04-Ala-80 KP 1.6-2.7
04-265-E.A. 0120M4
Project Cost: $76,500,000

Fact Sheet Exceptions to Advisory Design Standards

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1. PROPOSED PROJECT

A. Project Description

The Oakland Touchdown Phase 2 (OTD 2) project is located in the City of Oakland in Alameda County (04-ALA-80 KP 1.6-2.7) and is part of the San Francisco-Oakland Bay Bridge (SFOBB) East Span Seismic Safety Project (ESSSP). The OTD 2 project will continue the construction of the I-80 westbound roadway and the I-80 eastbound bridge that was partially completed in the Oakland Touchdown Phase 1 (OTD 1) project. OTD2 project will also construct the I-80 eastbound roadway approach, maintenance roads to access the Toll Administration Building, bike path landing and parking lot, and landscaping. The OTD2 contract will place both westbound and eastbound traffic in their final configurations.

See Attachment A for a Project Location Map.

B. Existing Highway

This 1.1 kilometer long segment is part of the Interstate 80 connecting the cities of San Francisco in San Francisco County and Oakland in Alameda County. In the eastbound direction the first 667 meters of roadway consists of 1.2-meter shoulders, four 3.3 meter wide lanes, and one 3.6-meter wide lane. The remaining 443 meters consist of five 3.3 meter wide lanes, one 3.6 meter wide lane, and 1.2 meter wide shoulders. The westbound roadway consist of four 3.3 meter wide lanes, one 3.6 meter wide lane, and 1.2 meter wide shoulders.

C. Safety Improvements

The proposed project improvements include the widening of existing eastbound and westbound lanes from 3.3 meters to 3.6 meters in width. In addition, improvements also include the placement of new pavement, low density concrete base to decrease roadway settlement, and widening of existing shoulders from 1.2 meter to 3 meter.

D. Total Project Cost

The total project cost for the Phase 2 contract (Contract 04-0120M1) in 2011dollars is $74,500,000

The cost estimate is broken down as follows:

Project Report and Environmental Document Report:	$ 1,000,000
Design Phase (PS&E)	$ 4,000,000
Construction Phase:	
District Items:	$ 41,000,000
Structure Items:	$ 21,000,000
Right-of-Way/Utilities:	$ 1,000,000
Construction Administration	$ 8,500,000
Total:	$ 76,500,000

2. FEATURES REQUIRING AN EXCEPTION

Attention is directed to Attachments B, "Nonstandard Features Exhibit - Advisory" which graphically depicts the nonstandard features for the proposed project. The nonstandard features are described as follows:

(1) Design Exception Feature #1 – Lane Drop Transitions

The following are the existing nonstandard lane drop transitions for the freeway, and standards contained in Index 206.3(1). Also included are Attachment B locations:

Structure	Attachment B Location	Location	Existing Nonstandard Lane Drop Transitions	HDM Index 206.3(1) Lane Drop Transitions Standards
Westbound	1	Mainline toll lanes approaching existing WB structure	Transition Length = 145 m from W94+25 to W95+70	Minimum Transition Length= 216 m (for a facility with a design Speed of 90 km/h and lane width of 3.6 m)
Westbound	2	Mainline toll lanes approaching existing WB structure	Transition Length = 70 m from W95+00 to W95+70	Minimum Transition Length= 216 m (for a facility with a design Speed of 90 km/h and lane width of 3.6 m)

Westbound	3	Mainline toll lanes approaching existing WB structure	Transition Length = 183 m from W93+17 to W95+00	Minimum Transition Length= 216 m (for a facility with a design Speed of 90 km/h and lane width of 3.6 m)
Structure	**Attachment B Location**	**Location**	**Existing Nonstandard Lane Drop Transitions**	**HDM Index 206.3(1) Lane Drop Transitions Standards**
Westbound	4	Mainline toll lanes approaching existing WB structure	Transition Length = 205 m from W91+12 to W93+17	Minimum Transition Length= 216 m (for a facility with a design Speed of 90 km/h and lane width of 3.6 m)

Note: Advisory (per Caltrans Metric HDM, 5th Edition – Last Updated: 6-26-06)

Standard for which exception is requested

HDM Index 206.3(1).

206.3 Pavement Reductions

(1) Through Lane Drops. When a lane is to be dropped, it should be done by tapering over a distance equal to (2/3)WV, where W = Width of lane to be dropped and V = Design Speed.

Reason for requesting exception

Lane drop transitions could not be provided because of the physical constraint associated with the location of the metering lights and the toll plaza. In order to provide the required lane drop transition, the metering lights, and the toll plaza facilities would have to be relocated to the east, thus also requiring the relocation of the 80/580/980/W.Grand connectors to the Toll Plaza. This relocation would require widening the roadway and structures into the Environmental Sensitive Areas on the north and possibly into the bay. The environmental impacts would require a full FEIS/R process.

Added cost to make standard

In order to comply with all the geometric standards, the metering lights, toll plaza facilities, and the 80/580/980/W.Grand connectors would have to be relocated at a cost of in excess of $ 1 billion.

3. TRAFFIC DATA

Current and design peak period hourly volumes are as follows:

Direction/Peak	2006	Existing	2034 Forecast
Two Way 18,820	N/A	25,620	

Current AADT is 336,900 vehicles, with an anticipated 2034 AADT volume of 407,900 vehicles

4. ACCIDENT ANALYSIS

The following table is a summary of TASAS table B accident data from 9/1/05 to 8/31/08 for 04 Ala 80 1.0-1.7

Actual Number of Accidents			Total MV+ or MVM	Actual Accident Rates			Average Accident Rates		
Total	Fatal	Injury		Fat	F+I	Total	Fat	F+I	Total
180	0	46	192.49	0	0.24	0.94	0.009	0.27	0.89

Primary collision factors		
Number	PCT	Code
12	6.7	1-Influence alcohol
16	8.9	2-Follow too close
0	0	3-Failure to yield
13	7.2	4-Improper turn
60	33.3	5-Speeding
50	27.8	6-Other violations
17	9.4	B-Improper driving
3	1.7	C-Other than driver
9	5.0	D-Unknown
0	0	E-Fell sleep
0	0	< - Not stated

Road Surface		
Number	PCT	Code
163	90.6	A-Dry
16	8.9	B-Wet
0	0.0	C-Snowy, Icy
0	0.0	D-Slippery
1	0.6	< - Not Stated

Roadway Condition		
Number	**PCT**	**Code**
1	0.6	A-Holes, ruts
3	1.7	D-Construct-Repair-Zone
175	97.2	H-No unusual Condition
1	0.6	F-Flooded

Side of Highway		
Number	**PCT**	**Code**
67	37.2	E-Eastbound
113	62.8	W-Westbound

Type of Collision		
Number	**PCT**	**Code**
1	0.6	A-Head-on
62	34.4	B-Sideswipe
86	47.8	C-Rear End
4	2.2	D-Broadside
25	13.9	E-Hit Object
2	1.1	F-Overturn
0	0	< - Not Stated

Accident Rates expressed as number of accidents/million vehicle miles (MVM)

Most of the Accidents (63%) have occurred on the Westbound side of the highway. This contract (04-0120M4), will correct the abrupt curve at the east end of the bridge and the smoother alignment will potentially help reduce the percentage of accidents caused due to sideswipe. Sideswipe accidents are at 34 percent for the period between 9/1/05 to 8/31/08.

5. INCREMENTAL IMPROVEMENTS

None

6. FUTURE CONSTRUCTION

No major freeway projects are planned following the completion of the ESSSP

7. PROJECT REVIEWS, CONCURRENCE

Gordon Brown, Design Reviewer for the Division of Design reviewed and concurred with this Fact Sheet exception to Advisory Design Standards for this project on 6-6-11

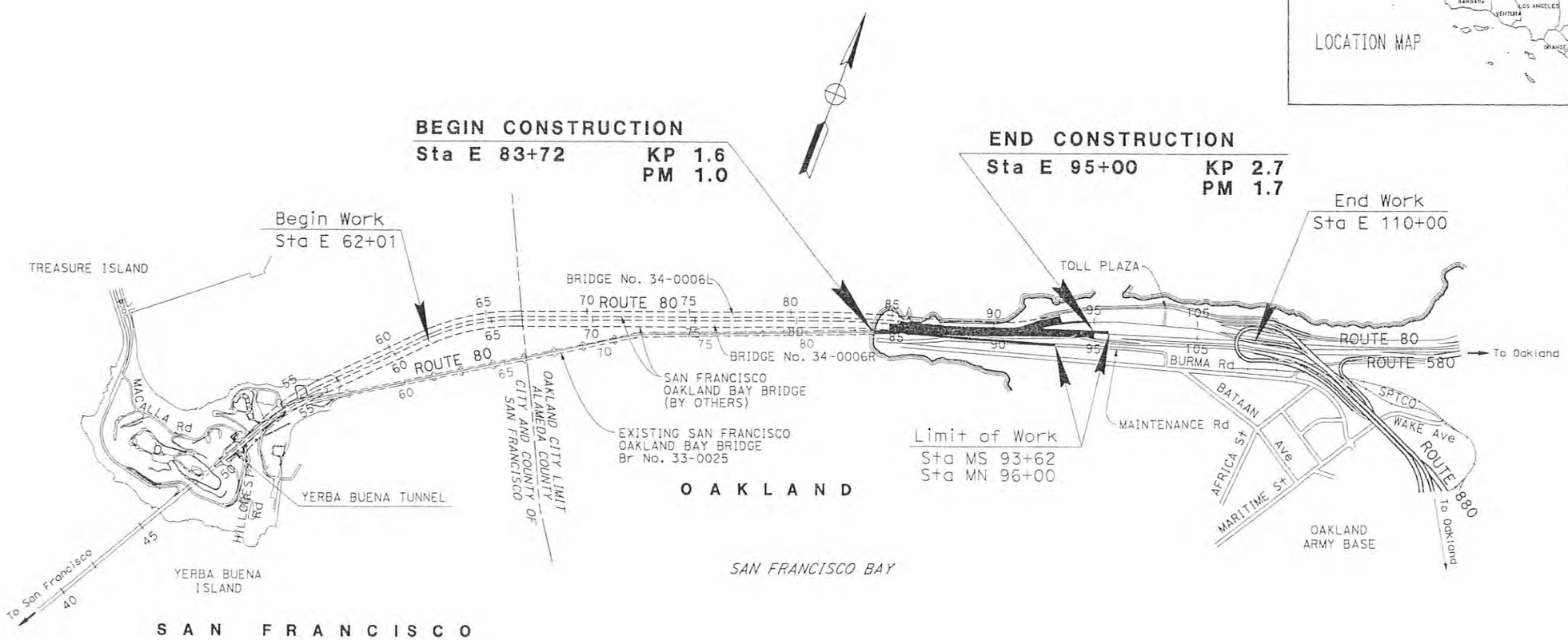
8. ATTACHMENTS

Attachment A:	Project Location Map
Attachment B:	Nonstandard Features Exhibit – Advisory

ATTACHMENT A
Project Location

04-Ala-80 KP 1.6-2.7
04-265-E.A. 0120M4
Project Cost: $74,500,000

Dist	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	Ala	80	1.6/2.7		



NO SCALE

CONTRACT No.: 04-0120M4

ATTACHMENT B
Locations for Requested Design Exceptions

04-Ala-80 KP 1.6-2.7
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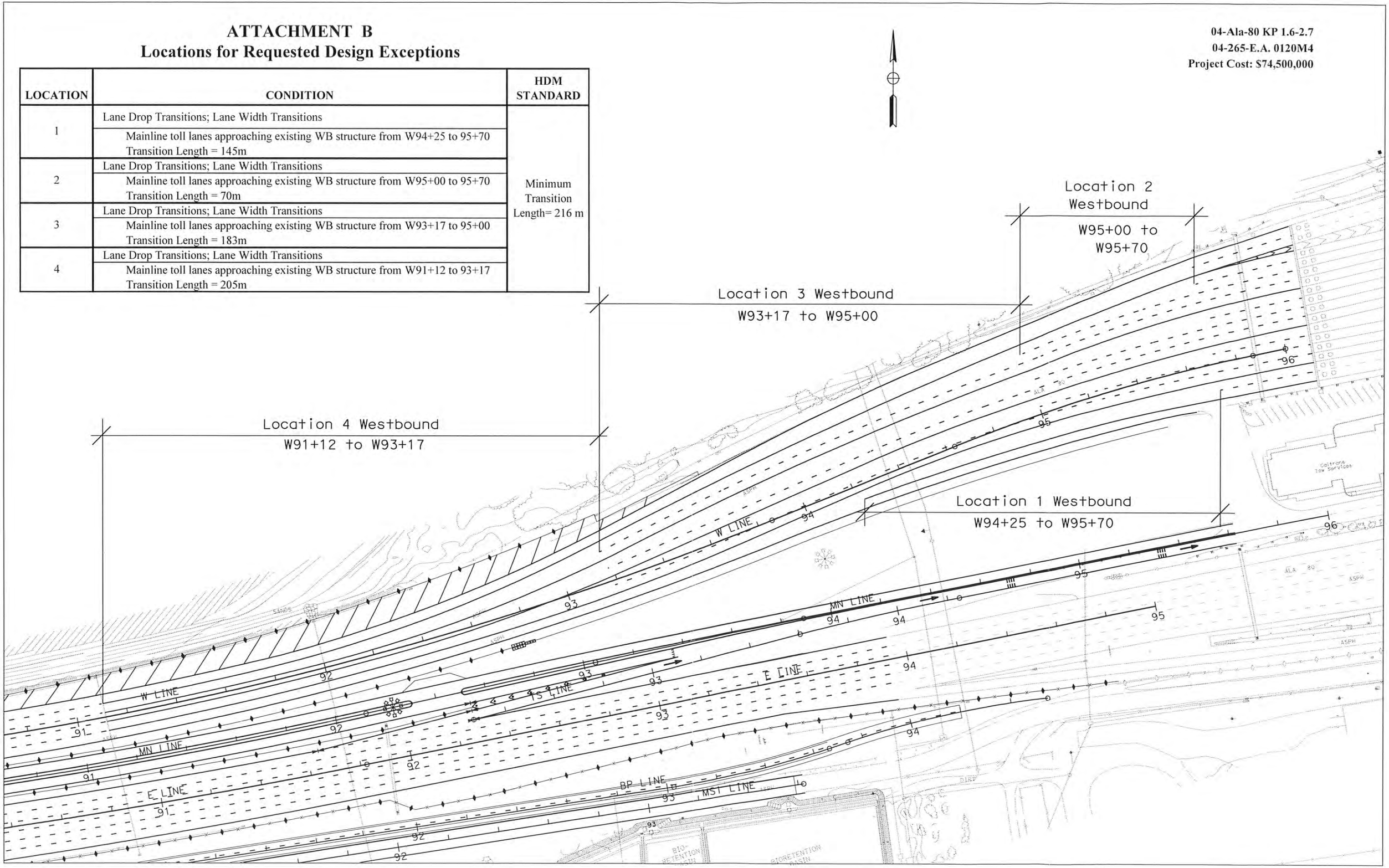
Project Cost: $74,500,000

LOCATION	CONDITION	HDM STANDARD
1	Lane Drop Transitions; Lane Width Transitions Mainline toll lanes approaching existing WB structure from W94+25 to 95+70 Transition Length = 145m	Minimum Transition Length= 216 m
2	Lane Drop Transitions; Lane Width Transitions Mainline toll lanes approaching existing WB structure from W95+00 to 95+70 Transition Length = 70m	
3	Lane Drop Transitions; Lane Width Transitions Mainline toll lanes approaching existing WB structure from W93+17 to 95+00 Transition Length = 183m	
4	Lane Drop Transitions; Lane Width Transitions Mainline toll lanes approaching existing WB structure from W91+12 to 93+17 Transition Length = 205m