

APPLYING A GREENHOUSE GAS (GHG) EMISSIONS LENS TO STIP DECISION-MAKING

JAN 2021

Addendum to Phase 1 Analysis Report (November 2020)

"2024-2027 Statewide Transportation Improvement Program (STIP) Funding Allocation Scenario Analysis Report,"

PREPARED BY ODOT Climate Office

Based on the Phase 1 Report analysis results for the original 2024-2027 STIP funding scenarios and public comments received, the OTC was unsatisfied with the initial proposed funding allocation scenarios.

At the request of the Commission, several additional hybrid-funding scenarios were developed and analyzed. Results from the Climate Office analysis were then presented to the Commission during their December OTC meetings to inform subsequent trade-off discussions and final determination of the 2024-2027 STIP program funding allocations.

This document augments the published Phase 1 Report by providing a detailed look at the hybrid scenarios considered by the Commission and the selected program funding allocation amounts for the 2024-2027 STIP cycle.-

Original Scenario Analysis

In November 2020, the Climate Office presented the Commission with results from their analysis of the five originally proposed 2024-2027 STIP program funding allocation scenarios. Initial funding scenarios were developed, taking into consideration federal and state statutory requirements, direction received from the Commission, and input from advisory committees, stakeholder groups, and the public. The graphic below shows the results for each of the four original scenarios across seven priority outcome areas, relative to the 2021-2024 baseline outcomes.

	2021-2024 STIP *	S1 ENHANCE	S2 NON-HIGHWAY	S3 SAFETY/ NON-HIGHWAY	54 FIX-IT
FIX-IT*	\$850	\$719	\$728	\$719	\$972
ENHANCE	\$24	\$89	\$24	\$50	\$24
NON-HIGHWAY	\$158	\$214	\$321	\$224	\$77
SAFETY	\$147	\$199	\$147	\$228	\$147
Climate Change - Ghg mitigation	D-				
CLIMATE CHANGE - ADAPTATION/ RESILIENCE	C-				
CONGESTION RELIEF	B-				
Social Equity	C-				
MULTIMODAL MOBILITY	D				
SAFETY	В				
STATE OF GOOD REPAIR	С				
Notable improvement	🔅 Modest improvemer	nt 📃 Same as base	line (no change)	🔀 Modest decline	Notable decline

Hybrid Scenario Development and Analysis

Based on Commission feedback to the phase 1 report and analysis of the original scenarios, ODOT developed additional hybrid funding scenarios (hybrid 1 and hybrid 2) seeking to balance funding across program funding categories to minimize negative impacts across priority outcome areas.

		Hybrid 1:	Hybrid 2:
Program Funding Category	2021-2024 STIP*	Non-Highway/Fix-It	Non-Highway/Enhance
Fix-it	850,000,000	880,000,000*	805,000,000*
Enhance (HB 2017)	662,750,000	110,000,000	110,000,000
Enhance (Discretionary)	24,000,000	0	90,000,000
Safety	146,850,000	147,000,000	147,000,000
Non-Highway	158,286,568	221,550,000	225,000,000
Total	2,407,348,248	2,112,910,568	2,112,910,568
* 2024-2027 Fix-It allocation amou	nt reflects \$120 million reduction to co	over funding borrowed from future	allocation to cover ADA needs during

* 2024-2027 Fix-It allocation amount reflects \$120 million reduction to cover funding borrowed from future allocation to cover ADA needs during the 2021-2024 STIP cycle.

IMPACT OF SCENARIO FUNDING LEVELS ACROSS DESIRED OUTCOME AREAS	ADJUSTED BASELINE	HYBRID 1	HYBRID 2
Climate Change - Ghg mitigation	D- Most trips drive alone & in low MPG cars	Slight GHG reductions anticipated (performs 2 nd best overall behind non- highway scenario)	No emission reductions Non-highway and enhance offset (performs 2 nd worst behind fix-it scenario and same as baseline)
Climate Change - Adaptation/ Resilience	C- Slow progress with preservation projects	Slight, marginal decline (performs roughly same as the baseline and better than enhance and non- highway scenarios)	Fewer adaptation projects (marginal decline from baseline but still better than enhance and non-highway scenarios)
CONGESTION RELIEF	B- Select, legislatively funded bottleneck projects in development	Less resources for bottleneck projects but is offset some by multimodal projects (overall performance is similar to baseline)	Some funding for critical bottlenecks (performs best overall for congestion)
SOCIAL EQUITY	C- Few low cost travel options	Slight increase in access for all users (does not perform as well as non- highway scenarios but better than enhance, baseline and fix-it scenarios)	Slight increase in access for all users (does not perform as well as non- highway scenarios but better than enhance, baseline and fix-it scenarios)
MULTIMODAL MOBILITY	D Many connectivity gaps	Small increase in bikeways, walkways, TDM programs, etc. (does not perform as well as non- highway scenarios but better than enhance, baseline and fix-it scenarios)	Small increase in bikeways, walkways, TDM programs, etc. (does not perform as well as non- highway scenarios but better than enhance, baseline and fix-it scenarios)
SAFETY	B Focus on fatalities and serious injuries	No change from baseline (safety funding flat, consistent with baseline and 21-24 STIP)	No change from baseline (safety funding flat, consistent with baseline and 21-24 STIP)
STATE OF GOOD REPAIR	C Several assets and areas deteriorating	Slight, marginal decline (Funding fairly consistent with baseline (-5%) but still more funding than 21-24 STIP)	Small decline (decline from baseline but not as much as enhance and non-highway scenarios)
Notable improvement	Modest improvement	Same as baseline (no change) 🔅 Mo	dest decline Notable decline

Hybrid Scenario Development and Analysis continued...

Hybrid 1 & 2 Scenario results provided additional insights to the Commission about the relationship between certain program funding categories and the priority outcome areas. To offset impacts of shifting funds from one category to another, additional funding scenarios were developed and analyzed; the analysis results were presented to the Commission for their consideration (*see* below Hybrids 2A, 2B, 3A, and 3B).

	2021-2024 STIP *	s1 Enhance	s2 Non- Highway	s3 Safety/ Non- Highway	s4 Fix-it	HYBRID 2A Non-Highway / Enhance	Hybrid 2b Non-Highway / Enhance	HYBRID 3A Non-Highway/ Enhance/ Safety	HYBRID 38 Non-Highway/ Enhance/ Safety
FIX-IT*	\$850	\$719	\$728	\$719	\$972	\$805	\$805	\$579	\$770
ENHANCE	\$24	\$89	\$24	\$50	\$24	\$90	\$70	\$120	\$70
NON-HIGHWAY	\$158	\$214	\$321	\$224	\$77	\$225	\$245	\$294	\$270
SAFETY	\$147	\$199	\$147	\$228	\$147	\$147	\$147	\$228	\$157
Climate Change - Ghg Mittigation	D-								
CLIMATE CHANGE - ADAPTATION/ RESILIENCE	C-								
CONGESTION RELIEF	B-								
Social Equity	C-								
MULTIMODAL MOBILITY	D								
SAFETY	В								
STATE OF GOOD REPAIR	С								

Notable improvement

Modest improvement

Same as baseline (no change)

🔣 Modest decline

Notable decline

Hybrid Scenario Development and Analysis continued...

Hybrids 1 & 2 were quickly eliminated in favor of the subsequent hybrid scenarios. These options were narrowed further to focus solely on Hybrid 2A, Hybrid 2B, and Hybrid 3B which were the final scenarios considered by the Commission shown in the table below.

	2021-2024 STIP *	HYBRID 2A NON-HIGHWAY / ENHANCE	HYBRID 2B NON-HIGHWAY / ENHANCE	HYBRID 38 Non-Highway/ Enhance/ Safety
FIX-IT*	\$850	\$805	\$805	\$770
ENHANCE	\$24	\$90	\$70	\$70
NON-HIGHWAY	\$158	\$225	\$245	\$270
SAFETY	\$147	\$147	\$147	\$157
Climate Change - Ghg Mitigation	D– Most trips drive alone in low MPG cars	No emission reductions Non-highway and enhance offset (no improvement from baseline)	Slight GHG reductions anticipated (modest improvements above baseline)	Slight GHG reductions anticipated (performs best among hybrid scenarios; 2 nd best overall behind non-highway scenario)
Climate Change - Adaptation/ Resilience	C– Slow progress with preservation projects	A few less adaptation projects (marginal decline from baseline)	A few less adaptation projects (marginal decline from baseline)	Fewer adaptation projects (modeat decline from baseline; not as notable as original scenarics; worst among hybrids)
Congestion Relief	B– Select, legislative bottleneck projects in development	Some funding for critical bottlenecks (performs best overall for congestion)	Bit of funding to supplement needs (some funding to supplement larger projects)	Bit of funding to supplement needs (some funding to supplement larger projects)
SOCIAL EQUITY	C– Few low cost travel options	Slight increase in access for all users (performs better than baseline but not as well as other Hybrid scenarios)	Small increase in access for all users (more multimodal projects than 2A, but less than 3B)	Some improvements in access for all (performs best among Hybrid scenarios)
MULTIMODAL MOBILITY	D Many connectivity gaps	Slight increase in bikeways, walkways, TDM programs (performs better than baseline but not as well as other Hybrid scenarios)	Small increase in bikeways, walkways, TDM programs (more multimodal projects than 24, but less than 38)	Incremental increase in bikeways, walkways, TDM programs (performs best among Hybrid scenarios)
SAFETY	B Focus on fatalities and serious injuries	No change from baseline (safety funding flat, consistent with baseline and 21-24 STIP)	No change from baseline (safety funding flat, consistent with baseline and 21-24 STIP)	More projects focused on fatalities and serious injuries (performs best among Hybrid scenarios)
STATE OF GOOD REPAIR	C Several assets and areas deteriorating	Small decline from baseline (slight decline from baseline which indicates trend of deteriorating conditions over time)	Small decline from baseline (slight decline from baseline which indicates trend of deteriorating conditions over time)	Conditions start to more rapidly decline (modest decline from baseline, trends worsen)



Modest improvement

Same as baseline (no change)

Modest decline

Notable decline

Final Scenario Selection - 2024-2027 STIP Program Funding Allocations

The analysis results for the final 3 hybrid scenarios, combined with substantial verbal and written public comments, led the commission to make additional modifications to the funding amounts in Hybrid Scenario 2B, increasing nonhighway funding by \$10 million (from \$245m to \$255m) and reducing both Fix-it and Enhance Discretionary funding by \$5m respectively. The final selected program funding allocations and the associated analysis results are reflected in the figure below:

	2021-2024 STIP*	24-27 FINAL SCENARIO
FIX-IT*	\$850	\$800
ENHANCE	\$24	\$65
NON-HIGHWAY	\$158	\$255
SAFETY	\$147	\$147
LIMATE CHANGE - GHG MITIGATION	D– Most trips drive alone in low MPG cars	Slight GHG reductions anticipated (modest improvements above baseline)
LIMATE CHANGE - ADAPTATION/ RESILIENCE	C– Slow progress with preservation projects	A few less adaptation projects (marginal decline from baseline)
CONGESTION RELIEF	B– Select, legislative bottleneck projects in development	Bit of funding to supplement needs (some funding to supplement larger projects)
SOCIAL EQUITY	C– Few low cost travel options	Small increase in access for all users (more multimodal projects than 2A, but less than 3B)
Multimodal Mobility	D Many connectivity gaps	Small increase in bikeways, walkways, TDM programs (more multimodal projects than 2A, but less than 3B)
SAFETY	B Focus on fatalities and serious injuries	No change from baseline (safety funding flat, consistent with baseline and 21-24 STIP)
STATE OF GOOD REPAIR	C Several assets and areas deteriorating	Small decline from baseline (slight decline from baseline which indicates trend of deteriorating conditions over time)