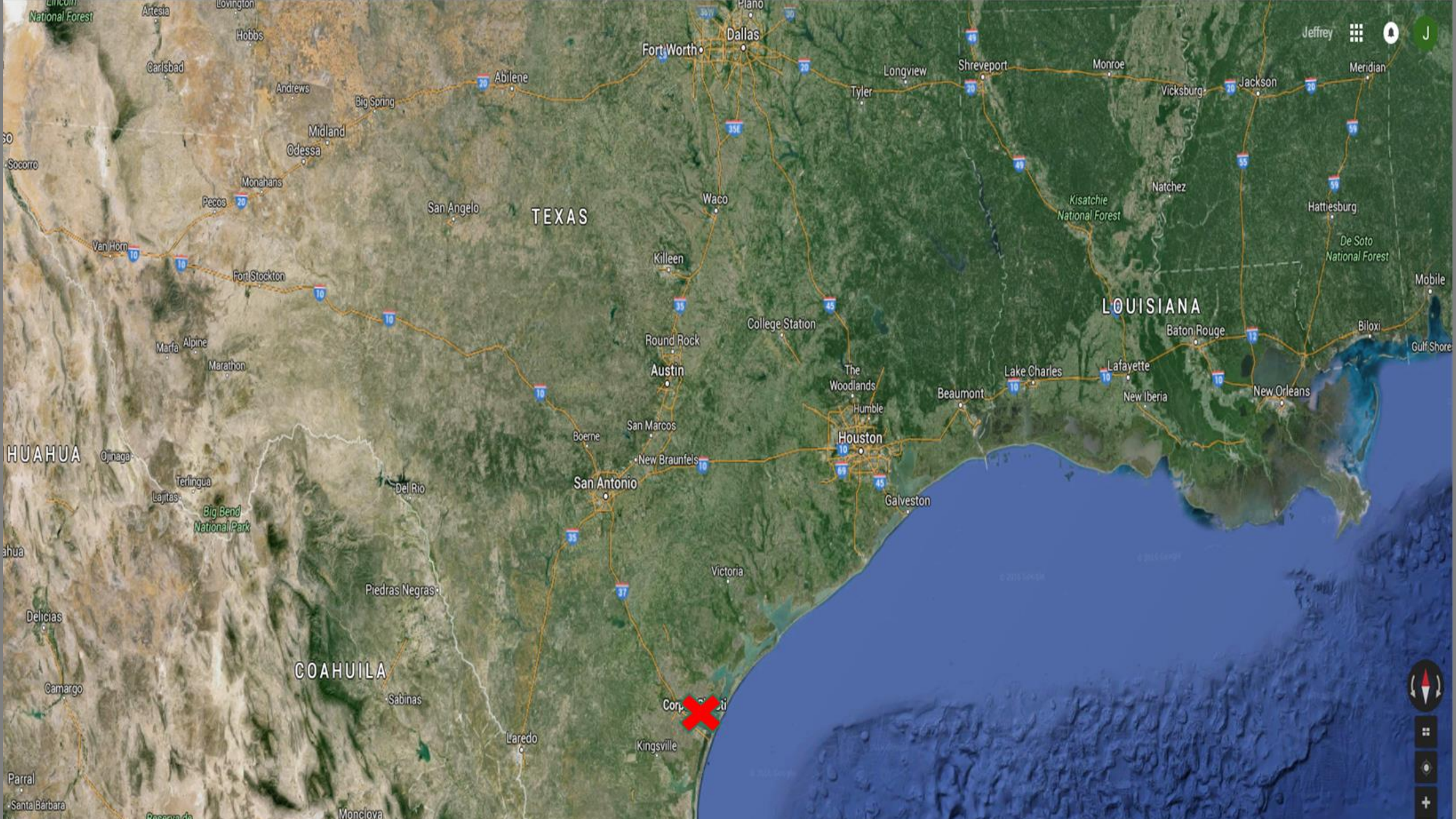


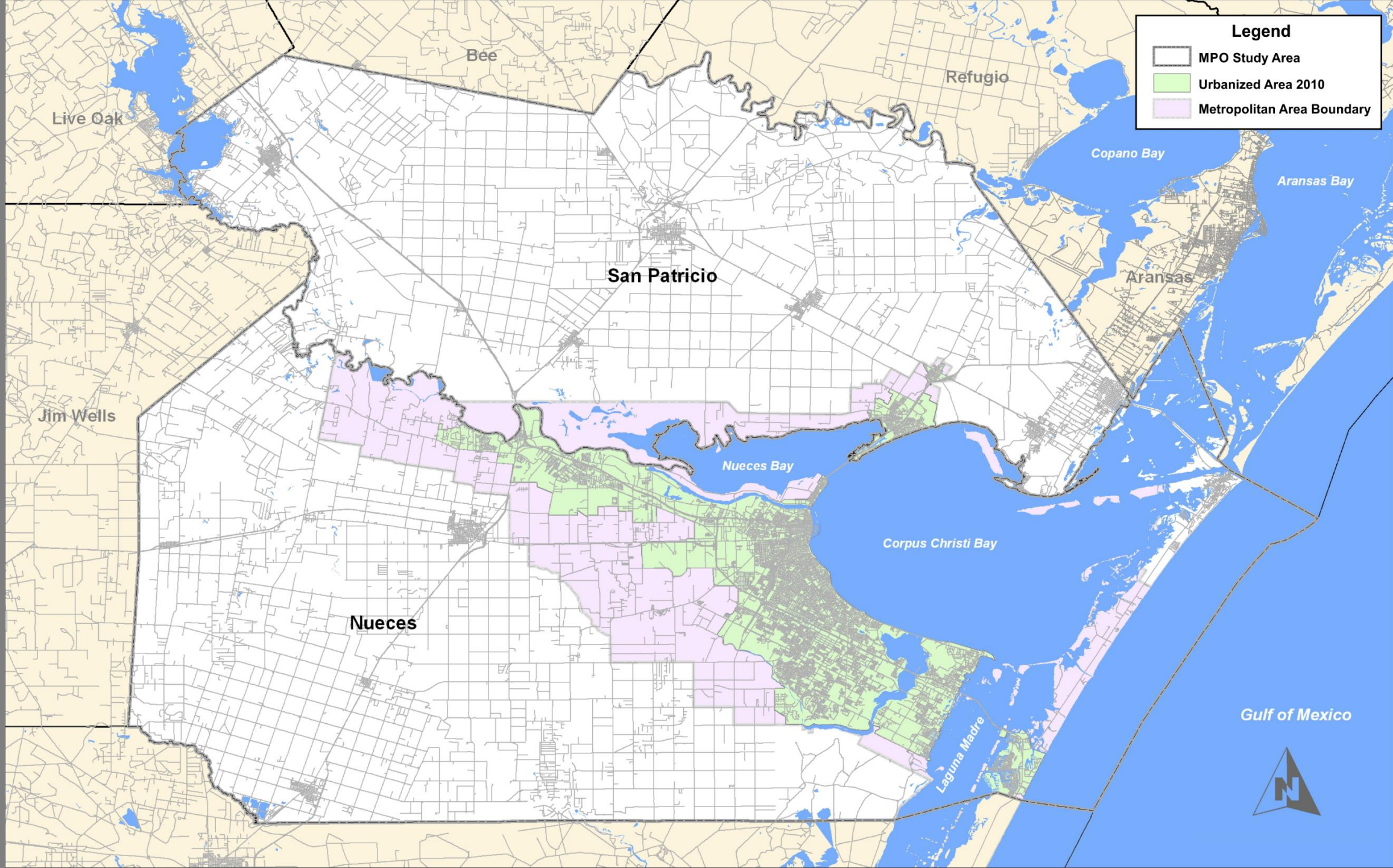
Performance Metrics: [Making lemonade out of federal and state Requirements]

AMPO – Performance Panel I
October 18, 2017

Jeff Pollack, AICP, ENV SP
Transportation Planning Director, Corpus Christi MPO







Member Entities:

1. City of Corpus Christi
2. City of Portland
3. Nueces County
4. San Patricio County
5. TxDOT Corpus Christi District
6. Port of Corpus Christi Authority
7. Corpus Christi Regional Transportation Authority

Texas House Bill 20

Texas Transportation Commission must:

- Adopt/review performance measures and metrics
- Evaluate projects selected for funding (per state UTP)
- Evaluate project delivery

MPOs must:

- Develop a 10-year plan
- Develop project recommendation criteria

Regional Goal Areas	Performance Measurement Topics	Performance Metrics
Safety	Crashes	Metric 1
		Metric 2
	Fatalities	Metric 1
		Metric 2
System Reliability	Efficiency and Economic Competitiveness (Congestion)	...
		...
	Infrastructure Condition	...
		...
		...
Multimodal Use & Opportunity	Active Mobility	...
		...
	Transit	...
		...
Stewardship	Equity / Accessibility	...
		...
		...
	Environmental Impact	...
		...

Goal Areas	Performance Measurement Topics	(Sub-Topic)	Performance Metrics
Safety	Crashes		Annual total crashes (all types)
			Annual total vehicle-on-vehicle crashes
			Annual total vehicle-on-pedestrian crashes
			Annual Averages Crashes (all types)/Mile
			Annual Average Vehicle-on-vehicle Crashes/Mile
			Annual Average Vehicle-on-pedestrian Crashes/Mile
		Bike Safety	Annual Average Vehicle-on-bicycle Crashes/Mile
			Annual total vehicle-on-bicycle crashes
	Injuries & Fatalities		Annual Total Pedestrian & Bike Fatalities
			Annual Average Pedestrian & Bike Fatalities/VMT
			Annual Average Fatalities (all modes)/VMT
			Annual Average Incapacitating Injuries (all modes)/VMT
			Annual Total Incapacitating Injuries
			Annual Total Fatalities (all modes)

Evaluating the performance of the transpo system overall (dark blue)

Goal Areas	Performance Measurement Topics	(Sub-Topic)	Performance Indicators (Metrics)
System Reliability	Efficiency and Economic Competitiveness (Congestion)		Planning Time Index
			Commuter Stress Index
			Travel Time Index
			TomTom Traffic Index (*when available)
			INRIX Average Annual Hours Spent in Congestion
			Level of Service (LOS)
			Volume (ADT) to design (daily) capacity ratio
			Ratio: (% Δ in total VMT) to (% Δ in population) for 5 yrs
			Total Freight Throughput (Port Tonnage)
	Infrastructure Condition		Pavement Condition Index (PCI)
			On Freight Priority Network?
			Average PCI of Freight Priority Network
		Bike Infrastructure Condition	% of RTA Stops/Stations with Bike Parking
			Miles of Cycle Track Constructed in Reporting Year
			Miles of Off-road Multi-use Trails Constructed in Reporting Year
			Miles of Bicycle Boulevards Implemented in Reporting Year

Goal Areas	Performance Measurement Topics	(Sub-Topic)	Performance Indicators (Metrics)
Multimodal Use and Opportunity	Active Mobility	Bike Demand	Bikeshare annual calories burned
			Bikeshare annual total miles ridden
			Bikesharetotal active members
			Bikeshare annual trips taken
			# (annual) commuter bicycle trips logged on Strava
			# (annual) registered bicycle commuter users on Strava
			% of respondents ride a bike (for any reason) at least once a week
			% of respondents (to a community survey to be repeated every 3-years) who agree/agree strongly with BMP vision statement
			On Bicycle Mobility Network?
			Bike ADT
			% (or #) of Individuals cycling to Work
			% (or #) of Individuals walking to Work
		Rider Experience	% respondents (to a community survey to be repeated every 3-years) feel that local drivers are too aggressive toward cyclists
			% of respondents didn't feel safe from vehicles on the existing bike facilities.
			% of respondents (to a community survey to be repeated every 3-years) reported an absence of bike facilities (e.g. bike lanes or paths) along the streets on which they would like to ride.
			% of respondents cited the poor condition of existing bike facilities as a reason for not riding more often
	Transit		Is Project on a Transit Fixed Route?
			Is Project on a High Frequency Transit Fixed Route?
			Annual Transit Boardings (fixed route)
			Annual Bike Boardings (fixed route)
			Annual Non-ambulatory Boardings (fixed route)
			Annual Transit Revenue Service Hours

Goal Areas	Performance Measurement Topics	(Sub-Topic)	Performance Indicators (Metrics)
Stewardship	Equity/ Accessibility		Project in "Equity Target Area" (e.g. area scores \geq 70% per demographic indicators in EJ Screen Tool)?
			Project limits include direct access to school
			Project limits include direct access point to low income housing
			Project limits include direct access point to primary food resource
			Project limits include direct access to primary medical resource
			Project limits include direct access to civic institution
	Environmental Impact		Project Avoids Environmental Target Areas? (e.g. area scores \geq 70% per environmental indicators in EJ Screen Tool)
			Project Includes Water Quality BMP?
			Number of 8-hour Exceedances above Federal Ozone Standard

In the first five months of the Downtown BikeShare Program
(7 stations, 40 bikes):

6,444 trips taken

2,190 active members registered

17,130 miles ridden

805,500 calories burned



Bicycle Safety



The Crash Records Information System (C.R.I.S.) reported that for 2016, the city of Corpus Christi had a total **8,627** reported vehicle crashes. Data from other communities suggest that the installation of bicycle infrastructure is associated with a reduction in vehicular crashes of all types. Of these crashes

														GA-1	PT-1A	PT-1B	GA-2	PT-2A	PT-2B	GA-3	PT-3A	PT-3B	GA-4	PT-4A	PT-4B	
Consideration for Cat 7 freeboard?	FY 2017-2026 10-Yr Projects	FY 2017 - 2020 TIP Projects	CSJ#	MPO ID#	Project Name	From	To	Funding Source	Project Sponsor	Project Type: On / Off system	YOE Cost (M)	Description	Overall	Overall - No Crashes	Safety	Crashes	Injuries & Fatalities	System Reliability	Efficiency & Economic Competitiveness	Infrastructure Condition	Multimodal Use & Opportunity	Active Mobility	Transit	Stewardship	Equity / Accessibility	Environmental Impact
		2017	0617-01-170	S-229-C2-17	SH 358 (SPID) Ramp Reversal	Nile	Ayers	CAT 2	TxDOT-CRP	On	\$50.00	Ramp reversal - south side only	1022	182	847	840	7	75	50	25	0	0	0	100	100	
			0617-01-178	S091C0104	SH 358 (SPID) Ramp Reversal	N of Airline	Everhart	Anticipated/S ource TBD	TxDOT-CRP	On	\$35.00	Ramp Reversal Phase II-C (Braided ramps)	504	101	404	403	1	75	50	25	0	0	0	25	25	
		2020	0617-01-177	269-17	SH 358 (SPID) Ramp Reversal	Nile	Staples	CAT 2	TxDOT-CRP	On	\$29.61	Ramp reversal Phase II-B	407	126	282	281	1	75	50	25	0	0	0	50	50	
				264-17	Yorktown Blvd	Rodd Field Rd	Mud Bridge - west end	Anticipated/S ource TBD	Corpus Christi	Off	\$10.00	Corridor upgrade	338	325	14	12	2	298	298	0	25	25	0	0	0	
				263-17	Yorktown Blvd	Mud Bridge - west end	Mud Bridge - east end	Anticipated/S ource TBD	Corpus Christi	Off	\$1.50	Upgrade Bridge	323	323	0	0	0	298	298	0	25	25	0	0	0	
				231-17	SH 35	SH 361	Spur 202 Interchange	CAT 2	TxDOT-CRP	On	\$1.50	Feasibility study: multi-level interchange	303	100	203	203	0	75	50	25	0	0	0	25	25	
			0180-06-XXX	270-17	SH 35	SH 361	Spur 202 Interchange	Anticipated/S ource TBD	TxDOT-CRP	On	\$60.00	Interchange Improvements	303	100	203	203	0	75	50	25	0	0	0	25	25	
				271-17	SH 286 (Crosstown)	SH 358 (SPID)	SS 544	Anticipated/S ource TBD	TxDOT-CRP	On	\$30.00	Construct additional northbound lanes	264	103	164	161	3	75	50	25	0	0	0	25	25	
				276-17	US 181	FM 3296 (Buddy Ganem Dr)	FM 2986 (Wildcat Dr)	Anticipated/S ource TBD	TxDOT-CRP	On	\$48.00	Reconstruction	222	100	122	122	0	75	50	25	0	0	0	25	25	
		2018	0101-04-114	S227C720	US 181 Ramp Reversals	FM 3239 (Buddy Ganem Dr)	FM 2986 (Wildcat Dr)	CAT 2	TxDOT-CRP	On	\$4.00	Portland Ramp Reversals - Northbound	211	125	86	86	0	75	50	25	0	0	0	50	50	
		2018	0101-04-097	S-224-P1-17	US 181 Overpass at Kay Bailey Hutchison Rd	0.6 mi SE of Spur 202	FM 3239 (Buddy Ganem Dr)	CAT 2, Prop 1	TxDOT-CRP	On	\$24.00	Construct overpass at Kay Bailey Hutchison Rd.	210	100	110	110	0	75	50	25	0	0	0	25	25	
				241-17	Leopard St	Up River Rd	Navigation Blvd	Anticipated/S ource TBD	Corpus Christi	Off	TBD	Corridor upgrade	209	155	54	54	0	55	55	0	50	0	50	50	50	
		2020		230-17	SS 544	SH 286	Coopers Alley	CAT 7	Corpus Christi	Off	\$5.50	Corridor improvements	203	129	74	74	0	79	54	25	25	0	25	25	25	
	2026		0916-35-170	S049C0497	Holly Rd Travel Lanes	SH 286	Greenwood Dr.	CAT 7	Corpus Christi	Off	\$4.00	Construct additional travel lanes w/CLTL	155	128	28	28	0	67	67	0	61	61	0	0	0	
		2018		272-17	Holly Rd	SH 286	Greenwood Dr.	CAT 7	TxDOT-CRP	Off	\$6.70		155	128	28	28	0	67	67	0	61	61	0	0	0	
				273-17	FM 624	River Hills Dr	East Riverview	Anticipated/S ource TBD	TxDOT-CRP	On	\$3.80	Install raised medians	146	106	41	40	1	80	55	25	0	0	0	25	25	

Consideration for Cat 7 freeboard?	FY 2017-2026 10-Yr Projects	FY 2017 - 2020 TIP Projects	CSJ#	MPO ID#	Project Name	From	To	Funding Source	Project Sponsor	Project Type: On / Off system	YOE Cost (M)	Description	Overall	Overall - No Crashes	GA-1	PT-1A	PT-1B
															Safety	Crashes	Injuries & Fatalities
		2017	0617-01-170	S-229-C2-17	SH 358 (SPID) Ramp Reversal	Nile	Ayers	CAT 2	TxDOT-CRP	On	\$50.00	Ramp reversal - south side only	1022	182	847	840	7
			0617-01-178	S091C0104	SH 358 (SPID) Ramp Reversal	N of Airline	Everhart	Anticipated/Source TBD	TxDOT-CRP	On	\$35.00	Ramp Reversal Phase II-C (Braided ramps)	504	101	404	403	1
		2020	0617-01-177	269-17	SH 358 (SPID) Ramp Reversal	Nile	Staples	CAT 2	TxDOT-CRP	On	\$29.61	Ramp reversal Phase II-B	407	126	282	281	1
				231-17	SH 35	SH 361	Spur 202 Interchange	CAT 2	TxDOT-CRP	On	\$1.50	Feasibility study: multi-level interchange	303	100	203	203	0
			0180-06-XXX	270-17	SH 35	SH 361	Spur 202 Interchange	Anticipated/Source TBD	TxDOT-CRP	On	\$60.00	Interchange Improvements	303	100	203	203	0
				271-17	SH 286 (Crosstown)	SH 358 (SPID)	SS 544	Anticipated/Source TBD	TxDOT-CRP	On	\$30.00	Construct additional northbound lanes	264	103	164	161	3
				276-17	US 181	FM 3296 (Buddy Ganem Dr)	FM 2986 (Wildcat Dr)	Anticipated/Source TBD	TxDOT-CRP	On	\$48.00	Reconstruction	222	100	122	122	0
		2018	0101-04-097	S-224-P1-17	US 181 Overpass at Kay Bailey Hutchison Rd	0.6 mi SE of Spur 202	FM 3239 (Buddy Ganem Dr)	CAT 2, Prop 1	TxDOT-CRP	On	\$24.00	Construct overpass at Kay Bailey Hutchison Rd.	210	100	110	110	0
		2018	0101-04-114	S227C720	US 181 Ramp Reversals	FM 3239 (Buddy Ganem Dr)	FM 2986 (Wildcat Dr)	CAT 2	TxDOT-CRP	On	\$4.00	Portland Ramp Reversals - Northbound	211	125	86	86	0
		2020		230-17	SS 544	SH 286	Coopers Alley	CAT 7	Corpus Christi	Off	\$5.50	Corridor improvements	203	129	74	74	0
				241-17	Leopard St	Up River Rd	Navigation Blvd	Anticipated/Source TBD	Corpus Christi	Off	TBD	Corridor upgrade	209	155	54	54	0
		2018	0102-01-088	S088C0899	SH 44	West of FM 3386	East of FM 1694	CAT 2 / CAT 4(3c)/CAT 12	TxDOT-CRP	On	\$18.50	Construct main lanes, interchange; overpass (Violet)	130	85	52	46	6
			0074-06-241	235-17	I 37	Redbird Ln (Overpass)	Nueces River	CAT2/CAT4(3c)/CAT12	TxDOT-CRP	On	\$35.00	Widen freeway	121	77	46	44	2
				273-17	FM 624	River Hills Dr	East Riverview	Anticipated/Source TBD	TxDOT-CRP	On	\$3.80	Install raised medians	146	106	41	40	1
			0101-04-112	237-17	US 181	PENDING	PENDING	CAT 4(3c) / CAT 12	TxDOT-CRP	On	\$40.00	Construct Grade Separation over Sunset Rd	140	100	40	40	0
		2025	0617-02-073	232-17	PR 22	Aquarius	Whitecap	CAT 2	TxDOT-CRP	On	\$16.00	Corridor upgrade	137	106	33	31	2
			2263-03-900	S028C0913	SH 361	PR 22	Mariners Dr/Port Aransas city limit	Anticipated/Source TBD	TxDOT-CRP	On	\$100.00	Corridor upgrade	83	56	28	27	1
		2026	0916-35-170	S049C0497	Holly Rd Travel Lanes	SH 286	Greenwood Dr.	CAT 7	Corpus Christi	Off	\$4.00	Construct additional travel lanes w/CLTL	155	128	28	28	0
		2018		272-17	Holly Rd	SH 286	Greenwood Dr.	CAT 7	TxDOT-CRP	Off	\$6.70		155	128	28	28	0
				S132C0299A	FM 43	SH 286	FM 665 (Old Brownsville Rd)	Anticipated/Source TBD	TxDOT-CRP	On	\$30.00	Upgrade roadway to 5 lane curb & gutter	106	82	27	24	3
		2020	0326-01-056	S089C2000	SH 286 (Crosstown)	FM 43 (Weber Rd)	S of FM 2444	CAT 2	TxDOT-CRP	On	\$16.00	Extend Freeway Section	74	55	20	19	1
				274-17	FM 665 (Old Brownsville Rd)	SH 358	SH 357	Anticipated/Source TBD	TxDOT-CRP	On	\$15.00	Upgrade roadway to 5 lane curb & gutter	97	80	17	17	0

“The CMP uses an objectives-driven, performance-based approach to planning for congestion management. Through the use of congestion management objectives and performance measures, the CMP provides a mechanism for ensuring that investment decisions are made with a clear focus on desired outcomes.”

“ . . . the CMP shall be developed and implemented as an integrated part of the metropolitan transportation planning process; however, Federal regulations are not prescriptive regarding the methods and approaches that must be used to implement a CMP.”

jpollack@cctxmpo.us

www.corpuschristi-mpo.org

www.CoastalBendInMotion.org

