EXHIBIT A

FACTUAL FINDINGS
PROPOSED EXEMPTION FROM COMPETITIVE BIDDING

WASHINGTON PARK RESERVOIRS IMPROVEMENTS PROJECT

I. EXEMPTION FROM COMPETITIVE BIDDING UNDER OREGON STATUTE

Oregon law requires all public improvement projects to be procured by a competitive low bid method, unless an exemption is granted by the State of Oregon or the Local Contract Review Board for public agencies other than the state. In order to obtain an exemption, ORS 279C.335 requires the Portland City Council, acting as the Local Contract Review Board, to approve two findings submitted by the City staff:

1. It is unlikely that the exemption will encourage favoritism in the awarding of public improvement contracts or substantially diminish competition for the public improvement; and

2. The awarding of the public improvement contract under the exemption will likely result in substantial cost savings for the City of Portland ("City").

As used in ORS 279C.335, 279C.345 and 279C.350, "findings" means the justification for a contracting agency conclusion that includes, but is not limited to, information regarding:

(1) Operational, budget, and financial data;

(2) Public benefits;

(3) Value engineering;

(4) Specialized expertise required;

(5) Public safety;

(6) Market conditions;

(7) Technical complexity; and

(8) Funding sources. [2003 c.794 §102]

II. PROJECT BACKGROUND

The City of Portland (City) Water Bureau (PWB) is a water utility that provides drinking water to over 800,000 people. PWB strives to provide the highest quality water to enhance the public health and safety, and contribute to the economic viability and livability of the Portland metropolitan region. We are a recognized leader among water service agencies across the

country. The goal of the Washington Park Reservoirs Improvements (Project) is to provide increased reliability of stored drinking water at PWB's Washington Park Reservoir (WPR) site and to protect the stored water. The PWB's current vision, as identified in the Long Term 2 Enhanced Surface Water Treatment Rule (LT2) Storage Recommendation (March 2009), is to replace the existing open finished drinking water reservoir (WPR No. 3) with 15 million gallons (MG) of buried storage on-site generally within the existing footprint of WPR No. 3 and to disconnect the open finished drinking water reservoir (WPR No. 4) from the public water system.

The WPR No.'s. 3 and 4 were constructed in 1894. WPR No. 3, with an overflow elevation of 299.5 feet and a storage capacity of approximately 16.0 million gallons (MG), is situated north and uphill of WPR No. 4, which operates at an overflow elevation of 229.5 feet and has a storage capacity of approximately 17.6 MG. WPR No. 3 was formed within an existing drainage slope and is contained by a freestanding concrete dam on its south side. WPR No. 4 was formed within the downstream slopes and is contained by a concrete dam on the east side. Both reservoirs are constructed of cast-in-place concrete panels placed at an approximate 1:1 slope to form battered side walls and laid horizontally to form floors.

The construction of the reservoirs was completed by mass excavation within the surrounding hillside area. During construction of the reservoirs, the toe of an uphill slip plane located within the existing drainage slopes was unknowingly removed and a landslide was activated. The reservoirs were immediately plagued with a number of problems associated with the landslide following their construction; WPR No. 3 suffering the most damage due to bulges that developed along its westerly side slope.

PWB engineers soon recognized the local earth movements being observed in Washington Park (WP) were an indication of a larger ancient landslide that extended southerly from WPR No. 3 along the western wall of WPR No. 4. A system of drainage tunnels and monitoring wells were constructed uphill of the reservoirs in an effort to identify the limits of the slide, determine the depth of the slide's slip plane and to remove groundwater along the slide's slip plane. These initial efforts resulted in dramatic slowing of the slide movement. Over the years, further studies have been conducted on the area's landslide. Landslide monitoring programs including adding inclinometers and piezometers have been carried out in addition to the work in the 1890s as described above. Ground movements over the reservoirs' 100-plus years of service have reportedly ranged from 0.15 inches to 0.8 inches per year. PWB continues to monitor ground movements.

In the late 1970s, WPR No. 3 was fitted with a flexible membrane liner system to extend the expected service life of the reservoir. The liner was replaced during a rehabilitation project in 2004. At that time, PWB also initiated construction to install temporary floating covers on WPR No.'s 3 and 4. This project was cancelled prior to installation of the covers and work on covering open finished water storage was stopped until the United States Environmental Protection Agency (EPA) adopted the LT2 rule. Issues involved in disconnecting or covering the open reservoirs have been studied over many years.

In 1969, the Oregon State Health Division and the Environmental Control Administration, Bureau of Water Hygiene informed PWB that the open finished drinking water reservoirs were not desirable. Since then, PWB has been studying water quality in the reservoirs and the

necessity and practicality of building new or covering the existing reservoirs. Published studies include:

- Open Distribution Reservoir Study, April 1976 (identification of bacteriological, biological, chemical and physical quality of the water in and leaving each Reservoir).
- Open Reservoir Study Phase I Summary Report, January 2002 Update (examined the conditions, issues and perceptions related to the Open Reservoirs).
- Open Reservoir Study Phase II Planning Summary Report, 2004 (proposed strategy to cover Mt. Tabor reservoirs and install temporary floating covers at WP until a permanent solution at WP could be implemented).
- LT2 Storage Plan Recommendation, March 25, 2009.

In 2006, the Environmental Protection Agency's (EPA) adopted the "Long Term 2 Enhanced Surface Water Treatment Rule" (LT2). One provision of this rule requires large water providers (those serving 100,000 or more customer) to either cover the open finished drinking water reservoirs, or provide for post-reservoir treatment (i.e. treatment at the outlets) for Cryptosporidium, Giardia and other viruses.

In 2009, PWB submitted a plan and schedule to comply with LT2 to the EPA for replacing the open reservoirs at Mt. Tabor and WP with new covered storage at Powell Butte, Kelly Butte and WP. This plan included the disconnection of the open reservoirs at Mt. Tabor and Washington Park from the public water system. According to the schedule accepted by EPA, the new WPR No. 3 will be constructed and operational by December 31, 2019, and WPR No. 4 will be disconnected by December 31, 2020. In 2012 Oregon Health Authority (OHA) denied a request to delay and extend the compliance schedule stating that PWB needs to follow the existing plan that was submitted and approved in 2009.

To meet the approved EPA compliance plan, PWB has committed to the following fixed milestones:

January 1, 2014 - Submit land use review
March 31, 2016 - Submit signed and stamped plans and specs to OHA for review and approval
July 1, 2016 - Begin construction
December 31, 2019 – WPR No. 3 constructed and operational
December 31, 2020 - WPR No. 4 disconnected from public water system
June 30, 2021 – Construction complete

The compliance plan requires an aggressive permitting, design and construction schedule. A strategic sequencing of construction tasks will be required to ensure worker safety, cost-effective operations, and ensure the Project is constructed and on-line by the compliance dates above. In addition, the aggressive schedule does not allow enough time to use a traditional Design/Bid/Build (DBB) method once the land use and permitting are done. For these reasons, PWB is proposing an alternative contracting method, namely the Construction Manager/General Contractor (CM/GC) method for this Project, instead of the traditional DBB method. Use of the CM/GC alternative contracting method is also more likely to minimize costs, reduce change orders, reduce risk, and reduce construction impacts.

In the traditional Design/Bid/Build (DBB) method, the City obtains separate contracts for design and construction. The construction contract is bid at the completion of design and is awarded to the candidate meeting the minimum qualifications with the lowest responsive bid. The construction contractor performs the work under the oversight of PWB staff. The City assumes the risk for schedule delays, unanticipated costs, and claims. The sequential nature of the DBB method requires a lengthy design and construction time frame to allow for the permitting and bidding processes. In DBB, there is no interaction between the design and construction contractors until construction begins, when design and permits are locked in and there is little allowance for change.

When using the CM/GC procurement method, the City negotiates a contract for a Construction Manager/General Contractor. PWB proposes to use a two step process and will begin with a Professional, Technical and Expert (PTE) contract for CM/GC services performed during design, and a construction contract for management and completion of construction work elements. During the PTE contract, the CM/GC's costs for construction are negotiated and locked in with a guaranteed maximum price (GMP) for the specified scope. As the design is refined, the CM/GC provides input to the design to reduce costs, minimize scheduling problems, and ensure safety. As the Project design develops, the CM/GC can plan and sequence technical subcontractors and provide the City with a GMP for the work. Once a GMP has been negotiated, a construction contract is executed. Subcontractors are hired by the CM/GC using a competitive bidding process consistent with the City's Procurement requirements.

Using a CM/GC contracting method would support successful completion of the Project in the most cost-effective manner. Hiring a CM/GC would provide the following benefits:

- Greater focus on EPA compliance date;
- Evaluation of total Project costs based on Project design;
- Guarantee of the maximum price at final design, absent changes in the scope of work and/or unforeseen site conditions;
- Access to technical expertise during the design in the planning for sequencing construction phases;
- Experienced management of multiple technical subcontractors;
- Team-building and partnering opportunities with PWB project management staff and the design teams;
- Coordinated responsibility for worker safety;
- CM/GC assumption of some risk (i.e., cost, schedule, safety, maintaining water supply and service, and constructability);
- Reduction of risk of construction delays and unanticipated costs for PWB;

- Accelerated schedule with early solicitation of subcontract bid packages and early construction start, concurrent with final design;
- Selection of a Contractor based on Qualifications;
- Development of a subcontracting plan that supports the inclusion of minority, women and emerging small businesses;
- Greater emphasis on contractor quality control; and,
- Use of contractors with experience constructing and commissioning underground storage reservoirs, working with historical structures and work around active land slides.

III. FINDINGS REGARDING REQUIRED INFORMATION

A. OPERATIONAL, BUDGET, AND FINANCIAL REQUIREMENTS

The Project will be constructed at the PWB's Washington Park Reservoirs site. Connections to existing operating facilities will be required during construction. During construction activities, the City will need to maintain operations and supply water to customers. Using the CM/GC method will allow the City to hire the CM/GC during the design phase of the Project and allow the CM/GC Contractor to develop a comprehensive construction schedule before initiating the work with input from the Project team. The interaction between the Project team and the CM/GC during the design process means it is more likely that the final design will take into account potential construction problems and allow early coordination of connections to existing facilities.

It is necessary to carefully consider the means and methods of construction during design stages to ensure a minimum of delays and additional costs during construction. Adding the CM/GC to the design team between the 30% and 60% design phase will provide information on constructability and create a logical sequence for construction. The CM/GC method fosters coordination and efficiency in design and construction.

Confidentiality, security, and protection of the bureau's critical facilities during the design and construction process are essential. PWB does not want to release documents that include the detailed plans for the reservoir and piping. The City would use the provisions of House Bill 2425, which amended Oregon Revised Statute (ORS) 192.501 (23) which allows some protection from disclosure for "Records or information that would reveal or otherwise identify security measures or weaknesses...taken or recommended to be taken to protect: b) building or other property (used or owned by a public body.)" The CM/GC contracting method would allow distribution of the construction documents to a controlled audience whereas in the DBB process, anyone anywhere in the world can register as a vendor and request copies of the construction documents.

The Project involves constructing buried finished water storage generally within the existing footprint of the existing WPR No. 3. This will involve construction of a new buried reservoir and shifting the new reservoir structure east to avoid construction in the toe of the existing landslide.

A compressible inclusion will be placed between the landslide mass and the proposed storage facilities to isolate the new reservoir structure from the active slide. The new reservoir will be an irregular-shaped polygon, conventionally-reinforced concrete structure with a capacity of approximately 15 MG. Support structures (such as stormwater basin, reservoir drainage and overflow basin, and dechlorination facilities, etc.) for the new reservoir will be constructed at the existing WPR No. 4 site. The goal is to maintain and protect the existing historic features where practical.

The new buried reservoir will include a center divider wall to create two storage areas in the structure. The Project will include piping upgrades on the site, separate inlet and outlet piping to the reservoir, and a mixing system to promote water circulation in the reservoir. Foundation and drainage improvements will be required under the reservoir due to existing soil conditions under the structure footprint.

Coordination between contractors and PWB operations, and permitting agencies will be complicated and require a high level of contracting sophistication to keep operations running smoothly and minimizing disruptions to customers. The PWB and the CM/GC will be sharing this small site and maintaining water service to more than 800,000 customers, which is critically important. The CM/GC method will allow the PWB to have more participation and control than the traditional DBB method. This construction contracting method carries both the lowest risk and lowest construction and operating cost compared with any other alternative. This approach also offers the greatest flexibility, risk reduction, reliability, and ease of construction.

The CM/GC method will facilitate a much greater Project understanding by the CM/GC before construction starts, and a longer lead time in which to craft a thoughtful and comprehensive construction schedule that accommodates these operational challenges. It is unlikely that even an experienced contractor would have the time to produce a plan of this quality without the lead time and team interaction the CM/GC method provides because traditionally the DBB process allows no time or opportunity for interaction with the PWB or design contractors before the construction Notice to Proceed (NTP) is issued. In addition, the RFP process for selecting the CM/GC will give the PWB greater opportunity to question the respondents to discern the best responses to these issues, and to check references.

By minimizing surprises, incorporating cost savings ideas in the original design phase and avoiding hurried plans or adaptations to the construction plan, it is likely that the PWB can avoid costly change orders or disputes that impact the schedule or budget. In contrast, the DBB method of construction does not allow for input on the part of the contractor during the design phase. The DBB method also can produce cost overruns if a critical portion of the plans are unclear, may require redesign and sometimes entitle the contractor to additional compensation. Utilization of the CM/GC method permits the contractor to understand the designer's intent and the plans because of close cooperation with the designer and thus reduces this risk.

In addition, a typical CM/GC project produces what is known as a "Guaranteed Maximum Price." Although the contract price can still change (for example, if the scope of work changes or unforeseen site conditions are discovered) usually such contracts provide a greater price certainty for the City.

As a result, the use of a CM/GC method on this type of Project is more likely to meet PWB's budget, avoid unnecessary cost overruns and disputes and provides greater financial certainty for the City.

Finding: *A competitive selection of a CM/GC allows the City to minimize disruptions to customers and maintain operations during construction, as well as addressing constructability during design by having the CM/GC provide expertise on contracting methods compatible with their operations. This approach also offers the greatest flexibility, risk reduction, reliability, and ease of construction. The Project budget is likely to be more stable as a result of this approach and it is less likely that there will be Project overruns. In comparison to the DBB method, the CM/GC method is less likely to cause budget overruns.*

B. PUBLIC BENEFITS

PWB must meet its commitment to the City of Portland to provide quality potable water to its 800,000 customers and maintain water storage and fire fighting capacity during construction. Construction of WPR No. 3 is critical in providing the necessary storage in complying with LT2 requirements for the open finished drinking water reservoirs. Therefore, it is necessary that construction of the project proceed smoothly and with a minimum of interruptions, delays, and claims.

It is likely that there will be a lower chance of disruption to the schedule, cost overruns, and delays by using the CM/GC contracting approach. Electing to adopt reasonable measures such as alternative contracting to meet commitments due to the decreased risk of total construction cost overruns, falls well within PWB's fundamental mission of maintaining the livability of the City.

The CM/GC method may allow construction of the current facility plan at a lower life-cycle cost of any other technically feasible procurement alternative identified to date, including a DBB method. A CM/GC contracting approach will thus allow the public to receive the benefits of both timeliness and best value and minimizes risk to the City by awarding the contract to the most qualified contractor.

Using a CM/GC method provides more opportunities during design and construction to address constructability, modify construction means and methods, and work in partnership with the City. This construction approach provides the following public benefits:

- Minimizing disruptions to the environment;
- Success in neighborhood relations;
- Ensuring access to adjacent properties is maintained;
- Protect and minimize impacts to historical features;
- Minimize odor, noise, vibration impacts, and utility disruptions; and

- Selects a contractor based on qualifications resulting in overall value to the Project.

Finding: *The competitive Request for Proposal (RFP) used in the CM/GC method of procurement maximizes public benefit by ensuring the selection of a contractor who is well qualified to effectively minimize the public impacts caused by the work. In contrast, the DBB method, which does not permit the contractor to become involved in the Project until after the design is complete, would be less likely to achieve these goals.*

C. VALUE ENGINEERING

The CM/GC method will give the CM/GC an opportunity to partner with PWB's Project Team, Design Contractor, and PWB Operations in performing value engineering (VE) and constructability reviews during design. Value engineering is a process in which Project stakeholders compare the total Project cost to Project performance and evaluate the benefit-to-cost ratio. With a CM/GC method of procurement, constructability is continuously evaluated and final costs are determined early in the process (that is, prior to completion of the final design). The early and realistic determination of costs allows PWB to adjust design and construction methods based on real costs. In contrast, construction contractor input for the Project, while it is being designed, is not possible using the conventional DBB method.

Early involvement of the CM/GC will more efficiently attain the Project objectives. The CM/GC can see conditions while design is ongoing and provide input. The CM/GC's construction experience and knowledge will help identify and resolve issues prior to construction and will aid in early identification of effective measures to minimize disruption. This partnering will likely reduce the need for change orders, claims, and delays, resulting in cost savings and delivery of quality facilities on time.

Having the CM/GC review the design prior to the start of construction best leverages the value engineering ideas that are accepted and incorporated into the final design. It is less expensive to implement ideas during design than to wait and provide a change order and potential redesign during construction.

Finding: *Hiring a contractor through the CM/GC method provides for feedback from the construction contractor during design and participation in the design and development of the Project helps the Project to be completed within the estimated cost. In contrast, the DBB process does not permit contractor involvement during the design phase of the Project and limits value engineering possibilities.*

D. SPECIALIZED EXPERTISE REQUIRED

The construction of Washington Park Reservoirs will require a highly specialized contractor in order to meet the tight project schedule and technical site constraints. The work will require massive cuts into a hillside with steep slopes. A portion of the project site lies within environmental zones that will require minimal disturbance during construction activities. Due to the large excavations and the steep slopes, erosion control and stormwater management will be critical. The CM/GC process allows PWB to contract with a contractor that demonstrates the desired specialized expertise. Utilizing a CM/GC will allow the contractor to provide valuable

input during the design process. Constructability issues can be addressed preceding the actual construction activities.

Expertise in reservoir construction methodology, sequencing, scheduling and cost estimating is essential to make sure the City realizes an optimum design that remains practical and within budget. Expertise working around and protecting historical facilities is essential. The CM/GC contracting process will provide the best opportunity to select the most knowledgeable contractor with the necessary expertise for this project. An alternative contracting method, such as CM/GC provides the only realistic way to make sure that expertise is available during the project design phase. In contrast, the DBB method does not permit the PWB to use the contractor's expertise to help design the project. Although the DBB process, through the use of contractor prequalification permits the City to make sure that qualified contractors bid on the project, it does not permit the City to select the most qualified contractor to perform this work. Using specialized expertise on this project in the most beneficial way requires a CM/GC contracting process to maximize the project success and minimize unanticipated costs.

The CM/GC process is critical in allowing the CM/GC to be intensely involved in the design, value engineering, schedule, risk-reduction, and overall successful completion of this Project.

Finding: *Procurement using the CM/GC method allows the City to evaluate the qualifications of the contractors seeking contract award, including an evaluation of their expertise. In contrast, the DBB method sets a minimum threshold for qualifications and does not permit the City to evaluate contractors based on their expertise. As a result, the CM/GC method is more likely to result in hiring the best contractor for the job rather than the DBB method of procurement.*

E. PUBLIC SAFETY

PWB must deliver high-quality water to its customers and provide water for emergencies 24 hours a day and 365 days a year. The construction activities cannot interfere with the bureau's mission of providing high-quality water that meets all regulatory standards.

As a public Project, it is important to build the Project with safety foremost in the contractor's approach to ensure safe working conditions for the contractor, neighbors and traveling public that could be affected by the Project.

The CM/GC method enables the selected CM/GC to provide input during the design process including establishing a safety plan and a coordinated construction phasing plan. This process is more likely than the DBB method to result in early implementation of health and safety measures to protect the public water source, City staff, construction workers, and the public throughout the Project. These health and safety measures will ensure that the water system continues to provide excellent water quality, reliability, and system security.

The CM/GC method will allow the City the best opportunity to provide additional weight in the selection process to proposers with successful safety records. It also enables the selected CM/GC to establish a transportation plan and to consider their means and methods through the lens of safety. The DBB method, in contrast, may not result in the selection of the most qualified contractor. See Paragraph B, Public Benefits, for more discussion of the process.

Finding: *The CM/GC method allows actual safety performance on similar projects to be considered as a selection criteria. It also permits the City to work closely with the CM/GC during the design phase of the Project to ensure that the design provides appropriate safety measures, that the CM/GC understands the City's safety concerns and that the CM/GC will take appropriate steps to address them. In contrast, the DBB method does not permit the City to discuss safety issues with a contractor until after the design is completed and does not permit the close interaction with the contractor to better express the City's safety concerns.*

F. MARKET CONDITIONS

A CM/GC method of procurement would reach the same or greater market of construction contractors as the DBB method. The Request for Proposal (RFP) for specialized skills, size of the Project, and major components of work necessary for the Project could reach the state and national marketplace. Competitive contracting to this market will be obtained during the solicitation for qualifications and proposals. Utilizing the CM/GC method of procurement ensures that the Project design and construction sequencing will employ all market innovations in means and methods. A CM/GC would be selected using the City's alternative procurement process that evaluates qualifications and proposals to ensure the best combination of technical expertise at a cost-effective price.

The CM/GC method has the added benefit of allowing the selected CM/GC to solicit competitive bids for various aspects of work (equipment, labor, etc.) as the work is ready to go out to bid and coordinate construction activities among all resources to minimize construction risks and delays. The CM/GC will be able to prepare material and equipment submittals early and issue purchase orders to suppliers and vendors during design for timely delivery. This would also provide increased opportunity to identify and reach out to qualified Minority, Women, and Emerging Small Businesses (MWESB) that may otherwise not have an opportunity to participate in the Project.

Because the City will be advertising for a CM/GC, a CM/GC method will reach the same number of contractors as the DBB method. Therefore, the City can take advantage of market conditions that promote competition, especially during a time when the national economy and the Oregon economy have faced a serious economic downturn. The CM/GC method provides the best assurance that the most-qualified and most cost-effective subcontractors, suppliers, and vendors would be available to meet the demanding schedule at a minimum cost. Current market conditions favor the CM/GC method.

The PWB will issue a Request for Proposals (RFP) for a CM/GC contract for this Project in accordance with procedures that will attract competition for this contract from qualified contractors in the construction community. The RFP will be advertised in the *Daily Journal of Commerce*, and will be posted on the City of Portland's eBid website. Potential contractors will submit proposals. A Selection Committee consisting of personnel from the Water Bureau, and others from the community, including an Alliance of Minority Chamber provided evaluator, will evaluate the proposals and will select a contractor based on the highest-scoring proposal and subsequent interviews, if necessary.

The selection process will be completed under the supervision of the City's Procurement Services. The evaluation process will be based on predefined criteria such as demonstrable technical qualifications, the proposed fixed fee for the CM/GC during construction, diversity in employment and sustainability, Project team, Project approach and understanding, and safety. Subcontracted portions of the work will be contracted by the CM/GC through a competitive bidding process. The CM/GC method will not limit competition or encourage favoritism in the selection process when compared to the standard DBB method.

The RFP will also include MWESB outreach requirements, which will include an MWESB Outreach Program Plan that outlines what organization and processes will be used to initiate and maintain an MWESB Outreach Program throughout the construction of the Project. The CM/GC is responsible for determining the subcontracting opportunities from the Divisions of Work and soliciting bids from MWESB firms in all areas of subcontracting.

Finding: *The CM/GC method uses a competitive selection process with qualifications being one of the criteria. This selection does not significantly change the pool of contractors qualified to bid on the Project, but does allow the City to select the most qualified contractor for the Project. The CM/GC procurement process can start earlier, taking advantage of the current economic market. In contrast, the DBB method does not permit the contractor to get an early start on the Project. The CM/GC selection process and hiring of subcontractors uses competitive procurement. Selection of a CM/GC does not limit competition or encourage favoritism in the selection process.*

G. TECHNICAL COMPLEXITY

This is a technically complex Project because of the aggressive schedule, geotechnical challenges, historical features and difficulty of installing the required facilities on a small site, in an environmentally sensitive area while maintaining existing operations. The CM/GC method allows the City to acquire a highly qualified contractor. As a result, it is more likely that the CM/GC can resolve the technical complexities of the Project more efficiently, in part because of its qualifications and in part because it will have additional time to evaluate solutions for handling problems during the design and construction process.

It is essential that both the Design Team and CM/GC have a thorough understanding of the importance of maintaining drinking water operations while working on this challenging site. The CM/GC method will allow the CM/GC to proactively be involved in design to help develop construction approaches and methods to minimize impacts in and around Washington Park. This early involvement in the design will allow the Project team and the CM/GC to actively work together to find solutions to complete this Project and maintain operations. Such involvement in the design stage would not be possible using the traditional DBB method.

In addition to protecting the environment and historical features during construction, the Project requires establishment of a construction phasing plan, construction mitigation plan, construction management plan, erosion and stormwater control plan, traffic control plan, a security plan, and a health and safety plan. Some of these plans will require close coordination with the public, other City Bureaus and permitting agencies. This can be a time consuming process. The CM/GC method allows the CM/GC additional time during the PTE services phase of the contract for this

planning and permitting process, thus making it more likely that the Project can be completed to meet the EPA compliance dates.

The CM/GC would be responsible for supplying and coordinating the various subcontractors to complete the work. This technical complexity requires that the construction contractor understand and be able to manage all aspects of work. A qualified and informed contractor is imperative to managing these elements. The CM/GC method allows selection of the most qualified contractor to function as a partner in the design and construction process, rather than requiring the City to accept the contractor that submits the lowest responsive bid.

The conventional DBB method, based strictly on the initial price, does not guarantee hiring the contractor best able to handle the technical complexity of this process. Hiring a DBB contractor based strictly on submittal of the lowest bid may well cause the City additional short-term and long-term costs and risks. See Paragraph A, Operational, Budget, and Financial Requirements and Paragraph D, Specialized Expertise for more discussion of the process.

Finding: *The CM/GC method ensures hiring a contractor with technical expertise to participate in the design and construction to identify and resolve technical issues effectively. The same reasons that support the finding regarding specialized expertise are applicable here and are incorporated by reference.*

H. FUNDING SOURCES

The overall Project budget is $70 million and includes costs for PTE services, pre-construction services, construction services, and contingency. The Project will be funded using Water Bureau funds through fiscal year 2021. The contingency is a percentage of Project costs above the stated amount that the Project may exceed. As the Project design progresses from early to later design stages, the confidence rating goes up (improves) and the contingency percentage may go down. This means that, as the design progresses, the estimation of how much the Project will cost may vary from the budgeted amount, and in theory, may be reduced. Maximum construction contract amounts within the fixed budget will be negotiated with the selected CM/GC. The CM/GC method permits more financial certainty where the DBB method does not present the same degree of reassurance.

Finding: *The Project is funded using City of Portland Water Funds. The Project is funded in the current fiscal budget and is expected to be included in the fiscal year budgets through 2021. While funding does not change based on use of the CM/GC method, the Project budget is likely to be more stable as a result of that process and it is less likely that there will be Project overruns. In comparison to the DBB method, the CM/GC method is less likely to cause budget overruns. The DBB method sometimes has project overruns which require finding additional sources of funds.*

I. COST SAVINGS

Based on all the findings above, the following finding can be reached:

ORS 279C.335 (2) requires that a public agency make certain findings as part of exempting public contracts or classes of public contracts from competitive bidding. ORS 279C.335 (2)(b)

requires an agency to find that: *"The awarding of public improvement contracts under the exemption will result in substantial cost savings to the public contracting agency....."* This finding is supported by the following:

The Construction Industry Institute (CII) and Penn State University conducted a seminal study published in 1997 comparing CM/GC (called construction management at risk in the study), design-build, and design-bid-build performance on 351 building projects in the United States. The results of the study can be compared in terms of cost and schedule. Schedule was defined in both construction speed (construction only) and delivery speed (both design and construction). The projects delivered using the CM/GC method as compared to conventional DBB methods on average resulted in:

- Lower as-completed unit cost;
- Faster construction speed;
- Faster total delivery (including design and construction); and,
- Less cost growth during construction.

http://www.engr.psu.edu/ae/cic/publications/TechReports/TR_038_Konchar_Comparison_of_US_Proj_Del_Systems.pdf

The CM/GC method benefits for this Project include opportunity for cost and time-savings through innovation. These innovations include improved Project construction staging, incremental completion of design and commencement of construction, integrated planning between designers and contractors from the beginning of the Project, and reduced formal design effort because the working plans and detailed specifications do not have to be of a biddable level of detail.

The CM/GC method of contracting rewards innovation, allows for concurrent acquisition, design, and construction functions, and takes advantage of the ability to acquire materials and order fabrication incrementally. It also provides incentives to the CM/GC to manage and stage the Project to optimize efficiencies in construction. These methods contribute to reduce Project duration, encourage long-term cost savings, and support meeting Project performance objectives.

The City's experience in the CM/GC method has shown the significant advantages to the qualifications-based selection for complex projects, the early collaboration between the design team and the CM/GC and the ability to manage costs through contractor input into the construction methods.

For the Washington Park Reservoirs Improvements Project, the advantages and potential cost savings would result from working closely with the selected CM/GC to plan the construction staging in a manner that cost effectively supports the specialized construction necessary for this facility, protects the environment and historical structures, and coordinates detailed construction sequencing to maintain drinking water delivery throughout the construction period.

The Project could benefit from a CM/GC method with:

- Real-time cost estimating;
- Controlling cash-flow schedule;
    - Earlier construction start to reduce inflation impacts on the Project budget; *and,*
    - Allows early purchase of long-lead items.
- Reduced overall Project duration facilities reductions in overhead costs; and,
- Setting MAX/MIN limitations on work that is self-performed.

Finding: *The CM/GC method will help to ensure the Project is completed within the proposed Project budget because, as discussed above, the CM/GC method results in a greater understanding of the Project by the CM/GC, reducing both the incentive and the factual basis for change orders. It also brings the knowledge and experience of the CM/GC onto the Project Team while there is still time to make the design more efficient relative to both the estimated cost and the staging plan. For these reasons, the CM/GC method may result in cost savings to the public compared to the DBB method.*

IV. CONCLUSION

The City of Portland meets the requirements for allowing an exemption to the competitive bidding process as identified in ORS 279C.335 (2). Use of CM/GC alternative procurement process for the Washington Park Improvement's Project allows:

- Evaluation of total Project costs based on a Project design that was value engineered by the CM/GC;
- Guarantee of the maximum price at final design, absent changes in the scope of work;
- Access to technical expertise in planning for sequencing construction phases during design;
- Taking advantage of the CM/GC's knowledge and experience in assessing constructability and developing cost effective designs;
- Experienced management of multiple technical subcontractors;
- Team-building and partnering with PWB Project management staff and the design team;
- Early procurement of long lead materials and equipment;
- Coordinated responsibility for worker safety and security of the water supply;

- CM/GC assumption of some risk (i.e., cost, schedule, safety, maintaining service, quality and constructability);
- Reduction of risk of construction delays and unanticipated costs for PWB;
- Accelerated schedule with early solicitation of subcontract bid packages and early construction concurrent with final design;
- CM/GC's with experience constructing and commissioning complex and specialized water treatment systems; and
- Selection of a CM/GC based on Qualifications.