

























ITEM #           E3          

**DATE:** May 15, 2014

**TO:** Committee Chair Ed Graham and  
Members of the Administrative & Finance Committee

**THROUGH:** P. Scott Graham, CEO/General Manager

**FROM:** Andres Ramirez, sbX Construction Manager

**SUBJECT:** **CONSTRUCTION PROGRESS REPORT NO. 28 THROUGH  
APRIL 25, 2014 - sbX E STREET CORRIDOR BRT PROJECT**

**FORM MOTION**

Receive and recommend to the Board of Directors for receipt and file Construction Progress Report No. 28 for the sbX E Street Corridor BRT Project through April 25, 2014.

**BACKGROUND**

This is Construction Progress Report No. 28 for the sbX E Street Corridor Project.

**CONCLUSION**

Receive and recommend to the Board of Directors for receipt and file Construction Progress Report No.28 for the sbX E Street Corridor BRT Project through April 25, 2014.

PSG:AR

Attachment



**sbX E Street Corridor Bus Rapid Transit (BRT) Project**

**Construction Progress Report No. 28**

**As of April 25, 2014**

**Submitted By:**

**JACOBS**

Contractor:	SBX Corridor - Griffith/Comet VMF – USS Cal Builders
Contractor Contract No.:	IPMO11-5
Project Manager:	Roger Hatton, P.E.
Resident Engineer	Karim Varshochi, P.E. (Corridor) Anni Larkins, P.E. (VMF)
Omnitrans Construction Manager:	Andres Ramirez Construction Manager



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## **I. PROJECT STATUS SUMMARY**

### **A. Project Description – sbX Corridor**

The sbX E Street Corridor BRT Project is a 15.7-mile-long transit improvement project that will connect the northern portion of the City of San Bernardino with the City of Loma Linda. Over the past four years, the sbX E Street Corridor Bus Rapid Transit (BRT) Project has evolved as the highest priority corridor identified in the System-Wide Transit Corridor Plan for the San Bernardino Valley.

The Refined LPA includes:

- 15.7 mile corridor
- 5.4 miles of exclusive center-running BRT lanes
- 10.3 miles of mixed flow BRT operation
- 16 BRT station locations, 6 center stations and 10 curb stations
- 23 station boarding structures
- 4 park-and-ride facilities with a total of 610 parking spaces
- Transit signal priority (TSP) applications at select key intersections

### **B. Summary Status Update (Accomplishments) – sbX Corridor**

- SBX Corridor Completion Celebration held on April 22, 2014.
- Punch List items 95% completed.
- Continued completion of remaining change order work.
- Completed Level 1 testing/Certification.
- Continued Level 2-4 testing/certification.

### **C. May Work – sbX Corridor**

- Complete remaining 5% of Punch List corrections.
- Complete the remaining Level 2-4 testing/certification.
- Complete final Punch List walk.
- Complete the As-Built turnover.
- Complete turnover of stations and corridor.
- Complete project document turnover.

### **D. Project Description – Vehicle Maintenance Facility (VMF)**

The Omnitrans' Vehicle Maintenance Facility is a 4.4-acre facility maintaining and servicing the Omnitrans' bus fleet, comprised of over 160 buses. Modifications to Omnitrans' facility include the demolition of a bus washing station, removal of abandoned underground fuel tanks and new construction of a bus washing system, a new Genset building, a three-lane CNG fueling station, and re-

configuring the bus parking area. Modifications to the maintenance building made in order to accommodate Omnitrans' 60-foot articulated bus fleet.

#### **E. Summary Status Update (Accomplishments) – Vehicle Maintenance Facility (VMF)**

- Completed installation of the booster pump enclosure; the new booster pump system has been successfully testing and will be operational by April 25, 2014.
- Completed concrete installation for the stem walls and slab-on-grade inside Maintenance Building A on April 10, 2014.
- Received deliveries of bus lift equipment and started installation in Maintenance Building A starting April 21, 2014.
- Completed over-excavation and backfill work of the demolished Building B by April 4, 2014.
- Completed the over-excavation of new Building B, and the excavated footings and inspection pit. Formwork and reinforcing steel placement to start during the week of April 28, 2014.
- Completed stucco at the exterior of the new battery room and started shaft installation.

#### **F. May Work – Vehicle Maintenance Facility (VMF)**

- Complete installation of the new bus lifts in Maintenance Building A and start cutting the roof penetrations.
- Lace concrete for the footings and inspection pits at the new Bus Wash Facility and start underground utility work for the new building.
- Excavation for the new reclamation pits and sand/oil separator.
- Construction on the new buffer tank pad, relocation of the buffer tanks, and start of the grading and excavation for the new Fuel Facility (Building C).
- Complete the water point of connection at the compressor room and install the second compressor.
- Continue work at the new battery room for completion by end of May/early June 2014.

## **II. PROJECT SCHEDULE**

The CM team and Contractors are using the latest scheduling tools (Primavera V. P6), available to manage the project schedule.

Due to the actual field conditions (the VMF), many construction activities needed re-sequencing, resulting in several revisions in the baseline schedules submitted. As a proactive approach, the CM team has created an internal schedule as a guiding tool used to monitor and manage the construction progress.



### **Summary of Project Schedule – Vehicle Maintenance Facility (VMF)**

The Contractor submitted its December 2013 Monthly Schedule Update (UP05), with a data date of December 15, 2013, on March 20, 2014. The schedule update shows the project behind schedule, with approximately (+/-) 257-calendar days of negative float projecting a Substantial and Final Completion dates of August 23, 2014 and October 22, 2014, respectively. The resubmittal was accepted “For Record Purposes Only” on April 3, 2014.

The December 2013 monthly schedule update does not include the contaminated soil shutdown that occurred from January 31, 2014 through March 19, 2014. This will impact the project and, based on internal assessments, the project is currently forecast to be completed December 2014. The Agency and Contractor met at the upper management level on April 16, 2014 and have agreed to collectively actualize the project schedule through May 2014 by end of May 2014, including having all schedule updates submitted, reviewed and approved. This will allow the Agency and Contractor to assess impacts to date and manage the remaining work as a partnering and collective effort.

The Contractor has not yet submitted its response to the Agency findings on Time Impact Evaluation (TIE No. 1) submitted on October 28, 2013. The Agency issued a letter on January 29, 2014 granting an extension of 108-calendar days: 55-CD deemed concurrent (Excusable & Non-Compensable) and 53-CD deemed (Excusable & Compensable), resulting in revised Substantial and Final Completion dates of 3/27/2013 and 5/26/14, respectively. A change order to be issued for this assessment.

It should be noted that, subsequent to the Agency’s issuance of the TIE No. 1 findings, the Contractor submitted its notification of suspension of work on January 31, 2014, and did not work much in February 2014. Although the contaminated soil issue was discovered on January 31, 2014, this only affected the earthwork activities, but had no impact to the work that remained outstanding at the compressor room, the new battery room and in maintenance Building A. The two change orders affecting work in Building A (COR 86 Utility Trenches and COR 87 Changes to the Tire Equipment) were resolved and work started on March 6, 2014, in advance of an executed change order. However, any impacts (if any) have yet to be submitted, or substantiated, by the Contractor by submission of a TIE. Work is progressing and unresolved items are continuing to be elevated for resolution through the Dispute Resolution Ladder.

### **III. REQUESTS FOR INFORMATION (RFIs), SUBMITTALS, AND NON-CONFORMANCE REPORTS (NCRs)**

#### **A. sbX Corridor**

To date, the CM team has met the required timelines and no delay has come about as a result of submittal and RFI responses.

Total RFIs – 1011  
Total Open – 9

Total Submittals – 883  
Total Open – 5

Total NCRs - 26  
Total Open - 2

**B. Vehicle Maintenance Facility (VMF)**

To date, the CM team has met the required timelines and no delay has come about as a result of submittal and RFI responses.

Total RFIs – 189  
Total Open – 5

Total Submittals – 332  
Total Open – 6

Total NCRs – 13  
Total Open – 2

**IV. SAFETY**

The project team considers safety to be the utmost priority. As such, the entire project team works towards a “no-lost time” goal on a daily basis.

SbX Corridor - As of April 25, 2013 there are 421,008 “no-lost time” hours.  
VMF - As of April 11, 2014 there are 19,970 “no-lost time” hours.

**V. PROJECT BUDGET AND COST****TOTAL PROGRAM BUDGET  
BUDGET AS OF MARCH 31, 2014**

Approved Budget	\$191,706,000
Cost to Date	\$155,170,380
Estimate to Complete	\$ 32,877,085
Estimate at Completion	\$188,047,465

**SBX CORRIDOR PROJECT COSTS - AS OF MARCH 31, 2014**

	CURRENT AUTHORIZED	CURRENT INVOICES PAID	REMAINING CONTRACT BALANCE
<b>JACOBS</b>	\$11,852,647	\$9,822,796	\$2,029,851
<b>PARSONS</b>	\$18,097,876	\$16,842,576	\$1,255,300
<b>GRIFFITH/COMET</b>	\$83,782,780	\$74,738,415	\$9,044,365
<b>TOTAL</b>	\$113,733,303	\$101,403,787	\$12,329,516

**VMF CORRIDOR PROJECT COSTS - AS OF MARCH 31, 2014**

	<b>CURRENT AUTHORIZED</b>	<b>CURRENT INVOICES PAID</b>	<b>REMAINING CONTRACT BALANCE</b>
<b>STV Inc.</b>	\$1,418,132	\$1,274,272	\$143,860
<b>USS Cal Builders</b>	\$11,685,598	\$5,399,712	\$6,285,886
<b>Total</b>	\$13,103,730	\$6,673,984	\$6,429,746

**SBX CORRIDOR CONTRACT TIME**

<b>Activity</b>	<b>Days</b>	<b>Date</b>
Notice to Proceed		11/21/11
Calendar Days per Original Contract	730	
Original Completion Date		12/21/13
Calendar Days Completed as of April 25, 2014	855	
CCO Time Extension to Date	0	
Required Completion Days/Date as of April 25, 2014	-125	12/21/13
Forecasted Completion Date as of April 25, 2014		04/28/14
Percent Time Elapsed	117%	

**VMF CONTRACT TIME**

<b>Activity</b>	<b>Days</b>	<b>Date</b>
Notice to Proceed		12/10/12
Calendar Days per Original Contract	425	
Original Completion Date		02/08/14
Calendar Days Completed as of April 25, 2014	501	
CCO Time Extension to Date	0	
Required Completion Days/Date as of April 25, 2014	-76	02/08/14
Forecasted Revenue Start Date as April 25, 2014		04/28/14
Percent Time Elapsed	118%	

**\* CONSTRUCTION COMPLETION DATE WILL BE AVAILABLE UPON COMPLETION OF THE SCHEDULE UPDATE.**

**CHANGE ORDERS****SBX CORRIDOR CONTRACT CHANGE ORDERS - As of April 25, 2014**

<b>Change Order Status</b>	<b>Amount Approved</b>
Approved Change Orders	\$18,962,326.34
Pending Change Orders	\$1,958,845.20
Potential Change Orders	\$666,358.36
<b>Total</b>	<b>\$21,587,529.90</b>

**VMF CONTRACT CHANGE ORDERS - As of April 25, 2014**

<b>Change Order Status</b>	<b>Amount</b>
Approved Change Orders	\$1,436,548.60
Pending Change Orders	\$90,620.22
Potential Change Orders	\$1,480,478.50
<b>Total</b>	<b>\$3,007,647.32</b>

**Note: Currently, pricing for Potential Change Orders are estimated based on Rough Order of Magnitude pending designer plans or final submittal of pricing by the Contractor.**

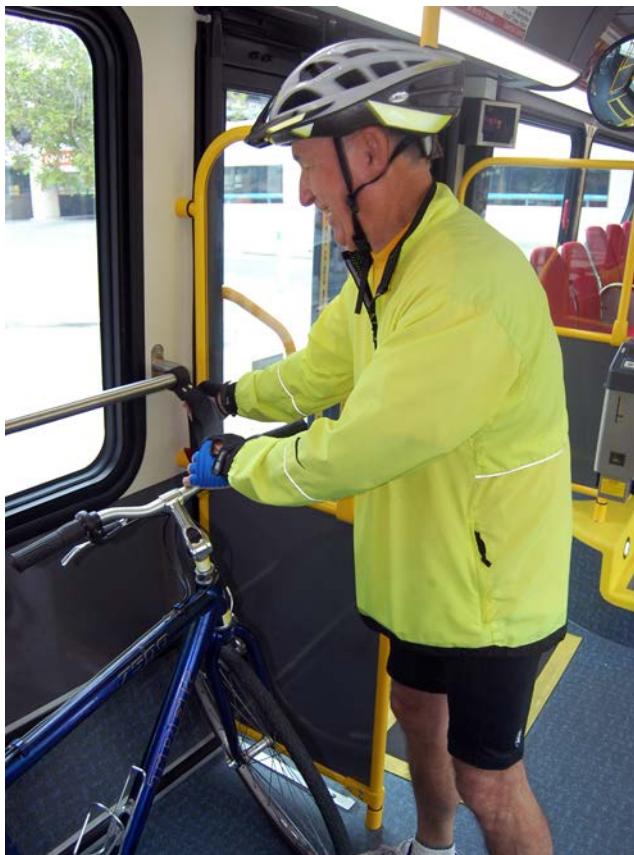
**Upon the approval of the final to date schedule, an analysis will be completed to determine the effect of the change orders on the scheduled completion date.**

## VI. Project Photographs

### SBX CORRIDOR PROGRESS PHOTOS



1. Construction Completion Celebration at E/Court Street Station.



2. Former COSB Mayor Pat Morris secures his bicycle on first sbX ride.





3. Using WiFi on sbX coach.



4. Enjoying the Construction Completion Celebration at Court Street Square.

**VMF PROGRESS PHOTOS**



1. Installing Embed Angles for the New Bus Lifts in Building A (Maintenance Facility).



2. Excavating for Building Footings at New Bus Wash Facility (Building B).



**IPMO/sbX Project Cost Report**  
**Period Ended 3/31/14**

Description	Current Budget	Expenditures		Remaining Budget	Estimate to Complete	Estimate at Completion	Budget Forecast Variance
		\$	%				
BRT Construction	84,637,000	74,854,816	88.4%	9,782,184	12,559,653	87,414,469	(2,777,469)
Vehicle Maintenance Facility (VMF) Construction	8,131,000	5,399,712		2,731,288	10,456,960	15,856,672	(7,725,672)
Vehicles - Design & Manufacturing	16,628,000	14,890,755	89.6%	1,737,245	1,274,960	16,165,715	462,285
ROW Acquisition Services	10,357,000	10,936,973	105.6%	(579,973)	952,997	11,889,970	(1,532,970)
3rd Party Utilities Design & Relocation	1,003,000	1,067,153	106.4%	(64,153)	38,964	1,106,117	(103,117)
BRT Design	17,849,400	16,842,576	94.4%	1,006,824	8,506	16,851,082	998,318
VMF Design	1,007,600	1,288,672	127.9%	(281,072)	407,260	1,695,932	(688,332)
Other Professional, Technical & Management Services	34,020,000	29,889,723	87.9%	4,130,277	7,177,785	37,067,508	(3,047,508)
<b>SUB-TOTAL</b>	<b>173,633,000</b>	<b>155,170,380</b>		<b>18,462,620</b>	<b>32,877,085</b>	<b>188,047,465</b>	<b>(14,414,465)</b>
Unallocated Contingency	18,073,000	-		18,073,000	3,658,535	3,658,535	14,414,465
<b>TOTAL</b>	<b>191,706,000</b>	<b>155,170,380</b>	<b>80.9%</b>	<b>36,535,620</b>	<b>36,535,620</b>	<b>191,706,000</b>	<b>-</b>

**IPMO/sbX Project  
Through 3/31/14**

Standard Cost Category (SCC)	Description	Approved Current Budget	Expenditures		Remaining Budget	Estimate to Complete	Estimate at Completion	Budget Forecast Variance
			\$	%				
<b>10</b>	<b>GUIDEWAY &amp; TRACK ELEMENTS</b>	<b>19,725,000</b>	<b>16,981,370</b>	<b>86.1%</b>	<b>\$ 2,743,630</b>	<b>\$ 2,811,054</b>	<b>\$ 19,792,424</b>	<b>\$ (67,424)</b>
10.02	Guideway: At-grade semi-exclusive (allows cross-traffic)	\$ 18,353,000	15,054,490	82.0%	\$ 3,298,510	\$ 2,474,461	\$ 17,528,951	\$ 824,049
10.03	Guideway: At-grade in mixed traffic	\$ 1,372,000	1,926,880	140.4%	\$ (554,880)	\$ 336,593	\$ 2,263,473	\$ (891,473)
<b>20</b>	<b>STATIONS, STOPS, TERMINALS, INTERMODAL</b>	<b>14,917,000</b>	<b>13,235,653</b>	<b>88.7%</b>	<b>\$ 1,681,347</b>	<b>\$ 1,140,484</b>	<b>\$ 14,376,137</b>	<b>\$ 540,863</b>
20.01	At-grade station, stop, shelter, mall, terminal, platform	14,917,000	13,235,653	88.7%	\$ 1,681,347	\$ 1,140,484	\$ 14,376,137	\$ -
<b>30</b>	<b>SUPPORT FACILITIES: YARDS, SHOPS, ADMIN. BLDGS</b>	<b>\$ 8,131,000</b>	<b>5,399,712</b>	<b>66.4%</b>	<b>\$ 2,731,288</b>	<b>\$ 10,456,960</b>	<b>\$ 15,856,672</b>	<b>\$ (7,725,672)</b>
30.02	Light Maintenance Facility	\$ 4,265,000	4,195,576	98.4%	\$ 69,424	\$ 8,014,061	\$ 12,209,637	\$ (7,944,637)
30.05	Yard and Yard Track	\$ 3,866,000	1,204,136	0.0%	\$ 2,661,864	\$ 2,442,899	\$ 3,647,035	\$ 218,965
<b>40</b>	<b>SITWORK &amp; SPECIAL CONDITIONS</b>	<b>34,271,000</b>	<b>25,837,576</b>	<b>75.4%</b>	<b>\$ 8,433,424</b>	<b>\$ 4,699,946</b>	<b>\$ 30,537,522</b>	<b>\$ 3,733,478</b>
40.01	Demolition, Clearing, Earthwork	\$ 4,741,000	338,921	7.1%	\$ 4,402,079	\$ (248,911)	\$ 90,010	\$ 4,650,990
40.02	Site Utilities, Utility Relocation	\$ 4,993,000	9,449,305	189.3%	\$ (4,456,305)	\$ 1,682,868	\$ 11,132,173	\$ (6,139,173)
40.05	Site structures including retaining walls, sound walls	\$ 90,000	386,621	429.6%	\$ (296,621)	\$ 257,245	\$ 643,866	\$ (553,866)
40.06	Pedestrian / bike access and accommodation, landscaping	\$ 6,925,000	3,436,770	49.6%	\$ 3,488,230	\$ 1,861,643	\$ 5,298,413	\$ 1,626,587
40.07	Automobile, bus, van accessways including roads, parking lots	\$ 3,601,000	4,117,695	114.3%	\$ (516,695)	\$ 148,012	\$ 4,265,707	\$ (664,707)
40.08	Temporary Facilities and other indirect costs during construction	\$ 13,921,000	8,108,264	58.2%	\$ 5,812,736	\$ 999,089	\$ 9,107,353	\$ 4,813,647
<b>50</b>	<b>SYSTEMS</b>	<b>\$ 16,727,000</b>	<b>19,867,370</b>	<b>118.8%</b>	<b>\$ (3,140,370)</b>	<b>\$ 618,994</b>	<b>\$ 20,486,364</b>	<b>\$ (3,759,364)</b>
50.02	Traffic signals and crossing protection	\$ 10,810,000	6,574,649	60.8%	\$ 4,235,351	\$ (116,552)	\$ 6,458,097	\$ 4,351,903
50.05	Communications	\$ 4,210,000	8,318,796	197.6%	\$ (4,108,796)	\$ 109,471	\$ 8,428,267	\$ (4,218,267)
50.06	Fare collection system and equipment	\$ 1,707,000	4,973,925	291.4%	\$ (3,266,925)	\$ 626,075	\$ 5,600,000	\$ (3,893,000)
	Pending Change Orders					\$ 3,916,283	\$ 3,916,283	\$ (3,916,283)
	Risk					\$ (588,144)	\$ (588,144)	\$ 588,144
	<b>Construction Subtotal (10-50)</b>	<b>93,771,000</b>	<b>81,321,681</b>	<b>86.7%</b>	<b>\$ 12,449,319</b>	<b>\$ 23,055,577</b>	<b>\$ 104,377,258</b>	<b>\$ (10,606,258)</b>
<b>60</b>	<b>ROW, LAND, EXISTING IMPROVEMENTS</b>	<b>\$ 6,532,000</b>	<b>\$ 6,006,388</b>	<b>92.0%</b>	<b>\$ 525,612</b>	<b>\$ 944,447</b>	<b>\$ 6,950,835</b>	<b>\$ (418,835)</b>
60.01	Purchase or lease of real estate	\$ 6,327,000	5,841,458	92.3%	\$ 485,542	\$ 904,377	\$ 6,745,835	\$ (418,835)
60.02	Relocation of existing households and businesses	\$ 205,000	164,930	80.5%	\$ 40,070	\$ 40,070	\$ 205,000	\$ -
<b>70</b>	<b>VEHICLES</b>	<b>\$ 16,628,000</b>	<b>\$ 14,890,755</b>	<b>89.6%</b>	<b>\$ 1,737,245</b>	<b>\$ 1,274,960</b>	<b>\$ 16,165,715</b>	<b>\$ 462,285</b>
70.04	Bus	\$ 15,448,000	14,858,641	96.2%	\$ 589,359	\$ 400,026	\$ 15,258,667	\$ 189,333
70.06	Non-revenue vehicles	\$ 250,000	-	0.0%	\$ 250,000	\$ -	\$ -	\$ 250,000
70.07	Spare parts	\$ 930,000	32,114	3.5%	\$ 897,886	\$ 874,934	\$ 907,048	\$ 22,952
<b>80</b>	<b>PROFESSIONAL SERVICES</b>	<b>56,702,000</b>	<b>52,951,556</b>	<b>93.4%</b>	<b>\$ 3,750,444</b>	<b>\$ 7,602,101</b>	<b>\$ 60,553,657</b>	<b>\$ (3,851,657)</b>
80.01	Preliminary Engineering	\$ 12,921,000	12,876,525	99.7%	\$ 44,475	\$ 17,502	\$ 12,894,027	\$ 26,973
80.02	Final Design	\$ 7,261,000	7,036,248	96.9%	\$ 224,752	\$ 405,874	\$ 7,442,122	\$ (181,122)
80.03	Project Management for Design and Construction	\$ 15,997,000	11,701,267	73.1%	\$ 4,295,733	\$ 2,750,036	\$ 14,451,303	\$ 1,545,697
80.04	Construction Administration & Management	\$ 6,632,000	9,822,796	148.1%	\$ (3,190,796)	\$ 3,029,851	\$ 12,852,647	\$ (6,220,647)
80.05	Professional Liability and other Non-Construction Insurance	\$ 1,112,000	-	0.0%	\$ 1,112,000	\$ -	\$ -	\$ 1,112,000
80.06	Legal; Permits; Review Fees by other agencies, cities, etc.	\$ 10,596,000	11,514,720	108.7%	\$ (918,720)	\$ 673,838	\$ 12,188,558	\$ (1,592,558)
80.07	Surveys, Testing, Investigation, Inspection	\$ 1,463,000	-	0.0%	\$ 1,463,000	\$ 25,000	\$ 25,000	\$ 1,438,000
80.08	Start up	\$ 720,000	-	0.0%	\$ 720,000	\$ 700,000	\$ 700,000	\$ 20,000
	<b>Subtotal (10-80)</b>	<b>\$ 173,633,000</b>	<b>\$ 155,170,380</b>	<b>89.4%</b>	<b>\$ 18,462,620</b>	<b>\$ 32,877,085</b>	<b>\$ 188,047,465</b>	<b>\$ (14,414,465)</b>
<b>90</b>	<b>UNALLOCATED CONTINGENCY</b>	<b>18,073,000</b>	<b>-</b>	<b>0.0%</b>	<b>\$ 18,073,000</b>	<b>\$ 3,658,535</b>	<b>\$ 3,658,535</b>	<b>\$ 14,414,465</b>
	<b>Subtotal (10-90)</b>	<b>191,706,000</b>	<b>155,170,380</b>	<b>80.9%</b>	<b>\$ 36,535,620</b>	<b>\$ 36,535,620</b>	<b>\$ 191,706,000</b>	<b>\$ -</b>
<b>100</b>	<b>FINANCE CHARGES</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
	<b>TOTAL PROJECT COST (10-100)</b>	<b>191,706,000</b>	<b>155,170,380</b>	<b>80.9%</b>	<b>\$ 36,535,620</b>	<b>\$ 36,535,620</b>	<b>\$ 191,706,000</b>	<b>\$ -</b>