Southern California Edison
WODUP A.13-10-020

DATA REQUEST SET A.13-10-020 WODUP ED-SCE-17

To: ENERGY DIVISION
Prepared by: Nicole Di Jerlando
Title: Project Manager
Dated: 10/29/2015

Question PD-35 :

During PEA review, the EIR/EIS team submitted data requests to SCE asking for its construction schedule and timing of possible line outages. SCE's Response to Completeness Item 18 stated,

> The specific sequence in which new towers and conductor will be installed and existing towers and conductor will be removed cannot be fully defined at this time due to several factors including final tower locations (to be defined as part of final engineering), line outage availability/duration, the extent of shoo-fly configurations, construction contractor resource availability, and potential environmental constraints.

The Draft EIR/EIS Project Description (in Section B.3.3.13), which has been reviewed several times and approved by SCE, states,

> Specific shoo-fly locations cannot be determined until final design and engineering efforts are completed and the construction sequencing plans are finalized.

However, SCE's direct testimony filed on October 27, 2015 (pages 25-26) states the following (underlining added):

> Because the four circuits in the WOD corridor are currently operating at full capacity, SCE designed the construction plan for the Proposed Project specifically to limit the amount and duration of required outages. More importantly, the Proposed Project construction plan limits both the number of double-line outages (de-energization of two circuits at one time) and the duration of such outages. SCE believes it could safely construct the Proposed Project while limiting any required double-line outages to less than 24 hours in duration. In contrast, in order to safely construct the Phased Build Alternative, SCE would need to take multiple line outages of up to six months in duration. This means that for up to six months at a time, multiple times during the four-plus-year construction schedule, two or more of the four circuits in the WOD corridor would be out of service. In order to limit the need for extended multiple line outages associated with the Phased Build Alternative, SCE would likely propose to significantly increase the number of temporary structures used during construction. Assuming that there is adequate space and suitable topography to physically construct the increased number of temporary structures within the WOD right of way, the number of multiple line outages needed for the Phased Build Alternative could be reduced, but not entirely eliminated.

Request: Please provide a copy of the construction plan referenced in the testimony statement

above. It appears that the SCE construction plan includes illustration of (a) how the double-line outages are identified and how long they would last, and (b) the number of temporary structures (shoo-flies) required to construct the Proposed Project. This data can be compared with the information to be provided in the following request (ALT-29).

Response to Question PD-35 :

The attached conceptual construction plans contain information that is consistent with the comments SCE provided to the DEIR/DEIS. The three attachments are as follows:

- Conceptual Construction Plan for SCE's Proposed Project
- Conceptual Construction Plan for the Phased Build Alternative - Multiple Line Outage Scenario
- Conceptual Construction Plan for the Phased Build Alternative - Shoo Fly Scenario

The conceptual construction plans were created to assist SCE with comparing the differences between SCE's Proposed Project and the Phased Build Alternative. These conceptual construction plans are subject to change based on, for example, final tower location, line outage availability/duration (which will not be known until SCE puts in the request to CAISO), the extent of shoo-fly configurations, construction contractor resource availability, and potential environmental constraints such as nesting birds. As explained in SCE's comments to the DEIR/DEIS, the Conceptual Construction Plan for SCE's Proposed Project limits the number of shoo-fly's and limits the amount and duration of required CAISO outages.

The Conceptual Construction Plan for the Phased Build Alternative - Multiple Line Outage Scenario identifies the need for an increase number of outage requests for multiple lines at a time over an extended period of time. As SCE has stated in testimony, responses to data requests and comments to the DEIR/DEIS, the ability to be granted a multiple line outage for an extended amount of time by the CAISO is not known at this time, further emphasizing the prudent planning for SCE's Proposed Project that would ultimately limit the amount and duration of primarily single line outages.

The Conceptual Construction Plan for the Phased Build Alternative - Shoo Fly Scenario identifies the need for an increase in the number of shoo-fly structures when compared to SCE's Proposed Project based on the alternative requiring the existing double circuit structures to be utilized in their existing locations. The Phased Build Alternative - Shoo Fly Scenario also reduces (but does not fully eliminate) the need for double line outages. Additionally, although SCE has identified the need and approximate location for shoo-fly structures within this conceptual construction plan, SCE has not established the feasibility to construct shoo fly structures in these locations, and it may not be possible to construct due to topography and other limitations of adjacent uses to the existing ROW.

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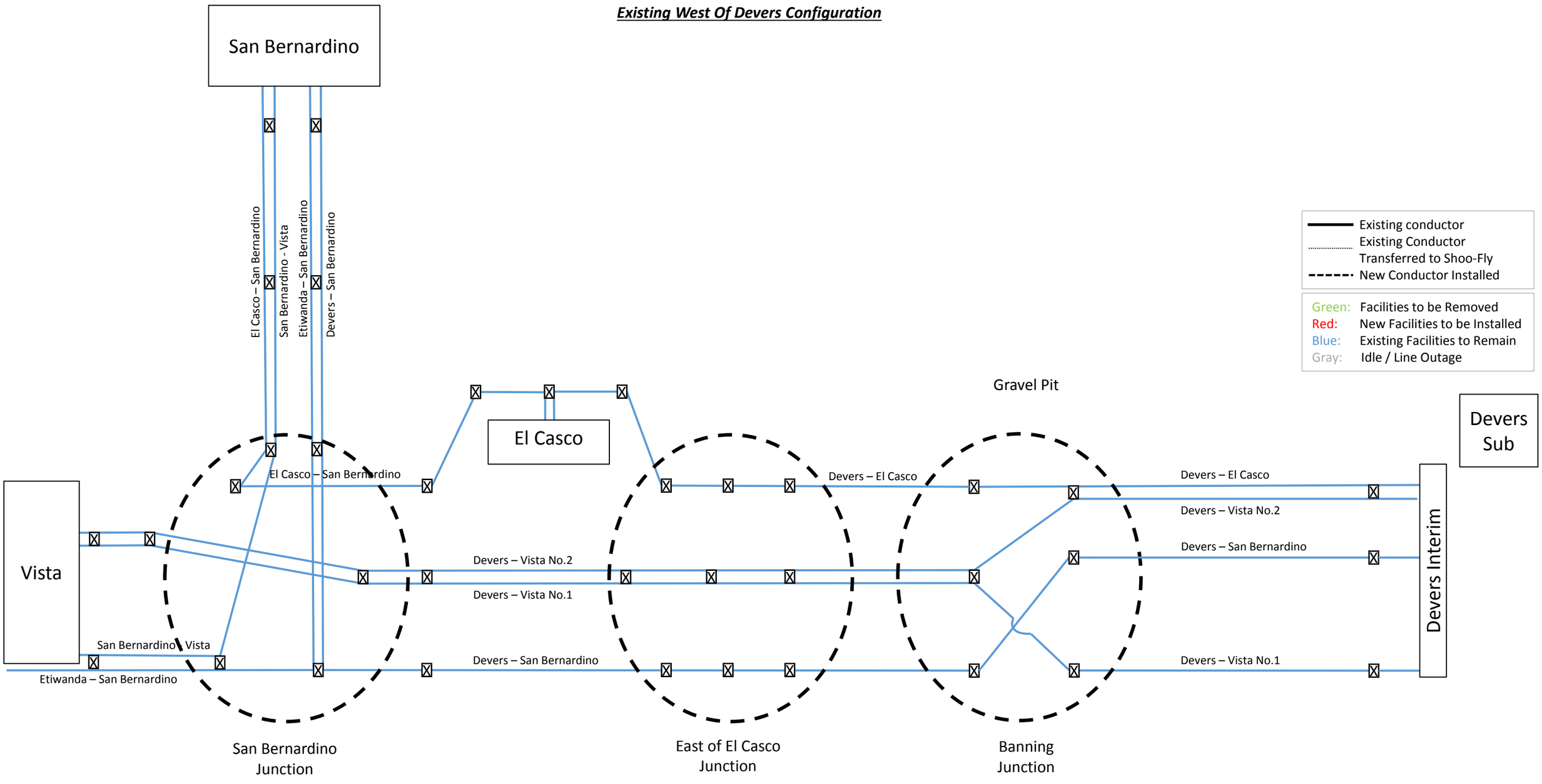
Existing West Of Devers Configuration



Existing conductor
Existing Conductor Transferred to Shoo-Fly
New Conductor Installed

Green: Facilities to be Removed
Red: New Facilities to be Installed
Blue: Existing Facilities to Remain
Gray: Idle / Line Outage

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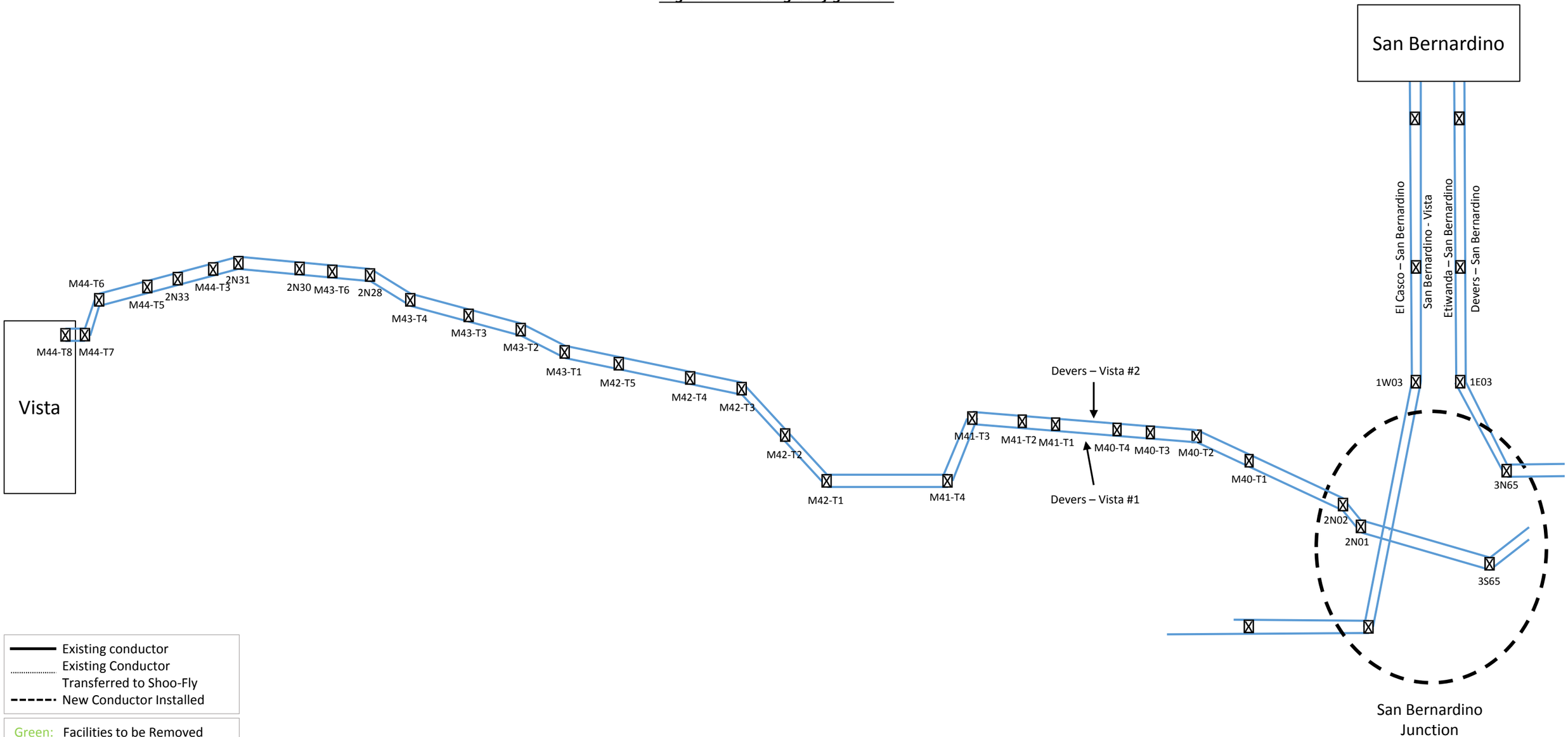
Segment 2 Existing Configuration



Existing conductor
Existing Conductor Transferred to Shoo-Fly
New Conductor Installed

Green: Facilities to be Removed
Red: New Facilities to be Installed
Blue: Existing Facilities to Remain
Gray: Idle / Line Outage

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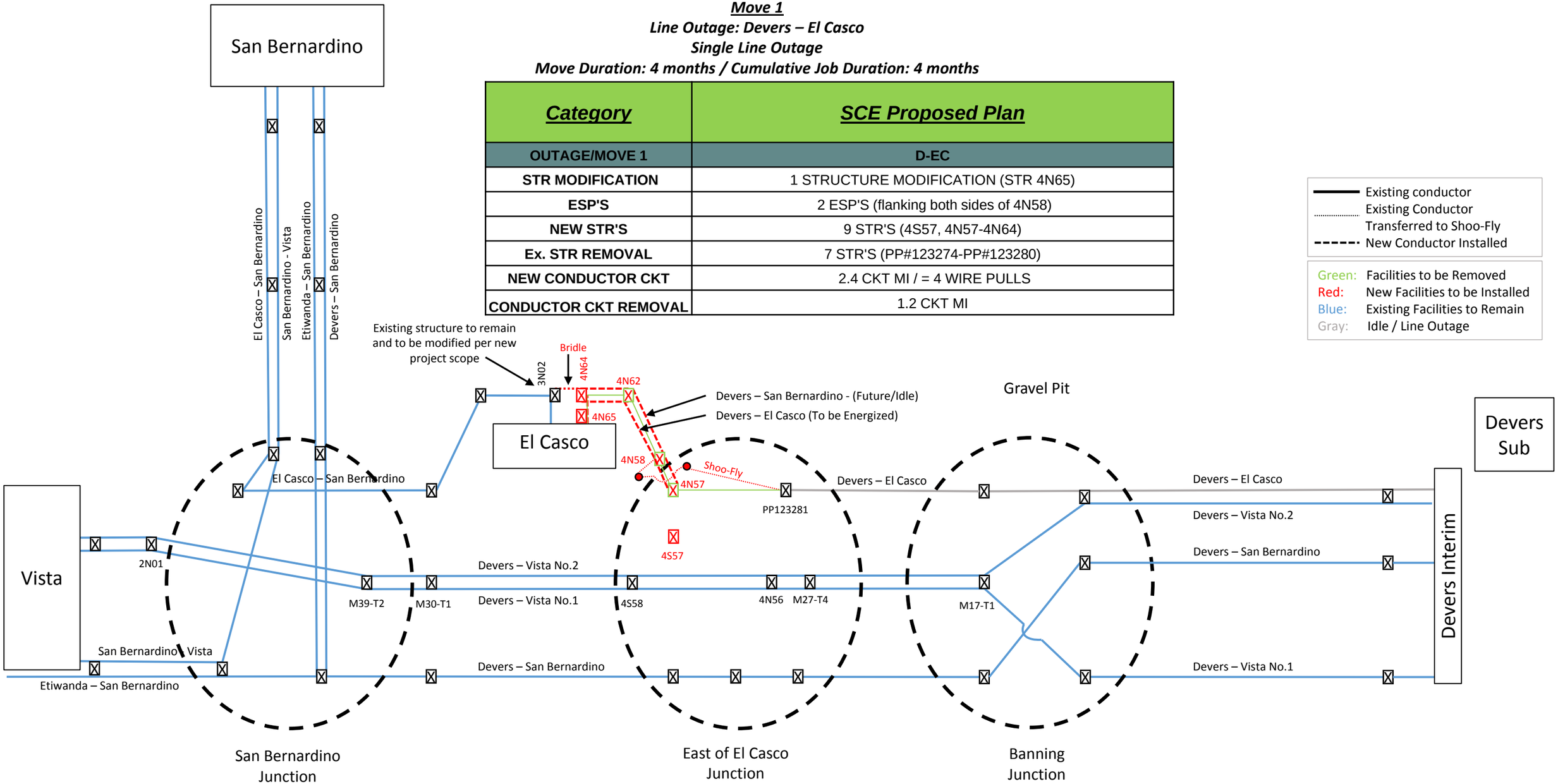
Move 1
Line Outage: Devers – El Casco
Single Line Outage
Move Duration: 4 months / Cumulative Job Duration: 4 months

Category	***SCE Proposed Plan***
OUTAGE/MOVE 1	**D-EC**
STR MODIFICATION	1 STRUCTURE MODIFICATION (STR 4N65)
ESP'S	2 ESP'S (flanking both sides of 4N58)
NEW STR'S	9 STR'S (4S57, 4N57-4N64)
Ex. STR REMOVAL	7 STR'S (PP#123274-PP#123280)
NEW CONDUCTOR CKT	2.4 CKT MI / = 4 WIRE PULLS
CONDUCTOR CKT REMOVAL	1.2 CKT MI



Existing conductor
Existing Conductor Transferred to Shoo-Fly
New Conductor Installed

Green: Facilities to be Removed
Red: New Facilities to be Installed
Blue: Existing Facilities to Remain
Gray: Idle / Line Outage

East of El Casco Junction is a congested area of the ROW where the lines need to swap from their existing configuration to the proposed configuration ultimately having the Devers – San Bernardino circuit moving from the far South side of the ROW to the far North side. This move removes the existing single circuit El Casco towers and completes the construction of the double circuit towers from the East of El Casco junction to El Casco Substation setting up the new open position for the Devers – San Bernardino circuit to be energized in a future move. The El Casco circuit will be re-energized on the new structures from 4N58 to El Casco Substation.

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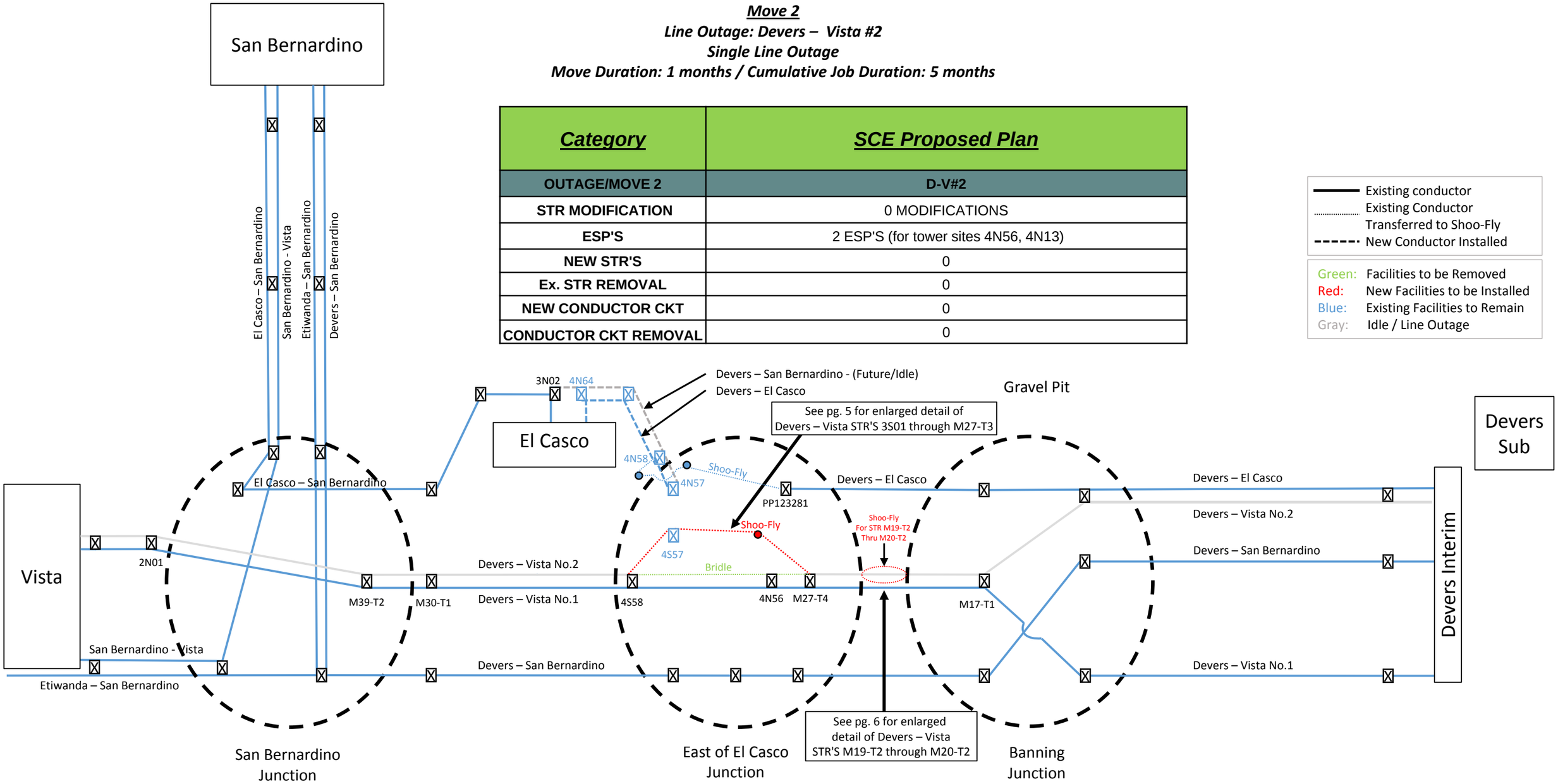
Move 2
Line Outage: Devers – Vista #2
Single Line Outage
Move Duration: 1 months / Cumulative Job Duration: 5 months

Category	***SCE Proposed Plan***
OUTAGE/MOVE 2	**D-V#2**
STR MODIFICATION	0 MODIFICATIONS
ESP'S	2 ESP'S (for tower sites 4N56, 4N13)
NEW STR'S	0
Ex. STR REMOVAL	0
NEW CONDUCTOR CKT	0
CONDUCTOR CKT REMOVAL	0



Existing conductor
Existing Conductor Transferred to Shoo-Fly
New Conductor Installed

Green: Facilities to be Removed
Red: New Facilities to be Installed
Blue: Existing Facilities to Remain
Gray: Idle / Line Outage

The East of El Casco Junction also is the site where the existing Devers – Vista circuits are utilizing a future tower proposed to ultimately become the Devers – San Bernardino and Devers – El Casco circuits (Structure 4N56). In order to free up the existing 4N56 structure for this transition the existing Devers – Vista circuit (In this case the D-V #2) will be shoo-flied to open up the North position of the 4N56 structure. This same scenario also presents itself at structure 4N13 where the Devers – Vista #1 and #2 circuits will need to be shoo-flied to open the tower up for the future D-SB and D-EC circuits.

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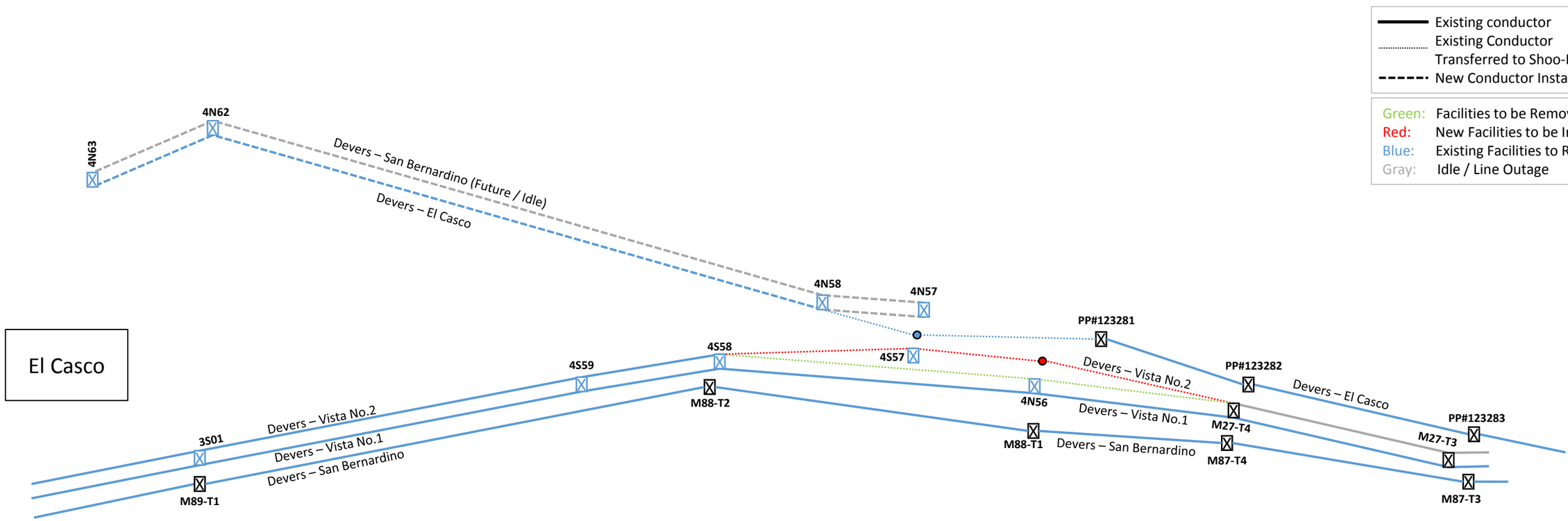
Move 2
Devers – Vista #2



This detail represents the Devers – Vista #2 circuit being transferred from the North position of the 4N56 structure to the new 4S57 (installed in previous move) and also to a shoo-fly structure at 4N56 opening up the North position on 4N56 for its future circuits (this position will ultimately be occupied by the D-SB circuit in the final configuration).

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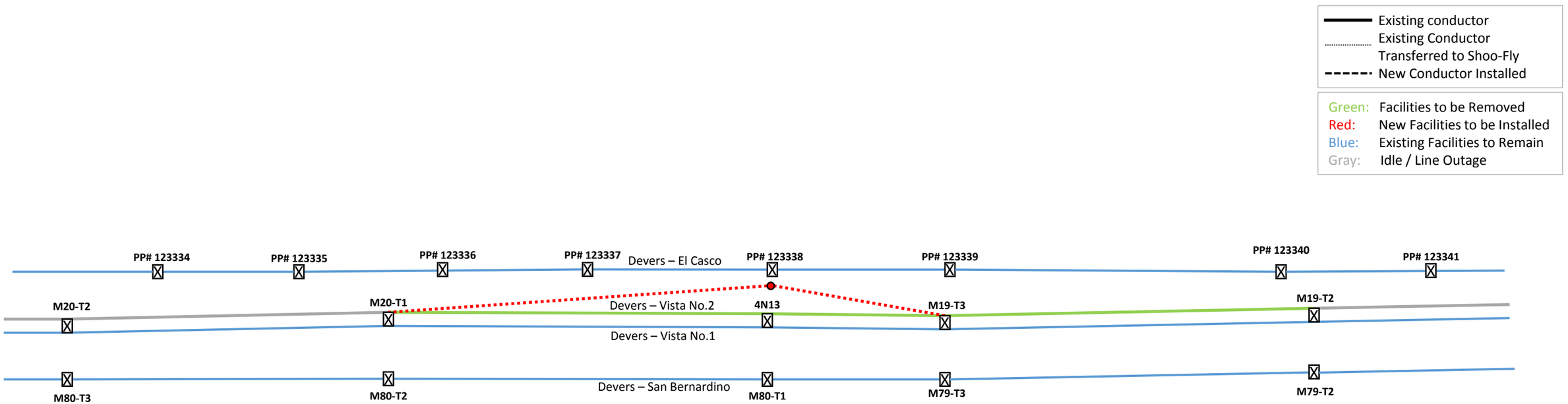
Move 2

Devers – Vista #2

Devers – Vista Structures M19-T2 through M20-T2



Existing conductor
Existing Conductor Transferred to Shoo-Fly
New Conductor Installed

Green: Facilities to be Removed
Red: New Facilities to be Installed
Blue: Existing Facilities to Remain
Gray: Idle / Line Outage

This detail represents the Devers – Vista #2 circuit being transferred from the North position of the 4N13 structure to shoo-flies at structures opening up the North position on 4N13 for its future circuits (this position will ultimately be occupied by the D-SB circuit in the final configuration).

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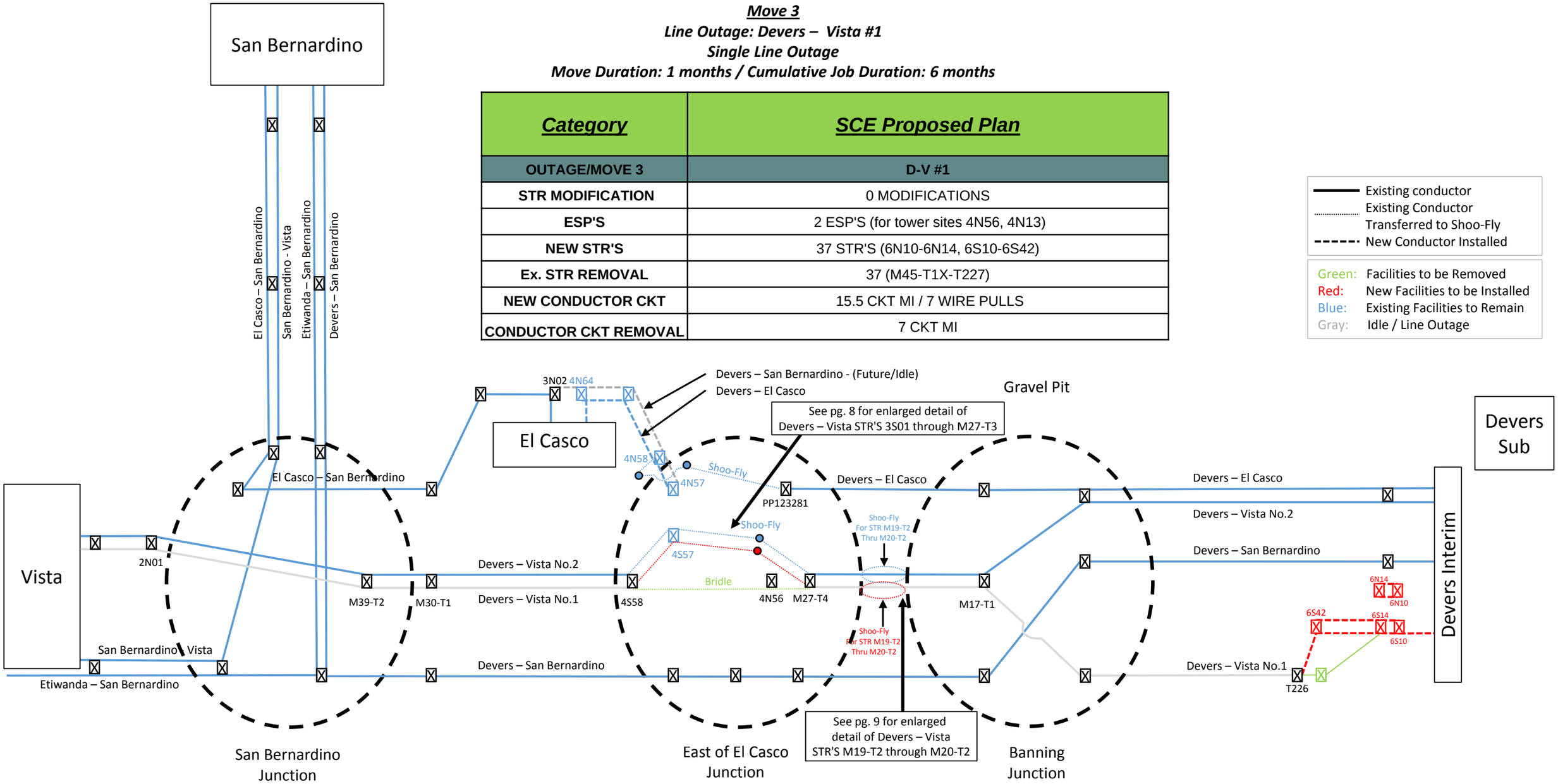
Move 3
Line Outage: Devers – Vista #1
Single Line Outage
Move Duration: 1 months / Cumulative Job Duration: 6 months

Category	***SCE Proposed Plan***
OUTAGE/MOVE 3	**D-V #1**
STR MODIFICATION	0 MODIFICATIONS
ESP'S	2 ESP'S (for tower sites 4N56, 4N13)
NEW STR'S	37 STR'S (6N10-6N14, 6S10-6S42)
Ex. STR REMOVAL	37 (M45-T1X-T227)
NEW CONDUCTOR CKT	15.5 CKT MI / 7 WIRE PULLS
CONDUCTOR CKT REMOVAL	7 CKT MI



Existing conductor
Existing Conductor Transferred to Shoo-Fly
New Conductor Installed

Green: Facilities to be Removed
Red: New Facilities to be Installed
Blue: Existing Facilities to Remain
Gray: Idle / Line Outage

During Move 3 the Devers – Vista #1 will be transferred off of structures 4N56 and 4N13 similar to the scope performed in the previous Devers – Vista #2 (Move 2) sequence which will then open up the South position on each respective tower and free them up for the future locations of the D-SB and D-EC circuits. Also during this move the removal of the old single circuit Devers – Vista #1 structures will occur in Segment 6. Following their removal the new double circuit structures will be installed and the South position of the new South towers between 6S10 and 6S42 will be energized with the Devers – Vista #1.

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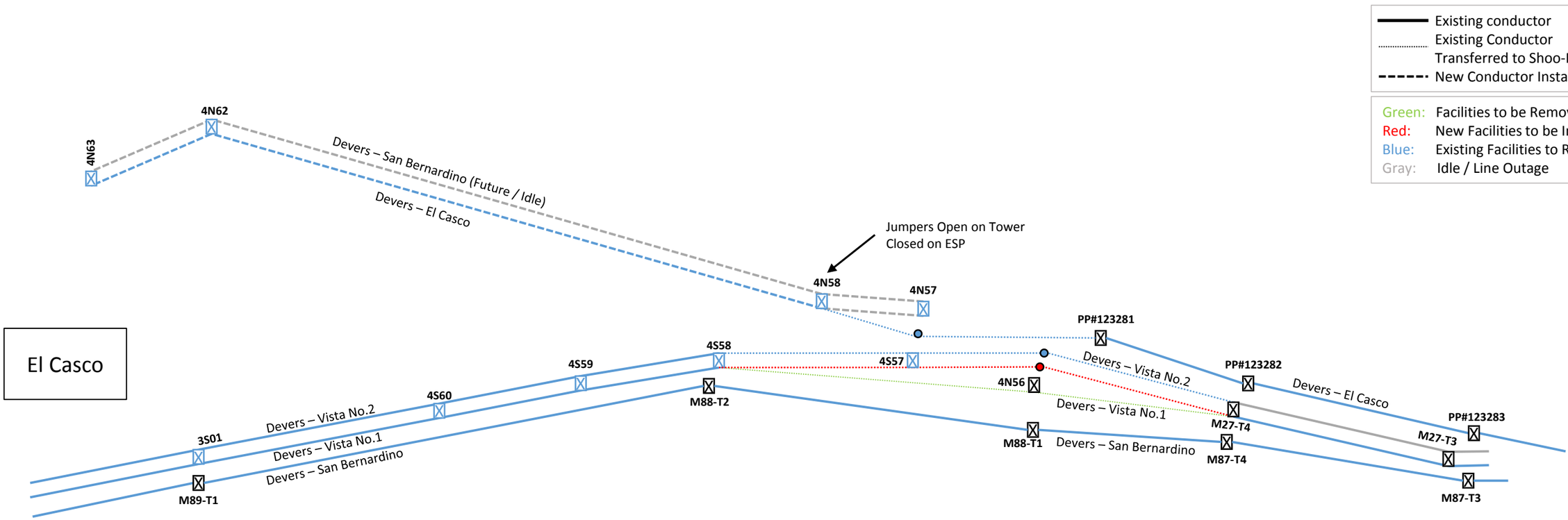
Move 3

Devers – Vista #1

Devers – Vista Structures 3S01 through M27-T3



This detail represents the Devers – Vista #1 circuit being transferred from the South position of the 4N56 structure to the new 4S57 (installed in previous move) and also to a shoo-fly structure at 4N56 opening up the South position on 4N56 for its future circuits (this position will ultimately be occupied by the D-EC circuit in the final configuration).

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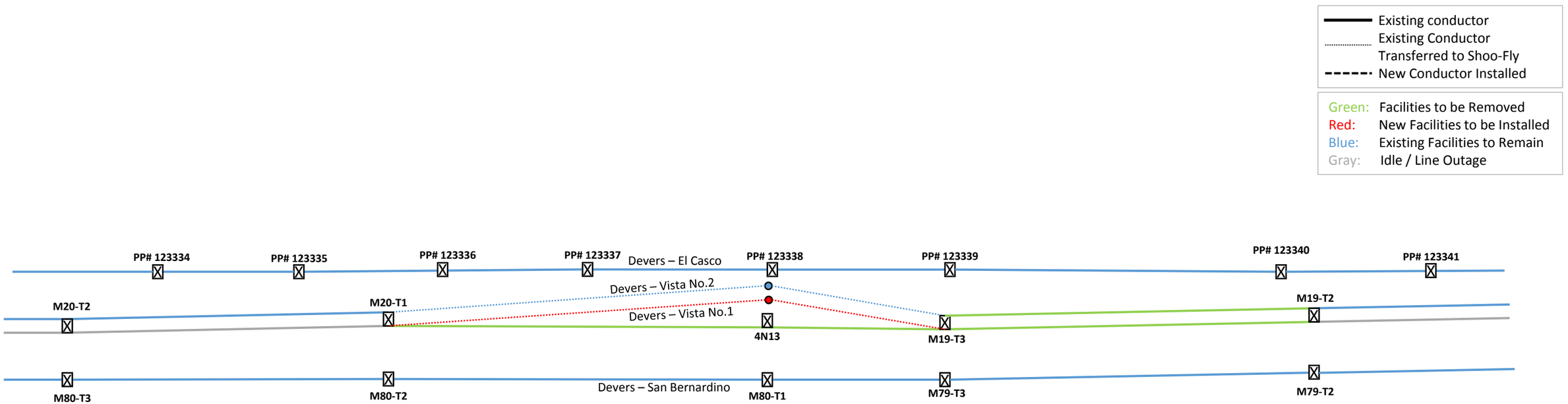
Move 3
Devers – Vista #1
Devers – Vista Structures M19-T2 through M20-T2



Existing conductor
Existing Conductor Transferred to Shoo-Fly
New Conductor Installed

Green: Facilities to be Removed
Red: New Facilities to be Installed
Blue: Existing Facilities to Remain
Gray: Idle / Line Outage

This detail represents the Devers – Vista #1 circuit being transferred from the South position of the 4N13 structure to shoo-flies at structures opening up the South position on 4N13 for its future circuits (this position will ultimately be occupied by the D-EC circuit in the final configuration).

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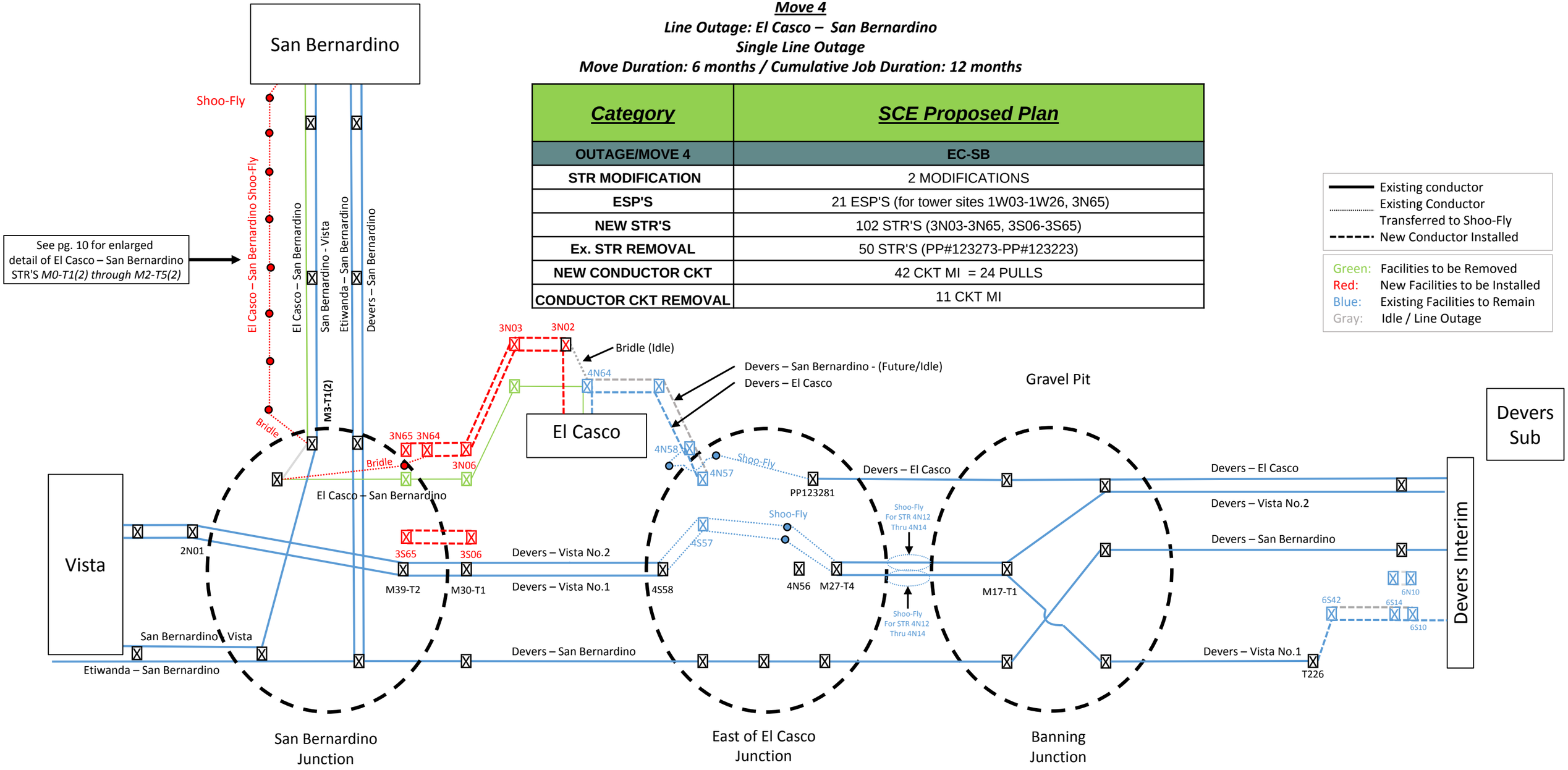
Move 4
Line Outage: El Casco – San Bernardino
Single Line Outage
Move Duration: 6 months / Cumulative Job Duration: 12 months

Category	***SCE Proposed Plan***
OUTAGE/MOVE 4	**EC-SB**
STR MODIFICATION	2 MODIFICATIONS
ESP'S	21 ESP'S (for tower sites 1W03-1W26, 3N65)
NEW STR'S	102 STR'S (3N03-3N65, 3S06-3S65)
Ex. STR REMOVAL	50 STR'S (PP#123273-PP#123223)
NEW CONDUCTOR CKT	42 CKT MI = 24 PULLS
CONDUCTOR CKT REMOVAL	11 CKT MI



Existing conductor
Existing Conductor Transferred to Shoo-Fly
New Conductor Installed

Green: Facilities to be Removed
Red: New Facilities to be Installed
Blue: Existing Facilities to Remain
Gray: Idle / Line Outage

During Move 4 and with the El Casco – San Bernardino circuit outage the single circuit EC-SB structures within Segment 3 may be removed opening up the space for the new North and South double circuit towers to be constructed. This move completes the majority of Segment 3 with new structures and conductor. Also following the removal of the 66kV circuit within Segment 1 (performed under separate 66kV outage and prior to this sequence) the shoo-fly corridor within Segment 1 will be constructed. By transferring the El Casco – San Bernardino circuit to the shoo-flies the existing west structures will only have one (1) remaining circuit energized (SB – V) which will set up the future move to remove the existing west and construct the new west towers in this sequence.

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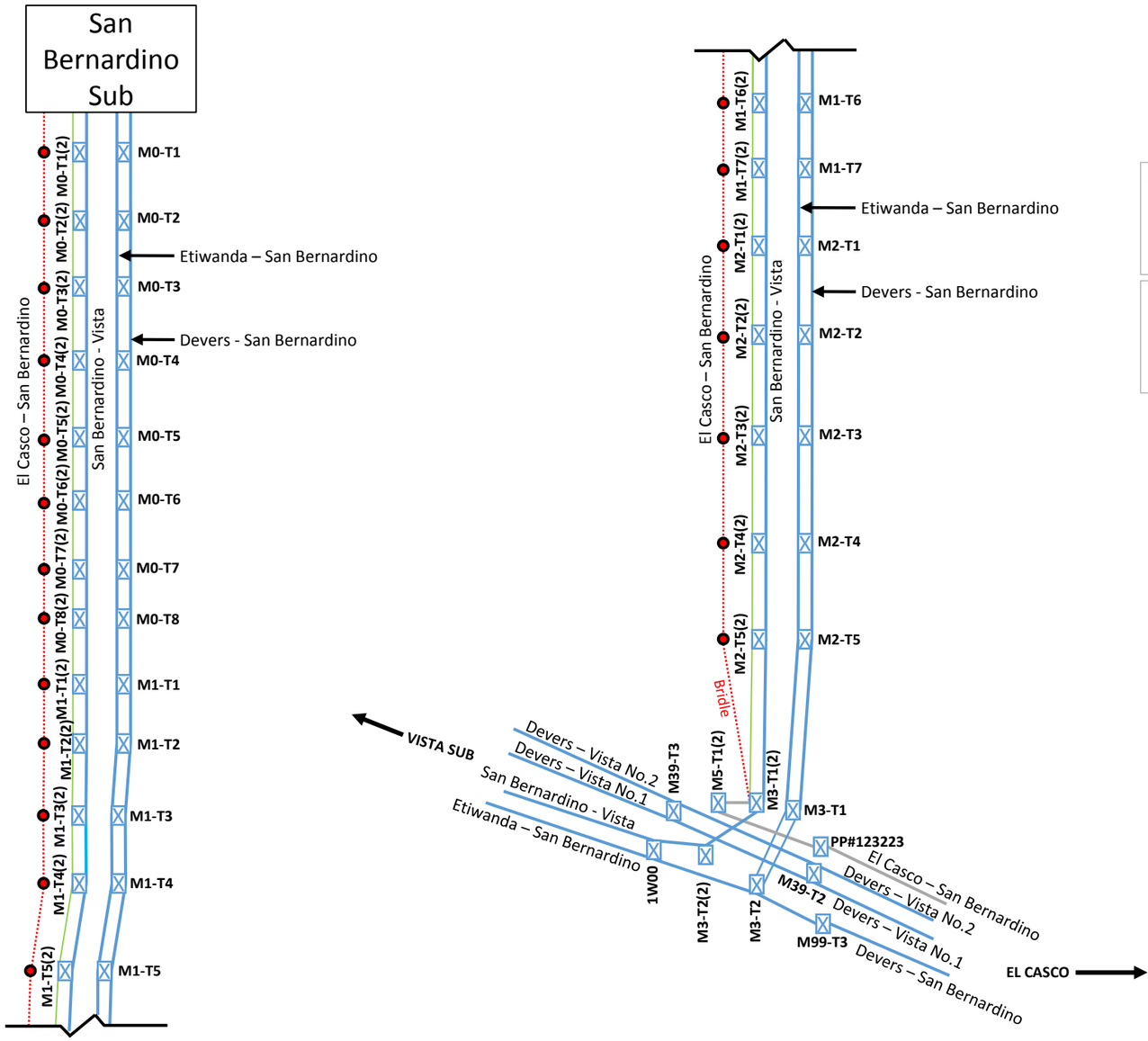
Move 4

El Casco – San Bernardino

Enlarged El Casco – San Bernardino Structures M0-T1(2) through M2-T5



This diagram depicts the shoo-flies that will be installed to the West side of the Segment 1 corridor. The shoo – flies will be energized with the El Casco – San Bernardino circuit ultimately leaving the existing West structures with one (1) remaining energized circuit. This shoo-fly will allow for the removal of existing and construction of new structures in Segment 1 to be performed on single line outages (this strategy limits the outage impacts of the WOD Proposed Project during the replacement of the Segment 1 structures). The strategy of transferring of the 3 remaining circuits between the two (2) double circuit structures are detailed in the preceding move program found within this document.

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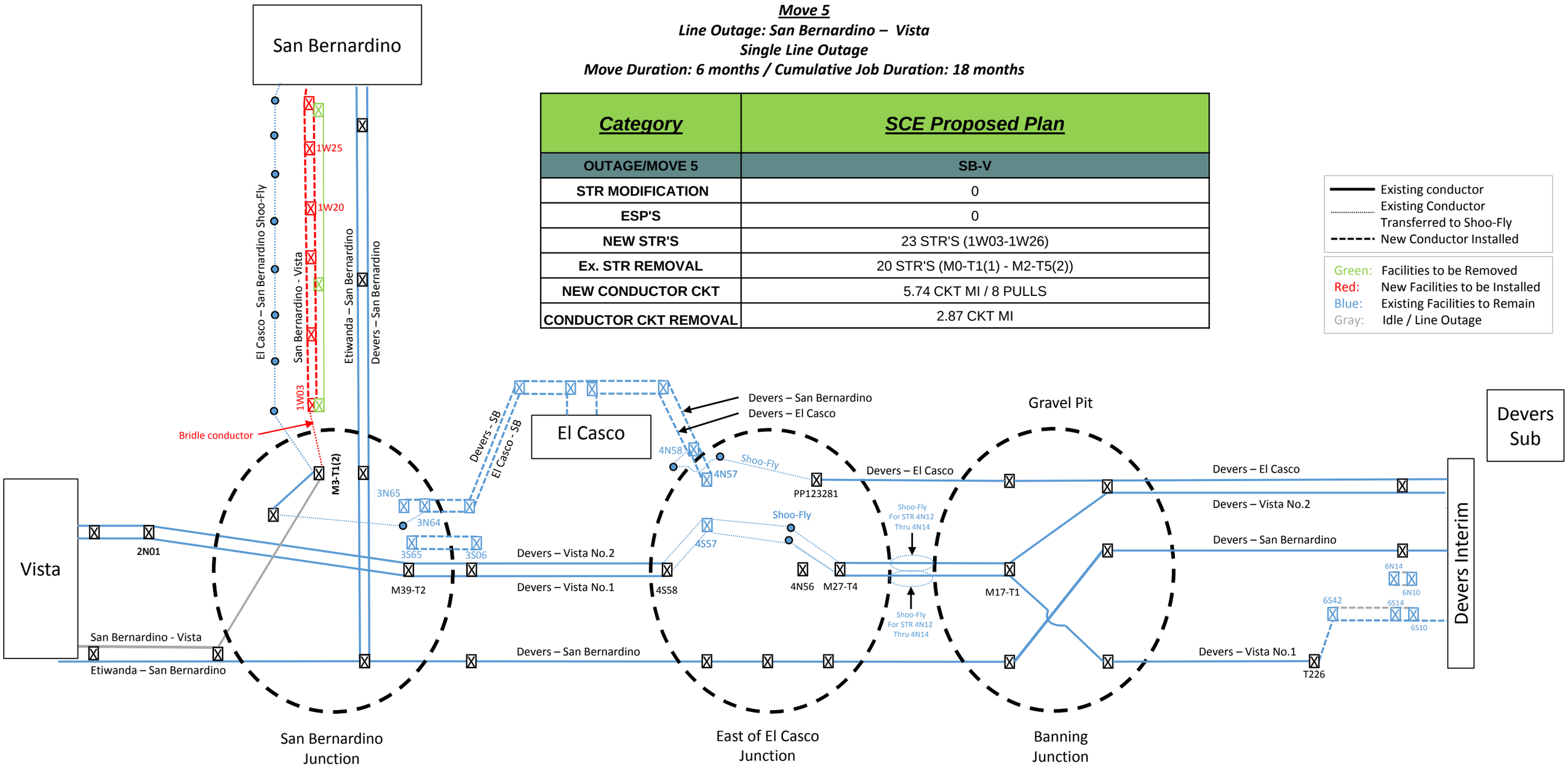
Move 5
Line Outage: San Bernardino – Vista
Single Line Outage
Move Duration: 6 months / Cumulative Job Duration: 18 months

Category	SCE Proposed Plan
OUTAGE/MOVE 5	SB-V
STR MODIFICATION	0
ESP'S	0
NEW STR'S	23 STR'S (1W03-1W26)
Ex. STR REMOVAL	20 STR'S (M0-T1(1) - M2-T5(2))
NEW CONDUCTOR CKT	5.74 CKT MI / 8 PULLS
CONDUCTOR CKT REMOVAL	2.87 CKT MI



Existing conductor
Existing Conductor Transferred to Shoo-Fly
New Conductor Installed

Green: Facilities to be Removed
Red: New Facilities to be Installed
Blue: Existing Facilities to Remain
Gray: Idle / Line Outage

Move 5 takes the San Bernardino – Vista circuit out of service and de-energizes the West towers within Segment 1 allowing for removal and construction of the existing and new structures to be performed under this single line outage. Upon completion of the work scope within this move the towers between 1W03 and San Bernardino Substation will be erected and strung with the new 2B – 1590 Lapwing conductor. Following the completion of the construction in this move the San Bernardino – Vista circuit will be re-located to the West position of the new West tower and in its final configuration.

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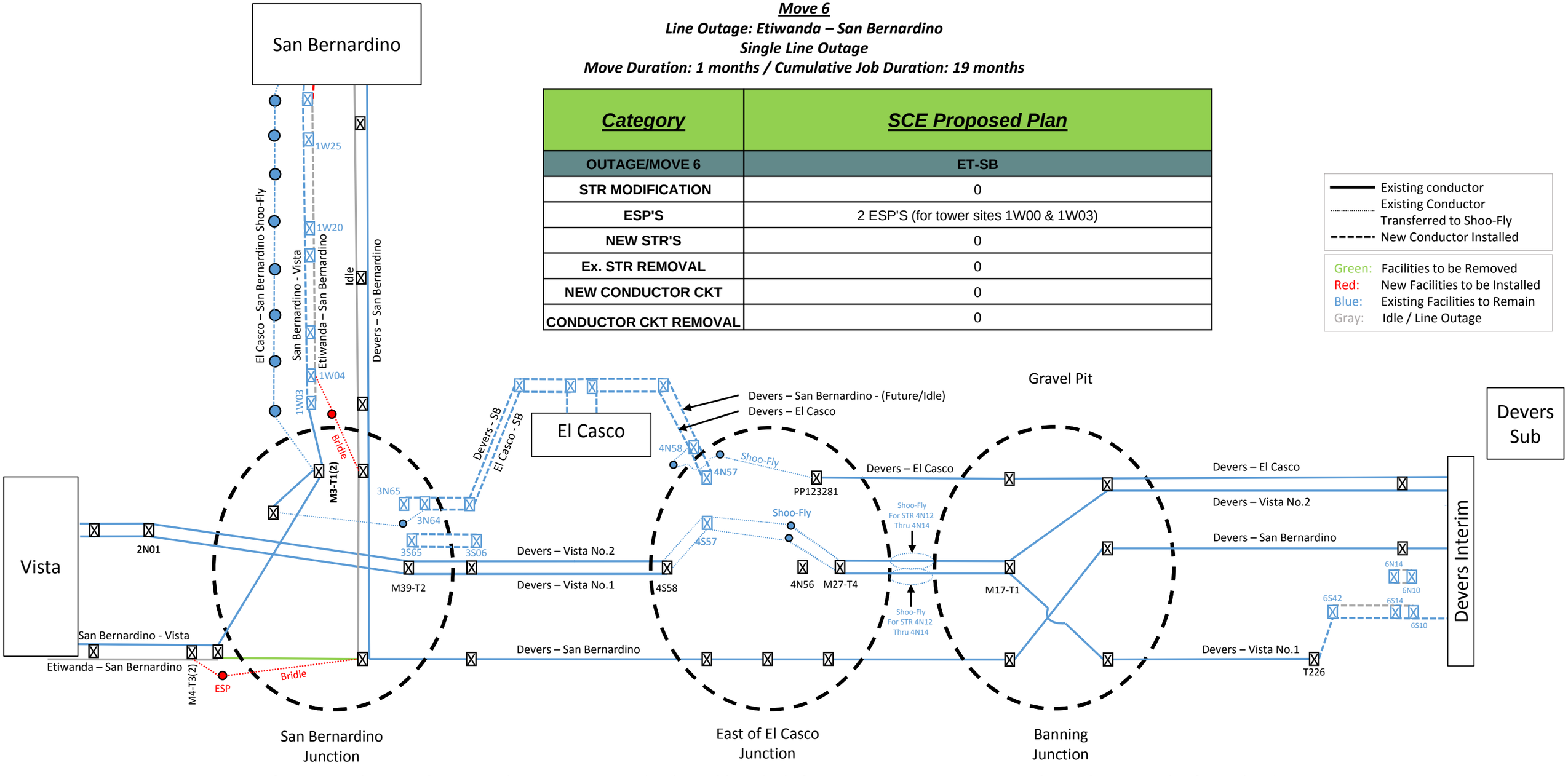
Move 6
Line Outage: Etiwanda – San Bernardino
Single Line Outage
Move Duration: 1 months / Cumulative Job Duration: 19 months

Category	***SCE Proposed Plan***
OUTAGE/MOVE 6	**ET-SB**
STR MODIFICATION	0
ESP'S	2 ESP'S (for tower sites 1W00 & 1W03)
NEW STR'S	0
Ex. STR REMOVAL	0
NEW CONDUCTOR CKT	0
CONDUCTOR CKT REMOVAL	0



Existing conductor
Existing Conductor Transferred to Shoo-Fly
New Conductor Installed

Green: Facilities to be Removed
Red: New Facilities to be Installed
Blue: Existing Facilities to Remain
Gray: Idle / Line Outage

Move 6 takes the Etiwanda – San Bernardino outage and transfers its position with in Segment 1 (between structures 1W04 and San Bernardino Substation) from the West position of the existing East structures to the East position of the new West structures (installed in the previous move) and ultimately into its final configuration for this section. Also by transferring this circuit to the West tower this move has also accomplished isolation of the East towers to allow for East tower removal and construction to be performed during a single line outage in a future move.

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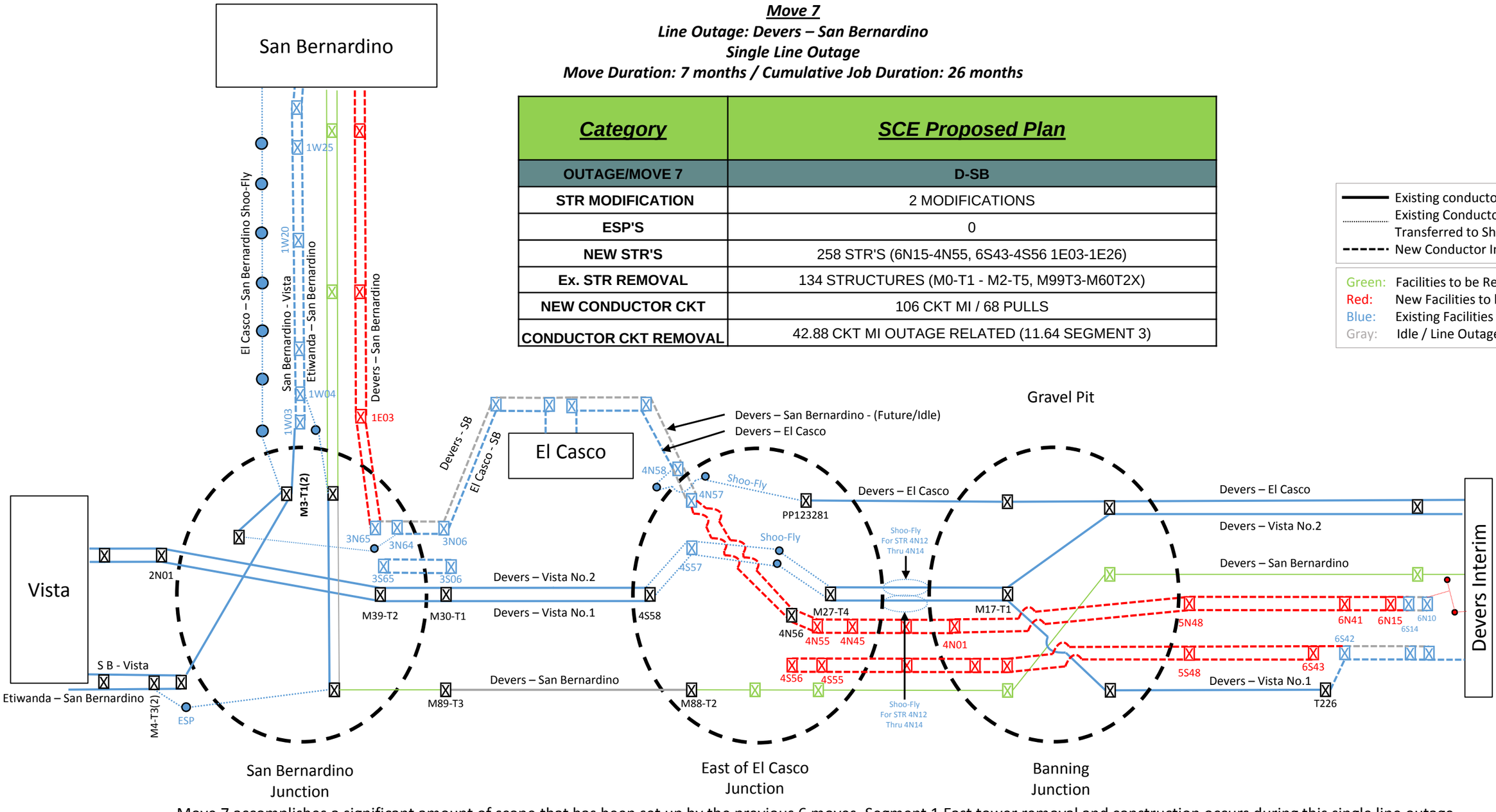
Move 7
Line Outage: Devers – San Bernardino
Single Line Outage
Move Duration: 7 months / Cumulative Job Duration: 26 months

Category	***SCE Proposed Plan***
OUTAGE/MOVE 7	**D-SB**
STR MODIFICATION	2 MODIFICATIONS
ESP'S	0
NEW STR'S	258 STR'S (6N15-4N55, 6S43-4S56 1E03-1E26)
Ex. STR REMOVAL	134 STRUCTURES (M0-T1 - M2-T5, M99T3-M60T2X)
NEW CONDUCTOR CKT	106 CKT MI / 68 PULLS
CONDUCTOR CKT REMOVAL	42.88 CKT MI OUTAGE RELATED (11.64 SEGMENT 3)



Existing conductor
Existing Conductor Transferred to Shoo-Fly
New Conductor Installed

Green: Facilities to be Removed
Red: New Facilities to be Installed
Blue: Existing Facilities to Remain
Gray: Idle / Line Outage

Move 7 accomplishes a significant amount of scope that has been set up by the previous 6 moves. Segment 1 East tower removal and construction occurs during this single line outage since the towers had been isolated by the previous move, construction of the North and South towers between East of El Casco Junction and 6S43 and 6N15 are able to be constructed and strung once the single circuit Devers – San Bernardino structures have been removed during this outage. Upon completion of this single line outage move the majority of the West of Devers Upgrade scope has been completed with the exception of Segment 2, San Bernardino Junction clean up, East of El Casco cleanup and circuit configuration. By having the ability to perform significant scope under one (1) single line outage construction crews can streamline work and increase efficiencies without multiple start/stops.

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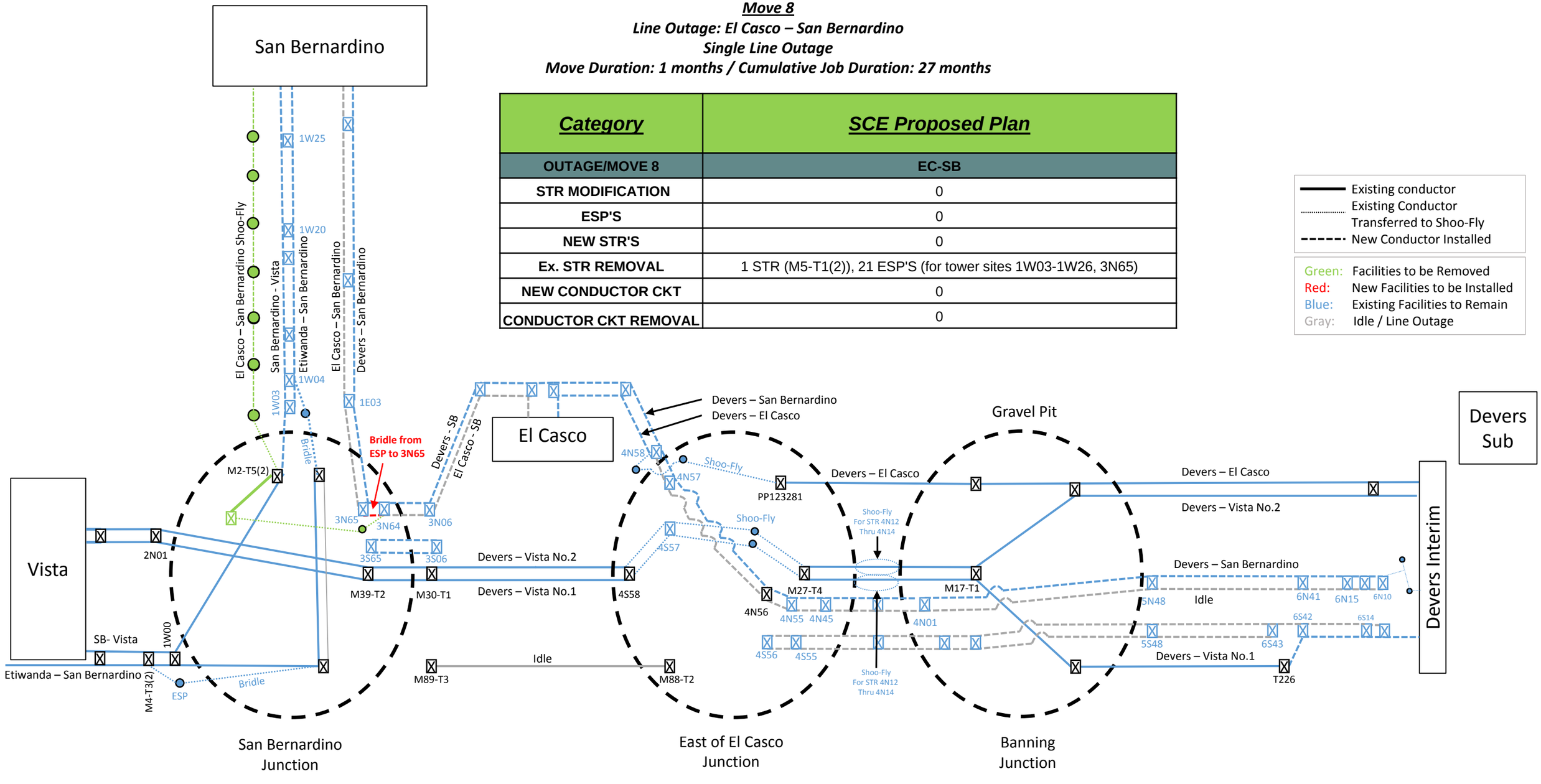
Move 8
Line Outage: El Casco – San Bernardino
Single Line Outage
Move Duration: 1 months / Cumulative Job Duration: 27 months

Category	***SCE Proposed Plan***
OUTAGE/MOVE 8	**EC-SB**
STR MODIFICATION	0
ESP'S	0
NEW STR'S	0
Ex. STR REMOVAL	1 STR (M5-T1(2)), 21 ESP'S (for tower sites 1W03-1W26, 3N65)
NEW CONDUCTOR CKT	0
CONDUCTOR CKT REMOVAL	0



Existing conductor
Existing Conductor Transferred to Shoo-Fly
New Conductor Installed

Green: Facilities to be Removed
Red: New Facilities to be Installed
Blue: Existing Facilities to Remain
Gray: Idle / Line Outage

Move 8 transfers the El Casco – San Bernardino circuit from the shoo-flies in Segment 1 to the new East structures in Segment 1 and completes the construction of this circuit. Following the tie in of the EC – SB circuit at 3N65 the shoo-flies in Segment 1 can be remove and construction within the residential portions of Segment 1 will be complete.

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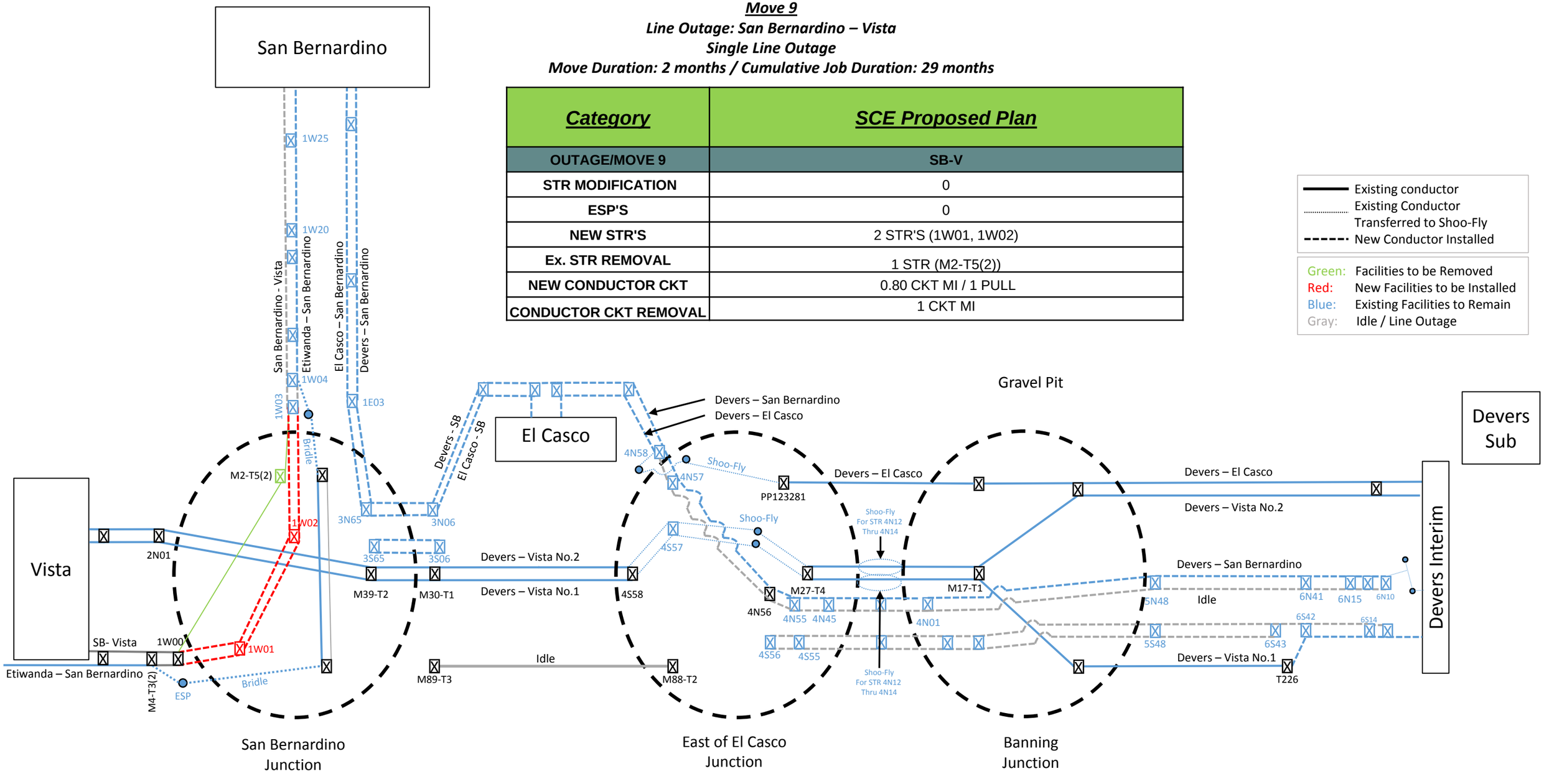
Move 9
Line Outage: San Bernardino – Vista
Single Line Outage
Move Duration: 2 months / Cumulative Job Duration: 29 months

Category	SCE Proposed Plan
OUTAGE/MOVE 9	SB-V
STR MODIFICATION	0
ESP'S	0
NEW STR'S	2 STR'S (1W01, 1W02)
Ex. STR REMOVAL	1 STR (M2-T5(2))
NEW CONDUCTOR CKT	0.80 CKT MI / 1 PULL
CONDUCTOR CKT REMOVAL	1 CKT MI



Existing conductor
Existing Conductor Transferred to Shoo-Fly
New Conductor Installed

Green: Facilities to be Removed
Red: New Facilities to be Installed
Blue: Existing Facilities to Remain
Gray: Idle / Line Outage

By taking the San Bernardino – Vista outage in move 9 construction crews will begin the cleanup of the San Bernardino junction by removing the existing single circuit towers and installing two (2) new double circuit structures and stringing the respective conductor. Following this move the remainder of the East towers in Segment 1 will be complete and the San Bernardino – Vista circuit will be also be completed as a result.

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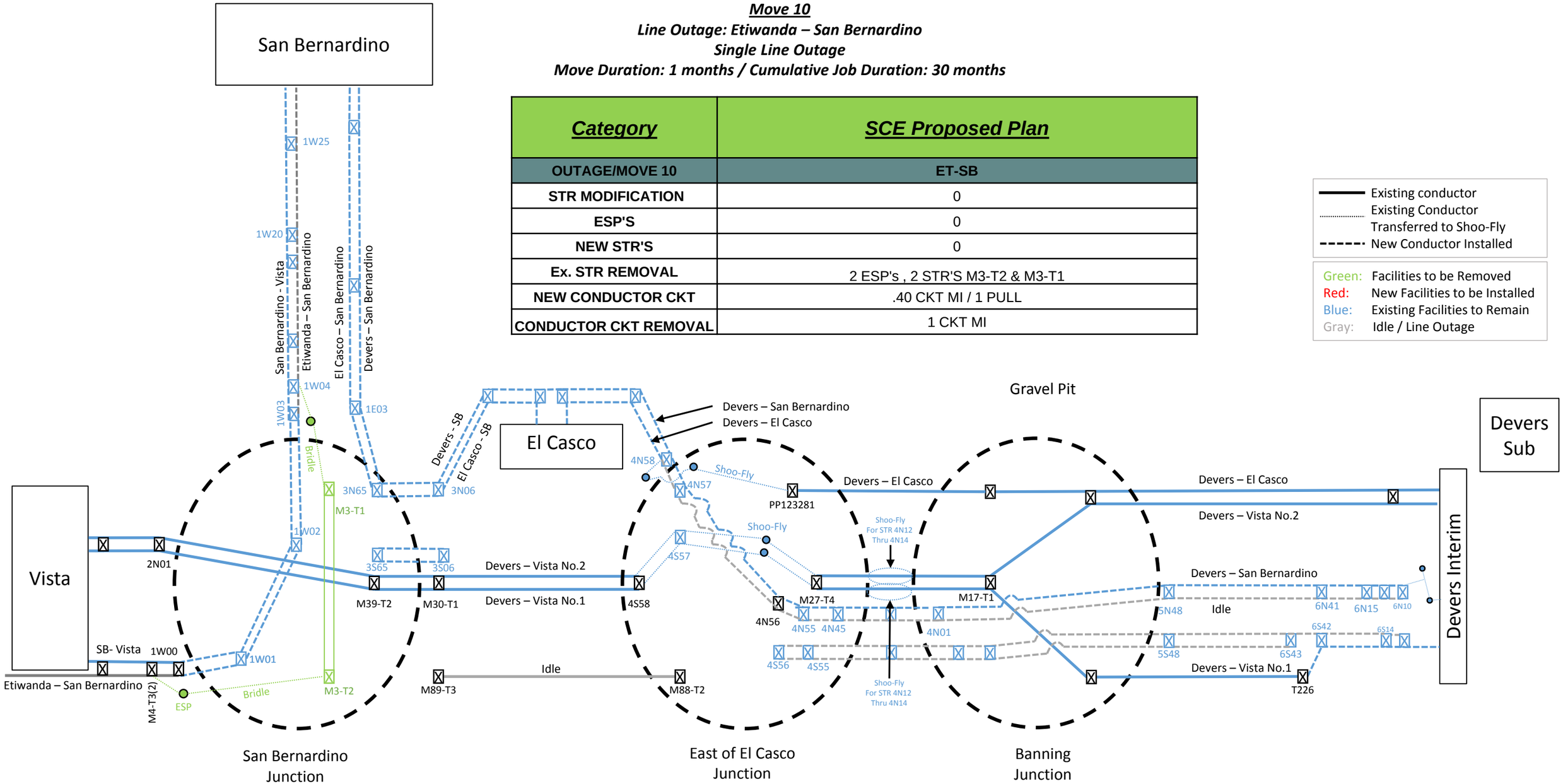
Move 10
Line Outage: Etiwanda – San Bernardino
Single Line Outage
Move Duration: 1 months / Cumulative Job Duration: 30 months

Category	SCE Proposed Plan
OUTAGE/MOVE 10	ET-SB
STR MODIFICATION	0
ESP'S	0
NEW STR'S	0
Ex. STR REMOVAL	2 ESP's , 2 STR'S M3-T2 & M3-T1
NEW CONDUCTOR CKT	.40 CKT MI / 1 PULL
CONDUCTOR CKT REMOVAL	1 CKT MI



Existing conductor
Existing Conductor Transferred to Shoo-Fly
New Conductor Installed

Green: Facilities to be Removed
Red: New Facilities to be Installed
Blue: Existing Facilities to Remain
Gray: Idle / Line Outage

Move 10 will remove the remaining existing structures in Segment 1 on the previous Devers – San Bernardino and Etiwanda – San Bernardino structures and transfer the E – SB circuit to the new towers previously installed on the prior move. By moving these circuits to the new towers in the San Bernardino Junction prior to the construction of the Devers – Vista #1 & #2 circuits it positions each of the SB-V and E-SB circuits in a location where construction crews can guard the circuits while stringing the Devers – Vista #1 & #2 circuits overhead. Had this scope not been completed prior to the Devers – Vista circuit construction the existing locations of these circuits are in spots where construction would have a significant civil grading scope (if even feasible) to gain access to locations to guard these circuits.

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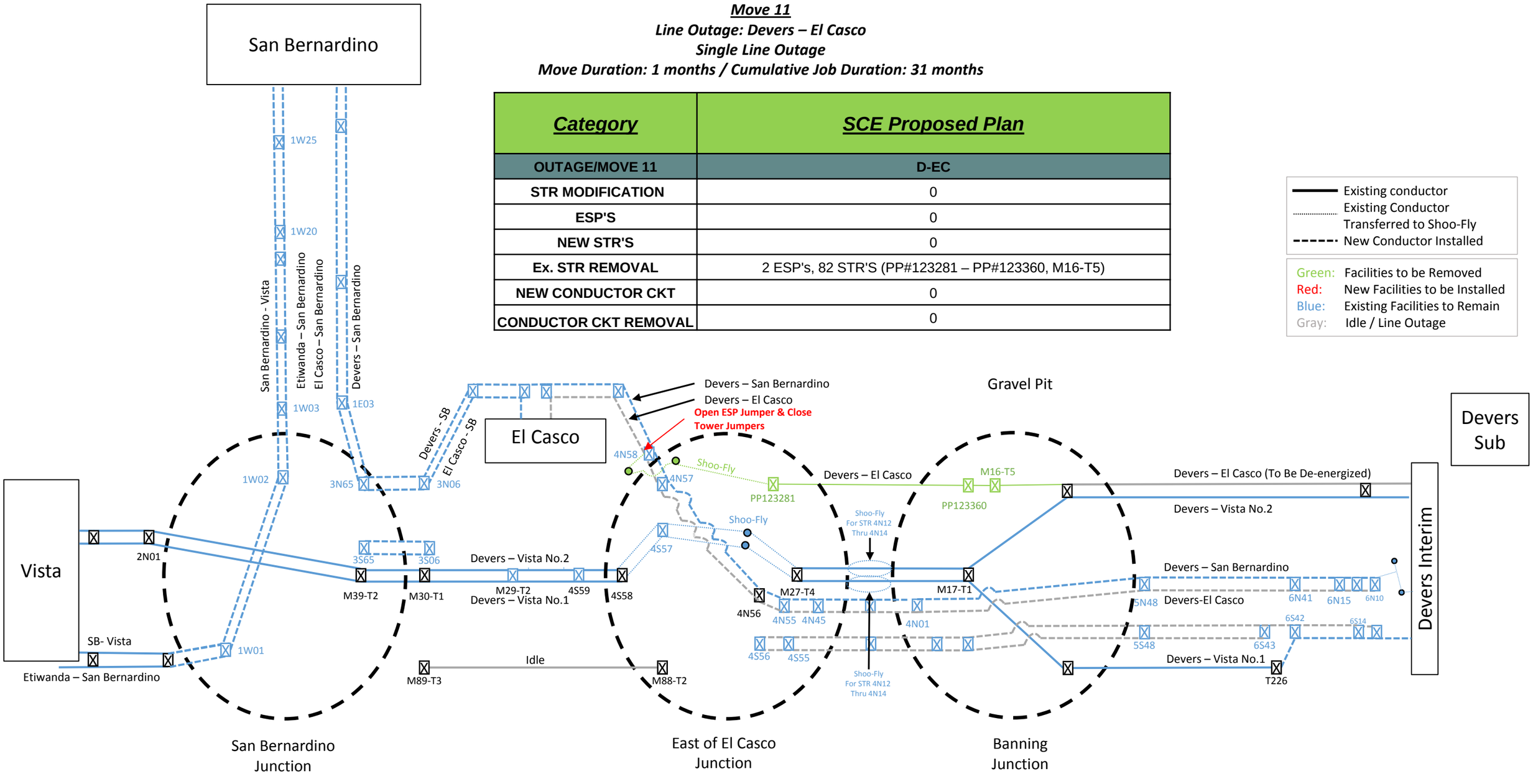
Move 11
Line Outage: Devers – El Casco
Single Line Outage
Move Duration: 1 months / Cumulative Job Duration: 31 months

Category	***SCE Proposed Plan***
OUTAGE/MOVE 11	**D-EC**
STR MODIFICATION	0
ESP'S	0
NEW STR'S	0
Ex. STR REMOVAL	2 ESP's, 82 STR'S (PP#123281 – PP#123360, M16-T5)
NEW CONDUCTOR CKT	0
CONDUCTOR CKT REMOVAL	0



Existing conductor
Existing Conductor Transferred to Shoo-Fly
New Conductor Installed

Green: Facilities to be Removed
Red: New Facilities to be Installed
Blue: Existing Facilities to Remain
Gray: Idle / Line Outage

Move 11 will transfer the Devers – El Casco circuit from the existing structures and shoo-flies to the new structures and conductor by re-positioning the jumpers at structure 4N58. Following this minimal scope the D-EC circuit will be complete. The represented removal scope can be completed non-outage following the re-positioning of the jumpers.

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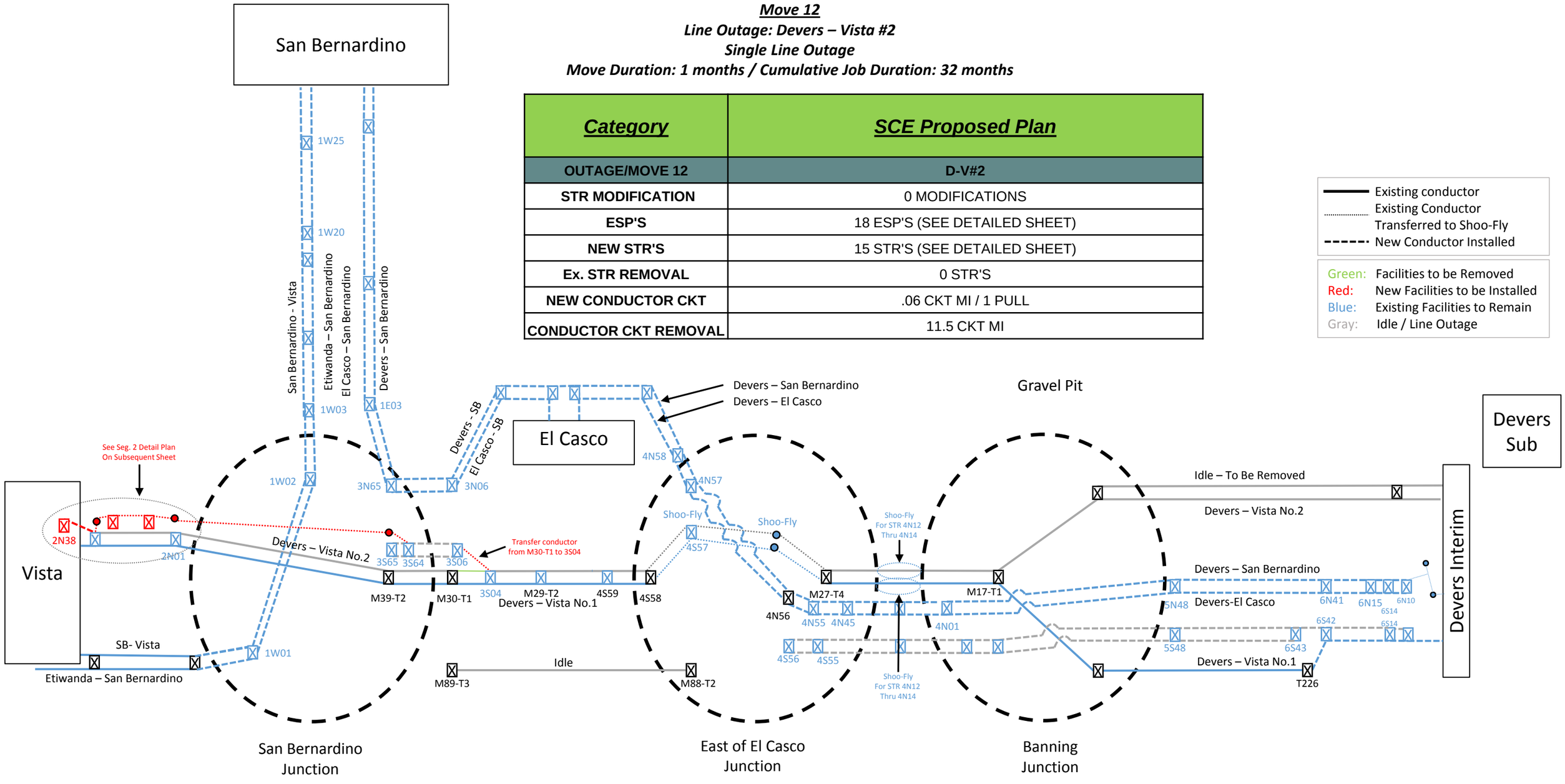
Move 12
Line Outage: Devers – Vista #2
Single Line Outage
Move Duration: 1 months / Cumulative Job Duration: 32 months

Category	***SCE Proposed Plan***
OUTAGE/MOVE 12	**D-V#2**
STR MODIFICATION	0 MODIFICATIONS
ESP'S	18 ESP'S (SEE DETAILED SHEET)
NEW STR'S	15 STR'S (SEE DETAILED SHEET)
Ex. STR REMOVAL	0 STR'S
NEW CONDUCTOR CKT	.06 CKT MI / 1 PULL
CONDUCTOR CKT REMOVAL	11.5 CKT MI



Existing conductor
Existing Conductor Transferred to Shoo-Fly
New Conductor Installed

Green: Facilities to be Removed
Red: New Facilities to be Installed
Blue: Existing Facilities to Remain
Gray: Idle / Line Outage

Move 12 will begin the construction of the Devers – Vista structures in Segment 2 including installation of shoo-flies in Segment 2 and the San Bernardino Junction. Shoo-flies in Segment 2 and at SB Junction will isolate the D-V structures to allow for removal and installation of structures/conductor in the future phases. Following the completion of this scope the Devers – Vista #2 circuit will be energized on the new Segment 3 structures.

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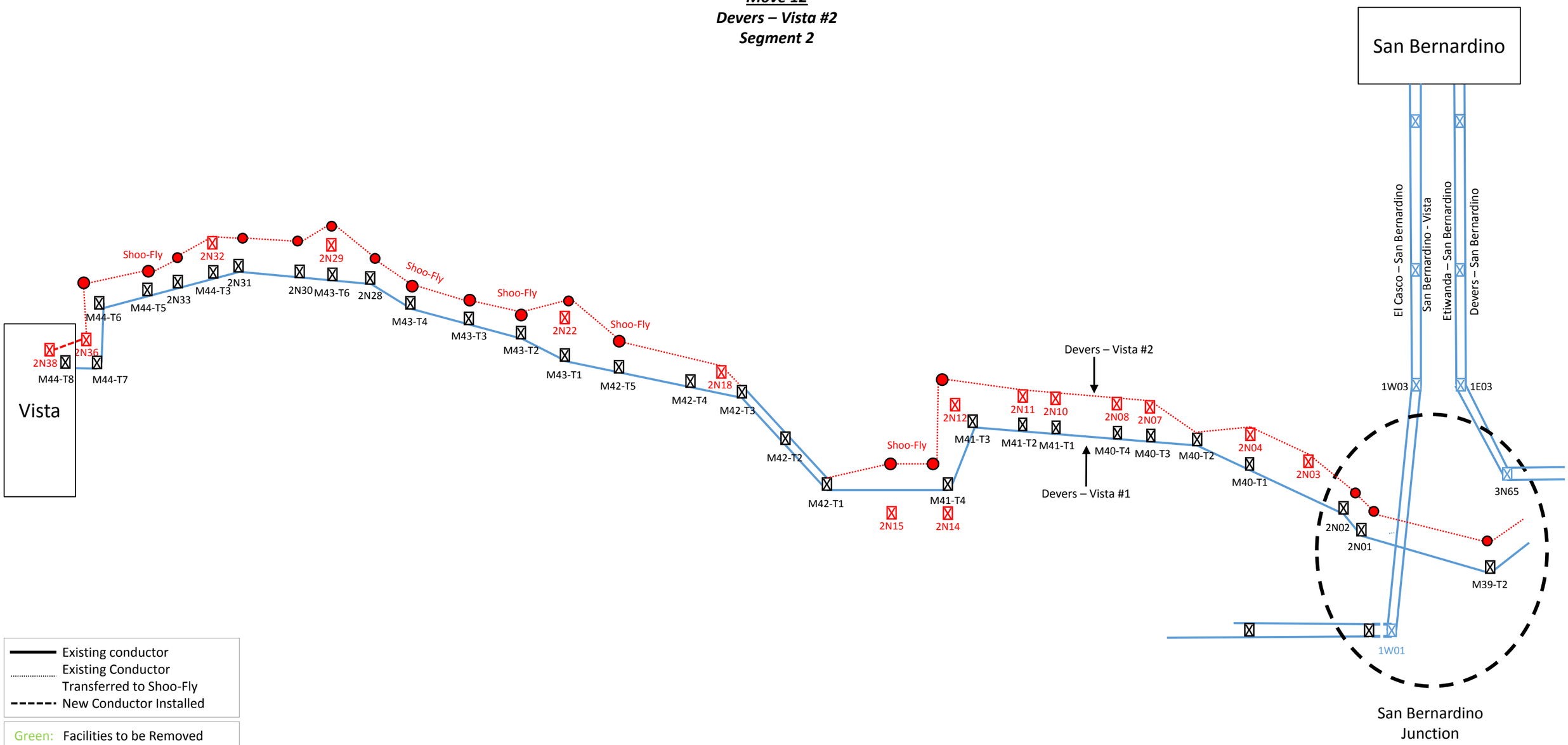
Move 12
Devers – Vista #2
Segment 2



Existing conductor
Existing Conductor Transferred to Shoo-Fly
New Conductor Installed

Green: Facilities to be Removed
Red: New Facilities to be Installed
Blue: Existing Facilities to Remain
Gray: Idle / Line Outage

New structures installed in this move will act as shoo-flies to isolate the existing structures and where the new structures cannot be installed (due to conflicts with the existing towers) shoo-flies will be installed to isolate the structure locations setting up for removal and construction of new structures under a single line outage.

Green: Facilities to be Removed
Red: New Facilities to be Installed
Blue: Existing Facilities to Remain
Gray: Idle / Line Outage

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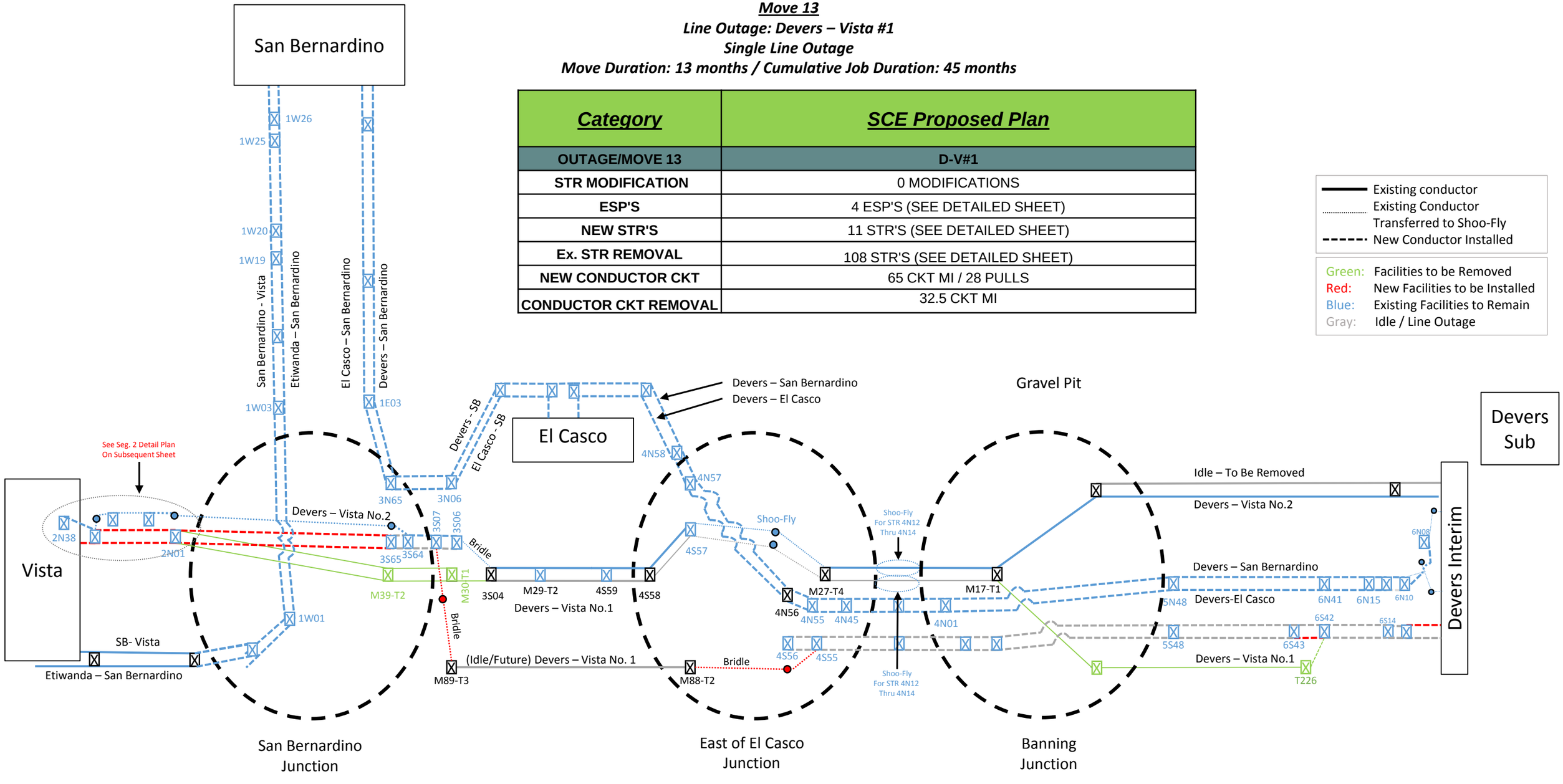
Move 13
Line Outage: Devers – Vista #1
Single Line Outage
Move Duration: 13 months / Cumulative Job Duration: 45 months

Category	***SCE Proposed Plan***
OUTAGE/MOVE 13	**D-V#1**
STR MODIFICATION	0 MODIFICATIONS
ESP'S	4 ESP'S (SEE DETAILED SHEET)
NEW STR'S	11 STR'S (SEE DETAILED SHEET)
Ex. STR REMOVAL	108 STR'S (SEE DETAILED SHEET)
NEW CONDUCTOR CKT	65 CKT MI / 28 PULLS
CONDUCTOR CKT REMOVAL	32.5 CKT MI

Existing conductor
Existing Conductor Transferred to Shoo-Fly
New Conductor Installed

Green: Facilities to be Removed
Red: New Facilities to be Installed
Blue: Existing Facilities to Remain
Gray: Idle / Line Outage



Move 13 will conductor the Devers – Vista circuits over through the San Bernardino Junction (SB-V and E-SB circuits will be guarded now that they are accessible in their new location). Also sections of Segment 2 will be replaced with new structures and strung with new conductor. Behind El Casco substation the Devers – Vista #2 will utilize the previous Devers - San Bernardino structures as a shoo-fly preparing for the construction of the new towers in this location.

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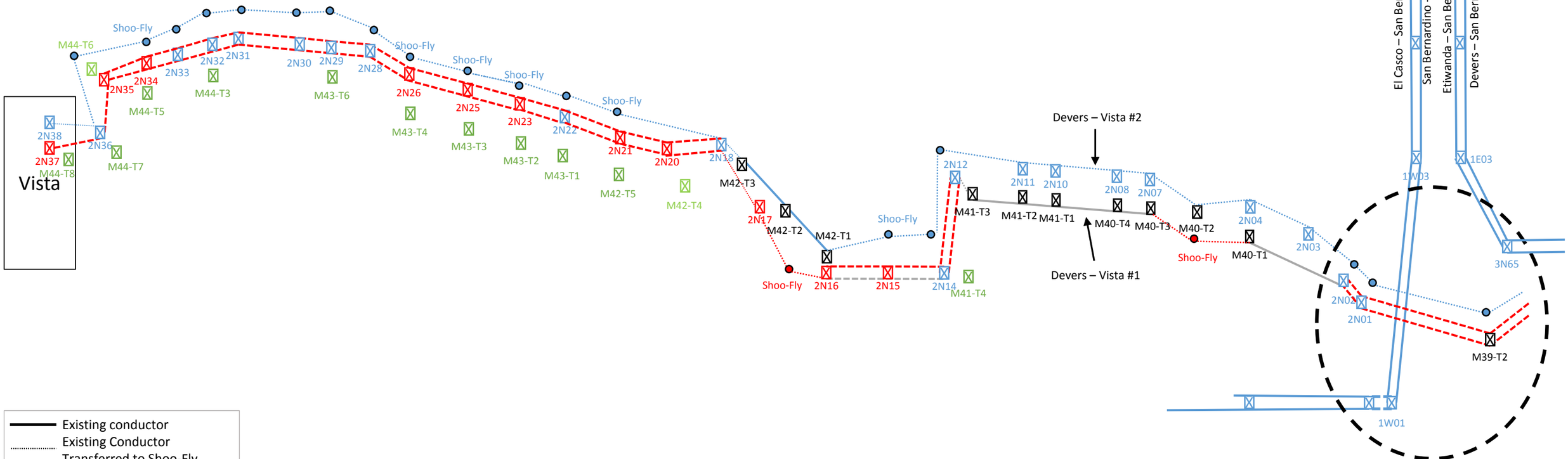
<u>Move 13</u>
Devers – Vista #1
Segment 2



Existing conductor
Existing Conductor Transferred to Shoo-Fly
New Conductor Installed

Green: Facilities to be Removed
Red: New Facilities to be Installed
Blue: Existing Facilities to Remain
Gray: Idle / Line Outage

Where the previous move shoo-flied the Devers – Vista #2 structures the existing structures will be removed and the new structures will be erected and strung with new conductor. The strategic placement of structures within the proposed project has allowed for construction to occur in the fashion represented in this diagram and without disturbing slopes above residents near El Prado Lane (Structures 2N16 to 2N18). The alternate project does not allow for this since the new structures are not scheduled to be installed and the conductor has limitations for stringing that will require significant slope disturbance above residents.

Green: Facilities to be Removed
Red: New Facilities to be Installed
Blue: Existing Facilities to Remain
Gray: Idle / Line Outage

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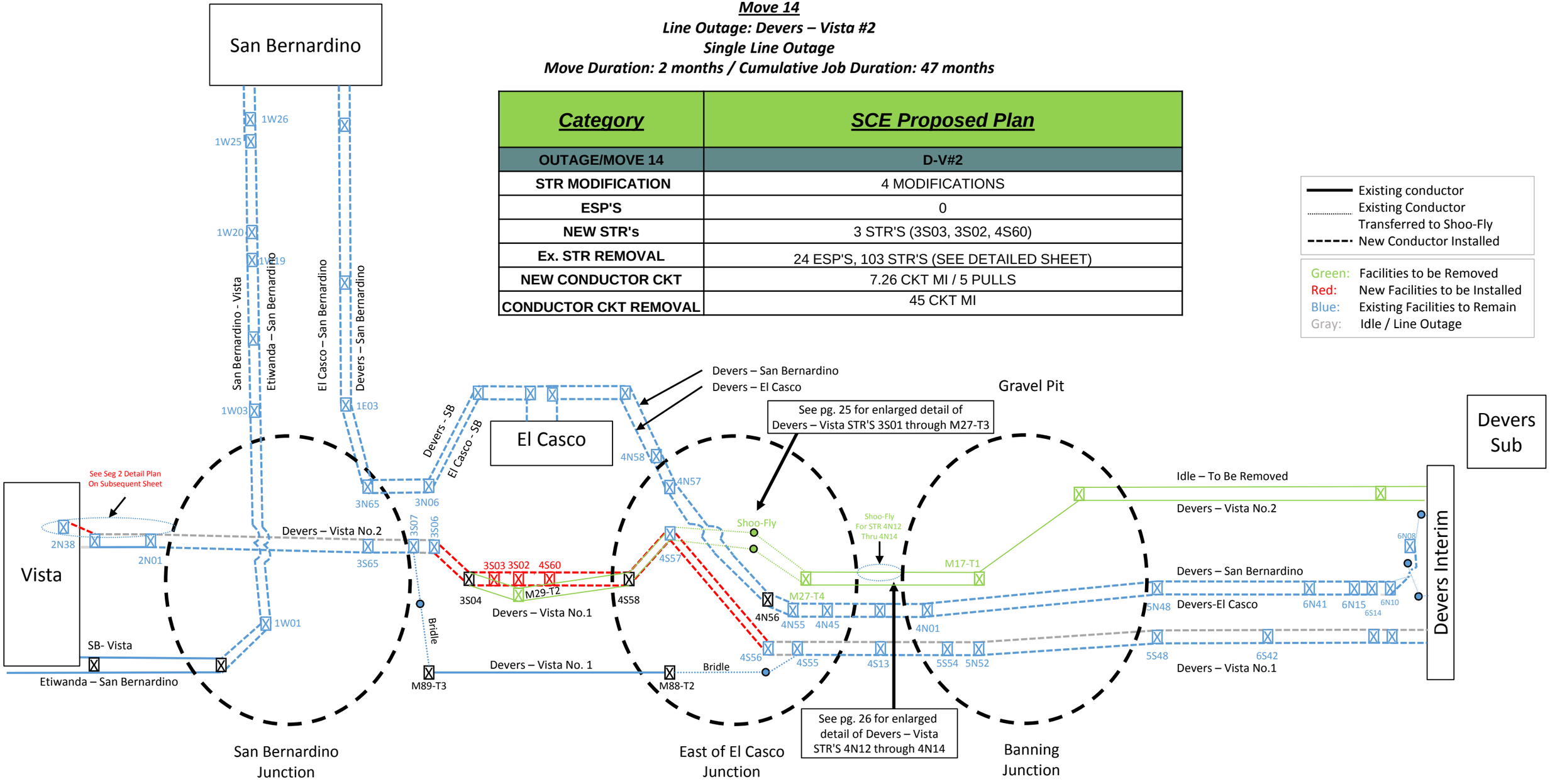
Move 14
Line Outage: Devers – Vista #2
Single Line Outage
Move Duration: 2 months / Cumulative Job Duration: 47 months

Category	SCE Proposed Plan
OUTAGE/MOVE 14	D-V#2
STR MODIFICATION	4 MODIFICATIONS
ESP'S	0
NEW STR's	3 STR'S (3S03, 3S02, 4S60)
Ex. STR REMOVAL	24 ESP'S, 103 STR'S (SEE DETAILED SHEET)
NEW CONDUCTOR CKT	7.26 CKT MI / 5 PULLS
CONDUCTOR CKT REMOVAL	45 CKT MI



Existing conductor
Existing Conductor Transferred to Shoo-Fly
New Conductor Installed

Green: Facilities to be Removed
Red: New Facilities to be Installed
Blue: Existing Facilities to Remain
Gray: Idle / Line Outage

Move 14 will complete the tower construction for the project and following this sequence the remaining work is limited to a single wire pull in Segment 2 and limited structure removal behind El Casco Substation. The previous move had Shoo-flied the Devers – Vista #1 behind El Casco allowing for the construction of the remaining towers behind El Casco including their conductor installation activities under this single line outage. With the path complete on the Devers - Vista structures the remaining Devers - Vista structures may be removed non-outage between Devers Substation and the East of El Casco Junction.

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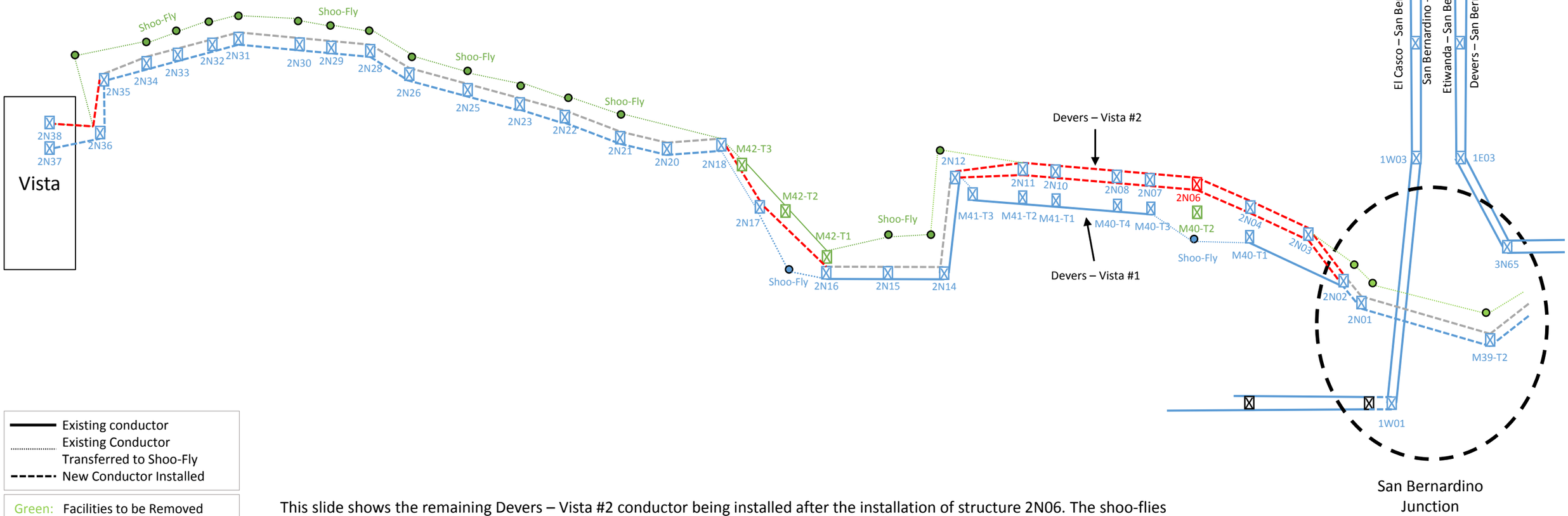
Move 14
Devers – Vista #2
Segment 2



Existing conductor
Existing Conductor Transferred to Shoo-Fly
New Conductor Installed

Green: Facilities to be Removed
Red: New Facilities to be Installed
Blue: Existing Facilities to Remain
Gray: Idle / Line Outage

This slide shows the remaining Devers – Vista #2 conductor being installed after the installation of structure 2N06. The shoo-flies installed in this segment will also be removed along with the remaining existing structures. With the exception of the wire segment between 2N16 and 2N18 Segment 2 will be complete following this move.

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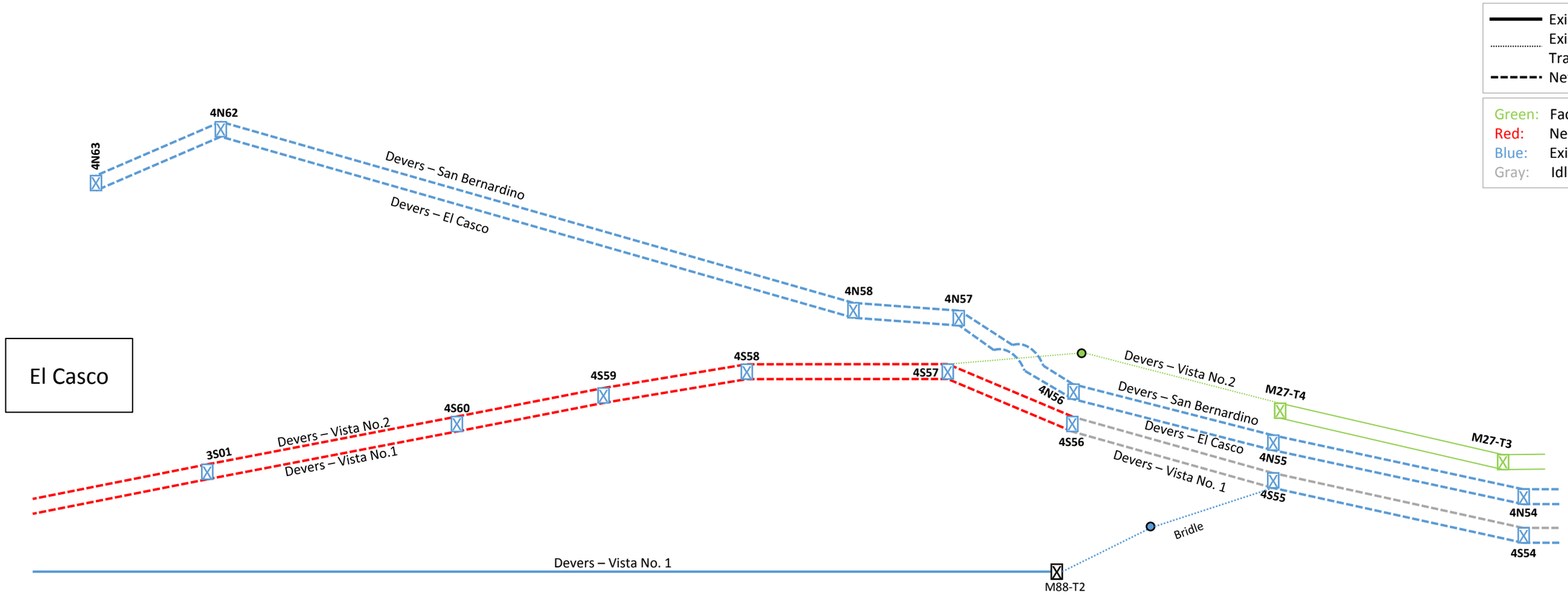
<u>Move 14</u>
Devers – Vista #2
Devers – Vista Structures 3S01 through M27-T3



Following the transfer of the Devers – Vista #2 to its proposed location on the new structures all remaining structures (including shoo-flies) East from the East of El Casco Junction will be removed non-outage.

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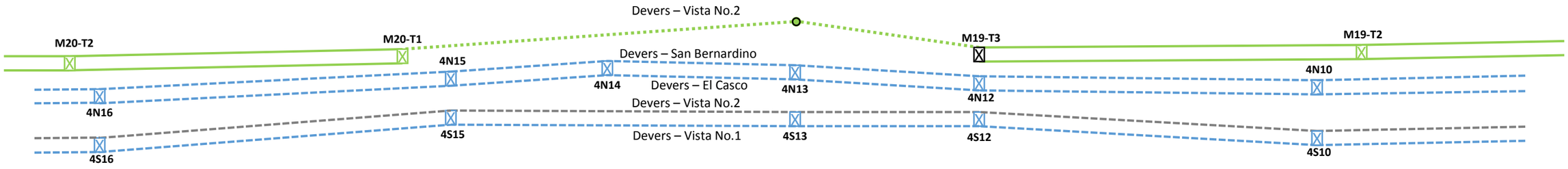
Move 14
Devers – Vista #2
Devers – Vista Structures 4N12 through 4N14

———	Existing conductor
.....	Existing Conductor Transferred to Shoo-Fly
- - - - -	New Conductor Installed

Green:	Facilities to be Removed
Red:	New Facilities to be Installed
Blue:	Existing Facilities to Remain
Gray:	Idle / Line Outage



Following the transfer of the Devers – Vista #2 to its proposed location on the new structures all remaining structures (including shoo-flies) East from the East of El Casco Junction will be removed non-outage.

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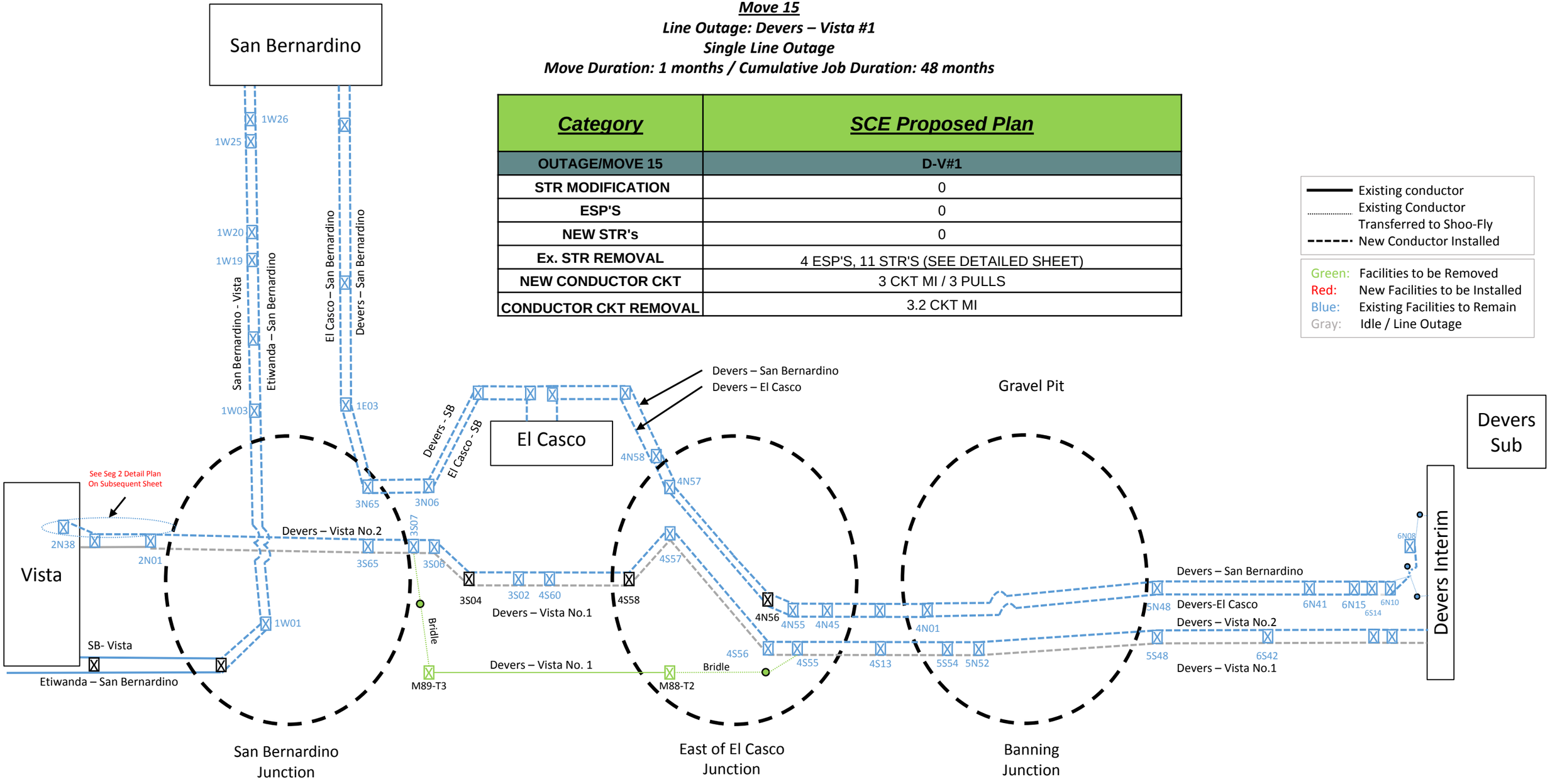
Move 15
Line Outage: Devers – Vista #1
Single Line Outage
Move Duration: 1 months / Cumulative Job Duration: 48 months

Category	SCE Proposed Plan
OUTAGE/MOVE 15	D-V#1
STR MODIFICATION	0
ESP'S	0
NEW STR's	0
Ex. STR REMOVAL	4 ESP'S, 11 STR'S (SEE DETAILED SHEET)
NEW CONDUCTOR CKT	3 CKT MI / 3 PULLS
CONDUCTOR CKT REMOVAL	3.2 CKT MI



Existing conductor
Existing Conductor Transferred to Shoo-Fly
New Conductor Installed

Green: Facilities to be Removed
Red: New Facilities to be Installed
Blue: Existing Facilities to Remain
Gray: Idle / Line Outage

Move 15 completes the West of Devers Upgrade following its 2 span wire installation in Segment 2 and the re-positioning of conductor behind El Casco Substation. Removal of the Devers – Vista Shoo-Fly can be completed non outage once spans at either end have been put into their final proposed locations.

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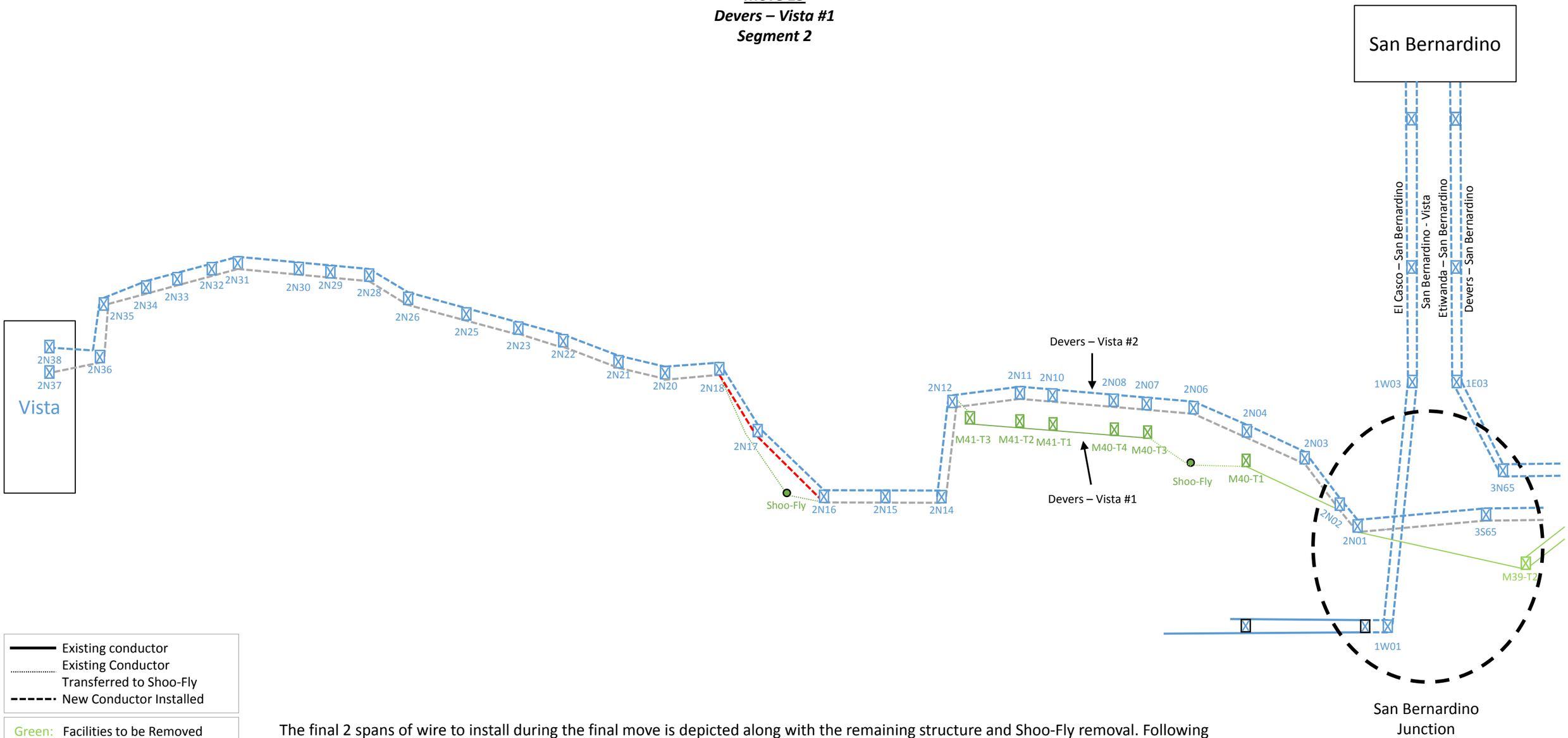
<u>Move 15</u>
Devers – Vista #1
Segment 2



Existing conductor
Existing Conductor Transferred to Shoo-Fly
New Conductor Installed

Green: Facilities to be Removed
Red: New Facilities to be Installed
Blue: Existing Facilities to Remain
Gray: Idle / Line Outage

The final 2 spans of wire to install during the final move is depicted along with the remaining structure and Shoo-Fly removal. Following this move the West of Devers Upgrade Project is complete.

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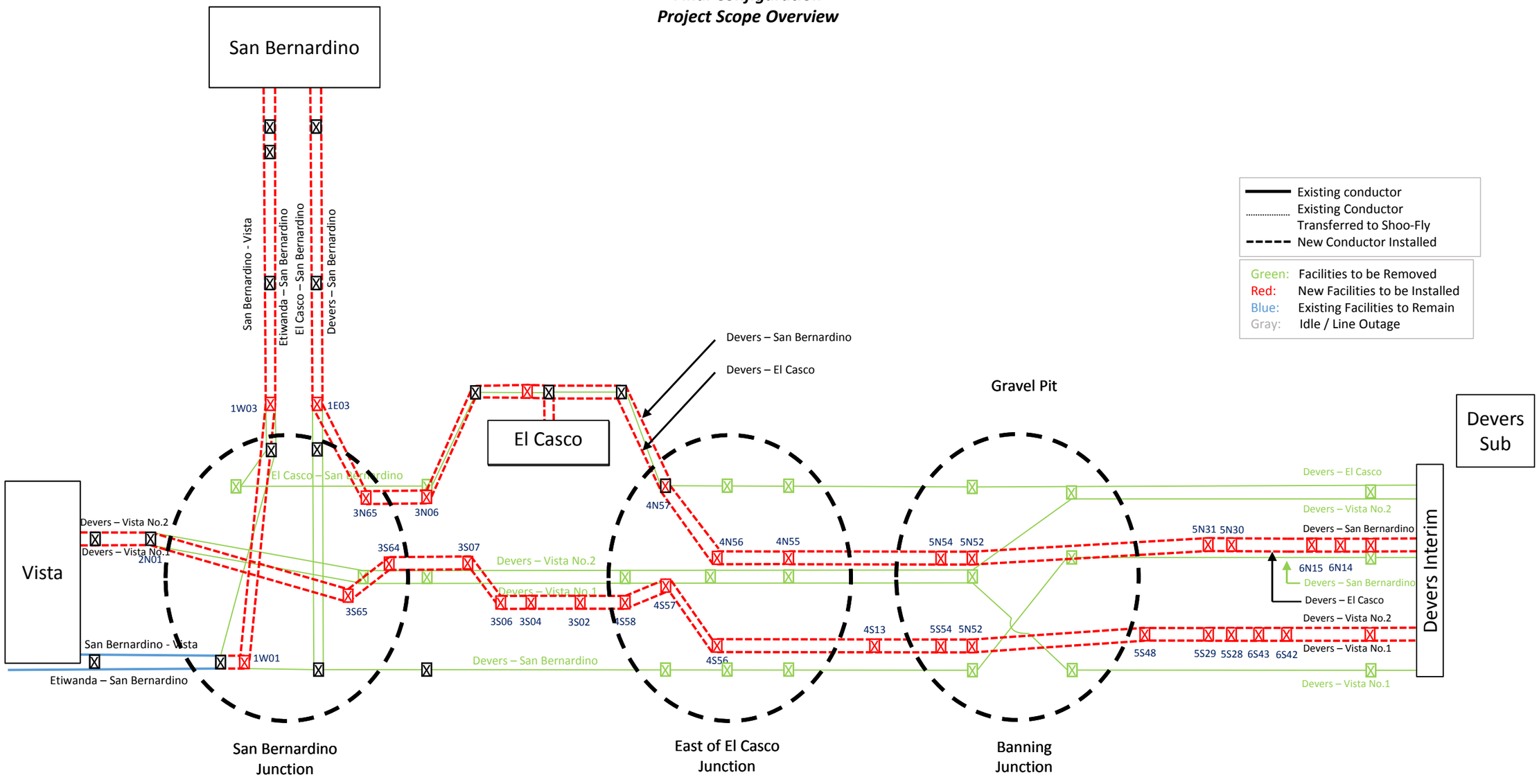
West of Devers
Final Configuration
Project Scope Overview



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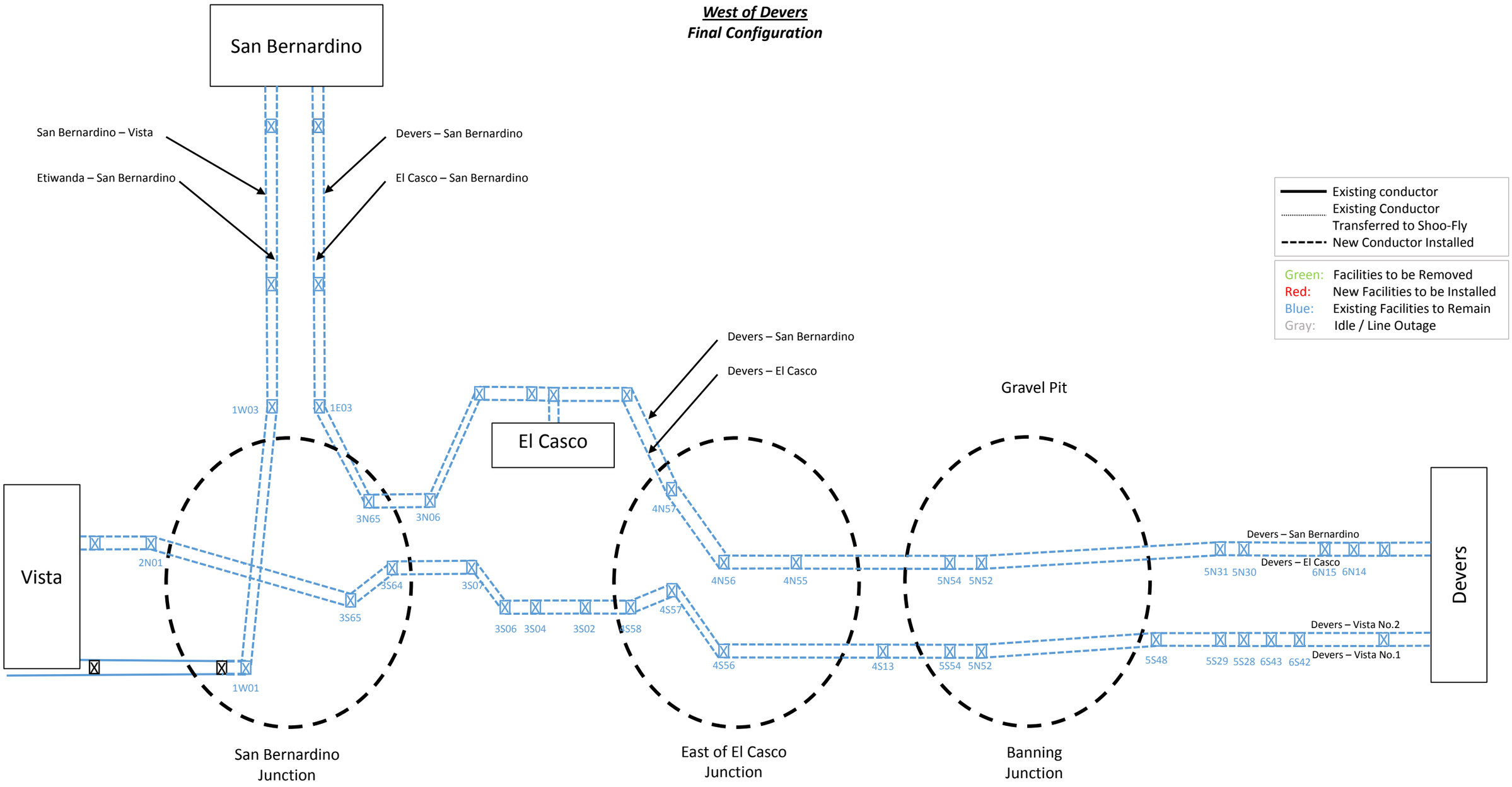
West of Devers
Final Configuration



Existing conductor
Existing Conductor Transferred to Shoo-Fly
New Conductor Installed

Green: Facilities to be Removed
Red: New Facilities to be Installed
Blue: Existing Facilities to Remain
Gray: Idle / Line Outage