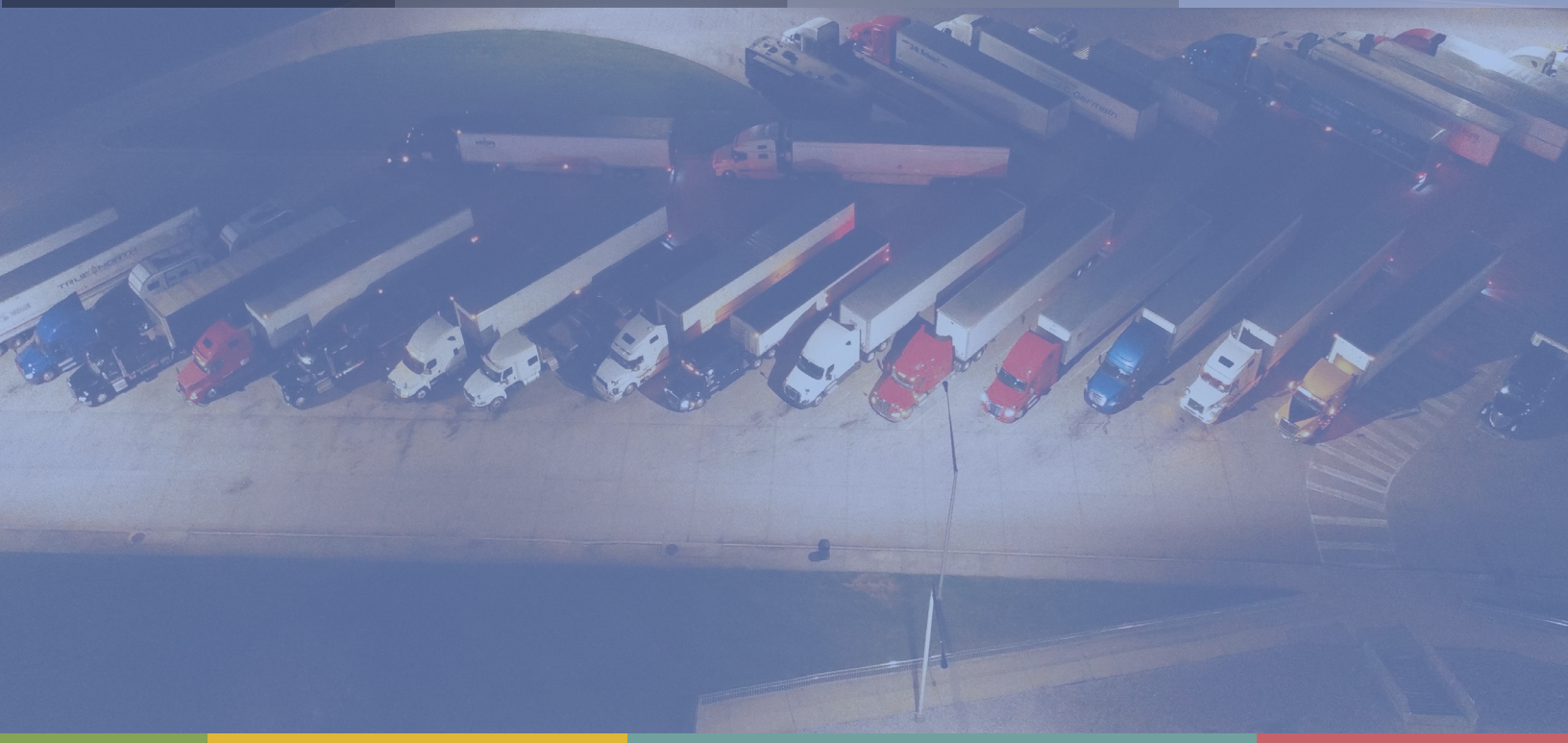
KENTUCKY TRUCK PARKING STUDY

TEAM KENTUCKY®
TRANSPORTATION CABINET

2022

KENTUCKY TRUCK PARKING ASSESSMENT & ACTION PLAN

EXECUTIVE SUMMARY



EXECUTIVE SUMMARY

Across Kentucky there is a significant deficit of dedicated overnight truck parking. This deficit of approximately 1700 spaces leads to safety risks for all road users and reduces the efficiency of freight movement across the state. Truck parking facilities provide truck drivers with a location to take mandatory rest. For many years, truck parking availability has been a national concern within the freight industry. Recent industry trends and federal policy changes have increased the visibility and significance of truck parking challenges. Required rest breaks are defined by the Federal Motor Carrier Safety Administration's (FMCSA) Hours of Service (HOS) regulations, and they are monitored by compulsory Electronic Logging Devices (ELD). An example of typical truck parking at a rest area is shown in **Figure ES- 1.** This truck parking location is the rest area on northbound I-75 in Boone County.

This Assessment and Action Plan is designed to build a better understanding of how truck parking issues impact Kentucky and what potential solutions could be undertaken by the Kentucky Transportation Cabinet (KYTC) and potential partners. The assessment includes an inventory of existing publicly and privately owned truck parking facilities in Kentucky. It also includes an evaluation of truck parking demand using truck GPS data from the American Transportation Research Institute (ATRI), and an identification and prioritization of the truck parking needs across Kentucky.

The report concludes with recommendations for addressing the identified truck parking needs. Potential capacity expansion sites were identified and prioritized. For areas without clear parking capacity expansion opportunities, information was presented on recommended innovative solutions. The report concludes with an Action Plan summarizing the recommended truck parking solutions along with a deployment timeline and budget. The parking expansion recommendations, innovative solutions, and Action Plan have been prepared for KYTC to address truck parking needs.

Figure ES- 1. Typical Truck Parking at Rest Area (I-75 Boone County)

Truck Parking Supply & Demand - Methodology

To better understand the existing supply of truck parking in Kentucky, the project team evaluated truck GPS data to identify truck movements throughout the state as well as locations where trucks parked. Identified areas were screened to confirm that parking occurs at the location, then the number of parking spaces were counted to determine parking capacity. There are approximately 7,550 truck parking spaces in Kentucky, with 6,330 spaces at privately owned facilities and 1,050 spaces at publicly owned facilities. The remaining spaces are in facilities with unknown ownership. A summary of parking spaces by corridor are shown in **Table ES- 1**. The highest number of total truck parking spaces are available along the I-65 and I-75 corridors. The highest truck parking densities (spaces per mile) are found along I-65, I-24, and I-75, all corridors with high truck traffic volumes.

Truck parking demand across Kentucky was assessed utilizing the ATRI anonymized truck GPS dataset as the primary data source. This data was compared to data from the Trucker Path app along with limited field verification. The analysis helps to show where truck parking demand is highest and where parking facilities are the most overcapacity. A summary of truck parking demand by corridor is shown in **Table ES- 2**. The highest truck parking demand is along the I-75 corridor, which also features the highest unmet parking demand. The highest parking demand densities are along I-65, I-75, and I-24.

Table ES- 1. Truck Parking Supply

Corridor	Truck Parking Spaces	Truck Parking Space Density (per mile)	Truck Parking Space Density Rank
I-24	1000	11	2
I-64	1150	6	4
I-65	2330	17	1
I-69	180	1	6
I-71	490	6	4
I-75	2020	11	3
I-165	80	1	7
Other Interstates	0	0	9
Parkways	230	>1	8
Other Highways	150	n/a	n/a
Total	**7550**	--	--

Table ES- 2. Truck Parking Demand

Corridor	Truck Parking Demand	Truck Parking Capacity	Truck Parking Unmet Demand	Truck Parking Demand Density (per mile)	Truck Parking Demand Density Rank
I-24	1300	1000	300	14	3
I-64	1120	1150	-30	6	5
I-65	2360	2330	30	17	1
I-69	240	180	60	2	6
I-71	750	490	260	10	4
I-75	2850	2020	830	15	2
I-165	40	80	-40	1	7
Other Interstates	40	0	40	1	8
Parkways	270	230	40	>1	9
Other Highways	270	70	200	n/a	n/a
Total	**9240**	**7550**	**1690**	--	--

Truck Parking Needs

Using the truck parking supply and demand results, along with 2015 to 2019 KYTC Crash Data Analysis Tool (CDAT) crash data, the truck parking needs across Kentucky were tabulated and prioritized. The needs were determined by area (typically interchanges) using six criteria involving 1) interchange ramp parking, 2) illegal rest area and weigh station parking, 3) site unmet parking demand, 4) corridor unmet parking demand, 5) parked truck crashes, and 6) parking at big box stores. **Figure ES- 2** shows the top prioritized parking need locations. Overall, seven of the top 10 priority sites are located in the I-71, I-75, and I-64 triangle that encompasses the Louisville, Lexington, and the northern Kentucky/Cincinnati metropolitan areas. There are also concentrations of high need sites along I-65 between Louisville and Elizabethtown, along I-75 south of London, and along I-24 in western Kentucky.

Truck Parking Capacity Expansion & Innovation Solutions

There is a clear need for truck parking expansion in Kentucky. This Assessment and Action Plan identified the locations of potential publicly owned expansion sites with limited barriers to development. All potential sites are within KYTC right-of-way, have sufficient area, limited environmental red-flags, and acceptable roadway access. The available size, topographic, and roadway access qualities of the expansion site were combined with the parking need in the area to select the 10 top priority parking expansion areas shown in **Figure ES- 3**. As shown in **Table ES- 3**, the 10 priority parking expansions are proposed in the Action Plan to be designed over the three current and upcoming highway plan biennium periods. **Figure ES- 3** labels each of the sites with both the deployment ground as well as the site identification number as shown in **Table ES- 3**. These ten sites were selected by searching for suitable areas near noted areas of truck parking need, within existing state right-of-way, and those suitable for parking expansion construction. Eighty of those sites were found and scored for suitability. A field visit, sketch design, and conceptual cost estimate were completed for the 30 most promising sites. Engineering review of the results of the 30 sites, along with the associated need, was used to determine the ten sites for conceptual level design and cost estimation. These sites are located in areas of high truck parking need as discussed above.

For areas of truck parking need without suitable commonwealth-owned land for physical parking expansion, innovative solutions have been recommended. These include expansions and upgrades to the existing Truck Parking Inventory Management System (TPIMS), the integration of truck parking into ongoing planning and design projects, the consideration of new funding and project implementation models, and new partnerships with private truck parking developers and operators.

Table ES- 3. Top Expansion Site Summary

Group	Site Design Biennium	ID	Route	MP	County	Construction Cost Estimate (2022)	Existing Capacity	Proposed Capacity
1	2022-2024	175	I-71	13.0	Oldham	$8,300,000.00	26	131
1	2022-2024	217	I-64	60.4	Woodford	$5,910,000.00	26	91
1	2022-2024	230A	I-75 NB	176.8	Boone	$3,710,000.00	54	103
1	2022-2024	230B	I-75 SB	176.8	Boone	$8,800,000.00	94	173
2	2024-2026	29	I-24	54	Lyon	$15,900,000.00	0	252
2	2024-2026	152	I-65	113.3	Bullitt	$2,710,000.00	28	80
2	2024-2026	206	I-71	51.3	Carroll	$11,350,000.00	0	166
2	2024-2026	302	I-75	2.0	Whitley	$2,860,000.00	35	65
3	2026-2028	83	I-65	0.5	Simpson	$2,280,000.00	32	76
3	2026-2028	254	I-75	127.2	Scott	$4,260,000.00	91	158
3	2026-2028	100B	I-65	41.5	Warren	$6,860,000.00	0	57

Figure ES- 2. Kentucky Truck Parking Needs Prioritization

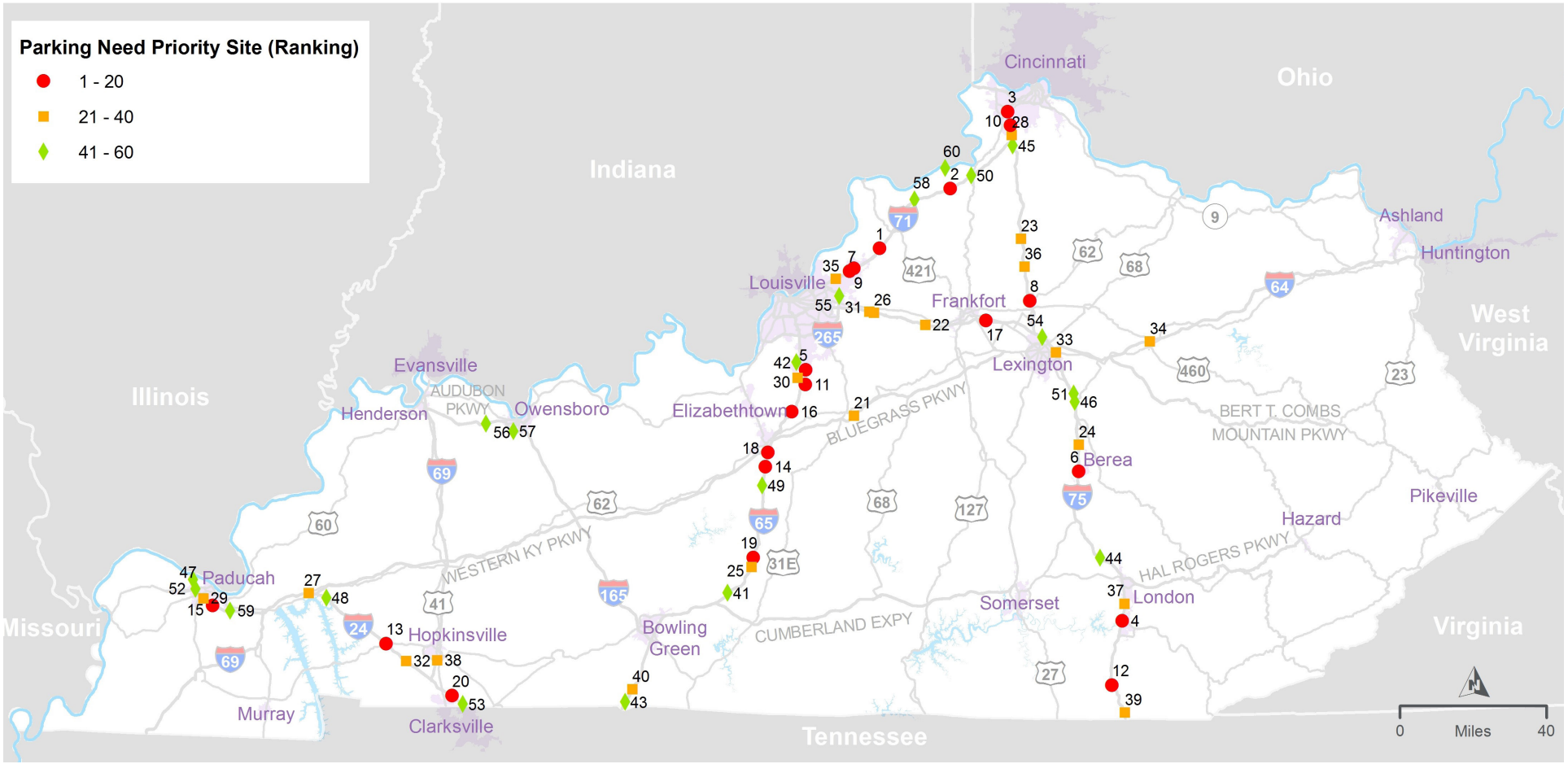
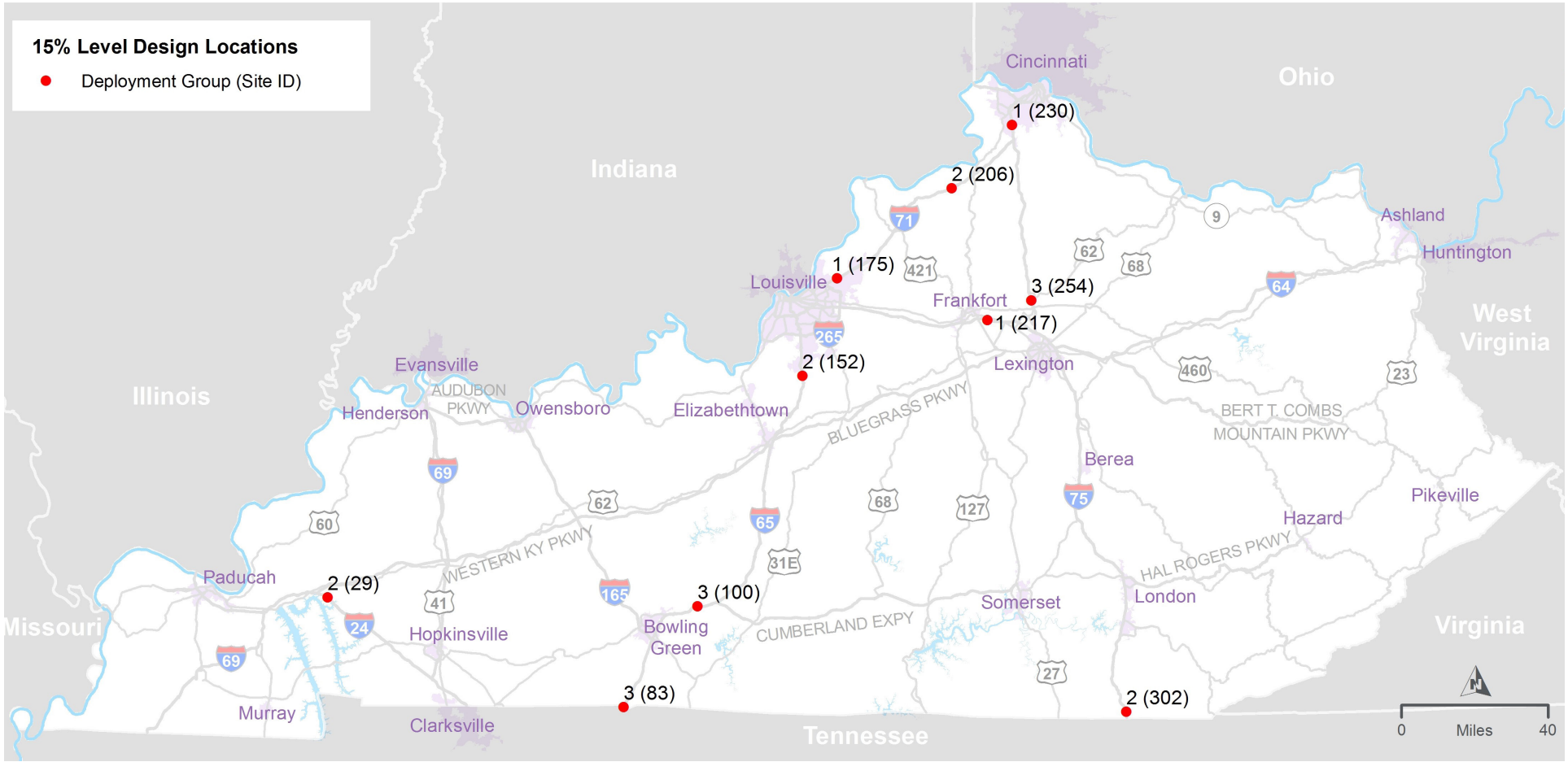


Figure ES- 3. Top Ten Capacity Expansion Sites



Action Plan

The final part of this report is an Action Plan for the deployment of the recommended capacity expansions and innovative solutions. Broken out into the KYTC biennium, the Action Plan contains a set of annual steps involving committing funding, project design, utility clearance, agency coordination, and other steps that should be completed each year. This Action Plan is prioritized for KYTC leadership and staff with the potential to be updated and expanded over time.

Table ES- 3 contains a summary of the top ten recommended truck parking expansion sites and the recommended deployment priority. The Action Plan divides the parking expansions into three deployment groups. These deployments groups should go through design/utility coordination and construction during the same biennium. **Table ES- 4** contains a summary of the actions recommended during each of the next three biennium periods, starting with the current 2022-2024 biennium. These actions include the capital projects summarized in **Table ES- 3** along with innovative solutions, funding actions, and policy and programming actions.

Table ES- 4. Action Plan Summary

	2022-2024 Biennium FY 2023 & 2024	**2024-2026 Biennium** FY 2025 & 2026	**2026-2028 Biennium** FY 2027 & 2028
Capital Project Action	**Design** • Group 1 Expansion **Utility Coordination** • Group 1 Expansions	**Construct** • Group 1 Expansions **Design** • Group 2 Expansions **Utility Coordination** • Group 2 Expansion	**Construct** • Group 2 Expansions **Design** • Group 3 Expansions **Utility Coordination** • Group 3 Expansion
Innovative Technology Action	--	**Construct** • TPIMS Projects 1-3	**Construct** • TPIMS Projects 4-6
Funding Actions	**Secure Financing** • Group 1 Construction • Group 2 Design & Utilities • TPIMS Projects 1-3	**Secure Financing** • Group 2 Construction • Group 3 Design & Utilities • TPIMS Projects 4-6	**Secure Financing** • Group 3 Construction
Policy and Programming Actions	**Coordinate** • Reallocation of Highway Plan Truck Parking Projects • District and Central Office Efforts / Initiatives **Review / Evaluate / Study** • TPIMS Data Sharing Policy • Potential Insurance Pool Policy • Potential Development Agreements	**Review / Evaluate / Study** • TPIMS on I-69 • Effectiveness of Group 1 Facilities	**Review / Evaluate / Study** • Truck Parking Assessment and Action Plan Update • Effectiveness of Group 2 Facilities

HDR

TAYLOR SIEFKER WILLIAMS design group

ATRI American Transportation Research Institute

CCS