SECTION 704

BASE AGGREGATES

~~01~~SCOPE

704.01.01 MATERIALS COVERED

A. This specification covers the quality and size of mineral materials used in base courses, trench backfill, or other construction locations.

B. The term Source shall mean any of the following:

1. ~~a)~~ A permanent commercial location.
2. ~~b)~~ Contractor manufactured material either commercial or on-site.

704.01.02 REFERENCE CODES AND STANDARDS:

~~a)Uniform Standard Specifications for Public Works' Construction Off-site Improvements, Clark County Area Nevada that will henceforth be referred to as "USS" Specifications and Drawings~~

~~b)Contract Special Provisions and Drawings and Agency Policies and Procedures~~

~~c)NRS. 338.176, NAC 625.550~~

~~d)Most current ASTM, AASHTO, ACI or NDOT test & inspection procedures~~

A. ~~e)a)~~ Related Interagency Quality Assurance Committee (IQAC) procedures at:

www.accessclarkcounty.com/depts/public_works/Pages/iqac.aspx (IQAC website)

REQUIREMENTS

704.02.01 GENERAL

A. The mineral aggregate shall be the crushed and screened product from approved aggregate deposits, except that Type I aggregate base need not be crushed. The Engineer reserves the right to prohibit the use of aggregates from any source when:

1. ~~(a)~~ The character of the material is such, in the opinion of the Engineer, as to make improbable the furnishing of aggregates conforming to the requirements of these specifications.
2. ~~(b)~~ The character of the material is such, in the opinion of the Engineer, that undue additional costs may be accrued by the Contracting Agency.

B. The mineral aggregate shall be clean, hard, durable, free from any frozen lumps, deleterious matter, and harmful adherent coatings. Crushed ~~p~~Portland cement concrete and asphaltic concrete pavement will be permitted, subject to the requirements of these specifications. No materials subject to regulation as hazardous wastes as defined in the Nevada Administrative Code 444.8565 shall be allowed.

704.02.02 IQAC SOURCE QUALIFICATION

A. For expediting of material source and type approvals, ~~and at the opinion of the Source, a website was established for the posting of~~ a listing of qualified materials ~~at:~~has been provided on the IQAC website.

www.accessclarkcounty.com/depts/public_works/Pages/iqac.aspx

B. Any listed material is considered qualified for use without a material testing submittal. However, this does not relieve the cContractor of project testing of the material as required in these US specifications.

C. The IQAC posted materials as indicated in Table 1 are subject to re-approval as prescribed in Subsection 704.04.033, "Source Deficiencies," annually for continued posting on the Interagency Quality Assurance Committee (IQAC) website. The procedure is annotated in Subsection 704.04.02, "Source Quality Control Testing RequirementsIQAC Annual Material Prequalification."

Table 1 – IQAC Materials Tthat Require Annual Qualification

Type II Aggregate Base
Type II Controlled Low Strength Material (CLSM)

Table 2 – Materials Tthat Require Six6-Month Qualification

Type II blended with recycled Portland Cement Concrete

704.02.03 DEFICIENCIES

A. If the product of a deposit is deficient in material passing the No. l16 sieve, filler from other approved deposits may be added at the crushing and screening plants. This is not to be construed as a waiver of any of the requirements contained herein.

03PHYSICAL PROPERTIES AND TESTS

704.03.01 PLASTIC LIMITS

A. When specified, aggregates shall conform to the applicable requirements of the following table:

Table 3 – Plastic Limits

Percentage by Weight Passing 200 Sieve	Plasticity Index Maximum
0.1 to 3.0	15
3.1 to 4.0	12
4.1 to 5.0	9
5.1 to 8.0	6
8.1 to 11.0	4
11.1 to 15.0	3

704.03.02 DRAIN BACKFILL

A. This aggregate shall conform to one of the following grading requirements:

Table 4 – Drain Rock Gradation Acceptance Limits

Sieve Sizes	Percentage by Dry Weight Passing Sieve		
	3-Inch Size	2-Inch Size	3/4-Inch Size
3 Inch-Inch	100	--	--
2 Inch-Inch	90-100	100	--
1-1/2 Inch-Inch	70-100	95-100	--
3/4 Inch-Inch	0-50	50-100	100

Table 4 – Drain Rock Gradation Acceptance Limits

Sieve Sizes	Percentage by Dry Weight Passing Sieve		
	3 Inch Size	2 Inch Size	3/4 Inch Size
1/2 Inch	--	--	95-100
3/8 Inch	0-10	0-55	70-100
No. 4	--	0-25	0-70
No. 8	0-5	0-15	--
No. 200	0-3	0-3	0-3

B. Unless otherwise specified in the contract documents, the Contractor may use any of the sizes.

Table 5 – Drain Backfill Durability Acceptance Limits

Source Requirement Test	3 Inch Size	2 Inch Size	3/4 Inch Size
Percentage of Wear (500 Rev.)	45% Maximum	45% Maximum	45% Maximum

704.03.03 TYPE I AGGREGATE BASE

A. This aggregate shall conform to one of the following requirements:

Table 6 – Type I Gradation Acceptance Limits

Sieve Sizes	Percentage by Dry Weight Passing Sieve	
	3 Inch Size	2 Inch Size
3 Inch	100	--
2 Inch	90-100	100
1-1/2 Inch	--	95-100
1 Inch	--	70-90
No. 4	30-65	30-65
No. 16	15-40	15-40
No. 200	2-12	2-12

Table 7 – Type I Acceptance Limits

Project Control Test	Test Method	Requirements
Sieve Analysis	AASHTO T27	Table 7 6
Sampling Aggregate from Calibrated Conveyor stream or belt cut[1]	AASHTO T2	--
Plasticity Index	AASHTO T90[2]	Table 1 3
Liquid Limit	AASHTO T89	35 Maximum
Resistance (R Value)	ASTM D2844	60 Minimum
Percentage of Wear (500 Rev.)	AASHTO T96	45% Maximum

704.03.04 TYPE II AGGREGATE BASE

A. This aggregate shall conform to the following requirements:

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[1] Sampling from a stockpile permitted only after approval of the Engineer; the conveyor device shall be calibrated every three (3) months and recent record attached to sample document.

[2] Test specimens shall be prepared following the dry preparation procedure AASHTO T87.

Table 8 – Type II Gradation Acceptance Limits

Sieve Sizes	Percentage by Dry Weight Passing Sieve
1 ~~Inch~~ Inch	100
3/4 ~~Inch~~ Inch	90-100
No. 4	35-65
No. 16	15-40
No. 200	2-10

Table 9 – Type II Acceptance Limits

Quality Control Test	Test Method	Requirements
Sieve Analysis	AASHTO T27	Table ~~7~~8
Sampling Aggregate from Calibrated Conveyor stream or belt cut[3]	AASHTO T2	--
Fractured Faces	Nev. T230	70% Minimum
Plasticity Index	AASHTO T90[4]	Table ~~1~~3
Liquid Limit	AASHTO T89	35 Maximum
Resistance (R Value) or Resilient Modulus	ASTM D2844	78 Minimum for road base
	AASHTO T307	35,000 psi minimum for road base
Percentage of Wear (500 Rev.)	AASHTO T96	45% Maximum
Total Available Water Soluble Sulfates[5]	AWWA 3500-NaD AWWA 4550 E	Less than 0.3% by dry weight of soil.

B. Type II Plantmix Aggregate as specified in Subsection 705.03.01, "Plantmix and Roadmix Bituminous Base and Surface Aggregate, Types Two Fine and Coarse and Three," may be used in lieu of Type II Base Aggregate as specified above.

704.03.05 TYPE III AGGREGATE

A. The soluble sulfate content shall not exceed 0.3 percent by dry weight of soil. The mineral shall be clean, hard, durable, free from any frozen lumps, deleterious matter, and harmful coatings. In addition thereto, the material shall conform to the gradation requirements of Type II aggregate base ~~as per~~in accordance with Subsection 704.03.04, "Type II Aggregate Base," with the following property testing~~.~~:

Table 10 – Type III Acceptance Limits

Quality Control Test	Test Method	Requirements
Sieve Analysis	AASHTO T27	~~704.03.05~~Table 8
Sampling Aggregate from Calibrated Conveyor stream of belt cut[6]	AASHTO T2	--
Plasticity Index	AASHTO T 90[7]	Table ~~1~~3
Liquid Limit	AASHTO T 89	35 Maximum

[3] Sampling from a stockpile permitted only after approval of the Engineer; the conveyor device shall be calibrated every ~~three (~~3~~)~~ months and ~~recent~~ record attached to sample document.
[4] Test specimens shall be prepared following the dry preparation procedure AASHTO T87.
[5] Required only for placement around waterline pipe.
[6] Sampling from a stockpile permitted only after approval of the Engineer.
[7] Test specimens shall be prepared following the dry preparation procedure AASHTO T87.

Table 10 – Type III Acceptance Limits

Quality Control Test	Test Method	Requirements
No. 200 Sieve	AASHTO T 27	2-15%
Total Available Water Soluble Sulfates[8]	AWWA 3500-NaD AWWA 4550 E	Less than 0.3% by dry weight of soil

704.03.06 CRUSHED ROCK

A. Crushed rock shall be the product from approved aggregate deposits and shall only be used as directed by the ~~governing~~Contracting ~~a~~Agency. The mineral aggregate shall be clean, hard, durable, free from any frozen lumps, deleterious matter, and harmful coatings. In addition thereto, the material shall conform to the following gradation requirements:

Table 11 – Crushed Rock Gradation Acceptance Limits

Sieve Sizes	Percentage of Weight Passing
3/8~~"~~-Inch	100
No. 4	20-80
No. 200	0-15

Table 12 – Crushed Rock Acceptance Limits

Quality Control Test	Test Method	Requirements
Sieve Analysis	AASHTO T 27	~~704.03.05~~Table 11
Sampling Aggregate From Calibrated Conveyor stream of belt cut[9]	AASHTO T 2	----------
Fractured Faces	Nev. T 230	90% Minimum
Plasticity Index	AASHTO T 90[10]	Table ~~1~~3
Liquid Limit	AASHTO T 89	35 Maximum
Percentage of Wear (500 Rev.)	AASHTO T 96	45% Maximum
Total Available Water Soluble Sulfates[11]	AWWA 3500-NaD AWWA 4550 E	Less than 0.3% by dry weight of soil

704.03.07 CONTROLLED LOW STRENGTH MATERIAL (CLSM)

A. CLSM shall consist of a low-strength, self-leveling concrete material composed of various combinations of cement, fly ash, aggregate, water, and chemical admixtures. ~~It~~CLSM shall have a design compressive strength at an age of ~~twenty eight (~~28~~)~~ days within the ranges required ~~in the table~~ below for the specified class:

1. ~~a)~~ Class I - (50 to 150 psi ~~(345 kPa to 1.03 MPa)~~): Specified where the maximum strength is of primary concern due to the desire to have material that can be excavated in the future with relative ease.

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[8] Required only for placement around waterline pipe.

[9] Sampling from a stockpile permitted only after approval of the Engineer; the conveyor device shall be calibrated every ~~three (~~3~~)~~ months and record attached to sample document.

[10] Test specimens shall be prepared following the dry preparation procedure AASHTO T87.

[11] Required only for placement around waterline pipe.

2. ~~b)~~ Class II – (100 to 300 psi ~~(1.03 Mpa to 2.07 Mpa)~~): Specified where the minimum strength is of primary concern for pipe support.

3. ~~c)~~ Class Special (as shown in project specifications or drawings): Specified where project unique criteria, such as erosion control, are the primary concern.

4. ~~d)~~ Class I and II CLSM:

   a. ~~–~~The mix shall result in a product having a slump in the range of ~~six (~~6~~)~~ to ~~ten (~~10~~)~~ inches ~~(150 to 250mm)~~ at the time of placement.

   b. ~~–~~The Source of Contractor shall submit a mix design for approval by the ~~e~~Engineer prior to placement.

   c. ~~-~~The mix design shall be supported by laboratory test data verifying the potential of the mix to comply with the requirements for these specifications.

B. CLSM ~~wi~~shall be proportioned in general compliance with the methods outlined in ACI 211.1-91, ~~R~~re~~-~~approved 1997, "Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete." The following materials shall be used:

1. ~~(a)~~ Cement shall meet the requirements of Section 701, "~~Portland~~ Hydraulic Cement.". ~~-~~ Type V cement shall be used unless otherwise specified.

2. ~~(b)~~ Fly ash shall meet the requirements of Section 729, "Fly Ash." Fly ash not meeting the requirements of Section 729, "Fly Ash," may be used if prior testing indicates to the satisfaction of the Engineer the ability of the CLSM with this fly ash to meet these specifications.

3. ~~(c)~~ Water shall meet the requirements of Section 722, "Water."

4. ~~(d)~~ Aggregates shall have ~~one hundred (~~100~~)~~ percent by total weight of the aggregate passing the ~~one (~~1~~)~~ inch ~~(25 mm)~~ screen and ~~fifthteen (~~15~~)~~ percent or less passing the No. 200 sieve. The aggregate shall meet the plastic limits requirements of Subsection 704.~~02.~~03.01, "Plastic Limits."

5. ~~(e)~~ Chemical admixtures shall meet the requirements of Subsection 702.03.0~~3~~2, "Air-Entraining Admixtures," and Subsection 702.03.0~~4~~3, "Admixtures Other Than Air-Entraining."

   a. ~~–~~Other admixtures specifically approved for CLSM may be used.

   b. ~~–~~All materials proportions shall be measured and the CLSM mixed in accordance with ~~the requirements of~~ Section 501, "Portland Cement Concrete."

   c. ~~–~~Other proportion measuring and CLSM mixing systems are acceptable, if control can be demonstrated to be satisfactory to the Engineer.

   d. ~~–~~These other methods include continuous feed, volumetric measurement of proportions, and pug mill and continuous mixing plants.

C. If the CLSM mix does not produce a flowable consistency or exhibits excessive bleeding, the mix shall be adjusted.

1. ~~–~~Excessive bleeding is considered to occur when water flows from the CLSM in a manner that causes disturbance or displacement of the exposed surface of the CLSM.

2. –Mix adjustments shall include, but not be limited to: aggregate gradation, cementitious material content, admixtures, water content, or a combination of adjustments.

D. The testing procedures for approval of CLSM mix designs by the IQAC or if required in the contract special provisions ~~requirements~~shall be as follows~~,~~:

1. –T~~t~~he material Source, which may be the Contractor, shall cast one set of six each ~~four~~4 -~~-~~inch diameter by ~~eight (~~8~~)~~ -~~-~~inch high ~~(600 millimeter by 1200 millimeter)~~ specimens in split cylinders.

2. –No rodding method shall be used for the placement of the CLSM into the cylinders.

3. –All field curing and environmental protection shall conform to ~~the~~ AASHTO T23, "Test Methods for Making and Curing Concrete Test Specimens in the Field."

4. -The cast specimens shall then be laboratory-cured in a ~~one hundred (~~100~~)~~ percent humidity, temperature-controlled concrete cure room (cure tanks shall not be used).

5. –Compressive strength testing shall be performed in accordance with AASHTO T22 and T23 with samples from each set at the ages of ~~seven (~~7~~)~~, ~~twenty-eight (~~28~~)~~, and ~~ninety (~~90~~)~~ days.

6. –A report of the results shall be submitted to the Engineer.

E. Class Special: ~~t~~The compressive strength testing procedures shall be as specified in the project specifications or on the project drawings.

F. **Bonded Aggregate Fill (BAF):**

1. This material is a crushed rock-cement slurry consistency.

2. –BAF may be used only with the prior approval of the Engineer.

3. –The material Source shall have it designed under the responsible charge of a Nevada PE, ~~which~~ and the mix shall consist of a ~~gap~~ gap-graded ~~one half (½)~~ 1/2-inch maximum nominal size crushed gravel ~~bounded by a~~with a ~~one (~~1~~)~~ -~~-~~sack minimum Type V cement and water slurry.

4. –The material shall be plant mixed and placed from a truck.

5. –Due to the gap-graded nature of the material, it shall not be used where water drainage is an issue and in all cases shall use dams ~~at each manhole~~ as specified in Subsection 208.03.~~01~~16, "~~Trench Excavation, General~~Drain Backfill."

6. –This procedure does not require concrete cylinder break testing; however, it does require a visual inspection and shall be documented in a report to the Engineer summarizing the inspection to be performed as follows:

a. After the first batch is placed and initially cured, excavate to the bottom of the pipe or structure.

b. –If a self-supporting vertical face is maintained, the material is functioning properly.

704.03.08 AGGREGATE FOR PORTLAND CEMENT TREATED BASE

A. This aggregate shall conform to the following requirements:

Table 13 – Portland Cement Treated Base Gradation Acceptance Limits

Sieve Sizes	Percentage by Dry Weight Passing Sieve
3 ~~Inch~~ Inch	100
2 ~~Inch~~ Inch	90-100
No. 4	35-75
No. 200	20

Table 14 – Portland Cement Treated Base Acceptance Limits

Test	Test Method	Requirements
Sieve Analysis	AASHTO T27	Table ~~14~~13
Sampling Aggregate from Calibrated Conveyor stream or belt cut[12]	AASHTO T2	1/1000 Tons per day or portion thereof
Percentage of Wear (500 Rev.)	AASHTO T96	45% Maximum

B. Aggregate for cement or lime treated bases will be sampled as follows:

1. ~~(a)~~Where the material is being mixed at a stationary plant, samples will be taken from the conveyors just prior to delivery to the mixer and prior to adding lime or cement.

2. ~~(b)~~Where material is being mixed on the roadbed, samples will be taken after the material has been placed on the roadbed and processed and prior to adding cement or lime.

704.03.09 SHOULDERING MATERIAL

A. This aggregate shall conform to the following requirements:

Table 15 – Shouldering Material Acceptance Limits

Sieve Sizes	Percentage by Dry Weight Passing Sieve
1 ~~Inch~~ Inch	100
3/4 ~~Inch~~ Inch	90-100
No. 4	35-65
No. 16	15-40
No. 200	2-6

SOURCE QUALITY CONTROL TESTING

704.04.01 GENERAL

A. There are ~~two (~~2~~)~~ testing aspects to Source material acceptance.

1. ~~(a)~~Testing by the Source for annual posting on the IQAC ~~web page~~website of qualified materials.

2. ~~(b)~~Contractor project quality control Source testing for non-qualified materials.

[12] Sampling from a stockpile permitted only after approval of the Engineer. The conveyor device shall be calibrated every ~~three (~~3~~)~~ months and record attached to sample document.

B. The acceptance of the Source material shall be at the production plant while the acceptance of the Contractor-placed material is at the project site.

C. Any laboratory submitting to an agency shall be R-18 AASHTO accredited in the appropriate test method perin accordance with Table 1316, "Source Quality Control Testing Requirements," where applicable and testing reviewed and stamped by a Nevada professional engineer who has responsible charge of the work. The use of a Pprofessional Eengineer by the Source could be the Source staff engineer or third party, however but the Pprofessional Eengineer must have responsible charge of the testing and/or inspection.

704.04.02 IQAC ANNUAL MATERIAL PREQUALIFICATION

A. Each individual location or "pit" shall be referred to as a "Source." The responsibility for testing and inspection is the material Source. Material shall be tested, inspected, and certified per thein accordance with Table 13 16 "Source Quality Control Testing Requirements." The Source shall submit to the IQAC agency engineer assigned for that Source. The reviewing agency is listed on the web IQAC website page next to the Source material at:.

B. Test data shall be included with the certifying document.

C. The maximum qualification period is one (1) year, or six (6) months for aggregate blended with crushed concrete. The entire qualification process mustshall be completed, in accordance with the sections above, prior to the first day of April., or For for aggregates blended with crushed concrete, the first day of April and the first day of October for of each year. This includes, but is not limited to, submittal, agency review, all required retesting, and qualification from the IQAC member.

704.04.03 NON-PREQUALIFIED MATERIALS

A. If the material is not posted on the IQAC web page, the Source may elect to submit non-prequalified material to the Engineer for approval prior to use that complies towith the above noted specification and mustshall have been tested within sixty (60) days of the intended use.

704.04.04 SUBMITTAL

A. All tests specified in this section shall be performed.

1. The report(s) shall include any graphical representation of plotted data such as the R-value or the Proctor value(s) along with the pit name and location.

2. The most current ASTM, AASHTO, NDOT, and AWWA methods shall be used when performing the tests.

B. All samples shall be "cut" from the "belt.". When circumstances do not allow for sampling during production, the Source mustshall coordinate with the Engineer to identify an alternative plan for sampling.

C. IQAC Annual Submittal

1. For the purposes for theof IQAC submittal, the Engineer is the IQAC reviewing agency as noted on the IQAC web page.

2. For the annual submittal by the supplier, the material to be approved for use as aggregate shall be obtained and "split" by an AASHTO accredited laboratory with the Engineer present at the time the sample is obtained with the sample large enough for a full suite of testing for the Source and Engineer.

3. –The Engineer shall be notified a minimum of ~~forty eight (~~48~~)~~ hours prior to obtaining the sample.

4. –If the Engineer is not present during the sampling of the material, the results for that sample will not be accepted.

5. –Sampling ~~must~~shall be performed during normal working hours for the Engineer.

6. –If the Source laboratory results are in compliance with the standard specifications, Source shall submit the test report to the Engineer within ~~twenty one (~~21~~)~~ days of sampling requesting the review and approval of the materials for the proposed use of the material.

7. Notification by the Source of samples not in compliance with the standard specifications is requested but not required. Samples without notification or a qualification submittal within the ~~twenty one (~~21~~)~~-day period will be assumed by the IQAC to be outside the standard specifications.

8. The agency Engineer for a particular pit may accommodate minor adjustments for "tuning" of an operation. This courtesy shall not be extended during the qualification process.

D. Non-prequalified materials (materials not posted on the IQAC list)

1. The material to be approved for use as aggregate shall be obtained and "split" by an AASHTO accredited laboratory with the Engineer present at the time the sample is obtained with the sample large enough for a full suite of testing for the Source and Engineer.

   a. -The Engineer shall be notified a minimum of ~~forty eight (~~48~~)~~ hours prior to obtaining the sample.

   b. -If the Engineer is not present during the sampling of the material, the results for that sample will not be accepted.

   c. -Sampling ~~must~~shall be performed during normal working hours for the Engineer.

   d. -If the Source laboratory results are in compliance with the standard specifications, the Source shall submit the test report to the Engineer within ~~twenty one (~~21~~)~~ days of sampling with a letter requesting the review and approval of the materials report for the proposed use of the material.

2. Notification by the Source of samples not in compliance with the standard specifications is requested but not required.

   a. –Samples without notification or a qualification submittal within the ~~twenty one (~~21~~)~~-day period will be assumed by the IQAC to be outside the standard specifications.

   b. –The Source shall submit the material test report to the Engineer~~, within between sixty (~~no earlier than 60~~) to~~ days ~~or~~and no later than ~~fourteen (~~14~~)~~ days prior to use~~, the material test report~~.

3. The qualification is for one project only.

704.04.05 REPORT FORMAT

A. The report ~~must~~shall be prepared ~~by~~ and stamped by, or under the direction of, a ~~P~~professional ~~E~~engineer registered in the ~~S~~state of Nevada. The report shall be on the

standard IQAC[13] form and shall include the pit name and location. The report shall include the following:

1. ~~(a)~~Recommendation by the Source Professional Engineer.

2. ~~(b)~~The testing results ~~per~~ in accordance with the appropriate Table ~~13~~ 16, "Source Quality Control Testing Requirements," test methods and reporting requirements, along with any graphs and charts.

B. When "no exceptions" are taken, a conditional posting on the web site will be provided by the IQAC within ~~ten (~~10~~)~~ days of the receipt of the submittal.

C. Discrepancies between test results will be reviewed on a case-by-case basis. The Engineer will notify the aggregate producer of substantial test variations within ~~ten (~~10~~)~~ days of receipt of the qualification submittal.

704.04.06 SAMPLING AND TESTING

A. When the Contractor/Material Source or Engineer acquires aggregate samples at an aggregate production plant, the plant shall provide a calibrated mechanical means for obtaining samples.

1. ~~–~~If a mechanical means is not provided, a belt cut from a stopped conveyor will be required.

2. ~~–~~Any mechanical sampling device shall be approved by the Engineer prior to starting the respective phase of the project, or shall have been approved as part of a prior plant inspection by the Engineer or ~~his~~ the Engineer's representative.

3. ~~–~~The sampling device shall be so constructed to provide for simultaneous "cutting" of the entire section of material being discharged or conveyed, and so constructed that small representative samples may be taken frequently and these samples combined to form the complete sample.

4. ~~–~~The reference method for the mechanical procedure shall be a "belt cut" sample taken from a stopped conveyor belt.

5. ~~-~~Samples of the finished product of the plant shall be obtained prior to or as the material leaves the conveyor belt for the bin or stockpile.

B. Test results run from samples taken will be furnished to the Engineer ~~as required in the USS~~ by the Contractor or the Contractor's representative. The results of such tests shall not be the basis for final acceptance of the material.

C. Sampling for final acceptance of materials will be as required in the appropriate USS sections and in general ~~must~~shall comply with the AASHTO requirements, where applicable, and with any exception to the method(s) listed on the ~~Clark County web page at:~~IQAC website.~~www.accessclarkcounty.com/depts/public_works/Pages/iqac.aspx under testing.~~

[13] The form is on the IQAC ~~web site at www.accessclarkcounty.com/depts/public_works/Pages/iqac.aspx~~ website, or use an Agency approved form

Table ~~15~~ 16 – Source Quality Control Testing Requirements[14]

Spec Section	Deiscription	Item	Reference Specification and/or Test Procedure	Frequency
704.03.02, 704.03.03, 704.03.04, 704.03.08	Drain Rock~~,~~	Submittal	IQAC and/or Agency Requirements	Annually for IQAC Source Approval OR per project
	Type I, Type II Aggregate	Sampling from ~~C~~calibrated conveyor stream or belt cut	AASHTO T2	1/day at plant
	Cement treated base	Sieve Analysis	AASHTO T11 & T27	1/day at plant
		Percentage of Wear (500 Rev.)	AASHTO T96	Annually for Source Approval OR per project
704.03.04, 704.03.05, 704.03.06	Drain rock, Type II, and Type III aggregate around water pipe	Total Available Water Soluble Sulfates[15]	AWWA 3500-NaD AWWA 4550 E	1/month at plant
704.03.03, 704.03.04	Type I and Type II Aggregate	Plasticity Index	AASHTO T90[16]	1/day at plant
		Liquid Limit	AASHTO T89	1/day at plant
		Resistance (R Value) or Resilient Modulus	ASTM D2844	Annually for IQAC Source Qualification OR per project
			AASHTO T307	Annually for IQAC Source Qualification OR per project
704.03.07	CLSM	Mix Design	USS 704.03.07	Annually for IQAC Source Qualification OR per project
		Compressive Strength	USS 208.02.0~~6~~7 & AASHTO T22, T23	Annually for IQAC Source Qualification OR per project
	CLSM-BAF	Visual Inspection Report	~~RTC~~USS 208.02.0~~6~~7 Split cylinders	Annually for IQAC Source Qualification OR per project

[14] Review the ~~Clark County~~IQAC website for any exceptions to the listed test methods. ~~at www.accessclarkcounty.com/depts/public_works/Pages/iqac.aspx~~

[15] Required only for placement around waterline pipe

[16] Test specimens shall be prepared following the dry preparation procedure AASHTO T87