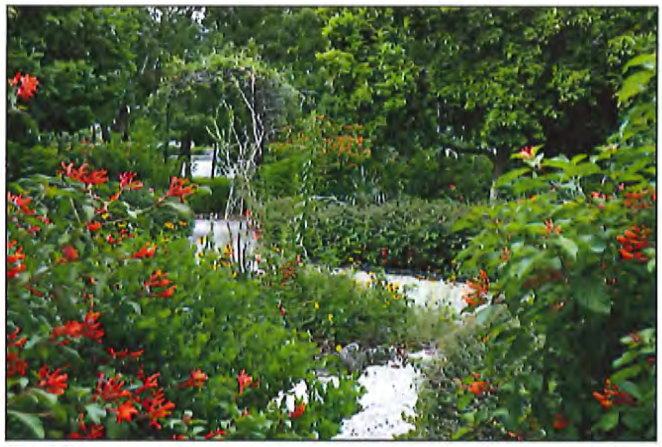
Outside - Photo Examples

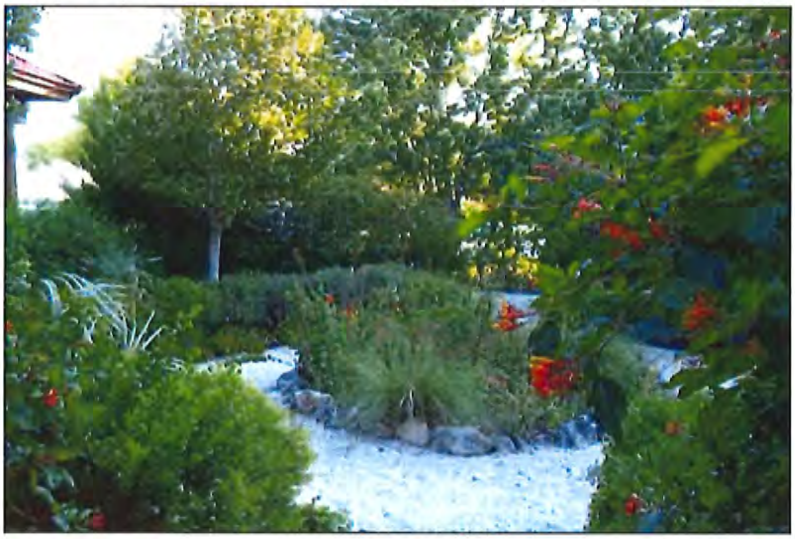
Playground

Plaza

Plaza

Garden





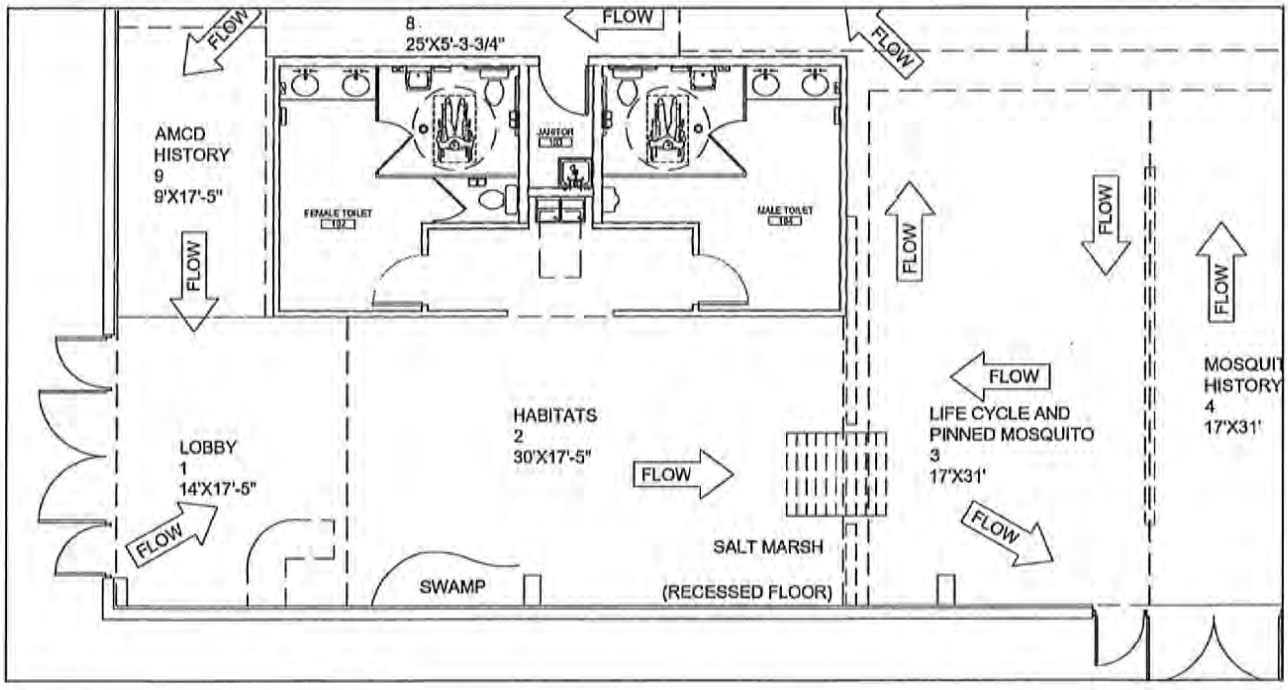
Beehive area

Lobby & Habitats

EDU Center Design Detail Lobby & Habitats

Description:

When you enter the building you will be in a 40 foot long 18 foot wide space (720 sq. ft.) with an open ceiling, on the right will be a small ticket counter and behind the ticket counter will be a wildlife scene, to the left will be a house, with a roof, windows, gutters, small astro-turf yard and a white picket fence. It will look like you are outside standing in front of a house that faces a swamp/saltmarsh. The right side and the back walls will be covered with a photo or mural of a swamp blending into a salt marsh as the east (right) wall blends into the back wall. The water and tress will come out of the wall and take up floor space showing many forms of mosquito habitat (as well as other insect habitat), parts of the floor will be recessed to look like actual habitats. The east (left) side of the display area is the house, this will have many examples of domestic forms of habitat in the small front yard (behind the picket fence), and will include birdbath, kids' toys, flowerpots, gutters etc. The house will actually be the entrance to the restrooms. At the end of the room will be an opening in the wall (with the saltmarsh picture or mural) with a nature boardwalk going over the recessed floor/habitat display that leads into the Education Center proper. The floor leading up to the boardwalk entrance will look like a dirt road or pathway. There will be two podiums that have buttons, one podium (P-1) will use the buttons to light the different examples of habitats to include gutters, kid toys, bird bath, swamp, salt marsh, tree hole, cat tails, old tire, trash and other natural and manmade objects. The second podium (P-2) will have species of mosquitos to include Ae aegypti, Ae albopictus, Cs melanura, Cx nigripalpus, Cx quinquefascitatus and others (staff will check with the science department to determine the corrects species for the correct habitat). When a button is pushed a habitat to match a mosquito species (P-2) or a habitat to match a question (P-1) will spot light the correct habitat.



Detail:

1. **Lobby:** The lobby and Habitats section will be one big room and the lobby with seating and reception counter will blend into the habitats section and restroom area.
    a. A reception counter or booth that will blend into the theme of the space (outdoors). Counter will need:
        i. Phone (data outlet).
        ii. Point of sale computer (data outlet).
        iii. Cash drawer.
        iv. Counter area will have space for one employee seated.
    b. Bench style seating.
    c. Display racks for merchandise and brochures.
    d. Floor will be stained/polished concrete.
    e. Entrance door space will be glass and encompass the entire north wall.
    f. Ceiling will be open and painted black.
2. **Habitats (House & Yard):** Bathroom block will be disguised as a typical house.
    a. House (bathroom block) will have a shingle roof on the visible side and vinyl siding.
    b. Entrance to bathrooms will look like a vestibule on a duplex house with door to the left and right.
    c. The left and right side of the "house" will have faux windows, one open with no screen and one closed with screen, this will demonstrate prevention and exposure to mosquitos. Windows will be decals or models.
    d. Gutters with a rain barrel (habitat examples).
    e. White picket fence around front of house and astro turf for faux grass.
    f. Yard will have flower pots, bird bath, kiddy toy, and other examples of habitats.
3. **Habitats (Swamp & Salt Marsh):** South and west walls and display area.
    a. Entire west wall and south wall will be covered in a photo for a swamp and salt marsh. The west wall will be swamp and as the wall turns the corner (this should be a curved corner to sell the display photo) it changes into a saltmarsh looking out to the intra-coastal waterway.
    b. West wall display area will start directly behind the reception counter with a recessed floor and will be a depiction of a swamp. The swamp will have:
        i. Recessed floor of varying depths molded to look like a transition from pathway to swamp.
        ii. Trees, cypress, oak, palm and one will have a tree hole (habitat example).
        iii. Some cat tails will be in the display (habitat example).
        iv. At the start of the swamp, on the bank of the swamp will be some trash to include an old tire, a discarded bucket and some bottles and cans (habitat examples).
        v. Faux water pools in swamp area (habitat example).
        vi. Building Column in display area will be disguised as a tree.
        vii. Lots of faux flora and fauna will be used, palmettos, ferns, etc.
        viii. Faux or stuffed examples of some native wildlife will be in this are to include an alligator, wading birds, mammals like racoons or possums and turtles and frogs (demonstrate other species that mosquitos feed on).

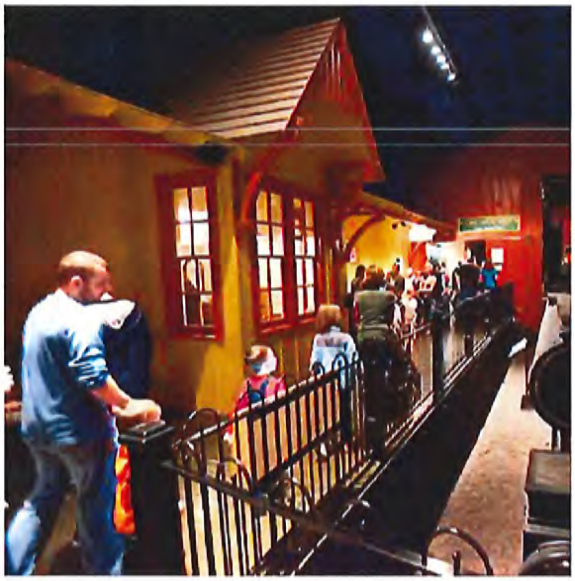
c. South wall display area will be in direct line of site upon entering the front door and will be the continued wall mural/photo as it turns from swamp to salt marsh. The wall will have an open doorway to the next display area using a wood nature walkway to enter the next display area. The salt marsh will have:
    i. Trees will end somewhere on the right (west) side of the wall as the display transition from swamp to salt marsh. This area will have more salt marsh grass.
    ii. As the display moves from right to left the recessed floor will go under a wood nature walk/bridge. This bridge will go through the wall into the next display area.
    iii. The salt marsh display and recessed floor will recede into the wall as the display approaches the house display and picket fence.
    iv. Faux water pools in salt marsh area, will try to present examples of mosquito larvae boils (habitat example).
    v. The banks could have faux oyster beds and crab holes (habitat example).
    vi. Faux or stuffed examples of some native wildlife will be in this are to include an alligator, wading birds, mammals like racoons or possums and turtles and frogs (demonstrate other species that mosquitos feed on).

4. **Habitats (Interactive Display):** Two pedestals one for mosquito food source, one for mosquito habitat /breeding sites.
    a. Food source:
        i. Top of pedestal will have pictures with all the mosquito species represented in the display area.
        ii. The pictures will have buttons will below them (or on them).
        iii. When the button is pushed for a specific mosquito the food sources will light up with a spotlight (if the chosen species food includes humans a light over the pedestal will light up).
    b. Habitat/breeding sites:
        i. Top of pedestal will have pictures with all the mosquito species represented in the display area.
        ii. The pictures will have buttons will below them (or on them).
        iii. When the button is pushed for a specific mosquito the habitat/breeding site will light up with a spotlight.
    c. There will also be informational signs for guests that do not use the interactive display explaining the house, swamp and saltmarsh displays.
5. Habitats (General): Section sign.
    a. Sign would hang from the ceiling in the center of the display area.
    b. Sign would be a similar size as the other section's signs (except classroom/Theater & Kids Area) and be able to be seen from lobby.
    c. Sign would be modern and fit into the overall theme of the Education Center.
    d. Sign would be spotlighted.

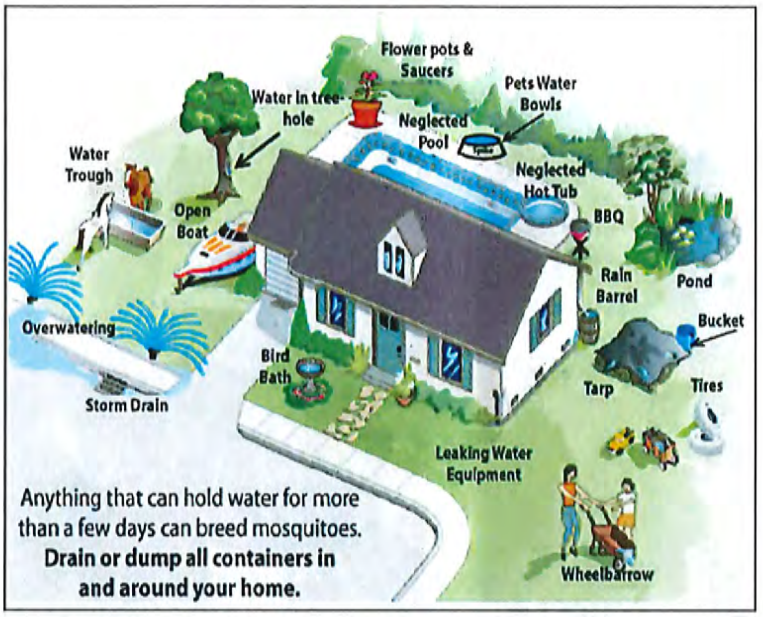
Lobby & Habitats – Photo Example

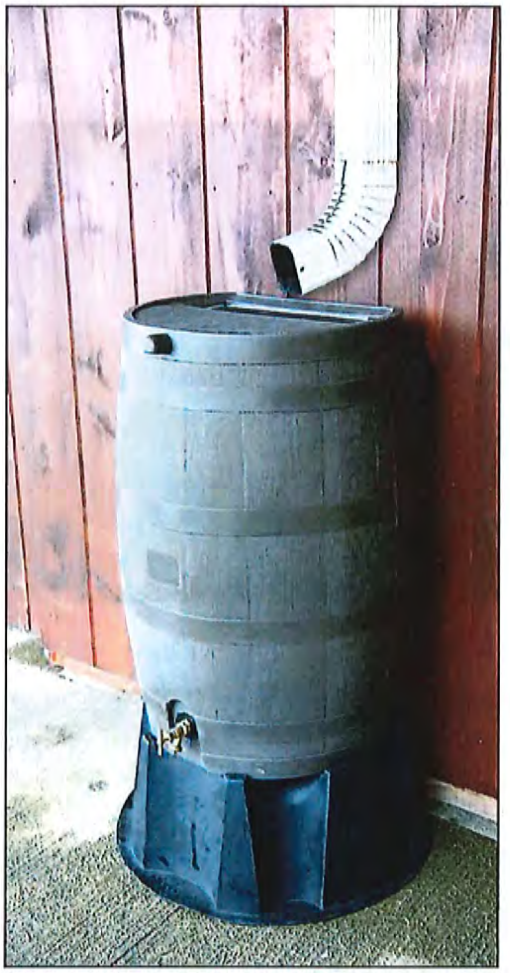
Lobby

House & Yard

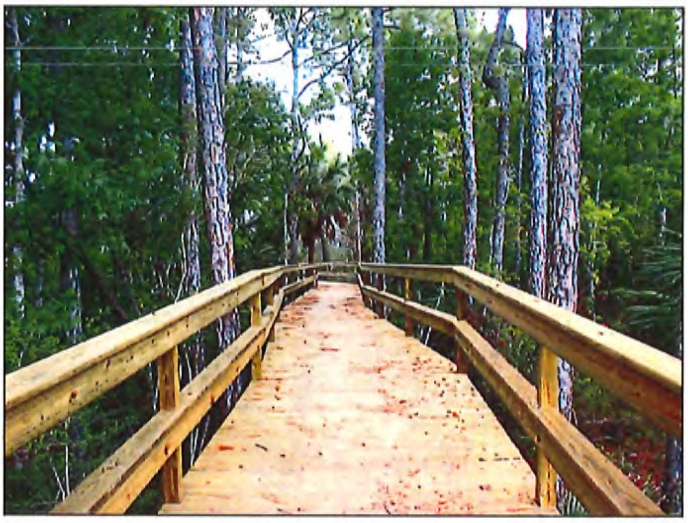


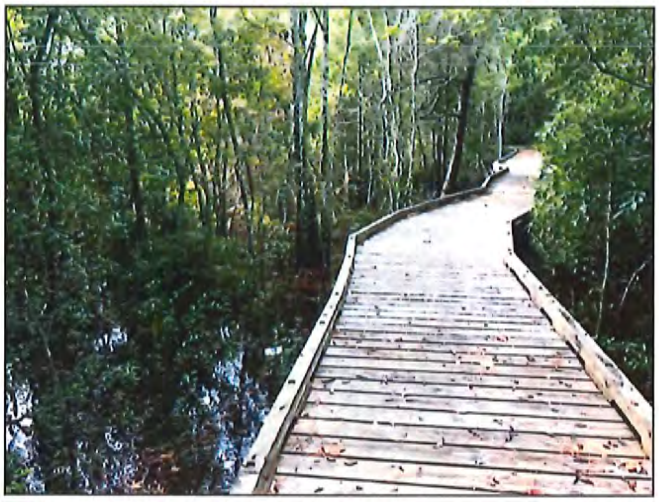
House & Yard


Flower pots & Saucers
Water in tree-hole
Pets Water Bowls
Neglected Pool
Water Trough
Neglected Hot Tub
Open Boat
BBQ
Rain Barrel
Pond
Overwatering
Bucket
Bird Bath
Tarp
Tires
Storm Drain
Leaking Water Equipment
Anything that can hold water for more than a few days can breed mosquitoes.
Drain or dump all containers in and around your home.
Wheelbarrow

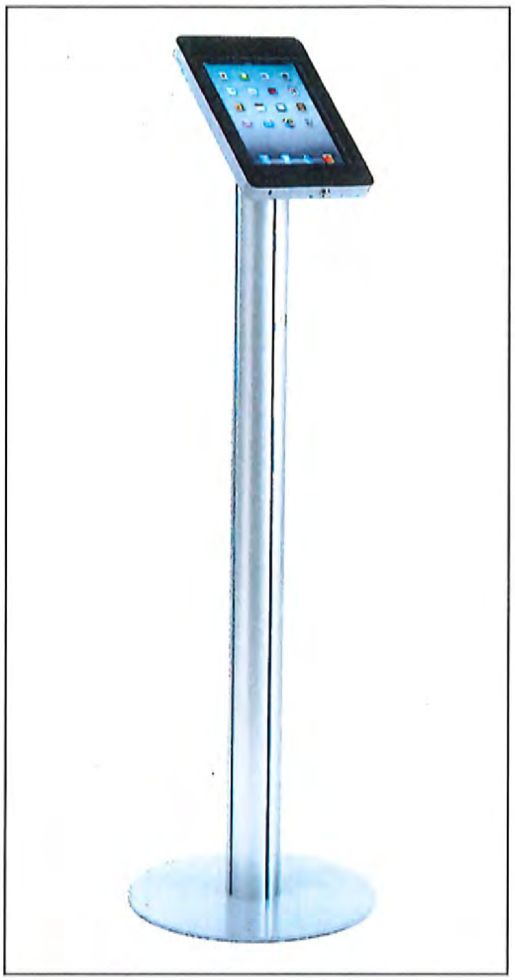


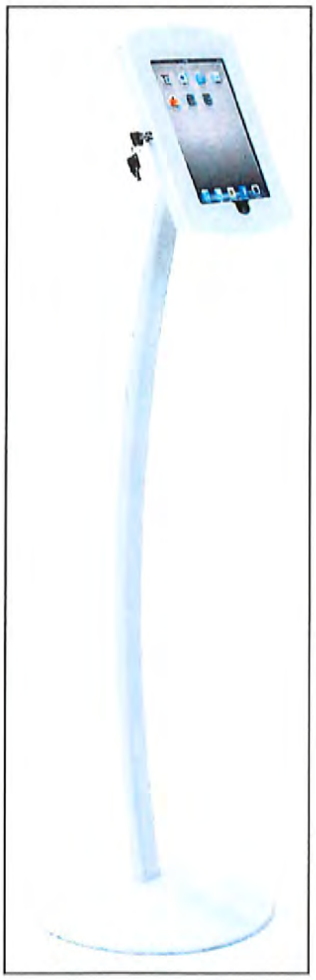
Swamp & Salt Marsh





Interactive Display



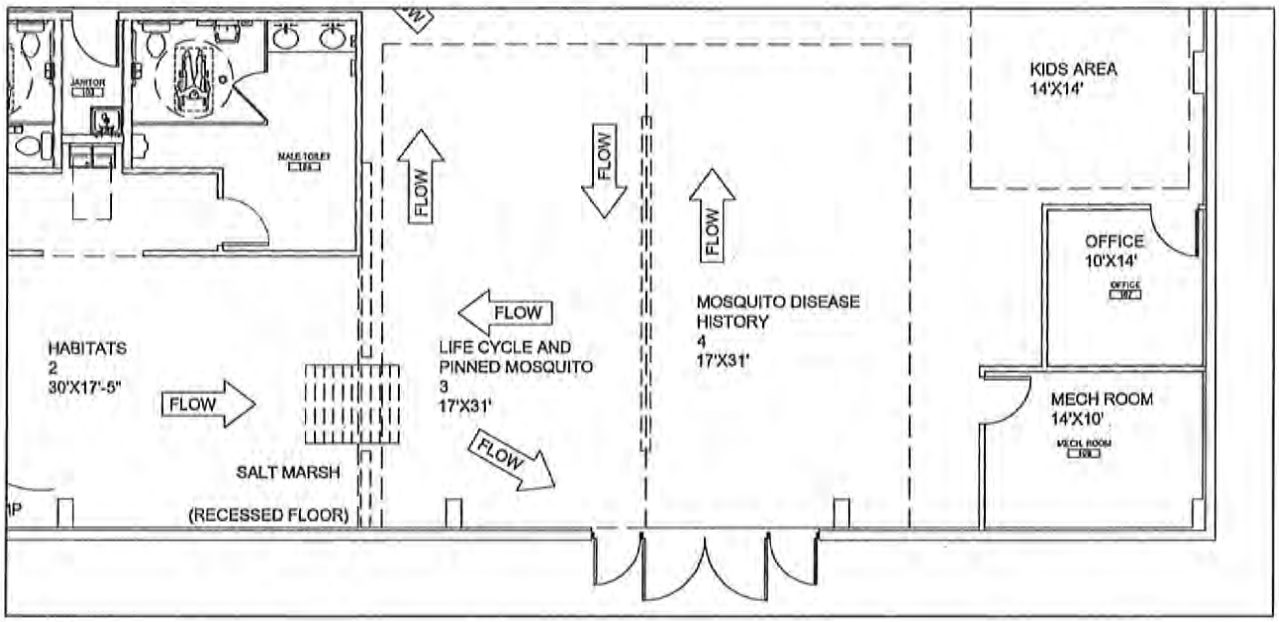


Life Cycle & Pinned Mosquitos

EDU Center Design Detail Life Cycle and Pinned Mosquito

Description:

As you enter the display area proper from the habitat display via the boardwalk you will enter the EDU Center proper. The rest of the EDU Center's display areas will be in one open space with high ceilings. The Life Cycle & Pinned Mosquito display area that is 31 feet wide by 17 feet deep (527 sq. ft.) defined by a partial wall south of the entrance. This area will have display cases with pinned mosquito species, electronic digital microscope(s) that will display mosquito(s) on a large screen(s), back lite display(s) explaining the life cycle of a mosquito and maybe comparing mosquito life cycle to other animals' life cycles.



Detail: This will be an open area and have a partial wall dividing this display area from the Mosquito Disease History area directly ahead of the entrance from the Habitat area (south).

1. Section sign.
    a. Sign would hang from the ceiling in the center of the display area.
    b. Sign would be a similar size as the other section's signs (except Classroom/Theater & Kids Area) and be able to be seen from other display areas.
    c. Sign would be modern and fit into the overall theme of the Education Center.
    d. Sign would be spotlighted.
2. Pedestal display boxes with pined mosquitos.
    a. Displays could be segregated by genus, food source, disease vector or something else.
    b. There would be at least 6 of these displays.
    c. Displays would have plexiglass covers.
    d. Displays could be square with square plexiglass or round with domed plexiglass.
    e. Displays would be lighted by spot lights and might need internal lights.
3. Large wall mounted display of the life cycle of a common mosquito species.

a. Display could be a large wall mounted display using models of the mosquito life stages jutting from wall with bas-relief descriptive wording.
b. Display could be digital using video to show the life cycle on a large video screen.
c. Display could be a large backlight panel.
d. The display would be mounted on the partial wall, centered on wall and visible when entering the display area as a center piece.
e. Lighting would depend on display type.
f. Need for power and data would depend on display type.

4. Along the north wall would be series of wall/counter displays showing closeups of pined mosquitos.
    a. 4 displays.
    b. Video microscope displaying a pinned or slide mounted mosquito on a large video screen.
    c. Power to wall for video screens and power to display counter for microscopes.
    d. Data cable to connect screens to microscopes.
5. Some large close up photos of mosquitos that were taken with a micron microscope.
    a. These photos would be large 5' X 4'.
    b. Be used to fill in spaces in the display area.
    c. 4 to 6 photo displays depending on final layout, mounted on all 3 walls.
    d. Photos would be light with spotlights.
6. Display pedestals with models of deferent types of mosquito eggs next to the actual mosquito eggs to show the difference in egg types and show how small the actual eggs are.
    a. Could be a wall display, counter display or partial interactive display models that stan alone.
    b. Lighting would depend on display type.
    c. Display case or counter would depend on display type.
7. Some type of enclosed display that shows actual larvae and adult mosquitos. This could be a small plexiglass insectary; this would also allow guest to view how entomologists raise mosquitos and other insects.
    a. Small room or display could be along the west wall covering the building column.
    b. Walls facing the display area would be plexiglass.
    c. If this room is a working insectary there would need to be a HVAC split unit, a humidifier and water and RO water.
    d. Along the plexiglass wall could be a shelf or table that would have pans of larvae and cages of adults (pans & cages would be plexiglass).
8. Model or display showing the differences between male and female mosquitos.
    a. Could be a standalone 2-sided kiosk in the middle of the floor, one side is female and one side is male.
    b. Display could be digital or static.
    c. If display is digital display would need power in the floor.
    d. Top of kiosk would have a sign telling visitor to view both sides for both sexes.
9. Photos, backlighted screens or video screens on wall space or floor space as standalone displays showing female mosquito laying eggs, mosquito emerging from pupa and/or any other photo of life cycle transformation.

a. Digital or backlighted displays would need power and possibly data.
b. Photos would need Spotlights.

10. On the west side of the display area and more so on the west side of the Mosquito Disease History section would be glass doors that exit to the garden display and let light into the interior.

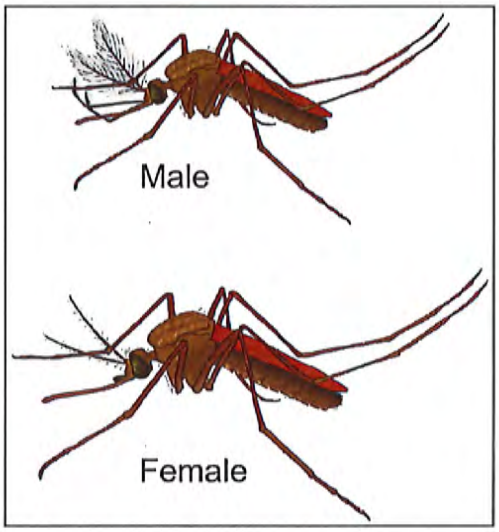
Life Cycle and Pinned Mosquitos – Photo Examples

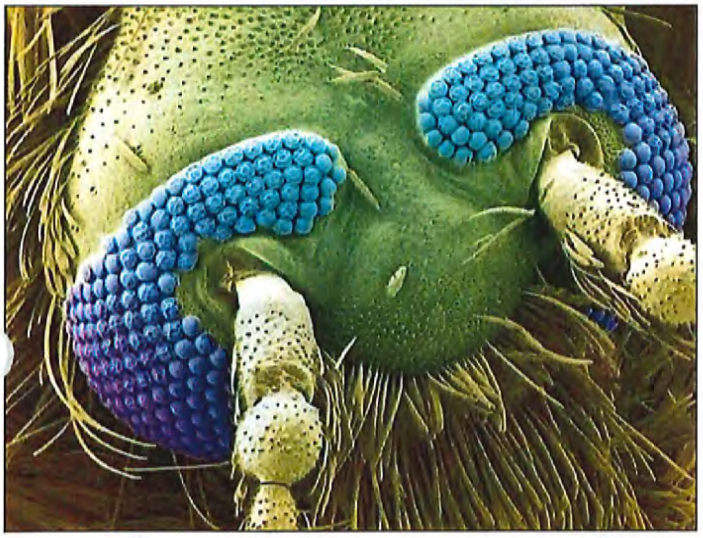
Pinned Mosquito Displays

Life Cycle Example Display

Video microscope displaying pinned mosquitos

Kiosk displaying difference between male and female mosquitos





Examples of Pictures of Mosquitos taken with a Micron Microscope

Plexi glass insectary

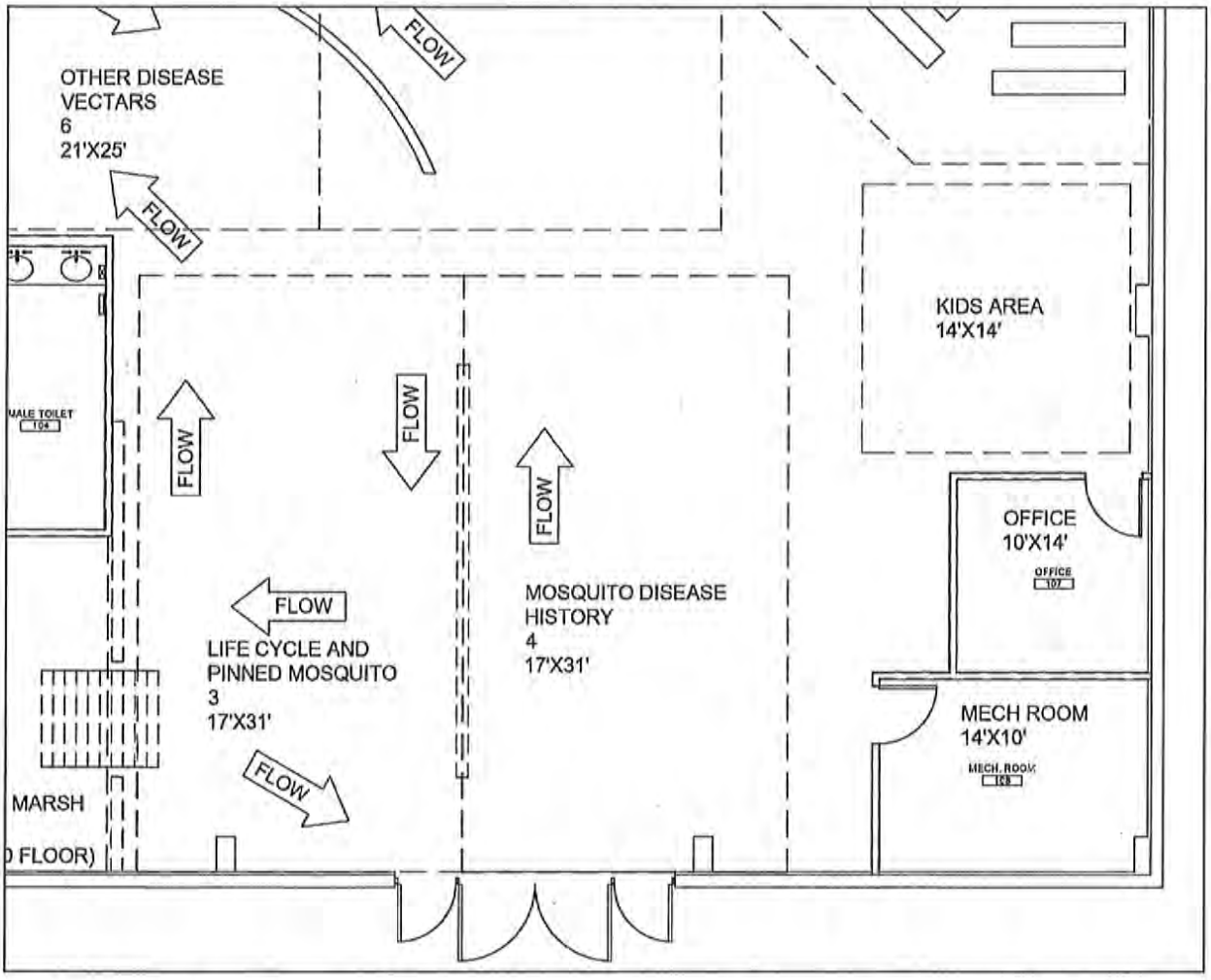
Back lighted displays

Mosquito Disease History

EDU Center Design Detail Mosquito Disease History

Description:

On the other side (south) of the partial wall in the SW corner of the building is the Mosquito Disease History section and is the next display area. This area will also be 31 feet wide by 17 feet deep (527 sq. ft.), with a glass door in the west wall and an entrance door to the mechanical room on the south wall. The glass door is a doorway to the garden area and is part of the tour as an outside component and allows natural light to enter this portion of the EDU center. This area will feature all the common mosquito borne diseases to include malaria, dengue, WNV, EEE, Chikungunya, yellow fever, Zika, dog heartworm, keystone and Saint Louis encephalitis. Displays will show examples of effects on people and animals (pictures), examples of the virus or organism (pictures or models) and how humans and animals can contract the disease. There will also be a time line from the beginning of human history to present day outlining the effects of vector borne diseases on mankind.



Detail: This will be an open area and have a partial wall (north) dividing this display area from the Life Cycle and Pinned Mosquito area, entry can be made to this area from either side of this wall. Glass doors on the west wall, south wall will be odd shaped as this wall houses the mechanical room and the office,

also on the west wall is the kids display area. The east opens up to the classroom/movie area and the Mosquito Control Technology & Tools section.

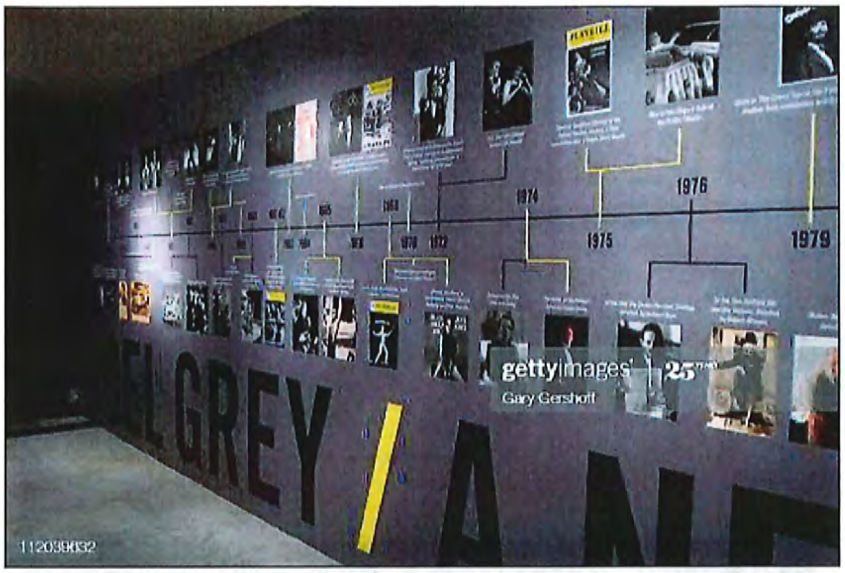
1. Section sign.
    a. Sign would hang from the ceiling in the center of the display area.
    b. Sign would be a similar size as the other section's signs (except Classroom/Theater & Kids Area) and be able to be seen from other display areas.
    c. Sign would be modern and fit into the overall theme of the Education Center.
    d. Sign would be spotlighted.
2. Mosquito disease history time line running the length of the north partial wall from left to right, ancient to modern history.
    a. On the wall you would see the line and for each major impact there would be a short-written history with pictures and graphics.
    b. As you face the wall there would be a podium, with buttons that allowed the guest to light up different periods in history. Different buttons for either periods of time (ages) or specific disease events.
    c. The line it's self would light up and the text and graphics would light up when triggered at the podium.
    d. Below the world history could be a Florida history line set up to function in the same manner as the world history time line.
    e. The whole wall would be a display and each significant event would use various forms of display media to include photos, graphs, text, video, bas relief, etc.
    f. Wall and podium would need power and data.
3. In the SW corner could be a display of what causes mosquito borne disease's: bacteria, viruses and parasites.
    a. On the walls south and west could be a overhead sign that says "Mosquito-borne Diseases and Illnesses are Caused by Bacteria, Viruses & Parasites".
    b. On the wall would be pictures of the three causes, spotlighted.
    c. On pedestal displays could be one model of each example of illness using the most common type. These three displays would form a semi-circle in front of the walls.
    d. Most of this display would use spot lighting.
4. Located in a grid around the display area would be 7 standalone 2-sided kiosk's that would display the most commonly known diseases in Florida and the USA.
    a. The 7 standalone 2-sided kiosks would be in the middle of the floor in a grid pattern using most of the space.
    b. One side of the kiosk would have a picture of the bacteria, virus or parasite and the other side would have pictures of the effects on humans and/or animals. Both sides would have descriptive text with the picture.
    c. The 7 examples could be Malaria, Dengue, West Nile Virus, Yellow Fever, Eastern Equine Encephalitis, Zika and Keystone Virus. Dog Heart Worm could replace one of the less known like Keystone Virus or Dengue.
    d. Display could be digital or static, recommend digital.
    e. If display is digital display would need power in the floor.
    f. Top of kiosk would have a sign telling visitor what vector is displayed.
5. List of all the know mosquito-based diseases and their location of origin.

a. Located on the south wall adjacent to the office and the floor in front of the office wall would be a display showing all the know mosquito-based diseases using a projector on a fixed screen on the wall.
b. On the floor would be a painted or applied map of the world.
c. The projected list would not be static and every few seconds (15, 20) a different disease would become bold and highlighted at the same time a spotlight would light a country of origin on the floor map.
d. As an alternate the map could also be projected on the wall and each time a disease was highlighted the map could show the country of origin and then a heat map of the spread.
e. This display would most likely use a computer-based program and would need power, data and lighting as well as a projector.

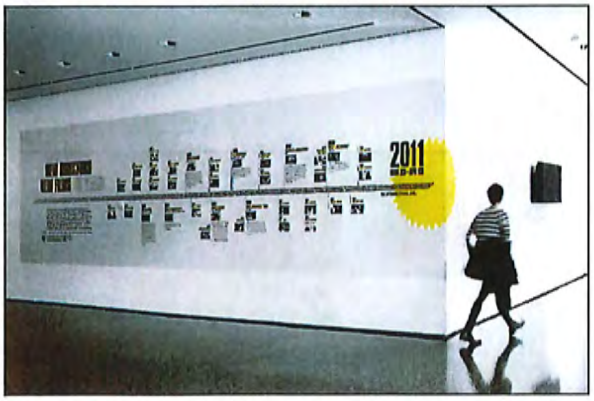
Chart of common mosquito borne diseases:

Vector		**Disease caused**	**Type of pathogen**
Mosquito	*Aedes*	Chikungunya	Virus
		Dengue	Virus
		Lymphatic filariasis	Parasite
		Rift Valley fever	Virus
		Yellow Fever	Virus
		Zika	Virus
	Anopheles	Lymphatic filariasis	Parasite
		Malaria	Parasite
	Culex	Japanese encephalitis	Virus
		Lymphatic filariasis	Parasite
		West Nile fever	Virus

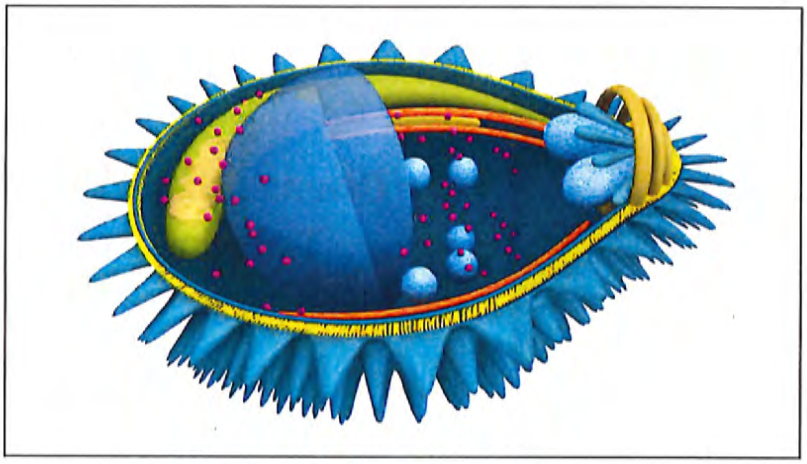
Mosquito Disease History – Photo Examples

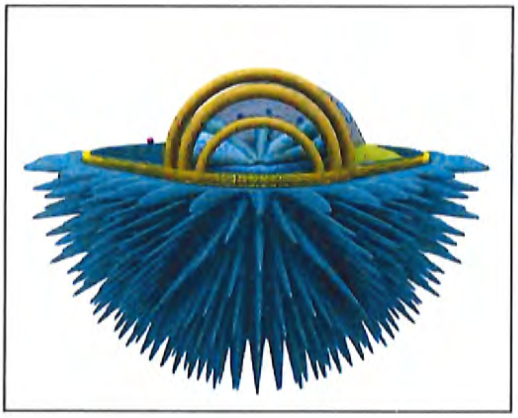


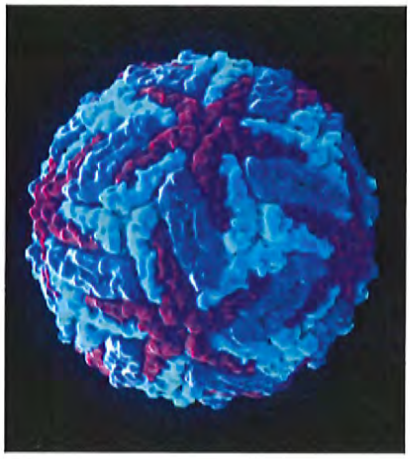
Disease History Timeline



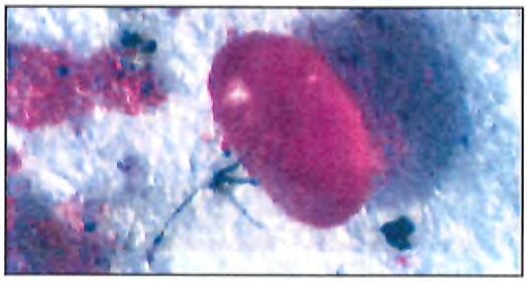
Causes of mosquito borne diseases





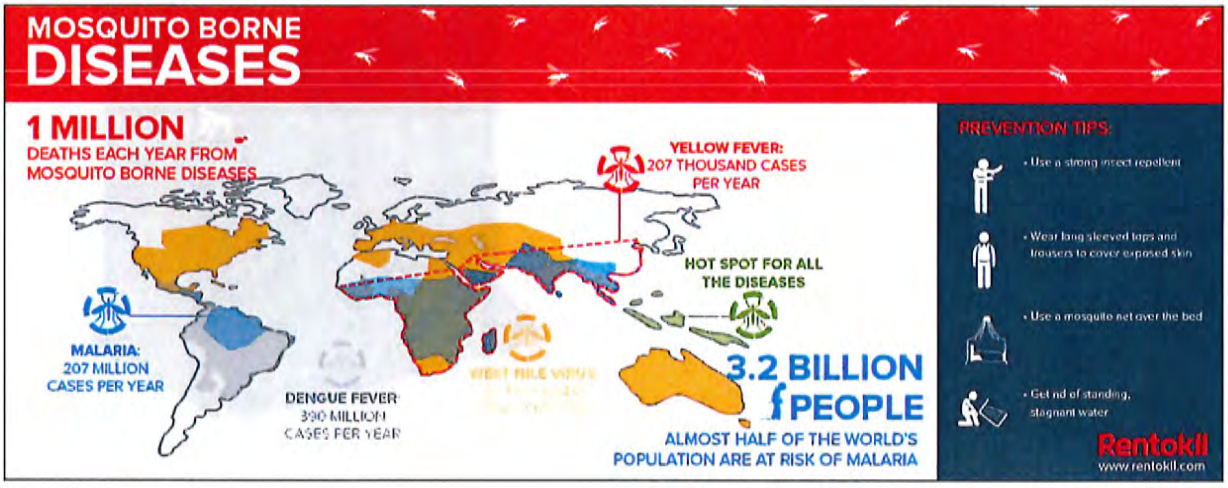


Bacteria, viruses
& parasites



Two sided kiosks for common mosquito borne diseases

Mosquito diseases and their locations on a map

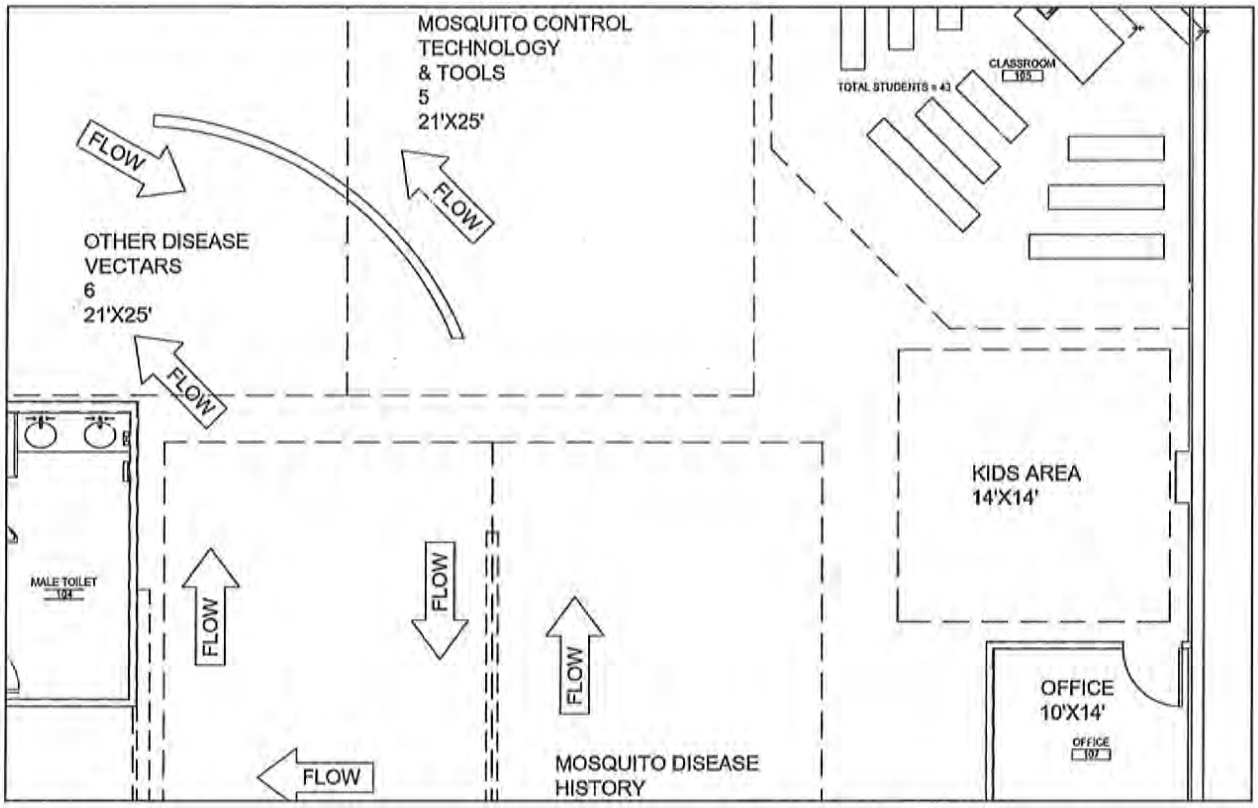


Kids Area

EDU Center Design Detail Kids Area

Description:

The Kids Area will have interactive displays with displays designed for the younger children. The area will be located on the back wall (south) adjacent to the Classroom/Movie Theater area and the office. The doorway to the office will be in the Kids Area and may have a window to allow observation of the Kids Area by AMCDEC employees. There will be some type of rail or fence separating the Kids Area from the rest of the display areas. Parents can sit and watch from the Classroom/Movie Theater benches or benches provided outside the Kids Area.



Detail: This area will be carpeted and set between the office area and the Classroom/Movie Theater area. The area will be separated by some sort of barrier with entrance from the Mosquito Disease History area. A bench for parents will be provided by entrance and additional seating will be the top row of bench seating for the Classroom/Movie Theater.

The display ideas for this section are not fully developed.

1. Section sign.
    a. Big sign hanging from the ceiling or on the edge of a drop-down ceiling at the entrance to the area.
    b. Sign would be kid friendly and have a fun font and sign style.
    c. Sign might have lighting or would be spotlighted.
2. Storm drain toss, demonstrates treatment of storm drains.
    a. Game located on the east side of the Kids Area.

b. Have a toss area through a vehicle (truck) door window to a raised faux storm drain.
c. Small bean bags that look like WSP's would be tossed.
d. Bean bags that make it into the "storm drain" would slide out on a curved metal shoot or slide to the front of the drain for retrieval.
e. A light could light up when a WSP makes it into the drain.
f. At the front of the game would be a sign explaining the use of WSP's.
g. AMCD could ask that the display be donated in exchange for acknowledgment of the manufacturer of WSP's (advertisement).

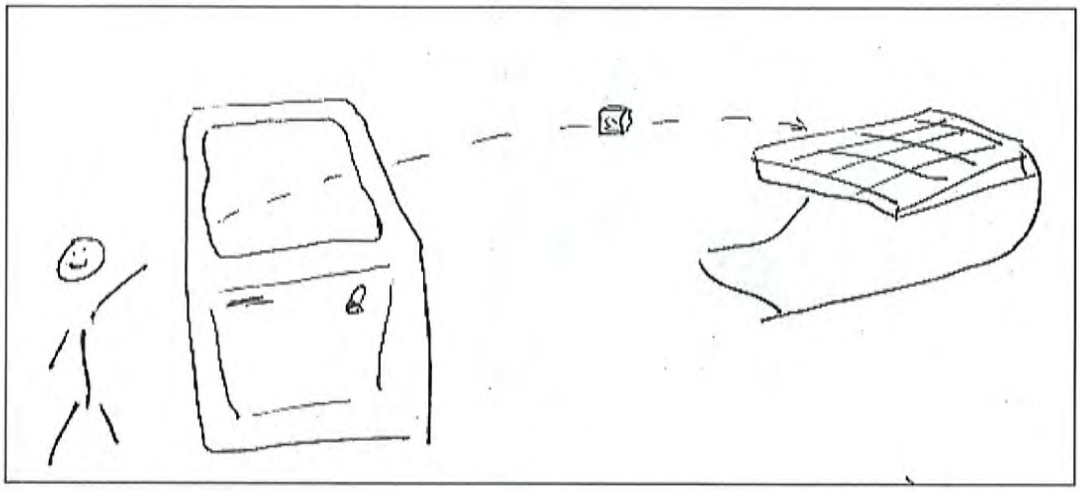
3. Spin wheel for life cycle and/or spin wheel for animal family.
    a. Displays could be stand alone in the center/front area of the play area, if two spinners are used, they could be back to back.
    b. Life cycle would have 4 stages of mosquito and when the wheel lands on one of the four the spinner (visitor) could push a button with the word egg, larvae, pupa, adult and get a red light if wrong and a green light if correct.
    c. Animal family could have many examples of different critters and when the wheel lands on one of the critters the spinner (visitor) could push a button with the name of the critter by family and get a red light if wrong and a green light if correct.
    d. Display would have instruction on it and explanations of the life cycle and differences is animals.
    e. Displays would need power.
    f. Displays would be spot lighted.
4. Coloring area.
    a. Children's table with children's seating for 4 to 6 kids.
    b. Crayons and coloring pages with mosquitos, butterfly's and other insects would be available for the children.
    c. Placement of the table and chairs could be center of the south wall (quitter in the back).
    d. Table would need to be lighted from above.
5. Insect live animal display.
    a. A series of live animal displays with different bugs and spiders.
    b. 4 to 6 tanks in a display wall on the south wall.
    c. Display would have text explaining each insect and their role in nature.
    d. Tanks would be self-lighted.
    e. Display would need power.
6. Photo opportunity display.
    a. Stand alone display, at front of kid's area.
    b. Could be a mosquito or other insect (prefer mosquito).
    c. Childs face would replace the mosquitos head.
    d. Steps behind the display would allow for different sized kids to be able to use the display.
    e. Sign at front could have detail about the species displayed.
    f. Display front would need to be spot lighted.
7. Microscope table.
    a. Location could be extension of the south wall to the office, part of the barrier to the Kids Area.

b. Back side of the bench table (seen from the Mosquito Disease History section) would have display components on it.
    i. Display components could be cartoon mosquitos with arrow to Kids Area entrance and the section name "Kids Area".
c. Have a bench type table with 4 to 6 microscopes (that are attached to the table).
d. Children would stand and look into the microscopes.
e. Each microscope could have changeable slides with different insects and stages of insect development.
f. Each microscope could have a different insect type.
g. Behind the microscope would be an informational display with instructions, text on what their looking at and some pictures of what they are seeing.
    i. Informational display could be digital, back lighted or poster style display.
h. Display would need power for microscopes and informational display.
i. Table would need to be well lighted.

8. Center of Kids Area could be a climbing/touching/photo area.
    a. Could be big, plastic larvae, eggs and/or pupa models that can be climbed on.
    b. Could be some big tires or a bucket (tie the water-based mosquitos to the container).
    c. Area where kids can touch and feel different tactile examples on the models.
    d. Area would be spotlighted.

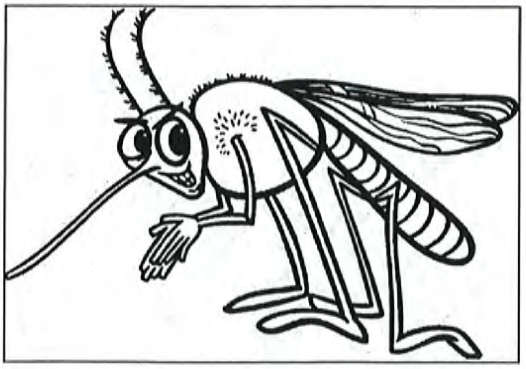
Kids Area – Photo Examples

Storm Drain Toss



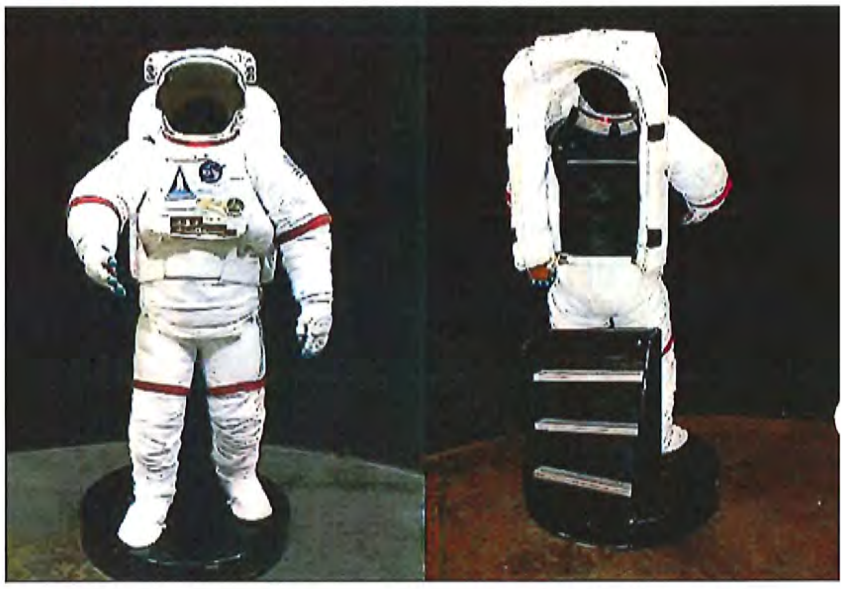
Spin Wheel

Coloring Area

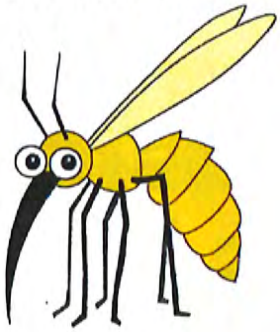


Insect Animal Display

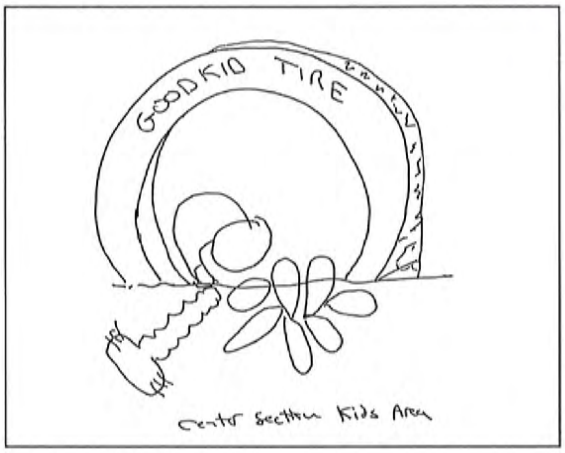
Photo Opportunity
(mosquito not spacesuit)



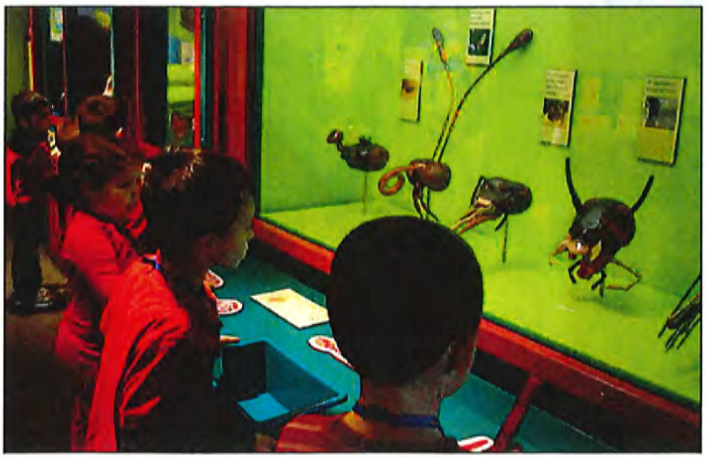
Cartoon Bug
Created for AMCD



Center Climbing Area

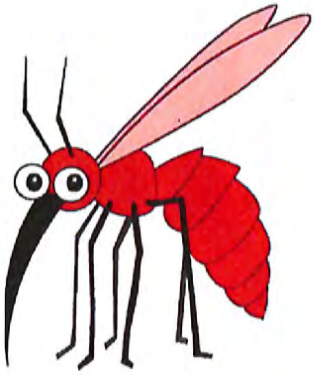


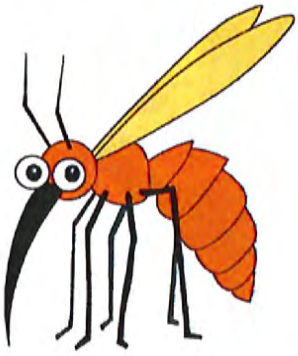
Microscope Table



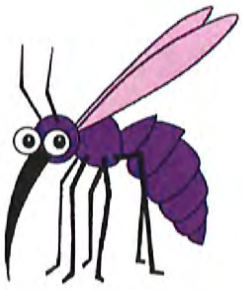
Other (not in detail) models of bug heads

Room/Area Examples





Cartoon Bug
Created for AMCD

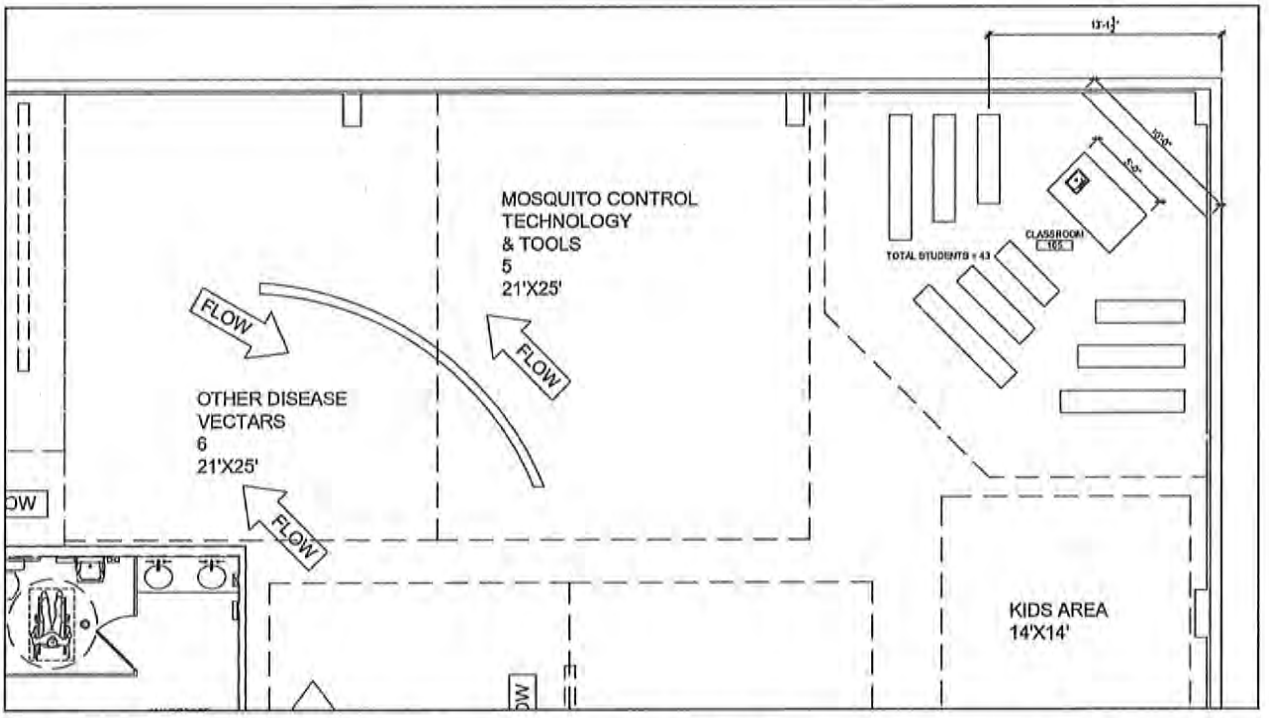


Classroom/Movie Theater

EDU Center Design Detail Classroom/Movie Theater

Description:

This section will be located in the SE corner of the building and will be an open amphitheater type setting. The area will be about 21 feet by 21 feet (441 sq. ft.) and have bench seating for between 30 and 40 people. At the front (SE corner) of the Classroom/Movie Theater will be a large retractable screen to show movies, video's and PowerPoint presentations. The front of the Classroom/Movie Theater will also have a demonstration lab table with a sink, this lab table can be used for teaching lab experiments and also as a speaking podium or area. Wall areas will have solid faced and glass faced cabinets that will contain lab supplies and displays. The floor may or may not be slightly recessed for better viewing, this will be determined by the design engineers. There will be a drop celling over the Classroom/Movie Theater area defining the space in the building and containing speakers, lighting, projector and other needed utilities. There will be a PA system for the teacher/speaker using a portable lapel microphone, the A/V equipment will be located on the back wall in one of the cabinets. When no classes are being taught informational videos will be played on a loop and visitors will be able to sit and view the videos.



Detail: Open area to the rest of the EDU Center displays with the Kids Area, Mosquito Control Technology & Tools and the Mosquito Disease History sections surrounding the Classroom/Movie Theater.

1. Section sign.
    a. Sign would be on the edge of a drop-down ceiling at the entrance to the area.
    b. Sign would look like a marquee.
    c. Sign could use digital screens for the letter section of the sign.
        i. Digital so the wording for the use of the room could be changed easily.

ii. For movie the digital display would say for example: "NOW SHOWING NAME OF MOVIE".
iii. For classroom the digital display would say for example: "CLASS ON BTI STARTS A 9:30 AM".

d. Sign would be big enough to see from other display areas.
e. Sign would need power and might need to be spotlighted.
f. Movies could be mosquito documentaries.

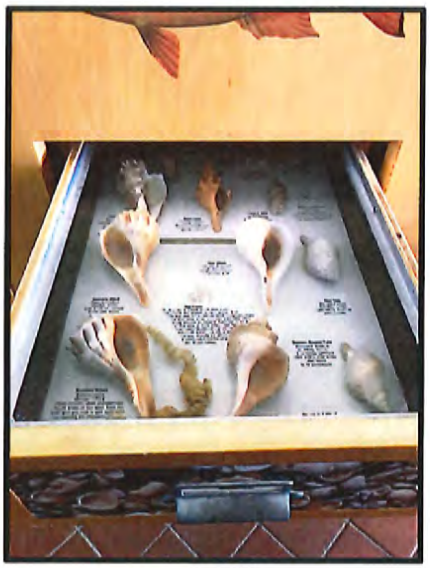
2. Benches will be wood or faux wood with no backs.
   a. Enough seating for 40 to 50 people.
   b. The 3 rows of benches could be on descending levels allowing for better viewing.
   c. Top row of benches would be at standard floor height, middle row of benches would be 7.75 inches lower, first row of benches would be another 7.75 inches lower and the classroom floor would be another 7.75 inches lower making the classroom floor 23.25 inches lower than the rest of the EDU Centers floor, giving the Classroom/Movie Theater a amphitheater effect and allowing for better viewing for visitors.
   d. Behind the back row of benches would be wheelchair parking/seating.
3. Teaching area would be on the floor in the SE corner, with a 90-degree viewing area.
   a. The main focus would be a lab table about 5 feet wide with a sink.
      i. An option to make the lab table mobile or moveable is available.
      ii. Table would need water, sewer and power.
      iii. Data cable to A/V system for alternate use of laptop for presentations.
   b. On the east and south wall from the corner to the first bench level would be cabinets.
      i. Cabinets would be tall and have both glass door faces and solid door faces, some units would have pull out drawers.
      ii. Cabinets would have displays for viewing (glass door faces), Supplies for teaching classes (solid door faces) and pull out drawers with displays items.
      iii. Cabinets would also contain audio visual equipment and lighting switches (solid door faces).
4. A movie screen that retracts into the ceiling as large as the space will allow.
5. A/V equipment would include:
   a. A retractable HD projector.
   b. A retractable screen.
   c. Speakers for audience, overhead, sides and behind screen.
   d. Microphone for teacher/speaker.
   e. Computer for PowerPoint presentations.
   f. Amplifier and other equipment.
   g. Switches for A/V equipment and lighting.
6. Lighting would include:
   a. low light for movies.
   b. Spotlights on the lab table and teacher/speaker.
   c. Lighting for the audience during teaching situations.
7. East and south walls would have poster size closeup pictures (4 to 6) of mosquitos and other insects, and may also have sound absorbing material.

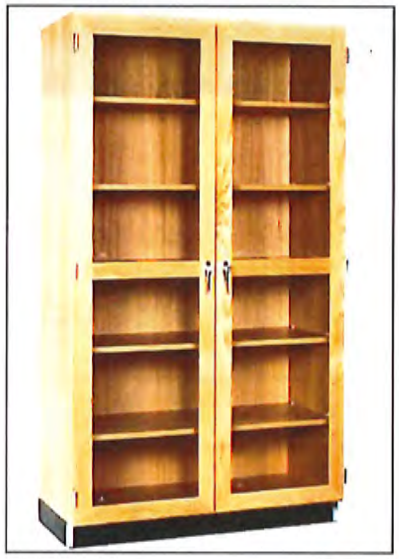
Classroom/Movie Theater – Photo Examples

Benches

Instructors Lab Table

Classroom Cabinets





Theater Screen &
Stacked Seating

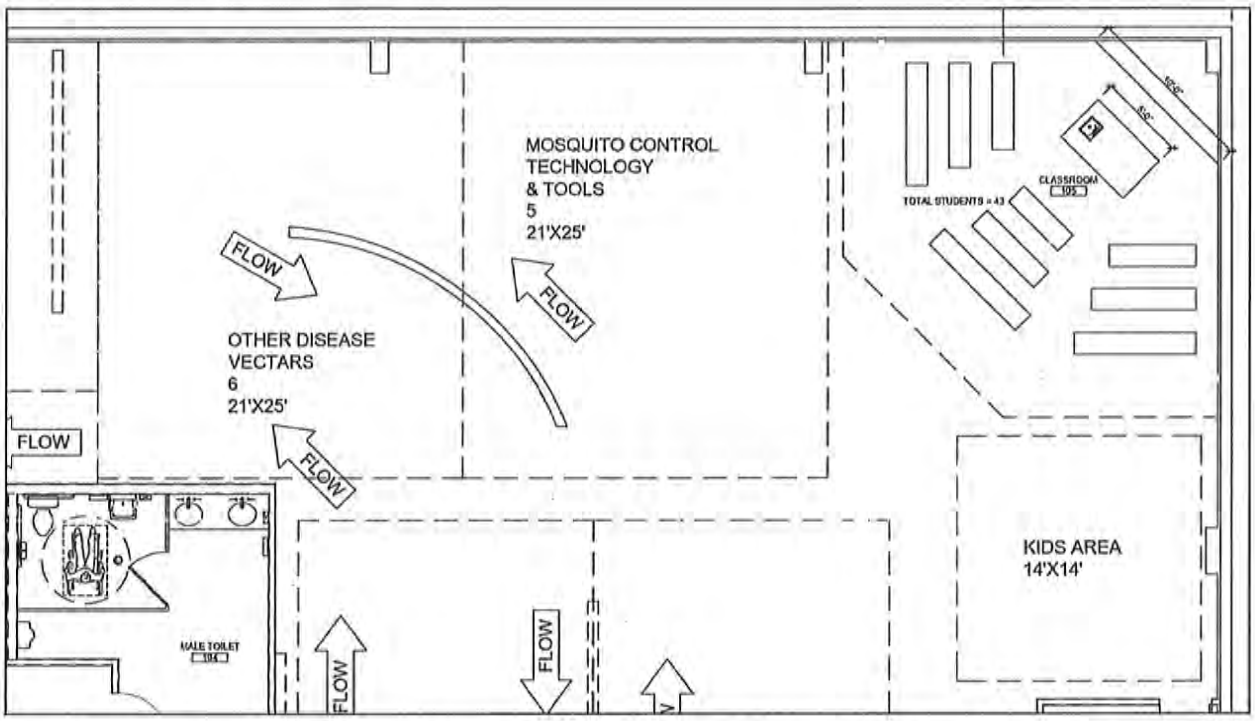
Display Section Sign
Marquee Examples

Mosquito Control Technology & Tools

EDU Center Design Detail Mosquito Control Technology & Tools

Description:

This section will be the area that borders the Classroom/Movie Theater, the section will be about 21 feet by 25 feet (525 sq. ft.) with a curved or angled divider wall breaking up the displays in the SE portion of the building. This area will have some tools displayed both old and new to include sprayers, electronics and machines. This area will also contain the militaries contribution to mosquito control and entomology and display some of the tools developed by and used by the military. A display of marsh management and more recently mitigation of past marsh management will be included. Displays will be a combination of static displays, A/V displays and informational displays with photos and print both analog and digital. There should also be examples of, or models of, aircraft (fixed wing and rotor wing) hanging from the ceiling. Modern drones used in mosquito control could be on display pedestals or hanging from the ceiling.



Detail: This will be an open area and have a partial curved wall (north side of area) dividing this display area from the Other Disease Vectors area, entry can be made to this area from either side of this wall. South of the display area is the classroom/movie area.

1. Section sign.
    a. Sign would hang from the ceiling in the center of the display area.
    b. Sign would be a similar size as the other section's signs (except Classroom/Theater & Kids Area) and be able to be seen from other display areas.
    c. Sign would be modern and fit into the overall theme of the Education Center.
    d. Sign would be spotlighted.
    e. Sign location would not interfere with other hanging displays.
2. Hanging model aircraft and/or drones.

a. There is room for two or three aircraft to be hung from the ceiling, in a banked attitude so you could see the bottom, side and top of the aircraft depending on where you are standing.
b. Aircraft could be Beechcraft King Air (used by AMCD contractors and Lee County), Air Tractor (used by many MCD), Bell 206 (AMCD's aircraft), a large drone that is used for mosquito control. Aircraft would have the spray or granular delivery systems on the aircraft models.
c. Models would be spotlighted.
d. AMCD could ask that the drone display be donated in exchange for acknowledgment of the manufacturer (advertisement).

3. Large pedestal displays display different types of equipment used for mosquito control. These displays would be stand alone and be located throughout the sections floorspace.
    a. Use the antique thermal fogger AMCD has and display it with a small modern thermal fogger from LongRay.
        i. This display could be two tiered with the old fogger on one level and the new fogger on a second level on the pedestal.
        ii. Display would be spotlighted.
        iii. AMCD could ask that the LongRay thermal fogger be donated in exchange for acknowledgment of the manufacturer (advertisement).
    b. Display a modern truck spray unit.
        i. This display could be on a pedestal in front of a wall (east) and have pictures of old spray trucks and how much pesticide they put out (should have a picture of kids chasing old spray truck).
        ii. In the center of the photo display could be a video screen showing a modern spray truck in action from start up, GPS tracking, spraying and cleanup.
        iii. Display would need spot lighting, power, computer or DVD player and data.
    c. A series of pedestals could display various types of drones used in mosquito control.
        i. This could be three round pedestals each having a different type of drone depending on the drone's function.
        ii. Pedestals would be at three different heights.
        iii. The pedestal circumferences would be different depending drone size, three heights and sizes for effect.
        iv. Pedestals could have static, back lighted or video screens in the base of each pedestal showing the function and application for each drone displayed.
        v. As an option to the above bullet point a fourth larger pedestal or kiosk could be in the center of the display showing the function and application of the drones displayed.
        vi. Display area would need spot lighting and might need power and/or data.
        vii. The big drone hanging from the celling could be above this pedestal display.
        viii. AMCD could ask that the drone display be donated in exchange for acknowledgment of the manufacturer (advertisement).
4. A GPS/GIS display showing how mosquito control uses modern technology to track the application of chemicals, the location of service calls, the location of illness (sentinel chickens, DOH reported illness), location of water, location of traps, etc.

a. This display would be multimedia using photos, video, text and objects to show the application of GPS tracking for mosquito control.
b. Display would be at the west end of the curved wall
c. Display could also contrast the advances by showing some old technology like the old paper-based tracking system.
d. Highlight the use of GPS/GIS in aerial application.
e. Display would need spot lights, power and possibly data.

5. Marsh management and mitigation of old-style marsh management (may belong in mosquito control history)
    a. Photo and text display.
    b. Display would be on the east end of the curved wall.
    c. Display would need spot lights.
6. Traps and toxic sugar baits.
    a. Floor display using stands, pedestals and long cords suspending some traps from the celling displaying different types of traps in a group.
    b. A kiosk with video explaining the types of traps used and their purpose. One side of this kiosk could nave the screen and the other side could have traps displayed on the kiosk or hanging from the kiosk.
    c. Display would need spot lights, floor power, data and maybe a computer or DVD.
7. Bed nets display.
    a. This could be a photo display in the center of the curved wall.
    b. Photos would emphasize this is an important tool used in third world nations.
    c. Feature pictures form third world nations.
    d. There could also be an example of a bed net displayed on the wall or in front of the wall, possibly using a small model of a bed with a bed net on a pedestal display.
    e. A video element could be added.
    f. Spotlights, power, data and DVD or computer if video element is added.
8. The United States Military contribution to mosquito control, entomology and pest control around the world.
    a. This display could be on the east wall and be a bridge between the Mosquito Control Technology & Tools section and the Other Disease Vectors section since the military entomologists work with many disease vectors.
    b. Display would be multimedia using photos, text, digital screens, displays and kiosks.
    c. Mannequin dressed in a pesticide treated uniform.
    d. Tools used by the military.
    e. Dieses treated by the military.
    f. Map of places the military is deployed.
    g. Section on the Navy Entomology Center of Excellence (based in Jacksonville FL).
    h. Ask that the military be involved in the development of this display area.
    i. Display would need spot lights, power (floor & wall), data, DVD or computers.
9. Mosquito predator display, show how mosquito fish and other predators are used in the control of mosquitos.
    a. Display would be stand alone and be near the Classroom/Movie Theater and Kids Areas entrances.

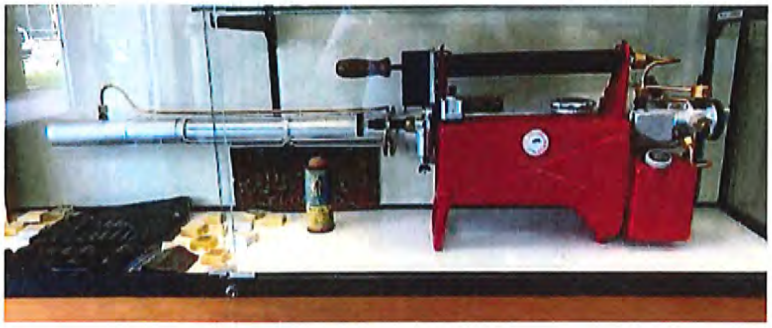
b. Display would have a fish tank with gambusia fish (mosquito fish).
c. Display would have video of fish-eating mosquito larvae as well as other mosquito larvae eating.
d. Poster and text spot lighted or back lighted informational display of other predators.
e. Poster and text spot lighted or back lighted informational display explain how bats are not a great predator but are used in many places.
f. Stand alone display would need power, data and spot lights.

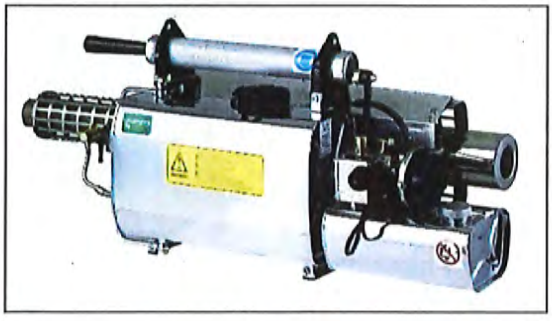
10. Facing the east wall by the classroom, a helicopter flight simulator.
    a. Simulator would hold 2 customers.
    b. Cockpit would be set up like bell 206 including AgNav system. AgNav system could be donated in exchange for acknowledgment of the manufacturer (advertisement).
    c. Simulator would feature a 5-minute flight from the AMCD helipad to a daylight larvicide mission and return for landing.
    d. Wall in front of simulator could be projection screen for simulation.
    e. Display around the simulator could also feature treatment systems that are used on aircraft, booms and pods.
    f. If available the cockpit of an actual OH-58 could be used, donated surplus (not enough room for an entire aircraft).
11. On the east wall between the two columns on the wall have the AMCD Mission Statement painted high on the wall.
    a. Statement: To protect all people from the nuisance of mosquitos and mosquito-borne diseases in St. Johns County, Florida.
    b. Maybe add to mission statement: and contribute to the protection around the world.
    c. Statement would be painted on the wall in bold letters and be high on the wall to be seen from across the building.
    d. Statement would be spot lighted.

Mosquito Control Technology & Tools – Photo Examples

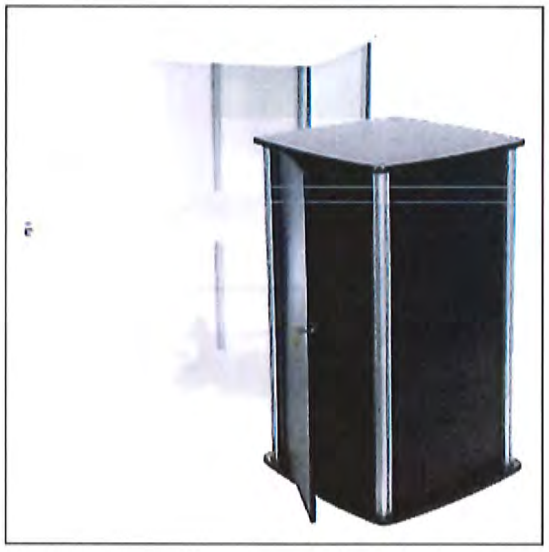
Model Aircraft

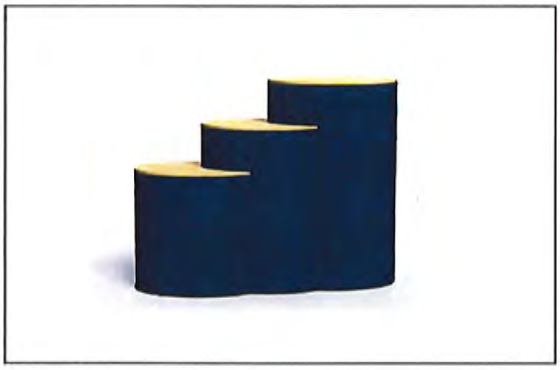
Pedestal Displays



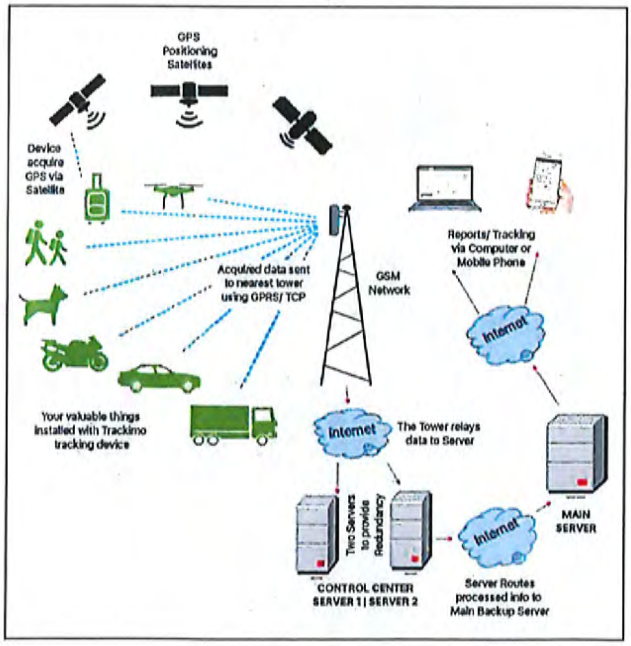


Pedestal Displays Continued





Drones for Hanging & Pedestal Displays



GPS Tracking Display

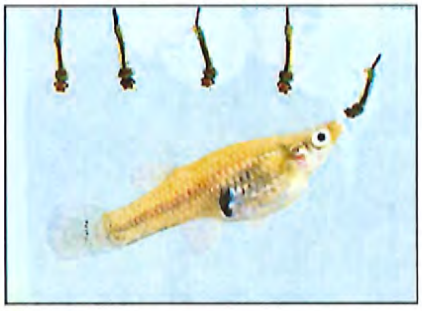
Pedestal Kiosks with Displays

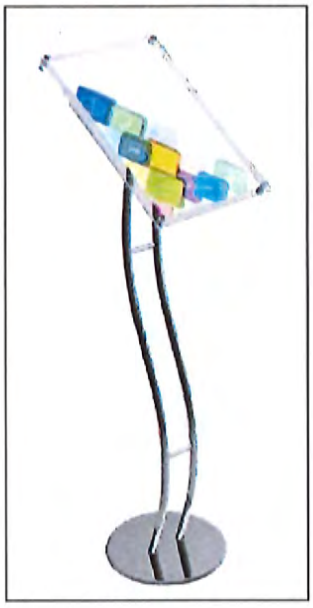
Mosquito Trap Examples

Bed Net Display

Military Display

Mosquito Predator Display





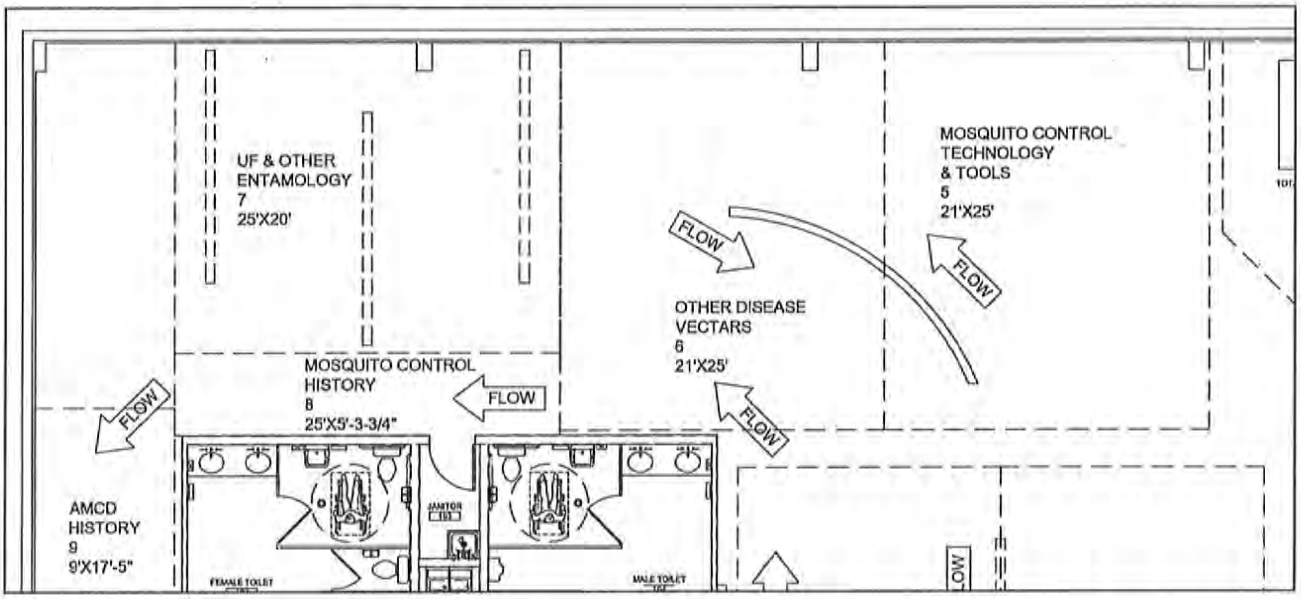
Flight Simulator

Other Disease Vectors

EDU Center Design Detail Other Disease Vectors

Description:

This display section will be on the other side of the divider wall that separates the Mosquito Control Technology & Tools section and is in the transition area from the back (SE) of the building to the front (east) of the building, continuing the circular pattern of the display area flow. The size will be approximately the same as the Mosquito Control Technology & Tools section at about 21 feet by 25 feet (525 sq. ft.). This area will show other vectors and pests like ticks, louse, bedbugs, rats, fly's, fleas etc. and their impact on man and animals to include livestock. The displays will also be static displays, A/V displays and informational displays with photos and print both analog and digital. There will be pinned examples of the insects in display cases and this area could also have electronic digital microscope(s) that will display mosquito(s) on a large screen(s).



Detail: This will be an open area and have a partial curved wall (south side of area) dividing this display area from the Mosquito Control Technology & Tools area, entry can be made to this area from either side of this wall. South of the display area is the Life Cycle & Pinned Mosquito section.

Vectors that may be included:

Vector	Disease caused	Type of pathogen
Aquatic snails	Schistosomiasis (bilharziasis)	Parasite
Blackflies	Onchoceriasis (river blindness)	Parasite
Fleas	Plague (transmitted from rats to humans) Tungiasis	Bacteria Ecto parasite
Lice	Typhus Louse-borne relapsing fever	Bacteria Bacteria
Sandflies	Leishmaniasis	Bacteria

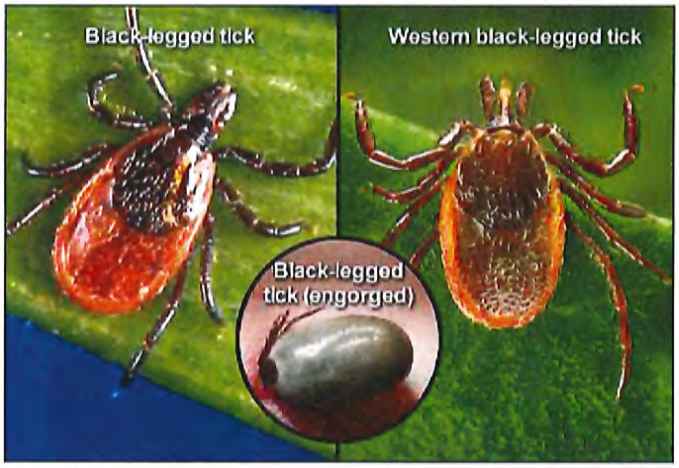
	Sandfly fever (phlebotomus fever)	Virus
Ticks	Crimean-Congo haemorrhagic fever Lyme disease Relapsing fever (borreliosis) Rickettsial diseases (eg: spotted fever and Q fever) Tick-borne encephalitis Tularaemia	Virus Bacteria Bacteria Bacteria Virus Bacteria
Triatome bugs	Chagas disease (American trypanosomiasis)	Parasite
Tsetse flies	Sleeping sickness (African trypanosomiasis)	Parasite

1. Section sign.
    a. Sign would hang from the ceiling in the center of the display area.
    b. Sign would be a similar size as the other section's signs (except Classroom/Theater & Kids Area) and be able to be seen from other display areas.
    c. Sign would be modern and fit into the overall theme of the Education Center.
    d. Sign would be spotlighted.
2. Pedestal display boxes with pined examples of other disease vectors.
    a. Displays could be segregated by species, disease vector or something else.
    b. Displays would include vectors from list above.
    c. There would be at least 4 of these displays.
    d. Displays would have plexiglass covers.
    e. Displays could be square with square plexiglass or round with domed plexiglass.
    f. Displays would be lighted by spot lights and might need internal lights.
3. Located in a grid from north to south in the display area would be no more than 5 standalone 2-sided kiosk's that would display the most commonly known disease vectors of Florida and the USA.
    a. The 5 standalone 2-sided kiosks would be in the middle of the floor in a grid pattern using most of the space.
    b. One side of the kiosk would have a microscope picture of the vector and the other side would have pictures of the effects on humans and/or animals. Both sides would have descriptive text with the picture.
    c. The 5 examples could be ticks, lice, bedbugs, rats, fly's, fleas etc.
    d. Display could be digital or static, recommend digital.
    e. If display is digital display would need power in the floor.
    f. Top of kiosk would have a sign telling visitor what vector is displayed.
4. Wall mounted display of the life cycle of a few of the vector species.
    a. Display could be a wall mounted display using large pictures of the stages with bas-relief descriptive wording.
    b. Display could be a large backlight panel(s).
    c. The display would be mounted on the north side of the curved wall.
    d. Lighting would depend on display type.

    e. Need for power and data would depend on display type.
5. Along the east wall (back of bathroom) would be series of wall/counter displays showing closeups of vectors.
    a. 2 to 4 displays.
    b. Video microscope displaying a pinned or slide mounted vectors on a large video screen.
    c. Power to wall for video screens and power to display counter for microscopes.
    d. Data cable to connect screens to microscopes.
6. As filler on the north side of the curved wall could be poster type displays that feature the rest of the international or less known vectors not shown on the kiosks.
    a. Poster would have a microscope picture of the vector and pictures of the affects on people and animals with descriptive text
    b. These could also be back lighted displays.
    c. Lighting would depend on display type.
    d. Need for power and data would depend on display type.

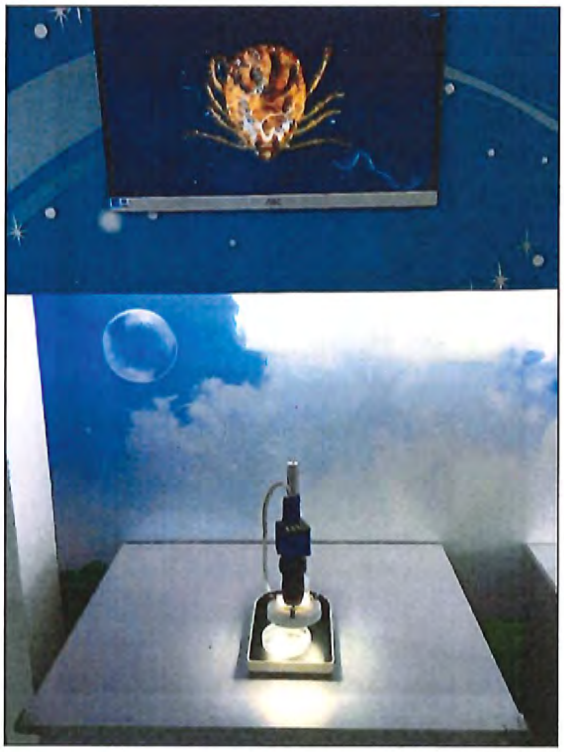
Other Disease Vectors – Photo Examples

Two sided kiosks
for common other
diseases vectors



Wall Mounted of Other Common Vectors

Video Microscopes

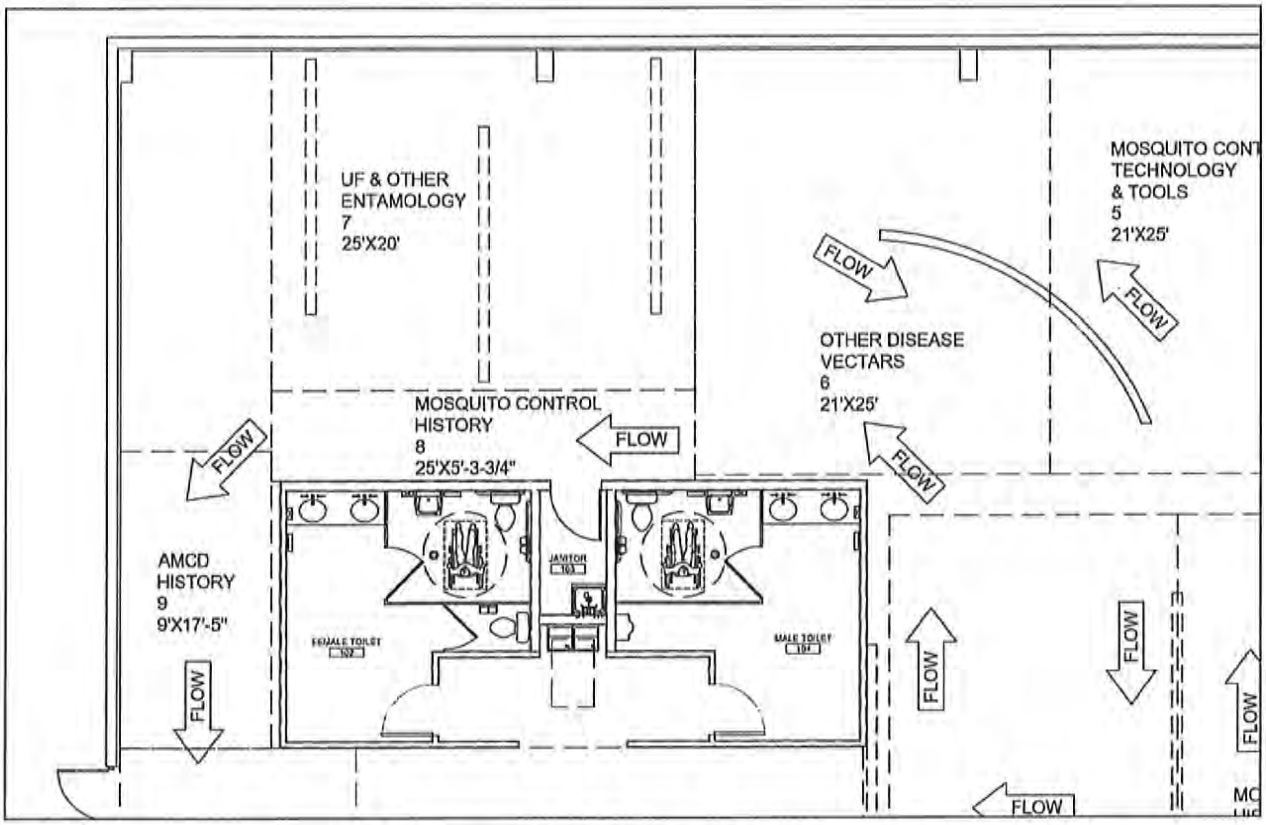


University of Florida and Other Entomology

EDU Center Design Detail University of Florida and Other Entomology

Description:

This display section is shown broken up with a series of 3 partial walls, the section could also be further defined by a rectangle section of a drop ceiling over the area. The main space used for the UF & Other Entomology would be 20 feet by 25 feet (500 sq. ft.), also included in the defined space (defined by the drop-down ceiling) would be the Mosquito Control History section. The UF & Other Entomology section would cover some of the nicer bugs like bees, have a bee display, possibly with an indoor plexiglass beehive.



Detail: This will be an area that is divided by 3 partial walls. This display area is entered from the Mosquito Control Technology & Tools and the Other Disease vectors sections from the south and exits to the Mosquito Control and AMCD History sections. This section may have a ceiling section to accent this area.

1. Section sign.
    a. Sign would hang from the ceiling in the center of the display area.
    b. Sign would be a similar size as the other section's signs (except Classroom/Theater & Kids Area) and be able to be seen from other display areas.
    c. Sign would be modern and fit into the overall theme of the Education Center.
    d. Sign would be spotlighted.
2. As you exit the Mosquito Control Technology & Tools on the east wall that is shared by the two sections will be a plexiglass bee hive.

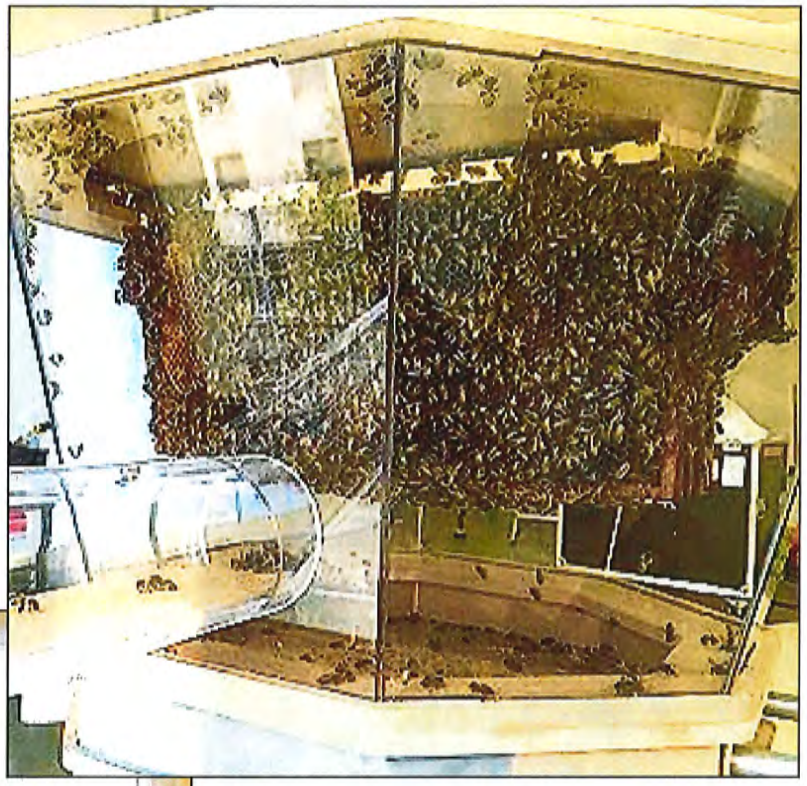
a. The east wall on the outside will have a fenced off viewing area with bee hives, these bee hives will attract bees and help keep the indoor bee hive populated.
b. There will be a plexiglass tube from the outside to the inside leading to a plexiglass bee hive along the inside east wall.
c. This would be a fully functional bee hive.
d. Design of hive and lighting would be dictated by bee keepers and/or UF.
e. Ask the St. Johns County Bee Keepers Association to sponsor and maintain the displays.

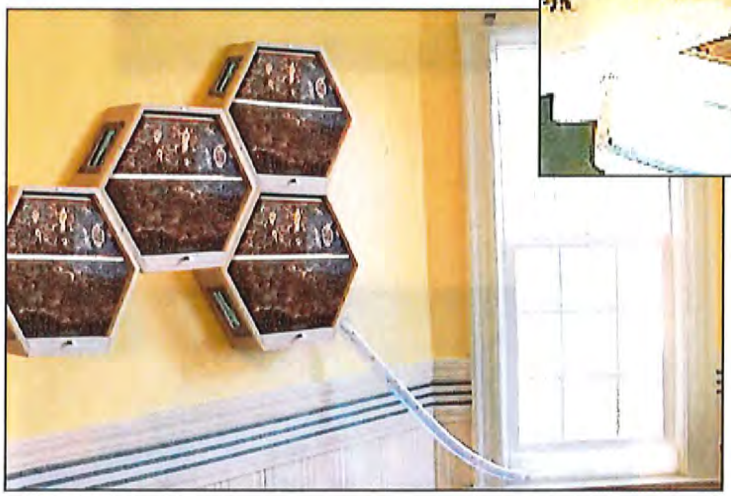
3. There are 3 partial display walls allowing for displays of pinned and photographic examples of different insect species.
    a. The 3 walls could allow for 6 specific specie display walls.
    b. Suggestions for the 6 display areas are:
        i. Butterflies.
        ii. Bees and wasps.
        iii. Beetles.
        iv. Fly's.
        v. Spiders.
        vi. Other, mixed to include grasshoppers and/or exotic.
    c. Displays would include informational text about each specie displayed.
    d. Displays on walls could be hanging pinned display, especially for big species like butterflies.
    e. Displays on walls could be pictures and text, back lighted or poster style.
    f. Displays in front of walls could be Pedestal display boxes with pined examples.
        i. Displays would have plexiglass covers.
        ii. Displays could be square with square plexiglass or round with domed plexiglass.
        iii. Displays would be lighted by spot lights and might need internal lights.
    g. Partial wall displays would need a combination of spot lights, display lights and power, if informational data via video is used data would be needed.
4. The east wall could continue the displays of species of insects that are displayed on the partial walls.
    a. Feature nicely framed butterflies, with frames making patterns.
    b. Framed exotic large bugs from around the world.
    c. Displays on the wall would be spotlighted.
5. The east wall could also have models of bugs like ants, roaches and lady bugs walking on the wall.
    a. All the models would be to some standard scale and be 3 or 4 feet long.
    b. If this section has a ceiling section a few of the model bugs could be walking on the celling also.
    c. Models would be lighted by spotlights.
6. The east wall and the portion of the west wall before the janitor closet door could be pedestal display boxes with examples of different species not on the display walls.
    a. Displays would have plexiglass covers.
    b. Displays could be square with square plexiglass or round with domed plexiglass.
    c. Displays would be lighted by spot lights and might need internal lights.
7. Display about the UF entomology department and the UF entomology collection.

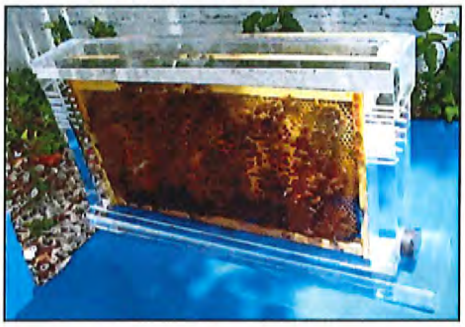
a. A portion East wall or the west wall before the janitor closet door could be used for this display.
b. Display could include digital, poster and text or back lighted informational boards.
c. Depending on display components spot lights, power and possibly data would be needed on wall.

UF & Other Entomology – Photo Examples

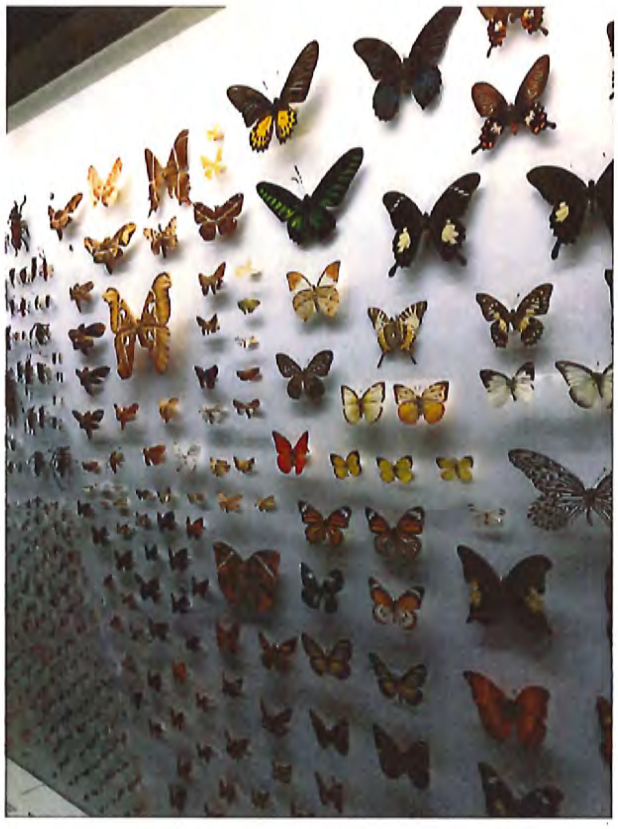
Plexiglass Beehives





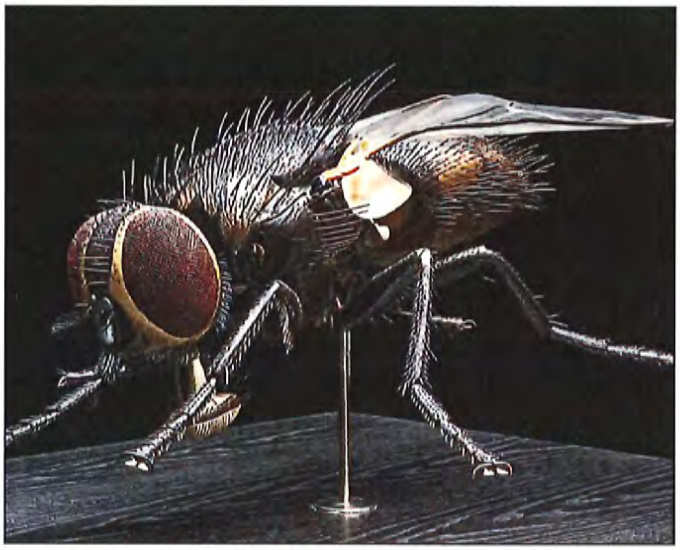


Partial Wall Displays (using butterflies as examples)

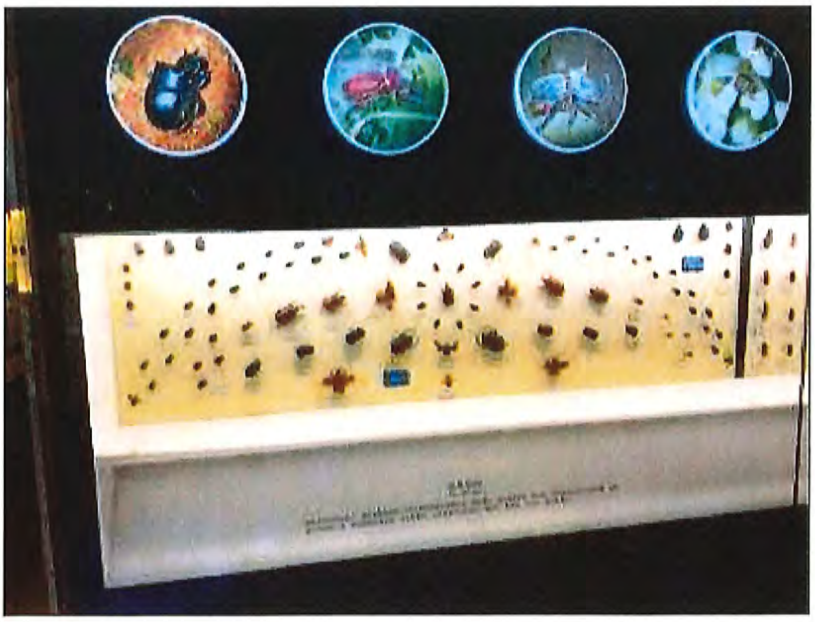


最早会飞的动物

Insect Models



Other Species & UF

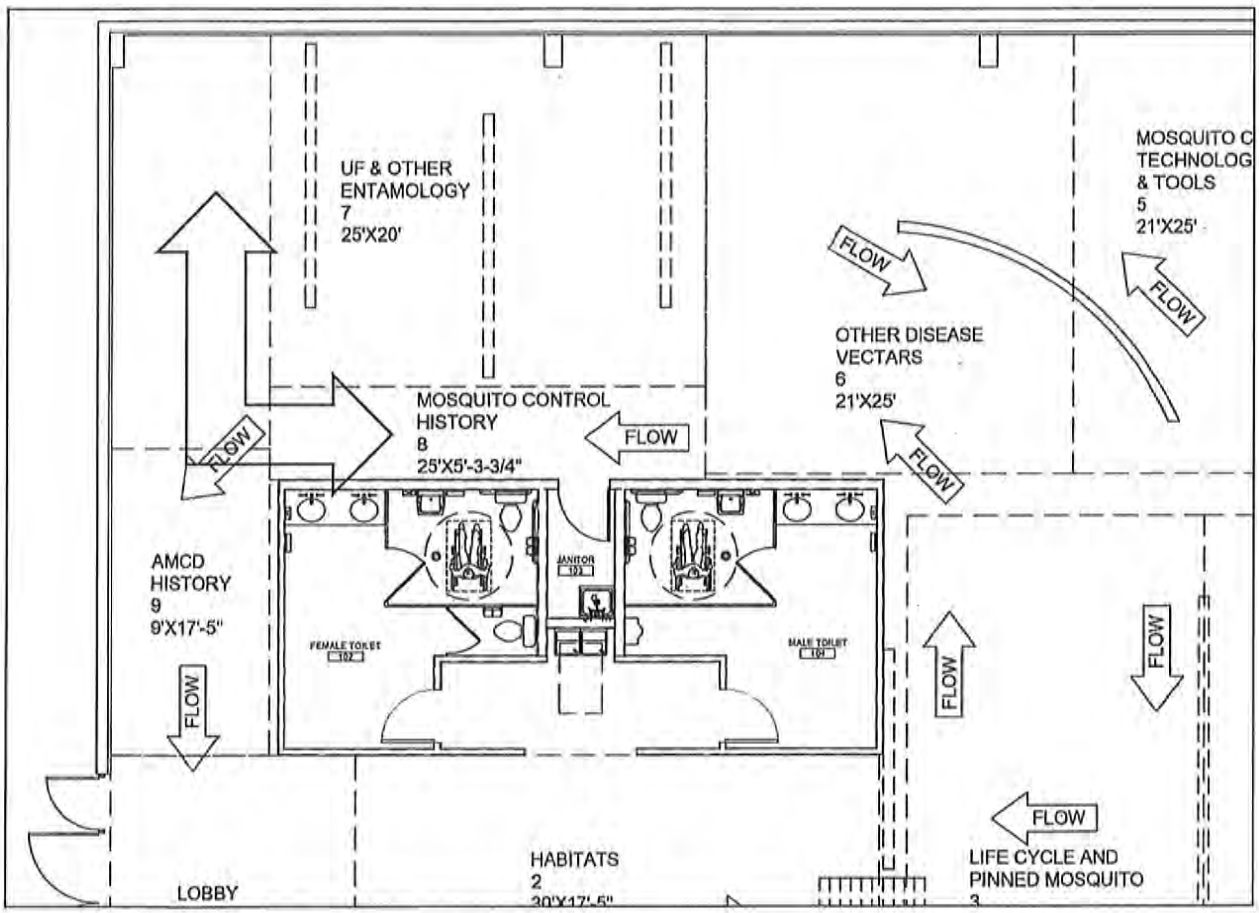


Mosquito Control History

EDU Center Design Mosquito Control History

Description:

This display section will be adjacent to the UF & Other Entomology section at what is the front of the building (NE corner) and will be about 10 feet by 25 feet (250 sq. ft.). This section and the next section, AMCD History, are at the tour end. This section will have A/V displays and informational displays with photos and print, both analog and digital. This will include the history of the development of mosquito control practices, government agencies and companies in Florida, Nationally and Internationally. This section will lead to the AMCD History section.



Detail: This display will start on the west wall of the UF & Other Entomology section after the janitors closet door and continue north and use the south and some of the east wall in the NE corner of the building and continue west to the AMCD History section.

1. Section sign.
    a. Sign would hang from the ceiling in the center of the display area.
    b. Sign would be a similar size as the other section's signs (except Classroom/Theater & Kids Area) and be able to be seen from other display areas.
    c. Sign would be modern and fit into the overall theme of the Education Center.
    d. Sign would be spotlighted.
2. Section on mosquito control in Florida.

a. Photo and text display poster style with a video display with a montage of old photos from mosquito control districts all around Florida.
    i. AMCD could solicit these photos from the many MCD's and have the rolling video display have the MCD name then the photos in a series.
b. Display could be on the west wall of the UF & Other Entomology section after the janitor's closet door as you enter the main display area.
c. Could be a Florida flag on the wall above the Florida display section.
d. Wall would need power, spot light on non-digital displays.

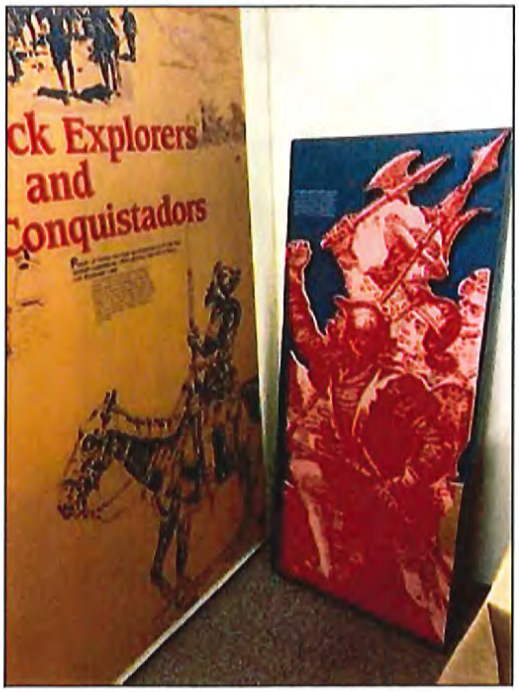
3. Effects of mosquitos to human populations and animals throughout world history.
    a. Display location in the NE corner on the east wall.
    b. This section can drill down on the time line highlights from the Mosquito Disease History section and concentrate on how mankind developed ways to cope with the mosquitos.
    c. Display can be Photo and text display poster style or back lighted and/or a video display.
    d. It would be nice to have an artifact in a display case.
    e. Wall would need power if video was used otherwise spot lighted.
4. Who and where mosquito control was developed in the USA and important pioneers in the development of mosquito control practices.
    a. This would be located on the east wall continuing toward the west.
    b. Display can be Photo and text display poster style or back lighted and/or a video display.
    c. It would be nice to have an artifact in a display case.
    d. Wall would need power if video was used otherwise spot lighted.
5. Medical history of the control of mosquito borne diseases.
    a. This could be a kiosk or a standalone display.
    b. Recommend digital.
    c. One side of the display could be digital the other have text and poster photos.
    d. Display would need power and spot lights.
6. Standalone display of books and publications that have had a major contributed to mosquito control.
    a. Examples of the actual books with text describing the book or publications impact on mosquito control.
    b. These could be a series of smaller display cases running up the center of the section.
    c. Display cases could be internally lite or spot lighted.
7. History of pesticide development for mosquito control and manufactures impact.
    a. This would be on the east wall center.
    b. Display can be Photo and text display poster style or back lighted.
    c. This section could show a contrast and compare of old technology and new technology.
        i. Example: Mosquito control used to use waste oil to treat mosquito larvae in ditches, now Bti, an eco-friendly pesticide is used.
        ii. Example: Moved from DDT mixed with kerosene to create a fog to Ultra Low Volume spraying of very mild pesticide in small quantities.
    d. Section would be spot lighted.
8. Display of FMCA & AMCA history to include examples of Buzz Words and Wing Beats.
    a. This would be on the east wall before moving into the AMCD History.
    b. Display can be Photo and text display poster style or back lighted.

c. History of the development of each group and their contributions to mosquito control.
d. Each organization could fund and contribute material for the display.
e. Section would be spot lighted.

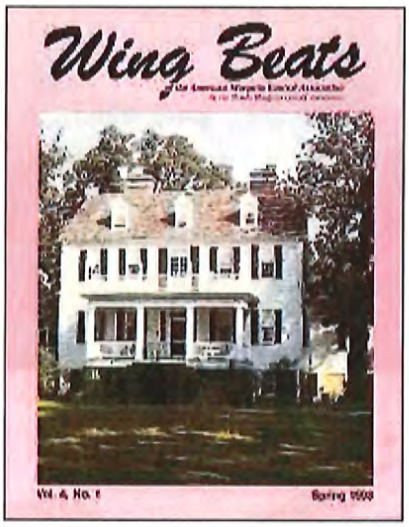
9. Mosquito control in comics.
    a. Text examples of comics that have used mosquitos for humor.
    b. Use both historical and modern examples.
    c. Feature Florida based humor.
10. Review, suggestions and development help by Gordon Patterson author & historian.

Mosquito Control History – Photo Examples

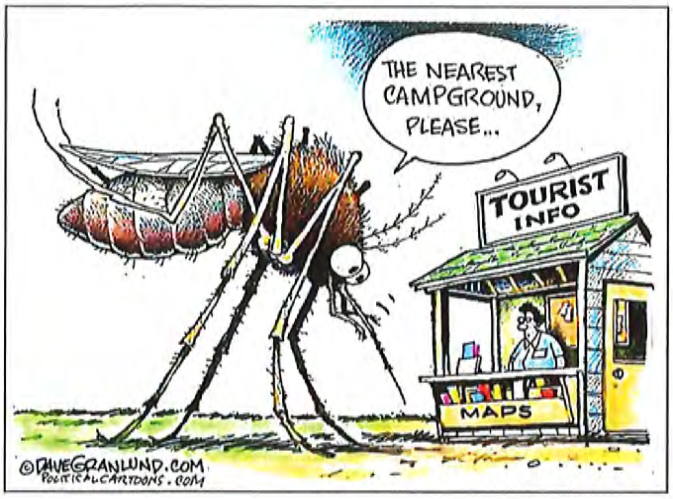
Mosquito Control History

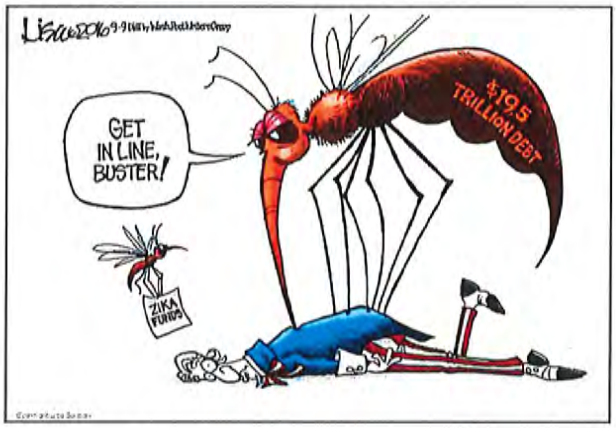


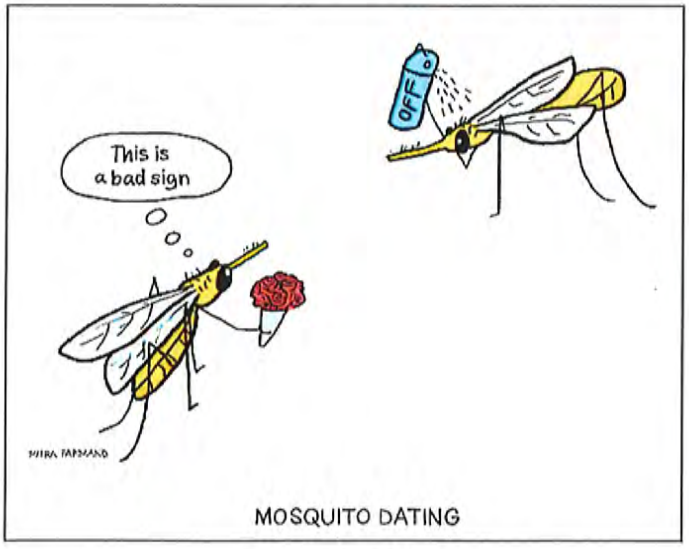
Book Displays and kiosks

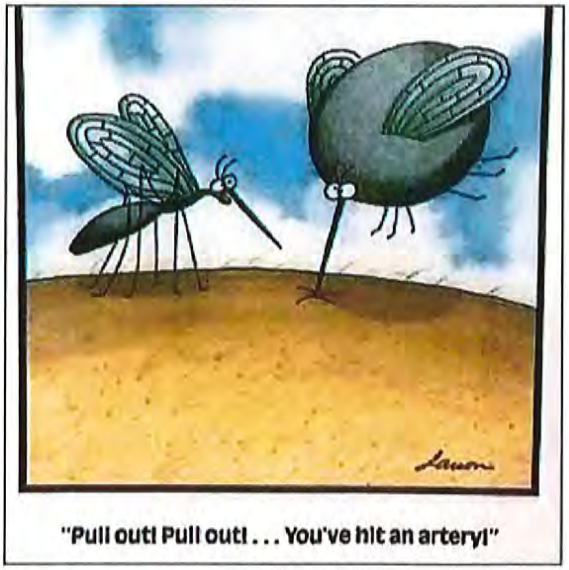


Mosquito Control in Comics







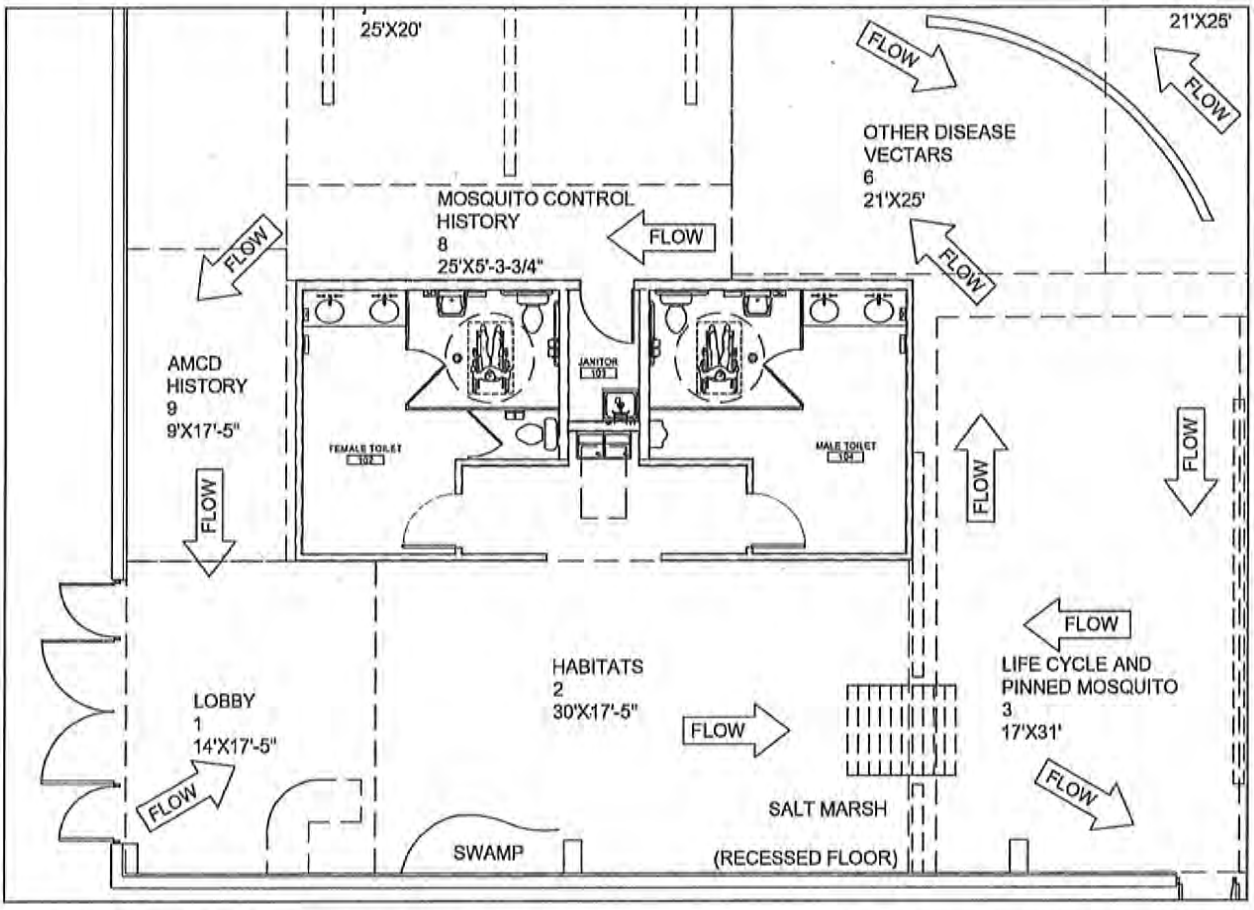


AMCD History

EDU Center Design AMCD History

Description:

This section will be directly tied to the Mosquito Control History section but will focus on AMCD history. The section will start in the Mosquito Control History section and continue into the exit hallway or section. This area will be 9 feet by 17.5 feet (158 sq. ft). This section will have informational displays with photos and print components and may include some static displays. This section will also have photos of past and current Commissioners displayed on a wall.



Detail: This section will be between the Mosquito Control History section and the entrance/exit lobby area. Display area will be the north wall and the south (bathroom) wall. All visitors to the EDU Center will have to visit this section to exit the building.

1. Section sign.
    a. Sign would hang from the ceiling in the center of the display area.
    b. Sign would be a similar size as the other section's signs (except Classroom/Theater & Kids Area) and be able to be seen from other display areas.
    c. Sign would be modern and fit into the overall theme of the Education Center.
    d. Sign would be spotlighted.
2. Photo display of all the past Commissioners of the District.
    a. Display would be on the north wall at the start of the section.

b. Photos would be 8 inches X 10 inches in simple black wood frames.
c. Display would start at about 3.5 feet off the ground, 4 pictures up to about 8 feet in a grid pattern.
d. Past Commissioners would be added as time progresses from right to left.
e. Each picture would have the Commissioners name and years served on a plaque under their picture.
f. Display area would be spot lighted.

3. Photo display of the current Commissioners.
   a. Display would be on the north wall at the west end of the section.
   b. Photos would be 16 inches X 20 inches in elaborate gold wood frames.
   c. The 5 Commissioners photos would be displayed at eye level in a single row.
   d. New commissioners would be added as elected to this section and retired Commissioners would be moved to the past Commissioner section.
   e. Each picture would have the Commissioners name on a plaque under their picture.
   f. Display area would be spot lighted.
4. Photo display of current and past Directors.
   a. Display would be on the north wall before the display of current Commissioners.
   b. Photos of current Director would be 16 inches X 20 inches in elaborate gold wood frame to match current Commissioners.
   c. Photos of current Director would be 8 inches X 10 inches in simple black wood frames to match past Commissioners.
   d. Display would start at about 4.5 feet off the ground, 2 pictures up to about 7 feet in a grid pattern with the current Director photo on the left side, center.
   e. New director would replace old Director after being appointed. Retired Director would be moved to the past Director portion of this section.
   f. Each picture would have the Commissioners name on a plaque under their picture.
   g. Display area would be spot lighted.
5. Any special recognition plaques could be displayed, original Charter could be displayed.
   a. Display would be on the north wall before the display of the Directors.
   b. Display could include a plaque recognizing the first AMCD employee.
   c. Display area would be spot lighted.
6. Photo and text display of the history of the yellow fever epidemic in St. Augustine.
   a. Display would be at the east end of the south (bathroom) wall.
   b. Display can be Photo and text display poster style or back lighted.
   c. Wall would need power if back lighted display was used otherwise spot lighted.
7. Picture history of AMCD.
   a. Display would be at the center of the south (bathroom) wall.
   b. Display can be Photo and text display poster style or back lighted.
   c. Wall would need power if back lighted display was used otherwise spot lighted.
8. Future history of AMCD.
   a. Display would be at the west end of the south (bathroom) wall.
   b. Display would highlight recent projects and future plans.
   c. Display would also feature all the collaborative efforts AMCD has had in the past, are doing in the present and are planning for the future.

d. Display can be Photo and text display poster style or back lighted.
e. Wall would need power if back lighted display was used otherwise spot lighted.

9. AMCD Vision Statement.
    a. Painted or raised letters on the south (bathroom) wall above the displays.
    b. Vision Statement: "We have a vision that Anastasia Mosquito Control District of St. Johns County will be among the leading Districts for mosquito control and the people in St. Johns County will be among the healthiest in the nation- a well served community, enjoyed by all and supported by all partners"
    c. Statement will be spotlighted.
10. AMCD Values Statement.
    a. Painted or raised letters on the north wall above the displays.
    b. Values Statement: "Values: Justified, Accountable, Service Driven, Scientific Based, Sustainable Excellence, Environmentally-Friendly, Professional, Collaborative, Compassionate".
    c. Statement will be spotlighted.
11. Free pamphlet with an in-depth written history of AMCD.
    a. Pamphlet would be at the west end display area.
    b. Pamphlets would be available in a small pamphlet rack or dispenser.

AMCD History – Photo Examples

Photo and Plaque Examples

Yellow Fever

Vision & Value Statement