



# IBTS Plan Review Process



*Developed for:*  
Broken Arrow, OK

September 11, 2015

## Summary

IBTS has nearly 40 years of experience providing plan reviews, inspections, quality control, and general performance evaluations for the built environment. Our inspectors and plan reviewers are certified by the International Code Council (ICC), NFPA and/or the American Society for Quality (ASQ) and receive ongoing professional training in all areas of importance including the fields of customer satisfaction, problem solving and communications.

IBTS is a 501(c)(3) not-for-profit government resource organization formed and guided by government entities including the National Association of Counties (NACo), the National League of Cities (NLC), the International City/County Managers Association (ICMA), the National Governors Association Center for Best Practices (NGA Center), and the Council of States Governments (CSG).

IBTS provides plan review in Washington DC, Maryland and Virginia, on military bases throughout the United States. Additionally, IBTS provides plan review for approximately 25 jurisdictions in Louisiana, Kansas and Missouri. IBTS is able to provide professional building department services for jurisdictions at a cost considerably less than a jurisdiction can provide these services. These services complement our 30-year record of service with the Department of Housing and Urban Development (HUD), United States Army Corps of Engineers (USACE), Federal Emergency Management Agency (FEMA), and multiple municipal jurisdictions.

## Qualifications and Experience

In addition to graduate and undergraduate degrees and professional licensure, our plan reviewers and inspectors are certified by the International Code Council (ICC), the National Fire Protection Association (NFPA), the American Society for Quality (ASQ) and other organizations depending upon their area(s) of focus. We employ a team of plan reviewers in our corporate offices and have access to additional plan reviewers based in Louisiana, Kansas and Missouri.

Our staff is committed to providing solutions to problems rather than merely describing violations of the code. We are aware of the impact of plan review findings on project costs and timelines, not to mention public and private liabilities, so our personnel remain mindful of the interests of the Authority Having Jurisdiction (AHJ), the developer(s) and the public at large, pointing out potential problem areas and safety issues in advance whenever possible. Our services actually reduce costly and time-consuming design, permitting and construction delays.

## Plan Review Process

Review Assigned Work. IBTS will examine the structure's plans and review for compliance with Broken Arrow's Construction Codes and the associated referenced standards. Systems and features proposed to be constructed or installed will be reviewed according to the applicable codes, as adopted by Broken Arrow.

Provide Complete and Timely Plan Review Reports. IBTS will submit the completed plan review reports to the Building Official for the project. The Plan Review Report will include a Summary Plan Review,

Cover Letter and a detailed Plan Review Comments Letter that identifies any non-conformances found in the plans. IBTS will complete this plan review process within 10 business days after receipt of plans. A revised plan review will be completed within 5 business days.

- *Plan Review Report.* IBTS will complete a Plan Review Report, containing a list of non-complying items for the contracted Project. This report will identify the deficient areas and provide the code reference number for the deficiency. See **Exhibit A** for a sample report.
- *Plan Review Certification Letter.* IBTS will provide a Plan Review Certification Letter that certifies the approval of each completed Discipline that is part of the scope of the Plan Review for this project. See **Exhibit B** for a sample letter.

Any revisions after IBTS provides the recommendation to approve the project will be considered a new plan review.

## IBTS/Broken Arrow Interaction

1. Broken Arrow will provide all drawings and construction documents to IBTS in a digital format or hardcopy as agreed upon by IBTS and Broken Arrow. This may include the developer giving access to the digital documents via an ftp site or other document storage site used and agreed upon by the developer, Broken Arrow and IBTS.
2. IBTS will conduct the plan reviews as described in this document and return to Broken Arrow for their review and distribution to the developer for corrective actions. Once the developer has revised the drawings/documents, these will follow the same submittal process previously describes and will be routed to Broken Arrow. After IBTS reviews the corrective actions, IBTS will submit the reports again to Broken Arrow for distribution. This review cycle will repeat until the developer adequately meets the code reviews.

## Plan Review Sample Work Product

IBTS reviewers use ICC's plan review checklists to conduct plan reviews, with modifications as appropriate to address Broken Arrow's requirements. IBTS will review and modify these checklists for use on this project in accordance with specific requirements for construction of the hotel and convention center. Following are actual reports for review.

## Plan Review Staff

Name	Experience (years)	ICC-Certified Plans Examiner							ICC-Certified Building Official and Master Code Professional	
		Building	Structural*	Accessibility	Electrical	Energy	Mechanical	Plumbing	ICC CBO	ICC MCP
Paul Hancher, PE	27	X		X	X	X	X	X	X	X
David Wei Lu, RA	25	X	X	X	X	X	X	X	X	X
Adrian Mirt, PE	16	X		X	X	X	X	X	X	X
Douglas Applegate, PE	18	X	X	X		X				
Aashish Shahani, PE**	14				X					
Gary Fisher	30	X		X			X	X	X	X
Fuen Soh, PE**	20		X							
Mustafa Ghaith	5					X	X			
Daniel Zweip	30	X		X	X	X	X	X	X	X
<b>Totals</b>		6	3	6	5	6	6	6	5	5

### Paul T. Hancher, PE

DIRECTOR OF BUILDING DEPARTMENT SERVICES, IBTS

Mr. Hancher is a Professional Engineer in Virginia, Maryland and the District of Columbia. He is an International Code Council Certified Building Official and Master Code Professional. He has over 20 years of experience in design, construction, plan review and inspection of structures to model building codes, and 15 years of experience in management and development and delivery of technical training seminars on home and building design, construction, installation, rehabilitation, and inspection. Mr. Hancher guides his staff to review plans for commercial and residential design and construction throughout the U.S, and trains staff to review for special requirements including AT/FP and SCIF conformance in government buildings. Mr. Hancher has a Bachelor of Science, Electrical Engineering.

## **David Wei Lu, RA**

MANAGER OF PLAN REVIEW SERVICES

Mr. Lu is a Licensed Architect in Virginia, Maryland, and Washington DC and an EIT in Maine. He is an International Code Council Certified Building Official and Master Code Professional. Mr. Lu has extensive knowledge of both residential and commercial architectural and structural design. Currently he performs Architectural review as well as Structural and Life Safety review for IBTS. He is experienced in using AutoCAD, ArchT for 3D Modeling, MicroStation, STAADIII, Accurender for 3D rendering, and Adobe PhotoShop. Mr. Lu has a degree in Architecture, Master of Structural Engineering.

## **Douglas Applegate**

BUILDING PLAN REVIEWER

Mr. Applegate is a licensed Professional Engineer in Virginia and Maryland, and an ICC-certified Building Plans Examiner and Fire Plans Examiner. He has more than 15 years of experience in commercial, residential, industrial, and Embassy building projects. He has extensive experience providing facilities/utilities engineering support. Mr. Applegate has a Bachelor's in Civil Engineering, Master of Business Administration and Computer Aided Drafting and Design Certificate.

## **Adrian Mirt, PE**

PLANS REVIEWER

Mr. Mirt is a Mechanical Engineer with 13+ years of experience reading and interpreting electrical, energy conservation, mechanical and plumbing codes. He is an International Code Council Certified Building Official and Master Code Professional. Mr. Mirt reviews plans for military construction throughout the U.S. He analyzes technical issues and recommends feasible solutions. He also has expertise in data collection, research techniques, and the use of AutoCAD. Mr. Mirt has a Bachelor of Science, Mechanical Engineering

## **Gary L. Fisher**

SR. ENGINEER AND PLANS REVIEWER

A Certified Building Official, Master Code Official, Building Inspector and Senior Engineer with over 30 years of experience, specializing in fire safety. He has experience in reviewing all commercial building designs to determine compliance with Building Codes. He develops and delivers training on various aspects of building code enforcement. Mr. Fisher has trained commercial building inspection staff and was responsible for oral and written code interpretations affecting commercial plan review and inspections. Mr. Fisher has a Bachelor of Science, School of Fire Protection and Safety Engineering Technology and a Master of Science, Political Science, Fire and Emergency Management

## **DAN ZWIEP, MCP**

INSTRUCTOR/PLANS EXAMINER/BUILDING INSPECTOR

Mr. Zwiep has over 25 years in the construction industry, both hands-on and in management, and over 10 years of experience as an ICC Code Compliance Trainer, Inspector, and Plans Examiner. He is an International Code Council Certified Building Official and Master Code Professional. He is fluent in English and Spanish, and conversant in two other languages.

## **JAMES P. TURNER, JR., E.I.T.**

### PLAN REVIEWER

Mr. Turner is a structural engineer with more than 10 years of experience in the area of plan and design review and regulatory enforcement. He performs evaluations of plans and designs to ensure compliance with the appropriate codes, standards, and regulations, as well as conducting on-site residential and commercial building inspections for mechanical, electrical, and plumbing compliance. His experience includes manufactured housing, military housing, site-built housing, and commercial buildings. He also performs a variety of tasks such as code enforcement analysis, and design substantiation assessments. Mr. Turner has a Bachelor of Science, Civil Engineering.

## **Aashish Shahani, PE**

### ELECTRICAL ENGINEER

Mr. Shahani is a Project Manager with more than 11 years of experience in estimating, bidding and designing power generation/distribution systems, controls & low voltage systems, and lighting systems. He is experienced in direct client interaction and team management. His capabilities also include strong people and communication skills, and a focused mind suitable for design development, and their implementation. Mr. Shahani has a Bachelor of Science, Electrical Engineering and a Master of Science, Electrical Engineering.

## **Fuen Whai Soh**

### PLAN REVIEWER

Experience as a Professional Engineer in plan review, engineering design, construction administration, field inspection/quality control and project management in the public and private sectors of the construction industry. Experience in engineering and design of reinforced concrete, steel, masonry, wood, composite, earth retaining structures, shallow foundations and deep foundations. Mr. Soh has a Bachelor of Science, Civil Engineering.

## **Mustafa Ghaith**

### PLAN REVIEWER

Mr. Ghaith is experienced in HVAC and air conditioning, duct and pipe design, and meeting codes and standards. He is skilled in AutoCAD, HAP, and Elite Software. Mr. Ghaith has a Bachelor of Science, Mechanical Engineering.

# EXHIBIT A



Plan Review Services  
703.481.2025  
PlanReview@ibts.org



## DC Commercial Plan Review Comments

<b>Permit #</b>	
<b>Project Name</b>	Ava Noma Apartments
<b>Project Address</b>	55 M Street, NE Washington DC
<b>Use Group(s)</b>	R2, A2, A3 and S2
<b>Construction Type</b>	IB
<b>Applicable Codes</b>	IEBC 2006, and DCMR 12J-2008; IBC 2006, and DCMR 12A-2008; IMC 2006, and DCMR 12E-2008; IPC 2006, and DCMR 12F 2008; IFC 2006, and DCMR 12H 2008; IECC 2006, and DCMR 12I 2008; NEC 2005, and DCMR 12C 2008; ANSI 117.1-2003, and DCMR 12A chapter 11.
<b>Review Date</b>	9/8/2014

Provide a complete revision submittal (including all impacted disciplines) and a point-by-point written response narrative detailing how each comment is addressed and where the revised info can be found. All revised areas on the drawing shall be identified by revision clouds. Partial revision submittal may result in no review and immediate rejection of the revision submittal. Note that a response such as “Will Comply” does not constitute a complete response.

#	Drawing	Building and Life Safety/Accessibility	Code Reference
1	G001	The Sheet index needs to be updated.	General
2	G002	General Notes need to be revised to reference the District of Columbia and not the State of Virginia or simply state.	General
3	G002	General Note #13 shall be updated to reference the 2008 DCMR and associated ICC codes and not the State of Virginia codes.	General
4	G003	The minimum number of handicap accessible parking spaces shall be based on the various occupancies. For Group R-2 occupancies a minimum of 2% of the parking spaces shall be handicap accessible. For the remainder of the parking spaces provided the number of handicap parking spaces shall be based on Table 1106.1. At any rate, it appears more than 7 handicap parking spaces are required.	IBC 1106.1, Table 1006.1 & 1106.2
5	G003	Dead end corridors are limited to 20 feet in length in all occupancies with the exception of Group B, F & I-3. Please revise.	IBC 1017.3
6	General	The Life safety Plan for Level G3 is missing. Please include for review.	IBC 109.3
7	G005, G006, G007, G09 & G014	Please provide the worst case common path of travel distances on each floor plan.	IBC 1014.3
8	G006 & A101	Elevator equipment rooms shall be separated from the remainder of the building by 2-hour fire barriers and 2-hour horizontal assemblies. No fire separation is indicated on current drawings. Please correct.	IBC 3006.4
9	G006	Please provide the length of the corridor leading to the Main	IBC 1017.3

#	Drawing	Building and Life Safety/Accessibility	Code Reference
		electrical room. No dead end corridors greater than 20 feet are permitted.	
10	G007 & A111, A112 & A113	Dead end corridors greater than 20 feet exist in the Residential area. Please correct.	IBC 1017.3
11	G007	Please provide floor plan for the second floor.	IBC 109.3
12	G007	Please provide clarification as to how the outdoor area occupant load was determined.	IBC 1004.5
13	G007	Please break down the Common Area/Pub/Lounge by usage (i.e. concentrated seating areas, unconcentrated seating areas, standing areas at the bar, waiting areas, etc.)	IBC 1004.1.2
14	G014	The square footage numbers used in the Amenity Occupant Load table do not match the square footage numbers provided on the floor plan. Please correct.	General
15	G014	Please provide clarification as to how the Interior Lounge area occupant load was determined. Please provide a fixture/furniture plan substantiating the use of unconcentrated floor area criteria. Otherwise, a 7 sq. ft. /person shall be used. This would bring the Roof Level total occupant load to greater than 500 thus requiring a third exit.	IBC 1004.2 & Table 1019.1
16	A010	Please provide a completed door schedule.	IBC 109.3
17	A011 & A012	Please provide a completed window schedule to include the location of all safety glazing.	IBC 109.3 & 2406.3
18	A111	Door in party wall located between buildings is not permitted.	IBC 705.1.1
19	A112	Please clarify the occupancy use of the "residential seating" area. The occupant load if using unconcentrated (15 s.f./person) equals 50. If concentrated (7 s.f./person) the occupant load equals 106. Either way two independent exits are required from the area.	IBC Table 1015.1
20	A112	Please provide an access door for the mechanical room located adjacent to A5 ANSI Type A dwelling unit.	General
21	A111, A112 & A113	Please properly identify all partition types, door numbers, room numbers, etc. for each floor plan.	IBC 109.3
22	A112	Doors to Trash Chute Access rooms shall be ¾-hour fire door assemblies.	IBC Table 715.4
23	A111 thru A113, A124 and A202 thru A207	The elevations do not match the floor plan layout given the location of the N arrow on Sheets A111 thru A113 and A124. Please correct.	General
24	A112, A113 & A204	Balconies openings are not permitted less than 3 feet from the property line. See balconies along column line B.	IBC Table 704.8
25	A124	In to accurately determine the occupant load of the roof level,	IBC 109.3



#	Drawing	Building and Life Safety/Accessibility	Code Reference
		please provide the landscaping drawings referenced in the fixed seating areas.	
26	A124	The handicap accessible drinking fountains shall be provided with cane detection. Please clarify if such construction has been provided.	ICC/ANSI A117.1-03 edition, section 307.1
27	A603	Please provide the test number of the perimeter fire containment system used between the rated floor assembly and the exterior curtain wall in Details 2, 7 & 10.	IBC 703.2
28	A811	Please reference the District of Columbia in any notes and not the State of Maryland. See General Note #2.	General

#	Drawing	Structural	Code Reference
1	General	Provide completed District of Columbia Special Inspection form to detail the type and frequency of each special inspection.	DCMR 12 A 106.1
2	General	Provide signed and sealed structural calculations for the gravity, lateral and seismic design loading.	DCMR 12A 106.1
3	General	Provide signed and sealed geotechnical report for the project.	IBC 1802.1, 1802.2 and 1802.6
4	S001	Why is Virginia Construction Code -2006 Commonwealth of Virginia (Supplement to 2009 International Building Code) shown in General Structural and Construction Notes on Sheet S001 in Section A Codes and Standards for Washington, DC project? Please clarify.	DCMR 12A 106.1
5	S001	Provide the following information on Sheet S001: <ol style="list-style-type: none"> <li>1. Ground snow load, pg</li> <li>2. Flat-roof snow load, pf</li> <li>3. Snow exposure factor, Ce</li> <li>4. Snow importance factor, Ct</li> <li>5. Sloped roof snow load factor, ps</li> <li>6. Wind design procedure</li> <li>7. Occupancy category</li> <li>8. Wind importance factor</li> <li>9. Surface roughness and exposure categories</li> <li>10. Internal pressure coefficient</li> <li>11. Component and cladding pressures</li> <li>12. Main wind-force resisting system</li> <li>13. Seismic importance factor</li> <li>14. Mapped spectral response acceleration, Ss and S1</li> <li>15. Spectral response coefficients, Sds and Sd1</li> <li>16. Site Class</li> <li>17. Seismic design category</li> <li>18. Basic seismic-force-resisting systems</li> <li>19. Response modification coefficient, R and deflection</li> </ol>	IBC 1608.2 ASCE 7 7.2 ASCE 7 7.3 ASCE 7 Table 7-2 and 7.3.1 ASCE 7 Table 7-4 ASCE 7 Table 7-3 and 7.3.1 ASCE 7 7.4 ASCE 7 6.1.2 IBC 1604.5 ASCE 7 Table 6-1 and 6.5.5 IBC 1609.4, ASCE Figure 6-5 and 7 6.5.11.1 ASCE 7 6.1.4.2, 6.1.4.2.2, 6.5.12.4 ASCE 7 6.1.4.1,

#	Drawing	Structural	Code Reference
		<p>amplification factor, Cd</p> <p>20. Seismic analysis procedure</p> <p>21. Design Base Shear</p> <p>22. Lateral equivalent fluid pressure for soil at rest condition, active condition and sliding resistance</p>	<p>6.4.2.1, 6.5.12.2</p> <p>IBC Table 1604.5</p> <p>ASCE 7 Table 1-1</p> <p>ASCE 11.5.1 and Table 11.5-1</p> <p>IBC 1613.5.1</p> <p>ASCE 711.4.1</p> <p>IBC 1613.5.4</p> <p>ASCE 7 11.4.1</p> <p>IBC 1613.5.2</p> <p>ASCE 7 11.4.2</p> <p>IBC 1613.5.6</p> <p>ASCE 7 11.6</p> <p>ASCE 7 Table 12.2-1</p> <p>ASCE 7 12.6</p> <p>ASCE 7 12.8</p> <p>IBC Chapter 18</p>
6	S101	Sheet S101 shows a mat foundation. Provide foundation plan drawings which show section cuts and related information to detail the reinforcing steel in the mat foundation.	DCMR 12A 106.1.1
7	S001	Please reference 2008 DCMR 12 and not the Virginia Construction Code and 2009 IBC.	DCMR 12A 101.2
8	S002	Please complete Wind Component and Cladding Schedule on Sheet S002.	DCMR 12A 106.1.1
9	S002	Provide material specification on Sheet S002 for concrete masonry units, grout and mortar on General Structural and Construction Notes in Section H. Provide material specifications for fireplaces, heater and chimneys in the proposed building.	DCMR 12A 106.1.1
10	S202 S203 to S205	Provide locations of the section cuts on another drawing(s) for the sections and details shown for concrete walls on Sheet S202.	DCMR 12A 106.1.1
11	S503	Complete the Post-Tensioned Beam Schedule on Sheet S503. Provide beam references on other drawings that are consistent with above provided information.	DCMR 12A 106.1.1
12	M401	Provide the weights of the boilers, pumps and exchangers in the roof mechanical room on Sheet M401	IBC 1604.2
13	P501	Provide the weights of apartment water heater and electric water heater shown on Sheet P501.	IBC 1604.2
14	L1.00 L1.01	The courtyard shown on Sheet L1.00 appears to have an assembly occupant load of more than 300 occupants. If the assembly occupancy load is 300 or more for the courtyard, the occupancy classification would be III as per IBC Section 1604.	IBC 1604

#	Drawing	Structural	Code Reference
15	A502	Provide structural drawings to detail the canopy at 2 <sup>nd</sup> to 3 <sup>rd</sup> Floor shown on Section 2/ A315.	IBC 1604

#	Drawing	Fire Safety	Code Reference
1	G006	The fire pump room shall be separated from the remainder of the building by 1-hour fire barriers and 1-hour horizontal assembly.	NFPA 20 Table 5.12.1.1.2
2	G09	All corridors within Group R occupancies shall be rated a minimum of ½-hour. See corridor walls on right side of building.	IBC Table 1017.1
3	G014	Please provide the maximum travel distances to exits on the Roof Level.	IBC 109.3
4	A111	The fire command center shall be separated from the remainder of the building by 1-hour fire barriers and 1-hour horizontal assembly.	IBC 911.1
5	A111	The refuse chute termination room shall be separated from the remainder of the building by 1-hour fire barriers and 1-hour horizontal assemblies. Unable to determine fire resistance rating on either Sheet G007 or A111. Please clarify.	IBC 707.13.3
6	A111, A112 A113 & A204	Balcony and exterior wall openings within 15 feet of the property line are limited to 15% of exterior wall surface per floor level. See windows and balconies along column line C.	IBC Table 715.4
7	A113 & A203	Openings are not permitted within exterior walls located less than 3 feet from a property line. See windows in west wall.	IBC Table 704.8
8	A508	The trash chute shall be in a separate shaft from any other shaft. See kitchen exhaust shaft in Detail #7.	IBC 707.13.1

#	Drawing	Mechanical	Code Reference
1	M001	Revise mechanical drawing index as it shows an extra mechanical cover sheet.	IMC 106.3
2	M001	Revise exhaust fan schedule and modify quantity values as well as CFM values.	IMC 501.1
3	M001	Add SP-2 to the fan schedule with its specifications.	IMC 401.1
4	M002	Provide information on backflow preventer used.	IPC 608.1
5	M003	Provide the manufacturer's installation instructions for the clothes dryer exhaust system. Include duct size, maximum length, back draft damper and location of termination point.	IMC 504.6.1
6	M003	Indicate specifically the make and model of the clothes dryers used throughout the plans.	IMC 504.1
7	M003	Indicate on plans that water hammer arrestors shall be installed where quick closing valves (as in the case of clothes washing machine) are utilized.	IPC 604.9
8	M004	Provide spill control, drainage and containment for the emergency generator storage tank.	IBC 414.5.4
9	M004	Revise and coordinate exhaust fan airflow rates as it appears to be different from schedule.	IMC 501.1

10	M005	Provide an outdoor air schedule for all of the spaces according to their respective occupancy classifications.	IMC 403.3 Table 403.3
11	M005	Revise OA 1 riser diagram as it appears there are two branches missing the airflow rates and sizes.	IMC 401.1
12	M101	Coordinate garage exhaust fans with the fan schedule.	IMC 501.1
13	M101- M103	Provide fire dampers for ducts penetrating fire rated assemblies such as shafts, walls ...etc.	IMC 607.5
14	M101- M112	Indicate the use of SP-1 & SP-2 fans, as it looks like the ducts from these two fans are not feeding any floor.	IMC 401.1
15	M104	Indicate duct sizes, diffusers, returns and cfm ratings for AWSHPs 1, 2 and 3.	IMC 403.1
16	M104	Indicate in plans that volume dampers or other means of supply air flow rate adjustment shall be provided.	IMC 603.17
17	M104	Indicate termination points for 22"x14" OA intake duct as well as 18"x10" OA intake duct.	IMC 403.1
18	M105	Please remove bath tubs in areas between columns 5&6-U&V, 5-Q, 5-M&L, 5-H&G, 5-D&C.	IPC 401.1
19	M105	Provide ceiling radiation damper where ducts (MU-1, MU-2, KE-1, KE-2) penetrates the fire rated ceiling / floor.	IMC 607.6.2
20	M111	Provide elevator hoistway vents for venting smoke and hot gases to the atmosphere.	IBC 3004.1, IBC 3004.2 and IBC 3004.3
21	M112	Add guards around roof top equipment that is within 10 feet of the roof edge.	IMC 304.10
22	M301- M305	Dryer exhaust ducts are too long for the units for the size indicated.	IMC 504.6.1
23	M402	Indicate duct sizes, diffusers, returns and cfm ratings associated with AWSHP-4	IMC 403.1
24	M402	Indicate in plans that volume dampers or other means of supply air flow rate adjustment shall be provided.	IMC 603.17
25	M402	Provide outdoor air connection to AWSHP-4.	IMC 403.3

#	Drawing	Electrical	Code Reference
1	E001	Please indicate that the elevator disconnect switch shall be capable of being locked in the open position.	NEC 620.51(A)
2	E101- - - E112	Please provide the lighting for the elevator lobbies, stairs and other spaces where the lighting are required by code.	IBC 1205
3	E401, E402 & E403	Please fix the drawings to make the drawing readable.	DCMR 12A 106.1
4	E404	Smoke alarms and detectors shall not be installed within 36" (3ft) horizontal path from a door to a bathroom containing a shower or tub. Right now, it is in the bathroom containing the shower. Please relocate the smoke detectors in units C1, B4 and B5.	NFPA 72 11.8.3.5

5	E405	Smoke alarms and detectors shall not be installed within 36" (3ft) horizontal path from a door to a bathroom containing a shower or tub. Right now, it is in the bathroom containing the shower. Please relocate the smoke detectors in units C2 and C4.	NFPA 72 11.8.3.5
6	E601	Please provide the power riser diagram.	NEC 215.5

#	Drawing	Plumbing	Code Reference
1	G007	Provide one service sink.	IPC table 403.1
2	G014	Provide one service sink.	IPC table 403.1
3	P100-105	Provide cleanouts where required.	IPC 708.1
4	P100	4" storm water drainage piping near columns I-18 has no termination point.	IPC 1101.1
5	P103	Clarify piping exiting the sprinkler room.	NFPA 13
6	P103	10" sanitary drainage piping at columns E-10 has no termination point.	IPC 701.1
7	P103	Provide manholes on 10" sanitary drainage piping where required.	IPC 708.3.2
8	P103	Remove bathtubs from plans at columns G-21 & D-21.	IPC 701.1
9	P104	Sanitary drainage piping along column line C-15 has no termination point.	IPC 701.1
10	P104	Storm water drainage piping along column lines D-13 and F-8 have no termination points.	IPC 1101.1
11	P104	Sanitary drainage piping along column line E-11 has no termination point.	IPC 701.1
12	P104	Sanitary drainage piping along column line O-18 and T-21 has no termination point.	IPC 701.1
13	P104	Storm water drainage piping along column lines U-22 and T-18 have no termination points.	IPC 1101.1
14	P105	Provide manholes at the 45° change of direction for the 10" storm drainage piping.	IPC 1101.8, IPC 708.3.2
15	P105	Storm water drainage piping along column lines D-4 has no termination points.	IPC 1101.1
16	P105	Sanitary drainage piping along column lines K-4, M-4 and T-5 has no termination point.	IPC 701.1
17	P301W	Units S3, S4, S5, and S6 show no water hookups to the toilets.	IPC 604.5 Table 604.5
18	P302S	Unit A3 (4 <sup>th</sup> ) has no sanitary hookup to the toilet.	IPC 709.1 Table 709.1
19	P302W	Unit A3 (4 <sup>th</sup> ) bathroom and unit A1N (4 <sup>th</sup> ) has no water hookup to the toilet.	IPC 604.5 Table 604.5
20	P303W	Unit B3 (3 <sup>rd</sup> ) and unit B2 (3 <sup>rd</sup> ) have no water hookup to the toilet.	IPC 604.5 Table 604.5
21	P304S	Unit B4 (3 <sup>rd</sup> ) has no sanitary hookup to the toilet.	IPC 709.1 Table 709.1
22	P304W	Unit B6 (3 <sup>rd</sup> ) has no water hookups to the toilets.	IPC 604.5 Table 604.5

23	P305S	Unit C2 (4 <sup>th</sup> ) has no sanitary hookup to the toilet.	IPC 709.1 Table 709.1
24	P401	Add cleanouts to left stacks S7 and S7A.	IPC 708.3.4
25	P404	Provide information on new backflow preventer in Existing Phase 1.	IPC 608.1
26	P501	Add tempered water temperature to Detail of Public Fixture Mixing Valve. Tempered water feeding the lavatories cannot exceed 110 F.	IPC 607.1
27	P502	Clarify sump pump detail. Detail shows only one effluent carrier pipe if 2" vent represents a vent.	IPC 712.3.1

# EXHIBIT B



Plan Review Services  
703.481.2025  
PlanReview@ibts.org



plan review

February 9, 2015

Robbie Sabbakhan  
Acting Chief of Permit Operations  
Department of Consumer and Regulatory Affairs (DCRA)  
Government of District of Columbia  
1100 4th Street, SW  
Washington, DC 20024

**RE: Third Party Plan Review for AVA NOMA**

Dear Mr. Sabbakhan:

This letter is provided as a requirement for certification of third party plan review for AVA NOMA, located at 55 M Street NE, Washington, DC 20002. This is a revision to existing permit number B1215174.

The following are details of the project:

Name of Project: AVA NOMA  
Address of Project: 55 M Street NE  
Name of professional in charge: David Wei Lu  
Name of other approving engineers: Douglas Applegate, Keding Gao, Mustafa Ghaith  
Date of approval: February 9, 2015  
Disciplines for which approval is to be given: Architectural/Structural, Mechanical, Plumbing, Electrical, Elevator (limited building review only), Fire and Life Safety  
Dates of Review: August 22, 2014 – February 9, 2015  
Narrative of Project: Permit revision of a high-rise mixed-use residential building as reflected on the enclosed design change narratives from the designer.

IBTS has reviewed plans for code compliance in accordance with requirements of the District of Columbia Construction Codes, which include by reference the 2006 edition of applicable ICC codes and the 2005 edition of NFPA's National Electrical Code.

Please call me if you have any questions regarding this confirmation letter.

Sincerely,

David Wei Lu  
Registered Architect, District of Columbia

District Registered RA Seal#  
Signed and Sealed

Loudoun County, Commonwealth of Virginia  
Acknowledged before me this day February 9, 2015

Notary Public: Rebecca J. Hamilton  
My Commission expires May 31, 2015

