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FEATURES & BENEFITS

- Speed of Deployment
- Proven Experience Across the Globe
- Versatility
- National Footprint - 78 Precast Facilities
- Reliability
- Reduced Transportation
- Safety & Security
- Reduced Total Cost of Ownership
- Design Flexibility
- Easily Expandable
- Delivered Fully Assembled
- Increased Interior Height Capabilities
- Fast & Easy to Install
- Variety of Finishes
# MARKET APPLICATIONS

**Telecommunication**
- Data Center
- Cable Television
- Broadband
- Wireless
- Re-generation Huts
- Repeater Rooms
- Cable Hub Buildings
- Fiber Optic Buildings
- Telephone Buildings:
- Head Ends
- Optical Transfer Nodes
- Central Offices
- Huts
- Vaults
- Cabinets
- Monopole
- Payment and Call Centers
- Television Broadcast Facilities
- Emergency Operations Centers
- Public Safety Radio Shelters
- Two-Way Radio Buildings
- Remote Central Office Buildings

**Transportation**
- Administration Offices
- Weigh Station Buildings
- DOT Toll Booth Buildings
- Vaults; CEV’s

**Oil & Gas**
- Odorant Buildings

**HAZMAT**
- Flammable Storage
- Corrosive Storage

**Parks and Recreation**
- Restroom, Shower
- Concession Buildings
- Multi-Use Facilities

**Other Applications**
- Pump Stations
- Storm Shelters
- Office Space
- Wastewater Facility Shelters

**Telecommunications Equipment Pads - Foundations:**
- Generator Pads
- Guyed tower foundations
- Earth Station

**Federal**
- Satellite Communication Buildings
- 911 Radio Systems

**Power & Energy**
- Power Substation Control Buildings
- Electrical Control Buildings
- Mechanical Enclosures
- Switchgear Buildings
- Generator Enclosures
- MCC / VFD Enclosures
- Guard Houses
- Attendant Booths
- Security Checkpoints
- Bulletproof Storage
- Border Entry Buildings
- Administration Offices
Delivering Reliability

Above Ground Precast Structures
index

- Single Piece High Performance Shelters ........................................ 1
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Single Piece High Performance Shelters

Vandal Resistant  I  Bullet Resistant  I  Fire Resistant  I  Earthquake Resistant  I  Hurricane Resistant

Please call 888.965.3227 to speak with a precast specialist.
Pre-Engineered

At Oldcastle Precast, we understand that our customers require quick, safe and sustainable shelter solutions. Our proactive communication policies along with our experience and performance standards ensure we exceed our customer’s expectations. Each custom High Performance Shelter is made from steel reinforced precast concrete and specifically engineered to meet your project requirements. Our shelters are available in a variety of standard and custom dimensions to fit your needs. Oldcastle Precast provides you the additional flexibility to factory equip your shelters for accelerated installation and hook up.

Pre-engineered shelters provide durability, flexibility, convenience and cost-effectiveness for long lasting security.
Double Wide High Performance Shelters

Vandal Resistant  I  Bullet Resistant  I  Fire Resistant  I  Earthquake Resistant  I  Hurricane Resistant

Double Wide Section 1

Double Wide Section 2

Double Wide

Please call 888.965.3227 to speak with a precast specialist.
Pre-Engineered Precast Concrete Shelters

Unlimited Optional Features: Precast concrete buildings can be shipped equipped for all applications.

Practical

Saves Time & Gets Your Site Operational Fast: Quick installation and simple site preparation. With built-in floor, no footings or foundations are necessary unless required by local codes.

Decreases Maintenance Expenses: Durability and vandal resistant features.

Maintenance Free: Will not rust, warp, corrode, rot, or burn and retains finish without maintenance.

Saves Money: Costs much less and eliminates many inherent costs of comparable built in place construction.

Ideal Application:

- Data Centers
- Office Space
- Wireless Equipment
- Cable Equipment
- Telephone Equipment
- Utility Equipment
- Pump Houses
- Generator Buildings
- Control Rooms
- Guard Houses
- Storage
- Restrooms
- HAZMAT
- Concessions
- Military Storage
- Wastewater Facilities
Multi-Section - Maxi-Mod® High Performance Buildings

Vandal Resistant  I  Bullet Resistant  I  Fire Resistant  I  Earthquake Resistant  I  Hurricane Resistant

Please call 888.965.3227 to speak with a precast specialist.
Pre-Engineered Precast Concrete Buildings

The Maxi-Mod all precast building system allows for the ultimate in design flexibility for your large shelter needs. Maxi-Mods provide you with a fast-track building that can be customized in a variety of sizes and configurations. Each Maxi-Mod can be engineered to be expanded to meet your needs. Our construction process is concurrent with site preparation & permitting, saving time and money on your project.

Our shelters are manufactured with precision steel forms to produce exacting tolerances required for superior quality and watertight design.
Clam Shell High Performance Buildings

Please call 888.965.3227 to speak with a precast specialist.
Cell Blocks® Foundation System

Oldcastle Precast Cell Blocks are a precast, post-tensioned foundation system designed to accommodate monopoles, lattice towers, shelters, equipment cabinets, power/telco pedestals, precast walls, chain link fencing and stairs.

Ideal Application:
- Wireless Equipment
- Cable Equipment
- Telephone Equipment
- Pump Houses
- Generator Buildings
- Control Rooms
- Guard Houses
- Storage

Custom Services and Turn-Key Solutions

Oldcastle Precast Shelter Solutions has the experience, knowledge and resources to be your long term partner in the deployment, renovation and maintenance of your equipment facility. We provide pre-planning, coordinate the manufacturing of the shelter and handle all of the field details to ensure your on-time completion. We customize a deployment program that meets your quality, schedule and value specification needs.

Oldcastle Precast’s experienced project management, design and engineering team will work with you to create strong and innovative solutions that meet the demands of your specialized project.

Turn-Key Services:
- Program Management
  - Oversight & Communication
  - Value Engineering
  - Procurement
- Real Estate
  - Site Selection
  - Due Diligence & Evaluation
  - Negotiate & Close Property
- Design, Engineer & Permit
  - Space Planning
  - Zoning and Permitting
  - Civil, Structural, Architectural, Mechanical and Electrical
- Site Development
  - Site Work & Foundations
  - Utilities
  - Towers & Dishes
- Building Construction
  - Final Outfitting & Assembly
  - Architectural Enhancements
  - Renovations & Upgrades
- Equipment Integration
  - Racks & Cable Ladder
  - Offsite & Factory Equip
  - Wiring & Testing
- Continuing Services
  - Site Audits & Inspections
  - Preventive Maintenance
  - Repairs
Shelter & Building Interiors

Please call 888.965.3227 to speak with a precast specialist.
Electrical and mechanical systems are designed and installed to meet customer specifications as well as specialized technicians to integrate customer supplied equipment. Many accessory options are available to customize electrical, generator, grounding, cabling, heating and cooling, and other features for your building.
Oldcastle Precast is the leading manufacturer of precast concrete, polymer concrete and plastic products in the United States. With a nationwide network of facilities our products are always close at hand. Our employees are committed to upholding core values of reliability, quality and service in revolutionary ways. Our attention to detail exceeds the expectations of customers from some of the largest companies in the U.S., across a spectrum of industries.
Delivering Reliability

Fast-Track construction
Saves money by saving time
Flexible design
Scalable to meet changing technological and business needs
Safe & secure IT facility
Turnkey services
Total precast concrete solutions
Reduces total cost of ownership
Pre-engineered designs available based on quantities of racks and rack loads
Multiple options available to meet your program needs
Easily expand data center in difficult environments
Easily add components - including servers, frames and racks
Fully assembled, conditioned, distributed power, equipment rack systems, in-row, load-variable cooling and monitoring capabilities available

Building Structures-Shelter Solutions

Multiple Options & Applications
Oldcastle Precast quickly deploys cost-effective, high quality, expandable, precast concrete data centers to meet your growing IT infrastructure needs. Oldcastle Precast is your solution to manage your construction project from beginning to end no matter what the square footage demand; a full turnkey solution.

☐ Fast-Track construction
☐ Saves money by saving time
☐ Flexible design
☐ Scalable to meet changing technological and business needs
☐ Safe & secure IT facility
☐ Turnkey services
☐ Total precast concrete solutions
☐ Reduces total cost of ownership
☐ Pre-engineered designs available based on quantities of racks and rack loads
☐ Multiple options available to meet your program needs
☐ Easily expand data center in difficult environments
☐ Easily add components - including servers, frames and racks
☐ Fully assembled, conditioned, distributed power, equipment rack systems, in-row, load-variable cooling and monitoring capabilities available
Custom Services and TurnKey Solutions

Oldcastle Precast Shelter Solutions has the experience, knowledge and resources to be your long term partner in the deployment, renovation and maintenance of your data center facility.

Oldcastle Precast’s experienced project management, design and engineering team will work with you to create strong and innovative solutions that meet the demands of your specialized project.
# Featured Products

## Controlled Environment Cabinets (CEC)

Oldcastle Precast’s CEC products are the solution for smaller applications where space is limited in high density areas. Designed to be above ground or partially buried for low profile applications, CEC’s are installed in just a few hours. Available in a variety of sizes, CEC’s are a sustainable alternative to metal cabinets. Site preparation is easy and cost effective.

Oldcastle Precast’s efficient CEC designs allow technicians to work immediately, maintain equipment in any weather condition, and provide a comfortable environment. Our cabinets also allow for easy expansion. Oldcastle Precast CECs accommodate six bays of electronics, in addition to battery and rectifier gear. Oldcastle Precast has engineered the industry’s strongest, most secure and efficient CEC to fit your equipment needs.

![CEC Images](image)

### Ideal Application:
- Low Profile Areas
- Cities and Towns
- Business Parks
- Subdivisions
- Apartment Complexes
- Strip Malls
- Planned Urban Developments

## Controlled Environment Manholes (CEMH)

Oldcastle Precast’s urban designed, zero profile CEMH products provide a pre-wired solution for your lighting, air conditioning, alarms and any other specific requirements. Oldcastle Precast’s CEMH is designed to be flush to grade and visually appealing. A compression sealed entry hatch permits placement flush with the ground, pavement or sidewalk. This heavy gauge galvanized steel hatch is vandal resistant and won’t compromise your equipment if flooding occurs.

CEMH’s contain two levels. The top level includes the air conditioning, control assembly, power entrance, transfer switch and an emergency power generator connector. The bottom level houses the telecommunications and environmental control equipment. CEMH products are easy to permit and provide an electronic equipment enclosure right where you need it - out of sight.

![CEMH Images](image)

### Ideal Application:
- Placed in Sidewalks
- Downtown
- Urban Areas
- Boroughs
- Towns
- Cities
**Controlled Environment Vaults (CEV)**

Oldcastle Precast’s below-grade Controlled Environment Vaults are built secure and watertight. Our precast concrete structures install quickly and are delivered pre-wired with HVAC, lighting and alarms designed to your requirements. Available in a variety of sizes, Oldcastle Precast CEVs are the optimal choice, providing unmatched security for your network requirements.

**Microcell™ Environment Vaults**

Oldcastle Precast’s Microcell Controlled Environment Vaults house micro-cells underground and are ideal for applications where shallow excavation and/or size restrictions require small vaults. Equipment can be placed out of sight and secure from the weather. In addition to having a zero profile, they offer unmatched security and are cost effective.
Oldcastle Precast is the leading manufacturer of precast concrete, polymer concrete and plastic products in the United States. With a nationwide network of facilities our products are always close at hand. Our employees are committed to upholding core values of reliability, quality and service in revolutionary ways. Our attention to detail exceeds the expectations of customers from some of the largest companies in the U.S., across a spectrum of industries.
Oldcastle Precast Shelter Solutions has the experience, knowledge and resources as your long term partner in the deployment, renovation and maintenance of your equipment facility. The manufacturing, deployment and integration of any facility is a complex process that our team successfully delivers. Oldcastle Precast provides a turn-key solution from pre-planning, design and procurement through manufacturing, facility set-up and systems integration to ensure on-time delivery of the product you desire.

Oldcastle Precast Shelter Solutions provides the following benefits:
- Single Point of Accountability
- Diverse Experience
- Efficient and Expedited Deployment

We customize a deployment program that meets your quality, schedule and values through an understanding of your:
- Technical Specifications
- Equipment Requirements
- Geographical Requirements
Oldcastle Precast will help you manage your schedule and budget.

Program Management
- Single Source Communication
- Onsite Supervision
- Schedule / Cost / Quality Coordination

Real Estate
- Site Selection
- Due Diligence
- Negotiation and Acquisition

Design, Engineering and Permitting
- Space Planning
- Zoning and Permitting
- Civil, structural, architectural, mechanical and electrical

Site Development
- Civil and Foundation Work
- Utilities Coordination
- Ancillary Installation such as towers and dishes

Building Construction
- Final Outfitting and Assembly
- Architectural Enhancements
- Renovations and Upgrades

Equipment Integration
- Racks and Cable Ladder
- Off Site and Factory Equipment Installation
- Wiring and Testing

Continuing Services
- Site Audits and Inspections
- Preventive Maintenance
- Repairs
Experience You Can Count On

Oldcastle Precast Shelter Solutions is your single source for system Critical facilities. Not only do we manufacture our precast shelters in multiple sizes and configurations, we also modernize existing facilities to meet today's technology requirements.

Oldcastle Precast Shelter Solutions possesses the ingenuity and flexibility to provide these services in and around sensitive areas occupied by customers, staff, or critical equipment.

On every project our knowledge and experience help you through any portion of the overall process. From concept to completion our team is available to meet your needs, and provide solutions.
AC Upgrades

- No upgrading of electrical service required
- Systems will work with existing controller
- Retrofit of dual compressor CEV in just 1 day
- Additional cooling capacity, up to 6 tons and greater reliability
- New condenser located in A/C housing with restrictive air inlet’s/outlets
- New condenser utilizes modern Scroll compressor-assessable simplified
- New condenser BLOWER moves required air through restrictive louvers
- Ceiling mounted air handler designed to fit in the center of the CEV walkway
- Ceiling mounted air handler blows 800 cfm down/out to improve circulation
- “Hatch pak” provides fresh outside air upon demand
- Blower motor and squirrel cage can be replaced in minutes
- Entire system designed to make maintenance and repairs simple and fast

Above Ground Buildings AC Upgrades & Improvements

Can be installed outside or custom built to install AC unit inside of building.

NGCEV New Hatch Replacement & Issue II & Issue IV Hatch Replacement.

Typically manufactured in 2 weeks. Can be accelerated in emergency cases

OZ-Bank Expansion

Full Turnkey can be Installed in banks of 2, 4, 6, & 8

NGCEV Control Panel Replacements
Upgrade to a Solid State Control

COLLAR EXTENSION
Replacements. Built to Specification

CEU Sump Pump Installation
Installed in Above Ground Buildings

Building Roof Repairs
From Cracks to Major Overhauls

CEV Relocate—Full Turnkey Provided
Resealed and Con-Wrapped

Custom Building Work
Buildings-Roofs-Siding-Landscape

Change out old Gem Floats to S.S. Probe Floats including Heater & Dehumidifier

CEV, CUE, CMH, Flush mount, Huts & All other Concrete Structures.

Cracks & Leaks in parting lines or cold joints are injected and sealed.

Please call 888.965.3227 to speak with a Solution Specialist or visit us at oldcastleprecast.com
MCNC/CommScope Golden Leaf Rural Broadband Project
North Carolina

RCS1020 Precast Concrete Shelters

Project Overview

New fiber build installation of approximately 2,000 miles of fiber optic cables throughout a 69 county area in the state of North Carolina. As part of the BroadbandUSA Initiative once complete the project will greatly increase the broadband capacity and stabilize bandwidth and Internet access costs for public school systems, community college campuses, libraries, universities, and other community anchor institutions.

Phase 1 required (2) two turnkey Co-Location Shelters to house the headend fiber network system.

Phase 2 required an additional (18) eighteen turnkey Co-Location shelter sites.

Construction Challenge

In collaboration with MCNC, Commscope, and the State of North Carolina, Oldcastle Precast provided a "turnkey" solution for (20) different sites. Oldcastle Precast's scope of work consisted of the manufacturing, outfitting and installation of (20) twenty RCS1020 shelters along with foundations, fencing, power service, dc installation, racking and generators.

Precast Solution

The turnkey project involved the manufacturing and complete outfitting of Oldcastle Precast’s RCS1020 Precast Equipment Shelters with all specified equipment. In addition, the fully out-fitted shelters were shipped, installed and made fully functional at (20) twenty different locations in North Carolina. The RCS1020 shelters were manufactured at our Newnan, GA facility and foundations were installed in the field by our Oldcastle Services Group.

Construction Schedule

Start Date : January 2012
Completion Date: Scheduled for September 1, 2012
SCOPE OF WORK

Precast Structure

A. Structural Engineering
   Detailed engineering:
   Drawings: Detailed drawings

B. Precast Concrete Shell
   Size: (1) RCS 1020 concrete shelter with waffled floor
   Concrete: 5000 psi concrete
   Outside dimension – 20'-0" Long x 10'-0" W x 10'-1" H
   Finished inside dimension – 19'-0" Long x 9'-0" W x 9'-0" H
   Weight: Approximate finished weight: 48,432 pounds
   Specifications: Floor load: 200 PSF
   Roof load: 60 PSF
   Wind load: 150 MPH, Exp “C”
   Bullet Resistance: UL752 Level 4 equivalent
   Fire Rating: 2 hour
   Seismic Zone: Up to 50% gravity acceleration

C. Finishes
   Exterior Walls: Exposed aggregate finish with tan trim
   Interior Walls & Ceiling: 1/8" FRP mounted on 1/2" board
   Insulation: R-11 on walls and ceiling
   Telco Board: (1) 4’x4’ telco termination board; white
   Floor: Vinyl composition tile
   Roofing: Dura-cool coating

D. Doors and Openings
   Doors: (2) 3’-0” x 7’-0” heavy duty steel door & frame
   Locks: (2) Kaba – 5 key combination locksets,
   Door Hardware: NRP Stainless steel hinges, closer, pick plate,
   holder, weather stripping, door shoe & aluminum
   threshold
   Door Drip Caps: (2) Door drip caps – 2 ½” wide
   Door Canopy: (2) Standard 3070 door canopies

E. Power
   Power Service: 200A,1Ø, 120/240V
   Main Distribution Panel: 200A, 1Ø, main breaker w/ 42 positions
   “SQ D”, breakers
   Exterior Disconnect: 200A, 1Ø, exterior disconnect
   Surge Suppression: (1) AC Data surge suppressor –
   AC2100NA
   Convenience Outlets: (8) 120v/20A duplex outlets
   Exterior GFI Outlets: (1) 120/20A outlet
   Twistlock Receptacles: (4) 120v/20A twistlock receptacles
   Automatic Transfer Switch: (1) Automatic Transfer Switch –
   Asco 300 Series
   Fiber Termination Panel: (2) Fiber Termination Panels
   Battery Plant: (2) 100A, Eltek Valere DC
   Battery Plants
   Standard Racks: (2) Standard racks
   Invertor: (1) 2000 Watt invertor

F. Environmental System
   HVAC: (2) 3 ton, 1Ø – Marvair HVAC units with 5kw heater, no economizer
   Controls: (1) Lead / Lag controller

G. Alarms
   Alarms: (1) 25 pair alarm terminal box with Intrusion, smoke, power failure,
   HVAC fail and high/low temperature

H. Lighting
   Interior: (4) 4’, double tube fluorescent light fixtures with lexan covers
   Exterior: (2) Exterior lights, 70 Watt HPS with photocell
   Emergency: (1) Emergency fixture with dual flood lights
   Switches: (2) 20 amp light switches

I. Cable Ladder
   Cable Ladder: 60 linear feet of 18’ wide gold chromate cable ladder with
   supports and brackets
   Cable Brackets: 22 each cable brackets – Central Steel Part ACB2ZY

Oldcastle Precast Shelter Solutions | National Office - 200 Keystone Drive, Telford, PA | phone: 215.257.2255

Also Offering:
Real Estate Services
- Identification/Evaluation
- Due diligence
- Contract negotiation
- Representation at closing
- Real Estate Commissions
City of Opelika – New Fiber Optic Building for New FTTH Network
Opelika, AL

# 3096 Precast Concrete Maxi-Mod Buildings

Project Overview

The City of Opelika is developing a new fiber to the home (FTTH) network to provide both broadband services as well as the ability to monitor and manage their own energy consumption. The FTTH new fiber optic network and new smart grid technology for the network will give residents and businesses access to new high-quality broadband voice, data and video services, including lightning-fast Internet access, IPTV and video-on-demand services.

Opelika will be the first city in the State of Alabama to build an all fiber optic network and will leverage that infrastructure to enhance economic development and attract new businesses to the community.

Construction Challenge

The $2.6 million project included the complete “Full Turn Key” construction of a 60 foot by 96 foot building that would house the new head-in building and data center building. The scope of work consisted of manufacturing, out-fitting and installation of the building, fencing, power service, dc installation, racking and generators.

Precast Solution

The turnkey project involved the manufacturing and complete out-fitting of (2) two Oldcastle Precast # 3096 Precast Concrete Maxi-Mod components to create the required 60 ft x 96 foot building with all specified equipment. In addition, the fully out-fitted building modules were shipped, installed and made fully functional for the City of Opelika. The # 3096 Precast Concrete Maxi-Mod components were manufactured at our Newnan, GA facility and foundations were installed in the field by our Oldcastle Shelter Solutions Group.

Construction Schedule

Start Date: May 2012
Completion Date: Scheduled for August 1, 2012

Design & Construction Team

GENERAL CONTRACTOR:
RACO, Inc.

OWNER:
City of Opelika

PRECASTER:
Oldcastle Precast
Shelter Solutions

MANUFACTURING FACILITY:
Oldcastle Precast
Newnan, Georgia
SCOPE OF WORK

Precast Structure

A. Structural Engineering
   Engineering: Provided complete product engineering services.
   Drawings: Provided detailed engineering drawings.
   Supervision: Provided an onsite managing supervisor.

B. Precast Concrete Shell
   Size: (2) Model 3096 maxi-mod concrete building.
   Each outside dimension: ~ 97'-4" Long x 31'-4" Wide x 10'-1" High.
   Each finished inside dimension: ~ 96'-0" Long x 30'-0" W x 10'-0" H.
   Weight: Approximate weight: 59,000 pounds per concrete section.
   Specifications:
      Floor load: 150 PSF
      Roof load: 60 PSF
      Wind load: 130 MPH, Exp “C”
      Seismic Zone: Zone 4.

C. Finishes
   Exterior Finish: Smooth chamfered surface w/ textured finished.
   Interior Finish: Interior walls & ceiling finished w/FRP laminated board.
   Insulation: Outside walls & ceiling insulated.
   Floor: VCT anti-static tile with rubber base molding.
   Interior Walls: Steel Stud 2x4 framing, insulation, drywall, and FRP (2hr rated);
      (2) Video Head-End Offices-# 1 & #2; (1) Set-Up Office/Lab;
      (1) Electrical/Battery Room; (1) Storage/Receiving Area;
      (1) Server Room.
   Roofing: 60 mil Duro Last Roof with a 20 year warranty

D. Doors and Openings
   Doors: (3) 4'-0" x 7'-0" heavy duty steel doors and frames.
   Doors: (9) 6'-0" x 7'-0" heavy duty steel doors and frames.
   Locks: (12) Locksets w/ changeable core; (6) Mortise; (5) Passage; (4) Panic Bars Doors; frames have electric strike & card reader
   Door Hardware: NRP Stainless steel hinges, door closer, door pick plate, door holder, weather strip, aluminum threshold, 2.5”drip cap.

E. Power
   Power Service: 1200A, 3Ø, 480V
   Disconnect Switch: (1) 2000A @ 480VAC 3 PHASE main switch gear.
   Surge Suppression: (2) 100K Peak Amp Surge Suppressor.
   Generator: Included in section 11.
   Main Distribution Panel: (1) 1200A (DSSB) support phase one loads.
   HVAC Panel: (1) 600A HVAC (HM) Panel.
   DC/UPS Panel: (1) 800A (HC) Panel.
   LA Panel: (1) 225A (LA) Housekeeping Panel.
   HA Panel: (1) 100A Lighting Panel.
   Transformer: (1) 75kVA 480VAC to120VAC step transformer for non-critical housekeeping loads.
   Convenience Outlets: (61) 20A, 120V Duplex outlets (as needed throughout bldg.).
   Exterior GFI Outlets: (11) 20A, 120V outlets.
   Power Conditioning: (2) APC Symmetra PX 100 kW UPS with 50 kVA modules, PDU & cables with connectors to the “A” power strips in Rows 1 & 2 (3) APC Symmetra PX 40 kW UPS with 10 kVA modules, including batteries, PDU & cables with connectors to the “A” power strips in Rows 1 & 2 complete.
   DC Plant/Batteries: Lineage DC Plant and Batteries.

F. Environmental System
   HVAC: (2) Bard W60A1C06MP 2. 5 Ton 3Ø HVAC Units with dehumidification, 9kw heat, “E” controls (low ambient control).
      (17) Bard W60A1D06MP 5 Ton 3Ø HVAC Units with dehumidification, 9kw heat, “E” controls (low ambient control).
   Controls: (10) Bard MC4000B Lead Lag Controller with enhanced alarm board.
   HFans: (5) Broan 331H wall exhaust fans.
   Grills: Return air, and exhaust grills.

G. Alarms

H. Lighting
   Interior (Mod A): (96) 4’ fluorescent light fixtures with 20% up light.
   Interior (Mod B): (20) 4’ fluorescent light fixtures with wire guards.
   Exterior: (13) 100 HPS Exterior fixtures with photo cell.
   Emergency: (11) Emergency fixture with exit sign and dual flood lights.
   Exit: (8) Exit sign/lights.
   Switches: (12) 20 amp light switches.
I. Cable Ladder:
   Cable Ladder: (750) LF of 12” gray cable ladder mounted above rack spaces: Ladder mounting hardware, Two layers of cable ladder mounted above DC rows, One lay of cable ladder mounted above AC rows.
   Fiber tray: (321) LF of fiber tray as shown on drawing T2.01.

J. Grounding
   Halo: No.2 AWG Bare, Stranded copper wire around inside perimeter of building.
   Bonding: No. 6 insulated copper wire from metallic items such as conduit, electrical boxes and equipment to perimeter ground bus. #2 stranded green jacketed communication equipment ground bus secured to Newton #2106C brackets mounted to the cable ladder.
   Ground Bar: (2) 24” x 4” x ¼” Cooper ground bars, insulators, connecting rods & exterior; Copper straps (4”) to earth ring; One bar interior, one exterior.

K. On-site Mechanical and Electrical
   Electrical (exterior):
      Exterior ground halo: Perimeter loop with copper cable, 10’ copper cladded rods, inspections ports, conduit entry into building with all connections cadwelded.
      Lightning protection: Lightning protection system adhered to roof, lightning arrestors adhered to roof with each down leg cadweld to 10’ copper cladded rod connected to the main ground loop.
   Generator work: Included as part of Section 11.
   Power Conditioning: Included as part of Section 7.
   Electrical (interior): Included as part of section seven.
   Plumbing: Water lines and condensate lines. Lines outside 5 feet from the building are excluded.
   Fire Protection: System engineering per NFPA protocol; tanks, piping and FE-25 agent to 9% concentration; smoke detectors and relays; abort buttons, pull stations and strobes; required testing, start-up and instructions.
   HVAC: Included as part of section seven.
   Controls and automation: Included as part of section seven.

L. Equipment
   Generator: CAT Model C27 - 750 KW (480V) diesel generator with standard weather enclosure with critical grade silencer; main line circuit breaker; 24 hour belly fuel tank (1,600 gallon); analog / digital control panel; start-up and training.
   Generator work: Receive, set and anchor; up to 20 lf of conduits (line voltage, blocker heater and controls) and matching number of conductors for 750KW generator. UG conduits to be encased in concrete.
   Load Bank Test: Complete a 4 hour load bank test of the generator per specifications and plans.
   ATS -A: Included as a part of Section 7.
   ATS -B: Included as a part of Section 7.
   Power Conditioning: Included as a part of Section 7.

M. Electronic Equipment Integration
   Cable ladder: Included in section seven.
Case Study - City of Opelika – New Fiber Optic Building for New FTTH Network

Opelika, AL

Oldcastle Precast Shelter Solutions | National Office - 200 Keystone Drive, Telford, PA | phone: 215.257.2255
Oklahoma Department of Transportation
Weigh Station Buildings Project

RCS 13830 Precast Concrete Buildings

Project Overview

The Oklahoma DOT (ODOT) is constructing new state-of-the-art commercial truck weigh and inspection stations for heavy trucks entering Oklahoma. A total of nine POE weigh stations will be built along major highway entrances around the state’s border.

The $100 million dollar project consists of building eight permanent, manned stations at key ports of entry into Oklahoma, along with a ninth unmanned “virtual” station that will allow regulators to use special equipment to weigh and check trucks as they move along the highway.

Construction Challenge

In collaboration with Telco Supply Company and the Oklahoma State DOT, Oldcastle Precast provided a “turnkey” solution for the ODOT Port of Entry Precast Weight Station Buildings. Oldcastle Precast’s turnkey scope of work consisted of the manufacturing, outfitting and installation of (2) two RCS 13830 Precast Concrete POE Buildings.

Precast Solution

The ODOT, using metal office trailers in the past, knew it was essential, going forward, to provide a more secure and durable building to house the DOT employees that weigh and regulate the trucking industry on Oklahoma’s highways. They chose precast concrete construction as the solution.

The turnkey project involved the manufacturing and complete out-fitting of Oldcastle Precast's RCS 13830 Precast Concrete Buildings with all specified equipment. In addition, the fully out-fitted buildings were shipped, off loaded and installed at the POE sites near Oklahoma City. The RCS 13830 Precast Concrete Buildings were manufactured at our Newnan, GA facility.
SCOPE OF WORK

Precast Structure
A. Structural Engineering
   Detailed engineering & drawings
B. Precast Concrete Shell
   Size: 1 RCS 1430 Light Weight Precast Concrete POE Precast Office Building
   Outside Dimension – 30’ long x 13’8” Wide x 10.1’ High
   Finished Inside Dimension – 29’ Long x 12’ 8” Wide x 9’ High
   Weight: Approximate finished weight ~82,700 pounds
   Specifications:
   - Floor load: 200 PSF
   - Roof load: 60 PSF
   - Wind load: 150 MPH, Exp “C”, I=1.15
   - Bullet Resistance: UL752 Level 4 Equivalent (.30-06 at 15 Ft.)
   - Fire rating: Two Hour Equivalent
   - Seismic Zone: Up to 50% Gravity acceleration per IBC2006. Higher ratings are available to 300% Gravity acceleration

C. Finishes
   Exterior Walls: Solid Precast Concrete, 4” Thick with Textured Thorocoat finish,
   Interior Wall & Ceiling: Nudo White 1/2 “FRP board
   Insulation: R-11 in walls and ceiling
   Roofing: Vinyl composition tile with rubber base molding
   Stud Partition Walls:

D. Doors and Openings
   Doors:
   - (2) 3'-6” x 7'-0” 16 gauge steel door with 14 gauge steel frame
   Locks:
   - High Security Lockset with changeable core and Panic hardware
   Other Door Hardware:
   - (2) NRP Stainless steel hinges, anti-pick plate; kick plate, hydraulic door closer, weather strip, aluminum threshold; door sweep
   Door Hood:
   - (2) 54”w x 30”d door rain hoods, (2) Door drip cap
   Interior Doors:
   - (2) 3”-0” x 7”-0” Interior steel doors with hardware;
   Windows:
   - (5) 5ftW x 4ftH Shatterproof Tinted Windows rated 150 MPH with 1- 5/16” tempered, tinted, hurricane resistant glass

E. Power
   Power Service:
   - 200A 1Ø 120/240V
   Disconnect Switch:
   - (1) SQ D, D224NRB, 200A Exterior Disconnect Switch
   Main Distribution Panel:
   - (1) SQ D NO series, MB panel, 200A 1Ø, 40 space
   Surge Suppression:
   - (1) Raycap/AC Data B82XXR-G at MDP
   Convenience Receptacles:
   - (6) 20A, 125V
   Dedicated Receptacles:
   - (~32) 120V, 15A Receptacles
   Exterior GFI Receptacle:
   - (2) 20A, 125V

F. Environmental System
   HVAC:
   - (1) 3 Ton, 240V,1Ø wall mounted HVAC system
   Controls:
   - (1) Auto heat/cool thermostat controller
   Restroom Exhaust fan:
   - (1) Restroom exhaust fan

G. Alarms
   Alarms:
   - (1) 25 pair split 66 block in storage room with intrusion smoke

H. Lighting
   Interior:
   - (4) 4’-2” tube Lithonia fluorescent light fixtures with acrylic lens covers
   - (2) 2’ x 2’, surface mtd fluorescent fixtures
   Exterior:
   - (2) 100W HPS Exterior light with photocell Lithonia TWA series
   Emergency:
   - (2) Emergency fixture with dual flood lights
   Switches:
   - (2) 20A light switches

I. Grounding
   Grounds: Standard Commercial service grounding per NEC.

K. Additional Items
   Telco, Computer, Radio:
   - Install other conduits only as required
   Counter:
   - Plastic laminate counter with ledge
   Storage shelves/Cabinet:
   - Plastic laminate storage shelves in storeroom & storage cabinet in restroom
   Restroom:
   - Block outs for plumbing & floor drain provided by Oldcastle.
   IT equipment box/cabinet:
   - IT equipment box/cabinet in storage room