Hospital Inspector of Record
Session 2
“How to Prepare for the IOR Exam”

June 03, 2020
JOE LABRIE, RCO
Agenda

• Introduction
• What is the exam format?
• How can you best prepare for the exam?
• What happens after passing the exam?
• Who employs the IOR?
• What are the ABCs of the A, B, and C exam?
• What are an IORs Responsibilities?
Poll questions

1. Have you taken the OSHPD IOR exam before?
   - Yes
   - No
   - No vote

2. Is your background in construction?
   - Yes
   - No
   - No vote

3. Did you register for all the IOR webinar sessions?
   - Yes
   - No
   - No vote

4. In which IOR Certification are you interested?
   - Class A
   - Class B
   - Class C
   - No vote

5. How familiar are you with OSHPD?
   - Very familiar
   - Normal familiar
   - Not so much familiar
   - No vote
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Introduction

• What is OSHPD’s Inspection Services Unit (ISU)?
• Who are the people of ISU?
• How does OSHPD work with IORs?
  • Certification Examination
  • Recertification
  • Ongoing Training
  • Ongoing Monitoring
  • Corrective Measures
• How should IORs understand ISU?
• What are the Exam Sections?
What is the exam format?
Class A IOR Exam

- Open Book Exam
  - Code Knowledge:
    - 80 questions
    - To be answered in 4 hours
    - Weighted on Administrative Regulation and Structural Discipline

- Plan Reading:
  - 80 questions
  - To be answered in 4 hours
  - Weighted on Structural Discipline
What is the exam format?
Class B IOR Exam

• Open Book Exam
  • Code Knowledge:
    • 80 questions
    • To be answered in 4 hours
    • Weighted on Administrative Regulation

• Plan Reading:
  • 40 questions
  • To be answered in 2 hours
  • Not weighted on any one discipline
What is the exam format?
Class C IOR Exams

• Open Book Exam
  • 40 questions: 20 Admin and 20 Anchorage & Bracing
  • To be answered in 2 hours (1 hour for each)
  • Evenly weighed for Administrative Regulation and Anchorage and Bracing

• Plan Reading:
  • No questions
Sample Question - Administrative
In accordance with Section 7- 151(f),…who shall submit to the Office a verified compliance report, with their signature and based on their own personal knowledge:

a) the architect(s)
b) engineers(s)
c) inspector(s) of record (IORs)
d) approved agency
e) special inspector(s)
f) contractor or owner/builder
g) all the above

How to look for the response?
Where VCR reference code is?

- CAC code has a TABLE OF CONTENTS
• Where in this chapter there is information about VCR?
The question is:
In accordance with Section 7-151(f), or when required by the Office, who shall submit to the Office a verified compliance report, with their signature and based on their own personal knowledge:

Response:
- a) the architect(s)
- b) engineer(s)
- c) inspector(s) of record (IORs)
- d) approved agency
- e) special inspector(s)
- f) contractor or owner/builder
- g) all the above
What is the exam format?

Sample Question - Electrical
Utilization equipment weighing not more than ____ shall be permitted to be supported on other boxes or plaster rings that are secured to other boxes, provided the equipment or its supporting yoke is secured to the box with no fewer than two No. ____ screws.

a) 5 lbs, 8 or larger
b) 6 lbs, 6 or larger
c) 6 lbs, 8 or larger
d) 4 lbs, 6 or larger

How to look for the response?
Where to look for Utilization Equipment and Boxes?
Where to look for Utilization Equipment and Boxes?

The question is:
Utilization equipment weighing not more than ____ shall be permitted to be supported on other boxes or plaster rings that are secured to other boxes, provided the equipment or its supporting yoke is secured to the box with no fewer than two No. ____ screws.

Responses:
- a) 5 lbs, 8 or larger
- b) 6 lbs, 6 or larger
- c) 6 lbs, 8 or larger
- d) 4 lbs, 6 or larger
What is the exam format?

Sample Question - Plumbing
Test gauges used during pressure testing of plumbing systems shall have a pressure range not exceeding _____ the test pressure applied.

a) Twice
b) Three times
c) Four times
d) Six times

How to look for the response?
Where to look for Pressure Range?

The Question is:
Test gauges used during pressure testing of plumbing systems shall have a pressure range not exceeding _____ the test pressure applied.

a) Twice
b) Three times
c) Four times
d) Six times

318.5 Pressure Range. Test gauges shall have a pressure range not exceeding twice the test pressure applied.

318.0 Test Gauges.
318.1 General. Test gauges in accordance with this code, which are permitted to indicate the pressure, shall be listed to gaugehaving the following pressure graduations or increments.

318.1 Pressure Tests (10 psi or less). Required pressure shall be applied not less than _____ psi for _____ minutes.

318.2 Pressure Tests (10 psi or less). Required pressure shall be applied not less than _____ psi for _____ minutes.

318.3 Pressure Tests (greater than 10 psi to 100 psi). Required pressure shall be applied not less than _____ psi for _____ minutes.

318.4 Pressure Tests (greater than 10 psi to 100 psi). Required pressure shall be applied not less than _____ psi for _____ minutes.

318.5 Pressure Range. Test gauges shall have a pressure range not exceeding twice the test pressure applied.
What is the exam format?

Sample Question – Plan Reading

In Detail 16, Sill Detail at openings, for openings between 8’-3” and 12’-0” which is the size of the SMS?

a) #2  
b) #4  
c) #8  
d) #10

How to look for the response?
In Sill Detail at openings, for openings between 8'-3" and 12'-0" which is the # of the SMS?

a) 2  

b) 4  

c) 8  

d) 10  

The correct answer is c) 8.
What is the exam format?

Sample Question – Plan Reading

At the provided interior elevation, which is the mounting height of the FLOW01?

a) 3’ – 4”
b) 2’ – 7”
c) 5’ – 0”
d) 1’ – 3”
At the provided interior elevation, which is the mounting height of the FLOW01?

a) 3’ – 4”
b) 2’ – 7”
c) 5’ – 0”
d) 1’ – 3”
Sample Question – Plan Reading

In the Typical O.R. Ceiling, in which note is there information for the LSD02?

a) 6.00  
b) 6.34  
c) 6.67  
d) 6.68
In the Typical O.R. Ceiling, in which note is there information for the LSD02?

a) 6.00
b) 6.34
c) 6.67
d) 6.68

The correct answer is d) 6.68.
How can you best prepare for the exam?

• Code Knowledge
  • High level study of the Codes.
    • Gather all of the applicable code books and reference materials you will need.
    • Review table of contents to familiarize yourself with how to find different areas of interest quickly
    • Highlight key code section titles that include a health facilities content
    • Tab each code book for quick and easy navigation to key sections related to health facilities
    • Talk with others that have taken the test to understand what to expect
    • Use the TIO template as a guide for important items to know
    • Commit time and energy to study for the exam every day
How can you best prepare for the exam?

• Plan Reading
  • Understand the general organization of plans
    • Study the organization of plans from projects on which you have worked
    • Familiarize yourself with the Table of Contents on the Title Sheet
    • Understand the meaning of project symbols and abbreviations
    • Ask questions of others about any areas of plan reading that you need to strengthen
    • Commit time and energy to study plan reading every day to prepare for the exam
How can you best prepare for the exam?

Know the Symbols
Each sheet has different symbols i.e.:
• Cover sheet
• Elec. Mech. Plumb. Struc.…. 
• Door / window schedules 
• Fire Prevention etc.

[Image of various symbols and abbreviations related to construction and emergency planning]
How can you best prepare for the exam?

Know Material Designations.
Like prior slide, each trade has their own different symbols.
How can you best prepare for the exam?

Know the abbreviations.

Like prior slides, each discipline has their own different abbreviations.
How can you best prepare for the exam?

Know the drawing index
What happens after passing the exam?

• COMBINED Score for Code Knowledge and Plan Reading must be greater than 75% per Section
• Notification of Exam results available within 4 to 6 weeks from exam date
• Failure of more than one discipline (combined score) requires reapplication and exam after 6 months
• Only One Section Exam Retake is allowed.
What happens after passing the exam?

- Retake Exam includes Code Knowledge and Plan Reading
- Retake Exam to be completed within two weeks of notification
- Review of completed Exams are not allowed
- Only Exam score of each section is available upon notification of Exam results

We regret to inform you that you were not successful in obtaining a passing score in the Class A Hospital Inspector Certification Examination. A minimum score of 75% for each section of the exam is required for certification. Your final scores are as follows:

<table>
<thead>
<tr>
<th>Administrative</th>
<th>Code %</th>
<th>Plans %</th>
<th>Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architectural</td>
<td>50</td>
<td>81</td>
<td>68</td>
</tr>
<tr>
<td>Structural</td>
<td>48</td>
<td>42</td>
<td>45</td>
</tr>
<tr>
<td>Mechanical-Plumbing</td>
<td>75</td>
<td>69</td>
<td>71</td>
</tr>
<tr>
<td>Electrical</td>
<td>67</td>
<td>69</td>
<td>68</td>
</tr>
<tr>
<td>Fire and Life Safety</td>
<td>75</td>
<td>50</td>
<td>61</td>
</tr>
</tbody>
</table>

You will be eligible to take a new examination no sooner than six months from this examination. If you choose to retake the examination, you may submit a complete and updated application with current information and the term “Retest” written on top of the front page. An examination fee must also be submitted with your application. The examination schedules for October 2019 are currently posted on the Office’s website [www.oshpd.ca.gov](http://www.oshpd.ca.gov).
What happens after passing the exam?

- Successful examinee will be requested to email a picture for their official badge.
- Badges will be sent out to successful examinees within a week or two from day of notification.
- Successful examinees are eligible to become an IOR immediately at the time of notification.
- Certified Hospital Inspectors Credentials are immediately available for verification by the public on OSHPD Website.
Who employs the IOR?

- Healthcare facility owners may employ:
  - IORs directly
  - IORs who employ other IORs
  - Firms that employ IORs
- NOT Construction Contractors
- NOT Manufacturers
- NOT OSHPD
What are the ABCs of the A, B, and C exam?

• **Class A Inspector Exam**
  May inspect all areas of construction; including structural.
  • The A Exam emphasizes Structural and Administrative Knowledge.

• **Class B Inspector Exam**
  May inspect all areas of construction; excluding structural
  • The B Exam emphasizes Administrative Knowledge.
What are the ABCs of the A, B, and C exam?

- Class C Inspector Exam
  - May not inspect the complete scope of construction
  - May inspect one or more areas of construction specialty as certified
  - The C Exam emphasizes Administrative Knowledge
What are the ABCs of the A, B, and C exam?

This is not on the Class C IOR Exam. Refer to 2019 CAC

- Mechanical – IAPMO Certification
- Concrete – ICC Certification
- Masonry – ICC Certification
- Steel – ICC, Structural Steel Certification
- Welding – AWS Certification
- Framing and Drywall – ICC
- CBIC Roofing – NRCA
- Architectural - Certification to be administered by the Office
1. What is the minimum % for passing the IOR exam?
   - 60%
   - 75%
   - No vote

2. Failure of more than one discipline (combined score) requires reapplication and exam. A candidate may reapply after __ months?
   - 4
   - 6
   - No vote

3. What should you know prior to taking the IOR exam?
   - Code knowledge
   - Plan reading
   - Code knowledge and Plan reading
   - No vote

4. Who employs the IOR?
   - Healthcare facility owners
   - Construction Contractors
   - Manufactures
   - OSHPD
   - No vote

5. Can IOR Class B inspect and approve structural elements?
   - Yes
   - No
   - No vote
Poll questions

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   - 60%
   - 75%
   - No vote

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   - OSHPD
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What are an IORs Responsibilities?

The responsibility for inspection resides with the project Inspector of Record; OSHPD only observes that the process is working and that adequate and competent inspection is provided.

Adequate and competent inspection is gained through continuous and periodic inspections. (see next slides)
What are an IORs Responsibilities?

CAC 7-145(a)2. Continuous inspection of the work.

Continuous inspection means:

- complete inspection of every part of the work. i.e. concrete or masonry work which can be inspected only as it is placed or assembled.
What are an IORs Responsibilities?

Periodic inspection of the work.

Periodic inspection means:
• types of work which can be completely inspected after the work is installed while the IOR is not present and prior to cover-up i.e. rough elec., mech. plumb.

In no case shall the IOR have or assume any duties which will prevent continuous inspection.
What is the IOR’s responsibility? - IORs Interaction with the DPOR?

• IOR shall work under the direction of the DPOR
• Report all inconsistencies in approved construction documents to the DPOR for interpretation and instructions
• The DPORs instructions shall not cause the work to be done not in conformity with the approved construction documents.
What is the IOR’s responsibility? - Files on the Jobsite

• Approved construction documents
• Reports of tests and inspections required by the approved construction documents
• TIO Program
• All codes and regulations referenced in the approved construction documents
• Specifications
• Referenced Research Reports and Manufacturers Installation Instructions.
What is the IOR’s responsibility? - Files on the Jobsite

IOR(s) shall maintain field records of construction progress for each day or any portion of a day that they are present at the project site location. The files shall include:

• Time of arrival
• Time of departure
• A summary of work in progress
• Noted deficiencies in construction or deviations
• Date, time, and method of corrections for deficiencies
What is the IOR’s responsibility? -
IOR Notifications to the OSHPD

• When the work is started or resumed on the project.
• At least 48 hours in advance of the time when foundation trenches will be complete, ready for footing forms.
• At least 48 hours in advance of the first placing of concrete.
• When work has been suspended for a period of more than two weeks.
SUCCESS CHECKLIST ITEMS

• **Daily Reports:** Completed by the IOR and submitted to the Design Professional of Record (DPOR)

• **Test Laboratory Qualifications:** Approved by the DPOR with concurrence from OSHPD

• **Special Inspector’s Qualifications:** Approved by the DPOR with concurrence from OSHPD

• **TIO Field Maintenance:** Only as coordinated and directed by the DPOR
SUCCESS CHECKLIST ITEMS

• Directive or Change Log with Supporting Documents: Maintained by the DPOR and kept in the field by the IOR. It must include both material and non-material alterations.

• Verified Compliance Reports (VCRs): Maintained by the DPOR and kept in the field by the IOR.

• Submittal / Shop Drawing Log: Maintained by the DPOR and kept in the field by the IOR. Shop drawings are not part of the approved construction documents.
SUCCESS CHECKLIST ITEMS

• **Approved Design Documents including Deferred Approvals and ACDs:** Held in the field by the IOR.

• **Architect and Engineers of Record Observation Reports:** Maintained by the DPOR and kept in the field by the IOR.

• **Outstanding Items List (OIL) / Deviation or Discrepancy List:** Maintained in the field by the IOR.
SUCCESS CHECKLIST ITEMS

• **General Contractor QC Program:** Provided by the General Contractor, this program should be coordinated in the field by the GC with the IOR and the DPOR.

• **Notice of Non-Compliance Log:** Maintained in the field by the IOR.

• **Special Inspectors Reports:** Distributed to the DPOR and IOR and maintained in the field by the IOR.

• **Discrepancy Correction Reports**
SUCCESS CHECKLIST ITEMS

• **Test Reports:** Distributed to the DPOR and IOR and maintained in the field by the IOR.

• **Identification of Seeming Errors:** Reported to the DPOR by the IOR for follow up action.

• **Witness Qualification / Acceptance of Performance Tests of Building Systems:** Responsibility of the IOR.
IORs and Special Inspections -
What does an IOR have to do if they want to be a Special Inspector on the Job?

• Be approved by the DPOR
• Have the appropriate knowledge and/or certification
• Have the time and desire (report meeting CBC 1704A.2.4)
• Have the required tools
• OSHPD RCO must confirm IOR’s workload
1. Does the IOR work under the direction of the DPOR?
   - Yes
   - No
   - No vote
2. Does the IOR manage the TIO?
   - Yes
   - No
   - No vote
3. IOR(s) shall maintain field records of construction progress for each day or any portion of a day that they are present at job?
   - True
   - False
   - Only if requested
   - No vote
4. Are the Verified Compliance Reports (VCRs) maintained by the IOR?
   - Yes
   - No
   - No vote
5. What does an IOR have to do if they want to be a Special Inspector on the Job?
   - Be approved by the DPOR
   - Be hired by Construction Contractors
   - No vote
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   o Yes
   o No
   o No vote

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Questions