

BID No. 603040-13



DEPARTMENT OF PUBLIC WORKS

ISSUED FOR CONSTRUCTION

Contract Documents and Special Provisions for

MUDDY RIVER COOPER STREET BRIDGE

FUNDED BY

CLARK COUNTY
REGIONAL FLOOD CONTROL DISTRICT

Denis Cederburg

DIRECTOR
CLARK COUNTY PUBLIC WORKS
500 S. GRAND CENTRAL PARKWAY
PO BOX 554000
LAS VEGAS, NEVADA 89155-4000

Gale Wm. Fraser, II

GENERAL MANAGER & CHIEF ENGINEER
CLARK COUNTY REGIONAL
FLOOD CONTROL DISTRICT
600 S. GRAND CENTRAL PARKWAY
LAS VEGAS, NEVADA 89106

COMMISSIONERS

Steve Sisolak, Chair - Larry Brown, Vice-Chair
Susan Brager, Tom Collins, Chris Giunchigliani, Mary Beth Scow, Lawrence Weekly

Donald G. Burnette, County Manager

CLARK COUNTY, NEVADA
CONTRACT DOCUMENTS & CONSTRUCTION SPECIFICATIONS

BID NO. 603040-13
MUDDY RIVER COOPER STREET BRIDGE

CLARK COUNTY, NEVADA

BID FORM

BID NO. 603040-13
MUDDY RIVER COOPER STREET BRIDGE
PWP NUMBER: CL-2013-247
REVISED PER ADDENDUM NO. 1

Meadow Valley Contractors, Inc.
(NAME)

4615 N. Lamb Blvd, Suite A Las Vegas, NV 89115
(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 Certification 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, 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. This Attachment will be time stamped by the Purchasing and Contracts Division. I understand that submission after the two-hour time limit is not allowed and will be returned to me and the bid may be deemed non-responsive. I acknowledge that for:
 - a) Projects EXCEEDING \$5,000,000
I need to list only Subcontractors that will provide labor/improvements exceeding one percent (1%) of the Prime Contractor's total base bid amount, or \$50,000.00, whichever is greater.
5. 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.
6. I acknowledge that my bid is based on the current State of Nevada prevailing wages.
7. 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.
8. 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.
9. 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 \$3,000 per day as liquidated damages.

10. 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.
11. 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.
12. 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.
13. 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.
14. 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.
15. I am responsible to ascertain the number of addenda issued, and I hereby acknowledge receipt of the following addenda:

Addendum No. 1 dated, 10-4-13 Addendum No. _____ dated, _____
 Addendum No. _____ dated, _____ Addendum No. _____ dated, _____
 Addendum No. _____ dated, _____ Addendum No. _____ dated, _____
 Addendum No. _____ dated, _____ Addendum No. _____ dated, _____
 Addendum No. _____ dated, _____ Addendum No. _____ dated, _____

16. 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 |
| 109.01 | CONSTRUCTION CONFLICTS & ADDITIONAL WORK | 1 | LS | \$ 750,000.00 |
| 109.02 | HISTORICAL OWNER-CAUSED DELAY ALLOWANCE | 15 | DAY | \$ 7,500.00 |
| 109.03 | ADDITIONAL AMOUNT OVER \$500/DAY AS DETERMINED BY BIDDER | 15 | DAY | \$ 7,500.00 |
| 200.01 | MOBILIZATION | 1 | LS | \$ 970,000.00 |
| 201.01 | CLEARING AND GRUBBING | 38 | AC | \$ 243,200.00 |
| 202.01 | REMOVE BUILDINGS | 1 | LS | \$ 10,000.00 |
| 202.02 | REMOVE FENCE | 1,530 | LF | \$ 1,683.00 |
| 202.03 | REMOVE CUT-OFF WALL | 1,303 | LF | \$ 13,681.50 |
| 202.04 | REMOVE STEM WALL | 265 | LF | \$ 3,445.00 |
| 202.05 | REMOVE AND SALVAGE GUARDRAIL | 96 | LF | \$ 796.80 |
| 202.06 | REMOVE AND SALVAGE SIGN | 3 | EA | \$ 255.00 |
| 202.07 | REMOVE DOUBLE 4-FOOT BY 2-FOOT RCB CULVERT | 1 | LS | \$ 7,000.00 |
| 202.08 | REMOVE DRAW BRIDGE | 1 | LS | \$ 6,000.00 |
| 202.09 | REMOVE CONCRETE DRAINAGE STRUCTURE | 1 | LS | \$ 5,700.00 |
| 202.10 | REMOVE GABION WALL | 213 | LF | \$ 2,556.00 |
| 202.11 | REMOVE IRRIGATION CHANNEL | 215 | LF | \$ 3,117.50 |
| 202.12 | REMOVE AND SALVAGE IRRIGATION PUMP | 1 | LS | \$ 1,900.00 |

| BID SCHEDULE | | | | |
|--------------|---|------------------|--------|-----------------|
| ITEM NUMBER | ITEM DESCRIPTION | APPROX. QUANTITY | UNIT | TOTAL |
| 202.13 | REMOVE HEADWALLS AND FOOTINGS | 1 | LS | \$ 2,600.00 |
| 202.14 | REMOVE DRIVEWAY | 182 | SY | \$ 2,912.00 |
| 202.15 | REMOVE CMP | 132 | LF | \$ 2,376.00 |
| 202.16 | REMOVE IRRIGATION PIPE | 3,300 | LF | \$ 39,600.00 |
| 202.17 | REMOVE BITUMINOUS SURFACE | 4,900 | SY | \$ 14,700.00 |
| 202.18 | ABANDON WELL | 1 | LS | \$ 11,000.00 |
| 202.19 | REMOVE CONCRETE SLOPE PAVING | 500 | SY | \$ 3,000.00 |
| 202.20 | RELOCATE 20-INCH TWIST CAP AND CONCRETE CHANNEL | 1 | LS | \$ 10,000.00 |
| 202.21 | REMOVE ADELIA STREET HOUSE | 1 | LS | \$ 27,000.00 |
| 203.01 | EXCAVATION | 297,000 | CY | \$ 1,856,250.00 |
| 203.02 | OVER-EXCAVATION AND BACKFILL | 3,662 | CY | \$ 146,480.00 |
| 203.03 | FILL | 21,600 | CY | \$ 136,080.00 |
| 213.01 | 18-INCH PVC PIP | 1,672 | LF | \$ 173,888.00 |
| 213.02 | 20-INCH HDPE IRRIGATION PIPELINE | 737 | LF | \$ 187,198.00 |
| 213.03 | 6-INCH DUCTILE IRON IRRIGATION PIPELINE | 90 | LF | \$ 12,960.00 |
| 213.04 | IRRIGATION STAND PIPE | 1 | EA | \$ 8,400.00 |
| 213.05 | WEBBER IRRIGATION PIPE AND FACILITY | 1 | LS | \$ 31,000.00 |
| 214.01 | IRRIGATION PUMP SYSTEM | 1 | LS | \$ 18,700.00 |
| 217.01 | DEWATERING | 1 | LS | \$ 775,000.00 |
| 302.01 | TYPE II AGGREGATE ACCESS ROAD AND MANWAY (F) | 2,150 | CY (F) | \$ 79,550.00 |
| 302.02 | TYPE II AGGREGATE BASE COOPER STREET AND WEBBER ACCESS ROAD (F) | 2,700 | CY (F) | \$ 90,450.00 |
| 402.01 | PLANTMIX BITUMINOUS SURFACE (3-INCH) (F) | 4,350 | SY (F) | \$ 71,775.00 |
| 502.01 | CONCRETE TRAPEZOIDAL CHANNEL (STA. 180+58.93 TO STA. 182+06.29) | 148 | LF | \$ 294,520.00 |
| 502.02 | CONCRETE TRAPEZOIDAL CHANNEL (STA. 191+42.65 TO STA. 195+38.68) | 396 | LF | \$ 792,000.00 |
| 502.03 | CONCRETE RECTANGULAR CHANNEL (STA. 184+31.29 TO STA. 187+20.79) | 290 | LF | \$ 658,300.00 |
| 502.04 | CONCRETE CHANNEL TRANSITION (STA. 182+06.29 TO STA. 184+31.29) | 225 | LF | \$ 522,600.00 |
| 502.05 | CONCRETE CHANNEL TRANSITION (STA. 187+20.79 TO STA. 191+42.65) | 422 | LF | \$ 953,720.00 |
| 502.06 | COOPER BRIDGE STRUCTURE | 1 | LS | \$ 2,600,000.00 |
| 502.07 | IRRIGATION OPEN CONCRETE CHANNEL | 135 | LF | \$ 7,425.00 |
| 502.08 | IRRIGATION PUMP BOX | 1 | LS | \$ 30,000.00 |
| 502.09 | CATTLE RAMP | 1 | LS | \$ 23,000.00 |
| 502.10 | 2-FOOT WIDE U-CHANNEL | 450 | LF | \$ 31,500.00 |
| 502.11 | NDOT CULVERT HEADWALL | 1 | EA | \$ 6,500.00 |
| 502.12 | CONCRETE SWALE | 38 | LF | \$ 1,520.00 |

| BID SCHEDULE | | | | |
|--------------|--|------------------|------|---------------|
| ITEM NUMBER | ITEM DESCRIPTION | APPROX. QUANTITY | UNIT | TOTAL |
| 502.13 | IRRIGATION OPEN CONCRETE CHANNEL TERMINATION | 1 | LS | \$ 2,800.00 |
| 502.14 | IRRIGATION OPEN CONCRETE CHANNEL LATERAL | 1 | LS | \$ 3,400.00 |
| 603.01 | 18-INCH RCP STORM DRAIN (CLASS III) | 46 | LF | \$ 8,326.00 |
| 603.02 | 24-INCH RCP STORM DRAIN (CLASS III) | 302 | LF | \$ 30,804.00 |
| 603.03 | 30-INCH RCP STORM DRAIN (CLASS III) | 36 | LF | \$ 8,172.00 |
| 603.04 | 36-INCH RCP STORM DRAIN (CLASS III) | 41 | LF | \$ 9,266.00 |
| 609.01 | NDOT TYPE 2A DROP INLET | 1 | EA | \$ 5,900.00 |
| 609.02 | 48-INCH TYPE I STORM DRAIN MANHOLE | 1 | EA | \$ 7,600.00 |
| 609.03 | 48-INCH TYPE II STORM DRAIN MANHOLE | 1 | EA | \$ 9,400.00 |
| 610.01 | RIPRAP (D50 = 8-INCH) | 3,806 | CY | \$ 270,226.00 |
| 610.02 | RIPRAP (D50 = 12-INCH) | 2,850 | CY | \$ 202,350.00 |
| 610.03 | UPSTREAM GABION TRANSITION STRUCTURE | 359 | LF | \$ 506,190.00 |
| 610.04 | DOWNSTREAM GABION TRANSITION STRUCTURE | 100 | LF | \$ 178,000.00 |
| 610.05 | GABION CUTOFF WALL | 1,276 | CY | \$ 146,740.00 |
| 613.01 | SIDEWALK RAMP | 2 | EA | \$ 3,400.00 |
| 616.01 | 48-INCH POST AND CABLE RAILING | 4,329 | LF | \$ 134,199.00 |
| 616.02 | 6-FOOT CHAIN-LINK FENCE | 5,100 | LF | \$ 56,100.00 |
| 616.04 | 12-FOOT CHAIN-LINK DOUBLE-SWING GATE | 5 | EA | \$ 5,250.00 |
| 616.05 | 20-FOOT CHAIN-LINK DOUBLE-SWING GATE | 6 | EA | \$ 9,000.00 |
| 616.06 | REMOVE AND RESET FENCE | 543 | LF | \$ 2,715.00 |
| 617.01 | 22-FOOT PRECAST CATTLE GUARD | 1 | EA | \$ 22,800.00 |
| 617.02 | 28.5-FOOT PRECAST CATTLE GUARD | 1 | EA | \$ 28,500.00 |
| 618.01 | GALVANIZED GUARDRAIL (TRIPLE CORRUGATION) | 590 | LF | \$ 25,370.00 |
| 618.02 | GUARDRAIL TERMINAL (FLARED) | 3 | EA | \$ 9,000.00 |
| 618.03 | GUARDRAIL TERMINAL (TRAILING END ANCHOR) | 1 | EA | \$ 825.00 |
| 618.04 | GUARDRAIL-BARRIER RAIL CONNECTION (TRIPLE CORRUGATION) | 2 | EA | \$ 6,000.00 |
| 619.01 | MEDIAN MARKER POST | 2 | EA | \$ 520.00 |
| 623.01 | 100-WATT STREET LIGHT ASSEMBLY | 1 | EA | \$ 3,540.00 |
| 623.02 | 100-WATT STREET LIGHT ASSEMBLY (BRIDGE MOUNT) | 2 | EA | \$ 3,240.00 |
| 623.03 | 2-INCH PVC CONDUIT ONLY WITH 1 NO. 8 TRACER WIRE | 75 | LF | \$ 750.00 |
| 623.04 | POWER POLE RISER SYSTEM (FOUR 3-INCH CONDUITS) | 1 | EA | \$ 3,250.00 |
| 623.05 | TRANSFORMER PAD (JENSEN UPAD 77 OR EQUAL) | 1 | EA | \$ 1,750.00 |
| 623.06 | JENSEN 466 TA OR EQUAL PULL BOX | 1 | EA | \$ 6,400.00 |
| 623.07 | NO. 3-1/2 PULL BOX (BURIED) | 1 | EA | \$ 426.00 |

| BID SCHEDULE | | | | |
|-------------------------|---|------------------|-------------|-------------------------|
| ITEM NUMBER | ITEM DESCRIPTION | APPROX. QUANTITY | UNIT | TOTAL |
| 623.08 | NO. 5 PULL BOX | 2 | EA | \$ 452.00 |
| 623.09 | 2-INCH PVC CONDUIT, 2 NO. 4, 1 NO. 8 CONDUCTORS (STREET LIGHT) | 315 | LF | \$ 3,150.00 |
| 623.10 | JENSEN 3048 NP OR EQUAL PULL BOX | 1 | EA | \$ 4,100.00 |
| 623.11 | 200 AMP SERVICE PEDESTAL | 1 | EA | \$ 4,200.00 |
| 623.12 | 3-INCH PVC CONDUIT ONLY WITH PULLSTRING (CONCRETE ENCASED) | 750 | LF | \$ 13,500.00 |
| 623.13 | SIX 3-INCH PVC CONDUIT ONLY WITH PULLSTRING (CONCRETE ENCASED) | 250 | LF | \$ 16,500.00 |
| 623.14 | 3-INCH PVC CONDUIT WITH 4/C#350 THW-2 (PUMP CONTROL PEDESTAL) | 230 | LF | \$ 11,730.00 |
| 623.15 | FOUR 3-INCH PVC CONDUIT ONLY WITH PULLSTRING (CONCRETE ENCASED) | 295 | LF | \$ 12,980.00 |
| 623.16 | SEVEN 3-INCH PVC CONDUIT ONLY WITH PULLSTRING (CONCRETE ENCASED) | 410 | LF | \$ 29,315.00 |
| 623.17 | 2-INCH CONDUIT 3#4/0 THW-2 (STREET LIGHT PEDESTAL) | 10 | LF | \$ 550.00 |
| 623.18 | TYPE II BASE FOUNDATION FOR TRANSFORMER PAD | 1 | EA | \$ 350.00 |
| 623.19 | 2-INCH PVC CONDUIT, 2 NO. 4, 1 NO. 8 CONDUCTORS, 2-INCH PVC CONDUIT ONLY WITH 1 NO. 8 TRACER WIRE | 110 | LF | \$ 1,320.00 |
| 624.01 | COOPER STREET DETOUR | 1 | LS | \$ 50,000.00 |
| 627.01 | PERMANENT SIGN (GROUND MOUNTED)(METAL SUPPORTS) | 46 | SF | \$ 2,898.00 |
| 628.01 | POLYUREA PAINT MARKING (4-INCH DOUBLE YELLOW) | 1,853 | LF | \$ 4,632.50 |
| 628.02 | POLYUREA PAINT MARKING (6-INCH SOLID WHITE) | 2,900 | LF | \$ 7,250.00 |
| 628.03 | MEDIAN PAINT | 50 | SF | \$ 175.00 |
| 629.01 | 24-INCH WATERLINE STEEL SLEEVE | 299 | LF | \$ 39,169.00 |
| 630.01 | ADJUST CCWRD MANHOLE TO FINISHED GRADE | 1 | EA | \$ 1,000.00 |
| 633.01 | REFLECTIVE PAVEMENT MARKERS | 10 | EA | \$ 140.00 |
| 637.01 | DUST CONTROL (F) | 400 | CAL DAY (F) | \$ 74,000.00 |
| 637.02 | PRE-EMERGENT HERBICIDE | 30 | AC | \$ 18,000.00 |
| 637.03 | STORM WATER POLLUTION CONTROL (F) | 400 | CAL DAY (F) | \$ 34,000.00 |
| TOTAL BID AMOUNT | | | | \$ 13,696,359.30 |

SUBCONTRACTORS EXCEEDING 5% OF BASE BID AMOUNT

PRIME CONTRACTOR MUST INCLUDE ITS NAME ON THIS LIST IF HE OR SHE INTENDS TO PERFORM ANY OF THE LABOR OR PORTIONS OF THE PUBLIC WORK.
 THE CONTRACTOR SHALL NOT SUBSTITUTE A SUBCONTRACTOR WHO IS NAMED IN THIS BID, PURSUANT TO NEVADA REVISED STATUTE 338.141. THE FOLLOWING SUBCONTRACTORS SHALL BE UTILIZED. A BIDDER, WHICH FAILS TO LIST A SUBCONTRACTOR (S), REPRESENTS THAT NO SUBCONTRACTOR(S) MEET THE STATUTORY REQUIREMENTS.

| DESCRIPTION OF WORK | SUBCONTRACTORS' FIRM NAME(S) | *BEG | *ETHNICITY |
|---|--|------------|------------|
| <i>Drilled Shaft Foundation</i> | <i>Haywood Baker</i> | <i>LBE</i> | <i>CX</i> |
| | | | |
| <i>Reinforcing Steel</i> | <i>CMC Rebar</i> | <i>LBE</i> | <i>CX</i> |
| | | | |
| <i>Clearing, removals, grading, Concrete work, rip-rap, optional drainage pipe, bridge utilities.</i> | <i>Meadow Valley Contractors Inc</i> | <i>NBE</i> | <i>CX</i> |
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Meadow Valley Contractors Inc.
 Legal Name of Firm as it Would Appear in Contract

Robert Terry
 Signature of Bidder (Authorized Representative)

October 17, 2013
 Today's Date

*Reference Instructions to Bidders for Definitions (Section 7.3(d)).

17. BUSINESS ENTERPRISE INFORMATION:

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

18. 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.

19. 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.

20.

Meadow Valley Contractors Inc.
LEGAL NAME OF FIRM AS IT WOULD APPEAR IN CONTRACT

4615 N. Lamb Blvd. Suite A
ADDRESS OF FIRM

Las Vegas, NV 89115
CITY, STATE ZIP CODE

702-643-9472
TELEPHONE NUMBER

702-643-6953
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: 0019258

LICENSE CLASS: A

LICENSE LIMIT: Unlimited

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

CLARK COUNTY BUSINESS LICENSE NO. 000011-241-8

STATE OF NEVADA BUSINESS LICENSE NO. 1000575730

Robert Terril
AUTHORIZED REPRESENTATIVE
(PRINT) OR TYPE

shaycock@meadowvalley.com
E-MAIL ADDRESS

Robert Terril
SIGNATURE OF AUTHORIZED REPRESENTATIVE

October 17, 2013
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, Meadow Valley Contractors, Inc. as Principal Contractor, and Liberty Mutual * 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.

* Insurance Company

Signed this 14th day of October, 2013.

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. 603040-13, MUDDY RIVER COOPER STREET BRIDGE.**

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)

Meadow Valley Contractors, Inc.
(Principal Contractor)

Robert Terril, V.P.
(Authorized Representative and Title)

By:

Robert Terril
(Signature)

Surety: Liberty Mutual Insurance Company
I 0415
(State of Nevada, License Number)

Alliant Insurance Services, Inc.
(Appointed Agent Name)

By:

Jeri Apodaca
(Signature) Attorney in Fact

Address: 330 No. Brand Blvd., Suite 500
Glendale, CA 91203

Telephone: (818) 956-4338

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of Orange

On OCT 14 2013 before me, K. Luu, Notary Public
Date Here Insert Name and Title of the Officer

personally appeared Jeri Apodaca
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that ~~he~~/she/~~they~~ executed the same in ~~his~~/her/~~their~~ authorized capacity(~~ies~~), and that by ~~his~~/her/~~their~~ signature(~~s~~) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.



Place Notary Seal Above

Signature [Handwritten Signature]
Signature of Notary Public

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document: _____

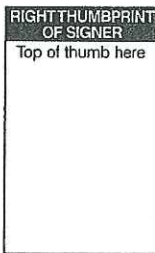
Document Date: _____ Number of Pages: _____

Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____

- Individual
- Corporate Officer — Title(s): _____
- Partner — Limited General
- Attorney in Fact
- Trustee
- Guardian or Conservator
- Other: _____



Signer Is Representing: _____

Signer's Name: _____

- Individual
- Corporate Officer — Title(s): _____
- Partner — Limited General
- Attorney in Fact
- Trustee
- Guardian or Conservator
- Other: _____



Signer Is Representing: _____

THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON RED BACKGROUND.

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Certificate No. 6281983

American Fire and Casualty Company
The Ohio Casualty Insurance Company

Liberty Mutual Insurance Company
West American Insurance Company

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That American Fire & Casualty Company and The Ohio Casualty Insurance Company are corporations duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Heather Saltarelli, James A. Schaller, Jeri Apodaca, Kim Luu, Michael D. Parizino, Rachelle Rheault, Rhonda C. Abel

all of the city of Newport Beach, state of CA each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 11th day of September, 2013.



American Fire and Casualty Company
The Ohio Casualty Insurance Company
Liberty Mutual Insurance Company
West American Insurance Company

By: Gregory W. Davenport
Gregory W. Davenport, Assistant Secretary

STATE OF WASHINGTON ss
COUNTY OF KING

On this 11th day of September, 2013, before me personally appeared Gregory W. Davenport, who acknowledged himself to be the Assistant Secretary of American Fire and Casualty Company, Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at Seattle, Washington, on the day and year first above written.



By: KD Riley
KD Riley, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV - OFFICERS - Section 12. Power of Attorney. Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

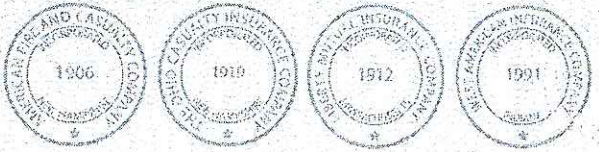
ARTICLE XIII - Execution of Contracts - SECTION 5. Surety Bonds and Undertakings. Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation - The President of the Company, acting pursuant to the Bylaws of the Company, authorizes Gregory W. Davenport, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization - By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, David M. Carey, the undersigned, Assistant Secretary, of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this OCT 14 2013 day of 20.



By: David M. Carey
David M. Carey, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, currency rate, interest rate or residual value guarantees.

To confirm the validity of this Power of Attorney call 1-610-832-8240 between 9:00 am and 4:30 pm EST on any business day.

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, Robert Terril ("Affiant"), on behalf of the Meadow Valley Contractors, Inc. ("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. 603040-13, Project Name MUDDY RIVER COOPER STREET BRIDGE ("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.



To Whom It May Concern:

This is to certify that Robert Terril, President of Nevada Area of Meadow Valley Contractors, Inc. is authorized to sign the bid submittal.

Signed:

Kenneth D. Nelson
Vice President
Chief Administrative Officer
Director



NEVADA STATE CONTRACTORS BOARD

9670 GATEWAY DRIVE, SUITE 100, RENO, NEVADA, 89521 (775) 688-1141 FAX (775) 688-1271, INVESTIGATIONS (775) 688-1150
2310 CORPORATE CIRCLE, SUITE 200, HENDERSON, NEVADA, 89074, (702) 486-1100 FAX (702) 486-1190, INVESTIGATIONS (702) 486-1110

CERTIFICATE OF ELIGIBILITY PER NRS 338.147 and NRS 338.1389

CERTIFICATE NUMBER: BPC-00-02-03-0046

MEADOW VALLEY CONTRACTORS INC. (HEREIN THE "GENERAL CONTRACTOR") NEVADA STATE CONTRACTORS' LICENSE NUMBER: 19258 ORIGINAL ISSUE DATE: 11/16/1981 BUSINESS TYPE: CORPORATION CLASSIFICATION: A-GENERAL ENGINEERING MONETARY LICENSE LIMIT: UNLIMITED STATUS: ACTIVE, IS HEREBY ISSUED THIS CERTIFICATE BY THE NEVADA STATE CONTRACTORS' BOARD, BASED UPON THE INFORMATION CONTAINED IN THE STATEMENT OF COMPLIANCE WITH NEVADA REVISED STATUTES (NRS) 338.147 AND NRS 338.1389 AND THE AFFIDAVIT OF CERTIFIED PUBLIC ACCOUNTANT SUBMITTED TO THE NEVADA STATE CONTRACTORS BOARD AS PROOF OF CONTRACTOR'S COMPLIANCE WITH THE PROVISIONS OF NRS 338.147 AND NRS 338.1389, ATTACHED HERETO. IN ACCORDANCE WITH THE PROVISIONS OF NRS 338.147(3), THE ABOVE-NAMED GENERAL CONTRACTOR AND A CERTIFIED PUBLIC ACCOUNTANT HAVE SUBMITTED FULLY EXECUTED AND NOTARIZED SWORN AFFIDAVITS AS PROOF OF PREFERENTIAL BIDDER STATUS, UNDER PENALTY OF PERJURY, CERTIFYING THAT THE GENERAL CONTRACTOR IS QUALIFIED TO RECEIVE A PREFERENCE IN BIDDING AS SET FORTH IN NRS 338.147 AND NRS 338.1389 AND OTHER MATTERS RELATING THERETO.

THIS CERTIFICATE OF ELIGIBILITY IS ISSUED ON DECEMBER 1, 2012 AND EXPIRES ON NOVEMBER 30, 2013, UNLESS SOONER REVOKED OR SUSPENDED BY THE NEVADA STATE CONTRACTORS BOARD.



Nancy Mathias
NANCY MATHIAS, LICENSING ADMINISTRATOR
FOR MARGI GREIN, EXECUTIVE OFFICER

11-30-2012
DATE

The Nevada State Contractors Board assumes no liability or responsibility for the accuracy or validity of the information contained in the Contractors Statement of Compliance or the Affidavit of Certified Public Accountant as Proof of Contractors Compliance with the Provisions of NRS 338.147 and NRS 338.1389. The above-named General Contractor shall bear the responsibility to ascertain the accuracy and validity of the affidavits provided to support the issuance of this certificate.

**BID ATTACHMENT 2
DESIGNATION OF SUBCONTRACTORS**

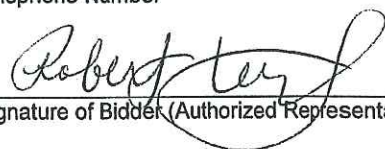
SUBCONTRACTORS EXCEEDING 1% OF BASE BID AMOUNT

FOR BID TOTALS EXCEEDING \$5,000,000.00, LIST SUBCONTRACTORS EXCEEDING 1% OF THE BASE BID AMOUNT OR \$50,000, WHICHEVER IS GREATER, SHALL BE LISTED BELOW:

THE THREE (3) LOW BIDDERS, MUST SUBMIT THIS FORM VIA HAND DELIVERY OR EMAIL TO COUNTYPURCHASING@CLARKCOUNTYNV.GOV IF THEY HAVE SUBCONTRACTOR(S) MEETING THE REQUIREMENTS OF NEVADA REVISED STATUTE 338.141, AND HAVE IT TIME STAMPED WITHIN TWO (2) HOURS AFTER COMPLETION OF THE OPENING OF THE BIDS. SUBMISSIONS AFTER THE TWO (2) HOURS WILL BE REJECTED AND/OR RETURNED UNOPENED. A BIDDER THAT FAILS TO SUBMIT THE LIST WITHIN THE REQUIRED TIME REPRESENTS THAT NO SUBCONTRACTOR(S) MEET THE STATUTORY REQUIREMENTS. THE CONTRACTOR SHALL NOT SUBSTITUTE ANY PERSON FOR A SUBCONTRACTOR WHO IS NAMED IN THIS BID, PURSUANT TO NEVADA REVISED STATUTE 338.141. IF A CONTRACTOR DOES NOT SUBMIT THIS LIST AND HAS SUBCONTRACTOR(S) THAT MEET THE STATUTORY REQUIREMENTS, ITS BID SHALL BE DEEMED NOT RESPONSIVE.

| DESCRIPTION OF WORK | SUBCONTRACTOR'S FIRM NAME(S) | NV STATE CONTRACTORS' LICENSE NUMBER | *BEG | *ETHNICITY |
|---|------------------------------|--------------------------------------|------|------------|
| Clearing, removal, grading, concrete work, pipe, galv, drainage pipe, bridge, & fill fill | Meadow Valley Contractors | 19258 | NBE | CX |
| Dr. Med. School Foundation | Hayward Baker | 24620 | LBE | CX |
| Reinforcing steel | CMC Rebar | 71809 | LBE | CX |
| Electrical Work | Wheeler's Electric | 18974 | NBE | CX |
| Fencing RT | Fiberti Fence RT | | | |
| Fencing | Fiberti Company Fence | 4632 F | NBE | CX |
| Dewater | Acin 2 Day | 78225 | NBE | HA |
| | | | | |

Meadow Valley Contractors Inc.
 Legal Name of Firm as it would appear in Contract
 4615 N. Lamb Blvd, Suite A
 Las Vegas, NV 89115
 Address including City, State and Zip Code

702-643-9472
 Telephone Number

 Signature of Bidder (Authorized Representative)

* Reference Instructions to Bidders for Definitions (Section 7.3(d))

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Department of Administrative Services

Purchasing and Contracts

500 S Grand Central Pky 4th Fl • Box 551217 • Las Vegas NV 89155-1217
(702) 455-2897 • Fax (702) 386-4914

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

CLARK COUNTY, NEVADA

INVITATION TO BID

BID NO. 603040-13 MUDDY RIVER COOPER STREET BRIDGE

NEVADA STATE LABOR COMMISSION PWP NUMBER: CL-2013-247

SCOPE OF WORK: The project is the construction of the Cooper Street Bridge, crossing the Muddy River in Overton, Nevada. The work for the project includes, but not limited too, bridge structure, channel excavation, over-excavation, grading, de-watering, rectangular and trapezoidal concrete channel, concrete channel transitions, concrete access ramp, gabion structure, rip-rap, cattle ramp, reinforced concrete pipe, ductile iron pipe, steel sleeves, PVC pipe, utility conduit, pull boxes, asphalt, type II aggregate, sidewalk, curb and gutter, driveway relocations, maintenance access roads, street lighting, irrigation relocations, irrigation pump, waterline relocations, power supply relocations, power meter, transformer pad, Cooper Street detour road, traffic control, traffic signs, fencing, gates, house demolition, abandon well, remove steel draw bridge, dust control, dust palliative, pre-emergent herbicides, storm water pollution control, and associated local, State, and Federal Permits.

ESTIMATED COST: \$10,831,869 - \$11,196,300.

A Pre-bid Conference will be held on **SEPTEMBER 26, 2013** at **1:00 p.m.**, in the Gold Conference Room on the Fourth Floor of the Clark County Government Center, at the address shown below. If your firm is unfamiliar with the County Bid Submittal procedures and would like to obtain training on the submittal process for this Bid, please contact Thomas E. Boldt, Senior Purchasing Analyst, at tboldt@clarkcountynv.gov no later than **the Friday before the pre-bid conference**, and a training session will be provided immediately following the pre-bid conference referenced above.

Bids will be accepted at the Clark County Government Center, 500 South Grand Central Parkway, Purchasing and Contracts Division, Fourth Floor, Las Vegas, Nevada 89106, on or before **OCTOBER 17, 2013** at **2:15:00 p.m.**, based on the time clock at the Clark County Purchasing and Contracts front desk, and will be opened immediately thereafter. Bidders and other interested parties are invited to attend the Bid opening.

Specifications and drawings will be available on **SEPTEMBER 12, 2013**, at the above address. Specifications and drawings will be available on Compact Disc (CD) **only**. **The CD will be provided at no charge**. If the CD is to be mailed, there is a non-refundable charge of **\$5.00**. **All checks are to be made payable to the Clark County Treasurer**. Hearing impaired customers may obtain information by calling TT/TDD: Relay Nevada toll free (800) 326-6868.

PUBLISHED:

Las Vegas Review-Journal
SEPTEMBER 12, 2013

INSTRUCTIONS TO BIDDERS

BID NO. 603040-13 MUDDY RIVER COOPER STREET BRIDGE

1. PROJECT SCOPE OF WORK

The project is the construction of the Cooper Street Bridge, crossing the Muddy River in Overton, Nevada. The work for the project includes, but not limited to, bridge structure, channel excavation, over-excavation, grading, de-watering, rectangular and trapezoidal concrete channel, concrete channel transitions, concrete access ramp, gabion structure, rip-rap, cattle ramp, reinforced concrete pipe, ductile iron pipe, steel sleeves, PVC pipe, utility conduit, pull boxes, asphalt, type II aggregate, sidewalk, curb and gutter, driveway relocations, maintenance access roads, street lighting, irrigation relocations, irrigation pump, waterline relocations, power supply relocations, power meter, transformer pad, Cooper Street detour road, traffic control, traffic signs, fencing, gates, house demolition, abandon well, remove steel draw bridge, dust control, dust palliative, pre-emergent herbicides, storm water pollution control, and associated local, State, and Federal Permits.

2. PROJECT LOCATION

Cooper Street crossing the Muddy River, Overton, Nevada.

3. DESIGNATED CONTACTS

| DESIGNATED CONTACTS FOR QUESTIONS | ENTITY/COMPANY | CONTACT NAME | WORK REFERENCE # | TELEPHONE NUMBER | FAX NUMBER |
|---|---|---|------------------|--------------------|--------------------|
| Special provisions, technical specifications, or drawings | Clark County Public Works | John Catanese catanese@clarkcountynv.gov | FMOA01G | (702) 455-6616 | (702) 455-6113 |
| Invitation to Bid, Bonds, insurance requirements (Purchasing Analyst) | Clark County Purchasing and Contracts Division | Thomas Boldt tboldt@clarkcountynv.gov | 603040-13 | Use email address. | Use email address. |
| Special provisions, technical specifications or drawings (Consulting Engineering) | G.C. Wallace, Inc | Calvin L. Black, P.E. Cblack@gcwallace.com | | (702) 804-2020 | (702) 804-2299 |
| Utility requirements (Utility Coordinator) | Overton Power District #5 | Brett Gale | | (702) 397-3033 | (702) 397-2583 |
| Building Permits and Fees Clark County | Clark County Department of Development Services | | | (702) 455-3020 | (702) 455-5685 |
| Utility requirements (Utility Coordinator) | Muddy Valley Irrigation Company | Scott Millington | | (702) 398-7310 | N/A |
| Water connection fees | Moapa Valley Water District | Joe Davis | | (702) 397-6893 | (702) 397-6894 |
| Utility requirements (Utility Coordinator) | Moapa Valley Telephone | John Lyon | | (702) 397-2225 | N/A |
| Utility requirements (Utility Coordinator) | Southwest Gas Corporation | Alyse Baker | | (702) 365-2077 | N/A |
| Utility requirements (Utility Coordinator) | Baja Broadband | Jim Brown | | (435) 703-1055 | N/A |
| Utility requirements (Utility Coordinator) | Regional Flood Control District | | MOA01G11 | | |
| Sewer connection fees | Water Reclamation District | Daniel Hammond | | (702) 688-8165 | N/A |
| Dust control permit | Clark County Department of Air Quality and Environmental Management | Customer Service | | (702) 455-5942 | (702) 383-9994 |
| Management of construction project after award (Assist Manager Off-Site Construction) | Clark County Public Works | Mike Mamer mmamer@clarkcountynv.gov | FMOA01G | (702) 455-6081 | (702) 455-6113 |

4. CONTACT WITH OWNER DURING BIDDING PROCESS

Communication between a Bidder and a member of the Board of County Commissioners (BCC) or between a Bidder and a non-designated Owner contact, regarding this Bid is prohibited from the time the Bid is advertised until the time it is posted on an agenda for award of the contract. Questions pertaining to this Invitation to Bid shall be addressed to the designated contact(s) specified above. Failure of a Bidder, or any of its representatives, to comply with this paragraph may result in its Bid being rejected by the BCC.

5. DEFINITIONS

- A. **Architect:** Owner's representative or other person designated by the Governing Body, acting directly or through their duly authorized representative.
- B. **Addendum:** A written document issued by the Owner, via the Purchasing and Contracts Division, prior to the submission of Bids which modifies or clarifies the Bid Documents by additions, deletions, clarifications, and/or corrections.
- C. **Additive/Deductive Bid Items:** An amount stated in the Bid to be added to or deducted from the contract amount for the corresponding change in the work, as described in the Bid Documents. The unit price (\$) quoted shall remain firm throughout the contract term. Funding for the item(s) is provided in the Bid Form under the description of "Construction Conflicts and Additional Work," or shall be funded through the issuance of a formal change order as described herein. Bidder must quote all item(s) to be responsive and considered for award.
- D. **Additive Alternate Bid Item:** An amount stated in the Bid to be added to the amount of the Base Bid if the corresponding change in the work, as described in the Bid Documents, is accepted by Owner. Additive Alternate Items may be exercised by the Owner with the award of the project, in sequential order only subject to the availability of funds. Bidder must quote all items to be responsive and considered for award.
- E. **Authorized Representative:** A person designated by the Governing Body to be responsible for the development and award of the Contract for the public work.
- F. **Bidder(s):** A Prime Contractor who submits a Bid to the Owner for a project.
- G. **Bid Form(s):** The Bid Form pages, Bid Security, and any attachments
- H. **Bid Option Item:** An amount stated in the Bid to be added to the amount of the Base Bid if the corresponding change in the work, as described in the Bid Documents, is accepted by Owner. Bid Option Items may be exercised by the Owner with the award of the project, in sequential order only subject to the availability of funds. Bidder must quote all items to be responsive and considered for award.
- I. **Bid Documents:** Include but are not limited to, the Invitation to Bid, Instructions to Bidders, General Conditions, Special Conditions, Contract Requirements and Forms, Bid Forms/Attachments, Exhibits, Specifications/Special Provisions and Drawings, and any Addenda issued prior to the date designated for receipt of Bids, as applicable.
- J. **Consulting Architect/Engineer:** A licensed and registered professional contracted by the Owner to design the project's special provisions and drawings.
- K. **Consulting Construction Manager:** The Construction Management firm contracted by the Owner to manage the construction of the project.
- L. **Consulting Engineer:** A professional engineering firm contracted by the Owner to design the project's specifications, special provisions and drawings.
- M. **Contract:** Contract documents include the Bid Documents, Contractor's Bid Form, all Addenda, Contractor's Bonds and Insurance, Subcontractor Notification letters and Notice of Award.
- N. **Contractor:** The person or entity identified as such in the Contract and is referred to throughout the Contract documents as Contractor or successful Bidder. Contractor shall mean the Prime Contractor or its authorized representative as defined by Nevada Revised Statute 616A.285.
- O. **Engineer:** Owner's representative or other person designated by the Governing Body, acting directly or through their duly authorized representative.
- P. **Governing Body:** Used throughout these documents will mean the Clark County Board of Commissioners.

- Q. **Lot:** A separate portion of work as defined in Bid Document as identified in the Special Provisions and Drawings. Each Lot may require separate bonds and insurance documents. The Contractor may bid any single Lot or multiple Lots with a single Bid security as specified within the Instructions to Bidders.
- R. **Owner:** The term used throughout these documents will mean County of Clark, Las Vegas, Nevada.
- S. **Planholders:** Prospective Bidder(s) who have purchased the specifications and drawings for a project.
- T. **Subcontractor/Independent Contractor:** Any individual, agent, firm, sole proprietor, or corporation to whom the Prime Contractor subcontracts any part of the project. There is no contractual relationship between the Owner and the above-mentioned Subcontractor who perform work or services for the Prime Contractor.
- U. **Successful Bidder:** Bidder who is the lowest responsive, responsible and/or best bidder, to whom the Governing Body or the authorized representative has authorized the award of the contract.
- V. **Traffic Engineer:** The Traffic Manager from the Traffic Management Division as designated by the Director of Public Works acting directly or through their duly authorized representative.

6. **BIDDER'S REPRESENTATION**

A. **Each Bidder by submitting their Bid represents that:**

- 1. Bidder has read and understands the Bid Documents and asserts that its Bid is made in accordance therewith and shall be considered a firm offer for a period of 120 calendar days following the opening of bids. The Bidder's offer may expire at the end of the 120 calendar day's period.
- 2. Bidder has visited the project site and is familiar with the local conditions under which the work is to be performed.
- 3. Prior to submission of the Bid, the Bidder shall ascertain that it has received all Addenda issued. The Bidder shall acknowledge receipt of each Addendum by completing the acknowledgment space provided on the Bid Form.

B. **Nevada State Contractors' Board Licensing**

- 1. Bidders for this work must be qualified and properly licensed to perform the particular work pursuant to the provisions of the Nevada Revised Statutes Chapter 624. Failure to comply shall result in rejection of the Bidder. Nevada Contractor's License number and dollar limit must be indicated on the Bid Form page. Should there be a protest regarding the applicability of the low Bidder's Contractor's license to the scope of the project, it shall be the low Bidder's responsibility to obtain an opinion from the State Contractor's Board at its next meeting. **Bidders are reminded that, per NRS 624.3015, bidding on a contract for work in excess of its limits or beyond the scope of its license is grounds for disciplinary action by the State Contractors Board.**
- 2. The Bidder(s), and the successful Contractor(s), and their Subcontractor/Independent Contractors, shall comply with all provisions of Nevada Revised Statutes, Chapter 624, during the bidding phase and Nevada Administrative Code, Chapter 624, through completion of the project.

C. **Journeyman and Master Electrician and Plumbing Examination Program**

- 1. All electricians providing supervision of electrical work on this project are required to possess a valid Clark County Development Services card appropriate to the scope of work being performed. The categories are Master Electrician and Journeyman Electrician, which have passed the International Code Council (ICC) Contractor Examination Services testing at www2.ICCSAFE.org or by calling 1-888-422-7233.
- 2. All plumbers providing supervision of the plumbing work on this project are required to possess a valid Clark County Development Services card for the appropriate scope of work being performed. The categories are Master Plumber and Journeyman Plumber. Tests are administered by the Southern Nevada Board of Plumbing Examiners (SNBOPE) at www.NBOPE.org or by calling 1-877-457-6482.

3. The general Contractor or specialty Contractor submitting a Bid to the Owner shall validate that their employee(s) or their Subcontractor's employee(s) providing supervision for the scope performed maintain current valid cards throughout the term of this Contract. The Bidder(s) and subsequent awarded Contractor(s) agree to provide within twenty-four (24) hours of a request by the Owner, proof of current and valid cards for individuals planned or performing the supervision identified herein. Should any of these supervising employee's cards expire, that employee shall be replaced immediately with another qualified valid cardholder without any additional cost to the Owner.
4. Clark County staff, including but not limited to, from Development Services, Real Property Management, Public Works and/or their contracted staff will perform unscheduled site visits to validate that the workers performing the electrical and plumbing work are in compliance with these requirements. Employees found performing work without the proper proof of compliance (valid card) shall be immediately replaced as specified above without any additional cost or associated impacts to the Owner.

D. Traffic Signal Systems

The Bidder shall investigate prior to the submission of their Bid that the electrical Contractor/subcontractor responsible for the installation of the traffic signal systems has technicians or electricians currently certified by IMSA for Level II Traffic Signals as required in the Uniform Standards Specifications for Public Works Construction Off-Site Improvements, latest revisions, 623 G.01.02, Regulations and Code. The Bidder may submit proof of certification(s) with the Bid proposal and agrees to provide such proof within two (2) working days of the request of the Owner by facsimile to the purchasing analyst specified herein at (702) 386-4914. Failure to provide proof of current certification may result in the rejection of the Bidder.

E. Addenda and Interpretations

1. If it becomes necessary to revise any part of this Bid, a written Addendum will be provided to all known Planholders. Owner is not bound by any oral representations, clarifications, or changes made to the written specifications by Owner's employees, unless such clarification or change is provided to Planholders in written Addendum form from the Purchasing and Contracts Division.
2. Bidders shall take no advantage of any apparent error or omission in the Bid Documents. In the event the Bidders discover such an error or omission, they shall immediately notify the Owner. The Owner will then make such corrections and interpretations as may be deemed necessary for fulfilling the intent of the Bid Documents through the issuance of an Addendum.
3. Addenda shall be sent via mail, certified mail, or fax, and will be made available for pick up to all known Planholders.
4. Copies of Bid Documents, including any Addenda, will be made available for inspection at the Purchasing and Contracts Division.
5. Bidders shall verify receipt of all addenda issued by Owner prior to submission of their Bid.

7. SUBMITTAL OF BID – REQUIRED DOCUMENTS

The following documents, together, comprise a Bid: The Bid Form, all Stipulated Bid Attachments, and the Bid Security, shall be included in the envelope containing the bid. Omission of, or failure by a Bidder to complete any portion of the required documents, or fail to include them in the Bid envelope at the time of Bid Opening, may be cause to reject the Bid.

A. Bid Form

1. Bidder shall complete and include all Bid Form pages, and all stipulated Bid Attachments, all of which have a black bar on the right margin, as part of its Bid submittal.
2. **Subcontractors/Independent Contractors Information**
 - a) The Bidder shall be bound by and comply with Nevada Revised Statute 338.141 to limit the practice of shopping for Bids and shall provide within its Bid proposal, the name of each Subcontractor which will be paid an amount exceeding five percent (5%) of the total base Bid amount. Bidder must verify prior to submitting its Bid that all Subcontractors listed are properly licensed. **A Bidder (Prime Contractor) shall include its name on the required list if it will perform any of the labor or portions of the public work.**

Within two (2) hours after the completion of the opening of Bids, the Bidders who submitted the three (3) lowest Bids must submit a list on the form provided, the name of each Subcontractor who will provide labor, or a portion of the work on the public work, to the Prime Contractor for which the Subcontractor will be paid an amount exceeding one percent (1%) of the Prime Contractor's total Bid or \$50,000, whichever is greater, and the number of the license issued to the Subcontractor pursuant to Chapter 624 of Nevada Revised Statutes. Bidder must verify prior to submitting its list that all Subcontractors listed are properly licensed. **A Bidder (Prime Contractor) shall include its name on the required list if it will perform any of the labor or portions of the public work.**

- (1) Projects EXCEEDING \$5,000,000

The Bidders shall list Subcontractors that will provide labor/improvements exceeding one percent (1%) of the Prime Contractor's total base bid amount, or \$50,000.00, whichever is greater.

Following are detailed delivery instructions for **1% Subcontractors List**:

***Note: Subject line of the e-mail must provide the Bid No., Project Description, and Name of Attachment**

HAND DELIVERY

Clark County Government Center
500 South Grand Central Parkway
Purchasing and Contracts, 4th Floor
Las Vegas, Nevada 89106

E-Mail DELIVERY

CountyPurchasing@ClarkCountyNV.gov
*Reference above.

- b) The list(s) required above must include a description of the labor or portion of the work which each Subcontractor named in the list will provide to the Bidder (Prime Contractor), **and when the Bidder (Prime Contractor) will perform any of the labor or portions of the public work.**
- c) If a Prime Contractor does not submit the list(s) required above, its Bid may be deemed not responsive.
- d) Owner shall verify through the Nevada State Contractors' Board only that information required pursuant to NRS 338.141 as provided by the Bidders. Any Bidder or Subcontractor questioning licensing or utilization of any Subcontractor(s) shall direct their inquiries to the Nevada State Contractors' Board with a copy of all correspondence to the Owner. The Owner will not conduct any investigations regarding the Bidders' (Prime Contractor) relationships with Subcontractors.
- e) Pursuant to NRS 338.13895 and 338.145, a Subcontractor who is named in the Bid for the Contract as a Subcontractor who will provide a portion of the work on the public work pursuant to NRS 338.141, and is not properly licensed for that portion of the work shall be deemed unacceptable, and the contractor shall provide an acceptable Subcontractor.
- f) Contractor shall not substitute any person for itself or a Subcontractor who is named on the required list(s) except as provided pursuant to NRS 338.141.
- g) If a Contractor substitutes a Subcontractor for any Subcontractor who is named in the Bid without complying with the provisions of NRS 338.141; the Contractor shall forfeit, as a penalty to the Owner, an amount equal to one percent (1%) of the total amount of the contract.
- h) If a Contractor indicated pursuant to NRS 338.141 that he or she would perform a portion of work on the public work and, after the submission of the Bid, substitutes a Subcontractor to perform such work; the Contractor shall forfeit as a penalty to the Owner, the lesser of, and excluding any amount of the contract attributable to change orders the following:
- (1) An amount equal to 2.5 percent of the total amount of the contract; or

- (2) An amount equal to 35 percent of the estimate by the engineer of the cost of the work the contractor indicated pursuant to NRS 338.141 that he or she would perform on the public work.
- i) Contractor agrees that it will assume responsibility for acts or omissions of its subcontractors and of persons either directly or indirectly employed by them, as they are responsible for the acts or omissions of persons directly employed by the Contractor. Nothing contained in the contract documents shall create any contractual relation between Subcontractor and the Owner.
- j) Per NRS 338.140.1.d, the Contractor agrees to provide, upon the Owner's request, copies of any or all contracts that it may have with its Subcontractor(s), to be used to determine the price of additional work performed pursuant to change orders, to evaluate claims for costs incurred for the performance of additional work, and/or to prepare for potential mediation or litigation.

3. **Non-Discrimination and Fair Employment Practices**

a) Discrimination:

The Board of County Commissioners is committed to promoting full and equal business opportunity for all persons doing business in Clark County. The SUCCESSFUL BIDDER acknowledges that COUNTY has an obligation to ensure that public funds are not used to subsidize private discrimination. SUCCESSFUL BIDDER recognizes that if the Contractor or their Subcontractors are found guilty by an appropriate authority of refusing to hire or do business with an individual or company due to reasons of race, color, religion, sex, sexual orientation, gender identity or expression, age, disability, national origin, or any other protected status; COUNTY may declare SUCCESSFUL BIDDER in breach of CONTRACT, terminate CONTRACT, and designate SUCCESSFUL BIDDER as non-responsible.

b) Fair Employment Practices:

In connection with the performance of work under this contract, the Contractor agrees not to discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex, sexual orientation, gender identity or expression, age, disability, national origin, or any other protected status. Such agreement shall include, but not be limited to, the following: employment; upgrading; demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

The Contractor further agrees to insert this provision in all subcontracts hereunder. Any violation of such provision by a Contractor shall constitute a material breach of this Contract.

c) Close-out Documentation

As a part of the required contract close-out documentation, Contractor shall submit a Summary Report of Material Suppliers and Subcontractors listing the name of the Subcontractor, Bid item or work performed, the Business Enterprise Group (BEG), Ethnicity Status, and Value of the contracts. The monthly reports shall be submitted in a manner that substantially meets the format and content of the form attached hereto as **Close-out Documentation Summary Report of Subcontractors**.

- d) The Bid form requests information regarding the Prime Contractor's, Subcontractor's, and Material Supplier's Business Enterprise Groups (BEG) and Ethnicity Status. The Business Enterprise Categories are defined as follows:

(1) MINORITY OWNED BUSINESS ENTERPRISE (MBE):

An independent and continuing business for profit, which performs a commercially useful function and is at least 51 percent owned and controlled by one or more minority persons of African-American (AA), Hispanic American (HA), Asian-Pacific American (AX) or Native American (NA) ethnicity.

(2) WOMEN OWNED BUSINESS ENTERPRISE (WBE):

An independent and continuing business for profit, which performs a commercially useful function and is at least 51 percent owned and controlled by one or more women.

(3) PHYSICALLY-CHALLENGED BUSINESS ENTERPRISE (PBE):

An independent and continuing business for profit, which performs a commercially useful function and is at least 51 percent owned and controlled by one or more disabled individuals pursuant to the federal Americans with Disabilities Act.

(4) SMALL BUSINESS ENTERPRISE (SBE):

An independent and continuing business for profit which performs a commercially useful function, is not owned and controlled by individuals designated as minority, women, or physically-challenged, and where gross annual sales does not exceed \$2,000,000.

(5) NEVADA BUSINESS ENTERPRISE (NBE):

Any Nevada business, which has the resources necessary to sufficiently perform identified County projects, and is owned or controlled by individuals that are not designated as socially or economically disadvantaged.

(6) BUSINESSES IN OTHER STATES - LARGE BUSINESS ENTERPRISE (LBE):

An independent and continuing business for profit that performs a commercially useful function and is not located in Nevada.

(7) VETERAN OWNED ENTERPRISE (VET):

A Nevada business at least 51% owned/controlled by a veteran.

(8) DISABLED VETERAN OWNED ENTERPRISE (DVET):

A Nevada business at least 51% owned/controlled by a disabled veteran.

The information provided by the Bidder is for the Owner's information only, as requested by the Board of County Commissioners.

If there are any questions regarding these business categories, their utilization, and local small business development program, please contact Adleen Stidhum at telephone number (702) 455-7155.

4. Bids submitted shall be on the forms provided by Owner. All figures must be written in ink or typewritten. Figures written in pencil or erasures are not acceptable. Any interlineation or alteration must be initialed by a person authorized to bind the Bidder to a contract. If the person making said interlineation, alteration or erasure is not the same person who signs the Bid Form, such person must be authorized by the person who signs the Bid Form.

5. **Construction Conflicts and Additional Work**

\$750,000 has been entered into the Bid Schedule on the Bid Form as "Construction Conflict and Additional Work."

This work may consist of repairing, rebuilding, relocating, replacing, constructing or reconstruction which cannot be performed by extending Bid items and which are not shown on the plans, or not otherwise covered in the Technical Specifications. Contractor shall submit in writing a cost breakdown to include labor, materials required and time to complete to the Construction Manager for review with the architect.

This work shall not be performed until the Contractor is instructed to proceed by the Construction Manager in writing. The Contractor and the Construction Management Inspector will keep strict account of all costs involved with this item of work.

B. Bid Security

1. Each Bid shall be accompanied by a Bid security (in the form of, at Bidder's option, a Cashier's Check, Certified Check, Money Order, or Bid Bond in favor of the Owner) in the amount of five percent (5%) of the base Bid amount, pledging that the Bidder will within seven (7) business days after Notice of Intent to Award, furnish the bonds and insurance as required herein, covering the faithful performance of the Contractor and the payment of all obligations arising hereunder. Bonds issued by a surety, who is an individual surety, are not acceptable to Clark County. Should the Bidder refuse to or fail to furnish such bonds and insurance, the amount of the Bid security may be forfeited to the Owner. All checks and money orders must indicate the Payee as Clark County Treasurer and reflect the complete Bid number.
2. Surety companies executing bonds must be licensed to issue surety by the State of Nevada Insurance Division pursuant to Nevada Revised Statute Chapter 683A and bonds must be issued by an appointed producer of insurance pursuant to Nevada Revised Statute Chapter 683A.
3. If submitting a Bid Bond it shall be written on either a standard Bid Bond form or the enclosed form (Bid Attachment 1), and the attorney-in-fact who executes the Bond on behalf of the surety shall affix to the Bond a certified and current copy of his/her power of attorney.
4. The Owner will have the right to retain the Bid security of Bidders to whom an award is being considered until either (a) the bonds and insurance have been furnished, or (b) the specified time has elapsed so that Bids may be withdrawn, or (c) all Bids have been rejected.
5. Should this Bid contain Lots, the Bidder may choose to provide a Bid security in the form of a Cashier's Check, Certified Check or Money Order, a separate check or Money Order for EACH LOT submitted. If the Bidder elects to provide a Bid security in the form of a Bid Bond, it may be issued for five percent (5%) of the aggregate amount of all Lots submitted.

8. SUBMISSION OF BIDS

All bids must be submitted in a sealed envelope plainly marked with the name and address of the Bidder, the Bid Number, and the Project Title in the upper left-hand corner. No responsibility will attach to the Owner, or any official or employee thereof, for the pre-opening of, post-opening of, or the failure to open a bid which is not properly addressed and identified

The following are detailed delivery instructions for bids:

HAND DELIVERY

Clark County Government Center
500 South Grand Central Parkway
Purchasing and Contracts, 4th Floor
Las Vegas, Nevada 89106

U.S. MAIL DELIVERY

Clark County Government Center
Attn: Purchasing and Contracts, 4th Floor
500 South Grand Central Parkway
P.O. Box 551217
Las Vegas, Nevada 89155-1217

EXPRESS DELIVERY

Clark County Government Center
Attn: Purchasing and Contracts, 4th Floor
500 South Grand Central Parkway
Las Vegas, Nevada 89106

Regardless of the method used for delivery, the Bidder shall be wholly responsible for the timely delivery of its bid. FAXED OR ELECTRONICALLY SUBMITTED BIDS ARE NOT ALLOWED AND WILL NOT BE CONSIDERED.

Bids are time-stamped upon receipt. Bids submitted must be time-stamped no later than 2:15:00 p.m. on the bid opening date. Bids time-stamped after 2:15:00 p.m., based on the time clock at the Clark County Purchasing and Contracts front desk will be recorded as late, remain unopened and be formally rejected. Overnight Mail must use the 89106 zip code. Bidders and other interested parties are invited to attend the bid opening.

9. WITHDRAWAL OF BID

A. Before Bid Opening:

Bidders may request withdrawal of a submitted, sealed bid prior to the scheduled bid opening time provided the request for withdrawal is submitted in writing to the Purchasing Analyst.

B. After Bid Opening:

The Owner may allow a Bidder intended for award to withdraw its bid during the firm offer period due to a mistake of fact on the part of the Bidder or its employee(s) in preparing its bid. Such Bidder, upon discovery of the mistake, must immediately notify the Owner in writing of such mistake. The notice to the Owner must include: (1) a request to withdraw its bid, (2) a detailed description of the exact nature of the mistake, (3) an explanation of exactly how and why the mistake occurred, (4) and an explanation of the corrective action that was, or will be implemented by the Bidder to eliminate the possibility of future mistakes. If the above requested information is not adequately provided to the Owner's satisfaction, the Bidder shall be prepared to meet with the Owner within 24 hours of notification by the Owner to further review the Bidder's request for withdrawal of its bid. In any case of a withdrawal, Owner may require that Bidder forfeit its bid security to the Owner.

10. TIE-BIDS

A tie-bid is defined as an instance where bids are received from two or more Bidders who are the low Bidders, and their offers are identical. Bids must be identical in all evaluation areas; e.g., price, quality, delivery, terms, and ability to supply, etc. If any of these areas are not identical, it is not considered a tie-bid, and Owner can justify awarding to the Bidder with the lowest responsive and responsible bid.

The procedure for tie-bids is to hold a public drawing and award the bid to the winner of the draw in accordance with the Method of Award clause in the Instructions to Bidders. When a drawing is necessary, the Bidders involved will be contacted with the time and place of the drawing. Attendance is not mandatory for the drawing. An impartial witness will be present at the drawing.

11. EVALUATION OF BIDS AND AWARD

A. Line Item Total Prices/Evaluation

The Bidder shall quote a total price for each line item; low bid will be defined as the lowest sum of these total prices. Mathematical errors in the line item Bid Schedule shall be corrected by Owner. For purposes of progress payments and change orders, the Owner will divide the item total by the estimated quantity contained in the Bid Form to arrive at a unit price (rounded down to the truncated cent). If there is no cost for a line item, the Bidder will enter a "0" or write the words "NO COST." A Bidder who fails to quote a total price for each line item or modifies/changes any elements within its Bid Form may be deemed non-responsive and their bid rejected.

B. Award: Unit Prices

In the event there are unit price bid items provided in the Bid Form, and the total indicated for a unit price bid item does not equal the product of the unit price and quantity, the unit price shall govern and the total will be corrected accordingly. Mathematical errors in the Bid shall be corrected by Owner. A Bidder who fails to quote a unit price for all items may be deemed non-responsive due to an incomplete bid. If there is no cost for a unit price, the Bidder shall enter a "0" or write the words "NO COST."

C. Intent to Award

The Owner will issue a formal letter of Intent to Award to the low responsive responsible and/or best Bidder. The Bidder shall utilize this letter to obtain the bonds required by NRS 339.025. This statute requires that before any Public Works contract is awarded and becomes binding, the Contractor shall furnish bonds and insurance.

D. Award Determination

All responsive and responsible bids received are considered firm offers for 90 calendar days after the date of bid opening and may be considered for award. Award shall be made to the lowest responsive, responsible and/or best bidder, based upon the Total Bid Amount. Bidders must quote all items and agree to provide the bonds and insurance specified herein to be responsive and considered for award.

The determination of award may involve all or some of the following factors: price; bidder preference, if applicable; conformity to specifications; financial ability to meet the contract; previous performance; facilities and equipment; experience; and other objective and accountable factors which are reasonable and in accordance with the requirements of the Nevada Revised Statutes.

Rejection of bid(s) may be recommended to the Governing Body for any of (but not limited to) the following causes:

1. Failure to use the Bid Form(s) furnished by the Owner.
2. Lack of signature by an authorized representative on the Bid Form(s).
3. Failure to properly complete the Bid Form(s).
4. Evidence of collusion among Bidders.
5. Omission of Bid Security, in an acceptable form.

6. Unauthorized alteration of Bid Form(s).
7. Failure to fill out the Disclosure of Ownership/Principals form.
8. Reports of prior County required contracts.

Owner reserves the right to waive any minor informality or irregularity.

E. Disclosure of Ownership/Principals

Any bidder recommended for award of a contract by the Board of County Commissioners is required to provide the information on the attached "Disclosure of Ownership/Principals" form. The form must be submitted to the Owner within 24 hours after request. Failure to fill out the subject form by the Bidder shall be cause for rejection of the bid.

F. Award of Contract

This bid will not be awarded or considered entered into, until the Governing Body or its authorized representative has authorized the award and the Successful Bidder has properly executed and submitted the required proof of insurance, the required bonds, and any other required submittals. Upon receipt of these required documents, in acceptable form, the Contract is considered binding, and the Purchasing Manager or her designee will issue an Award Letter. The bid will then become a binding contract.

12. BONDS AND INSURANCE REQUIREMENTS

The successful Bidder shall obtain the bonds and maintain through the contract term the insurance coverage required in Exhibit A, incorporated herein by this reference. The successful Bidder shall comply with the terms and conditions set forth in Exhibit A. The cost of the insurance coverage shall be included in the bid amount.

Bidders are strongly urged to fax the bonds, insurance, and insurance certificate to their respective agents before the bid opening. The Successful Bidder must provide these within seven (7) business days from date of faxed letter of Intent to Award. Owner will assess the liquidated damages for submission of incorrect documents that are not corrected and returned by the seventh business day.

- A. Insurance and surety companies issuing certificates of insurance and bonds must be licensed by the State of Nevada Insurance Division and certificates of insurance and bonds must be issued by an appointed producer of insurance pursuant to Nevada Revised Statute Chapter 683A.
- B. The Successful Bidder shall provide all submittals requested in this section within seven (7) business days. If the Successful Bidder does not provide the submittals on or before the seventh business day, or fails to keep the bonds or insurance policies in effect or allows them to lapse, the Successful Bidder will pay to the Owner the amount of **\$3,000** per day as liquidated damages.

13. SOILS REPORT

Should a soils report concerning this project be provided, the document is not incorporated as part of the bid. It is provided for informational purposes only. This report and other records of subsurface investigations and test are provided only for inspection by Bidders. It is understood and agreed that such subsurface information, whether included in the plans, specifications, or otherwise made available to the Bidder, was obtained and is intended for the Owner's design and estimating purposes only. Bidder expressly waives any right to rely on such information for any purpose. Such information has been made available only for the convenience of all Bidders. It is further understood and agreed that each Bidder is solely responsible for all assumptions, deductions, or conclusions that it may make or obtain from any subsurface information obtained from any source.

14. PROTESTS

Any Bidder who bids on a contract may file a written protest regarding the awarding of contract with the Purchasing Analyst within five (5) business days after the recommendation to award a contract is issued by the Owner or authorized representative. The protest must include a written statement setting forth the specific reasons the Bidder submitting the protest believes the applicable provisions of the law were violated. The Bidder filing the protest shall be required, at the time the protest is filed, to post a bond with a good and solvent surety authorized to do business in this state, or submit other security, defined as a cashiers check, money order or certified check, to the Owner who shall hold the bond or other security until a determination is made on the protest. A bond posted or other security submitted with the protest must be in an amount equal to the lesser of:

- A. 25% of the total value of the base bid submitted by the Bidder filing the protest; or
- B. \$250,000.

The protest filed in accordance with these provisions operates as a stay of action in relation to the award of this contract until a determination is made by the Governing Body on the protest.

An unsuccessful Bidder may not seek any type of judicial intervention until the Governing Body has made a determination on the protest and awarded the Contract.

Neither the Governing Body nor the authorized representative is liable for any costs, expenses, attorney's fees, loss of income or other damages sustained by a Bidder, whether or not the person files the protest pursuant to this clause.

If the protest is upheld, the bond posted or other security submitted with the protest must be returned to the Bidder who submitted the protest. If the protest is rejected a claim may be made against the bond or other security by the Owner in an amount equal to the expenses incurred by the Owner because of the unsuccessful protest. Any money remaining after the claim has been satisfied must be returned to the Bidder who posted the bond or submitted the security.

15. REJECTION OF BID

The Governing Body reserves the right to waive any informality or irregularity in any bid received, to reject any and/or all bids, and to rebid.

16. FEDERAL, STATE, LOCAL LAWS

All Bidders, the successful Contractor, Subcontractors and any other person(s) who provides labor, equipment, materials, supplies or services for the public work, shall comply with the requirements of all applicable federal, state, and local laws relative to conducting business in Clark County including, without limitation, any applicable licensing requirements, labor and health laws, requirements for the payment of sales and use taxes on equipment, materials and supplies provided for the public work, and including NRS 338 as amended, if applicable. The laws of the State of Nevada will govern as to the interpretation, validity, and effect of this bid, its award, and any contract entered into.

17. COLLUSION AND ADVANCE DISCLOSURES

Pursuant to 332.820 evidence of agreement or collusion among Bidders and prospective Bidders acting to illegally restrain freedom of competition by agreement to bid a fixed price, or otherwise, shall render the bids of such Bidders void.

Advance disclosures of any information to any particular Bidder which gives that particular Bidder any advantage over any other interested Bidders, in advance of the bid opening, whether in response to advertising or an informal request for bids, made or permitted by a member of the governing body or an employee or representative thereof, shall operate to void all bids received in response to that particular request for bids.

18. RESPONSIBILITY OF CONTRACTOR

- A. It is understood that in the performance of the services herein provided for, Contractor shall be, and is, an independent Contractor, and is not an agent, representative or employee of Owner and shall furnish such services in its own manner and method except as required by this Contract. Further, Contractor has and shall retain the right to exercise full control over the employment, direction, compensation and discharge of all persons employed by Contractor in the performance of the services hereunder. Contractor shall be solely responsible for, and shall indemnify, defend and hold Owner harmless from all matters relating to the payment of its employees, including compliance with social security, withholding and all other wages, salaries, benefits, taxes, demands, and regulations of any nature whatsoever.
- B. Contractor shall be fully and solely responsible for safety and health conditions for conducting all operations under this contract and at all times in such a manner as to avoid the risk of endangerment to health, bodily harm to persons, and damage to property. Contractor shall continually and diligently inspect all equipment, materials and work to discover any conditions which might involve such risks and shall be solely responsible for discovery and correction of any such conditions Contractor shall furnish all safety equipment, supplies and instructions required for the work and enforce the proper use of such by its employees, agents, subcontractors and any and all sub-tier levels and suppliers. Contractor shall notify the Owner in writing of the name of their assign employee responsible for safety and health including a twenty-four hour telephone number prior to commencement of work. Contractor shall comply with all requirements of Nevada Revised Statute Chapter 618, Occupational Safety and Health, Nevada Administrative Code Chapter 618 and have established an **active** Safety Program in accordance therewith.
- C. Contractor acknowledges that the Owner has an obligation to ensure that public funds are not used to subsidize private discrimination. Contractor recognizes that if they or their subcontractors are found guilty by an appropriate authority of refusing to hire or do business with an individual or company due to reasons of race, color, religion, sex, sexual orientation, gender identity or expression, age, disability, national origin, or any other protected status; the Owner may declare the Contractor in breach of the Contract, terminate the Contract, and designate the Contractor as non-responsible.

- D. Contractor acknowledges that Contractor and any Subcontractors, agents or employees employed by Contractor shall not, under any circumstances, be considered employees of the Owner, and that they shall not be entitled to any of the benefits or rights afforded employees of Owner, including, but not limited to, sick leave, vacation leave, holiday pay, Public Employees Retirement System benefits, or health, life, dental, long-term disability or workers' compensation insurance benefits. Owner will not provide or pay for any liability or medical insurance, retirement contributions or any other benefits for or on behalf of Contractor or any of its officers, employees or other agents.
- E. The Contractor shall be responsible for the professional quality, technical accuracy, timely completion, and coordination of all services furnished by the Contractor, their principals, officers, employees, agents, Subcontractors and suppliers required to complete this Contract. In performing the specified services, Contractor shall follow practices consistent with generally accepted professional and technical standards.
- F. It shall be the duty of the Contractor to assure that all products of its effort are technically sound and in conformance with all pertinent Federal, State and Local statutes, codes, ordinances, resolutions and other regulations. Contractor will not produce a work product that violates or infringes on any copyright or patent rights. The Contractor shall, without additional compensation, correct or revise any errors or omissions in its work products. Permitted or required approval by the Owner of any products or services furnished by Contractor shall not in any way relieve the Contractor of responsibility for the professional quality and technical accuracy and adequacy of its work. Owner's review, approval, acceptance, or payment for any of Contractor's services herein shall not be construed to operate as a waiver of any rights under this Contract or of any cause of action arising out of the performance of this Contract, and Contractor shall be and remain liable in accordance with the terms of this Contract and applicable law for all damages to Owner caused by Contractor's performance or failures to perform under this Contract.
- G. Contractor shall appoint a qualified employee who will manage the performance of services, should this employee be unable to complete his or her responsibility for any reason, the Contractor will immediately replace him or her with a qualified person and inform the Owner in writing.
- H. As built drawings and related specifications shall become and remain the property of the Owner. Copies of the drawings and specifications retained by the Owner may be utilized only for its use and for occupying and maintaining the project for which they were prepared, and not for construction of any other project. A copy of all materials, information and documents, whether finished, unfinished, or draft, developed, prepared, completed, or acquired by Contractor during the performance of services for which it has been compensated under this Contract, shall be delivered to Owner's representative upon completion or termination of this Contract, whichever occurs first. Owner shall have the right to reproduce all non-copy write protected documentation supplied pursuant to this Contract.
- I. The Contractor agrees that its officers, employees, Subcontractors and suppliers will cooperate with the Owner in the performance of services under this Contract and will be available for consultation with Owner at such reasonable times with advance notice as to not conflict with their other responsibilities.
- J. The Contractor agrees to provide the information on the attached "Disclosure of Ownership/Principals" form prior to any contract award by the Board of County Commissioners.
- K. The rights and remedies of the Owner provided for under this section are in addition to any other rights and remedies provided by law or under other sections of this Contract.

19. RESPONSIBILITY OF OWNER

- A. The Owner agrees that its officers, employees, and contracted firms will cooperate with Contractor in the performance of services under this Contract and will be available for consultation with Contractor at such reasonable times with advance notice as to not conflict with their other responsibilities and in accordance with the communication methodology defined by the Owner.
- B. Owner's Departmental Responsibilities:
 - 1. The Owner's Department of Finance, Purchasing and Contracts Division will administer the bid solicitation, pre-bid conference, issue addenda, bid opening, bid protest, evaluation, Nevada State Contractors Board license compliance, bonds and insurance, Notice of Award of contract, prevailing wage rate compliance, and obtainment of governing body approval of fully executed change order(s), subcontractor substitutions, assignment of contractual rights, and any Notice to Remedy and Contract Termination. The Owner's departmental representative assigned to administer the contract with the design professional (Architect/Engineer) shall review and approve all documents prior to presenting them to the Purchasing and Contracts Division for advertising a notice to bid and prior to release of a formal addenda.

2. Upon the issuance of a written Notice of Award, the services performed by Contractor under this Contract shall be subject to contract administration for compliance with the terms of this Contract by Owner's departmental representative assigned at the preconstruction meeting and/or as instructed in the written Notice to Proceed. Owner's departmental representative shall provide all contract administration including issuance of the written Notice to Proceed for commencement of work/services, substitutions ("or equal"), coordination with design professional and construction management firm, progress payment evaluation(s), invoice approval, payments and retainage, surety performance inquirers, negotiations and signature authority for change order(s), punch list(s), Notice of Substantial Completion, warranty inspections, corrective action notices, project conflicts, disputes, mediation demands. Additionally shall administer and coordinate the Owner's design professional, construction management firm or other Owner contracted firm(s). Owner's departmental representative responsibilities under this Contract may be delegated to appropriate staff members or a third party firm, and shall notify the Contractor in writing before the effective date of each such delegation.

- C. The review comments of Owner's representative may be reported in writing as needed to Contractor. It is understood that Owner's representative's review and oral comments do not relieve Contractor from the responsibility for the timely completion, professional quality and technical accuracy of all work delivered under this Contract unless modified through a formal written change order(s) approved by the governing body.

- D. Clark County staff (including but not limited to those) from Development Services, Real Property Management, Public Works and/or their contracted staff will perform unscheduled site visits to validate that the workers performing the electrical and plumbing work are in compliance with requirements of the Building Administrative Code, Chapter 22.2.

20. DISCLAIMER

The prospective Bidder is responsible for obtaining all addenda, correspondence, CD data, and any other documentation issued by Clark County. Clark County is not responsible for the accuracy or completeness of any documentation the Bidder receives from **any source** other than Clark County Purchasing and Contracts Division.

GENERAL CONDITIONS

BID NO. 603040-13
MUDDY RIVER COOPER STREET BRIDGE

SECTION 1: GENERAL

1.1 NOTICE(S) TO PROCEED

A. **Notice to Proceed (for Work)**

After receipt of all required post-bid bonds and proof of insurance, and any other required post-bid submittals, the Purchasing and Contracts Division will issue a Notice of Award which authorizes the Contractor to immediately execute the required contracts with equipment and material supplier(s), required Subcontractors, and apply for and obtain any necessary permits. The Public Works Department shall issue a Notice to Proceed to commence the work.

1.2 TIME: COMPLETION OF PROJECT

A. Time is of the essence and failure to meet the specified time to complete the work to be performed shall constitute a breach of the Contract and may result in termination of the Contract.

B. The Successful Bidder, upon becoming the awarded Contractor, shall commence the work to be performed on the date set by the Owner's departmental representative in the written Notice to Proceed, continuing the work in accordance with the approved schedule and shall complete the entire work within **360 calendar days** from the date specified in the Notice to Proceed. Further, separable portions of the work may be subject to milestone or specific dates as established in this document. The Contractor shall complete all work or separable portions of work in accordance with specified milestones or specific dates and in accordance with these specifications. Any costs associated with the overtime, which may be required to complete the project in time, and/or milestones specified shall be solely the responsibility of the Contractor and shall have been included in the bid amount(s).

1. In addition, where applicable, reference to time shall be in accordance with Section 108, "Prosecution and Progress" of the Uniform Standard Specifications for Public Works Construction Off-Site Improvements, Clark County Area, Nevada, Third Edition, and revisions thereto.

2. The time specified above represents no overtime requirement. The scheduling of overtime for this project is solely the responsibility of the Contractor. The Owner is not responsible for any additional costs related to overtime work performed.

C. **Contractor's Performance of Work**

The Contractor shall perform all work as may be necessary to complete the contract in a satisfactory and acceptable manner, and unless otherwise provided, shall furnish all transportation, materials, equipment, tools, labor or incidentals necessary to complete the work in the best possible and most expeditious manner.

D. **Liquidated Damages**

1. In case of failure on the part of the Contractor to complete the work within the time(s) specified in the Contract, or with such additional time(s) as may be granted by formal change order, or if the Contractor fails to perform the work, or any separable part thereof, with such diligence as will insure its completion within the time(s) specified in the contract or any extensions thereof, the Contractor shall pay to the Owner, as liquidated damages, the sum of **\$2,000** for each calendar day of delay until the work is complete, together with any increased costs incurred by the Owner in completing the work.

2. **Owner's Recovery of Bidder's Preference Liquidated Damages**

If the Owner determines that the Contractor has failed to comply with a requirement certified in its Public Works Bidder's Preference Affidavit, the Owner may seek to recover by civil action Liquidated Damages for material breach of the contract in the amount of one percent (1%) of the contract price.

1.3 PERMITS AND FEES

The Contractor shall determine and secure and pay for all fees and permits which may include, but not be limited to the following: building permit; plan check fee; dust control permit; sanitation/sewer; storm water pollution, water; tortoise; and other permits, connection and governmental fees; licenses; and all special inspections necessary for proper execution and completion of the work, unless otherwise specified. Contractors shall direct questions to the designated contacts specified in the Instructions to Bidders.

1.4 UTILITIES

The Contractor shall, at its expense, arrange for, develop and maintain all utilities in work areas to meet the requirements of the Contract. Such utilities shall be furnished by Contractor at no additional cost to the Owner, unless otherwise specified in this bid document.

1.5 STANDARDS AND CODES

- A. Wherever references are made in the Contract to standards or codes in accordance with which work is to be performed or tested, the edition or revision of the standards or codes current on the effective date of this Contract shall apply to the work of the project, unless otherwise expressly set forth. Unless otherwise specified, reference to such standards or codes is solely for implementation of the technical portions of such standards and codes.
- B. Where applicable, reference to the Uniform Standard Specifications shall mean the Uniform Standard Specifications for Public Works Construction, Off-Site Improvements, Clark County Area, Nevada, Third Edition and revisions thereof, excluding Sections 102 and 103 of Division One, and/or the latest adopted Editions of the Uniform Building Code, Plumbing Code, Electrical Code, Fire Code, and Mechanical Code.
- C. In case of conflict among any of the above referenced Specifications standards and codes, or between any referenced standards and codes and the Special Provisions, reference is made to Section 105, Subsection 105.04 of the Uniform Standard Specifications for Public Works Construction, Off-Site Improvements, Clark County Area, Nevada, Current Edition, and revisions thereto, unless otherwise specified in the General Conditions.

1.6 TAXES

Contractor shall pay all taxes, levies, duties and assessments of any nature that may be applicable to any work under this Contract. The contract amount and any approved change orders amounts shall include all taxes imposed by law. Contractor shall make any and all payroll deductions required by law. Contractor herein indemnifies and holds the Owner harmless from any liability regarding any and all such taxes, levies, duties, assessments and deductions.

1.7 ASSIGNMENT OF CONTRACTUAL RIGHTS

It is agreed that the Contractor will not assign, transfer, convey or otherwise dispose of the contract or its right, title or interest in or to the same, or any part thereof, without prior written consent of Owner and any sureties.

1.8 GOVERNING ORDER OF BIDDING AND CONTRACT DOCUMENTS

- A. The bidding and contract documents include various divisions, sections, and conditions, which are essential parts for the work to be provided by the Contractor. A requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete work. In case of a discrepancy, the following precedence will govern:
 - 1. Permits required by law from other agencies, and/or the County, issued to the Contractor, and/or the County.
 - 2. Change orders, supplemental contracts and amended contracts.
 - 3. Instructions to Bidders, including any addenda.
 - 4. General Conditions, including any addenda.
 - 5. Special Provisions, including any addenda.
 - 6. Contract Drawings, including any addenda.
 - 7. Uniform Standard Specifications for Public Works Construction Off-Site Improvements, Clark County Area, Nevada, Third Edition, and all revisions through date of advertisement.

8. Uniform Standard Drawings for Public Works Construction Off-Site Improvements, Clark County Area, Nevada, and all revisions through date of advertisement.
- B. Notwithstanding the above, if a permit provision conflicts with a provision in items 1-8, above, the more stringent provision controls.
- C. Notwithstanding the above, a change order, supplemental agreement or amended agreement takes precedence over a more stringent permit if the permitting agency approves in writing.
- D. Notwithstanding the above, in the event of a conflict between addenda, the more recent addenda controls.
- E. Notwithstanding the above, approved revisions to contract drawings, specifications and drawings will take precedence over items 5, 6, 7 and 8 respectively. Detailed contract drawings shall have precedence over general plans.
- F. The Contractor shall not take advantage of any apparent error or omission in the contract drawings or specifications. In the event the Contractor discovers such an error or omission, the Contractor shall immediately notify the Engineer/Architect. The Engineer/Architect will then make such corrections and interpretations as may be deemed necessary for fulfilling the intent of the plans and specifications.

1.9 INDEMNITY

- A. Notwithstanding the insurance coverage required herein, Contractor hereby indemnifies and shall defend and hold harmless Owner, its officers, employees, agents and, if applicable, its construction manager, its officers and employees, Overton Power District #5, **additionally**,
- the Moapa Valley Water District,**
 - Muddy Valley Irrigation Company,**
 - Moapa Valley Telephone,**
 - Daniel T. & Kirk D. Polattis (APN: 070-12-601-010)**
 - and Clark County Water Reclamation District (CCWRD),**

from and against any and all suits, actions, legal or administrative proceedings, claims, demands, damages, liabilities, interest, attorney's fees, costs and expenses whatsoever of any kind or nature whether arising before or after completion of the work hereunder and in any manner directly and indirectly caused, occasioned or contributed to in whole or in part, by reason of any act, omission, fault or negligence whether active or passive by Contractor, or anyone contracted with or acting under its direction or control, or in its behalf in connection with or incident to the performance of this Contract.

Contractor's aforesaid indemnity and hold harmless obligations, or portions or applications thereof, shall apply even in the event of the fault or negligence, whether active or passive, of the parties indemnified or held harmless to the fullest extent permitted by law, but in no event shall they apply to liability caused by the willful misconduct of the parties indemnified or held harmless.

- B. Contractor agrees to indemnify, defend, and hold harmless the Owner, its officers and employees, from any and all claims by Contractor's employees or its subcontractors' employees, for work-related injuries arising out of the performance of the contract.

1.10 ADA REQUIREMENTS

All work performed or services rendered by the successful Contractor must comply with the Americans with Disabilities Act standards adopted by Clark County. All facilities built prior to January 26, 1992 must comply with the Uniform Federal Accessibility Standards; and all facilities completed after January 26, 1992 must comply with the Americans with Disabilities Act Accessibility Guidelines. It shall be the responsibility of the successful Contractor to advise the Owner should the Owner's requirements not meet the appropriate accessibility standards.

1.11 AUDITS

The performance of this contract by the Contractor is subject to review by the Owner to insure contract compliance. The Contractor agrees to provide the Owner any and all information requested that relates to the performance of this contract. All requests for information shall be in writing to the Contractor. Time is of the essence during the audit process. Failure to provide the information requested within the timeline provided in the written information request may be considered a material breach of contract and be cause for suspension and/or termination of the contract.

SECTION 2: MATERIALS:

2.1 PATENT INDEMNITY

- A. Contractor hereby indemnifies and shall defend and hold harmless Owner, its officers, employees, agents and, if applicable, its construction manager, its officers, and employees, respectively, from and against all claims, losses, costs, damages, and expenses, including attorney's fees, incurred by Owner and its construction manager, respectively, as a result of or in connection with any claims or actions based upon infringement or alleged infringement of any patent and arising out of the use of the equipment or materials furnished under the contract by Contractor, or out of the processes or actions employed by, or on behalf of Contractor in connection with the performance of the contract. Contractor shall, at its sole expense, promptly defend against any such claim or action unless directed otherwise by Owner or its construction manager; provided that Owner or its construction manager shall have notified Contractor upon becoming aware of such claims or actions, and provided further that Contractor's aforementioned obligations shall not apply to equipment, materials, or processes furnished or specified by Owner or its construction manager.
- B. Contractor shall have the right, in order to avoid such claims or actions, to substitute at its expense non infringing equipment, materials, or processes, or to modify such infringing equipment, materials and processes so they become non infringing, or obtain the necessary licenses to use the infringing equipment, material or processes, provided that such substituted and modified equipment, materials and processes shall meet all the requirements and be subject to all the provisions of this Contract.

2.2 SUBSTITUTIONS ("OR EQUAL")

A. **Policy**

1. Prior to proposing any substitute material, product, or service, Contractor shall satisfy itself that the material, product, or service proposed is, in fact, equal to that specified. Contractor may only request a substitution if a material or product will fit into the space allocated, affords comparable ease of operations, maintenance and service, that the appearance, and longevity is equal to or better than the material or product specified; or that the substitution of such material, product, or service by reason of cost savings, reduced construction time, or similar demonstrable benefit will be in Owner's interest.
2. The burden of proof of equality of a proposed substitution for a specified material, product, or service shall be upon Contractor. Contractor shall support its request with sufficient test data and other means to permit Owner to make a fair and equitable decision on the merits of the proposal. Contractor shall submit drawings, samples, data and certificates for proposed substitute materials. Any material, product, or service by a manufacturer other than those specified or of brand name or model number or of generic species other than those specified will be considered a substitution. Owner will be the sole judge of whether or not the substitution is equal in quality, utility and economy to that specified.
3. Approval of a substitution shall not relieve the Contractor from responsibility for compliance with all requirements of the Contract. Contractor shall bear the expense for any changes in other parts of the work caused by any substitutions.
4. Materials, products or service proposed as substitutions for specified items shall be supported by certification of their approval for use by any or all governmental agencies having jurisdiction over use of the specific material, product or service.
5. Substitutions will not be permitted in those instances where the product is intended to accommodate artistic design, specific function or economy of maintenance.

B. **Procedure**

Should the Contractor wish to use any material, product, or service other than those specified by brand or trade name, it shall, within **10 calendar days** after award of the contract, submit to the Architect or Engineer, a written request for substitution accompanied by all data necessary for the Architect or Engineer to determine whether the requested substitution is equal to the specified material, product, or service. If the Contractor fails to submit written requests within **10 calendar days** after the award of the contract, no substitutions will be allowed. The submission of a request to substitute a material, product, or service gives rise to no obligation on the part of the Owner to accept such substitute, or on the part of the Architect or Engineer to determine such substitute to be the equal of that specified.

The Architect or Engineer will have a reasonable amount of time to review requests for substitution and make a recommendation to the Owner. Should the substitute be acceptable to the Owner, an authorization will be written allowing the provision of the substitute material, product, or service. No substitution will be allowed which will increase the Contract amount.

2.3 DELIVERY, UNLOADING AND STORAGE

Contractor shall receive, unload, store in a secure place, and deliver from storage to the construction site all materials and equipment required for the performance of the Contract. The storage facilities and methods of storing shall meet Owner's approval. Materials and equipment subject to degradation by exposure shall be stored in a suitable enclosure provided by Contractor.

2.4 PAYMENT OF MATERIAL

- A. At the discretion of the Owner, payment for materials on hand may be made when a paid invoice is presented to the Architect/Engineer for inclusion with the estimate, provided the materials meet the requirements of the plans and specifications, and are stored under acceptable storage conditions. Payment for materials on hand does not alter the responsibility of the Contractor for all materials until final acceptance of the work.
- B. If materials are not specifically purchased for the work, but are taken from the Contractor's stock, then in lieu of invoices, there shall be submitted to the Owner statements accompanied by an affidavit of the Contractor, certifying such materials were taken from its stock and the price and transportation claimed represent the actual cost to the Contractor.
- C. It is understood and agreed that the transfer of title to and the Owner's payment of such stored or stockpiled material shall in no way relieve the Contractor of its responsibility for furnishing and placing such materials in accordance with the requirements of the Contract, plans, and specifications.

2.5 WARRANTY

- A. Unless otherwise provided elsewhere in the Contract, all materials and equipment incorporated into any work covered by the contract shall be new, and where grade is not specified, shall be of the most suitable grade of their respective kinds for their intended use, and all workmanship shall be in accordance with construction practices acceptable to Owner. Unless otherwise provided in the contract, Contractor warrants all equipment, materials, and labor furnished or performed under this contract against defects in design, materials (unless furnished by Owner), and workmanship for a period of **12 months** (unless longer guarantees or warranties are provided for in the contract in which case the longer periods of time shall prevail) from the date of Substantial Completion, regardless of whether the same were furnished or performed by Contractor or by any of its subcontractors of any tier. Upon receipt of written notice from Owner of any defect in any such equipment, materials, or labor during the applicable warranty period, due to defective design, materials or workmanship, the affected item or parts thereof shall be redesigned, repaired or replaced by Contractor at a time acceptable to Owner.
- B. Contractor shall perform such tests as Owner may require verifying that such redesign, repairs and replacements comply with the requirements of this Contract. All costs incidental to such redesign, repair, replacement and testing, including the removal of any barrier, necessary to gain access, shall be borne by Contractor.
- C. Contractor warrants such redesigned, repaired or replaced work against defective design, materials and workmanship for a period of 12 months from and after date of acceptance thereof. Should Contractor fail to promptly make the necessary redesign, repair, replacement, and tests, Owner may perform or cause to be performed the same at Contractor's expense. Contractor and its surety or sureties shall be liable for the satisfaction and full performance of the warranties as set forth herein.

SECTION 3: LABOR

3.1 PREVAILING WAGES

- A. The Contractor and Subcontractors shall be bound by and comply with all federal, state and local laws with regard to minimum wages, overtime work, hiring and discrimination, including NRS 338.020 through 338.090. The Contractor shall ensure that all employees on the work are paid in accordance with the CURRENT PREVAILING WAGE RATES AS APPROVED BY THE STATE LABOR COMMISSIONER, whenever the actual value of the contract totals \$100,000 or more. Bidders are responsible to identify and use the correct prevailing wage rates, including any addenda, as well as all the forms needed to comply, as specified on the State of Nevada Labor Commissioner's web site: <http://www.laborcommissioner.com>, or by calling (702) 486-2795. Per NAC 338.040, after a contract has been awarded, the prevailing rates of wages in effect at the time of the opening of bids remains in effect for the duration of the project. **Please note that if a change order causes a contract to exceed \$100,000, the Owner will audit the entire contract period.**
- B. In accordance with NRS 338.013.3, the Contractor shall report to the Labor Commissioner and the Owner the name and address of each subcontractor performing work on the project within 10 days after the subcontractor commences work on the project and the identifying (PWP) number for the public work.
- C. In accordance with NRS 338.060 and 338.070, the Contractor shall forfeit as a penalty to the Owner, amounts specified in NRS 338.060, for each calendar day or portion thereof that each workman employed on the Owner's project is paid less than the designated rate for any work done under the contract by the Contractor or any Subcontractor under it. If the Contractor or any Subcontractor on the project fails to submit the certified payroll reports to the Owner within **15 calendar days** after the end of the month, the Contractor shall forfeit as a penalty to the Owner, amounts specified in NRS 338.060, for each calendar day or portion thereof for each workman employed on the project during the reporting period. The Labor Commissioner shall establish a sliding scale based on the size of the Contractor's business to determine the amount per worker per day to be imposed. Any Contractor or Subcontractor, or agent or representative thereof, performing work on the project, who neglects to comply with the prevailing wage, is guilty of a misdemeanor. If a penalty is imposed, in addition to any penalties allowed by NRS 338.060, the Prime Contractor shall reimburse Owner for all costs associated with wage complaint investigations for the project, including but not limited to, actual staff time, materials used, and attorneys fees.
- D. In accordance with NRS 338.070, Contractor and each Subcontractor shall keep or cause to be kept:
1. An accurate record showing for each worker employed by the Contractor or Subcontractor;
 - a) The name of the worker;
 - b) The occupation of the worker;
 - c) If the worker has a driver's license or identification card, an indication of the state or other jurisdiction that issued the license or card; and
 - d) The actual per diem, wages, and benefits paid to the worker; and
 2. An additional accurate record showing for each worker employed by the Contractor or Subcontractor who has a driver's license or identification card;
 - a) The name of the worker;
 - b) The driver's license or identification card number of the worker; and
 - c) The state or other jurisdiction that issued the license or card.

The records maintained pursuant to the requirements indicated above must be open at all reasonable hours to inspection by the Owner. The Contractor, and all Subcontractors, shall ensure that a copy of each record for each calendar month, together with a cumulative summary of the percentage of workers that hold a valid driver's license or identification card issued by the State of Nevada, is received by the Owner no later than 15 days after the end of the month. The copy of the record maintained pursuant to paragraph one (1) of this section must be open to public inspection, as provided in NRS 239.010. The copy of the record maintained pursuant to paragraph two (2) of this section is **confidential and not open to public inspection**. The Contractor, or any Subcontractor or agent or representative thereof, doing work on the Project who neglects to comply with the terms of this provision is guilty of a misdemeanor. A copy of the records of work performed on the Project by the Contractor and each Subcontractor shall be submitted to the Owner at the following address:

Clark County Government Center
Purchasing and Contracts Division, 4th Floor
Attn: Construction Compliance Officer
500 South Grand Central Parkway
P.O. Box 551217
Las Vegas, Nevada 89155-1217

Attached are sample forms that may be used to document the above required information.

Two years after Project's final payment is made by the Owner; the records in Owner's possession may be destroyed.

- E. **The Contractor shall comply with the requirements of NRS 338.020 and post in a generally visible place to the Workmen, the Nevada Prevailing Wage Rates and all addenda.**
- F. **Certified Payroll Reports:** Pursuant to NRS 338.070, on any public work contract awarded for more than \$100,000, the Contractor and each Subcontractor are required to keep an accurate record showing the name, the occupation and the actual per diem, wages and benefits paid to each workman employed by it in connection with the public work.

Each contractor and every lower-tier subcontractor will be required to submit certified payrolls and other labor compliance documentation electronically at the discretion of and the manner specified by Clark County. Each contractor and subcontractor will be given a Log On identification and password to access the Clark County reporting system at www.LCPtracker.net. In the event that electronic reporting is not required for a project, the Contractor will be notified after the award of the contract.

Use of the LCPtracker system may entail additional data entry of weekly payroll information including; employee identification, labor classification, total hours worked and hours worked on this project, wage and benefit rates paid, etc. The contractor's payroll and accounting software might be capable of generating a 'comma delimited file' that will interface with the software.

This requirement will be 'flowed down' to every lower-tier subcontractor and supplier/vendor required to provide labor compliance documentation.

The Contractor and each Subcontractor are required to submit a copy of the record for each calendar month to the Owner no later than 15 calendar days after the end of the month for the purposes of public inspection. Contractor shall be responsible for coordinating the submittal of all the certified payroll reports for the project, including its reports and the reports of all the subcontractors who are performing work on the project. A Contractor shall not withhold from a subcontractor the sums necessary to cover any penalties withheld from the Contractor by the public body because the Contractor failed to submit certified payroll reports within 15 calendar days after the end of the month if the Subcontractor provided certified payroll reports to the Contractor within 10 calendar days after the end of the month or the date agreed upon by the Contractor and Subcontractor. The Contractor shall submit the Owner's copy of its certified payroll and the certified payroll of each of the subcontractors performing work on the project, utilizing LCPtracker or the Contractor shall submit paper copies if notified.

Certified Payroll Reports will be available for public viewing. The Construction Compliance Officer may be contacted at (702) 455-5252 to view the reports.

3.2 STATE OF NEVADA LEGAL HOLIDAYS

The Contractor is advised that below there are 10 firm legal holidays and 11 when December 31st falls on Friday.

Martin Luther King's Birthday
Presidents' Day
Memorial Day
Independence Day
Labor Day
Nevada Admission Day
Veteran's Day
Thanksgiving Day and the Friday After
Christmas Day
New Year's Day

Contractor is required to verify dates with Owner's representative prior to commencement of the Project.

3.3 COPELAND ANTI-KICK BACK ACT

The Contractor shall comply with the Copeland Anti-Kick Back Act (18 U.S.C. 874) as supplemented in the Department of Labor Regulations (29 CFR Part 3). This act provides that each Contractor or Subcontractor shall be prohibited from inducing by any means, any person employed in the construction, completion or repair of public work, to give up any part of the compensation to which it is otherwise entitled.

3.4 EMPLOYMENT OF UNAUTHORIZED ALIENS

In accordance with the Immigration Reform and Control Act of 1986, the successful Bidder agrees that it will not employ unauthorized aliens in the performance of this contract.

3.5 NON-DISCRIMINATION / FAIR EMPLOYMENT PRACTICES

A. Discrimination:

The BCC is committed to promoting full and equal business opportunity for all persons doing business in Clark County. The successful Bidder acknowledges that the Owner has an obligation to ensure that public funds are not used to subsidize private discrimination. The successful Bidder recognizes that if they or their subcontractors are found guilty by an appropriate authority of refusing to hire or do business with an individual or company due to reasons of race, color, religion, sex, sexual orientation, gender identity or expression, age, disability, national origin, or any other protected status, the Owner may declare the successful Bidder in breach of the contract, terminate the contract, and designate the successful Bidder as non-responsible.

B. Fair Employment Practices:

In connection with the performance of work under this contract, the Contractor agrees not to discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex or age. Such agreement shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship.

The Contractor further agrees to insert this provision in all subcontracts hereunder, except subcontracts for standard commercial supplies or raw materials. Any violation of such provision by a Contractor shall constitute a material breach of this Contract.

3.6 PREFERENTIAL EMPLOYMENT

All contractors shall comply with the preferential employment provisions of NRS 338.130 for public works contracts. This law requires that, when the qualifications of applicants are equal, that preference be given: First, to honorably discharged soldiers, sailors, and marines of the United States who are citizens of the State of Nevada; second, to other citizens of the State of Nevada. If the provisions of NRS 338.130 are not complied with by the Contractor, this contract is void, and any failure or refusal to comply with any of the provisions of NRS 338.130 renders this contract void.

3.7 SUBCONTRACTOR/INDEPENDENT CONTRACTOR

A. Contractor represents that it is fully experienced and properly qualified to perform the class of work provided for herein, and that it is properly licensed, equipped, organized and financed to perform such work. Contractor shall act as an independent Contractor and not as the agent of Owner in performing the Contract. The Contractor shall maintain complete control over its employees and all of its Subcontractors. Nothing contained in this Contract or any subcontract awarded by Contractor shall create any contractual relationship between any such Subcontractor and Owner. Contractor shall perform all work in accordance with its own methods subject to compliance with the Contract.

B. Any subcontract entered into by the Contractor and its Subcontractor or Material Supplier shall not create any contractual relationship between the Owner and Subcontractor or Material Supplier. It is the Contractor's responsibility to ensure all subcontract agreements and material supply contracts comply with the terms and conditions set forth in this Contract and applicable Statutes. If the Contractor submitted with its Bid a signed and notarized Affidavit, the Contractor must include in each contract between the Contractor and Subcontractor the apportionment of Bidder's Preference Liquidated Damages assessed (General Conditions Section 1,1.2(D)).

The Contractor shall not substitute a subcontractor for any portion of the Work which was previously indicated would be performed by the Contractor unless such substitution meets the requirements of NRS Chapter 338.

3.8 REPORTING OF ALLEGED VIOLATIONS OF THE LAW

The Contractor should have a written policy that protects employees from retaliation for reporting alleged violations of the law.

3.9 LABOR STRIFE

The Contractor shall not cause or condone labor strife that may jeopardize the timely and efficient completion of public construction projects.

3.10 ELIGIBILITY FOR PREFERENCE IN BIDDING

The OWNER shall award the Contract to the Bidder who submits the best Bid as defined by NRS 338.147 and, in doing so will consider the Bidder's eligibility for a bidding preference as defined by NRS 338.147. Eligibility for the preference will be established if the Bidder, at the time of Bid: 1) submits a valid certificate of eligibility from the State Contractor's Board; and 2) submits the "Affidavit Pertaining to Preference Eligibility" form, attached hereto as Attachment No. 3, within 2 hours after the completion of the opening of the Bid by the OWNER, included as part of the Bid Documents and hereafter incorporated into the Contract. A person who submitted a bid on the public work or an entity who believes that the contractor who was awarded the contract for the public work is not entitled to receive preference in bidding on public works under Nevada Law may: 1) challenge the validity of the certificate of eligibility by filing a written objection with the Owner in compliance with NRS 338.147 (13) within three (3) business days after the Bid opening; or 2) file a written objection with the Owner setting forth proof or substantiating evidence to support the belief that the Contractor has failed to comply with NRS 338.147. In evaluating an objection to the certificate of eligibility, the Owner shall comply with the requirements of NRS 338.147 (14).

3.11 BIDDERS RECEIVING PREFERENCE

- A. If the Contractor submitted, within 2 hours after the completion of the opening of the Bid, a signed and notarized "Affidavit Pertaining to Preference Eligibility" form, and fails to comply with any of the requirements certified in the Affidavit, such failure is a material breach of the Contract and entitles the Owner to liquidated damages in the amount of one percent (1%) of the Contract Price.
- B. A person who submitted a Bid who believes that the Contractor that obtained a preference bidding by submitting within 2 hours after the completion of the opening of the bids a signed and notarized Affidavit has failed to comply with a requirement certified in the Affidavit, may file a "written objection" with the Owner that sets forth proof or substantiating evidence to support the belief of the person or entity that the Contractor has failed to comply.
- C. If the Owner receives a written objection from a person who submitted a Bid a Contractor who submitted an Affidavit within 2 hours after the completion of the opening of the bids has failed to comply with a requirement certified in the Affidavit, the Owner shall determine whether the objection is accompanied by the required proof or substantiating evidence. If the Owner determines that the objection is not accompanied by the required proof or substantiating evidence, the Owner shall dismiss the objection. If the Owner determines that the objection is accompanied by the required proof or substantiating evidence or if the Owner on its own initiative determines that the required proof or substantiating evidence exists, the Owner shall determine that the Contractor has failed to comply with a requirement certified in his or her Affidavit, the Owner may seek to recover by civil action liquidated damages for material breach of the Contract in the amount of one percent (1%) of the Contract Price.
- D. If the Contractor submitted within 2 hours after the completion of the bid opening of the Bid, a signed and notarized Affidavit, the Contractor must:
 - 1. Each Contract between the Contractor and a Subcontractor must provide for the apportionment of liquidated damages to be assessed if a person other than the Contractor is responsible for a breach of the Affidavit. The apportionment of liquidated damages must be in proportion to the responsibility of each party for the breach.
 - 2. Submit copies of the vehicle registration for all vehicles used primarily for the public work. For vehicles that are not registered in the State of Nevada, submit documentation confirming that the vehicle is registered and partially apportioned to Nevada pursuant to the International Registration Plan, as adopted by the DMV pursuant to NRS 706.826. The documentation required by this subparagraph shall be provided no later than 30 calendar days following the first use of a vehicle on the Site and shall be supplemented as necessary during the course of the work to comply with the requirements certified by the Affidavit. Attached is a sample form that may be used to submit the documentation.
 - 3. Submit a monthly report of all Suppliers of materials used for the Project with company name and address. Report shall be submitted no later than 15 calendar days following the end of each month during the course of the Work. A report showing the information in cumulative summary form shall be provided as a condition of Final Completion.

SECTION 4: SITE SAFETY AND SECURITY

4.1 RESPONSIBILITY FOR WORK SECURITY

- A. Contractor shall at all times conduct all operations under the Contract in a manner to avoid the risk of loss, theft, or damage by vandalism, sabotage or damage of other means to any property. Contractor shall promptly take all reasonable precautions which are necessary and adequate against any conditions which involve a risk of loss, theft or damage to its property, the Owner's property, and the work site. Contractor shall continuously inspect all its work, materials, equipment, and facilities to discover and determine any such conditions and shall be solely responsible for discovery, determination, and correction of any such conditions.
- B. Contractor shall comply with all applicable laws and regulations. Contractor shall cooperate with Owner on all security matters and shall promptly comply with any project security requirements established by Owner. Such compliance with these security requirements shall not relieve Contractor of its responsibility for maintaining proper security for the above-noted items, nor shall it be construed as limiting in any manner Contractor's obligation to undertake reasonable action as required to establish and maintain secure conditions at the site.
- C. Contractor shall prepare and maintain accurate reports of incidents of loss, theft or vandalism and shall furnish these reports to Owner in a timely manner.

4.2 CONTRACTOR SITE RESPONSIBILITIES

- A. Unless otherwise specifically provided in the Contract, Contractor shall not do any work that would disrupt or otherwise interfere with the operation of any pipeline, telephone, electric transmission line, ditch or other structure, nor enter upon lands in their natural state until approved by Owner. Before Contractor begins such work, it shall give due notice to Owner of its intention to start such work. Contractor shall not be entitled to any extension of time, or any extra compensation on account of any postponement, interference or delay caused by any such line, ditch or structure on or adjacent to the site of work.
- B. Contractor shall preserve and protect all cultivated and planted areas, and vegetation such as trees, plants, shrubs and grass on or adjacent to the premises, which, as determined by Owner, do not unreasonably interfere with the performance of its work through operation of equipment or stockpiling of materials. All costs in connection with any repairs or restoration necessary or required by reason of any such damage shall be borne by Contractor.
- C. Owner reserves the right to permit access to the site by other contractors if necessary. Contractor shall cooperate and coordinate with Owner as needed.

4.3 CONSTRUCTION SAFETY

Neither the Owner nor its employees, agents, Architect/Engineer or construction management firm shall be responsible for safety on the project site, including but not limited to, providing or assuring a safe place for the performance of construction, methods of construction employed by any Contractor, subcontractor, supplier or other entity, or their partners, officers, agents, employees or volunteers or access, visits, use work, travel or occupancy by any person.

A. General

- 1. The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. The Contractor shall comply with all applicable laws, ordinances, rules, regulations and lawful orders of any public authority bearing on the safety of persons or property or their protection from damage, injury or loss.
- 2. In an emergency affecting the safety of life or of the Work or of adjoining property, the Contractor shall follow the instructions of the Owner or Consulting Architect or Engineer and, in the absence of such instruction, shall act at its discretion to prevent such threatened loss or injury.

B. Protection of Persons

- 1. The Contractor shall take all reasonable precautions for the safety of all employees on the Work and all other persons who may be affected thereby. The Contractor shall designate a responsible member of its organization at the Project site whose duty shall be prevention of accidents.
- 2. Except as otherwise stated in the Contract Documents, if the Contractor encounters on the Project site material reasonably believed to be asbestos, lead, or polychlorinated biphenyl (PCB), that Contractor shall immediately stop work in the area affected and give notice to Owner and any other appropriate entity of the condition. Work in the affected area shall not be resumed without written direction by the Owner.

4.4 CLEANING UP

- A. Contractor shall, at all times, keep the work area in a neat, clean, and safe condition. Upon completion of any portion of the work, Contractor shall promptly remove all of its equipment, construction plant, temporary structures and surplus materials not to be used at or near the same location during later stages of work. Upon completion of the work and before final payment is made, Contractor shall, at its expense, satisfactorily dispose of all plant, buildings, rubbish, unused materials, and other equipment and materials belonging to it or used in the performance of the work, and Contractor shall leave the premises and work site in a neat, clean, and safe condition. In the event of Contractor's failure to comply with the above requirements may be accomplished by Owner at the Contractor's expense.
- B. In the case of Public Works Off-Site Construction Reference to use of completed portions of the work, shall conform to Section 107 of the Uniform Standard Specifications for Public Works Construction, Off-Site Improvements, Clark County Area, Nevada, Third Edition, and revisions thereto.

4.5 FIRE PREVENTION

- A. Contractor shall comply with all Federal, State, and local laws and regulations pertaining to burning, fire prevention, and control within or adjacent to the project. Necessary precautions to avoid and eliminate fire hazards shall be the responsibility of the Contractor.
- B. All tarpaulins used for any purpose during construction of any work shall be made of material resistant to fire, water, and weather and shall bear UL labels. Lighting of any fires on premises is strictly forbidden.
- C. Contractor shall provide portable fire extinguishers compatible with the hazard of each work area and shall instruct its personnel in their location and use. Wherever welding and burning are conducted, inflammable materials shall be protected and a fire watch shall be provided by Contractor to be present during the burning and welding operation to ensure that protective measures are taken and no fires result from such operation. The fire watch shall have fire extinguisher equipment readily available and must be knowledgeable regarding proper use.

4.6 AIR POLLUTION

- A. The Contractor shall perform its work so as to not discharge into the atmosphere from any source, smoke, dust, or other air contaminants in violation of the laws, rules and regulations of all federal, state and local air and water pollution requirements.

Contractor shall:
 - 1. Comply with the provisions of Nevada Revised Statute 445: Air Quality Regulation; and
 - 2. Register with the Clark County Air Quality Management Air Pollution Board, any equipment requiring operating permits; and
 - 3. Adhere to all Clark County Air Pollution Board regulations.

4.7 STORMWATER POLLUTION

- A. The Contractor shall perform its work so as to not discharge polluted stormwater runoff into the waters of the United States, including municipal separate storm sewer systems (MS4s), in violation of the laws, rules, and regulations of all federal, state, and local water pollution requirements.

Contractor shall:
 - 1. Comply with the provisions of Nevada Revised Statutes, Chapter 445A: Water Pollution Control;
 - 2. Adhere to all Federal regulations under 40 CFR 122.26(b)(14).
 - 3. All information and forms pertaining to Nevada's Stormwater Permitting Program can be found on the following website: <http://ndep.nv.gov/bwpc/storm01.htm>
- B. The state and federal regulations identified above are hereby incorporated by reference as preconditions of this contract. The Contractor shall familiarize itself with these regulations and practices, and is advised that prior to engaging in any construction activities, the Contractor shall submit a Notice of Intent (NOI) to the Nevada Division of Environmental Protection. A Storm Water Pollution Prevention Plan (SWPPP) must be completed prior to submission of the NOI, and must remain on the project site and be updated as necessary for the duration of the project. As applicant, the Contractor is responsible for insuring that all contractors, subcontractors, and all other persons abide by the conditions of the permit. As applicant, the Contractor is further responsible for supplying complete copies of the NOI and SWPPP to all project subcontractors.

Any contracts between the Prime Contractor and applicable subcontractors must provide a monetary allowance for any storm water pollution control BMPs specified in the SWPPP.

The Contractor shall cause to have in place a qualified person with full authority to ensure that storm water control measures are implemented, including inspections, record keeping, deployment of resources, and shut-down or modification of construction activities as needed.

Throughout the project area and the duration of the project, all BMPs must be maintained to minimize erosion and prevent discharge of pollutants from the site. BMPs are required 24 hours a day, 7 days a week, whether or not there is current construction activity on site.

As permit holder, the Contractor shall keep records of construction site inspections for up to 3 years after completion of the work.

The cost of all shut-down expenses, monetary penalties or sanctions resulting from violations of this regulation shall be the sole responsibility of the Contractor.

SECTION 5: PROJECT COSTS AND WAGES

5.1 CHANGE ORDERS

The Contractor shall comply with all provisions and conditions which are required by the Contract for change order(s) which increase the Contract amount. Contractor represents that change order(s) will include all related costs prior to presentation to the Owner for consideration. Retroactive change order(s) will be rejected. Work which is specifically required by the Owner or its representative, and which is in addition to work required by the Contract, will be charged against a formal change order executed by both parties. Then the work defined shall commence as directed by the Owner's representative. Change order(s) may not exceed 10 percent of the original Contract amount without prior approval by the Governing Body, with the following conditions:

- A. The Contractor shall submit proposals and/or billings for materials and/or labor for all additional work requested on the following basis, and in all cases the Contractor shall conform to the following requirements, and costs shall be limited to those set forth below:
1. Products and Materials
 - a. The costs of products and materials to the Contractor or Subcontractor, less any applicable trade discounts.
 - b. Where the Prime Contractor supplies products and materials to the Owner directly, the Prime Contractor will be allowed to add a maximum of 10 percent overhead and profit in its billing to the Owner.
 - c. Where the Subcontractor supplies products or materials to the Owner, through the Prime Contractor, the Prime Contractor will be allowed to add a maximum of 10 percent overhead and profit for the Subcontractor, and above that, five percent (5%) overhead and profit for itself in its billing to the Owner.
 - d. The Owner reserves the right to request copies of any invoice(s), including those from the originating supplier(s), Subcontractor(s), or manufacturer(s).
 - e. No overhead and profit will be allowed on any applicable taxes.
 2. Labor
 - a. Where the Prime Contractor supplies labor to the Owner directly, the Prime Contractor will be allowed to add a maximum of 15 percent overhead and profit in its billing to the Owner.

Labor costs shall be in compliance with the prevailing wage rates as specified above in Section 3, Labor, Item A.1.
 - b. Where the Subcontractor supplies labor to the Owner, through the Prime Contractor, the Prime Contractor will be allowed to add a maximum of 15 percent overhead and profit for the subcontractor; and above that, a maximum of 10 percent overhead and profit for itself in its billing to the Owner.

Labor costs shall be in compliance with the prevailing wage rates as specified above in Section 3, Labor, Item A.1.
 - c. The Owner reserves the right to request copies of any invoice(s) or time sheet(s) relevant to labor charged.

- d. Should a contract originally awarded for less than \$100,000 be increased over that amount through the issuance of change order(s), the Contractor shall then comply with all provisions and requirements of the Prevailing Wage Rates and represents that change order(s) will include labor and all related costs prior to presentation to the Owner for consideration. Retroactive change order(s) will be rejected.

5.2 RELEASE OF RETENTION

Not more than 95 percent of the amount of any progress payment may be paid until 50 percent of the work required by the CONTRACTOR has been performed. The amount of retention with respect to progress payments shall be five percent (5%) until the work is 50 percent complete. After the work is 50 percent complete, no further amount shall be retained from future progress payments, provided CONTRACTOR is making satisfactory progress. In the event of unsatisfactory progress, OWNER shall retain five percent (5%) from any progress payments. OWNER, or OWNER representative shall determine when the work is 50 percent complete.

The specified retention amount will be released following the Owner's issuance/approval of the Notice of Completion, provided that the following conditions are met:

1. All punch list items have been completed.
2. A Certificate of Occupancy has been received (if applicable).
3. Final record drawings and specifications have been submitted (if applicable).
4. No known premium delinquency exists with the Contractor's workers' compensation insurer.
5. All required documentation has been submitted to the Owner and no request has been made to the Owner by the Labor Commissioner, to hold retention.

The Owner may at its discretion, withhold only the estimated portion of the retention monies needed to finish any of the five uncompleted conditions as specified above, and only with written notice to the Contractor. The difference of the retention may then be paid.

SECTION 6: PROJECT COMPLETION

6.1 USE OF COMPLETED PORTIONS OF WORK

- A. Whenever, as determined by Owner, any portion of work performed by Contractor is in a condition suitable for use, Owner may initiate a certificate of substantial completion for that portion and take possession of, or use such portion.
- B. Such use by Owner shall in no case be construed as constituting final acceptance, and shall neither relieve Contractor of any of its responsibilities under the Contract, nor act as a waiver by Owner of any of the conditions thereof, provided that Contractor shall not be liable for the cost of repairs, rework or renewals which may be required due to ordinary wear and tear resulting from such use. However, if such use increases the cost, or delays the completion of remaining portions of work, Contractor shall be entitled to an equitable adjustment mutually agreed upon prior to Owner taking possession.
- C. If, as a result of Contractor's failure to comply with the provisions of the Contract, such use proves to be unsatisfactory to Owner, Owner shall have the right to continue such use until such portion of work can, without injury to Owner, be taken out of service for correction of defects, errors, omissions, or replacement of unsatisfactory materials or equipment, as necessary for such work to comply with contract; provided that the period of such operation or use pending completion of appropriate remedial action shall not exceed 12 months, unless otherwise mutually agreed upon in writing between the parties.
- D. Contractor shall not use any permanently installed equipment unless such use is approved by Owner in writing. Where Contractor's written request is granted for the use of certain equipment, Contractor shall properly use and maintain, and upon completion of its use, and at its expense, recondition such equipment to the satisfaction of Owner.
- E. If Owner furnished an operator for such equipment, such operator's services shall be performed under the complete direction and control of Contractor and shall be considered Contractor's employee for all purposes other than the payment of such operator's wages, workers' compensation or other benefits paid directly or indirectly by Owner.

- F. Use of completed portions of off-site improvements shall be done in accordance with Section 107 of the Uniform Standard Specifications for Public Works Construction, Off-Site Improvements, Clark County Area, Nevada, Third Edition, and revisions thereto.

6.2 RECORD DRAWINGS AND SPECIFICATIONS

- A. Progress Records: During construction, Contractor shall keep a marked-up, up-to-date set of drawings showing as-built conditions on the site as an accurate record of all deviations between work as shown and work as installed.
- B. Final Records: When specified or required upon completion of work, Contractor shall furnish to Owner a complete set of marked-up as-builts with "RECORD" clearly printed on each sheet. Owner, at its expense, will furnish Contractor with drawings for mark-up by Contractor. Contractor shall accurately and neatly transfer all deviations from progress as-builts, to final as-builts.

6.3 TESTING, INSPECTIONS, AND FINAL ACCEPTANCE

- A. When Contractor considers that all work under the Contract is complete, Contractor shall inform Owner in writing. When the results of inspection and testing satisfy Owner that all work under the Contract is completed and in accordance with the requirements of this Contract, Owner shall initiate the Notice of Completion process.
- B. The date of final acceptance of the project shall be the date upon which the Owner accepts and issues a Notice of Completion for the project.
- C. All warranties, guarantees and other applicable requirements designated in the Contract documents shall commence on the date of final acceptance of the project by the Owner as defined herein except that Owner, upon written request, may approve earlier commencement dates for system, equipment, or other specific items of work.

6.4 CONTRACT TERMINATION

- A. Termination by the Owner for Cause
1. The Owner may terminate the Contract for Construction if the Contractor:
 - a) Fails to maintain Bonding, Nevada State Contractor's Board License, Worker's Compensation Insurance, insurance coverage for limits as defined in the contract documents; or
 - b) Persistently or repeatedly refuses or fails to supply enough properly skilled workers or proper materials; or
 - c) Persistently disregards laws, ordinances, or rules, regulations or order of a public authority having jurisdiction; or
 - d) Has otherwise materially breached the Contract.
 2. When any of the above reasons exist, the Owner may without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's Surety, if any, **7 business days** advance written notice, terminate the contract with Contractor and may, subject to any prior rights of the Surety:
 - a) Take possession of the site and of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
 - b) Accept assignment of Subcontractors pursuant to this Contract (contingent assignment of subcontracts to Owner if Contract is terminated); and,
 - c) Finish the work by whatever reasonable method the Owner may deem expedient.
 3. When the Owner terminates the Contract for one of the reasons stated in this section "Termination by the Owner for Cause," the Contractor shall be entitled to receive payment only on work completed and accepted by Owner as of that termination date.
 4. If the costs of finishing the work, including expenses made necessary thereby, exceed the Contract amount, the Contractor shall pay the difference to the Owner. The amount to be paid to the Owner shall survive Termination of the Contract.

B. Suspension by the Owner for Convenience

1. The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the work in whole or in part for such period of time as the Owner may determine.
2. An adjustment shall be made for increase in the cost of performance of the requirements of the Contract documents, including profit on the increased cost of performance, caused by suspension, delay or interruption. No adjustment shall be made to the extent:
 - a) That performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Contractor is responsible; or
 - b) That an equitable adjustment is made or denied under another provision of the Contract.
3. Adjustments made in the cost of performance must have a mutually agreed fixed price.

C. Termination for Convenience by Owner

Prior to, or during the performance of the work, the Owner reserves the right to terminate the contract for its convenience. Upon such an occurrence, the following procedures will be adhered to:

1. The Owner will immediately notify the Architect/Engineer and the Contractor in writing specifying the effective termination date of the Contract.
2. After receipt of the Notice of Termination, the Contractor shall immediately proceed with the following obligations, regardless of any delay in determining or adjusting any amounts due at the point in the Contract.
 - a) Stop all work.
 - b) Place no further subcontracts or orders for materials or services.
 - c) Terminate all subcontracts.
 - d) Cancel all material and equipment orders as applicable.
 - e) Take action that is necessary to protect and preserve all property related to this Contract which is in the possession of the Contractor.
3. Within 180 days of the date of the Notice of Termination, the Contractor shall submit a final termination settlement proposal to the Owner based upon costs incurred up to the date of termination, reasonable profit on work done only, and reasonable demobilization costs. If the Contractor fails to submit the proposal within the time allowed, the Owner may determine the amount due to the Contractor because of the termination and shall pay the determined amount to the Contractor.

SECTION 7: PROJECT CONFLICTS

7.1 DISPUTES

All claims, disputes or other controversy that may arise between the Owner and Contractor relating to any provisions of this Contract, or its performance, which have not been waived by the making and acceptance of final payment or any progress payment, must be attempted to be resolved by the parties by informal negotiations prior to the initiation of mediation. In the event such claim, dispute or controversy can not be resolved by informal negotiations within forty-five (45) calendar days after either party made a written request for such informal negotiations, the parties shall, pursuant to NRS 338.150, attempt to resolve the claim, dispute or controversy by non-binding mediation prior to initiating judicial action.

In the event the Contractor files a claim in District Court, pursuant to one or more provisions of NRS 338.640, and the Owner prevails in the Court's decision, then the Contractor shall pay the Owner's attorneys' fees. Further, Contractor acknowledges that NRS 338.640 is contained within Nevada's Prompt Pay Act and, thus, fee-shifting provisions apply only to actions involving ordinary progress payments, and not claims for additional compensation or additional days beyond this contract.

The Owner and Contractor, in any legal proceeding, including this mediation, an arbitration or Court action, shall bear their own fees and costs. This specifically extends to any pass-through claims asserted by or on behalf of subcontractor. The County shall not be liable for fees or costs as an element of consequential damages.

7.2 NOTICE OF NON-BINDING MEDIATION

After the expiration of the forty-five days for informal negotiations, as set forth in Item 7.1 above; either the Owner or the Contractor may initiate mediation by providing written notice to the other party against whom a claim, dispute or controversy is being made by submitting the following:

- A. A written demand by the party initiating the mediation that the claim, dispute, or other controversy be referred to a mediator;
- B. The names, addresses and telephone numbers of the parties;
- C. A reference to any contract provisions from which the claim, dispute or controversy arises;
- D. A complete description and a specific statement of the claim(s), dispute(s) or controversy(ies) and a showing of entitlement to relief;
- E. The relief or remedy sought and the amount of money claimed;
- F. If the Contractor is the initiating party, a copy of the Contractor's documents generated in preparation or determination of prices included in the bid as required by NRS 338.140(1)(d);
- G. If the Contractor is the initiating party and if the claim, dispute or controversy is made by a subcontractor, a written statement by the Contractor that it agrees with the merits and the amount of the claim;
- H. If the Contractor submits a total cost or modified cost claim, dispute or controversy then the Contractor must submit documents showing: 1) that the nature of the particular losses make it impossible or highly impractical to determine the losses with a reasonable degree of accuracy; 2) that the bid was realistic; 3) that the actual costs are reasonable; 4) that the Contractor was not responsible for the added expenses; and 5) that the County, and not anyone else, is responsible for the additional cost; and
- I. If the Contractor is the initiating party, it must submit the written demand of mediation to Owner in the time period set forth in the claims presentment statute of NRS 244.250.
- J. If the Contractor is the initiating party of the claim, dispute or controversy, the Contractor shall certify in writing that the claim is made in good faith, that the supporting data is accurate and complete to the best of the Contractor's knowledge and belief, and that the amount requested accurately reflects the Contract adjustment for which the Contractor believes the Owner is liable.

7.3 SELECTION OF MEDIATOR

The mediator shall be chosen by mutual agreement of the parties.

7.4 COST OF THE MEDIATION

The fees and expenses of the independent private mediator shall be shared equally by the Owner and Contractor. Owner and Contractor shall each pay their own costs and expenses, including, but not limited to, expert and attorney fees incurred in the mediation of any claim, dispute or controversy, including, but not limited to, their own costs of preparation of and presentation of all claims prior to and through the mediation period. Neither the Owner nor Contractor shall be entitled to an award of interest.

7.5 LOCATION OF THE MEDIATION

The mediation shall take place at a location designated by the Owner at an Owner-owned facility.

7.6 MEDIATOR AGREEMENT

The parties shall enter into an agreement with the mediator that will include, among other provisions, the mediator's fees and costs, the mediator's responsibilities, and the mediator's model standards of conduct. The parties agree to propose that the mediator enter into an agreement in substantial form as that attached hereto as **Exhibit B**, prior to serving in any capacity as a mediator.

7.7 MEDIATION PROCEEDING

- A. The parties and the mediator shall agree on the date of the mediation and time of the mediation. Unless the parties and the mediators mutually agree otherwise, the mediation shall take place within ninety (90) days after execution of the mediator agreement.
- B. Either party may be represented by an attorney. Representation is not required. Parties are expected to have present at the mediation an officer, partner, employee or other person authorized to make decisions regarding the resolution of the dispute, claim or controversy. Contractor acknowledges that Owner is a public body and any settlement agreed to by its authorized representatives is subject to approval by the Board of County Commissioners.
- C. The mediation shall consist of one or more sessions totaling no more than sixteen (16) hours, unless otherwise mutually agreed to by the parties and the mediator. Unless the parties otherwise mutually agree, it shall be an irrebuttable presumption that efforts beyond sixteen (16) hours would be futile.
- D. Prior to the mediation session, on a date mutually agreed upon by the mediator and the parties, as set forth in section 7.7(a), above, each party shall provide the mediator with a written memoranda addressing the facts, issues, legal arguments and damages related to the claim, dispute or controversy. In addition to the written statement, the parties shall produce all relevant information reasonably required by the mediator to understand the issues and positions presented. Each party will provide the written statement and supporting documents to the mediator only. The parties will not exchange the written statement and supporting documents. The written statement shall be double spaced, no smaller than 12 characters per inch and not to exceed 30 (thirty) pages, unless mutually agreed to otherwise by the mediator and the parties. The party initiating the mediation shall provide the mediator with the information set forth in Item 7.2 of this section.
- E. The mediation shall be confidential and, as a condition of the nonbinding mediation, the parties shall enter into a confidentiality agreement, attached hereto as **Exhibit B** prior to the commencement of the mediation proceeding.
- F. The mediation session will be private. Persons other than the parties and their representatives may attend only with the permission of both parties and the consent of the mediator. Unless mutually agreed to by the parties, the Owner and Contractor, along with its authorized representatives, shall be the only participants in the mediation. There shall be no stenographic record of the mediation process.
- G. The parties agree to assert all claims, disputes and controversies known to the parties in their respective written statements submitted to the mediator.
- H. The parties agree that opinions, recommendations, proposals, suggestions made or written, or views expressed, by the mediator will not be introduced, used or relied upon in any arbitral, judicial or other proceedings.

7.8 TERMINATION OF MEDIATION

The mediation shall be terminated:

- A. by the execution and approval of a settlement agreement by the parties;
- B. by declaration of the mediator that further efforts at the mediation are no longer worthwhile;
- C. after the completion of the mediation session if the parties do not settle, by a written declaration of a party or parties to the effect that the mediation proceedings are terminated;
- D. a party gives written notice of withdrawal; or
- E. when there has been no communication between the mediator and a party or a party's representative for 14 days, at no fault of the mediator, following the conclusion of the mediation session.

7.9 WORK IN PROGRESS

At all times while the informal negotiations or mediation action is pending, the Contractor shall carry on with the work set forth in this Contract and maintain its progress schedule in accordance with the requirements of the Contract, unless the County exercises its right to terminate, pursuant to Section 6 of this Contract, or otherwise mutually agreed upon in writing by the parties.

SPECIAL CONDITIONS

BID NO. 603040-13
MUDDY RIVER COOPER STREET BRIDGE

1. PRE-CONSTRUCTION CONFERENCE

- A. A Pre-Construction Conference shall be held after the award of the contract and the successful bidder has submitted all post award submittals. The Owner's representative shall schedule this meeting.
- B. The Successful Bidder and all subcontractors are required to attend the Pre-Construction Conference to discuss this project, requirements, and all associated required documents. The Notice to Proceed will not be issued until all parties involved in the project have completed and returned the required forms. The Successful Bidder is responsible for attendance of all subcontractors at the Pre-Construction Conference and their submission of the required forms.
- C. The Contractor shall provide all submittals requested within **five calendar days** from the date of the Pre-Construction Conference. If the Contractor does not provide submittals on or before the 5th calendar day, it will pay over to the Owner the amount of **\$3,000** per day as liquidated damages.

CLARK COUNTY, NEVADA

BID FORM

BID NO. 603040-13
MUDDY RIVER COOPER STREET BRIDGE
PWP NUMBER: CL-2013-247

(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 Certification 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, 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. This Attachment will be time stamped by the Purchasing and Contracts Division. I understand that submission after the two-hour time limit is not allowed and will be returned to me and the bid may be deemed non-responsive. I acknowledge that for:
 - a) Projects EXCEEDING \$5,000,000
I need to list only Subcontractors that will provide labor/improvements exceeding one percent (1%) of the Prime Contractor's total base bid amount, or \$50,000.00, whichever is greater.
5. 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.
6. I acknowledge that my bid is based on the current State of Nevada prevailing wages.
7. 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.
8. 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.
9. 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 **\$3,000** per day as liquidated damages.

10. 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.
11. 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.**
12. 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.
13. 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.
14. 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.
15. 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, _____
- Addendum No. _____ dated, _____ Addendum No. _____ dated, _____
- Addendum No. _____ dated, _____ Addendum No. _____ dated, _____
16. 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 |
| 109.01 | CONSTRUCTION CONFLICTS & ADDITIONAL WORK | 1 | LS | \$ 750,000.00 |
| 109.02 | HISTORICAL OWNER-CAUSED DELAY ALLOWANCE | 15 | DAY | \$ 7,500.00 |
| 109.03 | ADDITIONAL AMOUNT OVER \$500/DAY AS DETERMINED BY BIDDER | 15 | DAY | \$ |
| 200.01 | MOBILIZATION | 1 | LS | \$ |
| 201.01 | CLEARING AND GRUBBING | 38 | AC | \$ |
| 202.01 | REMOVE BUILDINGS | 1 | LS | \$ |
| 202.02 | REMOVE FENCE | 1,530 | LF | \$ |
| 202.03 | REMOVE CUT-OFF WALL | 1,303 | LF | \$ |
| 202.04 | REMOVE STEM WALL | 265 | LF | \$ |
| 202.05 | REMOVE AND SALVAGE GUARDRAIL | 96 | LF | \$ |
| 202.06 | REMOVE AND SALVAGE SIGN | 3 | EA | \$ |
| 202.07 | REMOVE DOUBLE 4-FOOT BY 2-FOOT RCB CULVERT | 1 | LS | \$ |
| 202.08 | REMOVE DRAW BRIDGE | 1 | LS | \$ |
| 202.09 | REMOVE CONCRETE DRAINAGE STRUCTURE | 1 | LS | \$ |
| 202.10 | REMOVE GABION WALL | 213 | LF | \$ |
| 202.11 | REMOVE IRRIGATION CHANNEL | 215 | LF | \$ |
| 202.12 | REMOVE AND SALVAGE IRRIGATION PUMP | 1 | LS | \$ |
| 202.13 | REMOVE HEADWALLS AND FOOTINGS | 1 | LS | \$ |

| BID SCHEDULE | | | | |
|---------------------|---|-------------------------|-------------|--------------|
| ITEM NUMBER | ITEM DESCRIPTION | APPROX. QUANTITY | UNIT | TOTAL |
| 202.14 | REMOVE DRIVEWAY | 182 | SY | \$ |
| 202.15 | REMOVE CMP | 132 | LF | \$ |
| 202.16 | REMOVE IRRIGATION PIPE | 3,300 | LF | \$ |
| 202.17 | REMOVE BITUMINOUS SURFACE | 4,900 | SY | \$ |
| 202.18 | ABANDON WELL | 1 | LS | \$ |
| 202.19 | REMOVE CONCRETE SLOPE PAVING | 500 | SY | \$ |
| 202.20 | RELOCATE 20-INCH TWIST CAP AND CONCRETE CHANNEL | 1 | LS | \$ |
| 203.01 | EXCAVATION | 297,000 | CY | \$ |
| 203.02 | OVER-EXCAVATION AND BACKFILL | 3,662 | CY | \$ |
| 203.03 | FILL | 21,600 | CY | \$ |
| 213.01 | 18-INCH PVC PIP | 1,672 | LF | \$ |
| 213.02 | 20-INCH HDPE IRRIGATION PIPELINE | 737 | LF | \$ |
| 213.03 | 6-INCH DUCTILE IRON IRRIGATION PIPELINE | 90 | LF | \$ |
| 213.04 | IRRIGATION STAND PIPE | 1 | EA | \$ |
| 213.05 | WEBBER IRRIGATION PIPE AND FACILITY | 1 | LS | \$ |
| 214.01 | IRRIGATION PUMP SYSTEM | 1 | LS | \$ |
| 217.01 | DEWATERING | 1 | LS | \$ |
| 302.01 | TYPE II AGGREGATE ACCESS ROAD AND MANWAY (F) | 2,150 | CY (F) | \$ |
| 302.02 | TYPE II AGGREGATE BASE COOPER STREET AND WEBBER ACCESS ROAD (F) | 2,700 | CY (F) | \$ |
| 402.01 | PLANTMIX BITUMINOUS SURFACE (3-INCH) (F) | 4,350 | SY (F) | \$ |
| 502.01 | CONCRETE TRAPEZOIDAL CHANNEL (STA. 180+58.93 TO STA. 182+06.29) | 148 | LF | \$ |
| 502.02 | CONCRETE TRAPEZOIDAL CHANNEL (STA. 191+42.65 TO STA. 195+38.68) | 396 | LF | \$ |
| 502.03 | CONCRETE RECTANGULAR CHANNEL (STA. 184+31.29 TO STA. 187+20.79) | 290 | LF | \$ |
| 502.04 | CONCRETE CHANNEL TRANSITION (STA. 182+06.29 TO STA. 184+31.29) | 225 | LF | \$ |
| 502.05 | CONCRETE CHANNEL TRANSITION (STA. 187+20.79 TO STA. 191+42.65) | 422 | LF | \$ |
| 502.06 | COOPER BRIDGE STRUCTURE | 1 | LS | \$ |
| 502.07 | IRRIGATION OPEN CONCRETE CHANNEL | 135 | LF | \$ |
| 502.08 | IRRIGATION PUMP BOX | 1 | LS | \$ |
| 502.09 | CATTLE RAMP | 1 | LS | \$ |
| 502.10 | 2-FOOT WIDE U-CHANNEL | 450 | LF | \$ |
| 502.11 | NDOT CULVERT HEADWALL | 1 | EA | \$ |
| 502.12 | CONCRETE SWALE | 38 | LF | \$ |
| 502.13 | IRRIGATION OPEN CONCRETE CHANNEL TERMINATION | 1 | LS | \$ |
| 502.14 | IRRIGATION OPEN CONCRETE CHANNEL LATERAL | 1 | LS | \$ |

| BID SCHEDULE | | | | |
|---------------------|--|-------------------------|-------------|--------------|
| ITEM NUMBER | ITEM DESCRIPTION | APPROX. QUANTITY | UNIT | TOTAL |
| 603.01 | 18-INCH RCP STORM DRAIN (CLASS III) | 46 | LF | \$ |
| 603.02 | 24-INCH RCP STORM DRAIN (CLASS III) | 302 | LF | \$ |
| 603.03 | 30-INCH RCP STORM DRAIN (CLASS III) | 36 | LF | \$ |
| 603.04 | 36-INCH RCP STORM DRAIN (CLASS III) | 41 | LF | \$ |
| 609.01 | NDOT TYPE 2A DROP INLET | 1 | EA | \$ |
| 609.02 | 48-INCH TYPE I STORM DRAIN MANHOLE | 1 | EA | \$ |
| 609.03 | 48-INCH TYPE II STORM DRAIN MANHOLE | 1 | EA | \$ |
| 610.01 | RIPRAP (D50 = 8-INCH) | 3,806 | CY | \$ |
| 610.02 | RIPRAP (D50 = 12-INCH) | 2,850 | CY | \$ |
| 610.03 | UPSTREAM GABION TRANSITION STRUCTURE | 359 | LF | \$ |
| 610.04 | DOWNSTREAM GABION TRANSITION STRUCTURE | 100 | LF | \$ |
| 610.05 | GABION CUTOFF WALL | 1,276 | CY | \$ |
| 613.01 | SIDEWALK RAMP | 2 | EA | \$ |
| 616.01 | 48-INCH POST AND CABLE RAILING | 4,329 | LF | \$ |
| 616.02 | 6-FOOT CHAIN-LINK FENCE | 5,100 | LF | \$ |
| 616.03 | 12-FOOT CHAIN-LINK DOUBLE-SWING GATE | 5 | EA | \$ |
| 616.04 | 20-FOOT CHAIN-LINK DOUBLE-SWING GATE | 6 | EA | \$ |
| 616.05 | REMOVE AND RESET FENCE | 543 | LF | \$ |
| 617.01 | 22-FOOT PRECAST CATTLE GUARD | 1 | EA | \$ |
| 617.02 | 28.5-FOOT PRECAST CATTLE GUARD | 1 | EA | \$ |
| 618.01 | GALVANIZED GUARDRAIL (TRIPLE CORRUGATION) | 590 | LF | \$ |
| 618.02 | GUARDRAIL TERMINAL (FLARED) | 3 | EA | \$ |
| 618.03 | GUARDRAIL TERMINAL (TRAILING END ANCHOR) | 1 | EA | \$ |
| 618.04 | GUARDRAIL-BARRIER RAIL CONNECTION (TRIPLE CORRUGATION) | 2 | EA | \$ |
| 619.01 | MEDIAN MARKER POST | 2 | EA | \$ |
| 623.01 | 100-WATT STREET LIGHT ASSEMBLY | 1 | EA | \$ |
| 623.02 | 100-WATT STREET LIGHT ASSEMBLY (BRIDGE MOUNT) | 2 | EA | \$ |
| 623.03 | 2-INCH PVC CONDUIT ONLY WITH 1 NO. 8 TRACER WIRE | 75 | LF | \$ |
| 623.04 | POWER POLE RISER SYSTEM (FOUR 3-INCH CONDUITS) | 1 | EA | \$ |
| 623.05 | TRANSFORMER PAD (JENSEN UPAD 77 OR EQUAL) | 1 | EA | \$ |
| 623.06 | JENSEN 466 TA OR EQUAL PULL BOX | 1 | EA | \$ |
| 623.07 | NO. 3-1/2 PULL BOX (BURIED) | 1 | EA | \$ |
| 623.08 | NO. 5 PULL BOX | 2 | EA | \$ |
| 623.09 | 2-INCH PVC CONDUIT, 2 NO. 4, 1 NO. 8 CONDUCTORS (STREET LIGHT) | 315 | LF | \$ |
| 623.10 | JENSEN 3048 NP OR EQUAL PULL BOX | 1 | EA | \$ |

| BID SCHEDULE | | | | |
|-------------------------|---|-------------------------|-------------|--------------|
| ITEM NUMBER | ITEM DESCRIPTION | APPROX. QUANTITY | UNIT | TOTAL |
| 623.11 | 200 AMP SERVICE PEDESTAL | 1 | EA | \$ |
| 623.12 | 3-INCH PVC CONDUIT ONLY WITH PULLSTRING (CONCRETE ENCASED) | 750 | LF | \$ |
| 623.13 | SIX 3-INCH PVC CONDUIT ONLY WITH PULLSTRING (CONCRETE ENCASED) | 250 | LF | \$ |
| 623.14 | 3-INCH PVC CONDUIT WITH 4/C#350 THW-2 (PUMP CONTROL PEDESTAL) | 230 | LF | \$ |
| 623.15 | FOUR 3-INCH PVC CONDUIT ONLY WITH PULLSTRING (CONCRETE ENCASED) | 295 | LF | \$ |
| 623.16 | SEVEN 3-INCH PVC CONDUIT ONLY WITH PULLSTRING (CONCRETE ENCASED) | 410 | LF | \$ |
| 623.17 | 2-INCH CONDUIT 3#4/0 THW-2 (STREET LIGHT PEDESTAL) | 10 | LF | \$ |
| 623.18 | TYPE II BASE FOUNDATION FOR TRANSFORMER PAD | 1 | EA | \$ |
| 623.19 | 2-INCH PVC CONDUIT, 2 NO. 4, 1 NO. 8 CONDUCTORS, 2-INCH PVC CONDUIT ONLY WITH 1 NO. 8 TRACER WIRE | 110 | LF | \$ |
| 624.01 | COOPER STREET DETOUR | 1 | LS | \$ |
| 627.01 | PERMANENT SIGN (GROUND MOUNTED)(METAL SUPPORTS) | 46 | SF | \$ |
| 628.01 | POLYUREA PAINT MARKING (4-INCH DOUBLE YELLOW) | 1,853 | LF | \$ |
| 628.02 | POLYUREA PAINT MARKING (6-INCH SOLID WHITE) | 2,900 | LF | \$ |
| 628.03 | MEDIAN PAINT | 50 | SF | \$ |
| 629.01 | 24-INCH WATERLINE STEEL SLEEVE | 299 | LF | \$ |
| 630.01 | ADJUST CCWRD MANHOLE TO FINISHED GRADE | 1 | EA | \$ |
| 633.01 | REFLECTIVE PAVEMENT MARKERS | 10 | EA | \$ |
| 637.01 | DUST CONTROL (F) | 400 | CAL DAY (F) | \$ |
| 637.02 | PRE-EMERGENT HERBICIDE | 30 | AC | \$ |
| 637.03 | STORM WATER POLLUTION CONTROL (F) | 400 | CAL DAY (F) | \$ |
| TOTAL BID AMOUNT | | | | \$ |

SUBCONTRACTORS EXCEEDING 5% OF BASE BID AMOUNT

PRIME CONTRACTOR MUST INCLUDE ITS NAME ON THIS LIST IF HE OR SHE INTENDS TO PERFORM ANY OF THE LABOR OR PORTIONS OF THE PUBLIC WORK.

THE CONTRACTOR SHALL NOT SUBSTITUTE A SUBCONTRACTOR WHO IS NAMED IN THIS BID, PURSUANT TO NEVADA REVISED STATUTE 338.141. THE FOLLOWING SUBCONTRACTORS SHALL BE UTILIZED. A BIDDER, WHICH FAILS TO LIST A SUBCONTRACTOR (S), REPRESENTS THAT NO SUBCONTRACTOR(S) MEET THE STATUTORY REQUIREMENTS.

| DESCRIPTION OF WORK | SUBCONTRACTORS' FIRM NAME(S) | *BEG | *ETHNICITY |
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Legal Name of Firm as it Would Appear in Contract

Signature of Bidder (Authorized Representative)

Today's Date

**Reference Instructions to Bidders for Definitions (Section 7.3(d)).*

17. BUSINESS ENTERPRISE INFORMATION:

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

18. 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.

19. 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.**

20. _____
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. 603040-13, MUDDY RIVER COOPER STREET BRIDGE.**

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> |
|--|--|

**BID ATTACHMENT 2
DESIGNATION OF SUBCONTRACTORS**

SUBCONTRACTORS EXCEEDING 1% OF BASE BID AMOUNT

FOR BID TOTALS EXCEEDING \$5,000,000.00, LIST SUBCONTRACTORS EXCEEDING 1% OF THE BASE BID AMOUNT OR \$50,000, WHICHEVER IS GREATER, SHALL BE LISTED BELOW:

THE THREE (3) LOW BIDDERS, MUST SUBMIT THIS FORM VIA HAND DELIVERY OR EMAIL TO COUNTYPURCHASING@CLARKCOUNTYNV.GOV IF THEY HAVE SUBCONTRACTOR(S) MEETING THE REQUIREMENTS OF NEVADA REVISED STATUTE 338.141, AND HAVE IT TIME STAMPED WITHIN TWO (2) HOURS AFTER COMPLETION OF THE OPENING OF THE BIDS. SUBMISSIONS AFTER THE TWO (2) HOURS WILL BE REJECTED AND/OR RETURNED UNOPENED. A BIDDER THAT FAILS TO SUBMIT THE LIST WITHIN THE REQUIRED TIME REPRESENTS THAT NO SUBCONTRACTOR(S) MEET THE STATUTORY REQUIREMENTS. THE CONTRACTOR SHALL NOT SUBSTITUTE ANY PERSON FOR A SUBCONTRACTOR WHO IS NAMED IN THIS BID, PURSUANT TO NEVADA REVISED STATUTE 338.141. IF A CONTRACTOR DOES NOT SUBMIT THIS LIST AND HAS SUBCONTRACTOR(S) THAT MEET THE STATUTORY REQUIREMENTS, ITS BID SHALL BE DEEMED NOT RESPONSIVE.

| DESCRIPTION OF WORK | SUBCONTRACTOR'S FIRM NAME(S) | NV STATE CONTRACTORS' LICENSE NUMBER | *BEG | *ETHNICITY |
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Legal Name of Firm as it would appear in Contract

Telephone Number

Address including City, State and Zip Code

Signature of Bidder (Authorized Representative)

* Reference Instructions to Bidders for Definitions (Section 7.3(d))

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. 603040-13, Project Name MUDDY RIVER COOPER STREET BRIDGE (“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.

**BID ATTACHMENT 3
AFFIDAVIT PERTAINING TO PREFERENCE ELIGIBILITY
Page 2 of 2**

By: _____ Title: _____
Printed Name of Affiant

Signature of Affiant: _____ Date: _____

Signed and sworn to (or affirmed) before me on this _____ day of _____, 20____,

by _____ (name of Affiant)

State of _____)
ss) _____
Notary Signature

County of: _____) **STAMP AND SEAL**

Proof of Authorization to Sign Affidavit

The person must establish his/her actual authority to act on behalf of the business organization. The individual must be the person indicated in the table below and provide written documentation clearly indicating the person's position within that business organization. If the individual signing the Affidavit is an employee of the business organization, written documentation on organization letterhead must be provided; clearly indicating the person's authority to act on behalf of the business organization. The authorized person identified in the table must sign the written documentation.

If the individual making application for the business organization is not one of the persons identified in the table or an authorized employee, a valid power of attorney executed by an authorized person on behalf of the business organization must be provided. The power of attorney must be made not more than 90 calendar days before the Affidavit is signed.

| BUSINESS ENTITY | PERSON WHO HAS AUTHORITY TO COMPLETE AFFIDAVIT |
|---------------------------|---|
| Sole Proprietorship | Name of Sole Proprietor |
| Partnership | Name of Partner |
| Corporation | 1. Director, if Authorized 2. Executive Officer (as indicated in the Article of Incorporation) |
| Limited Liability Company | 1. Member, if Member-Managed LLC 2. Manager, if Manager-Managed LLC |

EXHIBIT A

BONDS AND INSURANCE REQUIREMENTS AND FORMS

1. BONDS

- A. The Contractor shall furnish bonds covering the faithful performance of the Contract, payment of all obligations arising thereunder and a Guaranty Bond to take effect upon substantial completion of the project, utilizing the bond forms. Bonds may be secured through the Contractor's usual sources, provided that the surety is authorized and licensed to do business in the State of Nevada. All bonds specified shall indicate the State of Nevada Insurance Division license number, the surety company name, address, telephone number, and include the appointed agent of record who issued the bond. Surety Bonds issued by an individual are not acceptable to Clark County.
- B. Not later than **seven business days** after Notification of Award, the Contractor shall furnish contract bonds to the Purchasing and Contracts Division as follows:
1. Labor and Material Payment Bond in the amount of 100% of the Contract price.
 2. Performance Bond in the amount of 100% of the Contract price.
 3. Guaranty Bond in the amount of 100% of the Contract price. The Guaranty Bond will go into effect from the date of Notice of Substantial Completion.

Award will become final after the Governing Body has authorized the award and the Contractor has submitted its required bonds utilizing the Owner's Bond forms.

C. Form of Bonds

1. The bonds referred to herein **shall be written on the Performance Bond, Labor and Material Payment Bond, and Guaranty Bond forms provided by Owner.**
2. The Contractor shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of his power of attorney.
3. **Any Performance Bond, Labor and Material Payment Bond, or Guaranty Bond prepared by an appointed agent must provide their license number and the issuing state.**
4. The bonds specified in this section must be issued by a certified surety which is listed in the Department of the Treasury, Fiscal Service, (Department Circular 570; Current Revision) companies holding certificates of authority as acceptable sureties on Federal Bonds and as acceptable reinsuring companies.

2. INSURANCE

- A. Contractor further agrees, as a precondition to the performance of any work under this contract and as a precondition to any obligation of the Owner to make any payment under this contract, to provide the Owner with a work certificate and/or a certificate issued by an insurer qualified to underwrite workers' compensation insurance in the state of Nevada in accordance with Nevada Revised Statutes Chapters §616A through 616D, inclusive, whether or not the Contractor has employees.
- B. Contractor agrees to maintain required workers' compensation coverage throughout the entire term of the contract. If Contractor does not maintain coverage throughout the entire term of the contract, Contractor agrees that Owner may, at any time the coverage is not maintained by Contractor, order the Contractor to stop work, assess liquidated damages as defined herein, suspend the contract, or terminate the contract.
- C. The Contractor shall furnish not later than **seven business days** after notification of Intent to Award, the insurance as indicated below. The certificates for each insurance policy shall be signed by a person authorized by that insurer and licensed by the State of Nevada.
- D. As a condition precedent to receiving payments, Contractor shall have on file with Owner current certificates of insurance evidencing the required coverage. Insurance certificates for the Owner should contain the information shown on the sample certificates attached.

- E. Each insurance company's rating as shown in the latest Best's Key Rating Guide shall be fully disclosed and entered on the required certificate of insurance. Owner requires insurance carriers to maintain a Best's Key Rating of A.VII or higher (i.e., A.VII, A.VIII, A.IX, A.X, etc.). The adequacy of the insurance supplied by the Contractor, including the rating and financial health of each insurance company providing coverage, is subject to the approval of the Owner.
- F. Contractor shall furnish renewal certificates to the Owner for the required insurance during the period of coverage required by the contract. Contractor will furnish renewal certificates for the same minimum coverage as required in this Contract. The request for updated renewal certificates will be sent by the Owner to the Contractor 30 calendar days in advance of the expiration date shown on the certificate of insurance. A second request will be sent if the renewal certificate is not received from within **seven business days**. If within 20 calendar days from the date of the request for an updated renewal certificate, the updated certificate has still not been provided, the Owner may declare the Contractor in default of its obligation under this paragraph.
- G. Owner, its officers, employees, agents, and volunteers, Overton Power District #5, **additionally**,
 - the Moapa Valley Water District,**
 - Muddy Valley Irrigation Company,**
 - Moapa Valley Telephone,**
 - Daniel T. & Kirk D. Polattis (APN: 070-12-601-010)**
 - and Clark County Water Reclamation District (CCWRD),**

must be expressly covered as insured's with respect to liability arising out of the activities by or on behalf of the named insured in connection with this project.

- 1. The Contractor's insurance shall be primary as respects Owner, its officers, employees, agents, and volunteers, Overton Power District #5, **additionally**,
 - the Moapa Valley Water District,**
 - Muddy Valley Irrigation Company,**
 - Moapa Valley Telephone,**
 - Daniel T. & Kirk D. Polattis (APN: 070-12-601-010)**
 - and Clark County Water Reclamation District (CCWRD).**

Any other coverage (insurance or otherwise) available to Owner, its officers, employees and volunteers shall be excess over the insurance required of the Contractor and shall not contribute with it.

- H. The Contractor's commercial general liability and automobile liability insurance policy shall be endorsed to recognize specifically the Contractor's contractual obligation of additional insured to Owner. All policies must note that the Owner will be given 30-calendar days advance notice by certified mail "return receipt requested" of any policy changes, cancellations, or any erosion of insurance limits. Either a copy of the additional insured endorsement, or a copy of the policy language that gives Clark County automatic additional insured status must be attached to any certificate of insurance.
- I. All deductibles and self-insured retentions shall be fully disclosed in the Certificate of Insurance. No deductible or self-insured retention may exceed \$25,000.
- J. If aggregate limits are imposed on the insurance coverage, then the amount of such limits must not be less than **\$2,000,000** per occurrence or per accident. All aggregates must be fully disclosed and the amount entered on the required certificate of insurance. Contractor's insurer must notify the Owner of any erosion of the aggregate limits. The "per occurrence" limits of insurance required herein must be maintained in full, irrespective of any erosion of aggregate.
- K. The Contractor shall obtain and maintain, for the duration of the Contract or longer period if specified herein, insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the Contractor, its agents, representatives, employees or subcontractors of any tier. The cost of such insurance shall be included in Contractor's Bid. The Contractor is required to obtain and maintain the following coverage:
 - 1. Commercial General Liability: Commercial General Liability coverage shall be on "occurrence" basis only and not "claims made." The coverage must be provided on either an ISO Commercial General Liability form or an ISO Broad Form Comprehensive General Liability (including a Broad Form CGL Endorsement) insurance form. Policies must contain a primary and non-contributory clause and must contain a waiver of subrogation endorsement. Any exceptions to coverage must be fully disclosed on the required certificates. If other than these forms are submitted as evidence of compliance, complete copies of such policy forms must be submitted to Owner within **seven business days** after notice of award. Policies must include, but need not be limited to, coverage for bodily injury, property damage,

personal injury, Broad Form property damage, premises and operations, severability of interest, products and completed operations, contractual and independent contractors. Contractor shall maintain limits of no less than **\$1,000,000** combined single limit per occurrence for bodily injury (including death), personal injury and property damages.

2. Auto Liability: Auto Liability must provide coverage for claims for damage due to bodily injury or death of any person, or property damage arising out of the ownership, maintenance or use of **any motor vehicles whether owned, hired or non-owned**. Contractor shall maintain limits of no less than **\$1,000,000** combined single limit "per accident" for bodily injury and property damage.
- L. If the Contractor fails to maintain any of the insurance coverage required herein, then the Owner will have the option to declare the Contractor in breach, or may purchase replacement insurance or pay the premiums that are due on existing policies in order that the required coverage may be maintained. The Contractor is responsible for any expenses paid by the Owner to maintain such insurance and the Owner may collect the same from the Contractor or deduct the amount paid from any sums due the Contractor under the contract.
- M. The insurance requirements specified herein do not relieve the Contractor of its responsibility or limit the amount of their liability to the Owner or other persons and the Contractor is encouraged to purchase such additional insurance, as it deems necessary.
- N. Contractor is responsible for and must remedy all damage or loss to any property, including property of Owner, caused in whole or in part by the Contractor, any subcontractor or anyone employed, directed or supervised by Contractor. The Contractor is responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the work.
- O. The Contractor shall pay all premiums and costs of insurance.
- P. Regardless of the coverage provided by any insurance policy, the Contractor shall indemnify, defend and hold Owner, Overton Power District #5, **additionally**,
 - the Moapa Valley Water District,**
 - Muddy Valley Irrigation Company,**
 - Moapa Valley Telephone,**
 - Daniel T. & Kirk D. Polattis (APN: 070-12-601-010)**
 - and Clark County Water Reclamation District (CCWRD),**

harmless from any and all claims, demands, actions, attorneys' fees, costs, and expenses based upon or arising out of any acts, errors, omissions, fault or negligence of Contractor or its principals, employees, subcontractors or other agents while performing services under this Contract. Contractor shall indemnify, defend and hold harmless the Owner and others specified from any attorney's fees or other costs of defense, even if the allegations of the claim are groundless, false or fraudulent.



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an **ADDITIONAL INSURED**, the policy (ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

| | | |
|--|---|--------------------------------------|
| PRODUCER INSURANCE BROKER'S NAME ADDRESS | CONTACT NAME: | |
| | PHONE (A/C No. Ext): BROKER'S PHONE NUMBER | FAX (A/C No.) BROKER'S FAX NUMBER |
| | E-MAIL ADDRESS: BROKER'S EMAIL ADDRESS | |
| | INSURER(S) AFFORDING COVERAGE | |
| INSURED CONTRACTOR'S NAME ADDRESS PHONE & FAX NUMBERS | NAIC # | |
| | INSURER A: | |
| | INSURER B: | |
| | INSURER C: | |
| | INSURER D: | |
| | INSURER E: | |
| INSURER F: | | |

COVERAGES CERTIFICATE NUMBER: REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

| INSR LTR | TYPE OF INSURANCE | ADD'L INSR | SUBR WVD | POLICY NUMBER | POLICY EFF (MM/DD/YY) | POLICY EXP (MM/DD/YY) | LIMITS |
|----------|--|------------|----------|---------------|-----------------------|-----------------------|--|
| | GENERAL LIABILITY <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY CLAIMS-MADE <input type="checkbox"/> OCCUR. <input checked="" type="checkbox"/> GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC | X | | | | | EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 50,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 DEDUCTIBLE MAXIMUM \$ 25,000 |
| | AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS | X | | | | | COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ DEDUCTIBLE MAXIMUM \$ 25,000 |
| | WORKER'S COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) <input type="checkbox"/> Y/N DESCRIPTION OF OPERATIONS below | N/A | | | | | WC STATUTORY LIMITS \$ OTHER \$ E.L. EACH ACCIDENT \$ E.L. DISEASE - E.A. EMPLOYEE \$ E.L. DISEASE - POLICY LIMIT \$ |

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)
 BID NO. 603040-13; MUDDY RIVER COOPER STREET BRIDGE. CLARK COUNTY, ITS OFFICERS, EMPLOYEES AND VOLUNTEERS, OVERTON POWER DISTRICT #5, ADDITIONALLY, THE MOAPA VALLEY WATER DISTRICT, MUDDY VALLEY IRRIGATION COMPANY, MOAPA VALLEY TELEPHONE, DANIEL T. & KIRK D. POLATTIS (APN: 070-12-601-010), AND CLARK COUNTY WATER RECLAMATION DISTRICT (CCWRD), ARE INSUREDS WITH RESPECT TO LIABILITY ARISING OUT OF THE ACTIVITIES BY OR ON BEHALF OF THE NAMED INSURED IN CONNECTION WITH THIS PROJECT.

| | | | |
|--|--|---|--|
| CERTIFICATE HOLDER CLARK COUNTY, NEVADA C/O PURCHASING AND CONTRACTS DIVISION GOVERNMENT CENTER, FOURTH FLOOR 500 S. GRAND CENTRAL PARKWAY P.O. BOX 551217 LAS VEGAS, NV 89155-1217 | | CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE | |
|--|--|---|--|

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POLICY NUMBER: _____

COMMERCIAL GENERAL AND AUTOMOBILE LIABILITY

BID NUMBER AND PROJECT NAME: _____

**THIS ENDORSEMENT CHANGED THE POLICY. PLEASE READ IT CAREFULLY
ADDITIONAL INSURED – DESIGNATED PERSON OR ORGANIZATION**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY AND AUTOMOBILE LIABILITY COVERAGE PART.

SCHEDULE

Name of Person or Organization:

CLARK COUNTY, NEVADA
C/O PURCHASING & CONTRACTS DIVISION
500 S. GRAND CENTRAL PKWY 4TH FL
PO BOX 551217
LAS VEGAS, NEVADA 89155-1217

(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to this endorsement.)

WHO IS AN INSURED (Section II) is amended to include as an insured the person or organization shown in the Schedule as an insured but only with respect to liability arising out of your operations or premises owned by or rented to you.

CLARK COUNTY, ITS OFFICERS, EMPLOYEES AND VOLUNTEERS, OVERTON POWER DISTRICT #5, ADDITIONALLY, THE MOAPA VALLEY WATER DISTRICT, MUDDY VALLEY IRRIGATION COMPANY, MOAPA VALLEY TELEPHONE, DANIEL T. & KIRK D. POLATTIS (APN: 070-12-601-010), AND CLARK COUNTY WATER RECLAMATION DISTRICT (CCWRD) ARE INSUREDS WITH RESPECT TO LIABILITY ARISING OUT OF THE ACTIVITIES BY OR ON BEHALF OF THE NAMED INSURED IN CONNECTION WITH THIS PROJECT.

PERFORMANCE 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 _____, as Principal Contractor, and _____, as Surety, are held and firmly bound unto CLARK COUNTY, NEVADA, hereinafter called Owner, in the sum of _____ dollars, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, said Contractor has been recommended for award and shall enter into the contract with said Owner to perform all work required under the Bidding Schedule(s) **BID NO. 603040-13** of the Owner's specifications, entitled **MUDDY RIVER COOPER STREET BRIDGE**.

NOW THEREFORE, if said Contractor shall perform all the requirements of said contract required to be performed on their part, at the times and in the manner specified therein, then this obligation shall be null and void, otherwise it shall remain in full force and effect.

PROVIDED, that any change order(s), alterations in the work to be done or the materials to be furnished, which may be made pursuant to the terms of said contract, shall not in any way release said Contractor or said Surety thereunder, nor shall any extensions of time granted under the provisions of said contract release either said Contractor or said Surety, and notice of such change order(s), alterations or extensions of the contract is hereby waived by said Surety.

SIGNED this _____ day of _____, 20____

(SEAL AND NOTARIAL ACKNOWLEDGMENT OF SURETY)

(Principal Contractor)

(Authorized Representative and Title)

By: _____
(Signature)

Surety: _____

(Appointed Agent Name)

(State of Nevada, License Number)

By: _____
(Signature)

(Appointed Agent Name)

(License Number and Issuing State)

By: _____
(Signature)

Address: _____

Address: _____

Telephone: _____

Telephone: _____

ISSUING COMPANY MUST HOLD CERTIFICATES OF AUTHORITY AS ACCEPTABLE SURETY ON FEDERAL BONDS AND AS ACCEPTABLE REINSURING COMPANY WITH LISTING IN THE DEPARTMENT OF TREASURY, FISCAL SERVICE, (DEPARTMENT OF CIRCULAR "570," CURRENT REVISIONS).

LABOR AND MATERIAL PAYMENT 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 _____, as Contractor, and _____, as Surety, are held and firmly bound unto CLARK COUNTY, NEVADA, hereinafter called Owner, in the sum of _____ dollars, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, said Contractor has been recommended for award and shall enter into the contract with said Owner to perform all work required under the Bid Schedule(s), **BID NO. 603040-13, MUDDY RIVER COOPER STREET BRIDGE.**

NOW THEREFORE, if said Contractor, or subcontractors, fails to pay for any materials, equipment, or other supplies, or for rental of same, used in connection with the performance of work contracted to be done, or for amounts due under applicable State law for any work or labor thereon, said Surety will pay for the same in an amount not exceeding the sum specified above and, in the event suit is brought upon this bond, a reasonable attorney's fee to be fixed by the court. This bond shall insure to the benefit of any persons, companies or corporations entitled to file claims under applicable State law.

PROVIDED, that any change order(s), alterations in the work to be done or the materials to be furnished, which may be made pursuant to the terms of said Contract, shall not in any way release either said Contractor or said Surety thereunder, nor shall any extensions of time granted under the provisions of said Contract release either said Contractor or said Surety, and notice of such change order(s), alterations or extensions of the Contract is hereby waived by said Surety.

SIGNED this _____ day of _____, 20____

(SEAL AND NOTARIAL ACKNOWLEDGMENT OF SURETY)

(Principal Contractor)

(Authorized Representative and Title)

By: _____
(Signature)

Surety: _____

(Appointed Agent Name)

(State of Nevada, License Number)

By: _____
(Signature)

(Appointed Agent Name)

(License Number and Issuing State)

By: _____
(Signature)

Address: _____

Address: _____

Telephone: _____

Telephone: _____

ISSUING COMPANY MUST HOLD CERTIFICATES OF AUTHORITY AS ACCEPTABLE SURETY ON FEDERAL BONDS AND AS ACCEPTABLE REINSURING COMPANY WITH LISTING IN THE DEPARTMENT OF TREASURY, FISCAL SERVICE, (DEPARTMENT OF CIRCULAR "570," CURRENT REVISIONS).

GUARANTY 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.

GUARANTEE for _____

(Name and Address of Prime Contractor)

We hereby guarantee that the **BID NO. 603040-13, MUDDY RIVER COOPER STREET BRIDGE**, which we have constructed, has been done in accordance with the plans and specifications; that the work as constructed will fulfill the requirements of the guaranties included in the Contract Documents. We agree to repair or replace any or all of our work together with any other adjacent work which may be damaged in so doing, that may prove to be defective in workmanship or materials within a period of one year from the date of the Notice of Substantial Completion of the above named work by the County of Clark, State of Nevada, without any expense whatsoever to said County of Clark, State of Nevada, ordinary wear and unusual abuse or neglect excepted.

In the event of our failure to comply with the above mentioned conditions within 14 calendar days after being notified in writing by Clark County, Nevada, we collectively or separately, do hereby authorize Clark County, Nevada to proceed to have said defects repaired and made good at our expense and we will honor and pay the costs and charges therefore upon demand. When correction work is started, it shall be carried through to completion.

SIGNED this _____ day of _____, 20____

(SEAL AND NOTARIAL ACKNOWLEDGMENT OF SURETY)

(Principal Contractor)

(Authorized Representative and Title)

By: _____
(Signature)

Surety: _____

(Appointed Agent Name)

(State of Nevada, License Number)

By: _____
(Signature)

(Appointed Agent Name)

(License Number and Issuing State)

By: _____
(Signature)

Address: _____

Address: _____

Telephone: _____

Telephone: _____

ISSUING COMPANY MUST HOLD CERTIFICATES OF AUTHORITY AS ACCEPTABLE SURETY ON FEDERAL BONDS AND AS ACCEPTABLE REINSURING COMPANY WITH LISTING IN THE DEPARTMENT OF TREASURY, FISCAL SERVICE, (DEPARTMENT OF CIRCULAR "570," CURRENT REVISIONS).

EXHIBIT B MEDIATOR AGREEMENT

This Agreement ("Agreement") is made and entered into this ____ day of _____, by and between the County of Clark ("County"), _____ ("Contractor") and _____ ("Mediator"). County and _____ are collectively referred to as "Parties".

WHEREAS, _____ was awarded the Bid No. _____ for the _____ Project, and the County and _____ entered into a contract entitled _____ ("Contract");

WHEREAS, a claim, dispute or controversy relating to the Contract has arisen between the Parties;

WHEREAS, the Parties have been unsuccessful in resolving the claim, dispute or controversy by informal negotiations as required in section _____ of the Contract,

WHEREAS, _____ has submitted a demand to _____ for non-binding informal mediation of the claim, dispute or controversy, pursuant to section _____ of the Contract;

WHEREAS, the Contract requires the Parties to mutually agree upon a private independent mediator to mediate the claim, dispute or controversy;

WHEREAS, the Parties have mutually agreed to hire Mediator in this matter;

WHEREAS, Mediator is willing to accept this appointment;

NOW THEREFORE, the County, Contractor and Mediator agree as follows:

1. Scope of Services

The Parties hereby retain and appoint Mediator to mediate the above-referenced claim, dispute or controversy arising out of the Contract. Mediator agrees to conduct a mediation in accordance with section 7 of the General Conditions of the Contract and consistent with the most current version of "The Model Standards of Conduct for Mediators" as approved by the American Arbitration Association. Additionally, Mediator agrees to conduct the mediation consistent with sections addressing "Mediator's Impartiality and Duty to Disclose", "Duties and Responsibilities of the Mediator" and "Confidentiality" of the current version of the "Construction Industry Mediation Procedures" as approved by the American Arbitration Association.

2. Mediator's Fees and Expenses

Mediator will charge an hourly rate of \$_____ for his services as a mediator. The Parties are equally responsible for the cost of the Mediator. The County is responsible for fifty-percent (50%) of the fees of Mediator and Contractor is responsible for fifty-percent (50%) of the cost of Mediator.

The County and Contractor agree to reimburse Mediator for reasonable expenses including, but not limited to, long distance telephone calls, photocopying and mailing fees.

3. Billing

Mediator will provide, on a monthly basis, invoices to the County and Contractor itemizing all services provided. Mediator agrees to bill the County for its fifty-percent (50%) share and Mediator agrees to bill the Contractor for its fifty-percent (50%) share. Mediator understands and agrees that the Parties are only responsible for their respective fifty-percent (50%) shares. If the Contractor does not pay Mediator its fifty-percent (50%) share of the fees, then the County is not responsible. Likewise, if the County does not pay Mediator its fifty-percent (50%) share of the fees, then the Contractor is not responsible.

The County and Contractor agree to make payment for Mediator's fees and expenses within sixty (60) days after receipt of such billings.

4. Term

The term of this Agreement shall commence on the date of this Agreement and shall continue until Mediator concludes the above-referenced matters on which he is serving as the Parties' Mediator.

5. Amendment and Modification

No provision of this Agreement will be deemed waived, amended or modified by either party unless such waiver, amendment or modification is in writing and signed by the authorized agents of both parties.

6. Applicable Law

This Agreement shall be governed by and interpreted according to the laws of the State of Nevada.

7. Exclusive Benefit of the Parties

Except as specifically provided in this section, this Agreement is not intended to create any rights, powers or interests in any third party and this Agreement is entered into for the exclusive benefit of the County, Contractor and Mediator.

8. Notices

Any notice required or permitted to be given under this Agreement shall be deemed to have been given when received by the party to whom it is directed by personal service, hand delivery or United States Mail at the following addresses:

To County: _____

To Contractor: _____

To Mediator: _____

Either party may, at any time and from time to time, change its address by written notice to the other party.

9. Entire Agreement

This Agreement constitutes the entire agreement between the parties and may only be modified, supplemented or amended by a written agreement signed by both parties.

(SIGNATURE ON NEXT PAGE)

IN WITNESS WHEREOF, the parties have caused this contract to be signed and intend to be legally bound thereby.

CLARK COUNTY, a political
subdivision of the State of Nevada

ATTEST:

By: _____
Board of County Commissioners

DIANA ALBA, County Clerk

By: _____

Name: _____

Its: _____
CONTRACTOR

STATE OF NEVADA)
) ss.
COUNTY OF CLARK)

On this ____ day of _____, 20__, before me the undersigned, a Notary Public, in and for said County
and State, personally appeared _____, who acknowledged to me that _____ executed the
above instrument for the purposes herein stated.

WITNESS my hand and official seal.

NOTARY PUBLIC
In and for said County and State

By: _____

Name: _____

Its: _____
MEDIATOR

STATE OF NEVADA)
) ss.
COUNTY OF CLARK)

On this ____ day of _____, 20__, before me the undersigned, a Notary Public, in and for said County
and State, personally appeared _____, who acknowledged to me that _____ executed the
above instrument for the purposes herein stated.

WITNESS my hand and official seal.

Approved as to form:

NOTARY PUBLIC
In and for said County and State

Laura C. Rehfeldt
Deputy District Attorney

EXHIBIT B

CONFIDENTIALITY AGREEMENT

THIS CONFIDENTIALITY AGREEMENT (hereinafter referred to as ("Confidentiality Agreement")) is made and entered into this ____ day of _____, 20__ by and between the County of Clark, a political subdivision of the State of Nevada, ("County"), and _____ ("_____"). County and _____ are collectively referred to as "Parties".

RECITALS

WHEREAS, _____ was awarded Bid No. 603040-13 for the _____ Project, and the County and _____ entered into a contract entitled MUDDY RIVER COOPER STREET BRIDGE ("Contract");

WHEREAS, a claim, dispute or controversy relating to the Contract has arisen between the Parties;

WHEREAS, the Parties have haven been unsuccessful in resolving the claim, dispute or controversy by informal negotiations as required in section _____ of the Contract,

WHEREAS, _____ has submitted a demand to _____ for non-binding informal mediation of the claim, dispute or controversy, pursuant to section _____ of the Contract;

WHEREAS, pursuant to section _____ of the Contract, the Parties are required to enter into this Confidentiality Agreement as a condition of the informal nonbinding mediation prior to the commencement of the mediation;

NOW THEREFORE, in consideration of the premises and covenants herein contained, it is mutually agreed by and between the parties hereto as follows:

AGREEMENT

IT IS HEREBY AGREED by and between the Parties, their directors, officers, representatives and employees to maintain the confidentiality of the mediation and not disclose any statements, documents or information of merit or substance relating to the mediation. The Parties agree not to rely upon or introduce as evidence in any arbitral, judicial or other proceedings the following:

- a) views expressed or suggestions or offers made by another party or the mediator in the course of the mediation proceedings, with respect to a possible settlement of a dispute, and with respect to negotiations that preceded the mediation;
- b) admissions made by another party in the course of the mediation proceedings and negotiations that preceded the mediation relating to the merits of the dispute;
- c) written and oral statements made or documents exchanged;
- d) proposals made or views expressed by the mediator; or
- e) the fact that another party had or had not indicated willingness to a proposal for settlement made by another party or the mediator.

The confidentiality of this provision is waived in the event the disclosure constitutes probative evidence in a pending action alleging negligence or willful misconduct of the mediator.

IT IS FURTHER AGREED by and between the Parties, their directors, officers, representatives and employees that no cause of action may be asserted based upon the manner in which the mediation is conducted or what transpires during the mediation proceeding.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

CLARK COUNTY, a political
subdivision of the State of Nevada

ATTEST:

By: _____
Donald G. Burnett,
County Manager

DIANA ALBA, County Clerk

By: _____

Name: _____

Its: _____

STATE OF NEVADA)
) ss.
COUNTY OF CLARK)

On this ____ day of _____, 20__, before me the undersigned, a Notary Public, in and for said County and State,
personally appeared _____, who acknowledged to me that ____he ____ executed the above
instrument for the purposes herein stated.

WITNESS my hand and official seal.

NOTARY PUBLIC

Approved as to form:

Deputy District Attorney
Laura C. Rehfeldt

**INSTRUCTIONS FOR COMPLETING THE
DISCLOSURE OF OWNERSHIP/PRINCIPALS FORM**

Purpose of the Form

The purpose of the Disclosure of Ownership/Principals Form is to gather ownership information pertaining to the business entity for use by the Board of County Commissioners (“BCC”) in determining whether members of the BCC should exclude themselves from voting on agenda items where they have, or may be perceived as having a conflict of interest, and to determine compliance with Nevada Revised Statute 281A.430, contracts in which a public officer or employee has interest is prohibited.

General Instructions

Completion and submission of this Form is a condition of approval or renewal of a contract or lease and/or release of monetary funding between the disclosing entity and the appropriate Clark County government entity. Failure to submit the requested information may result in a refusal by the BCC to enter into an agreement/contract and/or release monetary funding to such disclosing entity.

Detailed Instructions

All sections of the Disclosure of Ownership form must be completed. If not applicable, write in N/A.

Business Entity Type – Indicate if the entity is an Individual, Partnership, Limited Liability Company, Corporation, Trust, Non-profit Organization, or Other. When selecting ‘Other’, provide a description of the legal entity.

Non-Profit Organization (NPO) - Any non-profit corporation, group, association, or corporation duly filed and registered as required by state law.

Business Designation Group – Indicate if the entity is a Minority Owned Business Enterprise (MBE), Women-Owned Business Enterprise (WBE), Small Business Enterprise (SBE), or Physically-Challenged Business Enterprise (PBE). This is needed in order to provide utilization statistics to the Legislative Council Bureau, and will be used only for such purpose.

Minority Owned Business Enterprise (MBE):

An independent and continuing business for profit that performs a commercially useful function and is at least 51% owned and controlled by one or more minority persons of Black American, Hispanic American, Asian-Pacific American or Native American ethnicity.

Women Owned Business Enterprise (WBE):

An independent and continuing business for profit that performs a commercially useful function and is at least 51% owned and controlled by one or more women.

Physically Challenged Business Enterprise (PBE):

An independent and continuing business for profit that performs a commercially useful function and is at least 51% owned and controlled by one or more disabled individuals pursuant to the federal Americans with Disabilities Act.

Small Business Enterprise (SBE):

An independent and continuing business for profit which performs a commercially useful function, is not owned and controlled by individuals designated as minority, women, or physically-challenged, and where gross annual sales does not exceed \$2,000,000.

Veteran Owned Enterprise (VET):

A Nevada business at least 51% owned/controlled by a veteran.

Disabled Veteran Owned Enterprise (DVET):

A Nevada business at least 51% owned/controlled by a disabled veteran.

Business Name (include d.b.a., if applicable) – Enter the legal name of the business entity and enter the “Doing Business As” (d.b.a.) name, if applicable.

Corporate/Business Address, Business Telephone, Business Fax, and Email – Enter the street address, telephone and fax numbers, and email of the named business entity.

Local Business Address, Local Business Telephone, Local Business Fax, and Email – If business entity is out-of-state, but operates the business from a location in Nevada, enter the Nevada street address, telephone and fax numbers, point of contact and email of the local office. Please note that the local address must be an address from which the business is operating from that location. Please do not include a P.O. Box number, unless required by the U.S. Postal Service, or a business license hanging address.

Number of Clark County Nevada Residents employed by this firm.

List of Owners/Officers – Include the full name, title and percentage of ownership of each person who has ownership or financial interest in the business entity. If the business is a publicly traded corporation or non-profit organization, list all Corporate Officers and Directors only.

For All Contracts – (Not required for publicly-traded corporations)

- 1) Indicate if any individual members, partners, owners or principals involved in the business entity are a Clark County full-time employee(s), or appointed/elected official(s). If yes, the following paragraph applies.

In accordance with NRS 281A.430.1, a public officer or employee shall not bid on or enter into a contract between a government agency and any private business in which he has a significant financial interest, except as provided for in subsections 2, 3, and 4.

- 2) Indicate if any individual members, partners, owners or principals involved in the business entity have a second degree of consanguinity or affinity relation to a Clark County full-time employee(s), or appointed/elected official(s) (reference form on Page 2 for definition). If **YES**, complete the Disclosure of Relationship Form. Clark County is comprised of the following government entities: Clark County, University Medical Center of Southern Nevada, Department of Aviation (McCarran Airport), and Clark County Water Reclamation District. Note: The Department of Aviation includes all of the General Aviation Airports (Henderson, North Las Vegas, and Jean).

A professional service is defined as a business entity that offers business/financial consulting, legal, physician, architect, engineer or other professional services.

Signature and Print Name – Requires signature of an authorized representative and the date signed.

Disclosure of Relationship Form – If any individual members, partners, owners or principals of the business entity is presently a Clark County employee, public officer or official, or has a second degree of consanguinity or affinity relationship to a Clark County employee, public officer or official, this section must be completed in its entirety.

DISCLOSURE OF OWNERSHIP/PRINCIPALS

| | | | | | | |
|--|--------------------------------------|--|--------------------------------------|--------------------------------|--|---|
| Business Entity Type | | | | | | |
| <input type="checkbox"/> Sole Proprietorship | <input type="checkbox"/> Partnership | <input type="checkbox"/> Limited Liability Company | <input type="checkbox"/> Corporation | <input type="checkbox"/> Trust | <input type="checkbox"/> Non-Profit Organization | <input type="checkbox"/> Other |
| Business Designation Group | | | | | | |
| <input type="checkbox"/> MBE | | <input type="checkbox"/> WBE | | <input type="checkbox"/> SBE | | <input type="checkbox"/> PBE |
| Minority Business Enterprise | | Women-Owned Business Enterprise | | Small Business Enterprise | | Physically Challenged Business Enterprise |
| Corporate/Business Entity Name: | | | | | | |
| (Include d.b.a., if applicable) | | | | | | |
| Street Address: | | | | Website: | | |
| City, State and Zip Code: | | | | POC Name and Email: | | |
| Telephone No: | | | | Fax No: | | |
| Local Street Address: | | | | Website: | | |
| City, State and Zip Code: | | | | Local Fax No: | | |
| Local Telephone No: | | | | Local POC Name Email: | | |
| Number of Clark County Nevada Residents Employed: | | | | | | |

All entities, with the exception of publicly traded and non-profit organizations, must list the names of individuals holding more than five percent (5%) ownership or financial interest in the business entity appearing before the Board.

Publicly traded entities and non-profit organizations shall list all Corporate Officers and Directors in lieu of disclosing the names of individuals with ownership or financial interest. The disclosure requirement, as applied to land-use applications, extends to the applicant and the landowner(s).

Entities include all business associations organized under or governed by Title 7 of the Nevada Revised Statutes, including but not limited to private corporations, close corporations, foreign corporations, limited liability companies, partnerships, limited partnerships, and professional corporations.

| Full Name | Title | % Owned <small>(Not required for Publicly Traded Corporations/Non-profit organizations)</small> |
|-----------|-------|--|
| | | |
| | | |
| | | |

This section is not required for publicly traded corporations.

1. Are any individual members, partners, owners or principals, involved in the business entity, a Clark County, University Medical Center, Department of Aviation, or Clark County Water Reclamation District full-time employee(s), or appointed/elected official(s)?

Yes No (If yes, please note that County employee(s), or appointed/elected official(s) may not perform any work on professional service contracts, or other contracts, which are not subject to competitive bid.)

2. Do any individual members, partners, owners or principals have a spouse, registered domestic partner, child, parent, in-law or brother/sister, half-brother/half-sister, grandchild, grandparent, related to a Clark County, University Medical Center, Department of Aviation, or Clark County Water Reclamation District full-time employee(s), or appointed/elected official(s)?

Yes No (If yes, please complete the Disclosure of Relationship form on Page 2. If no, please print N/A on Page 2.)

I certify under penalty of perjury, that all of the information provided herein is current, complete, and accurate. I also understand that the Board will not take action on land-use approvals, contract approvals, land sales, leases or exchanges without the completed disclosure form.

Signature

Print Name

Title

Date

DISCLOSURE OF RELATIONSHIP

List any disclosures below:
(Mark N/A, if not applicable.)

| NAME OF BUSINESS OWNER/PRINCIPAL | NAME OF COUNTY* EMPLOYEE/OFFICIAL AND JOB TITLE | RELATIONSHIP TO COUNTY* EMPLOYEE/OFFICIAL | COUNTY* EMPLOYEE'S/OFFICIAL'S DEPARTMENT |
|----------------------------------|---|---|--|
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* County employee means Clark County, University Medical Center, Department of Aviation, or Clark County Water Reclamation District.

"Consanguinity" is a relationship by blood. "Affinity" is a relationship by marriage.

"To the second degree of consanguinity" applies to the candidate's first and second degree of blood relatives as follows:

- Spouse – Registered Domestic Partners – Children – Parents – In-laws (first degree)
- Brothers/Sisters – Half-Brothers/Half-Sisters – Grandchildren – Grandparents – In-laws (second degree)

For County Use Only:

If any Disclosure of Relationship is noted above, please complete the following:

- Yes No Is the County employee(s) noted above involved in the contracting/selection process for this particular agenda item?
- Yes No Is the County employee(s) noted above involved in anyway with the business in performance of the contract?

Notes/Comments:

Signature

Print Name
Authorized Department Representative

DISCLOSURE OF RELATIONSHIP

For County Use Only:

If any Disclosure of Relationship is noted above, please complete the following:

Yes No Is the County employee(s) noted above involved in the contracting/selection process for this particular agenda item?

Yes No Is the County employee(s) noted above involved in anyway with the business in performance of the contract?

Notes/Comments:

Signature

Print Name
Authorized Department Representative

For County Use Only:

If any Disclosure of Relationship is noted above, please complete the following:

Yes No Is the County employee(s) noted above involved in the contracting/selection process for this particular agenda item?

Yes No Is the County employee(s) noted above involved in anyway with the business in performance of the contract?

Notes/Comments:

Signature

Print Name
Authorized Department Representative

For County Use Only:

If any Disclosure of Relationship is noted above, please complete the following:

Yes No Is the County employee(s) noted above involved in the contracting/selection process for this particular agenda item?

Yes No Is the County employee(s) noted above involved in anyway with the business in performance of the contract?

Notes/Comments:

Signature

Print Name
Authorized Department Representative

WORKERS EMPLOYED REPORT (A) (PER N.R.S. 338.070)

Project Number: _____

Date: _____

Project Name: _____

PWP Number: _____

General Contractor: _____

Subcontractor: _____

Prepared by: _____

Contact Number: _____

Email Address: _____

| | Worker Name | Workers Occupation | Has a Drivers License or Identification Card | State Issued | Wages | Per Diem | Benefits |
|----|-------------|--------------------|---|--------------|-------|----------|----------|
| 1 | | | <input type="checkbox"/> YES or <input type="checkbox"/> NO | | | | |
| 2 | | | <input type="checkbox"/> YES or <input type="checkbox"/> NO | | | | |
| 3 | | | <input type="checkbox"/> YES or <input type="checkbox"/> NO | | | | |
| 4 | | | <input type="checkbox"/> YES or <input type="checkbox"/> NO | | | | |
| 5 | | | <input type="checkbox"/> YES or <input type="checkbox"/> NO | | | | |
| 6 | | | <input type="checkbox"/> YES or <input type="checkbox"/> NO | | | | |
| 7 | | | <input type="checkbox"/> YES or <input type="checkbox"/> NO | | | | |
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| 10 | | | <input type="checkbox"/> YES or <input type="checkbox"/> NO | | | | |
| 11 | | | <input type="checkbox"/> YES or <input type="checkbox"/> NO | | | | |
| 12 | | | <input type="checkbox"/> YES or <input type="checkbox"/> NO | | | | |
| 13 | | | <input type="checkbox"/> YES or <input type="checkbox"/> NO | | | | |
| 14 | | | <input type="checkbox"/> YES or <input type="checkbox"/> NO | | | | |
| 15 | | | <input type="checkbox"/> YES or <input type="checkbox"/> NO | | | | |
| 16 | | | <input type="checkbox"/> YES or <input type="checkbox"/> NO | | | | |
| 17 | | | <input type="checkbox"/> YES or <input type="checkbox"/> NO | | | | |
| 18 | | | <input type="checkbox"/> YES or <input type="checkbox"/> NO | | | | |
| 19 | | | <input type="checkbox"/> YES or <input type="checkbox"/> NO | | | | |
| 20 | | | <input type="checkbox"/> YES or <input type="checkbox"/> NO | | | | |

DO NOT INCLUDE ANY LICENSE OR I.D. NUMBERS

WORKERS EMPLOYED REPORT (B) (PER N.R.S. 338.070)

| | |
|----------------------------------|------------------------------|
| Project Number: _____ | Date: _____ |
| Project Name: _____ | PWP Number: _____ |
| General Contractor: _____ | Subcontractor: _____ |
| Prepared by: _____ | Contact Number: _____ |
| Email Address: _____ | |

| | Worker Name | Driver's License No. or Identification No. | State Issued | First day on Project | Last day on Project |
|----|-------------|--|--------------|----------------------|---------------------|
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CONFIDENTIAL

NON-APPORTIONED VEHICLE REPORT

| | |
|----------------------------------|------------------------------|
| Project Number: _____ | Date: _____ |
| Project Name: _____ | PWP Number: _____ |
| General Contractor: _____ | Subcontractor: _____ |
| Prepared by: _____ | Contact Number: _____ |
| Email Address: _____ | |

| | Owner Name | Vehicle Description | License No. and State |
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MATERIALS PURCHASED REPORT

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|----------------------------------|------------------------------|
| Project Number: _____ | Date: _____ |
| Project Name: _____ | PWP Number: _____ |
| General Contractor: _____ | Subcontractor: _____ |
| Prepared by: _____ | Contact Number: _____ |
| Email Address: _____ | |

| | Material Supplier Name | Address | Materials Purchased |
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CLOSEOUT DOCUMENTATION SUMMARY REPORT OF SUBCONTRACTORS

Project Number: _____

Date: _____

Project Name: _____

PWP Number: _____

General Contractor: _____

Subcontractor: _____

Prepared by: _____

Contact Number: _____

Email Address: _____

| | Subcontractor Name | *BEG | Ethnicity | Address | Bid Item or Work Performed | Value of Contract |
|----|--------------------|------|-----------|---------|----------------------------|-------------------|
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*Reference Instruction to Bidders for definitions.



Department of Administrative Services

Purchasing and Contracts

500 S Grand Central Pky 4th Fl • Box 551217 • Las Vegas NV 89155-1217
(702) 455-2897 • Fax (702) 386-4914

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

CLARK COUNTY, NEVADA
BID NO. 603040-13
MUDDY RIVER COOPER STREET BRIDGE

October 4, 2013

ADDENDUM NO. 1

INVITATION TO BID

1. The Bid Opening date of October 17, 2013 at 2:15:00 p.m., remains unchanged.

BID FORM

2. Replace the existing Bid Form Pages 4-1 through 4-7 with the attached Revised Bid Form, Revised Pages 4-1 through 4-7. New Bid Item 202.21, Remove Adelia Street House, was added to the Bid Form.

SPECIAL PROVISIONS

3. **SUBSECTION 100.01 - LOCATION AND SCOPE**

Delete the paragraph under this subsection and replace with the following:

The work to be performed under this Contract is for the construction of Muddy River Cooper Street Bridge and related appurtenances located in Overton, Nevada, along the Muddy River from Ramos Ranch Road to Ingram Avenue. The improvements will generally consist of, but not be limited to, site clearing, scarification, removal and disposal of structures and obstructions, excavation and embankment to proposed grade elevations, aggregate access road, concrete-lined channel, earthen channel, earthen channel with riprap-lined sides, gabion-lined channel, a gabion-lined transition structure, gabion cutoff wall, a bridge structure and roadway improvements at Cooper Street, utility relocations, fencing and gates, and appurtenances and other improvements as specified and as shown on Drawings. At the completion of construction, the work shall also encompass demolition and removal of the house at 410 North Adelia Street including verification of septic tank on-site and, if present, septic tank abandonment.

4. **SUBSECTION 202.01.01 - GENERAL**

Add the following paragraphs to this subsection:

"H. At the completion of construction, Contractor shall demolish and remove the house and appurtenant structures provided by the Owner for use as the Field Office (as specified in Section 200). An asbestos survey was completed for this house, titled Asbestos Demolition Survey, Vacant Residence, 410 North Adelia Street, Overton, Nevada, dated January 31, 2011, and prepared by Converse Consultants. A copy of this survey is available in the office of the Project Engineer at 500 Grand Central Parkway, Suite 2001 where it may be picked up by the prospective bidders at no cost. This survey reported that no asbestos was detected in the samples analyzed for asbestos content. Contractor shall perform demolition and removal of this house in compliance with the following:

1. Remove and dispose of all utility connections provided for the Field Office.
2. Remove and dispose of all other appurtenant structures located on the property.
3. Verify that a septic tank is on-site and, if present, abandon the septic tank and leach field on the property in accordance with the requirements of the Southern Nevada Health District:

<http://www.southernnevadahealthdistrict.org/isds/res-abandonment.php>

4. Properly handle and dispose of all demolition materials.
5. Remove and properly dispose of all trash and debris generated by the demolition work.
6. Comply with dust control and storm water pollution control requirements.
7. Create a smooth ground surface and ensure that the property will drain.
8. Provide all other related work, permitting, and incidentals necessary to complete the project.
9. Obtain and comply with all necessary permits."

5. **SUBSECTION 202.03.01 - GENERAL**

Add the following paragraphs to this subsection:

"C. Contractor shall be responsible for the following:

1. Not starting any demolition until a project site visit including review of his procedures and schedule is conducted with Engineer, and Contractor has performed a safety walk-through.
2. Performing a thorough field review of property to be demolished to determine existing conditions prior to beginning work.
3. Complying with EPA, OSHA, 29 CFR 1926-62 Lead Regulation and also providing proposed action plans in accordance with Southern Nevada Health District's Demolition Removal Procedures.
4. Complying with EPA regulation in disconnecting and properly disposing of heating, ventilation, and air conditioning (HVAC) systems and providing proof of proper disposal.
5. Complying with all disposal regulations if oil or grease or possibly hazardous materials are found on the property.
6. Calling "Call Before You Dig" and "Call Before You Do Overhead" a minimum of 3 working days before beginning work.
7. Making sure all utilities have been disconnected and services removed, both underground and overhead, from the building to the existing right-of-way before starting demolition.
8. Capping and marking disconnected utilities as required by Engineer.
9. Keeping utilities in service and maintaining access to other sections of the neighborhood.
10. Filling all cavities caused by demolition with small (minus 3/4-inch), non-perishable materials acceptable to Engineer.
11. Broom cleaning and water soaking the property once demolition is complete.
12. Providing proof to Engineer of proper disposal of demolition materials and trash in an authorized landfill.
13. Immediately correcting and/or remedying all conditions reported by City, County, State, and/or Federal Inspectors, and providing Engineer with a written report of action taken within 48 hours of completing corrective actions.
14. Protecting items/improvements not designated for removal."

6. **SUBSECTION 202.04.01 - MEASUREMENT**

Add the following paragraph to this subsection:

"X. Measurement for payment of Remove Adelia Street House will be on a lump sum basis."

7. **SUBSECTION 202.05.01 - PAYMENT**

Add the following sentences to Paragraph E of this subsection:

"The lump sum payment for Remove Building shall also be full compensation for verification of septic tank on-site and, if present, septic tank and leach field abandonment in accordance with the requirements of the Southern Nevada Health District. Additionally, the lump sum payment shall include broom cleaning and water soaking the building demolition site, restoring the disturbed surface to an equal or better condition than the original, ensuring that the demolition area of the property is graded to drain, and for all labor, tools, equipment, and incidentals required to complete the work as shown on the Drawings, as specified, and as required by Engineer."

Add the following new paragraph to this subsection and re-letter existing Paragraph X to be Paragraph Y, accordingly:

"X. The lump sum payment for Remove Adelia Street House shall be full compensation for removal and disposal at an approved site of existing Adelia Street House and other appurtenant structures on the property at the completion of construction when the house is no longer needed as a Field Office. The demolition and removal of the house shall include framing, roofing, foundations, steel, concrete, footings, excavation, backfill, utilities, traffic control, and all incidental and appurtenant items in accordance with applicable provisions of Section 202 of the Standard Specifications, properly removed and site of removal restored as specified, as shown on the Drawings, and as required by Engineer. Payment shall also be full compensation for verification of septic tank on-site and, if present, septic tank and leach field abandonment in accordance with the requirements of the Southern Nevada Health District. Additionally, the lump sum payment shall include broom cleaning and water soaking the building demolition site, restoring the disturbed surface to an equal or better condition than the original, ensuring that the demolition area of the property is graded to drain, and for all labor, tools, equipment, and incidentals required to complete the work as shown on the Drawings, as specified, and as required by Engineer."

8. **SUBSECTION 630.04.01 - MEASUREMENT**

Add the following paragraph to this subsection:

"B. Septic tank and leach field abandonments will not be measured for payment as such, but shall be included in the lump sum measurement for building demolition and removal."

9. **SUBSECTION 630.05.01 - PAYMENT**

Add the following to Paragraph B of this subsection:

"Also, no separate payment will be made for septic tank and leach field abandonments, all costs for which shall be included in the lump sum payments for demolition and removal of the buildings where the septic tanks and leach fields are located."

10. **APPENDIX A - US ARMY CORPS OF ENGINEERS SECTION 404 PERMIT**

Delete Appendix A and replace with the attached Appendix A. Appendix A is replaced to provide a more legible version.

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

ISSUED BY:



THOMAS E. BOLDT, C.P.M.
Senior Purchasing Analyst

Attachment(s): Revised Bid Form, Pages 4-1 through 4-7
Replacement Appendix A - 404 Permit

cc: John Catanese, Public Works
Cindy Beauchamp, Public Works

Mike Mamer, Public Works

CLARK COUNTY, NEVADA

BID FORM

BID NO. 603040-13
MUDDY RIVER COOPER STREET BRIDGE
PWP NUMBER: CL-2013-247
REVISED PER ADDENDUM NO. 1

(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 Certification 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, 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. This Attachment will be time stamped by the Purchasing and Contracts Division. I understand that submission after the two-hour time limit is not allowed and will be returned to me and the bid may be deemed non-responsive. I acknowledge that for:
 - a) Projects EXCEEDING \$5,000,000
I need to list only Subcontractors that will provide labor/improvements exceeding one percent (1%) of the Prime Contractor's total base bid amount, or \$50,000.00, whichever is greater.
5. 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.
6. I acknowledge that my bid is based on the current State of Nevada prevailing wages.
7. 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.
8. 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.
9. 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 \$3,000 per day as liquidated damages.

10. 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.
11. 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.**
12. 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.
13. 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.
14. 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.
15. 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, _____
 Addendum No. _____ dated, _____ Addendum No. _____ dated, _____
 Addendum No. _____ dated, _____ Addendum No. _____ dated, _____

16. 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 |
| 109.01 | CONSTRUCTION CONFLICTS & ADDITIONAL WORK | 1 | LS | \$ 750,000.00 |
| 109.02 | HISTORICAL OWNER-CAUSED DELAY ALLOWANCE | 15 | DAY | \$ 7,500.00 |
| 109.03 | ADDITIONAL AMOUNT OVER \$500/DAY AS DETERMINED BY BIDDER | 15 | DAY | \$ |
| 200.01 | MOBILIZATION | 1 | LS | \$ |
| 201.01 | CLEARING AND GRUBBING | 38 | AC | \$ |
| 202.01 | REMOVE BUILDINGS | 1 | LS | \$ |
| 202.02 | REMOVE FENCE | 1,530 | LF | \$ |
| 202.03 | REMOVE CUT-OFF WALL | 1,303 | LF | \$ |
| 202.04 | REMOVE STEM WALL | 265 | LF | \$ |
| 202.05 | REMOVE AND SALVAGE GUARDRAIL | 96 | LF | \$ |
| 202.06 | REMOVE AND SALVAGE SIGN | 3 | EA | \$ |
| 202.07 | REMOVE DOUBLE 4-FOOT BY 2-FOOT RCB CULVERT | 1 | LS | \$ |
| 202.08 | REMOVE DRAW BRIDGE | 1 | LS | \$ |
| 202.09 | REMOVE CONCRETE DRAINAGE STRUCTURE | 1 | LS | \$ |
| 202.10 | REMOVE GABION WALL | 213 | LF | \$ |
| 202.11 | REMOVE IRRIGATION CHANNEL | 215 | LF | \$ |
| 202.12 | REMOVE AND SALVAGE IRRIGATION PUMP | 1 | LS | \$ |

| BID SCHEDULE | | | | |
|---------------------|---|------------------|-----------|-----------|
| ITEM NUMBER | ITEM DESCRIPTION | APPROX. QUANTITY | UNIT | TOTAL |
| 202.13 | REMOVE HEADWALLS AND FOOTINGS | 1 | LS | \$ |
| 202.14 | REMOVE DRIVEWAY | 182 | SY | \$ |
| 202.15 | REMOVE CMP | 132 | LF | \$ |
| 202.16 | REMOVE IRRIGATION PIPE | 3,300 | LF | \$ |
| 202.17 | REMOVE BITUMINOUS SURFACE | 4,900 | SY | \$ |
| 202.18 | ABANDON WELL | 1 | LS | \$ |
| 202.19 | REMOVE CONCRETE SLOPE PAVING | 500 | SY | \$ |
| 202.20 | RELOCATE 20-INCH TWIST CAP AND CONCRETE CHANNEL | 1 | LS | \$ |
| 202.21 | REMOVE ADELIA STREET HOUSE | 1 | LS | \$ |
| 203.01 | EXCAVATION | 297,000 | CY | \$ |
| 203.02 | OVER-EXCAVATION AND BACKFILL | 3,662 | CY | \$ |
| 203.03 | FILL | 21,600 | CY | \$ |
| 213.01 | 18-INCH PVC PIP | 1,672 | LF | \$ |
| 213.02 | 20-INCH HDPE IRRIGATION PIPELINE | 737 | LF | \$ |
| 213.03 | 6-INCH DUCTILE IRON IRRIGATION PIPELINE | 90 | LF | \$ |
| 213.04 | IRRIGATION STAND PIPE | 1 | EA | \$ |
| 213.05 | WEBBER IRRIGATION PIPE AND FACILITY | 1 | LS | \$ |
| 214.01 | IRRIGATION PUMP SYSTEM | 1 | LS | \$ |
| 217.01 | DEWATERING | 1 | LS | \$ |
| 302.01 | TYPE II AGGREGATE ACCESS ROAD AND MANWAY (F) | 2,150 | CY (F) | \$ |
| 302.02 | TYPE II AGGREGATE BASE COOPER STREET AND WEBBER ACCESS ROAD (F) | 2,700 | CY (F) | \$ |
| 402.01 | PLANTMIX BITUMINOUS SURFACE (3-INCH) (F) | 4,350 | SY (F) | \$ |
| 502.01 | CONCRETE TRAPEZOIDAL CHANNEL (STA. 180+58.93 TO STA. 182+06.29) | 148 | LF | \$ |
| 502.02 | CONCRETE TRAPEZOIDAL CHANNEL (STA. 191+42.65 TO STA. 195+38.68) | 396 | LF | \$ |
| 502.03 | CONCRETE RECTANGULAR CHANNEL (STA. 184+31.29 TO STA. 187+20.79) | 290 | LF | \$ |
| 502.04 | CONCRETE CHANNEL TRANSITION (STA. 182+06.29 TO STA. 184+31.29) | 225 | LF | \$ |
| 502.05 | CONCRETE CHANNEL TRANSITION (STA. 187+20.79 TO STA. 191+42.65) | 422 | LF | \$ |
| 502.06 | COOPER BRIDGE STRUCTURE | 1 | LS | \$ |
| 502.07 | IRRIGATION OPEN CONCRETE CHANNEL | 135 | LF | \$ |
| 502.08 | IRRIGATION PUMP BOX | 1 | LS | \$ |
| 502.09 | CATTLE RAMP | 1 | LS | \$ |
| 502.10 | 2-FOOT WIDE U-CHANNEL | 450 | LF | \$ |
| 502.11 | NDOT CULVERT HEADWALL | 1 | EA | \$ |
| 502.12 | CONCRETE SWALE | 38 | LF | \$ |

| BID SCHEDULE | | | | |
|--------------|--|------------------|------|-------|
| ITEM NUMBER | ITEM DESCRIPTION | APPROX. QUANTITY | UNIT | TOTAL |
| 502.13 | IRRIGATION OPEN CONCRETE CHANNEL TERMINATION | 1 | LS | \$ |
| 502.14 | IRRIGATION OPEN CONCRETE CHANNEL LATERAL | 1 | LS | \$ |
| 603.01 | 18-INCH RCP STORM DRAIN (CLASS III) | 46 | LF | \$ |
| 603.02 | 24-INCH RCP STORM DRAIN (CLASS III) | 302 | LF | \$ |
| 603.03 | 30-INCH RCP STORM DRAIN (CLASS III) | 36 | LF | \$ |
| 603.04 | 36-INCH RCP STORM DRAIN (CLASS III) | 41 | LF | \$ |
| 609.01 | NDOT TYPE 2A DROP INLET | 1 | EA | \$ |
| 609.02 | 48-INCH TYPE I STORM DRAIN MANHOLE | 1 | EA | \$ |
| 609.03 | 48-INCH TYPE II STORM DRAIN MANHOLE | 1 | EA | \$ |
| 610.01 | RIPRAP (D50 = 8-INCH) | 3,806 | CY | \$ |
| 610.02 | RIPRAP (D50 = 12-INCH) | 2,850 | CY | \$ |
| 610.03 | UPSTREAM GABION TRANSITION STRUCTURE | 359 | LF | \$ |
| 610.04 | DOWNSTREAM GABION TRANSITION STRUCTURE | 100 | LF | \$ |
| 610.05 | GABION CUTOFF WALL | 1,276 | CY | \$ |
| 613.01 | SIDEWALK RAMP | 2 | EA | \$ |
| 616.01 | 48-INCH POST AND CABLE RAILING | 4,329 | LF | \$ |
| 616.02 | 6-FOOT CHAIN-LINK FENCE | 5,100 | LF | \$ |
| 616.04 | 12-FOOT CHAIN-LINK DOUBLE-SWING GATE | 5 | EA | \$ |
| 616.05 | 20-FOOT CHAIN-LINK DOUBLE-SWING GATE | 6 | EA | \$ |
| 616.06 | REMOVE AND RESET FENCE | 543 | LF | \$ |
| 617.01 | 22-FOOT PRECAST CATTLE GUARD | 1 | EA | \$ |
| 617.02 | 28.5-FOOT PRECAST CATTLE GUARD | 1 | EA | \$ |
| 618.01 | GALVANIZED GUARDRAIL (TRIPLE CORRUGATION) | 590 | LF | \$ |
| 618.02 | GUARDRAIL TERMINAL (FLARED) | 3 | EA | \$ |
| 618.03 | GUARDRAIL TERMINAL (TRAILING END ANCHOR) | 1 | EA | \$ |
| 618.04 | GUARDRAIL-BARRIER RAIL CONNECTION (TRIPLE CORRUGATION) | 2 | EA | \$ |
| 619.01 | MEDIAN MARKER POST | 2 | EA | \$ |
| 623.01 | 100-WATT STREET LIGHT ASSEMBLY | 1 | EA | \$ |
| 623.02 | 100-WATT STREET LIGHT ASSEMBLY (BRIDGE MOUNT) | 2 | EA | \$ |
| 623.03 | 2-INCH PVC CONDUIT ONLY WITH 1 NO. 8 TRACER WIRE | 75 | LF | \$ |
| 623.04 | POWER POLE RISER SYSTEM (FOUR 3-INCH CONDUITS) | 1 | EA | \$ |
| 623.05 | TRANSFORMER PAD (JENSEN UPAD 77 OR EQUAL) | 1 | EA | \$ |
| 623.06 | JENSEN 466 TA OR EQUAL PULL BOX | 1 | EA | \$ |
| 623.07 | NO. 3-1/2 PULL BOX (BURIED) | 1 | EA | \$ |

| BID SCHEDULE | | | | |
|-------------------------|---|------------------|-------------|-----------|
| ITEM NUMBER | ITEM DESCRIPTION | APPROX. QUANTITY | UNIT | TOTAL |
| 623.08 | NO. 5 PULL BOX | 2 | EA | \$ |
| 623.09 | 2-INCH PVC CONDUIT, 2 NO. 4, 1 NO. 8 CONDUCTORS (STREET LIGHT) | 315 | LF | \$ |
| 623.10 | JENSEN 3048 NP OR EQUAL PULL BOX | 1 | EA | \$ |
| 623.11 | 200 AMP SERVICE PEDESTAL | 1 | EA | \$ |
| 623.12 | 3-INCH PVC CONDUIT ONLY WITH PULLSTRING (CONCRETE ENCASED) | 750 | LF | \$ |
| 623.13 | SIX 3-INCH PVC CONDUIT ONLY WITH PULLSTRING (CONCRETE ENCASED) | 250 | LF | \$ |
| 623.14 | 3-INCH PVC CONDUIT WITH 4/C#350 THW-2 (PUMP CONTROL PEDESTAL) | 230 | LF | \$ |
| 623.15 | FOUR 3-INCH PVC CONDUIT ONLY WITH PULLSTRING (CONCRETE ENCASED) | 295 | LF | \$ |
| 623.16 | SEVEN 3-INCH PVC CONDUIT ONLY WITH PULLSTRING (CONCRETE ENCASED) | 410 | LF | \$ |
| 623.17 | 2-INCH CONDUIT 3#4/0 THW-2 (STREET LIGHT PEDESTAL) | 10 | LF | \$ |
| 623.18 | TYPE II BASE FOUNDATION FOR TRANSFORMER PAD | 1 | EA | \$ |
| 623.19 | 2-INCH PVC CONDUIT, 2 NO. 4, 1 NO. 8 CONDUCTORS, 2-INCH PVC CONDUIT ONLY WITH 1 NO. 8 TRACER WIRE | 110 | LF | \$ |
| 624.01 | COOPER STREET DETOUR | 1 | LS | \$ |
| 627.01 | PERMANENT SIGN (GROUND MOUNTED)(METAL SUPPORTS) | 46 | SF | \$ |
| 628.01 | POLYUREA PAINT MARKING (4-INCH DOUBLE YELLOW) | 1,853 | LF | \$ |
| 628.02 | POLYUREA PAINT MARKING (6-INCH SOLID WHITE) | 2,900 | LF | \$ |
| 628.03 | MEDIAN PAINT | 50 | SF | \$ |
| 629.01 | 24-INCH WATERLINE STEEL SLEEVE | 299 | LF | \$ |
| 630.01 | ADJUST CCWRD MANHOLE TO FINISHED GRADE | 1 | EA | \$ |
| 633.01 | REFLECTIVE PAVEMENT MARKERS | 10 | EA | \$ |
| 637.01 | DUST CONTROL (F) | 400 | CAL DAY (F) | \$ |
| 637.02 | PRE-EMERGENT HERBICIDE | 30 | AC | \$ |
| 637.03 | STORM WATER POLLUTION CONTROL (F) | 400 | CAL DAY (F) | \$ |
| TOTAL BID AMOUNT | | | | \$ |

SUBCONTRACTORS EXCEEDING 5% OF BASE BID AMOUNT

PRIME CONTRACTOR MUST INCLUDE ITS NAME ON THIS LIST IF HE OR SHE INTENDS TO PERFORM ANY OF THE LABOR OR PORTIONS OF THE PUBLIC WORK.
THE CONTRACTOR SHALL NOT SUBSTITUTE A SUBCONTRACTOR WHO IS NAMED IN THIS BID, PURSUANT TO NEVADA REVISED STATUTE 338.141. THE FOLLOWING SUBCONTRACTORS SHALL BE UTILIZED. A BIDDER, WHICH FAILS TO LIST A SUBCONTRACTOR (S), REPRESENTS THAT NO SUBCONTRACTOR(S) MEET THE STATUTORY REQUIREMENTS.

| DESCRIPTION OF WORK | SUBCONTRACTORS' FIRM NAME(S) | *BEG | *ETHNICITY |
|---------------------|------------------------------|------|------------|
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_____ **Legal Name of Firm as it Would Appear in Contract**

_____ **Signature of Bidder (Authorized Representative)**

_____ **Today's Date**

*Reference Instructions to Bidders for Definitions (Section 7.3(d)).

17. BUSINESS ENTERPRISE INFORMATION:

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

18. 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.

19. 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.

20.

 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

**CLARK COUNTY BOARD OF COMMISSIONERS
AGENDA ITEM**

| | | |
|--|--|---------------------|
| Issue: | Muddy River Flood Control Project | Back-up: |
| Petitioner: | M. J. Manning, Director of Public Works | Clerk Ref. # |
| Recommendation: That the Board of County Commissioners approve and authorize the County Manager or his designee to sign a memorandum of agreement among Clark County, the United States Army Corps of Engineers, and the Nevada State Historical Preservation Officer, to assure implementation of a treatment plan that mitigates the impact of the flood project for the Muddy River in Clark County, Nevada. | | |

FISCAL IMPACT:

None.

BACKGROUND:

Clark County applied for a permit under Section 404 of the Clean Water Act from the United States Army Corps of Engineers (USACOE) for the construction of the Muddy River Flood Control Project in Clark County, Nevada. In May 2001, an archaeological survey alongside the Muddy River Flood Project resulted in discovery of a site containing prehistoric Native American artifacts. A Treatment Plan, dated July 2003, was prepared and sent to the USACOE for review and the USACOE determined that construction of the flood project may adversely affect a site identified in the Treatment Plan located adjacent to the Muddy River. The USACOE required an agreement among USACOE, the Nevada State Historical Preservation Officer, and Clark County to address the Treatment Plan.

The attached memorandum of agreement details the responsibilities of the County, the USACOE, and the Nevada State Historical Preservation Officer for the Muddy River Flood Control project.

The District Attorney's Office has reviewed and approved this agreement as to form.

APPROVED/AUTHORIZED AS RECOMMENDED/REITERATED REQUEST MANDATE THAT PUBLIC WORKS WORK CLOSELY WITH AFFECTED PROPERTY OWNERS & TOWN ADVISORY BOARD TO DETERMINE WHATEVER POSSIBLE TO MINIMIZE ANY ADVERSE IMPACTS

Respectfully submitted,



M. J. MANNING
Director of Public Works

MJM:JJC:mcc\06-15-04
Attachment (Agreement)

Cleared for Agenda

6/15/04 BK

Agenda
Item #

8/10

**MEMORANDUM OF AGREEMENT REGARDING ARCHAEOLOGICAL
TREATMENT FOR THE MUDDY RIVER FLOOD CONTROL PROJECT,
CLARK COUNTY, NEVADA**

THIS AGREEMENT, made and entered into as of this 15th day of June, 2004, by and among Clark County, Nevada, a political subdivision of the State of Nevada, hereinafter referred to as COUNTY, Nevada State Historical Preservation Officer, hereinafter referred to as NEVADA SHPO, and the United States Army Corps of Engineers, hereinafter referred to as USACOE.

WITNESSETH

WHEREAS, the COUNTY applied for a permit under Section 404 of the Clean Water Act from the USACOE for the construction of the Muddy River Flood Control, in Clark County, Nevada, hereinafter referred to as "Project"; and,

WHEREAS, the USACOE is the lead Federal Agency for this Project and responsible for the compliance with Section 106 of the Nevada State Historic Preservation Act, and consulted with NEVADA SHPO regarding effects of the Project; and,

WHEREAS, the USACOE determined that construction of the Project may adversely affect site 26CK6355, identified in the "Treatment Plan for Site 26CK6355 Located Adjacent to the Muddy River in Clark County, Nevada," dated July 2003, hereinafter referred to as "Treatment Plan," on file at Clark County Public Works, and made part of hereof by this reference, a prehistoric Native American site considered eligible for the National Register of Historical Places under Criterion D; and,

WHEREAS, the USACOE determined that any buried deposits associated with site 26CK6355 that could be present within the Project construction area may be adversely affected by construction of the Project; and,

WHEREAS, in accordance with 36 CFR Part 800, the USACOE acknowledges and accepts the advice and conditions outlined in the Advisory Council on Historic Preservation's "Recommended Approach for Consultation on the Recovery of Significant Information from Archaeological Sites," effective on July 17, 1999, hereinafter referred to as "Published Guidance"; and,

WHEREAS, the COUNTY, NEVADA SHPO and the USACOE desire to enter into a Memorandum of Agreement, hereinafter referred to as "MOA," prior to the construction of the Project, to assure implementation of a treatment plan that mitigates the impact of the Project in compliance with Section 106 of the Nevada State Historic Preservation Act; and,

National
03

WHEREAS, the COUNTY desires to conduct the Treatment Plan to address possible adverse effects to such buried deposits within the Project area prior to construction, rather than halt the Project construction for treatment if buried deposits are uncovered; and,

WHEREAS, Native American tribes that may attach religious or cultural importance to the affected properties have been consulted and have raised no objection to the Project as proposed; and,

WHEREAS, no human remains, associated or unassociated funerary objects or sacred objects, or objects of cultural patrimony as defined in the Native American Graves Protection and Repatriation Act (25 U.S.C. 3001) are expected to be encountered; and,

WHEREAS, the USACOE shall ensure that the following terms and conditions will be implemented in a timely manner and with adequate resources in compliance with the National Historic Preservation Act of 1966 (16 U.S.C. 470).

NOW, THEREFORE, in acknowledgment that the foregoing is reasonably necessary, and for and in consideration of the premises and mutual covenants herein contained, the parties hereto agree as follows:

The USACOE will ensure that the following stipulations are carried out.

STIPULATION I: THE PROJECT

The Project is identified in Clark County Regional Flood Control District 2001 Master Plan Update for the Muddy River and Tributary Washes as Facility Identifier MRLV0010 through 0150, from Gubler Avenue crossing to Lewis Avenue crossing, in Overton, Nevada.

STIPULATION II: TERMS AND CONDITIONS

A. Treatment

The COUNTY will employ a professional archeologist meeting the Secretary of Interior's Professional Qualifications to implement the Treatment Plan. Recovery of significant information from site 26CK6355 will be done in accordance with the Treatment Plan. In the event field conditions require substantial changes to the procedures proposed in the Treatment Plan, the COUNTY will contact the USACOE and request re-opening consultation with NEVADA SHPO. When the fieldwork is complete, The COUNTY will provide NEVADA SHPO and the USACOE with a summary report of the fieldwork performed and a schedule for completion of that work. Upon approval of the summary report by NEVADA SHPO and USACOE the COUNTY will be allowed to proceed with construction.

B. Documentation

1. All reporting activities described in the Treatment Plan will be conducted by, or under the direction of, a professional archaeologist contracted by the COUNTY, meeting standards set forth in the Secretary of the Interior's professional qualification standards (48 FR 44738-9).
2. A draft report will be prepared documenting the results of the Phase 1 investigation following the completion of the field activities. The Treatment Plan for Phase 2 investigation will be finalized based on the results of the Phase 1 investigation. The draft report and treatment plan will be reviewed by the USACOE and NEVADA SHPO. The USACOE and NEVADA SHPO will be afforded thirty (30) days to review the draft report. The USACOE will return comments to the COUNTY to incorporate in the final Phase 1 investigation report. Said process will be followed upon completion of the Phase 2 investigation.
3. All final documentation prepared by USACOE will be sent to NEVADA SHPO and the COUNTY. Copies of the Phase I report and the Phase 2 treatment plan will be sent to the Hopi Indian Tribe.

C. Discovery of Human Remains

In the event of a discovery of any human remains all excavation work in the immediate vicinity would be halted and the USACOE would be contacted. The USACOE will immediately initiate consultation with NEVADA SHPO and the Native American Tribes pursuant to the Nevada Revised Statutes 383.

D. Curation

Any artifacts uncovered during the treatment process will be handled in accordance with 36 CFR 79. At the end of the Project, artifacts and other Project materials will be returned to Clark County (the landowner) for curation at the Clark County Museum unless the County requests that they be curated elsewhere.

E. Duration

This MOA will be in effect until the Parties determine that all of its terms been satisfactory fulfilled but not to exceed eighteen (18) months, unless the signatories agree in writing to an extension for carrying out its terms.

STIPULATION III: AMENDMENTS AND TERMINATION

A. Amendments

If any signatory to this MOA determines that its terms will not or cannot be carried out, or that an amendment to its terms must be made, that party shall immediately consult with the other parties to develop an amendment to this MOA pursuant to 36 CFR 800.6(c) (7) and 36 CFR 800.6(c) (8). The amendment will be effective on the date a copy signed by all of the original signatories is filed with the Council. If the signatories cannot agree to appropriate terms to amend the MOA, a signatory may terminate the agreement by notifying the signatories of its decision in writing.

B. Termination by COUNTY

The COUNTY may terminate this Agreement at any time prior to the commencement of any work on the Project or contracting of the archaeologist for any reason. The COUNTY may also terminate this Agreement after commencement of any work on the project provided the COUNTY complies with the requirements of the Treatment Plan for the excavated area and artifacts. Work authorized by the USACOE permit shall not be performed if this MOA is terminated prior to commencement of the Project or contracting of the archaeologist for any reason. Termination will be a basis for suspending and revoking the USACOE permit by the USACOE.

C. Notice of Termination

In the event that either party elects to terminate as provided in this Section, that party shall provide written notice of termination within thirty (30) days to the other party(ies) and the Agreement shall be deemed terminated upon receipt of such notice.

D. Term

This Agreement shall be in full force and effect from and after the date of execution of the Agreement and shall continue until the obligations of the COUNTY are fulfilled, unless terminated as provided in this Agreement.

E. Waiver

None of the conditions of this Agreement shall be considered waived by either party unless such waiver is in writing and signed by both parties. No such waiver shall be a waiver of any past or future default, breach, or modification of any of the conditions of this Agreement unless expressly stipulated in such waiver.

F. Successors and Assigns

The terms, provisions, covenants, and conditions of this Agreement shall apply to, bind, and inure to the benefit of the parties hereto, their heirs, executors, administrators, legal representatives, successors, and assigns.

G. Captions

The captions appearing at the commencement of the Sections and Articles hereof are descriptive only and for convenience in reference to this Agreement and in no way whatsoever define, limit, or describe the scope or intent of this Agreement, nor in any way affect this Agreement.

H. Governing Law

The laws of the State of Nevada shall be applied in interpreting and construing this Agreement.

I. Third Party/No Partnerships


It is not intended by this Agreement to, and nothing contained in this Agreement shall, create any partnership, joint venture, or other arrangement among COUNTY, NEVADA SHPO, and USACOE. No term or provision of this Agreement is intended to benefit any person, partnership, corporation or other entity not a party hereto, including, without limitation, any broker, and no such other person, partnership, corporation or entity shall have any right or cause of action hereunder.

J. Notices

All notices, demands, requests, consents, approvals or other communications required or permitted to be given hereunder shall be in writing and shall be deemed sufficiently given and received when personally delivered or three business days after deposit in the U.S. Mail, registered or certified mail, return receipt requested, postage pre-paid, to the addresses provided above.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date herein above set forth.

UNITED STATES ARMY CORPS OF
ENGINEERS, SACRAMENTO DISTRICT

BY:  4 MAY 04
ANDREW J. ROSENAU
Chief, Regulatory Branch


NEVADA STATE HISTORIC
PRESERVATION OFFICER

BY:  5/13/04
ALICE M. BALDRICA
Deputy

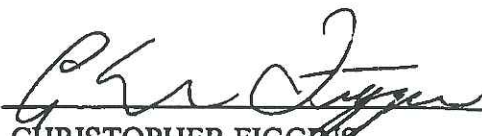
ATTEST:

CLARK COUNTY, NEVADA

BY: 
SHIRLEY B. PARRAGUIRRE
County Clerk

BY: 
THOMAS F. REILLY
County Manager

Approved as to form:

BY: 
CHRISTOPHER FIGGINS
Chief Deputy District Attorney

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**CLARK COUNTY
DEPARTMENT OF PUBLIC WORKS**

**MUDDY RIVER
COOPER STREET BRIDGE**

ISSUED FOR CONSTRUCTION

Bid Number 603040-13

Funded by

Clark County Regional Flood Control District

2013

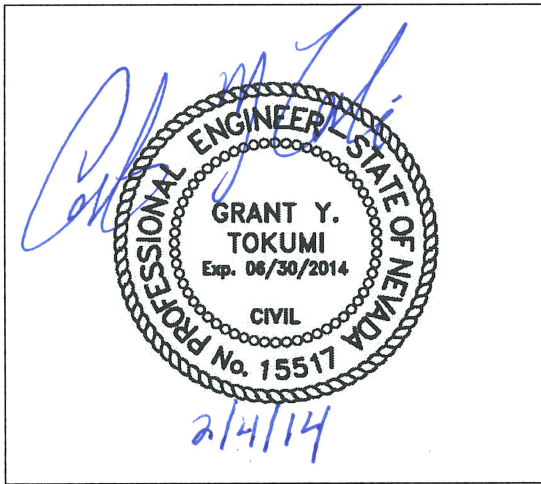
**G. C. WALLACE, INC.
1555 South Rainbow Boulevard
Las Vegas, Nevada 89146**

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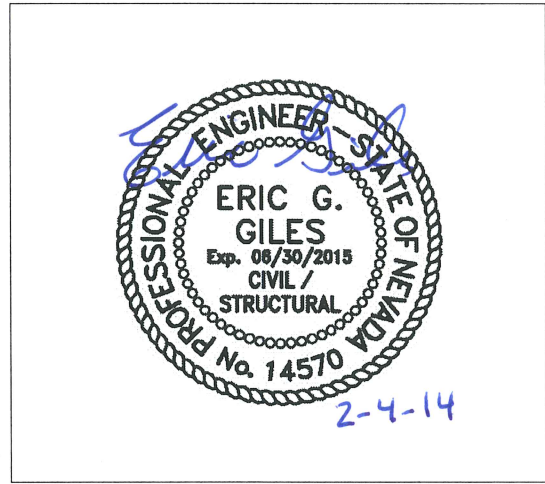
**MUDDY RIVER
COOPER STREET BRIDGE**

The following design professionals certify that the Contract Drawings and Specifications were prepared by them or under their direct supervision. Initials of each registered professional appear in the Table of Contents following the title of each technical specification section for which each professional was responsible.

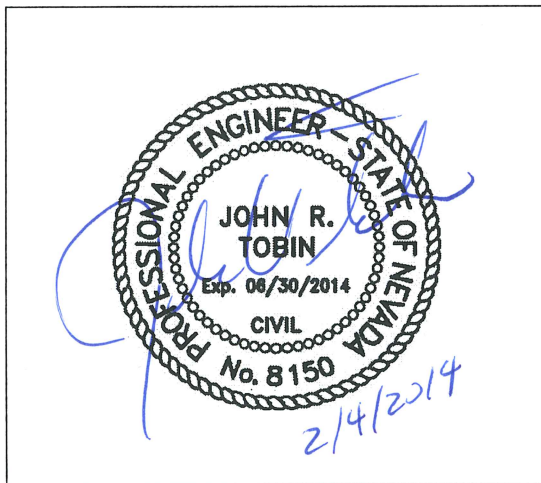
G. C. Wallace, Inc., Engineers / Planners / Surveyors
1555 South Rainbow Boulevard, Las Vegas, Nevada 89146, (702) 804-2000



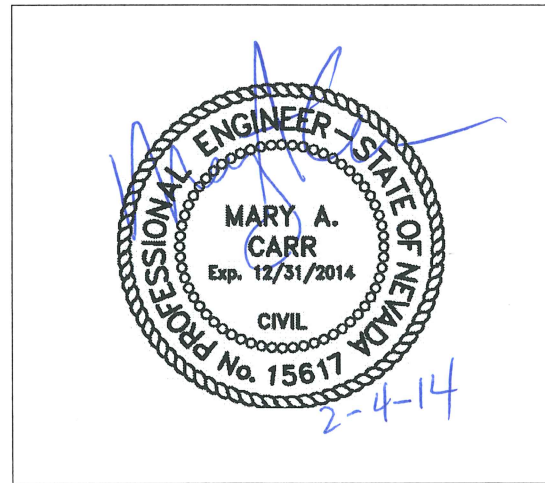
Grant Y. Tokumi, PE (GYT)



Eric G. Giles, PE/SE (EGG)



John R. Tobin, PE (JRT)



Mary A. Carr, PE (MAC)



John T. Brown, PE (JTB)

**SPECIAL PROVISIONS
TECHNICAL SPECIFICATIONS***

**MUDDY RIVER
COOPER STREET BRIDGE**

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**SPECIAL PROVISIONS
TECHNICAL SPECIFICATIONS***

**MUDDY RIVER
COOPER STREET BRIDGE**

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| Section 626 | Final Cleanup | (GYT) |
| Section 627 | Permanent Signs..... | (JRT) |
| Section 628 | Painting Traffic Striping, Pavement Markings and Curb Markings | (JRT) |
| Section 629 | Water Distribution Facilities | (GYT) |
| Section 630 | Sanitary Sewers | (GYT) |
| Section 633 | Pavement Markers | (JRT) |
| Section 637 | Pollution Control | (GYT) |
| Section 703 | Bituminous Materials | (GYT) |
| Section 707 | Joint Material | (GYT) |
| Section 708 | Concrete and Clay Pipe and Drains | (GYT) |
| Section 714 | Paint and Pavement Markings | (JRT) |
| Appendix A | US Army Corps of Engineers Section 404 Permit | |
| Appendix B | Referenced Standard Drawings | |
| Appendix C | Cooperative Agreement between Muddy River Irrigation Company and Clark County Public Works | |

***SPECIAL PROVISIONS/TECHNICAL SPECIFICATIONS:** The initials shown in parentheses after each Special Provision/Technical Specification section title are keyed to the responsible registered design professionals whose seals appear on the Seals Page.

SPECIAL PROVISIONS**DESCRIPTION**

These Special Provisions supplement and modify the *Uniform Standard Specifications for Public Works Construction Off-Site Improvements, Clark County Area, Nevada*, third edition, and all revisions through date of advertisement (hereinafter referred to as the Uniform Standard Specifications). These Special Provisions also supplement and modify the *Standard Specifications for Road and Bridge Construction, State of Nevada Department of Transportation*, 2001 edition (hereinafter referred to as the NDOT Standard Specifications). Generally, sections dealing with the roadway and drainage improvements are based on the Uniform Standard Specifications and the sections covering bridge construction and concrete structures are based on the NDOT Standard Specification. All of the requirements and provisions of Uniform and NDOT Standard Specifications shall apply except where modified by the Drawings and these Special Provisions.

For clarity, each Special Provision section includes a header line which references the appropriate Standard Specification (either Uniform or NDOT) to be used with that section. Where used in these Special Provisions and in both Standard Specifications, the references to State, Department, Contracting Agency, or Engineer shall refer to Clark County.

The following Section is added:

SECTION 100**GENERAL REQUIREMENTS****100.01 LOCATION AND SCOPE**

The work to be performed under this Contract is for the construction of Muddy River Cooper Street Bridge and related appurtenances located in Overton, Nevada, along the Muddy River from Ramos Ranch Road to Ingram Avenue. The improvements will generally consist of, but not be limited to, site clearing, scarification, removal and disposal of structures and obstructions, excavation and embankment to proposed grade elevations, aggregate access road, concrete-lined channel, earthen channel, earthen channel with riprap-lined sides, gabion-lined channel, a gabion-lined transition structure, gabion cutoff wall, a bridge structure and roadway improvements at Cooper Street, utility relocations, fencing and gates, and appurtenances and other improvements as specified and as shown on Drawings. At the completion of construction, the work shall also encompass demolition and removal of the house at 410 North Adelia Street including verification of septic tank on-site and, if present, septic tank abandonment.

100.02 REFERENCE SPECIFICATIONS AND DRAWINGS

- (a) The *Uniform Standard Specifications for Public Works Construction Off-Site Improvements, Clark County Area, Nevada*, latest edition at the time of bid, constitute the Standard Specifications for this project, is an integral part of the contract, and is hereby incorporated therein by reference. All requirements and provisions of said specifications shall be adhered to in the performance of this contract, except where otherwise provided herein or otherwise shown on the Contract Drawings, and are herein referred to as the "Standard Specifications."

Likewise, the *Uniform Standard Drawings for Public Works' Construction Off-Site Improvements*, latest edition at the time of bid, constitute the Standard Drawings for this project. Said Standard Drawings shall be adhered to in the performance of this contract, except where otherwise provided herein or otherwise shown on the Contract Drawings, and are herein referred to as the "Standard Drawings." The current revision must be used at the time of the bid date and can be verified through the Internet at <http://www.rtcsonthernnevada.com> or at the Regional Transportation Commission at 702-676-1500.

NOTE: It is the Bidder's responsibility to acquire the latest revisions to the "Standard Specifications" and "Standard Drawings."

- (b) Copies of the above referenced "Standard Specifications" and "Standard Drawings" are available for reference at the Office of the Engineer. Standard Specifications and Standard Drawings may also be viewed and downloaded from the Internet at <http://www.rtcsonthernnevada.com/mpo/streets/>. Direct questions to the RTC at (702) 676-1500.

Copies of the NDOT Standard Specifications and NDOT Standard Plans may be purchased from Nevada Department of Transportation, 1263 South Stewart Street, Carson City, Nevada 89712 and are available online at <http://www.nevadadot.com>

- (c) As provided in Section 107.07 of these specifications, all temporary traffic control devices for the project shall be in accordance with the latest edition of the *Manual on Uniform Traffic Control Devices (MUTCD)*.
- (d) All work shown on the Contract Drawings which refer to the State of Nevada Standard Plans shall be constructed in accordance with the Nevada Department of Transportation, "2010 Standard Plans for Road and Bridge Construction," available on the internet at <http://www.nevadadot.com>.
- (e) The *Manual on Uniform Traffic Control Devices (MUTCD)*, latest edition, is also an integral part of this contract and is hereby incorporated therein by reference. The official version is available on-line at http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/pdf_index.htm.
- (f) All work on water distribution facilities shall be in accordance with the *Uniform Design and Construction Standards for Water Distribution Systems*, latest edition, as published by the Las Vegas Valley Water District available on the Internet at <http://www.lvwd.com>. These standards are an integral part of this contract and hereby incorporated therein by reference.
- (g) Work on any public utilities shall be performed in accordance with the Standard Specifications except where modified by the utilities' own standards.
- (h) The *Design and Construction Standards for Wastewater Collection Systems*, latest edition, available from the Clark County Water Reclamation District (702) 434-6600, on the Internet at <http://www.cleanwaterteam.com>, is an integral part of this contract and hereby incorporated therein by reference.
- (i) Materials approved by Clark County Public Works, Construction Management Division, 500 South Grand Central Parkway, P. O. Box 554000, Las Vegas, Nevada 89155-4000

are listed on the Clark County Public Works Webpage at http://www.clarkcountynv.gov/Depts/public_works/construction_mgmt/Pages/Materials.aspx.

100.03 CONTRACTOR'S UTILITIES

In accordance with Section 210 of the Standard Specifications, the Contractor shall furnish all water and facilities necessary for the construction under the contract at his own expense. The Contractor shall provide his own telephone, electric power, and any other utility service fees or charges required in performance of the work under the contract and shall pay all installation charges and monthly bills in connection therewith.

100.04 PROJECT SIGNS

Two project signs shall be provided by the Contractor for placement near the limits of the project. The Contractor shall erect said signs at locations as approved by the Engineer. The signs shall be erected at such time as construction activity is visible to the public.

The Contractor shall properly maintain said signs throughout the construction until final completion of the contract, or as directed by the Engineer, refer to sign detail at the end of this section.

Information regarding prevailing wage rates shall be added to the reverse side of every project sign in minimum 3-inch high lettering. The required verbiage shall be as shown below.

THIS IS A PREVAILING WAGE PROJECT

The hourly labor rates for this project are determined by the State of Nevada. Information on the rates can be obtained by calling the Office of the Labor Commissioner at (702) 486-2650. Reference PWP# CL-2013-247.

ESTE ES UN PROYECTO DE SALARIOS DETERMINADOS

El salario laboral correspondiente por hora es determinado por El Estado de Nevada. Información acerca de los salarios puede ser obtenida llamando a la Comisión Laboral al (702) 486-2650. Numero PWP de referencia CL-2013-247.

The Contractor's cost for furnishing, installing, and maintaining these signs shall be included in the bid amount for other related items of work and will not be measured or paid for separately.

100.05 GEOTECHNICAL REPORT

A Geotechnical Report for this project was prepared by Nova Engineering and Environmental and is on file in the Office of the Project Engineer at the Clark County Government Center, 500 South Grand Central Parkway, Suite 2001, Las Vegas, Nevada, 89155 where it may be examined by prospective bidders.

Copies of the Geotechnical Report can be purchased for \$50 from Nova Engineering and Environmental. When purchasing the report, please provide a minimum of 24 hours' advance notice to allow sufficient time for printing.

The Geotechnical Report prepared for this Contract and other record of subsurface investigations and tests are referenced only for the inspection by bidders. It is understood and agreed that such subsurface information, whether included in the plans, special provisions, or otherwise made available to the bidder, was obtained and is intended for the owner's design and estimating purposes only. Bidder expressly waives any right to rely on such information for any purpose. Such information has been made available only for the convenience of the bidders.

Bidders shall make their own interpretations of the data contained in said report, and the Contractor shall not be relieved of liability under the contract for any loss sustained as a result of any variance between conditions indicated by, or deduced from, said report and the actual conditions encountered during the progress of work.

Payment for additional work and materials required to remove unsuitable materials beyond the limits of excavation of subgrade material encountered during the progress of work will be in accordance with Subsection 109.03, "Extra and Force Account Work."

100.06 LUMP SUM BID BREAKDOWN

The purpose of the bid breakdown shall be to provide a basis for partial payment and/or analysis by the Engineer before awarding the contract. Any and all of the bidders may be required to prepare an itemized bid breakdown, on a form to be provided, at any time after the opening of bids as requested by the Engineer. This form is intended to include all major items, and the lump sum bid computed therefore will be the maximum compensation for all work and materials whatsoever furnished by the Contractor in order to comply with the Contract Drawings and Specifications in their present form, whether or not indicated in the approximate quantities or pertaining to the items or work listed therein.

100.07 PARTNERING

The Owner desires to encourage the foundation of a cohesive partnership with the Contractor and its subcontractors. This partnership will be structured to draw on the strengths of each organization to identify and achieve reciprocal goals. The objectives are effective and efficient Contract performance, intended to achieve completion within budget, on schedule, and in accordance with Drawings and specifications.

100.08 DIGITAL VIDEO RECORDING

Prior to initiating construction operations, Contractor shall perform digital video recording of the entire project, its full length and width. The Contractor shall also include or add as necessary, any areas to be disturbed for material storage, employee parking or equipment storage.

The video documentation shall be completed in digital format; it shall be a minimum resolution of 1920x1080 pixels, and at 60fps (frames per second). The actual date of recording shall be date-stamped within each frame of the video. Approval of the video must be obtained from the Engineer prior to the commencement of any clearing and grubbing operations.

A DVD copy of the digital video recording shall be submitted to the Engineer, in the format compatible with standard DVD players.

All costs associated with the video recording specified in this subsection shall be considered incidental to other related items of work and no separate payment will be made unless specifically indicated elsewhere in the Special Provisions.

100.09 UTILITY RELOCATIONS

Contractor shall identify and coordinate the relocation of existing utility lines, removal of existing overhead and underground services, and construction of new services as required to be completed in order to meet the schedule for this Contract.

Contractor shall incorporate into Contractor's schedule, mutually agreed upon time frames for utility construction by other contractors to ensure that appropriate windows of opportunity are available for utility relocations without hampering or delaying Contractor's own operation.

Contractor shall provide each utility company with mutually agreed upon notification time, sufficient to construct new or relocate existing facilities and avoid construction conflict.

The following list identifies the utility companies and their respective contacts for this project:

Baja Broadband, Jim Brown, (435) 703-1055

Moapa Valley Telephone, John Lyon, (702) 397-2225

Moapa Valley Water District, Joe Davis, (702) 397-6893

Muddy Valley Irrigation Company, Scott Millington, (702) 398-7310

Overton Power District #5, Brett Gale, (702) 397-3026

Clark County Water Reclamation District, Daniel Hammond, (702) 668-8165

Southwest Gas Corporation, Alyse Baker, (702) 365-2077

The need for Contractor's coordination exists for all utilities regardless of specified alerts to do so.

100.10 OVERHEAD POWER LINE SAFETY

The Nevada Legislature enacted NRS 455.200 to 455.250, Overhead Power Line Safety Law, requiring that utilities be notified and give consent before Work is performed near overhead power lines. Contractor shall call Overton Power District #5 (OPD) prior to working with hand tools or operating equipment near overhead power lines.

If necessary, additional conditions may be required by OPD before consent to do the Work is given; these could include:

- Reasonable limits on the time, place, and manner of the Work.
- Placing barriers to prevent contact with the lines.
- Temporarily disconnecting the power to the lines.

Work to be done by OPD as a result of these conditions shall be started within 5 working days of receiving notice of Work planned near an overhead line or executing an agreement on payment for preventative work needed to meet these conditions.

Penalties of up to \$1,000 per day could be imposed for violation of this law. Contact OPD with questions regarding this law.

Contractor performing the Work in the vicinity of the overhead line carrying high voltage shall pay actual expenses incurred by the public utility in carrying out the preventative measures required.

100.11 PROJECT CONSTRAINTS

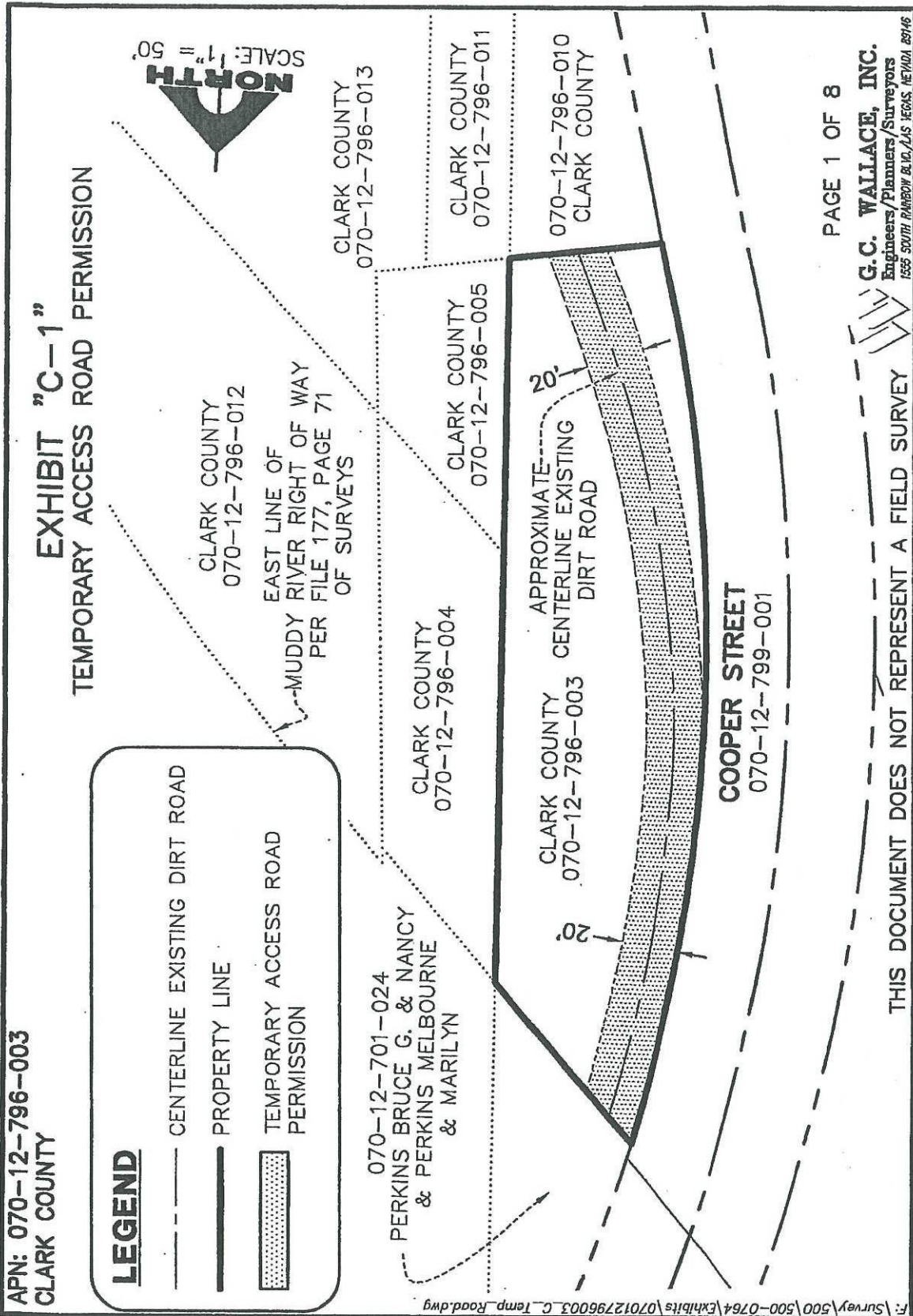
Contractor shall not remove the existing Perkins/Webber access road along the proposed channel until after the new Perkins access road has been constructed on the east bank of the channel. Refer to the temporary access road location shown on the following Exhibit C-1. Either the existing Perkins/Webber access road or the new Perkins access road shall remain accessible to adjacent property owner throughout construction duration.

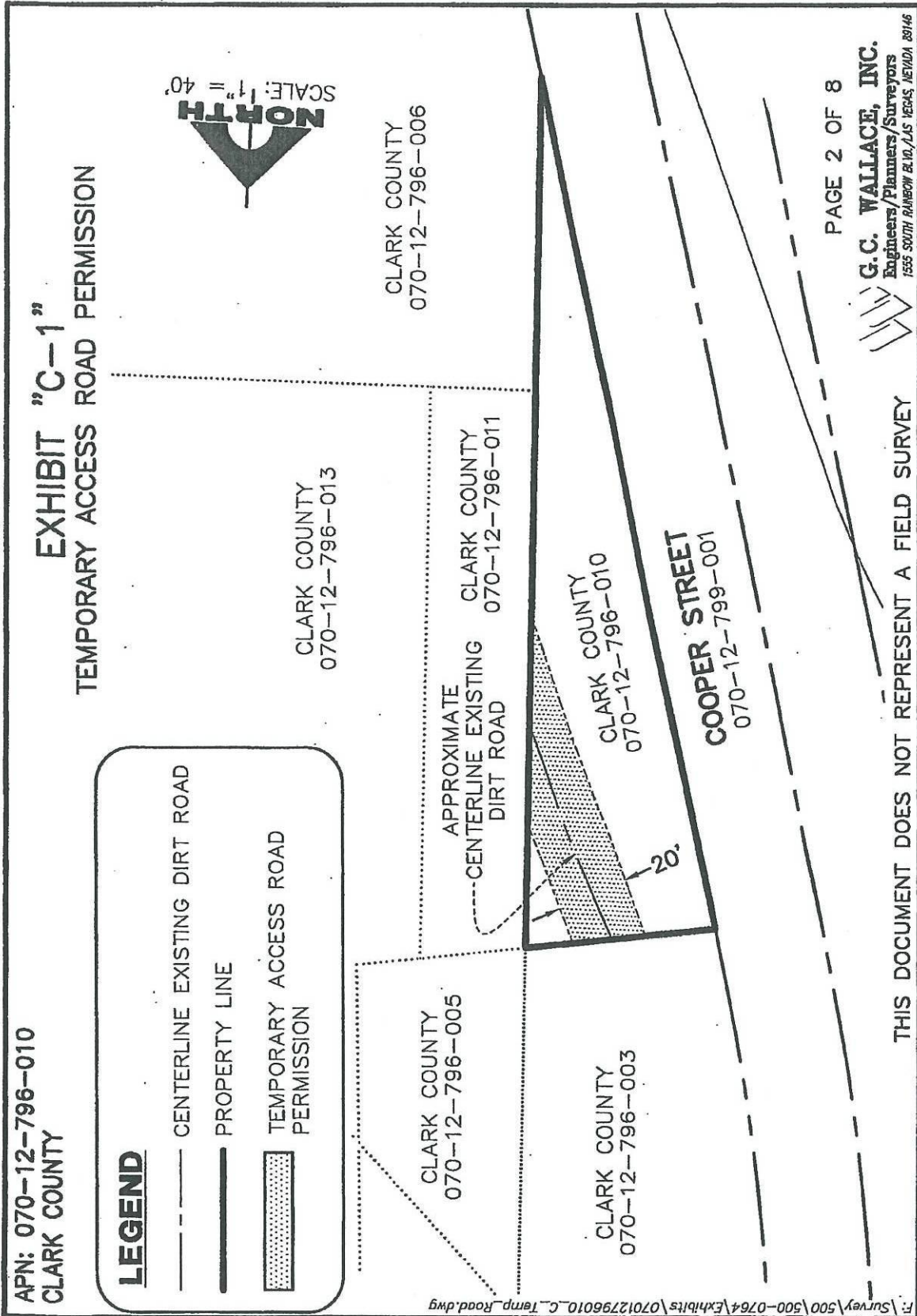
Prior to removal of the Webber fencing on Parcels 070-12-701-002 and 070-12-701-008, Contractor shall notify Engineer 10 calendar days in advance.

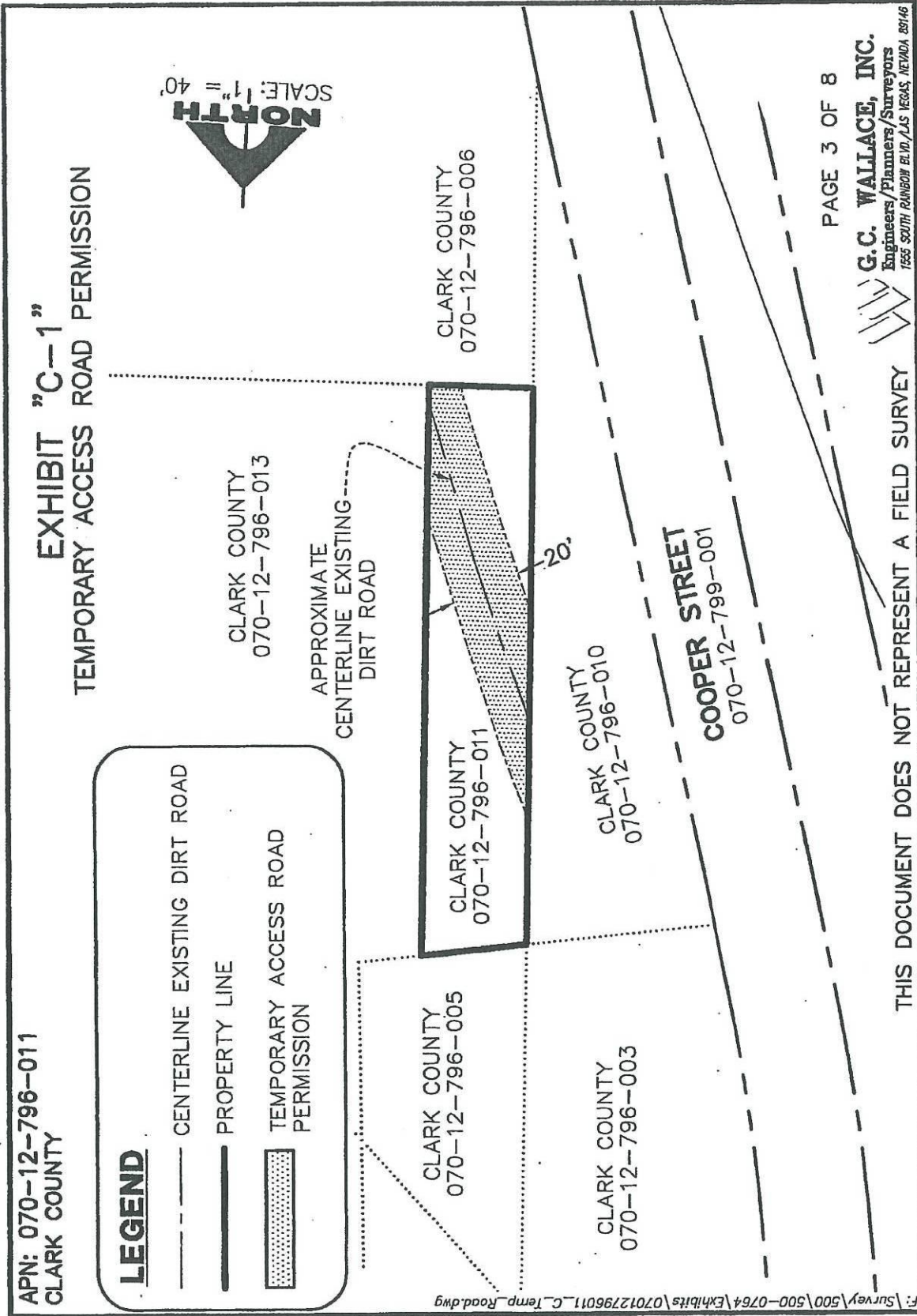
In the vicinity of Sta. 201+00, Contractor shall maintain access to the river during construction operations or make water available to livestock at all times using a method acceptable to the Engineer.

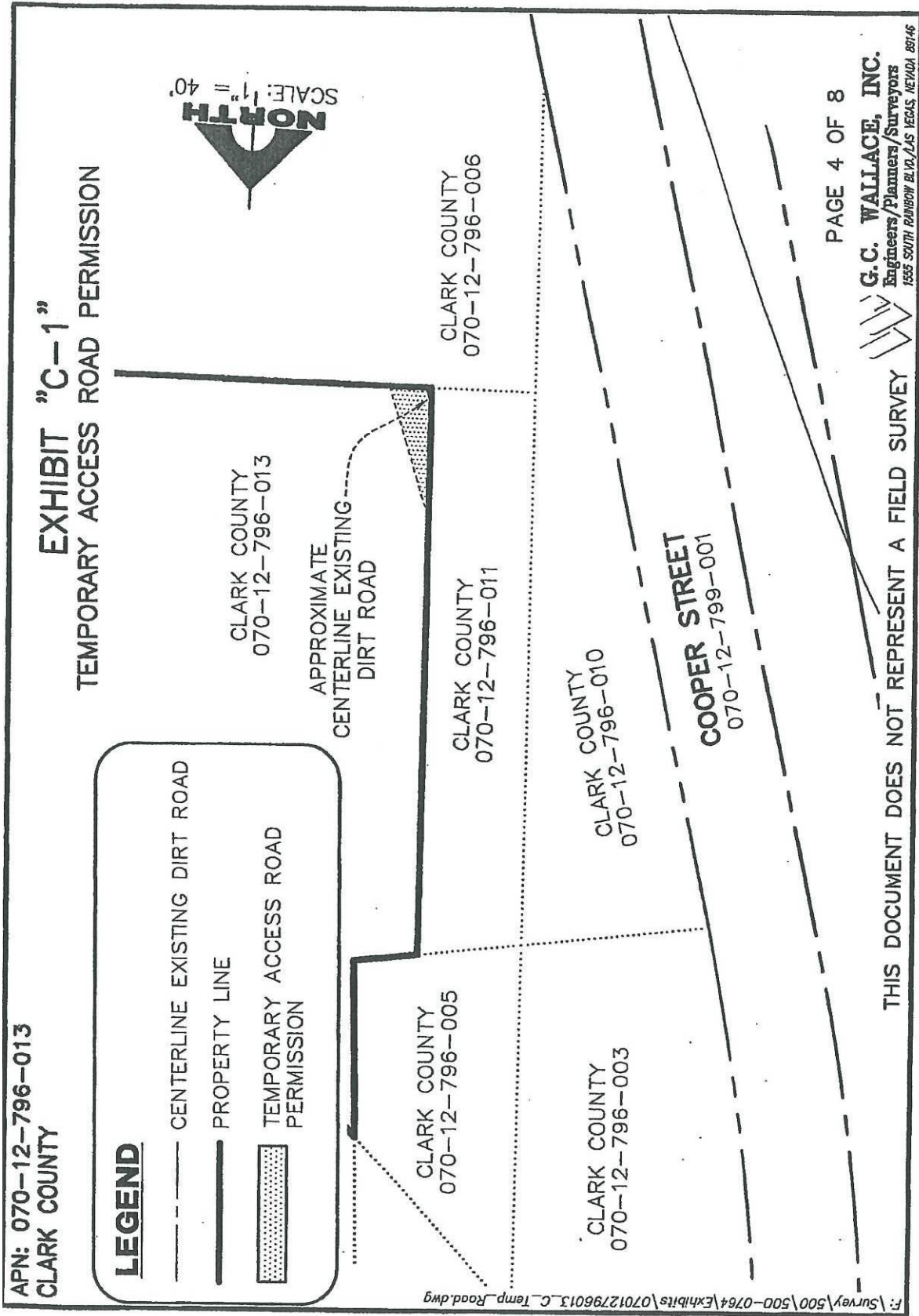
Contractor shall not encroach into the existing thalweg during construction operations, except as shown on the Drawings.

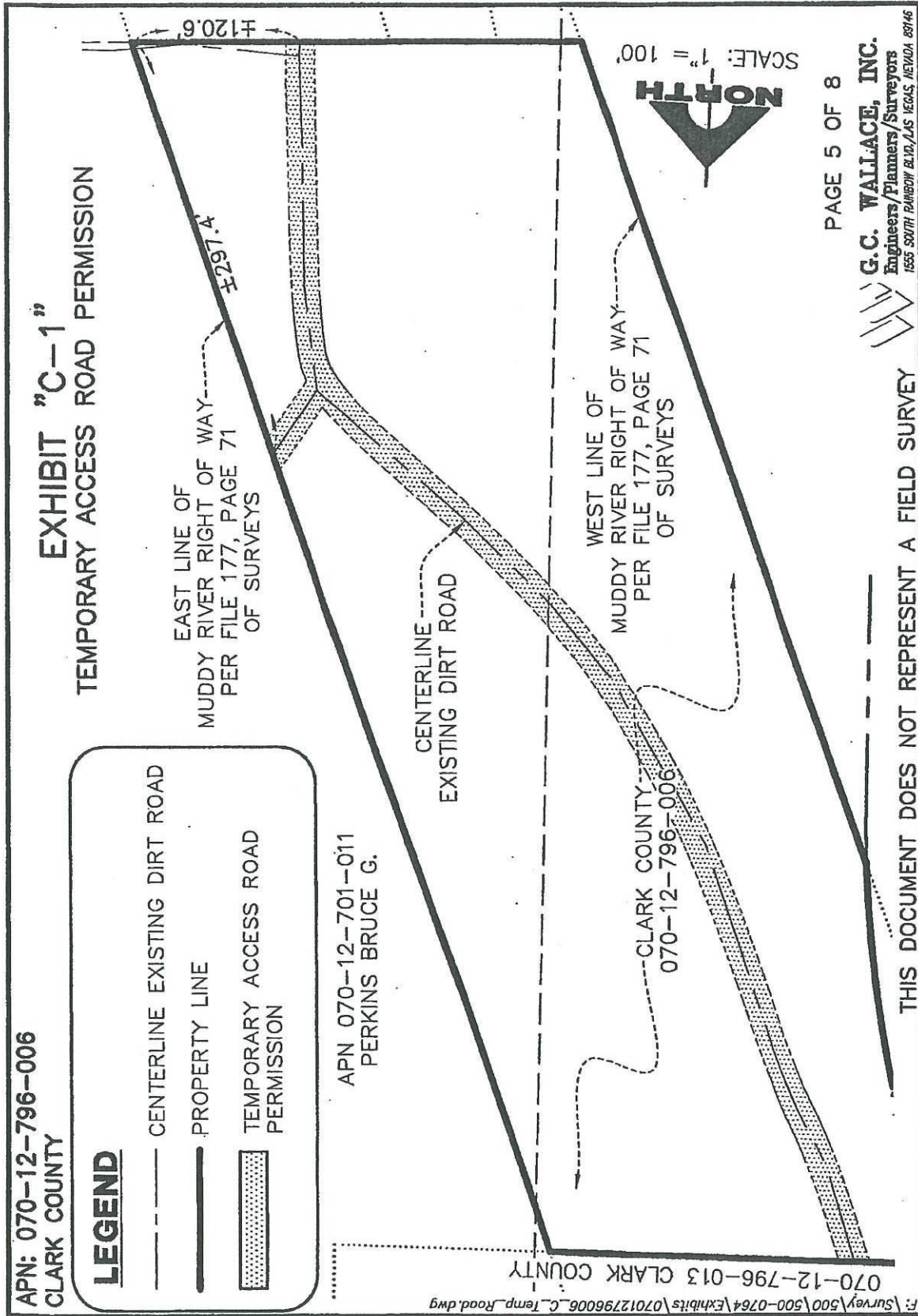
Contractor shall coordinate construction of the waterline steel sleeve and the irrigation pipeline at Sta. "IL" 23+50 with the Moapa Valley Water District (MVWD) and the Muddy Valley Irrigation Company (MVIC) to facilitate MVWD's installation of carrier pipe in the steel sleeve and to construct MVIC's irrigation facilities. Contractor shall also provide necessary staging and construction area for MVWD's delivery, storage, and handling of the carrier pipe, and coordinate work time and location for MVWD to install carrier pipe within the casing. The estimated time for this work shall be considered two weeks; however, site conditions could increase the time required.

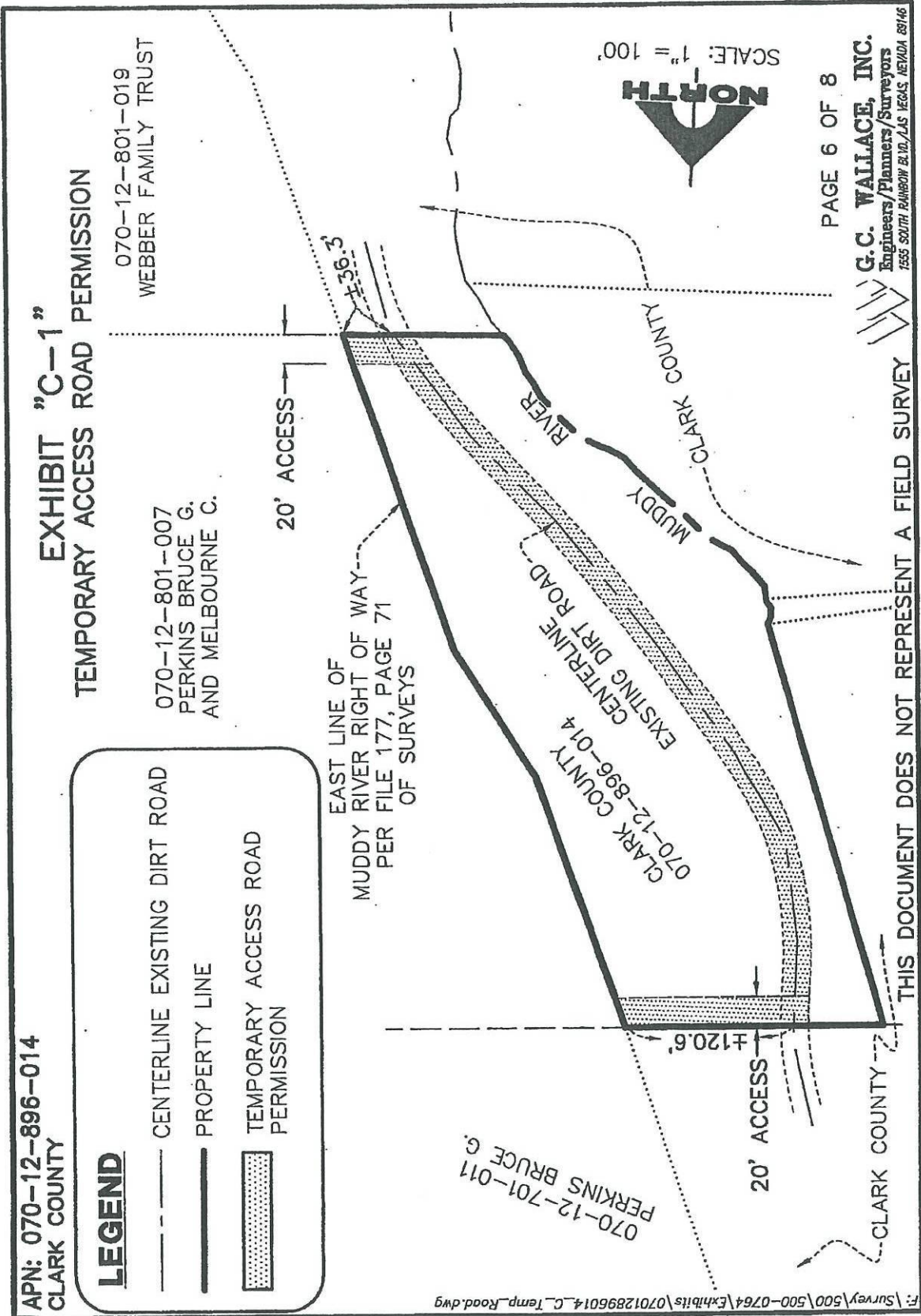


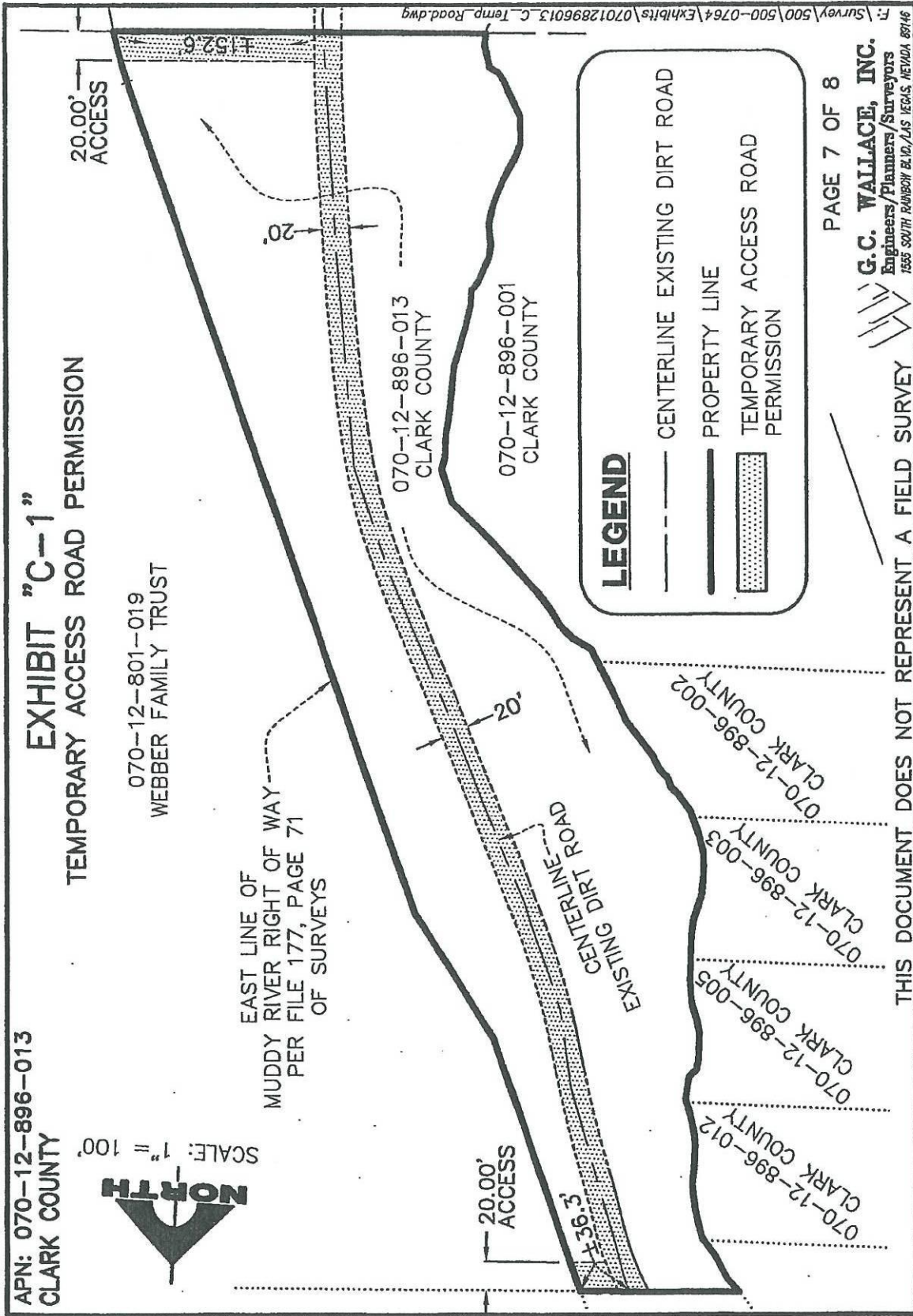


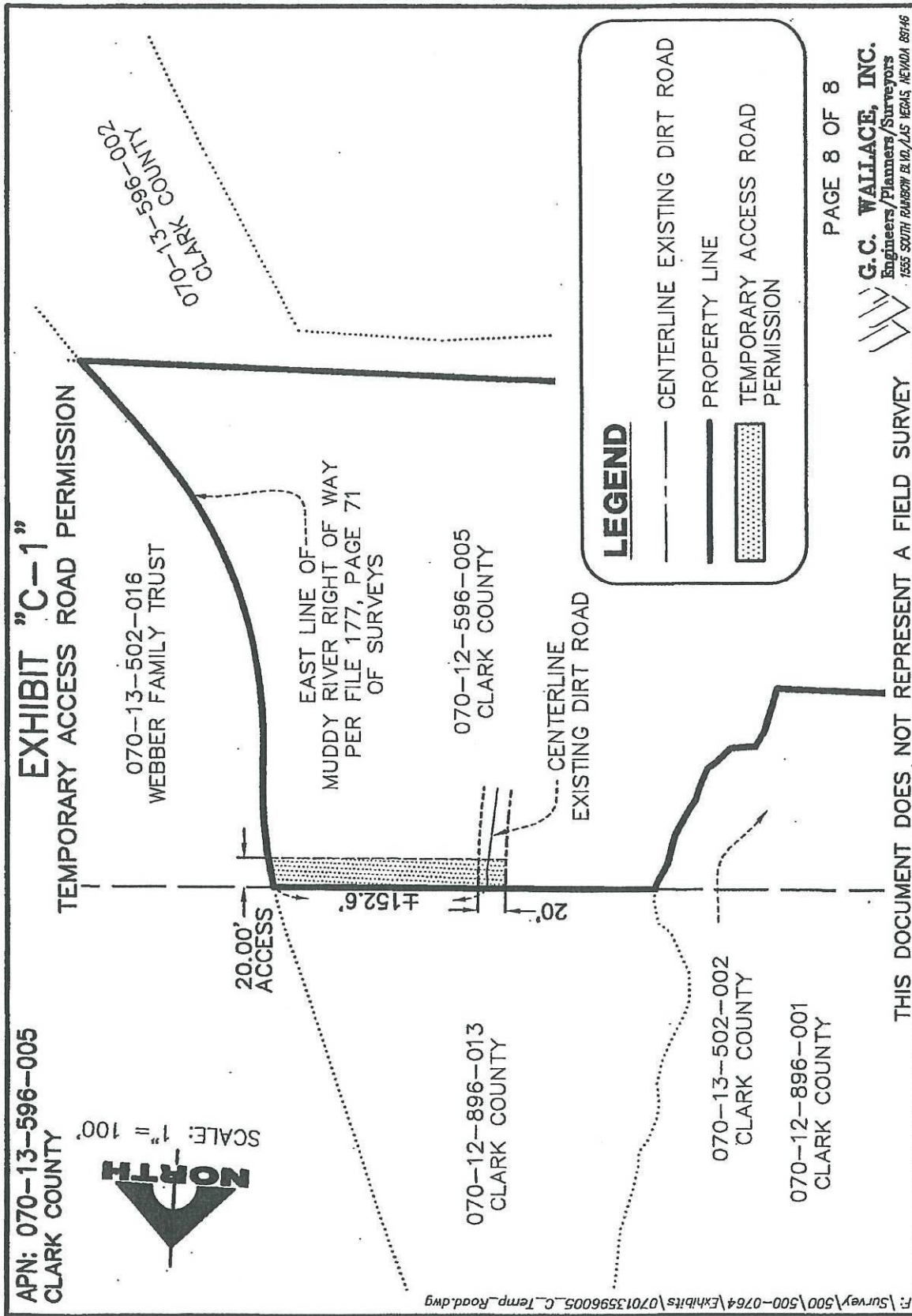


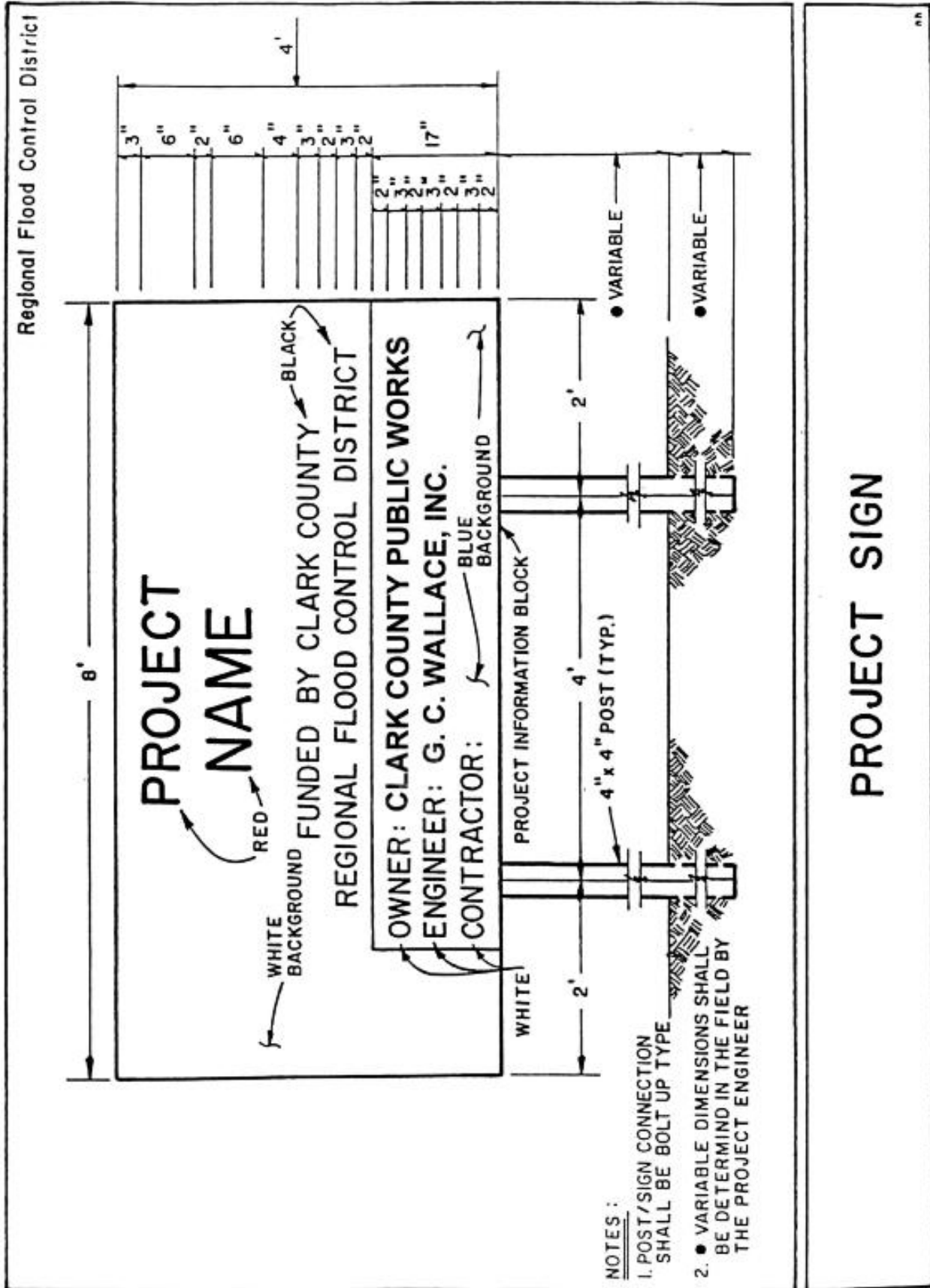












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SECTION 101

DEFINITIONS AND TERMS

101.34 MAJOR CONTRACT ITEM

Change the first sentence of paragraph A to read:

A "Major Item" shall be defined to be any individual bid item included in the proposal that has a total cost equal to or greater than \$500,000 or 10 percent of the total contract cost, whichever is the lesser amount.

Add the following subsections:

101.76 SERVICE CONNECTION

- A. A service connection shall be defined as all or any portion of a utility, including sewer and water laterals, conduit, wire, cable or duct, including meters, between a utility distribution line and an individual customer or customers.

101.77 NOMINAL DIAMETER

- A. Nominal diameter shall be defined as the inside diameter of a standard pipe as specified by the manufacturer.

101.78 DEWATERING

- A. Dewatering shall be defined as removal and/or lowering of any surface or subsurface water by a method chosen by the Contractor and acceptable to the Engineer, which results in a ground moisture content which enables construction to be carried out under relatively dry and stable conditions.
- B. Payment will be made for dewatering as specified in Section 217.

101.79 UNSUITABLE MATERIAL

- A. Unsuitable Material shall be defined as soils that fail to meet the classification of AASHTO Soil Classification System (AASHTO M 145 or ASTM D3282).

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SECTION 104

SCOPE OF THE WORK

104.02 INCREASED OR DECREASED QUANTITIES AND CHANGE IN CHARACTER OF WORK

Paragraph D of this subsection is changed to read as follows:

- D. If it is found that the quantity of any major item, other than (F) items, required to complete the work underruns or overruns less than 25 percent of the proposed quantity, payment for the work performed will be made at the contract unit price for the quantity of work actually performed.

Paragraph F of this subsection is changed to read as follows:

- F. Whenever an overrun or underrun of more than 25 percent of the original bid quantity for one or more major contract items, other than (F) items, occurs, either party to the contract may demand a supplemental agreement to be negotiated satisfactory to both parties.

104.04 MAINTENANCE OF TRAFFIC

Paragraph A of this subsection is changed to read as follows:

- A. Contractor shall maintain all school walk routes affected by construction on each school day for any school's walking attendance boundary within the project limits for the following time periods:
 1. From the 30-minute period before through a minimum of 5 minutes after each school day begins, and
 2. From a minimum of 5 minutes before through 30 minutes after each school day ends.

Contractor shall be responsible to verify the attendance boundary for the specific school from the Clark County School District website located at www.ccsd.net. Contactor shall be responsible to contact the specific school to determine the time school begins and ends.

Public traffic shall be maintained for the duration of the project, with the exception of specific closures described in this subsection.

Unless otherwise specified in this subsection, Contractor shall construct the required improvements in a manner and sequence that maintains all existing vehicular travel lanes, lane widths, and driveway accesses.

Construction operations, storage, stockpiling of materials, and parking of vehicles and equipment shall maintain a minimum distance of 30 feet from the edge of the traveled way over which public traffic is directed, unless separated by guardrail or concrete barrier rail.

Cooper Street may be closed by the Contractor at the Muddy River crossing for the purpose of constructing the Cooper Street Bridge. Contractor shall construct and maintain a detour prior to approval of the closure, including appropriate detour signing and barricading. A detour alignment has been provided in the Contract Documents for

convenience of and use by the Contractor. The final detour built shall be the responsibility of the Contractor.

Travel lanes shall only be closed while active work is taking place.

SECTION 105

CONTROL OF WORK

105.02 PLANS AND WORKING DRAWINGS

Add following to this subsection:

Contract Drawings applicable to the work to be performed under the contract have the title and drawing number as follows:

MUDDY RIVER COOPER STREET BRIDGE
L-1942

Add the following subsections:

105.02.01 SUBMITTAL PROCEDURES

- A. Contractor shall accompany submittals by cover sheet as specified in Section 106.
- B. Schedule submittals to expedite the Project, and deliver to Engineer. Coordinate submission of related items.
- C. For each submittal for review, allow 15 calendar days (30 calendar days if NDOT or other third party approval is required) excluding delivery time to and from the Contractor.
- D. Identify variations from Contract Documents and Product or system limitations which may be detrimental to successful performance of the completed Work.
- E. Provide space for Contractor and Engineer review stamps.
- F. Revise and resubmit, identify all changes made since previous submission.
- G. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report any inability to comply with provisions.
- H. Submittals not requested will not be recognized or processed.

105.02.02 SHOP DRAWING SUBMITTALS

- A. Furnish to the Engineer for review a minimum of one original and six copies of each shop drawing.
 - 1. The term "shop drawing" shall be understood to include, but not be limited to, fabrication and installation drawings, lists, graphs, and operating instructions.
 - 2. Unless otherwise required, shop drawings shall be submitted at a time sufficiently early to allow review by Engineer and to accommodate the rate of construction progress under the Contract.
 - 3. Contractor shall not submit shop drawings to the Engineer until Contractor has reviewed them against requirements of the Contract Documents himself. Such reviews shall be indicated by a stamp placed on each submittal certifying that Contractor has reviewed the submittal.

4. Contractor shall not submit copies of Contract Drawings, Standard Drawings, and faxes to serve as shop drawings.
- B. Within 15 calendar days (30 calendar days if NDOT or other third party approval is required) after receipt of prints, Engineer will return prints of each drawing to Contractor with comments noted. Contractor shall make a complete and acceptable submittal to the Engineer by the second submission of drawings. Owner reserves the right to withhold monies due Contractor to cover additional costs of review beyond the second submission.
- C. If 3 prints of the drawing are returned to Contractor marked APPROVED or NO EXCEPTIONS TAKEN, a formal revision of the drawing will not be required.
- D. If 3 prints of the drawing are returned to Contractor marked APPROVED AS NOTED, ACCEPTED AS NOTED, or MAKE CORRECTIONS NOTED, a formal revision of the drawing will not be required.
- E. If 1 print of the drawing is returned to Contractor marked REVISE/RESUBMIT, AMEND-RESUBMIT, or REJECTED-RESUBMIT, Contractor shall revise the drawing and shall resubmit one original and 6 copies of the revised drawing to Engineer.
- F. Fabrication of an item shall not be commenced before Engineer has reviewed the pertinent shop drawings and returned copies to Contractor marked APPROVED or APPROVED AS NOTED. Revisions indicated on shop drawings shall be considered as changes necessary to meet requirements of Drawings and Specifications and shall not be taken as the basis of claims for extra work. Contractor shall have no claim for damages or extension of time due to any delay resulting from Contractor's having to make the required revisions to shop drawings (unless review by Engineer of the drawings is delayed beyond a reasonable period of time and unless Contractor can establish that Engineer's delay in review actually resulted in delay in Contractor's construction schedule). The review of drawings by Engineer will be limited to checking for general agreement with Specifications and Drawings, and shall in no way relieve Contractor of responsibility for errors or omissions contained therein, nor shall such review operate to waive or modify any provision contained in the Specifications or Drawings.
- G. Engineer's review of shop drawing submittals shall not relieve Contractor of the entire responsibility for the correctness of details and dimensions. Contractor shall assume all responsibility and risk for misfits due to errors in Contractor submittals. Contractor shall be responsible for the dimensions and the design of adequate connections and details. Fabricating dimensions, quantities of materials, applicable code requirements and other Contract requirements shall be Contractor's responsibility.
- H. Engineer shall have the authority to reject any product upon completion of review of the suppliers' submittals in regard to proof of acceptability of the product.

105.02.03 MIX DESIGN SUBMITTALS

- A. Submit mix designs as described in Sections 501 and 510 of the specifications for Portland cement concretes. Separate mix designs shall be prepared for each class and compressive strength of Portland cement concrete and for roller compacted concrete. Engineer will require 10 working days (30 calendar days if NDOT or other third party approval is required) to review mix design submittals. Contractor shall submit the mix designs early enough to allow this review without impacting the construction schedule. Rejection of a mix design shall not be grounds for extension of Contract time or incidental

damages. With the exception of specific design requirements, an IQAC mix design may be used. If an IQAC mix design is selected, Contractor shall submit the mix design number to the Engineer.

- B. The mix designs shall be based upon existing stockpiles. Mix designs prepared for previous projects will be accepted only if accompanied by a cover letter from the engineer who originally prepared the mix design. The cover letter shall indicate that the stockpile materials have been retested and are substantially unchanged, and that the mix design is still valid and in compliance with the plans and specifications.
- C. Documentation and certifications for all materials used in the mix shall be submitted with the mix design. These shall include, but are not limited to: Portland cement, admixtures, and curing compounds.
- D. Any variation from a mix design or changes in any component used shall be approved by Engineer, prior to incorporation of the altered material in the project. Engineer may require new mix designs representative of the change as a condition of approval.

105.02.04 QUALITY CONTROL SUBMITTALS

- A. Submit quality control information as specified in Section 106.

105.02.05 CONTRACTOR'S REQUEST FOR INFORMATION/CLARIFICATION (RFI/RFC)

- A. In the event that Contractor determines that some portion of the Contract Documents requires additional information or interpretation, Contractor shall submit a written statement to Engineer requesting clarification on the issue. Contractor shall provide such request to Engineer immediately upon discovery. Prior to the submittal of the RFI/RFC, Contractor shall carefully study and review the Contract Documents to ensure that the requested information is not contained therein. Submit only one issue to be clarified per form.
- B. Contractor shall include in a properly written RFI/RFC the following information:
 1. Bid number and title, RFI/RFC number (sequentially numbered), date, person requesting clarification, and signature.
 2. A clear and concise summary of the issue in question and why further clarification or information is required from Owner.
 3. The Drawing number shall be identified and the location on the Drawing sheet.
 4. The Specification section, page number, and paragraph shall be identified.
 5. Where applicable, Contractor shall include Contractor's own interpretation of the Drawings or Specifications and why Contractor believes such an understanding is correct.
 6. In cases requesting clarification of coordination issues, Contractor shall include a suggested solution with necessary drawings or sketches with the RFI/RFC.
- C. Only RFI/RFCs submitted by the Contractor will be accepted. Any clarifications required by the Subcontractors, Manufacturers, or Suppliers of the Contractor shall be properly routed through Contractor to Engineer on the appropriate form. All RFI/RFCs shall be limited to clarifications of the Contract Documents. RFI/RFCs shall not be used for the purpose of notifying Owner of the following:

1. To request approval of submittals.
 2. To request approval of substitutions.
 3. To request changes that entail additional cost or credit.
 4. To request methods of performing work different from those shown or specified.
- D. If Engineer determines that the RFI/RFC is not in relation to clarifications relating to the Contract Documents, such RFI/RFC will be returned to Contractor with an explanation, which may include references to other sections within the Contract for Contractor to follow.
- E. **Improper or Frivolous RFI/RFCs:** RFI/RFCs that are not properly prepared as detailed above, or request information that is clearly shown in the Contract Documents, will be returned to Contractor labeled as either Improper or Frivolous with the reasons for such determination.
- F. Any additional costs incurred by Owner as a result of unnecessary review by the Design Consultant, Engineer, or Owner, may be deducted from money still due Contractor. The Design Consultant's standard hourly rate will apply. Prior to processing a Contract deduction, Contractor will be notified.
- G. **Response to RFI/RFCs:** After Engineer's receipt of the RFI/RFC, Engineer will be allowed 14 calendar days to review and respond to the issue. If Engineer requires additional time, Contractor will be notified in writing.
- H. Responses by Engineer shall not be interpreted as authorization to proceed with extra work. If Contractor believes additional cost or time is involved from the clarification provided by Engineer, Contractor shall notify Owner in writing that a Construction Change Authorization (CCA) is required and state the reasons for Contractor's belief that this work constitutes a change in Contractor's contractual requirements. At no point in time is Contractor to proceed with extra work without the written consent of an authorized representative of Owner. See Subsection 109.03, "Extra and Force Account Work," for additional clarification of procedures.

105.04 COORDINATION OF PLANS, SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS, AND SPECIAL PROVISIONS

Paragraphs A and B are changed to read as follows:

In case of discrepancy, the governing order shall be as described in the General Conditions of the Contract Documents.

105.05 COOPERATION BY CONTRACTOR

Paragraph A is changed to read as follows:

- A. The Owner will furnish to the Contractor, without charge, 4 sets of Special Provisions including the Drawings. The Contractor shall keep one copy of the documents available on the work site at all times. Additional quantities of Special Provisions with Drawings will be furnished to the Contractor at the cost of reproduction upon request to the Contracting Agency.

Add following to Paragraph C:

Prior to issuance of Notice to Proceed, the Contractor shall submit to the Engineer in writing the names of at least three 24-hour emergency contact personnel who have personal knowledge of the work and can respond to emergency situations. At least one of those persons listed must be available locally at all times during the contract period. This submittal shall include, at a minimum, home, office, fax, and cellular telephone numbers for these personnel.

105.06 COOPERATION WITH UTILITIES

Add the following to this subsection:

- R. The Owner and Engineer do not guarantee that all existing utilities are shown on the Contract Drawings, or that the utilities are shown in their exact locations. The Owner has not indicated utility service connection laterals on the Contract Drawings.
- S. During all time periods when any utility valve, manhole, vault, or pull box may be buried or otherwise rendered inaccessible, the Contractor shall have personnel and equipment on standby (respond within 1 hour) to uncover any valve, manhole, vault, or pull box when requested by the Engineer or owning agency.
- T. All utility valves, manholes, vaults, or pull boxes that are buried shall be conspicuously marked by Contractor in a fashion acceptable to the owner and Engineer to allow their location to be determined by Engineer or utility personnel under adverse conditions, (inclement weather or darkness).
- U. All cost for providing standby personnel and equipment and for uncovering buried facilities shall not be paid for separately but shall be considered incidental to the items of work associated with the burial except for service connections that may affect the work.
- V. Contractor shall pothole to determine the exact vertical and horizontal location of all existing utilities indicated on the Drawings, or marked in the field, crossing or in close proximity parallel to the proposed channel, bridge, roadway, pipeline, mains, and laterals at least 10 days in advance of the construction and no later than 15 working days following Notice to Proceed.
- W. Contractor shall provide Engineer all pothole information obtained including measurements, dimensions, elevations, and types and sizes of utilities within one working day following the potholing. From this information, Engineer will determine additional utility conflicts, which may not be shown on the Drawings. If any utility conflicts exist that are not shown on the Drawings, Contractor will take the necessary action in accordance with this subsection and Subsection 105.09, "Construction Interferences."
- X. During the performance of contract work, the owner of any utility affected by the work shall have the right to enter, when necessary, upon any portion of the work for the purpose of maintaining service and of making changes in, or repairs to, said utility.
- Y. When the Drawings or Specifications provide for Contractor to alter, relocate, or reconstruct a utility, the bid prices shall include the cost of any temporary bypasses that may be required by the affected utility. In accordance with Subsection 102.05, Contractor shall satisfy himself prior to bidding as to the requirements of each utility and utility modification.
- Z. The relocation of utility service connections will be paid for in accordance with Subsection 105.09, "Construction Interferences."

- AA. Contractor shall not be assessed liquidated damages for failure to complete the work on time to the extent that such delay was caused by failure of the owner or agency having jurisdiction over the utility or service connection to authorize or otherwise provide for its removal, relocation, protection, support, repair, maintenance, or replacement.
- BB. Contractor shall not shut off the water supply to a hydrant, nor in any way prevent access to a fire hydrant until Contractor has secured permission to do so from the proper authorities.

105.08 CONSTRUCTION STAKES, LINES AND GRADES

Change Paragraph C of this subsection to read as follows:

- C. Contractor shall preserve property line and corner survey monuments except where their destruction is determined by the Engineer to be unavoidable. Monuments that are disturbed or destroyed by the Contractor's operations will be replaced in accordance with all applicable Nevada Revised Statutes and Standard Drawings by a Nevada Professional Land Surveyor and the cost for such replacement will be deducted from any money due, or which may become due, the Contractor under this contract.

Delete Paragraphs F and G of this subsection and add the following:

- F. Contractor shall allow a minimum of 2 working days notice when submitting survey work requests. If multiple requests are submitted, prioritization of said requests will be provided by the Contractor with consideration given to the length of time required to complete each ordered task.

The following construction stakes will be furnished by the Owner:

1. Stakes at 50-foot intervals along the edge of pavement and at the ends and center of each curb return, or at offsets that may be requested by the Contractor.
2. Stakes at 50-foot intervals for construction of drainage and utility pipes along an offset line chosen by the Contractor.
3. Two stakes, containing horizontal and vertical control for each manhole.
4. One stake for each streetlight pole containing horizontal and vertical control.
5. Subgrade stakes placed at 100-foot intervals (plus grade breaks) and 3 across the asphaltic pavement area (maximum). Type II stakes placed at a maximum 3 stakes per 50-foot interval (25-foot stations through vertical curves) plus grade breaks.
6. Rough grade stakes at top and toe of slopes at 100-foot intervals (50-foot intervals within curves) plus grade breaks, transition areas, and expansion joints, and in a grid pattern within the bottom of channel marked sufficiently for excavation with channel limits.
7. Finish grade stakes at 50-foot intervals along tangents (25-foot intervals within curves) plus grade breaks, transition areas, and expansion joints, and in a grid pattern within the bottom of channel for shaping and finish grading.
8. Finish grade stakes within excavations of rectangular concrete channels at walls and flowlines at 50-foot station intervals (25-foot intervals within curves) plus grade breaks, angle points, and ends.

9. Finish grade stakes within excavation of trapezoidal concrete channels at top and toes and flowlines at 50-foot station intervals (25-foot interval within curves) plus grade breaks, angle points, and ends.
 10. Line stakes at Contractor specified offset at 100-foot intervals (50-foot intervals within curves) for fences plus angle points, gates, and ends.
 11. Two stakes, containing horizontal and vertical control at 100-foot intervals, at beginning, end, and angle points for maintenance roads and drop inlets.
 12. One set of waterline stakes at Contractor specified offset at a maximum interval of 50 feet and including all angle points and connections to existing main graded to invert elevations as shown by Record Drawings.
 13. Sufficient stakes and/or marks to properly construct the Cooper Street Bridge structure. Stakes will include, but not be limited to, abutment wall, approach slabs, pier excavation and footings, bearing pads, girder alignment, abutment walls, and pier caps. Set grades for top of deck at 10th point intervals for each span.
 14. Final Monumentation, in accordance with NRS Chapter 329 and the Uniform Standard Specifications, of all intersections, controlling corners, and public land survey corners within the construction area that are disturbed or destroyed by this construction.
 15. Engineer will also mark existing pavement for saw cut lines at all intersection streets and driveway locations.
 16. Stakes not delineated above which Engineer may determine are necessary to ensure the work will be properly constructed.
- G. The above construction stakes shall constitute the field control by and in accordance with which Contractor shall execute the work, and will be furnished at no expense to Contractor. Engineer will set stakes in addition to these delineated above, if required by and requested by Contractor; however, costs for setting said additional stakes shall be paid by Contractor and will be deducted from any amounts due or to become due Contractor.

After stakes and marks have been set it shall be the responsibility of Contractor and his employees to protect the stakes and marks against vandalism and/or destruction. Should any of the stakes or marks be destroyed or disturbed by Contractor's operations or otherwise, the cost of replacing said stakes or marks shall be paid by Contractor and will be deducted from any amounts due or to become due Contractor.

Add the following subsection:

105.09 CONSTRUCTION INTERFERENCES

- A. Construction interferences shall consist of any utility or service connection that is required to be disturbed, modified, relocated, or removed to permit the construction of a pipeline or other structure as specified in the contract. Such disturbance or removal shall be done only with the approval of the project Engineer and following notification to the owner of the interfering utility or service connection. Any such utility or service connection removed or otherwise disturbed shall be reconstructed as promptly as possible in its original or other authorized location in a condition at least as good as prior to such removal or disturbance, subject to the inspection of the owner of same.

- B. Contractor's responsibility under this subsection to remove or replace shall apply even in the event such damage or destruction occurs after backfilling or is not discovered until after completion of backfilling. The owner of the utility or service connection shall be notified immediately after damage or destruction occurs or is discovered.
- C. A Class 1 construction interference shall be defined as to include any utility or service connection within the limits of excavation or over-excavation, required by the Contract Drawings or as ordered by the Engineer that is not located within the pipe space.
- D. A Class 2 construction interference shall be defined as to include any utility or service connection located within the pipe space.
- E. Pipe space shall be defined as to be the outside diameter or dimension of the pipeline or structure, plus 6-inches.
- F. All costs involved in removing, relocating, protecting, supporting, repairing, maintaining, or replacing a utility or service connection shall be borne by the Contractor per the following descriptions and as shown on the figure at the end of this section.
- G. Case I - An actual Class 1 interference which is shown as a Class 1 on the Contract Drawing however approximate the location may be.
- H. Case II - An actual Class 2 interference which is shown as a Class 2 interference on the Contract Drawings.
- I. Case III - An actual Class 1 interference which is not shown on the Contract Drawings.
- J. Case IV - A main line or service connection which is smaller than or equal to 4-inches nominal diameter which actually constitutes a Class 1 or 2 construction interference, whether or not said line or connection is shown on the Contract Drawings.
- K. Case V - An actual Class 1 interference which is shown as a Class 2 interference on the Contract Drawings.
- L. All costs involved in removing, relocating, protecting, supporting, repairing, maintaining, or replacing a utility or service connection greater than 4 inches nominal diameter shall be paid for by the Contracting Agency, unless otherwise specified, as additions to work in accordance with Subsection 104.03, "Extra Work," in the following case:
 - 1. Case VI - An actual Class 2 interference which is shown as a Class 1 interference or not shown at all on the Contract Drawings.
- M. When the Contractor encounters a construction interference that has been incorrectly shown or omitted from the Contract Drawings, the Contractor shall immediately notify the Engineer. The Engineer will determine a case number for the construction interference. The Engineer will notify the Contractor of the Engineer's determination within 24 hours after the interference has been encountered. The Engineer will determine the case number for multiple ducts with individual nominal diameters 4 inches or smaller.
- N. When the Engineer has determined that the construction interference is either a Case I, II, III, IV, or V, the Contractor shall continue with the work, including the removing, relocating, protecting, supporting, repairing, maintaining, or replacing of the construction interference. The Contractor understands and agrees that this condition is not a cause for delay in completion of the contract work.

- O. When the Engineer has determined that the construction interference is a Case VI, and there is no bid item in the contract covering this interference, the Contracting Agency and the Contractor will negotiate terms for a change order according to provisions of subsection 104.03, "Extra Work." During this negotiation period, the Contractor will continue work at another location within the scope of the project. A time extension for completion of contract work may be a part of the negotiation. The Contracting Agency will not pay standby expenses incurred by the Contractor or costs incurred by the Contractor in relocating equipment during the negotiating period or redesign of proposed improvements due to construction interferences.
- P. Contractor shall exercise extreme care so as not to damage new or existing buried utilities which do not physically constitute a construction interference and shall utilize equipment throughout his construction operations so that new and existing utilities are not damaged. Contractor shall be responsible for costs of removing, relocating, protecting, supporting, repairing, maintaining, or replacing new or existing facilities damaged by his operations as determined by the Engineer.

105.14 MAINTENANCE DURING CONSTRUCTION

Add the following to this subsection:

- D. Contractor shall maintain a temporary asphaltic concrete patch over backfilled pipe trenches, subject to traffic, during the course of the project to the satisfaction of Engineer. The temporary patch shall be permanently repaired or removed as soon as Contractor's operations allow. Temporary asphalt patching will not be allowed to remain longer than 30 calendar days before permanent paving is placed, unless otherwise approved in writing by Engineer.
- E. Should areas of temporary pavement fail and become hazardous, Contractor shall repair at Engineer's direction and at the Contractor's expense.
- F. Temporary asphaltic pavement shall be placed in accordance with Subsection 208.03.21, Cutting and Restoring Street Surfacing.

105.16 FINAL ACCEPTANCE

Change Paragraph A of this subsection to read as follows:

- A. Upon due notice from the Contractor of presumptive completion of the entire project and the submittal of Record Drawings, the Engineer will make an inspection. If all construction, final cleanup, and Record Drawings provided for and contemplated by the contract are found completed to Engineer's satisfaction, the inspection shall constitute the final inspection and Engineer will so advise the governing body or commission. Contractor will then be notified in writing of the acceptance of the contract as of the date of the final inspection. Such notice will not be given to the board or commission until all work, including required Record Drawings has been completed to the satisfaction of Engineer.

Add the following subsections:

105.18 AUTHORIZED CHANGES

- A. All changes to the plans performed in the field shall be reviewed, approved and authorized by Engineer prior to proceeding with the work. Any changes to the plans without

authorization may result in removal of such item at Contractor's expense or nonpayment for the work, at the discretion of Engineer.

- B. Verbal authorized changes to the plans in the field will not be considered for additional quantities or compensation, but can be and will be considered for any reduction in quantities or cost. Any authorized changes to the plans which are approved by Engineer for additional compensation shall be in written form indicating all items of work involved and the cost for each item, and will be submitted to Engineer prior to proceeding with the work involved. Any authorized changes for the convenience of Contractor will not be considered for additional quantities or payment, unless Engineer has approved such additional cost in writing to Contractor.

105.19 CONTRACTOR QUALITY CONTROL PROGRAM

- A. Contractor Quality Control Program was developed to ensure that materials and workmanship incorporated into the work meet the requirements of the Standard Specifications, Special Provisions, and all other contract documents. Quality Control is the sole responsibility of Contractor. Quality Control shall be performed in accordance with Sections 111 through 117 of these special provisions. Depending on the size of the project, all of the sections may not be included.
- B. In order to ensure an understanding of the program by all persons both QC and Quality Assurance, there is a mandatory QC program pre-activity meeting to be conducted by the Engineer. Contractor shall have the Responsible Person-in-Charge, Quality Control Coordinator, inspectors, and the testing professional engineer at the meeting. The positions are defined in Section 113.

105.19.01 INDEPENDENT ASSURANCE SAMPLING

- A. The CCPW Quality Assurance (QA) Section is responsible for administering the split sample program amongst the various QC and QA certified personnel. This involves supervising the sampling, splitting, and distribution of the samples and collecting and reporting the results of the tests and the observation of the testing.
- B. A preactivity meeting is required prior to proceeding with the Independent Assurance (IA) process. The following personnel must be present:
 1. Contractor RPC
 2. Contractor QC testing responsible personnel
 3. CCPW Construction Representative
 4. CCPW QA testing responsible personnel
 5. CCPW QA Section Inspector (optional)
 6. CCPW IA subconsultant
- C. There are two scenarios:
 1. The IA is performed by the Engineer through the Quality Assurance section.
 2. The IA is performed by a consultant contracted by the County.
- D. As a part of the regular IA sampling and testing program, samples are split three ways by the QC personnel as directed by the IA Personnel. One sample is tested by QC, one is

tested by QA and one is tested by IA. The IA may observe the QA/QC testing process. The Contractor shall expect that some or all materials listed below shall be required for IA split sampling throughout the duration of the Contract.

1. Select Borrow
 2. Selected Material
 3. Granular and Drain Backfill
 4. Base Aggregates
 5. Concrete Aggregates
 6. Aggregates for Plantmix Bituminous Surface, and UTACS
 7. Concrete
 8. Plantmix Bituminous Surface
 9. UTACS
- E. The IA representative shall retain custody of the samples from the time they are taken until they are delivered to the QC or QA laboratories for testing
- F. The IA Report shall be transmitted as per the contract documents and section 112.07.02. The results cannot be a part of the contract acceptance data.

105.19.02 ENGINEER AUDITS

- A. The Engineer will randomly audit the Contractor project records. These will be scheduled by the Engineer in coordination with the Contractor. Audits will be subject to a \$100 penalty for non-compliant items.
- B. A mandatory pre-audit will be conducted for projects of durations greater than or equal to 6 months in duration within one month of the project construction start. For all other projects, they shall be scheduled within two weeks, or as determined by the Engineer.

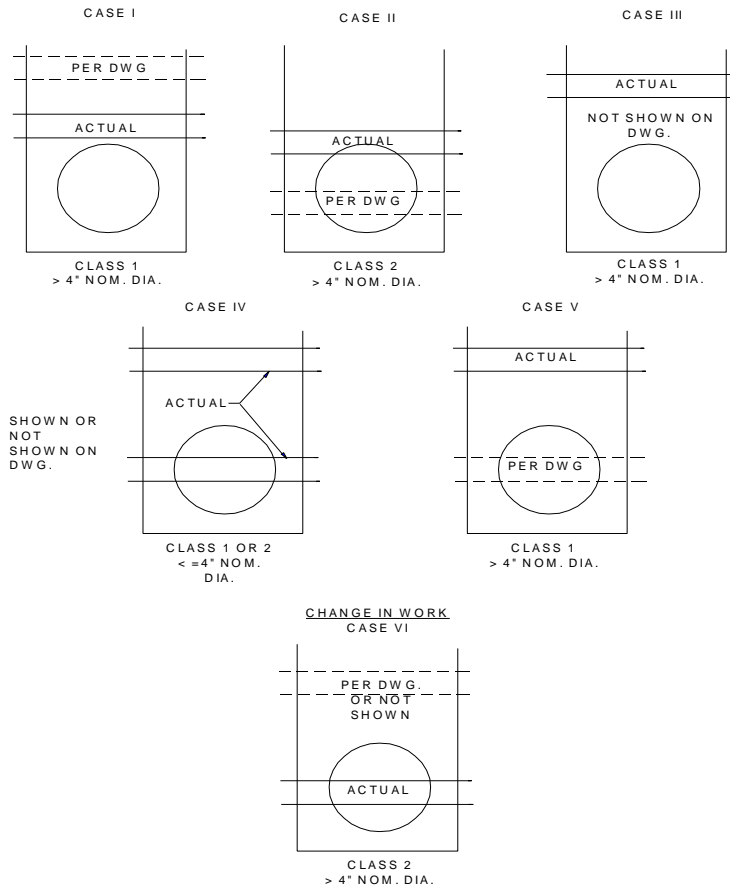
105.20 PAYMENT FOR CONTRACTOR QUALITY CONTROL PROGRAM

- A. No separate payment will be made for Quality Control. The costs for all quality control efforts required to complete the work described in the General and Special Provisions and project Drawings, including the Contractor's QC Plan, punch list, and cleanup shall be included in the price bid for the various elements of the work.
- B. The prices bid for the various elements of the work shall include full compensation for performing all required control of quality including, but not limited to, costs to develop the quality control program, management of the quality control program, on-site testing, on-site inspection and oversight, off-site source/production inspection, off-site source/production testing, laboratory testing of field samples, preparation of the weekly and monthly reports, submittal of the program, submittal of results and daily, weekly, and monthly reporting of results.
- C. Engineer may request additional testing not to exceed a maximum of 10 percent of the required testing for a given type performed on the project at no additional cost to Owner.

- D. Testing at a frequency greater than the minimum called for, other than at the direction of the Engineer, is considered to be a methods and means decision of the Contractor and as such is at the expense of the Contractor.
- E. In the event of improperly conducted Quality Control Program, the Progress Payment amount will be reduced by **\$300.00** per day per incident by the Engineer until resolved. An incident is defined as:
 - 1. The use of an incorrect or the improper execution of a test method.
 - 2. Non-compliance to any portion of the Sections 111 through 117.
 - a. Including non-inspection
 - b. No documentation of inspection
 - c. No notification of the QA inspector
 - d. Not using hold points
 - 3. No pre-activity meeting.
 - 4. Improperly submitted reports.
 - 5. Testing not in conformance with the testing procedure
 - 6. Lack of timely resolution of deficiencies and non-compliances.
 - 7. Non-compliance of the Quality Control Administration audit.
- F. If the testing was conducted by a non-accredited laboratory, the testing will not be accepted and payment will not be made for the installed material unless resolved to the satisfaction of the Engineer within 30 days. If after 30 days, the laboratory cannot satisfy the Engineer, the Contractor shall replace the non-complying laboratory. If the testing was conducted by a non-certified technician(s), the quantity of material shall be subject to non-payment of the line item and the Contractor shall also pay for the Quality Assurance testing until such time the certified technician(s) is replaced.
- G. The Contractor shall implement removal of personnel for the following infringements:
 - 1. Nonqualified QC inspector based on the Section 113 requirements: The removal of the person from the project.
 - 2. Knowingly falsify Contract Documents of any kind: Removal from the project of the person and disqualification of the person from future Clark County projects.
- H. Equipment and engineering/technician hours required for Quality Assurance investigation for Quality Control conflict resolution shall be reimbursed as per the Table B fee schedule on the QAQC Webpage at:
http://www.clarkcountynv.gov/Depts/public_works/construction_mgmt/Pages/Materials.aspx
- I. The fee(s) shall be payable to Clark County Treasurer Maintenance Account 202 delivered to Clark County Public Works Construction Division at 500 South Grand Central Parkway.

CONSTRUCTION INTERFERENCES

CONTRACTOR'S RESPONSIBILITY



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SECTION 106

CONTROL OF MATERIALS

106.01 SOURCE OF SUPPLY AND QUALITY REQUIREMENTS

Change Paragraph H to read as follows:

H. The Contractor shall furnish without charge such samples as may be required. Inspection and tests may be performed by the Engineer or Engineer's designated representative in accordance with Subsection 105.20, but it is understood that such inspections and tests, if made at any point other than the point of incorporation in the work, in no way shall be considered as a guarantee of acceptance of such materials nor of continued acceptance of material presumed to be similar to that upon which inspections and tests have been made.

Add the following subsections:

106.01.01 CONTENT OF SUBMITTED MATERIALS LIST

A. Each individual material being submitted to the Engineer shall be accompanied by a Cover Sheet. When more than one material is being submitted at one time, each individual material shall have an individual Cover Sheet. The contents of the Cover Sheet shall include the following:

- Contractor’s Name and Address, including Phone and Fax numbers
- Project Name
- Bid Number
- Package Number (Numbering shall be per Figure 1 below for listed items, all other items will use the bid item prefix as the Package Number.)
- Submittal Number (Sequential number inside of a particular Package)
- Revision Number (Sequential number for each re-submit)
- Intended Use (description of the specific use or uses of the material on the project)
- Indication of “Or Equal” or “Substitution” as appropriate
- Date
- Number of Copies Sent (attached behind the Cover Sheet)
 - a. Minimum of 1 Original and 6 additional copies must be attached.
 - b. Clark County will retain the Original and 2 copies.
 - c. If Contractor requests additional copies to be returned, Clark County will accommodate 2 additional copies, up to a total of 9 documents maximum.
- Printed Name and Signature of Submitting individual
- Printed Name and Signature of Responsible Person in Charge (RPC)

| Figure 1 Table of Submittal Package Number | | |
|---|----------------|----------------------|
| Section | Package Number | Description |
| 100 | | General Items |
| | 100.01 | SWPPP Permit |
| | 100.02 | NDPES Permit |
| | 100.03 | Air Quality Permit |

| Figure 1 Table of Submittal Package Number | | |
|---|----------------|---|
| Section | Package Number | Description |
| | 100.04 | Rolling Stock Permit |
| | 100.05 | Emergency contact list |
| 103 | | Awards and Execution of Contract |
| 105 | | Control of Work |
| | 105.01 | QC Plan and Amendments |
| | 105.02 | QC Monthly reports |
| 107 | | Legal Relations and Responsibility to the Public |
| | 107.01 | Property Owner Permission Letters |
| 108 | | Prosecution & Progress |
| | 108.01 | Schedules |
| 109 | | Measurement and Payment |
| | 109.01 | Pay Estimates |
| | 109.02 | Force Account |
| 302 | | Aggregate Base Courses |
| | 302.01 | Type II |
| 624 | | Accommodations for Public Traffic |
| | 624.01 | Traffic Control Plans |
| 900 | | Project Closeout |
| | 900.01 | QC File Turnover |
| | 900.02 | Punchlist Completion |
| | 900.03 | QC/QA Personnel Data Sheets |
| NOTE: All other items will use the bid item prefix as the Package Number. | | |

106.01.02 ACCURACY OF CONTENT

A. The responsible person in charge shall attest that the content of the submitted materials has been reviewed against the Contract Documents, and that the materials are in compliance thereto. Submitted materials that are to be evaluated as “Or Equal” or “Substitution” shall be reviewed for accuracy and sufficiency of back-up materials to enable the Engineer to make the determination.

106.01.03 SUBMISSION OF MULTIPLE MATERIALS CONCURRENTLY

- A. A “Transmittal” or Cover Page shall accompany any group of 2 or more submitted materials. The Transmittal shall include the following information:
- Contracting company name and address, including phone and fax numbers
 - Project name
 - Bid number
 - Listing of submitted materials attached including package and submittal numbers
 - Date
 - Printed name and signature of responsible person in charge

106.04 SAMPLES AND TESTS

Change Paragraph A of this subsection to read as follows:

A. Sampling for final acceptance of materials will be as required in the appropriate Uniform Standard Specifications sections and in general must comply with the AASHTO requirements, where applicable and with the following exception:

1. Aggregate for all plantmix bituminous mixtures (base or surface) will be sampled for acceptance at the plant.
2. Sampling of bituminous materials, intended for use in prime, tack, or seal coats surface treatments, shall be done after the bituminous material has arrived at job destination and before or at the time of unloading the materials.

For binder used in mixes, 2 samples shall be taken from the plant mixer prior to introduction into the mixer by a NAQTC person of the Contractor or his designated representative under the observation of a NAQTC technician and per the requirements of AASHTO T 40. Where delivery is made in smaller hauling units than those cited above such as a distributor, or where the contents of a storage tank are sampled, the required two samples shall be taken to represent a maximum of 10,000 gallons. Contractor shall take the samples during the established job working hours, unless arrangements are made for a representative of the Contracting Agency to witness the taking of the samples at another time.

All sampling devices and sample containers shall be furnished by the Contractor of Material Source.

One of the 2 samples, taken from each load, shall be submitted to the Contractor's Material Source laboratory for testing as required by Section 703 and the other sample retained by the Engineer.

The Contractor shall furnish without charge such samples as may be required. Inspection and tests may be performed by the Engineer or his designated representative, but it is understood that such inspections and tests, if made at any point other than the point of incorporation in the work, in no way shall be considered as a guarantee of acceptance of such materials nor of continued acceptance of material presumed to be similar to that upon which inspections and tests have been made.

3. When the Engineer elects to take, or specifications require that samples be taken at a production plant, sampling of aggregates shall be by "belt cut" from a stopped conveyor or may be by mechanical sampling device built into the production plant. Any mechanical sampling device shall be approved by the Engineer prior to starting the respective phase of the project, or shall have been approved as part of a prior plant inspection by the Engineer or his representative. The sampling device shall be so constructed to provide for simultaneous "cutting" of the entire section of material being discharge or conveyed, and so constructed that small representative samples may be taken frequently and these samples combined to form the complete sample. The reference method for the procedure shall be a "belt cut" sample taken from a stopped conveyor belt.
4. Tests for the aforementioned materials produced under conditions other than contemplated herein shall be taken at the time and place deemed by the Engineer to be most appropriate.

5. Except as provided in Subsection 106.05, "Certificates of Compliance," all materials will be inspected, tested, and accepted in accordance with Subsection 105.19 and 105.20 before incorporation in the work. Any work in which untested and unaccepted materials are used without approval or written permission of the Engineer shall be treated as provided in Subsection 105.12.

6. All field and laboratory testing technicians shall be Nevada Alliance for Quality Transportation Construction (NAQTC) certified, including ACI certification. Information regarding training, examinations and certification is available from the Nevada T2 Center/257, NAQTC, University of Nevada, Reno, 1664 N. Virginia Street, Reno, Nevada, 89557-0179.

SECTION 107**LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC****107.02 PERMITS, LICENSES, AND TAXES**

Add the following to this subsection:

- B. Permit has been acquired for: Section 404 Permit from the US Army Corps of Engineers.
- C. Contractor shall comply with the requirements delineated in the Section 404 Permit, a copy of which is provided in Appendix A.

107.07 TRAFFIC AND ACCESS

Add the following to this subsection:

- M. The Contractor shall comply with all requirements contained in Section 624 and 625 of the Standard Specifications and with the supplemental requirements contained herein, except that no direct payment shall be made to the Contractor for signing and/or detours unless otherwise specified herein.
- N. The Contractor, as required by the Engineer, shall provide and station competent flaggers whose sole duties shall consist of directing the movement of public traffic either through or around the work. Traffic work zone technicians on the project must be certified in work zone traffic control at least at the "Technician" level by ATSSA or IMSA.
- O. Where necessary or required for the convenience of the public or individual residents at street crossings, alleys, or at private driveways, the Contractor shall provide suitable temporary bridges over unfilled excavations, except in such cases as the Contractor shall secure permission from the Engineer to omit such temporary bridges. All such bridges shall be maintained in service until after the Contractor has complied with all of the specifications governing the work prior to backfilling.
- P. Temporary bridges for street crossings shall conform to the requirements of the authority having jurisdiction in each case, and Contractor shall submit designs for approval by said authority as may be required. Steel plates used on this project must be capable of carrying the heaviest loads utilizing the roadway.
- Q. When the Contractor's construction operations encroach upon a sidewalk, walkway, or crosswalk area, the Contractor shall take special precautions to protect the pedestrian's safety including provisions to separate pedestrian traffic from the work area.
- R. Pipe stockpiled along pipeline alignments shall be within 1,000 feet of the Contractor's laying operations. Pipe strung within street right-of-way that is to remain one night or more shall be protected by barricades spaced at intervals not exceeding 50 feet.

Add the following subsections:

107.07.01 TRAFFIC CONTROL REGULATIONS

- A. All traffic and/or traffic control devices under this contract shall be provided, maintained, and/or controlled as specified in this section and in the latest edition of the MUTCD.

- B. If the Contractor, at any time, fails to maintain traffic and/or traffic control devices as specified in the above documents or elsewhere by these specifications, the Engineer will immediately notify the Contractor in writing of such non-compliance. If the Contractor fails to remedy unsatisfactory maintenance within 2 hours after receipt of such notice, the Engineer may immediately proceed to perform such maintenance, and the entire direct cost of this maintenance will be deducted from money due or to become due the Contractor.
- C. If, in the opinion of the Engineer, a condition develops that is dangerous to public safety, such condition may be immediately remedied with whatever means is available to the Owner and the cost of this maintenance will be deducted from money due or to become due to the Contractor.

107.07.02 TRAFFIC CONTROL REQUIREMENTS

- A. The Contractor will also, as a minimum, provide the traffic control measures specified below.
- B. Temporary traffic lanes must be delineated using either paint or traffic tape, excepting that paint may only be used on pavement to be replaced or overlaid as part of this contract.
- C. The tape shall conform to State of Nevada specifications. The temporary pavement striping shall be by pilot line method. The tape shall be 6 inches wide and 4 feet long and spaced every 40 feet. The color of the tape shall match the color of the line that it replaces. The double yellow line shall have two pieces of tape side by side with a 4-inch space between, and spaced to the increments above.
- D. Painted temporary traffic lines shall be 6 inches wide and shall be continuous or intermittent in accordance with the MUTCD. Existing lines either painted or raised pavement markers, that conflict with required temporary lines shall be effectively removed in such a manner to leave no residue or other trace of the former line that may be misconstrued by a driver to be a traffic line under any condition of daylight, darkness and wetness of pavement.
- E. At the completion of the project, the Contractor shall install additional pilot lines using 4-inch square pieces of tape to show the alignment of any permanent lines that were destroyed during construction. It shall be the responsibility of the Contractor to remark said lines. This 4-inch square tape shall be removed just prior to the installation of the permanent lines.
- F. Type 3 barricades shall be used to protect all approaches to sites of excavation.
- G. Flaggers shall be used to assist trucks for safe ingress and egress whenever truck movements may interfere with safe passage through the work zone. In addition, flaggers shall be used whenever the Engineer deems it necessary for safety purposes.
- H. If, in the opinion of the Engineer, a condition develops or exists that is dangerous to the safety of the general public, concrete barrier rails and fencing shall be used around the work site, excavations, trenches for underground utilities, and/or stockpiled materials. The barrier rails and fencing shall be maintained until the Engineer determines that the hazard no longer exists.
- I. Portable concrete barrier rail ("F" rail) shall be used to separate travel lanes from excavations when any excavation:

1. exceeds one foot in depth,
 2. exceeds one foot in width,
 3. is sloped steeper than 4:1, and
 4. is less than 18 feet from the nearest travel lane.
- J. Fencing shall be used around open trenches exceeding 2 feet in depth. The fencing may be placed on top of concrete barrier rails. Type II barricades used for delineation shall have Type C steady burn lights. All barricades used for closures shall have Type A lights. Type B lights shall be used with appropriate advance warning signs.

107.07.03 TRAFFIC CONTROL AND BARRICADE PLAN

- A. The Contractor shall submit a written and diagramed 11-inch by 17-inch "Traffic Control and Barricade Plan" to the Engineer no later than 14 calendar days prior to proposed use. Two copies of the plan shall be submitted as a submittal directly to the Engineer, who will review it for conformance to the Contract Documents and the MUTCD.
- B. Work items requiring traffic control devices to be placed in the traveled way will not be allowed to proceed until the Contractor has an approved "Traffic Control and Barricade Plan" for such work.
- C. Traffic Control Plans shall be submitted on 11-inch by 17-inch plans unless required to be full plan size due to the complexity of the plan. All Traffic Control Plans shall be prepared by an ISMA or ATSSA Certified Traffic Control Technician. Each sheet shall have the following information:
1. Project Name
 2. Bid Number of the Project
 3. Name/address of Company that prepared the plan
 4. Name of the individual that prepared the plan
 5. The ISMA or ATSSA Certification number of the plan preparer
 6. The phone number of the Company that prepared the plan
 7. A 24-hour contact for the Company if different from above
 8. Whether the setup is day, night, or a 24-hour set up.
 9. What work will be conducted with the plan
 10. Date the plan was prepared
 11. Dates the plan is proposed to be implemented
 12. Duration of each plan
 13. A 3-inch by 5-inch blank area in the upper right hand corner of each plan sheet
 14. Roadways shall be oriented with north to the top or left of the plan sheet
 15. Key to what each symbol used indicates
 16. If a sand barrel attenuator is used, the barrel layout and fill of each barrel.
- D. Plans shall provide the minimum following items:
1. All advance warning signs and arrow boards;

2. Method of protecting excavations and work sites;
 3. Method of barricading at intersections;
 4. Delineation patterns, lengths, etc., (including laterals);
 5. All regulatory signs;
 6. All warning signs within delineation;
 7. Driveway access plan and business access signage;
 8. Method for protecting pedestrians and pedestrian access;
 9. Provisions for emergency vehicle access at all times.
 10. Lane widths, transitions, and tangent sections.
 11. Proposed bus stop closures and relocations.
 12. The existing posted speed on each roadway, and
 13. Any and all pedestrian pathways.
- D. Temporary Traffic Control Devices shall not be pre-strung or left within the right-of way during non-working hours or when the devices are not being used. Drums shall be used on all tapers and lane shifts.
- E. Contractor is required to provide a minimum of 3 work days' advance written notice to Clark County Traffic Operations for any changes to the traffic or pedestrian signal operations within the accepted traffic control plan. Contractor is responsible for all cost associated with any changes required to the traffic signal for vehicle or pedestrian movements.
- F. The above described plan shall conform to the Special Provisions Section 625 contained herein as well as the MUTCD for all traffic control methods, devices, and appurtenances.
- G. The Contractor shall post with the Contracting Agent all information relative to any subcontractor for barricade control, including: name of firm, address of firm, telephone number of firm, name of responsible agent for the project, and a 24-hour number for emergency response. All traffic control devices shall display the 24-hour contact number of the traffic control (sub) contractor on their reverse side, along with an identifying name, initials, or logo.
- H. "Traffic Control and Barricade Plan" must be completed to Engineer's satisfaction and all traffic control devices installed according to the approved plans before construction begins.

107.07.04 TRAFFIC CONTROL PLAN FOR HIGHWAY WORK ZONES

- A. Contractor may not utilize the "Traffic Control Plans for Highway Work Zones" as shown in the Standard Drawings in lieu of preparing a "Traffic Control and Barricade Plan" in accordance with Subsection 107.07.03.

107.07.05 TRAFFIC CONTROL MEASUREMENT AND PAYMENT

- A. Traffic Control shall not be measured and paid for directly. The cost thereof shall be included in the bid prices for other items of work.

107.14 DISPOSAL OF MATERIAL OUTSIDE PROJECT RIGHT-OF-WAY

Add the following to Paragraph D of this subsection:

Payment shall also include drying, wetting, spreading, loading, hauling, covering, permitting, coordination of truck routes, fencing, and traffic control for the disposal and all other incidental and appurtenant items associated with the disposal of excess material.

Add the following to this subsection:

- E. Prior to construction, Contractor shall notify Engineer of the disposal location for excess excavated material, for approval by Engineer. Materials shall not be disposed of in the Special Flood Hazard Area, but shall be placed in Engineer approved dump site.

107.16 CONTRACTOR'S RESPONSIBILITY FOR THE WORK AND MATERIALS

Add the following to this subsection:

- A. Contractor shall maintain on-site, copies of all applicable Material Safety Data Sheets (MSDS) for all materials used on the project.
- B. These MSDS sheets shall be readily available for inspection and review by any individual who may so request.

107.18 FURNISHING RIGHT-OF-WAY

Add the following to this subsection:

- B. Lands or rights-of-way for the work to be constructed under the contract will be provided by the Owner as shown on the Drawings. Nothing contained in the Specifications or Drawings shall be interpreted as giving the Contractor exclusive occupancy of the lands or rights-of-way provided. Any additional lands or rights-of-way required for construction operations shall be provided by the Contractor at his own expense.
- C. Contractor shall not enter nor occupy with men, equipment, or materials any lands outside the rights-of-way or easements shown on the Drawings without the written consent of the owner of the property. Evidence of written permission to occupy lands outside those rights-of-way shown shall be presented to the Engineer prior to entry upon said land by the Contractor.

Add the following subsection:

107.23 PUBLIC RELATIONS AND NOTIFICATION

- A. The Contractor shall be responsible to keep the residents and business owners within or adjacent to the project informed of the Project. This information shall be as accurate and informative as possible with emphasis placed on timely communication in Spanish and English.
- B. Ten working days after receiving the Notice of Award from Clark County Purchasing and Contracts Division, the Contractor shall prepare a draft public notification for approval by the Engineer that informs all property owners, residents and/or businesses within or adjacent to the project of the project status. The notification letter shall be distributed by the Contractor only after approval of the Engineer.
- C. This notification shall be an introductory letter, which shall contain information such as the scope of the project, an anticipated construction start date and sequence of work, and the Contractors contact information.

- D. Seventy-two hours prior to commencement of construction, Contractor will notify, in person, all property owners and/or businesses which will be affected by the construction operation and will install "No Parking" signs at no more than 250-foot intervals along each side of the road where vehicle removal is required. Whenever personal notification is not possible, Contractor, at his expense, shall reproduce and distribute written or printed notification in the form of a leaflet, door-hanger, etc., approved by the Engineer, to each residence or business affected.
- E. This notification shall contain information such as the date and time of construction, brief explanation of work, vehicle removal instructions, Contractor's name, business address, and 24-hour telephone number of the Contractor or one of his agents. After notification by the Contractor, the Engineer will make any arrangements necessary to remove vehicles remaining in the roadway at the time of construction.
- F. The cost of this work shall be considered as incidental to other related items of work and no separate payment shall be made therefor. The Contractor shall keep records of the notification process and be able show proof to the Engineer, when required.

SECTION 108**PROSECUTION AND PROGRESS****108.02 NOTICE TO PROCEED**

Replace Paragraphs A and B with the following:

- A. The Authorization to commence with acquisition of materials will be as described per the General Conditions in the Contract Documents.
- B. The authorization to proceed with actual physical work shall be given to the successful bidder in writing.

108.03 PROSECUTION AND PROGRESS

Revise this subsection to read as follows:

The Contractor shall be responsible for planning, scheduling, and reporting the progress of the work to ensure timely completion of the contract.

The Contractor shall submit an anticipated Schedule in 2 parts, based upon the Sequence of Construction shown in the project Drawings or in these Special Provisions, in accordance with the following:

- A. Part I shall be a preliminary Schedule and shall be submitted prior to or at the preconstruction conference for the Engineer's acceptance. It shall be a schematic (arrow) diagram or precedence diagram, showing the work stages and operations for all activities required by the contract. The diagram shall be in sufficient detail to allow day-to-day monitoring of the Contractor's operations. Along with the preliminary Schedule, the Contractor shall include his calendar for the contract period which shall show work days, calendar days, and dates. The diagram shall include 4 to 10 milestone events as identified by the Contractor and accepted by the Engineer.
- B. Part II shall be submitted for the Engineer's acceptance within 15 calendar days after Part I has been accepted by the Engineer. This second Schedule shall include a complete critical path Schedule to cover the Contractor's anticipated time Schedule. The Schedule shall include a detailed network diagram acceptable to the Engineer with the following features:
 1. Network diagram shall be time-scaled in calendar days. All activities shall be plotted on their anticipated early start and finish dates. Unless approved by the Engineer, activities shall not exceed 15 working days in length. The plot shall have a size and scale acceptable to the Engineer.
 2. Network diagram shall show the order and interdependence of activities and the sequence of work as reflected in the Schedule Report specified in (B)(7) below. The critical activities shall be prominently distinguished on all reports by the use of color or other means acceptable to the Engineer.
 3. Network diagram shall include, in addition to all construction activities, such tasks as mobilization, demobilization, submittal and approval of samples of materials and shop drawings, procurement of significant or long-lead time materials and

equipment fabrication of special items, installation, and testing and interfacing with other projects.

4. The activities shall be sufficiently detailed so that a reviewer can follow the sequence. For example, the activities shall show forming, reinforcing, and placement of concrete on the calendar days these tasks are anticipated to be performed.
 5. The diagram shall show for each activity the preceding and following event numbers or activity numbers, the activity description, the total float, if any, and the anticipated duration of the activity in working days.
 6. The activities shall be organized and described so as to conform to the contract bid items, as closely as possible. Activity descriptions shall be unique and specific with respect to the type of work and location.
 7. The diagram shall be accompanied by a Schedule Report of the network with a tabulation of the following data for each activity:
 - a. Preceding and following event numbers or activity number.
 - b. Activity description
 - c. Activity duration
 - d. Earliest start date
 - e. Earliest finish date
 - f. Latest start date
 - g. Latest finish date
 - h. Total float times
 - i. Responsibility for activity - e.g., Contractor, subcontractor, supplier, etc.
 - j. A balanced resource loading for each activity listing personnel and equipment anticipated to accomplish the activity. Personnel should be identified as the number of each trade anticipated. Equipment shall be identified by type and, if known, by model/size.
 - k. Contractor shall be responsible for including in the balanced resource loaded schedule all subcontractors designated for completing 5 percent or more of the total contract value.
- C. The Contractor shall make updated Schedules and Reports under the following circumstances or as requested:
1. The Contractor shall submit a monthly report of actual construction progress with the monthly pay request by updating his Schedule Report to reflect all complete and in progress activities on the project. All negative float shall be explained in detail. If, in the opinion of the Engineer, the detailed network diagram requires revision, either wholly or in part, Engineer shall so direct the Contractor and the Contractor shall submit such revision within 10 calendar days.
 2. The monthly report also shall show the activities or portions of activities completed during the 1 month reporting period and the portions completed on the project to date, showing actual start and finish dates plus all future activities.

3. The monthly report shall state the amount and percentage of revenue actually earned as of the report date.
4. The Monthly Report shall be accompanied by a narrative description of job progress, problem area, current and anticipated delaying factors and their expected effect, and any corrective actions proposed or taken. The narrative description shall also clearly identify any departures from earlier Schedules, including, but not limited to, changes in logical sequence or logical ties, constraints, changes in activity durations and changes, additions or deletion in event numbers, activity numbers, activity descriptions, and resource combinations. The reasons for each departure shall be included in the narrative description. The Engineer shall approve any additions or deletions or milestone events.
5. The Monthly Report shall include a summary of all activities sequenced by a total float from least to greatest float and ordered by early start.
6. The required Schedules and Report shall be submitted to the Engineer as follows:
 - a. Part I (Preliminary Schedule) - 7 originals
 - b. Part II (Detail Network Diagram) - 7 originals
 - c. Revisions to Part II - 7 originals
 - d. Monthly Report - Original plus 3 copies of the narrative
7. The Monthly Report shall include a detailed predecessor/successor analysis showing the predecessors, successors, logic ties, and constraints for each activity Schedule. These activities shall be ordered by event number or activity number from least to greatest.
8. All Extra Work shall be shown on an updated Schedule.

The automated system software shall be Primavera or approved equal. The Contractor shall furnish an unopened licensed disc package of the software to the Engineer for use during the duration of the project. The software shall be IBM PC compatible.

No measurement or direct payment will be made for Contractor costs relating to preparation and submission of Schedules and Reports and revisions thereto, the cost being considered as included in the prices paid for contract items.

Failure of the Contractor to comply with the Part I, Part II, or monthly updated Schedule and Report requirements specified herein will be grounds for the Engineer to deduct 10 percent of the monthly progress payments, until the Contractor is in compliance. Upon compliance, this amount will be paid to the Contractor in the next Scheduled monthly estimate.

Float time is not for the exclusive use or benefit of either the Owner or the Contractor. Extension of time for performance may be granted for delays caused solely by action or inaction by the Contracting Agency to the extent that equitable time adjustment for the activity affected exceeds the total float of the project, or where an impact on the contract completion can be shown.

Acceptance of the Contractor's Schedules by the Engineer is not to be construed as relieving the Contractor of Contractor's obligation to complete the work within the contract time; or as

granting, rejecting, or in any other way acting on the Contractor's requests for adjustments to the date for completing contract work, or claims for additional compensation. Such requests shall be processed in strict compliance with other relevant provisions of the contract.

The Contractor shall participate in a review and evaluation of the proposed Part I, Preliminary Schedule and Part II Schedule and monthly updated Schedule by the Engineer. Any revisions necessary as a result of the review shall be submitted for acceptance to the Engineer within 10 calendar days after the review. The accepted Part II Schedule shall then be used by the Contractor for planning, organizing, executing, and directing the work and for reporting progress of work accomplished. The Contractor shall furnish a copy of the Part II Schedule and monthly updated Schedule on a 3-1/2-inch floppy disk or CD-ROM to the Engineer for project use.

108.04 LIMITATION OF OPERATIONS

Add the following paragraphs to this subsection:

- D. At no time shall materials and supplies be stored or stockpiled within 30 feet of a travel lane unless separated by guardrail or concrete barrier rail.
- E. Within 500 feet of any residential dwelling, work shall only be performed between 7:00 a.m. and 7:00 p.m. weekdays. In other areas, night work may be performed between 7:00 p.m. and 7:00 a.m. from Sunday night through Friday morning.
- F. Contractor's operations shall be restricted to areas shown on the Drawings that depict the limits of construction and/or right-of-way. Contractor shall limit disturbance to the work area.

108.08 DETERMINATION AND EXTENSION OF CONTRACT TIME

Add the following to Paragraph B:

- 4. If the Contractor's schedule, submitted and accepted by the Engineer per subsection 108.03 "Prosecution and Progress" of these specifications, reflects a total completion time less than that allowed by contract under the Instruction to Bidders, "Time: Completion Of Project", then the contract time will be adjusted by a no-cost change order to reflect the Contractor's submitted schedule completion time.

Add the following to this subsection:

- E. If the Contractor is unable to prosecute the portion of the work which is the currently controlling operation or the portion of the work which is the currently controlling operation is suspended due to unsuitable weather or to such conditions as are considered unfavorable to the suitable prosecution of the work, an excusable, non-compensable time extension may be awarded if the following conditions are satisfied:
 - 1. The weather shall actually cause a delay to the completion of the project and the delay shall be beyond the control and without the fault or negligence of the Contractor; or
 - 2. The Engineer orders the suspension of the work in the interest of public safety or health or due to specification requirements.
- F. The Contractor shall provide written notification to the Engineer of the occurrence of adverse weather delay days and resultant impact to the currently controlling operation

within 10 calendar days of each occurrence, when such weather prevents work on critical activities for 50 percent or more of the Contractor's scheduled work day.

- G. No compensation will be made for re-work, traffic control, delay impact costs, or other monetary damages due to adverse weather delay(s).

108.09 FAILURE TO COMPLETE THE WORK ON TIME

Add the following to this subsection:

- E. At the time of presumptive completion of the work, which shall include, all valve and manhole adjustments, complete signal systems and streetlight assemblies, all permanent signage, striping and other pavement markings, and, excepting minor corrections punch list items and clean-up, the Contractor will receive a Notice of Substantial Completion from the Engineer. On the date of the Notice of Substantial Completion, the time specified in the contract for completion of the work will terminate. Thereafter, the Contractor shall complete all work on the "punch list" and required cleanup within 30 calendar days or other time as agreed to by the Contractor and the Engineer.
- F. Should the Contractor fail to complete the "punch list" within the above allocated time or within such extra time as allowed by the Engineer, there shall be deducted from any money due the Contractor the sum of **\$2,000.00** per each calendar day exceeding the allotted time. This sum shall be considered and treated not as a penalty, but as damage due the Contracting Agency from the Contractor by reason of added cost of engineering and supervision and other items which have caused an expenditure of funds resulting from the Contractor's failure to complete the work on the "punch list" and required cleanup.

Add the following subsections:

108.14 CONTRACT CLOSE-OUT PROCEDURE

- A. When the Contractor considers that all work under the contract is completed, he shall inform the Engineer in writing and submit the completed Record Drawings to the Engineer.
- B. Upon receipt of notification from the Contractor that all work has been completed, the Engineer shall:
1. Inspect the work to determine if it is substantially complete, and inform Contractor in writing of this determination.
 2. Notify, in writing, all affected utilities and other governmental agencies and request their acceptance, or punch list comments within 14 calendar days of receipt of the request or as an alternate their participation in the project walk-through.
 3. Schedule an inspection with the Contractor's representative and any other affected agency. This inspection shall be for the purpose of developing a "punch list" of items requiring correction, repair, or completion. The punch list shall include comments made by the Engineer on the Record Drawings submitted by the Contractor.
 4. Shall compile the "punch list" from the comments provided at the inspection and supply a typewritten copy to the Contractor. Upon distribution of the punch list items to the Contractor, the punch list time allotment shall commence.

- C. Scheduled completion of the punch list shall not exceed thirty (30) calendar days from date of the punch list letter or as otherwise agreed to by the Engineer.
- D. When all punch list items are completed, Contractor shall notify in writing the Owner/Engineer who will verify their completion.
- E. Should the Owner/Engineer be required to perform second inspections, either "punch list" or final, because of failure of work to be complete, Contractor shall compensate the Owner for any costs incurred by the second and any subsequent inspections.
- F. Failure of the Contractor to complete the "punch list" within the stated time shall be cause for assessment of liquidated damages in accordance with Subsection 108.09 of the Special Provisions.

108.15 WARRANTY INSPECTION

- A. The Contractor shall be responsible for coordinating the schedule of and conducting a warranty inspection with the Owner and its representatives approximately one month prior to the expiration of the warranty period. This shall also include a Pre-Activity meeting for the warranty inspection activity.
- B. All warranty corrections identified during the warranty inspection shall be commenced prior to the Warranty Bond expiration date. The Contractor shall be required to comply with all federal, state, and local laws, regulations, and ordinances regarding safety and environmental issues as it applies to the warranty inspection. The warranty inspection shall include but not be limited to: traffic control plan submission, approval and set-up for the inspection, confined space entry, support staff as needed, providing access to the inspection site, and all equipment, materials, and manpower required to conduct the warranty inspection.
- C. The cost of this inspection shall be considered incidental to the bid items in the contract. The Contractor's failure to perform shall not constitute waiver of warranty, and may necessitate the Owner to complete the warranty inspection and corrections, with costs incurred charged to the Contractor or against the Warranty Bond at the option of the Owner.

SECTION 109

MEASUREMENT AND PAYMENT

109.01 MEASUREMENT OF QUANTITIES

Change Paragraph B to read as follows:

- B. After the items of work are completed and before final payment is made, the Engineer will determine the quantities of the various items of work performed as the basis for final settlement for all other than (F) items and lump sum contracts. In the case of unit price items, excluding (F) items, the Contractor will be paid for the actual amount of work performed and materials used in accordance with these specifications, as shown by the final measurements, unless otherwise specified.

Change Subparagraph K.1 to read as follow:

- 1. All scales shall be furnished by and at the expense of the Contractor and shall have a certificate of inspection by the bureau of Weights and Measures. The scales shall be tested and inspected by the Bureau of Weights and Measures and a new inspection certificate required as often as the Engineer may deem necessary, and after each move in order to ensure the accuracy of the scales. The Contractor shall pay for the initial inspection and inspections required after each move. The Owner shall pay for additional inspections required by the Engineer.

Add the following to this subsection:

- T. When an item of work is designated as (F) in the Bid Form, the estimated quantity for that item of work is the Engineer’s calculated quantity based on neat lines and grades as shown on the plans. This (F) quantity shall be the final pay quantity, unless the dimensions (lines and grades) of any portion of that item are revised by the Engineer, or the item or any portion of the item is eliminated. If the dimensions of any portion of the item are revised, and the revisions result in an increase or decrease in the calculated quantity of that item of work, the final pay quantity for the item will be based on the “Price Adjustment” formula:

$$\frac{\text{Calculated change in (F) Bid Form Units (+ or -)}}{\text{Original (F) Bid Quantity}} \times \text{Total (F) Bid Item Price} = \text{Price Adjustment}$$

- U. If a (F) pay item is eliminated, the estimated quantity for the item will be eliminated. If a portion of a (F) pay item is eliminated, the final pay quantity will be revised in the amount represented by the eliminated portion of the item of work.

109.02 SCOPE OF PAYMENT

Change the first sentence in Paragraph A to read as follows:

Payments to the Contractor will be made for the actual quantities of contract items performed in accordance with the plans and specifications unless otherwise provided under "Basis of Payment" or items designated as (F) Items. If upon completion of the construction these actual quantities show either an increase or decrease from the quantities given in the bid schedule, the

contract unit prices will still prevail, except as provided in Subsection 109.04, Eliminated Items, and 104.02, Increased or Decreased Quantities and Change in Character of Work.

Add the following subsection:

109.05 HISTORICAL OWNER CAUSED DELAY ALLOWANCE

- A. The quantity and minimum unit price for this item is based on an estimate of the Contracting Agency’s historical experience of Owner-caused delays on this type and size of project. The minimum unit price bid plus the additional amount bid by the Contractor per day of delay shall be the full compensation due the Contractor for all delay-related costs, both direct and indirect pursuant to the project, including, but not limited to, home office and field overheads, supervision, opportunity costs, quality control, traffic control, dust control, storm water pollution control, and equipment standby costs. Owner-caused delays shall mean the delays set forth in Subsection 108.08 (Subparagraph B.2) of the Standard Specifications, exclusive of the provisions of NRS 338.
- B. If the Contractor experiences concurrent delays wherein one or more delay event is compensable under this item and other delay(s) are merely excusable as defined in Subsection 108.08 (Subparagraph B.3), no compensation will be made. If a Contractor experiences concurrent delays wherein one or more delay event is compensable under this item and other delay(s) are neither compensable nor excusable, such concurrent delay will be neither compensable nor excusable. If the Contractor experiences multiple concurrent Owner-caused delays with no other delay events in effect, compensation will be limited to one bid price day per calendar day.
- C. Delay cost incurred while performing additional work on a force account basis shall be considered as compensated for within the markups allowed in Subsection 109.03 “EXTRA AND FORCE ACCOUNT WORK”; Owner-caused delay will not be added to extra work or force account markups.
- D. This is an allowance item that will be paid for the actual quantity used, and is not subject to price re-negotiation based on quantity variance from the bid quantity of days (i.e., the renegotiation aspects of Subsection 104.02 of the Standard Specifications do not apply to this item).
- E. The minimum unit price bid for this item shall be \$500.00 per day. The Contractor shall bid an additional amount to be added to the \$500.00 to determine the actual unit price paid per day of delay.
- F. Payment will be made under:

| <u>Pay Item</u> | <u>Pay Unit</u> |
|---|-----------------|
| Historical Owner-Caused Delay Allowance | Day |
| Additional Amount over \$500.00/Day as determined by Bidder | Day |

109.06 PARTIAL PAYMENTS

Add the following to Paragraph A:

The monthly payment date shall be the last calendar day of each month; each pay request shall comprise work performed during that calendar month.

Add the following to Paragraph F:

Payment based on the actual cost of "specially made" supplies, materials and equipment on hand under this Section shall be made by the Owner pursuant to NRS 338.515(2) with or without a paid invoice. "Actual cost" of materials shall be the invoice amount, whether paid or not, and shall not include any costs associated with installation, testing, etc. The Contractor shall be entitled to payment of the actual cost of supplies, materials and equipment only if he (1) presents an invoice to the Owner with the progress bill and (2) states in the progress bill that the materials have been delivered and stored in the time and manner specified in the contract between the Contractor and his supplier or subcontractor. If the Contractor fails to comply with those conditions, the Owner may withhold payment in accordance with the provisions of NRS 338.525. The Owner expressly reserves the right to withhold retention until the Contractor presents to the Owner a paid invoice, or some other proof of payment satisfactory to the Owner, for the Owner's use in verifying the accuracy of the actual cost of the supplies, materials or equipment. If the amount paid does not match the actual cost, the Owner shall adjust the amount of retention accordingly. Payment for supplies, materials or equipment on hand does not alter the responsibility of the Contractor for all supplies, materials and equipment until final acceptance of the work.

Materials considered "specially made" for this project include:

1. Grate at the Perkins Pump
2. Swing Gate at the Perkins Pump
3. Irrigation Pump
4. Service Pedestal

Add the following subsections:

109.08 CONSTRUCTION CONFLICTS AND ADDITIONAL WORK

- A. This work shall consist of repairing, rebuilding, relocating, replacing, constructing or reconstruction of any surface or sub-surface improvements which cannot be performed by extending bid items and which are not shown on the drawings, or not otherwise covered in these Special Provisions. Such work shall be performed in accordance with the Standard Specifications, Standard Drawings, and these Special Provisions and as directed by the Engineer.
- B. This work shall not be performed until the Contractor is instructed to proceed by the Engineer in writing. The Engineer will keep strict account of all actual costs involved with this item of work. The Contractor shall be paid in accordance with subsection 109.03, "Extra and Force Account Work."
- C. The sum of SEVEN HUNDRED FIFTY THOUSAND DOLLARS (\$750,000) has been entered into the bid schedule under bid item number 109.01, "Construction Conflicts and Additional Work." The bidder shall include this amount in the total base bid base amount.

109.09 EXTENSION OF QUANTITIES

- A. The extension of quantities for the purpose of paying for unrelated items of work shall not be permitted. Only in kind pay item quantities will be allowed to be extended for additional work, for example, plantmix bituminous surface will only be extended for additional plantmix bituminous surface, or concrete sidewalk will only be extended for additional concrete sidewalk, etc.

109.10 UNSETTLED CLAIMS

- A. If the Contractor and Engineer cannot agree on a negotiated cost for the additional work, the Engineer shall give the Contractor a written notice to proceed with the additional work. The Contractor shall then expeditiously perform the work as required and the additional compensation for such work shall be paid under Subsection 109.03, "Extra and Force Account Work." However, if the Contractor deems that any additional compensation is due him for the additional work, the Contractor may file a claim in accordance with Subsection 105.17, "Claims for Adjustments and Disputes."

SECTION 110

WAGES, HOURS AND CONDITIONS OF EMPLOYMENT

110.01 WAGES, HOURS AND EMPLOYMENT PRACTICES

Change Paragraph B to read as follows:

- B. The Contractor shall pay for the overtime of agents and employees of the contracting agency who, as a result of Contractor's operations, are required to perform inspections or testing beyond the normal hours of the established working day, and in accordance with Subsection 105.11. Contractor shall not be required to pay for the overtime of the agents and employees of the Contracting Agency for work performed beyond the normal hours of the established working day if such hours are required by the Contract.

Change Paragraph C to read as follows:

- C. The Contractor will be billed at the base overtime rate, including fringe benefits, equipment costs, and administrative costs. If the invoice is not paid within 30 Days, the amount will be deducted from the next pay estimate due.

Add the following to this subsection:

- F. The established working day shall be 7:00 AM to 3:30 PM, Monday through Friday, except legal holidays, as specified in the General Conditions.
- G. At the discretion of the County, seasonal or other adjustments in the hours of the normal working day may be made.

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Add the following Section:

SECTION 111

CONTRACTOR QUALITY CONTROL ADMINISTRATION - GENERAL CONTRACTOR PROGRAM

111.01 GENERAL

This specification shall be considered a Special Provision to the *Uniform Standard Specifications for Public Works' Construction, Off-Site Improvements, Clark County Area Nevada*. The Contractor Quality Control Program includes the following Sections:

- Section 111 - Contractor Administration and Quality Control-General
- Section 112 - Contractor Quality Control Administration
- Section 113 - QC Organization and Qualification of Inspectors, Laboratories and Technicians
- Section 114 - QC Inspection Procedures
- Section 115 - Contractor Quality Control Administration Forms
- Section 117 - Contractor Quality Control Testing

Program Documents: A written program does not have to be submitted if the Contractor performs the administration, testing, and inspection in accordance with this and other referenced sections. The only submittal required for approval for the quality control program itself is the personnel qualifications as listed in Section 113, "Contractor Quality Control Organization and Qualification of Inspectors, Laboratories, and Technicians."

The Special Provisions Sections 111 through 117 documents shall be placed in hard file cabinets in a field trailer or other fixed office that is near the project.

Personnel Exceptions: The project is a size that requires a Quality Control Coordinator (QCC) separate from the Responsible Person-in-Charge (RPC). The QCC and RPC shall be located on-site full-time. The description of these positions are in Section 113 "Contractor Quality Control Organization and Qualification of Inspectors, Laboratories and Technicians" organization. The contractor shall submit for approval by the Engineer an organization chart indicating the position numbers and the persons responsible.

The Contractor Inspector shall be a different person than the working foreman or testing technician and qualified in the discipline of construction being inspected.

111.02 SUBCONTRACTOR QUALITY CONTROL PROGRAMS

In the event a Subcontractor has a Quality Control Program, the Subcontractor Quality Control (QC) Program shall provide, at a minimum, the requirements set forth in this specification, tailored to the Subcontractor scope of work. The only point of contact for the Engineer is the Prime Contractor. Therefore, the Responsible Person-in-Charge (RPC shall be on-site during any subcontractor work.

111.03 DEFINITIONS GENERAL

The definitions given in this section shall be in conjunction with and/or in addition to the definitions given in the Uniform Standard Specifications. The definitions given herein shall not be construed to modify the definitions given in and application within the *Uniform Standard Specifications* unless specifically stated within this section.

a. Authorized Materials List:

A list generated by the Engineer contains materials that are "Authorized" for incorporation into the work. Contractor may select materials from this list and submit by using only the product name and manufacturer. The period of Authorization is indefinite, contingent upon continued execution, by the Material Source, of the Quality Control Program that has been approved by Clark County Public Works.

b. Control Measures:

All actions taken to ensure that materials are in compliance with specifications, including but not limited to submittal, testing, inspection, documentation, quantifying for testing and payment, As-Built drawings, material tracking. The Contractor shall perform independent Control Measures from the Engineer's Quality Assurance to ensure that all elements of the project are within specifications.

c. Inspection:

A control measure utilizing visual and manual methods shall be used to determine the quality of workmanship, material, or finished product. Inspections shall determine if all verifiable parts, practices, and products are in compliance with the Contract Documents. All inspections shall be documented, and any deviations from Contract Documents shall be noted therein.

d. IQAC Materials List:

A Qualified source list generated by the Interagency Quality Assurance Committee (IQAC), which contains materials requiring an abbreviated submittal prior to incorporation into the work. The period of Qualification will typically be one year or as indicated on the IQAC. Materials on the IQAC list that are removed by IQAC before or during a project shall not be incorporated into the work. This does not eliminate the testing that is to be performed at the project site or of that to a non-authorized source.

e. Lot:

One day's production, regardless of quantity produced. One day's production shall be considered as one continuous production run within one working day shift by the Source or Contractor from which the finished product was produced.

Examples of a Lot are as follows:

1. One "heat" or one continuous pouring from a caldron for reinforcing steel
2. One day's production of a particular mix design of Asphalt Concrete regardless of tonnage quantity

3. One "batch" of Portland Cement or Asphalt Cement (binder)
4. One day's production of a particular mix design of Portland Cement Concrete

Lots may be composed of several sub-lots as provided by specification.

f. Qualified Source:

A Source that has not been approved on the Clark County Public Works "Authorized Source" list.

g. Oversight:

The Contractor's supervisory personnel shall perform all daily inspection, supervisory oversight, and normal worker performance verification checks during production of the work. Oversight shall be documented.

h. Pre-Activity Meeting:

A meeting to coordinate the quality control, quality assurance, and work planning for a specific activity prior to its start. This formal meeting shall resolve all outstanding issues regarding submittals, inspection, testing requirements, elevation controls, safety, and work plan.

i. Quality Assurance (QA):

Quality Assurance shall be all Control measures taken by the Engineer to verify that the Contractor Quality Control measures, materials, and workmanship comply with Contract Documents.

j. Independent Assurance (IA):

Independent Assurance verifies that Engineer's and Contractor's Quality Assurance and Quality Control measures comply with the Clark County Public Works procedures and Contract Documents.

k. Quality Control (QC):

Quality Control shall be all measures taken by the Contractor to ensure that materials and workmanship are in compliance with the specification.

l. Testable Quantity:

The amount of work, material, or construction shall be quantified by the units used for the determination of testing frequency. Testing units and payment units may be different. For the purposes of this document all quantities shall be testable quantities.

m. Source:

Material manufacturing located outside of or located on the project limits. Locations outside of the limits are named "Off-Site Sources" while on the project are named "On-Site Sources."

n. Submittal:

A submittal is a document that is transmitted to the Engineer in order to seek approval of a material or procedure, or as indicated in the Contract Documents.

111.04 SCOPE

The Clark County Public Works (CCPW), Construction Management Division, developed the Quality System Special Provisions to establish and document the Quality Program for construction. This specification listed in Subsection 111.01, "General," are the specifications and references detailing the program and defining policies, elements, activities, and guidelines to ensure that the materials and workmanship in all construction projects conform reliably to the requirements for the approved plans and specifications. It has been developed in conformance with the criteria contained in Federal Regulation 23 CFR 637B, *Quality Assurance Procedures for Construction*.

CCPW's Quality Program represents the Department's recognition of its responsibility and commitment to ensure a high level of confidence in the materials, material sources, field and laboratory test results reported by Quality Control laboratories, and field testing personnel performing testing activities on CCPW projects. The Contractor is expected to be familiar with all aspects of the Inspection, Testing, and Technician Training and Laboratory Qualification Program relating to their duties.

111.05 OVERVIEW

Federal Regulation 23 CFR 637B allows the traditional approach of CCPW performed Quality Assurance sampling and testing for acceptance and the option of using material source or Contractor Quality Control sampling and testing results for acceptance, provided adequate verification is in place. In conformance with these regulations the CCPW Quality System Program was created implementing a schedule of activities to cover construction installation, laboratory operations, testing personnel competency, source production inspection, and material source "Authorized" Program with the goal of using the Contractor data for verified acceptance. The Quality Assurance program provides for four areas of assurance:

Area 1: Qualifying Laboratories and Testing Personnel.

This ensures that technical personnel are capable of performing the tests properly and that the applicable testing qualifications have been met. This level also ensures that testing laboratories are properly accredited.

Area 2: Independent Assurance Program (IA).

This level ensures that the QA and QC functions of the program conform to their respective Quality Special Provision sections and 23 CFR 637B. Additionally, the IA is responsible for the verification of the qualification/certification of inspection and testing personnel along with accreditation of laboratories used in the Quality Control/Quality Assurance Programs.

Area 3: Material Source Quality Program.

Option 1: Qualified Source - This level ensures the quality of the material through acceptance sampling, testing, and inspection performed by the Contractor.

Option 2: Authorized Source - This level ensures the quality of the material through inspection and verification of the material source QC Plan and its application and/or inspection of the source facility itself by the Engineer. The Contractor performs Quality Control inspection and testing of materials placed from the Authorized Source at the project location. For **federally funded** projects, there are no Authorized Material Sources. The Contractor is required to test and inspect the material source as per Table 1 on the Website link at http://www.clarkcountynv.gov/Depts/public_works/construction_mgmt/Pages/Materials.aspx or according to other requirements in the contract documents.

Area 4: Construction Inspection and Testing Program.

Ensures the workmanship of materials incorporated into the CCPW contract project through inspection and testing by Contractor QC with Quality Assurance by the Engineer.

The CCPW Quality Program allows for the use of QA validated quality control (QC) test results as part of the acceptance decision. The program also allows for the use of test results obtained by non-CCPW agencies and laboratories in the acceptance decision provided they meet the following:

- (a) Qualified personnel through qualified laboratories have performed the sampling and testing.
- (b) The quality of the material has been validated by verification sampling and testing.
- (c) The appropriate Quality Assurance Auditing activities have been conducted in a satisfactory manner.

111.06 QC RESPONSIBILITY

The Contractor has the responsibility for the quality of all material properties and workmanship. This specification is intended to quantify the minimum requirements for acceptance of materials and establish a minimum standard for the control of quality within a project. The Contractor shall use this specification, as a minimum, for the basis of their Quality Control.

The Contractor's Quality Control shall provide evidence that all items have been submitted, tested, inspected, and accepted. Further, the Contractor shall track the usage of all materials on the project. The Contractor shall document each of these aspects independently as required herein regardless of testing, inspection, Quality Control measures, and/or Quality Assurance measures historically performed by any agency. Any testing, inspection, Quality Control measures, or Quality Assurance measures, which are performed by an agency, will not be considered as part of the Organization's Quality Control. Compliance with the frequency of testing, inspection, and Quality Control measures required in this specification shall be independent of any compliance measures taken by any agency.

The Contractor is required to measure and reach agreement on "testable quantities" with the Engineer daily. "Partial" quantities and "Completed" quantities for payment purposes only, shall be agreed upon by both parties, and shall not include in part or in whole any materials which will require subsequent testing prior to acceptance.

(a) Control of Subcontractors:

The Contractor has responsibility for all Quality Control Measures required for all subcontractors.

(b) Control of Material Sources:

Materials produced at a Source, which have not been listed in the Engineer's "Authorized Materials List", shall have Quality Control Measures performed by the Contractor in accordance with the Contractor's Quality Control. The Authorized list may be obtained from the Engineer.

(c) Control of Elevation and Grade:

Contractor is responsible for the proper material placement for vertical and horizontal control after the Engineer has established the initial controls as indicated in the Contract.

111.07 ACCEPTANCE

The Engineer will provide Quality Assurance for the verification of the Contractor Quality Control for the acceptance of the construction materials and installation.

The Engineer verification may be performed on a reduced frequency.

The acceptance is also based upon the program compliance and is subject to the penalties listed in section 105.20 PAYMENT FOR CONTRACTOR QUALITY CONTROL PROGRAM.

111.08 CONTRACTOR CONTRACT ADMINISTRATION - GENERAL

The Contractor may have internal administration of the Contract that is not contained in this section. This section only specifies those Contract Document processes that are submitted to the Engineer for Quality Control Purposes.

111.09 ORGANIZATION - GENERAL

The minimum organization staffing and qualifications are described in Section 113, "QC Organization and Qualification of Inspectors, Laboratories and Technicians. The contractor shall submit for approval by the Engineer an organization chart indicating the position numbers and the persons responsible.

Add the following Section:

SECTION 112

CONTRACTOR QUALITY CONTROL ADMINISTRATION

112.01 GENERAL

The administration of the Contractor Quality Control (CQC) shall comply with the minimum requirements as established in this section. This section includes descriptions of all the Control Measures that are applicable to the QC documentation process. A written program does not have to be submitted if the Contractor performs the administration in accordance with this and other referenced sections. The only submittal required is the personnel qualifications as listed in Section 113 "Contractor Quality Control Organization and Qualification of Inspectors, Laboratories, and Technicians". All documents that are required through the course of the work shall be submitted to the Engineer.

112.02 ADMINISTRATIVE OUTLINE

- 112.03 Organizational Processes
- 112.04 Documentation Process - General
 - Maintenance
 - Project Filing System
 - Submittal
 - Deficiency Tracking and Resolution
- 112.05 Conflict Resolution Processes
- 112.06 Certification and Materials Delivery and Tracking Procedure
- 112.07 Activity Cards and Control Measures
 - Tracking Responsibility
 - Testing Identification Responsibility
- 112.08 Daily Reporting
- 112.09 Monthly Reporting
- 112.10 Final Reporting
- 112.11 QC Auditing Procedures
- 112.12 QC Program Revisions

112.03 ORGANIZATIONAL PROCESSES

The Contractor shall develop his minimum organizational structure, lines of communication, and reporting functions based on the minimum position descriptions as indicated in Section 113. The Organizational Structure is based on the partnering approach for conflict resolution; therefore, Quality Control issues shall be addressed at the lowest level possible.

The descriptions of the positions are generalizations of requirements. Additional requirements for a given individual may be further defined in other Special Provisions to the Contract.

The description sheets will suffice for an organization structure.

112.04 DOCUMENTATION PROCESS GENERAL

The Contractor is responsible for the execution and maintenance of the project file system, which shall be maintained in a location approved by the Engineer.

The Contractor has the responsibility for documenting the construction process. All documentation and records generated at the field level shall be provided through the RPC or the designee. Prior to transmitting to the Engineer, the RPC shall review the following for Contract compliance:

1. Records generated by the Contractor laboratory or an outside laboratory
2. Records generated by the Contractor Site Inspector
3. Records generated by Material Sources

112.04.01 MAINTENANCE

The maintenance of the documentation shall comply with the following:

- Be legible, identifiable, and retrievable.
- Protected in a manner to prevent damage, deterioration, or loss.
- Readily available for review within 4 hours.
- Retain documents until transmitted to the Engineer at substantial completion.
- Submit on a monthly basis, all records and laboratory and field tests data to the Engineer either in a paper document or pdf files on a CD/DVD media.

112.04.02 PROJECT FILING SYSTEM

The RPC or designee shall identify, with approval of the Engineer, the central location for filing and storage of all project documentation locations throughout the duration of the project.

The project file system shall include, where appropriate, the following:

- Notification, Activity Cards with test results and inspection reports attached and Log
- Pre-activity meetings
- Deficiency Reports and Log
- Sample Reports and Log
- Certifications and Materials Tracking Log
- Submittals and Log
- Hotmix Log
- Concrete Log
- Audits
- QC Summaries
- QC Final Summary

112.04.03 SUBMITTAL

Submittal tracking shall be performed by the RPC or designee. Submittals that are specification substitutions shall be so identified with written justification.

Copies of submittals shall be filed in the RPC office throughout the review process.

Copies of approved submittals shall reside in the project file.

A person qualified to review the material being submitted shall review and approve the QC Submittal content and verify against specifications. Personnel qualifications are to be submitted for approval by the ENGINEER.

(a) Logging and Submission Process

The RPC or designee shall take the following steps:

1. Generate a Submittal Cover Sheet
2. Log the submittal into the submittal log.
3. Review the submittal for compliance with the Contract Documents.

If the submittal is not in compliance with the Contract Documents, return to submitting representative for correction.

Initial the log for review and transmittal to the RPC.

(b) Reviewing Returned Submittals

The RPC or designee shall take the following steps:

1. Log the submittal as returned.
2. Determine the status of the submittal:
 - a. "No exceptions taken"
 - 1) Forward copy to the RPC for distribution.
 - 2) Forward a copy to the Submitting Representative, if other than the RPC.
 - 3) After Final Filing, no additional action shall be required.
 - b. "With Corrections Noted"
 - 1) Verify that the corrections are clear
 - 2) Forward copy to the RPC.
 - 3) Forward a copy to the Submitting Representative, if other than the RPC.
 - 4) After Final Filing, no additional action shall be required.
 - c. "Amend and Resubmit"
 - 1) Return the Submittal to the individual who generated the Submittal initially.
 - 2) These Submittals shall require "Revision" and shall be resubmitted using the same initial log ID number. The Revision number shall progress sequentially for each additional "Resubmit."
 - 3) Note that a Revision is pending on the Submittal Log.
 - d. "Rejected"
 - 1) Return the Submittal to the Submitting Representative, and inform them that a New Submittal is required.
 - 2) These Submittals shall be given a new log ID number and treated as a new Submittal.
 - 3) File a copy of the Submittal regardless of Status in the Submittal File.

112.04.04 DEFICIENCY TRACKING AND RESOLUTION

The section shall define the procedures required to accurately identify, track, and resolve project deficiencies.

(a) Deficient Work

Deficient work is defined as work that is not in accordance with Contract Documents. An item of work may remain a Deficiency (and not be escalated to Non-Compliance) provided it can be readily corrected "in the field" by the project level personnel. For example, field soils density test below specification requirements.

(b) Non-Conforming Work (non-compliance)

Non-compliant work is defined as work that has a Deficiency which cannot be readily corrected "in the field," and/or shall require that a decision be made by personnel with an "authority" level higher than that which is available daily on the project site. For example, concrete compressive strengths being below specification, or Field soils density test being below specification and no longer accessible.

(c) Informational Tests

In order to control failing Quality Control inspections and/or testing, the Contractor may perform "informational testing." The Contractor shall explain how informational testing shall be utilized prior to requesting any acceptance inspection and/or testing from Engineer. Informational testing may be performed by the Contractor to determine the amount of effort necessary to provide work that complies with the Contract Documents. However, the informational testing that is performed shall be in addition to the minimum testing required by the Contract Documents. Passing informational test(s) which represent the work being performed may be submitted as part of the minimum testing required by the Contract Documents and approved Quality Control Program, only if the Engineer was given proper advance notification of the testing. Informational testing is not required to be submitted to the Engineer as part of the Quality Control documentation but shall be made available for review at the Engineer's request.

(d) Tracking Responsibility

The RPC shall review all Activity Cards daily for New and Resolved Deficiencies. Resolutions shall be approved by the Engineer:

1. When New Deficiencies are found that were resolved on the same day, do not log them on the Deficiency Log. (No further action shall be required for these items.)
2. When New Deficiencies are found that are not Resolved on the same day, log them on the Deficiency Log including the following information:
 - a. Sequential Deficiency Log ID Number
 - b. Reference QC Activity Card Number
 - c. Date of Deficiency
 - d. Material ID Number
 - e. Written description of the deficiency
 - f. QC Initials

3. When Resolutions are found on the Activity Card, log them on the Deficiency Log including the following information:
 - a. Reference Activity Card Number on which the Resolution occurred.
 - b. Date of Correction
 - c. Written Description of the remitted action per conflict resolution chart
 - d. QC Initials

The personnel responsible for identifying deficiencies at the project level may be any one of the following, but not limited to QA Representatives, QC inspectors, Technician(s), RPC, and Foreman.

Documentation and logging of deficiencies shall be provided by the RPC or designee.

The RPC or designee is responsible for transferring deficiencies from the log to the applicable Activity cards.

The RPC is responsible for tracking deficiencies.

The RPC is responsible for deficiency resolution documentation. Following the resolution, the corrective action and resolution shall be documented on the deficiency log and the deficiency noted as corrected.

(e) Deficiency Reporting

The Contractor shall as a minimum take the following actions to report Deficiencies:

- Weekly Review
- Before the Weekly Progress Meeting, review the Deficiency Tracking Log for outstanding Deficiencies.
- Generate a summary of outstanding deficiencies including status of each.
- Deliver the Summary at the Weekly Meeting

(f) Deficiency Resolution

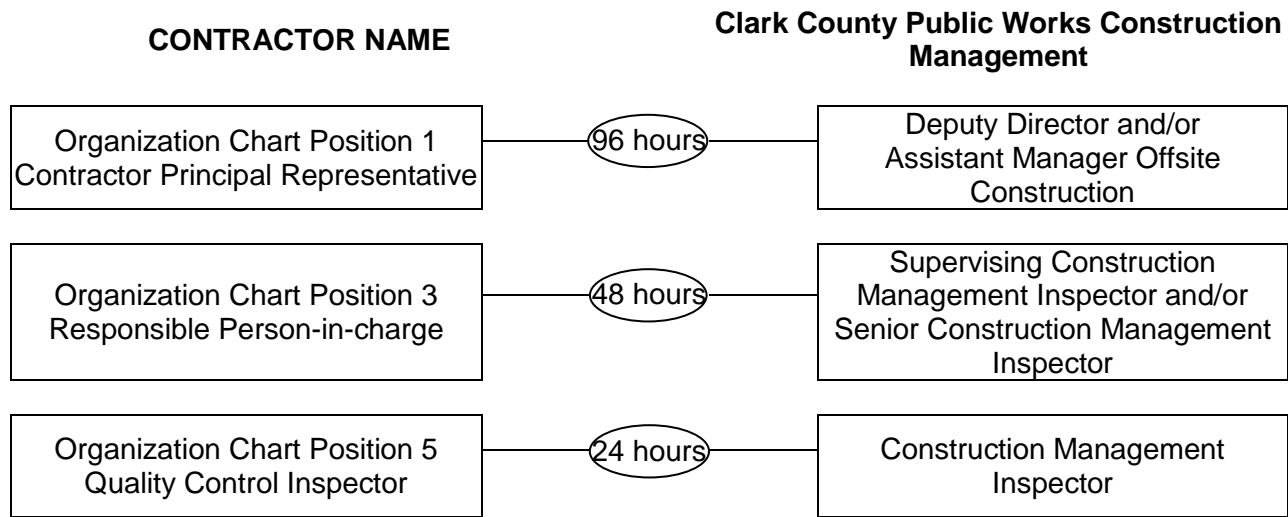
This program does not allow a resolution to be initiated by the Engineer. The Engineer will review resolutions initiated by the Contractor and where engineering properties or design are involved, the Contractor shall have the resolution reviewed by a Nevada Professional Engineer at the Contractor's expense.

The Engineer has the right to not approve the resolution and/or propose a documented resolution after review of the Contractor's proposal.

112.05 CONFLICT RESOLUTION PROCESS

Conflict resolution shall be accomplished in a partnering method in that there shall be levels of authority, time frames of resolution, and a correspondence between the Contractor and QA employees as outlined in the chart below. Every effort shall be made to resolve conflicts at the lowest possible level.

The example chart depicts the resolution process for "deficient and non-compliant work."



The above chart is used as a process to follow whenever there is disagreement between Contractor Quality Control and Engineer Quality Assurance inspection and/or test results. Third party inspections and/or testing may be proposed under the following conditions:

- (a) The third party shall be a separate independent laboratory, meeting the minimum qualifications set forth for laboratories on the project and not performing any additional work for the Engineer, Contractor, Subcontractors, and/or Suppliers on or for the project.
- (b) The third party shall be agreed to by both the Contractor and the Engineer.
- (c) Costs for the third party testing shall be as follows:
 1. Initial inspection or test for the disputed work in question shall be included as part of Contract Documents, paid for by the Contractor.
 2. If the third party's inspection and/or test results reflect Engineer results, Contractor shall pay for any additional inspection(s) or testing performed by the third party after the initial inspection or test.
 3. If the third party's inspection and/or test results reflect the Contractor results, the Engineer shall pay for any additional inspection(s) or testing performed by the third party after the initial inspection or test.
 4. Compensation for third party conflict resolution, for each instance of conflict between the Contractor and the Engineer inspection and/or testing, shall be as provided above.

112.06 CERTIFICATION AND MATERIAL DELIVERY AND TRACKING PROCEDURE

Logs shall be established for the purpose of tracking materials that are delivered to or generated from the project. The logs shall be executed and maintained by the RPC or designee and shall remain in the project file system at all times when not in use. The accompanying certifications shall be filed and numbered relative to the log.

The RPC or designee shall be responsible for generating and completing delivery-tracking documentation. There may be instances where activity foremen shall complete the log.

The documentation of the lot, or other identifiable information, relative to the item and the date of installation documented by the RPC or designee shall serve as evidence of the location of the delivered material upon incorporation into the project. For non-authorized sources, the tests per lot shall be attached to the certificate.

The RPC shall:

- (a) Complete the Materials Delivery documentation.
- (b) Track materials until incorporation into the work.
- (c) Ensure that all materials are noted on the Materials Tracking Log.
- (d) Resolve certification problems.

When a certification is not presented with the delivery, the RPC shall obtain the document prior to material installation.

The logs shall be executed and maintained in the project file system at all times when not in use. Copies of the logs are available at the link shown below.

http://www.clarkcountynv.gov/Depts/public_works/construction_mgmt/Pages/Materials.aspx

The sample log ID number shall be the Contract project sequential number, not an independent numbering system supplied by the laboratory. A separate column may be added for a cross-reference if a laboratory number is needed.

112.07 ACTIVITY CARDS AND CONTROL MEASURES

The RPC shall ensure that the Notification and Activity Cards are in conformance with the procedures in Section 114, "Quality Control Inspection Procedures," and shall establish the guidelines and processes utilized with respect to Notification and QC Activity Cards. The RPC is responsible for verifying all documentation on the QC Activity and Notification Cards is in compliance with this program before being presented to the QA Representatives for "sign-off" and closeout of the activity.

112.07.01 TRACKING RESPONSIBILITY

The RPC shall be responsible for logging and tracking deficiencies on the QC Activity Card. Constant comparison against the deficiency log shall ensure no deficiency is left unresolved.

The RPC shall document deficiencies that are new or have been cleared for each item relative to each activity. Every effort shall be made to resolve deficiencies as soon as possible. No work shall proceed that will negatively affect the resolution.

Section 2 of the QC Activity Card is used for documenting existing deficiencies associated with the activity listed in Section 1 of the QC Activity Card. If no deficiencies exist or occur for the activity, the RPC shall check-off and initial this section. If deficiencies do exist, the lower area of this section shall be completed. Each material number shall be verified against outstanding deficiencies.

112.07.02 TESTING IDENTIFICATION RESPONSIBILITY

The RPC utilizing the QC testing frequencies as indicated in Table I located on the Webpage at http://www.clarkcountynv.gov/Depts/public_works/construction_mgmt/Pages/Materials.aspx shall verify the test methods, frequency of the tests, and the planned number of tests to be taken for each material used in the respective activity as designated by the author of the Activity Card.

The tests are subject to a testing turn-a-round time as designated in Table 2 on the Webpage at http://www.clarkcountynv.gov/Depts/public_works/construction_mgmt/Pages/Materials.aspx.

Check the box on the table for which tests are performed either in—house or contracted. This form is to be submitted at the beginning of the project. A deduction will be made to the contract and monthly work completion estimate of \$100 per day penalty per test method when they are submitted after the durations shown in Table 2.

The QC Inspector, in the appropriate space provided on the QC Activity Card, shall document the actual number of tests taken on each material. The activity card must indicate the quantity and frequency of the tests.

The quantity of material to be tested is the numerical amount of material actually available or “ready” for testing shown in units defined in Tables 1 and/or NDOT Table 5.1 of their Construction Manual relative to the frequency of the material and based on the stationing information documented on the card. For example, the testable quantity of Type II grade for compaction from Station 0+00 to Station 10+00, given a width of 30 feet, would be 30,000 square feet (SF). Given this example and using Table I, the minimum number of tests required for this item would be 6 total tests based on the required frequency of 1 test per 5,000 SF.

The RPC or designee shall verify all necessary calculations to ensure the number of tests performed meet the required number. All minimum test numbers calculated shall be rounded up.

In the event that multiple lifts of material are represented or given that the testable quantity shown on the QC Activity Card is not readily identifiable with documented stations and dimensions, appropriate documentation and/or calculations shall be provided on the QC Activity Card to facilitate easy verification of the testable quantity. This process allows the technician to show documentation for the entire amount of material represented without documenting repetitive entries.

The RPC shall generally arrive at total quantities for each activity by documenting pertinent information such as stations, widths, and other miscellaneous dimensions at the beginning of the activity and comparing them against dimensions at the end of the activity. If situations arise where RPC or QC Inspector cannot be present during all operations and would not be able to derive total quantities, the QC Inspector shall retrieve the information from the activity Foreman and forward it to the RPC. The Materials Tracking Logs shall also be utilized in this respect.

The QC Activity Cards shall reflect certain bid item payment quantities. However, the Contractor shall not use them for compilation of the monthly pay estimate or for bid item payment tracking. This is due to the difference between the pay item unit of measurement and the testable quantity unit of measurement shown in the QC table(s), and also given that payable activities may take place without the presence of a QC Activity Card. (No testing or Inspection.)

The test numbering shall be sequential for the entire project. If a test number is missing, it needs to be accounted for by the RPC or the testing consultant.

112.08 DAILY REPORTING

The Quality Control Activity cards with the inspection forms and daily reports attached plus any field tests shall be used to satisfy the requirements of this subsection. The Quality Control Activity card, completed and signed off, shall serve as the daily summary of activities on the project for the relative item(s). This shall include the transfer of any deficiency items to the tracking log.

112.09 MONTHLY REPORTING

The RPC shall be responsible for coordinating the monthly quality control summaries at the end of each calendar month and submitting to the QA within the time period allowed by agreement between the Engineer and Contractor after each calendar month. This shall include a summary of the quality control performed during the reporting period that includes the frequency of testing for each material type in accordance with Table I or other agency tables.

The RPC shall generate a cover letter. The cover letter shall attest that the summary has been reviewed, that any short falls in testing, sampling, or qualities have been identified, quantified, and acknowledged. Deficient items shall be acknowledged and state that resolution actions are contained in the letter and/or being resolved. A material resolution shall be reviewed and stamped by the Nevada P.E. who has responsible charge.

A Nevada Professional Engineer shall certify that all field laboratory testing was performed correctly, and that the corresponding data is accurate as required by NAC 625.612. This certification shall be attached to the monthly submittal. Additional P.E. stamped letters shall accompany the monthly summary to indicate a P.E. level review and acceptance of the information provided by outside laboratories.

The report may be submitted on media as follows:

- CD-Rom in a pdf format
- Spectraquest test report printouts
- Other word processor documents
- Or any combination

The summary shall be submitted in the following format:

- Cover letter generated by RPC and/or QCC.
- P.E. stamped cover letter stating review and approval of the test summary.
- Field Test Result Summary that shall indicate all field test procedures and results performed during the reporting period. Items and tests shall be summarized by type.
- Field Density Test Result Summary indicating all pertinent information generated during all field density testing,
- Laboratory Test Result Summary that shall indicate all laboratory test procedures and results performed during the reporting period. Items and tests shall be summarized by type.
- Laboratory Concrete Break Result Summary facilitating brief analysis of critical concrete strength data. Items shall be summarized by cylinder set numbers.
- Laboratory Aggregate and Soils Result Summary indicating all gradation test procedures performed during the reporting period.
- Deficiency log.

Testable Quantity Summary that shall indicate total month and to-date counts of tests performed relative to the testable quantities and to-date testable quantities.

The monthly QC summary report shall attach a copy of the most current AASHTO accreditation status for the laboratories referenced in the report from the AASHTO web site. The report shall also attach a list of the NAQTC certified technicians that were working at the referenced laboratories or in the field for the project during that report period.

112.10 FINAL REPORTING

A final summary report shall be generated in accordance with Subsection 112.09 and shall not be submitted until such time as all discrepancies and non-conformances have been resolved as well as a compliant close-out audit.

In the event that a shortfall in QC testing occurs, the fees assigned to the test procedure listed in Table C on the Webpage at http://www.clarkcountynv.gov/Depts/public_works/construction_mgmt/Pages/Materials.aspx shall be deducted.

112.11 QC AUDITING PROCEDURES

For projects that have calendar days to complete greater than 90 days, the RPC is responsible for informal internal audits at a frequency of once per week. The RPC shall perform formal written audits on a monthly basis. QC shall formally document monthly audits with results given to the Engineer. Formal audits shall be filed and maintained with jobsite files.

Specific items or topics of the program that will be evaluated are:

- Advanced Notification Cards Logs - 24-hour notice being given
- Pre-Activity Meetings Logs
- Activity Cards Logs - accurate, correct, and complete on a daily basis
- Materials tracking log
- Sampling and Testing completed with tracking information and results
- As-built's are being updated monthly
- QC documentation and overall program is being implemented effectively
- Documentation for resolution of Deficiencies/Non-Conformances Logs correct and complete

Written documentation of the audit shall be a checklist format with space provided for comments.

Items that are found to require corrective measures shall be noted in the remarks section of the audit form. The RPC shall ensure corrective measures are taken and comply with the program. A follow-up audit limited to items that need correcting shall occur within one week.

Add the following subsections:

112.12 PRODUCTION CONTROL AND CHARTING

The on-site production of aggregate gradation shall be controlled through the testing as indicated in the specification and tracked using a control chart as per ASTM Manual on Presentation of Data and Control Chart Analysis Part 3. The sieves that shall be recorded are the ½", #4, #30 and #200. The other property is the Plastic Index (if required).

The control chart provides a basis for action.

The chart shall plot the daily average of the tests. The production must stop if any of the following non-randomness occurs:

- 1) Any single point beyond the 3σ limits (3 standard deviations)
- 2) Two consecutive points beyond 2σ limits on the same side of the centerline
- 3) Eight points in a row on one side of the centerline
- 4) Six points in a row that is moving away or toward the centerline with no change (trend rule)
- 5) Fourteen consecutive points alternating up and down (saw tooth)
- 6) Two out of three points beyond 2σ limits on the side of the centerline
- 7) Four out of five points beyond 1σ limit on the same side of the centerline

The process must be corrected before resuming acceptance production.

112.13 SAMPLE RETENTION

All samples are to be retained until the project is complete. The sample size shall be such that the required testing could be performed. The Contractor QCC shall be responsible for ensuring the sample is of the appropriate size and that it is stored properly at a location approved by the Engineer.

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Add the following Section:

SECTION 113

CONTRACTOR QUALITY CONTROL ORGANIZATION AND QUALIFICATION OF INSPECTORS, LABORATORIES AND TECHNICIANS

113.01 GENERAL

This section describes the minimum Contractor Quality Control Organization indicating chain of command and position descriptions. Depending on the size of the project, all of the positions may not be required. The contractor must submit the organization to the Engineer for approval. The information shall be submitted to the Engineer and approved prior to the beginning of the work.

The Contractor quality control material sampling shall be obtained from an NAQTC qualified person. The Contractor shall not accept material samples from a subcontractor or material supplier unless the Contractor NAQTC technician observes and documents the sampling.

The Qualifications, Scope of Work and Responsibilities, Communication, and Reporting for each position are related to the execution of the Project Quality Control Program only. Other roles, responsibilities, and reporting requirements may be required by the Engineer in the Contract specification. This Program does not address those roles or responsibilities, nor is it intended to diminish their intent.

The exceptions to this section are listed in Section 111, "Contractor Quality Control Administration - General."

113.02 ORGANIZATION

The minimum chain of command positions are titled as follows:

- Position 1 - Contractor Principal Representative
- Position 2 - Professional Engineer (PE)
- Position 3 - Responsible Person-in-Charge (RPC)
- Position 4 - Quality Control Coordinator (QCC)
- Position 5 - Quality Control Inspector (QCI)
- Position 6 - Quality Control Field Testing Technician
- Position 7 – Quality Control Laboratory Testing Technician

Suggested formats for providing the information to submit to the Engineer are shown in Tables 1 through 7 later in this section, which reference the position titles.

Qualifications and experience requirements are provided for each QC position. The minimum experience requirements for selected positions are as follows:

The Responsible Person-in-Charge (RPC) shall be a quality control project manager level having a minimum of 8 years experience in construction managing the type of construction implemented on the Contract. The RPC shall have the ability to speak and read English and read and understand construction Drawings and Specifications. The RPC shall have stop work authority.

For the testing QC Laboratory, the Professional Engineer who is in responsible charge of the testing shall be a Nevada State licensed Civil Professional Engineer, with a minimum of 5 years experience in construction materials. The field testing technicians shall be NAQTC and/or ACI Concrete Field Technician grade I certified and the Laboratory testing technician shall be NAQTC and/or ACI Concrete Laboratory Testing Technician Level 1 certified. All shall have the ability to speak and read English and read and understand construction Drawings and Specifications.

The Quality Control Coordinator (QCC) is a quality control administrator that ensures that the documents are coordinated to all levels of the project with a minimum of 2 years of experience in this type of work or have evidence in the resume of the ability to coordinate documents. The QCC shall have the ability to speak and read English and read and understand construction Drawings and Specifications.

The inspectors, or a foreman if used per the requirements of Section 111, shall have a minimum of 3 years of experience in the inspection of the particular type of construction work they are performing. The inspectors shall have the ability to speak and read English and read and understand construction Drawings and Specifications.

Resumes of all RPC, QCC, PE, inspection, and material testing personnel shall be submitted. The Contractor shall verify that qualifications of each employee match those required by the position that individual will hold and will be valid for the duration of the project. If personnel will require recertification during the Contract duration, the Contractor shall indicate those personnel and the process for ensuring that the recertification is accomplished.

The Contractor shall complete the Position Description Form (Tables 1 through 7) for each position including Name, Signature, Discipline, Employer, Stop-Work Authority, Certifications, and Title as applicable and submit to the Engineer for approval. Work shall not proceed until approved by the Engineer. One form will be used per position per individual. The form will include all disciplines of work and the related certifications for which the individual is qualified. The inspection and testing staff utilized for a specific item of work may be comprised of any individual that has demonstrated competence and completed the appropriate form. Only QC Inspectors or technicians with appropriate certifications and work experience will be used for that item of work.

When multiple QC Inspectors are used for a common work item, the individuals allowed to inspect a specific item within the work will be identified during the Pre-Activity Meeting. However, all personnel shall be approved by the Engineer.

The acceptance of the work is by the Engineer using the Engineer's inspection and the information from the contractor.

113.03 LABORATORIES

All laboratories, whether primary or subcontracted shall be AASHTO R18, AMRL/CCRL accredited including ASTM D 3666 (Asphalt Concrete and Aggregates), D 3740, C1077, effective June 1, 2012.

For laboratories with multiple facilities, the Contractor shall identify the location of the lab providing the service. This table is project specific for the actual work that will be performed.

Separate laboratories may be used in conjunction with the Primary QC Laboratory. Prior to their use, the Contractor shall provide a submittal for each QC Laboratory. The approved submittal will then be added to QC program as an amendment.

With the exception of “chemical testing” (i.e. binder, cement), QC Laboratory reviewing personnel are required to be in responsible charge Professional Engineers, registered in the State of Nevada, regardless of whether the QC Laboratory utilized is primary or secondary.

Table 1 - Contractor Principal Representative

| | | | |
|---|---|---|-------------------------|
| | Position Number | Position Title | Stop-Work Authority |
| | 1 | Contractor Representative Principal | Yes |
| | Name: | | |
| 1 | Scope of Work and Responsibilities: Perform corporate oversight for the Quality Control. Determine course of action for Quality Control at highest level of Conflict Resolution process. Quality Control related issues within the Organization. | | |
| 2 | Communication - Provide direct access for the following individuals: RPC Quality Control Coordinator Professional Engineer | | |
| 3 | Communication protocol: | | |
| | To Whom | What | When |
| | CCPW | QC Conflicts | Resolve within One Week |
| | QC Professional Engineer | After QC Resolutions | 1 Day |

Table 2 - Quality Control Professional Engineer

| | Position Number | Position Title | Stop-Work Authority |
|---|--|---|---|
| | 2 | Professional Engineer (PE) | Yes |
| | Name: | | |
| 1 | Scope of Work and Responsibilities: In responsible charge over Quality Control Testing, both field and laboratory testing. Signature for all testing reports. Liaison for the Prime Contractor for Materials and testing related issues. Provide consultation to Prime Contractor as requested. Aid in providing resolution in material deficiencies. | | |
| 2 | Maintain open and effective communication with the following individual on a twice weekly basis: RPC | | |
| 3 | Maintain open and effective communication and testing oversight with the following individuals on a daily basis: Testing Technician (Field & Lab) Source / Plant Inspector (when an employee of Engineer) | | |
| 4 | Have direct access to the following individual: Principal Representative | | |
| 5 | Communication protocol: | | |
| | To Whom | What | When |
| | RPC | QC Conflicts - Investigation | Resolve Within 1 day of Test Completion or 3 days for other material issues |
| | RPC or designee | Monthly Report of Field and Lab Results | At time of Pay Estimate |
| | | Final Report of Field and Lab Results | Within 2 weeks from "Substantial Completion" |
| | | Deficiencies in Lab Test Results | Immediately upon completion of testing |
| | QC Technician | After Resolution | 1 hour |

Table 3 - Responsible Person in Charge (RPC)

| | Position Number | Position Title | Stop-Work Authority |
|---|--|---|----------------------|
| | 3 | Responsible Person in Charge (RPC) | Yes |
| | Name: | | |
| 1 | Scope of Work and Responsibilities: Expedite Conflict Resolution. Educate Lead / Foreman of responsibilities to the QC Program. Generate or advise QC coordinator to review and forward Materials Submittals. Measurement and reporting of daily quantities. | | |
| 2 | Maintain open and effective communication and testing oversight with the following individual on a daily basis: Principal Representative | | |
| 3 | Have direct access to the following individual: Principal Representative | | |
| 4 | Communication - Provide direct access for the following individual: Quality Control Inspector | | |
| 5 | Communication protocol: | | |
| | To Whom | What | When |
| | RPC | QC Conflicts - Investigation | Resolve within 1 day |
| | Inspector/Foreman | Materials Delivery and Quantities | Log Daily |

Table 4 - Quality Control Coordinator (QCC)

| | Position Number | Position Title | Stop-Work Authority |
|---|--|--|---------------------------|
| | 4 | Quality Control Coordinator (QCC) | Contractor Option |
| | Name: | | |
| 1 | Scope of Work and Responsibilities: Dispatch Inspectors and Testers. Generate, close, and maintain file system for Activity Cards. Generate, close, and maintain file system for Advance Notification Cards. Generate, track, and maintain all Logs. Perform the Administration for all Quality Control documentation. Perform routine audits of Quality Control and documentation. Review materials submittals for compliance with Contract Documents. Receive, Log, and Schedule sampling of Materials Delivery and Quantities | | |
| 2 | Maintain open and effective communication with the following individuals on a twice weekly basis at a minimum: Professional Engineer | | |
| 3 | Maintain open and effective communication and testing oversight with the following individuals on a daily basis: RPC QC Inspectors Testing Technicians | | |
| 4 | Have direct access to the following individuals: Principal Representative Quality Assurance Coordinator | | |
| 5 | Communication - Provide direct access for the following individuals: Quality Control Inspector Quality Control Technician | | |
| 6 | Communication protocol: | | |
| | To Whom | What | When |
| | QA Inspector / Inspector | Activity Card Close-out | Daily |
| | | Advanced Notification Cards | Prior to Days Work |
| | | Generation of Activity Card | Daily |
| | | Deficiencies | Immediately |
| | | Materials Delivery Log | Daily |
| | | Sample Log and Scheduling of Samples for Materials Delivered | Daily |
| | | Deficiency Log | Daily |
| | | Monthly QC Reports | With Monthly Pay Estimate |
| | | Final QC Report | End of Construction |
| | | QC Resolutions | 1 Hour |
| | RPC | Activity Cards | Prior to Days Work |
| | | QC Conflicts | Resolve within 2 Hours |
| | | QC Resolutions | 1 Hour |

Table 5 - Quality Control Contract or Material Source Inspectors

| | Position Number | Position Title | Stop-Work Authority | | | | | | | | | | | | | | | | | | |
|--|--|---|---------------------|---------|------|------|--------------|--------------------|-------------|---------------------|-------------|--------------|-------------|--------------|---------------------------------------|-----|---------------|---|--|--------------|---------|
| | 5 | Quality Control Inspector (QCI) | Yes | | | | | | | | | | | | | | | | | | |
| | Name: | | | | | | | | | | | | | | | | | | | | |
| 1 | <p>Scope of Work and Responsibilities:</p> <p>Perform inspections and possibly testing. However, if testing, shall comply with NAQTC field test module.</p> <p>Review materials Testing Technician test results.</p> <p>Ascertain work compliance to Contract Documents.</p> <p>Responsible for Quality Control acceptance of work.</p> <p>Responsible for identifying deficient or Non-Compliant work.</p> <p>Will execute "stop work" authority when work or materials are found to be deficient and/or Non-Compliant.</p> <p>Responsible for identifying deficient or Non-Compliant work.</p> <p>Signature for Activity Card Inspection Section items.</p> <p>Measurement, Calculation, and reporting of Testable Quantities.</p> <p>Report deficiencies.</p> | | | | | | | | | | | | | | | | | | | | |
| 2 | <p>Maintain open and effective communication and testing oversight with the following individuals on a daily basis:</p> <p>RPC Professional Engineer Testing Technician Source / Plant Inspector QA Inspector</p> | | | | | | | | | | | | | | | | | | | | |
| 3 | <p>Have direct access to the following individuals:</p> <p>RPC Quality Control Coordinator and/or RPC</p> | | | | | | | | | | | | | | | | | | | | |
| 4 | <p>Communication - Provide direct access for the following individual(s):</p> <p>Quality Control Technician</p> | | | | | | | | | | | | | | | | | | | | |
| 5 | <p>Communication protocol:</p> <table border="1"> <thead> <tr> <th>To Whom</th> <th>What</th> <th>When</th> </tr> </thead> <tbody> <tr> <td rowspan="4">QA Inspector</td> <td>Inspection Results</td> <td>Immediately</td> </tr> <tr> <td>Testable Quantities</td> <td>Immediately</td> </tr> <tr> <td>QC Conflicts</td> <td>Immediately</td> </tr> <tr> <td>Deficiencies</td> <td>Immediately Upon Scheduled Inspection</td> </tr> <tr> <td>RPC</td> <td>Activity Card</td> <td>With Test Results attached at the end of the event. Will be completed by the end of the day.</td> </tr> <tr> <td>Quality Control Coordinator and/or RPC</td> <td>QC Conflicts</td> <td>2 Hours</td> </tr> </tbody> </table> | | | To Whom | What | When | QA Inspector | Inspection Results | Immediately | Testable Quantities | Immediately | QC Conflicts | Immediately | Deficiencies | Immediately Upon Scheduled Inspection | RPC | Activity Card | With Test Results attached at the end of the event. Will be completed by the end of the day. | Quality Control Coordinator and/or RPC | QC Conflicts | 2 Hours |
| To Whom | What | When | | | | | | | | | | | | | | | | | | | |
| QA Inspector | Inspection Results | Immediately | | | | | | | | | | | | | | | | | | | |
| | Testable Quantities | Immediately | | | | | | | | | | | | | | | | | | | |
| | QC Conflicts | Immediately | | | | | | | | | | | | | | | | | | | |
| | Deficiencies | Immediately Upon Scheduled Inspection | | | | | | | | | | | | | | | | | | | |
| RPC | Activity Card | With Test Results attached at the end of the event. Will be completed by the end of the day. | | | | | | | | | | | | | | | | | | | |
| Quality Control Coordinator and/or RPC | QC Conflicts | 2 Hours | | | | | | | | | | | | | | | | | | | |

Table 6 - Quality Control Field Testing Technician

| | Position Number | Position Title | Stop-Work Authority | | | | | | | | | | | | | |
|-------------------------|---|--|--------------------------|---------|------|------|-------------------------|--------------|-------------|--------------|--|-----------------------|---------------------------------------|-----|--------------|--|
| | 6 | Quality Control Field Technician (QCFT) | Contractor Option | | | | | | | | | | | | | |
| | Name: | | | | | | | | | | | | | | | |
| 1 | <p>Scope of Work and Responsibilities:</p> <p>This individual is the “support” for the Quality Control Inspector. Verifies conformance of materials through testing. Advisor to Quality Control Inspector in regard to testing. Responsible for accurately testing, sampling, and reporting of results for construction materials. Responsible for identifying deficient or Non-compliant work, as related to testing. Responsible for notifying Quality Control and Quality Assurance of status of work, as related to testing.</p> | | | | | | | | | | | | | | | |
| 2 | <p>Maintain open and effective communication and testing oversight with the following individuals on a daily basis:</p> <p>RPC Professional Engineer Quality Assurance Coordinator Inspector</p> | | | | | | | | | | | | | | | |
| 3 | <p>Have direct access to the following individual:</p> <p>Quality Assurance Coordinator</p> | | | | | | | | | | | | | | | |
| 4 | <p>Communication - Provide direct access for the following individuals:</p> <p>Quality Control Inspector Quality Control Lab Technician</p> | | | | | | | | | | | | | | | |
| 5 | <p>Communication protocol:</p> <table border="1"> <thead> <tr> <th>To Whom</th> <th>What</th> <th>When</th> </tr> </thead> <tbody> <tr> <td rowspan="3">QC/QA Inspector/Foreman</td> <td>Test results</td> <td>Immediately</td> </tr> <tr> <td>Deficiencies</td> <td>Immediately Upon Failing Test or Observation</td> </tr> <tr> <td>Informational Testing</td> <td>Before performing informational tests</td> </tr> <tr> <td>RPC</td> <td>Test Results</td> <td>Attach to Activity Card at the end of the Event.</td> </tr> </tbody> </table> | | | To Whom | What | When | QC/QA Inspector/Foreman | Test results | Immediately | Deficiencies | Immediately Upon Failing Test or Observation | Informational Testing | Before performing informational tests | RPC | Test Results | Attach to Activity Card at the end of the Event. |
| To Whom | What | When | | | | | | | | | | | | | | |
| QC/QA Inspector/Foreman | Test results | Immediately | | | | | | | | | | | | | | |
| | Deficiencies | Immediately Upon Failing Test or Observation | | | | | | | | | | | | | | |
| | Informational Testing | Before performing informational tests | | | | | | | | | | | | | | |
| RPC | Test Results | Attach to Activity Card at the end of the Event. | | | | | | | | | | | | | | |

Table 7 - Quality Control Laboratory Testing Technician

| | Position Number | Position Title | Stop-Work Authority |
|---|---|---|--|
| | 7 | Quality Control Laboratory Technician (QCLT) | Contractor Option |
| | Name: | | |
| 1 | Scope of Work and Responsibilities: This individual is the “support” for the Professional Engineer. Verifies conformance of materials and work through testing. Advisor to Quality Control Inspector in regard to testing. Responsible for accurately testing, sampling, and reporting of results for construction materials. Responsible for identifying deficient or Non-compliant work, as related to testing. Responsible for notifying Quality Control and Quality Assurance of status of work, as related to testing. | | |
| 2 | Maintain open and effective communication and testing oversight with the following individuals on a daily basis: Quality Control Coordinator Professional Engineer | | |
| 3 | Have direct access to the following individual: Quality Assurance Coordinator | | |
| 4 | Communication - Provide direct access for the following individual: Quality Control Inspector | | |
| 5 | Communication protocol: | | |
| | To Whom | What | When |
| | Professional Engineer | Test results | Immediately |
| | Professional Engineer | Deficiencies | Immediately Upon Failing Test or Observation |

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Add the following Section:

SECTION 114

CONTRACTOR QUALITY CONTROL INSPECTION PROCEDURES

114.01 GENERAL

The Inspector shall be qualified as required in Section 113, "QC Organization and Qualification of Inspectors, Technicians, and Laboratories," or as stated in other Contract Documents.

These inspections and tests include, but are not limited to, qualification tests, factory fabrication and verification tests, material and pre-operational checks/tests, site construction, installation, and testing.

Inspection, process oversight, and testing of items under construction shall be performed for work activities as required in the Contract Documents and at the frequency referenced in the specifications.

A combination of inspection, testing and process oversight shall be performed in a systematic manner to ensure the specific requirements for control of the process and quality of the item are being achieved throughout the duration of the process.

Inspection, oversight, and test results shall be documented in accordance with the Quality Control Program requirements in Section 111 "Contractor Administration and Quality Control-General". Inspection results shall be evaluated and the acceptance determined by the Engineer.

Modifications, repairs or replacement of items subsequent to final inspection shall be re-inspected and/or retested to verify acceptance.

114.02 SECTION 114 OUTLINE

The following are described in this section:

114.03 Organization

114.04 Inspection Process

- Pre-Activity Meetings
- Notification Cards
- Quality Control Activity Card Process
- Sampling and Testing
- Oversight Inspections
- Final Inspection(s) and Testing
- Hold Processes
- Material Sources
- Elevation References

114.05 Field Problem Identification and Reporting Process

114.06 Tracking Responsibility

114.07 Testing Identification Responsibility

114.08 Inspection Procedures

114.09 Inspection Reports

114.03 ORGANIZATION

The organization is based on Section 111, "Contractor Administration and Quality Control - General," that identifies the minimum levels for communication and delegation for the Quality Control program.

114.04 INSPECTION PROCESS

The Contractor inspector(s) shall have the experience to observe, document, instruct, and in general ensure that the work is installed that all testing requirements have been met for the Contract Documents.

The Contractor's in-process inspection program shall utilize an inspection plan outlined as follows:

114.04.01 PRE-ACTIVITY MEETINGS

For the first start-up of any bid of work or in the change of a crew for the same work, a meeting shall be conducted with all persons involved. Each activity of work shall have a procedure approved by the Engineer that contains descriptions of the processes, which address the requirements for inspections and tests for the particular crew activity. See section 114.08 for details.

It is encouraged that the information outlined below be relayed during the daily course of the project and through any periodic progress meetings to reduce the number of time consuming meetings. However, formal Pre-Activity Meetings shall be held as activities begin for a period of unbroken time. It is intended that the Pre-Activity Meeting be held at the actual location of the work. The Pre-Activity Meeting shall be held within one week of the first item of work on the shift that the actual work shall begin. When working a multi-jurisdictional project such as with NDOT, 2 days' advance notice is required prior to the meeting being held.

The meetings shall be held to discuss all quality control and operational aspects of proposed activities. All activities may necessitate meetings, unless extenuating circumstances dictate the need for meetings on general and common activities.

The meetings may be held under special requests made by the Engineer and shall also be held in the event of major personnel changes with respect to the project such as a project manager for the Engineer or the Contractor.

The RPC shall facilitate the meetings at the project level.

Documentation of the meetings shall be provided by the RPC in the form of tape recordings and/or written documentation. A copy of the documentation (written and or recorded) shall be provided to the Engineer within one shift of the meeting.

The meetings shall accomplish the verification of the following items:

- Description
- Ensure that all submittals are approved
- Review Plans, Specifications, and Procedures that apply
- List materials
- List any mandatory procedures (i.e., Manufacturers' specifications)

- Review Deficiencies in prior related work and note
- Verify that no outstanding deficiencies exist for work that led up to this activity
- Discussion of acceptance criteria
- Particular items of interest to the Engineer; QA's expectations
- List of Control Measures and responsible parties, Review of Frequency of Control Measures
- Discussion of off-site and on-site QC responsibilities
- Discuss "What do we do when something goes wrong?"
- Traffic Control and Safety Issues and Notification to the Public
- Reminder that the public comes first
- Items requiring QC
- Itemize frequency of inspection and testing.
- Define any revision of Contract specification protocol and documentation revision approved by the Engineer

The following individuals are required to attend the Pre-Activity Meeting for work that they perform:

- RPC
- QC Inspector
- QA Inspector
- Responsible activity foreman

114.04.02 NOTIFICATION CARDS

The Contractor shall utilize the Advance Notification Card in the example forms to schedule all Activities.

114.04.03 QUALITY CONTROL ACTIVITY CARD PROCESS

QC Activity Cards, examples in Section 115, will not be required when activities do not necessitate testing or inspection to be performed on the item.

The RPC is responsible for verifying all documentation on the QC Activity and Notification Cards is in compliance with this program before being presented to the QA Representatives for "sign-off" and closeout of the activity.

The inspection staff utilized for this project can be comprised of any of the personnel listed in this section with the stipulation that only personnel with appropriate field certifications shall be used.

The testing staff utilized for this project can be comprised of any of the personnel listed in this section with the stipulation that only technicians with appropriate certification shall be used. The RPC shall use the following guidelines for QC Activity Card identification and logging:

- QC Activity Cards shall be issued a sequential number to uniquely identify it with the activity.
- QC Activity Cards generated and filed shall be logged on the QC Activity card Log as described in Section 112.

a. Activity Card Section 1 – Actual Work Performed

Used to document the actual work performed for the activities listed. Locations shall be listed to correlate with the type of work performed.

b. Activity Card Section 2 – Deficiency Check

Used for documenting existing deficiencies associated with the activity listed in Section 1. If no deficiencies exist or occur for the activity, the Inspector or Technician shall check-off and initial this section. If deficiencies do exist, the Inspector or Technician shall complete the lower area of this section. Each material number shall be verified against outstanding deficiencies.

c. Activity Card Section 3 – Item/Material for Inspection

Used for documenting inspections associated with the activities listed in Section 1 and for documentation of QA verification inspections.

Each inspected material utilized during the activity shall be entered. The completion of the RPC next section “QC Initial/Date” shall serve as documentation of the quality control inspection performed. There shall be instances where the RPC fills out the QC Activity Card but does not initial the inspection. In these cases, the RPC shall require the particular activity Foreman, or subcontractor Foreman/Supervisor, to initial the inspection. Electrical items shall almost always be inspection initialed by the activity Foreman.

Inspections to be performed are listed in the QC Table 1 on the Website link at http://www.clarkcountynv.gov/Depts/public_works/construction_mgmt/Pages/Materials.aspx.

The next section “QA Initial/Date” shall be utilized for QA’s documentation of verification of the inspections listed within the section.

The RPC and/or Foreman shall give a maximum one-day advance notice to QA of verification inspections to be performed. If so notified and verification inspections cannot be performed by QA, subsequent activities may proceed and RPC or Foreman’s inspection of a particular item shall justify as permission to proceed with subsequent activities provided no exceptions were taken. If QA was unable to attend the inspection, a statement thereof shall be made on the QC Activity card. In the event a difference of opinion or interpretation of specifications occur between the RPC or Foreman and QA the conflict shall be resolved with every effort of both parties to resolve the issue at the lowest possible level.

The RPC or Foreman can initial inspection of an activity/item that he was not continuously present, however there shall be an acceptable level of periodic oversight performed in order to initial the inspection. .

The inspection observation reports shall be attached to the activity card.

d. Activity Card Section 4 – Testing and Sampling Requirements

Used for documenting field tests associated with the activities listed in Section 1.

The RPC shall indicate the description of the test performed. The “Actual” column shall also be completed by RPC and shall reflect the actual number of tests performed for each item listed.

The final column, “Testable Quantity,” shall be completed by the RPC and shall indicate the amount of material that was available for testing for the items listed within this section. The

amount shall be followed by the appropriate unit (square feet, cubic yard, linear feet). Calculations shall be shown to justify the number entered, for instance, when there may be multiple lifts of trench backfill tested and documented.

e. Activity Card Section 5 – Remarks

Used for documentation of miscellaneous information associated with the activities listed on the card. This section shall also be used to document formulas used to calculate the number of tests required.

f. Activity Card Section 6 – Quality Assurance Sign-Off

Used for documentation of the QA sign-off of the QC work performed associated with the activity listed. Upon sign-off, a copy of the QC Activity Card with applicable test and inspection observation reports results shall be delivered to RPC.

114.04.04 SAMPLING AND TESTING

All sampling and testing shall be performed in accordance with the Table I in the Website at http://www.clarkcountynv.gov/Depts/public_works/construction_mgmt/Pages/Materials.aspx or other Agency jurisdiction and the contract documents.

All density testing locations shall be clearly identified by paint marking on the grade at the time the testing is performed. All trench walls or structure shall have backfill lift thickness marked in paint. This requirement will aid in the correlation testing by Quality Assurance.

114.04.05 FINAL INSPECTION(S) AND TESTING

Final inspection(s) and tests which are performed to demonstrate and verify functional operation and conformance to the Contract requirements of the products, subsystems and systems constructed, fabricated, manufactured, and installed by the Contractor or its subcontractors and suppliers for the Project in accordance with the Contract Documents.

Prior to final inspection(s) and tests, a review of the deficiencies identified during the in-process inspections and tests shall be performed by the RPC to verify that corrective action has been completed, verified, and documented. The final inspection or test shall demonstrate the conformance of the item to specified requirements.

114.04.06 HOLD POINT PROCESSES

A “hold point” is the point in the construction installation of one step that must await a previous step to be completed and approved by the Engineer to proceed. These hold points are defined on the Website link (shown below) and may also be defined in the Contract Documents. A hold point not indicated in the Contract Documents may be defined by the Contractor and approved by the Engineer.

http://www.clarkcountynv.gov/Depts/public_works/construction_mgmt/Pages/Materials.aspx

The Contractor shall not proceed without specific approval of the Engineer.

114.04.07 MATERIAL SOURCES

On-site delivery of material items furnished by suppliers to be incorporated into the work shall be jointly inspected upon receipt by the Contractor's Quality Control personnel and the Engineer to verify conformance to specified requirements. Source inspection of items fabricated or manufactured specifically for the Project shall be performed jointly as required by the Contract Documents.

The Engineer may conduct independent Quality Assurance and/or Independent Assurance (IA) inspection/testing and source inspections as deemed necessary. The Engineer or Engineer's representative shall coordinate these inspections and tests as required.

114.04.08 ELEVATION REFERENCES

In order to aid in the overall coordination of testing and inspection location, use the below table of Elevation References.

| Abbreviation | Grade Name | Description of Grade |
|--------------|-------------------------------|--|
| FG | Finish Grade | Final elevation for the top of the completed work |
| FGAB | Finish Grade - Aggregate Base | Final elevation for the top of Aggregate Base |
| FGE | Finish Grade - Embankment | Final elevation for the top of Embankment Fills |
| FGS | Finish Grade - Subgrade | Final elevation for the top of Subgrade *Note 1 |

Note 1: The Finish Grade - Subgrade elevation shall only reference the top of the "scarified and recompacted," "in-place," and "native" original ground material. This elevation shall not be used to reference any portion of embankment materials. In Trench Zone work, this elevation shall be the bottom of the trench excavation only; all other elevations shall be referenced to FGE, FGAB, or FG. In the event that the Aggregate Base Zone is placed directly on scarified original ground, the FGS elevation shall be used for the top of native Subgrade.

All elevations shall be "called out" as one of the Finish Grade elevations noted in the table above minus the number of feet below that grade.

An example would be Finish Grade Aggregate Base minus 0.5 feet or FGAB-0.5'. In the example, the elevation stated would be one-half of one foot below finish grade for the aggregate base.

Another example would be a trench backfill operation currently being tested 2 feet above a 3 feet thick pipe zone, in an 18 feet total depth trench measured from Finish Grade (FG) would be FG-13'. Alternately, if the pavement zone and aggregate base zone are not given for the work, the elevation may be FGE-13' for the same excavation where the surface elevation is Finish Grade Embankment.

When available for the Project, the actual elevation in feet **North American Vertical Datum of 1988 (NAVD 88)** shall be noted on all documentation in addition to the elevation "call out" above.

114.05 FIELD PROBLEM IDENTIFICATION AND REPORTING PROCESS

The following procedure outlines the identification and reporting of a deficiency.

- (a) If a problem is observed by a Non-Quality Control Personnel:
- (1) Locate the QC Inspector.
 - (2) Inform the QC Inspector of the Deficiency and any additional information details special circumstance.
- (b) If a problem is observed by a Testing Technician:
- (1) Your testing indicates deficient work:
 - a) Record all testing data.
 - b) Locate QC Inspector.
 - c) Provide detail of Deficiency to QC Inspector.
 - (2) You observed deficient work:
 - a) Locate QC Inspector.
 - b) Provide detail of Deficiency to QC Inspector.
- (c) If a problem is observed by a QC Inspector:
- (1) Gather information from anyone with knowledge of Deficiency.
 - (2) Notify and discuss deficiency with QA Inspector to identify possible resolution.
 - (3) QC to provide possible solution, QA agrees with proper solution.
 - (4) If resolution cannot be achieved within that day, one of two courses of action needs to be taken as follows:
 - a) If resolution can be achieved the following day:
 - 1) Verify that the resolution was performed and that all aspects of work are now in compliance with Contract Documents.
 - 2) If it is not in compliance, Notify QA immediately.
 - (5) If work is now in compliance, note resolution in deficiency area of Activity Card, with written description of resolution, making notes in remarks which detail the resolution process then:
 - a) Notify QA Inspector of Resolution.
 - b) Sign-off the Inspection Item.
 - (6) If resolution cannot be achieved the following day, note in the remarks any portion of the Activity Card that has a Deficiency pending.

114.06 DEFICIENCY TRACKING RESPONSIBILITY

The RPC or QCC shall be responsible for logging and tracking deficiencies on the QC Activity Card. Constant comparison against the deficiency log shall ensure no deficiency is left unresolved.

The RPC shall document deficiencies that are new or have been cleared for each item relative to each activity. Every effort shall be made to resolve deficiencies as soon as possible.

Section 2 of the QC Activity card is used for documenting existing deficiencies associated with the activity listed in Section 1 of the QC Activity card. If no deficiencies exist or occur for the activity the RPC shall check-off and initial this section. If deficiencies do exist, the lower area of

this section shall be completed. Each material number shall be verified against outstanding deficiencies.

114.07 TESTING IDENTIFICATION RESPONSIBILITY

The RPC, utilizing the Table 1 at the website, shall identify the test methods, frequency of the tests, and the planned number of tests to be taken for each material used in the respective activity as explained in Section 112.

The planned number of tests to be taken shall be documented on the notification card. The actual number of tests taken on each material shall be documented by the RPC in the appropriate space provided on the QC Activity Card. There may often be a large difference between the planned number of tests and actual number of tests taken. There may also be instances where a large number of planned tests were documented on the notification card and no actual tests were taken, given the probability of the cancellation of activities.

The testable quantity is the numerical amount of material actually available or "ready" for testing shown in units defined in Table I or related Agency testing of this program relative to the frequency of the material and based on the stationing information documented on the card. For example, the testable quantity of Type II grade for compaction from Station 0+00 to Station 10+00, given a width of 30 feet would be 30,000 square feet (SF). Given this example and using Table I, the minimum number of tests required for this item would be 6 total tests based on the required frequency of 1 test per 5,000 SF.

The RPC shall perform all necessary calculations to ensure the number of tests performed meet the required number. All minimum test numbers calculated shall be rounded up.

In the event that multiple lifts of material are represented or given that the testable quantity shown on the QC Activity Card is not readily identifiable with documented stations and dimensions, appropriate documentation and/or calculations shall be provided on the QC Activity Card to facilitate easy verification of the testable quantity. This process allows the technician to show documentation for the entire amount of material represented without documenting repetitive entries.

The RPC shall generally arrive at total quantities for each activity by documenting pertinent information such as stations, widths, and other miscellaneous dimensions at the beginning of the activity and comparing them against dimensions at the end of the activity. If situations arise where RPC cannot be present during all operations and would not be able to derive total quantities, the RPC shall retrieve the information from the activity Foreman. The Materials Tracking Logs shall also be utilized in this respect.

The QC Activity Cards shall reflect certain bid item payment quantities. However, the Contractor shall not use them for compilation of the monthly pay estimate or for bid item payment tracking. This is due to the difference between the pay item unit of measurement and the testable quantity unit of measurement shown in the QC table(s), and also given that payable activities may take place without the presence of a QC Activity Card. (No testing or Inspection.)

114.08 INSPECTION PROCEDURES AND REPORT

The Contractor shall provide documented full time inspection during construction. In addition to daily inspection of the physical performance of the work, oversight shall include any combination of the following:

- (a) Observation of Quality Control and Quality Assurance tests performed with narrative documentation of the observation;
- (b) Include the type of work for the activity card or on days of no hold point, oversight of the installation.
- (c) Coordination with personnel performing or supervising the work.
- (d) Review all field and lab test data.

Completed items shall be inspected for completeness, markings, calibration, adjustments, protection from damage, or other characteristics as required verifying the quality of workmanship and conformance of the item to specified requirements. Quality records, where required, shall be examined for adequacy and completeness and available for audit by the Engineer. A sample inspection document shall be submitted to the Engineer for each type of inspection item. The Contractor may use documents supplied by the Engineer.

During the pre-activity meeting, each activity of work shall be discussed and documented by the Contractor about the descriptions of the processes, which address the requirements for inspections and tests for the particular crew activity. The minimum information to discuss and document in the pre-activity meeting, , shall include the following:

- (a) Name of Crew Work (i.e. concrete curbs)
- (b) General Description of Work
- (c) Personnel Responsibilities
- (d) Checklists
- (e) Verification of Qualifications: Inspection, testing and oversight personnel who verify conformance of work activities shall be qualified and/or certified as necessary to perform the assigned inspection/testing tasks.
- (f) Responsible Individuals: The position name(s) or Title of the individual(s) with "stop work" authority shall be identified
- (g) These inspections and tests include qualification tests, factory tests, installation and verification tests, material tests, and pre-operational checks/tests.

In addition to the standard forms, the inspector shall keep a written or electronic Inspection Report of activities. It shall contain such information as weather conditions, important conversations, visitors on the site, verbal orders received, unusual incidents, equipment breakdowns, length of work stoppages, number of persons and types of equipment affected by work stoppages, and any changes in the appearances of the material. Any item of significance shall be recorded. The importance of entries listed in the inspection's Inspection Report cannot be over emphasized. The information is a reference that can be used to perform similar future work or in case of legal action. The Inspection Report shall include as a minimum, where applicable, the following:

- (a) Date including the year.
- (b) Weather conditions; cloudy, rain, etc.
- (c) Temperature – high and low (the web site wunderground.com is a good resource).
- (d) Wind velocity and direction (approximate).
- (e) Total calendar days.
- (f) Contractors and Subcontractor's working hours.
- (g) Specify work activities performed on that day/week the work is in progress.
- (h) Pay Quantities for the day's activities.
- (i) Note any unusual situations encountered, such as accidents, damages to vehicles or to the project, unusual material (bentonite, etc.), or anything that you would bring to the attention of others.

- (j) Important calls,
- (k) Conversations,
- (l) Verbal discussions with Engineer relative to the work, including any instructions or suggestions from the Engineer.
- (m) Communication with the property owners.
- (n) Official visitors and their recommendations; official visitors may include FHWA, Central Office Personnel, Region Personnel.
- (o) Major equipment.
- (p) Sizable work forces being moved onto or away from the job.
- (q) General locations where equipment is working, not working, and/or idle for repairs.
- (r) Material rejected and reason.
- (s) Substandard materials and justification.
- (t) Any phase shut down, justification and by whom.
- (u) Time spent with Engineer on disputable items of work.
- (v) Describe any delays and duration.
- (w) Progress of surveying and staking.
- (x) Deviations and corrective action taken.
- (y) Traffic Control.
- (z) Changes to Plans.
- (aa) Project personnel.
- (bb) Contractor Inspector signature and title.

The use of a pen with black ink is required for entries into the Inspection Report. The Inspection Report should be kept current by adding notes frequently and directly into the report. The report must be attached to the activity card for the RCP to review. The Engineer shall review and evaluate the inspection results and determine their acceptability. Photographs or other media shall be used daily to visually document the activity and either attach to the report or place in a file. The media shall reference the activity card number.

Add the following Section:

SECTION 115

CONTRACTOR QUALITY CONTROL ADMINISTRATION AND INSPECTION FORMS

115.01 GENERAL

Inspection and administration documents that shall be used by the Contractor for the Quality Control Program may be downloaded from the Website link at:

http://www.clarkcountynv.gov/Depts/public_works/construction_mgmt/Pages/Materials.aspx

If the Contractor would like to revise these or use other documents in the quality control program, they may be submitted prior to use to the Engineer for approval.

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Add the following Section:

SECTION 117

CONTRACTOR QUALITY CONTROL TESTING

117.01 GENERAL

The testing and frequency shall comply with Table I at the website:

http://www.clarkcountynv.gov/Depts/public_works/construction_mgmt/Pages/Materials.aspx

References to QC Manual version 1.02 shall be applied where applicable to the sections Section 111 thru through Section 117

For the purposes of testing, the following common structural items are hereby defined as non-structural:

- 1) Manholes
- 2) Utility Collars
- 3) Street Light Bases
- 4) Curb and Gutter
- 5) Sidewalk
- 6) Driveways
- 7) Valley Gutters
- 8) CLSM (controlled low-strength material)
- 9) ADA ramps

These items will only be required to meet the minimum requirement of once per week per mix design as defined above.

117.02 EXCEPTIONS

117.02.01 AASHTO TEST METHODS

Add the following:

AASHTO T310 In-place Density and Moisture Content of Soil and Soil-Aggregate by Nuclear Methods (shallow depth) Section 9.4.15

Once the initial wet density test reading is recorded, retest in the same position for a minimum of two. If the difference between the wet densities is less than the values in Tables 1 then the two tests are to be averaged for the density test calculation.

Table 1- Direct Transmission Single Operator Two-Test Range

| ASTM Soil Type ¹ | Acceptable range between two tests Lb/ft ³ |
|-----------------------------|--|
| CL | 1.0 |
| SP | 0.8 |
| ML | 1.3 |
| All other | 1.0 |

If the value is outside of the range, another round of two new tests is required in the same position or rotated 90 degrees. If not satisfactory, repeat other rounds until two tests are within the acceptable range.

117.02.02 ASTM TEST METHODS

Add the following:

ASTM D 2950 Density of Bituminous Concrete in Place by Nuclear Methods section 9

Once the initial wet density test reading is recorded, retest in the same position for a minimum of two. If the difference between the wet densities is less than the values in Tables 1 then the two tests are to be averaged for the density test calculation.

Table 2- Single Operator Two-Test Range

| |
|--|
| Acceptable range between two tests Lb/ft ³ |
| 2.6 |

If the value is outside of the range, another round of two new tests is required in the same position or rotated 90 degrees. If not satisfactory, repeat other rounds until two tests are within the acceptable range.

117.02.03 OTHER TEST METHODS

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¹ ASTM D 2487 Table 1

117.02.04 NDOT PROJECTS

Use the Ndot sampling and testing frequency table 5.1 in the Ndot Construction Manual with exception of Bid items 203, 207, and 208 which shall use the CCPW frequencies in table I at the website for:

http://www.clarkcountynv.gov/Depts/public_works/construction_mgmt/Pages/Materials.aspx

117.03 CONSTRUCTION

117.03.01 BRIDGE ABUTMENTS

The zone for structural backfill for bridge abutments is within 50 feet of the structure. Walk behind equipment must be used at the face of the walls.

117.03.02 VERSION 1.02 TESTING FREQUENCY

The testing ID process from the QC program version 1.02 does not apply.

117.03.03 CONCRETE PLANT INSPECTION

The minimum requirement for plant inspection and field testing of concrete is set at one (1) inspection per week per mix design. The field sampling shall be performed on the same concrete placement as the plant inspection.

117.03.04 REINFORCEMENT BAR TESTING

Tensile testing of reinforcing steel is required for all structural concrete at the frequency specified in the QC tables. However, tensile testing of reinforcing steel used in non-structural items as listed in 117.01 is not required.

117.03.05 CCPW CONCRETE TESTING

The following table applies to each individual mix. Frequencies apply to each mix individually. Aggregate sampling and testing is required any time a plant inspection is performed.

The following table applies to testing for concrete and aggregate materials for each individual mix

| Size of Concrete Placement | Any Individual Day | | Cumulative for the Week | |
|----------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| | Structural Concrete | Non-Structural Concrete | Structural Concrete | Non-Structural Concrete |
| Less than 3 cy | NO Tests | NO Tests | NO Tests | NO Tests |
| 3 cy. to 50 cy | YES – 1 Minimum | NO compression Tests | YES – 1 Minimum | YES – 1 Minimum |
| More than 50 cy | YES & 1/100 CY Thereafter | YES & 1/100 CY Thereafter | YES & 1/100 CY Thereafter | YES & 1/100 CY Thereafter |

117.03.06 TEMPORARY DETOURS

Items associated with temporary detours and sections will be tested at a rate of 25% of that which is specified in the respective QC Table(s) with the exception of those items listed below. The use of the APA equipment shall not be required for **temporary** sections both for production control and design of bituminous pavements.

For temporary paving sections, the following test procedures will not be required:

| <u>CCPW Table I</u> | <u>NDOT Table 5.1</u> |
|-------------------------------|-------------------------------|
| Production Rate Report | PBS Mixture Moisture |
| Plant Inspection | Fractured Face |
| Fractured Face | Atterburg Limits |
| Atterburg Limits | Stabilometer |
| Lottman | Lottman |
| Absorption of Agg | Absorption of Agg |
| Straightedge and Profilograph | Straightedge and Profilograph |
| APA | |
| Marshall Testing | |

For temporary soil and aggregate sections, only field density testing will be performed.

117.03.07 APA TESTING AND RECOVERED BINDER

A production day of HMA paving, with respect to the requirements of the use of the APA equipment and Recovered AC Binder Tests only, will be defined as the placement of at least 500 tons of material.

117.03.08 REPORTING

With reference to the QC Manual Version 1.02, reporting requirements are monthly only

117.03.09 SOIL COMPACTION LIFTS

In order to reduce the possibility that testing frequencies are not being met, the following guideline is presented.

Figure 1 is an example for trenches and from Table 1, the frequency of testing is 1/100 Linear Feet (LF) / per Lift. The Lighter colored lifts on the Left hand side of the diagram were placed in the morning (AM). The Darker colored lifts on the Right hand side were placed in the afternoon (PM).

In the AM (lighter) the following testing would be required:

- The 1st Lift would require one (1) test.
- The 2nd Lift would require one (1) test.
- The 3rd Lift would require one (1) test
- The 4th Lift would require one (1) test.

In the PM (darker), the following testing would be required:

- The 1st Lift would require one (1) test.
- The 2nd Lift would require two (2) tests.
- The 3rd Lift would require two (2) tests.
- The 4th Lift would require two (2) tests.

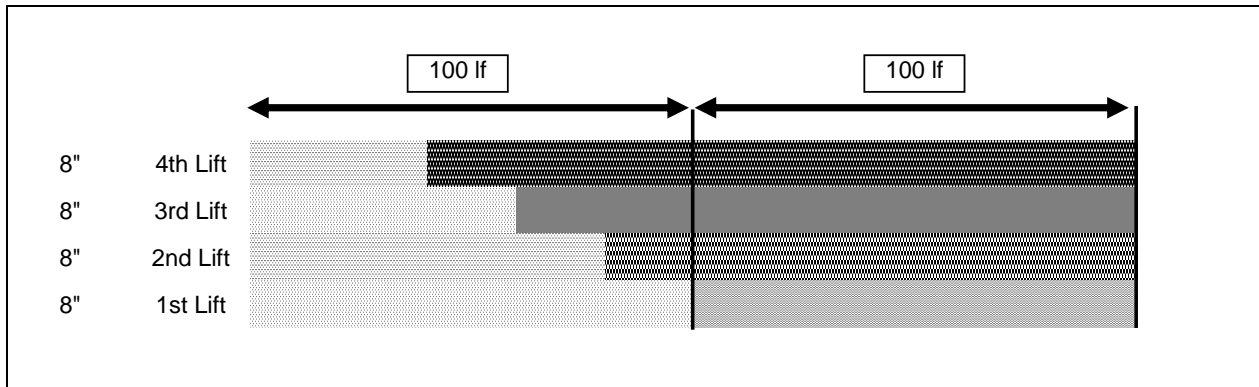


Figure 1- Trench Backfill

In this Figure 2, the contractor has elected to place the fill diagonally. Because each lift is within 100 LF continuous, only one (1) test is required for each lift (darkened line).

The testing requirement is "PER LIFT." Therefore, testing at four locations on a single lift down the slope is not acceptable.

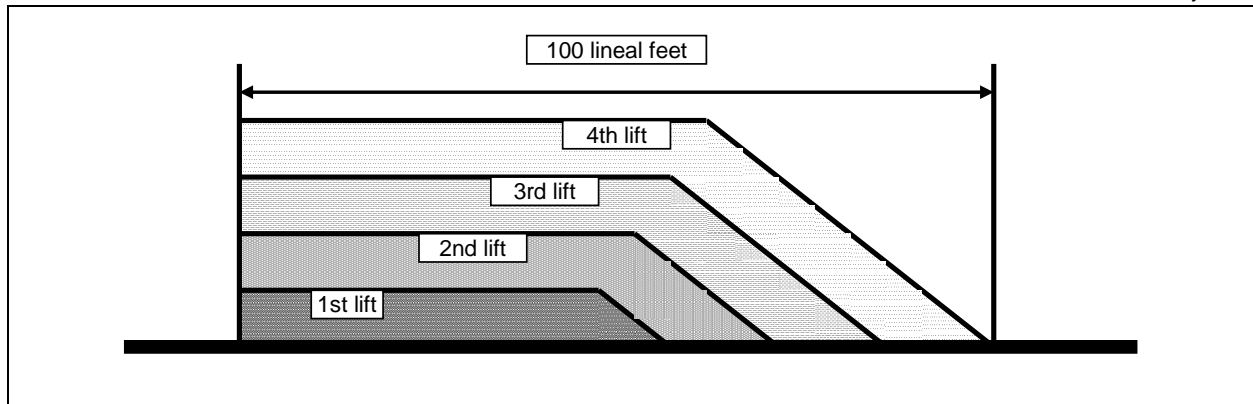


Figure 2- Ramping

117.03.10 RAMPING

The most common method is rapidly dumping enough material to get the equipment into the trench. This method would only be acceptable when the Ramp is subsequently removed, replaced, compacted, and tested in lifts per specification.

A remark needs to be made on the Activity Card when a ramp is no tested. This will be a reminder that the ramp will be required to be reworked. If the work is covered, or the activity moves out of the immediate area, a Deficiency would then be noted on the Activity Card.

The best method for ramping is to build the ramp in lifts and test as it is being constructed.

Add the following Section 200 to the Uniform Standard Specifications:

SECTION 200

MOBILIZATION

DESCRIPTION

200.01.01 GENERAL

- A. The item of Mobilization shall consist of preparatory work and operations, including, but not limited to, those necessary for the movement of personnel, equipment, supplies, and incidentals to the project site, for the establishment of all offices, buildings, and other facilities necessary for work on the project, as well as all other work and operations that must be performed, or costs incurred, not otherwise paid for prior to beginning work on the various items on the project site.
- B. The Engineer will provide the Field Office. All of the following shall be supplied by the Contractor:
1. Sufficient graded parking spaces adjacent to the Field Office for at least 12 vehicles.
 2. Sufficient power for heating and air conditioning equipment in the Field Office capable of providing a comfortable work environment during all seasons experienced in Clark County, and for the safe operation of all the electronic office equipment.
- C. The Contractor shall provide the Field Office with all of the following:
1. Adequate security measures in place to protect the Engineer's equipment and project files.
 2. Monthly pest control service.
 3. Weekly cleaning service which shall include but not be limited to supplying various cleaning supplies; vacuuming; dusting; cleaning windows, floor, and restroom(s); and providing restroom supplies including toilet paper and paper towels.
 4. Weekly garbage removal.
- D. The Contractor shall equip the Field Office, at a minimum, with a conference area and various office furniture to include:
1. Conference table(s) and chairs to accommodate a project meeting with 25 people;
 2. 4 desks with 4 office chairs;
 3. Two 5-drawer legal size file cabinets;
 4. A water cooler and water service;
 5. One large table or desk for plans,
 6. One hard wire telephone line,
 7. One fax/printer/copy machine (Toshiba E-Studio 4540C or approved equal) that is capable of producing 11-inch by 17-inch color copies and PDF scans with a service maintenance agreement and supplies, including but not limited to toner and copier paper (in 8-1/2-inch by 11-inch and 11-inch by 17-inch sizes) for the duration of the project.

- E. Internet access shall be provided with Download speed 5 Mbps-10 Mbps range and Upload speed 1 Mbps-2 Mbps range to not more than 6 desktop personal computers via cat 5 cable or approved equal.
- F. The Field Office shall be made available and ready for use by Engineer's personnel within 30 calendar days of the official Notice of Award from Clark County Purchasing and be maintained for 60 calendar days after Substantial Completion is issued by Clark County Public Works. All costs associated with establishment through termination of this Field Office shall include, but not be limited to, utilities (electricity, water, and sewer), maintenance or association fees shall be paid by the Contractor and included in the cost of mobilization. A submittal for Engineer's approval of the location and contents shall be made within 7 days of the Notice of Award.

BASIS OF PAYMENT

200.05.01 PAYMENT

- A. Mobilization partial payments shall be made in accordance with the following schedule:
 - 1. When 5 percent of the original contract amount is earned from other bid items, 25 percent of the amount bid for mobilization, or 5 percent of the original contract amount, whichever is less, will be paid.
 - 2. When 25 percent of the original contract amount is earned from other bid items, 50 percent of the amount bid for mobilization, or 7 percent of the original contract amount, whichever is less, will be paid.
 - 3. When 50 percent of the original contract amount is earned, excluding the amount for mobilization, the remaining contract amount bid for mobilization, or 10 percent of the original contract amount, whichever is less, will be paid.
 - 4. Upon completion of all work on the project, payment of any amount bid for mobilization in excess of 10 percent of the original contract amount will be paid.
- B. All payments will be made in accordance with subsection 109.06, "Partial Payment."
- C. Payment will be made under:

| <u>Pay Item</u> | <u>Pay Unit</u> |
|-----------------|-----------------|
| Mobilization | Lump Sum |

SECTION 201

CLEARING AND GRUBBING

DESCRIPTION

201.01.01 GENERAL

Delete Paragraph A and replace with the following paragraph:

- A. This work shall consist of clearing, grubbing, removing, and disposing to an Engineer-approved disposal location of all vegetation and debris within the limits of construction, except such objects as are designated to remain or be removed in accordance with other sections of these specifications. This work shall also include the preservation from injury or defacement all vegetation and objects designated to remain.

Add new Paragraph B to this subsection as follows:

- B. Clearing and grubbing shall extend to the edge of the water in thalweg and shall include cutting, removal, and disposal of trees, roots, shrubs, and sprinkler irrigation and capping pipelines at property line.

CONSTRUCTION

Delete Paragraphs A and F and replace with the following paragraphs:

201.03.03 CLEARING AND GRUBBING

- A. Surface objects and trees, stumps, roots, and other protruding obstructions, designated for removal, shall be cleared or grubbed or both.
- F. Except in areas to be excavated, stump holes and other holes from which obstructions are removed shall be backfilled with suitable materials and compacted in accordance with Subsection 203.03.22, "Fill." Payment for backfilling and compacting will be in accordance with Subsection 203.05.01D.

METHOD OF MEASUREMENT

201.04.01 MEASUREMENT

Delete Paragraph A and replace with the following paragraph:

- A. The quantity of Clearing and Grubbing to be measured for payment will be the number of acres and fractions thereof acceptably cleared or grubbed or both within the limits shown, completed and accepted.

BASIS OF PAYMENT

201.05.01 PAYMENT

Delete Paragraphs A and C and replace with the following paragraphs:

- A. The accepted quantity of Clearing and Grubbing will be paid for at the Contract unit price bid per acre, which shall be full compensation for removal and disposal to an Engineer-approved disposal location of all materials including trees, roots, shrubs, and vegetation regardless of size from

within the designated construction limits/right-of-way; removal of sprinkler irrigation; capping pipelines at property line; and all incidentals necessary for completing the work required as shown on the plans or as established by the Engineer.

C. Progress payments will be based on calculated quantities cleared and grubbed during the pay period.

D. Payment will be made under:

| <u>Pay Item</u> | <u>Pay Unit</u> |
|-----------------------|-----------------|
| Clearing and Grubbing | Acre |

SECTION 202**REMOVAL OF STRUCTURES AND OBSTRUCTIONS****DESCRIPTION****202.01.01 GENERAL**

Add the following to this subsection:

- B. This work shall also consist of removal, wholly or in part, and satisfactory disposal of buildings, fence, guard rail, bituminous pavement, driveway, cut-off wall, stem wall, reinforced concrete box culvert, well, slope paving, pipe, headwall, footing, gabion wall, and other designated items; the removal and salvage of signs and irrigation pump; and the relocation of irrigation 20-inch twist cap; all as specified and as shown on the Drawings.
- C. Salvage traffic control signs and posts removed and deliver to the Traffic Operations Division located at 4315 South Stephanie Street, Las Vegas, Nevada.
- D. Salvage the irrigation pump and deliver to the property owner (Perkins).
- E. Salvaged materials not reused on the project shall be delivered to Clark County Public Works Maintenance Management Division at 5825 East Flamingo Road, unless directed otherwise by Engineer and at no additional cost to Owner.
- F. Contractor shall comply with restrictions on disruption of irrigation services as specified in Subsection 213.03.01.
- G. Contractor shall perform removal, handling, and disposal of asbestos containing materials in accordance with all applicable laws and regulations. For existing building to be demolished, Contractor shall comply with recommendations contained in the Asbestos Survey, Muddy River Riverine Cooper Street Bridge, Single Family Residence, APN: 070-13-596-005, Overton, Nevada, dated July 9, 2012, and prepared by OGI Environmental LLC. A copy of this survey is available in the office of the Project Engineer at 500 Grand Central Parkway, Suite 2001 where it may be picked up by the prospective bidders at no cost.
- H. At the completion of construction, Contractor shall demolish and remove the house and appurtenant structures provided by the Owner for use as the Field Office (as specified in Section 200). An asbestos survey was completed for this house, titled Asbestos Demolition Survey, Vacant Residence, 410 North Adelia Street, Overton, Nevada, dated January 31, 2011, and prepared by Converse Consultants. A copy of this survey is available in the office of the Project Engineer at 500 Grand Central Parkway, Suite 2001 where it may be picked up by the prospective bidders at no cost. This survey reported that no asbestos was detected in the samples analyzed for asbestos content. Contractor shall perform demolition and removal of this house in compliance with the following:
 - 1. Remove and dispose of all utility connections provided for the Field Office.
 - 2. Remove and dispose of all other appurtenant structures located on the property.
 - 3. Verify that a septic tank is on-site and, if present, abandon the septic tank and leach field on the property in accordance with the requirements of the Southern Nevada Health District:

<http://www.southernnevadahealthdistrict.org/isds/res-abandonment.php>

4. Properly handle and dispose of all demolition materials.
5. Remove and properly dispose of all trash and debris generated by the demolition work.
6. Comply with dust control and storm water pollution control requirements.
7. Create a smooth ground surface and ensure that the property will drain.
8. Provide all other related work, permitting, and incidentals necessary to complete the project.
9. Obtain and comply with all necessary permits.

Add the following subsection:

202.01.02 QUALITY ASSURANCE

- A. Removal of asbestos containing materials in buildings to be demolished shall be performed by a qualified asbestos abatement contractor licensed in the state of Nevada for this type of work. Removal activities shall conform to local, state, and federal laws, ordinances, and regulations.

CONSTRUCTION

202.03.01 GENERAL

Add the following to this subsection:

- B. Existing bituminous pavement and the portion of base material, where required to be reconstructed, shall be removed and scarified, respectively, at the locations shown on the Drawings, as specified, and/or as directed by Engineer.
- C. Contractor shall be responsible for the following:
 1. Not starting any demolition until a project site visit including review of his procedures and schedule is conducted with Engineer, and Contractor has performed a safety walk-through.
 2. Performing a thorough field review of property to be demolished to determine existing conditions prior to beginning work.
 3. Complying with EPA, OSHA, 29 CFR 1926-62 Lead Regulation and also providing proposed action plans in accordance with Southern Nevada Health District's Demolition Removal Procedures.
 4. Complying with EPA regulation in disconnecting and properly disposing of heating, ventilation, and air conditioning (HVAC) systems and providing proof of proper disposal.
 5. Complying with all disposal regulations if oil or grease or possibly hazardous materials are found on the property.
 6. Calling "Call Before You Dig" and "Call Before You Do Overhead" a minimum of 3 working days before beginning work.

7. Making sure all utilities have been disconnected and services removed, both underground and overhead, from the building to the existing right-of-way before starting demolition.
8. Capping and marking disconnected utilities as required by Engineer.
9. Keeping utilities in service and maintaining access to other sections of the neighborhood.
10. Filling all cavities caused by demolition with small (minus 3/4-inch), non-perishable materials acceptable to Engineer.
11. Broom cleaning and water soaking the property once demolition is complete.
12. Providing proof to Engineer of proper disposal of demolition materials and trash in an authorized landfill.
13. Immediately correcting and/or remedying all conditions reported by City, County, State, and/or Federal Inspectors, and providing Engineer with a written report of action taken within 48 hours of completing corrective actions.
14. Protecting items/improvements not designated for removal.

202.03.02 REMOVAL

Add the following to this subsection:

- I. Remove bituminous pavement shall consist of removing existing pavement of varying depths as shown on Drawings and shall include saw cutting and removal of base and/or subgrade as required to accommodate the new pavement section. This removal shall include streets, driveways, and miscellaneous bituminous pavement.
- J. Existing signs to be removed shall include removing and salvaging existing sign panels, and delivering the salvaged sign panels to Traffic Operations located at 5821 East Flamingo Road. Contractor shall exercise care with all signs salvaged and shall assume that salvaged signs will be re-used again by Clark County.
- K. Existing sign posts to be removed shall include removing and salvaging existing sign posts, removing or cutting the existing sign anchors, patching the holes where the sign posts were located, and delivering the salvaged sign posts to Traffic Operations located at 5821 East Flamingo Road. Contractor shall exercise care with all sign posts and anchors salvaged and shall assume that salvaged sign posts and anchors will be re-used again by Clark County.
- L. Site of sign post removal shall be restored by patching the hole with concrete. Post anchor shall be removed or cut so that the post is not protruding above finished grade.
- M. Salvaged sign panels shall be disassembled and separated from the sign posts prior to delivery to Clark County Traffic Operations.
- N. Any items to be returned to Clark County Traffic Operations shall include a transmittal form with the Contractor's company letterhead. The transmittal form shall include the associated project name and number, and a list of the items and the quantities of items being returned. Contractor shall call (702) 455-6100 to make an appointment for dropping off salvaged items.

202.03.04 CLOSING CULVERTS

Change this subsection to read as follows:

- A. Any part of facilities or structures that are abandoned within 2 feet below finished roadway grade or the depth to the bottom of pavement base plus 6 inches, whichever is greater, shall be removed unless otherwise shown on the Drawings or directed by the Engineer.
- B. Unless otherwise noted on the Drawings or directed by the Engineer, all culverts, storm drain mainlines, and laterals (except corrugated metal pipes) that are taken out of service, shall be abandoned using one of the following methods:
 - 1. Crush lines in place
 - 2. Remove lines
 - 3. Fill lines with CLSM Class I material (see Subsection 704.03.07) or other approved slurry materials.
- C. All corrugated metal pipes that are to be abandoned shall be removed unless otherwise directed by the Engineer.

METHOD OF MEASUREMENT**202.04.01 MEASUREMENT**

Add the following to this subsection:

- D. Measurement for payment of Remove Buildings will be on a lump sum basis.
- E. The quantity of Remove Fence measured for payment will be the number of linear feet removed.
- F. The quantity of Remove Cut-Off Wall measured for payment will be the number of linear feet removed.
- G. The quantity of Remove Stem Wall measured for payment will be the number of linear feet removed.
- H. The quantity of Remove and Salvage Guardrail measured for payment will be the number of linear feet removed and salvaged.
- I. The quantity of Remove and Salvage Sign measured for payment will be the number of each removed and salvaged.
- J. Measurement for payment of Remove Double 4-foot by 2-foot Reinforced Concrete Box (RCB) Culvert will be on a lump sum basis.
- K. Measurement for payment of Remove Draw Bridge will be on a lump sum basis.
- L. Measurement for payment of Remove Concrete Drainage Structure will be on a lump sum basis.

- M. The quantity of Remove Gabion Wall measured for payment will be the number of linear feet removed.
- N. The quantity of Remove Irrigation Channel measured for payment will be the number of linear feet removed.
- O. Measurement for payment of Remove and Salvage Irrigation Pump will be on a lump sum basis.
- P. Measurement for payment of Remove Headwalls and Footings will be on a lump sum basis.
- Q. The quantity of Remove Driveway measured for payment will be the number of square yards removed.
- R. The quantity of Remove CMP measured for payment will be the number of linear feet removed.
- S. The quantity of Remove Irrigation Pipe measured for payment will be the number of linear feet removed.
- T. The quantity of Remove Bituminous Surface measured for payment will be the number of square yards removed.
- U. Measurement for payment of Abandon Well will be on a lump sum basis.
- V. The quantity of Remove Concrete Slope Paving measured for payment will be the number of square yards removed.
- W. Measurement for payment of Relocate 20-inch Twist Cap and Concrete Channel will be on a lump sum basis.
- X. Measurement for payment of Remove Adelia Street House will be on a lump sum basis.

BASIS OF PAYMENT

202.05.01 PAYMENT

Delete Paragraph E and add the following to this subsection:

- E. The lump sum payment for Remove Buildings shall be full compensation for removal and disposal at an approved site of existing buildings including framing, roofing, foundations, steel, concrete, footings, excavation, backfill, utilities, traffic control, and all incidental and appurtenant items in accordance with applicable provisions of Section 202 of the Standard Specifications, properly removed and site of removal restored as specified, as shown on the Drawings, and as required by Engineer. Payment shall also include removal, handling, and disposal of asbestos containing materials in accordance with all applicable laws and regulations; completing and submitting all required forms and documentation; and complying with recommendations contained in the Asbestos Survey. Existing improvements not designated for removal that are damaged or removed shall be replaced to original line and grade at no additional cost to Owner. The lump sum payment for

Remove Building shall also be full compensation for verification of septic tank on-site and, if present, septic tank and leach field abandonment in accordance with the requirements of the Southern Nevada Health District. Additionally, the lump sum payment shall include broom cleaning and water soaking the building demolition site, restoring the disturbed surface to an equal or better condition than the original, ensuring that the demolition area of the property is graded to drain, and for all labor, tools, equipment, and incidentals required to complete the work as shown on the Drawings, as specified, and as required by Engineer.

- F. The accepted quantity of Remove Fence will be paid for at the Contract unit price bid per linear foot, which shall be full compensation for excavation, backfill, removal, and disposal of existing fence including foundations, traffic control, and incidental and appurtenant obstructions in accordance with applicable provisions of Section 202 of the Standard Specifications, properly removed and site of removal restored as specified, as shown on the Drawings, and as required by Engineer. Existing improvements not designated for removal that are damaged or removed shall be replaced to original line and grade at no additional cost to Owner.
- G. The accepted quantities of Remove Cut-Off Wall and Remove Stem Wall will be paid for at the Contract unit prices bid per linear foot, which shall be full compensation for traffic control and for removal and disposal of existing cut-off walls, stem walls, concrete, steel, mortar, excavation, backfill, footings, and all incidental and appurtenant obstructions in accordance with applicable provisions of Section 202 of the Standard Specifications, properly removed and site of removal restored as specified, as shown on the Drawings, and as required by Engineer. Existing improvements not designated for removal that are damaged or removed incidental to the work for these bid items shall be replaced to original line and grade at no additional cost to Owner.
- H. The accepted quantity of Remove and Salvage Guardrail will be paid for at the Contract unit price bid per linear foot, which shall be full compensation for traffic control and for excavation, backfill, removal, and salvage of existing guardrail, footings, posts, hardware, and all incidental and appurtenant obstructions in accordance with applicable provisions of Section 202 of the Standard Specifications, properly removed and site of removal restored as specified, as shown on the Drawings, and as required by Engineer. Existing improvements not designated for removal that are damaged or removed shall be replaced to original line and grade at no additional cost to Owner. At Contractor's option, salvaged guardrail and hardware may be reused on the project where new guardrail is to be installed as specified in Section 618 and as shown on the Drawings. Compensation for installing the salvaged guardrail will be paid at the Contract unit price bid for installation of guardrail. Guardrail posts shall not be reused. The salvaged guardrail and hardware shall meet current safety standards and be approved by Engineer, prior to installation.
- I. The accepted quantity of Remove and Salvage Sign will be paid for at the Contract unit price bid per each, which shall be full compensation for traffic control and for removal and salvage of existing signs in accordance with applicable provisions of Section 202 of the Standard Specifications, properly removed including all incidental and appurtenant obstructions, delivered to salvage yard, and site of removal restored, as specified, as shown on the Drawings, and as required by Engineer. Removal and disposal sign posts and footings shall also be included in the payment for Remove and Salvage Sign. Existing improvements not designated for removal that are damaged or removed shall be replaced to original line and grade at no additional cost to Owner.

- J. The lump sum payment for Remove Double 4-foot by 2-foot RCB Culvert shall be full compensation for saw cutting, excavation, removal, backfilling, and disposal of the existing RCB culvert, footings, headwalls, cutoff walls, concrete, steel, and all incidental and appurtenant obstructions in accordance with applicable provisions of Section 202 of the Standard Specifications, as specified, as shown on the Drawings, and as required by Engineer. Existing improvements not designated for removal that are damaged or removed shall be replaced to original line and grade at no additional cost to Owner.
- K. The lump sum payment for Remove Draw Bridge shall be full compensation for traffic control and for removal and disposal of the existing draw bridge, footings, concrete, steel, fencing, hardware, and all incidental and appurtenant obstructions in accordance with applicable provisions of Section 202 of the Standard Specifications, as specified, as shown on the Drawings, and as required by Engineer. Existing improvements not designated for removal that are damaged or removed shall be replaced to original line and grade at no additional cost to Owner.
- L. The lump sum payment for Remove Concrete Drainage Structure shall be full compensation for traffic control and for excavation, backfill, removal and disposal of the existing concrete drainage structure, saw cutting, reinforcing steel, concrete, mortar, footings, cutoff walls, trash rack, and all incidental and appurtenant obstructions in accordance with applicable provisions of Section 202 of the Standard Specifications, as specified, as shown on the Drawings, and as required by Engineer. Existing improvements not designated for removal that are damaged or removed shall be replaced to original line and grade at no additional cost to Owner.
- M. The accepted quantity of Remove Gabion Wall will be paid for at the Contract unit price bid per linear foot, which shall be full compensation for traffic control and for excavation, backfill, removal, and disposal of existing gabion walls, footings, cutoff walls, concrete, grout, mortar, wire, and all incidentals and appurtenant obstructions in accordance with applicable provisions of Section 202 of the Standard Specifications, properly removed and site of removal restored as specified, as shown on the Drawings, and as required by Engineer. Existing improvements not designated for removal that are damaged or removed shall be replaced to original line and grade at no additional cost to Owner.
- N. The lump sum payment for Remove Irrigation Channel shall be full compensation for traffic control and for excavation, backfill, removal, and disposal of the existing irrigation concrete channel segment, saw cutting, reinforcing steel, concrete, cutoff walls, mortar, and all incidentals and appurtenant obstructions in accordance with applicable provisions of Section 202 of the Standard Specifications and as specified. Existing concrete channel and all other improvements not designated for removal that are damaged or removed shall be replaced to original line and grade at no additional cost to Owner.
- O. The lump sum payment for Remove and Salvage Irrigation Pump shall be full compensation for traffic control and for excavation, backfill, removal, and salvage of existing irrigation pump, mounting hardware, electrical equipment, piping, tubing, and all incidentals and appurtenant obstructions, properly removed and delivered to property owner as specified, as shown on the Drawings, and as required by Engineer. Existing improvements not designated for removal that are damaged or removed shall be replaced to original line and grade at no additional cost to Owner.
- P. The lump sum payment for Remove Headwalls and Footings shall be full compensation for traffic control and for excavation, removal, backfilling, and disposal of existing headwalls,

cutoff walls, footings, and all incidental and appurtenant obstructions in accordance with applicable provisions of Section 202 of the Standard Specifications, as specified, as shown on the Drawings, and as required by Engineer. Existing improvements not designated for removal that are damaged or removed shall be replaced to original line and grade at no additional cost to Owner.

- Q. The accepted quantity of Remove Driveway will be paid for at the Contract unit price bid per square yard, which shall be full compensation for traffic control and for removing and disposal of riprap, gravel, pavement, base material, concrete, saw cutting, excavation, removal, backfilling, and disposal of existing driveway and all incidental and appurtenant obstructions in accordance with applicable provisions of Section 202 of the Standard Specifications, as specified, as shown on the Drawings, and as required by Engineer. Existing improvements not designated for removal that are damaged or removed shall be replaced to original line and grade at no additional cost to Owner. Temporary driveway access on Parcel 070-12-701-008 to access APN 070-12-701-002 shall be completed prior to removal of existing driveway.
- R. The accepted quantity of Remove CMP will be paid for at the Contract unit price bid per linear foot, which shall be full compensation for traffic control and for excavation; removal of CMP, cutoff walls, concrete encasement, headwalls, and footings; backfilling; and disposal of existing CMP culvert and all incidental appurtenant obstructions in accordance with applicable provisions of Section 202 of the Standard Specifications, as specified, as shown on the Drawings, and as required by Engineer. Existing improvements not designated for removal that are damaged or removed shall be replaced to original line and grade at no additional cost to Owner.
- S. The accepted quantity of Remove Irrigation Pipe will be paid for at the Contract unit price bid per linear foot, which shall be full compensation for traffic control and for excavation; removal of pipe, fittings, appurtenances, cutoff walls, and concrete encasement; backfilling; and saw cutting, capping, disposal of existing pipe and all incidental and appurtenant obstructions in accordance with applicable provisions of Section 202 of the Standard Specifications, as specified, as shown on the Drawings, and as required by Engineer. Existing improvements not designated for removal that are damaged or removed shall be replaced to original line and grade at no additional cost to Owner.
- T. The accepted quantity of Remove Bituminous Surface will be paid for at the Contract unit price bid per square yard, which shall be full compensation for traffic control and for saw cutting, removal of asphalt concrete and subgrade or base material, and all incidental and appurtenant obstructions, hauling and disposal, and incidentals necessary to complete the pavement removal work in accordance with applicable provisions of Section 202 of the Standard Specifications, as specified, as shown on Drawings, and as required by Engineer. Existing improvements not designated for removal that are damaged or removed shall be replaced to original line and grade at no additional cost to Owner.
- U. The lump sum payment for Abandon Well shall be full compensation for Contractor's compliance with Nevada Administrative Code (NAC) Chapter 534, Underground Water Wells; traffic control; excavation; removal of well components, hardware, fittings, and piping; backfilling; abandonment of existing well components and hardware; and disposal of incidental and appurtenant obstructions in accordance with applicable provisions of Section 202 of the Standard Specifications, as specified, as shown on the Drawings, and as required by Engineer. Existing improvements not designated for removal that are

damaged or removed shall be replaced to original line and grade at no additional cost to Owner.

- V. The accepted quantity of Remove Concrete Slope Paving will be paid for at the Contract unit price bid per square yard, which shall be full compensation for traffic control and for excavation, removal, backfilling, and disposal of existing concrete slope paving, footings, cutoff walls, steel, and appurtenant obstructions in accordance with applicable provisions of Section 202 of the Standard Specifications and as specified. Existing improvements not designated for removal that are damaged or removed shall be replaced to original line and grade at no additional cost to Owner.

- W. The lump sum payment for Relocate 20-inch Twist Cap and Concrete Channel shall be full compensation for traffic control; excavation; removal including concrete, steel, cap, cutoff walls, and all incidental and appurtenant obstructions; backfilling; and salvage of existing irrigation twist cap and reinstallation of the twist cap, connection to new irrigation pipeline, and construction of concrete channel in new location including shoring, scarifying, subgrade preparation, bedding, structural backfill, Type II aggregate base, form work, concrete, and reinforcing steel as specified, as shown on the Drawings, and as required by Engineer. Existing improvements not designated for removal that are damaged or removed shall be replaced to original line and grade at no additional cost to Owner.

- X. The lump sum payment for Remove Adelia Street House shall be full compensation for removal and disposal at an approved site of existing Adelia Street House and other appurtenant structures on the property at the completion of construction when the house is no longer needed as a Field Office. The demolition and removal of the house shall include framing, roofing, foundations, steel, concrete, footings, excavation, backfill, utilities, traffic control, and all incidental and appurtenant items in accordance with applicable provisions of Section 202 of the Standard Specifications, properly removed and site of removal restored as specified, as shown on the Drawings, and as required by Engineer. Payment shall also be full compensation for verification of septic tank on-site and, if present, septic tank and leach field abandonment in accordance with the requirements of the Southern Nevada Health District. Additionally, the lump sum payment shall include broom cleaning and water soaking the building demolition site, restoring the disturbed surface to an equal or better condition than the original, ensuring that the demolition area of the property is graded to drain, and for all labor, tools, equipment, and incidentals required to complete the work as shown on the Drawings, as specified, and as required by Engineer.

- Y. Payment will be made under:

| <u>Pay Item</u> | <u>Pay Unit</u> |
|--|-----------------|
| Remove Buildings | Lump Sum |
| Remove Fence | Linear Foot |
| Remove Cut-Off Wall | Linear Foot |
| Remove Stem Wall | Linear Foot |
| Remove and Salvage Guardrail | Linear Foot |
| Remove and Salvage Sign | Each |
| Remove Double 4-foot by 2-foot RCB Culvert | Lump Sum |
| Remove Draw Bridge | Lump Sum |
| Remove Concrete Drainage Structure | Lump Sum |
| Remove Gabion Wall | Linear Foot |
| Remove Irrigation Channel | Linear Foot |

| <u>Pay Item</u> | <u>Pay Unit</u> |
|---|-----------------|
| Remove and Salvage Irrigation Pump | Lump Sum |
| Remove Headwalls and Footings | Lump Sum |
| Remove Driveway | Square Yard |
| Remove CMP | Linear Foot |
| Remove Irrigation Pipe | Linear Foot |
| Remove Bituminous Surface | Square Yard |
| Abandon Well | Lump Sum |
| Remove Concrete Slope Paving | Square Yard |
| Relocate 20-inch Twist Cap and Concrete Channel | Lump Sum |
| Remove Adelia Street House | Lump Sum |

SECTION 203

EXCAVATION AND EMBANKMENT

DESCRIPTION

203.01.01 GENERAL

The following is added to this subsection:

- B. Storage and processing of excavated materials may be required prior to use as embankment, compacted fill, or selected backfill, and no additional payment shall be made for this work.

MATERIALS

203.02.01 ROADWAY EXCAVATION

Add the following to Paragraph A:

When caliche is encountered within the excavation limits, the treatment, removal, trimming, and working of that caliche shall be considered as incidental to the excavation work.

203.02.02 DRAINAGE EXCAVATION

Add the following to Paragraph A:

When caliche is encountered within the excavation limits, the treatment, removal, trimming, and working of that caliche shall be considered as incidental to the excavation work.

203.02.03 CHANNEL EXCAVATION

Add the following to Paragraph A:

When caliche is encountered within the excavation limits, the treatment, removal, trimming, and working of that caliche shall be considered as incidental to the excavation work.

Add the following subsections:

203.02.06 OVER-EXCAVATION

- A. Care shall be taken not to over-excavate beyond the channel excavation neat-line shown on the Drawings. However, during construction if the Engineer determines that materials below the excavation neat-line are unsuitable for construction, the Engineer will notify the Contractor, in writing, that the unsuitable materials shall be over-excavated beyond the depths of the neat-line to a depth required by the Engineer. The area shall then be backfilled to the correct grade and compacted to 90 or more relative compaction in accordance with ASTM D1557 in accordance with procedures specified in Section 203.
- B. When unstable materials under the excavation neat-line are encountered, the Contractor shall immediately notify the Engineer for examination of such materials to determine further remedy and/or action thereafter.

- C. In the event that the Contractor over-excavates materials without approval of the Engineer, the over-excavated area shall be backfilled as specified in the above paragraph and at no additional cost to the Owner.
- D. Protection of all utility lines and appurtenances within the over-excavation limits shall be the sole responsibility of the Contractor.

203.02.07 NATIVE MATERIALS

- A. On-site soils or native material meeting the following criteria may be used in required fills/embankment as specified in Subsection 203.03.22, except for use as structural backfill:
 - 1. The majority of the material (85 to 90 percent) shall be 6 inches or less in maximum dimension.
 - 2. The minus 6-inch material shall be comprised of at least 40 percent by weight of material finer than 3/4-inch in size.
 - 3. The material shall be free of debris and organic matter.

CONSTRUCTION

Replace Subsection 203.03.01, ROADWAY, with the following:

203.03.01 GENERAL EXCAVATION

- A. Excavation to the lines, grades, and dimensions shown on the drawings will be required of the Contractor.
- B. The Contractor’s methods for excavation are solely his responsibility, and, as such, the Contractor shall be liable for all property damage by his excavation operations and shall be responsible for answering all complaints. The Contractor shall satisfactorily control storm runoff and seepage into and along the bottoms of excavations and shall not excavate materials outside the limits of the required excavation without the approval of the Engineer. All materials disturbed below the excavation neat-line without the approval of the Engineer shall be replaced to the satisfaction of the Engineer at the Contractor’s cost.
- C. Contractor shall comply with excavation restrictions specified in Subsection 100.11 regarding the Perkins/Webber access road.

203.03.03 UNSUITABLE MATERIAL

Change Paragraph A to read as follows:

- A. Unsuitable Materials are those materials that fail to meet the classification of AASHTO Soil Classification System (AASHTO M145 or ASTM D3282). Material that is unsuitable for planned use, including material below the natural ground surface in embankment areas, shall be excavated and disposed of in a manner approved by the Engineer or as specified in the Contract Documents and shall be considered as incidental to the excavation work.

203.03.04 BLASTING

Delete this subsection and replace with the following:

- A. Blasting or use "headache ball" or similar device to fracture material for excavation will not be allowed for this project.

Add the following subsection:

203.03.22 FILL

- A. Fill will consist of acceptable native material, as specified in Subsection 203.02.07, excavated, hauled, screened, placed, and compacted to lines, grades, and dimensions and within the neat lines shown on the Drawings and as specified in Subsections 203.03.16 and 203.03.17 of the Standard Specifications.
- B. All fill materials shall be placed in continuous horizontal layers in maximum 8-inch loose lifts. Each layer shall be moisture conditioned to within 2 percent of optimum moisture content and compacted by rolling with compaction equipment methods to at least 90 percent of the maximum dry density as determined by ASTM D1557.
- C. The existing soil in areas to receive fill shall be scarified to a minimum of 6 inches, reworked, moisture conditioned, and recompacted to at least 90 percent of the maximum density as determined by ASTM D1557. The depth of excavation, replacement, and compaction may be reduced or increased by the Engineer depending on his visual inspection of uncovered soils. Hard cemented soils may result in a decrease in required excavation depth while partially cemented soils or soft spongy or deleterious soils may result in an increase in required excavation depth. Any increase in depth shall comply with Subsection 203.02.06, Over-Excavation.

METHOD OF MEASUREMENT**203.04.01 MEASUREMENT**

Replace Paragraph B of Subsection 203.04.01 with the following:

- B. The quantities of Excavation and of Fill measured for payment will be the number of cubic yards excavated or filled and any surplus hauled off as needed. The quantity of excavation and fill used for bidding purposes is based on Engineer's estimate of the total volume of cut and fill. Excavation performed and fill/embankment placed outside of the staked or authorized cross section will not be measured for payment. Contractor is hereby notified that the existing contours as shown on the Drawings may not represent current field conditions and that the quantity for excavation and fill shown on the bid set are for bid purposes only. An electronic file that contains the topographic data and an earthworks quantity report performed by Earthcalc, Inc., titled "Muddy River Riverine Enhancement Phase I," January 31, 2011, containing excavation and fill information is available in the office of the Project Engineer at 500 Grand Central Parkway, Suite 2001 where it may be picked up by the prospective bidders at no cost.

The quantity used for payment shall be based on the following method of measurement:

1. After clearing and grubbing and the newly cleared ground being accepted by the Engineer, and before initiation of excavation, Contractor shall notify the Owner to survey the newly cleared ground. The Owner shall have 10 working days thereafter to survey the ground.
2. The Engineer shall have additional 5 working days to quantify the new amounts for excavation and fill based on the newly surveyed ground and shall furnish the surfaces and quantities to the Contractor. The surfaces shall be analyzed using the same method as initially used by the Engineer to estimate the quantities for bid estimation and shall be in ACAD format and will show the new totals for cut and fill quantities.
3. The Contractor shall have 5 working days to respond, in writing, to the Engineer's new excavation and fill quantities. If agreeable to the Contractor, the new calculated quantities will be determined to be the final measurements for excavation and fill quantities. If not agreeable to the Contractor, the Contractor shall justify such disagreement with the ACAD earthwork estimation stamped by a Nevada licensed professional engineer during this Contractor's responding time of 5 working days. All earthwork disagreements must be resolved within the next 2 working days following the Contractor's justification submittal.

The times specified in this subsection and any additional times required to resolve the earthwork quantities shall be considered as included in the Contract completion days and shall not be the cause for extension of the Contract time.

Additional measurement of excavation and fill quantities will not be made for methods or equipment chosen by the Contractor. No additional payment shall be made for removal of caliche under excavation within the neat-line limits. Excavation shall not be considered major items of work, which overrules the requirements of Subsection 101.34.

Add the following to this subsection:

- M. The accepted quantity of Over-Excavation and Backfill will be measured for payment by the Engineer in the field and will be the number of cubic yards excavated. Backfill of the over-excavated section shall not be paid for separately but shall be considered as subsidiary to the over-excavation item. Measurements will be taken as length times width times depth below the design channel sub-base. Contractor is advised that the quantity for Over-Excavation and Backfill listed in the Bid Proposal is an estimate only. Over-Excavation and Backfill shall not be considered a major item of work, which overrules the requirements of Subsection 101.34.

BASIS OF PAYMENT

Replace Subsection 203.05.01 with the following:

203.05.01 PAYMENT

- A. The accepted quantity of Excavation will be paid for at the Contract unit price bid per cubic yard. Compensation for Excavation shall include traffic control; analysis of survey data for new totals of cut and fill; excavating, scarifying existing subgrade or subbase and recompacting, loading, hauling, depositing, spreading, screening, crushing, removing, treatment, drying of excavated material, watering, and stockpiling; removing abandoned waterline; maintaining the material complete and in place; all miscellaneous grading of

shoulders, ditches, and transitions; temporary construction access road; temporary driveway access; and incidentals which include all labor, tools, and equipment as necessary to complete the work as shown on the Drawings, as specified, and as required by the Engineer.

- B. Full compensation of any work involved in wetting or drying embankment material to obtain the required moisture content and all costs for disposal of unsuitable surplus materials shall be considered as included in the contract unit price bid for excavation and fill. No additional compensation will be allowed therefor.
- C. The accepted quantity of Over-Excavation and Backfill will be paid for at the Contract unit price bid per cubic yard, which shall be full compensation for traffic control and for all materials, labor, tools, and equipment necessary to perform the work and for removing and disposing of unsuitable material, acquiring suitable material, loading, hauling, moisture conditioning, blending, screening, drain rock, Type II aggregate base, compaction, geogrid, backfilling, and compacting suitable material to the lines and grades shown on the Drawings and as directed by the Engineer. Payment will be made at the unit price established during bidding and extended under the same bid item. Payment will be based solely on field measurements for actual over-excavated and backfilled areas.
- D. The accepted quantity of Fill will be paid for at the Contract unit price bid per cubic yard, which shall be full compensation for traffic control, screening, mixing, blending, crushing, removing, treating, and drying of excavated material and for furnishing, loading, hauling, depositing, spreading, watering, scarification, compacting, and maintaining the material complete and in place for acceptable native material in accordance with above Subsection 203.03.22, Fill, as shown on the Drawings, as specified, and as directed by the Engineer.
- E. Payment will be made under:

| <u>Pay Item</u> | <u>Pay Unit</u> |
|------------------------------|-----------------|
| Excavation | Cubic Yard |
| Over-Excavation and Backfill | Cubic Yard |
| Fill | Cubic Yard |

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SECTION 206

STRUCTURE EXCAVATION

DESCRIPTION

206.01.01 GENERAL

Add the following to this subsection:

- C. When caliche is encountered within the excavation limits, the treatment, removal, trimming, and working of that caliche shall be considered as incidental to the excavation work.

CONSTRUCTION

206.03.01 GENERAL

Change Paragraph C to read as follows:

- C. Unless otherwise permitted by the Engineer, the excavated areas of the foundations shall be compacted to not less than 90 percent relative compaction for culvert pipe and not less than 95 percent relative compaction for structures. For backfill, refer to Section 207 Structural Backfill.

For fine-grained soils, which are classified by having 50 percent or more passing the No. 200 sieve, if approved by the Engineer, the relative compaction may not be less than 90 percent for structures.

Change Paragraph H to read as follows:

- H. Excavated material, which is suitable for backfilling, shall be so utilized or used in embankments, in a manner satisfactory to the Engineer. At no expense to the Owner, the surplus or unsuitable material shall be disposed of to cause no obstruction to flow of streams or otherwise impair the efficiency or appearance of the structure. It shall be disposed of in such a manner as to prevent damage to property or the creation of unsightly conditions, and shall not be placed where it will interfere with the operation of drains or impair the roadway ditches, etc.

206.03.02 SAFETY REQUIREMENTS AND REGULATIONS

Delete Subsection 206.03.02.

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SECTION 207
STRUCTURE BACKFILL
CONSTRUCTION

207.03.01 GENERAL

Change Paragraph B to read as follows:

- B. Unless otherwise specified, shown on the Drawings, or approved by the Engineer, the compaction requirement shall be a minimum of 95 percent.

Change Paragraph F to read as follows

- F. Structure backfill shall not be placed until the structure or facilities have been inspected by the Engineer and approved for backfilling. Backfill material shall not be deposited against the back of concrete abutments, concrete retaining walls, or the outside walls of concrete box culverts until the concrete conforms to the requirements of Subsection 502.03.11.

Change the title of Subsection 207.03.02 to include all structures as follows:

207.03.02 PLACING AND COMPACTING AT STRUCTURES

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SECTION 208**TRENCH EXCAVATION AND BACKFILL****MATERIALS****208.02.01 GENERAL**

Add the following to this subsection:

- D. The backfill material in the pipe zone for round and elliptical pipe on the project shall be Method A and shall conform to the following:
1. **Method A:** The use of CLSM as defined in this subsection and as placed in the Uniform Standard Drawing 503.1 for flexible pipe and 503.2 for rigid pipe.
- E. Unsuitable Material as defined in Subsection 101.79 and that is unsuitable for planned use, including material below the natural ground surface in embankment areas, shall be excavated and disposed of in a manner approved by the Engineer or as specified in the Contract Documents.
- F. Electrical conduits shall be encased in concrete where and as indicated on the Drawings or as directed by the Overton Power District 5 inspector with Engineer's concurrence. Electrical conduit trench concrete backfill/encasement shall conform to the following:
1. Concrete shall conform to Method A, the use of CLSM as defined in this section.
 2. Concrete shall be dyed red with 12 pounds of dye per cubic yard of concrete.
 3. Concrete shall be 3-bag slurry mix.
 4. Additional backfill shall be placed after concrete has cured.

CONSTRUCTION**208.03.02 MINIMUM TRENCH WIDTH**

Change the first sentence of Paragraph B to read as follows:

For pipe backfill using CLSM, the minimum trench width may be reduced to the pipe outside diameter plus 12 inches to allow for the proper consolidation of the CLSM under the pipe haunches.

208.03.11 FOUNDATION

Revise Paragraph A as follows

- A. Trench foundation (subgrade) shall be stable prior to placing bedding material with field densities subject to Subsection 208.03.17. If excess water is creating instability, dewatering methods shall be employed after approval of the Engineer.

Unless otherwise provided in the contract, the moisture content of the soil at the time of compaction shall not exceed the optimum or be less than the optimum minus five percentage points as determined by AASHTO T 224 and AASHTO T 99, Method C.

Soils subject to high volume changes may require moisture contents in excess of the optimum. For all soils with a plasticity index of 15 or greater, the moisture content of the soil at the time of compaction shall be in the range of optimum minus 1 percent to optimum plus 4 percent. If the moisture content at the time of compaction is not within the specified range, the material shall be either moistened or dried and thoroughly mixed by reprocessing, to the full depth of the lift, before re-compaction.

If the Engineer determines that unsuitable materials exist at the trench foundation, the Contractor shall remove and replace the material as directed by the Engineer and as specified in Subsection 208.03.04, "Trench Over-Excavation."

208.03.17 COMPACTION

Revise Paragraph B as follows:

- B. Each layer shall be evenly spread, moistened, and tamped or rolled with static or vibratory equipment until the specified relative compaction has been attained. Unless there is a special compaction attachment, the use of the back of a bucket on a backhoe is not permitted.

208.03.21 CUTTING AND RESTORING STREET RESURFACING

Add the following to this subsection:

- Q. Where the profilograph measurements are not required, the surface tolerance of finished plantmix bituminous patches shall be checked with a 12-foot long straightedge. All finished surfaces shall be checked along the centerline for the full length of each lane longitudinally and every 25 feet transversely.

METHOD OF MEASUREMENT

208.04.01 MEASUREMENT

Delete Paragraph B of this subsection.

BASIS OF PAYMENT

208.05.01 PAYMENT

Delete Paragraph B and replace with the following:

- B. No payment will be made for temporary cold plantmix patching and permanent patching as such; the cost thereof is considered as included in the price bid for the construction or installation of the items to which such patching is incidental or appurtenant.

Delete Paragraphs C through F and the pay item listed in this subsection.

SECTION 213

IRRIGATION SYSTEMS

DESCRIPTION

213.01.01 GENERAL

Delete Paragraph A and substitute the following therefor:

- A. This Work shall consist of furnishing all materials, equipment, tools, and labor required to install an irrigation pipeline.

Add the following Paragraph C to this subsection:

- C. Irrigation pump system shall be furnished and installed as specified in Section 214.

MATERIALS

213.02.02 PIPE AND FITTINGS

Add the following to this subsection:

- C. Ductile Iron Pipe: Unless otherwise specified or shown on Drawings, provide ductile iron pipe conforming to AWWA C151, pressure class 350.
- D. Polyvinyl chloride (PVC) plastic irrigation pipe (PIP): Unless otherwise specified or shown on the Drawings, provide PVC PIP conforming to Soil Conservation Services (SCS) 430-DD and or ASTM D2241, SDR41.
- E. Approved PVC PIP manufacturers shall be as follows:
 - 1. Diamond Plastic Corporation.
 - 2. Engineer approved equal.
- F. High-density polyethylene (HDPE) pipe: Unless otherwise specified or shown on the Drawings, provide HDPE pipe conforming to ASTM D3350, DR19.
- G. Approved HDPE pipe manufacturers shall be as follows:
 - 1. WL Plastics.
 - 2. Engineer approved equal.
- H. The above manufacturers have been preapproved to establish the type, function, and quality required for the PVC PIP and HDPE pipe. Materials of other suppliers may be accepted by Engineer if sufficient information pertaining to the material to be delivered to the project site is submitted by Contractor to allow Engineer to determine that the substitution proposed is equivalent or equal to that named, subject to the following requirements:
 - 1. The burden of proof as to the type, function, and quality of any substitute shall be upon Contractor. Contractor shall certify that the proposed substitute will perform

adequately the functions and achieve the results called for by the design, be at least equal in quality or utility to that specified, and be suited to the same use as that specified.

2. Engineer shall judge as to the type, function, and quality of any substitute and Engineer shall have the final decision as to whether or not a substitution is approved.
3. Engineer may require Contractor to furnish at Contractor's expense additional data about the proposed substitution.
4. Engineer may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitution.
5. Acceptance by Engineer of a substitute item proposed by Contractor shall not relieve Contractor of the responsibility for full compliance with the Contract Documents and for adequacy of the substitute item.
6. Contractor shall be responsible for resultant changes and all additional costs which the accepted substitution requires in Contractor's work and the work of Contractor's Subcontractors and Suppliers, and shall effect such changes without additional cost to Owner.

Add the following subsections:

213.02.16 LINE GATE VALVES

- A. Line gate valves with 60 feet maximum seating (face) pressure for the 18-inch PVC PIP shall be provided as follows:
 1. Waterman Industries, Inc.: H-30 line gate valve.
 2. Fresno Valves: Series 4000 line gate valve.
 3. Or Engineer-approved equal.

213.02.17 OVERFLOW RISER VALVES

- B. Overflow riser valves, 20-inch with 15 feet maximum operating head, shall be provided as follows:
 1. Waterman Industries, Inc.: Red Top Overflow Valve with Yakima frame (solid arch).
 2. Fresno Valves: Type S Alfalfa Valve.
 3. Or Engineer-approved equal.

CONSTRUCTION

213.03.01 GENERAL

Add the following paragraph to this subsection:

- B. Irrigation service shall not be disrupted throughout the duration of construction, with the exception of a single disruption for the connection of the existing irrigation facility into the newly constructed facilities. When this service disruption is necessary, the maximum duration for the disruption of service shall be limited to 7 calendar days. This disruption shall be scheduled with MVIC prior to initiation.

- C. Pumping service to the existing irrigation channel where the proposed permanent irrigation pump system outlet is located shall be made available throughout the duration of construction. Where construction activities disrupt the pumping service, Contractor shall provide temporary service for a duration of 11 consecutive days, once every month, including access to the controls for the pump by Bruce Perkins and Melbourne Perkins. This service shall be provided until the proposed irrigation pump system is constructed and functional. When water is available, the temporary service shall be able to provide a minimum flow rate of 900 GPM at the existing irrigation channel where the proposed permanent irrigation pump system outlets. Contractor shall coordinate with Bruce and Melbourne Perkins (Parcel 070-12-701-005) regarding the specific schedule of the temporary pumping service.

Add the following subsections:

213.03.13 PVC PIP INSTALLATION

- A. Contractor shall install PVC PIP in accordance with manufacturer's recommendations and as specified in this subsection. Trenching and backfill shall comply with Section 208.
- B. During installation, the maximum permitted pipe deflection at joints shall be limited to 1 degree of deflection per 20-foot segment of pipe.
- C. Place purple tracer wire along the top of the pipeline the full distance of the pipe. Tracer wire shall extend to the ground surface at each pipe fitting locator point.
- D. Purple irrigation line tape shall be placed 2.5 feet above the top of the pipe for the full distance of the pipeline.
- E. Contractor shall place irrigation pipeline identifier markers every 300 feet. Markers shall read CAUTION IRRIGATION PIPELINE and be purple in color. Markers shall withstand being in the sun and weather.
- F. Pipe Fitting Locator: Contractor shall place a 2-inch PVC pipe vertically at all fitting/bend locations. A 16-inch square by 4-inch deep concrete pad (3,000 psi using Type V cement in accordance with Section 501) shall be poured and centered about the vertical pipe at grade and the pipe shall be capped at top of concrete.
- G. Prior to laying any pipe, the grade lines shall be established in the trench bottom at the designated grades and thickness of pipe bedding required. Pipe bedding shall be carefully graded such that the pipe when installed shall be true to line and grade within 0.05 feet for pipe 12 inches in diameter or smaller and within 0.10 feet for pipe larger than 12 inches.

213.03.14 HDPE PIPE INSTALLATION

- A. Contractor shall install HDPE pipe in accordance with manufacturer's recommendations and as specified in this subsection. Trenching and backfill shall comply with Section 208.
- B. HDPE pipe shall be installed in steel casing as shown on the Drawings.
- C. Purple irrigation line tape shall be placed 2.5 feet above the top of the casing pipe for the full distance of the pipeline.

- D. Pipe Fitting Locator: Contractor shall place a 2-inch PVC pipe vertically at all fitting/bend locations. A 16-inch square by 4-inch deep concrete pad (3,000 psi using Type V cement in accordance with Section 501) shall be poured and centered about the vertical pipe at grade and the pipe shall be capped at top of concrete.
- E. Prior to laying any pipe, the grade lines shall be established in the trench bottom at the designated grades and thickness of pipe bedding required. Pipe bedding shall be carefully graded such that the pipe when installed shall be true to line and grade within 0.05 feet for pipe 12 inches in diameter or smaller and within 0.10 feet for pipe larger than 12 inches.

METHOD OF MEASUREMENT

213.04.01 MEASUREMENT

Delete this subsection and substitute the following therefor:

- A. The quantities of 18-inch PVC PIP and 20-inch HDPE Irrigation Pipeline will be measured for payment per linear foot, complete and accepted.
- B. The quantity of 6-inch Ductile Iron Irrigation Pipeline will be measured for payment per linear foot, complete and accepted.
- C. The quantity of Irrigation Stand Pipe will be measured for payment per each, complete and accepted.
- D. Measurement for payment of Webber Irrigation Pipe and Facility shall be on a lump sum basis, in place and operational.
- E. All measurements will be made in accordance with Subsection 109.01, "Measurement of Quantities."

BASIS OF PAYMENT

213.05.01 PAYMENT

Delete Paragraph E and substitute the following therefor:

- E. The Contract unit price paid per linear foot for 18-inch PVC PIP shall be full compensation for complete installation as specified, including, but not limited to, field measurement and verification of existing irrigation pipeline; excavation, shoring, subgrade preparation, bedding, compaction, and backfill including CLSM Class I as specified in Subsection 208.02.07 of the Standard Specifications; scarifying and recompaction, Type II aggregate base, and drain rock; furnishing and installing new 18-inch PVC PIP, fittings, and all incidentals and appurtenances; providing PIP fitting locators at all fittings/bends as detailed on Drawings including concrete, reinforcing steel, and 2-inch PVC Schedule 40 pipe; tracer wire, gaskets, identifier markers, and irrigation line tape; in line gate valve as specified above; testing all work; temporary and permanent pavement patching; protection and restoration, if damaged, of all existing improvements designated to remain in place; and providing materials, equipment, and incidentals as necessary to complete the work as shown on the Drawings, as specified, and as directed by Engineer.

- F. The Contract unit price paid per linear foot for 20-inch HDPE Irrigation Pipeline shall be full compensation for complete installation as specified, including, but not limited to, field measurement and verification of existing irrigation pipeline; excavation, shoring, subgrade preparation, bedding, compaction, and backfill including CLSM Class I as specified in Subsection 208.02.07 of the Standard Specifications; scarifying and recompaction, Type II aggregate base, drain rock, steel sleeve, spacers, and rubber end seals; furnishing and installing new 20-inch HDPE pipe and steel casing, and all incidentals and appurtenances; providing pipe locators at all fittings/bends as detailed on Drawings including concrete, reinforcing steel, and 2-inch PVC Schedule 40 pipe; identifier markers, and irrigation line tape; testing all work; protection and restoration, if damaged, of all existing improvements designated to remain in place; and providing materials, equipment, and incidentals as necessary to complete the work as shown on the Drawings, as specified, and as directed by Engineer.
- G. The Contract unit price paid per linear foot for 6-inch Ductile Iron Irrigation Pipeline shall be full compensation for complete installation as specified, including, but not limited to, excavation, shoring, subgrade preparation, bedding, furnishing and installing new 6-inch DI pipe, fittings, mechanical joints, concrete pipe support, hardware, and appurtenances, testing all work, compaction, backfill including CLSM Class I as specified in Subsection 208.02.07 of the Standard Specifications, temporary and permanent pavement patching, protection and restoration, if damaged, of all existing improvements designated to remain in place, and providing materials, equipment, and incidentals as necessary to complete the work as shown on the Drawings, as specified, and as directed by Engineer.
- H. The Contract unit price paid per each for Irrigation Stand Pipe shall be full compensation for complete installation as specified, including, but not limited to, excavation, shoring, bedding, furnishing and installing new stand pipe, steel pipe, concrete pad, reinforcement, transition coupling, fittings, flange ring, mesh screen, elbow, and appurtenances, testing all work, compaction, backfill, temporary and permanent pavement patching, protection and restoration, if damaged, of all existing improvements designated to remain in place, and providing materials, equipment, and incidentals as necessary to complete the work as shown on the Drawings, as specified, and as directed by Engineer.
- I. The Contract lump sum payment for Webber Irrigation Pipe and Facility shall be full compensation for furnishing and installing all equipment and materials for the irrigation system including pipe, manhole, NDOT Type II drop inlet, cleanouts, end caps, and all incidentals and appurtenances; for coordinating with affected property owners; for excavation, shoring, subgrade preparation, bedding, compaction, and backfill; for restoring improvements designated to remain in place; and for providing all labor, tools, equipment, and incidentals required to complete the work as shown on the Drawings, as specified, and as directed by Engineer.
- J. All payments will be made in accordance with Subsection 109.02, "Scope of Payment."
- K. Payment will be made under:

| <u>Pay Item</u> | <u>Pay Unit</u> |
|---|-----------------|
| 18-inch PVC PIP | Linear Foot |
| 20-inch HDPE Irrigation Pipeline | Linear Foot |
| 6-inch Ductile Iron Irrigation Pipeline | Linear Foot |
| Irrigation Stand Pipe | Each |

Pay Item

Webber Irrigation Pipe and Facility

Pay Unit

Lump Sum

Add the following new Section 214 to the Uniform Standard Specifications:

SECTION 214

IRRIGATION PUMP SYSTEM

DESCRIPTION

214.01.01 GENERAL

- A. Work of this section shall include furnishing and installing 1 submersible non-clog solids pump, ball check valve, and ancillary equipment.
- B. The pump shall be equipped with an 10 HP submersible electric motor connected for operation on 460-480 volts, 3-phase, 60 hertz, wire service, with 50 feet of submersible cable (SUBCAB) suitable for submersible pump applications. The power cable shall be sized according to NEC and ICEA standards and have P-MSHA Approval.
- C. The ball check valve shall have modular cast iron body, metal ball core with vulcanized nitrile rubber covering, Class 125 flanged connections, and 145 psi maximum working pressure.
- D. Level regulator, float type, mechanical switch in a plastic housing for level control to shut off the pump at low water level shall also be provided.
- E. Pump electrical incidentals shall also be included such as, but not limited to, pump control pedestal, concrete foundation, and pump feeder conduit, conductors, and fittings as shown on Drawings.

MATERIALS

214.02.01 IRRIGATION PUMP

- A. Irrigation pump shall be a FLYGT Model NP-3127-422 (Hard Iron Version) or Engineer approved equal, with the characteristics and components as specified below.

214.02.02 PUMP DESIGN CONFIGURATION

- A. The pump shall be supplied with a mating cast iron 6-inch discharge connection and be capable of delivering 900 GPM at 26 feet TDH. An additional point on the same curve shall be 500 GPM at 33 feet total head. Shut off head shall be 50 feet (minimum).
- B. The pump shall be automatically and firmly connected to the discharge connection, guided by no less than 2 guide bars extending from the top of the wet well to the discharge connection. There shall be no need for personnel to enter the wet well.
- C. Sealing of the pumping unit to the discharge connection shall be accomplished by a machined metal to metal watertight contact. Sealing of the discharge interface with a diaphragm, O-ring or profile gasket will not be acceptable.
- D. No portion of the pump shall bear directly on the wet well floor.
- E. The pump shall be fitted with 25 feet of lifting chain or stainless steel cable. The working load of the lifting system shall be 50 percent greater than the pump unit weight.

- F. The maximum required, minimum operational submergence shall not exceed 18 inches.

214.02.03 PUMP CONSTRUCTION

- A. Major pump components shall be of grey cast iron, ASTM A48, Class 35B, with smooth surfaces devoid of blow holes or other irregularities. All exposed nuts or bolts shall be AISI type 304 stainless steel construction. All metal surfaces coming into contact with the pumpage, other than stainless steel or brass, shall be protected by a factory applied spray coating of acrylic dispersion zinc phosphate primer with a polyester resin paint finish on the exterior of the pump.
- B. Sealing design shall incorporate metal-to-metal contact between machined surfaces. Critical mating surfaces where watertight sealing is required shall be machined and fitted with Nitrile or Viton rubber O-rings. Fittings will be the result of controlled compression of rubber O-rings in two planes and O-ring contact of four sides without the requirement of a specific torque limit.
- C. Rectangular cross sectioned gaskets requiring specific torque limits to achieve compression shall not be considered as adequate or equal. No secondary sealing compounds, elliptical O-rings, grease or other devices shall be used.

214.02.04 COOLING SYSTEM

- A. Motors shall be sufficiently cooled by the surrounding environment or pumped media, even with only 18 inches submergence. A water jacket shall not be required.

214.02.05 CABLE ENTRY SEAL

- A. The cable entry seal design shall preclude specific torque requirements to ensure a watertight and submersible seal. The cable entry shall consist of a single cylindrical elastomer grommet, flanked by washers, all having a close tolerance fit against the cable outside diameter and the entry inside diameter and compressed by the body containing a strain relief function, separate from the function of sealing the cable. The assembly shall provide ease of changing the cable when necessary using the same entry seal.
- B. The cable entry junction chamber and motor shall be separated by a stator lead sealing gland or terminal board, which shall isolate the interior from foreign material gaining access through the pump top. Epoxies, silicones, or other secondary sealing systems shall not be considered acceptable.

214.02.06 MOTOR

- A. The pump motor shall be a NEMA B design, induction type with a squirrel cage rotor, shell type design, housed in an air filled, watertight chamber. The stator windings shall be insulated with moisture resistant Class H insulation rated for 180 degrees C (356 degrees F). The stator shall be insulated by the trickle impregnation method using Class H monomer-free polyester resin resulting in a winding fill factor of at least 95 percent.
- B. The motor shall be inverter duty rated in accordance with NEMA MG1, Part 31. The stator shall be heat-shrink fitted into the cast iron stator housing. The use of multiple step dip and bake-type stator insulation process is not acceptable. The use of bolts, pins or other fastening devices requiring penetration of the stator housing is not acceptable.

- C. The motor shall be designed for continuous duty handling pumped media of 40 degrees C (104 degrees F) and capable of no less than 15 evenly spaced starts per hour. The rotor bars and short circuit rings shall be made of cast aluminum. Thermal switches set to open at 125 degrees C (260 degrees F) shall be embedded in the stator end coils to monitor the temperature of each phase winding. These thermal switches shall be used in conjunction with and supplemental to external motor overload protection and shall be connected to the control panel. The junction chamber containing the terminal board, shall be hermetically sealed from the motor by an elastomer compression seal. Connection between the cable conductors and stator leads shall be made with threaded compression type binding posts permanently affixed to a terminal board. The motor and the pump shall be produced by the same manufacturer.
- D. The combined service factor (combined effect of voltage, frequency and specific gravity) shall be a minimum of 1.15. The motor shall have a voltage tolerance of plus or minus 10 percent. The motor shall be designed for operation up to 40 degrees C (104 degrees F) ambient and with a temperature rise not to exceed 80 degrees C. A performance chart shall be provided upon request showing curves for torque, current, power factor, input/output kW and efficiency. This chart shall also include data on starting and no-load characteristics.
- E. The power cable shall be sized according to the NEC and ICEA standards and shall be of sufficient length to reach the junction box without the need of any splices. The outer jacket of the cable shall be oil resistant chlorinated polyethylene rubber. The motor and cable shall be capable of continuous submergence underwater without loss of watertight integrity to a depth of 65 feet or greater.
- F. The motor horsepower shall be adequate so that the pump is non-overloading throughout the entire pump performance curve from shut-off through run-out.

214.02.07 BEARINGS

- A. The pump shaft shall rotate on 2 bearings.
- B. Motor bearings shall be permanently grease lubricated. The upper bearing shall be a single deep groove ball bearing. The lower bearing shall be a 2-row angular contact bearing to compensate for axial thrust and radial forces.
- C. Single row lower bearings are not acceptable.

214.02.08 MECHANICAL SEAL

- A. Pump shall be provided with a tandem mechanical shaft seal system consisting of 2 totally independent seal assemblies for raw river water/stormwater service.
 - 1. Seals shall operate in a lubricant reservoir that hydrodynamically lubricates the lapped seal faces at a constant rate.
 - 2. Lower, primary seal unit, located between the pump and the lubricant chamber, shall contain 1 stationary and 1 positively driven rotating, corrosion resistant tungsten-carbide ring.
 - 3. Upper, secondary seal unit, located between the lubricant chamber and the motor housing, shall contain 1 stationary and 1 positively driven rotating, corrosion resistant tungsten-carbide seal ring.

4. Each seal interface shall be held in contact by its own spring system.
 5. The seals shall require neither maintenance nor adjustment nor depend on direction of rotation for sealing.
 6. The position of both mechanical seals shall depend on the shaft.
 7. Mounting of the lower mechanical seal on the impeller hub will not be acceptable.
- B. The following seal types shall not be considered acceptable nor equal to the dual independent seal specified: shaft seals without positively driven rotating members, or conventional double mechanical seals containing either a common single or double spring acting between the upper and lower seal faces. No system requiring a pressure differential to offset pressure and to effect sealing shall be used.
- C. Pump shall be provided with an lubricant chamber for the shaft sealing system. The lubricant chamber shall be designed to prevent overfilling and to provide lubricant expansion capacity. The drain and inspection plug, with positive anti-leak seal shall be easily accessible from the outside. The seal system shall not rely upon the pumped media for lubrication. The motor shall be able to operate dry without damage while pumping under load.
- D. Seal lubricant shall be FDA Approved, nontoxic.

214.02.09 PUMP SHAFT

- A. Pump and motor shaft shall be the same unit.
- B. Pump shaft shall be an extension of the motor shaft. Couplings shall not be acceptable. Shaft shall be stainless steel complying with ASTM A479, S43100-T.

214.02.10 IMPELLER

- A. The impeller(s) shall be of hard iron, high chrome, dynamically balanced, semi-open, multi-vane, back-swept, non-clog design.
- B. The impeller vane leading edges shall be mechanically self-cleaned upon each rotation as they pass across a spiral groove located on the volute suction which shall keep them clear of debris, maintaining an unobstructed leading edge.
- C. The impeller(s) vanes shall have screw-shaped leading edges that are hardened to Rc 45 and shall be capable of handling solids, fibrous materials, heavy sludge and other matter. The screw shape of the impeller inlet shall provide an inducing effect for the handling of sludge and rag-laden wastewater. Impellers shall be locked to the shaft and held by an impeller bolt.

214.02.11 VOLUTE BOTTOM/INSERT RING

- A. The pump volute shall be of hard iron, high chrome, and shall have integral spiral shaped cast groove(s) at the suction of the volute.
- B. The internal volute bottom or insert ring shall provide effective sealing between the pump volute and the multi-vane, semi-open impeller.

- C. The sharp spiral groove(s) shall provide the shearing edge(s) across which each impeller vane leading edge shall cross during its rotation in order to remain unobstructed.
- D. The clearance between the internal volute bottom and the impeller leading edges shall be adjustable.

214.02.01 PROTECTION

- A. All stators shall incorporate thermal switches in series to monitor the temperature of each phase winding. The thermal switches shall open at 125 degrees C (260 degrees F), stop the motor and activate an alarm.
- B. The thermal switches shall be connected to a Mini CAS (Control and Status) monitoring unit. The Mini CAS shall be designed to be mounted in any control panel.

CONSTRUCTION

214.03.01 INSTALLATION

- A. Contractor shall install pump and appurtenances as shown on Drawings, in accordance with manufacturer's recommendations, and as required to provide complete, fully operable installation.
- B. Installation shall include field testing and acceptance by property owner.
- C. Pump shall undergo the following tests, which shall be recorded and certified:
 - 1. Pressure.
 - 2. Noise.
 - 3. Vibration.
 - 4. Winding: Phase angle and Z tests.
 - 5. Insulation to ground.
- D. A copy of the test record tag shall be attached to the pump when delivered to the customer or job site.

METHOD OF MEASUREMENT

214.04.01 MEASUREMENT

- A. Measurement for payment of Irrigation Pump System shall be on a lump sum basis, in place and operational.
- B. All measurements will be made in accordance with Subsection 109.01, "Measurement of Quantities."

BASIS OF PAYMENT

214.05.01 PAYMENT

- A. The Contract lump sum payment for Irrigation Pump System shall be full compensation for furnishing and installing all equipment and materials for the pump system and all incidentals and appurtenances including, but not limited to, pump, check valve, float, upper guide bar bracket, guide bars, hardware, pump service pedestal, electrical conduits and conductors between the pedestal and the pump, and pump electrical incidentals; for

coordinating with affected property owners; for restoring improvements designated to remain in place; and for providing all labor, tools, equipment, and incidentals required to test the pump and complete the work as shown on the Drawings, as specified, and as directed by Engineer.

B. All payments will be made in accordance with Subsection 109.02, Scope of Payment.

C. Payment will be made under:

Pay Item

Irrigation Pump System

Pay Unit

Lump Sum

Add the following new Section 217 to the Uniform Standard Specifications:

SECTION 217

DEWATERING

DESCRIPTION

217.01.01 GENERAL

- A. The Contractor is advised that groundwater management will be required for this project. Should the Contractor encounter groundwater during construction, the Contractor shall be responsible for the control of groundwater through dewatering.
- B. The Work of this Section shall include design of the groundwater dewatering system by a Nevada professional civil engineer, furnishing, installing, maintaining, operating, monitoring, flow rate metering, and disposing of pumped water.
- C. Dewatering shall include intercepting seepage; preventing loss of material from the channel and structure excavation; and preventing rupture or heaving of the bottom of the excavation; and maintaining water table, as a minimum, below excavation bottom and as necessary to complete the Work.
- D. Groundwater will be discharged into the Muddy Valley Irrigation Company Diversion Box located near the intersection of Andersen Street and Ramos Ranch Road.
- E. Contractor shall not degrade the downstream water quality.

217.01.02 SUBMITTALS

- A. Contractor shall submit the following within 14 calendar days from the Notice of Award date:
 - 1. The proposed type of groundwater dewatering systems including relief of hydrostatic head, procedure for maintaining the excavation in a dewatered and hydrostatically relieved condition, diversion channels, diversion dikes, channel scour protection plan, site restoration and phasing of implementation and removal activities.
 - 2. Cross sections, arrangement, locations, heights, and composition of diversion channels, diversion dikes, and channel scour protection, and depths of groundwater components.
 - 3. A complete description of equipment to be used, with installation, operation, and maintenance procedures.
 - 4. Standby equipment and power supply.
 - 5. Location, size, and construction details of sumps and discharge lines, including discharge points and plans for removing system and restoring the area disturbed by Dewatering operations.
 - 6. Types and sizes of filters.
 - 7. Design calculations demonstrating adequacy of selected system and equipment.
- B. Contractor shall submit copies of correspondence with the state of Nevada regarding dewatering operations, authorization to drill, well driller's license, and completion report.

217.01.03 DESIGN CRITERIA FOR DEWATERING SYSTEM

- A. The dewatering system shall be designed by a Nevada professional civil engineer with expertise in groundwater disposal.
- B. Contractor shall furnish all pumps, pipes, groundwater removal flow metering, appliances, and equipment for Dewatering.
- C. Contractor shall provide a professional engineer-designed dewatering system which will:
 - 1. Lower the groundwater level in the ground as a minimum to 2 feet below the lowest bottom of the excavation and/or as necessary to maintain a stable subgrade condition to complete the Work.
 - 2. Develop a substantially dry and stable subgrade for the performance of subsequent operations.
 - 3. Result in no damage to adjacent properties, buildings, structures, utilities, and other work.
 - 4. Not remove soil particles during pumping operations.
- D. Contractor shall review and investigate the soils and groundwater conditions at the site and determine the type or combination of methods necessary to provide the Dewatering required to perform the Work.
- E. Dewatering procedures which cause, or threaten to cause, damage to new or existing facilities shall be modified to prevent damage. Contractor shall determine and implement modifications at no additional cost to Owner.

217.01.04 QUALITY CONTROL

- A. Contractor shall perform dewatering activities in compliance with Nevada Revised Statutes and Administrative Code, administered through the State of Nevada Division of Water Resources and secure all necessary permits to complete the work of this Section.
 - 1. Control the rate and effect of dewatering to avoid objectionable settlement and subsidence.
 - 2. Perform dewatering operations to adequately ensure integrity of the finished project.
- B. Where critical structures or facilities exist immediately adjacent to areas of proposed dewatering, establish reference points and observe at intervals specified in Subsection 217.03.02 to detect any settlement which may develop.
 - 1. Conduct dewatering operation in a manner which will protect adjacent structures and facilities.
 - 2. Contractor shall repair damage to adjacent structures and restore facilities at no additional cost to Owner.

MATERIALS**217.02.01 EQUIPMENT**

- A. Contractor shall provide equipment necessary for dewatering.
 - 1. At all times, keep sufficient pumping equipment on-site, keep machinery in good working condition, and provide competent workmen for operation of pumping equipment.

2. Keep adequate standby equipment available at all times to ensure efficient dewatering and maintaining of dewatering operation during power failure.
3. Maintain standby pumping equipment on-site.

CONSTRUCTION

217.03.01 DEWATERING

- A. Dewatering shall be accomplished in accordance with the reviewed shop drawings.
 1. Inform Engineer of changes made to accommodate field conditions and, on completion of the Dewatering system installation, revise and resubmit shop drawings.
 2. Dewatering may include the use of:
 - a. Well points.
 - b. Temporary pipelines for water disposal.
 - c. Rock or gravel placement.
 - d. Ditches and dikes.
 - e. Or other means approved by Owner, prior to construction.
- B. Dewatering operations shall lower the groundwater level in excavations for prosecution of the Work, and provide a stable subgrade for the prosecution of subsequent operations. Dewatering operations shall commence a minimum of 60 days prior to excavation and continue until a stable subgrade is achieved.
- C. The water level shall be maintained at such lower elevations until no danger to the excavation, structure, or related facilities can occur because of buildup of excessive hydrostatic pressure. Maintain the water level, as a minimum, to 2 feet below the lowest bottom of the excavation and/or as necessary to maintain a stable subgrade condition to complete the Work until the structure has been satisfactorily completed, unless otherwise permitted by Engineer.
- D. Conduct dewatering in a manner to preserve undisturbed bearing capacity of subgrade soils at proposed bottom of excavation.
 1. If foundation soils are disturbed or loosened by upward seepage of water or an uncontrolled flow of water, excavate affected areas and replace with drain rock at no additional cost to Owner.
 2. Maintain water level as a minimum to 2 feet below the lowest bottom of excavation in all work areas where groundwater occurs during excavation, construction, and backfilling until acceptance.
- E. Dewatering operations shall be prosecuted as required to prevent delays in construction.
- F. The responsible person in charge of the Dewatering program shall be available for communication with the site personnel at all times, and shall be able to be on the site within one hour of being alerted.
- G. Prevent flotation by maintaining a positive and continuous removal of water. Contractor shall accept responsibility and liability for damages which may result from failure to adequately keep excavations dewatered.
- H. Requirements and procedures for using well points or wells:

1. Adequately space to provide necessary dewatering.
2. Sandpack and/or use other means to prevent pumping of fine sands or silts from the subsurface.
3. Continually check to ensure that the dewatering operation does not remove subsurface soil.

217.03.02 MONITORING OF DEWATERING OPERATIONS

- A. Contractor shall provide regular monitoring of the dewatering operations including, but not limited to, walking along the project a minimum of weekly to check for visual signs of settlement (i.e., cracking and so forth).
- B. At no additional cost to Owner, Contractor shall also provide a minimum of monthly surveying along the project, by a Nevada licensed surveyor, on existing improvements to check for signs of excessive settlement, checking wells, groundwater levels, and discharge piping, flow rates, and water quality.
- C. The Contractor shall prepare monthly dewatering monitoring reports inclusive of flow quantity meter readings.

217.03.03 SHEETING AND SHORING

- A. Where slope stabilization is required, excavation for structures shall be sheeted, braced, and/or shored as necessary to prevent caving or sliding.
- B. Where sheeting is left in place, such sheeting shall not be braced against the structure, but shall be supported in a manner which will preclude concentrated loads or horizontal thrusts on the structure. Cross braces installed above the structure to support sheeting may be removed after pipe embedment has been completed.

217.03.04 STABILIZATION

- A. Structure and trench sections shall be excavated to the minimum limits required by the Contract Drawings.
- B. Subgrades for structures and pipelines shall be firm, dense, and thoroughly compacted and consolidated; free from mud and muck; and sufficiently stable to remain firm and intact under the feet of the workmen.

217.03.05 WATER DISPOSAL

- A. Contractor shall dispose of water from the Work in a suitable manner without damage to adjacent property and shall obtain approval for the method and place of disposal of groundwater from Clark County Public Works Engineering Division. Contractor shall not drain water into work built or under construction without prior consent of Engineer. Upon approval of Engineer, and prior to preparation of pipe or structure for acceptance, the pipeline or structure may be used to convey groundwater to sumps for pumping. Do not allow such water or associated debris to enter into any sanitary sewer system. Remove debris accumulated in the pipeline or structure and thoroughly clean prior to testing and acceptance.
- B. Do not allow runoff from dewatering to flow in the curb, gutter, or street nor to be discharged into any sanitary sewer pipeline. Filter water using an approved method to remove sand and fine-sized soil particles before disposal into any drainage system.

217.03.06 GROUNDWATER RELEASE

- A. Contractor shall release of groundwater to its static level in a manner which shall maintain the undisturbed state of natural foundation soils, prevent disturbance of compacted backfill, and prevent flotation or movement of structures, pipelines, and sewers.

217.03.07 REMOVAL AND RESTORATION

- A. When dewatering operations are no longer necessary, drain lines and connections shall be removed and the ground surface restored to its original conditions.

METHOD OF MEASUREMENT

217.04.01 MEASUREMENT

- A. Dewatering will be measured for payment on a lump sum basis.

BASIS OF PAYMENT

217.05.01 PAYMENT

- A. The Contract lump sum price paid for Dewatering shall be full compensation for professional engineering design of the dewatering system, groundwater disposal, groundwater discharge flow metering, dewatering system monitoring, monthly report preparation and submittal, furnishing and placing all materials, labor, tools, equipment, and incidentals necessary to complete the work as required by the Contract Drawings and Specifications, and as directed by the Engineer.
- B. Partial payments for the lump sum amount bid for Dewatering of channel, trenches, and other excavations will be paid in accordance with the following schedule:
 1. When 5 percent of the original Contract amount is earned from other bid items, 25 percent of the amount bid for dewatering, or 5 percent of the original Contract amount, whichever is less, will be paid.
 2. When 25 percent of the original Contract amount is earned from other bid items, 50 percent of the amount bid for dewatering, or 7 percent of the original Contract amount, whichever is less, will be paid.
 3. When 50 percent of the original Contract amount is earned, excluding the amount for dewatering, 75 percent of the amount bid for dewatering, or 10 percent of the original Contract amount, whichever is less, will be paid.
 4. Upon completion of all work on the project any unpaid amount of the original Contract amount for dewatering will be paid.
- C. Payment will be made under:

| <u>Pay Item</u> | <u>Pay Unit</u> |
|-----------------|-----------------|
| Dewatering | Lump Sum |

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SECTION 302

AGGREGATE BASE COURSES

CONSTRUCTION

302.03.01 SUBGRADE PREPARATION

Add the following to this subsection:

- C. When caliche is encountered within the excavation limits, the treatment, removal, trimming, and working of that caliche shall be considered as incidental to the excavation work.
- D. The caliche shall be trimmed a minimum of 2 inches below the bottom of the asphalt concrete layer. A minimum 2-inch leveling course of base material must be placed between the caliche and the asphalt.
- E. Proof rolling without testing shall be performed and accepted by the Engineer prior to prime coat and paving.

METHOD OF MEASUREMENT

302.04.01 MEASUREMENT

Add the following to this subsection:

- D. No separate measurement will be made for Type I and Type II Aggregate Base material used for channel, riprap, gabions, trench backfill for drainage structures, or other underground facilities or utilities.
- E. The quantity of Type II Aggregate Access Road and Manway (F) will be measured for payment by cubic yard, in place and accepted.
- F. The quantity of Type II Aggregate Base Cooper Street and Webber Access Road (F) will be measured for payment by cubic yard, in place and accepted unless otherwise specified as incidental to other items of work.
- G. All measurements will be made in accordance with Subsection 109.01, Measurement of Quantities.

BASIS OF PAYMENT

302.05.01 PAYMENT

Delete Paragraph E and substitute the following therefor:

- E. No separate payment will be made for aggregate base material used for channel, riprap, gabions, trench backfill for drainage structures, or other underground facilities or utilities.
- F. The accepted quantities of Type II Aggregate Access Road and Manway (F) and Type II Aggregate Base Cooper Street and Webber Access Road (F) will be paid for at the Contract unit prices bid per cubic yard, which shall be full compensation for adjusting water meters to

grade; adjusting water valve to grade; excavation, subgrade preparation, scarifying, bedding, crushing, screening, mixing, hauling, placing, watering, compacting, and maintaining the aggregate as shown on the Drawings, as specified, and as directed by the Engineer.

G. All payments will be made in accordance with Subsection 109.02, Scope of Payment. Partial payments may be made in accordance with Subsection 109.06, Partial Payment.

H. Payment will be made under:

| <u>Pay Item</u> | <u>Pay Unit</u> |
|---|-----------------|
| Type II Aggregate Access Road and Manway (F) | Cubic Yard (F) |
| Type II Aggregate Base Cooper Street and Webber Access Road (F) | Cubic Yard (F) |

SECTION 401**PLANTMIX BITUMINOUS PAVEMENTS - GENERAL****MATERIALS****401.02.01 COMPOSITION OF MIXTURES**

Change this subsection to read as follows:

- A. The bituminous plantmix shall be composed of a mixture of aggregate, 1.5 percent mineral filler, and bituminous material.
- B. This project shall use the following asphalt binder type for dense grade pavement for all mix designs as follows:

All lifts: PG76-22NV
- C. Minimum thickness for Category I design is 2-1/2 inches. A minimum of 2 inches for PG76-22NV may be permitted if approved by the Engineer and then field verified for acceptable "visual" segregation compliance as determined by the Engineer project representative.
- D. Park trails shall use the mix design Type 3 (1/2 inch minus). Trails used for maintenance equipment and all 60-foot or less R/W residential streets shall use the design Type 2F (3/4 inch minus 50 blow Marshall).
- E. All of the Type 2C mix designs shall be rut tested with the Asphalt Pavement Analyzer (APA) as outlined in Subsection 401.02.01.01.
- F. Should the target design fail to meet the rut test requirements, the Contractor shall modify the gradation within the design limits, redesign, and retest.
- G. Two wet stamped originals of the mix design report shall be given to the Clark County Public Works Construction Division. Originals are also required for check point designs.
- H. The job-mix formula shall be selected in accordance with the following procedures:
 - 1. Determine asphalt content required for 4 percent air voids, and
 - 2. Determine the average asphalt content for:
 - a. Maximum density
 - b. Maximum stability
 - c. 4 percent air voids
 - 3. The lower of the asphalt contents obtained for 1 or 2, above, will be used as the design asphalt content for the job-mix formula.

Table 1 Design Criteria

| TRAFFIC CATEGORY | 1 Asphalt Concrete Base (ACB) COLLECTOR & ARTERIAL | | 2 Asphalt Concrete Base (ACB) RESIDENTIAL | |
|--|--|------|---|------|
| | Min. | Max. | Min. | Max. |
| COMPACTION BLOWS EACH END OF SPECIMEN | 6-inch Marshall 112 | | 4-inch Marshall 50 | |
| PERCENT TOTAL AIR VOIDS | 3 | 5 | 3 | 5 |
| PRODUCTION SURFACE AREA SQ FT PER LB | - | 26 | - | 33 |
| APA RUT TEST @ 76°C DRY @ 8,000 cycles, mm Maximum | 1 | 2.5 | - | - |
| APA RUT TEST @ 76°C DRY @ 20,000 cycles, mm Maximum | 1 | 4 | - | - |

- I. The job-mix formula aggregate with the allowable tolerances herein shall conform to the requirements of Section 705, "Aggregates for Bituminous Courses," for plantmix bituminous base aggregates, plantmix bituminous surface aggregate, or plantmix bituminous open-graded aggregate, as the case may be.
- J. The job-mix formula shall not be modified except with the written approval of the Engineer. The mix furnished shall conform to this job-mix formula, within the following range of tolerances:
 - 1. Aggregate passing the No. 4 and larger sieves.....±7%
 - 2. Aggregate passing the No. 8 to 100 sieves.....±4%
 - 3. Aggregate passing the No. 200 sieve* ±2%, but not to exceed upper limit of specification Bitumen content±0.3%
 - 4. Temperature leaving the mixer ±20 degrees F.
 - 5. Temperature in hopper of paving machine..... ±20 degrees F.

*Mineral filler is not considered as part of the aggregate.
- K. The job-mix formula shall reflect the asphalt percentage recommended by the approved mix design. Consistently produce a mixture with an asphalt content at the target value. Do not use the above operational tolerance as a means to alter the asphalt content target value.
- L. Should there be a change in sources of materials, a new job-mix formula shall be established before the new material is used. Check tests of properties of the plantmix bituminous materials shall be made on the first day of production and as requested by the Engineer during period of construction to confirm that all properties are in compliance with Marshall Design Criteria and tensile strength requirements. Adjustments in gradation, mineral filler content, and asphalt content shall be made as necessary in order to meet design criteria.
- M. The temperature of the bituminous material just prior to mixing and of the completed mixture in the hauling vehicle just prior to leaving the plant shall conform to the following table:

Table 2 Plantmix Bituminous Mixture With Asphalt Cement

| Grade of Asphalt Cement | Bituminous Material | | Plantmix Bituminous Base of Surface Mixtures | | Plantmix Bituminous Open-Graded Mixtures | |
|-------------------------|---------------------|-------|--|-------|--|-------|
| | Min. | Max. | Min. | Max. | Min. | Max. |
| AC-30 | 265°F | 330°F | 245°F | 325°F | 245°F | 275°F |
| PG76-22NV | 300°F | 350°F | 265°F | 350°F | 265°F | 300°F |

Add the following subsection:

401.02.01.01 ASPHALT PAVEMENT ANALYZER

- A. Once the target mix design is selected, rut test beam samples shall be fabricated by the Contractor. The beam samples shall be compacted to an air void content of 7% ±0.5%. The samples shall be tested in the PTI Asphalt Pavement Analyzer (APA) in air at 76 degrees C and 60 degrees C in the water.
- B. The criteria for design acceptance shall be as specified in Table 1 above. Should the target design fail to meet the RUT TEST requirements, with the approval of the Engineer, the Contractor shall modify the gradation or binder type, within the design limits, redesign, and retest.
- C. If the plan is to adjust the asphalt content based on the test strip as described in Subsection 401.02.01.02 or from previous year’s history, please so state on the first sheet referencing the history.
- D. As a part of the Quality Control, the production shall be rut tested using random samples from the test strip for 1 set per design of 6 each 6-inch cores. Unless otherwise approved by the Engineer, all test strips will require the rut testing. Another set shall be delivered to the Clark County Public Works Construction Management laboratory for correlation testing. The Contractor shall also core and test once per 2,000 tons (or fractions thereof) per mix design for acceptance at 76 degrees C in air using 2 sets of 2 each 6-inch randomly sampled field cores. The cores must be taken and patched prior to opening to traffic. If the core rut test fails, a minimum of 4 more cores may be used from the same lift using a random sampling criteria to verify. The average of all the Contractor cores shall be the determining factor for acceptance.
- e. Design data shall be submitted in a similar format as shown below:

**Asphalt Concrete Mix Design Submittal Form
YEAR
Mix Design No. XXXXXX**

| | |
|---------------------|-----------------|
| Date: | Mix Number: |
| Mix Source Company: | Plant Location: |
| Design Type: | Category: |

| Job Mix Formula | | | |
|-----------------|--------|---------------|---------------|
| Sieve Size | Target | Job-Mix Range | Specification |
| 1" 25 mm | | | |

| Summary | |
|-------------------|--|
| Traffic Category: | |
| Marshall Blows: | |

| Job Mix Formula | | | |
|------------------|--------|---------------|---------------|
| Sieve Size | Target | Job-Mix Range | Specification |
| 3/4" 19 mm | | | |
| 1/2" 12.5 mm | | | |
| 3/8" 9.5 mm | | | |
| #4 4.75 mm | | | |
| #8 2.36 mm | | | |
| #16 1.18 mm | | | |
| #30 0.60 mm | | | |
| #50 0.30 mm | | | |
| #100 0.15 mm | | | |
| #200 75 μm | | | |
| Mix Temperature: | | | |

| Summary | |
|-------------------------------------|--|
| Traffic Category: | |
| Aggregate Type: | |
| Asphalt Binder (Total) %: | |
| Asphalt Cement Grade: | |
| Asphalt Cement Supplier: | |
| Asphalt Binder RAP % | |
| Antistrip Supplier: | |
| Filler Supplier | |
| Bin Percentages and Stockpile Types | |
| (add as needed) | |
| Compaction Temperature: | |

Mix design samples were mixed at XXX°F and compacted at XX blows, each face, at XXX°F.

Wet stamp on first page below table

Prepared By: _____ Reviewed By: _____

**TABLE 1
PROPERTIES AT OPTIMUM ASPHALT CONTENT**

| | Value | CCPW Spec |
|---|-------|---|
| Asphalt Content by Total Wet Weight, % | | |
| Marshall Stability, lbs | | |
| Marshall Flow, 0.01 in | | |
| Air Voids, % | | |
| Voids in Mineral Aggregate (VMA) % | | |
| Voids Filled with Asphalt, VMA method | | |
| Laboratory Compacted Unit Weight (Marshall), g/cc | | |
| Laboratory Compacted Unit Weight (Marshall), pcf | | |
| Maximum Theoretical unit Weight (Rice), g/cc | | |
| Maximum Theoretical unit Weight (Rice), pcf | | |
| Surface Area, Sq. Ft. / lb | | |
| Film Thickness, Microns (Idaho DOT Method) | | |
| Indirect Tensile Strength, Retained Strength, % | | |
| Rut Depth, mm – 20,000 Cycles in Water @ 60°C | | |
| Rut Depth, mm – 20,000 Cycles in Air @ 76°C | | |
| Rut Depth, mm – 8,000 Cycles in Air @ 76°C | | From 20,000 Cycle Graph |
| 8,000 Cycle Acceptance Range , mm | | Maximum as Calc from Statistics Method (see Figure 1) |

Plot the following graphs with % on the x-axis

Use as a minimum the graphs shown on page 67 of the Asphalt Institute MS-2 and a graph of the asphalt film thickness. Plot the points based off the average of both the actual specific gravities and the calculated combined specific gravities. The target for the design will be the average of these two.

TABLE 2
AGGREGATE BLEND

| Material Source | Source 1 | Source 2 | Source 3 | Source 4 | Source 5 | | CCPW Specs Section 705 |
|----------------------------------|----------|----------|----------|----------|----------|----------|------------------------|
| Description | | | | | | | |
| Sieve AASHTO T27 Percent Passing | | | | | | | |
| Bin Percentage | | | | | | Combined | |
| 1" 25 mm | | | | | | 100% | |
| 3/4" 19 mm | | | | | | | |
| 1/2" 12.5 mm | | | | | | | |
| 3/8" 9.5 mm | | | | | | | |
| #4 4.75 mm | | | | | | | |
| #8 2.36 mm | | | | | | | |
| #16 1.18 mm | | | | | | | |
| #30 0.60 mm | | | | | | | |
| #50 0.30 mm | | | | | | | |
| #100 0.15 mm | | | | | | | |
| #200 0.075 mm | | | | | | | |

GRADATION CHART
0.45 POWER

Place chart here, size as needed

TABLE 3
AGGREGATE PROPERTIES

| Material Source | Source 1 | Source 2 | Source 3 | Source 4 | Source 5 | | Specs Section 705 |
|----------------------------|---|----------|----------|----------|----------|--------------|-------------------|
| Description | | | | | | | |
| Coarse Aggr #8 | Specific Gravity & Absorption, AASHTO T85 | | | | | Calc Average | |
| Bulk Specific Gravity | | | | | | | N/A |
| Bulk Specific Gravity, SSD | | | | | | | N/A |
| Apparent Specific Gravity | | | | | | | N/A |
| Absorption | | | | | | | |

TABLE 3
AGGREGATE PROPERTIES

| Material Source | Source 1 | Source 2 | Source 3 | Source 4 | Source 5 | | Specs Section 705 |
|--------------------------------------|---|----------|----------|----------|--------------|----------------|-------------------|
| Description | | | | | | | |
| Fine Aggr -#8, +200 | Specific Gravity & Absorption, AASHTO T84 | | | | | Calc Average | |
| Bulk Specific Gravity | | | | | | | N/A |
| Bulk Specific Gravity, SSD | | | | | | | N/A |
| Apparent Specific Gravity | | | | | | | N/A |
| Absorption | | | | | | | |
| #-200, App. SG | | | | | | | |
| Combined Aggregate | | | | | Calc Average | Actual Average | |
| Bulk Specific Gravity | | | | | | | N/A |
| Bulk Specific Gravity, SSD | | | | | | | N/A |
| Apparent Specific Gravity | | | | | | | N/A |
| Absorption | | | | | | | |
| Fractured Faces One Side ASTM D5821 | | | | | | | |
| Fractured Faces Two Side ASTM D5821 | | | | | | | |
| L.A. Abrasion AASHTO T96 | | | | | | | |
| Plastic Index AASHTO T90 | | | | | | | |
| Methylene Blue Test AASHTO T330 | | | | | | | |
| Fine Aggregate Angularity AASHTO T33 | | | | | | | |
| Elongation @ 5:1 ASTM D4791 | | | | | | | |
| Soundness Test, AASHTO T104 | | | | | | | |
| Deleterious Materials | | | | | | | |
| Stripping Test | | | | | | | Satisfactory |

TABLE 4
MARSHALL DATA

| | 1 | 2 | 3 | 4 | 5 |
|--------------------------------|---|---|---|---|---|
| Percent Asphalt Content | | | | | |
| By Total Weight of Mix | | | | | |
| By Dry Weight of Mix | | | | | |
| Effective | | | | | |

TABLE 4
MARSHALL DATA

| | 1 | 2 | 3 | 4 | 5 |
|---------------------------------------|---|---|---|---|---|
| Percent Asphalt Content | | | | | |
| Absorption | | | | | |
| Specific Gravities, g/cc | | | | | |
| Bulk Specific Gravity, SSD | | | | | |
| Maximum Theoretical SG Measured | | | | | |
| Maximum Theoretical SG Calculated | | | | | |
| Effective of Aggregate | | | | | |
| Unit Weights | | | | | |
| Bulk, pcf | | | | | |
| Maximum Theoretical, Measured, pcf | | | | | |
| Maximum Theoretical, Calculated, pcf | | | | | |
| Percent Voids | | | | | |
| Measured Air Voids | | | | | |
| Calculated Air Voids | | | | | |
| Voids in Mineral Aggregate | | | | | |
| Voids Filled with Asphalt, VMA Method | | | | | |
| Marshall Properties | | | | | |
| Marshall Stability, lbs | | | | | |
| Marshall Flow, in/100 | | | | | |
| Film Thickness, Microns | | | | | |

TABLE 5
TENSILE STRENGTH RATIO – STRIPPING TEST

| Test Method AASHTO T283 freeze thaw | | Unconditioned Set | Specification |
|-------------------------------------|-------------------------------|-------------------|----------------|
| Anti-Strip type: | Average Percent Air Voids | | |
| | Average Maximum Load, lbs | | |
| | Average Tensile Strength, psi | | 65 psi minimum |
| | | Conditioned Set | Specification |
| Average Percent Air Voids | | | |
| Average Maximum Load, lbs | | | |
| Average Tensile Strength, psi | | | |
| Tensile Strength Ratio, (TSR) % | | | 70 Minimum |

Insert binder test data used on the design

Insert the asphalt pavement analyzer data here (where appropriate)

Use the figure 5.4 on page 65 as a template for the raw data that is to be included here.

Statistical Calculation Example:

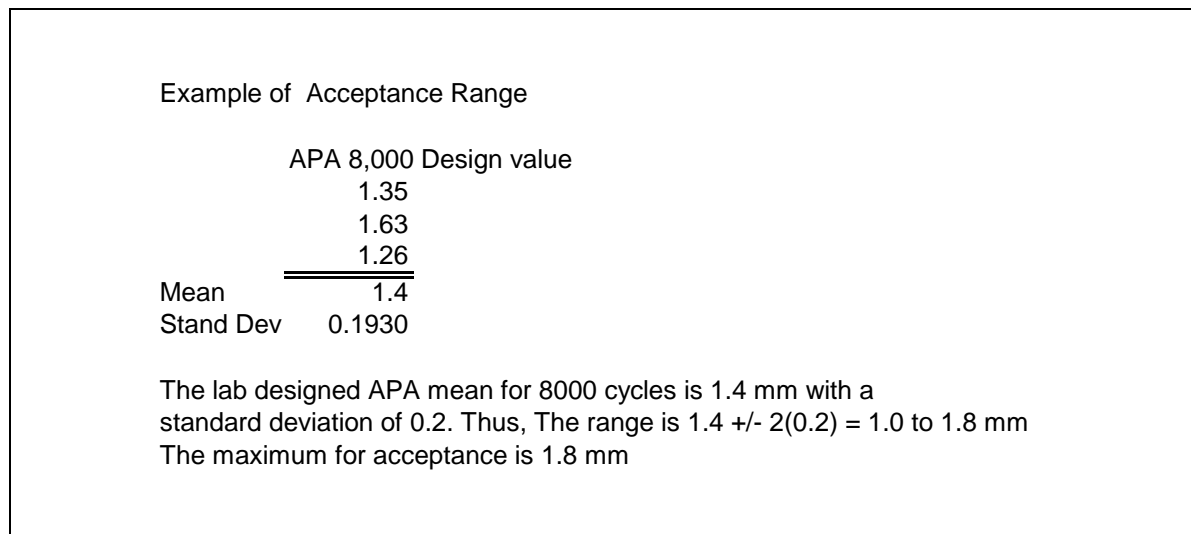


Figure 1 Placement Acceptance Statistic Example

Add the following subsection:

401.02.01.02 TEST STRIP

- A. On the first day of bituminous mix production, produce a trial mixture of 500 tons of mix. Complete production of the trial mixtures in the same shift. Produce the trial mixtures at the medium speed used during the plant calibration. The trial mixtures may be placed on the shoulder of the roadway or the passing lane of 4-lane roadways and become a section of the completed roadway. For other roadways, place at a location approved by the Engineer. Suspend production of the bituminous mix for a maximum of 3 working days or until all test results, except for Indirect Tensile Strength (Unconditioned) or Indirect Tensile Strength (Retained Strength), are available. Once the tests are approved, the production may commence without the results of the Indirect Tensile Strength (Unconditioned) or Indirect Tensile Strength (Retained Strength) tests.
- B. For Category 1 roads, the test strip is required to determine the final bitumen content based on the compaction point of refusal. The production plant is set to the design mix formula, then the placement compaction is tested at each roller phase: break down and the finish roller. At each phase, the compaction continues until the subsequent values on the compaction gauge do not increase by more than 0.2 percent. A graph is plotted for each roller pattern with the x-axis representing passes and the y-axis representing density. A pass is defined as rolling over the compaction test location 2 times. If it has been determined that the in-place air voids are equal to or less than 4 percent or equal to or more than 8 percent, the mix design bitumen content shall be adjusted. This procedure will be required as a part of all new mix designs, annual renewal, or Agency Capital Improvement Project. The graphs, with test data, shall be submitted, attached to the initial design to the Engineer with the original and corrected binder content noted.
- C. The field compaction shall be as required in Subsection 401.03.11. The in-place air voids are based on the Maximum Theoretical Specific Gravity and 10 correlated nuclear tests or 5 cores. If the mean percent air voids is outside the limits noted above, the bitumen content shall be mathematically increased or reduced and noted on the mix design

submittal. If adjustment is made, then a new control strip is required or may proceed if approved by the Engineer. Once the control strip meets the above requirements, it becomes the control strip for subsequent mix placements.

- D. Subsequent compaction testing lots shall be tested in accordance to Subsection 401.03.12. If the compaction cannot be maintained between the above limits, a new control strip shall be implemented to re-establish the mean density for testing.

CONSTRUCTION

401.03.02 HAULING EQUIPMENT

Paragraph A is changed to read:

- A. Use trucks for hauling bituminous mixture with tight, clean, and smooth metal beds which may be thinly coated with a minimum amount of one of the asphalt release agents listed in the NDOT QPL to prevent the mixture from adhering to the truck beds. Do not use diesel or kerosene.

401.03.03 PAVERS

Add to the following to Paragraph E:

1. The screed shall be equipped with automatic controls which will make adjustments in both transverse and longitudinal direction.
2. The external longitudinal reference devices used to pick up grade information for the automatic sensing control shall conform to the following:
 - a. When picking up grade information from an underlying base, the external longitudinal reference device shall be a floating beam at least 30 feet long or a 27-foot non-contact averaging ski with a minimum of 4 sensors.
 - b. When picking up grade information from an adjacent compacted pavement course or a concrete surface, the external longitudinal reference device shall be a floating beam or a non-contact averaging ski with a minimum of 2 sensors. Either referencing device shall be at least 10 feet in length.
 - c. When using a floating beam to pick up grade information, place the sensing device in the middle third of the floating beam.
 - d. A non-contact sensor may be used to pick up grade information from a newly placed adjacent compacted course only when approved.
 - e. Should the automatic controls fail to function properly, finishing the half shift with manual controls may be approved. Do not resume until the controls are repaired.

401.03.06 PREPARATION OF EXISTING SURFACE

Revise Paragraph D to read as follows:

- D. A similar tack coat shall be applied to the surface of any previous course even if the course is placed the same day. Also if the surface is such that a satisfactory bond cannot be obtained between it and a succeeding course, as determined by the Engineer.

401.03.07 PREPARATION OF BITUMINOUS MATERIALS

Add the following to this subsection:

- B. When polymer modified asphalt is specified, deliver and maintain the material in storage tanks at a minimum temperature of 300 degrees F. When polymer modified bituminous asphalt is placed in storage tanks, continuously circulate or moderately agitate them within the tanks.

401.03.08 PREPARATION OF AGGREGATES

Add the following to Paragraph A:

When the required tonnage is more than 5,000 tons, maintain a minimum of 5,000 tons of material proportionately stockpiled until such time as 5,000 tons or less are needed to complete the plantmix operations. Place the aggregates in the cold feed proportioning bins directly from the stockpile. Do not charge the cold feed bins from the crushing plant.

Prior to the use of the aggregate stockpiles, the Contractor shall sample, test, and certify that the piles meet the aggregate requirements in Subsection 705.03.01, Plantmix and Roadmix Bituminous Base and Surface Aggregate, Types Two Fine and Coarse and Three, and AASHTO T283 for the mix design criteria and approved by the Engineer. The Engineer or his representative shall witness the obtaining of the samples by the Contractor. Duplicate samples shall be delivered to the Clark County Public Works Construction Division laboratory.

The cost of furnishing asphalt or aggregate samples will not be paid for directly but shall be considered included in the contract unit price bid for other items of work.

Change the first sentence of paragraph F to read as follows:

Mineral filler shall be added at a rate of 1.5 percent by weight of the total mix and shall be added by one of the methods described below to meet the tensile strength requirements of the job-mix formula. After the mix design is approved with the selected method, a test run at the plant of 50 tons shall be produced and a sample submitted to CCPW for determining the presence of lime. If lime cannot be detected, a different add method shall be employed to introduce the lime into the mix. This testing procedure shall be repeated until a satisfactory mix is obtained.

401.03.09 MIXING

Revise the first sentence in Paragraph A to read as follows:

The permissible moisture content of the bituminous mixture just behind the paver shall not exceed 1 percent as determined by Test Method Nos. Nev. T112 (Method A) or Nev. T306.

401.03.10 SPREADING AND FINISHING

Add the following:

- G. The Contractor shall use equipment to eliminate segregation such as a Material Transfer Vehicle (MTV) for conveyance of mixture from the hauling truck or roadway to the paving machine for all Category I mixes such as the Shuttle Buggy or equivalent for a daily production greater than 500 tons.

401.03.11 ROLLING AND COMPACTION

Change this subsection to read as follows:

- A. The initial or breakdown rolling shall consist of one complete coverage of the bituminous mixture with a steel-wheeled roller. Initial rolling shall commence at the lower edge and shall progress toward the highest portion of the roadbed. Under no circumstances shall the center be rolled first. The initial or breakdown rolling shall be followed by rolling such that uniform density is obtained throughout the depth of the layer of the material being compacted. At least two rollers, one steel-wheeled, the other pneumatic-tired, shall be used and the total number of rollers used shall be sufficient to obtain the required compaction while the mixture is in a workable condition. Perform all compactive rolling, defined as initial or intermediate, while the internal temperature of the mid-depth of the mat is above 180 degrees F. The final rolling of the bituminous mixture shall be performed with the same type of roller used for breakdown rolling. Complete finish rolling within the same day of placement of the plantmix bituminous surface while the internal temperature of the mat at mid-depth is above 150 degrees F. Rolling shall be performed in such a manner that cracking, shoving, or displacement will be avoided. All rollers shall be in good condition, and the reversing mechanism so maintained that the roller is capable of changing directions smoothly. The roller shall be kept in continuous motion while rolling so that all parts of the pavement shall receive equal compression. The motion of the roller shall be slow enough at all times to avoid displacement of the pavement. Any displacement occurring as a result of reversing the direction of the roller, or from any other cause, shall be corrected immediately by the use of rakes and fresh mixture when required. To prevent adhesion of the mixture to the roller, the wheels shall be kept properly maintained. The use of diesel oil on any rollers is prohibited. Use a minimum amount of one of the asphalt release agents listed in the NDOT QPL to prevent the mixture from adhering. The compaction for Type 2C control strips shall proceed until the rate of change of in-place densities of subsequent compaction tests is less than 0.2 percent.
- B. The acceptance of the longitudinal joint shall be based on average of densities acquired each 100 linear feet within 3 inches of the joint. The individual compaction test shall be no lower than 90 percent and shall not be included in the 5,000 square foot testing lot. Joint edge compaction equipment may be used in order to increase the compaction of the joint.
- C. Visual segregation of the mix that occurs during placement shall be removed prior to compaction. The placement shall not proceed until the cause is remedied.

401.03.12 ACCEPTANCE SAMPLING AND TESTING OF IN-PLACE BITUMINOUS MIXTURE

Change this subsection to read as follows:

- A. **Compaction:** At the Contractor's expense, field density determinations of bituminous mixtures shall be made in lots, each lot representing one day's placement. A lot shall be divided into sub-lots of 5,000 square feet in area, and one test shall be made for each sub-lot. A minimum of 3 sub-lots shall be tested per lot, regardless of sub-lot area. The location of the field density tests shall be chosen on a random basis using ASTM D3665 Section 4.3, except that any random location given may be set back 1 foot from any construction joint or seam. A summary of the random number chart used and the lot description shall be completed and approved by the Engineer's representative prior to sampling, and shall be included in the finished test results. For all mix designs, deliver two 6-inch cores at 50,000 square foot intervals with a minimum of one per project to the Clark

County Public Works Construction Management laboratory. All cores shall be patched using plantmix that is similar to the project design.

- B. Determination of the field density of the compacted bituminous mixture shall be accomplished by one of the following:
1. ASTM D2950, Density of Bituminous Concrete by Nuclear Method.
 2. AASHTO T 275, Bulk Specific Gravity of Compacted Bituminous Mixtures Using Paraffin-Coated Specimens.
 3. AASHTO T 331, Bulk Specific Gravity and Density of Compacted Asphalt Mixtures Using Automatic Vacuum Sealing Method.
- C. Saturated Surface Dry method shall NOT be used. Zinc stearate shall NOT be substituted for paraffin. When nuclear method is used, the nuclear device shall first be correlated with the density of core samples. In case of a dispute, AASHTO T275, Bulk Specific Gravity of Compacted Bituminous Mixtures Using Paraffin-Coated Specimens, test method shall control. The use of ASTM D2950, Density of Bituminous Concrete by Nuclear Method, shall include correlation of test results to drilled cores. A minimum of 1 lot (one full day's production), and not less than 5 sub-lots shall be used for this correlation. Should any nuclear test density in the first lot differ from its corresponding drilled core density by more than 3 percent relative compaction, a second lot shall be correlated and the average of all sub-lots in the first and second lots, but not less than 10 sub-lots, shall be used for the correlation.
- D. The theoretical maximum density of the bituminous mixture shall be determined by taking random samples of the mixture delivered to the job site and testing in accordance with AASHTO T209, Theoretical Maximum Specific Gravity and Density of Hot-Mix Paving Mixtures. At least 2 theoretical maximum density determinations shall be made for each day's production of bituminous mixture used in the work, unless the day's production is less than 500 tons, then only 1 theoretical maximum density determination is required.
1. Daily Pavement Acceptance:
 - a. Rut Test Acceptance Criteria shall be based upon 8,000-cycle acceptance as described in subsection 401.02.01, Composition of Materials, Asphalt Concrete Mix Design Submittal Form, Table 1.
 - b. Density Acceptance: Unless otherwise specified in the project Drawings or contract documents, each lot of compacted bituminous mixture will be accepted when the average of the 5 density determinations is between 92 percent and 96 percent with no single density below 90 percent or higher than 97 percent. If the compaction criteria cannot be obtained, the Contractor shall submit a resolution from a Nevada PE for approval by the Engineer or, if approved by the Engineer, apply the option of contributing the lost asset value of \$1.50 per square yard per percentage point deviation from the acceptance average range. Reimbursements shall be made to Clark County Department of Public Works Fund 202 Road Maintenance.
 - c. Tensile Strength Ratio (TSR): Meeting the minimum per the design.
 - d. Marshall testing: Meet the minimum design requirement
 2. Daily Quality Control Acceptance Criteria:
 - a. Percent asphalt content: Average to be within the production range.

- b. Gradation Percent passing the 1/2 inch, #4, #30, and #200: Average to be within the production range.
- c. If any one item is out of the required range, there shall be a demerit of \$0.20 per mix ton times the whole percentage point deviation for the least error item.

401.03.14 JOINTS

Add the following:

- E. The top lift of plantmix bituminous surface shall be placed so that any longitudinal joints that are constructed shall be within 1 foot of the traffic lane lines. No two longitudinal joints shall be constructed within the same traffic lane.

METHOD OF MEASUREMENT

Subsection 401.04.01 of the Standard Specifications is replaced by the following:

401.04.01 MEASUREMENT

- A. The quantity of bituminous plantmix surface to be measured for payment shall be as follows:
 - 1. When an item of work is designated as (F) in the Bid Form, the estimated quantity for that item of work shall be the final pay quantity, unless the dimensions (lines and grades) of any portion of that item are revised by the Engineer, or the item or any portion of the item is eliminated. If the dimensions of any portion of the item are revised, and the revisions result in an increase or decrease in the calculated quantity of that item of work, the final pay quantity for the item will be based on the "Price Adjustment" formula called out in (4) below. If a final pay (F) item is eliminated, the estimated quantity for the item will be eliminated. If a portion of a final pay (F) item is eliminated, the final pay quantity will be revised in the amount represented by the eliminated portion of the item of work.
 - 2. The estimated quantity for each item of work designated as (F) in the Bid Form shall be considered as approximate only, and no guarantee is made that the quantity which can be determined by computations, based on the details and dimensions shown on the plans, will equal the estimated quantity. No allowance will be made in the event that the quantity based on computations does not equal the estimated quantity.
 - 3. In case of discrepancy between the quantity shown in the Bid Form for a Final Pay (F) item, and the quantity or summation of quantities for the same item shown on the plans, payment will be based on the quantity shown in the Bid Form.
 - 4. When the dimensions (lines and grades) of any portion of a Final Pay (F) item are revised by the Engineer, the pay item's total cost shall be proportionately increased or decreased as follows:

$$\frac{\text{Calculated change in (F) Bid Form Units (+ or -)}}{\text{Original (F) Bid Quantity}} \times \text{Total (F) Bid Item Price} = \text{Price Adjustment}$$

Additional measurement of plantmix bituminous surface will not be made for methods or equipment chosen by the Contractor.

BASIS OF PAYMENT**401.05.01 PAYMENT**

Add the following:

- D. ASPHALT PRICE ADJUSTMENT. The use of this price adjustment provision is intended to reduce the effect of price uncertainty to the Contractor and the Contracting Agency for oil-based asphalt products used in the completion of the project. These price adjustment provisions are not intended to serve as a guarantee of full compensation for price fluctuations, but are intended to be a sharing of a portion of the Contractor's risk which could result from potentially volatile price fluctuations that might occur during the term of the contract.
- E. The provisions of this Asphalt Price Adjustment specification shall only apply if the indexes below have increased or decreased by more than 10 percent between the week in which the project was bid and the week in which bituminous paving is billed for payment.
- F. These price adjustment provisions do not serve to relieve the Contractor of risks associated with any fluctuation in cost beyond the amount adjusted by these provisions. This adjustment shall be full compensation for any and all price fluctuations, including but not limited to taxes, transportation, and delays.
- G. When requested by the Contractor or initiated by the Engineer, a monthly supplementary item adjustment for bituminous paving items that are paid by the ton will be determined as follows:
- $$\text{MSIA} = (\text{IPay} - \text{IBid}) (\text{QBA}) (0.04)$$
- Where:
- MSIA = Monthly Supplementary Item Adjustment
- IPay = The average of the high and low "Nevada" "West Coast Asphalt Prices" contained in the Argus Asphalt Report for the week in which the billing for a quantity of bituminous paving is received by the Contracting Agency on the Contractor's monthly Pay Request. This index is available through subscription at www.argusmediagroup.com
- IBid = The average of the high and low "Nevada" "West Coast Asphalt Prices" contained in the Argus Asphalt Report for the week in which the contract was bid
- QBA = The quantity of a bituminous asphalt item to be paid on the Contractor's monthly Pay Estimate.
- 0.04 = Average percent oil in asphalt to be used in all MSIA calculations regardless of actual percentage.
- H. MSIA will be paid as a line item on the monthly Pay Estimate in addition to the original bid price. The MSIA may be positive (price increase) or negative (price decrease).
- I. The Contractor shall include copies of the appropriate Argus Asphalt Report(s) when requesting adjustment under this specification.

SECTION 402

PLANTMIX BITUMINOUS SURFACE

DESCRIPTION

402.01.01 GENERAL

Add the following to this subsection:

- C. This work shall also consist of the Contractor furnishing a pavement core drilling machine and a profilograph to be operated by the Contractor for pavement testing. The profilograph shall be used by the Contractor for checking riding tolerances as specified in Subsections 402.03.03, and 402.03.04 for new plantmix bituminous surface pavements for right-of-ways of 80 feet and over. Patch projects, i.e., pipeline installations, will not be subjected to this criteria.

CONSTRUCTION

402.03.03 SURFACE TOLERANCES

Add the following to this subsection:

- E. Surface tolerances for Category I roads only shall be verified in accordance with Paragraph D of this subsection.

METHOD OF MEASUREMENT

402.04.01 MEASUREMENT

Change this subsection to read as follows:

- A. The quantity of Plantmix Bituminous Surface (3-inch) (F) will be measured for payment in square yards as described in Subsection 109.01.

BASIS OF PAYMENT

402.05.01 PAYMENT

Change this subsection to read as follows:

- A. The accepted quantity of Plantmix Bituminous Surface (3-inch) (F) measured as specified in Subsection 109.01, "Measurement of Quantities," will be paid for at the Contract price bid per square yard of the pay item listed in the bid schedule.
- B. Compensation for plantmix bituminous surface shall include all asphalt cement, prime coat, tack coat, and seal coat and shall be full compensation for furnishing all the material, mixing, loading, hauling, placing, compacting, and all incidentals necessary for doing all work required in constructing plantmix bituminous surface as shown on the Drawings or as established by the Engineer.

- C. Any adjustment to the construction lines and grades directed by the Engineer shall be paid as specified in Subsection 109.01.
- D. Progress payments will be based on calculated quantities placed during the pay period.
- F. Payment will be made under:

Pay Item

Pay Unit

Plantmix Bituminous Surface (3-inch) (F)

Square Yard (F)

SECTION 405

TACK COAT

CONSTRUCTION

405.03.04 APPLICATION OF ASPHALTIC EMULSION

Add the following to this subsection:

- D. The Contractor shall provide to the Engineer the Contractor's calculations of the spread rate that was applied.

METHOD OF MEASUREMENT

405.04.01 MEASUREMENT

Delete this subsection and substitute the following therefor:

- A. Tack coat shall not be measured for payment directly.

BASIS OF PAYMENT

405.05.01 PAYMENT

Delete this subsection and substitute the following therefor:

- A. No payment will be made for tack coat as such. The cost thereof shall be considered as included in the price bid for the construction plantmix bituminous surface to which tack coat is incidental. All material applied shall conform to all the requirements in the completed work.

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SECTION 406

PRIME COAT

MATERIALS

406.02.01 BITUMINOUS MATERIAL

Delete Paragraphs A and B and replace with the following:

- A. The material shall be one of the below listed products:
 - 1. Topein-Paramount Petroleum, Bakersfield, Sales (661)392-3630
 - 2. Ecoprime- Ergon, Greg Hunt 3601 Ponderosa Way, Las Vegas, NV, (702) 235-7347
 - 3. NANOTAC- Zydex Industries, 106 Kitty Hawk Drive, Morrisville, NC 27560, (919) 544-3131, Fax (919) 544-3784 info@zydexindustries.com
- B. The bituminous material shall meet the applicable requirements of the above vendors. The bituminous material may be conditionally accepted at the source.

CONSTRUCTION

406.03.04 APPLICATION OF BITUMINOUS MATERIAL

Revise Paragraph D to read as follows:

- D. The application rate shall be in accordance with the vendor's recommendation.

The Contractor shall provide to the Engineer the Contractor's calculations of the spread rate that was applied.

METHOD OF MEASUREMENT

406.04.01 MEASUREMENT

Delete this subsection and substitute the following therefor:

- A. The quantity of bituminous material will not be measured for payment. Prime coat shall be considered incidental to the paving.

BASIS OF PAYMENT

406.05.01 PAYMENT

Delete this subsection and substitute the following therefor:

- A. The quantity of bituminous material is considered incidental to the paving and is included in the contract prices for other items of work. All material applied shall conform to all the requirements in the completed work.

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SECTION 407

SEAL COAT

CONSTRUCTION

407.03.04 APPLICATION OF BITUMINOUS MATERIAL

Add the following:

- G. The Contractor shall provide to the Engineer the Contractor's calculations of the spread rate that was applied.

METHOD OF MEASUREMENT

405.04.01 MEASUREMENT

Delete this subsection and substitute the following therefor:

- A. Seal coat shall not be measured for payment directly.

BASIS OF PAYMENT

405.05.01 PAYMENT

Delete this subsection and substitute the following therefor:

- A. No payment will be made for seal coat as such. The cost thereof shall be considered as included in the price bid for the construction plantmix bituminous surface to which seal coat is incidental. All material applied shall conform to all the requirements in the completed work.

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SECTION 501
PORTLAND CEMENT CONCRETE
MATERIALS

501.02.02 GRADATION REQUIREMENTS

Revise the first sentence of Paragraph A of this subsection to read as follows:

Refer to ACI 304R Chapters 2.1 and 2.2, and comply with the gradation requirements specified in Section 706, "Aggregates for Portland Cement Products," and the following:

CONSTRUCTION

501.03.09 CURING

Delete Subparagraph A.7.a of this subsection and replace with the following:

- a. The Maturity Meter Method may be used on this project.

501.03.10 WEATHER LIMITATIONS

Add the following to Paragraph D of this subsection:

9. Concrete placing temperature shall not exceed 90 degrees F when measured in accordance with ASTM C1064.
10. Cooling of mixing water, aggregates or both may be required to obtain an adequate placing temperature.
11. Steel forms and reinforcement shall be cooled prior to concrete placement when steel temperatures are greater than 120 degrees F.
12. Conveying and placing equipment shall be cooled if necessary to maintain proper concrete placing temperature.
13. When rate of evaporation of surface moisture, as determined using ACI 305R may reasonably be expected to exceed 0.2 lb/ft²/hr, provisions for windbreaks, shading, fog spraying, or wet covering with a light colored material shall be made in advance of placement, and such protective measures shall be taken as quickly as finishing operations allow.
14. In addition to above provisions, Contractor may elect to use a pre-cure finishing aid on any horizontal surface. Finishing aid shall be applied at manufacturers recommended rate immediately after screeding. Finishing aid shall be reapplied immediately after each subsequent finishing operation until concrete is ready for installation of final curing method.

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SECTION 502

CONCRETE STRUCTURES

CONSTRUCTION

502.03.11 REMOVAL OF FALSEWORK AND FORMS

Change paragraph B.1 to read as follows:

B. Falsework.

1. Where stresses will be placed on the concrete, in arch centers, centering under beams and girders, and in floor slabs, falsework shall not be removed until the concrete has reached an age of 10 days unless maturity meter readings or concrete cylinder breaks show concrete has reached 75 percent of the mix design 28-day compressive strength.

Change paragraphs C.1 and C.2 to read as follows:

1. Forms on parapets and curbs shall not be removed until concrete has set sufficiently to prevent distorting or cracking.
2. Forms for columns, walls, side of beams, girders, and all other parts that are not subjected to stress shall not be removed until the concrete has reached a minimum strength of 70 percent of the mix design 28-day break or age of 40 hours unless the requirements of Paragraph B are met.

Add the following to this subsection:

D. Backfill.

1. Backfill is not to be placed against walls, mounting of pole with arm on pole bases, backfill on decks, or other structures until after 10 days have passed unless maturity meter readings or concrete cylinder breaks show concrete has reached 85 percent design strength.
2. Backfill over boxes or similar structures that will have construction traffic are considered outside of this subsection. The Contractor must submit a review from a Nevada P.E. and approved by the Engineer for the appropriate cover and allowable equipment type.

E. Maturity Meter.

1. The Contractor may reduce the cure time with the use of a maturity meter.
2. If the Contractor selects this method, a detailed proposal, reviewed and stamped by a Nevada P.E., must be submitted to the Engineer. This method shall not be used until approved by the Engineer.

Add the following subsection:

502.03.21 FINISH OF CHANNELS

- A. The surface of the channel invert shall be worked to a true and even grade by means of a float, trowelled with a long-handled trowel (or "Fresno") and wood float finished. A light broom finish may be substituted for the final wood float finish. The finished surface of the concrete invert shall be tested by means of a straightedge 12 feet long. The surface shall not vary more than 0.02 foot from the lower edge of the straightedge. All high areas in the hardened surface in excess of 0.02 foot shall be removed by abrasive means.
- B. The surface of the channel walls and slopes shall receive an ordinary surface finish as specified in Subsection 502.03.17, "Ordinary Surface Finish."

METHOD OF MEASUREMENT**502.04.01 MEASUREMENT**

Delete Paragraphs B, C, L, M, and N and add the following to this subsection:

- P. The quantities of Concrete Trapezoidal Channel (Sta.) measured for payment shall be the number of linear feet complete, in place, and accepted.
- Q. The quantity of Concrete Rectangular Channel (Sta.) measured for payment shall be the number of linear feet complete, in place, and accepted.
- R. The quantity of Concrete Channel Transition (Sta.) measured for payment shall be the number of linear feet complete, in place, and accepted.
- S. Measurement for payment of Cooper Bridge Structure will be on a lump sum basis complete, in place, and accepted.
- T. The quantity of Irrigation Open Concrete Channel measured for payment shall be the number of linear feet complete, in place, and accepted.
- U. Measurement for payment of Irrigation Pump Box will be on a lump sum basis complete, in place, and accepted.
- V. Measurement for payment of Cattle Ramp will be on a lump sum basis complete, in place, and accepted.
- W. The quantity of 2-foot Wide U-Channel measured for payment shall be the number of linear feet complete, in place, and accepted.
- X. The quantity of NDOT Culvert Headwall measured for payment shall be the number of each complete, in place, and accepted.
- Y. The quantity of Concrete Swale measured for payment shall be the number of linear feet complete, in place, and accepted.
- Z. Measurement for payment of Irrigation Open Concrete Channel Termination will be on a lump sum basis complete, in place, and accepted.

- AA. Measurement for payment of Irrigation Open Concrete Channel Lateral will be on a lump sum basis complete, in place, and accepted.

BASIS OF PAYMENT

502.05.01 PAYMENT

Delete Paragraphs A, B, and D and add the following to this subsection:

- D. No direct payment shall be made for utility potholing as such. The cost thereof being considered as included in the price bid for the construction and installation to which such potholing is incidental or appurtenant.
- E. The accepted quantities of Concrete Trapezoidal Channel (Sta.) and Concrete Rectangular Channel (Sta.) will be paid for at the Contract unit prices bid per linear foot, which shall be full compensation for constructing the channels including shoring, subgrade preparation, bedding, structural backfill, concrete cutoff walls, weep holes, drain rock, geotextile fabric, channel steps with paint, speed dowels and smooth dowels, concrete, form work, epoxy adhesive, reinforcing steel, channel expansion, weakened plane, and construction joints, joint material (including premolded filler, preformed sealer, and tooled edges), and curing compounds for the channel lining. The prices paid shall be considered full compensation for furnishing all labor, materials, tools, equipment, and incidentals and constructing the channels complete, in place, as shown on the Drawings, as specified, and as directed by the Engineer. Excavation associated with this item is covered under channel excavation.
- F. The accepted quantities of Concrete Channel Transition (Sta.) will be paid for at the Contract unit prices bid per linear foot, which shall be full compensation for furnishing all shoring, subgrade preparation, bedding, structural backfill, concrete cutoff walls, weep holes, drain rock, geotextile fabric, channel access ramps, channel steps with paint, speed dowels and smooth dowels, concrete, form work, epoxy adhesive, reinforcing steel, channel expansion, weakened plane, and construction joints, joint material (including premolded filler, preformed sealer, and tooled edges), and curing compounds for the channel transition lining. The prices paid shall be considered full compensation for furnishing all labor, materials, tools, equipment, and incidentals and constructing the channel transitions complete, in place, as shown on the Drawings, as specified, and as directed by the Engineer. Excavation associated with this item is covered under channel excavation.
- G. The lump sum payment for Cooper Bridge Structure shall be full compensation for traffic control and for constructing the bridge including all shoring, excavation, structural backfill, Type II aggregate base, concrete, reinforcing steel, fine surface finish, strip seal expansion joints, bearing pads, structural steel, prestressing steel, drilled shaft foundations, deck drains, access hatches, abutments, approach slabs, utility conduits, pedestrian rails Type M (modified), Type V rail, medians, sidewalk, curb and gutter, concrete barrier rail, hangers for utility casings, and sections widened for light pole foundations. The price paid shall be full compensation for furnishing all labor, materials, tools, equipment and incidentals and installing the items, complete in place, as shown on the Drawings, as specified, and as directed by the Engineer.
- H. The accepted quantity of Irrigation Open Concrete Channel will be paid for at the Contract unit price bid per linear foot which shall be full compensation for constructing the irrigation channel including excavation, shoring, subgrade preparation, bedding, structural backfill,

Type II aggregate base, concrete, form work, reinforcing steel, channel expansions, weakened plane and construction joints, joint material, 20-inch twist cap, epoxy, and curing compounds for the channel lining. The price paid shall be considered full compensation for furnishing all labor, materials, tools, equipment, and incidentals and constructing the channel complete in place, as shown on the Drawings, as specified, and as directed by the Engineer.

- I. The Contract lump sum price paid for Irrigation Pump Box shall be full compensation for furnishing all excavation, shoring, scarifying, subgrade preparation, bedding, structural backfill, concrete, form work, reinforcing steel, expansion and construction joints, joint material, curing compounds, gates, pipe penetration, grates, hardware, fencing, and appurtenances. The price paid shall be full compensation for furnishing all labor, materials, tools, equipment, and incidentals and constructing the pump box complete, in place, as shown on the Drawings, as specified, and as directed by the Engineer.
- J. The Contract lump sum price paid for Cattle Ramp shall be full compensation for furnishing all shoring, scarifying, subgrade preparation, bedding, structural backfill, concrete, form work, reinforcing steel, and concrete cutoff walls; expansion, weakened plane, and construction joints; joint material (including premolded filler, preformed sealer, and tooled edges), curing compounds, and all incidental and appurtenant work. The price paid shall be full compensation for furnishing all labor, materials, tools, equipment, and incidentals and constructing the ramps complete, in place, as shown on the Drawings, as specified, and as directed by the Engineer. Excavation associated with this item is covered under channel excavation.
- K. The accepted quantity of 2-foot Wide U-Channel will be paid for at the Contract unit price bid per linear foot which shall be full compensation for constructing the channel including excavation, shoring, scarifying, subgrade preparation, bedding, structural backfill, drain rock, concrete, form work, reinforcing steel, pipe connection, channel expansion, weakened plane, and construction joints, joint material, and curing compounds for the channel lining. The price paid shall be considered full compensation for furnishing all labor, materials, tools, equipment, and incidentals and constructing the channel complete in place, as shown on the Drawings, as specified, and as directed by the Engineer.
- L. The accepted quantity of NDOT Culvert Headwall will be paid for at the Contract unit price bid per each, which shall be full compensation for furnishing and placing all materials, including excavation, shoring, scarifying, subgrade preparation, bedding, backfill, aggregate base, compaction, concrete, reinforcing steel, protection and restoration, if damaged, of all existing facilities and improvements required to remain in place, and for all labor, tools, equipment, and incidentals necessary to complete the work as shown on the Drawings, as specified, and as directed by the Engineer.
- M. The accepted quantity of Concrete Swale will be paid for at the Contract unit price bid per linear foot which shall be full compensation for constructing the concrete channel including excavation, shoring, scarifying, subgrade preparation, bedding, structural backfill, Type II aggregate base, concrete, form work, reinforcing steel, expansions, weakened plane and construction joints, joint material, and curing compounds. The price paid shall be considered full compensation for furnishing all labor, materials, tools, equipment, and incidentals and constructing the channel complete in place, as shown on the Drawings, as specified, and as directed by the Engineer.

- N. The Contract lump sum price paid for Irrigation Open Concrete Channel Termination shall be full compensation for constructing the irrigation channel termination including excavation, shoring, scarifying, subgrade preparation, bedding, structural backfill, Type II aggregate base, concrete, form work, reinforcing steel, epoxy, channel expansions, weakened plane and construction joints, joint material, and curing compounds for the channel lining. The price paid shall be considered full compensation for furnishing all labor, materials, tools, equipment, and incidentals and constructing the channel complete in place, as shown on the Drawings, as specified, and as directed by the Engineer.

- O. The Contract lump sum price paid for Irrigation Open Concrete Channel Lateral shall be full compensation for constructing the irrigation channel lateral including excavation, shoring, scarifying, subgrade preparation, bedding, structural backfill, Type II aggregate base, concrete, form work, reinforcing steel, epoxy, 20-inch twist cap, 20-inch overflow valve as specified in Section 213, channel expansions, weakened plane and construction joints, joint material, and curing compounds for the channel lining. The price paid shall be considered full compensation for furnishing all labor, materials, tools, equipment, and incidentals and constructing the channel complete in place, as shown on the Drawings, as specified, and as directed by the Engineer.

- P. Payment will be made under:

| <u>Pay Item</u> | <u>Pay Unit</u> |
|---|-----------------|
| Concrete Trapezoidal Channel (Sta. 180+58.93 to Sta. 182+06.29) | Linear Foot |
| Concrete Trapezoidal Channel (Sta. 191+42.65 to Sta. 195+38.68) | Linear Foot |
| Concrete Rectangular Channel (Sta. 184+31.29 to Sta. 187+20.79) | Linear Foot |
| Concrete Channel Transition (Sta. 182+06.29 to Sta. 184+31.29) | Linear Foot |
| Concrete Channel Transition (Sta. 187+20.79 to Sta. 191+42.65) | Linear Foot |
| Cooper Bridge Structure | Lump Sum |
| Irrigation Open Concrete Channel | Linear Foot |
| Irrigation Pump Box | Lump Sum |
| Cattle Ramp | Lump Sum |
| 2-foot Wide U-Channel | Linear Foot |
| NDOT Culvert Headwall | Each |
| Concrete Swale | Linear Foot |
| Irrigation Open Concrete Channel Termination | Lump Sum |
| Irrigation Open Concrete Channel Lateral | Lump Sum |

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SECTION 503

PRECAST PRESTRESSED CONCRETE MEMBERS

METHOD OF MEASUREMENT

503.04.01 MEASUREMENT

Change this subsection to read as follows:

- A. The quantity of prestressing steel will not be measured for payment.

BASIS OF PAYMENT

503.05.01 PAYMENT

Change this subsection to read as follows:

- A. No separate payment will be made for prestressing steel as such; the cost thereof shall be included in the price bid for the construction or installation of the items of which such prestressing steel is a part.

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SECTION 505

REINFORCING STEEL

METHOD OF MEASUREMENT

505.04.01 MEASUREMENT

Change this subsection to read as follows:

- A. The quantity of steel reinforcement will not be measured for payment.

BASIS OF PAYMENT

505.05.01 PAYMENT

Change this subsection to read as follows:

- A. Reinforcing steel shall be considered as incidental to the work and no separate payment will be made for its inclusion in the project work. The cost of reinforcing steel shall be included in the price bid for the construction or installation of the items for which the reinforcing steel is used.

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SECTION 509

DRILLED SHAFT FOUNDATIONS

DESCRIPTION

509.01.01 GENERAL

- A. This work consists of constructing drilled shaft foundations.

509.01.02 QUALIFICATIONS OF DRILLED SHAFT CONTRACTORS

- A. No later than 30 days prior to constructing drilled shafts, submit in writing, qualifications to perform the drilled shaft construction as specified and provide a list of 4 projects successfully completed using drilled shaft construction. The list of projects shall contain names and current phone numbers of owner's representatives who can verify participation on those projects.
- B. A minimum of one year's experience installing drilled shafts of both diameter and length similar to those shown on the Drawings is required for signal, soundwall and overhead sign foundations.
- C. A minimum of 3 years' experience installing drilled shafts of both diameter and length similar to those shown on the Drawings is required for retaining wall and bridge foundations. In addition, the drilled shaft installations shall also have been in conditions similar to those indicated by the Contract Documents and a site inspection.

509.01.03 SUBMITTALS

- A. Provide a signed statement from the drilling contractor that inspection has been made of both the project site and all the subsurface information made available, including soil or rock samples referenced in the Contract Documents. Submit this statement as part of the installation plan required herein.
- B. Submit an installation plan for review a minimum of 15 working days prior to constructing drilled shafts. This plan shall provide information on the following:
1. Name and experience record of the drilled shaft superintendent who will be in charge of the drilled shaft operations.
 2. List of proposed equipment to be used, including, but not limited to: cranes, drills, soil augers, rock augers, coring buckets, bailing buckets, chipping and grooving tools, final cleanout equipment, desanding equipment, slurry pumps, slurry tanks, slurry sampling and testing equipment, core sampling equipment, tremies, concrete pumps, casing, and so forth.
 3. Details of overall construction operation sequence and sequence of shaft construction in bents or groups.
 4. Details of shaft excavation methods and procedures.
 5. When the use of slurry is anticipated, details of the mix design, mix design suitability for the subsurface conditions at the construction site, mixing and storage methods, maintenance methods, slurry disposal procedures, provisions for controlling slurry

- quality including test types, sampling techniques, test methods, frequency of tests, specified property requirements to ensure the slurry meets its intended functions.
6. Discussion of methods to clean the shaft excavation.
 7. Details of reinforcement placement, including support and centralization methods.
 8. Details of concrete placement, including concrete delivery schedule and proposed operational procedures for tremie and pumping methods.
 9. When the use of casing is anticipated, details of casing installation and removal methods.
- C. The drilled shaft installation plan will be evaluated for conformance with the Contract requirements. Notification will be given within 14 days after receipt of the installation plan of any additional information required and/or changes necessary. Approval of the plan shall not operate to relieve the responsibility under the Contract for the successful completion of the work, nor shall approval of the plan operate as a warranty that the plan will succeed or will be the most economical or efficient method of completing the work. Adhere to the approved plan for the remainder of the Contract. Subject to acceptable field performance, or if changes in equipment or construction methods occur, submit a revised plan for review and approval.

MATERIALS

509.02.01 GENERAL

- A. Material shall conform to the following Sections:
1. Portland Cement Concrete Section 501
 2. Reinforcing Steel Section 505
 3. Concrete Curing Materials and Admixtures Section 702
- B. Concrete shall be Type V, Class D Portland cement concrete with the following exceptions:
1. Minimum Compressive Strength 4,500 psi (31 MPa)
 2. Maximum Aggregate Size 100% passing 3/4 inch Sieve
 3. Maximum Water/Cement Ratio 0.45
 4. Slump 7 - 9 inches*

* Test Method No. Nev. T438. In addition, the concrete shall maintain a minimum slump of 6 inches at 2 hours and 4 inches at 3 hours. For 2-hour, 3-hour or extended time slump tests, store a sufficient quantity of concrete in sealed 5-gallon buckets at room temperature.

CONSTRUCTION

509.03.01 CONSTRUCTION SEQUENCE

- A. Complete excavation to top of shaft elevation before shaft construction begins, unless otherwise noted or approved. Recompact and regrade any disturbance to the footing or pile cap area prior to the footing pour.
- B. When drilled shafts are to be installed in conjunction with embankment placement, construct drilled shafts after the placement of embankment, unless otherwise noted or approved. In the case of drilled shafts constructed prior to the completion of the embankment, place pile

caps or footings after the embankment has been placed as near to final grade as possible. Leave only the necessary work room for construction of the caps or footings.

509.03.02 CONSTRUCTION METHODS

- A. Perform excavations required for shafts, and bell footings if shown on the Drawings, through whatever materials are encountered to the dimensions and elevations shown in the Drawings or as required. Use construction methods suitable for the intended purpose and materials encountered. The permanent casing method shall be used only at locations shown on the Drawings or when authorized. Blasting will not be permitted unless noted on the Drawings or authorized in writing. Construct drilled shaft foundations according to the following methods:
1. **Dry Construction Method.** The dry construction method consists of drilling the shaft excavation, removing accumulated water and loose material from the excavation, placement of the reinforcing cage, and placement of concrete in a relatively dry excavation. Use the dry construction method only when: less than 1 foot of groundwater accumulates above the base of the excavation over a 1 hour period when no pumping is permitted; the sides and bottom of the excavation remain stable, with no detrimental caving, sloughing, or swelling occurring prior to placement of reinforcement; the sides and bottom of the shaft can be visually inspected prior to placement of reinforcing steel and/or concrete.
 2. **Wet Construction Method.** The wet construction method consists of using drilling slurry to maintain the stability of the borehole perimeter while advancing the excavation to the specified bottom elevation, placement of the reinforcing cage, and concreting the shaft. Where drilled shafts are located in open water areas, extend exterior casings from above the water elevation into the ground to protect the shaft concrete from water action during placement and curing. Install exterior casings in a manner that will produce a positive seal at the bottom of the casing so that no piping of water or other materials occurs into or from the shaft excavation. Use the wet construction method at sites where a dry excavation cannot be maintained for placement of the shaft concrete.
 3. **Casing Construction Method.** The casing construction method consists of placing a casing into a predrilled hole or advancing a casing through the ground by twisting, driving, or vibration before being cleaned out. Use the casing method when shown on the Drawings or at sites where the dry or wet construction methods are inadequate to prevent caving or excessive deformation of the hole.
- B. Method 3, Casing Construction Method, may be used in conjunction with Method 1, Dry Construction Method, or Method 2, Wet Construction Method.

509.03.03 EXCAVATION AND DRILLING EQUIPMENT

- A. Use excavation and drilling equipment having adequate capacity, including power, torque, and down thrust to excavate a shaft of the required diameter and to a depth 20 percent greater than required. Excavation and overreaming tools shall be of adequate design, size and strength to perform the work.
- B. When the material encountered cannot be drilled using conventional earth augers with soil or rock teeth, drill buckets, grooving tools, and/or overreaming tools, provide special excavation equipment, including but not limited to: rock core barrels, rock tools, air tools,

blasting materials, and other equipment as necessary to construct the shaft excavation to the size and depth required.

509.03.04 EXCAVATIONS

- A. Excavate shafts at locations and to the top of shaft elevations, estimated bottom of shaft elevations, shaft geometry and dimensions shown in the Contract Documents. Extend drilled shaft tip (base) elevations as directed, when the material encountered during excavation is determined to be unsuitable.
- B. Excavate bells by mechanical methods to form the height and bearing area of the size and shape shown.
- C. Over-ream sidewalls of shafts when the sidewalls have either softened due to excavation methods, swelled due to delays in concreting, or degraded due to slurry cake buildup. Over-ream to a minimum thickness of 1/2 inch and a maximum thickness of 3 inches. Accomplish over-reaming with a grooving tool, over-reaming bucket, or other approved equipment. The thickness and limits of sidewall over-reaming will be determined.
- D. Utilize suitable excavated material for backfilling or in embankments. Dispose of unsuitable or surplus material according to Subsection 107.14.

509.03.05 EXCAVATION INSPECTION

- A. Provide all equipment for checking the dimensions and alignment of each shaft excavation. This may include, but is not limited to: lights, mirrors, weighted tape, weighted probe, personnel, and all assistance required to perform inspection of the drilled shaft construction. Use the equipment to obtain all measurements as directed.
- B. Measure final shaft depth with a suitable weighted tape or other approved methods after final cleaning. The maximum depth of sediment or any debris at any place on the base of the shaft shall not exceed 1-inch. For dry shafts, remove all cuttings that may have been smeared on the sidewalls walls during the insertion and removal of drilling tools. In addition, for dry excavations, the maximum depth of water shall not exceed 3-inch prior to concrete placement. Shaft inspection will be made after final cleaning by visual inspection for dry shafts or other methods deemed appropriate for wet shafts, such as sounding with a weighted tape or probe. Do not proceed with shaft construction until the shaft has been inspected and accepted.

509.03.06 OBSTRUCTIONS

- A. Remove surface and subsurface obstructions at drilled shaft locations. Such obstructions may include, but are not limited to, man-made materials such as old foundations or construction debris and natural materials such as cobbles, boulders, or cemented soils. Employ special procedures and/or tools when the shaft cannot be advanced using augers, drilling buckets, and/or over-reaming tools. Such special procedures and/or tools may include, but are not limited to: chisels, boulder breakers, core barrels, air tools, hand excavation, temporary casing, and increasing the shaft diameter. Do not blast to remove obstructions unless specifically approved in writing.
- B. Retrieve and dispose of all excavating equipment and tools lost during shaft excavation.

509.03.07 EXPLORATION (SHAFT EXCAVATION)

- A. Obtain soil samples or rock cores to determine the character of the material directly below the completed shaft excavation where shown on the Drawings or as directed. Extract soil samples with a split spoon sampler or undisturbed sample tube, using the designated soil sampling technique. Cut rock cores with an approved double or triple tube core barrel to a minimum of 10 feet below the shaft excavation either before the excavation is made or at the time the shaft excavation is approximately complete. Extend the depth of coring to 20 feet below the bottom of the shaft when directed. Measure, visually identify, and record rock core samples in an appropriate field log. Also, describe and record standard penetration test blow counts and samples in the log.
- B. Place samples in suitable containers, identified by shaft location, elevation, and Contract number and deliver with the field log to the Engineer. When samples are obtained after completion of the shaft excavation, deliver the field log and samples immediately upon completion of sampling. The material will be inspected and a decision will be made on the suitability of the bearing stratum within 2 days. When samples are obtained prior to excavating the shaft, deliver the samples and field log within 24 hours of sampling. Inspection of the samples/cores will be made and the final depth of required excavation will be determined within 3 days. Furnish 2 typed copies of the final log at the time the shaft excavation is completed and accepted.

509.03.08 CASINGS

- A. Use steel casings which are smooth, clean, watertight, and of sufficient strength to withstand both handling and driving stresses and the pressure of both concrete and the surrounding earth materials. The outside diameter of the casing and the diameter of any excavation made below the casing shall not be less than the specified diameter of the shaft, or greater than 6 inches than the specified diameter of the shaft at no cost to the Owner. Remove all casings, except permanent casings, from shaft excavations. Any length of permanent casing installed below the shaft cutoff elevation shall remain in place.
- B. Extract casing prior to initial set to allow the concrete cast against the surrounding soil to develop the designed skin friction. Leave casing not extracted within the allotted time in the excavation. If casing is not extracted from the excavation, the shaft will be reevaluated to determine if any loss of capacity has occurred. Any loss of capacity may be grounds for the shaft to be considered defective. If any shaft is determined to be defective, submit a plan for remedial action for approval.
1. Temporary Casing. All subsurface casing shall be considered temporary unless specifically shown as permanent casing in the Contract Documents. Remove temporary casing before completion of concreting the shaft. Telescoping, predrilling with slurry, and/or overreaming to beyond the outside diameter of the casing may be required during installation.

If electing to remove a casing and substitute a longer or larger-diameter casing through caving soils, the excavation shall be either stabilized with slurry or backfilled before the new casing is installed. Other methods may be used to control the stability of the excavation and protect the integrity of the foundation materials when approved.

As the casing is withdrawn, maintain an adequate level of concrete within the casing so that fluid trapped behind the casing is displaced upward and discharged at the ground surface without contaminating or displacing the shaft concrete.

Temporary casings which become bound or fouled during shaft construction and cannot be practically removed shall constitute a defect in the shaft. Submit a plan for approval to correct such defective shafts. Such improvement may consist of, but is not limited to, removing the shaft concrete and extending the shaft deeper to compensate for loss of frictional capacity in the cased zone, providing straddle shafts to compensate for capacity loss, or providing a replacement shaft. Any foundation redesign must be performed by a Registered Professional Engineer, licensed to practice in the State of Nevada.

2. Permanent Casing. Use permanent casing when shown in the Contract Documents. Provide continuous full length casing between the top and bottom elevations of the shaft. Cut off permanent casing, after installation is complete, at the prescribed elevation, and complete the shaft construction by installing necessary reinforcing steel and concrete in the casing.

509.03.09 SLURRY

- A. If electing to use slurry, use mineral slurry in the drilling process unless other drilling fluids are specified. Mineral slurry shall have both a mineral grain size that will remain in suspension and sufficient viscosity and gel characteristics to transport excavated material to a suitable screening system. The percentage and specific gravity of the material used to make the mineral suspension shall be sufficient to maintain the stability of the excavation and to allow proper concrete placement.
 - B. During construction, maintain the level of the slurry at a height sufficient to prevent caving of the hole. In the event of a sudden significant loss of slurry in the hole, cease construction of the foundation until either a method to stop slurry loss or an alternate construction procedure has been approved.
 - C. Premix mineral slurry thoroughly with clean water and allow adequate time (as prescribed by the mineral slurry manufacturer) for hydration prior to introduction into the shaft excavation. Provide slurry tanks of adequate capacity for slurry circulation, storage, and treatment. Do not use excavated slurry pits in lieu of slurry tanks without written permission. Provide desanding equipment to control slurry sand content to less than 4 percent by volume at any point in the borehole at the time slurry is introduced, including situations in which temporary casing is used. Take all steps necessary to prevent the slurry from "setting up" in the shaft. Such methods may include, but are not limited to: agitation, circulation and/or adjusting the properties of the slurry. Dispose of all slurry material according to Subsection 107.14.
- B. Perform control tests on the mineral slurry using suitable apparatus to determine density, viscosity and pH. The range of values for those physical properties is shown in the following table:

| MINERAL SLURRY (Sodium Bentonite or Attapulgitite in Fresh Water) | | | |
|--|---|--|---|
| Acceptable Range of Values | | | |
| Property | At the Time of Slurry Introduction | In Hole at Time of Concreting | Test Method |
| Density kN/m ³ (lb/ft ³) | 10.1 - 10.8 (64.0 - 68.8) | 10.1 - 11.8 (64.0 - 74.6) | Density Method API 13B-1 Section 1 |
| Viscosity (seconds/quart)* | (28 - 45) | (28 - 45) | Marsh Funnel and Cup API 13B-1 Section 2.2 |

| MINERAL SLURRY (Sodium Bentonite or Attapulgite in Fresh Water) | | | |
|---|---|--------------------------------------|--------------------------------------|
| Acceptable Range of Values | | | |
| Property | At the Time of Slurry Introduction | In Hole at Time of Concreting | Test Method |
| pH | 8 - 11 | 8 - 11 | pH Paper Glass Electrode pH Meter |
| Notes: Testing shall be performed when the slurry temperature is above 4 degrees C (40 degrees F). The sand content shall not exceed 4% (by volume) at any point in the bore hole as determined by the American Petroleum Institute sand content test. *The Marsh Funnel Test is conducted using one quart of fluid, not one liter. | | | |

- E. Perform tests during the shaft excavation to determine density, viscosity and pH values to ensure material consistency. Conduct a minimum of 4 sets of tests during the first 8 hours of slurry use. When the results show consistent behavior the testing frequency may be decreased to 1 set every 4 hours of slurry use.
- F. Do not use water only as a drilling fluid, unless approved in writing. When water only is approved for use, all of the provisions in the table shown above for mineral slurries shall be met, except that the maximum density shall not exceed 70 lb/ft³ (11.0 kN/m³). Consider naturally occurring water as drilling fluid.
- G. Ensure that a heavily contaminated slurry suspension, which could impair the free flow of concrete, has not accumulated in the bottom of the shaft. Prior to placing concrete in any shaft excavation, take slurry samples using an approved sampling tool. Extract slurry samples from the base of the shaft and at intervals not exceeding 10 feet up the slurry column in the shaft, until two consecutive sets of samples produce acceptable values for density, viscosity, and pH.
- H. When any slurry samples are found to be unacceptable, take whatever action is necessary to bring the slurry within specification requirements. Do not place concrete until the slurry in the hole is re-sampled and test results produce acceptable values.
- I. Furnish signed test reports of all tests required above upon completion of each drilled shaft.
- J. Synthetic slurries listed on the NDOT QPL may be used. When synthetic slurry is used, have a technical representative of the manufacturer or supplier on site prior to slurry introduction into drilled shaft excavations to ensure the slurry is mixed and managed properly for the specific site conditions. The representative shall remain on site until directed. Mix synthetic slurry in accordance with the manufacturer's recommendations. Follow manufacturer's recommendations for disposal of synthetic slurry. Dispose the slurry in accordance with Subsection 107.14. Sample and perform control tests on the slurry in the same manner as specified for mineral slurry or as modified by the approved installation plan. Obtain slurry samples and verify acceptable test results after final cleaning of the bottom of the hole, just prior to placing concrete.
- K. Synthetic slurry shall be at least 39 °F when tested and shall meet the following requirements or the requirements as modified by the approved installation plan:

| TEST | SLURRY PRODUCT REQUIREMENTS | | | TEST METHOD |
|--|-----------------------------|------------------|------------------|---|
| | NOVAGEL POLYMER | SHORE PAC GVC | SUPERMUD | |
| Density, lb/ft ³ (a) (b) | ≤ 67 ≤ 64 | --- ≤ 64 | --- ≤ 64 | Density Method API 13B-1 Section 1 |
| Viscosity, sec/qt (a) (b) | 45 to 104 ≤ 104 | 33 to 74 ≤ 57 | 32 to 60 ≤ 60 | Marsh Funnel and Cup API 13B-1 Section 2.2 |
| pH | 6.0 to 11.5 | 8.0 to 11.0 | 8.0 to 10.0 | pH Paper Glass Electrode pH Meter |
| Sand Content, % (b) | ≤ 0.5 | ≤ 0.5 | ≤ 0.5 | Sand API 13B-1 Section 5 |

(a) During drilling.

(b) Just prior to placing concrete.

509.03.10 CONSTRUCTION TOLERANCES

- A. Construct shaft foundations to plan dimensions within the following tolerances:
1. The diameter of the shaft shall not be less than the specified diameter and shall not be more than 6 inches greater than the specified diameter.
 2. Construct the center of the drilled shaft within 3 inches of plan position in the horizontal plane at the plan elevation for the top of the shaft.
 3. The vertical alignment of a vertical shaft excavation shall not vary from the plan alignment by more than 1/4 inch per foot of depth.
 4. After concrete placement, the top of the reinforcing steel cage shall be no more than 6 inches above and no more than 3 inches below plan position. Provide minimum cover of 6 inches for all reinforcing steel for shafts 5 feet or larger in diameter, and a minimum cover of 4 inches for all reinforcing steel for shafts less than 5 feet in diameter.
 5. A casing larger in diameter than shown in the Drawings may be used only when approved.
 6. Excavate bells to the plan bearing area and height shown on the Contract Drawings as a minimum. The actual diameter of the bells shall not exceed 3 times the specified shaft diameter. All other plan dimensions shown for the bells may be varied to accommodate the excavation equipment when approved.
 7. Top elevation of the shaft shall not be less than 3 inches below the plan top-of-shaft elevation and shall not be more than 1 inch above the plan top-of-shaft elevation.
 8. Employ excavation equipment and methods so that the completed shaft excavation will have a planar bottom. The cutting edges of excavation equipment shall be normal to the vertical axis of the equipment within a tolerance of ±0.375 inch per foot of diameter.
- B. Drilled shaft excavations and completed shafts not constructed within the required tolerances are unacceptable. Correct all unacceptable shaft excavations and completed shafts by approved methods. Engineering analysis and/or drilled shaft redesign to correct out-of-tolerance drilled shafts shall be performed by a Registered Professional Engineer, licensed to practice in the state of Nevada. Submit proposed corrective measures for approval.

509.03.11 REINFORCING STEEL CAGE CONSTRUCTION AND PLACEMENT

- A. Reinforcing steel shall conform with the details shown on the Drawings and the requirements of Section 505. Double tie, with double wires, every other intersecting vertical and spiral or hoop members of the reinforcing cage in each direction. Assemble and place the reinforcing steel cage, consisting of longitudinal bars, spiral or hoop reinforcement, cage

stiffeners, spacers, centralizers, and other necessary appurtenances, as a unit within 6 hours after the shaft excavation is inspected and accepted. Remove internal stiffeners as the cage is placed in the shaft so as not to interfere with the placement of concrete. Support the reinforcing steel cage from the top at all times until completion of concrete placement. Inspect the shaft and the steel cage immediately after placing the cage.

- B. Tie and support the reinforcing steel in the shaft so that the reinforcing steel will remain within allowable tolerances given in Subsection 509.03.10. Use non corrosive rollers near the bottom and at intervals not exceeding 10 feet up the shaft to ensure concentric spacing for the entire cage length in the excavation. Use rollers of adequate dimension to ensure a minimum of 6 inches annular space between the outside of the reinforcing cage and the side of the excavation for shafts 5 feet or larger in diameter. Provide rollers of adequate dimension to ensure a minimum of 4 inches annular space between the outside of the reinforcing cage and the side of the excavation for shafts less than 5 feet in diameter. Provide approved cylindrical feet (bottom supports) to ensure that the bottom of the cage is maintained the proper distance above the base.
- C. Verify the elevation of the top of the steel cage before and during the concrete placement. If the upward displacement of the rebar cage exceeds 2 inches or if the downward displacement exceeds 6 inches per 20 feet of shaft length, the drilled shaft will be considered defective. Submit correction procedure for approval. Cease shaft construction until the method of supporting the reinforcing steel cage is modified to produce acceptable results.

509.03.12 CONCRETE PLACEMENT

- A. Place concrete within 1 hour after the cage has been placed and inspected. If this 1 hour limit is exceeded, remove the reinforcing cage to allow for reinspection as directed. The use of a tremie to place concrete is mandatory. Place concrete continuously from the bottom to the top elevation of the shaft. Concrete placement shall be continuous from the bottom elevation to the top of the shaft, and shall continue after the shaft excavation is filled until quality concrete is evident at the top of the shaft.
- B. If casing is utilized, vibrate the concrete during withdrawal of the last 15 feet of the casing. Keep the vibrator below the bottom of the casing during removal. Where steel casings have been used to support the excavation walls, withdraw the casing as the concrete is being placed within the limits previously specified in Subsection 509.03.08. Remove the steel liner in a manner so that the lower edge of the steel liner always remains a minimum of 5 feet below the surface of the concrete being placed to prevent water or soil from entering the shaft excavation from below the bottom of the casing. Submit for approval, appropriate procedures and methods of withdrawal of steel liners to ensure that the concrete is not being lifted or contaminated as the steel liner is being withdrawn.
- C. Do not exceed 3 hours from the beginning of concrete placement in the shaft to the completion of concrete placement. A longer placement time may be approved, when requested, provided that the supplied concrete mix maintain a slump of 4 inches or greater over the longer placement time. The slump test will be performed according to Subsection 509.02.01.
- D. Pump debris, mud, water and contaminated concrete forced up during concrete placement directly into a truck for disposal unless alternate methods are approved.
- E. Cure the top surface of the pile as prescribed in Subsection 501.03.09.

509.03.13 TREMIES

- A. Use tremies and concrete pumps for concrete placement. Use tremies consisting of a tube of sufficient length, weight, and diameter to discharge concrete at the shaft base elevation. Do not use a tremie having aluminum parts that will come into contact with the concrete. The tremie inside diameter shall be at least six times the maximum size of aggregate used in the concrete mix but shall not be less than 5 inches. The inside and outside surfaces of the tremie shall be clean and smooth to permit both flow of concrete and unimpeded withdrawal during concreting. The wall thickness of the tremie shall be adequate to prevent crimping or sharp bends, which restrict concrete placement.
- B. Use a watertight tremie for wet excavation concrete placement. Do not begin underwater or under-slurry concrete placement until the tremie is placed to the shaft base elevation. Keep the concrete completely separated from the water or slurry prior to the time it is discharged. Valves, bottom plates or plugs may be used for this purpose only if concrete discharge can begin within one tremie diameter of the base of the drilled shaft. Remove plugs from the excavation or provide plugs of an approved material which will not cause a defect in the shaft, if not removed. Construct the discharge end of the tremie to permit the free radial flow of concrete during placement operations. Immerse the tremie discharge end at least 5 feet in concrete at all times after starting the flow of concrete. Maintain a continuous flow of concrete and keep the level of the concrete in the tremie above the level of slurry or water in the shaft at all times to prevent water or slurry intrusion into the shaft concrete.
- C. If at any time during the concrete pour the tremie line orifice is removed from the fluid concrete column and/or discharges concrete above the rising concrete level, the shaft, as determined by Engineer, will be considered defective. All costs of testing, mitigation, and/or replacement of defective shafts shall be at no additional cost to the City.

509.03.14 DRILLED SHAFT INSPECTION REPORT

- A. Provide any assistance that may be required for Engineer to prepare and submit daily reports for the complete drilled shaft construction program. The reports will include: logging all excavated soils, concrete quantities and rate of delivery, description of tools and drill rigs used and any changes necessitated by changing ground conditions, recording actual elevations at top and bottom of each drilled shaft, elevation of rock (if any), plumbness of casing and rebar cages, seepage of water, elevation of top and bottom of any casing left in place, any unusual conditions, and any other pertinent information deemed necessary.

509.03.15 CROSSHOLE SONIC LOG (CSL) TESTING

- A. Completed drilled shafts shall be subject to a nondestructive testing (NDT) method called Crosshole Sonic Logging (CSL). CSL tests will be performed by an approved independent testing organization. The Contractor shall hire the CSL testing company. The CSL testing company shall have a minimum of 3 years' experience and be approved by the City. Final approval for the first drilled shaft constructed for bridge foundations will be given within 10 days after placement of concrete. Concrete placement in subsequent bridge foundation shaft excavations will not be allowed until the first shaft has been approved. All shafts shall be tested. Do not place reinforcing steel or concrete above designated shaft construction joints until the CSL testing of the lower portion of the shaft has been completed, test results obtained, and the lower portion of the shaft has been approved.

- B. For the purposes of the above tests, install tubes to permit access for the CSL test probes. The tubes shall have an inside diameter of 50 mm (2 in.) \pm 6 mm (1/4 in.) and shall be Grade B Schedule 40 steel pipe conforming to ASTM A53. The tubes shall have a round, regular inside diameter free of defects or obstructions, including obstructions at any pipe joints, in order to permit the free, unobstructed passage of a 1.375 inch diameter or smaller source and receiver probes used for the CSL tests. The tubes shall be watertight, free from corrosion with clean internal and external faces to insure good bond between the concrete and the tubes. Fit the tubes with a watertight cap on the bottom and a removable watertight cap on the top.
- C. Securely attach the CSL tubes at equal spacings along the interior circumference of the reinforcement cage of each drilled shaft or as shown in the Drawings. Install CSL tubes at least 3 feet above the shaft top to within 1 inch of the actual drilled shaft tip elevation. Make any joints in the tubes watertight. Roughen up the surface of steel CSL test pipes to reduce the potential of the test pipes de-bonding. Hand sand, using 50 grit sandpaper to de-gloss the steel pipe. Take care to prevent damaging the tubes during reinforcement cage installation operations in the drilled shaft excavation. Fill the tubes with potable water, verify the tubes are water tight, and cap the tube tops prior to concrete placement. Check within 6 to 12 hours to verify water remains above the level of the poured concrete and top off water as needed. Refer to Section 722 for water requirements.
- D. If any shaft is determined to be unacceptable, submit a plan for remedial action for approval. Furnish satisfactory materials and work necessary, including engineering analysis and redesign, to mitigate shaft defects at no additional cost to the City. Any modifications to the dimensions of the drilled shafts shown on the Contract Drawings caused by remedial action will require calculations and working drawings stamped by a Registered Professional Engineer licensed to practice in the state of Nevada. Drill a core hole in any shaft of questionable quality (as determined from the CSL test results or by observation of Engineer) to explore the shaft condition. Use a coring method that provides complete core recovery and minimizes abrasion and erosion of the core (i.e., double or triple core barrels). Contractor shall pay for all coring costs.
- E. If inspection equipment cannot pass through the full length of a CSL tube or a tube is determined to be defective and unable to be used for CSL testing purposes, core a 50 mm (2 in.) diameter hole through the concrete for the full length of the shaft (or the length necessary for CSL inspection) at own expense. Locate the core hole at a designated location.
- F. After completion of the CSL testing and acceptance of the shaft foundation, cut off the testing tubes flush with the top of the shaft foundation. Fill CSL testing tubes and core holes with grout consisting of 0.45 maximum water/cement ratio. Provide mixing and pumping equipment that can fill the CSL tubes from the bottom up.

509.03.16 SCHEDULING AND RESTRICTIONS

- A. After the first drilled shaft has been successfully constructed, make no significant change in construction methods, equipment, or materials to be used in the construction of such shafts unless approved. The first bridge foundation drilled shaft shall be approved before proceeding with concrete placement in remaining shafts.
- B. For a period of at least 24 hours after drilled shaft concrete has been placed, do not excavate adjacent shafts, do not place excessive wheel loads, and do not allow vibration to

occur or be felt at any point within 10 feet or 3 times the shaft diameter, whichever is greater, from the periphery of the drilled shaft.

- C. Failure to satisfactorily perform the procedures described above may result in shut down of the construction operation and/or rejection of the drilled shaft. If the integrity of the drilled shaft is in question, employ core drilling, CSL, or other approved methods as directed. Backfill core-drilled holes with grout or mortar. Perform remedial measures as approved or as directed.
- D. No compensation will be made for costs, losses or damages due to remedial work or any testing required on drilled shafts due to not meeting the requirements .
- E. Do not cast pile caps or the footings of pier columns on the drilled shafts until at least 7 days have elapsed, or 80 percent of the compressive strength is obtained.

METHOD OF MEASUREMENT

509.04.01 MEASUREMENT

- A. No separate measurement will be made for drilled shaft foundations, including increased drilled shaft volume due to sloughing, and appurtenant work.

BASIS OF PAYMENT

509.05.01 PAYMENT

- A. No separate payment will be made for drilled shaft foundations including clearing, drilling, casing, dewatering, CSL tubes, reinforcing, and all other incidental and appurtenant work as such; the cost thereof will be considered as included in the price bid for the construction of bridge of which they are a part. Also, no separate payment will be made for increased drilled shaft volume due to sloughing. Compensation for off-site disposal of unsuitable materials shall be in accordance with Subsection 203.05.01, Paragraph B.

Add the following new Section 511 to the Uniform Standard Specifications:

SECTION 511

MISCELLANEOUS METAL

DESCRIPTION

511.01.01 GENERAL

- A. This work shall consist of furnishing, fabricating, and installing miscellaneous metalwork as specified and shown on the Drawings. Miscellaneous metalwork, as used herein, is defined as items required to be fabricated from structural steel shapes, plates, bars, and their products.
- B. This work shall also consist of furnishing and installing pedestrian rail and access hatches as specified and shown on the Drawings.

511.01.02 REFERENCES

- A. This work shall comply with these Special Provisions and the most recent editions of the commercial standards specified as follows:
 - 1. ASTM A36, Specifications for Structural Steel.
 - 2. ASTM A307, Specifications for Carbon Steel Externally and Internally Threaded Standard Fasteners, Grade B.
 - 3. ASTM A675, Specifications for Steel Bars and Bar Size Shapes, Carbon, Hot-Rolled, Special Quality, Subject to Mechanical Requirements.
 - 4. ASTM A123, Specifications for Zinc (Hot-Galvanized) Coatings on Products Fabricated from Rolled, Pressed and Forged Steel Shapes, Plates, Bars and Strip.
 - 5. ASTM A153, Specifications for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
 - 6. American Welding Society (AWS) Code for Arc and Gas Welding in Building Construction; and American Standard for Screw Threads.

511.01.03 SUBMITTALS

- A. Contractor shall submit detailed shop drawings of miscellaneous metalwork to Engineer for review in accordance with Subsection 105.02. Do not commence fabrication prior to approval of shop drawings.

511.01.04 QUALIFICATIONS

- A. Welders shall be qualified in accordance with the Specifications for Standard Qualification Procedure of AWS.

MATERIALS

511.02.01 GENERAL

- A. Miscellaneous metals materials shall conform to Section 712 and as specified herein. Structural steel plates, shapes, bars, and fabricated assemblies shall conform to ASTM A36.
- B. Bolts, anchor bolts, nuts, and similar threaded fasteners shall be provided as follows:

1. Steel for bolts shall be in accordance with ASTM A307, ASTM A675, or portions of ASTM A36 pertaining to threaded parts. Nut material shall be free-cutting steel and nuts shall be capable of developing full strength of anchor bolts.
2. Threads shall be Coarse Thread Series conforming to requirements of American Standard for Screw Threads. Bolts shall have hexagon heads and nuts shall be Heavy Hexagon Series.
3. Threads on galvanized bolts and nuts shall be formed with suitable taps and dies so they retain normal clearance after hot-dip galvanizing. Bolts, anchor bolts, nuts, and washers, except those required to be of stainless steel shall be galvanized after fabrication using "Galvinox," "Galvo-Weld," or approved equal.

511.02.02 ACCESS HATCHES

- A. Access hatches in the bridges shall be furnished and installed as shown on the Drawings. The hatches shall be style "SL" galvanized steel access hatches as manufactured by Syracuse Castings Sales Corporation, Cicero, New York (315) 699-2601, or approved equal meeting the following specifications.
1. Material shall be hot rolled steel for bars, angle, and plate.
 2. Each hatch shall be equipped with a locking arm. The door shall lock open in the 90-degree position. Locking arm shall have a red vinyl grip handle. Locking arm shall be fastened to the frame with a 1/2-inch grade 316 stainless steel bolt.
 3. Hinges shall be of heavy duty design and made of 3/8-inch steel plate. Hinge pin shall be 1/2-inch in diameter, made of grade 316 stainless steel.
 4. Each hatch shall be supplied with a stainless steel slam lock and an exposed padlock clip for Owner's padlock. It is anticipated that to open the hatch, personnel will first remove the padlock and then with the tee handle, release the stainless steel slam lock and lower the door with the tee handle in place. The slam lock shall be fastened with grade 316 stainless steel bolts and washers.
 5. The complete unit shall be galvanized in accordance with Section 715, Galvanizing.

511.02.03 CONCRETE ANCHORAGE DEVICES

- A. Concrete anchorage devices for attaching equipment or fixtures to concrete shall conform to the following:
1. Concrete anchorage devices shall be mechanical expansion or resin capsule types installed in drilled holes or cast-in-place insert types. The anchorage devices shall be complete with threaded studs, hex nuts, and cut washers. Thread dimensions for externally threaded concrete anchorage devices shall conform to ANSI B1.1 having a Class 2A tolerance. Thread dimensions for internally threaded concrete anchorage devices shall conform to ASTM A563.
 2. Mechanical expansion anchors shall be the integral stud type or the shell type with internal threads and an independent stud. Self-drilling mechanical expansion anchors shall not be used.
 3. All metal parts of anchorage devices shall be fabricated from steel, which shall be either corrosion resistant (stainless steel) or be protected with a corrosion resistant coating. The coating shall not have an adverse chemical reaction with concrete.
 4. Mechanical expansion and resin capsule anchors shall, when installed in accordance with manufacturer's instructions and these specifications and tested in accordance with California Test 681, withstand the application of a sustained

tension load of at least the following values for a period of at least 48 hours with a movement not greater than 0.035-inch:

| Stud Diameter (inches) | Sustained Tension Test Load (pounds) |
|------------------------|--------------------------------------|
| 1-1/4 | 31,000 |
| 1 | 17,900 |
| 7/8 | 14,400 |
| 3/4* | 5,000 |
| 5/8 | 4,100 |
| 1/2 | 3,200 |
| 3/8 | 2,100 |
| 1/4 | 1,000 |

*Maximum stud diameter permitted for mechanical expansion anchors.

5. Cast-in-place inserts shall, when installed in accordance with manufacturer's instructions and these specifications, and tested in accordance with California Test 682, withstand the following minimum ultimate tensile loads:

| Stud Diameter (inch) | Ultimate Tensile Load (pounds) |
|----------------------|--------------------------------|
| 1 | 16,000 |
| 7/8 | 11,600 |
| 3/4 | 7,200 |
| 5/8 | 6,600 |
| 1/2 | 4,200 |

6. All concrete anchorage devices shall be subject to the approval of Engineer. Approval of anchorage device types and sizes shall be contingent upon Contractor submitting to Engineer one sample of each type of concrete anchorage device, manufacturer's installation instructions, and certified results of tests, either by a private testing laboratory or the manufacturer, indicating compliance with the above requirements.
- B. Sealing compound, for calking and adhesive sealing, shall be a nonsag polysulfide or polyurethane material conforming to the provisions in Federal Specification TT-S-230, Type II.
- C. Galvanizing of miscellaneous bridge metal will not be required for portions of plates, shapes, or other items embedded more than 2 inches in concrete; embedded steel pipe terminating at or below the surface of encasing concrete; and items shown on the Drawings to receive other finish.

511.02.04 FABRICATION

- A. Galvanizing: Unless otherwise shown, miscellaneous metalwork of fabricated steel shall be galvanized. Structural steel plates, shapes, bars, and fabricated assemblies required to be galvanized, after steel has been thoroughly cleaned of rust and scale shall be galvanized in accordance with ASTM A123. Straighten galvanized parts that become warped during galvanizing operation. Bolts, anchor bolts, nuts, and similar threaded fasteners, after being properly cleaned, shall be galvanized in accordance with ASTM A153.
- B. Welding: Perform welding by shielded arc method and in conformance with AWS Code for Arc and Gas Welding in Building Construction. Electrodes shall conform to requirements of AWS A 5.1 or A 5.5, E70XX electrodes.

- C. Contractor shall verify field measurements prior to fabrications and fabricate components as follows:
1. Fit and shop assemble components in largest practical sizes for delivery to site.
 2. Fabricate components with joints tightly fitted and secured.
 3. Exposed Mechanical Fastenings: Flush countersunk screws or bolts; unobtrusively located; consistent with design of component, except where specifically noted otherwise.
 4. Supply components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise.
 5. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.

CONSTRUCTION

511.03.01 EXAMINATION

- A. Contractor shall verify field conditions are acceptable and are ready to receive work.

511.03.02 PREPARATION

- A. Clean and strip primed steel items to bare metal where site welding is required. Supply items required to be cast into concrete or embedded in masonry with setting templates.

511.03.03 INSTALLATION OF ACCESS HATCHES

- A. Install access hatches as shown on the Drawings and in accordance with manufacturer's recommendations.
- B. Concrete anchorage devices shall be installed in the concrete as shown on the Drawings, as recommended by the manufacturer of the devices, and as specified, so that the attached equipment or fixtures bear firmly against the concrete. Shell type mechanical expansion anchors shall be installed so that the top surface of the anchor body remains 1/2 to 1 inch below the surface of the concrete after expansion. After installation of shell type mechanical expansion anchors, and prior to mounting any equipment or fixture, Contractor shall demonstrate in the presence of Engineer that the expansion anchor is firmly seated within the above tolerances.
- C. If the manufacturer's instructions do not include specific torque requirements, nuts used to attach equipment or fixtures shall be torqued to the following installation torque values in foot-pounds:

| Stud Diameter (inches) | Shell Type Mechanical Expansion Anchors | Integral Stud Type Mechanical Expansion Anchors | Resin Capsule Anchors and Cast-in-Place Inverts |
|------------------------|---|---|---|
| 1-1/4 | -- | -- | 550 |
| 1 | -- | -- | 300 |
| 7/8 | -- | -- | 200 |
| 3/4 | 80 | 175 | 135 |
| 5/8 | 35 | 90 | 80 |
| 1/2 | 22 | 50 | 35 |
| 3/8 | 11 | 25 | 15 |
| 1/4 | 4 | 7 | 5 |

511.03.04 INSTALLATION OF APPURTENANCES

- A. Bolts and anchor bolts shall be furnished and set and metal fabrications including handrail and sidewalk underdrain shall be furnished and constructed as shown on the Drawings and the Standard Drawings.
- B. Concrete anchorage devices shall be installed in the concrete as shown on the Drawings, as recommended by the manufacturer of the components, and as specified, so that the attached metal fabrications bear firmly against the concrete.
- C. Install pedestrian handrail as shown on the Drawings, including welding and galvanizing.

511.03.05 FIELD QUALITY CONTROL

- A. Field repairs to galvanizing shall be made using "Galvinox," "Galvo-Weld," or approved equal.

METHOD OF MEASUREMENT

511.04.01 MEASUREMENT

- A. The quantity of miscellaneous metal shall not be measured for payment directly.
- B. The quantity of pedestrian rail will not be measured for payment directly.
- C. The quantities of access hatches and appurtenances shall not be measured for payment directly.

BASIS OF PAYMENT

511.05.01 PAYMENT

- A. No direct payment will be made for other miscellaneous metals; the cost thereof being considered included in the price bid for the construction and installation of items to which such items are ancillary.
- B. No payment will be made for pedestrian rail as such. The cost thereof shall be considered as included in the price bid for for the construction of the bridge to which the such rails are incidental or appurtenant.
- C. No payment will be made for access hatches and appurtenances as such. the cost thereof shall be considered as included in the price bid for the construction of the bridge to which such hatches and appurtenances are incidental.

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SECTION 601

PIPE CULVERTS – GENERAL

CONSTRUCTION

Add the following subsection:

601.03.08 PIPE LOCATOR MARKER BALLS

- A. Electronic marker system (EMS) balls shall be installed on all storm drain stub outs, laterals, angle points and intervals (200-foot maximum) along the main storm drain trunk line as shown on the Drawings and/or as required by the Engineer.
- B. Marker balls shall be the passive 4-inch 3M General Purpose Locator Ball Model 1408-XR EMS Extended Range (or approved equal).
- C. Marker balls shall be placed by the Contractor in accordance with manufacturer's recommendations and guidelines at a minimum of 3 feet, but not more than 5 feet below the finished ground surface and directly above the installed pipe.

METHOD OF MEASUREMENT

601.04.01 MEASUREMENT

Add the following to this subsection:

- H. Installation of electronic marker system (EMS) balls will not be measured for payment but shall be considered included in other related items.

BASIS OF PAYMENT

601.05.01 PAYMENT

Add the following to this subsection:

- F. No separate payment shall be made for furnishing and installing electronic marker system (EMS) balls. Installation of marker balls shall be considered incidental to other related items of work.

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SECTION 603

REINFORCED CONCRETE PIPE

MATERIAL

603.02.01 GENERAL

Revise Paragraph D to read as follows:

- D. Rubber gaskets are required for all circular pipes and mastic for elliptical. Rubber gaskets and mastic shall conform to Subsection 707.03.06, "Rubber Gaskets."

CONSTRUCTION

603.03.03 LAYING CULVERT PIPE

Add the following to this subsection:

- G. The Contractor shall pothole to determine the exact vertical and horizontal location of all existing utilities indicated on the Drawings, or marked in the field, crossing the proposed pipelines, mains, and laterals. The potholing shall be performed at least 10 days in advance of the construction of the pipeline and no later than 15 working days following the Notice to Proceed date (working day number one).
- H. The Contractor shall provide the Engineer all pothole information obtained including measurements, dimensions, elevations, types, and sizes of utilities within one working day following the potholing. The Engineer will use this information to determine additional utility conflicts that may not be shown on the Drawings. If any utility conflicts exist that are not shown on the Drawings, the Contractor will take the necessary action in accordance with Subsections 105.06, "Cooperation with Utilities," and 105.09, "Construction Interferences."

603.03.04 RUBBER GASKETED JOINTS

Add the following to this subsection:

- G. Grout shall only be used in rubber gasketed joints when the Engineer has determined that the contractor has used all reasonable methods to meet the allowable tolerances of the annular space.

METHOD OF MEASUREMENT

603.04.01 MEASUREMENT

Add the following to this subsection:

- E. The quantities of (Size) RCP Storm Drain (Class) measured for payment will be the number of linear feet of pipe in place, completed, and approved as measured along the centerline of the pipe, from the end, or inside face of structures, whichever is applicable. The various pipe sizes and types shall be measured separately.

BASIS OF PAYMENT

603.05.01 PAYMENT

Delete Paragraph E and add the following to this subsection:

- E. Existing RCP to be removed shall be incidental to installation of the new RCP. RCP culverts shall be neatly saw cut in preparation for jointing to the new construction.
- F. The accepted quantities of (Size) RCP Storm Drain (Class) will be paid for at the Contract unit prices bid per linear foot of the class or D-load and size specified, which shall be full compensation for trench excavation, subgrade preparation, furnishing and placing bedding and backfill material, geotextile fabric, marker balls, aggregate base, CLSM, compaction, furnishing and placing pipe and jointing mortar, elastomeric joints, cut and join connections, pipe penetrations, inlet connections, concrete collars, removing existing plugs, shoring, disposal of excess excavated material, protection and restoration, if damaged, of all existing facilities and improvements required to remain in place, potholing to determine location of existing utilities, related items of work not otherwise provided for, and for all labor, tools, and equipment necessary to complete the work as shown on the Drawings, as specified, and as directed by Engineer.
- G. Payment will be made under:

| <u>Pay Item</u> | <u>Pay Unit</u> |
|-------------------------------------|-----------------|
| 18-inch RCP Storm Drain (Class III) | Linear Foot |
| 24-inch RCP Storm Drain (Class III) | Linear Foot |
| 30-inch RCP Storm Drain (Class III) | Linear Foot |
| 36-inch RCP Storm Drain (Class III) | Linear Foot |

SECTION 609**CATCH BASINS, MANHOLES, AND INLETS****MATERIALS****609.02.01 GENERAL**

Add the following to this subsection:

- F. Precast drop inlets can be used in-lieu of cast-in-place inlets upon approval of the Engineer that such drop inlets are shown to be equivalent or better in structural integrity and inlet capacity.
- G. Grout shall conform to ASTM C476 and shall have a minimum strength of 2,000 psi. Fine grout shall be proportioned by volume of 1 part Portland cement and 2-1/4 to 3 parts sand. Coarse grout shall consist of 1 part Portland cement, 2-1/2 to 3 parts sand, and 1 to 2 parts coarse aggregate.
- H. Laboratory design mixes are acceptable in lieu of the above proportions and are required if the maximum strength is more than 2,000 psi. Grout shall be of a fluid consistency, with proper proportions of sand to gravel, for pouring and pumping.
- I. Precast manhole riser sections and flat top manholes shall meet the requirements of ASTM C478.
- J. All storm drain manhole access covers shall have a minimum diameter of 30 inches.
- K. Sanitary sewer manholes are governed by Section 630.

CONSTRUCTION**609.03.02 ADJUSTING CATCH BASIN, MANHOLE AND INLET COVERS**

Add the following to this subsection:

- D. Concrete collars for manholes shall be constructed in accordance with Standard Drawing No. 408.1.

Add the following subsection:

609.03.05 PRECAST CONCRETE MANHOLE BASES

- A. Precast concrete manhole bases may be used in lieu of cast-in-place concrete manhole bases. Their design and fabrication shall conform to the requirements of these contract provisions and the provisions of ASTM C478 for round base structures and ASTM C913 for rectangle or square box base structures. The precast bases shall conform to the basic dimensions shown on the Contract Drawings. The Contractor shall submit shop drawings prior to construction, showing typical design, reinforcing and structural details, and manufacturer's certifications as required by the Engineer. The horizontal joint at the top of the precast bases shall be compatible with that of the precast wall sections.

- B. All precast bases shall be free from cracks, damaged joints, exposed reinforcing, aggregate pockets, spalls, and dimensional distortions or other irregularities. All units rejected by the Engineer shall be tagged and removed from the job site immediately.
- C. The precast bases shall be manufactured to contain openings in the wall, of minimum size, to receive the ends of storm drains. Such openings shall be accurately set to conform with the line and grade of storm drains. The ends of the pipes shall be accurately positioned in the openings and properly sealed and secured against movement for watertight connections in accordance with the provisions of applicable ASTM Specifications and manufacturer's recommendations. The manhole bases may be precast with pipe stubs for which the compensation shall be included in the bid item(s) of storm drain manhole(s). The pipe stubs shall be a minimum of 2 feet in length or any approved length that allows structural integrity and proper pipe connections, whichever is greater.
- D. Manhole floors shall be made of Type V, Class A, concrete (minimum 3,000 psi) and/or grout, as shown on the Contract Drawings and/or as required by the Engineer, and the work shall be free of any rough corners or sudden changes in direction such that a steady uniform flow with a minimum of wave action will be provided. Changes in direction and grade will consist of the straight line and/or largest curve radius the manhole diameter will permit. The surface of the manhole floors along the flowline shall be smooth as possible.
- E. The precast (or cast-in-place) manhole bases shall be uniformly supported on a compacted (95 percent of maximum density per AASHTO T-180), level Type II aggregate base bedding foundation of minimum 6 inches in depth and minimum 6 inches beyond the perimeter of the manhole bases. The depth of the gravel bedding foundation may increase to a maximum of 12 inches as required by the Engineer. Prior to placement of such bedding or foundation, the Contractor shall scarify and recompact the subgrade a minimum of 6 inches below the bottom of the bedding or foundation to 90 percent of maximum density in accordance with AASHTO T-180. The work specified in this paragraph will not be measured separately for payment but the cost thereof shall be considered as included in the bid item(s) for storm drain manhole(s).
- F. When unstable subgrade is encountered, the Contractor shall immediately notify the Engineer for examination of the subgrade to determine further remedy and/or action. Any additional work required to replace unsuitable materials below the subgrade measured from 12 inches below the bottom of the manhole bases to the depth as determined by the Engineer shall be paid for under the bid item for Construction Conflicts and Additional Work.

METHOD OF MEASUREMENT

609.04.01 MEASUREMENT

Change this subsection to read as follows:

- A. The quantities of NDOT Type 2A Drop Inlet and (Type) Storm Drain Manhole measured for payment will be the number of each, constructed as specified and as shown on the Drawings.
- B. All measurements will be made in accordance with Subsection 109.01, "Measurement of Quantities."

BASIS OF PAYMENT

609.05.01 PAYMENT

Delete Paragraph H and add the following to this subsection:

- H. The accepted quantities of NDOT Type 2A Drop Inlet will be paid for at the Contract unit price bid per each, which shall be full compensation for furnishing and placing all materials including excavation, subgrade preparation, bedding, backfill, geotextile fabric, compaction, shoring, forming, concrete, grout, steel reinforcement, all frames and grate covers, protection bars and plates, all incidental and appurtenance items, and protection and restoration, if damaged, of all existing facilities, and for all labor, tools, equipment, and incidentals necessary to complete the work as shown on the Drawings and as directed by Engineer. Partial payment for drop inlets will not be made. Drop inlets will be measured for payment upon completion. Where shown on the Drawings, connections to existing storm drains shall be included in the Contract unit price bid for each.
 - 1. Payment for drop inlets shall also include compensation for removal of existing curb and gutter and sidewalk where necessary to construct the drop inlet.
 - 2. Payment for drop inlets shall also include compensation for constructing concrete curb and gutter and sidewalk to limits of 3 feet 6 inches on each side of inlet opening or to limits of removal.

- I. The accepted quantities of (Type) Storm Drain Manhole will be paid for at the Contract unit prices bid per each, which shall be full compensation for furnishing and placing all materials including excavation, subgrade preparation, bedding, backfill, geotextile fabric, compaction, shoring, forming, concrete, grout, manhole steps, steel reinforcement, all frames and covers, concrete collars, adjusting covers to final grade, all incidental and appurtenance items, and protection and restoration, if damaged, of all existing facilities, and for all labor, tools, equipment, and incidentals necessary to complete the work as shown on the Drawings and as directed by Engineer. Partial payment for manholes will not be made. Manholes will be measured for payment upon completion.

- J. Structural excavation, reinforcing, structural steel grates, frames, covers, and structure backfill as shown on the Drawings and as required to construct each item in place shall be included in the Contract price bid per each for the construction of the manholes and drop inlets and no further compensation will be provided therefor.

- K. Payment will be made under:

| <u>Pay Item</u> | <u>Pay Unit</u> |
|-------------------------------------|-----------------|
| NDOT Type 2A Drop Inlet | Each |
| 48-inch Type I Storm Drain Manhole | Each |
| 48-inch Type II Storm Drain Manhole | Each |

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SECTION 610

SLOPE AND CHANNEL PROTECTION

MATERIALS

610.02.04 STONES FOR RIPRAP

Add new Subparagraph A.4. to this subsection as follows:

- 4. The nominal stone size for 8-inch riprap shall be as follows:

| RIPRAP GRADATIONS | |
|------------------------------------|--|
| Percent Passing by Mass | Riprap D₅₀=8" (inches) |
| 100 | 14 |
| 70-85 | 12 |
| 35-50 | 8 |
| 5-15 | 4 |
| 0 | 2 |

610.02.08 WIRE MESH GABIONS AND GABION MATTRESSES

Add new Paragraph E to this subsection as follows:

- E. All gabion structures for this project shall include PVC coating of the wire mesh as specified in this subsection.

METHOD OF MEASUREMENT

610.04.01 MEASUREMENT

Delete Paragraphs A and B and substitute the following therefor:

- A. The quantities of Riprap (D₅₀ = 8-inch) and Riprap (D₅₀ = 12-inch) measured for payment will be the number of cubic yards, complete and in place.
- B. The quantity of Upstream Gabion Transition Structure measured for payment will be the number of linear feet, complete and in place.

Add new Paragraphs D and E as follows:

- D. The quantity of Downstream Gabion Transition Structure measured for payment will be the number of linear feet, complete and in place.
- E. The quantity of Gabion Cutoff Wall measured for payment will be the number of cubic yards, complete and in place.

BASIS OF PAYMENT

610.05.01 PAYMENT

Delete Paragraph C and substitute the following therefor:

- C. Payment for Riprap ($D_{50} = 8\text{-inch}$) and Riprap ($D_{50} = 12\text{-inch}$) shall include furnishing and placing stone and all other miscellaneous items appurtenant to the placement of riprap including scarifying, subgrade preparation, Type II aggregate base material, riprap cutoff walls, geotextile fabric, and compaction as specified, as shown on the Drawings, and as required by Engineer. Excavation associated with this item is covered under channel excavation.
- D. The accepted quantity of Upstream Gabion Transition Structure will be paid for at the Contract unit price bid per linear foot, which shall be full compensation for furnishing and placing PVC coated wire mesh gabions, stone, filter fabric, gabion cutoff walls, and all other miscellaneous items that are appurtenant to the construction of the gabion structure. Payment shall also include all scarifying, grading, subgrade preparation, Type II aggregate base, bedding, backfill, and compaction necessary to complete the work as specified, as shown on the Drawings, and as required by Engineer. Excavation associated with this item is covered under channel excavation.
- E. The accepted quantity of Downstream Gabion Transition Structure will be paid for at the Contract unit price bid per linear foot, which shall be full compensation for furnishing and placing PVC coated wire mesh gabions, stone, filter fabric, gabion cutoff walls, and all other miscellaneous items that are appurtenant to the construction of the gabion structures. Payment shall also include all scarifying, grading, subgrade preparation, Type II aggregate base, bedding, backfill, and compaction necessary to complete the work as specified, as shown on the Drawings, and as required by Engineer. Excavation associated with this item is covered under channel excavation.
- F. The accepted quantity of Gabion Cutoff Wall will be paid for at the Contract unit price bid per cubic yard, which shall be full compensation for furnishing and placing wire mesh gabions, stone, filter fabric, and all other miscellaneous items that are appurtenant to the construction of the gabion cutoff wall. Payment shall also include all excavation, scarifying, grading, subgrade preparation, Type II aggregate base, backfill, and compaction necessary to complete the work as specified, as shown on the Drawings, and as required by Engineer.
- G. Payment will be made under:

| <u>Pay Item</u> | <u>Pay Unit</u> |
|--|-----------------|
| Riprap ($D_{50} = 8\text{-inch}$) | Cubic Yard |
| Riprap ($D_{50} = 12\text{-inch}$) | Cubic Yard |
| Upstream Gabion Transition Structure | Linear Foot |
| Downstream Gabion Transition Structure | Linear Foot |
| Gabion Cutoff Wall | Cubic Yard |

SECTION 613**CONCRETE CURB, WALK, GUTTERS, DRIVEWAYS AND ALLEY INTERSECTIONS****MATERIALS**

The following subsection is added:

613.02.02 DETECTABLE WARNING SURFACES**A. Submittals:**

1. Product Data: Submit manufacturer's literature describing products, installation procedures and routine maintenance.
2. Samples for Verification Purposes: Submit 3 samples of detectable panels of each kind proposed for use.
3. Shop drawings are required for products specified showing fabrication details; composite structural system; plans of panel placement including joints, and material to be used as well as outlining installation materials and procedure.
4. Panel pattern shall be designed and shown between existing expansion joints with panel rib dimension used for the cut size of panels.
5. Material Test Reports: Submit test reports from qualified independent testing laboratory indicating that materials proposed for use are in compliance with requirements and meet the properties indicated. All test reports shall be conducted on each type of detectable panel system as certified by a qualified independent testing laboratory.
6. Maintenance Instructions: Submit copies of manufacturer's specified maintenance practices for each type of detectable panel and accessory as required.

B. Cast-in-place Detectable Warning Panels

1. Provide detectable panels and accessories as produced by a single manufacturer.
2. Installer's Qualifications: Engage an experienced Installer certified in writing by detectable manufacturer as qualified for installation, who has successfully completed tile installations similar in material, design, and extent to that indicated for Project. Manufacturer's supervisor shall be present at initial installation.
3. Americans with Disabilities Act (ADA): Provide detectable warning surfaces which comply with the detectable warnings on walking surfaces section of the Americans with Disabilities Act (Title 49 CFR TRANSPORTATION, Part 37.9 STANDARDS FOR ACCESSIBLE TRANSPORTATION FACILITIES, Appendix A, Section 4.29.2 DETECTABLE WARNINGS ON WALKING SURFACES. In addition products must comply with CALIFORNIA TITLE 24 requirements regarding patterns, color and sound on cane contact.
4. Vitrified Polymer Composite (VPC) cast-in-place panels shall be an epoxy polymer composition with an ultra violet coating employing aluminum oxide particles in the truncated domes:
 - a. Water Absorption of Tile when tested by ASTM D570 not to exceed 0.35 percent.

- b. Slip Resistance of Tile when tested by ASTM C1028 the combined wet/dry static coefficient of friction not to be less than 0.80.
 - c. Compressive Strength of tile when tested by ASTM D695 not to be less than 18,000 psi.
 - d. Tensile Strength of Tile when tested by ASTM D638 not to be less than 10,000 psi.
 - e. Flexural Strength of Tile when tested by ASTM C293 not to be less than 24,000 psi.
 - f. Chemical Stain Resistance of Tile when tested by ASTM D543 to withstand without discoloration or staining - 1 percent hydrochloric acid, urine, calcium chloride, stamp pad ink, gum and red aerosol paint.
 - g. Abrasive Wear of Tile when tested by BYK - Gardner Tester ASTM D2486 with reciprocating linear motion of $37 \pm$ cycles per minute over a 10-inch travel. The abrasive medium, a 40 grit Norton Metallite sand paper, to be fixed and leveled to a holder. The combined mass of the sled, weight and wood block to be 3.2 pounds. Average wear depth shall not exceed 0.030 after 1,000 abrasion cycles measured on the top surface of the dome representing the average of three measurement locations per sample.
 - h. Fire Resistance: When tested to ASTM E84 flame spread be less than 25.
 - i. Gardner Impact to geometry "GE" of the standard when tested by ASTM D5420 to have a mean failure energy expressed as a function of specimen thickness of not less than 450 in. lbf/in. A failure is noted if a hairline fracture is visible in the specimen.
 - j. Accelerated Weathering of Tile when tested by ASTM G26 for 2000 hours shall exhibit the following result - no deterioration, fading or chalking of surface of tile.
5. Vitrified Polymer Composite (VPC) cast-in-place panels embedded in concrete shall meet or exceed the following test criteria:
- a. Accelerated Aging and Freeze Thaw Test of Tile when tested to ASTM D1037 shall show no evidence of cracking, delamination, warpage, checking, blistering, color change, loosening of tiles or other defects.
 - b. Salt and Spray Performance of Tile and Adhesive System when tested to ASTM B117 not to show any deterioration or other defects after 100 hours of exposure.

C. Delivery and Storage, and Handling

- 1. Panels shall be suitably packaged or crated to prevent damage in shipment or handling. Finished surfaces shall be protected by sturdy wrappings, and panel type shall be identified by part number.
- 2. Panels shall be delivered to location at building site for storage prior to installation.

D. Site Conditions

- 1. Environmental Conditions and Protection: Maintain minimum temperature of 40 degrees F in spaces to receive detectable panels for at least 48 hours prior to installations, during installation, and for not less than 48 hours after installation.

Store detectable panel material in spaces where they will be installed for at least 48 hours before beginning installation. Subsequently, maintain minimum temperature of 40 degrees F in areas where work is completed.

2. The use of water for work, cleaning or dust control, etc. shall be contained and controlled and shall not be allowed to come into contact with the passengers or public. Provide barricades or screens to protect passengers or public.
3. Disposal of any liquids or other materials of possible contamination shall be made in accordance with federal state and local laws and ordinances.
4. Cleaning materials shall have code acceptable low VOC solvent content and low flammability if used on the site.
5. Contractor shall coordinate phasing and flagging personnel operations as specified elsewhere.

E. Guarantee

1. Cast-in-place detectable panels shall be guaranteed in writing for a period of 5 years from the date of final acceptance of the project.
2. The guarantee shall include defective work, breakage, deformation, fading and chalking of finishes, and loosening of panels.

F. Product Manufacturers

1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to, the following:
 - a. The Vitrified Polymer Composite (VPC) Cast-In-Place Detectable Panel specified is based on Armor-Tile manufactured by Engineered Plastics Inc. (800-682-2525).
 - b. Existing engineered and field tested products which are subject to compliance with requirements, may be incorporated in the work and shall meet or exceed the specified test criteria and characteristics.
2. Color: Yellow conforming to Federal Color No. 33538. Color shall be homogeneous throughout the tile.

CONSTRUCTION

Add the following subsections:

613.03.19 INSTALLATION OF CAST-IN-PLACE DETECTABLE WARNING PANELS

- A. During all concrete pouring and tile installation procedures, ensure adequate safety guidelines are in place and that they are in accordance with the applicable industry and government standards.
- B. The specifications of the concrete sealants and related materials shall be in strict accordance with the contract documents and the guidelines set by their respective manufacturers.

- C. The physical characteristics of the concrete shall be consistent with the contract specifications while maintaining a slump range of 4 - 7 to permit solid placement of the Cast-In-Place Tile System. An overly wet mix will cause the Cast-In-Place System to float, therefore under all conditions suitable weights such as concrete blocks or sandbags (25-pound) shall be placed on each 2-foot by 2-foot tile module.
- D. Prior to placement of the Cast-In-Place System, the manufacturer's shop drawings shall be reviewed and a layout drawing prepared by the installation contractor to resolve the issues related to pattern repeat, tile cuts, expansion joints, control joints, curves, end returns, and surface interferences.
- E. The concrete pouring and finishing operations require typical mason's tools, however, a mason's line, radius edge (1/8-inch by 3/16-inch return) tool, 4 feet long by 2 inches wide by 1/8-inch thick steel straight edge, 25-pound weights, vibrator wand and small sledge hammer with 2-inch by 6-inch by 20-inch wood tamping plate are specific to the installation of the Cast-In Place System.
- F. The concrete shall be poured and finished level, true and smooth to the required dimensions prior to tile placement. Immediately after pouring concrete, a mason's line should be strung parallel to track to act as a reference line for placement of tile, then the tile assembly shall be placed true to the platform edge and to each other on the concrete. The Cast-In-Place tiles shall be tamped or vibrated into the fresh concrete to ensure that the field level of tile is flush to the adjacent concrete or edge surface. The shop drawings indicate that the tile field level (base of truncated dome) is flush to adjacent surfaces to permit proper water drainage and eliminate tripping hazards between adjacent finishes. The tolerance for elevation differences between tile and adjacent surface is 1/16-inch.
- G. Immediately after tile placement, the tile elevation is to be checked to adjacent concrete heights with a steel straight edge. The tile elevation should be set consistent with shop drawings to permit water drainage to or away as the design dictates.
- H. While concrete is workable a steel edging trowel 1/8-inch radius by 3/16-inch return is to be used to edge the tile to adjacent concrete surfaces running parallel to track. While edging, ensure that a clean edge definition is created between tile and adjacent concrete and that tile to concrete elevations meet the shop drawing tolerances.
- I. The placement of Cast-In-Place Tile assemblies to each other and to the mason's line or form edge shall be true and parallel to develop a true line consistent with the platform edge. A tight tile-to-tile placement can best be achieved by raking out the concrete at the butting edge to avoid trapping concrete or aggregate between tiles and/or form edge.
- J. During and after the tile installation and the concrete curing stage, it is imperative that there is no walking, leaning or external forces placed on the tile to rock the tile, causing a void between the underside of tile and concrete.
- K. Following tile placement, review installation tolerances to shop drawings and adjust tile before the concrete sets, suitable weights of 25 pounds shall be placed on each tile and additional weights at tile to tile assemblies as necessary to ensure solid contact of tile underside to concrete.
- L. Following the curing of the concrete, the protective plastic wrap is to be removed from the tile face by cutting the plastic with a sharp knife tight to the concrete/tile interface. If

concrete bleeding occurs between tiles, a wire brush will clean the residue without damage to the tile surface.

- M. An elastomeric urethane sealant shall be applied to the tile edges running parallel to the track or curb. Proper surface preparation requires that the tile and adjacent surfaces be mechanically etched with sandpaper or a carbide burr and wiped clean and dry with acetone. Applications of the urethane sealant shall be level to the adjacent surface and a straight line formed to the tile edge. A quality installation of the sealant may require that the tile face be masked off with duct tape to ensure a clean definition of sealant to the adjacent surfaces.

613.03.20 CLEANING AND PROTECTING DETECTABLE WARNING PANELS

- A. Protect panels against damage during construction period to comply with detectable panel manufacturer’s specification.
- B. Protect panels against damage from rolling loads following installation by covering with plywood or hardwood.
- C. Clean detectable panels not more than four days prior to date scheduled for inspection intended to establish date of substantial completion in each area of project. Clean detectable panel by method specified by detectable panel manufacturer.

METHOD OF MEASUREMENT

613.04.01 MEASUREMENT

Add the following to this subsection:

- F. The quantity of Sidewalk Ramp will be measured for payment by each, in place and complete.

BASIS OF PAYMENT

613.05.01 PAYMENT

Delete Paragraph F and replace with the following:

- F. The accepted quantity of Sidewalk Ramp will be paid for at the Contract unit price bid per each, which shall be full compensation for furnishing and placing concrete, excavation, base preparation, Type II aggregate base, bedding, backfill, forming, incidentals, and all labor, tools, materials, and equipment to complete the Work as shown on the Drawings, as specified, and as directed by Engineer. Compensation for all work required for the construction of sidewalk ramps including tactile warning panels will be included in the contract unit price paid for this item.
- G. Payment will be made under:

| <u>Pay Item</u> | <u>Pay Unit</u> |
|-----------------|-----------------|
| Sidewalk Ramp | Each |

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SECTION 616

FENCING

DESCRIPTION

616.01.01 GENERAL

Add the following to this subsection:

- D. This work shall also consist of constructing post and cable railing and removing and resetting existing metal corral fence as shown on the Drawings.

CONSTRUCTION

616.03.05 GATES

Add the following to this subsection:

- G. Swing gates shall be constructed as shown in the Drawings and in accordance with the Standard Drawings and Standard Specifications.
- H. Each gate shall be provided with a Master Lock Model Number 175D "set your own combination" lock or approved equal.

Add the following new subsection:

616.03.06 POST AND CABLE RAILING

- A. Post and cable railing construction shall be as shown on the Drawings and as specified. Posts shall be firmly set and spaced as indicated on the Drawings. Each end post shall be firmly braced and shall be set in concrete when required. Posts shall be braced as indicated in the Drawings. All intervals shall be measured center to center of adjacent posts.

METHOD OF MEASUREMENT

616.04.01 MEASUREMENT

Delete Paragraphs A through D and substitute the following therefor:

- A. The quantities of 48-inch Post and Cable Railing and 6-foot Chain-Link Fence will be measured for payment by linear foot for height specified, complete and in place.
- B. The quantities of 12-foot Chain-Link Double-Swing Gate and 20-foot Chain-Link Double-Swing Gate will be measured for payment by each for width specified, complete and in place.
- C. The quantity of Remove and Reset Fence will be measured for payment by linear foot, complete and in place.

BASIS OF PAYMENT

616.05.01 PAYMENT

Delete Paragraph E and substitute the following therefor:

- E. The accepted quantity of 48-inch Post and Cable Railing will be paid for at the Contract unit price bid per linear foot, which shall be full compensation for furnishing and installing posts, post tops, corner brace, 1/4 inch chain, cable, clamps, turn buckles, threaded eye bars, bolts, nuts, washers, carabiner or snap hook, nonshrink grout, mountings, fiber core rope, pipe sleeves, pole mounts, mounting plate, reinforcement steel, hardware, and all incidentals and appurtenances as specified, as shown on the Drawings, and as directed by Engineer.
- F. The accepted quantity of 6-foot Chain-Link Fence will be paid for at the Contract unit price bid per linear foot, which shall be full compensation for furnishing galvanized posts and fence fabric, hardware, pole mounts, cement, excavation, concrete foundations, concrete, framing, erecting, connecting fence, and all incidentals and appurtenances necessary to complete the work as specified, as shown on Drawings, and as directed by Engineer. Payment shall also include excavation necessary for installation of posts.
- G. The accepted quantities 12-Foot Chain-Link Double-Swing Gate and 20-Foot Chain-Link Double-Swing Gate will be paid for at the Contract unit prices bid per each, which shall be full compensation for furnishing gates, posts, hardware, locks, signs, excavation, concrete foundations, grading, dual locks along shared access, and all incidentals and appurtenances necessary to install the gates in accordance with the manufacturer's recommendations, as specified, as shown on Drawings, and as directed by Engineer. Payment shall also include excavation necessary for installation of gate posts.
- H. The accepted quantity of Remove and Reset Fence will be paid for at the Contract unit price bid per linear foot, which shall be full compensation for removing existing metal corral fence and foundations and for resetting the fence including furnishing hardware, excavation, concrete foundations, cement, erecting, connecting fence, and all incidentals and appurtenances and for all labor, tools and equipment necessary to complete the work as specified, as shown on Drawings, and as directed by Engineer.

I. Payment will be made under:

| <u>Pay Item</u> | <u>Pay Unit</u> |
|--------------------------------------|-----------------|
| 48-inch Post and Cable Railing | Linear Foot |
| 6-foot Chain-Link Fence | Linear Foot |
| 12-foot Chain-Link Double-Swing Gate | Each |
| 20-foot Chain-Link Double-Swing Gate | Each |
| Remove and Reset Fence | Linear Foot |

SECTION 617

CATTLE GUARDS

BASIS OF PAYMENT

617.05.01 PAYMENT

Add the following new Subparagraph 3 to Paragraph A of this subsection:

3. Payment for the cattle guards shall also be full compensation for excavation, backfilling, recompacting, shoring, subgrade preparation, forming, framing, fasteners, bearing pads, painting, welding, 4-inch PVC drain pipe, which shall be considered incidental and appurtenant to the cattle guard installation, and all materials, labor, and incidental and appurtenant work as shown on the Drawings, as specified, and as directed by the Engineer. Payment shall also include CLSM encasement, plantmix bituminous surface, and Type II aggregate base.

Delete the pay items listed under this subsection and substitute the following therefor:

| <u>Pay Item</u> | <u>Pay Unit</u> |
|--------------------------------|-----------------|
| 22-foot Precast Cattle Guard | Each |
| 28.5-foot Precast Cattle Guard | Each |

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SECTION 618

GUARDRAIL

DESCRIPTION

618.01.01 GENERAL

Change this subsection to read as follows:

- A. This work shall consist of furnishing and erecting new guardrail, end anchor assemblies, guardrail expansion joints, breakaway cable terminals, end terminals, and additional guardrail beam elements required for constructing double beam or triple beam rail, or reconstruction of guardrail previously removed, in conformity with these specifications and of the types and at the points shown on the plans or ordered by the Engineer.
- B. This item shall also consist of furnishing and installing reflector plates as shown on the Drawings.
- C. At Contractor's option, guardrail, guardrail terminals, guardrail-barrier rail connections, and hardware that were removed and salvaged as specified in Section 202, may be reused on the project where new guardrail, guardrail terminals, and guardrail-barrier rail connections are to be installed. The reused guardrail, guardrail terminals, and guardrail-barrier rail connections shall meet current safety standards and be approved by Engineer prior to installation. Guardrail posts shall not be reused.

CONSTRUCTION

618.03.01 GENERAL

Add the following to this subsection:

- M. Guardrail and end treatments shall be constructed in accordance with applicable details of the *Standard Plans for Road and Bridge Construction*, Nevada Department of Transportation, most recent edition.

Add the following subsection:

618.03.04 GALVANIZED GUARDRAIL

- A. All guardrail beam elements and end sections shall be hot-dip galvanized in accordance with the provisions in Section 715. Galvanizing shall be performed after fabrication. Fabrication shall include all operations such as shearing, cutting, punching, forming, drilling, milling, and bending.
- B. Galvanized surfaces that are abraded or damaged at any time after application of the zinc coating shall be repaired by thoroughly wire brushing the damaged areas and removing all loose and cracked coating, after which the cleaned areas shall be painted with 2 coats of paint with a high zinc content conforming to the requirements of Federal Specification MIL-P-21035.
- C. All exposed surfaces of the metal guardrail that have become soiled shall be cleaned, at the expense of the Contractor, as required by the Engineer. Galvanized guardrail shall not be painted.

MEASUREMENT

618.04.01 MEASUREMENT

Add the following to this subsection:

- H. The quantity of Galvanized Guardrail (Triple Corrugation) will be measured for payment by linear foot, in place and complete.
- I. The quantities of Guardrail Terminal (Flared) and Guardrail Terminal (Trailing End Anchor) will be measured for payment by each, in place and complete.
- J. The quantity of Guardrail - Barrier Rail Connection (Triple Corrugation) will be measured for payment by each, in place and complete.

BASIS OF PAYMENT

618.05.01 PAYMENT

Change this subsection to read as follows:

- A. The accepted quantity of Galvanized Guardrail (Triple Corrugation) will be paid for at the Contract price bid per linear foot, which shall be full compensation for furnishing hardware, reflectors, concrete footings, controlled release terminal (CRT), and timber posts; digging, backfilling, and compacting post holes; erecting, galvanizing, wood preserving, and all incidentals and appurtenances; and all labor, tools, and equipment necessary to complete the work as shown on the Drawings, as specified, and as directed by the Engineer.
- B. The accepted quantities of Guardrail Terminal (Flared) and Guardrail Terminal (Trailing End Anchor) will be paid for at the Contract unit prices bid per each, which shall be full compensation for guardrail, posts, foundation, cable, cable terminal, fittings, anchor plates, miscellaneous hardware, permanent signs, and all incidentals and appurtenances and for doing all work necessary for the installation as specified, as shown on the Drawings, and as directed by the Engineer.
- C. The accepted quantity of Guardrail - Barrier Rail Connection (Triple Corrugation) will be paid for at the Contract price bid per each, which shall be full compensation for the cable, fittings, anchor plates, miscellaneous hardware, and all incidentals and appurtenances and for doing all work necessary for the installation as specified, as shown on the Drawings, and as directed by the Engineer.
- D. All payment will be made in accordance with Subsection 109.02, "Scope of Payment."
- E. Payment will be made under:

| <u>Pay Item</u> | <u>Pay Unit</u> |
|--|-----------------|
| Galvanized Guardrail (Triple Corrugation) | Linear Foot |
| Guardrail Terminal (Flared) | Each |
| Guardrail Terminal (Trailing End Anchor) | Each |
| Guardrail-Barrier Rail Connection (Triple Corrugation) | Each |

SECTION 619

OBJECT MARKERS AND GUIDE POSTS

DESCRIPTION

619.01.01 GENERAL

Add the following to this subsection:

- B. This work shall also consist of furnishing and installing marker posts at locations shown on the Drawings or as directed by Engineer.

MATERIALS

Add the following new subsection:

619.02.02 MARKER POSTS

- A. Provide Bullnose Marker with base plate as supplied by Qwick Kurb, Inc., 1916 US 41 South, Ruskin, Florida 33570, (813) 645-5072.
- B. Bullnose marker shall be 42-inch height from finished grade and have double sided 8-inch by 29-inch retroreflective sheeting. The sheeting shall be in accordance with Subsection 716.03.01, Paragraph F. Color of the sheeting shall be white or yellow, as specified on the Drawings.

CONSTRUCTION

619.03.01 GENERAL

Add the following to this subsection:

- C. Install median marker posts as shown on the Drawings and in accordance with the manufacturer's recommendations.

METHOD OF MEASUREMENT

619.04.01 MEASUREMENT

Add the following to this subsection:

- C. The quantity of Median Marker Post will be measured for payment by each, in place and accepted.

BASIS OF PAYMENT

619.05.01 PAYMENT

Delete Paragraph D and substitute the following therefor:

D. The accepted quantity of Median Marker Post will be paid for at the Contract unit price bid for each, which shall include base plates, markers, retroreflective sheeting, anchor assemblies, and adhesive and all labor, tools, equipment, and materials required to install the marker posts, in place and complete as specified, as shown on the Drawings, and as required by Engineer.

E. Payment will be made under:

| <u>Pay Item</u> | <u>Pay Unit</u> |
|--------------------|-----------------|
| Median Marker Post | Each |

SECTION 623

TRAFFIC SIGNALS AND STREET LIGHTING

DESCRIPTION

623G.01.05 GLOBAL POSITIONING SYSTEM (GPS) COORDINATES

Replace this subsection with the following:

- A. Information related to traffic assets shall be the responsibility of the Contractor and Clark County will not be responsible for furnishing any information.
- B. 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.
- C. Traffic asset information shall also be provided for all pull boxes that are buried underground as shown on the Drawings.
- D. 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.
- E. 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.
 - 1. 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 Drawings.
 - 2. The horizontal precision of the coordinates shall be recorded with a device that has an accuracy tolerance within 3 feet of the actual location of the object.

MATERIALS

623G.02.01 CONDUIT

Add the following to this subsection:

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

623G.02.02 PULL BOXES

Replace the first sentence of Paragraph B with the following:

- B. Nonconductive 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.

623 G.02.03 EXPANSION FITTINGS

Replace this subsection with the following:

- A. Expansion fittings shall be installed where the conduit crosses an expansion joint in the structure.
- B. Each rigid conduit expansion fitting shall be provided with a bonding jumper of 7 strand, No. 4 AWG copper wire.
- C. Expansion fittings shall be used where they exit a structure or bridge abutment.
- D. Expansion connectors shall be approved prior to installation by the Maintaining Agency.

623G.02.04 CONDUCTORS AND CABLE

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

- a. 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.

623G.02.07 ELECTRICAL SERVICE PEDESTALS

Replace Subparagraph J.1 with the following:

- 1. 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:

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

CONSTRUCTION**623G.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.

Add the following paragraph to this subsection:

- V. Spacers shall be used with concrete encasement and shall be spaced at 4-foot to 10-foot intervals.
 - 1. Spacers shall be of type recommended by conduit manufacturer.
 - 2. Minimum spacing of 1-1/2-inch between conduits is required.
 - 3. Spacer intervals shall be 6 feet to 8 feet for 3-inch conduits and 8 feet to 10 feet for 4-inch to 6-inch conduits.
 - 4. Extra intermediate spacers: Due to some distortion of conduits from heat, and/or other means, it may be necessary to install extra intermediate spacers with the duct bank. These extra spacers shall be installed within the normal required spacing to maintain proper horizontal clearance.

623G.03.09 ELECTRICAL SERVICE

Replace Paragraph E in this subsection with the following:

- E. 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:

- G. Contractor shall coordinate with Overton Power District for all inspections of their underground facilities and service equipment to the satisfaction of Overton Power District and the Engineer.

623G.03.10 PULL BOXES

Add the following to this subsection:

- E. Pull boxes installed as part of a street lighting system shall be installed such that the pull boxes are in a buried condition upon completion.
 - 1. Minimum cover on top of pull box shall be 6 inches below finish grade.
 - a. Contractor shall place a County-supplied locator ball inside each buried pull box.
 - b. Contractor shall provide global positioning system (GPS) coordinates in accordance with Subsection 623G.01.05, above.

Add the following subsection:

623G 03.13 CONDUIT VERIFICATION AND CONDUIT BLOCKAGE

- A. At locations where existing conduit is to be utilized, Contractor shall verify condition of the conduit.
- B. 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.

- C. 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.

STREET LIGHTING SECTION

DESCRIPTION

623L.01.01 GENERAL

Replace Paragraph G with the following:

- G. Refer to Subsection 623G.01.05, Global Positioning System (GPS) Coordinates, of these Special Provisions for requirements for the collection of field data including State Plane and Geodetic coordinates.

MATERIALS

623L.02.01 STREET LIGHT POLES AND ARMS

Replace Subparagraph O.1 with the following:

1. The handhole shall be 4-inch by 6-inch O.D. reinforced frame with slip-resistant indented type cover located 12 inches above the base plate. The edges of the handhole at the base of the street light pole shall be continuously, permanently welded shut by bead welding, after project walk-through and prior to final acceptance of the project. Welded surfaces shall be galvanized by hot-stick galvanizing in accordance with Subsection 623T.03.01. Welding shall be done by American Welding Society (AWS) certified welders.

Add the following Paragraph R to this subsection:

- R. Finish. Pole assemblies, base covers, and luminaire brackets shall be hot-dipped galvanized in conformance with ASTM A123. Pole assemblies shall not be painted. Galvanized materials that have a striped appearance may be rejected by the Engineer.

623L.02.03 STREET LIGHTING LUMINAIRES

Replace the first sentence of Paragraph A with the following:

The standard luminaire, except at signalized street intersections, shall be of the high pressure sodium type, horizontal burning cobra head style, and in wattages specified in the Contract Documents.

Add Subparagraph A.6 as follows:

6. The luminaire shall be equipped with a 360-degree external light shield.

Replace Subparagraph C.2 with the following:

2. The optical assembly shall consist of an aluminum reflector and flat glass refractor.

Replace Subparagraph E.2 with the following:

2. The ballast shall be voltage specific to the lighting application and shall be capable of starting and operating the lamp type indicated in the Drawings and specified herein from a nominal 120/240 volt, 60 HZ power source within the limits specified by the lamp manufacturer.

Replace Paragraph H with the following:

- H. Full cutoff luminaires shall be provided.

Replace Subparagraph H.1 with the following:

1. Luminaires shall provide true 90-degree light cutoff.

Replace Subparagraph H.3 with the following:

3. The light distribution shall be IES Type II.

Delete Subparagraph H.4.

623L.02.04 FUSEHOLDERS AND FUSES

Replace Paragraph F with the following:

- F. Fuse holders shall be rated for 600 volts.
1. Single fuse holders shall be Littlefuse, 600 volt, Series LEB fuse holders, with WPB1 rubber boots and Littlefuse BLF10, fast-acting Midget, 250 volt, L4J12F fuse or approved equal.
 2. Double pole fuseholders shall be Littlefuse double fuse holder, Series LEX rated for 600 volts with Littlefuse rubber boot WPB1 and Littlefuse BLF10, Fast-Acting, Midget 250 volt L4J12F fuse or approved equal for 240 volt multiple street lighting systems.
 3. Glass, paper or indicating type fuses are not acceptable.

623L.02.05 STREET LIGHTING SYSTEMS

Delete Paragraphs C and D.

CONSTRUCTION

623L.03.03 ELECTRICAL TESTING

Replace Subparagraph A.3 with the following:

3. A megohm test shall be conducted on all single conductors, 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**

Change this subsection to read as follows:

- A. Verification of existing conduits and removal of conduit blockages shall not be measured for payment directly. The cost thereof shall be considered as included in the price bid for the construction of the street light to which such items are incidental or appurtenant.
- B. The quantities of 100-Watt Street Light Assembly and 100-Watt Street Light Assembly (Bridge Mount) will be measured for payment by each, constructed in place, complete, operational.
- C. The quantity of 2-inch PVC Conduit Only with 1 No. 8 Tracer Wire measured for payment will be the number of linear feet installed, in place, complete.
- D. The quantity of Power Pole Riser System (Four 3-Inch Conduits) measured for payment will be the number of each constructed and installed in place, complete and operational.
- E. The quantity of Transformer Pad (Jensen UPAD 77 Or Equal) measured for payment will be the number of each, constructed and installed in place, complete and operational.
- F. The quantity of Jensen 466 TA Or Equal Pull Box measured for payment will be the number of each, constructed and installed in place, complete and operational.
- G. The quantity of No. 3-1/2 Pull Box (Buried), buried 6 inches below grade, measured for payment will be the number of each installed, in place, complete.
- H. The quantity of No. 5 Pull Box measured for payment will be the number of each installed, in place, complete.
- I. The quantity of 2-inch PVC Conduit, 2 No. 4 and 1 No. 8 THW-2 Conductors (Street Light) measured for payment will be the number of linear feet installed, in place, complete.
- J. The quantity of Jensen 3048 NP Or Equal Pull Box measured for payment will be the number of each, constructed and installed in place, complete and operational.
- K. The quantity of 200 AMP Service Pedestal measured for payment will be the number of each, constructed and installed in place, complete and operational.
- L. The quantities of 3-inch PVC Conduit Only with Pullstring (Concrete Encased), Six 3-inch PVC Conduit Only with Pullstring (Concrete Encased), Seven 3-inch PVC Conduit Only with Pullstring (Concrete Encased), and Four 3-inch PVC Conduit Only with Pullstring (Concrete Encased) measured for payment will be the number of linear feet installed, in place and complete.
- M. The quantity of 3-inch PVC Conduit with 4/C#350 THW-2 (Pump Control Pedestal) measured for payment will be the number of linear feet installed, in place, complete.
- N. The quantity of 2-inch PVC Conduit 3 No. 4/0 THW-2 (Street Light Pedestal) measured for payment will be the number of linear feet installed, in place, complete.

- O. The quantity of Type II Base Foundation for Transformer Pad measured for payment will be the number of each constructed, in place, complete.
- P. The quantity of 2-inch PVC Conduit, 2 No. 4 and 1 No. 8 Conductors, 2-inch PVC Conduit Only with 1 No. 8 Tracer Wire (Street Light) measured for payment will be the number of linear feet installed, in place, complete.
- Q. All measurements will be made in accordance with Subsection 109.01, "Measurement of Quantities."

BASIS OF PAYMENT

623.05.01 PAYMENT

Change this subsection to read as follows:

- A. The accepted quantities of 100-Watt Street Light Assembly and 100-Watt Street Light Assembly (Bridge Mount) will be paid for at the Contract unit price bid per each, which shall be full compensation for furnishing and installing all materials including, but not limited to, trenching, conduit and wire, fuses and fuse holders, conductors, fittings, excavation, compacted backfill, concrete foundations, connections to existing conduit and circuits, bead welding the handhole shut, making all required tests and for all labor, tools, equipment and incidentals required to make street lights operational as shown on the Drawings, as specified, and as required by the Engineer. The replacement of existing sidewalk and/or curb and gutter where it is removed for the construction of street lights and appurtenances will not be measured for payment; the cost for such work shall be considered incidental to the price bid for the street lights.
- B. The accepted quantity of 2-inch PVC Conduit Only with 1 No. 8 Tracer Wire will be paid for at the Contract unit price bid per linear foot, which shall be full compensation for furnishing and installing all materials including trenching, installation, backfill, location markers, detection wire, fittings, bends, pull string, stubs and caps, restoring improvements designated to remain in place including pavement replacement, and for providing all labor, tools, equipment, and incidentals required to complete the work as shown on the Drawings, as specified, and as directed by Engineer.
- C. The accepted quantity of Power Pole Riser System (Four 3-Inch Conduits) will be paid for at the Contract unit prices bid per each, which shall be full compensation for furnishing and installing all materials including excavation, installation, and backfill, and for providing all labor, tools, equipment, and incidentals required to complete the work as shown on the Drawings, as specified, and as directed by Engineer.
- D. The accepted quantity of Transformer Pad (Jensen UPAD 77 Or Equal) will be paid for at the Contract unit price bid per each, which shall be full compensation for furnishing and installing all materials including subbase material, hardware, and for providing all labor, tools, equipment, and incidentals required to make the transformer pad operational as shown on the Drawings, as specified, and as directed by Engineer.
- E. The accepted quantity of No. 3-1/2 Pull Box (Buried), buried 6 inches below grade, will be paid for at the Contract unit price bid per each, which shall be full compensation for furnishing and installing all materials including excavation, installation, backfill, burying the pull boxes, placing County-supplied locator ball inside pull boxes, providing GPS

coordinates for the pull boxes, and for providing all labor, tools, equipment, and incidentals required to complete the work as shown on the Drawings, as specified, and as directed by Engineer. All lighting pull boxes within roadway right-of-way and outside of sidewalk areas shall be traffic rated pull boxes and lids.

- F. The accepted quantities of Jensen 466 TA Or Equal Pull Box, No. 5 Pull Box, and Jensen 3048 NP Or Equal Pull Box will be paid for at the Contract unit prices bid per each, which shall be full compensation for furnishing and installing all materials including excavation, installation, and backfill, providing GPS coordinates for the pull boxes, and for providing all labor, tools, equipment, and incidentals required to complete the work as shown on the Drawings, as specified, and as directed by Engineer. All lighting pull boxes within roadway right-of-way and outside of sidewalk areas shall be traffic rated pull boxes and lids.
- G. The accepted quantity of 2-inch PVC Conduit, 2 No. 4 and 1 No. 8 THW-2 Conductors (Street Light) will be paid for at the Contract unit price bid per linear foot, which shall be full compensation for furnishing and installing all materials including conduit, conductors, terminations, connections, restoring improvements designated to remain in place, and for providing all labor, tools, equipment, and incidentals required to complete the work as shown on the Drawings, as specified, and as directed by Engineer.
- H. The accepted quantity of 200 AMP Service Pedestal will be paid for at the Contract unit price bid per each, which shall be full compensation for furnishing and installing all materials including concrete foundations, contactors, circuit breakers, meters, hardware, making all required tests, and for providing all labor, tools, equipment, and incidentals required to make the service pedestals operational as shown on the Drawings, as specified, and as directed by Engineer.
- I. The accepted quantities of 3-inch PVC Conduit Only with Pullstring (Concrete Encased), Six 3-inch PVC Conduit Only with Pullstring (Concrete Encased), Four 3-inch PVC Conduit Only with Pullstring (Concrete Encased), and Seven 3-inch PVC Conduit Only with Pullstring (Concrete Encased) will be paid for at the Contract unit prices bid per linear foot, which shall be full compensation for furnishing and installing all materials including trenching, installation, backfill, location markers, detection wire, concrete encasement, fittings, bends, pull string, stubs and caps, restoring improvements designated to remain in place including pavement replacement, and for providing all labor, tools, equipment, and incidentals required to complete the work as shown on the Drawings, as specified, and as directed by Engineer.
- J. The accepted quantity of 3-inch PVC Conduit with 4/C#350 THW-2 (Pump Control Pedestal) will be paid for at the Contract unit prices bid per linear foot, which shall be full compensation for furnishing and installing all materials including trenching, installation, backfill, location markers, detection wire, fittings, bends, pull string, stubs and caps, restoring improvements designated to remain in place including pavement replacement, and for providing all labor, tools, equipment, and incidentals required to complete the work as shown on the Drawings, as specified, and as directed by Engineer.
- K. The accepted quantity of 2-inch PVC Conduit 3 No. 4/0 THW-2 (Street Light Pedestal) will be paid for at the Contract unit prices bid per linear foot, which shall be full compensation for furnishing and installing all materials including trenching, installation, backfill, location markers, detection wire, fittings, bends, pull string, stubs and caps, restoring improvements designated to remain in place including pavement replacement, and for

providing all labor, tools, equipment, and incidentals required to complete the work as shown on the Drawings, as specified, and as directed by Engineer.

- L. The accepted quantity of Type II Base Foundation for Transformer Pad will be paid for at the Contract unit price bid per each, which shall be full compensation for furnishing and installing all materials including excavation and compaction and for providing all labor, tools, equipment, and incidentals required placement of the transformer pad by Overton Power District as shown on the Drawings, as specified, and as directed by Engineer.
- M. The accepted quantity of 2-inch PVC Conduit, 2 No. 4 and 1 No. 8 Conductors, 2-inch PVC Conduit Only with 1 No. 8 Tracer Wire (Street Light) will be paid for at the Contract unit price bid per linear foot, which shall be full compensation for furnishing and installing all materials including trenching, installation, backfill, location markers, detection wire, fittings, bends, pull string, stubs and caps, conduit, conductors, terminations, connections, restoring improvements designated to remain in place including pavement replacement, and for providing all labor, tools, equipment, and incidentals required to complete the work as shown on the Drawings, as specified, and as directed by Engineer.
- N. All payments will be made in accordance with Subsection 109.02, "Scope of Payment."
- O. Payment will be made under:

| <u>Pay Item</u> | <u>Pay Unit</u> |
|---|-----------------|
| 100-Watt Street Light Assembly | Each |
| 100-Watt Street Light Assembly (Bridge Mount) | Each |
| 2-inch PVC Conduit Only with 1 No. 8 Tracer Wire | Linear Foot |
| Power Pole Riser System (Four 3-Inch Conduits) | Each |
| Transformer Pad (Jensen UPAD 77 Or Equal) | Each |
| Jensen 466 TA Or Equal Pull Box | Each |
| No. 3-1/2 Pull Box (Buried) | Each |
| No. 5 Pull Box | Each |
| 2-inch PVC Conduit, 2 No. 4 and 1 No. 8 THW-2 Conductors (Street Light) | Linear Foot |
| Jensen 3048 NP Or Equal Pull Box | Each |
| 200 AMP Service Pedestal | Each |
| 3-inch PVC Conduit Only with Pullstring (Concrete Encased) | Linear Foot |
| Six 3-inch PVC Conduit Only with Pullstring (Concrete Encased) | Linear Foot |
| 3-inch PVC Conduit with 4/C# 350 THW-2 (Pump Control Pedestal) | Linear Foot |
| Four 3-inch PVC Conduit Only with Pullstring (Concrete Encased) | Linear Foot |
| Seven 3-inch PVC Conduit Only with Pullstring (Concrete Encased) | Linear Foot |
| 2-inch PVC Conduit 3 No. 4/0 THW-2 (Street Light Pedestal) | Linear Foot |
| Type II Base Foundation for Transformer Pad | Each |
| 2-inch PVC Conduit, 2 No. 4 and 1 No. 8 Conductors, 2-inch PVC Conduit Only with 1 No. 8 Tracer Wire (Street Light) | Linear Foot |

**CLARK COUNTY PUBLIC WORKS TRAFFIC MANAGEMENT DIVISION
TRAFFIC ASSET DATA COLLECTION FORMS
FORM 2 – STREET LIGHTING**

STREET LIGHTING

Circuit: _____ (A, B, C, etc.)

Service Pedestal: X _____ Y _____

Address: _____

Meter #: _____

Amp Rating: _____ (200A / 125A / Other)

Poles:

Pole designation: _____ (A-1, A-2, etc.; must be same designation from the plans)

Street name: _____ (NE / NW / SE / SW / N / S / E / W)

Pole Height: _____ (Feet)

Pole Type: _____ (CCPW, NDOT, Summerlin, Southern Highland, Other - Specify)

Pole Base: _____ (Standard, Safety)

Pole Gage: _____ (7, 11, Other - Specify)

Luminaire arms: _____ (single, double)

Luminaire arm type: _____ (3-Bolt / Single Bolt)

Luminaire arm length: _____ (Feet) (8', 12', 15', 18')

Fixture type: _____ (HPS / Induction / LED)

Fixture Wattage: _____

Voltage: _____ (120 / 240 / 277)

X _____ Y _____

Pole designation: _____ (A-1, A-2, A-3, etc.; must be same designation from the plans)

Street name: _____ (NE / NW / SE / SW / N / S / E / W)

Pole Height: _____ (Feet)

Pole Type: _____ (CCPW, NDOT, Summerlin, Southern Highland, Other - Specify)

Pole Base: _____ (Standard, Safety)

Pole Gage: _____ (7, 11, Other - Specify)

Luminaire arms: _____ (single, double)

Luminaire arm type: _____ (3-Bolt / Single Bolt)

Luminaire arm length: _____ (Feet) (8', 12', 15', 18')

Fixture type: _____ (HPS / Induction / LED)

Fixture Wattage: _____

Voltage: _____ (120 / 240 / 277)

X _____ Y _____

Pole designation: _____ (A-1, A-2, A-3, etc.; must be same designation from the plans)

Street name 1: _____ (NE / NW / SE / SW / N / S / E / W)

Pole Height: _____ (Feet)

Pole Type: _____ (CCPW, NDOT, Summerlin, Southern Highland, Other - Specify)

Pole Base: _____ (Standard, Safety)

Pole Gage: _____ (7, 11, Other - Specify)

Luminaire arms: _____ (single, double)

Luminaire arm type: _____ (3-Bolt / Single Bolt)

Luminaire arm length: _____ (Feet) (8', 12', 15', 18')

Fixture type: _____ (HPS / Induction / LED)

Fixture Wattage: _____

Voltage: _____ (120 / 240 / 277)

X _____ Y _____

**CLARK COUNTY PUBLIC WORKS TRAFFIC MANAGEMENT DIVISION
TRAFFIC ASSET DATA COLLECTION FORMS
FORM 2 – STREET LIGHTING**

STREET LIGHTING (CONTINUED)

Pull Boxes:

Pull Box Type: _____ (3½ / 5 / Other)
X _____ Y _____

Pull Box Type: _____ (3½ / 5 / Other)
X _____ Y _____

Pull Box Type: _____ (3½ / 5 / Other)
X _____ Y _____

Pull Box Type: _____ (3½ / 5 / Other)
X _____ Y _____

Pull Box Type: _____ (3½ / 5 / Other)
X _____ Y _____

Pull Box Type: _____ (3½ / 5 / Other)
X _____ Y _____

Pull Box Type: _____ (3½ / 5 / Other)
X _____ Y _____

Pull Box Type: _____ (3½ / 5 / Other)
X _____ Y _____

Pull Box Type: _____ (3½ / 5 / Other)
X _____ Y _____

Pull Box Type: _____ (3½ / 5 / Other)
X _____ Y _____

Pull Box Type: _____ (3½ / 5 / Other)
X _____ Y _____

Pull Box Type: _____ (3½ / 5 / Other)
X _____ Y _____

Pull Box Type: _____ (3½ / 5 / Other)
X _____ Y _____

Pull Box Type: _____ (3½ / 5 / Other)
X _____ Y _____

Pull Box Type: _____ (3½ / 5 / Other)
X _____ Y _____

Pull Box Type: _____ (3½ / 5 / Other)
X _____ Y _____

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SECTION 624

ACCOMMODATIONS FOR PUBLIC TRAFFIC

CONSTRUCTION

Add the following subsection:

624.03.06 CONSTRUCT, MAINTAIN AND REMOVE COOPER STREET DETOUR

- A. This item shall compensate the Contractor for all work necessary to construct, maintain, repair and/or replace if damaged, and remove the detour. The design of the detour is dependent on the Contractor's sequencing of construction.
- B. The detour shall be constructed in accordance with the Contract Drawings. The 60-inch low flow pipe shown on the Drawings is the minimum size to convey the normal base flow for the Muddy River. The Contractor may provide additional conveyance capacity at no additional cost to Owner.
- C. The detour shall include barricading, striping, and signing in accordance with Sections 104, 107, 625, and 628.
- D. Replacement of shoo-fly detour if washed out shall be incidental to the detour work and the Contractor's responsibility. Repair of detour after washout shall be completed within 24-hour after flood waters have subsided or after directed by the Engineer to begin repair.

METHOD OF MEASUREMENT

624.04.01 MEASUREMENT

Add the following to this subsection:

- B. Measurement for payment to construct, maintain, and remove Cooper Street Detour will be on a lump sum basis for all necessary detour work for the duration of the Contract.

BASIS OF PAYMENT

624.05.01 PAYMENT

Delete Paragraph H and add the following to this subsection:

- H. The Contract lump sum price paid to construct, maintain, and remove Cooper Street Detour shall include all traffic control, labor, tools, equipment, excavation, scarifying and compacting the existing base, grading, earthwork, corrugated metal pipe, Type II aggregate base, barricading and signing, and all miscellaneous and incidentals as necessary, as shown on the Drawings, as specified, and as required by the Engineer. This item shall also include the removal and disposal of all materials when the detour is no longer required, and restoration of the affected areas to equal or better condition.
- I. Payment will be made under:

Pay Item

Cooper Street Detour

Pay Unit

Lump Sum

SECTION 626

FINAL CLEANUP

METHOD OF MEASUREMENT

626.04.01 MEASUREMENT

Change this subsection to read as follows:

- A. Work required for final cleanup as specified in this section will not be measured for payment.

BASIS OF PAYMENT

626.05.01 PAYMENT

Change this subsection to read as follows:

- A. Full compensation for the work specified under Section 626 shall be considered as included in the price paid for the various bid items and no separate payment will be made therefor.

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SECTION 627

PERMANENT SIGNS

DESCRIPTION

627.01.01 GENERAL

Add the following to this subsection:

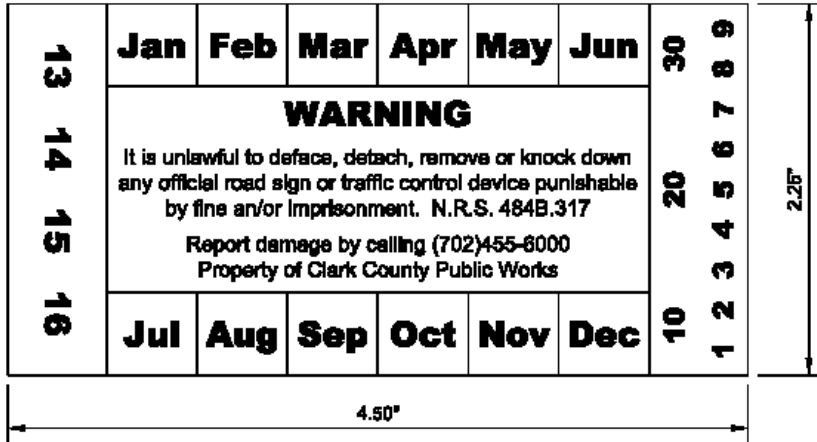
- E. Information related to traffic assets shall be the responsibility of the Contractor and Clark County will not be responsible for furnishing any information.
- F. All traffic asset information shall be provided by completing the Traffic Asset Data Collection Form 3 as appropriate for all new and relocated permanent signs, including but not limited to signs on sign structures, ground mounted, pole mounted, and mast arm mounted signs.
- G. 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.
 - 1. 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 Drawings.
 - 2. The horizontal precision of the coordinates shall be recorded with a device that has an accuracy tolerance within 3 feet of the actual location of the object.

CONSTRUCTION

627.03.03 INSTALLATION

Replace Paragraph D of this subsection with the following:

- D. A 4.50-inch by 2.25-inch (length times width) sticker shall be placed on the back of each sign on the lower right hand corner when facing the rear of the sign.
 - 1. The sticker shall have the date of installation, consisting of day, month, and year, hole-punched prior to affixing to the rear of the sign.
 - 2. The sign sticker shall be made with ASTM Type III yellow reflective sheeting, silk screen printed with the information shown below in black, and overlaid with anti-graffiti protective overlay film.



Add the following to this subsection:

- K. Rivets used for the installation of ground mounted signs shall be all steel drive rivets. Aluminum alloy rivets shall not be used. Rivets shall have 3/8-inch diameter by 1/2-inch long. A zinc plated stainless steel fender washer shall be used between the drive rivet and the sign panel. Fender washer shall have a minimum thickness of 3/8-inch, a minimum outside diameter of 1-1/4-inch and fit a bolt size of 3/8-inch diameter. For signs with an area of 8-square foot or larger, 2-inch diameter fender washers shall be used.

METHOD OF MEASUREMENT

627.04.01 MEASUREMENT

This subsection is changed to read as follows:

- A. The quantity of Permanent Sign (Ground Mounted) (Metal Supports) measured for payment will be the number of square feet of panel surface provided and installed, complete and in place, as shown on the Drawings.
- B. All measurements will be made in accordance with Subsection 109.01, Measurement of Quantities.

BASIS OF PAYMENT

627.05.01 PAYMENT

This subsection is changed to read as follows:

- A. The accepted quantity of Permanent Sign (Ground Mounted) (Metal Supports) will be paid for at the Contract unit price bid per square foot of panel surface, which shall be full compensation for furnishing all labor, materials, tools, supplies, equipment, and incidentals, including all supports and hardware necessary to attach the sign panels to sign posts and supports as required and indicated on the Drawings, as specified, and as

directed by Engineer, and including excavation, backfill, concrete foundations, supports, poles, hardware, bracing for mounting, and all incidentals and appurtenances.

B. All payments will be made in accordance with Subsection 109.02, Scope of Payment.

C. Payment will be made under:

Pay Item

Pay Unit

Permanent Sign (Ground Mounted) (Metal Supports)

Square Foot

**CLARK COUNTY PUBLIC WORKS TRAFFIC MANAGEMENT DIVISION
TRAFFIC ASSET DATA COLLECTION FORMS
FORM 3 – PERMANENT SIGNS**

PERMANENT SIGNS

Sign Designation: _____ (R1-1, R2-1, etc.)
Sign Description: _____ (Stop, Speed Limit XX, etc.)
Route: _____ (Name of street where the sign is located)
Street Ahead: _____ (Closest street ahead)
Street Back: _____ (Closest street behind)
Sign Size: _____
Type: _____ (Post mounted / Ground Mounted/ Mast Arm Mounted/Sign Structure/Other)
Sign faces direction: _____ (N, S, E, W)
X _____ Y _____

Sign Designation: _____ (R1-1, R2-1, etc.)
Sign Description: _____ (Stop, Speed Limit XX, etc.)
Route: _____ (Name of street where the sign is located)
Street Ahead: _____ (Closest street ahead)
Street Back: _____ (Closest street behind)
Sign Size: _____
Type: _____ (Post mounted / Ground Mounted/ Mast Arm Mounted/Sign Structure/Other)
Sign faces direction: _____ (N, S, E, W)
X _____ Y _____

Sign Designation: _____ (R1-1, R2-1, etc.)
Sign Description: _____ (Stop, Speed Limit XX, etc.)
Route: _____ (Name of street where the sign is located)
Street Ahead: _____ (Closest street ahead)
Street Back: _____ (Closest street behind)
Sign Size: _____
Type: _____ (Post mounted / Ground Mounted/ Mast Arm Mounted/Sign Structure/Other)
Sign faces direction: _____ (N, S, E, W)
X _____ Y _____

Sign Designation: _____ (R1-1, R2-1, etc.)
Sign Description: _____ (Stop, Speed Limit XX, etc.)
Route: _____ (Name of street where the sign is located)
Street Ahead: _____ (Closest street ahead)
Street Back: _____ (Closest street behind)
Sign Size: _____
Type: _____ (Post mounted / Ground Mounted/ Mast Arm Mounted/Sign Structure/Other)
Sign faces direction: _____ (N, S, E, W)
X _____ Y _____

Sign Designation: _____ (R1-1, R2-1, etc.)
Sign Description: _____ (Stop, Speed Limit XX, etc.)
Route: _____ (Name of street where the sign is located)
Street Ahead: _____ (Closest street ahead)
Street Back: _____ (Closest street behind)
Sign Size: _____
Type: _____ (Post mounted / Ground Mounted/ Mast Arm Mounted/Sign Structure/Other)
Sign faces direction: _____ (N, S, E, W)
X _____ Y _____

SECTION 628**TRAFFIC STRIPING, PAVEMENT MARKINGS, AND CURB MARKINGS****MATERIAL****628.02.01 MATERIALS FOR TRAFFIC STRIPING, PAVEMENT MARKING, AND CURB MARKING**

Change Paragraph A of this subsection to read as follows:

- A. Materials for permanent traffic striping and marking shall conform to the applicable requirements of Section 714, "Paint and Pavement Markings." Materials for temporary traffic striping shall conform to the requirements in Section 634, "Temporary Pavement Striping Tape." Temporary traffic lanes may be delineated using paint only if pavement is to be replaced or overlaid as part of this contract, and with the Engineer's approval.

CONSTRUCTION**628.03.04 PREPARATION OF EXISTING SURFACES**

Change Paragraph A of this subsection to read as follows:

- A. Existing markings and striping on asphalt pavement surfaces, either permanent or temporary, that are to be removed shall be removed by carbide scraping or by other approved means by the Engineer.

Existing markings and striping on concrete pavement surfaces, either permanent or temporary, that are to be removed shall be removed by water blasting as stated in Section 202 of these Special Provisions.

Abandoning and/or covering the temporary markings and striping with black paint shall not be permitted.

628.03.09 INSTALLATION OF RETROREFLECTIVE PREFORMED PAVEMENT MARKINGS

Change this subsection to read as follows:

- A. Traffic striping and marking shall be applied at locations and to the dimensions and spacing indicated on the approved plans in accordance with requirements of this specification and Section 714, "Paint and Pavement Markings," or as provided in the Special Provisions.
- B. The preformed retroreflective pavement markings shall be applied in accordance with the manufacturer's recommendations, a copy of which the Contractor shall supply the governing agency prior to installing the pavement marking material.
- C. Type 1 and Type 2 retroreflective preformed pavement markings shall be installed using either of the following options:
1. Option 1 - Applications during laying and rolling asphalt concrete wearing courses(Hot-inlaid): Both types of pavement marking films shall be capable of being adhered to asphalt concrete by a pre-coated pressure sensitive adhesive. The film

shall be placed on the final asphalt surface prior to the final passes of the roller-compaction equipment. The Engineer must be present during application to approve the position and orientation of the film. The roller compaction equipment shall then complete the installation by compressing the film into the surface of the new asphalt.

The Contractor shall notify the Engineer 48-hours prior to installation.

2. Option 2 - Applications more than ten (10) calendar days after the completion of asphalt placement (Overlay): Contractor shall apply primer and/or adhesive on all surfaces prior to installing retroreflective preformed pavement markings. Primer shall be from the same manufacturer of the preformed pavement markings, and shall be applied following manufacturer's directions and instructed rate.

Note: If Option 2 is utilized, Contractor must provide temporary signage at stop bar locations until application of marking. The required time for Option 2 work is part of the original contract time and this work is required to be part of the Contractor's CPM schedule.

- D. Joints in the initial installation of new pavement markings will be allowed only on lane lines and change of direction. The longitudinal bars in crosswalks, if used, shall be one piece.
- E. Pavement marking failures shall be removed and replaced. For stop bar and edge line failures, pavement marking shall be removed and replaced for a minimum of 24 inches in length, with a minimum of 6 inches on each side of the failure. For crosswalk bars and arrow legends failures, the whole crosswalk bar and arrow legend shall be removed and replaced. For word legends failures, the whole letter shall be removed and replaced.

METHOD OF MEASUREMENT

628.04.01 MEASUREMENT

Add the following to this subsection:

- E. The quantity of Polyurea Paint Markings (4-inch Double Yellow) and Polyurea Pavement Markings (6-inch Solid White) placed for line delineation shall be measured for payment by linear foot of color and width specified, complete and in place.
- F. Pavement markings placed for lane lines or other "skip line" applications shall be measured for payment by the linear foot of color, width and material specified. Measurement shall include the skipped portion of the marking pattern.
- G. The quantity of Median Paint measured for payment will be the number of square feet, complete and in place.

BASIS OF PAYMENT

628.05.01 PAYMENT

Delete Paragraph C and add the following to this subsection:

- C. The accepted quantities of Polyurea Paint Markings (4-inch Double Yellow) and Polyurea Pavement Markings (6-inch Solid White) will be paid for at the Contract unit prices bid per

linear foot, which shall be full compensation for cleaning and preparing the pavement surface, for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in furnishing and placing polyurea pavement markings, complete and in place, as shown on the Drawings, as specified, and as directed by Engineer.

- D. The accepted quantity Median Paint measured as provided above will be paid for at the Contract unit price bid per square foot which price shall be full compensation for cleaning and preparing the median surface and for furnishing materials, labor, tools, equipment, and incidentals necessary to complete the Work as shown on Drawings, as specified, and as required by Engineer.
- E. Payment shall be made under:

Pay Item:

Pay Unit:

Polyurea Paint Marking (4-inch Double Yellow)
 Polyurea Paint Marking (6-inch Solid White)
 Median Paint

Linear Foot
 Linear Foot
 Square Foot

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SECTION 629

WATER DISTRIBUTION FACILITIES

DESCRIPTION

629.01.02 STANDARDS

Add the following to this subsection:

- B. All water distribution facilities shall be constructed in accordance with the Moapa Valley Water District's standards, unless otherwise specified or shown on the Drawings or as directed by the Engineer.

629.01.04 CONSTRUCTION LINES AND GRADES

Delete Paragraph A of this subsection and substitute the following therefor:

- A. All lines and grades required for proper execution of the work will be furnished as specified in Subsection 105.08.

CONSTRUCTION

629.03.01 GENERAL

Add the following to this subsection:

- B. The approximate location of water vaults, valves, meters, main lines and fire hydrants are indicated on the Drawings. The locations of service lines are not indicated on the Drawings. Contractor shall locate, relocate, and/or adjust these items as necessary for proper placement according to the Drawings and Standard Drawings.
- C. Any method of adjustment and/or relocation of water valve boxes, meters, vaults, mains, or fire hydrants other than that indicated on the Drawings or Standard Drawings shall be approved by the Engineer prior to beginning work.
- D. Contractor shall provide reference markers and records of the location of each water valve box and water meter to allow access at any time. Contractor shall perform all work required for construction of water mains and appurtenances as shown.
- E. Installation of waterline appurtenances shall be in accordance with manufacturer's printed recommendations, as specified, and as directed by Engineer.

METHOD OF MEASUREMENT

629.04.01 MEASUREMENT

Delete Paragraph A and substitute the following therefor:

- A. No separate measurement will be made for relocating and adjusting existing water service laterals, adjusting water meters, and adjusting water valves.

Add the following to this subsection:

- B. The accepted quantity of 24-inch Waterline Steel Sleeve will be measured for payment by linear foot, in place and complete.

BASIS OF PAYMENT

629.05.01 PAYMENT

Delete Paragraph A and substitute the following therefor:

- A. No separate payment will be made for relocating and adjusting existing water service laterals, adjusting water meters, and adjusting water valves; the cost thereof shall be included in the Contract prices paid for work for which such relocation/adjustment is necessary.
- B. The accepted quantity of 24-inch Waterline Steel Sleeve will be paid for at the Contract unit price bid per linear foot, which shall be full compensation for complete installation as specified, including, but not limited to, excavation, shoring, bedding, compaction, backfill, steel casing, spacers, end caps, hardware, location markers, and appurtenances; and for labor, materials, equipment, and incidentals as necessary to complete the work as shown on the Drawings, as specified, and as directed by Engineer and Moapa Valley Water District.
- C. All payments will be made in accordance with Subsection 109.02, Scope of Payment.
- D. Payment will be made under:

Pay Item

Pay Unit

24-inch Waterline Steel Sleeve

Linear Foot

SECTION 630
SANITARY SEWERS
CONSTRUCTION

Add the following subsection:

630.03.16 MANHOLE ADJUSTMENT

- A. When adjusting manholes, all components must be set in a bed of grout: Burke Type V nonmetallic, nonshrink. Burke can be mixed with equal parts of sand and Type V cement for components, but must be used full strength in pipe inverts.
- B. Range of grade ring height allowed for new manhole construction or existing manhole adjustment shall be as follows:

| <u>WIDTH OF STREET</u> | <u>COMMENTS</u> |
|------------------------|---|
| Less than 65 feet | That 0 to 18 inches of adjustments would be allowed. |
| Greater than 65 feet | That 6 inches to 19.5 inches of adjustment would be allowed for streets that have an unestablished grade. |
| Any width | That 0 to 18 inches of adjustment would be allowed when the grade of the street has been established. |

- C. Class A concrete collars for sanitary sewer manholes shall be constructed in accordance with Standard Drawing No. 408.

METHOD OF MEASUREMENT

630.04.01 MEASUREMENT

Delete this subsection and substitute the following therefor:

- A. The quantity of Adjust CCWRD Manhole to Finished Grade will be measured for payment per each adjustment of existing CCWRD manhole, complete and accepted.
- B. Septic tank and leach field abandonments will not be measured for payment as such, but shall be included in the lump sum measurement for building demolition and removal.

BASIS OF PAYMENT

630.05.01 PAYMENT

Delete this subsection and substitute the following therefor:

- A. The accepted quantity of Adjust CCWRD Manhole to Finished Grade will be paid for at the Contract unit price bid per each to adjust the manholes and shall be full compensation for vertical adjustment to final grade, including removal and disposal of existing concrete

collars, adding or removing grade rings, concrete collar, replacement of manhole frames and covers if damaged, concrete, steel, excavation, backfill, compaction, related items of work not otherwise provided for, and for all labor, tools and equipment necessary to complete the work in accordance with the Clark County Water Reclamation District (CCWRD) requirements, and incidentals necessary to complete the work as specified, as shown on the Drawings, and as required by the Engineer.

- B. No separate payment will be made for the relocation/adjustment of existing sanitary sewer service laterals. All costs for relocation/adjustment of existing sewer service laterals, including marking curb and gutter directly above the service lateral with an "S" in accordance with Subsection 630.03.07(b) of the Standard Specifications and placement of marker balls in accordance with paragraphs 3.14 and 4.12.3 of the *Design and Construction Standards for Wastewater Collection Systems*, shall be included in the Contract unit prices paid for work for which such relocation/adjustment is necessary. Also, no separate payment will be made for septic tank and leach field abandonments, all costs for which shall be included in the lump sum payments for demolition and removal of the buildings where the septic tanks and leach fields are located.
- C. All payments will be made in accordance with Subsection 109.02, Scope of Payment.
- D. Payment will be made under:

| <u>Pay Item</u> | <u>Pay Unit</u> |
|--|-----------------|
| Adjust CCWRD Manhole to Finished Grade | Each |

SECTION 633

PAVEMENT MARKERS

MATERIALS

633.02.01 NON-REFLECTIVE PAVEMENT MARKERS

Add the following to this subsection:

- D. Only ceramic non-reflective pavement markers shall be used.
- E. Contractor shall use non-reflective pavement markers listed in the Pavement Markers (Non-reflective, Permanent) subsection in the current NDOT Qualified Product List (QPL) that also meets the requirements set forth in the RTC Standard Specifications and these special provisions. A material listed in the NDOT QPL is not guaranteed to be acceptable 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.

633.02.02 REFLECTIVE PAVEMENT MARKERS

Add the following to this subsection:

- F. Contractor shall use reflective pavement markers listed in the Pavement Markers (Reflective, Permanent) subsection in the current NDOT QPL that also meets the requirements set forth in the RTC Standard Specifications and these special provisions. A material listed in the NDOT QPL is not guaranteed to be acceptable 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.

633.02.03 PAVEMENT MARKER ADHESIVE

Replace Paragraph A of this subsection with the following:

- A. The pavement marker adhesive shall be a flexible hot-melt bituminous adhesive that provides effective bonding of pavement markers to both asphalt and concrete pavement surfaces.

Delete Paragraph D of this subsection.

BASIS OF PAYMENT

633.05.01 PAYMENT

As specified in the Uniform Standard Specifications, payment will be made under:

| <u>Pay Item</u> | <u>Pay Unit</u> |
|-----------------------------|-----------------|
| Reflective Pavement Markers | Each |

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SECTION 637

POLLUTION CONTROL

DESCRIPTION

637.01.01 GENERAL

Add the following to this subsection:

- D. The Clark County Department of Air Quality's (DAQ) *Air Pollution Control Regulations Section 94, Construction Activities Dust Control Handbook* and those Best Management Practices (BMPs) described therein are hereby incorporated by reference as preconditions of this contract. Contractor shall familiarize himself with these regulations and practices, and is advised that prior to engaging in any construction activities defined in Section 94.2 of these regulations, shall obtain a Dust Control Permit from the Clark County Department of Air Quality. As applicant, the Contractor is responsible for ensuring that all contractors, subcontractors, and all other persons abide by the conditions of the permit. As applicant, the Contractor is further responsible for supplying complete copies of the Dust Control Permit and Dust Mitigation Plan, if applicable, to all project subcontractors.

- E. Temporary discharge permits are not recognized as being included in the Clean Water Act by the Environmental Protection Agency (EPA) for the removal and discharge of groundwater from a construction site to a surface water downstream (waterway). Consequently, the Nevada Division of Environmental Protection (NDEP) requires a National Pollutant Discharge Elimination System (NPDES) permit for construction sites where groundwater is to be discharged into waterways.

- F. The Contractor must contact the NPDES to determine what permits are required for the construction of the project based on construction staging and techniques approved by Clark County. Current permits as determined by NPDES are required to be maintained by the Contractor.

MATERIALS

Add the following subsection to this section:

637.02.02 PRE-EMERGENT HERBICIDE

- A. Soil surfaces prepared as described below in Subsection 637.03.04 shall then be treated with a pre-emergent herbicide using a mixture of ENDURANCE herbicide applied at 16 ounces per acre and GALLERY herbicide applied at 16 ounces per acre.
 - 1. Contractor shall comply with manufacturers' instructions for mixing, application, and precautionary procedures.
 - 2. Pre-emergent herbicide shall be watered in accordance with manufacturer's recommendations.

CONSTRUCTION

637.03.01 GENERAL

Change paragraph D to read as follows:

- D. The total area of erodible earth material exposed by the Contractor's operation shall not exceed the respective requirements of DAQ and/or the Nevada Department of Environmental Protection (NDEP) before either temporary pollution control or temporary or permanent erosion control measures are accomplished.

Add the following subsections to this section:

637.03.02 DUST CONTROL

- A. Any contracts between the prime Contractor and applicable subcontractors shall provide a monetary allowance for any dust control options specified in either the Dust Control Permit or, if applicable, the Dust Mitigation Plan.
- B. In accordance with Section 94.7.5 of the *Construction Activities Dust Control Handbook*, if at any time the Contractor's operations cause more than 50 acres of disturbed soil to exist, the Contractor shall cause to have in place a person (dust control monitor) with full authority to ensure that dust Control Measures are implemented, including inspections, record keeping, deployment of resources, and shut-down or modification of construction activities as needed.
- C. Throughout the project area and for the duration of the project, all disturbed soil shall be maintained to minimize wind erosion and particulate emissions. Best available control measures (BACM) are required 24 hours a day, 7 days a week, whether or not there is current construction activity on site. When any part of the project area is inactive for a period of 30 days or longer, long-term stabilization shall be implemented within 10 days following the cessation of active operations in that area. As permit holder, the Contractor shall notify the Department of Air Quality in writing within 10 days following the cessation of active operations on all or a part of the project area.
- D. Contractor's superintendent or other designated on-site representative shall be required to have successfully completed a Clark County Department of Air Quality Dust Control Class. All water truck drivers and water pull drivers on the project shall be required to have successfully completed a Clark County Department of Air Quality Dust Control Class.
- E. As permit holder, the Contractor shall keep records of construction site self-inspections for the project duration in accordance with Section 94.7.8.1 of the *Construction Activities Dust Control Handbook*.

637.03.03 STORM WATER POLLUTION CONTROL

- A. Contractor shall perform its work so as to not discharge polluted storm water runoff into the waters of the United States, including municipal separate storm sewer systems, (MS4s), in violation of the laws, rules and regulations of all federal, state and local water pollution requirements.
- B. Contractor shall:
1. Adhere to all Federal regulations under 40 CFR 122.26(b)(14);
 2. Comply with the provisions of Nevada Revised Statutes, Chapter 445A: Water Pollution Control;
 3. Comply with provisions of Clark County Code, Title 24, Chapter 24.40: Storm Water System Discharge;

4. Obtain all information and forms pertaining to Nevada's Storm Water Permitting Program on the following website: <http://ndep.nv.gov/bwpc/storm01.htm>
- C. The federal, state, and local regulations identified above are hereby incorporated by reference as preconditions of this contract.
1. Contractor shall familiarize itself with these regulations and practices, and is advised that prior to engaging in any construction activities, shall submit a Notice of Intent (NOI) to the Nevada Division of Environmental Protection.
 2. A Storm Water Pollution Prevention Plan (SWPPP) shall be completed prior to submission of the NOI, and shall remain on the project site and be updated as necessary for the duration of the project.
 3. As applicant, Contractor shall ensure that all contractors, subcontractors, and all other persons abide by the conditions of the permit.
 4. As applicant, Contractor is further responsible for supplying complete copies of the NOI and SWPPP to all project subcontractors.
- D. Any contracts between the prime Contractor and applicable subcontractors shall provide a monetary allowance for any storm water pollution control BMPs specified in the SWPPP.
- E. The Contractor shall cause to have in place a qualified person with full authority to ensure that storm water control measures are implemented, including inspections, record keeping, deployment of resources, and shut-down or modification of construction activities as needed. All aspects of the (SWPPP), shall be addressed and included in the Contractor's QC Program, including but not limited to filing of inspection reports, completion of activity cards, and auditing.
- F. Throughout the project area and the duration of the project, all BMPs shall be maintained to minimize erosion and prevent discharge of pollutants from the site. BMPs are required 24 hours a day, 7 days a week, whether or not there is construction activity on site.
- G. As permit holder, the Contractor shall keep records of construction site inspections for up to 3 years after completion of the work.
- H. As of January 31, 2005 NDEP will only accept the new Notice of Intent (NOI) "Section 8 – Certification" for an application of coverage under the Stormwater permit for Construction activities. Access to the NEW APPLICATION (Stormwater NOI) can be obtained through their web site at: <http://www.ndep.nv.gov/bwpc/constructionnoi/signin.aspx>
- I. Nevada Division of Environmental Protection, Bureau of Water Pollution Control, has issued general permit NVR100000 that covers construction activities within the state of Nevada. In order to be covered by the permit, Contractor shall submit, at no extra cost to Owner, a Notice of Intent (NOI) with a Stormwater Pollution Prevention Plan (SPPP) and the required filing fee to the attention of Clifford Lawson (775-687-9429) at: Nevada Division of Environmental Protection, Bureau of Water Pollution Control, 901 South Stewart Street, Suite 4001, Carson City, Nevada 89701-5249. Further information and copies of the required (NOI) and Notice of Termination (NOT) may be obtained on the Internet at http://www.ndep.nv.gov/bwpc/storm_cont03.htm.
- J. As part of the project closeout process, areas that are disturbed by Contractor, his employees, subcontractors, or suppliers that are within or outside of the project limits shall be restored to comply with Federal Regulations regarding Final Stabilization. Contractor shall obtain a Notice of Termination (NOT) from the Nevada Division of Environmental

Protection and forward a copy of that Notice to the Engineer. Final Stabilization is defined within the (NOT) and can be found at http://www.ndep.nv.gov/bwpc/docs/not_form09.pdf. Contractor is responsible for documenting the condition of the project site before construction. No additional compensation shall be provided for this work.

- K. Copies of the SPPP and the NOI shall be available on the job site throughout the duration of the project.

637.03.04 PRE-EMERGENT HERBICIDE

- A. Disturbed surfaces (except for areas to be covered by concrete and bituminous pavement) shall be treated with a pre-emergent herbicide to discourage the growth of weeds and other vegetation.
- B. Prior to the application of the pre-emergent herbicide, the above designated areas shall be finished to the grades shown on the Drawings or as directed by the Engineer, including the removal of all existing vegetation and the filling and smoothing of erosional features and surface irregularities. The finished surfaces shall then be scarified to a depth of 6 inches and groomed to produce a smooth surface with all particles greater than 3 inches in diameter removed.
- C. Soil surfaces prepared as described above shall then be treated with pre-emergent herbicide as specified above in Subsection 637.02.02.

METHOD OF MEASUREMENT

637.04.01 MEASUREMENT

Add the following to this subsection:

- D. Measurement and payment for Dust Control (F) shall be Contract calendar days for all dust control activities described in the general and special provisions and required to satisfy the requirements of Section 94.
- E. The bid amount will be divided by the number of calendar days in the Contract to establish a daily value for dust control. Each progress payment will reflect payment on the bid amount equal to this daily value times the number of days since the previous progress payment. The bid amount for this item shall not be increased. In the event compensable time is added to the contract, additional payment for dust control shall be included in the payment for Historical Owner Caused Delay Allowance Over \$500 Per Day.
- F. The quantity of Pre-Emergent Herbicide measured for payment will be the number of acres completed as specified. The estimated quantities shown on the Drawings, plus or minus authorized quantity changes, will be the quantities used for payment.
- G. Measurement and payment for Storm Water Pollution Control (F) shall be Contract calendar days for all work required to comply with all state and federal regulations, including but not limited to permit fees, plan preparation, required signage, monies paid to subcontractors, provision of storm water control monitor, record keeping, training, long-term stabilization, and all labor, equipment and materials required to employ BMPs as set forth in state and federal regulations to prevent pollutants from entering MS4s and the waters of the United States.

- H. The bid amount will be divided by the number of calendar days in the Contract to establish a daily value for Storm Water Pollution Control (F). Each progress payment will reflect payment on the bid amount equal to this daily value times the number of days since the previous progress payment. The bid amount for this item shall not be increased. In the event compensable time is added to the contract, additional payment for storm water pollution control shall be included in the payment for Historical Owner Caused Delay Allowance Over \$500 Per Day.

BASIS OF PAYMENT

637.05.01 PAYMENT

Delete Paragraph D and substitute the following therefor:

- D. The payment for Dust Control (F) shall include all weekends, holidays, and non-working days encountered during the duration of the contract, including any days required for completion of corrective punch list items.
- E. Dust Control (F) as measured in subsection 637.04.01 "Measurement," shall be full compensation for all work required to comply with Section 94 requirements, including but not limited to permit fees, plan preparation, required signage, monies paid to subcontractors, provision of dust control monitor(s), shut-down expenses caused by violations of this regulation, monetary penalties or sanctions resulting from violations of this regulation, record keeping, training, long-term stabilization due to cessations of the work more than 30 days, and all labor, equipment, and materials required to employ Best Available Control Measures as set forth in the *Construction Activities Dust Control Handbook* to prevent particulate matter from becoming airborne.
- F. The accepted quantity of Pre-Emergent Herbicide will be paid for at the Contract unit price bid per acre of the completed application of Pre-Emergent Herbicide. The Contract unit price bid for Pre-Emergent Herbicide shall include the cost of all work identified in Section 637 of the Standard Specifications and herein and shall include furnishing the materials, adding and mixing additional water at the job site, applying the mixture, and furnishing all labor, materials, tools, supplies, equipment, and incidentals necessary to complete the work, in place and accepted, as indicated on the Drawings and as directed by Engineer.
- G. The payment for Storm Water Pollution Control (F) shall include all weekends, holidays, and non-working days encountered during the duration of the Contract, including any days required for completion of corrective punch list items.
- H. Storm Water Pollution Control (F) as measured in Subsection 637.04.01, "Measurement," shall be full compensation for all work required to comply with all applicable requirements, including but not limited to permit fees, plan preparation, monies paid to subcontractors, shut-down expenses caused by violations of this regulation, monetary penalties or sanctions resulting from violations of this regulation, record keeping, training, and all labor, equipment, and materials required to employ Best Available Control Measures.
- I. Payment will be made under:

Pay Item

Pay Unit

Dust Control (F)

Calendar Days (F)

Pre-Emergent Herbicide

Acre

Storm Water Pollution Control (F)

Calendar Days (F)

SECTION 703
BITUMINOUS MATERIALS
REQUIREMENTS

703.02.03 SHIPPING NOTICE

Paragraph B is changed to read as follows:

- B. All asphalt cements must be shipped from an authorized source. If shipment is from an unauthorized source, the contractor must perform the full material tests per lot/batch.

When shipment of materials arrive at the hotplant during and after normal working hours, the Contractor shall notify the Engineer sufficiently in advance to make arrangements for an inspector to be present when the material is sampled. All sampling by the Vendor or Contractor shall be performed by a NAQTC certified technician. A minimum of a metal quart container sample for asphalt cement and/or one quart plastic container of emulsions for each material batch (lot) shall be retained by the Contractor until the project has been closed and one given to the Engineer.

Deliver to the Engineer at:

Clark County Public Works
Construction Management Division QA Section
Attn: Michael Dunning
7361 W. Charleston Suite 130
Las Vegas, NV 89117

The certificate of compliance shall include a copy of the tests for that lot shipment.

A sample shall be submitted no greater than 2 days prior to paving and of the same batch for the paving. The non-delivery of a binder sample per the specified frequency and prior to the paving will result in a \$100 per sample penalty.

PHYSICAL PROPERTIES AND TESTS

703.03.01 REFINERY TEST REPORT

Paragraph A is changed to read as follows:

- A. Refinery test reports shall be mailed to the Engineer as soon as tests have been completed for each lot as designated in the authorized vendor quality control manual and the report shall contain the following data:
1. Date of shipment;
 2. Car initials or number of truck transport delivery ticket number;
 3. Destination and consignee;
 4. Contracting Agency contract number (or purchase order number, if applicable);
 5. Type and grade of material;
 6. Certificate of grade (certify that material conforms to these specifications, and itemize results on tests performed and date of test);

7. Signature of refinery's authorized representative.

703.03.02 ASPHALT CEMENTS

This subsection is changed to read as follows:

This subsection is changed to read as follows:

- A. These specifications cover the following grades as indicated on Table 11 which shall be substituted for Tables 2A and 2B located in Subsection 703.03.07.
 1. Performance grade (PG) material must have been prepared from crude petroleum product.
 2. The asphalt cements shall be homogenous, free from water and shall not foam when heated to 175 degrees Celsius (175°C) or 347 degrees Fahrenheit (347°F).
 3. Blending of asphalt cements to produce a specified performance grade shall result in a uniform, homogenous blend with no separation.
 4. Modified binders shall be blended at the source of supply and delivered as a completed mixture to the job site.
 5. It shall not be transported via railroad car.
 6. Only elastomeric Styrene Butadiene Styrene (SBS), Styrene-Butadiene (SB), Styrene-Butadiene Rubber (SBR), and Styrene Ethylbutylene Styrene (SEBS) rubber shall be added to the base binder asphalt cement, to produce a binder that complies with specification requirements.
 7. Unless approved by the Engineer. No recycled truck tire shall be as part of the asphalt cement.
 8. All products must be purchased from a plant that is authorized by Clark County Public Works.

Table 11 - Performance Grade

| | Test Method | PG 76-22NV Modified | PG 64-34 Modified |
|--|--------------------|--------------------------------|------------------------------|
| Flash Point <i>Degrees °C – Minimum</i> | NDOT T716 | 230 | 230 |
| Viscosity (Brookfield) <i>Test Temp - 135 °C</i> | ASTM D4402 | 3.0 Pas (3000cP) Max | 3.0 Pas (3000cP) Max |
| Dynamic Shear $G^*/\sin \delta$ @ 10 rad/s <i>At grade Temp ° C</i> | AASHTO T315 | 1.3 kPa min | 1.0 kPa min |
| Ductility at 39.2° F (4° C) 5 cm/min <i>cm. – Minimum</i> | NDOT T746 | 20 | 30 |

| | Test Method | PG 76-22NV Modified | PG 64-34 Modified |
|---|-----------------|---------------------|-------------------|
| #10 Sieve test Pass / Fail | NDOT T730 | Pass | Pass |
| Polymer Content, % by mass min | Cert | 3.0 | 3.0 |
| Solubility in Trichloroethylene <i>Percent (%) - Minimum</i> | AASHTO T44 | 99.0 | 99.0 |
| Toughness ¹ in-lb or (N.m.) - Minimum | ASTM D 5801 | 150 | 75 |
| Tenacity <i>in-lb or (N.m.) - Minimum</i> | ASTM D 5801 | 100 | 50 |
| If T&T fails, Elastic Recovery Percent (%) - Minimum | AASHTO T 301 | 60 | 60 |

Tests on Residue From RTFO AASHTO T-240

| Test Method | | PG 76-22NV Modified | PG 64-34 Modified |
|---|----------------|---------------------|-------------------|
| Ductility at 39.2° F (4° C) 1 cm/min. <i>cm. - Minimum</i> | NDOT T746 | | 15 C |
| Ductility at 39.2° F (4° C) 5 cm/min. <i>cm. - Minimum</i> | NDOT T746 | 10 C | |
| Mass Loss Percent (%) – Maximum | NDOT T728 | 0.5 | 0.5 |
| Dynamic Shear G*/sin δ kPa @ 10 rad/s <i>At grade Temp. in ° C</i> | AASHTO T315 | 2.2 min | 2.2 min |

¹ NV T 745 Method of Toughness and Tenacity: Scott Tester (or equivalent), inch-pounds @ 77° F., 20 inches per minute pull with tension head 7/8-inch diameter.

Tests on Residue After PAV

| | | | |
|---|----------------|-------|-------|
| PAV Test Temp. in ° C | AASHTO R28 | 110 C | 100 C |
| Dynamic Shear $G^*/\sin \delta = \text{Max } 5,000 \text{ kPa}$ @ 10 rad/s Test Temp. in ° C | AASHTO T315 | 31 C | 19 C |
| BBR - Creep Stiffness ² S = 300 Mpa Maximum m-value = 0.30 Minimum @ 60s Test Temp. in ° C | AASHTO T313 | -12 C | -24 C |
| Direct Tension Failure Strain = 1.0% Minimum @ 1.0 mm/min Test Temp. in ° C | AASHTO T314 | -12 C | -24 C |

Table 12 - Slurry Seal Emulsion

| TESTS | AASHTO METHOD | SPECS. |
|---------------------------------------|------------------|----------|
| Viscosity. Saybolt 122°F, SFS | T59 | 15- 300 |
| Storage. Stability. 24 H. % | T59 | 1 max |
| Particle Charge Test | E70 | positive |
| Sieve Test % | T59 | 0.3 max |
| Density 60°F, lbs/gallon | T59 | |
| Residue by evaporation. % | T59 | 60 min |
| Tests on residue from evaporation: | | |
| Penetration. 77°F, 100g, 5s | T49 | 35 - 55 |
| Elastic recovery, % | T301 | 58 min |
| Softening point, °F | T53 | 140 min |
| Polymer content, wt % | | 3.0 min |

² The m-value requirement and direct tension failure strain requirement must be satisfied in all cases. If the creep stiffness is between 300 and 600 Mpa, the direct tension failure strain requirement may be used in lieu of the creep stiffness requirement.

SECTION 707

JOINT MATERIAL

REQUIREMENTS

Add the following subsection

707.02.01 TRAINING OF INSTALLATION AND INSPECTION PERSONNEL

- A. The Contractor shall be responsible for arranging manufacturer's representation on-site to train and certify the Contractor's installation crew and the Owner's project representative(s) of proper installation procedures prior to any use of the product on the project. Any substitution of Contractor's installation personnel will only be allowed if the personnel proposed to be used are also trained and certified in the use and installation of the product.

PHYSICAL PROPERTIES AND TESTS

707.03.03 CHANNEL EXPANSION JOINT (1-INCH OR LESS)

Change paragraph B to read as follows:

- B. The pourable, non-sag joint sealer for concrete channel weakened plane joints and wall expansion joints shall be SikaFlex 2C-NS or other equivalent slow set, 2-component polyurethane sealant as approved by the Engineer.

707.03.06 RUBBER GASKETS

Delete Paragraph A and replace with the following:

- A. The circular rubber gaskets shall conform to ASTM C 443.
- B. Mastic material shall conform to ASTM C 990, 6.2.1 (Butyl Rubber Sealant).

707.03.09 PREFORMED ELASTIC JOINT SEALER

Add the following to this subsection:

- E. The preformed joint sealer for concrete channel slab and side slope expansion joints greater than one (1) inch in width shall be Phyzite 380 ESP with H.A.L.S. Joint Material (Model No. PZ1.25) with Eva-Pox Fresh Concrete Bonder as manufactured by Chase Construction Products or equal as approved by the Engineer. The Contractor shall comply with the manufacturer's installation recommendations and submit manufacturer's certification to the Engineer. The Contractor shall provide manufacturer's representative on-site during installation to certify materials and proper installation procedures.
- F. Each container of material shall be clearly labeled or each delivery of material in the tanks of two-component equipment shall be accompanied with a ticket showing the destination (Component A or B), manufacture's name, lot or batch number, date of manufacture, date of packing, and date, if any, beyond which the material shall not be used.

- G. All joints in the compression seal including directional changes in the joint sealer material shall be performed using heat welding methods. Material that has been heat welded shall be cooled before mixing adhesives.
- H. The concrete surface shall be dry, sound, and free of dirt, oils, grease, waxes, curing compounds, sharp objects, protrusions, and debris prior to application. Spalled areas must be repaired prior to joint installation. Area adjacent to joint opening shall be sufficiently masked to keep the surrounding areas clean. Epoxy shall be cleaned from the surface of the joint material to the proper level immediately after the joint material is installed, before the epoxy sets.

SECTION 708

CONCRETE AND CLAY PIPE AND DRAINS

TESTING AND INSPECTION

708.04.01 PRODUCTION QUALITY CONTROL INSPECTION AND TESTING

Revise Table 2 as follows:

| Table 2 – Inspection and Testing | | | | |
|---|---------------------------|--|--------------------------------------|-----------------------------|
| Product/Material | Subsection | Referenced Specification or Test Procedure | Requirement | Frequency |
| Concrete Pipe | | | | |
| Plant QC Program | 708.01.01 | ACPA/NCPA | Certified annually | 1 per new plant or revision |
| Reinforced Concrete Pipe | 708.03.01 | Section 5.1.1 ASTM C76, ASTM C1417 | Design submittal | 1 per type |
| | | ASTM C76, Section 5.1.2 | Basis of manufactured lot acceptance | See Components below |
| Reinforced Concrete Elliptical Pipe | 708.03.01 | ASTM C507, Section 5.1.1 and ASTM C655, Section 9 | Design submittal | 1 per type |
| | | ASTM C76, Section 5.1.2 | Basis of manufactured lot acceptance | See Components below |
| Nonreinforced Concrete Pipe | 708.03.02 | AASHTO M315 and ASTM C14 | Design submittal | 1 per type |
| | | ASTM C14 | Basis of manufactured lot acceptance | See Components below |
| Perforated Concrete Pipe | 708.03.03 | ASTM C444 | Design submittal | 1 per type |
| | | | Basis of manufactured lot acceptance | See Components below |
| Reinforced Concrete Pressure Pipe (Water) | 708.03.09 | AWWA C300, AWWA C301, and AWWA C302 | Design submittal | 1 per type |
| | | | Basis of manufactured lot acceptance | See Components below |

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SECTION 714**PAINT AND PAVEMENT MARKINGS****SCOPE****714.01.01 MATERIALS COVERED**

Add the following to this subsection:

- C. 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.

PHYSICAL PROPERTIES AND TESTS**714.03.05 PAINT FOR TRAFFIC STRIPING, PAVEMENT MARKING, AND CURB MARKING – GENERAL**

Add the following to this subsection:

- E. 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.
- F. A material listed in the NDOT QPL is not guaranteed to be acceptable 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.

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 acceptable

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.

Add the following to this subsection:

C. Qualified Products List:

1. 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.
2. A material listed in the NDOT QPL is not guaranteed to be acceptable for use on this project.
3. 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 to this subsection:

G. Qualified Products List:

1. 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.
2. A material listed in the NDOT QPL is not guaranteed to be acceptable for use on this project.
3. 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.

APPENDIX A

SECTION 404 PERMIT

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DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO CA 95814-2922

REPLY TO
ATTENTION OF

December 16, 2013

Regulatory Division SPK-2002-50105

Mr. Calvin Black
GC Wallace
1555 South Rainbow Boulevard
Las Vegas, Nevada 89146-2903

Dear Mr. Black:

We are responding to your November 26, 2013 request to modify your Department of the Army permit number SPK-2002-50105. The original letter of permission was issued on October 22, 2004 for flood control improvements on the Muddy River (Enclosure 1). The project is located on the Muddy River, Section 18, Township 16 S, Range 68 E, Mount Diablo Meridian, Latitude 36.547517°, Longitude -114.437597°, Overton, Clark County, Nevada. The modification request involves an extension of time to complete the project. This approximately 0.14-acre project involves activities in waters of the United States to construct flood control features along the Muddy River. The original 650-ft project was permitted on October 22, 2004 with a letter of permission that has been extended to December 31, 2013. This project includes an additional 850-ft of the Muddy River. The Project involves the construction of roadway improvements and a bridge at Cooper Street to replace the existing dipped overflow section and the low flow reinforced concrete box culvert, concrete lining of 1,480 lineal feet of channel, including the bridge structure, gabion grade control structures, cutoff walls for the 100-year flood channel, transitions structures and bank riprap lining. The project is located on or near Muddy River, Section 18, Township 16 S, Range 68 E, Mount Diablo Meridian, Latitude 36.547517°, Longitude -114.437597°, Overton (historical), Clark County, Nevada (Enclosure 2).

Permit number SPK-2002-50105 is hereby modified as follows:

All terms and conditions of the previously issued permit (attached) remain valid with the exception of General Condition #1; which is amended to read as follows:

"1. The time limit for completing the work authorized ends on December 18, 2017. If you find that you need more time to complete the authorized activity, submit a request for a time extension to this office for consideration at least one month before the above date is reached."

All other terms and conditions of the permit remain in full force and effect. Failure to comply with the terms and conditions of this authorization may result in the suspension or revocation of your permit.

Please refer to identification number SPK-2002-50105 in any correspondence concerning this project. If you have any questions, please contact me at 196 E Tabernacle Street Room 30, St. George, Utah 84770, by email at *Patricia.L.McQueary@usace.army.mil*, or telephone at 435-986-3979. For more information regarding our program, please visit our website at *www.spk.usace.army.mil/Missions/Regulatory.aspx*.

Sincerely,

A handwritten signature in blue ink that reads "Patricia L. McQueary". The signature is written in a cursive style and is centered on the page.

Patricia L. McQueary
Senior Regulatory Project Manager
St. George Regulatory Office
Sacramento District

Enclosures

cc: (w/o encls)

Mr. Tim Sutko, Environmental Mitigation Manager, Clark County Regional Flood Control District, 600 South Grand Central Parkway Suite 300 Las Vegas, NV 89106-4511

Ms. Jean Stone, NDEP, 901 S. Stewart Street Suite 4001, Carson City, Nevada 89701-5249

Mr. Jason Ferrin, NDEP, 901 S. Stewart Street Suite 4001, Carson City, Nevada 89701-5249



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO CA 95814-2922

September 23, 2011

Regulatory Division SPK-2002-50105

John Catanese
Clark County Department of Public Works
500 S. Grand Central Parkway
PO Box 554000
Las Vegas, Nevada 89155-4000

Dear Mr. Catanese:

We are responding to your request for a Department of the Army permit for the Muddy River Flood Control project. This approximately 0.14-acre project involves activities in waters of the United States to construct flood control features along the Muddy River. The original 650-ft project was permitted on October 22, 2004 with a letter of permission that has been extended to December 31, 2013. This project includes an additional 850-ft of the Muddy River. The Project involves the construction of roadway improvements and a bridge at Cooper Street to replace the existing dipped overflow section and the low flow reinforced concrete box culvert, concrete lining of 1,480 lineal feet of channel, including the bridge structure, gabion grade control structures, cutoff walls for the 100-year flood channel, transitions structures and bank riprap lining. The project is located on or near Muddy River, Section 18, Township 16 S, Range 68 E, Mount Diablo Meridian, Latitude 36.547517°, Longitude -114.437597°, Overton (historical), Clark County, Nevada.

Based on the information you provided, the proposed activity in approximately .14 acres of Muddy river is authorized by Regional General Permit number RGP #07 - Clark County, Nevada - Construction & Maintenance of Flood Control Facilities. This permit verification also allows for up to 1.0 acres of temporary impact for access and staging areas. Your work must comply with the general terms and conditions listed on the enclosed Regional General Permit information sheets *and the following special conditions*:

Special Conditions

- 1. This permit is contingent upon issuance of a Section 401 Water Quality Certification. All terms and conditions of the Water Quality Certification are expressly incorporated as conditions of this permit.**
- 2. The Permittee is responsible for all work authorized herein and ensuring that all contractors and workers are made aware and adhere to the terms and conditions of this permit authorization. You shall ensure that a copy of the permit authorization and associated drawings are available for quick reference at the project site until all construction activities are completed.**

3. You and your authorized contractor shall allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that work is being or has been accomplished in accordance with the terms and conditions of this permit verification.

4. To insure your project complies with the Federal Endangered Species Act, you must implement all of the mitigation measures identified in the enclosed Fish and Wildlife Service letter of concurrence (1-5-03-1-439 dated December 11, 2002., Including those ascribed to the Corps therein. If you are unable to implement any of these measures, you must immediately notify this office and the Fish and wildlife Service so we may consult as appropriate, prior to initiating the work, in accordance with Federal law.

4. Best management practices must be followed during and after construction to minimize potential direct and indirect adverse impacts co adjacent waters of the United States, including wetlands.

5. You must furnish a certification report that the work, including any mitigation, has been completed in accordance with the conditions of this permit. This certification must be signed by the permittee or authorized representative and provided to this office no later than 60 days following the completion of the authorized work.

6. The enclosed Memorandum of Agreement (MOA) between the permittee, the Nevada State Historic Preservation Officer and this office regarding the archaeological treatment for the authorized work is expressly incorporate into and made a part o f this permit. The permittee shall ensure that all aspects of the MOA and the referenced treatment plan for site 26CK6355 are implemented. Failure to do so will be grounds for suspension, modification or revoking of this permit.

7. The permittee shall avoid and minimize adverse impacts to the aquatic ecosystem of the Muddy River to the maximum extent practicable. Impacts to the low-flow channel and associated riparian corridor of the Muddy River should be avoided where possible.

8. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of these requirements if you abandon the permitted activity. This permit may be transferred upon request provided the work complies with the terms and conditions of this authorization. When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. Should you wish to cease to maintain the authorized activity or abandon it without a good faith transfer; you must obtain a permit modification from this office. Periodic maintenance of adjacent riparian vegetation to a height of 3-4-ft is allowed in perpetuity.

9. To avoid violation of the Migratory Bird Treaty Act (MBTA), land clearance (or other surface disturbance) including subsequent vegetation maintenance shall be conducted outside the avian breeding season. If this is not feasible, a qualified biologist shall survey the area prior to land clearing or other surface disturbance. If active nests are located, or if other evidence of nesting (mated pairs, territorial defense, and carrying nesting material, transporting food) is observed, a protective buffer (the size depending on the requirements of the species) shall be delineated and

the entire area avoided to prevent destruction or disturbance to nests until they are no longer active. Contact U.S. Fish and Wildlife Service, Southern Nevada Field Office, 4701 North Torrey Pines Drive, Las Vegas, Nevada 89130, (702) 515-5230 for further advice and information. Failure to comply may be grounds for modifying, suspending or revoking this Regional General Permit for the authorized work.

10. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register.

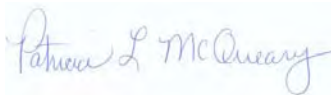
11. Following completion of the project, areas that have been temporarily impacted by construction activities shall be replanted with native species.

This verification is valid for two years from the date of this letter or until the Regional General Permit is modified, reissued, or revoked, whichever comes first. Projects approved under RGP 7 will have up to one year after the expiration of this permit to complete construction. The permit for those projects remains valid while the proponent remains in full compliance with the terms and conditions of this permit. Failure to comply with the General Conditions of this Regional General Permit, or the project-specific Special Conditions of this authorization, may result in the suspension or revocation of your authorization.

We appreciate your feedback. At your earliest convenience, please tell us how we are doing by completing the customer survey at <http://per2.nwp.usace.army.mil/survey.html> and select Sacramento District – St. George Office on page 2 of the survey form.

Please refer to identification number SPK-2002-50105 in any correspondence concerning this project. If you have any questions, please contact Patricia McQueary at 321 North Mall Drive, Suite L-101, St. George, Utah 84790, email Patricia.L.McQueary@usace.army.mil, or telephone 435-986-3979. For more information regarding our program, please visit our website at www.spk.usace.army.mil/regulatory.html.

Sincerely,



Patricia L. McQueary
Senior Regulatory Project Manager
St. George Regulatory Office
Sacramento District

Enclosure(s)

Project drawings, USFWS letter, MOA, RGP 7

Copy furnished without enclosure(s): Tim Sutko, Jean Stone, Jeryl Gardner

Copies furnished with enclosures: Calvin Black, Ken MacDonald

COMPLIANCE CERTIFICATION

Permit File Number: SPK-2002-50105

Regional General Permit Number: RGP #07 - Clark County, Nevada - Construction & Maintenance of Flood Control Facilities

Permittee: Mr. John J. Catanese
600 South Grand Central Parkway
Las Vegas, Nevada 89106

County: Clark

Date of Verification: September 23, 2011

Within 30 days after completion of the activity authorized by this permit, sign this certification and return it to the following address:

U.S. Army Corps of Engineers
Sacramento District
321 North Mall Drive, Suite L-101, St. George, Utah 84790

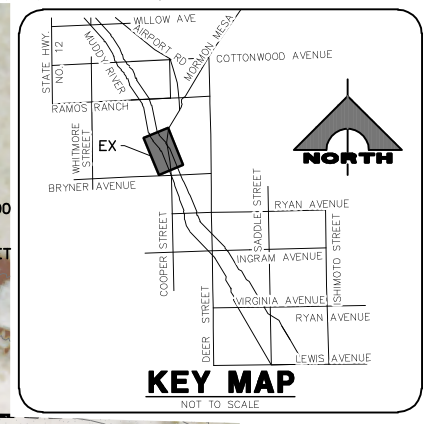
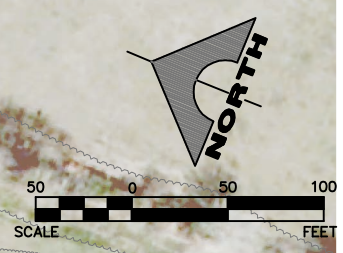
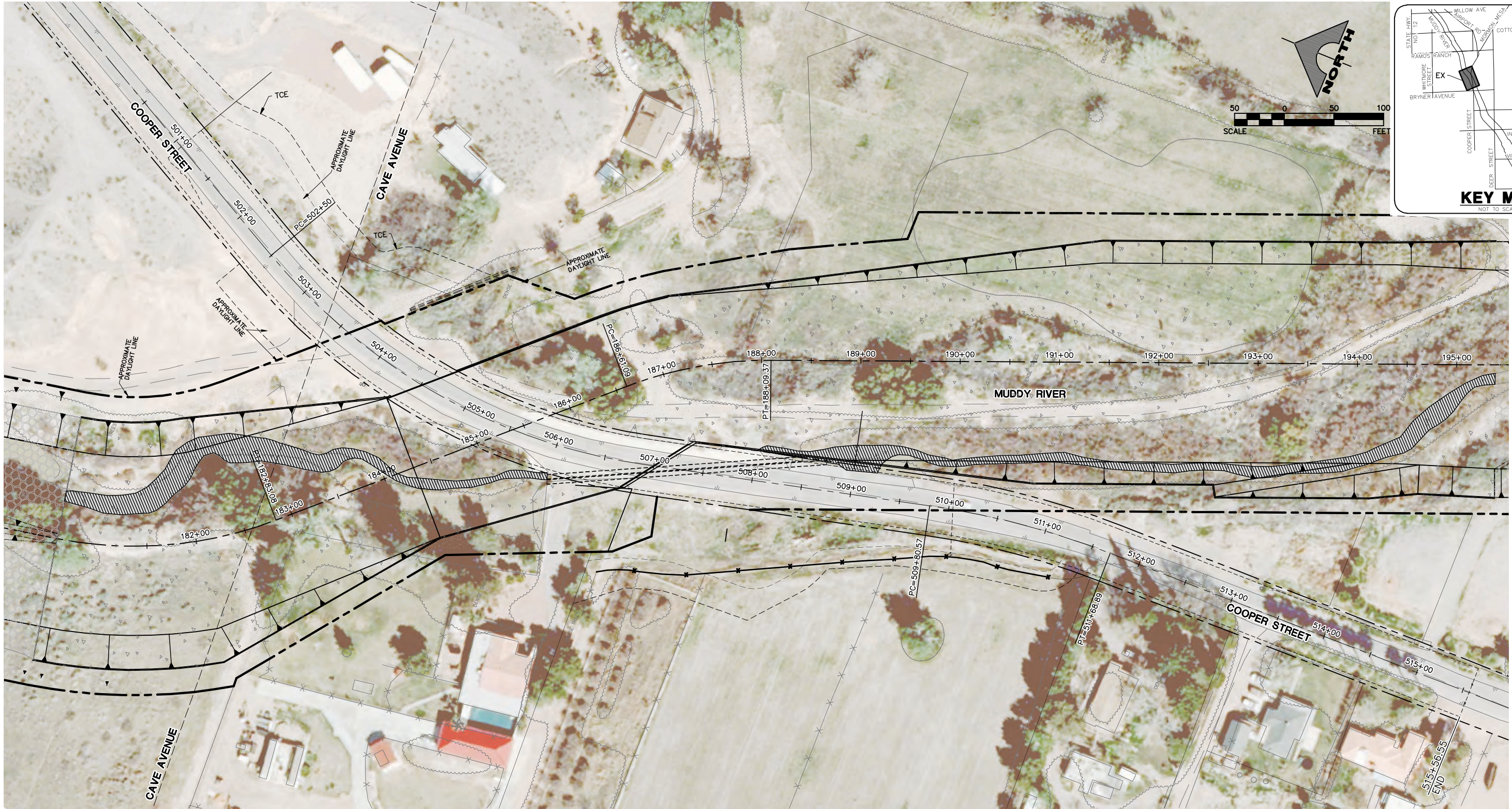
Please note that your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with the terms and conditions of the permit your authorization may be suspended, modified, or revoked. If you have any questions about this certification, please contact the Corps of Engineers.

* * * * *

I hereby certify that the work authorized by the above-referenced permit, including all the required mitigation, was completed in accordance with the terms and conditions of the permit verification.

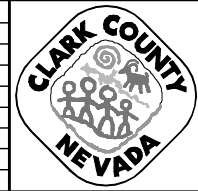
Signature of Permittee

Date



THALWEG = 0.38 ACRE

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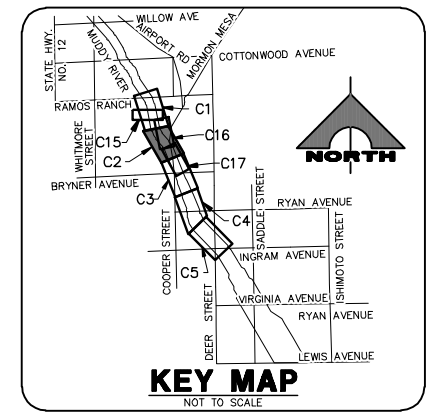


MUDDY RIVER RIVERINE ENHANCEMENT PHASE 1
 THALWEG EXHIBIT
 CLARK COUNTY, NEVADA, DEPARTMENT OF PUBLIC WORKS

PROJECT No: 500-0763 DRAWN BY: _____
 DESIGNED BY: _____ CHECKED BY: _____
 APPROVED BY: _____

G. C. WALLACE COMPANIES
 ENGINEERS | PLANNERS | SURVEYORS
 1555 S. RAINBOW BLVD. LAS VEGAS, NV 89146
 T: 702.804.2000 F: 702.804.2099 GCWALLACE.COM

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| FIELD BOOK | |
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NOTE: ALL STATIONING FROM CENTERLINE OF ROADWAY UNLESS OTHERWISE NOTED.

CONSTRUCTION NOTES

- (11) CONSTRUCT IRRIGATION PUMP BOX. (E C20)

- GABION
- NEW CONCRETE CHANNEL

DISCLAIMER NOTE

UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UNDERGROUND AND OVERHEAD UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

Call before you Dig
Avoid hitting underground utility lines. It's costly.
Call 811
OR
1-800-227-2800

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY.
CALL BEFORE YOU DO OVERHEAD

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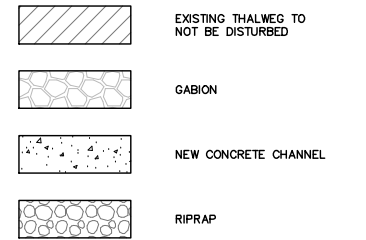
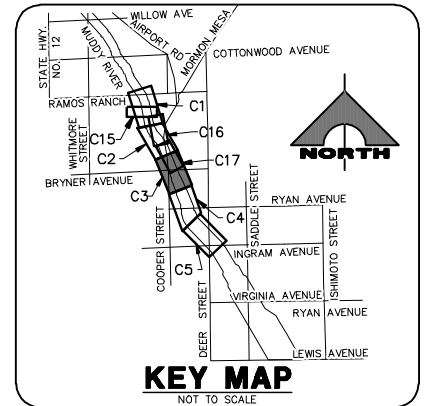
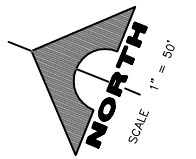


Muddy River Riverine Enhancement Phase 1
GRADING PLAN
"MR" 180+00.00 TO "MR" 192+00.00
CLARK COUNTY, NEVADA, DEPARTMENT OF PUBLIC WORKS

90%
SUBMITTAL
PRELIMINARY
NOT FOR
CONSTRUCTION

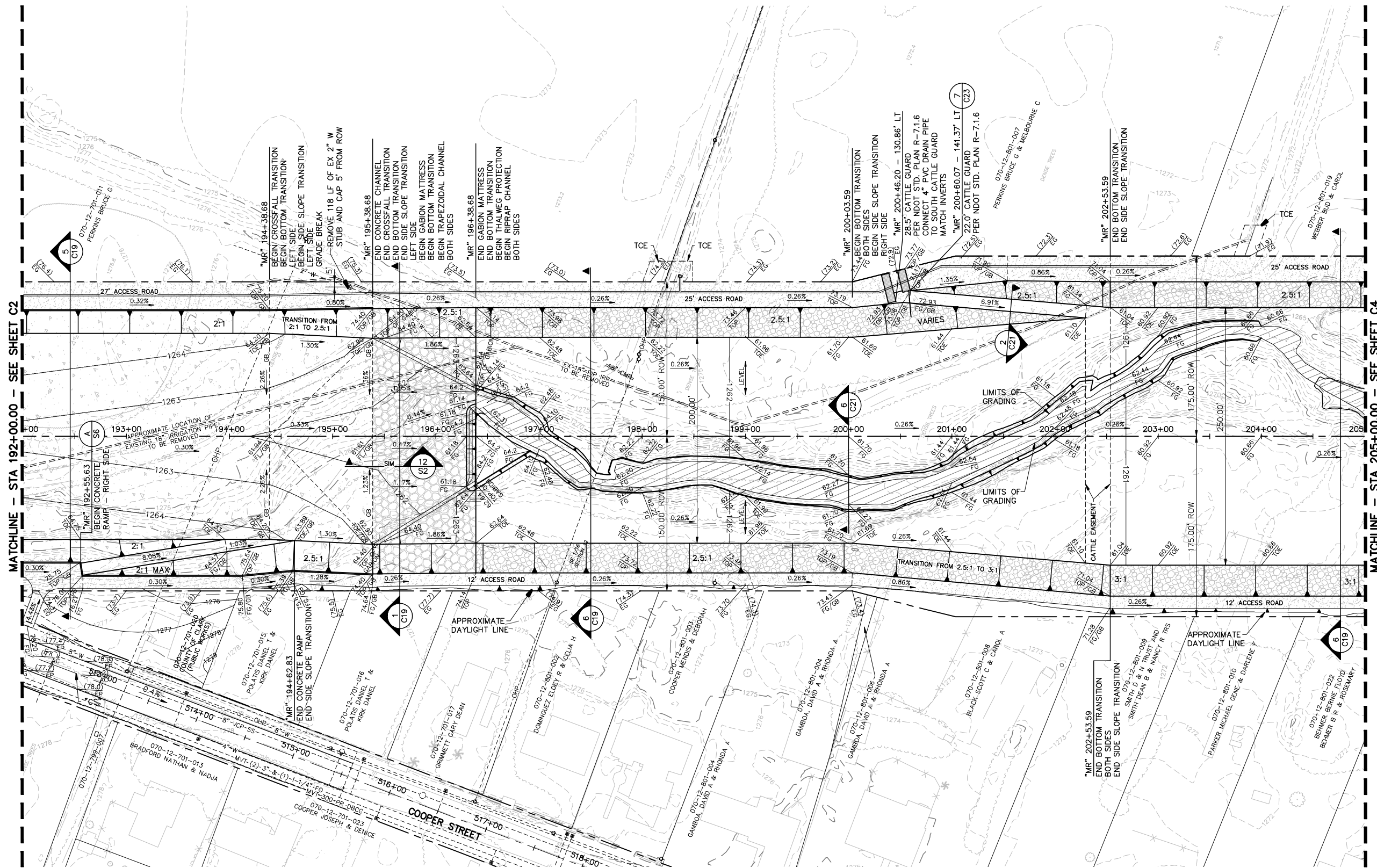
PROJECT No: 500-0763 DRAWN BY: _____
DESIGNED BY: _____ CHECKED BY: _____
APPROVED BY: _____
G. C. WALLACE COMPANIES
ENGINEERS | PLANNERS | SURVEYORS
1555 S. RAINBOW BLVD. LAS VEGAS, NV 89146
T: 702.804.2000 F: 702.804.2099 GCWALLACE.COM

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| FIELD BOOK | | SHT. OF |



DISCLAIMER NOTE

UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UNDERGROUND AND OVERHEAD UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.



MATCHLINE - STA 192+00.00 - SEE SHEET C2

MATCHLINE - STA 205+00.00 - SEE SHEET C4



MUDDY RIVER RIVERINE ENHANCEMENT PHASE 1
 GRADING PLAN
 "MR" 192+00.00 TO "MR" 205+00.00
 CLARK COUNTY, NEVADA, DEPARTMENT OF PUBLIC WORKS

90% SUBMITTAL
 PRELIMINARY
 NOT FOR CONSTRUCTION

PROJECT No: 500-0763 DRAWN BY: _____
 DESIGNED BY: _____ CHECKED BY: _____
 APPROVED BY: _____
G. C. WALLACE COMPANIES
 ENGINEERS | PLANNERS | SURVEYORS
 1555 S. RAINBOW BLVD. LAS VEGAS, NV 89146
 T: 702.804.2000 F: 702.804.2099 GCWALLACE.COM

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**MEMORANDUM OF AGREEMENT REGARDING ARCHAEOLOGICAL
TREATMENT FOR THE MUDDY RIVER FLOOD CONTROL PROJECT,
CLARK COUNTY, NEVADA**

THIS AGREEMENT, made and entered into as of this 15th day of June, 2004, by and among Clark County, Nevada, a political subdivision of the State of Nevada, hereinafter referred to as COUNTY, Nevada State Historical Preservation Officer, hereinafter referred to as NEVADA SHPO, and the United States Army Corps of Engineers, hereinafter referred to as USACOE.

WITNESSETH

WHEREAS, the COUNTY applied for a permit under Section 404 of the Clean Water Act from the USACOE for the construction of the Muddy River Flood Control, in Clark County, Nevada, hereinafter referred to as "Project"; and,

WHEREAS, the USACOE is the lead Federal Agency for this Project and responsible for the compliance with Section 106 of the Nevada State Historic Preservation Act, and consulted with NEVADA SHPO regarding effects of the Project; and,

WHEREAS, the USACOE determined that construction of the Project may adversely affect site 26CK6355, identified in the "Treatment Plan for Site 26CK6355 Located Adjacent to the Muddy River in Clark County, Nevada," dated July 2003, hereinafter referred to as "Treatment Plan," on file at Clark County Public Works, and made part of hereof by this reference, a prehistoric Native American site considered eligible for the National Register of Historical Places under Criterion D; and,

WHEREAS, the USACOE determined that any buried deposits associated with site 26CK6355 that could be present within the Project construction area may be adversely affected by construction of the Project; and,

WHEREAS, in accordance with 36 CFR Part 800, the USACOE acknowledges and accepts the advice and conditions outlined in the Advisory Council on Historic Preservation's "Recommended Approach for Consultation on the Recovery of Significant Information from Archaeological Sites," effective on July 17, 1999, hereinafter referred to as "Published Guidance"; and,

WHEREAS, the COUNTY, NEVADA SHPO and the USACOE desire to enter into a Memorandum of Agreement, hereinafter referred to as "MOA," prior to the construction of the Project, to assure implementation of a treatment plan that mitigates the impact of the Project in compliance with Section 106 of the Nevada State Historic Preservation Act; and,

*National
OS*

WHEREAS, the COUNTY desires to conduct the Treatment Plan to address possible adverse effects to such buried deposits within the Project area prior to construction, rather than halt the Project construction for treatment if buried deposits are uncovered; and,

WHEREAS, Native American tribes that may attach religious or cultural importance to the affected properties have been consulted and have raised no objection to the Project as proposed; and,

WHEREAS, no human remains, associated or unassociated funerary objects or sacred objects, or objects of cultural patrimony as defined in the Native American Graves Protection and Repatriation Act (25 U.S.C. 3001) are expected to be encountered; and,

WHEREAS, the USACOE shall ensure that the following terms and conditions will be implemented in a timely manner and with adequate resources in compliance with the National Historic Preservation Act of 1966 (16 U.S.C. 470).

NOW, THEREFORE, in acknowledgment that the foregoing is reasonably necessary, and for and in consideration of the premises and mutual covenants herein contained, the parties hereto agree as follows:

The USACOE will ensure that the following stipulations are carried out.

STIPULATION I: THE PROJECT

The Project is identified in Clark County Regional Flood Control District 2001 Master Plan Update for the Muddy River and Tributary Washes as Facility Identifier MRLV0010 through 0150, from Gubler Avenue crossing to Lewis Avenue crossing, in Overton, Nevada.

STIPULATION II: TERMS AND CONDITIONS

A. Treatment

The COUNTY will employ a professional archeologist meeting the Secretary of Interior's Professional Qualifications to implement the Treatment Plan. Recovery of significant information from site 26CK6355 will be done in accordance with the Treatment Plan. In the event field conditions require substantial changes to the procedures proposed in the Treatment Plan, the COUNTY will contact the USACOE and request re-opening consultation with NEVADA SHPO. When the fieldwork is complete, The COUNTY will provide NEVADA SHPO and the USACOE with a summary report of the fieldwork performed and a schedule for completion of that work. Upon approval of the summary report by NEVADA SHPO and USACOE the COUNTY will be allowed to proceed with construction.

B. Documentation

1. All reporting activities described in the Treatment Plan will be conducted by, or under the direction of, a professional archaeologist contracted by the COUNTY, meeting standards set forth in the Secretary of the Interior's professional qualification standards (48 FR 44738-9).
2. A draft report will be prepared documenting the results of the Phase 1 investigation following the completion of the field activities. The Treatment Plan for Phase 2 investigation will be finalized based on the results of the Phase 1 investigation. The draft report and treatment plan will be reviewed by the USACOE and NEVADA SHPO. The USACOE and NEVADA SHPO will be afforded thirty (30) days to review the draft report. The USACOE will return comments to the COUNTY to incorporate in the final Phase 1 investigation report. Said process will be followed upon completion of the Phase 2 investigation.
3. All final documentation prepared by USACOE will be sent to NEVADA SHPO and the COUNTY. Copies of the Phase I report and the Phase 2 treatment plan will be sent to the Hopi Indian Tribe.

C. Discovery of Human Remains

In the event of a discovery of any human remains all excavation work in the immediate vicinity would be halted and the USACOE would be contacted. The USACOE will immediately initiate consultation with NEVADA SHPO and the Native American Tribes pursuant to the Nevada Revised Statutes 383.

D. Curation

Any artifacts uncovered during the treatment process will be handled in accordance with 36 CFR 79. At the end of the Project, artifacts and other Project materials will be returned to Clark County (the landowner) for curation at the Clark County Museum unless the County requests that they be curated elsewhere.

E. Duration

This MOA will be in effect until the Parties determine that all of its terms been satisfactory fulfilled but not to exceed eighteen (18) months, unless the signatories agree in writing to an extension for carrying out its terms.

STIPULATION III: AMENDMENTS AND TERMINATION

A. Amendments

If any signatory to this MOA determines that its terms will not or cannot be carried out, or that an amendment to its terms must be made, that party shall immediately consult with the other parties to develop an amendment to this MOA pursuant to 36 CFR 800.6(c) (7) and 36 CFR 800.6(c) (8). The amendment will be effective on the date a copy signed by all of the original signatories is filed with the Council. If the signatories cannot agree to appropriate terms to amend the MOA, a signatory may terminate the agreement by notifying the signatories of its decision in writing.

B. Termination by COUNTY

The COUNTY may terminate this Agreement at any time prior to the commencement of any work on the Project or contracting of the archaeologist for any reason. The COUNTY may also terminate this Agreement after commencement of any work on the project provided the COUNTY complies with the requirements of the Treatment Plan for the excavated area and artifacts. Work authorized by the USACOE permit shall not be performed if this MOA is terminated prior to commencement of the Project or contracting of the archaeologist for any reason. Termination will be a basis for suspending and revoking the USACOE permit by the USACOE.

C. Notice of Termination

In the event that either party elects to terminate as provided in this Section, that party shall provide written notice of termination within thirty (30) days to the other party(ies) and the Agreement shall be deemed terminated upon receipt of such notice.

D. Term

This Agreement shall be in full force and effect from and after the date of execution of the Agreement and shall continue until the obligations of the COUNTY are fulfilled, unless terminated as provided in this Agreement.

E. Waiver

None of the conditions of this Agreement shall be considered waived by either party unless such waiver is in writing and signed by both parties. No such waiver shall be a waiver of any past or future default, breach, or modification of any of the conditions of this Agreement unless expressly stipulated in such waiver.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date herein above set forth.

UNITED STATES ARMY CORPS OF
ENGINEERS, SACRAMENTO DISTRICT

BY:  4/14/04

ANDREW J. ROSENAU
Chief, Regulatory Branch

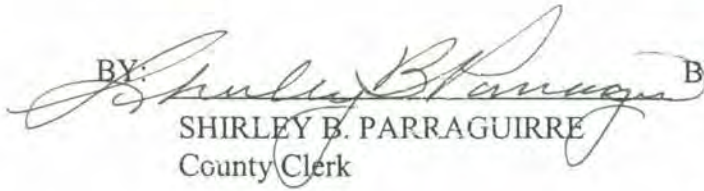
NEVADA STATE HISTORIC
PRESERVATION OFFICER

BY:  5/13/04

ALICE M. BALDRICA
Deputy

CLARK COUNTY, NEVADA

ATTEST:

BY: 
SHIRLEY B. PARRAGUIRRE
County Clerk

BY: 

THOMAS F. REILLY
County Manager

Approved as to form:

BY: 

CHRISTOPHER FIGGINS
Chief Deputy District Attorney



DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO CA 95814-2922

REPLY TO
ATTENTION OF

September 22, 2011

Regulatory Division (SPK-2002-50105)

John Catanese
Clark County Department of Public Works
500 S. Grand Central Parkway
PO Box 554000
Las Vegas, Nevada 89155-4000

Dear Mr. Catanese:

We are responding to your consultant's (Calvin Black) request for a permit modification for the Muddy River Flood Control Project. This approximately 0.38-acre project involves activities, including discharges of dredged or fill material, in waters of the United States to construct gabion grade control structures, 650-ft of concrete lining, gabion cutoff walls, and bank riprapping. The site is located on or near the Muddy River in Sections 34 and 35, Township 15 South, Range 67 East, Sections 1, 2, 12 and 13 of Township 16 South, Range 67 East, and Section 18, Township 15 South, Range 68 East, Mount Diablo Base and Meridian, Clark County, Nevada.

All terms and conditions of the previously issued permit (attached) remain valid with the exception of General Condition #1; which is amended to read as follows:

“1. The time limit for completing the work authorized ends on December 31, 2013. If you find that you need more time to complete the authorized activity, submit a request for a time extension to this office for consideration at least one month before the above date is reached.”

We appreciate your feedback. At your earliest convenience, please tell us how we are doing by completing the customer survey at <http://per2.nwp.usace.army.mil/survey.html> and select Sacramento District – St. George Office on page 2 of the survey form.

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Sincerely,

A handwritten signature in blue ink that reads "Patricia L. McQueary". The signature is written in a cursive style and is centered below the word "Sincerely,".

Patricia L. McQueary
Senior Regulatory Project Manager
St. George Regulatory Office
Sacramento District

Enclosure(s)
Original Permit

CC:
Tim Sutko
Ken MacDonald
Calvin Black
Jean Stone
Jeryl Gardner



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO, CALIFORNIA 95814-2922

October 22, 2004

Regulatory Branch (200250105)

Mr. John J. Catanese
Project Manager
Clark County Regional Flood Control District
600 South Grand Central Parkway, Suite 300
Las Vegas, Nevada 89106

Dear Mr. Catanese:

This letter of permission authorizes your proposed discharge of dredged or fill material for 14 gabion grade control structures, channel concrete lining in a 650-foot reach near the Cooper Avenue bridge crossing, bank riprapping, and gabion cut-off walls for 100-year flood channel improvements in 5 miles of the Muddy River as shown on drawings filed with the Corps of Engineers, Sacramento District, St. George Regulatory Office [Figure 1 (untitled and undated) and Sheets C1 through C18 entitled Muddy River Riverine Enhancement Predesign (including revised Sheet C18)] and with a revision relating to the Overton Wildlife Management Area, as described in a letter dated July 22, 2002 to the Corps of Engineers, Sacramento District from G.C. Wallace, Incorporated. The project is located in Sections 34 and 35, Townships 34 and 35, Range 67 East, MDB&M, near Overton, Clark County, Nevada. α

The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer. **Work in waters of the United States must be in accordance with the following conditions of authorization:**

Special Conditions:

1. All terms and conditions of the enclosed Section 401 Water Quality Certification dated October 6, 2004 from the Nevada Division of Environmental Protection are expressly incorporated as conditions of this permit.
2. To document pre- and post-project construction conditions, you shall submit pre-construction photos of the project site prior to project commencement and post-construction photos of the project site within 30 days after project completion.

3. To insure your project complies with the Federal Endangered Species Act, you must implement all of the mitigating measures identified in the enclosed Fish and Wildlife Service letter of concurrence (I-5-03-I-439 dated December 17, 2002), including those ascribed to the Corps therein. If you are unable to implement any of these measures, you must immediately notify this office and the Fish and Wildlife Service so we may consult as appropriate, prior to initiating the work, in accordance with Federal law.

4. Best management practices must be followed during and after construction to minimize potential direct and indirect adverse impacts to adjacent waters of the United States, including wetlands.

5. You must furnish a certification report that the work, including any mitigation, has been completed in accordance with the conditions of this permit. This certification must be signed by the permittee or authorized representative and provided to this office no later than 60 days following the completion of the authorized work.

6. The enclosed Memorandum of Agreement (MOA) between the permittee, the Nevada State Historic Preservation Officer and this office regarding the archaeological treatment for the authorized work is expressly incorporate into and made a part of this permit. The permittee shall ensure that all aspects of the MOA and the referenced treatment plan for site 26CK6355 are implemented. Failure to do will be grounds for suspending, modifying, or revoking this permit.

7. The permittee shall avoid and minimize adverse impacts to the aquatic ecosystem of the Muddy River to the maximum extent practicable and as stipulated in permittee's supporting documents in the permit application for the authorized work. Prominent among these stipulations is the permittee's commitment to avoid alteration of the low flow channel of the river (except for the footprint of grade control structures) and adjacent riparian vegetation (except for periodic maintenance cutting to a 3 to 4-foot height). This is noted as "EXIST THALWEG TO REMAIN" in the project drawings. See also special condition 3 above for additional river corridor alteration avoidance bordering Nevada's Overton Wildlife Management Area.

8. Prior to commencing the authorized work, construction personnel shall be given specific written instructions concerning the various commitments, stipulations, terms and conditions of this permit and other supporting documents, for avoiding and minimizing adverse impacts to the Muddy River aquatic ecosystem.

9. To compensate for the loss of 0.42 acre of waters of the United States, the permittee shall pay an in-lieu fee equivalent to 0.5 acre (presently, \$70,600 based upon 0.5 acre multiplied by \$14,120 per 0.1 acre) in the Clark County, Nevada In-Lieu Fee Wetlands Mitigation Program. Written proof of this payment shall be submitted to this office within 30 days of the commencement of the authorized work.

10. To avoid violation of the Migratory Bird Treaty Act, land clearing (or other surface disturbance) including subsequent vegetation maintenance, shall be conducted outside of the avian breeding season. If this is not feasible, a qualified biologist shall survey the area prior to land clearing or other surface disturbance. If active nests are located, or if other evidence of nesting (mated pairs, territorial defense, carrying nesting material, transporting food) is observed, a protective buffer (the size depending on the requirements of the species) shall be delineated and the entire area avoided to prevent destruction or disturbance to nests until they are no longer active. Contact Ms. Amy LaVoie of the U.S. Fish and Wildlife Service at (702) 515-5230 for further advice and information. Failure to comply may be grounds for modifying, suspending or revoking this Letter of Permission for the authorized work.

General Conditions:

1. The time limit for completing the work authorized ends on December 31, 2009. If you find that you need more time to complete the authorized activity, submit a request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of these requirements if you abandon the permitted activity. This permit may be transferred upon request provided the work complies with the terms and conditions of this authorization. When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. Should you wish to cease to maintain the authorized activity or abandon it without a good faith transfer, you must obtain a permit modification from this office.
3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what

you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

- () Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).
- (X) Section 404 of the Clean Water Act (33 U.S.C. 1344).
- () Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

- a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.
- b. This permit does not grant any property rights or exclusive privileges.
- c. This permit does not authorize any injury to the property or rights of others.
- d. This permit does not authorize interference with any existing or proposed Federal projects.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

- a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
- b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

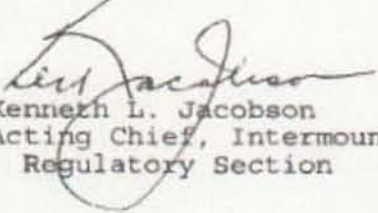
- c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
 - d. Design or construction deficiencies associated with the permitted work.
 - e. Damage claims associated with any future modification, suspension, or revocation of this permit.
4. The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.
5. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:
- a. You fail to comply with the terms and conditions of this permit.
 - b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (see 4 above).
 - c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5.

6. Extensions. General Condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

This letter of permission becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below. I am enclosing a notice of appeal options. Please refer to number 200250105 in any correspondence concerning this permit. If you have any questions, please contact Mr. Grady L. McNure at telephone number 435-986-3979.

For and on behalf of Ronald N. Light, Colonel, Corps of Engineers, District Engineer.


Kenneth L. Jacobson
Acting Chief, Intermountain
Regulatory Section

4 Enclosures

Copies Furnished (without enclosures):

Mr. Robert Williams, U.S. Fish and Wildlife Service, 1340
Financial Boulevard, Suite 234, Reno, Nevada 89502-7147
Mr. Glen Gentry, Nevada Division of Environmental Protection,
333 West Nye Lane, Room 138, Carson City, Nevada 89710-0851
Ms. Alice Baldrice, Deputy Nevada State Historic Preservation
Office, Nevada Department of Cultural Affairs, 100 North
Stewart Street, Carson City, Nevada 89701

| | | |
|---|--|-------------------|
| Applicant: Clark County Regional Flood Control Dist | File Number: 200250105 | Date: 22 Oct 2004 |
| Attached is: | | See Section below |
| | INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission) | A |
| X | PROFFERED PERMIT (Standard Permit or Letter of permission) | B |
| | PERMIT DENIAL | C |
| | APPROVED JURISDICTIONAL DETERMINATION | D |
| | PRELIMINARY JURISDICTIONAL DETERMINATION | E |

SECTION II

- A: INITIAL PROFFERED PERMIT:** You may accept or object to the permit.
- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the DISTRICT engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
 - **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the DISTRICT engineer. Your objections must be received by the DISTRICT engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the DISTRICT engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the DISTRICT engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.
- B: PROFFERED PERMIT:** You may accept or appeal the permit
- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the DISTRICT engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
 - **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the DIVISION (not district) engineer (address on reverse). This form must be received by the DIVISION engineer within 60 days of the date of this notice.
- C: PERMIT DENIAL:** You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the DIVISION (not district) engineer (address on reverse). This form must be received by the DIVISION (not district) engineer within 60 days of the date of this notice.
- D: APPROVED JURISDICTIONAL DETERMINATION:** You may accept or appeal the approved JD or provide new information.
- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
 - **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the DIVISION (not district) engineer (address on reverse). This form must be received by the DIVISION engineer within 60 days of the date of this notice. Exception: JD appeals based on new information must be submitted to the DISTRICT engineer within 60 days of the date of this notice.
- E: PRELIMINARY JURISDICTIONAL DETERMINATION:** You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II: REASONS FOR APPEAL OR OBJECTIONS TO AN INITIAL DECISION

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:

DISTRICT ENGINEER
Sacramento District, Corps of Engineers
Attn: Andrew J. Rosenau, Chief, Regulatory Branch
1325 J Street, Sacramento, CA 95814-2922

(Use this address for submittals to the DISTRICT ENGINEER)

If you only have questions regarding the appeal process you may also contact:

DIVISION ENGINEER
Army Engineer Division, South Pacific, CESPD-CM-O
Attn: Doug Pomeroy, Administrative Appeal Review Officer
333 Market Street, San Francisco, CA 94105 (415-977-8035)

(Use this address for submittals to the DIVISION ENGINEER)

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

| | | |
|----------------------------------|-------|-------------------|
| Signature of appellant or agent. | Date: | Telephone number: |
|----------------------------------|-------|-------------------|



United States Department of the Interior: 50

FISH AND WILDLIFE SERVICE
NEVADA FISH AND WILDLIFE OFFICE
1340 FINANCIAL BOULEVARD, SUITE 234
RENO, NEVADA 89502

RFCO

KEVIN
TIM
file

December 17, 2002
File No. I-5-03-I-439

Mr. Grady McNure
Chief, St. George Regulatory Office
US Army Corps of Engineers
321 North Mall Drive, Suite L-101
St. George, Utah 84770-7310

Dear Mr. McNure:

Subject: Lower Muddy River Flood Control Project near Overton, Clark County, Nevada

This letter responds to the July 30, 2002, letter from the U.S. Army Corps of Engineers (Corps), requesting the initiation of consultation with the Fish and Wildlife Service (Service) regarding effects to the federally-listed as endangered southwestern willow flycatcher (*Empidonax traillii extimus*) resulting from the proposed Lower Muddy River Flood Control Project. The Corps' request was submitted pursuant to section 7 of the Endangered Species Act of 1973, as amended (Act) (16 U.S.C. 1531, *et seq.*). In your letter of July 30, 2002, you requested concurrence from the Service that the proposed project is *not likely to adversely affect* the southwestern willow flycatcher, and also offered the option that, in the event that the Service did not concur with the *not likely to adversely affect* determination, your letter should be considered a request for formal consultation. The Service responded on August 27, 2002, with a letter initiating formal consultation with the Corps regarding likely adverse effects to the southwestern willow flycatcher resulting from the proposed project (File No. 1-5-02-F-529).

Upon further review of the project design, and additional consideration of proposed actions to minimize effects to the southwestern willow flycatcher and its habitat, the Service now concurs with the Corps' determination that the Lower Muddy River Flood Control Project is *not likely to adversely affect* the southwestern willow flycatcher based on the information below. This consultation has been assigned a new file number of 1-5-03-I-439. Please refer to this file number in all future correspondence regarding this project. Our comments regarding the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 *et seq.*), and the Migratory Bird Treaty Act (40 Stat. 755, as amended; 16 U.S.C. 703 *et seq.*) that were provided in our letter of April 30, 2002, remain valid.

The project area is located near the city of Overton, Clark County, Nevada, approximately 55 miles northeast of the City of Las Vegas. The proposed project will impact approximately

Mr. Grady McNure

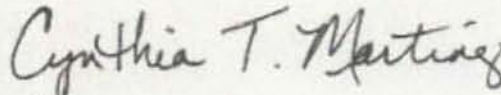
File No. 1-5-03-I-439

for the adequate conveyance of peak flows in the presence of unmaintained floodplain vegetation, thereby leaving potential southwestern willow flycatcher breeding habitat intact.

Based on the above information and your proposed conservation measure, we concur with your determination that the proposed project is *not likely to adversely affect* the southwestern willow flycatcher. This response constitutes informal consultation under regulations promulgated in 50 CFR § 402.14, which establish procedures governing interagency consultation under section 7 of the Act. This informal consultation does not authorize any incidental take of southwestern willow flycatcher. Should the project description or habitat conditions change, effect determinations should be reevaluated.

We appreciate the assistance and cooperation of your staff throughout this consultation process. If we can be of any further assistance, please contact Dan Reinkensmeyer in our Southern Nevada Field Office at (702) 515-5230.

Sincerely,



for Robert D. Williams
Field Supervisor

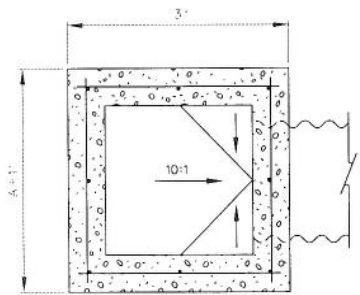
cc:

Executive Vice President, G. C. Wallace, Inc., Las Vegas, Nevada
Environmental Sciences Program Manager, PBS&J, Henderson, Nevada
Associate Engineer, Clark County Public Works, Las Vegas, Nevada
Supervisory Biologist-Habitat, Nevada Division of Wildlife, Las Vegas, Nevada

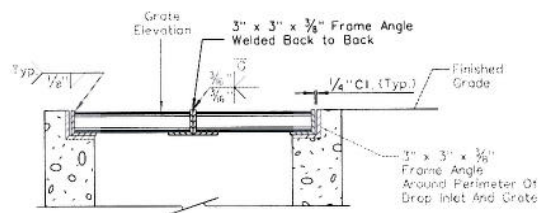
APPENDIX B

REFERENCED STANDARD DRAWINGS

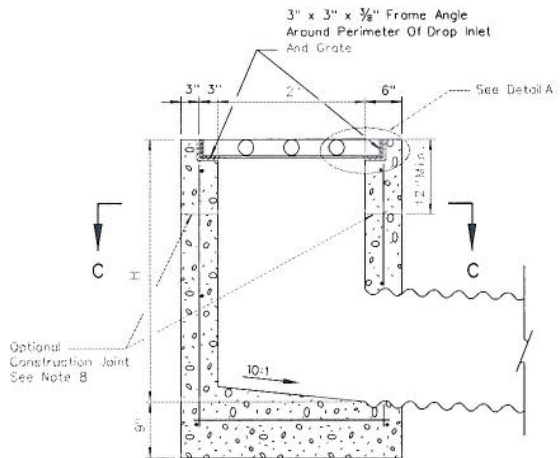
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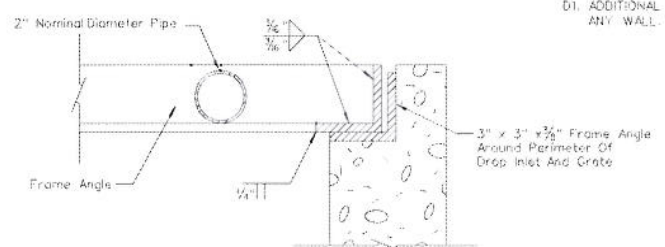
SECTION C-C



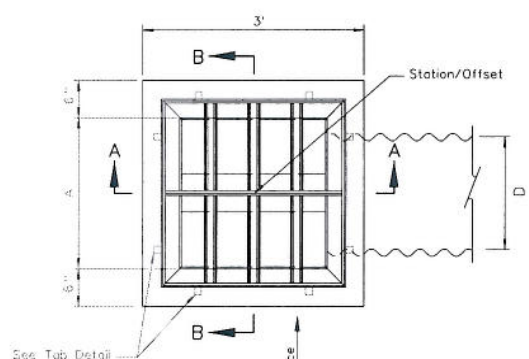
SECTION B-B



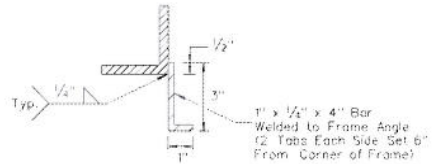
SECTION A-A



DETAIL A



PLAN



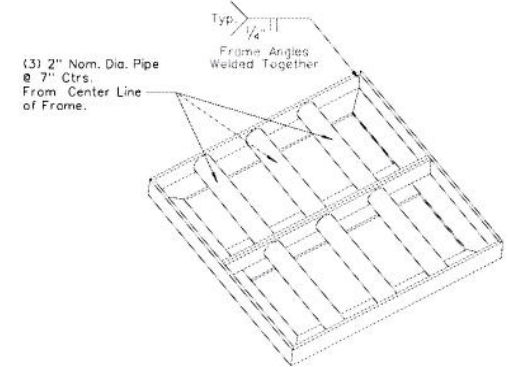
TAB DETAIL

NOTES:

1. ALL CONCRETE SHALL BE CLASS A OR AA.
2. REINFORCING STEEL SHALL BE NO. 4 BARS WITH MAXIMUM SPACING AT 18" CENTERS, WIRED TIGHTLY AT ALL INTERSECTIONS AND EMBEDDED 2" CLEAR OF ALL CONCRETE SURFACES.
3. EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1".
4. STRUCTURAL STEEL WEIGHT INCLUDES THE 2" NORMAL DIAMETER PIPE STANDARD WEIGHT AND 3"x3"x3/8" FRAME ANGLES.
5. FOR 2" NOMINAL DIAMETER PIPE SEE ASTM A53.
6. SEE SHEET R-2.9.1 FOR DETAILS IF CONNECTING HDPE PIPE.
7. SLOPE CATCH BASIN FLOORS 10:1 FROM ALL DIRECTIONS TOWARD OUTLET PIPE. IF BASIN IS USED AS A JUNCTION, SHAPE FLOW LINE(S) TO OUTLET PIPE AND PROVIDE A 10:1 SLOPE TO FLOW LINE(S).
8. RUN REBAR CONTINUOUS THRU CONSTRUCTION JOINT. JOINT MUST BE A MIN. 3" FROM HORIZONTAL BARS.

DESIGN NOTES:

- D1. ADDITIONAL PIPE PENETRATIONS MAY BE PLACED IN ANY WALL.



GRATE DETAIL

| R C P | PIPE SIZE (INCH) | A | H Min. (FT) | CONCRETE (CU. YD.) | | REINFORCING (LB) | | STRUCTURAL STEEL (LB) |
|------------------|---------------------|-------|----------------|-------------------------|--------------------------|-------------------------|----------------------|--------------------------|
| | | | | BASE QUAN. (H. Min.) | ADD RATE (CU. YD./FT) | BASE QUAN. (H. Min.) | ADD RATE (LB./FT) | |
| H D P E | 15" | 2" | 2.50 | 0.71 | 0.19 | 36 | 10 | 200 |
| | 18" | 2" 6" | 3.00 | 0.89 | 0.20 | 40 | 10 | 220 |
| | 24" | 3" | 3.50 | 1.08 | 0.22 | 58 | 12 | 240 |
| | 30" | 3' 6" | 4.00 | 1.28 | 0.24 | 63 | 12 | 260 |
| C M P | 36" | 4" | 4.50 | 1.50 | 0.26 | 67 | 13 | 280 |
| | 42" | 4' 6" | 5.00 | 1.71 | 0.28 | 90 | 15 | 300 |
| | 48" | 5' | 5.50 | 1.94 | 0.30 | 95 | 15 | 319 |

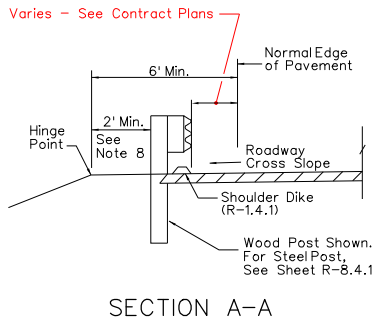
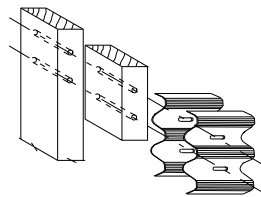
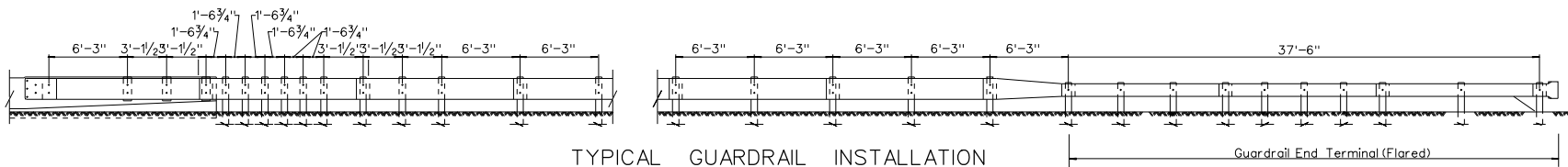
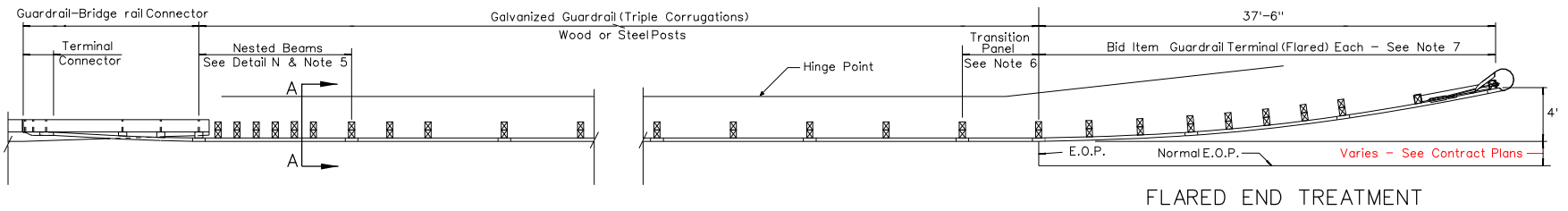
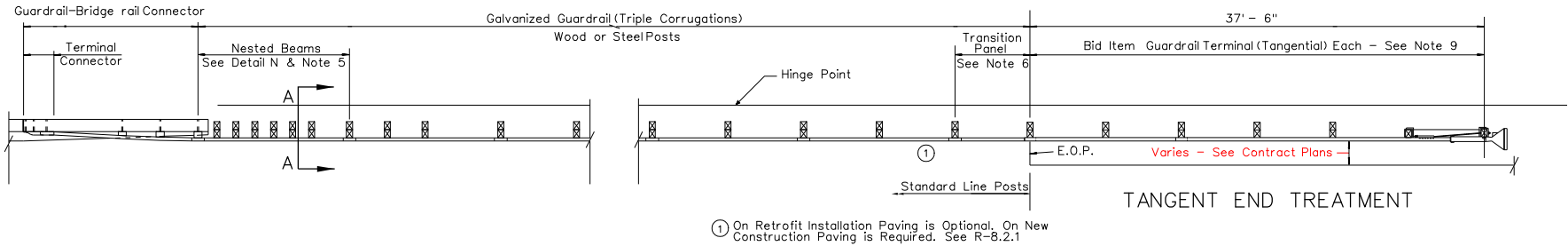
The Concrete And Reinforcing Quantities Are Based On The H Min. Shown. Increase The Concrete And Reinforcing Base Quantity By The Corresponding Add Rate (Per Foot Of Increased H) If The H Specified Is Larger Than H Min.

NEVADA DEPARTMENT OF TRANSPORTATION

**TYPE 2A
DROP INLET**

| | | |
|---------------------------|---------------|---------------|
| Signed Original On File | R-4.2.1.1 | (609) |
| CHIEF HYDRAULICS ENGINEER | ADOPTED 11/70 | REVISION 5/09 |

R-43

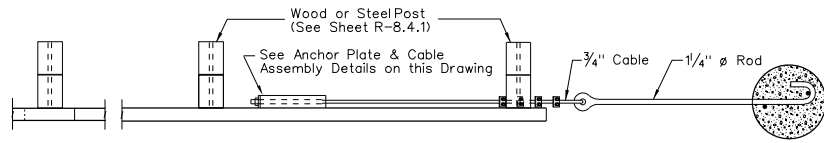


NOTES:

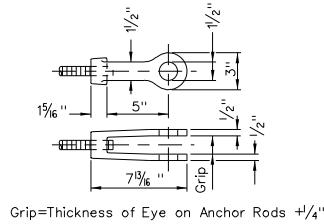
- FOR DETAILS AND DIMENSIONS NOT SHOWN SEE SHEETS R-8.1.2 THRU R-8.4.3.
- SEE SHEET T-35.3.1 FOR SPECIAL GUARDRAIL TERMINAL END FOR RAILROAD CROSSING.
- SEE SHEET R-8.2.2 FOR TRAILING END ANCHOR.
- MINIMUM INSTALLATION:

| | |
|---------------------------------|---------------|
| GUARDRAIL-BRIDGE RAIL CONNECTOR | - 14'-4 3/4" |
| NESTED BEAM SECTION | - 12'-6" |
| THRIE BEAM SECTION | - 12'-6" |
| TRANSITION PANEL | - 6'-3" |
| APPROVED "350" TERMINAL | - 37'-6" |
| | - 83'-19 1/4" |
- ANY OTHER VARIATION THAT REDUCES THE MINIMUM LENGTH SHALL REQUIRE APPROVAL OF THE CHIEF ROAD DESIGN ENGINEER.
- NO DIRECT PAYMENT FOR THE ADDITIONAL GUARDRAIL PANEL.
- THE LENGTH OF THE TRANSITION PANEL (6'-3") SHALL BE ADDED TO THE ESTIMATED LENGTH OF THE THRIE BEAM GUARDRAIL, SEE SHEET R-8.4.1.
- FOR GRADING DETAILS NOT SHOWN, SEE SHEET R-8.2.1. FOR OTHER APPROVED "350" TERMINALS NOT SHOWN, REFER TO MANUFACTURERS DRAWINGS.
- ON RETROFIT INSTALLATIONS IF MINIMUM CANNOT BE MET AND THE DISTANCE BETWEEN BACK OF POST AND HINGE POINT IS LESS THAN 2', THE POST SHALL BE LENGTHENED 1' MIN.
- WHEN GUARDRAIL IS PLACED AT NORMAL EDGE OF PAVEMENT, THE TANGENT END TREATMENT SHALL BE FLARED @ 50:1 TAPER TO GET HEAD PIECE CLEAR OF EDGE OF PAVEMENT.
- APPROACH GUARDRAIL TERMINALS SHALL BE "NCHRP 350", FHWA, AND NDOT APPROVED.
- A REFLECTORIZED OBJECT MARKER SHALL BE INSTALLED ON THE IMPACT HEAD OF THE APPROVED "350" TERMINAL PER MANUFACTURERS RECOMMENDATIONS.
- ALL WOOD/STEEL POSTS SHALL BE STAMPED WITH THE LENGTH ON OR NEAR THE TOP SURFACE IN A CONSPICUOUS PLACE. THE STAMPED LETTERING SHALL BE 1/2" HIGH AND 1/4" DEEP FOR WOOD AND 1/4" TO 3/8" IN HEIGHT FOR STEEL. IF THE LETTERING IS DISTURBING DURING INSTALLATION IT SHALL BE RE-STAMPED.

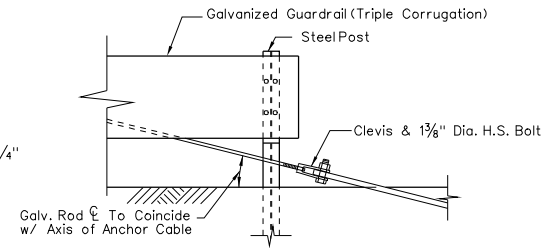
| | | |
|---|--------------|---------------|
| NEVADA DEPARTMENT OF TRANSPORTATION | | |
| TYPICAL GUARDRAIL INSTALLATION | | |
| Signed Original On File | R-8.1.1 | (618) |
| CHIEF ROAD DESIGN ENGR. | ADOPTED 1/89 | REVISION 5/09 |



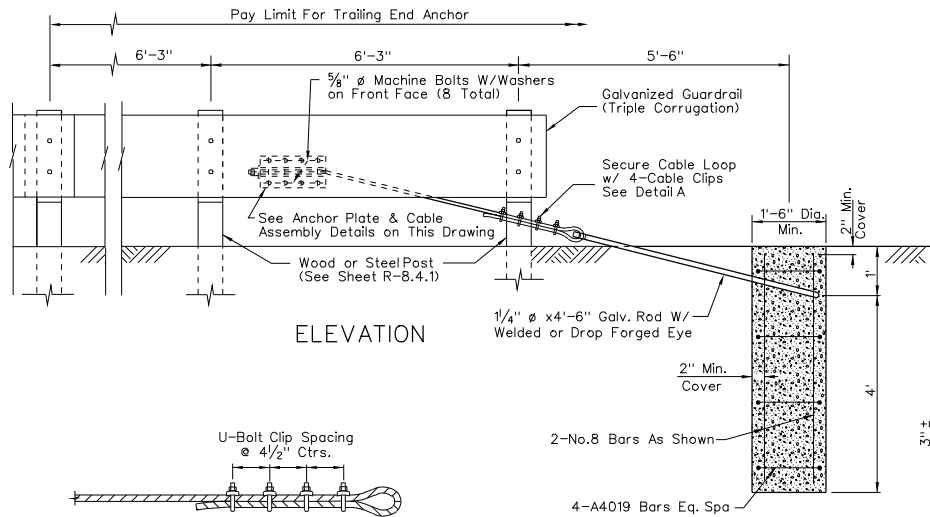
PLAN



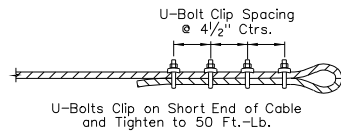
CLEVIS



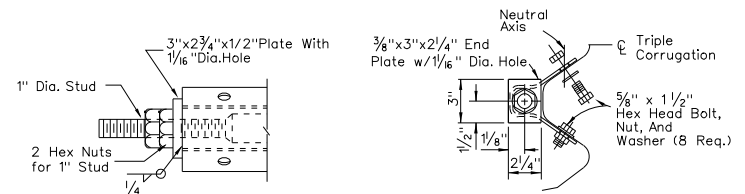
DETAIL B
CABLE ANCHOR ASSEMBLY STEEL POST GUARD RAIL
See Note 3



ELEVATION



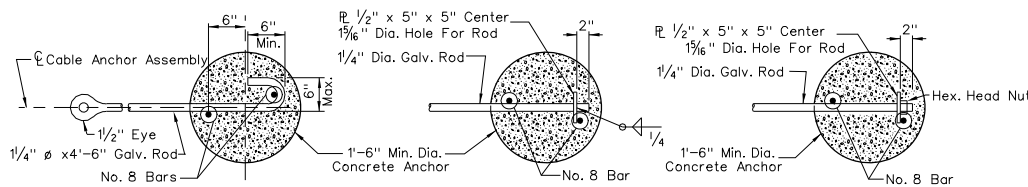
DETAIL A
CABLE CLIP INSTALLATION
See Note 3



ANCHOR PLATE DETAILS

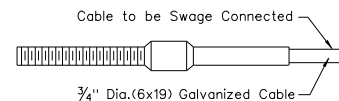
NOTES:

- ANCHOR CABLE TO BE PARALLEL TO GUARD RAIL FOR STRAIGHT RUNS OF RAIL. ANCHOR CABLE MAY HAVE ANGLE POINT AT ANCHOR PLATE IF GUARD RAIL IS CURVED.
- ANCHOR ROD HOOKS TO BE IN CONTACT WITH ANCHOR REINFORCEMENT WHEN CONCRETE IS PLACED. WIRE TIES MAY BE USED TO POSITION ANCHOR RODS.
- CABLE CLIP CONNECTION (DETAIL A) OR CLEVIS AND BOLT CONNECTION (DETAIL B) TO BE USED WITH WOOD POST GUARD RAILING INSTALLATION. FOR STEEL POST GUARD RAIL INSTALLATIONS, CLEVIS AND BOLT CONNECTION (DETAIL B) IS TO BE USED. OTHER ALTERNATIVES FOR ATTACHING CABLE TO ANCHOR ROD MUST BE APPROVED BY THE ENGINEER.
- FOR TRAILING END ANCHOR CONCEPT, REFER TO PLAN VIEW SHOWN ON SHEETS R-8.1.2 AND R-8.3.1.
- CONCRETE SHALL BE CLASS A OR AA.
- THE TRAILING END ANCHOR SHALL BE INSTALLED OUTSIDE THE CLEAR ZONE FOR OPPOSING TRAFFIC.
- CABLE SHALL BE RESTRAINED FROM MOVING DURING TIGHTENING.



SINGLE ANCHOR

OPTIONAL ANCHOR ROD END DETAILS
Single Anchors Only

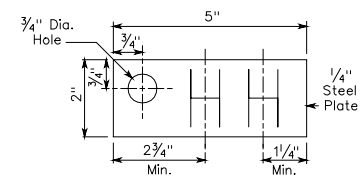
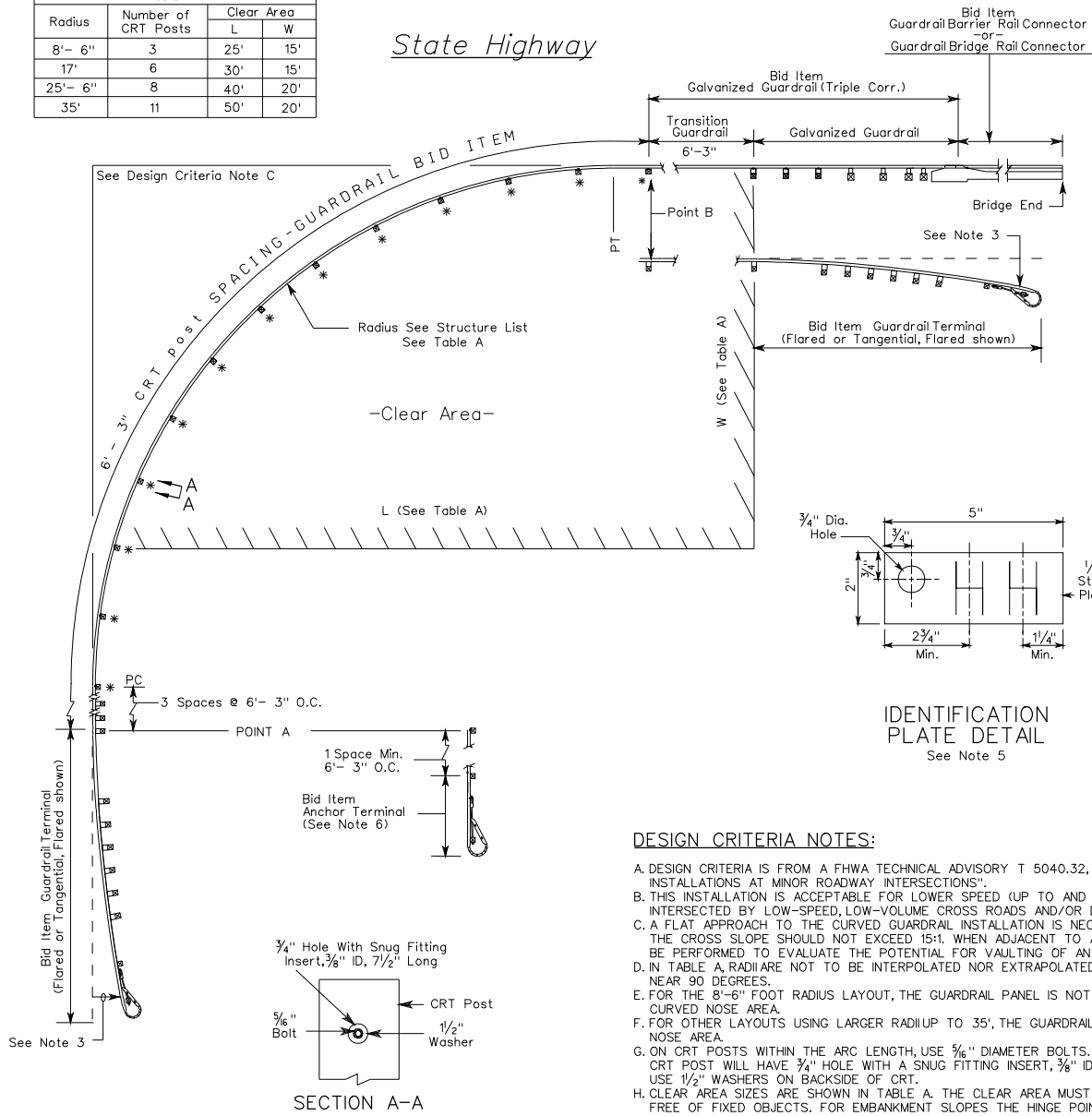


CABLE ASSEMBLY DETAILS

| | | |
|-------------------------------------|--------------|---------------|
| NEVADA DEPARTMENT OF TRANSPORTATION | | |
| TRAILING END ANCHOR | | |
| Signed Original On File | R-8.2.2 | (618) |
| CHIEF ROAD DESIGN ENGR. | ADOPTED 7/96 | REVISION 6/04 |

| Table A | | | |
|---------|---------------------|------------|-----|
| Radius | Number of CRT Posts | Clear Area | |
| | | L | W |
| 8'- 6" | 3 | 25' | 15' |
| 17' | 6 | 30' | 15' |
| 25'- 6" | 8 | 40' | 20' |
| 35' | 11 | 50' | 20' |

State Highway



IDENTIFICATION PLATE DETAIL
See Note 5

NOTES:

- USE OF THIS DETAIL REQUIRES CHIEF ROADWAY DESIGN ENGINEER APPROVAL. THIS INSTALLATION IS INTENDED FOR THE LEADING SIDE TO A BRIDGE END, ESPECIALLY WHERE INADEQUATE ROOM IS AVAILABLE TO INSTALL OTHER STANDARD INSTALLATIONS OF GUARDRAIL-BRIDGE RAIL CONNECTORS, GUARDRAIL AND GUARDRAIL TERMINALS (FLARED) OR GUARDRAIL TERMINAL (TANGENTIAL) DUE TO A NEARBY CROSSROAD OR APPROACH.
 - SEE CONTRACT STRUCTURE LIST AND STANDARD PLANS FOR TRANSITION AND TERMINAL CONNECTOR TYPE.
 - THE SLOPE FROM THE EDGE OF THE SHOULDER INTO THE FACE OF THE GUARDRAIL SHOULD BE 10:1 OR FLATTER. SEE SHEET R-8.2.1.
 - GUARDRAIL INSTALLATION SHALL BE W-BEAM GUARDRAIL WITH BREAKAWAY CRT POSTS AND WITHOUT BLOCKS. CRT (CONTROLLED RELEASE TERMINAL) TIMBER POSTS ARE SHOWN AS ITEM "PDE09" IN THE ASHTO-AGC-ARTBA JOINT COMMITTEE TASK FORCE 13 REPORT "A GUIDE TO STANDARDIZED HIGHWAY BARRIER HARDWARE".
 - RADIUS IN FEET SHALL BE ETCHED INTO PLATE REPLACING THE LETTERS "HH" SHOWN ON THE IDENTIFICATION PLATE DETAIL. DIGITS SHALL BE 1/2" MINIMUM HEIGHT AND 3/4" MAXIMUM WIDTH. PLATE SHALL BE GALVANIZED AFTER ETCHING.
- THE GUARDRAIL IDENTIFICATION PLATE SHALL BE MOUNTED AT THE LOWER SPLICE BOLT ON THE BACK SIDE OF THE RAIL ELEMENT AT THE PC OF THE GUARDRAIL RADIUS.
- ANCHOR TERMINAL TO BE USED ONLY WHEN THERE IS NOT ENOUGH ROOM TO ACCOMMODATE AN NCHRP REPORT 350 TERMINAL.

LEGEND:

- Clear Area
- CRT Posts, No Blocks, See Note 4.

DESIGN CRITERIA NOTES:

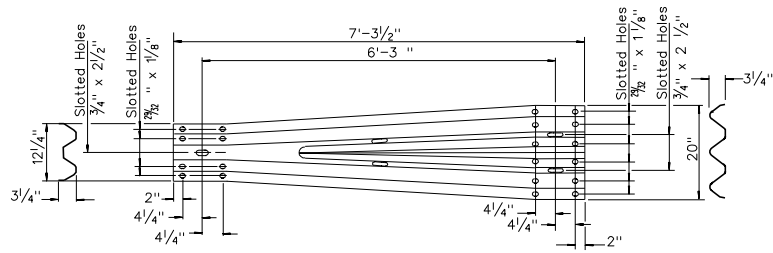
- DESIGN CRITERIA IS FROM A FHWA TECHNICAL ADVISORY T 5040.32, DATED APRIL 13, 1992 CALLED "CURVED W-BEAM GUARDRAIL INSTALLATIONS AT MINOR ROADWAY INTERSECTIONS".
- THIS INSTALLATION IS ACCEPTABLE FOR LOWER SPEED (UP TO AND EQUAL TO 50 mph), LOW-VOLUME THROUGH ROADWAYS INTERSECTED BY LOW-SPEED, LOW-VOLUME CROSS ROADS AND/OR DRIVEWAYS.
- A FLAT APPROACH TO THE CURVED GUARDRAIL INSTALLATION IS NECESSARY TO ENSURE PROPER PERFORMANCE OF THE SYSTEM. THE CROSS SLOPE SHOULD NOT EXCEED 15:1. WHEN ADJACENT TO A SUPERELEVATED SECTION ON THE MAINLINE, AN ANALYSIS SHOULD BE PERFORMED TO EVALUATE THE POTENTIAL FOR VAULTING OF AN ERRANT VEHICLE.
- IN TABLE A, RADII ARE NOT TO BE INTERPOLATED NOR EXTRAPOLATED. THIS INSTALLATION IS BASED ON INTERSECTION ANGLES NEAR 90 DEGREES.
- FOR THE 8'-6" FOOT RADIUS LAYOUT, THE GUARDRAIL PANEL IS NOT BOLTED TO THE ONE CRT POST AT THE CENTER OF THE CURVED NOSE AREA.
- FOR OTHER LAYOUTS USING LARGER RADIUS UP TO 35', THE GUARDRAIL PANEL IS BOLTED TO THE CRT POSTS IN THE CURVED NOSE AREA.
- ON CRT POSTS WITHIN THE ARC LENGTH, USE 5/16" DIAMETER BOLTS. EACH CRT POST WILL HAVE 3/4" HOLE WITH A SNUG FITTING INSERT, 3/8" ID x 7/2" LONG. USE 1/2" WASHERS ON BACKSIDE OF CRT.
- CLEAR AREA SIZES ARE SHOWN IN TABLE A. THE CLEAR AREA MUST BE KEPT FREE OF FIXED OBJECTS. FOR EMBANKMENT SLOPES THE HINGE POINT SHOULD BE GREATER THAN 2' BEHIND THE BACK OF POSTS. EMBANKMENT SLOPES WILL BE FLATTER THAN OR EQUAL TO A 2:1 MAXIMUM. THE CLEAR AREA SHOULD BE KEPT FREE OF PEDESTRIAN WALKWAYS.
- USE THE ANCHOR TERMINAL WITH LOW-SPEED, LOW-VOLUME FACILITIES WITH A STOP CONDITION ON CROSS ROAD OR APPROACH.

R-97

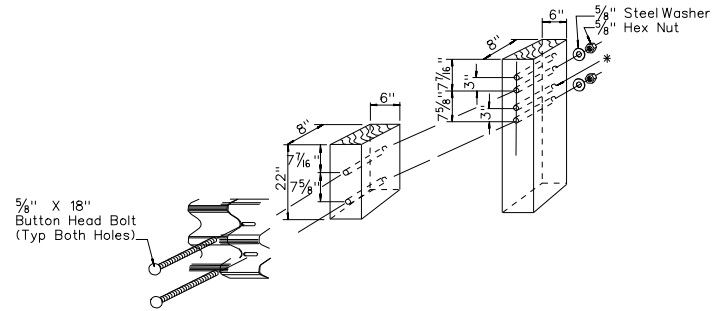
NEVADA DEPARTMENT OF TRANSPORTATION

**SPECIAL GUARDRAIL
INSTALLATION
CRT**

| | | |
|-------------------------|--------------|---------------|
| Signed Original On File | R-8.2.4 | (618) |
| CHIEF ROAD DESIGN ENGR. | ADOPTED 1/01 | REVISION 2/02 |



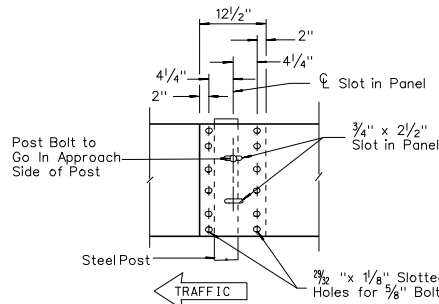
TRANSITION SECTION



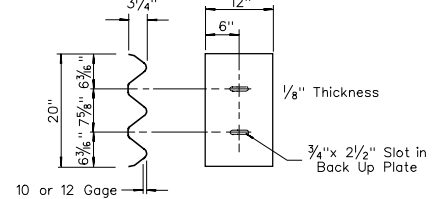
BLOCK/POST DETAIL
All Holes To Be 1/8" Dia.



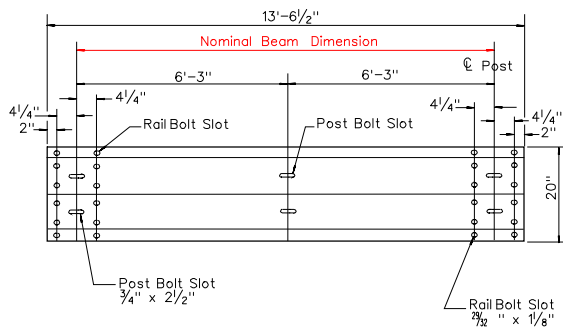
PLAN VIEW



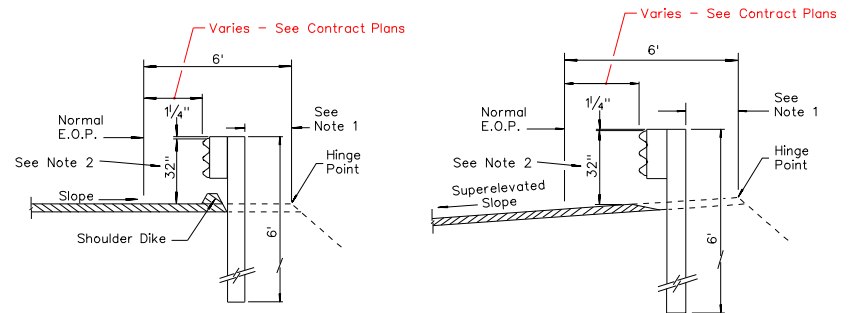
RAIL SPLICE



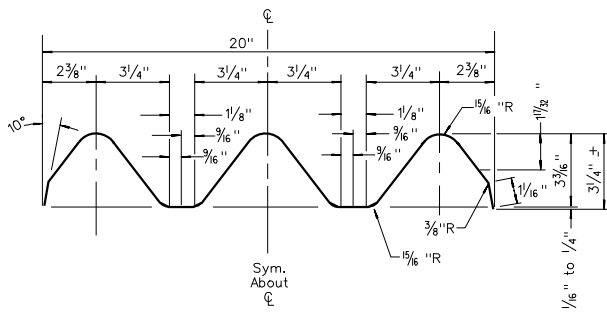
BACK-UP PLATE
(For Use Between Guardrail and Steel Block at Posts Between Rail Splices)



FRONT ELEVATION



TYPICAL GUARDRAIL INSTALLATIONS



SECTION THROUGH RAIL ELEMENT

NOTES:

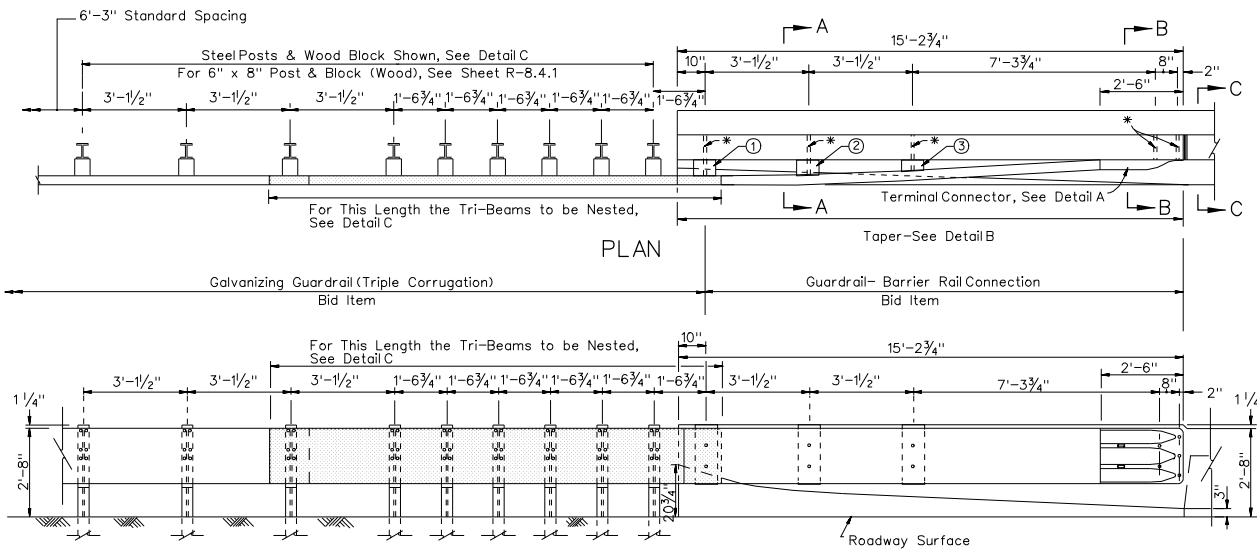
1. WHEN DISTANCE BETWEEN BACK OF GUARDRAIL POST AND HINGE POINT IS LESS THAN 2', THE POST SHALL BE LENGTHENED 1' MINIMUM.
2. GUARDRAIL HEIGHTS ON STAGE CONSTRUCTION PROJECTS SHALL BE GOVERNED BY FINAL SURFACING ELEVATIONS. HEIGHT MEASURED AT FACE OF RAIL ELEMENT.
3. ALL HARDWARE TO BE GALVANIZED.

LEGEND:

* AUXILIARY HOLE TO BE USED WHEN ROADWAY SURFACE TO RAIL BOTTOM IS LESS THAN 10"

R-101

| | | |
|--|---------------|---------------|
| NEVADA DEPARTMENT OF TRANSPORTATION | | |
| GALVANIZED GUARDRAIL (TRIPLE CORRUGATION) WOOD POST | | |
| Signed Original On File | R-8.4.1 | (618) |
| CHIEF ROAD DESIGN ENGR. | ADOPTED 11/86 | REVISION 5/09 |

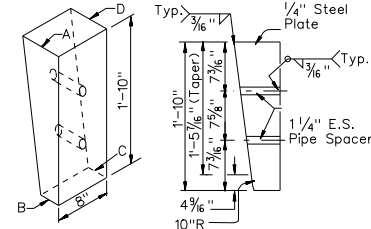


ELEVATION

LEGEND:

- * 1 1/8" DIA. CORE DRILLED HOLES FOR 3/8" DIA. GALVANIZED HIGH STRENGTH HEX BOLTS & NUTS WITH 3"x 1/4" SQUARE GALVANIZED STEEL WASHER WITH 1" DIA. HOLE.
- ** DENSE GRADED OR PROFILE GRADE

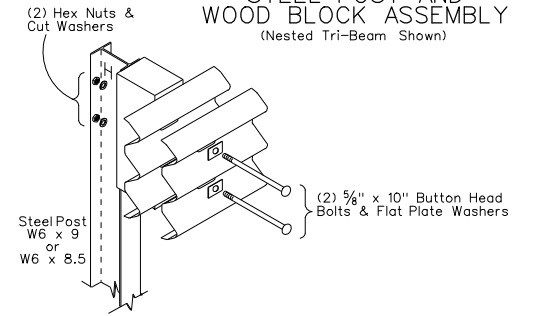
| SPACER BLOCK TABLE | | | | |
|--------------------|--------|--------|--------|--------|
| SPACER BLOCK | A | B | C | D |
| ① | 4" | 2 1/4" | 2 1/4" | 4" |
| ② | 3 1/2" | 1 1/4" | 1 1/4" | 3 3/8" |
| ③ | 2 1/8" | 3/4" | 3/4" | 2 1/8" |



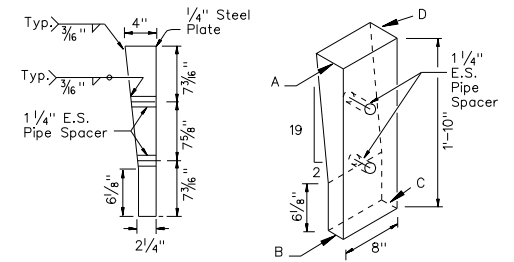
ISOMETRIC SIDE VIEW

SPACER BLOCKS 2 AND 3 DETAIL

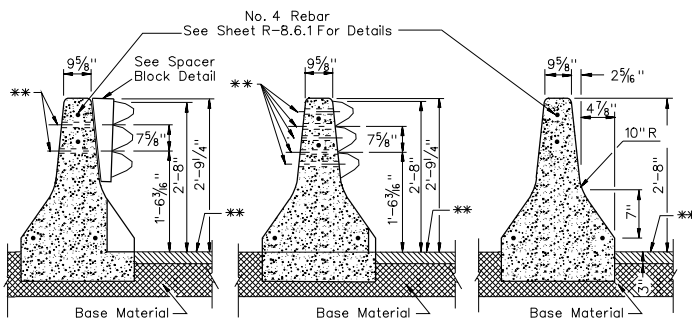
DETAIL C
STEEL POST AND WOOD BLOCK ASSEMBLY
(Nested Tri-Beam Shown)



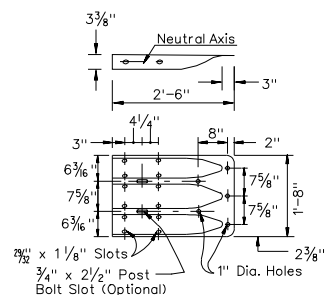
Attach Tri-Beam on Approaching Traffic Side of Block and Post Web. NDOT Approved Composite Material Spacer Block May Be Substituted. See Sheet R-8.4.1.1 for Details not shown. For Wood Post/Block Details, See Sheet R-8.4.1.



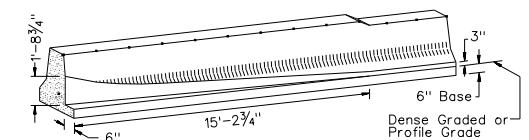
SIDE VIEW ISOMETRIC
SPACER BLOCK 1 DETAIL



SECTION A-A SECTION B-B SECTION C-C



DETAIL A



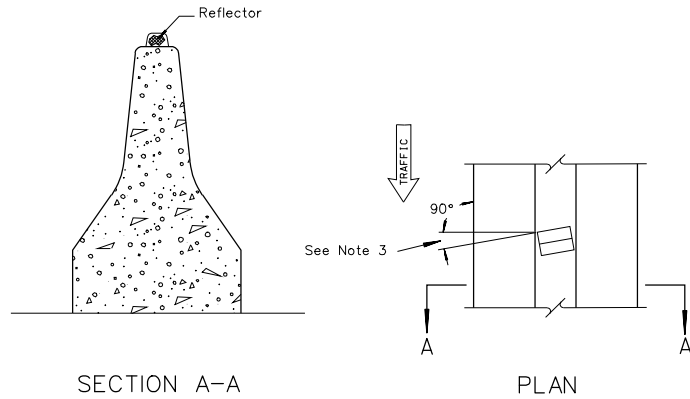
DETAIL B
Method of Tapering Barrier Rail For Guardrail Connections

NEVADA DEPARTMENT OF TRANSPORTATION

GUARDRAIL-BARRIER RAIL CONNECTION (TRIPLE CORRUGATION)

Signed Original On File R-8.4.3 (618)

CHIEF ROAD DESIGN ENGR. ADAPTED 7/96 REVISION 9/06



SECTION A-A
BARRIER RAIL REFLECTOR INSTALLATION

NOTES:

1. ALL REFLECTORS SHALL BE SELECTED & INSTALLED PURSUANT TO THE PROJECT PLANS & SPECIFICATIONS OR AT THE DIRECTION OF THE ENGINEER. THE DEPICTED REFLECTORS ARE FOR MOUNTING LOCATION INFORMATION ONLY.
2. SPACING: SEE "REFLECTOR PLACEMENT ON GUARDRAIL" NOTES AND TABLE "A", OF THIS SHEET.
3. REFLECTORS SHALL BE MOUNTED AT THE ANGLE SPECIFIED BY THE MANUFACTURER OR AS DIRECTED BY THE ENGINEER.
4. COLOR: SHALL COMPLY WITH THE GUIDELINES ESTABLISHED BY THE CURRENTLY ADOPTED M.U.T.C.D. EDITION.

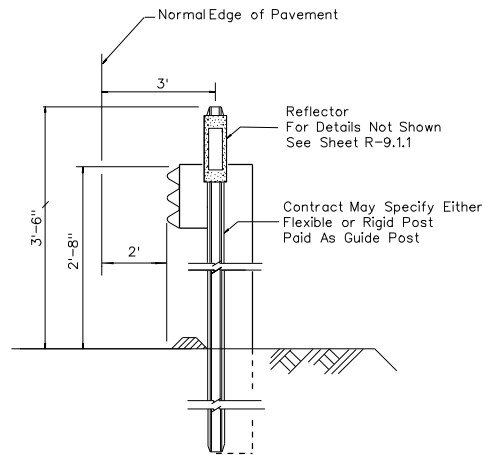
REFLECTOR PLACEMENT SPACING ON GUARDRAIL/BARRIER RAIL:

SPACING SHALL BE:

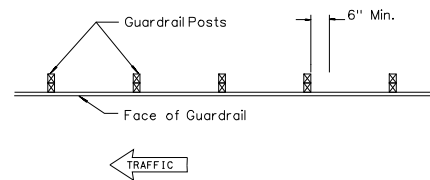
- (a) 50' ON TANGENTS AND ON CURVES OF 300' RADIUS OR GREATER. IF LESS THAN 300' RADIUS SEE TABLE A.
- (b) REFLECTORS SHALL BE OMITTED ON THE FLARED SECTIONS OF GUARDRAIL.
- (c) NO DIRECT PAYMENT FOR REFLECTORS ON BARRIER RAIL.

TABLE A

| Radius of Curve | Reflector Spacing |
|-----------------|-------------------|
| < 50' | 20' |
| 150' | 30' |
| 200' | 35' |
| 250' | 40' |
| > 300' | 50' |



TYPICAL GUARDRAIL-GUIDE POST INSTALLATION



GUARDRAIL-GUIDE POST LOCATION

| | | |
|--|-------------------------|----------------------------|
| NEVADA DEPARTMENT OF TRANSPORTATION | | |
| REFLECTORS GUARDRAIL-GUIDE POST | | |
| Signed Original On File CHIEF ROAD DESIGN ENGR. | R-9.2.2 ADOPTED 7/96 | (618,619) REVISION 6/09 |

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APPENDIX C

**COOPERATIVE AGREEMENT BETWEEN
MUDDY RIVER IRRIGATION COMPANY
AND CLARK COUNTY PUBLIC WORKS**

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**CLARK COUNTY BOARD OF COMMISSIONERS
AGENDA ITEM**

| | | |
|---|---|---------------------|
| Issue: | Muddy River Cooper Street Bridge Flood Control Project | Back-up: |
| Petitioner: | Denis Cederburg, Director of Public Works | Clerk Ref. # |
| Recommendation: | | |
| <p>That the Board of County Commissioners approve and authorize the County Manager or his designee to sign an agreement between Clark County and the Muddy Valley Irrigation Company (MVIC) to allow the County to discharge into an MVIC diversion structure during construction of the Muddy River Cooper Street Bridge Flood Control project, in Overton, Nevada. (For possible action)</p> | | |

FISCAL IMPACT:

Fund #: N/A
Fund Center: N/A
Description: N/A
Added Comments: N/A

Fund Name: N/A
Funded Pgm/Grant: N/A
Amount: N/A

BACKGROUND:


In order to facilitate the construction of the Muddy River Cooper Street Bridge Flood Control project (No. PW.FMOA01G), Clark County desires approval, consent, and authorization from the Muddy Valley Irrigation Company to allow the County and its contractor to pump groundwater from the approximate location of the Muddy River at Cooper Street, and discharge the groundwater into their existing irrigation system referred to as Point of Diversion Structure Identification Number ST-018A.

County staff negotiated the attached agreement with the Muddy Valley Irrigation Company. The agreement describes the services to be provided and the stipulated terms and conditions.

The District Attorney's Office has reviewed and approved the agreement as to form.

APPROVED AS RECOMMENDED

Respectfully submitted,



DENIS CEDERBURG
Director of Public Works
DCUJC:SS\GMS\5-7-13
Attachment (Cooperative Agreement)

Cleared for Agenda
5/17/13 MD

Agenda Item #

34

**COOPERATION AGREEMENT FOR
MUDDY RIVER COOPER STREET BRIDGE
FLOOD CONTROL PROJECT**

This COOPERATION AGREEMENT (hereinafter "Agreement") made and entered into by Clark County, a political subdivision of the State of Nevada (hereinafter "County") and Muddy Valley Irrigation Company (hereinafter "MVIC"). The County and MVIC are individually a Party and collectively Parties.

RECITALS

WHEREAS, the County is constructing the Muddy River Cooper Street Bridge project (hereinafter "Project) in Overton, Nevada; and,

WHEREAS, the Project requires dewatering of groundwater located approximately at the Muddy River at Cooper Street; and,

WHEREAS, in order to facilitate the construction of the Project, the County desires approval, consent and authorization from MVIC to allow the County and its contractor to pump groundwater from the approximate location of the Muddy River at Cooper Street, and discharge the groundwater into an existing irrigation system known as Point of Diversion Structure Identification Number ST-018A, managed by MVIC and located at intersection of Anderson Avenue and Ramos Ranch Road alignments (hereinafter "Diversion Structure "); and,

WHEREAS, by this Agreement, MVIC agrees to approve, consent and authorize the County and its contractor to discharge the groundwater into its Diversion Structure so long as the County, or its contractor, at its sole cost and expense, constructs and maintains the discharge facility consisting of an eight-inch (8") pipe to convey the pumped groundwater from the Muddy River at Cooper Street to the Diversion Structure and disconnects the discharge facility from the Diversion Structure after completion of the Project; and,

NOW, THEREFORE, in consideration of the mutual promises contained herein, and for good and other valuable consideration, the receipt of which is hereby expressly acknowledged, the Parties agree as follows:

**ARTICLE I
COUNTY AGREES**

1. That County and/or its contractor will construct and maintain the discharge facility, at the County's sole cost and expense, consisting of an eight-inch (8") pipe commencing at Cooper Street near the Muddy River, and running approximately along the Muddy River alignment, and to the Diversion Structure, as generally and approximately depicted in Exhibit "A", attached hereto and by this reference incorporated herein (hereinafter "Discharge Facility") for the purpose of discharging groundwater into said Diversion Structure .

2. To be the sole owner of the Discharge Facility and to allow for an average discharge of 100 gallons per minute (GPM) of groundwater into the Diversion Structure and that the Discharge Facility shall not exceed a maximum discharge of 250 GPM of groundwater into the Diversion Structure. The County does not guarantee that these amounts, or any amounts, will be discharged into the Diversion Structure and does not guarantee whether the discharge will be continuous or intermittent.
3. To discharge the groundwater into MVIC's Diversion Structure for up to twelve (12) months upon written notice, as provided herein, to MVIC by the County, and/or its contractor. Any extension of the discharge duration will require written approval of the Parties.
4. To require its contractor to disconnect the Discharge Facility from the Diversion Structure after completion of construction of the Project, or sooner, as determined by the County.
5. To require its contractor to be responsible for damage that may occur to the Diversion Structure as a result of the Discharge Facility or actions of the contractor.
6. To require its contractor to name MVIC as an additional insured on its applicable insurance policies.

ARTICLE II MVIC AGREES

1. That is approves, consents and authorizes the County to connect said Discharge Facility to MVIC's Diversion Structure, and approves, consents and authorizes the discharge of the groundwater into said Diversion Structure. MVIC agrees that the pumped groundwater that the County discharges into its Diversion Structure will be used for the sole purpose for irrigation of farm fields that are currently utilizing the MVIC existing irrigation system. MVIC agrees that this use is in conformance with the Nevada Department of Environmental Protection regulations.
2. To assure and guarantee that the Diversion Structure has the capacity to handle an average discharge of 100 gallons per minute (GPM) of groundwater into the Diversion Structure and that the Discharge Facility shall not exceed a maximum discharge of 250 GPM of groundwater into the Diversion Structure twenty-four hours a day, seven days a week for twelve (12) months. MVIC understands and agrees that the County will not be liable in the event that MVIC's Diversion Structure is unable to handle these capacities. Likewise, MVIC understands and agrees that it will not rely on a certain amount of discharge of groundwater from the Discharge Facility and understands that there may be no discharge or discharge less than that stated in the above paragraph. Furthermore, MVIC understands and agrees that the discharge into the Diversion Structure by the County, or its contractor, may be intermittent, and not continuous, during the twelve (12) month period.
3. That the County does not guarantee the quality of the groundwater discharged into the Diversion Structure or the amounts of groundwater that may be discharged into the Diversion Structure.

4. That the County will not be responsible or liable to MVIC for any violation of laws, federal, state or local, or regulations by MVIC, including but not limited to those relating to the Nevada Department Environmental Protection and water quality.

**ARTICLE III
PARTIES MUTUALLY AGREE**

1. The Parties understand that this Agreement does not create “water rights” but only rights for the County and its contractor to discharge groundwater into the Diversion Structure for the sole purpose of constructing the Project as set forth in this Agreement.

2. That the County is the sole owner of the Discharge Facility and that MVIC does not have, nor does this Agreement create, any rights to the Discharge Facility.

3. That only the County may terminate this Agreement, as solely determined by the County, by providing as much written notice as practical to MVIC.

4. All of the Parties to this Agreement represent and declare that they have read this Agreement carefully and know the contents thereof and that they signed the Agreement freely and voluntarily.

5. Any notice, required to be provided, as stated in this Agreement shall be via U.S. mail, certified, return receipt requested and sent to:

| MVIC | COUNTY |
|---|--|
| Scott Millington, General Manager Muddy River Irrigation Company 2625 North Moapa Valley Boulevard Logandale, Nevada 89021 (702) 398-7310 | Denis Cederburg, Director Clark County Department of Public Works 500 South Grand Central Parkway Las Vegas, Nevada 89106 (702) 455-6020 |

6. Each individual signing this Agreement acknowledges that he or she has the full authority to enter into this Agreement and bind such individual Party or entity to the terms of this Agreement.

7. No term or provision of this Agreement is intended to benefit any person, partnership, corporation, or other entity not a Party to this Agreement, including without limitation, any broker, subcontractor, shareholder, or private landowner, and no such other person, partnership, corporation, or entity shall have any right or cause of action hereunder.

8. The terms, provisions, covenants, and conditions of this Agreement shall apply to, bind, and inure to the benefit of the Parties hereto, their heirs, executors, administrators, legal representatives, successors, and assigns.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the day and year first written above.

CLARK COUNTY, a political subdivision of the State of Nevada

Attest:

By: *Donald G. Burnette*
DONALD G. BURNETTE
County Manager

Diana Alba
DIANA ALBA
County Clerk

MUDDY VALLEY IRRIGATION COMPANY

By: *Scott Millington*
SCOTT MILLINGTON
General Manager

STATE OF Nevada)
COUNTY OF Clark) ss.

On this 18 day of April, 2013, before me the undersigned, a Notary Public, in a for said County and State, personally appeared Scott Millington xxx only xxx, who acknowledged to me that he executed the above instrument for the purposes herein stated.

WITNESS my hand and official seal.

Kelly Cronkleton
NOTARY PUBLIC
in and for said County and State



My Commission expires: May 1, 2016
{SEAL}

Approved as to form:

Laura C. Rehfeldt
Deputy District Attorney
LAURA C. REHFELDT

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F:\Projects\500-0764\Draw\Temp\VR_HHTR-DE-WATERING PIPE.dwg 04-22-13 05:55:34 - RBlanchard

070-12-001-016
 ROCKAWAY TRUST
 WILLIAM AND CATHERINE
 PROCKET TRUST
 OR 20070419.00417

070-12-001-001
 PAYNE JAMES O. & TO
 AND PAYNE JAMES C. &

070-12-001-001
 F. N. F. FAMILY TRUST ETAL

070-12-001-001
 COOPER, IVAH B. & MEREDITH H.

070-12-001-001
 COOPER, IVAH B. & MEREDITH H.

**GROUND WATER
 DISCHARGE FACILITY**

G. C. WALLACE COMPANIES
 ENGINEERS | PLANNERS | SURVEYORS
 1335 S. RAINBOW BLVD. LAS VEGAS, NV 89146
 T: 702.804.2000 · F: 702.804.2099 · GCWALLACE.COM

| SCALE | |
|------------|--------|
| HORIZ: | 1"=50' |
| VERT: | NONE |
| FIELD BOOK | |

| | |
|------------------|--|
| DRAWING NO. | |
| EXHIBIT A | |
| SHT. 1 OF 1 | |

07/4 12
 FOUND 3" ALUM DISC
 CLARK COUNTY PLAS 7100'