

SFMTA - TASC SUMMARY SHEET

PreStaff_Date: 4/8/2021 Requested_by: SFMTA Handled: Edward Tang Section Head : CL ^{BT} for CL	<input type="checkbox"/> Public Hearing Consent <input checked="" type="checkbox"/> Public Hearing Regular <input type="checkbox"/> Informational / Other <small>PH - Regular</small>	No objections: _____ Item Held: _____ Other: _____
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Location: California Street at Hyde Street

Subject: No Turn on Red

PROPOSAL / REQUEST:

ESTABLISH – NO TURN ON RED
 California Street, westbound, approaching Hyde Street (Supervisor District 3)

This proposal would prohibit westbound right turns on red from California Street onto Hyde Street in support of a proposed preempt project for the California Cable Car pull-in.

Edward Tang, edward.tang@sfmta.com

BACKGROUND INFORMATION / COMMENTS

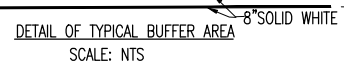
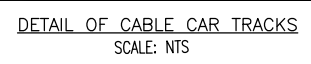
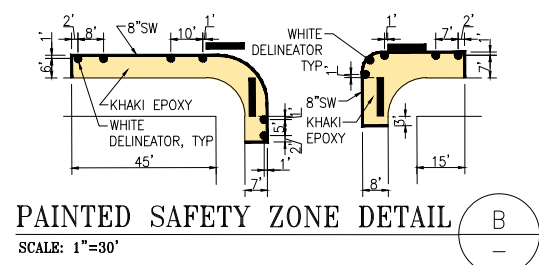
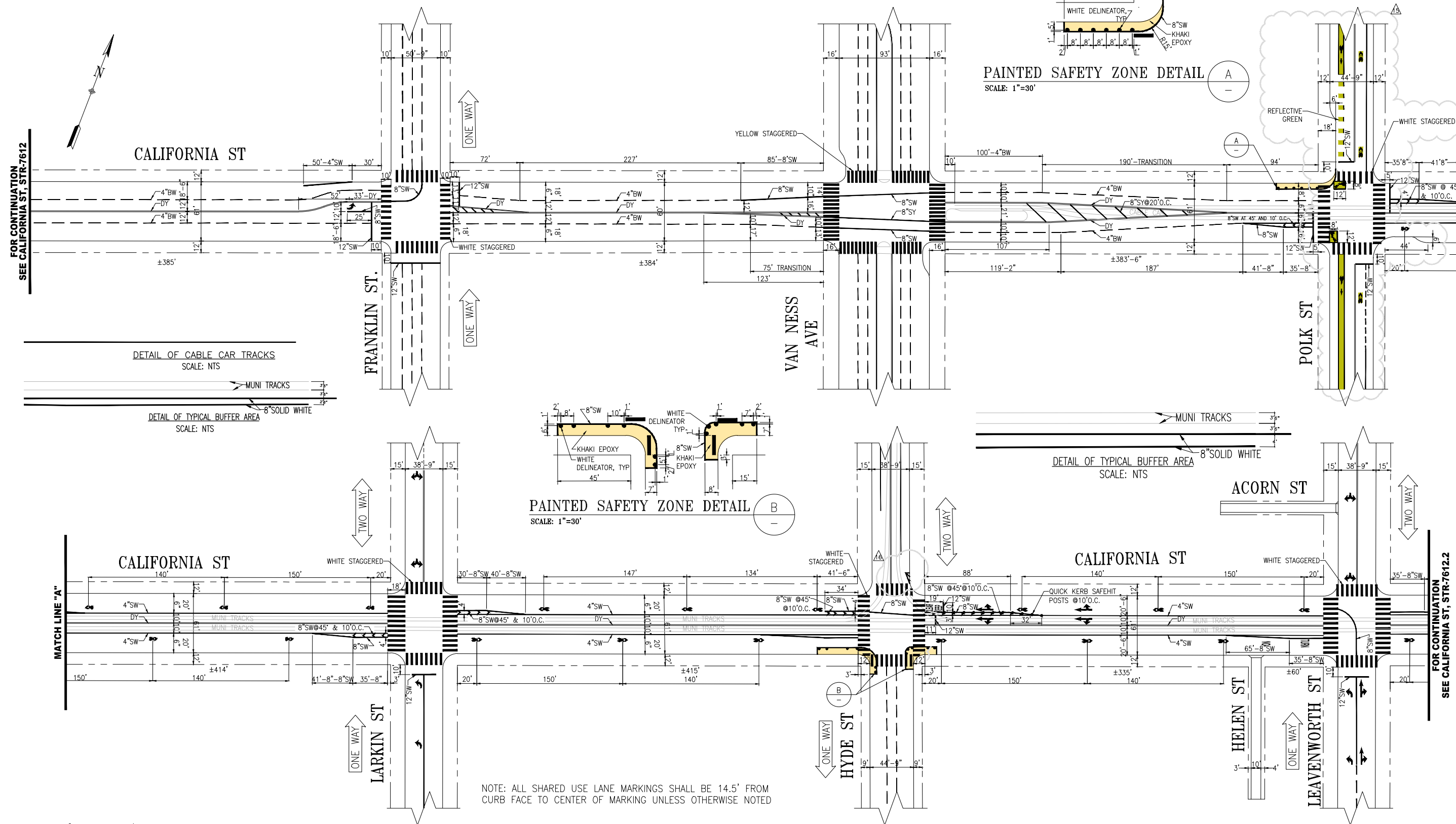
The California and Hyde Pull-In Traffic Signal Preemption Project would provide traffic signal preemption for California Line cable cars that pull-in to the Cable Car Barn. The current procedure requires a WB cable car on California Street to make a right turn from Lane #1 (left lane) onto Hyde Street while negotiating with vehicles in Lane #2 (right lane) and pedestrians crossing the north side crosswalk. During routine pull-ins (approximately 7 during the PM peak), Cable Car Track Maintenance temporarily blocks vehicle traffic one block upstream at California and Leavenworth so that the cable car can more safely perform this maneuver. The cable car may also perform unscheduled pull-ins throughout the day due to service or maintenance issues.

The proposed project would add two 2-section transit signals at the northwest and northeast corners and a dedicated preemption phase for the WBRT cable car that would hold conflicting vehicle and pedestrian movements red. The preemption sequence would start when a magnet detects that a lever has been pulled to raise the cable as the cable car prepares for the pull-in maneuver. The cable car's existing WB through preempt would also follow this 2-section transit signal during normal revenue operations. A 3-section transit signal was considered for the right diverge movement; however, there is insufficient conduit capacity. There would be no significant change to EB through, WB through, or SBRT cable car movements.

This proposed no turn on red would clarify the right-of-way for cable cars when the preemption phase is activated because cable cars must turn right from Lane #1 (left lane).

HEARING NOTIFICATION AND PROCESSING NOTES:	ENVIRONMENTAL CLEARANCE BY: <input checked="" type="checkbox"/> SFMTA <input type="checkbox"/> Attached <input type="checkbox"/> Pending
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Existing Striping



NOTE: ALL SHARED USE LANE MARKINGS SHALL BE 14.5' FROM CURB FACE TO CENTER OF MARKING UNLESS OTHERWISE NOTED

REVISION 17 NOTES: 8" SW ON FRANKLIN; LEFT/RIGHT, LEFT TURN ARROWS ON LARKIN & LEAVENWORTH; FOR PER FIELD UPDATES SEE REV17 NOTES

NO.	DATE	DESCRIPTION	BY	APP
17	09/14/19	CONVERT X-WALK TO WHITE STAGG. CONTIS & ADD ADV. LIMIT LINES ON LARKIN & LEAVENWORTH; FOR PER FIELD UPDATES SEE REV17 NOTES	J. GARZEE	G. HO
16	MM/DD/YY	ADDED HATCHING AT NORTHEAST CORNER NB ON HYDE	E. TANG	B. TANNER
15	MM/DD/YY	REMOVE PSZ & ADDED GREEN BIKE LANE, REFLECTIVE GREEN, ADVANCE LIMIT LINES, BULB-OUT ON POLK	S. SHARIATI	C. BECK
14	MM/DD/YY	ADDED ADV. LIMIT LINE AND KEEP CLEAR ON WB CAL AT HYDE	A. LAM	C. WONG

TABLE OF REVISIONS
CHECK WITH TRACING TO SEE IF YOU HAVE LATEST REVISION



SFMTA



SUPERCEDES STR-6276, REV3	DATE:
T.ABDALLAH	9/10/01
CHECKED:	DATE:
E.TSUI	10/1/01

APPROVED	DATE:
THOMAS FOLKS	10/15/01
SENIOR ENGINEER	DATE:
BOND M. YEE	10/15/01
CITY TRAFFIC ENGINEER	DATE:

SCALE:
1"=50'
SHEET/SHEETS:

TRAFFIC STRIPING
CALIFORNIA STREET
FROM GOUGH STREET TO LEAVENWORTH STREET

CONTRACT NO.
DRAWING NO. STR-7612.1
FILE NO.
REV. NO. 17

FILE NAME: California st_Str-7612 (Filmore) to Operations
DATE:

EXTERNAL REFERENCES:
FONTS USED:
SCALE FACTOR:
PLOT SCALE:

California and Hyde

CHANGE: 29
 CNN #: 25252000
 ENGINEER: J. Hornbostel
 Revision date: 10/21/2019
 Programmed by: DG
 Installed by: DC
 1129
 Date Completed: 10-21-19

DESCRIPTION: Add Dwell Extend for PE1.

Page 1 of 4

PHASE	STREET	EmerFlash	ProgFlash	Controller:
1	California WBLT	n/a	--	2070
2	California EB	R	--	Cabinet: M-SF
4	Hyde SB	R	--	Oper. Date: 11/11/1948
6	California WB	R	--	System: NoMa
				Master: TBC-GPS to Bush/Hyde

California and Hyde

Actuation
 Transit Priority
 Preemption

Steady Demand Sequence

X = YES	-- = NO	S	M	T	W	T	F	S	CYCLE	SPLIT	OFFSET	FLASH
	6:00 to 14:00	--	X	X	X	X	X	--	2	1	2	--
	14:00 to 22:00	--	X	X	X	X	X	--	3	1	3	--
	ALL OTHER TIMES	X	X	X	X	X	X	X	1	1	1	--

STREET	PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
California WBLT	1	OFF														
California EB	2	R	G	Y	R											
Hyde SB	4	R						G	Y	R						
California WB	6	R	G	Y	R											
Peds Xing Hyde (S/S)	2P		FRH	RH												
Peds Xing California (W/S)	4P	RH						FRH	RH							
Peds Xing Hyde (N/S)	6P		FRH	RH												
Peds Xing California (E/S)	8P	RH						FRH	RH							

ws3.5

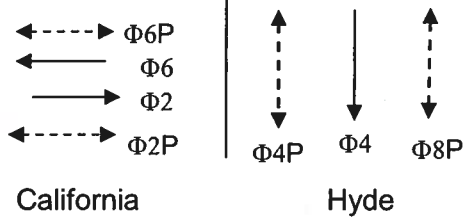
CSO	CYCLE (seconds)	OFFSET (seconds)	SIGNAL INTERVALS (seconds)														
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
111	75.0	61	4.0	14.5	11.0	4.0	1.5	4.0	15.5	15.0	4.0	1.5					
212	75.0	59	4.0	13.5	11.0	4.0	1.5	4.0	16.5	15.0	4.0	1.5					
313	75.0	29	4.0	19.5	11.0	4.0	1.5	4.0	10.5	15.0	4.0	1.5					

CHANGE 29

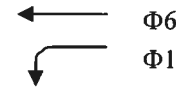
PAGE 2: BASE TIMING, ACTUATION, COORDINATION SETTINGS

California and Hyde

PHASE DIAGRAM



DURING WB PREEMPT DWELL



DURING EB PREEMPT DWELL



Are there conflicting protected left turn phases? n/a

BASE TIMINGS:

Phase	1	2	3	4	5	6	7	8P
Movement		EB		SB		WB		ESP
Absolute Min Green (whole #)	10	7		12		7		
Early Walk		4		4		4		4
Yellow	4.0	4.0		4.0		4.0		4.0
Red Clearance	1.5	1.5		1.5		1.5		1.5
Absolute Min Walk (whole #)		7		7		7		7
FRH (whole #)		11		15		11		15

ACTUATION: ** if Actuation setting vary by plan, use special comments.

Phase	1	2	3	4	5	6	7	8P
Vehicle Detection Type	CblCar	NONE		NONE		NONE		
Ped Detection Type		NONE		NONE		NONE		NONE
Vehicle Recall (Max, Min, Soft or None)		MAX		MAX		MAX		
Absolute Min Green (same as above)	10	7		12		7		
Vehicle Extension (seconds)		--		--		--		--
Max Green (only used for FREE)		26		30		26		30
Pedestrian Recall (Yes or No)		YES		YES		YES		YES
Ped Recycle (Yes or No)		YES		YES		YES		YES
"WALK EXPAND" (Yes or No)		YES		YES		YES		YES

COORDINATION (phase splits = Max G + Y + R Clearance)

Phase	1-4 Cycle length	1	2	3	4	5	6	7	8P	Offset (from page 1)
Dial 1 Splits	75		35		40		35		40	61
Min Transition	69		32		37		32		37	
Max Transition	100		40		60		40		60	
Dial 2 Splits	75		34		41		34		41	59
Min Transition	69		31		38		31		38	
Max Transition	100		40		60		40		60	
Dial 3 Splits	75		40		35		40		35	29
Min Transition	69		37		32		37		32	
Max Transition	100		40		60		40		60	
Coordinated Phases			X				X			

Special Comments

startup all-red = 6 seconds

California and Hyde

Change

SECTION 4: PREEMPTION

California and Hyde

PE 1 - WB Cable Car (Service Priority Level 2)

California and Hyde

MOVEMENTS: WB Cable Car on California St.(Phase 6)

DESCRIPTION: The preempt call is made when a WB cable car on California St. activates entry switch located in middle of California/Leavenworth intersection. Backup entry switch is located approximately at the west property line at Leavenworth St. When a call is received, abort WALK, time out FRH, yellow, all-red normally, then dwell in phases 1 and 6. After a WB cable car passes over exit switch, located 74-feet east of the east property line at Hyde St., or up to a maximum of 90 seconds, time out yellow, all-red, and exit to Hyde St. (phase 4). Disregard and do not serve any EB preempt calls recieved during WB preempt.

Phase	1	2	3	4	5	6	7	8P
Track Clearance 1 (if applicable)								
Track Clearance 2 (if applicable)								
Phase Early Walk to Green		X		X		X		X
Zero phase ped walk		X		X		X		X
Zero phase ped clear								
Zero phase green								
Dwell	V					V		
Exit Phase				X				X
Exit Mode	Normal							

V = vehicles only; VP = vehicles and pedestrians; P = pedestrians only

Track Clearance 1	
Track Clearance 2	
Dwell (min time)	10
Dwell Extend	15
Preemption Max Override	
Checkout Limit	90
Change Phasenext	Yes

Outputs:

Detectors: 1st entry switch is located in the middle of California/Leavenworth intersection, approximately 450-feet east of Hyde St. 2nd entry switch is located at the west property line at Leavenworth, approximately 415-feet east of Hyde St. Exit switch is located approximately 74-feet east of the east property line of Hyde St.

Notes:

Change

SECTION 4: PREEMPTION

California and Hyde

PE 2 - EB Cable Car (Service Priority Level 1)

California and Hyde

MOVEMENTS: EB Cable Car on California St. (Phase 2)

DESCRIPTION: The preempt call is made when an EB cable car on California St. activates entry switch located approximately 298-feet west of Hyde west property line. When a call is received, abort WALK, time out FRH, yellow, and all-red normally, then dwell in phases 2 and 6. After an EB cable car passes over exit switch, located 2.5-feet east of the east property line at Hyde St., or up to a maximum of 90 seconds, time out yellow, all-red, and exit to Hyde St. (phase 4). Abort EB preempt if WB preempt call is received and serve WB preempt.

Phase	1	2	3	4	5	6	7	8P
Track Clearance 1 (if applicable)								
Track Clearance 2 (if applicable)								
Phase Early Walk to Green		X		X		X		X
Zero phase ped walk		X		X		X		X
Zero phase ped clear								
Zero phase green								
Dwell		V				V		
Exit Phase				X				X
Exit Mode	Normal							

V = vehicles only; VP = vehicles and pedestrians; P = pedestrians only

Track Clearance 1	
Track Clearance 2	
Dwell (min time)	10
Preemption Max Override	
Checkout Limit	90
Change Phasenext	Yes

Outputs:

Detectors: Entry switch is located approximately 298-feet west of the west property line of Hyde St. Exit switch is located approximately 2.5-feet east of the east property line of Hyde St.

Notes:

Change

29

California and Hyde (DRAFT)

DESCRIPTION: Add phase 13T and WBRT preempt. Update 2P & 6P FRH, preemption order, and service priority levels for all preempts.

Preemption settings updates:
 PE 1 (EB) - Update abort sequence.
 PE 2 (WB) - Update min dwell, dwell phases, and abort sequence.
 PE 3 (WBRT) - New preempt.

CHANGE: 30
 CNN #: 25252000
 ENGINEER: Edward Tang
 Revision date:
 Programmed by:
 Installed by:
 Date Completed:

NOTES: Page 1 of 5

PHASE	STREET	EmerFlash	ProgFlash	Controller:	2070
1	California WBLT	DARK	--	Cabinet:	MSF
2	California EB	R	--	Oper. Date:	11/11/1948
4	Hyde SB	R	--	System:	NoMa
6	California WB	R	--	Master:	TBC-GPS
13T	Cable Car	F--	--		to Bush / Hyde

Actuation
 Transit Priority
 Preemption

Steady Demand Sequence

X = YES	-- = NO	S	M	T	W	T	F	S	CYCLE	SPLIT	OFFSET	FLASH
		--	X	X	X	X	X	--	2	1	2	--
		--	X	X	X	X	X	--	3	1	3	--
ALL OTHER TIMES		X	X	X	X	X	X	X	1	1	1	--

STREET	PHASE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
California WBLT	1	OFF														
California EB	2	R	G	Y	R											
Hyde SB	4	R						G	Y	R						
California WB	6	R	G	Y	R											
Peds Xing Hyde SS	2P		FRH	RH												
Peds Xing California WS	4P	RH					FRH	RH								
Peds Xing Hyde NS	6P		FRH	RH												
Peds Xing California ES	8P	RH					FRH	RH								
Cable Car	13T	--														

ws3.5 per SRC

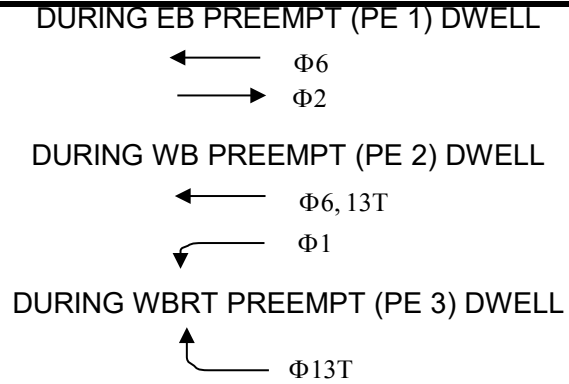
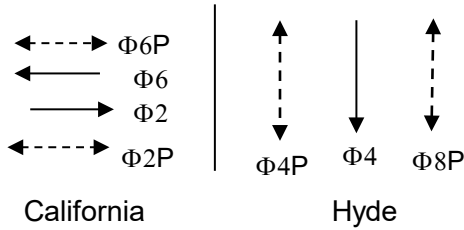
CSO	CYCLE (seconds)	OFFSET (seconds)	SIGNAL INTERVALS (seconds)														
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
111	75.0	61	4.0	16.5	9.0	4.0	1.5	4.0	15.5	15.0	4.0	1.5					
212	75.0	59	4.0	15.5	9.0	4.0	1.5	4.0	16.5	15.0	4.0	1.5					
313	75.0	29	4.0	21.5	9.0	4.0	1.5	4.0	10.5	15.0	4.0	1.5					

California and Hyde (DRAFT)

CHANGE 30

California and Hyde (DRAFT)

PHASE DIAGRAM



Are there conflicting protected left turn phases? n/a

BASE TIMINGS:

Phase	1	2	3	4	5	6	7	8P	13T
Movement	WBLT	EB		SB		WB		ESP	MUNI
Absolute Min Green (whole #)	10	9		12		9		--	3
Early Walk	--	4		4		4		4	--
Yellow	4.0	4.0		4.0		4.0		4.0	6.0
Red Clearance	1.5	1.5		1.5		1.5		1.5	3.0
Absolute Min Walk (whole #)	--	7		7		7		7	--
FRH (whole #)	--	9		15		9		15	--

ACTUATION: ** if Actuation setting vary by plan, use special comments.

Phase	1	2	3	4	5	6	7	8P	13T
Vehicle Detection Type	Preempt	NONE		NONE		NONE		--	Preempt
Ped Detection Type	--	NONE		NONE		NONE		NONE	--
Vehicle Recall (Max, Min, Soft or None)	--	MAX		MAX		MAX		--	--
Absolute Min Green (same as above)	10	9		12		9		--	3
Vehicle Extension (seconds)	--	--		--		--		--	--
Max Green (only used for FREE)	--	25		30		25		30	90
Pedestrian Recall (Yes or No)	--	YES		YES		YES		YES	--
Ped Recycle (Yes or No)	--	YES		YES		YES		YES	--
"WALK EXPAND" (Yes or No)	--	YES		YES		YES		YES	--

COORDINATION (phase splits = Max G + Y + R Clearance)

Phase	1-4 Cycle length	1	2	3	4	5	6	7	8P	13T	Onset (from page 1)
Dial 1 Splits	75		35		40		35		40		61
Min Transition	69		32		37		32		37		
Max Transition	100		40		60		40		60		
Dial 2 Splits	75		34		41		34		41		59
Min Transition	69		31		38		31		38		
Max Transition	100		40		60		40		60		
Dial 3 Splits	75		40		35		40		35		29
Min Transition	69		37		32		37		32		
Max Transition	100		40		60		40		60		
Coordinated Phases			X				X				

Special Comments

startup all-red = 6 seconds

California and Hyde (DRAFT)

Change

SECTION 4: PREEMPTION

California and Hyde (DRAFT)

PE 1 - EB Cable Car (Service Priority Level 1)

California and Hyde (DRAFT)

MOVEMENTS: EB Cable Car on California St. (Phase 2)

DESCRIPTION: The preempt call is made when an EB cable car on California St. activates entry switch located approximately 298-feet west of Hyde west property line. When a call is received, abort WALK, time out FRH, yellow, and all-red normally, then dwell in phases 2 and 6. After an EB cable car passes over exit switch, located 2.5-feet east of the east property line at Hyde St., or up to a maximum of 90 seconds, time out yellow, all-red, and exit to Hyde St. (phase 4). Abort PE 1 (EB) if any other preempt calls are received and serve preempts according to service priority level.

Phase	1	2	3	4	5	6	7	8P	13T
Track Clearance 1 (if applicable)	--	--		--		--		--	--
Track Clearance 2 (if applicable)	--	--		--		--		--	--
Phase Early Walk to Green		X		X		X		X	
Zero phase ped walk		X		X		X		X	
Zero phase ped clear									
Zero phase green									
Dwell		V				V			
Exit Phase				X				X	
Exit Mode	Normal								

V = vehicles only; VP = vehicles and pedestrians; P = pedestrians only; T = transit only

Track Clearance 1	--
Track Clearance 2	--
Dwell (min time)	10
Dwell Extend	
Preemption Max Override	
Checkout Limit	90
Change Phasenext	Yes

Outputs:

Detectors: Entry switch is located approximately 298-feet west of the west property line of Hyde St. Exit switch is located approximately 2.5-feet east of the east property line of Hyde St.

Notes:

Change

30

SECTION 4: PREEMPTION

California and Hyde (DRAFT)

PE 2 - WB Cable Car (Service Priority Level 2)

California and Hyde (DRAFT)

MOVEMENTS: WB Cable Car on California St. (Phase 13T)

DESCRIPTION: The preempt call is made when a WB cable car on California St. activates entry switch located in middle of California/Leavenworth intersection. Backup entry switch is located approximately at the west property line at Leavenworth St. When a call is received, abort WALK, time out FRH, yellow, all-red normally, then dwell in phases 1, 6, and 13T. After a WB cable car passes over exit switch, located 74-feet east of the east property line at Hyde St., or up to a maximum of 90 seconds, PE 2 (WB) will dwell extend for 15 seconds, then time out yellow, all-red, and exit to Hyde St. (phase 4). Disregard and do not serve PE 1 (EB) calls received during PE 2 (WB) calls. Abort PE 2 (WB) if PE 3 (WBRT) call is received and serve PE 3 (WBRT) preempt.

Phase	1	2	3	4	5	6	7	8P	13T
Track Clearance 1 (if applicable)	--	--		--		--		--	--
Track Clearance 2 (if applicable)	--	--		--		--		--	--
Phase Early Walk to Green		X		X		X		X	
Zero phase ped walk		X		X		X		X	
Zero phase ped clear									
Zero phase green									
Dwell	V					V			T
Exit Phase				X				X	
Exit Mode	Normal								

V = vehicles only; VP = vehicles and pedestrians; P = pedestrians only; T = transit only

Track Clearance 1	--
Track Clearance 2	--
Dwell (min time)	3
Dwell Extend	15
Preemption Max Override	
Checkout Limit	90
Change Phasenext	Yes

Outputs:

Detectors: 1st entry switch is located in the middle of California/Leavenworth intersection, approximately 450-feet east of Hyde St. 2nd entry switch is located at the west property line at Leavenworth, approximately 415-feet east of Hyde St. Exit switch is located approximately 74-feet east of the east property line of Hyde St.

Notes:

Change

SECTION 4: PREEMPTION

California and Hyde (DRAFT)

PE 3 - WBRT Cable Car (Service Priority Level 3)

California and Hyde (DRAFT)

MOVEMENTS: WBRT Cable Car on California St. (Phase 13T)

DESCRIPTION: The preempt call is made when an operator lifts the lever on California Street, located approximately 79-feet east of east property line of Hyde St. When a call is received, serve the track clearance state for phases 1 & 6 and dwell in phase 13T while peds show solid RH. After the cable car passes over exit switch, located 74-feet east of the east property line of Hyde St, or up to a maximum of 90 seconds, PE 3 (WBRT) will dwell extend for 50 seconds, then time out yellow and all-red and exit to Hyde St. (phase 4). Disregard and do not serve any other preempt calls received during PE 3 (WBRT) calls.

Phase	1	2	3	4	5	6	7	8P	13T
Track Clearance 1 (if applicable)	V	--		--		V		--	--
Track Clearance 2 (if applicable)	--	--		--		--		--	--
Phase Early Walk to Green		X		X		X		X	
Zero phase ped walk		X		X		X		X	
Zero phase ped clear									
Zero phase green									
Dwell									T
Exit Phase				X				X	
Exit Mode	Normal								

V = vehicles only; VP = vehicles and pedestrians; P = pedestrians only; T = transit only

Track Clearance 1	10
Track Clearance 2	--
Dwell (min time)	4
Dwell Extend	50
Preemption Max Override	
Checkout Limit	90
Change Phasenext	Yes

Outputs:

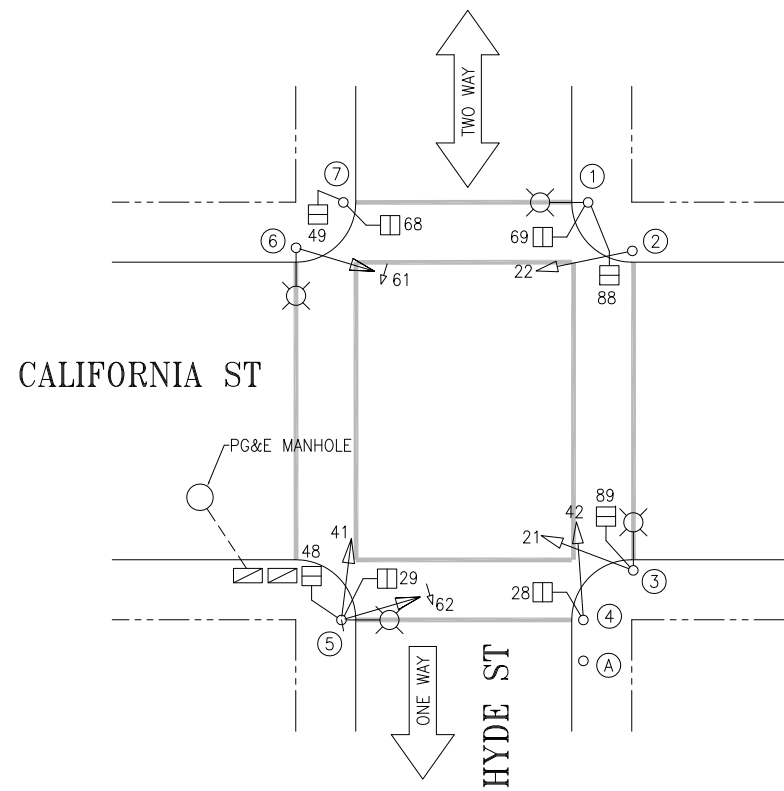
Detectors: Lever is located approximately 79-feet east of the east property line of Hyde St and is activated only when an operator lifts the lever. Exit switch is located approximately 74-east of the east property line of Hyde St.

Notes:

Change

30

Existing Signal Inventory



NOTE:
CABINET FOUNDATION TYPE: M

POLE AND EQUIPMENT SCHEDULE										
POLE No.	TYPE OF POLE	VEHICLE SIGNAL					PEDESTRIAN SIGNAL			REMARKS
		No.	TYPE	MOUNTING	VISORS	LOUVERS	No.	TYPE	MOUNTING	
①	SL						69 88	1S-1 1S-1	SP-2-SF	
②	MUNI	22	3S8"	SV-1-T	FC					
③	SL	21	3S8"	SV-1-T	FC		89	1S-1	SP-1	
④	1 - A (10')	42	3S8"	TV-1	FC		28	1S-1	SP-1	
⑤	SL	41 62	3S12" 4S12"GLA	SV-2-TA	T T		29 48	1S-1 1S-1	SP-2-SF	
⑥	SL	61	4S12"GLA	SV-1-T	T					
⑦	1 - A (7')						49 68	1S-1 1S-1	TP-2-T	
Ⓐ	UTILITY									



NO.	DATE	DESCRIPTION	BY	APP.
2	12/9/14	SRC #2012-290 ADDED WBLT	BWoo	TFolks
1	06/95	SIGNAL MODIFICATION CT22.	CXL	BWoo

TABLE OF REVISIONS
CHECK WITH TRACING TO SEE IF YOU HAVE LATEST REVISION

REFERENCE INFORMATION
& FILE NO. OF SURVEYS



SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY
CITY AND COUNTY OF SAN FRANCISCO

DRAWN: DATE:
CHECKED: DATE:

CXL 07/09/99
SCALE:
1" = 40'
SHEET OF SHEETS
1 OF 1

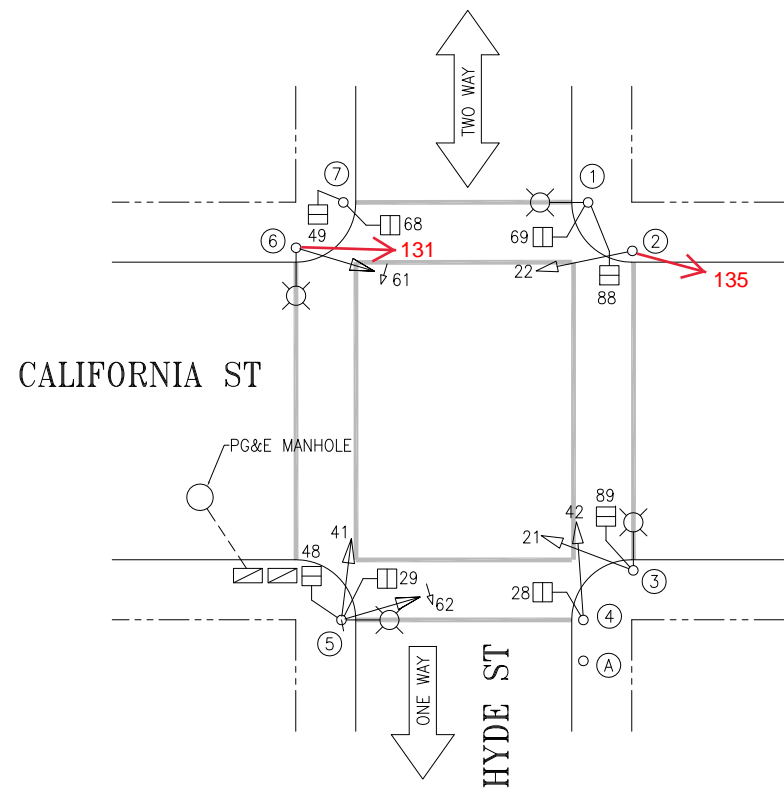
TRAFFIC SIGNAL INVENTORY DIAGRAM
CALIFORNIA ST & HYDE ST

CNN NO.
25252000
REV NO.
2

EXTERNAL REFERENCES: I:\34\22.dwg
FONTS USED: ROMANS.SHX romans ROMANS.SHX ROMANS.SHX ROMANT
SCALE FACTOR: 240
PLOT SCALE: 1"=1'
ORIGIN: SECTION
FILE NAME: California_Hyde.dwg
DATE: Aug 24 2000 11:44

Proposed Signal Inventory

RED = PROPOSED WESTBOUND TRANSIT SIGNAL ADDITIONS



Mount at same height as 131 on Pole 6.

POLE AND EQUIPMENT SCHEDULE

POLE No.	TYPE OF POLE	VEHICLE SIGNAL					PEDESTRIAN SIGNAL			REMARKS
		No.	TYPE	MOUNTING	VISORS	LOUVERS	No.	TYPE	MOUNTING	
①	SL						69 88	1S-1 1S-1	SP-2-SF	
②	MUNI	22 135	3S8" 2S12"LB	SV-1-T	FC T					
③	SL	21	3S8"	SV-1-T	FC		89	1S-1	SP-1	
④	1 - A (10')	42	3S8"	TV-1	FC		28	1S-1	SP-1	
⑤	SL	41 62	3S12" 4S12"GLA	SV-2-TA	T T		29 48	1S-1 1S-1	SP-2-SF	
⑥	SL	61 131	4S12"GLA 2S12"LB	SV-1-T SV-1-T	T T					
⑦	1 - A (7')						49 68	1S-1 1S-1	TP-2-T	
①	UTILITY									

NOTE:
CABINET FOUNDATION TYPE: M



NO.	DATE	DESCRIPTION	BY	APP.
3	XX/XX/XX	SRC #2021-### ADD MUNI LB SIGNALS TO POLES 2 AND 6	ECT	CL
2	12/9/14	SRC #2012-290 ADDED WBLT	BWoo	TFolks
1	06/95	SIGNAL MODIFICATION CT22.	CXL	BWoo

TABLE OF REVISIONS
CHECK WITH TRACING TO SEE IF YOU HAVE LATEST REVISION

REFERENCE INFORMATION & FILE NO. OF SURVEYS



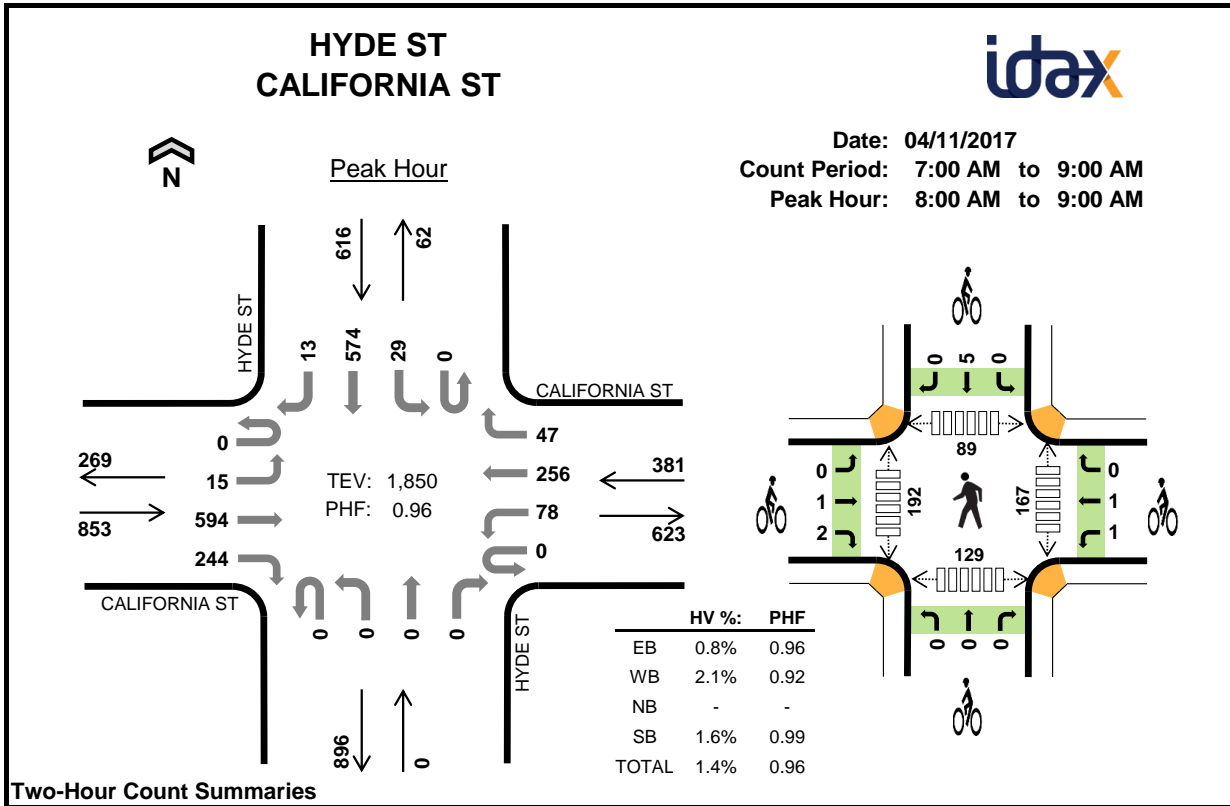
SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY
CITY AND COUNTY OF SAN FRANCISCO

DRAWN: DATE:
CHECKED: DATE:

CXL 07/09/99
SCALE: 1" = 40'
SHEET OF SHEETS: 1 OF 1

TRAFFIC SIGNAL INVENTORY DIAGRAM
CALIFORNIA ST & HYDE ST

CNN NO. 25252000
REV NO.



Two-Hour Count Summaries

Interval Start	CALIFORNIA ST Eastbound				CALIFORNIA ST Westbound				HYDE ST Northbound				HYDE ST Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	3	53	40	0	11	49	3	0	0	0	0	0	1	68	4	232	0	
7:15 AM	0	0	66	28	0	10	46	7	0	0	0	0	0	2	104	4	267	0	
7:30 AM	0	2	104	39	1	17	59	11	0	0	0	0	0	5	121	4	363	0	
7:45 AM	0	3	129	46	0	19	72	14	0	0	0	0	0	3	154	3	443	1,305	
8:00 AM	0	3	162	58	0	20	71	12	0	0	0	0	0	6	148	2	482	1,555	
8:15 AM	0	2	142	56	0	21	66	11	0	0	0	0	0	6	146	4	454	1,742	
8:30 AM	0	7	144	60	0	17	53	10	0	0	0	0	0	7	144	3	445	1,824	
8:45 AM	0	3	146	70	0	20	66	14	0	0	0	0	0	10	136	4	469	1,850	
Count Total	0	23	946	397	1	135	482	82	0	0	0	0	0	40	1,021	28	3,155	0	
Peak Hour	All	0	15	594	244	0	78	256	47	0	0	0	0	0	29	574	13	1,850	0
	HV	0	1	5	1	0	1	7	0	0	0	0	0	0	0	10	0	25	0
	HV%	-	7%	1%	0%	-	1%	3%	0%	-	-	-	-	-	0%	2%	0%	1%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

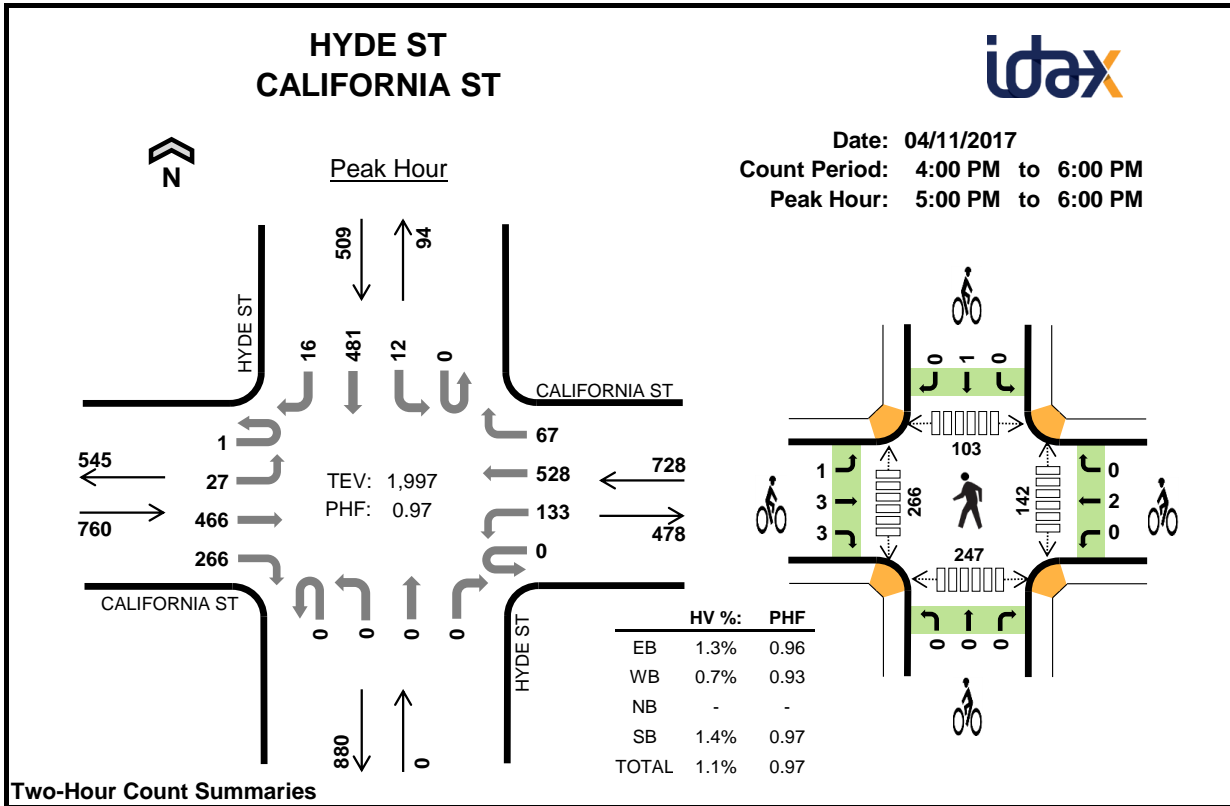
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	2	2	0	3	7	1	0	0	2	3	15	12	14	10	51
7:15 AM	5	1	0	2	8	0	0	0	0	0	21	18	14	11	64
7:30 AM	1	1	0	2	4	2	0	0	1	3	22	28	20	20	90
7:45 AM	2	3	0	1	6	3	1	0	0	4	31	24	19	37	111
8:00 AM	2	2	0	3	7	2	0	0	1	3	44	29	16	37	126
8:15 AM	2	1	0	3	6	0	1	0	1	2	43	46	22	30	141
8:30 AM	1	2	0	3	6	1	0	0	2	3	44	61	19	36	160
8:45 AM	2	3	0	1	6	0	1	0	1	2	36	56	32	26	150
Count Total	17	15	0	18	50	9	3	0	8	20	256	274	156	207	893
Peak Hour	7	8	0	10	25	3	2	0	5	10	167	192	89	129	577

AM Traffic Counts

Two-Hour Count Summaries - Heavy Vehicles																		
Interval Start	CALIFORNIA ST				CALIFORNIA ST				HYDE ST				HYDE ST				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	2	0	0	0	2	0	0	0	0	0	0	0	1	2	7	0
7:15 AM	0	0	5	0	0	0	1	0	0	0	0	0	0	0	1	1	8	0
7:30 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	1	4	0
7:45 AM	0	0	2	0	0	1	2	0	0	0	0	0	0	0	1	0	6	25
8:00 AM	0	0	1	1	0	0	2	0	0	0	0	0	0	0	3	0	7	25
8:15 AM	0	0	2	0	0	0	1	0	0	0	0	0	0	0	3	0	6	23
8:30 AM	0	0	1	0	0	0	2	0	0	0	0	0	0	0	3	0	6	25
8:45 AM	0	1	1	0	0	1	2	0	0	0	0	0	0	0	1	0	6	25
Count Total	0	1	15	1	0	2	13	0	0	0	0	0	0	0	14	4	50	0
Peak Hour	0	1	5	1	0	1	7	0	0	0	0	0	0	0	10	0	25	0

Two-Hour Count Summaries - Bikes																	
Interval Start	CALIFORNIA ST			CALIFORNIA ST			HYDE ST			HYDE ST			15-min Total	Rolling One Hour			
	Eastbound			Westbound			Northbound			Southbound							
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT					
7:00 AM	0	0	1	0	0	0	0	0	0	0	2	0	3	0			
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:30 AM	0	2	0	0	0	0	0	0	0	0	1	0	3	0			
7:45 AM	0	2	1	0	1	0	0	0	0	0	0	0	4	10			
8:00 AM	0	1	1	0	0	0	0	0	0	0	1	0	3	10			
8:15 AM	0	0	0	1	0	0	0	0	0	0	1	0	2	12			
8:30 AM	0	0	1	0	0	0	0	0	0	0	2	0	3	12			
8:45 AM	0	0	0	0	1	0	0	0	0	0	1	0	2	10			
Count Total	0	5	4	1	2	0	0	0	0	0	8	0	20	0			
Peak Hour	0	1	2	1	1	0	0	0	0	0	5	0	10	0			

Note: U-Turn volumes for bikes are included in Left-Turn, if any.



Two-Hour Count Summaries

Interval Start	CALIFORNIA ST Eastbound				CALIFORNIA ST Westbound				HYDE ST Northbound				HYDE ST Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
4:00 PM	0	3	102	62	0	39	101	15	0	0	0	0	0	2	110	2	436	0	
4:15 PM	0	6	67	53	0	38	87	16	0	0	0	0	0	5	107	10	389	0	
4:30 PM	0	3	51	70	0	35	104	18	0	0	0	0	0	5	119	2	407	0	
4:45 PM	0	10	92	70	0	35	132	16	0	0	0	0	0	5	123	5	488	1,720	
5:00 PM	0	6	107	70	0	31	109	12	0	0	0	0	0	1	117	5	458	1,742	
5:15 PM	0	9	111	66	0	30	147	18	0	0	0	0	0	3	120	6	510	1,863	
5:30 PM	0	5	121	72	0	38	127	25	0	0	0	0	0	4	119	3	514	1,970	
5:45 PM	1	7	127	58	0	34	145	12	0	0	0	0	0	4	125	2	515	1,997	
Count Total	1	49	778	521	0	280	952	132	0	0	0	0	0	29	940	35	3,717	0	
Peak Hour	All	1	27	466	266	0	133	528	67	0	0	0	0	0	12	481	16	1,997	0
	HV	0	0	4	6	0	0	4	1	0	0	0	0	0	0	7	0	22	0
	HV%	0%	0%	1%	2%	-	0%	1%	1%	-	-	-	-	-	0%	1%	0%	1%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	3	1	0	1	5	0	1	0	0	1	30	60	25	43	158
4:15 PM	2	2	0	0	4	0	1	0	0	1	31	65	34	30	160
4:30 PM	5	2	0	3	10	0	0	0	0	0	27	73	26	39	165
4:45 PM	1	1	0	2	4	0	2	0	0	2	24	39	29	43	135
5:00 PM	1	2	0	2	5	0	0	0	0	0	28	60	9	64	161
5:15 PM	4	1	0	1	6	3	0	0	0	3	30	40	20	61	151
5:30 PM	3	2	0	3	8	1	0	0	0	1	38	101	39	51	229
5:45 PM	2	0	0	1	3	3	2	0	1	6	46	65	35	71	217
Count Total	21	11	0	13	45	7	6	0	1	14	254	503	217	402	1,376
Peak Hour	10	5	0	7	22	7	2	0	1	10	142	266	103	247	758

Two-Hour Count Summaries - Heavy Vehicles																			
Interval Start	CALIFORNIA ST				CALIFORNIA ST				HYDE ST				HYDE ST				15-min Total	Rolling One Hour	
	Eastbound				Westbound				Northbound				Southbound						
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
4:00 PM	0	0	1	2	0	0	1	0	0	0	0	0	0	0	0	1	0	5	0
4:15 PM	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	4	0
4:30 PM	0	0	2	3	0	0	2	0	0	0	0	0	0	0	0	3	0	10	0
4:45 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	2	0	4	23
5:00 PM	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	2	0	5	23
5:15 PM	0	0	1	3	0	0	1	0	0	0	0	0	0	0	0	1	0	6	25
5:30 PM	0	0	1	2	0	0	2	0	0	0	0	0	0	0	0	3	0	8	23
5:45 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	3	22
Count Total	0	0	9	12	0	0	10	1	0	0	0	0	0	0	0	13	0	45	0
Peak Hour	0	0	4	6	0	0	4	1	0	0	0	0	0	0	0	7	0	22	0
Two-Hour Count Summaries - Bikes																			
Interval Start	CALIFORNIA ST			CALIFORNIA ST			HYDE ST			HYDE ST			15-min Total	Rolling One Hour					
	Eastbound			Westbound			Northbound			Southbound									
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT							
4:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0	
4:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	0	2	4	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
5:15 PM	1	0	2	0	0	0	0	0	0	0	0	0	0	0	3	0	3	5	
5:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	6	
5:45 PM	0	2	1	0	2	0	0	0	0	0	0	0	1	0	6	0	6	10	
Count Total	1	3	3	1	5	0	0	0	0	0	0	0	1	0	14	0	14	0	
Peak Hour	1	3	3	0	2	0	0	0	0	0	0	0	1	0	10	0	10	0	
<i>Note: U-Turn volumes for bikes are included in Left-Turn, if any.</i>																			

TransBASE Internal Dashboard

Collision History

Geographic Extent: 25252000: HYDE ST at CALIFORNIA ST
 Spatial Intersect: SFMTA Intersection Related (<=20ft or <=150ft if Rear End)
 Data Range: 10/01/2015 to 09/30/2020
 Pull Date: 3/9/2021

Collision/Party/Victim Table Showing 1 to 9 of 9 entries

Count of Fatal Collisions: 0
 Count of Non-Fatal Injury Collisions: 9
 Total Count of Fatal/Non-Fatal Injury Collisions: 9

Case ID	Collision Date	Collision Time	Day of Week	Primary Road	Secondary Road	Distance	Direction	Party 1 Type	Party 1 Direction of Travel	Party 1 Movement Preceding Crash	Party 2 Type	Party 2 Direction of Travel	Party 2 Movement Preceding Crash	Vehicle Code Violation	Highest Degree of Injury	Type of Collision	Motor Vehicle Involved With	Weather	Lighting
200356687	06/13/2020	18:20	Saturday	CALIFORNIA ST	HYDE ST	0	Not Stated	Driver	West	Making Left Turn	Driver	West	Proceeding Straight	CVC 22100(b)	Injury (Complaint of Pain)	Broadside	Other Motor Vehicle	Clear	Daylight
180744637	10/01/2018	20:00	Monday	CALIFORNIA ST	HYDE ST	0	Not Stated	Driver	West	Proceeding Straight	Pedestrian	Not Stated	Proceeding Straight	CVC 2818	Injury (Complaint of Pain)	Vehicle/ Pedestrian	Pedestrian	Clear	Dark - Street Lights
170961562	11/26/2017	08:50	Sunday	CALIFORNIA ST	HYDE ST	0	Not Stated	Driver	East	Making Left Turn	Pedestrian	North	Proceeding Straight	CVC 21950(a)	Injury (Complaint of Pain)	Vehicle/ Pedestrian	Pedestrian	Clear	Daylight
170824374	10/09/2017	11:54	Monday	CALIFORNIA ST	HYDE ST	0	Not Stated	Driver	West	Making Left Turn	Driver	East	Proceeding Straight	CVC Unknown	Injury (Complaint of Pain)	Head-On	Other Motor Vehicle	Clear	Daylight
170703966	08/29/2017	12:15	Tuesday	CALIFORNIA ST	HYDE ST	0	Not Stated	Driver	West	Making Left Turn	Pedestrian	East	Proceeding Straight	CVC 21968	Injury (Complaint of Pain)	Vehicle/ Pedestrian	Pedestrian	Clear	Daylight
170489257	06/15/2017	21:15	Thursday	CALIFORNIA ST	HYDE ST	0	Not Stated	Driver	North	Making Left Turn	Driver	West	Proceeding Straight	CVC 21801(a)	Injury (Complaint of Pain)	Broadside	Other Motor Vehicle	Clear	Dark - Street Lights
160133709	02/14/2016	15:15	Sunday	CALIFORNIA ST	HYDE ST	0	Not Stated	Bicyclist	West	Not Stated	Driver	West	Not Stated	CVC Unknown	Injury (Other Visible)	Not Stated	Not Stated	Not Stated	Not Stated
150954208	11/01/2015	11:40	Sunday	CALIFORNIA ST	HYDE ST	0	Not Stated	Driver	West	Making Left Turn	Driver	East	Proceeding Straight	CVC 21801(a)	Injury (Severe)	Head-On	Other Motor Vehicle	Clear	Daylight
150933440	10/25/2015	16:40	Sunday	CALIFORNIA ST	HYDE ST	0	Not Stated	Driver	East	Proceeding Straight	Driver	East	Proceeding Straight	CVC 22106	Injury (Complaint of Pain)	Sideswipe	Other Motor Vehicle	Clear	Daylight

Geographic Extent: 25252000: HYDE ST at CALIFORNIA ST
Spatial Intersect: SFMTA Intersection Related (<=20ft or <=150ft if Rear End)
Data Range: 10/01/2015 to 09/30/2020
Pull Date: 3/9/2021

Metadata Information

Collision Filters

Database Source: TransBASESF.org
Database Pull Date: 3/9/2021
Collision Level: Injury Collisions
Boundary: 25252000: HYDE ST at CALIFORNIA ST
Collision Dates: 10/01/2015 to 09/30/2020
Collision Month Filter(s): No Restrictions
Collision Distance: Any Distance
Collision Severity Filter(s): No Restrictions
Primary Collision Factor Filter(s): No Restrictions
Collision Type Filter(s): No Restrictions
Intersection/ Midblock: SFMTA Intersection Related (<=20ft or <=150ft if Rear End)

Party Filters

Party Involved Type: No Restrictions
Party Involved Gender: No Restrictions
Party Involved at Fault: No Restrictions
Party Involved Age: No Restriction
Party Involved Sobriety: No Restrictions
Party Involved Condition: No Restrictions
Party Involved Direction of Travel: No Restrictions
Party Involved Safety Equipment 1: No Restrictions
Party Involved Safety Equipment 2: No Restrictions
Party Involved Insurance: No Restrictions
Party Involved Other Associated Factors : No Restrictions
Party Involved Movement Preceding Collision: No Restrictions
Party Involved Vehicle Type: No Restrictions
Party Involved Race: No Restrictions
Party Involved Special Info: No Restrictions

Victim Filters

Victim Involved Role: No Restrictions
Victim Involved Degree of Injury: No Restrictions
Victim Involved Age: No Restriction
Victim Involved Seating Position: No Restrictions
Victim Involved Safety Equipment: No Restrictions
Victim Involved Ejected: No Restrictions

Environmental Filters

Nearest Traffic Control: No Restriction
Intersecting Speed Limit: No Restriction
Intersecting Network: No Restriction
Intersecting Street Class: No Restriction
Weather Description: No Restrictions
Lighting Description: No Restrictions

TransitSafe Collision History

12/1/2015 - 12/23/2020

Intersection	Corridor	Date	Incident Type	Line	Mode Updated	ARB Charge	At Street	Capid	Collision Type	Collision With (Operator)	Direction	Division	IE_DESC	Incident Narrative	Incident Number	Injury Involved	MTA Vehicle Action	Operator Narrative	Safety Analysis	Time	
California St & Hyde St	Other	12/7/2016	Collision	California Street	Cable Car	Cable Car	Unavoidable	Hyde St	759	Sideswipe	Left	Auto/Van	outbound	Cable Car		FY17-03211	No	Going Straight	Restricted	2:09 PM	
California St & Hyde St	Other	1/28/2015	Collision	California Street	Cable Car	Cable Car	Unavoidable	Hyde St	2349	Sideswipe	Right	Auto/Van	outbound /nearside	Cable Car	Braking on the back did not see what happen in the front no injured cc call TSC came.	NON-Preventable	FY15-04086	No	Going Straight	Restricted	NON-Preventable 8:00 PM

Proposed Signage Plan

Install No Right on Red sign



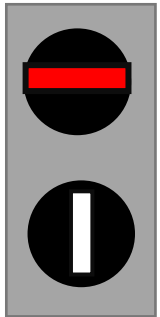
Relocate "DO NOT PASS" sign from existing northeast corner pole to new pole approximately 60' east

~60'

Install No Right on Red sign after relocating "DO NOT PASS" sign



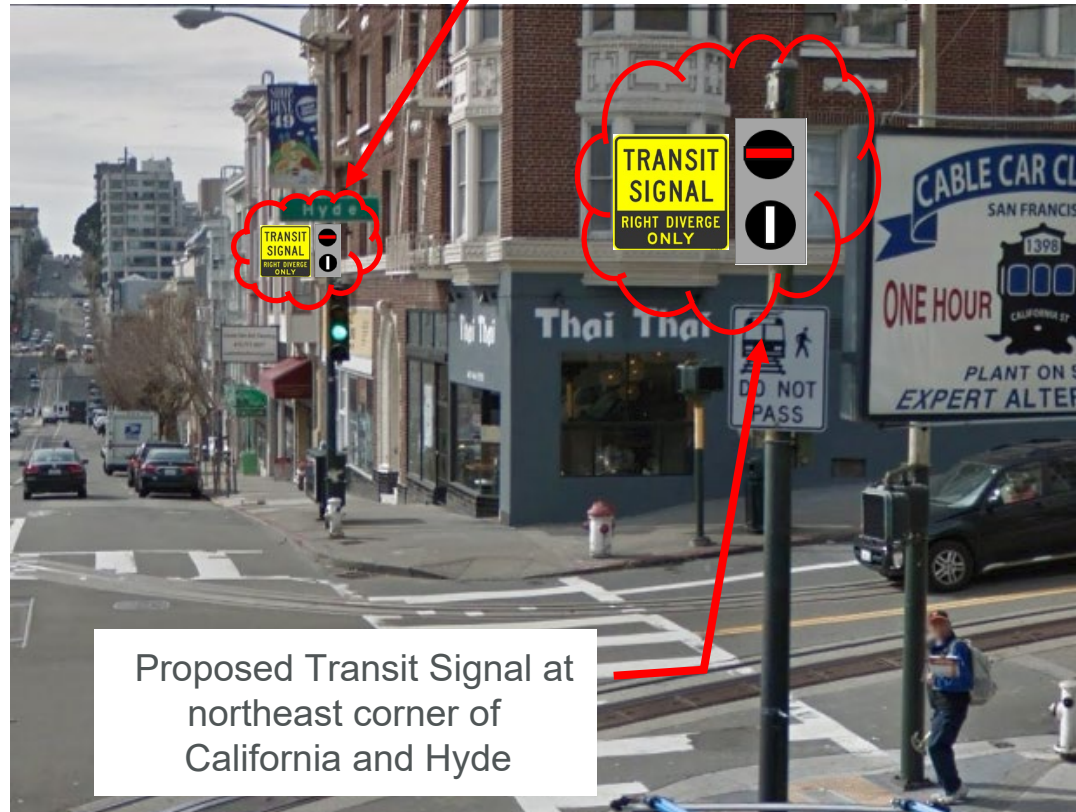
Proposed Signal at California and Hyde



Aspect: Red Horizontal Bar
Indication: RESTRICTED
Movement not permitted.

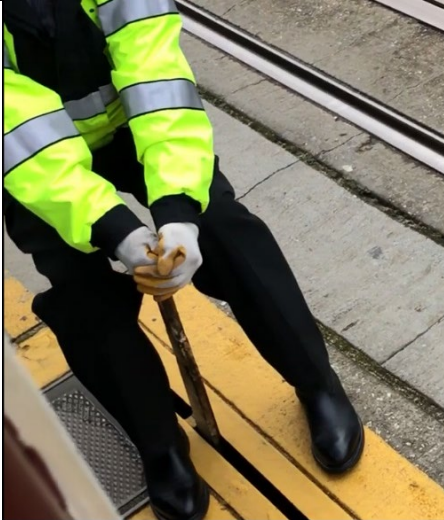
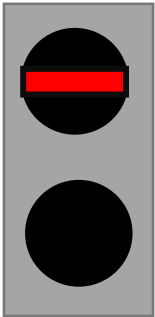
Aspect: White Vertical Bar
Indication: PERMISSIVE
Proceed with movement when safe to do so.

Proposed Transit Signal at northwest corner of California and Hyde



Proposed Transit Signal at northeast corner of California and Hyde


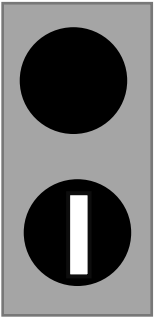

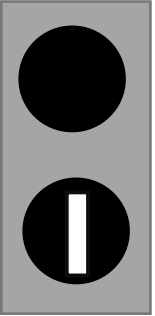

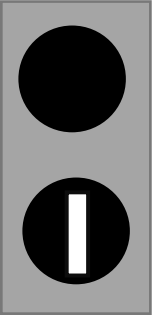
Proposed Field Procedure with Timestamps

Timestamp ¹	Action	Image	Transit Signal Action
0:00	<p>Conductor pulls first lever (79' east of east side crosswalk) to lift the cable. Cable Car grabs cable but does not fully grip it yet.</p> <p>Preempt sequence activated and starts the track clearance state – meaning WB and WBLT will be green for 10 seconds before the transit signal turns to vertical lunar bar. An additional 26s is needed for conflicting movements to time out before the transit signal will change from red horizontal bar to vertical lunar bar.</p> <p>The transit signal will have 91 seconds to reach the checkout switch, 74' east from crosswalk, or 5' downhill from the lever pictured to the right.²</p>		


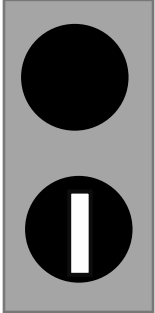

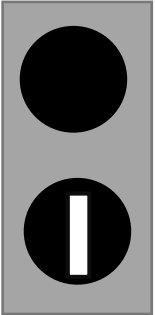
¹ Timestamps are approximate and may vary pending additional field testing with Cable Car Division.

² Based on min dwell time of 1 second and checkout limit of 90 seconds on the proposed timing card.

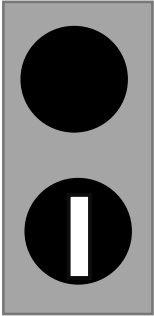
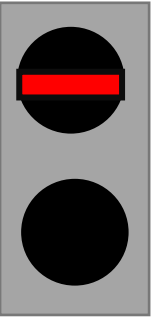
Proposed Field Procedure with Timestamps

Timestamp ¹	Action	Image	Transit Signal Action
0:36	Conductor pulls second lever to activate track switch for right turn onto Hyde Street. Cable car is still waiting for clear indication from conductor and presence of clear traffic before fully gripping the cable to begin proceeding down the hill and around the curve.		
0:39	Cable car fully grips cable and proceeds downhill, westbound, towards the curve.		
0:41	Cable car reaches exit switch, triggering the preempt sequence to dwell for an additional 50 seconds.		

Proposed Field Procedure with Timestamps

Timestamp ¹	Action	Image	Transit Signal Action
0:49	<p>Cable car slowly proceeds through curve while maintaining full grip on the cable.</p> <p>8 seconds of dwell have elapsed.</p>		
1:14	<p>Cable car clears intersection and is approaching entrance switch for preempt at Hyde / Sacramento. The preempt at California / Hyde will time out independently.</p> <p>33 seconds of dwell have elapsed.</p> <p>17 seconds of dwell, 6 seconds of flashing vertical lunar bar, and 3 seconds of all-red remain. This additional time allows buffer as there is no exit switch to detect when the cable car has finished.</p>		

Proposed Field Procedure with Timestamps

Timestamp ¹	Action	Image	Transit Signal Action
1:51	Dwell has finished after 50 seconds, and transit signal begins flashing lunar bar for 6 seconds.		 A vertical traffic signal with two circular lenses. The top lens is solid black. The bottom lens contains a white vertical bar, representing a flashing lunar bar.
1:57	Transit signal has completed flashing lunar bar and is now displaying the red horizontal bar. Preempt sequence has ended.		 A vertical traffic signal with two circular lenses. The top lens contains a red horizontal bar. The bottom lens is solid black.

Existing Grade Map

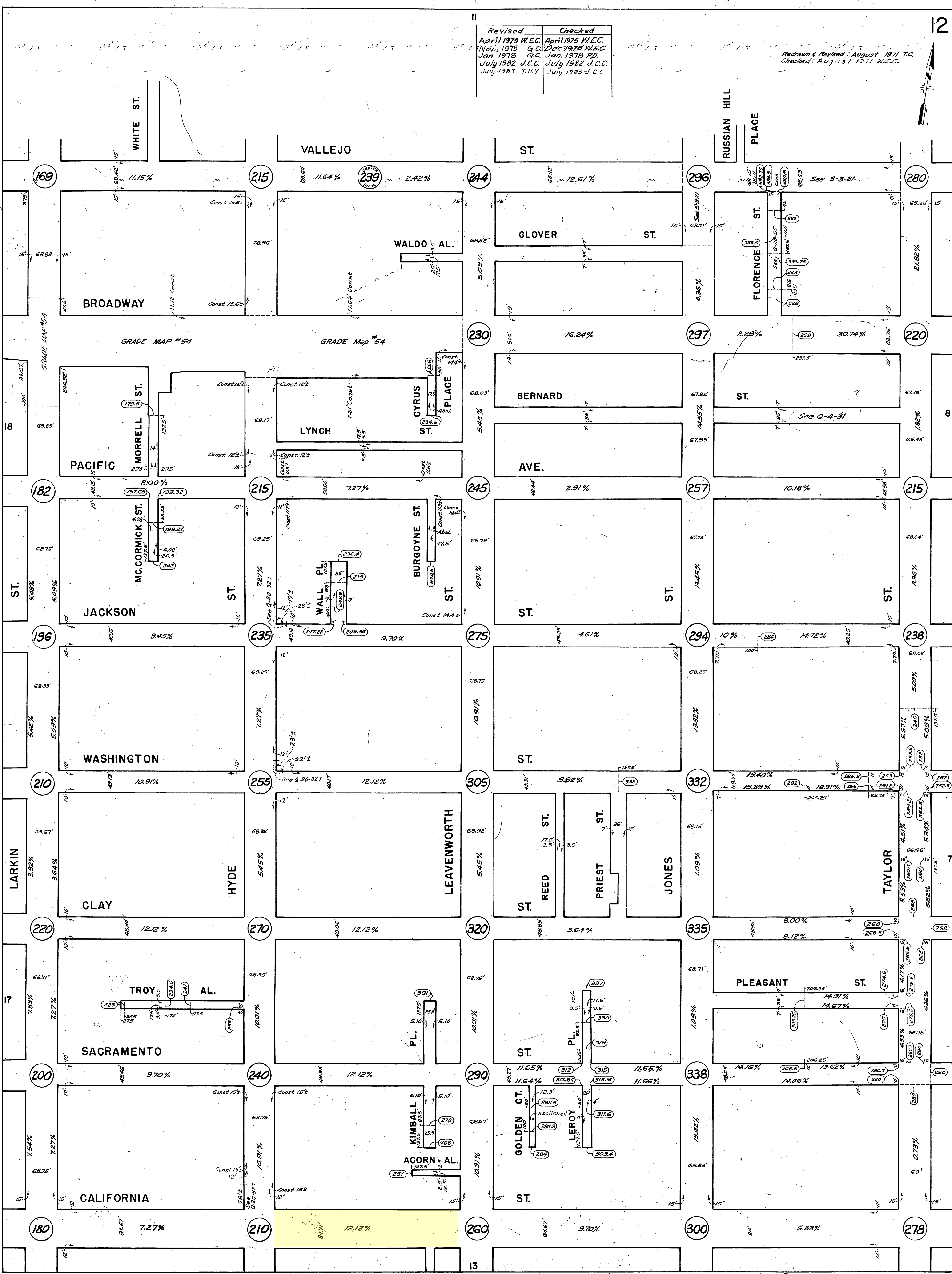
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Revised	Checked
April 1975 W.E.C.	April 1975 W.E.C.
Nov. 1975 G.C.	Dec. 1975 W.E.C.
Jan. 1978 G.C.	Jan. 1978 R.D.
July 1982 J.C.C.	July 1982 J.C.C.
July 1983 Y.H.Y.	July 1983 J.C.C.

Redrawn & Revised: August 1971 T.C.
Checked: August 1971 W.E.C.



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