



Fredericksburg Safety Rest Area & Welcome Center

LEED GREEN BUILDING ASPECTS



- ◆ Federal Style building exterior - advocated by the VA Dept. Of Historic Resources.
- ◆ Contrasting with this traditional look are the modern solutions for high efficiency and energy performance, which underscore the versatility of a fully integrated sustainable building.



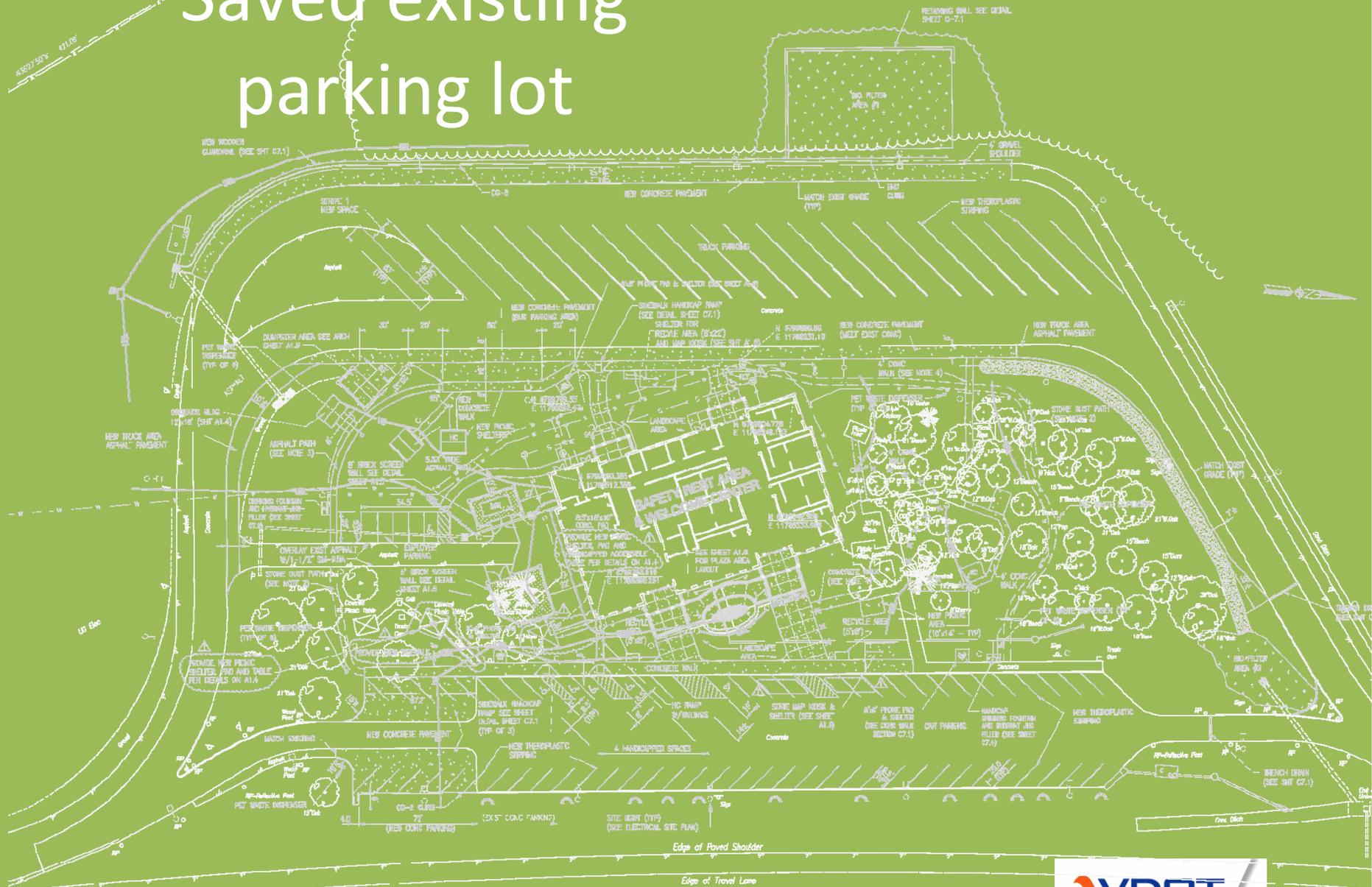
- ◆ In addition to energy-saving systems, the materials used in the modern interior and traditional exterior of the building play a critical role in achieving the sustainability goals for this facility.
- ◆ Demonstrates that sustainable buildings can be created in a variety of architectural styles and still be “built green!”

Demolition of existing building

75% of old building, site structures and construction waste was re-used, recycled or otherwise diverted materials from landfill during construction phase.



Saved existing parking lot



Landscaping - Saved existing habitat



Restored Landscaping – added plants were native or adaptable to our climate, eliminating the need for irrigation (once established) and reducing maintenance costs.



Stormwater Management



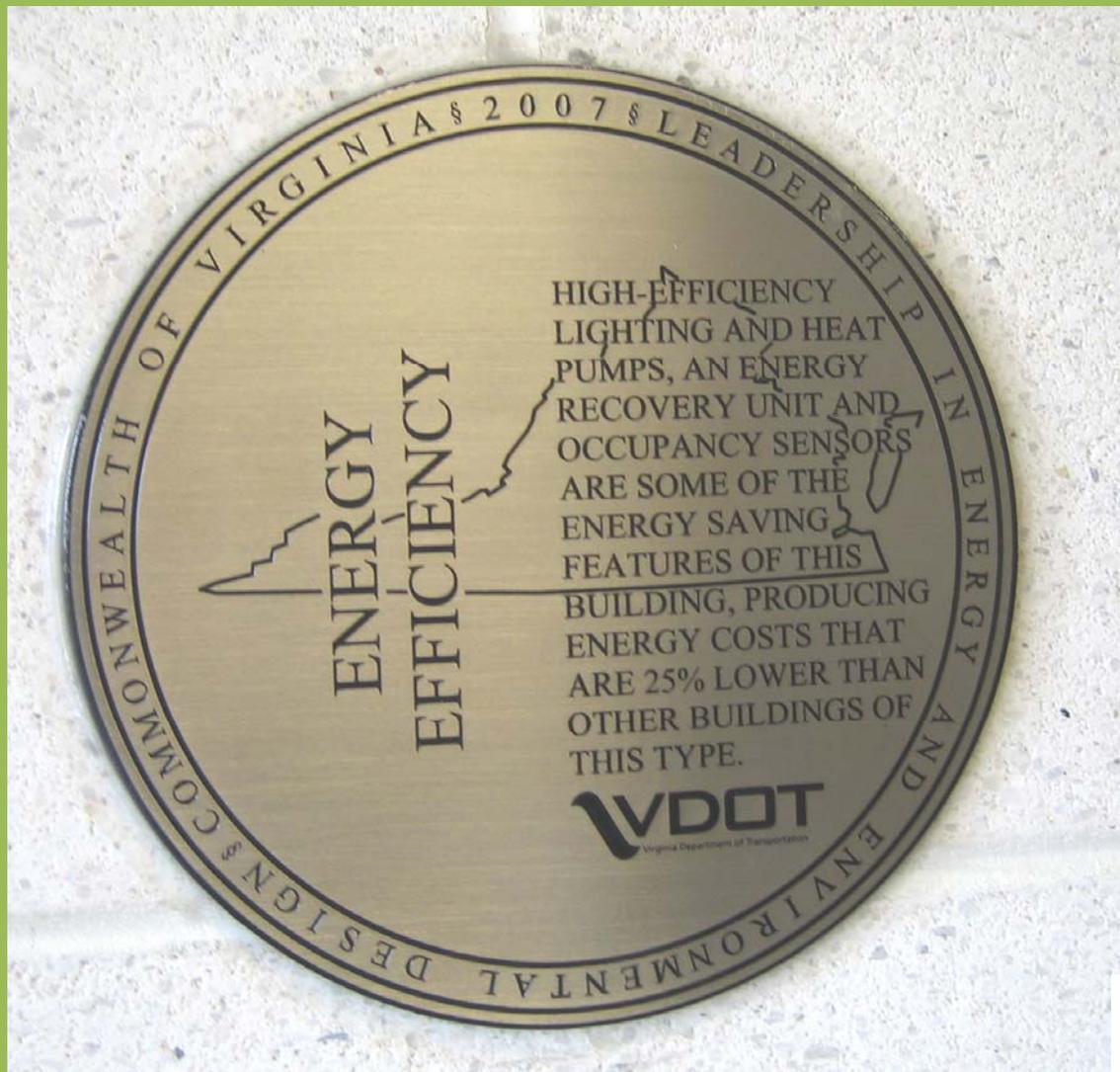
Stormwater Management



Pet Waste Management



Energy Efficiency



High Efficiency Lighting & Occupancy Sensors



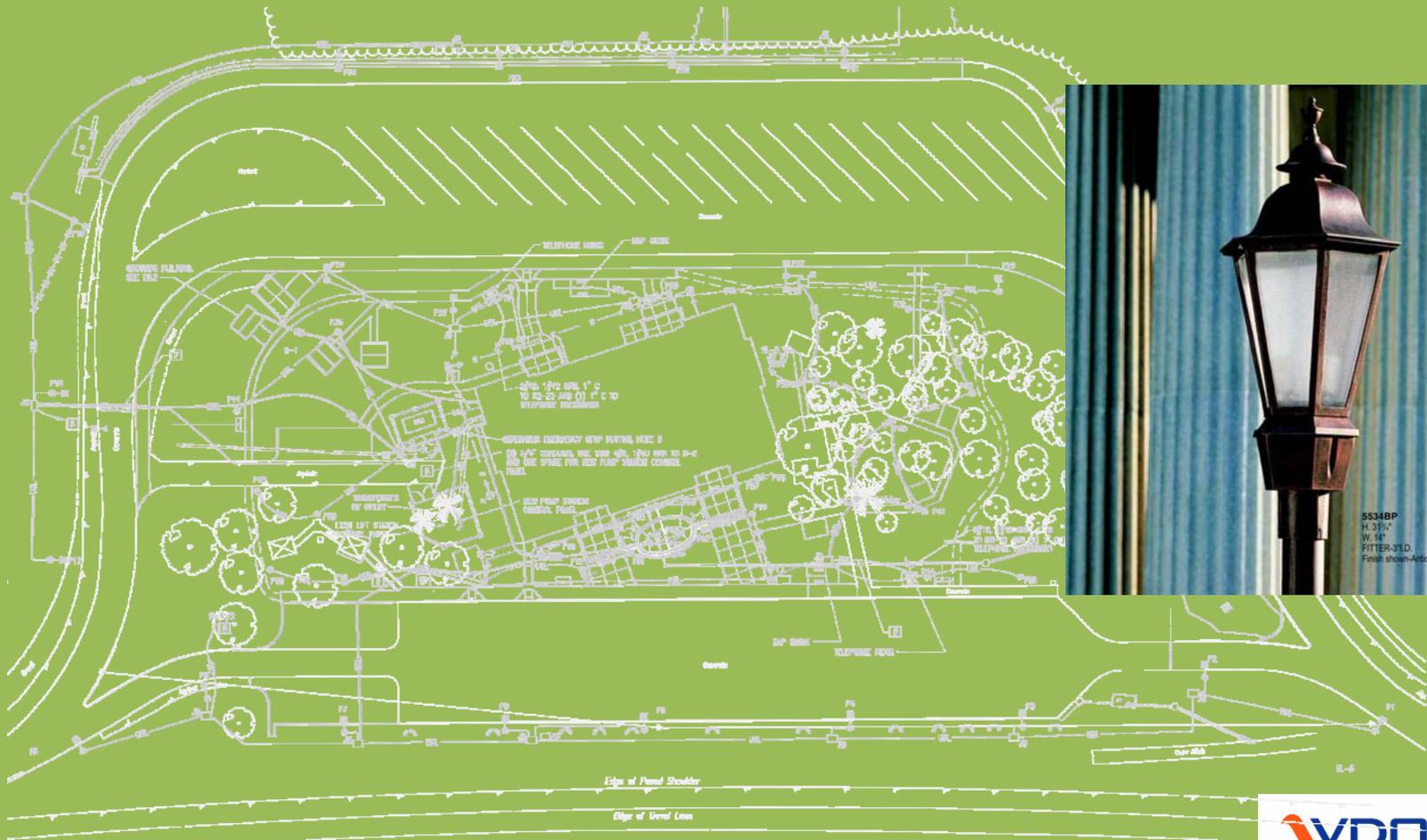
Daylighting – Fixtures dim as natural light increases



Natural Lighting



Exterior Lighting – controlled by photocells and lighting contractors



ELECTRICAL SITE PLAN
SHEET 1-2

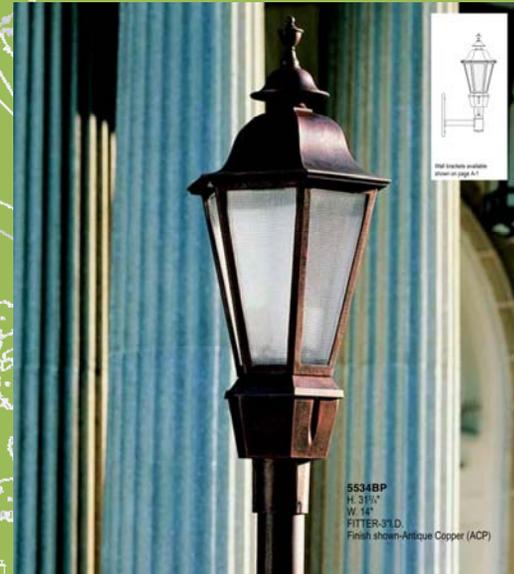
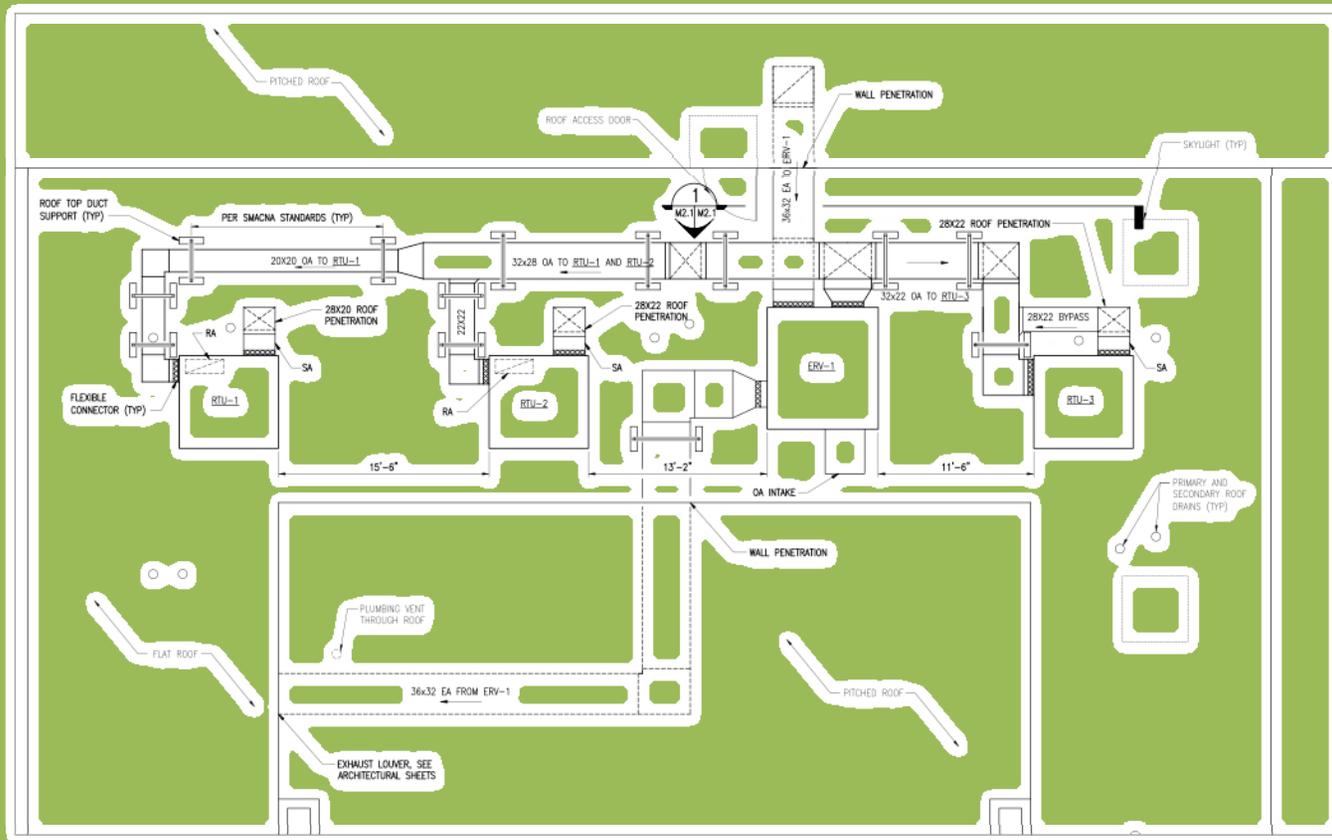


EXHIBIT SITE 10000
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Heating & Cooling

High efficiency heat pumps

Restroom areas controlled by occupancy sensors



 MECHANICAL ROOF PLAN
SCALE: 1/4"=1'-0"

Heating & Cooling

Energy Recovery Unit - Energy recovery is provided by drawing outside air across one half of wheel and building exhaust air across the other half. Latent heat and sensible heat are transferred from hotter and moister exhaust air to the colder and drier outside air during winter. Opposite occurs in Summer conditions.



Automated Controls



Other Energy Efficient products

Energy Efficient, Touchless Hand Dryer



Recycled Building Products



Building Products with recycled materials



Carpet tiles made with 25% recycled products, carpet backing 100% PVC free, completely recyclable

Ground –faced masonry block walls



Building Products with recycled materials

Synthetic “slate” roofing tiles composed of up to 80% recycled post-industrial rubber and plastic. Very durable, flexible and lightweight



Building Products with recycled materials

Resinous Epoxy Terrazzo flooring – contains recycled materials



Building Products with recycled materials

Steel used in building materials within 500 miles and contains post consumer and post industrial material



Used Regional Building Products

40% of the building materials - including concrete, brick, drywall and steel were produced within a 500-mile radius of the site, reducing fuel consumption and vehicular emissions.



Water Conservative Plumbing Fixtures



Water Conservative Plumbing Fixtures

Waterless, Flushless Urinals & Low Flow Toilets



Water Conservative Plumbing Fixtures

Sensor activated sink faucets



Recycling Containers – Inside & Outside



Healthy Indoor Air Quality – both during construction and for life of building

- ◆ Low VOC adhesives, sealants, paints
- ◆ Green Cleaning & Techniques - All cleaning products selected for reduced human and environmental impact
- ◆ Walk Off Mats at entrances reduce the amount of dirt carried into the building.



Healthy Indoor Air Quality No Smoking in or near building

