

LOSSAN rail corridor improvement projects in Orange County

[4,708 words]

By Brian Yanity

A previous issue of Steel Wheels (Q3 2020) had a brief report on the Anaheim Canyon improvement project, and new Placentia Metrolink station in Orange County. This article will describe the major LOSSAN corridor projects in Orange County, which will have great benefit to passenger rail in the entire Southern California region.



While it has the lowest ridership of any train station in Orange County, the beachside San Clemente Pier station is very popular on weekends. Metrolink and Amtrak Surfliner passengers can carry surfboards onboard to this most quintessentially Southern California station.

(photo: © Robert Davis, Laguna Beach Secrets photography, used with permission)

Orange County, with 3.2 million people nestled in between the Pacific Ocean and Los Angeles, San Diego San Bernardino and Riverside counties, is located at a very strategic location on the Southern California rail network. While it has long had a reputation for being the epitome of automobile-centric suburbia, travelling by passenger rail is in fact a daily way of life for thousands of Orange County citizens. On Metrolink's three lines that run through OC (the Orange County Line, Inland Empire-Orange County Line and the 91/Perris Valley Line), combined rail ridership increased from 3.8 million 2008 to nearly 4.6 million in 2015, an increase of 21% over seven years (according to 2018 OCTA Long Range Transportation Plan). Prior to the pandemic, average weekday ridership on the Orange County Line was

nearly 8,000, while there were about 4,500 weekday riders on the Inland Empire-Orange County Line and 3,000 on the 91/Perris Valley Line. On the Amtrak *Pacific Surfliner*, which passes through Orange County between LA and San Diego, ridership in the year 2019 was nearly 3 million, up from 2.6 million in 2010. The county's two busiest rail stations, Fullerton and Irvine, in recent years have each boasted around a million annual riders (Metrolink and Amtrak combined), or several thousand per day. At the beginning of 2020, a total of 74 passenger trains served Orange County each weekday: 13 *Surfliner* LA-San Diego roundtrips, 23 Metrolink roundtrips, and one roundtrip on the Amtrak *Southwest Chief* between LA and Chicago (which makes its Orange County stop in Fullerton).

Figure 6-6 Orange County Rail Transit



Fig. 6.6 from OCTA OC Transit Vision, January 2018

The Southern Pacific was the first railroad to what is now Orange County, arriving in Anaheim in 1875 and Santa Ana in 1877. After the new Orange County split from Los Angeles County in 1889, the formative development of its cities, towns, and industries (mainly citrus and oil) was largely shaped by railroads. The cities of Fullerton and Buena Park were founded in the late 1880s by the Santa Fe Railway

as rail-oriented developments, while a few years later the Pacific Electric created Huntington Beach and Newport's Balboa as beachside "streetcar suburbs". A century ago, trains and streetcars could get you to every town in the county except for Laguna Beach. Orange County citizens today are proud of its rail roots. For many years, the Fullerton train station hosted the annual Railroad Days festival, one of the most popular rail events in Southern California.

Metrolink began serving the county in 1994 with the start of the Orange County Line, which was a continuation of Amtrak's *Orange County Commuter* trains which ran for several years before. Orange County Transportation Authority (OCTA), one of the member transportation agencies of the Southern California Regional Rail Authority (SCRRA or Metrolink), owns 42 miles of the former Santa Fe "Surf Line" tracks between Fullerton and the San Diego County line. This is a portion of the 351-mile Los Angeles – San Diego – San Luis Obispo Rail Corridor (LOSSAN Corridor), served by the Amtrak *Pacific Surfliner*. OCTA also owns the 5-mile, single-tracked Olive Subdivision, which connects from the BNSF mainline at Atwood Junction to the LOSSAN corridor in Orange.

The LOSSAN Rail Corridor Agency, a joint powers authority formed in 1989, is headquartered at OCTA. The LOSSAN corridor is used by both the Metrolink regional rail and the *Surfliner*, which is the second-busiest Amtrak corridor in the country after the Northeast Corridor between Washington, D.C. and Boston. Frequent passenger trains along the LOSSAN corridor between LA and San Diego are critical to relieving traffic congestion on the parallel Interstate 5. Phase 1 of California High Speed Rail project will extend from LA to Anaheim (with a station in Fullerton), reflecting the high demand for passenger rail travel in Orange County. Similar to the blended approach of the Caltrain corridor, high-speed trains will share the LOSSAN corridor with Amtrak and Metrolink.

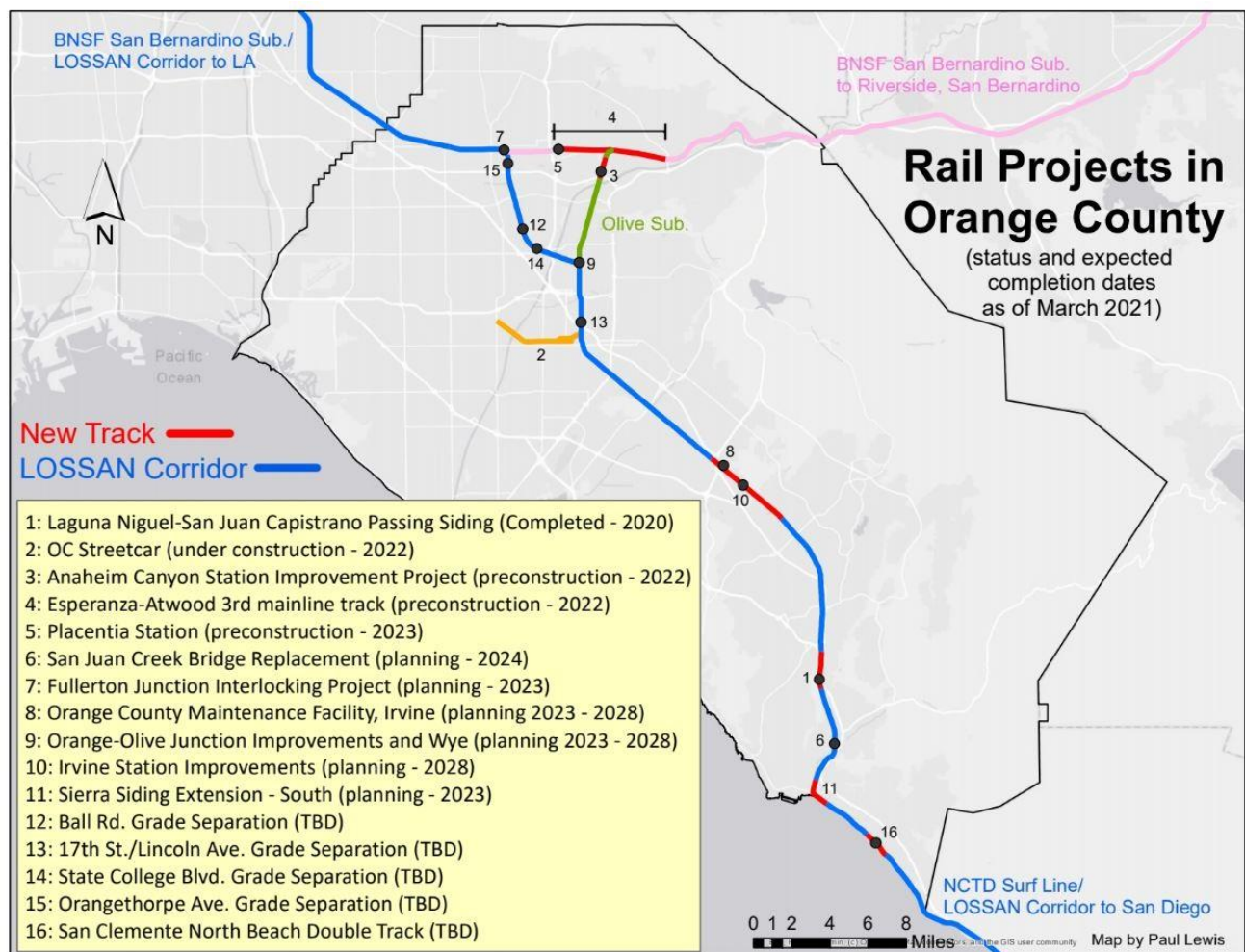
As the managing agency for the LOSSAN Rail Corridor Agency and owner of the Fullerton-San Clemente portion of LOSSAN, OCTA has an important role to play in planning, funding, and managing maintenance and capital projects. The agency also partners with cities on capital projects including station access improvements and grade separations. OCTA is also advancing local rail transit with the OC Streetcar, under construction from the Santa Ana Regional Transportation Center (Amtrak/Metrolink station) to Garden Grove. Expected to begin operations on its 4-mile route in 2022, the OC Streetcar will be the first electric rail transit system to run in Orange County since the last Pacific Electric "Red Car" to Santa Ana ran in 1950.

There is pent-up demand in Orange County for more passenger rail service, particularly at off-peak hours and at night. From Orange County, one cannot return on Metrolink later in the evening from Los Angeles. Instead, a passenger must take a more-expensive Amtrak *Surfliner* train- the last one each night leaves LA Union Station at 10:22 PM. Before the pandemic there were a couple late-night Amtrak Thruway buses. Monday through Friday the last Orange County Line train leaves LA Union Station at 6:40 PM, while the last 91/Perris Valley train (which stops in the OC cities Buena Park and Fullerton only) leaves LA at 6:50 PM. On a Saturday or Sunday the last Orange County Line train leaves LA at 4:40 PM, and the last 91/PVL at 7:12 PM. The lack of night trains makes visiting Los Angeles for evening events, dining or entertainment much less convenient for Orange County residents. To run more trains around the clock, not only is new Metrolink and *Surfliner* rolling stock needed, but also significant capital investment for new tracks and other infrastructure.

LOSSAN Corridor Improvements

The LOSSAN Rail Corridor Agency coordinates ongoing and planned capital investments and improvements along the Surfliner corridor by OCTA, LA Metro, the North County Transit District (NCTD) of San Diego County, Caltrans and other public agencies. OCTA and the LOSSAN Rail Corridor Agency are working with Metrolink, BNSF and California High Speed Rail Authority (CHSRA) to greatly expand the number of passenger trains on the LOSSAN corridor through Orange County. In 2018, the LOSSAN Agency was awarded \$40 million of SB1 gasoline tax funds for infrastructure improvements of the 'LOSSAN South'/LA-Fullerton-San Bernardino corridors. These SB1-funded projects include signal optimization, new right of way fencing, and a more robust capital maintenance program. However, many more rail capital improvement projects are needed along the LOSSAN corridor. As described by the LOSSAN Rail Corridor Agency Business Plan FY 2021-22 to FY 2022-23 (pg. iv):

Though much progress has been made over the years, many segments of the LOSSAN rail corridor are still limited by the lack of passing sidings or second main tracks. There are currently more than \$5 billion in unfunded capital needs that have been identified on various portions of the LOSSAN rail corridor, including additional track capacity, station improvements, and signal and communications improvements.



Over the next decade, overall passenger rail investments planned for Orange County total over two billion dollars (see below table).

Table: Orange County Rail Projects Under Construction and Planned

Project	Agency	Estimated Cost	Estimated Completion Date	Status
Orange County Streetcar	OCTA	408.0	2022	Under construction
Atwood-Esperanza 3 rd mainline track	SCRRA	30.0	2022	Under construction, CRISI Grant awarded by USDOT January 2019
Placentia Metrolink Station	OCTA	34.0	2022	In pre-construction, scheduled construction start 2021
Anaheim Canyon station upgrade and double track	OCTA	30.0	2022	In pre-construction, scheduled construction start 2021
Fullerton Junction- full buildout	SCRRA	225.0	2023	Construction not yet funded, in design/environmental
Irvine Maintenance Facility – initial phase	OCTA	4.8	2023	TIRCP Grant from SB-1 funds
Irvine Maintenance Facility- full buildout	OCTA	153.0	2028	Not yet funded, proposed 2024-2028 in SCORE program
Signal Respacing: La Palma to College	SCRRA	4.9	2023	Not yet funded
Signal Respacing: Maple to Solow	SCRRA	4.9	2023	Not yet funded
Orange Siding and Spur Tracks	SCRRA	3.0	2023	proposed 2019-2023 in SCORE program
San Juan Creek Bridge Replacement	OCTA	38.0	2024	Funded
Orange-Olive Junction Improvements and Wye	SCRRA	3.9	2023	Proposed 2019-2023 in SCORE program
Orange-Olive Junction Improvements and Wye- full buildout	SCRRA	42.6	2028	Not yet funded, proposed 2024-2028 in SCORE program
Serra Siding Extension - South	OCTA	12.5	2023	Funded, in design /environmental
Serra Siding Extension - North		10.8	TBD	Not yet funded
Irvine Station Improvements, 4th main track	OCTA	184.0	2028	Construction not yet funded, in design/environmental
3 rd track between Tustin area and Laguna Niguel area	SCRRA	53.0	2028	Not yet funded, proposed 2024-2028 in SCORE program
LA-Fullerton 4 th main track	CHSRA /SCCRA	887.0	2028	Not yet funded
17th St./Lincoln Ave Grade Separation, Santa Ana	OCTA	230.0	TBD	Not yet funded
Ball Road Grade Separation, Anaheim	OCTA	138.0	TBD	Not yet funded
Orangethorpe Ave. Grade Separation, Anaheim	TBD	TBD	TBD	Not yet funded
La Palma Ave. Grade Separation, Anaheim	TBD	TBD	TBD	Not yet funded
Cerritos Ave. Grade Separation, Anaheim	TBD	TBD	TBD	Not yet funded
Broadway Grade Separation, Anaheim	TBD	TBD	TBD	Not yet funded
Vermont Ave. Grade Separation, Anaheim	TBD	TBD	TBD	Not yet funded
State College Ave. Grade Separation, Anaheim	TBD	TBD	TBD	Not yet funded
Kellog Drive Grade Separation, Anaheim	TBD	TBD	TBD	Not yet funded
Jefferson Street Grade Separation, Anaheim	TBD	TBD	TBD	Not yet funded
Richfield Road Grade Separation, Placentia	TBD	TBD	TBD	Not yet funded
Van Buren Street Grade Separation, Placentia	TBD	TBD	TBD	Not yet funded
Santa Ana Street Grade Separation, Santa Ana	TBD	TBD	TBD	Not yet funded
San Clemente North Beach double track	TBD	TBD	TBD	Not yet funded

Metrolink's Southern California Optimized Rail Expansion (SCORE) is a 10-year, \$10 billion program to improve regional rail in Southern California in time for 2028 Olympics and subsequent arrival of High Speed Rail. The LOSSAN Agency is an important partner in the SCORE program, working with BNSF, SCRRA, Caltrans, CHSRA, and CalSTA in the development of a phased implementation strategy for the SCORE suite of projects. The strategy begins with near- and medium-term capital improvements and expansion of the region's existing passenger rail services, and allows for the eventual introduction of high-speed rail as part of the regional rail network in the long term.

Orange County Grade Separations-

OCTA is partnering with the cities of Santa Ana and Anaheim for future road-rail grade separations on the LOSSAN corridor. In addition to the grade separation projects listed in the table above, as part of the HSR Phase 1 project, permanent closure is planned of the existing crossings at Sycamore and South streets in Anaheim. After these and all of the planned grade separation projects are built (including some in LA County), the 31 miles of LOSSAN track between Los Angeles Union Station and ARTIC in Anaheim will be almost entirely grade separated. Only two at-grade street crossings are planned to remain: Lakeland Drive in Santa Fe Springs, and Santa Ana Street in Anaheim.



Ball Road at-grade crossing in Anaheim (photo by Brian Yanity)

LA-Fullerton 4th Main Track

BNSF, SCRRA, Caltrans and other partner agencies have been working on the triple-tracking project between Soto Junction (near downtown Los Angeles) and Fullerton since the late 1990s. Presently the corridor is triple-tracked the entire 22 miles between the LA River and Fullerton, with the exception of one 1.2-mile segment of double track through the Rosecrans-Marquardt road crossing in Santa Fe Springs. This crossing will be upgraded to four tracks once the grade separation project is finished in 2023. While the Rosecrans-Marquardt grade separation project is in Los Angeles County, it is vital for improved rail service in Orange County. Other planned L.A. County future grade separations on the BNSF San Bernardino Subdivision between LA and Orange County include Pioneer Blvd. and Norwalk Blvd./Los Nietos.

A fourth track is planned between Los Angeles and Fullerton station, on both the BNSF San Bernardino Subdivision and the LOSSAN corridor. Among the largest of the many projects proposed in the SCORE program, these additional tracks will minimize congestion, delays and schedule conflicts for both passenger and freight trains. The 22-mile BNSF-owned track section between Redondo Junction and Fullerton Junction is the western end of the 2,200-mile BNSF Southern Transcon route which connects three of the busiest freight rail hubs in the U.S.: Chicago, Kansas City and Los Angeles (via Fullerton). Dozens of BNSF freight trains pass each day through Orange County, the majority carrying shipping containers long distance between the rest of nation and the ports of LA/Long Beach, the busiest container port in North America. One of the nation's most vital freight rail corridors, the BNSF tracks through Orange County carry a not-insignificant fraction of the nation's trade with Asia. In addition, the OCTA-owned line south of Fullerton Junction towards San Diego sees several BNSF freight trains per day. Separating passenger and freight rail traffic will reduce delays for rail passengers and make train travel safer and more reliable, while allowing more freight to get to market on schedule.

A collaboration of BNSF Railway, SCORE, and CHSRA, the LA-Fullerton 4th main track project has an estimated cost of \$887 million (according to the 2018 SCORE proposal). The four-track configuration will consist of two electric passenger tracks, and two freight tracks. The SCORE program proposal of 2018 identified "early start components (2019-2023)" of the LA-Fullerton 4th main track as Soto to Commerce 4th track and the Fullerton Junction Interlocking projects.

Fullerton Junction

The Fullerton Junction, a half a mile east of the Fullerton train station, is where the Los Angeles-San Diego "Surf Line" joins the BNSF Southern Transcon between Los Angeles and Chicago. It is a very important node of the Southern California rail network, along one of the nation's busiest rail lines. The passenger trains which pass through Fullerton Junction include the Amtrak *Pacific Surfliner* (between Los Angeles and San Diego) as well as Metrolink's Orange County line (to Oceanside) and 91/Perris Valley line (between Los Angeles and South Perris via Riverside), as well as the Amtrak *Southwest Chief* to Chicago.



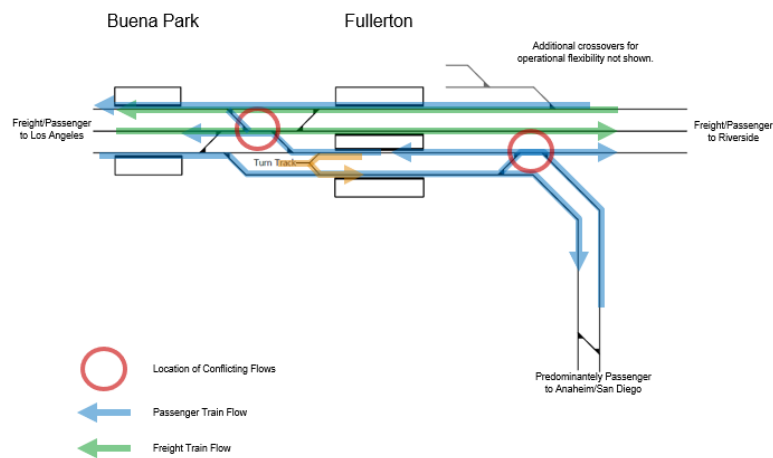
Fullerton Junction (photo by Brian Yanity)

The Fullerton Junction Interlocking Project consists of multiple track and signal improvements, both east and west of the Fullerton train station. The project will result in a two-track direct connection south to Anaheim, and a three-track direct connection to the route east toward Riverside, new station platforms between tracks at Fullerton, and a fourth main line through Fullerton. The Fullerton Junction project will separate trains which are traveling in different directions (i.e., geographic east and west and geographic south and west), with the two dedicated south and west tracks for trains coming from or traveling south toward San Diego. The Fullerton Junction project is arguably the most important rail project going on in Orange County, and will bring tangible benefits to the entire Southern California rail network. By enabling far more frequent and regular service, Orange County cities in particular will benefit from the increase in passenger trains through Fullerton Junction.

The \$226 million Fullerton Junction reconfiguration is expected to be completed in several phases over the next few years, but the timeline is not yet determined. Metrolink is the lead agency on the project, partnered with BNSF Railway (the track owner), OCTA, Caltrans, and CHSRA. The Fullerton Junction Interlocking Project is a critical part of the larger SCORE program's \$3.2 billion LOSSAN South/LA-Fullerton-San Bernardino Corridor Plan, which includes the fourth main track from Los Angeles to Fullerton, and from Fullerton- Riverside- San Bernardino third main track. According to a Rail Traffic Controller analysis done by BNSF Capacity Planning staff in 2017, the full buildout of these combined projects will enable up to 320 passenger trains/day, plus over 100 freight trains per day through Fullerton Junction. This BNSF analysis also predicted that freight train delay would be cut in half, while the average freight train speed through the segment more than doubled: from 15.3 mph to nearly 38 mph in 2030. The overall train volumes through Fullerton could grow to three times what it is today, and passenger trains over five times (compared to 56 weekday passenger trains in 2020). The current maximum number of passenger rail "slots" in this corridor is 84 trains per day. BNSF is currently conducting a San Bernardino Pathing Study, a freight-specific analysis on accommodating future traffic growth on the San Bernardino Subdivision between Los Angeles and San Bernardino (which includes the LOSSAN corridor between LA and Fullerton).



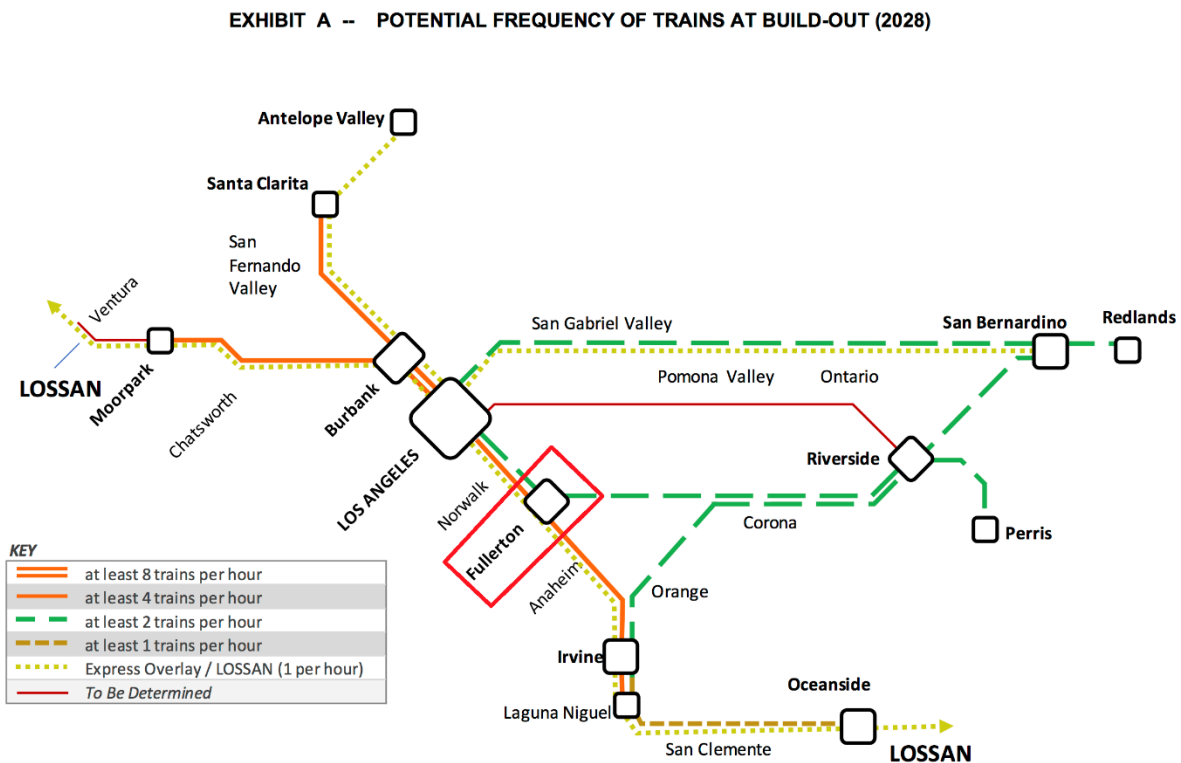
Looking east from Fullerton station towards Fullerton Junction (photo by Brian Yanity)



Fullerton Junction diagram, after completion of planned improvements

Improvements:

1. Conflicting flows on east side of Fullerton station are reduced, passenger trains can access and serve the station while conflicting freight traffic clears the tracks. Northbound passenger (express) trains do not have to fully cross over but can go straight to the middle track.
2. Passenger trains from Orange County terminating at Fullerton use the turn track west of the station, untangling train flows east of the station.



Fullerton Junction highlighted on Metrolink map showing system train frequency proposed for 2028

Atwood-Esperanza 3rd Mainline Track-

In June 2019, the Federal Railroad Administration (FRA) announced that Metrolink and BNSF received a \$30,000,000 Consolidated Rail Infrastructure and Safety Improvements (CRISI) grant to fund construction of a 4.8 mile segment of third mainline track between control points Atwood and Esperanza (through the cities of Fullerton, Placentia and Anaheim). A separate \$10 million FRA CRISI grant for Fullerton Junction PTC was awarded by the USDOT to SCRRA in August 2018. To be completed in 2023, the Atwood and Esperanza third main track project will (along with Fullerton Junction) complete the triple-tracking of the BNSF San Bernardino Subdivision mainline within Orange County. A first phase of the Fullerton Junction project, as well as the Fullerton- Riverside- San Bernardino third mainline track project, this third track is also critical for the new station at Placentia.

On the 46 miles between San Bernardino and Fullerton, BNSF currently has about 15 miles of third mainline track, with the rest still double track. Full completion of the remaining 31 miles of third main track from Fullerton to San Bernardino, with key fourth track segments at Corona and La Sierra, is estimated to cost \$566 million (see Riverside County article in the Q3 2020 of *Steel Wheels*). Environmental planning work is underway, funded by the 2018 SB1 grant awarded to Metrolink for the SCORE program.

South Orange County

Orange County Maintenance Facility

Metrolink is proposing to build a new Orange County Maintenance Facility in Irvine. OCTA received a \$4.8 million TIRCP grant from SB-1 funds for the first phase of the project, which will be to be completed in 2023. Full buildout (2024-2028) will cost an estimated \$153 million. The facility will be located northeast of existing LOSSAN tracks about a mile from the Irvine station, near Orange County Great Park.

Irvine Station Improvements

Irvine Station Connect is a City of Irvine planning project to improve bicycle and pedestrian access and connecting bus transit within a 1-mile radius around Irvine station.

As part of the SCORE Program, Metrolink is proposing additional improvements to increase the operational flexibility at Irvine Station. The Irvine Station improvements include a 4th Main Track expansion between west of Milepost (MP) 184.0 and east of CP Bake, MP 186.9, with two center island platforms. OCTA is the lead agency working cooperatively with Metrolink and the City of Irvine to begin the environmental phase of this project. It is estimated to cost \$184 million, with an anticipated completion date of 2028.

Laguna Niguel to San Juan Capistrano Passing Siding Project-

OCTA, in coordination with Metrolink and the cities of Laguna Niguel and San Juan Capistrano, recently completed 1.8 miles of new passing siding railroad track between the Laguna Niguel/Mission Viejo Metrolink Station and Trabuco Creek in San Juan Capistrano. The project in southern Orange County was completed in November 2020, several months ahead of schedule. The passing siding will reduce delays, increase safety and provide more reliable rail service to all Orange County stations. This \$36.4 million project was funded by OC Go (formerly Measure M), Orange County's half-cent sales tax to fund transportation investments, along with state and federal funds. The passing siding track will run adjacent to the existing track, connecting to it at each end, which will allow trains traveling in opposite directions to pass each other without stopping.



Laguna Niguel- San Juan Capistrano Passing Siding (OCTA)

San Juan Creek Bridge Replacement-

This \$38 million project in San Juan Capistrano involves the replacement of a 304' long single track rail bridge. Construction is anticipated to occur from June 2022 to December 2024.

Serra Siding Extensions-

Serra siding runs alongside the mainline track between the cities of Dana Point and San Juan Capistrano. The \$12.5 million, 1.2-mile south siding extension from Victoria Blvd. to Beach Road in Dana Point is currently in environmental studies, and is expected to be completed in 2023. The 0.7-mile north Serra siding extension, south of San Juan Capistrano station, is expected to cost \$10.7 million and is not yet funded.

Capacity expansions south to San Diego County-

OCTA is collaborating with San Diego County's North County Transit District (NCTD) and San Diego Association of Governments (SANDAG) on plans for additional sidings and double-tracking in southern Orange County and in San Diego County. These include two SCORE projects proposed for the 2024-2028 timeframe, the third track between Tustin area and Laguna Niguel area (\$53 million) and the double track between CP Songs to San Mateo Creek Lagoon (\$19 million). Double tracking has also been proposed for north of the San Clemente Station (north beach), though the corridor will remain a single-track south of this station south to the county line. This project would increase capacity on this segment of LOSSAN from 3 to 8 trains per hour, according to BNSF's SANDAG Pathing Study Final Report.

Just south of the county line in San Diego County, the SONGS siding extension and San Onofre Creek passing track are planned. These capacity improvement on the south Orange County section of LOSSAN corridor will be developed concurrently with SANDAG double-tracking projects such as the San Onofre to Pulgas (Stage 2), North Oceanside and Carlsbad Village (see San Diego projects article in Q1 2021 issue of *Steel Wheels*).

Slope stabilizations and proposed South County Bypass-

Slope stabilization work of trackside slopes from Irvine to San Juan Capistrano is ongoing. Further south through Dana Point and San Clemente and into San Diego County, the 'Surf Line' lives up to its name by running next to the beach, with ocean swells at high tide sometimes literally spraying the surf onto the rail line. While affording a famously picturesque view of the Pacific Ocean from the train, this proximity comes with coastal erosion and flooding problems.

In January 2021, OCTA and Caltrans, completed a rail infrastructure study titled the *OCTA Rail Defense Against Climate Change Plan*. The study identified opportunities and challenges to improve service, operation, and infrastructure to better withstand severe weather conditions. The study identifies implementation strategies and preventive measures to reduce the risk to rail infrastructure from mudslides, flooding, severe storm/weather events, coastal surge, and sea level rise. The study focused 25-mile section of the LOSSAN corridor from Jeffrey Road in Irvine to the Orange/San Diego county border, along with evaluation of all 12 Metrolink Stations in Orange County.

RailPAC has long supported the proposed 'South County Bypass' concept, a new route for the LOSSAN rail corridor further inland between Laguna Niguel and San Onofre. This would provide a more direct double track route for intercity trains, and better shield LOSSAN track from severe weather, flooding and coastal erosion. Local service could be maintained on the existing beachside line. The 2004 LOSSAN Programmatic Environmental Impact Report/Environmental Impact Statement by Caltrans identified several project alternatives, with the preferred alternative called the San Clemente Long Two Segment Tunnel – Double Tracking option. The Google Earth image below shows a rough concept of this project configuration: a two-segment rail tunnel built along Interstate 5 from San Onofre State Beach in northern San Diego County to Avenida Aeropuerto in San Juan Capistrano, a length of 9.6 miles total. This two-segment design would allow for a new station in San Clemente. The technical feasibility of the tunnel was not evaluated in detail by the 2004 study, so a new design study is needed to determine costs, environmental assessments needed and a construction timeline.



Potential Coastal Alignment Relocation, or “South County Bypass” between San Juan Capistrano and San Onofre
(Figure 26- from *OCTA Rail Defense Against Climate Change Plan* in January 2021)

Pooling of Metrolink and Coaster rail rolling stock-

The 2012 LOSSAN Strategic Implementation Plan called for both Metrolink and NCTD COASTER to operate through service (one seat ride) from LA Union Station to San Diego’s Santa Fe Depot. Cost savings could be realized by pooling Metrolink and COASTER rolling stock, and RailPAC has long supported this concept. The pool trains could connect to the Metrolink 91/Perris Valley Line and Orange County line trains at Fullerton, on continue to LA Union Station. SCAG, Metrolink and the LOSSAN Rail Corridor Agency should start a working group on the concept with NCTD or SANDAG. Such a working group would figure out technical issues such as equipment compatibility between COASTER and Metrolink, voltage of passenger car ‘hotel power’, position of wheelchair ramps, position of locomotive on the train, etc.

Future Vision for LOSSAN in Orange County

There are ambitious long-range plans to significantly upgrade passenger rail service and infrastructure along the LOSSAN corridor in Orange County. The LOSSAN Corridorwide Strategic Implementation Plan several years ago called for Orange County service to increase by 2030 to 124 weekday trains (88 Metrolink and 36 Surfliner), up from the pre-pandemic 72 weekday trains (46 Metrolink and 26 Surfliner) in 2020. In addition to Metrolink/Coaster LA-San Diego pooled service, it was proposed that some trains going north from Orange County that now terminate at Union Station near downtown Los Angeles would continue north to Santa Clarita and Antelope Valley. The Metrolink Integrated Service and Capital Plan (with Discussion on Electrification), released in November 2017, called for a series of improvements to be completed by 2028 Olympics, including electrification of segments including the LOSSAN corridor north of Irvine, with 15 minute peak headways.

2018 California State Rail Plan-

The 2018 California State Rail Plan “establishes a statewide vision describing a future integrated rail system that provides comprehensive and coordinated service to passengers through more frequent service, and convenient transfers between rail services and transit.” The State Rail Plan calls for a variety of improvements to intercity rail lines throughout the state by 2040. These include faster, electrified service (up to 125 miles per hour on Orange County lines), more frequent service (starting with 30-minute local and hourly express service between Los Angeles and San Diego by 2022, electrification (as far south as Laguna Niguel/Mission Viejo), and greater multimodal integration. The State Rail Plan’s 2022 goals for the Los Angeles Urban Mobility Corridor, extending from Burbank to Anaheim, using the capacity benefits of the new Rosecrans-Marquardt grade separation, include:

- Hourly express and half-hourly peak (hourly off-peak) local service between Anaheim and Los Angeles.
- Additional local service between Fullerton and Los Angeles from increase in service from Perris Valley and Riverside.

By 2040, the State Rail Plan calls for even more ambitious goals, with fast, very frequent service between Los Angeles Union Station and Fullerton via Norwalk/Santa Fe Springs hub, with connections between services and connections to urban transit. With frequent high speed service, Orange County is proposed to have:

- Hourly express service to the Inland Empire.
- Half-hourly express service to San Diego.
- Half-hourly service continuing on to the Inland Empire, making local stops.
- Half-hourly service continuing on to San Diego making local stops.
- Frequent HSR service terminating at the Anaheim hub.



Exhibit 4.4: Southern California Service (2040 Vision)

Fullerton highlighted on 2018 California State Rail Plan map of proposed 2040 intercity passenger rail, showing the strategic importance of Fullerton Junction to the Southern California region

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