

San Mateo Set Out Track Alternatives Analysis

ID	Location - Suggestions from Caltrain, City of San Mateo, Members of the Public	Cross Street	Description of Surrounding Area	Criteria Assessment (Meets: Yes/No)									Operationally Viable	Financially Viable	Acceptable Option	Project Cost		Notes
				1	2	3	4	5	6	7	8	9				Estimated Additional Project Cost	Constructable Within Timeframe of Grade Separation Y/N	
1	Just North of the Hayward Park Station behind industrial area behind Leslie Street and South of 17th Avenue	End of 17th Avenue and behind Leslie Street	Industrial Area. The tracks are somewhat screened from the businesses by fencing. Some residences directly adjacent to the railroad tracks. Nearest residences are on Gum St. Ground is flat in this area. Convenient to the Hayward Park Station.	N	N	N	N	Y	Y	Y	Y	Y	No. Cannot build switch on super elevated curve at 16th. Also Hayward park access must be maintained.	No	No	N/A	N/A	
2	South of Trinta Park behind Automotive repair shops on Leslie Street	Leslie Street and 20th Avenue	Mixed industrial and residential area with automotive repairs shops and other businesses. On the other side of the tracks is the San Mateo Public Works Department and businesses. Ground is flat in this area. Wider channel of empty ground with no existing structures of trees adjacent to the tracks. There are residences on Palm Avenue which is one street over from Leslie St, in this area.	N	N	N	N	Y	N	N	Y	Y	No. There is no room to construct in this area. The switch cannot be located on a super elevated curve, the track is elevated, and access to Hayward Park must be maintained.	No	No	N/A	N/A	
3	Under Highway 92 just South of the Hayward Park Station adjacent to Leslie Street	Leslie St. and 19th and Gum Sts.	Flat, non-residential area under the highway 92 overpasses. Convenient to the Hayward Park Station. No existing structures or trees in this strip. Wider channel of empty ground. Already continuous noise from the highway overhead.	N	N	N	N	Y	N	N	Y	Y	No. There is no room to construct in this area. The final location of the tracks is west of the existing.	No	No	N/A	N/A	
4	Just North of 25th Avenue behind the industrial businesses	25th to 20th Avenue	Existing industrial North of the grade separation bridge. Flat ground. Long strip of wide channel tracks. No residences on Palm Ave. in this area. This would seem to be one of the better choices for the spur track and maintenance yard.	N	N	N	N	Y/N	N	N	Y	Y	Yes. Would require realignment of mainline track, construction of two new bridges over canal/Beresford Creek, retaining wall, and access from 25th.	No	No	Estimated additional cost of \$ 13.7 M. This cost does not include additional environmental mitigation, relocation of OCS poles, or new location for storm water management.	N/A	
5	South of 25th Avenue behind the public storage facility and BMW dealership and strip mall	25th to 28th Avenue	Existing industrial area South of the grade separation bridge. Flat ground. Long strip of wide channel tracks. No existing structures but some trees adjacent to the tracks. No residences on the eastern side of El Camino in this area. This would seem to be the best choice of area for the spur tracks and maintenance yard.	N	N	N	N	Y	N	N	Y	Y	No. West side is location of final alignment of mainline tracks. East side no room due to existing creek.	No	No	N/A	N/A	
6	None. If no maintenance zone has been active in San Mateo since the start of the 25th street grade separation project 8+ months ago it does not seem like a maintenance yard in this area is necessary and Caltrans has many other options for maintenance activities at other points along the peninsula	N/A	N/A	N	N	N	N	N	N	N	N	N	No. The no build option would not allow Caltrain to continue to maintain railroad in a state of good repair.	No	No	Approx. \$ 832 k per year and \$ 150 k in sinking fund	N/A	Estimated cost based on additional travel time to perform required maintenance (approx. \$ 832 k in 2019 dollars); the remainder of total is estimate for sinking fund to cover maintenance that cannot be performed during allowable work windows and therefore is capitalized as a capital project.
7	East Side of tracks between Birch Ave and 16th Avenue	Birch to 16th Avenue	Adjacent to commercial area.	Y	Y	Y	N	N	Y	Y	Y	Y	Yes. However, the property is not owned by Caltrain	No	No	ROW from \$ 3.5 to 8.5 M plus redesign and env. clearance. (2)	No.	Low end of estimated ROW cost assumes purchase of 1000 FT length
8	West side of tracks between 10th and 14th	10th to 14th Avenue	Adjacent to Residential Area. Originally planned location.	Y	Y	Y	N	Y	Y	Y	Y	Y	Yes.	Yes	Yes	Included in current project budget.	Yes	
9	West side of tracks between 10th and 14th plus mitigations	10th to 14th Avenue	Adjacent to Residential Area. Originally planned location.	Y	Y	Y	N	Y	Y	Y	Y	Y	Yes.	Yes	Yes	Approx. \$ 500k for a ten (1) foot redwood fence and trees; \$ 1.1M for a ten (10) foot CMU soundwall.	Yes	Cost estimate is based upon likely construction cost.
10	Separate the track length requirement into two separate requirements - one for maintenance ONLY and one for emergency offline parking. Reduce the required length of the maintenance track to that required for maintenance ONLY, and create a separate track in another location that is 1000' long for the emergency offline parking of trains. 1000' is NOT necessary for maintenance - per the Project Manager (Rafael Bolon) statement in the San Mateo public meeting on 11 June, the 1000' length requirement is necessary for offline parking of a full train length - which rarely occurs. The length required for maintenance work is much shorter, perhaps only 300'. The emergency offline track - which would be rarely used, if ever - may be acceptable in other areas, because it would not have the daily activity of noise impacts, large vehicles, and graffiti / vandalism magnets that would be created with maintenance rail cars parked on the tracks permanently.	Various	Various	See chart for options. The 1000' requirement is per JPB standards. Relocating the 1000' section of set out track would then become the problem.														

11	Eliminate the requirement for a maintenance yard in San Mateo - it is not needed, and Caltrans has operated for years without one in this location - recently during the construction of 25th Ave grade separation. There are multiple existing maintenance yards along the rail corridor that are already in use - Caltrans has not demonstrated the business need for yet another maintenance yard in San Mateo.	N/A	N/A	N	N	N	N	N	N	N	N	N	No. The no build option would not allow Caltrain to continue to maintain railroad in a state of good repair.	No	No	Approx. \$ 832 k per year and \$ 150 k in sinking fund	N/A	Estimated cost based on additional travel time to perform required maintenance (approx. \$ 832 k in 2019 dollars); the remainder of total is estimate for sinking fund to cover maintenance that cannot be performed during allowable work windows and therefore is capitalized as a capital project.
12	Two locations at 25th and South Delaware (east of rails and north and south of intersection), with a switchover track near highway 92. There is a large parcel of open land right next to the intersection where maintenance trains could be parked, with easy access to streets and trucks. This is already an industrial area. Importantly, although Caltrans may not own this land yet - it is obviously better suited for the maintenance purpose than residential area, and could be acquired by Caltrain. Also importantly, although the regular track is grade separated at this location - it is possible for the maintenance track to be parallel to and lower than the regular track, -- and join up with the main line at a point north or south that is at grade.	25th and Delaware	Parking for future grade separation, existing drainage improvement, and parking for County of SM event center.	N	Y	N	N	N	Y	Y	Y	Y	No. The final track alignment is elevated between 16 and 20 feet above finished grade in this location. 16' at 1.00% would require a min of 1600 feet to reach grade -- under 1000 feet is available.	No	No	N/A	N/A	
13	El Camino between Dewey Glen and Anita Ave in Belmont.	Davey Glen and ECR	Multi family residential across from ECR.	Y	Y	Y	N	Y	Y	N	Y	Y	Yes. The property is owned by UPRR.	No	No	ROW from \$ 8 to 27 M plus redesign and env. clearance. (2)	No.	Low end of estimated ROW cost assumes purchase of 1000 FT length only; higher range assumes purchase of entire parcel is required.
14	Just North of the Hayward Park Station behind industrial area behind Leslie St. and South of 17th Avenue	Leslie ST. and 17th	Park	N	N	N	N	Y	N	Y	Y	Y	No. There is a station at this location.	No	No	N/A	N/A	
15	South of Trinta Park behind Automotive repair shops on Leslie St.	Leslie ST. and 17th	Park	N	N	N	N	Y	N	Y	Y	Y	No. There is no room to construct in this area. The final location of the tracks is west of the existing.	No	No	N/A	N/A	
16	Under highway 92 just South of the Hayward Park station adjacent to Leslie St.	SR-92 and Leslie		N	N	N	N	Y	N	Y	Y	Y	No. There is no room to construct in this area. The final location of the tracks is west of the existing.	No	No	N/A	N/A	
17	Just North of 25th street behind the industrial businesses.	25th	Parking for future grade separation, existing drainage improvement, and parking for County of SM event center.	N	Y	N	N	N	Y	Y	Y	Y	No. The final track alignment is elevated between 16 and 20 feet above finished grade in this location. 16' at 1.00% would require a min of 1600 feet to reach grade -- under 1000 feet is available.	No	No	N/A	N/A	
18	South of 25th Avenue behind the public storage facility and BMW dealership and strip mall.	25th	Mainline tracks										No. The final track alignment is located on top of this area.	No	No	N/A	N/A	
19	None. If no maintenance zone has been active in San Mateo since the start of the 25th street grade separation project 8+ months ago it does not seem like a maintenance yard in this area is necessary and Caltrans has many other options for maintenance activities at other points along the peninsula.	N/A	N/A	N	N	N	N	N	N	N	N	N	No. The no build option would not allow Caltrain to continue to maintain railroad in a state of good repair.	No	No	Approx. \$ 832 k per year and \$ 150 k in sinking fund	N/A	Estimated cost based on additional travel time to perform required maintenance (approx. \$ 832 k in 2019 dollars); the remainder of total is estimate for sinking fund to cover maintenance that cannot be performed during allowable work windows and therefore is capitalized as a capital project.
20	In addition to multiple locations outside of San Mateo, I would like to suggest two in San Mateo.	Comment from the public noted																
21	If all else fails, than at least, on the East side of the North bound track, adjacent to the commercial bldgs. Access would be on a commercial drive and not on our residential streets and back yards.												Yes. The area between 10th and 14th on the east side may be feasible. However, the property is <u>not</u> owned by Caltrain.	No	No	ROW from \$ 3.5 to 8.5 M plus redesign and env. clearance. (2)		Low end of estimated ROW cost assumes purchase of 1000 FT length only; higher range assumes purchase of entire parcel is required.
22	I am not familiar with the rail corridor, don't have ability to research it all on site. Caltrain is in best position to look at other alternate locations they think they could work with, so I recommend that Caltrain itself look at the entire corridor and propose what its choice would be if the Hayward Park site between 9th and 14th did not exist, and taking into consideration that any other site can not be next to residential area similar to current proposal. What would Caltrain do in this case? Choice could be anything from no new site as one person proposed, to making necessary investment to make another site work if the need for the maintenance area is so great.	Comment from the public noted																

23	This is not an idea for a different site, but a recommendation that the access road entrance should be sited 9th Ave, not at 14th Ave, to at least keep the Caltrain truck traffic out of Hayward Park. It looks to me there is plenty of room at 9th Ave with a little imagination, and there are advantages to this location since it is in an existing commercial area; trucks can have a straight access to it from S. Railroad Ave across the street; and the workers could even trigger the crossing gates if they needed to stop traffic while they cross 9th. The only obstacle I can see is a fire hydrant that may need to be moved, surely not an impossible feat. Access thru the paved commercial area by the auto shop is also a possibility if needed. What would it take to make this the access point? Would solve much of the problems with current proposal.	10th to 14th Avenue	Adjacent to Residential Area. Originally planned location.	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Yes. This could be reviewed further, but is probably viable. Access at 9th would involve SHPO clearance.	Yes	Yes	N/A	Yes	
24	Burlingame near train station as suggested at city hall public meeting	California Drive	Vacant/Existing set out track	Y	Y	Y	N	Y	Y	Y	N	Y	No. There is already a set out track in Burlingame at this location.	No	No	N/A	N/A		
25	The east side of the tracks in the same area. there is already a gate for access and it is in a light industrial/commercial area. There are also multiple sites in other cities:	10th to 14th Avenue	Vacant, adjacent to industrial/commercial	See above, #23															
26	On the East side of the tracks in a commercial area.	11th to 14th Avenue	Vacant, adjacent to industrial/commercial	See above, #21															
27	Just North of the Hayward Park Station behind industrial area behind Leslie Street-- and as far south as possible.	Between 14th and Hayward Park	Industrial Area. The tracks are somewhat screened from the businesses by fencing. Residential at north end. Note some residential in commercial area.	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Yes. There are significant encroachments that will need to be cleared in order to construct.	Yes	Yes	\$435,000 (an additional approx. \$ 500k for a ten (1) foot redwood fence and trees; \$ 1.1M for a ten (10) foot CMU soundwall.)	Yes	Additional cost is to cover a new preliminary design and environmental clearance, as well as an estimated cost to clear encroachments within right-of-way.
28	Just South of the Hayward Park Station behind industrial area behind Leslie Street-- and as far south as possible.	Between Hayward Park and Beresford Creek	Industrial Area. The tracks are somewhat screened from the businesses by fencing. Need to take a portion of baseball diamond, and all of Leslie Street.	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Yes. This option would require taking a portion of the adjacent park, and could have environmental issues at Beresford Creek, and with the construction in the park.	No	No	\$6,375,000	Yes	Additional cost includes the construction and CM of a retaining wall for the length of the set out track, including a 2 foot retaining wall to support the access road along the west side.
29	Between 5th to 9th Avenues	9th Ave.	Commercial/office area. The current land use is a universal railroad track switch	N	Y	Y	N	Y	Y	Y	Y	Y	Y	Yes. This option would require relocating railroad track switch prior to beginning construction.	No.	No	\$ 11.1 M	No	Would require constuction of a new railroad track switch, south of current location, prior to removing the existing switch.

1. The estimated cost for additional maintenance cost includes a reduction of 20% for capital and 3% for BSP (State of Good Repair work performed by the contract operator TASI) for the areas where new concrete tie track will be constructed as part of the 25th Avenue GS Project. In other areas, the estimate is based upon the additional inefficiency due to the delay in accessing the railroad due to the additional travel time that would be required due to the absence of a set out track at this location multiplied by the total amount of maintenance performed on the JPB right-of-way, averaged on a per mile basis.

2. Options that require ROW purchase and clearance, would likely increase the period without a set out track, and therefore the cost of the "no-build" would need to be considered for some period of time prior to completion of construction.

* All estimates are subject to change pending more detailed information.

Note: Only Options 8, and 9 have been cleared under CEQA. The feasibility of any other option is subject to environmental clearance.

Set Out Track Criteria:

1. All MOW setout tracks shall have a minimum storage capacity of 950 feet. The storage capacity shall be measured from the "clear point" of the switch or the clear of the signal, whichever is more restrictive. Setout tracks shall be double ended with derails at both mainline turnout entry locations.
2. All MOW setout tracks shall be electrified. Current Peninsula Corridor Electrification Program (PCEP) design standards shall be incorporated for all elements.
3. All MOW setout tracks shall include a means of access for rubber tire trucks (40' tractor trailer trucks) for deliveries and pickups.
4. When relocating and/or removing a set out track, construction staging shall be implemented to allow for maintenance of way access to the set out track at all times.
5. Avoid relocating a set out track to a different mainline track. Set out tracks shall be relocated to the same main line when possible.
6. All setout tracks shall include a remote controlled (via CCF) power switch machine.
7. All turnouts for new setout tracks shall be constructed using flange bearing or "jump" frogs. 8. Setout tracks shall be located a maximum of 3 miles from each adjacent (north and south) set out track.
9. Turnout should not be constructed on curved track due to excessive maintenance issues on the switch.