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CY PLAN 119: Planning for Sustainability
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Transportation Sector Evaluation

As a port city situated at the edge of the North American continent, New Orleans is a transportation hub that hosts tourism, trade, and day-to-day transit. Seriously devastated by the 2005 natural disaster Hurricane Katrina, the city is now in the tertiary stage of recovery, mainly focused on public transit development and sidewalk repairs. These expansion efforts pose challenges related to delegating the needs of low- and median-income communities displaced from job opportunities by lack of transportation infrastructure. The city's interventions on strengthening connectivity have centered around developing strategies for new linkages, as well as building out new bicycle infrastructure, while falling short on linkage construction and mediation of bike growth that balances access, and the city is just now starting to electrify its fleet. Thus, sustainability efforts in the transportation sector of New Orleans rank 3 out of 5, and recommendations for improvement include developing transparent metrics for assessing the socioeconomic impacts of transit-housing expansions, regulating the spread of bicycle infrastructure, providing accessible results of sidewalk repairs, and developing a comprehensive report of smart charging potential in New Orleans.

The basis of my analysis of New Orleans's progress in transportation sustainability is the 2018 *New Orleans Adopted Master Plan*, whose Transportation section is laid out in Volume 2, Chapter 11. From general goals, to corresponding policies and action items, the plan is clearly structured and easy to break apart into distinct strategies. The sustainability and resilience goal, "Develop an environmentally sustainable and resilient transportation system", mainly focuses on making road drainage systems more robust, strengthening emergency preparedness measures

amongst modes of transportation regulated by the government, and introducing more alternative modes of transportation while making current modes cleaner (City of New Orleans, 2018). I found these measures relatively vague, deciding that it could be more useful to holistically evaluate this section of the plan, and in doing so I revealed a more comprehensive picture of the sustainability planning tensions present in the Planner's Triangle, ultimately informing more about the city's performance in addressing these issues. Looking broadly now at the whole Transportation section, I mainly look from the perspective of a working resident and develop three key measurements of progress on the basis of which I make my final evaluation of the New Orleans's performance: transit job connectivity, the extent of street multi-modality, and the presence of an electrified fleet.

Sustainable transit should stand as an attractive alternative to personal car use in order to decrease roadway congestion and greenhouse gas emissions. According to independent nonprofit 501(c)3 organization Ride New Orleans's *State of Transit 2019* report, only 12% of New Orleans jobs are currently accessible by a 30-minute transit commute, while 89% of these jobs are accessible by a 30-minute drive. Moreover, a Data Center analysis of US Census Bureau data breaks down the modes of travel in New Orleans (2018), showing that over 70% of the population travels by car, while transit accounts only for 7%, even though this number is greater than the national average of 5% (see Figure 1). This distribution is not necessarily reflective of personal preference: in fact, the same analysis indicates that 19% of the New Orleans population does not have access to a vehicle, which is higher than the national average of 9% (see Figure 2). However, what this modal breakdown does suggest is that the core issue with current transportation quality is that public transit is not a preferred mode of getting around. There are several stakeholder trade-offs at play here: vehicle-owners could save money and help reduce air

pollution by using public transportation, but this would come at the expense of available job opportunities and time, while businesses could choose to be located near transit hubs for the sake of being accessible, but this would come at a higher operations cost as that land is more valuable. Either way, public transportation infrastructure must be strengthened for the sake of satisfying the needs of both employees and businesses while leveraging the respective property and resource conflicts derived from the Planner's Triangle, and to do so would also encourage a decline of cars on the road, decreasing traffic and emissions.

As a strength, the New Orleans's general plan intervenes on the inefficiency of job-oriented transit in two ways: it suggests that the public transit network should be expanded, and it encourages the growth of bicycle usage in order to close existing connectivity gaps. The plan intends to, "2.A. Develop and implement a Transportation System Management Strategy to increase capacity and maximize efficiency" (City of New Orleans, 2018), meaning it leaves room for the capacity expansion to be delegated to other governing/private bodies down the pipeline, and in fact this is exactly what has happened so far. In March of 2018, the New Orleans Regional Transit Authority (RTA) published their *Strategic Mobility Plan*, which was both a response to existing issues voiced by riders and other stakeholders, as well as an overview of what direction the RTA wants to head in in terms of addressing comfort, quality, accessibility, connectivity, and collaboration. The document makes several good points about how transit access is crucial in establishing equity for those made vulnerable because of their socio-economic status and mobility needs, namely by highlighting the significance of having transit be located near affordable housing: "people who use transit the most, people with low incomes, are increasingly moving to suburban areas that are further from Downtown and have less frequent service. While increasing transit service in these areas is one solution, many regions have also

begun to encourage more affordable housing in areas with good transit service” (*Strategic Mobility Plan*, 2018). Extending this notion to the issue of job connectivity, “RTA’s service area only covers a portion of the region’s jobs, with other transit agencies providing service in surrounding areas. This can be inconvenient for riders and add additional travel time to their commutes. Regions across the country have handled this issue differently, with some consolidating multiple agencies into one agency and others collaborating extensively to provide regional routes”, which leads to the year-long New Links project, launched as a result of this mobility plan with the aim of consolidating regional transit in order to improve the efficiency of the job commute (*Strategic Mobility Plan*, 2018). Since its 2018 launch, this collaborative effort between the New Orleans and Jefferson parishes has conducted passenger surveys, completed a system analysis, and ultimately created a network redesign of regional transit, which now can be translated into tangible changes, like tailored fares, improved stops, and new linkages.

Ultimately, progress to improve the New Orleans transit system seems, at first glance, to have been stagnant so far, but in context of the fact that broad changes affect the livelihoods of many and that these changes should be justifiable, the existence and quality of the *Strategic Mobility Plan* and the New Links project are indicators of the consideration of stakeholders and equity, and therefore the transparency of the effort so far; solutions that will be implemented include increasing accessibility to service information, improving stop shelters, optimizing road congestion, encouraging affordable housing near transit hubs, and looking to expand mobility options (New Links, 2019). More generally, the idea that the RTA recognizes that jobs are connected across the greater New Orleans area and is thinking in terms of prioritizing daily commuters’ needs is a strong sign of sustainable and inclusive thinking, in that transit will become a more attractive alternative to driving, and will potentially connect people to more jobs

by strategically developing transit centers and ensuring that housing is affordable there.

However, what stands as a major shortcoming of the progress made so far is the lack of any concrete assurance that transit will operate in tandem with housing to uphold equity, as proposed transit hubs will attract the attention of developers. In other words, the age-old property conflict between gentrifying professionals and long-time residents may arise if the stipulation of accommodating working-class folk first is not made.

The second key approach that New Orleans has taken in both reconciling connectivity issues and encouraging multi-modal travel is expanding and strengthening bicycle infrastructure as both a cost-effective and clean mode of transit. The master plan states the goal of establishing a bike-sharing network: “4.A. implement an equitable bike share system that serves job commuting needs and connects to transit” (City of New Orleans, 2018). Meeting this goal requires the presence of proper infrastructure, including bike lanes, bike stations, sharable bikes, and a smartphone application or a program that manages the bicycle exchange. Bike Easy, a New-Orleans-based non-governmental organization whose main purpose is to increase bicycle ridership and safety, has played a key role for the last decade and a half in building up bicycle mobility resources through public outreach programs, collaborations with companies in the bicycling industry, and analyses of the state of accessibility and equity of bicycling in New Orleans. According to their 2018 report, “Parts of New Orleans East, Algiers, the Upper and Lower Ninth Ward, Central City, Treme, the Seventh Ward, Hollygrove, and Leonidas have high percentages of low-income residents who lack access to employment centers via bicycle facilities” (Bike Easy, 2018). This trend is highlighted in Figure 3, where the northeastern residential block with high/very high percentages of low-income residents is largely cut off from

the southwestern job cluster, and even just eastwards of the cluster, Algiers lacks both existing and planned bike pathways.

To mitigate this lack of infrastructure, in 2018 Bike Easy launched its Connect the Crescent project, which was a three-month demonstration that “enhanced crosswalks, improvements to transit, and protected bikeways which featured barriers separating people biking from automobile traffic on routes leading to and through New Orleans’ French Quarter and Central Business District” (Connect the Crescent, 2019; see Figure 4). Project planning involved community input, and as the demonstration occurred, the website hosted a comment section whose content was then used in the final analysis. As quickly as by the end of 2018, the demonstration ended, and study results were published to the project website, making them accessible and easy to read. In this light, the aim to involve community stakeholders in testing out bicycle integration into major city nodes was made clear, signifying that this community-oriented strategy is holding equity in its gaze. Furthermore, the results showed that putting in low-cost, bicycle-vehicle barriers significantly reduced vehicular speeding, bike-related crashes, and made riders and pedestrians feel safer or just as safe as before (Connect the Crescent, 2019). Overall, the Connect the Crescent project showcased the potential for increased bicycle mobility if the infrastructure is strengthened first, allowing riders to feel like they will be safe on the road and thus encouraging them to bike instead of driving.

Coupling with Connect the Crescent is the introduction of a bike-sharing program called Blue Bikes. This service can be used by the minute, or with a monthly membership, and it includes a student membership discount. This bike network is mostly located around the downtown area of New Orleans, so people that are commuting from farther away cannot use this service, however. As a private interest, this subdivision of Uber has no responsibility to commit

towards charging a fixed rate, so it is more difficult to make policy-based forecasts of how bike-sharing will evolve, which suggests an economy-equity tension. Additionally, because its service is restricted just to one major node of New Orleans, Blue Bikes does not serve the purpose of connecting across the region of New Orleans in order to provide a cleaner and cheaper alternative to using a private car (see Figure 5). This leads to the core issue with bicycle usage growth, namely that if it is not strategically aimed to link connectivity gaps, then it will disproportionately benefit communities in New Orleans, most likely along lines of race and socioeconomic status. Nonetheless, the efforts made by Bike Easy and Blue Bikes, under the supervision of the city government, specify how the master plan's applications so far have begun to encourage effective job connectivity, especially amongst those set back by transit inefficiencies, namely low- and median-income groups.

Sustainable transportation infrastructure can also support multi-modal transit by maintaining sidewalk quality for pedestrian use, which the city addresses: “1.A. Invest in our streets and maintain them in a state of good repair” (City of New Orleans, 2018). Since Hurricane Katrina, New Orleans has received funding from the Federal Emergency Management Agency to do recovery-based construction. As a result, some roadways have been improved, but there still is a long way to go. A 2016 pavement analysis showed that “Approximately 65 percent of the City’s streets rated in poor or worse condition” (Roadwork). The bigger issue with this result is that it is not accessible to people: the only recent status report is this 2016 draft report of the analysis, which has technical wording and too much information for regular people to sift through to see relevant information to them as voters and taxpayers. For example, Figure 6 shows what budget size each kind of roadway treatment requires, and to someone that is not an expert, effectively all this table conveys is that “recovery is expensive”. While website users can

navigate to a page where all ongoing projects are listed, overall the channel of information is blocked by illegible reporting.

Lastly, the fuel-efficiency aspect of building sustainable infrastructure, “Support the usage of alternative fueled vehicles such as electric cars”, has only begun to be addressed (City of New Orleans, 2018). As recently as November 2019, the City of New Orleans was awarded a grant to “install five City-owned electric vehicle charging stations available for public use.” (City Awarded \$80k, 2019). Currently about 600 EVs are being driven in New Orleans, and there is no public charging infrastructure, but the previous purchase of an EV fleet, along with the promise that “construction and installation plans will be completed and submitted to the [Louisiana Department of Environmental Quality] LDEQ by 2020” creates a sense of optimism that fuel-efficiency will be taken seriously (City Awarded \$80k, 2019).

Thus, here are some planning recommendations that stem from the city’s work to expand public transit, build bicycle infrastructure, repair sidewalks, and deploy EVs. Firstly, I propose that transit development projects coming up in the next few years explicitly include low/median-salary-job connectivity metrics, both on a local and on a regional scale, to ensure that we can clearly track the improvement of transit as a vehicle for improving quality of life and minimizing environmental impacts. Following future transit-use demographics can help evaluate the efficacy of these expansion efforts, and to ensure that workers are not displaced as a result of home values increasing when transit improves. Because public transit is heavily used by low- and median-income residents who might not have the choice to drive a car, these groups are vulnerable to systemic changes, and should not be left out of the city’s consideration of what is a sustainable change to existing transit infrastructure.

Additionally, I recommend that priority in bike lane construction be given to close corridors between low/median income communities and potential workplaces in order to encourage cleaner transportation and to increase job accessibility. With the same understanding as with transit expansion, bike-sharing and bike access needs to be explicitly aimed at minimizing job opportunity losses that result from systemic shortcomings for folks who potentially cannot afford to drive. If the city government can make agreements with Blue Bikes and other future bike sharing services to expand equitably, and if future multimodal street networks are arranged in an interconnected manner, then transportation can intervene on the economy-equity struggle by linking vulnerable groups with more travel choices, giving them bargaining power over their quality of life.

Multimodal streets require resilient sidewalks, so I propose that the many ongoing repairs be reported clearly to the public, perhaps through the use of a simpler website or a separate report that describes relevant progress and stakeholders. Even within the difficult-to-comprehend report draft, this weakness is mentioned: “As time progresses, it will be important for the City to maintain and refine the software and data contained within, in order to obtain meaningful recommendations that can be used as part of the ongoing program planning process” (*New Orleans Pavement Management Analysis Draft Report*, 2016). As such, residents will only become invested in multimodal streets if they understand their value despite how difficult and expensive (on the order of billions of dollars) it will be to renovate the streets. If implemented, these suggestions can contribute to more public discourse on what the best version of “multimodal” is for each neighborhood, or even for each block. The input of residents is invaluable to this end, because their knowledge of how roads are actually being used can assist planners in identifying location-dependent issues such as congestion.

Lastly, on the fresh topic of electric car deployment, I propose that the city develop a straightforward action plan or timeline for how it will accommodate the incoming fleet of EVs, given the new promise to build out public charging stations. There is a lot of potential for building out EV infrastructure, but the city must decide its overall stance on developing this in conjunction with private developments, and it must include the public in this decision. By intervening on how EV adoption will develop, the city will encourage a decline in vehicular emissions while balancing economic and environmental interests.

Ultimately, from the perspective of a working resident in New Orleans, I found that the city has performed well in tackling the ongoing issues of getting people to their jobs, giving people options for how they travel, and introducing the idea of zero-emissions transit, but these steps are still in the stage of planning and cost-benefit analysis, without much implementation. Transit expansion should aim to be regional and affordable, so when future housing developments occur in coevolution with transit improvements, the city government needs to do clear needs assessments and report on how vulnerable groups, such as low- and median- income groups, are being accommodated as the city transforms. In addition, bicycle network expansion is an exciting trend to observe, as it promotes health and emissions reductions, but the network should not just be concentrated in downtown job clusters; again, multimodal and progressive development needs to prioritize existing regional travel patterns. Other, more nuanced improvements like sidewalk repair and the nebulous potential of EV integration are not well documented and should be pronounced more in future iterations of the general plan. Thus, New Orleans has a lot of groundwork to lay now, but its community involvement and sophisticated ideas so far demonstrate that it is on the right track to a sustainable future.

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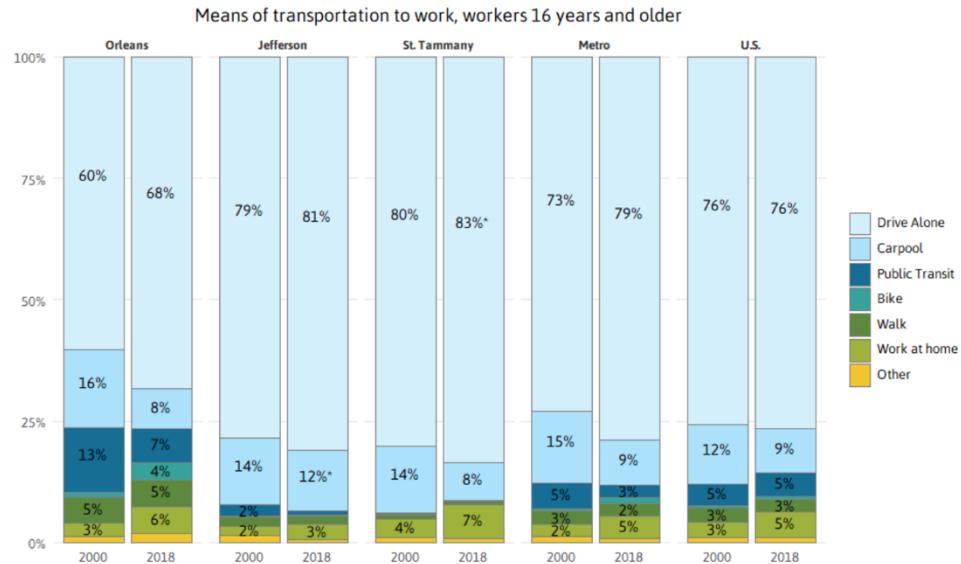
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Figures

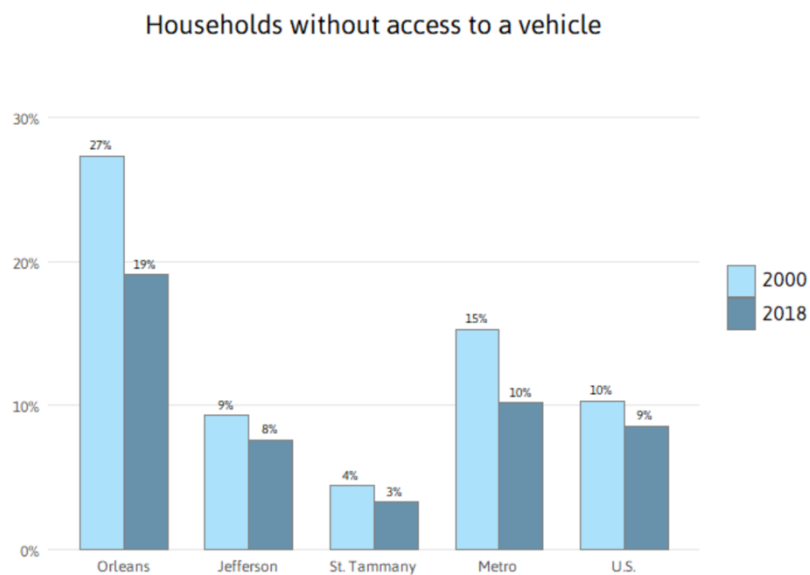
Figure 1. “Means of Transportation to work, workers 16 years and older” from *Public Meeting* New Links PowerPoint Presentation



* = Difference between 2000 and 2018 is not significant at 95% confidence interval.

Source: The Data Center analysis of U.S. Census Bureau data from Census 2000 SF3 and American Community Survey 2018.

Figure 2. “Households without access to a vehicle” from *Public Meeting* New Links PowerPoint Presentation



* = Difference between 1999 and 2018 is not significant at 95% confidence interval.

Source: The Data Center analysis of U.S. Census Bureau data from Census 2000 SF3 and American Community Survey 2018.

Figure 3. “Access to employment centers in low income neighborhoods in New Orleans, 2016”
from *An Evaluation of New Orleans and Jefferson Parish*

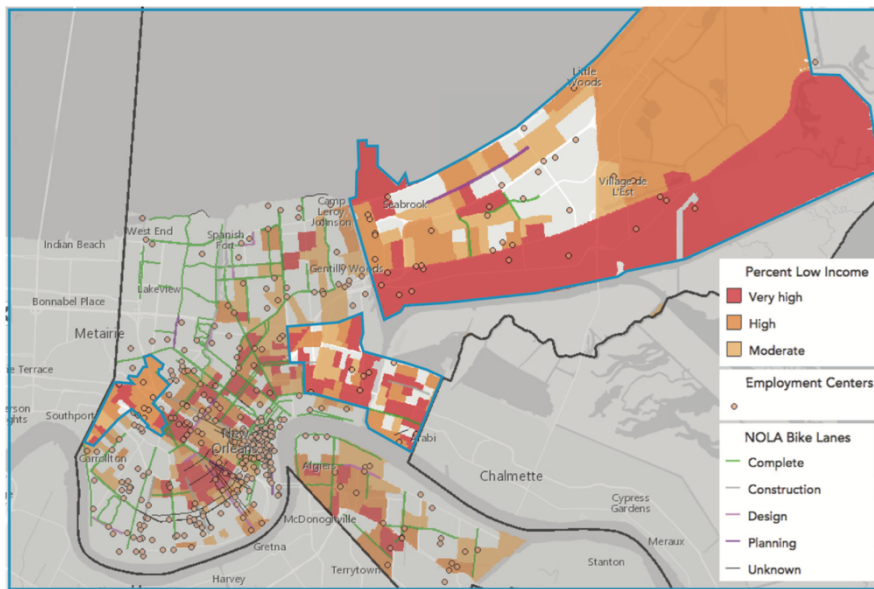


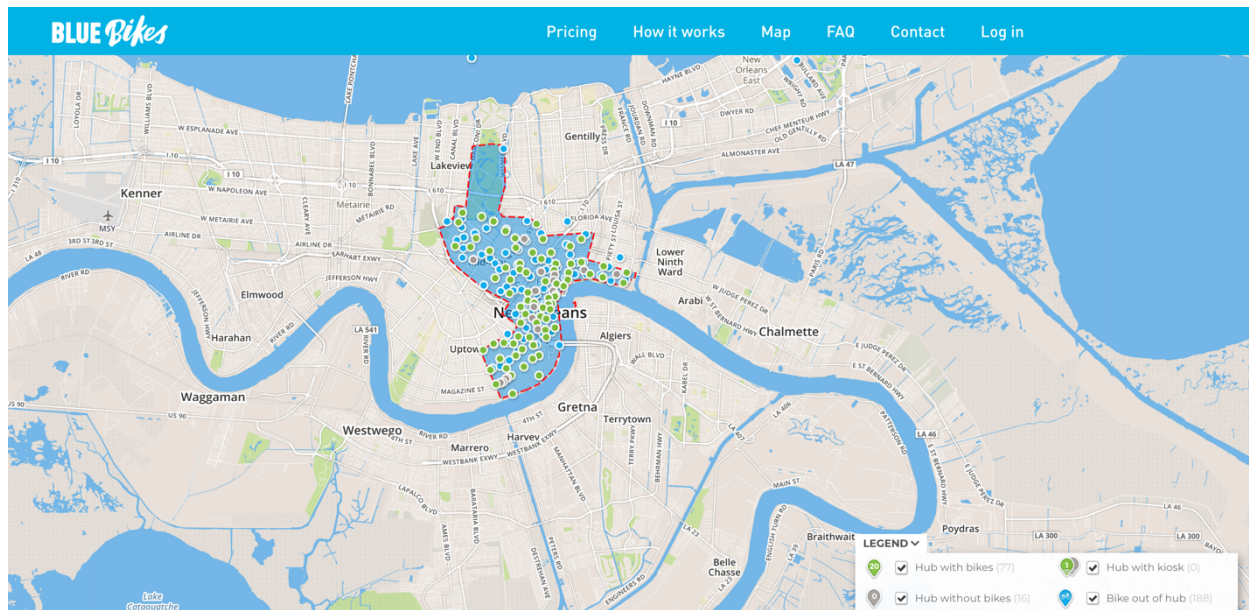
Figure 19. Access to employment centers in low-income neighborhoods in New Orleans, 2016

(Data source: Climate-Smart Cities Portal)

Figure 4. Connect the Crescent Demonstration Map



Figure 5. Blue Bikes Network relative to the Greater New Orleans Area

Figure 6. “Needs Analysis Treatment Distribution (2016-2025)” from *New Orleans Pavement Management Analysis Draft Report***Table 4.2: Needs Analysis Treatment Distribution (2016-2025)**

Treatment Description	Sections	Length (mi)	Rehab Cost
AC - Mill and Overlay	5,931	413.8	\$ 312,252,104
AC - Mill and Overlay with Base Repairs	2,542	169.1	\$ 166,230,978
AC - Pothole Filling	12	0.8	\$ 350,149
AC - Reconstruction (Arterial/Major Collector)	77	4.6	\$ 19,598,312
AC - Reconstruction (Minor Collector/Local)	4,674	314.7	\$ 1,379,101,689
PCC - Crack/Joint Sealing	2,130	177.7	\$ 48,931,727
PCC - Joint Repair	1,195	106.5	\$ 104,676,196
PCC - Full Depth Slab Repair	940	85.2	\$ 111,878,267
PCC - Reconstruction (Arterial/Major Collector)	392	28.8	\$ 235,194,950
PCC - Reconstruction (Minor Collector/Local)	1,285	104.9	\$ 827,192,608
Totals:	19,178	1406.2	\$ 3,205,406,980