

United States Land Port of Entry Columbus New Mexico

Architect: Richter Architects

MEP Engineers: IMEG Corp

Structural Engineers: Walter P Moore

Civil Engineers: JQ, LLC

Landscape Architects: MRWM Landscape Architects



Existing Port



Project Delivery Method

Design Bid Build

Design Start – March 2014

Design End – Sept 2016

Construction Start – Feb 2017

Construction End – 2019

Budget:

Design FY '14 - \$7,400,000

Construction FY'16 -
\$79,600,000

M&I – FY'16 - \$6,045,000



Project Scope

This Land Port of Entry (LPOE) expansion includes new Main building/Cargo Dock, Kennel, Narcotics Vault, POV and Commercial Inspections. Existing facility was too close to the border, compromising security and safety.

Challenges

- Regional watershed - Two major flood events occurred in 2006 and 2011
- Congestion - Single crossing point that serves the privately owned vehicles, commercial traffic and pedestrian traffic.
- Pedestrian Traffic - 800+ Children cross everyday during the school year.
- Truck Traffic - Commercial peak season 100 trucks per day cross, Mostly chili peppers.
- Phasing - LPOE operates 24/7. LPOE must stay operational during construction.

TO COLUMBUS, NM



EXISTING PORT

PUERTO PALOMA, MEXICO



Landscape Typologies

Chihuahuan Desert
Grasslands

Chihuahuan Desert Scrub

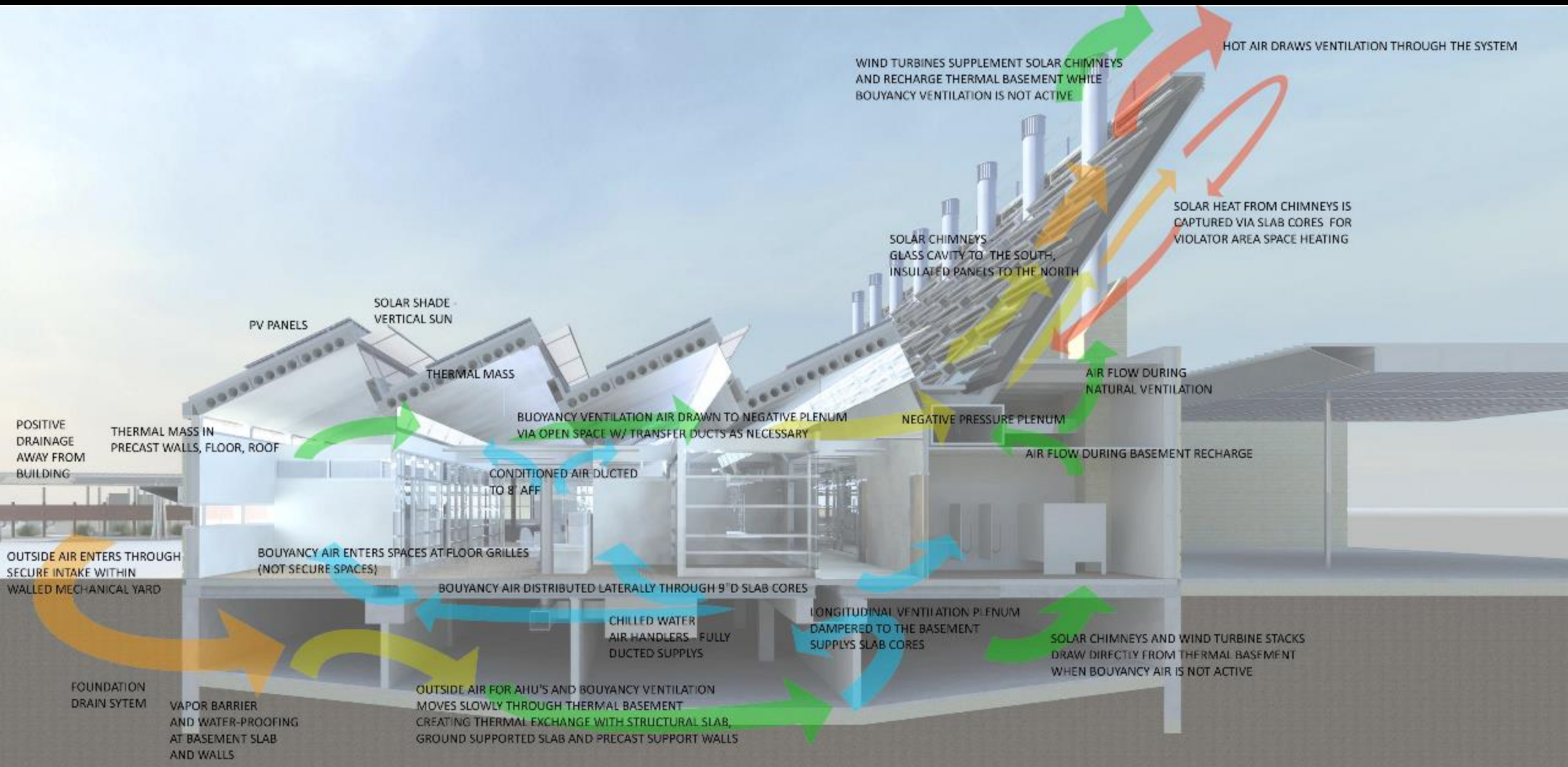
Desert Washes

Desert Riparian Landscapes



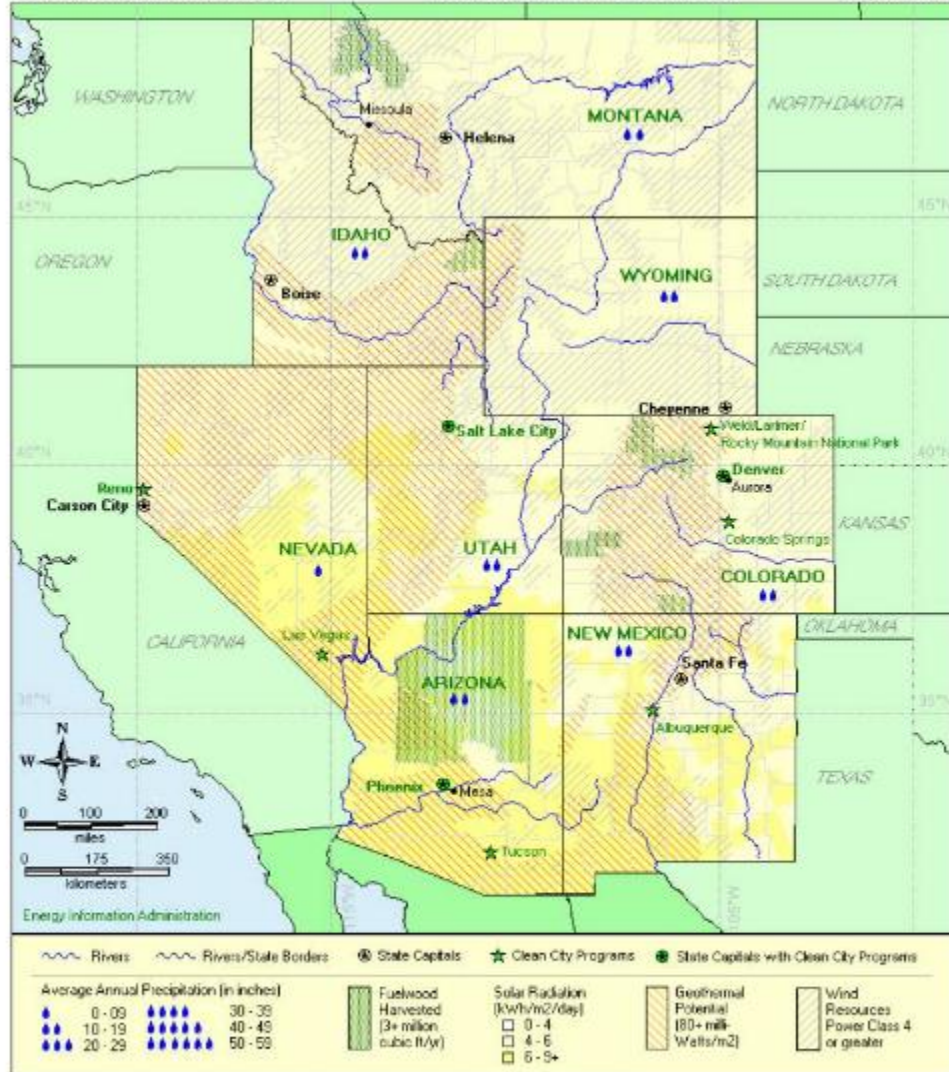


Net Zero Energy Study

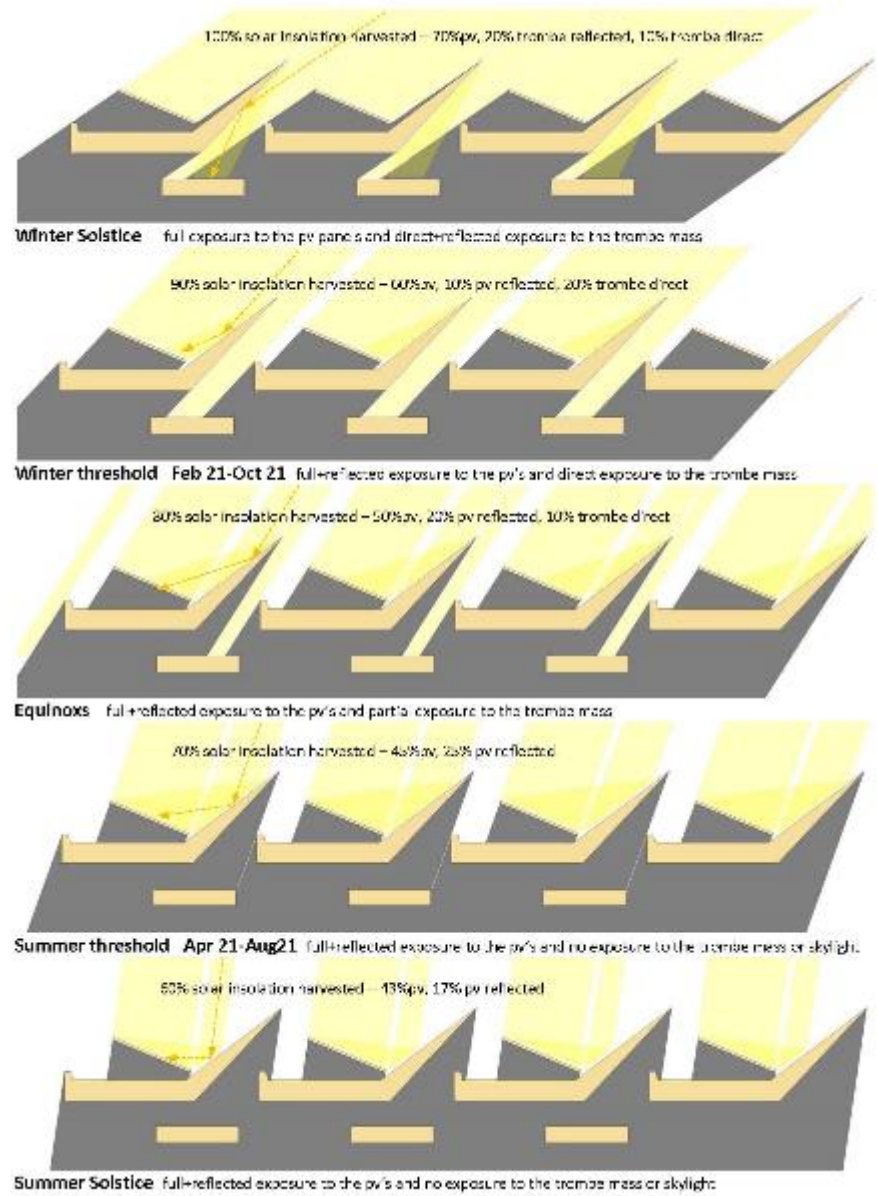




Net Zero Energy Strategy



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 ♦ Contact: Barbara.Fichman@eia.doe.gov ♦ 202-586-5737 ♦ Energy Information Administration
 ♦ File created: September 30, 2002



LEED Platinum



LEED Certification Review Report

This report contains the results of the technical review of an application for LEED® certification submitted for the specified project. LEED certification is an official recognition that a project complies with the requirements prescribed within the LEED rating systems as created and maintained by the U.S. Green Building Council® (USGBC®). The LEED certification program is administered by Green Business Certification Inc. (GBCI®).

Columbus U.S. Land Port of Entry

Project ID 1000060166
 Rating system & version LEED-NC
 Project registration date 07/23/2015



Platinum Certified

CERTIFIED: 20-29, SILVER: 30-39, GOLD: 40-49, PLATINUM: 50+

LEED 2009 NEW CONSTRUCTION

ATTEMPTED: 90, DENIED: 1, PENDING: 0, AWARDED: 87 OF 110 POINTS

SUSTAINABLE SITES 24 OF 26

SSc1 Construction Activity Pollution Prevention	1
SSc1 Site Selection	1/1
SSc2 Development Density and Community Connectivity	5/5
SSc3 Brownfield Redevelopment	0/1
SSc4 Alternative Transportation-Public Transportation Access	6/6
SSc4.2 Alternative Transportation-Bicycle Storage and Changing Rooms	1/1
SSc4.2 Alternative Transportation-Low-Emitting and Fuel-Efficient Vehicles	3/3
SSc4.2 Alternative Transportation-Parking Capacity	2/2
SSc5 Site Development-Protection or Restoration of Natural Resources	1/1
SSc5.2 Site Development-Maximize Open Space	1/1
SSc6 Stormwater Design-Quantity Control	1/1
SSc6.2 Stormwater Design-Quantity Control	1/1
SSc7 Heat Island Effect-Non-Roof	1/1
SSc7.2 Heat Island Effect-Roof	1/1
SSc8 Light Pollution Reduction	0/1

WATER EFFICIENCY 8 OF 10

WEp1 Water Use Reduction-20% Reduction	Y
WEc1 Water Efficient Landscaping	2/4
WEc2 Innovative Water-Water Technologies	2/2
WEc3 Water Use Reduction	4/4

ENERGY AND ATMOSPHERE 28 OF 35

Ea1 Fundamental Commissioning of the Building Energy Systems	Y
Ea2 Minimum Energy Performance	Y
Ea3 Fundamental Refrigerant Mgmt	Y
En1 Optimize Energy Performance	17/19
En2 On-Site Renewable Energy	2/3
En3 Enhanced Commissioning	2/2
En4 Enhanced Refrigerant Mgmt	0/2
En5 Measurement and Verification	0/3
En6 Green Power	2/2

MATERIALS AND RESOURCES 5 OF 14

MRc1 Storage and Collection of Recyclables	Y
MRc1.1 Building Reuse-Maintain Existing Walls, Floors and Roof	0/1
MRc1.2 Building Reuse-Maintain 95% of Interior Non-Structural Elements	0/1
MRc2 Construction Waste Mgmt	2/2
MRc3 Material Reuse	0/1
MRc4 Recycled Content	2/2
MRc5 Regional Materials	1/1
MRc6 Rapidly Renewable Materials	0/1
MRc7 Certified Wood	0/1

INDOOR ENVIRONMENTAL QUALITY 12 OF 14

EQc1 Minimum IAQ Performance	Y
EQc2 Environmental Tobacco Smoke (ETS) Control	Y
EQc3 Outdoor Air Delivery Monitoring	0/1
EQc4 Increased Ventilation	0/1
EQc5 Construction IAQ Mgmt Plan-During Construction	1/1
EQc5.2 Construction IAQ Mgmt Plan-Before Occupancy	1/1
EQc6 Low-Emitting Materials-Adhesives and Sealants	1/1
EQc6.2 Low-Emitting Materials-Floors and Coatings	1/1
EQc6.4 Low-Emitting Materials-Plumbing Systems	1/1
EQc6.4.2 Low-Emitting Materials-Composite Wood and Agrifiber Products	1/1
EQc7 Indoor Chemical and Pollutant Source Control	1/1
EQc8 Commissionability of Systems-Offline	0/1
EQc8.2 Commissionability of Systems-Thermal Demand	1/1
EQc9 Thermal Comfort-Design	1/1
EQc9.2 Thermal Comfort-Ventilation	1/1
EQc9.3 Daylight and Views-Daylight	1/1
EQc9.3 Daylight and Views-Views	1/1

INNOVATION IN DESIGN 6 OF 8

Id1 Innovation in Design	0/1
Id1.1 Exemplary Performance SSc7.1	1/1
Id1.2 Green Cleaning	1/1
Id1.3 Innovation in Design	0/1
Id1.3 Exemplary Performance WEc3	1/1
Id1.3 Innovation in Design	0/1
Id1.3 Exemplary Performance SSc5.2	1/1
Id1.4 Innovation in Design	0/1
Id1.5 Green Purchasing Plan	1/1
Id1.5 Innovation in Design	0/1
Id2 LEED® Accredited Professional	1/1

REGIONAL PRIORITY CREDITS 4 OF 4

RPc1 Stormwater Design-Quantity Control	1/1
RPc2 Heat Island Effect-Roof	1/1
RPc3 Water Efficient Landscaping	1/1
RPc4 Water Use Reduction	1/1

TOTAL 87 OF 110

THE Sustainable SITES Initiative®

Silver Certification

Section 1: Site Context

Section 2: Pre-Design Assessment + Planning

Section 3: Site Design – Water

Section 4: Site Design – Soil + Vegetation

Section 5: Site Design – Materials Selection

Section 6: Site Design – Human Health and Well-Being

Section 7: Construction

Section 8: Operations + Maintenance

Section 9: Education

Section 10: Innovation or Exemplary Performance

Project Name: Colombo East Post Office Project ID: 0110 Date: April 2023

SITES v2 Scorecard Summary

YS	TS	MS	CS	MS	CS	MS	CS	Possible Points:	Points:
1	1	1	1	1	1	1	1	30	30
1. SITE CONTEXT									
Y	/	/	/	/	/	/	/	CONTEXT P1.1	Land development on brownfields
Y	/	/	/	/	/	/	/	CONTEXT P1.2	Prevent land-use conflicts
Y	/	/	/	/	/	/	/	CONTEXT P1.3	Conserve aquatic ecosystems
Y	/	/	/	/	/	/	/	CONTEXT P1.4	Conserve habitats for threatened and endangered species
Y	/	/	/	/	/	/	/	CONTEXT P1.5	Develop a digital plan
Y	/	/	/	/	/	/	/	CONTEXT C1.1	Identify and preserve historic resources
Y	/	/	/	/	/	/	/	CONTEXT C1.2	Connect to multi-modal transit networks
2. PRE-DESIGN ASSESSMENT + PLANNING									
Y	/	/	/	/	/	/	/	PRE-DESIGN P2.1	Use an integrative design process
Y	/	/	/	/	/	/	/	PRE-DESIGN P2.2	Conduct a pre-design risk assessment
Y	/	/	/	/	/	/	/	PRE-DESIGN P2.3	Designate and communicate USQs
Y	/	/	/	/	/	/	/	PRE-DESIGN C2.1	Integrate and coordinate USQs
3. SITE DESIGN - WATER									
Y	/	/	/	/	/	/	/	WATER P3.1	Manage and protect an on-site
Y	/	/	/	/	/	/	/	WATER P3.2	Re-use water on-site for multiple purposes
Y	/	/	/	/	/	/	/	WATER C3.1	Minimize impervious footprint
Y	/	/	/	/	/	/	/	WATER C3.2	Reduce on-site stormwater
Y	/	/	/	/	/	/	/	WATER C3.3	Design functional, attractive features at street level
Y	/	/	/	/	/	/	/	WATER C3.4	Reduce impervious surfaces
4. SITE DESIGN - SOIL + VEGETATION									
Y	/	/	/	/	/	/	/	SOIL+VEG P4.1	Create and communicate a soil management plan
Y	/	/	/	/	/	/	/	SOIL+VEG P4.2	Use appropriate plants
Y	/	/	/	/	/	/	/	SOIL+VEG P4.3	Conserve and restore native vegetation
Y	/	/	/	/	/	/	/	SOIL+VEG C4.1	Conserve upland natural vegetation
Y	/	/	/	/	/	/	/	SOIL+VEG C4.2	Use functional, attractive plant communities
Y	/	/	/	/	/	/	/	SOIL+VEG C4.3	Design to support
Y	/	/	/	/	/	/	/	SOIL+VEG C4.4	Use vegetation to enhance building energy use
Y	/	/	/	/	/	/	/	SOIL+VEG C4.5	Reduce the risk of catastrophic wildfire
5. SITE DESIGN - MATERIALS SELECTION									
Y	/	/	/	/	/	/	/	MATERIALS P5.1	Plan to favor local and low-carbon materials
Y	/	/	/	/	/	/	/	MATERIALS C5.1	Minimize site structures and paving
Y	/	/	/	/	/	/	/	MATERIALS C5.2	Design for accessibility and disassembly
Y	/	/	/	/	/	/	/	MATERIALS C5.3	Use recycled materials and plants
Y	/	/	/	/	/	/	/	MATERIALS C5.4	Use recycled or natural materials
Y	/	/	/	/	/	/	/	MATERIALS C5.5	Use regional materials
Y	/	/	/	/	/	/	/	MATERIALS C5.6	Support regional businesses of local materials
Y	/	/	/	/	/	/	/	MATERIALS C5.7	Support transparency and credit clarity
Y	/	/	/	/	/	/	/	MATERIALS C5.8	Support sustainable and humane working conditions
Y	/	/	/	/	/	/	/	MATERIALS C5.9	Support sustainable and humane working conditions
Y	/	/	/	/	/	/	/	MATERIALS C5.10	Support sustainable and humane working conditions
6. SITE DESIGN - HUMAN HEALTH AND WELL-BEING									
Y	/	/	/	/	/	/	/	HHWB P6.1	Maximize and maintain outdoor green space
Y	/	/	/	/	/	/	/	HHWB P6.2	Provide outdoor amenity, safety, and well-being
Y	/	/	/	/	/	/	/	HHWB C6.1	Promote equitable access
Y	/	/	/	/	/	/	/	HHWB C6.2	Support health and safety
Y	/	/	/	/	/	/	/	HHWB C6.3	Support social connectivity
Y	/	/	/	/	/	/	/	HHWB C6.4	Provide on-site food production
Y	/	/	/	/	/	/	/	HHWB C6.5	Reduce light pollution
Y	/	/	/	/	/	/	/	HHWB C6.6	Maximize natural and built environmental features
Y	/	/	/	/	/	/	/	HHWB C6.7	Minimize exposure to environmental stressors
Y	/	/	/	/	/	/	/	HHWB C6.8	Support local economy
7. CONSTRUCTION									
Y	/	/	/	/	/	/	/	CONSTRUCTION P7.1	Communicate and verify sustainable construction practices
Y	/	/	/	/	/	/	/	CONSTRUCTION P7.2	Control and reduce construction pollutants
Y	/	/	/	/	/	/	/	CONSTRUCTION P7.3	Reduce soil disturbance during construction
Y	/	/	/	/	/	/	/	CONSTRUCTION C7.1	Reduce soil disturbance by proper sequencing
Y	/	/	/	/	/	/	/	CONSTRUCTION C7.2	Direct construction and demolition materials from local sources
Y	/	/	/	/	/	/	/	CONSTRUCTION C7.3	Direct waste to separate, reuse, and/or recycle
Y	/	/	/	/	/	/	/	CONSTRUCTION C7.4	Protect air quality during construction
8. OPERATIONS + MAINTENANCE									
Y	/	/	/	/	/	/	/	OP+MAINT P8.1	Plan for sustainable maintenance
Y	/	/	/	/	/	/	/	OP+MAINT C8.1	Provide for storage and collection of recyclables
Y	/	/	/	/	/	/	/	OP+MAINT C8.2	Recycle organics on-site
Y	/	/	/	/	/	/	/	OP+MAINT C8.3	Minimize pesticide and herbicide use
Y	/	/	/	/	/	/	/	OP+MAINT C8.4	Reduce outdoor storage construction
Y	/	/	/	/	/	/	/	OP+MAINT C8.5	Use reusable material for landscape industry needs
Y	/	/	/	/	/	/	/	OP+MAINT C8.6	Protect air quality during landscape maintenance
9. EDUCATION + PERFORMANCE MONITORING									
Y	/	/	/	/	/	/	/	EDUCATION P9.1	Provide on-site sustainability awareness and education
Y	/	/	/	/	/	/	/	EDUCATION C9.1	Develop and communicate a sustainability plan
Y	/	/	/	/	/	/	/	EDUCATION C9.2	Provide on-site sustainability performance
10. INNOVATION OR EXEMPLARY PERFORMANCE									
Y	/	/	/	/	/	/	/	INNOVATION P10.1	Exceed or exceed minimum performance
TOTAL AND AVERAGE POINTS									
YS	TS	MS	CS	MS	CS	MS	CS	Total Possible Points:	500
YS	TS	MS	CS	MS	CS	MS	CS	Total of YTS and MS/CS Points:	319
SITES Certification Level:									
YS	TS	MS	CS	MS	CS	MS	CS	Level:	SILVER
YS	TS	MS	CS	MS	CS	MS	CS	Level:	GOLD
YS	TS	MS	CS	MS	CS	MS	CS	Level:	PLATINUM



US MEXICO

<- COLUMBUS 3 MILES

KENNEL

COMMERCIAL
INSPECTIONS

MAIN BUILDING

CARGO

ART FENCE

PUBLIC

RUERTO
PALOMAS

SITE PLAN

<- NORTH





































100% of paving and roof materials high SRI

Over 1 acre of pavement shaded by trees and shade structures

Roughly 6,000 tons recycled concrete used in gabion walls and mattresses

Roughly 12.5 acres of restored grassland

Initial irrigation requirement 76% below EPA WaterSense baseline

Post-establishment irrigation 97% below baseline

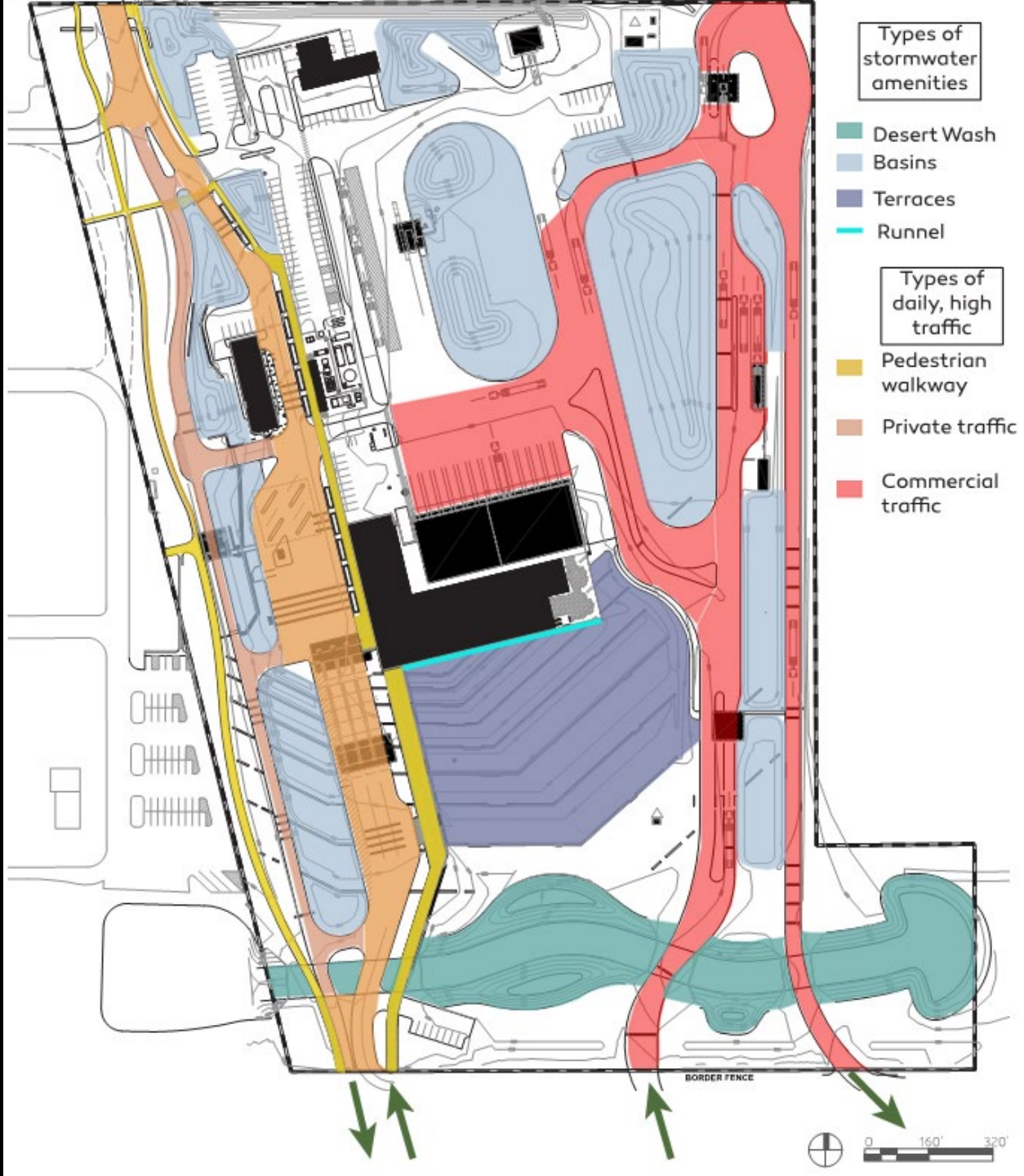
Water Harvesting terraces





On-site stormwater management

2.5 million gallons of stormwater directed to landscape annually
(reduction in irrigation use)

















Community



Awards/Recognitions/Publication

- AIA COTE Top Ten Award, 2020
- AIA New Mexico Honor Award, 2020
- Texas Society of Architects Design Award, 2020
- LEED Platinum
- Sustainable SITES Initiative Silver
- Architect Magazine, Oct. 2020
- Texas Architect Oct. 2020
- Socio-Ecological Practice Research, Design with Nature at 50, Sept 2020
- GSA Design Excellence monograph series

