

Testing & Sampling Guide

Prepared on 3/23/2018 using eGuide Document Generator

Project Information

Contract: 20180109009

Project: 5991-02-54

Description: C Onalaska, Braund Street

County: La Crosse

Highway: LOC STR, LA CROSSE COUNTY

Region: SW

Contractor: GERKE EXCAVATING INC

Table of Content

Project Guide	4
Item of Concrete	9
Removing Inlets	12
Removing Storm Sewer (size)	13
Base Aggregate Dense 1 1/4-Inch	14
Concrete Driveway 6-Inch	16
Tack Coat	17
HMA Pavement 3 LT 58-28 S	18
HMA Pavement 4 LT 58-28 S	18
Concrete Curb & Gutter 30-Inch Type D	21
Concrete Sidewalk 4-Inch	22
Curb Ramp Detectable Warning Field Natural Patina	23
Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	24
Inlet Covers Type H-S	26
Inlets 2x3-FT	27
Adjusting Manhole Covers	30
Water	31
Topsoil	32
Mulching	33
Inlet Protection Type C	34
Fertilizer Type B	35
Seeding Mixture No. 40	36
Posts Wood 4x6-Inch X 14-FT	37
Signs Type II Reflective H	38
Signs Type II Reflective H Folding	38
Traffic Control Drums	39
Traffic Control Barricades Type II	39

Traffic Control Barricades Type III	39
Traffic Control Warning Lights Type A	39
Traffic Control Signs	39
Conduit Loop Detector	40
Loop Detector Wire	41

Project Guide for Sampling and Testing Requirement

DISCLAIMER: This sampling and testing guide is *only a tool* to help inform contract administrators about project construction materials acceptance sampling, testing, and documentation requirements. Materials acceptance requirements are contained in the Standard Specifications, Contract Special Provisions, Plans, the Construction and Materials Manual, and other WisDOT policies and procedures.

Omissions and errors in this guide do not abrogate the responsibility of the project administrator to assure that construction materials acceptance requirements are met and documented.

Files for most standard bid items are available. Files have also been created for most STSP items. Materials acceptance and documentation criteria for Contract Special Provisions (SPV) items are of necessity the responsibility of the contract administrator.

Contact the Bureau of Technical Services- Quality Assurance Unit for additions or corrections to standard bid item files.

MTS/MITS Report Uses

Report prefix "130"

Concrete strength cylinders test report

Report prefix "135"

Used for reporting quality verification concrete pavement thickness measurements

Report prefix "155"

This includes Density Summaries, QMP Reports, and RFI's for explanation on acceptance of Non- conforming Materials.

Report prefix "217"

This includes all Aggregate Field Gradations, Base Course, Backfill, Select Borrow, and Breaker Run.

Report prefix "162"

This includes all Concrete Aggregate Gradations.

Report prefix "232"

This report is for Soils Nuclear Density tests.

Report prefix "262"

This report is for HMA Nuclear Density tests.

Report prefix "900"

This Reference report is used for listing references to external hard copy documents and electronic test reports entered for another project. Certifications of Compliance, Certified Reports of Test and Analysis of Tests, catalog cut sheets, etc. that are on file in the project records should be listed using this report. Materials sampled and tested, which may be applicable to several contracts, but are reported under another project ID should be listed using this report. This report includes Certifications of Compliance, Certified Reports of Test, Aggregate Quality Tests not sent to Madison under your Project I.D., and Asphalt Mix Designs.

Other prefixes not listed above are used by the Regional Lab or Central Office Lab.

Requirements Definitions

Laboratory Test

A test of a specific material done by the central office laboratory or other designated testing laboratory.

Random Field Acceptance Test

A test done a specific material or aggregate which is sampled in the field and tested at a field laboratory or laboratory designated by the engineer. If the test is on aggregates, sample, test and report on the appropriate test report.

Source or shop inspection

A report (DT 1832), which covers specific materials inspection done by a representative of the department. Materials are accepted based n inspection and/or tests at the source of fabrication or manufacture.

Report of field inspection

A report done by the engineer or his designate for a specific material covering dimensions and other physical characteristics determined by measurement, weight, visual inspection, and routine field tests.

Manufacturers' Certification of Compliance

A Certification of Compliance is a document provided by manufacturer, producer or supplier of a product stating that the product as furnished to the contractor, complies with the pertinent specifications or contract requirements. The document is to be signed by a responsible party of the company. It is the responsibility of the contractor to obtain the Certification of Compliance. Refer to chapter 8 of the Construction and Materials Manual (CMM) for format of the certification.

Certified Report of Test and Analysis

A certified test report document provided by a manufacturer, producer, supplier or independent testing company of a product, indicating actual results of tests or analysis comply with the elements of the specification requirements. It is the responsibility of the contractor to obtain the Certified Report of Test and Analysis. Refer to chapter 8 of the Construction and Materials Manual (CMM) for format of the certification.

Approved list

List of pre-qualified products, approved suppliers, certified sources and certified producer plants compiled by the department for specific materials which exhibit satisfactory test results for a given specification either done by pre-qualification tests, inspection, and evaluation; process control inspection with certification; or process control inspection with verification tests done randomly by the department.

Required dairy entry

Inspection and documentation necessary for adequate control of quality and compliance with specifications. Project documentation (diary) when required shall include manufacturer, brand, model, source, lot /batch, heat number, application rate, markings, type, size, system species, etc Information related to the basis of acceptance, compliance to requirements, visual job site inspection, product data sheets (labels), etc. shall be include when they are applicable and/or made available and considered to be appropriate. If a label or a label is available, staple the label in an inspector's dairy or otherwise retain with the project documents. This documentation will be located in construction finals box and not in the materials test report record. See chapter 8 of the CMM for guidance.

NOTE: For additional guidance for materials sampling, testing and acceptance see chapter 8 of the CMM If there are any contract change orders on this project, please contract the district materials section for guidance in accepting the materials related items. Also include contract change order number on field reports and other related correspondence.

Diary Document Format- Example

<u>Date</u>	<u>Description</u>	<u>Manufacturer</u>	<u>Evaluation and Basis for Acceptance</u>
3/11/2006	CSS-1 Asph. Emulsion for tack coat, diluted with 50% water, 2300 Gallons	Koch- Dubuque	Type acceptable per specifications. Performed well at application rate of 0.025 gals/SY. See truck invoice in project record.
3/12/2006	Reinf. Conc. Pipe 18"-120 LF 24"- 224 LF 36"- 608 LF	Madison Conc. Pipe, Madison, WI	Pipe was new and undamaged shipped from a pre-qualified source, cert. statement on shipping invoice
4/1/2006	High Strength Bolts, nuts, washers, 3/4"X 3" galvanized Type A325, Lot 4321, RC Lot #5678 400 units each	Uny-Tite Fasteners Fort Bolt, Missouri	All shipped in same drum, drums were well marked & undamaged. Label matches Cert Report of Tests. Units clean and well lubed.

Steel Dynamics, Inc.
2601 S. County Road 700 East
Columbia City, IN 46725-8044
(260) 625-8100

Name of manufacturer

Customer No: 000118
Bill of Lading No: 0000018030
MTR #: 0000018000

Name and use of product

Ship to:
R.W. Conklin Steel Supply, Inc
Will Call Pickup
Attn: Tom Meyer

Bill to:
R.W. CONKLIN STEEL SUPPLY, INC
3336 Carpenter Creek Drive
Cincinnati, OH 45241
Attn: Phil Conklin

Heat no., lot or batch

Specifications

Certified Mill Test Report
100% Mined and Manufactured in USA

Item	Bundle	Section	Length	Pcs	Heat #	Grade(s)	Specification(s)	Customer P.O.
1	020148845	HP12X53	68' 0"	4	8005403	A572 gr50	ASTM A572 - 01	31106-1SDI
2	020148846	HP12X53	68' 0"	4	8005403	A572 gr50	ASTM A572 - 01	31106-1SDI
3a	020148873	HP12X53	68' 0"	1	8005401	A572 gr50	ASTM A572 - 01	31106-1SDI
3b	020148873	HP12X53	68' 0"	2	8005402	A572 gr50	ASTM A572 - 01	31106-1SDI

CHEMICAL

Item	C	Mn	P	S	Si	Cu	V	Cr	Ni	Mo	Sn	N	B	Cb	Cr	PC	Analysis
1	.06	1.08	.011	.037	.24	.43	.036	.09	.08	.030	.014	.0071	.0004	.003	.31	.35	HEAT
2	.06	1.08	.021	.032	.24	.43	.036	.09	.08	.030	.014	.0071	.0004	.003	.31	.35	HEAT
3a	.07	1.11	.021	.032	.24	.51	.037	.09	.08	.028	.015	.0062	.0004	.003	.32	.36	HEAT
3b	.06	1.08	.016	.027	.26	.45	.036	.09	.08	.030	.015	.0076	.0003	.003	.30	.35	HEAT

MECHANICAL

Tension Test Results

Item	Test	Yield (Fy) Strength ksi/MPa	Tensile (Fu) Strength ksi/MPa	Fy/Fu	Elong (%) based on 8" gauge	ROA (%)	Bend Test Result	Test	Temp F/C	Sample 1 ft. lb/joules	Sample 2 ft. lb/joules	Sample 3 ft. lb/joules	% Shear	ASTM Grain Size No (per ASTM E112)
1	1	62	75	.82	28			1						
1	2	55	70	.79	27			2						
2	1	62	76	.82	28			1						
2	2	55	70	.79	27			2						
3a	1	53	68	.78	29			1						
3a	2	61	75	.81	29			2						
3b	1	59	74	.80	26			1						
3b	2	53	68	.78	28			2						

Charpy Impact Testing Results

Test results

Signature and title of person certifying to the results

USDA WY SEED
AS ASTM 709

Per Talk with
Doe White O.H.
TO USE
9-7-07

Document is checked, dated, and
initialed by project personnel

I hereby certify that the contents of this report are accurate and correct. All tests and operations performed by this material manufacturer are in conformance with the requirements of the material specifications and applicable purchaser designated.

Signed: [Signature]
Quality Assurance

State of Indiana, County of Whitley

Sworn to and subscribed before me this _____ day of _____

Signed: _____
Notary Public

My commission expires: _____

Special Comments/Information:

Page 1

Figure 1

MANUFACTURER'S CERTIFICATION OF COMPLIANCE

Some materials require a manufacturer's certified report of test or analysis, while for all manufactured items, the contractor must furnish a certification of compliance upon request of the engineer (see [standard spec 106.3](#)), either as sole documentation for acceptance or as supplemental documentation. A manufacturer's certification of compliance must include:

1. Name of the manufacturer or of the supplier.
2. Name and use of the product.
3. Statement of the specification that the product meets, such as AASHTO and/or ASTM and the specification number, or when applicable, the contract special provisions. In some cases it may be the manufacturer's specifications.
4. Signature and title of a person in responsible charge of certifying the product who can bind the company and the signer's job title.

CERTIFIED REPORT OF TEST OR ANALYSIS

A manufacturer's certified report of test or analysis must include (see figure 1 above):

1. Name of the manufacturer or of the supplier.
2. Name and use of the product.
3. Statement of the specification that the product meets such as AASHTO and/or ASTM and the specification number, or when applicable, the contract special provisions. In some cases it may be the manufacturer's specifications.
4. Lot, batch, heat numbers, etc., applicable to the material delivered.
5. Test results for both physical and chemical test requirements as specified.
6. Signature and title of a person in responsible charge of the testing facility



BUY AMERICA

Important note: All iron and steel products supplied must be in compliance with FHWA "Buy America" provisions.

Certification documentation is required and shall state the iron and steel used in the product was:

- Smelted and Manufactured in the US
- Was coated, galvanized, or painted in the US
- All fabrication, such as rolling, bending, forming, drilling, machining, extruding, etc. was done in the US.

If more than one company performed a fabrication process on the product, each company needs to make a "Buy America" certification statement for the process they performed.

Refer to [Construction and Materials Manual \(CMM\) section 2.28.4](#)

Upon completion of the project certify to the engineer, in writing using department form WS4567, that all steel, iron, and coating processes for steel or iron incorporated into the contract work conform to these Buy America provisions. Attach a list of exemptions and their associated costs to the certification form. Department form WS4567 is available at:

<http://roadwaystandards.dot.wi.gov/standards/cmm/forms/ws4567.doc>

Item of Concrete Properties

Refer to QMP provisions for Concrete. Concrete QMP items are contained in part 7 of the Standard Specifications. Refer to [CMM 8.35](#) for additional guidance.

****Non-QMP Concrete – refer to CMM 8.50 for testing requirements.****

QMP (Class I & II)

Portland Cement

- 1) Verify source is on the approved list.
 - a. If on the approved list contact Regional Materials for approved sources and for determination of whether your source needs to be tested this year.
 - b. If not on the approved list contact Regional Materials for coordination of testing.
- 2) Diary entry required. (optional 900-____ - ____)
- 3) Manufacturers certification is required for blended cements. Assign to prefix 900-____ - ____

Admixtures

Air Entraining Admixtures, Retarder, Water Reducers, Water Reducing Set Retarders

- 1) Verify source is on the approved list.
- 2) Diary entry required. (optional 900-____ - ____)
- 3) If admixture is not on the approved list contact Regional Materials.

Other Admixtures

- 1) If source is not on the approved list obtain a certified report of tests by a qualified independent laboratory showing the requirements of ASTM C494 for the type of admixture are satisfactory.
Assign to prefix 900-____ - ____
- **If calcium chloride allowed as an accelerator, document in diary entry the concentration and addition rate. (optional 900-____ - ____)

Water

Municipal Source

- 1) Diary entry required. (optional 900-____ - ____)

Private Wells

- 1) Contact Regional Materials for approved sources and for determination of whether your source needs to be tested.
- 2) Diary entry required. Reference water test number: 131-____ - ____
(optional 900-____ - ____)

Surface Water

- 1) Contact Regional Materials for approved sources and for determination of whether your source needs to be tested this year.
- 2) Diary entry required. Reference water test number: 131-____ - ____
(optional 900-____ - ____)

Aggregates

Fine Aggregates

- 1) Quality Test Required. (test prefix 162)
 - a. Obtain hard copy of test and assign a 900-____ - ____

Coarse Aggregates

- 1) Quality Test Required. (test prefix 225)
 - a. Contact Regional Materials for approved sources and for determination of whether your source needs to be tested this year.
 - b. Obtain hard copy of test and assign a 900-____ - ____.
 - c. If not from approved source, sample must be submitted to CO for quality testing.
- 2) Field Acceptance Testing.
 - a. Frequency varies based on application and quantity. See CMM Subsection 8.50 for guidance.

Fly Ash

- 1) Certified report of test or analysis required. Assign to prefix 900-____ - ____ (Must be supplied 14 days prior to use.)
- 2) Fly ash samples are required.
 - a. For contracts with less than 100 tons, no sampling is required.
 - b. For contracts with 100 or more: 1 sample required per 2000 tons.

Slag

- 1) Certified report of test or analysis required. Assign to prefix 900-____ - ____
- 2) Slag samples are required.
 - a. For contracts with less than 100 tons, no sampling is required.
 - b. For contracts with 100 or more: 1 sample required per 2000 tons.

Pozzolans

- 1) Verify source is on the approved list.
- 2) Diary entry required. (optional 900-____ - ____)
- 3) If a pozzolan is not on the approved list contact Regional Materials.

Concrete Curing Compounds

See CMM Subsection 8.50 and Subsection 415.2.4 of the Standard Specifications for detailed guidance.

****NOTE:** *Lots or batches carried over from the previous year must be tested before use. ***

- 1) PAMS and Linseed
 - a. Verify source is on the approved list.
 - b. Diary entry required. (optional 900-____ - ____)
 - c. If source is not on the approved list sampling is required.
 - i. For contracts with less than 220 gallons, manufacturer's certification of compliance is required. Assign to prefix 900-____ - ____
 - ii. For contracts with 220 or more gallons, one sample per 2000 gallons or fraction thereof.

- 2) White Water wax-limited to uses referred to and allowed under Std. Spec. 501.2.9
 - a. Verify source is on the approved list.
 - b. Diary entry required. (optional 900-____ - ____)
 - c. If source is not on the approved list sampling is required.
 - i. For contracts with less than 220 gallons, manufacturer's certification of compliance is required. Assign to prefix 900-____ - ____
 - ii. For contracts with 220 or more gallons, one sample per 2000 gallons or fraction thereof.
- 3) Clear and Translucent
 - a. Diary entry required. (optional 900-____ - ____)
 - b. Sampling is required.
 - i. For contracts with less than 55 gallons, manufacturer's certification of compliance is required. Assign to prefix 900-____ - ____
 - ii. For contracts with 55 or more gallons, one sample per contract.
- 3) Cure & Seal Compound
 - a. Verify source is on the approved list.
 - b. Diary entry required. (optional 900-____ - ____)
 - c. If source is not on the approved list contact Regional Materials.

Project Reporting

- 1) Develop a 155-____ - ____ to cover the entire QMP acceptance. Discuss all aspects of verification testing and contractor testing. (control charts, adjustments, additional testing, etc.) (See CMM 8.45)
 - a. Include date of samples, location of sample, quantity, test results, tester names,

Example prefix 155 report for QMP Ancillary Concrete

QMP ANCILLARY CONCRETE

The contractor provided an acceptable QC plan and mix design-documents on file in the project record.

Field-testing was summarized on DOT WS 5013 (located in the project record)

Cylinder compression strength records and printouts were satisfactory and are stored with the project records.

Two sets of QC tests were completed the first day with three sets done each of the subsequent days
QC testing met the frequency and requirements of the QMP specification.

Verification tests

Date	Location	C.Y.	% Air	Temperature	Slump
8/14/2006	C&G Sta. 23+10 - 38+4	102	5.6	78 F	1.5-inch
8/15/2006	6 foot Sidewalk- Sta. 21+10 - 53+87 LT	224	6.3	76 F	1.75-inch
8/16/2006	6 foot Sidewalk- Sta. 21+10 - 53+87 LT	226	5.5	72 F	1.5-inch

Verification cylinders cast Ave = 4567 psi See report 9-999-130-0123-2008

QMP (Class III)

Class III Concrete

- 1) Certification of compliance is required 3 days prior to use. Assign to prefix 900-____ - ____
 - a. If certification of compliance is not supplied, then concrete falls under Class II concrete.
- 2) Department Verification testing is optional for Class III concrete.

204.0220 REMOVING INLETS

Granular Backfill (when paid for under the 204.0* item)**

- 1) *Quality Test Required regardless of tonnage (only if plastic fines are identified.)*
 - a) *Contact Region Materials for determination of whether your source needs to be tested.*
 - b) *If tested obtain hard copy of test and assign a 900-____-_____.*
 - c) *If plastic fines are identified a sample may be submitted to the C.O. Lab for Atterberg limits testing only.*
- 2) *Granular Backfill Field Acceptance*
 - a) *For contracts of less than 500 C.Y., diary entry required.*
 - b) *For contracts greater than 500 C.Y., sample for gradation at following frequencies:*
 - *One sample required for 501 thru 3000 C.Y.*
 - *For more than 3000 C.Y. per contract, one sample required per 3000 C.Y. accumulative.*

Report gradation testing on a MTS/MIT prefix 217 ____-____ report.

Plan Quantity _____

Final Quantity _____

204.0245 REMOVING STORM SEWER (SIZE)

Granular Backfill (when paid for under the 204.0* item)**

- 1) *Quality Test Required regardless of tonnage (only if plastic fines are identified.)*
 - a) *Contact Region Materials for determination of whether your source needs to be tested.*
 - b) *If tested obtain hard copy of test and assign a 900-____-_____.*
 - c) *If plastic fines are identified a sample may be submitted to the C.O. Lab for Atterberg limits testing only.*
- 2) *Granular Backfill Field Acceptance*
 - a) *For contracts of less than 500 C.Y., diary entry required.*
 - b) *For contracts greater than 500 C.Y., sample for gradation at following frequencies:*
 - *One sample required for 501 thru 3000 C.Y.*
 - *For more than 3000 C.Y. per contract, one sample required per 3000 C.Y. accumulative.*

Report gradation testing on a MTS/MIT prefix 217 ____-____ report.

Plan Quantity _____

Final Quantity _____

Base Aggregates, Ton
305.0110, 305.0120, 305.0130, 305.0410, 310.0110

905- _____ - _____

1) Quality Test Required regardless of tonnage. (WisDOT prefix 225)

- a) Contact Regional Materials for approved sources and for determination of whether your source needs to be tested this year.
- b) Obtain hard copy of test and assign a Bid Item ID: _____.
- c) If not from a currently tested and approved source sample contractor testing by a qualified laboratory is required. The department must observe sampling and a verification split is sent to The C.O. lab.

2) Base Aggregate Field Acceptance

Non-QMP Base Aggregate

- a) For contracts of less than 500 tons, (Quantity minimum apply to non-QMP base aggregates only.) Diary entry required. Bid Item ID: _____.
 - i. Acceptance may be in accordance with CMM 8-45. (Minor Quantity and Incidental Work).
- b) For contracts of greater than 500 tons, sample for gradation at the following frequencies:
 - i. One sample required for 501 through 3000 tons.
 - ii. For more than 3000 ton per contract, one sample required per 3000 ton accumulative.
 - iii. For 3000 tons or less per contract the material may be sampled for acceptance in the stockpile at the last location before use.
 - iv. Sample 3-inch material at stockpile load out

QMP Base Aggregate

- a) See Item STSP 301.0100 for detailed instructions.
The department will conduct QV tests of each base aggregate size, source or classification, and type during placement conforming to the following:
 - i. One non-random test on the first day of placement.
 - ii. At least one random test per 30,000 tons (30 000 Mg), or fraction of 30,000 tons (30 000 Mg), placed.
 - iii. Department verification testing is optional for quantities of 6000 tons (6000 Mg) or less.
 - iv. Sample 3-inch material at stockpile load out
 - v. Refer to STSP 301.0100 regards small quantities

3) Project Reporting

- a) Verification
 - i. Test for gradation, fractured particles, and liquid limit and plasticity index.
- b) Quality Control Plan required from contractor (refer to the contract Special Provision regarding plan contents for small quantity items).
Bid Item ID: _____.
- c) Develop a 155-_____ - _____ to cover the entire QMP acceptance quantity. Prefix 155 reports are used to report activities and test results that aren't covered by other standard prefix numbered reports. Prefix 155 is also used for QMP Summary reports to summarize QMP activities that were performed for each individual QMP specification involved in a project.
 - i. Use the Base Aggregate Template located in Pantry-StatewideForms-QMPFormTemplates. Or

<http://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrcs/tools/appr-prod/default.aspx>

Bid Item Number	Description	Plan Quantity	Final Quantity
305.0110	Base Aggregate Dense, ¾- inch, Ton		
305.0120	Base Aggregate Dense, 1 ¼ - inch, Ton		
305.0130	Base Aggregate Dense, 3- inch, Ton		
305.0410	Aggregate Detours, Ton		
310.0110	Base Aggregate Open Graded, Ton		

Complete ☐

CONCRETE DRIVEWAY X-INCH

416.0160, 416.0170, 416.0180, 416.0190

See Item of Concrete

If the project contains STSP 501.065(QMP Ancillary Concrete), some sampling and testing elements are covered as part of the provision. Refer to the Special Provision article for details. See CMM 8.35.2 for additional guidance.

Bid Item	Description	Plan Quantity	Final Quantity
416.0160	Concrete Driveway 6- Inch		
416.0170	Concrete Driveway 7- Inch		
416.0180	Concrete Driveway 8- Inch		
416.0190	Concrete Driveway 9- Inch		

Complete ☐

Tack Coat
455.0605
905-_____-_____

Tack Coat

1. Diary entry required. Bid Item ID: _____.
 - a. Note type, quantity and application rate.
 - i. Furnish type MS-2, SS-1, SS-1h, CSS-1, or modified emulsified asphalt, unless the contract specified otherwise.
2. Obtain at least one sample for each 10,000 gallons.
 - a. Sample in the field per guidelines of standard spec 455.2.2 and AASHTO R-66.
 - b. Emulsified asphalts have a limited life and should be submitted to the Central Laboratory as soon as practical. DO NOT allow samples to sit in the sun, be exposed to excessive heat, or freeze. NEVER use metal cans for samples, always use plastic or other non-reactive clean containers.

Plan Quantity _____

Final Quantity _____

Complete ☐

HMA Pavement (gradation) LT (binder)(designation)
460.5000-5999

905-_____ - _____

Aggregates

- 1) Quality Test required for all coarse aggregates sources
- 2) Aggregate source(s) must be on the WisDOT approved list
- 3) Obtain hard copy of test. Assign 905-_____ - _____
- 4) If not from a currently tested and approved source, sampling by the contractor and testing by a qualified laboratory is required. The department must observe sampling and a verification split is sent to the C.O. lab

Asphaltic Binders

- 1) Diary entry required. Bid Item ID: _____
- 2) WisDOT Certified Supplier
- 3) Quality Verification sample(s) – See the department’s “Combined State Binder Group Method of Acceptance for Asphalt Binders” for sampling methods and frequency
 - a. For contracts with 1,000 ton or less of mix, one (1) random sample of the binder by In-line sample may be required per project, at the discretion of the project engineer.
 - b. For projects greater than 1,000 ton of mix, an in-line sample at a rate of one-liter (one-quart) sample per 15,000 mix tons for each supplier and grade of asphalt binder, or fraction thereof, per contract. Additionally, one random sample, from truck transport, of the binder is required per project.
- 4) Bill of Lading with statement certifying the material complies with the Combined State Binder Group and Department Specifications shall be on or accompany the shipping ticket. Assign 905-_____ - _____

Additives

- 1) Hydrated Lime Antistripping Agent
 - a. Certification of compliance. Assign 905-_____ - _____
- 2) Liquid Antistripping Agent
 - a. Provide documentation that the addition of the agent will not alter the grade or characteristics. Assign 905-_____ - _____
- 3) Stone Matrix Asphalt Stabilizer
 - a. WisDOT approval prior to letting date if an alternative system is proposed
- 4) Warm Mix Asphalt Additive or Process
 - a. WisDOT approved product

Recovered Asphaltic Binders

If production test results indicate a change in the percent of recovered asphaltic binder, the contractor or the engineer may request a change in the design recovered asphaltic binder. Provide the department with at least 2 recent extraction samples supporting that change.

HMA Mixture Design

- 1) WisDOT approved mix
- 2) Mix design. Assign 905-_____ - _____.

QMP - Mixture

- 1) Contractor Testing
 - a. HTCP Certified Personnel
 - b. Qualified Laboratory – see WisDOT approved list
 - c. Contractor quality control testing and documentation
 - d. Running average calculation sheet required daily.
 - e. Final testing records, to include source documents, required within 10 days after paving is completed
- 2) Department Testing
 - a. Field Verification Samples
 - b. Contact the Region Materials Lab at least two working days prior to paving.
 - c. Documentation of Field Verification Samples
 - d. Region Materials personnel will perform the tests and develop an MTS prefix 254-_____ - _____ to report those results.
 - e. If the design mix used for the project has been tested under another contract reference the prefix 254 test on a 905-_____ - _____ report
- 3) Project Reporting
 - a. Develop a 155-_____ - _____ report to cover the entire QMP acceptance. Use template located in Pantry. Discuss all aspects of contractor and verification testing.

Density Testing

- 1) Lot testing required
- 2) Refer to contract documents when QMP QC testing is specified
- 3) Report all department and verification testing on a MTS/MIT prefix 262.

Item No.	Description	Plan Quantity	Final Quantity
460.5223	HMA Pavement 3 LT 58-28 S		
460.5224	HMA Pavement 4 LT 58-28 S		
460.5225	HMA Pavement 5 LT 58-28 S		

Updated

460.5243	HMA Pavement 3 LT 58-34 S		
460.5244	HMA Pavement 4 LT 58-34 S		
460.5245	HMA Pavement 5 LT 58-34 S		
460.5424	HMA Pavement 4 LT 58-28 H		
460.5444	HMA Pavement 4 LT 58-34 H		

CONCRETE CURB & GUTTER ITEMS

601.03XX, 601.04XX, 601.05XX

See Item of Concrete- Note QMP Ancillary requirements

Note: This item is covered under *QMP testing as specified for class II ancillary concrete under standard spec part 7*. See the [Construction & Materials Manual](#) , 8.35.

Bid item	Description	Plan Quantity	Final Quantity
601.0319	Concrete Curb Gutter 19-Inch		
601.0322	Concrete Curb Gutter 22 -Inch		
601.0331	Concrete Curb Gutter 31-Inch		
601.0342	Concrete Curb Gutter Integral 18-Inch		
601.0344	Concrete Curb Gutter Integral 36-Inch		
601.0405	Concrete Curb Gutter 18-Inch Type A		
601.0407	Concrete Curb Gutter 18-Inch Type D		
601.0409	Concrete Curb Gutter 30-Inch Type A		
601.0411	Concrete Curb Gutter 30-Inch Type D		
601.0413	Concrete Curb Gutter 30- Inch Type G		
601.0415	Concrete Curb Gutter 30- Inch Type J		
601.0417	Concrete Curb Gutter 30- Inch Type K		
601.0419	Concrete Curb Gutter 30- Inch Type L		
601.0452	Concrete Curb Gutter Integral 30-Inch		
601.0454	Concrete Curb Gutter Integral 30-Inch Type J		
601.0456	Concrete Curb Gutter Integral 30-Inch Type L		
601.0501	Concrete Curb Gutter Integral 4-Inch Sloped 36-Inch		
601.0511	Concrete Curb Gutter Integral 6-Inch Sloped 36-Inch		
601.0551	Concrete Curb Gutter 4-In Sloped 36-Inch Type A		
601.0553	Concrete Curb Gutter 4-In Sloped 36-Inch Type D		
601.0555	Concrete Curb Gutter 6-In Sloped 36-Inch Type A		
601.0557	Concrete Curb and Gutter 6-in Sloped 36-Inch Type D		
601.0574	Concrete Curb Gutter 4-In Sloped 30-Inch Type D		
601.0576	Concrete Curb Gutter 4-In Sloped 30-Inch Type J		
601.0580	Concrete Curb Gutter 6-In Sloped 36-Inch Type R		
601.0582	Concrete Curb Gutter 6-In Sloped 36-Inch Type T		

Complete ☐

CONCRETE SIDEWALK ITEMS

602.0405, 602.0410, 602.0415, 602.0420

See Item of Concrete- Note QMP Ancillary requirements

Note: This item is covered under *QMP testing as specified for class II ancillary concrete under standard spec part 7*. See the [Construction & Materials Manual](#) , 8.35.

Bid Item	Description	Plan Quantity	Final Quantity
602.0405	Concrete Sidewalk 4-Inch		
602.0410	Concrete Sidewalk 5-Inch		
602.0415	Concrete Sidewalk 6-Inch		
602.0420	Concrete Sidewalk 7-Inch		

Complete ☐

602.0515 Curb Ramp Detectable Warning Field Natural Patina

- 1) Diary entry required.
 - i. Document visual inspection for conformance to condition and physical dimensions
 - ii. Verify and document the detectable warning field supplied is listed on the WisDOT Approved Products list
 - iii. http://www.atwoodsystems.com/materials/view_files.cfm

Plan Quantity _____

Final Quantity _____

608.0312 ST SEWER PIPE REINF CONC CLASS III 12-IN

Pipe

- 1) Each shipment will have a loading document. Retain with project records.
- 2) Manufacturers certification of compliance made available by the contractor when requested.
- 3) Diary entry required.
 - a) Verify that the manufacturer is on the approved list.

Portland Cement for Mortar

- 1) Diary Entry Required

Masonry Cement for Mortar

- 1) Diary Entry Required

Hydrated Lime for Mortar (Type S)

- 1) Diary Entry Required

Mortar Sand

- 1) For 50 C.Y. or Less:
 - a) Diary Entry Required.
- 2) For over 50 C.Y.
 - a) Quality Test Required
 - i) Contact District Materials for approved source.
 - ii) Obtain hard copy and assign 900-_____ - _____.
 - iii) If not from approved source, sample must be submitted to C.O. for quality testing.
 - b) Field Acceptance: One sample for gradation per contract.

Water

- 1) Quality Test Required if water is from a private well.
 - a) Contact District Materials for approved source.
 - b) Obtain hard copy and assign 900-_____ - _____.
 - c) If not from approved source, sample must be submitted to C.O. for quality testing.
- 2) Diary Entry Required if water is from a municipal source.

Gaskets

- 1) Manufacturers cert. of compliance made available by the contractor when requested.
or
- 2) Diary Entry Required

Bituminous Mastic Joint Sealer

- 1) Diary Entry Required

Granular Backfill/ Special Foundation Material

- 1) Quality Test Required regardless of tonnage.
 - a) Contact District Materials for approved sources and for determination of whether your source needs to be tested this year.
 - b) Obtain hard copy of test and assign a 900-_____ - _____.
 - c) If not from approved source, sample must be submitted to C.O. for quality testing.
- 2) Granular Backfill Field Acceptance
 - a) For contracts of less than 500 C.Y., diary entry required.

- b) For contracts greater than 500 C.Y., sample for gradation at following frequencies:
- One sample required for 501 thru 3000 C.Y.
 - For more than 3000 C.Y. per contract, one sample required per 3000 C.Y. accumulative.

Plan Quantity _____

Final Quantity _____

Complete ☐



Inlet Covers Type XX **611.06XX**

Buy America

Certification documents for steel reinforcement items must denote compliance to all elements of Buy America provisions

If from approved manufacturer....

1. Diary entry required. Assign 905-____-____.
 - a) Verify that the manufacturer is on the approved list.

If not from an approved manufacturer....

1. Diary entry required. Assign 905-____-____.
2. Manufacturers certification of compliance made available by the contractor when requested. (900-____-____)

Item No.	Description	Plan Quantity	Final Quantity
611.0600	Inlet Covers Type A		
611.0603	Inlet Covers Type A-S		
611.0606	Inlet Covers Type B		
611.0609	Inlet Covers Type B-A		
611.0610	Inlet Covers Type BW		
611.0612	Inlet Covers Type C		
611.0615	Inlet Covers Type F		
611.0624	Inlet Covers Type H		
611.0627	Inlet Covers Type HM		
611.0630	Inlet Covers Type HM-GJ		
611.0633	Inlet Covers Type HM-GJ-S		
611.0636	Inlet Covers Type HM-S		
611.0639	Inlet Covers Type H-S		
611.0642	Inlet Covers Type MS		
611.0645	Inlet Covers Type MS-A		
611.0648	Inlet Covers Type R		
611.0651	Inlet Covers Type S		
611.0652	Inlet Covers Type T		
611.0654	Inlet Covers Type V		
611.0657	Inlet Covers Type W		
611.0660	Inlet Covers Type WM		
611.0663	Inlet Covers Type X		
611.0666	Inlet Covers Type Z		

Complete ☐



Inlets (dimensions)
Inlets Median (number of grates)
611.3XXX

Buy America

Certification documents for steel reinforcement items must denote compliance to all elements of Buy America provisions

See Item of Concrete – Class III

Brick or Concrete Block

1. Diary entry required. Assign 905-____-____.
2. Verify that the manufacturer is on the approved list. The list will include an identifying mark and/or color when applicable.

Precast Units

1. Verify that the manufacturer is on the approved list.
2. Manufacturer certification of compliance made available by the contractor when requested.
3. Each shipment will have a loading document. Retain with project records.
4. Diary entry required. Assign 905-____-____.
 - a. The following must be legibly marked on each precast product. Document in diary entry.
 - i. Specification and product designation: MH for Manhole base
 - ii. Date of manufacture
 - iii. Name or trademark of manufacturer

Mortar

1. Portland Cement
 - a. Diary entry required. Assign 905-____-____.
 - i. Verify manufacturer is on the approved list.
2. Masonry Cement
 - a. Diary entry required. Assign 905-____-____.
3. Hydrated Lime
 - a. Diary entry required. Assign 905-____-____.
4. Mortar Sand
 - a. Quality test required
 - i. Verify source is on the approved list.
 - ii. Obtain hard copy of the test and assign 900-____-____.
 - iii. If not from an approved source, sample must be submitted to CO for quality testing.

5. Water

- a. Municipal Sources
 - i. Diary entry required. Assign 905-____-____.
- b. Private Wells
 - i. Quality test required.
 - 1. Verify source is on the approved list.
 - a. Water test is valid for 5 years.
 - 2. Obtain hard copy of test and assign 900-____-____
 - 3. If not from an approved source, sample must be submitted to CO for quality testing.
- c. Surface Water
 - i. Quality test required.
 - 1. Verify source is on the approved list.
 - a. Water test is valid for 1 year.
 - 2. Obtain hard copy of test and assign 900-____-____
 - 3. If not from an approved source, sample must be submitted to CO for quality testing.

Reinforcement

1. Bar Steel

- a. Field acceptance for less than 50,000 lbs.
 - i. Diary entry required. Assign 905-____-____.
 - ii. Manufacturer's certified report of test or analysis required.
Assign 900-____-____
- b. Field acceptance for more than 50,000 lbs.
 - i. Diary entry required. Assign 905-____-____.
 - ii. Manufacturer's certified report of test or analysis required.
Assign 900-____-____
 - iii. Field Sample Frequency

Bar Steel Minimum Sample Frequency Table (lbs) CMM 8.50	
0 – 49,999	No sample required
50,000 – 99,999	2 samples required
100,000 – 149,999	3 samples required
150,000 – 199,999	4 samples required
200,000 – 249,999	5 samples required
300,000 – 349,999	6 samples required

Note: Continue to add one additional sample for each 50,000 lb increment or portion thereof.

2. Epoxy Coating

- a. Diary entry required. Assign 905-____-____.
- b. Certification of compliance for epoxy coating. Assign 900-____-____
- c. Verify manufacturer of epoxy coating is on the approved list.

Granular Backfill

1. Quality test required regardless of tonnage.
 - a. Verify source is on the approved list.
 - b. Obtain hard copy of test and assign 900-____-____.
 - c. If not from an approved source, sample must be submitted to CO for quality testing.
2. Field Acceptance
 - a. 500 CY or less
 - i. Diary entry required. Assign 905-____-____.
 - b. Over 500 CY
 - i. One sample required for 501 – 3,000 CY
 - ii. More than 3,000 CY, one sample per 3,000 CY accumulative.

Gaskets

1. Manufacturer's certification of compliance made available by the contractor when requested.
2. Diary entry required. Assign 905-____-____.

Bituminous Mastic Joint Sealer

1. Diary entry required. Assign 905-____-____.

Welded Steel Wire Fabric

1. Diary entry required. Assign 905-____-____.

Support Assemblies

1. Verify material is on the approved products list for fiber optic cable.
2. Diary entry required. Assign 905-____-____.

Item No.	Description	Plan Quantity	Final Quantity
611.3003	Inlets 3-FT Diameter		
611.3004	Inlets 4-FT Diameter		
611.3220	Inlets 2x2-FT		
611.3225	Inlets 2x2.5-FT		
611.3230	Inlets 2x3-FT		
611.3253	Inlets 2.5x3-FT		
611.3901	Inlets Median 1 Grate		
611.3902	Inlets Median 2 Grate		
611.3903	Inlets Median 3 Grate		
611.3904	Inlets Median 4 Grate		

611.8110 ADJUSTING MANHOLE COVERS

Brick or Concrete Block

- 1) Diary Entry Required
- 2) Manufacturer must be on the Approved List. See C/M Manual Subsection 4-25-30 for the link to the approved list. Approved brick and block are to have an identifying characteristic.

Portland Cement for Mortar

- 1) Diary Entry Required

Masonry Cement for Mortar

- 1) Diary Entry Required

Hydrated Lime for Mortar (Type S)

- 1) Diary Entry Required

Mortar Sand

- 1) For 50 C.Y. or Less:
 - a) Diary Entry Required.
- 2) For over 50 C.Y.
 - a) Quality Test Required
 - i) Contact District Materials for approved source.
 - ii) Obtain hard copy and assign 900-_____ - _____.
 - iii) If not from approved source, sample must be submitted to C.O. for quality testing.
 - b) Field Acceptance: One sample for gradation per contract.

Water

- 1) Quality Test Required if water is from a private well.
 - a) Contact District Materials for approved source.
 - b) Obtain hard copy and assign 900-_____ - _____.
 - c) If not from approved source, sample must be submitted to C.O. for quality testing.
- 2) Diary Entry only Required if water is from a municipal source.

Precast Collars

- 1) Diary entry required.

Cast Iron Adjusting Rings

- 1) If from an approved fabricator . . .
 - a) Diary entry required
 - i) Verify that the fabricator is on the approved list
- 2) If not from an approved fabricator . . .
 - a) Manufacturers certification of compliance is to be made available by the contractor when requested.
 - b) Diary entry required.

Concrete Mixtures

- 1) Diary entry required.

Plan Quantity _____
Final Quantity _____

Complete ☐

624.0100 Water

1. Diary entry required. Assign 905-____-____

Plan Quantity _____

Final Quantity _____

Complete ☐

625.0100 Topsoil

1. Diary entry required. Assign 905-____-____.
 - a. Visually inspect and document that :
 - i. Topsoil consists of loam, sandy loam, silt loam, silty clay loam, or clay loam humus-bearing soils.
 - b. Ensure soil pH is in the range of 6.0 to 7.0. If requested, contractor shall provide test documentation. Assign 900-____-____.

Plan Quantity _____

Final Quantity _____

Complete ☐

Mulching

627.0200 & 627.0205

Mulch

1. Diary entry required. 905-____ - ____

Tackifier

1. Diary entry required. Assign 905-____ - ____
 - a. Verify the material is on the Erosion Control Product Acceptability List (PAL)
 - b. If using wood chip mulch, nitrogen is required. Document rate of placement.

Netting

1. Diary entry required. Assign 905-____ - ____
 - a. Document how netting was anchored.

If contractor opts to use Erosion Mat instead of Mulch and Netting (as allowed per spec):

Erosion Mat

1. Diary entry required. Assign 905-____ - ____
 - a. Verify the material is on the Erosion Control Product Acceptability List (PAL)

Item No.	Description	Plan Quantity	Final Quantity
627.0200	Mulching		
627.0205	Mulching		

Complete ☐

628.7015 Inlet Protection Type C

- 1) Diary entry required.
 - a) Verify that the material is on the approved list.

Plan Quantity _____

Final Quantity _____

Complete ☐

629.0210 FERTILIZER TYPE B

- 1) Diary entry required.
 - a) Record brand and formula.

Plan Quantity _____

Final Quantity _____

Complete ☐

630.0140 SEEDING MIXTURE NO. 40

- 1) Diary entry required.
 - a) Record brand, mix number, and test data. File tags in field records.

Plan Quantity _____

Final Quantity _____

Posts Wood (size) (length)
634.0400 – 634.0699

Wood Posts

1. Diary entry required. Assign 905-____ - ____
 - a. Manufacturer's certification of compliance required.

Item No.	Description	Plan Quantity	Final Quantity
634.0410	Posts Wood 4x4-Inch x 10-FT		
634.0412	Posts Wood 4x4-Inch x 12-FT		
634.0414	Posts Wood 4x4-Inch x 14-FT		
634.0416	Posts Wood 4x4-Inch x 16-FT		
634.0418	Posts Wood 4x4-Inch x 18-FT		
634.0612	Posts Wood 4x6-Inch x 12-FT		
634.0614	Posts Wood 4x6-Inch x 14-FT		
634.0616	Posts Wood 4x6-Inch x 16-FT		
634.0618	Posts Wood 4x6-Inch x 18-FT		
634.0620	Posts Wood 4x6-Inch x 20-FT		
634.0622	Posts Wood 4x6-Inch x 22-FT		
634.0624	Posts Wood 4x6-Inch x 24-FT		

Signs Type II (reflectivity) (folding)

637.2000 – 637.2999

Base Materials (aluminum extrusions, high density overlaid plywood, or sheet aluminum)

1. Diary entry required. Assign 905-____ - ____
 - a. Manufacturer certification of compliance made available by the contractor when requested.

Reflective Sheeting

1. Diary entry required. Assign 905-____ - ____
 - a. Manufacturer certification of compliance made available by the contractor when requested.

Sign Message Material

1. Diary entry required. Assign 905-____ - ____
 - a. Manufacturer certification of compliance made available by the contractor when requested.

Item No.	Description	Plan Quantity	Final Quantity
637.2110	Signs Type II Non Reflective		
637.2115	Signs Type II Non Reflective Folding		
637.2210	Signs Type II Reflective H		
637.2215	Signs Type II Reflective H Folding		
637.2220	Signs Type II Reflective SH		
637.2225	Signs Type II Reflective SH Folding		
637.2230	Signs Type II Reflective F		
637.2235	Signs Type II Reflective F Folding		

Complete ☐

Traffic Control Items

643.XXXX

- 1) Diary entry is required. Assign 905-____-____.
 - a. Conform to the requirements listed in Section 643 of the Standard Specifications.
 - b. Furnish materials conforming to the MUTCD and meeting the criteria for acceptable devices according to the ATSSA publication Quality Guidelines for Temporary Traffic Control Devices.
- 2) Letter of certification stating items meet crashworthiness criteria of NCHRP Report 350 test level 3 is to be made available by the contractor if requested. Assign 900-____-____.

Item No.	Description	Plan Quantity	Final Quantity
643.0100	Traffic Control		
643.0300	Traffic Control Drums		
643.0405	Traffic Control Barricades Type I		
643.0410	Traffic Control Barricades Type II		
643.0420	Traffic Control Barricades Type III		
643.0500	Traffic Control Flexible Tubular Marker Posts		
643.0600	Traffic Control Flexible Tubular Marker Bases		
643.0705	Traffic Control Warning Lights Type A		
643.0710	Traffic Control Warning Lights Type B		
643.0715	Traffic Control Warning Lights Type C		
643.0800	Traffic Control Arrow Boards		
643.0900	Traffic Control Signs		
643.0910	Traffic Control Covering Signs Type I		
643.0920	Traffic Control Covering Signs Type II		
643.1000	Traffic Control Signs Fixed Message		
643.1050	Traffic Control Signs PCMS		
643.2000	Traffic Control Detour		
643.3000	Traffic Control Detour Signs		

652.0800 Conduit Loop Detector

Conduit

1. Diary entry required. Assign 905-____ - ____.
 - a. Each piece should have UL or NRTL label and UL STD 651. If a piece does not have a UL or NRTL or UL STD 651 label, DO NOT USE THAT PIECE.
 - b. Record brand, type and size.
 - c. Document that conduit satisfies all requirements of Standard Specification Section 651.

Plan Quantity _____

Final Quantity _____

Complete ☐

655.0800 Loop Detector Wire

Loop Detector Wire

1. Diary entry required. Assign 905-____-____.
 - a. Verify that the manufacturer is on the approved list.
 - b. Document that conduit satisfies all requirements of Standard Specification Section 651.

Plan Quantity _____

Final Quantity _____

Concrete Curb and Gutter, 30-Ince Type D, SHES Item SPV.0090.01

- 1.) Diary Entry Required. Assign 905-____-____ Bid Item ID:_____
- 2.) See Item of Concrete, Note QMP Ancillary requirements
Note: This item is covered under QMP testing as specified for class II ancillary concrete under standard spec part 7. See the CMM 8.35

PLAN QUANTITY_____75_____

FINAL QUANTITY_____

532.0200. S Wall Modular Block Gravity

The department specifies approved modular block gravity wall products on the department's approved products list.

Refer to, and carefully review, the details of the contract special provision

Wall Facing Blocks

- 1) All blocks shall be certified as to strength, absorption, and freeze-thaw requirements unless, due to contract changes, certified blocks are not available when required. at the time of delivery of the certified blocks, furnish the engineer a certified test report from a department-approved independent testing laboratory for each lot of modular blocks. The certified test report shall clearly identify the firm conducted the sampling and testing, the type of block, the date sampled, name of the person who conducting the sampling, the represented lot, the number of blocks in the lot, and the specific test results for each of the stated requirements of this specification. A lot shall not exceed 5000 blocks. The certified test results will represent all blocks within the lot. Each pallet of blocks delivered shall bear lot identification information. Block lots that do not meet the requirements of this specification or blocks without supporting certified test reports will be rejected and shall be removed from the project at the contractor's expense.
- 2) Assign 900-_____-_____ to certified report of tests.
- 3) Optional Department testing
- 4) Project Documentation- visual verification of condition, dimensions and tags or markings, Record lot identification

Cast-in-place Cap (if used)

- 1) See Item of Concrete.

Leveling Pad

Depending on type of pad allowed:

- 1) Concrete Option
 - a) See Item of Concrete.
- 2) Crushed Aggregate Base Course Option
 - a) See requirements of Base Aggregate Dense item.

Geotextile Fabric Type DF

1. Certification of compliance required
2. Reference the certification of compliance on an MTS/MIT prefix 900-_____-_____ report

Backfill

Type A:

- 1) Quality Test Required regardless of tonnage (only if plastic fines are identified).
 - a) Contact District Materials for approved sources and for determination of whether your source needs to be tested for Atterberg properties this year.
 - b) Obtain hard copy of test and assign a 900-_____-_____.
 - c) If not from approved source, sample must be submitted to C.O. for quality testing.
- 2) Base Course Field Acceptance
Quality Test Required regardless of tonnage

- a) For contracts of less than 500 tons, diary entry required.
- b) For contracts greater than 500 tons, sample for gradation at following frequencies:
 - i) One sample required for 501 through 3000 tons.
 - ii) For more than 3000 ton per contract, one sample required per 3000 ton accumulative.

Note: Submittal of plans and shop drawings required.

Reference the design and shop plans on an MTS/MIT prefix 900-_____ - _____ report.

Plan Quantity _____

Final Quantity _____