

**US BANCORP**

**TOWER & PLAZA BUILDING**

**UBC TO IBC CONVERSION  
APPEAL**



APPEALS  
 City of Portland  
 Bureau of Development Services  
 1900 SW 4<sup>th</sup> Ave., Suite 5000 (5<sup>th</sup> floor)  
 Portland, Oregon 97201  
 (503) 823-7335

**Building Code Appeal Form  
 (Project Information Sheet)**

**BLD**

**To Appellant:**

These forms must be filled out completely. For help in filling them out, consult with the Plans Examiner assigned to your project or with a Plans Examiner in the Development Services Center. The details of each item being appealed must be included on these forms in order to be considered. Drawings clearly indicating the area and the conditions of each item being appealed must also be submitted with your appeal. Supplemental information such as photos, test data, etc. can be helpful if it is pertinent to the item being appealed. Each item being appealed requires a separate Appeal Information Sheet. As many items as desired may be submitted with one Project Information Sheet.

The fee, relevant plans (**exclusive of any plans submitted for permit processing**) and any supplemental information must be submitted with these forms. Checks are to be made payable to "Treasurer, City of Portland". Fees are listed below:

**\$100 for one and two family dwellings**  
**Plus \$50 each for each appeal item over four**

**\$200 for all other conditions (four appeal items or less)**  
**Plus \$50 each for each appeal item over four**

**Mail or hand-delivered appeals must be received by no later than 5:00 PM on Friday. Electronic appeals must be received by 9:00 AM on Monday.** (The fee, plans and supplemental information for electronic appeals may be delivered separately by 9:00 AM on Monday.) In most cases, appeals submitted by these deadlines will be heard the following Wednesday. However, an appeal may be deferred for hearing at a later date due to the number of appeals scheduled for hearing, the complexity of the appeal being submitted, or other unforeseen factors. Appeal decisions are mailed and are usually available the following day on the BDS web site [http://www.portlandonline.com/bds/index.cfm?c=34196#cid\\_105495](http://www.portlandonline.com/bds/index.cfm?c=34196#cid_105495), or by calling the Appeal Board Support Staff at (503) 823-7335.

**Project Information** (Items in **BOLD** cannot be left blank):

**This appeal involves** (check at least one below)

- |  |   |
|--|---|
| <input type="checkbox"/> Erection of a new structure         | <input type="checkbox"/> Change of Occupancy: from _____ to _____               |
| <input type="checkbox"/> Alteration of an existing structure | <input checked="" type="checkbox"/> Other (specify): <u>UBC/IBC Conversion.</u> |
| <input type="checkbox"/> Addition to an existing structure   | <input type="checkbox"/> Reconsideration of Appeal ID # _____                   |

**Proposed Use of Structure** (e.g., single-family dwelling, office, etc.) Office and Retail

**Project Street Address** 111 SW Fifth Avenue

**Owner Name** C/O Unico Pproperties Inc. Company \_\_\_\_\_

**Address** 111 Sw Fifth Avenue, Suite 900 **City** Portland **State** OR **Zip** 97204

**Phone** 503-425 6705 Email \_\_\_\_\_

**Related Permit Application #, LUR Case #, or if none, check Preliminary**  
 Permit # \_\_\_\_\_ LUR Case # \_\_\_\_\_  Preliminary

**Number of stories** Plaza 7, Tower43, **Occupancy Group** M/B **Construction Type** 1FR (1B)

**Fire Sprinklers**  No  Yes > Location: Throughout building

**Plans Examiner/Inspector working on project** Scott Burris

In accordance with the City Code, I hereby submit an appeal for an alternative method or modification of the requirements of the Building Codes of the City of Portland as outlined in the attached information.

**Appellant Name** Craig Davis Company GBD ARCHITECTS

**Address** 1120 NW Couch, Suite 300 **City** Portland **State** OR **Zip** 97209

**Phone** 503-224-9656 Email craig@gbdarchitects.com

**Appellant signature** \_\_\_\_\_ **Date** \_\_\_\_\_

For Office Use Only: Received By \_\_\_\_\_ Date Received \_\_\_\_\_ Receipt # \_\_\_\_\_



APPEALS  
City of Portland  
Bureau of Development Services  
1900 SW 4<sup>th</sup> Ave., Suite 5000 (5<sup>th</sup> floor)  
Portland, Oregon 97201  
(503) 823-7335

## Building Code Appeal Form (Appeal Information Sheet)

# BLD

---

### **To Appellant:**

Each item you are appealing requires a separate Appeal Information Sheet to be filled out. All requested information is to be filled out completely with as much detail as possible. **Failure to do so may cause your appeal to be held over until adequate information is received.** For help in filling out these forms, consult with the Plans Examiner assigned to your project or with a Plans Examiner in the Development Services Center.

Any modifications of the Building Code requirements requires an appeal. A reasonable degree of equivalent health, accessibility, structural capacity, energy conservation, life safety or fire protection **must** be demonstrated before an appeal may be considered.

---

### **Code Section being appealed:**

### **Regulation Requirement:**

The building was built under the Uniform Building Code with Oregon Amendments (1970 edition for the Plaza Building and 1979 edition for the Tower Building ) and any subsequent tenant improvements are required to be built under the criteria of the old Uniform Building Code.

**Proposed Design:** (Describe the alternate methods or materials of construction to be used or that exist. Be as specific as possible)

The proposed design is to construct future tenant improvements to meet the requirements of the current International Building Code with Oregon Amendments for floors 1 through 43 in relation to the following issues:

1. Allow non rated corridor walls and openings
2. Allow unlimited glass in corridor walls
3. Allow 50' dead end corridors
4. Allow IBC increased travel distance
5. No Exit stair vestibules
6. Allow tenants up to 5000 square feet with a single exit
7. Allow exit separation of 1/3 the distance of the longest diagonal
8. Allow non-cascading egress requirements
9. Allow internal stairs connecting (3) floors
10. Allow non separated uses Section 302.3.1
11. Allow Fire resistant ratings based on Type 1-B Construction
12. Allow non-rated corridor spaces created by partitions over 5 feet in height
13. Allow non-combustible raised floor with no fire stopping between the fire resistive floor and raised floor
14. Allow existing three story atrium/Galleria space without 1 hour separation
15. No requirement for elevator lobbies
16. Allow intervening rooms be permitted within the corridor paths serving multi-tenant floors

**Reason for Alternate:** (Describe why the alternate is required and how it will provide equivalent health, accessibility, structural capacity, energy conservation, life safety or fire protection to what the code requires)

The existing building essentially meets the criteria of the IBC. Most of the items listed above have previously been appealed and allowed in the building. The attached comparative matrix shows a point-by-point comparison of the essential code elements.

There are two areas where the current building exceeds the requirements of the IBC. The first is by having smoke detection integrated with the fire detection system throughout the core and open office areas. The second major upgrade is the building's floor-by-floor active smoke control system. As required by the previous code, smoke is isolated on the event by mechanically creating pressure differentials between the event floor and the adjacent floors. This is not required in IBC and offers an extra level of protection in the building. Again, the building essentially matches IBC fire and life safety requirements with few exceptions.

Both when the building was initially built and on subsequent occasions, appeals were granted that allowed several of the elements that eventually were codified with the adoption of the IBC; elements such as non-rated corridors, pressurized elevator shafts in lieu of lobbies, and longer dead-end corridors.

We feel that the US Bancorp Tower and Plaza Building as built, provides a level of protect that is certainly equivalent to that required by the IBC and that shifting the design criteria for new tenant improvements to meet the IBC would not diminish the safety of the building occupants.

# US BANCORP

## TOWER & PLAZA BUILDING

### CODE COMPARISON MATRIX

&

### APPEAL HISTORY

CODE COMPARISON MATRIX			
US Bancorp Tower and Plaza - Floors 1 through 43			
Code Book	Plaza Building UBC 1970 Tower Building 1979 UBC Existing Building	OSSC 2010 (IBC 2010)	Code or action to govern
<b>Construction Type:</b>	Type IFR	Type IB	
<b>Occupancy Types:</b>	A, B, M and S2	A, B, M and S2	
<b>Allowable Area:</b>			
B and M occup.	UL	UL	
<b>Allowable Area Increases:</b>	NA	NA	
<b>Actual Gross Area (1-19):</b>			
Tower Building	795680	795680	
Plaza Building	402,100	402,100	
Total	1197780	1197780	
<b>Building Height:</b>			
Max Allowable	UL	UL	
Actual Building Height			
<b>Stories:</b>	UL	UL	
<b>Actual Stories:</b>			
Tower Building	2 underground parking 43 above ground office and 1 Penthouse	2 underground parking 43 above ground office and 1 Penthouse	
Plaza Building	Basement, 12 above ground office and 1 penthouse	Basement, 12 above ground office and 1 penthouse	
<b>Fire Resistive Requirements:</b>			
	Type IFR	Type 1B	Current IBC
Bearing Walls (Ext.)	4-hour	3-hour	Fire rating meets or exceeds Current IBC
Bearing Walls (Int.)	2-hour	3-hour	UBC
Non-bearing Walls (Ext.)	1-hour is separated by 30'	0-hour (30' or more separation)	Fire rating meets or exceeds Current IBC
Structural Frame	2-hour	3-hour	UBC
Permanent Partitions	1-hour	0	Fire rating meets or exceeds Current IBC
Shaft Enclosures	2-hour	2-hour	Current IBC
Floors/Ceilings	2-hour	2-hour	Current IBC
Roofs/Ceilings	1-hour	1.5-hour	UBC
Exterior Doors & Windows	Sec. 603.3.2	Sec. 704.12	Current IBC
Stairway Protection	Sec. 603.4	non-combustible, smoke tight	Current IBC
Area Separation Walls	Not Req'd	NA	Current IBC
Minimum Roof Class	Class B	Class B	Current IBC
Atrium Spaces		Addressed a proposed 3-story atrium space designed in accordance with UBC Section 1715 of the 1982 Edition of the code.	Current IBC
Atrium Spaces		Allow the proposed 3-story Galleria space without 1-hour rated separation walls.	Acceptable if areas are incorporated into the smoke control system design.
Raised Floors		To allow non-combustible raised floor with no fire stopping between the fire-resistive rated floor in the raised floor level.	Current IBC
<b>Means of Egress:</b>			
Travel Distance	200'	300'	Current IBC
Corridor Width	44 inches min.	44 inches min.	
Dead-end Corridor	20'	20'	
	30' at Group B Occ.	50' at Group B Occ. w/. Auto Sprinklers	Current IBC
Exit Corridor Fire Rating	Existing non-rated, non-combustible, smoke tight	Non-rated	Current IBC
Exit Enclosures	2 hour	2 hour	
Exit Vestibules	None provided	Not Required with .15 inches of pressure differential	Current IBC
<b>Smoke Control</b>			
Stair Pressurization	Maintain 0.25 inches of water column pressure differential with barometric relief dampers at top and a minimum of 2500 cfm discharge through the damper	Maintain 0.15 inches of water column pressure differential and 0.35 maximum with all doors closed and including stack effect	Existing system to be maintained for stair pressurization
Elevator Pressurization	Existing elevator shafts are pressurized in lieu of elevator lobbies by appeal.	Elevator shafts may be pressurized in lieu of elevator lobbies by code	Current IBC

Floor Pressurization	The existing building system creates pressurization "sandwich" above and below event floor. The event floor then goes into exhaust mode.	Fully sprinklered buildings do not require automatic event floor isolation via pressurization.	Existing system to be maintained. The existing floor-by-floor active smoke control system, as required by the previous code, exceeds the current code requirements
Sprinklers/Standpipes	Building is fully sprinklered	Building is fully sprinklered	Existing system to be maintained
Fire Alarm System	Building is provided with manual pull stations, detection as noted below and alarm activation from activation of the automatic fire sprinkler system	Manual Fire Alarm pull stations are not required in fully sprinklered buildings	Existing fire alarm system to be maintained
Smoke Detection	Corridors and lobbies including detectors for elevator recall. Tenant spaces are at 900 s.f. per detector; discharge air ducts over 2000 CFM; elevators; mech and elec rooms; tel rooms and closets; elevator machine rooms; top of atrium and open areas adjacent to atrium.	Required in elevator lobbies; elevator equipment rooms; mech and elec, and tel rooms; main return air duct and exhaust air plenums > 2000 cfm; return air risers or ducts serving 2 or more floors	Existing smoke detection system to be maintained. The existing system having smoke detection integrated with the fire detection system throughout the core and open office areas exceeds current code requirements.
Voice Annunciation	Building has alarm activated voice annunciation system	Alarm activated voice annunciation is required	Existing voice annunciation system to be maintained
Fire Command center	Existing fire command center is integrated into the main lobby reception desk and adjacent panel closets	Fire Command Center is located in 1 hour rated room per fire dept approval	Existing fire command center to be maintained
Fireman's Communication	Communication jacks are located in each elevator lobby.	Communication jacks are located in each elevator lobby.	Existing system to be maintained
Emergency Power	Building has 4 diesel generators that feeds FLS systems, 2 for the tower and two for the plaza respectively.	Building is required to have emergency power for FLS systems.	Existing Generator system to be maintained
Unlimited Glass	By Appeal	Allowed by Code	Current IBC
Tenant spaces with one exit	3,000 square foot maximum - Office space	5,000 square foot maximum - office space	Current IBC
Exit Separation	1/2 the distance of longest diagonal required.	1/3 the distance of the longest diagonal	Current IBC
Cascading egress	egress stairs required to cascade load from floors above	Cascading egress not required	Current IBC
Interconnecting stairs	Interconnecting stairs of two floor only	Interconnecting stairs of three floors allowed	Current IBC
Allow non-separated uses	Separations required	Allowed by code	Current IBC
Non rated corridors	Partitions over 5' in height create a rated corridor	Non rated corridors allowed	Current IBC
Interstitial spaces			Current IBC
Intervening Rooms	intervening rooms not allowed in corridors.	Intervening rooms allowed in corridors	Current IBC

**APPEAL HISTORY**

**PLAZA BUILDING – 555 S.W. OAK STREET**

City Appeal #	Date	Description	2004 OSSC Requirements (2007 OSSC where noted)
82172	8/32/72	1. Cascading Exit Capacity	No longer required by OSSC
		2. Bank Vault Locks	Continue
		3. Non-rated corridors on office floors	Design Proposal Permitted by current OSSC
		4. No Smokeproof Enclosures	Continue
		5. Ridge openings in vicinity of exterior stairs	Continue
		6. 3-story galleria with upper levels exceeding mezzanine requirements. Space includes smoke control.	IBC would appear to require classification as atrium. Confirm separation from tenant spaces and smoke exhaust capacity provided
		7. Smoke and Heat Vents Omitted	No longer required by OSSC
		8. Fire Dampers omitted at mechanical openings in smoke shafts	Design permitted by OSC Section 716.5.3.1
		9. Grease Duct installed in common ventilation shaft	Continue
		10. Roof penthouse housing office, and exceeding 33% of area of supporting roof	Continue. Recommend removing office space to comply with general penthouse limitations of current OSSC.

11873	1/18/1973	1. Maintenance of clear width within stairs at non-rectangular stair landings.	Proposal meets current OSSC.
		2. Double swinging doors at exits from galleria.	Current design no longer appears to include doors in question.
		3. Omission of fire-resistive rated occupancy separation.	Fire-resistive rated occupancy separation no longer required by 2004 OSSC, based on the application of the non-separated use provisions.
2092	4/12/1973	Omission of fire dampers at stair pressurization fans.	These openings are typically permitted under the provisions of the current OSSC, such that no appeal would be required.
8	6/21/1973	1. Appeal proposed non-rated corridors on floor floors.	Design proposal permitted by current OSSC.
		2. Dead-end corridors in B occupancy areas up to 50 feet in length.	Design proposal permitted by current OSSC.
		3. Allow a single exit from office spaces, when we calculated occupant loads less than 50.	Design proposal permitted by current OSSC.
		4. Omission of fire dampers at supply shafts.	Continue . This configuration is not currently permitted by the OSSC, such that a similar appeal would be required or dampers would need to be added.
		5. To allow non-rated hallway configuration on the office floors when the occupant load is not greater than 50.	Design proposal meets current OSSC.
6	9/27/1973	1. Occupancy separation at the galleria.	These occupancy separations are not required by the current OSSC, based upon the application of the non-separated use provisions.
		2. To allow locked doors to personal areas after business hours.	Continue. This configuration is not typically permitted by the current OSSC, such that a similar appeal would be required.
4	6/12/1975	1. This appeal related to a revised occupant load calculation for the second floor area for a computer room, which includes two separate exit paths.	Design proposal complies with current OSSC, such that no appeal would be required.
		2. To allow intervening rooms within the corridors.	The current OSSC would not require rated corridors on these office levels, such that this layout would be acceptable, and no appeal would be required.
		3. To lock the security doors at exit the stairs.	Continue. This design configuration would not be typically permitted by the OSSC, such that a similar appeal would still be required.
		4. To omit the occupancy separation at the fourth floor level between office areas in the classroom space.	This rated occupancy separation is not required by the OSSC, based upon the non-separated use provisions.
		5. To allow non-rated corridor spaces created by partitions in excess of 5 feet in height.	Based upon the office use, the code would permit non-rated corridor paths, such that the proposed layout would be acceptable.
12	6/12/1975	1. To allow non-accessible public telephones.	This design does not meet the current OSSC. We recommend public telephones be designed and installed in accordance with the Federal ADA and current OSSC requirements.
		2. To allow non-combustible raised floor with no fire stopping between the fire-resistive rated floor in the raised floor level.	This type of design proposal is permitted by the current OSSC, such that an appeal will be required.
		3. To allow an exit separation distance for a tenant space that is less than 1/3 of the maximum diagonal dimension of the area in question	Continue. This design proposal is still not permitted by the OSSC, such that a similar appeal would be required.
		4. To allow the omission of a door between the tenant space and the 3-story galleria atrium area.	The galleria space appears to be designed similarly to an atrium with smoke control. Therefore, this type of design layout would be acceptable. We recommend the design clarify the original smoke control system design, as this was not provided with this documentation.
		5. To allow glazing at the ceiling areas with additional sprinkler protection proposed to protect the glazing.	This design proposal appears to be acceptable under the current OSSC, such that no appeal would be required.
10	1/16/1985	1. To allow the proposed 3-story galleria space without 1-hour rated separation walls.	The galleria appears to be designed similarly to an atrium space, such that the omission of the 1-hour rated walls for the tenant spaces on these lower levels will be acceptable if these areas were incorporated into the smoke control system design.

9	11/3/1993	To allow a non-rated smoketight elevator lobbies within this high-rise building.	The 2004 OSSC would not require elevator lobbies within this building. The 2007 OSSC, which will take effect on April 1, 2007, would require elevator lobbies, but will permit these lobbies to be constructed with smoke partitions. The proposed design meets this requirement.
<b>TOWER BUILDING – 111 S.W. 5<sup>TH</sup> AVENUE</b>			
<b>City Appeal #</b>	<b>Date</b>	<b>Description</b>	<b>2004 OSSC Requirements (2007 OSSC where noted)</b>
B2	1/22/2003	This appeal proposed a reduction in the separation distance between exits for tenant spaces on the 20 <sup>th</sup> floor to less than 1/2 the maximum diagonal dimension of the area in question.	The design proposal still maintains an exit separation distance greater than 1/3 the maximum diagonal dimension, such that this proposed design layout would be acceptable under the current code.
3	5/12/1981	This appeal addressed proposed changes within the electrical circuits for lighting and elevators. The City recommended that this information be submitted to the Electrical Department. There was no further clarification regarding approval or denial of this proposed appeal.	
11	7/9/1981	1. This appeal related to exit separation distances less than 1/2 the maximum diagonal dimension caused by the proposed building configuration. 2. This appeal proposed omission of elevator lobbies at shuttle elevators serving less than three floors. 3. To allow non-rated corridors in the B occupancy floors in dead-end distances of 26 feet. 4. To allow self-closing valves on lavatories within handicapped restrooms. 5. To allow the omission of fire dampers at mechanical shafts on Floors 32 through 42 based upon the smoke control system design. The shafts in question include smoke detectors within the shafts that will automatically close smoke dampers upon detection of smoke within the shaft elements. If smoke is first detected on the tenant floors, then the building will go into automatic smoke control mode with these smoke dampers remaining open. 6. To limit the standby power within the building to serve a maximum of five floors in smoke control mode. 7. To allow the omission of vents at the top of elevator shafts based upon the sprinkler protection within the hoistways.	The proposed design configuration maintains compliance with the current OSSC, such that no appeal would be required. The elevators in question appear to serve less than three floors, such that the 2004 and 2007 OSSC editions do not require elevator lobbies and no similar appeal would be required. The proposed design configuration would maintain compliance with the current OSSC requirements, such that no appeal would be required. Based upon the description provided, it is unclear if the design proposal maintains compliance with the current State and Federal Accessible requirements. We recommend that the design configuration be modified, as necessary, to maintain compliance with the current regulations. Continue. The current OSSC requirements would not require automatic smoke control in these floors. However, they would require fire dampers at the shafts. The proposed design configuration described within this appeal would likely require a similar appeal document to be submitted under the current code, if modifications are made to these floors. Continue. Continue. We recommend adding vents (where necessary to maintain compliance with the current elevator requirements. In addition, we recommend confirming that smoke and heat detection is provided within the elevator hoistways, based upon the inclusion of sprinklers, as described within the Oregon Elevator Specialty Code requirements.
10	10/15/1981	1. This appeal concerned the emergency and standpipe power equipment for smoke control equipment on up to five floors. 2. This appeal described the proposed protection between the current walls and the edge of slabs.	Continue. Continue. If the proposed design configuration appears to maintain compliance with the current City standards, regarding this type of protection.
2	1/14/1982	This appeal addressed the proposed protection for the concrete covered steel columns within the garage areas, to maintain protection for these columns from vehicular traffic.	Continue.
1	6/30/1982	This appeal concerned the inclusion of signage indicated that in the event of emergency, occupants should use the stairs. This signage was proposed at the doors into the elevator lobbies, as opposed to at the individual elevator doors.	Continue
		This appeal proposed the use of Schedule 40 pipe at pressures up to 319 psig.	Continue.

14	6/30/1982	This appeal proposed an open convenience stair connecting Levels 33 to 35. The open stair would be protected by drafts stops extending down from the ceiling level and closely spaced sprinklers.	This type of design configuration is permitted by the shaft exceptions included in 2004 OSSC Section 707.2, as long as 18-inch deep draft stops and closely spaced sprinklers are provided around the floor openings in the stairs and that are required for egress. Therefore, no appeal would be required for this design proposal.
5	8/4/1982	1. This appeal addressed doors from normally non-occupied areas, such as electric rooms and mechanical rooms, which reduce the corridor width to approximately 21 inches when they are swung open 90° into the corridor.	Continue
		2. This item addressed a proposed 3-story atrium space designed in accordance with UBC Section 1715 of the 1982 Edition of the code.	This item relates to the atrium lobby space which will extend through three floor levels. The drawings provided for the project, dated June 29, 2001, appear to show this lobby as a 2-story space. This type of design configuration will be permitted by the current OSSC with no additional protection provided for this 2-story volume. Therefore, a similar appeal would not be required based on the current code requirements.
8	10/14/1982	This appeal addressed the proposed reduction in the structural frame rating of the structural frame elements abutting shaft construction. The design proposed to reduce the rating at the side facing the shaft to 2-hours.	This type of design proposal will be accepted by the 2004 OSSC as the high-rise modifications to the code allow the structural frame elements within high-rise buildings to be based upon the requirements typically associated with Type I-B construction. This would allow 2-hour rated structural frame elements throughout. Therefore, no similar appeal would be required.
6	10/14/1982	1. This appeal concerned exiting through intervening rooms on office floors.	Continue. In addition, the design should confirm that the doors serving the secondary egress paths from tenant areas do not include locks that would permit their use as a means of egress as required by current code requirements.
		2. This appeal concerned open circulation corridors that are not separated by fire-resistive rated construction.	The 2004 OSSC would permit this design proposal, such that a similar appeal would not be required.
		3. This appeal concerned the proposed increase in the dead-end corridor distance up to 35 feet.	The 2004 OSSC permits dead-end corridor distances up to 50 feet within B occupancy office areas, such that this appeal would no longer be required.
5	10/27/1982	This appeal addressed the proposed separation and the inclusion of sleeves at cable penetration between elevator machine rooms and elevator hoistways.	Continue.
4	1/26/1983	This appeal concerned the distance between the stair landings between the 41 <sup>st</sup> and 42 <sup>nd</sup> floors. The appeal requested that this distance be increased to 12 feet, 4 inches between landings	Continue.
2	9/28/1983	1. This item concerned a proposed reduction within the exit separation distance for tenant spaces exceeding 3,000 square feet. This appeal specifically notes that it will remain applicable until the remainder of the floor is built-out.	This item no longer appears to be applicable as the floor appears to be built-out and the exit separation appears to meet the current OSSC requirements.
		2. This item concerned the proposed egress path from the Executive Board Room area on the 31 <sup>st</sup> floor. This space includes an exit directly to the corridor space. The second exit will be through the empty room serving a cloakroom.	The proposed exit arrangement appears to comply with current OSSC requirements, such that this appeal would no longer be required.
4	10/5/1983	This appeal addressed the proposed inclusion of electronic strike bolts to maintain security at the elevator lobby doors. The appeal indicates that the doors will unlock upon detection of smoke on the floors or the activation of sprinkler waterflow alarms, and clarifies that the secondary doors will not include exit hardware.	Continue.
1	10/19/1983	This appeal addressed ducts serving Type I kitchen hoods that include an aquamatic hood removed grease. Therefore, the ducts will not be designed as greased ducts as described within the applicable mechanical codes.	Continue
5	11/23/1983	This appeal requested an increase in the allowable dead-end distance up to 60 feet on the office floors. This appeal was denied by the City.	The current code permits dead-end distances up to 50 feet within B occupancy areas. Future tenant layout should maintain compliance with this maximum dead-end restriction.

4	12/14/1983	1. This term requested the use of Won-Doors at corridors at the 30 <sup>th</sup> floor level, to maintain a fire-resistive, smoke tight separation.	This type of design proposal is specifically permitted by the current OSSC, such that no similar appeal would be required.
		2. This item addressed tenant spaces requiring access to two exits where the exit separation distance is less than 1/2 the maximum diagonal dimension of the space. The actual separation distance as maintained about 1/3 of the maximum diagonal dimension of the area in question.	This exit separation distance is specifically permitted by the current OSSC, such that no similar appeal would be required.
		3. This item related to a special dining area for executives that exceeded 750 square feet, but that included fixed seating limiting the maximum occupant load within this area to 245 people. The appeal requested a single exit from this space.	Continue.
5	3/28/1984	This appeal requested that the City accept a rolling security gate between the bank space and the ATM areas at the ground floor level. For security reasons, this gate will block the main egress path from the bank. This gage will only be closed during non-operating hours.	Continue.
11	4/18/1984	This appeal requested that intervening rooms be permitted within the corridor paths serving multi-tenant floors.	This type of design proposal is specifically permitted by the current OSSC as the corridors on these levels are not required to be fire-resistive rated. Therefore, a similar appeal would not be required.
4	12/31/1983	This appeal requested a exit separation distance within office spaces requiring access to two exits less than 1/2 the maximum diagonal of the mentioned area in question. The actual separation distance will be maintained above 1/3 of the maximum diagonal dimension of the space in question.	This exit separation distance is specifically permitted by the current OSSC, such that it is similar appeal will no longer be required.
2 3/4/85		This appeal addressed a proposed radio station space on the 15 <sup>th</sup> floor of the tower area. This area will be served by separate HVAC equipment from the remainder of the floor. The smoke control system design for the majority of the building was based upon maintaining not less than six air changes per hour following detection of smoke or heat in the floors. The appeal requests that the HVAC equipment serving the radio station areas shut down upon detection of smoke or heat. The smoke control system serving the reminder of the floor will go into smoke control mode.	The current OSSC would not require automatic smoke control on these floors. Therefore, this proposed design will be acceptable when no appeal would be required.
8	7/27/1987	This appeal addressed proposed raised floor area at the 15 <sup>th</sup> floor radio station space. The raised floor configuration does not maintain compliance with the ADA requirements enforced at the time of the appeal submission.	Continue. We recommend modifying the design layout to maintain compliance with the current Federal ADA and State Accessibility requirements.
3	7/27/1987	This appeal requested that the design be permitted to include an A-3 assembly area in 41 <sup>st</sup> floor. The appeal addresses the proposed inclusion of this space despite the fact that the proposed layout will increase the occupant load beyond the exit stair capacity based upon the cascading egress requirements included within the code enforced at the time of submission.	The current OSSC does not require that the exit stairs be sized to accommodate occupant egress from multiple floor levels, as long as the stairs has sufficient capacity to accommodate egress from one floor at a time. Therefore, as long as the proposed tenant space on the 41 <sup>st</sup> floor has a total occupant load less than total exit capacity, this proposed design layout should be acceptable, and no similar appeal would be required.
4	7/29/1987	This appeal requested that tenant spaces that require access to two exits have their egress paths separated from less than 1/2 the maximum diagonal dimension of this space in question. The actual exits will be separated by more than 1/3 the maximum diagonal dimension in area in question.	This design proposal is acceptable under the current code, such that no similar appeal would be required.
6	12/9/1987	This appeal requested that tenant spaces that require access to two exits have their egress paths separated from less than 1/2 the maximum diagonal dimension of this space in question. The actual exits will be separated by more than 1/3 the maximum diagonal dimension in area in question.	This design proposal is acceptable under the current code, such that no similar appeal would be required.
5	1/28/1988	1. This appeal requested that tenant spaces that require access to two exits have their egress paths separated from less than 1/2 the maximum diagonal dimension of this space in question. The actual exits will be separated by more than 1/3 the maximum diagonal dimension I area in question.	This design proposal is acceptable under the current code, such that no similar appeal would be required.
		2. This appeal addressed a proposed increase in the dead-end distance on the B occupancy office floors up to 40 feet in length.	The current OSSC permits dead-end corridors up to 50 feet in length on B occupancy floors. Therefore, this design proposal will be acceptable in a similar appeal and will no longer be required.

11	2/3/1988	This appeal addressed a proposed open stair extending between Levels 33 through 36. This based upon the previous appeal that was approved by the City to allow an open stair arrangement between Levels 33 and 35. This appeal proposed extending this stair up to the 36 <sup>th</sup> floor with 2-hour rated separation provided between the open stairs in the remainder of the occupied areas on Level 36.	The current OSSC permits open convenient stairs interconnecting multiple levels on B occupancy buildings, provided the openings in the floors are protected by 18-inch draft stops with closely spaced sprinklers. The proposed design configuration maintains compliance with the current OSSC requirements, such that a similar appeal will no longer be required.
1	2/15/1989	This appeal addressed the proposed inclusion of cross-corridor doors to limit the maximum dead-end distance on the 40 <sup>th</sup> floor to less than 20 feet.	Continue. Doors should be provided to limit the maximum dead-end distance within the office areas to 50 feet in accordance with OSSC Section 1016.3.
8	9/11/1991	1. This item addressed the proposed inclusion of non-rated corridors interrupted by office spaces on the 38 <sup>th</sup> floor offices, which is used for offices.	The design proposal described within this appeal is permitted by the current OSSC, such that a similar appeal would not be required.
		2. This item addressed non-rated corridor openings.	The design proposal described within this appeal is permitted by the current OSSC, such that a similar appeal would not be required.
13	9/2/1992	This appeal addressed a multi-tenant floor included on the 28 <sup>th</sup> floor on the Tower building. The appeal proposed to include cross-corridor doors that lock after hours to separate the tenant spaces as part of an overall security plan.	Continue.
16	2/3/1993	This appeal requested the omission of fireproofing for a lateral structural frame members.	Continue.
HV1	3/3/1993	This appeal addressed an alternate enclosure for greased ducts extending through multiple floors level.	Continue.
21	3/31/1993	This appeal addressed revised detector spacing on the office floors to allow an increase in the overall distance between automatic smoke detectors provided around the core areas of the office floors.	Area smoke detection is not required throughout the floors by 2004 OSSC, such that the proposed increase in detector spacing should be acceptable. To maintain continuity in the design, we recommend continuing this appeal.
P-4	12/2/1998	This appeal requested the use of non-rated corridors on the 24 <sup>th</sup> floor office areas.	Non-rated corridors are specifically permitted by the current OSSC within office areas. Therefore, a similar appeal will no longer be required.

**US BANCORP**

**TOWER & PLAZA BUILDING**

**SUPPORTING FIRE  
PROTECTION REPORT**

# US BANCORP TOWER FIRE PROTECTION REPORT

July 16, 2010



**GBD ARCHITECTS, Incorporated**  
1120 NW Couch Street, Suite 300  
Portland, OR 97209

20002147

**TABLE OF CONTENTS**

INTRODUCTION .....	2
APPLICABLE CODES .....	2
BUILDING DESCRIPTION .....	3
PLAZA .....	3
TOWER .....	4
FIRE PROTECTION SYSTEMS .....	5
CONSTRUCTION .....	5
NON-SEPARATED USES .....	5
EXITING .....	6
SUPPRESSION .....	8
DETECTION .....	9
ALARM AND NOTIFICATION .....	11
FIRE COMMAND CENTER .....	13
SMOKE CONTROL .....	13
EMERGENCY POWER .....	16
FIRE PROTECTION OUTLINE .....	17
I.    GENERAL FIRE-RESISTIVE CONSTRUCTION ASPECTS .....	17
II.   OCCUPANCY CLASSIFICATION .....	17
III.  FIRE-RESISTIVE SPARATIONS .....	17
IV.   DAMPERS .....	18
V.    INTERIOR FINISH .....	18
VI.   EGRESS .....	19
VII.  EMERGENCY SIGNAGE .....	20
VIII.   SUPPRESSION SYSTEMS .....	20
IX.   DETECTION .....	22
X.    ALARM AND NOTIFICATION .....	22
XI.   FIRE COMMAND CENTER (FCC) .....	23
XII.  EMERGENCY POWER .....	23
XIII. ELEVATORS .....	24
XIV.   EXISTING APPEALS .....	25
XV.    APPEALS CONCLUSION .....	37
CONCLUSION .....	37

## **INTRODUCTION**

This document is an updated Fire Protection Report for the Plaza and Tower Buildings at the US Bancorp Tower in Portland Oregon. The project consists of an existing complex located at 111 S.W. Fifth Avenue. The complex includes a 7-story Plaza Building originally constructed in 1973, and a 42-story tower element constructed 10 years later.

This report summarizes the applicable fire/life safety related requirements associated with the existing building, based on the current building and fire codes. This report describes the applicable requirements, and the existing systems within the building. This is intended to serve as a reference document for future work at the complex. This is based on the Oregon Structural Specialty Codes (OSSC), and the Uniform Building Code (model code for 2004 and 2007 Oregon Structural Specialty Codes), and the Uniform Building Code (model code for previous editions of the OSSC, which were in effect at the time of original construction.

The latter sections of this report describe the various appeals accepted by the City for the Plaza and Tower Buildings, and describe the current Oregon Structural Specialty Codes provisions relating to these appeal items. Many of the requirements addressed in the appeals are no longer included within the applicable codes, or are now specifically permitted, such that similar appeals are no longer necessary.

## **APPLICABLE CODES**

The current applicable codes enforced by the state include:

1. 2004 Oregon Structural Specialty Code (OSSC) (Based on 2003 International Building Code).
2. Oregon Fire Code (PFC) (Based on 2003 International Fire Code).
3. City of Portland Building Regulations.
4. Oregon Elevator Specialty Code (OESC).
5. 2004 Oregon Mechanical Specialty Code (OMSC).
6. 2003 International Mechanical Code (IMC).

## **BUILDING DESCRIPTION**

The overall complex consists of two main building elements; a Tower Building and a Plaza Building. Drawings for each of these building elements are attached in Appendix A for reference.

### **PLAZA BUILDING**

The Plaza Building was originally designed/constructed in 1973. The design appears to have been based on the 1970 Edition of the Uniform Building Code (UBC). The building includes seven above-grade levels atop two levels of below-grade parking and a service/storage basement. The primary use of the above-grade building areas is as rentable office space. The primary occupancy classifications of the Plaza Building were F-2 (office, B occupancy per current OSSC), and F-1 (open parking garage, S-2 per current OSSC). The 1970 edition of the UBC did not include formal high-rise requirements, applicable to building greater than 75 feet in height. These requirements officially became part of the code in the 1973 UBC, which was not adopted and enforced until March 1974.

#### Atrium

Based on the documentation provided, the Plaza Building also includes a large galleria/cafeteria area in the center areas of Level 1, which extends up through Levels 2 and 3. This 3-story space appears to have been designed similarly to an atrium space, as described in current editions of the OSSC. This galleria/atrium space was originally described in an appeal submitted on September 27, 1973. This appeal indicated that the proposed 3-story space would be open to areas on the lower three levels of the building. The appeal indicates that this space will include automatic sprinkler protection, automatic smoke evacuation, a public address system, and 24-hour surveillance. This description appears to meet the base atrium related requirements included in the current OSSC.

#### Mechanical Penthouse

The building includes a mechanical penthouse above the 7<sup>th</sup> floor. The enclosed mechanical space exceeds 1/3 the area of the supporting roof, such that this space would not typically be permitted to be classified as a penthouse or roof structure in accordance with Section 1510 of the current OSSC. These requirements are similar to those included in the 1970 UBC. However, this area was accepted by the City as part of the appeal package submitted on August 31,

1972. This appeal addressed the proposed penthouse area (about 37 percent of the area of the supporting roof), and the proposed inclusion of a small office and storage area on this level. We propose that the existing appeal on file with the City of Portland remain intact.

### **TOWER BUILDING**

The other main building element at this complex is the Tower Building, which was added in 1983. Based on the appeal and construction dates, the most likely model code used in the design is the 1979 UBC, which was adopted and had an effective date in Oregon of July 1, 1980. The tower consists of a 42-story structure, with a two basement levels. The drawings show the basement level interconnected to Levels 1 and 2 of the Plaza Building. The Tower houses approximately 750,000 square feet of rentable floor area. This structure is primarily used for office space.

The 42 above-grade levels have a footprint area of about 19,680 square feet. A central core, including elevators, stairs, restrooms, and service spaces extends through the entire Tower. A total of 17 passenger elevators serve different floors of the Tower. The main passenger elevators open into an elevator lobby on each floor served by the elevators in questions. A single freight elevator serves the basement levels through the Tower up to the 41<sup>st</sup> floor. The building includes two stairwells located in the north east and south west corners, which serve each floor in the Tower. The stairwells are not provided with vestibules and open directly into tenant spaces and/or non fire-rated corridors on each floor.

The south part of the ground floor lobby is open to the second floor level, creating a 2-story volume. This space is permitted to be open to the building areas on each level, without classifying it as an atrium, based on the current OSSC.

Plaza Floor 6 includes the US Bank Trust Vault protected by an Inergen special suppression system. Two computer/LAN rooms located on Floor 11 are protected by a dry pipe pre-action sprinkler system. The dry pipe pre-action system that was previously located on Floor 10 has been eliminated. The two main phone rooms, one on Plaza B2 and one on Tower B2, are both protected by dry pipe pre-action sprinkler systems as well. The information provided also describes a restaurant space located on the 30<sup>th</sup> floor. The restaurant hoods are protected by an Ansul suppression system. The parts of the 41<sup>st</sup> floor that were converted to A-3 assembly areas have all been converted back to office uses. An appeal was submitted to allow the proposed assembly use, which created a condition where the occupant load in the stairs exceeded the exit capacity, based on the cascading egress requirements described in Section 3302 of the 1979 UBC. The current OSSC does not include similar cascading egress requirements, and only requires that the stairs have sufficient capacity to accommodate the occupant load of the floor in question. This eliminates the need for this, or a similar appeal. We propose that IBC govern as the appeal no longer applies.

Floors 33 through 35 are connected by open circulation stair. This design proposal was addressed and approved by the City of Portland in an appeal dated February 3, 1988. There was a subsequent appeal to extend this open stair up to the 36<sup>th</sup> floor, with the stair separated from the areas on the 36<sup>th</sup> floor level by 2-hour rated construction. The site assessment

performed in 2000 raised a concern whether the stair on Level 36, which is currently open to the floor, satisfies the requirements of the appeal. However, this design layout is specifically permitted by the current OSSC, based on Exception 2 to Section 707.2 of the code, provided 18-inch deep draft stops and closely spaced sprinklers to protect the area around the floor opening. It has been confirmed that the protection has been installed.

Drawings of the roof level have not been studied, but based on the 2000 assessment report; a helipad with an AFFF suppression system is located on the roof. The Helipad is inactive and is no longer in use.

## **FIRE PROTECTION SYSTEMS**

This section contains a brief description of some of the key fire protection systems and current code requirements, for this complex. The fire protection systems and features are intended to provide a code compliant level of protection for the building.

### CONSTRUCTION

Documentation provided for both the Plaza and Tower Buildings indicates that they structures were designed as Type I construction. As described above, the code enforced at the time of the design of the Plaza building did not have specific high-rise requirements. However, based on the addition of the Tower Building, and the protective features described in the drawings and assessment reports provided, both the Tower and Plaza Buildings appear to comply with the general high-rise related requirements included in the 1979 UBC.

The current OSSC includes similar overall high-rise related provisions to those included in the 1979 UBC. The current code would require the building to be classified as Type I-A construction. Buildings designed and classified as a high-rise by the current code are permitted to apply reductions in the fire-resistive ratings. This would allow the fire-resistive ratings to be based on the requirements for Type I-B construction. The actual fire-resistive ratings associated with this classification are included in the "Fire Protection Outline" section of this report.

### Non-Separated Use

The Type I-A occupancy classification will allow for the application of the non-separated use provisions described in OSSC Section 302.3.1 throughout the buildings. This will eliminate the need for fire-resistive occupancy separation walls between the different occupancy types. There were previously a number of appeals submitted and approved, which requested reductions in the separation and opening protection requirements at occupancy separation walls. The current code, through the application of the non-separated use provisions, eliminates the need for these appeals, as rated occupancy separation walls are generally not required. Individual hazardous areas will need to be separated in accordance with OSSC Table 302.1.1. This will require that the parking garage areas be separated from the adjacent building areas by not less than 1-hour fire barriers. It is our belief after review of the original construction

documents that the parking garage is separated from the adjacent areas by at least 1 hour rated CMU walls vertically and a 2 hour rated slab horizontally.

## EXITING

The egress systems for the Plaza Building and the Tower Building are separate and are described below.

### Plaza Building

Existing Egress Configuration – The Plaza Building includes two basement levels. These levels are provided with direct access to three enclosed stairs that provide direct access to the exterior at the ground floor level. The ground floor level of the Plaza Building includes multiple separated tenant areas, around the center galleria area. These tenant areas include a combination of access to exits through the main galleria space, to doors discharging to the exterior on the North, South, and East side (center) of the building and direct access to the exterior. The galleria space extends up through the second and third floor levels. The design includes multiple tenant areas on these floor levels. These levels are provided with four egress stairs, at the four corners of the building. The northeast and southeast exit stairs are accessed via pedestrian bridges extending to the stairs from the main occupied areas on these two levels. The tenant areas include access directly to the stairs from the tenant space, or via the main galleria. The egress configuration on these levels appears to require passage through individual tenant spaces. The design has a single tenant (US Bank) with multiple departments that provides all occupants access to the exit stairs, without the path being blocked by locked doors.

Corridors – Previous editions of the UBC based building codes included requirements for fire-rated corridors. The current OSSC will permit corridors within this building to be non-rated, with doors, based on the current uses and the sprinkler protection within the building. This will permit glazed doors and openings in these exit paths. Various appeals were submitted on the existing building to allow for the use of non-rated openings and non-rated corridors. These types of appeals are no longer required, based on the occupancy classifications in question and the sprinkler protection.

Previous editions of the UBC building codes also included restrictions on the dead-end distances within corridors, which limited this distance to a maximum of 20 feet. The current OSSC permits dead-end corridors up to 50 feet in length in B and S occupancy spaces. This will allow more flexibility regarding the egress configuration on the Plaza floors.

Stairs – The Plaza Building includes floor levels located more than 75 feet above the lowest level of fire department access. This would typically require that one of the stairs be designed as a smokeproof enclosure. The 1970 UBC required that smokeproof enclosures include either an open air or a mechanically ventilated vestibule between the exit stair and the building. None of the existing stairs are currently designed as smokeproof enclosures, with vestibules. This was accepted by the City as part of an appeal submitted on August 31, 1972. This appeal was based on the sprinkler protection within the buildings, the number of stairs provided and the

smoke exhaust. Despite this appeal, the smoke control documentation provided indicated that the stairs are pressurized for both Tower and Plaza buildings. The appeal is in place which allowed the existing exit systems to remain as long as the stairs are all pressurized. This is discussed in more detail in the Smoke Control sections of this report.

### Tower Building

Existing Egress Configuration – The Tower Building includes two basement level and 42 above-grade levels. The main egress discharge level is the first floor. The occupied areas on this level have access to multiple exits discharging directly to the exterior. The basement levels and the levels above the ground floor are served by two enclosed exit stairs. One of the exit stairs discharges directly to the exterior. The second stair discharges into the main lobby area on the ground floor area. This configuration has traditionally been accepted by the UBC based building codes in office buildings. This type of arrangement is also permitted by the current OSSC.

The upper office levels include single tenant and multi-tenant floors. The exit access routes on these levels appear to be designed as enclosed exit access corridors.

Corridors – Previous editions of the UBC based building codes included requirements for fire-rated corridors. The current OSSC will permit corridors within this building to be non-rated, with non-rated doors, based on the current uses (B and A occupancy) and the sprinkler protection within the building. This will permit glazed doors and openings in these exit paths. Various appeals were submitted on the existing buildings to allow for the use of non-rated openings and non-rated corridors. These types of appeals are no longer required, based on the occupancy classifications in question and the sprinkle protection.

Previous editions of the UBC based building codes also included restrictions on the dead-end distances within corridors, which limited this distance to a maximum of 20 feet. The current OSSC permits dead-end corridors up to 50 feet in length in B and S occupancy spaces. This will allow more flexibility regarding the egress configuration on the Tower floors classified as a B occupancy. The maximum permitted dead-end distances permitted in corridors serving A occupancy areas is still limited to 20 feet by the current OSSC.

Stairs – The tower building includes floor levels located more than 75 feet above the lowest level of fire department access. This would typically require that one of the stairs be designed as a smokeproof enclosure, based on the 1979 UBC. The 1979 UBC required that smokeproof enclosures include either an open air or a mechanically ventilated vestibule between the exit stair and the building. The tower building includes two stairs serving the high-rise floors. Neither of these stairs appears to be designed as a smokeproof enclosure with vestibules, as described in the 1979 UBC. There did not appear to be a separate appeal filed for this issue within the tower building, but the stairs are pressurized and are enclosed in a 2 hour rated enclosure.

The existing building documentation provided did not include much detail regarding the existing smoke control system. However, the smoke control write-up in the assessment report does

reference pressurization fans for the stairwells within the tower building. The test report from March of 1983 shows that stairwell 1 has a space pressure of +0.14" and stairwell 2 has a space pressure of +0.15". We do not have TAB data for the Plaza stairwell pressurization fans.

## **SUPPRESSION**

The building includes automatic sprinkler protection system throughout. The tower building is protected by wet standpipe systems and the Plaza has all dry standpipes. The standpipes-sprinkler risers include hose connections at each floor and are located within the two stair enclosures of the tower building, and within all four stair enclosures of the Plaza building.

The primary water supply for the sprinkler/standpipe systems is connected to the City water main. The entire complex is connected to two separate water mains, located on 5<sup>th</sup> and 6<sup>th</sup> Avenues respectively. Water can be drawn from either main via a cross-connection in the second basement level of the Plaza. Tower FDCs are located at the NE corner of the Plaza. Plaza FDCs are located at all four corners of the Plaza. The water supply system includes four electric fire pumps installed on the basement level of the Plaza building. These fire pumps are installed in a 1-hour rated room, as required by NFPA 20.

III-C Tests were performed in 2002 and 2007. In both cases, the pumps did achieve 500 gpm at the most remote standpipes (both the NE and SW high rise standpipes terminate on the Tower roof). The low rise standpipes terminate on T23. In 2002 an attempt was made to test the low rise standpipes by pumping (flow test) the water to drain. At that time, the sump pumps in the B2 level were incapable of keeping up with the volume and the test had to be abandoned before getting a good reading. The low rise standpipes have not been re-tested since redirecting the drain line to a more effective sump. The system installer confirmed that the building was designed to meet or exceed the stated flow rates. Test connections for testing the pressure reducing valves were installed in 2000.

There are multiple dry pipe sprinkler systems in each installed system and it was decided that if we flushed one riser (for each installation date) in that system it would prove to be adequate representation of what was designed and installed. The test was performed in 2004 and at that time, there was insufficient debris discovered to warrant flushing the remaining systems. Test connections for testing the pressure reducing valves were installed in 2000. Tests were conducted successfully in 2003 and 2006.

Additional details regarding the general suppression requirements of the current OSSC are included in the "Fire Protection Outline" section of this report. These requirements would apply to any new projects completed within the existing buildings.

## DETECTION

Based on information in the 2000 assessment report, the Tower and Plaza buildings are provided with an integrated addressable fire alarm system that was installed in 1996. Based on information included within the 2000 assessment report, installed activation devices include:

1. Water flow and valve tamper switches for the fire sprinkler system in both buildings.
2. Area smoke detection within the building core areas and in all open office areas.
3. Area smoke detection within the elevator lobby areas, the elevator hoistways, and in the elevator equipment rooms, for elevator recall.
4. Duct detection in all return and supply shafts in the Tower and Plaza buildings.
5. Heat detection in the mechanical rooms of both buildings and in various locations in the restaurant on floor 30 of the Tower building.
6. Beam detection in the atrium of the Tower and Plaza building. (Not required within the 2-story lobby space in the tower building).
7. A manual pull-station is located in the ground floor lobby. (it's the only one in the complex)

The 2000 assessment report indicated deficiencies regarding location and spacing of manual pull-stations based on the requirements of the 1997 UBC. Manual pull-stations are not required by the current OSSC. The 2000 assessment report also described various elevator lobby areas that do not include automatic smoke detection. This includes the freight elevator lobbies in the Plaza Building and in the passenger elevator lobbies on Levels 2 and 3 in the Plaza Building. Detection devices have been installed in these areas, as required, for elevator recall in accordance with Chapter 30 of the current OSSC and the Oregon Elevator Specialty Code.

In general, the number and type of detection devices throughout the building appears to meet or exceed the requirements of the current OSSC. As described above, the current code does not require a manual fire alarm system throughout the building. Smoke detection is required at all elevator lobbies or elevator entrance areas for elevator recall in accordance with OSSC Section 3003.2, and at automatically closing doors in rated corridors and exit enclosures in accordance with Section 715.3.7.3. Duct detectors are also required in the vicinity of smoke dampers, as described in Section 716.3.2.1 of the OSSC. Duct smoke detectors are also required in the return air mechanical system in accordance with IMC Section 606.2. These locations are further clarified in the "Fire Protection Outline" section of this report. Detection would also be required within the atrium spaces to initiate the atrium smoke control system.

The primary area where the current building fire alarm system exceeds the requirements of the current applicable building code is the incorporation of area smoke detection throughout the core areas and open office areas throughout the upper levels of the building. This type of smoke detection would not be required by current code, the current code also reduces the number of smoke dampers that would be required throughout the occupied building areas, such that the number of detection devices required to close the smoke dampers would be

reduced. We recommend that the potential removal of the area detection devices on the upper floors of the building be further evaluated as specific tenant improvement projects are completed on the upper floor levels and as long as we meet current code the owner would like to maintain the current system on the upper floor levels until major replacement occurs. Smoke dampers are located at each mechanical penetration of the shafts in the Tower and Plaza. Duct smoke detectors are located near the smoke dampers.

Elevator Recall/Shunt Trip

The current Oregon Elevator Specialty Code and NFPA 71 include requirements for elevator recall and power shunt trip, to protect against the impact of sprinkler spray on active elevator equipment. These types of systems generally include automatic smoke detection within the elevator lobbies and machinery rooms (and hoistway if sprinklers are provided), to recall the elevator, and heat detectors in these areas to deactivate power to the elevator equipment prior to sprinkler activation. The 2000 assessment report describes the primary and secondary recall operation of the elevators. The recall information is summarized in the table below.

TABLE 1: ELEVATOR RECALL SUMMARY

<b>Building</b>	<b>Elevator #</b>	<b>Floors Served</b>	<b>Primary Recall Level</b>	<b>Secondary Recall Level</b>
Tower	1	1 – 17	Tower 1	Tower 3
Tower	2	1 – 17	Tower 1	Tower 3
Tower	3	1 – 17	Tower 1	Tower 3
Tower	4	1 – 17	Tower 1	Tower 3
Tower	5	1 – 17	Tower 1	Tower 3
Tower	6	B1, 1, 18-30	Tower 1	Tower 18
Tower	7	B1, 1, 18-30	Tower 1	Tower 18
Tower	8	B1, 1, 18-30	Tower 1	Tower 18
Tower	9	B1, 1, 18-30	Tower 1	Tower 18
Tower	10	B1, 1, 18-30	Tower 1	Tower 18
Tower	11	B1, 1, 18-30	Tower 1	Tower 18
Tower	12	B1, 1, 18-30	Tower 1	Tower 18
Tower	13	T1, 30-41	Tower 1	Tower 30
Tower	14	T1, 30-41	Tower 1	Tower 30
Tower	15	T1, 30-41	Tower 1	Tower 30
Tower	16	T1, 30-41	Tower 1	Tower 30
Tower	17	T1, 30-41	Tower 1	Tower 30
Tower	18	B1 - 41	Tower 1	Tower B1
Tower	19	B2 – B1	None	None
Tower	20	T41-T43	Tower 41	None
Tower	21	T41-T43	Tower 41	None
Plaza	1	1 – 7	Plaza 1	Plaza 4
Plaza	2	1 – 7	Plaza 1	Plaza 4
Plaza	3	1 – 7	Plaza 1	Plaza 4
Plaza	4	B2 – 7	Plaza 1	Plaza B2
Plaza	5	B2 – 7	Plaza 1	Plaza B2

Plaza	6	B2 – Roof	Plaza 1	Plaza B2
Plaza	7	B2 – 7	Plaza 1	Plaza B2
Plaza	8	B2, 1 - 2	Plaza B2	None

The 2000 assessment report did not include similar information related to power shunt trip for the elevator equipment. As further modifications are made to the elevator equipment and/or the fire alarm system within these buildings areas, we recommend that this system be further evaluated and upgraded, as necessary, to comply with the current state and fire alarm code requirements. There are presently no power shunt trips in this facility.

### **ALARM AND NOTIFICATION**

As described above, the Tower and Plaza Buildings are provided with an integrated addressable fire alarm system that was installed in 1996. Following detection of smoke or heat, the fire alarm system initiates an occupant notification alarm on the floor of alarm, and the floors above and below. The 2000 assessment report indicates that the existing system provides emergency voice communication. If installed in 1996, this system was likely designed based on the requirements in the 1994 OSSC (based on the 1994 UBC). The general voice alarm/communication system requirements included in the 1994 UBC are similar to those included within the 2004 OSSC. Therefore, the existing system should maintain compliance with the general alarm annunciation requirements of the current codes.

The existing building also includes visual notification devices, as required by the federal ADA and the accessibility related requirements of the OSSC. The 2000 assessment report indicated deficiencies regarding strobe spacing in the north Tower corridors and potentially within the dining areas on Level 2 of the Tower Building. We recommend upgrading the visual notification devices within these areas to maintain compliance with the requirements outlined in Section 907.9.1 of the current OSSC. This was not done except where tenant improvements have involved the north Tower corridors. There are approximately 20 floors that would need to be upgraded, and this would impact the south corridors as well.

Based on the information included within the 2000 assessment report, the existing fire alarm system appears to meet the general requirements of the current code. As changes or alterations are made within the building, the fire alarm system will need to be upgraded/modified to meet the requirements of OSSC Section 907 and NFPA 72.

Based on the information provided, it appears that the fire alarm system includes the capability to manually override the automatic annunciation system to allow for voice paging and the broadcasting of live voice messages. The current OSSC requires similar voice paging and broadcasting capability for fire alarm systems within high-rise buildings in Section 907.2.12

### Fire Department Communication Systems

Section 907.2.12.3 of the current OSSC requires that new high-rise buildings include an approved two-way fire department communication system installed in accordance with NFPA 72. This system is required to operate between the fire command center and elevators, elevator lobbies, emergency and standby power rooms, fire pump rooms, and at each floor level within enclosed stairways. The 2000 assessment report describes a firefighter's telephone system, but does not include details regarding its installation. The 1994 UBC included similar requirements regarding these types of systems. Firefighter phones are installed in all the required locations of the Tower, except for the Generator and Fire Pump rooms. The Plaza building does not have any of these systems installed.

### Stair Door Control

Section 403.12 of the current OSSC permits stairway doors, other than the exit discharge doors, to be locked from the stairway side, to limit occupant access to the upper floors.

These types of stairway door locking systems are required to include a means for the fire department to simultaneously unlock the doors from a signal in the fire command center.

The 2000 assessment report describes a stairwell door control system as part of the fire alarm specifications. The description of this system indicates that the fire alarm system is to include a touch screen computer for all stairwell doors, connected to the existing door control system. The description also notes that the electronic locks will also automatically release upon alarms within the building. This specification appears to describe a system meeting the general requirements of the current OSSC. There presently is not a touch screen computer that controls the fire alarm systems, but a graphical user interface (located at the security desk on Floor 1) for the System that releases all Tower stairwell doors. Any alarm on the lower Tower floors B2 thru 8 or any floors in the Plaza also releases the Plaza stairwell doors.

## **FIRE COMMAND CENTER**

The current OSSC requires that high-rise building include a 96 square foot Fire Command Center, to house the systems and equipment identified in the attached outline. This room should be located off one of the main entrance lobbies, and should be enclosed in 1-hour rated construction. The 2000 assessment report indicates that the fire alarm system is monitored 24 hours a day by a security guard in the Main Lobby/Security Desk on Floor 1. However, there is no indication that the monitoring is via a remote annunciation panel with the main panel located within a Fire Command Center.

Presently there are two main panels that control our system. The panel for floors T34 – T43 is located in the rated electric room on T34 and the panel that serves the rest of the building is located at the Security Desk on Floor 1 which is not in a rated room. The panel on T34 and the panel on T1 can both be read from the Network Command Center (NCC) computer at the Security Desk. Both panels also report to a continuous feed printer at the Security Desk.

## **SMOKE CONTROL**

The previous UBC based codes include more restrictive active smoke control requirements than the current OSSC for high-rise buildings. This section includes a brief description of the various smoke control zones within the building. Much of this information is based on a smoke control specification document dated September 30, 1994.

### Floor Protection

Based on the 2000 assessment report, the current active smoke control system for the Tower and the Plaza building is designed and zoned on a floor by floor basis. This system appears to have originally been designed to exhaust the floor of alarm at six air changes per hour. However, specification sections relating to smoke control, dated September 30, 1994, indicate that the system is to maintain exhaust from the fire floor, with supply/return dampers closed, to exhaust smoke and maintain a negative pressure differential on the floor. In addition to the exhaust, the smoke control specification section indicates that the exhaust dampers on the floors above and below will close and the supply dampers will fully open, creating a positive pressure in these zones. Activation of this active smoke control system is by water flow switch, smoke detector or heat detector.

Based on the changes included in the 2004 OSSC, floor-to-floor pressurization is no longer required. This type of active smoke control was required in previous editions of the OSSC, which were based on the Uniform Building Code. However, the current OSSC, which is based on the 2003 IBC, no longer requires this type of active smoke control.

The active smoke control system design was used as part of the justification to remove dampers at the shafts, and to justify the existing stair protection. Therefore, we recommend that this system be maintained. We recommend that the system be tested to document to amount of air supplied and exhausted from the various zones, and the pressure differential achieved. This is to confirm compliance with the maximum door opening force requirements and the stair pressurization requirements of the current code. In the smoke control mode, the current code limits the maximum door opening force to 30 pounds.

### Stairwell Pressurization

As described above, the existing codes in effect at the time of construction of these buildings would have required that one of the exit stairs serving the Tower Building and one of the stairs serving the Plaza Building be designed as smokeproof enclosure. If this were new construction, the current OSSC would require that all of the stairs be designed as smokeproof enclosures. The current code outlines three different approaches that are provided to construct stairs as a smokeproof enclosure. The first alternative employs natural ventilation, where the stair is required to include a vestibule with a minimum opening area to the exterior. The second method also requires a vestibule and uses mechanical ventilation to pressurize the vestibule with respect to the stair and the building. The third option does not require vestibules, but requires the stair shaft to be pressurized, which presently is how the stairs are configured. The test report from March of 1983 shows that both stairwell (Stairwells 1 & 2) within the Tower have a space pressure between +0.14" and +0.15" inches water gage, which is right on the lower end of the requirement for the current OSSC. We do not have TAB data for the Plaza stairwell pressurization fans.

The existing stairs do not include vestibules, and details regarding the active smoke control within these stair towers are limited. The smoke control specification dated September 30, 1994 indicates that upon detection of smoke or heat, the system is to provide pressurization supply air to the stairs within the building housing the fire zone (Tower or Plaza), to limit smoke migration into the stair.

Presently the stairs have a stack effect (in the static mode) within the stair shafts that require the stair door closers to be adjusted to a pressure of around 15 psi, so the doors will latch to the closed position. What this means is when the pressurization is turned on for the stairs the opening force of the door registers around or above 20 psi, which exceeds the acceptable ADA (section 1109.9.9.3) opening force for exterior doors. The section also contends that Fire doors (section 1109.9.9.5) shall have the minimum force necessary to close and latch the door.

Our recommendation is to leave the stair pressurization systems at the present pressure differential of 0.15 inches water gage, so that the door opening force can be kept as low as possible for ADA requirements.

### Atrium Smoke Control

The Plaza building includes a three story atrium space protected by active smoke control. The current code would require that this smoke control system be designed to maintain smoke at least 10 feet above the highest walking surface within the atrium. This is achieved by the placement of the primary exhaust fans in ceiling of the Link between Tower and Plaza such that there is a full story of open space above the Atrium ceiling to draw and contain the smoke. Fans that serve adjacent areas to the Atrium are also placed in evacuation mode during fire events

within the first three floors. Because the first three floors are open to one another, they are treated as one floor for both alarm annunciation and smoke control. An alarm on Plaza 2, for example, places all of the air handlers that serve floors 1, 2, and 3 into smoke evacuation mode, and places the entire 4<sup>th</sup> floor in pressurization mode. An alarm on Plaza 4 places the 4<sup>th</sup> floor air handlers in evacuation and places all of the air handlers that serve floors 1, 2, 3 and 5 into pressurization mode.

#### Elevator Protection

As described above, the design includes various elevators serving the Plaza and Tower buildings. These elevators open into elevator lobby areas on the upper floor levels. These lobbies provide the smoke control required for these systems. This design approach maintains compliance with the elevator protection requirements where elevators open onto floors, as outlined in the 2004 and 2007 OSSC.

Based on information included in the 2000 assessment report, the elevator hoistways do not include vents at the tops of the shafts. Elevator hoist way vents are typically required in new construction in accordance with Section 3004.3 of the current OSSC.

#### Firefighters Control/Annunciation Panel

The 2000 assessment report indicates that the smoke control system includes a graphics smoke control panel (manufactured by Landis & Gyr) located at the security desk in the main floor lobby on Floor 1. This panel indicates which floors are in alarm, and also allows manual fire fighter override of the smoke control system. The smoke control specification information indicates that this firefighter control panel has priority over all other control points and equipment making up the smoke control system. This may be acceptable as an existing condition. However, the current code would typically require a graphic panel in accordance with OSSC Section 909.16, located within a 1-hour rated Fire Command Center.

### **EMERGENCY POWER**

Four diesel fuel emergency generators are located on the 8<sup>th</sup> floor penthouse/roof of the Plaza Building. Two generators serve the Tower and Plaza, respectively. If this emergency power system is upgraded, this emergency power system shall conform to the high-rise requirements outlines in OSSC Section 402.10 and 403.11. Emergency power will also be required for the smoke control system, in accordance with OSSC Section 909.11, and for the various other systems identified in Section 2702. This includes exit signs, egress illumination, fire alarm equipment, elevators, etc. We have confirmed that emergency power has been provided for these systems.

## FIRE PROTECTION OUTLINE

This outline summarizes the fire protection and life safety related requirements of the 2004 OSSC, as they relate to high-rise office buildings similar to the existing US Bancorp Tower. The narrative section of this report describes how the existing building complies with these requirements, or the similar requirements enforced at the time of construction. These 2004 OSSC requirements are not necessarily applicable to the existing building areas. However, these general requirements of the current code will apply to future alteration and renovation projects completed on the building. This should be evaluated as future projects are completed.

### I. GENERAL FIRE-RESISTIVE CONSTRUCTION ASPECTS

- a. 2004 Oregon Structural Specialty Code and Fire and Life Safety Regulations (Type I-B Construction based on high-rise reduction described in OSSC Section 403.3):
  - i. Structural frame:
    1. Columns – 2-hour.
  - ii. Exterior Walls:
    1. Bearing - @-hour.
    2. Non-bearing – 1-hour if separated by less than 30 feet from property line.
  - iii. Floors (including supporting beams and Joists) – 2-hour.
  - iv. Roofs and roofs/ceilings – 1-hour.
  - v. Interior:
    1. Bearing – 2-hour.
    2. Non-bearing – 0-hour.
  - vi. Shaft Protection:
    1. Shaft enclosures penetrating four stories or more will be provided with 2-hour protection with 1 1/2-hour openings. Penetrations under four stories require 1-hour protection with 1-hour openings.
    2. Exit Enclosures – 2-hour with 1 1/2-hour openings.

### II. OCCUPANCY CLASSIFICATION

- a. Assembly (more than 50 persons), Dining Areas, Cafeteria – Group A, Division 2
- b. Offices – Group B
- c. Retail Space – Group M
- d. Mechanical/Electrical/Storage – Group S, Division 2

### III. FIRE-RESISTIVE SEPARATIONS

- a. Occupancy Separation: None required. Individual hazardous areas should be separated per OSSC Table 302.1.1.
- b. Exit Corridors – Corridors within the B and A occupancy areas can be non-rated, in accordance with OSSC Section 1016.
- c. Exits/shafts – 2-hour rated shaft enclosures required at shafts connecting 4 stories or more (all shafts within existing building should be 2-hour rated).
- d. Atrium – 1-hour:
  - i. Doors – 45-minute smoke and draft control assemblies.

- ii. Glazed Openings – A glass-block wall assembly with a 3/4 –hour rating. Alternatively, tenant spaces separated from the atrium by glass wall forming a smoke partition where automatic sprinklers are designed to wet the entire surface of the glass upon activation can be provided in accordance with Exception 1 to Section 404.5. If walking surfaces or usable space are provided on both sides of the glass, then sprinklers are required on both sides of the glazing, otherwise, sprinklers can be provided on the non-atrium side of the glazing only.
- e. Opening Protection – Interior walls:
  - i. Corridors/Atrium – See above.
  - ii. Exit Enclosures – 1 1/2-hour in 2-hour exits.
- f. Through penetrations and membrane penetrations should comply with the requirements of Section 716.6.2.

**IV. DAMPERS**

- a. Fire dampers are required in the following locations:
  - i. Penetrations of fire barriers, except where penetrations are tested in accordance with ASTM E 119 as part of the fire-resistance-rated assembly or where other exceptions of Section 716.5.2 may apply.
  - ii. Penetration of fire partitions, except where penetrations are tenant separation and corridor walls in the building are equipped throughout with an automatic sprinkler system.
- b. Smoke dampers will be provided in the following locations:
  - i. Penetrations of corridors required to have smoke and draft control doors in accordance with Section 715.3.3 (residential corridors only).
- c. Combination fire/smoke dampers will be provided in the following locations:
  - i. Penetrations in shaft enclosures, with exceptions provided in Section 716.5.3.21.

**V. INTERIOR FINISH**

- a. The interior finish requirements of the 2004 are shown in the table below, and are based on a fully sprinklered building.
- b. The interior finish of walls and ceilings in the atrium shall not be less than Class B with no reduction in class for sprinkler protection.

<b>Group</b>	<b>Vertical exits and exit passageways</b>	<b>Exit access corridors and other exitways</b>	<b>Rooms and enclosed spaces</b>
A-2	B	B	C
B, M	B	C	C
S-2	C	C	C

- c. Class A: Flame spread 0-25; smoke-developed 0-450.
- d. Class B: Flame spread 26-75; smoke-developed 0-450.
- e. Class C: Flame spread 76-2000; smoke-developed 0-450.

**VI. EGRESS**

- a. Occupant load factors:

Area	Square -feet/Occupant
Offices	100
Restaurants and Assembly Areas	12
Commercial Kitchens	200
Parking garage	200
Conference Rooms	15
Mercantile	30
Storage/Mechanical	300

- b. Travel distance to an exit (exterior exit door, exit passage or enclosed stair) will not exceed the distances given in the following table:

Occupancy	Exit Access Travel Distance (feet)
A and M	250
B	300
S-2	400

- c. Travel distance within the atrium will be limited to a maximum of 200 feet, except on the ground floor level of the atrium.
- d. Intervening Rooms:
- i. Egress from a room or space shall not pass through adjoining or intervening rooms of areas, except where such adjoining rooms or areas are accessory to the area served, are not a High Hazard occupancy, and provide a discernible path of egress travel to an exit. An exit access shall not pass through a room that can be locked to prevent egress.
  - ii. Non-rated corridor paths are permitted to be interrupted by intervening rooms, provided the exit access doors cannot be locked.
- e. Stairs:
- i. Enclosed stairs are required to discharge to the exterior of the building, or into a 2-hour rated exit passageway leading to the exterior, except as noted below.
  - ii. Up to 50 percent of the stairs are permitted to discharge through areas on the ground floor, provided the path of egress is free and clear, and readily visible to exiting occupants.
  - iii. Minimum width to be based on occupant load and OSSC Section 1005.1, but not less than 44 inches.
  - iv. All exit stairs will be constructed of noncombustible construction.
  - v. All exit stairs are required to be enclosed in 2-hour rated shaft construction.
  - vi. The open stair within the atrium will not be defined as a required means of egress from any level. Open stairs connected areas on the Upper levels of the building cannot be used as required means of egress paths in accordance with OSSC Section 1019.1.

- f. Doors:
  - i. Exit doors are required to be operable from the exit side without the use of a key or special knowledge or effort.
  - ii. Exit doors will swing in the direction of exit travel when serving an occupant load of 50 or more.
  - iii. Panic hardware will be installed on all exit doors provided with latches, which serve Group A occupancies having an occupant load of 100 or more.
- g. Egress Illumination:
  - i. Exit Sign Illumination:
    - 1. Whenever the building is occupied, the floor level of the means of egress will be illuminated to not less than 1 foot-candle.
    - 2. Power for exit signage and exit illumination will normally be supplied for the premises' electrical supply.
    - 3. Emergency lighting facilities shall be arranged to provide initial illumination that is at least an average of 1 foot-candle and a minimum at any point of 0.1 foot-candle measured along the path of egress at floor level.

**VII. EMERGENCY SIGNAGE**

- a. A sign stating "IN FIRE EMERGENCY, DO NOT USE ELEVATOR, USE EXIT STAIRS" will be posted adjacent to each elevator call station.
- b. Stairway identification and directional signs are required in accordance with OSSC Section 1011.1 and 1019.1.7.
- c. A sign indicating the floor level will be posted facing each set of elevator doors approximately five feet above the floor. Numerals will be at least 5 inches high with a 3/4-inch stroke.

**VIII. SUPPRESSION SYSTEMS**

- a. Automatic Sprinkler protection:
  - i. The building will be equipped throughout with an automatic sprinkler system. New and/or altered areas of the sprinkler system are required to comply with the 1999 Edition of NFPA 13.
  - ii. Sprinkler and standpipe system(s) within the existing buildings are combined utilizing the same piping network.
  - iii. Maximum area per sprinkler Zone: 52,000 square feet.
  - iv. Hydraulic design will be based on the following criteria:

Space	Light Hazard	Ord. Group 1	Ord. Group 2
Business/Office Areas	X		
Assembly Seating Areas	X		
Commercial Kitchens		X	
Atrium/Lobby	X		
Mechanical			X
Storage			X

Parking		X	
---------	--	---	--

- v. Quick-response sprinklers are required throughout light hazard areas.
  - vi. Automatic sprinkler zones are designed to provide a minimum of one shutoff valve and water flow device per floor.
  - vii. The atrium should be defined as a separate sprinkler zone, with separate shutoff valves and waterflow devices from the remainder of the building.
  - viii. Alarm and Trouble Signals:
    - 1. Waterflow devices should be provided at the lateral connection to each sprinkler riser on each floor for each zone. These devices should initiate an alarm. Activation of a waterflow device in a system serving the atrium should initiate the atrium smoke control system.
    - 2. Electrical supervision should be provided on all sprinkler control valves.
- b. Standpipes:
- i. Class I Automatic, wet standpipe system installation in accordance with NFPA 14 is required within the building. Both the Tower and Plaza Buildings include Class I standpipe systems.
  - ii. 2-1/2-inch hose outlets installed at every floor-level landing of the enclosed stairways.
  - iii. Minimum flow rate of the hydraulically most remote standpipe shall be 500-gpm. Minimum flow rate for additional standpipes 250-gpm per standpipe up to maximum required total supply of 1000-gpm for the combined sprinkler/standpipe system.
  - iv. The standpipes will be interconnected at the ground floor level.
- c. Water supply:
- i. Sprinkler and standpipe systems will be interconnected.
  - ii. The water supply for the combined sprinkler/standpipe system shall be sufficient to provide a minimum of 1000-gpm as required by NFPA 14, unless a higher demand is required for the hydraulically designed sprinkler system. The system should be designed to provide adequate pressure to the sprinkler system as outlined in NFPA 13, and to provide the required water flow rate with a minimum pressure of 100-psi at the hydraulically most remote standpipe hose connection of as required by the City.
  - iii. At least one fire department connection (FDC) will be provided to boost the sprinkler system. The complex currently includes two FDC's as described previously.
- d. Fire extinguishers are required, in accordance with Oregon Fire Code requirements. Fire extinguisher distribution should be such that the maximum travel distance to an extinguisher does not exceed 75 feet. The building currently includes fire extinguishers throughout, based on the information provided.

**IX. DETECTION**

- a. Smoke Detectors – Required:

- i. In each mechanical equipment, electrical, transformer, telephone equipment, or similar room which is not provided with sprinkler protection, Elevator Machine Rooms and in elevator lobbies.
    - ii. In the main return air and exhaust air plenum of each air conditioning system having a capacity greater than 2,000 cubic feet per minute (cfm). Such detectors shall be located in a serviceable area downstream of the last duct inlet.
    - iii. At each connection to a vertical duct or riser serving two or more stories from a return air duct or plenum or an air-conditioning system.
    - iv. At automatically closing doors in rated corridors and exit enclosures.
    - v. Adjacent to elevator doors, and in Elevator Machine Room for elevator recall (per OSSC Chapter 30 and OESC).
  - b. Duct detectors – Required:
    - i. At locations dependant on the method of damper actuation in OSSC Section 716.3.2.1.
  - c. Sprinkler/standpipe waterflow indicators:
    - i. Separated sprinkler zone per floor, and between main floor area and atrium.
  - d. Elevator Power Shunt Trip:
    - i. Detection and control will be provided within the Elevator Machinery Rooms (smoke and heat detectors) to deactivate power to the elevators prior to sprinkler activation).
  - e. Initiating devices are required to be zoned per floor with a separate zone for the atrium.
  - f. A Fire Alarm Panel will be required in a location agreed upon by the fire department in accordance with OSSC Section 911.
  - g. Annunciation of all fire alarm systems will be provided at the fire alarm panel.
  - h. All fire alarm initiating devices and circuits will be monitored and indicate a “trouble” condition as required.

**X. ALARM AND NOTIFICATION**

- a. Alarm signals will be transmitted to the fire alarm control panel:
  - i. Sprinkler/standpipe waterflow indicators – by device, zoned by floor and area served.
  - ii. Sprinkler/standpipe control valve tamper switches.
  - iii. Smoke detectors – by device.
  - iv. Manual fire alarm stations (where provided) – by device.
- b. Fire alarm alert tone and visual notification devices will be activated on each floor following a receipt of alarm from sprinkler waterflow, smoke detector (except single station alarms in residential units), or manual fire alarm station. Visual and audible alarms will be located as required by the building and fire departments.
- c. Alarm signals will be retransmitted by the fire alarm control panel to a listed central station. Fire signals will be automatically retransmitted to the Fire Department by the Central Station.

**XI. FIRE COMMAND CENTER (FCC)**

- a. A FCC complying with NFPA 72 is required.
- b. The location and accessibility of the FCC will be required to be separated from the remainder of the building by not less than a 1-hour fire barrier.
- c. A layout of the FCC and all its features should be submitted for approval prior to installation.
- d. The FCC should contain the following features:
  - i. Emergency voice/alarm communication unit.
  - ii. Fire department communications unit.
  - iii. Fire detection and alarm system annunciator unit.
  - iv. Annunciator unit visually indicating the location of the elevators and whether they are operational.
  - v. Status indicators and controls for air-handling systems.
  - vi. Firefighter's Control Panel (FFCP) required by Section 909.16.
  - vii. Controls for unlocking stairway doors simultaneously.
  - viii. Sprinkler valve and water-flow detectors display panels.
  - ix. Emergency and standby power status indicators.
  - x. Telephone for fire department use with controlled access to the public telephone system.
  - xi. Fire pump status indicators.
  - xii. Schematic building plans indicating the typical floor plan and detailing the building core, means of egress, fire protection systems, fire-fighting equipment and fire department access.
  - xiii. Worktable.
  - xiv. Generator supervision devices, manual start and transfer features.
  - xv. Public address system, where specifically required by other sections of this code.

**XII. EMERGENCY POWER**

- a. Onsite standby power generation is required. The generator is required to:
  - i. Automatically start upon failure of the normal electrical system.
  - ii. Automatic transfer and operation of electrical systems and equipment specified in Section B below.
  - iii. On-site fuel supply will be sufficient to operate all systems and equipment on full demand for 2 hours.
- b. Emergency power is required for the following systems following failure of normal power supply:
  - i. Exit signs.
  - ii. Means of egress illumination required by Chapter 10.
  - iii. Elevators per OSSC Section 3003.1 and Elevator car lighting.
  - iv. Emergency voice/alarm communications systems.
  - v. Automatic fire detection systems.
  - vi. Fire alarm systems.
  - vii. Smoke control equipment.
  - viii. Power and lighting for Fire Control Room.

**XIII. ELEVATORS**

- a. Key operated switch in each car for emergency service.
- b. Key switch at the main floor level in entrance/lobby areas.
- c. Elevator Machinery Rooms provided with power shunt trip, as required by elevator code.
- d. Shaft Protection:
  - i. All elevator hoistways are required to be of 2-hour constructions.
  - ii. All elevator doors are required to have 1-1/2-hour opening protection.
- e. Hoistway Venting:
  - i. Elevator shafts are required to be vented to the exterior.
  - ii. The vent area will be at least 3.5 percent of the shaft area, with at least 3 square feet per elevator.
- f. Activation of a landing or Machine Room smoke detector is required to cause automatic recall of all elevators serving that bank to return nonstop to the ground floor. Heat detectors interlocked to shut power to the elevators flowing recall to the appropriate floor level are required by the current code. If detection is on the main (ground) floor, all elevators will return to a secondary recall floor.
- g. Each Elevator Machine Room will be provided with smoke detectors installed within their listings, and heat detectors located within 2 feet of the sprinklers. Separation requirement for Machine Room will be the same as shaft requirements (2-hour with 1 – ½-hour openings).

**APPEALS**

This Section summarizes the existing appeal granted for the existing plaza and tower buildings that form the US Bancorp Tower, and the relationship between these previously granted appeal items and the requirements included in the 2004 OSSC (and 2007 OSSC where applicable). Several of these appeal items address issues that are now permitted by the OSSC, are no longer required by the OSSC. This would allow these items to be removed from consideration in future projects. Where the appeal item in question still needs to be applied to satisfy the current OSSC requirements, we have indicated Continue in the tables below. Several of the filed appeals included multiple individual appeal items that were filed as a group. These are listed as separate individual items under the main appeal in question.

**PLAZA – 555 S.W. OAK STREET**

The table below presents a brief description of the previously filed and approved appeals for the Plaza building. This table summarizes the original appeals, and describes whether the proposals would still require an appeal based on the current OSSC requirements.

<b>City Appeal #</b>	<b>Date</b>	<b>Description</b>	<b>2004 OSSC Requirements (2007 OSSC where noted)</b>
082172	8/32/72	1. Cascading Exit Capacity	No longer required by OSSC
		2. Bank Vault Locks	Continue
		3. Non-rated corridors on office floors	Design Proposal Permitted by current OSSC
		4. No Smokeproof Enclosures	Continue
		5. Ridge openings in vicinity of exterior stairs	Continue
		6. 3-story galleria with upper levels exceeding mezzanine requirements. Space includes smoke control.	IBC would appear to require classification as atrium. Confirm separation from tenant spaces and smoke exhaust capacity provided
		7. Smoke and Heat Vents Omitted	No longer required by OSSC
		8. Fire Dampers omitted at mechanical openings in smoke shafts	Design permitted by OSC Section 716.5.3.1
		9. Grease Duct installed in common ventilation shaft	Continue
		10. Roof penthouse housing office, and exceeding 33% of area of supporting roof	Continue. Recommend removing office space to comply with general penthouse limitations of current OSSC.
11873	1/18/73	1. Maintenance of clear width within stairs at non-rectangular stair landings.	Proposal meets current OSSC.

City Appeal #	Date	Description	2004 OSSC Requirements (2007 OSSC where noted)
		2. Double swinging doors at exits from galleria.	Current design no longer appears to include doors in question.
		3. Omission of fire-resistive rated occupancy separation.	Fire-resistive rated occupancy separation no longer required by 2004 OSSC, based on the application of the non-separated use provisions.
2092	4/12/73	Omission of fire dampers at stair pressurization fans.	These openings are typically permitted under the provisions of the current OSSC, such that no appeal would be required.
8	6/21/73	1. Appeal proposed non-rated corridors on floor floors.	Design proposal permitted by current OSSC.
		2. Dead-end corridors in B occupancy areas up to 50 feet in length.	Design proposal permitted by current OSSC.
		3. Allow a single exit from office spaces, when we calculated occupant loads less than 50.	Design proposal permitted by current OSSC.
		4. Omission of fire dampers at supply shafts.	Continue . This configuration is not currently permitted by the OSSC, such that a similar appeal would be required or dampers would need to be added.
		5. To allow non-rated hallway configuration on the office floors when the occupant load is not greater than 50.	Design proposal meets current OSSC.
6	9/27/73	1. Occupancy separation at the galleria.	These occupancy separations are not required by the current OSSC, based upon the application of the non-separated use provisions.
		2. To allow locked doors to personal areas after business hours.	Continue. This configuration is not typically permitted by the current OSSC, such that a similar appeal would be required.
4	6/12/75	1. This appeal related to a revised occupant load calculation for the second floor area for a computer room, which includes two separate exit paths.	Design proposal complies with current OSSC, such that no appeal would be required.
		2. To allow intervening rooms within the corridors.	The current OSSC would not require rated corridors on these office levels, such that this layout would be

City Appeal #	Date	Description	2004 OSSC Requirements (2007 OSSC where noted)
			acceptable, and no appeal would be required.
		3. To lock the security doors at exit the stairs.	Continue. This design configuration would not be typically permitted by the OSSC, such that a similar appeal would still be required.
		4. To omit the occupancy separation at the fourth floor level between office areas in the classroom space.	This rated occupancy separation is not required by the OSSC, based upon the non-separated use provisions.
		5. To allow non-rated corridor spaces created by partitions in excess of 5 feet in height.	Based upon the office use, the code would permit non-rated corridor paths, such that the proposed layout would be acceptable.
12	6/12/75	1. To allow non-accessible public telephones.	This design does not meet the current OSSC. We recommend public telephones be designed and installed in accordance with the Federal ADA and current OSSC requirements.
		2. To allow non-combustible raised floor with no fire stopping between the fire-resistive rated floor in the raised floor level.	This type of design proposal is permitted by the current OSSC, such that an appeal will be required,
		3. To allow an exit separation distance for a tenant space that is less than 1/3 of the maximum diagonal dimension of the area in question	Continue. This design proposal is still not permitted by the OSSC, such that a similar appeal would be required.
		4. To allow the omission of a door between the tenant space and the 3-story galleria atrium area.	The galleria space appears to be designed similarly to an atrium with smoke control. Therefore, this type of design layout would be acceptable. We recommend the design clarify the original smoke control system design, as this was not provided with this documentation.
		5. To allow glazing at the ceiling areas with additional sprinkler protection proposed to protect the glazing.	This design proposal appears to be acceptable under the current OSSC, such that no appeal would be required.
10	1/16/85	1. To allow the proposed 3-story galleria space without 1-hour rated separation	The galleria appears to be designed similarly to an atrium space, such that the omission of the 1-hour rated walls

City Appeal #	Date	Description	2004 OSSC Requirements (2007 OSSC where noted)
		walls.	for the tenant spaces on these lower levels will be acceptable if these areas were incorporated into the smoke control system design.
9	11/3/93	To allow a non-rated smoketight elevator lobbies within this high-rise building.	The 2004 OSSC would not require elevator lobbies within this building. The 2007 OSSC, which will take effect on April 1, 2007, would require elevator lobbies, but will permit these lobbies to be constructed with smoke partitions. The proposed design meets this requirement.

**TOWER BUILDING – 111 S.W. 5<sup>TH</sup> AVENUE**

The table below presents a brief description of the previously filed and approved appeals for the Tower building at the US Bancorp facility. This table summarizes the original appeals, and describes whether the proposals would still require an appeal based on the current OSSC requirements.

City Appeal #	Date	Description	2004 OSSC Requirements (2007 OSSC where noted)
B2	1-22-03	This appeal proposed a reduction in the separation distance between exits for tenant spaces on the 20 <sup>th</sup> floor to less than 1/2 the maximum diagonal dimension of the area in question.	The design proposal still maintains an exit separation distance greater than 1/3 the maximum diagonal dimension, such that this proposed design layout would be acceptable under the current code.
3	5/12/81	This appeal addressed proposed changes within the electrical circuits for lighting and elevators. The City recommended that this information be submitted to the Electrical Department. There was not further clarification regarding approval or denial of this proposed appeal.	
11	7/9/81	1. This appeal related to exit separation distances less than 1/2 the maximum diagonal dimension caused by the proposed building configuration.	The proposed design configuration maintains compliance with the current OSSC, such that no appeal would be required.

		2. This appeal proposed omission of elevator lobbies at shuttle elevators serving less than three floors.	The elevators in question appear to serve less than three floors, such that the 2004 and 2007 OSSC editions do not require elevator lobbies and no similar appeal would be required.
		3. To allow non-rated corridors in the B occupancy floors in dead-end distances of 26 feet.	The proposed design configuration would maintain compliance with the current OSSC requirements, such that no appeal would be required.
		4. To allow self-closing valves on lavatories within handicapped restrooms.	Based upon the description provided, it is unclear if the design proposal maintains compliance with the current State and Federal Accessible requirements. We recommend that the design configuration be modified, as necessary, to maintain compliance with the current regulations.
		5. To allow the omission of fire dampers at mechanical shafts on Floors 32 through 42 based upon the smoke control system design. The shafts in question include smoke detectors within the shafts that will automatically close smoke dampers upon detection of smoke within the shaft elements. If smoke is first detected on the tenant floors, then the building will go into automatic smoke control mode with these smoke dampers remaining open.	Continue. The current OSSC requirements would not require automatic smoke control in these floors. However, they would require fire dampers at the shafts. The proposed design configuration described within this appeal would likely require a similar appeal document to be submitted under the current code, if modifications are made to these floors.
		6. To limit the standby power within the building to serve a maximum of five floors in smoke control mode.	Continue.
		7. To allow the omission of vents at the top of elevator shafts based upon the sprinkler protection within the hoistways.	Continue. We recommend adding vents (where necessary to maintain compliance with the current elevator requirements. In addition, we recommend confirming that smoke and heat detection is provided within the elevator hoistways, based upon the inclusion of sprinklers, as described within the Oregon Elevator Specialty Code requirements.
10	10/15/81	1. This appeal concerned the emergency and standpipe power equipment for smoke	Continue.

		control equipment on up to five floors.	
		2. This appeal described the proposed protection between the current walls and the edge of slabs.	Continue. If the proposed design configuration appears to maintain compliance with the current City standards, regarding this type of protection.
2	1/14/82	This appeal addressed the proposed protection for the concrete covered steel columns within the garage areas, to maintain protection for these columns from vehicular traffic.	Continue.
1	6/30/82	This appeal concerned the inclusion of signage indicated that in the event of emergency, occupants should use the stairs. This signage was proposed at the doors into the elevator lobbies, as opposed to at the individual elevator doors.	Continue
		This appeal proposed the use of Schedule 40 pipe at pressures up to 319 psig.	Continue.
14	6/30/82	This appeal proposed an open convenience stair connecting Levels 33 to 35. The open stair would be protected by drafts stops extending down from the ceiling level and closely spaced sprinklers.	This type of design configuration is permitted by the shaft exceptions included in 2004 OSSC Section 707.2, as long as 18-inch deep draft stops and closely spaced sprinklers are provided around the floor openings in the stairs and that are required for egress. Therefore, no appeal would be required for this design proposal.
5	8/4/82	1. This appeal addressed doors from normally non-occupied areas, such as electric rooms and mechanical rooms, which reduce the corridor width to approximately 21 inches when they are swung open 90° into the corridor.	Continue
		2. This item addressed a proposed 3-story atrium space designed in accordance with UBC Section 1715 of the 1982 Edition of the code.	This item relates to the atrium lobby space which will extend through three floor levels. The drawings provided for the project, dated June 29, 2001, appear to show this lobby as a 2-story space. This type of design configuration will be permitted by the current OSSC with no additional

			protection provided for this 2-story volume. Therefore, a similar appeal would not be required based on the current code requirements.
8	10/14/82	This appeal addressed the proposed reduction in the structural frame rating of the structural frame elements abutting shaft construction. The design proposed to reduce the rating at the side facing the shaft to 2-hours.	This type of design proposal will be accepted by the 2004 OSSC as the high-rise modifications to the code allow the structural frame elements within high-rise buildings to be based upon the requirements typically associated with Type I-B construction. This would allow 2-hour rated structural frame elements throughout. Therefore, no similar appeal would be required.
6	10/14/82	1. This appeal concerned exiting through intervening rooms on office floors.	Continue. In addition, the design should confirm that the doors serving the secondary egress paths from tenant areas do not include locks that would permit their use as a means of egress as required by current code requirements.
		2. This appeal concerned open circulation corridors that are not separated by fire-resistive rated construction.	The 2004 OSSC would permit this design proposal, such that a similar appeal would not be required.
		3. This appeal concerned the proposed increase in the dead-end corridor distance up to 35 feet.	The 2004 OSSC permits dead-end corridor distances up to 50 feet within B occupancy office areas, such that this appeal would no longer be required.
5	10/27/82	This appeal addressed the proposed separation and the inclusion of sleeves at cable penetration between elevator machine rooms and elevator hoistways.	Continue.
4	1/26/83	This appeal concerned the distance between the stair landings between the 41 <sup>st</sup> and 42 <sup>nd</sup> floors. The appeal requested that this distance be increased to 12 feet, 4 inches between landings	Continue.
2	9/28/83	1. This item concerned a proposed reduction within the exit separation distance for tenant spaces exceeding 3,000 square feet. This appeal	This item no longer appears to be applicable as the floor appears to be built-out and the exit separation appears to meet the current OSSC requirements.

		specifically notes that it will remain applicable until the remainder of the floor is built-out.	
		2. This item concerned the proposed egress path from the Executive Board Room area on the 31 <sup>st</sup> floor. This space includes an exit directly to the corridor space. The second exit will be through the empty room serving a cloakroom.	The proposed exit arrangement appears to comply with current OSSC requirements, such that this appeal would no longer be required.
4	10/5/83	This appeal addressed the proposed inclusion of electronic strike bolts to maintain security at the elevator lobby doors. The appeal indicates that the doors will unlock upon detection of smoke on the floors or the activation of sprinkler waterflow alarms, and clarifies that the secondary doors will not include exit hardware.	Continue.
1	10/19/83	This appeal addressed ducts serving Type I kitchen hoods that include an aquamatic hood removed grease. Therefore, the ducts will not be designed as greased ducts as described within the applicable mechanical codes.	Continue
5	11/23/83	This appeal requested an increase in the allowable dead-end distance up to 60 feet on the office floors. This appeal was denied by the City.	The current code permits dead-end distances up to 50 feet within B occupancy areas. Future tenant layout should maintain compliance with this maximum dead-end restriction.
4	12/14/83	1. This term requested the use of Won-Doors at corridors at the 30 <sup>th</sup> floor level, to maintain a fire-resistive, smoke tight separation.	This type of design proposal is specifically permitted by the current OSSC, such that no similar appeal would be required.
		2. This item addressed tenant spaces requiring access to two exits where the exit separation distance is less than 1/2 the maximum diagonal dimension of the space. The actual	This exit separation distance is specifically permitted by the current OSSC, such that no similar appeal would be required.

		separation distance as maintained about 1/3 of the maximum diagonal dimension of the area in question.	
		3. This item related to a special dining area for executives that exceeded 750 square feet, but that included fixed seating limiting the maximum occupant load within this area to 245 people. The appeal requested a single exit from this space.	Continue.
5	3/28/84	This appeal requested that the City accept a rolling security gate between the bank space and the ATM areas at the ground floor level. For security reasons, this gate will block the main egress path from the bank. This gage will only be closed during non-operating hours.	Continue.
11	4/18/84	This appeal requested that intervening rooms be permitted within the corridor paths serving multi-tenant floors.	This type of design proposal is specifically permitted by the current OSSC as the corridors on these levels are not required to be fire-resistive rated. Therefore, a similar appeal would not be required.
4	12/31/83	This appeal requested a exit separation distance within office spaces requiring access to two exits less than 1/2 the maximum diagonal of the mentioned area in question. The actual separation distance will be maintained above 1/3 of the maximum diagonal dimension of the space in question.	This exit separation distance is specifically permitted by the current OSSC, such that it is similar appeal will no longer be required.
2	3/4/85	This appeal addressed a proposed radio station space on the 15 <sup>th</sup> floor of the tower area. This area will be served by separate HVAC equipment from the remainder of the floor. The smoke control system design for the majority of the building was based upon	The current OSSC would not require automatic smoke control on these floors. Therefore, this proposed design will be acceptable when no appeal would be required.

		maintaining not less than six air changes per hour following detection of smoke or heat in the floors. The appeal requests that the HVAC equipment serving the radio station areas shut down upon detection of smoke or heat. The smoke control system serving the remainder of the floor will go into smoke control mode.	
8	7/27/87	This appeal addressed proposed raised floor area at the 15 <sup>th</sup> floor radio station space. The raised floor configuration does not maintain compliance with the ADA requirements enforced at the time of the appeal submission.	Continue. We recommend modifying the design layout to maintain compliance with the current Federal ADA and State Accessibility requirements.
3	7/27/87	This appeal requested that the design be permitted to include an A-3 assembly area in 41 <sup>st</sup> floor. The appeal addresses the proposed inclusion of this space despite the fact that the proposed layout will increase the occupant load beyond the exit stair capacity based upon the cascading egress requirements included within the code enforced at the time of submission.	The current OSSC does not require that the exit stairs be sized to accommodate occupant egress from multiple floor levels, as long as the stairs has sufficient capacity to accommodate egress from one floor at a time. Therefore, as long as the proposed tenant space on the 41 <sup>st</sup> floor has a total occupant load less than total exit capacity, this proposed design layout should be acceptable, and no similar appeal would be required.
4	7/29/87	This appeal requested that tenant spaces that require access to two exits have their egress paths separated from less than 1/2 the maximum diagonal dimension of this space in question. The actual exits will be separated by more than 1/3 the maximum diagonal dimension in area in question.	This design proposal is acceptable under the current code, such that no similar appeal would be required.
6	12/9/87	This appeal requested that tenant spaces that require access to two exits have their egress paths separated from less than 1/2 the maximum diagonal dimension of this space in question. The actual exits will be separated by more than 1/3 the maximum	This design proposal is acceptable under the current code, such that no similar appeal would be required.

		diagonal dimension in area in question.	
5	1/28/88	1. This appeal requested that tenant spaces that require access to two exits have their egress paths separated from less than 1/2 the maximum diagonal dimension of this space in question. The actual exits will be separated by more than 1/3 the maximum diagonal dimension I area in question.	This design proposal is acceptable under the current code, such that no similar appeal would be required.
		2. This appeal addressed a proposed increase in the dead-end distance on the B occupancy office floors up to 40 feet in length.	The current OSSC permits dead-end corridors up to 50 feet in length on B occupancy floors. Therefore, this design proposal will be acceptable in a similar appeal and will no longer be required.
11	2/3/88	This appeal addressed a proposed open stair extending between Levels 33 through 36. This based upon the previous appeal that was approved by the City to allow an open stair arrangement between Levels 33 and 35. This appeal proposed extending this stair up to the 36 <sup>th</sup> floor with 2-hour rated separation provided between the open stairs in the remainder of the occupied areas on Level 36.	The current OSSC permits open convenient stairs interconnecting multiple levels on B occupancy buildings, provided the openings in the floors are protected by 18-inch draft stops with closely spaced sprinklers. The proposed design configuration maintains compliance with the current OSSC requirements, such that a similar appeal will no longer be required.
1	2/15/89	This appeal addressed the proposed inclusion of cross-corridor doors to limit the maximum dead-end distance on the 40 <sup>th</sup> floor to less than 20 feet.	Continue. Doors should be provided to limit the maximum dead-end distance within the office areas to 50 feet in accordance with OSSC Section 1016.3.
8	9/11/91	1. This item addressed the proposed inclusion of non-rated corridors interrupted by office spaces on the 38 <sup>th</sup> floor offices, which is used for offices.	The design proposal described within this appeal is permitted by the current OSSC, such that a similar appeal would not be required.
		2. This item addressed non-rated corridor openings.	The design proposal described within this appeal is permitted by the current OSSC, such that a similar appeal would not be required.
13	9/2/92	This appeal addressed a multi-	Continue.

		tenant floor included on the 28 <sup>th</sup> floor on the Tower building. The appeal proposed to include cross-corridor doors that lock after hours to separate the tenant spaces as part of an overall security plan.	
16	2/3/93	This appeal requested the omission of fireproofing for a lateral structural frame members.	Continue.
HV1	3/3/93	This appeal addressed an alternate enclosure for greased ducts extending through multiple floors level.	Continue.
21	3/31/93	This appeal addressed revised detector spacing on the office floors to allow an increase in the overall distance between automatic smoke detectors provided around the core areas of the office floors.	Area smoke detection is not required throughout the floors by 2004 OSSC, such that the proposed increase in detector spacing should be acceptable. To maintain continuity in the design, we recommend continuing this appeal.
P-4	12/2/98	This appeal requested the use of non-rated corridors on the 24 <sup>th</sup> floor office areas.	Non-rated corridors are specifically permitted by the current OSSC within office areas. Therefore, a similar appeal will no longer be required.

**APPEALS CONCLUSION**

The tables provided above summarize the previously approved appeals for the Plaza and Tower Buildings at the US Bancorp project in Portland, Oregon. These tables also describe where similar appeals would still be required based upon the current OSSC requirements, which are based upon the International Building Code. In many cases, the previously submitted appeals are specifically permitted by the OSSC, or address requirements that are no longer included in the OSSC, such that these appeals would no longer need to be considered in future tenant improvement projects.

**CONCLUSION**

This document is an updated Fire Protection Report for the Plaza and Tower Buildings at the US Bancorp Tower in Portland, Oregon. This report summarizes the applicable fire/life safety related requirements associated with the existing building, based on the current building and fire codes. This report describes the applicable requirements, and the existing systems within the building. This is intended to serve as a reference document for future work on the project. This report also describes the previously accepted appeals for this project, and how these appeals are addressed by the current code. Several of the appeal items address issues no longer required by the code, or specifically permitted, such that they would not need to be applied to future projects.

GBD Architects

Unico

City of Portland

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ Date

\_\_\_\_\_ Date

\_\_\_\_\_ Date