Bid Number 36800.12
Hansen Number 36800

SPECIAL PROVISIONS

AUGUST 2012

ANGEL PARK DETENTION BASIN EXPANSION

PREPARED FOR:

CITY OF LAS VEGAS

PREPARED BY:

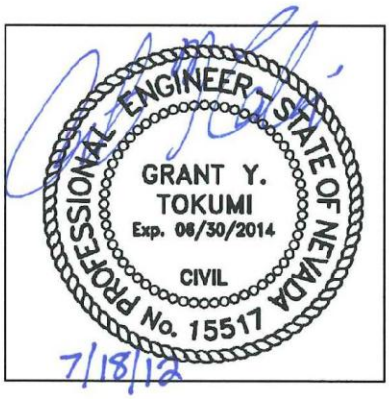
G. C. WALLACE, INC.

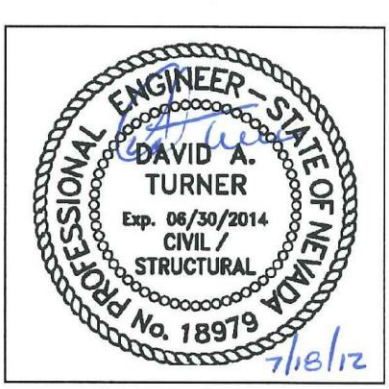
FUNDED BY:
CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT

ANGEL PARK DETENTION BASIN EXPANSION

SPECIAL PROVISIONS

The following special provisions supplement and modify the City of Las Vegas, City Engineer Division Supplemental Specifications; "Uniform Standard Specifications for Public Works' Construction Off-site Improvements Clark County Area Nevada", third edition; and the "Uniform Standard Drawings for Public Works' Construction Off-site Improvements Clark County Area Nevada, Volume I (1988 edition), and Volume II (adopted 1992), along with revisions thereto, hereinafter referred to as the "Standard Specifications" and "Standard Drawings". Said Standard Specifications and Standard Drawings are hereby incorporated into these Special Provisions.





NOTE: THE ENGINEERS' APPROVAL AND SUBSEQUENT SEALS ARE LIMITED TO THE FOLLOWING PORTIONS OF THESE DOCUMENTS AS PREPARED BY OR UNDER THE DIRECT SUPERVISION OF THE ENGINEERS:

(1) SPECIAL PROVISIONS, PAGES SP-100-1 THROUGH SP-694-3
(2) BID SCHEDULE PAGE(S) – ATTACHMENT A

ALL OTHER ATTACHMENTS, INCLUSIONS, ENCLOSURES, SCHEDULES, FORMS, GRAPHICS, ETC. WERE PREPARED BY OTHERS AND NOT UNDER THE DIRECT SUPERVISION OF THE ENGINEER.

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SECTION TITLE

ADD THE FOLLOWING SECTION TO DIVISION I – GENERAL REQUIREMENTS

SECTION 100 – GENERAL PROJECT REQUIREMENTS

100.01 REFERENCE SPECIFICATIONS AND DRAWINGS

A. Work specified herein shall conform to or exceed the requirements of all applicable codes and the applicable requirements of the following documents to the extent that the provisions of such documents are not in conflict with the requirements of these Special Provisions or the applicable codes. Wherever references are made in the contract, standards or codes in accordance with which work under this contract is to be performed or tested, the latest edition or latest revision(s) of the standards or codes shall apply.

B. The following standards and codes are an integral part of the contract and are incorporated herein by reference. The Contractor is advised to become familiar with the contents of the "Uniform Standard Specifications", "Special Provisions" and the "Uniform Standard Drawings", as they shall govern the construction of this Project. Work on any public utility shall be performed in accordance with the Uniform Standard Specifications and Drawings except where modified by the utilities' own standards.

C. **"Uniform Standard Specifications for Public Works Construction Off-Site Improvements, Clark County Area, Nevada"**, also referred to as the "Uniform Standard Specifications" or "USS". All of the requirements and provisions of said Uniform Standard Specifications shall apply except where otherwise provided herein or otherwise shown on the Contract Drawings. There may be recently adopted changes to the Uniform Standard Specifications and the Contractor should be aware of these before he submits a bid. Copies may be obtained from the Regional Transportation Commission of Southern Nevada, 600 S. Grand Central Parkway, Suite 350, Las Vegas, Nevada 89106 or online at www.rtcsouthernnevada.com

D. **"Uniform Standard Drawings for Public Works Construction, Clark County Area, Nevada Volume I and Volume II"**, also referred to as the "Uniform Standard Drawings" or "USD" and shall be adhered to except where otherwise provided herein or otherwise shown on the Contract Drawings. Copies may be obtained from the Regional Transportation Commission of Southern Nevada, 600 S. Grand Central Parkway, Suite 350, Las Vegas, Nevada 89106 or online at www.rtcsouthernnevada.com

E. **"Manual on Uniform Traffic Control Devices"**, also referred to as "MUTCD" and shall be adhered to except where otherwise provided herein or otherwise shown on the Contract Drawings. Copies may be obtained from the U.S. Government Printing Office, Washington, D.C. 20402 or online at mutcd.fhwa.dot.gov

F. **"State of Nevada Department of Transportation Standard Specifications for Road and Bridge Construction"**, also referred to as the "NDOT Standard Specifications" or the "State of Nevada Standard Specifications" and shall be adhered to when specifically referenced herein or as shown on the Contract Drawings. NDOT is located at 123 E. Washington Blvd., Las Vegas, Nevada 89101; Phone (702) 385-6500 or online at www.nevadadot.com/business/contractor/standards/

G. **"State of Nevada Department of Transportation Standard Plans for Road and Bridge Construction"**, also referred to as the "NDOT Standard Drawings" or the "State of Nevada Standard Plans" and shall be adhered to when specifically referenced herein or as shown on the Contract Drawings. NDOT is located at 123 E. Washington Blvd., Las Vegas, Nevada 89101; Phone (702) 385-6500 or online at www.nevadadot.com/business/contractor/standards/.

H. **"Nevada Work Zone Traffic Control Handbook"**, also referred to as the "Work Zone Handbook". Copies may be obtained from Lisa Cody, University of Reno Nevada, (775) 784-1433.

I. **"ASTM International"**, also referred to as the "ASTM". ASTM is located at 100 Barr Harbor Drive, Conshohocken, Pennsylvania, 19428-2959; Phone (610) 832-9585 or online at www.astm.org

J. **"Uniform Design and Construction Standards for Water Distribution Systems"**, also referred to as the "Water District Standards" or "UDACS". Copies may be obtained from the Las Vegas Valley Water District, 1001 South Valley View Boulevard, Las Vegas, Nevada 89153 or online at http://www.lvvwd.com/html/eng_udacs.html

K. **"LVVWD Design Guidance Documents"**, Copies may be obtained from the Las Vegas Valley Water District, 3700 W. Charleston Blvd., Las Vegas, Nevada 89153.

L. **"Southern Nevada Design and Construction Standards for Wastewater Collection Systems"**, also referred to as the "Sewer Specifications". Issued by the Clark County Water Reclamation District, 5857 E. Flamingo Blvd., Las Vegas, Nevada, 89122; Phone (702) 434-600.

100.02 SUBMITTALS

A. The Contractor shall forward 6 copies of each submittal to the Engineer unless otherwise stated in applicable sections.

B. The Contractor shall make all submittals in accordance with the Special Provisions, Uniform Standard Specifications and the following:

C. **CONTRACTOR SUBMITTAL CHECKLIST:** The Contractor shall make the following submittals to the Engineer as indicated:

100.02.01 SUBMITTALS REQUIRED AT THE PRE-CONSTRUCTION CONFERENCE UNLESS OTHERWISE NOTED

REQUIRED	*SUBMITTAL*	APPLICABLE SECTIONS	REMARKS
☒ YES ☐ NO	Preliminary Baseline Project Schedule	108.03.01	Submit as required by Instruction to Bidders (ITB) 8.03

REQUIRED	*SUBMITTAL*	APPLICABLE SECTIONS	REMARKS
☐ YES ☒ NO	Barricade and Traffic Control Plan	624.01.71A	Submit as required by ITB 8.03
☐ YES ☒ NO	Bus Stop Closure Plan	624.01.71K	Submit as required by ITB 8.03
☒ YES ☐ NO	Name and twenty-four hour telephone number of the Contractor's Superintendent plus another contact person and telephone number.	105.05	Name of Superintendent shall be given in accordance with ITB Section 7.04. Twenty-four hour telephone number and name of another contact person and telephone number due at Pre-Construction Conference.
☒ YES ☐ NO	Name and title of Contractor's Authorized Representative(s)	105.05	To execute orders or directions of the Engineer without delay, who can receive correspondence and instruction, as well as sign Change Orders.
☒ YES ☐ NO	Name and title of Contractor's Authorized Representative(s)	108.03	To prepare, revise and update the progress schedules.
☒ YES ☐ NO	Name/telephone number of Contractor's safety officer	107.05	To receive notification of any safety concerns or accidents.
☒ YES ☐ NO	Name and title of Contractor's "Competent Person"	108.05	As required by CFR 29 Part 1926 Subpart P (OSHA Standards & Interpretations).
☒ YES ☐ NO	Name/telephone number of Traffic Control Supervisor	624.03.74	For notification in the event of a traffic control deficiency.
☒ YES ☐ NO	Video and Photograph Record	694.03.04	Video/Photo library of existing private property owners fences, block walls, landscaping, irrigation, etc. prior to start of construction.

100.02.02 SUBMITTALS PRIOR TO BEGINNING THE WORK

REQUIRED	*SUBMITTAL*	APPLICABLE SECTIONS	REMARKS
☒ YES ☐ NO	Baseline Project Schedule	108.03.02	Due 14 calendar days after acceptance of Preliminary Baseline Project Schedule.
☐ YES ☒ NO	Clark County Encroachment Permit	107.02	Permit from Clark County Development Services.
☒ YES ☐ NO	Barricade and Traffic Control Plan	624.01.71B	Submit fourteen (14) calendar days prior to starting segment or phase of construction

REQUIRED	*SUBMITTAL*	APPLICABLE SECTIONS	REMARKS
☒ YES ☐ NO	A copy of any notification to residents, homeowners, homeowners associations, businesses, schools or emergency agencies affected by construction	107.07	Allow 5 working days for CLV review prior to distribution.
☒ YES ☐ NO	Monument tie sheet	105.08 622	For placement and/or replacement of permanent survey monuments.
☒ YES ☐ NO	Inventory of Existing Landscape and Irrigation System	107.12 212 213	Prior to work being done in these areas.
☒ YES ☐ NO	Copy of written notification to utilities	107.17	Prior to distribution.
☒ YES ☐ NO	Copy of necessary permits and written consent from property owner(s)	107.18	Prior to entering or occupying any lands outside the right-of-way or easement or where no Authorization to Enter Property exists.
☒ YES ☐ NO	Copy of Construction Water Permit	210 107.02	Permit from Las Vegas Valley Water District to use a hydrant as a water source.
☐ YES ☒ NO	Copy of CLV Boring Permit	603 630 670	Permit from City of Las Vegas if the contractor proposes trenchless technology for utility installation.
☐ YES ☒ NO	Copy of RCB Manufacturer's Qualifications	502.01.01	Prior to ordering the RCB to be used on the Project.
☐ YES ☒ NO	IMSA Level 2 Certification	623 G.01.01	Prior to any work on Traffic Signals.
☒ YES ☐ NO	Project Identification Signs	200.02.01	Approval and erection prior to any work being done.
☒ YES ☐ NO	Copy of Commercial Use Permit and written authorization from property owner(s)	106.08 107.02	Permit from CLV Building Dept. if Contractor intends to store materials on private property.

REQUIRED	*SUBMITTAL*	APPLICABLE SECTIONS	REMARKS
☒ YES ☐ NO	Name of Contaminated Soil Disposal Site or Facility	203	Due prior to beginning the work.
☒ YES ☐ NO	Copy of Construction Permit	107.02	Permit from CLV Land Development Dept. for off-site work.
☒ YES ☐ NO	Copy of Grading Permit and written authorization from property owner(s)	107.02 107.14	Permit from CLV Building Dept. if Contractor intends to dispose materials on private property.
☐ YES ☒ NO	Copy of Clark County Construction Activities Permit	107.02	Permit from Clark County Public Works.
☒ YES ☐ NO	Copy of General NPDES Permit	107.02 637.01.01	If construction activities will disturb one or more acres and flow will discharge into the Las Vegas Wash.
☒ YES ☐ NO	Copy of Stormwater Pollution Prevention Plan	637.01.01	Should be completed prior to submittal of the Notice of Intent with NDEP.
☒ YES ☐ NO	Copy of Clark County Dust Control Permit	107.02 637.01.01	Prior to beginning work requiring a Dust Control Permit. Permit from Clark County Dept. of Air Quality Management.
☒ YES ☐ NO	Identification of Professional Land Surveyor	105.08 622.01.01	To supervise construction staking and replacement of permanent survey monuments.
☒ YES ☐ NO	Copy of Detention Basin Initial Pre-Excavation Topographic Survey	622.05.01	Furnish to Owner completed and sealed reproducible and electronic copies of the results.
☐ YES ☒ NO	Letter identifying the methods the Contractor is to use in cleaning operations	692.03.03	Due 15 working days prior to beginning of the cleaning operations.
☐ YES ☒ NO	Rehabilitation Plan	105.09	For locations of rehabilitation work and storage sites.
☐ YES ☒ NO	Odor Control Plan	105.09 695.02.01	For locations of odor control devices.

REQUIRED	*SUBMITTAL*	APPLICABLE SECTIONS	REMARKS
☐ YES ☒ NO	Applicator Qualifications and Performance History	691.01.06	Due 20 working days prior to beginning work.
☐ YES ☒ NO	Manufacturer's Specification, Product Data and Quality Control Procedures	691	Instruction for installation. Due 15 days prior to the work.
☐ YES ☒ NO	Coating System Application Plan	691	Due 15 days prior to the work.
☐ YES ☒ NO	List of Manholes and Appurtenances	NDOT Encroachment Permit	List of manholes or other appurtenances that may be affected by this project per the NDOT Encroachment Permit, as shown in the "Additional Terms and Conditions."

100.02.03 SUBMITTALS PRIOR TO USE

REQUIRED	*SUBMITTAL*	APPLICABLE SECTIONS	REMARKS
☒ YES ☐ NO	Pipe Trench Bedding	208	Allow Owner 15 working days for each review.
☒ YES ☐ NO	Pipe Trench Backfill	208	Allow Owner 15 working days for each review.
☒ YES ☐ NO	Copy of Trench Safety System Plan	208.03.01	Due 1 week prior to beginning trenching operations.
☒ YES ☐ NO	Type II Aggregate Base	302 704	Allow Owner 15 working days for each review.
☒ YES ☐ NO	Geotextile	272	Allow Owner 15 working days for each review.
☐ YES ☒ NO	Geogrid	271	Allow Owner 15 working days for each review.
☒ YES ☐ NO	Plantmix Bituminous Pavement Marshall Mix Design	401 404	Allow Owner 15 working days for each review.
☐ YES ☒ NO	Plantmix Bituminous Open Graded Surface	403	Allow Owner 15 working days for each review.
☒ YES ☐ NO	Concrete Mix Designs	501	Allow Owner 15 working days for each review.

REQUIRED	*SUBMITTAL*	APPLICABLE SECTIONS	REMARKS
☐ YES ☒ NO	CMU Wall Surface Finish	570	Allow Owner 15 working days for each review.
☒ YES ☐ NO	Reinforced Concrete Pipe	603	Allow Owner 15 working days for each review.
☒ YES ☐ NO	Drop Inlet Grates and Incidentals	609	Allow Owner 15 working days for each review.
☐ YES ☒ NO	Manhole Extensions	609	Allow Owner 15 working days for each review.
☒ YES ☐ NO	Streetlight Conduit	672	Allow Owner 15 working days for each review.
☐ YES ☒ NO	Sanitary Sewer Pipe	630	Allow Owner 15 working days for each review.
☒ YES ☐ NO	Construction Materials not identified above	Per bid items	Allow Owner 15 working days for each review.
☐ YES ☒ NO	Manufacturer's recommended installation procedures	690.01.03 691.01.06	Allow Owner 15 working days for each review.
☐ YES ☒ NO	Shop Drawings	690.01.03 691.01.06	Allow Owner 15 working days for each review; shall include liner, SLC details and manhole installation details (if applicable) as described in the applicable sections.
☐ YES ☒ NO	Liner End Seal Materials	690.01.03 691.01.06	Allow Owner 15 working days for review.
☐ YES ☒ NO	Liner sampling requirements; sample location, size, removal and method of liner repair	690.01.03 691.01.06	Allow Owner 15 working days for each review.
☐ YES ☒ NO	CCTV Inspection Reports	690.01.03 691.01.06	Allow Owner 15 working days for each review.
☐ YES ☒ NO	Flow Diversion and Bypassing Plan	695.02.01	Due 15 working days prior to operations governed by the plan.
☐ YES ☒ NO	Copy of Clark County District Certification	692.03.04	Due 2 days prior to cleaning sewers.

100.02.04 SUBMITTALS DURING THE COURSE OF WORK

REQUIRED	*SUBMITTAL*	APPLICABLE SECTIONS	REMARKS
☒ YES ☐ NO	Monthly Progress Schedule	108.03	Submit monthly with each Pay Estimate.
☒ YES ☐ NO	3 Week Look Ahead Schedules	108.03	Submit weekly.
☒ YES ☐ NO	Remedial Project Schedules	108.03	Submit if required by the Engineer.
☒ YES ☐ NO	Daily Traffic Control Device Inspection Records	624.03.74	Submit weekly.
☒ YES ☐ NO	Video and Photograph Report	694	Video/Photo library of existing property owners fences, block walls, landscaping, irrigation, etc. during construction.
☒ YES ☐ NO	Daily Heavy Equipment Record of Use in the Detention Basin	203	Furnish to Owner copies of Records of Use.

100.02.05 SUBMITTALS PRIOR TO ISSUANCE OF "NOTICE OF COMPLETION" OR RELEASE OF RETENTION

REQUIRED	*SUBMITTAL*	APPLICABLE SECTIONS	REMARKS
☒ YES ☐ NO	Final Record Documents	105.09	
☒ YES ☐ NO	Video and Photograph Report	694	Video/Photo library of existing property owners fences, block walls, landscaping, irrigation, etc. after construction is complete.
☒ YES ☐ NO	Copy of Post Installation Storm Drain Video	603	Submit prior to Issuance of Notice of Substantial Completion. Allow 30 days for video review.
☒ YES ☐ NO	Copy of Detention Basin Post Excavation Completion Topographic Survey	622	Furnish to Owner completed and sealed reproducible and electronic copies of the results.
☐ YES ☒ NO	Third party testing results	690.01.03 687.01.06	Furnish to Owner results of the third party materials testing required for CIPP Liner and/or Machine PVC Spiral Wound Liner.

REQUIRED	*SUBMITTAL*	APPLICABLE SECTIONS	REMARKS
☐ YES ☒ NO	APEX landfill receipts	692.03.04	One week after final cleaning operations.
☐ YES ☒ NO	Copy of Post Installation Sewer Video	693	Submit prior to Issuance of Notice of Substantial Completion.
☐ YES ☒ NO	Manufacturer's Warranty	691	Submit prior to Issuance of Notice of Substantial Completion.

END OF SECTION 100

SECTION 101 – DEFINITIONS AND TERMS

DELETE SUBSECTION 101.01 BLANK AND REPLACE WITH THE FOLLOWING:

101.01 ABBREVIATIONS

AGA	American Gas Association
AI	The Asphalt Institute
AIEE	American Institute of Electrical Engineers
AISI	American Iron and Steel Institute
ANSI	American National Standards Institute
API	American Petroleum Institute
ASHRAE	American Society of Heating, Refrigerating and Air Conditioning Engineers
ATSSA	American Traffic Safety Services Association
CFR	Code of Federal Regulations
CPM	Critical Path Method
CRSI	Concrete reinforcement and Steel Institute
EPA	Environmental Protection Agency (USA)
IMSA	International Municipal Signal Association
IPCEA	Insulated Power Cable Engineers' Association
ITB	Instructions to Bidders
NBFU	National Board of Fire Underwriters
NCPI	National Clay Pipe Institute
NDEP	Nevada Department of Environmental Protection
NDOT	Nevada Department of Transportation
NOAA	National Ocean and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NRS	Nevada Revised Statutes
OSHA	Occupational Safety and Health Standards
PCA	Portland Cement Association
SSPC	Steel Structures Painting Council
UBC	Uniform Building Code, International Conference of Building Officials
USS	Uniform Standard Specifications for Public Works' Construction Off-Site Improvements, Clark County Area Nevada
USD	Uniform Standard Drawings for Public Works' Construction Off-Site Improvements, Clark County Area Nevada, Volumes I & II

101.02 ADDENDUM

DELETE THIS SUBSECTION IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING:

A. Addendum means a written or graphic instrument issued by the Owner via the City of Las Vegas Purchasing and Contracts Office prior to the submission of bids which modifies or interprets the Bidding Documents by means of additions, deletion, clarification, correction or other type of modification. All Addenda will become part of the executed Contract.

101.06 BASE COURSE

DELETE THIS SUBSECTION IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING:

A. The layer or layers of specified or selected material of designated thickness on a subgrade to support a surface course.

101.07 BIDDER

DELETE THIS SUBSECTION IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING:

Refer to the INSTRUCTIONS TO BIDDERS section ITB 2 Definitions of the Bid Documents.

101.11 CONTRACT CHANGE ORDER OR FIELD CHANGE ORDER

DELETE THIS SUBSECTION IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING:

101.11 CHANGE ORDER AND CONSTRUCTION CHANGE DIRECTIVE

A. Change Order means a written order issued by the Owner to the Contractor after execution of the Contract that authorizes a change in the Work, Contract Amount or Contract Time. Except as allowed by the Contract Documents, the Contract Amount or Contract Time may be changed only by the issuance of a Change Order. The execution of the Change Order indicates the Contractor's agreement to the terms set forth therein including the adjustment, if any, in the Contract Amount or Contract Time.

B. Construction Change Directive means a written order issued by the Owner to the Contractor directing immediate changes in the Work for which a modification to the Contract Amount, Contract Time or other provision of the Contract may be appropriate but may not have been negotiated at the time of issuance. The Contractor is to proceed immediately with the implementation of the Construction Change Directive.

101.13 CONTRACT

DELETE THIS SUBSECTION IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING:

A. Refer to the INSTRUCTIONS TO BIDDERS section ITB 2 Definitions of the Bid Documents.

101.16 CONTRACTOR

DELETE THIS SUBSECTION IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING:

A. Refer to the INSTRUCTIONS TO BIDDERS section ITB 2 Definitions of the Bid Documents.

101.17 CONTRACT TIME

DELETE THIS SUBSECTION IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING:

A. Refer to the INSTRUCTIONS TO BIDDERS section ITB 2 Definitions of the Bid Documents.

101.38 NOTICE TO PROCEED

DELETE THIS SUBSECTION IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING:

A. Refer to the INSTRUCTIONS TO BIDDERS section ITB 2 Definitions of the Bid Documents.

101.58 SPECIAL PROVISIONS

DELETE THIS SUBSECTION IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING:

A. Special Provisions means the written descriptions of the requirements for the Work incorporated as a part of the Contract.

101.61 SUBCONTRACTOR

DELETE THIS SUBSECTION IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING:

A. Refer to the INSTRUCTIONS TO BIDDERS section ITB 2 Definitions of the Bid Documents.

107.75 WORKING DRAWINGS

DELETE THIS SUBSECTION IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING:

A. Stress sheets, shop drawings, erection plans, falsework plans, framework plans, cofferdam plans, bending diagrams for reinforcing steel, or any other supplementary plans or similar data which the Contractor is required to submit to the Engineer for approval. Working Drawings are not part of the Contract Documents.

ADD THE FOLLOWING SUBSECTIONS TO THIS SECTION:

101.80 ACTIVITY-ON-NODE (AON)

A. A format for illustrating a network diagram where activities are represented by nodes, and arrows are used to show the precedence relationships. AON format is utilized in Precedence Diagramming.

101.81 BAR (GANTT) CHART

A. A graphical format for displaying network schedules which shows planned and actual progress for a number of tasks against a horizontal time scale. The Bar Chart is frequently

updated throughout the project to monitor the detailed progress of the work and is the primary source of reporting/displaying project schedule information to others.

101.82 CERTIFIED ENVIRONMENTAL MANAGER (CEM)

A. One who is certified by Nevada Department of Environmental Protection as an Environmental Manager.

101.83 CRITICAL PATH METHOD (CPM)

A. A mathematical analysis technique for schedule development utilizing realistic activity time estimates. CPM is designed to control both the time and costs of a project by identifying the activities, which must be kept on schedule ("critical" activities) and the activities, which have extra time ("float") available for their completion.

101.84 DEWATERING

A. The removal and/or lowering of any surface of subsurface water which results in a ground moisture content that enables construction to be carried out under relatively dry and stable conditions.

101.85 FLOAT

A. The amount of time between the early start date and the late start date, or the early finish date and the late finish date, of any activity or group of activities in the schedule.

101.86 NETWORK DIAGRAM

A. A general scheduling term for several methods of describing the net effect of interconnecting lines used to indicate dependencies and interrelationships of project activities.

101.87 NOMINAL DIAMETER

A. The inside diameter of a standard pipe as specified by the manufacturer.

101.88 PRECEDENCE DIAGRAMMING (PDM)

A. A graphical format of presenting a schedule utilizing the AON network diagramming method. All activities are linked to successor and predecessor activities with start-start, finish-finish, finish-start or start-finish relationships, allowing lead and lag.

101.89 PROJECT SCHEDULE (SCHEDULE)

A. The fundamental basis for planning, scheduling, monitoring and controlling project activity. The schedule illustrates the interdependence of all tasks, work packages and work units.

101.90 SERVICE CONNECTION LATERAL

A. All or any portion of a utility, including pipe, conduit, wire, cable or duct, including meters between a utility distribution (or collection) line and an individual customer or customers.

101.91 CLARIFICATION

A. In order to avoid cumbersome and confusing repetition of expressions in the specifications, it is provided that whenever anything is, or is to be done, if, as, or when, or where contemplated, required, determined, directed, specified, authorized, ordered, given, designated, indicated, considered necessary, deemed necessary, permitted, reserved, suspended, established, approval, approved, disapproved, acceptable, unacceptable, suitable, accepted, satisfactory, unsatisfactory, sufficient, insufficient, rejected or condemned, it shall be understood as if the expression were followed by the words, “by the Owner”.

END OF SECTION 101

SECTION 102 – BIDDING REQUIREMENTS AND CONDITIONS

SUBSECTIONS 102.01 THROUGH 102.03 AND 102.06 THROUGH 102.13 SHALL BE DELETED IN THEIR ENTIRETY AND REPLACED WITH THE FOLLOWING:

A. The INSTRUCTIONS TO BIDDERS section of the Bid Documents shall govern.

102.04 INTERPRETATION OF QUANTITIES IN THE PROPOSAL

ADD THE FOLLOWING TO THIS SUBSECTION:

C. It shall be the Contractor's responsibility to field verify required quantities prior to bidding.

102.05 EXAMINATION OF PLANS, SPECIFICATIONS, CONTRACT DOCUMENTS AND SITE OF WORK

ADD THE FOLLOWING TO THIS SUBSECTION:

G. The Contractor, by submitting a bid proposal for this work, represents that Contractor has studied all surveys and investigative reports about potential surface and subsurface conditions pertaining to the site of work; that Contractor has performed such additional surveys and investigations as Contractor deems necessary to complete the work at Contractor's bid proposal price; and that Contractor has correlated the results of all such data with the requirements of the contract documents.

H. A geotechnical exploration report "Geotechnical Data Report Angel Park Detention Basin Expansion – Vegas Drive and Durango Drive – Las Vegas, Nevada" was prepared by NINYO & MOORE GEOTECHNICAL AND ENVIRONMENTAL SCIENCES CONSULTANTS on April 11, 2011 and may be reviewed at the following address: 6700 Paradise Road, Suite E, Las Vegas, NV 89119 or may be purchased by calling the following phone number: 702-433-0330 twenty-four hours prior to pick-up.

1. Bidders shall be aware of the contents of these reports and shall make their own interpretation of the data contained therein.

2. ***This report(s) is provided as "Materials Information" only.***

3. The Contractor shall not be relieved of liability under the Contract for any loss sustained as a result of variances between conditions indicated and the actual conditions encountered during the progress of the work.

I. The Contractor should be aware that no known levels of petroleum hydrocarbons are present in the area.

1. In such case that hazardous material is encountered, the Contractor shall notify the Engineer and all appropriate agencies in writing in accordance with subsection 203.03.71 "Hazardous Material" of these Special Provisions.

END OF SECTION 102

SECTION 103 – AWARD AND EXECUTION OF CONTRACT

THIS SECTION SHALL BE DELETED IN ITS ENTIRETY AND REPLACED WITH THE FOLLOWING:

A. The INSTRUCTIONS TO BIDDERS section of the Bid Documents shall govern.

END OF SECTION 103

SECTION 104 – SCOPE OF WORK

ADD THE FOLLOWING SUBSECTION:

104.00 LOCATION AND SCOPE OF WORK

A. LOCATION: Angel Park Detention Basin is located at the northwest and southwest corners of Durango Drive and Summerlin Parkway. The existing Angel Park Detention Basin consists of two storage areas situated north and south of Summerlin Parkway. The two storage areas are connected by a 12-foot wide by 14-foot high reinforced concrete box (RCB) under the Summerlin Parkway. The area north of Summerlin Parkway will be described as the North Basin, and the area south of Summerlin Parkway will be described as the South Basin

B. SCOPE OF WORK: The work to be performed under this Contract consists of, but is not limited to, constructing improvements to increase the detention basin capacity, to provide a maintenance access road around the North Basin, to install a nuisance water storm drain at major inflow points to the outlet facilities, to construct additional spillway, to construct 3 water quality debris structures, to dispose of a portion of the excess excavated material on-site, to dispose of the remaining excavated material off-site, to remove and abandon existing outfall facilities, and to provide all other improvements incidental, appurtenant, and necessary to complete the work as specified and as shown on the Drawings.

104.04 MAINTENANCE OF TRAFFIC

ADD THE FOLLOWING TO THIS SUBSECTION:

F. Access to the location of work to be performed shall be from within the specified construction limits as shown on the Drawings, unless otherwise directed by the Engineer.

END OF SECTION 104

SECTION 105 – CONTROL OF WORK

105.01 AUTHORITY OF THE ENGINEER

ADD THE FOLLOWING TO THIS SUBSECTION:

E. The Engineer shall not direct Contractor's means, methods, techniques, sequences or procedures of construction, or the safety precautions and program incident thereto and will not be responsible for Contractor's failure to perform the work in accordance with the Contract.

F. Engineer will not be responsible for the acts or omissions of the Contractor, or any Subcontractor or any of his or their agents or employees or any other persons at the site or otherwise performing any of the work.

105.02 PLANS AND WORKING DRAWINGS

ADD THE FOLLOWING TO THIS SUBSECTION:

D. The Contractor shall make submittals for all materials prior to use.

1. All submittals made and signed by the Contractor shall be accompanied by the Contractor's standard transmittal form, containing, at a minimum, the bid item to which the submittal pertains.
2. Any submittals not accompanied by such a form, or where all applicable items on the form are not completed, will be returned for re-submittal.
3. Items submitted by anyone other than the Contractor will be returned, without action, for resubmission by the Contractor.
4. All submittals shall be carefully reviewed by an authorized representative of the Contractor prior to submission to the Engineer.
5. Each submittal shall be dated, signed and certified by the Contractor as being correct and in strict conformance with the Contract Documents.
6. All non-certified submittals will be returned to the Contractor without action taken by the Engineer and any delays caused thereby shall be the total responsibility of the Contractor.

E. The Contractor shall submit any City of Las Vegas acceptance letters for asphalt concrete, aggregate and Portland Cement Concrete in lieu of test data.

1. If the asphalt concrete, aggregate or Portland Cement Concrete mix design are not on the City of Las Vegas' current list of approved materials, a mix design for asphalt or Portland Cement Concrete or test data must be signed and approved by a Nevada Licensed P.E.
2. The Contractor shall establish its bid price according to the mix designs that are delineated on the City of Las Vegas' current list of approved materials.

3. Any additional costs arising from mix designs submitted by the Contractor that are rejected for not meeting the City of Las Vegas' criteria for any reason whatsoever shall be borne solely by the Contractor.

4. All mix designs are to be submitted thirty (30) days prior to anticipated material placement.

F. The Engineer's review of working drawings submitted by the Contractor will cover only general conformity to the drawings, specifications and special provisions, external connections and dimensions which affect the layout.

1. The Engineer's review does not indicate a thorough review of all dimensions, quantities and details of the material, equipment, devices or items shown.

2. The Engineer's review of submittals shall not relieve Contractor from responsibility for errors, omissions, or deviations, or responsibility for compliance with the Contract Documents.

3. Corrections indicated on submittals shall be considered as changes necessary to meet the requirements of the Contract Documents and shall not be taken as the basis of claims for extra work.

G. If a submittal is returned to the Contractor marked "NO EXCEPTIONS TAKEN" or "MAKE CORRECTIONS AS NOTED", formal revision and resubmission of said submittal will not be required.

H. If a copy of the submittal is returned to the Contractor marked "AMEND – RESUBMIT", or "REJECTED – RESUBMIT" the Contractor shall revise said submittal and shall resubmit to the Engineer.

1. When corrected copies are submitted, the Contractor shall indicate any revisions not made and any revisions made other than those called for by the Engineer on previous submissions.

2. Manufacture, fabrications or purchasing of items prior to final acceptance is at the Contractor's own risk.

105.03 CONFORMITY WITH PLANS AND SPECIFICATIONS

ADD THE FOLLOWING TO THIS SUBSECTION:

D. In the event the Contractor desires to substitute materials or perform work that does not conform with the plans and specifications, the Contractor will make a written request to the Engineer for review and approval.

E. As a minimum, the written request will address the following:

1. The Contractor will demonstrate that the substituted materials and/or the performed work are equal or greater than the materials and/or work specified in the plans and specifications.

2. Various requests for substitution may require the seal and signature of approval from a licensed Nevada Professional Engineer. Prior to submitting a request for substitution, the Contractor shall inquire as to whether the Owner will require the

approval of an Engineer, and if so, the Contractor will be responsible for the associated costs of this review.

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

DELETE THIS SUBSECTION IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING:

A. During the Bidding Phase of the proposed Work the governing order of the Bid Documents shall be per Instruction to Bidders (ITB) Section 3.02 “Governing Order of Bid Documents”.

B. After the Contract has been awarded, the governing order of the Contract Documents shall be per General Conditions (GC) Section 14.03 “Governing Order of Bid Documents”.

C. The Contractor shall take no advantage of any apparent error or omission in the plans or specifications. In the event the Contractor discovers such an error or omission, he shall immediately notify the Engineer. The Engineer will then make such corrections and interpretations as may be deemed necessary for fulfilling the intent of the plans and specifications.

D. The Contractor shall attend the Pre-Construction meeting.

105.05 COOPERATION BY CONTRACTOR

DELETE PARAGRAPH C OF THIS SUBSECTION AND REPLACE WITH THE FOLLOWING:

C. The Contractor shall provide his own mobile telephone, capable of making and receiving both local and long distance calls to allow communication with the Engineer and Resident Project Representative at all times. The Contractor shall also provide his own electric power, potable water, construction water and sanitary facilities required in the performance of the work under the contract. All costs associated with these items shall be the responsibility of the Contactor.

ADD THE FOLLOWING PARAGRAPH G TO THIS SUBSECTION:

G. Prior to entering construction access areas, the Contractor shall provide 48 hours' notice to David Bogue, General Manager of Angel Park, and include him as an invitee on project progress meetings. See Appendix F for ROW map that depicts "Construction Access Areas."

David Bogue
General Manager
100 South Rampart Boulevard
Las Vegas, Nevada 89145
Telephone (702) 967-3210

105.06 COOPERATION WITH UTILITIES

ADD THE FOLLOWING PARAGRAPHS TO THIS SUBSECTION:

R. The Contractor shall be responsible for verifying that each utility has responded to each notification.

S. Intentionally Omitted.

T. Subsurface utility exploration (potholing) has been conducted in the project area to identify sanitary sewer line crossing. The location and results of the potholing effort are depicted on the Drawings.

1. A sewer line shown on Sheet C1 may not exist. The sewer line shown on Sheet C9 has been potholed.

2. If either sewer line is exposed during construction, stop work and contact the City of Las Vegas Public Works Collection System Planning section for direction: **City of Las Vegas Sanitary Sewer Department – Tim Parks, 229-2178.**

U. Existing utilities in the perimeter streets have not been shown on the Drawings. The streets are shown for bearings of the project location. It is anticipated that there will be no conflict with any NV Energy utilities, Cox Communications, CenturyLink, SWG, and LVVWD.

V. The list below identifies the individual utility companies and their contact representatives. If any telephone numbers are changed, the Contractor is not relieved of Contractor's responsibility for notifying various parties.

1. City of Las Vegas Sanitary Sewer Department – Tim Parks, 229-2178
2. NV Energy Distribution – Tracey Yancey, Project Liaison, 402-6813
3. NV Energy Transmission – Lisa Harvey, Project Liaison, 367-5327
4. Cox Communication, Doney Villareal, Project Liaison, 210-5985
5. CenturyLink – Scott Gifford, Project Liaison, 244-7290
6. Southwest Gas Corp. (SWG) – Dominic Tarella, Project Liaison 365-2172
7. Las Vegas Valley Water District – Steve Jackson, 258-3249

V. Contractor shall comply with the restrictions delineated in Appendix C, NV Energy Transmission Governmental Agency and Utility Notification.

105.08 CONSTRUCTION STAKES, LINES AND GRADES

DELETE THIS SUBSECTION IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING:

A. Construction staking work shall be required of the Contractor, as indicated in Section 622 “Construction Surveying by the Contractor” of these Special Provisions, and shall conform to all requirements therein.

DELETE SUBSECTION 105.09 “BLANK” OF THE USS IN ITS ENTIRETY AND REPLACE WITH 1015.09 “RECORD DOCUMENTS” AS DESCRIBED BELOW:

105.09 RECORD DOCUMENTS

A. General Instructions

1. Ensure entries are complete and accurate. Current Progress Record Documents shall be available for review by the Owner, Owner's Consulting Engineer and the Owner's Construction Management Consultant (if applicable) at all times during the progress of the work.
2. Store Progress Record Documents separate from documents used for construction.
3. Neatly record information concurrent with construction progress. Maintain Progress Record Documents in a clean and orderly manner. The Contractor shall not conceal any work until the required record information has been recorded on the record document set. The Contractor shall bear the cost of uncovering any prematurely concealed work for required record documentation.
4. Progress Record Documents shall be made available to the Owner, the Owner's Consulting Engineer and the Owner's Construction Management Consultant (if applicable) for review at the site, at progress meetings and during Owner's review of the monthly progress bill requesting payment
5. Failure of the Contractor to maintain a current record of information on the Progress Record Documents shall entitle the Owner to withhold payment until corrected. The release of payment to the Contractor shall be contingent upon the Contractor's diligent performance as required herein.

B. Progress Record Documents - The Contractor shall maintain the following documents, which constitute the Progress Record Documents, at the job site during construction:

1. Drawings – Owner shall provide a full size copy of the approved set of drawings on bond paper for use as the Progress Record Document drawings prior to starting the work.
    a. The Contractor will supplement the drawing set with approved drawings submitted as deferred submittals. The Contractor shall insert approved Addenda and revision sheets in front of the original sheet
    b. The Contractor shall legibly mark each sheet to record actual construction including (but not limited to):
        1) Measured horizontal and vertical locations of underground installations, utilities and appurtenances referenced to permanent surface improvements;
        2) Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work;
        3) Field changes of dimension and detail;
        4) Details not on original Contract Drawings
2. Specifications – The Contractor shall legibly mark and record at each product section description of actual products installed, including (but not limited to) the following:
    a. Manufacturer's name and product model and number
    b. Product substitutions or alternates utilized;

c. Changes made by addenda and modifications.

3. The Contractor shall keep copies of and maintain a record of all Change Orders and any other modifications to the Contract.

4. The Contractor shall keep copies of and maintain a record of all reviewed Shop Drawings, Product Data and Samples.

5. The Contractor shall keep copies of and maintain a record of all Manufacturer's instructions for assembly, installation and adjusting.

C. Final Record Documents - Upon completion of the work, including all punch list items and prior to Release of Retention, the Contractor shall provide to Owner a complete set of Final Record Documents. The Final Record Documents shall include (but not limited to) the following:

1. Final Drawings

a. The Contractor will supplement the drawing set with approved drawings submitted as deferred submittals. The Contractor shall insert approved Addenda and revision sheets in front of the original sheet including any revisions required for completion of the punch list

b. The Contractor shall legibly mark each sheet to record actual construction including, (but not limited to):

1) Measured horizontal and vertical locations of underground installations, utilities and appurtenances referenced to permanent surface improvements;

2) Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work;

3) Field changes of dimension and detail;

4) Details not on original Contract Drawings;

5) Changes made during completion of the punch list.

c. The Contractor shall mark each sheet as "Record" or "As-Built"

2. Specifications

a. Manufacturer's name and product model and number

b. Product Substitutions or alternates utilized

c. Changes made by Addenda and modifications

d. Changes made during completion of the punch list.

3. Contractor shall keep copies of and maintain a record of all Change Orders and any other modifications to the Contract including any changes made during completion of the punch list.

4. The Contractor shall keep copies of and maintain a record of all reviewed Shop Drawings, Product Data and Samples including any additional shop drawings, product data and samples required for completion of the punch list.

5. The Contractor shall keep copies of and maintain a record of all Manufacturer's instructions for assembly, installation and adjusting and any Manufacturer's

instructions for assembly, installation and adjusting required for completion of the punch list.

105.17 CLAIMS FOR ADJUSTMENT AND DISPUTES

DELETE PARAGRAPH "A" OF THIS SUBSECTION AND REPLACE WITH THE FOLLOWING:

A. If the Contractor deems that additional compensation is due for work or material not clearly covered in the Contract and not ordered by the Engineer as extra work as defined herein, the Contractor shall notify the Engineer in writing within 24 hours of his intention to make claim for additional compensation before beginning the work which will be the subject of the claim.

1. If the notification is not given, and the Engineer is not afforded proper facilities by the Contractor for keeping strict account of actual cost as required, then the Contractor shall be deemed to have waived any claim for such additional compensation.

2. The notice by the Contractor, and the fact that the Engineer has kept account of the cost as aforesaid, shall not in any way be construed as proving or substantiating the validity of the claim.

3. If the claim, after consideration by the Engineer, is found to be just, it will be paid as extra work as provided for as "Force Account" work.

4. Nothing in this subsection shall be construed as establishing any claim contrary to the terms of Subsection 104.02, "Increased or Decreased Quantities and Change in Character of Work".

END OF SECTION 105

SECTION 107 – LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC

107.02 PERMITS, LICENSES, AND TAXES

ADD THE FOLLOWING PARAGRAPHS TO THIS SUBSECTION:

B. The Contractor shall obtain Grading and/or Stockpile permits for on-site storage or disposal of materials from the City of Las Vegas Building Department prior to beginning the work, unless waived by Section 100.02.02.

C. It shall be the Contractor's responsibility to determine if the permit requirements of Section 637 “Pollution Control” shall be required.

D. The Contractor shall obtain a permit from the Las Vegas Valley Water District to use a hydrant as a water source.

E. The drawings and specifications detail the locations the Contractor may occupy during the duration of the project and any limitations and requirements associated with the occupation of said areas. If the Contractor desires to use any areas outside the limits described in the drawings and specifications, he shall be responsible for meeting the requirements of Title 19 (The Zoning Code). The Contractor shall obtain all permits required for the use of private property and provide copies to the City prior to any use of the site. If a temporary commercial permit is required for work performed on private property, the Contractor shall ensure that a temporary commercial permit is obtained through the City of Las Vegas Planning Department prior to any use of the site. All work, fees, and scheduling associated with compliance to this subsection shall be borne entirely by the Contractor and shall not be a justification for delay claims.

ADD THE FOLLOWING SUBSECTION TO THIS SECTION:

107.05 SAFETY

A. General: Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the work. The name and telephone number of the Contractor’s safety officer shall be provided to the Contracting Agency. He shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

1. All employees engaged in the work and the other persons who may be affected thereby;
2. All the work and all materials or equipment to be incorporated therein, whether in storage or on the project site, and
3. Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of the work.

B. Contractor shall comply with all applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss. He shall erect, install, employ and maintain, as required by the conditions and progress of the work, all necessary safeguards. Contractor's duties and responsibilities for the safety and protection of the work shall continue until such time as all

the work is completed and a "Notice of Completion" has been issued to the Contractor by the Engineer.

C. Trench Safety: Trench Safety shall comply with Subsection 208.03.01.

107.07 TRAFFIC AND ACCESS

ADD THE FOLLOWING TO PARAGRAPH "C" OF THIS SUBSECTION:

1. 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 and vehicular traffic.
    a. When pedestrian traffic is routed onto the roadway, at other than existing crosswalk locations, the Contractor shall use portable precast concrete barrier rails to separate the pedestrian traffic from the work area and vehicular traffic.
    b. All portable precast concrete barrier rails shall be butted tight and pinned in accordance with the requirements of the NDOT Standard Drawing R-8.7.1, entitled "Portable Precast Concrete Barrier Rail."
2. When a designated *Suggested Route to School* is encroached upon by a construction work zone and/or the City of Las Vegas's Traffic Engineering Division identifies a need for students to be assisted in the safe crossing through the work zone, the Contractor shall be required to provide a qualified crossing guard.
    a. The guard shall be present for the full duration of time that children are likely to be present, as determined by the Traffic Engineering Division.
    b. It will be the Contractor's responsibility to contact the Metropolitan Police Department Special Events Unit (828-3442) to arrange for crossing guards properly trained in traffic control.
    c. Fees for the use of these guards, if required, shall be set by Metro and will be paid under Bid Item No. 624.01 "Traffic Control and Maintenance".
    d. Following are designated Suggested/Safe Routes to School that will be impacted by construction:
        1) Durango Drive is a Suggested Route for Katz and McMillan Elementary Schools and Johnson Middle School.

DELETE PARAGRAPH "K" OF THIS SUBSECTION IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING:

K. Notifications:

1. The Contractor shall cooperate with, and give written notice to all emergency agencies, public entities, each resident, homeowner, homeowner association, business or school that will be affected by any part of the construction process, particularly concerning temporary interruptions to vehicular access.

2. This notice of the approximate schedule and explanation of work shall be distributed at least seven (7) days prior to commencement of work in the area, unless waived in Section 100.02.02.

3. A second written notice, as well as a verbal notice, including door-to-door communication shall be made at least twenty-four (24) hours prior to construction to remind all affected parties of the construction to take place.

4. The Contractor shall notify by phone the following agencies:

METRO DISPATCH	702-795-3111
FIRE DEPARTMENT DISPATCH	702-382-3001
AMBULANCE DISPATCH CENTER	702-384-3400
RTC – Bus Stop Closures, when applicable Contact Carl Scarborough, per SP 624.01.71	702-676-1608
CITIZEN'S AREA TRANSIT (CAT), when applicable	702-676-1731
CLARK COUNTY SCHOOL DISTRICT	702-799-8115
NEVADA DEPARTMENT OF TRANSPORTATION (NDOT), when applicable	702-385-6588
CLV - DEPT. OF PUBLIC WORKS	
PUBLIC INFORMATION SPECIALIST	702-229-6581
TRAFFIC ENGINEERING DIVISION	702-229-6327
UNITED STATES POSTAL SERVICE	1-888-275-8777
REPUBLIC SERVICES	702-735-5151 EXT 314

5. The Owner shall receive a copy of all notifications for acceptance.

ADD THE FOLLOWING PARAGRAPHS TO THIS SUBSECTION:

M. Construction materials may not be stored in streets, roads or highways for more than five days after unloading. All materials or equipment not installed or used in the construction within five days after unloading shall be stored elsewhere by the Contractor at his expense unless he is authorized additional storage time.

N. Construction equipment shall not be stored at the work site before its actual use on the work nor for more than five days after it is no longer needed on the work. Time necessary for repair or assembly of equipment may be authorized by the Engineer.

O. Excavated material, except that which is to be used as backfill in the adjacent trench, may not be stored in public streets, roads or highways unless otherwise permitted. After placing backfill, all excess material shall be removed immediately from the site.

P. Construction access shall be from Rampart Boulevard, Venetian Strada, Vegas Drive, Summerlin Parkway, and Durango Drive, bounded by the construction limits shown on the Drawings. Hauling traffic shall be limited to Rampart Boulevard and Venetian Strada.

107.12 PROTECTION AND RESTORATION OF PROPERTY AND LANDSCAPE

ADD THE FOLLOWING PARAGRAPHS TO THIS SUBSECTION:

J. Contractor shall provide for the drainage of storm water and such water as may be applied or discharged on the site in the performance of the work. Drainage facilities shall be adequate to prevent damage to the work, the site and the adjacent property.

K. Contractor shall prevent erosion of soil on the site and adjacent property resulting from his construction activities. Effective measures shall be initiated prior to the commencement of clearing, grading, excavation or other operation that will disturb the natural protection of the soil.

107.17 CONTRACTOR'S RESPONSIBILITY FOR UTILITY PROPERTY AND SERVICE

ADD THE FOLLOWING PARAGRAPH TO THIS SUBSECTION:

I. All utility valves, manholes, vaults, pull boxes, etc., which are buried, shall be conspicuously marked by the Contractor to allow their location to be determined by the Engineer or utility personnel under adverse conditions (i.e. inclement weather or darkness).

ADD THE FOLLOWING SUBSECTIONS TO THIS SECTION:

107.70 CONTRACTOR'S RESPONSIBILITY TO THE PUBLIC

A. The Contractor is responsible to answer and resolve any conflicts that may arise between a homeowner or business owner and himself during the construction process.

107.71 ALLOWABLE WORK HOURS

A. No work between the hours of 6 p.m. and 7 a.m. will be allowed in residential areas unless approved by the Engineer or otherwise stated in the Special Provisions. If work after the aforementioned hours is approved, then the Contractor shall provide each affected resident at least forty-eight (48) hours written notice explaining the reason for the work after hours and providing an approximate duration of the activity.

107.72 NATURAL DRAINAGE AND STORM WATER RUNOFF

A. The Contractor shall be responsible for protecting and preserving public and private property from damage directly or indirectly caused by drainage or storm water runoff leaving the project during construction of all improvements, including downstream properties if damage is a result of the Contractor's actions in diverting or redirecting existing natural runoff patterns.

107.73 NDOT RIGHT-OF-WAY OCCUPANCY TERMS AND CONDITIONS

A. An NDOT right-of-way occupancy permit will not be required for this project.

107.74 BUREAU OF LAND MANAGEMENT FREE USE PERMIT

A. The Contractor shall abide by the terms and conditions of the BLM Right-of-Way Free Use Permit (FUP) as attached in Appendix D of these Special Provisions.

107.75 DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES DIVISION OF WATER RESOURCES SAFETY OF DAM PERMIT (LOCATION)

A. The Contractor shall abide by the terms and conditions of the DAM SAFETY PERMIT J-677 attached in Appendix E of these Special Provisions.

END OF SECTION 107

SECTION 108 – PROSECUTION AND PROGRESS

108.03 PROSECUTION AND PROGRESS

DELETE THIS SUBSECTION IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING:

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

B. The Contractor shall submit a baseline schedule in two parts, based upon the Sequence of Construction shown in the project plans or in these Special Provisions, in accordance with the following:

1. Part I shall be a Preliminary Baseline Project Schedule (PBPS) and shall be submitted in accordance with ITB 8.03.
2. Part II shall be a Baseline Project Schedule and shall be submitted 14 calendar days after acceptance of the PBPS.

ADD THE FOLLOWING SUBSECTIONS TO THIS SECTION:

108.03.01 PRELIMINARY BASELINE PROJECT SCHEDULE (PBPS)

A. The Contractor shall prepare and submit to the Project Contract Specialist in Finance and Business Services Department – Purchasing and Contracts, the PBPS as specified herein showing the order in which the work is proposed to be carried out.

1. Along with the PBPS, the Contractor shall include his calendar for the contract period, which shall show workdays, calendar days and dates, Contractor holidays and historical anticipated weather delays.
2. The Contractor shall designate an authorized representative who will be responsible for the preparation, revision and updating of the PBPS.
3. In addition to hard copies of plots and reports (submitted in accordance with Section 100), the Contractor shall also submit the schedules (generated using Primavera or a compatible scheduling program acceptable to the Project Engineer) on a single-write compact disk.
4. Acceptable formats for the PBPS include Bar (Gantt) Chart or Precedence Diagram.
5. Regardless of format, a Critical Path Method shall be utilized.

B. The PBPS shall be in sufficient detail to allow day-to-day monitoring of the Contractor's operations.

C. As a minimum, the first thirty (30) working days shall be shown on this schedule, including the following activities:

1. Long-lead purchases and deliveries of critical materials
2. Fabrication, installation and testing of critical equipment
3. Submittal and approval of materials, samples and shop drawings

4. All activities that affect progress of the job
5. Required dates of completion of all activities
6. Mobilization, milestones, punch list and final clean-up

D. Failure to submit the PBPS on time may result in liquidated damages being assessed to the Contractor.

108.03.02 BASELINE PROJECT SCHEDULE (BPS)

A. Part II shall be submitted for the Engineer's acceptance within fourteen (14) calendar days after acceptance of the Preliminary Baseline Project Schedule. The Contractor shall allow fourteen (14) calendar days for review by the Engineer. If BPS is rejected, an additional fourteen (14) calendar days is allowed for each subsequent review by the Engineer. The BPS shall be generated using either Primavera or a compatible scheduling program acceptable to the Project Engineer and submitted on a single-write compact disc.

B. The BPS shall include a detailed network diagram acceptable to the Engineer with the following features:

1. It shall be time scaled in calendar days. All activities shall be plotted on their early start and finish dates. Unless approved by the Engineer, activities shall not exceed twenty-one (21) calendar days in length. The plot shall have a size and scale acceptable to the Engineer.
2. It shall show the order and interdependence of activities and the sequence of work as reflected in the Schedule Report specified in #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. It shall include all activities required for the Preliminary Baseline Project Schedule, any utility relocation required by project documents and any interfacing required with other projects.
4. The construction activities shall be in sufficient detail to list all components of the work and to allow day-to-day monitoring of the Contractor's operations. For example, an activity such as placement of a concrete structure should show the interdependency of all related items, such as submittals (mix designs, rebar certifications, shop drawings, etc.); any required review period; start work; excavation; forming; reinforcing; concrete placement; removal of forms; etc. No one work activity shall have a duration of greater than twenty-one (21) calendar days in length, unless approved by the Engineer.
5. The diagram shall show for each activity the preceding and following event numbers or activity numbers, the activity description, the total float and the duration of the activity in working days.
6. The activities shall be organized, described and identified so as to conform to the contract bid items and their respective bid item number. 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. Scheduled or actual start date

g. Scheduled or actual finish date

h. Latest start date

i. Latest finish date

j. Total float times

k. Responsibility for activity (e.g. Contractor, Subcontractor, Supplier, etc.)

l. Percentage of activity completed during the reporting period and on the project to date

m. Bid item for which the activity is a part

n. Any activity constraints

o. **For Projects Over Five (5) Million Dollars** –

1) A balanced resource loading for each activity listing personnel and equipment anticipated to accomplish the activity.

2) Personnel should be identified as the number of each trade anticipated.

3) Equipment shall be identified by type and, if known, by model/size.

4) Contractor shall be responsible for including in the balanced resource loaded schedule all subcontractors designated for completing five percent (5%) or more of the total contract value.

8. Seasonal weather conditions shall be considered and included in the planning and scheduling of all work influenced by high or low ambient temperatures and/or precipitation to ensure completion of all work within the contract time.

9. Seasonal weather conditions shall be determined by an assessment of average historical climatic conditions based upon the preceding ten (10) year records published for the locality by the National Ocean and Atmospheric Administration (NOAA) and entitled “Local Climatological Data”.

10. The following schedule of anticipated adverse weather delays is based on NOAA or similar data for the project location and will constitute the baseline for the total contract time adverse weather delay evaluations. The Contractor’s Baseline Project Schedule must assume to anticipate this degree of adverse weather delays in all weather dependent activities.

MONTHLY ANTICIPATED ADVERSE WEATHER DAYS

Based on Work Days as Described in Section 110

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
6	2	2	1	1	0	2	2	1	1	1	3

11. The Contractor is to provide written notification to the Engineer of the occurrence of adverse weather delay days and resultant impact to normally scheduled work, within ten (10) calendar days of each occurrence, when such weather prevents work on critical activities for fifty percent (50%) or more of the Contractor's scheduled workday. A time extension may be granted when the number of actual adverse weather days calculated from the Notice to Proceed date to the date the Contractor asserts the request exceeds the total anticipated adverse weather delays using the above table for the same time period. If the Contractor wishes to assert additional claim(s) for time adjustment at later date(s), each succeeding claim must address the time period from Notice to Proceed date to the date of the request. No compensation will be made for monetary damages due to adverse weather delay(s).

    a. Float time belongs to the project and is not for the exclusive use or benefit of either the Owner of the Contractor. Extension of time for performance may be granted to the extent that equitable time adjustment for the activity affected exceeds the total float, or where otherwise justified, and impact on the contract completion can be shown. The Contractor's schedule shall be based on the contract time and shall not be based on an early completion schedule. No additional compensation will be allowed to the Contractor for delays to an early completion schedule.

    b. Acceptance of the Contractor's schedules by the Engineer is not to be construed as relieving the Contractor of his 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.

108.03.03 MONTHLY PROGRESS SCHEDULE

A. For all projects the Contractor shall submit a monthly progress schedule with each pay estimate.

B. The monthly progress schedule shall conform to all the requirements indicated under Subsection 108.03.02 "Baseline Project Schedule" and shall state the percentage of revenue actually earned as of the report date. The monthly progress schedule shall also be accompanied by a narrative description of job progress, problem areas and 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 Baseline Project Schedules, including but not limited to, changes in logical sequence or logical ties, constraints, changes in activity duration and changes, additions or deletions in event numbers, activity numbers and activity descriptions. The reasons for each departure shall be included in the narrative description.

C. The Contractor shall allow fourteen (14) calendar days for the Owner's review and acceptance or rejection of any Monthly Progress Schedules or Remedial Project Schedules. The Contractor shall participate in a review and evaluation of the schedules with the Engineer, as requested. Requested revisions to the schedules shall be provided to the Owner within seven (7) calendar days.

108.03.04 THREE-WEEK LOOK AHEAD SCHEDULE – FOR PROJECTS OVER FIVE (5) MILLION DOLLARS

A. Concurrent with the weekly progress meetings, the Contractor shall submit a three-week look ahead schedule (two weeks forward and one behind) to the Construction Manager indicating, on portions of the current computer produced schedule reports, a status report on scheduled activities within the three-week window, including:

1. percent complete
2. actual start/finish dates
3. planned start dates
4. continuation of work

B. These status reports shall serve as the basis for discussion at construction progress meetings and will be used to evaluate the status of the work in progress on a continuing basis.

108.03.05 REMEDIAL PROJECT SCHEDULE

A. The Contractor shall submit a Remedial Project Schedule if, in the opinion of the Engineer, the project is determined to be behind schedule. A schedule revision shall be submitted within five (5) working days of recognition of the need for the change. A revised network diagram and Time Impact Analysis showing the proposed revised Baseline Project Schedule shall be included.

B. The conditions under which revisions of the Baseline Project Schedule will be required include the following:

1. When delay in completion of any work item or sequence of work items results in an estimated extension of project completion by either twenty (20) working days or five percent (5%) of the remaining duration of time to complete the Project, whichever is less.
2. When delays in submittals or deliveries make replanning or rescheduling of the work necessary.
3. When the schedule does not represent actual prosecution and progress of the work.
4. When any change to the sequence of activities, the completion date for major portions of the work, or changes occur which affect the critical path.
5. When contract modification necessitates schedule revision.

108.03.06 FAILURE TO SUBMIT MONTHLY PROGRESS SCHEDULES

A. Failure of the Contractor to submit the Monthly Progress Schedule will be grounds for the Engineer to deduct ten percent (10%) 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.

108.04 LIMITATIONS OF OPERATIONS

ADD THE FOLLOWING PARAGRAPH TO THIS SUBSECTION:

D. The Contractor shall conduct the work in such a manner and in such a sequence as will ensure the least interference with traffic and as approved by the Engineer.

108.05 CHARACTER OF WORKMEN; METHODS AND EQUIPMENT

ADD THE FOLLOWING PARAGRAPH TO THIS SUBSECTION:

H. OSHA Standards and Interpretations, CFR 29 Part 1926 Subpart P, defines “competent person”, one who is capable of identifying existing and predictable hazards in the surroundings, or working conditions which are unsanitary, hazardous or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate those hazards and conditions.

108.08 DETERMINATIONS AND EXTENSION OF CONTRACT TIME

DELETE PARAGRAPH “A” OF THIS SUBSECTION AND REPLACE WITH THE FOLLOWING:

A. The contract time for completion will be fixed by the Contracting Agency and will be stated in the Owner–Contractor Agreement, either as a calendar date or based on a number of working days or on a specified number of calendar days.

ADD THE FOLLOWING PARAGRAPHS TO THIS SUBSECTION:

E. Completion of all Work within Contract Time Limits. When change orders are indicated, delays are experienced, or the Contractor proposes to revise the Baseline Project Schedule with impact to project milestones and/or substantial completion, the Contractor shall submit to the Owner a written Time Impact Analysis (TIA) illustrating the influence of each modification, delay or Contractor request on the contract time. The preparation of the TIA is considered part of the construction process and will be performed at no additional cost to the Owner. Each TIA shall include a fragmentary network (network analysis) demonstrating how the Contractor proposes to incorporate the modification, delay or Contractor request into the Baseline Project Schedule. The TIA shall demonstrate the time impact based on the date the modification is given to the Contractor or the date the delay occurred; the status of construction at that point in time; and the event time computation of all affected activities. The event times used in the TIA shall be those included in the latest schedule update or as adjusted by mutual agreement.

F. A contract time change shall only be authorized when an approved TIA indicates impact to milestone or substantial completion dates. The Baseline Project Schedule shall be revised only upon Contractor's receipt of an approved change order for the contract. The approved revision shall then be incorporated into the next monthly progress schedule submission.

ADD THE FOLLOWING SUBSECTIONS TO THIS SECTION:

108.70 FAILURE TO COMPLETE THE PUNCH LIST ON TIME

A. At the time of the Contractor's notice 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 all other work, excepting minor correction 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 clean up **within thirty (30) calendar days** or other time as agreed to by the Contractor and the Engineer.

B. Should the Contractor fail to complete the punch list and required clean up within the 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 **$3500** 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 administration of the contract, including cost of engineering, inspection, 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.

108.71 CONTRACT CLOSE-OUT PROCEDURE

A. When the Contractor considers that all work under the contract is completed, the Contractor shall inform the Engineer in writing and submit the Final Record Drawings to the Engineer, per Section 105 of the Special Provisions.

B. Upon receipt of notification from the Contractor that all work has been complete, the Engineer shall:

1. Inspect the work to determine if it is substantially complete and inform the 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 fourteen (14) calendar days of receipt of the request or as an alternate their participation in the project walk-thru.
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 final Record Drawings submitted by the Contractor.

4. Compile the punch list from the comments provided at the inspection and supply type written 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 Contractor and Engineer.

D. When all punch list items are completed, the Contractor shall notify, in writing, the Owner/Engineer who will verify their completion.

E. Failure of the Contractor to complete the punch list within the stated time shall be cause for assessment of damages in accordance with Section 108.09, "Failure to Complete the Work on Time" of these Special Provisions.

108.72 WARRANTY INSPECTION

A. The Contractor shall be responsible for scheduling and conducting a warranty inspection with the Owner and its representatives approximately one (1) month prior to the expiration of the warranty period. This shall also include a meeting prior to the warranty inspection.

B. All warranty corrections identified during the warranty inspection shall be commenced prior to the Guarantee 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 limited to, the following: traffic control plan submission; approval and set up for the inspection; confined space entry; support staff as needed; provide 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 the inspection 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.

METHOD OF MEASUREMENT

108.73 MEASUREMENT

A. Submittals required by this section will not be measured for payment directly but shall be included as 10 percent of Bid Item No. 200.01 "Mobilization and Demobilization".

METHOD OF PAYMENT

108.74 PAYMENT

A. No 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 Bid Item No. 200.01 "Mobilization and Demobilization".

B. The Contractor's cost for Section 108 shall be included in Bid Item No. 200.01 "Mobilization and Demobilization", which shall be full compensation for all materials, equipment and labor required including, but not limited to, Preliminary Baseline Project Schedule; review meetings; revisions as directed by the Engineer; Schedule Reports; Monthly Progress Schedules; Three Week Look Ahead; any required Time Impact Analysis; Remedial Project Schedules; including any and all other items incidental, appurtenant, and necessary to complete and comply with the work as described herein.

END OF SECTION 108

SECTION 109 – MEASUREMENT AND PAYMENT

109.06 PARTIAL PAYMENT

ADD THE FOLLOWING TO THIS SUBSECTION:

A. Invoices may not be submitted for payment until the Project Baseline Schedule has been accepted and approved by the Engineer.

ADD THE FOLLOWING SUBSECTIONS TO THIS SECTION:

109.70 CONTRACTOR EVALUATION NOTIFICATION

A. The City of Las Vegas Engineering Department has instituted a post construction process of Contractor Evaluation. This performance evaluation will encompass all aspects of project performance and responsiveness to all job related issues. These can and will include: adherence to schedule; expertise shown in field and management personnel; quality of the finished product; response to changes and project closeout. Additional items will include: compliance to Contract Documents; compliance with labor laws and Equal Opportunity Contracting Policy (EOCP); and overall cooperation of the Contractor and sub-contractors. This evaluation will be done with the input from all relevant City of Las Vegas Departments up to and including any outside consultants.

B. Above average performance could result in a bonus payment to the Contractor of up to one-half of one percent (0.5%) of the final contract amount (not to exceed $20,000.00).

C. Substandard performance could result in possible temporary bidding suspension, lasting a maximum of twelve months, on future City of Las Vegas related projects beginning in the next annual quarter.

D. Results will be sent via registered mail to the company Principals as recorded by the Nevada State Contractor's Board.

109.71 COMPENSATION FOR OWNER CAUSED DELAYS

A. Any claim by the Contractor for additional compensation for delays to the Project Schedule caused by the Owner shall be subject to the requirements of this Section. The parties agree that for the Owner caused delays which the Owner agrees to pay, or is found liable for payment, shall be based on the unit price set forth herein. The unit price for additional compensation is composed of the allowance established by the Owner based upon the Contracting Agency's historical experience with the cost of Owner cause delays plus the additional amount bid by the Contractor per day for the delay. The unit price multiplied by the number of days that the Owner caused delay impacts the Project Schedule shall be the full compensation due the Contractor for all delay related costs, both direct and indirect, connected to the Project, including, but not limited to, home and field office overhead, supervision costs and, opportunity costs, excepting there from traffic control and equipment standby costs which will be paid in accordance with Sections 624, 625 and 109.03, respectively. Owner caused delays shall mean the delays set forth in Section 108.08 (2) of the Standard Specifications.

B. If the Owner caused delay for which the Contractor is seeking additional compensation is concurrent with (i) an excusable delay as defined in Section 108.08(3), (ii) with a delay which is beyond the control of the Owner, or (iii) with a delay caused by the Contractor, the Contractor shall not be entitled to any additional compensation for that portion of time during which the delays are occurring concurrently. In no event shall the Contractor be entitled to any additional compensation on the basis that an early completion date in the Project Schedule was anticipated or planned for by the Contractor. If the Contractor experiences multiple concurrent Owner caused delays which are not concurrent with any other delays, compensation will be paid for one Owner caused delay only based upon the bid price day per calendar day set forth in this Section.

C. Any delay costs 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 delays 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. The claim for additional compensation submitted by the Contractor shall be evaluated by the City and, if deemed valid, paid pursuant to this Section. Section 104.02 of the Standard Specifications does not apply to this item.

E. The Owner Caused Delay Allowance shall be $500 per day. The Owner Caused Delay Amount in Addition to Allowance will be paid for at the contract unit price per day and shall be in an amount as bid by the Contractor.

F. Payment will be made under:

ITEM NO.	ITEM DESCRIPTION	UOM
109.01	OWNER CAUSED DELAY ALLOWANCE	DAY
109.02	OWNER CAUSED DELAY AMOUNT IN ADDITION TO ALLOWANCE	DAY

END OF SECTION 109

SECTION 110 – WAGES, HOURS AND CONDITIONS OF EMPLOYMENT

ADD THE FOLLOWING SUBSECTION TO THIS SECTION:

110.70 NORMAL WORKING HOURS

A. The Contractor is advised that the normal working hours for City of Las Vegas employees will be **7:00 a.m. to 4:00 p.m.** Monday through Friday except the following holidays: New Year's Day; Martin Luther King, Jr. Day; President's Day; Memorial Day; Independence Day; Labor Day; Nevada Day; Veteran's Day; Thanksgiving Day; Day After Thanksgiving; and Christmas Day.

B. The Contractor shall pay for the overtime of all employees of the City, who are requested by the Contractor to perform inspection or testing, or who as a result of the Contractor's operation, are required to perform inspections or testing beyond the normal hours of the established working day listed above. **Overtime rate for City employees is $85.50 per hour.**

C. The Contractor shall not be required to pay for the overtime of employees of the City who, as a result of a request by the Owner, are required to perform inspections or testing beyond the normal hours of the contract.

D. The Contractor shall not be required to pay for the wages of the employees of the City who are required to work beyond the normal working hours due to work phases that require night work under NDOT encroachment permits; however, work will be restricted to a normal eight hour shift.

E. The City of Las Vegas construction project representative may not approve any portion of the work completed during his absence. The City will retain the right to insist on removal of work completed during inspector's absence.

F. The Contractor will be required to pay for inspection of facilities not under the jurisdiction of the City of Las Vegas, performed outside of regular working hours. Payment will be at the current rates charged by the responding agency.

END OF SECTION 110

ADD THE FOLLOWING SECTION TO DIVISION I – GENERAL REQUIREMENTS

SECTION 170 – CONSTRUCTION CONFLICTS AND CONTINGENCIES

DESCRIPTION

170.01.01 GENERAL

A. Construction conflicts and contingency costs are those costs incurred due to alterations, deviations or additions to the plans and specifications, including increases in the quantity of any item or portion of work as deemed necessary by the Engineer for the proper completion and construction of the work as a whole.

MATERIALS

170.02.01 GENERAL

A. All materials shall conform to the requirements set forth in the USS, USD, the Supplemental Specifications, Special Provisions, or as agreed to in writing by the Contractor and the Engineer.

CONSTRUCTION

170.03.01 GENERAL

A. The work shall include, but is not limited to, supplying all labor, material, equipment, and transportation necessary to repair, rebuild, remove, relocate, replace, construct or reconstruct any surface or subsurface improvements which are not shown on the plans and or otherwise addressed in the contract documents. Such work shall be performed in accordance with the USS, USD, the Supplemental Specifications, Special Provisions and/or as directed by the Engineer.

METHOD OF MEASUREMENT

170.04.01 MEASUREMENT

A. Measurement for construction conflicts and contingencies will be in accordance with the applicable bid items and at the contract unit bid prices.

BASIS OF PAYMENT

170.05.01 PAYMENT

A. Full compensation for construction conflicts and contingencies will be paid under the appropriate contract unit price bid for the type of work completed. When the additional work is not covered by any unit bid price, payment will be as determined in Section 109.03 “Extra and Force Account Work” or by negotiated cost, agreed to in writing by the Contractor and the Engineer. Such payment shall be full compensation for all the labor, materials, and

incidentals necessary to complete the work. **No work shall be performed under this item without prior written approval from the Engineer.**

END OF SECTION 170

ADD THE FOLLOWING SECTION TO DIVISION II – CONSTRUCTION DETAILS

SECTION 200 – MOBILIZATION AND DEMOBILIZATION

DESCRIPTION

200.01.01 GENERAL

A. The item of mobilization and demobilization shall consist of preparatory work and clean up 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 which must be performed, or costs incurred, not otherwise paid for prior to beginning work and final completion of work on the various items on the project site.

B. The lump sum bid amount for mobilization and demobilization shall be determined by the Owner and shown on the bid schedule.

200.02.01 PROJECT SIGN

A. Two project signs shall be provided by the Contractor for placement near the limits of the project. Sign details are included in Appendix A of these Special Provisions. 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.

B. The Contractor shall properly maintain said signs throughout the construction until final completion of the contract, or as directed by the Engineer. Upon completion of the project and at the direction of the Engineer, the Contractor shall remove and dispose of the project signs.

C. The Contractor's cost for furnishing, installing, maintaining and removing these signs shall be included in the lump sum bid item for Mobilization and Demobilization and will not be measured or paid for separately.

BASIS OF PAYMENT

200.05.01 PAYMENT

A. Partial payments for MOBILIZATION AND DEMOBILIZATION shall be made in accordance with the following schedule:

1. The Contractor shall be entitled to twenty-five percent (25%) of the lump sum amount for mobilization and demobilization on their first pay request after the Notice to Proceed.

2. When five percent (5%) of the original contract amount is earned from other bid items, up to fifty percent (50%) of the total lump sum amount for mobilization and demobilization will be paid.

3. When twenty-five percent (25%) of the original contract amount is earned from other bid items, up to seventy-five percent (75%) of the total lump sum amount for mobilization and demobilization will be paid.
4. With the submittal of the monthly schedule update, ten percent (10%) of the lump sum amount for mobilization and demobilization, divided by the number of calendar months for the project duration, will be paid.
5. Upon completion of all work on the project any unpaid amount of the original contract lump sum amount for mobilization and demobilization, minus any deducted amounts for non-submittal of the monthly schedule update (see item #4 above), will be paid.

B All payments will be made in accordance with Subsection 109.02, “Scope of Payment”.

C. Payment will be made under:

ITEM NO.	ITEM DESCRIPTION	UOM
200.01	MOBILIZATION AND DEMOBILIZATION	LS

END SECTION 200

SECTION 201 – CLEARING AND GRUBBING

METHOD OF MEASUREMENT

201.04.01 MEASUREMENT

ADD THE FOLLOWING TO THIS SUBSECTION:

A. No direct measurement shall be made for CLEARING AND GRUBBING.

BASIS OF PAYMENT

201.05.01 PAYMENT

ADD THE FOLLOWING TO THIS SUBSECTION:

Unless otherwise provided in the Special Provisions, no payment will be made for CLEARING AND GRUBBING as such. The cost thereof shall be considered as included in the price bid for construction or installation of the items for which CLEARING AND GRUBBING is required.

END OF SECTION 201

SECTION 202 – REMOVAL OF STRUCTURES AND OBSTRUCTIONS

METHOD OF MEASUREMENT

202.04.01 MEASUREMENT

ADD THE FOLLOWING TO THIS SUBSECTION:

D. The quantity of Abandon North Basin - North Outfall Pipe will be measured for payment by the number of linear feet abandoned.

E. The quantity of Abandon North Basin - South Outfall Pipe will be measured for payment by the number of linear feet abandoned.

F. Measurement for payment of Remove Gate Hardware - South Basin - North Outfall Pipe will be on a lump sum basis for the removal.

G. The quantity of Abandon South Basin - South Outfall Pipe will be measured for payment by the number of linear feet abandoned.

H. The quantity of Remove Chain-Link Fence will be measured for payment by the number of linear feet removed.

I. The quantity of Remove Asphalt Pavement Trail and Improvements will be measured for payment by the number of square yards removed, including salvage of improvements for reinstallation on the project.

J. Measurement for payment of Remove Concrete Channel and Riprap at Sports Park will be on a lump sum basis for the removal and will include salvage of the riprap for reuse on the project.

K. The quantity of Remove Concrete Channel at 84-inch RCP Inflow will be measured for payment by the number of square feet removed.

L. The quantity of Remove Vehicle Barrier Fence (Non-Trail Area) will be measured for payment by the number of linear feet removed.

M. The quantity of Remove Riprap will be measured for payment by the number of cubic yards removed and will include salvage of the riprap for reuse on the project.

BASIS OF PAYMENT

202.05.01 PAYMENT

DELETE PARAGRAPH E AND ADD THE FOLLOWING TO THIS SUBSECTION:

E. The accepted quantity of Abandon North Basin - North Outfall Pipe will be paid for at the Contract unit price bid per linear foot; shall conform to the requirements of Subsection 202.05.01 of the Uniform Standard Specifications; and shall include access to location of

removals from within specified construction limits, all materials, equipment, labor, and disposal required to perform this work, and all work as shown on the Drawings, as specified, and as directed by the Engineer. This payment shall also include clearing and grubbing, saw cutting, riprap removal, removal and disposal of steel pipe cage, sluice gate, stem rod, gate operating hardware, concrete slab, cutoff walls, footings, and steel reinforcement; removal and disposal of concrete outlet headwall; compacted fill of voids left by excavated structures in compliance with Section 203, grading, and shaping of excavated area to match adjacent existing embankment slope or contour grading as shown on the Drawings; saw cutting of existing storm drain and removal and disposal of storm drain; slurry filling the portion of storm drain to be abandoned in place; and all other items incidental, appurtenant, and necessary to complete the work as shown on the Drawings, as specified, and as directed by the Engineer.

F. The accepted quantity of Abandon North Basin - South Outfall Pipe will be paid for at the Contract unit price bid per linear foot; shall conform to the requirements of Subsection 202.05.01 of the Uniform Standard Specifications; and shall include access to location of removals from within specified construction limits, all materials, equipment, labor, and disposal required to perform this work, and all work as shown on the Drawings, as specified, and as directed by the Engineer. This payment shall also include clearing and grubbing, saw cutting, riprap removal, removal and disposal of steel pipe cage, sluice gate, stem rod, gate operating hardware, concrete slab, cutoff walls, footings, and steel reinforcement; removal and disposal of concrete outlet headwall; compacted fill of voids left by excavated structures in compliance with Section 203, grading, and shaping of excavated area to match adjacent existing embankment slope or contour grading as shown on the Drawings; saw cutting of existing storm drain and removal and disposal of storm drain; slurry filling the portion of storm drain to be abandoned in place; and all other items incidental, appurtenant, and necessary to complete the work as shown on the Drawings, as specified, and as directed by the Engineer.

G. The lump sum payment for Remove Gate Hardware - South Basin - North Outfall Pipe shall be full compensation for saw cutting; removal and disposal of steel pipe cage, stem rod, gate operating hardware, concrete slab, cutoff walls, footings, and steel reinforcement; epoxy coating of exposed reinforcing steel; compacted fill of excavated structures in compliance with Section 203, grading, and shaping of excavated area to match adjacent embankment slope; protecting in place of remaining concrete slab; all materials, equipment, labor, and disposal required to perform this work; and all other items incidental, appurtenant, and necessary to complete the work as shown on the Drawings, as specified, and as directed by the Engineer.

H. The accepted quantity of Abandon South Basin - South Outfall Pipe will be paid for at the Contract unit price bid per linear foot; shall conform to the requirements of Subsection 202.05.01 of the Uniform Standard Specifications; and shall include all materials, equipment, labor, and disposal required to perform this work and all work as shown on the Drawings, as specified, and as directed by the Engineer. This payment shall also include removal of concrete inlet structure, steel reinforcement, grate, cutoff walls, and footings; removal of sluice gate, stem rod, and gate operating hardware; compacted fill of excavated structures in compliance with Section 203, grading, and shaping of excavated area to match adjacent existing embankment slope or contour grading as shown on the Drawings; saw cutting of existing storm drain and removal of storm drain; slurry filling the

portion of storm drain to be abandoned in place; slurry filling outlet vault to match existing grade and broom finish to match existing; and all other items incidental, appurtenant, and necessary to complete the work as shown on the Drawings, as specified, and as directed by the Engineer.

I. The accepted quantity of Remove Chain-link Fence will be paid for at the Contract unit price bid per linear foot; shall conform to the requirements of Subsection 202.05.01 of the Uniform Standard Specifications; and shall include access to location of removals from within specified construction limits and all materials, equipment, labor, and disposal required to perform this work and all work as shown on the Drawings, as specified, and as directed by the Engineer. This price shall be full compensation for removal and disposal of various portions of the existing chain-link fence including complete removal of post concrete foundations, in accordance with applicable provisions of Section 202 of the Standard Specifications, as specified, and as shown on the Drawings, properly removed, and the site of the removal restored in preparation for installation of new fencing as specified in Section 616, all as specified, as shown on the Drawings, and as required by the Engineer and all other items incidental, appurtenant, and necessary to complete the work as shown on the Drawings, as specified, and as directed by the Engineer.

J. The accepted quantity of Remove Asphalt Pavement Trail and Improvements will be paid for at the Contract unit price bid per square yard; shall conform to the requirements of Subsection 202.05.01 of the Uniform Standard Specifications; and shall include access to location of removals from within specified construction limits and all materials, equipment, labor, and disposal required to perform this work and all work as shown on the Drawings, as specified, and as directed by the Engineer. This payment shall also include saw cutting and removal of existing asphalt concrete pavement trail; removal and disposal of concrete slabs, light pole foundations, reinforcing steel, cutoff walls, footings, decomposed granite, trash, and debris; removal and salvage for reinstallation of trash receptacles, benches, signage, lights, pole, arm and fixtures, conduit and conductors, vehicle barrier fence (block and chain), post and cable, and similar improvements; protection and restoration, if damaged, of all existing facilities; and all other items incidental, appurtenant, and necessary to complete the work as shown on the Drawings, as specified, and as directed by the Engineer.

K. The lump sum payment for Remove Concrete Channel and Riprap at Sports Park shall be full compensation for saw cutting; shall conform to the requirements of Subsection 202.05.01 of the Uniform Standard Specifications; and shall include access to location of removals from within specified construction limits; clearing and grubbing; removal and disposal of concrete channel, cutoff walls, and steel reinforcement; removal and salvage of riprap for reuse on the project; all materials, equipment, labor, and disposal required to perform this work; and all other items incidental, appurtenant, and necessary to complete the work as shown on the Drawings, as specified, and as directed by the Engineer.

L. The accepted quantity of Remove Concrete Channel at 84-inch RCP Inflow will be paid for at the Contract unit price bid per square foot; shall conform to the requirements of Subsection 202.05.01 of the Uniform Standard Specifications; and shall include all materials, equipment, labor, and disposal required to perform this work and all work as shown on the Drawings, as specified, and as directed by the Engineer. This payment shall also include saw cutting and removal of existing concrete channel, cutoff walls, and steel

reinforcement; protection and restoration, if damaged, of all existing facilities; and all other items incidental, appurtenant, and necessary to complete the work as shown on the Drawings, as specified, and as directed by the Engineer.

M. The accepted quantity of Remove Vehicle Barrier Fence (Non-Trail Area) will be paid for at the Contract unit price bid per linear foot; shall conform to the requirements of Subsection 202.05.01 of the Uniform Standard Specifications; and shall include access to location of removals from within specified construction limits, removal of blocks and chains, excavation of end blocks, salvage of blocks and chains for reuse on the project, and all materials, equipment, labor, and disposal required to perform this work and all work as shown; and all other items incidental, appurtenant, and necessary to complete the work as shown on the Drawings, as specified, and as directed by the Engineer.

N. The accepted quantity of Remove Riprap will be paid for at the Contract unit price bid per cubic yard; shall conform to the requirements of Subsection 202.05.01 of the Uniform Standard Specifications; and shall include removal and disposal or salvage of riprap for reuse on the project; disposal of excess materials; and all materials, equipment, labor, and disposal required to perform this work; and all other items incidental, appurtenant, and necessary to complete the work as shown on the Drawings, as specified, and as directed by the Engineer. Salvaged riprap shall be screened and placed as specified in Section 610 and as shown on the Drawings.

O. Payment will be made under:

ITEM NO.	ITEM DESCRIPTION	UOM
202.01	Abandon North Basin - North Outfall Pipe	Linear Foot
202.02	Abandon North Basin - South Outfall Pipe	Linear Foot
202.03	Remove Gate Hardware - South Basin - North Outfall Pipe	Lump Sum
202.04	Abandon South Basin - South Outfall Pipe	Linear Foot
202.05	Remove Chain-Link Fence	Linear Foot
202.06	Remove Asphalt Pavement Trail and Improvements	Square Yard
202.07	Remove Concrete Channel and Riprap at Sports Park	Lump Sum
202.08	Remove Concrete Channel at 84-inch RCP Inflow	Square Foot
202.09	Remove Vehicle Barrier Fence (Non-Trail Area)	Linear Foot
202.10	Remove Riprap	Cubic Yard

END OF SECTION 202

SECTION 203 – EXCAVATION AND EMBANKMENT

DESCRIPTION

203.01.01 GENERAL

ADD THE FOLLOWING PARAGRAPH TO THIS SUBSECTION:

B. The compacted subgrade shall be maintained at optimum moisture content until placement of an aggregate base course.

CONSTRUCTION

203.03.01 ROADWAY

ADD THE FOLLOWING PARAGRAPH TO THIS SUBSECTION:

E. It is expected that roadway, trench, channel, structure, drainage and impoundment excavation will require removal of various types of material, including cemented soils and rock. The cost for the excavation of cemented soils and rock encountered shall be considered as included in the unit prices bid for pay items requiring excavation and no additional compensation will be allowed.

203.03.04 BLASTING

DELETE THIS SUBSECTION IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING:

A. Blasting shall not be permitted.

203.03.16 EMBANKMENT MATERIALS

ADD THE FOLLOWING PARAGRAPH TO THIS SUBSECTION:

F. Comply with select backfill requirements and gradation in Subsection 207.02.01. Structural fill and compacted fill soils shall consist of coarse-grained material (50 percent or more retained on the No. 200 sieve) with a low solubility potential of 1.5 percent or less, as evaluated by Technical Guideline TG-19-2007 (Clark County Department of Development Services – Building Division, 2007), a low sulfate content (less than 0.1 percent), and a very low to low expansion potential (EI less than 50, as evaluated by ASTM D4829). Fill soils shall not contain organic matter, debris, other deleterious matter, or rocks or hard chunks larger than approximately 6 inches nominal diameter.

ADD THE FOLLOWING SUBSECTIONS TO THIS SECTION:

203.03.70 OVER-EXCAVATION AND BACKFILL

A. Where over-excavation below the depths as shown on the Drawings or required by the specifications is necessary to remove unsuitable material, the Engineer may require the Contractor to remove the unsuitable materials and backfill to the finished graded section

with Type I aggregate base, conforming to 3-inch size per Subsection 704.03.03, compacted to a minimum of 90% of ASTM D1557 Modified Proctor and in accordance with the methods in the USS.

B. Unless otherwise provided in the Special Provisions, over-excavation and backfill below the limits shown on the Drawings will be paid for as “Extra Work”.

203.03.71 HAZARDOUS MATERIAL

A. Hazardous material shall be defined as material or water contaminated with volatile organic compounds, inorganic non-metals, petroleum hydrocarbons, or other contaminates as specified by the Nevada Division of Environmental Protection Agency (NDEP).

B. The Contractor shall retain a Certified Environmental Manager (CEM) for making periodic inspection of the project for potential hazardous materials. In addition, the CEM will be available for inspection of the project as directed by the Engineer and/or NDEP should material be uncovered that may be potential hazardous material.

C. When potential hazardous material is encountered with the project, the Contractor shall:

1. Immediately contact the CEM, Engineer, and NDEP (486-2863).
2. Have the CEM perform the inspection of the potential hazardous material and if required perform the inspection for the removal and disposal of the hazardous material.
3. Retain a certified geotechnical firm to perform the required tests for hazardous materials and/or contaminants.
4. If required, perform the removal and disposal of the hazardous materials as directed by the CEM, Engineer, and/or the NDEP.
5. Removal of hazardous material will be paid for as “Extra Work”.

203.03.72 EXCAVATION FOR DETENTION BASINS

A. It is expected excavation for storm drain and detention basin items will require removal of various types of material, including cemented soils and rock (i.e., caliche).

B. All costs for excavation for trenches, storm drain, culverts, pipes, and structures shall be incidental in the various bid items. Separate payment for excavation, regardless of the type, amount, or methods required, will not be made.

C. Prior to construction, baseline distress evaluation by a qualified professional shall be conducted by the Contractor. The evaluations shall document existing distress to the structures and other improvements in the area of work.

D. Vibration monitoring by a qualified professional shall be conducted by the Contractor during excavation of cemented soils. The Contractor shall be required to conduct impact assessment tests of the equipment excavating cemented soils prior to construction. The Contractor shall submit an Impact Assessment Test Plan and Impact Assessment Test Results. The frequency and amplitude of the vibratory equipment shall be calibrated and used to measure ground velocity for conformance to the current regulatory limit of 0.5 inch

per second peak ground velocity at the nearest affected structure. The measurements shall comply with the recommendations of the “Office of Surface Mining, Blasting Guidance Manual, 1987.” The cost for vibration monitoring during excavation of cemented soils shall be considered as included in the unit price bid for pay items requiring excavation and no additional compensation will be allowed.

E. The Contractor shall submit to the Owner a plan detailing Contractor's proposed excavation techniques. This excavation plan shall include the results of a seismic survey performed by a certified seismic survey firm. The plan must show all proposed locations of excavation operations utilizing methods involving headache balling, hoe ram, or other techniques. The excavation plan shall include recommendations from certified seismic survey firm for limiting ball weights, height of drop, etc. for all areas headache balls and/or hoe rams techniques are proposed. In addition, the plan must include the results of a pre-excavation survey and a seismic monitoring plan. The excavation plan shall also include as a minimum; detailed examination of adjacent structures, including video taping and installation of crack monitoring tape along existing structural cracks. The excavation plan must be approved by the Owner prior to construction.

F. If damage to structures becomes evident, the Contractor shall immediately cease Contractor's excavation operations and submit a new excavation plan detailing new or modified methods to end the adverse affects. The Contractor shall make no claims for any delay caused by the re-submittal nor any additional expense resulting from changing Contractor's proposed excavation methods.

G. The excavation plan shall be updated and resubmitted to the Owner any time the Contractor proposes altering Contractor's methods. The plan(s) will be considered shop drawings and will be handled as such. The Contractor shall make no claim for any losses resulting from delays during the review of these submittals in accordance with the limitations detailed for shop drawings in these specifications.

H. The Contractor’s methods for excavation are solely Contractor's responsibility. Approval of the excavation plan by the Owner will in no way limit the Contractor’s liability regarding property damaged and subsurface damage beyond the excavation limits by Contractor's operations, nor will it alter the Contractor’s sole responsibility for the safety of Contractor's operations. The Contractor shall be responsible for all damage caused by Contractor's excavation operations and be responsible for answering all complaints. Provide the Owner with advance warning of the use of excavation techniques which may lead to property damage, to review the proposed techniques, to confirm general compliance with these specifications, and to allow monitoring of the excavation methods.

I. Excavations near mapped alluvial faults shall be inspected by a qualified professional prior to RCP/RCB installation. If a fault is encountered, appropriate remedial action shall be taken by the Contractor in accordance with geotechnical recommendations.

203.03.73 COMPACTED FILL

A. Compacted fill will consist of native material excavated, hauled, screened, placed, and compacted within the neat lines shown on the Drawings and as specified in Subsection 203.03.16.

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 along the dam embankment shall be scarified to a minimum of 8 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 Owner's representative 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 203.03.70, Over-Excavation and Backfill.

203.03.74 EMBANKMENT PROTECTION

A. Completed excavation and embankment grading planes and other disturbed areas within the limits of construction shall be protected by soil stabilizer placed on all exposed soil surfaces. Soil stabilizer shall be applied to all disturbed soil areas not specified to be covered with riprap, decomposed granite, aggregate base, asphalt pavement or other surfacing. Herbicide shall not be allowed on any surfaces within the detention basin.

B. Apply soil stabilizer within 14 days of when no further disturbance of the surface will be made. Protect all structures, walls, landscaping, etc. from overspray. Store and handle soil stabilizer in accordance with the manufacturer’s recommendations. Do not spray when weather conditions are windy. Windy conditions are defined as a sustained wind of 8 mph or more, or any condition that may cause dispersal of material to be difficult or inaccurate. Soil stabilizer shall form a crust like barrier within 4 to 8 hours.

C. Soil stabilizer shall be PLAS-TEX, Enviro-Shield Bonded Fiber Matrix, or approved equal and shall be applied at the manufacturer’s recommended application and dilution rates.

D. Add a color pigment to the soil stabilizer at the time of application. Apply a suitable pigmentation to the soil stabilizer slurry such that is used for pigmenting concrete at an application rate of 50 pounds per acre. The color of the pigmentation shall be approved by the Engineer.

203.03.75 QUALITY CONTROL TESTING

A. Quality control testing will be performed for Dam Safety Permit compliance in accordance with the State Engineers Office. The testing will be performed by an independent testing laboratory.

B. The Contractor shall schedule his operations so as to allow and facilitate quality control testing by the independent laboratory.

C. The following standard tests will be used as a basis for classifying soil materials and for control testing:

Test Designation	Test
ASTM C136 AASHTO T27	Test for Sieve or Screen Analysis of Fine and Course Aggregates
ASTM D1556	Density of Soils In-Place by the Sand-Cone Method
ASTM D1557 AASHTO T180	Moisture-Density Relations of Soils and Soil Aggregate Mixing Using 10 Pound Rammer and 18-Inch Drop
AASHTO T310	In-Place Density and Moisture Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)
ASTM D4318 AASHTO T89/T90	Plasticity Index of Soils
AWWA 4500E	Maximum Sulfate Content
Southern Nevada Amendments to the Building Code	Maximum Expansive Potential 60 psf
ASTM C117	Test for Materials Finer than No. 200 Sieve in Mineral Aggregates by Washing
ASTM D422	Particle-Size Analysis of Soils

D. Two representative soil samples of imported fill will be performed at the beginning of construction. Additional tests will be conducted to classify and establish the moisture density relationship for each type of soil encountered in areas that may yield excavated materials suitable for placement in embankment. Whenever the material encountered is different from previously tested material, a new set of classification and moisture-density tests will be performed.

E. The number of locations of in-place density tests for embankment and compacted fill construction shall be sufficient to determine that each layer of material placed in embankment has been compacted adequately to obtain the density specified therefore. The minimum number of in-place density tests by ASTM D1556 and AASHTO T310 procedures will be one for each 5,000 square feet per 8-inch lift of fill.

F. The following standard tests will be used for concrete material quality control testing:

Test Designation	Test
ASTM C1064	Temperature of Freshly Mixed Portland Cement Concrete
ASTM C143	Slump of Hydraulic Cement Concrete

Test Designation	Test
ASTM C173/C231	Air Content of Freshly Mixed Concrete
ASTM C39	Compressive Strength of Cylindrical Concrete Specimens

G. The concrete will be tested a minimum of once per day and per every 100 cubic yards placed.

H. The above frequency of tests is approximate and is provided for the Contractor's information in planning Contractor's work and interruptions during testing. The actual number of tests will depend on the variability of materials being placed and uniformity of the Contractor's placement operations.

I. Quality control test data will be reviewed and submitted monthly. All quality control test data will be compiled in a final report and submitted at the completion of work for Dam Safety Permit compliance. All reports submitted to the City shall be stamped by a Nevada Registered Professional Engineer.

203.03.76 CALICHE EXCAVATION

A. Caliche is anticipated to be encountered on this project and is defined as a rock-like material that occurs in soil deposits erratically in thickness, hardness, and lateral extent and it is therefore difficult to predict in terms of interference with below-grade construction. Contractor shall take adequate precautions to reduce the potential for vibrational damage to adjacent or nearby structures when using heavy impact equipment during removal of caliche. In the event structures are damaged, Contractor be responsible for effecting all repairs.

B. Generation of oversized material (rocks or hard chunks greater than 6 inches nominal diameter) shall be anticipated by Contractor when excavating caliche. Oversize material shall be crushed prior to being used as structural fill, backfill, and compacted fill, or disposed of in a suitable manner.

METHOD OF MEASUREMENT

203.04.01 MEASUREMENT

ADD THE FOLLOWING TO THIS SUBSECTION:

M. The quantity of Detention Basin Excavation will be measured for payment by cubic yard.

N The quantity of Hauling to BLM Site will be measured for payment by cubic yard.

O. Measurement for payment of Quality Control Testing will be on a lump sum basis.

P. The quantity of Compacted Fill will be measured for payment by cubic yard.

Q. Over-excavation and backfill volumes will be measured by the average end area method of the over-excavated material in its original state. If for any reason it is impossible or impractical to measure quantities by average end areas, the Engineer will compute the quantities by a method which, in the Engineer's opinion, is best suited to obtain an accurate determination. This quantity will include both the cost for removing the unsuitable material and the cost to replace it with suitable backfill.

R. The quantity of Detention Basin Soil Stabilization will be measured for payment by acre.

BASIS OF PAYMENT

203.05.01 PAYMENT

DELETE THIS SUBSECTION IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING:

A. The accepted quantity of Detention Basin Excavation will be paid for at the Contract unit price bid per cubic yard and shall include all labor, equipment, and materials necessary to complete the work, including but not limited to, clearing and grubbing; excavating; scarifying; grading; moisture conditioning, blending, screening, compaction; all miscellaneous grading of shoulders, ditches and transitions; on-site hauling; handling; stockpiling and rehandling for on-site excess material disposal as shown on the Drawings; watering; disposal; dewatering; and all other items incidental, appurtenant, and necessary to complete the work as shown on the Drawings, as specified, and as directed by the Engineer. Payment for Detention Basin Excavation shall also include the cost of caliche excavation including rehandling if permitted to use as riprap, screening, watering, disposal, heavy-duty ripping, heavy-duty backhoe, headache ball, hoe-ram, rocksaw, dewatering, and all other items incidental and appurtenant to this work. Hauling excess material to the BLM site will be paid for as specified below for the item for Hauling to BLM Site.

B. The quantity of Hauling to BLM Site will be paid for at the Contract unit price bid per cubic yard, which shall be full compensation for providing all labor, equipment, and materials necessary to complete the work, including but not limited to, crushing, loading, hauling, depositing on BLM site, coordinating with pit operator, handling, stockpiling, compacting**,** watering, complying with stipulations of the Bureau of Land Management Free Use Permit (Appendix D) and all other items incidental, appurtenant, and necessary to complete the work as shown on the Drawings, as specified, and as directed by the Engineer.

C. The lump sum payment for Quality Control Testing shall include all testing, labor, tools, equipment. and coordination with outside testing laboratories to comply with all test requirements necessary to complete the work. Testing by the Contractor required as part of other bid items shall not be paid for under this pay item but will be considered incidental to the pay items requiring the tests.

1. Failure to submit a monthly report, as specified in Subsection 203.03.74 "Quality Control Testing," will be grounds for the Engineer to deduct up to ten percent (10%) of the monthly progress payment until the Contractor is in compliance.

D. The accepted quantity of Compacted Fill will be paid for at the Contract unit price bid per cubic yard, which shall be full compensation for providing all labor, equipment, and materials necessary to complete the work, including but not limited to, access to location

within the specified construction limits, clearing and grubbing, crushing, processing, screening, hauling, placing, blending, watering, compacting, and all other items incidental, appurtenant, and necessary to complete the work as shown on the Drawings, as specified, and as directed by the Engineer.

E. The accepted quantity of Detention Basin Soil Stabilization will be paid for at the Contract unit price bid per acre, which shall include all permits, labor, materials, equipment, and all other items incidental, appurtenant, and necessary to complete the work as shown on the Drawings, as specified herein, and as directed by the Engineer.

F. The CEM retained by the Contractor will not be paid for directly, but will be included in the unit prices bid for pay items requiring excavation and no additional payment will be allowed.

G. Unless otherwise provided in the Special Provisions, dewatering will not be paid for directly and will be included in the unit prices bid for pay items requiring excavation and no additional payment will be allowed.

H. Payment will be made under:

ITEM NO.	ITEM DESCRIPTION	UOM
203.01	Detention Basin Excavation	Cubic Yard
203.02	Hauling to BLM Site	Cubic Yard
203.03	Quality Control Testing	Lump Sum
203.04	Compacted Fill	Cubic Yard
203.05	Detention Basin Soil Stabilization	Acre

END OF SECTION 203

SECTION 206 – STRUCTURE EXCAVATION

DESCRIPTION

206.01.01 GENERAL

ADD THE FOLLOWING TO THIS SUBSECTION:

C. Where structure over-excavation below the depths as shown on the Drawings or required by the specifications is necessary to remove unsuitable material, the Engineer may require the Contractor to remove the unsuitable materials and backfill to the required grade with material conforming to Subsection 704.03.02, compacted to a minimum of 90% of ASTM D1557 Modified Proctor and in accordance with the methods in the USS.

D. Unless otherwise provided in the Special Provisions, structure over-excavation and backfill below the limits shown on the Drawings will be paid for as "Extra Work."

E. If groundwater is encountered within the excavated area, dewatering shall be performed as specified in Section 270 "Dewatering."

METHOD OF MEASUREMENT

ADD THE FOLLOWING SUBSECTION TO THIS SECTION:

206.04.01 MEASUREMENT

No unit of measurement shall be made for Structure Excavation.

METHOD OF PAYMENT

206.05.01 PAYMENT

ADD THE FOLLOWING TO THIS SUBSECTION:

Unless otherwise provided in the Special Provisions, no payment will be made for Structure Excavation as such. The cost thereof shall be considered as included in the price bid for construction or installation of the items to which Structure Excavation is required.

END OF SECTION 206

SECTION 207 – STRUCTURE BACKFILL

DESCRIPTION

METHOD OF MEASUREMENT

207.04.01 MEASUREMENT

ADD THE FOLLOWING TO THIS SUBSECTION:

No direct measurement shall be made for Structure Backfill.

METHOD OF PAYMENT

207.05.01 PAYMENT

ADD THE FOLLOWING TO THIS SUBSECTION:

Unless otherwise provided in the Special Provisions, no payment will be made for Structure as such. The cost thereof shall be considered as included in the price bid for construction or installation of the items to which Structure Backfill is required.

END OF SECTION 207

SECTION 208 – TRENCH EXCAVATION AND BACKFILL

DESCRIPTION

208.01.01 GENERAL

ADD THE FOLLOWING TO THIS SUBSECTION:

E. Frequency of quality control field inspection and testing shall be in accordance with 203.05.02 Testing.

F. Ponding and jetting will not be allowed on City of Las Vegas projects.

MATERIAL

208.02.08 CRUSHED ROCK

ADD THE FOLLOWING TO THIS SUBSECTION:

B. Crushed rock will not be permitted as structural or trench backfill.

ADD THE FOLLOWING SUBSECTION TO THIS SECTION:

208.02.70 STRUCTURAL BACKFILL

A. Structural backfill shall consist of material conforming to subsection 207.02.02 “Granular Backfill” or subsection 207.02.01 “Selected Backfill”. Additionally, the backfill material shall be non-gypsiferous (solubility less than 4%), have an expansion potential less than 4%, shall be free of vegetation and debris and contain no rocks larger than four inches nominal diameter. Crushed rock will not be permitted as structural or trench backfill.

CONSTRUCTION

208.03.01 TRENCH EXCAVATION, GENERAL

ADD THE FOLLOWING TO THIS SUBSECTION:

C. Trenching and shoring operations shall be conducted in accordance with 29 CFR (Code of Federal Regulations) Part 1926, Occupational Safety and Health Standards (OSHA) – Subpart P – Excavations (July 1, 1990).

METHOD OF MEASUREMENT

208.04.01 MEASUREMENT

DELETE THIS SUBSECTION AND REPLACE WITH THE FOLLOWING:

A. No separate measurement will be made for trench excavation and backfill as such.

B. No separate measurement will be made for temporary cold plantmix patching as such.

C. No separate measurement will be made for permanent pavement patching as such.

BASIS OF PAYMENT

208.05.01 PAYMENT

DELETE THIS SUBSECTION AND REPLACE WITH THE FOLLOWING:

A. Unless otherwise provided in the Contract Documents, no payment will be made for trench excavation and backfill as such; the cost thereof under normal circumstances being considered as included in the price bid for the construction or installation of the items to which such excavation and backfill is incidental or appurtenant. Compensation for trenching, backfilling, and compaction of pipe zone and other items of work, which are considered as part of underground piping or conduit work, shall be included with the Contract bid item for such piping or conduit work.

B. No payment will be made for temporary cold plantmix patching as such; the cost thereof shall be considered as included in the price bid for the removal and construction or installation of underground piping or conduit work to which such patching is incidental or appurtenant.

C. No payment will be made for permanent pavement patching as such; the cost thereof shall be considered as included in the price bid for installation of underground piping or conduit work to which such patching is incidental or appurtenant.

END OF SECTION 208

SECTION 211 – EROSION CONTROL

METHOD OF MEASUREMENT

211.04.01 MEASUREMENT

DELETE THIS SUBSECTION AND REPLACE WITH THE FOLLOWING:

A. No direct measurement shall be made for erosion control operations as such.

METHOD OF PAYMENT

211.05.01 PAYMENT

DELETE THIS SUBSECTION AND REPLACE WITH THE FOLLOWING:

A. Unless otherwise provided in the Special Provisions, no payment will be made for erosion control operations as such. The cost thereof shall be considered as included in the price bid for construction or installation of the items for which erosion control operations are required.

END OF SECTION 211

ADD THE FOLLOWING SECTION TO DIVISION II – CONSTRUCTION DETAILS

SECTION 270 – DEWATERING

DESCRIPTION

270.01.01 GENERAL

A. This work shall consist of furnishing all materials, labor, equipment and supervision to design, install, operate, remove dewatering systems and to lower the water table sufficient to prevent ground water from entering excavations.

B. The work shall also consist of, but is not necessarily limited to, the proper disposal of groundwater removed by a dewatering system **in accordance with local, state, and federal regulations**. Prior to discharging groundwater into the storm drain system, the Contractor shall be responsible for obtaining the groundwater discharge permit from the Nevada Division of Environmental Protection, comply with the conditions of the permit and pay all costs associated with the permit requirements such as permit fees, laboratory analysis and treatment of the discharge water, if required. The permit application can be downloaded at: ndep.nv.gov/BWPC. Sampling and laboratory analysis shall be completed by Nevada Certified Environmental Manager and Certified Laboratory.

C. Dewatering shall conform to the requirements of Section 208 “Trench Excavation and Backfill” and Section 502 “Concrete Structures” unless otherwise specified herein.

MATERIALS

270.02.01 GENERAL

A. At or prior to the preconstruction conference, the Contractor shall submit the dewatering plan showing method of dewatering, piping locations, discharge points, sewer and storm drainage facilities utilized and estimated discharge quantities.

CONSTRUCTION

270.03.01 GENERAL

A. Dewatering for structures and pipelines shall commence when groundwater is first encountered and shall be continuous until such times as water can be allowed to rise in accordance with the following provisions. Dewatering shall be conducted such that no concrete footings or floors or pipelines are placed in water nor shall water be allowed to rise over them until the concrete or mortar has set at least eight (8) hours. Water will not be allowed to rise in pipeline trenches or drained excavations until pipelines or facilities are backfilled or restrained to prevent flotation.

B. The Contractor shall remove all dewatering equipment and materials at the completion of the work or as otherwise directed by the Engineer.

C. The dewatering system shall be kept in operation until all work in the excavation is backfilled and properly compacted to a point three (3) feet above the existing water table elevation.

D. The Contractor shall arrange for and provide all necessary utilities to operate the dewatering system.

270.03.02 POINT OF DISCHARGE

A. The Contractor shall dispose of groundwater removed by the dewatering system into the storm drain system in accordance with local, state and federal regulations.

METHOD OF MEASUREMENT

270.04.01 MEASUREMENT

A. No direct measurement shall be made for Dewatering.

BASIS OF PAYMENT

270.05.01 PAYMENT

A. Unless otherwise provided in the Special Provisions, no payment will be made for Dewatering as such. The cost thereof shall be considered as included in the price bid for construction or installation of the items for which Dewatering is required.

END OF SECTION 270

ADD THE FOLLOWING SECTION TO DIVISION II – CONSTRUCTION DETAILS

SECTION 272 – GEOTEXTILE SEPARATION FABRIC

DESCRIPTION

272.01.01 GENERAL

A. This work shall consist of geotextile fabric under riprap and gabion structures.

MATERIALS

272.02.01 GENERAL

A. The materials shall conform to MacCaferri Mactex MX 275 Nonwoven Geotextile, Mirafi 180N Nonwoven Geotextile, or approved equal.

B. Geotextiles labeling, shipment, and storage shall follow ASTM D4873. Product labels shall clearly show the manufacturer or supplier name, style name, and roll number.

C. Each geotextile roll shall be wrapped with a material that will protect the geotextile from damage due to shipment, water, sunlight, and contaminants.

D. During storage, geotextile rolls shall be elevated off the ground and adequately covered to protect them from the following: site construction damage, precipitation, extended ultraviolet radiation including sunlight, chemicals that are strong acids or strong bases, flames including welding sparks, excess temperatures, and any other environmental conditions that may damage the physical property values of the geotextile.

CONSTRUCTION

272.03.01 INSTALLATION

A. The installation site shall be properly prepared to receive the geotextile fabric including removing all large debris which might puncture the fabric and complying with manufacturer's recommendations.

B. The geotextile shall be laid smooth without wrinkles or folds on the prepared subgrade. Adjacent geotextile rolls shall be overlapped, sewn or joined as recommended by the product manufacturer and as shown on the Drawings. Overlaps shall be in the direction as shown on the Drawings or required by the Engineer.

C. On curves, the geotextile may be folded or cut to conform to the curves. The fold or overlap shall be in the direction of construction and held in place by pins, staples, or piles of rock.

D. Prior to covering, the geotextile shall be inspected by the Engineer to ensure that the geotextile has not been damaged during installation. Damaged geotextiles, as identified by the Engineer, shall be repaired immediately. Cover the damaged area with a geotextile

patch which extends an amount equal to the required overlap beyond the damaged area, or as recommended by manufacturer.

E. If placement of the riprap or gabion material causes damage to the geotextile, the damaged area shall be repaired as described above. The placement procedure shall then be modified to eliminate further damage from taking place.

METHOD OF MEASUREMENT

272.04.01 MEASUREMENT

A. No direct measurement shall be made for geotextile fabric.

BASIS OF PAYMENT

272.05.01 PAYMENT

A. Unless otherwise provided in the Special Provisions, no payment will be made for geotextile fabric as such. The cost thereof shall be considered as included in the price bid for construction or installation of the items for which geotextile fabric is required.

END OF SECTION 272

SECTION 302 – AGGREGATE BASE COURSES

METHOD OF MEASUREMENT

302.04.01 MEASUREMENT

ADD THE FOLLOWING TO THIS SUBSECTION:

D. The quantity of Type II Maintenance Road will be measured for payment by square yard, in place and accepted.

BASIS OF PAYMENT

302.05.01 PAYMENT

DELETE PARAGRAPH E AND ADD THE FOLLOWING TO THIS SUBSECTION:

E. The accepted quantity of Type II Maintenance Road will be paid for at the Contract unit price bid per square yard, shall conform to the requirements of Subsection 302.05.01 of the Uniform Standard Specifications, and shall include all materials, equipment, and labor required to perform this work. This payment shall also include all scarifying, excavation, grading, compaction, subgrade preparation, and moisture conditioning, recompacting the subgrade, and all other items incidental, appurtenant, and necessary to complete the work as shown on the Drawings, as specified, and as directed by the Engineer.

F. Payment will be made under:

ITEM NO.	ITEM DESCRIPTION	UOM
302.01	Type II Maintenance Road	Square Yard

END OF SECTION 302

SECTION 401 – PLANTMIX BITUMINOUS PAVEMENTS - GENERAL

MATERIALS

401.02.01 COMPOSITION OF MIXTURES

ADD THE FOLLOWING TO THIS SUBSECTION:

O. The Traffic Category for all permanent plantmix bituminous trail surfaces shall be Traffic Category II, with AC-30 asphalt.

401.02.02 AGGREGATES

ADD THE FOLLOWING TO THIS SUBSECTION:

B. Aggregate Type 3 shall be used for pavements 2 inches or less in total thickness.

C. Aggregate Type 2 shall be used for pavements greater than 2 inches in total thickness.

METHOD OF MEASUREMENT

401.04.01 MEASUREMENT

ADD THE FOLLOWING TO THIS SUBSECTION:

E. The quantity of Plantmix Bituminous Surface will be measured in accordance with Section 402, “Plantmix Bituminous Surface.”

BASIS OF PAYMENT

401.05.01 PAYMENT

ADD THE FOLLOWING TO THIS SUBSECTION:

D. The accepted quantity of Plantmix Bituminous Surface will be paid for in accordance with Section 402, “Plantmix Bituminous Surface.”

END OF SECTION 401

SECTION 402 – PLANTMIX BITUMINOUS SURFACE

METHOD OF MEASUREMENT

402.04.01 MEASUREMENT

DELETE THIS SUBSECTION IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING:

A. Measurement for payment of 2-inch Plantmix Bituminous Surface Trail and Improvements will be on a lump sum basis, in place and complete.

BASIS OF PAYMENT

402.05.01 PAYMENT

DELETE PARAGRAPHS A AND D OF THIS SUBSECTION AND REPLACE WITH THE FOLLOWING:

A. The lump sum payment for 2-inch Plantmix Bituminous Surface Trail and Improvements as shown on sheet C2 and referenced details shall include all materials, equipment, and labor required including, but not limited to, clearing and grubbing, asphalt cement, mixing, loading, hauling, placing, compacting, prime coat, seal coat, dust palliative, decomposed granite, concrete slabs, footings, and all other items incidental, appurtenant, and necessary to complete the work as shown on the Drawings, as specified, and as directed by the Engineer. Payment for this item shall also include replacing items removed as part of the remove asphalt pavement trail item specified in Section 202 and shall include, but not be limited to, decomposed granite, benches, trash receptacle, signage, vehicle barrier fence, post and cable, connection to existing post and cable, trail lights (pole, arm, fixtures), conduit, electrical connections, conductors, pull boxes, and all other items incidental, appurtenant, and necessary to complete the work as shown on the Drawings, as specified, and as directed by the Engineer.

D. Payment will be made under:

ITEM NO.	ITEM DESCRIPTION	UOM
402.01	2-inch Plantmix Bituminous Surface Trail and Improvements	Lump Sum

END OF SECTION 402

SECTION 406 – PRIME COAT

DESCRIPTION

406.01.01 GENERAL

ADD THE FOLLOWING TO THIS SUBSECTION:

B. Prime coat shall be applied to aggregate base courses when the thickness of the plantmix bituminous pavement is less than 5 inches. Plantmix bituminous pavements 5 inches and greater shall not require the application of a prime coat.

MATERIAL

406.02.01 BITUMINOUS MATERIAL

ADD THE FOLLOWING TO THIS SUBSECTION:

C. The type and grade of bituminous material shall be SS-1h liquid asphalt emulsion.

CONSTRUCTION

406.03.02 WEATHER LIMITATIONS

ADD THE FOLLOWING TO THIS SUBSECTION:

B. Application of bituminous material shall be in accordance with Subsection 401.03.05 "Weather Limitations".

METHOD OF MEASUREMENT

406.04.01 MEASUREMENT

DELETE THIS SUBSECTION IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING:

A. No direct measurement for payment shall be made for Prime Coat.

BASIS OF PAYMENT

406.05.01 PAYMENT

DELETE THIS SUBSECTION IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING:

A. When sand blotter is not included in the proposal and it is needed to protect the work or public traffic, sand blotter shall be considered subsidiary to other items of work and no additional compensation will be allowed.

B. The Contracting Agency reserves the right to increase or to omit all or any part of the estimated amount of blotter material or bituminous material to be used and no adjustment in unit price will be allowed by reason of such increase or decrease.

C. When an item for prime coat does not appear in the proposals, but is shown on the Drawings or Standard Drawings, prime coat will be considered as incidental to the subsequent paving and compensation shall be included in the contract prices for other items of work.

D. Unless otherwise provided in the Special Provisions, no payment will be made for Prime Coat as such. The cost thereof shall be considered as included in the price bid for construction or installation of the items to which Prime Coat is required. Also included as incidental: furnishing the material, mixing, loading, hauling, placing, and incidentals necessary for doing all of the work involved in placing prime coat and sand blotter as shown on the plans or established by the Engineer.

END OF SECTION 406

SECTION 407 – SEAL COAT

METHOD OF MEASUREMENT

407.04.01 MEASUREMENT

DELETE THIS SUBSECTION IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING:

A. No direct measurement for payment shall be made for Seal Coat.

METHOD OF PAYMENT

407.05.01 PAYMENT

DELETE THIS SUBSECTION IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING:

A. Unless otherwise provided in the Special Provisions, no payment will be made for Seal Coat as such. The cost thereof shall be considered as included in the price bid for construction or installation of the items to which Seal Coat is required.

END OF SECTION 407

SECTION 501 – PORTLAND CEMENT CONCRETE

DESCRIPTION

501.01.01 GENERAL

ADD THE FOLLOWING TO THIS SUBSECTION:

C. All cement used on the work shall be standard brand Portland cement conforming to the "Specifications for Portland Cement" (ASTM C150), Type V, in accordance with requirements contained in Section 701 of the USS.

MATERIALS

501.02.03 ADMIXTURES

ADD THE FOLLOWING TO THIS SUBSECTION:

Q. The use of calcium chloride shall not be permitted.

CONSTRUCTION

501.03.04 CLASSIFICATION AND PROPORTIONS

ADD THE FOLLOWING PARAGRAPH TO THIS SUBSECTION:

F. Concrete shall be composed of cement, admixtures (when approved), aggregates, and water. These materials shall be as specified. The exact proportions in which these materials are to be used for different parts of the work shall be determined by the Contractor and submitted to the Engineer for review prior to use in the work. In general, the mix shall be so designed as to produce concrete capable of being deposited so as to obtain maximum density and minimum shrinkage and, where deposited in forms, to have maximum smoothness of surface. Mix designs where sand represents more than 41 percent of the total weight of fine and coarse aggregate shall not be permitted. The proportions shall be changed whenever necessary or desirable in the opinion of the Engineer. Concrete mixes shall be designed by a registered professional engineer in the state of Nevada representing a qualified independent testing laboratory and approved in advance by the Engineer. Concrete mixing operations shall conform to ASTM C94. Water shall not be added to concrete after leaving the batch plant unless specifically authorized by the Engineer.

501.03.10 WEATHER LIMITATIONS

ADD THE FOLLOWING PARAGRAPH TO PARAGRAPH A OF THIS SUBSECTION:

4. All exposed concrete surfaces shall be sprayed liberally with an evaporation retarder such as Confilm by Masterbuilders, SikaFilm (J-74) by Sika Chemical Company, Sealtight Evapre by W. R. Meadows, or approved equal, when the ambient air temperature is greater than 100 degrees F.; or when the ambient air temperature is

above 90 degrees F. and the wind speed is above 20 mph; or as directed by the Engineer. Spraying shall be per manufacturer's recommendation and shall occur immediately upon completion of the finish.

ADD THE FOLLOWING PARAGRAPH TO PARAGRAPH B OF THIS SUBSECTION:

7. Concrete shall not be placed on frozen ground, nor shall it be placed when atmospheric temperature is below 40 F. and within 24 hours of the time that the concrete is to be placed, except with the written permission of the Engineer and only after such precautionary measures for the protection of the concrete have been taken as the Engineer may direct.

ADD THE FOLLOWING PARAGRAPH TO PARAGRAPH D OF THIS SUBSECTION:

9. When the temperature is 90 degrees F or above, or is likely to rise above 90 degrees F within the 24-hour period after concrete placement; or when there is any combination of high air temperature, low relative humidity, and wind velocity which would impair concrete strength or quality, follow the recommendations of ACI 305R and the following:
   a. Keep concrete as cool as possible during placement and curing
   b. Do not allow concrete temperature to exceed 90 degrees F at placement.
   c. Prevent plastic shrinkage cracking due to rapid evaporation of moisture.
   d. Dampen subgrade and forms with cool water immediately prior to placement of concrete. Protect the concrete with temporary wet covering during any appreciable delay between placement and finishing.
   e. Take appropriate precautions per ACI 305R when the actual or anticipated evaporation rate equals or exceeds 0.2 pounds per square foot per hour as determined from ACI 305R, Figure 2.1.4.

ADD THE FOLLOWING SUBSECTIONS TO THIS SECTION:

501.03.70 CORROSION PROTECTION REQUIREMENT

A. Pipe, conduit, dowels, and other ferrous items required to be embedded in concrete construction shall be so positioned and supported prior to placement of concrete that there shall be a minimum of 2 inches of clearance between these items and any part of the concrete reinforcement. Securing such items in position by wiring or welding them to the reinforcement shall not be permitted.

501.03.71 PREPARATION OF SURFACES FOR CONCRETING

A. Native material surfaces shall be thoroughly wetted by sprinkling, prior to the placing of any concrete, and these surfaces shall be kept moist by frequent sprinkling up to the time of placing concrete thereon. The surface shall be free from standing water, mud, and debris at the time of placing concrete.

B. Concrete surfaces upon or against which concrete is to be placed, where the placement of the old concrete has been stopped or interrupted so that, in the opinion of the Engineer, the new concrete cannot be incorporated integrally with that previously placed, are defined as construction joints. The surfaces of horizontal joints shall be leveled with a wooded float to provide a reasonably smooth surface. A surface consisting largely of coarse aggregate shall be avoided. The joint surfaces shall be cleaned of all laitance, loose or defective concrete, and foreign material.

C. No concrete shall be placed until all form work, installation of parts to be embedded, and preparation of surfaces involved in the placing have been approved by the Engineer.

501.03.72 EXCLUSION OF WATER

A. No concrete shall be placed in any structure until all water entering the space to be filled with concrete has been properly cut off or has been diverted by pipes, or other means, and carried out of the forms, clear of the work. No concrete shall be deposited under water without the explicit permission of the Engineer and then only in strict accordance with the Engineer's directions, nor shall the Contractor, without explicit permission from the Engineer, allow still water to rise on any concrete until the concrete has attained its initial set. Water shall not be permitted to flow over the surface of any concrete in such a manner and at such velocity as to injure the surface finish of the concrete. Pumping or other necessary dewatering operations for removing groundwater, if required, shall be subject to the approval of the Engineer and shall be the responsibility of the Contractor. Said items shall be considered incidental to construction and no additional compensation shall be made.

501.03.73 TAMPING AND VIBRATING

A. As concrete is placed in the forms or in excavations, it shall be thoroughly settled and compacted, throughout the entire depth of the layer which is being consolidated, into a dense, homogenous mass, filling all corners and angles, thoroughly embedding the reinforcement, eliminating rock pockets, and bringing only a slight excess of water to the exposed surface of concrete during placement.

501.03.74 CARE AND REPAIR OF CONCRETE

B. The Contractor shall protect all concrete against injury or damage from excessive heat, lack of moisture, overstress, or any other cause until final acceptance by the Owner. Particular care shall be taken to prevent the drying of concrete and to avoid roughening or otherwise damaging the surface. Any concrete found to be damaged, or which becomes defective at any time prior to the final acceptance of the completed work, or which departs from the established line or grade, or which for any other reason does not conform to the specifications, shall be removed and replaced at the Contractor's expense.

END OF SECTION 501

SECTION 502 – CONCRETE STRUCTURES

CONSTRUCTION

502.03.08 HANDLING AND PLACING CONCRETE

ADD THE FOLLOWING TO THIS SUBSECTION:

J. Stilling Basins and Vaults:

1. Prior to placement of base material for concrete structures such as concrete stilling basins or vaults, excavation bottoms shall be cleaned of loose material generated by the excavation process.

2. When the bottom of the excavation contains rocks or caliche chunks larger than 4 inches in diameter, protruding above the bottom of the excavation, these protrusions shall be removed and the area leveled prior to placement of base material.

ADD THE FOLLOWING SUBSECTION TO THIS SECTION:

502.03.70 TEMPORARY HEAD WALL

A. The Contractor may utilize the temporary head walls for support of the required travel lane(s) and/or work areas adjacent to open excavation. If the Contractor chooses to utilize temporary head walls, the Contractor shall provide the Engineer with design plans and calculations for such head walls and/or supports. The design plans shall be in detail, showing all information as required by the Engineer, and shall bear the seal of a Nevada Registered Engineer.

METHOD OF MEASUREMENT

502.04.01 MEASUREMENT

ADD THE FOLLOWING TO THIS SUBSECTION:

P. The quantity of Existing Wall Penetration will be measured for payment by each, in place and accepted.

Q. Measurement for payment of Headwall Structure and U-Channel will be on a lump sum basis, in place and accepted.

R. Measurement for payment of Junction Structure SDMH #4 will be on a lump sum basis, in place and accepted.

S. Measurement for payment of 54-Inch RCP Headwall will be on a lump sum basis, in place and accepted.

T. The quantity of Concrete Swale will be measured for payment by square yard, in place and accepted.

U. Measurement for payment of North Basin Upper Bay Water Quality Standpipe and Outfall will be on a lump sum basis, in place and accepted.

V. Measurement for payment of North Basin Lower Bay Water Quality Standpipe and Outfall will be on a lump sum basis, in place and accepted.

W. Measurement for payment of South Basin Water Quality Standpipe will be on a lump sum basis, in place and accepted.

X. The quantity of Low Flow U-Channel will be measured for payment by linear feet, in place and accepted.

Y. Measurement for payment of Spillway will be on a lump sum basis, in place and accepted.

BASIS OF PAYMENT

502.05.01 PAYMENT

DELETE PARAGRAPH D AND ADD THE FOLLOWING TO THIS SUBSECTION:

D. The accepted quantity of Existing Wall Penetration will be paid for at the Contract unit price bid per each, which shall include all materials, equipment, and labor required including, but not limited to, excavation, shoring, scarification, recompaction, grading, shaping, dewatering, aggregate base materials, granular backfill, compaction, moisture conditioning, dowels, concrete, reinforcing steel, non-shrink grout, saw cutting and removing existing concrete, concrete bonding agent, and epoxy; support and protection of all utilities; and all other items incidental, appurtenant, and necessary to complete the work as shown on the Drawings, as specified, and as directed by the Engineer.

E. The lump sum payment for Headwall Structure and U-Channel shall include all materials, equipment, and labor required including, but not limited to, excavation, shoring, scarification, recompaction, grading, shaping, dewatering, aggregate base materials, granular backfill, compaction, moisture conditioning, dowels, concrete, reinforcing steel, concrete cutoff walls, controlled low strength material (CLSM) Class I, temporary headwalls, cast-in-place connections and/or transitions; support and protection of all utilities; delivery; placement; and all other items incidental, appurtenant, and necessary to complete the work as shown on the Drawings, as specified, and as directed by the Engineer.

F. The lump sum payment for Junction Structure SDMH #4 shall include all materials, equipment, and labor required including, but not limited to, excavation, shoring, scarification, recompaction, grading, shaping, dewatering, preparation of foundation, aggregate base materials, granular backfill, compaction, moisture conditioning, dowels, concrete, reinforcing steel, grout, steel grate and frame, manhole riser, cast-in-place connections and/or transitions; support and protection of all utilities; delivery; placement; and all other items incidental, appurtenant, and necessary to complete the work as shown on the Drawings, as specified, and as directed by the Engineer.

G. The lump sum payment for 54-Inch RCP Headwall shall include all materials, equipment, and labor required including, but not limited to, excavation, shoring, scarification, recompaction, grading, shaping, dewatering, aggregate base materials, granular backfill, compaction, moisture conditioning, dowels, steel hooks, concrete, reinforcing steel, controlled low strength material (CLSM) Class I, temporary headwalls, wire mesh, drain rock, geotextile fabric, gabion anchors, cast-in-place connections and/or transitions; post and cable railing and post connection; support and protection of all utilities; delivery; placement; and all other items incidental, appurtenant, and necessary to complete the work as shown on the Drawings, as specified, and as directed by the Engineer.

H. The accepted quantity of Concrete Swale will be paid for at the Contract unit price bid per square yard, which shall include all materials, equipment, and labor required including, but not limited to, excavation, shoring, scarification, recompaction, grading, shaping, dewatering, aggregate base materials, granular backfill, compaction, moisture conditioning, concrete, reinforcing steel, concrete cutoff walls, cast-in-place connections and/or transitions; support and protection of all utilities; delivery; placement and all other items incidental, appurtenant, and necessary to complete the work as shown on the Drawings, as specified, and as directed by the Engineer.

I. The lump sum payment for North Basin Upper Bay Water Quality Standpipe and Outfall shall include all materials, equipment, and labor required including, but not limited to, excavation, shoring, scarification, recompaction, grading, shaping, dewatering, aggregate base materials, granular backfill, compaction, moisture conditioning, dowels, concrete, reinforcing steel, grout, joint water proofing (including premolded filler, preformed sealer, and tooled edges), elastomeric sealant, steel grate and frame, cast-in-place connections and/or transitions; support and protection of all utilities; delivery; placement; and all other items incidental, appurtenant, and necessary to complete the work as shown on the Drawings, as specified, and as directed by the Engineer.

J. The lump sum payment for North Basin Lower Bay Water Quality Standpipe and Outfall shall include all materials, equipment, and labor required including, but not limited to, excavation, shoring, scarification, recompaction, grading, shaping, dewatering, aggregate base materials, granular backfill, compaction, moisture conditioning, dowels, concrete, reinforcing steel, grout, joint water proofing (including premolded filler, preformed sealer, and tooled edges), elastomeric sealant, steel grate and frame, cast-in-place connections and/or transitions; support and protection of all utilities; delivery; placement; and all other items incidental, appurtenant, and necessary to complete the work as shown on the Drawings, as specified, and as directed by the Engineer.

K. The lump sum payment for South Basin Water Quality Standpipe shall include all materials, equipment, and labor required including, but not limited to, excavation, shoring, scarification, recompaction, grading, shaping, dewatering, aggregate base materials, granular backfill, compaction, moisture conditioning, dowels, concrete, reinforcing steel, grout, joint water proofing (including premolded filler, preformed sealer, and tooled edges), elastomeric sealant, steel grate and frame, cast-in-place connections and/or transitions; support and protection of all utilities; delivery; placement; and all other items incidental, appurtenant, and necessary to complete the work as shown on the Drawings, as specified, and as directed by the Engineer.

L. The accepted quantity of Low Flow U-Channel will be paid for at the Contract unit price bid per linear feet, which shall include all materials, equipment, and labor required including, but not limited to, excavation, shoring, scarification, recompaction, grading, shaping, dewatering, aggregate base materials, granular backfill, compaction, moisture conditioning, dowels, concrete, reinforcing steel, grout, epoxy, jointing material; support and protection of all utilities; delivery; placement; and all other items incidental, appurtenant, and necessary to complete the work as shown on the Drawings, as specified, and as directed by the Engineer.

M. The lump sum payment for Spillway shall include all materials, equipment, and labor required including, but not limited to, clearing and grubbing, excavation, shoring, scarification, recompaction, grading, shaping, dewatering, aggregate base materials, granular backfill, compaction, moisture conditioning, dowels, concrete, reinforcing steel, cast-in-place connections and/or transitions; decomposed granite, dust palliative, filter fabric, grouted riprap, cutoff wall, concrete slabs, and footings; support and protection of all utilities; delivery; placement; and all other items incidental, appurtenant, and necessary to complete the work as shown on the Drawings, as specified, and as directed by the Engineer. Payment for this item shall also include replacing items removed as part of the remove asphalt pavement trail item specified in Section 202 and shall include, but not be limited to, decomposed granite, benches, trash receptacle, signage, vehicle barrier fence, post and cable, connection to existing post and cable, trail lights (pole, arm, fixtures), conduit, electrical connections and conductors, and light pole foundation. Concrete spillway cutoff walls shall be constructed prior to excavation of light pole foundation.

N. Payment will be made under:

ITEM NO.	ITEM DESCRIPTION	UOM
502.01	Existing Wall Penetration	Each
502.02	Headwall Structure and U-Channel	Lump Sum
502.03	Junction Structure SDMH #4	Lump Sum
502.04	54-inch RCP Headwall	Lump Sum
502.05	Concrete Swale	Square Yard
502.06	North Basin Upper Bay Water Quality Standpipe and Outfall	Lump Sum
502.07	North Basin Lower Bay Water Quality Standpipe and Outfall	Lump Sum
502.08	South Basin Water Quality Standpipe	Lump Sum
502.09	Low Flow U-Channel	Linear Feet
502.10	Spillway	Lump Sum

END OF SECTION 502

SECTION 505 – REINFORCING STEEL

MATERIALS

505.02.01 GENERAL

ADD THE FOLLOWING TO THIS SUBSECTION:

F. At selected locations as indicated on the Contract Drawings, reinforcing steel shall be galvanized (zinc coated), in accordance with ASTM A767 or epoxy-coated.

G. At the expansion joint locations shown on the Contract Drawings or as directed by the Engineer, reinforcing steel shall be sprayed, coating the entire circumference of the bar, with a zinc-rich formulation conforming to ASTM A767.

METHOD OF MEASUREMENT

505.04.01 MEASUREMENT

DELETE THIS SUBSECTION IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING:

A. No direct measurement for payment shall be made for Reinforcing Steel.

BASIS OF PAYMENT

505.05.01 PAYMENT

DELETE THIS SUBSECTION IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING:

A. Unless otherwise provided in the Special Provisions, no payment will be made for Reinforcing Steel as such. The cost thereof shall be considered as included in the price bid for construction or installation of the items to which such Reinforcing Steel is required.

END OF SECTION 505

ADD THE FOLLOWING NEW SECTION 511 TO THE UNIFORM STANDARD SPECIFICATIONS:

SECTION 511 - METAL FABRICATIONS

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 include providing fabricated sediment gauge.

C. Miscellaneous metals used in constructing items of this section shall conform to the details shown on the Drawings and be as specified.

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 Specifications for Standard Qualification Procedure.
7. 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 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

A. Bolts and anchor bolts shall be furnished and set and metal fabrications 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.

511.03.04 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 Sediment Gauge will be measured for payment by each for the installed gauge, complete and in place.

BASIS OF PAYMENT

511.05.01 PAYMENT

A. The accepted quantity of Sediment Gauge will be paid for at the Contract unit price bid per each, which shall be full compensation for removal and disposal of existing sediment gauge and for furnishing and installing the sediment gauge including footing, painting, lettering, filling pipe with concrete, and all other items incidental, appurtenant, and necessary to complete the work as shown on the Drawings, as specified, and as directed by Engineer

B. Payment will be made under:

ITEM NO.	ITEM DESCRIPTION	UOM
511.01	Sediment Gauge	Each

END OF SECTION 511

SECTION 601 – PIPE CULVERTS-GENERAL

MATERIALS

ADD THE FOLLOWING SUBSECTION TO THIS SECTION:

601.03.07 PIPE LOCATOR MARKER BALLS

A. Electronic marker system (EMS) balls shall be the passive 4-inch balls as manufactured by:

1. 3M Company, Scotchmark Electronic Marker System, Series 1400.
2. Tempo, Omni Markers Electronic Marker.
3. Or approved equal.

B. Marker balls shall have high-density polyethylene shell impervious to minerals, chemicals, and temperatures normally found in underground environments.

C. Markers shall comply with APWA Uniform Color Code (ANSI Z 353.1) and have unique signal frequencies by service type as indicated:

Utility Type	Color	Signal Frequency
Sanitary Sewers and Drain Lines	Green	121.6 kHz

CONSTRUCTION

601.03.07 VIDEO INSPECTION

ADD THE FOLLOWING PARAGRAPHS TO THIS SUBSECTION

H. The following paragraphs define the requirements for internal video inspection of storm drain facilities after installation.

1. The Contractor shall inspect the storm drain facility interior using a color closed circuit television (CCTV) camera and document the inspection on image with audio location and date information, image title information, and hard copy inspection logs. The CCTV inspection shall be performed after the installation has been completed.
2. Field operator(s) of inspection equipment must have current National Association of Sewer Service Companies (NASSCO) Pipeline Assessment and Certification Program (PACP) Certification.
3. Television Inspection Camera. Equipment shall be operative in 100 percent humidity conditions. Lighting intensity shall be remote controlled and shall be adjusted to minimize reflective glare. Lighting and camera quality shall provide a clear, in-focus picture of the entire inside periphery of the storm drain facility.
4. Digital Storage Medium. The inspection shall be recorded, stored and submitted on CD's (or DVD's) in high quality MPG format on CD -R/+R disks formatted for use with PC systems. The audio portion of the composite CD shall be sufficiently free

from electrical interference and background noise to provide complete intelligibility of the oral report.

5. Footage Counter. A footage counter device, which measures the distance traveled by the camera in the storm drain facility, shall be accurate to plus or minus 2 feet in 1,000 feet.

6. Video Tilting. Pan and tilt unit, with adjustable supports specifically designed and constructed for operation in connection with storm drain facility inspection.

7. Flow in Storm Drain Facility. During internal video inspections the Contractor shall provide temporary dry conditions in the storm drain facility unless otherwise agreed upon by the Engineer.

I. Inspection Methods for Internal Video:

1. Verbal Commentary. None required except to note operational problems such as camera failure, or restart of inspection.

2. Access. The Engineer shall have access to observe the monitor and all other operations at all times. The system of cabling employed to transport the camera and transmit its signal shall not obstruct the camera's view.

3. Inspection Rate. The camera shall be pulled through the storm drain facility in either direction, but all inspections at each location shall be in the same direction. Rate of travel shall be such that a comprehensive inspection/analysis may be performed but at no time shall exceed 30 feet per minute when recording.

4. Image Perspective. The camera image shall be down the center axis of the storm drain facility when the camera is in motion. The Contractor is required to provide a 360-degree view of the interior. Points of interest shall also be shown on the video and shall include, but not be limited to, all joints, defects, encrustations, mineral deposits, debris, sediment, any location determined not to be clean or part of a proper installation or defects in the materials.

5. Storm Drain Facility Identification. All inspection documentation shall include the location referenced to the project survey control specifically the pipe stationing.

6. Defect Coding. National Association of Sewer Service Companies (NASSCO) Pipeline Assessment and Certification Program (PACP) coding system, latest version, shall be used to document all defects visible on the image recordings.

7. Quality Control. The Engineer will review CD's or DVD's and logs to ensure compliance with the requirements listed in this specification and contract documents.

8. The Contractor shall be responsible for modifications to his equipment and/or inspection procedures to achieve report material of acceptable quality. No work shall commence prior to approval of the material by the Engineer. Once accepted, the report material shall serve as a standard for the remaining work.

9. Contractor shall maintain a copy of all inspection documentation (CDs, databases, and logs) for the duration of the work and warranty period.

ADD THE FOLLOWING SUBSECTION TO THIS SECTION:

601.03.70 PIPE LOCATOR MARKER BALLS INSTALLATION

A. Contractor shall install EMS passive balls as specified.

B. Storm drain laterals require the installation of a marker ball at the connection of the storm drain lateral to the storm drain main and where the storm drain lateral exits the public right-of-way or where the storm drain lateral connects to a drop inlet.

C. Comply with manufacturer's installation recommendations for backfill methods.

METHOD OF MEASUREMENT

601.04.01 MEASUREMENT

ADD THE FOLLOWING TO THIS SUBSECTION:

H. No direct measurement shall be made for the work specified in this section.

METHOD OF PAYMENT

601.05.01 PAYMENT

ADD THE FOLLOWING TO THIS SUBSECTION:

F. Unless otherwise provided in the Special Provisions, no payment will be made for the work specified in this section as such. The cost thereof shall be considered as included in the price bid for construction or installation of the items for which the work is required.

END OF SECTION 601

SECTION 603 – REINFORCED CONCRETE PIPE

DESCRIPTION

603.01.01 GENERAL

ADD THE FOLLOWING TO THIS SUBSECTION:

C. This work shall also consist of providing storm drain connections for the storm drain and laterals as directed by the Engineer.

CONSTRUCTION

603.03.07 INSPECTION

ADD THE FOLLOWING TO THIS SUBSECTION:

E. Internal Video Inspection. Internal video inspection shall be performed by the Contractor a minimum of 30 days after final backfill has been placed and prior to final acceptance by the Contracting Agency. This inspection includes 360-degree taping of all storm drain lateral joints. The line shall be cleaned and inspected in accordance with Subsection 601.03.07, "Video Inspection."

METHOD OF MEASUREMENT

603.04.01 MEASUREMENT

ADD THE FOLLOWING TO THIS SUBSECTION:

E. The quantities of (Size) RCP Storm Drain (Class) will be measured for payment by linear foot, along the centerline of the pipe to the end section or inside face of structure.

BASIS OF PAYMENT

603.05.01 PAYMENT

DELETE PARAGRAPH E AND ADD THE FOLLOWING TO THIS SUBSECTION:

E. The accepted quantities of (Size) RCP Storm Drain (Class) will be paid for at the Contract unit prices bid per linear foot for each size, type, and class or D-Load of pipe designated; shall conform to the requirements of Subsection 603.05.01 of the Uniform Standard Specifications; and shall include all materials, equipment, labor, and disposal required to perform this work and all work as shown on the Drawings, as specified, and as directed by the Engineer. These prices shall be full compensation for steel conduit and conductor relocation, saw cutting and replacement of existing concrete apron if damaged, saw cutting and replacement of existing concrete depth gauge, clearing and grubbing, cleaning and clearing of existing concrete facility of silt and debris before construction of new facility, removal and disposal of flared end section, trench excavation, trench excavation through cemented soil and rock (caliche), removal and replacement of riprap, scarifying

and recompacting, furnishing and placing bedding and backfill material, CLSM backfill, granular backfill, Type II aggregate base, compaction, furnishing and placing pipe and jointing mortar, rubber gasket joints, polyurethane elastomeric sealant, cut and join connections, concrete collars, concrete encasement, storm drain connections, plugs, shoring, dewatering, and other improvements disturbed, damaged, or removed as a part of the work described above, disposal of excess excavated materials, protection of facilities and improvements required to remain in place, potholing to determine location of existing utilities, video inspection, all other items incidental, appurtenant, and necessary to complete the work, and all labor, tools, and equipment necessary to complete the work as shown on the Drawings, as specified, and as directed by the Engineer**.**

F. Unless otherwise provided in the Special Provisions, no payment will be made for Internal Video Inspection as such. The cost thereof shall be considered as included in the price bid for construction or installation of the items to which Internal Video Inspection is required.

G. Payment will be made under:

ITEM NO.	ITEM DESCRIPTION	UOM
603.01	18-inch RCP Storm Drain Class III	Linear Foot
603.02	18-inch RCP Storm Drain Class IV	Linear Foot
603.03	18-inch RCP Storm Drain Class V	Linear Foot
603.04	30-inch RCP Storm Drain Class III	Linear Foot
603.05	36-inch RCP Storm Drain Class III	Linear Foot
603.06	54-inch RCP Storm Drain Class V	Linear Foot

END OF SECTION 603

SECTION 609 – CATCH BASINS, MANHOLES AND INLETS

DESCRIPTION

MATERIALS

609.02.01 GENERAL

ADD THE FOLLOWING TO THIS SUBSECTION:

F. Grout shall conform to ASTM C476 and shall have a minimum strength of 2000 psi. Fine grout shall be proportioned by volume of one part Portland cement and 2-1/4 to 3 parts sand. Coarse grout shall consist of one part Portland cement, 2-1/2 to 3 parts sand, and 1 to 2 parts course aggregate.

G. Laboratory design mixes for grout, approved by a Licensed Professional Engineer in the State of Nevada, are acceptable in lieu of the above proportions and are required if the maximum strength is more than 2000 psi. Grout shall be of a fluid consistency with proper proportions of sand to gravel for pouring and pumping.

H. All exposed steel shall be hot-dipped galvanized per section 715.

METHOD OF MEASUREMENT

609.04.01 MEASUREMENT

DELETE THIS SUBSECTION IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING:

A. The quantities of (Size) (Type) Storm Drain Manhole and 54-inch RCP Manhole Junction Structure will be measured for payment by each, in place and accepted.

B. The quantity of 15-Foot Type "CM2" Drop Inlet will be measured for payment by each, in place and accepted.

C. The quantity of NDOT Type 2B Drop Inlet and Concrete Apron will be measured for payment by each, in place and accepted.

D. All measurements will be made in accordance with Subsection 109.01, "Measurement of Quantities."

BASIS OF PAYMENT

609.05.01 PAYMENT

DELETE THIS SUBSECTION IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING:

A. The accepted quantities of (Size) (Type) Storm Drain Manhole will be paid for at the Contract unit prices bid per each, which shall be full compensation for clearing existing storm drain of silt and debris; furnishing and placing all materials including excavation, foundation preparation, structure backfill, compaction, grading, shaping, aggregate base materials, dewatering, granular backfill, drain rock, compaction, dowels, shoring, forming, grout, steel reinforcement, frames, covers, grade rings, beams, taper or flat-top sections,

cones, seals, manhole base, concrete, reinforcing steel, castings, steps, and concrete collars; disposing of excess excavated material; adjusting covers to final grade; support and protection of all utilities; protection and restoration, if damaged, of existing improvements required to remain in place; and all labor, tools, equipment, and all other items incidental, appurtenant, and necessary to complete the work as shown on the Drawings, as specified, and as directed by Engineer.

B. The accepted quantity of 54-Inch RCP Manhole Junction Structure will be paid for at the Contract unit price bid per each, which shall be full compensation for clearing existing storm drain of silt and debris; furnishing and placing all materials including excavation, foundation preparation, structure backfill, compaction, grading, shaping, aggregate base materials, dewatering, granular backfill, drain rock, compaction, dowels, shoring, forming, grout, steel reinforcement, frames, covers, grates, grade rings, beams, taper or flat-top sections, cones, seals, manhole base, concrete, reinforcing steel, castings, steps, and concrete collars; disposing of excess excavated material; adjusting covers to final grade; support and protection of all utilities; protection and restoration, if damaged, of existing improvements required to remain in place; and all labor, tools, equipment, and all other items incidental, appurtenant, and necessary to complete the work as shown on the Drawings, as specified, and as directed by Engineer.

C. The accepted quantities of 15-Foot Type "CM2" Drop Inlet and NDOT Type 2B Drop Inlet and Concrete Apron will be paid for at the Contract unit prices bid for each, which shall be full compensation for furnishing and placing all materials including excavation, dewatering, foundation preparation, backfill, compaction, shoring, forming, concrete, grout, steel reinforcement, all frames and grate covers including various size grates; constructing concrete aprons as applicable; removing and replacing sidewalk and curb and gutter; protection bars and plates; disposing of excess excavated material; protection and restoration, if damaged, of all existing facilities; and all labor, tools, equipment, and all other items incidental, appurtenant, and necessary to complete the work as shown on the Drawings, as specified, 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 storm drain pipes shall be included in the Contract unit price bid for each.

D. Payment will be made under:

ITEM NO.	ITEM DESCRIPTION	UOM
609.01	48-Inch Type I Storm Drain Manhole	Each
609.02	60-Inch Type I Storm Drain Manhole	Each
609.03	48-Inch Type IA Storm Drain Manhole	Each
609.04	60-Inch Deep Storm Drain Manhole	Each
609.05	54-Inch RCP Manhole Junction Structure	Each
609.06	15-Foot Type "CM2" Drop Inlet	Each
609.07	NDOT Type 2B Drop Inlet and Concrete Apron	Each

END OF SECTION 609

SECTION 610 – SLOPE AND CHANNEL PROTECTION

DESCRIPTION

610.01.01 GENERAL

ADD THE FOLLOWING TO THIS SUBSECTION:

D. Contractor shall provide a qualified representative from the wire mesh gabion manufacturer to supervise the gabion installation.

METHOD OF MEASUREMENT

610.04.01 MEASUREMENT

ADD THE FOLLOWING TO THIS SUBSECTION:

D. The quantities of Riprap D50 = 12-inch and Grouted Riprap D50 = 12-inch measured for payment will be the number of cubic yards, complete and in place.

E. The quantity of Wire Mesh Gabion measured for payment will be the number of cubic yards, complete and in place.

F. No direct measurement shall be made for aggregate bedding placed with the riprap, grouted riprap, and wire mesh gabions.

METHOD OF PAYMENT

610.05.01 PAYMENT

DELETE PARAGRAPH C AND ADD THE FOLLOWING TO THIS SUBSECTION:

C. The accepted quantities of Riprap D50 = 12-inch and Grouted Riprap D50 = 12-inch will be paid for at the Contract unit prices bid per cubic yard, which shall be full compensation for furnishing all materials, labor, tools, supplies, equipment, excavation, backfill, aggregate bedding, riprap, filter fabric, grout as necessary, and all other items incidental, appurtenant, and incidentals necessary to provide and install the riprap complete, in place in the accepted work, as shown on the Drawings, as specified, and as directed by the Engineer. Grouted riprap adjacent to the spillway will be paid for as specified in Section 502 for the spillway lump sum item.

D. The accepted quantity of Wire Mesh Gabion 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, aggregate bedding, grout, clips, hooks, and other hardware and all other items incidental, appurtenant, and necessary for the construction of the gabion structure, including providing manufacturer's representative on-site. Payment shall also include all grading, subgrade preparation, bedding, and backfill necessary to complete the work as specified, as shown on the Drawings, and as required by Engineer.

E. Unless otherwise provided in the Special Provisions, no payment will be made for aggregate bedding for riprap and gabions as such. The cost thereof shall be considered as included in the price bid for construction or installation of the items for which the aggregate bedding is required.

F. Payment will be made under:

ITEM NO.	ITEM DESCRIPTION	UOM
610.01	Riprap D50 = 12-inch	Cubic Yard
610.02	Grouted Riprap D50 = 12-inch	Cubic Yard
610.03	Wire Mesh Gabions	Cubic Yard

END OF SECTION 610

SECTION 613 – CONCRETE CURB, WALK, GUTTERS, DRIVEWAYS AND ALLEY INTERSECTIONS

MATERIALS

613.02.01 GENERAL

ADD THE FOLLOWING TO THIS SUBSECTION:

B. The cement to be used for all concrete shall be Type V Portland Cement.

C. The reinforcing steel shall be Grade 60.

CONSTRUCTION

613.03.06 SLIP FORMS

ADD THE FOLLOWING TO PARAGRAPH H OF THIS SUBSECTION:

1. The adhesive shall be applied, per the manufacturers recommended application rate.
2. Cover 100 percent of the contact area between the underlying surfaces and new concrete.

METHOD OF MEASUREMENT

613.04.01 MEASUREMENT

ADD THE FOLLOWING TO THIS SUBSECTION:

F. The quantity of "L" Type Curb and Gutter will be measured per linear foot, in place and complete.

G. The quantity of 12-Foot Wide Driveway will be measured per square foot, in place and complete.

H. The quantities of curb and gutter and driveway to be measured for payment will not include the following:

1. Curb and gutter abutting proposed drop inlets 3′ - 6″ away from each side, or to the nearest joint, of the inlet opening.
2. The replacement of existing curb and gutter where it is removed for the construction of drop inlets, pull boxes, street lights, and the removal and salvage of existing street lights.
3. The curb and gutter, sidewalk, driveway, etc. being replaced because of unnecessary damage during construction.

BASIS OF PAYMENT

613.05.01 PAYMENT

DELETE THIS SUBSECTION IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING:

A. The accepted quantity of "L" Type Curb and Gutter will be paid for at the Contract unit price of linear foot and shall include all materials, equipment and labor required including, but not limited to excavation; Type II Aggregate Base; plates; foundation preparation; compaction; concrete; depressions; reinforcing steel; finishing; joints; curing compound and backfilling; and all other items incidental, appurtenant, and necessary to complete the work as shown on the Plans, as specified herein and as directed by the Engineer.

B. The accepted quantity of 12-Foot Wide Driveway will be paid for at the Contract unit price of square foot and shall include all materials, equipment and labor required including, but not limited to, excavation; saw cutting, removal, and disposal of concrete and reinforcing; Type II Aggregate Base; plates; foundation preparation; compaction; concrete; depressions; reinforcing steel; adjusting all new or existing pull boxes; vault covers; utility conduits; meter boxes; handholes and valve boxes; finishing; joints; expansion joints; curing compound and backfilling; and all other items incidental, appurtenant, and necessary to complete the work as shown on the Plans, as specified herein and as directed by the Engineer.

C. Payment will be made under:

ITEM NO.	ITEM DESCRIPTION	UOM
613.01	"L" Type Curb and Gutter	Linear Foot
613.02	12-Foot Wide Driveway	Square Foot

END OF SECTION 613

SECTION 616 – FENCING

DESCRIPTION

616.01.01 GENERAL

ADD THE FOLLOWING PARAGRAPHS TO THIS SUBSECTION:

D. Temporary fencing will be required in association with chain-link fence installation to maintain the integrity of fencing around private properties and the project until the new fencing is complete. Temporary fencing shall be considered incidental to the chain-link fence, chain-link gate, and vehicle barrier fence items and no additional compensation will be allowed. Temporary fencing is to meet the requirements of this subsection and shall be installed prior to the removal of existing fencing and shall remain in place until the new fence is complete.

E. This work shall also consist of constructing vehicle barrier fence (concrete block and chain fence) as shown on the Drawings.

METHOD OF MEASUREMENT

616.04.01 MEASUREMENT

ADD THE FOLLOWING TO THIS SUBSECTION:

F. The quantity of 6-Foot Chain-Link Fence will be measured for payment by linear foot, complete and in place.

G. The quantity of 16-Foot Chain-Link Double-Swing Gate measured for payment will be the number of each set of 2 gates, complete and in place.

H. The quantity of Vehicle Barrier Fence (Non-Trail Area) will be measured for payment by linear foot, complete and in place.

BASIS OF PAYMENT

616.05.01 PAYMENT

DELETE PARAGRAPH E AND ADD THE FOLLOWING TO THIS SUBSECTION:

E. The accepted quantity of 6-Foot Chain-Link Fence will be paid for at the Contract unit price bid per linear foot, which shall include all labor, equipment and materials including but not limited to excavation, aggregate base materials, pipe, posts, bars, rods, wire, concrete footings, welding, backfill, and compaction; connection to existing fencing; installation of temporary fencing until proposed fencing is installed; and all other items incidental, appurtenant, and necessary to complete the work as shown on the Drawings, as specified, and as directed by the Engineer.

F. The accepted quantity of 16-Foot Chain-Link Double-Swing Gate will be paid for at the Contract unit price bid per each pair of 2 gates, which shall include all labor, equipment,

and materials to furnish and install gates, posts, hinges, concrete footing, bars, rods, hardware, locks, grout, and all incidentals necessary to install the gates in accordance with the manufacturer's recommendations, connection to existing fencing, installation of temporary fencing until proposed fencing is installed, and all other items incidental, appurtenant, and necessary to complete the work as shown on the Drawings, as specified, and as directed by the Engineer.

G. The accepted quantity of Vehicle Barrier Fence (Non-Trail Area) will be paid for at the Contract unit price bid per linear foot and shall include all labor, equipment, and materials including but not limited to excavation, backfill, foundation preparation, compaction, concrete blocks, chain, steel reinforcement, hardware for connecting chain, lock, placement, connection to existing fencing, installation of temporary fencing until proposed fencing is installed, and all other items incidental, appurtenant, and necessary to complete the work as shown on the Drawings, as specified, and as directed by the Engineer.

H. Payment will be made under:

ITEM NO.	ITEM DESCRIPTION	UOM
616.01	6-Foot Chain-Link Fence	Linear Foot
616.02	16-Foot Chain-Link Double-Swing Gate	Each
616.03	Vehicle Barrier Fence (Non-Trail Area)	Linear Foot

END OF SECTION 616

SECTION 621 – MONUMENTS

621.01.01 GENERAL

DELETE PARAGRAPH B OF THIS SUBSECTION AND REPLACE WITH THE FOLLOWING:

B. All monuments destroyed and/or damaged shall be installed by the Contractor in accordance with the Uniform Standard Drawings, and under the direct supervision of the Engineer. The Contractor shall coordinate his work with the Engineer.

METHOD OF MEASUREMENT

621.04.01 MEASUREMENT

DELETE THIS SUBSECTION IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING:

A. No unit of measurement will be made for Monuments.

BASIS OF PAYMENT

621.05.01 PAYMENT

DELETE THIS SUBSECTION IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING:

A. Unless otherwise provided in the Special Provisions, no payment will be made for Monuments as such. The cost thereof shall be considered as included in the price bid for construction or installation of the items to which such Monument replacement is required.

END OF SECTION 621

ADD THE FOLLOWING SECTION TO DIVISION II – CONSTRUCTION DETAILS

SECTION 622 – CONSTRUCTION SURVEYING BY THE CONTRACTOR

DESCRIPTION

622.01.01 GENERAL

A. The Contractor shall, under supervision of a Professional Land Surveyor registered in the state of Nevada, furnish and set construction stakes establishing locations, lines, and slope stakes for detention basin, detention basin spillway, water quality features, trail, trail amenities, maintenance roads, storm drain, drainage structures, laterals, compacted fill areas, and for all other improvements for project necessary to ensure conformance of work to lines, elevations, locations, and grades as shown on the Drawings and in these Special Provisions. Any horizontal or vertical discrepancies shall be reported to Engineer prior to commencement of construction. Any revisions or changes approved by Engineer that affect lines, grades, elevations, or locations of any improvement shall be indicated on As-Built (Record) Drawings.

B. If necessary, the Contractor shall also perform and provide to the Engineer those items described in Subsection 203.04.01 of the USS. Any revisions or changes approved by the Engineer that affect the lines, grades, elevations, or locations of any improvement shall be indicated on the As-Built (Record) Drawings.

C. Contractor shall preserve property line and corner survey points. If their destruction is determined by Engineer to be unavoidable, and their replacement is not called for on the Drawings, Owner shall replace or pay for their replacement under this contract as determined by Engineer. Markers that are disturbed or destroyed by Contractor's operations without prior approval by the Engineer shall be replaced by Contractor at no additional cost to the Owner. Replacement shall be done only by a Nevada Professional Land Surveyor and in accordance with the USS. A monument tie sheet for replacement of permanent survey monuments shall be submitted to Engineer for approval.

D. When a permanent survey marker and/or monument is located within the construction area of any roadway, storm drain, drainage structures, sewer line, or channel improvement, the Contractor shall adjust the cover or replace the monument as noted on the Drawings. The cost of replacement or adjustment of said monuments shall be included in the lump sum bid for Construction Survey. If monuments are to be installed as part of the work, they shall be placed in accordance with the USD numbers 239 through 243 and Section 621 of the USS.

MATERIALS

622.02.01 BLANK

CONSTRUCTION

622.03.01 GENERAL

A. Prior to all work in this section, the Contractor shall carefully inspect all installed work and verify that all such work is complete to a point where this installation may properly commence.

B. The Contractor shall verify that all work can be installed in accordance with all pertinent codes and regulations, Contract Drawings, and referenced standards.

C. The Contractor shall verify that there are no conflicts with existing utilities prior to the start of work.

D. In event of a discrepancy, the Contractor shall immediately notify the Engineer in writing.

E. Installation of work in areas of discrepancy shall not proceed until all such discrepancies have been fully resolved.

F. After stakes and marks have been set, it shall be the responsibility of the Contractor to protect the stakes and marks. Should any of the stakes or marks be destroyed or disturbed by the Contractor's operations or otherwise, the costs of replacing said stakes or marks shall be paid by the Contractor.

G. The Engineer, at his discretion, may periodically have survey work performed to verify conformance to the construction Drawings. Any nonconformity found to be the fault of the Contractor, or the Professional Land Surveyor, shall be corrected at no additional cost to the Owner.

H. Prior to start of the project and upon completion of the project and as a condition for final payment authorization, topographic mapping shall be conducted to document the pre- and post-construction topography of the Angel Park Detention Basin Expansion. Pre- and post-construction site mapping shall be submitted to the Engineer as a separate electronic map (drawing) in AutoCAD format. AutoCAD maps shall also be submitted in hard copy (6 copies). The Engineer shall review the electronic and hard copy maps for accuracy relative to the specified accuracy requirements. The Contractor shall amend the mapping files, as required, based on review of the maps by the Engineer. The electronic mapping files shall be produced using field survey techniques with sufficient accuracy for reproduction and use as base maps at a scale of 1 inch = 40 feet horizontal and 1-foot contour intervals as specified for National Map Accuracy Standards. All electronic mapping files shall be 3-dimensional. Submit points lists for all topographic surveys in ASCII text file format. All files shall be copied to one or more compact discs in a format acceptable to the Owner. Submit 6 copies of the compact discs for the pre- and post-construction topography.

   Additionally the Contractor shall furnish to the Engineer a certification attested to by the Professional Land Surveyor that the work performed for this contract has been constructed to the lines and grades as described in the As-built (Record) Drawings and as shown on the post-construction topographic map. When requested, the Contractor shall also provide

the Engineer with copies of all field notes, computations, and other related work performed by the Professional Land Surveyor.

622.03.02 FINAL ACCURACY

A. Surface Drainage Structures (including all concrete or asphalt gutters and drains) shall be installed within 0.05 feet horizontally and 0.05 feet vertically from the location taken from the project plans, and shall not vary more than 10 percent of the gradient shown on the plans.

B. Monument Cases and Brass Caps shall be centered to within 0.01 feet horizontally of the position as called for on the plans, and the ties to that monument.

C. Sanitary and Storm Drainage Sewer Systems shall be installed within 0.05 feet horizontally and 0.05 feet vertically of the exact location taken from the project plans. In addition, the gradient of any 10-foot section of pipe shall not vary by more than 10 percent of the gradient shown the project plans

METHOD OF MEASUREMENT

622.04.01 MEASUREMENT

A. Measurement for payment of Construction Surveying will be on a lump sum basis.

BASIS OF PAYMENT

622.05.01 PAYMENT

A. The lump sum payment for Construction Surveying shall include all materials, equipment, and labor, including, but not limited to, monuments, record of surveys, monumentation tie sheets, as-built drawings, sewer and storm drain final location map, property line markers, corner survey points, construction survey, pre- and post-construction topography, and all other items incidental, appurtenant, and necessary to complete this work as specified and as required by the Engineer.

B. Monthly payments will be made in an amount equal to the percent of total contract complete multiplied times the lump sum price bid for Construction Surveying minus previous Construction Surveying monthly payments.

C. Payment will be made under:

ITEM NO.	ITEM DESCRIPTION	UOM
622.01	Construction Surveying	Lump Sum

END OF SECTION 622

SECTION 624 - ACCOMMODATIONS FOR PUBLIC TRAFFIC

DESCRIPTION

624.01.01 GENERAL

DELETE THIS SUBSECTION IN ITS ENTIRETY AND REPLACE WITH FOLLOWING:

A. The work shall consist of providing safe and effective work areas and to warn, control, protect and expedite vehicular and pedestrian traffic through the construction zone. It shall be the sole responsibility of the Contractor to provide for the safety of the traveling public within the limits of the project.

B. The work shall be performed in accordance with the MUTCD Latest Edition and as specified in these Special Provisions.

ADD THE FOLLOWING SUBSECTIONS:

624.01.70 SPECIAL TRAFFIC CONTROL, LANE RESTRICTIONS OR ACCESS ISSUES:

A. Refer to section 107.07 for traffic and access requirements and section 108.04 for limitations of operations.

624.01.71 TRAFFIC CONTROL PLAN (TCP):

A. The Contractor shall submit 6 copies of the **"Traffic Control Plan (TCP)"** to the Contract Specialist for acceptance, **as required by ITB 8.03**.

1. TCP shall be submitted on 11-inch by 17-inch paper, as approved by the Engineer.
2. Acceptance of the plan shall be a condition on the Contractor prior to beginning any Work requiring an approved Traffic Control Plan.
3. For work in the Nevada Department of Transportation, (NDOT) right-of-way, the TCP must also be submitted to NDOT for their acceptance, as outlined in the NDOT encroachment permit.
4. For work in Clark County right-of-way, the TCP must also be submitted to Clark County after it has received City of Las Vegas approval for Clark County acceptance prior to beginning the work.

B. A TCP shall be required for each phase or segment of the construction.

1. The TCP shall be submitted fourteen (14) calendar days prior to the start of the proposed work.
2. The TCP shall be prepared in accordance with the requirements of the MUTCD, specifically Part VI, latest edition.
3. The TCP for each phase of construction will be considered separately.

4. Acceptance of the TCP applies only to a specific phase of construction as identified on the plan.

C. There shall be no deviations from the approved TCP unless a revised TCP is submitted to and accepted by the Engineer. The submittal shall be made at least fifteen (15) working days prior to the need for the proposed revision.

D. In the event a routine TCP deficiency, including maintenance of traffic control items, is not corrected within twenty four (24) hours after notification, **a deduction in the amount of two hundred dollars ($200) per deficiency** shall be made from monies due the Contractor for each calendar day that the deficiency is allowed to remain, not as a penalty, but as liquidated damages.

E. If, in the opinion of the Engineer, a TCP deficiency causes an unsafe condition that requires immediate correction, the Engineer will issue the Contractor a "Barricading Violation Notification" at which time the Contractor will have two hours to correct the noted violation.

1. If the violation is not corrected within the two-hour time limit, the **Contractor will be assessed $200.00 per hour as liquidated damages until the violation is corrected.**
2. This condition may cause the Project to "Stop Work"; this will not be grounds for a time extension of the contract.

F. As an absolute minimum for each phase of the construction, the Traffic Control Plan shall show placement and spacing of all the traffic control devices (including signs, markings, channelizing devices, lighting devices, flaggers, etc.) and their spacing within the following traffic control areas:

1. Advance Warning Signs
2. Transition Areas
3. Buffer Spaces
4. Work Areas
5. Termination Areas

G. Type B high-intensity warning lights are required on all warning signs within the advance warning and transitional areas of all traffic control and barricade setups. The Contractor shall provide Type C steady burn warning lights on channelizing devices within the transition areas of all night time traffic control and barricade setups.

H. Additionally, the traffic control plans must clearly show the following minimum requirements:

1. Method for protecting excavations, work sites and school zone crosswalks
2. Method of barricading at intersections
3. Driveway access plan
4. Provisions for emergency vehicle access

5. All set-up changes to accommodate different phasing of the work
6. Lane widths and transitions
7. 24-hour emergency telephone number
8. Business Access Signs
9. Sidewalk Closed / Cross Here Signs
10. No Parking Signs
11. Project Signs
12. Fresh Oil Signs
13. Duration of Traffic Control and Barricade Plan
14. All Advance Warning Signs
15. Placement of “Double Penalty in Work Zones” warning signs

I. The above-described plan must conform to the Special Provisions contained herein, the latest revisions of the Manual on Uniform Traffic Control Devices (MUTCD) for all traffic control methods, devices and appurtenances.

J. The Contractor shall begin placing the barricades in the direction of traffic. The Contractor shall remove the barricades in a direction opposing traffic.

K. Attached to the TCP the Contractor shall provide a Bus Stop Closure Plan (BSCP). The BSCP shall identify specific durations and times of day for all proposed bus stop closures. The BSCP must be submitted to both the Construction Manager and the RTC for acceptance. During construction the Contractor must coordinate with the RTC regarding specific dates of bus stop closures (RTC Contact: Carl Scarborough @ 702-676-1608). Simultaneous closure of two or more sequential bus stops shall be minimized in duration and will only be allowed when necessary to maintain normal production levels for work items such as asphalt placement. The TCP shall show required signage and barricading associated with bus stop closures and all applicable requirements of the TCP shall apply to bus stop closures.

CONSTRUCTION

624.03.01 SPECIAL DETOURS

DELETE PARAGRAPH “A” AND REPLACE WITH THE FOLLOWING:

A. Special detours shall be constructed as shown on the Traffic Control Plan prepared by the Contractor. Detour locations indicated on the Traffic Control Plan may be approximate only; the exact location shall be staked by the Contractor’s surveyor.

ADD THE FOLLOWING PARAGRAPHS TO THIS SUBSECTION:

G. It is the City of Las Vegas's policy that under no circumstances will travel on a temporary gravel surface be permitted for longer than fifteen (15) calendar days. Temporary gravel

surfaces shall be graded, watered and maintained at all times to provide a smooth dust free traveled surface.

H. All temporary detours and/or bypasses that are expected to be in service for more than fifteen (15) calendar days shall be hard surfaced with a minimum of 1-1/2 inches of AC pavement and maintained in a smooth and usable condition at all times for the duration of the detour and/or bypass.

624.03.02 FLAGGERS

ADD THE FOLLOWING TO THIS SUBSECTION:

D. Proper advance warning signs shall be in place when flaggers are working and removed when work requiring flaggers is completed.

E. Flaggers shall be used to assist trucks for safe ingress and egress whenever truck movements may interfere with safe passage through the work zone. The flaggers' first priority shall be to maintain the safe and efficient movement of the public traffic. In the event that a flagger is to flag at an intersection controlled by a stop sign they must bag the sign(s) prior to taking control of traffic. If a flagger is to flag at an intersection controlled by a traffic signal the traffic signal must be turned off prior to taking control of traffic. Any changes to regulatory signs or changes to a traffic signal shall be reversed at the end of every workday, unless approved by the traffic engineer. Failure to do so could result in an order to stop work.

F. The "Flagger Method" as outlined in Part VI of the MUTCD shall be used for all one lane, two-way traffic control.

ADD THE FOLLOWING SUBSECTIONS TO THIS SUBSECTION

624.03.70 TEMPORARY STRIPING

A. The temporary traffic striping tape material shall conform to subsection 635.02.01 of the NDOT Standards. Placement of temporary pavement striping shall be by pilot line method and its use limited to fourteen (14) calendar days. The tape shall be four (4) inches wide and four (4) feet long and spaced every forty- (40) feet. The color of the tape shall match the color of the existing line. The double yellow line shall have two pieces of tape side by side with a four (4) inch space between, and spaced to the above increments.

B. Painted temporary striping shall be 4-inches wide and shall be continuous or intermittent in accordance with the MUTCD. Painted temporary striping shall not be used on the final wearing course of the pavement.

C. Existing pavement markings, either painted or raised pavement markers, which are not applicable and are within the transverse limits of the temporary travel lanes shall be removed to the satisfaction of the Engineer. Painting over existing markings will not be allowed.

624.03.71 TEMPORARY BRIDGES FOR VEHICULAR ACCESS

A. Where necessary or required for the convenience of the traveling public or individual residents, businesses or schools, The Contractor shall provide temporary bridges over all unfilled excavations at all street, driveway and alleyway, crossings unless otherwise directed by the Engineer. The bridges shall remain in place until the excavations have been properly backfilled to the satisfaction of the Engineer.

B. Temporary bridges for street crossings shall conform to the requirements of the authority having jurisdiction in each case, and the Contractor shall adopt designs furnished by said authority for such bridges or shall submit designs for approval by said authority as may be required. If plates are used, they must be capable of carrying the heaviest anticipated loads using the roadway, be properly anchored so as to prevent any transverse and/or any longitudinal shifting of the plate and must be certified by a structural engineer registered in the State of Nevada. Refer to the City of Las Vegas Trench Plate Requirements detail in Appendix "B."

624.03.72 PIPE LAYING OPERATIONS

A. Pipe stored in the street rights of way within a barricaded work zone, with the approval of or at the direction of the Engineer, which is to remain one night or more shall be protected by Barrier Rail. Type B high intensity warning lights will be installed on the barrier rail at intervals not exceeding 25 feet.

B. During working hours, the Contractor shall have no more than 300 feet of open trench and/or structure excavation nor more than one half of an intersection closed to vehicular traffic, except with specific written permission by the Engineer. During non-working hours, the Contractor shall have no more than 100 feet of open trench and/or structure excavation barricaded in accordance with these supplemental specifications. Pedestrian access crossings suitably equipped with handrails shall be provided as directed by the Engineer. The cost of such crossings shall be included as a part of the traffic control bid item.

624.03.73 TRAFFIC CONTROL DEVICES

A. Trained and knowledgeable traffic control personnel shall be utilized to insure proper set-up and maintenance of traffic control devices and to assist in the safe movement of vehicles through the traffic control zone.

B. The Contractor from the public right-of-way shall remove all traffic control devices that are not in use or will not be used for a period greater than 24 hours. All traffic control devices that are determined by the Engineer to be unnecessary, confusing, or causing an unsafe condition, shall be removed by the Contractor from the public right-of-way immediately upon written notification by the Engineer. The Contractor shall not, at any time, use the sidewalk area to store unused barricades unless the sidewalk is closed and an approved barricade plan is provided for rerouting the pedestrians.

C. The Contractor shall maintain all barricades and other traffic control devices in clean and effective condition. The Contractor shall replace poorly maintained devices immediately upon notification by the Engineer.

D. The Contractor shall begin placing the barricades in the direction of traffic. The Contractor shall remove the barricades in a direction opposing traffic.

E. **Temporary Stop Signs**: All temporary stop signs shall be installed in a semi-permanent manner in the ground or pavement surface in accordance with Standard Drawing Number 249 of the USD.

624.03.74 TRAFFIC CONTROL SUPERVISOR

A. The Contractor shall designate a Traffic Control Supervisor who shall be responsible for initiating, installing and maintaining all traffic control devices as shown on the traffic and plans, as specified in the MUTCD, and revisions thereto, the USS, these supplemental specifications or as directed by the Engineer. When traffic control devices are on the project site the designated Traffic Control Supervisor shall be available to the Engineer 24 hours a day for the duration of the contract. The Traffic Control Supervisor shall be an employee of the Contractor and under the supervision of the Superintendent. The person so designated shall be certified as a worksite traffic control supervisor by the ATSSA. The name and qualifications of this person shall be submitted to the Engineer in accordance with subsection 100.02.02 "Contractor Submittals" of these Special Provisions.

B. The Traffic Control Supervisor shall be capable of being on-site within 30 minutes of notification.

C. The traffic control supervisor shall make at least 4 inspections of all traffic control devices each calendar day as follows:

1. Before beginning work
2. At mid shift
3. Half an hour after the end of the shift
4. Once during the period of non working hours

D. The Traffic Control Supervisor shall make a daily record of traffic control activities including a reference to the barricading in effect that day. The Contractor shall submit these records to the Engineer on a weekly basis.

624.03.75 REQUIRED PROTECTION FOR OPEN EXCAVATION DURING WORKING AND NON-WORKING HOURS

A. The following requirements apply to any open excavations where the difference in elevation between the pavement and the excavated area is greater than 6 inches:

1. Any open excavations, in the roadway or within 18 feet of the roadway, which does not provide a 4:1 (horizontal: vertical) slope between the edge of pavement and the bottom of the excavation, shall be protected with portable precast concrete traffic barrier rails and 6 feet high non-climb fence. All portable precast concrete traffic barrier rails shall be butted tight and pinned in accordance with the requirements of the Nevada Department of Transportation's Standard Drawing R-8.3.3, entitled "Portable Precast Concrete Barrier Rail," which is hereby incorporated into the Drawings.

2. Any open excavation farther than 18 feet and less than 300 feet from any building or roadway, shall be, as a minimum, completely fenced with a 6-foot high non-climb fence.

3. Any open excavation beyond 300 feet of any building or roadway shall be protected with a 3-foot high earth berm completely around the excavation. Type II Barricades with Type B high intensity warning lights shall be spotted around the top of the berm after daylight hours.

4. Barrier rails and fencing may be required, during working hours, when determined by the Engineer, to be in the interest of public safety.

B. The following requirements apply to any open excavations adjacent to a sidewalk where the difference in elevation between the back of the sidewalk and the excavated area is greater than 6 inches:

1. The open excavation shall be protected, as a minimum, with a 6-foot high non-climb fence.

METHOD OF MEASUREMENT

624.04.01 MEASUREMENT

DELETE THIS SUBSECTION IN ITS ENTIRETY AND INSERT THE FOLLOWING:

A. Measurement for payment of Traffic Control and Maintenance will be on a lump sum basis.

BASIS OF PAYMENT

624.05.01 PAYMENT

DELETE THIS SUBSECTION IN ITS ENTIRETY AND INSERT THE FOLLOWING:

A. The lump sum payment for Traffic Control and Maintenance shall include all labor, materials, and equipment necessary to provide measures to protect and maintain traffic 24 hours per day during the life of the Contract, including traffic control plan, temporary pavement, detours; furnishing of personnel, flaggers, traffic control supervisor; including the furnishing of daily record of traffic control activities; barricades, signs, temporary pavement markings and striping (paint and tape), barrier rails, nonclimb fencing, flashers, portable changeable message signs, arrow displays, bridges, plates, and so forth as may be required to ensure the safety of the traveling public in accordance with Sections 107, 624, and 625 and all other applicable sections of the USS, USD, and these Special Provisions.

B. **The value of the Traffic Control Supervisor's site inspections in accordance with Subsection 624.03.10, "Traffic Control Supervisor," will be considered to be 15 percent of the Traffic Control and Maintenance pay item.** Submittal of the daily record of traffic control activities will be evidence that the Traffic Control Supervisor has made the required inspections. **Failure to submit the required daily record of traffic control activities will result in the proportional amount of this bid item not being paid as work not performed.**

C. Payment will be made under:

ITEM NO.	ITEM DESCRIPTION	UOM
624.01	Traffic Control and Maintenance	Lump Sum

WE MAY NEED TO ADD DISCUSSION OF APPROVED HAUL ROUTES. CITY NEEDS TO MEET INTERNALLY AND DISCUSS.

END OF SECTION 624

SECTION 625 – CONSTRUCTION SIGNS

MATERIALS

625.02.01 GENERAL

ADD THE FOLLOWING TO THIS SUBSECTION:

C. All work zone signs and channelizing devices shall be reflectorized. Minimum levels of reflectorization shall be as follows:

1. Signs shall be reflectorized using Type I sheeting for all faces, except those on which the background or foreground colors are either orange or red, for which signs Type III sheeting shall be used.
2. Channelizing devices such as barricades, cones, vertical panels, and drums shall be reflectorized using Type II sheeting, whether surfaces to which sheeting is applied are reboundable or rigid.

CONSTRUCTION

ADD THE FOLLOWING SUBSECTIONS TO THIS SECTION:

625.03.05 PORTABLE CHANGEABLE MESSAGE SIGNS

A. Portable Changeable Message Signs (PCMS) conforming to the MUTCD, Part VI, Section 6F-2 shall be used to advise the driver of road closures on streets with an 80-foot or greater right-of-way.

B. The PCMS shall be placed far enough in advance of the closed street to allow traffic ample opportunity to detour around the disrupted area.

C. The location and number of PCMS will be determined by the Engineer.

D. Solar powered panels shall be used in residential areas.

625.03.06 ARROW DISPLAYS

A. Arrow Displays conforming to the MUTCD, Part VI, Section 6F-3, Type B, shall be used to advise the driver of two or more lane closures in any one direction when so directed by the Engineer.

B. The Arrow Displays shall be required at the beginning of the taper and placed behind the barricades in the closed lanes.

C. Solar powered panels shall be used in residential areas.

METHOD OF MEASUREMENT

625.04.01 MEASUREMENT

ADD THE FOLLOWING TO THIS SUBSECTION:

There will be no direct measurement for Portable Changeable Message Sign and Arrow Display.

BASIS OF PAYMENT

625.05.01 PAYMENT

ADD THE FOLLOWING TO THIS SUBSECTION:

Unless otherwise provided in the Special Provisions, no payment will be made for Portable Changeable Message Sign and Arrow Display as such. The cost thereof shall be considered as included in the price bid for Traffic Control and Maintenance, as specified in Section 624, for which portable changeable message sign and arrow display are required.

END OF SECTION 625

SECTION 626 – FINAL CLEANUP

METHOD OF MEASUREMENT

626.04.01 MEASUREMENT

DELETE THIS SUBSECTION IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING:

A. No unit of measurement will be made for Final Cleanup.

BASIS OF PAYMENT

626.05.01 PAYMENT

DELETE THIS SUBSECTION IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING:

A. Unless otherwise provided in the Special Provisions, no payment will be made for Final Cleanup as such. The cost thereof shall be considered as included in the price bid for construction or installation of the items to which such cleanup is required.

END OF SECTION 626

SECTION 627 – PERMANENT SIGNS

DESCRIPTION

627.01.01 GENERAL

ADD THE FOLLOWING TO THIS SUBSECTION:

E. The work shall include all labor, material, equipment and incidental hardware necessary to remove, relocate and/or install permanent signs and posts.

F. The unit price shall include delivery of salvaged and unused signs to the City Maintenance Yard located at 3100 East Bonanza Avenue, Building A. The Contractor shall call 702-229-6331, 24 hours in advance of delivery. The Contractor shall also have the ability to unload their truck without use of City facilities or equipment.

MATERIALS

627.02.01 GENERAL

ADD THE FOLLOWING TO THIS SUBSECTION:

B. All permanent signs shall be manufactured with Class 6 reflective sheeting.

C. All new traffic signs shall have 3M series 1160 or approved equivalent anti-graffiti protective overlay film.

CONSTRUCTION

627.03.03 INSTALLATION

ADD THE FOLLOWING TO THIS SUBSECTION:

K. Directional signs that are not functional may require covering during the progress of the work.

1. Covers shall be sufficient size and density to completely block out the message so that it is not visible either during the day or night.
2. The use of burlap or similar fabrics will not be allowed.
3. Covers shall be fastened securely to prevent movement by wind action and withstand the effect of weathering.
4. No adhesive tape shall be applied to the face of the sign.

METHOD OF MEASUREMENT

627.04.01 MEASUREMENT

ADD THE FOLLOWING TO THIS SUBSECTION:

F. The quantity of Permanent Sign (Ground Mounted) will be measured for payment by each, in place and accepted.

BASIS OF PAYMENT

627.05.01 PAYMENT

DELETE PARAGRAPH F AND ADD THE FOLLOWING TO THIS SUBSECTION:

F. The accepted quantity of Permanent Sign (Ground Mounted) will be paid for at the contract unit price bid per each and shall include all materials, equipment, and labor required to fabricate and install the signs including, but not limited to, excavation, foundation preparation, backfill, concrete foundation, supports, poles, anchor sleeve, anchors, hardware, making all required tests, and all other items incidental, appurtenant, and necessary to complete the work as shown on the Drawings, as specified, and as directed by the Engineer.

G. Payment will be made under:

ITEM NO.	ITEM DESCRIPTION	UOM
627.01	Permanent Sign (Ground Mounted)	Each

END OF SECTION 627

SECTION 637 - POLLUTION CONTROL

DESCRIPTION

637.01.01 GENERAL

ADD THE FOLLOWING TO THIS SUBSECTION

D. Dust control work includes creating a Dust Control Mitigation Plan (DCMP), obtaining all necessary approvals for the DCMP, obtaining a Dust Control Permit for Construction Activities, payment of all fees associated with the project dust control, all work necessary to comply with the DCMP, Dust Control Permit, and the requirements of Section 94 of the Clark County Department of Air Quality Regulations, most recently adopted.

E. Any fines or penalties levied by the Clark County Department of Air Quality due to violations of the project Dust Control Permit requirements are the sole responsibility of the Contractor and shall be paid by the Contactor.

F. The Contractor shall use all necessary Stormwater Runoff Best Management Practices (BMPs) performing the Work so as to not discharge stormwater runoff containing pollutants or sediment into the waters of the United States, including municipal separate storm sewer systems (MS4s) in violation of federal and state laws, rules, and regulations and the City's water pollution requirements.

G. The Contractor shall:

1. Comply with the provisions of Nevada Revised Statutes, Chapter 445A: Water Pollution Control and City of Las Vegas Municipal Code 14.18; and
2. Adhere to all Federal regulations under 40 CFR 122.26(b)(14).

H. All information and forms pertaining to Nevada's Stormwater NPDES Permitting Program can be found on the following website: http://ndep.nv.gov/bwpc/storm01.htm.

I. The city, 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 ensuring that all persons on the project site, including Contractor and subcontractor personnel, abide by the conditions of the permit. As the applicant, the Contractor is responsible for supplying complete copies of the NOI and SWPPP to all project subcontractors.

J. Upon completion of the project, the Contractor will need to permanently stabilize the construction area and file a Notice of Termination (NOT) with NDEP to terminate the permit. The Contractor shall provide a copy of the approval letter of termination from

NDEP to the Owner. Receipt of this letter will be required prior to acceptance of Contractor's final payment request.

K. Contractor shall apply for, pay for, and gain approval of the required permit from NDEP in a timely manner so as not to affect the project schedule. Contractor shall comply with the requirements of the permit and shall bear all associated costs. If the Owner suffers damages including but not limited to delays and fines as a result of the Contractor's failure to obtain a required permit or for non-compliance with the requirements of the permit, the Contractor shall reimburse the Owner for such damages and the Owner may withhold amounts equal to the damages from the Contractor's payments. Failure of the Contractor to obtain required permits in a timely manner shall not be justification for delay of the issuance of the Notice to Proceed by the Owner.

L. Any fines or penalties levied by the City of Las Vegas, Nevada Division of Environmental Protection, U.S. EPA, or any local, state, or federal agency to violations of the project Stormwater Runoff Management requirements are the sole responsibility of the Contractor and shall be paid by the Contactor.

CONSTRUCTION

ADD THE FOLLOWING SUBSECTION TO THIS SECTION:

637.03.70 STORM WATER POLLUTION PREVENTION PLAN (SWPPP) PERMIT FOR CONTRACTOR'S STAGING AREAS

A. The following applies to the Contractor's staging areas: NDEP, Bureau of Water Pollution Control, has issued general permit NVR100000 that covers construction activities within the state of Nevada. The Contractor shall comply with the requirements of the general permit at no extra cost to the Owner. In order to be covered by the permit, the Contractor shall submit, at no extra cost to Owner, a Notice of Intent (NOI) and the required filing fee on the Internet at http://www.ndep.nv.gov/bwpc/storm_cont03.htm.

B. Upon the completion of the construction, Contractor is responsible for permanently stabilizing the staging area, filing Notice of Termination (NOT), and obtaining approval of NOT with NDEP to terminate the permit.

METHOD OF MEASUREMENT

637.04.01 MEASUREMENT

DELETE PARAGRAPHS A AND B AND ADD THE FOLLOWING TO THIS SUBSECTION:

D. Measurement for payment of Dust Control will be on a lump sum basis.

E. Measurement for payment of NPDES Discharge Permit will be on a lump sum basis.

BASIS OF PAYMENT

637.05.01 PAYMENT

DELETE PARAGRAPH D AND ADD THE FOLLOWING TO THIS SUBSECTION:

D. The lump sum payment for Dust Control shall include all permits, labor, materials and equipment necessary to provide dust control for the entire duration of the project as described in the approved DCMP or as directed by the Engineer. Payments shall be divided evenly using the initial contract duration, plus any additional contract time added by change order or as directed by the Engineer. When additional contract time is added the remaining unpaid portion of the lump sum bid amount shall be divided evenly over the remaining contract time by recalculating the prorated payment.

E. The lump sum payment for NPDES Discharge Permit shall include permits, labor, materials and equipment necessary to carry out the Storm Water Pollution Prevention Plan (SWPPP) for the entire duration of the project as described in the permit and as directed by the Engineer and shall also include permanent stabilization of the construction area and staging area. Payments shall be divided evenly using the initial contract duration, plus any additional contract time added by change order or as directed by the Engineer. When additional contract time is added the remaining unpaid portion of the lump sum bid amount shall be divided evenly over the remaining contract time by recalculating the prorated payment.

F. Payment will be made under:

ITEM NO.	ITEM DESCRIPTION	UOM
637.01	Dust Control	Lump Sum
637.02	NPDES Discharge Permit	Lump Sum

END OF SECTION 637

ADD THE FOLLOWING SECTION TO DIVISION II – CONSTRUCTION DETAILS

SECTION 672 – TRAIL LIGHTING

DESCRIPTION

672.01.01 GENERAL

A. Trail lighting work shall consist of furnishing and installing, modifying or removing trail lighting systems, electrical equipment in structures, partial installations for future systems, or combinations thereof, all as shown on the plans, and as specified in these Special Provisions.

B. All materials furnished and used shall conform to the provisions in Section 106. The materials shall be manufactured, handled, and used in a manner to insure completed work in accordance with the plans, specifications, and Special Provisions.

C. All systems shall be complete and in satisfactory operating condition at the time of acceptance of the contract. Where an existing system is to be modified, the existing material shall be reused in the revised system, removed, salvaged, and stockpiled or abandoned as shown on the plans, as specified in the Special Provisions or as directed by the Engineer.

D. The Contractor shall provide all labor, materials, equipment, transportation and services required to install the trail lighting and related items on the plans and in the specifications resulting in a complete and operational system.

E. All equipment shall function as designed. The trail lighting standards shall be leveled before they are energized.

F. The Contractor shall maintain the new lighting system from the date energized until the entire project has been accepted by the City of Las Vegas.

1. This includes maintaining proper operation of the new system and any necessary replacement parts to make the system operational including but not limited to lamps, igniters, ballasts, breakers, photo-electric and time clock controls.
2. The Contractor is also responsible for any damage to the system as a result of vandalism or negligence during this period.

G. The lights must be operating properly. They are responsible for any replacement parts to make them operational, (i.e. lamps, igniter, ballasts, breakers, photo eyes, time clocks, etc). They are also responsible for damage and vandalism during this period.

H. The Contractor shall have a qualified representative present at the time the City inspects the trail lighting installations.

672.01.02 REGULATIONS AND CODE

A. All electrical equipment shall conform to the standards of the National Electrical Manufacturers Association (NEMA), and listed by Underwriters' Laboratories, Inc. (UL), or the Electronic Industries Association (EIA), wherever applicable.

B. In addition to the requirements of the plans, the specifications, and these Special Provisions, all materials and workmanship shall conform to the requirements of the National Electrical Code (NEC); National Electrical Safety Code (NESC); Standards of the American Society for Testing and Materials (ASTM); American National Standards Institute (ANSI) manuals; Institute of Electronic and Electrical Engineers (IEEE); Illumination Engineering Society (IES); Rural Electrification Association (REA); Nevada Occupational Safety and Hazard Act (NOSHA); National Board of Fire Underwriters (NBFU); Uniform Standard Drawings, Clark County Area; and any local ordinance which may apply.

C. Wire sizes shall be indicated in American Wire Gage (AWG).

672.01.03 EQUIPMENT LIST AND DRAWINGS

A. Unless otherwise permitted in writing by the Engineer, the Contractor shall within fifteen (15) days following approval of the contract, submit to the Engineer for approval, a list of equipment and materials which he proposes to install.

1. The list shall be complete as to name of manufacturer, size, and identifying number of each item.
2. The list shall be supplemented by such other data as may be required, including scale drawings of cabinets showing location and spacing of shelves, terminal blocks and equipment, including dimensioning.

B. All of the above data shall be submitted, in triplicate, for review. Where electrical equipment is constructed as detailed on the plans, the submission of detailed drawings and diagrams will not be required.

672.01.04 WARRANTIES, GUARANTEES, AND INSTRUCTION SHEETS

A. Manufacturers warranties, guarantees, and certifications for materials used in the work and instruction sheets and parts list shall be supplied with materials and shall be delivered to the Engineer prior to acceptance of the project.

672.01.05 REMOUNT ELECTRICAL SERVICE

A. Existing service shall remain fully operational during construction.

1. Outages required shall be scheduled with the Owner and timing devices reset after resumption of service.
2. The Contractor shall field verify wiring connections and routing prior to disconnecting any conductors.

B. The modification, extension or removal of the existing conductors and equipment shall be inspected by and accepted by the Engineer.

C. Electrical work shall be in accordance with the requirements of the National Electrical Code.

MATERIALS

672.02.01 TRAIL LIGHTING STANDARDS AND POLES

A. The trail lighting standard shall consist of a continuous round or square steel pole assembly, base cover, mast arm, shoebox style luminaire fixture, pole top, anchor rods and necessary bolts, nuts and washers. Workmanship and finish shall be equal to the best general practice of modern metal fabrication.

B. Pole Assembly.

1. Trail lighting poles shall be manufactured steel poles; aluminum poles will not be allowed.
2. The pole shaft shall be of round or square cross section with a minimum outer diameter or width of 4 inches (100 millimeters) and shall have a minimum height of 14 feet and a maximum height of 15 feet from the base not including the foundation.

C. A minimum 3-inch (75 millimeters) by 5-inch (128 millimeters) access handhole with reinforced frame and slip-resistant type cover located 8 inches (200 millimeters) from the base plate shall be provided.

1. The cover shall include a bar with one weather and vandal resistant 1/4 inch (6 millimeters) stainless steel hex socket head screw.
2. The handhole may have radius corners such that the hand hole is oval in shape.
3. The handhole reinforcement shall provide a bending strength equal to that of the pole without an opening.
4. Field cutting, welding, or other adjustments of the access handhole will not be allowed.
5. This minimum handhole size shall be provided regardless of the required pole height or usage.

D. Standards and fittings shall be cleaned and finished as specified in Subsection 623 L.03.01.

1. After erection, all outside surfaces shall be cleaned free from dust, dirt and oil, and all abraded and damaged areas shall be neatly refinished.
2. Tie rods, nuts, washers, and other miscellaneous ferrous parts shall be galvanized before installation by the hot-dip process conforming to ASTM A153.

E. Posts, poles, standards, and cabinets shall not be erected until the foundation has set at least 72 hours, and shall be plumbed or raked, as ordered by the Engineer.

672.02.02 TRAIL LIGHTING LUMINAIRES

A. The standard luminaire lamp fixture for trail lighting shall be of High Pressure Sodium (HPS) type, horizontal burning, of style and wattage as shown on the plans or specified in these Special Provisions.

672.02.03 FUSE HOLDERS AND FUSES

A. Fuse holders and fuses shall be installed in the bases of all lighting standards and shall be accessible through the handholes for the lighting standard bases.

1. The fuse holders shall be single pole for 120 and 277 volts, or double pole for 208, 240, or 480 volts, waterproof type without the use of tape, with integral or separate conductor insulating boots, and must be certified by the Traffic Shop.
2. Fuse holders shall be HEX series as manufactured by Bussmann, or approved equal.
3. The single pole fuse holder shall consist of two sections, a line side section, and a load side section.
4. When the line and load sections are mated per instructions from the manufacturer, the fuse holder body and terminals shall be vapor and waterproof.
5. The design shall be such that if the fuse holder is re-closed under load, any arc will be confined within the body when a proper sized fuse is seated firmly in the terminals.

B. The double pole fuse holder shall contain two fuse holder chambers and consist of two sections, a line side section and a load side section.

1. When the fuse holder is opened, both load side connections shall be simultaneously disconnected from the live side.
2. The fuse holders shall be 30 amperes, 600 volt rating and accept 13/32 inch (10 millimeter) diameter by 1-1/2-inch (38 millimeter) fuses of the ampere rating specified in the contract.
3. 10 amp fuses shall be used.
4. Glass, paper or indicating type fuses are not acceptable.

672.02.04 LOW VOLTAGE UNDERGROUND TRAIL LIGHTING SYSTEM

A. Unless otherwise specified on the plans, the low voltage lighting system shall be single phase, two wire, 240 volt multiple.

1. The 2-wire system shall consist of two insulated 600 volt THW conductors of the specified gage and a green #8 THW equipment bonding conductor as shown on the plans and shall bear the U.L. label.
2. The service panel shall be 200 ampere, unless otherwise specified, and shall be wired for 120-240 volt with a full size neutral.

B. Pole and Arm Cable (Load side):

1. Unless otherwise specified on the plans, the cable from the base of the lighting standard to the luminaire shall be two conductor No. 10 AWG plus ground, solid copper with insulation rated at 600 volts.

2. The individual conductors shall be insulated with TW grade, and the outer jacket shall be PVC jacket type UF grade.

672.02.05 FOUNDATIONS

A. Foundations for trail lighting shall be constructed as shown on the Drawings.

B. Foundations for posts, standards, and pedestals shall be concrete conforming to the applicable requirements of Section 501, "Portland Cement Concrete." The concrete shall be of a CLV approved mix design and shall have a minimum compressive strength of 3,000 pounds per square inch.

C. Forms shall be true to line and grade. Foundations shall extend 12 inches above finish grade in trail areas and shall extend 30 inches above finish grade with rebar cage in parking areas unless otherwise specified by the Engineer.

D. Forms shall be rigid and securely braced in place.

1. Conduit ends and anchor bolts shall be held in place by means of a template until the concrete sets.

2. Both forms and ground which will be in contact with the concrete shall be thoroughly moistened before placing concrete.

E. For pedestals, a 4 inches (100 millimeters) minimum concrete foundation cap shall be poured after the pedestal is in proper position.

1. For trail lighting standards, the foundation shall be poured to base plate in a single pour and shall be slope away from the base plate.

2. The forms shall be stripped off while concrete is still “green” and the foundation shall be stone rubbed to provide a smooth, seamless surface appearance.

3. A light broom finish shall then be applied.

4. The foundation shall be wet cured for a minimum of 72 hours.

5. Attempts to fill and shape poured foundation will not be allowed after the initial pour; improperly poured foundations must be demolished and rebuilt at the contractor’s expense.

F. No. 4 AWG multi strand bare copper grounding conductor wire shall be used to ground pole and all anchor bolts as shown on the plans or in the standard drawings.

G. A matching metal base cover shall be provided.

672.02.06 ANCHOR BOLTS

A. Anchor bolts shall conform to ASTM A576, Grade C-1035 for a minimum yield strength of 48,000 psi (331 MPa) and shall be provided with two nuts and two washers of diameter as specified on the plans.

1. Not less than 12 inches (300 millimeters) of the upper end of the anchor rods and all nuts and washers shall be galvanized by the hot-dip process conforming to ASTM A153, or cadmium plated with type NS coating conforming to ASTM A165.
2. After galvanizing or plating, the bolt threads shall accept galvanized or plated standard nuts without requiring tools or causing removal of protective coating.

B. Anchor bolt sizes shall be as specified on the Drawings.

1. The upper 6 inches (150 millimeters) of anchor bolts shall be threaded.
2. Plumbing of standards shall be accomplished by adjusting the nuts before the foundation is finished to 1 inch (25 millimeters) minimum above final grade.
3. Shims or other similar devices for plumbing or raking will not be permitted.

672.02.07 CONDUIT

A. Underground conductors shall be installed in conduit unless otherwise specified in these Special Provisions or the Drawings. Conduit shall be listed by the Underwriters' Laboratories Inc., and shall bear the UL label on each length.

B. Low voltage conductors shall not be installed in high voltage light standards.

C. The conduit sizes to be used will be indicated on the plans. Conduit shall be 1-1/4 inches (32 millimeters) minimum diameter, unless otherwise indicated on the plans.

D. The Contractor may, at his own expense with Engineer approval, use larger size conduit, and where used, it shall be for the entire length of the run from outlet to outlet with no reducing couplings permitted.

E. PVC coated rigid steel conduit shall consist of galvanized rigid steel conduit conforming to applicable federal specifications and Underwriter’s Laboratories.

1. The exterior surface of the conduit shall be acid-treated to provide an acceptable surface for plastic coating with a heat polymerizing lacquer with a thickness not to exceed 0.0005 inch (0.01 millimeter) thick.
2. A polyvinyl chloride compound shall then be bonded to the prepared conduit with a thickness not less than 0.035 inch (0.9 millimeter) for the full length of the conduit except the threads.
3. The bond between the metal and the plastic shall be equal or greater than the tensile strength of the plastic coating.
4. In addition, the PVC compound shall have the following physical characteristics:
   a. Hardness: 85+ Shore A Durometer

b. Dielectric Strength: 400 (Volts/mil @ 60 cycles)

c. Tensile Strength: 3500 psi

F. PVC coated rigid steel conduit shall be used for all exposed conduit such as when attached to the exterior of pedestrian bridge and underpass structures, for example. Electrical Metallic Tubing, or EMT conduit, will not be allowed.

G. When new conduit is to connect to existing conduit, the Contractor shall verify the integrity of the existing conduit and make necessary repairs. The Engineer shall approve any additional repair work prior to commencing.

H. Conduits shall extend continuous through and above pole bases to within 3 inches below bottom of handhole of lighting standard.

1. Conduits shall be bent, without crimping or flattening.

2. No single run shall include more than two 45 degree bends and two 90 degree bends without prior approval of the Engineer and shall not exceed 300 feet between pull boxes.

I. Conduits shall be proven free and clear of dirt and debris by use of an appropriately sized mandrel no less than 1/4 inch smaller than the inside diameter of the conduit.

J. All installed spare or empty conduit shall include a green No. 8 AWG conductor installed from end to end and shall conform to subsection 672.03.06 WIRING of these Special Provisions.

672.02.08 PULL BOXES

A. New pull boxes shall comply with applicable portions of the Standard Specifications, the Standard Drawings, and the plans.

1. The interior of pull boxes shall be void of any other materials except conduit risers and necessary wiring.

2. All excess materials shall be removed to promote drainage.

B. Pull boxes installed in grass, dirt or asphalt shall have an 8-inch minimum concrete collar with No. 4 rebar.

C. Pull box lids shall be an approved non-metallic polymer type material and shall be secured with brass ties downs. Pull boxes 2 feet by 3 feet and larger shall have torsion assisted lids.

D. Pull box lids shall factory imprinted with the word “LIGHTING” or “ELECTRIC”.

E. A pull box shall be required with conduit runs greater than 300 feet and at every 300 feet thereafter.

672.02.09 CONDUCTORS AND CABLE

A. Insulation for multiple circuit lighting conductors shall be rated at 600 volts, 75 degrees C minimum.

B. Conductors, unless otherwise specified, shall be single conductor, solid or stranded copper of the gage shown on the plans, or indicated herein, insulated with THW grade plasticized polyvinyl chloride.

C. Copper wire shall conform to the applicable portions of ASTM D2220, B3 and B8.

672.02.10 CONNECTIONS

A. All connections shall be made using bronze split bolt type connectors and coated with approved weatherproofing compound in accordance with these Special Provisions, and the standard drawings; wire nuts are not allowed.

672.02.11 LIGHTING CONTROLS

A. Photo-electric controls

1. Photo-electric controls shall be as shown below, or as shown on the plans.
2. The photo-electric control shall be capable of switching multiple lighting systems directly or by a separate contactor as indicated on the plans.
3. The photo-electric control shall consist of a photo-electric unit installed at the top of the first lighting standard from the service point, and controlling the lighting contactor in the pad mounted service and control cabinet.
4. A by-pass switch shall be included to permit manual operation of the lighting system contactor.
5. **The photo-electric control shall be Tork 2007, or approved equal.**
6. **Equipment Details:**
   a. The photo-electric unit shall consist of a light sensitive element connected to a control relay.
   b. The light sensitive element shall have a spectral response such that it is especially sensitive to north sky illumination and shall have an "ON" level adjustable between minimum limits of 0.6 and 1.1 foot-candles
   c. The unit shall be so designed that a failure of any electrical or electronic component will energize the lighting circuit.
   d. The photo-electric unit shall be mounted at the top of the standard designated on the Drawings and shall be oriented as directed by the Engineer.
7. **Contactor:**
   a. The contactor shall be constructed in accordance with NEMA standards for lighting contactors and shall have contacts rated to switch the specified lighting load.
   b. Contactor shall be the mechanical armature type.
   c. The mechanical type shall consist of an operating coil, a laminated core, a laminated armature, contacts and terminals.

d. Contacts shall be silver alloy.

8. **Housing:**

a. The contactor may be either integral with the photo-electric unit or may be located externally from it.

b. When located externally, the contactor shall be housed in a suitable NEMA type 3 rain-tight enclosure with hasp for a padlock.

c. The rain-tight enclosure shall be mounted on the same standard as the photo-electric unit at a height of approximately 28 feet (8.5 meters) above the base.

d. All contactors housings shall be approved by the Engineer prior to installation.

9. **Wiring:**

a. Conductors between the photo-electric unit and an external contactor shall be a minimum No. 10 AWG, and shall be installed inside the lighting standard.

B. Time Clock controls:

1. Facility lighting set for dusk to facility closing will be controlled by a time clock installed inside the service pedestal cabinet.

2. **The time clock controller shall be Intermatic ET70115C, or approved equal**.

CONSTRUCTION

672.03.01 MAINTENANCE OF EXISTING AND TEMPORARY ELECTRICAL SYSTEMS

A. Existing electrical systems (traffic signal, ramp metering, highway and street lighting, flashing beacon and sign illumination), or approved temporary replacements thereof, shall be kept in effective operation for the benefit of the traveling public during the progress of the work, except when shutdown is permitted to allow for alterations or final removal of the systems.

1. Traffic signal shutdown shall be as specified in the Special Provisions or as requested by the Engineer.

2. Lighting system shutdowns shall not interfere with the regular lighting schedule, unless otherwise permitted by the Engineer.

3. The Contractor shall notify the Operating Engineer's Agency in writing 3 normal working days prior to performing any work on existing systems.

B. The CLV shall be notified in writing 3 normal working days in advance by the Contractor prior to any operational shutdown of a traffic signal system.

C. The CLV will continue operation and maintenance of existing electrical facilities.

D. Where damage is caused by the Contractor's operations, the Contractor shall at his expense, repair or replace, at the direction of the Engineer, damaged facilities promptly in accordance with these specifications. Should the Contractor fail to perform the required repairs or

replacements, the cost of performing such repairs or replacements will be deducted from any monies due or to become due the Contractor.

E. The data indicated on the plans and in these Special Provisions is as exact as could be secured, but its absolute accuracy is not guaranteed. Exact locations, distances, levels, and other conditions will be governed by unforeseen obstacles in the field.

F. The exact location of existing conduits and pull boxes shall be ascertained by the Contractor before using equipment that may damage such facilities or interfere with any system. The Contractor shall use the plans and these specifications for guidance, and secure the Engineer's approval for all changes of location or scope of work.

G. Where roadways are to remain open to traffic and existing lighting systems are to be modified, the lighting systems shall remain in operation and the final connection to the modified circuit shall be made so that the modified circuit will be in operation by nightfall of the same day.

H. Temporary electrical installations shall be kept in effective operation until the temporary installations are no longer required for the traveling public.

I. These provisions will not relieve the Contractor in any manner of his responsibilities as provided in Subsection 107.11, "Responsibility for Damage," and Subsection 107.16, "Contractor's Responsibility for the Work and Materials."

J. A temporary overhead cable system may be used for the existing signal system circuitry in lieu of maintaining the underground installations during construction if approved by the Operating Engineer's Agency.

K. Where an existing system is being modified, work not shown on the plans or specified in these Special Provisions and which is considered by the Engineer as necessary to keep all or any part of the existing system in effective operation shall be considered as included in the prices paid for the systems, or units, therefore no additional compensation will be allowed.

672.03.02 SCHEDULING OF WORK

A. Conductors shall not be pulled into conduit until pull boxes are set to grade, crushed rock sumps installed, and metallic conduit bonded, where applicable.

B. Lighting for pedestrian structures shall be placed in operation prior to opening the structure to pedestrian traffic.

C. If the Engineer orders lighting for pedestrian structures placed in operation before permanent power service is available, the cost of installing and removing temporary power service will be paid for as extra work as provided in Subsection 104.03, "Extra Work."

D. Trail lighting shall not be inspected for acceptance or turned on until a completed set of red lined plans is received by the local agency. This does not preclude the preparation and submittal of as-built plans or record drawings.

672.03.03 SAFETY PRECAUTIONS

A. Before starting work on existing lighting circuits, the Contractor shall obtain daily a safety circuit clearance from the responsible local agency.

B. By-pass shall be switched to the "off" position, fuses shall be removed, and signs posted at the switch box before any work is done.

672.03.04 EXCAVATING AND BACKFILLING

A. All trenching and backfill shall comply with applicable portions of the USS, USD and plans.

1. All trenching shall be deep enough to insure a minimum of 24 inches of cover over the conduit measured from the top of conduit to finish grade.
2. Vinyl power warning tape shall be placed above conduits at 12 inches below the finish grade.
3. The backfill in street areas shall be Type II gravel compacted to 95 percent relative density or an agency approved controlled low strength material (CLSM).
4. No trench shall be left open after established working hours without approval of the Engineer.

B. Conduit locations on the plans are for reference only.

1. Actual locations are to be determined by the Contractor as to the most economical location, either behind the curb or in front of the lip of the gutter, but in either case, the conduit must remain parallel to the back of curb or the edge of pavement between the lighting standards, and the location shall be approved by the Engineer.
2. As-built marked prints or Record Drawings showing installed locations shall be given to the Engineer by the Contractor prior to final acceptance by the agency.

C. All conduit that is terminated, stubbed, and capped for future use shall be marked by a "+" a minimum of 3 inches high and directly above the conduit, cut into the face of the curb, wall, concrete paving, etc.

D. Excavations required for the installation of conduit, foundations and other facilities, shall be performed in such a manner as to cause the least possible damage to the streets, sidewalks, and other improvements.

1. Excavations shall not be larger than necessary for the proper installation of conduit, electrical facilities and foundations.
2. Excavating shall not be performed until immediately before installation of conduit, facilities, and foundations.

E. The material from the excavation shall be placed in a position where the least disruption and obstruction to vehicular and pedestrian traffic will be realized and the least interference with surface drainage will occur.

F. Surplus excavated material shall be removed and disposed of by the Contractor outside of the right-of-way.

G. At the end of each day's work, and at other times when construction operations are suspended, equipment and other obstructions shall be removed from the right-of-way.

H. Structural excavation and backfill shall conform to the requirements of Section 206, "Structure Excavation" and 207, "Structure Backfill."

I. Trench excavations shall be backfilled in conformance with the requirements of Section 208, "Trench Excavation and Backfill." Backfill shall be free of stones, caliche, or lumps of material exceeding 3 inches and free from sod, frozen earth and organic materials.

J. Backfilled excavations shall be kept well filled and maintained in a smooth and well-drained condition, until permanent resurfacing is completed as specified in Subsection 208.03.05, "Cutting and Restoring Street Surfacing."

K. Unless otherwise specified in the Special Provisions, excavation in the street and highway shall be performed in such a manner that not more than one lane of traffic is restricted in either direction at any time, unless otherwise approved by the Engineer.

L. All streets upon or within which any work is being done shall be kept open to all traffic by the Contractor, as specified in Subsection 104.04, "Maintenance of Traffic," unless otherwise provided in these Special Provisions, or as approved by the Engineer.

M. Barricading shall conform to the latest editions of the Traffic Control Plans for Highway Work Zones for the Clark County Area and the Manual On Uniform Traffic Control Devices.

672.03.05 REMOVING AND REPLACING IMPROVEMENTS

A. Improvements, such as sidewalks, curbs, gutters, existing park amenities, Portland cement concrete and asphalt concrete pavement, bituminous surfacing, base material and other improvements removed, broken or damaged by the Contractor, shall be replaced or reconstructed in compliance with the applicable sections of these specifications.

B. Whenever a part of a square or slab of existing concrete sidewalk or driveway is broken or damaged, it shall be repaired in accordance with Subsection 202.03.02, "Removal of Structures and Obstructions."

C. The outline of all areas to be removed in Portland cement concrete sidewalks and in pavements shall be cut to a minimum depth of 1-1/2 inches (38 millimeters) with an abrasive type saw prior to removing the sidewalk and pavement material.

1. Cut for the remainder of the required depth may be made by any method satisfactory to the Engineer.

2. Cuts shall be neat and true with no shatter outside the removal area.

672.03.06 WIRING

A. Wiring shall conform to appropriate articles of the National Electrical Code.

1. Wiring within cabinets, junction boxes, etc., shall be neatly arranged and laced.
2. Powdered soapstone, talc, or other approved lubricant shall be used when installing conductors in conduit.

B. Each conductor shall have 18 inches (450 millimeters) of slack coiled within each lighting standard and at least 2 feet (600 millimeters) of slack coiled in each pull box.

C. Conductors shall be installed without splices from luminaire to luminaire and from service to luminaire unless otherwise specified. Multiple lighting conductors may be spliced in the base of lighting standards or in pull boxes adjacent thereto.

D. Splices for trail light conductors shall be connected using bronze split bolt type connectors in accordance with these Special Provisions and the standard drawings.

E. Conductor insulation shall be well penciled, trimmed to conical shape, roughened and meet manufacturer's recommendations before applying splice.

1. When conductors and cables are pulled into the conduit, all ends of the conductors and cables shall be taped to exclude moisture.
2. Ends of spare conductors shall be taped.

F. The ends of all conduits shall be well reamed to remove burrs and rough edges.

1. Field conduit cuts shall be made square and true so that the ends will butt or come together for the full circumference in the couplings or adapters.
2. Slip joints or running threads shall not be permitted for coupling metal conduit.

G. When a standard coupling can not be used, an approved union coupling shall be used.

H. Couplings for steel conduit shall be tightened until the ends of the conduits are brought together, so that a good electrical connection will be made throughout the entire length of the conduit run.

I. Conduit ends shall be threaded and capped with standard pipe caps until wiring is started. When caps are removed, the threaded ends shall be provided with approved conduit bushings.

J. Manual or power-operated equipment normally used for cutting rigid steel conduit is acceptable for use in cutting PVC coated rigid steel conduit.

1. PVC shall not be peeled back before cutting and all cuts shall be reamed.
2. Threading shall be the same as for non-coated rigid conduit.
3. All scarred and grip marked areas shall be touched up with approved heavy consistency coating compound.

K. For PVC coated rigid steel, all couplings and threaded fittings shall be hand tightened before using a wrench.

1. Use strap wrench for the final two turns only.
2. All wrench marks and scores shall be recoated and joints must be sealed with heavy consistency PVC compound.
3. Ensure that the final installation does not have any exposed metal areas.

L. PVC coated rigid steel conduit, 2 inches (51 millimeters) in diameter or larger, shall be used for all bends, except for 90 degree bends at trail light pole foundations.

1. Standard field bending techniques shall be used which typically uses a shoe one size larger to accommodate the larger pipe diameter.
2. The minimum radius of the bend shall be 36 inches (914 millimeters) for P.V.C. coated rigid steel conduit.

M. Conduit terminating in pedestals shall be a minimum of 2 inches (50 millimeters) and a maximum of 4 inches (100 millimeters) above the foundation and should be sloped toward the handhole opening.

N. Conduit shall enter concrete pull boxes from the bottom and shall terminate 2 inches (50 millimeters) inside the box wall and not less than 3 inches (50 millimeters) nor more than 4 inches (100 millimeters) above the bottom, and shall be sloped to facilitate pulling of conductors.

1. Conduit entering the bottom of a pull box shall be located near the end walls to leave the major portion of the box clear.
2. At all outlets, conduit shall enter from the direction of the run.

O. Existing underground conduit to be incorporated into a new system shall be cleaned by blowing out with compressed air, or by other methods required by the Engineer.

P. Conduit runs shown on the plans are for bidding purposes only and may be changed with the approval of the Engineer to avoid underground obstructions.

672.03.07 SERVICE

A. Service points when required for trail lighting shall be as indicated on the plans.

1. Each service provided by the Contractor shall have a 200 amp rating and shall conform to the Clark County Area Uniform Standard Drawings as applicable.
2. Breakers as shown in the service panel schedule in the drawings will be required.

B. The Contractor shall obtain all addresses for new services from the City of Las Vegas, Department of Planning and Development, 731 South 4th Street, (702) 229-5408.

C. It shall be the Contractor's responsibility to coordinate all work associated with service point connections required by this contract with the NV Energy Company.

D. The Contractor shall furnish and install conduit and conductors to the service point as shown on the Drawings or as required to complete the installation.

E. No service point will be considered acceptable unless approved in writing by the NV Energy Company and the Engineer or his designee.

672.03.08 BONDING AND GROUNDING

A. Metallic cable sheaths, steel conduit, metal poles, pedestals, pull boxes, and other metal enclosures shall be metallically joined together and made mechanically and electrically secure to form a continuous electrical conducting path and shall be effectively grounded as required by the National Electrical Code.

B. All non-metallic conduits shall contain a green grounding conductor as specified herein, except if none is specified, this conductor shall be sized according to Article 250 of the National Electrical Code.

C. Bonding and grounding jumpers shall be copper wire or copper strap of the same cross-sectional area as No. 4 AWG for series and multiple lighting circuits.

1. Bonding of standards and foundations shall be accomplished by means of a bare No. 4 copper wire attached to each anchor bolt and to a 1/2 inch (13 millimeters), or larger, brass, cadmium-plated or bronze bolt installed on the lower lip of the lighting standard handhole as shown on the Standard Drawings or on the plans.
2. The No. 8 green grounding conductor from the conduit and the No. 10 luminaire ground shall be connected to the No. 4 grounding conductor.
3. Grounding of conduit and neutral at the service point shall comply with the applicable sections of Article 250 of the National Electrical Code.

672.03.09 TESTING

A. The Contractor shall be required to submit record drawings prior to any inspections being performed. Contractor and/or his representative shall be present at the project location during the maintaining agency's inspection of the streetlight installation.

B. Prior to completion of the work, the Contractor shall cause the following tests to be made on all lighting circuits, in the presence of the Engineer:

1. Test for continuity of each circuit.
2. Test for grounds in each circuit with a 500 volt megohmmeter with a minimum acceptable reading of 200 megohms.
3. A functional test in which it is demonstrated that each and every part of the system functions as specified or intended herein.
4. A high-pot test when specified.
5. Before acceptance of the work and after adjusting the luminaire lamp sockets to produce the I.E.S. light distribution patterns specified in the plans, the Contractor

shall provide the Engineer with foot-candle readings showing average to minimum ratios in accordance with I.E.S. standard recommendations.

C. Any fault in any material or in a part of the installation revealed by these tests shall be replaced or repaired by the Contractor in a manner approved by the Engineer, and the same test shall be repeated until corrected.

METHOD OF MEASUREMENT

672.04.01 MEASUREMENT

A. No direct measurement will be made for remove and replace trail light as such.

BASIS OF PAYMENT

672.04.02 PAYMENT

A. No direct payment will be made for remove and replace trail light as such, the cost thereof shall be included in the price bid for removal and construction or installation of items for which such removal and replacement of trail lights is required. Removal of trail lights will be paid for as specified in Section 202 for the remove asphalt pavement trail and improvements lump sum item. Replacement of the trail lights will be paid for as specified in Section 402 for the asphalt pavement trail and improvements lump sum item.

END OF SECTION 672

ADD THE FOLLOWING SECTION TO DIVISION II – CONSTRUCTION DETAILS

SECTION 694 – PHOTOGRAPHS AND VIDEO RECORDING

DESCRIPTION

694.01.01 GENERAL

A. This section specifies photographs and video recordings to be provided by the Contractor before and after construction.

B. The photographs and color audio-video tapes:

1. Are intended for use as indisputable evidence in ascertaining the extent of any damage which may occur as a result of the Contractor's operations
2. Are for the protection of the Contractor and the Contracting Agency
3. Will be a means of determining whether and to what extent damage resulting from the Contractor's operations occurred during the Contract work.

MATERIALS

694.02.01 PHOTOGRAPHS

A. Photographs shall be color 35 mm film and shall indicate on the front of each print the date, name of work and location where the photograph was taken.

B. One 3-1/2 inch by 5 inch glossy print of each exposure, together with the negatives, shall be delivered to the Engineer within 10 days following each set of exposures.

C. The photographer shall be qualified and equipped to photograph either interior or exterior exposures, with lenses ranging from wide angle to telephoto.

694.02.01 VIDEO TAPES

A. Videotapes shall be 1/2-inch Super VHS format magnetic tapes and shall indicate on the tape case and the box the date, name of contract and the location where the tape was recorded.

1. The tapes should contain an audio track that narrates the progression of the videotape through the site.
2. Two copies of each type shall be delivered to the Engineer within 10 working days.

B. The tab on the videotape case, which permits re-recording, shall be removed prior to submittal.

C. Contractor shall maintain a copy of site examination documentation for the duration of the work.

CONSTRUCTION

694.03.01 RECORDING

A. After the Contract is awarded and before starting the work, the Contractor shall make a thorough examination of all the existing structures, vegetation, and general condition of the work site.

B. Examination of the existing condition of the work site shall be made by the Contractor and shall be recorded using photographs and video recording as described in this section.

C. After the post-restoration video and photographs are taken, a copy will be provided to the Engineer.

D. The Engineer will ascertain the extent of any damage and will determine whether improvements, damaged or removed during construction, have been returned to specified or original condition.

694.03.02 VIDEO

A. Contractor shall provide video tape recording of all areas where the Contractor will be working for the entire project, including all staging, storing, working, parking areas and excavation areas.

B. After completion of construction and restoration, video tape recording shall be taken from the same points in the same direction as the pre-construction examination within 7 days after the acceptance of the project by the Contracting Agency

C. Final payment will not be made to the Contractor until the Contracting Agency receives copies of the video tapes which reflect the final conditions.

694.03.03 CONSTRUCTION PHOTOGRAPHY

A. Photographs shall be provided during construction to show all utility crossings, installation of bypass piping, excavation of access pits, installation of lining system in pipes, rehabilitation of manholes and items of special interest upon the request of the Engineer.

B. Provide photographs taken on cutoff date for each scheduled application for payment.

694.03.04 SUBMITTALS

A. Contractor shall submit the following information for review at the Pre-Construction Conference following notification of award of the Contract:

1. An example of his work consisting of one videotape of site examination and recording with audio commentary.
2. An example of photographs used for site examination.

B. The Contractor will be responsible for modifications to his equipment and/or inspection procedures to achieve report material of acceptable quality.

C. No work shall commence prior to approval of the material by the Engineer.

D. Once accepted, the report material shall serve as a standard for the remaining work.

METHOD OF MEASUREMENT

694.04.01 MEASUREMENT

A. No unit of measurement will be made for Photographs and Video Recording.

BASIS OF PAYMENT

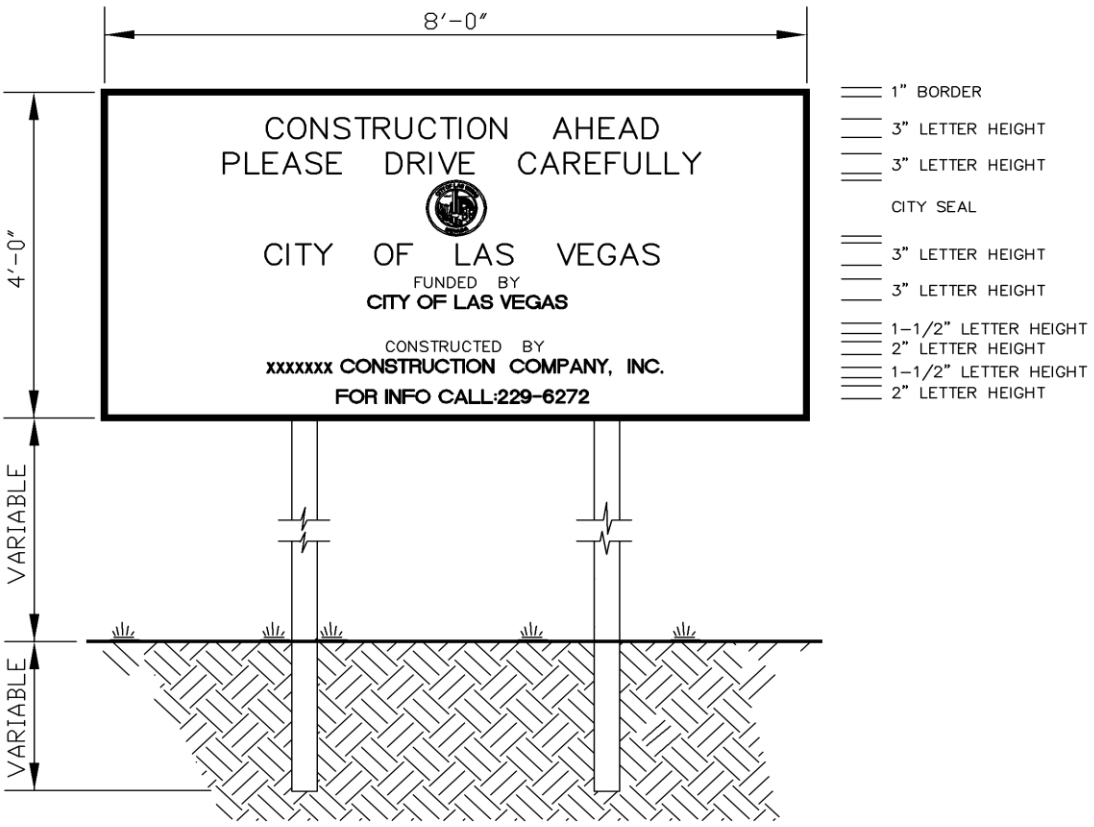
694.05.01 PAYMENT

A. Unless otherwise provided in the Special Provisions, no payment will be made for Photographs and Video Recording of site conditions as such. The cost thereof shall be considered as included in the price bid for construction or installation of the items for which such Photographs and Video Recording a required.

END OF SECTION 694

APPENDIX A – PROJECT SIGNS

Front of sign information for City of Las Vegas funded projects:

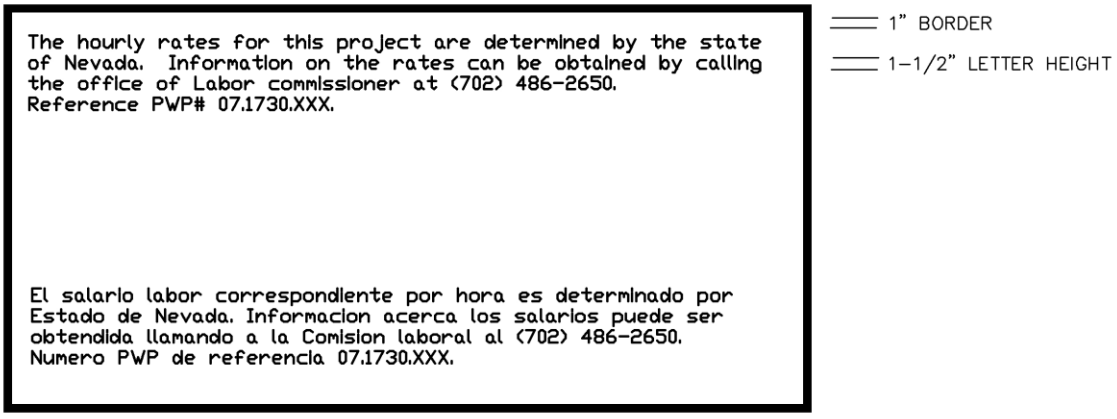


PROJECT SIGN

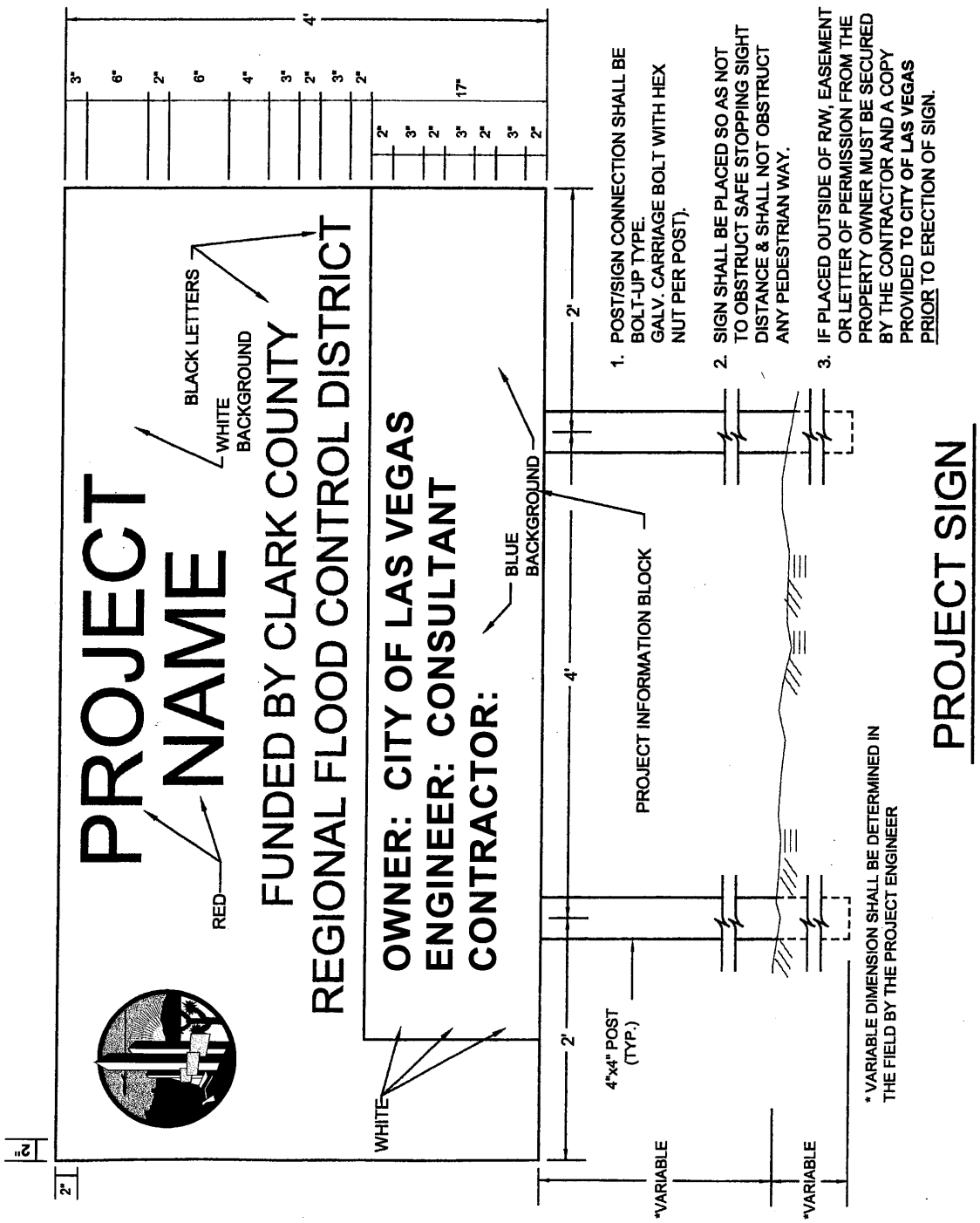
NOTES:

1. SIGN SHALL BE PAINTED WHITE WITH 1" BLACK BORDER. ALL LETTERING TO BE BLACK EXCEPT TOP ONE WHICH SHALL BE RED.
2. SIGN SHALL BE PLACED SO AS NOT TO OBSTRUCT SAFE STOPPING SIGHT DISTANCE AND SHALL NOT OBSTRUCT ANY PEDESTRIAN WAY.
3. FINAL SIGN LOCATIONS SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.

Back of sign information:



Sign information for RFCD funded projects:



Back of sign:

REVERSE SIDE OF PROJECT SIGN
(Use Minimum 3-inch High Letters)

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# _____.

ESTE ES UN PROJECTO 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 _____.

APPENDIX B – CITY OF LAS VEGAS TRENCH PLATE REQUIREMENTS

Trench plates placed on City of Las Vegas right of way with speeds of 45 m.p.h. or greater shall be placed with one of the following options.

1. The surface of the roadway around the trench will be taken down to allow the plate to lay flush with the top of the roadway. Any voids will be filled with cold mix and compacted to ensure that the roadway has a smooth drivable surface. The integrity of the plate placement is the responsibility of the contractor, who must take necessary precautions to ensure anchoring, strength and side supports are adequate to prevent collapse and/or plate movement. (PROFILE VIEW OPTION #1)

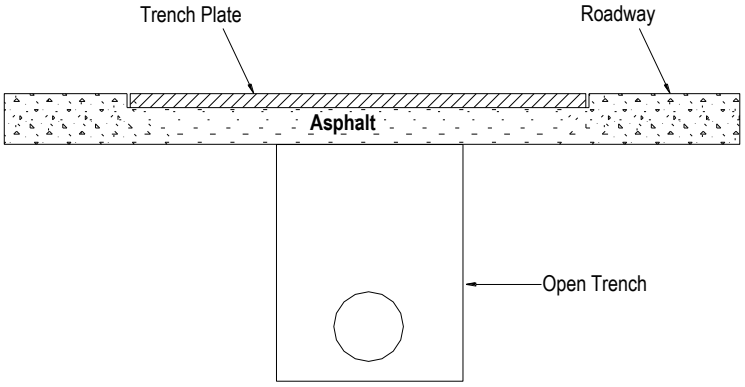
2. The trench plates will be placed over the trench with at least 18 inches of cold mix placed around the trench plate on every side to ensure a smooth transition. When checked with a 12" straight edge, vertical deviations must be less than ¾". The integrity of the plate placement is the responsibility of the contractor, who must take necessary precautions to ensure anchoring, strength and side supports are adequate to prevent collapse and/or plate movement. There will be a buffer plate added to each side of the plate covering the trench within the travel lane to create a more drivable surface. The entire lane will be addressed, no half lane plating will be allowed. Bump Ahead signage will be placed in advanced of the plates. They will be placed in accordance with the M.U.T.C.D. and/or all Municipal Codes. (PLAN VIEW OPTION #2)

Trench plates placed on City of Las Vegas right of way with speeds of 40 m.p.h. or less shall be placed with one of the following options.

The trench plates will be placed over the trench with at least 18 inches of cold mix placed around the trench plate on every side to ensure a smooth transition. When checked with a 12" straight edge, vertical deviations must be less than ¾". The integrity of the plate is the responsibility of the contractor, who must take all necessary precautions to ensure anchoring, strength and side supports are adequate to prevent collapse and/or plate movement. The entire travel lane will be addressed, no half lane plating will be allowed. Bump Ahead signage will be placed in advanced of the plates. They will be placed in accordance with the M.U.T.C.D. and/or all Municipal Codes. (PLAN VIEW OPTION #2)

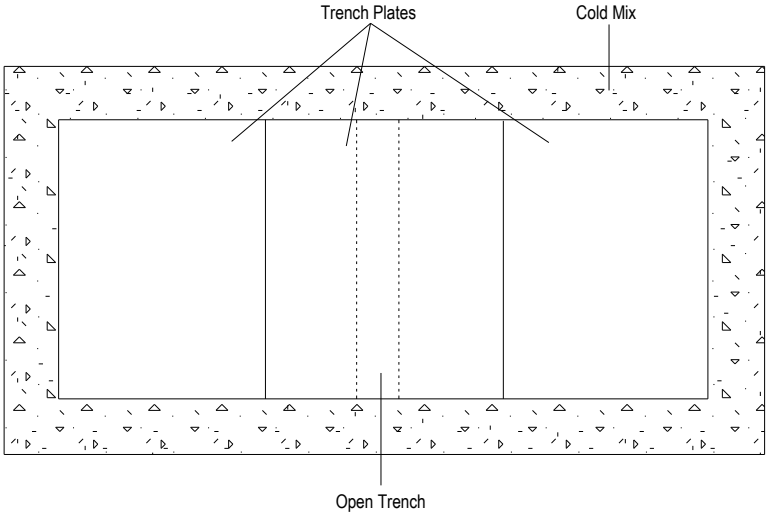
Appendix "B"

OPTION # 1



Profile View

Option #2



PLAN VIEW

APPENDIX C – NV ENERGY TRANSMISSION GOVERNMENTAL AGENCY AND UTILITY NOTIFICATION

NVEnergy
nvenergy.com

Governmental Agency and Utility Notification

G.C. Wallace
1555 S. Rainbow
Las Vegas, NV 89146
Attn: Grant Tokumi

August 19, 2011

Subject: **Angel Park Detention Basin, Project #G101200161**

NV Energy has reviewed your drawings and based on your submittal, we find that our facilities do affect the property in question, and your proposed improvements have been determined to comply with NESC clearances. A copy of the site plan and clearance exhibit(s) is attached.

Approved Items within NV Energy easement:

1) Detention basin expansion on 70% preliminary submittal.

Details pertaining to the approved items:

- Customer will have to CALL BEFORE YOU CRANE (702-402-2929) while working near the poles
- No trenching or excavating within the 10' radius and 1:1 slope around structures per NV Energy STD-D2.

NV Energy is primarily concerned with the continued safe and reliable delivery of power through our facilities within our easement. In order to insure the safety of the public, the following conditions must be met:

- Compliance with all NESC and OSHA requirements.
- Materials and equipment cannot be stockpiled under lines.
- Pole bollards are required and shall be installed by the owner if parking is within 10' of any transmission structure. (Detail provided as required)
- A 40'x40' square must be maintained on one side of tangent structures and a 40'x40' square around a dead end structure to allow access for maintenance purposes.

This is also to inform you that it is necessary to obtain prior approval from NV Energy's ROW Management for future projects and any changes or revisions to this project. Certain improvements, for safety and liability reasons, are typically not allowed within transmission corridors, including but not limited to the following items:

- Parking or storage of vehicles exceeding 8' in height
- Covered parking
- Parking lights
- Metallic fences or block walls
- Trash enclosures
- Buildings or structures and free standing signs
- Swimming pools
- Pine and palm trees
- Elevation or grade changes

If you have any questions, please call 402-5327

Sincerely,

Lisa Harvey
ROW Management

encl
Cc: Sharon McShea File

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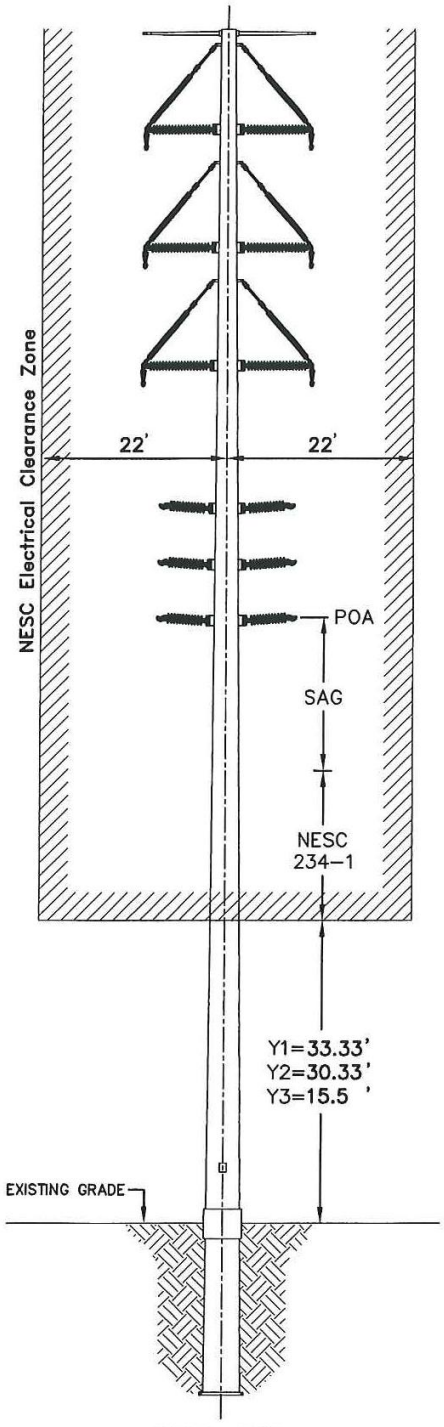


SCALE: N.T.S.

HORIZONTAL DIMENSION (138kV VEGAS–WESTSIDE)

NESC RULE 234–A2 CONDUCTOR DISPLACED FROM REST TOWARD INSTALLATION BY A 6psf WIND AT FINAL SAG AT 60°F

REQUIREMENT FOR 69kV = 22'

VERTICAL DIMENSION (0kV FIBER OPTIC)

Y1= NESC CLEARANCE OF CONDUCTORS TO TRAFFIC SIGNALS OR LIGHTING SUPPORTS

POINT OF ATTACHMENT (POA)(STR # X1183)	43.00'
SAG @ MAX. OPERATING TEMP. (115°)	– 7.67'
CLEARANCE PER NESC 234–1(RULE 234B.b)	– 2.0'
MAXIMUM ALLOWABLE HEIGHT OF TRAFFIC SIGNAL OR LIGHTING SUPPORT	33.33'

Y2= NESC CLEARANCE OF CONDUCTORS TO APPROVED STRUCTURES

POINT OF ATTACHMENT (POA)(STR # X1183)	**43.00'**
SAG @ MAX. OPERATING TEMP. (115°)	– **7.67'**
CLEARANCE PER NPC/NESC 234–1(2.b.2)	– 5.00'
MAXIMUM ALLOWABLE HEIGHT OF APPROVED STRUCTURES	30.33'

Y3= NESC CLEARANCE TO ROADS, STREETS, DRIVEWAYS, PARKING LOTS AND OTHER AREAS SUBJECT TO VEHICLE TRAFFIC

REQUIRED VERTICAL CLEARANCE OF CONDUCTORS ABOVE ROADWAY SURFACES, SEE NESC RULES 232–B1 232–C1a, 232–D4 AND TABLE 232–1

REQUIREMENT FOR 0kV = 15.5'

POINT OF ATTACHMENT (POA)(STR # X1183)	**43.00'**
SAG @ MAX. OPERATING TEMP. (115°)	– **7.67'**
PROPOSED GRADE CHANGE BY DEVELOPER (FILL)	– 0.00'
	35.33'

SINCE **35.33'** > **15.5'**, MIN REQUIREMENT IS MET.

NOTES:

1. OSHA SAFE WORKING CLEARANCES TYPICALLY EXCEED NESC CLEARANCE REQUIREMENTS. DEVELOPER IS RESPONSIBLE TO MEET ALL OSHA REQUIREMENTS.
2. HORIZONTAL CLEARANCES SHOWN MAY BE LESS THAN EXISTING EASEMENTS. PLEASE REFER TO RECORDED DOCUMENTS FOR EASEMENT DIMENSIONS.
3. ELEVATION VIEW MAY NOT REPRESENT ACTUAL POLE CONFIGURATION.

DRAWING INFO.		
DRAWN	3/20/11	MI
DESIGNED	6/20/11	MI
CHECKED	6/21/11	SA
APPROVED	6/21/11	SA
	DATE	BY
REV. 0		

TEMPLATE REV 4 05/25/09

NVEnergy™
TRANSMISSION ENGINEERING

ANGEL PARK DETENTION BASIN

MINIMUM CLEARANCE CALCULATION

EXHIBIT 'A–1'

PROJ. ID.G101200161	DWG. NO.: N/A	SHEET: 1 OF 1

PLOT DATE/TIME: 8/1/2011 1:36 PM PLOTTED BY: IGLESIAS, MARIA

G:\CONFLICT\2010 PROJECTS\G101200161 ANGEL PARK DETENTION BASIN\EXHIBIT A-1_X1183_06-25-09.DWG

APPENDIX D – BLM RIGHT-OF-WAY FREE USE PERMIT

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Southern Nevada District Office
Las Vegas Field Office
4701 N. Torrey Pines Drive
Las Vegas, Nevada 89130
http://www.blm.gov/nv/st/en.html

In Reply Refer To:
N-91141
3600 (NVS0053)

JUL 16 2012

City of Las Vegas/Real Estate
c/o Rebecca Rury
333 N. Rancho Drive, 8th floor
Las Vegas, NV 89106

Dear Ms. Rury:

Enclosed is a copy of the executed Free Use Permit for 50,000 cubic yards of mineral material from the Angel Park Detention Basin Expansion Project. This permit authorizes the placement of this material in the Lone Mountain Community Pit. The permit has been issued for two years and will expire on July 13, 2014. You must report the total production from the site on the anniversary date of the permit, or when you have completed the project, whichever comes first.

In addition, please note the following special conditions of the Free Use Permit:

1. BLM recognizes that your contractor will be removing the material for the City at this site. However, the free use permit is issued to City of Las Vegas. BLM will not deal directly with your contractor. If we have any issues at the site, we will contact the City for compliance. If your contractor contacts the BLM, we will refer them back to the City.

2. You must provide your contractor with a copy of the signed permit and the stipulations. It is the City's responsibility to monitor your contractor to ensure compliance with the stipulations. If BLM finds any compliance issues, we will report them to the City for resolution.

3. It is the City's obligation to make sure that all the material removed from the site is placed within the Lone Mountain Community Pit. If BLM determines that material was taken to any other site, it may result in the City being issued a mineral material trespass. If the City wants to use the material on another public works project, you must notify the BLM at least 30 days in advance of when you want to use the material. You may only take material to another site with the express written permission of the BLM.

4. It is the City's responsibility to ensure that your contractor removes the material in accordance with any grading plan proposed for the Angel Park Detention Basin.

5. It is the City's responsibility to ensure that your contractor uses the assigned haul roads and places the material within the designated portion of the Lone Mountain Community Pit in a neat and consolidated stockpile (see attached map). If changes need to be made to the entrance, exit or haul route, you must submit a request to make those changes to the BLM 15 days prior to construction. Vehicles may only exit via the north gate, labeled exit on the attached map.

6. The stockpiled material must not exceed the existing topography of the pit walls in the designated stockpile area.

7. The assigned haul roads are gated. The City's contractor and the City may place their own looks on the gate. The BLM lock must remain in place at all times. The gates must be locked at the end of each workday to prevent unauthorized entrance into the site.

8. Air quality permits must be maintained for the duration of the project. A water truck must be on site during any activity taking place in the Lone Mountain Community Pit. The assigned haul roads must be watered to suppress dust. It is the City's responsibility to ensure that all federal, state and local air quality regulations are complied with.

9. You must notify the BLM in writing if there is a change of operator at the site within 15 days.

Please inform this office when the project is complete so we may conduct a final inspection of the site and close the case file. If you have any questions, please contact Evan Allen at 702-515-5283.

Sincerely,

Shonna Dooman
Assistant Field Manager
Non-Renewable Resources

Enclosure: Copies of signed Free Use permit with Stipulations
Map illustrating assigned access roads and designated stockpile area

Form 5510-1
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FREE USE APPLICATION AND PERMIT
VEGETATIVE OR MINERAL MATERIAL

FORM APPROVED
OMB NO. 1004-0001
Expires: March 31, 2010

Permit Number
N-91141

Expiration Date
7-13-2014 EA

District
Southern Nevada District - LV Field Office

APPLICATION

Name of applicant
City of Las Vegas (Contact: Rebecca Rury 702.229.6262)

Address *(include zip code)* City of Las Vegas/Real Estate
333 N. Rancho Drive, 8th Floor
Las Vegas, NV 89106

Kind of material 25,000 cy unprocessed mineral material and 25,000 cy of caliche (estimated)

Estimated quantity 50,000 cy

Give legal land description

	TOWNSHIP	RANGE	SECTION	SUBDIVISION
From:	T. 20 S.	R. 60 E.,	029	E1/2 (Angel Park Detention Basin Expansion Project)
To.	T. 20 S.	R. 59 E.,	001	N1/2NE1/4 (Lone Mountain Pit)

State of Nevada

County of Clark

Materials are to be used for transferring mineral material from City of Las Vegas Angel Park Detention Basin Expansion project to the Lone Mountain Pit.

I HEREBY AGREE TO COMPLY WITH the special conditions as set forth below. I CERTIFY That the: (a) materials to be removed are to be used for the purpose noted above; (b) none of the materials removed are to be sold or bartered; (c) removal of materials can begin only upon receipt of an approved copy of this permit; and, (d) the Bureau of Land Management (BLM) must be notified upon completion of removal.

I CERTIFY That I am a citizen of the United States, and of the age of majority in the State in which I reside.

I FURTHER CERTIFY That the statements made by me in this application are true, complete, and correct to the best of my knowledge and belief and are made in good faith.

4-2-12
(Date)

Robin Yoder
(Signature of Applicant)

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction

PERMIT

SPECIAL CONDITIONS

This permit is hereby issued for the materials applied for but may be canceled if it appears that this permit was issued erroneously or the terms or conditions contained herein are not observed. It will be subject to the following special conditions:

• See Attached Stipulations

RECEIVED BLM
SOUTHERN NEVADA
DISTRICT OFFICE
2012 APR -3 AM 8:29

Conservation practices must be carried out as provided by 43 CFR 5511.1-1(b), 2-3(c), and 3-3;

Equipment, personal property, and improvements must be removed within ninety (90) days after expiration date 43 CFR 5511 3-5);

Any use of the surface of the lands involved in this permit must not interfere with any mining claim subject to the provisions of Section 4 of the Act of July 23, 1955 (30 U.S.C. 613);

The permittee must clean up all work areas and must remove or dispose of all refuse resulting from the permittee's operations,

This permit is issued under the Act of July 31, 1947, as amended, and 43 U.S.C. and 1201, and under the free use privilege of the Act of May 14, 1898 (Alaska only).

An annual report indicating the amount (cu. yds. or tons) of material removed must be filed with the District Office on the anniversary date of the permit, or within *thirty (30)* days *after* permit expiration (Alaska only)

7/13/12
(Date)

(Signature of BLM)

(Continued on page 2)

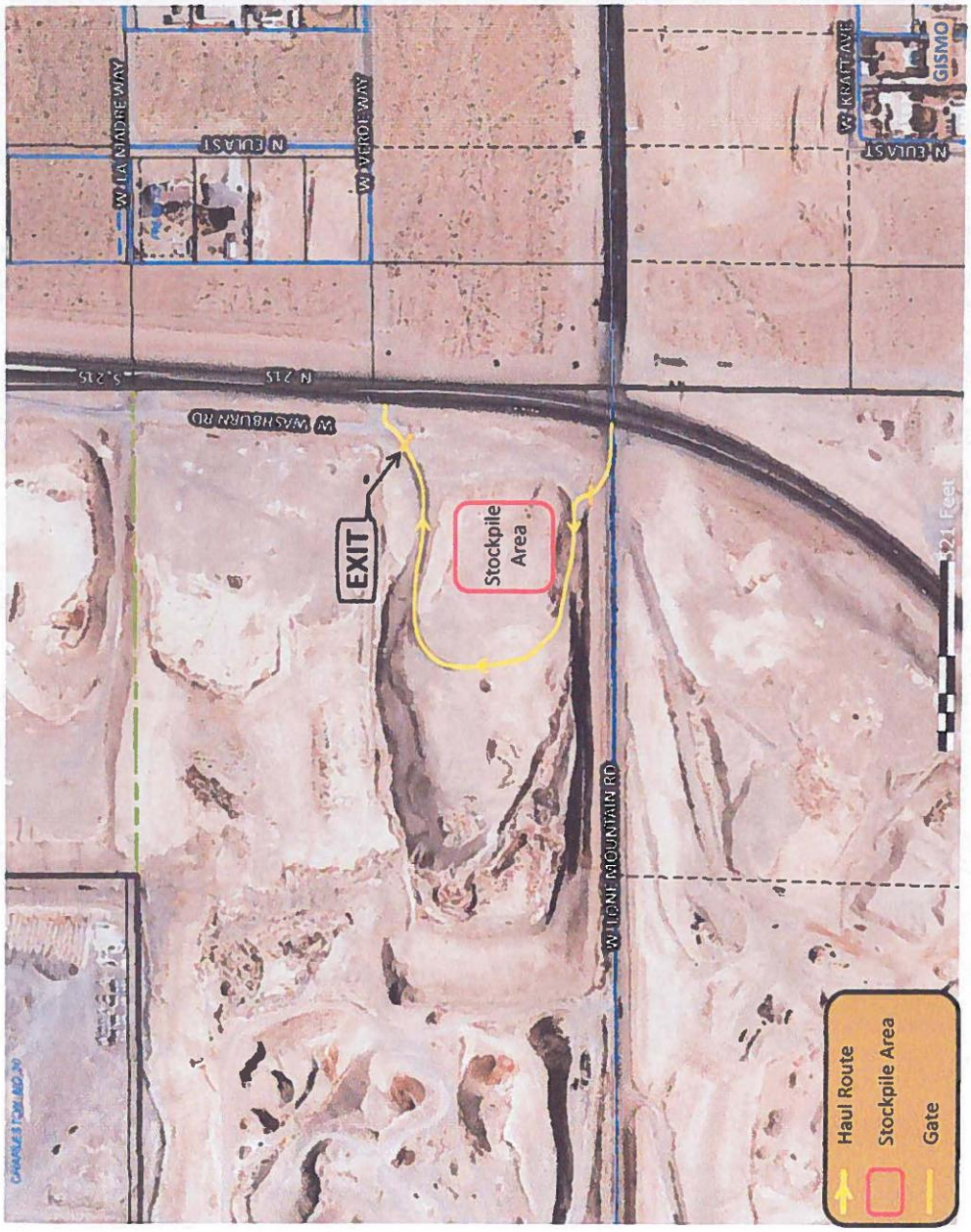
☐ APPLICANT ☐ FIELD OFFICE

NOTICES

The Privacy Act of 1974 and the regulations in 43 CFR 2.48(d) provide that you be furnished with the following information required by this application:
AUTHORITY: 30 U.S.C. 601, 602; and 43 U.S.C. 1201
PRINCIPAL PURPOSE: BLM uses the information to maintain an inventory of vegetal and mineral information and to adjudicate your rights to vegetal and mineral resources.
ROUTINE USES: BLM will disclose the information on this form pursuant to the regulations in 43 CFR 2.56.
EFFECT OF NOT PROVIDING THIS INFORMATION: If you do not furnish all the information required by this form, your application may be rejected.

The Paperwork Reduction Act of 1995 requires us to inform you that:
The BLM collects this information to evaluate the amount and condition of vegetal and mineral materials on public lands and will be used to maintain depletion records.
Response to this request is required to obtain a benefit.
The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 2 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0001), Bureau Information Collection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.


W LA MADRE WAY
W VEROL WAY
N EULA ST
W KRAFT AVE
GISMO
N 215
S 215
W WASHBURN RD
EXIT
Stockpile Area
W LONE MOUNTAIN RD
321 Feet
Haul Route
Stockpile Area
Gate

APPENDIX E – DAM SAFETY PERMIT

STATE OF NEVADA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF WATER RESOURCES

Filed JUN - 1 2012

J- 677

NV

APPLICANT MUST NOT FILL IN ABOVE BLANKS

APPLICATION FOR APPROVAL OF THE PLANS AND SPECIFICATIONS FOR THE CONSTRUCTION, RECONSTRUCTION OR ALTERATION OF A DAM

This Application Involves in No Way the Right to Appropriate Water
To secure the right to appropriate water, application should be made to the State Engineer on forms which will be furnished upon request.

I, Grant Y Tokumi, P.E. (Name of applicant) of G.C.Wallace Companies (Address)
1555 S. Rainbow Blvd Las Vegas, NV 89146, hereby make application for the approval of

Plans and Specifications for the Spillway Alteration (Construction, reconstruction, alteration) of Angel Park Detention Basin (Name of dam) dam.

The owner of the proposed dam is City of Las Vegas (Name of owner)

of 333 Rancho Drive, Las Vegas, NV 89107 (Address) State of Nevada

If the owner is a corporation, give name and address of president and secretary:
N/A

The applicant is acting for the owner in the legal capacity of Consulting Engineer (Agent, Lessee, Trustee, etc.)

RECEIVED
2012 JUN -1 AM 11:14
STATE ENGINEERS OFFICE

Location of Dam

1. The source of water to be stored is storm runoff which is a tributary of Gowan Watershed,
and the proposed dam to be located within the ____ ¼, ____ ¼, Sec. E1/2, Sec. 29 & NE1/4, Sec. 32
T. 20S, R. 60 E., M.D.B.&M. in Clark County, Nevada further described as
being at Latitude 36d11'12.2" N. Longitude 115d16'54.2" W. (at a point pursuant to NAC 535.210(6b).

Description and Dimensions of Dam

(If for an alteration, the data given below is for the altered dam)

2. Type of dam Earthen (Concrete arch or gravity, earth, rockfill, etc.) 3. Length of crest 277-ft added spillway ft.
4. Height stream bed to spillway crest 30.4 ft. 5. Height foundation to spillway crest 8.8 ft.
6. Freeboard 0 (Spillway crest to top) ft. 7. Thickness at top 10 ft. 8. Thickness at bottom 20 at spillwa ft.
9. Slope upstream* 3:1 10. Slope downstream* 3:1 11. Upstream facing Earthen (Concrete or rock paving, etc.)
*This information to be supplied for earth or rockfill dams.
12. Amount of material in dam N/A cu. yds. 13. Estimated Cost $404,000.00
14. Spillway data Broad Crested Concrete Spillway (Type, capacity, etc.)
15. Outlet data N/A (Type, capacity, etc.)

Revised 07/09 - dam_plans

$1,000 filing fee must accompany this application

16. Elevation of crest of dam 2620.8 above 0 datum
Approximate elevation to be given if true elevation not available

17. Area of reservoir at spillway level 55.62 acres. 18. Capacity of reservoir 1653 ac. ft.

General Information

19. State the **purpose** of the dam Flood Control
Diversion only; storage only; storage and diversion; debris storage, flood control, etc.

20. State the **use** that is to be made of water detention of storm water
municipal, domestic, irrigation, power, mining and milling, recreation, stockwatering or none

21. Engineers
Grant Y. Tokumi P.E
1555 S. Rainbow Blvd.
Las Vegas, NV 89146

Name and address of Engineers preparing plans

22. If the proposed dam is to be built under Federal supervision, state what department has jurisdiction.
N/A

23. The maps, plans and specifications accompanying this application are a part thereof.

[Signed] Grant Y. Tokumi

this 25 day of May, 20 12

APPROVAL OF APPLICATION NO. J-677, INCLUDING PLANS AND SPECIFICATIONS

This Is to Certify That Application No. J-677, including plans and specifications for the ANGEL PARK DETENTION BASIN dam has been examined and the same is hereby approved, subject to the following conditions:

SEE EXHIBIT A

RECEIVED
2012 JUN -1 AM 11:14
STATE ENGINEERS OFFICE

Witness my hand and seal this 13 day of July, 20 12

P.E.
State Engineer

FILE IN TRIPLICATE

Revised 07/09 - dam_plans

Angel Park Detention Basin Expansion

EXHIBIT "A"

1. This permit is issued for the construction and alteration of the existing Angel Park Detention Basin. The work consists of excavating the basin to provide additional storage, increasing the reservoir capacity to 1653 acre-feet. An additional spillway will be built to accommodate the recently revised Probable Maximum Flow (PMF). Several inlet channels and conduits will be improved, removed, or abandoned.

2. A Registered Engineer shall make periodic inspections during construction and installation to insure that the construction of the subject facility is built in conformance with the approved plans and specifications.

3. Upon Completion of construction of the subject facility, the Engineer shall submit to the State Engineer a signed completion report certifying that the project was constructed as per approved plans and specifications. The certification shall be accompanied by a set of record drawings (as built) plans, final specifications and a summary of the work performed.

4. A summary of the results of all concrete, grout, foundation and embankment compaction tests shall be included in the report of completion. Actions taken regarding those tests failing to meet the minimum requirements stated in the plans and specifications shall be described in the report of completion.

5. When the State Engineer has received the certification, he will notify the Permittee and/or Engineer in writing if water can be impounded.

6. Proof of Completion of Work for the dam and structures shall be filed in the office of the State Engineer on or before July 3, 2013.

7. The embankment, spillway, outlet and appurtenant works shall be inspected periodically to monitor for any deleterious conditions and debris accumulations.

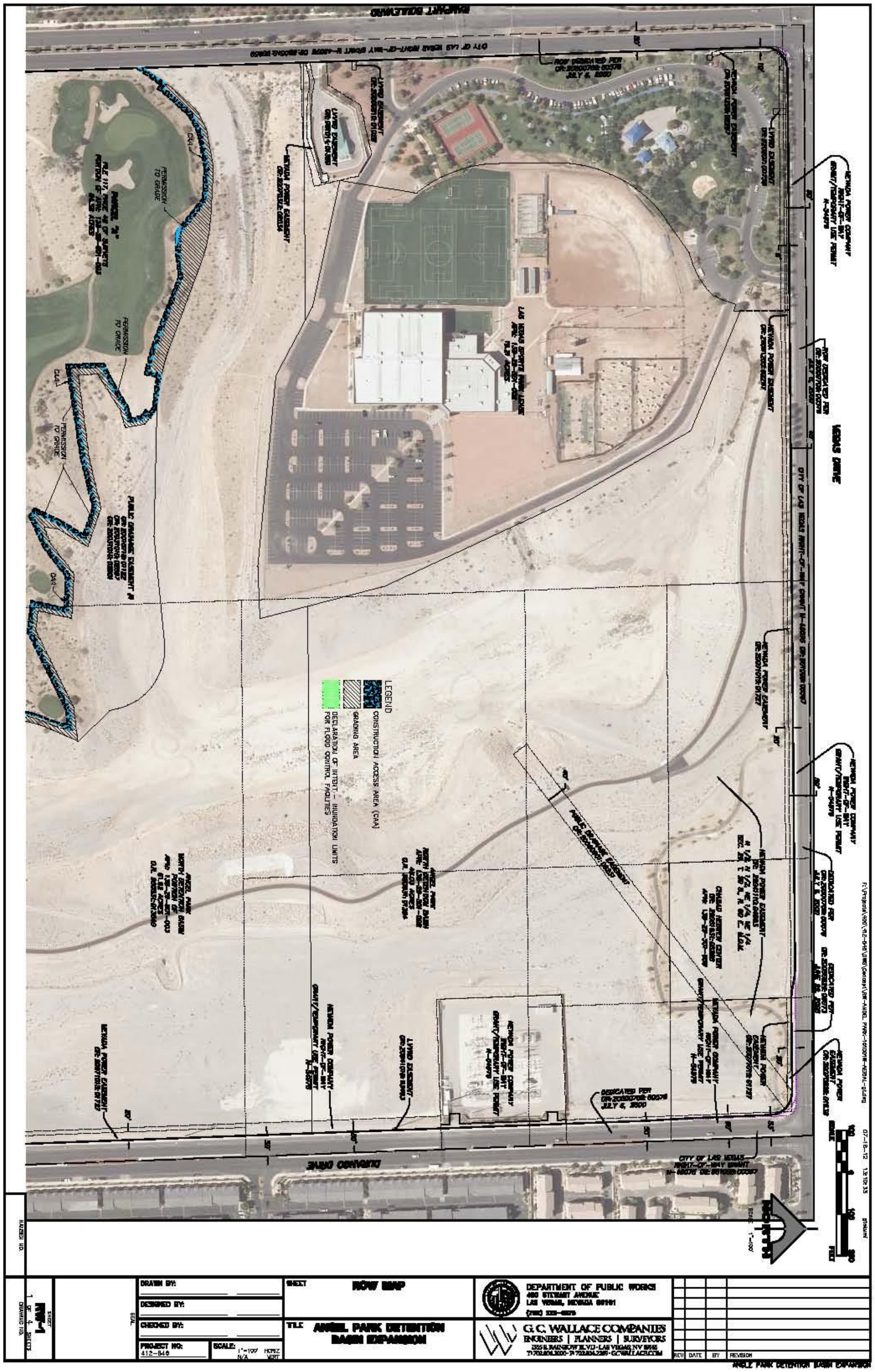
8. This approval does not waive the requirement that the permit holder obtain other required permits from any and all other Federal, State and local agencies.

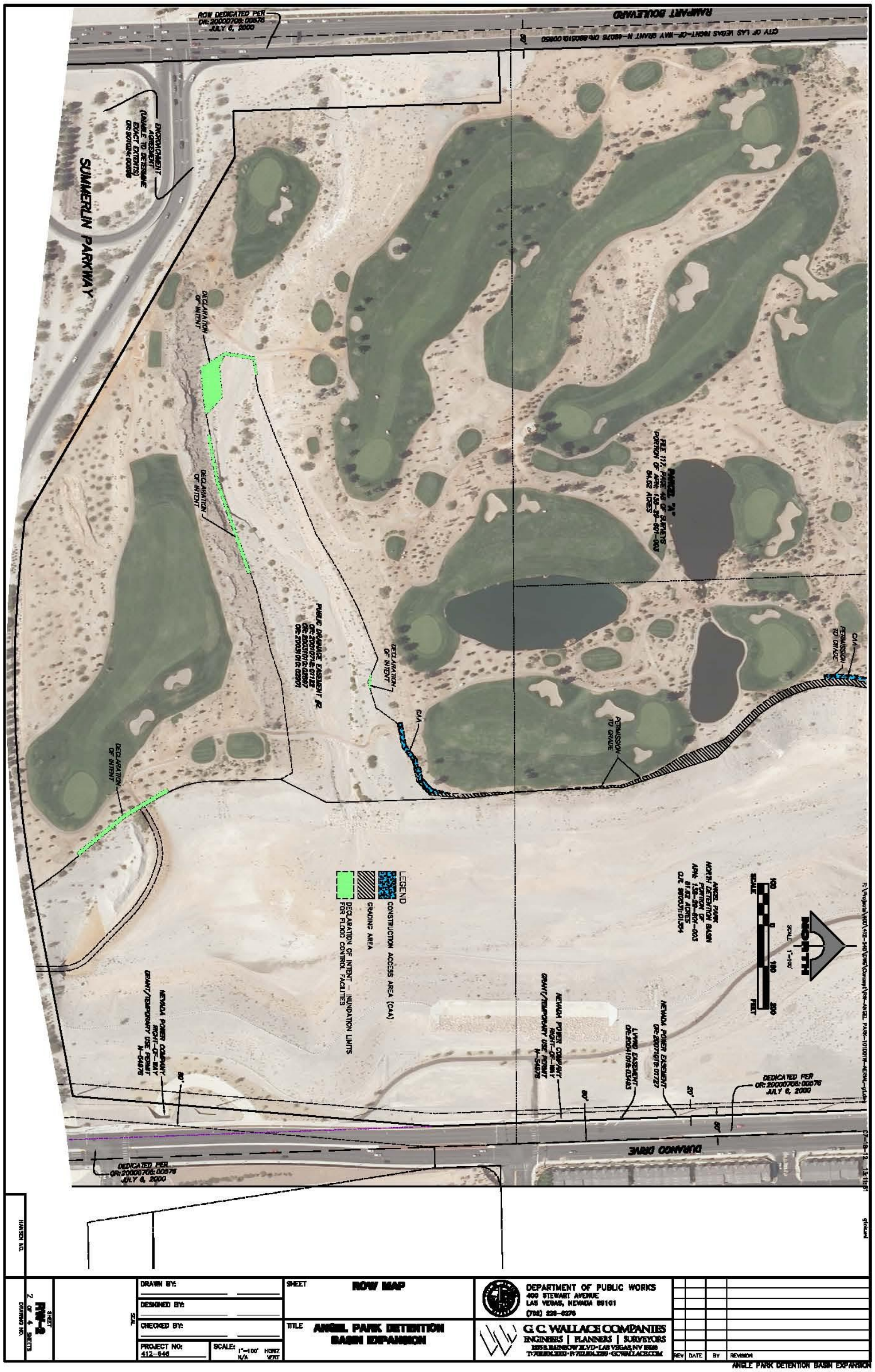
9. This review is only for the plans and specifications submitted and the construction of this subject facility does not imply or guarantee that property will be free from flooding or flood damage.

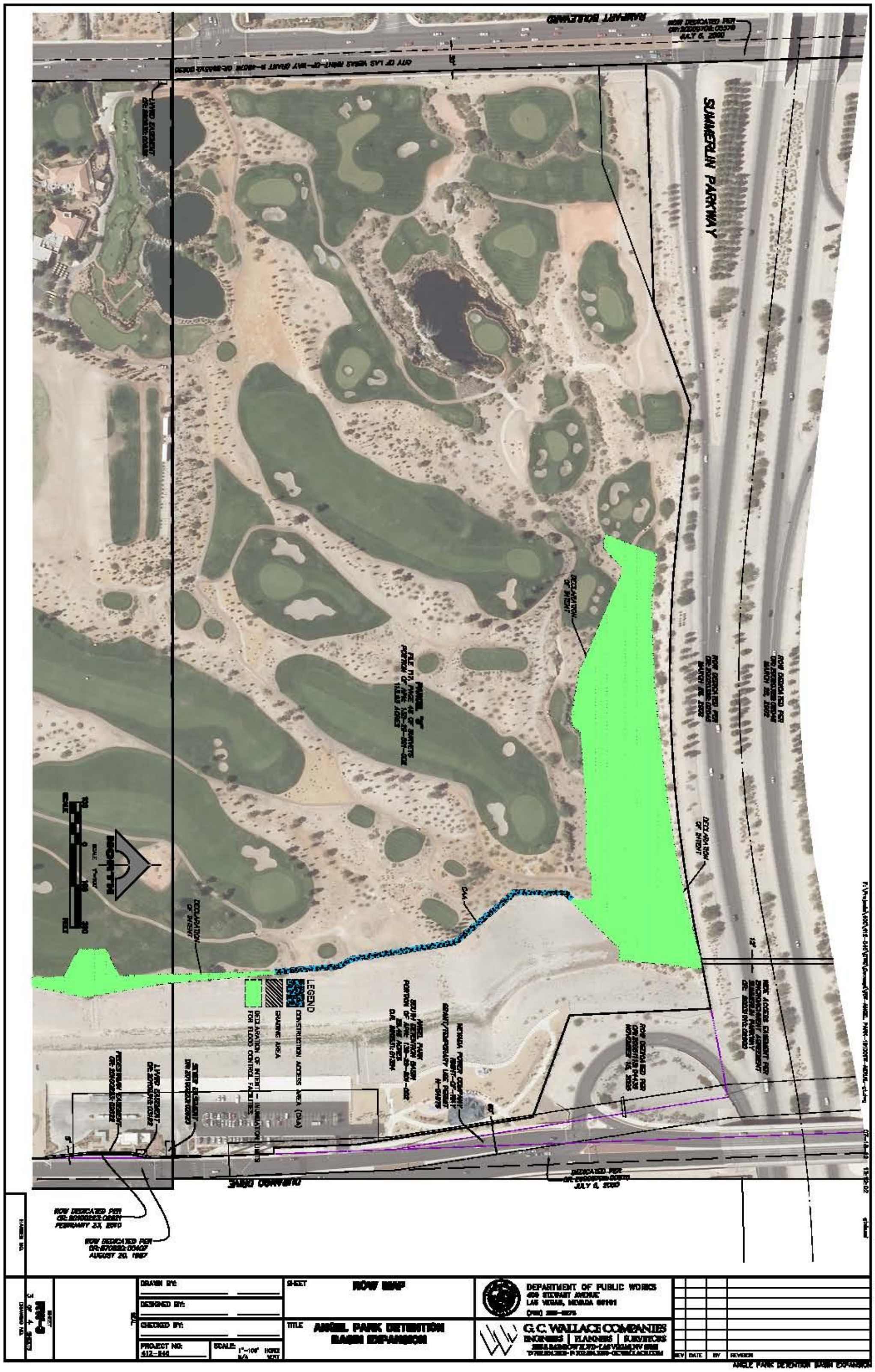
10. Any existing downstream water conveyances structures and their ability to carry any of the flows that may be released from the subject facility are not part of this review.

11. This office, its officials, or employees assume no liability for the information, data or conclusions presented in this submittal. We therefore make no warranties, either expressed or implied, in conducting this review.

APPENDIX F – ROW MAP - CONSTRUCTION ACCESS AREAS


LEGEND
CONSTRUCTION/ ACCESS AREA (CAA)
GRADING AREA
DECLARATION OF INTENT - INUNDATION LIMITS FOR FLOOD CONTROL FACILITIES
VEGAS DRIVE
DURANGO DRIVE
RAMPART BOULEVARD
NORTH
ROW MAP
ANGEL PARK DETENTION BASIN EXPANSION
DEPARTMENT OF PUBLIC WORKS
G.C. WALLACE COMPANIES
ENGINEERS | PLANNERS | SURVEYORS
DRAWN BY:
DESIGNED BY:
CHECKED BY:
PROJECT NO:
SCALE:


RAMPART BOULEVARD
SUMMERLIN PARKWAY
DURANGO DRIVE
PARCEL "A"
ANGEL PARK
NORTH DETENTION BASIN
DECLARATION OF INTENT
PERMISSION TO GRADE
CAA
PUBLIC DRAINAGE EASEMENT
NEVADA POWER EASEMENT
NEVADA POWER COMPANY RIGHT-OF-WAY GRANT/TEMPORARY USE PERMIT
DEDICATED PER
NORTH
LEGEND
CONSTRUCTION ACCESS AREA (CAA)
GRADING AREA
DECLARATION OF INTENT – INUNDATION LIMITS FOR FLOOD CONTROL FACILITIES
DRAWN BY:
DESIGNED BY:
CHECKED BY:
PROJECT NO:
SCALE:
SHEET
ROW MAP
TITLE
ANGEL PARK DETENTION BASIN EXPANSION
DEPARTMENT OF PUBLIC WORKS
LAS VEGAS, NEVADA
G.C. WALLACE COMPANIES
ENGINEERS | PLANNERS | SURVEYORS
RW-2
2 OF 4 SHEETS
ANGLE PARK DETENTION BASIN EXPANSION


SUMMERLIN PARKWAY
LEGEND
CONSTRUCTION ACCESS AREA (CAA)
GRADING AREA
DEPARTMENT OF PUBLIC WORKS
G.C. WALLACE COMPANIES
ROW MAP
ANGEL PARK DETENTION BASIN EXPANSION

ROW MAP
ANGEL PARK DETENTION BASIN EXPANSION
DEPARTMENT OF PUBLIC WORKS
G.C. WALLACE COMPANIES
ENGINEERS | PLANNERS | SURVEYORS
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CHECKED BY:
PROJECT NO:
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SCALE:
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DATE
BY
REVISION