TOWN OF CHINO VALLEY SUPPLEMENT TO THE MARICOPA ASSOCIATION OF GOVERNMENTS UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS

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CHINO VALLEY UNIFIED SCHOOL DISTRICT BUS LANE TECHNICAL SPECIFICATIONS

100 GENERAL CONDITIONS

ADD the following Sections:

100.1 Scope of Work:

A. **Intent of Plans And Specifications:**

1. The intent of the Specifications and Scope of Work is to prescribe a complete work for the Project which the Contractor shall perform in a manner acceptable to the Town of Chino Valley and in full compliance with the terms of the Contract.

2. Unless otherwise specified in the Special Conditions, the Contractor shall furnish all materials, labor, tools, equipment, water, light, power, transportation, superintendence, temporary construction of every nature, and incidentals, including, but not limited to, dust and traffic control measures, and to perform all work involved in executing the contract in a satisfactory and workmanlike manner within the specified time.

3. The Engineer shall be that person or his designees employed by or contracted by the Town of Chino Valley responsible for all aspects of the project and with the authority to make revisions to and approve changes to the plans or specifications.

B. **Project Description and Location:**

1. The Project description and location are as noted in the contract documents and plans.

C. **Time of Completion:**

1. The Contractor shall commence the work under this contract not before May 21, 2020. The Contractor shall fully complete all work on or before July 28, 2020. The Contractor shall at all times during the continuance of the Contract prosecute the work with such work force and equipment as is sufficient to complete the project within the time specified.

100.2 Standard Specifications & Drawings:

A. Standard details and specifications for this project shall be the Maricopa Association of Governments Standard Specifications and Details (MAG Standards), latest revision, and the Quad City Standard Details, latest revisions, except as modified in the plans.

B. Other standard specifications and details will be incorporated within the plans, project documents and technical specifications by reference, as necessary. These may include references to Maricopa Association of Governments Uniform Standard Details for Public Works Construction (MAG Standard Details, Arizona Department of Transportation Standard Specifications and Standard Drawings for Road and Bridge Construction (ADOT Specifications or ADOT Standard Details), and others.

100.3 General Notes:

A. All construction shall conform to the Maricopa Association of Governments Standard Specifications and Details (MAG Standards), latest revisions, and Quad City (QC) Standard Details, latest revisions, unless specifically modified on the plans.

B. It shall be the Contractor's responsibility to obtain copies of MAG, and QC Standards and Specifications as well as all other standards and specifications necessary to completely and accurately interpret the plans.

C. All plans signed by the Town Engineer are null and void one year from date of signature if construction has not started.

D. All quantities shown on plans are not verified by the Engineer. The Contractor shall verify all quantities shown and make his bid based upon those verifications. If any discrepancy in quantities is found, Contractor shall notify the Engineer of such no later than 24 hours prior to bid opening.

E. A Town of Chino Valley Public Works Department permit will be required for all off-site construction and construction within the public right of way.

F. It is the sole responsibility of the Contractor to obtain, at his own expense, such permits as are required from the appropriate agencies.

G. The Public Works Department shall be notified a minimum of 24 hours prior to beginning any construction in the public right of way at (928) 636-7140.

H. Inspection is to be done by the Town of Chino Valley Public Works Department or their representatives.

I. Any work performed without the knowledge of the Town of Chino Valley and Lyon Engineering inspector or his representative is subject to removal and replacement of same, to be done at the Contractor's expense.

J. All work and materials, which do not conform to the specifications, are subject to removal and replacement at the Contractor's expense.

K. Approval of a portion of the work in progress does not guarantee its final acceptance. Testing and evaluation may continue until the written final acceptance of a complete and workable unit.

L. The Town of Chino Valley may suspend the work by written notice when, in its judgment, progress is unsatisfactory, work being done is unauthorized or defective, weather conditions are unsuitable, or there is a danger to the public health and safety.

M. The Contractor shall provide sufficient men and equipment on the job at all times during construction to comply with specifications and to complete work.

N. The Engineer shall be responsible for construction surveying and layout.

O. The Contractor shall notify "Blue Stake" at 811 or 1-800-782-5348 at least 48 hours prior to construction.

P. It is the Contractor's responsibility to locate all underground pipelines, telephone and electric conduits and structures in advance of any construction and will observe all possible precautions to avoid any damage to such. The Engineer and/or Town will not guarantee any locations as shown on these plans, or those omitted from it.

Q. The Contractor is to uncover all existing lines being tied into and verify grades, pipe material, and pipe diameter before material submittals and planned construction activities.

R. Arizona Department of Environmental Quality (ADEQ) Requirements shall be complied with.

S. All water lines shall be provided with 14 AWG HS-CCS wire. Trace wire shall be subject to traceability test.

T. Water/sewer separation shall be pursuant to AAC R-18-5-502C and project specifications.

U. Water mains shall be subject to a pressure and leakage test in accordance with AWWA C-600 Standard.

V. Water mains shall be disinfected in accordance with ADEQ Engineering Bulletin No. 8 "Disinfection of Water Systems".

W. Operation of valves to be done by Town personnel only unless otherwise determined by the Town that the existing water system is owned and operated by the City of Prescott.

X. All pipeline materials shall be installed per manufacturer's requirements unless superseded by MAG specifications.

Y. All materials for water line construction shall meet AAC R-18-4-119.

Z. Arizona Department of Environmental Quality requirements will apply when more stringent than MAG Standard Specifications; more specifically where they pertain to maximum allowable sewer line/pressure sewer line exfiltration-infiltration rates.

AA. Sewer line low-pressure air tests shall be done on 100% of all lines.

BB. Sewer manhole vacuum testing shall be done on 100% of all manholes. Vacuum testing shall be in accordance with QC Standards Detail 443PV. Exfiltration testing (water tightness) or holiday testing is not permitted.

CC. Sewer line deflection tests shall be done on 100% of all pipes.

DD. Prior to project acceptance, the Contractor shall be responsible for providing the Town of Chino Valley with video (DVD) of the entire sewer main installed including service laterals. The video will be previewed and deemed acceptable by the Town prior to project release.

EE. Acceptance of the completed water/sewer system will not be given until 3 ml photo Mylar or Xerox graphic "as-built" reproducible plans and all required digital files have been submitted by a Registered Professional Engineer and approved by the Engineer.

FF. Contractor shall warrant all work for a minimum of two years after formal acceptance of the work.

101 ABBREVIATIONS AND DEFINITIONS

101.2 Definitions and Terms:

REPLACE the definition of Engineer with the following:

The Engineer shall be that person or his designees, subordinate to the Town Engineer, employed by or contracted by the Town of Chino Valley responsible for all aspects of the project and with the authority to make revisions to and approve changes to the plans or specifications.

104 SCOPE OF WORK

104.1.4 Cleanup and Dust Control:

ADD the following:

A. The work under this item shall consist of applying water required for dust control per MAG Specifications and as modified herein.

B. If in the opinion of the Engineer the Contractor fails to keep dust for his operation under control, the Engineer may order by written order suspension of operations until the situation is remedied. No time extension or additional costs will be allowed for this suspension.

C. The existing water system is owned and operated by the Town of Chino Valley, All contractors requesting construction water from the Town of Chino Valley must apply for a hydrant meter and

pay all construction water used at the current rates charged by the Town. The Contractor will be responsible for all costs associated with obtaining and delivering construction water.

Measurement and Payment:

No separate measurement or payment shall be made for dust control. This work shall be considered incidental and included in the unit price bid for construction of the appropriate contract pay items.

104.1.5 Final Cleaning Up:

ADD the following:

Upon completion of construction and before Final Acceptance can be made by the Engineer, the Contractor shall clean up each individual construction area to the satisfaction of the Engineer. Small trees, weeds, and brush, which were removed as part of construction work, shall be removed from the project site and properly disposed of. All debris, broken pipe, concrete and other construction debris shall be removed from the project site and properly disposed.

Mailboxes, fences, gates, landscaping, driveway culverts, street and traffic signs removed during construction shall be reinstalled in "like kind" and shall be considered incidental to the unit prices for road work included in the bidding schedule.

105 CONTROL OF WORK

105.6 Cooperation with Utilities:

ADD the following:

A. Location of Underground Utilities

1. Contractor shall contact Blue Stake within the time frame specified under Blue Stake law and request field location of underground utilities. At the time these locations have been marked and prior to the commencement of excavation within the affected area, the Contractor shall at his expense manually determine the exact location of all buried facilities.

2. Contractor shall notify all affected utilities prior to the start of construction and shall ascertain the location of the various underground utilities either shown on the plans and/or as may be brought to his attention.

3. Contractor shall perform all operations in accordance with Arizona Blue Stake law.

4. Utility locations shown on the plans are approximate and based on drawings furnished by the respective utility. It shall be the Contractor's responsibility to protect all existing utilities. Should a utility conflict occur, the Contractor shall cooperate with the said utility to resolve the conflict. No claim for extra costs shall be made against the Owner for delays due to any utility conflict.

5. If performance of the Contractor's work is delayed because the utility owners fail to relocate or adjust their facilities in a timely manner, the Contractor may file for an extension of time. To receive consideration, this request shall contain specific information as to the nature of the delay and the actual loss of time involved.

6. Contractor shall assume full responsibility for damage to all marked utilities due to his operations and shall repair the damaged utilities in accordance with regulatory authority requirements at his own expense.

Measurement and Payment:

No separate measurement and payment shall be made for Location of Underground Utilities. This work shall be considered incidental and included in the unit price bid for construction or installation of the appropriate contract pay items.

105.8 Construction Staking:

105.8 CONSTRUCTION STAKES, LINES AND GRADES:

REPLACE Entire Section with the following:

A. The CONTRACTOR will set construction stakes establishing lines and grades as described in the plans. The ENGINEER will furnish the Contractor with all necessary information relating to the lines and grades. These stakes and marks shall constitute the field control by and in accordance with which the Contractor shall establish other necessary controls and perform the work.
B. The CONTRACTOR shall perform the work in accordance with the Engineer's stakes and marks, and shall be charged with full responsibility for conformity and agreement of the work with such stakes and marks.
C. The CONTRACTOR shall be held responsible for the preservation of all stakes and marks, and if the construction stakes or marks have been carelessly or willfully destroyed or disturbed by the Contractor, the cost for replacing them will be charged against him and will be deducted from the payment for the work.
D. The CONTRACTOR shall set the construction stakes for buildings establishing lines, grades, and elevations to include necessary utilities and appurtenances and shall be responsible for their conformance with plans and specifications. The ENGINEER will establish or designate a control line or benchmark of known location and elevation for use as a reference.

Measurement and Payment:

A payment shall be made for construction staking to the CONTRACTOR in one lump sum that will be determined by the CONTRACTOR's surveyor.

105.16 As-Built Preparation and Coordination:

A. As-built preparation will be performed by the ENGINEER based on redlined as-built data supplied by the contractor. During the construction phase and prior to any backfilling or covering, the CONTRACTOR will survey the work for the purpose of as-built preparation. Surveying shall be performed and certified by a Registered Land Surveyor in good standing with the Arizona State Board of Technical Registration. The CONTRACTOR shall supply the ENGINEER with all horizontal and vertical as-built data in ASCII format, including a northing, easting, elevation and description of all work completed under this contract. The CONTRACTOR shall aid the ENGINEER in determining and providing this information. As-built data shall include, but not be limited to all items noted below.

    1. Roadway

        a. Horizontal centerline alignment(s) including all PC's, PT's, and PI's.

        b. Valley gutters including flow lines, spandrels, approaches, ADA ramps, installed or relocated signs, traffic signals, and street lights.

    2. Storm System

a. All drainage structures including manholes, catch basins, junction structures, scuppers, and inlet/outlet structures. Rim and invert elevations shall be included for all structures. Headwall data shall include top of wall/wingwall, footing elevations, inverts, and apron boundaries weather concrete or rip-rap.

b. Drainage ditches, swales, channels, and flow lines

3. Water System (Potable and Re-Use)

a. The alignment of the water main(s) including all horizontal and vertical curves. If the water main continues in a straight horizontal ***and*** vertical alignment for more than 100 feet, the water main will be surveyed every 100 feet. Sufficient survey shots shall be taken on horizontal and vertical curves to establish an accurate alignment.

b. All fittings and appurtenances shall be surveyed, including but not limited to the following: valves, bends, tees, reducers blow offs, air release valves, tracer wire stations, water meters, and hydrant locations.

i) Valves shall be shot on the nut and center of the cover. If extensions are used, the length of the extension shall be noted.

ii) All fittings shall be shot at the middle of the fitting.

iii) Air release valves shall be shot at the main connection, the air release box, and any major alignment changes between the two.

c. All mainline water and sewer crossings shall be surveyed for specific elevation separations and be entered on the as-builts.

4. Site improvements

a) Shall include, but not limited to, retaining walls including footing elevations, curbs, fencing, drainage, chain link fence enclosures, protection posts, gates, finished ground topography, etc.

B. Prior to backfilling or covering any work, the CONTRACTOR shall notify the TOWN 48-hours in advance in writing for the item of work. The minimum 48-hours notice time shall not include weekends or holidays.

C. The CONTRACTOR shall maintain a redlined copy of the project plans including changes made in construction of the project. The redline copy shall be updated on a weekly basis in preparation for the weekly as-built field meeting. The CONTRACTOR shall provide the ENGINEER with a copy of the redline plans upon completion of the project.

D. Weekly field meetings with the CONTRACTOR, ENGINEER and TOWN shall occur to review As-Built information for conformance with the specifications. The CONTRACTOR shall provide the ENGINEER with a schedule of work items to be constructed in the upcoming 30 day period, including approximate dates of installation prior to backfilling or covering. The CONTRACTOR field redlines will be reviewed for notation of changes in the work. Missing, erroneous or deficient data must be corrected by the CONTRACTOR at no additional cost to the TOWN.

Pay Item: 105.16.1 Construction Staking (LS)

ADD the following Section:

106 CONTROL OF MATERIALS

ADD the following:

Contractor shall submit in writing all materials to be used in the project in accordance with MAG Specification Section 105.2.

106.2 Samples and Tests of Materials:

ADD the following:

A. Quality control measures sufficient to produce materials and workmanship of acceptable quality are the responsibility of Contractor. Upon request Contractor shall provide factory certificates of compliance or analysis or both to the Engineer. The Contractor shall provide full-time asphaltic concrete laydown compaction testing and adequate plant control for each paving day. The Contractor shall provide an independent geotechnical firm to perform all soils and concrete testing, as required, per these specifications.

B. The weekly reports shall state the type of work performed during the report period and other process control measures taken to assure quality. Type of work must be identified by activity, location, station, and offset, purpose of test, and any other relevant information that the Engineer needs to identify or replicate the quality control testing. Results of all tests, corrective actions, re-tests, and control charts shall be attached to the weekly reports. Although hand written documentation can be included, the quality control report narrative and test results must be typed to insure that clear reproductions of the documents can be made. The report period shall end at midnight each Friday and the report shall be submitted to the Engineer no later than 5:00 pm of the following Wednesday. Payment in the amount of $500.00 per report will be withheld for each individual report that is not delivered to the Engineer by the time and day specified above. Only one half of the withheld payments will be returned on the next regular project progress payment when the delinquent reports have been turned in and all of the above requirements have been met. Any report turned in more than 10 business days beyond the Wednesday due date will not be eligible for withheld payments to be returned.

Minimum Quality Control Sampling Guidelines (may not include all required testing)

MATERIAL TYPE	REQUIRED TEST	SAMPLING POINT	SAMPLING FREQUENCY	REQUIRED RESULT
Embankment	Proctor Optimum Moisture	In-Place	One per Soil Type	
	Compaction	In-Place	One per 500 LF of 8" lift	95% per ASTM D-698
Sub-grade	Proctor Optimum Moisture	In-Place	One per Soil Type	

	Compaction		One per 500 LF	95% per ASTM D-698
Agg. Base	Proctor Optimum Moisture	Crusher belt or Stockpile	At start of production, then as mtl. Changes	
	Compaction	In-Place	One per 500 LF of 6" lift	98% Per ASTM D-698
	Abrasion	Source	One per source	
	Plasticity Index		One per shift	Max. 6 per AASHTO T89 & T90
	Gradation		One per shift	
	Crushed Faces		One per shift	
Asphalt Concrete PG 64-22				
	Bit. Mtl. Content		Two per day (3/day on 1st day)	
	Marshalls		Two per day	
	Rice		One per day	
MATERIAL TYPE	REQUIRED TEST	SAMPLING POINT	SAMPLING FREQUENCY	REQUIRED RESULT
	Voids, VMA		One per day	
	Compaction			95%
	Core		One per 1,000 SY	within 24 hours
Min. Agg.	Gradation		One per 1,200 tons	
	Crushed Faces		One per day	
	Sand Equivalent		One per day	45 or greater
	Abrasion		One	
Asphalt Rubber Concrete				
Open Graded				

Asphalt Rubber Concrete				
Asphalt Concrete Friction Course Asphalt Rubber				
		Stock pile		
	Gradation		One per day	
	Sand Equivalent		One per day	
	Crushed Faces		One per day	
	Flakiness Index		One per day	
Portland Cement Concrete				
	Air		each sample	5% +/- 1%
	Slump		each sample	max. 3.5"
	Compression		4 per 50 CY per Section 725.8.2	1 @ 7 day 1 @ 28 day 2 @ 56 day if failure

ADD the following Section:

106.9 Quality Acceptance Testing:

A. The Engineer may provide quality acceptance sampling and testing. The number of tests and location of each shall be determined by the Engineer. The expense of the initial sampling and testing shall be paid for by the Town. Additional sampling and testing required due to failure of the initial test(s) shall be accomplished as provided by the Town and these additional expenses shall be deducted from moneys due Contractor.

B. Contractor and the Engineer's representative shall coordinate on a daily basis the following day's work schedule and any testing that may be necessary. The Engineer' quality acceptance testing will generally consist of (1) daily sampling and testing for asphalt extraction/gradation and Marshall density for each paving day; and (2) asphaltic concrete core drilling after placement to verify thickness and density. A minimum of one core per each 1,000 square yards of paving shall be randomly sampled by the Contractor's quality control lab after marking by the Town inspector.

C. Construction quality acceptance testing performed by the Town of Chino Valley does not relieve the Contractor or the manufacturer of materials produced for the Contractor, of the obligation to perform and document quality control testing of materials and workmanship.

Measurement and Payment:

No separate payment shall be made for Contractor Quality Control. This work shall be considered incidental and included in the unit price bid for construction or installation of the appropriate contract pay items. An independent geotechnical firm shall perform all quality control testing. The Contractor shall furnish copies of all test results to the Town on a weekly basis.

No separate payment shall be made for Quality Acceptance Testing or any related work performed by Contractor.

107 LEGAL REGULATIONS AND RESPONSIBILITY TO PUBLIC

107.6 Public Convenience and Safety:

ADD the following:

A. Maintenance of Traffic

1. Contractor shall at all times conduct his/her work as to ensure the least possible obstruction to traffic.

2. Unless otherwise provided, the road, while being improved shall be kept open to all traffic by Contractor. When so requested by Contractor and approved by the Engineer, Contractor may by-pass traffic over an approved detour route. Regardless of whether it is through or local traffic, Contractor shall keep the portion of the project being used by traffic in such condition that traffic will be adequately accommodated.

3. Contractor shall also provide and maintain in a safe condition temporary approaches or crossings and intersections with trails, roads, streets, businesses, parking lots, driveways residences, garages and farms; however, Contractor will not be required to remove snow.

4. Before any detour is opened to traffic, the Engineer shall have been satisfied that traffic is able to proceed in a safe manner.

5. Contractor shall bear all expense of maintaining traffic over the road being improved as well as constructing, maintaining and subsequently removing Contractor requested detours, approaches, crossings, intersections and other features as may be necessary without any direct compensation.

B. Access to Businesses/Residences

Contractor shall provide to all residents and businesses affected by the project, access to one of their driveways at all times except as modified by the following: If Contractor finds it unavoidable to temporarily close off access for any time, the residents/businesses affected shall be contacted a minimum of 48 hours in advance and an alternate procedure for access mutually agreed to. Contractor shall provide the Engineer with signed evidence of a mutually accepted agreement between the property owner/business manager/residential manager and Contractor prior to said closure.

C. Safety

1. The safety and convenience of the general public and the residents along the project and the protection of persons and property shall be provided for by the Contractor in accordance with the requirements of this contract.

2. Contractor shall submit a Safety Plan to the Engineer at the preconstruction conference. The plan shall detail the procedures The Contractor will implement to satisfy OSHA and the State Occupational Safety Guidelines related to the worker as well as public safety in construction of excavations, structures and confined air spaces as identified by the Engineer. Contractor's Safety Plan shall include the requirement that all workers and visitors must wear hard hats while within the project limits.

3. The Safety Plan submitted by Contractor shall include proposed methods to prevent unauthorized persons from gaining access to the work areas.

4. In conjunction with the Safety Plan, Contractor shall furnish and install 72" temporary chain link fencing, or approved equal satisfactory to the Engineer, around any unattended excavation deeper than four feet with slopes steeper than 2:1. Temporary fencing shall completely enclose the referenced construction activity and shall be secured after normal working hours to prevent unauthorized access.

5. Unless otherwise approved in writing by the Engineer, open utility trenches shall be limited to 50 ft. in length except for cast-in-place pipe installations and during non-working hours shall be covered with steel plate in a manner satisfactory to the Engineer.

107.9 Protection and Restoration of Property and Landscape:

ADD the following:

Mailboxes and traffic signs removed during construction shall be installed in "like kind" and shall be considered incidental to the unit prices for utility work included in the bid schedule, provided they are not in the bid schedule.

Existing landscape improvements, drainage ditches, etc., shall be restored in "like kind" so that the improvement is put back in as close to its prior state as possible

The Contractor shall restore each individual work site to grades existing before construction work, including wheel ruts and other scarring.

Measurement and Payment:

No separate payment will be made for restoration of items impacted by the Contractor's construction operation and the cost of these items shall be included in the unit bid prices in the bid schedule.

ADD the following Section:

108 COMMENCEMENT, PROSECUTION AND PROGRESS

108.4 Construction Schedule:

ADD the following:

A. At the pre-construction meeting the Contractor shall submit for review by the Engineer a complete construction schedule as stated in the General Conditions of these contract documents.

B. Once this schedule has been accepted by the Engineer, Contractor shall not deviate from it until a revised schedule has been submitted and accepted by the Engineer.

C. The Engineer reserves the right to reject construction schedule submittals when in his opinion the schedule lacks the proper detail.

109 MEASUREMENT AND PAYMENTS

109.10 Payment for Mobilization/Demobilization:

REPLACE Section 109.10 in its entirety with the following:

The Agency will compensate Contractor for a single round trip mobilization/demobilization of Contractor's personnel, equipment, supplies and incidentals, including establishment of offices, buildings

and other facilities required for the performance of the work on the project, as well as preparatory work and operations prior to the commencement of the work on the project site.

Measurement and Payment:

Mobilization will be measured for payment by the lump sum bid as a single complete unit of work. Payment for mobilization will be made as provided herein which shall be full compensation for supplying and furnishing all materials, facilities, and services and performing all the work involved as specified above. The total amount allowed for mobilization during the life of the contract shall not exceed nine percent (9%) of the original contract amount. If the bid price exceeds this percentage the excess amount will be paid to the Contractor upon completion of the contract and nine percent of the contract amount shall be used to determine partial payments. Partial payments under this item will be made in accordance with the following provisions:

1. The first payment of one third of the lump sum price for mobilization may be made provided that all submissions required under this Section and the General Conditions of the Contract are submitted by the Contractor at the pre-construction conference to the satisfaction of the Engineer and when the Engineer has determined that a significant amount of equipment has been mobilized to the project site which will be used to perform portions of the project work.

2. The second payment of one third of the lump sum price for mobilization shall be made on the first estimate following completion of thirteen percent (13%) of the contract.

3. The third payment of one third of the lump sum price for mobilization will be made on the first estimate following completion of twenty-six percent (26%) of the contract.

Pay Item: 109.10.1 Mobilization

ADD the following Section:

109.11 Contract Allowance:

A. Contract allowance items are provided for the purpose of encumbering funds to cover the costs of possible contract amendment work. The amount of the allowance item is determined by the Engineer and is not subject to individual bid pricing. All bidders shall incorporate the amount pre-entered in the bid proposal and shall reflect the same in the total amount bid for this project.

B. This allowance item provides an estimated funding to cover unforeseen changes that may be encountered and corresponding extra work needed to complete the contract per plan. Unforeseen extra work, if any, shall be in accordance with the Contract Amendment section of the General Conditions.

   It shall be understood that this allowance item is an estimate only and is based on contract amendment history of similar projects. It shall not be utilized without an approved contract amendment. It is further understood that authorized extra work, if any, may be less than the allowance item. The Contractor, by submittal of his bid, acknowledges that the total bid and individual bid items were prepared without anticipation of use of the contract allowance.

Pay Item: 109.11.1 Contract Allowance

200 EARTHWORK

201 CLEARING AND GRUBBING

201.1 Description:

REPLACE in its entirety with the following:

This work shall consist of removing objectionable material from the right-of-way, easements, all areas to be graded, and such other areas as may be specified in the special provisions. Clearing and grubbing shall be performed in advance of grading operations.

201.3 Construction Methods:

REPLACE the second paragraph with the following:

All trees and shrubs found suitable for improvement and beautification, which will not interfere with excavation or embankment or cause disintegration of the improvements shall not be disturbed. In any event, the Contractor shall avoid injury to shrubbery, vines, plants, grasses and other vegetation growing outside of the clearing limits. The dragging and the piling of materials of various kinds and the performing of other work which may be injurious to vegetation shall be confined to areas which have no vegetation or which will be covered by embankment or disturbed by excavation during grading operations.

REPLACE the fourth paragraph with the following:

From excavated areas, all stumps, roots and other obstructions 3 inches or over in diameter shall be grubbed to a depth of not less than 24 inches below finish grade.

REPLACE Table 201-1 in its entirety with the following:

TABLE 201-1
EMBANKMENT CLEARING AND GRUBBING

Height of Embankment Over Stump	Height of Clearing and Grubbing
0 Feet to 2 Feet	All stumps or roots 6 inches or over in diameter shall be grubbed to 24 inches below original grade. All others shall be cut flush with the ground.
2 Feet to 3 Feet	All stumps 1 foot and over in diameter shall be grubbed to 24 inches below original grade. All others shall be cut flush with the ground.
Over 3 Feet	All stumps shall be cut flush with the ground.

REPLACE the eighth paragraph with the following:

All tree trunks, stumps, brush, limbs, roots, vegetation and other debris removed in clearing and grubbing shall be completely removed from the project and properly disposed of.

201.5 Payment, Clearing and Grubbing:

REPLACE with the following:

No separate payment shall be made for clearing and grubbing.

205 ROADWAY EXCAVATION

205.1 Description:

ADD the following Section:

205.1.1 General:

The bidding schedule quantities for this item of work will be considered to be the final quantities for payment. Adjustments in the bidding schedule quantities for Roadway Excavation as contained in these specifications may be initiated by Contractor or the Engineer if evidence indicates that the required quantity varies by an amount greater than 5% of the bidding schedule quantity. Contractor shall advise the Engineer, in writing, submitting evidence in the form of a construction survey or photogrammetric survey with measurement for the proposed adjustment and requesting an adjustment in quantities. The Engineer will determine the amount of adjustment, if any. The quantity upon which payment will be based will be the bidding schedule quantity plus or minus only that portion of the adjustment that exceeds 5% of the bidding schedule quantity.

Variations caused by shrink/swell of materials shall not be considered for quantity adjustments.

Adjustments in Roadway Excavation quantities due to revisions ordered by the Engineer will be isolated by measurement or calculations. The bidding schedule quantities will be adjusted by the amount either measured or calculated, regardless of the 5% variation requirement above.

205.2 Unsuitable Material:

REPLACE the third paragraph with the following:

If material is encountered during excavation that the Engineer determines to be unsuitable, the following shall apply:

1. Material which is located in a cut section at an elevation above finished sub-grade shall not be utilized in construction but shall be removed and disposed of at a site secured by Contractor.
2. Material which is located below the finished sub-grade elevation in excavation areas shall be removed to the limits as determined by the Engineer and the resultant cavity backfilled with aggregate base course in accordance with Section 310.

205.6 Surplus Material:

REPLACE the first paragraph with the following:

Unless otherwise shown on the plans, addressed in the special provisions, or approved by the Engineer, no surplus excavated material shall be disposed of within the right-of-way or easement. The Contractor shall make all arrangements for disposal of the material at off-site locations as may be approved by the Engineer. The Contractor shall provide to the Engineer copies of the written consent of the owner of the property upon which he intends to dispose of such material, and any permits that may be required by a governing agency for said disposal.

205.7 Measurement:

REPLACE the first two paragraphs with the following:

The following earthwork operations will not be measured as roadway excavation for the quantities of material involved.

Excavating the roadway prism including public and private roadway approaches; excavating slides and slip-outs not resulting from overshooting; excavating excess material; excavating selected material and

topsoil from within the limits of the project and removing such materials from stockpiles when stockpiling is ordered; and excavating ditches.

ADD the following:

No measurement for unsuitable material shall be completed as part of the work required to complete this project.

205.8 Payment:

ADD the following:

This work shall be considered incidental and included in the unit price bid for construction or installation of the roadway improvements. and shall include all excavation, hauling and disposal at a site secured by Contractor, and backfilling with aggregate base course.

Pay Item: 205.8.1 Excavation (CY)

211 FILL CONSTRUCTION

211.6 Measurement & Payment:

ADD the following Section:

The unit price bid for fill quantities shall include all work, embankment construction and any required import material necessary for final grading.

Pay Item: 211.6.1 Fill Construction (CY)

220 RIPRAP CONSTRUCTION

220.7 Measurement:

REPLACE with the following:

The completed, in place riprap construction within the limits of the dimensions shown on the plans shall be measured. Measurement will be in cubic yards rounded to the nearest square yard.

No separate measurement will be made for erosion control geosynthetic fabric, bedding material, or grout.

Pay Item: 220.7.1 Hand-Placed Riprap

300 STREETS AND RELATED WORK

ADD the following Section:

300.1 Saw Cut:

A. The work under this item shall consist of saw cutting the existing pavement where new asphalt concrete is to match existing bituminous surfaces with no provisions for overlaying the entire section. This item shall also include saw cutting of existing Portland cement concrete pavement, sidewalks, driveways and parking lots where new construction shall match the grade of existing surfaces that are to remain where called for on the project plans or where designated by the Engineer.

B. Saw cuts shall be made to a full depth of the material to insure a neat vertical joint. Portland cement concrete designated to remain that is damaged by the saw cutting shall be replaced in kind at The Contractor's expense.

Measurement and Payment:

C. The unit price bid for saw cuts shall be measured in linear feet, as shown in the plans, and the unit price bid shall be made per linear foot of cut.

Pay Item: 300.1.1 Sawcut Pavement (LF)

301 SUB-GRADE PREPARATION

301.1 Description:

ADD the following:

The work under this item shall consist of furnishing all materials, equipment, and labor necessary for preparation of natural or excavated areas prior to the placement of any sub-base material, chip seal, pavement, curbs and gutters, driveways, sidewalks or other structures. Unless provided for in another bid item, this work shall include the removal and disposal of all unsuitable material including existing pavement and other obstructions in accordance with MAG Specification Section 301. The Contractor shall be required to provide and pay for all quality control geotechnical testing in accordance with the MAG Specifications and the Town's MAG Supplement.

301.2 Preparation of Subgrade:

301.2.1

REPLACE in its entirety with the following:

The contractor shall not use asphalt concrete or other bituminous roadway surfacing materials as embankment fill.

Project earthwork quantities, when included as separate contract pay items, will include removed asphalt/bituminous material volumes, unless there is a pay item for asphalt removal or asphalt milling in the bid schedule or otherwise specified in the Special Provisions.

All unsuitable material and all excess material shall be disposed of in accordance with the requirements of Sections 205.2 and 205.6, respectively. When additional material is required for fill, it shall conform to Section 210.

301.3 Relative Compaction:

The subgrade shall be scarified and loosened to a depth of eight (8) inches.

(B) Below detached sidewalk not subject to vehicular traffic 95 percent

Sub-grade quality control testing shall be one per 500 lf per lane for compaction testing.

301.7 Measurement:

REPLACE in its entirety with the following:

Measurement for Subgrade Preparation will be by the square yard, measured by the total accepted area of new pavements and chip seal, including paved shoulders, tapers, turnouts and driveways that are paved or surfaced with an aggregate base material. The areas under concrete curb and gutter, sidewalk and

concrete driveway entrances will not be included. Unless provided for in other separate bid items or unless otherwise specified; Clearing and Grubbing, Roadway Excavation, Rock Excavation, Borrow Excavation, and Fill Construction shall not be measured, in which case payment for these earthwork items, if required, shall be included in the unit price for Subgrade Preparation.

301.8 Payment:

REPLACE in its entirety with the following:

Payment for Subgrade Preparation will be made only when it is performed for street or roadway paving projects. Payment shall be compensation in full for stripping, scarifying, grading, excavating, hauling, filling, compacting, and disposing of excess or unsuitable materials, together with all costs incidental thereto. All excess materials will be delivered to the Town of Chino Valley yard located at northeast corner of Jerome Junction and Road 4 North in Old Home Manor.

Pay Item: 301.8.1 Sub Grade Preparation

310 PLACEMENT AND CONSTRUCTION OF AGGREGATE BASE COURSE

ADD the following:

310.1 Description:

The work under this item shall consist of furnishing all materials, equipment, and labor necessary for the placement of an approved, imported aggregate base course material on top of a prepared subgrade per the required design thickness, grade, cross-section and compaction as specified on the project plan documents and in accordance with MAG Specification Sections 310, 701 and 702. Aggregate base course shall not be placed on a prepared subgrade until the Town Engineer or authorized representative has inspected and accepted the underlying subgrade. The Contractor shall be required to provide and pay for all quality control geotechnical testing in accordance with the MAG Specifications and the Town's MAG Supplement. Use of Reclaimed Concrete Material (RCM) is not allowed.

ADDITION of the following to MAG Section 310.1:

310.1.1 Reclaimed Asphalt Pavement (RAP)

Reclaimed Asphalt Pavement (RAP) aggregates or "millings" will be produced on-site and/or imported for placement on top of fill slopes as shown in the plans. Imported and on-site RAP milling material to be used shall be screened and compacted per MAG Specification Section 310.

Pay Item 310.1.1 Reclaimed Asphalt Pavement Millings (2.5") (SY)

310.2 Placement and Construction:

ADD the following:

Aggregate base course shall not be placed on excessively wet or frozen sub-grade materials as determined by the Engineer.

ADD the following Section:

310.2.1 Aggregate Base Course Frequency Testing

Aggregate base course quality control testing frequency shall be as follows:

Resistance to Degradation and Abrasion

One at the start of production and again if source changes Fractured Faces, One Face, PI, and Gradation.

One per shift

310.3 Compaction:

The fifth paragraph shall be REPLACED as follows:

For roadway construction, a minimum of one field density test shall be performed per 6-inch lift per 500 feet per lane. For other aggregate base course applications, a minimum of one field density test shall be performed for each 800 square yards.

Delete (A), (B), and (C) in their entirety, and ADD the following:

Aggregate base course shall be compacted to 98% in all instances.

310.5 Payment:

REPLACE in its entirety with the following:

Measurement for aggregate base course material will be per cubic yard, given the total accepted area of new pavement and chip seal, including paved shoulders, tapers, turnouts and driveways that are paved or surfaced with an aggregate base material; and the thickness of the base layer. Copies of material delivery tickets will be required for material verification purposes. Payment shall be made at the unit price bid and shall be considered full compensation for this work item.

Pay Item: 310.5.1 Aggregate Base Course

321 PLACEMENT AND CONSTRUCTION OF ASPHALT CONCRETE PAVEMENT

321.13 Payment:

ADD the following:

The asphalt concrete measured as provided above will be paid for at the contract price per ton or square yard, as adjusted per Section 321.10, which price shall be full compensation for the item complete, as herein described and specified.

Pay Item: 321.13.1 Asphaltic Concrete, Type C 3/4, 3" Thick, w/Thickened Pavement Edge (SY)

340 CONCRETE CURB, GUTTER, SIDEWALK, CURB RAMPS, DRIVEWAY AND ALLEY ENTRANCE

ADD the following Section:

340.3.11 ADA-Compliant Sidewalk Ramps

A. All sidewalk ramps shall conform to Section 405, 2010 ADA Standards for Accessible Design.

B. All ramp runs must adhere to the following requirements as described in Section 405.1 through 405.6:

   a. Any ramp run shall have a rise of no more than 30 inches.

   b. Ramp runs shall of a slope no steeper than 12:1 except for short runs that meet the requirements below:

      i. For runs with a maximum rise of 3 inches, a maximum slope of 8:1 is permitted.

ii. For runs with a maximum rise of 6 inches, a maximum slope of 10:1 is permitted.

c. Ramp runs shall be constructed with a cross slope no steeper than 48:1.

d. All ramp runs shall be constructed with a minimum clear width between handrails of 36 inches.

C. All ramp landings must adhere to the following requirements as described in Section 405.7:

a. Landings shall be level wherever possible; however, a maximum slope of 48:1 is permitted.

b. Landings shall have a width at least that of the widest ramp run.

c. Landings shall have a minimum clear length of 60 inches.

d. Landings where intersecting runs change direction shall be at least 60 inches wide x 60 inches long.

D. All ramps with a rise greater than 6 inches must be constructed with handrail in accordance with Section 405.8.

E. Edge protection shall be provided on all ramps in accordance with Section 405.9

ADD the following Section:

340.5.4 ADA-Compliant Sidewalk Ramps:

All ADA-Compliant sidewalk ramps shall be treated as normal concrete flat work and shall be measured in accordance with Section 340.5.2 and shall include the construction of all necessary structural elements and appurtenances except for retaining walls and handrail.

340.6 Payment:

ADD the following:

Pay Item:	**340.6.1 Concrete Sidewalk**	**(SF)**
Pay Item:	**340.6.2 Single Curb**	**(LF)**
Pay Item:	**340.6.3 Valley Gutter**	**(SF)**
Pay Item:	**340.6.4 Retaining Walls for Sidewalk Ramps**	**(LF)**

SECTION 345: ADJUSTING FRAMES, COVERS AND VALVE BOXES

345.5 Adjusting Manhole And Valve Covers With Adjustment Rings

REMOVE in its entirety and REPLACE with the following:

Existing sanitary sewer manhole and covers shall be salvaged to the Town. All salvaged items shall be delivered to the Town of Chino Valley Public Works office at 1982 Voss Drive Chino Valley, AZ.

Adjusting rings may be used to raise manhole covers in conformance to the dimensions noted on QCSD Detail 420Q-1. The amount of adjustment, thickness of seal or overlay, and cross slope will be considered when using adjusting rings. Each location where an adjusting ring is used must have a sufficient depth of

asphalt to assure the proper installation and operation of the ring. The rings shall be made of concrete and installed per the manufacturer's specifications. The rings shall be approved by the Engineer.

The concrete collar ring around the frame or valve box shall be circular, shall be a minimum of 8 inches thick, struck off and finished ¼ inch below with the adjacent new pavement surface. Concrete shall be a minimum of Class AA. All concrete shall be obtained from plants approved by the Engineer.

A single No. 4 rebar hoop will be placed in each concrete collar in accordance with the respective detail. The hoop diameter shall be such that its placement is centered between the edge of the manhole frame or valve box, and the outer edge of the concrete collar, the depth of the hoop shall be centered in the thickness of the collar. Each concrete ring shall be scored radially at quarter-circle points. Score lines shall be ¼ inch wide by ½ inch deep. The concrete collar surface shall be rough broom finished. (See QCSD GES Detail 270Q).

Traffic shall not be allowed on the concrete collars until the concrete has reached a minimum compressive strength of 2,500 psi on residential and 3,000 psi on collector and major streets.

On major streets the Contractor shall use "high-early" in the concrete mix, approved by the Engineer, to minimize delay in reopening the street(s) to traffic.

All machined surfaces on the frame and cover shall be such that the cover will lie flat in any position in the frame and have a uniform bearing through its entire circumference. Any frame and cover which creates any noise when passed over by automobiles shall be replaced by the Contractor at the Contractor's expense.

345.6 Measurement

ADD the following:

Measurement for adjusting existing frames, covers, valve boxes, and water meter boxes to finished grade shall be the actual number of each type adjusted and accepted.

Measurement for adjusting new frames, covers, valve boxes, and water meter boxes shall not be measured as adjustment to finished grade is considered incidental to installation of the respective item.

Payment:

ADD the following:

The unit price bid for adjusting existing frames, covers, valve boxes, and water meter boxes to finished grade shall be per each type adjusted and accepted.

Pay Item:	**345.6.1 Adjust Cleanout Frame and Cover**	**(EA)**
Pay Item:	**345.6.2 Adjust Stormdrain Manhole Frame and Add Cover**	**(EA)**

350 REMOVAL OF EXISTING IMPROVEMENTS

REPLACE in its entirety with the following:

350.1 Description:

The work under this section shall consist of the removal, wholly or in part, and satisfactory disposal of all structures and obstructions within the right-of-way which have not been designated on the project plans or specified in the Special Provisions to remain, except for those structures and obstructions which are to be

removed and disposed of under other items of work in the contract. The work shall also include salvaging of designated materials and backfilling the resulting cavities.

Existing structures, pavement, sidewalks, curbs, gutters and other existing improvements which are to become an integral part of the planned improvements shall remain even though not specifically noted.

Materials removed and not designated to be salvaged or incorporated into the work shall become the property of the contractor.

All existing utilities not designated for removal shall remain in place and be protected against damage.

The removal of existing improvements shall be conducted in such a manner as not to injure active utilities or any portion of the improvement that is to remain in place.

350.2 Construction Methods:

Bridges, culverts and other structures in use by traffic shall not be removed until satisfactory arrangements have been made to accommodate the traffic. Blasting or other operations necessary for the removal of an existing structure or obstruction, which may damage new construction, shall be completed prior to commencing the new work.

Items designated to be salvaged shall be carefully stockpiled or stored by the contractor at locations designated in the Special Provisions or as directed by the Engineer.

Items which are to be salvaged or reused in the new construction and are damaged or destroyed as a result of the contractor's operations shall be repaired or replaced by the contractor at no additional cost to the Town.

Holes, cavities, trenches and depressions resulting from the removal of structures or obstructions, except in areas to be excavated, shall be backfilled with suitable material which shall be compacted to a density of not less than 95 percent of the maximum density as determined in accordance with the requirements of Section 601 or Section 211. Backfill of all excavated areas below structures shall be in accordance with Section 206.4.

350.3 Removal of Pavement:

F. Portland Cement Concrete Pavement:

Unless otherwise specified in the Special Provisions, concrete pavement designated on the project plans to be removed shall be removed from the job site and disposed of at a site secured by the contractor.

Where new construct ion is to join the existing concrete pavement, the pavement shall be saw cut to a true line perpendicular to the centerline of the pavement with straight vertical edges free from irregularities.

G. Bituminous Pavement:

Unless milling is noted on the plans or is a bid item, all bituminous pavement designated on the project plans to be removed, shall be completely removed down to the underlying base course or subgrade. The pavement material shall be removed and disposed of at a site secured by the contractor.

Where new construction is to join existing bituminous pavement, the existing pavement shall be cut to a true line perpendicular to the centerline of the pavement with straight vertical edges free from irregularities. The removal of asphaltic concrete at the approaches to structures shall be accomplished in a manner approved by the Engineer.

Measurement and Payment:

The unit bid price for removal of asphalt pavement shall be made per square yard.

Pay Item: 350.3.1 Remove Existing Asphalt Pavement (SY)

350.4 Removal of Block Walls:

A. The existing block wall to be removed shall be salvaged and stored on-site for reuse unless otherwise specified on the plans.

Measurement and Payment:

The unit price bid removal and salvaging of the existing block wall shall be per linear foot.

Pay Item: 350.3.1 Remove and Salvage Existing Block Wall (LF)

350.7 Removal of Signs and Delineators:

Street signs, traffic control signs, traffic signal material and control devices shall be removed as designated on project drawings, salvaged and delivered to the Town at the site designated by the Engineer. The contractor shall dismantle the sign panels and delineators and remove the sign posts from the ground in such a manner as to prevent damage to the posts. The contractor shall not remove the existing signs prior to the completion of the new sign installation, but shall remove them within five working days after the installation of the new signs or as directed by the Engineer.

350.8 Removal of Fence:

All fence to be removed, shall become the property of the contractor unless it can be salvaged for new location as shown on the project plans. All fence, including gates shall be salvaged (or removed) in accordance with the requirements of Subsection 202-3.01.

When designated for salvage, fence and gates shall be carefully dismantled and neatly rolled or coiled. Posts shall be cleaned of all concrete and dirt.

In areas where new fence or relocated fence is to be installed, Contractor shall perform the removals in such a manner as to prevent the escape of any livestock and/or domestic pets, including the placement and removal of temporary fence when necessary.

Measurement and Payment:

Payment shall be made based on the unit price bid for removal of existing fence per linear foot as determined by the CONTRACTOR and shall include any replaced and salvaged fence for reuse in new fence location.

Pay Item: 350.8.1 Remove Existing 6'- High Fence (LF)

400 RIGHT-OF-WAY AND TRAFFIC CONTROL

401 TRAFFIC CONTROL

401.1 Description:

REPLACE with the following:

Traffic control during construction shall be performed in accordance with MAG Section 401 and the Manual on Uniform Traffic Control Devices for Streets and Highways, US Department of Transportation Federal Highway Administration, latest edition with the latest revisions, Arizona Department of Transportation Traffic Control Manual, the project plans, and as stated herein.

(A) Prior to beginning the project, Contractor shall submit for approval a Traffic Control Plan for the entire project. He must obtain approval from the Engineer for the Traffic Control Plan and Schedule prior to any construction. Contractor shall submit the Traffic Control Plan to the Director of Public Works at or before the project preconstruction conference.

(B) Written notice shall be given to the Engineer or his representative on the job 48 hours prior to any changes in detours or routes of access. The notice shall give specific details with maps showing the access to all residences and businesses affected by the project.

(C) The Police and Fire Departments shall be continually updated on access routes along and through the site during construction.

401.2 Traffic Control Devices: ADD the following:

(C) All traffic control devices required for the project shall be the responsibility of Contractor.

(D) When required to cross, obstruct, or close a street, traffic way, or sidewalk for a short duration that is approved by the Director of Public Works, the Contractor shall provide and maintain suitable bridges, detours or other approved temporary means for the accommodation of vehicular and pedestrian traffic.

(E) When traffic conditions at the construction site warrant the use of certified police personnel to direct traffic, arrangements shall be made with the Town of Chino Valley Police Department, Yavapai County, or Department of Public Safety for off-duty officers.

401.6 Measurement: DELETE in its entirety

401.7 Payment: DELETE in its entirety

ADD the following:

401.6 Measurement and Payment:

Payment for traffic control shall be at the applicable unit price bid in the Contract Documents.

1. Preparation of traffic control plan shall be inclusive of all submittals, reviews and if needed, re-submittals.

2. Flaggers for directing traffic.

3. Barricades and storage shall be included in the bid item and shall be inclusive of all temporary signs and devices in the traffic control plan and as required by the MUTCD and the Engineer.

4. Incidental traffic related items shall include all other pertinent tools, equipment, devices and or work required to provide safe and effective traffic control in accordance with the approved traffic control plan, the MUTCD and the Engineer.

403.1 PERMANENT SIGNING, SIGN POSTS AND DELINEATORS

Work under this item shall be done in accordance with the project drawings and requirement of the Manual on Uniform Traffic Control Devices (MUTCD), MAG Detail 131, and ADOT Signing and Marking Standards.

A. General Signing Guidelines

1. All signing shall conform to the most recent editions of the publications shown above with regard to size, color, shape and placement.
2. All signs shall be new (other than those shown to be relocated). All new and relocated signs shall be mounted on new posts with new hardware. Signs designed for installation on existing street light poles shall be mounted with new hardware.
3. Traffic sign dimensions, colors and lettering shall conform to the latest MUTCD specifications. Traffic sign size shall be standard unless otherwise specified here or on the plans.
4. All non mountable curb section signs shall be located at least two (2') feet from the curb face to the nearest edge of the sign. All other roadways signs shall be mounted from six (6') feet to twelve (12') feet from the edge of the pavement to the nearest edge of the sign, unless otherwise noted in the sign summary table or on the plans.
5. Roadways with guardrail signs shall be located at least six (6') feet from the face of the guard rail to the nearest edge of the sign, unless otherwise noted in the sign summary table or on the plans.
6. Sign location shall be coordinated with landscaping plans to ensure sign visibility per AASHTO standards.
7. Signs shall be mounted on street light poles whenever feasible.
8. All signs installed in areas where parking or pedestrian movements occur shall typically be erected at a height of seven (7') feet above the normal edge of pavement or sidewalk to the bottom of the sign or to the lowest sign in a multiple sign installation assembly with the following exceptions:
    a. The height to the bottom of a secondary sign mounted below another sign may be up to two (2') feet less than the height specified above.
    b. If the bottom of a secondary sign that is mounted below another sign is mounted lower than 7 feet above a pedestrian sidewalk or pathway, the secondary sign shall not project more than four (4") inches into the pedestrian facility.
    c. Object markers shall be installed at least four (4') feet above the normal edge of pavement.
9. All R1-1 "STOP" signs and pedestrian warning signs shall be reflective with all reflective sheeting material to be diamond grade.
10. All other signs are to be reflective with all reflective sheeting material to be high intensity prismatic meeting or exceeding ASTM 4956-04.
11. Sign blanks shall be 5052-H38 alloy treated aluminum with Alodine 1200 conversion coating, 0.080" thick with rounded corners.

12. Stop signs are to be shown at all local street intersections within a subdivision unless an engineering study shows that no control or yield control is warranted. Stop signs shall be designed and shown at all collector and non signalized arterial street intersections.

13. Stop signs and Yield signs shall be a minimum of thirty (30") inches in width. When specified by the City Traffic Engineer thirty-six (36") inch and/or forty-eight (48") inch signs may be required on major collectors and arterial streets.

B. SIGN POSTS

1. Sign posts shall conform to the Quad City Standard Detail 131Q.

2. For new construction the Telspar, Uni-strut or approved equal twelve gauge, galvanized steel, four (4) sided perforated square tubing is required. Two (2") inch tubing shall be used for all signs

3. The post shall be tall enough to provide the minimum clearances specified in section A (8).

4. The base and sleeve system for the sign shall be anchored in a minimum of a twenty-four (24") inch deep, twelve (12") inch diameter foundation of concrete. The base shall have a breakaway slip base system. The exposed post from the base shall be four (4") inches to six (6") inches high.

5. Signs over forty-eight (48") inches wide shall be mounted on two (2), two and one-half (2½") inch posts with a horizontal support frame.

6. All station locations are approximate. The Contractor shall verify actual sign locations with the Engineer prior to the installation of all signs.

7. The Contractor shall verify post lengths and elevations prior to installation.

Measurement and Payment:
Measurement and payment shall be the unit price per each for posts and delineators and per square foot for sign panels, complete and in place.

Pay Item: 403.1.1 Sign Posts and Delineators

420 CHAIN LINK FENCES

420.2 Materials:

ADD the following:

Chain-linked fence materials and appurtenances shall conform to the requirements of ADOT Standard Detail 12.20, Type 1, Chain link fence and Section 902, ADOT Standard Specifications.

420.5 Payment:

ADD the following:

The price bids for 6'-high and 4'-high chain link fence shall include full compensation for furnishing all labor, materials, tools, and equipment, and doing all the work involved in constructing the fence complete in place as specified on the plans, and in the special provisions. A separate price bid for the swinging gate shall include the cost of manufacturing and installing the gate.

Pay Item: 420.5.1 6'-High Chain link Fence (LF)

Pay Item: 420.5.2 4'-High Chain link Fence (LF)

Pay Item: 420.5.3 24' Swinging Double Cantilever Gate Assembly (EA)

520 STEEL AND ALUMINUM HANDRAILS

520.2 Fabrication

ADD the following:

Railing panels shall be fabricated with one additional rail at the bottom that will serve as a barrier for the ADA-compliant ramps. The clear space between the bottom rail and the sidewalk shall be no more than 4"as described in Section 405.9.2, 2010 ADA Standards For Accessible Design.

ADD the following:

520.5 Payment

The price paid per linear foot for handrailing shall include full compensation for furnishing all labor, materials, tools, and equipment and doing all work involved in constructing the railing complete in place as shown on the plans and specified herein.

Pay Item: 520.5.1 Handrail

601 TRENCH EXCAVATION, BACKFILLING AND COMPACTION

601.1 Description: ADD the following:

A. Unless specifically identified, no investigation of subsurface soil conditions for water or sewer main installation has been made for project limits.

B. Excavation, backfilling and compaction shall be in accordance with this Section and QC Standard Details as noted.

C. All water encountered during the work shall be disposed of by the Contractor in a manner such that it will not damage public or private property or create a public nuisance or health problem. The costs of furnishing pumps, pipes, special bedding, and over excavation as required to provide a stable foundation, and other equipment and materials shall be incidental to the work in accordance with Section 200.1 of these specifications.

601.2.3 Trench Grade: REPLACE the first paragraph with the following:

All construction staking shall be in accordance with Specification Section 105.8.

REPLACE the second paragraph with the following:

For all pipe, the Contractor shall excavate for and provide an initial granular bedding at least 6 inches thick. This bedding material shall be placed at a uniform density with minimum compaction and fine graded as specified below.

601.2.5 Over Excavation: REPLACE the second paragraph with the following:

Unauthorized excavation below the specified grade line shall be refilled at the Contractor's expense with bedding material compacted to a uniform density of not less than 95 percent of the maximum density as determined by AASHTO T-99 and T-191 or ASTMD6938. When AASHTO T-99, method A or B, and T-191 are used for density determination, ARIZ 227c will be used for rock correction.

ADD the following Section:

No separate measurement or payment shall be made for trench excavation, backfilling, compaction, or placement of temporary pavement. This work shall be included in the respective unit bid price for water, sewer, or storm main and lateral construction.

Rock excavation within the roadway excavation limits shall not be measured separately. It will be included in Roadway Excavation. No separate payment will be made for roadway rock excavation. It shall be combined as one item under roadway excavation.

Rock Excavation within structural excavation limits shall not be measured separately. It will be considered incidental and shall be included in the appropriate bid item.

Rock excavation within trenches shall be measured in accordance with the following:

a. Width of trench for rock excavation shall be based on pipe outside diameter plus 24 inches.

b. Depth for rock excavation shall be actual depth from top of rock to bottom of rock, or to bottom of normal bedding section, whichever depth occurs first.

601.8 Payment:

No separate payment shall be made for trenching. This work shall be considered incidental and included in the unit price bid for construction or installation of the appropriate contract pay items.

610 WATER LINE CONSTRUCTION

610.9

REPLACE with the following:

a. The Contractor shall furnish all labor, materials, and equipment necessary to relocate fire hydrants to locations shown on the plans in accordance with the QC Standard Details and special provisions.
b. If paint is chipped, scuffed, or otherwise damaged during handling and installation, the Contractor shall touch up such spots as may be designated by the Engineer.
c. All hydrants must be flushed and left in good working condition with the control valve open.

ADD the following:

610.10 Measurement & Payment

The price bid for fire hydrant relocation will be a lump sum amount determined by the contractor and will include all work necessary for moving the fire hydrant including backfilling excavated trenches and surface replacement.

Pay Item: 610.10.1 Fire Hydrant Relocation (LS)

700 MATERIALS

710 Asphalt Concrete

SECTION 710.2.1 Asphalt Binder: shall be deleted and replaced as follows:

a. The asphalt binder shall be a Performance Grade (PG) PG 64-22 Asphalt conforming to the requirements of AASHTO M 320-09 Performance-Graded Asphalt Binder. The binder grade shall be as specified in the contract documents or as directed by the Engineer.

b. The Engineer may review a request by the Contractor to change from a PG 64-22 binder grade to a PG 64-16 grade. The owner may require the Contractor to provide supporting justification and/or data for changing the grade of binder from PG 64-22 to PG 64-16.

SECTION 710.3.2 Mix Design Criteria: add the following:

a. The intent of this supplement is to use only 1/2 inch or 3/4 inch Marshall or Gyratory Mix Designs within the specification unless specifically called out in the project specifications.

b. The asphalt mix design shall be for high traffic volume, unless otherwise specified.

SECTION 710.3.2.1 Marshall Mix Design: make the following change:

a. In Table 710-3 change the Tensile Strength Ratio minimum percent requirement from 65 to 75. A tensile strength ratio of 75 percent may require more than one percent mineral admixture.