



INVOICE
HCTRA

10 DEC -9 PM 12: 39

Remittance Address

Transcore
PO Box 933493
Atlanta, GA 31193-3493

Invoice Number: 10-07310

Invoice Date: 11/30/2010

Bill To:
HARRIS COUNTY TOLL RD AUTHORITY
ACCOUNTS PAYABLE
330 MEADOWFERN, SUITE 200
HOUSTON, TX 77067

Customer Number: H0013

Customer PO Number: P149763

Object Number: 1100007

Object Name: Maint VES Project 1300153

Terms: NET 30

Due Date: 12/30/2010

Billing Period From: 11/01/2010
To: 11/30/2010

Billing Currency: USD

VES Maint Techs
LL SCHEDULE ITEMS

Current
Amount

58,333.33

58,333.33

Invoice Total

58,333.33


12/17/10

HCTRA Monthly VES Maintenance Report - NOV10

Date	Location	Lane	Service Performed	Original Equipment Install Date
Monday, November 01, 2010	ALL	ALL	Reviewed ATTLAS image report	
Monday, November 01, 2010	ALL	ALL	Completed morning image checks of all lanes	
Monday, November 01, 2010	ALL	ALL	Continued review of bad OCR data	
Monday, November 01, 2010	ALL	ALL	Worked on bench testing removed VES computers/LEDs and preparing them to return to service	
Monday, November 01, 2010	Airport Connector	ALL	Intermittent comm issue on some of the lanes, went and swapped octopus cable and confirmed proper operation	
Monday, November 01, 2010	NEBW8 Work	John Ralston	VESC configuration/installation	
Monday, November 01, 2010	ALL	ALL	Completed afternoon image checks of all lanes	
Tuesday, November 02, 2010	ALL	ALL	Reviewed ATTLAS image report	
Tuesday, November 02, 2010	ALL	ALL	Completed morning image checks of all lanes	
Tuesday, November 02, 2010	ALL	ALL	Continued review of bad OCR data	
Tuesday, November 02, 2010	Fallbrook Exit	ALL	Video quality issue when checking images, went to site and replaced video digitizer card and confirmed proper operation. Will bench test old card to confirm issue.	
Tuesday, November 02, 2010	Alameda Exit	ALL	Power issue caused fiber converters to be turned off. Waited on site for power to be restored and confirmed proper operation of all equipment.	
Tuesday, November 02, 2010	NEBW8 Work	John Ralston	VESC configuration/installation	
Tuesday, November 02, 2010	ALL	ALL	Completed afternoon image checks of all lanes	
Tuesday, November 02, 2010	Ship Channel Bridge	ELPAC3	Issues related to comm during image checks, verified newest comm driver was installed and restarted system. Verified proper operation.	
Tuesday, November 02, 2010	Cullen Exit	ALL	Issues related to comm during image checks, verified newest comm driver was installed and restarted system. Verified proper operation.	
Tuesday, November 02, 2010	I-10 TP1	NRT2	This system was not accessible remotely, rebooted with netbooter and confirmed proper operation.	
Wednesday, November 03, 2010	ALL	ALL	Reviewed ATTLAS image report	
Wednesday, November 03, 2010	ALL	ALL	Completed morning image checks of all lanes	
Wednesday, November 03, 2010	ALL	ALL	Continued review of bad OCR data	
Wednesday, November 03, 2010	Ship Channel Bridge	ELPAC3	Issues related to comms during image checks again. Went to site and replaced comm board and confirmed proper operation.	
Wednesday, November 03, 2010	Alameda Exit	ALL	Power issue again, found bad comm card. Replaced comm card and confirmed proper operation.	
Wednesday, November 03, 2010	NEBW8 Work	John Ralston	VESC configuration/installation	
Wednesday, November 03, 2010	ALL	ALL	Completed afternoon image checks of all lanes	
Thursday, November 04, 2010	ALL	ALL	Reviewed ATTLAS image report	
Thursday, November 04, 2010	ALL	ALL	Completed morning image checks of all lanes	
Thursday, November 04, 2010	ALL	ALL	Continued review of bad OCR data	
Thursday, November 04, 2010	NEBW8 Work	John Ralston	VESC configuration/installation	
Thursday, November 04, 2010	ALL	ALL	Completed afternoon image checks of all lanes	
Friday, November 05, 2010	ALL	ALL	Reviewed ATTLAS image report	
Friday, November 05, 2010	ALL	ALL	Completed morning image checks of all lanes	
Friday, November 05, 2010	ALL	ALL	Continued review of bad OCR data	
Friday, November 05, 2010	I-10 TP3	NRT1	Unable to connect to this NRT remotely, rebooted using netbooter and verified proper operation.	
Friday, November 05, 2010	ALL	ALL	Worked on bench testing removed VES computers/LEDs and preparing them to return to service	
Saturday, November 06, 2010	ALL	ALL	Reviewed ATTLAS image report	
Sunday, November 07, 2010	ALL	ALL	Reviewed ATTLAS image report	
Monday, November 08, 2010	ALL	ALL	Reviewed ATTLAS image report	
Monday, November 08, 2010	ALL	ALL	Completed morning image checks of all lanes	
Monday, November 08, 2010	ALL	ALL	Continued review of bad OCR data	
Monday, November 08, 2010	Sam Central	NRT	Unable to connect to this NRT remotely, rebooted using netbooter and verified proper operation.	
Monday, November 08, 2010	WPT Hwy 6	ALL	Issue related to comms during image checks. Confirmed latest comm driver was installed, restarted system and confirmed proper operation.	
Monday, November 08, 2010	WestPark Extension	ALL	Checked and reported incandecent bulb outages	
Monday, November 08, 2010	Fort Bend Parkway	ALL	Checked and reported incandecent bulb outages	
Monday, November 08, 2010	NEBW8 Work	Wilson Rd.	VESC configuration/installation	
Monday, November 08, 2010	ALL	ALL	Completed afternoon image checks of all lanes	

Tuesday, November 09, 2010	ALL	ALL	Reviewed ATTLAS image report
Tuesday, November 09, 2010	ALL	ALL	Completed morning image checks of all lanes
Tuesday, November 09, 2010	ALL	ALL	Continued review of bad OCR data
Tuesday, November 09, 2010	Telephone Rd Exit	ALL	Issue related to comms during image checks. Confirmed latest comm driver was installed, restarted system, same issue. Went to site and replaced comm card, same issue. Issue appears to be software related. Replaced system and confirmed proper operation, will re-image removed system.
Tuesday, November 09, 2010	NEBW8 Work	Wilson Rd.	VESC configuration/installation
Tuesday, November 09, 2010	ALL	ALL	Completed afternoon image checks of all lanes
Wednesday, November 10, 2010	ALL	ALL	Reviewed ATTLAS image report
Wednesday, November 10, 2010	ALL	ALL	Completed morning image checks of all lanes
Wednesday, November 10, 2010	ALL	ALL	Continued review of bad OCR data
Wednesday, November 10, 2010	NEBW8 Work	Wilson Rd.	VESC configuration/installation
Wednesday, November 10, 2010	ALL	ALL	Completed afternoon image checks of all lanes
Thursday, November 11, 2010	ALL	ALL	Reviewed ATTLAS image report
Thursday, November 11, 2010	ALL	ALL	Completed morning image checks of all lanes
Thursday, November 11, 2010	ALL	ALL	Continued review of bad OCR data
Thursday, November 11, 2010	Lake Olympia	ALL	Previously replaced VESC at this location with ELPAC, re-wired to send RS422 comms directly from the lane controller to the ELPAC and eliminate the RS232 to 422 convertor.
Thursday, November 11, 2010	ALL	ALL	Completed afternoon image checks of all lanes
Friday, November 12, 2010	ALL	ALL	Reviewed ATTLAS image report
Friday, November 12, 2010	ALL	ALL	Completed morning image checks of all lanes
Friday, November 12, 2010	ALL	ALL	Continued review of bad OCR data
Friday, November 12, 2010	ALL	ALL	Worked on bench testing removed VES computers/LEDs and preparing them to return to service
Friday, November 12, 2010	ALL	ALL	Completed afternoon image checks of all lanes
Saturday, November 13, 2010	ALL	ALL	Reviewed ATTLAS image report
Sunday, November 14, 2010	ALL	ALL	Reviewed ATTLAS image report
Monday, November 15, 2010	ALL	ALL	Reviewed ATTLAS image report
Monday, November 15, 2010	ALL	ALL	Completed morning image checks of all lanes
Monday, November 15, 2010	ALL	ALL	Continued review of bad OCR data
Monday, November 15, 2010	Cullen Exit	ALL	No triggers during morning image checks, LCA says lane controller was not working and they were in process of replacing it.
Monday, November 15, 2010	I-10 TP2	NRT	Unable to connect to this NRT remotely, rebooted using netbooter and verified proper operation.
Monday, November 15, 2010	NEBW8 Work	West Lake Houston	VESC configuration/installation
Monday, November 15, 2010	ALL	ALL	Completed afternoon image checks of all lanes
Tuesday, November 16, 2010	ALL	ALL	Reviewed ATTLAS image report
Tuesday, November 16, 2010	ALL	ALL	Completed morning image checks of all lanes
Tuesday, November 16, 2010	ALL	ALL	Continued review of bad OCR data
Tuesday, November 16, 2010	Telephone Rd Exit	ALL	Issue related to comms during image checks. Confirmed latest comm driver was installed, restarted system and confirmed proper operation.
Tuesday, November 16, 2010	NEBW8 Work	West Lake Houston	VESC configuration/installation
Tuesday, November 16, 2010	ALL	ALL	Completed afternoon image checks of all lanes
Wednesday, November 17, 2010	ALL	ALL	Reviewed ATTLAS image report
Wednesday, November 17, 2010	ALL	ALL	Completed morning image checks of all lanes
Wednesday, November 17, 2010	ALL	ALL	Continued review of bad OCR data
Wednesday, November 17, 2010	Telephone Rd Exit		Issue related to comms during image checks. Went to site and changed comm ports on the ELPAC and confirmed proper operation
Wednesday, November 17, 2010	Airport Connector	NRT	NRT pre-production test passes
Wednesday, November 17, 2010	Little York Ent	NRT	NRT pre-production test passes
Wednesday, November 17, 2010	Little York Exit	NRT	NRT pre-production test passes
Wednesday, November 17, 2010	Aldine Mail Route Exit	NRT	NRT pre-production test passes
Wednesday, November 17, 2010	NEBW8 Work	West Lake Houston	VESC configuration/installation
Wednesday, November 17, 2010	ALL	ALL	Completed afternoon image checks of all lanes
Thursday, November 18, 2010	ALL	ALL	Reviewed ATTLAS image report
Thursday, November 18, 2010	ALL	ALL	Completed morning image checks of all lanes

Thursday, November 18, 2010	ALL	ALL	Continued review of bad OCR data
Thursday, November 18, 2010	Moore West	ALL	No triggers during morning image checks, LCA says the issue is related to loops and HCTRA will address the issue
Thursday, November 18, 2010	ALL	ALL	Completed afternoon image checks of all lanes
Friday, November 19, 2010	ALL	ALL	Reviewed ATTLAS image report
Friday, November 19, 2010	ALL	ALL	Completed morning image checks of all lanes
Friday, November 19, 2010	ALL	ALL	Continued review of bad OCR data
Friday, November 19, 2010	Airport Connector	ALL	Issues with video quality during morning image checks, went to site and replaced ground isolation transformers and confirmed proper operation.
Friday, November 19, 2010	Hardy Tidwell Ent	ALL	Issues with video quality during morning image checks, went to site and replaced ground isolation transformers and confirmed proper operation.
Friday, November 19, 2010	ALL	ALL	Completed afternoon image checks of all lanes
Saturday, November 20, 2010	ALL	ALL	Reviewed ATTLAS image report
Sunday, November 21, 2010	ALL	ALL	Reviewed ATTLAS image report
Monday, November 22, 2010	ALL	ALL	Reviewed ATTLAS image report
Monday, November 22, 2010	ALL	ALL	Completed morning image checks of all lanes
Monday, November 22, 2010	ALL	ALL	Continued review of bad OCR data
Monday, November 22, 2010	ALL	ALL	Installed windows XP patch on specific list of systems as requested by HCTRA IT team
Monday, November 22, 2010	NEBW8 Work	Garrett Rd.	VESC configuration/installation
Monday, November 22, 2010	ALL	ALL	Completed afternoon image checks of all lanes
Tuesday, November 23, 2010	ALL	ALL	Reviewed ATTLAS image report
Tuesday, November 23, 2010	ALL	ALL	Completed morning image checks of all lanes
Tuesday, November 23, 2010	ALL	ALL	Continued review of bad OCR data
Tuesday, November 23, 2010	NEBW8 Work	Garrett Rd.	Help with testing per HCTRA request
Monday, November 22, 2010	Red Bluff Exit	ALL	Issue related to comms during image checks. Confirmed latest comm driver was installed, restarted system, confirmed proper operation
Monday, November 22, 2010	Spencer Hwy Exit	ALL	Issue related to comms during image checks. Confirmed latest comm driver was installed, restarted system, confirmed proper operation
Monday, November 22, 2010	Beltway 8 Exchange	ALL	Issue related to comms during image checks. Confirmed latest comm driver was installed, restarted system, confirmed proper operation
Tuesday, November 23, 2010	ALL	ALL	Completed afternoon image checks of all lanes
Wednesday, November 24, 2010	ALL	ALL	Reviewed ATTLAS image report
Wednesday, November 24, 2010	ALL	ALL	Completed morning image checks of all lanes
Wednesday, November 24, 2010	ALL	ALL	Continued review of bad OCR data
Wednesday, November 24, 2010	NEBW8 Work	Wilson Rd.	Help with testing per HCTRA request
Wednesday, November 24, 2010	NEBW8 Work	Garrett Rd.	VESC configuration/installation
Thursday, November 25, 2010	ALL	ALL	Holiday
Friday, November 26, 2010	ALL	ALL	Holiday
Saturday, November 27, 2010	ALL	ALL	Reviewed ATTLAS image report
Saturday, November 27, 2010	Sam North	ALL	Alerts from NRT systems being down and not getting triggers. Unable to connect to some NRTs. Went to site and found breaker on UPS was tripped, reset breaker and all equipment recovered.
Sunday, November 28, 2010	ALL	ALL	Reviewed ATTLAS image report
Monday, November 29, 2010	ALL	ALL	Reviewed ATTLAS image report
Monday, November 29, 2010	ALL	ALL	Completed morning image checks of all lanes
Monday, November 29, 2010	ALL	ALL	Continued review of bad OCR data
Monday, November 29, 2010	ALL	ALL	Worked on bench testing removed VES computers/LEDs and preparing them to return to service
Monday, November 29, 2010	NEBW8 Work	Winfield	VESC configuration/installation
Monday, November 29, 2010	ALL	ALL	Completed afternoon image checks of all lanes
Tuesday, November 30, 2010	ALL	ALL	Reviewed ATTLAS image report
Tuesday, November 30, 2010	ALL	ALL	Completed morning image checks of all lanes
Tuesday, November 30, 2010	ALL	ALL	Continued review of bad OCR data
Tuesday, November 30, 2010	ALL	ALL	Worked on bench testing removed VES computers/LEDs and preparing them to return to service
Tuesday, November 30, 2010	NEBW8 Work	Winfield	VESC configuration/installation
Tuesday, November 30, 2010	ALL	ALL	Completed afternoon image checks of all lanes
Tuesday, November 30, 2010	ALL	ALL	Work with HCTRA to complete VESC user password conversion and check every VES related system to ensure they are working properly

Tuesday, November 30, 2010	WPT Royaltan Ent	ALL	System did not come back up after password conversion, went onsite to reboot. Confirmed proper operation	
Tuesday, November 30, 2010	Airport Connector	ALL	Comm issues with this system after password conversion, went to site to resolve issues, confirmed proper operation.	
Tuesday, November 30, 2010	Sam East	PIC	System did not come back up after password conversion, went onsite to reboot. Confirmed proper operation	

Repaired Equipment

Equipment	Serial Number	Problem	Resolution
LED Illuminator	00557M	4 LED BANKS NOT WORKING	REPLACED 4 BANKS AND TESTED
LED Illuminator	01034M	CONTROLLER BOARD BURNED	REPLACED CONTROLLER BOARD AND TESTED
LED Illuminator	00504M	CONTROLLER BOARD HAS NO POWER	REPLACED CONTROLLER BOARD AND TESTED
LED Illuminator	00910M	ISSUE SWITCHING TO DAY NIGHT MODE	RESET CONTROLLER BOARD, REPROGRAMMED AND TESTED
LED Illuminator	00616M	CONTROLLER BOARD HAS NO POWER	REPLACED CONTROLLER BOARD AND TESTED
LED Illuminator	0201	CONTROLLER BOARD HAS NO POWER	REPLACED CONTROLLER BOARD AND TESTED
LED Illuminator	00421M	CONTROLLER BOARD BURNED	REPLACED CONTROLLER BOARD AND TESTED
LED Illuminator	01047M	1 LED BANK NOT WORKING	REPLACED 1 BANK AND TESTED
LED Illuminator	0353M	5 LED BANKS OUT	REPLACED CONTROLLER BOARD AND 5 LED BANKS AND TESTED
LED Illuminator	00389M	CONTROLLER BOARD HAS NO POWER	REPLACED CONTROLLER BOARD AND TESTED

TRANSCORE

INVOICE
HCTRA

10 DEC -9 PM 12:39

Remittance Address

Transcore
PO Box 93393
Atlanta, GA 31194-3393

Invoice Number: 10-07310

Invoice Date: 11/30/2010

Bill To:
HARRIS COUNTY TOLL RD AUTHORITY
ACCOUNTS PAYABLE
330 MEADOWFERN, SUITE 200
HOUSTON, TX 77067

Customer Number: H0013

Customer PO Number: P149763

Project Number: 1100007

Project Name: Maint VES Project 1300103

Terms: NET 30

Due Date: 12/30/2010

Billing Period From: 11/01/2010
To: 11/30/2010

Billing Currency: USD

5 VES Maint Techs
BILL SCHEDULE ITEMS

Invoice Total

Current
Amount

58,333.33

58,333.33

58,333.33

Jul
12/17/10

$700,000 \div 12 = 58,333.33$

VER
CPA
AUDITOR
TEXAS

2010 DEC 28 PM 2:02

HCTRA Monthly VES Maintenance Report - NOV10

Date	Location	Lane	Service Performed	Original Equipment Install Date
Monday, November 01, 2010	ALL	ALL	Reviewed ATTLAS image report	
Monday, November 01, 2010	ALL	ALL	Completed morning image checks of all lanes	
Monday, November 01, 2010	ALL	ALL	Continued review of bad OCR data	
Monday, November 01, 2010	ALL	ALL	Worked on bench testing removed VES computers/LEDs and preparing them to return to service	
Monday, November 01, 2010	Airport Connector	ALL	Intermittent comm issue on some of the lanes, went and swapped octopus cable and confirmed proper operation	
Monday, November 01, 2010	NEBW8 Work	John Ralston	VESC configuration/installation	
Monday, November 01, 2010	ALL	ALL	Completed afternoon image checks of all lanes	
Tuesday, November 02, 2010	ALL	ALL	Reviewed ATTLAS image report	
Tuesday, November 02, 2010	ALL	ALL	Completed morning image checks of all lanes	
Tuesday, November 02, 2010	ALL	ALL	Continued review of bad OCR data	
Tuesday, November 02, 2010	Fallbrook Exit	ALL	Video quality issue when checking images, went to site and replaced video digitizer card and confirmed proper operation. Will bench test old card to confirm issue.	
Tuesday, November 02, 2010	Alameda Exit	ALL	Power issue caused fiber converters to be turned off. Waited on site for power to be restored and confirmed proper operation of all equipment.	
Tuesday, November 02, 2010	NEBW8 Work	John Ralston	VESC configuration/installation	
Tuesday, November 02, 2010	ALL	ALL	Completed afternoon image checks of all lanes	
Tuesday, November 02, 2010	Ship Channel Bridge	ELPAC3	Issues related to comm during image checks, verified newest comm driver was installed and restarted system. Verified proper operation.	
Tuesday, November 02, 2010	Cullen Exit	ALL	Issues related to comm during image checks, verified newest comm driver was installed and restarted system. Verified proper operation.	
Tuesday, November 02, 2010	I-10 TP1	NRT2	This system was not accessible remotely, rebooted with netbooter and confirmed proper operation.	
Wednesday, November 03, 2010	ALL	ALL	Reviewed ATTLAS image report	
Wednesday, November 03, 2010	ALL	ALL	Completed morning image checks of all lanes	
Wednesday, November 03, 2010	ALL	ALL	Continued review of bad OCR data	
Wednesday, November 03, 2010	Ship Channel Bridge	ELPAC3	Issues related to comms during image checks again. Went to site and replaced comm board and confirmed proper operation.	
Wednesday, November 03, 2010	Alameda Exit	ALL	Power issue again, found bad comm card. Replaced comm card and confirmed proper operation.	
Wednesday, November 03, 2010	NEBW8 Work	John Ralston	VESC configuration/installation	
Wednesday, November 03, 2010	ALL	ALL	Completed afternoon image checks of all lanes	
Thursday, November 04, 2010	ALL	ALL	Reviewed ATTLAS image report	
Thursday, November 04, 2010	ALL	ALL	Completed morning image checks of all lanes	
Thursday, November 04, 2010	ALL	ALL	Continued review of bad OCR data	
Thursday, November 04, 2010	NEBW8 Work	John Ralston	VESC configuration/installation	
Thursday, November 04, 2010	ALL	ALL	Completed afternoon image checks of all lanes	
Friday, November 05, 2010	ALL	ALL	Reviewed ATTLAS image report	
Friday, November 05, 2010	ALL	ALL	Completed morning image checks of all lanes	
Friday, November 05, 2010	ALL	ALL	Continued review of bad OCR data	
Friday, November 05, 2010	I-10 TP3	NRT1	Unable to connect to this NRT remotely, rebooted using netbooter and verified proper operation.	
Friday, November 05, 2010	ALL	ALL	Worked on bench testing removed VES computers/LEDs and preparing them to return to service	
Saturday, November 06, 2010	ALL	ALL	Reviewed ATTLAS image report	
Sunday, November 07, 2010	ALL	ALL	Reviewed ATTLAS image report	
Monday, November 08, 2010	ALL	ALL	Reviewed ATTLAS image report	
Monday, November 08, 2010	ALL	ALL	Completed morning image checks of all lanes	
Monday, November 08, 2010	ALL	ALL	Continued review of bad OCR data	
Monday, November 08, 2010	Sam Central	NRT	Unable to connect to this NRT remotely, rebooted using netbooter and verified proper operation.	
Monday, November 08, 2010	WPT Hwy 6	ALL	Issue related to comms during image checks. Confirmed latest comm driver was installed, restarted system and confirmed proper operation.	
Monday, November 08, 2010	WestPark Extension	ALL	Checked and reported incandescent bulb outages	
Monday, November 08, 2010	Fort Bend Parkway	ALL	Checked and reported incandescent bulb outages	
Monday, November 08, 2010	NEBW8 Work	Wilson Rd.	VESC configuration/installation	
Monday, November 08, 2010	ALL	ALL	Completed afternoon image checks of all lanes	

Tuesday, November 09, 2010	ALL	ALL	Reviewed ATLAS image report
Tuesday, November 09, 2010	ALL	ALL	Completed morning image checks of all lanes
Tuesday, November 09, 2010	ALL	ALL	Continued review of bad OCR data
Tuesday, November 09, 2010	Telephone Rd Exit	ALL	Issue related to comms during image checks. Confirmed latest comm driver was installed, restarted system, same issue. Went to site and replaced comm card, same issue. Issue appears to be software related. Replaced system and confirmed proper operation. will re-image removed system.
Tuesday, November 09, 2010	NEBW8 Work	Wilson Rd.	VESC configuration/installation
Tuesday, November 09, 2010	ALL	ALL	Completed afternoon image checks of all lanes
Wednesday, November 10, 2010	ALL	ALL	Reviewed ATLAS image report
Wednesday, November 10, 2010	ALL	ALL	Completed morning image checks of all lanes
Wednesday, November 10, 2010	ALL	ALL	Continued review of bad OCR data
Wednesday, November 10, 2010	NEBW8 Work	Wilson Rd.	VESC configuration/installation
Wednesday, November 10, 2010	ALL	ALL	Completed afternoon image checks of all lanes
Thursday, November 11, 2010	ALL	ALL	Reviewed ATLAS image report
Thursday, November 11, 2010	ALL	ALL	Completed morning image checks of all lanes
Thursday, November 11, 2010	ALL	ALL	Continued review of bad OCR data
Thursday, November 11, 2010	Lake Olympia	ALL	Previously replaced VESC at this location with ELPAC, re-wired to send RS422 comms directly from the lane controller to the ELPAC and eliminate the RS232 to 422 convertor.
Thursday, November 11, 2010	ALL	ALL	Completed afternoon image checks of all lanes
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Monday, November 15, 2010	ALL	ALL	Reviewed ATLAS image report
Monday, November 15, 2010	ALL	ALL	Completed morning image checks of all lanes
Monday, November 15, 2010	ALL	ALL	Continued review of bad OCR data
Monday, November 15, 2010	Cullen Exit	ALL	No triggers during morning image checks, LCA says lane controller was not working and they were in process of replacing it.
Monday, November 15, 2010	I-10 TP2	NRT	Unable to connect to this NRT remotely, rebooted using netbooter and verified proper operation.
Monday, November 15, 2010	NEBW8 Work	West Lake Houston	VESC configuration/installation
Monday, November 15, 2010	ALL	ALL	Completed afternoon image checks of all lanes
Tuesday, November 16, 2010	ALL	ALL	Reviewed ATLAS image report
Tuesday, November 16, 2010	ALL	ALL	Completed morning image checks of all lanes
Tuesday, November 16, 2010	ALL	ALL	Continued review of bad OCR data
Tuesday, November 16, 2010	Telephone Rd Exit	ALL	Issue related to comms during image checks. Confirmed latest comm driver was installed, restarted system and confirmed proper operation.
Tuesday, November 16, 2010	NEBW8 Work	West Lake Houston	VESC configuration/installation
Tuesday, November 16, 2010	ALL	ALL	Completed afternoon image checks of all lanes
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Wednesday, November 17, 2010	Airport Connector	NRT	NRT pre-production test passes
Wednesday, November 17, 2010	Little York Ent	NRT	NRT pre-production test passes
Wednesday, November 17, 2010	Little York Exit	NRT	NRT pre-production test passes
Wednesday, November 17, 2010	Aldine Mail Route Exit	NRT	NRT pre-production test passes
Wednesday, November 17, 2010	NEBW8 Work	West Lake Houston	VESC configuration/installation
Wednesday, November 17, 2010	ALL	ALL	Completed afternoon image checks of all lanes
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Thursday, November 18, 2010	ALL	ALL	Continued review of bad OCR data
Thursday, November 18, 2010	Moore West	ALL	No triggers during morning image checks, LCA says the issue is related to loops and HCTRA will address the issue
Thursday, November 18, 2010	ALL	ALL	Completed afternoon image checks of all lanes
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Friday, November 19, 2010	ALL	ALL	Continued review of bad OCR data
Friday, November 19, 2010	Airport Connector	ALL	Issues with video quality during morning image checks, went to site and replaced ground isolation transformers and confirmed proper operation.
Friday, November 19, 2010	Hardy Tidwell Ent	ALL	Issues with video quality during morning image checks, went to site and replaced ground isolation transformers and confirmed proper operation.
Friday, November 19, 2010	ALL	ALL	Completed afternoon image checks of all lanes
Saturday, November 20, 2010	ALL	ALL	Reviewed ATTLAS image report
Sunday, November 21, 2010	ALL	ALL	Reviewed ATTLAS image report
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Monday, November 22, 2010	ALL	ALL	Completed morning image checks of all lanes
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Monday, November 22, 2010	ALL	ALL	Installed windows XP patch on specific list of systems as requested by HCTRA IT team
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Tuesday, November 23, 2010	NEBW8 Work	Garrett Rd.	Help with testing per HCTRA request
Monday, November 22, 2010	Red Bluff Exit	ALL	Issue related to comms during image checks. Confirmed latest comm driver was installed, restarted system, confirmed proper operation
Monday, November 22, 2010	Spencer Hwy Exit	ALL	Issue related to comms during image checks. Confirmed latest comm driver was installed, restarted system, confirmed proper operation
Monday, November 22, 2010	Beltway 8 Exchange	ALL	Issue related to comms during image checks. Confirmed latest comm driver was installed, restarted system, confirmed proper operation
Tuesday, November 23, 2010	ALL	ALL	Completed afternoon image checks of all lanes
Wednesday, November 24, 2010	ALL	ALL	Reviewed ATTLAS image report
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Wednesday, November 24, 2010	NEBW8 Work	Wilson Rd.	Help with testing per HCTRA request
Wednesday, November 24, 2010	NEBW8 Work	Garrett Rd.	VESC configuration/installation
Thursday, November 25, 2010	ALL	ALL	Holiday
Friday, November 26, 2010	ALL	ALL	Holiday
Saturday, November 27, 2010	ALL	ALL	Reviewed ATTLAS image report
Saturday, November 27, 2010	Sam North	ALL	Alerts from NRT systems being down and not getting triggers. Unable to connect to some NRTs. Went to site and found breaker on UPS was tripped, reset breaker and all equipment recovered.
Sunday, November 28, 2010	ALL	ALL	Reviewed ATTLAS image report
Monday, November 29, 2010	ALL	ALL	Reviewed ATTLAS image report
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Tuesday, November 30, 2010	ALL	ALL	Completed morning image checks of all lanes
Tuesday, November 30, 2010	ALL	ALL	Continued review of bad OCR data
Tuesday, November 30, 2010	ALL	ALL	Worked on bench testing removed VES computers/LEDs and preparing them to return to service
Tuesday, November 30, 2010	NEBW8 Work	Winfield	VESC configuration/installation
Tuesday, November 30, 2010	ALL	ALL	Completed afternoon image checks of all lanes
Tuesday, November 30, 2010	ALL	ALL	Work with HCTRA to complete VESC user password conversion and check every VES related system to ensure they are working properly

Tuesday, November 30, 2010	WPT Royaton Ent	ALL	System did not come back up after password conversion, went onsite to reboot. Confirmed proper operation	
Tuesday, November 30, 2010	Airport Connector	ALL	Comm issues with this system after password conversion, went to site to resolve issues, confirmed proper operation.	
Tuesday, November 30, 2010	Sam East	PIC	System did not come back up after password conversion, went onsite to reboot. Confirmed proper operation	

Repaired Equipment

Equipment	Serial Number	Problem	Resolution
LED Illuminator	00557M	4 LED BANKS NOT WORKING	REPLACED 4 BANKS AND TESTED
LED Illuminator	01034M	CONTROLLER BOARD BURNED	REPLACED CONTROLLER BOARD AND TESTED
LED Illuminator	00504M	CONTROLLER BOARD HAS NO POWER	REPLACED CONTROLLER BOARD AND TESTED
LED Illuminator	00910M	ISSUE SWITCHING TO DAY NIGHT MODE	RESET CONTROLLER BOARD, REPROGRAMMED AND TESTED
LED Illuminator	00616M	CONTROLLER BOARD HAS NO POWER	REPLACED CONTROLLER BOARD AND TESTED
LED Illuminator	0201	CONTROLLER BOARD HAS NO POWER	REPLACED CONTROLLER BOARD AND TESTED
LED Illuminator	00421M	CONTROLLER BOARD BURNED	REPLACED CONTROLLER BOARD AND TESTED
LED Illuminator	01047M	1 LED BANK NOT WORKING	REPLACED 1 BANK AND TESTED
LED Illuminator	0353M	5 LED BANKS OUT	REPLACED CONTROLLER BOARD AND 5 LED BANKS AND TESTED
LED Illuminator	00389M	CONTROLLER BOARD HAS NO POWER	REPLACED CONTROLLER BOARD AND TESTED

Harris County Production PO Reference Report

ORGANIZATION NAME H/C TOLL ROAD AUTHORITY		PURCHASE ORDER NO P149763
VENDOR NO. 251730334	Date 05/20/2010	REQUEST NO R283707
BUYER NAME VGROCE		EST. DELIVERY DATE

VENDOR ADDRESS:

TRANSCORE
2705 WEST SAM HOUSTON PKWY 1
HOUSTON, TX 77043

SHIP TO:

HC TOLL AUTHORITY
CENTRAL SUPPLY
14640 HENRY ROAD
HOUSTON, TX 770605623

BILL TO:

CONTACT:

713 355 3628

ITEM NO.	QTY	UNIT	DESCRIPTION	UNIT PRICE	TOTAL
0001	750,000.00	LOT	NEW PURCHASE ORDER IN FUND 5710 FOR 6 MONTHS OF PROJECTED EXPENDITURES DUE TO THE UNAVAILABILITY OF COMMERCIAL PAPER PROCEEDS IN FUND 5950. PURCHASE ORDER P134547 WILL BE REDUCED BY \$750,000.00. VES CAMERAS & ASSOCIATED EQUIPMENT FOR HCTRA. ALL IN ACCORDANCE WITH AGREEMENT HERETO REFERRED AND MADE PART HEREOF AS IF ATTACHED. COMMISSIONERS COURT APPROVED 1/22/08	1.00	750,000.00
0002	4,000,000.00	LOT	ADDENDUM R285456-1, DATED 12/29/08, TO ADD FUNDS TO PURCHASE ORDER P149763 IN FUND 5710 FOR 6 MONTHS OF PROJECTED EXPENDITURES DUE TO THE UNAVAILABILITY OF COMMERCIAL PAPER PROCEEDS IN FUND 5950. PURCHASE ORDER P134547 WILL BE REDUCED BY \$4,000,000. VES CAMERAS & ASSOCIATED EQUIPMENT FOR HCTRA. ALL IN ACCORDANCE WITH AGREEMENT HERETO REFERRED AND MADE PART HEREOF AS IF ATTACHED.	1.00	4,000,000.00
0003	2,544,550.00	LOT	ADDENDUM TO INCREASE P149763 BY \$2544,550.68 WHICH REPRESENTS THE REMAINING BALANCE ON THE RELATED PO, P134547. MATERIALS & LABOR; VIOLATION ENFORCEMENT SYSTEM CAMERAS & ASSOCIATED EQUIPMENT FOR HCTRA. ALL IN ACCORDANCE WITH AGREEMENT HERETO REFERRED AND MADE PART HEREOF AS IF ATTACHED.	1.00	2,544,550.00
0004	700,000.00	LOT	ADDENDUM TO INCREASE P149763 BY \$700,000 FOR THE SECOND YEAR RENEWAL OF THE ANNUAL MAINTENANCE. FIRST YEAR: 1/22/08-1/21/09 SECOND YEAR: 1/22/09-1/21/10	1.00	700,000.00
0005	700,000.00	LOT	ADDENDUM R323293, DATED 5/13/10, TO INCREASE P149763 BY \$700,000 FOR THE RENEWAL OF MAINTENANCE FOR VIOLATION ENFORCEMENT SYSTEM	1.00	700,000.00

User: CKIRKPAT - Kirkpatrick, Connie
Report: PO_FORMAT_HC - Purchase Order Report Format

Page: 1

01/03/2011 :Current Date
09:39:04 :Current Time

Kirkpatrick, Connie (Auditors)

From: Fischer, Felita (HCTRA) (Toll Road Authority)
Sent: Friday, January 07, 2011 2:40 PM
To: Cross, Sheila (HCTRA) (Toll Road Authority)
Cc: Kirkpatrick, Connie (Auditors)
Subject: Transcore Invoice # 10-07310--\$58,333.33

Sheila/Connie,

Please pay Transcore invoice # 10-07310--\$58,333.33 on PO # P156924.

Please let me know if you have any questions.

Thank you,

Felita Fischer
Maintenance

Harris County Toll Road Authority
7701 Wilshire Place Drive
Houston, Texas 77040

713-587-7913 Office *
281-875-1592 Fax

felita.fischer@hctra.org

*** PLEASE NOTE NEW TELEPHONE NUMBER**

TRA AP AUG12'10AM9.2.

Date: 08/04/10

P149763--\$278,384.00 &

Approved CL

Date 8-23-16

Batch AK 817 CK1

CC Date

Description:

[illegible]

P.O. BALANCE: \$7,733,811.01 OBJECT CODE: PO # P156924--\$22,197.67


Section Approval

Revised 10/2/06

INVOICE		TRANSCORE.							
Invoice No. 18330		P 149763 - \$278,384.00							
Vendor No. 251730334		HCTRA Purchase Order No. P156924 - \$22,197.67							
Name of Project: HCTRA VES UPGRADE		Invoice Date: 7/22/10							
Name of Contractor: TransCore		Customer No.: H0013							
Bill to: Harris County Toll Road Authority 7701 Wilshire Place Drive, 5th floor Houston, TX 77040 Attention: Chuck Sanders		Remit to: TransCore Holdings, Inc. 36120 Treasury Center Chicago, IL 60694-6100							
SUMMARY OF WORK FOR WHICH PAYMENT IS REQUIRED									
Item	Item	Total Contract Quantity	Unit Contract Amount	Total Contract Amount	Previous Quantity Invoiced	Previous Amount Invoiced	Current Month Quantity	Current Month Amount	
1	VES Camera	600	\$ 1,778.00	\$ 1,067,400.00	603	\$ 1,072,737.00	0	\$ -	
2	VES Camera Housing	300	\$ 2,226.00	\$ 801,360.00	300	\$ 801,360.00	0	\$ -	
3	Camera Junction Box (1 camera/line)	302	\$ 3,180.00	\$ 963,380.00	340	\$ 1,084,000.00	0	\$ -	
4	Camera Junction Box (2 camera/line)	93	\$ 3,845.00	\$ 360,885.00	65	\$ 374,775.00	0	\$ -	
5	a. LED Illuminator	500	\$ 2,910.00	\$ 1,456,500.00	500	\$ 1,456,500.00	0	\$ -	
	b. No Charge LED Illuminator		\$ -	\$ -	39	\$ -	0	\$ -	
6	b. LED Illuminator Bracket	500	\$ 130.00	\$ 65,000.00	500	\$ 65,000.00	0	\$ -	
	b. No Charge LED Illuminator Bracket		\$ -	\$ -	39	\$ -	0	\$ -	
7	LED Illuminator Junction Box		\$ 1,744.00	\$ -	0	\$ -	0	\$ -	
8	VES Controller (1-4 cameras)	40	\$ 8,354.00	\$ 334,160.00	57	\$ 476,178.00	0	\$ -	
9	VES Controller (1-8 cameras)	65	\$ 9,101.00	\$ 591,565.00	75	\$ 682,575.00	8	\$ 54,608.00	
10	Phaze Image Computer	1	\$ 9,877.00	\$ 9,877.00	0	\$ -	7	\$ 87,739.00	
11	a. OCR System Hardware	12	\$ 5,894.00	\$ 82,728.00	0	\$ -	8	\$ 55,152.00	
	b. OCR System Software License	11	\$ 4,080.00	\$ 44,880.00	0	\$ -	8	\$ 32,840.00	
12	OCR Tuning	0	\$ 30,936.00	\$ -	0	\$ -	0	\$ -	
13	Initial Commissioning and Testing	0	\$ 12,410.02	\$ -	0	\$ -	0	\$ -	
	Subtotal - Materials			\$ 5,786,535.00	2608	\$ 6,016,725.00	29	\$ 210,137.00	
14	Maintenance Lane Installation (Labor + Materials)	0	\$ 9,615.00	\$ -	7	\$ 67,305.00	0	\$ -	
15	Other Lane Installation (Labor + Materials)	380	\$ 22,749.00	\$ 8,872,110.00	72	\$ 1,637,928.00	3	\$ 68,247.00	
16	Single Lane/Ramp Closure - TransCore Work		\$ 1,117.73	\$ -		\$ -	14	\$ 15,648.22	
17	Two-Lane Closure - TransCore Work		\$ 1,309.89	\$ -		\$ -	5	\$ 6,548.45	
18	Single Lane/Ramp Closure - Others Work		\$ 1,775.00	\$ -		\$ -	0	\$ -	
19	Two-Lane Closure - Others Work		\$ 2,125.55	\$ -		\$ -	0	\$ -	
20	Public Notification - Work		\$ 675.00	\$ -		\$ -	0	\$ -	
	Subtotal - Labor			\$ 8,872,110.00		\$ 1,705,233.00	1	\$ 90,444.67	
								Current Invoice Amount	\$ 300,581.67
								Total Amount Invoiced to Date	\$ 8,022,539.67
								Contract Amount	\$ 14,638,645.00
								Amount Remaining	\$ 6,636,105.33

Submitted by:

Ron Barr

TransCore

Date: 7/22/2010

SPLIT PAY ON TWO P.O.'s

P 149763 - \$278,384.00

P 156924 - \$22,197.67

OK TO PAY
7/27/10

RECEIVED
BARBARA A. SCHOTT, CPA
HARRIS COUNTY AUDITOR
HOUSTON, TEXAS
2010 AUG 16 AM 10:33

May/June/July Lane Closures

Date	Location	Type	Quantity	Price	Date Invoiced	Issue	
5/13/2010	249 Entrance Lanes 31,32	Single Lane/Ramp Closure	1	\$1,117.73		Camera in lane 31 image is tilted to the left	Ci m VI
5/20/2010	Bellaire Exit Lanes 68,69	Single Lane/Ramp Closure	1	\$1,117.73		Swap FSJ4 to LDF4 per HCTRA	Ri cc w
5/25/2010	West Rd Exit Lanes 58,59	Single Lane/Ramp Closure	1	\$1,117.73		Camera in lane 59 has dark images	C re al
5/26/2010	Bellaire Entrance 60,61	Single Lane/Ramp Closure	1	\$1,117.73		Camera in Lane 61 has dark images	C re a
6/1/2010	Sam South Lanes 7,8	Two-Lane Closure	1	\$1,309.89		Center camera in lane 7 has dark images. Right camera in lane 8	C s
6/1/2010	Sam South Lane 9	Single Lane/Ramp Closure	1	\$1,117.73		On-Retro LED illuminator not working	C ri o
6/10/2010	Moore West Shoulder Lane	Single Lane/Ramp Closure	1	\$1,117.73		Damage caused by vehicle accident	E a
6/11/2010	Moore West Lanes 1,2	Two-Lane Closure	1	\$1,309.89		Test all VES lighting and replace light bulbs and sockets after	F 3
6/11/2010	Moore West Lane 3	Single Lane/Ramp Closure	1	\$1,117.73		Found bulbs out when powering up entire system.	F e
6/16/2010	Sam North Lane 3	Single Lane/Ramp Closure	1	\$1,117.73		Loop damage caused by vehicle accident	F s C
6/17/2010	Sam North Lane 6,7	Two-Lane Closure	1	\$1,309.89		Center camera in lane 7 has dark images.	F C V C
6/23/2010	Bellaire Exit Lanes 68,69	Single Lane/Ramp Closure	1	\$1,117.73		Camera in lane 68 has dark images	I
6/29/2010	Ranikin Entrance Lane 70	Single Lane/Ramp Closure	1	\$1,117.73		Camera in Lane 70 was fuzzy and out of focus.	

6/23/2010	Westheimer Entrance Lanes 40,41	Single Lane/Ramp Closure	1	\$1,117.73		Install lane control signal in lane 42	In pr al
7/5/2010	Sam North Lanes 5,6	Two-Lane Closure	1	\$1,309.89		Center camera in lane 7 has dark	C
7/5/2010	Sam North Lane 7	Single Lane/Ramp Closure	1	\$1,117.73		images	re
7/19/2010	Sam South Lane 4	Single Lane/Ramp Closure	1	\$1,117.73		Camera showing video out on ELPAC	R o V