Permit #

Permit Date

COM*check* Software Version 3.1 Release 1

Envelope Compliance Certificate

Standard 90.1-2001

Report Date: 01/04/07

Data filename: J:\TOWERS BLDG-SLIDELL\2007 BID PACKAGE\Towers Comm Check.cck

Section 1: Project Information

Project Title: St. Tammany Parish Administrative Complex Renovation

Construction Site:
520 Old Spanish Trail
Slidell, LA 70458

Owner/Agent:
Bruce Crouch
St Tammany Parish Government
21454 Koop Dirve
Mandeville, LA 70471
(985) 898-2792
brucec@stpgov.org

Designer/Contractor:
David Dammon
Dammon Engineering
1095 Florida Ave.
Slidell, LA 70458
985-649-5832
dammoneng@bellsouth.net

Section 2: General Information

Building Location (for weather data):	**Slidell, Louisiana**
Heating Degree Days (base 65 degrees F):	**1674**
Cooling Degree Days (base 50 degrees F):	**6660**
Building Type for Envelope Requirements:	**Non-Residential**
Project Type:	**New Construction**
Glazing Area Percentage:	**82%**

Building Type	Floor Area
Office	44254

Section 3: Requirements Checklist

Envelope PASSES: Design 10% better than code.

Climate-Specific Requirements:

Component Name/Description	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor
Roof 1: Insulation Entirely Above Deck	7730	19.0	15.0	0.063	0.063
Exterior Wall 1: Concrete Block:8", Solid Grouted,Light Density , Furring: None	5447	---	14.0	0.063	0.580
Door 1: Glass, Clear, SHGC 0.17	160	---	---	1.000	1.220
Window 2: Metal Frame with Thermal Break:Double Pane with Low-E, Tinted, Fixed, SHGC 0.50, PF 1.00	210	---	---	2.000	1.220
Exterior Wall 2: Steel-Framed, 24" o.c.	4455	19.0	14.0	0.041	0.124
Window 3: Metal Frame with Thermal Break:Triple Pane with Low-E, Clear, Fixed, SHGC 0.25, PF 1.00	4455	---	---	1.000	1.220
Exterior Wall 3: Steel-Framed, 24" o.c.	4455	19.0	14.0	0.041	0.124
Window 4: Metal Frame:Double Pane with Low-E, Clear, Fixed, SHGC 0.25, PF 1.00	4455	---	---	1.000	1.220
Exterior Wall 4: Steel-Framed, 24" o.c.	4455	19.0	14.0	0.041	0.124
Window 5: Metal Frame:Double Pane with Low-E, Clear, Fixed, SHGC 0.25, PF 1.00	4455	---	---	1.000	1.220
Exterior Wall 5: Steel-Framed, 24" o.c.	4455	19.0	14.0	0.041	0.124

Window 6: Metal Frame:Double Pane with Low-E, Clear, Fixed, SHGC 0.25, PF 1.00	4455	---	---	1.000	1.220
Exterior Wall 6: Steel-Framed, 24" o.c.	4455	19.0	14.0	0.041	0.124
Window 7: Metal Frame:Double Pane with Low-E, Clear, Fixed, SHGC 0.25, PF 1.00	4455	---	---	1.000	1.220
Floor 1: Slab-On-Grade:Unheated	8652	---	40.0	---	---

(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.

Insulation:

- ❑ 1. Open-blown or poured loose-fill insulation has not been used in attic roof spaces with ceiling slope greater than 3 in 12.
- ❑ 2. Wherever vents occur, they are baffled to deflect incoming air above the insulation.
- ❑ 3. Recessed lights, equipment and ducts are not affecting insulation thickness.
- ❑ 4. No roof insulation is installed on a suspended ceiling with removable ceiling panels.
- ❑ 5. All exterior insulation is covered with protective material.
- ❑ 6. Cargo and loading dock doors are equipped with weather seals.

Fenestration and Doors:

- ❑ 7. Windows and skylights are labeled and certified by the manufacturer for U-factor and SHGC.
- ❑ 8. Fixed windows and skylights unlabeled by the manufacturer have been site labeled using the default U-factor and SHGC.
- ❑ 9. Other unlabeled vertical fenestration, operable and fixed, that are unlabeled by the manufacturer have been site labeled using the default U-factor and SHGC. No credit has been given for metal frames with thermal breaks, low-emissivity coatings, gas fillings, or insulating spacers.

Air Leakage and Component Certification:

- ❑ 10. All joints and penetrations are caulked, gasketed, weather-stripped, or otherwise sealed.
- ❑ 11. Windows, doors, and skylights certified as meeting leakage requirements.
- ❑ 12. Component R-values & U-factors labeled as certified.

Section 4: Compliance Statement

Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed envelope system has been designed to meet the Standard 90.1-2001 requirements in COM*check* Version 3.1 Release 1 and to comply with the mandatory requirements in the Requirements Checklist.

Principal Envelope Designer-Name	Signature	Date

Permit #
Permit Date

COM*check* Software Version 3.1 Release 1

Lighting and Power Compliance Certificate

Standard 90.1-2001

Report Date: 01/04/07

Data filename: J:\TOWERS BLDG-SLIDELL\2007 BID PACKAGE\Towers Comm Check.cck

Section 1: Project Information

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Construction Site:
520 Old Spanish Trail
Slidell, LA 70458

Owner/Agent:
Bruce Crouch
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21454 Koop Dirve
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Designer/Contractor:
David Dammon
Dammon Engineering
1095 Florida Ave.
Slidell, LA 70458
985-649-5832
dammoneng@bellsouth.net

Section 2: General Information

Building Use Description by:
Project Type: **New Construction**

Building Type	Floor Area
Office	44254

Section 3: Requirements Checklist

Interior Lighting:

❑ 1. Total actual watts must be less than or equal to total allowed watts.

Allowed Watts	Actual Watts	Complies
57530	16960	YES

Exterior Lighting:

❑ 2. Minimum efficacy of 60 lumen/watt for lamps greater than 100W.

❑ 3. Lighting power for canopies, entrances, and exits meets the following criteria (trade-offs allowed among these applications):
- (i) Lighting power for free-standing canopy areas or building entrances with canopies is less than or equal to 3 watts per square foot.
- (ii) Lighting power for building entrances without a canopy is less than or equal to 33 watts per linear foot of door width.
- (iii) Lighting power for building exits is less than or equal to 20 watts per linear foot of exit door width.

❑ 4. Lighting power for building facades is less than or equal to 0.25 watts per square foot of the illuminated area.

Exceptions:

Controlled by motion sensor, signal or advertising signage, highlighting features of historic monuments and buildings, or required for safety or security.

Controls, Switching, and Wiring:

❑ 5. Independent manual or occupancy sensing controls for each space (remote switch with indicator allowed for safety or security).

❑ 6. Automatic shutoff control for lighting in >5000 sq.ft buildings by time-of-day device, occupant sensor, or other automatic control.

Exceptions:

24 hour operation lighting.

❑ 7. Master switch at entry to hotel/motel guest room.

❑ 8. Separate control device for display/accent lighting, case lighting, task lighting, nonvisual lighting, lighting for sale, and demonstration lighting.

❑ 9. Photocell/astronomical time switch on exterior lights.

Exceptions:

Covered vehicle entrance/exit areas requiring lighting for safety, security and eye adaptation.

❑ 10. Tandem wired one-lamp and three-lamp ballasted luminaires (No single-lamp ballasts).

Exceptions:

Electronic high-frequency ballasts;
Luminaires not on same switch;
Recessed luminaires 10 ft. apart or surface/pendant not continuous;
Luminaires on emergency circuits.

Voltage Drop:

❑ 11. Feeder conductors have been designed for a maximum voltage drop of 2 percent.

❑ 12. Branch circuit conductors have been designed for a maximum voltage drop of 3 percent.

Section 4: Compliance Statement

Compliance Statement: The proposed lighting design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed lighting system has been designed to meet the Standard 90.1-2001 requirements in COM*check* Version 3.1 Release 1 and to comply with the mandatory requirements in the Requirements Checklist.

Principal Lighting Designer-Name	Signature	Date

Section 5: Post Construction Compliance Statement

Record Drawings and Operating and Maintenance Manuals

Construction documents with record drawings and operating and maintenance manuals provided to the owner.

Permit #
Permit Date

COM*check* Software Version 3.1 Release 1

Lighting Application Worksheet

Standard 90.1-2001

Report Date:

Data filename: J:\TOWERS BLDG-SLIDELL\2007 BID PACKAGE\Towers Comm Check.cck

Section 1: Allowed Lighting Power Calculation

A	B Floor Area	C Allowed Watts / ft2	D Allowed Watts
Office	44254	1.3	57530
		Total Allowed Watts =	57530

Section 2: Actual Lighting Power Calculation

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
1st Floor 2X4: 2X4: FLUORESCENT / 48" T12 40W / Magnetic	3	31	32	992
2nd Floor 2X4: 2X4: FLUORESCENT / 48" T12 40W / Magnetic	3	83	32	2656
3rd Floor 2X4: 2X4: FLUORESCENT / 48" T12 40W / Magnetic	3	107	32	3424
4th Floor 2X4: 2X4: FLUORESCENT / 48" T12 40W / Magnetic	3	91	32	2912
5th Floor 2X4: 2X4: FLUORESCENT / 48" T12 40W / Magnetic	3	105	32	3360
6th Floor 2X4: 2X4: FLUORESCENT / 48" T12 40W / Magnetic	3	113	32	3616
			Total Actual Watts =	16960

Section 3: Compliance Calculation

If the Total Allowed Watts minus the Total Actual Watts is greater than or equal to zero, the building complies.

Total Allowed Watts =	57530
Total Actual Watts =	16960
Project Compliance =	40570

Lighting PASSES: Design 71% better than code.

Permit #
Permit Date

COM*check* Software Version 3.1 Release 1

Mechanical Compliance Certificate

Standard 90.1-2001

Report Date: 01/04/07

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Section 1: Project Information

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Owner/Agent:
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Section 2: General Information

Building Location (for weather data):	**Slidell, Louisiana**
Heating Degree Days (base 65 degrees F):	**1674**
Cooling Degree Days (base 50 degrees F):	**6660**
Project Type:	**New Construction**

Section 3: Mechanical Systems List

Quantity	System Type & Description
1	Plant 1: Cooling: Water Chiller, Capacity >=150 - <300 tons, Condenser Evaporatively Cooled, Standard Centrifugal Chiller: leaving chilled water temperature = 44.0 deg. F, entering condenser water temperature = 85.0, condenser flow rate = 3 gpm/ton

Section 4: Requirements Checklist

Requirements Specific To: Plant 1 :

❑ 1. Equipment minimum efficiency: Chiller: COP >= 5.55, IPLV = 5.90
❑ 2. Meets the condenser heat recovery requirement for service water heating
❑ 3. Hot gas bypass prohibited unless system has multiple steps of unloading or continuous capacity modulation

Generic Requirements: Must be met by all systems to which the requirement is applicable:

❑ 1. Load calculations per acceptable engineering standards and handbooks
❑ 2. Chilled water distribution systems >=300 kBtu/h must have one of the following: a) controls that reset supply water temperature by 25% of supply/return delta T b) mechanical or electrical adjustable-speed pump drive(s) c) two-way valves at all heating coils d) multiple-stage pumps e) other system controls that reduce pump flow by at least 50% based on load - calculations required

Section 5: Compliance Statement

Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the Standard 90.1-2001 requirements in COM*check* Version 3.1 Release 1 and to comply with the mandatory requirements

in the Requirements Checklist.

Principal Mechanical Designer-Name	Signature	Date

Section 6: Post Construction Compliance Statement

- ❑ HVAC record drawings of the actual installation and performance data for each equipment provided to the owner within 90 days after system acceptance.
- ❑ HVAC O&M documents for all mechanical equipment and system provided to the owner within 90 days after system acceptance.
- ❑ Written HVAC balancing report provided to the owner.

The above post construction requirements have been completed.

Principal Mechanical Designer-Name	Signature	Date

COM*check* Software Version 3.1 Release 1

Mechanical Requirements Description

Standard 90.1-2001

Report Date:

Data filename: J:\TOWERS BLDG-SLIDELL\2007 BID PACKAGE\Towers Comm Check.cck

The following list provides more detailed descriptions of the requirements in Section 4 of the Mechanical Compliance Certificate.

Requirements Specific To: Plant 1 :

1. The specified heating and/or cooling equipment is covered by ASHRAE 90.1-2001 Standard and must meet the following minimum efficiency: Chiller: COP >= 5.55, IPLV = 5.90
2. Condenser heat recovery systems must be installed for heating or preheating of service hot water provided if: a) The facility operates 24 hours a day. b) The total installed heat rejection capacity of the water-cooled systems exceeds 6,000 kBtu/h of heat rejection. c) The design service water heating load exceeds 1,000 kBtu/h. The required heat recovery system must have the capacity to provide the smaller of: a) 60% of the peak heat rejection load at design conditions, or b) preheat of the peak service hot water draw to 85 degrees F. Exceptions: - Facilities that employ condenser heat recovery for space heating with a heat recovery design exceeding 30% of the peak water-cooled condenser load at design conditions. - Facilities that provide 60% of their service water heating from site solar or site recovered energy or from other sources.
3. Hot gas bypass or other evaporator pressure controls must be used on cooling equipment with multiple step or continuous capacity unloading. The maximum amount of hot gas bypass must be 50% of total capacty if <=240 kBtu/h and 25% of total capacity if >240 kBtu/h. Unitary packaged systems <=90 kBtu/h are exempted from this requirement.

Generic Requirements: Must be met by all systems to which the requirement is applicable:

1. Heating and cooling system design loads for sizing systems and equipment must be determined using generally accepted engineering standards and handbooks acceptable to the adopting authority (for example, ASHRAE Handbook of Fundamentals).
2. Chilled water space-cooling systems with a capacity exceeding 300 kBtu/h supplying chilled water for comfort conditioning systems must include controls that automatically reset supply water temperatures by representative building loads (including return water temperature) or by outside air temperature. Exceptions: - Where the supply temperature reset controls cannot be implemented without causing improper operation of heating, cooling, humidification, or dehumidification systems. - Hydronic systems that use variable flow to reduce pumping energy.