

GENERAL PROVISIONS
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GENERAL PROVISIONS

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For the most recent version of the General Provisions, please contact the City of Tucson Department of Procurement at (520) 791-4217.

SECTION 101

0101.0100 ABBREVIATIONS

Wherever the following abbreviations are used in these Specifications, on the project plans or on the Standard Details, they are to be construed the same as the respective expressions represented:

AAA	Aluminum Alloy Association
AAMA	Architectural Aluminum Manufacturer's Association
AAN	American Association of Nurserymen
AAR	Association of American Railroads
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
ADEQ	Arizona Department of Environmental Quality
ADOT	Arizona Department of Transportation
ADWR	Arizona Department of Water Resources
AEC	Arizona Electric Code
AGA	American Gas Association
AGC	Associated General Contractors of America
AIA	American Institute of Architects
AIEE	American Institute of Electrical Engineers
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
ALS	American Lumber Standards
AMCA	Air Movement and Control Association
ANSI	American National Standards Institute, Inc.
APA	American Plywood Association
APHA	American Public Health Association
ARA	American Railway Association
AREA	American Railway Engineering Association
ARS	Arizona Revised Statutes
ARTBA	American Road and Transportation Builders Association
ASA	American Standards Association
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigeration and Air Conditioning Engineers
ASHVE	American Society of Heating and Ventilating Engineers
ASLA	American Society of Landscape Architects

ASLD	Arizona State Land Department
ASME	American Society of Mechanical Engineers
ASRE	American Society of Refrigerating Engineers
ASSE	American Society of Sanitary Engineering
ASTM	American Society for Testing and Materials
AWG	American Wire Gauge
AWI	Architectural Woodwork Institute
AWPA	American Wood Preservers' Association
AWPI	American Wood Preservers' Institute
AWS	American Welding Society
AWWA	American Water Works Association
AZI	American Zinc Institute
CISPI	Cast Iron Soil Pipe Institute
COE	U.S. Army Corps of Engineers
COTPC	City Of Tucson Procurement Code
CPI	Clay Pipe Institute
CRA	California Redwood Association
CRSI	Concrete Reinforcing Steel Institute
CS	Commercial Standards
DIPRA	Ductile Iron Pipe Research Association
EIA	Electronic Industries Association
EPA	Environmental Protection Agency
FCC	Federal Communications Commission
FED SPEC	Federal Specifications (See FSS)
FGJA	Flat Glass Jobber's Association
FHWA	Federal Highway Administration
FM	Factory Mutual
FSS	Federal Specifications and Standards, General Services Administration
IAL	Independent Approved Laboratory
IAPMO	International Association of Plumbing and Mechanical Officials
IEEE	Institute of Electrical and Electronic Engineers
IES	Illuminating Engineering Society
IMSA	International Municipal Signal Association
IPCEA	Insulated Power Cable Engineer's Association
IRI	Industrial Risk Insurers
ISA	Instrument Society of America
ITE	Institute of Transportation Engineers
MUTCD	Manual on Uniform Traffic Control Devices
NAAMM	National Association of Architectural Metal Manufacturers

NACE	National Association of Corrosion Engineers
NBFU	National Board of Fire Underwriters
NBS	National Bureau of Standards
NCMA	National Concrete Masonry Association
NCPI	National Clay Pipe Institute
NCPRC	National Clay Pipe Research Corporation
NESC	National Electrical Safety Code
NEMA	National Electrical Manufacturer's Association
NFPA	National Fire Protection Association
NLMA	National Lumber Manufacturer's Association
NSF	National Sanitation Foundation
OSHA	Occupational Safety and Health Administration
PCA	Portland Cement Association
PLP	Plastic Laminate Producers
PPI	Plastic Pipe Institute
PS	Product Standard, Product Standard Section U.S. Department of Commerce
PUESR	Pacific Utilities Electrical Service Requirements
RMA	Radio Manufacturer's Association
SAE	Society of Automotive Engineers
SSPC	Steel Structures Painting Council
TCA	Tile Council of America
UBC	Uniform Building Code
UFC	Uniform Fire Code
UL	Underwriters' Laboratories, Inc.
UNI-BELL	UNI-BELL PVC Pipe Association
UPC	Uniform Plumbing Code
USC	University of Southern California
USS	United States Standard
WCLA	West Coast Lumberman's Association
WCLIB	West Coast Lumber Inspection Bureau
WIA	Woodwork Institute of Arizona
WWPA	Western Wood Products Association
USCFCCCHR	University of Southern California Foundation for Cross Connection Control and Hydraulic Research

0101.0200 TERMS

Whenever in these specifications or in other contract documents the following terms or pronouns in place of them are used, the intent and meaning shall be interpreted as follows:

Advertisement for Bids - The public announcement, as required by law, inviting bids for work to be performed or materials to be furnished.

Agency - The City of Tucson.

As-Built Drawing (See Record Drawings)

Architect - The individual or firm who has accomplished the architectural services for the project, including individuals representing the architect. (See General Conditions Article 1 - Definitions)

Award - The acceptance by the City of Tucson Director of Procurement of a bid to do work and/or furnish materials.

Backfill - Material placed in an excavated space to fill such space.

Bedding - Material placed in the area of an excavated trench from the bottom to one foot above the top of the pipe or conduit.

Bid - The offer of a bidder, on the prescribed form, to perform the work and to furnish the labor and materials at the prices quoted.

Bid Bond - The security furnished with a bid to guarantee that the bidder shall enter into the contract if the bid is accepted. (See General Conditions Article 1 - Definitions)

Bidder - An individual, partnership, firm, corporation, or any acceptable combination thereof, or joint venture submitting a bid.

Bid Document - The document which describes the construction and its location, the quantities and kinds of work to be performed or materials to be furnished, a schedule of items for which unit bid prices are invited, and any special provisions or requirements which vary from or are not included in the Standard Specifications.

Bid Form - The approved form on which the Agency requires bids to be prepared and submitted for the work, commonly called the bidding schedule.

Bidding Schedule - The prepared schedule, included as a part of the bid document, containing the estimated quantities of the pay items for which unit bid prices are invited.

Blue Stake - The centralized contact point for scheduling the field location of utility lines within the limits of a project.

Bond Issue Project - A project financed from bonds issued by the City pledging credit or a revenue resource.

Bridge - A structure, including supports, erected over a depression or an obstruction, such as a highway, railway or water having a track or passageway for carrying traffic or other moving loads as well as an opening, measured along the center of the roadway, of more than 20 feet between undercopings of abutments or extreme ends of openings for multiple boxes.

Budget Project - A project financed by funds from General Tax levies and shared revenue funds set aside in the annual budget adopted by the City Council.

Building Code - A regulation adopted by a governing body establishing minimum standards of construction for the protection of the public health, safety, and welfare.

Calendar Day - Any day shown on the calendar, beginning at midnight, extending for a 24 hour period, and ending at midnight.

Change Authorization - A written order, issued by the engineer or duly authorized representative, to the contractor, to make changes in the work or to perform additional work or delete work, and establishing the conditions for adjustment in payment and/or adjustment in the time of completion.

Change Order - (See General Conditions Article 1 - Definitions)

Channel - A natural or artificial watercourse.

City - (See General Conditions Article 1 - Definitions)

Complete-in-Place - Complete-in-place means that the payment shall be full compensation for all materials and work necessary to complete that portion of the contract in its entirety to the satisfaction of the Engineer, in accordance with the requirements of the plans and specifications. When the basis of payment states the work shall be paid for complete-in-place it shall be the contractor's responsibility to determine the elements necessary to complete the work. When the basis of payment includes a list of elements associated with the complete-in-place work, the list shall not be construed to limit the work to the listed elements.

Construction - The process of building, altering, repairing, improving, or demolishing any public structure, or building improvement, or real property. Construction, for the purpose of this definition, does not include the operation, repair, or maintenance of a routine nature of existing structures, buildings, or real property.

Contract Agreement - The written agreement between the City of Tucson Procurement Director or Agency and the contractor setting forth the obligations of the parties thereunder, including, but not limited to, the performance of the work, the furnishing of labor and materials and the basis of payment.

Contract Amendment - A written supplement to any of the contract documents issued after advertisement of, but prior to the opening of, bids for a contract.

Contract Amount - The total amount to be paid the contractor for completion of the work specified in the Contract Documents within the contract time and to the satisfaction of the Engineer.

Contract Documents - The Contract Documents include the advertisement for bids, bid document, construction services agreement and contract bond, certificate of insurance, MWBE requirements, standard specifications, special specifications, project plans, standard details, IFB amendments and any supplemental agreements that are required to complete the construction of the work in an acceptable manner, including authorized extensions thereof, all of which constitute one instrument.

Contract Time - The number of working days or consecutive calendar days allowed for completion of the contract, including authorized time extensions.

The time in which the contract is to be completed shall be computed by excluding the first and including the last day; and, should the last day be a Sunday or a legal holiday, that day shall also be excluded.

In the case where a calendar date for completion is shown in the bid documents in lieu of the number of working or consecutive calendar days, the contract shall be completed by that date.

Contractor - The individual, partnership, firm, corporation, sole proprietorship, joint stock company, or joint venture, or any acceptable combination thereof, entering into a contract with the contracting Agency for performance of the prescribed work.

Council - The City Council which, by law, constitutes the legislative body of the entity.

County - Pima County, organized under, and existing by virtue of the laws of the State of Arizona.

Culvert - Any structure not classified as a bridge which provides an opening under the roadway.

Easement - A right to use or control the property of another for designated purposes or an interest in land owned by another that entitles its holder to specific limited uses.

Engineer - The Engineer, appointed by the Agency, acting directly or through the Engineer's duly authorized representative, who is responsible for engineering supervision of the construction.

Equipment - All machinery and equipment, together with the necessary supplies for upkeep and maintenance, and also tools and apparatus necessary for the proper construction and acceptable completion of the work.

Extra Work - An item of work not provided for in the contract as awarded but found essential to the satisfactory completion of the contract within its intended scope.

Final Acceptance - The calendar date when all items of work are 100% complete and all known defective work is corrected and the date upon which the warranty period commences and liability for liquidated damages ceases.

Force Account - Work paid for on a time and materials basis pursuant to Subsection 0109.0500.

Grade Stakes - Any stake used to establish a plan elevation on the ground.

Highway, Street or Road - A general term denoting a public way for purposes of vehicular travel, including the entire area within the right-of-way.

Holiday - The legal holidays recognized by the City of Tucson.

Independent Approved Laboratory - A testing laboratory which has been approved by the Engineer to perform testing and which has been determined by the Engineer to be free from any conflict of interest.

Inspector - The Engineer's authorized representative assigned to make detailed inspections of contract performance.

Invitation for Bid - All documents whether attached or incorporated by reference, which are used for soliciting bids in accordance with the procedures prescribed in Section 28-17 of the Procurement Code.

Invitation for Bid Amendment - A written supplement to any of the Contract Documents issued after advertisement of, but prior to the opening of, bids for a contract.

Item (Pay Item) - A detail of work for which separate payment is made under the contract.

Laboratory - The testing laboratory of the Agency or any other testing laboratory which is certified or approved by the Agency.

License - Formal permission from a regulatory body or constituted authority to do work associated with the project.

Lump Sum - The term "lump sum" when used as an item of payment shall mean complete payment for the work described in the bid.

Materials - Any substances specified for use in the construction of the project and its appurtenances.

Median - The portion of the highway, street, or road which separates the traveled roadway from traffic flowing in opposite directions.

Minor Informality - Mistakes, excluding judgmental errors, that have a negligible effect on price, quantity, quality, delivery, or other contractual terms and the waiver or correction of such mistakes which do not prejudice other bidders.

Neat Lines - The lines defining the sides of an excavation to be paid for. Material removed beyond the neat line is over excavation.

Notice of Award - Written notice to the contractor stating that the bid submitted to the contracting Agency together with all requested documents have been accepted.

Notice of Intent to Award - Written notice to the contractor stating the Agency's intention to enter into a contract for a particular project upon submittal and execution of all required documents by the contractor.

Notice to Proceed - Written notice to the contractor stating that the contractor is to commence work on the project and specifying the date on which the contract time begins and ends.

Or Equal - The equality of material, equipment and/or method offered by the contractor, supplier, or manufacturer in lieu of the material and/or equipment specified in the contract documents. The Procurement Director, acting through and with advice from the Engineer, shall be the sole judge as to whether a product is equal for the purpose of a particular project.

Pavement Structure - The combination of subbase, base course, and surface course placed on a subgrade to support the traffic load and distribute it to the roadbed. Subgrade, subbase, base course, and surface course are defined as follows:

Subgrade: The prepared and compacted soil immediately below the pavement structure and extending to such depth as will affect the structural design.

Subgrade Treatment: Modification of roadbed material by stabilization.

Subbase: One or more layers of specified or selected materials, of designed thickness, placed on the subgrade to support a base course.

Base Course: One or more layers of specified materials, of designed thickness, placed on a subbase course or a subgrade to support a surface course.

Surface Course: One or more layers of pavement structure designed to accommodate the traffic load, the top layer of which resists skidding, traffic abrasion and the disintegrating effects of climate. The top layer is sometimes called a "wearing course."

Payment Bond - The security provided by the contractor solely for the protection of claimants supplying labor and materials to the contractor or to subcontractors of the contractor.

Performance Bond - The security provided by the contractor solely for the protection of the contracting Agency and conditioned upon the faithful performance of the contract in accordance with the plans, specifications and conditions thereof.

Permit - The license to progress construction in public rights-of-way or easements as issued by the regulatory authority holding title to the right-of-way or easement; or on private property for which permission has been obtained from the owner of record of the property.

Pima County/City of Tucson Standard Specifications and Standard Details for Public Improvements - Specifications and details governing materials and quality of improvements or repairs constructed within public drainage easements or roadway rights-of-ways.

Plans - The official project plans, standard details and working drawings, or reproductions thereof, approved by the Engineer, which show the location, character, dimensions, and details of the work to be performed. All such documents are to be considered as a part of the plans whether or not they are reproduced in the bid document.

Standard Details: Drawings approved for repetitive use, showing details to be used where appropriate.

Project Plans: Specific details and dimensions peculiar to the work which are supplemented by the standard details insofar as they may apply.

Working Drawings: Supplemental design sheets, shop drawings, or similar data which the contractor is required to submit to the Engineer such as stress sheets, erection plans, falsework plans, framework plans, cofferdam plans, bending diagrams for reinforcing steel, computations or any other supplementary data required of the contractor.

Prebid Conference - A scheduled meeting of prospective bidders and representatives of the Agency to review the Contract Documents.

Preconstruction Conference - A scheduled meeting of the contractor and Engineer held prior to the commencement of work pursuant to Subsection 0107.0300.

Procurement Code - Regulations, adopted by the City of Tucson, which govern the acquisition of goods and services by the City.

Procurement Director - Director of the City of Tucson Department of Procurement and Administrator of the Procurement Code.

Professional Engineer - The term Professional Engineer or Registered Professional Engineer means a person who has been granted registration in one or more of the branches of engineering by the Arizona State Board of Technical Registration for Architects, Assayers, Engineers, Geologists, Landscape Architects and Land Surveyors, and is authorized to practice professionally in the State of Arizona. If a branch of engineering is included in the title, such as Professional Civil Engineer, registration in that branch shall be required.

Profile Grade - The trace of a vertical plane corresponding to the top surface of the proposed wearing surface or finished pipeline invert, usually along the longitudinal center line of the roadbed or pipeline. Profile grade means either elevation or gradient of such trace according to the context.

Project - The specific coordinated construction or similar undertaking identified by a single project number and bid and awarded as one contract. On occasion two or more projects may be bid and awarded as a single project.

Project Plans - Specific details and dimensions peculiar to the work which are supplemented by the Standard Details insofar as they may apply.

Reasonably Close Conformity - Reasonably close conformity means compliance with reasonable and customary manufacturing and construction tolerances where working tolerances are not specified. Where working tolerances are specified, reasonably close conformity means compliance with such working tolerances. Without detracting from the complete and absolute discretion of the Engineer to insist upon such tolerances as establishing reasonably close conformity, the Engineer may accept variations beyond such tolerances as reasonably close conformity where they will not materially affect the value or utility of the work and the interests of the Agency.

Reclaimed Water Works (Reclaimed Water System) - The storage facilities, pipelines, pumping equipment, mains, service pipes and all related appliances and appurtenances utilized in the transportation, storage, and delivery of reclaimed water.

Record Drawings - Record photo-mylar three (3) mls. thickness drawings prepared by contractor or engineer and kept current with the progress of the work which clearly show the work constructed and any variations from the plans.

Registered Land Surveyor - A person who has been granted registration in Land Surveying by the Arizona State Board of Technical Registration for Architects, Assayers, Engineers, Geologists, Landscape Architects and Land Surveyors, and who is authorized to practice professionally in the State of Arizona.

Regulatory Authority - The Agency having jurisdiction over the area of construction.

Right-of-Way - A general term, denoting land, property or interest therein, usually in a strip, acquired for or devoted to transportation or other public works purposes.

Roadbed - The graded portion of a highway within top and side slopes, prepared as a foundation for the pavement structure and shoulders.

Roadside - A general term denoting the area adjoining the outer edge of the roadway. Extensive areas between the roadways of a divided highway may also be considered roadside.

Roadside Development - Those items necessary to the complete highway which provide for the preservation of landscape materials and features; the rehabilitation and protection against erosion of all areas disturbed by construction through seeding, sodding, mulching, and the placing of other ground covers; such suitable planting and other improvements as may increase the effectiveness and enhance the appearance of the highway.

Roadway - That portion of a highway, street, or road right-of-way required for construction, limited by the outside edges of slopes, including ditches, channels and all structures pertaining to the work.

Sewage - Water borne wastes.

Sewer - Any conduit and related appurtenances employed to collect and carry off water and waste matter to a suitable point of final discharge.

Shoulder - The portion of the roadway contiguous with the traveled way for accommodation of stopped vehicles, for emergency use and for lateral support of base and surface courses.

Sidewalk - That portion of the roadway primarily constructed for the use of pedestrians.

Special Specifications - Additions and revisions to the Standard Specifications covering conditions and requirements peculiar to an individual project.

Specified Completion Date - The date on which the contract work is specified to be completed.

Standard Details - Drawings approved for repetitive use, showing details to be used where appropriate.

Standard Specifications - A book of specifications approved for general application and repetitive use.

Storm Drain - Any conduit and appurtenances intended for the reception and conveyance of storm water.

Structures - Bridges, culverts, catch basins, drop inlets, retaining walls, manholes, endwalls, buildings, sewers, service pipes, under drains, foundation drains, and other features which may be encountered in the work and not otherwise classed herein.

Subcontractor - An individual, partnership, firm, corporation, or joint venture or any acceptable combination thereof, to which the contractor sublets a part of the Contract.

Substantial Completion - Written notice to the contractor stating that the Agency acknowledges the readiness of the project or portions thereof for beneficial occupancy or use. (See General Conditions Article 1 - Definitions)

Substructure - All of that part of the structure below the bearings of simple and continuous spans, skewbacks for arches, or tops of footings of rigid frames, together with the backwalls, wingwalls, and wing protection railings.

Superintendent - The contractor's authorized representative in responsible charge of the work.

Superintendent of Streets - The individual duly appointed by the City Council or Board of Supervisors, as provided by A.R.S. §§ 48-501, 48-571 and 48-901.

Supplemental Agreement - A written agreement made and entered into by and between the Agency and the contractor covering work not otherwise provided for; revisions in or amendments to the terms of the contract; or conditions specifically prescribed in the specifications as requiring a supplemental agreement. Such contract agreement shall become a part of the contract when approved and properly executed. The Supplemental Agreement shall establish the conditions for adjustment in payment and/or adjustment in the time of completion.

Supplemental Specifications - Additions and revisions that are adopted subsequent to issuance of Tucson Water's Standard Specifications & Details, latest revision.

Supplier - One who fabricates, or processes an item off the project site, and who may or may not deliver this to the project. For purposes of this definition, a supplier shall not include one who establishes a fabricating process or facility expressly for use of the project, whether on or off the project site; or one who performs work on the project site that is incorporated into the project.

Surety - The corporate body bound with and for the contractor, for the full and complete performance of the Contract and for payment of all debts pertaining to the work.

Township, Town or District - A subdivision of the county used to designate or identify the location of the proposed work.

Traveled Way - The portion of the roadway for the movement of vehicles, exclusive of shoulders and auxiliary lanes.

Utility - Pipelines, conduits, ducts, transmission lines, overhead or underground wires, railroads, storm drains, sanitary sewers, irrigation facilities, street lighting, traffic signals, fire alarm systems, and appurtenances of public utilities and those of private industry, businesses, or individuals solely for their own use or use of their customers which are operated or maintained in, on, under, over or across public right-of-way or public or private easement.

Warranty - A guarantee by the contractor to repair or replace defective work pursuant to Subsection 0106.1100.

Wastewater Works (Sewerage System) - The collection system, treatment facilities, ponds and effluent pipe or channels, and all related incidental and appurtenant facilities and equipment for the collection, purification, and disposal of sanitary sewage.

Water Works (Water System) - The reservoirs, pipelines, wells, pumping equipment, treatment plant, mains, service pipes, and all related appliances and appurtenances utilized in the procurement, transportation and delivery of potable water supply.

Work - Work shall mean the furnishing of all labor, materials, equipment and other incidentals necessary or convenient to the successful completion of the project and the carrying out of all the duties and obligations imposed by the Contract. (See General Conditions Article 1 - Definitions)

Working Day - A calendar day, exclusive of Saturdays, Sundays and Agency recognized holidays on which weather and other conditions, not under the control of the contractor, permit construction operations to proceed for the major part of the day with the normal working force engaged in performing the controlling item or items of work in progress at that time.

Working Drawings - Supplemental design sheets, shop drawings, or similar data which the contractor is required to submit to the Engineer such as stress sheets, pipe layout schedules, erection plans, falsework plans, framework plans, cofferdam plans, bending diagrams for reinforcing steel, computations or any other supplementary data required of the contractor.

0101.0201 Repetition of Expressions. In order to avoid cumbersome and needless repetition of such phrases as "to the Engineer" and "by the Engineer" throughout the specifications, it shall be understood that when an order, instruction, decision, exercise of judgement or other similar action is indicated, such order, instruction, decision, exercise of judgement or other similar action will be issued, given, made by or reserved to the Engineer.

0101.0202 Interpretation of terms. When not inconsistent with the context, words used in the present tense include the future, words in the singular number include the plural; and words in the plural number include the singular.

0101.0203 Titles; Headings. The titles or headings of sections and subsections are intended for convenience of reference and shall not be considered as having any bearing on their interpretation.

0101.0204 Referenced Documents. On all work authorized by the Agency, any referenced documents in the specifications, (i.e.; Bulletins, Standards, Rules, Methods of Analysis or Test, Codes and Specifications of other Agencies, Engineering Societies or Industrial Associations) refer to the latest edition thereof, including amendments, which are in effect and published at the time of Advertisement for Bids or the issuing of a permit for the work. In the event of a conflict or overlapping regulations, the most restrictive shall apply.

SECTION 0102

BIDDING REQUIREMENTS AND CONDITIONS

0102.0100 DETERMINATION OF RESPONSIBILITY

Bidders may be required, after bid opening or with their bid, as instructed in the submission check list, to submit additional information to the City to determine bidder responsibility pursuant to ARS 34-221; and Tucson Procurement Code Sec. 28-15 (10) and Sec. 28-27.

0102.0200 INTERPRETATION OF QUANTITIES IN BIDDING SCHEDULE

The quantities appearing in the bidding schedule, except as provided elsewhere, are approximate only and are prepared for the comparison of bids. Payment to the contractor shall be made only for the actual quantities of work performed and accepted or materials furnished in accordance with the requirements of the contract. The scheduled quantities of work to be done and materials to be furnished may each be increased, decreased or omitted as

SECTION 0103

SCOPE OF WORK

0103.0100 INTENT OF CONTRACT

The intent of the contract is to provide for the construction and completion, in every detail, of the work described. The Contractor shall furnish experienced supervision and labor, and all materials, equipment, tools, transportation and supplies required to complete the work in accordance with the plans, specifications and terms of the contract.

0103.0200 ALTERATIONS OF CONTRACT

103.0201 By the Agency

The Agency, with advice from and the consent of the Procurement Director, reserves the right to make, at any time during the progress of the work, alterations to the contract as a result of changes in the details of construction, increases or decreases in quantities of items of work, subsurface or latent physical conditions discovered during construction or due to unplanned work which was not originally contemplated. Such alterations shall not invalidate the contract nor release the surety, and the Contractor shall perform the work as altered the same as if it had been a part of the original contract.

The contract price shall be equitably adjusted, if warranted, to account for any alteration in accordance with the terms of this Subsection, and the contract time shall be equitably adjusted in accordance with the terms of this contract's General Conditions. The scope of any alteration and the terms of the equitable adjustment, if any, affecting contract price or contract time, shall be agreed to by the Agency and the Contractor and evidenced in a supplemental agreement executed by both parties. In order to avoid delay to the project, the Agency may issue a change authorization directing the Contractor to proceed with the alteration before a final agreement on the equitable adjustment to the contract prices or time is reached.

Payment for alterations or modifications to the contract shall be in accordance with Subsection 0108.0300.

Any adjustment in compensation or contract time because of a change or changes resulting from the conditions described in the foregoing paragraph shall be made in accordance with the requirements of this Subsection 0103.0200.

0103.0202 Due to Work not Conforming to the Requirements of the Contract

If, instead of requiring corrections or removal of work not conforming to the requirements of the contract, the work is determined to be acceptable in accordance with the requirements of Subsection 0104.0300, a supplemental agreement shall be issued incorporating the necessary revisions in the contract, including an appropriate reduction in the contract price. Such a supplemental agreement shall not require the signature or approval of the Contractor. Such acceptance of defective work shall not constitute a waiver of any other work required under the contract.

0103.0203 Due to Failure to Prosecute the Work

If the Contractor fails to prosecute the work in accordance with the contract, including requirements of the progress schedule, the Agency may make good these deficiencies five days after giving written notice to the Contractor. The costs of these remedies shall be charged against the Contractor. A supplemental agreement may be issued to make the necessary changes in the contract and to make an appropriate reduction in the contract price. Such a supplemental agreement shall not require the signature or approval of the Contractor. This remedy shall not prejudice the Agency's use of any other remedy which the Agency may be entitled to use.

0103.0300 EXTRA WORK

The Contractor shall perform unplanned work for which there is no unit price included in the contract whenever the Engineer deems it necessary or desirable in order to complete the work as contemplated. The Contractor shall furnish a written, detailed cost analysis for the extra work, itemizing labor, equipment, materials and anticipated production rates. The Contractor shall be allowed a markup for overhead and profit for work performed in accordance with supplemental

agreements resulting from alteration of the contract. Except as provided in Subsection 0108.0500 (B) Force Account Work, the maximum allowable markup for the prime contractor shall be 15 percent for work performed by the prime contractor and 5 percent for work performed by subcontractors. In no event shall the cumulative amount paid for overhead, profit or other markups claimed for any work performed by the prime contractor or subcontractors exceed 20 percent of the cost of the work.

At the sole option of the Engineer, the equitable adjustment to the contract price may be determined in accordance with the provisions of Subsection 0108.0500 (B). Any adjustment in contract time because of such change or changes shall be made in accordance with the requirements of this contract's General Conditions. Such work shall be performed in accordance with the specifications and as directed by the Engineer.

0103.0800 COST REDUCTION INCENTIVE

The Contractor may submit to the Engineer proposals for modifying the plans, specifications or other requirements of the contract for the sole purpose of reducing the total cost of construction without impairing, in any manner, the essential functions or characteristics of the project, including but not limited to service life, economy of operations, ease of maintenance, desired appearance, or design and safety standards.

It shall not be inferred from this Subsection that the Engineer is required to consider any proposal submitted.

Cost reductions contained in the proposal resulting from changes to contingency items such as traffic control, dust palliative etc. shall not be considered.

Proposals submitted pursuant to this Subsection shall be identified as Cost Reduction Incentive Proposals. They shall be submitted in writing and, at a minimum, contain the following:

- A. A description of both the existing contract requirements for performing the work and the proposed changes.
- B. All engineering drawings and computations necessary for a thorough and expeditious evaluation.
- C. A listing of all reviews and approvals required by any outside Agency.
- D. An itemization of the existing contract requirements that must be changed if the proposal is adopted and a recommendation as to the manner in which the change should be made.
- E. A detailed estimate of the cost of performing the work under the existing contract and under the proposed changes, including the cost of developing and implementing the changes.
- F. The contract items affected by the proposed changes and any variations in quantities resulting from the changes.
- G. An objective estimate of any effects the proposal will have on collateral costs to the Agency, costs of related items and cost of maintenance and operation.
- H. A statement as to the effect that the proposal will have on the time for the completion of the project.
- I. A statement as to the time by which a supplemental agreement adopting the proposal must be executed or when the Engineer must have given oral approval.
- J. A statement as to any time extension or time related costs which shall be requested by the Contractor as a condition for implementing the proposed changes.

Proposals shall not be considered until all of the above requirements have been met. Once all of the required submittals have been received, the Agency will respond within ten working days, in writing, as to whether or not the proposal will be considered for detailed evaluation. If no such notice is issued within the time allotted, the proposal shall be deemed rejected.

The Agency shall not be liable for any delay in acting upon any proposal nor for any failure to accept any proposal pursuant to this Subsection.

The Engineer shall be the sole judge of the acceptability of a proposal and of the estimated net savings in construction costs from the adoption of all or any part of the proposal. The Engineer, with advice from and consent of the

Procurement Director, shall notify the Contractor in writing whether the Contractor's proposal has been accepted or rejected. The decision by the Engineer is final and shall not be subject to the provisions of Subsection 0104.1800.

When the Agency deems such action to be appropriate, it may require the Contractor to share equally in the cost to the Agency of investigating, evaluating and processing the proposal as a condition for the consideration of the proposal. The cost shall be shared whether the proposal is accepted or rejected. When the cost-sharing condition is imposed, the Contractor shall indicate the Contractor's acceptance in writing and the acceptance shall authorize the Agency to deduct the Contractor's share of the Agency's costs from any monies due or that may become due to the Contractor under the contract.

If the Contractor's proposal is accepted in whole or in part, the necessary contract modifications and contract price adjustments will be effected by the execution of a supplemental agreement which shall specifically state that it is executed pursuant to the provisions of this Subsection. In addition, the Contractor and redesign engineer, if other than the original design engineer, shall indemnify, defend and hold harmless the City against any and all claims and damages arising or alleged to have arisen from the redesign.

The Contractor shall continue to perform the work in accordance with the requirements of the contract until a supplemental agreement incorporating the proposal has been executed or until the Contractor has been given written approval by the Engineer that the Contractor's proposal has been accepted. If the supplemental agreement has not been executed or the Contractor has not been given oral or written approval on or before the date described under "I" or on or before such other date as the Contractor may have subsequently specified in writing, the proposal shall be deemed to be rejected.

The executed supplemental agreement shall incorporate the changes in the plans, specifications, or other requirements of the contract which are necessary to permit the proposal, or such part of it which has been accepted, to be put into effect, and shall include any conditions upon which the Agency's approval thereof is based if such approval is conditional. The executed supplemental agreement shall also adjust the time for the completion of the contract if, and only if, such an adjustment has been deemed to be warranted by the Engineer.

The executed supplemental agreement shall also establish the estimated net savings in the cost of performing the work attributable to the proposal effectuated by the supplemental agreement. In determining the net savings, the right is reserved to the Engineer to disregard the contract bid prices if, in the Engineer's judgment, such prices do not represent a fair measure of the value of the work to be performed or to be deleted. The net savings shall be established by determining the Contractor's cost of performing the work, taking into account the Contractor's cost of developing the proposal and implementing the change, and reducing this amount by any ascertainable collateral costs to the Agency. The executed supplemental agreement shall provide that the Contractor be paid 50 percent of the estimated net savings amount.

The executed supplemental agreement shall also provide for the adjustment in contract prices. Contract prices shall be adjusted by subtracting the Agency's share of the accrued net savings.

The amount specified to be paid to the Contractor in the executed supplemental agreement which effectuates a cost reduction proposal shall constitute full compensation to the Contractor for the cost reduction proposal and the performance of the work thereof pursuant to the supplemental agreement.

Upon acceptance of a cost reduction incentive proposal, any restrictions imposed by the Contractor on its use or on disclosure of the information shall become void, and the Agency thereafter shall have the right to use all or any part of the proposal without obligation or compensation of any kind to the Contractor.

SECTION 104

CONTROL OF WORK

0104.0100 AUTHORITY OF THE ENGINEER

The Engineer shall decide all questions which may arise as to the quality and acceptability of materials furnished and work performed and as to the rate of progress of the work, all questions which may arise as to the interpretation of the plans and specifications, all questions as to the acceptable fulfillment of the contract on the part of the Contractor and all questions or claims relating to compensation. The further resolution of contract claims and/or controversies

shall be addressed pursuant to Article IX, Legal And Contractual Remedies, Section 28-91 of the City of Tucson Procurement Code.

The Engineer shall have the authority to suspend the work wholly or in part due to the failure of the Contractor to correct conditions unsafe for the general public, to carry out provisions of the contract, or for failure to carry out directions. The Engineer may suspend the work for such periods as the Engineer may deem necessary due to adverse weather conditions, for conditions considered adverse for the prosecution of the work or for any other condition or reason deemed to be in the public interest.

The Engineer has the authority to reject defective material or work. The Engineer's failure during the progress of work to discover or reject materials or work not in accordance with the plans, specifications or contract documents shall not be considered an acceptance of the work or materials or a waiver of defects. Neither the failure of the Engineer to properly perform inspections, tests or approvals required by the contract documents nor the activities or duties of the Engineer in the administration of this contract shall relieve the Contractor from the contractor's responsibility for the means, methods, techniques, sequences or scheduling of the construction or the obligation to perform the work in strict accordance with the contract documents.

Failure of the Engineer to note unsafe working conditions or conditions dangerous to the general public, or to stop work on account of such conditions, shall not relieve the Contractor of sole responsibility for such conditions. In this connection, the Contractor warrants that the Contractor is fully familiar with all of the safety requirements of the current edition of the Occupational Safety and Health Act promulgated by the Federal Government and implemented by the State of Arizona, and that the Contractor shall be solely responsible for implementing and enforcing the same at all times. The Contractor shall also indemnify and defend the Engineer and the Agency from any and all claims arising out of or caused by such unsafe conditions.

0104.0200 PLANS AND WORKING DRAWINGS

The Contractor will be supplied with up to ten complete sets of approved plans and contract documents including special specifications, one set of which the Contractor shall keep available on the work at all times. The Contractor shall give 5 days advance notice to obtain authorized sets. Requests for sets in addition to the ten provided shall be made through the Engineer. The cost of reproduction for all additional sets shall be paid by the contractor.

The plans will show details of all structures, pipelines, valves and associated appurtenances. Lines, grades, and elevations, where applicable to the work, shall also be shown. The Contractor shall keep one set of the plans for the project available at the project site at all times.

The plans shall be supplemented by such working drawings as are necessary to control the work adequately. Working drawings shall be furnished by the Contractor and shall consist of such details as may be required to control the work adequately and are not included in the plans furnished by the Agency. They shall include stress sheets, shop drawings, erection plans, falsework plans, cofferdam plans, dewatering plans, bending diagrams for reinforcing steel, computations, or any other supplementary data required of the contractor.

The CONTRACTOR shall be required to field verify the location and dept of all buried utility lines and any other unknown situations/conditions along the water main alignment. Potholing field verification shall be performed prior to the submittal of shop drawings. The CONTRACTOR shall contact Arizona Blue Stake by calling 1-800-782-5348 at least 48-hours (2 working days) prior to any excavation. All pot-holing will require the approval of the permitting agency. The CONTRACTOR shall provide documentation of pot-holing to Tucson Water.

Drawings, detailed plans, diagrams, etc. shall not be prepared until the elevations, lengths, geometrics, etc. have been verified with the Engineer.

Drawings for falsework, shoring, soldier piles and other major temporary support structures shall be prepared by and bear the seal and signature of a licensed Professional Civil or Structural Engineer. Minor structures such as cattle guards, catch basins, median barriers, headwalls, and other small miscellaneous structures are exempt from this requirement.

Prior to submittal, the Contractor shall review all working drawings for conformity with the plans and specifications. Any substitution or variance from the plans and specifications shall be clearly noted. The contractor's transmittal letter shall serve as certification that the requirements of the plans and specifications have been met.

All submittal data, except as noted otherwise, shall be furnished within twenty-one (21) calendar days after the Notice of Intent to Award. The CONTRACTOR shall accept full responsibility for the accuracy and completeness of each submittal.

The Contractor shall submit working drawings allowing at least three weeks for review of each of the initial and supplementary or revised submittals. The Contractor shall allow a minimum of three months for the review of any working drawings submitted for structures involving railroads. Review periods for work involving railroads which extends beyond the three months shall be the basis for a time extension, if requested in writing by the contractor. The granting of such a time extension by the Agency shall not give rise to a claim by the Contractor for additional compensation due to delays caused by the extended review period. Working drawings and other data shall be submitted to the Engineer in a timely manner, well in advance of their need, taking into account the complexity of the work, the detailed review by the Engineer and the possibility of rejections, revisions and resubmittals.

All working drawings and other data shall be reviewed for conformance with the design intent by the Engineer. Following the Engineer's review of each submittal of working drawings, the Engineer shall indicate the action taken by the Engineer in response to the submittal by a written response to the Contractor showing action as follows:

"APPROVED FOR CONSTRUCTION," which means the Contractor may initiate construction, fabrication or manufacture, subject to the provision that the work shall be in accordance with the requirements of the contract. Final acceptance of the work shall be contingent upon such compliance.

"APPROVED FOR CONSTRUCTION AS NOTED," which means, unless otherwise noted on the drawings, the Contractor may initiate construction, fabrication or manufacture, subject to the provision that the work shall be carried out in compliance with all annotations or corrections required and in accordance with requirements of the contract. Final acceptance of work shall be contingent upon such compliance.

"NOT APPROVED FOR CONSTRUCTION, RESUBMIT," which means that deviations from the requirements of the contract exist in the submittal such that no work based on such drawings shall be constructed, fabricated or manufactured. The Contractor shall revise the drawing in compliance with the Engineer's annotations and pursuant to all requirements of the contract and shall resubmit the working drawings to the Engineer for another review.

The Engineer's review is only for general conformance with the design concept of the project and general compliance with the information provided in the contract documents. The Engineer's action shall not relieve the Contractor of the contractor's responsibility under the contract for the successful completion of the work including confirmation and correlation of dimensions of the job site, fabrication processes and techniques of construction, and coordination of the work with that of all other contractors. Any work done or materials ordered prior to the approval of such working drawings shall be at the sole risk of the contractor.

Prior to shipment of pipe, the CONTRACTOR shall submit certified test reports from the manufacturer that the Contract was manufactured and tested in accordance with the applicable AWWA standards.

All falsework drawings, shop drawings and other working drawings shall be a minimum of 8½ inches by 11 inches and a maximum of 36 inches by 24 inches in size. A blank space, on each sheet, adequate for both the contractor's and Engineer's review stamp shall be provided. All working drawings shall be made in such a manner that clear and legible copies can be made from them.

Six sets of blue prints or other acceptable type copies shall be submitted to the Engineer. Two sets shall be returned to the Contractor with revisions noted thereon. The Contractor shall resubmit the six sets as many times as is necessary, until all corrections and revisions have been made and are approved by the Engineer. After the Engineer has determined all corrections have been made, the Contractor shall submit six sets of prints and, if requested by the Engineer, one set of positive reproducibles, such as positive mylars or positive sepias, on which all details shown on the corrected drawings are printed on the front side of the reproducibles. The prints and the reproducibles shall be clear, precise and suitable for microfilm photography. The corrected prints shall be stamped "Approved" and returned to the contractor. Positive reproducibles shall not be required for falsework unless requested by the Engineer.

No changes shall be made by the Contractor to any drawing after it has been approved by the Engineer.

The cost of furnishing all working drawings shall be considered as included in the contract unit price for one or more of the contract items.

0104.0300 CONFORMITY WITH PLANS AND SPECIFICATIONS

All work performed and all materials furnished shall be in reasonably close conformity to the lines, grades, dimensions and material requirements, including tolerances shown on the plans or indicated in the specifications. The Engineer shall determine the limits of reasonably close conformity in each individual case and the Engineer's judgment shall be final and conclusive. Where specific provisions regarding quality control standards are set forth elsewhere in the contract, they shall be controlling.

In the event the Engineer finds the materials furnished, work performed, or the finished product in which the materials are used or the work performed, are not within reasonably close conformity with the plans and specifications, but that reasonably acceptable work has been produced, the Engineer shall then determine if the work shall be accepted and remain in place. If the Engineer determines that the work may be accepted and may remain in place, the Engineer shall document the basis of acceptance by contract modification which provides for an appropriate adjustment in the contract price for such work or materials based on the engineering judgment of the Engineer.

In the event the Engineer finds the materials furnished, work performed, or the finished product in which the materials are used or the work performed, are not in reasonably close conformity with the plans and specifications and have resulted in an inferior or unsatisfactory product, the work or materials shall be removed and replaced or otherwise corrected by and at the expense of the contractor.

It is the intent of the specifications that the materials and workmanship shall be uniform in character and shall conform as closely as realistically possible to the prescribed requirements.

The Engineer shall determine acceptability of materials or construction as outlined in the applicable sections of the specifications. When materials or construction are not within specification limits, an adjusted payment shall be made as delineated in this subsection, except where the variation of test results is so great that the material or construction is unacceptable.

In addition to other remedies, work and materials that do not conform to the plans and specifications may be remedied pursuant to Subsections 0103.0202 and 0103.0203.

0104.0400 COORDINATION OF PLANS, SPECIFICATIONS, AND SPECIAL SPECIFICATIONS

The special specifications, the plans, the standard specifications, and all supplementary documents are essential parts of the contract and a requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for the complete work.

In case of discrepancy or conflict, the order in which they govern shall be as follows:

- A. Invitation for Bid Amendment
- B. Special Specifications (i.e. blue pages)
- C. Project Plans
- D. General Provisions, Proposal, and Construction Agreement (i.e. white pages)
- E. Standard Specifications of Tucson Water's Standard Specifications 2011 Edition
- F. Standard Details of Tucson Water's Standard Specifications 2011 Edition

Where dimensions on the plans are given or can be computed from other given dimensions they shall govern over scaled dimensions.

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

0104.0500 COOPERATION BY CONTRACTOR

The Contractor shall give the work the constant attention necessary to facilitate the progress thereof and shall cooperate with the Engineer, the Engineer's inspectors and other contractors in every way possible.

The Contractor shall have on the work at all times, as the contractor's agent, a competent superintendent capable of reading and thoroughly understanding the plans and specifications and thoroughly experienced in the type of work being performed. The superintendent shall be present at the site of the work at all times while work is actually in progress on the contract. When work is not in progress and during periods when work is suspended, arrangements acceptable to the Engineer shall be made for any emergency work which may be required.

The superintendent shall have full authority to execute orders or directions of the Engineer without delay and to promptly supply such materials, equipment, tools, labor and incidentals as may be required. A superintendent shall be furnished irrespective of the amount of work subcontracted. In an emergency affecting the safety of life or adjoining property, the contractor, without special instruction or authorization from the Engineer, is permitted to act at the contractor's discretion to prevent such threatened loss or injury. Any compensation claimed by the Contractor arising from such emergency work shall be determined by the Engineer.

0104.0600 COOPERATION WITH UTILITY COMPANIES

The Agency shall notify all utility companies, all pipe line owners or other parties affected and endeavor to have all necessary adjustments of the public or private utility fixtures, pipe lines and other appurtenances within or adjacent to the limits of construction made as soon as practicable.

Utility facilities and appurtenances within the limits of the proposed construction which are to be relocated or adjusted shall be moved by the owners at their expense, unless otherwise provided for in the special specifications or noted on the project plans.

The contract may indicate various utility items, some of which may be relocated or adjusted by the utility owner, including the date by which the work is expected to be completed, and other utility items which shall be relocated or adjusted by the contractor.

It is understood and agreed that the Contractor has considered in the bid all of the permanent and temporary utility appurtenances in their present or relocated positions as shown on the project plans or described in the special specifications. The Contractor shall notify all utilities at least two working days in advance of beginning any work which may affect their facilities so as to allow a representative to be present.

Materials for utility inserts and sleeves on bridges shall be furnished and installed by the Contractor in accordance with the details shown on the plans or as directed by the Engineer.

The Contractor shall make every effort to cooperate fully with each utility and acknowledges and agrees that delays to its operations may necessarily occur. Extensions in the contract time for delays resulting from utility operations or schedules may be requested by the Contractor in accordance with this contract's General Conditions.

The Contractor shall be responsible for the coordination and cost of all utility relocations indicated on the plans as being the responsibility of the contractor. The Contractor shall not be liable for the cost of any utility relocation work which was not indicated on the plans when the cumulative cost of the relocation exceeds \$100.00. Such extra work shall be performed in accordance with the provisions of Subsection 0103.0300. Compensation for relocating such utilities shall be made in accordance with the requirements of Subsection 0108.0500.

0104.0700 COOPERATION BETWEEN CONTRACTORS

The Agency reserves the right at any time to contract for and perform other or additional work on or near the work covered by the contract.

When separate contracts are awarded within the limits of any one project, each contractor shall conduct its work so as not to interfere with or hinder the progress or completion of the work being performed by other contractors. Contractors working on the same project shall cooperate with each other as directed. If requested by the Engineer, each contractor shall furnish the Engineer with written evidence that the Contractor has made the necessary

arrangements with the other contractors for the successful prosecution of the work for the benefit of all parties.

Each contractor involved shall assume all liability, financial or otherwise, in connection with its contract and shall indemnify, defend, and hold harmless the Agency from any and all damages or claims that may arise because of inconvenience, delay or loss experienced by the Contractor because of the presence and operations of other contractors working within the limits of the same project.

The Contractor shall arrange its work and shall place and dispose of the materials being used so as not to interfere with the operations of the other contractors within the limits of the same project and on adjoining projects. The Contractor shall join the contractor's work with that of the others in an acceptable manner and shall perform it in proper sequence to that of the others.

0104.1000 DUTIES OF THE INSPECTOR

Inspectors employed by the Agency shall be authorized to inspect all work done and materials furnished. Such inspection may extend to all or any part of the work and to the preparation, fabrication or manufacture of the materials to be used. The inspector shall not be authorized to alter or waive the provisions of the contract. The inspector shall be authorized to issue instructions in keeping with the design intent of the plans and specifications. The inspector shall not act as foreman for the contractor; however, the inspector shall have the authority to reject defective materials or work.

0104.1100 INSPECTION OF WORK

All materials and each part or detail of the work shall be subject to inspection by the Engineer. The Engineer shall be allowed access to all parts of the work and shall be furnished with such information and assistance by the Contractor as is required to make a complete and detailed inspection.

Inspections of the contractor's work by the Engineer, inspector or other duly authorized agents or employees of the Agency are for the purpose of ensuring the technical quality of the work as well as adherence to the provisions of the contract. Such inspections are not for the purpose of insuring the safety of workers on the project which shall be the sole responsibility of the contractor. In this regard, the Contractor warrants that the Contractor is fully knowledgeable with all of the requirements of Title 29 Code of Federal Regulations Part 1926, Safety and Health Regulations for Construction (OSHA) as implemented by the State of Arizona, and that the Contractor shall be solely responsible for the implementation and enforcement of these requirements.

Items of work requiring inspection prior to being backfilled or otherwise concealed by the contractor include, but are not limited to, trench depth and location, pipe materials and installation, pipe fittings and installation, thrust restraint, fire hydrant installation, temporary plugs, taps and tie-ins, services, drain assembly, bedding, and detectable and marking tape installation.

Any work done or materials used without inspection by the Engineer may be ordered uncovered and removed or replaced at the contractor's expense. Failure to reject any defective work or materials shall not in any way prevent later rejection when such defect is discovered nor obligate the Engineer to final acceptance.

The Contractor shall schedule its operations to allow a reasonable amount of time for engineering inspection of the work during a normal work period. A normal work period shall be defined as 40 hours in a seven (7) day work period, worked on an eight (8) hour day, five (5) day basis, commencing on Monday and ending on Friday, continuing in seven (7) day increments. In most cases, inspection will be completed in eight (8) work hours or less. The Contractor shall not be entitled to additional compensation or an extension of contract time for delay resulting from such inspections.

Additional inspection costs incurred due to contractor errors shall be at the contractor's expense.

When any unit of government, political subdivision, utility or any railroad corporation is to pay a portion of the cost of the work covered by the contract, its respective representatives shall have the right to inspect the work. Such inspection shall in no sense make any unit of government, political subdivision or any railroad corporation a party to the contract and shall in no way interfere with the rights of either party to the contract.

0104.1200 REMOVAL OF UNACCEPTABLE AND UNAUTHORIZED WORK

All work which does not conform to the requirements of the contract as determined by the Engineer, inclusive of the warranty and guarantee period specified in this contract's General Conditions, shall be considered as unacceptable work unless otherwise determined to be acceptable in accordance with the requirements of Subsection 0104.0300.

Unacceptable work, whether the result of poor workmanship, use of defective materials, damage through carelessness or any other cause, found to exist prior to the final acceptance of the work shall be removed immediately and replaced in an acceptable manner.

When the removal and replacement or repair of unacceptable or unauthorized work causes damage or destruction to previously completed work, to the work of others, or to existing structures, equipment or material, the Contractor shall bear the expense of repairing or removing and replacing the facilities or improvements that were damaged or destroyed.

No work shall be done without lines and grades having been previously established. Work done contrary to the instruction of the Engineer, work done beyond the lines shown on the project plans or as given, except as herein specified, or any extra work done without authority, shall be considered as unauthorized and shall not be paid for under the provisions of the contract. Work so done may be ordered removed or replaced at the contractor's expense.

Upon failure on the part of the Contractor to comply with any order of the Engineer made under the provisions of this Subsection, the Engineer shall have authority to cause unacceptable work to be remedied or removed and replaced and unauthorized work to be removed and to deduct the costs from any monies due the contractor.

0104.1300 NON-CONFORMANCE REPORT

When a conflict, nonconformance to specifications issue, or poor contractor performance issue cannot be resolved by the Construction Inspector, Lead Inspector or Contractor Superintendent, the Lead Inspector will notify the Construction Section Engineering Manager (CM) and the City of Tucson Procurement Contract Officer. The CM will schedule a meeting with the contractor and a Non-Conformance Report (NCR) shall be issued to the contractor and the Tucson Water Planning and Engineering Division Administrator. The NCR should list the date, the problem, proposed solutions, and be signed by the Inspector, Construction Section Engineering Manager and the contractor's on site superintendent. If the incident is not resolved within 48 hours, the City of Tucson Procurement Contract Officer will be notified and the project will be stopped and not restarted until resolution is achieved. For developer projects, the developer will be notified. The Non-Conformance form shall be provided by Tucson Water personnel.

0104.1400 MAINTENANCE DURING CONSTRUCTION

Unless special maintenance bid items have been included in the contract document, the Contractor shall maintain the work during construction and until the project is accepted except as otherwise specified in the Standard Specifications, Maintenance.

0104.1500 FAILURE TO MAINTAIN THE WORK

If at any time the Contractor fails to comply with maintenance as provided for in the Standard Specifications, Maintenance, the Engineer shall notify the Contractor of such noncompliance. If the Contractor fails to remedy unsatisfactory maintenance or unsafe conditions within 24 hours after receipt of such notice, the Engineer may immediately proceed to maintain the project and the entire cost of this maintenance shall be deducted from monies due or to become due the Contractor on the contract. Maintenance work initiated by the Engineer shall not void the contractor's obligations under the warranty/guarantee provisions of Subsection 0105.1100.

0104.1700 ACCEPTANCE

- A. **Partial Acceptance (Substantial Completion)** If at any time during the prosecution of the project the Contractor substantially completes a unit or portion of the project, the Contractor may submit a written request to the Engineer to make final inspection of that unit. The Engineer shall approve or disapprove the request within five working days.

If approved, and the Engineer finds upon inspection that the unit has been satisfactorily completed in compliance with the contract, the Engineer may accept that unit as being completed and the Contractor may be relieved of further responsibility for that unit. Such partial acceptance shall in no way void or alter any of the terms of the contract.

- B. **Final Acceptance** Upon notice from the Contractor of presumptive completion of the entire project, the Engineer shall make an inspection. If all construction provided for and contemplated by the contract is found completed to the Engineer's satisfaction, that inspection shall constitute the final inspection and the Engineer shall make the final acceptance and notify the contractor, in writing, of this acceptance as of the date of the final inspection. Final acceptance does not necessarily constitute complete performance by the Contractor of all provisions of the contract. In that event the Agency' may make a specific written finding justifying delay in payment of retention monies to the Contractor beyond the 60 days stipulated in Subsection 0108.1000.

If, however, the inspection discloses any work, in whole or in part, as being unsatisfactory or not complete, the Engineer shall give the Contractor written notice of the unsatisfactory or uncompleted work and the Contractor shall immediately correct such work.

Upon completion and correction of the work, another inspection shall be made which shall constitute the final inspection provided the work has been satisfactorily completed. In such event, the Engineer shall make the final acceptance and notify the contractor, in writing, of this acceptance as of the date of final inspection.

0104.1800 CLAIMS

- A. **Notice of Claim** It is the purpose of this Subsection that claims for additional compensation and any difference between the parties arising under and by virtue of the contract be brought to the attention of the Engineer or authorized representative at the earliest possible time and at the first responsible level so as to increase the possibility for such matters to be resolved or for appropriate action to be taken promptly. This Subsection shall be construed to apply to all claims including, but not limited to, claims based on contract clauses as well as claims based on breach of contract or tort.

In the event any basis for additional compensation or time extension arising under, by virtue of, or out of the contract, is perceived by the Contractor to have occurred, the Contractor shall call such matter to the immediate attention of the Engineer for the earliest possible decision, instruction, notice or action duly taken by the Engineer.

Should the Contractor disagree with any decision, order, instruction, notice, act or omission of the Engineer, or authorized representative, the Contractor may submit a Notice of Claim to the Engineer or authorized representative. The Notice of Claim shall be submitted, in writing, within three working days after the Contractor has learned of such occurrence or event, and the notice shall indicate, insofar as possible, the basis and the nature of the claim. The Contractor shall give the Notice of Claim before the Contractor begins the work on which the Contractor bases the claim. If such notification is not given, the Contractor hereby agrees to waive any claim for additional compensation. Within a 10 day period from the submission of the Notice of Claim, the Contractor shall submit, in writing, a projection of the contractor's additional costs resulting from the alleged incident. Such costs shall include both the present and future cost resulting from the alleged incident.

If the Contractor fails to submit costs resulting from the claim to the Engineer within 60 days after all of the contractor's costs have been incurred, the Contractor hereby agrees to waive any claim for additional compensation.

At the time the Contractor gives written notice of the claim, the Contractor shall immediately begin to keep and maintain complete and specific records to the extent possible, including, but not limited to, cost records concerning the details of the claim.

The Contractor shall give the Engineer or authorized representative access to any such record and, when so requested, shall furnish the Engineer or authorized representative copies thereof.

Unless otherwise agreed to in writing, the Contractor shall continue with and carry on the project work and progress during the pendency of any claim, dispute, decision or determination by the Engineer, and any arbitration proceedings, and the Agency shall continue to make progress payments to the Contractor in accordance with the contract documents.

- B. **Submission of Claims** As promptly as possible following the submission of a notice of claim in accordance with paragraph (A) of this Subsection, but in no event later than 60 days after all of the contractor's costs have been incurred, the Contractor shall submit the claim to the Engineer or authorized representative concerning

the matter so noticed.

The claim shall set forth clearly and in detail, for each item of additional compensation or extension of time requested, the reasons for the claim, references to applicable provisions of the specifications, the nature and the specific cost ascribed to each element of the claim or for each period of time involved, the basis used in ascribing each such element of cost or for each such period of time, and all other pertinent factual data. The contractor, insofar as it is possible to do so, shall promptly furnish any clarification and additional information or data deemed necessary and requested in writing by the Engineer or authorized representative.

- C. **Decision on Claims** The Engineer shall make a written decision in relation to any claim presented by the Contractor within the following time frames:

1. For an adjustment in compensation, or other contractual dispute between the parties where the amount in controversy is \$100,000.00 or less, 60 days from the receipt of the contractor's claim;
2. For an adjustment in compensation or other contractual dispute between the parties where the amount in controversy is more than \$100,000.00, the Engineer shall make a decision within 90 days from the receipt of the contractor's claim.

Unless the Contractor and the Engineer otherwise stipulate in writing to a later time, if the Engineer does not make a decision or determination within the time frames prescribed in this Subsection, the claim shall be deemed denied and the Contractor may proceed with the remedy prescribed in Section 28-91 of the City of Tucson Procurement Code.

The decision of the Engineer or authorized representative in relation to the contractor's claim shall be final and binding unless the Contractor should request further review pursuant to Subsection 0104.1900.

0104.1900 LEGAL AND CONTRACTUAL REMEDIES

Legal and contractual remedies including protests, resolution of claims and controversies as well as processes involving hearings mediation and/or arbitration shall be in accordance with Article IX of the City of Tucson Procurement Code, which is by reference made a full part of this Subsection.

SECTION 105

CONTROL OF MATERIAL

0105.0100 SOURCE OF SUPPLY AND QUALITY REQUIREMENTS

The Contractor shall furnish all materials required to complete the work, except materials that are designated in the special specifications to be furnished by the Agency as set forth in Subsection 0105.1000.

Only materials conforming to the requirements of the specifications shall be incorporated into the work. Materials shall be new except as may be provided elsewhere in the contract documents. The materials shall be manufactured, handled and used in a workmanlike manner to insure completed work in accordance with the requirements of the plans and the specifications.

In order to expedite the inspection and testing of materials, the Contractor shall notify the Engineer of the proposed sources of materials prior to delivery. At the option of the Engineer, materials may be approved at the source of supply before delivery is started. If it is found after trial that sources of supply for previously approved materials do not produce specified products, the Contractor shall furnish materials from other sources.

0105.0200 ITEMS OF SPECIAL MANUFACTURE

Either at the time of the preconstruction conference, or in no case later than ten days after the preconstruction conference, the Contractor shall furnish the Engineer a list of all items of special manufacture or items which are, or may be, in short supply and which will be incorporated into the work. Items of special manufacture shall include, but shall

not be limited to, materials and equipment for water distribution and pumping systems, control systems or other components and materials of special manufacture.

The items of special manufacture which have been agreed upon by the Engineer and the Contractor shall be ordered by the Contractor promptly so that they will be available as required and will not delay the work.

The Contractor shall advise the Engineer regarding the dates of the orders and the dates that the items are expected to be received.

If there is any delay in the prosecution of the work because of a delay in the delivery of items of special manufacture, an extension of the contract time shall only be granted in accordance with this contract's General Conditions if the Engineer is completely satisfied that the Contractor has made every effort to obtain the items in a timely manner.

0104.0300 TESTS AND ACCEPTANCE OF MATERIALS

All materials shall be approved by the Engineer prior to incorporation in the work. Any work in which materials not previously approved are used shall be performed at the contractor's risk and may be considered as unauthorized and unacceptable and not subject to the payment provisions of the contract. Failure of the Engineer to approve any material shall not relieve contractor from its obligations under this Agreement and any liability for injury or damage.

Materials shall be sampled and tested by a qualified representative of the Agency at the location and frequency determined by the representative and at the expense of the Agency unless otherwise specified in the special specifications. Copies of all test results shall be furnished to the contractor's representative at the contractor's request.

Whenever a reference is made in the specifications to a Federal Specification, or to a specification or test designation of the American Association of State Highway and Transportation Officials, the American Society for Testing and Materials, or any other recognized national organization, it shall mean the year of adoption or latest revision of the specification or test designation in effect on the day the advertisement for bids for the work is dated.

0105.0400 CERTIFICATES

- A. **General** The Contractor shall submit to the Engineer an original and two copies of either a Certificate of Compliance or a Certificate of Analysis, as required, prior to the use of any materials for which these specifications or the special specifications require that such a certificate be furnished.
- B. **Certificate of Compliance** The Engineer may permit the use of certain materials or manufactured assemblies prior to sampling and testing if accompanied by a Certificate of Compliance stating that the materials comply, in all respects, with the requirements cited in the specifications. Such a certificate shall be furnished with each lot of material delivered to the project.

The Certificate of Compliance shall contain the following information:

1. Tucson Water Plan number to which the material is consigned.
2. Name of Contractor to whom the material is supplied.
3. Kind of material supplied.
4. Quantity of material represented, such as lot, batch, etc.
5. Means of material identification, such as label, lot number, marking.
6. Statement that the material complies in all respects with the specific requirements of the cited specifications.
7. The original signature of a person having legal authority to bind the manufacturer of the material. A reproduction is not acceptable. The signature shall be notarized.

The person signing the certificate shall be one of the following:

- An officer of a corporation.
- A partner in a business partnership or an owner.

- A general manager.
- Any person having been given the authority by one of the above. The delegation of authority shall accompany the Certificate of Compliance in writing.

Each of the first six items specified above, shall be provided by the firm or organization that is certifying the material prior to the signing as defined in item seven, and all of the first six shall be in one type style or handwriting. No certificate shall be accepted that has been altered, added to, or changed in any way after the authorized original signature of the person that has legal authority to bind the firm or organization has been affixed to the original certificate. Materials or assemblies shall not be incorporated into the project without a valid certificate of compliance or proper testing.

Materials or assemblies used on the basis of a Certificate of Compliance may be sampled and tested at any time and if found not in conformity with the requirements of the plans and the specifications will be subject to rejection whether in place or not.

The Agency reserves the right to refuse to permit the use of material on the basis of a Certificate of Compliance.

- C. **Certificate of Analysis** The Certificate of Analysis shall include all the information required in a Certificate of Compliance and, in addition, shall include the results of all tests required by the specifications, such as mill test reports for certain types of structural steel.

0105.0600 PROPRIETARY PRODUCTS, TRADE NAMES AND SUBSTITUTIONS

Plans or specifications may contain references to equipment, materials or patented processes by manufacturer, trade name, make or catalog number.

Such references shall be regarded as establishing a standard of quality, finish, appearance or performance or as indicating a selection based upon compatibility with existing equipment or materials and shall not be construed as limiting selection to a specific item or source.

Where an item or material is specified by the name of a manufacturer, distributor, supplier, or other proprietary name, it is done for the purpose of establishing a basis of quality and not for the purpose of limiting competition. The City's intent is to consider alternative products which have the desired essential characteristics. The City will consider any such product offered. Requests for approval of alternative products must be made through the prime contractor. No approvals for substitutions will be granted directly to suppliers, distributors or subcontractors.

Persons desiring to submit alternative product proposals for prior approval of the City Representative shall submit such proposals, through the prime contractor, at least ten (10) days prior to the original deadline for receiving bids. Each such request shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitute, including drawings, cuts, performance and test data, and any other information necessary for an evaluation. A statement setting forth any changes in other materials, equipment or other work that incorporation of the substitute would require shall be included. The City Representative shall consider and either approve or reject all proposals submitted.

If, by the close of the fifth (5th) day prior to the deadline for receiving bids, the City Representative has approved any alternative product proposals, the bidding document shall be modified to include the alternative products. The City Representative shall publish the modification in the same manner as the original bidding documents at least five (5) days prior to the original bidding deadline. The City Representative's decision of approval or disapproval of a proposed substitution shall be final.

The use of an alternative or substitute article of equipment, material or process which, for the purpose intended, is of equal quality, finish, appearance, or performance and which is compatible with existing equipment and materials when required, may be permitted at the discretion of the Agency after the award of the bid.

A written request for substitution shall be made by the Contractor and shall include all information necessary for proof of equality and suitability for substitution, including samples for testing, if required. The request for substitution shall meet the stipulations set forth in Subsection 0103.0800 for cost reduction incentive proposals, items (A) through (J). The Agency shall evaluate the information submitted, perform tests when necessary and make

comparisons. The Engineer shall then make the final decision as to the acceptability of the proposed substitution. The Agency shall not be liable for any delay in acting upon any request for substitution nor for any failure to accept any request pursuant to this substitution.

If acceptance of a substitution requires modifications to foundations, structures, piping, electrical or other related designs or existing facilities, these costs shall be borne by the contractor.

0105.0700 STORAGE OF MATERIALS

Materials shall be so stored as to insure the preservation of their quality and fitness for the work. Stored materials, even though approved before storage, may again be inspected prior to their use in the work. Stored materials shall be located so as to facilitate their prompt inspection. Approved portions of the right of way may be used for storage purposes and for the placing of the contractor's plant and equipment, but any additional space required for this purpose shall be provided by the Contractor at the contractor's expense. Private property shall not be used for storage purposes without written permission of the owner or lessee, all permits and approvals required by federal, state and local laws and regulations, compliance with zoning and, if requested by the Engineer, copies of such written permission and approvals shall be furnished to the Engineer. All storage sites shall be restored to their original condition by the Contractor at the contractor's expense.

0105.0800 HANDLING MATERIALS

All materials shall be handled in such a manner as to preserve their quality and fitness for the work.

0105.0900 UNACCEPTABLE MATERIALS

Materials not conforming to the requirements of the specifications, whether in place or not, shall be rejected and shall be promptly removed from the site of the work, unless otherwise directed by the Engineer. No rejected material, the defects of which have been corrected, shall be returned to the work site until such time as approval for its use has been given by the Engineer.

0105.1000 AGENCY FURNISHED MATERIAL

The Contractor shall furnish all materials required to complete the work, except those specified to be furnished by the Agency. Material furnished by the Agency shall be delivered or made available to the Contractor as specified in the special specifications. The Contractor shall receive, inventory, store, inspect, protect, distribute, and install Agency furnished material unless otherwise specified in the special specifications. The cost of handling and placing all materials after they are delivered to the Contractor shall be considered as included in the contract price for the item in connection with which they are used.

The Contractor shall be held responsible for all material delivered to the contractor. Deductions shall be made from any monies due the Contractor to make good any shortages or deficiencies, from any cause whatsoever and for any damage which may occur after such delivery, and for any late delivery charges.

0105.1100 WARRANTIES AND GUARANTEES

The Contractor shall warrant and guarantee all the work against defective workmanship and materials for a period of two years commencing on the date of final acceptance of the work under the contract; ordinary wear and tear and unusual abuse or neglect by others excepted. In the case of a latent defect, the warranty shall commence on the date the defect is discovered, except that this warranty period shall not extend beyond the period allowed by law.

Any omission on the part of the Engineer to condemn defective work or materials at the time of construction shall not be deemed an acceptance. Payment shall not be conclusive evidence of the completion of the work, either in whole or in part, or be construed as an acceptance of defective work or improper materials, or relieve the Contractor from making good such defects. The Contractor shall be required to correct defective work or materials at any time before final acceptance and within the warranty and guarantee period.

Should any defects develop within the warranty and guarantee period due to faults in workmanship or materials, the Contractor or the contractor's surety shall, within 14 calendar days of receipt of written notice from the Engineer, begin making the necessary repairs. The Contractor shall provide a schedule of completion of the repairs within five (5) days of notice of required repairs. Should the Contractor or the contractor's surety, not proceed with the

necessary repairs within the aforementioned 14 calendar days or, should the defect result in an imminent hazard to the public's health, welfare and safety, the Agency shall have full power and authority, without violating the contract, to direct the Contractor to make immediate repairs or corrections or to correct the defect with its own forces or to enter into an agreement with another contractor for correction of the defect in the work. Such work shall include the repair or replacement of other work or materials damaged or affected by making the above repairs or corrective work, all to the satisfaction of the Engineer and at no additional cost to the Agency.

All costs and charges incurred by the Agency, together with the cost of repairing the defect, shall be borne by and shall be liable to the Contractor or the contractor's surety.

Material and workmanship made good through compliance with such warranties and guarantees shall be subject to the same warranty and guarantee period from the date on which the material and/or workmanship was made good.

The Contractor shall obtain such manufacturer's or producer's warranties or guaranties on all items, materials, electrical, or mechanical equipment consistent with those provided as customary trade practice. The form in which such warranties or guaranties are delivered to the Contractor shall include the provision that they are subject to transfer to the maintaining agency as named by the Agency, and shall be accompanied by proper validation of such fact. Transfer of warranties or guaranties shall occur at the time of final acceptance of the work or equipment by the Agency.

The warranties and guarantees provided herein shall be in addition to and not in limitation of any other warranties, guarantees, or remedies required by law.

If the Contractor fails to make any repair, adjustment, or perform other work that may be made necessary by a defect, the Agency may cause the work to be properly done, in accordance with the provisions of the Contract documents, and to pursue whatever recourse it deems necessary to recover, from the contractor, any additional expense or cost it may have incurred. The performance bond shall remain in full force and effect through the warranty and guarantee period.

SECTION 106

LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC

0106.0100 LAWS TO BE OBSERVED

The Contractor shall keep fully informed of all federal and state laws, all local laws, ordinances and regulations and all orders and decrees of bodies or tribunals having any jurisdiction or authority, which in any manner affect those engaged or employed on the work or which in any way affect the conduct of the work. The Contractor shall at all times observe and comply with all laws, ordinances, regulations, orders and decrees and shall protect and indemnify the Agency, its representatives and agents against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order or decree, whether by the Contractor or by any of the contractor's subcontractors or suppliers, or by any of their employees.

0106.0200 RESTORATION OF SURFACES OPENED BY PERMIT

The right to construct or reconstruct any utility service in any public right of way or easement or to grant permits for same, at any time, is hereby expressly reserved for the proper authorities having jurisdiction over the work.

0106.0300 FEDERAL AID PARTICIPATION

When the United States government pays all or any portion of the cost of a project, the federal laws and the rules and regulations made pursuant to such laws shall be observed by the Contractor and the work shall be subject to the inspection of the appropriate federal agency.

Such inspection shall in no sense make the federal government a party to the contract and shall in no way interfere with the rights of either party to the contract.

0106.0400 ARCHAEOLOGICAL FEATURES

The attention of the Contractor is directed to Article 4, Archaeological Discoveries, A.R.S. §§ 41.841, 41.842, 41.844 and 41.846, which make it a felony, punishable by a fine and imprisonment, to investigate, explore or excavate on state land, in or on prehistoric ruins, ancient burial grounds, fossilized footprints, hieroglyphics and all other archaeological features of the State of Arizona without permits from the Arizona State Museum.

Section 6(a) of the Federal Archaeological Resources Protection Act of 1979 specifies that no person may excavate, remove, damage or otherwise alter or deface any archaeological resource located on public (Federal) lands or Indian lands unless such activity is pursuant to a permit issued under Section 4 of the Act. Violations of this Act are a felony and are punishable by fine and imprisonment.

Additionally, the Contractor shall be subject to and comply with all local ordinance, policies and directives governing archaeological and historical resources.

Although the Agency shall make every effort, prior to construction, to identify all cultural resources in a project area, previously unidentified archaeological materials could be found during the construction of the project. When archaeological, historical or paleontological features are encountered or discovered during any activity related to the construction of the project, the Contractor shall stop work immediately at that location and shall take all reasonable steps to secure the preservation of those features.

The Engineer shall immediately make arrangements for the proper treatment of those resources. The Contractor shall not resume work until the Contractor is so directed by the Engineer.

Extensions in the contract time for delays resulting from the discovery of archaeological, historical or paleontological features may be requested by the Contractor in accordance with this contract's General Conditions.

0106.0500 SANITARY, HEALTH, AND SAFETY PROVISIONS

The Contractor shall provide and maintain in a neat and sanitary condition such accommodations for the use of the contractor's employees as may be necessary to comply with the requirements and regulations of the Arizona State Department of Health Services, the Pima County Health Department or other authorities having jurisdiction.

Attention is directed to federal, state and local laws, rules and regulations concerning construction safety and health standards. The Contractor shall not require any workers to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to their health or safety. Occupational Safety and Health Standards (OSHA) shall apply at all times.

The Contractor shall hold harmless, indemnify and defend the Agency, and its employees, officers and agents, against any claims or liability arising from or based on the violation of the U.S. Occupational Safety and Health Act or any other safety provisions.

The Contractor shall provide at the site such equipment and medical facilities as are necessary to supply first-aid service to anyone who may be injured in connection with the work.

The Contractor shall promptly report in writing to the Engineer all accidents arising out of or in connection with the performance of the work, whether on or adjacent to the site, which caused death, personal injury or property damages, giving full details and the names and addresses of any witnesses. If death or serious damages are caused, the accident shall be reported *immediately* by telephone or messenger to the Engineer.

If any claim is made by anyone against the Contractor or any subcontractor on account of any accident, the Contractor shall promptly report the facts in writing to the Engineer, giving full details of the claim.

0106.0600 PUBLIC CONVENIENCE AND SAFETY

The Contractor shall at all times so conduct the work as to insure the least possible obstruction to traffic.

The safety and convenience of the general public and the residents in the vicinity of the work and the protection of persons and property shall be provided for by the Contractor in accordance with the requirements of the Standard

0106.0700 RAILROAD PROVISIONS

All work to be performed by the Contractor within or adjacent to the railroad right-of-way shall be performed at such times and in such a manner as not to interfere unnecessarily with the movement of trains or traffic upon the track of the railroad company. The Contractor shall use all care and precaution in order to avoid accidents, damage or unnecessary delay or interference with the railroad company's trains or other property.

Prior to commencing work within or adjacent to the railroad right-of-way, the Contractor shall obtain the necessary insurance coverage.

- Contractor's Public Liability and Property Damage Liability Insurance.
- Contractor's Protective Public Liability and Property Damage Liability Insurance.
- Railroad Protective Public Liability and Property Damage Liability Insurance.

Additionally, the Contractor shall execute a Contractor's Right of Entry Agreement with the appropriate railroad and provide all fees for inspections conducted by railroad personnel. The form of the Agreement as well as all applicable requirements and conditions are available from the appropriate railroad company or through the Agency. Compensation for railroad inspection fees shall be made in accordance with the requirements of this contract's General Conditions.

0106.0800 USE OF EXPLOSIVES

When the use of explosives is necessary for the prosecution of the work, the Contractor shall exercise the utmost care not to endanger life or property, including new work. The Contractor shall be responsible for all damage resulting from the use of explosives.

The Contractor shall furnish and erect special signs to warn the public of the contractor's blasting operations. Such signs shall be placed at appropriate points within the limits of the project and these signs shall be maintained so as to be clearly evident to the public during all critical periods of the blasting operations.

If the blasting to be done involves the use of electric blasting caps, the signs shall include a warning statement that all mobile radio transmitters shall be turned off.

In advance of doing any blasting work involving the use of electric blasting caps within 200 feet of any railroad track or structure, the Contractor shall notify the railroad company of the locations, date, time and approximate duration of such blasting operations.

The method of use, storing and handling of explosives and liquid inflammable materials shall conform with all state and local laws, regulations and safety codes. All storage places shall be marked clearly and in large letters: DANGEROUS EXPLOSIVES.

Where no local laws or ordinances apply, storage shall be provided satisfactory to the Engineer and, in general, not closer than 1,000 feet from any road, building, camping area or place of human occupancy.

The Contractor shall notify each property owner and public utility company having structures or facilities in proximity to the site of work of the contractor's intention to use explosives. Such notice shall be given sufficiently in advance to enable them to take such steps, as they may deem necessary, to protect their property from damage.

The Contractor shall obtain necessary permits from, and comply with the requirements of, any authority having jurisdiction over the area before any explosives are used.

The Engineer shall have the right to require the use of controlled blasting, whether specified by the plans or special specifications or not, when in the opinion of the Engineer general blasting may endanger any part of an existing structure, utility or public or private property.

0106.0900 PREVENTION OF AIR AND NOISE POLLUTION

The Contractor shall comply with all local air quality, sound control and noise level rules, regulations and ordinances which apply to any work performed pursuant to the contract.

0106.1000 PREVENTION OF LANDSCAPE DEFAACEMENT; PROTECTION OF STREAMS, LAKES AND RESERVOIRS

The Contractor shall take sufficient measures to minimize impact, inconvenience, and injury to the public by erosion, diversion of storm water, and pollutants. The Contractor shall be required to obtain all necessary permits.

The Contractor shall give special attention to the effect of the contractor's operations upon the landscape and shall take special care to maintain natural surroundings undamaged.

Construction of drainage facilities, permanent erosion control work and pollution prevention measures shall be performed at the earliest practicable time consistent with good construction practices. Temporary work and measures are not meant to be performed in lieu of permanent work specified in the contract.

Construction of drainage facilities as well as the performance of other contract work which will contribute to the control of erosion and sedimentation shall be carried out in conjunction with earthwork operations or as soon thereafter as possible.

The Contractor shall not be entitled to additional compensation or an extension of contract time for any delays to the work because of the contractor's failure to take sufficient measures to control erosion and pollution.

The cost of any erosion control and pollution prevention work which may be required of the Contractor shall be considered incidental to the cost of the contract.

0106.1100 CONTRACTOR'S RESPONSIBILITY FOR WORK

When required by the special specifications or the plans, the Contractor shall develop a stormwater management plan for submission to the Engineer outlining the procedures the Contractor proposes to use in the control and disposal of storm water that falls on or flows into the work site. The plan shall preclude measures that could cause damage to surrounding properties. The Contractor shall submit the plan within 15 calendar days after the preconstruction conference.

Until final written acceptance of the project by the Engineer, the Contractor shall have the charge and care thereof and shall take every precaution against loss, injury or damage to any part thereof by the action of the elements or from any other cause, whether arising from the execution or from the nonexecution of the work. The Contractor shall rebuild, repair, restore and make good all injuries or damages to any portion of the project occasioned by any of the above causes before final acceptance and shall bear the expense thereof except damage to the work as specified in Subsection 0106.1100.

Except as specifically provided for in the Standard Specifications, Maintenance, in case of suspension of work from any cause whatever the Contractor shall be responsible for the project and shall take such precautions as may be necessary to prevent damage to the project, provide for normal drainage and shall erect any necessary signs or other facilities at the contractor's expense. During such period of suspension of work, the Contractor shall properly and continuously maintain in an acceptable growing condition all living material in newly established plantings, seedings and soddings furnished under the contract and shall take adequate precautions to protect new tree growth and other important vegetative growth against injury.

0106.1200 DAMAGE BY STORM, FLOOD, OR EARTHQUAKE

Attention is directed to Subsection 0106.1100, "Contractor's Responsibility For The Work". In the event damage to the work is caused by a storm, flood or earthquake which constitutes an "Occurrence," as hereinafter defined, the provisions herein delineated shall be applicable and the Contractor may apply in writing to the Engineer for the Agency to pay or participate in the cost of repairing damage to the work from such cause or, in lieu thereof, and at the sole discretion of the Agency, terminate the contract and relieve the Contractor of further obligation to perform the work, subject to the following:

- A. **Occurrence** Occurrence shall include earthquakes in excess of a magnitude of 3.5 on the Richter Scale, and storms and floods for which the Governor has proclaimed a state of emergency when the damaged work is located within the territorial limits to which such proclamation is applicable or, which were, in the opinion of the Engineer, of a magnitude at the site of the work sufficient to have caused such a proclamation had they occurred in a populated area.
- B. **Application by Contractor** The contractor's written request for the Agency to pay or to participate in the cost of rebuilding, repairing, restoring or otherwise remedying the damage to the work caused by the occurrence shall be submitted to the Engineer before performing any work other than emergency work, including emergency work necessary to provide for passage of public traffic.
- C. **Protecting the Work from Damage** Nothing in this section shall be construed to relieve the Contractor of the responsibility to protect the work from damage. The Contractor shall bear the entire cost of repairing damage to the work caused by the occurrence which the Engineer determines was due to the failure of the Contractor to comply with the requirements of the plans and specifications, take reasonable and adequate measures to protect the work or exercise sound construction practices in the conduct of the work, and such repair costs shall be excluded from consideration under the provisions of this Subsection.
- D. **Repair Work** Repair of damaged work under the provisions of this Subsection shall be pursuant to a contract change authorization issued hereunder and specifying the repair work to be performed on the damaged facility. Such repair work shall consist of restoring the in-place construction to the same state of completion to which such work had advanced prior to the Occurrence. Emergency work which the Engineer determines would have been part of the repair work if it had not previously been performed, shall be considered to be part of said repair work.

The Agency reserves the right to make changes in the plans and specifications applicable to the portions of the work to be repaired, and if such changes increase the cost of repairing the damage over the Engineer's estimate of the cost of repair without the changes, the Contractor shall be paid for such increased costs in accordance with Subparagraph E and the increased cost amount shall not be considered in determining the cost of repair to be borne by the Contractor under Subparagraph F.

Nothing in this Section shall be construed to relieve the Contractor of full responsibility for the risk of injury, loss or damage to materials not yet incorporated in the work and to materials, tools and equipment used to perform the work, or to relieve the Contractor of responsibility under this contract's General Conditions. The provisions of this Section shall not be applicable to the repair of damage caused by an occurrence to any portion of the work accepted by the Agency in accordance with Subsection 0104.1700 (A) or (B).

- E. **Determination of Costs** Unless otherwise agreed between the Engineer and the contractor, the cost of the work performed pursuant to this Section shall be determined in accordance with the provisions of Subsection 0108.0400(B), "Force Account Work". The cost of emergency work, which the Engineer determines would have been part of the repair work if it had not previously been performed will be determined in the same manner as the authorized repair work. The cost of repairing damaged work which was not in compliance with the requirements of the plans and specifications shall be borne solely by the contractor, and such costs shall not be considered in determining the costs of repair under this Subsection E.
- F. **Termination of Contract** If the Agency elects to terminate the contract, the termination and the determination of the total compensation payable to the Contractor shall be governed by the provisions of this contract's General Conditions.

0106.1300 CONTRACTOR'S RESPONSIBILITY FOR UTILITY PROPERTY AND SERVICES

At points where the contractor's operations are adjacent to utilities or to other facilities and property, damage to which might result in considerable expense, loss, inconvenience, injury or death, work shall not be commenced until all arrangements necessary for the protection thereof have been made.

The Contractor shall cooperate with the owners of any underground or overhead utility lines in their removal and rearrangement operations in order that these operations may progress in a reasonable manner, that duplication of rearrangement work may be reduced to a minimum and that services rendered by these parties will not be unnecessarily interrupted.

The Contractor shall contact the owners of the various utilities prior to the start of construction and shall obtain from them any information pertaining to existing utilities that will either supplement information shown on the project plans or will correct any such information that may be incorrect. The Contractor shall furnish the Engineer with evidence that the Contractor has contacted the utility companies and shall furnish the Engineer with a copy of the information furnished the Contractor as a result of such contacts.

If the Contractor learns, from either the owner of the utility or from any other source, of the existence and location of utilities either omitted from or shown incorrectly on the project plans, the Contractor shall immediately notify the Engineer and shall not disturb the utilities. Relocation or adjustment of such utilities, if deemed necessary, shall be either performed by others or shall be performed by the Contractor in accordance with the provisions of Subsection 0104.0600.

The exact locations and depths of all utilities that are underground or the location of those on or near the surface of the ground, which are not readily visible, shall be determined. Such locations shall be marked in such a manner so that all workers or equipment operators shall be thoroughly apprised of their existence and location. It shall be the contractor's responsibility to see that every effort possible has been made to acquaint those actually involved in working near utilities not only with the type, size, location and depth, but with the consequences that might follow any disturbance. No trenching or similar operation shall be commenced until the Engineer is satisfied that every possible effort has been taken by the Contractor to protect utilities.

When the operations of the Contractor result in any damage to any utility line or appurtenance, the location of which has been brought to the contractor's attention, the Contractor shall assume full responsibility and costs for such damage and any subsequent claims.

In the event of interruption to utility services as a result of accidental breakage or as a result of lines being exposed or unsupported, the Contractor shall promptly notify the proper authority and shall cooperate with the authority in the restoration of service. When service is interrupted, repair work shall be continuous until the service is restored. No work shall be undertaken around fire hydrants until provisions for continued service have been approved by the local fire authority.

Temporary or permanent relocation or adjustment of any utility line or service connection desired by the Contractor for the convenience of the Contractor shall be the responsibility of the contractor. The Contractor shall obtain the approval of both the Engineer and the utility company and upon approval shall make all necessary arrangements with the utility company and shall bear all costs in connection with such relocation or adjustment.

Should any provision contained herein be contrary to the provisions of A.R.S. §§40.360.21 through 40.360.29, the statutory provisions shall prevail.

0106.1400 FURNISHING EASEMENTS

The Agency shall be responsible for the securing of all necessary easements as shown on the plans in advance of construction. Any exceptions shall be indicated in the contract documents.

0106.1500 CONTRACTOR AND SUBCONTRACTOR RECORDS

The Contractor shall keep one copy of all specifications, plans, amendments, modifications, working drawings, and shop drawings at the site, in good order and annotated to show all changes made during the construction process as they occurred. Upon completion of the project and prior to submittal of the final application for payment, the annotated set of plans together with any annotated working and shop drawings of significance shall be delivered to the Engineer for the Agency's record.

0106.1600 CONSTITUENT CLAIMS LANGUAGE

With regard to claims arising out of or related to this contract that are filed against the Contractor, the Contractor or Contractor's representative is required to provide notice to the City's Procurement Department and Risk Manager within 60 calendar days following the date of the receipt by the Contractor of such claim. The notice to the City must include the following information: (1) the date of the incident or occurrence that is the basis of the claim; (2) the damages identified in the claim; (3) the date of the Contractor's written response to the claim; and (4) a copy of Contractor's written response to the claim. Notification shall be deemed sufficient if given by (a) registered or certified mail, postage prepaid, return receipt requested, (b) private courier service, or (c) facsimile addressed to the respective addresses of the parties as first above written or at such other addresses as the respective parties may designate by like notice from time to time.

City Of Tucson
Procurement Department
255 W. Alameda, 6th floor
Tucson, Arizona 85701
Facsimile: 520-791-4735

City Of Tucson
Risk Management
255 W. Alameda, 5th floor
Tucson, Arizona 85701
Facsimile: 520-624-2061

The Contractor acknowledges that the City may use contract performance, including performance of the requirements of this paragraph, in the City's consideration of future contract awards; and that in connection with future contracting opportunities with the City, Contractor may be required to provide documentation demonstrating compliance with this paragraph.

SECTION 107

PROSECUTION AND PROGRESS

0107.0100 START OF WORK

Work shall not be started until the contract has been executed by both the Contractor and the Agency. The Contractor shall not begin work until the day specified in the Notice to Proceed issued by the Agency.

When the contract time is on a calendar day basis or on a working-day basis, contract time shall be charged commencing on the date specified in the Notice to Proceed. Should this date fall on a Saturday, Sunday or holiday, the next working day shall be considered the starting date for the purpose of charging contract time.

0107.0200 PRECONSTRUCTION CONFERENCE

The Contractor shall meet with the Engineer for a preconstruction conference prior to commencing work. At this time, the Contractor shall submit a progress schedule showing the order in which the Contractor proposes to carry out the work, the dates on which the Contractor and the subcontractors will start the salient features of the work, including procurement of materials, equipment, etc., the ordering of articles of special manufacture, the furnishing of drawings, plans and other data required under Subsection 0104.0200 for the review and approval of the Engineer, the inspection of structural steel fabrication, and the contemplated dates for the completion of the salient features. The project schedule shall be a Gantt Chart format, maximum sheet size not to exceed 24" X 36".

The Contractor shall furnish authorized signature forms and a list of the contractor's proposed subcontractors and major material suppliers.

Progress schedules shall have considered the time requirement for ordering articles of special manufacture to meet specific requirements of the work.

Progress schedules shall be reviewed by the Engineer and returned to the contractor, with any comments, within 10 calendar days of their receipt.

In accordance with the requirements of the Standard Specifications, Maintenance, the Contractor shall also submit a traffic control plan and designate an employee whose qualifications are satisfactory to the Engineer and who is experienced in construction traffic control to be responsible for the implementing, monitoring, and altering as necessary,

of the plan. If, in the opinion of the Engineer, the complexities of the work are such, the Engineer may require that the designated employee be someone other than the contractor's superintendent.

If the Contractor fails to provide the required submittals, the Engineer may order the conference suspended until such time as they are furnished. Work shall not begin until the conference has been concluded. Additional contract time may be allowed because of any Agency caused delays due to any suspension of the conference.

0107.0300 PROSECUTION AND PROGRESS

The Contractor shall start the work in accordance with the requirements of Subsection 0107.0200. The Contractor shall notify the Engineer at least one working day before beginning work.

Regular inspections of the work will be discontinued on any project that is inactive for two consecutive work days. The Contractor must notify the Engineer at least one working day before returning to work. Any work done or materials used without inspection by the Engineer may be ordered uncovered and removed or replaced at the contractor's expense.

Unless suspended, as herein provided, the work shall be diligently and continuously carried on to completion and the Contractor agrees to provide, at all times, an adequate force of labor and sufficient materials and equipment to insure the completion of the contract within the time allowed. The progress of the work shall be at a rate sufficient to complete the contract in an acceptable manner within the time allowed.

At a mutually convenient location and time, the Contractor shall meet weekly with the Engineer to discuss construction activities; however, some meetings may be waived if mutually agreed to, due to weather conditions, work progress, or for other reasons. At these meetings, the Contractor shall provide the Engineer with a detailed, written schedule of major construction activities and phases of work for the forthcoming two week period. This written schedule shall detail the start and anticipated completion dates of major phases of work as well as indicate the status of major ongoing activities. Minutes of the weekly meetings shall be kept by the Contractor and a copy given to the Engineer. Failure to provide an accurate, appropriate schedule may be grounds for the suspension of the work.

Schedule changes requiring an increase in the Agency's engineering personnel shall not be put into effect for five working days after the submission of schedules detailing such activities, or until the Engineer has made arrangements for additional personnel, whichever is the shorter time.

Should construction progress differ significantly from the progress schedule presented at the preconstruction conference, the Engineer may request that the Contractor submit a revised progress schedule and anticipated completion dates of the major phases of work remaining and the anticipated completion date of the work.

0107.0400 LIMITATION OF OPERATIONS

The Contractor shall conduct the work, at all times, in such a manner and in such sequence as will insure the least interference with traffic and the safety of the public and the protection of the workers. The Contractor shall have due regard to the location of detours and to the provisions for handling traffic. The Contractor shall not open up work to the prejudice or detriment of work already started. The Engineer may require the Contractor to finish a section of work which is in progress before work is started on any additional sections, if the opening of such section is essential to public convenience.

Except as required to protect work already accomplished, to provide dust control and for work of a similar nature, the Contractor shall schedule its operations to allow a reasonable amount of time for engineering inspection of the work during a normal work period. A normal work period shall be defined as 40 hours in a seven (7) day work period, worked on an eight (8) hour day, five (5) day basis, commencing on Monday and ending on Friday, continuing in seven (7) day increments.

In general, all work shall be performed during daylight hours. If the Contractor elects to perform work at night or if the Contractor is required to do so in the special specifications, the Contractor shall furnish, erect and maintain an amount of artificial lighting sufficient for the construction, flagging, inspection, etc. and for the safety of the workers and the traveling public. No night work shall be performed until the Engineer is satisfied that an adequate amount of artificial light has been furnished and placed properly.

0107.0500 CHARACTER OF WORKERS

The Contractor shall at all times employ sufficient labor and equipment for prosecuting the several classes of work to fulfill completion in the manner and within the time required by these specifications.

All workers shall have sufficient skill and experience to perform properly the work assigned to them. Workers engaged in special work or skilled work shall have sufficient experience in such work and in the operation of the equipment required to perform all work properly and satisfactorily.

Any person employed by the Contractor or by any subcontractor who, in the opinion of the Engineer, does not perform the contractor's work in a proper and skillful manner or is intemperate or disorderly shall, at the written request of the Engineer, be removed immediately by the Contractor or subcontractor employing such person and shall not be employed again in any portion of the work without the approval of the Engineer.

Should the Contractor fail to remove such person or persons as required above or fail to furnish suitable and sufficient personnel for the proper prosecution of the work, the Engineer may suspend the work by written notice until compliance.

0107.0600 METHODS AND EQUIPMENT

All equipment which is proposed to be used on the work shall be of sufficient size and in such mechanical condition as to meet the requirements of the work and to produce a satisfactory quality of work. Equipment used on any portion of the project shall be such that no damage to the improvements being constructed, adjacent property or other existing improvements will result from its use.

When the construction methods and types of equipment to be used by the Contractor in accomplishing the construction are not set forth in the contract, the Contractor may use any methods or equipment that will satisfactorily accomplish the contract work in conformity with the requirements of the contract.

When the contract specifies that the construction be performed by the use of certain methods, materials and equipment, such methods, materials and equipment shall be used unless others are authorized by the Engineer. If the Contractor desires to use a method or type of equipment other than those specified in the contract, the Contractor may request authority from the Engineer to do so. The request shall be in writing and shall include a full description of the method and equipment proposed to be used and an explanation of the reasons for desiring to make the change. If approval is given, it shall be on the condition that the Contractor shall be fully responsible for producing construction work in conformity with the contract requirements. If, after trial use of the substituted methods, materials or equipment, the Engineer determines that the work produced does not meet contract requirements, the Contractor shall discontinue the use of the substitute methods, materials or equipment and shall complete the remaining construction with the specified methods and equipment. The Contractor shall either remove the deficient work or replace it with work of specified quality or take such other corrective action as the Engineer may direct.

SECTION 108

MEASUREMENT AND PAYMENT

0108.0100 MEASUREMENT OF QUANTITIES

All work completed under the contract shall be measured by the Engineer according to United States standard measures.

A station when used as a definition or term of measurement shall be 100 linear feet.

The methods of measurement and computation to be used in determination of quantities of material furnished and of work performed under the contract shall be those determined by the Engineer.

All items measured on an area basis shall be measured, unless otherwise specified, by longitudinal and transverse measurements made along the surface area, and in such manner as to reasonably ascertain the true area of the item actually placed in accordance with contract requirements. No deductions shall be made for individual items having an area of nine square feet or less when payment is made on a square yard basis.

Structures shall be measured to neat lines shown on the project plans or as altered to fit field conditions.

Unless otherwise specified, all items which are to be measured by the linear foot shall be measured along or parallel to the longitudinal axis of that item in such manner as to reasonably ascertain the true length of the item.

In computing volumes of excavation, the average end area method or other acceptable methods shall be used. Corrections shall not be made for curvature, prismoidal corrections and similar refinements, unless specified.

The nominal diameter of wire, and the thickness of plates and sheets shall be specified and measured in gauge or decimal inches.

The wire size in welded wire fabric used for concrete reinforcement shall be identified by a "W" number directly corresponding to the cross-sectional area of the wire in hundredths of a square inch.

The term "ton" shall mean the short ton consisting of 2,000 pounds avoirdupois. All materials which are measured or proportioned by weight shall be weighed on accurate approved scales.

Where the specifications require scales for the determination of weight, the use of load cells and electronic digital readout shall be acceptable for all applications. The weighing system shall conform to, be maintained and be sealed in accordance with the requirements of the Weights and Measures Division, Department of Administration, State of Arizona.

During weighing operations, weights shall be read and recorded to the nearest 100 pounds. The gross, tare and net weights of each load shall be recorded and documented with all or part of the following information as applicable to the type of scales and recording system used:

- Project Identification (e.g. Plan Number)
- Materials Source/Plant Identification
- Date
- Load Number
- Truck Identification
- Time of Weighing
- Applicable Weights
- Weigh Person's Signature
- Type or Class of Material

Scales shall be resealed as often as required to assure accurate weights. Scales shall be resealed at least once every 365 calendar days.

Tests may be ordered by the Engineer to check the accuracy of scales.

No payment shall be made for any or all of the steps hereinbefore described.

At the direction of the Engineer, trucks used to haul materials being paid for by weight shall be weighed empty at least once daily and at such other times as the Engineer directs and each truck shall bear a plainly legible identification mark.

Materials to be measured by volume in the hauling vehicle shall be hauled in approved vehicles and measured therein at the point of delivery. Vehicles for this purpose may be of any size or type acceptable to the Engineer, provided that the body is of such shape that the actual contents may be readily and accurately determined. All vehicles shall be loaded to at least their water level capacity subject to the legal weight limitation for the vehicle.

When requested by the Contractor and approved by the Engineer in writing, materials specified to be measured by the cubic yard may be weighed and such weight shall be converted to cubic yards for payment purposes. Factors for conversion from weight measurement to volume measurement shall be determined by the Engineer and shall be agreed to by the Contractor before such method of measurement of pay quantities is used.

The term "lump sum" when used as an item of payment shall mean complete payment for the work described in the bid.

When a complete structure or structural unit (in effect, "lump sum" work) is specified as the unit of measurement, the unit shall be construed to include all necessary fittings and accessories.

When standard manufactured items are specified such as fence, wire, plates, rolled shapes, pipe conduit, etc., and these items are identified by unit weight, section dimensions, etc., such identification shall be considered to be nominal weights or dimensions. Unless more stringently controlled by tolerances in cited specifications, manufacturing tolerances established by the industries involved shall be accepted.

0108.0200 SCOPE OF PAYMENT

The Contractor shall accept the compensation provided in the contract as full payment for furnishing all labor, materials, tools, equipment, and incidentals necessary to the completed work and for performing all work contemplated and embraced under the contract; also for loss or damage arising from the nature of the work, or from the action of the elements, or from any unforeseen difficulties which may be encountered during the prosecution of the work until the acceptance by the Agency and for all risks of every description connected with the prosecution of the work; also for all expenses incurred in consequence of the suspension or discontinuance of the work as provided in the contract; and for completing the work according to the plans and specifications. Neither the payment of any estimate nor of any retained percentage shall relieve the Contractor of any obligation to make good any defective work or material.

No compensation shall be made in any case for loss of anticipated profits.

If an item of work is paid for under one bid item, this same work or material shall not also be measured or paid for under any other pay item which may appear elsewhere in the general provisions or standard specifications.

The Contractor shall pay all subcontractors and material suppliers in a timely manner. The right of the Contractor to receive payment is conditioned on the Contractor furnishing evidence that subcontractors and material suppliers have been paid. The Agency may at any time require lien waivers or releases of claims as evidence.

The Agency may at any time require the consent of surety prior to payment, and shall require consent of surety prior to release of final payment and/or retention.

0108.0300 COMPENSATION FOR ALTERATIONS OR MODIFICATIONS TO THE CONTRACT WORK, INCLUDING ALTERED QUANTITIES

Altered work and altered quantities of work shall be performed as a part of the contract and shall be paid for at the same contract prices as for other parts or quantities of the work, unless the alterations in the details of construction or increases or decreases in quantities materially change the character of the work to be performed or the cost thereof. The term "materially change," for purposes of intent under the contract, shall be construed to apply in either or both of the following circumstances:

- When the character of the work as altered differs in kind or nature from that involved or encountered in the original proposed construction.
- When the total quantity under any item of work in the contract varies from the bidding schedule quantity for that item by more than 20 percent.

If alterations in the details of construction or increases or decreases in quantities materially change the character of the work or the cost thereof, an adjustment in compensation may, at the request of either party to the contract, be made in accordance with the following:

1. Adjustments covering alterations in the character of the work shall apply only to the units of work actually altered and determined to be materially changed. Where a unit price is given in the contract, the adjustment to be made shall be an increase or a decrease in the unit bid price commensurate with the cost of the alteration.

2. Adjustments in unit prices for increased quantities of items shall be made on such basis as is necessary to cover a reasonable estimate of cost, plus an allowance for profit and applicable overhead, said allowance not to exceed 20 percent of the estimated cost. The adjusted price shall apply only to that quantity in excess of 120 percent of the bidding schedule quantity. The Agency reserves the right to require that units of work represented by increases in quantities in excess of 120 percent of the bidding schedule quantity be performed in accordance with the requirements of Subsection 0104.0300.
3. When the quantity of any work to be done under any item of the contract is reduced to less than 80 percent of the quantity shown in the bidding schedule, then either party to the contract, upon demand, shall be entitled to an equitable price adjustment for the work actually performed. In no case shall the product of the adjusted unit price and the quantity of work performed exceed the product of the contract unit price and 80 percent of the bidding schedule quantity. No allowance shall be made for profit on units of work not performed.

No adjustment shall be made in the contract unit price for any item that has materially changed if neither party requests an adjustment in the contract unit price for that item or if the total adjustment under that item amounts to less than \$1,000.00.

When no work is done under an item, no adjustment in the unit bid price shall be made. The item shall be eliminated in accordance with the provisions of Subsection 0108.0600.

If the alterations made or increases in the quantities are of sufficient magnitude as to require additional time in which to complete the project, such time adjustment shall be made in accordance with the requirements of this contract's General Conditions.

No allowance, except as provided in Subsection 0103.0200 and this contract's General Conditions, shall be made for any increased expense, loss of expected reimbursement or loss of anticipated profits suffered or claimed by the Contractor resulting either directly from such alterations or indirectly from unbalanced allocation among the contract items of overhead expense on the part of the Contractor and subsequent loss of expected reimbursements therefor or from any other cause.

0108.0400 EXTRA AND TIME & MATERIALS WORK

- A. **Extra Work** Unless determined by the Agency to be force account work, extra work to be performed in accordance with the requirements and provisions of Subsection 0103-0300 shall be set forth on a change authorization form. Upon request by the Engineer, the Contractor shall submit a detailed cost analysis for extra work items which includes estimated or assumed production rates, estimated man hours in specific labor craft categories, estimated hours of specific equipment use, listings of basic materials and costs, and other additional costs, as appropriate. The change authorization form shall specify the work to be done, the basis of compensation and the detailed cost analysis of the work. Where such work does not differ materially from specified contract work, it shall be measured and paid for at contract unit prices; otherwise, compensation shall be made at a price agreed upon by the Contractor and the Agency.

Upon receipt of an approved change authorization, the Contractor shall proceed with the ordered work; however, if so ordered by the Engineer, the Contractor shall proceed with the work, before the receipt of an approved change authorization.

The agreed upon prices shall be full compensation for furnishing all labor, materials and equipment required to do the extra work set forth in the change authorization. Should the extra work require an extension in the contract time, the Contractor shall include this request in the submittal to the Engineer in fulfillment of the requirements of Subsection 0108-0400.

- B. **Force Account Work** When force account work is shown in the bidding schedule or when work is to be performed in accordance with the requirements and provisions of Subsection 0104.0300 and such work is to be paid for as force account, the amount of such payments shall be determined in accordance with the provisions of this Subsection.

The Contractor shall submit payrolls or other cost data documents for all force account work. There shall be no

partial or full payments made for force account work until receipt of proper and correct documentation.

1. Labor - For all labor, including foreman in direct charge of specific operations, but excluding general superintendence, the Contractor shall be paid:
 - a) The actual cost of wages paid by the contractor, but at rates not to exceed those for comparable labor currently employed on the work.
 - b) The percentage of the actual amount of wages that is determined by the Agency to be necessary to cover the contractor's costs incurred as a result of payments imposed by state and federal laws and payments that are made to, or on behalf of, the workmen other than the actual wages defined under (a) and subsistence and travel allowance specified under (c).
 - c) Subsistence and travel allowance paid to such workmen as required by collective bargaining agreements.
 - d) An amount equal to 15 percent of the sum of the amounts determined under (a), (b) and (c).
 - e) A percentage of the actual amount of wages, determined by the Agency to be necessary to cover the contractor's costs incurred for Public Liability and Property Damage Insurance and Umbrella coverage insurance.
2. Materials - For all materials accepted by the Engineer and used in the work, the Contractor shall be paid reasonable compensation for items in the contractor's inventory or the actual invoice cost of materials purchased for the work including actual freight and express charges, less all offered or available discounts and rebates not withstanding the fact that they may not have been taken by the contractor. To the above cost shall be added a sum equal to 15 percent thereof.

The Agency reserves the right to furnish such materials as it deems appropriate, and the Contractor shall have no claims for any costs, overhead or profit on such materials.

3. Equipment - Equipment which the Engineer considers necessary for the performance of work shall be eligible for payment at the established rates only during the hours that it is operated except as otherwise allowed elsewhere in these specifications. Equipment hours shall be recorded to the nearest one-half hour. The equipment rental rates established herein include allowance for overhead and profit except where otherwise specified. For the use of equipment approved by the Engineer, the Contractor shall be paid the rental rates, as modified herein, set forth in the Rental Rate Blue Book for Construction Equipment which is published by the Equipment Guide Book Company, a division of Neilson-Dataquest, 1290 Ridder Park Drive, San Jose, California 95131, Phone (800) 227-8444. All rate determinations shall be based on the Blue Book rental rate chapter revisions that are applicable at the time the equipment is being used.

When multiple attachments are included with the rental equipment, only the attachment having the higher rental rate shall be eligible for payment, provided the attachment has been approved by the Engineer as being necessary to the force account work.

The Blue Book regional adjustment factors shall not apply in determining the rental rates.

Rental charges shall not be allowed for small tools that show a daily rate less than five dollars or for unlisted equipment that has a value of less than four hundred dollars.

The above provisions apply to approved equipment of modern design and in good working condition. The equipment shall be handled and used to provide normal output or production. Equipment that is not in good working condition or is not of proper size for efficient performance of the work may be rejected by the Engineer. Equipment ordered for force account work shall be paid for until such time as the Engineer directs that the use of such equipment be discontinued or until completion of the work.

For any equipment not listed in the Blue Book, rental rates shall be agreed to, in writing, prior to the use of such equipment on force account work or paid for by invoices in the case of outside rented equipment.

- a) Rental Rates (Without Operators) - The rental rate for each item of equipment shall be the sum of the base machine rate, attachment rate and operating rates. All rates shall be rounded to the nearest five cents.

The base rate for the machine and attachments represents the major cost of equipment . ownership, such as

depreciation, interest, taxes, insurance, storage and major repairs.

The hourly operating rate represents the major costs of equipment operation, such as fuel and oil, lubrication, field repairs, tires, expendable parts and supplies.

For all equipment utilized on force account work, the hourly rate for each piece of equipment and attachments shall be paid at the Blue Book monthly rate for the make and model multiplied by the appropriate rate adjustment factor, divided by one hundred and seventy-six, plus the hourly operating costs. Rate adjustment factors shall be furnished in the special specifications.

The rate adjustment factor assigned to any attachment shall be the yearly factor as determined for the base equipment.

The Contractor shall furnish to the Engineer serial numbers and year of manufacture for all pieces of equipment used on force account work.

- b) Stand-By Time - Equipment that is in operational condition and is standing by with the Engineer's approval for participation in force account work shall be paid for at fifty percent of the appropriate hourly rate as determined by the provisions set forth in Subsection 0108, less operating costs. Payment for such "standby" shall be limited to not more than eight hours in a twenty-four hour day or forty hours in a normal work week.

No compensation shall be allowed for equipment that is inoperable due to breakdown.

No payment shall be allowed for equipment that is not operating because the work has been suspended in accordance with the specifications or because the work has been suspended by the Contractor for the contractor's own reasons.

- c) Outside Rented Equipment - In cases where a piece of equipment to be used is rented or leased by the Contractor from a third party exclusively for force account work, the actual invoiced amount shall be paid when such rates are reasonably in line with established rental rates for the equipment in question and approved by the Engineer. A ten percent markup shall be allowed for overhead and profit for all rented equipment paid for by invoice. To this amount, the hourly operating cost shall be added.

In no case shall equipment be considered for rental which exceeds the hourly rate for the first eight hours and the daily rate divided by eight for all additional hours as compared with similar equipment listed in the Blue Book.

- d) Owner-Operated Equipment - Payment for rental of equipment owned and operated by persons other than the prime contractor's or subcontractor's shall be based on the actual paid invoice.

An amount equal to ten percent of the total rental of the equipment, including the owner-operator, shall be added for overhead, profit and all other costs incidental to furnishing and operating the equipment. The Engineer shall approve the rental rates prior to commencement of the work.

- e) Moving of Equipment - Rental time shall also be allowed for the time required to move needed equipment to the location of the force account work and to return it to its original location. Loading and transportation costs shall be allowed in lieu of moving times when equipment is moved by means other than its own power. Moving time back to the original location or loading and transportation costs shall not be allowed if the equipment is used at the site of the force account work on contract items or related work.

For use of equipment moved on the work exclusively for force account work, the actual cost of transferring the equipment to the site of the work and returning it to the original location shall be allowed, as specified herein, as an additional item of expense.

The original location of the equipment to be hauled to the site of the work shall be agreed to by the Engineer in advance.

Where the move of the equipment is made by common carrier, the allowance shall be the invoiced amount paid for the freight plus fifteen percent. If the Contractor hauls the equipment with the contractor's own forces, rental

shall be allowed for the hauling unit plus the driver's wages and the cost of loading and unloading the equipment.

The maximum rental period for the day that the equipment is moved on the work and the day that the use of the equipment is discontinued shall be the actual time that the equipment is in operation on force account work. When the contract includes line items of force account work, no payment shall be allowed for loading, unloading and transportation costs of such equipment since the Contractor is deemed to know what the work consists of and the type of equipment that is required to adequately perform the work.

4. **Statements** - No payment shall be made for work performed until the Contractor has furnished the Engineer with duplicate itemized statements of the cost of such work, detailed as follows:

- a) Name, classification, date, daily hours, total hours, rate, and extension for each laborer and foreman.
- b) Quantities of materials, prices, extensions, and transportation costs. These charges shall be submitted with the reports or, if not available, they shall be submitted with subsequent reports.

In the event the supplier's invoices are not submitted within fifteen days after acceptance of the work, the Agency reserves the right to establish the cost of such materials at the lowest current price at which the materials are available, in the quantities concerned and delivered to the location of the work.

- c) Designation, dates, daily hours, total hours, rental rate, and extension for each unit of equipment.

The Engineer shall compare the Engineer's records with the statements furnished by the contractor, resolve any differences, and make the necessary adjustments. When the actual cost of work is agreed upon, and signed by both parties, it shall become the basis of payment for the work performed.

- C. **Force Account Work by Subcontractor** When force account work not provided for in the bidding schedule is determined by the Engineer to require specialized labor or equipment not normally utilized by the Contractor and such force account work is performed by subcontractors, the Contractor shall be allowed an additional markup based on the following:

- For the first \$10,000.00 of work performed by subcontractors (less markups for overhead and profit), the Contractor shall be allowed a ten percent supplemental markup.
- For all work in excess of \$10,000.00 performed by subcontractor (less markups for overhead and profit), the Contractor shall be allowed a five percent supplemental markup.

The ten percent supplemental markup shall apply to the first accumulated total of all force account work performed by subcontractors.

The Contractor shall submit payrolls or other cost data documents for all force account work performed by subcontractors. There shall be no partial or full payments made for force account work until receipt of proper and correct documentation.

- D. **Bonding** The Contractor's Payment Bond and Performance Bond shall be increased according to the worth of Extra Work or Force Account Work performed or added to the contractor's Contract.

The actual cost of the additional bonding shall be reimbursable.

- E. **Taxes** Applicable taxes shall be reimbursable.

- F. **Disagreement on Cost** Should both parties fail to agree on the above basis of payments, the Engineer may have the work done or cause the work to be done by parties or means other than the contractor. This work shall not invalidate the Contract nor release the surety.

- G. **Audits** The City of Tucson may, at reasonable times and places, audit the financial records of any corporation or person who submits cost or pricing data to the City as provided in Article VII of the City of Tucson Procurement Code. Audits shall be only to the extent that the financial records relate to cost or pricing data for

the project. Any corporation or person who receives a contract or contract amendment for which cost or pricing data is required shall maintain the financial records that relate to the cost or pricing data for three years from the date of final payment under the contract, unless a shorter period is otherwise authorized in writing by the Procurement Director.

The City of Tucson is entitled to audit the financial records of a contractor or any subcontractor under any contract or subcontract to the extent that the financial records relate to the performance of the contract or subcontract. The financial records shall be maintained by the Contractor for a period of three years from the date of final payment under the prime contract and by the subcontractor for a period of three years from the date of final payment under the subcontract, unless a shorter period is otherwise authorized in writing by the Procurement Director. Any force account contract amendment under which cost or pricing data is required shall contain a provision that the price to the City shall be adjusted to exclude any significant amounts by which the City finds that the price was increased because the contractor-furnished cost or pricing data was inaccurate, incomplete or not current as of the date agreed on between the parties. Such adjustment by the City may include profit or fee.

0108.0500 ELIMINATED ITEMS

The Engineer may, upon written order to the contractor, eliminate items from the contract and such action shall in no way invalidate the contract. When a contractor is notified of the elimination of items, the Contractor shall be reimbursed for actual work done, including mobilization of materials prior to the notification.

0108.0600 PARTIAL PAYMENTS

If satisfactory progress is being made, the Contractor shall receive a payment each month based on the amount of work completed during the preceding month. Except as herein provided, the Agency, in lieu of securities, shall retain ten percent of each monthly statement of amount earned until the final acceptance of the work. No monthly payment shall be made when the total amount due for the month is less than \$500.00.

If 50 percent of the contract work has been completed, one-half of the amount retained to date, including substitute securities, shall be paid to the Contractor upon receipt of a written request from the Contractor and provided satisfactory progress is being made on the contract and there is no other specific cause or claim requiring a greater amount to be retained, all as determined by the Engineer. So long as the Contractor continues to make satisfactory progress, the Agency, in lieu of securities, shall retain five percent of each of the remaining monthly statements of amount earned.

Should any defective work or material be discovered prior to the final acceptance or should a reasonable doubt arise prior to the final acceptance as to the integrity of any part of the completed work, the payment for such defective or questioned work shall not be allowed until the defect has been remedied or cause for doubt removed.

The monthly payments will be approximate only and all partial statements and payments shall be subject to correction in the final statement and payment. If the total amount of the retained percentage of the contract is greatly in excess of the uncompleted and unaccepted portion of the contract, the Contractor may be allowed a portion of this suspended payment, provided that the Contractor files with the Agency a consent of the contractor's surety to such payment and provided that the Agency at all times retains an amount sufficient to enable it to complete the unaccepted or uncompleted work in the contract.

Partial payment on either a lump sum item or on an item paid for at a unit price may be made if the amount of work, in the opinion of the Engineer, is of sufficient magnitude to warrant partial payment. The amount of the partial payment to be made shall be in proportion to the percentage of the work completed on the item, as estimated by the Engineer.

The Contractor shall not assign payments to be made under the contract, or any portion thereof, without the written approval of both the surety and the Agency.

0108.0700 PARTIAL PAYMENT FOR MATERIAL ON HAND

Materials may be considered for partial payment without the execution of a supplemental agreement when the materials are delivered and stockpiled or produced on the project site or on another site if approved by the Engineer. Such partial payment may be as much as 100 percent of invoice cost, but shall not exceed 75 percent of the total item bid amount.

Partial payment shall be made only if the material is approved by the Engineer and if satisfactory progress is being made on the contract work by the contractor.

No partial payment shall be made for living or perishable plant materials until they are planted.

No partial payment shall be made for materials stockpiled at a commercial source unless approved in writing by the Engineer.

0108.0800 PAYMENT OF WITHHELD FUNDS

Attention is directed to Subsection 0108.0700 and in particular to the retention provisions of that Subsection.

Upon the contractor's request, the Agency shall make payment of funds withheld from progress payments if the Contractor makes an assignment to the Agency of time certificates of deposit or securities.

The securities shall be deposited in a joint escrow account to be held by a bank or savings and loan institution licensed by the State of Arizona and having an office in Pima County and in an amount that at all times is equal to or greater than the amount that would normally be withheld under the provisions of Subsection 0108.0700.

0108.0900 ACCEPTANCE AND FINAL PAYMENT

When final acceptance has been made in accordance with the requirements of Subsection 0104.1700(B), the Contractor shall prepare the final estimate of quantities of the various items of work performed.

Final payment shall be made in accordance with the contractor's final statement of the total amount earned by the contractor.

Pursuant to the requirements of Arizona Revised Statutes, Title 34, Chapter 2, Article 2(A) (5)*, the City will require the following document be completed and submitted before the final payment is made and retainage (or substitute securities) is released:

The consent of surety affidavit signed by an authorized representative of the surety (CONSENT OF SURETY TO FINAL PAYMENT AND FULL RELEASE OF CONTRACT RETAINAGE OR SUBSTITUTE SECURITIES).

*The City of Tucson reserves the right to obtain from the Contractor "... satisfactory receipt of all labor and material billed and waivers of liens from any and all persons holding claims against the work" (A.R.S. 34-221(A) (S)).

The final payment shall not be made until all quantities have been checked and verified, and complete performance of the contract has been rendered, including verification of all lien releases when requested. The final payment and release of retention shall occur within sixty days after final acceptance. In the event that final acceptance does not constitute complete performance of the contract, the Agency may make a specific written finding justifying the delay in final payment and release of retention monies to the Contractor beyond the aforementioned sixty days. Any undisputed amounts shall be released by the Agency within sixty days of final acceptance.

The cost of any work, material, equipment or incidentals specified in these general provisions for which no direct payment has been specified in the bid, shall be considered as included in the contract unit price for one or more of the contract items.

0108.1000 LUMP SUM PAYMENT FOR BUILDINGS AND STRUCTURES

- A. **General** When the Bid Schedule contains separate sheets indicating the items and approximate quantities required to complete specific buildings, structures or designated groups of structures and a lump sum total for each building, structure or group of structures, the Contractor shall be compensated on a lump sum basis.

Bidders shall show the lump sum bid price for each complete building, structure or group of structures.

Bidders shall verify the accuracy and completeness of the quantities listed in the Bid Schedule, and bid prices shall reflect the cost of quantities which the Contractor determines to be necessary to construct the buildings or structures and shall also include any additional costs for work necessary to complete the buildings or structures but for which no bid quantities are listed.

The Contractor shall provide the Engineer with a schedule of values for all components comprising the work at the preconstruction conference.

Adjustments Due to Quantity Variations For all items of work, other than Structural Concrete, Structural Steel and Reinforcing Steel items, no adjustment to the Bid Schedule's quantities, unit prices, extended amounts, and resulting lump sum amount shall be made following the award of contract because of any errors made either by the Agency in its calculations of quantities or by the Contractor in its calculations.

Adjustments in the Bid Schedule quantities for Structural Concrete, Structural Steel, or Reinforcing Steel may be initiated by the Contractor or the Engineer if evidence indicates that the required quantity varies by an amount greater than five percent of the Bid Schedule quantity. The Contractor shall advise the Engineer in writing, submitting such evidence and requesting an adjustment of the quantities. The Engineer shall determine the amount of adjustment, if any. The quantity upon which payment shall be based shall be the Bid Schedule quantity plus or minus only that portion of the adjustment that exceeds five percent of the Bid Schedule quantity. No adjustment to the contract time shall be allowed due to lump sum structure quantity variations.

- C. **Adjustments Due to Revisions Ordered by the Engineer** If the Engineer orders a revision in the project plans or specifications for a specific building, structure or group of structures contracted under this provision and the revision affects work for which bid schedule items have been established, the unit price shall be subject to revision in accordance with the requirements of Subsection 0103.0200. Payment to the Contractor shall be adjusted by an amount equal to the product of the quantity adjustment and the unit price bid or the revised unit price as appropriate.

If the revisions affect work for which no Bid Schedule item has been established, payment for this work shall be made in accordance with the requirements of Subsection 0104.0300.

- D. **Payment** Payment for all work necessary to construct the buildings or structures shall be made on the basis of the lump sum amount, except as may be adjusted in accordance with (B) and (C).

Partial payments shall be made in accordance with the requirements of Subsection 0109.0700, on the basis of the estimated percent of completion of each building or structure. The Engineer shall be the sole judge as to the actual percent of completion of the work eligible for payment in any month. The total amount of all partial payments shall equal the lump sum amount bid, adjusted as specified herein.

SECTION 109

PROJECT SIGNS

0109.0100 SIGNS

Construction site signs, and bond project signs, when required in accordance with the Specifications, shall be erected at the location(s) approved by the Engineer prior to the start of work.