

SURGE TIME

WHEN EVERYONE WANTS A PIECE
OF THE SAME POSTCARD.

BY JONATHAN LERNER

NATIONAL PARK SERVICE/MICHAEL QUINN

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MATHER POINT, a limestone fin that juts into Grand Canyon National Park, is the first overlook from which many, possibly most, visitors to the storied national park get a glimpse into that astonishing other world. In the middle of

a short flight of steps down from the rim to the overlook sits a pair of large boulders. There's often an informal queue at that spot. Every day hundreds, maybe thousands, of people wait to clamber up and have their pictures taken. Shot from below and elevated by the rock above the crowd, people appear to float before the geological fever dream of the canyon. Invariably, they spread their arms wide, like wings. These portraits make an allusion to flight—and an illusion of solitude.

A redesign of the access to Mather Point for cars and pedestrians, and of the park's nearby main visitor center, was completed in 2012. It more than doubled the parking capacity. But attendance at national parks has soared since then, and already these new facilities are frequently overwhelmed. For the National Park Service system as a whole, between 2012 and 2015, recreational visits were up nearly 9 percent. For national parks in the Intermountain Region, attendance rose 20 percent. Many things could be driving this surge, including cheap gas and publicity about this month's National Park Service Centennial. Another factor is "Mighty 5," a marketing campaign launched by Utah in 2013 to promote its national parks. Mighty 5 declares that these parks are "connected by some of the most scenic byways and backways in the country"—"scenic" being a faint descriptor for the region's jaw-dropping vistas. The campaign proposes driving itineraries; of course, aside from tour buses, there's no other way to get to the parks. Grand Canyon, not in Utah but

nearby in Arizona, may also have benefited, if that's the word, from Mighty 5. Attendance there was roughly steady at about 4.5 million annually between 1992 and 2013. In 2015 it reached 5.5 million, and is headed there again this year.

The challenge is traffic management, and not just for vehicles. Places like these—vast reserves of wilderness and dramatic topography—remain the national park icons. They elicit a pride of both citizenship and ownership, and images of freedom to roam, perhaps all alone. This correlates with the way, thanks to a thousand car commercials, we picture ourselves cruising empty highways through these same huge western panoramas. Actually, only tiny fractions of these major national parks are made accessible to most visitors by roads and other infrastructure, and even back-country trekkers must stay on marked trails. It seems counterintuitive that amid such immensity, crowding should become the norm. But the National Park Service must protect the land—which is often not only delicate but perilous—while welcoming visitors. People end up concentrated, their wandering scripted. Solitude? To visit these parks is to participate in mass tourism. For the National Park Service, managing the visitor experience, and load, is central. It's also the main purpose of interventions by landscape architects.

DHM Design, founded in Denver in 1975, received its first major commission from the park service in 1994, for work at Mount Rushmore. Facilities meant for 2,000 people daily were receiving many times that number. It's all about gazing at the sculpted presidents there, and the redesign removed visual obstructions. Parking was relocated; a new, mostly

PREVIOUS SPREAD
Mather Point provides many visitors with their first, and only, view into the Grand Canyon.



PLAN

- 1 RIM TRAIL
- 2 MATHER POINT SHUTTLE BUS STOP
- 3 MATHER POINT OVERLOOK
- 4 LANDMARK
- 5 AMPHITHEATER
- 6 PICNIC AREAS
- 7 SHUTTLE BUS TRANSIT CENTER
- 8 BOOKSTORE
- 9 INTERPRETIVE PLAZA
- 10 VISITOR CENTER
- 11 COMMERCIAL TOUR BUS PARKING
- 12 RESTROOMS



TOP LEFT
Chain link on old railings, shown before redesign, was incorporated into the new ones at Mather Point.

TOP RIGHT
Cars once parked immediately next to the canyon rim trail.

BOTTOM
The former railings were unsafe, and the overlook was not universally accessible.

underground visitor center was built; and a grand processional entry sequence was established, restoring “the views as the main element,” says Robert Smith, FASLA, now retired, who was the principal in charge. This was the first of many major park service projects for which DHM Design was the prime contractor. “It changed the pattern of our firm,” Smith says. “Now architects and engineers were coming to us” to join in on contract work. In many years, half or more of DHM Design’s work has been park service projects. A big one was completed recently at the heavily trafficked South Rim of the Grand Canyon.

Previously, a two-lane road traced the canyon rim near Mather Point. By the overlook, a lot accommodated 250 cars. But at peak times hundreds more would pull off onto the road’s verge. A

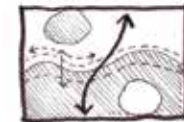
quarter-mile distant from there is a visitor center and plaza, completed in 2001 at the planned terminus of an unbuilt light-rail link to Tusayan, the gateway town seven miles south. Light rail would have kept cars out of the park, but it was defunded. The visitor center was left isolated; many people never even saw it. Ann Christensen, ASLA, is the DHM Design managing principal who oversaw the project. Mather Point itself “wasn’t safe,” she says. “There were some rough, nasty concrete steps and uneven surfaces, non-code-compliant railings. Kids were hopping outside them” onto the unprotected edge.

The challenges were typical for loved-to-death national parks: expand parking capacity without creating Walmart-scale lots; find a contemporary aesthetic that reflects the locale’s natural environment and historic architecture; restore degraded habitat while adhering to park service policy requiring plants to be sourced on site; address stormwater issues—all while minimizing expansion of the developed footprint. Outdated facilities must be made compliant with the Americans with Disabilities Act (ADA). There are questions of interpretation: Grand Canyon, for example, was not discovered by a geologist’s expedition in the 19th century, as had often been implied to visitors; Native Americans had been there for millennia. Could that history be expressed through design? For the South Rim project, DHM Design was obliged to consult about 200 people. Big parks have big, multidisciplinary staffs including rangers, guides, shuttle drivers, botanists, and

DHM DESIGN

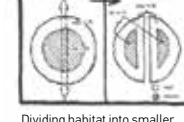
DHM DESIGN

LANDSCAPE ECOLOGY PRINCIPLES



Patches, edges, corridors, and movement within and between. Human corridors fragment patches and mosaics into smaller habitat, creating greater edge habitat and edge species.

EDGE HABITAT & SPECIES

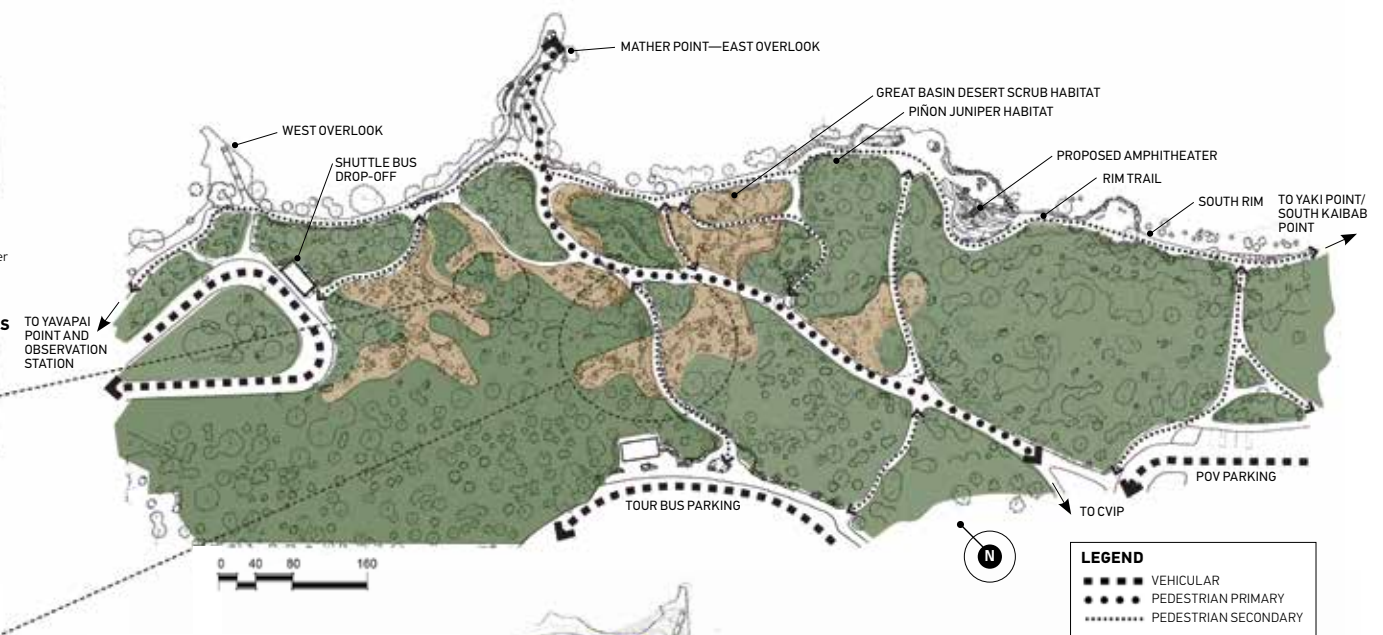


Dividing habitat into smaller ones creates more edge habitat, leading to higher populations and more edge species.

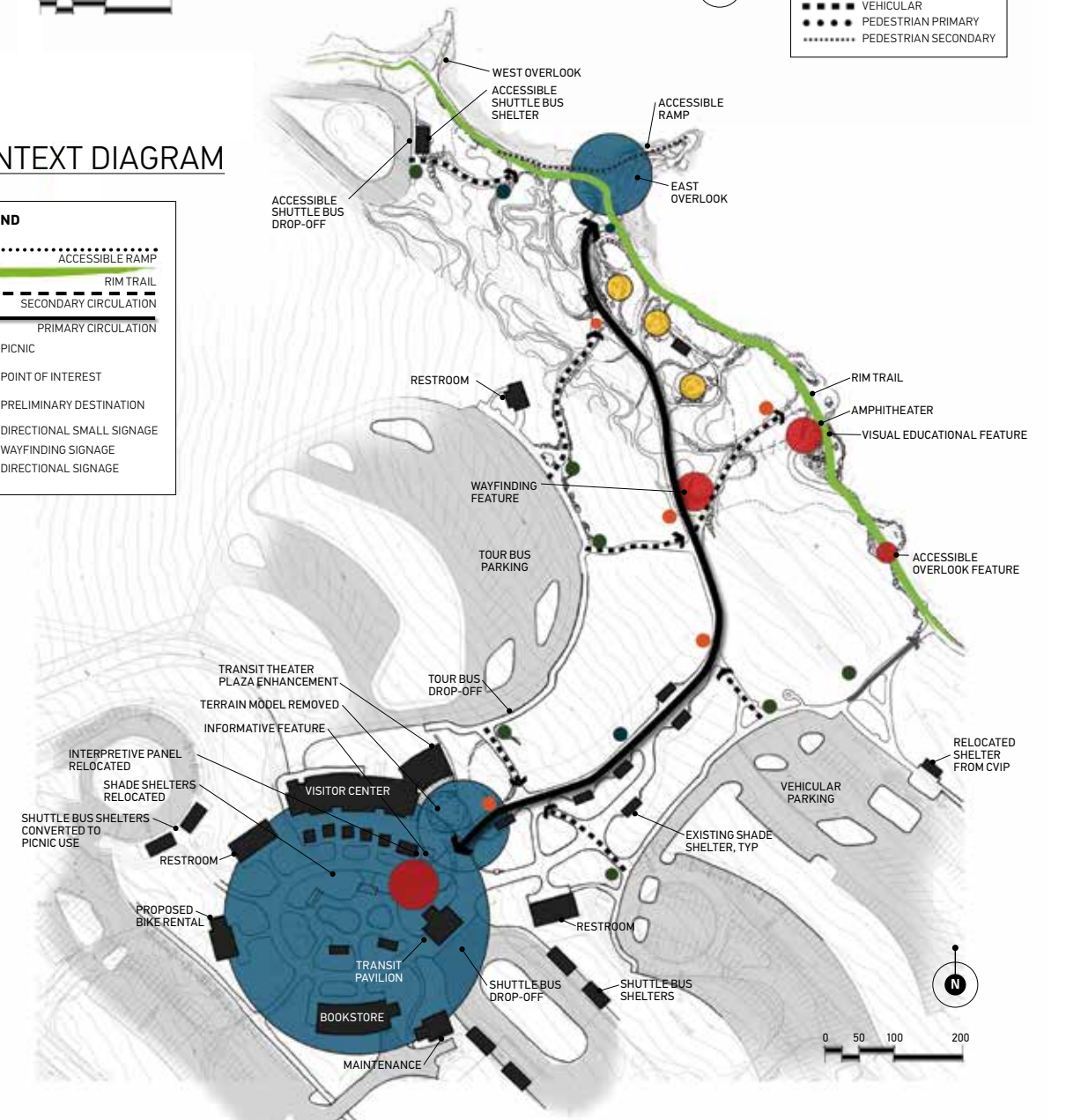
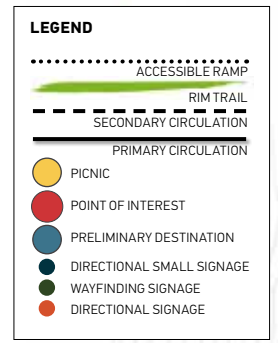
PATCH SHAPE



Convoluted edges create more edge habitat, therefore more edge species.



CONTEXT DIAGRAM





ABOVE
Parking and the roadway once hugged the canyon rim (left). Now visitors approach on foot through re-established habitat.

BELOW
Two schemes for the amphitheater built to overlook the rim.

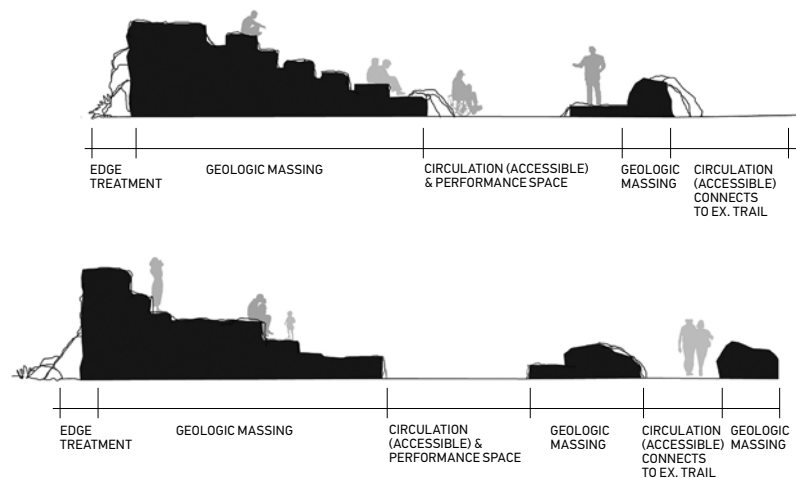


archaeologists. Concessionaires' input is important. Parks are public, so neighbors and civic groups expect a say, as do donors. Often, in the West, native tribes are involved. "You feel a tremendous responsibility," says Vicky Stinson, a landscape architect at Grand Canyon National Park. "It's got to be right for the hundreds of millions of people who will experience it."

Eight tribes have either inhabited the canyon or hold it at the center of their creation stories. The designers met with them all. Christensen recounts that a tribal member said, "We don't really expect you to tell all this [history]. Just move people by making them see how sacred this place is." That inspired the idea for a small plaza at the intersection of paths between

the visitor center, parking lots, and the canyon rim. Boulders piled around its circumference give a sense of enclosure. One tall standing stone is meant to serve as a landmark and wayfinding aid, for people navigating on foot through what Christensen calls the "dense and very disorienting" juniper and piñon pine forest; the grade was also elevated to enhance that visibility. The paving is inscribed with traditional native symbols, the tribes' names, and the legend "Tribes call the canyon home." Christensen terms the concept minimal. Indeed, it's subtle. Most park visitors traverse this antechamber en route to the overlook. Most stride through, seemingly oblivious. Some slow down and notice the symbols, or even circle the space. Overheard recently: "What's it mean?" Companion's reply: "It's supposed to be a sacred thing to them." Some do get it.

From there, a path to the overlook crosses the revegetated former parking lot. The canyon's opposite rim appears first in the distance—how distant, one can't judge; the landscape's enormosity subverts scale. Then the path curves to reveal the Mather Point promontory just below, its irregular periphery outlined and emphasized by a sinuous weathered-steel railing, dark against the ivory limestone. This railing's stanchions curve in at the top, for safety, but also to mimic existing ones in the park considered historic. Older railings also had galvanized chain link at the bottom; preservationists insisted that be replicated, too. The compromise solution—"a whole design exercise in itself," says Christensen—was to use chain link, but with a rusty patina. To ensure that the rails, bent on site, conformed to the curves and slopes of the landform, Stinson says, "I was there every day. You had to be hooked in, because there wasn't any railing" between workers and the drop.



"IT'S GOT TO BE RIGHT FOR THE HUNDREDS OF MILLIONS OF PEOPLE WHO WILL EXPERIENCE IT."

—VICKY STINSON

Descending to the point, the steps part around the big boulders. The rocks were installed because during construction a naturally occurring one there shattered, and because they provide that irresistible spot for photo ops. Accommodating people's insatiable desire to capture visual proof of presence is a minor but telling part of landscape architecture's brief in park projects. "They're going to do it anyway, so it's logistical" to provide safe, manageable locations, Christensen says. Out on Mather Point, the uneven rock surface was addressed "not just by paving, but by grinding down the natural stone. It's more authentic, and one more way to physically connect to the resource. If there's some fissures, you keep those and put in a filler." Ground stone, laid stone, and poured concrete, together, display the intervention of design and engineering. Arriving on the point from one side is a long ADA-compliant ramp that curves down along the rim, so gradual and well-integrated that "it doesn't feel like, 'Everybody goes over there, but all you wheelchairs go here.'"

DHM Design's work added much else of beauty and utility, including a deceptively naturalistic amphitheater of dry-set native rock overlooking the rim; other masonry patterned after existing rustic walls erected by the Depression-era Civilian Conservation Corps (CCC); and an attractive and subtly didactic system of stormwater detention basins, sand filters, and stone check dams and level spreaders, around the parking lots. That "was a newer idea for the park service, to be assertive in offsetting impacts from all that runoff—they get flash floods so it can really erode—but make those elements a little more artistic." Encircling the visitor center, in pods separated by vegetated bands, 600 auto spaces were defined. The question was: "How many cars can you jam in each cluster before it becomes depressing?" The rows curve, to downplay their extent. RVs and tour buses are sent to a separate lot, eliminating their looming presence from auto lots. And a transfer point was established for the shuttles that travel within the park and to the gateway town. Those buses hold 70 passengers. On one moderately

BELOW
Mather Point before (left) and after, with road replaced by native vegetation and a shuttle bus drop-off.



NATIONAL PARK SERVICE, TOP LEFT AND RIGHT; DHM DESIGN, BOTTOM

NATIONAL PARK SERVICE



ABOVE
Boulders on the stairway are a popular spot for visitors' photographs.

OPPOSITE
The recurved railing is based on existing park railing considered historic.

busy midday, their frequency had been upped to every eight minutes. Nevertheless, when each pulled away full, throngs remained, awaiting the next one.

Planning, reconstruction, and the introduction of shuttles, aimed at managing and reducing vehicular traffic in the parks, began decades ago at the park service. Walker Christensen (Ann's husband), a senior associate with DHM Design, started working on redesigns for the south entrance area of Utah's Zion National Park five years ago—before the recent spike in attendance made traffic management such a moving target. "You know something needs to happen, but probably nothing big is going to be happening soon," he says. The park service requires a complex value-analysis process. The agency wants to see four design concepts, ranging from "the do-nothing option" to one with major changes and potential impact. These are considered by staff at the park in question, and then at the Denver Service Center, the park service's central planning, design, and project management office. "Then you do your EA [environmental assessment], with all the options on the table. That could be years." Walker Christensen doesn't deem this bureaucratic obstruction. "They're being critical about what they're doing because you don't get many chances to do it," he says.



DHM Design often does large-scale ranch projects for wealthy owners who "want an ideal slice of the West," says Ann Christensen. The private-client process is far less encumbered than park service work, but the issues, and the approaches the firm applies, can be similar. Typically, these clients "start by thinking about the view from their home and 'Where can I go hiking?'" The properties may have been degraded by grazing, invasive species, fire suppression, the construction of roads and fences. "We go quickly into the values of the National Park Service about entry, about immersion into the natural resource and stewardship of that land, and them being part-

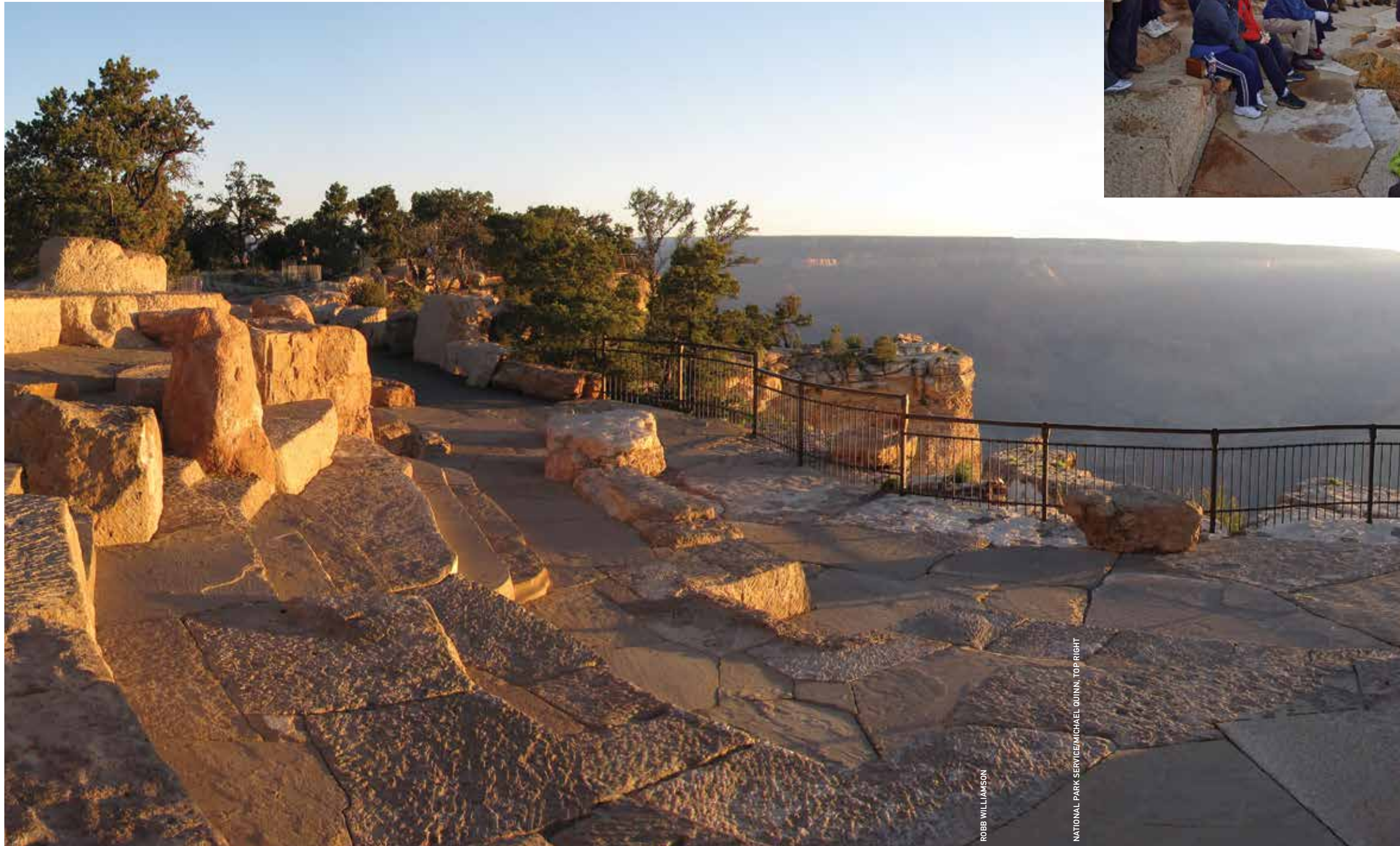
NATIONAL PARK SERVICE/MICHAEL QUINN, TOP LEFT

DHM DESIGN

ners in improving the ecology, thinking about drainage and how that supports habitat, steering revegetation—and they are interested in those values." The human history of a site may need to be elucidated and honored—restored landscape "doesn't mean untouched." The park aesthetic, seen for example in the rustic CCC stonework, is often suggested and embraced. The concept of replanting with materials from the property is proposed. So is the underlying park service intention to "frame the experience." In attracting clients for such projects, Ann Christensen says, "that park service piece is a distinguisher for our firm."

But there's one thing these private properties will never share with the parks: the visiting masses. Can design and construction cope with the growing numbers? To relieve the endless lines of hikers at Zion, says Jim Butterfus, a landscape architect at the park service, "it would be beneficial to have more places for people to go to. But there's not a lot of developable space; it's very rugged topography." And by opening "previously undisturbed land, you can end up not only with new trails, but with parking areas, which means people congregating, needing services, bathrooms—it starts to mushroom." Kevin Percival, a park service landscape architect who has been involved in park

DESIGN AND CONSTRUCTION TRY TO COPE
WITH THE GROWING NUMBERS.



ROBB WILLIAMSON

NATIONAL PARK SERVICE/MICHAEL QUINN, TOP RIGHT

transportation planning for nearly 20 years, says, “Maybe there is room to expand a parking lot here and there, or restripe them to be more efficient. But we aren’t going to build our way out of this.” Percival cites the parks’ accumulated \$11.9 billion in deferred maintenance as a practical constraint, apart from any principled reluctance to expand the footprint. “We don’t have enough money for the things we already own, to be taking on new development.”

Alternative solutions, not involving significant landscape architecture intervention, are being discussed and in some locations tried. One, long seen as promising, is multimodal systems like those at Zion and Grand Canyon—transit, and bike and pedestrian access from gateway towns. But the shuttles are easily swamped, and both tactics create parking congestion, though sometimes shifting it outside park boundaries, where it still debases the visitor experience. Other ideas involve operational tweaks and public information, or persuasion. In place of infrastructure-heavy new facilities, rangers could use small RVs as mobile visitor centers. At park entrances, new fast lanes could be dedicated to pass holders and employees, while rangers on foot could greet queuing drivers, to streamline their interactions at the fee station. Entry at peak times could be limited by advance reservation, or discouraged by congestion pricing. People can be encouraged to arrive at nonpeak times of day or year—or to go elsewhere. That is the suggestion of Kevin Dahl, the Arizona senior program manager for the National Parks Conservation Association, a nonprofit membership organization dedicated to supporting the park system.

ABOVE
The amphitheater provides space for educational programs.

OPPOSITE
The rock was dry set. With few exceptions, it is Kaibab limestone sourced within the park.



ROBB WILLIAMSON



“Instead of spending seven days at the Grand Canyon, you spend three days and then go see some of the smaller national monuments and Forest Service and Bureau of Land Management special places in the area,” Dahl says. “Maybe they don’t have the vast scale, but I can name five canyon experiences in northern Arizona that are just as spectacular as Grand Canyon, including some that are easier to walk into.” But it’s not canyons people never heard of, however enchanting, that are on their bucket lists. The seemingly boundless wilderness national parks like Grand Canyon and Zion, victims of their own iconic status plus all the factors enabling millions to visit, have become places of scarcity. Most of the possible responses amount to rationing. ●

ABOVE
Symbolism incorporated into this plaza honors the Native American heritage of the canyon. The sculptural stonework was done by Chevo Studios.

OPPOSITE
Chevo Studios collaborated on the amphitheater, which resembles a natural feature.

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