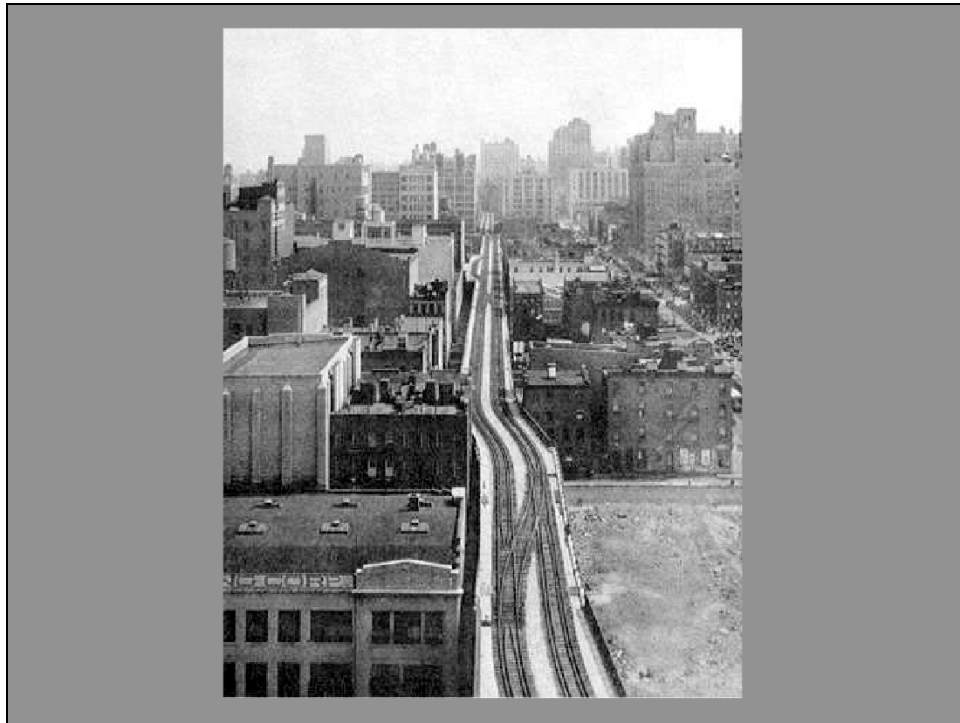


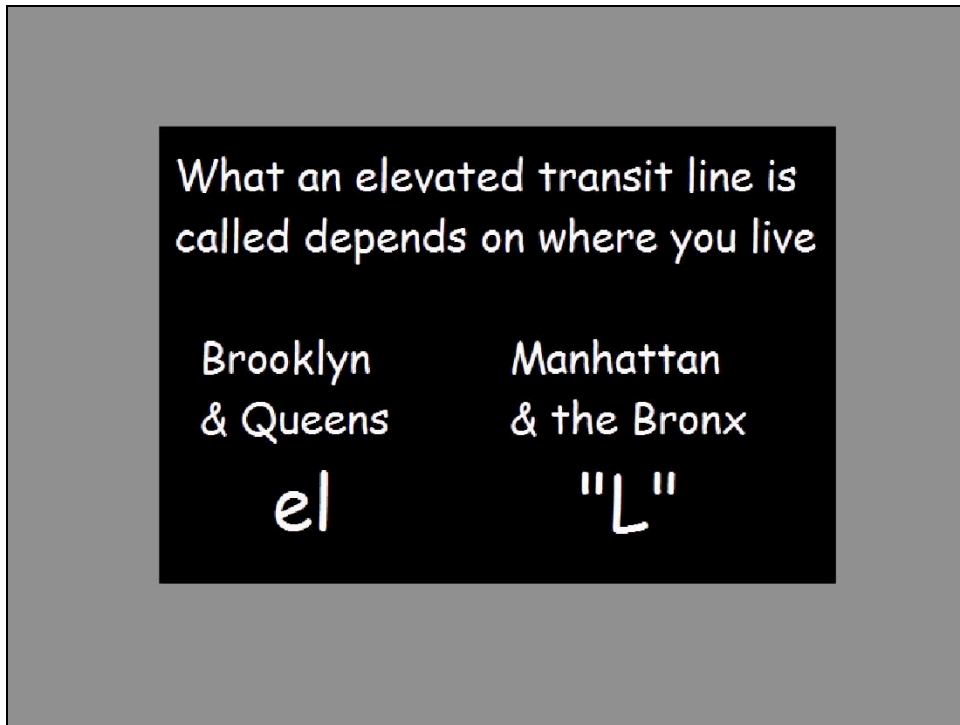
A new, almost unique, city park opened in New York City in June 2009. It was built from an abandoned cargo railline on the west side of Manhattan. Because this line was elevated above the streets on stilts, the park is called 'High Line Park' or, far more affectionately, 'the High Line'. The railline was constructed by the New York Central railroad in the 1930s to alleviate increasingly severe traffic conflict on the streets.



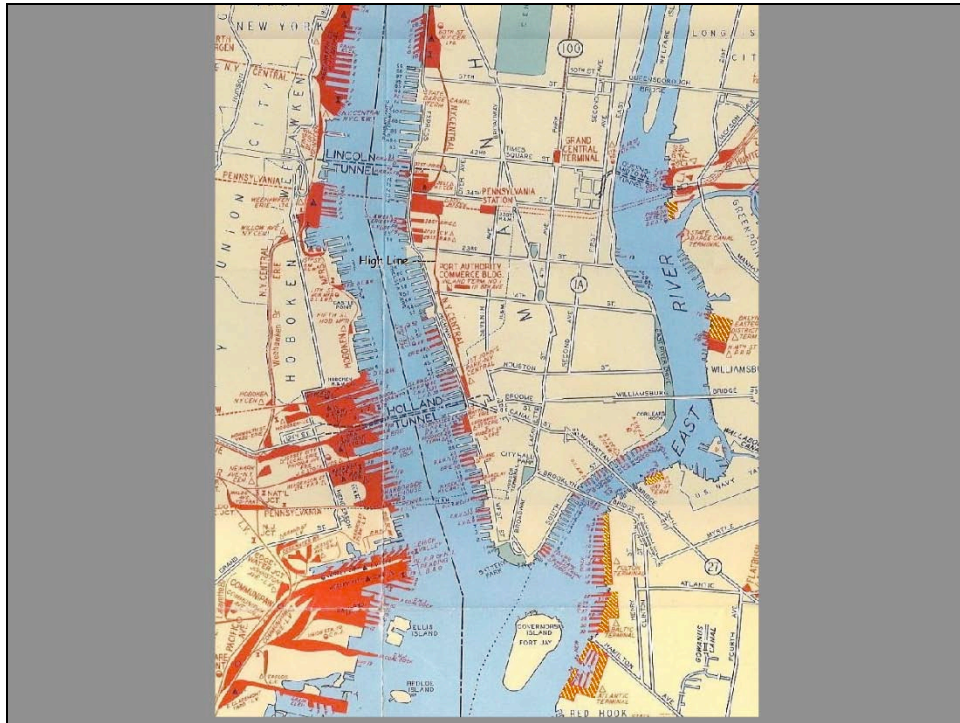
In the 19th century New York, as was typical of US towns then, built railroads at street level. Trains competed for road space with foot, horse, and, later, motor traffic. The outcome of collisions was almost invariably in favor of the train. The City ordered that each train have a horseman in front to ward off interfering traffic. This also was supposed to keep trains from speeding. The actual result was that the railroads quickly became good customers of horse farms..



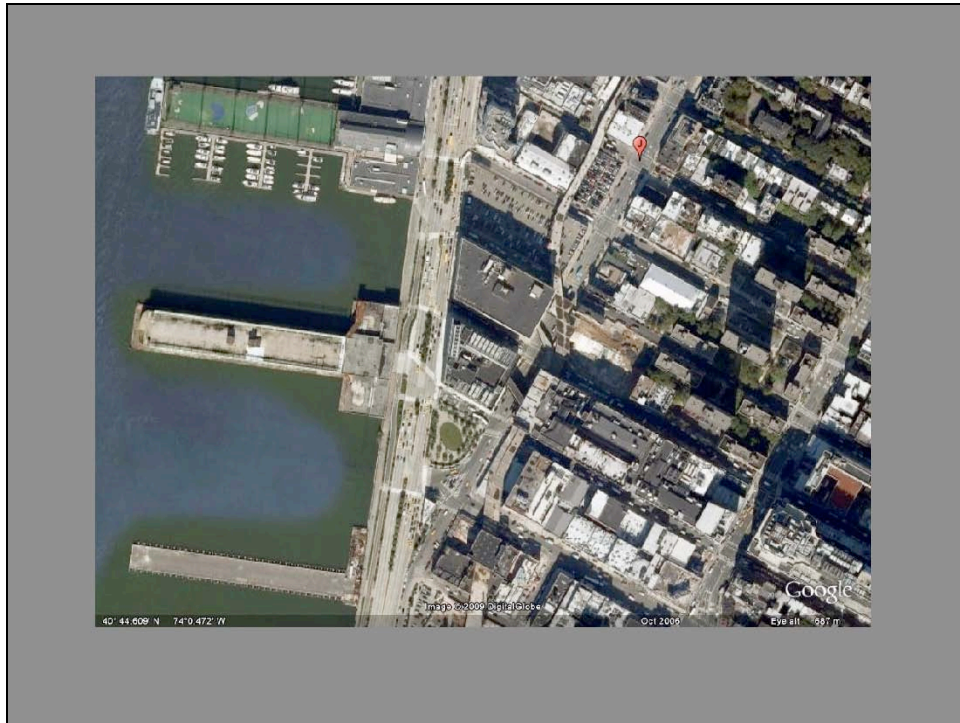
The line was part of the New York Central Railroad and ran along the west side of Manhattan. It was raised about 6 to 8 meters above the street to segregate the rails from road. This continued a practice with passenger railroads elsewhere on Manhattan, dating from the 1870s. Due to the heavy traffic along it, the cargo line had two tracks with many switches and sidings. This line worked warehouses and factories that once clustered along the west flank of Manhattan.



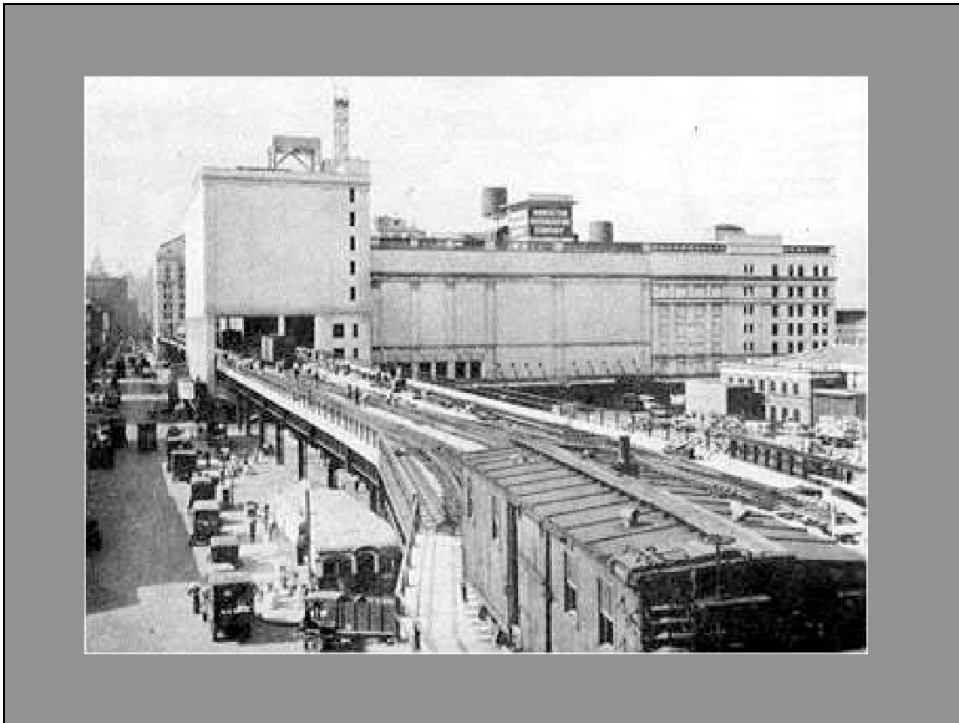
In history, the elevated railroads were first constructed in the 1870s on Manhattan and in the 1880s in Brooklyn. They were built and run by separate companies, which in the 20th century evolved into the IRT (for Manhattan) and BMT (for Brooklyn). They are now divisions of the NYC transit system. However, the IRT lines were called 'L's', with the alphabetic letter while the Brooklyn ones were 'els', spelled phonetically. This distinction persists into the 21st century for those lines still in operation.



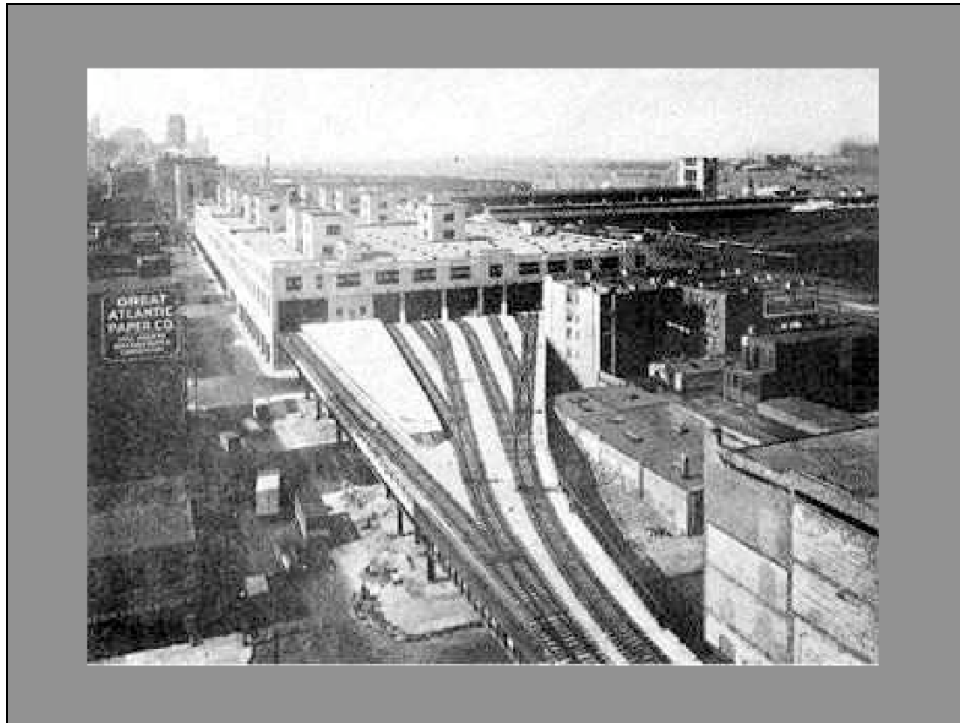
This map from 1943 was a military secret during World War II, but long was made public since then. The red areas are rail facilities around Manhattan with the High Line indicated. It's a short piece, only 2-1/2 kilometer long, from Penn Station to West Village.. Compare this view with the shore development of today, specially on the New Jersey side. The truck depot at the east end of 42nd St is now the United Nations campus. Of the several railheads on the Jersey side of the Hudson, only two remain. Hoboken is part of NJ Transit and CNJ is part of Liberty State Park but undeveloped as yet.



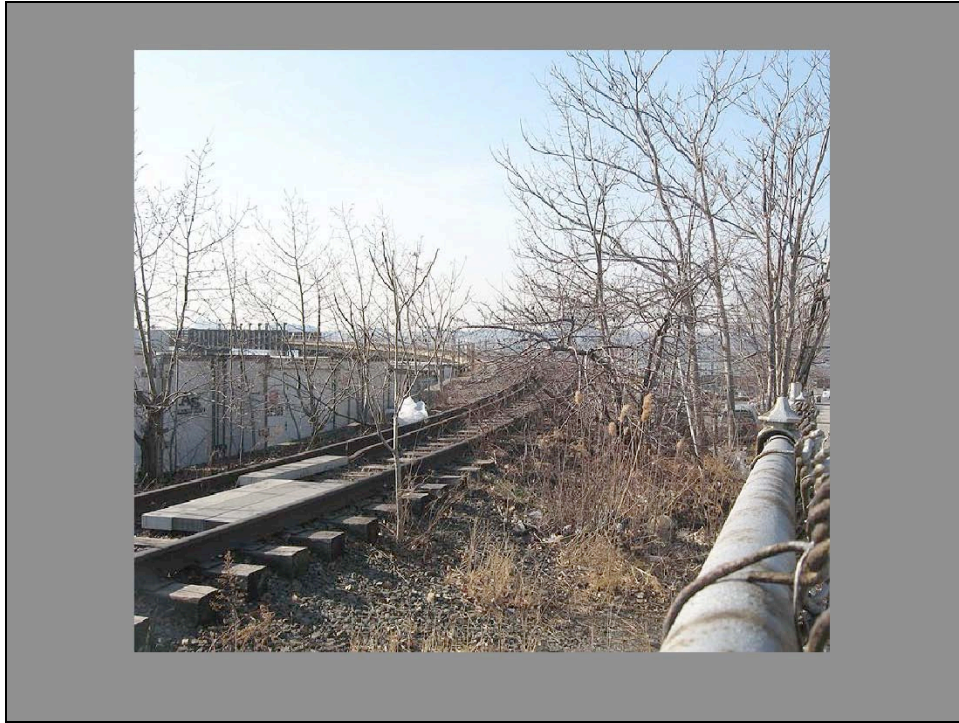
A Google Earth view of the High Line in the late 20th century in its abandoned state. It's the wiggly linear structure roughly paralleling Hudson River. Note the famous 'finger piers' of Manhattan, the nation's longest and busiest ship docking feature. The ones in this picture are about 250m long, to berth two cargo ships on each side or one of the gigantic oceanliners.



The rails squiggled their way over the city streets with side tracks at many of the wayside buildings. For a couple years some passenger service was tried, but didn't work out. People simply hopped onto the 9th Ave 'L' a block to the left, which also cost only 5 cents per ride and reached Lower Manhattan.



The south terminal was in St John's Park, a nabe now completely absorbed into West Village. By Manhattan norms this was a humongous edifice a ha'K long and a city block wide. Trains berthed in the upper level while trucks and work space occupied the street floor. The structure is still in use today, minus the railworks, as a UPS consolidation depot. On the roof is now perched a movie/video processing station for many of the media businesses on Manhattan. My former office was one block to the left and I overlooked this building from its windows.



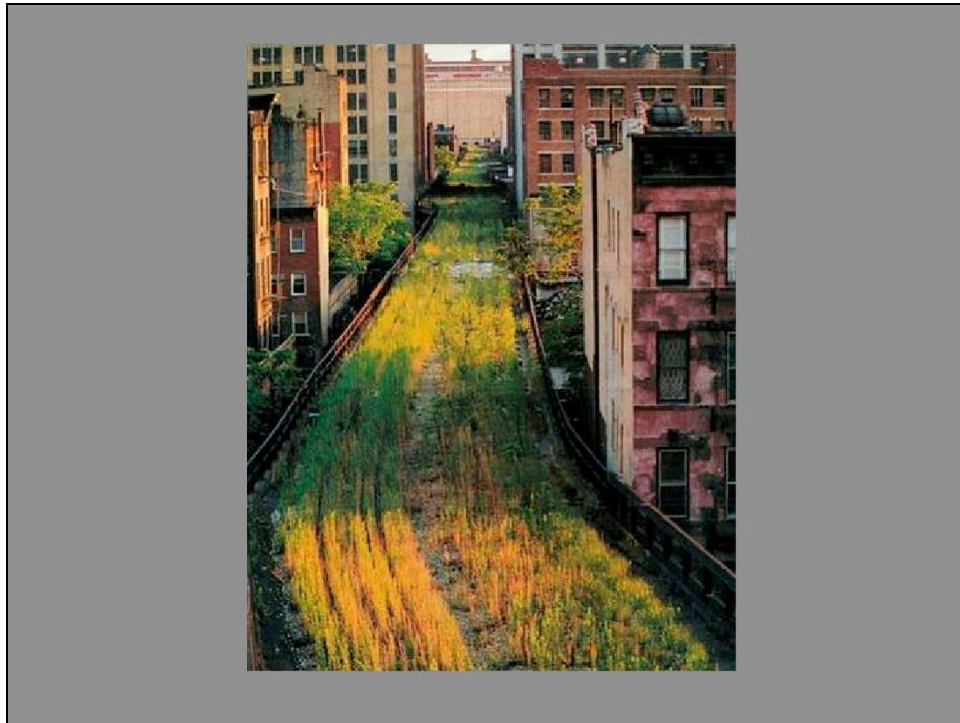
It's hard to believe this is a scene on the 'Island at the Center of the World'! It is the High Line in the early 20-thous in its decayed state. The rail customers bled off over the years. Some moved out of town, others switched to road service, still others changed operations to quit rail service. The last trains ran in 1981, after which the line was abandoned. The New York Central went into the Penn Central and then fell out of business completely. With no means to keep up the structure, it attracted gangs, crime, and posed safety hazards to those in its vicinity.



Before you sob that you can't ride an el, or 'L', when you visit New York, Please cheer up. We got about 100 kilometers of fully functional elevated railroads for your riding pleasure. This one is the International Express, passing over the streets of a very diverse section of Queens. It is worked by route #7 and is also called the 'Flushing' line after the outer terminal in the legacy town of Flushing LI. The simplicity of separating rail from road is eloquently illustrated here. Trains and cars flow past each other in perfect safety.



A street level view from Google Earth of the High Line in about 2000 after the NYC Parks Department acquired it. What to do with this thing? Just pull it down and sell off the land for nonrail use. This was long ago done to the extreme southern section, as illustrated later. An other is to convert it to other rail use, like attaching it to the transit grid. A third is to keep the structure for some nonrail function. This last is often done across the US by the ‘rail to trail’ process. The rial bed is cindered or graveled for hiking, horse-riding, or biking. Note the Parks Dept shield on the pillar in foreground.



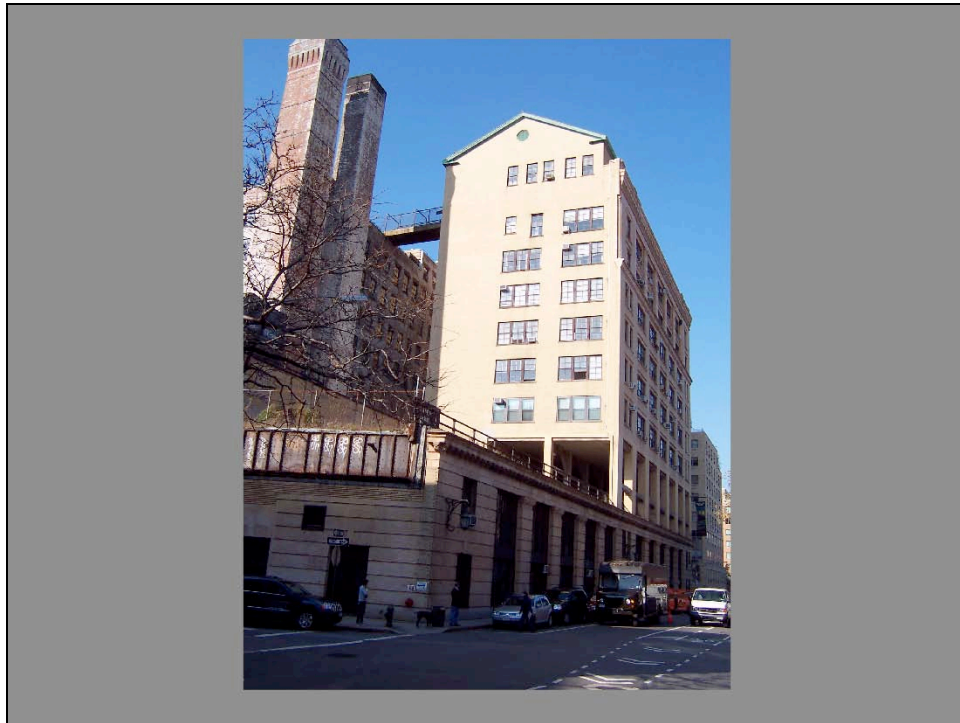
This promotional picture envisions a greenway made from the railline slicing thru the west coast of Manhattan, a park in the sky. It never was THIS green, but we'll see how things worked out. The renovation of the High Line took several years and the park opened in stages. Section one, from the present south end (leaving out the parts demolished already) to 20th and 10th Av, opened in June 2009. The 2nd stage is 20th St to 30th St in summer 2010. The last, from 30th St to Penn Station, must wait for other unrelated development of land around the right-of-way. To preserve the option of High Line, the development, Hudson Yards, must protect and maintain the High Line corridor thru its campus.



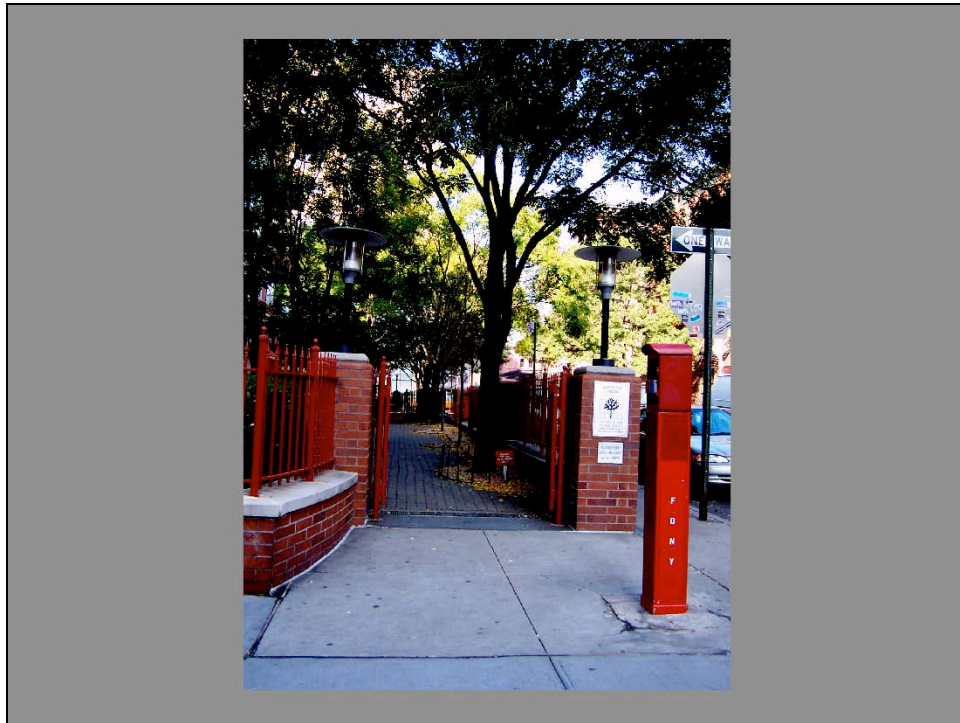
This is the current end of [what's left of] rail at Gansevoort St and Washington St in Gansevoort Market. To reach the rail deck stairs are placed every two blocks along the line and elevators are spotted roughly every six blocks. Admission to the High Line, like for any other municipal park, is free to all visitors. Hours are about 07h to 22h all year round, but may vary a bit with the season. There is no rail transit near the line, but buses run under it in 14th St and near it in 23rd St. Buses also run parallel to the line in 9th, 10th and 11th Av.



Looking south from Gansevoort St (about 11th St on the Manhattan street pattern) we see how the line extended farther south RIGHT THRU the building across the street! The touch up after the line was cut is plainly visible on the walls. Many of the old industry houses in this part of the island are now residences and offices for the new cerebral industry that needs no movement of physical items.



This is an example of how the corridor, after the 'L' was pulled down, was reused. This building is the original home of Bell Labs. The rail deck in front is now a garden and patio for the residents here, in what is now Westbeth. Jansky, pioneer in radio astronomy, and his crew were stationed here before shifting to New Jersey.



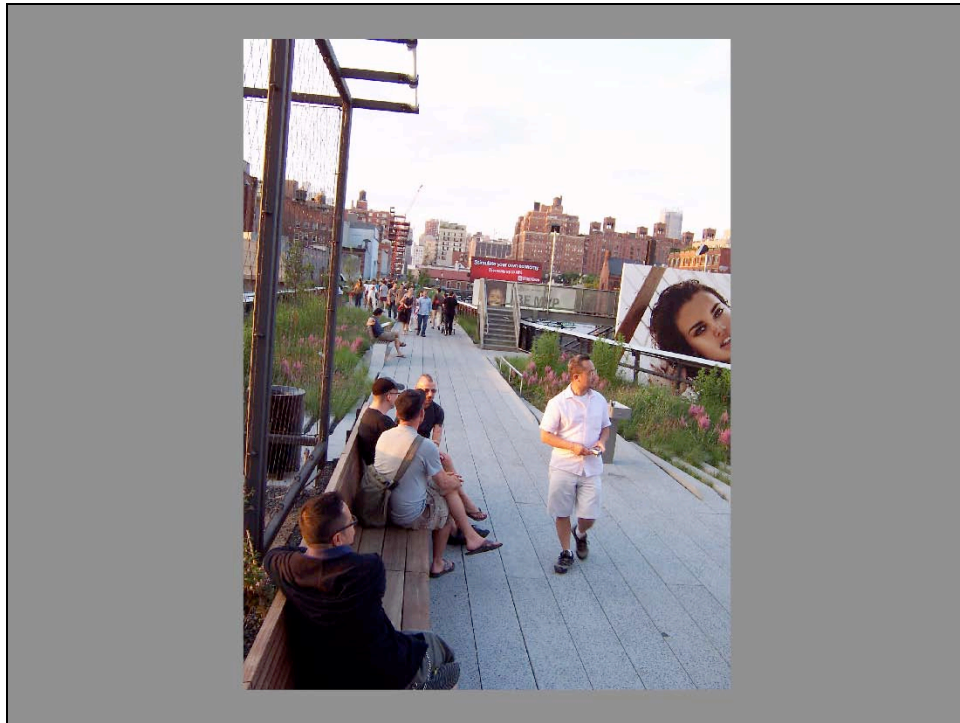
An other use of the old corridor in a linear park Washington Commons. Of particular note is the star-friendly lamps on the entrance pillars. Here the upward spray is blocked by umbrella shields. It is now a standard practice in New York to use only star-friendly illuminations. I'm standing under what was the uptown trackway.



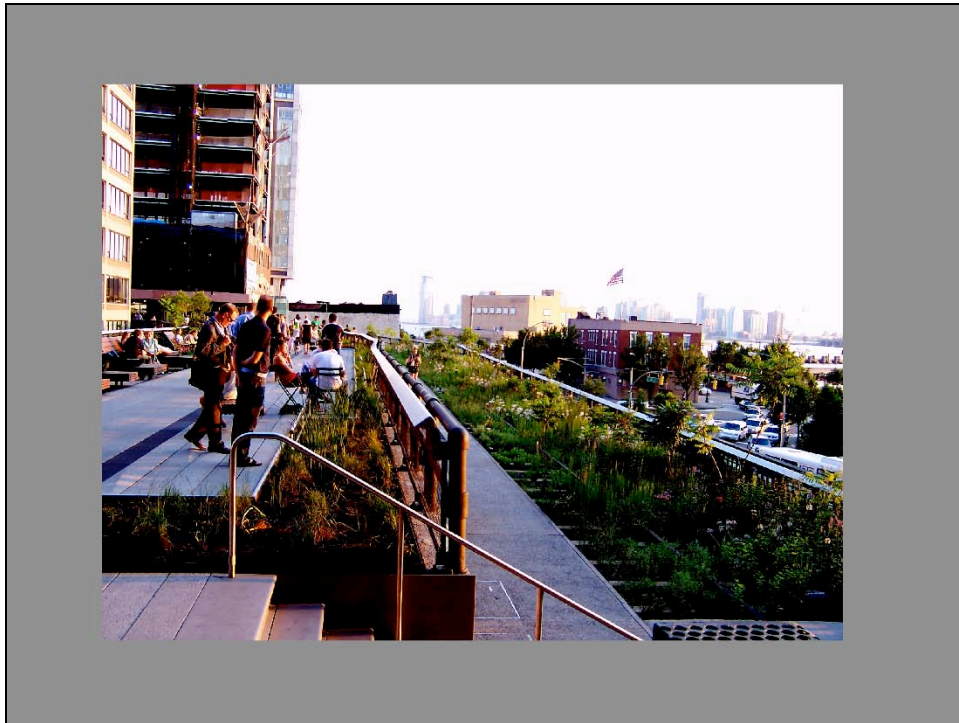
The southern entry point to the High Line is a shallowly inclined stairs piercing the rail deck. There is no elevator here, the next being at 14th St. The space under the 'L' is either vacant, like here, or left for small businesses to rent. Typical uses are restaurants, car repair shops, delivery services, taxi garages. These companies must in no way molest the High Line and must conduct their business in harmony with it. This means, among other things, no trash lighting, as we'll see at night later.



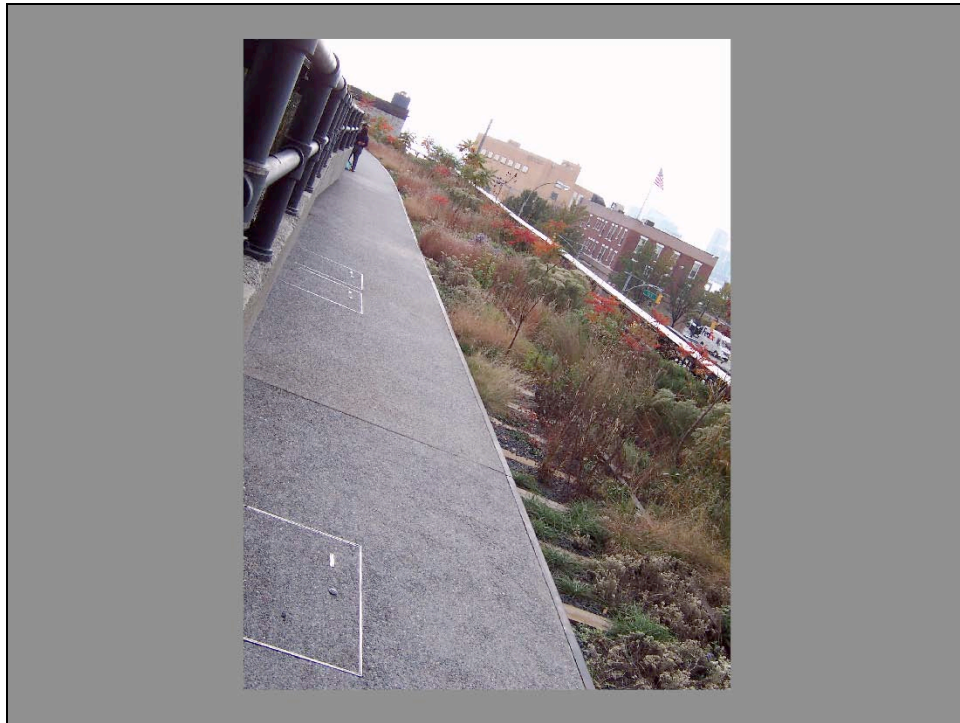
On the High Line! The deck is about 10 meters wide, for the double-track rail bed.. Concrete beams are laid for walkways and foliage is planted among the remains of the tracks. The flora look like weeds. They ARE weeds! The scheme was to evoke the former rail function by deliberately planting flowers and shrubs that natively grew up along the tracks. Yes, a team of horticulturists maintains the foliage.



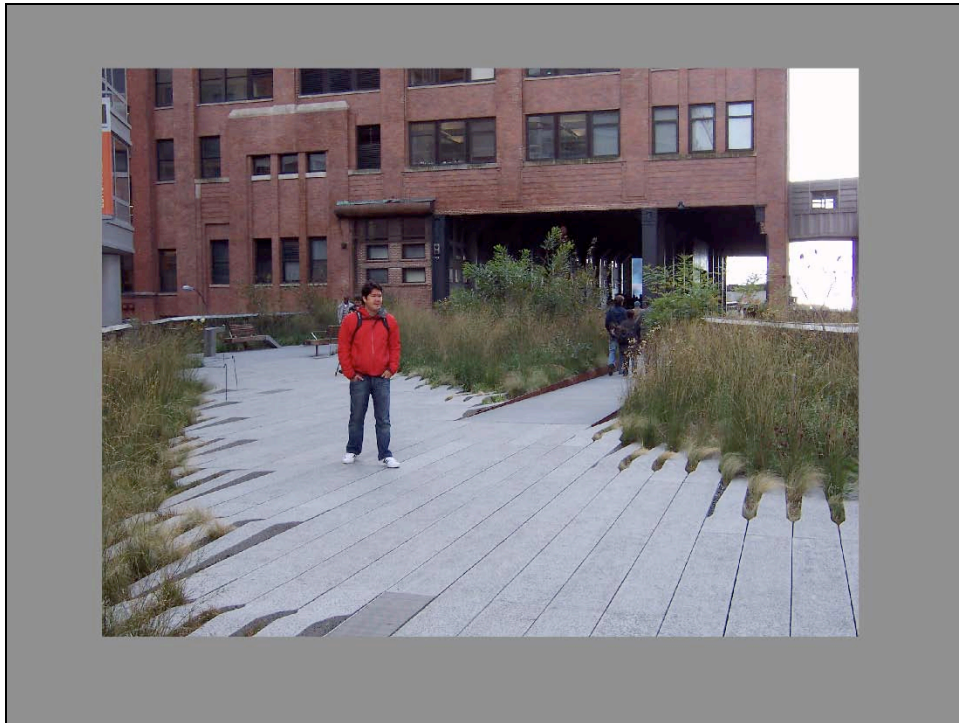
Depending on the service needed by wayside clients, the tracks split levels here and there to line up with the platforms in the adjacent buildings. Most of the parapet railing is preserved or salvaged, with a very special astronomy feature, seen later at night. The park has few 'toys' like swings, sand boxes, statues, and is mainly an aerial promenade. Comfort stations were under construction before the AAVSO meeting and a couple sipping fountains were running..



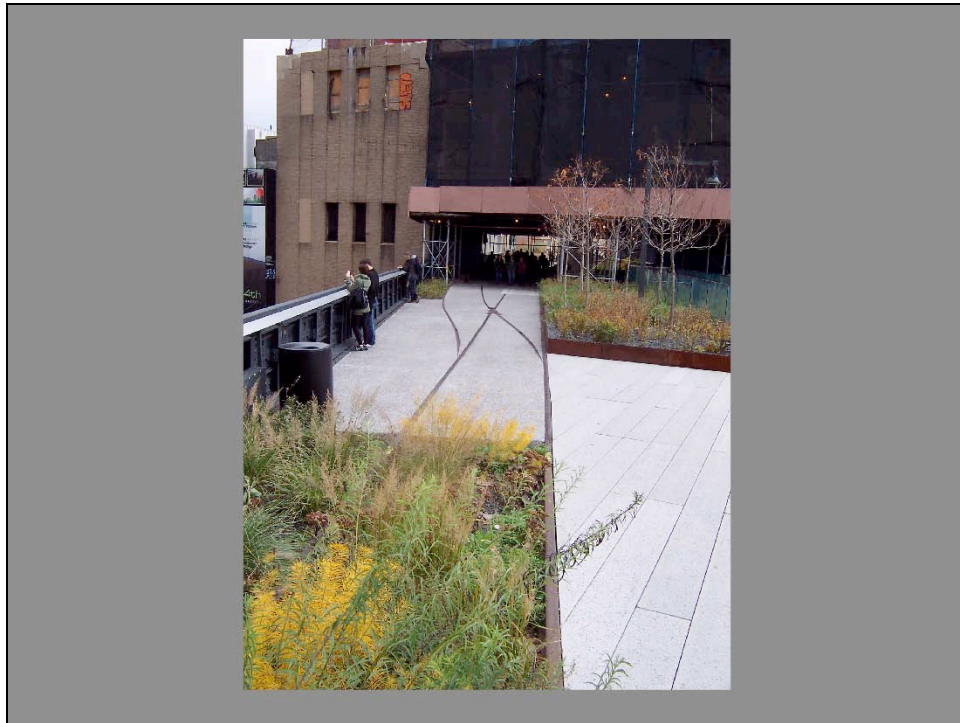
A better view of the gradient of the tracks. The tracks in the weeds are not merely kept from the former railworks. The entire deck was excavated, repaired, fitted with drainage and electric and comms. The tracks were then put back in the same alignment as before, following old railroad maps and plans. The notion of a park on different levels continues the model, first instituted by Central Park to exploit the third Cartesian dimension in New York.



You have to stay on the concrete floor beams and NOT walk in the tracks. It is impossible to get steady footing and it is easy to trip. Sometimes there is a curb or guard stone. Sometimes, like here, there is nothing to prevent accidentally stepping off of the walkway.



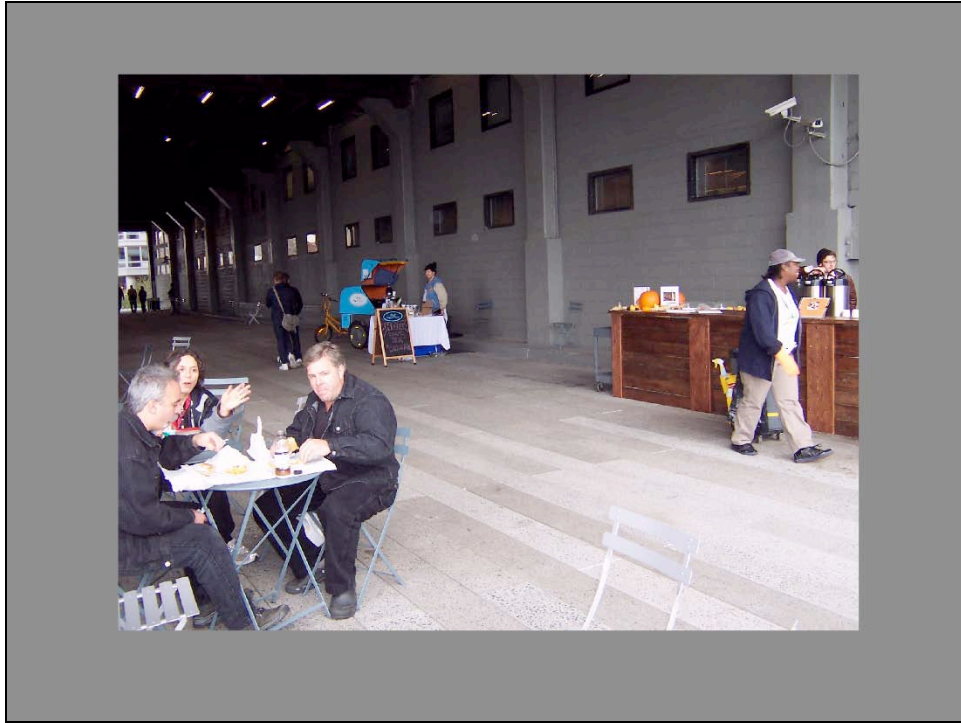
The High Line GOES THRU other properties! One of the weird feelings is to be on public land, this park, and then penetrate into and under private land. Note, too, the potential hazard of walking into the weeds and tracks. Altho the park is ADA compliant for access, it is dangerous within it. A wheelchair or walker can hang up in the combs at the edge of the walkway. Already, soon after the AAVSO meeting, the City was sued by a female visitor for tripping and injuring on the High Line. She was a abled person!



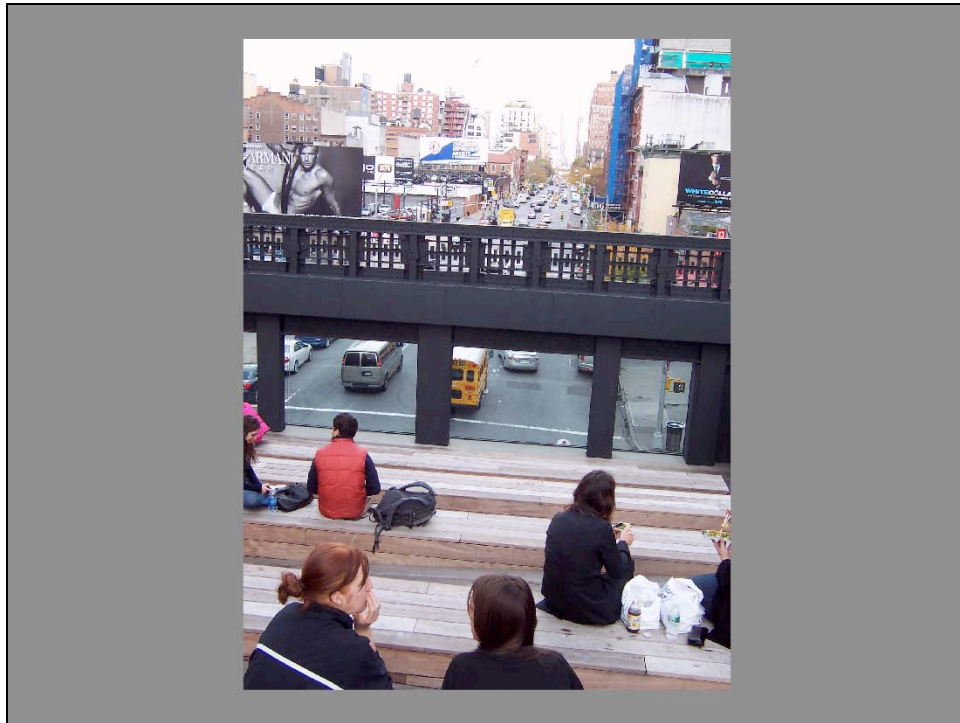
Tracks are placed in context in the walkway. They are graded level, somewhat like streetcar tracks. Apart from the visual stimulus, they are a way to illustrate rail operations, like the switch in mid picture. As a railline, the High Line worked by visual rules with no signals and switches were manually thrown by the railroad crew.



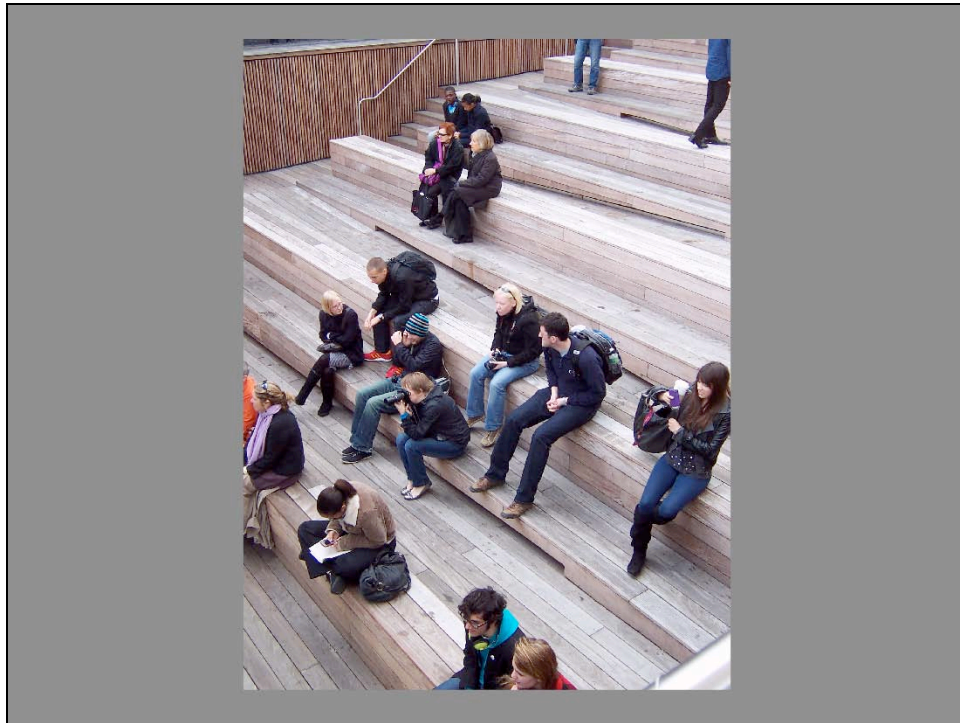
A walk thru a building's belly! Chairs, the standard issue used in other municipal parks, are sprinkled all along the line. They are rather flimsy, quite unattractive to steal. You may bring your own chair. The double row of rails is a neat trick to avoid switching mistakes. A train was routed onto either the left set of rails or the right, and each staggered pair went to its own siding. This technique sorted out rail traffic on Brooklyn Bridge when it carried railines before Woeld War II.



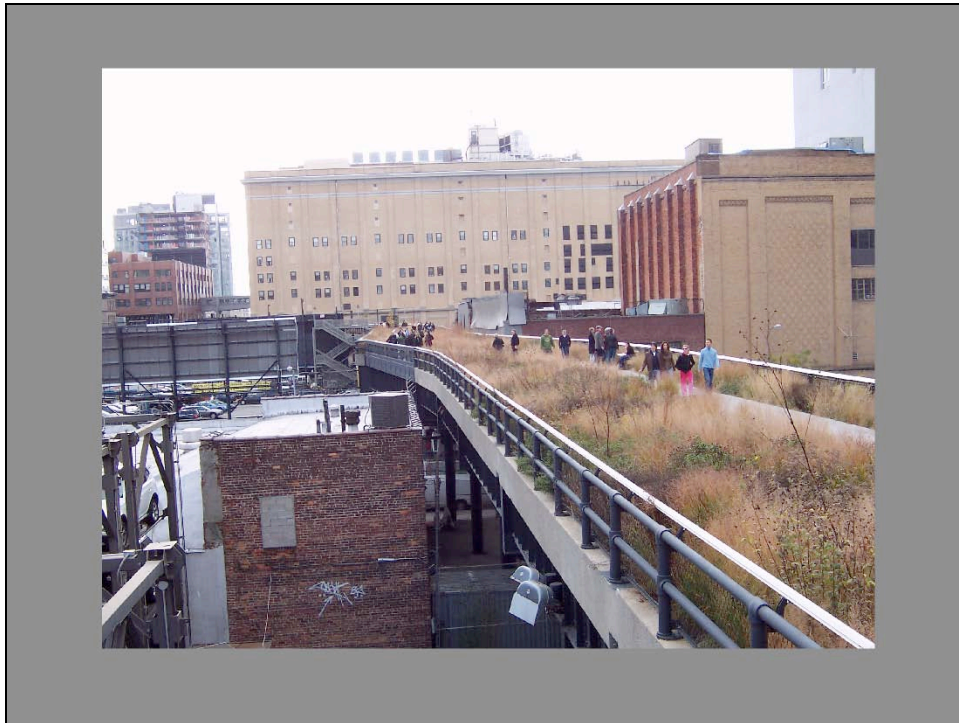
Lunch in the sky. When I photoessed the High Line for this AAVSO talk, the concessions were still under development. This one serves hot and cold meals at the two stands. Windows in the wall give peeks into the lower floors of the office building.



The High Line, being elevated, gives intriguing vistas of the City beneath it. This is a “Spanish steps’ where you can watch the road traffic scoot under your feet.



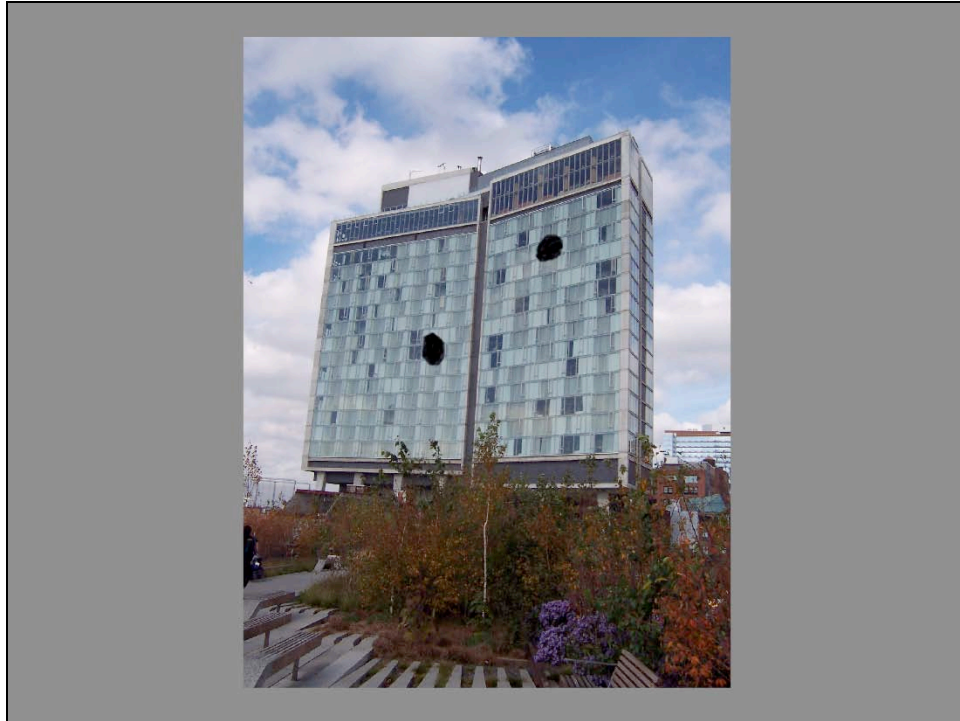
Spanish steps from the front. This is good picnic spot for residents and workers near the High Line. If you bring children, they must NOT run play on or near the stairs! The bottom is open to the street, about 6 meters below.



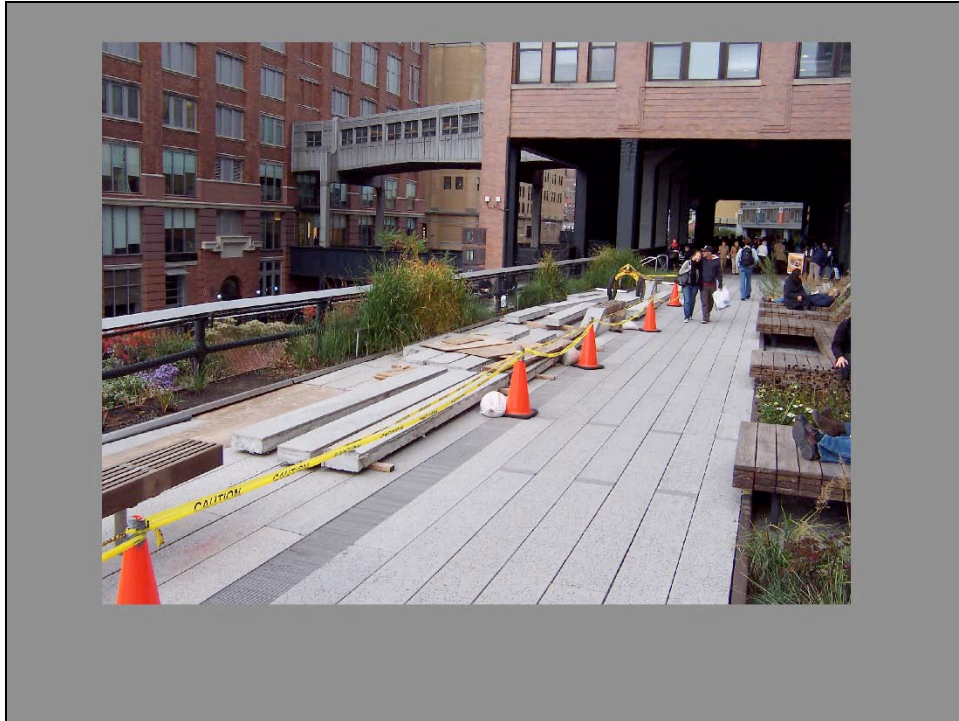
Compare this view with the early one of the line running trains. People stroll up and down the High Line, taking in the views of the City never before [safely] to hand. The fittings are as much as practical salvaged from the railworks and incorporated into the park. Yes, it was a hazy day.



You CAN ride on the High Line on its own tracks. The sun chairs are on small flange wheels that roll them along the track under them. They are very heavy to deter trying to rearrange them by physically lifting them off the rails. Note the gradient trackway on the left.



Uh, oh. Yep, it had to happen. Soonest the High Line opened, a new vista opened to its visitors. The Standard Hotel straddles the park. Its guests were giving hoochy-koochy shows thru their room windows for the park! I had to black out the two in progress when I took this picture. The Parks Dept and Hotel put a stop to this extra treat by fall 2009.



The park expected 5,000 visitor per day for planning and construction. It by the AAVSO meeting was hosting 20,000 per day in good weather. Wear and tear on the structure was far greater, making maintenance a real extra chore. Here floor beams are being replaced. The skywalk in the background connects two factories and a former spur of the High Line leads into the left one. That left building is the former factory of National Biscuit Company, now Nabisco. It still has offices here but the cookies and crackers are manufactured in some place like Turkmenistan



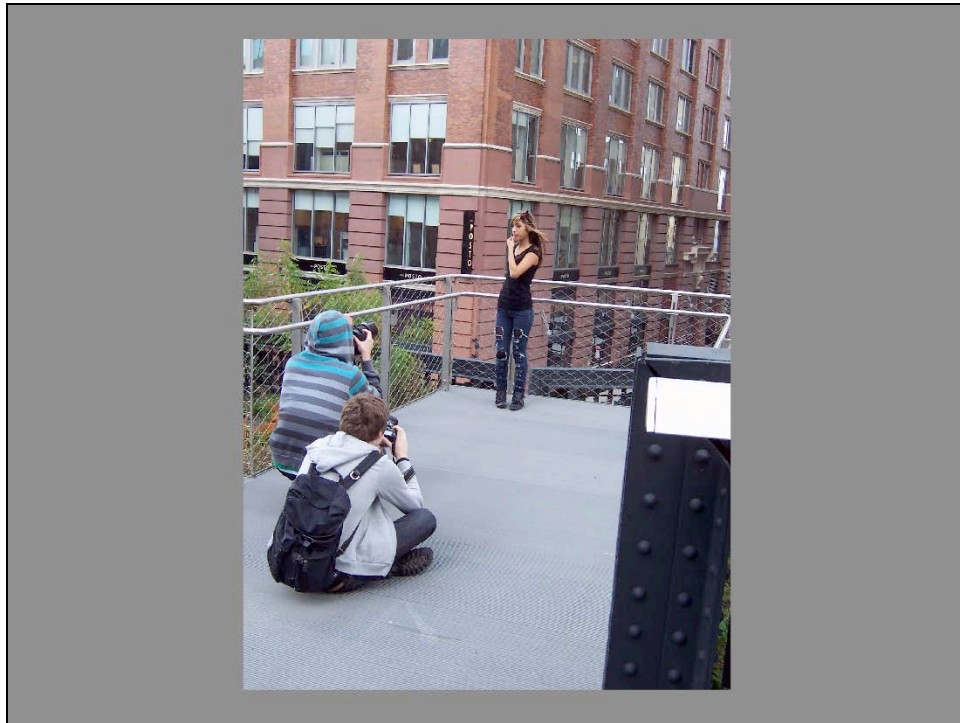
The finger piers on Manhattan are slowly vanishing, a relic of the former maritime trade. Most were demolished when they decayed into navigation and safety hazards. Many were converted to sports, recreation, exhibition space, like Chelsea Piers and Eisenhower Piers, but some remain in active marine use. This one is for the City's own marine and aviation patrols of NY harbor. It's about 250 meters long, seen foreshortened here.



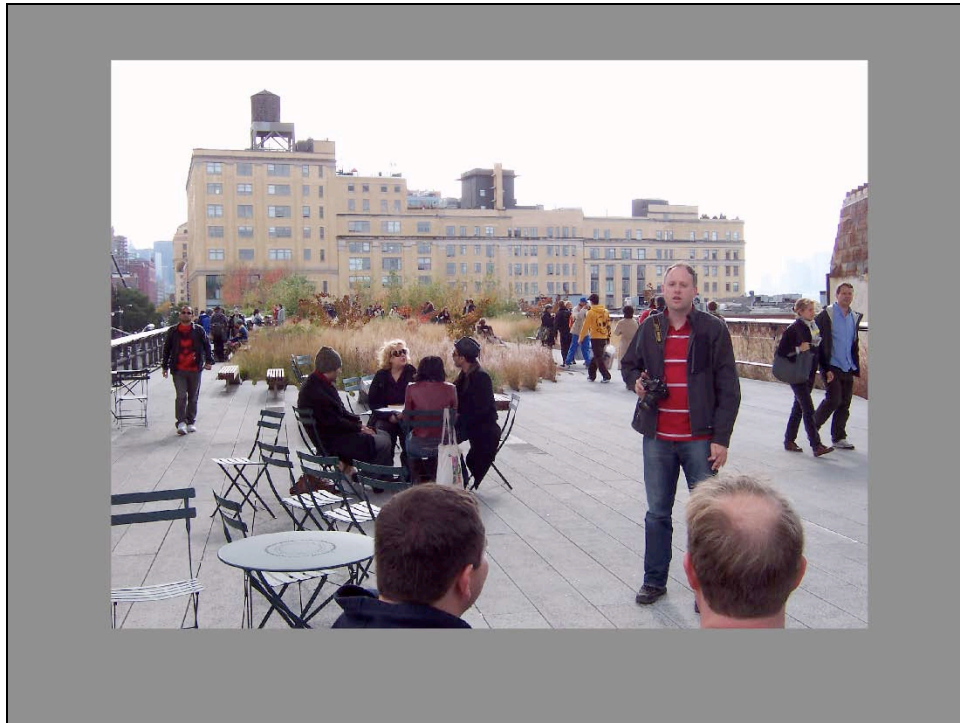
Wayside sights not previously available. Manhattan Fruit Exchange once occupied this entire warehouse, some fifteen floors tall. Now it works only the first couple floors. The rest is for luxury condominiums. One bonus for the residents is that they never have to buy fruit.



The High Line is generally above the trees and lamppoles. Ancient cobraheads, from the mid 20th century are under mass replacement all over the City. The work just didn't get to this district yet. The rail deck is also above the street clutter of lights, like from show windows and headsigns. This leaves a subdued ambient illumination on the High Line. The 'Spanish steps' (not the official name, which I'm not sure there is one) at the right. Ritzy residence houses line the streets here, mixed in with light industrial establishments.



People make what ever peaceful quiet use of the High Line they want. Picture-taking, probably for an advertisement, is shown here. Note the new hot fashion of shredded dungarees.



Taking in the Sun, on this cloudy day?, and generally relaxing on the High Line. The giant building in the back was once the world's largest cold room. Temperatures were kept at -5°C to -10°C for storing meat and fur. When the company moved out and a new owner took over the place, there was a problem. It took EIGHT MONTHS for the temperature to thaw for new owner to start renovations..It's now offices for the cerebral industries.. The cold level in many buildings in Gansevoort Market was provided by street brine. Like street steam, the brine was generated by brine plants in the area and sent to customers by mains in the streets.



End of the line for now at 20th St. The works beyond are under way for opening in summer 2010. The building in the back looks like it's leaning over the line. It is. Architecture near the High Line is trying to interact with it in innovative ways.



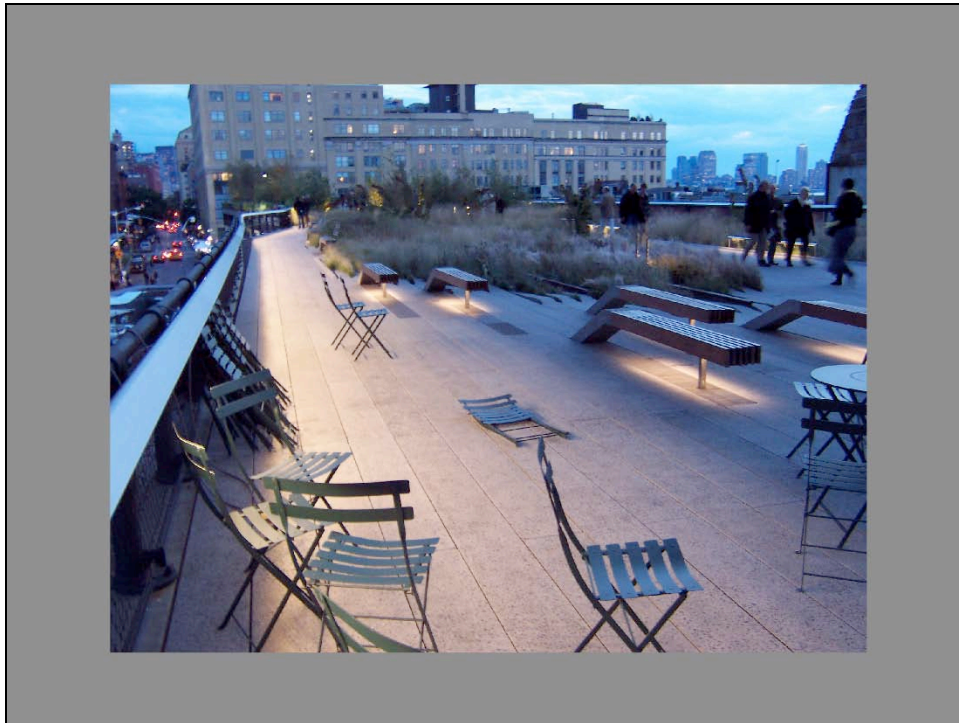
We have to come back at night, so we'll step down to the street here, at the 18th St exit. The new stairs and other fixtures are patterned in an industrial motif, in keeping with the character of the west side. The billboard? Come back after dark.



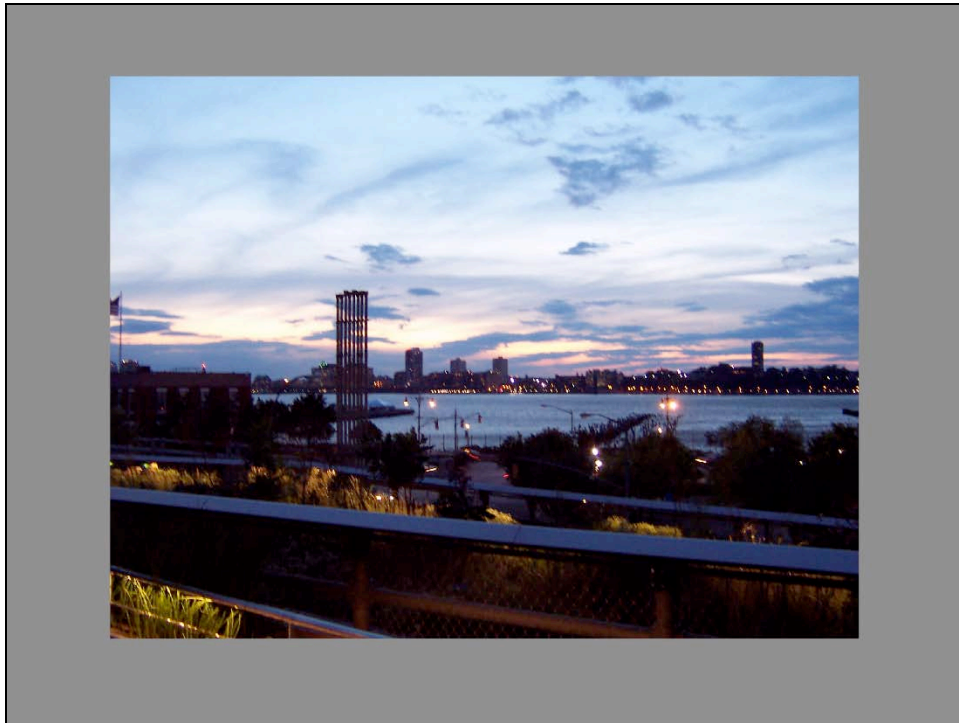
On the way downstairs we check out the massive build of the High Line. The structure actually required only modest stabilization and strengthening due to its solid original construction. Errant cars and trucks used to collide with the pillars at the curb. They still do, both here and at the other elevated railines around the City.



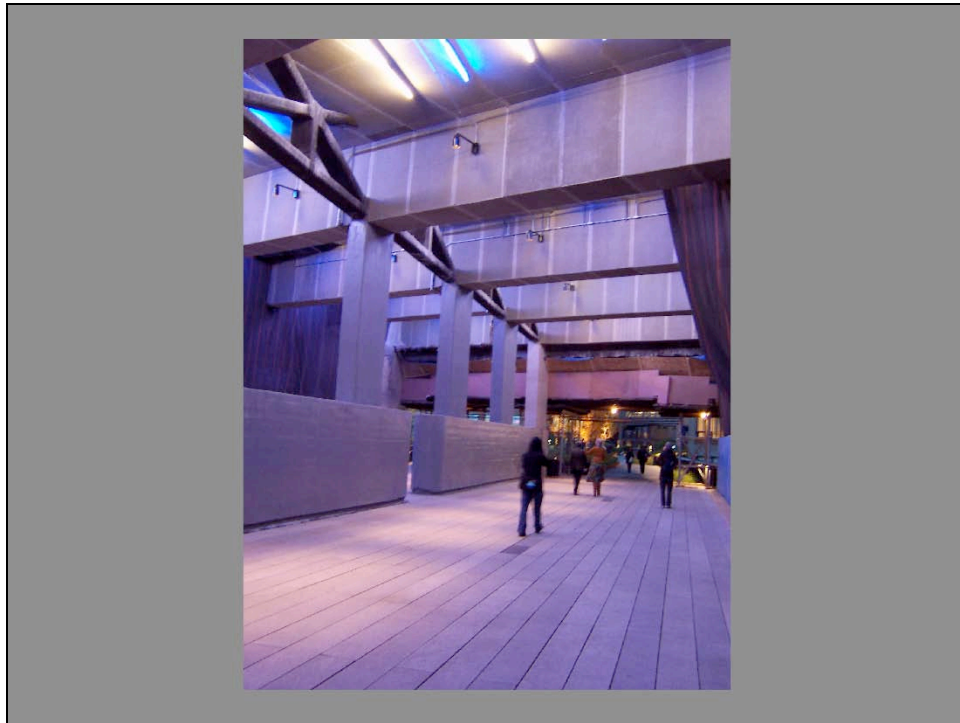
As good a place as any for supper. See how the City treats outdoor lighting? The plans for the restaurant are reviewed before building or redoing. Lighting is one aspect that's looked at carefully. Here, like in Washington Commons, the shields are umbrella hoods. New York has one stunning faculty missing from most other twons. We are a vertical town. Light thrown recklessly into the air, forgetting about what it does against stargazing, is likely to strike the eyes of some one living on upper floors. He WILL complain, loudly and strongly. The quality-of-life squad buzzes the offending light and, erm, takes care of it.



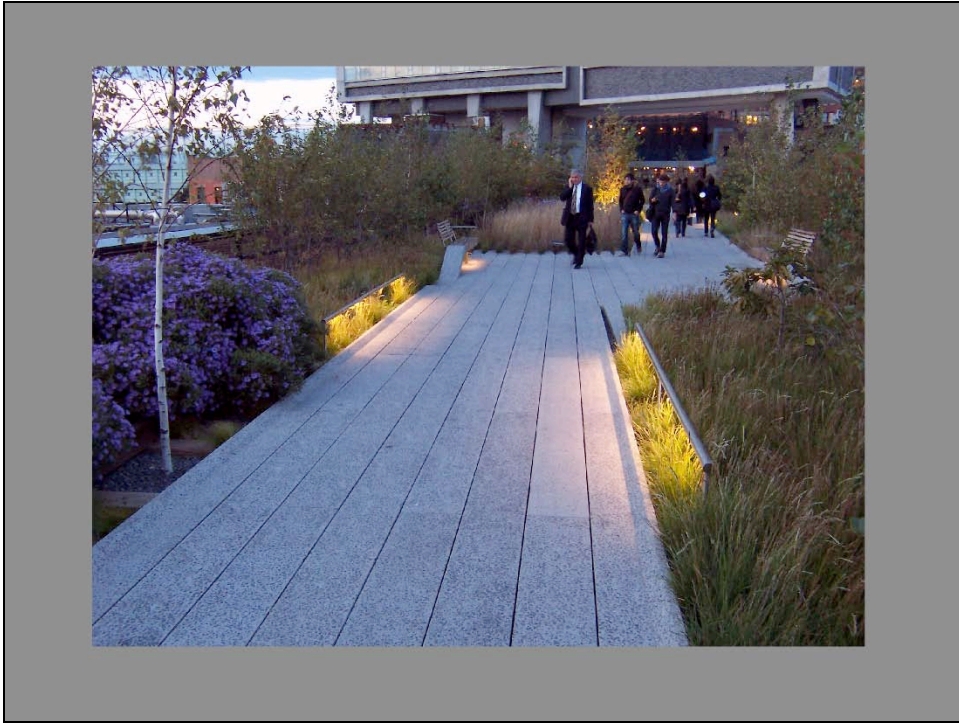
OK, we're restauranted, if that be the word, and back topside on the High Line in dusk. Where are the lamppoles? Parks got lamppoles, right? High Line doesn't. All lighting is thoroly shielded to preserve the city vista. The spinoff is that the High Line is a new favorite site for NYSkies and other city astronomers to study the stars! The deck is absolutely solid from its railroad build, so there is little vibration. The sky is wide open, as we'll see later, a miracle of sort on Manhattan. Isn't that the kind of bench you need at your observatory, with the hidden lamp under it?



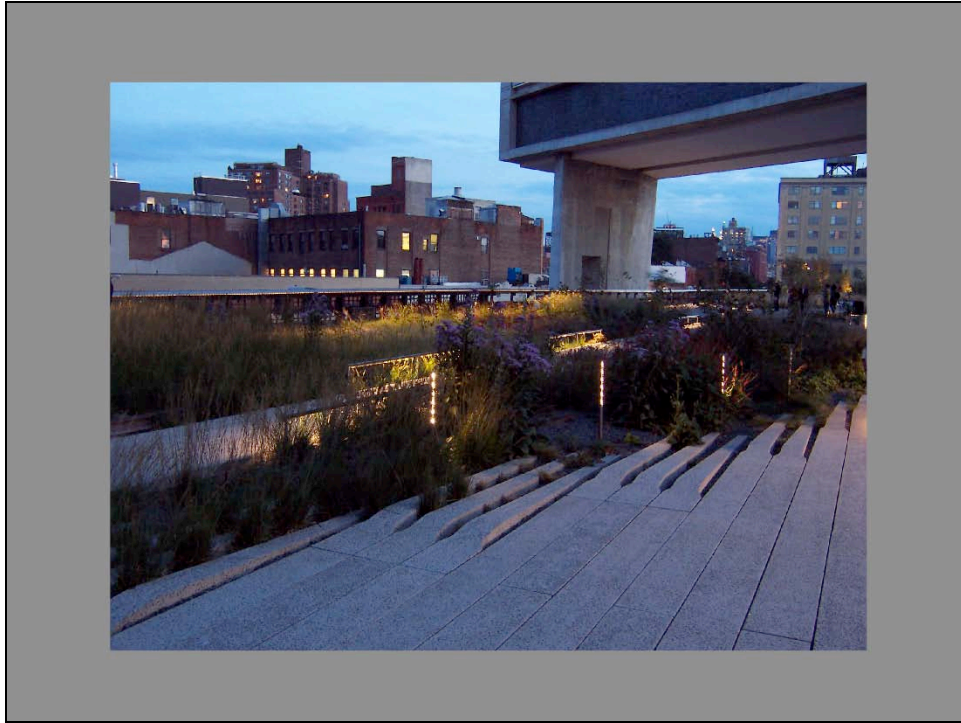
Open sky is real tough to find in New York, where the skyline from the street can reach 50 degrees and more above the horizon. The High Line stands above the street, varying 6 to 10 meters up. The track deck is almost level but the street undulates beneath it. This happens on the passenger elevated railines, too, but the range of elevation is far greater. The view here is west over Hudson River, here about 1,500 meters wide.



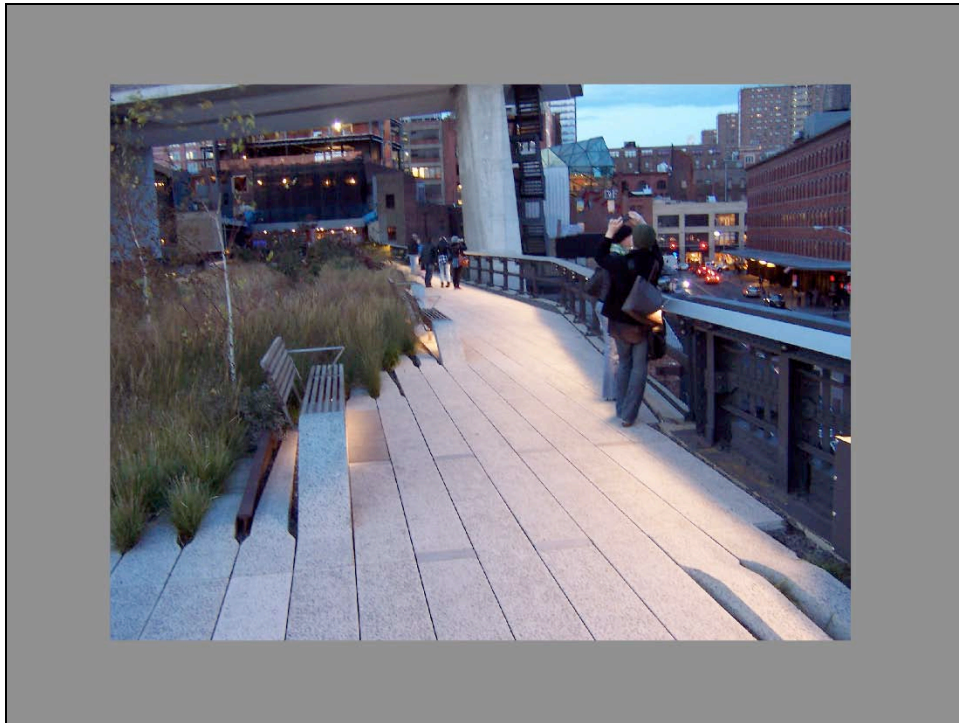
To relieve the Stygian darkness under the buildings, the owners had to install lighting. The lamps must be fully occluded from view from a distance. Here the shielding is structural by the deep webs of the girders. Even one bay away the lamps are hidden. You can appreciate the massive construction of a high-rise building by exploring around here. I sometimes wonder if there was any World Trade Center consideration in designing the High Line.



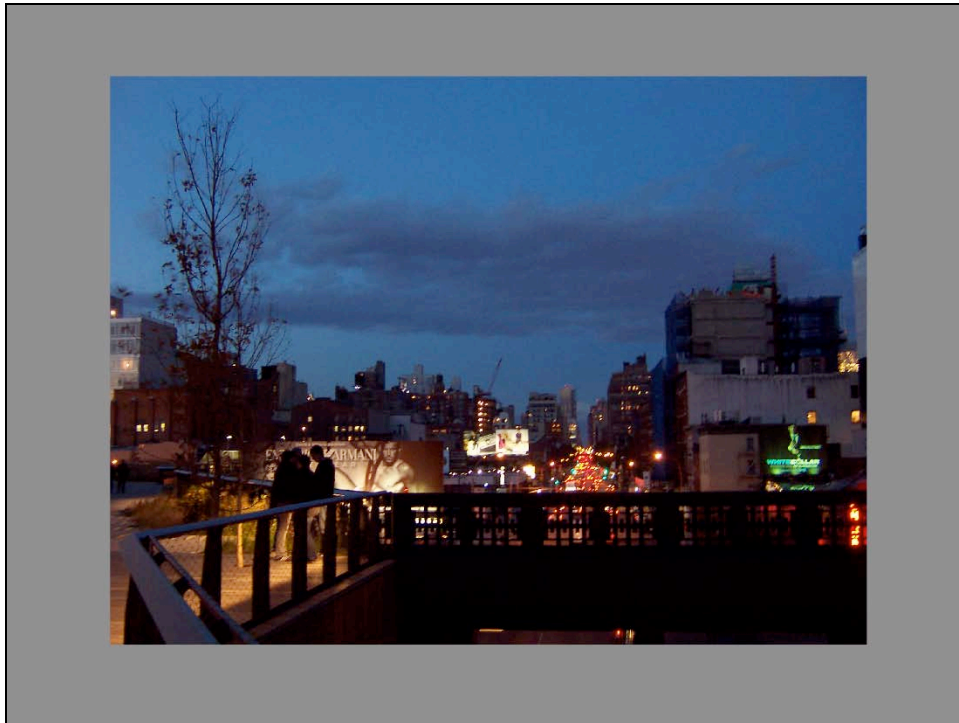
This is how you WANT to light the paths around your dark sky site, yes? As wonderful as the lighting is for starviewing, and general park enjoyment, the maintenance crew goes thru contortions to change the bulbs.



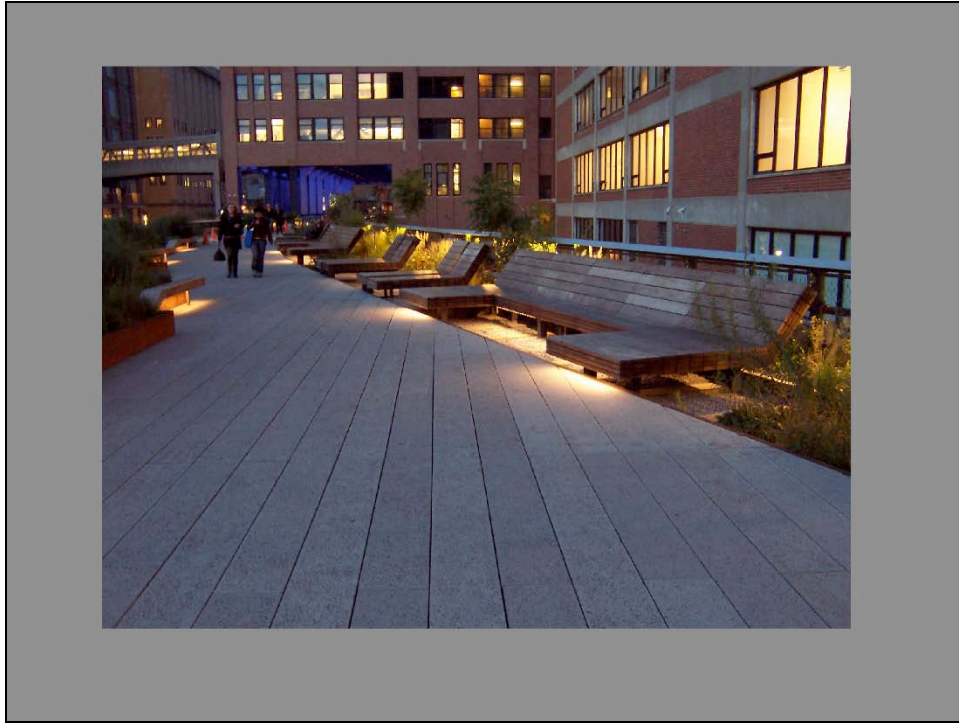
These poles gently warn of the foliage with downward lighting. You WANT these to mark the roadways near your observatory. Note the pillar of the building straddling the High Line in the back.



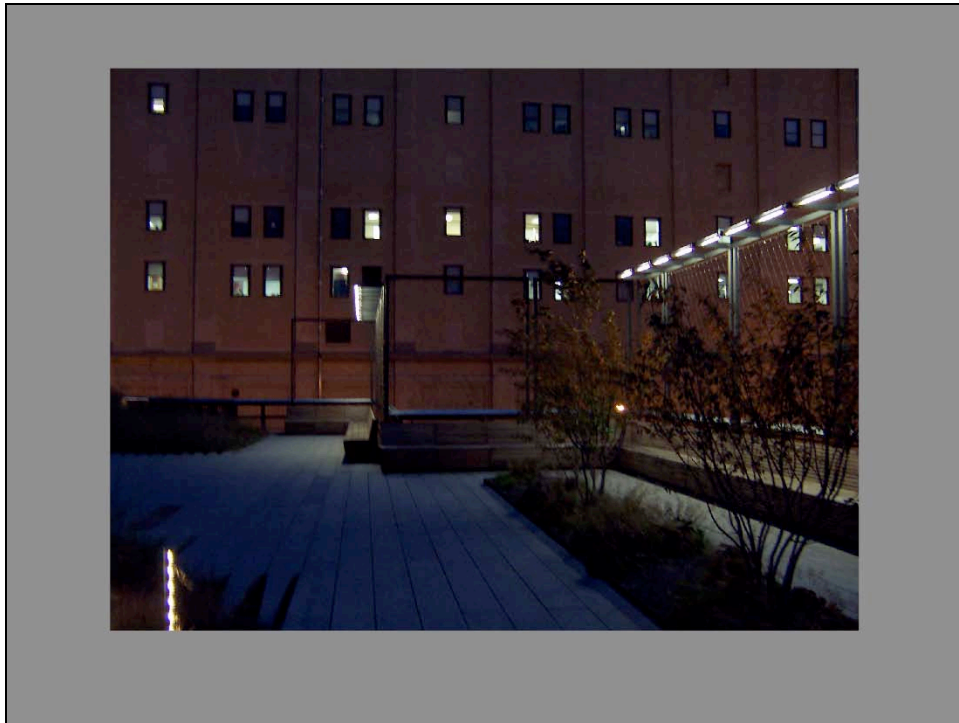
The parapet is authentic, with some replicas here and there. Under the top railing are the occluded lamps to light to edge of the deck. If your observatory has a viewing roof, this is what you WANT to install.



It's getting dark. As luck had it, each time I visited the High Line to assemble this show for AAVSO, it was cloudy. Yet you see how open a sky is presented. This is Manhattan, NEW YORK, not Kansas. Now hat you're probably teething on your shorts, I say there is one hideous situation against astronomy on the High Line. The open sky means also open air. Wind from the River, or any direction, roars right across the deck. There is no shelter, except escape to the street. Astronomers found a partial work-around by setting up under the edge of the straddle buildings. At least on two sides the walls can temper the wind. If the wind blows thru the building, in line with the High Line, well



The rolling chairs are perfect for meteor watching but they face west, away from most shower radiants. We use them for general binocular browsing of the stars overhead and, erm, in the west. See how soothing the lighting is for reading your maps?



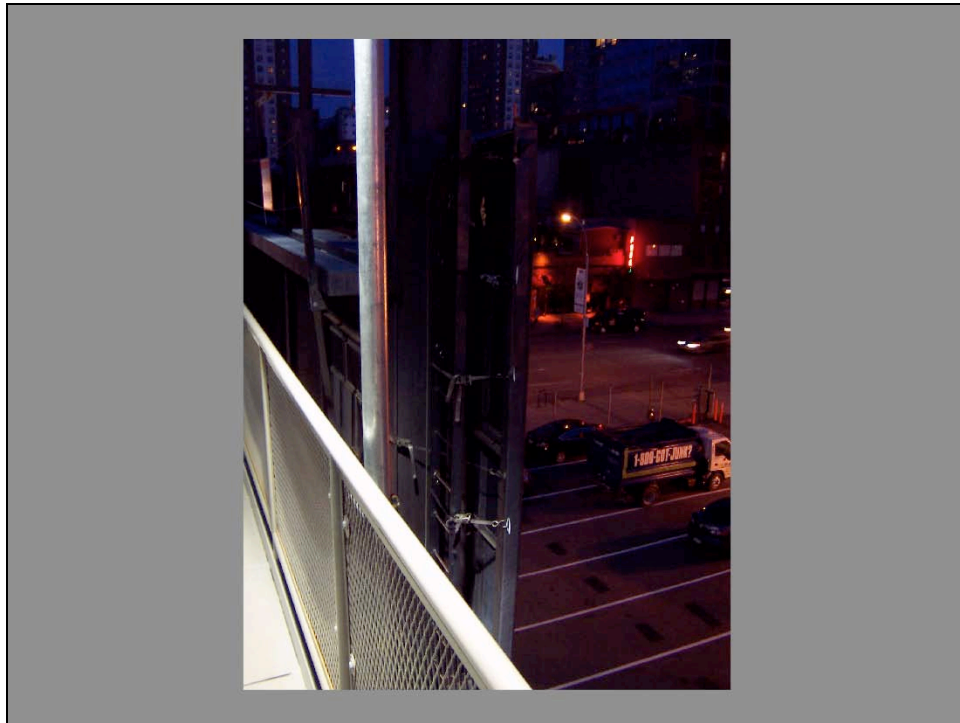
The visitors waiting room at your dark sky field? The seats are lighted from the rack above them. Visitors can read your literature before walking to the telescopes. On the High Line, the seats are for relaxing, getting off of your feet, meeting friends, and laying down stargazing gear. Please mind that while the High Line is the poster child for star-friendly inner-city lighting, you must watch your step, just as do in daytime. Please do not horseplay here!



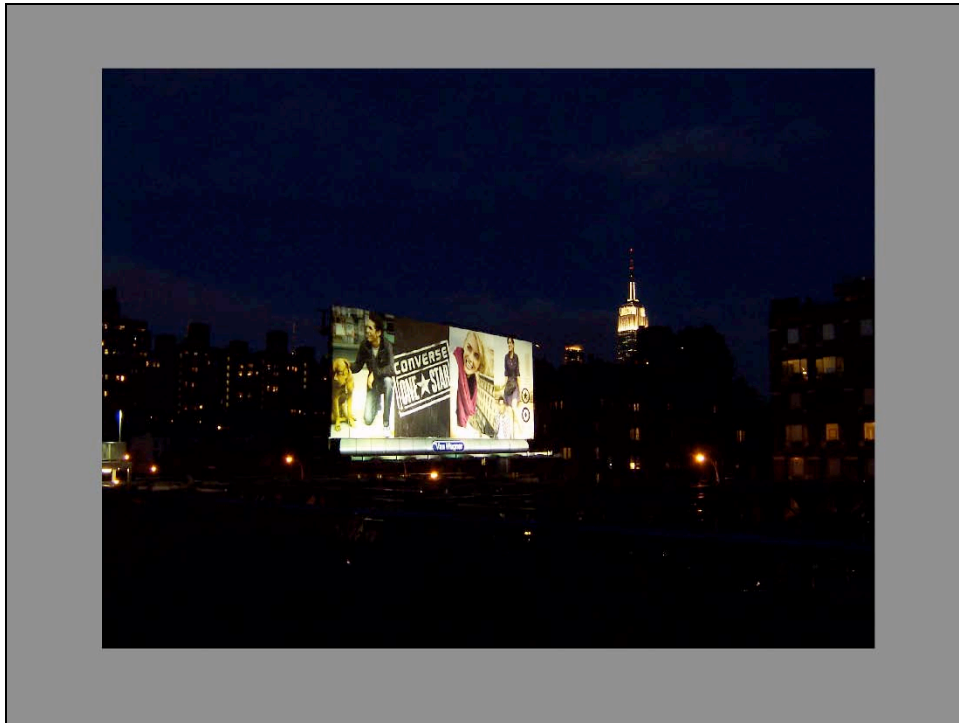
A lateral view of the High Line. See it? The linear structure from left to center picture? Uh oh, what's THAT thing dead ahead?!



I thought I saw a billboard. Yes, I did see a billboard! The billboard was here before the park was built and it was just as well to keep it to get some rent revenue. However, the sign owner had to modify the lighting to conform to the New York model. Keep the lights on the sign and out of the sky. From this angle the billboard looks a lot like the ones along your country highways. We look closer.



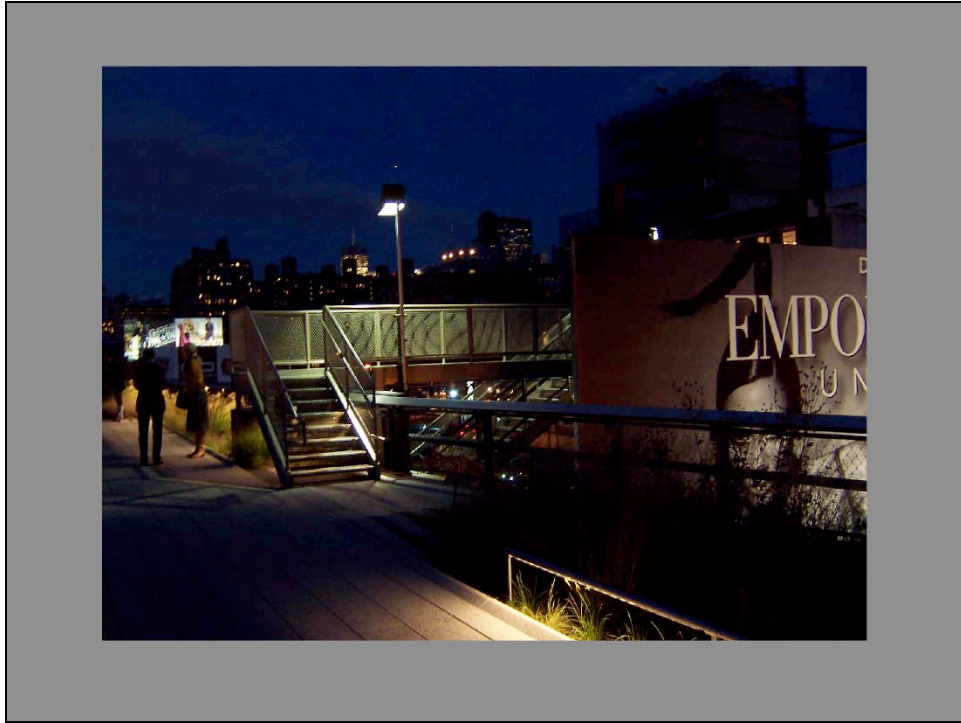
Here's that billboard close up. Where?! It's mounted on the side of the entry stairs! The dark struts are the back frame of the sign and the lights in front are, well, shielded! You can actually touch this thing, you're that close, yet get only a smidgeon of blast from the lamps.



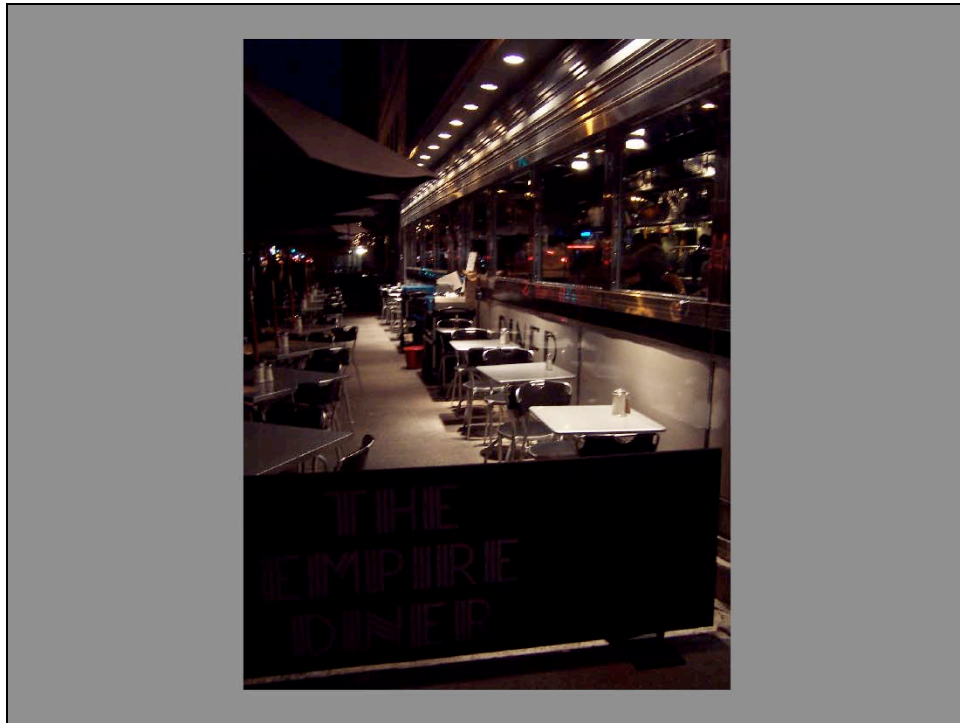
What? An other one?! Remember that this part of the City was a low-value district in former days. Today it's almost too rich to live in for us regular Joes and Janes. The sign generates some income to keep up the High Line and preserves the ambience of an industrial past. But, it has to be illuminated for the future. The tall fellow in cameo back there is who? But is this really Manhattan? On the television, that pervoyeur of the real America, Manhattan spills more photons into the air than Hoover Dam spills drops of water, no?



Where's the effing sign? We're looking edge on at it, like the rings of Saturn in 2009. There is just about no interference with seeing the skyline against the darkening sky beyond it. We can set up right here on the deck to inspect stars to the east. A probably familiar tower lurks in left background. Not the tallest in the world but it does have an open visitor's terrace 300 meters high. But why is the scene so DARK? For a humongous conurbation, shouldn't the place be FLOODED with glaring lights? We confine the 'bright lights' to select parts, like Times Square and Herald Square. Otherwise, we make sure to maintain the 'majestic darkness' aura over the island.



That was a long day and evening on the High Line. It's time to call it a night. That sitcom on the telly comes on in an hour, so we better hurry home. These stairs take us to the street under hooded spot lights.



Other folk can go watch television. I hope they got cable 'coz over-the-air reception in New York is, uh, atrocious. We astronomers will stop here for a cuppa, under the delicate outdoor lights of Empire Diner. Then we'll crash at my crib to process out sky pictures or clean up our field notes.