



# BFP News and Views

2014 First Quarter Issue  
January-February-March

A Publication of the Building Department  
and the Fire Prevention Bureau

[www.ClarkCountyNV.gov](http://www.ClarkCountyNV.gov)

## Alternate Plan Review Services Presented to Stakeholders

Over the past year, the Clark County Building Department has been actively developing alternative plan review programs to assist our customers with permitting and plan review for construction projects in our jurisdiction. Three newly developed programs are: Consultant Services Contract, Customer Driven Consultant Service, and the Permit Now program. These programs are intended to provide timely plan review and permitting of projects in the community as the area is recovering from the recent recession.

The following programs were presented at the Townhall Meetings held on February 26 and March 31. Customers were very receptive to the presentation of the new plans examination initiatives.



### Consultant Services Contract

The department has advertised a Request for Proposal from firms interested in providing contract services for plan reviews. The contract for services is similar to previous contract services that the department used during the 90's and into the 2000's while the valley was experiencing a period of record growth in construction and development.

These firms would provide professional plans examination services in times where the department may need additional resources to meet the demands of the customers. Where permit submittals exceed the volume of work that the department staff can reasonably handle, the department "outsources" these plan reviews to selected firms.

The "RFP" closed on March 28, 2014 and the department will enter into contract with these firms shortly after the evaluation period. The department handles all of the fees associated with this service with no increase to the standard plans examination fees.

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## Multi-National Delegations Visit the Clark County Department of Building and Fire Prevention Bureau

During this past February, we had the honor of hosting three international delegations from Abu Dhabi, Japan and Mongolia and one national delegation from Sandia National Laboratories Albuquerque, NM in our office. Executives from ICC/IAS helped to facilitate these tours and recommended to the delegates that they should tour our department as we represent one of the premier Building/Fire Prevention Departments in the United States.

February 5 – The Department of Municipal Affairs delegation from the Emirate of Abu Dhabi, United Arab Emirates represented by His Excellency – Mohammed Sghayer Al Dhaheri and Abdulla Hamdan Alameri and six senior engineers, planners and specialists along with senior IAS Executives toured our facilities for a day

and a half and met with Commissioner Steve Sisolak and key CCBD/FPB staff to discuss IAS accreditation, building department accreditation, special inspector certifications and our QAA program. Their country recently adopted the ICC Building/Fire Codes and are pursuing developing a world class building/fire department to accommodate their rapid growth and success.

February 13 – The Ministry of Land, Infrastructure, Transport and Tourism delegation from Tokyo, Japan, in conjunction with the Institute of International Harmonization for Building and Housing, represented by Dr. Wataru Gojo and Dr. Naohiko Iida and three senior

engineers met for a half day with key staff from CCBD/FPB to assist them in their study of foreign building regulatory systems to help them improve their own programs.

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## CCBD Approves Certificate of Operation for World's Largest Observation Wheel The Las Vegas High Roller

The Las Vegas High Roller Observation Wheel is the latest attraction on the Las Vegas Strip. Final inspection of the observation wheel was completed on Wednesday March 26, 2014. Final inspections were performed by a Building Department team and project participants led by Antonio Garcia. After operational testing to check procedures and attendant response, the largest observation wheel in the world was issued a Certificate of Operation on March 27, 2014 by Clark County Building Department.

This significant structure is the result of dedicated professionals from the design and development community. Materials, fabrication and design were procured worldwide. Listed below are interesting project facts:

- Overall height of the wheel tops 550 feet and its diameter is about 529 feet;
- At 550 feet, it is the tallest and largest observation wheel in the world and is taller than the 443 foot London Eye or 541 foot Singapore flyer;
- Based on 657,000 complete rotations, the operational design life is 50 years;
- At 1 foot per second, one complete revolution will take about 30 minutes;
- Total weight is approximately 3.5 million



pounds (1,750 tons);

- Each of the 28 unique cabins weigh about 44,000 pounds;
- Overall cabin diameter is about 20 feet and each cabin can accommodate up to a maximum of 40 passengers;

- Fully loaded, the wheel can accommodate up to a total of 1,120 passengers, equating to about 2,240 persons per hour;
- (112) 225 foot long 3" diameter coil-cable spoke assemblies were installed;
- Sum of all coil-cable spoke lengths total 25,256 feet (about 4.8 miles);
- Each spoke-cable assembly has been designed to have a breaking strength of 550 tons or 1,100,000 lbs (the weight of approximately 185 Hummer H2s);
- For added entertainment, the cabins feature dynamic video and music shows;
- Cabin interior climate control, audio visual, and door systems are fully automated;
- Uninterruptable Power Supply (UPS) for cabin ventilation and stabilization;
- Unlike traditional Ferris wheels, the cabins are not hung from the rim but rather bolted to the outside of the wheel using two "V-Arms" each; and
- Each set of cabin and "V-Frame" pairs weigh about 27.6 tons and the total sum of all the cabins is about 773 tons!

By: Antonio Garcia/Ted Droessler

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## Ron Lynn Receives Lifetime Achievement Award from WSSPC

Western States Seismic Policy Council (WSSPC) recognized the outstanding achievement of Ron Lynn, our Director/ Building and Fire Official of Clark County Building Department and Fire Prevention Bureau, for being a champion in earthquake safety throughout his career. His achievement spans over 30 years of extraordinary commitment and contribution to the application of earthquake risk reduction to public policy, developing codes and standards that directly impact seismic resilience of building and structures using the Uniform and International Building Codes.

Mr. Lynn was educated in Geology at the University of Las Vegas Nevada. His professional endeavors followed a path that kept him continually trumpeting the case of earthquake safety. He is one of the first to submit code language addressing soils/building interaction, leading to an awareness within the code that soils are a critical component of the performance of buildings in an

earthquake. His ability to collaborate with scientists, engineers, building owners, businesses, and the public have enabled a more efficient dissemination of seismic standards in our communities.

As Director of CCBD, Mr. Lynn was one of the first local government jurisdictions to join as an affiliate member of WSSPC. He has been a member of the WSSPC Engineering, Construction and Building Codes Committee since 1999, and currently serves as committee chair. In 2002, his department was recognized with an Award in Excellence for mitigation efforts for the Mitigation of Fault Related Hazards – shared with the Nevada Bureau of Mines and Geology (NBMG) – for implementing regulations that established "special geotechnical consideration areas" within 2,000 feet of NBMG mapped faults, and required setbacks from faults.



Most recently, his department was one of the first government entities in the State of Nevada to support the **Great Nevada Shake Out** by providing training as well as public service announcements to stimulate participation in seismic safety awareness.

  
 WESTERN STATES  
 SEISMIC POLICY  
 COUNCIL

On the web:

<http://www.wsspc.org>

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## Building Department Receives IAS Re-Accreditation

Clark County Building Department passed with flying colors the re-accreditation of the International Accreditation Services (IAS) of the operations, policies, procedures, performance, and finances of our administration, inspections, plans exam, and records divisions.

The 3-day evaluation in January 2014 was conducted to verify the continued compliance of the department's quality system to the requirements of the IAS Accreditation Criteria for Building Departments and Code Enforcement Agencies (AC2351), IAS Rules of Procedure.

This evaluation included a review of the code enforcement procedures. Field observations of representative building inspection, electrical inspec-

tion and plumbing inspection activities were performed during this assessment.

The Clark County Building Department became the first major jurisdiction to be accredited by the International Accreditation Services in 2008. Since then, the department has continued to meet the international standards with periodic surveillance reviews by IAS evaluators.

By: Ron Taylor, Management Analyst,  
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## Multi-National Delegations Visit CCBD

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In particular, they were interested in our methods of enforcement of building/fire codes; procedures for staged permission for construction and occupancy; and our procedures for allowing alternatives to the code.

February 25 – The Sandia National Laboratories delegation from Albuquerque, New Mexico, represented by Perry D'Antonio, Manager for Building & Fire Safety along with a senior engineer and construction manager met for half a day with key staff from CCBD/FPB to discuss automation of their building department; how we assign inspections, electronic reporting of inspections, data storage; certificate of occupancy process; and IAS accreditation.

February 28 – The Ministry of Construction and Urban Development of Mongolia, Construction Development Center delegation from Ulaanbaatar, Mongolia represented by Batchuluun Bayarsaikhan, Director and Otgonbat Barkhuu from the Global Group/Mongolia and 16 engineers, contractors, and scientists met for a half day with key staff from the CCBD/FPB to discuss how we review/approve construction drawings, adopted standards, and fee assessments; how we regulate construction projects in terms of permits; and overview of the construction development in Clark County over the past several years.



By: Sam Palmer, Assistant Director  
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## BLITZ is Coming!

The replacement system for Naviline, the current software program used by CCBD and FPB for permit and inspections, is moving right along! The BLITZ Project, which stands for the Clark County **B**usiness **L**icensing **I**nspection **T**erms **Z**oning System, is right on schedule and is anticipated to begin late Summer/early Fall.

The BLITZ system will tie together all departments and services which are involved in the coordination of all land development and business licensing services in unincorporated Clark County, Nevada. The departments that are affected are: Building Department, Fire Prevention Bureau, Business License, Public Response Office, Comprehensive Planning, Public Works Department, and Water Reclamation District.

The County currently utilizes several unrelated "departmental" systems to manage and track land and licensing information.

The primary goal of BLITZ is to share one system which will reduce duplicate data entry, maximize workflow between departments, and address the customer's needs more effectively. By implementing a new, modern, and integrated business licensing and land development system, the County expects to improve services provided to all customers.

The County released a Request for Proposal (RFP) for a new system last June and received about 12 responses. Representatives from each Department then narrowed these vendors down to 4 and these companies were invited to Clark County for demonstrations. The results from these demos were evaluated and because the top two companies were within just a few points, they were both invited back for a final demo this past January. The Evaluation Team came to consensus on which vendor they prefer so negotiations for a contract are now in process. If all goes well, we will have a contract and will be ready to go to the BCC for approval this June.



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## Building Codes for a Safe Built Environment - Quality Assurance Part 2 of the series

(In conjunction with the release of the 2012 Code Amendments, Ted Droessler, Manager for Engineering, is providing our readers a series of articles summarizing the evolution of the building codes and how they drive the safety of the construction industry. This is Part 2.....Editor)

The 2012 International Building Code has provisions for quality assurance in the built environment specified in Chapter 17 – Special Inspections and Tests. The term quality assurance is embedded in section 1705 – Required Verification and Inspection. Although the term “quality assurance” is noted in the building code, it is not defined. Therefore, we must interpret the code to establish the intent of quality assurance statements.

Quality is frequently identified as two distinct activities, with those being quality control and quality assurance. Quality control is invoked at the construction worker level through the contractor.

Quality assurance is generally a third party working for the benefit of the project owner and independent of the contractor.

The building code therefore intends special inspections to be a quality assurance activity. This intent is clearly stated in IBC section 1704.2 - Special Inspections, where “... the owner or the *registered design professional in responsible charge* acting as the owner’s agent shall employ one or more *approved agencies* to perform inspections during construction on the types of work listed under Section 1705”. The third party in this instance is the approved agency.

The quality assurance provisions are identified through a Statement of Special Inspections. The Statement of Special Inspections is to be prepared by the design professional in

responsible charge. The Statement of Special Inspections identifies specific quality actions to be performed by the approved special inspection agency.

Although the contractor does not perform a quality assurance function with respect to the building code, the code requires the contractor to acknowledge the special requirements in the Statement of Special Inspections. The contractor responsibility in this instance is noted in IBC section 1704.4.

The Statement of Special Inspections and IBC section 1705 have many requirements which are quality assurance functions even though those specific words are not directly stated. Specific instances of quality assurance in the IBC are noted in Table 1.

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| 2012 IBC | Subject  | Specific Citation   |
|----------|--|---|
| 1705.2   | Steel construction                               | <b>1705.2.1 Structural steel.</b><br>Special inspection for structural steel shall be in accordance with the quality assurance inspection requirements of AISC 360. |
| 1705.4   | Masonry construction                             | Masonry construction shall be inspected and verified in accordance with TMS 402/ACI 530/ASCE 5 and TMS 602/ACI 530.1/ASCE 6 quality assurance program requirements. |
| 1705.11  | Special inspections for seismic resistance       | <b>1705.11.1 Structural steel.</b><br><i>Special inspection</i> for steel shall be in accordance with the quality assurance requirements of AISC 341.               |
| 1705.12  | Testing and qualification for seismic resistance | <b>1705.12.2 Structural steel.</b><br>Testing for structural steel shall be in accordance with the quality assurance requirements of AISC 341.                      |

| Chapter    | Material | Specific Citation   |
|------------|----------|---|
| Chapter 21 | Masonry  | <b>2105.1 General.</b> A quality assurance program shall be used to ensure that the constructed masonry is in compliance with the <i>construction documents</i> . |
|            |          | The quality assurance program shall comply with the inspection and testing requirements of Chapter 17.  |
| Chapter 22 | Steel    | <b>2211.3.4 Truss quality assurance</b>   |
| Chapter 23 | Wood     | <b>2303.4 Trusses.</b> Wood trusses shall comply with Sections  |
|            |          | <b>2303.4.1 through 2303.4.7.</b>   |
|            |          | <b>2303.4.6 TPI 1 specifications</b>  |
|            |          | <b>2303.4.7 Truss quality assurance</b>   |

## Alternate Plan Review Services

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### Customer Driven Consultant Services

The Customer Driven Consultant Services Plan Review Program provides an alternate to the Clark County Building Department (CCBD) building plan review process by allowing a CCBD approved plan review consultant to take responsibility for code compliance and certify that the approved construction documents comply with the Building Code of Clark County. An owner may select a listed firm to provide professional plan review services in lieu of those typically performed by CCBD. The owner would be responsible for any professional service fees with the contracted agency.

Commercial and Residential projects can be reviewed by a listed plan review consultant, unless they contain any of the following specialized occupancies, construction methods, or special features/components:

- Educational, institutional, and/ or hazardous occupancies
- High-Rise Buildings
- Work without permit
- Townhouses
- Membrane structures
- Temporary structures
- Amusement and/or Transportation System
- Projects located in a FEMA Special Floodplain Hazard Area
- Projects which require grease interceptors
- Projects which require a Fire Protection Report or a Tenant Improvement Fire Protection Report by CCBD established standards.
- Stand Alone Alternate Methods and Material submittals.
- Grading Only Permits

These firms would need to employ a plans examination manager with a Nevada Architectural or Engineering

license. The staff performing the reviews would be listed by the department with qualification similar to staff at CCBD.

To become eligible, a listing fee for the firm and their personnel is required, along with specific requirements for insurance.

### Permit Now

The Permit Now Plan Review Program provides a voluntary alternative to the Clark County Building Department (CCBD) building plan review process by allowing a single Registered Design Professional (RDP) involved with the design of a project to take responsibility for code compliance and attest that the construction documents comply with the Building Code of Clark County

Eligible projects include:

- Commercial projects less than 25,000 sf (Exceptions apply for high risk occupancies and other specialized features.)
- Multi-Family residential projects constructed under the IRC
- Unsprinklered Single family homes less than 3,600 sf
- Sprinklered single family homes less than 8,000 sf

Professional architects and residential designers who have been responsible for ensuring code compliance for a minimum of three (3) years may be eligible for participating in the Permit Now Program for eligible building projects. During the time period, the professional must have been:

- Registered in the State of Nevada; and
- Responsible for compliance with the Clark County Building Code (based on codes and amendments adopted by Clark County); and
- Certified to seal project drawings;
- Successfully complete the CCBD Permit Now training class; and

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- Maintain a certificate of professional liability insurance issued by an insurer authorized to insure in the State of Nevada with limits not less than \$1,000,000 per claim and \$2,000,000 in aggregate for all claims made during the policy period.

Registered Design Professionals with disciplinary action from any State Registration Board within the last five (5) years may be determined to be ineligible, at the option of the Building Official.

Depending on interest, the department is looking at quarterly training classes for the Permit Now program. The first Permit Now training class is tentatively scheduled for **July 22 – 24, 2014.**

Listing fee of the professional involved in the Permit Now program is proposed to be \$2,000. This fee addresses both the listing of the professional and the Permit Now training class.

As proposed in our current Administrative Code to be considered at the Board of County Commissioner's meeting, the plan review fee will be reduced to 32.5% of the standard permit fee for projects permitted by either the Permit Now or the Customer Driven Consultant Service programs. CCBD will perform selective and/or random audit of the projects to ensure quality of services provided by outside sources.

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