



Department of Administrative Services Purchasing and Contracts

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Sabra Smith Newby, Chief Administrative Officer
Adleen B. Stidhum, Purchasing Administrator

CLARK COUNTY, NEVADA

BID NO. 603259-14

HARMON MILL AND OVERLAY AND TWAIN PULVERIZE AND PAVE

May 7, 2014

ADDENDUM NO. 2

INVITATION TO BID

1. The Bid Opening Date of May 9, 2014 at 2:15:00 **has been changed to May 14, 2014 at 2:15:00 p.m.**

SPECIFICATIONS

2. *The following section is being reissued with this addendum.*
 - a. *Section 714 – Paint and Pavement Markings*
3. *The following Appendix sheets are being issued with this addendum.*
 - a. Per Section 302.03.09 of the special provisions, core maps are being provided as reference for inspection by bidders.

BID SCHEDULE

Delete the original Bid Form, pages 4-1 through 4-9 and **replace** with the attached revised Bid Form, pages 4-1 through 4-9

Except as modified herein all other bid specifications, terms, conditions and special provisions shall remain the same.

ISSUED BY:


SANDY MOODY-UPTON
Purchasing Analyst

Attachment(s): Bid Form pages 4-1- through 4-9
Appendix Cores - Harmon Ave
Appendix Cores - Twain Ave
Section 714
Section 623

Cc: Ray Falcon, Public Works
Joe Yatson, Public Works
Cindy Beauchamp, Public Works

BOARD OF COUNTY COMMISSIONERS

STEVE SISOLAK, Chairman • LARRY BROWN, Vice Chairman
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CLARK COUNTY, NEVADA

BID FORM

BID NO. 603259-14
HARMON MILL AND OVERLAY AND TWAIN PULVERIZE AND PAVE
PWP NUMBER: CL-2014-190
REVISED PER ADDENDUM NO. 2

(NAME)

(ADDRESS)

I, THE UNDERSIGNED BIDDER:

1. Agree, if awarded this Contract, I will complete all work for which a Contract may be awarded and to furnish any and all labor, equipment, materials, transportation, and other facilities required for the services as set forth in the Bidding and Contract Documents.
2. Have examined the Contract Documents and the site(s) for the proposed work and satisfied themselves as to the character, quality of work to be performed, materials to be furnished and as to the requirements of the specifications.
3. Have completed all information in the blanks provided and have submitted the following within this Bid:
 - a) Have listed the name of each Subcontractor which will be paid an amount exceeding five percent (5%) of the Total Base Bid amount.
 - b) Attached a bid security (in the form of, at my option, a Cashiers Check, Certified Check, Money Order, or Bid Bond in favor of the Owner in the amount of five percent (5%) of the Total Base Bid amount.
 - c) If claiming the preference eligibility, I have submitted a valid Certificate of Eligibility with this Bid.
4. I acknowledge that if I am one of the three apparent low bidders at the bid opening, and if I have listed Subcontractor(s) pursuant to NRS 338.141, I must submit Bid Attachment 2 within two-hours after completion of the bid opening pursuant to the Instructions to Bidders, forms must be submitted via hand delivery or email to COUNTPURCHASING@CLARKCOUNTYNV.GOV and I understand that hand delivery is recommended, and Owner shall not be responsible for lists received after the two-hour time limit, regardless of the reason. I understand that submission after the two-hour time limit is not allowed and will be returned to me and the bid will be deemed non-responsive. I acknowledge that for:
 - a) Projects UNDER \$5,000,000
I need to list **only those Subcontractors** that will provide labor/improvements exceeding \$50,000.00.
5. I acknowledge that if I am one of the three apparent low bidders at bid opening, and if I have submitted a valid Certificate of Eligibility as described in 3.d above, I must submit Bid Attachment 3, Affidavit pertaining to preference eligibility, within two-hours after completion of the bid opening pursuant to the General Conditions. The forms must be submitted via hand delivery or email to COUNTPURCHASING@CLARKCOUNTYNV.GOV and I understand hand delivery is recommended. Owner shall not be responsible for lists received after the two-hour time limit, regardless of the reason. I understand that submission after the two-hour time limit is not allowed and will be returned to me and the bid will be deemed non-responsive.
6. I acknowledge that if notified that I am the low bidder, I must submit the Disclosure of Ownership/Principals form within 24-hours of request.
7. I acknowledge that my bid is based on the current State of Nevada prevailing wages and/or the current Davis-Bacon wage rates, whichever is greater.
8. I acknowledge that I have not breached a public work contract for which the cost exceeds \$25,000,000, within the preceding year, for failing to comply with NRS 338.147 and the requirements of a contract in which I have submitted within 2 hours of the bid opening an Affidavit pertaining to preference eligibility.

9. Upon faxed or mailed receipt of a Notice of Intent to Award the Contract, I will provide the following submittals within seven business days from receipt of the Notice:
 - a) Performance Bond, Labor and Material Payment Bond and a Guaranty Bond, for 100% of the Contract amount as required.
 - b) Certificates of insurance for Commercial General Liability in the amount of \$1,000,000, Automobile Liability in the amount of \$1,000,000, and Workers' Compensation insurance issued by an insurer qualified to underwrite Workers' Compensation insurance in the State of Nevada, as required by law.
10. I acknowledge that if I do not provide the above submittals on or before the seventh business day after receipt of the Notice of Intent to Award; or do not keep the bonds or insurance policies in effect, or allow them to lapse during the performance of the Contract; I will pay over to the Owner the amount of **\$1,500** per day as liquidated damages.
11. I confirm this bid is genuine and is not a sham or collusive, or made in the interest of, or on behalf of any person not herein named, nor that the Bidder in any manner sought to secure for themselves an advantage over any bidders.
12. I further propose and agree that if my bid is accepted, I will commence to perform the work called for by the contract documents on the date specified in the Notice to Proceed and I will complete all work within the calendar days **specified in the General Conditions.**
13. I further propose and agree that I will accept as full compensation for the work to be performed the price written in the Bid Schedule below.
14. I have carefully checked the figures below and the Owner will not be responsible for any error or omissions in the preparation or submission of this Bid.
15. I agree no verbal agreement or conversation with an officer, agent or employee of the owner, either before or after the execution of the contract, shall affect or modify any of the terms or obligations of this Bid.
16. I am responsible to ascertain the number of addenda issued, and I hereby acknowledge receipt of the following addenda:

Addendum No. _____ dated, _____ Addendum No. _____ dated, _____

Addendum No. _____ dated, _____ Addendum No. _____ dated, _____

Addendum No. _____ dated, _____ Addendum No. _____ dated, _____
17. I agree to perform all work described in the drawings, specifications, and other documents for the amounts quoted below:

BID SCHEDULE				
ITEM NUMBER	ITEM DESCRIPTION	APPROX. QUANTITY	UNIT	TOTAL
107.01	Traffic Control	45	DAY	\$
109.01	Construction Conflicts and Additional Work	1	LS	\$ 125,000
109.02	Historical Owner Caused Delay Allowance	5	DAY	\$ 2,500
109.03	Additional Amount Over \$500.00 / Day As Determined By Bidder	5	DAY	\$
200.01	Mobilization	1	LS	\$
202.01	1" Cold Planing	32,570	SY	\$
302.01	Pulverize Roadway	4,520	CY	\$
302.02	Reconstruction of Base Failures	500	CY	
302.03	Geotextile Soil Stabilization Fabric	300	SY	
402.01	Plantmix Bituminous Surface	4,808	TON	
402.02	AC Curb	392	LF	
402.03	AC Sidewalk	1,960	SF	

BID SCHEDULE				
ITEM NUMBER	ITEM DESCRIPTION	APPROX. QUANTITY	UNIT	TOTAL
413.01	1" UTACS Mixture - S3 Gradation	32,570	SY	
609.01	Vertically Adjust Manhole Grade Rings (Storm Drain)	1	EA	
613.01	Reconstruct Concrete Sidewalk	11,620	SF	
613.02	Reconstruct Concrete Curb and Gutter	1,603	LF	
613.03	Reconstruct Concrete Spandrel / Cross Gutter	1,086	SF	
613.04	Cast-in-Place Detectable Warning Panel (5'x2')	26	EA	
613.05	Concrete Tack-on Median	417	SF	
619.01	Marker Post (K-71) (Yellow)	4	EA	
623.01	Induction Loops Detector (6'x6')	73	EA	
623.02	Induction Loops Detector (6'x30')	12	EA	
623.03	No. 3 ½ Pull Box	5	EA	
623.04	No. 5 Pull box	8	EA	
623.05	3" Conduit	1,785	LF	
627.01	Permanent Sign Post	7	EA	
627.02	Permanent Sign Panel (R3-17) (30"x30")	6	EA	
627.03	Permanent Sign Panel (R3-17B)	2	EA	
627.04	Permanent Sign Panel (R3-7R)	2	EA	
627.05	Remove and Salvage Traffic Sign	2	EA	
628.01	Type 2 Film (Crosswalk)	7,000	SF	
628.02	Type 2 Film (Stop Bar)	2,300	SF	
628.03	Type 2 Film (Arrow Legend)	45	EA	
628.04	Type 2 Film (Bike Lane Legend)	8	EA	
628.05	Type 2 White 6" Marking	4,429	LF	
628.06	White Polyurea Paint Marking (8" Solid)	1,119	LF	
628.07	White Polyurea Paint (Chevron)	629	SF	
628.08	Median Island Paint (Yellow)	700	SF	
628.09	Type 2 Film ("ONLY" Legend)	2	EA	
629.01	Vertically Adjust Water Valve Box	56	EA	
629.02	Vertically Adjust Water Blow-off	1	EA	
630.01	Vertically Adjust Manhole Grade Rings (Sanitary Sewer)	15	EA	
630.02	Vertically Adjust Lined Manholes (Sanitary Sewer)	10	EA	
633.01	Non-Reflective Pavement Markers	4,025	EA	
633.02	Reflective Pavement Markers	1,633	EA	
637.01	Dust Control	45	DAY	
TOTAL BASE BID				\$

18. BUSINESS ENTERPRISE INFORMATION:

The Prime Contractor submitting this Bid is a MBE WBE PBE SBE NBE LBE as defined in the Instructions to Bidders.

19. BUSINESS ETHNICITY INFORMATION:

The Prime Contractor submitting the Bid Ethnicity is Caucasian (CX) African American (AA) Hispanic American (HA) Asian Pacific American (AX) Native American (NA) Other as defined in the Instructions to Bidders.

20. BIDDERS' PREFERENCE Is the Bidder claiming Bidders' Preference?

Yes If yes, the Bidder acknowledges that he/she is required to follow the requirements set forth in the Affidavit (Bid Attachment 3).

No I do not have a Certificate of Eligibility to receive preference in bidding.

21.

LEGAL NAME OF FIRM AS IT WOULD APPEAR IN CONTRACT

ADDRESS OF FIRM

CITY, STATE, ZIP CODE

TELEPHONE NUMBER

FAX NUMBER

NEVADA STATE CONTRACTORS' BOARD LICENSE INFORMATION:

I certify that the license(s) listed below will be the license(s) used to perform the majority of the work on this project.

LICENSE NUMBER: _____

LICENSE CLASS: _____

LICENSE LIMIT: _____

ONE TIME LICENSE LIMIT INCREASE \$ _____ IF YES, DATE REQUESTED _____

CLARK COUNTY BUSINESS LICENSE NO. _____

STATE OF NEVADA BUSINESS LICENSE NO. _____

AUTHORIZED REPRESENTATIVE
(PRINT OR TYPE)

E-MAIL ADDRESS

SIGNATURE OF AUTHORIZED REPRESENTATIVE

TODAY'S DATE

**BID ATTACHMENT 1
BID BOND**

IMPORTANT: SURETY COMPANIES EXECUTING BONDS MUST BE LICENSED TO ISSUE SURETY BY THE STATE OF NEVADA INSURANCE DIVISION PURSUANT TO NEVADA REVISED STATUTE 683A AND ISSUED BY AN APPOINTED PRODUCER OF INSURANCE PURSUANT TO NEVADA REVISED STATUTE 683A. INDIVIDUAL SURETY BONDS ARE NOT ACCEPTABLE.

KNOW ALL MEN BY THESE PRESENTS,

That we, the undersigned, _____ as Principal Contractor, and _____ as Surety, are hereby held and firmly bound unto CLARK COUNTY, NEVADA as OWNER in the penal sum of five (5) percent of the base bid amount for the payment of which, well and truly to be made, were hereby jointly and severally bind ourselves, successors and assigns.

Signed this _____ day of _____, 20_____.

The condition of the above obligation is such that whereas the Principal has submitted to CLARK COUNTY, NEVADA a certain BID attached hereto and hereby made a part hereof to enter into a contract in writing, for **BID NO. HARMON MILL AND OVERLAY AND TWAIN PULBERIZE AND PAVE.**

NOW, THEREFORE,

- a) If said BID shall be rejected; or
- b) If said BID shall be accepted and the Principal Contractor shall deliver an insurance certificate and bonds pursuant to the forms attached hereto properly completed in accordance with said BID, and shall furnish a BOND for their faithful performance of said Contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the Agreement created by the acceptance of said BID;

then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its BOND shall be in no way impaired or affected by any extension of the time within which the OWNER may accept such BID; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and the Surety has caused their seal to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

Bond must be acceptable to Clark County.

(SEAL AND NOTARIAL ACKNOWLEDGMENT OF SURETY)

<p>_____</p> <p style="text-align: center;">(Principal Contractor)</p> <p>_____</p> <p style="text-align: center;">(Authorized Representative and Title)</p> <p>By: _____</p> <p style="text-align: center;">(Signature)</p>	<p>_____</p> <p>Surety: _____</p> <p>_____</p> <p style="text-align: center;">(State of Nevada, License Number)</p> <p>_____</p> <p style="text-align: center;">(Appointed Agent Name)</p> <p>By: _____</p> <p style="text-align: center;">(Signature)</p> <p>Address: _____</p> <p>_____</p> <p>Telephone: _____</p> <p>_____</p>
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BID ATTACHMENT 3 AFFIDAVIT PERTAINING TO PREFERENCE ELIGIBILITY

THE LOW OR BEST BIDDER MUST SUBMIT THIS FORM VIA HAND DELIVERY OR EMAIL TO COUNTYPURCHASING@CLARKCOUNTYNV.GOV IF THEY HAVE MET THE REQUIREMENTS OF NEVADA REVISED STATUTE 338.141 AND 338.0117, AND HAVE IT TIME STAMPED WITHIN TWO (2) HOURS AFTER COMPLETION OF THE OPENING OF THE BIDS TO BE ELIGIBLE TO RECEIVE A PREFERENCE IN BIDDING. SUBMISSIONS AFTER THE TWO (2) HOURS WILL BE REJECTED. A BIDDER THAT FAILS TO SUBMIT THE AFFIDAVIT WITHIN THE REQUIRED TIME REPRESENTS THAT THEY WILL FOREGO RECEIVING THE PREFERENCE.

I, _____ (“Affiant”), on behalf of the _____ (“Contractor”), swear and affirm that in order to be in compliance with NRS 338.147, and NRS 338.0117, and be eligible to receive a preference in bidding for Project No. **Error! Reference source not found.**, Project Name **Error! Reference source not found.** (“Project”); certify that for the duration of the Project, collectively, and not on any specific day;

- (a) At least 50 percent of the workers employed on the Project including, without limitation, any employees of the Bidder, and of any Subcontractor engaged on the Project, will hold a valid driver’s license or identification card issued by the State of Nevada Department of Motor Vehicles (“DMV”);
- (b) All vehicles used primarily for the Project will be:
 - (1) Registered and partially apportioned to Nevada pursuant to the International Registration Plan, as adopted by the DMV pursuant to NRS 707.826; or
 - (2) Registered in the State of Nevada;
- (c) If applying to receive a preference in bidding pursuant to subsection 3 of NRS 338.1727 or subsection 2 of NRS 408.3886, at least 50 percent of the design professionals working on the Project, including, without limitation, employees of the design-build team, and of any subcontractor or consultant engaged in the design of the Project, will have a valid driver’s license or identification card issued by the DMV;
- (d) The Contractor, applicant or design-build team, and any Subcontractor engaged on the Project will maintain and make available for the inspection within this State his or her records concerning payroll relating to the Project.

Upon submission, of the State Contractors’ Board certificate of eligibility to receive a preference in bidding on public works and this Affidavit. Contractor recognizes and accepts that if a contract is awarded as a result of receiving a preference in bidding, failure to comply with the requirements herein, including all record keeping obligations detailed in the General Conditions, entitles Clark County to a penalty as defined by statute.

Clark County Materials Laboratory
Asphalt Coring Project for

Traffic Management Division
Project Number S123525
HARMON AVENUE
Wednesday 09.18.13
Between Koval Lane and Paradise Road
Michael R. Dunning,



Core No.

<p>1-A And 1-B</p>		
<p>2</p>		

Clark County Materials Laboratory
Asphalt Coring Project for

Traffic Management Division

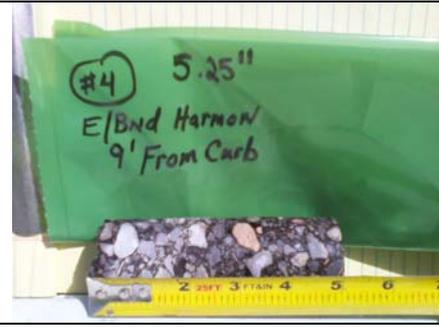
Project Number S123525

HARMON AVENUE

Wednesday 09.18.13

Between Koval Lane and Paradise Road

Michael R. Dunning,

<p>3-A And 3-B And 3-C</p>			
<p>Location No. 3</p>			
<p>4</p>			
<p>5-A And 5-B</p>			

Clark County Materials Laboratory
Asphalt Coring Project for

Traffic Management Division

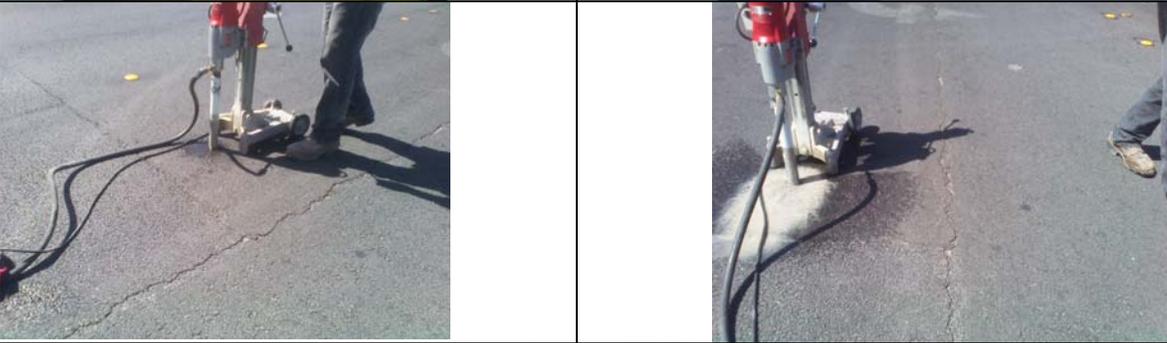
Project Number S123525

HARMON AVENUE

Wednesday 09.18.13

Between Koval Lane and Paradise Road

Michael R. Dunning,

6		
7-A And 7-B		
Location Of Core No. 7		
Location Of Core No. 7		

Clark County Materials Laboratory
Asphalt Coring Project for

Traffic Management Division

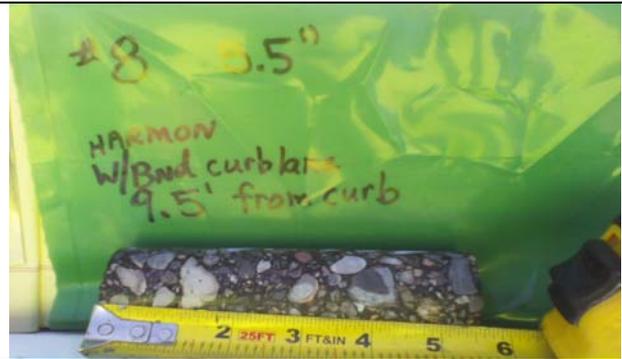
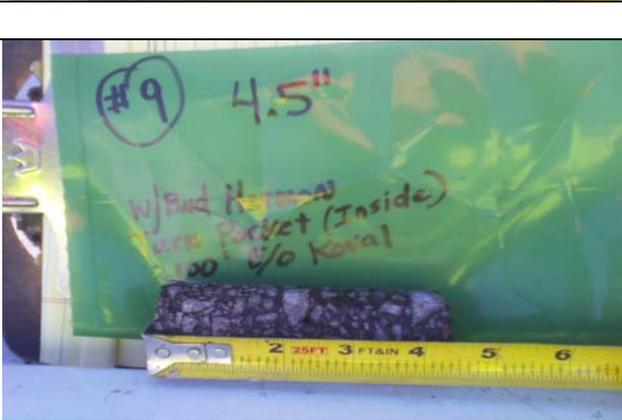
Project Number S123525

HARMON AVENUE

Wednesday 09.18.13

Between Koval Lane and Paradise Road

Michael R. Dunning,

8			
9			

Clark County Materials Laboratory
Asphalt Coring Project for

Traffic Management Division
Project Number M064220
E. TWAIN AVENUE
Between Swenson Street and Maryland Parkway
Michael R. Dunning,



Core ID	Location	Asphalt Depth	Type II Depth
1 (10)	22' south of north curb	2.00" Over lay / 3.00"	N/A
2 (11)	22' north of south curb	4.50"	N/A
3 (12)	22' north of south curb	1.50" Over lay / 2.50"	N/A
4 (13)	Median 1' South Center Lane	2.00" Over lay / 2.00"	N/A
5 (14)	Median (Center Lane) 100' west of edge of driveway	2.00" Over lay / 2.50"	N/A



Clark County Materials Laboratory
Asphalt Coring Project for

Traffic Management Division
Project Number M064220
E. TWAIN AVENUE
Between Swenson Street and Maryland Parkway
Michael R. Dunning,



Clark County Materials Laboratory
Asphalt Coring Project for

Traffic Management Division
Project Number M064220
E. TWAIN AVENUE
Between Swenson Street and Maryland Parkway
Michael R. Dunning,

5 (14)



SECTION 714

PAINT AND PAVEMENT MARKINGS

PHYSICAL PROPERTIES AND TESTS

714.01.01 MATERIALS COVERED

Add the following:

Contractor shall provide and install the type(s) of pavement marking materials as specified in the plans. No substitutions of types of materials will be allowed.

714.03.05 PAINT FOR TRAFFIC STRIPING, PAVEMENT MARKING, AND CURB MARKING – GENERAL

Add the following:

Contractor shall use an approved material listed under Rapid Dry Waterborne Paint – Permanent Striping Formulations (Type II) in the current NDOT QPL that also meets the requirements set forth in the Standard Specifications and these special provisions. A material listed in the NDOT QPL is not guaranteed to be accepted for use on this project. Contractor's shop drawings/materials submittals for approval of materials that are in the NDOT QPL which do not meet the requirements in the Standard Specifications and the special provisions will be rejected.

714.03.06 PAVEMENT MARKINGS

Replace Sentence 4 in Subparagraph A.2.f with the following:

Type 2 pavement marking material shall also meet the "Heavy Traffic" performance criteria establish in the table below.

Type 2 film shall have a min. thickness of 0.065 inches and shall provide a minimum service period of 3 years.

Add the following:

Qualified Products List

For transverse pavement marking applications, Contractor shall use an approved material listed under Pavement Marking Tape (Type II) in the current NDOT QPL that also meets the Type 2 pavement marking material requirements set forth in the Standard Specifications and these special provisions. A material listed in the NDOT QPL is not guaranteed to be accepted for use on this project. Contractor's shop drawings/materials submittals for approval of materials that are in the NDOT QPL which do not meet the requirements in the Standard Specifications and the special provisions will be rejected.

The following products have been approved for transverse pavement marking applications in this contract:

ATM - 400 Tape or approved equal. Product manufacturer shall provide specifications that prove it meets the criteria for "Heavy Traffic" applications. Note: Previously approved products that do not meet these criteria will not be accepted.

Replace Sentence 2 in Subparagraph B.3.e with the following:

Polyurea paint used for pavement markings shall conform to materials requirements listed in Subsection 714.03.11, "Polyurea Paint for Traffic Markings."

Replace Sentence 4 in Subparagraph B.3.g with the following:

Type 1 pavement marking material shall also meet the "Heavy Traffic" performance criteria establish in the table below.

Replace Subparagraph B.3.i, "Qualified Products List" with the following:

For longitudinal pavement marking applications, Contractor shall use an approved material listed under Pavement Marking Tape (Type IV) in the current NDOT QPL that also meets the Type 1 pavement marking material requirements set forth in the Standard Specifications and these special provisions. A material listed in the NDOT QPL is not guaranteed to be accepted for use on this project. Contractor's shop drawings/materials submittals for approval of materials that are in the NDOT QPL which do not meet the requirements in the Standard Specifications and the special provisions will be rejected.

714.03.11 POLYUREA PAINT FOR TRAFFIC MARKINGS

Add the following:

Qualified Products List

For longitudinal pavement marking applications, Contractor shall use an approved material listed under Paint Marking Material (Polyurea) in the current NDOT QPL that also meets the Polyurea Paint requirements set forth in the Standard Specifications and these special provisions. A material listed in the NDOT QPL is not guaranteed to be accepted for use on this project. Contractor's shop drawings/materials submittals for approval of materials that are in the NDOT QPL which do not meet the requirements in the Standard Specifications and the special provisions will be rejected.

SECTION 623

TRAFFIC SIGNALS AND STREET LIGHTING

DESCRIPTION

623 G.01.05 GLOBAL POSITIONING SYSTEM (GPS) COORDINATES

Replace this subsection with the following:

Information related to traffic assets shall be the responsibility of the Contractor and Clark County will not be responsible for furnishing any information. All traffic asset information shall be provided by completing the Traffic Asset Data Collection Forms 1 and/or 2 as appropriate for all new and relocated traffic signal systems, ITS, and street lighting facilities that are connected via the underground conduit system(s) and are visible at ground level, including but not limited to poles, pull boxes, splice vaults, cabinets, service pedestals, transformers, school flasher assemblies, and changeable message signs. Traffic asset information shall also be provided for all pull boxes that are buried underground as shown on the plans. The information on traffic assets shall be submitted to Clark County Public Works in an electronic file (.doc or .xls) and "hard copy" format following the Traffic Asset Data Collection Forms. The asset information shall be complete and free from error, with coordinates based on (Northing/Easting, NAD 1983, State Plane Nevada East, US Survey Feet) at the end of the project prior to final acceptance and maintenance. The information and data shall comply with the requirements of Clark County Public Works and identify post construction coordinates with identification to each item or facility on the plans. The horizontal precision of the coordinates shall be recorded with a device that has an accuracy tolerance within three (3) feet of the actual location of the object.

MATERIALS

623 G.02.01 CONDUIT

Add the following:

Electrical conduits, fittings, and couplings shall be joined together per NEC section 352.48.

623 G.02.02 PULL BOXES

Replace the first sentence of paragraph B with the following:

Non-conductive lids shall be used for all pull box covers except for Type 200 splice vault. Steel lids shall be used for Type 200 splice vault.

Add the following to this subsection:

Pull boxes shall not be installed within the roadway, shoulder, nor bike lane. Pull boxes shall also not be installed within sidewalk ramp, driveway, nor within 10-feet of a driveway.

623 G.02.04 CONDUCTORS AND CABLE

Replace the second sentence of paragraph A.4 with the following:

All traffic signal cable shall be 25-conductor, No. 14 AWG solid copper wire traffic signal cable.

Replace paragraph A.7.a in this subsection with the following:

Conductors shall be 7-strand No. 4/0 AWG copper wire with THW-2 or XHHW-2 insulation, unless otherwise shown in the plans or indicated herein.

Replace paragraph A.9.b with the following:

The insulation shall be 15 mils of orange PVC complying with UL62 with an overall jacket of clear nylon in accordance with ASTM D4066.

Add the following:

The induction loop wires shall be soldered and sealed to the loop lead-in wires.

623 G.02.07 ELECTRICAL SERVICE PEDESTALS

Replace paragraph J1 with the following:

The main body of the pedestal, the hood and the main door shall be polyurethane powder coated inside and out with a gloss, mint green coating (Federal color 14672).

Replace paragraph M with the following:

The pedestals shall incorporate a tin plated copper load center. Bus bars for grounding and neutral connections shall be tin plated aluminum rated for both copper and aluminum wire with facilities for landing two (2) No. 1/0 AWG conductors, six (6) No. 2 to No. 12 AWG and 12 No. 4 to No. 14 AWG conductors. The utility landing lugs shall be tin plated aluminum rated for both copper and aluminum service wire.

Replace paragraph O.1 with the following:

Each lighting circuit shall have a separate test toggle switch (or toggle switch position) rated for 10 amps with sealed leads for testing the circuit during maintenance activities.

CONSTRUCTION

623 G.03.03 SCHEDULING OF WORK

Add the following to paragraph G:

The Contractor shall supply Traffic Jackets as supplied by Phoenix Highway Products, 2631 North 37th Drive, Phoenix, Arizona 85009, Phone 602-344-7770, www.phoenixhighwayproducts.com, or approved equal by the Maintaining Agency.

The covers shall be bright orange with a vertical message "NOT IN SERVICE" in black on each cover, for new construction. The covers shall be black with a vertical message "NOT IN SERVICE" in white on each cover, for modifications to a traffic signal already in operation.

Coverings that are not installed when a signal head is installed, and not activated, shall have a cover installed by the Contracting Agency and the cost of the covering shall be deducted from any unpaid invoices that have been or will be submitted to the Contracting Agency by the Contractor.

623 G.03.07 FOUNDATIONS

Add the following:

Service pedestal and controller cabinet foundations shall be level.

623 G.03.08 WIRING AND CONDUIT

Add the following to paragraph D of this subsection:

Splices for street light cables shall be split bolt type of the appropriate size. The split bolt connector shall be copper or copper alloy with copper plating, and shall accommodate range of cable sizes specified in the Drawings. The split bolt connector shall be Brundy KS22, Brundy KS23, or approved equivalent by the Maintaining Agency.

Replace paragraph I of this subsection:

14 AWG UF wire shall be used between the pole-mounted "J" box and the traffic signal tenons on the traffic signal mast arms. All 14 AWG UF wire shall be uniquely identified in the "J" box. Six (6) conductors shall be installed from the pole mounted "J" box to any unused tenon at the end of the mast arm. Four (4) conductors shall be installed from the pole mounted "J" box to any unused tenons located elsewhere on the mast arm. All empty tenons shall be sealed with 10mil tape. Contractor shall determine and install the appropriate number of conductors from the pole mounted "J" box to all traffic signal indications.

623 G 03.09 ELECTRICAL SERVICES

Replace paragraph E in this subsection with the following:

Electrical conductors for service shall have THW-2 or XHHW-2 insulation and shall be 4/0 AWG, stranded, copper wire unless otherwise specified.

Add the following to this subsection:

623 G 03.13 CONDUIT VERIFICATION AND CONDUIT BLOCKAGE

At locations where existing conduit is to be utilized, Contractor shall verify condition of the conduit. In the event of a conduit blockage at existing conduit locations, the Contractor shall attempt to clear the blockages by any reasonable means to his disposal until the conduit is cleared of obstruction to the satisfaction of the Engineer or until the Engineer determines that further attempts to clear the conduit are not feasible. Reasonable means include any industry standard methods for removing conduit blockages, such as, blowing air through the blocked conduit(s) with an air compressor of a minimum size of 185 cfm, soaking the blocked conduit(s) with water for 24 hours then blowing air with an air compressor of a minimum size of 185 cfm, and any other methods as approved by the Engineer.

TRAFFIC SIGNAL SECTION

623 T.01.01 GENERAL

Add the following:

A Clark County-licensed Journeyman Electrician shall perform all electrical terminations.

MATERIAL

623 T.02.02 TRAFFIC SIGNAL CONTROLLER CABINET EQUIPMENT

Add the following to paragraph F:

Two (2) Model 764 emergency vehicle phase selectors shall be provided for each traffic signal system.

Replace paragraph H.1 with the following:

A 16-channel conflict monitor with flashing yellow arrow capabilities shall be furnished unprogrammed and the harnesses shall be wired by the Maintaining Agency.

623 T.02.03 TRAFFIC SIGNAL CONTROLLERS

Delete paragraph B.5.d in this subsection.

Delete paragraph C in this subsection.

Replace paragraph D.1 with the following:

Contractor shall supply a Siemens M53 with installed Naztec Apogee actuated signal controller software (latest version) or Naztec model 980 ATC signal controller with Apogee actuated signal controller software (latest version).

623 T.02.04 MAGNETIC INDUCTION LOOP DETECTORS

Add the following to paragraph A:

6 feet diameter circular detection loop may be used in lieu of 6 feet by 6 feet square detection loop. Spacing between each loop and the number of loops shall be as specified in the plans.

Replace paragraph G.1 with the following:

A separate lead-in cable to the controller cabinet shall be provided for each left turn, straight through, and right turn lanes. A separate lead-in cable to the controller cabinet shall be provided for advanced detection loops for each approach. Each lead-in cable shall be individually tagged.

Replace paragraph H.2 with the following:

All detectors shall be shelf mounted.

623 T.02.05 EMERGENCY VEHICLE PRIORITY CONTROL SYSTEM (INTERNAL PREEMPTION)

Replace paragraph D.4.b.1 with the following:

This module unit shall be a plug-in, 4-channel device, dual-priority, multimode encoded signal device designed to be used with optical Emitters and Detectors.

623T.02.06 TRAFFIC SIGNAL VIDEO IMAGE DETECTION SYSTEMS

Replace this subsection with the following:

Video detection systems shall be approved by the Engineer for installation. The system shall be PEEK VideoTrak IQ, ITERIS Edge 2, ECONOLITE Auto Scope Rack Vision or an alternate system that is pre-approved by the Traffic Manager. All video detection systems installed shall have 8 channels with the capability of expanding to more channels of detection by adding additional modules. A video detection system color LCD monitor, minimum size of 9", shall be provided as part of the detection system.

623 T.02.07 SYNCHRONIZING CLOCK

Replace paragraph B with the following:

The timing device provided shall be a stand alone unit to be shelf mounted and capable of accuracy to within 10 milliseconds of the GPS data stream. The timing device shall be an output only device and shall not receive commands from the controller. The clock shall be designed to maintain accuracy through continuous communication with a minimum of three satellites. Time zone and daylight savings shall be selected by means of an 8-position dipswitch on the circuit board. The clock shall have a time of day display utilizing temperature compensated LCD.

TRAFFIC SIGNALS AND FITTINGS

623 T.02.08 VEHICLE SIGNAL FACES

Add the following to paragraph D.5:

Testing by an independent laboratory may be required if the LED offered does not have prior approval of the Traffic Manager. All vehicular LED modules not previously approved shall be tested by Intertek - ETL/Semko, Cortland, NY. Test reports for each ball LED module shall include verification of power consumption, chromaticity, luminous intensity and light distribution and shall indicate compliance to the ITE VTCSH-LED specification. Test reports for arrow LED modules shall indicate compliance with the luminous intensity of the CALTRANS standards and measurement criteria. All supporting data and test results shall be delivered to the maintaining Agency Operations Engineer for approval prior to the installation of the LED modules.

Replace paragraph I.5 with the following:

All traffic signal backplates shall be louvered and shall be painted or powder coated flat black (front side)/dark olive green (backside), using the same technique as on the signal housing.

623 T.02.09 PROGRAMMED VISIBILITY VEHICLE SIGNAL FACES

Replace the first sentence paragraph C with the following:

All signal sections shall be provided with an adjustable connection that permits incremental tilting from 7 degrees to 15 degrees above or below the horizontal while maintaining a common vertical axis through couplers and mountings.

623 T.02.11 PEDESTRIAN PUSH BUTTONS

Add the following:

The pedestrian push button assembly shall be rectangular in shape and have nominal dimensions of 9"x16". A 9"x2" pedestrian push button sign must fit within the pedestrian push button assembly without any gaps or modifications to the sign and/or the assembly. The rear brackets shall be curved and adjustable to permit mounting on traffic signal poles type 1-A, 1-B, XX, XX-A, and XX-B, as well as mounting on a flat surface. At the rear of the assembly at the center shall be a wire entrance of 1-inch diameter. On the vertical centerline, two inches above the wire entrance hole, shall be two 3/8-inch diameter holes for securing the assembly to a pole, spaced 9-1/4-inch apart. The case shall be reinforced at these holes to provide adequate bearing surface. Four drilled and tapped holes shall be provided for mounting the pedestrian push button sign. Four (4) 10-32 x 3/8-inch stainless steel tamper-proof screws per each push button assembly shall be used to mount the pedestrian push button sign.

All pedestrian push button signs shall conform to MUTCD requirements. Signs shall be 9"x12" and shall be porcelain enameled sheet steel of 0.036-inch minimum thickness. Each hole shall be provided with a brass grommet. Signs shall have four (4) holes, one on each corner of the sign, for mounting on the pedestrian push button assembly.

623 T.02.13 TRAFFIC SIGNAL POLES

Add the following to paragraph B:

Multi-sided (minimum of 18 sides) steel traffic signal mast arms may be used.

623 T.02.15 RED LIGHT DISPLAY INDICATORS

Replace this subsection with the following:

Red light display indicators shall be provided for all traffic signals installed. The indicator shall be installed at the locations shown in the plans or as directed by the Maintaining Agency.

The devices shall be the McCain Red Light Violator Detection Unit, current models for red and blue indicators or approved equal. It shall operate from 120-volt VAC signal lines without additional power requirements. The indicators shall be visible for a minimum of 200 feet from the placement of the device.

The red indicator shall be mounted between sixteen (16) to twenty (20) feet above the base plate of the signal pole and shall detect the mast arm straight through signal red indication. The blue indicator shall be mounted one (1) foot above the red indicator and shall detect the side mount left turn red indication. Contractor shall install the indicators at a mounting height where they will not be obstructed by any side mounted signal hardware.

The Display indicators shall have a warranty of one year on all parts and labor (including installation) from final acceptance of the project.

623 T.02.16 INTERNALLY ILLUMINATED STREET NAME SIGNS

Replace this subsection with the following:

Internally illuminated street name signs shall be provided at all traffic signal locations, with street names on both sides of the sign. The internally illuminated street name sign is an assembly that consists of an enclosure and two sign panels, and shall be weather-tight and consist of aluminum alloy housing. The sign assembly shall be secured to the mast arm by two (2) 3/4-inch wide, 0.03-inch thick stainless steel bands with ear-lock buckle and one (1) bandable mounting bracket for each "L" bracket of the street name sign.

A. Street Name Sign Enclosure

1. The sign enclosure shall be 97 to 97-1/4 inches in length and 20-1/2 to 20-3/4 inches in height.
2. The sign enclosure shall have minimum yielding tensile strength of 22 ksi, minimum shear strength of 17 ksi, and minimum bending strength of 10 ksi.
3. The sign assembly (enclosure and sign panels) shall have a maximum weight of 93 lbs.
4. The sign enclosure shall be wired and equipped with two (2) 8-foot light emitting diode (LED) dual-tube lamps, with single pin Fa8 contact at each end of the lamp, spaced six (6) inches apart.
5. The internal wires shall be carefully installed along the side of the sign enclosure and

secured in place with a continuous bead of clear silicon rubber.

6. Thumb screws shall be brass or stainless steel, and shall not go through the sign panel framework.

B. Street Name Sign Panel

1. The sign panels shall be fabricated of clear, impact resistant, acrylic or polycarbonate sheeting with aluminum framing.
2. The clear, impact resistant, acrylic or polycarbonate panels shall be covered with translucent white, wide-angle, prismatic reflective sign face sheeting. Sheeting shall conform to ASTM D4956 Type XI sheeting.
3. The sign sheeting shall be applied in a vertical orientation in accordance with the manufacturer's recommendations.
4. The sign panel shall be capable of withstanding winds of 90 mph or greater without damage or separation from the sign enclosure.
5. The aluminum frame shall have a minimum inside dimension of 94-3/4 inches in length, and an outside dimension of 96-1/4 to 96-3/8 inches in length.
6. The aluminum frame shall have a minimum inside dimension of 16-1/2 inches in height, and an outside dimension of 18-11/16 to 18-13/16 inches in height.
7. Sign panel shall be hinged into the housing and secured by the bottom rail of the street name sign enclosure. No drilling or screws will be allowed in the panel and/or fascia.

C. Street Name

1. Street names shall be applied on top of the prismatic reflective sign face sheeting by either reverse-screened with manufacturer's recommended green ink and clear coating or overlaid with green, electronic cuttable, transparent overlay film.
2. Street names shall be in upper and lower case letters. Street names shall be 12-inch series D, unless other specified in the plans. If necessary to make spacing fit, 12-inch series C letters may be used upon approval by the Traffic Manager. Lower case letters shall be 9 inches in height.
3. Letters for the street cardinal direction, street name suffix, and block number shall be 5-inch series C.
4. The Kerning value of 110% shall be used.
5. Street name shall be centered between the cardinal direction and the street name suffix.
6. Cardinal direction shall be located in the upper left corner of each sign panel in upper case letter (N, S, E, or W).
7. Street name suffix abbreviation shall be located in the upper right corner of the sign panel in upper case letters. Postal Service standard suffix abbreviations shall be used.
8. Block number shall be located at the lower right corner in numerals.

D. Lamp

Lamp shall be 8-foot light emitting diode (LED) dual-tube lamps, with single pin Fa8 contact at each end of the lamp. The lamp shall also meet the minimum requirements below:

1. Photometric
 - a. A normal Correlated Color Temperature (CCT) of 4500 °K +/- 500 °K.
 - b. A Coloring Rendering Index (CRI) ≥ 80.

- c. 180 degree light distribution.
- d. bi-directional (dual side's illumination).

2. Electrical

- a. Power factor ≥ 0.92 .
- b. Operating voltage 120 VAC.
- c. Frequency 50-60 Hz.
- d. Total power consumption 40 watts maximum per tube connector/receptacle.
- e. UL 1310 class 2, UL 1598 and/or UL 8750 approved.
- f. Radio frequency (RF) emission > 50 kiloHertz.

3. LED Tube Lamp

- a. Full light output at initial lamp turn.
- b. Operating temperature range from -20 °F to 130 °F.
- c. Must fit into a single pin T-12 fluorescent lamp receptacle for an 8-ft illuminated street name sign enclosure.
- d. Lamp shall have a Fa8 lamp single-pin contacts.
- e. Rated life $\geq 70,000$ hours.
- f. Tube lens shall be polycarbonate.
- g. Luminaire must operate for a minimum of 50,000 hours before the LED light output has decreased to 70% of initial output (L70).
- h. Shall have internally built-in drivers. No external drivers are accepted.
- i. 8-foot tube lamp shall have light output of minimum 2,500 lumens per tube lamp.

4. Warranty

A manufacturer's warranty must be provided for the replacement or repair of the tube lamp due to any electrical failure (including light source and power supplies/drivers) for a minimum of five (5) years from final acceptance of the project. Warranty documents shall have Clark County Public Works as the warrantee. Contractor shall provide all warranty documents to Clark County Public Works Traffic Management Division. Documents shall contain project name, bid number of the project, manufacturer, brand, model, and quantity of tube lamps installed.

CONSTRUCTION

623 T.03.01 PAINTING

Replace paragraph A.4 with the following:

Directional louvers shall be painted or powder coated flat black (interior)/dark olive green (exterior) and backplates shall be painted or powder coated flat black (front side)/dark olive green (backside), using the same technique as the signal housing.

623 T.03.02 ELECTRICAL TESTING

Replace paragraph A.3 with the following:

A megohm test shall be conducted on all single conductor, except ground wire, between a new service pedestal and transformer, and between service pedestal to controller cabinet. Additionally, loop continuity shall be tested using a loop amplifier. The insulation resistance shall not be less than 100 megohms when tested at 500 volts for 1 minute.

STREET LIGHTING SECTION

DESCRIPTION

623 L.01.01 GENERAL

Replace paragraph G with the following:

Refer to Subsection 623 G.01.05 GLOBAL POSITIONING SYSTEM (GPS) COORDINATES of these Special Provisions for requirements the collection of field data including State Plane and Geodetic coordinates.

CONSTRUCTION

623 L.03.03 ELECTRICAL TESTING

Replace paragraph A.3 with the following:

A megohm test shall be conducted on all single conductor, except ground wire, between a new service pedestal and transformer. The insulation resistance shall not be less than 100 megohms when tested at 500 volts for 1 minute.

METHOD OF MEASUREMENT

623.04.01 MEASUREMENT

Add the following to this subsection:

Verification of existing conduits and removal of conduit blockages shall not be measured for payment.

Induction loops detector (size), No. 3 ½ pull box, and No. 5 pull box shall be measured per each, complete and in place. The Contractor shall verify the location of all existing traffic loops prior to construction.

3" conduit shall be measured for payment per linear foot complete, and in place.

BASIS OF PAYMENT

623.05.01 PAYMENT

The following is added to this subsection:

No separate payment will be made for verifying existing conduits and removing conduit blockages as such. The cost thereof shall be considered as included in the bid price for induction loops detector (size).

The contract unit bid price per each of induction loops detectors (size), No. 3 ½ pull box, and No. 5 pull box shall be full compensation for furnishing all materials, as well as labor, tools, equipment and incidentals necessary to complete the work as shown on the plans, as specified herein, and as required by the Engineer.

No payment will be made for cables and wires required to complete the work as shown on the plans, as specified herein, and as required by the Engineer. The cost thereof shall be included in the price bid for the construction or installation of the items to which such material is incidental or appurtenant.

The contract unit bid price per linear foot of 3" conduit shall be full compensation for furnishing all materials including conduit, trenching, backfilling, sawcut, recompaction of existing base material, as well as labor, tools, equipment and incidentals necessary to complete the work as shown on the plans, as specified herein, and as required by the Engineer.

Where loops are existing, as verified in the field, no payment will be made for the removal and replacement of conduit, wires, and/or cables damaged during construction; the cost thereof shall be included in the price bid for the construction or installation of the items to which such material is incidental or appurtenant.

<u>Pay Item</u>	<u>Pay Unit</u>
Induction Loops Detector (6'x6')	EA
Induction Loops Detector (6'x30')	EA
No. 3 ½ Pull Box	EA
No. 5 Pull Box	EA
3" Conduit	LF