EXPENDITURE
BUDGET
2021 • 2022

ANNUAL MANAGEMENT PLANS FOR **PUBLIC INFRASTRUCTURE INVESTMENTS**

2021 • 2022

Votre gouvernement

Québec

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Annual Management Plans for Public Infrastructure Investments 2021-2022
2020-2021 Expenditure Budget

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TERMS

ADDITION

Acquisition or construction of new infrastructure.

IMPROVEMENT

Increase in the service potential of existing infrastructure.

ENHANCEMENT

Increase in the government service offer through the addition of a new infrastructure or the improvement of an existing infrastructure.

ASSET MAINTENANCE DEFICIT (AMD)

Value of the work required to restore the physical condition of a specific structure to a satisfactory or better condition with the aim of protecting the health and safety of individuals, ensuring its continued use for its intended purposes, and reducing the likelihood of breakdown or counteracting physical wear and tear.

DISPOSITION

Alienation of a building, civil engineering structure or equipment by sale, transfer or disposal.

MAINTENANCE

Work of limited scope normally performed as part of an infrastructure's daily use. Asset maintenance does not include maintenance work.

SURPLUS BUILDING

Building owned by a public body for which no use, for the purpose of providing a government service, is planned.

INFRASTRUCTURE

Building, equipment or civil engineering structure that is part of the Government's service supply.

PLANNED INVESTMENT

Value of the financial contribution from the Gouvernement du Québec for a public infrastructure investment listed in the Québec Infrastructure Plan.

PROBABLE INVESTMENT

Probable cost of an investment from the Gouvernement du Québec for the government financial year that is ending.

ACTUAL INVESTMENT

Real cost of an investment from the Gouvernement du Québec for a government financial year that is closed.

ASSET MAINTENANCE

Value of the work required to keep an infrastructure in satisfactory or better condition with the aim of protecting the health and safety of individuals, ensuring its continued use for its intended purposes, and reducing the likelihood of breakdown or counteracting physical wear and tear.

INVENTORY MAINTENANCE

Ensure the sustainability of infrastructure by maintaining assets and addressing the asset maintenance deficit, as well as by replacing equipment and reconstruction of buildings or civil engineering works.

ADDRESSING THE ASSET MAINTENANCE DEFICIT

Investments (maintenance projects and envelopes) planned in QIP and specifically dedicated to reduce the AMD accounted for infrastructures included in the AMPI.

MAJOR PROJECT

Infrastructure project subjected to the Directive as its estimated cost is equals or exceeds $50.0 million dollars, or $100.0 million dollars in the case of roadway infrastructure project or public transit project. Furthermore, the Conseil du trésor may decide to consider as major any infrastructure project that it deems appropriate.

REPLACEMENT

Acquisition, construction or reconstruction of an infrastructure to replace an existing infrastructure that is usually at the end of its useful life, so as to ensure continuity in service delivery.

REPLACEMENT VALUE

Total investment required to build or acquire an infrastructure of the same dimensions and utility, with equivalent technical features, based on the construction techniques, building codes and materials or technical specifications in effect at the time of the estimate.

USEFUL LIFE

Time period during which an infrastructure or component should serve its intended purposes.

ACRONYMS

ACV	Air cushion vehicle
AMD	Asset maintenance deficit
AMPI	Annual Management Plans for Public Infrastructure Investments
ARTM	Autorité régionale de transport métropolitain
CCI	Culvert condition indicator
CCNQ	Commission de la capitale nationale du Québec
CERIU	Centre d'expertise et de recherche en infrastructures urbaines
CHA	Cultural Heritage Act
CHSLD	Residential and Long-Term Care Centres
CHU	Centre hospitalier universitaire
CHUM	Centre hospitalier de l'Université de Montréal
CISSS	Integrated Health and Social Services Centres
CIUSSS	Integrated University Health and Social Services Centres
CLSC	Local Community Services Centres
CRSSS	Regional Health and Social Services Centres
CSSS	Health and Social Services Centres
FCI	Facility condition index
FCCQ	Building Canada Fund – Québec
FEPTEU	Clean Water and Wastewater Fund
FIMEAU	Fonds pour l'infrastructure municipale d'eau
GHG	Greenhouse gas
HLM	Habitation à loyer modique
HVAC	Heating, ventilation and air-conditioning system
HSSN	Health and Social Services Network
GCI	Government condition indicator
IBA	Integrated Bilateral Agreement
IRI	International Roughness Index
MACM	Musée d'art contemporain de Montréal
MADA	Municipalité amie des aînés
MAMH	Ministère des Affaires municipales et de l'Habitation
MCC	Ministère de la Culture et des Communications
MELCC	Ministère de l'Environnement et de la Lutte contre les changements climatiques
MEQ	Ministère de l'Éducation du Québec
MES	Ministère de l'Enseignement supérieur
MERN	Ministère de l'Énergie et des Ressources naturelles
MSSS	Ministère de la Santé et des Services sociaux
MV	Motor Vessel
MTQ	Ministère des Transports
MUHC	McGill University Health Centre

NFCCQ	New Building Canada Fund – Québec
NPO	Non-profit organization
PAFFITC	Programme d'aide financière du Fonds pour l'infrastructure de transport en commun
PAGTCP	Programme d'aide gouvernementale au transport collectif des personnes
PAGITC	Programme d'aide gouvernementale d'infrastructures en transport collectif
PCEM	Equipment and furniture conservation plan
PCFI	Real estate conservation and functionality plan
PIQM	Programme d'infrastructures Québec-Municipalités
QIP	Québec Infrastructure Plan
PRIMADA	Programme d'infrastructures Municipalité amie des aînés
PRIMEAU	Programme d'infrastructures municipales d'eau
NPHP	Non-Profit Housing Program
RÉCIM	Réfection et construction des infrastructures municipales
RIO	Régie des installations olympiques
RSSCE	Réseau stratégique en soutien au commerce extérieur
RSSS	Health and social services network
RRSSS	Regional board of health and social services network
RTC	Réseau de transport de la Capitale
RTL	Réseau de transport de Longueuil
SHQ	Société d'habitation du Québec
SPDAM	Société de la Place des Arts de Montréal
SODEC	Société de développement des entreprises culturelles
SOFIL	Société de financement des infrastructures locales du Québec
SQI	Société québécoise des infrastructures
STL	Société de transport de Laval
STLévis	Société de transport de Lévis
STM	Société de transport de Montréal
STO	Société de transport de l'Outaouais
STQ	Société des traversiers du Québec
STTR	Société de transport de Trois-Rivières
STS (Saguenay)	Société de transport du Saguenay
STS (Sherbrooke)	Société de transport de Sherbrooke
TECQ	Programme de la taxe sur l'essence et la contribution du Québec

Annual Management Plan for Public Infrastructure Investments 2021-2022

AFFAIRES MUNICIPALES ET HABITATION

INFRASTRUCTURE MANAGEMENT

MINISTÈRE DES AFFAIRES MUNICIPALES ET DE L'HABITATION

VISION

The MAMH's vision is to ensure consistent and innovative public actions that favour dynamic and resilient communities.

ORIENTATIONS

The MAMH's mission is to support municipal administration, housing and sustainable planning, development and occupancy of the territory in the public's best interests.

By making a significant contribution to funding the maintenance and rehabilitation of water and sewer infrastructure in Quebec municipalities, the MAMH not only helps ensure sustainability, but also contributes to resolving issues of importance to communities and therefore increasing their resilience.

RESPONSIBILITIES

The MAMH administers major financial assistance programs[1] to meet the highest-priority needs of municipalities in terms of water and sewer infrastructure. The MAMH must ensure that projects for which financial assistance is requested meet program requirements; but also keep account of expenditures related to government investments.

The MAMH also supports smaller municipalities in developing more complex projects, steering them toward plausible and cost-effective solutions to achieve the desired results.

MUNICIPALITIES

RESPONSIBILITIES

As infrastructure owners, municipalities are responsible for building, maintaining, ensuring asset maintenance, operating and funding their infrastructure projects, including compliance with applicable regulatory compliance.

As a result, it is up to municipalities to assess and document the condition of their infrastructure and define their needs. They must manage their assets appropriately for the level of service required and periodically update their infrastructure network data.

[1] The main financial assistance programs related to this type of infrastructure are listed in Appendix 1.

DESCRIPTION OF THE INFRASTRUCTURE PORTFOLIO

The AMPI describes the condition of municipal water and sewer infrastructure as well as the roadways above drinking water and wastewater lines. This portrait of water and sewer infrastructure condition was established based on the results of the CERIU's work in developing the *Portrait des infrastructures en eau des municipalités du Québec*[2]. Details regarding the methods for collecting data and assessing condition are presented in Appendix 2.

The municipal water and sewer infrastructure network consists of collection facilities, drinking water and wastewater lines, drinking water treatment plants, reservoirs, pressure control stations, retention basins, wastewater treatment plants, pumping stations and overflow facilities.

[2] https://ceriu.qc.ca/bibliotheque/rapport-annuel-2020-du-portrait-infrastructures-eau-municipalites-du-quebec-piemq

Infrastructure Inventory[1]
By Infrastructure Type and Category

	Average Age (years)	Quantity			Measurement (km)[3]		
		AMPI		Variation	AMPI		Variation
		2020-2021	2021-2022		2020-2021	2021-2022	
Real Estates							
Non-linear Infrastructures							
Drinking water supply and production facilities	43	3,678	4,012	334	N/A	N/A	N/A
Water treatment facilities	30	4,948	5,587	639	N/A	N/A	N/A
Total – Real Estates		**8,626**	**9,599**	**973**	**N/A**	**N/A**	**N/A**
Civil Engineering Works							
Linear infrastructures							
Drinking water pipes	39	N/A	N/A	N/A	43,400	44,025	625
Wastewater pipes	40	N/A	N/A	N/A	35,035	35,158	123
Storm water pipes	34	N/A	N/A	N/A	18,467	18,646	179
Roadways above pipes	N/A	N/A	N/A	N/A	37,981	40,330	2,349
Total – Civil Engineering Works		**N/A**	**N/A**	**N/A**	**134,883**	**138,159**	**3,276**

1 Data as at October 30, 2020.
2 The average age is that of the infrastructure of the municipalities consulted.
3 The dimensions provided are estimates for Québec as a whole, based on a partial report.

Variation in Inventory

The overall increase in the inventory compared to the 2020-2021 AMPI is mainly due to the larger sample of municipalities consulted by the CERIU in preparing the *Portrait des infrastructures en eau des municipalités du Québec*.

The increase can also be explained by the fact that some municipalities, particularly cities with a population of more than 100,000, provided a more detailed update of their water and sewer infrastructure network, including new facilities not previously considered.

INFRASTRUCTURE SUSTAINABILITY

MUNICIPALITIES

Infrastructure Conditions By Infrastructure Type and Category

	Government condition indicator (GCI)[1] (%)					
	A	**B**	**C**	**ABC**	**D**	**E**
Real Estates						
Non-linear Infrastructures						
Drinking water supply and production facilities[2]	22	50	15	87	5	8
Water treatment facilities[3]	23	34	36	93	6	1
Total – Real Estates	**23**	**41**	**27**	**91**	**5**	**4**
Civil Engineering Works						
Linear infrastructures						
Drinking water pipes	21	33	33	87	9	4
Wastewater pipes	55	24	9	88	5	7
Storm water pipes	66	25	4	95	2	3
Roadways above pipes	17	23	18	58	14	28
Total – Civil Engineering Works	**37**	**26**	**17**	**80**	**8**	**12**
Total – Infrastructures	**35**	**28**	**19**	**82**	**7**	**11**

1 These percentages are weighted by infrastructure replacement value.
2 95% of the 4012 drinking water supply and production facilities are estimated to be in satisfactory condition or better (GCI of A, B or C); this represents 87% of the replacement value.
3 95% of the 5587 wastewater treatment facilities are estimated to be in satisfactory condition or better (GCI of A, B or C), which represents 93% of the replacement value.

Objectives

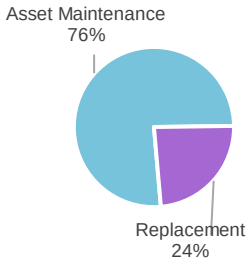
The MAMH's financial assistance programs for municipalities are essentially intended to support execution of work that will ensure maintenance and renewal of an infrastructure that provides reliable, quality basic services to citizens. As part of its priority investment programs, the MAMH has set the following objectives to ensure the sustainability of municipal infrastructure:

- Replace municipal infrastructure in vulnerable condition, especially drinking water distribution and wastewater collection systems;
- Upgrade infrastructure to standards under applicable environmental regulations;
- Create new basic services for citizens.

Furthermore, the MAMH has adopted an indicator in its 2019-2023 Strategic Plan to measure municipalities' completion rate of infrastructure projects under the QIP, namely achieving the target of 88% in 2022-2023.

Maintenance Investments in the 2021-2031 QIP
(contribution of the Gouvernement du Québec, in millions of dollars and as a percentage)

	Municipalities	%
Infrastructure Maintenance		
Asset Maintenance	5,147.1	**76**
Replacement	1,610.6	**24**
Total	**6,757.8**	**100**



Note: Figures are rounded and the sum of the amounts may not correspond to the total indicated.

Investment Strategy

In the process that led to the *Portrait des infrastructures en eau des municipalités du Québec*, the CERIU collected data from municipalities regarding the condition of their water and wastewater infrastructure. Once completed, this portrait pinpoints the highest-priority needs of municipalities that will require investment over the next few years. The MAMH takes these high-priority needs into account in its financial assistance programs and investment priorities.

The *Portrait* also indicates that 18% of the water and sewer infrastructure in Quebec municipalities is in poor or very poor condition (GCI of D or E) and will require major investments to restore it to good condition (GCI of A, B or C). Furthermore, special attention must be paid to the significant amount of ageing infrastructure with a moderate risk of failure (GCI of C).

The MAMH's investment strategy thus materializes in the development and implementation of financial assistance programs to:

- Meet municipalities' highest-priority needs so they can maintain the basic services provided by their water and sewer infrastructure, thereby contributing to the quality of life of their citizens;
- Allow municipalities to address the accrued AMD for their water and sewer infrastructure;
- Prioritize projects that address regulatory compliance and public health and safety issues;
- Ensure transparent and fair treatment of financial assistance applications from municipalities;
- Require municipalities to carry out, by their own financial means, a minimum amount of intervention on their own water infrastructure, without resorting to government subsidies.

Specifically, in 2019-2020 the MAMH announced two new programs making available $4.9 billion in total government financial assistance (from both Canada and Québec) to support high-priority municipal projects: the 2019-2023 TECQ and FIMEAU programs.

To achieve its objectives, the MAMH relies on the terms and conditions of financial assistance programs that set out the rules and assessment criteria that guide the MAMH when evaluating applications for assistance, in order to give priority to projects aimed at regulatory compliance or at rehabilitating poor infrastructure.

MAMH financial assistance programs also provide additional financial support to smaller municipalities to help them carry out their investment projects, since they often have major needs but limited financial resources. These projects are often technically complex, so MAMH guides municipalities toward plausible and cost-effective solutions to achieve the desired results.

SITUATION

Public Infrastructure Investments Included in the QIP
By type
(contribution of the Gouvernement du Québec, in millions of dollars)

	Infrastructure Maintenance				Infrastructure Enhancement	Total
	Asset Maintenance	Asset Maintenance Deficit	Repla-cement	Subtotal	Addition and Improvement	
Municipalities						
2019-2020						
Actual	139.4	–	143.0	**282.4**	276.3	**558.7**
Forecast	265.6	–	103.0	**368.6**	224.0	**592.6**
Difference	(126.2)	–	40.0	**(86.2)**	52.3	**(33.9)**
2020-2021						
Probable	165.0	–	210.7	**375.7**	210.5	**586.2**
2021-2022						
Forecast	286.3	–	200.0	**486.3**	180.3	**666.6**

ADDITIONAL INFORMATION

Differences between Planned and Actual Investments

MAMH funding to support municipal infrastructure investments made in 2019-2020 amounted to $558.7 million, just slightly less than the planned investment for the corresponding period, which was $592.6 million. On the one hand, financial assistance for asset maintenance work was lower than expected because less work was carried out than originally planned by municipalities within the context of the new programs and certain major projects. On the other hand, financial assistance granted for replacements and additions was slightly higher than expected.

Planned and Probable Investments

The investments provided for in the QIP by the MAMH are made according to the municipalities' work planning and capacity to perform the work. Since the MAMH does not own or manage the infrastructure projects it subsidizes, it has no control over the pace at which municipalities make investments. However, MAMH's investment forecasts take these factors into account and aim to be as probable as possible.

For the current year, probable investments are expected to total $586.2 million, and those planned for 2021-2022 are estimated at $666.6 million. Most of the investments made supported municipal water infrastructure projects such as projects to build, repair or upgrade drinking water and wastewater treatment facilities to standards, or to rehabilitate water infrastructure. In addition to these water infrastructure projects, investments are also planned to support completion of certain infrastructure projects dedicated to municipal services including cultural, community, sports and leisure services.

MAMH investments for the current year and those planned for 2021-2022 will contribute to the completion of many major projects, including the following:

- Station d'épuration des eaux usées Jean-R. Marcotte, unité de désinfection — Montréal — Construction;
- Bassins de rétention des eaux usées — Montréal — Construction;
- Station d'épuration des eaux usées — Gatineau — Construction et reconstruction;

- Mise en place d’un réseau d’égout sanitaire et prolongement du réseau d’aqueduc situé autour du lac à la Tortue — Shawinigan;
- Renouvellement de conduites — Sherbrooke;
- Centre de glaces — Québec — Construction;
- Colisée de Trois-Rivières — Construction.

Change in the Infrastructure Conditions By Infrastructure Type and Category

	GCI of D (%)			GCI of E (%)		
	AMPI		Variation	AMPI		Variation
	2020-2021	2021-2022		2020-2021	2021-2022	
Real Estates						
Non-linear Infrastructures						
Drinking water supply and production facilities	19	5	(14)	11	8	(3)
Water treatment facilities	14	6	(8)	9	1	(8)
Total – Real Estates	**16**	**5**	**(11)**	**10**	**4**	**(6)**
Civil Engineering Works						
Linear infrastructures						
Drinking water pipes	8	9	1	4	4	0
Wastewater pipes	4	5	1	7	7	0
Storm water pipes	2	2	0	2	3	1
Roadways above pipes	15	14	(1)	26	28	2
Total – Civil Engineering Works	**8**	**8**	**0**	**11**	**12**	**1**
Total – Infrastructures	**9**	**7**	**(2)**	**11**	**11**	**0**

ADDITIONAL INFORMATION

Change in Condition and in the AMD

The change in infrastructure in poor and very poor condition is based on the work and data compiled by the CERIU as part of the annual update of the *Portrait des infrastructure en eau des municipalités du Québec*. The proportion of infrastructure in poor and very poor condition for the period covered by this AMPI includes a greater number of observations than the previous period (addition of water main and pavement condition inventory data from 31 additional municipalities), and takes into account the natural deterioration of water infrastructure, as well as more detailed data updates from several municipalities as of October 30, 2020.

Compared to the previous period, the condition indicators remained stable overall for all municipal water infrastructure assets. However, there has been a significant decrease in the proportion of water and wastewater facilities in poor condition (GCI of D) and very poor condition (GCI of E). This decrease is mainly explained by the fact that since 2018, nearly 620 municipalities have reassessed the condition of the main components of their non-linear water infrastructure using a new, more detailed form that provides a more comprehensive and representative assessment of the condition of this infrastructure.

APPENDIX 1

MAMH FINANCIAL ASSISTANCE PROGRAMS

MAMH financial assistance programs offer financial support to Québec municipalities so they can provide and maintain basic services for their citizens. Its investments can also help improve communities' quality of life and their environment. The MAMH uses various formal and informal mechanisms to consult municipalities, which helps to evaluate whether the programs meet their needs. Several programs are adjusted to take account the fact that due to their limited financial capacity and sparse, dispersed population, small municipalities often have trouble making the investments they need to upgrade their basic infrastructure and bring it up to standards.

The terms and conditions of the programs are governed by rules and standards approved by the Conseil du trésor. In evaluating applications for financial assistance, the MAMH is guided by those standards and other criteria when it selects projects. The MAMH gives priority to projects aimed at regulatory compliance (*Regulation respecting the quality of drinking water* and *Regulation respecting municipal wastewater treatment works*), as well as those that focus on public health and safety issues. The assistance is also intended to keep municipal infrastructure that contributes to the quality of life of citizens in operation. To that end, the MAMH prioritizes eliminating the accumulated deficits in these infrastructures.

The following MAMH-administered programs support municipal infrastructure projects:

MAMH programs that provide provincial funding only

They evolve based on municipal needs and investments authorized in the Québec Infrastructure Plan (QIP):

- Programme d'infrastructures municipales d'eau (PRIMEAU): the purpose of this program is to help municipalities with projects to build, repair or expand drinking water and wastewater treatment infrastructure, as well as other projects to rehabilitate water and sewer lines.
- Réfection et construction des infrastructures municipales (RÉCIM): this program offers assistance to municipalities with limited financial resources to maintain their infrastructure. It applies to things like administrative offices (city halls, borough offices), fire stations, municipal garages, warehouses and community centres.
- Programme d’infrastructures Municipalité amie des aînés (PRIMADA): this program provides financial support for municipalities that have adopted policies for seniors and the MADA action plan to carry out small construction, repair or expansion projects on infrastructure used by seniors.
- Programme d'infrastructures Québec-Municipalités (PIQM): this program helps municipalities carry out various infrastructure projects based on their needs.

MAMH programs that provide both provincial and federal funding

These programs result from specific agreements between the Québec and federal governments:

- Programme de la taxe sur l'essence et de la contribution du Québec (TECQ): this program transfers a portion of the federal gasoline excise tax revenue plus a contribution from the Gouvernement du Québec to municipalities for drinking water, wastewater treatment, local road and other types of infrastructure projects. Under the TECQ, all eligible project expenditures are fully refundable. A new five-year funding phase was announced for 2019-2023.

- NFCCQ, Fonds des petites collectivités (FPC) component: this program offers financial support to municipalities with 100,000 or fewer residents to maintain and upgrade their water infrastructure, as well as for their cultural, tourism, recreational and sports facilities and local and regional airports.
- FCCQ, Collectivités, Grandes villes and Grands Projets components: the purpose of this program is to provide municipalities with a water infrastructure to improve the quality of drinking water or reduce the adverse effects of wastewater on the environment and public health. It also aims to provide communities or regions with a service infrastructure that can spur their development in terms of culture, economy, sports and tourism, among other things.
- FEPTEU: this program supports projects involving drinking water and wastewater treatment infrastructure in an effort to boost the economy.
- FIMEAU: this new program resulted from the Integrated Bilateral Agreement (IBA) for the Investing in Canada Infrastructure Program. It funds work to build, repair, expand or add municipal drinking water and wastewater treatment infrastructure.

The PIQM, NFCCQ, FCCQ and FEPTEU programs are closed to new grant applications, but projects that have already received confirmation of financial assistance are maintained.

The MAMH is also responsible for managing agreements made with the federal government.

Projects funded under those programs are audited by the MAMH or by an external auditor. The purpose of these audits is to make sure requests for payment cover eligible work and ensure compliance with the provisions laid down by agreements.

APPENDIX 2

ADDITIONAL INFORMATION

Since 2014, the CERIU has collected data from Québec's municipalities enabling it to structure and consolidate its knowledge of municipal water infrastructure. The CERIU project is being carried out in collaboration with the main municipal actors.

Almost 930 Québec municipalities are served by a water system. The inventory of the linear infrastructure network is based on data from 839 municipalities, which represents 95% of of the population total served and 90% of the municipalities in Québec that have a water infrastructure. The inventory of water facilities is based on data from 868 participating municipalities, given that they are representative of the water infrastructure network.

The participating municipalities are listed in Appendix 1 of the CERIU's *Portrait des infrastructures en eau des municipalités du Québec* (available here in French only): https://ceriu.qc.ca/bibliotheque/rapport-annuel-2020-du-portrait-infrastructures-eau-municipalites-du-quebec-piemq.

Data will continue to be collected and processed in the coming years to maintain a current, more comprehensive and representative picture of the condition of Québec's municipal water infrastructure, in line with government guidelines.

Methodology

Since the MAMH does not own the water infrastructure it subsidizes, the inventory and condition assessment are based on available data provided by the municipalities. In this regard, where there were no inspections or specific diagnostics, the missing figures were estimated based on the most reliable available information, including the number of breakdowns and the remaining life of the infrastructure. This methodology makes it possible to determine a realistic condition indicator for the purposes of the AMPI, which can be used to plan investments and monitor the effects of investments on changes in infrastructure condition.

Data collection

The CERIU has compiled most of the data on civil engineering structures from the Plans d'intervention pour le renouvellement des conduites d'eau potable, d'égouts et des chaussées, whose purpose is to identify high-priority municipal work. To obtain information about the water facilities (non-linear infrastructure), the CERIU created a special form, which the participating municipalities were asked to complete. The CERIU then confirmed the information it obtained, standardized the nomenclature and drew up estimates for any missing data.

Assessment of Infrastructure Condition

The CERIU's assessment of civil engineering structure condition was conducted by modelling the network based on data from inspections and detailed analyses. Segments that were not inspected or that did not have breakdown logs were assessed based on their remaining theoretical useful life. In those specific cases, the assessment reflects a theoretical condition based on risk of age-related breakdown.

For non-linear infrastructure, such as treatment plants and pumping stations, the assessment is based on a new detailed form completed by municipalities. On this form, municipal respondents are asked to rate the condition of key components of their water facilities on a scale of 1 (very good) to 5 (very poor). This assessment therefore represents the opinion of municipal respondents on the overall condition of the components of these facilities, rather than a physical condition based on a list of work arising from an inspection.

The condition indicator percentages (A / B / C / D / E) are weighted according to the replacement value.

It is important to note that the condition indicators presented reflect only the current functional condition and do not take into account any modifications or upgrades required to meet new requirements under the Regulation respecting the quality of drinking water or the Regulation respecting municipal wastewater treatment works.

Inspection and Data Update

Creating a comprehensive portrait of Québec municipalities' water infrastructure is a major project that will span several years and be continually updated. The project requires municipality cooperation, particularly with respect to data collection to ensure an accurate portrait of their infrastructure over time.

Maintaining this project requires data to be updated, so municipalities have been asked to send annual revised versions of their action plans to rehabilitate water and sewer infrastructure as well as roads, together with a new version of the form pertaining to their non-linear assets. These updates are transmitted, most specifically, after their infrastructure has been inspected or after completing work.

The CERIU also plans to include some projects subsidized by the MAMH in its report each year, as the municipalities send in their related reports.

In its 2020 report, the CERIU included subsidized work to rehabilitate water lines carried out by 180 municipalities under the MAMH's FEPTEU, PRIMEAU component 2, PIQM sub-component 1.5, and NFCCQ-FPC programs, as well as updated data from some 98 municipalities, 6 of which have more than 100,000 residents.

The condition of linear infrastructure for all municipalities listed in the CERIU 2020 report entitled *Portrait des infrastructures en eau des municipalités du Québec* was assessed between 2015 and 2020. A more accurate picture will be established every five years once all municipalities have submitted updated action plans. Until then, integration of a larger quantity of work carried out under MAMH subsidy programs will continue, as will data updates for the largest cities. Non-linear infrastructure, the condition of which was assessed mainly between 2014 and 2017 for all municipalities, will be gradually re-assessed using a new, more detailed form.

The AMPIs for subsequent years should provide a more accurate description of the change in condition of each infrastructure category, since the data bank will be fed and updated, and knowledge of infrastructure condition will be enhanced.

INFRASTRUCTURE MANAGEMENT

SOCIÉTÉ D'HABITATION DU QUÉBEC

VISION

The SHQ's vision is to be the leader in housing. It is recognized for its commitment to improve the quality of life for Quebecers and for its partnerships with communities. This vision reflects the desire of the SHQ to be known and recognized as a reference agency on housing.

- The quality of public services;
- The synergy of its partnerships;
- Its innovative and efficient interventions and procedures;
- The reach of its expertise.

ORIENTATIONS

To fulfil its mission of meeting the housing needs of Quebecers through an integrated and sustainable approach, the SHQ adopted the following orientations for the infrastructures under its responsibility:

- Develop and innovate in housing;
- Create conditions that ensure the quality and sustainability of the real estate portfolio.

RESPONSIBILITIES

The SHQ is overseen by the MAMH and is the main Government body responsible for housing in Québec. Under its enabling Act, the SHQ has the following responsibilities:

- Make low-rent housing available to Quebecers;
- Facilitate the acquisition of real property for Quebecers;
- Promote home improvement;
- Inform the Minister on the requirements, priorities and objectives of all housing sectors.

The SHQ develops and implements various programs to support bodies such as housing bureaus, co-operatives or housing NPOs. The SHQ favours an approach that grants significant autonomy to bodies within a results and risk-based management framework. Its primary role is therefore one of supervision, support and quality control.

More specifically, the SHQ administers the NPHP, which aims to support low-income households selected according to their socio-economic status. As part of implementing the NPHP, the SHQ maintains Québec's social housing network in good condition. To ensure the quality and sustainability of the entire HLM housing network, the SHQ makes no distinction between the housing complexes it owns directly and those owned by other bodies subsidized under the NPHP.

The NPHP has four components:

- **HLM public regular:** buildings owned and managed by the SHQ or by a housing bureau;
- **HLM public – Inuit:** buildings owned by the SHQ or the Kativik Municipal Housing Bureau and managed by the latter. Added to this are two health care centres (Inuulitsivik and Tulattavik);
- **HLM private regular:** privately owned buildings managed by co-operatives or housing NPOs;
- **HLM private –Autochtones outside reserve:** buildings owned by Habitation Métis du Nord, except three that belong to the SHQ and are managed by Corporation Waskahegen.

DESCRIPTION OF THE INFRASTRUCTURE PORTFOLIO

The building portfolio belonging to the SHQ is made up of 3,774 buildings, 2,465 for the public regular component, 1,306 owned for the Inuit public component and three for the Autochtones outside reserve private component, for a total of 45,258 low-rent dwelling units.

BODIES SUBSIDIZED BY THE SHQ

RESPONSIBILITIES

Since they own their buildings, the bodies subsidized by the SHQ are responsible for construction, maintenance, asset maintenance, operation and financing, including ensuring they comply with applicable regulations.

Bodies subsidized by the SHQ are charged with evaluating and documenting the condition of their infrastructure in the "building health" report, for defining needs and for managing their assets appropriately to ensure the quality and sustainability of the HLM under their responsibility.

DESCRIPTION OF THE INFRASTRUCTURE NETWORK

The building portfolio belonging to bodies subsidized by the SHQ is composed of 3,816 buildings, 1,989 of them owned by housing bureaus for the public regular component, 779 owned by the Kativik Municipal Housing Bureau for the Inuit public component, and 1,048 owned by co-operatives, housing NPOs and housing bureaus for the private component, for a total of 27,612 low-income dwelling units.

Infrastructure Inventory[2] By Infrastructure Type and Category

	Average Age[1] (years)	Number of Buildings			Number of Dwellings		
		AMPI		Variation	AMPI		Variation
		2020-2021	2021-2022		2020-2021	2021-2022	
Buildings Belonging to the SHQ							
Regular Public Component	37	2,463	2,465	2	43,435	43,479	44
Inuit Public Component	32	1,306	1,306	0	1,776	1,776	0
Regular Private Component Outside Reserve	30	0	3	3	0	3	3
Total – Buildings		**3,769**	**3,774**	**5**	**45,211**	**45,258**	**47**
Buildings Belonging to Bodies Subsidized by SHQ							
Regular Public Component	47	1,990	1,989	(1)	19,158	19,115	(43)
Inuit Public Component	9	769	779	10	1,604	1,638	34
Regular Private Component	30	398	398	0	4,984	4,984	0
Regular Private Component Outside Reserve	30	650	650	0	1,875	1,875	0
Total – Buildings		**3,807**	**3,816**	**9**	**27,621**	**27,612**	**(9)**

1 The average age is weighted in proportion to the number of dwelling units.
2 Data as at September 1, 2020 (2021-2022 AMPI) and December 1, 2019 (2020-2021 AMPI).

Variation in Inventory

Compared to the previous period, the building portfolio owned by the SHQ increased by five buildings, taking the new total to 3,774. A supplementary component was also added, the Autochtones outside reserve private component. This variation is due to:

- Reclassifying in a specific category of three buildings of the Autochtones outside reserve private component, formerly included in the regular public component inventory;
- Addition of a 44-unit building that was formerly presented as belonging to a body subsidized by the SHQ;
- An adjustment to the database adding four buildings to the regular public component inventory.

Compared to the previous period, the building portfolio owned by bodies subsidized by the SHQ increased by nine buildings, bringing the new total to 3,816. This variation is due to:

- The construction of 10 buildings, totalling 34 dwelling units, of the Inuit public component in the villages of Akulivik and Salluit;
- Withdrawal of a 44-unit building belonging to the SHQ.

INFRASTRUCTURE SUSTAINABILITY

Infrastructure Conditions and Asset Maintenance Deficit[1] By Infrastructure Type and Category

	Government condition indicator (GCI)[2] (%)						Asset Maintenance Deficit[3] ($M)		
	A	B	C	ABC	D	E	GCI of D	GCI of E	Total
Buildings belonging to the SHQ									
Regular Public Component	29	23	21	73	21	6	77.5	157.6	235.1
Inuit Public Component	82	7	2	91	6	3	4.9	9.4	14.3
Regular Private Component Outside Reserve[4]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total – Buildings	**37**	**20**	**18**	**75**	**19**	**6**	**82.4**	**167.0**	**249.4**
Buildings Belonging to Bodies Subsidized by SHQ									
Regular Public Component	27	22	20	69	20	11			
Inuit Public Component	83	2	2	87	10	3			
Regular Private Component	36	34	11	81	14	5		n.a.	
Regular Private Component Outside Reserve	44	36	15	95	5	0			
Total – Buildings	**37**	**22**	**16**	**75**	**17**	**8**			

1 Data as at September 1, 2020.
2 Percentages are weighted according to replacement values.
3 The inspected infrastructure maintenance deficit (an inspection rate of 96%) was extrapolated to the entire housing network in proportion to the number of dwelling units.
4 The three buildings of the Autochtones hors réserve private component belonging to the SHQ were not inspected.

Objectives

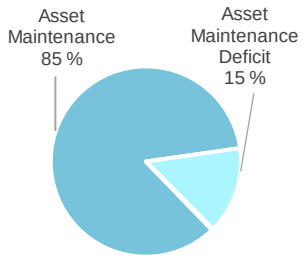
The investments and actions of the SHQ will make it possible to achieve the following objectives:

- Adjust responses to the evolving and varied needs of the public and communities:
  - By March 31, 2021, review 100% of the subsidy programs in operation every five years;
    - On March 31, 2020, 57% of active programs had been reviewed.
- Create conditions that will ensure the quality and sustainability of the real estate portfolio:
  - By March 31, 2024, reduce the current AMD of $249.4 million listed in the 2021-2022 AMPI by $59.8 million;
  - By March 31, 2021, raise the condition indicator for all buildings in the public housing network assessed at D or E in December 2017 to a condition indicator of C or better;
    - On March 31, 2020, 47% of the objective had been achieved.
  - By March 31, 2021, implement the completion of a building health report in 25% of subsidized private rental housing stock over a five-year cycle;
    - On March 2020, 35.3% of subsidized private rental housing stock had been inspected.

- Stimulate housing innovation:
  - By March 31, 2021, support four new innovative housing projects;
    - On March 31, 2020, two new innovative projects had been supported.

Inventory Maintenance Investments in the 2021-2031 QIP
(contribution of the Gouvernement du Québec, in millions of dollars and as a percentage)

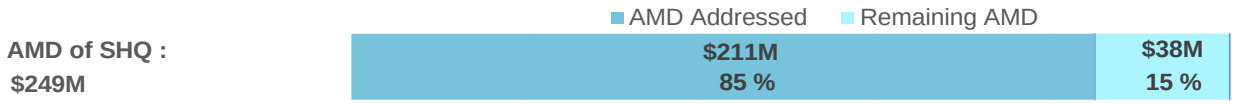
	Social and community housing	%
Infrastructure Maintenance		
Asset Maintenance	1,209.7	85
Asset Maintenance Deficit	210.8	15
Replacement[1]	3.1	0
Total	**1,423.6**	**100**



[1] Funding for the reconstruction of Maison Marc-Azade-Boudreau has been provided by a one-time contribution from the Gouvernement du Québec and separate from the NPHP.

Note: Figures are rounded and the sum of the amounts may not correspond to the total indicated.

Addressing the Asset Maintenance Deficit



Investment Strategy

The investment strategy for maintaining the building portfolio relies on knowledge of the state of its infrastructures and investment needs to ensure the health and safety of occupants and the sustainability of buildings. Consequently, the SHQ favours the priority interventions identified in building health reports, especially those that correct problems that could affect the health or safety of occupants and those associated with building structural integrity issues. At the same time, the SHQ emphasizes the completion of preventive work to extend the service life of infrastructures in good condition.

To respond adequately to the needs of the HLM housing network, the SHQ undertakes an optimal allocation of the total budget available among the various NPHP components, considering especially priorities identified in the building health reports. Furthermore, the SHQ allocates a minimum budget envelope to bodies to ensure the maintenance their building assets. Based on the state of buildings, additional investments are allocated to this envelope considering the maintenance needs of assets identified during inspections and listed in the building health reports.

Furthermore, the SHQ reserves a portion of the available budget envelope for special projects. The budget devoted to special projects is the primary means of assuming the most significant asset maintenance deficits of the HLM housing network. Special project requests presented are analyzed, prioritized and authorized by the SHQ. The budget for special projects in 2021 is $70.0 million.

Special Projects

A special project is a renovation project of $35,000 or more per dwelling unit affected, or that would demand drawing an excessive portion of the annual budget envelope allocated to the body for asset maintenance. Work completed as a special project must meet at least one of the following conditions:

- Be urgent considering the health and safety consequences for occupants and impossible to postpone in whole or in part;
- Be urgent considering the integrity of the building and impossible to postpone in whole or in part;
- Concern rehabilitation of the state of housing complexes with a GCI of D or E;
- Group interventions that must be completed at the same time and involve several building components;
- Arise from specific needs that involve work required for modernization, improvement or a mandatory upgrade.

SITUATION

Public Infrastructure Investments Included in the QIP
By Body and Investment Type
(contribution of the Gouvernement du Québec, in millions of dollars)

	Infrastructure Maintenance				Infrastructure Enhancement[2]	Total
	Asset Maintenance	Asset Maintenance Deficit	Replacement[1]	Subtotal	Addition and Improvement	
Société d'habitation du Québec						
2019-2020						
Actual	70.3	25.2	2.4	**97.9**	–	**97.9**
Forecast	63.6	25.1	–	**88.7**	–	**88.7**
Difference	6.7	0.1	2.4	**9.2**	–	**9.2**
2020-2021						
Probable	58.2	17.9	1.0	**77.1**	–	**77.1**
2021-2022						
Forecast	68.0	21.0	2.9	**91.9**	–	**91.9**
Bodies Subsidized by the SHQ						
2019-2020						
Actual	40.9	–	7.3	**48.2**	–	**48.2**
Forecast	54.8	–	15.1	**69.9**	–	**69.9**
Difference	(13.9)	–	(7.8)	**(21.7)**	–	**(21.7)**
2020-2021						
Probable	44.7	–	11.8	**56.5**	–	**56.5**
2021-2022						
Forecast	52.3	–	–	**52.3**	–	**52.3**

1 Funding for the reconstruction of Maison Marc-Azade-Boudreau and warehouses of the Kativik Municipal Housing Authority were provided by a one-time contribution from the Quebec government and separate from the NPHP.
2 Note that investments made under the AccèsLogis Québec program and for construction of some other private dwelling units are not considered in AIMP because in those cases, the SHQ is not responsible for maintaining the infrastructure assets.

ADDITIONAL INFORMATION

Completion and follow-up of investment projects fall under the responsibility of housing bodies (housing bureaus, co-operatives or housing NPOs). Nonetheless, the SHQ imposes the inspection methodology, follows up on building health reports and performs quality control on these reports to ensure they are complete and representative of building states and needs. The SHQ can also accompany bodies to support them in completing their intervention projects.

Société d'habitation du Québec

Investments made in 2019-2020 by the SHQ for the buildings it owned totalled $97.9 million, $9.2 million more than initially planned. This difference is due mainly to the completion of unplanned asset maintenance or project costs that were higher than expected for various buildings in the network. Furthermore, the SHQ made investments that were not initially planned for a social housing rehabilitation project, valued at $2.4 million, jointly financed with the federal government.

Probable investments in 2020-2021 and planned in 2021-2022 to maintain the network total $77.1 million and $91.9 million, respectively. This investment will make it possible to complete the following work:

- Replacement of balconies and building exteriors, including doors and windows, improvement of insulation and upgrading of mechanical ventilation systems for one building in Rimouski;
- Dwelling unit renovation and elevator modernization for one building in Rouyn-Noranda;
- Roof cladding, sanitary and stormwater disposal system, and electrical distribution system repairs for one building in Laval;
- Reconstruction of Maison Marc-Azade Boudreau;
- Building exterior renovations, as well as fire alarm, fire partition and mechanical (plumbing and ventilation) upgrades on various buildings;
- Dwelling unit modernization.

Bodies Subsidized by the SHQ

Investments made in 2019-2020 concerning financial aid the SHQ granted to bodies subsidized amounted to $48.2 million, $21.7 million less than that initially planned in the 2019-2029 QIP. This difference is due primarily to the amount of work completed by subsidized bodies, which was less than originally planned. Furthermore, following the postponement of a warehouse reconstruction project in Nunavik, a $7.8 million portion of the investments planned for 2019-2020, ought to be completed in 2020-2021.

Probable investments in 2020-2021 and planned in 2021-2022 to maintain the network totalling $56.5 million and $52.3 million, respectively. These investments will make it possible to complete the following work:

- Envelope repairs, window replacement and extra insulation for one building in Sherbrooke;
- Reconstruction of warehouses at the Kativik Municipal Housing Bureau;
- Replacement of the masonry cladding following inspection of the façade of one building in Montréal;
- Reconstruction of the parking lot and correction of land drainage for one building in Trois-Rivières;
- Restoration of outdoor facilities: retaining wall, parking lot resurfacing and correction of the drainage of one building in Baie-Comeau;
- Replacement of doors and windows on approximately 80 row-houses in Bécancour;
- Building exterior renovations, as well as fire alarm, fire partition and mechanical (plumbing and ventilation) upgrades on various buildings;
- Dwelling unit modernization.

Change in the Infrastructure Conditions and Asset Maintenance Deficit By Infrastructure Type and Category

	GCI of D (%)			GCI of E (%)			Asset Maintenance Deficit ($M)				
	AMPI		Variation	AMPI		Variation	AMPI 2020-2021	Natural Degradation	New Findings	Decrease	AMPI 2021-2022
	2020-2021[1]	2021-2022		2020-2021[1]	2021-2022						
Buildings belonging to the SHQ											
Regular Public Component	19	21	2	5	6	1	174.8	39.3	34.3	(13.3)	235.1
Inuit Public Component	6	6	0	1	3	2	5.7	2.0	7.2	(0.6)	14.3
Regular Private Component Outside Reserve[2]	N/A	N/A	n.a.	N/A	N/A	n.a.	N/A	n.a.	n.a.	n.a.	N/A
Total – Buildings	**17**	**19**	**2**	**4**	**6**	**2**	**180.5**	**41.3**	**41.5**	**(13.9)**	**249.4**
Buildings Belonging to Bodies Subsidized by SHQ											
Regular Public Component	21	20	(1)	7	11	4					
Inuit Public Component	10	10	0	1	3	2					
Regular Private Component	11	14	3	5	5	0			n.a.		
Regular Private Component Outside Reserve	6	5	(1)	0	0	0					
Total – Buildings	**17**	**17**	**0**	**5**	**8**	**3**					

[1] The data were adjusted compared with those in the 2020-2021 AMPI to correct an error that arose during publication regarding buildings of bodies subsidized by the SHQ.

[2] The three buildings of the Autochtones hors réserve private component belonging to the SHQ were not inspected.

ADDITIONAL INFORMATION

Change in Condition

In the 2021-2022 AMPI, the proportion of buildings in poor condition (GCI of D) and very poor (GCI of E) belonging to the SHQ and to bodies subsidized by the SHQ varied little compared with those presented in the 2020-2021 AMPI. This situation is due to effective planning of the asset maintenance work performed last year to prevent buildings from deteriorating, especially those in satisfactory or better condition (GCI of A, B or C).

Change in the AMD

Overall, the asset maintenance deficit increased by $68.9 million last year. This variation is mainly due to the following:

- The $41.3-million increase in the asset maintenance deficit is attributable to the natural deterioration mainly caused by aging of buildings in the regular public component;
- The addition of $41.5 million arising from new findings inventoried on September 1, 2020, in the health report for buildings belonging to the SHQ. The number of buildings inspected during the last year of the inspection cycle (third cycle ending December 31, 2020) is generally higher. This means more new findings and updates to those already inventoried in the building health reports;
- Work completed on buildings in poor condition (GCI of D) and very poor condition (GCI of E) resulted in a $13.9 million decrease in the AMD inventoried. That work was done under the strategy of allocating investments that target buildings with the most pressing needs and significant AMD.

APPENDIX 1

ADDITIONAL INFORMATION

Inspection and Data Update

The SHQ requires that all buildings be inspected every five years. The third inspection cycle of the HLM housing network was completed on December 31, 2020. The inspection rate of the current AMPI is 96.3% (7,311 buildings out of 7,590). Regarding the 279 uninspected buildings, 151 of these buildings were built less than five years ago and were considered to be in good condition (GCI of A).

Methodology

Building inventories and inspections are completed during preparation of the building health reports. Each health report is produced after an inspection to assess every component of the buildings and dwellings. Through this uniform and structured methodology, technical information is compiled on the components that could affect public health and safety, building integrity, component operation or service availability. In addition, a building's condition can change between inspections following an update or the emergence of a deficiency that will eventually require work. The SHQ uses the same inspection processes for its own buildings as for those belonging to the bodies it subsidizes.

The condition indicator percentages (A / B / C / D / E) are weighted according to the current replacement value. The AMD was extrapolated by comparing the number of dwelling units in the buildings inspected with the total number of dwelling units.

CONSEIL DU TRÉSOR ET ADMINISTRATION GOUVERNEMENTALE

INFRASTRUCTURE MANAGEMENT

SOCIÉTÉ QUÉBÉCOISE DES INFRASTRUCTURES

VISION

To be Quebec's centre of expertise in managing public infrastructures, and therefore, to offer innovative and sustainable solutions to all public bodies. To achieve this, the SQI as set out the following objectives:

- Plan a sustainable heritage and steer the evolution of public real estate assets through an exemplary focus on sustainability, quality and the optimal use of resources;
- Build excellence by putting the best teams of infrastructure, project management and property management experts at the service of its clients;
- Develop trust by achieving its vision with rigour, integrity and transparency while applying best-governance practices.

ORIENTATION

To successfully carry out its mission, which consists, in particular, of developing, maintaining and managing a real estate portfolio that satisfies the needs of its clientele by making available buildings and premises as well as by providing construction, operation and management services, the SQI has, from the standpoint of the infrastructure under its responsibility, adopted the orientation below:

- Promote the sustainability of public infrastructure through adequate allocation of investments for maintaining assets and leasehold improvements for its clientele.

RESPONSIBILITIES

The SQI is responsible for ensuring the sustainability of one of Québec's largest real estate inventory. It must, therefore, maintain its properties in satisfactory condition to ensure their long-term physical and functional integrity. Moreover, it must meet the real estate needs of government departments and bodies by offering premises whose location, availability, quality and costs meet their expectations, and ensure optimum space occupation to minimize the vacancy rate and rigorously manage the government's rent bill.

To this end, the SQI prioritizes its investments according to building requirements and government orientations, as well as the investment capacity that the government sets for it.

In a spirit of sustainable development, the SQI seeks to minimize energy consumption and ascertain climate change impacts on its buildings to prevent related problems. Accordingly, the SQI considers both the safety of occupants and the continuity of the Government's essential missions.

As for the condition of the buildings that it owns,[3] the SQI is responsible for the regular inspection of components, maintenance and repairs, and the day-to-day operations necessary to ensure services for occupants, the safety of the premises and the sustainability of the buildings.

[3] Except for buildings covered by a lease with an establishment in the HSSN and for which the establishment is responsible for asset maintenance.

DESCRIPTION OF THE INFRASTRUCTURE PORTFOLIO

The SQI's wholly-owned real estate portfolio comprises 370 buildings and civil engineering structures totalling more than 1.9 million square metres in area. It includes office buildings used for government administration, courthouses, detention facilities, Sûreté du Québec police stations and other specialized buildings, in particular, transportation centres, conservatories of music and dramatic art, laboratories, warehouses, and underground parking facilities and tunnels.

Infrastructure Portfolio[1, 2]
By Infrastructure Type and Category

	Average Age[3] (years)	Quantity			Measurement[4] (sq. m.)		
		AMPI		Variation	AMPI		Variation
		2020-2021	2021-2022		2020-2021	2021-2022	
Buildings							
Office Buildings	38	60	62	2	502,353	505,952	3,599
Other Specialized Buildings	35	156	155	(1)	410,049	411,680	1,631
Courthouses	40	43	43	0	431,969	431,994	25
Detention Facilities	24	14	14	0	208,557	208,557	0
Sûreté du Québec Police Stations	26	73	74	1	170,481	171,442	961
Non-rental and Surplus Buildings	57	4	4	0	3,304	3,304	0
Civil Engineering Works							
Parking Facilities and Tunnels	23	19	18	(1)	240,467	218,728	(21,739)
Total – Infrastructures	**33**	**369**	**370**	**1**	**1,967,180**	**1,951,657**	**(15,523)**

1 Data as at October 20, 2020.
2 The portfolio excludes emphyteutic leases, buildings under construction and rented buildings under capital leases, including the buildings at 3800 Rue de Marly, Québec City, and 1200 Boulevard Saint-Laurent, Montréal.
3 Average age represents the "effective" age of infrastructure assets. This means how old the infrastructure looks (observed condition), considering such elements as chronological age, degree of work carried out and useful life.
4 Data pertaining to building dimension represent the leasable area, in compliance with the BOMA-96 standard. Non-rental buildings, parking facilities and tunnels are measured according to gross area of the development.

Variation in Inventory

During 2020-2021, the SQI pursued the objectives of the Government's real estate vision by acquiring two office buildings and a building for the Sûreté du Québec in Lac-Etchemin. For other specialized buildings, the SQI transferred two buildings and acquired a new warehouse for the Ministère de l'Énergie et des Ressources naturelles, 935-945 Rue Fernand-Dufour, in Québec City. The SQI also disposed of the Dalhousie parking facility at the CCNQ.

INFRASTRUCTURE SUSTAINABILITY

SOCIÉTÉ QUÉBÉCOISE DES INFRASTRUCTURES

Infrastructure Conditions and Asset Maintenance Deficit[1, 2] By Infrastructure Type and Category

	Government condition indicator (GCI)[3] (%)						Asset Maintenance Deficit ($M)		
	A	B	C	ABC	D	E	GCI of D	GCI of E	Total
Buildings									
Office Buildings	10	14	22	46	46	8	85.7	80.5	166.2
Other Specialized Buildings	39	22	12	73	22	5	30.1	28.2	58.3
Courthouses	32	17	4	53	42	5	149.1	46.2	195.3
Detention Facilities	36	11	29	76	4	20	9.4	96.3	105.7
Sûreté du Québec Police Stations	37	11	40	88	11	1	8.6	0.7	9.3
Total – Rental Buildings	**28**	**16**	**18**	**62**	**30**	**8**	**282.9**	**251.9**	**534.8**
Non-rental and Surplus Buildings	2	0	7	9	0	91	–	15.7	15.7
Civil Engineering Works									
Parking Facilities and Tunnels	33	5	3	41	0	59	–	58.0	58.0
Total – Infrastructures	**28**	**15**	**18**	**61**	**29**	**10**	**282.9**	**325.6**	**608.5**

1 Data as at October 20, 2020.
2 The inventory excludes emphyteutic leases, buildings under construction and rented buildings under capital leases, including the buildings located at 3800 Rue de Marly, Québec City, and 1200 Boulevard Saint-Laurent, Montréal.
3 Percentages are weighted according to infrastructure replacement value.

Objectives

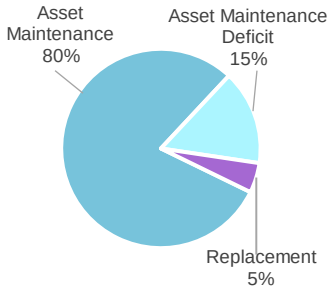
- Achieve a proportion of rental buildings in good condition (GCI of A, B or C) of 71% by March 2024;
- By March 2026, reduce the AMD of all infrastructures to $458.5 million, a decrease of $150.0 million (25% of the cumulative AMD);[4]
- Reduce the environmental impact of the SQI's real estate portfolio by prioritizing certain maintenance work that will facilitate the optimization of energy consumption and decrease dependence on fossil fuels to meet the GHG emission reduction targets set by the 2030 Plan for a Green Economy. Across its entire real estate portfolio, the Government aims to reduce its GHG emissions 60% by 2030 compared with 1990 levels.

4 This objective ignores the future natural deterioration of infrastructures.

Infrastructure Maintenance Investments in the 2021-2031 QIP

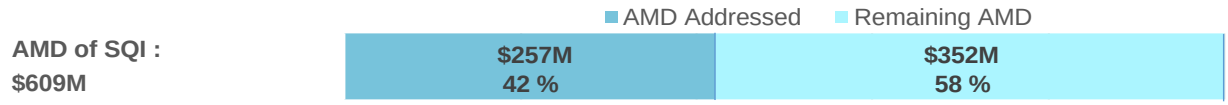
(contribution of the Gouvernement du Québec, in millions of dollars and as a percentage)

	SQI	%
Infrastructure Maintenance		
Asset Maintenance	1,331.4	80
Asset Maintenance Deficit	257.0	15
Replacement	81.2	5
Total	**1,669.7**	**100**



Note: Figures are rounded and the sum of the amounts may not correspond to the total indicated.

Addressing the Asset Maintenance Deficit



Investment Strategy

The SQI's investment strategy, which is based on best practices for building operation and workplace design, aims to maintain the real estate portfolio under its responsibility in good condition. To this end, the SQI implements various strategies to optimize infrastructure maintenance investments, such as grouping work on several sites into a single integrated project to optimize contractual management and thereby achieve economies of scale. In addition, building operation teams make it a priority to perform preventive maintenance in order to extend the useful life of assets and lessen the need for asset maintenance.

The current AMD assessed on SQI infrastructures amounts to $608.5 million. This AMD is explained mainly by the advanced age of several major buildings, many of the components of which have reached the end of their useful life. To meet this challenge, the SQI plans interventions targeting infrastructures in poor condition (GCI of D) and very poor condition (GCI E) to complete work that will decrease their AMD and return them to good condition (GCI of A, B or C). In the 2021-2031 QIP, planned infrastructure maintenance investments will make it possible to address $257.0 million of the current AMD of $608.5 million (42%).

Investments planned to decrease the AMD will be achieved in particular by:

- Work required on building exteriors, such as curtain walls and the architectural components of certain office buildings and courthouses;
- Various upgrades, such as replacement or addition of systems to protect people and assets, replacement of cooling systems or completion of various work to comply with different codes;
- Required upgrade and renovation work on certain detention facilities;
- Replacement of obsolete mechanical and electrical components;
- Replacement of abrasive warehouses that have reached the end of their useful life in several service centres of the MTQ;
- The sale of surplus buildings in poor condition.

Although the level of investment to address the AMD has not kept pace with the rise in the AMD noted this year, projects that will have a significant impact on decreasing the AMD are currently under study. Related investments, some of which will be major projects, should be planned progressively in the upcoming QIP and will contribute to achieving the objective of addressing the AMD of the SQI.

The SQI strategy also foresees using the majority of funds available to invest in asset maintenance on buildings that are in satisfactory condition or better to control their deterioration and prevent them from getting into poor condition. These interventions, when undertaken promptly, are generally less costly and more profitable over the long term than those completed on buildings for which the level of deterioration is important. For example:

- Replace a roof at the end of its useful life on a building in satisfactory or better condition (GCI of A, B or C) to reduce the risk of water penetration and deterioration of other components;
- Replace boilers that are obsolete with innovative systems that reduce energy consumption and GHG emissions for a building in satisfactory condition (GCI of C).

Lastly, the SQI also aims to increase its proportion of owned buildings to reduce the Government's long-term rental expenses.

SITUATION

Public Infrastructure Investments Included in the QIP
By Type
(contribution of the Gouvernement du Québec, in millions of dollars)

	Infrastructure Maintenance				Infrastructure Enhancement	Total
	Asset Maintenance	Asset Maintenance Deficit	Repla-cement	Subtotal	Addition and Improvement	
Société québécoise des infrastructures						
2019-2020						
Actual	91.6	5.0	6.4	**103.0**	208.0	**311.0**
Forecast	156.5	7.1	14.0	**177.6**	223.7	**401.3**
Difference	(64.9)	(2.1)	(7.6)	**(74.6)**	(15.7)	**(90.3)**
2020-2021						
Probable	103.6	8.2	12.0	**123.8**	125.4	**249.2**
2021-2022						
Forecast	74.1	39.5	19.1	**132.7**	176.1	**308.8**

ADDITIONAL INFORMATION

Investments in 2019-2020 totalled $311.0 million, $90.3 million less than the $401.3 million initially planned.

This difference is due mainly to slower than anticipated completion of some projects, such as the major redevelopment of the courthouse in Saint-Hyacinthe, refurbishment of the masonry and replacement of heritage windows of the Ernest Cormier building in Montréal and construction of a Sûreté du Québec police stations in Dunham.

The decrease in probable investments for 2020-2021 compared with those in 2019-2020 is primarily due to the impact of COVID-19 on the launch of several projects at the start of the year and not to a reduction in the need for asset maintenance investments of the real estate portfolio.

In return, investments planned for 2021-2022, totalling $308.8 million, will allow additional investments, on the one hand, to maintain existing infrastructure and, on the other, to make acquisitions, carry out major refits in courthouses and build new Sûreté du Québec police stations.

Infrastructure Maintenance

Planned investments to maintain the portfolio seek to complete work required to ensure the long-term physical and functional integrity of the SQI's real estate portfolio:

- A large proportion of asset maintenance investments focus essentially on work related to compliance with codes, structures, building exteriors, escalators and elevators, and the integrity of mechanical and electrical systems of a building as well as its functionality;
- Investments on infrastructure in poor condition and therefore at high risk of failing are targeted when work is planned since they make it possible to reduce the cumulative AMD;
- Lastly, investments in replacement target mainly the abrasive warehouses, transportation centres and modular buildings for detention facilities.

Most of the total infrastructure maintenance investments in 2019-2020, in the amount of $103.0 million, and probable investments of $123.8 million in 2020-2021, pertain to a large number of rehabilitation projects and compulsory upgrading to standards under $5 million.

Among these, the following projects had a significant impact on decreasing the AMD:

- Replacement of automated gates at 75 Rue Saint-François in Gatineau, which decreased the AMD by $3.0 million;
- Repair of the membrane in the courtyard of 675 Boulevard René-Lévesque Est in Québec City, which decreased the AMD by $2.4 million;
- Restoration and replacement of the electrical service entrance and generating set at 225 Grande-Allée Est in Québec City, which decreased the AMD by $1.8 million.

The SQI also completed the following significant projects:

- Reconstruction of the parking facility of the Marie-Guyart building in Québec City;
- Reconstruction of the parking facility of 10 Rue Pierre-Olivier-Chauveau in Québec City;
- Replacement of the ventilation system at the detention facility in Québec City.

Investments planned for 2021-2022 totalling $132.7 million, will facilitate completion of several projects, including the following:

- Building exterior repairs at 1141 Route de l'Église in Québec City, decreasing the AMD by $22.0 million;
- Upgrading of the electrical service entrance and replacement of 25 kV substations at 800 Boulevard Gouin in Montréal, decreasing the AMD by $5.3 million;
- Replacement of main circuit breakers at 500 Rue de la Faune in Québec City, decreasing the AMD by $3.8 million;
- Replacement of high-voltage components at the Montréal courthouse, which will reduce the AMD by $6.5 million;
- Refurbishment of escalators at 875 Grande-Allée Est in Québec City, an investment in asset maintenance of over $4.0 million;
- Replacement and enhancement of control systems of the Sorel courthouse, an investment in asset maintenance of almost $5 million.

Infrastructure Enhancement

Portfolio enhancement investments of $208.0 million in 2019-2020 and probable investments of $125.4 million in 2020-2021 facilitated the support of the Government's real estate vision, one objective of which is to increase the proportion of owned real estate compared to leased, primarily through the acquisition of these buildings:

- The specialized building at 935-945 Rue Fernand-Dufour in Québec City;
- A Sûreté du Québec police station in Lac-Etchemin;
- The office building at 1300 Rue du Blizzard in Québec City;
- The office building at 120 Chemin de Gros-Cap in Cap-aux-Meules.

In addition, these investments made it possible to broaden or improve the service potential of the infrastructure portfolio in terms of quality and functionality, such as:

- Construction of a Sûreté du Québec police station in Saint-Georges;
- Construction of a building to facilitate staff grouping in Chibougamau;
- Fitting out of the Centre de traitement informatique – Phase 1 at the Cyrille-Duquet building in Québec City;
- Fitting out of offices at 930 Chemin Sainte-Foy in Québec City;
- Fitting out and addition of space at the Gatineau courthouse;
- Construction of new abrasive shelters at the Trois-Rivières and Lac-Etchemin transportation centres.

Forecast investments of $176.1 million for 2021-2022, will allow the following key projects to be launched or completed:

- Refitting of sections of the Louis-Philippe-Pigeon building in Québec City;
- Expansion of the custody area in Puvirnituq;
- Refitting of food service facilities at the detention centre in Trois-Rivières;
- Replacement of the access control system of the Parthenais building;
- Complete upgrading of the camera surveillance system at the Montréal courthouse;
- Seizing of real estate acquisition opportunities to increase the property portion of the portfolio.

Change in the Infrastructure Conditions and Asset Maintenance Deficit
By Infrastructure Type and Category

	GCI of D (%)			GCI of E (%)			Asset Maintenance Deficit ($M)				
	AMPI		Variation	AMPI		Variation	AMPI				AMPI
	2020-2021	2021-2022		2020-2021	2021-2022		2020-2021	Natural Degradation	New Findings	Decrease	2021-2022
Buildings											
Office Buildings	26	46	20	7	8	1	105.7	15.9	53.0	(8.4)	166.2
Other Specialized Buildings	15	22	7	6	5	(1)	52.4	3.2	8.4	(5.7)	58.3
Courthouses	41	42	1	2	5	3	162.7	5.6	28.0	(10)	195.3
Detention Facilities	4	4	0	19	20	1	108.2	–	27.2	(29.7)	105.7
Sûreté du Québec Police Stations	11	11	0	1	1	0	5.2	4.1	0.1	(0.1)	9.3
Total – Rental Buildings	**23**	**30**	**7**	**7**	**8**	**1**	**434.2**	**28.8**	**116.7**	**(44.9)**	**534.8**
Non-rental and Surplus Buildings	8	0	(8)	90	91	1	15.7	–	–	–	15.7
Civil Engineering Works											
Parking Facilities and Tunnels	8	0	(8)	65	59	(6)	62.9	–	(4.9)	–	58.0
Total – Infrastructures	**23**	**29**	**6**	**8**	**10**	**2**	**512.8**	**28.8**	**111.8**	**(44.9)**	**608.5**

ADDITIONAL INFORMATION

Change in Condition and in the AMD

Office Buildings

- The proportion of office buildings in poor condition (GCI of D) increased significantly, rising from 26% to 46%. The increase in the AMD of $60.5 million compared with 2020-2021 AMPI is primarily due to new findings following an in-depth assessment of certain major properties, including the Marie-Guyart building. For these buildings, additional investments are to be anticipated in the years to come.
  - Major asset maintenance projects are planned in Québec City for the buildings at 12 Rue Saint-Louis, 1141 Route de l'Église, 2535 Boulevard Laurier and 1075 Chemin Sainte-Foy as well as in Montréal at 360 Rue McGill. Ultimately, these projects will reduce this category's AMD by roughly $78.0 million.

Other Specialized Buildings

- The proportion of specialized buildings in poor condition (GCI of D) increased slightly, rising from 15% to 22%. The $5.9 million increase in the AMD compared with the 2020-2021 AMPI is primarily due to new observations recorded in the last building inspection cycle.
  - The $58.3-million cumulative AMD for this category is primarily due to the age of several abrasive warehouses and transit centres. Projects are included in the SQI investment plan to decrease the AMD.

Courthouses

- The proportion of courthouses in poor condition (GCI of D) remained relatively stable, while an increase of those in very poor condition (GCI of E) is noted. The increase in the AMD of $32.6 million compared with 2020-2021 AMPI is primarily due to an in-depth assessment of certain major properties, including the Québec City and Laval courthouses.
  - The completion of major projects currently under study or in planning, particularly for the Québec City, Montréal, Rouyn-Noranda, Saint-Hyacinthe and Laval courthouses will decrease the AMD of this category by approximately $182 million.

Detention Facilities

- The proportion of courthouses in poor and very poor condition (GCI of D and E) remained relatively stable. The $105.7-million cumulative AMD is mainly due to the poor condition of Québec City detention facility, Maison Tanguay and the Gatineau detention facility.
  - Major rehabilitation projects are currently under study for these facilities to address approximately $90 million of their AMD;
  - The $29.7 million decrease is attributable to the completion of various work, such as that on the ventilation, electrical power supply and security components of detention facilities.

Sûreté du Québec Police Stations

- The proportion of Sûreté du Québec police stations in poor and very poor condition (GCI of D and E) has remained stable. Nonetheless, an increase in the AMD of $4.1 million is attributable to natural deterioration noted during inspections conducted in the summer of 2020.

Non-rental and Surplus Buildings

- Although these buildings show a very high level of deterioration, they are no longer assigned to their initial vocation and pose no safety risks. The proportion of buildings in poor condition (GCI of D) decreased by 8% ensuing the reduction of the needs of a boiler house containing heat-production equipment for rental buildings.
  - The expected sale or demolition of three surplus buildings will decrease the AMD in this category by $14.9 million.

Parking Facilities and Tunnels

- The reduction in the proportion of parking facilities and tunnels in very poor condition (GCI of E) is primarily attributable to a rise in the assessed replacement value of several of these assets to take into account the increase in the construction market, thereby improving their condition index. The AMD decreased $4.9 million compared with the 2020-2021 AMPI. This reduction is primarily attributable to an assessed decrease in the need for work on the d'Youville parking facility and is based on expert reports prepared during the year.

APPENDIX 1

ADDITIONAL INFORMATION

Inspection and Data Update

The building inspection process is done continuously by building managers. Building operation technicians visit all buildings under their responsibility with a frequency determined by the importance and complexity of the systems in each.

Although infrastructure component inspections are done continuously, the building management team must produce a property condition assessment for each building and civil engineering structure under their responsibility according to a fixed schedule. Approximately 30% of structures are assessed each year. The assessment calendar is based on the risks associated with the use of the infrastructure and its condition. All infrastructures receive such an assessment at least once every five years.

Assessment of Infrastructure Condition

To determine the state of infrastructures, the SQI uses various qualitative and quantitative parameters. The quantitative method used to measure it's condition is the facility condition index (FCI) calculation. Expressed as a percentage, this index qualifies the health status of the infrastructure compared with its replacement value. It is calculated as follows:

FCI = (sum of cost of asset maintenance work to be performed / replacement value) x 100%

The SQI has defined the acceptable thresholds for this index based on its experience with customer satisfaction, adequate funding of work and the resources required to maintain infrastructures. These thresholds serve as a reference to define the GCI levels, which range from "Very good" (GCI of A) to "Very poor" (GCI of E).

AMD Assessment of Infrastructures

The SQI categorizes asset maintenance work to be performed on buildings under its responsibility as either regular asset maintenance or AMD.

Regular asset maintenance refers to work to be completed within zero to five years to protect the building components.

When an infrastructure is below the satisfactory condition threshold (GCI of D or E), an AMD may be recorded. Therefore, observations noted as AMD for this infrastructure are then accounted for in the AMPI.

CULTURE ET COMMUNICATIONS

INFRASTRUCTURE MANAGEMENT

MINISTÈRE DE LA CULTURE ET DES COMMUNICATIONS

VISION

Be the catalyst for a vibrant culture and a source of pride for Québec.

ORIENTATION

As a leader in government action in the fields of culture and communications, the MCC contributes to the promotion of these fields, to the individual and community development as well as the establishment of an environment conducive to creation and territorial vitality.

With respect to the infrastructure under its responsibility, the MCC aims to promote access to culture and its dissemination through quality infrastructure.

RESPONSIBILITIES

Each year, substantial sums are allocated to government bodies and state-owned enterprises reporting to the Minister of Culture and Communications. These sums are used to maintain their assets, address their AMD and for the replacement of their infrastructure. The MCC ensures that the amounts allocated are used for their intended purposes. It also sees to it that information on infrastructure assets and any required documentation on their condition is available and relevant. This information allows to establish an overall picture of the infrastructure portfolio under its responsibility that is objective, comprehensive and reliable.

The MCC thus provides for proper management of infrastructure by applying the highest quality standards and enforcing the constituting acts of all the government bodies and state-owned enterprises in its portfolio.

THE GOVERNMENT BODIES AND STATE-OWNED ENTERPRISES REPORTING TO THE MINISTER OF CULTURE AND COMMUNICATIONS

RESPONSIBILITIES

The government bodies and state-owned enterprises under the responsibility of the Minister of Culture and Communications draw up a detailed plan of their needs in terms of asset maintenance, AMD management, and infrastructure replacement. They remain responsible for the work performed, regular follow-up and reporting, as well as for evaluating the overall condition of their infrastructure. In fact, government bodies and state-owned enterprises are responsible for evaluating and documenting the condition of their infrastructure so as to manage it optimally and to provide updated data periodically.

DESCRIPTION OF THE INFRASTRUCTURE PORTFOLIO

The infrastructure portfolio of government bodies and state-owned enterprises under the responsibility of the Minister is comprised of 51 buildings, including 37 that are protected under the CHA. It also includes 8 buildings of heritage interest, although they are not protected under the Act. Of the 37 buildings protected under the CHA, 31 belong to the SODEC. The infrastructure portfolio also includes specialized equipment critical to fulfil the mission of various government bodies and state-owned enterprises.

Infrastructure Inventory[1]
By Infrastructure Type and Category

	Average Age (years)	Quantity			Measurement (sq. m.)		
		AMPI		Variation	AMPI		Variation
		2020-2021	2021-2022		2020-2021	2021-2022	
Buildings							
Museums	89	10	10	0	96,599	89,785	(6,814)
Venues	45	5	5	0	152,321	143,945	(8,376)
Librairies	65	3	3	0	74,836	74,836	0
Broadcasting	124	2	2	0	14,552	14,552	0
Heritage Buildings[2]	241	31	31	0	26,738	26,738	0
Total – Buildings		**51**	**51**	**0**	**365,046**	**349,856**	**(15,190)**
Specialized Equipments							
Museums	15	16,950	16,950	0	n.a.	n.a.	n.a.
Venues	22	11,406	11,406	0	n.a.	n.a.	n.a.
Librairies	16	32	32	0	n.a.	n.a.	n.a.
Broadcasting	14	10,895	10,895	0	n.a.	n.a.	n.a.
Academy	31	213	213	0	n.a.	n.a.	n.a.
Total – Specialized Equipments		**39,496**	**39,496**	**0**	**n.a.**	**n.a.**	**n.a.**

1 Data as at December 31, 2020.
2 This building category includes only heritage buildings belonging to SODEC.

Variation in Inventory

The decrease in measurements for some museums and venues is linked to the updated data using a new methodology bases on the Marshall & Swift guidelines. This method is particularly based on an assessment of interior areas which thus makes it possible to better reflect the asset maintenance needs since only the occupied areas of these buildings are considered. This methodology has been used according to the newly accepted standards and in compliance with the code of conduct of the Ordre des évaluateurs agréés du Québec.

INFRASTRUCTURE SUSTAINABILITY

THE GOVERNMENT BODIES AND STATE-OWNED ENTERPRISES REPORTING TO THE MINISTER OF CULTURE AND COMMUNICATIONS

Infrastructure Conditions and Asset Maintenance Deficit[1] By Infrastructure Type and Category

	Government condition indicator (GCI)[2] (%)						Asset Maintenance Deficit ($M)		
	A	B	C	ABC	D	E	GCI of D	GCI of E	Total
Buildings									
Museums	51	14	3	68	13	19	8.9	8.3	17.2
Venues	0	0	18	18	52	30	30.4	7.6	38.0
Librairies	72	26	0	98	0	2	–	7.4	7.4
Broadcasting	0	95	0	95	5	0	0.1	–	0.1
Heritage Buildings[3]	10	22	44	76	19	5	5.9	2.9	8.8
Total – Buildings	**33**	**10**	**11**	**54**	**27**	**19**	**45.3**	**26.2**	**71.5**
Specialized Equipments									
Museums	0	6	70	76	6	18	0.4	0.1	0.5
Venues	0	0	53	53	7	40	0.3	1.9	2.2
Librairies	37	50	13	100	0	0	–	–	–
Broadcasting	0	0	96	96	4	0	0.4	–	0.4
Academy	0	0	100	100	0	0	–	–	–
Total – Specialized Equipments	**2**	**3**	**79**	**84**	**4**	**12**	**1.1**	**2.0**	**3.1**
Total – Infrastructures	**29**	**9**	**18**	**56**	**25**	**19**	**46.4**	**28.2**	**74.6**

1 Data as at December 31, 2020.
2 Percentages are weighted according to infrastructure replacement value.
3 This building category includes only heritage buildings belonging to SODEC.

Objectives

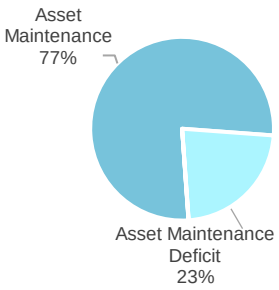
- By March 2025, increase to 65% the proportion of buildings belonging to government bodies and state-owned enterprises in satisfactory or better condition (GCI of ABC). In March 2021, this proportion is 54%;
- By March 2025, reduce the AMD of buildings currently assessed in the AMDI by $4.5 million to a total of $67.0 million.

Investments of $74.6 million planned for the PQI 2021-2031, including $37.4 million planned by March 2025, will make it possible to address the current AMD. The $4.5 million decrease in the AMD by 2025 is mainly due to the addition, during the same period, of work already listed in health reports and which will be added to the current AMD.

Inventory Maintenance Investments in the 2021-2031 QIP

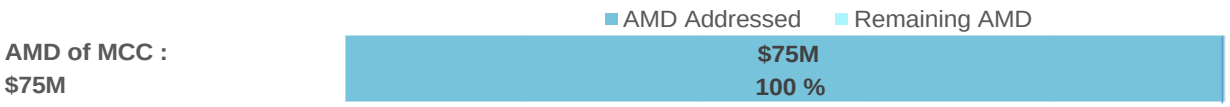
(contribution of the Gouvernement du Québec, in millions of dollars and as a percentage)

	MCC	%
Infrastructure Maintenance		
Asset Maintenance	252.7	77
Asset Maintenance Deficit	74.6	23
Replacement	0.1	0
Total	**327.5**	**100**



Note: Figures are rounded and the sum of the amounts may not correspond to the total indicated.

Addressing the Asset Maintenance Deficit



Investment Strategy

The MCC's overall infrastructure investment strategy is built around two priorities to ensure that the infrastructure of government bodies and state-owned enterprises is in good condition and meets standards, and to maintain appropriate conditions for displaying and conserving assets and works of art:

- Asset maintenance: Continually perform asset maintenance work to prevent the deterioration of buildings and equipment of government bodies and state-owned enterprises so as to avoid major repairs;
- Addressing the AMD: Prioritize interventions on venue buildings with a greater AMD, while considering other buildings with an AMD. The investments planned in the 2021-2031 QIP allow for addressing all of the recorded AMD.

SITUATION

Public Infrastructure Investments Included in the QIP
By Type
(contribution of the Gouvernement du Québec, in millions of dollars)

	Infrastructure Maintenance				Infrastructure Enhancement	Total
	Asset Maintenance	Asset Maintenance Deficit	Repla-cement	Subtotal	Addition and Improvement	
Gouvernment Bodies and State-Owned Enterprises Reporting to the Minister of Culture and Communications						
2019-2020						
Actual	26.7	16.6	0.6	**43.9**	15.1	**59.0**
Forecast	11.7	16.0	0.8	**28.5**	28.0	**56.5**
Difference	15.0	0.6	(0.2)	**15.4**	(12.9)	**2.5**
2020-2021						
Probable	17.7	8.3	0.1	**26.1**	17.4	**43.5**
2021-2022						
Forecast	23.4	6.7	0.1	**30.2**	19.1	**49.3**

ADDITIONAL INFORMATION

Difference Between Planned Investments and Actual Investments for the Previous Year

There is a total difference of $2.5 million between planned investments and actual investments for the previous year. This difference is mainly due to more infrastructure maintenance work, which allowed major projects to be completed. However, infrastructure enhancement projects slowed down with respect to what had been planned.

Infrastructure Maintenance

Investments in inventory maintenance allow for the following types of work to be performed:

- Building envelope and structural work;
- Electromechanical installation work (electricity, heating, air conditioning and fire alarm systems);
- Maintenance and replacement of specialized equipment (lighting systems, audiovisual systems and compact movable shelving systems).

More specifically, investments made in 2019-2020 and the 2020-2021 probable investments for infrastructure maintenance, totalling $43.9 and $26.1 million respectively, allowed for the advancement of the following projects:

- Repair work on the Grand Théâtre de Québec building, which restored the infrastructure to satisfactory condition (GCI of C);
- Repair work on the Au-Pied-du-Courant building owned by the Société de télédiffusion du Québec, which restored the infrastructure to very good condition (GCI of A);

- Repair work on SODEC heritage buildings, which restored the Maison Milot to good condition (GCI of B) and the following buildings to very good condition (GCI of A):
  - Maison Duroy-Leduc;
  - Parc de la Pointe-du-Moulin.

In addition to ongoing work to complete the above-mentioned projects, the $30.2-million investment planned in 2021-20212 for infrastructure maintenance will allow repairs on the SPDAM buildings. It will also allow to restore buildings with an AMD (GCI of D or E) to satisfactory or better condition (GCI of A, B or C). Work to repair the masonry of the MNBAQ's Pavillon Gérard-Morisset and work to install sprinklers in the Grand Théâtre de Québec will also be undertaken.

Infrastructure Enhancement

Infrastructure enhancement investments allow for the following type of work to be performed:

- Operational improvements to or expansion of existing infrastructure;
- Acquisition and construction of new infrastructure.

More specifically, investments made in 2019-2020 and the 2020-2021 probable investments, totalling $15.1 and $17.4 million respectively, allowed for the advancement of the following projects:

- Rehabilitation work on the Au-Pied-du-Courant building, a joint acquisition by SODEC and the Société de télédiffusion du Québec;
- Universal access between the metro station and the corridor to the Place des Arts complex;
- Development of the MAC transformation project.

The $19.1-million investment planned in 2021-2022 for infrastructure enhancement will make it possible to continue the universal access project linking the metro station and the corridor to the Place des Arts complex, and the MAC transformation project.

Change in the Infrastructure Conditions and Asset Maintenance Deficit By Infrastructure Type and Category

	GCI of D (%)			GCI of E (%)			Asset Maintenance Deficit ($M)				
	AMPI		Variation	AMPI		Variation	AMPI	Natural Degradation	New Findings	Decrease	AMPI
	2020-2021	2021-2022		2020-2021	2021-2022		2020-2021				2021-2022
Buildings											
Museums	28	13	(15)	8	19	11	16.8	0.4	3.6	(3.6)	17.2
Venues	71	52	(19)	0	30	30	18.1	–	28.0	(8.1)	38.0
Librairies	0	0	0	2	2	0	7.2	0.2	–	–	7.4
Broadcasting	5	5	0	0	0	0	0.1	–	–	–	0.1
Heritage Buildings	20	19	(1)	5	5	0	6.4	3.8	–	(1.4)	8.8
Total – Buildings	**40**	**27**	**(13)**	**3**	**19**	**16**	**48.6**	**4.4**	**31.6**	**(13.1)**	**71.5**
Specialized Equipments											
Museums	6	6	0	18	18	0	0.5	–	–	–	0.5
Venues	7	7	0	40	40	0	3.9	0.2	–	(1.9)	2.2
Librairies	0	0	0	0	0	0	–	–	–	–	–
Broadcasting	4	4	0	0	0	0	0.4	–	–	–	0.4
Academy	0	0	0	0	0	0	–	–	–	–	–
Total – Specialized Equipments	**4**	**4**	**0**	**12**	**12**	**0**	**4.8**	**0.2**	–	**(1.9)**	**3.1**
Total – Infrastructures	**36**	**25**	**(11)**	**4**	**19**	**15**	**53.4**	**4.6**	**31.6**	**(15.0)**	**74.6**

ADDITIONAL INFORMATION

Change in Condition

The condition indicators of museums and venues have declined on account of a significant number of new findings following the update of health reports on certain buildings over the past year, with many buildings going from a poor to a very poor condition (GCI of D to E respectively). In addition, the new evaluation accounts for the increase in construction costs observed on the market over the past few years. Furthermore, the decrease in the proportion of heritage buildings in poor condition (GCI of D) is due to asset maintenance and AMD work performed.

Change in the AMD

The increase in the AMD is mainly due to the addition of new findings during the update of the health reports done this year. More specifically, new work totalling $31.6 million was identified for museums and venues. These works allowed to correct problems with roofing, mechanical heating, ventilation and air conditioning systems, as well as cladding. Moreover, the increase in construction costs on the market over the past few years, and major additional costs related to the geographic location of SPDAM buildings, considering that these buildings are located in downtown Montreal (repairs in tourist areas, limited access for lifting equipment, significant presence of underground infrastructure), also contributed to this rise.

The $4.6-million increase in the AMD is mainly due to the natural deterioration of SODEC heritage buildings and the indexing of the costs of previously identified asset maintenance work not carried out during the year.

The $15.0-million reduction in the AMD is due to:

- Repair work on various buildings of the Place des Arts de Montréal, which resulted in a $8.1-million decrease;
- Targeted investments in heritage buildings belonging to SODEC, which resulted in a $1.4-million decrease;
- Repair work on museums and work on the MAC transformation project, which resulted in a $3.6-million decrease.
- The replacement of equipment that has reached the end of its useful life, which resulted in a $1.9-million decrease.

APPENDIX 1

ADDITIONAL INFORMATION

Inspection and Data Update

All the buildings and specialized equipment were inspected. In addition, in compliance with its mission, SODEC continues to implement its investment plan on an annual basis to protect and develop its heritage buildings.

With a view to adopting good infrastructure management practices and aligning with government guidelines, a continuous inspection schedule over a five-year period was established. An annual update is also carried out mainly for the buildings' critical components. The objective of this update is to have an up-to-date picture of the condition of the buildings and specialized equipment, thereby contributing to informed decision making in their regard.

Methodology

The evaluation method used to determine government condition indicators for infrastructure, with the exception of SODEC heritage buildings, is based on the FCI.[5] In contrast, the method used for SODEC buildings is weighting based on five criteria, as specified in the Minister's portfolio management framework, by taking into account the specifics associated with these buildings. This method allows to consider the specifics of heritage buildings.

The priority interventions found in health reports are recorded as an AMD for buildings whose FCI ranks above satisfactory (15%). This data is currently updated on a yearly basis and takes into consideration new investment needs, work carried out and the indexation of costs. Given that the inspections for the Saint-Sulpice library, the Société de télédiffusion du Québec's, Sept-Îles building and the Maison Chevalier have not been updated in recent years, a theoretical degradation was considered for the evaluation of the work to be done. The data is subsequently indexed on an annual basis.

The condition indicator percentages (A / B /C / D / E) are weighted according to the replacement value.

[5]Facility condition index: The sum of the estimated cost of all the asset maintenance work to be performed over a five-year horizon, divided by the replacement value of the infrastructure.

APPENDIX 2

Composition of Group of Bodies

THE GOVERNMENT BODIES AND STATE-OWNED ENTERPRISES REPORTING TO THE MINISTER OF CULTURE AND COMMUNICATIONS

Bibliothèque et Archives nationales du Québec
Conseil des arts et des lettres du Québec
Conservatoire de musique et d'art dramatique du Québec
Musée d'art contemporain de Montréal
Musée de la civilisation
Musée national des beaux-arts du Québec
Société de développement des entreprises culturelles
Société de la Place des Arts de Montréal
Société de télédiffusion du Québec
Société du Grand Théâtre de Québec

EDUCATION

INFRASTRUCTURE MANAGEMENT

EDUCATION

VISION

The condition of school organization infrastructures (school service centres, school boards) impacts the quality of the education offered. It is, therefore, essential that Québec students have at their disposal stimulating and accessible learning environments that foster their educational success. Whether from the standpoint of safe infrastructure or environments that satisfy the needs of students and staff, interveners' efforts must focus on the attainment of a common objective that of offering quality teaching that meets the highest standards.

ORIENTATION

To fulfill its mission, which consists in promoting education, the MEQ has adopted the orientation indicated below regarding the infrastructure under its responsibility:

- Maintain conditions conducive to educational success by ensuring the quantity, quality, safety and sustainability of infrastructure.

RESPONSIBILITIES

The MEQ is responsible for the following :

- Allocating funds to school organizations to maintain assets, to address the AMD and to rebuild and improve their infrastructure;
- Ensuring that the funds allocated are used for the purposes stipulated;
- Prioritizing the funding of investments considering government guidelines.

SCHOOL ORGANIZATIONS

RESPONSIBILITIES

School organizations are responsible for the following :

- Planning investments and carrying out work according to the projects authorized, the funds allocated and the regulations in force;
- Inspecting their infrastructure to establish an accurate picture of its condition and the work to be carried out to maintain or restore them in a good condition;
- Managing, in collaboration with the MEQ, the infrastructure that it owns or co-owns;
- Ensuring that their infrastructures are functional and that they remain safe, efficient and reliable.

DESCRIPTION OF THE INFRASTRUCTURE PORTFOLIO

School organization infrastructure comprises 4,089 buildings occupying an area of 16.9 million square metres.

This portfolio is divided among 69 linguistic school organizations and three with special-status (Centre de services scolaire du Littoral, Cree School Board and Kativik Ilisarniliriniq school board). It encompasses buildings in different categories, namely preschool, primary and secondary education establishments; vocational and adult education centers; buildings devoted to administration and other uses; and surplus buildings.

Infrastructure Inventory[1]
By Infrastructure Type and Category

	Average Age (years)	Quantity			Measurement (sq. m.)		
		AMPI		Variation	AMPI		Variation
		2020-2021	2021-2022		2020-2021	2021-2022	
Buildings							
Linguistic School organizations							
Educational Institutions							
Preschool and Primary Schools	61	2,266	2,280	14	7,390,456	7,472,227	81,771
High Schools	56	459	452	(7)	6,724,412	6,663,932	(60,480)
Vocational and Adult Education Centers	58	281	277	(4)	1,647,196	1,621,931	(25,265)
Administrative and other Buildings[2]	50	405	385	(20)	552,287	548,659	(3,628)
Special Status School organizations	29	520	550	30	283,020	296,507	13,487
Surplus Buildings[3]	69	130	145	15	259,819	283,878	24,059
Total – Buildings		**4,061**	**4,089**	**28**	**16,857,190**	**16,887,134**	**29,944**

1 Data as at February 2021.
2 The “Administrative and other uses” category includes, for example, administrative offices, residences, workshops, warehouses and garages.
3 The “Surplus buildings” category includes buildings that are no longer used by school organizations.

Variation in Inventory

In comparison with the preceding period, the inventory increased by 28 buildings for a new total of 4,089. This variation is explained by the addition of 48 buildings (e.g. construction, purchase) and the removal of 20 buildings (e.g. demolition, sale). In addition, a vocational change (category) of a building can be made by school organizations or by the MEQ. In the latter case, the vocation of a building can be changed if its predominant student clientele has changed from one year to another.

INFRASTRUCTURE SUSTAINABILITY

SCHOOL ORGANIZATIONS

Infrastructure Conditions and Asset Maintenance Deficit[1] By Infrastructure Type and Category

	Government condition indicator (GCI)[2] (%)						Asset Maintenance Deficit ($M)		
	A	B	C	ABC	D	E	GCI of D	GCI of E	Total
Buildings									
Linguistic School organizations									
Educational Institutions									
Preschool and Primary Schools	12	13	16	41	36	23	610.6	1,998.3	2,608.9
High Schools	5	19	21	45	41	14	586.4	965.5	1,551.9
Vocational and Adult Education Centers	9	16	15	40	47	13	155.0	257.8	412.8
Administrative and other Buildings[3]	27	6	11	44	28	28	43.0	235.2	278.2
Special Status School organizations	41	20	14	75	16	9	23.8	86.5	110.3
Surplus Buildings[4]	22	7	4	33	23	44	14.2	228.0	242.2
Total – Buildings	**11**	**16**	**17**	**44**	**37**	**19**	**1,433.0**	**3,771.3**	**5,204.3**

1 Data as at February 2021.
2 Percentages are weighted according to replacement values.
3 The “Administrative and other uses” category includes, for example, administrative offices, residences, workshops, warehouses and garages.
4 The “Surplus buildings” category includes buildings that are no longer used by school organizations.

The MEQ adopted a new infrastructure information management system to inventory the school-organization work to be completed and support the strategic planning of their infrastructure projects. Deployment of this new tool began as planned in 2020, but was delayed due to COVID-19.

Use of the new system required a data migration that represents significant work for school organizations. Given the current work overload caused by managing COVID-19, it was decided to postpone the data migration until next year. Therefore, and exceptionally, the data of the current AMPI do not come from information captured by the school organizations over the past year, but from a forecast based on a probable but theoretical deterioration in the state of the buildings presented in last year's AMPI.

Objective

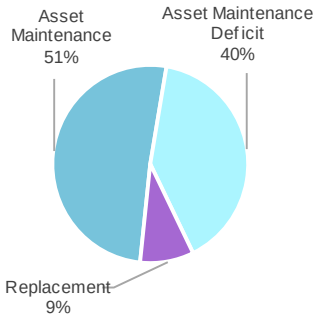
MEQ investments will make it possible to attain the following objective:

- Increase the proportion of infrastructure in satisfactory or better condition (GCI of A, B or C) to 50% for all school buildings under its responsibility by March 31, 2023.

Infrastructure Maintenance Investments in the 2021-2031 QIP

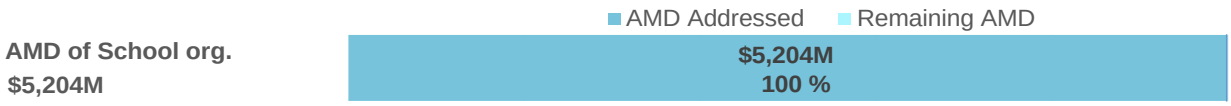
(contribution of the Gouvernement du Québec, in millions of dollars and as a percentage)

	School organizations	%
Infrastructure Maintenance		
Asset Maintenance	6,616.7	51
Asset Maintenance Deficit	5,204.3	40
Replacement	1,152.2	9
Total	**12,973.2**	**100**



Note: Figures are rounded and the sum of the amounts may not correspond to the total indicated.

Addressing the Asset Maintenance Deficit



Investment Strategy

The $5.2-billion investment planned in the 2021-2031 QIP for the education sector would be sufficient to reduce the AMD currently assessed in the AMPI. However, since the investments made annually to maintain assets are insufficient to compensate for the natural deterioration of the portfolio and respond to findings that will be established by the next inspections, the AMD should increase in the years to come. This means additional funds will be required to maintain the AMD management rate.

To decrease the AMD, the MEQ is taking the following actions:

- Confirm annual investment budgets for the school organizations to allow them to undertake the work as soon as possible;
- Plan for separate maintenance budgets, allocated in the school-organization operation envelopes, which must be used for this purpose;
- Develop mechanisms to optimize the contracting process, to benefit, in some cases, from economies of scale (qualification of suppliers and purchasing groups);
- Allow school organizations to acquire modular buildings to free up space in schools that require priority repair work;
- Encourage school organizations to elaborate investment master plans to organize their refurbishment, replacement and new construction projects over the medium and long term;
- Continue to implement the new information management systems to improve the tracking of investment needs in schools, including the effect of completed work on changes in their condition and the AMD, which will target the most optimal interventions.

Furthermore, the MEQ will continue to fulfill its plan to rebuild the most obsolete schools:

- Target the most obsolete schools and, where possible, combine their reconstruction with the creation of new student spaces to meet the most urgent space deficits;
- Consider the priorities identified by school organizations based on a cost / benefit analysis showing that it is more beneficial to rebuild the building rather than renovate it;
- Continue planning and carrying out projects authorized in recent years.

SITUATION

Public Infrastructure Investments Included in the QIP
By Type
(contribution of the Gouvernement du Québec, in millions of dollars)

	Infrastructure Maintenance				Infrastructure Enhancement	Total
	Asset Maintenance	Asset Maintenance Deficit	Replacement	Subtotal	Addition and Improvement	
School organizations						
2019-2020						
Actual	827.5	341.9	16.3	**1,185.7**	542.9	**1,728.6**
Forecast	395.5	167.2	35.2	**597.9**	718.7	**1,316.6**
Difference	432.0	174.7	(18.9)	**587.8**	(175.8)	**412.0**
2020-2021						
Probable	430.9	290.3	41.0	**762.2**	1,270.3	**2,032.5**
2021-2022						
Forecast	540.0	813.8	121.2	**1,475.0**	1,018.0	**2,493.0**

ADDITIONAL INFORMATION

Differences Between Planned and Actual Investments

The difference between the investments planned for 2019-2020 and actual investments is due mainly to the completion of certain projects more quickly than expected. Among other things, the extent of announcements made last year guaranteed a certain level of investment in school organizations, offering them the possibility to improve their internal organization and to better plan portfolio maintenance work. Furthermore, some portion of the difference is also attributable to the rise in construction costs, which increased the amounts invested for maintenance projects and portfolio enhancement.

Infrastructure Maintenance

Investments made in 2019-2020 and probable in 2020-2021, totalling $1,185.7 million and $762.2 million, respectively, enabled the completion or continuation of work aimed primarily at maintaining or restoring buildings to satisfactory or better condition. Here are a few examples of work carried out:

- The reconstruction of roofs and exterior cladding and the replacement of windows and floor coverings;
- Work to remedy problems related to mould and air quality in the schools;
- Work to adapt buildings for students with handicaps or those experiencing adjustment or learning difficulties;
- The replacement of institutional equipment;
- Functional renovations such as the conversion of offices or multipurpose rooms into classrooms;
- The rehabilitation or reconstruction of buildings damaged by disasters.

More specifically, these investments should make it possible to replace critical components in schools, such as:

- 23%: superstructure and envelope (e.g. floors, walls, covering);
- 30%: interior fit-up (e.g. partitions, stairs and interior finishes);
- 31%: services (e.g. plumbing, heating, ventilation and electricity).

In addition, investments in school organizations announced for 2020-2021 will allow the completion of projects such as:

- Various interventions involving HVAC at Polyvalente de Charlesbourg in Québec City;
- Renovation of the interior fittings of the École Saint-Philippe in Trois-Rivières;
- Replacement of the windows and apron walls of the pavillon Académie de l'Assomption of the École de l'Envol in La Sarre;
- Replacement of the flat roof covering at the École Antoine-de-Saint-Exupéry in Montréal.

To accelerate work in the schools and maximize short-term return, the process of confirming capital expenditure budgets in the school organizations has been moved forward. School organizations can, therefore, more quickly implement renovation project planning (most renovations occur during the summer).

Portfolio Enhancement

By 2024-2025, excluding the impact of the opening of kindergarten for four-year-olds, the MEQ foresees a deficit of over 400 classrooms in primary schools. These schools are mainly in the Montérégie, Montréal and Capitale-Nationale regions. By 2029-2030, the MEQ also forecasts a deficit of over 23,000 student spaces in secondary schools, mainly in the Montérégie, Laurentides, Capitale-Nationale, Lanaudière and Outaouais regions. In addition, to allow the establishment of universal 4-year-old kindergarten in the longer term, we anticipate an additional need for 1,000 classes in primary schools.

In response to these growing needs in education, the government is planning to invest over $7.9 billion in the 2021-2031 QIP, which, in particular, will make it possible to:

- Continue the planning and completion of close to 300 additional space projects authorized in recent years;
- Carry out new projects to build or expand schools, enabling more primary school classrooms and secondary student spaces to be added, benefiting thousands of students by 2024-2025;
- Build the necessary premises to achieve the objective of the 4-year-old kindergarten deployment plan by the end of the 2025-2026 school year, i.e. the opening of 2,600 new classes.

More precisely, investments of $1,018.0 million will make it possible to complete or continue certain projects in 2021-2022, such as:

- Primary school – Sainte-Brigitte-de-Laval – Construction (five preschool classrooms and 18 primary classrooms);
- Primary school – Riverside Regional Elementary School – Jonquière – Expansion (four preschool classrooms and two primary classrooms);
- Secondary school – Victoriaville – Expansion (176 student spaces and a gymnasium);
- Primary school – Montréal – Construction (addition of three preschool classes [four-year-olds] to the construction of a primary school in the Griffintown area).

Change in the Infrastructure Conditions and Asset Maintenance Deficit
By Infrastructure Type and Category

	GCI of D (%)			GCI of E (%)			Asset Maintenance Deficit ($M)				
	AMPI		Variation	AMPI		Variation	AMPI	Natural Degradation	New Findings	Decrease	AMPI
	2020-2021	2021-2022		2020-2021	2021-2022		2020-2021				2021-2022
Buildings											
Linguistic School organizations											
Educational Institutions											
Preschool and Primary Schools	32	36	4	26	23	(3)	2,779.2	446.7	–	(617.0)	2,608.9
High Schools	36	41	5	15	14	(1)	1,605.5	302.9	–	(356.5)	1,551.9
Vocational and Adult Education Centers	39	47	8	15	13	(2)	456.1	58.0	–	(101.3)	412.8
Administrative and other Buildings	21	28	7	30	28	(2)	223.8	104.1	–	(49.7)	278.2
Special Status School organizations	23	16	(7)	4	9	5	51.0	70.6	–	(11.3)	110.3
Surplus Buildings	25	23	(2)	51	44	(7)	224.9	67.2	–	(49.9)	242.2
Total – Buildings	**34**	**37**	**3**	**20**	**19**	**(1)**	**5,340.5**	**1,049.5**	–	**(1,185.7)**	**5,204.3**

ADDITIONAL INFORMATION

Change in Condition

As stated earlier, the data of the current AMPI are the result of a forecast based on a probable but theoretical deterioration in the state of the buildings presented in last year's AMPI. Consequently, the condition of school buildings remained relatively stable and the variations noted are based on the hypothetical evolution of their condition and not on the results of real estate audits over the year.

Change in the AMD

Compared with last year, an overall decrease in the AMD is noted, although the MEQ forecast an increase in the coming years. This reduction is explained by the absence of new findings due to the postponement, in light of the work overload caused by COVID-19, of migration of school-organization inspection data to the new MEQ infrastructure management tool. This situation will be corrected in 2021.

The deterioration of critical components of certain school buildings, such as foundations, floors, walls, roofs, plumbing and heating, ventilation and electrical systems explains the increase in AMD of nearly $1.1 billion associated with natural degradation.

In return, the reduction of almost $1.2 billion is attributable, in particular, to:

- The replacement of components that are outdated or at the end of their useful life, including:
  - 4%: infrastructure (e.g. foundations);
  - 23%: superstructure and envelope (e.g. floors, walls, covering);
  - 30%: interior refitting (e.g. partitions, stairs and interior finishes);
  - 31%: services (e.g. plumbing, heating, ventilation and electricity);
  - 12%: other work.
- Work aimed at eliminating problems that could affect air quality in certain buildings.

Despite the scope of the annual investments carried out, the MEQ anticipates that the AMD should increase for several years to come because of:

- The implementation of the new building inspection process in the school network that will enhance knowledge of the condition of building stock and the AMD;
- Broader knowledge of heritage building stock which generally means higher costs related to the materials and the complex nature of the work to be performed.

On the other hand, the optimization of the annual asset maintenance budget allocation process in the school organizations will support better planning of contracts, and maximize the work to be performed in the summer.

Furthermore, to address the anticipated increase in the AMD, the government must pursue its efforts to target allocations in priority sectors and adopt measures to ensure the capacity to carry out the work accordingly.

APPENDIX 1

ADDITIONAL INFORMATION

Inspection and Data Update

The MEQ is continuing its efforts to improve its inspection processes and tools for managing school buildings' asset maintenance. To this end, a standardized, recurring inspection process is being introduced that will, in the long run, provide a complete, continuous picture of the condition of all buildings in the network. The MEQ has engaged a firm that has prepared, among other things, a methodological inspection guide for school organizations, and launched a process for validating the work already inventoried. The support provided by the firm also includes a training and support component that reflects the desire of the MEQ to standardize inspections in all school organizations.

Started in the spring of 2019, work with the firm retained continues. The standardized inspection guide was distributed in the fall of 2019, and training was provided to school organizations to conduct their inspections according to the new methodology should be completed by the end of summer 2021.

Methodology

The school organizations use a software package to inventory the work, as they perform building inspections, that they must carry out within the next five years. The condition and AMD are based on the list of work recorded in the software package according to the inspection procedures set out in the *Cadre de gestion des infrastructures scolaires*. These procedures seek to obtain a coherent and continuous assessment of the condition of buildings that is harmonized throughout the school network.

The government condition indicator and the AMD are assessed based on an FCI[6]. Any building with an FCI above 15% is considered to be in poor condition, and the estimate of its AMD is the product of the 15% excess and its replacement value.

The government condition indicator and the AMD do not take into account specific features of heritage buildings, which may cause a rise in costs resulting from the materials required and the complex nature of the work to be carried out. An inventory of these buildings and a targeted assessment of their condition and their AMD should be carried out by 2022.

The condition indicator percentages (A / B / C / D / E) are weighted according to the replacement value.

[6] The facility condition index (FCI) of an infrastructure is the sum of the estimated cost of all the asset maintenance work to be performed over a five-year horizon, divided by the replacement value of the infrastructure.

APPENDIX 2

DETAILED INVENTORY

School Organizations (School Service Centres, School Boards)
Buildings

	Quantity	Measure-ment (sq. m.)	Average Age (years)	Government condition indicator[1] (Number)						AMD (M$)
				A	B	C	ABC	D	E	
de Montréal	268	1,586,351	72	20	6	11	37	39	191	1,585.3
de Laval	114	617,339	54	10	6	10	26	24	63	459.0
de la Seigneurie-des-Mille-Îles	100	457,755	41	11	5	5	21	31	41	250.6
English-Montréal	71	486,509	65	8	0	2	10	41	15	187.6
du Fer	35	142,350	49	3	0	0	3	2	29	181.0
des Patriotes	77	403,750	47	9	2	17	28	28	21	160.8
des Samares	102	373,042	51	14	1	2	17	43	42	145.1
Marguerite-Bourgeoys	130	791,256	63	12	13	22	47	63	20	141.9
de la Pointe-de-l'Île	69	495,530	56	3	3	5	11	43	15	135.9
de l'Estuaire	33	144,716	57	3	1	1	5	8	20	119.1
des Rives-du-Saguenay	48	252,719	64	1	2	8	11	24	13	116.5
des Monts-et-Marées	38	144,564	63	0	0	1	1	9	28	104.6
de Saint-Hyacinthe	52	224,588	62	2	0	4	6	18	28	102.0
Cree	221	148,198	23	120	27	15	162	38	21	99.0
des Grandes-Seigneuries	63	318,091	53	6	11	12	29	25	9	97.1
des Affluents	80	447,850	47	8	11	7	26	29	25	96.6
de la Côte-du-Sud	55	204,809	64	3	4	7	14	22	19	94.2
de la Rivière-du-Nord	65	313,116	50	7	2	8	17	36	12	75.3
Eastern Townships	32	139,228	78	4	0	1	5	8	19	71.7
de la Capitale	85	493,863	57	11	12	14	37	43	5	70.5
de la Vallée-des-Tisserands	51	151,545	56	4	0	5	9	18	20	69.1
des Découvreurs	39	229,985	56	2	2	9	13	19	7	67.0
Marie-Victorin	85	514,543	58	13	1	18	32	44	9	64.8
Sir-Wilfrid-Laurier	48	196,053	56	4	4	7	15	24	9	53.7
des Chênes	50	193,758	61	5	4	6	15	24	11	50.8
Lester-B.-Pearson	54	376,302	59	0	9	11	20	29	5	47.0
des Hautes-Rivières	56	258,796	64	2	4	9	15	32	9	42.1
Central Québec	37	88,795	70	13	7	4	24	6	6	39.5
de Sorel-Tracy	22	117,524	61	0	0	4	4	14	4	39.2
du Val-des-Cerfs	47	238,641	60	2	4	6	12	34	1	34.0
des Chic-Chocs	28	113,697	62	0	1	1	2	19	7	33.8
du Lac-Abitibi	20	72,098	60	1	3	1	5	13	2	30.0
Western Québec	31	120,688	55	4	3	1	8	19	4	29.6
de l'Énergie	62	231,819	60	6	4	13	23	24	8	28.5
de la Beauce-Etchemin	85	323,075	57	34	23	6	63	12	10	24.2
de Rouyn-Noranda	26	104,116	57	2	0	2	4	14	8	23.6
De La Jonquière	28	177,693	66	5	9	1	15	5	8	21.5

APPENDIX 2
(cont'd)

DETAILED INVENTORY

School Organizations (School Service Centres, School Boards)
Buildings

	Quantity	Measure-ment (sq. m.)	Average Age (years)	Government condition indicator[1] (Number)						AMD (M$)
				A	B	C	ABC	D	E	
Harricana	35	105,580	56	6	3	7	16	14	5	17.7
de la Région-de-Sherbrooke	58	300,125	60	7	4	17	28	26	3	17.5
des Hauts-Cantons	38	143,263	67	1	3	11	15	19	4	16.6
de la Riveraine	31	110,112	61	0	1	11	12	16	2	15.7
de Portneuf	24	117,989	66	2	2	7	11	9	4	13.3
des Trois-Lacs	50	202,631	50	6	5	11	22	27	0	12.5
Kativik	258	114,588	31	146	42	23	211	28	19	11.9
New Frontiers	17	89,665	64	4	1	3	8	7	2	10.4
de Charlevoix	16	82,714	62	0	2	6	8	6	2	9.7
de la Moyenne-Côte-Nord	11	22,098	61	0	1	0	1	8	2	8.8
des Portages-de-l'Outaouais	46	223,930	48	12	14	7	33	12	1	7.9
Eastern Shores	18	32,309	63	4	3	3	10	5	3	6.7
des Laurentides	31	119,156	64	0	9	10	19	11	1	6.2
des Draveurs	48	231,853	49	13	14	12	39	8	1	6.1
au Cœur-des-Vallées	26	98,320	59	2	5	5	12	13	1	6.0
du Chemin-du-Roy	76	332,036	66	18	33	17	68	6	2	5.9
de la Baie-James	36	78,527	48	13	10	3	26	1	0	5.0
René-Lévesque	33	155,041	61	0	3	14	17	16	0	4.5
du Lac-Témiscamingue	20	57,709	61	5	5	2	12	7	0	4.1
de l'Or-et-des-Bois	24	103,695	62	4	4	7	15	8	1	4.0
de Kamouraska—Rivière-du-Loup	48	178,174	63	7	10	17	34	13	0	3.7
des Bois-Francs	58	228,208	63	8	16	16	40	14	1	3.1
des Sommets	46	173,057	66	9	11	13	33	13	0	3.0
des Navigateurs	78	332,839	54	22	25	13	60	17	0	2.7
Riverside	27	140,134	63	2	4	12	18	9	0	2.2
du Pays-des-Bleuets	52	173,366	55	3	17	16	36	6	1	2.1
des Premières-Seigneuries	77	390,853	56	20	27	23	70	7	0	1.7
du Lac-Saint-Jean	37	162,581	58	6	14	12	32	3	1	1.4
des Phares	43	180,560	63	9	16	9	34	9	0	0.9
du Fleuve-et-des-Lacs	55	137,750	63	29	19	4	52	2	1	0.7
des Appalaches	24	138,468	62	2	13	8	23	1	0	0.1
des Hauts-Bois-de-l'Outaouais	28	76,408	70	7	17	3	27	1	0	-
du Littoral	75	34,561	41	52	14	4	70	0	0	-
des Îles	6	35,234	64	3	3	0	6	0	0	-
des Hautes-Laurentides	32	88,848	66	22	7	0	29	0	0	-
Total	**4,089**	**16,887,134**	**55**	**796**	**561**	**582**	**1939**	**1266**	**821**	**5,204.3**

[1] Because the condition indicators of 63 buildings are unknown, the number of buildings rated A, B, C, D and E does not equal 4,089.

HIGHER EDUCATION

INFRASTRUCTURE MANAGEMENT

MINISTÈRE DE L'ENSEIGNEMENT SUPÉRIEUR

VISION

The quality of higher education sector infrastructure affects the impact of the service offered in Québec. It is, therefore, essential that students have at their disposal stimulating learning environments that are tailored to the labour market. Whether from the standpoint of safe infrastructure, cutting-edge laboratories or environments that satisfy the needs of students and staff, interveners' efforts must focus on attaining a common objective, that of offering quality teaching that meets the highest standards.

ORIENTATION

To fulfill its mission, which consists, in particular, to promote higher education, the MES has adopted the orientation below with respect to the infrastructure for which it is responsible:

- Maintain conditions conducive to higher education by ensuring the quantity, quality, safety and durability of infrastructure.

RESPONSIBILITIES

The MES is responsible for:

- Allocating funds to colleges and universities to maintain assets, address the AMD, and to add, rebuild and improve their infrastructure;
- Ensuring that the funds allocated to establishments are used for the intended purposes;
- Auditing the capital expenditure budgets of the college and university establishments to ensure that allocations granted for spaces recognized for funding purposes are used solely for such spaces.

CEGEPS AND UNIVERSITIES

RESPONSIBILITIES

The MES funding formula distinguishes between spaces that are recognized and not recognized for funding purposes. The distinction between the two types of space relates to their mission and the standards that the MES applies.

The MES pays allocations for asset maintenance, addressing the AMD, and adding, rebuilding and improving buildings for designated spaces. Colleges and universities are responsible, regarding such spaces, for managing their infrastructure and planning work to be carried out, in accordance with the rules that the MES issues. The establishments must submit the projects that they plan to carry out based on an annual capital expenditure budget and obtain confirmation from the MES of the budgets' compliance. For each project, the establishments must provide a brief or detailed description, depending on the scope of the project, as well as funding details and building identification. The establishments must also submit information to the MES on the condition of these buildings.

The MES does not report in the AMPI on spaces not recognized for funding purposes given that it does not pay any allowances in respect of such spaces. The establishments must rely on their own revenues to satisfy investment needs related to them. Each establishment is therefore responsible for ensuring the quality, safety and durability of such spaces.

DESCRIPTION OF THE INFRASTRUCTURE PORTFOLIO

The college network infrastructure inventory encompasses 977 buildings, representing a surface area of around 2.7 million square metres, of which approximately 2.6 million square metres in 890 buildings are recognized by the MES for funding purposes. This inventory is spread among 48 CEGEPs.

The college network infrastructure inventory encompasses 1,046 buildings, representing a surface area of around 4.8 million square metres, of which approximately 3.6 million square metres in 761 buildings are recognized by the MES for funding purposes. This inventory is spread among 19 universities.

The college and university networks also have an inventory of equipment, made up particularly of research tools such as CT scanners, 3D printers, electron microscopes, spectroscopes and quantum computers. In addition, by their nature, certain training programs require non-standard equipment, such as aircraft or road vehicles like buses for transporting students to training sites.

Infrastructure Inventory
By Infrastructure Type and Category

	Average Age (years)	Quantity			Measurement (sq. m.)		
		AMPI		Variation	AMPI		Variation
		2020-2021	2021-2022		2020-2021	2021-2022	
CEGEPs[1]							
Buildings							
Spaces designated for funding	45	886	890	4	2,529,727	2,551,034	21,307
Equipments	N/A	N/A	N/A	n.a.	n.a.	n.a.	n.a.
Total – Infrastructures		**886**	**890**	**4**	**2,529,727**	**2,551,034**	**21,307**
Universities[2]							
Buildings							
Spaces designated for funding	54	762	761	(1)	3,599,851	3,597,184	(2,667)
Equipments	N/A	N/A	N/A	n.a.	n.a.	n.a.	n.a.
Total – Infrastructures		**762**	**761**	**(1)**	**3,599,851**	**3,597,184**	**(2,667)**

1 Data as at January 27, 2021.
2 Data as at January 25, 2021.

Variation in Inventory

CEGEPs

In comparison with the preceding period, the inventory was increased by four spaces recognized for funding purposes, for a new total of 890. This variation is due to:

- The construction of two buildings:
  - Collège Montmorency: expansion of Bloc D;
  - Cégep de l'Outaouais: campus Gabrielle-Roy business incubator.
- Addition of three buildings that will be recognized going forward for funding purposes:
  - Collège de Valleyfield: residences;
  - Cégep de Saint-Félicien : bloc R residences;
  - Collège Ahuntsic: residences.
- Demolition of one building:
  - Cégep de la Gaspésie et des Îles: pavillon Saint-Jean (residences that burned down).

Universities

Compared with the preceding period, the inventory was reduced by one space recognized for funding purposes, for a new total of 761. This variation is due to:

- The construction of five buildings for teaching and research purposes:
  - École de technologie supérieure: pavillon D;
  - Université de Montréal: open housing;
  - Concordia University: HU Building;
  - McGill University: Power House Service Building;
  - Université de Sherbrooke: Studio de création (Faculty of engineering).
- Demolition of five buildings:
  - HEC Montréal: Beaver Hall (three components);
  - Université de Montréal: animal facility – Saint-Hyacinthe;
  - McGill University: Research Centre.
- One building transferred at no cost:
  - Université du Québec à Chicoutimi: Pavillon de recherche sur le traitement thermique du bois transferred to the Centre d'entrepreneuriat et d’essaimage of the Université du Québec à Chicoutimi.

INFRASTRUCTURE SUSTAINABILITY

CEGEPS

Infrastructure Conditions and Asset Maintenance Deficit[1] By Infrastructure Type and Category

	Government condition indicator (GCI)[2] (%)						Asset Maintenance Deficit ($M)		
	A	B	C	ABC	D	E	GCI of D	GCI of E	Total
Buildings									
Spaces designated for funding	14	21	24	59	35	6	176.2	150.0	326.2
Equipments	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total – Infrastructures	**14**	**21**	**24**	**59**	**35**	**6**	**176.2**	**150.0**	**326.2**

1 Data as at January 27, 2021.
2 Percentages are weighted according to replacement values.

Objectives

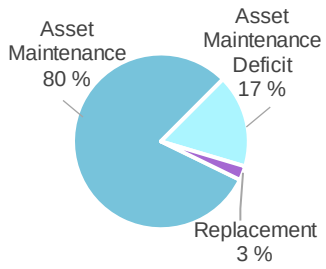
MES investments to maintain the college building inventory will make it possible to achieve the following objectives by March 31, 2026:

- Increase the proportion of college network infrastructure in good condition to 70% (GCI of A, B or C);
- Reduce the AMD, currently assessed at $326.2 million, to a total of $210.5 million, a decrease of $115.7 million.

Inventory Maintenance Investments in the 2021-2031 QIP

(contribution of the Gouvernement du Québec, in millions of dollars and as a percentage)

	CEGEPs	%
Infrastructure Maintenance		
Asset Maintenance	1,315.4	80
Asset Maintenance Deficit	280.6	17
Replacement	42.9	3
Total	**1,639.0**	**100**



Note: Figures are rounded and the sum of the amounts may not correspond to the total indicated.

Addressing the Asset Maintenance Deficit

The MES plans to use the following means to decrease the AMD of colleges:

- Prioritize the completion of repairs or replacement of critical components that have reached the end of their useful life, such as roofs, windows, and heating and ventilation systems;
- Working with the establishments, develop plans to decrease their AMD;
- Update the inspections of their buildings so as to target priority work on their building inventory.

Investment Strategy

The current portrait for CEGEPs shows that 59% of their network's infrastructure portfolio is in good condition (GCI of A, B or C). Among the most dilapidated infrastructures (GCI of D or E), representing 41% of the college building portfolio, 70% were built before 1980. Some of these are heritage buildings that should be rehabilitated or rebuilt over the next decade.

MES maintenance investments planned up to 2025-2026 will increase the proportion of buildings in good condition (GCI of A, B or C) to 70% and reduce the AMD to a total of $210.5 million.

To achieve this, the MES has adopted the following orientations for its future investment choices:

- Prioritize projects with a significant impact on the condition of the building and that decrease the asset maintenance deficit;
- Increase the normalized envelopes allocated to maintain the building inventory in good condition by 20% compared with the 2019-2029 QIP.

SITUATION

Public Infrastructure Investments Included in the QIP
By Type
(contribution of the Gouvernement du Québec, in millions of dollars)

	Infrastructure Maintenance				Infrastructure Enhancement	Total
	Asset Maintenance	Asset Maintenance Deficit	Repla-cement	Subtotal	Addition and Improvement	
CEGEPs						
2019-2020						
Actual	117.9	28.6	30.5	**177.0**	21.4	**198.4**
Forecast	192.0	40.4	32.5	**264.9**	62.0	**326.9**
Difference	(74.1)	(11.8)	(2.0)	**(87.9)**	(40.6)	**(128.5)**
2020-2021						
Probable	236.6	43.7	15.5	**295.8**	53.6	**349.4**
2021-2022						
Forecast	196.5	38.2	0.5	**235.2**	49.4	**284.6**

ADDITIONAL INFORMATION

Difference Between Planned and Actual Investments

The difference between the investments planned for 2019-2020 and actual investments is due mainly to postponement of certain projects. Postponement was necessary because of, among other things, changes in the scope of certain projects, a lack of internal and external labour as well as the interdependence of some postponed projects.

Investments in 2019-2020 and probable investments in 2020-2021, totalling $198.4 million and $349.4 million, respectively, enabled the following work to be continued or completed:

Inventory Maintenance

The main aim of inventory maintenance work is to maintain or restore buildings to a satisfactory or better condition (GCI of A, B or C). Here are a few examples of work carried out:

- Work on building interior cladding such as suspended ceilings, vinyl tiles, interior paint and floors;
- Replacement of mechanical and electrical systems such as compressed-air distribution systems, furnaces, refrigerated drinking fountains, air conditioners, cold-water distribution systems and lighting systems;
- Work to address the AMD, such as the rehabilitation of exterior and interior staircases, doors, dividing curtains, brick cladding and building roofs;
- The replacement of institutional equipment;
- Work on standard slabs on ground and building foundation walls.

More specifically, these investments enabled the following projects to be completed or continued:

- Renovation of the library at John Abbott College;
- Refitting of classrooms at the Collège de Valleyfield;
- Refurbishment of sports locker rooms at Collège de Rosemont;
- Partial refurbishment of the roof at the Cégep de Sherbrooke;
- Replacement of the gymnasium floors at the Cégep de Drummondville;
- Reconstruction of the swimming pool at the Cégep de Rivière-du-Loup;
- Refurbishment of the masonry at the Cégep de Victoriaville.

For 2021-2022, network investments planned totalling $235.2 million will make it possible, among other things, to start or complete several projects, including:

- Fitting out of the technological classroom at the Collège d'Alma;
- Asbestos removal from basement corridors of the central pavilion of the Cégep Marie-Victorin;
- Refurbishment of ventilation systems in bloc C of the Cégep du Vieux Montréal.

Portfolio Enhancement

Enhancement of the inventory primarily seeks to increase the number of student spaces and improve the quality of services offered. Here are a few examples of work carried out:

- Replacement of equipment and refitting of premises to allow for upgrading of various college network programs;
- Expansion of Cégep Gérald-Godin.

In 2021-2022, planned investments for portfolio enhancement totalling $49.4 million will allow the following achievements:

- Creation of new student spaces by adding spaces in Montréal and the surrounding region;
- Expansion of the Collège de Maisonneuve.

CEGEPS (cont'd)

Change in the Infrastructure Conditions and Asset Maintenance Deficit By Infrastructure Type and Category

	GCI of D (%)			GCI of E (%)			Asset Maintenance Deficit ($M)				
	AMPI		Variation	AMPI		Variation	AMPI	Natural Degradation	New Findings	Decrease	AMPI
	2020-2021	2021-2022		2020-2021	2021-2022		2020-2021				2021-2022
Buildings											
Spaces designated for funding	25	35	10	5	6	1	194.3	16.0	144.5	(28.6)	326.2
Equipments	N/A	N/A	n.a.	N/A	N/A	n.a.	N/A	n.a.	n.a.	n.a.	N/A
Total – Infrastructures	**25**	**35**	**10**	**5**	**6**	**1**	**194.3**	**16.0**	**144.5**	**(28.6)**	**326.2**

ADDITIONAL INFORMATION

Change in Condition

Deterioration of the condition of college buildings noted this year is due primarily to the new inspection cycle, which started in 2020-2021, which had the effect of increasing the need for works within five years of certain colleges.

Change in the AMD

The increase in AMD of $ 131.9 million is explained by the following factors:

- The $16.0-million increase is attributable to the natural deterioration of all spaces recognized for funding purposes;
- The $144.5 million increase corresponding to new findings explained by the update of construction costs as well as by new asset maintenance needs identified during real estate audits completed in 2020-2021. These correspond to renovations or repairs to slabs on standard ground, foundation walls, exterior walls, roof covering, wall cladding, filtration systems and electrical distribution systems;
- The elimination of $28.6 million is explained by refurbishment of foundations, roofs and an exterior wall carried out during the year. Other factors include the replacement of windows, sanitary equipment, a corrosion-resistant extractor fan system and electrical systems, plus interior finishing work.

INFRASTRUCTURE SUSTAINABILITY

UNIVERSITIES

Infrastructure Conditions and Asset Maintenance Deficit[1] By Infrastructure Type and Category

	Government condition indicator (GCI)[2] (%)						Asset Maintenance Deficit ($M)		
	A	B	C	ABC	D	E	GCI of D	GCI of E	Total
Buildings									
Spaces designated for funding	33	18	14	65	16	19	120.2	974.0	1,094.2
Equipments	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total – Infrastructures	**33**	**18**	**14**	**65**	**16**	**19**	**120.2**	**974.0**	**1,094.2**

1 Data as at January 25, 2021.
2 Percentages are weighted according to replacement values.

Objectives

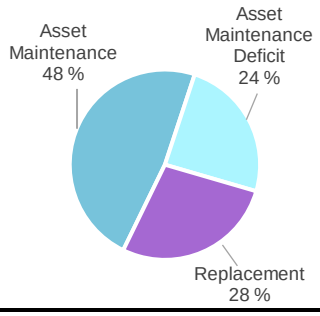
MES investments to maintain the university building inventory will make it possible to achieve the following objectives by March 31, 2026:

- Increase the proportion of university network infrastructure in good condition to 75% (GCI of A, B or C);
- Reduce the AMD, currently assessed at $1,094.2 million to a total of $692.1 million, a decrease of $402.1 million.

Inventory Maintenance Investments in the 2021-2031 QIP

(contribution of the Gouvernement du Québec, in millions of dollars and as a percentage)

	Universities	%
Infrastructure Maintenance		
Asset Maintenance	2,022.4	48
Asset Maintenance Deficit	1,032.3	24
Replacement	1,171.4	28
Total	**4,226.1**	**100**



Note: Figures are rounded and the sum of the amounts may not correspond to the total indicated.

Addressing the Asset Maintenance Deficit

The MES plans to use the following means to decrease the AMD of colleges:

- Prioritize the completion of repairs or replacement of critical components that have reached the end of their useful life, such as roofs, windows, and heating and ventilation systems;
- Working with the establishments, develop plans to decrease their AMD;
- Update the inspections of their buildings so as to target priority work on their building inventory.

Investment Strategy

The current portrait of university infrastructures indicates that 65% are in good condition (GCI of A, B or C). On the other hand, 16% are in poor condition (GCI of D), and 19% in very poor condition (GCI E). Most of these buildings are at the end of their useful life or have largely exceeded it. Indeed, nearly 91% of the most dilapidated infrastructures (GCI of D or E), which make up 35% of the university building inventory, were constructed before 1980. Furthermore, several of these infrastructures are heritage buildings that will require, over the next few years, complex repair work for which the costs will be higher due to the price of materials and the use of specialized labor.

MES maintenance investments planned up to 2025-2026 will increase the proportion of university infrastructures in good condition (GCI of A, B or C) to 75% and address $402.1 million of the AMD.

To achieve this, the MES has adopted the following orientations for its future investment choices:

- Prioritize projects with a significant impact on the condition of the building and decreasing the AMD;
- Increase the normalized envelopes by 20% to maintain the building inventory in good condition compared with the 2019-2029 QIP.

SITUATION

Public Infrastructure Investments Included in the QIP
By Type
(contribution of the Gouvernement du Québec, in millions of dollars)

	Infrastructure Maintenance				Infrastructure Enhancement	Restate-ment[1]	Total
	Asset Maintenance	Asset Maintenance Deficit	Repla-cement	Subtotal	Addition and Improvement		
Universities							
2019-2020							
Actual	186.8	90.6	124.9	**402.3**	60.6	3.7	**466.6**
Forecast	260.4	128.8	126.5	**515.7**	154.1	–	**669.8**
Difference	(73.6)	(38.2)	(1.6)	**(113.4)**	(93.5)	3.7	**(203.2)**
2020-2021							
Probable	260.3	119.0	122.4	**501.7**	152.2	3.7	**657.6**
2021-2022							
Forecast	149.8	139.2	120.1	**409.1**	123.6	–	**532.7**

[1] A restatement is presented on an interim basis to reflect work done under projects scheduled prior to March 31, 2015.

ADDITIONAL INFORMATION

Difference Between Planned and Actual Investments

The difference between the investments planned for 2019-2020 and actual investments is due mainly to postponement of certain projects. Postponement was necessary because of, among other things, changes in the scope of certain projects, a lack of internal and external labour as well as the interdependence of certain postponed projects.

Investments in 2019-2020 and probable investments in 2020-2021, totalling $466.6 million and $657.6 million, respectively, enabled the following work to be continued or completed:

Inventory Maintenance

The main aim of inventory maintenance work is to maintain or restore buildings to a satisfactory or better condition. Here are a few examples of work carried out:

- Refurbishment work on roofs and exterior cladding of buildings such as roof finishings, masonry and mortar joints;
- Replacement of mechanical and electrical systems such as compressed-air distribution systems, furnaces, refrigerated drinking fountains, air conditioners, cold-water distribution systems and lighting systems;
- Work to address the AMD, such as the rehabilitation of doors and exterior staircases, windows, brick cladding and building roofs;
- Major reconstruction work on building facades.

More specifically, these investments enabled the following projects to be completed or continued:

- Bishop’s University, Divinity House — Sherbrooke: Renovation;
- Bishop’s University, pavillon Hamilton — Sherbrooke: Renovation;
- Université du Québec à Montréal, Pavillon Judith-Jasmin: Renovation;
- Université de Sherbrooke, Pavillon A5: Reconstruction;
- McGill University, pavillon Macdonald-Stewart — Montréal: Renovation.

For 2021-2022, planned network investments totalling $409.1 million will make it possible, among other things, to start or complete several projects, including:

- Université de Montréal, pavillons Roger-Gaudry, Marie-Victorin, J.-A.-DeSève and Lionel-Groulx: Redevelopment;
- McGill University, Raymond Pavilion — Montréal: Postponed maintenance work;
- Concordia University, Vanier Library — Montréal: Renovation.

Inventory Enhancement

Enhancement of the inventory primarily seeks to increase the number of student spaces and improve the quality of services offered. Here are a few examples of projects carried out:

- Université du Québec à Trois-Rivières, Drummondville campus, Centre national intégré du manufacturier intelligent: Construction;
- Université de Sherbrooke, Campus de la santé: Construction of a knowledge hub;
- Université du Québec à Chicoutimi, École des arts numériques, de l'animation et du design – Montréal: Redevelopment;
- Concordia University, applied science pavilion at the Loyola campus — Montréal: Expansion;
- École de technologie supérieure, Maison des étudiants – Montréal: Fit out (2nd, 4th and 5th floors);
- Télé-Université, Québec – Québec: Expansion.

Moreover, for 2021-2022, planned investments totalling $123.6 million will enable a number of projects to be started or completed, including:

- Université du Québec en Abitibi-Témiscamingue, Rouyn-Noranda campus: Expansion;
- École de technologie supérieure, Pavillon F – Montréal: Construction;
- Université du Québec à Montréal, École des sciences de la gestion: Redevelopment.

UNIVERSITIES (cont'd)

Change in the Infrastructure Conditions and Asset Maintenance Deficit By Infrastructure Type and Category

	GCI of D (%)			GCI of E (%)			Asset Maintenance Deficit ($M)				
	AMPI		Variation	AMPI		Variation	AMPI				AMPI
	2020-2021	2021-2022		2020-2021	2021-2022		2020-2021	Natural Degradation	New Findings	Decrease	2021-2022
Buildings											
Spaces designated for funding	20	16	(4)	17	19	2	1,126.0	4.7	54.1	(90.6)	1,094.2
Equipments	N/A	N/A	n.a.	N/A	N/A	n.a.	N/A	n.a.	n.a.	n.a.	N/A
Total – Infrastructures	**20**	**16**	**(4)**	**17**	**19**	**2**	**1,126.0**	**4.7**	**54.1**	**(90.6)**	**1,094.2**

ADDITIONAL INFORMATION

Change in Condition

Overall, the condition of university network infrastructure improved slightly this year. This situation is due to the work carried out during the year as well as the updating of the data necessary to assess the condition of university buildings, including replacement values. However, despite the investments that will be made by the university, the MES anticipates an increase in the AMD starting next year, as the new cycle of inspection of university building inventory progresses.

Change in the AMD

The decrease of $31.8 million is explained by the following factors:

- The $90.6-million reduction is mainly due to the bringing of certain buildings up to health and safety standards, and to the replacement of obsolete heating, ventilation and air-conditioning systems;
- The $4.7-million increase is attributable to the natural deterioration of the spaces recognized for funding purposes overall;
- The $54.1-million increase corresponding to new findings is due to identification, during new inspections of facades and ventilation systems, of new work to be carried out.

APPENDIX 1

ADDITIONAL INFORMATION

CEGEPS

Inspection and Data Update

The initial inspection of spaces recognized for funding purposes in the college network occurred between 2010 and 2012. Each building component was evaluated during these inspections. This inspection was accompanied by a renewal forecast and a list of necessary asset maintenance work to maintain and restore the condition of the buildings to a satisfactory level. An annual update of this list was produced for 100% of the surface area of the building inventory in the network to reflect changes in asset maintenance needs and to support the work to be carried out in the short term. The condition of the buildings of the college network inventory is therefore representative of the current situation.

The second cycle of inspections in the college network began in 2020. To date, 12.5% of the new inspections have been completed, and the entire cycle is due to end in 2022.

In addition, the MES does not always possess sufficient information on the inventory of equipment in the college network, but plans to present an initial assessment in the 2022-2023 AMPI.

Methodology

The colleges use a software package to record the work that they must carry out within the next five years on their buildings following inspections conducted by a specialized firm. The assessment of the condition and the AMD of all buildings are based on this list of work recorded in the software package according to the inspection parameters set out in the *Cadre de gestion pour les investissements liés aux infrastructures des réseaux d'enseignement collégial et universitaire,* which seeks to obtain a coherent and continuous assessment of the condition of buildings that is harmonized throughout the college network.

The government condition indicator and the AMD are assessed based on a FCI[7]. Any building with a FCI above 15% is considered to be in poor condition and the estimate of its AMD is the product of the 15% excess and the building's replacement value.

The condition indicator percentages (A / B / C / D / E) are weighted according to the replacement value.

UNIVERSITIES

Inspection and Data Update

The first inspections of buildings recognized for funding purposes in the university network began in 2014 and ended in the spring of 2016. The second cycle of inspections in the university network began in 2019. To date, 40% of the new inspections have been completed, and the entire cycle is due to end in 2023.

The MES possesses partial information on the inventory of equipment in the university network, but the latter is working to obtain complete data in order to present an initial assessment in the 2022-2023 AMPI.

[7] Facility condition index: the sum of the estimated cost of all the asset maintenance work to be performed over a five-year horizon, divided by the replacement value of the infrastructure.

Methodology

The universities use a software package to record the work that they must carry out over the next five years on their buildings, following inspections conducted by a specialized firm. The assessment of the condition and the AMD of all buildings are based on this list of work recorded in the software package according to the inspection parameters set out in the *Cadre de gestion pour les investissements liés aux infrastructures des réseaux d'enseignement collégial et universitaire,* which seeks to obtain a coherent and continuous assessment of the condition of buildings that is harmonized throughout the college network.

The government condition indicator and the AMD are assessed based on a FCI. Any building with a FCI above 15% is considered to be in poor condition and the estimate of its AMD is the product of the 15% excess and the building's replacement value.

The condition indicator percentages (A / B / C / D / E) are weighted according to the replacement value.

APPENDIX 2

CEGEPS
Buildings

	Quantity	Measurement (sq. m.)	Average Age (years)	Condition Indicator (number)						AMD ($M)
				A	B	C	ABC	D	E	
Champlain Regional College	22	51,861	39	3	0	1	4	10	8	36.1
Cégep John-Abbott	16	71,657	78	2	0	2	4	5	7	28.1
Cégep de Rimouski	39	101,073	58	10	4	9	23	12	4	27.1
Cégep de Chicoutimi	43	66,939	46	8	4	7	19	13	11	19.7
Collège Ahuntsic	17	88,702	30	4	3	1	8	8	1	19.6
Vanier College	15	63,613	71	0	5	1	6	7	2	14.7
Cégep de Victoriaville	20	50,690	49	3	0	2	5	10	5	14.1
Cégep Limoilou	12	76,610	41	2	2	1	5	5	2	13.9
Collège de Rosemont	9	43,474	45	2	0	1	3	5	1	13.2
Cégep de Sherbrooke	24	77,808	38	16	3	1	20	3	1	12.2
Cégep de Saint-Hyacinthe	18	52,830	27	3	1	4	8	8	2	11.8
Cégep de l'Abitibi-Témiscamingue	18	52,970	44	2	3	4	9	8	1	11.1
Cégep Édouard-Montpetit	32	106,190	35	7	3	8	18	14	0	8.8
Cégep de Trois-Rivières	28	77,110	44	4	7	5	16	9	3	8.7
Cégep de Saint-Laurent	22	61,488	82	3	8	5	16	5	1	8.4
Collège de Bois-de-Boulogne	12	47,778	53	0	3	6	9	2	1	7.5
Collège de Maisonneuve	13	63,823	43	4	4	1	9	3	1	6.9
Collège Lionel-Groulx	41	70,608	52	12	5	8	25	11	5	6.3
Cégep régional de Lanaudière	24	80,690	39	4	5	6	15	8	1	6.4
Cégep de Jonquière	26	80,090	41	6	7	5	18	8	0	5.5
Cégep Garneau	24	61,576	38	7	7	4	18	5	1	4.9
Cégep de Sainte-Foy	42	77,796	36	20	9	6	35	4	3	4.0
Cégep de la Gaspésie et des Îles	22	48,221	54	6	11	2	19	3	0	3.5
Collège de Valleyfield	7	40,641	74	1	2	1	4	3	0	3.5
Cégep du Vieux Montréal	11	71,122	33	1	2	1	4	5	2	3.5
Cégep de Thetford	10	31,734	46	3	2	2	7	1	2	3.4
Cégep de Lévis	35	55,813	38	5	7	8	20	10	5	3.4
Cégep de Saint-Félicien	13	17,310	32	1	1	5	7	4	2	3.3
Cégep Marie-Victorin	21	45,907	38	4	7	4	15	5	1	3.0
Cégep de Sept-Îles	4	16,131	16	3	0	0	3	1	0	2.9
Cégep de Saint-Jérôme	23	58,518	48	1	6	3	10	12	1	2.7
Cégep de Rivière-du-Loup	25	40,345	42	6	8	6	20	3	2	2.3
Cégep de La Pocatière	15	41,763	49	0	5	4	9	5	1	1.2
Cégep Beauce-Appalaches	15	27,920	54	5	3	3	11	3	1	1.1
Cégep Saint-Jean-sur-Richelieu	22	45,831	53	6	5	7	18	2	2	1.0
Cégep de Sorel-Tracy	4	20,181	38	0	1	0	1	3	0	0.8
Collège Dawson	12	78,949	71	7	3	1	11	1	0	0.6

APPENDIX 2
(cont'd)

CEGEPS
Buildings

	Quantity	Measurement (sq. m.)	Average Age (years)	Condition Indicator (number)						AMD ($M)
				A	B	C	ABC	D	E	
Collège d'Alma	18	25,703	44	3	6	5	14	2	2	0.4
Cégep de l'Outaouais	10	64,149	34	5	4	0	9	1	0	0.3
Cégep Gérald-Godin	7	15,857	49	1	1	4	6	1	0	0.2
Cégep de Baie-Comeau	15	23,161	46	4	5	3	12	1	2	0.1
Collège Montmorency	15	70,122	16	7	1	5	13	2	0	–
Cégep de Drummondville	7	23,898	22	3	1	1	5	2	0	–
Cégep André-Laurendeau	3	44,584	32	1	1	1	3	0	0	–
Cégep de Granby	7	22,913	58	3	4	0	7	0	0	–
Collège Héritage	5	15,720	11	4	0	1	5	0	0	–
Cégep de Matane	13	28,669	53	4	8	1	13	0	0	–
Cégep de Shawinigan	1	31,391	46	0	0	1	1	0	0	–
Total[1]	**857**	**2,531,929**	**45**	**206**	**177**	**157**	**540**	**233**	**84**	**326.2**

[1] The quantity and dimensions do not match those of the infrastructure inventory because information is unavailable for certain buildings that were not inspected.

APPENDIX 2
(cont'd)

Universities
Buildings

	Quantity	Measurement (sq. m.)	Average Age (years)	Condition Indicator (number)						AMD ($M)
				A	B	C	ABC	D	E	
Université McGill	160	630,583	83	19	20	20	59	50	51	433.4
Université de Montréal	101	545,760	54	17	16	6	39	17	45	218.1
Université Laval	81	537,129	44	45	10	6	61	9	11	181.9
Université Concordia	58	395,587	76	9	5	7	21	11	26	124.1
Université du Québec à Montréal	27	333,423	52	10	8	5	23	1	3	87.3
Université de Sherbrooke	73	249,060	36	36	18	9	63	5	5	12.1
Université Bishop's	25	53,195	68	5	6	1	12	8	5	11.4
Université du Québec à Trois-Rivières	39	124,907	29	23	8	4	35	3	1	7.8
Inst. national de recherche scientifique	29	81,249	37	12	1	2	15	7	7	6.3
Université du Québec à Rimouski	24	44,465	40	11	5	4	20	2	2	5.3
École Polytechnique de Montréal	11	113,995	36	6	2	2	10	1	0	4.7
HEC Montréal	6	81,501	44	0	1	3	4	1	1	1.4
Université du Québec en Abitibi-Témiscamingue	13	26,668	21	10	0	2	12	1	0	0.2
Université du Québec (siège social)	4	26,833	32	1	1	1	3	1	0	0.2
École nationale d'administration publique	1	11,798	21	0	1	0	1	0	0	–
École de technologie supérieure	3	87,911	45	3	0	0	3	0	0	–
Université TÉLUQ	1	7,755	20	0	1	0	1	0	0	–
Université du Québec à Chicoutimi	20	77,583	25	17	3	0	20	0	0	–
Université du Québec en Outaouais	12	49,487	46	10	2	0	12	0	0	–
Total[1]	**688**	**3,478,889**	**55**	**234**	**108**	**72**	**414**	**117**	**157**	**1,094.2**

[1] The quantity and dimensions do not match those of the infrastructure inventory because information is unavailable for certain buildings that were not inspected.

ENVIRONNEMENT ET LUTTE CONTRE LES CHANGEMENTS CLIMATIQUES

INFRASTRUCTURE MANAGEMENT

THE MINISTÈRE DE L'ENVIRONNEMENT ET DE LA LUTTE CONTRE LES CHANGEMENTS CLIMATIQUES

VISION

At the centre of government action, the MELCC leadership in fighting climate change and protecting the environment enables social development and a green, resilient economy, to the benefit of current and future generations.

ORIENTATIONS

The MELCC mission is to contribute to Québec's sustainable development by playing a key role in fighting climate change, protecting the environment, and preserving biodiversity, for the public's benefit.

The operation, management and oversight of the public dam inventory fall under the Department's purview. The MELCC must ensure these infrastructures are safe and functional.

Specifically, it must:

- manage dams safely;
- inspect and monitor dams to ensure they operate safely and efficiently;
- perform the required maintenance work in keeping with the current legislation;
- assess the safety of public dams and coordinate emergency interventions;
- remove dams not essential to the Government's mission for safety and environmental reasons.

RESPONSIBILITIES

Dam management is subject to legal obligations that vary according to the type of dam (high-capacity, low-capacity, small). In addition to its legal obligations, MELCC takes into account the risks associated with dams, along with the budget and human resources that it has been allocated for their management, and prioritizes interventions.

DESCRIPTION OF THE INFRASTRUCTURE PORTFOLIO

MELCC operates and administers 818 dams under the *Dam Safety Act* (chapter S3.1.01), including 347 high-capacity, 227 low-capacity and 244 small dams.

The *Dam Safety Act* precisely defines the "high capacity" and "low capacity" dam categories. All dams that fall under the *Dam Safety Act* and that are more than 1 metre in height but not considered "high-capacity" or "low-capacity" are referred to as "small dams".

High-capacity dams are subdivided into two major categories: 48 mechanized dams and 299 non-mechanized dams. Mechanized dams are equipped with mechanical and electrical discharge equipment used to manage water levels and water flow. Non-mechanized dams are equipped with a fixed spillway that does not allow water levels and water flow to be managed. The complex components of mechanized dams and the need to ensure that they are always reliable and functional requires large investments as compared to the other dam types.

The following infrastructure also falls under MELCC's responsibility:

- Eight main buildings containing office spaces and seven auxiliary buildings (two warehouses, one workshop, three hangars and a garage) acting as regional points of service to provide for the operation and maintenance of nearby dams. These buildings are located in seven administration regions: Capitale-Nationale, Saguenay–Lac-Saint-Jean, Bas-Saint-Laurent, Laurentides, Abitibi-Témiscamingue, Estrie and Montérégie;
- A discharge pipe carrying effluent from the Resolute Forest Products market pulp plant in Saint-Félicien. This pipe, built by MELCC in 1976, diverts treated water from the factory to Rivière Mistassini located approximately 15 km from the plant. The pipe's initial useful life was 25 years, but has been in use for 44 years;
- Twenty-five (25) dams not subject to the *Dam Safety Act*. Although not subject to the Act, these dams, including a flood protection dike at Pointe-Calumet, are part of the infrastructure inventory under MELCC jurisdiction.

Infrastructure Inventory[1]
By Infrastructure Type and Category

	Average Age (years)	Quantity			Measurement		
		AMPI		Variation	AMPI		Variation
		2020-2021	2021-2022		2020-2021	2021-2022	
Buildings							
Service Centers	20	15	15	0	2,560 sq. m	2,560 sq. m	0
Civil Engineering Works							
High-capacity Dams							
Mechanised	44	48	48	0	Variable	Variable	0
Non-mechanised	24	272	299	27	Variable	Variable	0
Low-capacity and Small Dams	51	433	471	38	Variable	Variable	0
Other dams	50	18	25	7	Variable	Variable	0
Effluent Discharge Pipe	44	1	1	0	15 km	15 km	0

[1] Data as at September 2020

Variation in Inventory

The inventory has increased slightly from the previous period, given:

- the addition of 64 dams that were transferred from the MERN, of which 27 are "high-capacity non-mechanized dams" and 37 are "low-capacity and small dams";
- the addition of one dam in the "low-capacity and small dams" under the MELCC's responsability;
- the addition of seven dams less than 1 metre in length, not subject to the *Dam Safety Act*, but are under MELCC jurisdiction.

INFRASTRUCTURE SUSTAINABILITY

THE MINISTÈRE DE L'ENVIRONNEMENT ET DE LA LUTTE CONTRE LES CHANGEMENTS CLIMATIQUES

Infrastructure Conditions and Asset Maintenance Deficit[1] By Infrastructure Type and Category

	Government condition indicator (GCI)[2] (%)						Asset Maintenance Deficit ($M)		
	A	B	C	ABC	D	E[3]	GCI of D	GCI of E	Total
Buildings									
Service Centers	13	21	25	59	20	21	–	0.7	0.7
Civil Engineering Works									
High-capacity Dams									
Mechanised	23	10	12	45	55	0	47.9	–	47.9
Non-mechanised	82	5	2	89	10	1	6.0	0.3	6.3
Total – High-capacity Dams	**27**	**10**	**11**	**48**	**52**	**0**	**53.9**	**0.3**	**54.2**
Low-capacity and Small Dams	7	14	25	46	54	0	0.4	–	0.4
Other dams	5	23	18	46	54	0	–	–	–
Effluent Discharge Pipe	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total – Infrastructures	**26**	**10**	**12**	**48**	**52**	**0**	**54.3**	**1.0**	**55.3**

1 Data as at September 2020.
2 Percentages are weighted according to infrastructure replacement value.
3 Condition indicator E for civil engineering structures corresponds to structures that will be demolished.

Objectives

By March 31, 2023, MELCC investments provided for in the 2021-2031 QIP for dams under MELCC jurisdiction will make it possible to achieve the following objectives:

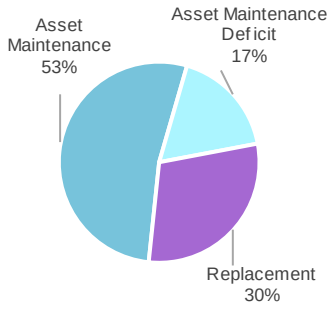
- For high-capacity mechanized dams:
  - Increase the proportion of dams in satisfactory or better condition (GCI of ABC) by 10%, a target of 57%
    (initial measurement: 47% in the 2020-2021 AMPI);
  - Reduce the AMD by $18.3 million to a total of $29.6 million
    (initial measurement: $47.9 million in the 2021-2022 AMPI);
- For high-capacity non-mechanized dams:
  - Increase the proportion of dams in satisfactory or better condition (GCI of ABC) by 3%, a target of 95%
    (initial measurement: 92% in the 2020-2021 AMPI);
  - Reduce the AMD by $0.9 million to a total of $5.4 million
    (initial measurement: $6.3 million in the 2021-2022 AMPI).

Better knowledge of all structures has made it possible to better determine their condition, most specifically as a result of the inspections performed on new dams under MELCC jurisdiction, as well as inspections performed to date on low-capacity dams, small dams and dams under 1 metre.

Inventory Maintenance Investments in the 2021-2031 QIP
(contribution of the Gouvernement du Québec, in millions of dollars and as a percentage)

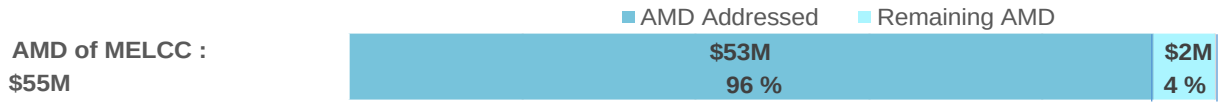
	Public Dams	%
Infrastructure Maintenance		
Asset Maintenance	160.6	53
Asset Maintenance Deficit	53.3	17
Replacement[1]	90.1	30
Total	**304.1**	**100**

[1] Replacement includes demolition.



Note: Figures are rounded and the sum of the amounts may not correspond to the total indicated.

Addressing the Asset Maintenance Deficit



Note: The residual AMD is managed by a private company that benefits from four dams owned by MELCC.

Investment Strategy

The overall strategy for intervention on dams is based on an integrated asset management approach. This approach relies on better knowledge of the infrastructure, prioritization of actions based on risk management, and close monitoring of project progress, fostering a better completion rate for capital projects.

Knowledge of the infrastructure is based on an inspection system that enables continuous monitoring of dam conditions in order to detect defects in time and monitor their progress. If necessary, safety assessment studies make it possible, by conducting hydraulic, geotechnical, structural, mechanical and electrical studies, to establish what remedial work is required to ensure dam integrity and safety.

Interventions are prioritized based on the repercussions the deficiencies have on the safety of people and property, and on the technical characteristics of the various dam categories, in the following order of priority:

- Repair dams with failure consequences that are moderate or higher;
- Maintain the condition of high-capacity mechanized dams. These dams are generally prioritized when planning asset maintenance work because the consequences of a failure or rupture would generally be more serious than for other categories of dams. Interventions must be planned for the discharge equipment on all these dams to ensure proper operation, particularly under flood conditions;
- Maintain the condition of high-capacity non-mechanized dams with failure consequences that are moderate or higher. These dams are prioritized over dams with low or very low consequences. Non-mechanized dams usually require less investment in terms of human and financial resources over their useful life. In light of this, MELCC prioritizes critical remedial work until conditions require complete reconstruction;
- Repair or maintain the condition of other infrastructures to ensure functionality.

Continuous project monitoring and control over each phase in execution provides for better control of the investment process. The project management procedure allows the MELCC monitoring committee to document the various project steps and to monitor control points and project progress. The goal is to quickly identify issues that could affect project execution so corrective actions can be implemented. A dashboard provides an up-to-date picture of the situation.

Other Elements

Climate and other events may make it necessary to take emergency action regarding a dam. Unscheduled work may be added to the plan and may have an impact on the completion rate.

SITUATION

Public Infrastructure Investments Included in the QIP
By Type
(contribution of the Gouvernement du Québec, in millions of dollars)

	Infrastructure Maintenance				Infrastructure Enhancement	Total
	Asset Maintenance	Asset Maintenance Deficit	Replacement	Subtotal	Addition and Improvement[1]	
MELCC						
2019-2020						
Actual	1.1	6.2	2.3	**9.6**	–	**9.6**
Forecast	2.2	7.8	9.4	**19.4**	–	**19.4**
Difference	(1.1)	(1.6)	(7.1)	**(9.8)**	–	**(9.8)**
2020-2021						
Probable	5.7	4.4	3.6	**13.7**	–	**13.7**
2021-2022						
Forecast	10.6	6.1	5.2	**21.9**	–	**21.9**

[1] It should be noted that investments made for biomethanization plants are not considered for the purposes of the AIMP, since MELCC is not responsible for asset maintenance of these infrastructure.

ADDITIONAL INFORMATION

Investments Made and Planned

The investments for infrastructure maintenance are intended to perform the work required to ensure dam integrity, and to protect people and property from the risks associated with the presence of these structures. In planning investments, work on dams that are in poor condition and deemed to be critical to the Government's mission are prioritized according to the risk assessment. This work helps maintain and restore dams to good condition, according to findings noted during inspections.

Government investments in maintaining public dams enable the following types of work to be carried out:

- Repair of heavy mechanical components, such as gates, winches, gantries, generating sets or embedded parts;
- Repair of concrete components or correction of concrete pathologies;
- Repair of riprap spillways by reshaping, adding riprap or filling gaps;
- Repair of dikes by reshaping, raising, waterproofing, stabilizing or adding drainage;
- Repair of electrical and control components such as electrical panels, heating systems, automated systems or communication systems;
- Renovation of service buildings, garages or equipment shelters.

Difference Between Planned Investments and Actual Investments

Investments in 2019-2020 to maintain the portfolio totalled $9.6 million, which is $9.8 million less than the $19.4 million initially planned in the 2019-2029 QIP. This difference is primarily explained by:

- delays due to unforeseen circumstances on certain projects, land management issues and administrative delays in obtaining provincial and federal authorizations required for certain maintenance projects and demolition;
- a time lag in completing work at the Sartigan (Chaudière-Appalaches), Morin (Bas-Saint-Laurent) and Laniel (Abitibi-Témiscamingue) dams in order to improve the definition of the type of work needed, following detailed inspections of certain components;
- feasibility study for the Mathieu-D'Amours Dam reconstruction project was more complex and extensive than expected;
- some projects were more complex than expected or required environmental impact studies not initially planned.

Inventory Maintenance

The probable investments to maintain the inventory in 2020-2021 total $13.7 million and will have made it possible to carry out the following work, most specifically:

- Reconstruction of the Croix and Lajeunesse dams (Mauricie);
- Riprap rehabilitation work on the Mont-Louis Dam (Gaspésie—Îles-de-la-Madeleine);
- Concrete repair work at the Aylmer (Estrie) and Choinière (Montérégie) dams;
- Remedial work on discharge equipment on the Beaudet (Centre-du-Québec), Mégantic (Estrie), Grand-Moulin (Laval), Portage-des-Roches (Saguenay—Lac-Saint-Jean), Saint-Raymond (Capitale-Nationale), and Jules-Allard (Chaudière-Appalaches) dams;
- Upgrading the Pointe-Calumet dike to standards (Laurentides);
- Completion of the preliminary design and concept study for reconstruction of the Mathieu-d’Amours Dam (Bas-St-Laurent);
- Preparation of plans and specifications for concrete repairs and work to enhance the load-bearing capacity of the bridge at the Sartigan Dam (Chaudière-Appalaches);
- Demolition of the Ouellet-2 dam (Saguenay—Lac-Saint-Jean).

Forecast investments in asset maintenance and reducing the AMD in 2021-2022, totalling $16.7 million, will facilitate completion of the following projects:

- Concrete repair work on the Duchesnay Dam (Capitale-Nationale);
- Continuation of remedial work on the discharge equipment at the Mégantic Dam (Estrie);
- Remedial work on the discharge equipment at the Saint-Didace Dam (Lanaudière);
- Concrete repair and improvement of the bridge load-bearing capacity, as well as replacement of heating and control equipment at the Sartigan Dam (Chaudière-Appalaches);
- Replacement of the electrical system on the Grand-Moulin Dam (Laval);
- Remedial work for the cavitation problem at the Jules-Allard Dam (Chaudière-Appalaches);
- Finalization of upgrading the Pointe-Calumet dike to standards (Laurentides).

Forecast investments for infrastructure replacement in 2021-2022, totalling $5.2 million, will facilitate completion of the following projects, most specifically:

- Reconstruction of the Armand (Mauricie), Pimbina (Mauricie), Grandes-Piles (Mauricie) and Profond (Mauricie) dams;
- Preparation of plans and specifications for reconstruction of the Mathieu-D'Amours Dam (Bas-St-Laurent);
- Levelling of the Mare-du-Sault (Capitale-Nationale) and De la Montagne (Estrie) dams.

Change in the Infrastructure Conditions and Asset Maintenance Deficit By Infrastructure Type and Category

	GCI of D (%)			GCI of E[1] (%)			Asset Maintenance Deficit ($M)				
	AMPI		Varia-tion	AMPI		Varia-tion	AMPI				AMPI
	2020-2021	2021-2022		2020-2021	2021-2022		2020-2021	Natural Degradation	New Findings	Decrease	2021-2022
Buildings											
Service Centers	19	20	1	21	21	0	10	–	(0.3)	–	0.7
Civil Engineering Works											-
High-capacity Dams											-
Mechanised	53	55	2	0	0	0	38.0	5.3	8.4	(3.8)	47.9
Non-mechanised	7	10	3	1	1	0	5.4	–	1.2	(0.3)	6.3
Total – High-capacity Dams	50	52	2	0	0	0	43.4	5.3	9.6	(4.1)	54.2
Low-capacity and Small Dams	55	54	(1)	0	0	0	0.1	–	0.3	–	0.4
Other dams	57	54	(3)	0	0	0	N/A	–	–	–	–
Effluent Discharge Pipe	N/A	N/A	n.a.	N/A	N/A	n.a.	N/A	n.a.	n.a.	n.a.	N/A
Total – Infrastructures	**51**	**52**	**1**	**0**	**0**	**0**	**44.5**	**5.3**	**9.6**	**(4.1)**	**55.3**

[1] Condition indicator E for civil engineering structures corresponds to structures that will be demolished

ADDITIONAL INFORMATION

Change in Condition

The proportion of high-capacity mechanized dams in poor condition increased by 2% compared to the previous period, as a result of the natural deterioration of one of mechanised dams. This deterioration was confirmed during in-depth investigations of certain defects detected during preliminary inspections.

The proportion of non-mechanized dams in poor condition increased by 3% over the previous period. This is mainly due to the effect of adding 27 new dams to the portfolio, which were previously under the responsibility of the MERN, 12 of which are in poor condition. Furthermore, inspections carried out during the period revealed new deficiencies in certain dams under MELCC jurisdiction, as compared to previous inspections.

Despite adding 37 dams from the MERN to the portfolio, the proportion of low-capacity and small dams in poor condition remained relatively stable, with a 1% decrease.

The proportion of dams not subject to the *Dam Safety Act* but in poor condition increased by 3% over the previous period. This is mainly due to effect of adding, to the existing inventory, five dams in good condition, two dams in poor condition and one previously uninspected dam, in poor condition.

Change in the AMD

The AMD assessment for the public dam portfolio focuses primarily on high-capacity dams. These dams represent nearly 95% of the value of the entire dam portfolio and are the only MELCC infrastructures subject to strict civil security standards. As such, and in accordance with the provisions of the *Dam Safety Regulation*, MELCC's public investments in infrastructure are aimed primarily at high-capacity dams.

Overall, the AMD increased by $10.8 million from the previous period. This increase is due to:

- The effect of natural deterioration observed during annual inspections of high-capacity mechanized dams. Furthermore, one dam in this category was reassessed as being in poor condition (Laniel Dam) and another dam requires additional major work (Kipawa Dam). This resulted in a $5.3-million increase in the AMD;
- New findings relating to the cost of work for several investment projects in the planning or execution stages. These new findings generally result from new information or clarification of the scope of the work to be performed. All of these new findings had a net increase on the AMD of $8.4 million for mechanized dams and $1.2 million for non-mechanized dams;

  For example, new work not initially planned will be required for the Sartigan Dam, most specifically to modernize two gates and the lifting system, in addition to an increase in costs already planned. Conversely, the scope of the work initially planned for the Morin Dam was considerably reduced as a result of a detailed inspection of the condition of the concrete. Also, the AMD linked to four dams in poor condition will be undertaken by the work planned by the private company who benefits of these dams;
- Completion of work addressing the AMD during the period on high-capacity dams. This reduced the AMD recorded by $4.1 million.

APPENDIX 1

ADDITIONAL INFORMATION

Inspection and data update

An inspection program for high-capacity dams was developed based on the risk posed by this type of dam (very low, low, moderate, and considerable dam failure consequences). This program applies equally to dams with a condition indicator of A, B or C (up to standard), D (to be renovated) or E (to be dismantled or levelled). Investment needs for dams in poor condition (GCI of D), with a "moderate" or "high" level of consequences are prioritized during work planning and in developing the QIP.

All high-capacity dams under MELCC jurisdiction are inspected at least once a year, in accordance with the requirements set out in the *Dam Safety Regulation*. The purpose of these inspections is to evaluate the safety of these structures and help guide planning for interventions to be carried out, based on the anomalies observed. According to the priorities established for the required interventions, investment requirements are then estimated.

While no obligation under the *Dam Safety Act* required it – given its low impact on the safety of people and property – in 2018-2019, MELCC implemented a visual inspection plan for low-capacity and small dams, as well as dams under 1 metre. The plan spans four years. The inspections are intended to validate the general condition of these structures and confirm their category. An assessment of the relevance of performing the work will be completed at a later date, according to the risk associated with the structure. After the first three years of the program, 66% of the 471 dams have been inspected. While the program was suspended in 2020-2021 due to the pandemic, the program will continue through 2021-2022.

A new inspection program began in 2020-2021 on buildings other than service centres, namely service buildings for certain dams, as well as shelters on the dams for lifting equipment. Ultimately, these inspections will determine their conditions and identify the highest-priority asset maintenance work that will need to be carried out on buildings assessed as being in poor condition.

The Saint-Félicien effluent discharge pipe underwent a partial inspection in 2018-2019 to detect potential sources of capacity loss. At this time, the inspection results do not make it possible to assess the overall condition of the infrastructure. However, MELCC monitors it regularly to control the risks associated with using the pipe.

Methodology

The condition indicator percentages (A / B / C / D / E) are weighted according to the replacement value.

- GCI of A, B or C indicates that the dam is in good condition;
- GCI of D indicates that the dam is not up to standard or that it requires significant and sometimes urgent asset maintenance work;
- GCI of E indicates that the dam is to be levelled.

Condition indicators and the AMD are not extrapolated for low-capacity and small dams, nor for dams that are not subject to requirements, with a few exceptions for dams of significant importance to the population or that pose risks to the safety of property and people.

SANTÉ ET SERVICES SOCIAUX

INFRASTRUCTURE MANAGEMENT

MINISTÈRE DE LA SANTÉ ET DES SERVICES SOCIAUX

VISION

The MSSS seeks to offer an integrated and efficient health and social services network where accessibility and well-being for all are central to our actions.

ORIENTATIONS

To fulfill its mission, which consists in maintaining, improving and restoring Quebecers' health and well-being by making accessible an array of integrated, quality health and social services, thereby contributing to Québec's social and economic development,[8] the MSSS has adopted the orientations indicated below regarding the infrastructure under its responsibility:

- Ensure sound management of the HSSN infrastructure;[9]
- Carry out new infrastructure investments aimed at priority needs;
- Ensure the safety of individuals and property, counteract the deterioration of buildings and oversee their conservation.

RESPONSIBILITIES

The MSSS determines priorities, objectives and orientations regarding health and social services and ensures their application.

It evaluates and allocates the funds necessary to maintain assets, to reduce the AMD and to add, replace or enhance HSSN infrastructure. In this respect, it ensures that the funds allocated to the HSSN are used for their intended purposes.

8 MSSS, *Mission et mandats* : https://www.quebec.ca/en/government/ministere/sante-services-sociaux/mission-and-mandates/.
9 Appendix 1 presents the list of bodies that comprise the HSSN.

HEALTH AND SOCIAL SERVICES NETWORK

RESPONSIBILITIES

The establishments are responsible for maintaining HSSN infrastructure in accordance with Ministerial programs and guidelines. They inspect and ascertain the asset maintenance needs of buildings. In addition, they prioritize and plan investments, which are then approved by the MSSS as part of the annual update of the three-year fixed asset and equipment investment plans.

In collaboration with HSSN establishments, each year the MSSS updates and certifies the inventory of the real estate and medical equipment portfolios.

DESCRIPTION OF THE INFRASTRUCTURE PORTFOLIO

Real Estate Portfolio

The HSSN's real estate portfolio comprises 2,737 buildings with a total area of 9.5 million square metres. The buildings are divided into seven main categories corresponding to their respective missions:

- Hospitals, which include short-term care centres, health care centres and psychiatric centres;
- Residential and long-term care centres (CHSLD);
- Rehabilitation centres;
- Youth centres;
- Local community service centres (CLSC);
- Other buildings, including staff and doctors' quarters, research centres, administrative spaces, warehouses, laundries and boiler rooms;
- Surplus buildings for which no use is foreseen within the next five years.

Medical Equipment Portfolio

The main medical equipment comprises 15,520 devices used to offer care and service in specialties such as medical imaging, radiation therapy, medical biology, respiratory therapy and surgery.

Infrastructure Portfolio[1]
By Infrastructure Type and Category

	Average Age (years)	Quantity			Measurement (sq. m.)		
		AMPI		Variation	AMPI		Variation
		2020-2021	2021-2022		2020-2021	2021-2022	
Real Estates							
Buildings							
Hospital centres	51	574	575	1	4,747,344	4,801,984	54,640
CHSLD	43	462	462	0	2,124,985	2,135,156	10,171
Rehabilitation centres	51	174	176	2	385,794	401,373	15,579
Youth centres	52	180	181	1	329,385	331,644	2,259
Local community service centres	37	186	190	4	358,858	367,967	9,109
Other[2]	40	1,077	1,103	26	1,299,368	1,324,548	25,180
Surplus buildings	90	53	50	-3	182,607	158,534	-24,073
Total – Buildings		**2,706**	**2,737**	**31**	**9,428,341**	**9,521,206**	**92,865**
Equipments							
Medical equipments							
Imaging	7	3,811	3,858	47	n.a.	n.a.	n.a.
Radiotherapy	7	126	129	3	n.a.	n.a.	n.a.
Medical biology	8	1,755	1,760	5	n.a.	n.a.	n.a.
Monitoring (Number facilities)	7	1,134	1,125	-9	n.a.	n.a.	n.a.
Respiratory therapy	6	2,820	3,424	604	n.a.	n.a.	n.a.
Surgery	8	824	818	-6	n.a.	n.a.	n.a.
Care	6	874	1,284	410	n.a.	n.a.	n.a.
Other	7	2,980	3,122	142	n.a.	n.a.	n.a.
Total – Equipments		**14,324**	**15,520**	**1,196**	**n.a.**	**n.a.**	**n.a.**

1 Data as at November 26, 2020, for real estate portfolio and September 30, 2020, for medical equipment.
2 Other buildings include staff and doctors' quarters, research centres, administrative spaces, warehouses, laundries and boiler rooms.

Variation in the Portfolio

Compared to the previous period, the total number of buildings increased by 31. This variation is primarily attributable to the addition of 23 residences for employees of the Centre de santé Inuulitsivik and the CSSS de la Baie-James.

Compared with the previous period, the total number of medical devices in the HSSN valued at $100,000 or more, or of a strategic nature, whatever their value, increased to 1,196 devices. This variation is primarily attributable to the acquisition of new devices to respond to HSSN needs, particularly in the "Respiratory therapy" and "Care" categories.

INFRASTRUCTURE SUSTAINABILITY

HEALTH AND SOCIAL SERVICES NETWORK

Infrastructure Conditions and Asset Maintenance Deficit[1] By Infrastructure Type and Category

	Government condition indicator (GCI)[2] (%)						Asset Maintenance Deficit ($M)		
	A	B	C	ABC	D	E	GCI of D	GCI of E	Total
Real Estates									
Buildings									
Hospital centres	60	20	9	89	10	1	214.9	125.2	340.1
CHSLD	31	27	21	79	17	4	80.6	89.7	170.3
Rehabilitation centres	42	19	22	83	11	6	9.3	21.5	30.8
Youth centres	34	24	10	68	24	8	16.0	43.1	59.1
Local community service centres	41	30	14	85	14	1	15.0	3.2	18.2
Other[3]	52	18	9	79	14	7	44.8	159.9	204.7
Surplus buildings	0	16	55	71	5	24	2.8	57.0	59.8
Total – Buildings	**52**	**21**	**12**	**85**	**12**	**3**	**383.4**	**499.6**	**883.0**
Equipments									
Medical equipments									
Imaging	22	28	22	72	23	5	255.5	59.5	315.0
Radiotherapy	27	26	24	77	17	6	40.2	15.0	55.2
Medical biology	16	17	30	63	25	12	43.6	21.5	65.1
Monitoring (Number facilities)	30	30	21	81	17	2	31.7	3.0	34.7
Respiratory therapy	36	22	25	83	14	3	24.3	4.7	29.0
Surgery	28	29	23	80	13	7	17.9	9.9	27.8
Care	24	43	15	82	16	2	22.3	3.2	25.5
Other	22	32	27	81	13	6	41.0	18.9	59.9
Total – Equipments	**24**	**28**	**24**	**76**	**19**	**5**	**476.5**	**135.7**	**612.2**
Total – Infrastructures	**50**	**22**	**13**	**85**	**12**	**3**	**859.9**	**635.3**	**1,495.2**

1 Data as at November 26, 2020, for real estate portfolio and September 30, 2020, for medical equipment.
2 Percentages are weighted according to replacement values.
3 Other buildings include staff and doctors' quarters, research centres, administrative spaces, warehouses, laundries and boiler rooms.

Objectives

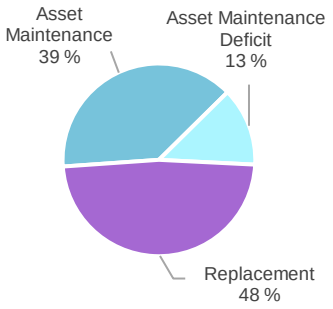
By March 31, 2023, investments provided for in the 2021-2031 QIP for buildings and medical equipment under MSSS responsibility will make it possible to achieve the following objectives:

- For buildings:
  - Reduce the AMD listed for buildings by $271.5 million;
    (Initial measurement: AMD listed at $822.7 million in the 2020-2021 AMPI).

- For medical equipment:
  - Reduce the AMD listed for medical equipment by $152.9 million;
    (Initial measurement: AMD listed at $465.0 million in the 2020-2021 AMPI).

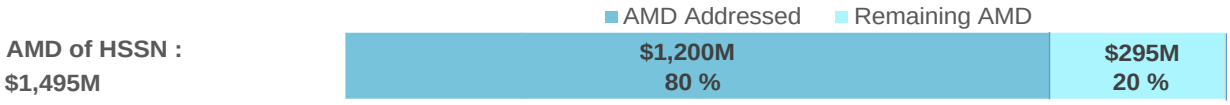
Infrastructure Maintenance Investments in the 2021-2031 QIP
(contribution of the Gouvernement du Québec, in millions of dollars and as a percentage)

	HSSN	%
Infrastructure Maintenance		
Asset Maintenance	3,516.1	39
Asset Maintenance Deficit	1,200.2	13
Replacement	4,378.8	48
Total	**9,095.1**	**100**



Note: Figures are rounded and the sum of the amounts may not correspond to the total indicated.

Addressing the Asset Maintenance Deficit



Investment Strategy

Infrastructure Maintenance

HSSN establishments' infrastructure management practices and investments in recent years have made it possible to maintain a significant portion of the overall infrastructure in good condition (85%). This means that, while preserving infrastructure access and availability for care, timely asset maintenance investments could be made throughout their useful life.

To maintain and preserve the current infrastructure portfolio in the years to come, action plans are foreseen to meet the following needs:

- Rebuild or renovate CHSLD in poor condition (GCI of D) and very poor condition (GCI E);
- Upgrade several pipes to control lead and copper levels in drinking water;
- Continue refurbishing the façades of certain buildings;
- Modernize the most obsolete surgical units and emergency departments;
- Implement the recommendations of the asbestos commission regarding the removal of asbestos from the components of certain buildings, primarily those built before 1980;
- Respond to the asset maintenance needs of indoor parking facilities;
- Modernize, upgrade and refit existing buildings to make these spaces more functional.

AMD Management

Investments of $1.2 billion planned in the 2021-2031 QIP for the health and social service sector will make it possible to address 80% of the AMD currently listed for buildings and medical devices.

In order to achieve its AMD resorption objectives, the MSSS will use the following means:

- Determine specific AMD reduction objectives under the management and accountability agreements between the MSSS and each establishment;
- Continue the implementation of standardized technical inspections on a five-year basis;
- Accelerate acquisitions by favouring group purchases of medical equipment and push forward approvals of replacement projects by two years.

SITUATION

Public Infrastructure Investments Included in the QIP
By type
(contribution of the Gouvernement du Québec, in millions of dollars)

	Infrastructure Maintenance				Infrastructure Enhancement	Restate-ment[1]	Total
	Asset Maintenance	Asset Maintenance Deficit	Repla-cement	Subtotal	Addition and Improvement		
Health and Social Services							
2019-2020							
Actual	279.7	142.9	519.4	**942.0**	562.0	19.3	**1,523.3**
Forecast	163.1	73.7	360.9	**597.7**	741.3	–	**1,339.0**
Difference	116.6	69.2	158.5	**344.3**	(179.3)	19.3	**184.3**
2020-2021							
Probable	459.2	112.7	593.2	**1,165.1**	733.3	12.1	**1,910.5**
2021-2022							
Forecast	334.7	117.7	246.2	**698.6**	1,634.9	–	**2,333.5**

[1] A restatement is presented on an interim basis to reflect work done under projects scheduled before March 31, 2015.

ADDITIONAL INFORMATION

Investments Made and Planned

Asset maintenance investments allow for necessary work to be performed to maintain the physical condition of HSSN buildings or to restore those that are in poor condition (reduction of the AMD). These investments are necessary and must be made throughout a building's useful life to maintain its service potential, ensure public health and safety, and counteract the building's physical deterioration. Such work focuses on the building structure or exterior, mechanical and electrical systems, and compliance with mandatory codes and standards. Furthermore, investments are also made to replace medical devices, furniture, and other non-medical equipment across the HSSN.

Difference Between Planned Investments and Actual Investments

Investments in 2019-2020 to maintain the portfolio totalled $942.0 million, which is $344.3 million more than the $597.7 million initially planned in the 2019-2029 QIP. This difference is mainly explained by the increase in the capacity of the HSSN to carry out work to maintain the building stock. This increase in capacity is generated by the sustained efforts of the MSSS, over the past few years, to support establishments in carrying out their real estate projects. Among the efforts made, we note the increase in the sums available, rigorous supervision in the monitoring of expenditure and the increase in human resources dedicated to the realization of real estate projects

Infrastructure Maintenance

The probable investments to maintain the inventory in 2020-2021 total $1,165.1 million, and will make it possible to carry out the following work, in particular:

- Centre d'hébergement de Cap-Chat (CHSLD) — Gaspésie: Replacement of all doors and windows, refurbishment of plumbing fixtures in bathrooms and heating systems in bedrooms as well as flooring;

- Hôpital régional de Portneuf — Québec: Redesign of the emergency department;
- Institut national de psychiatrie légale Philippe-Pinel — Montréal: Repairs to the roof of corridors and of the lightning rod systems;
- Résidence La Traversée (centre jeunesse) — Outaouais: Upgrading of the plumbing system, replacement of showers and sinks and replacement of ventilation units;
- Hôpital de Mont-Laurier (Laurentides): Replacement of the hot water heating network, redevelopment of the operating theater (phase I) and upgrading of the ventilation unit in the sterilization sector.

Forecast investments in asset maintenance and managing the AMD in 2021-2022, totalling $452.4 million, will facilitate completion of the following projects, in particular:

- Hôpital du Saint-Sacrement — Québec: Upgrading the fire alarm network;
- Hôpital d'Alma — Saguenay–Lac-Saint-Jean: Replacement of air conditioning units;
- Centre de santé et de services sociaux de l'Érable — Mauricie: Repair of cracks in foundations;
- Hôpital de Saint-Georges — Chaudières-Appalaches: Renovation of facades and windows;
- Hôpital général Juif — Montréal: Complete renovation of the Côte-des-Neiges entrance.

Forecast investments for infrastructure replacement in 2021-2022, totalling $246.2 million, will facilitate completion of the following projects, in particular:

- Hôpital Charles-LeMoyne, Montérégie : Replacement of a linear accelerator in radio-oncology;
- Centre universitaire de santé McGill, Montréal : Replacement of an angiography system in medical imaging;
- Institut de cardiologie de Montréal: Replacement of intensive care ventilators in respiratory therapy;
- Hôtel-Dieu de Sherbrooke — Estrie: Replacement of physiological monitoring systems in nursing care;
- Centre hospitalier universitaire de Sainte-Justine — Montréal: Replacement of a magnetic resonance imaging device in medical imaging.

In addition to the projects mentioned above, the actual, probable and planned investments in major projects through the maintenance and replacement envelopes allow, among other things, the continuation of:

- Hôpital régional de Saint-Jérôme, santé mentale — Construction;
- Hôpital de La Malbaie — Agrandissement et réaménagement;
- Centre hospitalier de St. Mary, unités de soins — Montréal — Maintien et bonification;
- Hôpital général juif (phase IV) — Montréal — Maintien et bonification;
- Hôtel-Dieu de Lévis, blocs endoscopique et opératoire — Maintien et bonification.

Portfolio Enhancement

Investments to enhance the inventory carried out in 2019-2020 totalling $562.0 million enabled completion or continuation of the following major projects:

- Centre hospitalier universitaire Sainte-Justine, unités spécialisées et recherche — Montréal — Agrandissement et réaménagement;
- Institut de cardiologie de Montréal, urgence, soins ambulatoires et centre de formation — Agrandissement et réaménagement;
- Hôpital du Sacré-Cœur de Montréal, traumatologie et unité mère-enfant — Agrandissement et réaménagement;

- Hôpital de Fleurimont, centre mère-enfant et urgence — Sherbrooke — Construction;
- Hôpital de l’Enfant-Jésus, complexe hospitalier — Québec — Construction et réaménagement;
- Hôpital du Haut-Richelieu, urgence et bloc opératoire – Saint-Jean-sur-Richelieu —– Agrandissement et réaménagement.

The investments also helped to continue or plan the following projects:

- Hôpital Pierre-Le Gardeur, unité de soins — Repentigny — Agrandissement et réaménagement;
- Centre hospitalier de Vaudreuil-Soulanges, complexe hospitalier — Construction;
- Hôpital de Verdun, unités de soins et soins ambulatoires — Montréal — Agrandissement et réaménagement;
- Hôtel-Dieu d'Arthabaska, urgence et bloc opératoire — Victoriaville — Agrandissement et réaménagement;
- Centre de réadaptation pour jeunes en difficulté — Saint-Jérôme — Construction.

Lastly, the investments allowed for the continuation or analysis of the following projects:

- Hôpital Maisonneuve-Rosemont — Montréal — Maintien et bonification;
- Hôpital de Chicoutimi, bloc opératoire — Saguenay — Maintien et bonification;
- Hôpital Pierre-Boucher, urgence et unités de soins — Longueuil — Maintien et bonification;
- Hôpital de Sept-Îles, urgence et bloc opératoire — Maintien et bonification;
- Hôpital de la Cité-de-la-santé — Laval — Maintien et bonification.

The 2020-2021 probable investments of $733.3 million, and 2021-2022 forecast investments of $1,634.9 million, will allow for continuing projects underway, in planning, and to begin studies, including:

- Nouvelles maisons des aînés — Plusieurs régions du Québec — Construction;
- Centre hospitalier régional d’Eeyou Istchee, Chisasibi, centre de santé régional — Bonification;
- Institut universitaire en santé mentale Douglas — Montréal — Maintien et bonification;
- Hôpital Charles-LeMoyne, santé mentale et oncologie ambulatoire — Longueuil — Maintien et bonification;
- Centre hospitalier de l'Outaouais, complexe hospitalier — Bonification;
- Hôpital de Saint-Eustache, urgence et unités de soins — Maintien et bonification.

Change in the Infrastructure Conditions and Asset Maintenance Deficit
By Infrastructure Type and Category

	GCI of D (%)			GCI of E (%)			Asset Maintenance Deficit ($M)				
	AMPI		Variation	AMPI		Variation	AMPI	Natural Degradation	New Findings	Decrease	AMPI
	2020-2021[1]	2021-2022		2020-2021[1]	2021-2022		2020-2021				2021-2022
Real Estates											
Buildings											
Hospital centres	10	10	0	1	1	0	324.6	27.6	4.6	(16.7)	340.1
CHSLD	18	17	(1)	4	4	0	157.3	13.8	4.1	(4.9)	170.3
Rehabilitation centres	12	11	(1)	7	6	(1)	29.8	2.5	–	(1.5)	30.8
Youth centres	24	24	0	9	8	(1)	57.8	4.8	–	(3.5)	59.1
Local community service centres	16	14	(2)	1	1	0	18.4	1.5	–	(1.7)	18.2
Other	15	14	(1)	6	7	1	175.0	16.6	22.9	(9.8)	204.7
Surplus buildings	6	5	(1)	20	24	4	59.8	2.7	(1.5)	(1.2)	59.8
Total – Buildings	**12**	**12**	**0**	**3**	**3**	**0**	**822.7**	**69.5**	**30.1**	**(39.3)**	**883.0**
Equipments											
Medical equipments											
Imaging	23	23	0	6	5	(1)	328.6	107.0	–	(120.6)	315.0
Radiotherapy	9	17	8	11	6	(5)	46.5	21.4	–	(12.7)	55.2
Medical biology	24	25	1	9	12	3	60.0	17.8	–	(12.7)	65.1
Monitoring (Number facilities)	18	17	(1)	3	2	(1)	37.9	15.4	–	(18.6)	34.7
Respiratory therapy	14	14	0	5	3	(2)	31.8	14.5	–	(17.3)	29.0
Surgery	10	13	3	6	7	1	23.9	11.4	–	(7.5)	27.8
Care	12	16	4	2	2	0	20.6	13.5	–	(8.6)	25.5
Other	14	13	(1)	7	6	(1)	68.6	32.9	–	(41.6)	59.9
Total – Equipments	**18**	**19**	**1**	**6**	**5**	**(1)**	**617.9**	**233.9**	—	**(239.6)**	**612.2**
Total – Infrastructures	**13**	**12**	**(1)**	**3**	**3**	**0**	**1,440.6**	**303.4**	**30.1**	**(278.9)**	**1,495.2**

[1] The condition indicator percentages (GCI of D or E) are weighted according to the replacement value. In the 2020-2021 AMPI, the percentages for building condition were established based on the area of the buildings.

ADDITIONAL INFORMATION

Buildings

Change in Condition

Overall, the proportion of buildings in poor condition (GCI of D) and very poor condition (GCI of E) remained stable compared with the previous year.

The pandemic prevented HSSN establishments from completing all the work necessary to decrease their AMD. As a result, several projects included in establishments' three-year investment plan were postponed.

Change in the AMD

The net increase in buildings' AMD for the period is $60.3 million.

This increase is mainly due to indexing of the costs of previously identified work not carried out totalling $69.5 million as well as new findings of $30.1 million identified during specific inspections, including a decrease in assessed work required for some surplus buildings.

Completion of priority asset maintenance work by HSSN establishments decreased the work accounted for in the AMD by $39.3 million.

Medical Equipment

Change in Condition

Overall, the proportion of medical devices with a GCI of D or E remained stable compared with the previous year. Implementation of the ongoing equipment replacement program has made it possible to fulfil plans to replace devices in HSSN institutions, thereby helping to maintain the medical device portfolio in good condition overall.

Change in the AMD

The net decrease in the AMD of medical devices for this period is $5.7 million.

The AMD for the replacement of medical devices rose by $233.9 million during the period because of the increase in the number of devices in the HSSN whose actual age exceeds their pre-established standardized useful life. On the other hand, the planned replacement of equipment in HSSN, provided for by investments allocations in the QIP, has helped to decrease by $239.6 million the AMD.

Despite the slight decrease in the AMD of medical devices for the period, the MSSS still anticipates a substantial reduction in this AMD over the next few years. To achieve this, since 2019, the MSSS approves equipment replacement projects for three-year periods instead of a single year, which makes it possible to optimize the equipment replacement process. Furthermore, the MSSS will continue its efforts to accelerate the replacement and installation of medical equipment.

APPENDIX 1

ADDITIONAL INFORMATION

Five-year Inspection and Inventory Data for the Real Estate Portfolio

The second inspection cycle, which was to start in 2020, had to be postponed by a year due to the pandemic and will therefore cover the five-year period 2021-2026. Unlike the previous cycle, inspections will be completed by the technical personnel of each establishment and not by outside firms, except for inspection of the most complex components.

This second cycle will make it possible to update work lists for all buildings inspected and also allow the inspection of new buildings that have now reached an age of at least 10 years in order to begin asset maintenance.

Updating of inventory data will allow calculation of a new AMD for the real estate portfolio by the end of 2021.

Update of Data Regarding Asset Maintenance Projects

As in past years, the updating of data concerning asset maintenance projects is completed by HSSN establishments during the annual update of real estate preservation and functionality plans (PCFI) and equipment and furniture preservation plans (PCEM) in the MSSS asset management system (Actifs+ Réseau).

Methodology

The GCI and AMD evaluate only the physical deterioration of a building and do not consider its functional obsolescence, meaning an outmoded development concept, inadequate configuration, or non-optimal space layout, excluding mandatory upgrades, which are integrated into the assessment of GCI and AMD. Therefore, assessing the physical deterioration of a building does not depend on its functional obsolescence.

The condition of a device is determined according to its actual age in relation to its pre-established standardized useful life. Medical devices are usually replaced at the end of their useful life. The AMD of medical devices corresponds to investment needs in order to provide for the replacement of medical devices whose age exceeds their pre-established standardized useful life.

The condition indicator percentages (A / B / C / D / E) are determined based on the replacement value of buildings or medical devices. For additional information, Appendix 2 shows the condition indicator of buildings according to their age group.

APPENDIX 2

COMPOSITION OF THE GROUPS OF BODIES

Health and Social Services Network

CISSS du Bas-Saint-Laurent
CIUSSS du Saguenay – Lac-Saint-Jean
CHU de Québec – Université Laval
CIUSSS de la Capitale-Nationale
Institut universitaire de cardiologie et de pneumologie de Québec – Université Laval
CIUSSS de la Mauricie-et-du-Centre-du-Québec
CIUSSS de l'Estrie – CHUS
CIUSSS de l'Ouest-de-l'Île-de-Montréal
CIUSSS du Centre-Sud-de-l'Île-de-Montréal
CIUSSS du Centre-Sud-de-l'Île-de-Montréal
CIUSSS du Nord-de-l'Île-de-Montréal
CIUSSS de l'Est-de-l'Île-de-Montréal
CHUM
CHU de Sainte-Justine
MUHC
Montreal Heart Institute
Institut national de psychiatrie légale Philippe-Pinel
CISSS de l'Outaouais
CISSS de l'Abitibi-Témiscamingue
CISSS de la Côte-Nord
CLSC de Naskapi
CRSSS de la Baie-James
CISSS de la Gaspésie
CISSS des Îles
CISSS de Chaudière-Appalaches
CISSS de Laval
CISSS de Lanaudière
CISSS des Laurentides
CISSS de la Montérégie-Centre
CISSS de la Montérégie-Est
CISSS de la Montérégie-Ouest
Nunavik Regional Board of Health and Social Services
Cree Board of Health and Social Services of James Bay

APPENDIX 3

DETAILED INVENTORY

Health and Social Services Network
Buildings[1]

	Quantity	Measurement (sq. m.)	Government condition indicator (%)					
			A	B	C	ABC	D	E
0-10 years								
Hospital centres	50	753,387	100	0	0	100	0	0
CHSLD	33	102,963	100	0	0	100	0	0
Rehabilitation centres	10	25,614	100	0	0	100	0	0
Youth centres	17	17,045	100	0	0	100	0	0
Local community service centres	19	37,388	100	0	0	100	0	0
Other	194	244,277	100	0	0	100	0	0
11-20 years								
Hospital centres	59	324,303	100	0	0	100	0	0
CHSLD	42	184,642	95	5	0	100	0	0
Rehabilitation centres	14	38,348	98	0	2	100	0	0
Youth centres	13	9,721	63	0	37	100	0	0
Local community service centres	38	65,146	71	27	0	98	2	0
Other	179	71,251	87	2	5	94	5	1
21-30 years								
Hospital centres	56	255,842	87	6	7	100	0	0
CHSLD	85	304,208	39	39	17	95	5	0
Rehabilitation centres	10	4,119	70	14	0	84	16	0
Youth centres	12	31,832	80	13	7	100	0	0
Local community service centres	31	27,680	28	22	28	78	22	0
Other	145	113,307	43	31	12	86	8	6
31-40 years								
Hospital centres	39	254,200	45	37	9	91	8	1
CHSLD	66	299,981	20	28	36	84	11	5
Rehabilitation centres	22	12,768	54	12	16	82	18	0
Youth centres	11	7,425	27	34	33	94	6	0
Local community service centres	34	66,617	8	42	25	75	25	0
Other	84	68,731	44	30	13	87	8	5
41-50 years								
Hospital centres	70	490,444	53	25	15	93	5	2
CHSLD	84	373,244	12	24	37	73	22	5
Rehabilitation centres	31	62,419	44	19	10	73	27	0
Youth centres	34	48,387	8	38	5	51	34	15
Local community service centres	20	32,916	16	61	16	93	1	6
Other	115	97,072	30	29	8	67	22	11
51-60 years								
Hospital centres	80	665,530	31	41	18	90	8	2
CHSLD	79	389,212	17	28	14	59	32	9
Rehabilitation centres	38	150,726	16	18	43	77	10	13
Youth centres	39	87,391	29	24	0	53	30	17
Local community service centres	15	43,402	35	14	11	60	40	0
Other	128	216,924	39	22	11	72	19	9

[1] Inspected buildings. Surplus buildings are not considered in this appendix.

APPENDIX 3
(cont'd)

Health and Social Services Network
Buildings[1]

	Quantity	Measurement (sq. m.)	Government condition indicator (%)					
			A	B	C	ABC	D	E
61-70 years								
Hospital centres	89	918,481	36	26	13	75	22	3
CHSLD	31	148,792	15	28	17	60	39	1
Rehabilitation centres	23	34,529	10	56	9	75	10	15
Youth centres	19	36,086	35	41	13	89	11	0
Local community service centres	16	48,191	17	53	25	95	5	0
Other	114	210,541	33	22	12	67	12	21
71 years and more								
Hospital centres	132	1,139,798	55	22	8	85	14	1
CHSLD	42	332,114	20	35	24	79	18	3
Rehabilitation centres	28	72,850	53	22	18	93	7	0
Youth centres	36	93,757	15	22	19	56	37	7
Local community service centres	17	46,628	47	20	14	81	19	0
Other	144	302,445	28	26	12	66	27	7
Total	**2,687**	**9,362,672**	**53**	**21**	**11**	**85**	**12**	**3**

[1] Inspected buildings. Surplus buildings are not considered in this appendix.

TOURISME

INFRASTRUCTURE MANAGEMENT

OLYMPIC PARK

VISION

The Olympic Park's vision for infrastructure management is to operate its facilities to their fullest potential, in keeping with their heritage value.

ORIENTATION

Since its new constituting Act came into force on November 1, 2020, the Olympic Park's mission is "to develop, manage, promote and operate Olympic Park facilities and to enhance its Olympic heritage and legacy." To successfully carry out this mission, it has adopted the following orientation with respect to the infrastructures and systems for which it is responsible:

- Securing, upgrading, renovating and modernizing facilities, systems and equipment.

RESPONSIBILITIES

The Olympic Park, which is under the legal responsibility of the Minister of Tourism, must manage its infrastructure and plan any actions that need to be taken.

DESCRIPTION OF THE INFRASTRUCTURE PORTFOLIO

The Olympic Park's infrastructure portfolio consists of numerous buildings and systems that are one-of-a-kind, grouped as follows: the Olympic Stadium and adjoining buildings (Tower, Sports Centre, administrative offices and leased spaces), the roof, the Esplanade, all outdoor spaces around the Olympic Stadium, and parking lots.

Infrastructure Inventory[1]
By Infrastructure Type and Category

	Average Age (years)[2]	Quantity			Measurement (sq. m.)		
		AMPI		Variation	AMPI		Variation
		2020-2021	2021-2022		2020-2021	2021-2022	
Buildings							
Olympic Stadium and Other Buildings	28	12	12	0	295,912	295,912	0
Roof	22	1	1	0	23,266	23,266	0
Esplanade and Outdoor Spaces Around the Olympic Stadium	27	3	3	0	150,533	150,533	0
Civil Engineering Works							
Parking lots	15	8	8	0	163,043	163,043	0

1 Data as at October 31, 2020.

2 Average age represents the "effective" age of infrastructure assets. This means how old the infrastructure looks (observed condition), taking into account such elements as chronological age, work carried out and useful life.

INFRASTRUCTURE SUSTAINABILITY

THE OLYMPIC PARK

Infrastructure Conditions and Asset Maintenance Deficit[1] By Infrastructure Type and Category

	Government condition indicator (GCI)[2] (%)						Asset Maintenance Deficit ($M)		
	A	B	C	ABC	D	E	GCI of D	GCI of E	Total
Buildings									
Olympic Stadium and Other Buildings	4	21	0	25	65	10	291.2	87.3	378.5
Roof	0	0	0	0	0	100	–	N/A	N/A
Esplanade and Outdoor Spaces Around the Olympic Stadium	21	2	16	39	23	38	21.2	77.3	98.5
Total – Buildings	5	18	1	24	59	17	312.4	164.6	477.0
Civil Engineering Works									
Parking lots	33	31	17	81	19	0	14.0	–	14.0
Total – Infrastructures	**8**	**20**	**2**	**30**	**55**	**15**	**326.4**	**164.6**	**491.0**

1 Data as at October 31, 2020.
2 Percentages are weighted according to replacement values.

Objectives

By March 31, 2026, the investments that the Olympic Park intends to make should allow them to reach or maintain the following proportion of infrastructure targets with a government condition indicator of satisfactory or better (GCI of A, B or C) in the following categories:

- Olympic Stadium and Other Buildings: 29%;
- Roof: 100%;
- Esplanade and Outdoor Spaces Around the Stadium: 39%;
- Parking lots: 81%.

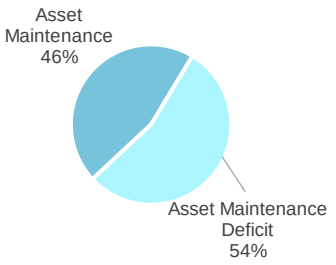
Manage the asset maintenance deficit in order to reduce it, by March 31, 2026, to a total of:

- $270.4 million for the Olympic Stadium and other buildings, i.e. a decrease of $108.1 million;
- $95.1 million for the Esplanade and outdoor spaces surrounding the Olympic Stadium, i.e. a decrease of $3.4 million.

Inventory Maintenance Investments in the 2021-2031 QIP

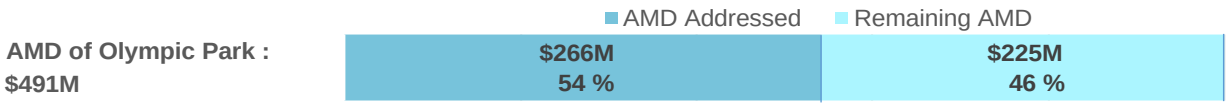
(contribution of the Gouvernement du Québec, in millions of dollars and as a percentage)

	Olympic Park	%
Infrastructure Maintenance		
Asset Maintenance	223.0	46
Asset Maintenance Deficit	266.2	54
Total	**489.2**	**100**



Note: Figures are rounded and the sum of the amounts may not correspond to the total indicated.

Addressing the Asset Maintenance Deficit



Investment Strategy

The Olympic Park's infrastructure management practices and the investments made in recent years have maintained 30% of the overall infrastructure in good condition. However, the Olympic Park is ageing and must continue to be modernized. In line with its new mission adopted in 2020 to develop and enhance the Olympic heritage and legacy, the organization has adjusted its investment strategy in order to achieve its objectives. Thus, the targeted projects, specifically the rehabilitation of leased spaces, will make it possible to manage a portion of the current AMD while increasing the potential for own-source revenues.

Overall, the investments planned for the Olympic Park in the 2021-2031 QIP will manage 54% ($266.0 million) of the current AMD and a significant portion of which is planned for the first five-year period, i.e. until March 2026, in order to achieve the objectives associated with the management of AMD. The $489.2 million total portfolio maintenance budget will also allow to proceed with the asset maintenance work and to replace the Stadium roof which is a critical part of the strategy for achieving the organization's business objectives and enhancing the client experience for visitors, partners and promoters.

STATEMENT

Public Infrastructure Investments Included in the QIP
By Type
(contribution of the Gouvernement du Québec, in millions of dollars)

	Infrastructure Maintenance				Infrastructure Enhancement	Total
	Asset Maintenance	Asset Maintenance Deficit	Repla-cement	Subtotal	Addition and Improvement	
Olympic Park						
2019-2020						
Actual	13.4	28.4	–	**41.8**	0.1	**41.9**
Forecast	18.0	35.3	–	**53.3**	0.3	**53.6**
Difference	(4.6)	(6.9)	–	**(11.5)**	(0.2)	**(11.7)**
2020-2021						
Probable	20.7	25.9	–	**46.6**	0.5	**47.1**
2021-2022						
Forecast	18.0	76.5	–	**94.5**	5.8	**100.3**

ADDITIONAL INFORMATION

Investments in 2019-2020 and probable investments in 2020-2021, totalling $41.9 million and $47.1 million, respectively, enabled the following main projects to be continued or completed:

- Repairs to one section of the parking lots (plans and specifications and work);
- Replacement of the Olympic Stadium roof (development of business case);
- Rehabilitation of the fire alarm system (work);
- Repairs to Sector 900 of the Esplanade/skate park (plans and specifications and work);
- Repairs to offices, ticketing and parking lots (plans and specifications and work);
- Tower upgrade and renovation program (work).

The difference of $11.7 million between the investments planned and the actual investments for 2019-2020 is mainly due to postponement of certain work and $3.2 million in anticipated savings from several projects that are in the process of being closed. Postponements were necessary due to, among other things, the need for additional studies, a lack of internal resources, interdependencies with partner work taking place in the Olympic Park quadrangle, and adjustments to procurement strategies on the international market.

Investments planned for 2021-2022 totalling $100.3 million will enable the following projects to be continued or completed:

- Renovation of the tourist areas of the Montréal Tower (plans and specifications and work);
- Replacement of the funicular (plans and specifications and work);
- Development of the base building on floors 8 to 14 of the Montréal Tower (work);
- Maintenance of structural components (plans and specifications and work);
- Redevelopment of the Viau metro access to Grande Place (plans and specifications and work);
- Repairs to administrative offices (plans and specifications and work);

- Repairs to evacuation doors (plans and specifications and work);
- Replacement of the Olympic Stadium roof (continued development of business case).

Change in the Infrastructure Conditions and Asset Maintenance Deficit By Infrastructure Type and Category

	GCI of D (%)			GCI of E (%)			Asset Maintenance Deficit ($M)				
	AMPI		Varia-tion	AMPI		Varia-tion	AMPI 2020-2021	Natural Degradation	New Findings	Decrease	AMPI 2021-2022
	2020-2021	2021-2022		2020-2021	2021-2022						
Buildings											
Olympic Stadium and Other Buildings	65	65	0	10	10	0	364.1	5.4	28.9	(19.9)	378.5
Roof	0	0	0	100	100	0	N/A	n.a.	n.a.	n.a.	N/A
Esplanade and Outdoor Spaces Around the Olympic Stadium	23	23	0	38	38	0	90.4	–	28.3	(20.2)	98.5
Total – Buildings	**59**	**59**	**0**	**17**	**17**	**0**	**454.5**	**5.4**	**57.2**	**(40.1)**	**477.0**
Civil Engineering Works											
Parking lots	19	19	0	0	0	0	23.6	–	–	(9.6)	14.0
Total – Infrastructures	**55**	**55**	**0**	**15**	**15**	**0**	**478.1**	**5.4**	**57.2**	**(49.7)**	**491.0**

ADDITIONAL INFORMATION

Change in Condition

The proportion of infrastructures in poor or very poor condition (GCI of D or E) remained stable despite an increase in the AMD. Studies and inspections have revealed new work to be done, as well as the natural deterioration of components for which work is planned.

Change in the AMD

The $62.6-million increase in the AMD is due to:

- In-depth studies conducted during the year resulting in a $5.4-million increase in certain estimates for work to be performed, most specifically pertaining to upgrading to standards and repairing certain structural components of the Olympic Stadium;
- New findings amounting to $57.2 million, which correspond primarily to the new requirements identified for the rehabilitation of administrative offices and leased spaces in very poor condition (GCI of E) that are currently occupied by Regroupement Loisir et Sport du Québec (RLSQ), as well as repairs to the Promenade slab in the outdoor spaces around the Stadium.

The $19.9-million decrease of the AMD for the "Olympic Stadium and Other Buildings" is mainly attributable to completion of work on the fire alarm system, office, ticketing and parking lot, as well as work on certain structural components.

The $20.2-million decrease of the AMD for the "Esplanade and Outdoor Spaces Around the Stadium" asset is mainly due to completion of redevelopment work in Sector 900 of the Esplanade, and elimination of certain work on outdoor areas that is no longer deemed necessary.

The parking lot repair project also allowed work involving elimination of the AMD to be carried out this year at a cost of $9.6 million.

In conclusion, a net increase of $12.9 million in the AMD is observed for the entire infrastructure portfolio.

APPENDIX 1

ADDITIONAL INFORMATION

Inspection and Data Update

Annual follow-ups and continual updates on the work to be carried out across the entire site will be performed in order to maintain an accurate picture of the Olympic Park's current condition.

Methodology

Based on the expertise obtained, the Olympic Stadium roof has reached the end of its useful life and cannot be repaired. Consequently, it must be replaced and for that reason, the AMD does not need to be assessed. The project to replace the Olympic Stadium roof is included in the "planning stage" category of the 2021-2031 QIP. In the meantime, to guarantee the absolute safety of anyone occupying the space, the Olympic Park has applied an occupancy management protocol for the main enclosure. This protocol is reviewed annually and approved by the Régie du bâtiment du Québec.

The condition indicator percentages (A / B / C / D / E) are weighted according to replacement value.

APPENDIX 2

DETAILED INVENTORY

	Quantity	Measurement (sq. m.)	Average Age (years)	Condition Indicator	Asset Maintenance Deficit ($M)
Olympic Stadium and Other Buildings					
Montréal Tower, Tourist Spaces and Observatory	3	27,503	22	C	52.8
Stadium (Tiers, Access Balconies, Play Area and Technical Services)	4	187,428	44	D	282.8
Sports Center	1	32,572	6	B	–
Thermal Power Plant	1	8,306	9	B	–
Administrative Offices and leased spaces	2	27,681	37	E	42.9
Institut national du sport du Québec (INSQ)	1	12,422	6	A	–
Total	**12**	**295,912**	**28**	**D**	**378.5**
Roof	**1**	**23,266**	**22**	**E**	**N/A**
Esplanade and Outdoor Spaces Around the Olympic Stadium					
Soccer Practice Pitch (P5-2 Roof)	1	17,489	8	A	–
Walkway Around the Stadium and Access Points	1	84,666	30	D	28.9
Esplanade (Sectors 100 to 900) and Access Points	1	48,378	43	E	69.6
Total	**3**	**150,533**	**27**	**D**	**98.5**
Parking lots					
Indoor parking (P1)	1	32,315	6	A	–
Indoor parking (P2 et P3)	2	58,889	12	D	14.0
Indoor parking (P4)	1	21,552	14	A	–
Indoor parking (P5 Level 1)	1	22,582	6	B	–
Indoor parking (P5 Level 2)	1	17,708	4	B	–
Outdoor parking (P7 - StarCité Cinema)	1	5,010	20	B	–
Outdoor parking (P8)	1	4,987	44	B	–
Total	**8**	**163,043**	**15**	**B**	**14.0**

TRANSPORTS

INFRASTRUCTURE MANAGEMENT

MINISTÈRE DES TRANSPORTS

VISION

As a major player in the organization of transportation systems, the MTQ exercises innovative leadership in the management of public transit networks, equipment, services and programs for which it is responsible. The main focus of its activities is to ensure rigorous, innovative and competent management of the highway system,[10] essential for economic exchange and for linking Québec's regions.

ORIENTATIONS

The mission of the MTQ is to ensure the sustainable mobility of people and goods throughout the territory using safe, efficient transportation systems that contribute to Québec's development. A key area of focus is maintaining the road infrastructure (specifically, roads and structures) in good condition, to which a very large part of its budget is allocated.

In keeping with its mission, the MTQ must ensure the completion of major projects to maintain assets, build new infrastructure, and replace infrastructure that is aging and in poor condition. The work of the MTQ aims to expand and adapt the highway system to meet the needs of citizens and ensure Québec's economic development. In its 2019-2023 Strategic Plan, the MTQ adopted the following orientations:

- Invest in the maintenance of transportation system infrastructure;
- Ensure an efficient and safe transportation system that has a smaller carbon footprint and supports a strong economy.

RESPONSIBILITIES

The MTQ carries out all construction, repair and maintenance work required for the infrastructure under its responsibility. The acquisitions and disposal of immovables are also governed by legislation and regulations that define the Department's initiatives. The Minister of Transport is also responsible for the Société des traversiers du Québec.

Furthermore, the MTQ administers financial assistance programs[11] to meet the priority needs of public transit corporations. It must ensure that the requests of transit corporations comply with the rules established, and oversee spending from the standpoint of government investments.

[10] Highway system: network comprising highways, and national, regional, collector and resource roads.
[11] Financial assistance programs are presented in Appendix 1.

The Act respecting the MTQ and the Act respecting roads set out the powers and obligations of the Minister, and more specifically those concerning management of the road network under his responsibility. In this respect, the legislation specifies that the Minister of Transport can carry out on the network all acts and exercise all the rights of an owner, although it stipulates that the local municipalities own roads that the Government builds or rebuilds, except for highways, which the Government owns, or those declared by government decree to be highways.

DESCRIPTION OF THE INFRASTRUCTURE PORTFOLIO

The MTQ manages the major road network totalling 31,039 kilometres and 5,475 structures, such as overpasses, bridges over watercourses, tunnels and retaining walls. Since 2007, the MTQ has also been responsible for 4,265 bridges located in the municipal network whose management was ceded back to the municipalities in 1993.

The MTQ's assets also include a portfolio of culverts under 3 m in diameter. Nearly 61,814 culverts are found on the major road network managed by the MTQ, including almost 13,000 in the RSSCE.

Other infrastructure also falls under MTQ responsibility. Inspections conducted on these infrastructures are geared and documented to ensure compliance with the safety standards in force. These infrastructures consists of:

- Buildings: wayside park network (roadside rest areas and service areas) and airport terminals;
- Civil engineering works: overhead and roadside signage structures;
- Electrotechnical equipment (lighting systems and light signals);
- Air, rail and marine transportation infrastructure: airports, heliports, the Société de chemin de fer de la Gaspésie and Québec Central railways, ferry terminals and wharves.

MINISTÈRE DES TRANSPORTS

Infrastructure Inventory[1]
By Infrastructure Type and Category

	Average Age (years)	Quantity			Measurement		
		AMPI		Variation	AMPI		Variation
		2020-2021[2]	2021-2022		2020-2021[2]	2021-2022	
Civil Engineering Works							
Highway System Roadways	N/A	n.a.	n.a.	n.a.	31,039 km	31,039 km	0 km
Structures							
Highway System	40	5,475	5,475	0	5,020,736 sq. m	5,020,736 sq. m	0 sq. m
Municipal Bridges	N/A	4,265	4,265	0	754,548 sq. m	754,548 sq. m	0 sq. m
Culverts under 3 m	N/A	61,814	61,814	0	1,446,859 m	1,446,859 m	0 m

1 Results based on data from 2019 reports.
2 An adjustment of the size of roadways and the quantity of highway system structures was made to align with the data presented in the 2019 reports.

Variation in Inventory

Due to data collection processing and analysis deadlines regarding inspections and work performed on road infrastructure under the responsibility of the MTQ, the 2021-2022 AMPI was prepared using information from 2019 reports.

INFRASTRUCTURE SUSTAINABILITY

MINISTÈRE DES TRANSPORTS

Infrastructure conditions and Asset Maintenance Deficit[1] By Infrastructure Type and Category

	Government condition indicator (GCI) (%)						Asset Maintenance Deficit ($M)		
	A	B	C	ABC	D	E	GCI of D	GCI of E	Total
Civil Engineering Works									
Highway System Roadways	17	21	11	49	22	29	1,821.0	6,093.0	7,914.0
Structures									
Highway System	By Number								
	20	27	30	77	8	15			
	By Value						–	8,444.8	8,444.8
	9	18	26	53	9	38			
Municipal Bridges	By Number								
	15	12	32	59	9	32			
	By Value						–	613.2	613.2
	11	12	35	58	9	33			
Culverts under 3 m	By Number								
	49	23	11	83	9	8			
	By Value						446.3	505.2	951.5
	51	23	10	84	8	8			
Total by value	**16**	**19**	**19**	**54**	**15**	**31**	**2,267.3**	**15,656.2**	**17,923.5**

[1] Results based on data from 2019 reports.

Objectives

The strategies put forward by the expert units are updated annually in order to slow the growth of the AMD and improve the proportion of infrastructure in good condition. In this respect, the 2019-2023 Strategic Plan of the MTQ seeks to achieve the following objectives by 2022-2023:

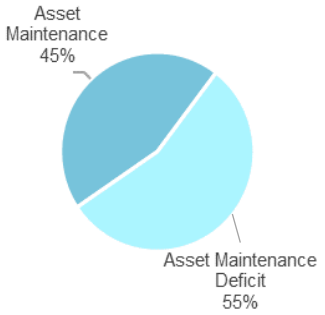
- 53% of roadways in the highway system in good condition according to the government condition indicator;
- 79% of highway-system structures (by number) in good condition according to the government condition indicator;
- 61% of municipal network bridges managed by the Department in good condition according to the government condition indicator.

The AMD of $17.9 billion, is the result of low investment in road infrastructure maintenance, especially from 1980 to 2000. Furthermore, since a large proportion of road network structures were built between 1960 and 1970, many are at the end of their useful life; reconstruction will require significant investments in the coming years.

Infrastructure Maintenance Investments in the 2021-2031 QIP

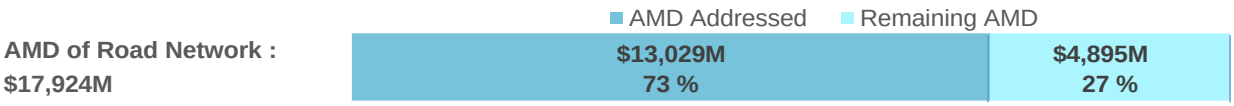
(contribution of the Gouvernement du Québec, in millions of dollars and as a percentage)

	Road Network	%
Infrastructure Maintenance		
Asset Maintenance	10,489.9	45
Asset Maintenance Deficit	13,028.6	55
Total	**23,518.5**	**100**



Note: Figures are rounded and the sum of the amounts may not correspond to the total indicated.

Addressing the Asset Maintenance Deficit[1]



[1] Level of investments planned in the 2021-2031 QIP to carry out interventions on assets with AMD.

Investment Strategies

In 2021-2031 QIP, investments of $13.0 billion to manage AMD are planned in order to carry out interventions on assets, which could ultimately reduce up to 73% of all the AMD listed nowadays. However, the natural degradation of road infrastructure will influence the variation of the AMD in the coming years.

Although they are not included in their physical dilapidation, carrying out work related to functional development on existing infrastructure, essential in particular for increasing road safety, traffic management and adaptation to climate change requires use of an increasingly significant portion of the investment envelopes available in infrastructure maintenance. The MTQ will continue to clarify the effect of these interventions on the rate of management of the AMD in the coming years.

Highway System Roadways

The MTQ has adopted a planning strategy in respect of pavement preservation measures to ensure that road network users enjoy a high level of service and to maximize the long-term benefits of investments. The challenge is to invest in the right roadway at the right time using the proper technique through optimum planning of measures and to avoid the “worst is first” reflex.

The MTQ plans to allocate the majority of investments available to performing high cost-benefit corrective measures to restore roadways to good condition and manage their AMD. The goal is to carry out, in the short term, the optimal amount of intervention to significantly prolong the useful life and riding comfort of the most obsolete roadways while substantially decreasing the AMD.

The strategy is open-ended and adapted to each MTQ territory depending on the condition and need for intervention on their network, financial parameters, the objectives defined in the AMPI and the targets set in the MTQ's strategic planning.

To achieve the target of 53% of roadways in good condition (GCI of A, B or C) by 2023, the MTQ drew on modern principles of sound road asset management to establish an intervention planning strategy. This strategy is built on five complementary components:

- Immediately initiate work on roadways where the pavement condition could compromise safety;
- Perform preventive work to maintain the roadways in good condition and increase their useful life by means of economic measures;
- Complete minor preventive interventions with a high cost-benefit based on the residual useful life of roadways;
- Complete minor preventive interventions with a high cost-benefit based on the residual useful life of roadways;
- Limit work that addresses other considerations and uncertainties through interventions that do not fall within other components.

In addition to the parameters stated above, the MTQ must strike a balance between investments in complex measures that remedy major deficiencies and high benefit-cost investments that remedy minor deficiencies. What is more, special attention is paid to heavily used road segments that display rutting.

Highway System Structures and Municipal Bridges

The intervention strategy devoted to structures prioritizes measures that ensure public safety. The MTQ's initiatives also seek to maintain assets to ensure the portfolio's sustainability. Lastly, because of the investments necessary, the strategic importance of structures and multi-year planning of initiatives, major structures are handled separately.

Based on the 2020-2022 integrated intervention strategy, the preservation of structures hinges on four key principles:

- Slow the pace of the structures' deterioration through targeted preventive maintenance measures and inexpensive repairs intended to postpone major interventions for five to 10 years;
- Reduce as quickly as possible the number of structures to be repaired on the RSSCE;
- Focus structure repair projects on measures that are strictly confined to structural deficiencies or other safety-related problems without adding "non-priority" interventions;
- Modify in the medium and long terms the distribution of intervention needs for structures to lengthen the time available to plan and complete major repair work.

In its strategic planning for the work to be carried out in the coming years, the MTQ has planned several major reconstruction and restoration projects on specific key structures in the highway system that are in poor condition. These investments will help decrease the current AMD on these structures by more than 73%. These projects include, most specifically:

- Major repair work on the Ville-Marie and Viger tunnels, as well as the Louis-Hippolyte-La Fontaine bridge-tunnel;
- Reconstruction of the Honoré-Mercier, Île-d'Orléans and Île-aux-Tourtes bridges;
- Major repair of the eastern section of Autoroute 40 (Autoroute Métropolitaine).

Culverts Under 3 m

The intervention strategy for culverts under 3 m aims to respond to the following four objectives:

- Intervene on culverts that pose a risk to user safety or to maintain the level of road network service;
- Intervene on culverts located below roadway projects;
- Intervene preventively on culverts in good condition;
- Intervene on culverts in poor condition that require only minor work to return them to good condition.

This prioritization makes it possible to ensure user safety, optimal use of resources and the sustainability of culverts. Furthermore, it avoids the "worst is first" reflex.

SITUATION

MINISTÈRE DES TRANSPORTS

Public Infrastructure Investments Included in the QIP
By Type
(contribution of the Gouvernement du Québec, in millions of dollars)

	Infrastructure Maintenance				Infrastructure Enhancement	Total
	Asset Maintenance	Asset Maintenance Deficit	Repla-cement	Subtotal	Addition and Improvement	
Ministère des Transports						
2019-2020						
Actual	1,315.8	736.2	–	**2,052.0**	335.6	**2,387.6**
Forecast	402.5	1,009.8	397.6	**1,809.9**	556.1	**2,366.0**
Difference	913.3	(273.6)	(397.6)	**242.1**	(220.5)	**21.6**
2020-2021						
Probable	1,044.0	883.4	–	**1,927.4**	422.2	**2,349.6**
2021-2022						
Forecast	1,211.1	1,150.0	–	**2,361.1**	538.9	**2,900.0**

ADDITIONAL INFORMATION

Differences Between Planned and Actual Investments

Investments in 2019-2020 to maintain the portfolio totalled $2,052.0 million, which is $242.1 million more than initially planned. This difference is explained primarily by the completion of certain projects faster than anticipated, such as:

- Autoroute 40 (Métropolitaine) — Montréal — Maintien;
- Échangeurs Turcot et De La Vérendrye — Montréal — Maintien.

The differences observed in the investments for the replacement reflect the intervention strategy of the MTQ which now considers this type of intervention as asset maintenance or the management of AMD depending on the state of the infrastructure.

Investments in 2019-2020 to enhance the portfolio totalled $335.6 million, which is $220.5 million less than initially planned. This difference is explained primarily by the slower completion of certain projects, such as:

- Autoroute 85 (Claude-Béchard) entre Saint-Antonin et Saint-Louis-du-Ha! Ha! (phase III) — Construction;
- Route 117, voie de contournement — Rouyn-Noranda — Construction.

Infrastructure Maintenance

Investments in 2019-2020 and 2020-2021 to maintain the portfolio totalled $2,052.0 million and $1,927.4 million. It made possible to complete or continue the following work:

- Échangeur de l'autoroute 20 et de la route 171 — Lévis — Réaménagement;
- Route 138, côte Arsène Gagnon — Les Bergeronnes — Reconstruction;
- Complexe Turcot — Montréal — Reconstruction;
- Tunnel Louis-Hippolyte-La Fontaine entre Montréal et Longueuil — Réfection;
- Échangeur de l'autoroute 13 et de l'autoroute 40, diverses structures — Montréal — Réfection et reconstruction;
- Pont Gouin entre Saint-Jean-sur-Richelieu et Iberville — Reconstruction.

Furthermore, for the year 2021-2022, anticipated investments to maintain the portfolio total $2,361.1 million and will be allocated to the following projects, among others:

- Autoroute 40 (Félix-Leclerc) direction est, entre Kirkland et Baie-d'Urfé — Reconstruction;
- Pont Pie-IX (route 125) entre Montréal et Laval — Réfection;
- Tunnels Ville-Marie et Viger — Montréal — Réfection;
- Pont Pierre-Laporte entre Québec et Lévis — Réfection.

Portfolio Enhancement

Investments made in 2019-2020 and probable in 2020-2021 to enhance the portfolio totalled $335.6 million and $422.2 million, respectively, and made it possible to complete or continue the following work:

- Autoroute 73 (Henri-IV) entre l'autoroute 40 et l'autoroute 440 — Québec — Élargissement;
- Autoroute 85 (Claude-Béchard) entre Saint-Antonin et Saint-Louis-du-Ha! Ha! (phase III) — Construction;
- Route 169, voie de contournement des quartiers L'Isle-Maligne et Delisle — Alma — Construction;
- Autoroute 410, voie de contournement (phase II) — Sherbrooke — Construction;
- Route 138, diverses sections entre Baie-Comeau et Port-Cartier — Reconstruction.

For 2021-2022, investments of $538.9 million are planned to enhance the inventory and complete the following work:

- Promenade Samuel-De Champlain (phase III) — Québec — Construction;
- Autoroute 35, entre Saint-Sébastien et Saint-Armand (phase III) — Construction;
- Autoroute 19 entre Laval et Bois-des-Filion — Construction.

MINISTÈRE DES TRANSPORTS

Change in the Infrastructure Condition and Asset Maintenance Deficit[1] By Infrastructure Type and Category

	GCI of D (%)			GCI of E (%)			Asset Maintenance Deficit ($M)				
	AMPI			AMPI			AMPI				AMPI
	2020-2021	2021-2022	Variation	2020-2021	2021-2022	Variation	2020-2021	Natural Degradation	New Findings	Decrease	2021-2022
Civil Engineering Works											
Highway System Roadways	22	22	0	29	29	0	7,401.0	–	513.0	–	7,914.0
Structures											
			By Number								
	8	8	0	15	15	0					
Highway System			By Value				9,527.2	–	(879.2)	(203.2)	8,444.8
	9	9	0	38	38	0					
			By Number								
	9	9	0	32	32	0					
Municipal Bridges			By Value				785.7	–	(172.5)	–	613.2
	9	9	0	33	33	0					
			By Number								
	9	9	0	8	8	0					
Culverts under 3 m			By Value				1,032.8	–	(81.3)	–	951.5
	N/A	8	n.a.	N/A	8	n.a.					
Total by value	**15**	**15**	**0**	**31**	**31**	**0**	**18,746.7**	**–**	**(620.0)**	**(203.2)**	**17,923.5**

[1] Results based on data from 2019 reports.

ADDITIONAL INFORMATION

Change in Condition

Due to data collection processing and analysis delays regarding inspections and work performed on road infrastructure under the responsibility of the MTQ, the 2021-2022 AMPI was prepared using information from 2019 reports. Accordingly, no variation in the condition indicators for any road infrastructure was observed this year, and the effect of measures taken in 2020 will be reflected in the 2022-2023 AMPI. This postponement will enable the MTQ to present, starting next year, a report of the condition of the AMD aligned with the latest certified data from inspections and with the intervention strategies implemented during the same period.

Change in the AMD

The overall reduction by $823.2 million of the AMD considers adjustments made to AMD assessment parameters, the state of advancement of some projects as well as the updating of certain costs.

Natural Deterioration

No natural deterioration of road infrastructure was observed this year since the network AMPI is presented based on inspection data from the previous year. Similarly, the effect of interventions completed in 2020-2021 could be reflected in the MTQ's 2022-2023 AMPI. However, the advancement of certain major repair projects is taken into account, including the final commissioning of the Turcot complex reconstruction in Montréal.

New Findings

- The $620.0-million overall decrease is primarily due to the following factors:
  - a downward adjustment of the AMD for certain repair and reconstruction projects for structures in very poor condition (GCI of E) currently under study, resulting from experience acquired, within the MTQ in recent years, in assessing costs for complex interventions;
  - an upward adjustment of increase factors associated with the cost of some types of roadway repairs, including management traffic maintenance during work, professional fees, mitigation measures as well as contingencies.

Reduction

- Reduction by $203.2 million arising from the final commissioning of the Turcot complex reconstruction project in Montréal.

INFRASTRUCTURE MANAGEMENT

PUBLIC TRANSIT CORPORATIONS

RESPONSIBILITIES

Since they own their infrastructure, the various public transit corporations are also responsible for the construction, maintenance, operation and financing of such infrastructure, including compliance with attendant regulations.

Consequently, it is incumbent upon the public transit corporations to evaluate, document and update data on the condition of infrastructure in order to support optimum management based on their priorities.

DESCRIPTION OF THE INFRASTRUCTURE PORTFOLIO

The infrastructure portfolio of public transit corporations comprises buildings such as terminals and bus shelters, garages for mechanical maintenance of equipment, stations, and administrative and service buildings.

Civil engineering structures include the infrastructure related to operating the Métro, that is, stations and tunnels, reserved bus lanes and parking lots, and sites required to adequately manage the vehicle fleet. Such structures also include the infrastructure related to operating the train network, that is, railroad lines, bridges, culverts, tunnels and walls.

Lastly, equipment comprises Métro cars, including the new state-of-the-art AZUR cars, which combine better reliability, increased capacity and enhanced comfort. Equipment related to the operation of the train network, namely, locomotives, passenger cars and automatic electrified cars are also under the responsibility of the MTQ. The mass transit equipment inventory also includes a fleet of buses that provides quality mass transit, emergency vehicles and all other equipment essential to ensure service continuity.

PUBLIC TRANSIT CORPORATIONS

Infrastructure Inventory[1]
By Infrastructure Type and Category

	Average Age (years)	Quantity			Measurement		
		AMPI		Variation	AMPI		Variation
		2020-2021	2021-2022		2020-2021	2021-2022	
Buildings							
Stations	21	50	51	1	1,189,664 sq. m	1,222,073 sq. m	32,409 sq. m
Garages and Workshops	34	42	42	0	1,396,886 sq. m	1,386,945 sq. m	-9,941 sq. m
Terminus	17	59	61	2	390,555 sq. m	390,506 sq. m	-49 sq. m
Administration and Services[2]	42	137	136	-1	113,793 sq. m	125,637 sq. m	11,844 sq. m
Bus Shelters, Shelters and Temperature-controlled Stations	13	5,346	4,943	-403	48,327 sq. m	48,341 sq. m	14 sq. m
Civil Engineering Works							
Métro							
Stations	45	68	68	0	249,701 sq. m	249,701 sq. m	0 sq. m
Tunnels	43	92	92	0	67 km	67 km	0 km
Trains							
Railroad Tracks	20	n.a.	n.a.	n.a.	44 km	44 km	0 km
Bridges, Culverts, Tunnels and Walls	30	146	215	69	n.a.	n.a.	n.a.
Reserved Lanes	13	n.a.	n.a.	n.a.	393 km	438 km	45 km
Park-and-ride Lots	15	43	46	3	552,100 sq. m	625,096 sq. m	72,996 sq. m
Equipments							
Métro Cars							
MR-73	45	423	423	0	n.a.	n.a.	n.a.
AZUR	4	486	513	27	n.a.	n.a.	n.a.
Buses							
Standard	10	3,507	3,572	65	n.a.	n.a.	n.a.
Articulated	9	471	468	-3	n.a.	n.a.	n.a.
Minibus	7	138	136	-2	n.a.	n.a.	n.a.
Trains							
Locomotives	17	41	41	0	n.a.	n.a.	n.a.
Passenger Rail Cars	14	206	206	0	n.a.	n.a.	n.a.
Electric Rail Cars	26	58	58	0	n.a.	n.a.	n.a.
Emergency Response Vehicules	6	738	750	12	n.a.	n.a.	n.a.
Other[3]	11	466	465	-1	n.a.	n.a.	n.a.

1 Results mainly based on data as at December 31, 2020.
2 Service buildings, which are primarily buildings to house mechanical and electrical equipment, including ventilation, electrical power supply and runoff-water pumping devices.
3 The "Other" category includes the following elements: elevating platforms, mechanical and washing sweepers, lift trucks, pallet trucks, floor cleaners, electric vehicles and platforms.

Variation in Inventory

The reduction of the number infrastructures in the category "Bus shelters, shelters and terminuses offering weather protection" is explained by the fact that certain bus shelters were excluded since they now belong to partners.

The increase in the number of infrastructures in the "Bridge, culvert, tunnel and wall" category is due to an update in the inventory in 2020.

The "Switches" and "Signalling" categories were withdrawn from the 2021-2022 AMPI since this equipment is now included with the infrastructure with which it is associated in the "Railroad tracks" and "Reserved bus lanes" categories.

INFRASTRUCTURE SUSTAINABILITY

PUBLIC TRANSIT CORPORATIONS

Change in Infrastructure Conditions[1] By Infrastructure Type and Category

	Government condition indicator (GCI) (%)					
	A	B	C	ABC	D	E
Buildings						
Stations	2	30	35	67	31	2
Garages and Workshops	22	10	22	54	22	24
Terminus	26	27	30	83	10	7
Administration and Services	7	8	28	43	29	28
Bus Shelters, Shelters and Temperature-controlled Stations	34	28	35	97	3	0
Civil Engineering Works						
Métro						
Stations	19	25	13	57	21	22
Tunnels	95	4	1	100	0	0
Trains						
Railroad Tracks	88	0	12	100	0	0
Bridges, Culverts, Tunnels and Walls	34	16	25	75	16	9
Reserved Lanes	23	57	17	97	3	0
Park-and-ride Lots	25	52	21	98	2	0
Equipments						
Métro Cars						
MR-73	0	0	0	0	100	0
AZUR	100	0	0	100	0	0
Buses						
Standard	19	61	13	93	4	3
Articulated	23	1	19	43	55	2
Minibus	1	17	78	96	2	2
Trains						
Locomotives	49	2	49	100	0	0
Passenger Rail Cars	78	0	22	100	0	0
Electric Rail Cars	0	0	0	0	100	0
Emergency Response Vehicules	10	10	24	44	55	1
Other	78	6	8	92	6	2
Total – Infrastructures[2]	**42**	**17**	**12**	**71**	**18**	**11**

1 Results mainly based on data as at December 31, 2020.
2 Percentages are weighted according to replacement values.

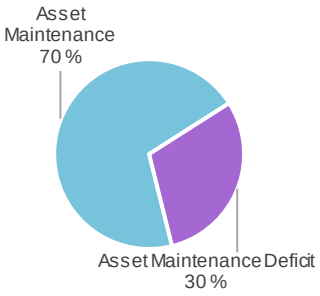
Objectives

- Offer safe, high-quality services that adhere to current standards;
- Maintain infrastructure in good condition (GCI of A, B or C) by means of continuous replacement and refurbishment of equipment, rolling stock and infrastructure that has reached the end of its useful life.

Infrastructure Maintenance Investments in the 2021-2031 QIP

(contribution of the Gouvernement du Québec, in millions of dollars and as a percentage)

	Public Transit	%
Infrastructure Maintenance		
Asset Maintenance	2,074.5	70
Replacement	894.9	30
Total	**2,969.5**	**100**



Note: Figures are rounded and the sum of the amounts may not correspond to the total indicated.

Investment Strategy

The majority of the infrastructure portfolio of public transit corporations is in good condition (GCI of A, B or C). This situation illustrates the efforts made by these corporations to maintain and enhance the infrastructure portfolio that delivers efficient, quality services that meet the needs of Quebecers.

Consequently, to provide for safe, dependable and fast services and to combat the deterioration of the infrastructure portfolio, investments of $2.9 billion are planned to maintain and replace infrastructure at the end of its useful life.

In concrete terms, the key investment projects planned to maintain the portfolio aim to:

- Replace fixed métro equipment, including escalators, ventilation, elevators and train control equipment;
- Perform general repairs to critical métro civil engineering structures, such as electrical, mechanical and structural systems;
- Reconstruct and upgrade buildings such as the Société de transport de Montréal's Complexe Crémazie and the Réseau de transport de Longueuil operations centre in Saint-Hubert;
- Replace rolling stock, including cars and locomotives, métro cars and buses.

SITUATION

PUBLIC TRANSIT CORPORATIONS

Public Infrastructure Investments Included in the QIP
By Type

(contribution of the Gouvernement du Québec, in millions of dollars)

	Infrastructure Maintenance				Infrastructure Enhancement	Total
	Asset Maintenance	Asset Maintenance Deficit	Repla-cement	Subtotal	Addition and Improvement	
Public Transit Authorities						
2019-2020						
Actual	148.8	–	192.8	**341.6**	380.8	**722.4**
Forecast	168.4	–	138.5	**306.9**	735.2	**1,042.1**
Difference	(19.6)	–	54.3	**34.7**	(354.4)	**(319.7)**
2020-2021						
Probable	146.9	–	277.9	**424.8**	619.0	**1,043.8**
2021-2022						
Forecast	182.5	–	180.6	**363.1**	532.1	**895.2**

ADDITIONAL INFORMATION

Differences Between Planned and Actual Investments

Investments in 2019-2020 to maintain the portfolio totalled $341.6 million, which is $34.7 million more than initially planned. This difference is explained primarily by additional investments that made renovation of métro infrastructure possible.

Investments in 2019-2020 to enhance the portfolio totalled $380.8 million, which is $354.4 million less than initially planned. This difference is explained primarily by slower-than-expected completion of certain projects, such as:

- Service rapide par bus intégré sur le boulevard Pie-IX entre Montréal et Laval — Aménagement et construction;
- Garage Côte-Vertu de la STM — Montréal — Construction;
- Métro de Montréal, ligne bleue de la station Saint-Michel à Anjou — Prolongement.

Infrastructure Maintenance

As for the funds allocated by the MTQ to support public transit corporations, investments made in 2019-2020 totalled $341.6 million. Furthermore, probable investments in 2020-2021 and planned investments in 2021-2022, totalling $424.8 million and $363.1 million, respectively, enabled the following main projects to be continued or completed:

- Métro de Montréal, voitures de métro AZUR — Remplacement;

- Pursuit of the Montréal Métro renovation programs:
  - Réno-Infrastructures (enhancement of stations, auxiliary structures, tunnels, garages and workshops);
  - Réno-Systèmes (replacement or upgrading of operations-related equipment, including, for example, ventilation, elevators and track equipment such as rail supports and guide bars).

Portfolio Enhancement

Probable investments in 2020-2021 and planned in 2021-2022, totalling $619.0 million and $532.1 million, respectively, enabled the following key projects to be continued or completed:

- Service rapide par bus intégré sur le boulevard Pie-IX entre Montréal et Laval – Aménagement et construction;
- Métro de Montréal, Programme d'accessibilité des stations (phase I) — Bonification;
- Garage Côte-Vertu de la STM — Montréal — Construction;
- Stationnements incitatifs de l'ARTM — Région métropolitaine de Montréal — Construction;
- Centre de transport Bellechasse de la STM — Montréal — Construction.

PUBLIC TRANSIT CORPORATIONS

Change in Infrastructure Condition
By Infrastructure Type and Category

	GCI of D (%)			GCI of E (%)		
	AMPI		Variation	AMPI		Variation
	2020-2021	2021-2022		2020-2021	2021-2022	
Buildings						
Stations	10	31	21	0	2	2
Garages and Workshops	26	22	(4)	11	24	13
Terminus	10	10	0	7	7	0
Administration and Services	N/A	29	n.a.	N/A	28	n.a.
Bus Shelters, Shelters and Temperature-controlled Stations	4	3	(1)	0	0	0
Civil Engineering Works						
Métro						
Stations	18	21	3	20	22	2
Tunnels	0	0	0	0	0	0
Trains						
Railroad Tracks	0	0	0	0	0	0
Bridges, Culverts, Tunnels and Walls	23	16	(7)	6	9	3
Reserved Lanes	8	3	(5)	0	0	0
Park-and-ride Lots	5	2	(3)	0	0	0
Equipments						
Métro Cars						
MR-73	100	100	0	0	0	0
AZUR	0	0	0	0	0	0
Buses						
Standard	3	4	1	2	3	1
Articulated	55	55	0	0	2	2
Minibus	3	2	(1)	0	2	2
Trains						
Locomotives	0	0	0	0	0	0
Passenger Rail Cars	0	0	0	0	0	0
Electric Rail Cars	100	100	0	0	0	0
Switches	0	n.a.	n.a.	0	n.a.	n.a.
Emergency Response Vehicules	60	55	(5)	1	1	0
Signage	0	n.a.	n.a.	0	n.a.	n.a.
Other	5	6	1	2	2	0
Total – Infrastructures	**17**	**18**	**1**	**8**	**11**	**3**

ADDITIONAL INFORMATION

Change in Condition

The main infrastructures for which an increase in the proportion in poor (GCI of D) or very poor (GCI of E) is found are terminals, garages and workshops.

Deterioration of the condition of terminals is due in particular to more targeted inspections of infrastructure of the public transit body exo by specialized workers.

Deterioration of the condition of garages and workshops is the result of new inspections conducted during the year. Furthermore, these new inspections revealed that this infrastructure was mostly in poor (GCI of D) or very poor (GCI of E) condition.

Lastly, considering the relatively high replacement value of métro station infrastructure, the increase in the proportion of stations in poor (GCI of D) or very poor (GCI of E) condition corresponds to significant asset maintenance needs to combat their deterioration and return them to a condition of satisfactory or better (GCI of A, B or C).

APPENDIX 1

ADDITIONAL INFORMATION

MINISTÈRE DES TRANSPORTS

MTQ Financial Assistance Programs to Meet the Priority Needs of Public Transit Corporations

The MTQ administers financial assistance programs to meet the priority needs of public transit corporations. It must ensure that the requests of transit corporations comply with the rules established, and oversee spending from the standpoint of government investments.

The financial assistance programs seek primarily to support transportation authorities to carry out the capital projects necessary to organize and operate services. These programs are intended to foster the maintenance, enhancement and development of mass transit equipment and infrastructure.

Public transit corporations benefit, in particular, from the subsidy programs indicated below:

- PAGTCP – Volet immobilisation: the objectives targeted by this program are to maintain existing assets in good condition, to improve the quality of the services offered to the clientele, and to develop new services;
- SOFIL Programme d'aide aux immobilisations en transport en commun: this program, in force since January 1, 2006, targets capital projects in the realm of mass transit. Funding sources include a portion of the revenue from the federal excise tax on gasoline, revenue from registrations of automobiles with high-displacement engines, and revenue from the Land Transportation Network Fund (FORT);
- PAFFITC: this program stems from the Canada-Québec Agreement on the Public Transit Infrastructure Fund, reached on June 29, 2016. The program seeks to support investments to restore and improve existing mass transit networks and those targeting the preparation of studies to support longer-term network expansion projects;
- PAGITC: this program stems from the signing of the IBA with the Government of Canada and supports new mass transit infrastructure construction, expansion, improvement and restoration projects, and active transportation projects.

APPENDIX 1 (cont'd)

ADDITIONAL INFORMATION

MINISTÈRE DES TRANSPORTS

Inspection and Data Update

Highway System Roadways

The MTQ monitors 83% of main paved roadways, or 25,750 km of the 31,039 km of the Québec major road network. The unmonitored portion of roadways mainly comprises gravel roads and onramps.

Structures (Highway System and Municipal Bridges)

The inspection program provides a comprehensive picture of the condition of all structures under the responsibility of the MTQ. Follow-up is carried out by means of different types of inspections at frequencies that vary depending on the age and the level of deterioration of the structure.

Culverts Under 3 m

Culverts are inspected according to the methodology established by the culvert inspection program. These inspections make it possible to learn the condition of culverts located under the roads making up the road network under the MTQ's management. The frequency with which a culvert is inspected is determined by its condition, characteristics and the importance of the road link. In 2019, the proportion of culverts inspected reached 96%.

Methodology

Highway System Roadways

Currently, the AMD and GCI are determined based on inspection data from 2019. The AMD and GCI are extrapolated taking into account the representativeness and relative importance of the uninspected portions of the system.

Condition Indicator

For more than 15 years, the MTQ has been inspecting the main paved roadways, monitoring changes in their condition and publishing an annual report based on the key indicator. The IRI is used to measure the ride quality experienced by vehicle occupants and is a standard employed by the vast majority of road authorities around the world. Its definition and calculation are subject to international standards.

The MTQ has used this indicator to define, in its successive strategic plans, performance targets based on the percentage of the road network in good condition. The MTQ publishes the findings in its Rapport annuel de gestion, and the results of its monitoring in its *Bilan annuel d'état du réseau routier*. Good pavement is a road segment for which the value of the ride comfort index falls below a threshold between good condition and a condition that requires intervention to restore good ride quality. On the other hand, the choice of initiatives and the best technique to be implemented considers other indicators such as rutting, cracking and vulnerability to freezing.

Within the framework of the AMPI, four indicators have been combined to create a new indicator integrated for the purposes of the GCI: the IRI, the rutting index, the cracking index and vulnerability to freezing. A road segment can offer good ride quality although it displays a fairly high cracking rate. The combination of the four indicators means that the assessment presented based on the GCI can differ from that hinging uniquely on the IRI. Consequently, recourse to this combination of indices better links the condition of infrastructure to the investments needed to attain what is deemed satisfactory or better condition.

Asset Maintenance Deficit

The value of the AMD of roadways represents the cost of work to repair roadways in poor and very poor condition for which the requisite work has not been carried out. These roadways have reached a severely deficient state where, for some, their remaining useful life is three years or less.

Structures (Highway System and Municipal Bridges)

Condition Indicator

For many years, the MTQ has been using different indicators to monitor the safety, functionality and general condition of its structures. The main indicator used by most road authorities is the "proportion of structures in good condition", which, for the purpose of the GCI, means all the condition indicators above the threshold of very good (A), good (B), or satisfactory (C), while structures "to be repaired" fall under condition indicators poor (D) and very poor (E).

At the MTQ, this indicator is based on the inspection data, targeting the main elements whose condition is such that they require work within the next five years. Other complementary indicators are also used, such as:

- a structure's functionality index, which measures whether the structure meets users' needs;
- a structure's behaviour index, which reflects the structure's stability and safety.

The combined results of these indicators help the MTQ choose the most attractive and beneficial course of action.

The "proportion of structures in good condition" indicator is expressed as a number, facilitating its interpretation. Conversely, it has the drawback of assigning the same weighting to every structure, regardless of size. Another way to present the information, which appears in the previous table, is as a percentage of the structure's value. This method offers the advantage of associating the need for investments with the relative importance of the structures. Consequently, structures of high value strongly influence the overall GCI of structures.

Asset Maintenance Deficit

The AMD of structures in the highway system and bridges of the municipal system is the total work required to restore to good condition structures requiring work for more than five years. This value is greatly influenced by a few key structures requiring work and for which the MTQ has planned major work, such as the Louis-Hippolyte-La Fontaine bridge-tunnel, and Ville-Marie and Viger tunnels as well as the Île-aux-Tourtes, Île-d'Orléans and Honoré-Mercier bridges. The MTQ will continue to emphasize initiatives that ensure public safety and is committed for many years to come to a replacement and maintenance cycle focusing on aging assets.

Lastly, the MTQ has also developed other indicators in response to targeted needs:

- The general condition indicator, which offers a cursory picture of the condition of structures for the general public by dividing them into four main categories, that is, structures that:
  - require replacement;
  - require major work;
  - require repairs;
  - do not require any intervention.
- The index of restoration investments to be carried out, developed at the request of the Auditor General of Québec.

The *Bilan de l'état des structures* presents information on the structures of the highway system and municipal bridges under the responsibility of the MTQ. The *Rapport annuel de gestion du ministère des Transports* includes reporting according to the targets established under the *Plan stratégique 2019-2023*. The MTQ presents the general inspection reports on its structures on its website.

Culverts Under 3 m

Condition Indicator

The MTQ inspects culverts based on 18 criteria divided into four categories: structural capacity, hydraulic capacity, condition of the embankment and the roadway, and the condition of other components, such as the headwall.

These inspections attribute a culvert condition indicator (CCI) to each culvert. The CCI determines the GCI linked to the infrastructure.

Culverts that are classed A, B or C are deemed to be in good condition, which means that they do not require any major intervention in the short term. Some of them may require minor repairs or maintenance to ensure their proper operation and to prolong their useful life. Culverts that are classed D and E are in poor condition and require repairs, rehabilitation or reconstruction.

Asset Maintenance Deficit

For the 2020-2021 AMPI, the MTQ presents a first evaluation of the AMD of culverts under 3 m based on the rebuilding cost determined for culverts in poor condition (GCI of D or E). The AMD calculation was clarified this year. For culverts in poor condition (GCI of D), it takes into account the cost of repairs required to restore their condition, rather than considering the cost of full reconstruction.

APPENDIX 1 (cont'd)

ADDITIONAL INFORMATION

PUBLIC TRANSIT CORPORATIONS

Inspection and Data Update

The inventory of mass transit infrastructure incorporates the majority of the infrastructure owned by public transit corporations, that is, the ARTM, exo, STM, RTC, RTL, STL, STO, STLévis, STTR, STS (Saguenay) and STS (Sherbrooke).

Given that the MTQ does not own public transit infrastructure, the inventory is based on available data provided by the public transit corporations. From the standpoint of government guidelines, the MTQ collects and processes, in collaboration with all public transit corporations, data to establish and update a complete, representative picture of the condition of the infrastructure that the corporations own. This approach seeks to plan the Gouvernement du Québec's investments to support public transit corporations over the next 10 years, bearing in mind the responsibilities linked to the ownership of the infrastructure concerned.

Methodology

The condition indicator percentages (A / B / C / D / E) and the average condition indicator are weighted according to the infrastructure for all categories, except reserved lanes and railroad lines, which are weighted according to the number of kilometres.

INFRASTRUCTURE MANAGEMENT

SOCIÉTÉ DES TRAVERSIERS DU QUÉBEC

VISION

A successful and innovative Government enterprise, a leader in maritime transportation.

ORIENTATION

Offer reliable services through an efficient, safe fleet and land infrastructure portfolio.

RESPONSIBILITIES

The STQ, which falls under the responsibility of the Minister of Transport, must ensure that the infrastructure it owns enables it to attain the above objectives. To succeed in doing so, the STQ must allocate the resources required to:

- Guarantee the infrastructure's integrity;
- Ensure compliance with the applicable regulatory requirements;
- Carry out work to extend their useful life;
- Undertake improvements to satisfy new requirements;
- Replace infrastructures at the end of their useful life.

DESCRIPTION OF THE INFRASTRUCTURE PORTFOLIO

The STQ has 11 ferries[12] and two services under its responsibility, nine of which it operates. They are located mainly along the St. Lawrence River, between Sorel and the Basse-Côte-Nord.

Aside from its head office building, the STQ owns infrastructure that encompasses 22 vessels (15 ferries, three passenger vessels and four work craft), buildings (terminals, service buildings, footbridges, warehouses, workshops), wharves, landing docks as well as other civil engineering structures (waiting areas, access roads, parking facilities, ripraps).

[12]Crossing: route that a ferry follows on a watercourse.

SOCIÉTÉ DES TRAVERSIERS

Infrastructure Portfolio[1]
By Infrastructure Type and Category

	Average Age (years)	Quantity			Measurement		
		AMPI		Variation	AMPI		Variation
		2020-2021	2021-2022		2020-2021	2021-2022	
Buildings	21	85	85	0	9,005 sq. m	9,005 sq. m	0
Civil Engineering Works							
Wharves	36	26	26	0	7,571 m	7,571 m	0
Docks	17	20	20	0	3,604 sq. m	3,604 sq. m	0
Other	35	22	22	0	161,298 sq. m	161,298 sq. m	0
Equipments							
Vessels	25	21	22	1	n.a.	n.a.	n.a.

[1] Data as at November 2020.

Variation in Inventory

A new vessel was acquired last year, the MV Jos-Hébert for the transport of goods across the Saint-Augustin river (Basse-Côte-Nord).

INFRASTRUCTURE SUSTAINABILITY

SOCIÉTÉ DES TRAVERSIERS DU QUÉBEC

Infrastructure Conditions and Asset Maintenance Deficit[1] By Infrastructure Type and Category

	Government condition indicator (GCI)[2] (%)						Asset Maintenance Deficit ($M)		
	A	B	C	ABC	D	E	GCI of D	GCI of E	Total
Buildings	91	3	0	94	5	1	–	–	–
Civil Engineering Works									
Wharves	8	13	6	27	60	13	60.6	32.5	93.1
Docks	61	0	0	61	39	0	11.4	–	11.4
Other	83	12	5	100	0	0	–	–	–
Equipments									
Vessels	54	30	5	89	11	0	25.0	–	25.0
Total – Infrastructures	**54**	**22**	**4**	**80**	**18**	**2**	**97.0**	**32.5**	**129.5**

1 Data as at November 2020.
2 Percentages are weighted according to replacement values.

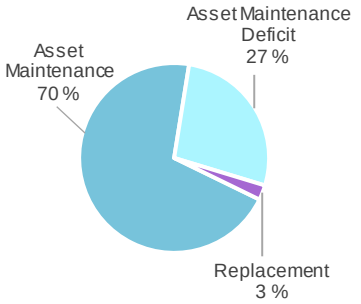
Objectives

In the coming years, the STQ's objectives in managing its infrastructure are linked with the aim of maintaining the performance of the number of crossings planned at 99.5%, i.e.:

- By March 31, 2025, reach a proportion of infrastructure with a GCI of C or greater of:
  - 35% for wharves;
  - 75% for landing docks;
  - 92% for vessels.
- At all times, maintain a higher than 90% proportion of buildings and civil engineering structures in the "Other" category with a GCI of C or greater.
- By March 31, 2025, reduce the currently evaluated AMD of $129.5 million by $50.6 million for the following infrastructure categories:
  - $24.9 million for wharves;
  - $3.0 million for landing docks;
  - $22.7 million for vessels.

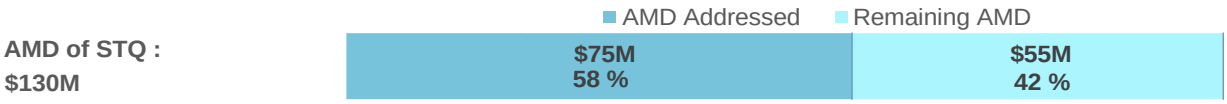
Infrastructure Maintenance Investments in the 2021-2031 QIP
(contribution of the Gouvernement du Québec, in millions of dollars and as a percentage)

	STQ	%
Infrastructure Maintenance		
Asset Maintenance	194.0	70
Asset Maintenance Deficit	74.9	27
Replacement	7.0	3
Total	**275.9**	**100**



Note: Figures are rounded and the sum of the amounts may not correspond to the total indicated.

Addressing the Asset Maintenance Deficit



Investment Strategy

To ensure the long life of its assets and maintain their performance, the STQ must update and implement its investment plans taking into account the main stages of their useful life, particularly their design, construction, operation, maintenance, rehabilitation and replacement. The decisions made at all points during this cycle can impact the remaining useful life of STQ assets. This is especially important considering that many infrastructures are aging and require investments to combat their deterioration and remain operational.

More concretely, for the vessel investment plan, it is important to plan long-term to optimize interventions that require dry docking and ensure the continuity of service. Consequently, work planned according to the useful life includes:

- Midlife interventions when a vessel reaches approximately 30 years of age;
- Thorough inspection and maintenance of each vessel every five years focused on such work as:
  - Rehabilitation of vessel structural components;
  - Refurbishment of mechanical components (engines, propellers), electrical (power distribution systems), electronics (radar, communication systems) and other systems (fire detection and suppression, rescue equipment and systems).

This work makes it possible to obtain the certifications required to continue vessel operations.

An inspection program (shore and underwater) of wharves and landing docks is in place to identify refurbishment work targeting essential components to keep them operational and extend their useful life. By following these procedures, the STQ gains extra time to plan the reconstruction of wharves and landing docks, which will make it possible to return them to very good condition (GCI of A) and respond to needs associated with the evolution of the service offer. The asset maintenance project currently being planned to the L'Isle-aux-Coudres wharf in preparation for a major reconstruction is a good example of this strategy.

In addition, for some infrastructure categories, and particularly for vessels, interventions not foreseen in the initial planning may be required to deal with unexpected component breakdowns or to comply with new standards. When possible, these are completed during maintenance periods scheduled in the investment plan.

SITUATION

Public Infrastructure Investments Included in the QIP
By Type

(contribution of the Gouvernement du Québec, in millions of dollars)

	Infrastructure Maintenance				Infrastructure Enhancement	Total
	Asset Maintenance	Asset Maintenance Deficit	Repla-cement	Subtotal	Addition and Improvement	
Société des traversiers du Québec						
2019-2020						
Actual	8.4	–	1.2	**9.6**	55.4	**65.0**
Forecast	21.7	–	–	**21.7**	58.3	**80.0**
Difference	(13.3)	–	1.2	**(12.1)**	(2.9)	**(15.0)**
2020-2021						
Probable	4.4	4.4	0.6	**9.4**	13.3	**22.7**
2021-2022						
Forecast	12.0	22.1	2.0	**36.1**	14.3	**50.4**

ADDITIONAL INFORMATION

Differences Between Planned and Actual Investments

The investments made in 2019-2020 for STQ infrastructure maintenance totalled $9.6 million while those forecast were $21.7 million. This difference of $12.1 million is primarily due to postponement of investments in the project to modernize the MV *Joseph-Savard*, which reduced investments made by approximately $11.5 million.

Infrastructure Maintenance

Probable investments in infrastructure maintenance were $9.4 million in 2020-2021 and enabled completion or continuation of the following projects:

- Refurbishment and refitting of the MV *Joseph-Savard* – L'Isle-aux-Coudres–Saint-Joseph-de-la-Rive crossing;
- Replacement of the ACV L'*Esprit-de-Pakuashipi*;
- Reconstruction of the Saint-Augustin wharf of the Rivière Saint-Augustin crossing (Basse-Côte-Nord).

In comparison with probable investments in 2020-2021, those forecast in 2021-2022 for infrastructure maintenance are increasing by $26.7 million to $36.1 million. This increase in investments is mainly attributable to completion of the following projects:

- Refurbishment and refitting of the MV *Joseph-Savard* – L'Isle-aux-Coudres – Saint-Joseph-de-la-Rive crossing;
- Reconstruction of the Saint-Augustin wharf of the Rivière Saint-Augustin crossing (Basse-Côte-Nord);
- Maintenance of L'Isle-aux-Coudres wharf assets.

Portfolio Enhancement

The investments made in 2019-2020 in improvement and addition projects reached $55.4 million while probable investments for 2020-2021 are $13.3 million. These amounts facilitated completion or continuation of the following projects:

- Construction of a freight transport vessel at the Rivière Saint-Augustin crossing (Basse-Côte-Nord), the MV *Jos-Hébert*;
- Construction of a multifunctional building in Chevery;
- Better traffic flow to the ferry from Sorel-Tracy to Saint-Ignace-de-Loyola.

Investments planned in 2021-2022 for improvements and additions totalling $14.3 million will enable completion of new projects or the continuation of projects underway, including the construction of a multifunctional building in Chevery.

SOCIETE DES TRAVERSIERS DU QUÉBEC

Change in the Infrastructure Conditions and Asset Maintenance Deficit By Infrastructure Type and Category

	GCI of D (%)			GCI of E (%)			Asset Maintenance Deficit ($M)				
	AMPI		Variation	AMPI		Variation	AMPI				AMPI
	2020-2021	2021-2022		2020-2021	2021-2022		2020-2021	Natural Degradation	New Findings	Decrease	2021-2022
Buildings	5	5	0	1	1	0	–	–	–	–	–
Civil Engineering Works											
Wharves	60	60	0	13	13	0	85.0	8.1	–	–	93.1
Docks	32	39	7	0	0	0	8.9	2.5	–	–	11.4
Other	0	0	0	0	0	0	–	–	–	–	–
Equipments											
Vessels	11	11	0	0	0	0	23.6	–	5.8	(4.4)	25.0
Total – Infrastructures	**17**	**18**	**1**	**2**	**2**	**0**	**117.5**	**10.6**	**5.8**	**(4.4)**	**129.5**

ADDITIONAL INFORMATION

Change in Condition

The proportion of buildings, wharves and other civil engineering structures in poor or very poor condition (GCI of D or E) remained stable compared with the previous year.

For landing docks, the 7% increase in the proportion assessed to be in poor condition (GCI of D) is attributable to the Sorel dock, which passed this year from satisfactory (GCI of C) to poor (GCI of D), primarily due to deterioration of structural components caused by its location in a saline environment.

The proportion of vessels in poor or very poor condition (GCI of D or E) remained stable compared with the previous year. This finding is explained mainly by the fact that only one vessel, the ACV L'*Esprit-de-Pakuashipi*, deteriorated, passing from a condition of satisfactory (GCI of C) to poor (GCI of D) due to new work needs listed, while a new freight transport vessel, the MV *Jos-Hébert*, assessed to be in very good condition (GCI of A), was acquired.

Change in the AMD

The AMD increase to $12 million is mainly explained by the following elements:

Natural Deterioration

The $10.6 million increase is explained by the aging of some wharves and land docks nearing the end of their useful life and for which investments of $8.1 million (for wharves) and $2.5 million (for landing docks) were identified.

New Findings

The increase of $5.8 million is explained by the addition of estimated cost of new asset maintenance work of $3.8 million required on the MV *Radisson* until it is decommissioned and dismantled as well as the addition of asset maintenance needs assessed at $2.0 million on other vessels.

Reduction

The midlife refurbishment work carried out on the MV *Joseph-Savard* has addressed $4.4 million of the AMD.

For wharves and landing docks, work must be condensed so as not to compromise the continuity of operations. Consequently, no decrease was noted last year, but the effect of work planned on wharves and landing docks will be seen in the coming years.

APPENDIX 1

ADDITIONAL INFORMATION

SOCIÉTÉ DES TRAVERSIERS DU QUÉBEC

Inspection and Data Update

A continuous inspection schedule was established targeting the critical components of buildings and civil engineering structures essential for delivery of the required service. The objective is to have an up-to-date picture of the condition of our infrastructures to support decisions about them.

For vessels, periodic inspection and follow-up programs for all components are required under the legislative and standards-based obligations imposed by the *Canada Shipping Act 2001*, among others, and the statutory regulations of classification societies. As a result of these inspections, each vessel obtains the periodic statutory approvals needed to maintain the certification required to perform its mission.

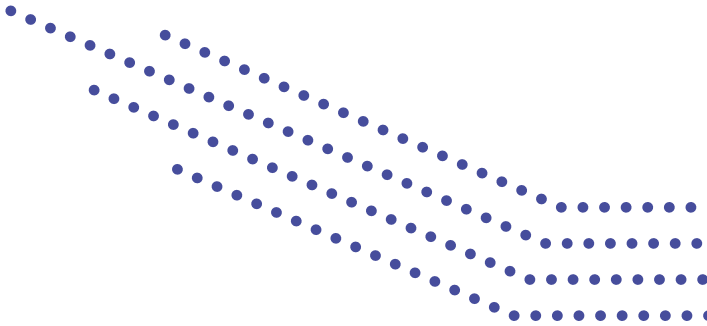
Methodology

The average age of the wharves and landing docks represents their effective age, which considers the infrastructure's chronological age and the work done on it to ensure its ability to render service until the end of its useful life.

For the vessels, buildings and civil engineering structures, the average age of these infrastructures corresponds to their real age.

The method for evaluating the condition of buildings and civil engineering structures is based on the establishment of a condition index after a technical inspection. For wharves and docks, the condition assessment method is based on an infrastructure deterioration model according to effective age. This evaluation supports the investment strategy for these infrastructures, which aims to carry out grouped interventions to minimize the consequences on operations.

For vessels, the condition assessment method considers their condition index and age to better reflect the situation. This method supports enlightened investment decisions regarding them.



Conseil du trésor
Québec