Researchers have consistently linked commercial sexual exploitation (CSE) of youth and involvement in prostitution with substance dependency and delinquency. Yet, important questions remain regarding the directionality and mechanisms driving this association. Utilizing a sample of 114 CSE/prostituted youth participating in the Pathways to Desistance study—a longitudinal investigation of the transition from adolescence to adulthood among serious adolescent offenders—the current study examined key criminal career parameters of CSE/prostitution including age of onset and rate of recurrence. Additionally, structural equation modeling (SEM) was used to explore concurrent associations and causal links between CSE/prostitution and drug involvement. Findings show a general sequential pattern of the ages of onset with substance use and selling drugs occurring prior to CSE/prostitution, evidence that a small group with chronic CSE/prostitution account for the majority of CSE/prostitution occurrences, and high rates of repeated CSE/prostitution. SEM results suggest CSE/prostituted youth persist in drug involvement from year to year but infrequently experience perpetuation of CSE/prostitution from year to year. Concurrent associations between CSE/prostitution and drug involvement were found across the length of the study. Additionally, drug involvement at one year was linked to CSE/prostitution during the subsequent year during early years of the study.