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Report

Alternative Financing and Procurement Track Record 2016

Infrastructure Ontario

making the **difference**

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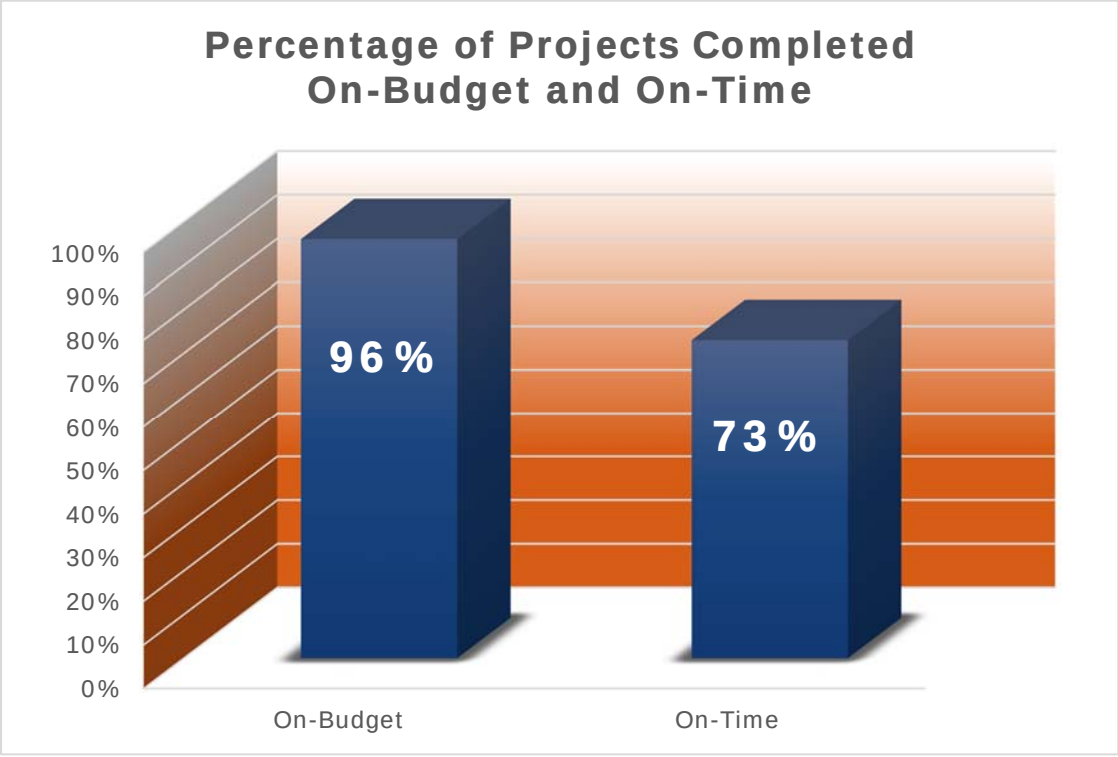
1 Executive Summary

Infrastructure Ontario has contracted Turner & Townsend to undertake a performance analysis of 51 Alternative Financing and Procurement ("AFP") projects that have reached Substantial Completion, including the validation of data for those six projects that reached Substantial Completion in the fiscal year 2015/16. This is the fourth annual report providing a transparent analysis of Infrastructure Ontario's strong track record on large and complex infrastructure projects.

It is Turner & Townsend's opinion, based on this analysis, that Infrastructure Ontario exceeds industry standards for On-Budget and On-Time performance.

To the best of our knowledge, Infrastructure Ontario continues to be the only government institution that works on large and complex projects and provides a transparent and open analysis of project performance. IO is unique in publishing a Track Record Report and is setting an example for other public institutions.



1.1 On-Budget Performance

Our analysis shows that of the 51 projects that have achieved Substantial Completion as of 31 March 2016, 49 projects or 96% were completed On-Budget.

The high percentage of projects completed On-Budget indicates that:

- IO undertakes a proper due diligence process for cost estimating pre-tender;
- IO allocates the appropriate design and risk contingencies for risks that are known at the time;
- IO employs strong project management throughout the process; and
- The government authority has appropriately priced the risk inherent in the Project, such that there are very few unexpected costs causing cost over runs

For a project to be completed On-Budget, the Final Project Costs (Awarded Contract Amount plus utilized Post Contract Contingency (PCC)) at Substantial Completion were less than or equal to the Awarded Contract amount plus budgeted PCC set at Financial Close (FC).

In essence, for a project to be completed On-Budget, Infrastructure Ontario conducted due diligence and risk transfer in the planning and procurement of projects and was able to manage the majority of unforeseen changes undertaken during construction within the allocated PCC allowance.

1.2 On-Time Performance

Of the 51 projects that reached Substantial Completion by 31 March 2016, 73% were completed On-Time or within one month of the Scheduled Substantial Completion Date.

Of the 37 projects that were On-Time or within one month of the Scheduled Substantial Completion Date, 20% were in fact delivered early while maintaining high quality standards.

Of the 14 delayed projects, Project Co retained full or shared responsibility for delays on 11 projects. This is unique to the AFP procurement model and is a means to protect the public interest.

This track record is strong and demonstrates that IO is diligent in transferring and sharing schedule risk, as well as striving to deliver projects early, while maintaining commitments to budget and quality standards.

1.3 High Quality Design Excellence

81% of the winning bids had the lowest financial bid and had the first or second technical score. For the two projects that were awarded to the second lowest financial bidder, these projects received the top technical score. This shows that the awards are based on best value for money with high quality technical/design and lower cost.

2 Introduction to Track Record Report 2016

2.1 Infrastructure Ontario

2.1.1 Corporate Background

Infrastructure Ontario is a Crown agency owned by the Government of Ontario mandated to provide a wide range of services to modernize and maximize the value of public infrastructure and realty. Infrastructure Ontario upholds the government's commitment to renew public services and protect the public interest, and often does so in co-operation with the private sector.

Infrastructure Ontario is governed by a Board of Directors and led by a Chief Executive Officer, appointed by the Lieutenant Governor in Council. The agency reports to the Minister of Infrastructure (MOI) through the Chair of the Board of Directors.

Infrastructure Ontario applies a high standard of corporate governance to ensure operational efficiency and accountability. The Ontario Infrastructure and Lands Corporation Act 2011, sets out Infrastructure Ontario's authority and responsibilities. The Agency is accountable to the Ontario Legislature through MOI. A Memorandum of Understanding (MOU) with the Minister clarifies and delineates Infrastructure Ontario's roles and responsibilities, as well as the accountability framework between the Ministry and the Agency. The annual business plan and annual report submitted to the Minister are prepared in accordance with applicable legislation and the government's Agencies and Appointment Directive.

2.1.2 Alternative Financing and Procurement (AFP)

AFP is a made-in-Ontario approach to modern project delivery. Based on its experience with AFP, Infrastructure Ontario received a Gold Award in 2016 for Government Agency of Year by P3 Bulletin. Infrastructure Ontario's AFP projects have won a number of awards in past years, including design awards from organization such as the Royal Architectural Institute of Canada and Canada Council for the Arts.

AFP is an innovative way of procuring and financing large, complex public infrastructure projects in order to transfer risk and protect the public interest.

There are three main procurement methods used within AFP delivery:

- **Build Finance:** A type of AFP project delivery model in which the private sector is responsible for construction and short-term financing during the construction period. The capital cost of the project is paid for by the public sector in a lump sum at the completion of construction and the public sector sponsor is responsible for developing a detailed design and providing ongoing maintenance after completion of construction.
- **Design Build Finance:** A type of AFP project delivery model in which the private sector is generally responsible for design, construction and short-term financing. The capital cost of the project is paid for by the public sector owner/authority by lump sum payment at completion of construction. The public sector sponsor is responsible for providing ongoing maintenance after completion of construction.
- **Design Build Finance Maintain:** A type of AFP project delivery model in which the private sector is generally responsible for design, construction, maintenance, capital rehabilitation (lifecycle) and financing (both short-term and long-term). The capital cost of the project is paid

for by the public sector owner/authority, in part, by lump sum payment at completion of construction and through blended capital and service payment installations over the fixed maintenance period, usually 25-30 years.

AFP allows large, complex infrastructure projects to be delivered more efficiently and cost effectively than traditional procurement. AFP also protects taxpayers from cost overruns by transferring project risks to the party who has the expertise, experience and ability to handle that risk best.

2.2 Turner & Townsend

Turner & Townsend is an independent professional services company specializing in program management, project management, cost management and consulting across the property, infrastructure and natural resources sectors. With 100 offices in 41 countries, we draw on our extensive global and industry experience to manage risk, while maximizing value and performance during the construction and operation of our clients' assets.

For over 16 years, Turner & Townsend has been one of Canada's leading and most successful construction consultants. Turner & Townsend are corporate members of the Royal Institution of Chartered Surveyors and have many staff in Canada who are members of the RICS and the Canadian Institute of Quantity Surveyors. We have project experience both nationally and locally, with offices in Toronto, Ottawa, Calgary, Edmonton and Vancouver. The firm provides consulting services for over 300 Canadian projects annually of various types and sizes in every sector. Turner & Townsend has 86 professionally qualified personnel including loan monitors, lenders technical advisors, cost consultants, specialist mechanical and electrical cost consultants, project managers and LEED® accredited professionals.

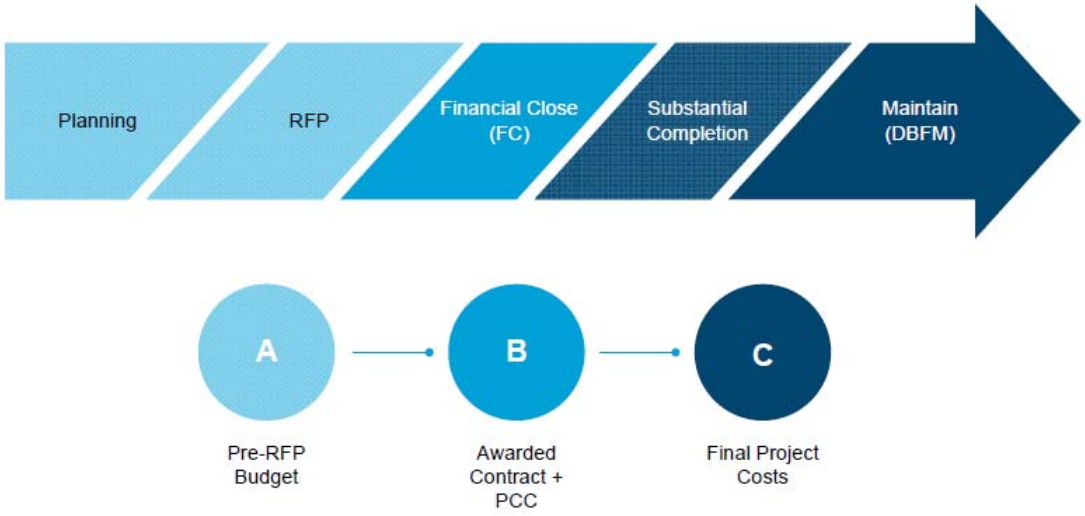
Turner & Townsend have been providing consultancy services to the AFP/P3 market across Canada since 2007, covering over 55 projects across seven provinces with a capital value in excess of $13B. In Ontario, Turner & Townsend have advised on 37 AFP projects across the social and civil infrastructure sectors and DBFM, DBF and BF procurement models.

3 Project Budget Analysis

3.1 Introduction

The 2016 Track Record Report includes analysis of On-Budget and On-Time performance of 51 projects that have reached Substantial Completion as at March 31, 2016. The Report builds on the previous year's edition, which reported on and analyzed 45 projects.

An AFP project is assigned to Infrastructure Ontario once it has received government (Treasury Board) approval with an approved, not-to-be exceeded budget and schedule with a defined delivery date. Once a project is assigned to Infrastructure Ontario for AFP delivery by the Ministry of Infrastructure, the project follows the process depicted below with three key milestones (A-B-C below) where the budget is measured.



As the budget moves from planning to Financial Close, it becomes more accurate as information becomes more detailed and the design and associated risks become known.

3.1.1 Estimates used by Public Works and Government Services Canada (PWGSC) for Construction costing of building projects

The PWGSC has guidelines for four different levels of estimates depending on the stage of design. In summary these are as follows:

Estimate	Stage of Design	Contingency Included
Class D	Comprehensive statement of requirements and an outline of potential solutions.	Up to 20%
Class C	Comprehensive list of requirements and assumptions including a full description of the preferred schematic design option, construction/design experience and market conditions.	Up to 15%
Class B	Design development drawings and outline specifications which include the design of all major systems and subsystems, as well as the results of all site investigations.	Up to 10%
Class A	Completed construction drawings and specifications	Up to 5%

3.1.2 Milestones for Monitoring Costs

3.1.2.1 Pre-RFP Budget

This budget, approved by Treasury Board, is typically based on a Class D to Class C estimate prepared by an independent Cost Consultant and based on a schematic design and project specification. It includes all construction costs and soft costs such as consultant fees, contingencies and other project related costs.

3.1.2.2 Awarded Contract

This represents the capital cost incorporated in the executed Project Agreement and represents the agreed award amount between the successful bidder and Infrastructure Ontario. These costs are typically based on a Class A to Class B estimate. Infrastructure Ontario adds a Post Contract Contingency (PCC) to this amount which is typically 5-10%, dependent on the complexity of the project and asset class. For Social Projects, the PCC allowance will generally be at the lower end of this range, as the complexity and level of unknown risk is limited. For Civil projects, which inherently have more complexity, unknown and retained risks encountered during the course of the construction period, such as retained environmental risks, the PCC allowance is higher.

3.1.2.3 Substantial Completion Costs

This represents the final costs at Substantial Completion and includes the Awarded Contract amount and the non-discretionary changes (PCC) for unknown and retained risks during construction.

3.1.2.4 Total Project Costs

This represents the sum of Awarded Contract plus the Post Contract Contingency or utilized PCC as well as transaction costs associated with advisors (legal, financial, fairness and process), land costs, early works, discretionary changes and other costs relating to the project managed by the public owner such as consulting fees, furniture, furnishing and equipment.

3.1.2.5 Post Contract Contingency

This is the budgeted allowance established at Financial Close to fund non-discretionary changes for unknown and retained risks during construction.

3.2 Pre-RFP Budgets

3.2.1 Pre-RFP Budget versus Awarded AFP Contract Amount

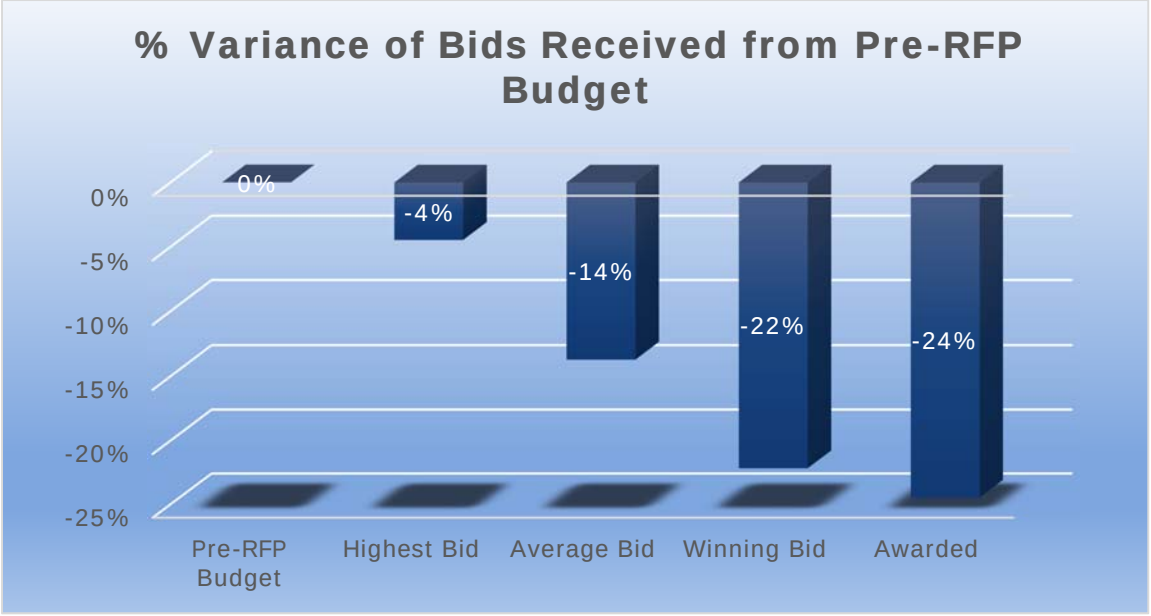
AFP budgets are designed to target the mid-point of a competitive market and within the approved budget that the government authority and Infrastructure Ontario have the commercial authority to award the project to a compliant bidder that may or may not have the lowest priced bid and demonstrates the best value for the government.

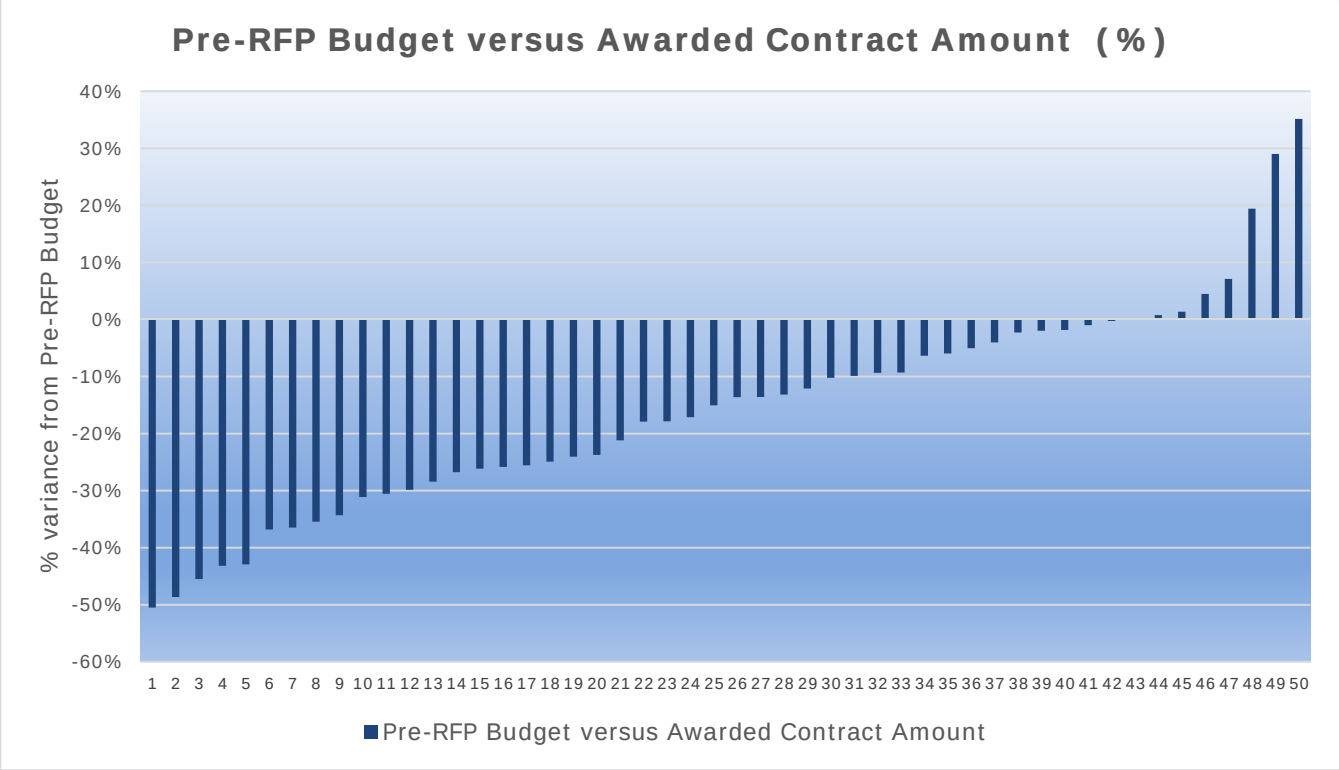
The budget process is rigorous and AFP budgets are developed with sufficient flexibility to absorb changes that occur as part of the design development phase, such that budgets are only updated prior to Financial Close due to extenuating circumstances that affect the ability of the project to be delivered On-Budget. Following Financial Close, AFP budgets are updated to reflect actual commitments, most importantly, the AFP contract value.

An analysis of the Pre-RFP Budget against the Awarded AFP Contact Amount provides visibility on the accuracy of the Pre-RFP Budget and whether current market conditions have been adequately addressed when preparing the Pre-RFP Budget. As a Pre-RFP Budget includes a number of high level assumptions and is based on a concept rather than a detailed design, we would expect it to be conservative and to be higher than the awarded AFP Contract Amount which is based on a detailed design with risk more accurately assessed and priced. Typically the Pre-RFP Budget is prepared as a Class D to Class C estimate and would therefore carry a 15%-20% contingency.

The Pre-RFP Budget for the 50[1] projects is $36.15B and the Awarded AFP Contract (excluding PCC) is $27.31B. This is a reduction of $8.84B or 24% as can be seen in the graph on the following page.

[1] One transportation project has been excluded from this analysis as IO's involvement was not established at pre-RFP budget approval.





The Pre-RFP Budget is generally based on a Class D to Class C estimate, which is expected to include 15% to 20% contingency allowance. Of the 50 projects, only two projects exceeded the

Pre-RFP Budget by more than 20%. There were 21 projects under the Pre-RFP Budget by more than 20%.

The following table shows the breakdown of the percentage variance of the 50 projects:

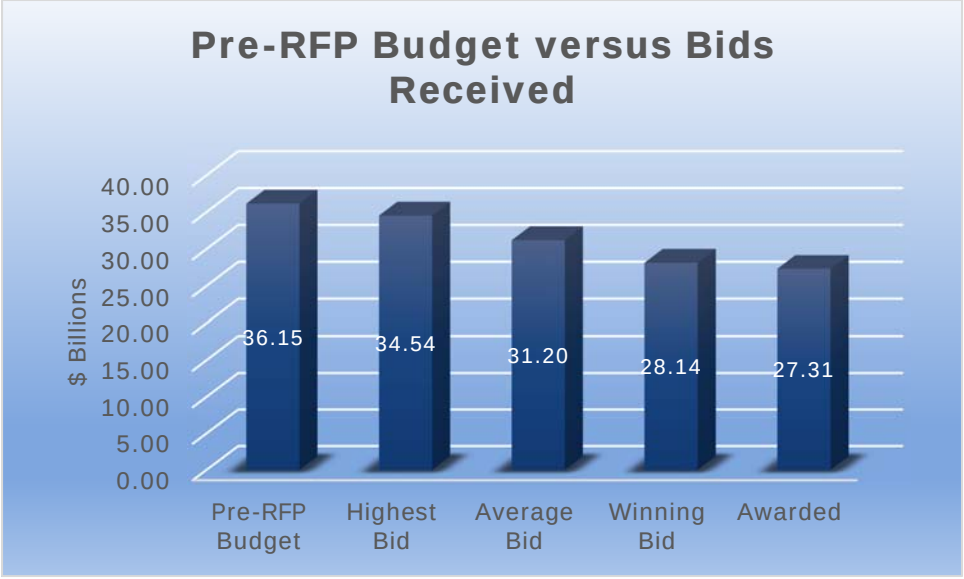
Variance below RFP Budget				Variance above RFP Budget	
>50%	30%-49%	10%-29%	0%-9%	0%-9%	10%-29%
9	7	12	10	9	3

There are a number of factors that could drive competitive bidding costs down, resulting in the Awarded AFP Contract amount being significantly lower than the Pre-RFP Budget:

- Innovative designs could meet specifications with a more cost effective solution than originally envisaged;
- Due diligence, market conditions and innovative approach on construction means and methods;
- Market conditions could drive costs down as bidders appetite to win a project increases;
- Detailed reports undertaken during the bidding process could eliminate risks that were originally costed in the pre-RFP estimate; for example, environmental and geotechnical reports that give more detailed data relating to environmental and ground condition risks;
- Upfront market consultation and design meetings pre-tender;
- Financing structure and rate adjustments could affect the borrowing rate of finance.

3.2.2 Pre-RFP Budget versus Bids Received

The following graphs show the Pre-RFP Budget against the aggregates for all bids received for the 50 projects. We note that these values for bids received exclude the PCC amount.



The following table shows the breakdown of the bids received against the Pre-RFP Budget:

Variance of Aggregate Pre-RFP Budget against Bids Received			
Highest Bid	**Average Bid**	**Winning Bid**	**Awarded Contract**
$1.61B lower	$4.95B lower	$8.01B lower	$8.84B lower
4% lower	14% lower	22% lower	24% lower

These values are consistent with a Class D to Class C estimate carrying a 15% - 20% contingency and the submitted bids being based on a more developed and therefore detailed set of information. The variance between the Pre-RFP Budget and the bids received is consistent with industry standards.

The Awarded AFP Contract amount (excluding PCC) compares to the bids received as follows:

Variance of Awarded Contract to Bids Received		
Highest Bid	**Average Bid**	**Winning Bid**
$6.99B lower	$3.65B lower	$0.59B lower
25% lower	13% lower	2% lower

The variance between the contract award amount and the winning bid is a result of changes that occur between RFP submission and execution of the Project Agreement. This could also include any innovations that were submitted as part of the bid submission and subsequently accepted.

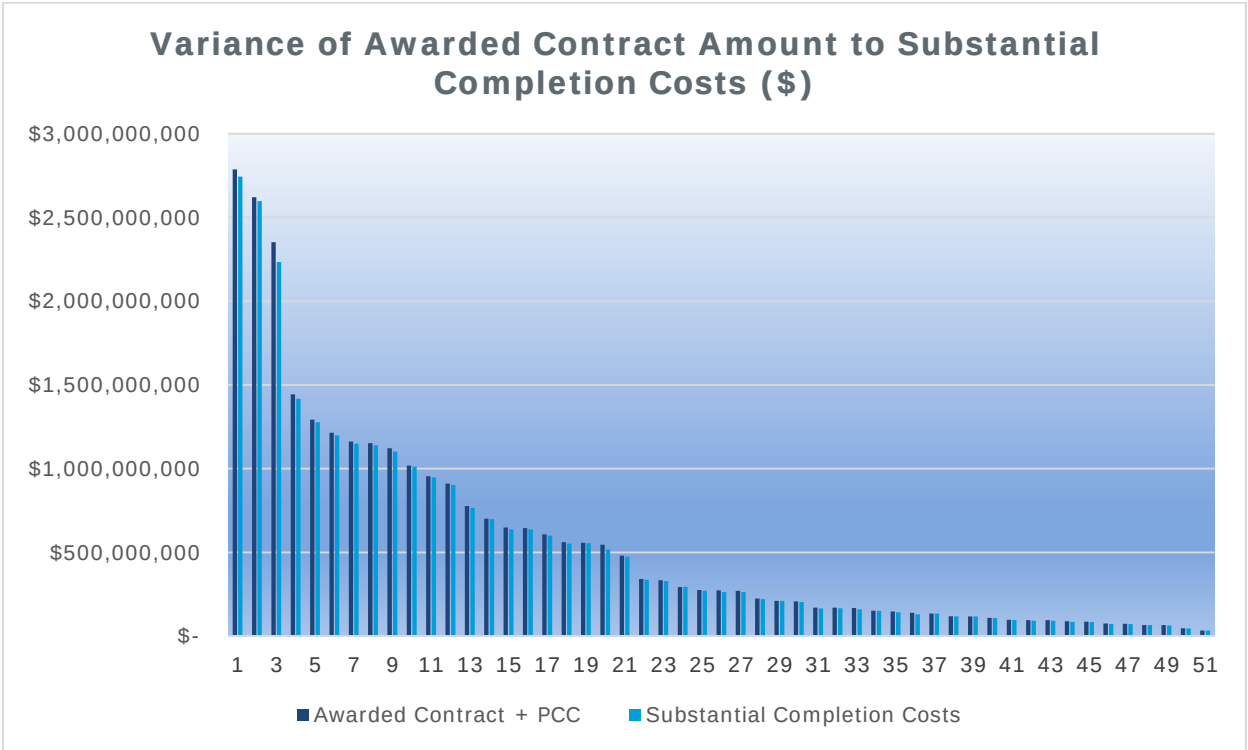
3.3 Awarded Contract Amount

This section provides analysis on the Awarded AFP Contract amount and how it compares to the Substantial Completion costs. This analysis enables comment on the extent to which the projects were On-Budget. On-Budget performance is one of the fundamental measures used by Infrastructure Ontario to track financial success. All AFP projects have costs that are managed by Infrastructure Ontario and costs that are managed by the client; this analysis only looks at those costs managed by Infrastructure Ontario.

A project is considered to be On-Budget if the Substantial Completion costs including the amount of PCC that is utilized is less than the Awarded AFP Contract Amount plus PCC (i.e. the project is considered to be On-Budget if the PCC is not exceeded).

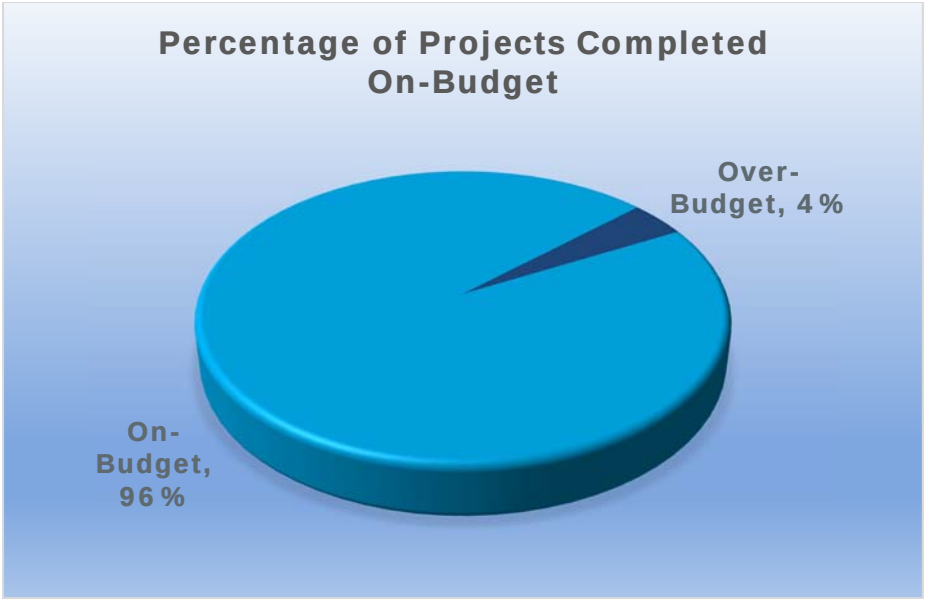
3.3.1 Awarded Contract Amounts versus Substantial Completion Costs

The following graph shows the comparison between the Awarded AFP Contract amount including the budgeted PCC and the Substantial Completion costs, which include the utilized PCC.



Of the 51 projects, only two projects had a cost at Substantial Completion that was above the Awarded AFP Contract amount. Through the publication of this report, IO is transparent about the performance of all AFP projects against Awarded Contract amounts, which allows analysis and lessons learned to be incorporated in to their practices and procedures. This is uncommon in government procurement. The four percent of AFP projects that are completed at a cost greater than the Awarded Contract amount denotes performance well above industry standards. On average, the final costs were two percent lower than the Awarded AFP Contract amount plus PCC.

In aggregate, the 51 projects had a Substantial Completion cost of $494 million below the Awarded AFP Contract amount plus PCC.



For a project to be On-Budget, the costs at Substantial Completion must be less than or equal to the Awarded Contract amount plus PCC. Our analyses shows, that of the 51 projects that reached Substantial Completion by 31 March 2016, 49 projects or 96% were completed On-Budget.

The high percentage of projects completed On-Budget indicates that:

- IO undertakes a proper due diligence process for cost estimating pre-tender
- IO allocates the appropriate design and risk contingencies for risks that are known at the time
- IO employs strong project management throughout the process
- The government party has appropriately priced the risk inherent in the Project, such that there are very few unexpected costs causing cost over runs

In essence, for a project to be completed On-Budget, Infrastructure Ontario was able to manage all unforeseen changes undertaken during construction within the allocated PCC allowance.

As reported in previous track record reports, there was one project that was $9,500 or 0.01% over the Awarded Contract amount of $117.5m. In 2015, a second project, a transportation project, is reported as being over-budget by $826,836 or 0.28%. IO conducts extensive due diligence on all projects. Environmental remediation is often a significant priority when assessing risks and determining which party is best able to manage issues such as potential soil contamination. While IO was able to conduct due diligence on some of the sites for the transportation project, inspections on a majority of the sites was limited at the time the Project Agreement was confirmed. It should be noted that one factor in not completing all due diligence on all sites was the fact that some sites were not closed because it was important to ensure the traveling public had access to these sites. As a result, IO retained environmental risks on the sites and those underground risks materialized over the course of the project, particularly on the sites that had not been closed to allow for inspections. In order to responsibly address environmental issues and meet established guidelines and industry practices during the project, additional expenditures of the project Post Contract Contingency were required. While every effort was made to address environmental issues on a majority of sites within the PCC, it was prudent for IO to incur a modest increase in PCC expenditure in order to address environmental risks.

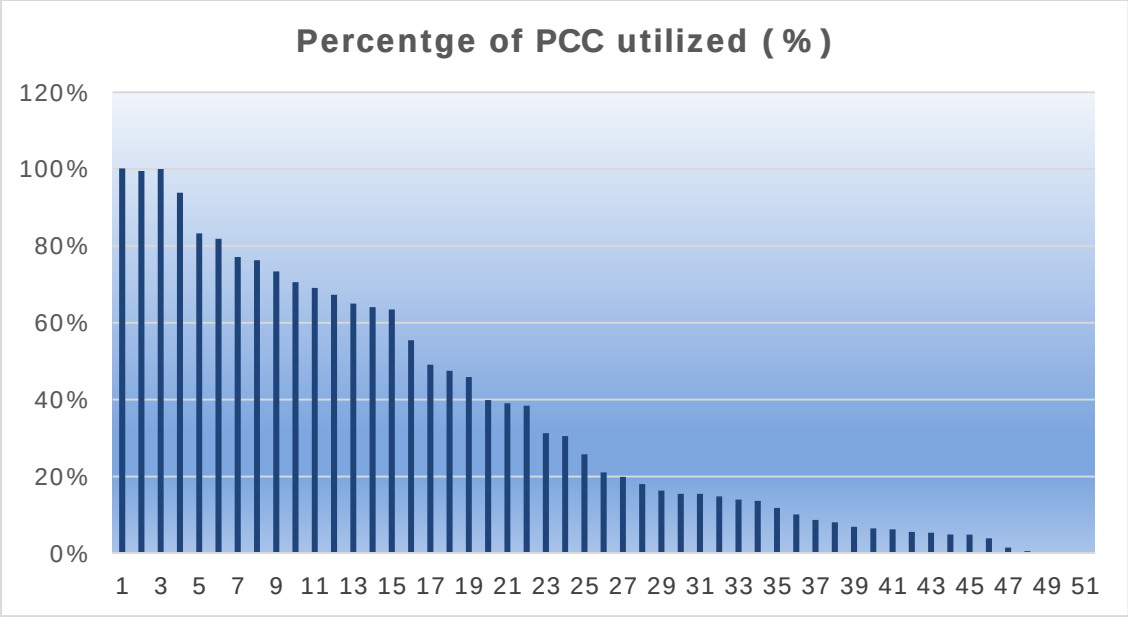
3.3.2 Analysis of Post Contract Contingency

The PCC is used to cover non-discretionary costs; those changes that arise as a result of mandatory changes on a project, such as change in law, realization of a risk that sits at contracting authority/project sponsor level, Force Majeure events, etc. It is not used to cover changes requested by the client or for risks retained by Project Co. The PCC is also used to cover design changes on BF projects, where this risk is retained by the government authority.

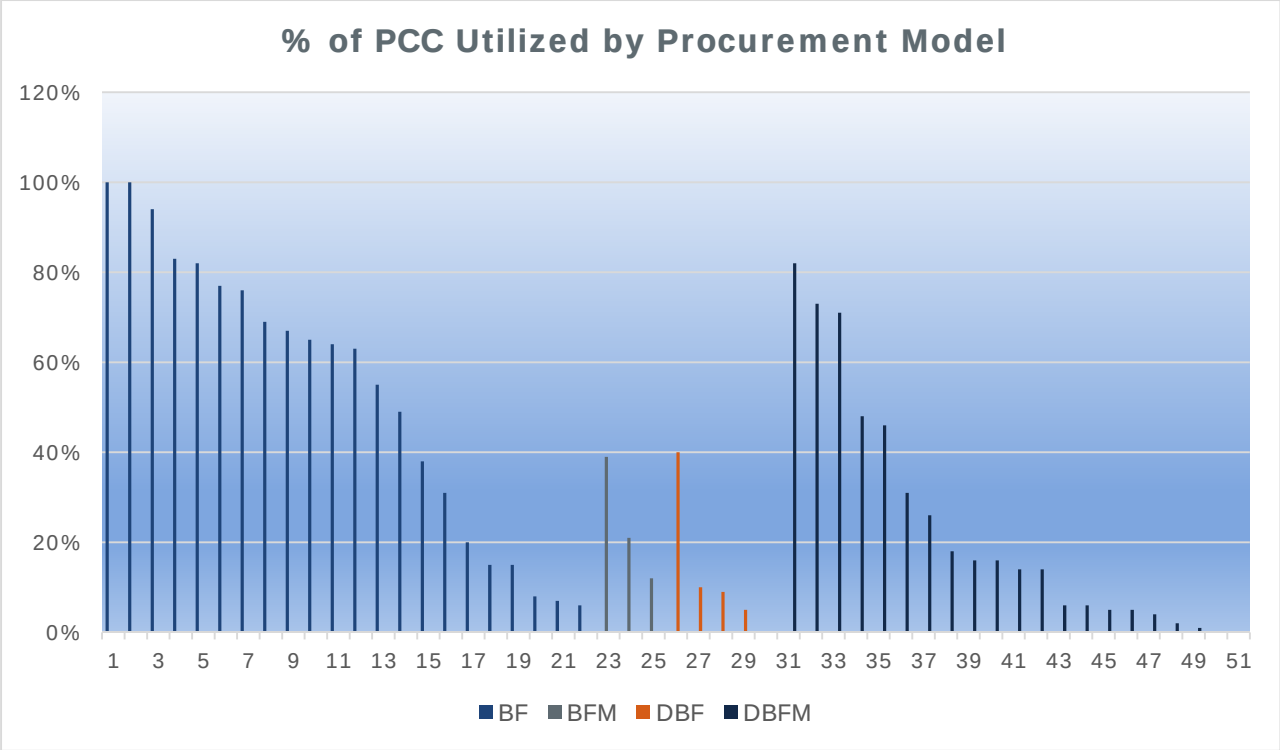
A change management process is detailed within the Project Agreement and is followed on all AFP projects to ensure visibility and agreement on all changes to the original Project Specification and Scope of Works.

In aggregate, 27.6% of PCC was utilized over the 51 projects, which results in a saving of $494 million across all projects.

The graph on the next page shows the value of PCC utilized on each of the 51 projects.



Risk allocation between the government authority and the bidder differs on different AFP models. In BF projects, the government authority takes on the design risk which, by its very nature, carries additional risk that must be carried in the PCC to cover any mandatory design changes due to unexpected changes/conditions during the construction period. An analysis of the PCC utilized by procurement model has therefore been undertaken on the following page.



It is expected that the BF model would utilize the highest percentage of the PCC due to the government authority carrying the design risk on these projects. Typically, a BF project is most like a traditionally procured project, so this result is expected. When the design risk is carried by Project Co, which provides the government authority with the most protection relating to design changes during the course of the construction period, we notice that the utilization of the PCC is less.

The PCC is typically 5-10% of the Awarded Contract Amount for construction. The level of PCC is dependent on asset class and the complexity of the project. For Social Projects, the PCC allowance will generally be at the lower end of this range, as the complexity and level of unknown risk is limited. For Civil projects, which inherently have more complexity, unknown and retained risks encountered during the course of the construction period, such as retained environmental risks, the PCC allowance is higher.

The industry tends to carry a contingency allowance of 1%-10%. Infrastructure Ontario's allowance of 5-10% across all sectors is therefore consistent with industry standards.

Following discussions with Infrastructure Ontario, in 2016 a revised methodology was introduced to calculate utilized PCC on the basis of average percentage difference (i.e. averaging the percentage difference of all projects) across the entire portfolio rather than using the gross difference. This revised methodology allows for the identification of the typical project performance and weighs each project equally whereas, the previous method gives each project the weight of its budget. While this does provide an outlook on the aggregate performance of the

entire portfolio, it does mean that larger projects will dominate the results. The impact of this style of analysis would have become even more pronounced as larger projects achieve Substantial Completion.

With time, and the inclusion of an increasing number of larger DBFM projects, the original method would have resulted in a PCC utilization that would eventually approach zero, whereas their impact via the revised methodology will be minimized due to equal weighting, giving a more accurate and transparent view of performance.

3.4 Total Project Cost Analysis

Total Project Costs include all known costs at Substantial Completion. While IO is responsible for the AFP awarded contract, IO is not responsible for Total Project Costs. Total Project Costs will include construction, proponent's soft costs, short and long-term finance costs, life cycle, operations and maintenance costs. In addition, other costs such as land acquisition, Infrastructure Ontario transaction costs, third-party consultant costs and furniture, fixtures and equipment will also be included. Clients that work with IO have their own costs that are not managed by IO. In some cases, these costs are provided in full detail. Where this is not the case, IO has made conservative assumptions regarding how such costs have been managed by these clients.

Discretionary costs are for changes to the contract that are initiated by the client and are changes to the Specification or Scope of Work included in the executed Project Agreement. These costs are not included in the AFP budget at Substantial Completion.

In aggregate, the total costs at Substantial Completion are $1.095B - 4% below the Total Project Costs at Financial Close, as approved by Treasury Board.

Of the 51 projects, 48 have total costs below or within 2% of the budgeted Total Project Cost at Financial Close.

We have assumed that any Project that has Total Project Costs within 2% of the original budget has been delivered On-Budget. Based on this analysis 94% of all projects were delivered On-Budget for Total Project Cost.

This is an improvement upon the 93% reported in the TR2015 report and demonstrates a high level of overall cost management throughout the construction period. The following table details the aggregate costs for Total Project Costs.

Total Project Costs at Financial Close, approved by Treasury Board	All known Costs at Substantial Completion	Variance ($)	Variance (%)
$32.03B	$30.93B	$1.095B less	4% less

4 Project Schedule Analysis

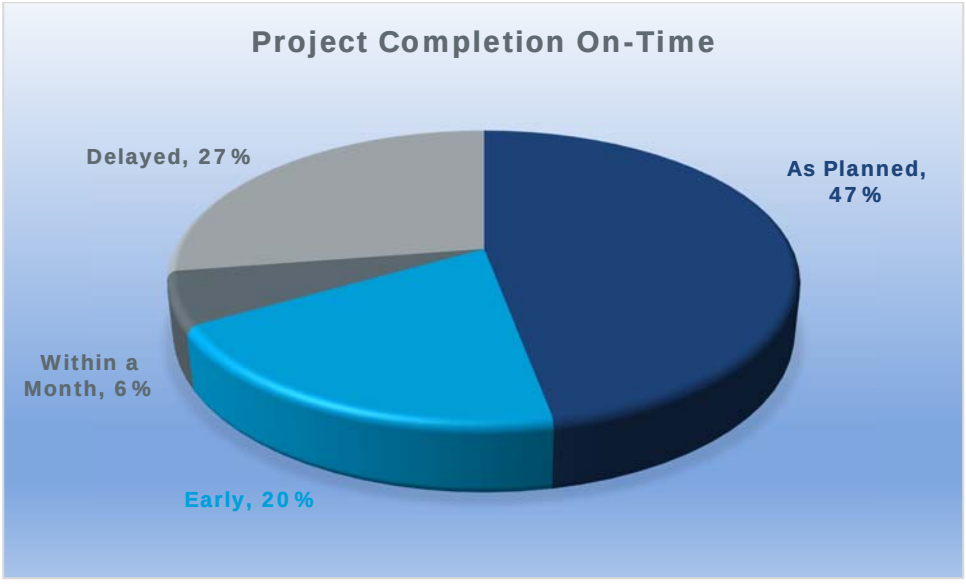
4.1 Substantial Completion

Of the 51 Projects analyzed, 73% were completed On-Time or within one month of the Scheduled Substantial Completion Date, which is consistent with the 2015 Track Record Report.

Of the 14 delayed projects, Project Co retained full or shared responsibility for delay on 11 projects. This is unique to AFP procurement model that is a means to protect the public interest.

On-Time performance is measured based on four criteria - consistent with the previous track record reports - looks at the variance between actual Substantial Completion against the Scheduled Substantial Completion Date set out in the Project Agreement. These criteria are as follows:

- Early - more than one month ahead of the Scheduled Substantial Completion Date
- As Planned - within a month prior to, or no later than five business days after the Scheduled Substantial Completion Date
- Within one month of the Scheduled Substantial Completion Date
- Delayed – more than one month after the Scheduled Substantial Completion Date



Of the 51 projects reaching Substantial Completion prior to March 31st, 2016, 67% were completed within five business days of the Scheduled Substantial Completion Date. A further three projects, 73%, were completed within a month of the Scheduled Substantial Completion Date, which is generally considered to be On-Time in the industry.

The following table provides further details related to those projects that experienced a delay.

Project Type	Year Completed	Delivery Model	Delay in Days	Primary Cause	Owner Risk	Shared Risk	Project Co Risk
Healthcare	2009	BF	32	Strike		X	
Social	2009	BF	52	Schedule Management / Winter Conditions			X
Healthcare	2009	BF	70	Design Errors	X		
Healthcare	2011	BF	183	Resourcing/Technical Deficiencies			X
Healthcare	2012	DBFM	31	Unknown Site Conditions	X		
Healthcare	2012	BF	427	Schedule Management/Scope Change		X	
Justice	2013	DBFM	60	Provincial Trade Strike: Elevators / Project Co Management		X	
Social	2013	DBFM	74	Site Conditions		X	
Healthcare	2013	BF	174	Schedule Management/Errors & Omissions		X	
Justice	2014	DBFM	70	Provincial Trade Strike: Elevators		X	
Justice	2014	DBFM	158	Provincial Trade Strike: Elevators/Terrazzo/Roofer		X	
Social	2015	BF	84	Structural steel fabricators were late in the delivery and installation of major structural elements. This created a cascading impact on schedule, resulting in unanticipated winter work		X	
Transportation	2015	DBFM	368	During independent testing, there was a quality control issue with the highway girders and therefore, they were rejected and corrective action was taken by PCo to replace all associated girders.			X
Transportation	2015	DBFM	925	75% of the sites were delivered early or On-Time. Pre-construction works (cleaning and decommissioning) resulted in late handover of site(s) for construction.	X		

5 High Quality Design Excellence

A Request for Qualification (RFQ) is issued to interested parties inviting them to submit their qualifications for a project. The RFQ process allows Infrastructure Ontario and its project partner to identify companies that have the required construction capacity, experience and financial capacity to undertake a large complex project.

DBFM and DBF Projects

For DBF and DBFM projects, Infrastructure Ontario typically selects three bidders that responded to the RFQ and were shortlisted and invites them to submit a proposal to meet the specifications detailed for the project. The bidder retains the design risk and their bid includes a design to meet the Output Specifications, with fixed costs and schedule. The fact that Project Co. retains the design risk encourages the bidders to submit innovative, high quality, cost efficient designs.

Once Infrastructure Ontario receives the bids for DBF and DBFM projects, they are evaluated against the technical requirements and must pass a minimum design-technical threshold before their bid is considered any further which ensures that all bids received have achieved a high technical and/or design standard. Given the high standards for what constitutes a passing threshold, in order to achieve maximum value for money, the IO procurement process is designed to identify the winning bid from the least expensive of the bids that meet the high technical standards.

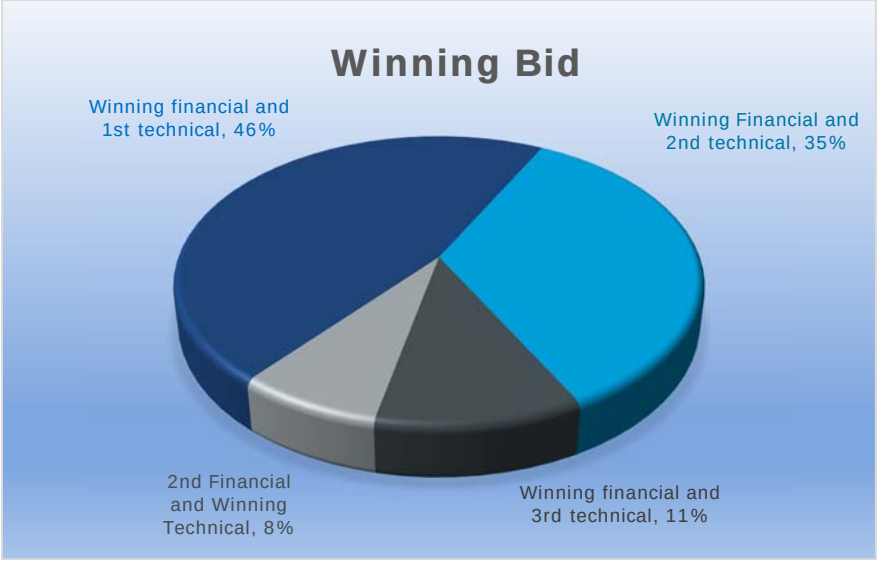
The following analysis compares:

- The Best Technical and/or Design score versus the lowest financial bid
- The Best Technical and/or Design score versus the winning bid

This analysis is intended to show a comparison of the technical/design scores versus the lowest bid received and whether the lowest bid also has the highest technical/design scores. This analysis is only undertaken on the DBF and DBFM projects.

Of the bids analyzed, 81% of the winning bids had the lowest financial bid and had the first or second technical score.

We have presented the results of the bid data in the graph on the next page.



For the two projects that were awarded to the second lowest financial bidder, these projects received the top technical score. This shows that the awards are based on best value for money with high quality technical/design and lower cost.

6 Conclusions

6.1 On-Budget Performance

Infrastructure Ontario has shown a consistently high On-Budget performance across all projects delivered so far. With 49 of 51 projects On-Budget, IO's performance exceeds industry standards.

The process included within the Project Agreement to manage non-discretionary changes is well documented and Infrastructure Ontario has managed the utilization of the Post Contract Contingency across all projects to ensure this high standard of On-Budget performance is maintained.

6.2 On-Schedule Performance

Of the 51 projects analyzed, 73% were completed On-Time or within one month of the Scheduled Substantial Completion Date. Of those projects that were On-Time or delivered within one month of the Scheduled Substantial Completion Date, 20% were in fact delivered early while maintaining high quality standards.

Of the 14 delayed projects, Project Co retained full or shared responsibility for delay on 11 projects. This is unique to AFP procurement model that is a means to protect the public interest.

6.3 Design Excellence

Of the bids analyzed, 81% of the winning bids had the lowest financial bid and had the first or second technical score. For the two projects that were awarded to the second lowest financial bidder, these projects received the top technical score. This shows that the awards are based on best value for money with high quality technical/design and lower cost.

Appendix A - Glossary of Terms and Acronyms

- Alternative Financing and Procurement (AFP): AFP is an innovative way of financing and procuring large, complex infrastructure projects. Under AFP, the public sector owner/authority establishes the scope and purpose of the project while the work is financed and carried out by the private sector. In some cases, the private sector will also be responsible for the maintenance of a physical building or operation and rehabilitation of a roadway.
- Ancillary Costs: Costs for all the technical advisors (designers, architects, and engineers) and are billed to the public sector owner/authority on a pass-through basis.
- Awarded AFP Contract Budget: Represents the budget for the project taking into account the value of the actual AFP contract with the successful bidder (Project Co) at Financial Close, including an updated Post Contract Contingency amount based on Project Co's construction costs, and any remaining other project related costs.
- Build Finance (BF): Type of AFP project delivery model in which the private sector is generally responsible for construction and short-term financing during the construction period. The Capital Cost of the project is paid for by the public sector in a lump sum at the completion of construction. The public sector sponsor is responsible for developing the detailed design of the facility and ongoing maintenance after completion of construction.
- Build Finance Maintain (BFM): Type of AFP project delivery model in which the private sector is generally responsible for construction, maintenance, capital rehabilitation (lifecycle costs) and financing (both short-term and long-term). The Capital Cost of the project is paid for by the public sector, in part, by partial lump sum payment at completion of construction and through blended capital and service payment instalments over the fixed maintenance period, usually 25 to 30 years. The public sector owner/authority is responsible for developing the detailed design of the facility. This model was used to transition early projects and is no longer used by Infrastructure Ontario.
- Capital Costs: Include the construction, financing and other project costs associated with the implementation of the project. Capital Costs do not include costs associated with operations, or lifecycle activities.
- Discretionary Changes: Changes and/or change orders to the Project Agreement that are initiated by the public sector owner/authority. Discretionary Changes amend the scope of the project.
- Design Build Finance Maintain (DBFM): Type of AFP project delivery model in which the private sector is generally responsible for design, construction, maintenance, capital rehabilitation (lifecycle) and financing (both short-term and long-term). The Capital Cost of the project is paid for by the public sector owner/authority, in part, by lump sum payment at completion of construction and through blended capital and service payment instalments over the fixed maintenance period, usually 25 to 30 years.
- Final Pre-tender Estimate: The estimate of total project costs developed by an external cost consultant reflecting the project scope immediately before release of the RFP.
- Financial Close: The time at which the Project Agreement is executed with the successful Project Co.

- Infrastructure Ontario Managed AFP Contract Costs: Include all payment obligations within the executed Project Agreement and any Non-Discretionary Changes that have occurred through the construction period. It does not include Transaction Fees or direct Infrastructure Ontario fees for delivering the project.
- Non-Discretionary Changes: Changes and/or change orders to the Project Agreement that arise when risks borne by the public sector owner/authority under the Project Agreement materialize. These changes and/or change orders do not relate to functional scope changes of a project.
- On-Budget Performance: When the project's actual Infrastructure Ontario Managed AFP Contract costs are less than the budgeted Infrastructure Ontario Managed AFP Contract costs at Financial Close.
- On-Time Performance: When the actual Substantial Completion Date occurs prior to, or within five business days of the Scheduled Substantial Completion Date, as defined in the Project Agreement at the time of Financial Close.
- Post Contract Contingency (PCC): The budget allocation established at Financial Close to fund Non-Discretionary Changes through the construction period, based on the anticipated risk profile, level of design development, and the Project Co established construction costs.
- Pre-RFP Approved Budget: The approved total budget allocated in the annual Letter of Direction prior to the actual RFP release.
- Project Agreement: Contract between the public sector owner/authority and private sector consortium (Project Co) setting out the requirements and obligations of each party to complete the project.
- Project Co: The private sector consortium comprised of differing parties and expertise (depending on the AFP delivery model) which, together with its Lenders, executes the Project Agreement and is responsible for completing the project.
- Request for Proposals (RFP): The second step of the two-stage AFP procurement process in which the public sector owner/authority solicits competitive bids for the completion of the defined project scope from prequalified bidders passing the RFQ stage.
- Request for Qualifications (RFQ): The first step of the two-stage AFP procurement process in which the public sector owner/authority solicits qualifications from private sector consortia for a potential project, resulting in the prequalification or "short-listing" of a selected number of consortia.
- Substantial Completion: The time when the construction of the project is completed in accordance with the Project Agreement, as certified by the Independent Certifier (BFM/DBF/DBFM) or the Consultant (BF), and the time when maintenance of the facility, either by Project Co (BFM/DBFM) or the public sector owner/authority (BF/DBF) begins.
- Scheduled Substantial Completion Date: The date, first bid by the successful Project Co and as specified in the Project Agreement, when construction of the Project is scheduled to be completed. For the purposes of this report, the Scheduled Substantial Completion Date is that date defined in the Project Agreement at the time of Financial Close within five business days.
- Total Project Costs: Includes both the Infrastructure Ontario Managed AFP Contract Costs, other Infrastructure Ontario Managed costs relating to the transaction process, direct Infrastructure Ontario fees for delivering the project, Discretionary Changes and any other costs relating to the project managed by the public owner.

- Transaction Fees: Transaction fees are a fixed fee to cover the costs of advisors (financial, fairness, legal and process advisors) required in the development of the agreements for the RFQ and RFP, and in negotiations leading to Financial Close.

Appendix B – List of Projects

	Project Name	Type / Sector	Delivery Model
1	Kingston General Hospital	Healthcare	BF
2	OPP Modernization Project	Justice	DBFM
3	Sunnybrook M-Wing/P&G Fit-out	Healthcare	BF
4	Hamilton Health Sciences - Juravinski Hospital and Cancer Centre	Healthcare	BF
5	Lakeridge Health, Oshawa	Healthcare	BF
6	Bluewater Health, Sarnia	Healthcare	BF
7	Sault Area Hospital	Healthcare	BFM
8	Trillium Health Centre - Mississauga, CCU /Catheter Lab	Healthcare	BF
9	The Ottawa Hospital - Ottawa Regional Cancer Centre	Healthcare	BF
10	Rouge Valley Health System	Healthcare	BF
11	LHSC/SJHC - M2P2	Healthcare	BF
12	Runnymede Healthcare Centre	Healthcare	BF
13	Hamilton Health Sciences - General Site Redevelopment	Healthcare	BF
14	North Bay Regional Health Centre	Healthcare	BFM
15	Roy McMurtry Youth Centre	Social	BF
16	Durham Region Courthouse	Justice	DBFM
17	Ministry of Government Services Data Centre	Social	DBFM
18	St. Joseph's Health Care, London - Grosvenor Restructuring (M2P1)	Healthcare	BF
19	Quinte HealthCare	Healthcare	BF
20	Forensic Services and Coroner's Complex	Social	DBFM
21	Waterloo Regional Consolidated Courthouse	Justice	DBFM
22	Niagara Health System	Healthcare	DBFM
23	Toronto Rehabilitation Institute	Healthcare	BF
24	Toronto South Detention Centre	Justice	DBFM
25	Centre for Addiction and Mental Health	Healthcare	DBFM
26	Windsor Regional Hospital	Healthcare	BF
27	Woodstock General Hospital	Healthcare	BFM
28	Trillium Health Partners (former Credit Valley Hospital)	Healthcare	BF
29	Sudbury Regional Hospital	Healthcare	BF
30	Bridgepoint Health	Healthcare	DBFM
31	Royal Victoria Regional Health Centre	Healthcare	BF
32	Thunder Bay Consolidated Courthouse	Justice	DBFM
33	St. Joseph's Health Care - West 5th Campus	Healthcare	DBFM

34	Quinte Consolidated Courthouse	Justice	DBFM
35	Waypoint Centre for Mental Health Care	Healthcare	DBFM
36	South West Detention Centre	Justice	DBFM
37	Elgin County Courthouse	Justice	DBFM
38	Regional Mental Health Care - London/St. Thomas	Healthcare	DBFM
39	Pan American Games: Markham Pool/Etobicoke Olympium/Field Hockey	Social	BF
40	Pan American Games: Aquatics Centre / CSIO / Fieldhouse	Social	DBF
41	Pan American Games: Athletes Village	Social	DBF
42	Markham Stouffville Hospital	Healthcare	BF
43	SJHC/LHSC - M2P3 (BP6), (UC4, VC4, UC5)	Healthcare	BF
44	Union Pearson Express Line	Transit	DBF
45	Humber College Learning Resource Commons	Education	DBF
46	Hamilton Health Sciences – Ron Joyce Children's Health Centre	Healthcare	DBF
47	The Rt. Hon. Herb Gray Parkway	Transportation	DBFM
48	Women's College Hospital	Healthcare	DBFM
49	Oakville Trafalgar Memorial Hospital	Healthcare	DBFM
50	Ontario Highway Service Centres	Transportation	DBFM
51	Humber River Hospital	Healthcare	DBFM

Montfort Hospital was excluded from the analysis as it was initiated prior to the establishment of IO, and did not include private sector financing, a key consideration in AFP project delivery.

For the purposes of this Report any projects that have reached Substantial Completion but continue to address certain unresolved matters have not been included this report.

Appendix C – Data Verification and Validation

Turner & Townsend met with the Infrastructure Ontario team for a kick-off meeting where we were presented with the data and had a detailed run through as to where information came from and how it had been presented within the master excel file. We discussed the assumptions made by Infrastructure Ontario to ensure we had a thorough understanding of the data.

A master excel file of all 51 projects was given to Turner & Townsend along with various source documents to enable us to verify the key data for the six new projects added to the list in the 2015/16 fiscal year. Where we found inconsistencies or missing data, we went back to Infrastructure Ontario and received further information.

Further meetings were also held to discuss PCC expenditure, as well as the reasons for schedule delays.

Appendix D – Data Source

Data Analyzed	Information Received
AFP Pre-Tender Estimate	Approval to proceed to Request for Proposals (RFP) stage for the six new projects Data compiled and provided by Infrastructure Ontario for 45 projects analyzed in TR2013, TR2014 and TR2015
Awarded AFP Contract	Data compiled and provided by Infrastructure Ontario from Financial Models. This information was not verified by T&T. Data Compiled and provided by Infrastructure Ontario for 45 projects analyzed in TR2013, TR2014 and TR2015
Post Contract Contingency	Approval to proceed to preferred proponent negotiations (PPN) deck presented to IO's Board of Directors for the six new projects Data compiled and provided by Infrastructure Ontario for 45 projects analyzed in TR2013, TR2014 and TR2015
Non-Discretionary Changes	Construction reports for the six new projects Data compiled and provided by Infrastructure Ontario for 45 projects analyzed in TR2013, TR2014 and TR2015
Discretionary Changes	Construction reports for the six new projects Data compiled and provided by Infrastructure Ontario for 45 projects analyzed in TR2013, TR2014 and TR2015
Winning Bid	Data compiled and provided by Infrastructure Ontario for 51 projects
Average Bid	Data compiled and provided by Infrastructure Ontario for 51 projects
Highest Bid	Data compiled and provided by Infrastructure Ontario for 51 projects
Technical Score	Data compiled and provided by Infrastructure Ontario for 51 projects
Financial Score	Data compiled and provided by Infrastructure Ontario for 51 projects
Scheduled Substantial Completion Date	Project Agreement Schedule 1 for the six new projects Data compiled and provided by Infrastructure Ontario for 45 projects analyzed in TR2013, TR2014 and TR2015
Substantial Completion Date	Substantial Completion Certificates