Implementing a New Mobility Vision for Rancho Higuera in a Deeply Uncertain, Fast-Changing World

Results from RAND Corporation Participatory Local Planning Workshops

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Culver City, with 40,000 residents, lies at the crossroads of key transportation corridors in west Los Angeles, between downtown Los Angeles and the beaches of Santa Monica. Home to motion picture and television production studios and a burgeoning tech industry, the city faces the challenge of increasingly dense traffic. In 2017, Culver City released its Transit Oriented Design (TOD) Visioning Study, a blueprint reimagining future mobility in the city’s downtown district. The TOD concept aims to reduce reliance on cars by reshaping the urban landscape and creating multiple alternative mobility options—including walking, transit, and biking.

To help realize the TOD vision, Culver City partnered with the RAND Corporation to develop an implementation plan for the city’s Rancho Higuera neighborhood. The RAND team’s efforts focused on two key concepts: decision making under deep uncertainty (DMDU) and a “shadow” process of citizen involvement in parallel to and interacting with more-formal planning.

In partnership with Culver City, the RAND team conducted a series of scenario and stress-testing workshops with city staff, developers, and Rancho Higuera residents. These workshops, along with supporting analysis, generated an augmented plan that included a phased implementation approach. This plan aims to meet the needs of Rancho Higuera residents, reduce the deleterious effects of traffic on surrounding communities and businesses, and enhance robustness against a variety of potential surprises.

As one unique aspect of this partnership, Thomas Small participated as both the mayor of Culver City at the time of the workshops and as a substantive contributor to designing and organizing the workshops. Given his professional career in architecture and planning, Small was ideally suited to this role.

These proceedings describe the process RAND employed with Culver City and the results generated that begin to address and ultimately will mitigate the city’s increasing traffic. Both the process and results are intended to benefit the Rancho Higuera neighborhood and Culver City as a whole. These proceedings also might be viewed as a template for other cities grappling with mobility challenges during an era of rapid change.

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**Abbreviations**

<table>
<thead>
<tr>
<th>Abbreviation</th>
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<tr>
<td>ABP</td>
<td>assumption-based planning</td>
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<td>DMDU</td>
<td>decision making under deep uncertainty</td>
</tr>
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<td>NTMP</td>
<td>Neighborhood Traffic Management Program</td>
</tr>
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<td>RHNA</td>
<td>Rancho Higuera Neighborhood Association</td>
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<td>TOD</td>
<td>Transit Oriented Design</td>
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Culver City, with 40,000 residents, lies at the crossroads of key transportation corridors in west Los Angeles, between downtown Los Angeles and the beaches of Santa Monica (see Figure 1.1). Home to Sony Studios (née MGM), among other of the 20th century’s iconic movie studios, Culver City has now also become a magnet for 21st-century digital media and higher-end design and architecture studios. Such firms as Amazon Studios, Apple Music, and HBO have relocated or are in the process of relocating their headquarters there. These economic engines, however, pose challenges. In particular, traffic increasingly clogs the city’s streets. Up to 70 percent is cut-through traffic, passing across the city on its way to someplace else.

The increase in traffic is especially consequential for Culver City, which has long prided itself in providing a distinctive urban environment for its residents and visitors. In 2017, Culver City released its Transit Oriented Design (TOD) Visioning Study, a blueprint reimagining future mobility in the city’s downtown district. The TOD vision aims to reduce reliance on cars by reshaping the urban landscape and creating multiple alternative mobility options—including walking, public transit, and biking. As one centerpiece, the plan aims to complement the new light-rail station for the Metropolitan Transit Authority’s Expo line that abuts

Figure 1.1
Culver City, California
the TOD district. The plan was framed with the intent to achieve these ends while also preserving and even enhancing Culver City’s current “hometown” feel within the heart of the greater Los Angeles basin.

However, implementing the TOD concept presents Culver City with a significant challenge. The study’s vision represents transformational change requiring significant shifts in the city’s landscape and the expectations and habits of its citizens. In addition, Culver City must pursue this vision at a time of rapid expansion of mobility options. For instance, within a year of the TOD study release, electric scooters belonging to two competing providers, Bird and Lime, became commonplace on the streets of nearby Santa Monica, adding an unannounced and unexpected element to the possibilities envisioned by the TOD study.

Keenly aware of this planning challenge, Culver City officials approached the RAND Corporation for help. It quickly became apparent that the Rancho Higuera neighborhood provided an ideal test case for exploring new approaches to planning toward ambitious visions during uncertain times. The neighborhood was ready and eager to embrace a new mobility vision, and its challenges represented a microcosm of those facing the city as a whole.

Rancho Higuera lies within the corridor defined by Interstate 10, the Expo line station of the county’s Metropolitan Transit Authority and Culver City’s downtown to its west and northwest; the burgeoning Hayden Tract business and arts district to its east and southeast; Sony Studios to the southwest; and the city’s Arts District to the northeast, as shown in Figure 1.2. Ballona Creek winds its way east and south of Rancho Higuera, further complicating access. Faced with increasingly heavy local traffic, the Rancho Higuera Neighborhood Association (RHNA) had already drafted its own local mobility plan before the city had completed its TOD study, as shown in Figure 1.3. The RHNA plan seeks to divert and calm traffic in

Figure 1.2
Rancho Higuera Neighborhood, Culver City’s Downtown, Extended TOD District, and Hayden Tract
the neighborhood by blocking major through streets with turn-only intersections; outlawing left turns on key streets; and installing multiple crosswalks, raised pedestrian crossings, and enforcement cameras.

Culver City partnered with RAND to develop an implementation plan for Rancho Higuera. The plan that emerged was termed the Neighborhood Traffic Management Program (NTMP) and is discussed in detail in Chapter Five of these proceedings. RAND’s efforts focused on two key concepts: decision making under deep uncertainty (DMDU) and a “shadow” process of citizen involvement in parallel to and interacting with more-formal planning. DMDU, discussed in more detail in Chapter Three, encompasses a variety of methods that help decisionmakers identify and seize opportunities while avoiding adverse surprises in a fast-changing world. DMDU methods help decisionmakers scan a wide variety of plausible futures, stress-test plans for these futures, and identify robust and flexible strategies that perform well even when the future is hard to predict with confidence.

It often proves useful to introduce DMDU methods into a community through a shadow process. A shadow process is a structured exercise that runs alongside a city’s formal planning process, provides a space for exploration and experimentation, and feeds promising ideas back into the formal process. It is also designed to address the growing problem of making certain that diverse voices from among those who will be affected can be heard during the planning process itself in a manner that will not only enhance the accurate targeting of the ensuing plans but widen the circle of consensus as well.

In its efforts with Culver City, RAND conducted a series of scenario and stress-testing workshops with city staff, developers, and Rancho Higuera residents. These workshops, along with supporting analysis, generated an augmented RHNA plan that included a phased implementation approach. This plan is designed to meet the needs of Rancho Higuera residents, reduce deleterious effects of the TOD vision on surrounding communities and businesses, and enhance robustness of the TOD concept against a variety of potential surprises. The workshops also helped residents, city officials, and stakeholders articulate and share a vision for a satisfactory outcome for Rancho Higuera, achieve consensus on initial implementation, and generate concepts for consideration in the city’s next general plan.

These proceedings describe the process RAND employed with Culver City and the Rancho Higuera residents and the results that those efforts generated. Both the process and results are intended to benefit the Rancho Higuera neighborhood and Culver City as a whole.
The streets of Culver City’s Rancho Higuera neighborhood fill with traffic moving among the city’s downtown, the Hayden Tract business district, its arts district, and Sony Studios. Cut-through traffic traveling between the Interstate 10 corridor and points south also fills the neighborhood’s streets. Up to 10,000 cars per day travel through this residential neighborhood in the morning and evening (Herbertson, 2019). According to workshop participants, this traffic, some of which is aggressive and high-speed, endangers pedestrian safety and residents’ access to local schools and businesses.¹

In response, the RHNA researched and developed recommendations for reducing traffic. Although the issues were long-standing and increasing with the continuing development of Culver City, the neighborhood wished to act while major city planning for the TOD study was underway to make certain that their interests and concerns were fully articulated. RHNA’s resulting 2016 proposal, called the RHNA plan, aims to improve the safety and quality of life in the Rancho Higuera neighborhood by blocking major through streets with turn-only intersections; prohibiting left turns on key streets; and installing multiple crosswalks, raised pedestrian crossings, and enforcement cameras, as shown in Figure 2.1.

After completing the plan, RHNA homeowners began petitioning the city council and mayor to implement the plan alongside the larger TOD effort. A developer behind one of the large new construction projects, recognizing that the increased traffic associated with their project would exacerbate the issues, offered to fund the plan’s recommended crosswalks and street signs.

In particular, the RHNA plan—also known as the Cattle Corner Plan, for the distinctive historical origin of the neighborhood as part of the Rancho Rincón de los Bueyes, a Spanish land grant—identified the following specific problems and proposed solutions:

- **Higuera Street:** This is an important neighborhood street; it sees an estimated 7,000 to 11,000 of the 70,000 cars that enter Culver City daily. Drivers using the street as a shortcut through the neighborhood reportedly drive aggressively and quickly. Crossing the street is dangerous, and students at a local elementary school have only one crosswalk available.

¹ As written by the RHNA in its plan (provided to the authors), “The intention of this concept is to increase pedestrian safety and access through and across our neighborhood, maintaining local traffic flow and access to Linwood E. Howe [elementary school], downtown Culver City, and the surrounding businesses. At the same time, it is intended to divert and calm the increasing amount of aggressive, high-speed auto traffic that crosses through both Hayden Tract and Rancho Higuera.”
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- The RHNA plan would remove direct access to Interstate 10 from Higuera by creating a turn-only intersection; adding roundabouts; and adding three crosswalks at Kruger, Hubbard, and Carson streets. The RHNA plan would also create a cul-de-sac before Hayden Place that would allow passage of emergency vehicles only.

- Ince Boulevard: Ince Boulevard is another important neighborhood street. It is wide, straight, and has no cross-traffic, because it is bordered on the west side by Culver Studios with access to local streets on the east side. Cars on Ince Boulevard drive quickly. The street has the best pedestrian sidewalk linking Rancho Higuera to downtown Culver, but has no crosswalks. Students at the local elementary school cross an oddly-shaped intersection.
  - The RHNA plan would add raised pedestrian crossings at each cross street to slow traffic, highlight crosswalks, and make the intersection by the elementary school more distinctive with expanded curb bump-outs.

- National Boulevard: One of Culver City’s main arteries, this thoroughfare is regarded as the northern edge of Rancho Higuera. To avoid congestion on National Boulevard, hundreds of cars turn left into the neighborhood onto the Wesley, Helms, and Schaefer residential side streets. This cut-through traffic often drives quickly. There are speed bumps, but they are too few and far between. The lack of designated pedestrian crosswalks makes crossing streets dangerous.
  - The RHNA plan would reduce traffic by prohibiting left turns off of National Boulevard during rush hour and adding raised crosswalks and more speed bumps on Wesley, Helms, and Schaefer Streets.

Figure 2.1
Rancho Higuera Neighborhood and the RHNA Plan
Implementation Challenges

The RHNA plan presents Culver City with important opportunities and challenges. The energized local community provides the city with a partner for pursuing aggressive goals consistent with the overall TOD vision, particularly the goals of shifting from individual motor traffic and preserving the distinctive character of adjoining neighborhoods. Reducing congestion in Rancho Higuera would allow the city to demonstrate the benefits of its new mobility vision, display its ability to implement that vision, and generate momentum toward pursuit of its larger goal of managing Culver City’s extraordinary growth in a manner that does not inflict undue costs on residents. But for the city, the RHNA plan also presents at least three distinct challenges.

First, implementing the RHNA plan could generate adverse consequences both inside and outside the Rancho Higuera neighborhood, making it more difficult for employees coming from outside the city to reach their jobs in the adjoining Hayden Tract and diverting congestion onto the streets in the neighborhoods around Rancho Higuera. The plan could also make it more difficult for Rancho Higuera residents to access and move around their own neighborhood—getting their children to school and traveling to their jobs and other activities. Thus, the plan might need to be modified to reduce some of these adverse potential consequences.

Second, the plan might run afoul of several disruptive future trends or developments, such as failing to account for or take advantage of new mobility options (e.g., scooters, ride-sharing) that might make its goals easier to reach, or failing to anticipate the unexpected ways people might respond to attempts to divert them from neighborhood streets.

Third, successfully implementing the RHNA plan would require generating a flow of realized and anticipated benefits that, in people’s minds, outweigh the inconvenience of adjusting their daily routines. Residents would need to see redress of their concerns, although the city would need to harmonize this effort with the broader implementation of the TOD concept. A mismatch in this flow of benefits and costs could derail the plan and the careers of the city leaders moving it forward.
As noted previously, addressing the RHNA plan in the context of the broader TOD vision presents Culver City with a significant challenge. The vision calls for transformational change in the city’s approach to mobility while the city’s economy and the technological underpinnings of transportation are also undergoing significant change. To help Culver City develop an implementation plan for Rancho Higuera, RAND employed methods for DMDU (Marchau et al., 2019; Lempert, Popper, and Bankes, 2003). DMDU methods help decisionmakers make robust and flexible choices when facing a fast-changing future that is hard to predict with any confidence.

This chapter provides a brief overview of the DMDU methods that RAND employed with Culver City and how these methods worked together. In the next section, we describe their specific implementation.

As shown in Figure 3.1, the process began with the city’s existing plans and worked through four steps. The first, a scenario-visioning exercise, was conducted as a day-long workshop with members of the community and city staff. The exercise was intended to help participants take an expansive view of the challenge and to help frame the subsequent analysis. In particular, the scenario exercise exposes a variety of community goals and the actions that the community might take to achieve those goals. This approach obviates a too-early focus on strategies (means) without sufficient explicit exploration of objective values (ends) to be used in evaluating outcomes.

In the second step, RAND and Culver City staff worked together to generate a proposed implementation pathway from the elements surfaced by the scenario visioning. As we discuss further in Chapter Five, the city staff began incorporating the results of this exercise into their NTMP process during the pathways stage.

In the third step, community members gathered in a day-long workshop to critique the proposed implementation plan and to try their hand at crafting alternatives. They then stress tested these alternative plans, identifying the key assumptions on which the success of each alternative plan would depend and the potential vulnerabilities of these load-bearing assumptions.

In the final step, RAND staff used this information to propose a robust and flexible plan—one that would achieve multiple goals over a wide variety of future scenarios.

The scenario-visioning exercise used two classic DMDU methods: scenarios and backcasting. Scenarios represent internally consistent descriptions of future events that often come in sets of two or more. The process of developing scenarios provides a powerful tool for gener-

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1 Also see Society for Decision Making Under Deep Uncertainty, homepage, undated.
ating stakeholder engagement and helping people expand the variety of futures they consider, contemplate their choices and goals from a wider variety of views and vantages, and engage more comfortably with potentially troubling tradeoffs. Backcasting is a planning method that starts with defining a desirable future and then works backward to identify policies and programs that will connect that specified future to the present (Robinson, 1988). In many cases, it is difficult to think about the future because of the rapid proliferation of branch points and alternatives. It is easier to begin with a specific future and think backward. This has the additional virtue of anchoring people in the future rather than the past. In this scenario-visioning exercise, participants first used backcasting to spark their imaginations about desired futures and then enriched these visions through building scenarios. We used these techniques to develop an explicit articulation of what might be a desirable future outcome and to gain consensus for moving forward based on that understanding.

The question then becomes one of how we might travel toward that desirable future and maintain our course through future vicissitudes. For this pathways exploration exercise, we employed another DMDU framework called Three Horizons Foresight, as shown in Figure 3.2 (Curry and Hodgson, 2008). The horizons represent distinct periods that result from decision-making, external forces, and societal evolution. The first horizon describes the current state of conditions using present-day values and trends. The third horizon describes the future state of the world, which might resemble the envisioned desirable world from the scenario-visioning exercise but could turn out to represent one of the less desirable scenarios depending on choice of pathway and uncertain future trends or surprises. The second horizon represents a transition phase articulating how society shifts from the current state to the desired future state.

The gray curve shown in Figure 3.2 suggests that systems important in the current state (first horizon) might become increasingly irrelevant or incapable of delivering on our future goals as the environment changes were we to not adapt to those changes. Not surprisingly, systems important in the desired future are only nascent today, as represented by the blue line. In addition, some systems only nascent today might prove important to the transition but will fade away as the desired future state comes into being, shown by the purple line. The pathways exercise uses this Three Horizons Foresight framework to help participants focus on policies and changes important at different time scales with reference to meeting the city’s core values.
The stress-testing workshop employed a further DMDU method called *assumption-based planning* (ABP) (Dewar, 2002). ABP helps decisionmakers manage surprise by enabling them to uncover the key vulnerabilities embedded in an organization’s plans. The method starts with a proposed plan and then helps participants identify explicit and, often more importantly, implicit assumptions underlying the plan. ABP focuses on two types of assumptions: load-bearing and vulnerable. A *load-bearing assumption* is one whose failure would require significant changes in a plan. The architectural metaphor is meant to hold: A load-bearing assumption is like a load-bearing beam: Pull it out, and the roof caves in. A *vulnerable assumption* is one that could fail within the expected lifetime of the plan. ABP regards assumptions that are both vulnerable and load-bearing as the *key assumptions* underlying a plan. Participants in the stress-testing workshop used ABP to identify such key assumptions underlying their favorite plans.

Finally, RAND employed the DMDU technique of adaptive pathways to recommend robust and flexible plans for Rancho Higuera (Haasnoot et al., 2013). *Adaptive pathways* provide an overview and compelling visualizations of alternative paths into the future. Each path might have tipping points, that is, emerging conditions under which continuing to follow the path would lead to failure. Adaptive pathways chart alternative paths at each tipping point and, importantly, highlight actions that can be taken in the near term to prepare for the alternative paths. This exercise used the ABP key assumptions to inform the adaptive pathways’ tipping points.
RAND convened four workshops and conducted supporting analyses using the methods outlined in the previous chapter. These workshops with stakeholders and with city staff aimed to develop and stress test an implementation plan for Rancho Higuera. In Table 4.1, we list the workshops. The first and last workshops were community workshops, and the two pathways workshops involved RAND and city staff.

As noted in Figure 3.1 in Chapter Three and further discussed in Chapter Five, Culver City began incorporating the results of this exercise into its NTMP process during the pathways workshops in July and September. The stress-testing workshop in October also influenced the city’s NTMP process.

### Scenario-Visioning Workshop with the Community

The process began with a scenario workshop, attended by 23 participants drawn from homeowners’ groups and developers—either residing in or associated with the Rancho Higuera neighborhood—and city staff. Participants were invited by city elected officials, informed in part by a RAND stakeholder mapping exercise, with the aim of obtaining a representative sample of the interest groups potentially affected by the RHNA plan.

**Table 4.1**

<table>
<thead>
<tr>
<th>Title</th>
<th>Date</th>
<th>Participants</th>
<th>Purpose and Product</th>
<th>DMDU Methods</th>
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</table>
| Scenario-visioning | May 8, 2018            | • Homeowner groups  
|                 |                        | • City staff  
|                 |                        | • Developers                          | Participants used games and         | Backcasting  
|                 |                        |                                       | scenarios to identify goals for     | Scenarios                          |
|                 |                        |                                       | successful TOD vision  
|                 |                        |                                       | actions for achieving those goals  |                                   |
| Pathways        | July 31, 2018, and     | • City staff  
|                 | September 21, 2018      | and RAND researchers  
|                 |                        |                                       | Participants developed              | Three Horizons  
|                 |                        |                                       | “augmented RHNA plan”               | Foresight framework                |
| Stress          | October 8, 2018        | • Homeowner groups  
| testing         |                        | • City staff  
|                 |                        | • Developers                          | Participants reviewed the “augmented | ABP                               |
|                 |                        |                                       | RHNA plan”                           | Adaptive pathways                  |
|                 |                        |                                       | • developed alternative              |                                   |
|                 |                        |                                       | implementation plans                 |                                   |
|                 |                        |                                       | • stress-tested the plans to         |                                   |
|                 |                        |                                       | examine their robustness to          |                                   |
|                 |                        |                                       | uncertainties and surprise           |                                   |
The workshop opened with the mayor of Culver City, Thomas A. Small, describing the city’s TOD vision. RAND staff then conducted a backcasting exercise in which participants gathered into breakout groups, were asked to place themselves in the future when the TOD vision was a widely recognized success, and fashion a story about how this success came to be. RAND staff specifically asked participants to imagine themselves in the year 2028 at the time of the upcoming Los Angeles Olympics. As the world’s attention turns to Southern California, Culver City basks in the success of having implemented its TOD vision. Gathered in breakout groups, the workshop participants crafted stories explaining how Culver City reached its goals and, in particular, what happened in the years 2019 and 2020 to make the success possible. Participants were also asked to describe what did not happen that might otherwise have prevented this outcome. After the breakout group sessions, each team presented their backcasting stories to the full workshop.

Building on the backcasting results, RAND staff facilitated a discussion of specific goals for the TOD concept and its implications for the Rancho Higuera neighborhood. Both the TOD study and RHNA plan have general statements of purpose but not specific lists of objectives. Participants were thus asked to imagine the criteria that people in 2028 would use to judge whether the city’s TOD efforts had proven successful. RAND seeded the discussions with the results of exploratory interviews conducted prior to the workshop with community members to better understand their interests, concerns, and goals for Culver City. The following five goals emerged from this discussion with suggestions on how progress toward those goals might be measured:

• **Increase mobility options**, which means that one can get where one wants to go using any of a variety of mobility options. To measure progress, note shifts in the modes of transit and increases in walkability score.

• **Increase density**, in particular more residential housing capacity and more businesses nearby, which increase walkability.

• **Be a leader and innovator** so that Culver City is increasingly seen as a regional and national model. Capture an “it” factor. Design for it. Be unique. Make Washington Boulevard a destination for those in the city and outside.

• **Establish flourishing sustainability for all** by creating a thriving community along several dimensions, including connections with neighbors and thriving businesses, both local and international. Culver City should offer a variety of economic and social opportunities; be sustainable environmentally, economically, and socially; be inclusive, equitable, and accessible; and remain a great place to raise a family.

• **Enhance happiness**, which is measured in part by the lack of complaints (or, for policymakers, fewer phone calls). This also includes pride of place, and a feeling of authenticity.

After lunch, participants returned to breakout groups to develop more-detailed scenarios describing how Culver City might achieve its TOD goals. Participants were asked to consider the goals discussed in the morning and a series of key drivers. They were also asked to consider in their scenarios multiple actors (e.g., the city, businesses, and residents), trends inside and outside Culver City, and how people with different points of view might experience the scenario. RAND staff also presented the Three Horizons Foresight framework (see Figure 3.2 in Chapter Three) and encouraged participants to organize their scenarios around its three phases of change.
The key drivers given to the participants to consider in their scenarios derived from the morning’s backcasting exercise. During a lunch break for participants and before the start of the scenario exercise, RAND staff extracted six elements highlighted in the backcasting stories. These six elements, which represent likely trends or new realities that would affect Rancho Higuera and the TOD concept as a whole are

- new mobility technology
- regional trends in transit and density
- pricing of parking and the cost of driving
- changes in values and social norms regarding cars and urban density
- availability of financing for innovative TOD solutions
- the changing nature and geography of on-site versus remote work.

Each breakout group was given two or three specific drivers to consider, although each group was free to consider them all. Participants were given about 90 minutes to craft their scenarios and asked to report back to the full group for comment and discussion.

After the workshop, RAND staff sent a summary memo to participants, a copy of which is reproduced in Appendix A.

**Implementation Pathways with City Staff**

The results from the community workshop informed two subsequent sessions with RAND and city staff. These workshops began with inputs from the community workshop, and then participants developed a proposed implementation pathway for Rancho Higuera, which we called the augmented RHNA plan.

Each of these half-day sessions, held on July 31 and September 21, 2018, included RAND staff and the heads of relevant departments in the Culver City government: the then-mayor, the city manager, the director of transportation, the director of community development, and the head of planning. In brief,

- the first Pathways workshop began with four strategic concepts from the community workshop and developed four stylized pathways
- the second Pathways workshop began with two alternative RHNA plans and developed the augmented RHNA plan.

In preparation for the first Pathways workshop, RAND staff developed the four strategic concepts from the community workshop scenarios. In preparation for the second Pathways workshop, RAND staff crafted two alternative RHNA plans from the four stylized pathways and developed a simple simulation model to evaluate these two plans.

We now describe these steps in more detail.

**Pathways Workshop on July 31, 2018**

The scenarios that emerged from the May 8th community workshop offered different stories about pathways Culver City could follow to meet its TOD goals and the criteria that residents might use to judge success. To prepare for the July 31st implementation pathways workshops
with city staff, RAND first extracted from these scenarios the following four strategic concepts that encompassed the variety of individual actions envisioned in the May 8th discussions:

- **changing streets**: physical changes in city streets, such as prohibiting left turns, adding stop signs, or creating cul-de-sacs
- **new behaviors**: implementation of incentives for encouraging behavioral change by residents and Hayden Tract employees, such as photo-enforced traffic regulations, financial incentives for those employing new mobility options, and hosting street fairs and other community events that close streets and thereby encourage familiarity with other mobility options
- **new mobility options**: promoting and providing microtransit, either on a fixed schedule or on-demand; shared bikes, cars, and scooters; opening gates on currently closed routes to make them accessible only to shuttles; and a mobility cloud to help users integrate multiple modes of travel
- **large-scale projects**: new infrastructure, such as peripheral parking structures, pedestrian bridges over Ballona Creek (which borders the Hayden Tract on the east), and converting Hayden Tract streets into attractive pedestrian spaces.

The July 31st workshop focused on developing four stylized implementation pathways, each organized around one of the strategic concepts, but drawing on the other concepts as additional elements, as shown in Table 4.2. Participants were asked to address questions, including: What additional concepts work best with each central focus? What actions should be taken first? What actions come later, and if so, when? For each pathways workshop, participants were asked to fill in a matrix with three columns, one for each period of the Three Horizons Framework shown in Figure 3.2 in Chapter Three.

The workshop discussions focused on identifying actions that would be taken at each step and who would take them. This focus on four different pathways helped city staff consider a wide variety of potential options and avoid the urge to settle prematurely on a single plan. After sketching out the four pathways, participants then discussed how the city might implement them. Explicit questions included: What is required to implement each pathway? What changes in current city policies and procedures might be required? What external conditions (social, political, regulatory, etc.) would be required?

### Table 4.2
Structure of Implementation Pathways Explored in the July Workshop with Culver City Staff

<table>
<thead>
<tr>
<th>Pathways</th>
<th>Changing Streets</th>
<th>New Behaviors</th>
<th>New Mobility Options</th>
<th>Large-Scale Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Changing streets</td>
<td>Central focus</td>
<td>Additional elements</td>
<td>Additional elements</td>
<td>—</td>
</tr>
<tr>
<td>New behaviors</td>
<td>Additional elements</td>
<td>Central focus</td>
<td>Additional elements</td>
<td>—</td>
</tr>
<tr>
<td>New mobility options</td>
<td>Additional elements</td>
<td>Additional elements</td>
<td>Central focus</td>
<td>—</td>
</tr>
<tr>
<td>Large-scale projects</td>
<td>Additional elements</td>
<td>Additional elements</td>
<td>Additional elements</td>
<td>Central focus</td>
</tr>
</tbody>
</table>

...
Pathways Workshop on September 21, 2018

To prepare for the second of the two workshops with city staff, RAND aggregated the four stylized pathways into two more-realistic options. These two new pathways were designed to address potential adverse consequences of the original RHNA plan and to exploit the wider variety of strategic options that emerged from the scenarios workshop.

The first alternative pathway emphasized *large projects*: in particular, building perimeter parking across Ballona Creek to the east of the Hayden Tract. The Tract’s employees could then get to work using a shuttle without driving through the Rancho Higuera neighborhood (or the Hayden Tract, for that matter). The second alternative emphasizes *new mobility options* from the Expo line light-rail’s Culver City station to the Hayden Tract. Each of the two plans combined the best elements of the four alternatives discussed at the July workshop and organized them into phased implementation plans.

To assess the implications of alternative plans, RAND developed a simple traffic-flow simulation model, which is illustrated in Appendix C, to explore some of the impacts and consequences of these two implementation pathways. The model projected traffic volume on streets in the region between National Boulevard and Higuera Street using current traffic-flow data provided by the city. The model optimized travel time by routing traffic over available streets, thereby providing rough estimates of cut-through traffic within Rancho Higuera and diverted traffic on National Boulevard for three alternatives: the status quo, the RHNA plan, and the augmented RHNA plan.

The model suggested that the original RHNA plan would significantly reduce traffic through Rancho Higuera, but would do so by diverting traffic to neighboring streets. In particular, the plan could create gridlock on National Boulevard, reducing employees’ access to their jobs in Hayden Tract and the ability of Rancho Higuera residents to leave and return to their neighborhood by car.

These results highlighted the importance of the timing and sequence of interventions in crafting an implementation pathway for Rancho Higuera. Because of the expected congestion, the new mobility options—in particular on-demand shuttles—would provide little reduction in travel time for their users until the city had taken the significant step of closing Higuera Street or other roads to through traffic. Yet, residents and Hayden Tract employees would likely object strongly to closing the streets before they were well accustomed to using these new options. Thus, for a successful implementation plan, implementers would need to find ways to incentivize and acculturate new mobility options before closing the streets during a period when these options were still using open but congested streets, and would thus be no faster than driving one’s own car. The analysis suggested that a high percentage of residents and Hayden Tract employees would have to use these new mobility options to displace enough traffic to avoid increasing gridlock on National Boulevard.

During the second workshop on September 21, city staff reviewed these considerations and debated the relative merits of the two augmented RHNA plans suggested by RAND staff. The ensuing discussions suggested the following four key criteria affecting the ability of alternative implementation plans to achieve the larger objectives:

1. reducing cut-through traffic in Rancho Higuera
2. retaining access to the Hayden Tract
3. testing and demonstrating the new mobility options Culver City needs to achieve its TOD vision
4. building the city government’s capacity to implement an innovation-tuned approach to mobility.

Using these criteria, RAND and city staff merged the two alternative pathways into the proposed augmented RHNA plan, shown in Table 4.3. This augmented RHNA plan has ten specific interventions in the second column, representing various strategic concepts, organized according to the three temporal stages from the Three Horizons Foresight framework. This plan builds on the changing streets elements of the original RHNA plan. It also includes, as shown in Figure 4.1, leasing new parking structures and building a shuttle bridge over Ballona Creek (large projects); shuttles to the Hayden Tract from the parking structures and from the Expo line station (new mobility options); and incentives for encouraging Hayden Tract employees to use the shuttles rather than their cars for the last mile (new behaviors).

The colored bands in Table 4.3 indicate the plan’s phased approach. The top tier of interventions (in gray) would constitute the early implementation steps. The city would implement key elements of the RHNA plan, including left-turn prohibitions off National Boulevard and adding crosswalks and stop signs. In addition, the plan would implement shuttles and incentives for using them. Drawing from that experience, building on success and dealing with

Table 4.3
Augmented RHNA Plan Generated by Implementation Pathways Workshops

<table>
<thead>
<tr>
<th>Strategic Concept</th>
<th>Intervention</th>
<th>Source: RHNA</th>
<th>Source: Augmented RHNA Plan</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Changing streets</td>
<td>No left turns off National</td>
<td>X</td>
<td>X</td>
<td>Stop cut-through from north</td>
</tr>
<tr>
<td>Changing streets</td>
<td>Crosswalks and stop signs</td>
<td>X</td>
<td></td>
<td>Slow down traffic</td>
</tr>
<tr>
<td>Mobility options</td>
<td>Employee shuttle</td>
<td></td>
<td>X</td>
<td>Employee alternatives</td>
</tr>
<tr>
<td>Mobility options</td>
<td>Open gates to shuttle at Landmark-Carson</td>
<td>X</td>
<td>Facilitate access to Hayden Tract</td>
<td></td>
</tr>
<tr>
<td></td>
<td>and Ince-Hayden Place</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New behaviors</td>
<td>Incentives to take shuttles</td>
<td>X</td>
<td></td>
<td>Employee alternatives</td>
</tr>
<tr>
<td>Changing streets</td>
<td>Employee transponders to access Ince-Hayden Place gate</td>
<td></td>
<td></td>
<td>Employee alternatives</td>
</tr>
<tr>
<td>New infrastructure</td>
<td>Perimeter parking near Expo line station</td>
<td>X</td>
<td></td>
<td>Provide first- and last-mile solutions</td>
</tr>
<tr>
<td>Mobility options</td>
<td>On-demand residential shuttle</td>
<td>X</td>
<td></td>
<td>Options for residents from Metro</td>
</tr>
<tr>
<td>Mobility options</td>
<td>Mobility data cloud to integrate all transport types</td>
<td></td>
<td>X</td>
<td>Facilitate multimodal transit</td>
</tr>
<tr>
<td>Changing streets</td>
<td>Close Higuera to through traffic</td>
<td>X</td>
<td></td>
<td>Stop cut-through</td>
</tr>
</tbody>
</table>

NOTE: The colors denote different phases of implementation.
issues limiting achievement of first-phase intended outcomes, the second phase would include those actions in the middle section (in blue). Such concepts include new parking structures, on-demand shuttle services, and a mobility-oriented information application that would help travelers integrate the increasing number of mobility options. Finally, the last phase of the implementation plan (in green) would see the final closure of Higuera Street to through traffic, because alternatives for residents, businesses, and employees will have been put into place.

**Stress-Testing Workshop with the Community**

The second community workshop, held on October 8, 2018, gathered 14 individuals representing homeowners’ groups, city staff, design professionals, and developers. All but two of those individuals had attended the original community workshop. The RAND team presented the augmented RHNA plan that emerged from the session with city staff. RAND also presented the analysis suggesting why this new plan might improve on the original RHNA plan from the perspectives of both Rancho Higuera residents and Culver City more broadly. In particular, RAND highlighted the potential for gridlock on National Boulevard and the need to acculturate new mobility options before closing any streets in Rancho Higuera.

Workshop participants were then invited to discuss and comment on the augmented RHNA plan. Several objected that such interventions as peripheral parking with employee shuttles would create a new host of traffic challenges as shuttles frequently moved along residential streets. There was also concern that restriction of traffic in the Rancho Higuera neighborhood would push traffic into surrounding communities.

To address these concerns and identify other ideas, participants were invited to gather into breakout groups. Each group was given maps and drawing paper and asked to suggest any
further modifications to the augmented RHNA plan. The groups then reported their ideas back to the full workshop. The following three additional ideas were raised by participants:

- **Hayden Campus**: Create a “Hayden Campus,” evolving the Hayden Tract business area into a community with more food and cafes; parking on the perimeter; and zoning for limited micro-housing, temporary housing, or shared housing.
- **Ballona Creek mobility**: Improve the mobility along Ballona Creek, including walking; biking; and light vehicle traffic, such as scooters.
- **increasing housing density**: Create a more-walkable city by increasing housing density through the center of the city.

These suggestions, although beyond the scope of the traffic program, were noted for future consideration, possibly as part of the city’s general plan.

In the afternoon, workshop participants stress tested the new, augmented plans using ABP, as described in Chapter Three. The ABP methodology begins with participants identifying those characteristics of the future that would need to be realized for the plan to work as intended—in the parlance of ABP, the load-bearing assumptions.

Table 4.4 gathers the many assumptions suggested by workshop participants into ten overall categories. For instance, the augmented RHNA plan assumes that a significant number of Rancho Higuera residents and Hayden Tract employees will be willing to take alternative modes of transportation. The augmented plan also assumes that the Culver City community and outside communities are supportive of the plan.

**Table 4.4**

<table>
<thead>
<tr>
<th>Load-Bearing Assumptions</th>
<th>Hedging Actions</th>
</tr>
</thead>
</table>
| Culver City community is supportive | • Involve key stakeholders in process  
| | • Pilot high-risk interventions before full deployment |
| Residents and employees embrace new mobility options | • Expand capacity of new options and incentivize their use  
| | • Work with employers to incentivize new modes of transportation  
| | • Work with landlords to reduce parking |
| Plan solves cut-through and safety problems | • Monitor, evaluate, and adapt interventions |
| City allows denser development | • When planning actions such as shuttles, evaluate sensitivity (including budgets) on density |
| Funding is available | • Diversify sources, involve private companies, and taxes |
| Outside communities are supportive | |
| Peripheral parking is good business | |
| New mobility options become available | |
| Surrounding roads have sufficient capacity | |
| Regional trends are favorable | |
After compiling a complete list of such assumptions, participants were asked to identify in which cases each might be vulnerable to future events or trends, signals that could be observed to provide early indication that vulnerabilities are emerging, and actions that could be taken to assist the plan by either shaping the environment into more-favorable directions or hedging against the possible failure of an assumption because of a realized vulnerability. Participants did not carry out this task for all of the assumptions that they identified, but they did suggest hedging actions for about half of them, as noted in Table 4.4.

Robust and Flexible Plans

After the last community workshop in October 2018, and once the city had begun crafting its own plan, RAND staff organized the actions shown in Table 4.2 into adaptive pathways visualizations, as shown in Figure 4.2. This type of visualization helps incorporate the ABP results into the augmented RHNA plan by showing how its implementation might respond to the unfolding of various assumptions. The visualization shows how the plan could evolve in several ways depending on timing, midterm results, and potential course corrections.

Specifically, Figure 4.2 shows three distinct decision points. The city's choices at these decision points would be informed by the availability and uptake of the new behaviors and new mobility options. The distinction between reversible and permanent options generates most of the structure of the potential pathways. We regard the large projects and changing streets actions (once rendered in concrete) as permanent. We regard the new behaviors and mobility options as reversible, in the sense that the city could discontinue them if those options do

![Adaptive Implementation Pathways for the Augmented RHNA Plan](image-url)
not achieve significant uptake, although these steps would not be reversible if people began to embrace them.

The plan begins in 2019, with traffic-calming changes to the Rancho Higuera streets, focusing on no-left-turn signage, additional crosswalks and stop signs, and radar speed cameras initially implemented as temporary structures. The plan also includes initial forays into new mobility options, including an employee shuttle and incentives for Hayden Tract employees to use new mobility options in traveling from transit (Expo line light-rail and buses) to work.

In 2020, Culver City could proceed along three potential courses of action using the success of the initial experiments in new behaviors and mobility options. If these initial efforts are deemed successful, Culver City could expand on them. As shown by the blue line at decision point A in Figure 4.2, these efforts could include implementing a cloud-based mobility-information application, expanding the offerings of scooters and bike shares, increasing on-demand shuttle services, opening currently locked gates to shuttles and other new mobility options, and using existing parking facilities along the Washington business district as perimeter parking for employees headed to the Hayden Tract. As shown by the orange-blue line extending from decision point A, Culver City could also complement these options with large projects by beginning construction of new perimeter parking facilities that would require building a pedestrian bridge across the Ballona Creek from the Hayden Tract. This new infrastructure could also include recrafting the Hayden Tract campus into more of a pedestrian space and less of a space for cars. All these new infrastructure options would take several years to fully realize. Alternatively, as shown by the grey pathway, Culver City could decide to reduce its new behaviors and mobility options efforts and rely solely on initial traffic-calming interventions.

In 2021, Culver City could again proceed along three potential courses of action, each shaped by its previous choices. If following the new behaviors and mobility options-only course (dark blue), Culver City could choose to continue with these efforts, as shown by the blue line at decision point B. Culver City could also decide that these efforts were sufficiently successful to close Higuera Street to through traffic, as shown by the blue-green line. Alternatively, as shown by the grey line extending from decision point B, Culver City could rely solely on its initial traffic-calming interventions. If following the new behaviors, mobility options, and large projects pathway, Culver City could choose to continue these efforts, as shown by the blue-orange pathway at decision point C. Culver City could also decide that these efforts were sufficiently successful to close Higuera Street to through traffic, as shown by the blue-orange-green pathway emanating from decision point C. Alternatively, as shown by the orange pathway, the city could scale back its new behaviors and mobility options efforts and rely solely on its large projects options for action.

1 Note that these options are not in Culver City’s NTMP, so Figure 4.2 shows them in 2020 rather than in the initial phase, as shown in Table 4.3.
Culver City has recently begun to implement parts of the final augmented RHNA plan that emerged from the pathways workshops conducted by this project. The Public Works Department’s official NTMP (Herbertson, 2019)—a collaborative effort among the city, residents, and the RHNA—closely follows the first two phases of the changing streets components shown in Table 4.2 in Chapter Four. The city developed the NTMP following the workshop process and has received the final augmented RHNA plan that emerged from it. The RHNA approved of the resulting NTMP in an advisory vote held on July 2, 2019.

The resulting NTMP includes

- signs prohibiting left turns from National Boulevard onto three Rancho Higuera streets during rush hours
- redesigned traffic circles on Higuera Street, along with painted, high-visibility crosswalks at all intersections; new “Yield Here to Pedestrians” signs and higher-visibility stop signs; and curb extensions to prevent cars from bypassing the new traffic circles
- speed bumps along Ince Boulevard with painted, high-visibility crosswalks at all intersections and new “Yield Here to Pedestrians” signs and higher-visibility stop signs
- new bike lanes on Ince Boulevard in each direction, enabled by removal of all parking on the west side of the street (which is typically occupied by vehicles associated with Culver Studios).

The NTMP focuses on elements of the augmented RHNA plan most familiar to the city’s Public Works Department; that is, the changing streets elements. The bike lanes, not included in the augmented plan, are an additional changing streets element aimed at enhancing access to the Hayden Tract from the Expo line station and the current parking lots in downtown Culver City through use of bikes, scooters, and other new mobility options. The city has configured the NTMP as an adaptive plan, implementing its mobility and traffic-calming measures on a temporary basis by installing new traffic islands with plastic barriers rather than concrete ones. After about a year of measuring the effectiveness of these efforts, the city plans to conduct another advisory vote within the community to determine whether to make these changes permanent.

The city has not yet formally adopted any new behaviors or new mobility options elements from this effort’s final augmented RHNA plan, as shown in Figure 4.2 in Chapter Four. In part, the city currently lacks the capacity to do so. For instance, the city had been negotiating with a firm that would have provided a demonstration of an on-demand shuttle, but that firm recently went out of business, delaying any implementation of this new mobility option.
Nonetheless, the city is still considering ways in which to introduce additional elements—beyond changing streets that appeared in the final augmented RHNA plan. The city is seeking a new partner for an on-demand shuttle, is exploring legal options for limiting access to gated streets, and intends to consider the larger set of Table 4.3’s augmented RHNA plan measures as part of its new general plan, which launched in fall 2019.

Overall, this DMDU shadow process seems to have provided Culver City with several benefits. First, it provided a safe venue and encouraging structure in which residents and city officials could explore and experiment together on new solutions to challenging problems. Culver City Councilmember Thomas A. Small, who was mayor at the time of this process (and who is a coauthor of these proceedings), credits this effort with accelerating the speed with which city staff developed an initial plan for Rancho Higuera by as much as one year. The process helped generate public support for the NTMP as it emerged. The work performed as part of the RAND-led process was frequently and approvingly mentioned in public meetings and city council sessions. Finally, the process helped introduce new options and both a framework and common language for deliberating over options into the city’s discussions. The city intends to build on this foundation following the initiation of a new general-planning process in September 2019.

Combining DMDU methods in a shadow process could prove useful for communities nationwide. This Culver City effort greatly benefited from strong leadership from the city’s elected officials, the willingness of city staff to innovate, support from local businesses, and the engagement of the local community. This effort also required RAND research staff to conduct supporting research and to design and facilitate the process. In the future, such leadership and engagement will likely prove an enduring need. But it might prove possible to make routine many of the research tasks and tools. Doing so would provide the foundation for a widely dispersible, evidence-based, and participatory process for pursuing bold visions during a time of rapid change.
Summary and Questions from our May 8 meeting:  
*The Future of Mobility in Culver City: A Scenario Workshop*

Thank you for joining us for a very productive workshop on May 8th! We covered a lot of ground. Here’s a quick recap, with next steps below.

- **We began with an overview of the TOD Visioning Study,** then played a “back casting game,” where we divided into groups and developed narratives for how Culver City could achieve its TOD vision by 2025, three years before the Los Angeles region hosts the 2028 Summer Olympics. This exercise aimed to get us thinking about the connection between near-term actions and our longer-term future.
- **We next discussed our goals** for the future of transit in Culver City. Explicit understanding of our diverse goals leads to better policy designs.
- **Over the working lunch we learned about the implementation process the city is following for the TOD study.** This process ensures rigorous, fair analysis behind implementation of any proposals on the city.
- **After lunch, we again split into groups for the Three Horizons Pathways exercise.** Groups were given initial scenario concepts, then asked to sketch describing pathways that lead to these scenarios, with a focus on the goals discussed earlier in the days. The groups were asked to focus on how their future scenario differs from the current situation and what needs to happen to transition from the current state to desired future? The groups gave their scenarios evocative names . . . see the results below!
- **To conclude the day, we discussed opportunities and risks** that are common across, or differ among the scenarios.

**Next steps:** In the coming weeks, our team will aggregate the workshop results into several scenario pathways that would take us from the current Culver City to a future scenario consistent with the TOD vision and its goals. We will send you a draft of these “pathways” and ask for your feedback. We will then convene a second workshop to stress test the resulting pathways.

Meanwhile, we request your feedback on three workshop outputs. In the attached description we list the goals and uncertainties discussed at the workshop.

1. Did we get the goals right?
2. Do we have a full list of the relevant uncertainties?
3. Is there anything missing or that you’d like changed from the summary?

Many thanks for your participation and feedback! Please send your comments to Tim McDonald at tmcdonald@rand.org

Thanks,
Rob and Thomas

**Goals: How Will We Know If Culver City Has Successfully Achieved Its TOD Vision?**

The following text seeks to summarize and explain the goals discussed at the workshop. How did we do?

- **Increased mobility options.** Indicated by shifting in modes of transit; and increased walkability score. Effective mobility means whatever method you choose, you can get to where you are going.
- **Increased density.** More residential capacity, more businesses increasing the walkability.
- **Be a leader and innovator.** Be a regional and national model. Capture an “it” factor. Design for it. Be unique. Make Washington Boulevard a destination for those in the city and outside.
- **Flourishing and sustainable for all.** Thriving community, connected with neighbors. Thriving business, from local to international. Have variety in economic and social opportunities. Be sustainable environmentally, economically, and socially. Be inclusive and equitable, and accessible. Remain a great place to raise your family.
- **Happiness,** measured in part by the lack of complaints (or for policymakers, fewer phone calls). This includes pride of place, and a feeling of authenticity.

**Uncertainties: What Unknown Factors Might Affect the Success of Actions Culver City Might Take to Achieve Its TOD Vision?**

Here is a list of uncertainties discussed at the workshop. Anything missing? Anything on this list seem clearly less important than the others?

- Future and life cycle of technology
- Public reaction and willingness to adopt new technologies
- Development and life cycle of projects
- Changes in land usage (zoning)
- Affordable housing
- Future of CEQA1
- Funding (local, state, private, economic conditions)
- Political climate (neighborhood, city support)
- Policy environment (state, national).

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1 CEQA = California Environmental Quality Act.
The Three Horizons Foresight framework we used in the workshop is a conceptual tool to compare the current state (first horizon) with a desired result over the long term (third horizon) and then to consider the actions that will be needed to facilitate the transition (the second horizon).

Figure B.1 is the graphic that appeared on the relevant slide during the workshop.

Figure B.1
Three Horizons Foresight Framework

Three horizons help focus on transition between current state and desired future

First Horizon
• Current way of doing things (managerial)

Second Horizon
• Transition and transformation (entrepreneurial)

Third Horizon
• Desired future system (aspirational)

Second horizon questions include:
• What activities open up pathways to desired future?
• What responses might slow the transition?
Introductions and Overview

During the introduction to the day—including a presentation on the TOD study visioning process—the following pattern of comments emerged:

- Interests of the community and the developers appear to be moving together. Anticipating the increase in traffic, what adjustments can be made to improve safety?
- The transit and development in Culver City are constantly evolving and complex. The community is surrounded by the metropolis, so the city needs to protect its profile in addition to growing it.
- Focus on the best thing to do, not just what is possible currently or with current finances. As a cautionary tale, Metro (Los Angeles’ urban rail transit system) avoided putting a station up the hill to Universal Studios and it has been struggling for 25 years because of it.
- Developers want certainty. They want to see that potential changes can benefit them.
- How can behavioral changes be encouraged (e.g., people stop relying on cars to get around in the city)?
- People moving to Culver City want to live close to the Metro station. It was not that way in the past. Even those that own cars use ride-sharing services rather than drive.
- How can the city make Washington and Culver Boulevards main streets and encourage visitors and residents to other modes of transportation?
- Although one analogy for traffic is a balloon (a push to reduce traffic in one area will move it to another), another for the city is a sponge, where more capacity can be absorbed. The question is how to change from a dynamic where vehicles are pushed from one area of the city to another, to instead allow the city to absorb a higher capacity of people transiting without reducing quality of life.

Backcasting and Breaking News Game

We organized into groups and envisioned what headlines might read in 2025 or 2028. The following themes emerged:

- **Culver Olympic Village**: Create an Olympic village concept, both for the Olympics and for everyday life, including residential, retail, and public spaces. People could walk or bike down the street in one of many lanes. There would be less traffic, especially cut-through. The downtown would be pedestrian-only at certain times (e.g., during special events). Funding from developers that would normally go toward parking structures would be redirected to other methods.
- **Culver Civic Center**: Large hub to be built on top of the Metro center: public facilities, housing, and mixed-use development. There would be parking hubs in the outlying area, connecting with gondolas; this would expand to surround the school areas: There would be no private car drop-off around schools. This scenario necessitates expanding downtown development to additional areas.
- **Enabling diverse options**: Make the downtown area less reliant on cars—and there would be dramatically more people using bikes and walking. For those moving outside the city,
there would be more regional transit methods, such as Metro lines and bus systems. Begin by building parking on the periphery and including a comprehensive shuttle. Do this by eliminating the requirement for developers to include parking when building housing.

- **A downtown without cars:** No cars would be allowed in the city other than those that belong to residents. People should use other modes of transportation, such as Metro, bikes, and scooters. Parking garages would be built with shuttles and bikes to connect to the city. There would be more housing and a city that fully embraces having a diverse community so people do not have to travel long distance to work or to have fun. Expand the concept of a bike lane to allow any sort of micro-transit, such as electric scooters and other modes that emerge. Beautify the city—make it appealing to walk between the Culver Steps and the Metro station.

### Scenario Exercise

Scenario exercises are structured processes that enable participants to consider the goals for a policy, then envision and describe a future set of themes and actions that could lead to successful accomplishment of those goals.

Participants broke into four groups to develop scenarios, then reported back to the larger group. They named their scenarios and listed essential elements. These scenarios, themes, and elements are listed below.

**Group A: “Making Changes Stick by Big Carrots and Tiny Sticks”**

Group A named their scenario “Making Changes Stick by Big Carrots and Tiny Sticks” and discussed the following themes:

- Focus on pricing incentives for users of transit and financing options for businesses or developers of alternative transit.
- The desired future is to focus on alternative modes of transportation. It should be easier for people to move around town.
- The perception is that it is easier to drive, but it is not.
- The transition could take a pilot project approach starting in a particular area in the city, maybe the downtown.
- Bigger perspective: We are not an island; we should be talking more regionally. How can we get involved in the regional world?
- Short and long-term changes could include paying for parking and requiring employees of local businesses to pay for parking, therefore incentivizing people to use alternative modes of transportation.

**Group B: “Culver City On Demand”**

Group B named their scenario “Culver City On Demand” and discussed the following themes:

- Take advantage of advances in technologies in both mobility and personal devices, and wider regional trends in tech-savvy employers and residents.
Implementing a New Mobility Vision for Rancho Higuera in a Deeply Uncertain, Fast-Changing World

• Places in which tech and regional trends intersect might bring leverage to Culver City’s advantage.
• Tech trends are autonomous vehicles, microtransit, personal on-demand transit, innovations in on-demand delivery (e.g., Amazon), an increasing belief that smart devices are a civil need or right, drones for delivery, and public Wi-Fi.
• Regional trends are transit-centric density, tech and media neighborhoods, regional telecom offices, a decline in big-box store mall centers, neighborhood growth, more-localized communities, and public plazas.
• In a scenario with more automation, autonomous vehicles mean that there is no human reaction time gap and thus higher road capacity; this leads to less land required for parking, and streets can accommodate alternative means of transportation.
• Between the advent of public Wi-Fi and the reduced costs of smartphones, technology becomes available to everyone so that people can use more ride-sharing options, make it easier to get transportation on demand, and subsidize school and employer payment for transit.
• There should be smaller retail close to the neighborhood, going back to the past: Big box stores are not needed anymore.
• Funding is an obstacle. To address it, large tech and media companies should invest in mixed-used communities to allow employees to live in proximity to their offices; high-density housing allows more room for diverse use, incentivizing companies to invest in Culver City; Culver City might become a tech and experimental lab.
• Discourage car-centric culture: regular events, encourage co-working, greening public space, community of pedestrians, and a permanent farmer’s market on Washington Boulevard.
• Environmental changes should be made.

Group C: “Blade Runner, but Good”

Group C named their scenario “Blade Runner, but Good,” and discussed the following themes:

• First horizon: medium-density city. The alternate modes of transit are not as interconnected as they should be, and there is a difficult traffic situation.
• Second horizon: high-density housing, investment in transportation infrastructure, incentives to hire residents, a solid mechanism for ensuring community and business involvement, changing zoning laws, and public-owned properties have a redefined purpose. Although Culver City is a major transit corridor for west Los Angeles, it has the feel of a suburban neighborhood that should be protected.
• Third horizon: characterized as a denser community, development designed with mobility in mind, transit is prioritized.
• Density was the background for the discussion.
• Prices of cars will pressure behavior and move people toward alternative methods of transportation.
• Employment and transportation: The city should encourage employers to consider hiring in terms of proximity. The city should create a desirable walking-based community.
• As Culver City becomes more dense, it will put upward pressure on land prices. The city should find a way to increase density but maintain the parklike setup.
Group D: “Recapturing the Street Through Technology”

Group D named their scenario “Recapturing the Street Through Technology” and discussed the following themes:

- Third horizon: A city that reclaims street space for other uses, reenvisions Ballona Creek for recreational use, strengthens the individual identity of neighborhoods, and increases arterial and downtown density and height to provide more affordable housing, keeping the city diverse and residence-based. Look for more opportunities for crossing the proposed bridge over Ballona Creek that are designed for alternative means of transportation.
- Look into starting a gondola service to Marina del Rey.
- Second horizon: autonomous vehicles will allow more cars in the same parking garage. The intermediate steps allow the city to revisit that parking space to reclaim some urban space. With the growth of autonomous vehicles, the city will need fewer car lanes and can claim these lanes for alternative transportation. More people will be out on the road, either on foot or on bikes. This creates a virtuous cycle that requires less space for cars. Developers can then redirect funding to alternative modes of transportation. The transportation department role changes to be more of a data-dissemination organization than an engineering one.
- There are still traffic jams en route to pick up students at schools. But it is possible that this infrastructure (i.e., schools) will be divided into hubs rather than big infrastructure.

Common Ideas Among Groups

- Reclaim public space.
- Optimize parking garages with technology; for instance, with autonomous vehicles.
- Park cars outside Culver City.
- Other parts of town may feel excluded from these potential changes proposed for Rancho Higuera.
- Uncertainties remain: public reaction, particularly areas outside Culver City; demand for parking; new project development; the future of density and height; community tolerance regarding increased density; housing and whether it is affordable; funding and budget for investments; the political climate; and the life cycle of proposed projects.
As discussed in Chapter Four, we used a simple traffic-flow simulation model to evaluate impacts of the RHNA and augmented RHNA plans. The model, created in Microsoft Excel, used data from a traffic-management study conducted by Culver City and calculated how these traffic flows might redirect if various streets were closed (see Figures C.1 and C.2).

These figures depict traffic flow under current conditions and estimated traffic flow after implementation of the RHNA plan for both morning and evening rush hours. The Hayden Tract is on the right-hand side of these figures, and downtown and the Expo line station are on the left-hand side of the figures.

Figure C.1
Morning Traffic Flows in Rancho Higuera
Figure C.2
Evening Traffic Flows in Rancho Higuera

The thickness of the lines denotes volume of traffic, and the arrows show direction of traffic flow. Darker arrows signal heavier traffic flow. These figures therefore suggest how the RHNA plan would reduce traffic through the Rancho Higuera neighborhood but increase traffic, particularly in the evening, on National Boulevard. These results emphasize the importance of new mobility options for Rancho Higuera residents and Hayden Tract employees if car traffic is restricted in Rancho Higuera.
References


Herbertson, Charles D., “Rancho Higuera Residential Neighborhood Advisory Survey to Express Your Opinion Due to the City by or Before Wed., July 3rd, 2019, 5 PM,” memorandum to Rancho Higuera neighborhood residents, Culver City, Calif., June 3, 2019. As of October 29, 2019: https://drive.google.com/file/d/1lDKNR1fbi1x03HsOVu_9uh5aEPF58__A/view


