



2023 YEAR IN REVIEW

Presentation to Manitoba Heavy Construction Association

February 14, 2024



BUDGET 2023

Overview

- Capital investments in infrastructure are critical to economic growth and generating jobs, including those in the heavy construction sector.
- Budget 2023 introduced a five-year capital plan that included the continuing commitment to invest a minimum of \$500 million per year on highway capital infrastructure.
- MTI priorities and mandates for highway development in the province support a 30-year plus vision to enhance strategic transportation infrastructure connecting Manitoba to national and international markets.
- Strategic priorities include development of Winnipeg as an international trade hub, investment in strategic trade corridors, further development of a grid of trade and commerce routes and the Winnipeg One Million Perimeter freeway initiative.



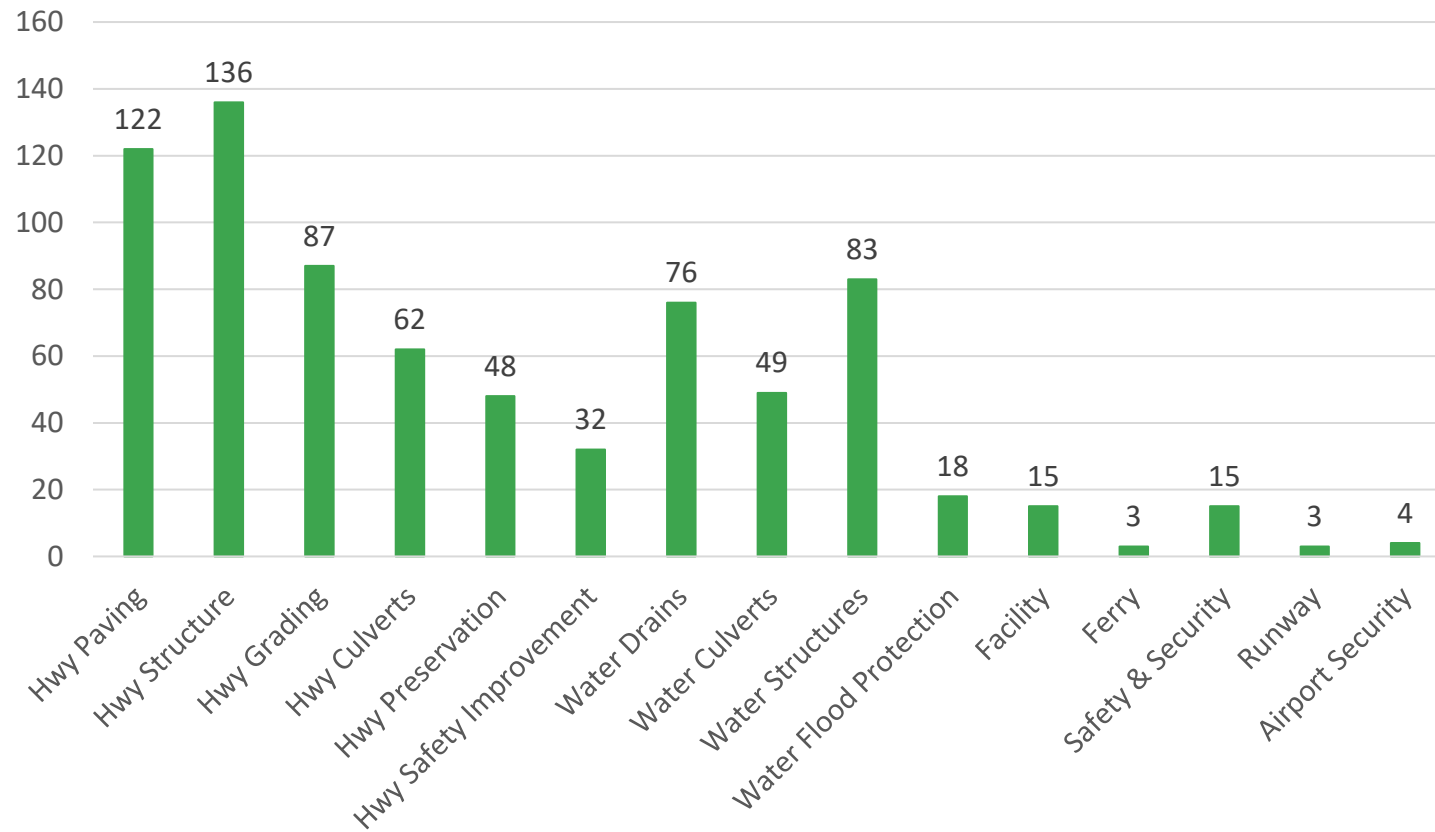
PTH 1: 0.3km W of W Jct PTH 10—0.3km E of E Jct PTH 10
Bituminous Rehabilitation



BUDGET 2023

Annual Capital Plan

2023/24 Projects

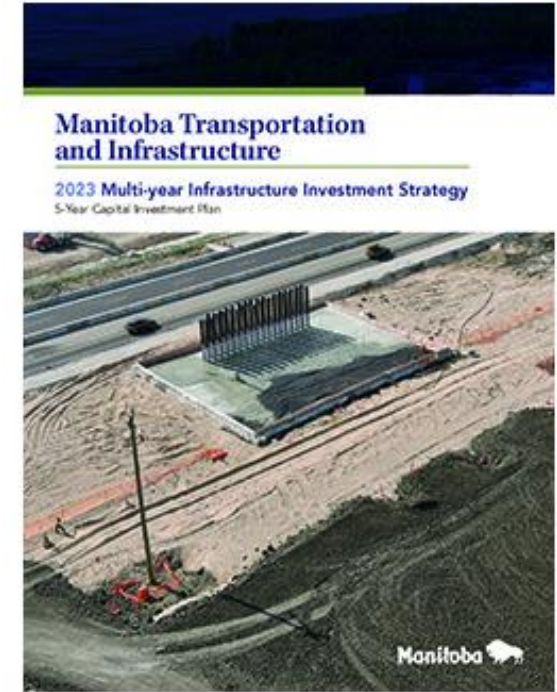


- 753 projects planned for 2023/24
- Total capital budget of \$622M across the different program areas:
 - Highways
 - Water
 - General Capital
 - Airports
 - Outlet Channels
- New and continuing projects at different stages: design, construction, construction preparation, environmental approvals, etc.
- Additional projects added throughout the year.



CAPITAL PROGRAM DELIVERY

Project Planning & Delivery



Manitoba Infrastructure Projects Map

Manitoba Infrastructur...

Hwy #
Click here to sel...

Project Status
Click here to select Pro...

Project Type
Click to filter by Pro...

Municipality Name
Click here to filter by M...

Manitoba Infrastructure Projects in displayed area

Road Restoration on Hwy 305

- PR 330--1.0km West of PTH 75
- Located in the RM OF MACDONALD
- Seasonal Shut Down

Structure Replacement on Hwy 259

- At Assiniboine River (Flood Relief): 6.1 km West of PR 463 (Vicinity of Virden)
- Located in the RM OF WALLACE-WOODWORTH
- Construction

Surface Preservation on Hwy 307

- 14.7km North of PTH 44 (Red Rock Bible Camp Access)--PR 309
- Located in the UNORGANIZED TERRITORY

Manitoba Capital Plans Project Status

Project Status

- ▲ Ad Schedule
- Ad Schedule RFP
- Design
- Construction
- Seasonal Shut Down
- Complete

Help

For information and for an answer to your question, please consult the following help document.

Project Summary

- Published the 2023/24 Multi-Year Infrastructure Investment Strategy detailing the planned MTI capital projects for the next five years.
- MIP Map was updated to include all projects from the Multi-Year Infrastructure Investment Strategy.
- MIP-Map is regularly updated with current project status updates.



CAPITAL PROGRAM DELIVERY

Project Timelines

PHASE 1: Program Definition		PHASE 2: Development of Design		PHASE 3: Construction	PHASE 4: Post-Construction	
Project planning	Pre-design and programming	Design	Tender	Construction	Cleanup	Preservation
1-24+ months	12-48 months	12-24 months	2-3 months	12-48+ months	1-12 months	12+ months after construction

- All projects follow a phased process from project planning through post construction, but timelines vary depending on the nature of the work.
- Development of design can be an extensive process requiring conceptual and functional design before completing a final detailed design.
- Engagement and land acquisition may begin in the pre-design process and carry through design and construction.
- Timelines vary and the department does not have direct control over items such as environmental approvals, Indigenous consultation, land acquisition, etc.



2023 CONDITIONS

Impact on Capital Program



PTH 1: Portage 1A West Jct (Portage Diversion—Can Oat Road)
Bituminous Reconstruction

- Tendered project bids coming in higher than estimated due to higher market prices as economy levels out.
- Supply chain issues, commodity pricing and labour shortages continue to drive up costs in the construction industry, but with a lower impact than in 2022 where construction inflation on projects ranged from 10 to 30%.
- Fuel costs as measured by the OPIS diesel fuel price index were lower than 2022;
 - May 2022=1.465 ; October 2022=1.618
 - May 2023=1.037 ; October 2023=1.196
- The AC index varied by 24 points in 2023 and was lower than 2022:
 - May 2022=1154 ; October 2022=1198
 - May 2023=1001 ; October 2023=1025
- Favourable weather throughout construction season



CAPITAL PROGRAM DELIVERY

Tendering & Contracts

Total Bonded Advertised Apr-Dec 2023	Highway	Structures	Water Infrastructure	Other
77	48	18	6	5
Not on Ad Schedule	19	0	1	1
Moved to Another Schedule	25	18	7	4

- 66 bonded contracts awarded to the end of December valued at \$373,070,856
- 154 non-bonded contracts awarded to the end of December valued at \$41,956,363
- PILOT - alternative evaluation and award for select construction projects to incorporate technical criteria; not low bid award



CAPITAL PROGRAM DELIVERY

Tendering & Contracts

Total RFPs Advertised Apr 2023 – January 2024	Highway	Structures	Water Infrastructure	Other	Total
Total	9	23	11	11	52
Prequalified	7	15	3	1	26
Non-Prequalified	2	8	6	10	26

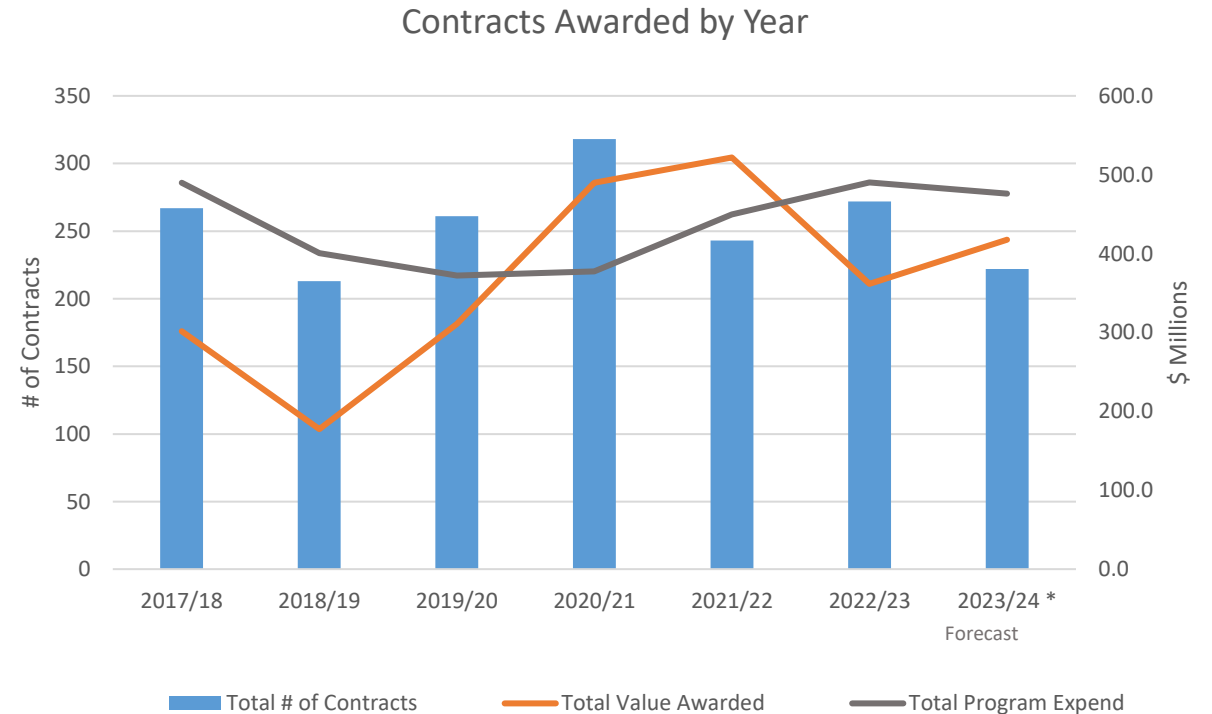
- February Advertising Schedule will include additional projects.
- MTI continues to estimate 3+ CACI Roads projects to be tendered for each construction season.
- Flood direct awards using ACEC rate structure will be used for future flood work.



CAPITAL PROGRAM DELIVERY

Tendering & Contracts

- Quick win improvement to tender chip seal and microsurfacing bundles based on collaboration between MTI and MHCA
- Updates to specifications continue, with feedback from MHCA and others
- Flood dike closures have been tendered; a number have been awarded.
- Bid Hourly closed in January
- Materials purchases and RFPs tendering ongoing
- Contractor claims and Sub-Contractor claims processed
- Reduced bid validity period from 90 to 30 days for majority of tenders.
- Average time to award = 15 days

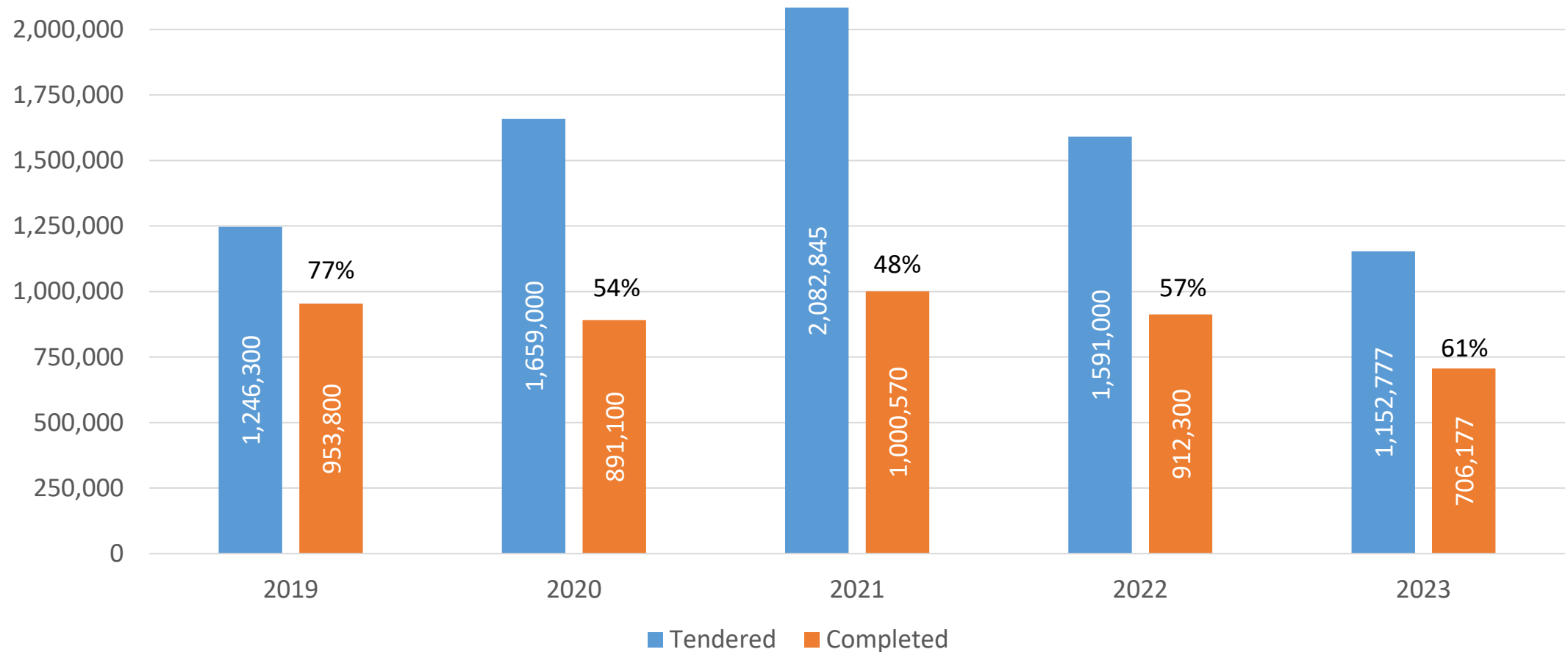




CAPITAL PROGRAM DELIVERY

Bituminous Tonnage

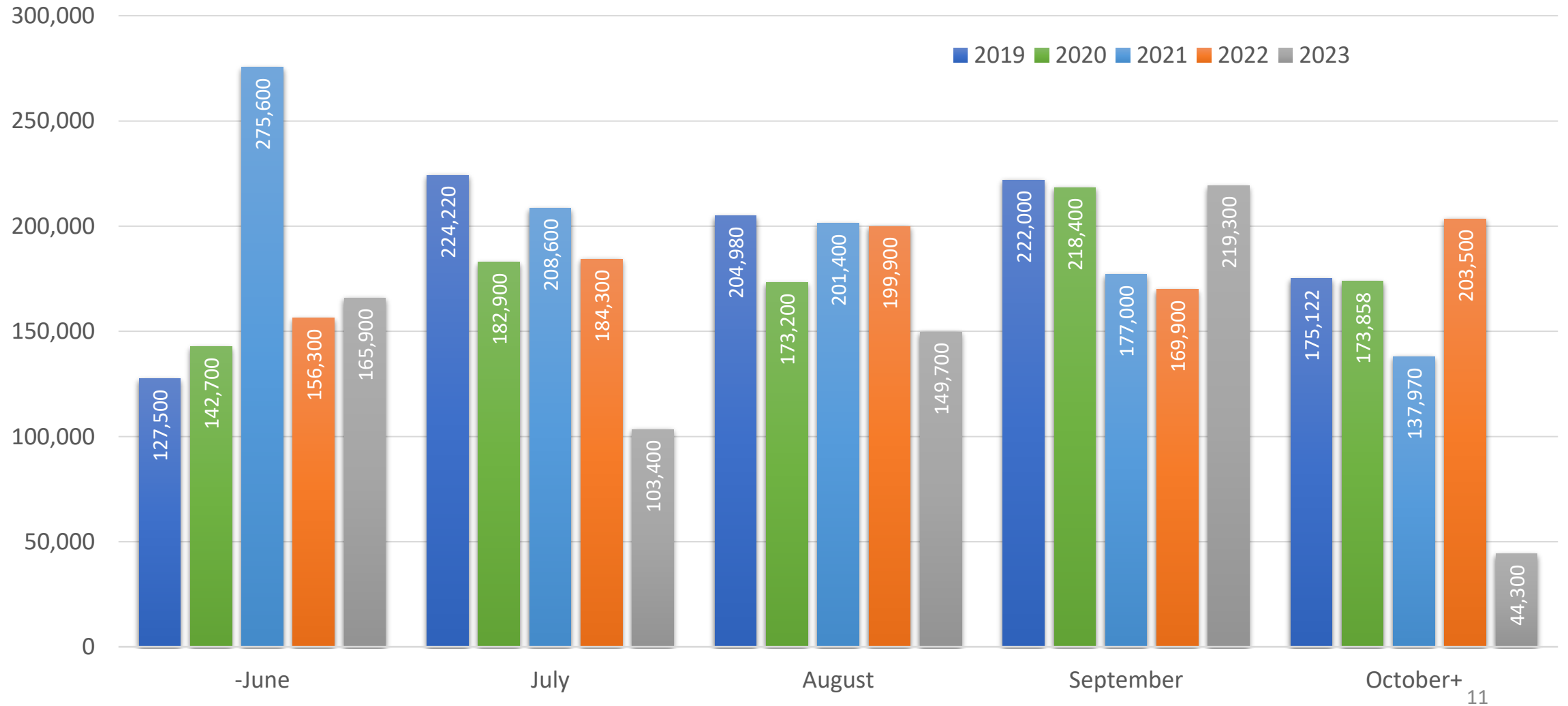
Tendered vs Completed





CAPITAL PROGRAM DELIVERY

Bituminous Tonnage





CAPITAL PROGRAM DELIVERY

Bituminous Tonnage

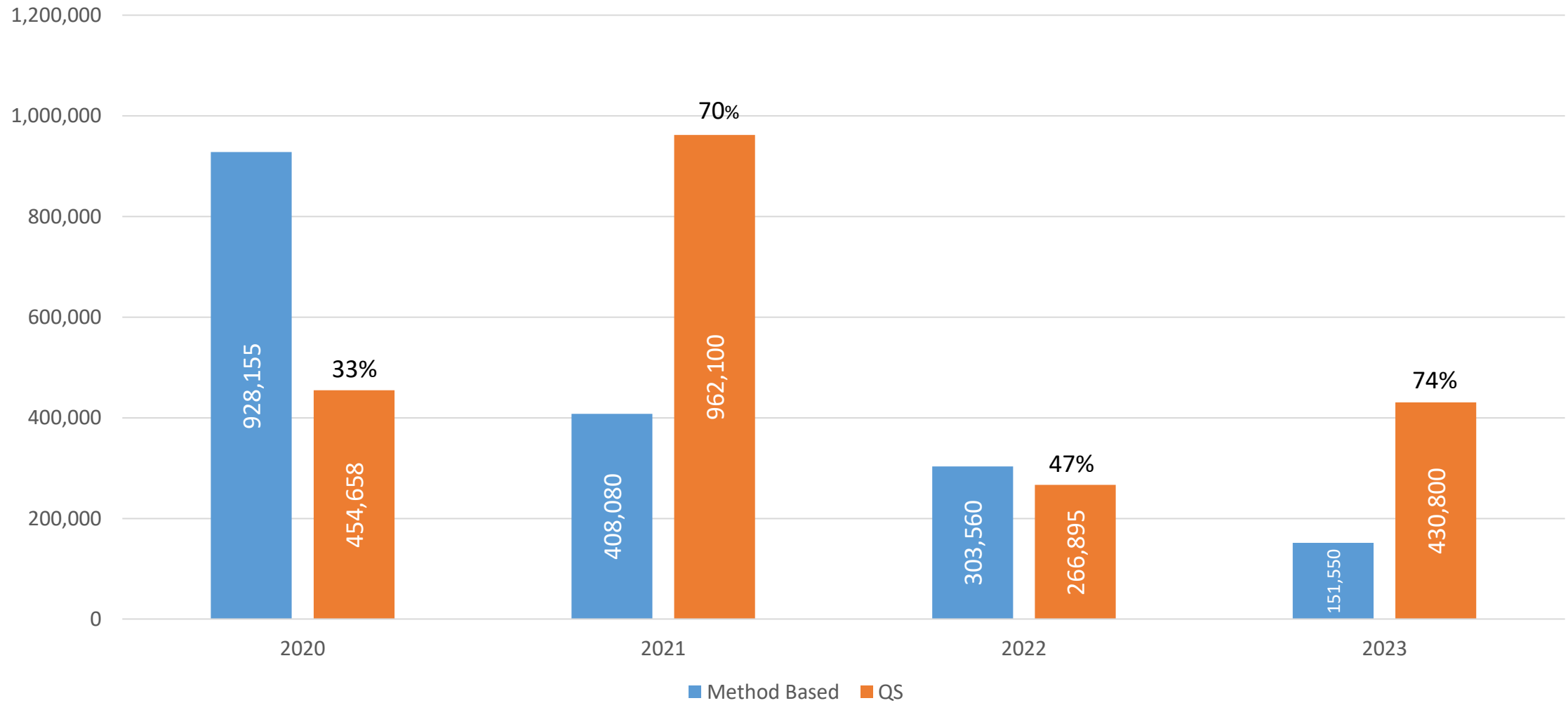
- 41 Bituminous construction projects (1,152,777 t)
 - 766,627 t Bituminous projects carried over to 2023-2024
 - 386,150 t New Bituminous projects for 2023-2024
- 23 projects completed (682,600 t)
 - Project with big tonnage in 2023-2024:
 - Contract # 7179: 92,300 t
 - Contract # 7219: 61,600 t
 - Contract # 7195: 55,000 t (188,000 t)
 - Contract # 7262: 52,400 t
- 17 projects carried over into 2024-2025 (446,600 t)
 - 8 projects final completion date is in the year 2023 (115,000 t)
 - 9 projects final completion date is in the year 2024 (331,600 t)
- 3 projects advertised in the fall with 2024 completion date (178,200 t)
- 624,800 t of Bituminous awarded for 2024-2025

	Total	Completed	Carried Over 2024/25
Carried Over to 2023/24	24	16	7
New for 2023/24	17	7	11
Total	41	23	18



CAPITAL PROGRAM DELIVERY

Delivery Method - Bituminous Tonnage





CAPITAL PROGRAM DELIVERY

Quality Specification

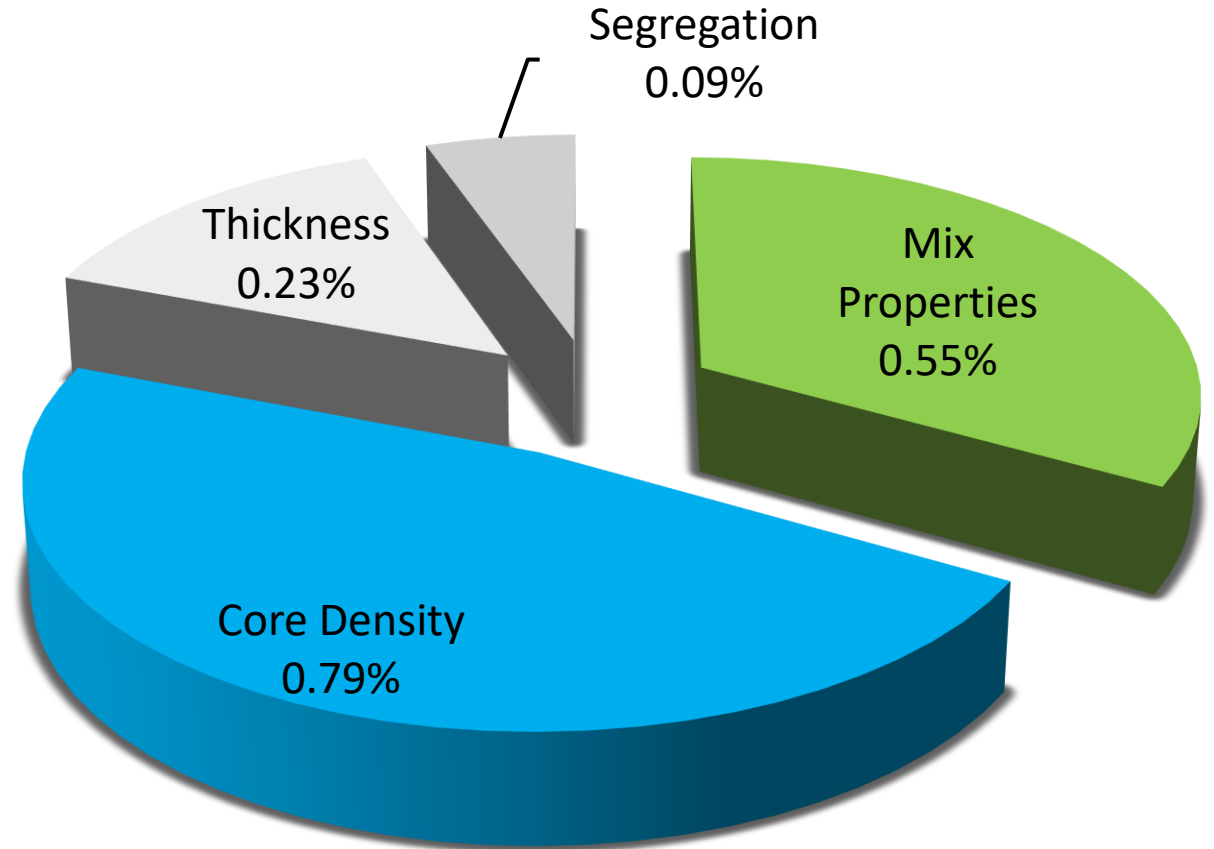
- Total 16 QS projects (714,077 t) in 2023 including carried over
 - 452,277 t carried over QS Bituminous projects to 2023-2024
 - 261,800 t New QS Bituminous projects for 2023-2024
- 9 projects completed (375,200 t)
 - Capital Region: 1 Projects (4,000 t)
 - Western Region: 7 Projects (342,400 t)
 - Northern Region: 1 Project (28,800 t)
- Completed 60% of QS bituminous quantity; remaining portion scheduled for completion in 2024-25
 - 315,300 t carried over to 2024-25



CAPITAL PROGRAM DELIVERY

Quality Specification Pay Adjustment

- Total Bituminous Cost \$46.3M of placed Bituminous
- Pay Adjustment Summary (%) of total Bituminous cost:
 - Segregation 0.09%
 - Mix Properties: 0.55%
 - Thickness: 0.23%
 - Core Density: 0.79%
- No Pay adjustment for Bit Aggregate acceptance
- Minor pay adjustment for segregation

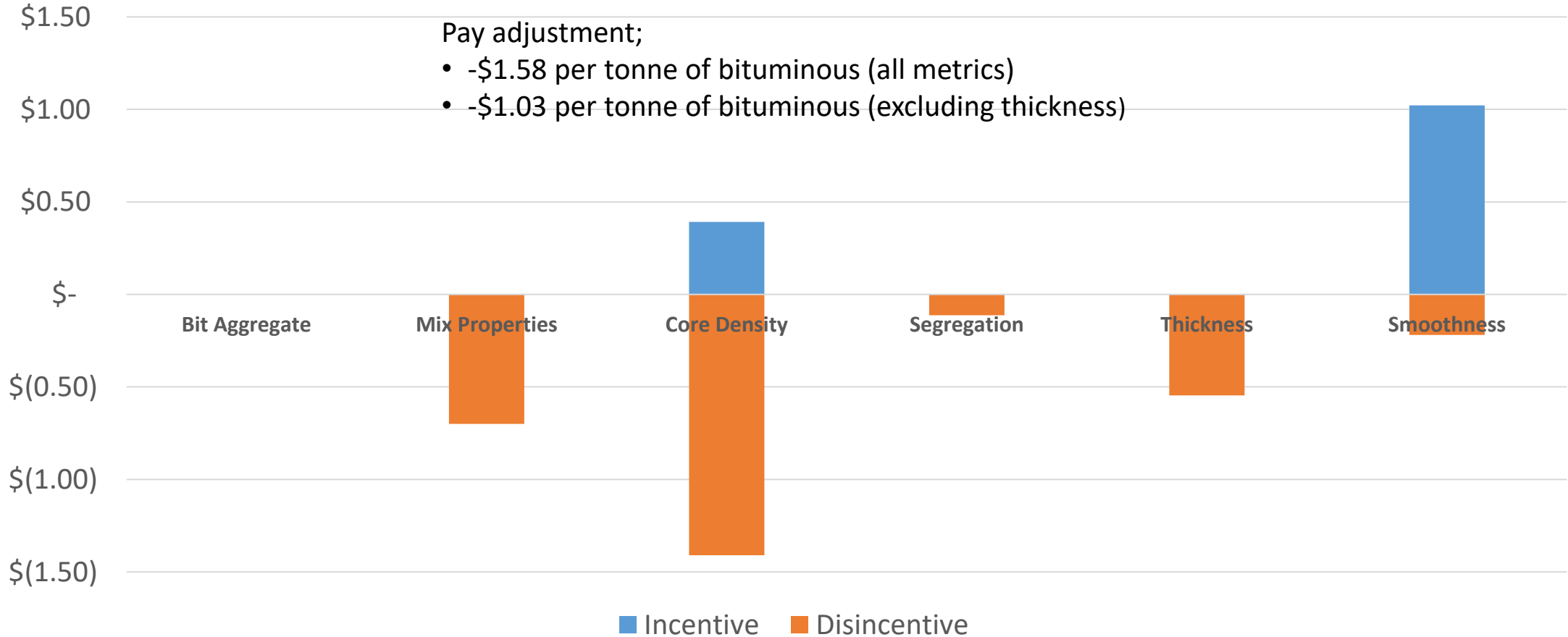


* Five projects positively adjusted for Core Density



CAPITAL PROGRAM DELIVERY

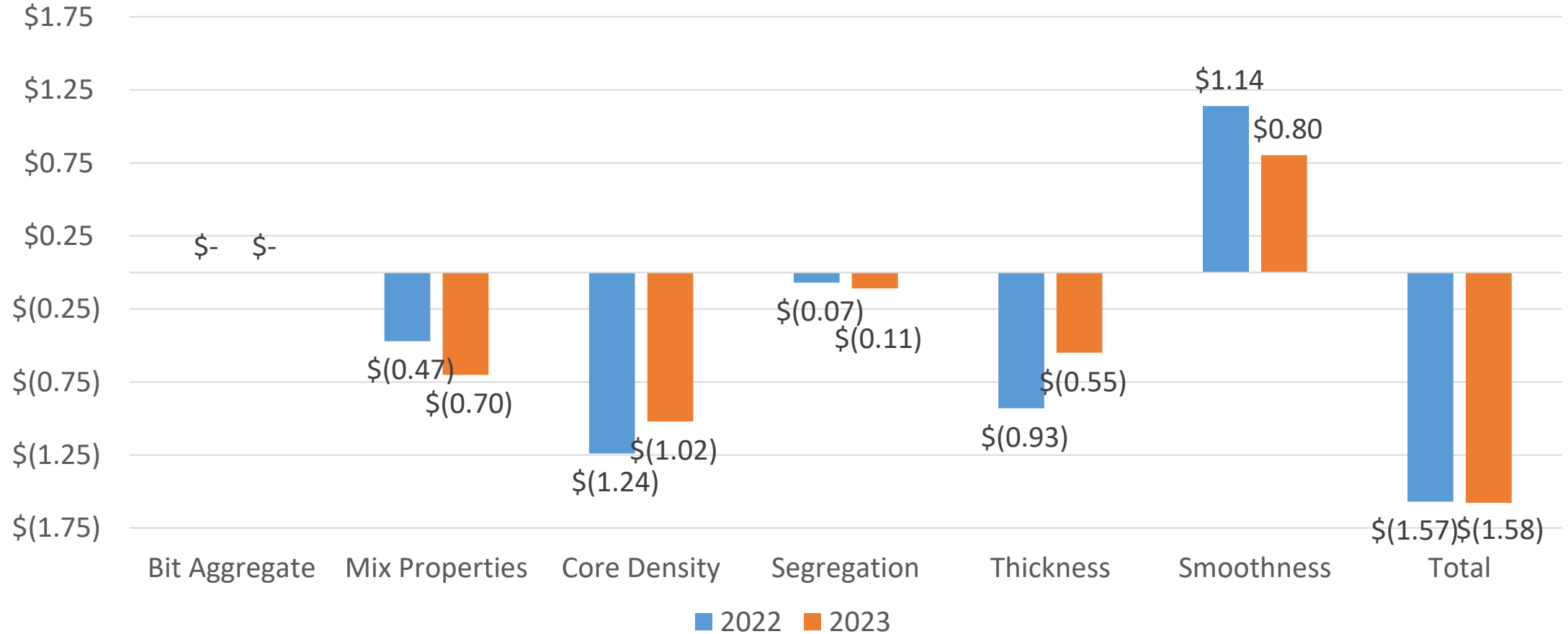
Quality Specification Pay Adjustment





CAPITAL PROGRAM DELIVERY

Quality Specification Pay Adjustment





CAPITAL PROGRAM DELIVERY

Summary of Laboratory Report

- Currently five correlation opportunities for contractors prior to construction:
 - CCIL Certification
 - MTI Laboratory Correlation Program
 - Mix Design Verification
 - Optional Trial Lot
 - Laboratory Correlation on Field Mix
- MTI undertook a comparison of MTI lab results to Contractor lab results.



CAPITAL PROGRAM DELIVERY

Summary of Laboratory Report

- Assessment of five fundamental laboratory tests that are most impactful to bituminous mixes.
 - Bulk Relative Density (BRD) of Compacted Asphalt
 - Maximum Theoretical Density (MTD) of Asphalt Mixture
 - Gradation, 0.075 mm
 - Asphalt Cement (AC) Content
 - Specific Gravity of Aggregate (SGA)
- The BRD, MTD, AC and SGA were selected because they are used to calculate metrics within our construction specifications that are associated to pay adjustment
 - Air voids
 - Voids in Mineral Aggregate
- The 0.075mm sieve was selected because of its narrow acceptance range.



CAPITAL PROGRAM DELIVERY

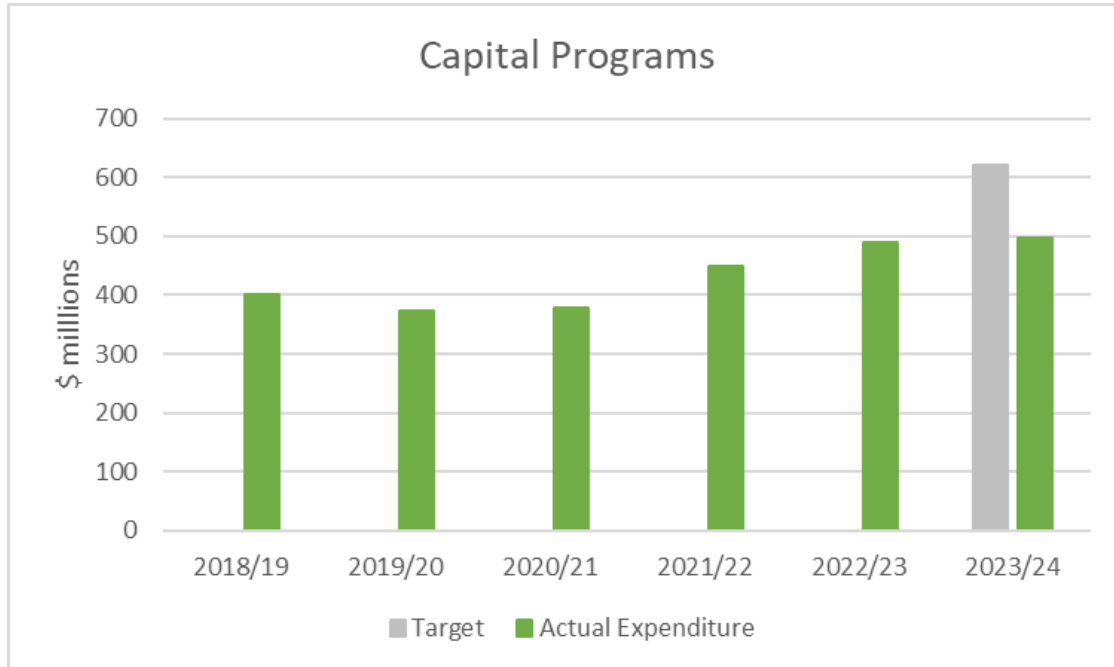
Summary of Laboratory Report

- Total Bituminous Cost \$46.3M of placed Bituminous
 - 2023/24 Pay adjustments for mix properties = **-\$252,681.30 (0.55%)**
- Assessment of test differences to highlights penalties associated to test discrepancies
 - MTI test result in pay reduction and contractor result in specification
 - Excluded if both MTI and Contractor was out of specification
 - BRD >10 and MTSG >7
- Total penalties associated with MTI and Contractor laboratory differences
 - BRD : **-\$12,449**
 - MTSG : **-\$31,420.27**
- No penalties for gradation and AC content



CAPITAL PROGRAM DELIVERY

Performance Summary



- The department is taking every possible measure to increase its capital spend and continues to work towards fully delivering its highway capital budget.
- In 2022/23, MTI’s highway capital spend was \$17.6M (or 4.4%) higher than 2021/22, continuing with the trend of increased capital delivery since 2021/22.
- As of January 31, 2024, MTI’s actual spend in the highway capital program increased by \$142.5M (or 48.3%) from the historical average year-to-date expenditures since 2018/19.
- MTI began the fiscal year with over 850,000 tonnes planned and carryover paving work and tendered an additional 200,000 tonnes through the summer of 2023.
- An additional 40.0km of the Trade and Commerce grid was completed in 2023. The grid is now 86.67% complete.

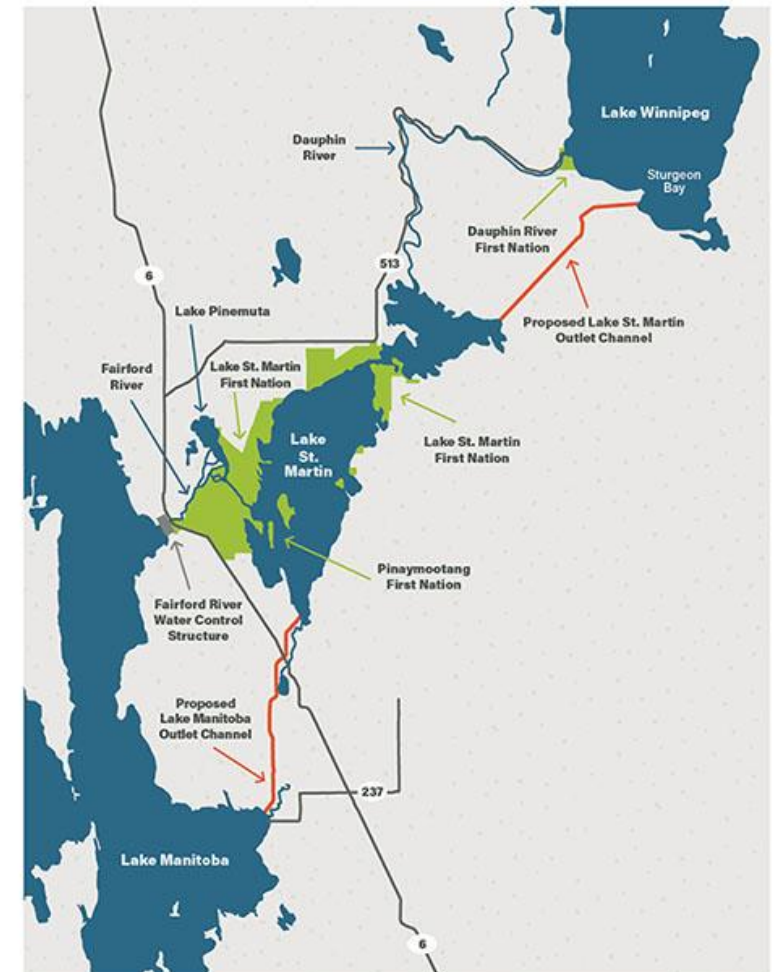


CAPITAL PROGRAM DELIVERY

Major Projects

Outlet Channels

- An environmental assessment is required by federal and provincial law under:
 - The Canadian Environmental Assessment Act, 2012
 - The Environment Act (Manitoba)
- MTI submitted responses to IAAC Round 3 Information Requests (IRs) in October 2023 and submitted responses to additional clarification questions received from the agency on January 26th, 2024.
- Ongoing public & Indigenous commenting on Manitoba submissions and federal government review of responses to technical review questions
- Preliminary design is complete. Detailed design, and construction tenders for the LMOC first year of construction are completed. Detailed design, and construction tenders for the subsequent construction years to be substantially completed by May 2024.
- Depending on conditions received as part of federal and/or environmental licenses, updates to the detailed design and construction tenders may be required.





CAPITAL PROGRAM DELIVERY

Major Projects

Winnipeg One Million Perimeter Freeway Initiative

- McGillivray Interchange Project

- March 2024: RFPQ Advertisement
- April/May 2024: RFP Advertisement
- January 2025: RFP Award
- Traffic Availability October 2027

- St. Anne's Interchange Project

- December 2024: Award of the Owner's Engineer Service Contract
- February 2026: RFPQ Advertisement
- May 2026: RFP Advertisement
- July 2027: RFP Award
- Traffic Availability 2031

- North Perimeter Functional Design Study

- Planned completion: early 2025





BUILDING CAPACITY

Capital Program Delivery



PTH 16: 2.0km W of PR 242—18.km E of PR 242
Bituminous Reconstruction – Cost-shared PTIC-NRP

- Ongoing efforts to improve capital program delivery and to build resource capacity for project delivery across the department
- Continued to build project management teams for major projects and projects management branches
- Continued implementation of Project Management within MTI to provide a standardized approach based on industry best practices and tailored to MTI to ensure the effective delivery of projects
- Improved project cost estimates with new estimating process and updated construction inflation rates.
- Improved accuracy of forecasts to reduce the risk of lapsing funds in the future.
- Building capacity to improve coordination/scheduling, administration, oversight and project management of MTI's capital program.
- Project Management Implementation continued throughout 2023
 - Began development of a Project Management Manual
 - Updated Payment Processes
 - New process developed for Change Requests including ESP Scope Changes and Construction Change Orders



2024/25 PLANNING

Capital Delivery



PTH 1: Portage 1A West Jct (Portage Diversion—Can Oat Road)
Bituminous Reconstruction

MTI once again increased capital investment in 2023 and is well positioned to fully deliver the planned capital program in 2024/25

- Continued commitment to capital delivery and further development of the project management function
- A continued focus on recruitment and retention initiatives across all of MTI

Capital Planning

- Multi-year capital planning beyond the public 5-year budget for long term planning purposes
- Update of the Multi-Year Infrastructure Investment Strategy



2024/25 PLANNING

Projects & Asset Management

Project Delivery

- Over six hundred thousand tonnes of paving material awarded to complete in 2024 construction year (new, continuing & carryover)
- Additional projects to be tendered (late tender due to election and change in government)
- Expanded assignments for Design & Tender Support to support earlier tendering of projects.

Projects Management

- Publish the MTI Project Management Manual
- Continued development of Project Management function through Projects Centre of Excellence

Asset Management

- Establish a dedicated asset management team to develop departmental policy, asset management plans and build on existing AM practices within MTI
- Capital planning and project prioritization based on asset inspection data and lifecycle planning to strengthen long term investment strategy



PTH 1: Portage 1A West Jct (Portage Diversion—Can Oat Road)
Bituminous Reconstruction



2024/25 PLANNING

Tendering & Contracts

- Continue to consider and pilot alternative procurement methods for larger, more complex projects
- Ad Schedule quarterly updates will continue
- MTI Construction Specification Review Committee to launch in early 2024
- Bid Procedures to be reviewed in early 2024
- Bid Hourly to be tendered in December
- Advertise chip seal and microsurfacing in December pending program approval



In Brandon: Daly Overpass (18th St at CP Railway)



AREAS FOR IMPROVEMENT

Prompt Payment

Highlights of the Act:

- An owner has 28 days after a proper invoice to pay a General Contractor
- The General Contractor then has 7 days to pay sub-contractors
- Sub-contractors then have 7 days to pay sub-sub-contractors
- Invoices must be provided monthly unless stipulated in the contract
- A Contractor or sub-contractor can suspend work after adjudication if amounts remain unpaid

- MTI is following the intent of the legislation
- MTI to review internal process to ensure payment would be made within 28 days of the approved progress payment or invoice
- The requirement is for monthly payment, however, for many large construction projects, payment is made bi-weekly
- MTI to follow up through MHCA/ACEC/MTI working group



AREAS FOR IMPROVEMENT

Building Together

- Continue MHCA/ACEC/MTI working group meetings
- Early tendering, tender ad schedule improvements
- Specification Review Committee, updates to specifications
- Lab correlation to be discussed as part of specification review committee



South Perimeter (PTH 100): At St. Mary's Road Interchange Construction



Thank you

