

B E C K E R

structural engineers, inc.

Special Inspections Report

**Maine Mall Motors
Toyota-Lexus**

Portland, Maine

January 31, 2005

Prepared for:

Berlin City
DSD Real Estate, Inc.
c/o Maine Mall Motors
255 Maine Mall Road
South Portland, Maine 04106
Attn: Andrew Bradford

In conjunction with:

The City of Portland
389 Congress Street
City Hall Room 315
Portland, Maine 04101

B E C K E R

structural engineers, inc.

Maine Mall Motors Toyota Lexus

Portland, Maine
January 31, 2005

Special Inspections Report

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Section 1.1

Disclaimers and Qualifications

The program of Structural/Special Tests and Inspections does not relieve the Contractor or its subcontractors of their responsibilities and obligations for quality control of the work, for any design work which is included in the scope of services, and for full compliance with the requirements of the Construction Documents. Furthermore, the detection of, or the failure to detect, deficiencies or defects in work during testing and inspection conducted pursuant to the Program does not relieve the Contractor or its subcontractors of their responsibility to correct all deficiencies or defects, whether detected or undetected, in all parts of work, and to otherwise comply with all requirements of the Construction Documents. Additional disclaimers and/or qualifications may be included in the Owner-Special Inspection agreement.

Section 1.2

Statement of Special Inspections

Becker Structural Engineers, Inc.

FINAL REPORT OF SPECIAL INSPECTIONS

PROJECT: Maine Mall Motors Toyota, Lexus, Scion, Riverside Drive, Portland, Maine

LOCATION: Portland, Maine

PERMIT APPLICANT: Daniel Hebert, Inc.

APPLICANT'S ADDRESS: 1 Pleasant Street, Colebrook, NH 03576

STRUCTURAL ENGINEER OF RECORD: Ethan A. Rhile, P.E. - Becker Structural Engineers, Inc.

Name Firm

ARCHITECT OF RECORD: Benedict B. Walter - CWS Architects

Name Firm

GENERAL CONTRACTOR: Daniel Hebert - Daniel Hebert, Inc.

To the best of my information, knowledge, and belief, the Special Inspections required for this project, and described in the Statement of Special Inspections submitted for the project, have been completed.

The following discrepancies that were outstanding since the last interim report, No. ___ dated _____ have been corrected:

NO INTERIM REPORT SUBMITTED

(Use additional sheets, if necessary)

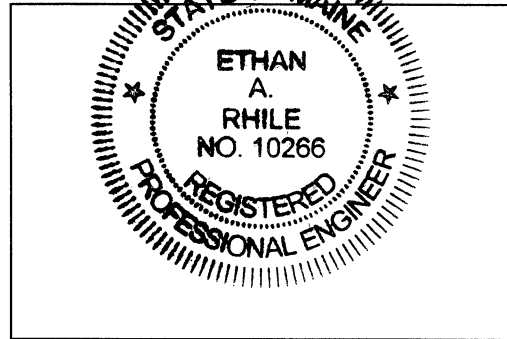
Interim reports submitted to this final report and numbered ___ to ___, form a basis for, and are to be considered an integral part of this final report.

Submitted By:
SPECIAL INSPECTOR

Ethan A. Rhile, P.E.

NAME [Signature]

SIGNATURE DATE 1/31/05



Special Inspector's P.E. Seal

Summary of Services (Exhibit A)

PROJECT: Maine Mall Motors Toyota/Lexus, Portland, ME							SCHEDULE OF SPECIAL INSPECTION SERVICES				Page 1 of 9
MATERIAL/ACTIVITY	ITEM	SERVICE	Y/N	EXTENT (All, Sample, Other, None)	COMMENTS	AGENT	DATE	REV.			
1705.2 Inspection of Fabricators	1.00										
		Fabrication Procedures	Y	As Required by following sections	See Steel	BSE	1/25/05				
		Procedure Implementation	Y	As Required by following sections	& concrete Sections	BSE	1/25/05				

All Steel Construction Special Inspections have been completed in accordance with BOCA Section 1705.12 Special Inspector *[Signature]* Date 1/25/05

SCHEDULE OF SPECIAL INSPECTION SERVICES

PROJECT: Maine Mall Motors Toyota/Lexus, Portland, ME

MATERIAL/ACTIVITY	ITEM	SERVICE	APPLICABLE TO THIS PROJECT						
			Y/N	EXTENT (All, Sample, Other, None)	COMMENTS	AGENT	DATE	REV.	
1705.3 STEEL CONSTRUCTION Steel Fabrication	2.00	In-plant review							
		Part A - Fabrication procedures/QA							
		1. AISC STB or SSFNE	Y	Provide AISC Certification	SSFNE	BSE	12/29/04		
		2. AWS Quality Assurance	Y	Provide Welder Certification		BSE	12/29/04		
		Part B - Procedures implementation							
		Review performance to Part A							
		Review material certificates							
		1. Bolts, Nuts, Washers	Y	Sample	AISC ASD A3.4	BSE	11/105		
		2. Structural Steel	Y	Sample	AISC A6 or A568	BSE	12/29/04		
		3. Weld Filler Material	Y	Sample	AISC ASD A3.6	BSE	12/29/04		
		Review connections							
		1. Shop Welded	Y	ALL	IN FIELD (VISUAL)	TL			
		2. Shop Welder Certs	Y	ALL		BSE	12/29/04		
Steel Erection		Field review							
		Review materials certs of compliance							
		1. Bolts, Nuts, Washers	Y	ALL		BSE	12/29/04		
		2. Structural Steel	Y	ALL		BSE	12/29/04		
		3. Weld Filler Material	Y	ALL		BSE	12/29/04		
		Review primary steel connections							
		Moment connections	Y			TL	8/30/04		
		Shear connections							
		1. Field Bolted	Y	ALL		TL	8/30/04		
		2. Field Welded	Y	ALL		TL	8/30/04		
		Bracing connections	Y	ALL	FIELD WELDS	TL	8/30/04		
Steel Deck	Y	Review Puddle Welds		RWG	BSE	8/30/04			
Review installation of shear studs	Y	ALL		TL	8/30/04				
Review Details/Steel Frame	Y	Sample		BSE	11/24/05				

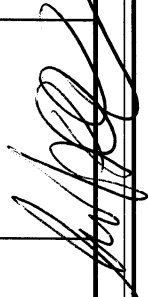
All Steel Construction Special Inspections have been completed in accordance with BOCA Section 1705.3 Special Inspector: *[Signature]* Date: 11/23/05

SCHEDULE OF SPECIAL INSPECTION SERVICES

PROJECT: Maine Mall Motors Toyota/Lexus, Portland, ME

Page 3 of 9

MATERIAL/ACTIVITY	ITEM	SERVICE	Y/N	EXTENT (All, Sample, Other, None)	APPLICABLE TO THIS PROJECT			
					COMMENTS	AGENT	DATE	REV.
1705.3 STEEL CONSTRUCTION (Continued)	2.00							
Steel Joists		In-plant review						
		Part A - Fabrication procedures	N					
		Part B - Procedures implementation						
		Review conformance to Part A	N					
		Review material certificates of compliance						
		1. Structural Steel	Y	ALL		BSE	12/29/04	
		2. Weld Material	Y	ALL		BSE	12/29/04	
		Review connections	Y	ALL		BSE	1/24/05	
		Review welder certification	Y	ALL		BSE	12/29/04	
		Review joist bearing connections	Y	ALL		BSE	1/24/05	
		Review joist bearing length	Y	ALL		BSE	1/24/05	
		Review joist bridging	Y	ALL		BSE	1/24/05	
		Joist Welds Visual Inspection	Y	ALL		TL	8/30/04/10/21/04	



All Steel Construction Special Inspections have been completed in accordance with BOCA Section 1705.3 Special Inspector Date 1/25/05

SCHEDULE OF SPECIAL INSPECTION SERVICES

PROJECT: Maine Mail Motors Toyota/Lexus, Portland, ME

Page 4 of 9

MATERIAL/ACTIVITY	ITEM	SERVICE	APPLICABLE TO THIS PROJECT						
			Y/N	EXTENT (All, Sample, Other, None)	COMMENTS	AGENT	DATE	REV.	
Concrete Materials	3.00	Review materials (ACI Chapter 3)							
		1. Cement	Y	ALL	ASTM C150	BSE	4/14/04		
		2. Normal WT aggregates	Y	ALL	ASTM C33	BSE			
		3. Air Entraining admix	Y	ALL	ASTM C260	BSE			
		4. Normal range water reducing admix	Y	ALL	ASTM C494	BSE			
		5. HI-Range water reducing admix	Y	ALL	ASTM C494	BSE			
		6. Accel Admix	Y	ALL	ASTM C494 Type A	BSE			
		7. Vapor Retarder	Y	ALL	15 mil	BSE			
		8. Curing Products	Y	ALL		BSE			
		9. Cellular Concrete Mix/admixtures	Y	ALL		BSE			
Placing Reinforcement		Review mix design	Y	ALL	ACI Chapter 4	BSE			
		Review reinforcing certification	Y	ALL	Certificate Only	BSE			
Concrete Operations [Sampling includes cellular concrete]		Review condition & placement of reinforcing	Y	Sample	ACI 318 7.4-7.7	BSE			
		Review Embedded items, bolts, plates, etc.	Y	Sample		BSE			
		Field Sampling & Testing of Concrete	Y	Every 50 yards or each separate placement Sample Air, Temp, Slump ASTM C172, C231 Testing shall include cellular concrete mat					
		Review concrete strength tests	Y		ACI 318 5.6	BSE	8/25/04		
Concrete Operations		Review mix proportions and technique	Y		ACI 318 5.2, 5.3, 5.4, & 5.8	TL			
		Review concrete placement	Y		ACI 318 5.9 & 5.10	TL			
		Review curing technique & temperature	Y		ACI 318 5.11, 5.12, & 5.13	TL			

All Concrete Construction Special Inspections have been completed in accordance with BOCA Section 1705.4 Special Inspector: *[Signature]* Date: 1/15/05

SCHEDULE OF SPECIAL INSPECTION SERVICES

PROJECT: Maine Mall Motors Toyota/Lexus, Portland, ME

MATERIAL/ACTIVITY	ITEM	SERVICE	APPLICABLE TO THIS PROJECT				REV.
			Y/N	EXTENT (All, Sample, Other, None)	COMMENTS	AGENT		DATE
1705.5 MASONRY CONSTR	4.00	No Structural Masonry					

[Handwritten Signature]
Date 1/25/01

All Masonry Construction Special Inspections have been completed in accordance with BOCA Section 1705.5 Special Inspector

SCHEDULE OF SPECIAL INSPECTION SERVICES

PROJECT: Maine Mall Motors Toyota/Lexus, Portland, ME

Page 6 of 9

MATERIAL/ACTIVITY	ITEM	SERVICE	APPLICABLE TO THIS PROJECT				REV.
			Y/N	EXTENT (All, Sample, Other, None)	COMMENTS	AGENT		DATE
1705.6 WOOD CONSTRUCTION Wood Truss Fabrication	5.00	No structural wood construction					

[Signature]

Date 11/2/05

Special Inspector

All Wood Construction Special Inspections have been completed in accordance with BOCA Section 1705.6

SCHEDULE OF SPECIAL INSPECTION SERVICES

PROJECT: Maine Mall Motors Toyota/Lexus, Portland, ME

MATERIAL/ACTIVITY	ITEM	SERVICE	APPLICABLE TO THIS PROJECT						
			Y/N	EXTENT (All, Sample, Other, None)	COMMENTS	AGENT	DATE	REV.	
1705.7 PREPARED FILL	6.00								
Site Preparation		Review site preparation prior to prepared fill/cellular concrete placement.	Y		Building only	TL	7/16/04		
During Fill Placement		Review compliance to soils report	Y	Sample	Building only	TL			
		Material	Y	Sample	Building only	TL			
		Lift thickness	Y	Sample	Building only	TL			
Evaluation of in-Place Density		Review in-place dry density for compliance with soils report	Y	Sample	Building only	TL			

[Handwritten Signature]

All Prepared Fill Special Inspections have been completed in accordance with BOCA Section 1705.7 Special Inspector Date 11/25/05

SCHEDULE OF SPECIAL INSPECTION SERVICES

PROJECT: Maine Mail Motors Toyota/Lexus, Portland, ME

Page 8 of 9

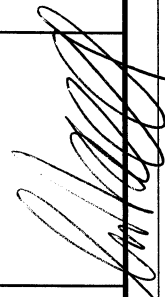
MATERIAL/ACTIVITY	ITEM	SERVICE	APPLICABLE TO THIS PROJECT				DATE	REV.
			Y/N	EXTENT (All, Sample, Other, None)	COMMENTS	AGENT		
1705.8 PILE FOUNDATIONS	7.00	No pile foundations						

[Handwritten Signature]

All Pile Foundation Special Inspections have been completed in accordance with BOCA Section 1705.8 Special Inspector: *[Signature]* Date: 1/25/05

SCHEDULE OF SPECIAL INSPECTION SERVICES

PROJECT: Maine Mall Motors Toyota/Lexus, Portland, ME

MATERIAL/ACTIVITY	ITEM	SERVICE	APPLICABLE TO THIS PROJECT				DATE	REV.
			Y/N	EXTENT (All, Sample, Other, None)	COMMENTS	AGENT		
1705.12 SPECIAL CASES Fireproofing	8.00	<u>Fire Separations</u> Review scope of installation for conformance with design documents	Y		Rulif CWS	9/15/04		
								

All Steel Construction Special Inspections have been completed in accordance with BOCA Section 1705.12 Special Inspector _____ Date 9/15/05

02000 Soils Testing and Inspection

Section 2.1

Soils Compaction Testing



R. W. Gillespie & Associates, Inc.

Geotechnical Engineering • Geohydrology • Materials Testing Services

24 May 2004

Mr. John Mitchell, ASLA
Mitchell & Associates, Inc.
70 Center Street
Portland, ME 04101

Subject: Use of On Site Sand as Fill Under Slab
New Maine Mall Dealership
Portland, Maine
RWG&A Project No. 235-979

Dear John:

In accordance with your request, we reviewed grain size distribution tests of on site sands which were stockpiled during the foundation excavation process. Two samples were submitted by S. W. Cole Engineering with representation the samples were from the aforementioned stockpiles. Results for Lab ID Nos. 1545G and 1548G indicate a poorly graded gravelly, fine to medium sand. It is our opinion that the stockpiled sands can be used as fill under slab. The sand should be topped with a leveling course of MeDOT 703.06 Type A crushed base to reduce surface disturbance during concrete placement.

We trust the foregoing meets your present needs and if you have any questions, please contact us.

Very truly yours,
R. W. GILLESPIE & ASSOCIATES, INC.

Robert W. Gillespie
Chairman

RWG:sab
cc: Becker Structural Engineers
CWS Architects
Daniel Hebert, Inc.

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FILE COPY

R. W. Gillespie & Associates, Inc.

Geotechnical Engineering • Geohydrology • Materials Testing Services

16 April 2004

Mr. Daniel Hebert
Daniel Hebert, Inc.
1 Pleasant Street
Colebrook, NH 03576

Subject: Geotechnical Observation - Removal of Organic Material
New Maine Mall Dealership
Portland, Maine
RWG&A Project No. 235-979

Dear Mr. Hebert:

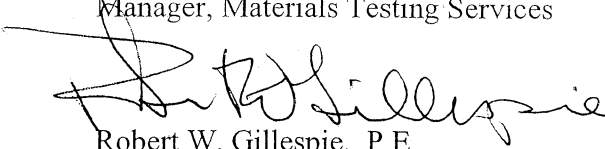
In accordance with your request, an RWG&A geotechnical engineer visited the above referenced site on 15 April to observe the removal of organic material located within the building foot print.

Organic material was exposed at the left rear and left middle quadrants of the building. In each location, the earthwork contractor, White Brothers, Inc., removed the substantial amount of organic material observed. The excavation dimensions needed to remove the organic material were approximately 51 feet long by 15 feet wide by 2 ½ to 3 feet deep at the left rear location and 45 feet long by 15 feet wide by 1 to 2 feet deep at the left middle location. White Brothers, Inc., was planning to backfill the excavations in compacted lifts at the time of the geotechnical engineer's departure.

If you have any questions or if we may be of further service, please contact us.

Very truly yours,
R. W. GILLESPIE & ASSOCIATES, INC.

Matthew T. Grady, P.E.
Manager, Materials Testing Services


Robert W. Gillespie, P.E.
Principal Geotechnical Engineer

MTG/RWG:ci

G:\MattGdocs\Projects\235s\235-979 041504 Geotech Observations.wpd

SUMMARY OF IN-PLACE DENSITIES - ASTM D2922/D3017
 NEW MAINE MALL MOTORS DEALERSHIP

PORTLAND, MAINE
 RWG&A PROJECT NO. 235-979

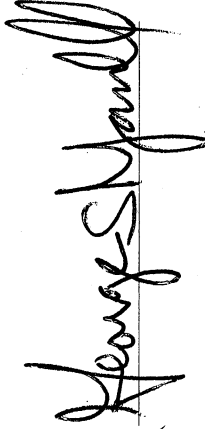
Client: Daniel Hebert, Inc.
 Test Date: June 18, 2004
 Technician: Marco Stone
 Gauge Model/Serial Number: Seamans L244

Lab No.	Soil Description	ASTM D1557 Max Density	ASTM D1557 Opt. Moisture
7218	Sand with Gravel	124.4	4

Report Issue Date: JUL 02 2004

Test No.	Location	Elevation	ASTM D2922 Dry Density (pcf)	ASTM D3017 Water Content (%)	Percent of Max. (%)	Lab. No.
1	C-5/L2	FG-12"	112.4	3	90*	7218
2	B-5+8/L3-5'	FG-12"	113.7	4	91*	7218
3	A-4/L5-5'	FG-12"	119.4	3	96	7218
4	B-6-5/L5+25'	FG-12"	121.3	3	98	7218
5	C-10/L7	FG-12"	119.5	2	96	7218
6	Midway between 9&10/C.5	FG-12"	111.8	3	90*	7218
7	C/L10-5'	FG-12"	108.0	3	87*	7218
8	B-5/L1+8'	FG-12"	103.9	3	84*	7218
9	4+5/L10-15'	FG-12"	116.0	3	93	7218

Remarks: FG = Finish Grade

Checked by: 

SUMMARY OF IN-PLACE DENSITIES - ASTM D2922/D3017
 NEW MAINE MALL MOTORS DEALERSHIP
 PORTLAND, MAINE
 RWG&A PROJECT NO. 235-979

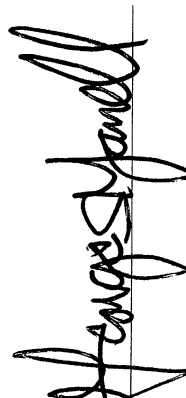
Client: Daniel Hebert, Inc.
 Test Date: June 23, 2004
 Technician: George Morrell
 Gauge Model/Serial Number: CPN 5697

Report Issue Date: JUL 02 2004

Lab No.	Soil Description	ASTM D1557 Max Density	ASTM D1557 Opt. Moisture
7218	Gravel	124.4	4

Test No.	Location	Elevation	ASTM D2922 Dry Density (pcf)	ASTM D3017 Water Content (%)	Percent of Max. (%)	Lab. No.
Retests of Tests Taken June 18, 2004						
1	Retest of Test No. 1	FG-12"	121.0	4	97	7218
2	Retest of Test No. 2	FG-12"	121.0	4	97	7218
3	Retest of Test No. 6	FG-12"	125.0	4	100+	7218
4	Retest of Test No. 7	FG-12"	116.0	3	93	7218
5	Retest of Test No. 8	FG-12"	118.7	4	95	7218

Remarks: FG = Finish Grade

Checked by: 

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02000 Soils Testing and Inspection

Section 2.2

Cellular Concrete Testing



R. W. Gillespie & Associates, Inc.

Geotechnical Engineering • Geohydrology • Materials Testing Services

18 January 2005

Adam White, E.I.
Becker Structural Engineers
75 York Street
Portland, ME 04101-4701

Subject: Maine Mall Motors
Riverside Street
Portland, Maine
RWG&A Project No. 235-979

Dear Mr. White:

In accordance with your request, please find attached the following items:

1. In place density reports for soils used as fill.
2. BSE letter of 06 July 2004 regarding cellular concrete.
3. RWG&A letter of 12 July 2004 in response to BSE's letter of 06 July.

Based on observations and test results, it is our opinion the cellular concrete mat was placed in general accordance with plans and specifications. As such, the general design intent has been met.

If you have any questions, please contact us.

Very truly yours,

R. W. GILLESPIE & ASSOCIATES, INC.

Robert W. Gillespie, P.E.

RWG:ci

235-474

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R. W. Gillespie & Associates, Inc.

Geotechnical Engineering • Geohydrology • Materials Testing Services

12 July 2004

Mr. Andrew Bradford, CFO
DSD Real Estate, Inc.
c/o Maine Mall Motors
255 Maine Mall Road
South Portland, ME 04106

Subject: Cellular Concrete Fill
New Lexus/Honda Dealership - Riverside Street
Portland, Maine

Dear Andrew:

The following paragraphs confirm our discussions of 08 July 2004 regarding cellular concrete fill at the above referenced site. Briefly, correspondence from Ethan Rhile, P.E., of Becker Structural Engineers, Inc., questioned the compressive strengths and unit weights of the cellular concrete based on test results provided by this office. We have reviewed the results and provide the following comments.

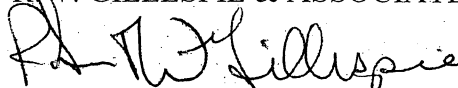
Unit Weight: The "... *specified density of 40 pcf.*" was a maximum value, remembering the purposed of the fill was to reduce applied loads to subgrade soils. The range of unit weight is relatively narrow, with a mean of 32 or 33 pcf, which is acceptable since settlement estimates were based on a unit weight of 40 pcf.

Compressive Strength: Compressive strengths have generally fallen into a range of 160 to 200 psi with a mean on the order of 170 psi, including 56 day tests. The use of a 200 psi design strength was recommended to provide a reasonable and realistic factor of safety with respect to allowable contact pressure and shear forces imparted by footings at dead plus live load conditions. For a factor of safety of 3 against bearing failure, the cellular concrete had to have a compressive strength of 65 psi. Since cellular concrete has some variability in strength, a compressive strength of 200 psi was recommended to provide leeway in production and placement methods which are the factors most likely to negatively impact strength.

Conclusions: It is our opinion that unit weights and compressive strengths are within the ranges considered during our evaluations, and remedial actions are neither warranted nor necessary.

We trust the foregoing meets your present needs, and if you have any questions, please contact us.

Very truly yours,
R.W. GILLESPIE & ASSOCIATES, INC.



Robert W. Gillespie, P.E.

RWG:sab

copy: CWS Architects-Attn: Ben Walter, AIA
Becker Structural Engineers-Attn: Ethan Rhile, P.E.
Daniel Hebert, Inc.- Attn: Daniel Hebert

G:\PROJECTS\9235\9235-0900\9235-979\Corresp\12 July 2004 Cellular Fill Spec Response.wpd

BECKER

structural engineers, inc.

RECEIVED
JUL 14 2004

July 06, 2004

Berlin City
DSD Real Estate, Inc.
c/o Maine Mall Motors
255 Maine Mall Rd.
South Portland, ME 04106

235-979

Attention: Mr. Andrew Bradford

Reference: Cellular Concrete Mat
Maine Mall Motors
Toyota Lexus Scion
Portland, Maine

Dear Mr. Bradford:

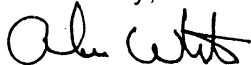
We have reviewed the most recent 28-day & 56-day strength test results for the cellular concrete mat underlying the foundation at the above referenced project. Please refer to the attached spreadsheets. The test results indicate that a significant portion of the cellular concrete mat is not in conformance with the specified 28-day minimum strength of 200-psi.

The average strength of the 28-day tests for the cellular concrete mat is 177-psi. In addition, approximately 66% of the 56-day specimens (21 of 32 cylinders) have fallen below the specified 200-psi minimum compressive strength with an average strength of 159-psi. Furthermore, 6 of 32 tests fell below 25% of the specified 28-day compressive strength.

The wet density of the cellular concrete mat has also been reviewed. According to the data received from R.W. Gillespie & Associates, the average unit weight of the cellular mat is approximately 80% of the design specified density of 40-pcf.

As the Agent for the Special Inspections program, we request that the Geotechnical Consultant be contacted as soon as possible to review the test results of the cellular concrete mat. The Geotechnical Consultant will need to indicate acceptance of the cellular mat, additional testing, or suggest remedial action if required.

Sincerely,



Adam M. White, EI



Ethan A. Rhile, PE

CC: Ben Walter (CWS), Daniel Hebert (Daniel Hebert Inc), Robert Gillespie (R.W. Gillespie & Associates)

Concrete Strength Statistical Evaluation

Date Run: 7/6/2004

Mail Motors Toyota Lexus

28 Day Average: 177
56 Day Average: 159

Cellular Concrete
Design Strength 200 psi

Lab	Set	Date Taken	28-dayCyl1	28-dayCyl2	Test (Ave 2)	Deficiency	Ave 3 Consecutive	56-day Break	Test Below 500	Ave 3
RWG	83-86	4/28/2004	140	110	125	-75	-	60	-	-
RWG	87-90	4/28/2004	160	130	145	-55	-	180	-	-
RWG	91-94	4/28/2004	180	220	200	0	157	340		REVIEW
RWG	95-98	4/28/2004	200	210	205	0	183			REVIEW
RWG	99-02	4/28/2004	150	145	147.5	-52.5	184	200		REVIEW
RWG	03-06	4/28/2004	140	220	180	-20	178	145		REVIEW
RWG	07-10	4/28/2004	155	155	155	-45	161	160		REVIEW
RWG	11-14	4/28/2004	200	220	210	0	182			REVIEW
RWG	15-18	4/28/2004	205	220	212.5	0	193			REVIEW
RWG	19-22	4/28/2004	130	130	130	-70	184	200		REVIEW
RWG	23-26	4/28/2004	170	150	160	-40	168	70		REVIEW
RWG	27-30	4/29/04	180	200	190	-10		380		REVIEW
RWG	31-34	4/29/04	210	190	200	0		190		REVIEW
RWG	35-38	4/29/04	200	200	200	0	197			REVIEW
RWG	39-42	4/29/04	180	190	185	-15	195	230		REVIEW
RWG	43-46	4/29/04	185	190	187.5	-12.5	191	200		REVIEW
RWG	47-50	4/29/04	220	280	250	0	208			ok
RWG	51-54	4/29/04	210	210	210	0	216			ok
RWG	55-58	4/29/04	160	170	165	-35	208	170		ok
RWG	27-30	4/30/2004	110	110	110	-90		120		REVIEW
RWG	31-34	4/30/2004	100	120	110	-90		110		REVIEW
RWG	35-38	4/30/2004	200	260	230	0	150			REVIEW
RWG	39-42	4/30/2004	120	200	160	-40	167	200		REVIEW
RWG	43-46	4/30/2004	195	220	207.5	0	199	260		REVIEW
RWG	47-50	4/30/2004	300	340	320	0	229			ok
RWG	51-54	4/30/2004	210	170	190	-10	239	200		ok
RWG	55-58	4/30/2004	240	230	235	0	248			ok
RWG	48-51	5/6/2004	120	110	115	-85		110		REVIEW
RWG	52-57	5/6/2004	270	170	220	0		115		REVIEW
RWG	58-61	5/6/2004	170	160	165	-35	167	180		REVIEW
RWG	62-67	5/6/2004	180	190	185	-15	190	210		REVIEW
RWG	68-71	5/6/2004	170	160	165	-35	172			REVIEW
RWG	72-77	5/6/2004	190	220	205	0	185	200		REVIEW
RWG	78-81	5/6/2004	160	160	160	-40	177	170		REVIEW
RWG	82-87	5/6/2004	190	210	200	0	188	190		REVIEW
RWG	88-90	5/7/2004	90	80	85	-115		65		REVIEW
RWG	92-97	5/7/2004	70	100	85	-115		50		REVIEW
RWG	98-01	5/7/2004	85	65	75	-125	82	80		REVIEW
RWG	02-07	5/7/2004	60	60	60	-140	73	70		REVIEW
RWG	08-11	5/7/2004	70	100	85	-115	73	40		REVIEW
RWG	12-17	5/7/2004	80	210	145	-55	97	40		REVIEW
RWG	18-21	5/7/2004	120	210	165	-35	132	155		REVIEW
RWG	22-27	5/7/2004	270	280	275	0	195			REVIEW
RWG	80-83	5/12/2004	125	120	122.5	-77.5				REVIEW
RWG	84-89	5/12/2004	305	280	292.5	0				REVIEW
RWG	90-93	5/12/2004	175	170	172.5	-27.5				REVIEW
RWG	94-99	5/12/2004	210	200	205	0	223			ok
RWG	00-03	5/12/2004	200	215	207.5	0	195			REVIEW
RWG	04-09	5/12/2004	230	220	225	0	213			ok
RWG	10-13	5/12/2004	330	300	315	0	249			ok
RWG	14-19	5/12/2004	85	100	92.5	-107.5	211			ok

21 Breaks<200
11 Breaks>=200
32 Total

6 Breaks<=50

Concrete Density Evaluation
 Maine Mall Motors Toyota Lexus

Date Run: 7/6/2004

Cellular Concrete Average (pcf) 31.8
 Specified Density: 40 pcf
 Specified Variation: 2 pcf

Cylinder Volume: 100.53 in³
 0.05818 ft³

Lab	Cylinder	Date Taken	Unit Weight (grams)	Unit Weight (Pounds)	Density (pcf)	Within Spec?
RWG	83	4/28/2004	905.8	1.9969	34.3	low
RWG	87	4/28/2004	1261	2.7800	47.8	HIGH
RWG	91	4/28/2004	1215.2	2.6791	46.0	HIGH
RWG	93	4/28/2004	1199.6	2.6447	45.5	HIGH
RWG	95	4/28/2004	1073.7	2.3671	40.7	per spec
RWG	96	4/28/2004	1063.7	2.3451	40.3	per spec
RWG	97	4/28/2004	1064.6	2.3470	40.3	per spec
RWG	99	4/28/2004	990.2	2.1830	37.5	low
RWG	0	4/28/2004	983.3	2.1678	37.3	low
RWG	1	4/28/2004	975.4	2.1504	37.0	low
RWG	3	4/28/2004	978	2.1561	37.1	low
RWG	4	4/28/2004	947.5	2.0889	35.9	low
RWG	5	4/28/2004	949.9	2.0942	36.0	low
RWG	7	4/28/2004	413.2	0.9110	15.7	low
RWG	9	4/28/2004	358	0.7893	13.6	low
RWG	11	4/28/2004	1140.8	2.5150	43.2	HIGH
RWG	12	4/28/2004	1133.5	2.4989	43.0	HIGH
RWG	15	4/28/2004	484.9	1.0690	18.4	low
RWG	16	4/28/2004	428.3	0.9442	16.2	low
RWG	17	4/28/2004	426.4	0.9401	16.2	low
RWG	19	4/28/2004	955.7	2.1070	36.2	low
RWG	21	4/28/2004	925.7	2.0408	35.1	low
RWG	23	4/28/2004	401	0.8841	15.2	low
RWG	24	4/28/2004	357.9	0.7890	13.6	low
RWG	25	4/28/2004	356.4	0.7857	13.5	low
RWG	27	4/29/2004			41.66	per spec
RWG	28	4/29/2004	407.9	0.8993	15.5	low
RWG	29	4/29/2004	407.4	0.8982	15.4	low
RWG	31	4/29/2004			43.9	HIGH
RWG	32	4/29/2004	417.7	0.9209	15.8	low
RWG	33	4/29/2004	415.9	0.9169	15.8	low
RWG	35	4/29/2004			43.27	HIGH
RWG	36	4/29/2004	423	0.9326	16.0	low
RWG	37	4/29/2004	422.6	0.9317	16.0	low
RWG	39	4/29/2004			39.29	per spec
RWG	40	4/29/2004	379.9	0.8375	14.4	low
RWG	41	4/29/2004	386.5	0.8521	14.6	low
RWG	43	4/29/2004			38.77	per spec
RWG	44	4/29/2004	379	0.8356	14.4	low
RWG	45	4/29/2004	374.3	0.8252	14.2	low
RWG	47	4/29/2004			46.33	HIGH
RWG	48	4/29/2004	447	0.9855	16.9	low
RWG	49	4/29/2004	449.7	0.9914	17.0	low
RWG	51	4/29/2004			43.55	HIGH
RWG	52	4/29/2004	420.8	0.9277	15.9	low
RWG	53	4/29/2004	423.5	0.9337	16.0	low
RWG	55	4/29/2004			38.87	per spec
RWG	57	4/29/2004	376.3	0.8296	14.3	low
RWG	27	4/30/2004			37.72	low
RWG	31	4/30/2004			37.18	low
RWG	35	4/30/2004			42.75	HIGH
RWG	39	4/30/2004			40.18	per spec
RWG	43	4/30/2004			41.42	per spec

RWG	44	4/30/2004	403.2	0.8889	15.3 low
RWG	45	4/30/2004	405.5	0.8940	15.4 low
RWG	47	4/30/2004			42 per spec
RWG	48	4/30/2004	414.6	0.9140	15.7 low
RWG	49	4/30/2004	415.5	0.9160	15.7 low
RWG	51	4/30/2004			39.79 per spec
RWG	52	4/30/2004	378.9	0.8353	14.4 low
RWG	55	4/30/2004			42.25 HIGH
RWG	48	5/6/2004	445.8	0.98282	16.9 low
RWG	49	5/6/2004	407.9	0.89927	15.5 low
RWG	50	5/6/2004	407.2	0.89772	15.4 low
RWG	52	5/6/2004	448	0.98767	17.0 low
RWG	53	5/6/2004	450.5	0.99318	17.1 low
RWG	54	5/6/2004	355.9	0.78463	13.5 low
RWG	55	5/6/2004	381	0.83996	14.4 low
RWG	58	5/6/2004	395.6	0.87215	15.0 low
RWG	59	5/6/2004	333.5	0.73524	12.6 low
RWG	62	5/6/2004	398.7	0.8790	15.1 low
RWG	63	5/6/2004	403.3	0.8891	15.3 low
RWG	64	5/6/2004	374.7	0.8261	14.2 low
RWG	65	5/6/2004	345.5	0.7617	13.1 low
RWG	66	5/6/2004	350.2	0.7721	13.3 low
RWG	68	5/6/2004			35.795 low
RWG	72	5/6/2004	401.6	0.8854	15.2 low
RWG	73	5/6/2004	407.4	0.8982	15.4 low
RWG	74	5/6/2004	393.3	0.8671	14.9 low
RWG	75	5/6/2004	359	0.7915	13.6 low
RWG	79	5/6/2004	384.8	0.8483	14.6 low
RWG	80	5/6/2004	362.9	0.8001	13.8 low
RWG	82	5/6/2004	412.7	0.9098	15.6 low
RWG	83	5/6/2004	414.5	0.9138	15.7 low
RWG	84	5/6/2004	393.1	0.8666	14.9 low
RWG	85	5/6/2004	378.9	0.8353	14.4 low
RWG	86	5/6/2004	366	0.8069	13.9 low
RWG	88	5/7/2004	388.6	0.8567	14.7 low
RWG	92	5/7/2004	393.3	0.8671	14.9 low
RWG	93	5/7/2004	413.5	0.9116	15.7 low
RWG	94	5/7/2004	366.9	0.8089	13.9 low
RWG	98	5/7/2004	395.6	0.8721	15.0 low
RWG	02	5/7/2004	371.1	0.8181	14.1 low
RWG	03	5/7/2004	370.1	0.8159	14.0 low
RWG	04	5/7/2004	402.7	0.8878	15.3 low
RWG	08	5/7/2004	408.7	0.9010	15.5 low
RWG	12	5/7/2004	421.9	0.9301	16.0 low
RWG	13	5/7/2004	430	0.9480	16.3 low
RWG	14	5/7/2004	399.7	0.8812	15.1 low
RWG	15	5/7/2004	371.1	0.8181	14.1 low
RWG	16	5/7/2004	372	0.8201	14.1 low
RWG	18	5/7/2004	356	0.7848	13.5 low
RWG	20	5/7/2004	342.5	0.7551	13.0 low
RWG	22	5/7/2004	446.6	0.9846	16.9 low
RWG	23	5/7/2004	434.1	0.9570	16.5 low
RWG	24	5/7/2004	410.9	0.9059	15.6 low
RWG	25	5/7/2004	374.2	0.8250	14.2 low
RWG	84	05/12/04	440.3	0.9707	16.7 low
RWG	85	05/12/04	396.1	0.8733	15.0 low
RWG	86	05/12/04	403.2	0.8889	15.3 low
RWG	94	05/12/04	399.2	0.8801	15.1 low
RWG	96	05/12/04	353.4	0.7791	13.4 low
RWG	1	05/12/04	350.4	0.7725	13.3 low
RWG	10	05/12/04	461.4	1.0172	17.5 low

R. W. GILLESPIE & ASSOCIATES, INC.

86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Cloudy
Method of Placement: Pump, Rear Discharge
Admixtures: --
Placement Location: East Third (67') 1st Lift
Test Cylinder Location: Northwest Corner of placement

Date Cylinders Cast: 28-Apr-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 200 lwf
Max Agg. Size: --

Date Report Issued: JUN 23 2004

4x8 Cylinders	4	Cast by	Marco C. Stone	Time	
Load No.	4	Slump (in) ASTM C 143	--	Batched @	6:45
Ticket No.	4509618	Air (*F)	44	Arrived @	6:50
Truck No.	180	Concrete (*F) ASTM C 1064	73	Total Time	--
Cubic Yds.	10	Air Content (%) ASTM C 231	--		

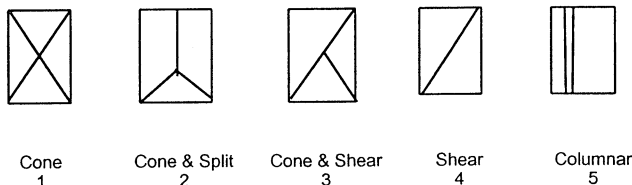
*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1
 Date received: 29-Apr-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
*45983	05-May-04	4.000	12.56	7	840	70	5
45984	26-May-04	4.000	12.56	28	1,720	140	4
45985	26-May-04	4.000	12.56	28	1,400	110	5
45986	23-Jun-04	4.000	12.56	56	780	60	2

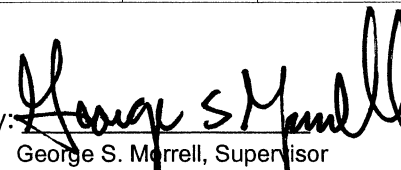
*Concrete compressive strength by ASTM C 39

Types of Breaks



Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (*F)	Conc Temp (*F)	(%) Air Content	Time (min.)
1	4509615	173	10.00	--	--	--	--	--
2	4509616	169	10.00	--	--	--	--	--
3	4509617	170	10.00	--	--	--	--	--
5	4509619	175	10.00	--	--	--	--	--
6	4509620	80	10.00	--	--	--	--	--
7	4509621	179	10.00	--	--	--	--	--
8	4509622	88	10.00	--	--	--	--	--
9	4509623	171	10.00	--	--	--	--	--
10	4509624	173	10.00	--	--	--	--	--
11	4509625	--	10.00	--	--	--	--	--

Remarks: Total loads = 74
 Weight of Cylinder #45983 = 905.8 g
 Weight of Cylinder #45984 = unknown
 Weight of Cylinder #45985 = unknown
 *Top was chipped

Checked by: 
 George S. Merrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244

CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Cloudy
Method of Placement: Pump, Rear Discharge
Admixtures: --
Placement Location: East Third (67') 1st Lift
Test Cylinder Location: 60' from North edge/15' from West edge

Date Cylinders Cast: 28-Apr-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 200 lwf
Max Agg. Size: --

Date Report Issued: JUN 23 2004

4x8 Cylinders	4	Cast by	Marco C. Stone	Time	
Load No.	12	Slump (in) ASTM C 143	--	Batched @	7:50
Ticket No.	4509626	Air (°F)	--	Arrived @	8:00
Truck No.	169	Concrete (°F) ASTM C 1064	--	Total Time	--
Cubic Yds.	10	Air Content (%) ASTM C 231	--		

*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1
 Date received: 29-Apr-04
 Condition of Cylinders: Good

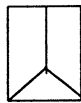
Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
*45987	05-May-04	4.000	12.56	7	1,300	100	5
45988	26-May-04	4.000	12.56	28	2,060	160	5
45989	26-May-04	4.000	12.56	28	1,660	130	5
45990	23-Jun-04	4.000	12.56	56	2,300	180	2

*Concrete compressive strength by ASTM C 39

Types of Breaks



Cone
1



Cone & Split
2



Cone & Shear
3



Shear
4



Columnar
5

Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
13	4509627	170	10.00	--	--	--	--	--
14	4509628	180	10.00	--	--	--	--	--
15	4509629	175	10.00	--	--	--	--	--
16	4509630	80	10.00	--	--	--	--	--
17	4509631	88	10.00	--	--	--	--	--
18	4509632	171	10.00	--	--	--	--	--
19	4509633	179	10.00	--	--	--	--	--
20	4509634	174	10.00	--	--	--	--	--
21	4509635	173	10.00	--	--	--	--	--

Remarks: Total loads = 74
 Weight of Cylinder #45987 = 1261.0 g
 Weight of Cylinder #45988 = unknown
 Weight of Cylinder #45989 = unknown
 *Top was chipped

Checked by:
 George S. Marrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Cloudy
Method of Placement: Pump, Rear Discharge
Admixtures: --
Placement Location: East Third (67') 1st Lift
Test Cylinder Location 50' from North edge/20' from East edge

Date Cylinders Cast: 28-Apr-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 200 lwf
Max Agg. Size: --

Date Report Issued: JUN 23 2004

4x8 Cylinders	4	Cast by	Marco C. Stone	Time	
Load No.	22	Slump (in) ASTM C 143	--	Batched @	9:00
Ticket No.	4509636	Air (°F)	--	Arrived @	--
Truck No.	170	Concrete (°F) ASTM C 1064	--	Total Time	--
Cubic Yds.	10	Air Content (%) ASTM C 231	--		

*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1
 Date received: 29-Apr-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
45991	05-May-04	4.000	12.56	7	2,780	220	2
45992	26-May-04	4.000	12.56	28	2,240	180	5
45993	26-May-04	4.000	12.56	28	2,740	220	5
45994	23-Jun-04	4.000	12.56	56	4,260	340	2

*Concrete compressive strength by ASTM C 39

Types of Breaks



Cone
1



Cone & Split
2



Cone & Shear
3



Shear
4



Columnar
5

Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
23	4509637	169	10.00	--	--	--	--	--
24	4509638	175	10.00	--	--	--	--	--
25	4509639	180	10.00	--	--	--	--	--
26	4509640	88	10.00	--	--	--	--	--
27	4509641	171	10.00	--	--	--	--	--
28	4509642	80	10.00	--	--	--	--	--
29	4509643	174	10.00	--	--	--	--	--
30	4509644	179	10.00	--	--	--	--	--
31	4509645	173	10.00	--	--	--	--	--
32	4509646	170	10.00	--	--	--	--	--

Remarks: Total loads = 74
 Weight of Cylinder #45991 = 1215.2 g
 Weight of Cylinder #45992 = unknown
 Weight of Cylinder #45993 = 1199.6 g
 Weight of Cylinder #45994 = 1153.1 g

Checked by: _____
 George S. Morrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244

CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Cloudy
Method of Placement: Pump, Rear Discharge
Admixtures: --
Placement Location: East Third (67') 1st Lift
Test Cylinder Location: 80' from North edge/10' from East edge

Date Cylinders Cast: 28-Apr-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 200 lwf
Max Agg. Size: --

Date Report Issued: MAY 26 2004

4x8 Cylinders	4	Cast by	Marco C. Stone			
Load No.	33	Slump (in) ASTM C 143	--	Time	Batched @	10:00
Ticket No.	4509647	Air (°F)	--		Arrived @	10:05
Truck No.	180	Concrete (°F) ASTM C 1064	--		Total Time	--
Cubic Yds.	10	Air Content (%) ASTM C 231	--			

*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1

Date received: 29-Apr-04

Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
*45995	05-May-04	4.000	12.56	7	1,620	130	4
45996	26-May-04	4.000	12.56	28	2,500	200	5
45997	26-May-04	4.000	12.56	28	2,580	210	5
45998	HOLD			HOLD			

*Concrete compressive strength by ASTM C 39

Types of Breaks



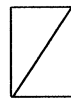
Cone
1



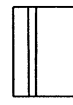
Cone & Split
2



Cone & Shear
3



Shear
4



Columnar
5

Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
34	4509648	175	10.00	--	--	--	--	--
35	4509649	88	10.00	--	--	--	--	--
36	4509650	171	10.00	--	--	--	--	--
37	4509651	80	10.00	--	--	--	--	--
38	4509652	174	10.00	--	--	--	--	--
39	4509653	179	10.00	--	--	--	--	--
40	4509654	173	10.00	--	--	--	--	--
41	4509655	170	10.00	--	--	--	--	--

Remarks: Total loads = 74
 Weight of Cylinder #45995 = 1073.7 g
 Weight of Cylinder #45996 = 1063.7 g
 Weight of Cylinder #45997 = 1064.6 g
 *Top was chipped

Checked by:

George S. Morrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.
 86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Cloudy
Method of Placement: Pump, Rear Discharge
Admixtures: --
Placement Location: East Third (67') 1st Lift
Test Cylinder Location: 75' from North edge/Center (East to West)

Date Cylinders Cast: 28-Apr-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 200 lwf
Max Agg. Size: --

Date Report Issued: JUN 25 2004

4x8 Cylinders	4	Cast by	Marco C. Stone	Time		
Load No.	42	Slump (in) ASTM C 143	--		Batched @	11:00
Ticket No.	4509656	Air (°F)	--		Arrived @	11:07
Truck No.	180	Concrete (°F) ASTM C 1064	--		Total Time	--
Cubic Yds.	10	Air Content (%) ASTM C 231	--			

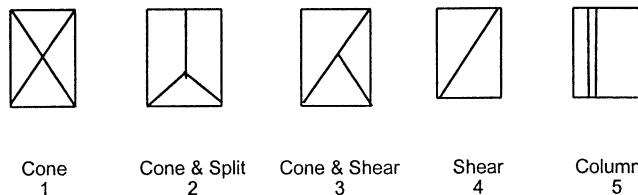
*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1
 Date received: 29-Apr-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
45999	05-May-04	4.000	12.56	7	1,300	100	5
46000	26-May-04	4.000	12.56	28	1,580	150	5
46001	26-May-04	4.000	12.56	28	1,860	145	5
46002	24-Jun-04	4.000	12.56	57	2,480	200	5

*Concrete compressive strength by ASTM C 39

Types of Breaks



Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
43	4509657	175	10.00	--	--	--	--	--
44	4509658	88	10.00	--	--	--	--	--
45	4509659	80	10.00	--	--	--	--	--
46	4509660	171	10.00	--	--	--	--	--
47	4509661	174	10.00	--	--	--	--	--
48	4509662	179	10.00	--	--	--	--	--
49	4509663	170	10.00	--	--	--	--	--
50	4509664	173	10.00	--	--	--	--	--

Remarks: Total loads = 74
 Weight of Cylinder #45999 = 990.2 g
 Weight of Cylinder #46000 = 983.3 g
 Weight of Cylinder #46001 = 975.4 g

Checked by: 
 George S. McNeill, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

Project Name:	Maine Mall Motors	Date Cylinders Cast:	28-Apr-04
Project No:	235-979	Concrete Supplier:	Dragon
Weather Conditions:	Cloudy	General Contractor:	Daniel Hebert
Method of Placement:	Pump, Rear Discharge	Design Strength:	200 lwf
Admixtures:	--	Max Agg. Size:	--
Placement Location:	East Third (67') 1st Lift		
Test Cylinder Location:	Center (North to South)/20' from West		

Date Report Issued: JUN 23 2004

4x8 & 3x6 Cylinders	8	Cast by	Marco C. Stone	Time
Load No.	51	Slump (in) ASTM C 143	--	Batched @
Ticket No.	4509665	Air (°F)	--	Arrived @
Truck No.	180	Concrete (°F) ASTM C 1064	--	Total Time
Cubic Yds.	10	Air Content (%) ASTM C 231	--	--

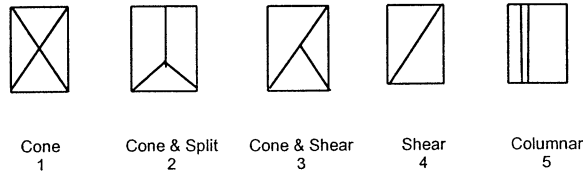
*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1
 Date received: 29-Apr-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46003	05-May-04	4.000	12.56	7	1,760	140	1
46004	26-May-04	4.000	12.56	28	1,820	140	5
46005	26-May-04	4.000	12.56	28	2,740	220	5
*46006	23-Jun-04	4.000	12.56	56	1,840	145	2
46007	05-May-04	3.000	7.06	7	820	115	5
46008	26-May-04	3.000	7.07	28	1,120	155	5
46009	26-May-04	3.000	7.07	28	1,100	155	5
46010	23-Jun-04	3.000	7.07	56	1,140	160	2

*Concrete compressive strength by ASTM C 39

Types of Breaks



Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
52	4509666	175	10.00	--	--	--	--	--
53	4509667	88	10.00	--	--	--	--	--
54	4509668	80	10.00	--	--	--	--	--
55	4509669	171	10.00	--	--	--	--	--
56	4509670	179	10.00	--	--	--	--	--
57	4509671	174	10.00	--	--	--	--	--
58	4509672	170	10.00	--	--	--	--	--
59	4509673	173	10.00	--	--	--	--	--

Remarks: *Cylinder #46006 has shrinkage cracks.

Total loads = 74
 Weight of Cylinder #46003 = 978.0 g
 Weight of Cylinder #46004 = 947.5 g
 Weight of Cylinder #46005 = 949.9 g
 Weight of Cylinder #46006 = 900.1 g
 Weight of Cylinder #46007 = 413.2 g
 Weight of Cylinder #46009 = 358.0 g
 Weight of Cylinder #46010 = 359.7 g

Checked by:
 George S. Morrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244

CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Cloudy
Method of Placement: Pump, Rear Discharge
Admixtures: --
Placement Location: East Third (67') 1st Lift
Test Cylinder Location: 60' from S/25' from E

Date Cylinders Cast: 28-Apr-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 200 lbf
Max Agg. Size: --

Date Report Issued: MAY 26 2004

4x8 & 3x6 Cylinders	8	Cast by	Marco C. Stone	Time	
Load No.	60	Slump (in) ASTM C 143	--	Batched @	1:00
Ticket No.	4509674	Air (°F)	--	Arrived @	1:07
Truck No.	180	Concrete (°F) ASTM C 1064	72	Total Time	--
Cubic Yds.	10	Air Content (%) ASTM C 231	--		

*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1

Date received: 29-Apr-04

Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
*46011	05-May-04	4.000	12.56	7	2,120	170	5
46012	26-May-04	4.000	12.56	28	2,520	200	5
46013	26-May-04	4.000	12.56	28	2,800	220	5
46014	HOLD			HOLD			
46015	05-May-04	3.000	7.06	7	1,360	190	4
46016	26-May-04	3.000	7.06	28	1,460	205	5
46017	26-May-04	3.000	7.06	28	1,540	220	5
46018	HOLD			HOLD			

*Concrete compressive strength by ASTM C 39

Types of Breaks



Cone
1



Cone & Split
2



Cone & Shear
3



Shear
4



Columnar
5

Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
61	4509675	175	10.00	--	--	--	--	--
62	4509676	88	10.00	--	--	--	--	--
63	4509677	80	10.00	--	--	--	--	--
64	4509678	179	10.00	--	--	--	--	--
65	4509679	174	10.00	--	--	--	--	--
66	4509680	170	10.00	--	--	--	--	--

Remarks: Total loads = 74

Weight of Cylinder #46011 = 1140.8 g

Weight of Cylinder #46012 = 1133.5 g

Weight of Cylinder #46013 = unknown

Weight of Cylinder #46015 = 484.9 g

Weight of Cylinder #46016 = 428.3 g

Weight of Cylinder #46017 = 426.4 g

*Top was chipped

Checked by:

George S. Marrell
 George S. Marrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Cloudy
Method of Placement: Pump, Rear Discharge
Admixtures: --
Placement Location: East Third (67') 1st Lift
Test Cylinder Location: S to End/20' from West

Date Cylinders Cast: 28-Apr-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 200 lwf
Max Agg. Size: --

Date Report Issued: JUN 23 2004

4x8 & 3x6 Cylinders	5	Cast by	Marco C. Stone	Time
Load No.	67	Slump (in) ASTM C 143	--	Batched @
Ticket No.	4509682	Air (°F)	--	Arrived @
Truck No.	175	Concrete (°F) ASTM C 1064	--	Total Time
Cubic Yds.	10	Air Content (%) ASTM C 231	--	--

*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1
 Date received: 29-Apr-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46019	05-May-04	4.000	12.56	7	1,200	95	5
46020	26-May-04	4.000	12.56	28	1,600	130	5
46021	26-May-04	4.000	12.56	28	1,600	130	5
46022	23-Jun-04	4.000	12.56	56	2,560	200	2
46023	05-May-04	3.000	7.06	7	800	110	1
46024	26-May-04	3.000	7.06	28	1,220	170	5
46025	26-May-04	3.000	7.06	28	1,040	150	5
46026	23-Jun-04	3.000	7.07	56	480	70	2

*Concrete compressive strength by ASTM C 39

Types of Breaks



Cone
1



Cone & Split
2



Cone & Shear
3



Shear
4



Columnar
5

Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
68	4509683	88	10.00	--	--	--	--	--
69	4509684	80	10.00	--	--	--	--	--
70	4509686	179	10.00	--	--	--	--	--
71	4509687	174	10.00	--	--	--	--	--
72	4509688	170	10.00	--	--	--	--	--
73	4509689	175	10.00	--	--	--	--	--
74	4509690	88	10.00	--	--	--	--	--

Remarks: Total loads = 74
 Weight of Cylinder #46019 = 955.7 g
 Weight of Cylinder #46021 = 925.7 g
 Weight of Cylinder #46022 = 923.6 g
 Weight of Cylinder #46023 = 401.0 g
 Weight of Cylinder #46024 = 357.9 g
 Weight of Cylinder #46025 = 356.4 g

Checked by:
 George S. Morrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Cloudy
Method of Placement: Pump / Rear Discharge
Admixtures: --
Placement Location: West Third (67') 1st Lift
Test Cylinder Location: 20' From W / N End

Date Cylinders Cast: 29-Apr-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 200 lwf
Max Agg. Size: --

Date Report Issued: JUN 25 2004

3 x 6 Cylinders	4	Cast by	Marco C. Stone	Time	
Load No.	2	Slump (in) ASTM C 143	--	Batched @	6:30
Ticket No.	4509696	Air (°F)	42	Arrived @	--
Truck No.	175	Concrete (°F) ASTM C 1064	--	Total Time	--
Cubic Yds.	10	Air Content (%) ASTM C 231	--		

*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1
 Date received: 30-Apr-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46027	06-May-04	3.000	7.07	7	1,600	230	2
46028	27-May-04	3.000	7.07	28	1,280	180	5
46029	27-May-04	3.000	7.07	28	1,400	200	5
46030	24-Jun-04	3.000	7.07	56	2,680	380	5

*Concrete compressive strength by ASTM C 39

Types of Breaks



Cone
1



Cone & Split
2



Cone & Shear
3



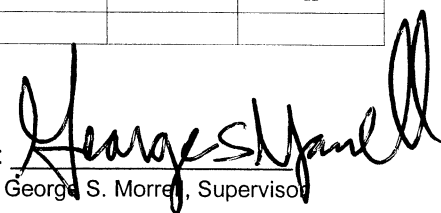
Shear
4



Columnar
5

Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
1	4509695	180	10.00	--	--	--	--	--
3	4509697	173	10.00	--	--	--	--	--
4	4509698	169	10.00	--	--	--	--	--
5	4509699	170	10.00	--	--	--	--	--
6	4509700	15	10.00	--	--	--	--	--
7	4509701	149	10.00	--	--	--	--	--
8	4509702	180	10.00	--	--	--	--	--
9	4509703	173	10.00	--	--	--	--	--
10	4509704	175	10.00	--	--	--	--	--
11	4509705	169	10.00	--	--	--	--	--

Remarks: 82 Total Loads
 Wet Density = 41.66 pcf
 Weight of Cylinder #46027 = unknown
 Weight of Cylinder #46028 = 407.9 g
 Weight of Cylinder #46029 = 407.4 g

Checked by: 
 George S. Morre, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244

CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Cloudy
Method of Placement: Pump / Rear Discharge
Admixtures: --
Placement Location: West Third (67') / 1st Lift
Test Cylinder Location 20' from N / 10 from W

Date Cylinders Cast: 29-Apr-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 200 lwf
Max Agg. Size: --

Date Report Issued: JUN 25 2004

3 x 6 Cylinders	4	Cast by	Marco C. Stone	Time	
Load No.	12	Slump (in) ASTM C 143	--	Batched @	7:50
Ticket No.	4509706	Air (°F)	45	Arrived @	--
Truck No.	170	Concrete (°F) ASTM C 1064	--	Total Time	--
Cubic Yds.	10	Air Content (%) ASTM C 231	--		

*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1

Date received: 30-Apr-04

Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46031	06-May-04	3.000	7.07	7	1,720	240	2
46032	27-May-04	3.000	7.07	28	1,460	210	5
46033	27-May-04	3.000	7.07	28	1,320	190	5
46034	24-Jun-04	3.000	7.07	56	1,320	190	5

*Concrete compressive strength by ASTM C 39

Types of Breaks



Cone
1



Cone & Split
2



Cone & Shear
3



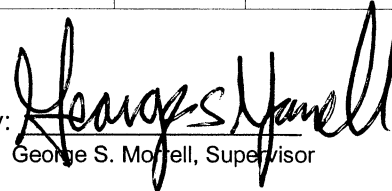
Shear
4



Columnar
5

Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
13	4509707	133	10.00	--	--	--	--	--
14	4509708	149	10.00	--	--	--	--	--
15	4509709	180	10.00	--	--	--	--	--
16	4509710	173	10.00	--	--	--	--	--
17	4509711	175	10.00	--	--	--	--	--
18	4509712	170	10.00	--	--	--	--	--
19	4509713	169	10.00	--	--	--	--	--
20	4509714	153	10.00	--	--	--	--	--
21	4509715	180	10.00	--	--	--	--	--
22	4509716	173	10.00	--	--	--	--	--

Remarks: 82 Total Loads
 Wet Density = 43.27 pcf
 Weight of Cylinder #46031 = unknown
 Weight of Cylinder #46032 = 417.7 g
 Weight of Cylinder #46033 = 415.9 g

Checked by: 
 George S. Moffell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Cloudy
Method of Placement: Pump / Rear Discharge
Admixtures: --
Placement Location: West Third (67') / 1st Lift
Test Cylinder Location: 25' from N / 10' from E

Date Cylinders Cast: 04/29/04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 200 lwf
Max Agg. Size: --

Date Report Issued: MAY 27 2004

3 x 6 Cylinders	4	Cast by	Marco C. Stone	Time	
Load No.	23	Slump (in) ASTM C 143	--	Batched @	9:30
Ticket No.	4509717	Air (°F)	--	Arrived @	9:40
Truck No.	171	Concrete (°F) ASTM C 1064	--	Total Time	--
Cubic Yds.	10	Air Content (%) ASTM C 231	--		

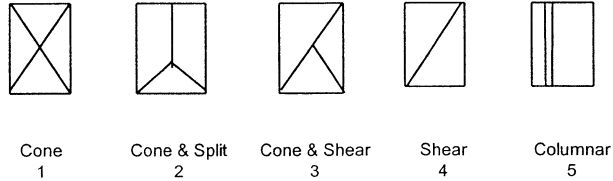
*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1
 Date received: 30-Apr-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46035	06-May-04	3.000	7.07	7	2,000	280	2
46036	27-May-04	3.000	7.07	28	1,440	200	5
46037	27-May-04	3.000	7.07	28	1,440	200	5
46038	HOLD			HOLD			

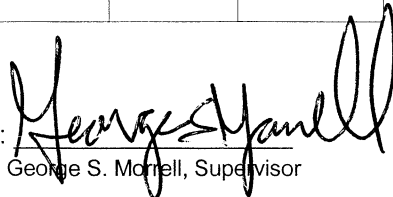
*Concrete compressive strength by ASTM C 39

Types of Breaks



Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
24	4509718	175	10.00	--	--	--	--	--
25	4509719	169	10.00	--	--	--	--	--
26	4509720	170	10.00	--	--	--	--	--
27	4509721	180	10.00	--	--	--	--	--
28	4509722	153	10.00	--	--	--	--	--
29	4509723	173	10.00	--	--	--	--	--
30	4509724	171	10.00	--	--	--	--	--
31	4509725	175	10.00	--	--	--	--	--

Remarks: 82 Total Loads
 Wet Density = 43.90 pcf
 Weight of Cylinder #46035 = unknown
 Weight of Cylinder #46036 = 423.0 g
 Weight of Cylinder #46037 = 422.6 g

Checked by: 
 George S. Morrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244

CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Cloudy
Method of Placement: Pump / Rear Discharge
Admixtures: --
Placement Location: West Third (67') / 1st Lift
Test Cylinder Location: 60' from N / Center W to E

Date Cylinders Cast: 04/29/04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 200 lwf
Max Agg. Size: --

Date Report Issued: JUN 25 2004

3 x 6 Cylinders	4	Cast by	Marco C. Stone	Time	
Load No.	32	Slump (in) ASTM C 143	--	Batched @	10:35
Ticket No.	4509726	Air (°F)	--	Arrived @	10:46
Truck No.	90	Concrete (°F) ASTM C 1064	73	Total Time	--
Cubic Yds.	10	Air Content (%) ASTM C 231	47		

*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1
 Date received: 30-Apr-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46039	06-May-04	3.000	7.07	7	1,620	230	2
46040	27-May-04	3.000	7.07	28	1,260	180	5
46041	27-May-04	3.000	7.07	28	1,340	190	5
46042	24-Jun-04	3.000	7.07	56	1,640	230	5

*Concrete compressive strength by ASTM C 39

Types of Breaks



Cone
1



Cone & Split
2



Cone & Shear
3



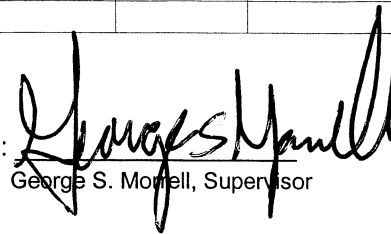
Shear
4



Columnar
5

Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
33	4509727	168	10.00	--	--	--	--	--
34	4509728	169	10.00	--	--	--	--	--
35	4509729	170	10.00	--	--	--	--	--
36	4509730	180	10.00	--	--	--	--	--
37	4509731	153	10.00	--	--	--	--	--
38	4509732	173	10.00	--	--	--	--	--
39	4509733	171	10.00	--	--	--	--	--
40	4509735	90	10.00	--	--	--	--	--
41	4509736	168	10.00	--	--	--	--	--

Remarks: 82 Total Loads
 Wet Density = 39.29 pcf
 Weight of Cylinder #46039 = unknown
 Weight of Cylinder #46040 = 379.9
 Weight of Cylinder #46041 = 386.5 g

Checked by: 
 George S. Morrill, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Cloudy
Method of Placement: Pump / Rear Discharge
Admixtures: --
Placement Location: West Third (67') / 1st Lift
Test Cylinder Location: Center N to S / W edge

Date Cylinders Cast: 04/29/04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 200 lwf
Max Agg. Size: --

Date Report Issued: JUN 25 2004

3 x 6 Cylinders	4	Cast by	Marco C. Stone	Time	
Load No.	42	Slump (in) ASTM C 143	--	Batched @	12:00
Ticket No.	4509737	Air (°F)	--	Arrived @	--
Truck No.	155	Concrete (°F) ASTM C 1064	--	Total Time	--
Cubic Yds.	10	Air Content (%) ASTM C 231	--		

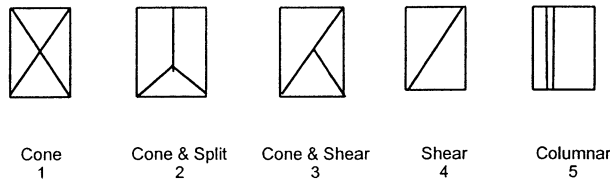
*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1
 Date received: 30-Apr-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46043	06-May-04	3.000	7.07	7	1,600	230	2
46044	27-May-04	3.000	7.07	28	1,240	185	5
46045	27-May-04	3.000	7.07	28	1,340	190	5
46046	24-Jun-04	3.000	7.07	56	1,420	200	5

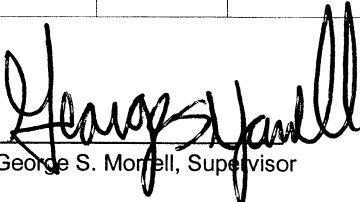
*Concrete compressive strength by ASTM C 39

Types of Breaks



Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
43	4509738	169	10.00	--	--	--	--	--
44	4509739	170	10.00	--	--	--	--	--
45	4509740	180	10.00	--	--	--	--	--
46	4509741	153	10.00	--	--	--	--	--
47	4509742	173	10.00	--	--	--	--	--
48	4509743	171	10.00	--	--	--	--	--
49	4509744	90	10.00	--	--	--	--	--
50	4509745	168	10.00	--	--	--	--	--
51	4509746	155	10.00	--	--	--	--	--

Remarks: 82 Total Loads
 Wet Density = 38.77 pcf
 Weight of Cylinder #46043 = unknown
 Weight of Cylinder #46044 = 379.0 g
 Weight of Cylinder #46045 = 374.3 g

Checked by: 
 George S. Morrill, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Cloudy
Method of Placement: Pump / Rear Discharge
Admixtures: --
Placement Location: West Third (67') / 1st Lift
Test Cylinder Location: 60' from S / Center E to W

Date Cylinders Cast: 04/29/04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 200 lwf
Max Agg. Size: --

Date Report Issued: MAY 27 2004

3 x 6 Cylinders	4	Cast by	Marco C. Stone	Time	
Load No.	52	Slump (in) ASTM C 143	--	Batched @	1:10
Ticket No.	4509747	Air (°F)	--	Arrived @	--
Truck No.	169	Concrete (°F) ASTM C 1064	--	Total Time	--
Cubic Yds.	10	Air Content (%) ASTM C 231	--		

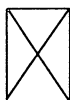
*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1
 Date received: 30-Apr-04
 Condition of Cylinders: Good

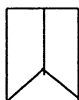
Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46047	06-May-04	3.000	7.07	7	2,520	360	2
46048	27-May-04	3.000	7.07	28	1,580	220	5
46049	27-May-04	3.000	7.07	28	1,960	280	5
46050	HOLD			HOLD			

*Concrete compressive strength by ASTM C 39

Types of Breaks



Cone
1



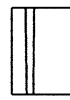
Cone & Split
2



Cone & Shear
3



Shear
4



Columnar
5

Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
53	4509748	170	10.00	--	--	--	--	--
54	4509749	180	10.00	--	--	--	--	--
55	4509750	153	10.00	--	--	--	--	--
56	4509751	173	10.00	--	--	--	--	--
57	4509752	171	10.00	--	--	--	--	--
58	4509753	90	10.00	--	--	--	--	--
59	4509754	155	10.00	--	--	--	--	--
60	4509756	169	10.00	--	--	--	--	--

Remarks: 82 Total Loads
 Wet Density = 46.33 pcf
 Weight of Cylinder #46047 = unknown
 Weight of Cylinder #46048 = 447.0 g
 Weight of Cylinder #46048 = 449.7 g

Checked by:
 George S. Morrell, Supervisor

A9?

R. W. GILLESPIE & ASSOCIATES, INC.

86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Cloudy
Method of Placement: Pump / Rear Discharge
Admixtures: --
Placement Location: West Third (67') / 1st Lift
Test Cylinder Location: 15' from E / 20' from S

Date Cylinders Cast: 04/29/04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 200 lwf
Max Agg. Size: --

Date Report Issued: MAY 27 2004

3 x 6 Cylinders	4	Cast by	Marco C. Stone	Time	
Load No.	61	Slump (in) ASTM C 143	--	Batched @	2:25
Ticket No.	4509758	Air (°F)	--	Arrived @	--
Truck No.	170	Concrete (°F) ASTM C 1064	--	Total Time	--
Cubic Yds.	10	Air Content (%) ASTM C 231	--		

*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1
 Date received: 30-Apr-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46051	06-May-04	3.000	7.07	7	2,220	315	2
46052	27-May-04	3.000	7.07	28	1,500	210	5
46053	27-May-04	3.000	7.07	28	1,480	210	5
46054	HOLD			HOLD			

*Concrete compressive strength by ASTM C 39

Types of Breaks



Cone
1



Cone & Split
2



Cone & Shear
3



Shear
4



Columnar
5

Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)	
62	4509759	153	10.00	--	--	--	--	--	
63	4509760	173	10.00	--	--	--	--	--	
64	4509761	171	10.00	--	--	--	--	--	
65	4509762	90	10.00	--	--	--	--	--	
66	4509763	155	10.00	--	--	--	--	--	
67	4509764	180	10.00	--	--	--	--	--	
68	4509765	169	10.00	--	--	--	--	--	
69	4509766	170	10.00	--	--	--	--	--	
70	4509767	153	10.00	--	--	--	--	--	
71	4509768	175	10.00	--	--	--	--	--	
72	4509769	168	SENT BACK BECAUSE LOAD CONTAINED AGGRE				--	--	--

Remarks: 82 Total Loads
 Wet Density = 43.55 pcf
 Weight of Cylinder #46051 = unknown
 Weight of Cylinder #46052 = 420.8 g
 Weight of Cylinder #46053 = 423.5 g

Checked by:
 George S. Morrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Cloudy
Method of Placement: Pump / Rear Discharge
Admixtures: --
Placement Location: West Third (67') / 1st Lift
Test Cylinder Location: 10' from W / 25' from S

Date Cylinders Cast: 04/29/04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 200 lwf
Max Agg. Size: --

Date Report Issued: JUN 25 2004

3 x 6 Cylinders	4	Cast by	Marco C. Stone	Time	
Load No.	73	Slump (in) ASTM C 143	--	Batched @	3:55
Ticket No.	4509770	Air (°F)	--	Arrived @	--
Truck No.	173	Concrete (°F) ASTM C 1064	--	Total Time	--
Cubic Yds.	10	Air Content (%) ASTM C 231	--		

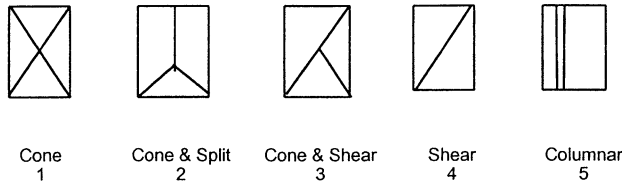
*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1
 Date received: 30-Apr-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46055	06-May-04	3.000	7.07	7	1,480	210	2
46056	27-May-04	3.000	7.07	28	1,120	160	5
46057	27-May-04	3.000	7.07	28	1,180	170	5
46058	24-Jun-04	3.000	7.07	56	1,220	170	5

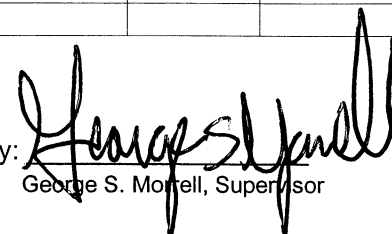
*Concrete compressive strength by ASTM C 39

Types of Breaks



Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
74	4509771	171	10.00	--	--	--	--	--
75	4509772	90	10.00	--	--	--	--	--
76	4509773	155	10.00	--	--	--	--	--
77	4509774	175	10.00	--	--	--	--	--
78	4509775	180	10.00	--	--	--	--	--
79	4509776	169	10.00	--	--	--	--	--
80	4509777	153	10.00	--	--	--	--	--
81	4509778	171	10.00	Replaced Load #72		--	--	--
82	4509779	--	10.00	--	--	--	--	--

Remarks: 82 Total Loads
 Wet Density = 38.87 pcf
 Weight of Cylinder #46055 = unknown
 Weight of Cylinder #46056 = unknown
 Weight of Cylinder #46057 = 376.3 g

Checked by: 
 George S. Morfell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244

CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Sunny
Method of Placement: Rear Discharge / Pump
Admixtures: --
Placement Location: Middle Third (66') 1st Lift
Test Cylinder Location 10' from N / 20' from E

Date Cylinders Cast: 30-Apr-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 200 lwf
Max Agg. Size: --

Date Report Issued: JUN 25 2004

3x6 Cylinders	4	Cast by	Marco C. Stone	Time	
Load No.	6	Slump (in) ASTM C 143	--	Batched @	7:05
Ticket No.	4509786	Air (°F)	--	Arrived @	7:17
Truck No.	80	Concrete (°F) ASTM C 1064	--	Total Time	--
Cubic Yds.	10	Air Content (%) ASTM C 231	--		

*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 3

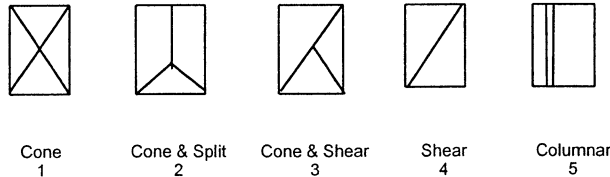
Date received: 03-May-04

Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46127	07-May-04	3.000	7.07	7	790	110	2
46128	28-May-04	3.000	7.07	28	760	110	4
46129	28-May-04	3.000	7.07	28	760	110	5
46130	25-Jun-04	3.000	7.07	56	860	120	2

*Concrete compressive strength by ASTM C 39

Types of Breaks



Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
1	4509781	175	10.00	--	--	--	--	--
2	4509782	169	10.00	--	--	--	--	--
3	4509783	173	10.00	--	--	--	--	--
4	4509784	180	10.00	--	--	--	--	--
5	4509785	171	10.00	--	--	--	--	--
7	4509787	144	10.00	--	--	--	--	--
8	4509788	177	10.00	--	--	--	--	--
9	4509789	83	10.00	--	--	--	--	--
10	4509790	74	10.00	--	--	--	--	--
11	4509791	81	10.00	--	--	--	--	--
12	4509792	175	10.00	--	--	--	--	--

Remarks: 76 Total Loads
 Wet Density = 37.72 pcf

Checked by: 
 George S. Morrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244

CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Sunny
Method of Placement: Rear Discharge / Pump
Admixtures: --
Placement Location: Middle Third (66") 1st Lift
Test Cylinder Location: 50' from N / 15' from E

Date Cylinders Cast: 30-Apr-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 200 lwf
Max Agg. Size: --

Date Report Issued: JUN 25 2004

3x6 Cylinders	4	Cast by	Marco C. Stone	Time	
Load No.	13	Slump (in) ASTM C 143	--		
Ticket No.	4509793	Air (°F)	--		
Truck No.	169	Concrete (°F) ASTM C 1064	--		
Cubic Yds.	10	Air Content (%) ASTM C 231	--		
				Batched @	07:20
				Arrived @	08:05
				Total Time	--

*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 3

Date received: 03-May-04

Condition of Cylinders: Good

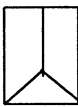
Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46131	07-May-04	3.000	7.07	7	800	110	2
46132	28-May-04	3.000	7.07	28	740	100	5
46133	28-May-04	3.000	7.07	28	860	120	5
46134	25-Jun-04	3.000	7.07	56	800	110	2

*Concrete compressive strength by ASTM C 39

Types of Breaks



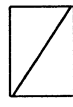
Cone
1



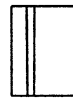
Cone & Split
2



Cone & Shear
3



Shear
4



Columnar
5

Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
14	4509794	180	10.00	--	--	--	--	--
15	4509795	173	10.00	--	--	--	--	--
16	4509796	171	10.00	--	--	--	--	--
17	4509797	80	10.00	--	--	--	--	--
18	4509798	144	10.00	--	--	--	--	--
19	4509799	172	10.00	--	--	--	--	--
20	4509800	74	10.00	--	--	--	--	--

Remarks: 76 Total Loads
Wet Density = 37.18 pcf

Checked by:
George S. Morrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244

CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Sunny
Method of Placement: Rear Discharge / Pump
Admixtures: --
Placement Location: Middle Third (66') 1st Lift
Test Cylinder Location: 40' from N / West Edge

Date Cylinders Cast: 30-Apr-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 200 lwf
Max Agg. Size: --

Date Report Issued:

3x6 Cylinders	4	Cast by	Marco C. Stone	Time	
Load No.	21	Slump (in) ASTM C 143	--	Batched @	--
Ticket No.	4509801	Air (°F)	82	Arrived @	--
Truck No.	83	Concrete (°F) ASTM C 1064	--	Total Time	--
Cubic Yds.	10	Air Content (%) ASTM C 231	--		

*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 3

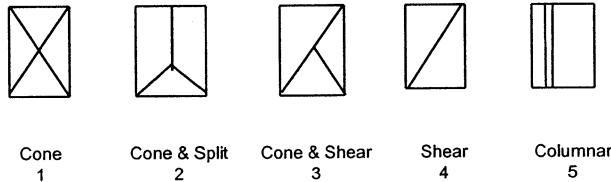
Date received: 03-May-04

Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
45135	07-May-04	3.000	7.07	7	985	140	2
45136	28-May-04	3.000	7.07	28	1,400	200	5
45137	28-May-04	3.000	7.07	28	1,840	260	5
45138	HOLD			HOLD			

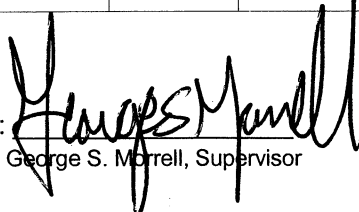
*Concrete compressive strength by ASTM C 39

Types of Breaks



Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
22	4509802	175	10.00	--	--	--	--	--
23	4509803	81	10.00	--	--	--	--	--
24	4509804	169	10.00	--	--	--	--	--
25	4509805	180	10.00	--	--	--	--	--
26	4509806	173	10.00	--	--	--	--	--
27	4509808	144	10.00	--	--	--	--	--
28	4509809	80	10.00	--	--	--	--	--
29	4509810	74	10.00	--	--	--	--	--
30	4509811	83	10.00	--	--	--	--	--
31	4509812	175	10.00	--	--	--	--	--
32	4509813	81	10.00	--	--	--	--	--

Remarks: 76 Total Loads
 Wet Density = 42.75 pcf

Checked by: 
 George S. Morrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244

CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Sunny
Method of Placement: Rear Discharge / Pump
Admixtures: --
Placement Location: Middle Third (66') 1st Lift
Test Cylinder Location: Center of Placement

Date Cylinders Cast: 30-Apr-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 200 lwf
Max Agg. Size: --

Date Report Issued: JUN 25 2004

3x6 Cylinders	4	Cast by	Marco C. Stone		
Load No.	33	Slump (in) ASTM C 143	--	Batched @	10:00
Ticket No.	4509814	Air (°F)	84	Arrived @	10:10
Truck No.	169	Concrete (°F) ASTM C 1064	78	Total Time	--
Cubic Yds.	10	Air Content (%) ASTM C 231	--		

*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 3

Date received: 03-May-04

Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46139	07-May-04	3.000	7.07	7	1,340	190	2
46140	28-May-04	3.000	7.07	28	880	*120	2
46141	28-May-04	3.000	7.07	28	1,440	200	5
46142	25-Jun-04	3.000	7.07	56	1,440	200	2

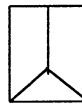
*Concrete compressive strength by ASTM C 39

*Visible cracks before breaking

Types of Breaks



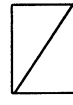
Cone
1



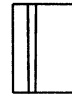
Cone & Split
2



Cone & Shear
3



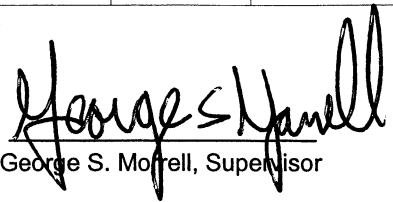
Shear
4



Columnar
5

Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
34	4509815	180	10.00	--	--	--	--	--
35	4509816	173	10.00	--	--	--	--	--
36	4509817	80	10.00	--	--	--	--	--
37	4509818	144	10.00	--	--	--	--	--
38	4509819	74	10.00	--	--	--	--	--
39	4509820	83	10.00	--	--	--	--	--
40	4509821	175	10.00	--	--	--	--	--

Remarks: 76 Total Loads
Wet Density = 40.18 pcf

Checked by: 
George S. Morrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.
 86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Sunny
Method of Placement: Rear Discharge / Pump
Admixtures: --
Placement Location: Middle Third (66') 1st Lift
Test Cylinder Location: 90' from South/15' from East

Date Cylinders Cast: 30-Apr-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 200 lwf
Max Agg. Size: --

Date Report Issued: JUN 25 2004

3x6 Cylinders	4	Cast by	Marco C. Stone	Time	
Load No.	41	Slump (in) ASTM C 143	--	Batched @	--
Ticket No.	4509822	Air (°F)	--	Arrived @	--
Truck No.	169	Concrete (°F) ASTM C 1064	--	Total Time	--
Cubic Yds.	10	Air Content (%) ASTM C 231	--		

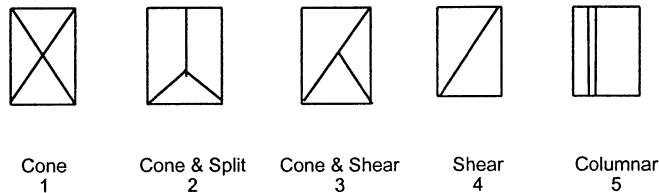
*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 3
 Date received: 03-May-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46143	07-May-04	3.000	7.07	7	1,455	205	2
46144	28-May-04	3.000	7.07	28	1,360	195	5
46145	28-May-04	3.000	7.07	28	1,560	220	5
46146	25-Jun-04	3.000	7.07	56	1,820	260	2

*Concrete compressive strength by ASTM C 39

Types of Breaks



Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
42	4509824	180	10.00	--	--	--	--	--
43	4509825	173	10.00	--	--	--	--	--
44	4509826	80	10.00	--	--	--	--	--
45	4509827	144	10.00	--	--	--	--	--
46	4509828	74	10.00	--	--	--	--	--
47	4509829	175	10.00	--	--	--	--	--

Remarks: 76 Total Loads
 Wet Density = 41.42 pcf
 Weight of Cylinder #46144 = 403.2 g
 Weight of Cylinder #46145 = 405.5 g

Checked by: *George S. McCrell*
 George S. McCrell, Supervisor

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 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Sunny
Method of Placement: Rear Discharge / Pump
Admixtures: --
Placement Location: Middle Third (66') 1st Lift
Test Cylinder Location: 60' from S / 10' from E

Date Cylinders Cast: 30-Apr-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 200 lwf
Max Agg. Size: --

Date Report Issued:

3x6 Cylinders	4	Cast by	Marco C. Stone	Time	
Load No.	48	Slump (in) ASTM C 143	--	Batched @	--
Ticket No.	4509830	Air (°F)	--	Arrived @	--
Truck No.	83	Concrete (°F) ASTM C 1064	--	Total Time	--
Cubic Yds.	10	Air Content (%) ASTM C 231	--		

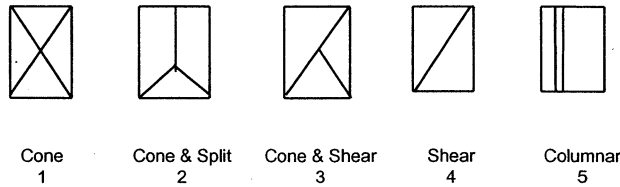
*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 3
 Date received: 03-May-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46147	07-May-04	3.000	7.07	7	2,100	300	2
46148	28-May-04	3.000	7.07	28	2,089	300	5
46149	28-May-04	3.000	7.07	28	2,420	340	4
46150	HOLD			HOLD			

*Concrete compressive strength by ASTM C 39

Types of Breaks



Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
49	4509831	169	10.00	--	--	--	--	--
50	4509832	180	10.00	--	--	--	--	--
51	4509833	173	10.00	--	--	--	--	--
52	4509834	80	10.00	--	--	--	--	--
53	4509835	144	10.00	--	--	--	--	--
54	4509836	74	10.00	--	--	--	--	--
55	4509837	175	10.00	--	--	--	--	--
56	4509838	81	10.00	--	--	--	--	--
57	4509839	176	10.00	--	--	--	--	--
58	4509840	180	10.00	--	--	--	--	--

Remarks: 76 Total Loads
 Wet Density = 42.00 pcf
 Weight of Cylinder #46148 = 414.6 g
 Weight of Cylinder #46149 = 415.5 g

Checked by:
 George S. McBrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

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 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244

CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Sunny
Method of Placement: Rear Discharge / Pump
Admixtures: --
Placement Location: Middle Third (66") 1st Lift
Test Cylinder Location: West Edge of Elevator Wall

Date Cylinders Cast: 30-Apr-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 200 lwf
Max Agg. Size: --

Date Report Issued: JUN 25 2004

3x6 Cylinders	4	Cast by	Marco C. Stone	Time	
Load No.	59	Slump (in) ASTM C 143	--	Batched @	--
Ticket No.	4509841	Air (°F)	--	Arrived @	--
Truck No.	80	Concrete (°F) ASTM C 1064	--	Total Time	--
Cubic Yds.	10	Air Content (%) ASTM C 231	--		

*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 3

Date received: 03-May-04

Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46151	07-May-04	3.000	7.07	7	1,280	180	2
46152	28-May-04	3.000	7.07	28	1,500	210	5
46153	28-May-04	3.000	7.07	28	1,220	170	4
46154	25-Jun-04	3.000	7.07	56	1,400	200	2

*Concrete compressive strength by ASTM C 39

Types of Breaks



Cone
1



Cone & Split
2



Cone & Shear
3



Shear
4



Columnar
5

Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
60	4509842	83	10.00	--	--	--	--	--
61	4509843	169	10.00	--	--	--	--	--
62	4509844	173	10.00	--	--	--	--	--
63	4509845	144	10.00	--	--	--	--	--
64	4509846	74	10.00	--	--	--	--	--
65	4509847	83	10.00	--	--	--	--	--
66	4509848	175	10.00	--	--	--	--	--
67	4509849	176	10.00	--	--	--	--	--
68	4509850	180	10.00	--	--	--	--	--
69	4509851	183	10.00	--	--	--	--	--

Remarks: 76 Total Loads
 Wet Density = 39.79 pcf
 Weight of Cylinder #46152 = 378.9 g

Checked by:

George S. McNeil
 George S. McNeil, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Sunny
Method of Placement: Rear Discharge / Pump
Admixtures: --
Placement Location: Middle Third (66') 1st Lift
Test Cylinder Location: SE Corner

Date Cylinders Cast: 30-Apr-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 200 lwf
Max Agg. Size: --

Date Report Issued:

3x6 Cylinders	4	Cast by	Marco C. Stone	Time	
Load No.	70	Slump (in) ASTM C 143	--	Batched @	2:35
Ticket No.	4509852	Air (°F)	--	Arrived @	--
Truck No.	173	Concrete (°F) ASTM C 1064	--	Total Time	--
Cubic Yds.	10	Air Content (%) ASTM C 231	--		

*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 3

Date received: 03-May-04

Condition of Cylinders: Good

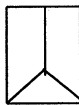
Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46155	07-May-04	3.000	7.07	7	1,495	210	2
46156	28-May-04	3.000	7.07	28	1,680	240	4
46157	28-May-04	3.000	7.07	28	1,600	230	4
46158	HOLD			HOLD			

*Concrete compressive strength by ASTM C 39

Types of Breaks



Cone
1



Cone & Split
2



Cone & Shear
3



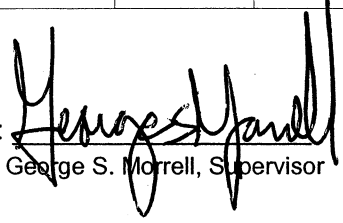
Shear
4



Columnar
5

Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
71	4509853	83	10.00	--	--	--	--	--
72	4509854	80	10.00	--	--	--	--	--
73	4509855	144	10.00	--	--	--	--	--
74	4509856	175	10.00	--	--	--	--	--
75	4509857	176	10.00	--	--	--	--	--
76	4509858	180	10.00	--	--	--	--	--

Remarks: 76 Total Loads
 Wet Density = 42.25 pcf

Checked by: 
 George S. Morrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

Project Name:	Maine Mall Motors	Date Cylinders Cast:	06-May-04
Project No:	235-979	Concrete Supplier:	Dragon
Weather Conditions:	Clear	General Contractor:	Daniel Hebert
Method of Placement:	Pump / Rear Discharge	Design Strength:	200 lwf
Admixtures:	--	Max Agg. Size:	--
Placement Location:	South Third of Filled Area/2nd Lift		
Test Cylinder Location:	10' West of East edge, 20' North of South edge		
			Date Report Issued: JUL 01 2004

3x6 Cylinders	4	Cast by	Michael J. Kramlich	Time
Load No.	4	Slump (in) ASTM C 143	--	Batched @
Ticket No.	4509966	Air (°F)	45	Arrived @
Truck No.	173	Concrete (°F) ASTM C 1064	--	Total Time
Cubic Yds.	10	Air Content (%) ASTM C 231	--	

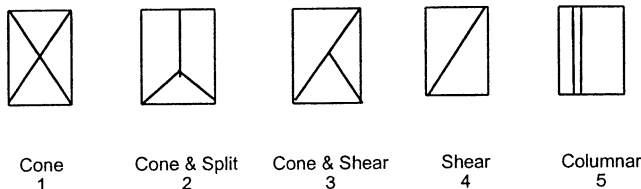
*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1
 Date received: 07-May-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46248	13-May-04	3.000	7.07	7	1,080	150	4
46249	03-Jun-04	3.000	7.07	28	840	120	5
46250	03-Jun-04	3.000	7.07	28	780	110	5
46251	01-Jul-04	3.000	7.07	56	780	110	5

*Concrete compressive strength by ASTM C 39

Types of Breaks



Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
1	4509963	170	10.00	--	45	--	--	--
2	4509964	180	10.00	--	--	--	--	--
3	4509965	169	10.00	--	--	--	--	--
5	4509967	175	10.00	--	--	--	--	--
6	4509968	176	10.00	--	--	--	--	--
7	4509969	83	10.00	--	--	--	--	--
8	4509970	144	10.00	--	--	--	--	--
9	4509971	180	10.00	--	--	--	--	--
10	4509972	179	10.00	--	--	--	--	--

Remarks: Total loads = 74
 Wet Density = 43.435 pcf
 Weight of Cylinder #46248 = 445.8 g
 Weight of Cylinder #46249 = 407.9 g
 Weight of Cylinder #46250 = 407.2 g
 Weight of Cylinder #46251 = 402.0 g

Checked by: 
 George S. Morrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

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200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244

CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Clear
Method of Placement: Pump / Rear Discharge
Admixtures: --
Placement Location: South Third of Filled Area/2nd Lift
Test Cylinder Location: 60' East of West end, 10' South of North end

Date Cylinders Cast: 06-May-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 200 lwf
Max Agg. Size: --

Date Report Issued: JUL 01 2004

3x6 Cylinders	6	Cast by	Michael J. Kramlich	Time
Load No.	11	Slump (in) ASTM C 143	--	Batched @ 7:25
Ticket No.	4509973	Air (%F)	45	Arrived @ --
Truck No.	170	Concrete (°F) ASTM C 1064	--	Total Time --
Cubic Yds.	10	Air Content (%) ASTM C 231	--	

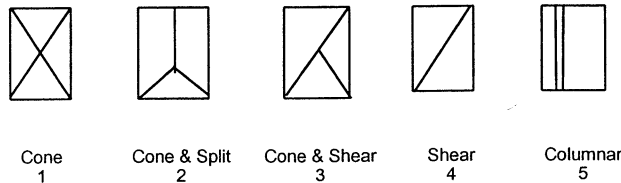
*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1
 Date received: 07-May-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46252	11-May-04	3.000	7.07	5	920	130	2
46253	11-May-04	3.000	7.07	5	1,120	160	2
46254	13-May-04	3.000	7.07	7	1,220	170	4
46255	03-Jun-04	3.000	7.07	28	1,880	270	5
46256	03-Jun-04	3.000	7.07	28	1,220	170	5
46257	01-Jul-04	3.000	7.07	56	820	115	5

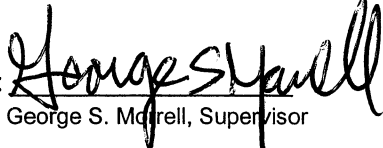
*Concrete compressive strength by ASTM C 39

Types of Breaks



Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
12	4509974	169	10.00	--	45	--	--	--
13	4509975	173	10.00	--	--	--	--	--
14	4509976	175	10.00	--	--	--	--	--
15	4509977	176	10.00	--	--	--	--	--
16	4509978	83	10.00	--	--	--	--	--
17	4509979	144	10.00	--	--	--	--	--
18	4509980	180	10.00	--	--	--	--	--
19	4509981	179	10.00	--	--	--	--	--
20	4509982	170	10.00	--	--	--	--	--

Remarks: Total loads = 74
 Wet Density = 42.904 pcf
 Weight of Cylinder #46252 = 448.0 g
 Weight of Cylinder #46253 = 450.5 g
 Weight of Cylinder #46254 = 355.9 g
 Weight of Cylinder #46255 = 381.0 g

Checked by: 
 George S. McNeill, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

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 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244

CONCRETE TEST/PLACEMENT REPORT

Project Name:	Maine Mall Motors	Date Cylinders Cast:	06-May-04
Project No:	235-979	Concrete Supplier:	Dragon
Weather Conditions:	Clear	General Contractor:	Daniel Hebert
Method of Placement:	Pump / Rear Discharge	Design Strength:	200 lwf
Admixtures:	--	Max Agg. Size:	--
Placement Location:	South Third of Filled Area/2nd Lift		
Test Cylinder Location:	10' West of East edge, 20' South of North edge		

Date Report Issued: JUL 01 2004

3x6 Cylinders	4	Cast by	Michael J. Kramlich	Time	
Load No.	21	Slump (in) ASTM C 143	--	Batched @	8:30
Ticket No.	4509983	Air (°F)	55	Arrived @	--
Truck No.	169	Concrete (°F) ASTM C 1064	--	Total Time	--
Cubic Yds.	10	Air Content (%) ASTM C 231	--		

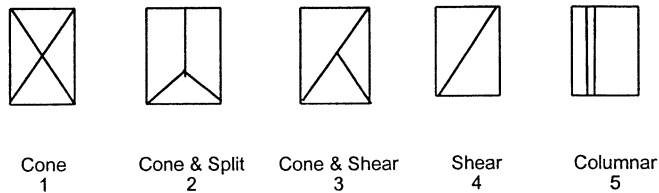
*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1
 Date received: 07-May-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46258	13-May-04	3.000	7.07	7	1,000	140	4
46259	03-Jun-04	3.000	7.07	28	1,220	170	5
46260	03-Jun-04	3.000	7.07	28	1,120	160	5
46261	01-Jul-04	3.000	7.07	56	1,280	180	5

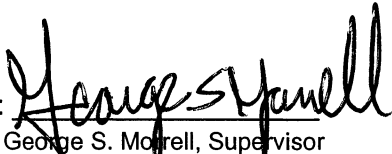
*Concrete compressive strength by ASTM C 39

Types of Breaks



Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
22	4509984	175	10.00	--	--	--	--	--
23	4509985	173	10.00	--	--	--	--	--
24	4509986	176	10.00	--	--	--	--	--
25	4509987	144	10.00	--	--	--	--	--
26	4509988	83	10.00	--	--	--	--	--
27	4509989	180	10.00	--	--	--	--	--
28	4509990	179	10.00	--	--	--	--	--
29	4509991	170	10.00	--	--	--	--	--
30	4509992	175	10.00	--	--	--	--	--

Remarks: Total loads = 74
 Wet Density = 35.372 pcf
 Weight of Cylinder #46258 = 395.6 g
 Weight of Cylinder #46259 = 333.5 g
 Weight of Cylinder #46261 = 336.5 g

Checked by: 
 George S. Morrill, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Clear
Method of Placement: Pump / Rear Discharge
Admixtures: --
Placement Location: South Third of Filled Area/2nd Lift
Test Cylinder Location 80' West of East end, 10' North of South side

Date Cylinders Cast: 06-May-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 200 lwf
Max Agg. Size: --

Date Report Issued: **JUL 01 2004**

3x6 Cylinders	6	Cast by	Michael J. Kramlich	Time	
Load No.	32	Slump (in) ASTM C 143	--	Batched @	9:30
Ticket No.	4509994	Air (°F)	60	Arrived @	--
Truck No.	169 (173)	Concrete (°F) ASTM C 1064	--	Total Time	--
Cubic Yds.	10	Air Content (%) ASTM C 231	--		

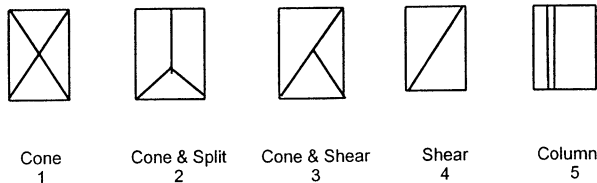
*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1
 Date received: 07-May-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46262	11-May-04	3.000	7.07	5	1,180	170	2
46263	11-May-04	3.000	7.07	5	980	140	2
46264	13-May-04	3.000	7.07	7	1,020	145	4
46265	03-Jun-04	3.000	7.07	28	1,260	180	5
46266	03-Jun-04	3.000	7.07	28	1,320	190	5
46267	01-Jul-04	3.000	7.07	56	1,500	210	2


*Concrete compressive strength by ASTM C 39

Types of Breaks



Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
31	4509993	173	10.00	--	60	--	--	--
33	4509995	176	10.00	--	--	--	--	--
34	4509996	144	10.00	--	--	--	--	--
35	4509997	180	10.00	--	--	--	--	--
36	4509998	83	10.00	--	--	--	--	--
37	4509999	170	10.00	--	--	--	--	--
38	4510000	--	10.00	--	--	--	--	--
39	4510001	170	10.00	--	--	--	--	--
40	4510002	173	10.00	--	--	--	--	--

Remarks: Total loads = 74
 Wet Density = 37.037 pcf
 Weight of Cylinder #46262 = 398.7 g
 Weight of Cylinder #46263 = 403.3 g
 Weight of Cylinder #43264 = 374.7 g
 Weight of Cylinder #43265 = 345.5 g
 Weight of Cylinder #43266 = 350.2 g

Checked by: 
 George S. Morrill, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

Project Name:	Maine Mall Motors	Date Cylinders Cast:	06-May-04
Project No:	235-979	Concrete Supplier:	Dragon
Weather Conditions:	Clear	General Contractor:	Daniel Hebert
Method of Placement:	Pump / Rear Discharge	Design Strength:	200 lwf
Admixtures:	--	Max Agg. Size:	--
Placement Location:	South Third of Filled Area/2nd Lift		
Test Cylinder Location:	80' West of East edge, 10' South of North edge		
			Date Report Issued: JUN 03 2004

3x6 Cylinders	4	Cast by	Michael J. Kramlich	Time	
Load No.	41	Slump (in) ASTM C 143	--	Batched @	10:30
Ticket No.	4510003	Air (°F)	65	Arrived @	--
Truck No.	169	Concrete (°F) ASTM C 1064	--	Total Time	--
Cubic Yds.	10	Air Content (%) ASTM C 231	--		

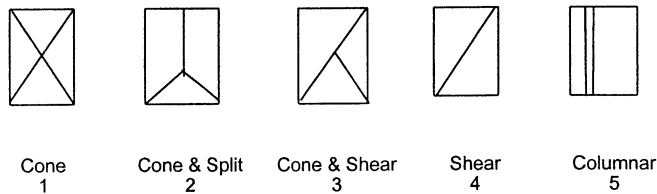
*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1
 Date received: 07-May-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46268	13-May-04	3.000	7.07	7	1,080	150	5
*46269	--	3.000	7.07	--			
46270	03-Jun-04	3.000	7.07	28	1,180	170	5
46271	03-Jun-04	3.000	7.07	28	1,120	160	5

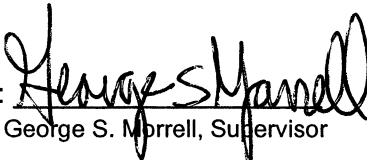
*Concrete compressive strength by ASTM C 39

Types of Breaks



Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
42	4510004	176	10.00	--	65	--	--	--
43	4510005	144	10.00	--	--	--	--	--
44	4510006	154	10.00	--	--	--	--	--
45	4510007	180	10.00	--	--	--	--	--
46	4510008	170	10.00	--	--	--	--	--
47	4510009	179	10.00	--	--	--	--	--
48	4510010	175	10.00	--	--	--	--	--
49	4510011	173	10.00	--	--	--	--	--
50	4510012	169	10.00	--	--	--	--	--

Remarks: Total loads = 74
 Wet Density = 35.795 pcf
 *Cylinder #26269 not found.

Checked by: 
 George S. Morrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

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 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Clear
Method of Placement: Pump / Rear Discharge
Admixtures: --
Placement Location: South Third of Filled Area/2nd Lift
Test Cylinder Location: 60' East of West end, 20' North of South end

Date Cylinders Cast: 06-May-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 200 lwf
Max Agg. Size: --

Date Report Issued: JUL 01 2004

3x6 Cylinders	6	Cast by	Michael J. Kramlich	Time	
Load No.	51	Slump (in) ASTM C 143	--	Batched @	11:45
Ticket No.	4510013	Air (°F)	65	Arrived @	--
Truck No.	144	Concrete (°F) ASTM C 1064	--	Total Time	--
Cubic Yds.	10	Air Content (%) ASTM C 231	--		

*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1
 Date received: 07-May-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46272	11-May-04	3.000	7.07	5	1,200	170	2
46273	11-May-04	3.000	7.07	5	1,340	190	2
46274	13-May-04	3.000	7.07	7	1,420	200	4
46275	03-Jun-04	3.000	7.07	28	1,340	190	5
46276	03-Jun-04	3.000	7.07	28	1,540	220	5
46277	01-Jul-04	3.000	7.07	56	1,440	200	5

*Concrete compressive strength by ASTM C 39

Types of Breaks



Cone
1



Cone & Split
2



Cone & Shear
3



Shear
4



Columnar
5

Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
52	4510014	176	10.00	--	65	--	--	--
53	4510015	154	10.00	--	--	--	--	--
54	4510016	180	10.00	--	--	--	--	--
55	4510017	83	10.00	--	--	--	--	--
56	4510018	170	10.00	--	--	--	--	--
57	4510019	175	10.00	--	--	--	--	--
58	4510020	179	10.00	--	--	--	--	--
59	4510021	173	10.00	--	--	--	--	--
60	4510022	144	10.00	--	--	--	--	--

Remarks: Total loads = 74
 Wet Density = 37.307 pcf
 Weight of Cylinder #46272 = 401.6 g
 Weight of Cylinder #46273 = 407.4 g
 Weight of Cylinder #46274 = 393.3 g
 Weight of Cylinder #46276 = 359.0 g

Checked by: 
 George S. Morrill, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

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200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244

CONCRETE TEST/PLACEMENT REPORT

Project Name:	Maine Mall Motors	Date Cylinders Cast:	06-May-04
Project No:	235-979	Concrete Supplier:	Dragon
Weather Conditions:	Clear	General Contractor:	Daniel Hebert
Method of Placement:	Pump / Rear Discharge	Design Strength:	200 lwf
Admixtures:	--	Max Agg. Size:	--
Placement Location:	South Third of Filled Area/2nd Lift		
Test Cylinder Location:	60' West of East edge, 30' North of South edge		

Date Report Issued: **JUL 01 2004**

3x6 Cylinders	4	Cast by	Michael J. Kramlich	Time
Load No.	62	Slump (in) ASTM C 143	--	Batched @
Ticket No.	4510024	Air (°F)	70	Arrived @
Truck No.	169	Concrete (°F) ASTM C 1064	--	Total Time
Cubic Yds.	10	Air Content (%) ASTM C 231	--	--

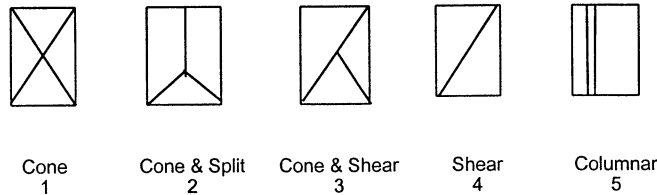
*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1
Date received: 07-May-04
Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46278	13-May-04	3.000	7.07	7	1,040	150	4
46279	03-Jun-04	3.000	7.07	28	1,140	160	5
46280	03-Jun-04	3.000	7.07	28	1,120	160	5
46281	01-Jul-04	3.000	7.07	56	1,220	170	2

*Concrete compressive strength by ASTM C 39

Types of Breaks



Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
61	4510023	154	10.00	--	70	--	--	--
63	4510026	170	10.00	--	--	--	--	--
64	4510027	83	10.00	--	--	--	--	--
65	4510029	179	10.00	--	--	--	--	--
66	4510030	175	10.00	--	--	--	--	--
67	4510031	173	10.00	--	--	--	--	--
68	4510032	144	10.00	--	--	--	--	--
69	4510033	154	10.00	--	--	--	--	--
70	4510034	169	10.00	--	--	--	--	--

Remarks: Total loads = 74
Wet Density = 38.289 pcf
Weight of Cylinder #46278 = 384.8 g
Weight of Cylinder #46279 = 362.9 g
Weight of Cylinder #46281 = 361.3 g

Checked by: 
George S. Morrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

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 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244

CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Clear
Method of Placement: Pump / Rear Discharge
Admixtures: --
Placement Location: South Third of Filled Area/2nd Lift
Test Cylinder Location: 10' East of West end, 10' South of North side

Date Cylinders Cast: 06-May-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 200 lwf
Max Agg. Size: --

Date Report Issued: JUL 01 2004

3x6 Cylinders	6	Cast by	Michael J. Kramlich	Time		
Load No.	71	Slump (in) ASTM C 143	--		Batched @	2:20
Ticket No.	4510035	Air (°F)	70		Arrived @	--
Truck No.	83	Concrete (°F) ASTM C 1064	--		Total Time	--
Cubic Yds.	10	Air Content (%) ASTM C 231	--			

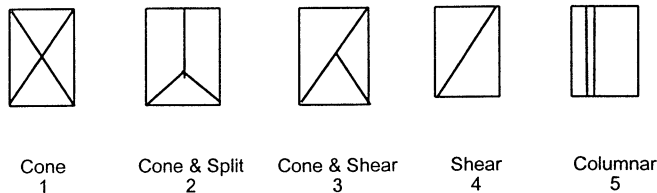
*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1
 Date received: 07-May-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46282	11-May-04	3.000	7.07	5	1,040	150	2
46283	11-May-04	3.000	7.07	5	960	140	2
46284	13-May-04	3.000	7.07	7	1,300	180	5
46285	03-Jun-04	3.000	7.07	28	1,340	190	5
46286	03-Jun-04	3.000	7.07	28	1,480	210	5
*46287	01-Jul-04	3.000	7.07	56	1,320	190	2

*Concrete compressive strength by ASTM C 39

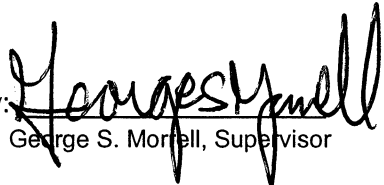
Types of Breaks



Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
72	4510037	179	10.00	--	--	--	--	--
73	4510038	175	10.00	--	--	--	--	--
74	4510040	173	10.00	--	--	--	--	--

Remarks: Total loads = 74

Remarks: Wet Density = 38.423 pcf
 Weight of Cylinder #46282 = 412.7 g
 Weight of Cylinder #46283 = 414.5 g
 Weight of Cylinder #46284 = 393.1 g
 Weight of Cylinder #46285 = 378.9 g
 Weight of Cylinder #46286 = 366.0 g
 *Cylinder #46287 was chipped.

Checked by: 
 George S. Morrill, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.
 86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Clear
Method of Placement: Pump / Rear Discharge
Admixtures: --
Placement Location: North 3rd of Filled Area - 2nd Lift
Test Cylinder Location: Southeast Corner

Date Cylinders Cast: 07-May-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 200 lwf
Max Agg. Size: --

Date Report Issued: JUL 02 2004

3x6 Cylinders	4	Cast by	Michael J. Kramlich	Time		
Load No.	4	Slump (in) ASTM C 143	--		Batched @	6:40
Ticket No.	4510050	Air (°F)	60		Arrived @	--
Truck No.	170	Concrete (°F) ASTM C 1064	--		Total Time	--
Cubic Yds.	10	Air Content (%) ASTM C 231	--			

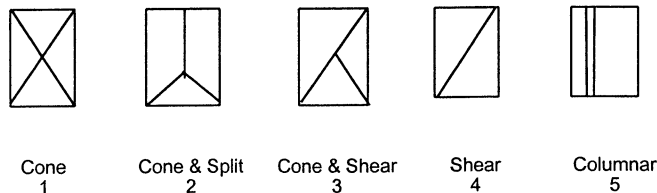
*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 3
 Date received: 10-May-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46288	14-May-04	3.000	7.07	7	520	70	4
*46289	04-Jun-04	3.000	7.07	28	620	90	4
*46290	04-Jun-04	3.000	7.07	28	540	80	4
46291	02-Jul-04	3.000	7.07	56	460	65	2

*Concrete compressive strength by ASTM C 39

Types of Breaks



Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
1	4510047	175	10.00	--	--	--	--	--
2	4510048	169	10.00	--	--	--	--	--
3	4510049	173	10.00	--	--	--	--	--
5	4510051	180	10.00	--	--	--	--	--
6	4510052	83	10.00	--	--	--	--	--
7	4510053	74	10.00	--	--	--	--	--
8	4510054	81	10.00	--	--	--	--	--
9	4510055	88	10.00	--	--	--	--	--
10	4510056	152	10.00	--	--	--	--	--

Remarks: Total loads = 78
 Wet Density = 38.122 pcf
 Weight of Cylinder #46288 = 388.6 g
 *Cylinders #46289 & 46290 were chipped.

Checked by: *George S. Morrell*
 George S. Morrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Clear
Method of Placement: Pump / Rear Discharge
Admixtures: --
Placement Location: North 3rd of Filled Area - 2nd Lift
Test Cylinder Location: Northeast Corner

Date Cylinders Cast: 07-May-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 200 lwf
Max Agg. Size: --

Date Report Issued: **JUL 02 2004**

3x6 Cylinders	6	Cast by	Michael J. Kramlich	Time		
Load No.	11	Slump (in) ASTM C 143	--		Batched @	--
Ticket No.	4510057	Air (%F)	65		Arrived @	--
Truck No.	175	Concrete (%F) ASTM C 1064	--		Total Time	--
Cubic Yds.	10	Air Content (%) ASTM C 231	--			

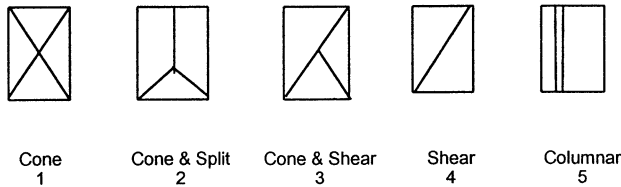
*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 3
 Date received: 10-May-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46292	11-May-04	3.000	7.07	4	780	110	2
46293	11-May-04	3.000	7.07	4	760	110	2
46294	14-May-04	3.000	7.07	7	360	50	5
*46295	04-Jun-04	3.000	7.07	28	520	70	5
*46296	04-Jun-04	3.000	7.07	28	680	100	5
46297	02-Jul-04	3.000	7.07	56	380	50	2

*Concrete compressive strength by ASTM C 39

Types of Breaks



Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
12	4510058	169	10.00	--	--	--	--	--
13	4510059	173	10.00	--	--	--	--	--
14	4510060	170	10.00	--	--	--	--	--
15	4510061	180	10.00	--	--	--	--	--
16	4510062	178	10.00	--	--	--	--	--
17	4510063	74	10.00	--	--	--	--	--
18	4510064	83	10.00	--	--	--	--	--
19	4510065	88	10.00	--	--	--	--	--
20	4510066	81	10.00	--	--	--	--	--

Remarks: Total loads = 78
 Wet Density = 36.713 pcf
 Weight of Cylinder #46292 = 393.3 g
 Weight of Cylinder #46293 = 413.5 g
 Weight of Cylinder #46294 = 366.9 g
 *Cylinders #46295 & 46296 were chipped.

Checked by 
 George S. Morrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

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 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244

CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Clear
Method of Placement: Pump / Rear Discharge
Admixtures: --
Placement Location: North 3rd of Filled Area - 2nd Lift
Test Cylinder Location: Northeast Corner

Date Cylinders Cast: 07-May-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 200 lwf
Max Agg. Size: --

Date Report Issued: JUN 04 2004

3x6 Cylinders	6	Cast by	Michael J. Kramlich	Time	
Load No.	11	Slump (in) ASTM C 143	--	Batched @	--
Ticket No.	4510057	Air (°F)	65	Arrived @	--
Truck No.	175	Concrete (°F) ASTM C 1064	--	Total Time	--
Cubic Yds.	10	Air Content (%) ASTM C 231	--		

*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 3

Date received: 10-May-04

Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46292	11-May-04	3.000	7.07	4	780	110	2
46293	11-May-04	3.000	7.07	4	760	110	2
46294	14-May-04	3.000	7.07	7	360	50	5
*46295	04-Jun-04	3.000	7.07	28	520	70 ✓	5
*46296	04-Jun-04	3.000	7.07	28	680	100 ✓	5
46297	02-Jul-04	3.000	7.07	56			

*Concrete compressive strength by ASTM C 39

Types of Breaks



Cone
1



Cone & Split
2



Cone & Shear
3



Shear
4



Columnar
5

Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
12	4510058	169	10.00	--	--	--	--	--
13	4510059	173	10.00	--	--	--	--	--
14	4510060	170	10.00	--	--	--	--	--
15	4510061	180	10.00	--	--	--	--	--
16	4510062	178	10.00	--	--	--	--	--
17	4510063	74	10.00	--	--	--	--	--
18	4510064	83	10.00	--	--	--	--	--
19	4510065	88	10.00	--	--	--	--	--
20	4510066	81	10.00	--	--	--	--	--

Remarks: Total loads = 78

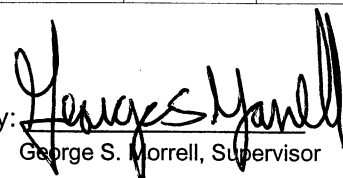
Wet Density = 36.713 pcf

Weight of Cylinder #46292 = 393.3 g ✓

Weight of Cylinder #46293 = 413.5 g ✓

Weight of Cylinder #46294 = 366.9 g ✓

*Cylinders #46295 & 46296 were chipped.

Checked by: 
 George S. Morrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244

CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Clear
Method of Placement: Pump / Rear Discharge
Admixtures: --
Placement Location: North 3rd of Filled Area - 2nd Lift
Test Cylinder Location: --

Date Cylinders Cast: 07-May-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 200 lwf
Max Agg. Size: --

Date Report Issued: JUL 02 2004

3x6 Cylinders	4	Cast by	Michael J. Kramlich	Time	
Load No.	21	Slump (in) ASTM C 143	--	Batched @	8:25
Ticket No.	4510067	Air (°F)	75	Arrived @	--
Truck No.	175	Concrete (°F) ASTM C 1064	--	Total Time	--
Cubic Yds.	10	Air Content (%) ASTM C 231	--		

*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 3

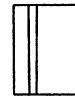
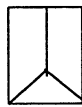
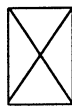
Date received: 10-May-04

Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46298	14-May-04	3.000	7.07	7	680	95	4
*46299	04-Jun-04	3.000	7.07	28	600	85	5
*46300	04-Jun-04	3.000	7.07	28	460	65	5
46301	02-Jul-04	3.000	7.07	56	560	80	2

*Concrete compressive strength by ASTM C 39

Types of Breaks



Cone
1

Cone & Split
2

Cone & Shear
3

Shear
4

Columnar
5

Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
22	4510068	173	10.00	--	--	--	--	--
23	4510069	169	10.00	--	--	--	--	--
24	4510070	170	10.00	--	--	--	--	--
25	4510071	180	10.00	--	--	--	--	--
26	4510072	178	10.00	--	--	--	--	--
27	4510073	74	10.00	--	--	--	--	--
28	4510074	81	10.00	--	--	--	--	--
29	4510075	83	10.00	--	--	--	--	--
30	4510076	88	10.00	--	--	--	--	--

Remarks: Total loads = 78
Wet Density = 37.811 pcf
Weight of Cylinder #46298 = 395.6 g
*Cylinders #46299 & 46300 were chipped.
Weight of Cylinder #46301 = 352.4 g

Checked by:
George S. Morrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

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 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

Project Name:	Maine Mall Motors	Date Cylinders Cast:	07-May-04
Project No:	235-979	Concrete Supplier:	Dragon
Weather Conditions:	Clear	General Contractor:	Daniel Hebert
Method of Placement:	Pump / Rear Discharge	Design Strength:	200 lwf
Admixtures:	--	Max Agg. Size:	--
Placement Location:	North 3rd of Filled Area - 2nd Lift		
Test Cylinder Location	80' East of West side, 20' South of North edge		

Date Report Issued: JUL 02 2004

3x6 Cylinders	6	Cast by	Michael J. Kramlich	Time
Load No.	31	Slump (in) ASTM C 143	--	Batched @ 9:25
Ticket No.	45100	Air (°F)	78	Arrived @ --
Truck No.	175	Concrete (°F) ASTM C 1064	--	Total Time --
Cubic Yds.	10	Air Content (%) ASTM C 231	--	

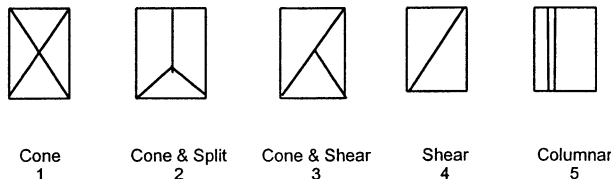
*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 3
 Date received: 10-May-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46302	11-May-04	3.000	7.07	4	680	100	2
46303	11-May-04	3.000	7.07	4	660	90	2
46304	14-May-04	3.000	7.07	7	680	95	2
*46305	04-Jun-04	3.000	7.07	28	440	60	5
*46306	04-Jun-04	3.000	7.07	28	420	60	4
46307	02-Jul-04	3.000	7.07	56	520	70	2

*Concrete compressive strength by ASTM C 39

Types of Breaks



Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
32	4510078	173	10.00	--	--	--	--	--
33	4510079	169	10.00	--	--	--	--	--
34	4510080	170	10.00	--	--	--	--	--
35	4510081	180	10.00	--	--	--	--	--
36	4510082	178	10.00	--	--	--	--	--
37	4510083	74	10.00	--	--	--	--	--
38	4510084	81	10.00	--	--	--	--	--
39	4510085	88	10.00	--	--	--	--	--
40	4510086	175	10.00	--	90	--	--	--

Remarks: Total loads = 78
 Wet Density = 33.825 pcf
 Weight of Cylinder #46302 = 371.1 g
 Weight of Cylinder #46303 = 370.1 g
 Weight of Cylinder #46304 = 402.7 g
 *Cylinders #46305 & 46306 were chipped.
 Weight of Cylinder #46307 = 330.9 g

Checked by: 
 George S. McNeill, Supervisor

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200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244

CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Clear
Method of Placement: Pump / Rear Discharge
Admixtures: --
Placement Location: North 3rd of Filled Area - 2nd Lift
Test Cylinder Location: --

Date Cylinders Cast: 07-May-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 200 lwf
Max Agg. Size: --

Date Report Issued: JUL 02 2004

3x6 Cylinders	4	Cast by	Michael J. Kramlich			
Load No.	41	Slump (in) ASTM C 143	--	Time	Batched @	--
Ticket No.	4510087	Air (°F)	90		Arrived @	--
Truck No.	83	Concrete (°F) ASTM C 1064	--		Total Time	--
Cubic Yds.	10	Air Content (%) ASTM C 231	--			

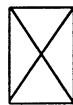
*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 3
Date received: 10-May-04
Condition of Cylinders: Good

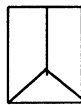
Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46308	14-May-04	3.000	7.07	7	580	80	5
*46309	04-Jun-04	3.000	7.07	28	480	70	4
*46310	04-Jun-04	3.000	7.07	28	680	100	4
46311	02-Jul-04	3.000	7.07	56	260	40	2

*Concrete compressive strength by ASTM C 39

Types of Breaks



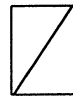
Cone
1



Cone & Split
2



Cone & Shear
3



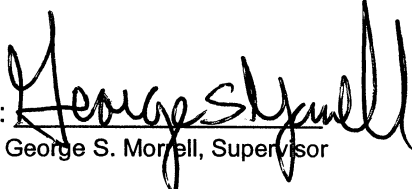
Shear
4



Columnar
5

Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
42	4510088	173	10.00	--	--	--	--	--
43	4510089	169	10.00	--	--	--	--	--
44	4510090	170	10.00	--	--	--	--	--
45	4510091	180	10.00	--	--	--	--	--
46	4510092	178	10.00	--	--	--	--	--
47	4510093	74	10.00	--	--	--	--	--
48	4510094	81	10.00	--	--	--	--	--
49	4510095	88	10.00	--	--	--	--	--
50	4510096	83	10.00	--	85	--	--	--

Remarks: Total loads = 78
Wet Density = 39.431 pcf
Weight of Cylinder #46308 = 408.7 g
*Cylinders #46309 & 46310 were chipped.
Weight of Cylinder #46311 = 327.5 g

Checked by: 
George S. Morrill, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

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 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Clear
Method of Placement: Pump / Rear Discharge
Admixtures: --
Placement Location: North 3rd of Filled Area - 2nd Lift
Test Cylinder Location: Southwest Corner

Date Cylinders Cast: 07-May-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 200 lwf
Max Agg. Size: --

Date Report Issued: JUL 02 2004

3x6 Cylinders	6	Cast by	Michael J. Kramlich	Time	
Load No.	51	Slump (in) ASTM C 143	--	Batched @	--
Ticket No.	4510097	Air (°F)	86	Arrived @	--
Truck No.	173	Concrete (°F) ASTM C 1064	--	Total Time	--
Cubic Yds.	10	Air Content (%) ASTM C 231	--		

*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 3

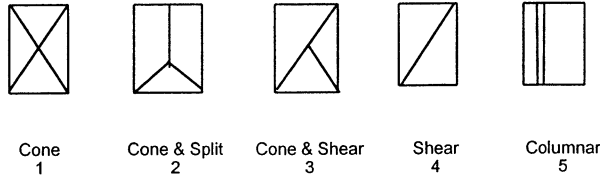
Date received: 10-May-04

Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46312	11-May-04	3.000	7.07	4	960	140	2
46313	11-May-04	3.000	7.07	4	740	100	2
46314	14-May-04	3.000	7.07	7	720	100	5
*46315	04-Jun-04	3.000	7.07	28	560	80	5
46316	04-Jun-04	3.000	7.07	28	1,480	210	2
46317	02-Jul-04	3.000	7.07	56	280	40	5

*Concrete compressive strength by ASTM C 39

Types of Breaks



Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
52	4510098	169	10.00	--	--	--	--	--
53	4510099	170	10.00	--	--	--	--	--
54	4510101	180	10.00	--	--	--	--	--
55	4510102	178	10.00	--	--	--	--	--
56	4510103	81	10.00	--	--	--	--	--
57	4510104	74	10.00	--	--	--	--	--
58	4510105	88	10.00	--	--	--	--	--
59	4510106	173	10.00	--	--	--	--	--
60	4510108	83	10.00	--	86	--	--	--

Remarks: Total loads = 78
 Wet Density = 39.341 pcf
 Weight of Cylinder #46312 = 421.9 g
 Weight of Cylinder #46313 = 430.0 g
 Weight of Cylinder #46314 = 399.7 g
 Weight of Cylinder #46315 = 371.1 g
 Weight of Cylinder #46316 = 372.0 g
 *Cylinder #46315 was chipped.

Checked by:
 George S. Morrill, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.
 86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Clear
Method of Placement: Pump / Rear Discharge
Admixtures: --
Placement Location: North 3rd of Filled Area - 2nd Lift
Test Cylinder Location: Northwest Corner

Date Cylinders Cast: 07-May-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 200 lwf
Max Agg. Size: --

Date Report Issued: JUL 02 2004

3x6 Cylinders	4	Cast by	Michael J. Kramlich	Time	
Load No.	61	Slump (in) ASTM C 143	--	Batched @	1:00
Ticket No.	4510109	Air (°F)	84	Arrived @	--
Truck No.	169	Concrete (°F) ASTM C 1064	--	Total Time	--
Cubic Yds.	10	Air Content (%) ASTM C 231	--		

*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 3
 Date received: 10-May-04
 Condition of Cylinders: Good

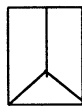
Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46318	14-May-04	3.000	7.07	7	580	80	5
*46319	04-Jun-04	3.000	7.07	28	840	120	5
46320	04-Jun-04	3.000	7.07	28	1,460	210	5
46321	02-Jul-04	3.000	7.07	56	1,100	155	5

*Concrete compressive strength by ASTM C 39

Types of Breaks



Cone
1



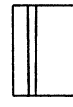
Cone & Split
2



Cone & Shear
3



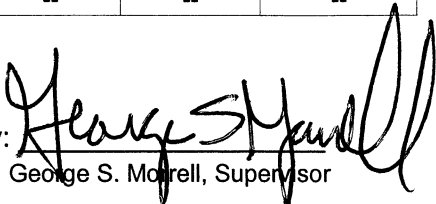
Shear
4



Columnar
5

Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
62	4510110	170	10.00	--	--	--	--	--
63	4510111	180	10.00	--	--	--	--	--
64	4510112	178	10.00	--	--	--	--	--
65	4510113	74	10.00	--	--	--	--	--
66	4510114	81	10.00	--	--	--	--	--
67	4510115	88	10.00	--	--	--	--	--
68	4510116	173	10.00	--	--	--	--	--
69	4510117	83	10.00	--	--	--	--	--
70	4510118	169	10.00	--	--	--	--	--

Remarks: Total loads = 78
 Wet Density = 37.451 pcf
 Weight of Cylinder #46318 = 356.0 g
 Weight of Cylinder #46320 = 342.5 g
 *Cylinder #46319 was chipped.

Checked by: 
 George S. McNeill, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

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 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Clear
Method of Placement: Pump / Rear Discharge
Admixtures: --
Placement Location: North 3rd of Filled Area - 2nd Lift
Test Cylinder Location: 5' West of East end, 10' South of North side

Date Cylinders Cast: 07-May-04 ✓
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 200 lwf
Max Agg. Size: --

Date Report Issued: JUN 04 2004

3x6 Cylinders	6	Cast by	Michael J. Kramlich		
Load No.	71	Slump (in) ASTM C 143	--	Time	Batched @ 2:10 Arrived @ -- Total Time --
Ticket No.	4510120	Air (°F)	86		
Truck No.	170	Concrete (°F) ASTM C 1064	--		
Cubic Yds.	10	Air Content (%) ASTM C 231	--		

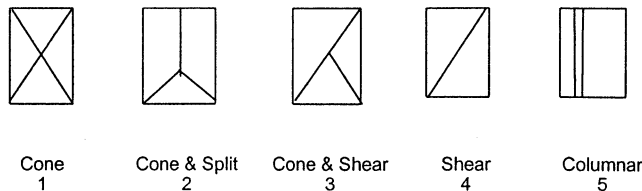
*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 3
 Date received: 10-May-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46322 ✓	11-May-04	3.000	7.07	4	1,260	180	2
46323	11-May-04	3.000	7.07	4	1,340	190	3
46324	14-May-04	3.000	7.07	7	1,400	200	5
46325	04-Jun-04	3.000	7.07	28	1,920	270	5
46326	04-Jun-04	3.000	7.07	28	1,960	280	5
46327 ✓	HOLD	3.000	7.07	HOLD			

*Concrete compressive strength by ASTM C 39

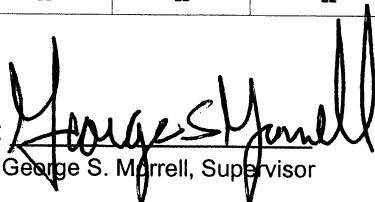
Types of Breaks



Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
72	4510121	180	10.00	--	--	--	--	--
73	4510123	74	10.00	--	--	--	--	--
74	4510124	81	10.00	--	--	--	--	--
75	4510125	88	10.00	--	--	--	--	--
76	4510127	83	10.00	--	--	--	--	--
77	4510128	169	10.00	--	--	--	--	--
78	4510129	180	10.00	--	80	--	--	--

Remarks: Total loads = 78

Wet Density = 41.149 pcf ✓
 Weight of Cylinder #46322 = 446.6 g ✓
 Weight of Cylinder #46323 = 434.1 g ✓
 Weight of Cylinder #46324 = 410.9 g ✓
 Weight of Cylinder #46325 = 374.2 g ✓

Checked by: 
 George S. Marrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244

CONCRETE TEST/PLACEMENT REPORT

Project Name:	Maine Mall Motors	Date Cylinders Cast:	12-May-04
Project No:	235-979	Concrete Supplier:	Dragon
Weather Conditions:	Sunny	General Contractor:	Daniel Hebert
Method of Placement:	Rear Discharge	Design Strength:	200 lwf
Admixtures:	--	Max Agg. Size:	--
Placement Location:	Middle Third - 2nd lift		
Test Cylinder Location:	10' South of North Edge, 10' West of East End		

Date Report Issued: JUL 08 2004

3x6 Cylinders	4	Cast by	Michael J. Kramlich	
Load No.	5	Slump (in) ASTM C 143	--	Time Batched @ 6:50 Arrived @ -- Total Time --
Ticket No.	4510213	Air (°F)	65	
Truck No.	180	Concrete (°F) ASTM C 1064	--	
Cubic Yds.	10	Air Content (%) ASTM C 231	--	

*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1

Date received: 13-May-04

Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46380	19-May-04	3.000	7.07	7	1,060	150	5
46381	09-Jun-04	3.000	7.07	28	880	125	5
46382	09-Jun-04	3.000	7.07	28	860	120	5
46383	07-Jul-04	3.000	7.07	56	620	90	2

*Concrete compressive strength by ASTM C 39

Types of Breaks



Cone
1



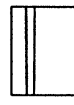
Cone & Split
2



Cone & Shear
3



Shear
4



Columnar
5

Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
1	4510209	170	10.00	--	--	--	--	--
2	4510210	169	10.00	--	--	--	--	--
3	4510211	175	10.00	--	--	--	--	--
4	4510212	173	10.00	--	--	--	--	--
6	4510214	171	10.00	--	--	--	--	--
7	4510215	144	10.00	--	--	--	--	--
8	4510216	143	10.00	--	--	--	--	--
9	4510217	170	10.00	--	--	--	--	--
10	4510218	169	10.00	--	70	--	--	--

Remarks: Total loads = 77

Checked by:
 FOR George S. Morrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Sunny
Method of Placement: Rear Discharge
Admixtures: --
Placement Location: Middle Third - 2nd lift
Test Cylinder Location: 10' North of South edge, 20' West of East End

Date Cylinders Cast: 12-May-04 ✓
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 200 lwf
Max Agg. Size: --

Date Report Issued: JUN 09 2004

3x6 Cylinders	6	Cast by	Michael J. Kramlich		
Load No.	12	Slump (in) ASTM C 143	--	Time	Batched @ 7:30 Arrived @ -- Total Time --
Ticket No.	4510220	Air (°F)	70		
Truck No.	175	Concrete (°F) ASTM C 1064	--		
Cubic Yds.	10	Air Content (%) ASTM C 231	--		

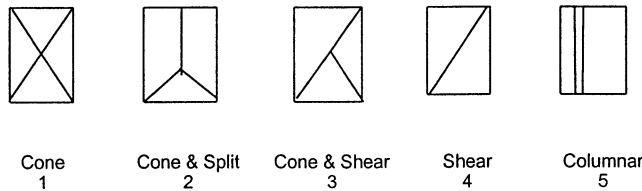
*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1
 Date received: 13-May-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46384 ✓	19-May-04	3.000	7.07	7	940	130	5
46385	09-Jun-04	3.000	7.07	28	2,160	305	5
46386	09-Jun-04	3.000	7.07	28	2,000	280	5
46387	HOLD	3.000	7.07	HOLD			
46388	HOLD	3.000	7.07	HOLD			
46389 ✓	HOLD	3.000	7.07	HOLD			

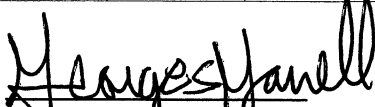
*Concrete compressive strength by ASTM C 39

Types of Breaks



Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
11	4510219	174	10.00	--	--	--	--	--
13	4510221	173	10.00	--	--	--	--	--
14	4510222	180	10.00	--	--	--	--	--
15	4510223	171	10.00	--	--	--	--	--
16	4510224	144	10.00	--	--	--	--	--
17	4510225	143	10.00	--	--	--	--	--
18	4510226	170	10.00	--	--	--	--	--
19	4510227	169	10.00	--	--	--	--	--
20	4510228	174	10.00	--	--	--	--	--

Remarks: Total loads = 77
 Weight of Cylinder #46384 = 440.3 g ✓
 Weight of Cylinder #46385 = 396.1 g ✓
 Weight of Cylinder #46386 = 403.2 g ✓

Checked by: 
 George S. Morrill, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.
 86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Sunny
Method of Placement: Rear Discharge
Admixtures: --
Placement Location: Middle Third - 2nd lift
Test Cylinder Location: 30' N of South Edge, 60' W of East End

Date Cylinders Cast: 12-May-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 200 lwf
Max Agg. Size: --

JUL 08 2004

Date Report Issued:

3x6 Cylinders	4	Cast by	Michael J. Kramlich	Time		
Load No.	21	Slump (in) ASTM C 143	--		Batched @	8:35
Ticket No.	4510229	Air (°F)	80		Arrived @	--
Truck No.	175	Concrete (°F) ASTM C 1064	--		Total Time	--
Cubic Yds.	10	Air Content (%) ASTM C 231	--			

*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1

Date received: 13-May-04

Condition of Cylinders: Good

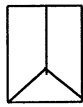
Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46390	19-May-04	3.000	7.07	7	760	110	4
46391	09-Jun-04	3.000	7.07	28	1,240	175	5
46392	09-Jun-04	3.000	7.07	28	1,180	170	5
46393	07-Jul-04	3.000	7.07	56	1,020	145	2

*Concrete compressive strength by ASTM C 39

Types of Breaks



Cone
1



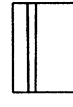
Cone & Split
2



Cone & Shear
3



Shear
4



Columnar
5

Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
22	4510230	88	10.00	--	--	--	--	--
23	4510231	173	10.00	--	--	--	--	--
24	4510232	180	10.00	--	--	--	--	--
25	4510233	171	10.00	--	--	--	--	--
26	4510234	144	10.00	--	--	--	--	--
27	4510235	143	10.00	--	--	--	--	--
28	4510236	170	10.00	--	--	--	--	--
29	4510237	169	10.00	--	--	--	--	--
30	4510238	174	10.00	--	85	--	--	--

Remarks: Total loads = 77

Checked by: Matthew J. Andry
 For George S. Morrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

Project Name:	Maine Mall Motors	Date Cylinders Cast:	12-May-04
Project No:	235-979	Concrete Supplier:	Dragon
Weather Conditions:	Sunny	General Contractor:	Daniel Hebert
Method of Placement:	Rear Discharge	Design Strength:	200 lwf
Admixtures:	--	Max Agg. Size:	--
Placement Location:	Middle Third - 2nd lift		
Test Cylinder Location:	80' West of East End, 10' South of North Edge		

Date Report Issued: JUN 09 2004

3x6 Cylinders	6	Cast by	Michael J. Kramlich	
Load No.	32	Slump (in) ASTM C 143	--	Time Batched @ 9:50 Arrived @ -- Total Time --
Ticket No.	4510240	Air (°F)	85	
Truck No.	88	Concrete (°F) ASTM C 1064	--	
Cubic Yds.	10	Air Content (%) ASTM C 231	--	

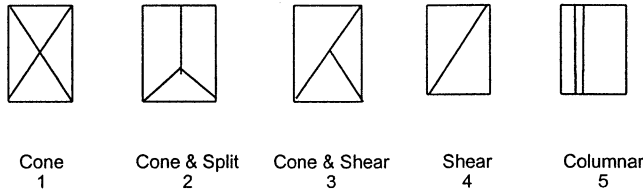
*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1
 Date received: 13-May-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46394	19-May-04	3.000	7.07	7	940	130	5
46395	09-Jun-04	3.000	7.07	28	1,460	210	5
46396	09-Jun-04	3.000	7.07	28	1,420	200	5
46397	HOLD	3.000	7.07	HOLD			
46398	HOLD	3.000	7.07	HOLD			
46399	HOLD	3.000	7.07	HOLD			

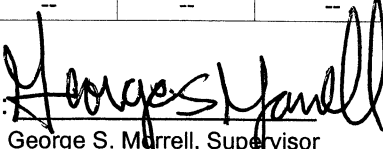
*Concrete compressive strength by ASTM C 39

Types of Breaks



Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
31	4510239	175	10.00	--	--	--	--	--
33	4510241	173	10.00	--	--	--	--	--
34	4510242	180	10.00	--	--	--	--	--
35	4510243	144	10.00	--	--	--	--	--
36	4510244	170	10.00	--	--	--	--	--
37	4510245	143	10.00	--	--	--	--	--
38	4510246	169	10.00	--	--	--	--	--
39	4510247	175	10.00	--	--	--	--	--
40	4510248	174	10.00	--	82	--	--	--

Remarks: Total loads = 77
 Weight of Cylinder #46394 = 399.2 g ✓
 Weight of Cylinder #46396 = 353.4 g ✓

Checked by: 
 George S. Marrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

Project Name:	Maine Mall Motors	Date Cylinders Cast:	12-May-04
Project No:	235-979	Concrete Supplier:	Dragon
Weather Conditions:	Sunny	General Contractor:	Daniel Hebert
Method of Placement:	Rear Discharge	Design Strength:	200 lwf
Admixtures:	--	Max Agg. Size:	--
Placement Location:	Middle Third - 2nd lift		
Test Cylinder Location:	50' South of North Edge, 80' East of West End		

Date Report Issued: JUN 09 2004

3x6 Cylinders	4	Cast by	Michael J. Kramlich	Time	
Load No.	41	Slump (in) ASTM C 143	--	Batched @	10:55
Ticket No.	4510249	Air (°F)	87	Arrived @	--
Truck No.	173	Concrete (°F) ASTM C 1064	--	Total Time	--
Cubic Yds.	10	Air Content (%) ASTM C 231	--		

*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1

Date received: 13-May-04

Condition of Cylinders: Good

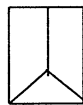
Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46400	✓ 19-May-04	3.000	7.07	7	1,100	155	5
46401	09-Jun-04	3.000	7.07	28	1,440	200	5
46402	09-Jun-04	3.000	7.07	28	1,520	215	5
46403	✓ HOLD	3.000	7.07	HOLD			

*Concrete compressive strength by ASTM C 39

Types of Breaks



Cone
1



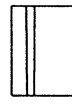
Cone & Split
2



Cone & Shear
3



Shear
4



Columnar
5

Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
42	4510250	88	10.00	--	--	--	--	--
43	4510251	180	10.00	--	--	--	--	--
44	4510252	144	10.00	--	--	--	--	--
45	4510253	170	10.00	--	--	--	--	--
46	4510254	143	10.00	--	--	--	--	--
47	4510255	169	10.00	--	--	--	--	--
48	4510256	175	10.00	--	--	--	--	--
49	4510257	174	10.00	--	--	--	--	--
50	4510258	173	10.00	--	87	--	--	--

Remarks: Total loads = 77
 Weight of Cylinder #46401 = 350.4 g ✓

Checked by:
 George S. Morrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

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 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

Project Name:	Maine Mall Motors	Date Cylinders Cast:	12-May-04
Project No:	235-979	Concrete Supplier:	Dragon
Weather Conditions:	Sunny	General Contractor:	Daniel Hebert
Method of Placement:	Rear Discharge	Design Strength:	200 lwf
Admixtures:	--	Max Agg. Size:	--
Placement Location:	Middle Third - 2nd lift		
Test Cylinder Location:	40' North of South Edge, 60' East of West Side		
		Date Report Issued:	JUN 09 2004

3x6 Cylinders	4	Cast by	Michael J. Kramlich	Time	
Load No.	51	Slump (in) ASTM C 143	--	Batched @	12:00
Ticket No.	4510259	Air (°F)	85	Arrived @	--
Truck No.	88	Concrete (°F) ASTM C 1064	--	Total Time	--
Cubic Yds.	10	Air Content (%) ASTM C 231	--		

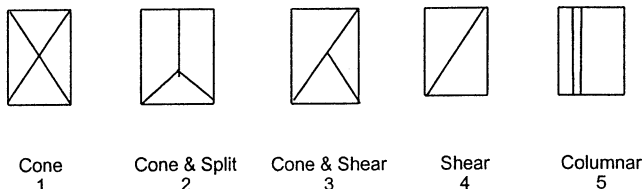
*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1
 Date received: 13-May-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46404 ✓	19-May-04	3.000	7.07	7	1,060	150	5
46405	09-Jun-04	3.000	7.07	28	1,600	230	5
46406	09-Jun-04	3.000	7.07	28	1,560	220	5
46407	HOLD	3.000	7.07	HOLD			
46408	HOLD	3.000	7.07	HOLD			
46409 ✓	HOLD	3.000	7.07	HOLD			

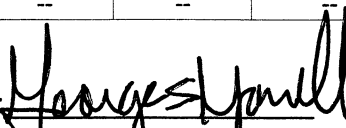
*Concrete compressive strength by ASTM C 39

Types of Breaks



Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
52	4510260	180	10.00	--	--	--	--	--
53	4510261	144	10.00	--	--	--	--	--
54	4510262	170	10.00	--	--	--	--	--
55	4510263	143	10.00	--	--	--	--	--
56	4510264	175	10.00	--	--	--	--	--
57	4510265	151	10.00	--	--	--	--	--
58	4510266	173	10.00	--	--	--	--	--
59	4510267	174	10.00	--	--	--	--	--
60	4510268	88	10.00	--	85	--	--	--

Remarks: Total loads = 77

Checked by: 
 George S. Morrell, Supervisor

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86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

Project Name:	Maine Mall Motors	Date Cylinders Cast:	12-May-04
Project No:	235-979	Concrete Supplier:	Dragon
Weather Conditions:	Sunny	General Contractor:	Daniel Hebert
Method of Placement:	Rear Discharge	Design Strength:	200 lwf
Admixtures:	--	Max Agg. Size:	--
Placement Location:	Middle Third - 2nd lift		
Test Cylinder Location:	10' South of North Edge, 10' West of South End		

Date Report Issued: JUN 09 2004

3x6 Cylinders	6	Cast by	Michael J. Kramlich	Time
Load No.	67	Slump (in) ASTM C 143	--	Batched @
Ticket No.	4510276	Air (°F)	85	Arrived @
Truck No.	88	Concrete (°F) ASTM C 1064	--	Total Time
Cubic Yds.	10	Air Content (%) ASTM C 231	--	

*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1

Date received: 13-May-04

Condition of Cylinders: Good

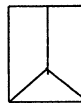
Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46410 ✓	19-May-04	3.000	7.07	7	1,360	190	5
46411	09-Jun-04	3.000	7.07	28	2,360	330	5
46412	09-Jun-04	3.000	7.07	28	2,120	300	5
46413 ✓	HOLD	3.000	7.07	HOLD			

*Concrete compressive strength by ASTM C 39

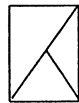
Types of Breaks



Cone
1



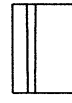
Cone & Split
2



Cone & Shear
3



Shear
4



Columnar
5

Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
61	4510269	180	--	--	--	--	--	--
62	4510270	170	--	--	--	--	--	--
63	4510271	144	--	--	--	--	--	--
64	4510272	143	--	--	--	--	--	--
65	4510273	175	--	--	--	--	--	--
66	4510274	151	--	--	--	--	--	--
68	4510277	174	--	--	--	--	--	--
69	4510278	180	--	--	--	--	--	--
70	4510279	143	--	--	85	--	--	--

Remarks: Total loads = 77
 Weight of Cylinder #46410 = 461.4 g ✓

Checked by:
 George S. Morwell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.
 86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Sunny
Method of Placement: Rear Discharge
Admixtures: --
Placement Location: Middle Third - 2nd lift
Test Cylinder Location: 20' North of South Edge, 10' East of West End

Date Cylinders Cast: 12-May-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 200 lwf
Max Agg. Size: --

Date Report Issued: ~~JUL 08 2004~~

3x6 Cylinders	6	Cast by	Michael J. Kramlich	Time		
Load No.	73	Slump (in) ASTM C 143	--		Batched @	--
Ticket No.	4510284	Air (°F)	85		Arrived @	--
Truck No.	180	Concrete (°F) ASTM C 1064	--		Total Time	--
Cubic Yds.	10	Air Content (%) ASTM C 231	--			

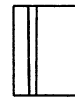
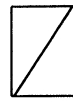
*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1
 Date received: 13-May-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46414	19-May-04	3.000	7.07	7	580	80	5
*46415	09-Jun-04	3.000	7.07	28	600	85	2
*46416	09-Jun-04	3.000	7.07	28	700	100	5
46417	07-Jul-04	3.000	7.07	56	800	110	2
46418	07-Jul-04	3.000	7.07	56	740	105	5
46419	HOLD	3.000	7.07	HOLD			

*Concrete compressive strength by ASTM C 39

Types of Breaks



Cone
1

Cone & Split
2

Cone & Shear
3

Shear
4

Columnar
5

Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
71	4510282	144	10.00	--	--	--	--	--
72	4510283	174	10.00	--	--	--	--	--
74	4510285	143	10.00	--	--	--	--	--
75	4510288	174	10.00	--	--	--	--	--
76	4510289	180	10.00	--	--	--	--	--
77	4510291	171	10.00	--	--	--	--	--

Remarks: Total loads = 77
 *Cylinders #46415 & 46416 were chipped.

Checked by: Matthew J. Dwyer
 Fol George S. Morrell, Supervisor

03300 Cast-in-Place Concrete

Section 3.1

BSE Reports

BECKER

structural engineers

Date: 5/19/2004

Time: 1:15 PM

Temp: 72 F

Weather: Partly Cloudy

Observation Report Cast-in-Place Concrete

Project: Maine Mall Motors - Toyota Lexus
Portland, ME

Job #: 1129

Location: _____

Satisfactory	Unsatisfactory	Not Completed	N/A		Satisfactory	Unsatisfactory	Not Completed	N/A	Additional Items:
X				Reinforcement Size					_____
X				Quantity					_____
X				Condition					_____
X				Placement					_____
X				Embed/Anchors					_____
			X	Lap Splices					_____
			X	Reinf. Weld					_____
			X	Hot Weather					_____
			X	Cold Weather					_____

Notes: Roof Drains were observed to penetrate through (2) footing locations, B/4, C/2. A 6-8" PVC pipe had been placed as a bond out to allow for the drain pipe to pass through the footings. Notified the site superintendant that we were unaware of these penetrations in the footings & that we would need to review the design to verify that the structural integrity of the footing hadn't been compromised.

Upon returning to the office, it was determined that the PVC sleeve was outside of the more critical influence area, but still represented significant stress concentrator in the footing. A voice message was left with the site superintendent to add (4) more #6 bars at the sleeve location, with (1) bar on each side of the opening, in each direction.

Signed: *Alan White*

Date: 5/20/04

BECKER

structural engineers

Date: 5/26/2004

Time: 12:45 PM

Temp: 50 F

Weather: Cloudy & Light Rain

Observation Report Cast-in-Place Concrete

Project: Maine Mall Motors - Toyota Lexus
Portland, ME

Job #: 1129

Location: Footings at Exterior wall. Line 1, C to D; Line D, 1 to 2.9, Line 3, C to D

Satisfactory	Unsatisfactory	Not Completed	N/A		Satisfactory	Unsatisfactory	Not Completed	N/A	Additional Items:
X				Reinforcement Size					
X				Quantity					
X				Condition					
X				Placement					
X				Embed/Anchors					
X				Lap Splices					
			X	Reinf. Weld					
			X	Hot Weather					
			X	Cold Weather					

Notes: _____

Signed: Al White

Date: 5/26/04

BECKER

structural engineers

Date: 6/2/2004

Time: 1:00 PM

Temp: 50-f

Weather: Overcast & light rain earlier

Observation Report Cast-in-Place Concrete

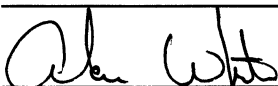
Project: Maine Mall Motors- Toyota/Lexus

Job #: 1129

Location: Strip & column footings along line C, between 4 & 5.

Satisfactory	Unsatisfactory	Not Completed	N/A		Satisfactory	Unsatisfactory	Not Completed	N/A	Additional Items:
X				Reinforcement Size					
X				Quantity					
X				Condition					
X				Placement					
X				Embed/Anchors					
X				Lap Splices					
			X	Reinf. Weld					
			X	Hot Weather					
			X	Cold Weather					

Notes: 11 CY Pour. Last piece of strip footing. Rob Gillespie had concrete technicians on site taking concrete samples & checking slump. Concrete was 60 min old when placed. (Batched at 12 noon).

Signed: 

Date: 6/2/04

BECKER

structural engineers

Date: 6/25/2004

Time: 7:30am

Temp: 60's

Weather: Overcast

Observation Report Cast-in-Place Concrete

Project: Maine Mall Motors- Toyota/Lexus

Job #: 1129

Location: Slab, Shop Area "B"

Satisfactory	Unsatisfactory	Not Completed	N/A
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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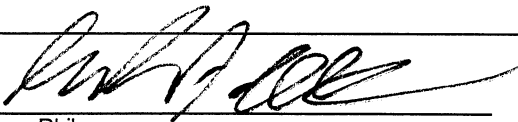
Reinforcement Size
Quantity
Condition
Placement
Embed/Anchors
Lap Splices
Reinf. Weld
Hot Weather
Cold Weather

Satisfactory	Unsatisfactory	Not Completed	N/A
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional Items:

Notes: Reinforcement was not yet placed. Vapor retarder layout was on-going Discussed PNA and bar layout.

Signed:


Ethan Rhile

Date:

6-25-04

BECKER

structural engineers, inc.

Project: MAINE MALL MOTORS
Location: PORTLAND, ME
Becker Job No: 1129

OBSERVATION REPORT

Cast in Place Concrete

Date: 6/28/04
Time: 3:30-4:00 PM
Temp: 75
Weather: HUMID, PT. CLOUDY

Observation Location: SLAB ON GRADE; LINE 6 TO 10, B TO D

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Quantity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Placement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Embed/Anchors	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Lap Splices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hot Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Cold Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bond Beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

PNA anchors installed & greased. Building Inspector, Mike Nugent, stopped by to review work in progress.

Signed: Adam M. White, E.I.

B E C K E R

structural engineers, inc.

Project: MAINE MALL MOTORS
Location: PORTLAND, ME
Becker Job No: 1129

OBSERVATION REPORT
 Cast in Place Concrete

Date: 07/08/04
Time: 9:00 AM
Temp: 65 F
Weather: CLOUDY/MISTY

Observation Location: SLAB ON GRADE; LINES A TO B & 10 TO 7

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	
Reinforcement Size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Comments
Quantity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Placement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Embed/Anchors	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Lap Splices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Hot Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Cold Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bond Beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

1 PNA anchors greased & installed. Pre-formed joint filler installed.

Signed: Adam M. White, E.I.

B E C K E R

structural engineers, inc.

Project: MAINE MALL MOTORS
Location: PORTLAND, ME
Becker Job No: 1129

OBSERVATION REPORT
 Cast in Place Concrete

Date: 7/13/04
Time: 9:15 AM
Temp: 70 F
Weather: PT. CLOUDY

Observation Location: AREA "A", LINE 8-10 & A-B, 6" SLAB

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	
Reinforcement Size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Comments
Quantity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Placement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Embed/Anchors	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Lap Splices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hot Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Cold Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bond Beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

1. Reviewed trench drain detail @ wash bay, "Area B". Told site superintendant that brick under trench drain wasn't acceptable & another means of support is necessary.
2. Check with concrete technician from RWG to verify slump & batch time met the job specification. He informed me that both were acceptable.

Signed: Adam M. White, E.I.

BECKER

structural engineers, inc.

Project: MAINE MALL MOTORS
Location: PORTLAND, ME
Becker Job No: 1129

OBSERVATION REPORT

Cast in Place Concrete

Date: 7/20/04
Time: 7:15 AM
Temp: 60's
Weather: OVERCAST

Observation Location: SLAB ON GRADE; NORTH OF J-LINE.

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Quantity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Placement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Embed/Anchors	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Lap Splices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hot Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Cold Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bond Beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

Signed: Ethan A. Rhile, P.E.

BECKER

structural engineers, inc.

Project: MAINE MALL MOTORS
Location: PORTLAND, ME
Becker Job No: 1129

OBSERVATION REPORT

Cast in Place Concrete

Date: 7/23/04
Time: 8:00 AM
Temp: 75 F
Weather: CLOUDY

Observation Location: LINE 4 TO 6 & B TO C. 6" SLAB AT SERVICE BAY ENTRANCE.

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Quantity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Placement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Embed/Anchors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Lap Splices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Hot Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Cold Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bond Beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

Pour was ongoing. Vibrators were being used at slab edges & around trench drains. PNA anchors were noted to be in place. Wet cure was noted to be in progress at yesterday's pour, Lexus showroom area. Concrete pump was being used to place concrete.

Signed: Adam M. White, E.I.

BECKER

structural engineers, inc.

Project: MAINE MALL MOTORS
Location: PORTLAND, ME
Becker Job No: 1129

OBSERVATION REPORT

Cast in Place Concrete

Date: 8/16/04
Time: Afternoon
Temp: 60's
Weather: Fair

Observation Location: Slab-on-grade, 3 Line and A line.

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Quantity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Placement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Embed/Anchors	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Lap Splices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hot Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Cold Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bond Beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

Signed: Ethan A. Rhile, P.E.

B E C K E R

structural engineers, inc.

Project: MAINE MALL MOTORS
Location: PORTLAND, ME
Becker Job No: 1129

OBSERVATION REPORT
 Cast in Place Concrete

Date: 8/18/04
Time: 3:20 PM
Temp: 80 F
Weather: HUMID

Observation Location: SLAB ON GRADE; LINES A TO B & 1 TO 4

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	
Reinforcement Size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Comments
Quantity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Placement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Embed/Anchors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Lap Splices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Hot Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Cold Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bond Beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

1. Wet cure in progress on previous pour. Concrete technician was observed to be present & taking samples.

2. This is the final slab pour.

Signed: Adam M. White, E.I.

BECKER

structural engineers, inc.

Project: MAINE MALL MOTORS
Location: PORTLAND, ME
Becker Job No: 1129

OBSERVATION REPORT

Cast in Place Concrete

Date: 8/25/04
Time: Afternoon
Temp: 70's
Weather: Warm

Observation Location: Slab-on-Deck, Prior to tomorrows pour

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Quantity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Placement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Embed/Anchors	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Lap Splices	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hot Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Cold Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bond Beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

General Review of WWF and Steel Studs prior to 8/26/04 pour.

Signed: Ethan A. Rhile, P.E.

BECKER

structural engineers, inc.

Project: MAINE MALL MOTORS
Location: PORTLAND, ME
Becker Job No: 1129

OBSERVATION REPORT

Cast in Place Concrete

Date: 12/16/04
Time: Early AM
Temp: Cold
Weather: Bright Sun

Observation Location: Slab on grade curling condition

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Reinforcement Size	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Quantity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Placement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Embed/Anchors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Lap Splices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hot Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Cold Weather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Bond Beams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

We were requested to look potential slab-on-grade curling in the Toyota showroom. With the contractors 10 ft straight edge, we noted curling on the order of 1 inch, particularly at the interior joints. The condition was not noted in the Lexus showroom. Looking at the morning sun's orientation with the building, we believe that there may have been a curing issue with the sun beating on the slab. Tile contractor was grinding joints.

Signed: Ethan A. Rhile, P.E.

03300 Cast-in-Place Concrete

Section 3.2

Compression Tests

R. W. GILLESPIE & ASSOCIATES, INC.

86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

FILE COPY

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Cloudy
Method of Placement: Pump
Admixtures: --
Placement Location: Foundation walls for the Elevator
Test Cylinder Location: Foundation walls for the Elevator

Date Cylinders Cast: 29-Apr-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 4,000
Max Agg. Size: 3/4

Date Report Issued: JUN 25 2004

6x12 Cylinders	4	Cast by	Marco C. Stone			
Load No.	1	Slump (in) ASTM C 143	4	Time		
Ticket No.	4509777	Air (°F)	48		Batched @	4:20
Truck No.	170	Concrete (°F) ASTM C 1064	78		Arrived @	4:30
Cubic Yds.	4	Air Content (%) ASTM C 231	11		Total Time	75

*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1
 Date received: 30-Apr-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
45975	06-May-04	6.005	28.32	7	72,680	2570	4
45976	27-May-04	6.007	28.34	28	98,360	3470	4
45977	27-May-04	6.007	28.34	28	102,520	3620	4
45978	24-Jun-04	6.000	28.27	56	94,700	3350	4

*Concrete compressive strength by ASTM C 39

Types of Breaks



Cone
1



Cone & Split
2



Cone & Shear
3



Shear
4



Columnar
5

Load	Ticket Number	Truck Number	Cubic Yds	Slump (Inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)

Remarks:

Checked by:
 George S. Morrill, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

FILE COPY

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Sunny
Method of Placement: Wheelbarrow & Shovels - Vibration
Admixtures: --
Placement Location: Piers and Footings / South Edge
Test Cylinder Location: 9/B, 9/C

Date Cylinders Cast: 12-May-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 4,000
Max Agg. Size: 3/4

Date Report Issued: JUN 09 2004

6x12 Cylinders	4	Cast by	Michael J. Kramlich	Time	
Load No.	1	Slump (in) ASTM C 143	4	Batched @	12:05
Ticket No.	3105646	Air (°F)	85	Arrived @	--
Truck No.	154	Concrete (°F) ASTM C 1064	90	Total Time	--
Cubic Yds.	10	Air Content (%) ASTM C 231	6.8		

*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1
 Date received: 13-May-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46368	19-May-04	6.012	28.39	7	90,060	3170	4
46369	09-Jun-04	6.017	28.43	28	125,920	4430	4
46370	09-Jun-04	6.017	28.43	28	126,660	4455	4
46371	HOLD			HOLD			

*Concrete compressive strength by ASTM C 39

Types of Breaks



Cone
1



Cone & Split
2



Cone & Shear
3



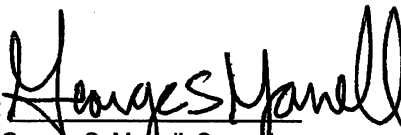
Shear
4



Columnar
5

Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
2	3105647	181	--	--	--	--	--	--
3	4510281	175	--	--	--	--	--	--
4	4510287	170	--	--	--	--	--	--
5	4510290	181	--	--	--	--	--	--

Remarks:

Checked by: 
 George S. Morrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

FILE COPY

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Overcast
Method of Placement: Rear Discharge
Admixtures: --
Placement Location: Piers
Test Cylinder Location: 2/B, 2/C

Date Cylinders Cast: 14-May-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 4,000
Max Agg. Size: 3/4

Date Report Issued: JUL 1 2 2004

6x12 Cylinders	4	Cast by	Michael J. Kramlich	Time	
Load No.	1	Slump (in) ASTM C 143	4.0	Batched @	8:55
Ticket No.	4510339	Air (%F)	55	Arrived @	9:20
Truck No.	170	Concrete (°F) ASTM C 1064	70	Total Time	95
Cubic Yds.	10	Air Content (%) ASTM C 231	7.1		

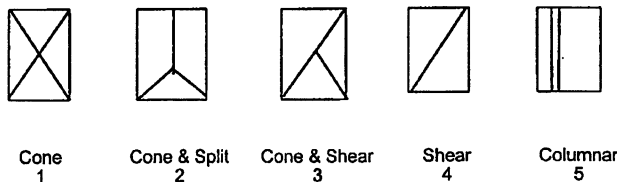
*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 3
 Date received: 17-May-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46428	21-May-04	6.013	28.40	7	96,280	3390	4
46429	11-Jun-04	6.004	28.31	28	108,080	3820	4
46430	11-Jun-04	6.004	28.31	28	114,760	4050	4
46431	09-Jul-04	6.012	28.39	56	123,480	4350	4

*Concrete compressive strength by ASTM C 39

Types of Breaks



Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
2	4510350	181	10.00	--	--	--	--	90

Remarks:

Checked by: George S. Morrell
 George S. Morrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

FILE COPY

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Sunny
Method of Placement: Rear Discharge
Admixtures: Pozzoloth 100XR
Placement Location: A/1 to Line 4 (Footing); A-C (Footing)
Test Cylinder Location: A/1

Date Cylinders Cast: 20-May-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 4,000
Max Agg. Size: 3/4

Date Report Issued: JUN 17 2004

6x12 Cylinders	4	Cast by	Michael J. Kramlich	Time	
Load No.	5	Slump (in) ASTM C 143	3.25	Batched @	10:05
Ticket No.	4510416	Air (*F)	65	Arrived @	--
Truck No.	151	Concrete (*F) ASTM C 1064	70	Total Time	90
Cubic Yds.	10	Air Content (%) ASTM C 231	6.2		

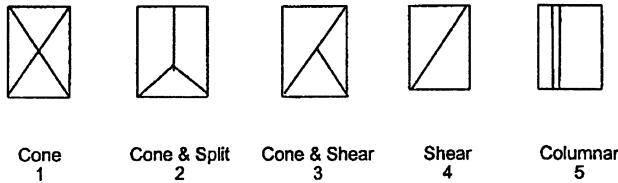
*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1
 Date received: 21-May-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46502	27-May-04	6.007	28.34	7	118,040	4165	4
46503	17-Jun-04	6.003	28.30	28	145,480	5140	4
46504	17-Jun-04	6.003	28.30	28	142,800	5045	4
46505	HOLD			HOLD			

*Concrete compressive strength by ASTM C 39

Types of Breaks



Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (*F)	Conc Temp (*F)	(%) Air Content	Time (min.)
3	3105684	176	10.00	--	60.00	--	--	--
4	4510409	151	10.00	--	60.00	--	--	--
6	4510423	151	6.50	--	65.00	--	--	--

Remarks:

Checked by: *George S. Morrell*
 George S. Morrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

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CONCRETE TEST/PLACEMENT REPORT

FILE COPY

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Sunny
Method of Placement: Rear Discharge
Admixtures: --
Placement Location: A.3/4; A.3/5; B/4; B/5; B/6; B/7
Test Cylinder Location: B/4

Date Cylinders Cast: 20-May-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 4,000
Max Agg. Size: 3/4

Date Report Issued: JUN 17 2004

6x12 Cylinders	4	Cast by	Michael J. Kramlich	Time		
Load No.	2	Slump (in) ASTM C 143	3.75		Batched @	6:50
Ticket No.	3105683	Air (%F)	55		Arrived @	7:20
Truck No.	181	Concrete (%F) ASTM C 1064	78		Total Time	50
Cubic Yds.	10	Air Content (%) ASTM C 231	6			

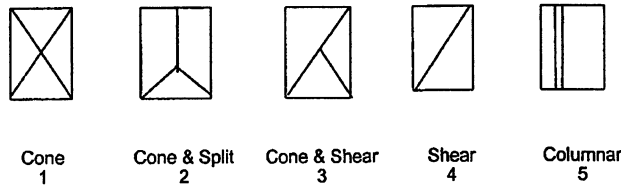
*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1
 Date received: 21-May-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46498	27-May-04	6.007	28.34	7	96,660	3410	4
46499	17-Jun-04	6.003	28.30	28	127,880	4520	4
46500	17-Jun-04	6.003	28.30	28	125,640	4440	4
46501	HOLD			HOLD			

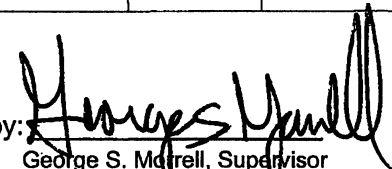
*Concrete compressive strength by ASTM C 39

Types of Breaks



Load	Ticket Number	Truck Number	Cubic Yds	Slump (Inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
1	3105682	151	10.00	--	--	--	--	--

Remarks:

Checked by: 
 George S. McFrell, Supervisor

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CONCRETE TEST/PLACEMENT REPORT

FILE COPY

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Sunny
Method of Placement: Rear Discharge
Admixtures: Pozzolith 100XR
Placement Location: Footing SW, S; Control Wall footing West side and half of North side
Test Cylinder Location: SW Footing

Date Cylinders Cast: 21-May-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 4,000
Max Agg. Size: 3/4

Date Report Issued: JUN -18 2004

6x12 Cylinders	4	Cast by	Jonathan Nickerson	Time	
Load No.	1	Slump (in) ASTM C 143	4.25	Batched @	12:15
Ticket No.	4510465	Air (°F)	79	Arrived @	12:35
Truck No.	156	Concrete (°F) ASTM C 1064	70	Total Time	50
Cubic Yds.	10	Air Content (%) ASTM C 231	6.3		

*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 3

Date received: 24-May-04

Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46513	28-May-04	6.013	28.40	7	77,520	2730	4
46514	18-Jun-04	6.015	28.42	28	113,240	3985	4
46515	18-Jun-04	6.015	28.42	28	115,060	4050	4
46516	HOLD			HOLD			

*Concrete compressive strength by ASTM C 39

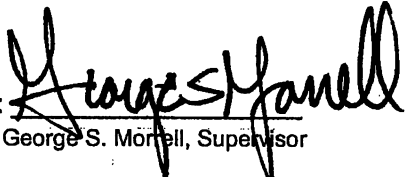
Types of Breaks



Cone 1 Cone & Split 2 Cone & Shear 3 Shear 4 Columnar 5

Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
2	4510469	151	10.00	--	--	--	--	65

Remarks: Super had retarder put into 2nd truck.
 1st truck had no retarder.

Checked by: 
 George S. Morrill, Supervisor

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CONCRETE TEST/PLACEMENT REPORT

FILE COPY

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Cloudy / Light Rain
Method of Placement: Rear Discharge
Admixtures: None
Placement Location: NW corner and SW corner of footing lines
Test Cylinder Location: NW corner of footing lines

Date Cylinders Cast: 26-May-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 4,000
Max Agg. Size: 3/4

Date Report Issued: JUN 23 2004

6x12 Cylinders	4	Cast by	Jonathan Nickerson		Time
Load No.	1	Slump (in) ASTM C 143	4.5		Batched @ 11:25
Ticket No.	4510536	Air (°F)	52		Arrived @ 11:25
Truck No.	83	Concrete (°F) ASTM C 1064	60		Total Time 65
Cubic Yds.	10	Air Content (%) ASTM C 231	6.8		

*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1

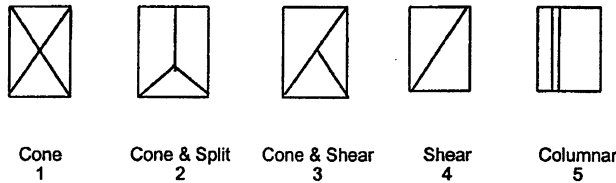
Date received: 27-May-04

Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46529	02-Jun-04	6.008	28.35	7	69,480	2450	4
46530	23-Jun-04	6.006	28.33	28	121,500	4290	4
46531	23-Jun-04	6.006	28.33	28	120,700	4260	4
46532	HOLD			HOLD			

*Concrete compressive strength by ASTM C 39

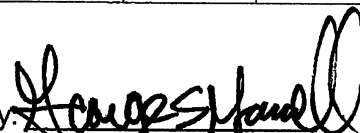
Types of Breaks



Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
2	4510538	177	10.00	--	--	--	--	50.00
3	4510541	170	10.00	--	--	--	--	75.00
4	4510543	175	10.00	--	--	--	--	65.00
5	4510548	170	5.00	--	--	--	--	--

Remarks: Super added 5 gal to Truck #1

Checked by:


 George S. Merrell, Supervisor

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CONCRETE TEST/PLACEMENT REPORT

FILE COPY

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Cloudy / Rainy
Method of Placement: Rear Discharge
Admixtures: Rheobuild 1000
Placement Location: Footings Line C, Footings Line 4 - 5
Test Cylinder Location: Footing 5C

Date Cylinders Cast: 02-Jun-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 4,000
Max Agg. Size: 3/4

Date Report Issued: JUN 30 2004

6x12 Cylinders	4	Cast by	Jonathan E. Nickerson	Time	
Load No.	1	Slump (in) ASTM C 143	4	Batched @	11:55
Ticket No.	4510623	Air (°F)	57	Arrived @	12:05
Truck No.	154	Concrete (°F) ASTM C 1064	60	Total Time	35
Cubic Yds.	10	Air Content (%) ASTM C 231	7.6		

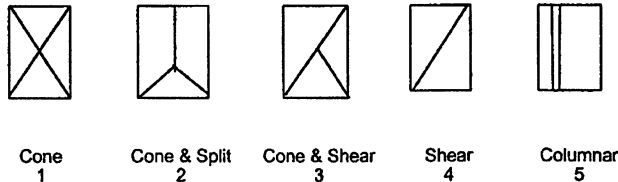
*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1
 Date received: 03-Jun-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46561	09-Jun-04	6.017	28.43	7	83,980	2950	4
46562	30-Jun-04	6.005	28.32	28	136,320	4810	4
46563	30-Jun-04	6.005	28.32	28	134,260	4740	4
46564	HOLD			HOLD			

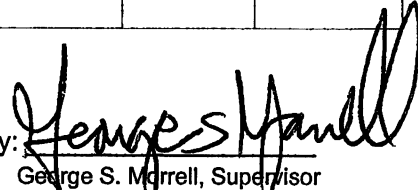
*Concrete compressive strength by ASTM C 39

Types of Breaks



Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
2	4510626	173	1.00	--	--	--	--	20

Remarks:

Checked by: 
 George S. McRrell, Supervisor

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CONCRETE TEST/PLACEMENT REPORT

FILE COPY

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Sunny and Windy
Method of Placement: Rear Discharge
Admixtures: MX3
Placement Location: Line 10/A - A+15, A/10 - 6 + 8
Test Cylinder Location: Line A / 9 + 5

Date Cylinders Cast: 03-Jun-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 4,000
Max Agg. Size: 3/4

Date Report Issued: JUL 0 1 2004

6x12 Cylinders	4	Cast by	Peter E. Callahan	Time	
Load No.	1	Slump (in) ASTM C 143	4.5	Batched @	10:00
Ticket No.	4510643	Air (°F)	65	Arrived @	10:10
Truck No.	169	Concrete (°F) ASTM C 1064	77	Total Time	120
Cubic Yds.	5	Air Content (%) ASTM C 231	6.2		

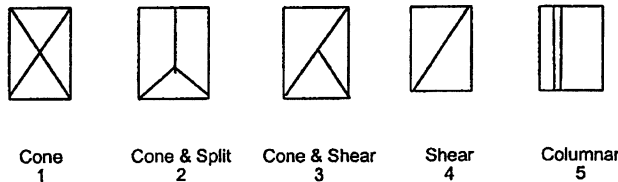
*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1
 Date received: 04-Jun-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46573	10-Jun-04	5.998	28.26	7	77,440	2740	4
46574	01-Jul-04	6.005	28.32	28	116,380	4110	4
46575	01-Jul-04	6.005	28.32	28	112,560	3975	4
46576	HOLD			HOLD			

*Concrete compressive strength by ASTM C 39

Types of Breaks



Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)

Remarks:

Checked by: *George S. McNeill*
 George S. McNeill, Supervisor

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CONCRETE TEST/PLACEMENT REPORT

FILE COPY

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Overcast
Method of Placement: From Chute
Admixtures: --
Placement Location: Foundation walls, Line 1, A to B and Line A, 1 to 2
Test Cylinder Location: Line A & 4

Date Cylinders Cast: 07-Jun-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 4,000
Max Agg. Size: 3/4

Date Report Issued: JUL 07 2004

6x12 Cylinders	4	Cast by	Matt T. Grady	Time	
Load No.	1	Slump (in) ASTM C 143	3.75	Batched @	1:05
Ticket No.	4510689	Air (°F)	56	Arrived @	1:25
Truck No.	175	Concrete (°F) ASTM C 1064	65	Total Time	100
Cubic Yds.	6	Air Content (%) ASTM C 231	4.8		

*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1

Date received: 08-Jun-04

Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46613	14-Jun-04	6.009	28.36	7	87,400	3080	4
46614	06-Jul-04	6.009	28.36	29	115,180	4060	4
46615	06-Jul-04	6.009	28.36	29	116,060	4090	4
46616	HOLD			HOLD			

*Concrete compressive strength by ASTM C 39

Types of Breaks



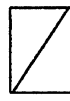
Cone
1



Cone & Split
2



Cone & Shear
3



Shear
4



Columnar
5

Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)

Remarks: Reinforcing steel was checked for size, grade, and spacing, and was found to be in general conformance with project plan.

Upon discharge, concrete was too stiff to travel down chute. 6 to 7 gallons of water added. Slump was within specification.

Checked by: Matthew T. Grady
 George S. Morrell, Supv.

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CONCRETE TEST/PLACEMENT REPORT

FILE COPY

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Sunny
Method of Placement: Rear Discharge
Admixtures: MX3, Pozzolith 100 XR
Placement Location: Wall: B1 + 40' to C1, 4 to 6
Test Cylinder Location: C10 + 20'

Date Cylinders Cast: 11-Jun-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 4,000
Max Agg. Size: 3/4

Date Report Issued: JUL 12 2004

6x12 Cylinders	4	Cast by	Peter E. Callahan	Time	
Load No.	1	Slump (in) ASTM C 143	3.5	Batched @	6:45
Ticket No.	4510765	Air (°F)	56	Arrived @	7:00
Truck No.	175	Concrete (°F) ASTM C 1064	70	Total Time	70
Cubic Yds.	8	Air Content (%) ASTM C 231	6.0		

*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 3

Date received: 14-Jun-04

Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46731	18-Jun-04	6.015	28.42	7	97,520	3430	4
46732	09-Jul-04	6.012	28.39	28	122,880	4330	4
46733	09-Jul-04	6.012	28.39	28	121,220	4270	4
46734	HOLD			HOLD			

*Concrete compressive strength by ASTM C 39

Types of Breaks



Cone
1



Cone & Split
2



Cone & Shear
3



Shear
4



Columnar
5

Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)

Remarks:

Checked by: George S. Morrell
 For George S. Morrell, Supervisor

FILE COPY

Maine Mall Motors

15-June-04

Project No: 235-979
Weather Conditions: Sunny, Hot
Method of Placement: Rear Discharge
Admixtures: --
Placement Location: Footings C.5/6.2; C.6/3.8
Test Cylinder Location: Footings C.6/3.8

Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 4,000
Max Agg. Size: 3/4

Date Report Issued: JUL 15 2004

6x12 Cylinders	4	Cast by	Jonathan Nickerson	Time	
Load No.	1	Slump (in) ASTM C 143	2.75	Batched @	9:30
Ticket No.	4510823	Air (°F)	84	Arrived @	9:40
Truck No.	170	Concrete (°F) ASTM C 1064	76	Total Time	50
Cubic Yds.	2	Air Content (%) ASTM C 231	5.2		

*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1

Date received: 16-Jun-04

Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46739	22-Jun-04	5.999	28.26	7	94,900	3360	4
46740	13-Jul-04	6.009	28.36	28	123,260	4350	4
46741	13-Jul-04	6.009	28.36	28	129,460	4565	4
46742	HOLD			HOLD			

*Concrete compressive strength by ASTM C 39

Types of Breaks



Cone
1



Cone & Split
2



Cone & Shear
3



Shear
4



Columnar
5

Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)

Remarks:

Checked by: *George S. Morrell*
 George S. Morrell, Supervisor

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CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Partly Sunny
Method of Placement: Pump
Admixtures: Polyheed 997
Placement Location: Slab on Grade 7 - 10, C - D
Test Cylinder Location: 5' East of D/9

Date Cylinders Cast: 29-Jun-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 3,000
Max Agg. Size: 3/4

Date Report Issued: JUL 27 2004

6x12 Cylinders	4	Cast by	Jonathan E. Nickerson		
Load No.	1	Slump (in) ASTM C 143	5.25	Time	Batched @ 9:15 Arrived @ 9:30 Total Time 40
Ticket No.	4511060	Air (°F)	70		
Truck No.	170	Concrete (°F) ASTM C 1064	71		
Cubic Yds.	10	Air Content (%) ASTM C 231	2.8		

*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1
 Date received: 30-Jun-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46850	06-Jul-04	6.009	28.36	7	71,240	2510	4
46851	27-Jul-04	6.007	28.34	28	110,180	3890	4
46852	27-Jul-04	6.007	28.34	28	112,180	3960	4
46853	HOLD			HOLD			

*Concrete compressive strength by ASTM C 39

Types of Breaks



Cone
1



Cone & Split
2



Cone & Shear
3



Shear
4



Columnar
5

Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
2	4511061	74	10.00	--	--	--	--	45
3	4511062	81	10.00	--	--	--	--	50
4	4511063	79	10.00	--	--	--	--	55
5	4511064	159	10.00	--	--	--	--	45

Remarks: Some ponded water on top of vapor barrier; some was wet-vacuumed out.
 Total loads = 17

Checked by: Matthew J. Morrell
 George S. Morrell, Supervisor

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CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Partly Sunny
Method of Placement: Pump
Admixtures: Polyheed 997
Placement Location: Slab on Grade 7 - 10, C - D
Test Cylinder Location: 5' West of 8.1; C.5

Date Cylinders Cast: 29-Jun-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 3,000
Max Agg. Size: 3/4

Date Report Issued: JUL 27 2004

6x12 Cylinders	4	Cast by	Jonathan E. Nickerson	Time	
Load No.	6	Slump (in) ASTM C 143	7.25	Batched @	10:20
Ticket No.	4511065	Air (°F)	74	Arrived @	10:35
Truck No.	170	Concrete (°F) ASTM C 1064	75	Total Time	65
Cubic Yds.	10	Air Content (%) ASTM C 231	2.6		

*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1
 Date received: 30-Jun-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46854	06-Jul-04	6.009	28.36	7	57,780	2040	4
46855	27-Jul-04	6.007	28.34	28	106,700	3670	4
46856	27-Jul-04	6.007	28.34	28	107,980	3810	4
46857	HOLD			HOLD			

*Concrete compressive strength by ASTM C 39

Types of Breaks



Cone
1



Cone & Split
2



Cone & Shear
3



Shear
4



Columnar
5

Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
7	4511067	74	10.00	--	--	--	--	50
8	4511068	180	10.00	--	--	--	--	65
9	4511069	81	10.00	--	--	--	--	70
10	4511070	175	10.00	--	--	--	--	65

Remarks: Some ponded water on top of vapor barrier; some was wet-vacuumed out.
 Total loads = 17

Checked by: Matthew J. Good
 For George S. Morrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

Project Name:	Maine Mall Motors	Date Cylinders Cast:	29-Jun-04
Project No:	235-979	Concrete Supplier:	Dragon
Weather Conditions:	Partly Sunny	General Contractor:	Daniel Hebert
Method of Placement:	Pump	Design Strength:	3,000
Admixtures:	Polyheed 997	Max Agg. Size:	3/4
Placement Location:	Slab on Grade 7 - 10, C - D		
Test Cylinder Location:	5' East of C.5; Halfway between 7 and 8.1		

Date Report Issued: JUL 27 2004

6x12 Cylinders	4	Cast by	Jonathan E. Nickerson	
Load No.	11	Slump (in) ASTM C 143	7.0	Time Batched @ 11:10 Arrived @ 11:15 Total Time 60
Ticket No.	4511071	Air (°F)	81	
Truck No.	79	Concrete (°F) ASTM C 1064	75	
Cubic Yds.	10	Air Content (%) ASTM C 231	2.4	

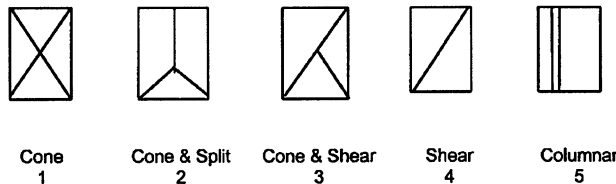
*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1
 Date received: 30-Jun-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46858	06-Jul-04	6.009	28.36	7	65,240	2300	4
46859	27-Jul-04	6.007	28.34	28	125,860	4440	4
46860	27-Jul-04	6.007	28.34	28	104,640	3690	4
46861	HOLD			HOLD			

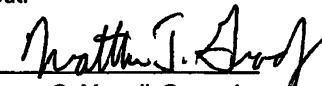
*Concrete compressive strength by ASTM C 39

Types of Breaks



Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
12	4511072	159	10.00	--	--	--	--	70
13	4511073	173	10.00	--	--	--	--	60
14	4511075	74	10.00	--	--	--	--	45
15	4511077	81	10.00	--	--	--	--	45
16	4511079	79	10.00	--	--	--	--	45
17	4511080	169	10.00	--	--	--	--	--

Remarks: Some ponded water on top of vapor barrier; some was wet-vacuumed out.
 Total loads = 17
 Truck 16 only poured 3 - 4 yards.
 Truck 17 did not pour.

Checked by: 
 George S. Morrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

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CONCRETE TEST/PLACEMENT REPORT

FILE COPY

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Partly Cloudy
Method of Placement: Pump
Admixtures: Polyheed 997
Placement Location: Slab on Grade Line 8 to 10, A to B
Test Cylinder Location: Half A to B, Line 9

Date Cylinders Cast: 13-Jul-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 3,000
Max Agg. Size: 3/4

Date Report Issued: AUG 11 2004

6x12 Cylinders	4	Cast by	Jonathan E. Nickerson			
Load No.	1	Slump (in) ASTM C 143	6.75	Time		
Ticket No.	4511296	Air (°F)	73		Batched @	7:40
Truck No.	153	Concrete (°F) ASTM C 1064	75		Arrived @	7:51
Cubic Yds.	10	Air Content (%) ASTM C 231	2.2		Total Time	60

*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1

Date received: 14-Jul-04

Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46954	20-Jul-04	6.007	28.34	7	61,540	2170	4
46955	10-Aug-04	6.005	28.32	28	113,800	4020	4
46956	10-Aug-04	6.005	28.32	28	116,040	4100	4
46957	HOLD			HOLD			

*Concrete compressive strength by ASTM C 39

Types of Breaks



Cone
1



Cone & Split
2



Cone & Shear
3



Shear
4



Columnar
5

Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
2	4511299	170	10.00	--	--	--	--	50
3	4511302	138	10.00	--	--	--	--	45
4	4511304	157	10.00	--	--	--	--	60
5	4511305	84	10.00	--	--	--	--	80

Remarks: Total loads = 8

Checked by: *RWJ*
 George S. Morrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

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CONCRETE TEST/PLACEMENT REPORT

Project Name:	Maine Mall Motors	Date Cylinders Cast:	13-Jul-04
Project No:	235-979	Concrete Supplier:	Dragon
Weather Conditions:	*Partly Cloudy	General Contractor:	Daniel Hebert
Method of Placement:	Pump	Design Strength:	3,000
Admixtures:	Polyheed 997	Max Agg. Size:	3/4
Placement Location:	Slab on Grade Line 8 to 10, A to B		
Test Cylinder Location:	10' Southwest of AB		
			Date Report Issued: AUG 11 2004

6x12 Cylinders	4	Cast by	Jonathan E. Nickerson	
Load No.	6	Slump (in) ASTM C 143	6.5	Batched @ 9:04 Arrived @ 9:13 Total Time 80
Ticket No.	4511306	Air (°F)	74	
Truck No.	155	Concrete (°F) ASTM C 1064	75	
Cubic Yds.	10	Air Content (%) ASTM C 231	2.8	

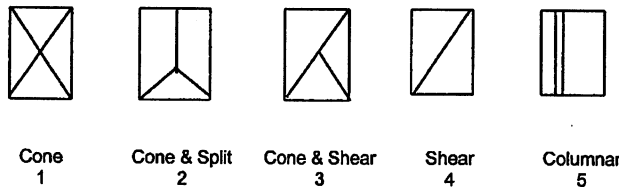
*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1
 Date received: 14-Jul-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
46958	20-Jul-04	6.007	28.34	7	49,640	1750	4
46959	10-Aug-04	6.005	28.32	28	107,580	3800	4
46960	10-Aug-04	6.005	28.32	28	101,560	3590	4
46961	HOLD			HOLD			

*Concrete compressive strength by ASTM C 39

Types of Breaks



Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
7	4511313	157	10.00	--	--	--	--	60
8	4511316	169	10.00	--	--	--	--	75

Remarks: Total loads = 8
 *Passing showers while trucks 7 & 8 were pouring.

Checked by: RW
 George S. Morrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

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CONCRETE TEST/PLACEMENT REPORT

Project Name:	Maine Mall Motors	Date Cylinders Cast:	20-Jul-04
Project No:	235-979	Concrete Supplier:	Dragon
Weather Conditions:	Overcast	General Contractor:	Daniel Hebert
Method of Placement:	Pump	Design Strength:	3,000
Admixtures:	Polyheed 997 (from 3rd load on)	Max Agg. Size:	3/4
Placement Location:	Slab on Grade 7 - 8 / A - B		
Test Cylinder Location:	7/A		

Date Report Issued: AUG 17 2004

6x12 Cylinders	4	Cast by	Michael J. Kramlich	Time	
Load No.	1	Slump (in) ASTM C 143	2.5	Batched @	--
Ticket No.	4511466	Air (°F)	80	Arrived @	--
Truck No.	169	Concrete (°F) ASTM C 1064	81	Total Time	--
Cubic Yds.	10	Air Content (%) ASTM C 231	1.9		

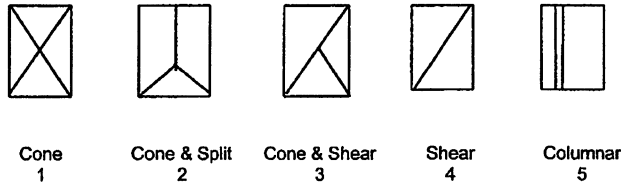
*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 2
 Date received: 22-Jul-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
47175	27-Jul-04	6.007	28.34	7	74,460	2630	4
47176	17-Aug-04	6.014	28.41	28	104,480	3680	4
47177	17-Aug-04	6.014	28.41	28	106,380	3740	4
47178	HOLD			HOLD			

*Concrete compressive strength by ASTM C 39

Types of Breaks



Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
2	4511467	173	10.00	--	80.00	--	--	--
3	4511469	170	10.00	--	--	--	--	--
4	4511470	180	10.00	--	85.00	--	--	--
5	4511471	169	10.00	--	--	--	--	--

Remarks: 10 Total Loads

Checked by: 
 George S. Morrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

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CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors	Date Cylinders Cast: 20-Jul-04
Project No: 235-979	Concrete Supplier: Dragon
Weather Conditions: Overcast	General Contractor: Daniel Hebert
Method of Placement: Pump	Design Strength: 3,000
Admixtures: Polyheed 997 (from 3rd load on)	Max Agg. Size: 3/4
Placement Location: Slab on Grade 7 - 8 / A - B	
Test Cylinder Location: 8 / HALF WAY BETWEEN A AND B	

Date Report Issued: AUG 17 2004

6x12 Cylinders	4	Cast by	Michael J. Kramlich			
Load No.	6	Slump (in) ASTM C 143	3.25	Time	Batched @	--
Ticket No.	4511474	Air (°F)	85		Arrived @	--
Truck No.	170	Concrete (°F) ASTM C 1064	84		Total Time	--
Cubic Yds.	10	Air Content (%) ASTM C 231	2.4			

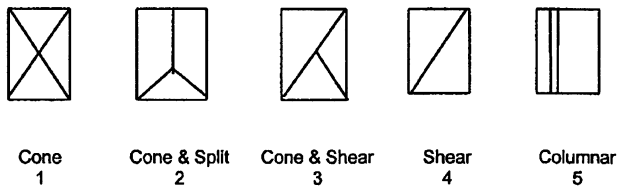
*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 2
 Date received: 22-Jul-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
47179	27-Jul-04	6.007	28.34	7	87,660	3090	4
47180	17-Aug-04	6.014	28.41	28	117,060	4120	4
47181	17-Aug-04	6.014	28.41	28	123,020	4330	4
47182	HOLD			HOLD			

*Concrete compressive strength by ASTM C 39

Types of Breaks



Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
7	4511476	144	10.00	--	--	--	--	--
8	4511478	169	10.00	--	--	--	--	--
9	4511481	144	10.00	--	--	--	--	--
10	4511483	169	10.00	--	--	--	--	--

Remarks: 10 Total Loads

Checked by: George S. Morrell
 George S. Morrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

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 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Foggy
Method of Placement: Pump
Admixtures: Polyheed 997
Placement Location: Slab on Grade Line 1 - 4; B - D
Test Cylinder Location: 5' Northeast of B4

Date Cylinders Cast: 22-Jul-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 3,000
Max Agg. Size: 3/4

AUG 20 2004

Date Report Issued:

6x12 Cylinders	4	Cast by	Jonathan E. Nickerson	Time	
Load No.	1	Slump (in) ASTM C 143	7.25	Batched @	6:30
Ticket No.	4311527	Air (°F)	72	Arrived @	6:50
Truck No.	175	Concrete (°F) ASTM C 1064	78	Total Time	75
Cubic Yds.	10	Air Content (%) ASTM C 231	1.6		

*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1

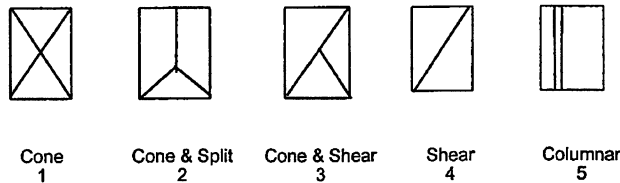
Date received: 23-Jul-04

Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
47207	29-Jul-04	6.007	28.34	7	50,300	1770	4
47208	19-Aug-04	6.011	28.38	28	91,300	3220	4
47209	19-Aug-04	6.011	28.38	28	90,980	3210	4
47210	HOLD			HOLD			


*Concrete compressive strength by ASTM C 39

Types of Breaks



Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
2	4511528	173	10.00	--	--	--	--	75
3	4511529	169	10.00	--	--	--	--	55
4	4511530	170	10.00	--	--	--	--	60
5	4511531	151	10.00					45

Remarks: Total loads = 15

Checked by: 
 George S. Morrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

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CONCRETE TEST/PLACEMENT REPORT

Project Name:	Maine Mall Motors	Date Cylinders Cast:	22-Jul-04
Project No:	235-979	Concrete Supplier:	Dragon
Weather Conditions:	Foggy	General Contractor:	Daniel Hebert
Method of Placement:	Pump	Design Strength:	3,000
Admixtures:	Polyheed 997	Max Agg. Size:	3/4
Placement Location:	Slab on Grade Line 1 - 4; B - D		
Test Cylinder Location:	B.6; 2		

Date Report Issued: 20 2004

6x12 Cylinders	4	Cast by	Jonathan E. Nickerson	Time
Load No.	6	Slump (in) ASTM C 143	7.0	Batched @
Ticket No.	4511535	Air (°F)	74	Arrived @
Truck No.	176	Concrete (°F) ASTM C 1064	76	Total Time
Cubic Yds.	10	Air Content (%) ASTM C 231	2.4	9:20
				9:30
				45

*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1

Date received: 23-Jul-04

Condition of Cylinders: Good

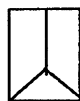
Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
47211	29-Jul-04	6.007	28.34	7	63,320	2230	4
47212	19-Aug-04	6.011	28.38	28	109,880	3870	4
47213	19-Aug-04	6.011	28.38	28	104,640	3690	4
47214	HOLD			HOLD			

*Concrete compressive strength by ASTM C 39

Types of Breaks



Cone
1



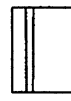
Cone & Split
2



Cone & Shear
3



Shear
4



Columnar
5

Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
7	4511539	169	10.00	--	--	--	--	55
8	4511542	151	10.00	--	--	--	--	50
*9	4511549	181	10.00	--	--	--	--	35
10	4511554	170	10.00					50

Remarks: Total loads = 15

*Truck 9: pulled four 2.5 - 3" stones out of pump hopper.

Checked by: *RWG*
 George S. Morrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

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 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Foggy
Method of Placement: Pump
Admixtures: Polyheed 997
Placement Location: Slab on Grade Line 1 - 4; B - D
Test Cylinder Location: C.6; 2

Date Cylinders Cast: 22-Jul-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 3,000
Max Agg. Size: 3/4

Date Report Issued: AUG 20 2004

6x12 Cylinders	4	Cast by	Jonathan E. Nickerson	Time
Load No.	11	Slump (in) ASTM C 143	7.0	Batched @
Ticket No.	4511558	Air (°F)	84	Arrived @
Truck No.	169	Concrete (°F) ASTM C 1064	77	Total Time
Cubic Yds.	10	Air Content (%) ASTM C 231	3.2	12:45
				1:00
				45

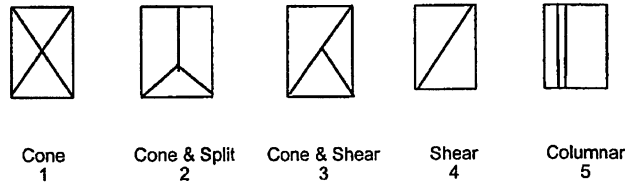
*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1
 Date received: 23-Jul-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
47215	29-Jul-04	6.007	28.34	7	56,440	1990	4
47216	19-Aug-04	6.011	28.38	28	101,200	3570	4
47217	19-Aug-04	6.011	28.38	28	103,440	3640	4
47218	HOLD			HOLD			

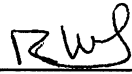
*Concrete compressive strength by ASTM C 39

Types of Breaks



Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
12	4511562	176	10.00	--	--	--	--	40
13	4511567	169	10.00	--	--	--	--	55
14	4511570	176	10.00	--	--	--	--	45
15	4511572	183	10.00					35

Remarks: Total loads = 15

Checked by: 
 George S. Morrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

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 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Overcast
Method of Placement: Pump
Admixtures: Pozzutec 200
Placement Location: Slab on Grade Line 4 - 6; B - C
Test Cylinder Location: Line 5; C.6

Date Cylinders Cast: 23-Jul-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 3,000
Max Agg. Size: 3/4

Date Report Issued: ~~SEP 17 2004~~

6x12 Cylinders	4	Cast by	Jonathan E. Nickerson	Time	
Load No.	1	Slump (in) ASTM C 143	7.0	Batched @	6:37
Ticket No.	3924295	Air (°F)	72	Arrived @	6:50
Truck No.	83	Concrete (°F) ASTM C 1064	77	Total Time	65
Cubic Yds.	10	Air Content (%) ASTM C 231	1.4		

*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 3
Date received: 26-Jul-04
Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
47239	30-Jul-04	6.012	28.39	7	49,020	1730	4
47240	20-Aug-04	6.013	28.40	28	83,200	2930	4
47241	20-Aug-04	6.013	28.40	28	85,600	3010	4
47242	17-Sep-04	6.005	28.32	56	83,900	2960	4

*Concrete compressive strength by ASTM C 39

Types of Breaks



Cone
1



Cone & Split
2



Cone & Shear
3



Shear
4



Columnar
5

Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
2	3924296	177	10.00	--	--	--	--	65
3	3924297	160	10.00	--	--	--	--	70
4	3924298	83	10.00	--	--	--	--	55
5	3924299	177	10.00	--	--	--	--	65

Remarks: Total loads = 7

Checked by: 
 George S. Morrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Overcast
Method of Placement: Pump
Admixtures: Pozzutec 200
Placement Location: Slab on Grade Line 4 - 6; B - C
Test Cylinder Location: 5' Southeast of B4

Date Cylinders Cast: 23-Jul-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 3,000
Max Agg. Size: 3/4

Date Report Issued: AUG 20 2004

6x12 Cylinders	4	Cast by	Jonathan E. Nickerson	Time	
Load No.	6	Slump (In) ASTM C 143	7.0	Batched @	9:29
Ticket No.	3924300	Air (%F)	74	Arrived @	9:45
Truck No.	160	Concrete (°F) ASTM C 1064	77	Total Time	55
Cubic Yds.	10	Air Content (%) ASTM C 231	1.2		

*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 3

Date received: 26-Jul-04

Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
47243	30-Jul-04	6.012	28.39	7	57,380	2020	4
47244	20-Aug-04	6.013	28.40	28	92,320	3250	4
47245	20-Aug-04	6.013	28.40	28	96,320	3390	4
47246	HOLD			HOLD			

*Concrete compressive strength by ASTM C 39

Types of Breaks



Cone
1



Cone & Split
2



Cone & Shear
3



Shear
4



Columnar
5

Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
7	3924301	134	10.00	--	--	--	--	40

Remarks: Total loads = 7

Checked by: RWJ
 George S. Morrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

Project Name:	Maine Mall Motors	Date Cylinders Cast:	17-Aug-04
Project No:	235-979	Concrete Supplier:	Dragon
Weather Conditions:	Sunny/ Clear	General Contractor:	Daniel Hebert
Method of Placement:	Pump	Design Strength:	3,000
Admixtures:	Polyheed 997	Max Agg. Size:	3/4
Placement Location:	Slab on Grade, Line 3-5.5', A-A.5		
Test Cylinder Location:	10'NE of A.5; 5.5		

Date Report Issued: **SEP 15 2004**

6x12 Cylinders	4	Cast by	Jon Nickerson	Time
Load No.	1	Slump (in) ASTM C 143	6.25	Batched @ 7:30 Arrived @ 7:40 Total Time 90 mins.
Ticket No.	4511939	Air (°F)	80	
Truck No.	74	Concrete (°F) ASTM C 1064	78	
Cubic Yds.	10	Air Content (%) ASTM C 231	1.2	

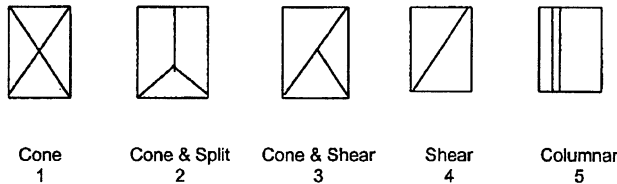
*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1
 Date received: 18-Aug-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
47814	24-Aug-04	6.007	28.34	7	103,180	3640	4
47815	14-Sep-04	6.004	28.31	28	119,840	4230	4
47816	14-Sep-04	6.004	28.31	28	120,920	4270	4
47817	HOLD			HOLD			


*Concrete compressive strength by ASTM C 39

Types of Breaks



Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
2	4511945	180	10.00	--	--	--	--	65
3	4511949	173	10.00	--	--	--	--	60
4	4511951	176	10.00	--	--	--	--	55
5	4511952	154	10.00	--	--	--	--	60

Remarks: Truck 1 came without MRWR - added Polyheed 997, 20 gal. Longer to harden 5.5-5 to A.5-A.3
 Super added water to truck 4.
 Total loads = 10

Checked by: 
 George S. Morrell, Supervisor

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 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

Project Name:	Maine Mall Motors	Date Cylinders Cast:	17-Aug-04
Project No:	235-979	Concrete Supplier:	Dragon
Weather Conditions:	Sunny/ Clear	General Contractor:	Daniel Hebert
Method of Placement:	Pump	Design Strength:	3,000
Admixtures:	Polyheed 997	Max Agg. Size:	3/4
Placement Location:	Slab on Grade, Line 3-5.5', A-A.5		
Test Cylinder Location:	Line 4, Halfway b/t A.3 and A.5		

Date Report Issued: ~~SEP 15 2004~~

6x12 Cylinders	4	Cast by	Jon Nickerson	Time
Load No.	6	Slump (in) ASTM C 143	6.75	Batched @
Ticket No.	4511953	Air (°F)	79	Arrived @
Truck No.	175	Concrete (°F) ASTM C 1064	80	Total Time
Cubic Yds.	10	Air Content (%) ASTM C 231	1.4	55 mins.

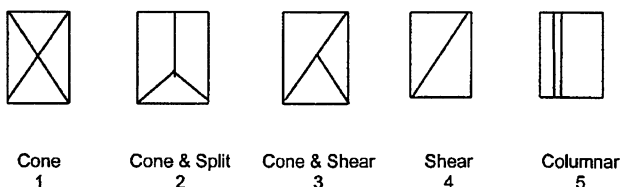
*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1
 Date received: 18-Aug-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
47818	24-Aug-04	6.007	28.34	7	84,460	2980	4
47819	14-Sep-04	6.004	28.31	28	110,880	3920	4
47820	14-Sep-04	6.004	28.31	28	104,780	3700	4
47821	HOLD			HOLD			

*Concrete compressive strength by ASTM C 39

Types of Breaks



Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
7	4511954	180	10.00	--	--	--	--	65
8	4511956	173	10.00	--	--	--	--	70
9	4511957	151	10.00	--	--	--	--	75
10	4511964	74	4.00	--	--	--	--	60

Remarks: Truck 1 came without MRWR - added Polyheed 997, 20 gal. Longer to harden 5.5-5 to A.5-A.3
Super added water to truck 4.
 Total loads = 10

Checked by: *DMJ*
 George S. Morrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

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 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

Project Name:	Maine Mall Motors	Date Cylinders Cast:	18-Aug-04
Project No:	235-979	Concrete Supplier:	Dragon
Weather Conditions:	Clear/Sunny	General Contractor:	Daniel Hebert
Method of Placement:	Pump	Design Strength:	3,000
Admixtures:	Polyheed 997	Max Agg. Size:	3/4
Placement Location:	Slab on Grade, Line 1-3; A-A.5		
Test Cylinder Location:	Halfway between 1-2, 10'E of A.5		

Date Report Issued: SEP 16 2004

6x12 Cylinders	4	Cast by	Jon Nickerson		Time
Load No.	1	Slump (in) ASTM C 143	6.25		Batched @ 6:45
Ticket No.	4511979	Air (°F)	85		Arrived @ 7:07
Truck No.	083	Concrete (°F) ASTM C 1064	79		Total Time 90 mins.
Cubic Yds.	10	Air Content (%) ASTM C 231	1.5		

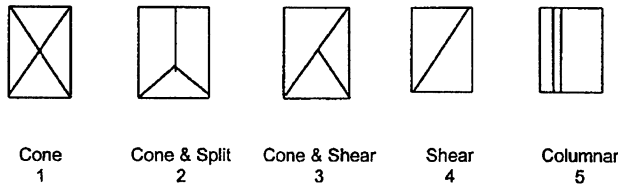
*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1
 Date received: 19-Aug-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
47862	25-Aug-04	6.007	28.34	7	77,920	2750	4
47863	15-Sep-04	6.005	28.32	28	99,760	3520	4
47864	15-Sep-04	6.005	28.32	28	98,640	3480	4
47865	HOLD			HOLD			

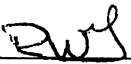
*Concrete compressive strength by ASTM C 39

Types of Breaks



Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
2	4511985	180	10.00	--	--	--	--	50
3	4511987	83	10.00	--	--	--	--	40
4	4511990	152	10.00	--	--	--	--	55
5	4511992	83	10.00	--	--	--	--	55

Remarks: Total loads = 8

Checked by: 
 George S. Morrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

Project Name:	Maine Mall Motors	Date Cylinders Cast:	18-Aug-04
Project No:	235-979	Concrete Supplier:	Dragon
Weather Conditions:	Overcast	General Contractor:	Daniel Hebert
Method of Placement:	Pump	Design Strength:	3,000
Admixtures:	Polyheed 997	Max Agg. Size:	3/4
Placement Location:	Slab on Grade, Line 1-3; A-A.5		
Test Cylinder Location:	Line A.3, 2		

Date Report Issued: SEP 16 2004

6x12 Cylinders	4	Cast by	Jon Nickerson	Time
Load No.	6	Slump (in) ASTM C 143	7.75	Batched @ 11:00 Arrived @ 11:20 Total Time 50 mins.
Ticket No.	4511994	Air (*F)	81	
Truck No.	81	Concrete (*F) ASTM C 1064	78	
Cubic Yds.	10	Air Content (%) ASTM C 231	1.7	

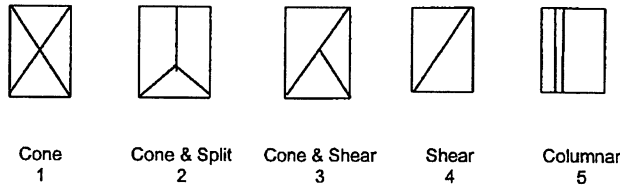
*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1
 Date received: 19-Aug-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
47866	25-Aug-04	6.007	28.34	7	89,380	3150	4
47867	15-Sep-04	6.005	28.32	28	112,800	3980	4
47868	15-Sep-04	6.005	28.32	28	114,940	4060	4
47869	HOLD			HOLD			

*Concrete compressive strength by ASTM C 39

Types of Breaks



Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (*F)	Conc Temp (*F)	(%) Air Content	Time (min.)
7	4511998	83	10.00	--	--	--	--	65
8	4512008	169	10.00	--	--	--	--	70

Remarks: Total loads = 8

Checked by:
 George S. Morrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

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CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Sunny
Method of Placement: Rear Discharge
Admixtures: Polyheed 997
Placement Location: 2nd Floor Slab
Test Cylinder Location: East side of 2nd Floor Slab

Date Cylinders Cast: 25-Aug-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 3,000
Max Agg. Size: 3/4

Date Report Issued: SEP 24 2004

6x12 Cylinders	4	Cast by	Peter E. Callahan	Time	
Load No.	3	Slump (in) ASTM C 143	5.5	Batched @	9:10
Ticket No.	4512207	Air (%F)	70	Arrived @	9:30
Truck No.	179	Concrete (°F) ASTM C 1064	78	Total Time	40
Cubic Yds.	10	Air Content (%) ASTM C 231	2.5		

*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1

Date received: 26-Aug-04

Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
48069	01-Sep-04	6.007	28.34	7	118,160	4170	4
48070	22-Sep-04	6.007	28.34	28	142,740	5040	4
48071	22-Sep-04	6.007	28.34	28	145,440	5130	4
48072	HOLD			HOLD			

*Concrete compressive strength by ASTM C 39

Types of Breaks



Cone
1



Cone & Split
2



Cone & Shear
3



Shear
4



Columnar
5

Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
1	4512201	168	10.00	6.00	--	--	--	30
2	4512202	83	10.00	--	--	--	--	40
4	4512203	180	10.00	--	--	--	--	30
5	4512204	83	10.00	6.00	--	--	--	30

Remarks: 12 Total Loads

Checked by: 
 For George S. Morrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Sunny
Method of Placement: Rear Discharge
Admixtures: Polyheed 997
Placement Location: 2nd Floor Slab
Test Cylinder Location: West side of 2nd Floor Slab

Date Cylinders Cast: 25-Aug-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 3,000
Max Agg. Size: 3/4

Date Report Issued: SEP 24 2004

6x12 Cylinders	4	Cast by	Peter E. Callahan		
Load No.	8	Slump (in) ASTM C 143	6.0		
Ticket No.	4512220	Air (%F)	72		
Truck No.	168	Concrete (%F) ASTM C 1064	80		
Cubic Yds.	10	Air Content (%) ASTM C 231	2.0		

	Time	
	Batched @	11:35
	Arrived @	11:50
	Total Time	40

*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1

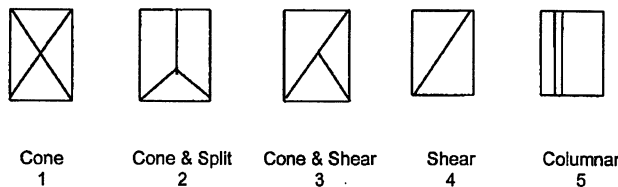
Date received: 26-Aug-04

Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
48073	01-Sep-04	6.007	28.34	7	108,580	3830	4
48074	22-Sep-04	6.007	28.34	28	132,560	4680	4
48075	22-Sep-04	6.007	28.34	28	134,480	4750	4
48076	HOLD			HOLD			

*Concrete compressive strength by ASTM C 39

Types of Breaks



Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
6	4512214	173	10.00	--	--	--	--	40
7	4512217	174	10.00	--	--	--	--	40
9	4512225	179	10.00	5.00	--	--	--	30
10	4512228	175	10.00	--	--	--	--	--

Remarks: 12 Total Loads

Checked by: 
 George S. Morrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

86 Industrial Park Road, Suite 4, Saco, ME 04072 207-286-8008
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CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Sunny
Method of Placement: Rear Discharge
Admixtures: Polyheed 997
Placement Location: 2nd Floor Slab
Test Cylinder Location: Middle of 2nd Floor Slab

Date Cylinders Cast: 25-Aug-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 3,000
Max Agg. Size: 3/4

Date Report Issued: SEP 24 2004

6x12 Cylinders	4	Cast by	Peter E. Callahan	Time	
Load No.	11	Slump (in) ASTM C 143	5.0	Batched @	1:45
Ticket No.	4512232	Air (°F)	75	Arrived @	1:59
Truck No.	176	Concrete (°F) ASTM C 1064	83	Total Time	60
Cubic Yds.	10	Air Content (%) ASTM C 231	2.5		

*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1

Date received: 26-Aug-04

Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
48077	01-Sep-04	6.007	28.34	7	102,200	3610	4
48078	22-Sep-04	6.007	28.34	28	126,940	4480	4
48079	22-Sep-04	6.007	28.34	28	133,240	4700	4
48080	HOLD			HOLD			

*Concrete compressive strength by ASTM C 39

Types of Breaks



Cone
1



Cone & Split
2



Cone & Shear
3



Shear
4



Columnar
5

Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
12	4512239	74	10.00	--	--	--	--	60

Remarks: 12 Total Loads

Checked by:
 George S. Morrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

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 200 International Drive, Suite 170, Portsmouth, NH 03801 603-427-0244
CONCRETE TEST/PLACEMENT REPORT

Project Name: Maine Mall Motors	Date Cylinders Cast: 26-Aug-04
Project No: 235-979	Concrete Supplier: Dragon
Weather Conditions: Sunny	General Contractor: Daniel Hebert
Method of Placement: Rear discharge	Design Strength: 4,500
Admixtures: Polyheed 997	Max Agg. Size: 3/4
Placement Location: A, to -15 A, 1 to 2	
Test Cylinder Location: A, 60 7A	

Date Report Issued: OCT 22 2004

6x12 Cylinders	4	Cast by	Peter E. Callahan		Time
Load No.	1	Slump (in) ASTM C 143	6		Batched @ 11:40
Ticket No.	4512278	Air (°F)	78		Arrived @ 12:00
Truck No.	158	Concrete (°F) ASTM C 1064	85		Total Time 40
Cubic Yds.	10	Air Content (%) ASTM C 231	7.5		

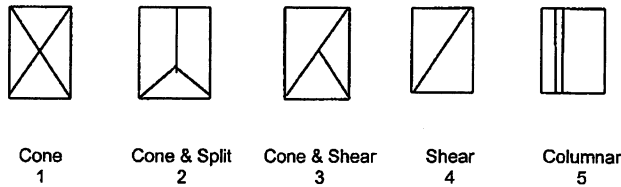
*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1
 Date received: 27-Aug-04
 Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in ²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
48109	02-Sep-04	6.006	28.33	7	95,340	3370	4
48110	23-Sep-04	6.002	28.29	28	114,320	4040	4
48111	23-Sep-04	6.002	28.29	28	111,400	3940	4
48112	21-Oct-04	5.998	28.26	56	115,400	4080	4

*Concrete compressive strength by ASTM C 39

Types of Breaks



Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)

Remarks:

Checked by: Matthew S. Dwyer
 For George S. Morrell, Supervisor

R. W. GILLESPIE & ASSOCIATES, INC.

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CONCRETE TEST/PLACEMENT REPORT

FILE COPY

Project Name: Maine Mall Motors
Project No: 235-979
Weather Conditions: Sunny
Method of Placement: Pump Truck, Rear discharge
Admixtures: Polyheed 997
Placement Location: 2nd Floor Slab
Test Cylinder Location: Middle of the slab

Date Cylinders Cast: 26-Aug-04
Concrete Supplier: Dragon
General Contractor: Daniel Hebert
Design Strength: 3,000
Max Agg. Size: 3/4

Date Report Issued: SEP 24 2004

6x12 Cylinders	4	Cast by	Peter E. Callahan	Time	
Load No.	1	Slump (in) ASTM C 143	5.0	Batched @	7:40
Ticket No.	3106292	Air (°F)	75	Arrived @	8:15
Truck No.	154	Concrete (°F) ASTM C 1064	83	Total Time	90
Cubic Yds.	10	Air Content (%) ASTM C 231	1.5		

*Concrete sampled by ASTM C 172

Specimen Storage ASTM C 31: Field cure days: 1

Date received: 27-Aug-04

Condition of Cylinders: Good

Lab No.	Test Date	Avg Dia (in)	Area (in²)	Age (Days)	Load (lbs)	Compressive Strength (psi)	Break type
48105	02-Sep-04	6.006	28.33	7	99,880	3530	4
48106	23-Sep-04	6.002	28.29	28	124,560	4400	4
48107	23-Sep-04	6.002	28.29	28	129,420	4570	4
48108	HOLD			HOLD			

*Concrete compressive strength by ASTM C 39

Types of Breaks



Cone
1



Cone & Split
2



Cone & Shear
3



Shear
4



Columnar
5

Load	Ticket Number	Truck Number	Cubic Yds	Slump (inches)	Air Temp (°F)	Conc Temp (°F)	(%) Air Content	Time (min.)
2	4512275	180	4.00	--	--	--	--	--

Remarks:

Checked by: _____
 George S. Morrell, Supervisor

05120 Structural Steel/Steel Joists/Light Gauge Metal Framing

Section 5.1

BSE Reports

B E C K E R

structural engineers, inc.

OBSERVATION REPORT
Structural Steel

Date:	7-8-04
Time:	9:00 AM
Temp:	65 F
Weather:	CLOUDY & MISTY

Project:	MAINE MALL MOTORS
Location:	PORTLAND, ME
Becker Job No:	1129

Observation Location: STEEL ERECTION AT LINE 1 TO 5 & B TO D
--

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	
Bolt Condition	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Comments
Weld Condition	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Anchor Bolts, Nuts, & Washers	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Grout/Leveling Plates	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Fit Up/Plumbness	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Metal Deck Welds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Pour Stops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bracing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

Erection started on Tuesday. All connections were incomplete, typically (1) or (2) bolts each connection.

Signed: Adam M. White, E.I.

B E C K E R

structural engineers, inc.

OBSERVATION REPORT
Structural Steel

Date:	7-13-04
Time:	9:30 AM
Temp:	70 F
Weather:	PT CLOUDY

Project:	MAINE MALL MOTORS
Location:	PORTLAND, ME
Becker Job No:	1129

Observation Location:	AREA "A", LINE C TO D & 10 TO 6 AREA "B" , LINE B TO D & 1 TO 5
------------------------------	--

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	
Bolt Condition	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Comments
Weld Condition	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Anchor Bolts, Nuts, & Washers	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Grout/Leveling Plates	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Fit Up/Plumbness	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Metal Deck Welds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Pour Stops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bracing	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

Steel erector had started setting columns at Area "A" SHOWROOM. Joists had been set at Area "B". Installation was not complete at this time. Temporary bolts had been installed. No welds had been completed.

Signed: Adam M. White, E.I.

B E C K E R

structural engineers, inc.

OBSERVATION REPORT

Structural Steel

Date: 07-20-04

Time: 7:15 AM

Temp: 60's F

Weather: OVERCAST

Project: MAINE MALL MOTORS

Location: PORTLAND, ME

Becker Job No: 1129

Observation Location:
SHOP ROOF, AREA "B"

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Bolt Condition	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Weld Condition	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Anchor Bolts, Nuts, & Washers	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Grout/Leveling Plates	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Fit Up/Plumbness	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Metal Deck Welds	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Pour Stops	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Bracing	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

ERECTION CONTINUING

Signed: Ethan A. Rhile, P.E.

BECKER

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OBSERVATION REPORT

Structural Steel

Date: 7-23-04

Time: 8:15 AM

Temp: 75 F

Weather: CLOUDY

Project: MAINE MALL MOTORS

Location: PORTLAND, ME

Becker Job No: 1129

Observation Location:
ROOF LEVEL, HSS BEAMS @ BUILDING PERIMETER.

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Bolt Condition	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Weld Condition	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Anchor Bolts, Nuts, & Washers	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Grout/Leveling Plates	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Fit Up/Plumbness	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Metal Deck Welds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Pour Stops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bracing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

Work was ongoing, setting roof joists @ high roof, line 8 to 10. Metal decking was being lifted into place for installation. HSS tubes were being set at the building perimeter, roof level. Welders were in the process of installing brace frames & moment connections.

Signed: Adam M. White, E.I.

B E C K E R

structural engineers, inc.

OBSERVATION REPORT
Structural Steel

Date:	8-18-04
Time:	3:15 PM
Temp:	80 F
Weather:	HUMID

Project:	MAINE MALL MOTORS
Location:	PORTLAND, ME
Becker Job No:	1129

Observation Location: SECOND FLOOR, AREAS "A & B"

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Bolt Condition	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Weld Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Anchor Bolts, Nuts, & Washers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Grout/Leveling Plates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Fit Up/Plumbness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Metal Deck Welds	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Pour Stops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bracing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

Stud welding was in progress. Studs were being welded in an alternating pattern as designed, on each top chord of the composite joists. Reference Details, DWG S4.4

Signed: Adam M. White, E.I.

B E C K E R

structural engineers, inc.

OBSERVATION REPORT
Structural Steel

Date:	October 6, 2004
Time:	2:30 PM
Temp:	60-F
Weather:	Sunny

Project:	Maine Mall Motors-Toyota/Lexus
Location:	Portland, ME
Becker Job No:	1129.02

Observation Location: Second Floor level, Line 1, Columns 1/B & 1/C

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Bolt Condition	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See below
Weld Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Anchor Bolts, Nuts, & Washers	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Grout/Leveling Plates	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Fit Up/Plumbness	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Metal Deck Welds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Pour Stops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bracing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

1. At column 1/C, Braced Frame 11, (2) bolts were observed to be missing at the steel beam/column connection. These bolts are required to be installed, as detailed in the Contract Drawings & structural steel fabrication drawings (shop drawings.)
2. At column 1/B, Braced Frame 9, (1) bolt was observed to missing. (Please refer to picture on following page.) The shear tab that receives this beam was apparently fabricated too short. The contractor shall weld on an additional shear tab, extending

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the existing piece & install the bolt as originally detailed. (Please refer to attached detail.)

Upon completing the above referenced repairs, the contractor shall notify Becker Structural Engineers so that the area can be re-inspected, prior to covering the area with interior finishes.



Signed: Adam M. White, E.I.

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structural engineers, inc.

OBSERVATION REPORT
Open Web Steel Joists

Date:	October 6, 2004
Time:	2:30 PM
Temp:	60-F
Weather:	Sunny

Project:	Maine Mall Motors-Toyota/Lexus
Location:	Portland, ME
Becker Job No:	1129.02

Observation Location: Roof, Lines B & C, High Roof & Low Roof Levels

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Seat Connection	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Bridging	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Bracing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Tie joist Connection	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

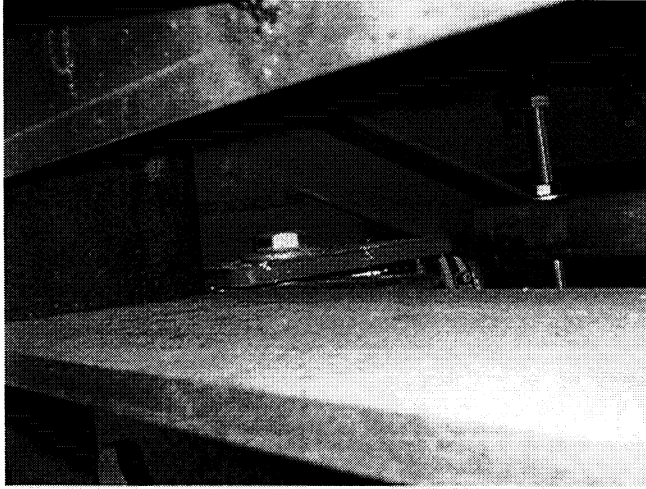
Notes:

At the roof steel elevations on Lines B, we observed a joist seat that was not bearing on its support. (See picture, following page). A bolt was installed on (1) side & not on the other. No weld was visible on the sides of the joist seat.

The contractor shall verify that the roof joists have been erected and connected in accordance with Steel Joist Institute (SJI) standards. A welded connection is acceptable, provided it meets the criteria of the SJI. The contractor shall verify that a Certified Welding Inspector (CWI) has inspected the roof joists and shall submit a copy of the inspector's report to Becker Structural Engineers for review.

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Joist not in contact with seat at
Line B, between Lines 6 & 9. Bolt
missing on far side.

Signed: Adam M. White, E.I.

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OBSERVATION REPORT

Light Gauge Metal Framing

Date:	October 06, 2004
--------------	------------------

Time:	2:00 pm
--------------	---------

Temp:	60-F
--------------	------

Weather:	Sunny
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Project:	Maine Mall Motors-Toyota/Lexus
-----------------	--------------------------------

Location:	Portland, ME
------------------	--------------

Becker Job No:	1129.02
-----------------------	---------

Observation Location: Exterior walls & roof soffit

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	
Spacing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Anchorage	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See below
Temp Bracing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Perm Bracing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Strapping in progress in some locations.
Sheathing Attachment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Size of Members	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

Superstud DF1500 Deflection clips were not installed at the roof soffit as specified on the Contract Drawings. (Please refer to Section D/CF-1). The contractor substituted another product, which currently varies from the design intent. As installed, the clips will not permit the roof soffit to deflect freely, without the risk of damage to the light gauge components. To correct this deficiency, the contractor shall perform one of the following options:

1. Remove the substituted clips and install the correct deflection clips as originally specified.
2. Remove the screw connecting the substituted angles, install a nylon washer, and

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- re-attach the pieces with the same screw, taking care not to over tighten the screw. (The two pieces should slide past each other freely, without binding.)
3. Remove the screw & replace with a similarly size bolt. Install a nylock type nut and washer, such that the two pieces will slide past each other freely, as intended.

The contractor shall notify Becker Structural Engineers when this remedial work has been completed, prior to installing any interior drywall, so that the work may be re-inspected.

Signed: Adam M. White, E.I.

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structural engineers, inc.

OBSERVATION REPORT
Structural Steel

Date:	11-9-04
Time:	Afternoon
Temp:	Cold
Weather:	OVERCAST

Project:	MAINE MALL MOTORS
Location:	PORTLAND, ME
Becker Job No:	1129

Observation Location:
 Review of Items noted in BSE report 10/6/04, RWG Report 10/19/04

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	Comments
Bolt Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Weld Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Anchor Bolts, Nuts, & Washers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Grout/Leveling Plates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Fit Up/Plumbness	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Metal Deck Welds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Pour Stops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Bracing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

In general, appears that items noted in previous reports have been corrected.

Signed: Ethan A. Rhile, P.E.

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structural engineers, inc.

OBSERVATION REPORT
Light Gauge Metal Framing

Date:	12/7/04
Time:	1:30
Temp:	25
Weather:	Pt Cloudy

Project:	Maine Mall Motors-Toyota Lexus
Location:	Portland, ME
Becker Job No:	1129

Observation Location: Interior soffit overhangs; Toyota & Lexus showroom areas.

	Satisfactory	Un-Satisfactory	Not Completed	Not Applicable	
Spacing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Comments
Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Anchorage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Temp Bracing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Perm Bracing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sheathing Attachment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Size of Members	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Items	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notes:

Deflection clips that had previously been installed incorrectly had been replaced with new clips. The new clips were observed to have the nylon washer correctly installed.

Signed: Adam M. White, E.I.

BECKER

structural engineers, inc.

25 January 2005

Ted Krush
CWS Architects
434 Cumberland Avenue
Portland, ME 04101

TRANSFORMER HANGERS
MAINE MALL MOTORS TOYOTA LEXUS
PORTLAND, ME

Dear Jerry,

Yesterday afternoon, Monday, 24 January 2005 I visited the above referenced project to review the hanging of the 75 kVA electrical transformer from the second story structure above the Parts Shop, in close proximity to the C and 7 column lines. Per my conversation with Zeke of Daniel Hebert, Inc., our review was made at the request of the City of Portland's electrical inspector. We understand that the transformer weighs approximately 400#.

We take no exception to the method of hanging of this transformer. The spreader angles are within a few inches of the joist panel points, which is in accordance with the requirements of the project documents.

Our review of this condition is for the effects of the hung unit on the base building structure only.

Please feel free to contact me with any questions or comments you might have.

Sincerely,
BECKER STRUCTURAL ENGINEERS, Inc.



Ethan A. Rhile, P. E.

CC: Zeke Taylor – Daniel Hebert, Inc.
Jerry McGee – Daniel Hebert, Inc.
Special Inspections Report

BECKER

structural engineers, inc.

31 January 2005

Ted Krush
CWS Architects
434 Cumberland Avenue
Portland, ME 04101

HANGING EQUIPMENT
MAINE MALL MOTORS TOYOTA LEXUS
PORTLAND, ME

Dear Ted,

Following a walk through by the City of Portland Inspection services, a concern was expressed regarding the hanging of the two mechanical units under the roof of the above referenced structure. In subsequent conversations with Mike Nugent of the City, Mike expressed his concern about the equipment hanger designs throughout the entire building.

We reviewed the hanging of the two units in the field on 25 January 2005. We took no exception to the unit on the Lexus end of the building, as the hangers were located at the joist panel points. However, the hangers for the Toyota side unit were not at joist panel points. Generally, a steel joist with a hanger away from a panel point requires a reinforcing stiffener. Based on our understanding of the hanger configuration and the unit weight, we estimate the maximum hanger load at this unit to be on the order of 500 pounds.

We contacted New Columbia Joist Company regarding the point loads on the joist top chords, away from the panel points. New Columbia took no exception to the joist loading in the as-built configuration, and stated that a reinforcing stiffener is not required. A copy of their correspondence is attached.

I spoke with John Nolan of Titan Mechanical regarding the channel/hanger assembly at the mechanical units. Per our conversation, the units are hung from 1/2" diameter threaded rods with C4x5.4 channels (weak axis) in a continuously loaded configuration. Based on our analysis, with an estimated maximum hanger load of 500 pounds, we take no exception to this hanger configuration.

I also spoke with John Nolan in regards to the other hangers throughout the building. Per the Steel Joist Institute, hanger loads of 150 pounds or less can be hung from any point along a joist without additional reinforcement, provided a load allowance has been provided in the joist uniformly distributed design load. John indicated that there should not be any hanger loads in excess of 150 pounds beyond those previously referenced or accounted for in the base building design. Further, the hangers are load rated per NFPA standards. An engineering analysis of a rated, off-the-shelf proprietary hanger is not necessary.

Please feel free to contact me with any questions or comments you might have.

Sincerely,
BECKER STRUCTURAL ENGINEERS, Inc.



Ethan A. Rhile, P. E.

CC: Jerry McGee – Daniel Hebert, Inc.
John Nolan – Titan Mechanical
Special Inspections Report
Attachment



THE NEW COLUMBIA JOIST COMPANY
A SUBSIDIARY OF NICHOLAS J. BOURAS, INC.
2093 Old Highway 15
New Columbia, PA 17856-0031

PHONE: 570-568-6761
FAX: 570-568-2092



PLEASE DELIVER THE FOLLOWING PAGE (S) TO:

DATE: **Wednesday, January 26, 2005**
NAME: Ethan Rhile
FIRM: Becker Structural Engineers, Inc.
FAX: (207) 879-1822
PROJ: Maine Mall Motors Toyota Lexus (04JD-B182)

TIME: 1:58 PM
PG: 2 (Including This Sheet)
RE: 48LH16SP3 Joists
FROM: Kevin W. Smith, E.I.T.
ksmith@bourasind.com

Please Respond For Your Use As Requested Original To Follow

MESSAGE:

Ethan,

As per our phone conversation yesterday and your faxed information today, I have checked the adequacy of the 48LH16SP3 joists to support the proposed loading (see attached) without the installation of field applied web stiffeners. The 48LH16SP3 (joist marks L16, L52, L53 & L54 on NJB placement drawings) are adequate to support the loads as shown on the sketch I received from you this morning (see attached) and do not require the installation of field applied web stiffeners. Please keep in mind that I only checked the marks I have listed above for the loading shown on your sketch. If you have any questions or need any other information please feel free to contact us.

cc: file

New Columbia Joist Co.

Kevin W. Smith, E.I.T.
Staff Designer

BECKER

structural engineers, inc.

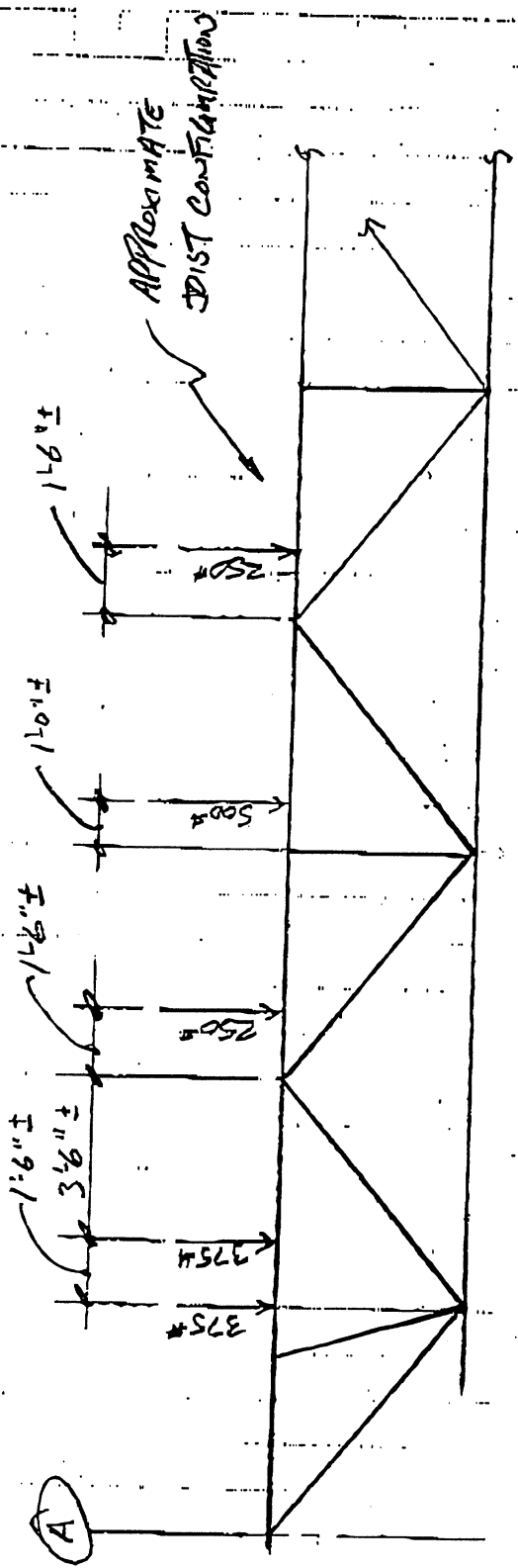
75 York Street, Portland, ME 04101-4350
Tel. 207-879-1838 ■ Fax 207-879-1822

Project MAINE MAIL MOTORS TOYOTA LEANS

W.O. 1129 Sheet 1 of 1

Calculated By: EAR Date 1/26/05

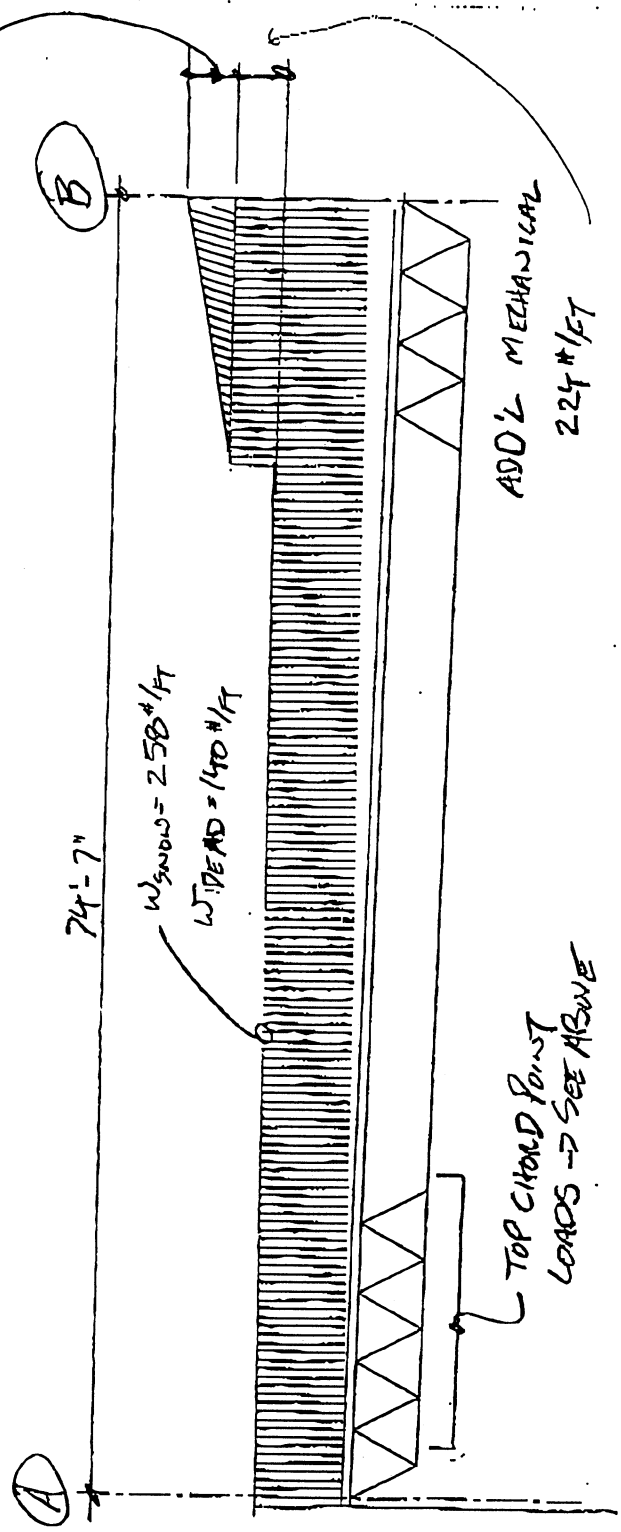
Checked By: _____ Date _____



ADD'L SNOW = 459 #/FT

4x8 LH 16 SP3

7'-7"



1'-6"
15' 5 1/2"
15'

05120 Structural Steel/Steel Joists/Light Gauge Metal Framing

Section 5.2

RWG Reports

FILE COPY



R. W. Gillespie & Associates, Inc.

Geotechnical Engineering • Geohydrology • Materials Testing Services

29 July 2004

Mr. Daniel Hebert
Daniel Hebert, Inc.
1 Pleasant Street
Colebrook, New Hampshire 03576

Subject: Structural Steel Inspection
 New Maine Mall Motors
 Portland, Maine
 RWG&A Project No. 235-979

Dear Mr. Hebert:

R.W. Gillespie & Associates Inc., (RWG&A) visited the above subject site on 26 July 2004 to perform visual inspections. The visual inspections consisted of observations of fillet welds and bolted connections for structural framing. The general contractor on the project is Daniel Hebert, Inc., and the steel construction is being performed by the subcontractor Harvey Libby.

Visual inspections were done in general accordance and with reference to the following standards, plans and specifications:

- *Structural Welding Code - Steel (AWS D1.1-96), Section 6.*
- Plans and specifications that were available at the jobsite trailer

Visual inspections were completed at the following locations with the noted observations:

First Floor Framing Braces

- Welds only were visually inspected at braces lines A-10 to A.3 -10, A.5-10 to B-10 and A-8 to A-9. The size and length of all fillet welds at the above referenced lines were in general conformance with the project plans and specifications and *Structural Welding Code - Steel (AWS D1.1-96), Section 6.*

Second Floor Framing (Lines B to C and 5 to 10)

- All bolted connections in the second floor framing at Lines B to C and 5 to 10 were in general conformance the project plans and specifications. Bolts were hand tight where needed and T.C. bolts were sheared off.

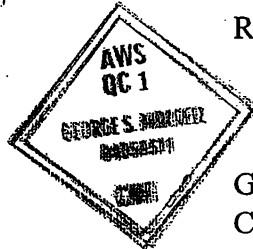
Welder Certification Verification

- Welder certifications were checked. All welders performing work in conformance with *Structural Welding Code - Steel (AWS D1.1-96)* are certified. A copy of certifications will follow at a later date.

RWG&A professionals are represented on site solely to observe work of the identified contractors to form opinions about the adequacy of those operations, and to report those opinions to RWG&A's client. The presence and activities of our field representative do not relieve any contractor from its obligations to meet contractual requirements. The contractor retains sole responsibility of site safety and the methods, operations, and sequences of construction.

If you have any questions or if we may be of further service, please do not hesitate to contact us.

Very truly yours,
R.W. GILLESPIE & ASSOCIATES, INC.



George S. Morrell
George S. Morrell
CWI # 04050311
Supervisor, Material Testing Services

Matthew T. Grady
Matthew T. Grady, P.E.
Manager, Material Testing Services

MTG/GSM:ci



FILE COPY

R. W. Gillespie & Associates, Inc.

Geotechnical Engineering • Geohydrology • Materials Testing Services

30 August 2004

Mr. Daniel Hebert
Daniel Hebert, Inc.
1 Pleasant Street
Colebrook, New Hampshire 03576

Subject: **Structural Steel Inspection**
 New Maine Mall Motors
 Portland, Maine
 RWG&A Project No. 235-979.MTS

Dear Mr. Hebert:

R.W.Gillespie & Associates Inc., (RWG&A) visited the above subject site on 24 August 2004 to perform visual inspections. The visual inspections consisted of observations of bolted connections, cross brace fillet welds, shear studs, and metal decking installation. The general contractor on the project is Daniel Hebert, Inc. and the steel construction is being performed by the subcontractor Harvey Libby.

Visual inspections were done in general accordance and with reference to the following standards, plans, and specifications:

- *Structural Welding Code - Steel (AWS D1.1:2002)*
- Plans and specifications that were available at the jobsite trailer

RWG&A professionals are represented on site solely to observe work of the identified contractors, to form opinions about the adequacy of those operations, and to report those opinions to RWG&A's client. The presence and activities of our field representative do not relieve any contractor from their obligations to meet contractual requirements. The contractor retains sole responsibility of site safety and the methods, operations, and sequences of construction.

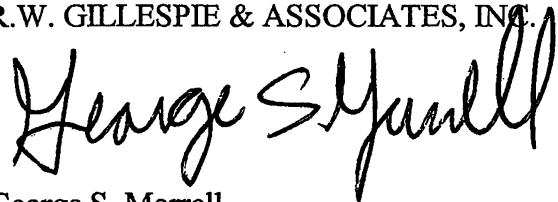
Visual inspections were completed at the following locations with the noted observations:

Second Floor Framing, Mechanical Mezzanine Framing, and Roof Framing:

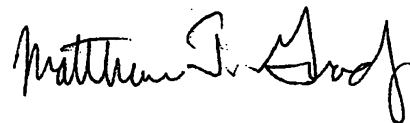
- All bolted connections were in general conformance with plans and specifications. All bolts were hand tightened where required and all tension control bolts were sheared off where the were required.
- All cross brace welds were complete and visually inspected after welds were completed and in general conformance with plans and specifications as well as AWS D1.1:2002 section 6.
- All shear studs (second floor framing only) are in general conformance with project plans and specifications and welded to structural members in conformance to AWS D1.1:2002 section 7.
- All steel decking in general conformance to plans and specifications with regards to puddle welds and hex screw lap connectors.

If you have any questions or if we may be of further service, please do not hesitate to contact us.

Very truly yours,
R.W. GILLESPIE & ASSOCIATES, INC.



George S. Morrell
CWI # 04050311
Supervisor, Material Testing Services



Matthew T. Grady, P.E.
Manager, Materials Testing Services

MTG/GSM:sab

G:\PROJECTS\9235\9235-0900\9235-979\Corresp\30 August 2004 Structural Steel Inspection.wpd

no copies



R. W. Gillespie & Associates, Inc.

Geotechnical Engineering • Geohydrology • Materials Testing Services

FILE COPY

19 October 2004

Mr. Daniel Hebert
Daniel Hebert, Inc.
1 Pleasant Street
Colebrook, New Hampshire 03576

Subject: Structural Steel Inspection
 New Maine Mall Motors
 Portland, Maine
 RWG&A Project No. 235-979

Dear Mr. Hebert:

R.W.Gillespie & Associates Inc., (RWG&A) visited the above subject site on 13 October 2004 to perform visual inspections. The visual inspections consisted of observations of bolted connections, and open web steel joist to column connections. The general contractor on the project is Daniel Hebert, Inc. and the steel construction is being performed by the subcontractor Harvey Libby.

Visual inspections were done in general accordance and with reference to the following standards, plans, and specifications:

- *Structural Welding Code - Steel (AWS D1.1:2002)*
- Plans and specifications that were available at the jobsite trailer

RWG&A professionals are represented on site solely to observe work of the identified contractors to form opinions about the adequacy of those operations, and to report those opinions to RWG&A's client. The presence and activities of our field representative do not relieve any contractor from its obligations to meet contractual requirements. The contractor retains sole responsibility of site safety and the methods, operations, and sequences of construction.

R. W. Gillespie & Associates, Inc.

Page 2 of 2

Visual inspections were completed at the following locations with the noted observations:

Low Roof Framing - East side of the column at B-5. The open web steel joist to column connection at this location only has one bolt in one side of the joist seat and no fillet weld around this seat.

High Roof Framing - Open web steel joist to top of column connections along B-line and C-line. All the C-line connections have proper fillet welds on both sides of the joist seats. All B-line joist seats are the same size as the plates on top of the columns (8 inches), so the contractor installed a full length fillet weld across the back side of the joist seat at all locations along B-line.

Second Floor Framing - Bolted connection on east side of column at C-1 has 10 holes in the beam/brace clip and only 8 holes in the column clip. The holes missing in the column clip were the middle two. Bolted connection on south side of column at C-1 has 7 holes in the beam and only 6 holes in the column clip. Bolted connection on south side of column at B-1 has 5 holes in the beam and only 4 holes in the column clip.

If you have any questions or if we may be of further service, please do not hesitate to contact us.

Very truly yours,
R. W. GILLESPIE & ASSOCIATES, INC.



George S. Morrell
CWI # 04050311
Supervisor, Material Testing Services

Matthew T. Grady, P.E.
Manager, Materials Testing Services

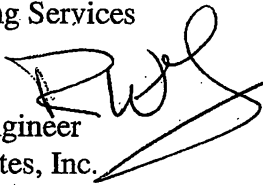
RWG/GSM:sab
Copy: Zeke , by fax (775-1427)

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Project Memorandum

To: Mr. Daniel Hebert
Daniel Hebert, Inc.
1 Pleasant Street
Colebrook, New Hampshire 03576

From: Matthew T. Grady, P.E.
Manager, Materials Testing Services

Robert W. Gillespie, P.E. 
Principal Geotechnical Engineer
R.W. Gillespie & Associates, Inc.

Date: 15 September 2004

Subject: Sprayed on Fire Resistant Material (SFRM) Inspections
New Maine Mall Motors Dealership
Portland, Maine
RWG&A Project No. 235-979

The purpose of this memorandum is to transmit to you the results of the SFRM inspections at the referenced project. SFRM inspections were performed by an RWG&A representative on 10 September 2004 and consisted of thickness and density testing of materials. Thickness testing was performed on each structural element for every 10,000 square feet in accordance with ASTM E605. Density tests were determined on elements where there was sufficient area to perform the test. The results of our testing are summarized in the attached table. In summary, the results of thickness and density testing met or exceeded required values.

Please do not hesitate to contact us with any questions.

Attachment: Testing Results

R. W. Gillespie & Associates, Inc.

New Maine Mall Motors Dealership Portland, Maine Thickness and Density Test Results

Second Floor

Structural Element	Location	Minimum Recorded Thickness (in)	Minimum Required Thickness (in)	Average Recorded Thickness (in)	Required Average Thickness (in)	Density (pcf)
Column	Line C/9	5/16	5/16	1/2	3/8	19.0
Deck	Lines 6+5',B+5',Area 1	3/8	1/4	1/2	5/16	-
Deck	Lines 5-5',A.3-5',Area 2	3/8	1/4	1/2	5/16	-
Joist	In Area 1	1	3/4	1 1/8	15/16	-
Beam	Line C between 8&9	3/8	3/8	9/16	7/16	23.0
Column	Line 5, A.3	5/8	3/8	5/8	5/16	-
Beam	Line 5 between A&A.3	1/2	3/8	5/8	7/16	22.2

Appendix

Certifications and Supporting Data



Master Builders
Technologies

RHEOCELL-30 MIX DESIGNER

Date: 4/7/04

Cellular

JOB: TOYOTA/LEXUS Producer: Dragon Products

Mix: mix #1, 200 psi, 37.5 pcf cellular fill

	specific gravity	abs.
Cement		3.15
Fly Ash		2.4
Newcem		2.95
water		1

Enter density	37.5	1012.5	Total batch wt/cubic yard
---------------	------	--------	---------------------------

Cementitious	675	Plastic Properties	
--------------	-----	--------------------	--

Enter %Ash	0%	Air	67.2%
------------	----	-----	-------

Enter %Slag	0%	Slump	flowable
-------------	----	-------	----------

	lb/yd		sol.vol.		
Cement	675		3.434	before	w/c Ratio 0.50
Fly Ash	0		0.000	after	Unit Weight 114.58
SLAG	0		0.000	foam	Unit Weight 37.5
Foam	67.25%		18.157		Yield 27.00
water	337.5	40.5	5.409		Mix Temp.
Totals	1013.17		27.00		

(Total volume less the FOAM) = 8.843 cu. ft.

Admixtures	oz/cwt	oz/yd	
Rheocell-15	2.20	14.9	est.

- Reviewed
- Furnish as Corrected
- Rejected
- Revise and Resubmit
- Submit Specific Items

STRENGTH DATA FOR RHEOCELL-30

This review is only for general conformance with the design concept of the project and general compliance with the information given in the Contract Documents. Corrections or comments made on the shop drawings during this review do not relieve contractor from compliance with the requirements of the plans and specifications. Approval of a specific item shall not include approval of an assembly of which the item is a component. Contractor is responsible for: dimensions to be confirmed and correlated at the jobsite; information that pertains solely to the fabrication processes or to the means, methods, techniques, sequences and procedures of construction; coordination of his or her Work with that of all other trades; and for performing all work in a safe and satisfactory manner.

Becker Structural Engineers, Inc.
Date 4/14/04 By AMW

SHOP DRAWING REVIEW

No Exception Taken Make Corrections Noted
 Revise and Resubmit Comments Attached

This check is only for review of general conformance with the design concept of the project and general compliance with the information given in the contract documents. The supplier is responsible for confirming and correlating all quantities and dimensions and performing his work in a satisfactory manner.

DANIEL HEBERT, INC.
GENERAL CONTRACTORS

Date 4/9/04 By J. MCGEE

BSE COPY



Corporate Offices

38 Preble St. • P.O. Box 1521
Portland, Maine 04104
207-774-6355 • Fax 207-761-5694

MIX ID : 304141 [] CONCRETE MIX DESIGN
3000 PSI

04/07/04

CONTRACTOR : DANIEL HEBERT INC.
PROJECT : TOYOTA / LEXUS DEALERSHIP
SOURCE OF CONCRETE : DRAGON PRODUCTS COMPANY
CONSTRUCTION TYPE : MIX #2, INTERIOR SLABS
PLACEMENT : CHUTE, PUMP

WEIGHTS PER CUBIC YARD (SATURATED, SURFACE-DRY)

		YIELD, CU FT
DRAGON, TYPE II, LB	400	2.04
LAFARGE, NEWCEM, LB	100	0.57
FINE AGGREGATE, ASTM C-33, LB	1502	9.08
3/4" QUARRY STONE, ASTM C-33, LB	900	5.34
1/2" QUARRY STONE, ASTM C-33, LB	850	5.05
WATER, LB (GAL-US)	280 (33.6)	4.49
TOTAL AIR, %	2.0 +/- 1.0	0.54
		=====
	TOTAL	27.10
MASTER BUILDERS: POZZOLITH 200N, OZ	15.00	
(OPTIONAL) M.B.: RHEOBUILD 1000, OZ	50.00	
WATER/CEMENT RATIO, LBS/LB	0.56	← <u>OK</u>
SLUMP, IN	4.00	
CONCRETE UNIT WEIGHT, PCF	148.8	

NEWCEM PERCENTAGE MAY BE ADJUSTED FOR AMBIENT TEMP VARIATIONS ✓
8" SLUMP AFTER RHEOBUILD
(OPTIONAL) FIBERMESH: POLYPROPYLENE FIBER REINFORCEMENT

PREPARED BY : *[Signature]*
TECHNICAL SERVICES



Corporate Offices

38 Preble St. • P.O. Box 1521
Portland, Maine 04104
207-774-6355 • Fax 207-761-5694

MIX ID : 404111 [] CONCRETE MIX DESIGN 4000 PSI 04/07/04

CONTRACTOR : DANIEL HEBERT INC.
PROJECT : TOYOTA / LEXUS DEALERSHIP
SOURCE OF CONCRETE : DRAGON PRODUCTS COMPANY
CONSTRUCTION TYPE : MIX #3, FOOTINGS, WALLS
PLACEMENT : CHUTE

WEIGHTS PER CUBIC YARD (SATURATED, SURFACE-DRY)		YIELD, CU FT
DRAGON, TYPE II, LB	472	2.40
LAFARGE, NEWCEM, LB	118	0.67
FINE AGGREGATE, ASTM C-33, LB	1216	7.35
3/4" QUARRY STONE, ASTM C-33, LB	1092	6.48
1/2" QUARRY STONE, ASTM C-33, LB	728	4.32
WATER, LB (GAL-US)	265 (31.8)	4.25
TOTAL AIR, %	6.0 +/- 1.0	1.63
		=====
	TOTAL	27.10
MASTER BUILDERS: POZZOLITH 200N, OZ	17.70	
(OPTIONAL) M.B.: RHEOBUILD 1000, OZ	59.00	
MASTER BUILDERS: MICRO-AIR, OZ-US	3.0	
WATER/CEMENT RATIO, LBS/LB	0.45	
SLUMP, IN	4.00	
CONCRETE UNIT WEIGHT, PCF	143.6	

NEWCEM PERCENTAGE MAY BE ADJUSTED FOR AMBIENT TEMP VARIATIONS
8" SLUMP WITH RHEOBUILD ✓

PREPARED BY : 
TECHNICAL SERVICES





Corporate Offices

38 Preble St. • P.O. Box 1521
Portland, Maine 04104
207-774-6355 • Fax 207-761-5694

MIX ID : 454110 [] CONCRETE MIX DESIGN 4500 PSI 04/07/04

CONTRACTOR : DANIEL HEBERT INC.
PROJECT : TOYOTA / LEXUS DEALERSHIP
SOURCE OF CONCRETE : DRAGON PRODUCTS COMPANY
CONSTRUCTION TYPE : MIX #4, EXTERIOR SLABS
PLACEMENT : CHUTE

WEIGHTS PER CUBIC YARD		(SATURATED, SURFACE-DRY)	YIELD, CU FT
DRAGON, TYPE II, LB	504		2.56
LAFARGE, NEWCEM, LB	126		0.72
FINE AGGREGATE, ASTM C-33, LB	1172		7.09
3/4" QUARRY STONE, ASTM C-33, LB	1098		6.52
1/2" QUARRY STONE, ASTM C-33, LB	732		4.34
WATER, LB (GAL-US)	265 (31.8)		4.25
TOTAL AIR, %	6.0 +/- 1.0		1.63
			=====
		TOTAL	27.10
MASTER BUILDERS: POZZOLITH 200N, OZ	18.90		
MASTER BUILDERS: MICRO-AIR, OZ-US	3.2		
WATER/CEMENT RATIO, LBS/LB	0.42		
SLUMP, IN	4.00		
CONCRETE UNIT WEIGHT, PCF	143.8		

NEWCEM PERCENTAGE MAY BE ADJUSTED FOR AMBIENT TEMP VARIATIONS

NOTE: 1" Ags. Not used

PREPARED BY :

TECHNICAL SERVICES

DRAGON[®]
PRODUCTS COMPANY

YARMOUTH HIGH SCHOOL
 Mix: PDYARMHIGH34 F'c: 3000 psi
 04/07/04

MIX DESCRIPTION
 =====

PDYARMHIGH34 ----- 3000 psi ----- 0/ 0/ 0

Sample Date	Sample ID	Air Tmp deg F	Con Tmp deg F	Air Cont %	Slump in	7 day Comp psi	28 day Comp psi	Moving Avg: 3 28 day Comp psi
5/ 8/ 2	1	62	65	6.5	4.25	2300	3555	-
5/ 8/ 2	2	60	73	6.4	4.00	2510	3995	-
5/21/ 2	6	65	61	5.4	4.00	2550	3640	3730
5/22/ 2	7	70	65	5.0	3.50	3860	3415	3683
6/ 4/ 2	13	70	68	6.1	5.00	1590	3380	3478
9/ 6/ 2	26	75	77	4.7	4.25	2410	3380	3392
9/11/ 2	28	75	80	5.0	4.00	2580	4050	3603
9/12/ 2	29	70	75	5.2	3.00	2230	3945	3792
9/18/ 2	30	70	67	5.5	2.50	2480	3875	3957
9/19/ 2	31	75	78	6.1	4.00	2230	3800	3873

9/20/ 2	32	68	70	5.3	3.25	2550	4100	3925
9/24/ 2	33	70	75	5.5	4.00	2160	4050	3983
10/ 1/ 2	35	67	65	5.4	4.50	2050	4190	4113
10/ 4/ 2	36	67	70	5.7	5.00	2090	3960	4067
10/ 7/ 2	37	67	66	5.7	4.00	2580	5180	4443
10/ 9/ 2	39	67	63	5.2	5.50	1800	4140	4427
10/15/ 2	41	60	60	5.8	3.25	2300	4140	4487
10/21/ 2	43	50	60	5.9	3.50	2480	4245	4175
10/24/ 2	44	48	53	-	8.00	2410	4705	4363
10/24/ 2	45	50	55	5.0	4.00	2160	4190	4380

10/30/ 2	46	38	51	6.8	5.00	2090	4300	4398
10/30/ 2	47	40	48	6.8	5.00	1950	4175	4222
11/ 1/ 2	48	48	67	6.8	4.25	2120	3400	3958
11/11/ 2	49	63	65	5.9	4.75	3040	3870	3815
11/11/ 2	50	62	65	5.0	3.25	2790	4220	3830
12/27/ 2	53	32	68	4.9	2.50	2690	3765	3952
12/30/ 2	54	45	55	5.2	3.25	2720	4280	4088
12/31/ 2	55	30	61	5.2	4.50	2550	3835	3960
1/ 3/ 3	56	20	50	5.0	3.25	2790	4970	4362
1/ 7/ 3	57	25	65	5.0	4.00	3430	5025	4610

1/ 8/ 3	58	25	67	6.0	4.50	3290	4950	4982
1/ 9/ 3	59	34	52	5.4	4.00	3220	4755	4910
1/10/ 3	60	20	67	6.0	4.50	3220	4900	4868

Concrete Test Report Summary

Sample Date	Sample ID	Air Tmp deg F	Con Tmp deg F	Air Cont %	Slump in	7 day Comp psi	28 day Comp psi	Moving
								Avg: 3 28 day Comp psi
1/15/ 3	62	18	53	5.1	4.00	2940	4545	4733
3/18/ 3	64	60	70	6.0	4.00	2050	3745	4397
4/ 1/ 3	65	30	78	5.5	3.75	2260	4330	4207
4/14/ 3	69	47	74	5.5	6.25	3040	4335	4137
4/14/ 3	70	47	90	6.5	7.00	3040	3890	4185
5/21/ 3	77	65	68	4.7	4.00	3080	4405	4210
6/16/ 3	78	74	71	4.6	3.00	2580	3395	3897

Count		40	40	39	40	40	40	38
Average		53	66	5.6	4.21	2555	4126	4147
Standard Deviation		18	9	0.6	1.09	480	482	380
Range		18	48	4.6	2.50	1590	3380	3392
		75	90	6.8	8.00	3860	5180	4982
Coefficient of Variation		33.60	13.90	10.96	25.89	18.77	11.68	9.16

USM PARKING GARAGE
 Mix: PDUSMPARKING44 F'c: 4000 psi
 04/07/04

MIX DESCRIPTION
 =====

PDUSMPARKING44 ----- 4000 psi ----- 0/ 0/ 0

Sample Date	Sample ID	Air Tmp deg F	Con Tmp deg F	Air Cont %	Slump in	7 day Comp psi	28 day Comp psi	Moving Avg: 3 28 day Comp psi
3/13/ 3	40678	20	62	-	6.50	2780	4848	-
3/21/ 3	40759	37	68	5.4	4.50	4280	5985	-
3/21/ 3	40763	43	63	7.1	7.00	3020	4930	5254
3/21/ 3	40767	55	62	6.6	6.00	3250	5125	5347
3/21/ 3	40771	58	60	6.5	5.50	3170	5325	5127
3/25/ 3	40806	43	63	-	3.00	3690	6065	5505
3/25/ 3	40810	44	62	-	4.00	3400	5585	5658
3/28/ 3	40851	56	66	6.2	3.25	3620	5000	5550
3/28/ 3	40855	60	62	-	4.00	3300	4965	5183
4/ 1/ 3	40900	42	66	-	4.00	3900	5955	5307

4/ 3/ 3	40920	36	62	-	4.00	3950	5850	5590
4/ 3/ 3	40924	36	61	-	6.50	3810	5770	5858
4/ 8/ 3	40904	46	62	-	4.00	3290	5385	5668
4/ 9/ 3	41004	42	69	-	4.00	3630	5410	5522
4/ 9/ 3	41008	40	68	-	5.00	2890	4925	5240
4/14/ 3	41072	65	72	-	4.00	3610	5640	5325
4/14/ 3	41076	57	66	-	2.75	3830	5635	5400
4/16/ 3	41098	47	64	-	3.25	3260	5450	5575
4/17/ 3	41123	41	62	-	3.00	3395	5630	5572
4/21/ 3	41196	61	64	5.6	6.75	3100	4680	5253

4/21/ 3	41200	62	63	5.8	7.25	2783	5025	5112
4/21/ 3	41204	64	69	5.6	7.50	2740	4810	4838
4/22/ 3	41184	50	65	5.0	3.00	3540	5375	5070
4/23/ 3	41232	56	64	5.0	4.00	4330	5585	5257
4/24/ 3	41294	46	64	5.8	7.25	3410	5250	5403
4/29/ 3	41351	84	65	5.5	3.75	3490	4665	5167
4/30/ 3	41374	54	64	5.6	5.50	3960	4725	4880
4/30/ 3	41378	57	66	5.1	6.00	4030	4850	4747
5/ 1/ 3	41391	49	61	6.5	7.00	3900	5335	4970
5/ 1/ 3	41395	48	63	-	7.00	3880	5538	5241

5/ 2/ 3	41425	45	67	5.1	3.50	3680	5523	5465
5/ 6/ 3	41524	53	66	6.0	4.50	3920	5895	5652
5/ 6/ 3	41528	47	65	6.1	5.50	3590	5620	5679

Concrete Test Report Summary

Sample Date	Sample ID	Air		Air	Slump in	7 day Comp psi	28 day Comp psi	Moving
		Tmp deg F	Tmp deg F	Cont %				Avg: 3
							28 day Comp psi	
5/ 8/ 3	41540	49	64	5.6	6.75	3790	5420	5645
5/ 8/ 3	41544	53	65	5.7	7.00	3060	5395	5478
5/ 9/ 3	41561	51	58	-	7.50	3110	4815	5210
5/13/ 3	41612	50	62	5.9	4.00	3060	5020	5077
5/14/ 3	41654	53	59	-	4.00	4530	6080	5305
5/15/ 3	41662	53	66	6.1	6.50	3560	5195	5432
5/16/ 3	41658	62	64	-	4.50	4040	5450	5575

5/20/ 3	41779	87	72	6.2	6.50	3200	4155	4933
5/21/ 3	41807	60	66	5.2	5.00	4100	5805	5137
5/23/ 3	41839	50	59	5.1	5.00	3790	6165	5375
5/29/ 3	41936	68	67	5.6	6.50	3870	5110	5693
6/ 2/ 3	41956	77	68	5.9	6.50	3510	4965	5413
6/ 4/ 3	42008	63	69	5.0	5.00	3970	5650	5242
6/ 4/ 3	42012	66	69	-	6.00	3820	5460	5358
6/ 5/ 3	42020	56	69	-	4.50	3960	5420	5510
6/ 6/ 3	42024	80	72	5.3	5.25	3685	5003	5294
6/ 9/ 3	42046	62	69	-	6.50	3710	4710	5044

6/10/ 3	42098	75	72	-	7.00	3740	4140	4618
6/11/ 3	42110	68	73	6.0	6.00	3360	4530	4460
6/13/ 3	42138	66	73	6.4	7.00	3910	4775	4482
6/13/ 3	42142	66	71	6.4	6.75	3670	4875	4727
6/17/ 3	42263	75	72	7.0	6.50	3540	4658	4769
6/18/ 3	42267	65	70	-	6.75	4080	5713	5082
6/20/ 3	42274	85	76	7.0	6.50	3895	4885	5085
6/23/ 3	42312	76	76	-	6.00	3770	4865	5154
6/26/ 3	42359	95	81	-	7.10	3510	4120	4623
6/26/ 3	42363	96	81	-	7.00	3460	4153	4379

6/30/ 3	42408	87	79	5.3	6.50	4200	4840	4371
7/ 2/ 3	42412	83	81	5.0	4.50	4060	4813	4602
7/ 7/ 3	42424	84	79	-	6.50	3430	4920	4858
7/11/ 3	42505	59	71	-	6.25	3910	5235	4989
7/16/ 3	42604	66	76	-	6.00	3345	5360	5172
8/21/ 3	43114	88	85	8.5	6.00	3490	4233	4943
9/ 3/ 3	43297	69	74	9.5	7.00	2820	4270	4621
9/19/ 3	43593	59	72	6.6	5.75	3080	4865	4456
9/29/ 3	43698	54	76	7.0	7.50	3230	4855	4663
9/29/ 3	43702	64	76	7.2	7.00	3480	5045	4922

10/ 2/ 3	43722	-	70	6.5	6.00	3550	4508	4803
10/ 2/ 3	43726	-	70	7.5	6.50	3700	5093	4882
10/14/ 3	43975	69	66	8.0	7.00	3120	4303	4634
11/13/ 3	44552	47	74	6.6	6.75	4040	5785	5060
11/13/ 3	44556	49	72	6.8	6.00	3770	5343	5143
11/19/ 3	44735	45	72	6.4	5.25	2950	4910	5346
11/24/ 3	44826	48	69	5.2	5.00	3240	5168	5140

Count		75	77	48	77	77	77	75

Concrete Test Report Summary

Sample Date	Sample ID	Air Tmp deg F	Con Tmp deg F	Air Cont %	Slump in	7 day Comp psi	28 day Comp psi	Moving Avg: 3 28 day Comp psi
=====								
Average		59	68	6.1	5.61	3578	5148	5148
Standard Deviation		15	6	1.0	1.34	396	502	361
Range		20	58	5.0	2.75	2740	4120	4371
		96	85	9.5	7.50	4530	6165	5858
Coefficient of Variation		25.85	8.64	15.51	23.97	11.08	9.74	7.01



P.O. Box 191, U.S. Route 1 • Thomaston, Maine 04861 • 207-594-5555

MILL TEST RESULTS Date: March 19, 2004
 Laboratory at Thomaston, Maine Cement Type: II

CHEMICAL DATA	Percent	PHYSICAL DATA	
<i>Tested by Warren Kincaid</i>		<i>Tested by Donald Barbour</i>	
Silicon Dioxide..... <i>(Per ASTM C 114)</i>	20.6	Specific Surface.....	389
Aluminum Dioxide..... <i>(Per ASTM C 114)</i>	4.6	Blaine (sq m /kg) <i>(Per ASTM C 204)</i>	
Ferric Oxide..... <i>(Per ASTM C 114)</i>	3.1	Percent Passing 325 Mesh..	98.8
Calcium Oxide..... <i>(Per ASTM C 114)</i>	60.8	<i>(Per ASTM C 430)</i>	
Magnesium Oxide..... <i>(Per ASTM C 114)</i>	3.8	Compressive Strength (psi) <i>(Per ASTM C 109)</i>	
Sulphur Trioxide..... <i>(Per ASTM C 114)</i>	4.0	Mortar Cubes	
Loss on Ignition..... <i>(Per ASTM C 114)</i>	1.3	1 day.....	2530
Insoluble Residue..... <i>(Per ASTM C 114)</i>	0.2	3 day.....	3490
Tricalcium Silicate..... <i>(Per ASTM C 114)</i>	43.3	7 day.....	4450
Dicalcium Silicate..... <i>(Per ASTM C 114)</i>	26.7	28 day.....	
Tricalcium Aluminate..... <i>(Per ASTM C 114)</i>	6.9	Vicat Setting Time <i>(Per ASTM C 191)</i>	
Sodium Oxide..... <i>(Per ASTM C 114)</i>	0.3	Initial (min.).....	85
Potassium Oxide..... <i>(Per ASTM C 114)</i>	1.3	Final (min.).....	225
Equivalent Alkalies..... <i>(Per ASTM C 114)</i>	1.11	Air Content (%).....	7.5
		<i>(Per ASTM C 185)</i>	
		Autoclave Expansion (%)...	0.21
		<i>(Per ASTM C 151)</i>	
		Certified by:	
		Jennifer Kimball Colburn	

We hereby certify that this cement complies with current ASTM C 150, AASHTO M-85 and CSA-A5 Type 10 specifications.

This mill test report is generated for silos produced, sampled and tested in the calendar month prior to the date upon this report.



NewCem LABORATORY TEST REPORT

To: _____

Carrier: _____

Date Shipped: _____

Loaded From: _____

CHEMICAL

Sulfide Sulfur (S), % 0.92

Sulfate Ion (as SO₃), % 0.12

PHYSICAL

Slag Activity Index, %:
7 Day 98.9

28 Day 119.2

Fineness:

Blaine
cm²/g 4,102

325 Sieve
% retain 3.0

Air Content, %: 4.8

Compressive Strength: Mpa ; psi

7 Day 33.26 4,824

28 Day 47.26 6,854

Sample Identification

Voyage: Alexandra
38-03-1209

Date: 31-Oct-03

Terminal: Boston

This ground granulated blast furnace slag complies with the current specification of the chemical and physical requirements of ASTM C-989, AASHTO M-302; Grade 120 and ASTM C-595M, AASHTO M-240 Type IS, when blended with Portland cement, conforming to ASTM C-150, at the prescribed proportions. NewCem is guaranteed to meet all applicable FDOT, GADOT, NYDOT, SCDOT and VADH specifications.

Northeast Region
Sparrows Point Plant
2001 Wharf Rd, Baltimore, MD 21219
Telephone: (410) 388-1177 x202

Thomas R. Griffiths
Quality Control Manager

12/17/03
Date

BLUE ROCK INDUSTRIES
58 MAIN STREET
WESTBROOK, MAINE

Location: **WESTBROOK**
Subject: **YEARLY ANALYSIS**

Date: **2003**
By: **LAB**

Product: **VARIOUS**
Project:

Sieve Analysis

Subject	3"	2 1/2"	2"	1 1/2"	1 1/4"	1"	3/4"	5/8"	1/2"	3/8"	#3	#4	#6	#8	#10	#16	#20	#30	#40	#50	#80	#100	#200											
																									100	92	51	17	8	4	2	1.2	1	1
1 1/2" CR.STN.			100																				1.2 WASH											
7/8" CR.STN.				92																			0.6 WASH											
3/4" CR.STN.					100																		1 WASH											
1/2" CR.STN.					100																		0.7 WASH											
3/8" CR.STN.							100																1 WASH											
1/4" CR.STN.										100													1.6 WASH											
STONE DUST													100										1.6 WASH											
M-50 SAND																							7.1 WASH											
R.A.P.																							1.3 WASH											
PRO-BASE																							WASH											
LAGOON DUST																							9.9 WASH											
																							94 WASH											

Subject	Specific Gravity		L.A. Abrasion	Soundness		Unit Weight	
	Bulk	Apparent		NA 2	MG	Loose	Rodded
1 1/2" CR.STN.	2.718	2.732	0.19	24.3%		2176	2507
7/8" CR.STN.	2.687	2.709	0.31			2335	2600
3/4" CR.STN.	2.694	2.725	0.42	14.9 %	1.81 % (2002)	2302	2551
1/2" CR.STN.	2.692	2.723	0.44	16.0 %	2.14 % (2002)	2311	2593
3/8" CR.STN.	2.691	2.733	0.56			2273	2579
1/4" CR.STN.	2.662	2.724	0.85			2322	2615
STONE DUST	2.665	2.731	0.90			2560	2921
M-50 SAND	2.625	2.666	0.58			2677	2880
R.A.P.	2.687	(Gse)				2016	2330

FRACTURE COUNT		FLAT & ELONG.
1 FACE	2 FACE	
100 %	100 %	2.8 %
100 %	100 %	6.0 %
100 %	100 %	5.7 %

QPW: F:DATA\LAB YEARLY

degussa.

Construction Chemicals

January 20, 2004

Master Builders, Inc.
New York Area
800-722-8899

Certificate of Conformance
Rheocell 30
Master Builders Foaming Agent for Cellular Concrete and Geotechnical Applications

TO WHOM IT MAY CONCERN:

I, Alice McFarland, Manager, Quality Assurance for Degussa Construction Chemicals and Master Builders, Cleveland, Ohio, certify:

That Rheocell 30 is a highly concentrated foaming agent for use in producing engineered, cellular cementitious mixtures including mortar, concrete, and grout; and

That no calcium chloride or chloride based ingredient is used in the manufacture of Rheocell 30; and

That Rheocell 30 is domestically manufactured and functionally equivalent to the products formerly designated as Meyco Fix 707, Finefoam 707 (imported from Japan) and PS-1193; and

That Rheocell 30 meets the requirements for ASTM C869-91, the Standard Specification for Foaming Agents Used in Making Preformed Foam for Cellular Concrete.

Alice McFarland



Manager, Quality Assurance
Degussa Construction Chemicals





Master Builders
Technologies

RHEOCELL® 30

Foaming Agent for Flowable Fill and Lightweight Fill Materials (CLSM)

DESCRIPTION:

RHEOCELL® 30 admixture is a synthetic foaming agent formulated specifically for use in producing flowable fill, lightweight fill materials. RHEOCELL 30 foaming agent meets the requirements of ASTM C 869, "Standard Specification for Foaming Agents Used in Making Preformed Foam for Cellular Concrete."

RECOMMENDED FOR:

RHEOCELL 30 foaming agent is recommended for use in the following applications:

- Use in backfill applications including sewer trenches, utility trenches, bridge abutments, retaining walls and conduit trenches
- Use in structural fill applications including foundation subbase, floor slab base and pipe bedding
- Use in abandoned underground storage tanks and utility company vaults, mines, sewers and manholes, voids under pavements and slabs, highway barriers and precast panels

FEATURES/BENEFITS:

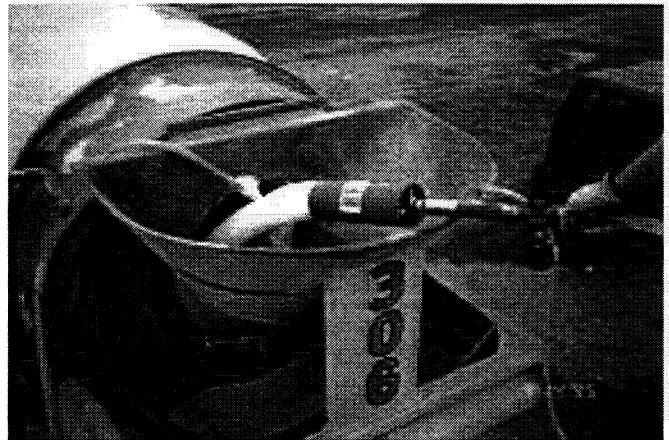
The use of RHEOCELL 30 produced mixtures provides:

- Optimum workability—can be produced in either fluid or plastic consistency
- Stable density (unit weight)
- Easy placement by means of chutes or pumps
- Good thermal insulation
- Reduced bleeding and settlement
- Ability to produce flowable fill and lightweight fill mixtures

USAGE INFORMATION:

RHEOCELL 30 foaming agent is a ready-to-use solution for producing foamed flowable fill and lightweight fill mixtures. **It is not recommended for use in conventional concrete.** Do not dilute or mix RHEOCELL 30 foaming agent with water or any other admixture.

When needed, set-controlling admixtures (i.e., accelerators or retarders) meeting ASTM C 494 requirements may be used to control the rate of set. However, the set-controlling admixture should be added separately to the mixture.



RHEOCELL 30 foaming agent is introduced to the CLSM mix using a RHEOCELL foam gun or similar foam generating equipment.

There is no standard dosage for RHEOCELL 30 foaming agent. The dosage is dependent upon the required density (unit weight) and end use. A trial evaluation should be conducted to determine the foaming time necessary to obtain the required density (unit weight).

PERFORMANCE DATA:

RHEOCELL 30 foaming agent can be used with a variation of mix designs: straight cement, cement and fly ash and/or sand mixtures.

<u>(Lightweight fill)--Straight Cement</u>	<u>Mass as Batched</u>
Type I Cement	600 lb (356 kg)
Water	270 lb (160 kg)
Foam Time, seconds	5.9
Unfoamed Density (Unit Weight)	118 lb/ft ³ (1,890 kg/m ³)
Density (Unit Weight) After Foaming	37 lb/ft ³ (593 kg/m ³)
Compressive Strength @7-day	110 psi (0.8 MPa)
@ 28-day	210 psi (1.4 MPa)

*Masses shown are as batched prior to foaming. Proportions for the CSLM mixtures will be different when adjusted to a cubic yard (0.8 cubic meter).

NOTE: Data taken from laboratory evaluations.

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Construction Chemicals

January 20, 2004

Master Builders, Inc.
New York Area
800-722-8899

Certificate of Conformance
Pozzolith 200N
Master Builders Admixture for Concrete

TO WHOM IT MAY CONCERN:

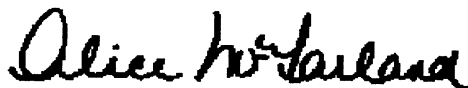
I, Alice McFarland, Manager, Quality Assurance for Degussa Construction Chemicals and Master Builders, Cleveland, Ohio, certify:

That no calcium chloride or chloride based ingredient is used in the manufacture of Pozzolith 200N; and

That Pozzolith 200N, based on the chlorides originating from all the ingredients used in its manufacture, contributes less than 0.00013 percent (1.3 ppm) chloride ions by weight of the cement when used at the rate of 65 ml per 100 kg (1 fluid ounce per 100 pounds) of cement; and

That Pozzolith 200N meets the requirements for a Type A, Water-Reducing Admixture specified in ASTM C 494-99, Corps of Engineers' CRD-C 87-93, and AASHTO M194-00, the Standard Specifications for Chemical Admixtures for Concrete.

Alice McFarland



Manager, Quality Assurance
Degussa Construction Chemicals





POZZOLITH® 200N

Concrete admixture

DESCRIPTION:

POZZOLITH 200N liquid admixture is ready-to-use for making more uniform and predictable quality concrete. It meets ASTM C-494 requirements for Type A water-reducing, Type B retarding and Type D retarding and water-reducing admixtures, specifically:

- Increased strength – compressive and flexural
- Relative durability to damage from freezing and thawing – wet above industry standards
- Reduced water content required for a given workability
- Normal setting characteristics

ADVANTAGES:

Concrete with POZZOLITH 200N admixture sets at a rate comparable to plain concrete while providing the following special qualities:

- Improved workability
- Reduced segregation
- Improved finishing characteristics for flatwork and cast surfaces
- Effective as a singular admixture or as a component in an admixture system

WHERE TO USE:

POZZOLITH 200N admixture is recommended for use in all types of concrete where normal-setting characteristics are desired.

As a result of the above advantages, this admixture improves pumped concrete, shotcrete (wet mix), and conventionally placed concretes. It improves plain, reinforced, precast, prestressed, lightweight or standard weight concrete.

POZZOLITH 200N admixture can be used with air-entraining cements and with air-entraining admixtures approved under AASHTO, ASTM and CRD specifications – including those manufactured by Master Builders – if air-entrained concrete is desired. When used in conjunction with another admixture, each admixture must be dispensed separately into the mix.

POZZOLITH 200N admixture will not initiate or promote corrosion of reinforcing steel in concrete. This admixture does not contain intentionally added calcium chloride or chloride-based ingredients. The admixture, due to chlorides originating from all the ingredients used in its manufacture, contributes less than 0.00015% (1.5 PPM) chloride ions by weight of the cement when used at the rate of 1 fl oz per 100 lb (65 ml per 100 kg) of cement.

POZZOLITH 200N admixture can be used in white, colored and architectural concrete.

QUANTITY TO USE:

POZZOLITH 200N admixture is recommended for use at a rate of 4 ± 2 fl oz per 100 lb (280 ± 65 ml per 100 kg) of cement for most concrete mixes using average concrete ingredients. However, it is appreciated that variations in job conditions and concrete materials may make usage rates outside the recommended dosage range desirable. In such cases, contact your local Master Builders representative.

PACKAGING:

POZZOLITH 200N admixture is supplied in 55 U.S. gallon (208 litre) drums and by bulk delivery.

TEMPERATURE PRECAUTION:

If POZZOLITH 200N admixture has frozen, thaw at 35 °F (2 °C) or above and completely reconstitute by mild mechanical agitation. **Do not use pressurized air for agitation.**

For additional information on POZZOLITH 200N admixture or on its use in developing a concrete mix with special performance characteristics, contact your local Master Builders representative.

Master Builders, Inc.
United States
23700 Chagrin Boulevard
Cleveland, Ohio 44122-5554
(800) MBT-9990
Fax (216) 831-6910

Canada
3637 Weston Road
Toronto, Ontario M9L 1W1
(800) 387-5862
Fax (416) 741-7925

Mexico
Blvd. M. Avila Camacho 80, 3er Piso
53390 Naucalpan, México
011-525-557-5544
Fax 011-525-395-7903

degussa.

Construction Chemicals

January 20, 2004

Master Builders, Inc.
New York Area
800-722-8899

Certificate of Conformance
Rheobuild 1000
Master Builders Admixture for Concrete

TO WHOM IT MAY CONCERN:

I, Alice McFarland, Manager, Quality Assurance for Degussa Construction Chemicals and Master Builders, Cleveland, Ohio, certify:

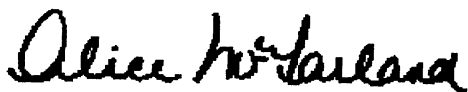
That no calcium chloride or chloride based ingredient is used in the manufacture of Rheobuild 1000; and

That Rheobuild 1000, based on the chlorides originating from all the ingredients used in its manufacture, contributes less than 0.00008 percent (0.8 ppm) chloride ions by weight of the cement when used at the rate of 65 ml per 100kg (1 fluid ounce per 100 pounds) of cement; and

That Rheobuild 1000 meets the requirements for a Type F, Water-Reducing, High Range Admixture, specified in ASTM C 494-99, Corps of Engineers' CRD-C 87-93, and AASHTO M194-00, the Standard Specifications for Chemical Admixtures for Concrete; and

That Rheobuild 1000 meets the requirements for a Type 1, Plasticizing Admixture specified in ASTM C 1017-98, the "Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete".

Alice McFarland



Manager, Quality Assurance
Degussa Construction Chemicals



RHEOBUILD® 1000

For the production of rheoplastic concrete

DESCRIPTION:

RHEOBUILD 1000 is a high-range, water-reducing admixture, one of a complete line of Rheobuild admixtures formulated to produce rheoplastic concrete. Rheoplastic concrete flows easily, maintaining high plasticity for time periods unmatched by any other superplasticized concrete. Yet it has the low water/ cement ratio of no-slump concrete, providing excellent engineering (hardened) properties. The slump-retention characteristics of rheoplastic concrete permit the addition of RHEOBUILD 1000 admixture at the batch plant.

This ready-to-use, liquid admixture meets ASTM C 494 requirements for Type A and Type F admixtures.

ADVANTAGES IN THE PLASTIC STATE:

RHEOBUILD 1000 admixture aids in the production of concrete with these special qualities:

- Plasticity range of 8 to 11" (200 to 280 mm)
- Extended slump retention
- Controlled time of set
- Cohesive and non-segregating
- Minimal bleed water

ADVANTAGES IN THE HARDENED STATE:

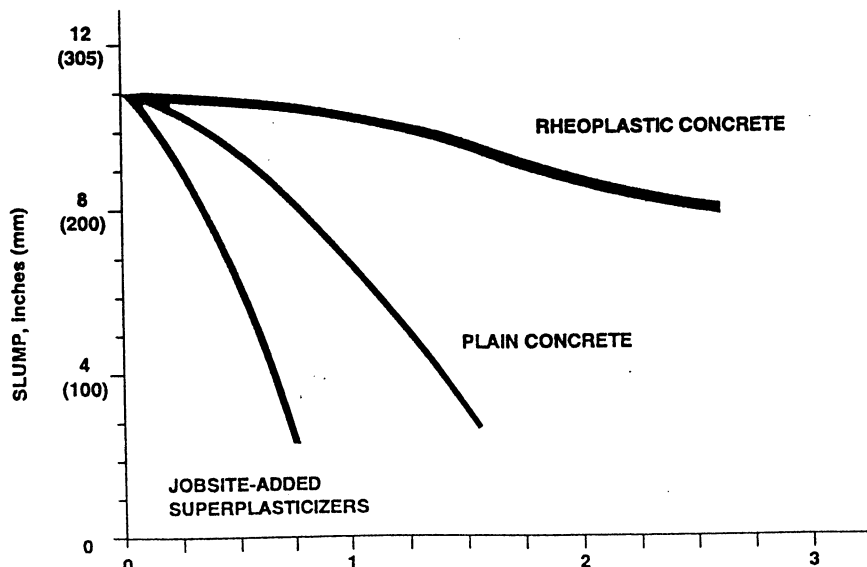
Through improved cement hydration efficiency, less dependence on consolidation energy and potential mix proportion adjustments, concrete treated with RHEOBUILD 1000 admixture provides the following engineering properties:

- Higher earlier strengths than can be achieved with conventional superplasticizers
- Increased ultimate compressive strength
- Higher modulus of elasticity
- Improved bond strength to steel
- Low permeability
- High durability
- Reduced shrinkage and creep
- Highly reliable in-place structural integrity

BENEFITS:

The economic benefits are both immediate and long-term, and extend to the total construction team. Use of rheoplastic concrete saves job time and cost through higher productivity rates or reduced labor. The higher early strength achieved with rheoplastic concrete allows for accelerated construction methods, resulting in completion dates ahead of schedule. Also, rheoplastic concrete permits engineering specification changes that allow for greater limits on the free-fall of concrete, lift heights and concrete temperatures, and potential economic mix adjustments.

SLUMP RETENTION VS. TIME



MPB

WHERE TO USE:

RHEOBUILD 1000 admixture is recommended for use in concrete where high plasticity, normal-setting characteristics and accelerated strengths are desired.

As a result of the preceding advantages and benefits, this admixture will improve performance in prestressed, precast and ready-mixed concrete applications.

RHEOBUILD 1000 admixture can be used with portland cements approved under ASTM, AASHTO or CRD specifications. The use of RHEOBUILD 1000 and a Master Builders air-entraining admixture is recommended whenever concrete is required to withstand freeze/thaw cycles. It is strongly recommended that concrete be properly cured.

RHEOBUILD 1000 can be used effectively as a singular admixture or as a component in a Master Builders admixture system. When used in conjunction with another admixture, each admixture must be dispensed separately into the mix.

DIRECTIONS FOR USE:

Because slump retention is increased using RHEOBUILD 1000 admixture, it may be batched at the ready-mix plant as opposed to jobsite addition often required when using other high-range water-reducers.

NOTE: For directions on the proper evaluation and use of RHEOBUILD 1000 admixture in specific applications, contact your local Master Builders representative.

WORKABILITY:

Concrete containing RHEOBUILD 1000 admixture has the ability to maintain a rheoplastic state [8 to 11" (200 to 280 mm)] for up to two hours, if such workability is required. The precise duration of workability depends not only on temperature, but also on the type of cement, mix proportions, the nature of the aggregates, the method of transport, and the dosage rate of RHEOBUILD 1000 admixture.

For additional information on RHEOBUILD 1000 admixture or on its use in developing a concrete mixture with special performance characteristics, contact your local Master Builders representative.



QUANTITY TO USE:

RHEOBUILD 1000 admixture is recommended for use at a rate of 10 to 25 fl oz per 100 lb (0.65 to 1.6 liters per 100 kg) of cementitious materials, depending upon the application, and the amount of strength acceleration needed or slump increase desired.

This dosage range applies for most concrete mixes using average concrete ingredients. However, variations in job conditions and concrete materials, such as silica fume, may make usage rates outside the recommended dosage range desirable. In such cases, contact your local Master Builders representative.

RATE OF HARDENING:

RHEOBUILD 1000 admixture is formulated to produce normal-setting characteristics throughout its recommended dosage range.

Setting time of concrete is influenced by the chemical and physical composition of the basic ingredients of the concrete, temperature of the concrete and climatic conditions. Trial mixes should be made with job materials to determine the dosage required for a specified setting time and a given strength requirement.

PACKAGING:

RHEOBUILD 1000 admixture is supplied in 55 U.S. gallon (208 liter) drums and bulk delivery.

TEMPERATURE PRECAUTION:

If RHEOBUILD 1000 admixture has frozen, thaw at 45 °F (7 °C) or above and completely reconstitute by mild mechanical agitation. **Do not use pressurized air for agitation.**

NON-CHLORIDE, NON-CORROSIVE:

RHEOBUILD 1000 admixture will not initiate or promote corrosion of reinforcing steel embedded in concrete, prestressed concrete or concrete placed on galvanized steel floor and roof systems. Neither calcium chloride nor any chloride-based ingredients are used in the manufacture of RHEOBUILD 1000. In all concrete applications, RHEOBUILD 1000 admixture conforms to the most stringent or minimum chloride ion limits currently suggested by construction industry standards and practices.

Master Builders, Inc.
23700 Chagrin Boulevard
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Master Builders Technologies, Ltd.
3637 Weston Road
Toronto, Ontario M9L 1W1
(800) 387-5862
Fax (416) 741-7925

degussa.

Construction Chemicals

January 20, 2004

Master Builders, Inc.
New York Area
800-722-8899

Certificate of Conformance
Micro-Air
Master Builders Air-Entraining Admixture for Concrete

TO WHOM IT MAY CONCERN:

I, Alice McFarland, Manager, Quality Assurance for Degussa Construction Chemicals and Master Builders, Cleveland, Ohio, certify:

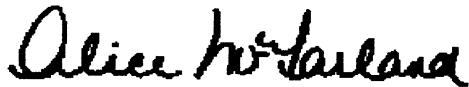
That Micro-Air is Master Builders air-entraining admixture for concrete; and

That no calcium chloride or chloride based ingredient is used in the manufacture of Micro-Air; and

That Micro-Air, based on the chlorides originating from all the ingredients used in its manufacture, contributes less than 0.0001 percent (1.0 ppm) chloride ions by weight of the cement when used at the rate of 65 ml per 100 kg (1 fluid ounce per 100 pounds) of cement; and

That Micro-Air meets the requirements of ASTM C 260-01, Corps of Engineers CRD-C 13-97, and AASHTO M154-00, the Standard Specifications for Air-Entraining Admixtures for Concrete.

Alice McFarland



Manager, Quality Assurance
Degussa Construction Chemicals



MICRO-AIR*

Admixture for Entraining Air in Concrete

DESCRIPTION:

MICRO-AIR is an air-entraining admixture which gives concrete extra protection by creating ultra-stable air bubbles that are strong, small and closely spaced—a characteristic especially useful in the types of concrete known for their difficulty to entrain and maintain the air content desired.

Even when used at a lower dosage rate than standard air-entraining admixtures, MICRO-AIR meets the requirements of ASTM C 260, AASHTO M 154, CRD-C 13 and other Federal and State specifications.

ADVANTAGES OF AIR ENTRAINMENT:

The entrainment of optimum air content in concrete results in the following improvements in concrete quality:

- Increased resistance to damage from freeze/thaw cycles and to scaling from deicing salts'
- Reduced permeability—increased watertightness
- Reduced segregation and bleeding
- Improved plasticity and workability

'Concrete durability research has established that the best protection for concrete from the adverse effects of freeze/thaw cycles and deicing salts results from:
• proper air content in the hardened concrete; • a suitable air-void system in terms of bubble size and spacing; and • adequate concrete strength, assuming the use of sound aggregates and proper mixing, placing, handling and curing techniques.

When unusually low or high amounts of an air-entraining admixture are required to achieve normal ranges of air content or if the required amount of air-entraining admixture necessary to achieve required levels of air content is observed to change significantly under given conditions, the reason should be investigated. In such cases, it is especially important to determine: (a) that a proper amount of air is contained in the fresh concrete at the point of placement; and (b) that a suitable air-void system (spacing factor) is being obtained in the hardened concrete.

ADVANTAGES OF MICRO-AIR:

- Greatly improved stability of air entrainment
- Improved air-void system in hardened concrete
- Improved ability to entrain and retain air in low-slump concrete; concrete containing high-carbon-content fly ash; concrete containing large amounts of fine materials; concrete using high-alkali cements; high-temperature concrete; and concrete with extended mixing times

FEATURES/BENEFITS:

Ready to Use—Solution is the proper concentration for rapid, accurate dispensing.

Compatible for Use—MICRO-AIR admixture is compatible with concrete containing other admixtures—water-reducers, high-range water-reducers, accelerators, retarders, and water repellents.

The use of MICRO-AIR air-entraining admixture with Master Builders water-reducing, set-controlling admixtures forms a desirable combination for producing the highest quality, normal or lightweight concrete. Heavyweight concrete normally does not contain entrained air.

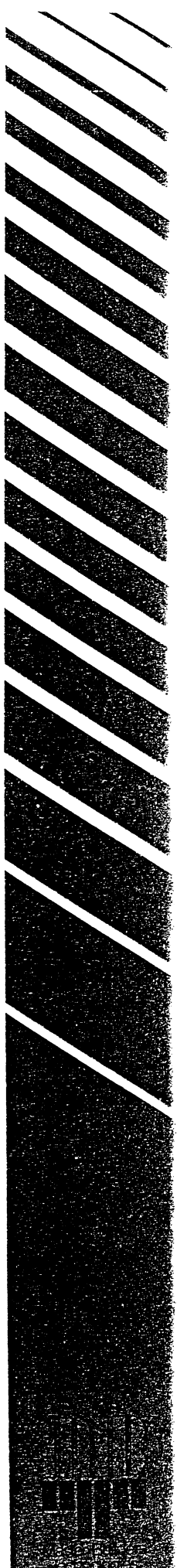
NOTE: As stated in ACI 212 and other publications, when two or more admixtures are used, they must be added to the mix separately (through dispensers or manually) and must not be mixed with each other prior to adding to the concrete mix.

For optimum, consistent performance, the air-entraining admixture should be dispensed on damp, fine aggregate or with the initial batch water. When using lightweight aggregate, field evaluations should be conducted to determine the best method to dispense the air-entraining admixture.

USAGE INFORMATION:

Add MICRO-AIR admixture to the concrete mix using a dispenser designed for air-entraining admixtures; or add manually using a suitable measuring device that ensures accuracy within plus or minus 3% of the required amount.

Measure the air content of the trial mix and either increase or decrease the quantity of MICRO-AIR admixture to obtain the desired air content in the production mix. Check the air content of the first batch and make further adjustments if needed. Due to possible changes in the factors that affect the dosage rate of MICRO-AIR, frequent checks should be made during the course of the work. Adjustments to the dosage should be based on the amount of entrained air in the mix at the point of placement.



QUANTITY TO USE:

There is no standard dosage rate for MICRO-AIR admixture. The exact quantity of air-entraining admixture needed for a given air content of concrete is not predictable because of differences in concrete-making materials. Typical factors which might influence the amount of air entrained are: temperature, cement, sand grading, mix proportions, slump, means of conveying and placement, use of extra fine materials such as fly ash, etc.

The amount of MICRO-AIR admixture used will depend upon the amount of entrained air required under actual job conditions. In a trial mix, use 1/8 to 1-1/2 fl oz/100 lbs (8 to 98 ml/100 kg) of cement. In mixes containing water-reducing, set-controlling admixtures, the amount of MICRO-AIR needed is somewhat less than the amount required in plain concrete. In mixes requiring a higher or lower dosage to obtain the desired air content, consult your local Master Builders representative.

AIR CONTENT DETERMINATION:

The total air content of normal weight concrete should be measured in strict accordance with ASTM C 231, "Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method" or ASTM C 173, "Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method." The air content of lightweight concrete should only be determined using the Volumetric Method.

The air content should be verified by calculating the gravimetric air content in accordance with ASTM C 138, "Unit Weight, Yield, and Air Content (Gravimetric) of Concrete." If the total air content, as measured by the Pressure Method or Volumetric Method and as verified by the Gravimetric Method, deviates by more than 1-1/2%, the cause should be determined and corrected through equipment calibration or by whatever process is deemed necessary.

TEMPERATURE PRECAUTION:

MICRO-AIR admixture should be stored and dispensed at 35°F (2°C) or higher. Although freezing does not harm this product, precautions should be taken to protect it from freezing. If it freezes, thaw and reconstitute by mild mechanical agitation. Do not use pressurized air for agitation.

PACKAGING:

MICRO-AIR admixture is supplied in 55 U.S. gallon (208 liter) drums and bulk delivery.

CAUTION:

MICRO-AIR admixture is a CAUSTIC solution. Chemical goggles and gloves are recommended if transferring or handling large quantities of material. (See MSDS and/or product label for complete information.)

NON-CHLORIDE, NON-CORROSIVE:

MICRO-AIR admixture will not initiate or promote corrosion of reinforcing steel embedded in concrete, prestressed concrete or concrete placed on galvanized steel floor and roof systems. Calcium chloride is not an added ingredient in the manufacture of MICRO-AIR admixture. Based on the chlorides originating from all ingredients used in manufacture, MICRO-AIR admixture contributes less than 0.0001% (1.0 ppm) chloride ions by weight of the cement when used at the rate of 1 fl oz per 100 lbs (65 ml per 100 kg) of cement.

For suggested specification information or for additional product data on MICRO-AIR air-entraining admixture, contact your local Master Builders representative.



Master Builders, Inc.
Admixture Division
23700 Chagrin Boulevard
Cleveland, Ohio 44122-5554
(216) 831-5500
Fax (216) 831-3470

Master Builders Technologies Ltd.
79 Kincort Street
Toronto, Ontario M6M 3E4
(416) 247-7135

Certification

Fiber Reinforcement Performance

Material Requirements:

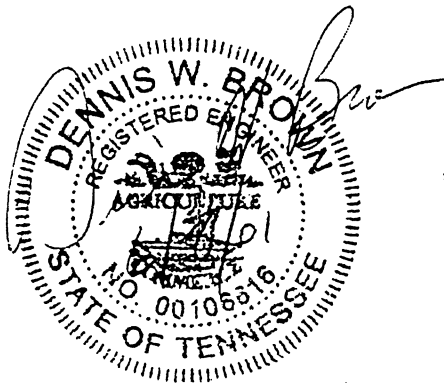
SI Concrete Systems hereby certifies that our Fibermesh® InForce™ fibers are made from 100% homopolymer virgin polypropylene fibrillated fibers containing no reprocessed olefin materials and are specifically engineered and manufactured to an optimum gradation for uses as fibrous reinforcement for concrete. Fibermesh InForce fibers meet the material specifications described in ASTM C-1116, Type III, Section 4.13, "Synthetic Fiber-Reinforced Concrete or Shotcrete."

Performance Requirements:

We further certify that concrete test specimens produced both in the field and in the laboratory containing a minimum of 0.1% by volume (1.5 lbs. per cubic yard) of Fibermesh InForce fibrillated polypropylene fibers, have been evaluated in independent test laboratories and have met or exceeded the specified value (≥ 3.0) for Performance Level I of ASTM C-1116-95, I₅ Toughness Index. Fibermesh InForce fibers are an alternate system to welded wire fabric when used for non-structural secondary reinforcement in hardened concrete.



Dennis Brown, P.E.
Design Engineer



SI Concrete Systems

USA
4019 Industry Drive
Chattanooga, TN 37416
Tel: 423-892-8080
Fax: 423-892-0157

Europe
Hayfield House, Devonshire Street
Chesterfield
Derbyshire, United Kingdom S41 7ST
Tel: (+44) 1246 564200
Fax: (+44) 1246 564201

FIBERMESH* Fibers

State-of-the-art secondary reinforcement system for concrete

DESCRIPTION:

FIBERMESH polypropylene fibers are engineered exclusively for concrete. The fibers are uniformly distributed throughout the concrete in all directions, providing effective secondary reinforcement for shrinkage crack control.

RECOMMENDED FOR:

- The reduction of concrete cracking as a result of intrinsic stresses.
- Use as a superior method and cost-effective alternate to welded wire fabric for secondary and/or temperature reinforcement.
- Greater impact, abrasion, shatter and fatigue resistance in concrete.
- Placements where all materials must be non-metallic.
- Areas requiring materials which are both alkali-proof and chemical resistant.

FEATURES/BENEFITS:

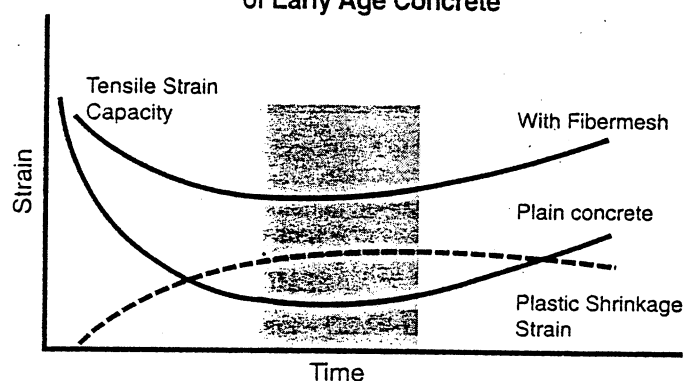
- Reinforces against plastic shrinkage and settlement crack formation, impact forces, shattering and abrasion.
- Holds cracks together with residual strength.
- Rustproof and corrosion resistant.
- Non-magnetic
- Always positioned in compliance with codes.

PACKAGING/ESTIMATING:

FIBERMESH fibers are available in a variety of package sizes to meet the needs of virtually every application. Contact your local Master Builders or FIBERMESH representative for specific sizes.

PERFORMANCE DATA:

Principle of Tensile Strain and Tensile Strain Capacity of Early Age Concrete



RELATED BULLETINS:

- Brochure FM-115 FIBERMESH
- Brochure FX-118 FIBERMESH Stealth Fibers
- Brochure FM-121 FIBERMESH MD Product Bulletin
- Data Sheet
- Material Safety Data Sheet

*FIBERMESH is a registered trademark of Synthetic Industries.



FACSIMILE COVER SHEET

Date 1/25/05

Number of Pages 7 [includes cover sheet]

Attn: ETHAN KWILE

Company: BECKER S. E. INC.

Fax No. 207-879-1822

From: JERRY McLYBE

Comments: ETHAN: Mill CERTS FOR REBAR @ M.M.M.

Multiple horizontal lines for additional handwritten notes.

If you do not receive all of the pages identified for transmission please contact our office.

FAX COVER SHEET

HarMac Rebar & Steel Corporation
PO Box 142
Com Shop Road
Fryeburg, Maine 04037

Telephone: 1800-294-4702

Fax: 207-935-3058

SEND TO Company name <i>Herbert Const</i>	From <i>John</i>
Attention <i>Janey</i>	Date <i>1/25/05</i>
Office location	Office location
Fax number <i>603-237-8470</i>	Phone number

- Urgent
 Reply ASAP
 Please comment
 Please review
 For your information

Total pages, including cover: 6

COMMENTS

*Mill Certs requested for
Main Mill Motors*

Shippers Number: S-019084

CHEMICAL AND PHYSICAL TEST REPORT

MADE IN U.S.A.

GERDAU AMERISTEEL

SAYREVILLE STEEL MILL

METALLURGICAL DEPARTMENT

NORTH CROSSMAN ROAD, SAYREVILLE, NJ 08871

PRODUCING MILL IS KNOWN BY HEAT ID PREFIX B=CARTERSVILLE, BB, C=CHARLOTTE, G=CARTERSVILLE J=JACKSONVILLE, K=KNOXVILLE,

N=CANBRIDGE, O=ORRVILLE, BB, P=PERTH AMBOY, S=SAYREVILLE, Y=JACKSON TN, W=WHITBY

SHIP TO: MACFARLANE STEEL WOOBLAWIN RD 207-855-3531 (SARY) FRNEBURG	INVOICE TO: MACFARLANE STEEL INC. HYRMAC REBAR AND STEEL CORP PO BOX 31058 NEWINGTON	SHIP DATE 02/28/04	SHIP DATE 02/28/04
ME 0407	CT 06-31-1658	CUST. ACCOUNT NO. 60008133	

SHAPE AND SIZE	GRADE	SPECIFICATION												SALES ORDER					CUSTOMER P.O. NUMBER				
		C	MN	P	S	V	SI	CR	CU	N	SN	AL	MO	N	NB	B	ZR	T	CA	ZN	C	EOU	
XZ2MM REBAR (#7)	A2000A308	28	1.13	.014	.031	.048	.24	.20	.40	.14	.017	.009	.034	.002	.001	.0020	.01	.0009	.0000				
SA-8065	IN-5292																						

YIELD POINTS: 50 IN: 7873; TENSILE 1.89/SQ IN: 5852; % ELONG 8 IN: 16.5; BEND: OK; DEF.: % LIGHT HEAVY;
 METRIC EQUIVALENT: YIELD = 521.25 MPA; TENSILE = 660.88 MPA; % ELONG 120MM = 16.5; DEF. = MIN

THE ABOVE FIGURES ARE CERTIFIED EXTRACTS FROM THE ORIGINAL CHEMICAL AND PHYSICAL TEST REPORT AS CONTAINED IN THE PERMANENT RECORDS OF THE COMPANY.

A. J. Turner

A. J. Turner
Quality Assurance Manager
Mill Group

CHEMICAL AND PHYSICAL TEST REPORT



Shippers Number: S-021620

MADE IN U.S.A.

SAYREVILLE STEEL MILL
METALLURGICAL DEPARTMENT
NORTH CROSSMAN ROAD, SAYREVILLE, NJ 08871

PRODUCING MILL IS KNOWN BY HEAT ID PREFIX. B=CARTERSVILLE BB, C=CHARLOTTE, G=CARTERSVILLE, J=JACKSONVILLE, K=KNOXVILLE,
N=CAMBRIDGE, O=ORRVILLE BB, P=PERTH AMBOY, S=SAYREVILLE, V=JACKSON TN, W=WHITBY

SHIP TO: MACFARLANE STEEL WOODLAWN RD 207-935-3581 (SAPY)	SHIP DATE 04/15/04	CUSTOMER P.O. NUMBER
FROM: MACFARLANE STEEL DIV. HARMACREBAR AND STEEL CORP PO BOX 31068 ACCS PAYABLE NEWINGTON	CUST. ACCOUNT NO. 6000153	
ME 04127	CT 05151-1028	

SHAPE AND SIZE	GRADE	SPECIFICATION											SALES ORDER				CUSTOMER P.O. NUMBER			
HEAT	C	MIN	P	S	V	S	CR	CJ	N	SN	AL	MO	N	B	ZR	TI	CA	ZN	C	EQU
430 RB5																4027177				
ASTM A570M GR60 (CP)																				
SA-570M	N2743	.40	1.03	0.18	.05	.06	.18	.11	.23	.18	.023	.000	.061	.000	.000	0.0000	.0008			

YIELD POINTS: 50 IN. GAGE; TENSILE: 50 IN. GAGE; BEND: 180°; DEF.: % LIGHT HEAVY;
 METRIC EQUIVALENT: YIELD = 471.2 MPa; TENSILE = 760.0 MPa; BENDING: 180°; DEF. = mm

THE ABOVE FIGURES ARE CERTIFIED EXTRACTS
 FROM THE ORIGINAL CHEMICAL AND PHYSICAL
 TEST REPORT AS CONTAINED IN THE PERMANENT
 RECORDS OF THE COMPANY.

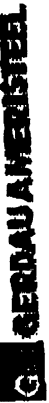
A. J. Turner

This material, including the billets, was produced and
 manufactured in the United States of America.
 A. J. Turner
 Quality Assurance Manager
 Mill Group

Shippers Number: S-001957

CHEMICAL AND PHYSICAL TEST REPORT

MADE IN U.S.A.



SAYREVILLE STEEL MILL
METALLURGICAL DEPARTMENT
NORTH CROSSMAN ROAD, SAYREVILLE, NJ 08871

PRODUCING MILL IS KNOWN BY HEAT D PREFIX B=CARTERSVILLE BB, C=CHARLOTTE, G=CARTERSVILLE, J=JACKSONVILLE, K=KNOXVILLE,
N=CAMBRIDGE, O=ORVILLE BB, P=PERTH AMBOY, S=SAYREVILLE, Y=JACKSON TN, W=WHITBY

SHIP TO: MACFARLANE STEEL
WOODLAWN RD
287485-268 (GARY)
FRIBURG

INVOICE TO: MACFARLANE STEEL DIV.
HARRING REBAR AND STEEL CORP
PO BOX 214858 ADOLFS PAVABLE
NEWINGTON

SHIP DATE: 03/30/04
CUST. ACCOUNT NO.: 61000133
CT: 08101-1868

ME 04007

SHAPE AND SIZE		GRADE	SPECIFICATION													SALES ORDER					CUSTOMER P.O. NUMBER				
HEAT	LT. NO.	C	MM	P	S	V	S	CR	CU	M	SN	AL	MD	N	NB	B	ZR	TI	CA	ZN	C				
420 0856																		4022815	4022815	0000	0000				
ASTM A575M GRADE 60 REBAR			.38	.051	.057	.019	.14	.40	.10	.020	.008	.025	.006												
YIELD POINT: 7174; TENSILE: 88857; % ELONG: 10.5; BEND: OK; DEF.: % UPRIGHT																									
METRIC EQUIVALENT: YIELD = 494.5 MPa; TENSILE = 716.14 MPa; % ELONG/20MM = 10.5; DEF. = 1MM																									

THE ABOVE FIGURES ARE CERTIFIED EXTRACTS FROM THE ORIGINAL CHEMICAL AND PHYSICAL TEST REPORT AS CONTAINED IN THE PERMANENT RECORDS OF THE COMPANY.

A. J. Turner

A. J. Turner
Quality Assurance Manager
HSS Group

This material, including the labels, was produced and manufactured in the United States of America.

Shippers Number: S-022039

CHEMICAL AND PHYSICAL TEST REPORT

MADE IN U.S.A.



SAYREVILLE STEEL MILL

METALLURGICAL DEPARTMENT

NORTH CROSSMAN ROAD, SAYREVILLE, NJ 08871

PRODUCING MILL IS KNOWN BY HEATID PREFIX: B=CARTERSVILLE, G=CARTERSVILLE, J=JACKSONVILLE, K=KNOXVILLE, N-CAMBRIDGE, O=ORVILLE, P=PERITH AMBOY, S=SAYREVILLE, V=JACKSON TN, W=WHITBY

INVOICE TO:

MACFARLANE STEEL DIV.
HARMAC REBAR AND STEEL CORP
PO BOX 311028 ACCIS PAYABLE
NEWARK NJ 07102-1028

ME 04087

CT 06131-1028

SHIP DATE: 04/23/04
CUST. ACCOUNT NO. 60006133

SHAPE AND SIZE		GRADE	SPECIFICATION													SALES ORDER				CUSTOMER P.O. NUMBER										
HEAT ID. NO.	ACTUAL TNG HEAT NO.	C	MN	P	S	V	SI	CR	CU	NI	SN	AL	MO	N	NO	B	ZR	T	CA	ZN	C	EOB								
54-2108	143300	44	.86	.012	.006	.015	.18	.06	.40	.11	.028	.000	.031	.030	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000						
X12MM REBAR #4			ASTM A615M GR60 (EPH)																				422857				316112			
YIELD PT LBS/50 IN: 7025; TENSIL LBS/50 IN: 10450; % ELONG IN: 12%; BEND OK; DEF.: % LIGHT/HEAVY: METRIC EQUIVALENT: YIELD = 489.51 MPa; TENSILE = 727.65 MPa; % ELONG/200MM = 12.8 DEF. = MM																							422857				316112			
54-2110	143301	43	.88	.014	.061	.085	.21	.19	.44	.11	.021	.065	.052	.030	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000						
X12MM REBAR #4			ASTM A615M GR60 (EPH)																				422857				316112			
YIELD PT LBS/50 IN: 7100; TENSIL LBS/50 IN: 10600; % ELONG IN: 12%; BEND OK; DEF.: % LIGHT/HEAVY: METRIC EQUIVALENT: YIELD = 488.78 MPa; TENSILE = 729.81 MPa; % ELONG/200MM = 12.9 DEF. = MM																							422857				316112			

THE ABOVE FIGURES ARE CERTIFIED EXTRACTS FROM THE ORIGINAL CHEMICAL AND PHYSICAL TEST REPORT AS CONTAINED IN THE PERMANENT RECORDS OF THE COMPANY.

[Signature]

A.J. Toner
Quality Assurance Manager
IMI Group

Page 4 of 4
Shippers Number: S-017556

CHEMICAL AND PHYSICAL TEST REPORT

MADE IN U.S.A.



SAYREVILLE STEEL MILL
METALLURGICAL DEPARTMENT
NORTH CROSSMAN ROAD, SAYREVILLE, NJ 08871

PRODUCING MILL IS KNOWN BY HEAT ID PREFIX B-CARRIERSVILLE BB, G-CHARLOTTE, G-CARRIERSVILLE, J-JACKSONVILLE, K-KNOXVILLE,
N-CAMBRIDGE, O-ORRVILLE BB, P-PERHAMBOY, S-SAYREVILLE, Y-JACKSON TN, W-WHITEBY

SHIP TO:			SHIP DATE	SALES ORDER												CUSTOMER P.O. NUMBER			
MACFARLANE STEEL			02/02/04	4007887												301923			
WOODLAWN RD			CUST. ACCOUNT NO. 80006133	NB B ZR												TI CA ZN C			
207-405-3531 (GARV)				0000 0000 0												00000 00000			
ERRIBOURS			CT 05131-1055	MO N												MO N			
ME 04537			AL SN NI CU NI CR SI V S P MN C												ASTM A615M GR50 (E30)				
SPECIFICATION			ASTM A615M GR50 (E30)												ASTM A615M GR50 (E30)				
SHAPE AND SIZE			42 74 000 008 011 20 11 44 11 3023 001 097 0000 0000 0000												4007887				
ACTUAL TAG HEATING			43 83 015 058 012 18 11 40 10 1023 008 132 0000 0000 0000												4007887				
YIELD PT LB/SQ IN: 639A			YIELD PT LB/SQ IN: 639A												YIELD PT LB/SQ IN: 639A				
TENSILE LB/SQ IN: 81208			TENSILE LB/SQ IN: 81208												TENSILE LB/SQ IN: 81208				
% ELONG 8 IN: 14.6			% ELONG 8 IN: 14.6												% ELONG 8 IN: 14.6				
BEND: OK			BEND: OK												BEND: OK				
% DEF.: % LIGHT/HEAVY:			% DEF.: % LIGHT/HEAVY:												% DEF.: % LIGHT/HEAVY:				
METRIC EQUIVALENT: YIELD = 461.3 MPa			METRIC EQUIVALENT: YIELD = 461.3 MPa												METRIC EQUIVALENT: YIELD = 461.3 MPa				
TENSILE = 569.02 MPa			TENSILE = 569.02 MPa												TENSILE = 569.02 MPa				
% ELONG/200MM = 14.9 DEF. = MM			% ELONG/200MM = 14.9 DEF. = MM												% ELONG/200MM = 14.9 DEF. = MM				
YIELD PT LB/SQ IN: 620			YIELD PT LB/SQ IN: 620												YIELD PT LB/SQ IN: 620				
TENSILE LB/SQ IN: 8732			TENSILE LB/SQ IN: 8732												TENSILE LB/SQ IN: 8732				
% ELONG 8 IN: 12.3			% ELONG 8 IN: 12.3												% ELONG 8 IN: 12.3				
BEND: OK			BEND: OK												BEND: OK				
% DEF.: % LIGHT/HEAVY:			% DEF.: % LIGHT/HEAVY:												% DEF.: % LIGHT/HEAVY:				
METRIC EQUIVALENT: YIELD = 463.33 MPa			METRIC EQUIVALENT: YIELD = 463.33 MPa												METRIC EQUIVALENT: YIELD = 463.33 MPa				
TENSILE = 611.00 MPa			TENSILE = 611.00 MPa												TENSILE = 611.00 MPa				
% ELONG/200MM = 12.3 DEF. = MM			% ELONG/200MM = 12.3 DEF. = MM												% ELONG/200MM = 12.3 DEF. = MM				
YIELD PT LB/SQ IN: 7076B			YIELD PT LB/SQ IN: 7076B												YIELD PT LB/SQ IN: 7076B				
TENSILE LB/SQ IN: 83277			TENSILE LB/SQ IN: 83277												TENSILE LB/SQ IN: 83277				
% ELONG 8 IN: 13.8			% ELONG 8 IN: 13.8												% ELONG 8 IN: 13.8				
BEND: OK			BEND: OK												BEND: OK				
% DEF.: % LIGHT/HEAVY:			% DEF.: % LIGHT/HEAVY:												% DEF.: % LIGHT/HEAVY:				
METRIC EQUIVALENT: YIELD = 493.60 MPa			METRIC EQUIVALENT: YIELD = 493.60 MPa												METRIC EQUIVALENT: YIELD = 493.60 MPa				
TENSILE = 72.07 MPa			TENSILE = 72.07 MPa												TENSILE = 72.07 MPa				
% ELONG/200MM = 13.8 DEF. = MM			% ELONG/200MM = 13.8 DEF. = MM												% ELONG/200MM = 13.8 DEF. = MM				
YIELD PT LB/SQ IN: 420			YIELD PT LB/SQ IN: 420												YIELD PT LB/SQ IN: 420				
TENSILE LB/SQ IN: 6930			TENSILE LB/SQ IN: 6930												TENSILE LB/SQ IN: 6930				
% ELONG 8 IN: 14.0			% ELONG 8 IN: 14.0												% ELONG 8 IN: 14.0				
BEND: OK			BEND: OK												BEND: OK				
% DEF.: % LIGHT/HEAVY:			% DEF.: % LIGHT/HEAVY:												% DEF.: % LIGHT/HEAVY:				
METRIC EQUIVALENT: YIELD = 512.07 MPa			METRIC EQUIVALENT: YIELD = 512.07 MPa												METRIC EQUIVALENT: YIELD = 512.07 MPa				
TENSILE = 751.88 MPa			TENSILE = 751.88 MPa												TENSILE = 751.88 MPa				
% ELONG/200MM = 14.0 DEF. = MM			% ELONG/200MM = 14.0 DEF. = MM												% ELONG/200MM = 14.0 DEF. = MM				
YIELD PT LB/SQ IN: 420			YIELD PT LB/SQ IN: 420												YIELD PT LB/SQ IN: 420				
TENSILE LB/SQ IN: 6937			TENSILE LB/SQ IN: 6937												TENSILE LB/SQ IN: 6937				
% ELONG 8 IN: 15.0			% ELONG 8 IN: 15.0												% ELONG 8 IN: 15.0				
BEND: OK			BEND: OK												BEND: OK				
% DEF.: % LIGHT/HEAVY:			% DEF.: % LIGHT/HEAVY:												% DEF.: % LIGHT/HEAVY:				
METRIC EQUIVALENT: YIELD = 488.69 MPa			METRIC EQUIVALENT: YIELD = 488.69 MPa												METRIC EQUIVALENT: YIELD = 488.69 MPa				
TENSILE = 686.28 MPa			TENSILE = 686.28 MPa												TENSILE = 686.28 MPa				
% ELONG/200MM = 15.0 DEF. = MM			% ELONG/200MM = 15.0 DEF. = MM												% ELONG/200MM = 15.0 DEF. = MM				

THE ABOVE FIGURES ARE CERTIFIED EXTRACTS FROM THE ORIGINAL CHEMICAL AND PHYSICAL TEST REPORT AS CONTAINED IN THE PERMANENT RECORDS OF THE COMPANY.

[Signature]

This material, including the bills, was produced and manufactured in the United States of America.
A. J. Turner
Quality Assurance Manager
MIL Group



Daniel Hebert Inc.

GENERAL CONTRACTORS

FACSIMILE COVER SHEET

Date 1/2/05

Number of Pages 5 [includes cover sheet]

Attn: ETHAN RHILE

Company: BECKER

Fax No. 207-879-1822

From: JERRY MCGEE

Comments: RE: SPECIAL INSPECTIONS - MMM
COMPLIANCE STATEMENT FOR FASTENERS

If you do not receive all of the pages identified for transmission please contact our office.

1 PLEASANT STREET • COLEBROOK, NH 03576
(603) 237-4454 • FAX (603) 237-8470

PRECISION WELDING & FABRICATION, INC.

LETTER OF TRANSMITTAL

690A STROUDWATER STREET
P.O. BOX 1310
WESTBROOK, ME 04098-1310

(207) 854-9330 PHONE
(207) 854-9694 FAX

TO: DANIEL HEBERT INC.

DATE: 1-7-05

ATTN: GERRY

RE: MAINE MALL MOTORS

WE ARE SENDING YOU Attached Under separate cover via _____ the following items:

Shop drawings Prints Plans Samples Specifications

Copy of letter Change order


Contest 1 Date: 1-7-05 Description: LETTER OF COMPLIANCE FASTENERS SEQUENCE #1, #2 & #3
PURCHASED FROM K.L. JACK ON 6-30-04

THESE ARE TRANSMITTED as checked below:

For approval	Approved as submitted	Resubmit _____ copies for approval
<input checked="" type="checkbox"/> For your use	<input type="checkbox"/> Approved as noted	<input type="checkbox"/> Submit _____ copies for distribution
As requested	<input type="checkbox"/> Returned for corrections	<input type="checkbox"/> Return _____ corrected prints
For review and comment		OTHER _____
FOR BID DUE _____		<input type="checkbox"/> PRINTS RETURNED AFTER LOAN TO US

THANK YOU

COPY TO: FILE

SIGNED: 
SOLOMON R. GAY

ATTN: 201

854-7674



INDUSTRIAL FASTENERS & SUPPLIES

CERTIFICATE OF COMPLIANCE

PRECISION WELD, FAB.
690 STROUDWATER ST.
WESTBROOK, ME 04092

- 1/4-10 X 2 TENSION CONTROL BOLT ASTM A325
- 1/4-10 X 2 1/2 TENSION CONTROL BOLT ASTM A325
- 1/4-10 X 2 3/8 TENSION CONTROL BOLT ASTM A325
- 7/8-9 X 2 1/2 TENSION CONTROL BOLT ASTM A325
- 1-8 X 2 1/2 TENSION CONTROL BOLT ASTM A325
- 1-8 X 2 3/4 TENSION CONTROL BOLT ASTM A325
- 1-8 X 2 1/2 TENSION CONTROL BOLT ASTM A325
- 1/4-10 X 1 1/2 STRUCTURAL BOLT ASTM A325
- 1/4-10 X 2 STRUCTURAL BOLT ASTM A325
- 1/4-10 X 2 1/2 STRUCTURAL BOLT ASTM A325
- 1/4-10 X 2 3/4 STRUCTURAL BOLT ASTM A325
- 1-8 X 2 STRUCTURAL BOLT ASTM A325
- 1/4-10 HVY HEX NUT ASTM A563 GR.DH
- 7/8-9 HVY HEX NUT ASTM A563 GR.DH
- 1-8 HVY HEX NUT ASTM A563 GR.DH
- 1/4" STRUCTURAL FLAT WASHER ASTM F436
- 7/8" STRUCTURAL FLAT WASHER ASTM F436
- 1" STRUCTURAL FLAT WASHER ASTM F436
- 5/8-11 X 7 HEX CAP SCREW ASTM A449 ZINC PLATED
- 5/8-11 X 6 HEX CAP SCREW ASTM A449 ZINC PLATED
- 1/4-10 X 2 HEX CAP SCREW ASTM A449 ZINC PLATED
- 1/4-10 X 2 1/2 HEX CAP SCREW ASTM A449 ZINC PLATED
- 1/4-10 X 2 3/4 HEX CAP SCREW ASTM A449 ZINC PLATED
- 5/8-11 FIN HEX NUT ASTM A563 GR.A ZINC PLATED
- 1/4-10 FIN HEX NUT ASTM A563 GR.A ZINC PLATED
- 5/8" USS FLAT WASHER ASTM F844 ZINC PLATED
- 1/4" USS FLAT WASHER ASTM F844 ZINC PLATED

INVOICE #: 522210-00, 524541-00, 523163-00, 523404-00, 523463-00, 523375-00

DATE OF SHIPMENT: 6-10-04

PURCHASE ORDER: 11142

The parts described in this certificate were produced from material for which we have available chemical and/or physical reports or other evidence of conformance to applicable specifications.

The parts described in this certificate have been inspected and/or tested, such specimens and samples as have been tested were taken from random lot quantities and meet requirements specifically stated on the purchase order.

[Handwritten Signature]
Approved Signature



INDUSTRIAL FASTENERS & SUPPLIES

CERTIFICATE OF COMPLIANCE

PRECISION WELD, FAB.
690 STROUDWATER ST.
WESTBROOK, ME 04092

- 1/4-10 X 2 TENSION CONTROL BOLT ASTM A325
- 1/4-10 X 2 1/4 TENSION CONTROL BOLT ASTM A325
- 3/8-10 X 1 1/4 TENSION CONTROL BOLT ASTM A325
- 7/8-9 X 2 1/2 TENSION CONTROL BOLT ASTM A325
- 1-8 X 2 1/4 TENSION CONTROL BOLT ASTM A325
- 1-8 X 2 1/2 TENSION CONTROL BOLT ASTM A325
- 1-8 X 2 3/4 TENSION CONTROL BOLT ASTM A325
- 1-8 X 2 1/2 TENSION CONTROL BOLT ASTM A325
- 3/4-10 X 1 1/4 STRUCTURAL BOLT ASTM A325
- 3/4-10 X 2 STRUCTURAL BOLT ASTM A325
- 3/4-10 X 2 1/4 STRUCTURAL BOLT ASTM A325
- 3/4-10 X 2 1/2 STRUCTURAL BOLT ASTM A325
- 1-8 X 2 STRUCTURAL BOLT ASTM A325
- 1/4-10 HVY HEX NUT ASTM A563 GR.DH
- 7/8-9 HVY HEX NUT ASTM A563 GR.DH
- 1-8 HVY HEX NUT ASTM A563 GR.DH
- 3/4" STRUCTURAL FLAT WASHER ASTM F436
- 7/8" STRUCTURAL FLAT WASHER ASTM F436
- 1" STRUCTURAL FLAT WASHER ASTM F436
- 5/8-11 X 7 HEX CAP SCREW ASTM A449 ZINC PLATED
- 5/8-11 X 6 HEX CAP SCREW ASTM A449 ZINC PLATED
- 3/4-10 X 2 HEX CAP SCREW ASTM A449 ZINC PLATED
- 3/4-10 X 2 1/4 HEX CAP SCREW ASTM A449 ZINC PLATED
- 3/4-10 X 2 1/2 HEX CAP SCREW ASTM A449 ZINC PLATED
- 5/8-11 PIN HEX NUT ASTM A563 GR.A ZINC PLATED
- 3/4-10 PIN HEX NUT ASTM A563 GR.A ZINC PLATED
- 5/8" USS FLAT WASHER ASTM F844 ZINC PLATED
- 3/4" USS FLAT WASHER ASTM F844 ZINC PLATED

INVOICE # : 522320-00
DATE OF SHIPMENT: 6-30-04
PURCHASE ORDER: 11143

The parts described in this certificate were produced from material for which we have available chemical and/or physical reports or other evidence of conformance to applicable specifications.

The parts described in this certificate have been inspected and/or tested, such specimens and samples as have been tested were taken from random lot quantities and meet requirements specifically stated on the purchase order.


Approved Signature



CERTIFICATE OF COMPLIANCE

PRECISION WELD. FAB.
690 STROUDWATER ST.
WESTBROOK, ME 04092

- 4-10 X 2 TENSION CONTROL BOLT ASTM A325
- 1-8 X 2 1/4 TENSION CONTROL BOLT ASTM A325
- 4-10 X 1 1/4 STRUCTURAL BOLT ASTM A325
- 4-10 X 2 STRUCTURAL BOLT ASTM A325
- 4-10 X 2 1/4 STRUCTURAL BOLT ASTM A325
- 4-10 X 2 1/2 STRUCTURAL BOLT ASTM A325
- 4-10 HVY HEX NUT ASTM A563 GR.DH
- 1-8 HVY HEX NUT ASTM A563 GR.DH
- 4" STRUCTURAL FLAT WASHER ASTM F436
- 1" STRUCTURAL FLAT WASHER ASTM F436
- 5/8-11 X 7 HEX CAP SCREW ASTM A449 ZINC PLATED
- 5/8-11 X 6 HEX CAP SCREW ASTM A449 ZINC PLATED
- 3/4-10 X 2 HEX CAP SCREW ASTM A449 ZINC PLATED
- 3/4-10 X 2 1/4 HEX CAP SCREW ASTM A449 ZINC PLATED
- 3/4-10 X 2 1/2 HEX CAP SCREW ASTM A449 ZINC PLATED
- 5/8-11 FIN HEX NUT ASTM A563 GR.A ZINC PLATED
- 4-10 FIN HEX NUT ASTM A563 GR.A ZINC PLATED
- 5/8" USS FLAT WASHER ASTM F844 ZINC PLATED
- 4" USS FLAT WASHER ASTM F844 ZINC PLATED

INVOICE #: 522342-00
DATE OF SHIPMENT: 6-30-04
PURCHASE ORDER: 11144

The parts described in this certificate were produced from material for which we have available chemical and/or physical reports or other evidence of conformance to applicable specifications.

The parts described in this certificate have been inspected and/or tested, such specimens and samples as have been tested were taken from random lot quantities and meet requirements specifically stated on the purchase order.


Approved Signature

LETTER OF TRANSMITTAL



Daniel Hebert Inc.

GENERAL CONTRACTORS

1 PLEASANT STREET • COLEBROOK, NH 03576
(603) 237-4454 • FAX (603) 237-8470

TO: BECKER STRUCTURAL ENGINEERING
75 YORK STREET
PORTLAND, ME 04101-4550

DATE	12/27/04	JOB NO.
ATTENTION	ETHAN RAILE	
RE:	MAINE HALL MOTORS	

WE ARE SENDING YOU: Attached Under separate cover via _____ the following items:

Shop drawings Prints Plans Samples Specifications
 Copy of letter Change order _____

COPIES	DATE	NO.	DESCRIPTION
1			SSFNE CERTIFICATE
1			SHOP & FIELD WELDER CERTIFICATIONS
1			TOIST CERT. OF COMPLIANCE - WELDER CERTIFICATIONS
1			STEEL CERT. OF COMPLIANCE
1			WELD FILLER MATERIALS CERTIFICATE OF CONFORMANCE
1			BOLT SPECIFICATION CRITERIA

THESE ARE TRANSMITTED as checked below:

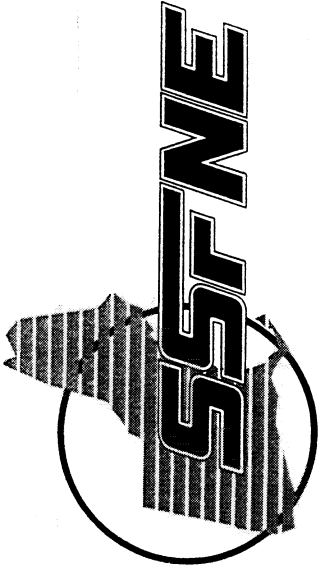
For approval Approved as submitted Resubmit _____ copies for approval
 For your use Approved as noted Submit _____ copies for distribution
 As requested Return for corrections Return _____ corrected copies
 For review and comment _____
 FOR BIDS DUE _____ 19____ PRINTS RETURNED AFTER LOAN TO US

REMARKS: INFORMATION REQUESTED TO COMPLETE YOUR PAPERWORK
FOR "SPECIAL INSPECTIONS" AT ABOVE REFERENCED PROJECT

BECKER STRUCTURAL ENGINEERS, INC.

DEC 29 2004

COPY TO: _____ SIGNED:



STRUCTURAL STEEL FABRICATORS OF NEW ENGLAND

BY AUTHORITY OF THE BOARD OF DIRECTORS

Precision Welding & Fabricating, Inc.

having been duly elected to membership
is hereby certified as

Member

and entitled to all privileges thereof

Elected September 1989

Consultant

President

AWS Shop & Field
CERTS



Edward P Nadeau
Cert # 0009030W SSN# 257-98-2162

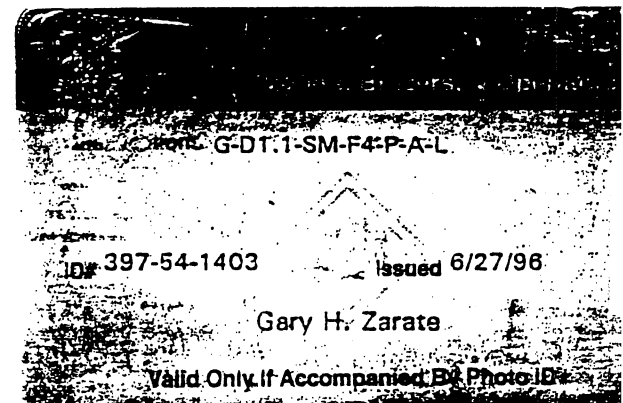


Qualifications D1.1-SM-F4-P-A-L

ID# 007-44-1265 Issued 6/7/96

Ronald H. Moody

Valid Only If Accompanied By Photo ID



Qualifications G-DT.1-SM-F4-P-A-L

ID# 397-54-1403 Issued 6/27/96

Gary H. Zarate

Valid Only If Accompanied By Photo ID



Qualifications G-DT.1-SM-F4-P-A-L

ID# 007-72-9877 Issued 8/2/96

Solomon R. Gay

Valid Only If Accompanied By Photo ID

WELDING PROCEDURE SPECIFICATION (WPS) Yes
 PREQUALIFIED QUALIFIED BY TESTING
 or PROCEDURE QUALIFICATION RECORDS (PQR) Yes

Ben. B

Company Name Precision Welding + Fabrication Identification # 1
 Revision N/A Date _____ By M. Schroeder
 Welding Process(es) FCAW Authorized by _____ Date _____
 Supporting PQR No.(s) PREQUALIFIED Type—Manual Semi-Automatic
 Machine Automatic

JOINT DESIGN USED
 Type: _____
 Single Double Weld
 Backing: Yes No
 Backing Material: ASTM A36
 Root Opening 1/4" Root Face Dimension _____
 Groove Angle: 45° Radius (J-U) _____
 Back Gouging: Yes No Method _____

BASE METALS
 Material Spec. ASTM A36
 Type or Grade _____
 Thickness: Groove 1" Fillet _____
 Diameter (Pipe) _____

FILLER METALS
 AWS Specification AWS 5.20
 AWS Classification E71T-1

SHIELDING
 Flux _____ Gas Argon / CO2
 Composition 75% - 25%
 Electrode-Flux (Class) _____ Flow Rate 35-40 CPH
 Gas Cup Size 5/8"

PREHEAT
 Preheat Temp., Min _____
 Interpass Temp., Min _____ Max _____

POSITION
 Position of Groove: 2G Fillet: _____
 Vertical Progression: Up Down

ELECTRICAL CHARACTERISTICS
 Transfer Mode (GMAW) Short-Circuiting
 Globular Spray
 Current: AC DCEP DCEN Pulsed
 Other _____
 Tungsten Electrode (GTAW)
 Size: _____
 Type: _____

TECHNIQUE
 Stringer or Weave Bead: STRINGER / WEAVE
 Multi-pass or Single Pass (per side) MULTIPASS
 Number of Electrodes ONE
 Electrode Spacing Longitudinal _____
 Lateral _____
 Angle _____
 Contact Tube to Work Distance 3/4"
 Peening NONE
 Interpass Cleaning: hand wire brush, chipping hammer, grinder on spatter
 POSTWELD HEAT TREATMENT
 Temp. _____
 Time _____

WELDING PROCEDURE

Pass or Weld Layer(s)	Process	Filler Metals		Current		Volts	Travel Speed	Joint Details
		Class	Diam.	Type & Polarity	Amps or Wire Feed Speed			
1-13	FCAW	E71T-1	.045	VertiCore DC+	200 AMPS.	26.5		

Form E-1 (Front)

Quality Assurance Labs Inc.

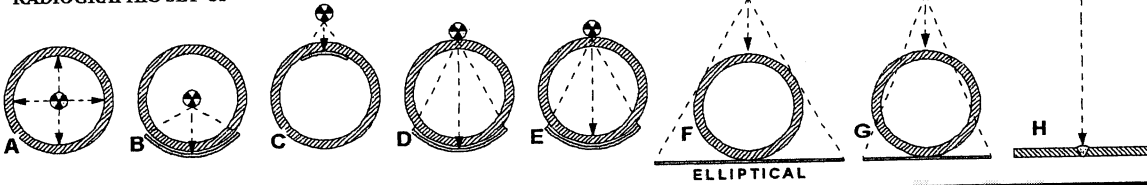
NON-DESTRUCTIVE TESTING AND INSPECTION SERVICES

80 PLEASANT AVENUE • SOUTH PORTLAND, MAINE 04106 • TEL: (207) 799-8911 • FAX: (207) 799-7251

INSPECTION REPORT

CUSTOMER'S NAME: PRECISION WELDING		P.O. NO.: N/A	PAGE 1 OF 1
RADIOGRAPHY REPORT NO.: QAL-02-843		PROCEDURE NO.: 0913	QUANTITY: 1
PART NO.: TEST COUPON		JOB NO.: N/A	
SOURCE: TYPE Iridium 192	SIZE: .107 X .118	CURIES: 30	KV: N/A MA: N/A SFD: 20"
FILM: TYPE II	SPEED: 100	SINGLE <input checked="" type="checkbox"/>	FRONT <input checked="" type="checkbox"/>
		DOUBLE <input type="checkbox"/>	SIZE: 4 1/2 x 10 SCREENS: 0.010" BACK <input checked="" type="checkbox"/>
IQI: SIZE ASTM "B" WIRE	GROUP: I	SENSITIVITY: .020	SHIM: N/A SOURCE SIDE <input checked="" type="checkbox"/>
MATERIAL: TYPE C/S	THICKNESS: 1"	ACCEPTANCE STANDARD: ASME SECTION IX	

RADIOGRAPHIC SET-UP



OTHER

SERIAL NUMBER	VIEW NUMBER	CONDITION OF PART (See Definitions)	ACCEPT	REJECT	SERIAL NUMBER	VIEW NUMBER	CONDITION OF PART (See Definitions)	ACCEPT	REJECT
BEN B.	0 - 1	2,5	✓						
FCAW									

REMARKS

REMARKS

- DEFINITIONS:
- | | | |
|---------------------------|------------------------|------------------------|
| 1. Crack | 6. Inclusions | 11. HI/Lo |
| 2. Porosity | 7. Gas Holes | 12. Surface |
| 3. Incomplete Fusion | 8. Shrink | 13. Undercut |
| 4. Incomplete penetration | 9. No Apparent Defects | 14. Void |
| 5. Slag | 10. Film Artifacts | 15. Internal concavity |

SIGNATURE: R. Russell #2687716 *Ryan Russell*

M / D / Y

DATE: 12/09/2002 LEVEL: II

WELDING PROCEDURE SPECIFICATION (WPS) Yes
PREQUALIFIED QUALIFIED BY TESTING
or PROCEDURE QUALIFICATION RECORDS (PQR) Yes

Edward P. Naclean
 Company Name Precision Welding & Fabrication
 Welding Process(es) FCAW
 Supporting PQR No.(s) 136 - QUALIFIED

Identification # 1
 Revision N/A Date _____ By S.G. Craig
 Authorized by _____ Date 4-13-04
 Type—Manual Semi-Automatic
 Machine Automatic

JOINT DESIGN USED
 Type: _____
 Single Double Weld
 Backing: Yes No
 Backing Material: ASTM A30
 Root Opening 1/4" Root Face Dimension -
 Groove Angle: 45° Radius (J-U) -
 Back Gouging: Yes No Method -

POSITION
 Position of Groove: 2G Fillet: _____
 Vertical Progression: Up Down

BASE METALS
 Material Spec. ASTM A30
 Type or Grade -
 Thickness: Groove 1" Fillet -
 Diameter (Pipe) -

ELECTRICAL CHARACTERISTICS
 Transfer Mode (GMAW) Short-Circuiting
 Globular Spray
 Current: AC DCEP DCEN Pulsed
 Other _____
 Tungsten Electrode (GTAW)
 Size: _____
 Type: _____

FILLER METALS
 AWS Specification AWS 570
 AWS Classification E71T-1

TECHNIQUE
 Stringer or Weave Bead: Stringer / Weave Root
 Multi-pass or Single Pass (per side) multi pass
 Number of Electrodes one
 Electrode Spacing Longitudinal -
 Lateral -
 Angle -

SHIELDING
 Flux - Gas Argon / CO₂
 Composition 75% - 25%
 Electrode-Flux (Class) - Flow Rate 35-40 CFM
 Gas Cup Size 3/8"

Contact Tube to Work Distance 3/4"
 Peening None
 Interpass Cleaning: hand wire brush
 carbon hammer hammer on spatter
POSTWELD HEAT TREATMENT
 Temp. _____
 Time _____

PREHEAT
 Preheat Temp., Min -
 Interpass Temp., Min - Max -

WELDING PROCEDURE

Pass or Weld Layer(s)	Process	Filler Metals		Current		Volts	Travel Speed	Joint Details
		Class	Diam.	Type & Polarity	Amps or Wire Feed Speed			
1-13	FCAW	E71T-1	0.045	Vertical DCEP	Variable 200-265	26.5		

Form E-1 (Front)

WELDER, WELDING OPERATOR, OR TACK WELDER QUALIFICATION TEST RECORD

Type of Welder Painting Welding & Fabrication Inc.
 Name Edward E. Anderson Identification No. 257-98-2162
 Welding Procedure Specification No. 1 Rev N/A Date 4-13-01

Variables	Record Actual Values Used in Qualification	Qualification Range
Process/Type [Table 4.10, Item (1)]	<u>FCM2</u>	<u>AM</u>
Electrode (single or multiple) [Table 4.10, Item (6)]	<u>045 E71T-1</u>	
Current/Polarity	<u>DC+</u>	
Position [Table 4.10, Item (4)]	<u>2G</u>	<u>1G, 2G</u>
Weld Progression [Table 4.10, Item (6)]		
Backing (YES or NO) [Table 4.10, Item (7)]	<u>Yes</u>	<u>Yes</u>
Material/Spec.		
Base Metal		
Thickness: (Plate)		
Groove	<u>1"</u>	<u>unlimited</u>
Fillet	<u>N/A</u>	<u>unlimited</u>
Thickness: (Pipe/tube)		
Groove	<u>N/A</u>	<u>unlimited</u>
Fillet	<u>N/A</u>	<u>unlimited</u>
Diameter: (Pipe)		
Groove	<u>N/A</u>	
Fillet	<u>N/A</u>	
Filler Metal [Table 4.10, Item (3)]		
Spec. No.	<u>A5.20</u>	
Class	<u>E71T-1</u>	
F-No. [Table 4.10, Item (2)]	<u>FC2</u>	<u>FC</u>
Gas/Flux Type [Table 4.10, Item (3)]	<u>Shawmut 85% CO2</u>	
Other	<u>N/A</u>	<u>N/A</u>

VISUAL INSPECTION (4.8.1)
 Acceptable YES or NO _____

Guided Bend Test Results (4.30.5)

Type	Result	Type	Result

Fillet Test Results (4.30.2.3 and 4.30.4.1)

Appearance _____ Fillet Size _____
 Fracture Test Root Penetration _____ Macroetch _____
 (Describe the location, nature, and size of any crack or tearing of the specimen.)

Inspected by _____ Test Number _____
 Organization _____ Date _____

RADIOGRAPHIC TEST RESULTS (4.30.3.1)

Film Identification Number	Results	Remarks	Film Identification Number	Results	Remarks
<u>Edward</u>	<u>Acceptable</u>				

Interpreted by David Lee Test Number _____
 Organization DAL Date 5/5/01

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of section 4 of AWS D1.1, (_____) Structural Welding Code--Steel.

Manufacturer or Contractor _____ Authorized By _____
 Form E-4 Date _____

WELDER, WELDING OPERATOR, OR TACK WELDER QUALIFICATION TEST RECORD

Type of Welder Precision Welding
 Name Bruce M Bragg Identification No. 007-48-3649
 Welding Procedure Specification No. 1 Rev N/A Date Nov 8, 2001

Variables	Record Actual Values Used in Qualification	Qualification Range
Process/Type [Table 4.10, Item (1)]	FCAW	ALL
Electrode (single or multiple) [Table 4.10, Item (8)]	045E7IT-1	
Current/Polarity	DC+	
Position [Table 4.10, Item (4)]	2G	1G, 2G
Weld Progression [Table 4.10, Item (6)]		
Backing (YES or NO) [Table 4.10, Item (7)]	YES	YES
Material/Spec.	to	
Base Metal		
Thickness: (Plate)	1"	UNLIMITED
Groove		
Fillet	N/A	UNLIMITED
Thickness: (Pipe/tube)		
Groove	N/A	UNLIMITED
Fillet	N/A	UNLIMITED
Diameter: (Pipe)		
Groove	N/A	
Fillet	N/A	
Filler Metal [Table 4.10, Item (3)]		
Spec. No.	A5.20	
Class	E7IT-1	
F-No. [Table 4.10, Item (2)]	F6	F6
Gas/Flux Type [Table 4.10, Item (3)]	75% Argon / 25% CO ₂	
Other	N/A	N/A

VISUAL INSPECTION (4.8.1)
 Acceptable YES or NO _____

Guided Bend Test Results (4.30.5)

Type	Result	Type	Result

Fillet Test Results (4.30.2.3 and 4.30.4.1)

Appearance _____ Fillet Size _____
 Fracture Test Root Penetration _____ Macroetch _____
 (Describe the location, nature, and size of any crack or tearing of the specimen.)

Inspected by _____ Test Number _____
 Organization _____ Date _____

RADIOGRAPHIC TEST RESULTS (4.30.3.1)

Film Identification Number	Results	Remarks	Film Identification Number	Results	Remarks
01-705	ACCEPT				
BB					

Interpreted by W. CRAWFORD Test Number 01-705
 Organization QUALITY ASSURANCE LABS Date 11/9/01

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of section 4 of AWS D1.1, (2000) Structural Welding Code—Steel.
 (year)

Manufacturer or Contractor _____ Authorized By _____
 Form E-4 Date _____

WELDING PROCEDURE SPECIFICATION (WPS) Yes
 PREQUALIFIED QUALIFIED BY TESTING
 or PROCEDURE QUALIFICATION RECORDS (PQR) Yes

Bruce B

Company Name PRECISION Welding + Fabrication
 Welding Process(es) FCAW
 Supporting PQR No.(s) PREQUALIFIED

Identification # 1
 Revision NA Date 11/08/07 By M. Schneider
 Authorized by _____ Date _____
 Type—Manual Semi-Automatic
 Machine Automatic

JOINT DESIGN USED
 Type:
 Single Double Weld
 Backing: Yes No Backing Material: ASTM A36
 Root Opening 1/4" Root Face Dimension _____
 Groove Angle: 45° Radius (J-U) _____
 Back Gouging: Yes No Method _____

POSITION
 Position of Groove: 2G Fillet: _____
 Vertical Progression: Up Down

BASE METALS
 Material Spec. ASTM A36
 Type or Grade _____
 Thickness: Groove 1" Fillet _____
 Diameter (Pipe) _____

ELECTRICAL CHARACTERISTICS
 Transfer Mode (GMAW) Short-Circuiting
 Globular Spray
 Current: AC DCEP DCEN Pulsed
 Other _____
 Tungsten Electrode (GTAW)
 Size: _____
 Type: _____

FILLER METALS
 AWS Specification AWS 5.20
 AWS Classification E71T-1

TECHNIQUE
 Stringer or Weave Bead: STRINGER / WEAVE ROOT
 Multi-pass or Single Pass (per side) MULTI PASS
 Number of Electrodes ONE
 Electrode Spacing
 Longitudinal _____
 Lateral _____
 Angle _____

SHIELDING
 Flux _____ Gas Argon/CO2
 Composition 75% - 25%
 Electrode-Flux (Class) _____ Flow Rate 35-40 CFH
 Gas Cup Size 5/8"

Contact Tube to Work Distance 3/4"
 Peening NONE
 Interpass Cleaning: hand wire brush, chipping hammer, grinder on Spatter

PREHEAT
 Preheat Temp., Min _____
 Interpass Temp., Min _____ Max _____

POSTWELD HEAT TREATMENT
 Temp. _____
 Time _____

WELDING PROCEDURE

Pass or Weld Layer(s)	Process	Filler Metals		Current		Volts	Travel Speed	Joint Details
		Class	Diam.	Type & Polarity	Amps or Wire Feed Speed			
1-13	FCAW	E71T-1	.045	Verticore DC+	200 200 AMPS	26.5		

Form E-1 (Front)

WELDER, WELDING OPERATOR, OR TACK WELDER QUALIFICATION TEST RECORD

Type of Welder Precision Welding & Fabrication
 Name Ben Berry Identification No. 005-76-8281
 Welding Procedure Specification No. 1 Rev N/A Date Dec 2-2002

Variables	Record Actual Values Used in Qualification	Qualification Range
Process/Type [Table 4.10, Item (1)]	<u>FCAW</u>	<u>ALL</u>
Electrode (single or multiple) [Table 4.10, Item (8)]	<u>045E7/T-1</u>	
Current/Polarity	<u>DC+</u>	
Position [Table 4.10, Item (4)]	<u>2G</u>	<u>1G, 2G</u>
Weld Progression [Table 4.10, Item (6)]		
Backing (YES or NO) [Table 4.10, Item (7)]	<u>YES</u>	<u>YES</u>
Material/Spec. to		
Base Metal		
Thickness: (Plate)		
Groove	<u>1"</u>	<u>UNLIMITED</u>
Fillet	<u>N/A</u>	<u>UNLIMITED</u>
Thickness: (Pipe/tube)		
Groove	<u>N/A</u>	<u>UNLIMITED</u>
Fillet	<u>N/A</u>	<u>UNLIMITED</u>
Diameter: (Pipe)		
Groove	<u>N/A</u>	
Fillet	<u>N/A</u>	
Filler Metal [Table 4.10, Item (3)]		
Spec. No.	<u>A5.20</u>	<u>F6</u>
Class	<u>E71T-1</u>	
F-No. [Table 4.10, Item (2)]	<u>F6</u>	
Gas/Flux Type [Table 4.10, Item (3)]	<u>75% Argon / 25% CO₂</u>	<u>N/A</u>
Other	<u>N/A</u>	

VISUAL INSPECTION (4.8.1)
 Acceptable YES or NO _____

Guided Bend Test Results (4.30.5)

Type	Result	Type	Result

Fillet Test Results (4.30.2.3 and 4.30.4.1)

Appearance _____ Fillet Size _____
 Fracture Test Root Penetration _____ Macroetch _____
 (Describe the location, nature, and size of any crack or tearing of the specimen.)

Inspected by _____ Test Number _____
 Organization _____ Date _____

RADIOGRAPHIC TEST RESULTS (4.30.3.1)

Film Identification Number	Results	Remarks	Film Identification Number	Results	Remarks

Interpreted by _____ Test Number _____
 Organization _____ Date _____

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of section 4 of AWS D1.1, (2001) Structural Welding Code—Steel.
 (year)

Manufacturer or Contractor _____ Authorized By _____
 Form E-4 Date _____

WELDING PROCEDURE SPECIFICATION (WPS) Yes
 PREQUALIFIED QUALIFIED BY TESTING _____
 or PROCEDURE QUALIFICATION RECORDS (PQR) Yes

Ben. B

Company Name Precision Welding + Fabrication
 Welding Process(es) FCAW
 Supporting PQR No.(s) PREQUALIFIED

Identification # 1
 Revision N/A Date _____
 Authorized by _____ By M. Schroeder
 Type—Manual Date _____
 Machine Semi-Automatic
 Automatic

JOINT DESIGN USED

Type:
 Single Double Weld
 Backing: Yes No
 Backing Material: ASTM A36
 Root Opening 1/4" Root Face Dimension _____
 Groove Angle: 45° Radius (J-U) _____
 Back Gouging: Yes No Method _____

POSITION

Position of Groove: 2G Fillet: _____
 Vertical Progression: Up Down

ELECTRICAL CHARACTERISTICS

Transfer Mode (GMAW) Short-Circuiting
 Globular Spray
 Current: AC DCEP DCEN Pulsed
 Other _____
 Tungsten Electrode (GTAW)
 Size: _____
 Type: _____

BASE METALS

Material Spec. ASTM A36
 Type or Grade _____
 Thickness: Groove 1" Fillet _____
 Diameter (Pipe) _____

TECHNIQUE

Stringer or Weave Bead: STRINGER / WEAVE
 Multi-pass or Single Pass (per side) MULTIPASS
 Number of Electrodes ONE
 Electrode Spacing Longitudinal _____
 Lateral _____
 Angle _____

FILLER METALS

AWS Specification AWS 5.20
 AWS Classification E71T-1

SHIELDING

Flux _____ Gas Argon / CO2
 Composition 75% - 25%
 Electrode-Flux (Class) _____ Flow Rate 35-40 CPH Contact Tube to Work Distance 3/4"
 Gas Cup Size 5/8" Peening NONE

PREHEAT

Preheat Temp., Min _____
 Interpass Temp., Min _____ Max _____

Interpass Cleaning: hand wire brush, chipping hammer, grinder on spatter
 POSTWELD-HEAT TREATMENT
 Temp. _____
 Time _____

WELDING PROCEDURE

Pass or Weld Layer(s)	Process	Filler Metals		Current		Volts	Travel Speed	Joint Details
		Class	Diam.	Type & Polarity	Amps or Wire Feed Speed			
1-13	FCAW	E71T-1	.045	VertiCore DC+	200 AMPS.	26.5		



AWS Certified Welder

Welders, Brazers, & Operators

Qualifications

G-D1.1-SMAW-F4-PI-A-U

ID# 004-74-4372 Issued 10/24/97

Michael D. Schroeder

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AWS Certified Welder

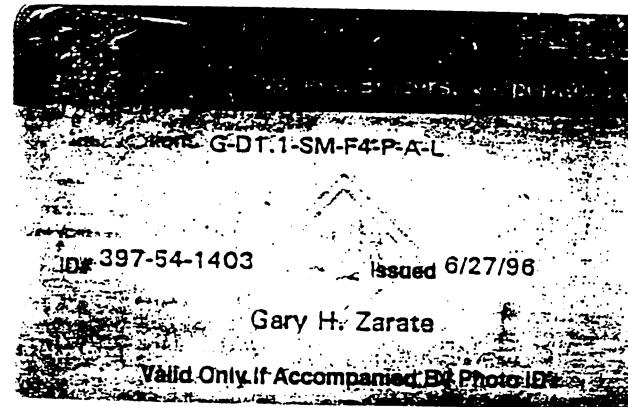
Welders, Brazers, & Operators

Qualifications 01.1-SM-F4-P-A-L

ID# 007-44-1265 Issued 8/7/96

Ronald H. Moody

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ID# 397-54-1403 Issued 6/27/96

Gary H. Zarate

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AWS Certified Welder

Welders, Brazers, & Operators

Qualifications G-D1.1-SM-F4-P-A-L

ID# 007-72-9877 Issued 8/2/96

Solomon R. Gay

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AWS Certified Welder

Welders, Brazers, & Operators

Qualifications G-B2.1-SMAN-E7018-A36-3G/4G-U

ID# 004-44-9539 Issued 6/12/95

David W. Sargent, Sr.

Valid Only If Accompanied By Photo ID

Att: Steve



Dwayne A Blake
Cert # 0201001W SSNW 006-72-1596
1-800-443-9353 USA
Information relating to identification and certification of the
bearer of this card may be verified by calling or writing:
Certification Department of the American Welding Society
550 N.W. LeJeune Road, Miami, FL 33128

This Card is the property of AWS and shall be returned on demand.

Valid Only if Accompanied by Photo ID

Dwayne A Blake

1 Test Date Sup Code
09/28/01 G DI.1

Process
SMAW

Gas
M/A

Filler Metal
F#

Base Metal
P1

Position Thickness Expires
R U 12/20/03

ATTN: Steve



AWS Certified Welder

Welders, Brazers, & Operators

Qualifications

G-D1.1-SMAW-F4-P1-A-U

ID# 007-48-3649 Issued 1/29/98

Bruce M. Bragg

Valid Only If Accompanied By Photo ID

WELDER, WELDING OPERATOR, OR TACK WELDER QUALIFICATION TEST RECORD

Type of Welder Leonard K Garvey
 Name _____ Identification No. 990814
 Welding Procedure Specification No. 1 Rev N/A Date 12-4-01

Variables	Record Actual Values Used in Qualification	Qualification Range
Process/Type [Table 4.10, Item (1)]	<u>FCAW</u>	<u>ALL</u>
Electrode (single or multiple) [Table 4.10, Item (8)]	<u>045E7IT-1</u>	
Current/Polarity	<u>DCT</u>	
Position [Table 4.10, Item (4)]	<u>2G, 1G</u>	<u>2G, 1G</u>
Weld Progression [Table 4.10, Item (6)]		
Backing (YES or NO) [Table 4.10, Item (7)]	<u>YES</u>	<u>YES</u>
Material/Spec.	<u>to</u>	
Base Metal		
Thickness: (Plate)	<u>1"</u>	<u>UNLIMITED</u>
Groove		
Fillet	<u>N/A</u>	<u>UNLIMITED</u>
Thickness: (Pipe/tube)		
Groove	<u>N/A</u>	<u>UNLIMITED</u>
Fillet	<u>N/A</u>	<u>UNLIMITED</u>
Diameter: (Pipe)	<u>N/A</u>	
Groove	<u>N/A</u>	
Fillet	<u>N/A</u>	
Filler Metal [Table 4.10, Item (3)]		
Spec. No.	<u>A5.20</u>	
Class	<u>E7IT-1</u>	
F-No. [Table 4.10, Item (2)]	<u>FL6</u>	<u>FL6</u>
Gas/Flux Type [Table 4.10, Item (3)]	<u>75% Argon/25% CO2</u>	
Other	<u>N/A</u>	<u>N/A</u>

VISUAL INSPECTION (4.8.1)
 Acceptable YES or NO _____

Guided Bend Test Results (4.30.5)

Type	Result	Type	Result

Fillet Test Results (4.30.2.3 and 4.30.4.1)

Appearance _____ Fillet Size _____
 Fracture Test Root Penetration _____ Macroetch _____
 (Describe the location, nature, and size of any crack or tearing of the specimen.)

Inspected by _____ Test Number _____
 Organization _____ Date _____

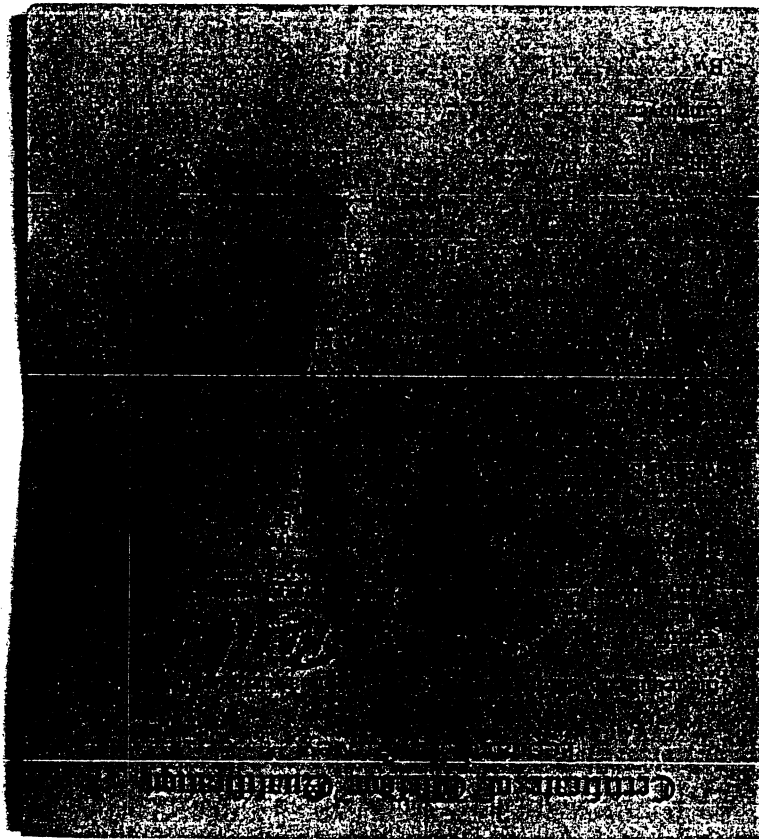
RADIOGRAPHIC TEST RESULTS (4.30.3.1)

Film Identification Number	Results	Remarks	Film Identification Number	Results	Remarks
<u>01-752</u>		<u>DOESN'T MEET CODE - SLAG</u>			

Interpreted by [Signature] Test Number 01-752
 Organization QUALITY ASSURANCE LABS Date 05 DEC 01

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of section 4 of AWS D1.1, (2000) Structural Welding Code—Steel.
 (year)

Manufacturer or Contractor _____ Authorized By _____
 Form E-4 Date _____



Bret Steel

AWS Certified Welder



Welders, Brazers, & Operators

Qualifications


G-D1.1-SMAW-F4-Pl-A-U

ID# 007-48-3649 issued 1/29/98

Bruce M. Bragg

Valid Only If Accompanied By Photo ID

AWS Certified Welder



Welders, Brazers, & Operators


Qualifications G-B2.1-SMAN-E7018-A36-3G/4G-U

ID# 004-44-9539 - Issued 6/12/95

David W. Sargent, Sr.

Valid Only if Accompanied By Photo ID

AWS Certified Welder



Welders, Brazers, & Operators


Qualifications G-D1.1-SM-F4-P-A-L

ID# 007-72-9877 - Issued 8/2/96

Solomon R. Gay

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AWS Certified Welder



Welders, Brazers, & Operators


Qualifications G-D1.1-SM-F4-P-A-L

ID# 397-54-1403 - Issued 6/27/96

Gary H. Zarate

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AWS Certified Welder



Welders, Brazers, & Operators


Qualifications 01.1-SM-F4-P-A-L

ID# 007-44-1265 - Issued 6/7/96

Ronald H. Moody

Valid Only if Accompanied By Photo ID

AWS Certified Welder



Welders, Brazers, & Operators

Qualifications G-D1.1-SMAW-F4-P1-A-U

ID# 004-74-4372 - Issued 10/24/97

Michael D. Schroeder

Valid Only if Accompanied By Photo ID



CERTIFICATE OF CONFORMANCE
(APPLIES ONLY TO U.S. PRODUCTS)

The Lincoln Electric Company
22801 St. Clair Avenue
Cleveland, Ohio 44117-1199

Order No.:
Production Code No.:
Size:

Product: Code-Arc® 7018 MR™
Classification: E7018 (ALSO MEETS THE REQUIREMENTS OF E7018HR)
Specification: AWS A5.1-91, ASME SFA-5.1
Date Completed: May 1, 2000

[1 Year]

This is to certify that the product named above and supplied on the referenced order number is of the same classification, manufacturing process, and material requirements as the material which was used for the test that was conducted on the date shown, the results of which are shown below. All tests required by the specifications shown for classification were performed at that time and the material tested met all requirements. It was manufactured and supplied according to the Quality System Program of the Lincoln Electric Company, Cleveland, Ohio, U.S.A., which meets the requirements of ISO9002, NCA3800, ANSI/AWS A5.01, JIS Z 9902, and other specification and Military requirements, as applicable. The Quality System Program has been approved by ASME, ABS, and VdTUV.

Operating Settings, Mechanical Properties (in the as-welded condition) and Chemical Analysis of the weld deposit were as follows:

	ANYSME REQUIREMENTS	5/32	3/16	1/4
		AC	AC	AC
Current (amps)		190	250	355
Plate Thickness (in.)		3/4	3/4	1
Passes/Layers		16/8	14/7	18/9
Preheat Temp. (°F)	225 min.	225	225	225
Interpass Temp. (°F)	225 to 350	350	325	325
Tensile Strength (psi)	70,000 min.	92,800	84,400	81,700
Yield Strength (psi)	58,000 min.	79,300	69,000	66,200
Elongation, % in 2"	22 min.	28	29	31
Hardness, Rockwell B (avg)	Not Required	91	89	87
Impact Properties (Charpy V-notch) @ -20°F	20 min.	78 (64, 64, 86)	84 (61, 84, 86)	105 (86, 104, 116)
% C	Not Req.	.08	.08	.08
Mn	1.80 max	1.26	1.11	1.09
Si	.75 max	.54	.54	.46
Ni	.30 max	.08	.08	.08
Cr	.20 max	.04	.06	.04
Mo	.30 max	.01	.01	<.01
V	.08 max	<.01	<.01	.01
Total alloy (C,Si)	1.75 max	1.37	1.25	1.18
Coating Moisture (%)	0.8 max.	.07	.09	.10

RADIOGRAPHIC TEST, Grade 1: Met requirements.

Exposed Weld Test (positions as required): Met requirements.

3/32" SIZES ARE CLASSIFIED AS E7018H, PER AWS A5.1-91.

The above information is to be used for this classification are 5/32", 3/16" and 1/4".

Diffusible Hydrogen (1)	3/32"	1/4"
(AWS AA-3-63)	.9	1.4

(1) Feet atmospheric condition of 20% relative humidity at 73°F.
Total of 21 grams of moisture per pound of dry air.

Cert. No. 61500

QUALITY OF CUYAHOGA COUNTY, OHIO
WARRANTY TO BE FORN TO BEFORE ME THIS

of May 20 00

of David L. Bell

DAVID L. BELL, CERTIFICATION SUPERVISOR

DAVID A. FINK, MANAGER, MATURE PRODUCTS CONSUMABLE R & D DEPT.

RES: September 23, 2004



Designation: A 325 - 93

American Association
State Highway and
Transportation Officials
Standard AASHTO No.: M 164

*MAT CTR
BOLT*

Standard Specification for Structural Bolts, Steel, Heat Treated, 120/105 ksi Minimum Tensile Strength¹

This standard is issued under the fixed designation A 325; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

This standard has been approved for use by agencies of the Department of Defense. Consult the DoD Index of Specifications and Standards for the specific year of issue which has been adopted by the Department of Defense.

1. Scope

1.1 This specification² covers two types of quenched and tempered steel structural bolts having a minimum tensile strength of 120 ksi for sizes 1.0 in. and less and 105 ksi for sizes over 1.0 to 1½ in. inclusive.

1.2 The bolts are intended for use in structural connections. These connections are covered under the requirements of the Specification for Structural Joints Using ASTM A 325 or A 490 Bolts, approved by the Research Council on Structural Connections of the Engineering Foundation.³

1.3 The bolts are furnished in sizes ½ to 1½ in. inclusive. They are designated by Type denoting chemical composition as follows:

Type	Description
Type 1	Medium carbon, carbon boron, or medium carbon alloy steel.
Type 2	Withdrawn in November 1991.
Type 3	Weathering steel. Atmospheric corrosion resistance and weathering characteristics are comparable to that of steels in Specifications A 242/A 242M, A 588/A 588M, and A 709/A 709M. The atmospheric corrosion resistance of these steels is substantially better than that of carbon steel with or without copper addition (see 5.2). When properly exposed to the atmosphere, these steels can be used bare (uncoated) for many applications.

NOTE 1—Bolts for general applications, including anchor bolts, are covered by Specification A 449. Also refer to Specification A 449 for quenched and tempered steel bolts and studs with diameters greater than 1½ in., but with similar mechanical properties.

NOTE 2—A complete metric companion to Specification A 325 has been developed—Specification A 325M; therefore no metric equivalents are presented in this specification.

2. Referenced Documents

2.1 ASTM Standards:

A 153 Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware⁴

A 194/A 194M Specification for Carbon and Alloy Steel Nuts for Bolts for High-Pressure and High-Temperature Service⁵

A 242/A 242M Specification for High-Strength Low-Alloy Structural Steel⁶

A 449 Specification for Quenched and Tempered Steel Bolts and Studs⁷

A 490 Specification for Heat-Treated Steel Structural Bolts, 150 ksi Minimum Tensile Strength⁷

A 563 Specification for Carbon and Alloy Steel Nuts⁷

A 588/A 588M Specification for High-Strength Low-Alloy Structural Steel with 50 ksi [345 MPa] Minimum Yield Point to 4 in. [100 mm] Thick⁶

A 709/A 709M Specification for Structural Steel for Bridges⁶

A 751 Test Methods, Practices, and Terminology for Chemical Analysis of Steel Products⁸

B 695 Specification for Coatings of Zinc Mechanically Deposited on Iron and Steel⁹

D 3951 Practice for Commercial Packaging¹⁰

F 436 Specification for Hardened Steel Washers⁷

F 606 Test Methods for Determining the Mechanical Properties of Externally and Internally Threaded Fasteners, Washers, and Rivets⁷

F 788/F 788M Specification for Surface Discontinuities of Bolts, Screws, and Studs, Inch and Metric Series⁷

F 959 Specification for Compressible-Washer-Type Direct Tension Indicators for Use with Structural Fasteners⁷

G 101 Guide for Estimating the Atmospheric Corrosion Resistance of Low-Alloy Steels¹¹

2.2 ANSI/ASME Standards:¹²

B1.1 Unified Screw Threads

B18.2.1 Square and Hex Bolts and Screws

B18.18.3M Inspection and Quality Assurance for Special Purpose Fasteners

¹ This specification is under the jurisdiction of ASTM Committee F-16 on Fasteners and is the direct responsibility of Subcommittee F16.02 on Steel Bolts, Nuts, Rivets, and Washers.

Current edition approved Feb. 15, 1993. Published April 1993. Originally published as A 325 - 64. Last previous edition A 325 - 92a.

² For ASME Boiler and Pressure Vessel Code applications see related Specification SA-325 in Section II of that Code.

³ Published by American Institute of Steel Construction, Wrigley Building, 400 N. Michigan Ave., Chicago, IL 60611.

⁴ Annual Book of ASTM Standards, Vol 01.06.

⁵ Annual Book of ASTM Standards, Vol 01.01.

⁶ Annual Book of ASTM Standards, Vol 01.04.

⁷ Annual Book of ASTM Standards, Vol 15.03.

⁸ Annual Book of ASTM Standards, Vol 01.03.

⁹ Annual Book of ASTM Standards, Vol 02.05.

¹⁰ Annual Book of ASTM Standards, Vol 15.09.

¹¹ Annual Book of ASTM Standards, Vol 03.02.

¹² Available from American National Standards Institute, 11 West 42nd Street, 13th Floor, New York, NY 10036.



A 325

2.3 Military Standard:¹³

MIL-STD-105 Sampling Procedure and Tables for Inspection by Attributes

3. Ordering Information

3.1 Orders for bolts under this specification shall include the following:

3.1.1 Quantity (number of pieces of bolts and accessories),
3.1.2 Size, including nominal bolt diameter and length (see 3.1.3.1).

3.1.2.1 Bolts threaded full length, specify Supplementary Requirements S1.

3.1.3 Name of product.

3.1.3.1 Heavy Hex Structural Bolts are supplied unless otherwise specified. For bolts other than Heavy Hex Structural, dimensional requirements must be specified on the purchase inquiry and order. The thread length may not be changed except as provided in Supplementary Requirements S1.

3.1.4 Type of bolt, that is Type 1 or 3.

3.1.5 ASTM designation and year of issue.

3.1.6 Accessories such as nuts and washers, when required.

3.1.7 Zinc Coating—Specify the zinc coating process required, for example, hot dip, mechanically deposited, or no preference (see 4.3).

3.1.8 Other Finishes—Specify other protective finish if required.

3.1.9 Test reports if required (see Section 14).

3.1.10 Special requirements.

NOTE 3—A typical ordering description follows: 1000 pieces 1 in. dia x 4 in. long Heavy Hex Structural Bolt, Type 1, ASTM A 325-XX; each with one Hardened Washer, ASTM F 436 Type 1; and one Heavy Hex Nut, ASTM A 563 Grade DH. Each component hot dip zinc coated. Nuts lubricated.

3.2 Recommended Nuts:

3.2.1 Unless otherwise specified, all nuts used on these bolts shall conform to the requirements of Specifications A 194/A 194M or A 563, shall be heavy hex, and shall be of the class and surface finish for each type of bolt as follows:

Bolt Type and Finish	Nut Class and Finish
1, plain (noncoated)	A 563-C, C3, D, DH, DH3, plain A 194-2, 2H, plain
1, zinc coated	A 563-DH, zinc coated A 194-2H, zinc coated, (see 3.2.2)
3, plain	A 563-C3, DH3, plain

3.2.2 When Specification A 194/A 194M (Gr. 2H zinc coated nuts are supplied, the zinc coating, overtapping, lubrication, and rotational capacity testing shall be in accordance with Specification A 563.

3.3 Unless otherwise specified, all washers used on these bolts shall conform to the requirements of Specifications F 436 or F 959 and shall be of a surface finish for each type of bolt as follows:

Bolt Type and Finish

1, plain (uncoated)
1, zinc coated
3, plain

Washer Finish

plain (uncoated)
zinc coated
weathering steel, plain

4. Materials and Manufacture

4.1 Heat Treatment—Bolts shall be heat treated by quenching in a liquid medium from above the austenitizing temperature and then tempering by reheating to a temperature of at least 800°F.

4.2 Threading—Threads of bolts may be cut or rolled.

4.3 Zinc Coatings, Hot-dip and Mechanically Deposited:

4.3.1 When zinc-coated fasteners are required, the purchaser shall specify the zinc coating process, for example, hot dip, mechanically deposited, or no preference.

4.3.2 When hot-dip is specified, the fasteners shall be zinc-coated by the hot-dip process and the coating shall conform to the coating weight/thickness and performance requirements of Class C of Specification A 153.

4.3.3 When mechanically deposited is specified, the fasteners shall be zinc-coated by the mechanical deposition process and the coating shall conform to the coating weight/thickness and performance requirements of Class 50 of Specification B 695.

4.3.4 When no preference is specified, the supplier may furnish either a hot-dip zinc coating in accordance with Specification A 153, Class C or a mechanically deposited zinc coating in accordance with Specification B 695, Class 50. Threaded components (bolts and nuts) shall be coated by the same zinc-coating process and the suppliers option is limited to one process per item with no mixed processes in a lot.

4.4 Lubrication—When zinc coated nuts are ordered with the bolts, the nuts shall be lubricated in accordance with Specification A 563 Supplementary Requirement S1 to minimize galling.

4.5 Secondary Processing—If heat treatment, zinc coating, lubrication, or other processing affecting properties is performed by a subcontractor, the fasteners shall be inspected after such processing by the party responsible for supplying the fasteners to the user or installer. Heat treated fasteners shall be tested for all mechanical properties; hot dip zinc coated fasteners for all mechanical properties and rotational capacity; mechanically zinc coated fasteners for rotational capacity; and lubricated fasteners for rotational capacity.

5. Chemical Composition

5.1 Type 1 bolts shall be plain carbon steel, carbon/boron steel, or alloy steel, at the manufacturers option, conforming to the chemical composition specified in Table 1.

5.2 Type 3 bolts shall be weathering steel and shall conform to one of the chemical compositions specified in Table 2. The selection of the chemical composition, A, B, C, D, E, or F, shall be at the option of the bolt manufacturer. See Guide G 101 for methods of estimating the atmospheric corrosion resistance of low alloy steels.

5.3 Product analyses may be made by the purchaser from finished material representing each lot of bolts. The chemical composition thus determined shall conform to the requirements specified in 5.1 or 5.2.

¹³ Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS

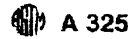


TABLE 1 Chemical Requirements for Type 1 Bolts

Element	Composition, %			
	Carbon or Alloy Steel		Carbon Boron Steel	
	Heat Analysis	Product Analysis	Heat Analysis	Product Analysis
Carbon	0.30-0.52	0.28-0.55	0.30-0.52	0.28-0.55
Manganese, min	0.60	0.57	0.60	0.57
Phosphorus, max				
C and C Boron	0.040	0.048	0.040	0.048
Alloy Steel	0.035	0.040	0.035	0.040
Sulfur, max				
C and C Boron	0.050	0.058	0.050	0.058
Alloy Steel	0.040	0.045	0.040	0.045
Silicon				
Alloy Steel	0.15-0.35	0.13-0.37	-	-
Boron	A	A	0.0005-0.003	0.0005-0.003
Alloying Elements	Permitted		-	-

^A Boron shall not be added.

5.4 Heats of steel to which bismuth, selenium, tellurium, or lead has been intentionally added shall not be permitted for bolts.

5.5 Chemical analyses shall be performed in accordance with Test Methods, Practices, and Terminology A 751.

6. Mechanical Properties

6.1 *Hardness*—The bolts shall conform to the hardness specified in Table 3.

6.2 *Tensile Properties:*

6.2.1 Bolts having a length of 3 times the diameter or longer (see 6.2.3) shall be tested full size and shall conform to the tensile strength and proof load or alternative proof load specified in Table 4.

6.2.2 Bolts having a length less than 3 times the diameter are not subject to tensile tests, except as permitted in 6.2.3.

6.2.3 Bolts having a length of 2 times the diameter or longer may be tested full size for tensile properties whenever test equipment is available. In such cases reference to "3 times the diameter" in Table 3, 6.2.1, and 6.2.2 shall be considered to be "2 times the diameter".

6.2.4 For bolts on which hardness and tension tests are performed, acceptance based on tensile requirements shall

TABLE 2 Chemical Requirements for Type 3 Bolts

Element	Composition, %					
	Type 3 Bolts ^A					
	A	B	C	D	E	F
Carbon:						
Heat analysis	0.33-0.40	0.38-0.46	0.15-0.26	0.15-0.25	0.20-0.25	0.20-0.26
Product analysis	0.31-0.42	0.36-0.50	0.14-0.26	0.14-0.26	0.18-0.27	0.19-0.28
Manganese:						
Heat analysis	0.90-1.20	0.70-0.90	0.80-1.35	0.40-1.20	0.60-1.00	0.90-1.20
Product analysis	0.86-1.24	0.67-0.93	0.76-1.39	0.36-1.24	0.58-1.04	0.85-1.24
Phosphorus:						
Heat analysis	0.040 max	0.06-0.12	0.035 max	0.040 max	0.040 max	0.040 max
Product analysis	0.045 max	0.06-0.125	0.040 max	0.045 max	0.045 max	0.045 max
Sulfur:						
Heat analysis	0.050 max	0.050 max	0.040 max	0.050 max	0.040 max	0.040 max
Product analysis	0.055 max	0.055 max	0.045 max	0.055 max	0.045 max	0.045 max
Silicon:						
Heat analysis	0.15-0.35	0.30-0.50	0.15-0.35	0.25-0.50	0.15-0.35	0.15-0.35
Product analysis	0.13-0.37	0.25-0.55	0.13-0.37	0.20-0.55	0.13-0.37	0.13-0.37
Copper:						
Heat analysis	0.25-0.45	0.20-0.40	0.20-0.50	0.30-0.50	0.30-0.60	0.20-0.40
Product analysis	0.22-0.48	0.17-0.43	0.17-0.53	0.27-0.53	0.27-0.63	0.17-0.43
Nickel:						
Heat analysis	0.25-0.45	0.50-0.80	0.25-0.50	0.50-0.80	0.30-0.60	0.20-0.40
Product analysis	0.22-0.48	0.47-0.83	0.22-0.53	0.47-0.83	0.27-0.63	0.17-0.43
Chromium:						
Heat analysis	0.45-0.65	0.50-0.75	0.50-0.50	0.50-1.00	0.60-0.90	0.45-0.65
Product analysis	0.42-0.68	0.47-0.83	0.27-0.53	0.45-1.05	0.55-0.95	0.42-0.68
Vanadium:						
Heat analysis	...	...	0.020 min	...	...	...
Product analysis	...	...	0.010 min	...	...	...
Molybdenum:						
Heat analysis	...	0.06 max	...	0.10 max	...	...
Product analysis	...	0.07 max	...	0.11 max	...	...
Titanium:						
Heat analysis	...	...	...	0.05 max	...	...
Product analysis	...	...	...	...	...	...

^A A, B, C, D, E, and F are classes of material used for Type 3 bolts. Selection of a class shall be at the option of the bolt manufacturer.

A 325

TABLE 3 Hardness Requirements for Bolts

Bolt Size, in.	Bolt Length, in.	Brinell		Rockwell C	
		Min	Max	Min	Max
1/2 to 1, incl	Less than 3D ^A	253	319	25	34
	3D and over	-	319	-	34
1 1/8 to 1 1/2, incl	Less than 3D ^A	223	286	19	30
	3D and over	-	286	-	30

^A Bolts having a length less than 3 times the diameter are subject only to minimum/maximum hardness. Such lengths cannot be reasonably tensile tested.
D = Nominal diameter or thread size.

TABLE 4 Tensile Requirements for Full Size Bolts

Bolt Size, Threads per Inch and Series Designation	Stress Area, ^A in. ²	Tensile Strength ^B min, lbf	Proof Load, ^B Length Measurement Method	Alternative Proof Load, ^B Yield Strength Method, min
1/2-13 UNC	0.142	17 050	12 050	13 050
5/8-11 UNC	0.226	27 100	19 200	20 800
3/4-10 UNC	0.334	40 100	28 400	30 700
7/8-9 UNC	0.462	55 450	39 250	42 500
1-8 UNC	0.608	72 700	51 500	55 750
1 1/8-7 UNC	0.763	80 100	56 450	61 800
1 1/4-8 UN	0.790	82 950	58 450	64 000
1 1/4-7 UNC	0.969	101 700	71 700	78 500
1 1/2-8 UN	1.000	105 000	74 000	81 000
1 3/8-6 UNC	1.155	121 300	85 450	93 550
1 3/8-8 UN	1.233	129 500	91 250	99 870
1 1/2-6 UNC	1.405	147 500	104 000	113 800
1 1/2-8 UN	1.492	156 700	110 400	120 850

^A The stress area is calculated as follows:
 $A_s = 0.7854 [D - (0.9743/n)]^2$

where:
A_s = stress area, in.².
D = nominal bolt size, and
n = threads per inch.

^B Loads tabulated are based on the following:

Bolt Size, in.	Column 3	Column 4	Column 5
1/2 to 1, incl	120 000 psi	85 000 psi	92 000 psi
1 1/8 to 1 1/2, incl	105 000 psi	74 000 psi	81 000 psi

take precedence in the event of controversy over low hardness tests.

6.3 Rotational Capacity (Lubricant) Test:

6.3.1 Definition—The rotational capacity test is intended to evaluate the efficiency of the lubricant on zinc coated nuts in Specification A 563.

6.3.2 Requirement—Zinc coated bolts and zinc coated and lubricated nuts tested full size in an assembled joint in accordance with 10.2, shall not show signs of failure when subjected to the nut rotation in Table 5. The test shall be performed by the responsible party (see Section 15) prior to shipment after zinc coating and lubrication of nuts.

6.3.3 Acceptance Criteria—The lubricant shall be considered as non conforming if the joint fails to pass one or more of the requirements specified below:

6.3.3.1 Inability to assemble to the nut rotation in Table 5 and remove the nut following the test.

6.3.3.2 Shear failure of the threads as determined by visual examination of bolt and nut threads following removal.

6.3.3.3 Torsional failure of the bolt. Elongation of the

TABLE 5 Rotational Capacity Test for Zinc-Coated Bolts

Bolt Length, in.	Nominal Nut Rotation, degrees (turn)	
	Solid Plate	Tension Measuring Device
Up to and including 4 x dia	300 (5/8)	300 (1 1/8)
Over 4 x dia, but not exceeding 8 x dia	360 (1)	450 (1 1/4)
Over 8 x dia	420 (1 1/8)	510 (1 1/2)

bolt, in the threads between the nut and bolt head, is to be expected at the required rotation and is not to be classified as a failure.

7. Dimensions

7.1 The bolts shall be full-body conforming to the dimensions for Heavy Hex Structural Bolts specified in ANSI/ASME B18.2.1.

7.1.1 Heavy Hex Structural Bolts shall be supplied, unless otherwise specified. For bolts other than Heavy Hex Structural, dimensional requirements must be specified on the purchase inquiry and order. The thread length may not be changed except as provided in Supplementary Requirement S1. Special thread lengths can be ordered under Specification A 449.

7.2 Threads shall be the Unified Coarse Thread Series as specified in ANSI/ASME B1.1, and shall have Class 2A tolerances. When specified, 8-pitch thread series may be used on bolts over 1 in. in diameter.

7.3 Unless otherwise specified, bolts to be used with nuts or tapped holes which have been tapped oversize, in accordance with Specification A 563, shall have Class 2A threads before hot-dip or mechanically deposited zinc coating. After zinc coating, the maximum limit of pitch and major diameter may exceed the Class 2A limit by the following amount:

Diameter, in. ^A	Oversize Limit, in. ^A
1/4	0.016
3/8, 1/2	0.017
5/8, 3/4	0.018
7/8 to 1 1/4 incl	0.020
1 1/2	0.022
1.0 to 1 1/4 incl	0.024
1 3/4, 1 1/2	0.027

^A These values are the same as the overlapping required for zinc-coated nuts in Specification A 563.

7.4 The gaging limit for bolts shall be verified during manufacture. In case of dispute, a calibrated thread ring gage of the same size as the oversize limit in 7.3 (Class X tolerance, gage tolerance plus) shall be used to verify compliance. Assembly of the gage, or the nut described above, must be possible with hand effort following application of light machine oil to prevent galling and damage to the gage. These inspections, when performed to resolve disputes, are to be performed at the frequency described in Table 6.

8. Workmanship

8.1 Surface discontinuity limits shall be in accordance with Specification F 788/F 788M.

9. Number of Tests and Retests

9.1 Testing Responsibility:

9.1.1 Each lot shall be tested by the manufacturer prior to shipment in accordance with the production lot identifica-

A 325

tion control quality-assurance plan in 9.2 thru 9.6.

9.1.2 When bolts are furnished by a source other than the manufacturer, the Responsible Party as defined in 15.1 shall be responsible for assuring all tests have been performed and the bolts comply with the requirements of this specification (see 4.5).

9.2 *Purpose of Lot Inspection*—The purpose of a production lot inspection program is to ensure that each lot conforms to the requirements of this specification. For such a plan to be fully effective it is essential that secondary processors, distributors, and purchasers maintain the identification and integrity of each lot until the product is installed.

9.3 *Production Lot Method*—All bolts shall be processed in accordance with a lot identification-control quality assurance plan. The manufacturer, secondary processors, and distributors shall identify and maintain the integrity of each production lot of bolts from raw-material selection through all processing operations and treatments to final packing and shipment. Each lot shall be assigned its own lot-identification number, each lot shall be tested, and the inspection test reports for each lot shall be retained.

9.4 *Production Lot Definition*—A production lot, for purposes of assigning an identification number and from which test samples shall be selected, shall consist of all bolts processed essentially together through all operations to the shipping container that are of the same nominal size, the same nominal length, and produced from the same mill heat of steel.

9.5 *Number of Tests*

9.5.1 The minimum number of tests from each production lot shall conform to the following:

Test	Number of Pieces in Production Lot	Number of Tests	Acceptance Number
Hardness	800 and less	1	0
	801 to 8,000	2	0
	8,001 to 35,000	3	0
	35,001 to 150,000	8	0
Proof Load	150,001 and over	13	0
	150,000 and less	2	0
Rotational Capacity	150,000 and less	2	0
Coating Weight	250,000 and less	4	0
Dimensions	in accordance with the manufacturer standard quality control practices. In the event of dispute, acceptance shall be based on the requirements for Final Inspection-Non Destructive shown in ASME/ANSI B13.18.3M		
Thread fit	Non Coated	Same as Dimensions	
	Coated	In accordance with 7.4 and Table 6	
Head Bursts	In accordance with Section 11 and Table 7		

9.6 When tested in accordance with the required sampling plan, a lot shall be rejected if any of the test specimens fail to meet the applicable test requirements.

10. *Test Methods*

10.1 *Tensile and Hardness:*

10.1.1 Tensile and hardness tests shall be conducted in

TABLE 6 Sample Sizes and Acceptance Numbers for Inspection of Hot Dip or Mechanically Deposited Zinc-Coated Threads

Lot Size	Sample Size ^{A,B}	Acceptance Number ^A
2 to 90	13	1
91 to 150	20	2
151 to 280	32	3
281 to 500	50	5
501 to 1 200	80	7
1 201 to 3 200	125	10
3 201 to 10 000	200	14
10 001 and over	315	21

^A Sample sizes of acceptance numbers are extracted from "Single Sampling Plan for Normal Inspection" Table II, MIL-STD-105.

^B Inspect all bolts in the lot if the lot size is less than the sample size.

TABLE 7 Sample Sizes with Acceptance and Rejection Numbers for Inspection of Bursts 2.5 AQL

Lot Size	Sample Size ^{A,B}	Acceptance Number ^A	Rejection No.
2 to 8	2	0	1
9 to 15	3	0	1
16 to 25	5	0	1
26 to 150	20	1	2
151 to 280	32	2	3
281 to 500	50	3	4
501 to 1 200	80	5	6
1 201 to 3 200	125	7	8
3 201 to 10 000	200	10	11
10 001 to 35 000	315	14	15

^A Sample sizes, acceptance numbers, and rejection numbers are extracted from "Single Sampling Plan for Normal Inspection" Table II, MIL-STD-105.

^B Inspect all bolts in the lot if the lot size is less than the sample size.

accordance with Test Methods F606 using the wedge tension testing of full size product method to determine full size tensile strength.

10.1.2 Proof load shall preferably be determined using Method 1, Length Measurement.

10.1.3 Fracture shall be in the body or threads of the bolt without any fracture at the junction of the head and body.

10.2 *Rotational Capacity*—The zinc-coated bolt shall be placed in a steel joint or tension measuring device and assembled with a zinc-coated washer and a zinc-coated and lubricated nut with which the bolt is intended to be used. The nut shall have been provided with the lubricant described in the last paragraph of the Manufacturing Processes section of Specification A 563. The joint shall be one or more flat structural steel plates or fixture stack up with a total thickness, including the washer, such that 3 to 5 full threads of the bolt are located between the bearing surfaces of the bolt head and nut. The hole in the joint shall have the same nominal diameter as the hole in the washer. The initial tightening of the nut shall produce a load in the bolt not less than 10 % of the specified proof load.¹⁴ After initial tightening, the nut position shall be marked relative to the bolt, and the rotation shown in Table 5 shall be applied. During rotation, the bolt head shall be restrained from turning.

11. *Visual Inspection for Head Bursts*

11.1 *Requirement*—Each lot shall be visually inspected

¹⁴ Use of the torque value obtained in a Skidmore-Whelm calibrator, or equivalent, may be used in meeting this requirement.

A 325

for head bursts and shall meet an acceptable quality level of 2.5 as specified in Table 7.

11.2 *Testing*—AQL sampling and inspection shall be conducted in accordance with the sample size, acceptance, and rejection values specified in Table 7. Samples shall be picked at random.

11.3 *Definitions:*

11.3.1 *Burst*—A burst is an open break in the metal (material). Bursts can occur on the flats or corners of the heads of bolts.

11.3.2 *Defective Bolt*—A defective bolt, for the purposes of the visual inspection for bursts, shall be any bolt that contains a burst in the flat of the head which extends into the top crown surface of the head (chamfer circle) or the under-head bearing surface. In addition, bursts occurring at the intersection of two wrenching flats shall not reduce the width across corners below the specified minimum.

11.3.3 *Lot*—A lot, for the purposes of visual inspection, shall consist of all bolts of one type having the same nominal diameter and length made from the same heat of material and by the same production process and subsequently submitted for final inspection at one time.

11.4 *Acceptance Criteria:*

11.4.1 *Manufacturer*—If the number of defective bolts found during inspection by the manufacturer is greater than the acceptance number given in Table 7 for the sample size, all bolts in the lot shall be visually inspected and all defective bolts shall be removed and destroyed.

11.4.2 *Purchaser*—If the number of defective bolts found during inspection by the purchaser is greater than the acceptance number given in Table 7 for the sample size, the lot shall be subject to rejection.

12. *Inspection*

12.1 If the inspection described in 12.2 is required by the purchaser, it shall be specified in the inquiry and contract or order.

12.2 The inspector representing the purchaser shall have free entry to all parts of the manufacturer's works, or supplier's place of business, that concern the manufacture or supply of the material ordered. The manufacturer or supplier shall afford the inspector all reasonable facilities to satisfy him that the material is being furnished in accordance with this specification. All tests and inspections required by the specification that are requested by the purchaser's representative shall be made before shipment, and shall be conducted as not to interfere unnecessarily with the operation of the manufacturer's works or supplier's place of business.

13. *Rejection and Rehearing*

13.1 Material that fails to conform to the requirements of this specification may be rejected. Rejection should be reported to the manufacturer or supplier promptly and in writing. In case of dissatisfaction with the results of the test, the manufacturer or supplier may make claim for a rehearing.

14. *Certification*

14.1 When specified on the purchase order, the manufacturer or supplier, whichever is the responsible party as defined in Section 15, shall furnish the purchaser a test

report which includes the following:

- 14.1.1 Heat analysis and heat number,
 - 14.1.2 Results of hardness, tensile, and proof load tests,
 - 14.1.3 Results of rotational capacity tests. This shall include the test method used (solid plate or tension measuring device); and the lubricant present for zinc coated nuts when shipped with zinc coated bolts,
 - 14.1.4 Zinc coating measured coating weight/thickness for coated bolts,
 - 14.1.5 Results of visual inspection for bursts,
 - 14.1.6 Statement of compliance with dimensional and thread fit requirements,
 - 14.1.7 Lot number and purchase order number,
 - 14.1.8 Complete mailing address of responsible party, and
 - 14.1.9 Title and signature of the individual assigned certification responsibility by the company officers.
- 14.2 Failure to include all the required information on the test report shall be cause for rejection.

15. *Responsibility*

15.1 The party responsible for the fastener shall be the organization that supplies the fastener to the purchaser and certifies that the fastener was manufactured, sampled, tested and inspected in accordance with this specification and meets all of its requirements.

16. *Product Marking*

16.1 *Manufacturers Identification*—All Type 1 and 3 bolts shall be marked by the manufacturer with a unique identifier to identify the manufacturer or private label distributor, as appropriate.

16.2 *Grade Identification:*

16.2.1 Type 1 bolts shall be marked "A 325." Additionally, the bolts may be marked with 3 radial lines 120 degrees apart.

16.2.2 Type 3 bolts shall be marked A 325 with the A 325 underlined. The manufacturer may add other distinguishing marks indicating the bolt is a weathering type.

16.3 *Marking Location and Methods*—All marking shall be located on the top of the bolt head and may be either raised or depressed at the manufacturer's option.

16.4 *Acceptance Criteria*—Bolts which are not marked in accordance with these provisions shall be considered non-conforming and subject to rejection.

16.5 Type and manufacturer's or private label distributor's identification shall be separate and distinct. The two identifications shall preferably be in different locations and, when on the same level, shall be separated by at least two spaces.

17. *Packaging and Package Marking*

17.1 *Packaging:*

17.1.1 Unless otherwise specified, packaging shall be in accordance with Practice D 3951.

17.1.2 When zinc coated nuts are included on the same order as zinc coated bolts, the bolts and nuts shall be shipped in the same container.

17.1.3 When special packaging requirements are required, they shall be defined at the time of the inquiry and order.

17.2 *Package Marking:*

17.2.1 Each shipping unit shall include or be plainly

 A 325

marked with the following information:

- 17.2.1.1 ASTM designation and type,
- 17.2.1.2 Size,
- 17.2.1.3 Name and brand or trademark of the manufacturer,
- 17.2.1.4 Number of pieces,

- 17.2.1.5 Lot number,
- 17.2.1.6 Purchase order number, and
- 17.2.1.7 Country of origin.

18. Keywords

- 18.1 bolts; carbon steel; steel; structural; weathering steel

SUPPLEMENTARY REQUIREMENTS

The following supplementary requirements shall apply only when specified by the purchaser in the contract or order. Details of these supplementary requirements shall be agreed upon in writing between the manufacturer and purchaser. Supplementary requirements shall in no way negate any requirement of the specification itself.

S1. Bolts Threaded Full Length

S1.1 Bolts with nominal lengths equal to or shorter than four times the nominal bolt diameter shall be threaded full length. Bolts need not have a shoulder, and the distance from the underhead bearing surface to the first complete (full

form) thread, as measured with a GO thread ring gage, assembled by hand as far as the thread will permit, shall not exceed the length of 2½ threads for bolt sizes 1 in. and smaller, and 3½ threads for bolt sizes larger than 1 in.

S1.2 Bolts shall be marked in accordance with Section 16, except that the symbol shall be A 325 T instead of A 325.

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DATE	2/25/04
INVOICE NO.	845849
BILL OF LADING	667585
CUSTOMER NO.	3738
CUSTOMER P.O.	SKO-433

NUCOR-YAMATO STEEL CO.
P.O. BOX 1228 • BLYTHEVILLE, AR 72316

CERTIFIED MILL TEST REPORT

100% MELTED AND MANUFACTURED IN U.S.A.
All shapes produced by Nucor-Yamato Steel are cast and rolled to a fully killed and fine grain practice.

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CONGDON & CARPENTER DIV
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SEEKONK, MA 02771-0000

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GRADE: ASTM A992-02; ASTM A572GR50-01
ASTM A709/A709M-01b GR50 (345)
ASTM A709/A709M-01b GR50S (345S)

ASTM A6/A6M-02b

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METALS USA PLATES & SHAPES
NORTHEAST OFFICE
2025 GREENTREE ROAD, 2ND FL
PITTSBURGH, PA 15220-0000

ITEM #	ITEM DESCRIPTION	QTY	HEAT #	MECHANICAL PROPERTIES							CHEMICAL PROPERTIES											
				YIELD TO TENSILE RATIO	YIELD STRENGTH	TENSILE STRENGTH	ELONG	CHARPY IMPACT		C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb	CE	
					PSI	PSI		%	TEMP													IMPACT ENERGY
					MPa	MPa		%	° F													FT-LBS
1	W21 - 50.0 55'	1	230403	.77	53000	69000	27				.06	1.10	.019	.034	.32	.34	.11	.08	.03	.01	.018	.29
	W530 x 74.0 16.764 M			.75	51000	68000	27												.01	.15		
2	W21 - 50.0 55'	2	230735	.76	55000	72000	26				.08	1.14	.017	.040	.30	.32	.10	.11	.03	.01	.020	.33
	W530 x 74.0 16.764 M			.77	56000	73000	26												.01	.18		
3	W21 - 57.0 45'	2	228070	.72	51000	71000	26				.05	1.18	.030	.025	.26	.44	.10	.13	.03	.01	.019	.32
	W530 x 85.0 13.716 M			.76	55000	72000	27												.01	.15		
4	W21 - 57.0 45'	1	230697	.75	54000	72000	26				.06	1.14	.018	.037	.30	.32	.12	.13	.03	.01	.017	.31
	W530 x 85.0 13.716 M			.74	55000	74000	26												.01	.16		
5	W21 - 62.0 60'	1	230608	.76	56000	74000	24				.08	1.14	.015	.034	.31	.32	.15	.12	.03	.01	.018	.33
	W530 x 92.0 18.288 M			.76	56000	74000	26												.01	.18		
6	W21 - 62.0 60'	2	230659	.76	58000	76000	26				.06	1.10	.016	.038	.29	.34	.12	.12	.03	.01	.023	.30
	W530 x 92.0 18.288 M			.75	57000	76000	25												.01	.16		

METALS USA SEEKONK - TEST REPORT
Customer: Precisionwldg
Date: 4-2-04
Your P.O. #: 10953
Our Charge #: 86795

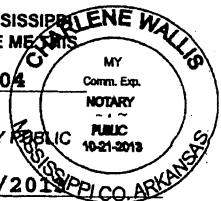
Carbon Equivalent: CE = CE(IIW) = C + Mn/6 + (Cr+Mo+V)/5 + (Ni+Cu)/15
Corrosion Index: CI = 36.0(%C) + 3.34(%Mn) + 1.20(%Si) + 1.48(%S) + 17.24(%P) + 7.23(%Cu) + 10(%Ni) + 33.28(%Cr)²

ELONGATION BASED ON 8.00 INCH GAUGE LENGTH
I hereby certify that the contents of this report are accurate and correct. All test results and operations performed by this material manufacturer are in compliance with the requirements of the material specifications, and when designated by the purchaser, meet the applicable specifications.

Gay Linnell

QUALITY ASSURANCE
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STATE OF ARKANSAS COUNTY OF MISSISSIPPI
SWORN TO AND SUBSCRIBED BEFORE ME THIS
25 Day of 02/04
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MY COMMISSION EXPIRES 10/21/2013



DATE	2/25/04
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NORTHEAST OFFICE
2025 GREENTREE ROAD, 2ND FL
PITTSBURGH, PA 15220-0000

ITEM #	ITEM DESCRIPTION	QTY	HEAT #	MECHANICAL PROPERTIES							CHEMICAL PROPERTIES											
				YIELD TO TENSILE RATIO	YIELD STRENGTH	TENSILE STRENGTH	ELONG	CHARPY IMPACT		C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb	CE	
					PSI	PSI		TEMP	IMPACT ENERGY													
					MPa	MPa		* F	FT-LBS													
1	W21 - 50.0 55' W530 x 74.0 16.764 M	1	230403	.77 .75	53000 51000	69000 68000	27 27				.06	1.10	.019	.034	.32	.34	.11	.08	.03 .01	.01 .15	.018 .33	.29
2	W21 - 50.0 55' W530 x 74.0 16.764 M	2	230735	.76 .77	55000 56000	72000 73000	26 26				.08	1.14	.017	.040	.30	.32	.10	.11	.03 .01	.01 .18	.020 .33	.33
3	W21 - 57.0 45' W530 x 85.0 13.716 M	2	228070	.72 .76	51000 55000	71000 72000	26 27				.05	1.18	.030	.025	.26	.44	.10	.13	.03 .01	.01 .15	.019 .32	.32
4	W21 - 57.0 45' W530 x 85.0 13.716 M	1	230697	.75 .74	54000 55000	72000 74000	26 26				.06	1.14	.018	.037	.30	.32	.12	.13	.03 .01	.01 .16	.017 .31	.31
5	W21 - 62.0 60' W530 x 92.0 18.288 M	1	230608	.76 .76	56000 56000	74000 74000	24 26				.08	1.14	.015	.034	.31	.32	.15	.12	.03 .01	.01 .18	.018 .33	.33
6	W21 - 62.0 60' W530 x 92.0 18.288 M	2	230659	.76 .75	58000 57000	76000 76000	26 25				.06	1.10	.016	.038	.29	.34	.12	.12	.03 .01	.01 .16	.023 .30	.30

METALS USA - SEEKONK - TEST REPORT
Customer: Precision Welding
Date: 4-2-04
Your P.O.#: 10953
Our Charge #: 86795

Carbon Equivalent: $CE = C + \frac{Mn}{6} + \frac{Cr + Mo + V}{5} + \frac{Ni + Cu}{15}$
Corrosion Index: $CI = 28.0(\%Cu) + 2.8(\%Ni) + 1.20(\%S) + 1.48(\%S) + 17.28(\%P) - 7.28(\%Cu)(\%Ni) - 0.10(\%Ni)(\%P) - 33.38(\%Cu)^2$

ELONGATION BASED ON 8.00 INCH GAUGE LENGTH

I hereby certify that the contents of this report are accurate and correct. All test results and operations performed by this material manufacturer are in compliance with the requirements of the material specifications, and when designated by the purchaser, meet the applicable specifications.

Doug Linnell
QUALITY ASSURANCE

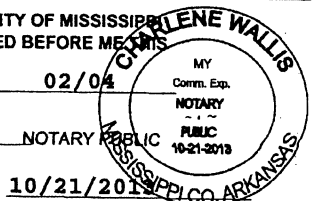
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STATE OF ARKANSAS COUNTY OF MISSISSIPPI
SWORN TO AND SUBSCRIBED BEFORE ME

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Charlene Wallis NOTARY PUBLIC

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GRADE: ASTM A992-02; ASTM A572GR50-01
ASTM A709/A709M-01b GR50 (345)
ASTM A709/A709M-01b GR50S (345S)

ASTM A6/A6M-02b

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2025 GREENTREE ROAD, 2ND FL
PITTSBURGH, PA 15220-0000

ITEM #	ITEM DESCRIPTION	QTY	HEAT #	MECHANICAL PROPERTIES							CHEMICAL PROPERTIES											
				YIELD TO TENSILE RATIO	YIELD STRENGTH	TENSILE STRENGTH	ELONG	CHARPY IMPACT		C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb	CE	
					PSI	PSI		TEMP	IMPACT ENERGY													
					MPa	MPa		° F	FT-LBS													
1	W21 - 50.0 55' W530 x 74.0 16.764 M	1	230403	.77	53000	69000	27				.06	1.10	.019	.034	.32	.34	.11	.08	.03	.01	.018	.29
2	W21 - 50.0 55' W530 x 74.0 16.764 M	2	230735	.76	55000	72000	26				.08	1.14	.017	.040	.30	.32	.10	.11	.03	.01	.020	.33
3	W21 - 57.0 45' W530 x 85.0 13.716 M	2	228070	.72	51000	71000	26				.05	1.18	.030	.025	.26	.44	.10	.13	.03	.01	.019	.32
4	W21 - 57.0 45' W530 x 85.0 13.716 M	1	230697	.75	54000	72000	26				.06	1.14	.018	.037	.30	.32	.12	.13	.03	.01	.017	.31
5	W21 - 62.0 60' W530 x 92.0 18.288 M	1	230608	.76	56000	74000	24				.08	1.14	.015	.034	.31	.32	.15	.12	.03	.01	.018	.33
6	W21 - 62.0 60' W530 x 92.0 18.288 M	2	230659	.76	58000	76000	26				.06	1.10	.016	.038	.29	.34	.12	.12	.03	.01	.023	.30

METALS USA - SEEKONK - TEST REPORT
Customer: Precision Wldg
Date: 4-2-04
Your P.O. #: 10953
Our Charge #: 86795

Formula: $C = \frac{Si}{20} + \frac{Mn}{20} + \frac{Cu}{60} + \frac{Ni}{60} + \frac{V}{10} + 5B$ Approx. 0.005
CARBON EQUIVALENT: $CE = CE(IW) = C + \frac{Mn}{6} + \frac{(Cr+Mo+V)}{5} + \frac{(Ni+Cu)}{15}$
Corrosion Index: $CI = 36.0(\%Cu) + 3.88(\%Ni) + 1.20(\%Cr) + 1.48(\%Mn) + 17.28(\%P) + 7.28(\%Cu) + 0.10(\%Ni) + 33.38(\%Co)^2$

ELONGATION BASED ON 8.00 INCH GAUGE LENGTH

I hereby certify that the contents of this report are accurate and correct. All test results and operations performed by this material manufacturer are in compliance with the requirements of the material specifications, and when designated by the purchaser, meet the applicable specifications.

Gay Lennell

QUALITY ASSURANCE

CUSTOMER COPY

STATE OF ARKANSAS COUNTY OF MISSISSIPPI
SWORN TO AND SUBSCRIBED BEFORE ME THIS

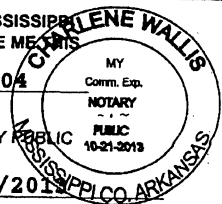
25 Day of 02/04

Charlene Wallis

NOTARY PUBLIC

MY COMMISSION EXPIRES

10/21/2013



CERTIFIED MILL TEST REPORT

100% MELTED AND MANUFACTURED IN U.S.A.
All shapes produced by Nucor-Yamato Steel are cast and rolled to a fully killed and fine grain practice.

NUCOR-YAMATO STEEL CO.

P.O. BOX 1228 • BLYTHEVILLE, AR 72316

DATE 1/16/04
INVOICE NO. 838029
BILL OF LADING 661917
CUSTOMER NO. 4284
CUSTOMER P.O. APA-1698

S METALS USA PLATES & SHAPES AMBRIDGE
H 81 CENTURY DRIVE
I
P AMBRIDGE, PA 15003
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S GRADE: ASTM A992-02; ASTM A572GR50-01
P ASTM A709/A709M-01b GR50 (345)
E ASTM A709/A709M-01b GR50S (345S)
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S METALS USA PLATES & SHAPES
O NORTHEAST OFFICE
L 2025 GREENTREE ROAD, 2ND FL.
D PITTSBURGH, PA 15226-0000
T
O

ASTM A6/A6M-02b

MECHANICAL PROPERTIES

CHEMICAL PROPERTIES

ITEM #	ITEM DESCRIPTION	QTY	HEAT #	YIELD TO TENSILE RATIO	TENSILE STRENGTH		ELONG %	CHARPY IMPACT		C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb	CE
					PSI	MPa		TEMP °F	IMPACT ENERGY FT-LBS												
1	W21 - 50.0	1	227850	.75	57000	76000	26			.07	1.16	.019	.038	.27	.33	.12	.12	.03	.00	.015	.3
	55'			.73	53000	73000	26														
	W530 x 74.0				393	524	26														
2	W21 - 50.0	8	227854	.73	54000	74000	25			.07	1.14	.020	.034	.32	.32	.10	.10	.03	.01	.017	.3
	55'			.74	55000	74000	27														
	W530 x 74.0				372	510	25														
3	W21 - 50.0	2	227857	.76	56000	74000	27			.07	1.10	.021	.035	.28	.37	.09	.10	.02	.01	.017	.3
	55'			.75	56000	75000	25														
	W530 x 74.0				386	510	27														
4	W21 - 50.0	1	227866	.78	57000	73000	26			.06	1.12	.016	.034	.31	.32	.13	.11	.04	.01	.024	.3
	55'			.77	58000	75000	26														
	W530 x 74.0				393	503	26														
	16.764 M				400	517	26														

METALS USA - SEIKONG - TEST REPORT

Customer: Precision Welding
Date: 4-2-04
Your P.O. #: 10953
Our Charge #: 86790

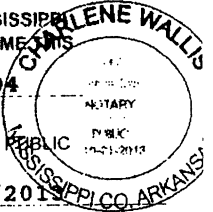
SEIKONG STEEL CO. CARBON EQUIVALENT: C + (Mn/6) + (Cr/4) + (Mo/4) + (Ni/40) + (Cu/12) = 0.0015

ELONGATION BASED ON 8.00 INCH GAUGE LENGTH
I hereby certify that the contents of this report are accurate and correct. All test results and operations performed by this material manufacturer are in compliance with the requirements of the material specifications, and when designated by the purchaser, meet the applicable specifications.

Gay-Lonnell

QUALITY ASSURANCE
CUSTOMER COPY

STATE OF ARKANSAS COUNTY OF MISSISSIPPI
SWORN TO AND SUBSCRIBED BEFORE ME THIS 16 Day of 01/04
Charlene Wallis NOTARY PUBLIC
MY COMMISSION EXPIRES 10/21/2013



DATE	2/25/04
INVOICE NO.	845846
BILL OF LADING	667585
CUSTOMER NO.	3738
CUSTOMER P.O.	SKO-366

NUCOR-YAMATO STEEL CO.
P.O. BOX 1228 • BLYTHEVILLE, AR 72316

CERTIFIED MILL TEST REPORT

100% MELTED AND MANUFACTURED IN U.S.A.
All shapes produced by Nucor-Yamato Steel are cast and rolled to a fully killed and fine grain practice.

S
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METALS USA PLATES & SHAPES SEEKONK
CONGDON & CARPENTER DIV
10 TOWER RD
SEEKONK, MA 02771-0000

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N
S
GRADE: ASTM A992-02; ASTM A572GR50-01
ASTM A709/A709M-01b GR50 (345)
ASTM A709/A709M-01b GR50S (345S)

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METALS USA PLATES & SHAPES
NORTHEAST OFFICE
2025 GREENTREE ROAD, 2ND FL
PITTSBURGH, PA 15220-0000

ASTM A6/A6M-02b

ITEM DESCRIPTION	QTY	HEAT #	MECHANICAL PROPERTIES						CHEMICAL PROPERTIES											
			YIELD TO TENSILE RATIO	YIELD STRENGTH	TENSILE STRENGTH	ELONG	CHARPY IMPACT		C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb	CE
				PSI	PSI		TEMP	IMPACT ENERGY												
				MPa	MPa		° F	FT-LBS												
1 W08 - 31.0 40' W200 x 46.1 12.192 M	1	229867	.76 .77	60000 60000	79000 78000	22 22														
2 W08 - 31.0 40' W200 x 46.1 12.192 M	5	229873	.77 .77	58000 59000	75000 77000	25 25														
3 W08 - 31.0 40' W200 x 46.1 12.192 M	4	229875	.73 .74	57000 58000	78000 78000	25 23														
4 W08 - 35.0 50' W200 x 52.0 15.240 M	5	229887	.78 .78	59000 59000	76000 76000	23 22														

METALS USA - SEEKONK - TEST REPORT
Customer: Precision Welding
Date: 4-2-04
Your P.O.#: 10953
Our Charge#: 86795

ELONGATION BASED ON 8.00 INCH GAUGE LENGTH

I hereby certify that the contents of this report are accurate and correct. All test results and operations performed by this material manufacturer are in compliance with the requirements of the material specifications, and when designated by the purchaser, meet the applicable specifications.

Doug Lennell

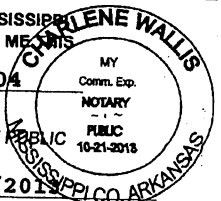
QUALITY ASSURANCE
CUSTOMER COPY

STATE OF ARKANSAS COUNTY OF MISSISSIPPI
SWORN TO AND SUBSCRIBED BEFORE ME THIS

25 Day of 02/04

Charlene Wallis NOTARY PUBLIC

MY COMMISSION EXPIRES 10/21/2013



01Apr04 09:52

SHIPPING ORDER

No:SKO W-87796

Sold By:

Ship From:

Metals USA

Metals USA

Plates & Shapes Northeast

Plates & Shapes Northeast

Plates & Shapes - Seekonk

Plates & Shapes - Seekonk

10 Tower Road

10 Tower Road

Seekonk, MA 02771

Seekonk, MA 02771

Tel: 508 399-8500 Fax: 508 399-6120

Sold To: (805613)

Ship To: (001)

PRECISION WELDING & FABRICATION

PRECISION WELDING & FABRICATION

P.O. BOX 880

690 A STROUDWATER STREET

WESTBROOK, ME. 04098

WESTBROOK, ME. 04098

Tel: 207-854-9330 Fax: 207-854-9694

Term NET 60 DAYS

Ord 01Apr04 Due 06Apr04

mt PREPAID

Via OUR TRUCK

FOB DLVRD

Plp RON MORIN

PC/Rel 10953

RON MORIN

SHIPPING ORDER

SO No SKO W-87796

Test Certs: Chem Y Phys Y 1 Original copies with Shipment, 0 with Invoice

1 Carbon Wide Flange Beam A 992
21 x 62 X 40

1 PCS 2480 LBS
40 FT

Heat No: 225673

Shipped:

1 PCS LBS

SIGNATURE: Ray Woods DATE: _____

LOADER'S INITIALS: JM DRIVER'S INITIALS: _____

4-5-04

Order Totals: 1 Items 2480 LBS

OUTSIDE DOOR # 3 @ STREET

01Apr04 09:52

SHIPPING ORDER

No:SKO W-87796

Sold By:

Ship From:

Metals USA

Metals USA

Plates & Shapes Northeast

Plates & Shapes Northeast

Plates & Shapes - Seekonk

Plates & Shapes - Seekonk

10 Tower Road

10 Tower Road

Seekonk, MA 02771

Seekonk, MA 02771

Tel: 508 399-8500 Fax: 508 399-6120

Sold To: (805613)

Ship To: (001)

PRECISION WELDING & FABRICATION

PRECISION WELDING & FABRICATION

P.O. BOX 880

690 A STROUDWATER STREET

WESTBROOK, ME. 04098

WESTBROOK, ME. 04098

Tel: 207-854-9330 Fax: 207-854-9694

Term NET 60 DAYS

Ord 01Apr04 Due 06Apr04

rt PREPAID

Via OUR TRUCK

FOB DLVRD

Slp RON MORIN

PO/Rel 10953

RON MORIN

SHIPPING ORDER

SO No

SKO W-87796

Test Certs: Chem Y Phys Y 1 Original copies with Shipment, 0 with Invoice

1 Carbon Wide Flange Beam A 992
21 x 62 X 40

1 PCS

2480 LBS
40 FT

Heat No: 225673

Shipped:

1 PCS

LBS

SIGNATURE:

Ray Moody

DATE:

LOADER'S INITIALS:

JMS

DRIVER'S INITIALS:

4-5-04

Order Totals:

1 Items

2480 LBS

OUTSIDE DOOR # 3 @ STREET



PLATES AND SHAPES – SEEKONK

10 Tower Road • Seekonk, MA 02771
(508) 399-8500
800 343-1100 Toll-Free
(508) 399-6120 Fax

PRECISION WELDING
PO BOX 880
WESTBROOK, ME 04098

MAR 15, 2004

Your Purchase Order : 10953
Our Order Number : 86799

This is to certify that the material shipped against your order conforms to the material specification listed below.

2 Pcs. A992 W18 X 35# X 50 ft. HEAT# 58460

Metals USA – Seekonk , MA


General Manager

DATE	9/05/03
INVOICE NO.	811535
BILL OF LADING	642895
CUSTOMER NO.	0001
CUSTOMER P.O.	SKO-121 PORT

NUCOR-YAMATO STEEL CO.
P.O. BOX 1228 • BLYTHEVILLE, AR 72316

CERTIFIED MILL TEST REPORT

100% MELTED AND MANUFACTURED IN U.S.A.
All shapes produced by Nucor-Yamato Steel are cast and rolled to a fully killed and fine grain practice.

S
H METALS USA PLATES & SHAPES SEEKONK
I CONGDON & CARPENTER DIV.
P 10 TOWER RD.
T SEEKONK, MASS 02771-0000
O

S
P GRADE: ASTM A992-01; ASTM A572GR50-01
E ASTM A709/A709M-01a GR50 (345)
C ASTM A709/A709M-01a GR50S (345S)
I GRADE: AASHTO M270-50 (345)
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S
O METALS USA PLATES & SHAPES
L NORTHEAST OFFICE
D 2025 GREENTREE ROAD, 2ND FL
T PITTSBURGH, PA 15220-0000
O

ASTM A6/A6M-01b

ITEM	DESCRIPTION	QTY	HEAT #	MECHANICAL PROPERTIES							CHEMICAL PROPERTIES											
				YIELD TO TENSILE RATIO	YIELD STRENGTH	TENSILE STRENGTH	ELONG	CHARPY IMPACT		C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb	CE	
					PSI	PSI		° F	FT-LBS													
					MPa	MPa		° C	JOULES													
1	W21 - 68.0 50' W530 x101.0 15.240 M	1	220953	.78	57000	73000	25				.07	1.13	.017	.040	.32	.46	.11	.11	.02	.00	.016	.33
				.78	57000	73000	25												.01	.17		
2	W21 - 68.0 50' W530 x101.0 15.240 M	2	220957	.79	59000	75000	25	✓			.07	1.10	.015	.032	.28	.42	.11	.10	.02	.01	.024	.32
				.79	57000	72000	25												.01	.17		
					407	517	25															
					393	496	25															

METALS USA - SEEKONK - TEST REPORT
Customer: Precision Wldg
Date: 3-15-04
Your P.O. #: 10953
Our Charge #: 86797

CARBON EQUIVALENT: CE = C/(W) = C + Mn/6 + (Cr+Mo+V)/5 + (Ni+Cu)/15
Corrosion Index: CI = 28.0(Cu) + 2.8(Ni) + 1.20(Cr) + 1.48(Si) + 17.28(P) + 7.28(Cu) + 9.10(Ni) + 33.38(Cu)

ELONGATION BASED ON 8.00 INCH GAUGE LENGTH

I hereby certify that the contents of this report are accurate and correct. All test results and operations performed by this material manufacturer are in compliance with the requirements of the material specifications, and when designated by the purchaser, meet the applicable specifications.

Gay Linnell

QUALITY ASSURANCE

CUSTOMER COPY

STATE OF ARKANSAS COUNTY OF MISSISSIPPI
SWORN TO AND SUBSCRIBED BEFORE ME THIS

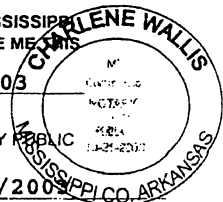
5 Day of 09/03

Day of

Charlene Wallis

NOTARY PUBLIC

MY COMMISSION EXPIRES 10/21/2003



NUCOR STEEL - BERKELEY
 P.O. Box 2259
 Mt. Pleasant, S.C. 29464
 Phone: (843) 336-6000

SOLD TO: METALS USA-AMBRIDGE
 ATTN: DEBBIE TAYLOR - A/P
 2025 GREENTREE ROAD, 2ND. FLOOR
 PITTSBURGH, PA 15220

SPECIFICATIONS: Tested in accordance with ASTM specification A6/A6M and A370.
 AASHTO : M270-36-00/M270-50-00
 ASME : SA-36
 ASTM : A992-02/A36-01A/A372-01-50/A709-01-36/A709-01-50
 CSA : CSA-44W/G40.21-50W

CERTIFIED MILL TEST REPORT

SHIP TO: METALS USA-AMBRIDGE
 10 TOWER ROAD
 SEEKONK, MA 02771

100% MELTED AND MANUFACTURED IN THE USA
 All beams produced by Nucor-Berkeley are cast and
 rolled to a fully killed and fine grain practice.

Customer #: 1852 - 6
 Customer PO: SKO-112
 B.O.L. #: 327664
 Invoice #: 455346

Description	Heat#	Grade(s)	Yield/Tensile Ratio	Yield (PSI)	Tensile (MPa)	Elong %	C	Cr	Mn	Mo	P	S	Si	N	Cu	Nb	Zr	NI	CE1	CE2	PCM	
W14x22	0351	00.00"	.84	57300	68300	27.96	.0730	.0210	.8250	.0190	.0076	.0216	.1840	.0031	.0660	.0306	.0000	.0400	.2652	.2630	.1309	
W360x32.9	010.6680m		.82	55900	67900	28.61	.0073	.0024	.0024	.0024	.0024	.0008	.0072	.0000	.0000	.0000	.0000	2.1351	.1309			
W14x22	0351	00.00"	.85	59300	69800	26.28	.0660	.0230	.8810	.0170	.0079	.0247	.2050	.0074	.0700	.0330	.0000	.0400	.2288	.2696	.1280	
W360x32.9	010.6680m		.85	56400	66600	26.29	.0074	.0019	.0019	.0008	.0008	.0009	.0074	.0000	2.2586	.0000	.0000		.1280			
W14x22	0351	00.00"	.84	58400	69400	27.01	.0660	.0210	.8450	.0160	.0080	.0160	.2180	.0067	.0650	.0260	.0000	.0340	.2216	.2632	.1227	
W360x32.9	010.6680m		.85	59900	70300	26.95	.0010	.0020	.0020	.0008	.0008	.0002	.0067	.0000	2.1512	.0000	.0000		.1227			
W14x22	0501	00.00"	.84	56200	67000	27.13	.0660	.0260	.7980	.0140	.0068	.0194	.1930	.0058	.0760	.0259	.0000	.0320	.2147	.2520	.1291	
W360x32.9	015.2400m		.82	54000	66100	25.61	.0032	.0012	.0012	.0013	.0013	.0020	.0058	.0000	2.3246	.0000	.0000		.1291			
W14x22	0501	00.00"	.84	58500	69800	25.85	.0690	.0300	.8630	.0140	.0043	.0127	.1580	.0090	.0860	.0262	.0000	.0320	.2299	.2615	.1278	
W360x32.9	015.2400m		.83	58600	70900	26.89	.0000	.0006	.0006	.0001	.0001	.0006	.0090	.0000	2.4385	.0000	.0000		.1278			
W14x22	0501	00.00"	.81	54100	66400	28.30	.0690	.0290	.8350	.0170	.0081	.0202	.1630	.0064	.1200	.0142	.0000	.0350	.2282	.2582	.1275	
W360x32.9	015.2400m		.79	51800	65400	28.20	.0069	.0017	.0017	.0000	.0000	.0004	.0064	.0000	3.1606	.0000	.0000		.1275			

METALS USA - SEEKONK - TEST REPORT
 Customer: Precision Welding
 Date: 3-15-04
 Your P.O.#: 16953
 Our Charge #: 86797

NUCOR STEEL - BERKELEY
 P.O. Box 2259
 Mt. Pleasant, S.C. 29464
 Phone: (843) 336-6000

Sold To: METALS USA-AMBRIDGE
 ATTN: DEBBIE TAYLOR - A/P
 2025 GREENTREE ROAD, 2ND. FLOOR
 PITTSBURGH, PA 15220

SHIP TO: METALS USA-AMBRIDGE
 10 TOWER ROAD
 SEKONK, MA 02771

Customer #: 1852 -
 Customer PO: SKO-135
 B.O.I. # :
 Invoice # : 451683

10/28/03 11:09:09
 100% MELTED AND MANUFACTURED IN THE USA
 All beams produced by Nucor-Berkeley are cast and
 rolled to a fully killed and fine grain practice.

SPECIFICATIONS: Tested in accordance with ASTM specification A6/A6M and A370.
 ASHTO : M270-36-00/M270-50-00
 ASTM : SA-36-02/A36-01A/A572-01-50/A709-01-36/A709-01-50
 CSA : CSA-44M/G40.21-50M

Description	Heat#	Yield/Tensile Ratio	Yield (PSI)	Tensile (PSI)	Elong %	C	Mn	P	S	Si	Cu	Ni	CE1
	Test		(MPa)	(MPa)		Pb	Ti	Ca	Al	N	Nb	CI	CE2
W12x16	2311902	.80	52300	65000	27.93	.0700	.8560	.0067	.0153	.2100	.1220	.0410	.2353
045' 00.00"	A992-02	.78	51000	65500	28.54	.0340	.0200	.0036	.0026	.0047	.0171	.0000	.2737
W310X23.8			352	452		.0121	.0020	.0004	.0019	.0054	.0000		.1394
013.7160m						31 Piece(s)							
W12x16	2311900	.80	53300	67000	26.89	.0720	.8210	.0089	.0191	.1910	.1180	.0400	.2305
045' 00.00"	A992-02	.80	53700	67200	28.40	.0360	.0170	.0052	.0008	.0028	.0131	.0000	.2650
W310X23.8			370	463		.0048	.0012	.0000	.0001	.0068	.0000		.1296
013.7160m						1 Piece(s)							
W12x16	2311894	.79	51600	65700	29.89	.0710	.8140	.0083	.0193	.1820	.1260	.0400	.2285
060' 00.00"	A992-02	.80	52700	66200	28.50	.0340	.0170	.0057	.0007	.0027	.0131	.0000	.2614
W310X23.8			363	456		.0048	.0011	.0000	.0002	.0058	.0000		.1287
018.2880m						11 Piece(s)							
W12x16	2311886	.79	51500	65000	28.19	.0680	.8340	.0087	.0173	.1690	.1220	.0400	.2295
060' 00.00"	A992-02	.80	51800	65100	28.79	.0370	.0180	.0051	.0015	.0033	.0137	.0000	.2604
W310X23.8			357	449		.0073	.0013	.0001	.0002	.0053	.0000		.1264
018.2880m						13 Piece(s)							
W12x19	1311877	.79	51800	65300	27.60	.0670	.8370	.0134	.0266	.2000	.1150	.0390	.2279
045' 00.00"	A992-02	.76	50100	65500	28.21	.0360	.0170	.0050	.0008	.0029	.0135	.0000	.2640
W310X28.3			345	452		.0049	.0011	.0000	.0001	.0063	.0000		.1255
013.7160m						18 Piece(s)							

METALS USA - SEKONK - TEST REPORT
 Customer: Precision Welding
 Date: 3-15-04
 YOUR P.O. #: 10953
 Our Charge #: 86797

NUCOR STEEL - BERKELEY
 P.O. Box 2259
 Mt. Pleasant, S.C. 29464
 Phone: (843) 336-6000

Sold To: METALS USA-AMBRIDGE
 ATTN: DEBBIE TAYLOR - A/P
 2025 GREENTREE ROAD, 2ND. FLOOR
 PITTSBURGH, PA 15220

SHIP TO: METALS USA-AMBRIDGE
 81 CENTURY DRIVE
 AMBRIDGE, PA 15003

SPECIFICATIONS: Tested in accordance with ASTM specification A6/A6M and A370.
 ASHTO : M270-36-00/M270-50-00
 ASTM : SA-36
 ASTM : A992-02/A36-01A/A572-01-50/A709-01-36/A709-01-50
 CSA : CSA-44W/G40.21-50W

MILL TEST REPORT

11/03/03 10:47:46
 100% MELTED AND MANUFACTURED IN THE USA
 All beams produced by Nucor-Berkeley are cast and
 rolled to a fully killed and fine grain practice.

Customer #: 1852 - 2
 Customer PO: AEA-1158
 B.O.L. #: 342672
 Invoice #: 478875

Description	Heat#	Yield/Tensile Ratio	Yield (PSI)	Tensile (PSI)	Elong %	C	Cr	Mn	Mo	P	Sn	S	Al	Si	N	Cu	Nb	Zr	NI	CE1	CE2	PCm
M12x14	1316223	.81	55400	68300	28.70	.0660	.0280	.8600	.0160	.0091	.0052	.0227	.0002	.2060	.0021	.0960	.0119	.0000	.0340	.2372	.2639	.1298
045' 00.00"	A992-02	.79	54000	68000	28.40	.0013	.0008	.0008	.0001	.0001	.0012	.0012	.0072	.0072	.0075	.0000	.0000	.0000	2.7923	.2372	.2639	.1298
M310X21.0	1316234	.80	54700	68000	28.40	.0730	.0310	.8770	.0140	.0094	.0072	.0265	.0024	.2240	.0027	.0970	.0108	.0000	.0340	.2374	.2769	.1344
013.7160m	A992-02	.82	56500	69200	27.60	.0000	.0015	.0015	.0015	.0016	.0016	.0004	.0004	.0075	.0000	.0000	.0000	.0000	2.8472	.2374	.2769	.1344
M12x14	1316235	.83	57200	69300	29.20	.0660	.0300	.8190	.0180	.0085	.0066	.0202	.0002	.1870	.0021	.1080	.0120	.0000	.0410	.2225	.2560	.1286
050' 00.00"	A992-02	.83	57700	69400	27.20	.0015	.0008	.0008	.0000	.0000	.0013	.0013	.0090	.0090	.0000	.0000	.0000	.0000	3.0048	.2225	.2560	.1286
M310X21.0	1316220	.81	55100	68100	28.10	.0650	.0270	.8720	.0160	.0085	.0046	.0205	.0007	.2130	.0022	.0840	.0123	.0000	.0310	.2270	.2650	.1290
015.2400m	A992-02	.82	57900	70700	29.20	.0020	.0010	.0010	.0008	.0008	.0012	.0012	.0077	.0077	.0000	.0000	.0000	.0000	2.5448	.2270	.2650	.1290
M12x14	1316206	.81	55000	67600	28.94	.0700	.0240	.8310	.0150	.0089	.0036	.0227	.0005	.2260	.0020	.0710	.0121	.0000	.0280	.2233	.2634	.1304
060' 00.00"	A992-02	.80	53000	66300	27.79	.0016	.0008	.0008	.0004	.0004	.0010	.0010	.0060	.0060	.0000	.0000	.0000	.0000	2.2896	.2233	.2634	.1304
M310X21.0	1316206	.81	55000	67600	28.94	.0700	.0240	.8310	.0150	.0089	.0036	.0227	.0005	.2260	.0020	.0710	.0121	.0000	.0280	.2233	.2634	.1304
016.7640m	A992-02	.80	53000	66300	27.79	.0016	.0008	.0008	.0004	.0004	.0010	.0010	.0060	.0060	.0000	.0000	.0000	.0000	2.2896	.2233	.2634	.1304

=====
 Elongation based on 8" (20.32cm) gauge length.
 CI = 26.01Cu+3.88Ni+1.20Cr+1.49Si+17.28P-(7.29Cu*Ni)-(9.10Ni*P)-33.39(Cu*Cu)
 PCm = C+(Si/30)+(Mn/20)+(Cu/20)+(Ni/60)+(Cr/20)+(Mo/15)+(V/10)+5B
 CE1 = C+(Mn/6)+((Cr+Mo+V)/5)+((Ni+Cu)/15)
 CE2 = C+((Mn+Si)/6)+((Cr+Mo+V+Cb)/5)+((Ni+Cu)/15)
 I hereby certify that the contents of this report are accurate and correct. All test results and operations performed by the material manufacturer are in compliance with material specifications, and when designated by the purchaser, meet applicable specifications.
 **END

BRUCE A. WORK
 Metallurgy
 METALS USA - SEEKONK, TEST REPORT
 Customer: Precision Wood
 Date: 3-15-04
 YOUR P.O.#: 10953
 Our Charge #: 86796

DATE 1/16/04
 INVOICE NO. 838027
 BILL OF LADING 661844
 CUSTOMER NO. 3738
 CUSTOMER P.O. SKP-309

NUCOR-YAMATO STEEL CO.
 P.O. BOX 1228 • BLYTHEVILLE, AR 72316

CERTIFIED MILL TEST REPORT

100% MELTED AND MANUFACTURED IN U.S.A.
 All shapes produced by Nucor-Yamato Steel are cast and rolled to a fully killed and fine grain practice.

SPECIAL METALS USA PLATES & SHAPES SEEKONK
 CONGDON & CARPENTER DIV
 10 TOWER RD
 SEEKONK, MA 02771-0000

SPECIAL GRADE: ASTM A992-02; ASTM A572GR50-01
 ASTM A709/A709M-01b GR50 (345)
 ASTM A709/A709M-01b GR50S (345S)
 ASTM A6/A6M-02b

SPECIAL METALS USA PLATES & SHAPES
 NORTHEAST OFFICE
 2025 GREENTREE ROAD, 2ND FL.
 PITTSBURGH, PA 15220-0000

ITEM #	ITEM DESCRIPTION	QTY	HEAT #	MECHANICAL PROPERTIES						CHEMICAL PROPERTIES												
				YIELD TO TENSILE RATIO	TENSILE STRENGTH (PSI)	TENSILE STRENGTH (MPa)	ELONGATION (%)	CHARPY IMPACT TEMP (°F)	CHARPY IMPACT ENERGY (FT-LBS)	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb	CE	
1	W24 x 60 W610 x 101.0 18.288 M	3	226977	.78	59000	76000	24				.08	1.34	.022	.022	.25	.32	.09	.10	.02	.04	.002	.36
				.78	58000	74000	24												.01	.19		
					407	524	24															
					400	510	24															

METALS USA - SEEKONK - TEST REPORT
 Customer: Precision Welding
 Date: 3-11-04
 Your P.O. #: 10953
 Our Charge #: 846787

ELONGATION BASED ON 8.00 INCH GAUGE LENGTH
 I hereby certify that the contents of this report are accurate and correct. All test results and operations performed by this material manufacturer are in compliance with the requirements of the material specifications, and when designated by the purchaser, meet the applicable specifications.

Gay Linnell
 QUALITY ASSURANCE

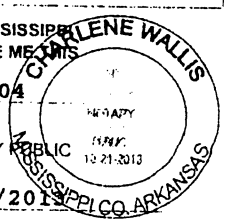
CUSTOMER COPY

STATE OF ARKANSAS COUNTY OF MISSISSIPPI
 SWORN TO AND SUBSCRIBED BEFORE ME

16 Day of 01/04

Charlene Wallis
 NOTARY PUBLIC

MY COMMISSION EXPIRES 10/21/2013



DATE	2/03/04
INVOICE NO.	841756
BILL OF LADING	664496
CUSTOMER NO.	3738
CUSTOMER P.O.	SKO-370

NUCOR-YAMATO STEEL CO.

P.O. BOX 1228 • BLYTHEVILLE, AR 72316

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METALS USA PLATES & SHAPES SEEKONK
CONGDON & CARPENTER DIV
10 TOWER RD
SEEKONK, MA 02771-0000

CERTIFIED MILL TEST REPORT

100% MELTED AND MANUFACTURED IN U.S.A.
All shapes produced by Nucor-Yamato Steel are cast and rolled to a fully killed and fine grain practice.

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GRADE: ASTM A992-02; ASTM A572GR50-01
ASTM A709/A709M-01b GR50 (345)
ASTM A709/A709M-01b GR50S (345S)

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METALS USA PLATES & SHAPES
NORTHEAST OFFICE
2025 GREENTREE ROAD, 2ND FL.
PITTSBURGH, PA 15220-0000

ASTM A6/A6M-02b

ITEM DESCRIPTION	QTY	HEAT #	MECHANICAL PROPERTIES						CHEMICAL PROPERTIES													
			YIELD TO TENSILE RATIO	YIELD STRENGTH		TENSILE STRENGTH	ELONG	CHARPY IMPACT		C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb	CE	
				PSI	MPa	PSI		%	TEMP													IMPACT ENERGY
				°F	°C	FT-LBS		Joules														
W21 - 44.0 45'	3	225785	.78	59000	76000	26					.07	1.20	.016	.037	.33	.33	.10	.12	.03	.01	.019	.33
W530 x 66.0 13.716 M			.79	59000	75000	25													.01	.17		
W21 - 44.0 45'	6	225806	.78	56000	72000	26					.05	1.18	.022	.034	.26	.29	.10	.11	.03	.01	.018	.31
W530 x 66.0 13.716 M			.78	57000	73000	26													.01	.14		
W21 - 44.0 45'	3	225819	.73	52000	71000	27					.07	1.13	.013	.035	.29	.30	.11	.11	.03	.01	.017	.32
W530 x 66.0 13.716 M			.75	54000	72000	25													.01	.17		
W21 - 50.0 60'	2	227854	.73	54000	74000	25					.07	1.14	.020	.034	.32	.32	.10	.10	.03	.01	.017	.32
W530 x 74.0 18.288 M			.74	55000	74000	27													.01	.17		
W21 - 50.0 60'	1	227856	.76	57000	75000	26					.08	1.10	.018	.031	.31	.34	.10	.09	.03	.01	.018	.32
W530 x 74.0 18.288 M			.74	54000	73000	26													.01	.17		

METALS USA - SEEKONK - TEST REPORT
Customer: Precision Welding
Date: 3-17-04
Your P.O.#: 10953
Our Charge #: 86787

CARBON EQUIVALENT: CE = CE(IIW) = C + Mn/6 + (Cr+Ni+V)/5 + (Nb+Cu)/15

ELONGATION BASED ON 8.00 INCH GAUGE LENGTH

I hereby certify that the contents of this report are accurate and correct. All test results and operations performed by this material manufacturer are in compliance with the requirements of the material specifications, and when designated by the purchaser, meet the applicable specifications.

Gay Linnell

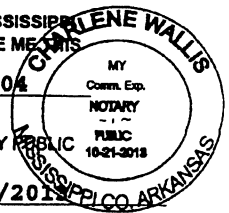
QUALITY ASSURANCE
CUSTOMER COPY

STATE OF ARKANSAS COUNTY OF MISSISSIPPI
SWORN TO AND SUBSCRIBED BEFORE ME THIS

3 Day of 02/04

Charlene Wallis

NOTARY PUBLIC



MY COMMISSION EXPIRES 10/21/2011

DATE	10/03/03
INVOICE NO.	816750
BILL OF LADING	646569
CUSTOMER NO.	7655
CUSTOMER P.O.	APA-1424

NUCOR-YAMATO STEEL CO.

P.O. BOX 1228 • BLYTHEVILLE, AR 72316

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METALS USA PLATES & SHAPES AMBRIDGE
C/O PITTSBURGH INTERMODAL MM 16
CONRAIL TRACK 767
AMBRIDGE, PA 15003-0000

CERTIFIED MILL TEST REPORT

100% MELTED AND MANUFACTURED IN U.S.A.
All shapes produced by Nucor-Yamato Steel are cast
and rolled to a fully killed and fine grain practice.

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GRADE: ASTM A992-02; ASTM A572GR50-01
ASTM A709/A709M-01b GR50 (345)
ASTM A709/A709M-01b GR50S (345S)

ASTM A6/A6M-02b

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METALS USA PLATES & SHAPES
NORTHEAST OFFICE
2025 GREENTREE ROAD, 2ND FL
PITTSBURGH, PA 15220-0000

ITEM	ITEM DESCRIPTION	QTY	HEAT #	YIELD TO TENSILE RATIO	MECHANICAL PROPERTIES					CHEMICAL PROPERTIES												
					YIELD STRENGTH	TENSILE STRENGTH	ELONG	CHARPY IMPACT		C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb	Cl	
					PSI	PSI	%	TEMP	IMPACT ENERGY													
					MPa	MPa	%	°F	FT-LBS													
1	W18 - 40.0 60'	4	222638	.74	55000	74000	24	✓		.07	1.11	.024	.030	.27	.33	.14	.17	.04	.01	.017	.3	
	W460 x 60.0 18.288 M			.76	57000	75000	25											.01	.17			
	W460 x 60.0 18.288 M				379	510	24															
	W460 x 60.0 18.288 M				393	517	25															
2	W18 - 40.0 60'	42	222640	.72	54000	75000	26			.06	1.13	.020	.034	.31	.37	.10	.10	.03	.01	.017	.3	
	W460 x 60.0 18.288 M			.77	57000	74000	27											.01	.16			
	W460 x 60.0 18.288 M				372	517	26															
	W460 x 60.0 18.288 M				393	510	27															
3	W18 - 40.0 60'	4	222642	.78	56000	72000	26			.05	1.17	.019	.024	.24	.35	.12	.12	.04	.01	.021	.3	
	W460 x 60.0 18.288 M			.77	55000	71000	27											.01	.15			
	W460 x 60.0 18.288 M				386	496	26															
	W460 x 60.0 18.288 M				379	490	27															
4	W24 - 62.0 40'	2	219393	.76	56000	74000	24			.07	1.13	.017	.038	.33	.34	.10	.11	.02	.00	.020	.3	
	W610 x 92.0 12.192 M			.75	55000	73000	26											.01	.17			
	W610 x 92.0 12.192 M				386	510	24															
	W610 x 92.0 12.192 M				379	503	26															
5	W24 - 62.0 40'	1	219395	.75	53000	71000	26			.05	1.11	.013	.023	.30	.39	.11	.10	.02	.00	.018	.2	
	W610 x 92.0 12.192 M			.74	51000	69000	27											.01	.15			
	W610 x 92.0 12.192 M				365	490	26															
	W610 x 92.0 12.192 M				352	476	27															
6	W24 - 62.0 40'	2	220836	.75	57000	76000	25			.09	1.20	.015	.025	.30	.38	.10	.10	.02	.01	.019	.3	
	W610 x 92.0 12.192 M			.73	55000	75000	25											.01	.19			
	W610 x 92.0 12.192 M				393	524	25															
	W610 x 92.0 12.192 M				379	517	25															
7	W24 - 62.0 40'	4	220838	.72	53000	74000	26			.06	1.10	.017	.032	.28	.32	.12	.10	.02	.00	.018	.2	
	W610 x 92.0 12.192 M			.74	53000	72000	27											.01	.16			
	W610 x 92.0 12.192 M				365	510	26															
	W610 x 92.0 12.192 M				365	496	27															
8	W24 - 62.0 45'	2	219373	.78	54000	69000	27			.06	1.11	.016	.035	.27	.35	.11	.11	.02	.04	.003	.3	
	W610 x 92.0 13.716 M			.81	56000	69000	27											.01	.16			
	W610 x 92.0 13.716 M				372	476	27															
	W610 x 92.0 13.716 M				386	476	27															
9	W24 - 62.0 45'	4	219375	.79	55000	70000	28			.08	1.10	.014	.025	.26	.28	.10	.09	.02	.04	.003	.3	
	W610 x 92.0 13.716 M			.78	54000	69000	28											.01	.16			
	W610 x 92.0 13.716 M				379	483	28															
	W610 x 92.0 13.716 M				372	476	28															

METALS USA - SEEKONK - TEST REPORT
Customer: Precision Welding
Date: 3-17-04
Your P.O. #: 10953
Our Charge #: 86787

DATE	8/30/03
INVOICE NO.	810558
BILL OF LADING	642195
CUSTOMER NO.	0001
CUSTOMER P.O.	SKO-126 PORT

NUCOR-YAMATO STEEL CO.

P.O. BOX 1228 • BLYTHEVILLE, AR 72316

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METALS USA PLATES & SHAPES SEEKONK
CONGDON & CARPENTER DIV.
10 TOWER RD.
SEEKONK, MASS 02771-0000

CERTIFIED MILL TEST REPORT

100% MELTED AND MANUFACTURED IN U.S.A.
All shapes produced by Nucor-Yamato Steel are cast
and rolled to a fully killed and fine grain practice.

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GRADE: ASTM A992-01; ASTM A572GR50-01
ASTM A709/A709M-01a GR50 (345)
ASTM A709/A709M-01a GR50S (345S)
GRADE: AASHTO M270-50 (345)

ASTM A6/A6M-01b

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METALS USA PLATES & SHAPES
NORTHEAST OFFICE
2025 GREENTREE ROAD, 2ND FL
PITTSBURGH, PA 15220-0000

ITEM DESCRIPTION	QTY	HEAT #	MECHANICAL PROPERTIES					CHEMICAL PROPERTIES												
			YIELD TO TENSILE RATIO	YIELD STRENGTH	TENSILE STRENGTH	ELONG	CHARPY IMPACT		C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb	CE
				PSI	PSI	%	TEMP	IMPACT ENERGY												
				MPa	MPa	%	° F	FT-LBS												
W18 - 35.0 55'	1	221532	.75	53000	71000	25														
W460 x 52.0 16.764 M			.76	54000	71000	25														
W18 - 35.0 55'	5	221536	.69	52000	75000	24														
W460 x 52.0 16.764 M			.77	56000	73000	24														
W18 - 35.0 55'	14	221552	.74	54000	73000	24														
W460 x 52.0 16.764 M			.80	59000	74000	24														
W18 - 35.0 60'	12	221534	.74	54000	73000	25														
W460 x 52.0 18.288 M			.78	56000	72000	26														
W18 - 35.0 60'	8	221536	.69	52000	75000	24														
W460 x 52.0 18.288 M			.77	56000	73000	24														
				359	517	24														
				386	503	24														

METALS USA - SEEKONK - TEST REPORT
Customer: Precision Welding
Date: 3-17-04
Your P.O. #: 10953
Our Charge #: 86786

ELONGATION BASED ON 8.00 INCH GAUGE LENGTH

I hereby certify that the contents of this report are accurate and correct. All test results and operations performed by this material manufacturer are in compliance with the requirements of the material specifications, and when designated by the purchaser, meet the applicable specifications.

Doug Lonnell

QUALITY ASSURANCE

CUSTOMER COPY

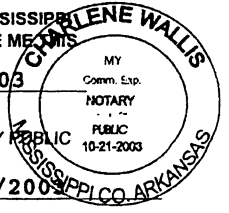
STATE OF ARKANSAS COUNTY OF MISSISSIPPI
SWORN TO AND SUBSCRIBED BEFORE ME

2 Day of 09/03

Charlene Wallis

NOTARY PUBLIC

MY COMMISSION EXPIRES 10/21/2003



8/14/03
806917
639451
0001
SKO-128 PORT

NUCOR-YAMATO STEEL CO.
P.O. BOX 1228 • BLYTHEVILLE, AR 72316

CERTIFIED MILL TEST REPORT

100% MELTED AND MANUFACTURED IN U.S.A.
All shapes produced by Nucor-Yamato Steel are cast and rolled to a fully killed and fine grain practice.

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METALS USA PLATES & SHAPES SEEKONK
CONGDON & CARPENTER DIV.
10 TOWER RD.
SEEKONK, MASS 02771-0000

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GRADE: ASTM A992-01; ASTM A572GR50-01
ASTM A709/A709M-01a GR50 (345)
ASTM A709/A709M-01a GR50S (345S)
GRADE: AASHTO M270-50 (345)

ASTM A6/A6M-01b

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METALS USA PLATES & SHAPES
NORTHEAST OFFICE
2025 GREENTREE ROAD, 2ND FL
PITTSBURGH, PA 15220-0000

ITEM	DESCRIPTION	QTY	HEAT #	MECHANICAL PROPERTIES						CHEMICAL PROPERTIES																						
				YIELD TO TENSILE RATIO	YIELD STRENGTH	TENSILE STRENGTH	ELONG	CHARPY IMPACT		C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb	CE											
					PSI	PSI		%	TEMP													IMPACT ENERGY	F	FT-LBS	Sn	Pcm	Cl					
1	W16 - 26.0 45' W410 x 38.8 13.716 M	14	213337	.79	52000	66000	27														.07	.70	.014	.025	.21	.30	.11	.11	.04	.00	.010	.25
2	W16 - 26.0 45' W410 x 38.8 13.716 M	21	218500	.81	58000	72000	24														.05	.90	.015	.024	.26	.25	.09	.08	.01	.00	.014	.24
3	W16 - 26.0 60' W410 x 38.8 18.288 M	16	220317	.78	53000	68000	25														.07	.72	.011	.034	.23	.35	.13	.08	.03	.00	.010	.24
4	W16 - 26.0 60' W410 x 38.8 18.288 M	12	220318	.79	54000	68000	27														.08	.80	.018	.039	.25	.34	.13	.10	.02	.01	.011	.27
	W16 - 31.0 35' W410 x 46.1 10.668 M	1	220158	.80	56000	70000	25														.06	.70	.012	.025	.25	.33	.10	.08	.02	.00	.010	.23
	W16 - 31.0 35' W410 x 46.1 10.668 M	2	220168	.77	53000	69000	27														.08	.73	.015	.032	.26	.33	.10	.12	.02	.00	.011	.26
	W16 - 31.0 35' W410 x 46.1 10.668 M	2	220196	.78	56000	72000	27														.09	.73	.010	.028	.27	.34	.11	.08	.03	.00	.009	.26
	W16 - 31.0 35' W410 x 46.1 10.668 M	20	220210	.78	53000	68000	26														.07	.73	.014	.036	.20	.32	.12	.10	.03	.00	.010	.25
	W16 - 31.0 35' W410 x 46.1 10.668 M	10	220212	.77	51000	66000	25														.07	.70	.012	.025	.25	.33	.10	.08	.02	.00	.010	.25

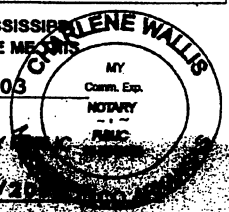
NUCOR-YAMATO STEEL CO. TEST REPORT
Customer: Precision Wldg
Date: 3-17-04
Your P.O. #: 10953
Our Charge #: 86786

ELONGATION BASED ON 8.00 INCH GAUGE LENGTH
I hereby certify that the contents of this report are accurate and correct. All test results and operations performed by this material manufacturer are in compliance with the requirements of the material specifications, and when designated by the purchaser, meet the applicable specifications.

Doug Lennell
QUALITY ASSURANCE

CUSTOMER COPY

STATE OF ARKANSAS COUNTY OF MISSISSIPPI
SWORN TO AND SUBSCRIBED BEFORE ME
14 Day of 08/03
Charlene Walker NOTARY PUBLIC
MY COMMISSION EXPIRES 10/21/2004



DATE	1/12/04
INVOICE NO.	836947
BILL OF LADING	661058
CUSTOMER NO.	3738
CUSTOMER P.O.	SKO-318

NUCOR-YAMATO STEEL CO.

P.O. BOX 1228 • BLYTHEVILLE, AR 72316

CERTIFIED MILL TEST REPORT

100% MELTED AND MANUFACTURED IN U.S.A.
All shapes produced by Nucor-Yamato Steel are cast and rolled to a fully killed and fine grain practice.

S
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METALS USA PLATES & SHAPES SEEKONK
CONGDON & CARPENTER DIV
10 TOWER RD
SEEKONK, MA 02771-0000

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GRADE: ASTM A992-02; ASTM A572GR50-01
ASTM A709/A709M-01b GR50 (345)
ASTM A709/A709M-01b GR50S (345S)

ASTM A6/A6M-02b

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METALS USA PLATES & SHAPES
NORTHEAST OFFICE
2025 GREENTREE ROAD, 2ND FL
PITTSBURGH, PA 15220-0000

ITEM DESCRIPTION	QTY	HEAT #	MECHANICAL PROPERTIES							CHEMICAL PROPERTIES										
			YIELD TO TENSILE RATIO	YIELD STRENGTH	TENSILE STRENGTH	ELONG	CHARPY IMPACT		C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb	CE
				PSI	PSI		TEMP	IMPACT ENERGY												
				MPa	MPa		° F	FT-LBS												
W16 - 26.0 35'	8	226786	.82	56000	68000	26			.05	.93	.019	.033	.27	.30	.11	.09	.03	.01	.017	.27
W410 x 38.8 10.668 M			.81	56000	69000	26											.01	.13		
W16 - 26.0 35'	6	226789	.79	54000	68000	26			.05	.93	.017	.034	.25	.33	.11	.09	.02	.01	.016	.26
W410 x 38.8 10.668 M			.79	54000	68000	26											.01	.13		
W16 - 26.0 35'	1	226982	.81	62000	77000	24			.08	.97	.020	.032	.29	.38	.10	.13	.02	.01	.016	.30
W410 x 38.8 10.668 M			.79	60000	76000	26											.01	.17		
W16 - 26.0 35'	1	226984	.82	62000	76000	22			.07	.96	.019	.039	.30	.36	.10	.10	.02	.00	.017	.28
W410 x 38.8 10.668 M			.82	62000	76000	25											.01	.16		
W16 - 26.0 35'	1	227006	.82	63000	77000	26			.08	1.00	.021	.032	.30	.30	.10	.13	.02	.01	.020	.31
W410 x 38.8 10.668 M			.81	64000	79000	26											.01	.17		
W16 - 26.0 35'	4	227008	.81	62000	77000	24			.06	.92	.020	.031	.24	.33	.12	.12	.02	.01	.016	.27
W410 x 38.8 10.668 M			.81	62000	77000	25											.01	.15		
W16 - 26.0 55'	14	226789	.79	54000	68000	26			.05	.93	.017	.034	.25	.33	.11	.09	.02	.01	.016	.26
W410 x 38.8 16.764 M			.79	54000	68000	26											.01	.13		
W16 - 26.0 60'	1	226923	.83	60000	72000	25			.04	.96	.019	.031	.23	.41	.13	.10	.03	.01	.018	.27
W410 x 38.8 18.288 M			.83	60000	72000	25											.01	.13		
W16 - 26.0 60'	6	226926	.81	57000	70000	25			.05	.92	.017	.033	.25	.37	.12	.08	.03	.01	.018	.25
W410 x 38.8 8.288 M			.83	58000	70000	24											.01	.13		
W410 x 38.8 8.288 M				393	483	25														
W410 x 38.8 8.288 M				400	483	24														

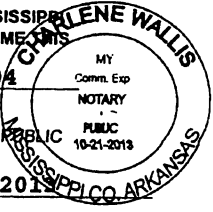
METALS USA - SEEKONK - TEST REPORT
Customer: Precision Welding
Date: 3-22-04
Your P.O. #: 10953
Our Charge #: 86794

W C Mn P S Si Cu Ni Cr Mo V Cb CE
CARBON EQUIVALENT: CE = C/(FW) = C + Mn/6 + (Cr+Mo+V)/5 + (Ni+Cu)/15
Corrosion Index: CI = 28.8*(%Cu)+3.8*(%Ni)+1.2*(%Cr)+1.48*(%Mo)+17.2*(%P)+7.28*(%Cu)/(%Ni)+4.10*(%Ni)/(%P)+33.3*(%Cu)²

LONGATION BASED ON 8.00 INCH GAUGE LENGTH
We hereby certify that the contents of this report are accurate and correct. All test results and operations performed by this material manufacturer are in compliance with the requirements of the material specifications, and when designated by the purchaser, meet the applicable specifications.

Doug Linnell
QUALITY ASSURANCE

STATE OF ARKANSAS COUNTY OF MISSISSIPPI
SWORN TO AND SUBSCRIBED BEFORE ME
12 Day of 01/04
Charlene Wallis NOTARY PUBLIC
MY COMMISSION EXPIRES 10/21/2012



#10953

CUSTOMER COPY

162 P.O. SKO-124

UNRECORDED TEST REPORT

NUCOR

BAR MILL - AUBURN
NUCOR STEEL AUBURN, INC.

P.O. BOX 2008
QUARRY ROAD
AUBURN, NY 13021

HEAT # R2872
DATE SHIPPED 8/06/2003
SHIPMENT# 0224810
SIZE: AN 2 X 2 X 1/4
ORDER ITEM# 135966/ 07
SOLD TO: METALS USA P and S N.E.
FAX#/EMAIL:

CUST. P.O. SKO-124
PART #: 2214
GRADE : ASTM A36-00A/A709 GR.36
SPEC CSA G40 .21-98 44W
SUPP. REQ:
SHIP TO: METALS USA P & S - SEEKON

CHEMICAL ANALYSIS %

C	MN	SI	P	S	CU	NI	CR	MO	SN	V	CB	TI	B	N2	O2
160	690	180	020	048	290	1100	180	035	014	002	0020	0010	0007	XXX	001

MECHANICAL RESULTS

YIELD	TENSILE	GAUGE	%	BEND	PIN. DIA	%
K.S.I.	K.S.I.	LENGTH	ELONG	IN. DIA	R.A.	
50.60	72.20	8	31.3	.0	.0	
49.60	72.40	8	36.3	.0	.0	
MPa	MPa	GAUGE	%	BEND	PIN. DIA	R.A.
		LENGTH	ELONG			

CHARPY IMPACT TEST

TEMP. F	FT./LB.	SUBSIZE SPECIMEN	SAMPLE

I CERTIFY THESE RESULTS TO BE CORRECT AS CONTAINED IN THE RECORDS OF THE COMPANY.

JIM BIERNAT, METALLURGIST
STATE OF NEW YORK
COUNTY OF CAYUGA SS.

Jim Biernat

(print)

AFTER BEING DULY SWORN BY ME, I DECLARE THAT THESE RESULTS ARE CORRECT AS CONTAINED IN THE RECORDS OF NUCOR STEEL AUBURN, INC

(sign)

SUBSCRIBED AND SHOWN BEFORE ME

THIS _____ DAY OF _____

LS _____

THIS CERTIFICATE IS NOTARIZED ONLY WHEN REQUESTED

JOMINY END-QUENCH HARDENABILITY RESULTS (HRC)

J1	J2	J3	J4	J5	J6	J7	J8	J9	J10	J11	J12
J13	J14	J15	J16	J18	J20	J22	J24	J26	J28	J30	J32

Grain Size: XXX

Reduction Ratio: XXX

As Rolled Hardness: XXX

D.I.: XXX

C.F.: XXX

C.I.: XXX

ALL MANUFACTURING PROCESSES FOR THIS STEEL, INCLUDING MELTING FROM SCRAP AND HOT ROLLING HAVE BEEN PERFORMED IN THE U.S.A. NO WELD REPAIR PERFORMED, STEEL NOT EXPOSED TO MERCURY OR ANY LIQUID ALLOY WHICH IS LIQUID AT AMBIENT TEMPERATURES. NOTARIZED CERTIFICATION

CUSTOMER SPECIAL INSTRUCTIONS:

ONLY A36 MATERIAL IS CERTIFIED TO ASME SA36 1998 NOTARIZED COPIES REQUIRED

METALS USA - SEEKON - TEST REPORT
Customer: Precision Wldg

Date: 3-22-04

Your P.O. #: 10853

Our Charge #: 812794

CF/01900
141091

CERTIFIED MILL TEST REPORT

100% MELTED AND MANUFACTURED IN U.S.A.
All shapes produced by Nucor-Yamato Steel are cast and rolled to a fully killed and fine grain practice.

GRADE: ASTM A992-01; ASTM A572GR50-01
ASTM A709/A709M-01a GR50 (345)
ASTM A709/A709M-01a GR50S (345S)

ASTM A6/A6M-01b

NUCOR-YAMATO STEEL CO.

P.O. BOX 1228 • BLYTHEVILLE, AR 72316

SPECIALTY
METALS USA PLATES & SHAPES SEEKONK
CONGDON & CARPENTER DIV.
10 TOWER RD.
SEEKONK, MASS 02771-0000

SOLD TO
METALS USA PLATES & SHAPES
NORTHEAST OFFICE
2025 GREENTREE ROAD, 2ND FL
PITTSBURGH, PA 15220-0000

DATE	8/15/03
INVOICE NO.	807172
BILL OF LADING	639619
CUSTOMER NO.	0001
CUSTOMER P.O.	SKO-133 PORT

ITEM #	ITEM DESCRIPTION	QTY	HEAT #	MECHANICAL PROPERTIES						CHEMICAL PROPERTIES												
				YIELD TO TENSILE RATIO	YIELD STRENGTH	TENSILE STRENGTH	ELONG	CHARPY IMPACT		C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb	CE	
					PSI	PSI		TEMP	IMPACT ENERGY													
					MPa	MPa		* F	FT-LBS													
1	W24 - 68.0 45' W610 x101.0 13.716 M	6	219413	.76	54000	71000	26				.07	1.17	.016	.025	.25	.37	.12	.10	.02	.04	.002	.33
2	W24 - 68.0 60' W610 x101.0 18.288 M	3	219407	.78	57000	73000	26				.08	1.12	.017	.023	.25	.36	.12	.11	.02	.03	.001	.33
3	W24 - 68.0 60' W610 x101.0 18.288 M	3	219409	.77	55000	71000	26				.08	1.16	.011	.019	.28	.35	.12	.11	.03	.04	.002	.34

METALS USA - SEEKONK - TEST REPORT
Customer: Precision Wdg
Date: 3-22-04
Your P.O. #: 10953
Our Charge #: 86783

CARBON EQUIVALENT: CE = CE(IIW) = C + Mn/6 + (Cr+Mo+V)/5 + (Ni +Cu)/15

Corrosion Index: C=26.0[(%Cu)+3.85(%Ni)]+1.20(%Cr)+1.48(%Si)+17.28(%P)+7.29(%Cu)(%Ni)+8.10(%Ni)(%P)-33.38(%Cu)²

ELONGATION BASED ON 8.00 INCH GAUGE LENGTH

I hereby certify that the contents of this report are accurate and correct. All test results and operations performed by this material manufacturer are in compliance with the requirements of the material specifications, and when designated by the purchaser, meet the applicable specifications.

Doug Linnell

QUALITY ASSURANCE

CUSTOMER COPY

STATE OF ARKANSAS COUNTY OF MISSISSIPPI
SWORN TO AND SUBSCRIBED BEFORE ME THIS

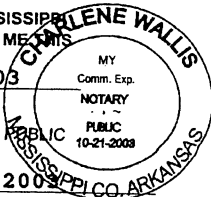
15 Day of 08/03

Charlene Wallis

NOTARY PUBLIC

MY COMMISSION EXPIRES

10/21/2003



DATE	8/28/03
INVOICE NO.	809877
BILL OF LADING	641609
CUSTOMER NO.	0001
CUSTOMER P.O.	SKO-126 PORT

NUCOR-YAMATO STEEL CO.

P.O. BOX 1228 • BLYTHEVILLE, AR 72316

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METALS USA PLATES & SHAPES SEEKONK
CONGDON & CARPENTER DIV.
10 TOWER RD.
SEEKONK, MASS 02771-0000

CERTIFIED MILL TEST REPORT

100% MELTED AND MANUFACTURED IN U.S.A.
All shapes produced by Nucor-Yamato Steel are cast and rolled to a fully killed and fine grain practice.

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GRADE: ASTM A992-01; ASTM A572GR50-01
ASTM A709/A709M-01a GR50 (345)
ASTM A709/A709M-01a GR50S (345S)
GRADE: AASHTO M270-50 (345)

ASTM A6/A6M-01b

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METALS USA PLATES & SHAPES
NORTHEAST OFFICE
2025 GREENTREE ROAD, 2ND FL
PITTSBURGH, PA 15220-0000

ITEM #	ITEM DESCRIPTION	QTY	HEAT #	MECHANICAL PROPERTIES						CHEMICAL PROPERTIES											
				YIELD TO TENSILE RATIO	YIELD STRENGTH	TENSILE STRENGTH	ELONG	CHARPY IMPACT		C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb	CE
					PSI	PSI		TEMP	IMPACT ENERGY												
					MPa	MPa		F	FT-LBS												
1	W18 - 40.0 50' W460 x 60.0 15.240 M	9	221134	.76 .71	54000 50000	71000 70000	25 26	✓		.07	1.07	.019	.034	.26	.30	.11	.17	.02 .01	.01 .16	.019	.32
2	W18 - 40.0 50' W460 x 60.0 15.240 M	2	221449	.73 .70	53000 51000	73000 73000	26 26			.07	1.19	.015	.029	.27	.30	.12	.13	.03 .01	.01 .17	.018	.33
3	W18 - 40.0 50' W460 x 60.0 15.240 M	9	221451	.78 .77	56000 56000	72000 73000	27 26			.07	1.11	.012	.029	.25	.32	.11	.11	.03 .01	.00 .17	.016	.32
4	W18 - 40.0 55' W460 x 60.0 15.764 M	15	221428	.74 .74	55000 55000	74000 74000	25 24			.08	1.10	.012	.029	.28	.32	.12	.11	.03 .01	.00 .18	.016	.32
5	W18 - 40.0 60' W460 x 60.0 18.288 M	15	221435	.73 .78	54000 58000	74000 74000	25 25			.08	1.10	.010	.030	.30	.30	.11	.09	.02 .01	.00 .17	.018	.31

METALS USA - SEEKONK - TEST REPORT

Customer: Precision Wldg
Date: 3-25-04
Your P.O. #: 10953
Our Charge #: 86783

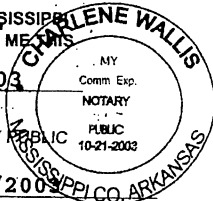
Carbon Equivalent: CE = CE(IIW) = C + Mn/6 + (Cr+Mo+V)/5 + (Ni+Cu)/15
Corrosion Index: CI = 28.01(%Cu) + 3.88(%Ni) + 1.20(%C) + 1.48(%S) + 17.28(%P) + 7.28(%Cu)(%Ni) + 9.10(%Ni)(%P) + 33.38(%Cu)

ELONGATION BASED ON 8.00 INCH GAUGE LENGTH
I hereby certify that the contents of this report are accurate and correct. All test results and operations performed by this material manufacturer are in compliance with the requirements of the material specifications, and when designated by the purchaser, meet the applicable specifications.

Doug Linnell

QUALITY ASSURANCE
CUSTOMER COPY

STATE OF ARKANSAS COUNTY OF MISSISSIPPI
SWORN TO AND SUBSCRIBED BEFORE ME THIS
28 Day of 08/03
Charlene Wallis NOTARY PUBLIC
MY COMMISSION EXPIRES 10/21/2003



DATE 1/16/04
INVOICE NO. 838026
BILL OF LADING 661844
CUSTOMER NO. 3738
CUSTOMER P.O. SK0-375

NUCOR-YAMATO STEEL CO.
 P.O. BOX 1228 • BLYTHEVILLE, AR 72316

CERTIFIED MILL TEST REPORT

100% MELTED AND MANUFACTURED IN U.S.A.
 All shapes produced by Nucor-Yamato Steel are cast and rolled to a fully killed and fine grain practice.

SPECIALTY
 METALS USA PLATES & SHAPES SEEKONK
 CONGDON & CARPENTER DIV
 10 TOWER RD
 SEEKONK, MA 02771-0090

SPECIFICATIONS
 GRADE: ASTM A992-02; ASTM A572GR50-01
 ASTM A709/A709M-01b GR50 (345)
 ASTM A709/A709M-01b GR50S (345S)

SOLD TO
 METALS USA PLATES & SHAPES
 NORTHEAST OFFICE
 2025 GREENTREE ROAD, 2ND FL.
 PITTSBURGH, PA 15220-0000

ASTM A6/A6M-02b

ITEM #	ITEM DESCRIPTION	QTY	HEAT #	MECHANICAL PROPERTIES						CHEMICAL PROPERTIES											
				YIELD TO TENSILE RATIO	YIELD STRENGTH MPa	TENSILE STRENGTH MPa	ELONG %	CHARPY IMPACT TEMP °C	IMPACT ENERGY FT-LBS	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb	CE
1	W24 - 68.0' 50'	1	222571	.80	63000	79000	23	✓		.07	1.30	.020	.014	.28	.35	.12	.08	.02	.05	.002	.35
	W610 x101.0 15.240 M			.83	65000	78000	23											.01	.18		
2	W24 - 68.0' 55'	2	226997	.78	57000	73000	25			.07	1.31	.022	.023	.26	.36	.10	.09	.02	.04	.001	.35
	W610 x101.0 16.764 M			.80	59000	74000	25											.01	.17		
3	W24 - 68.0' 55'	1	226999	.81	62000	77000	23			.07	1.34	.023	.024	.23	.32	.13	.08	.03	.05	.001	.35
	W610 x101.0 16.764 M			.79	59000	75000	23											.01	.17		
4	W24 - 84.0' 40'	3	226920	.80	59000	74000	25			.06	1.33	.024	.024	.26	.39	.13	.10	.03	.04	.001	.34
	W610 x125.0 12.192 M			.78	58000	74000	25											.01	.17		
5	W24 - 94.0' 45'	3	226908	.80	61000	76000	27			.07	1.33	.023	.024	.22	.34	.10	.08	.02	.04	.001	.35
	W610 x140.0 13.716 M			.81	61000	75000	25											.01	.17		

METALS USA - SEEKONK - TEST REPORT
 Customer: Precision Wdg + Fab
 Date: 4-14-04
 Your P.O. #: 10981
 Our Charge #: 87574

CARBON EQUIVALENT: CE = C(Mn) + C + Mn/6 + (Cr+Si)/5 + (Ni/Cr)15
 Corrosion Index: CI = 28.0(Cu) + 3.48(Si) + 1.20(Ni) + 1.82(P) + 17.28(S) + 7.22(Cu) + 1.07(Si) + 33.36(Cu)

ELONGATION BASED ON 8.00 INCH GAUGE LENGTH
 I hereby certify that the contents of this report are accurate and correct. All test results and operations performed by this material manufacturer are in compliance with the requirements of the material specifications, and when designated by the purchaser, meet the applicable specifications.

Gay Linnell
 QUALITY ASSURANCE

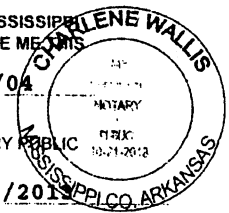
CUSTOMER COPY

STATE OF ARKANSAS COUNTY OF MISSISSIPPI
 SWORN TO AND SUBSCRIBED BEFORE ME THIS

16 Day of 01/04

Charlene Wallis
 NOTARY PUBLIC

MY COMMISSION EXPIRES 10/21/2015



DATE	12/02/03
INVOICE NO.	828720
BILL OF LADING	654895
CUSTOMER NO.	1628
CUSTOMER P.O.	SKP-309

NUCOR-YAMATO STEEL CO.
P.O. BOX 1228 • BLYTHEVILLE, AR 72316

CERTIFIED MILL TEST REPORT

100% MELTED AND MANUFACTURED IN U.S.A.
All shapes produced by Nucor-Yamato Steel are cast and rolled to a fully killed and fine grain practice.

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METALS USA PLATES & SHAPES SEEKONK
CONGDON & CARPENTER DIV.
10 TOWER RD.
SEEKONK, MASS 02771-0000

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GRADE: ASTM A992-02; ASTM A572GR50-01
ASTM A709/A709M-01b GR50 (345)
ASTM A709/A709M-01b GR50S (345S)

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METALS USA PLATES & SHAPES
NORTHEAST OFFICE
2025 GREENTREE ROAD, 2ND FL
PITTSBURGH, PA 15220-0000

ASTM A6/A6M-02b

ITEM	ITEM DESCRIPTION	QTY	HEAT #	MECHANICAL PROPERTIES						CHEMICAL PROPERTIES												
				YIELD TO TENSILE RATIO	YIELD STRENGTH	TENSILE STRENGTH	ELONG	CHARPY IMPACT		C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb	CE	
					PSI	PSI		%	TEMP													IMPACT ENERGY
					MPa	MPa		%	°F													FT-LBS
1	W18 - 60.0 40' W460 x 89.0 12.192 M	4	221370	.77	55000	71000	26				.06	1.16	.018	.032	.28	.35	.11	.11	.03	.00	.022	.31
				.77	55000	71000	25												.01	.16		
					379	490	26															
					379	490	25															
2	W24 - 55.0 55' W610 x 82.0 16.764 M	6	225534	.80	59000	74000	27				.08	1.11	.018	.023	.29	.35	.10	.14	.02	.04	.003	.34
				.78	56000	72000	26												.01	.18		
					407	510	27															
					386	496	26															

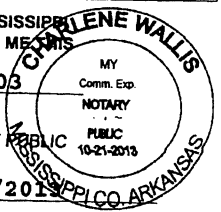
* METALS USA - SEEKONK - TEST REPORT
Customer: Precision Wldg + Fab
Date: 4-14-04
Your P.O. #: 10981
Our Charge #: 87574

ELONGATION BASED ON 8.00 INCH GAUGE LENGTH
I hereby certify that the contents of this report are accurate and correct. All test results and operations performed by this material manufacturer are in compliance with the requirements of the material specifications, and when designated by the purchaser, meet the applicable specifications.

Gay Lennell

QUALITY ASSURANCE
CUSTOMER COPY

STATE OF ARKANSAS COUNTY OF MISSISSIPPI
SWORN TO AND SUBSCRIBED BEFORE ME THIS
2 Day of 12/03
Charlene Wallis NOTARY PUBLIC
MY COMMISSION EXPIRES 10/21/2013



DATE	8/18/03
INVOICE NO.	807570
BILL OF LADING	639965
CUSTOMER NO.	0001
CUSTOMER P.O.	SKO-117 PORT

NUCOR-YAMATO STEEL CO.
P.O. BOX 1228 • BLYTHEVILLE, AR 72316

CERTIFIED MILL TEST REPORT

100% MELTED AND MANUFACTURED IN U.S.A.
All shapes produced by Nucor-Yamato Steel are cast and rolled to a fully killed and fine grain practice.

SHIPS TO: METALS USA PLATES & SHAPES SEEKONK CONGDON & CARPENTER DIV. 10 TOWER RD. SEEKONK, MASS 02771-0000

SPECIFICATION: GRADE: ASTM A992-01; ASTM A572GR50-01
ASTM A709/A709M-01a GR50 (345)
ASTM A709/A709M-01a GR50S (345S)
GRADE: AASHTO M270-50 (345)

ASTM A6/A6M-01b

SOLD TO: METALS USA PLATES & SHAPES NORTHEAST OFFICE 2025 GREENTREE ROAD, 2ND FL PITTSBURGH, PA 15220-0000

ITEM #	ITEM DESCRIPTION	QTY	HEAT #	MECHANICAL PROPERTIES						CHEMICAL PROPERTIES													
				YIELD TO TENSILE RATIO	YIELD STRENGTH	TENSILE STRENGTH	ELONG	CHARPY IMPACT		C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb	CE		
					PSI	PSI		%	TEMP													IMPACT ENERGY	*F	FT-LBS	Sn	Pcm	CI
1	W12 - 45.0 35' W310 x 67.0 10.668 M	2	218409	.73	54000	74000	25					.07	1.11	.015	.028	.29	.34	.11	.15	.02	.00	.021	.32
2	W12 - 45.0 35' W310 x 67.0 10.668 M	3	219700	.68	50000	74000	22					.05	1.10	.019	.029	.26	.40	.13	.14	.02	.00	.022	.30
3	W21 - 44.0 35' W530 x 66.0 10.668 M	6	217661	.77	53000	69000	24					.07	1.11	.016	.040	.30	.31	.10	.08	.01	.00	.016	.31
4	W21 - 44.0 35' W530 x 66.0 10.668 M	3	217663	.77	54000	70000	26					.07	1.14	.011	.030	.34	.28	.10	.07	.01	.01	.018	.31
5	W21 - 44.0 35' W530 x 66.0 10.668 M	9	217683	.78	57000	73000	25					.08	1.14	.010	.032	.32	.26	.10	.09	.01	.01	.020	.31
6	W21 - 44.0 35' W530 x 66.0 10.668 M	9	217685	.79	55000	70000	24					.07	1.14	.012	.029	.30	.29	.10	.08	.01	.01	.021	.31
7	W21 - 44.0 60' W530 x 66.0 18.288 M	6	217598	.76	53000	70000	27					.06	1.13	.019	.040	.26	.29	.10	.10	.01	.01	.014	.30
8	W21 - 44.0 60' W530 x 66.0 18.288 M	5	219193	.76	55000	72000	25					.07	1.11	.008	.027	.29	.33	.11	.07	.02	.00	.017	.31
9	W21 - 44.0 60' W530 x 66.0 18.288 M	7	219202	.75	53000	71000	27					.06	1.10	.017	.036	.33	.31	.12	.11	.03	.00	.016	.30

METALS USA - SEEKONK - TEST REPORT
Customer: Precision Wldg + Fab
Date: 4-14-04
Your P.O. #: 10981
Our Charge #: 87574

Form 1 - Si - Mn - Cu - Ni - Cr - Mo - V - S - B.H. Approx. 0005 CARBON EQUIVALENT: CE = CE(IIW) = C + Mn/6 + (Cr+Mo+V)/5 + (Ni+Cu)/15
Corrosion Index: CI = 28.01(%Cu)+3.88(%Ni)+1.20(%Cr)+1.49(%S)+17.28(%P)+7.22(%Cu)(%Ni)-8.10(%Ni)(%P)-33.38(%Cu)²

ELONGATION BASED ON 8.00 INCH GAUGE LENGTH

I hereby certify that the contents of this report are accurate and correct. All test results and operations performed by this material manufacturer are in compliance with the requirements of the material specifications, and when designated by the purchaser, meet the applicable specifications.

Gay Lonnell

QUALITY ASSURANCE

CUSTOMER COPY

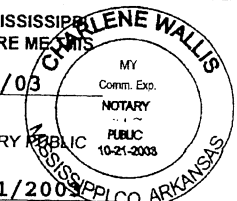
STATE OF ARKANSAS COUNTY OF MISSISSIPPI
SWORN TO AND SUBSCRIBED BEFORE ME THIS

18 Day of 08/03

Charlene Wallis

NOTARY PUBLIC

MY COMMISSION EXPIRES 10/21/2003



NUCOR STEEL - BERKELEY
 P.O. Box 2259
 Mt. Pleasant, S.C. 29464
 Phone: (843) 336-6000

SOLD TO: METALS USA-AMBRIDGE
 ATTN: DEBBIE TAYLOR - A/P
 2025 GREENTREE ROAD, 2ND. FLOOR
 PITTSBURGH, PA 15220

SHIP TO: METALS USA-AMBRIDGE
 10 TOWER ROAD
 SECONK, MA 02771

CERTIFIED MILL TEST REPORT
 100% MELTED AND MANUFACTURED IN THE USA
 All beams produced by Nucor-Berkeley are cast and
 rolled to a fully killed and fine grain practice.

Customer #: 1852 - 6
 Customer PO: SKO-104
 B.O.L. #: 324114
 Invoice #: 449887

SPECIFICATIONS: Tested in accordance with ASTM specifications for A6/A6M and A370.
 ASHTO : M270-36-00/M270-50-00
 ASTM : SA-36
 ASTM : A992-02:/A36-C1A/A572-01-50/A572-01-36/A572-01-30
 CSA : CSA-44W/G40.21-50W

Description	Heat#	Grade(s)	Yield/Tensile Ratio	Yield (MPa)	Tensile (MPa)	Elong	C		Mn		P		S		Si		Cu		Ni		CE1	CE2	Pcm	
							Cr	Pb	Mo	Ti	Sn	Ca	Al	B	V	N	Nb	Zr	CI					
W12x26	2309598	A992-02	.81	55300	67900	23.64	.0700	.0490	.0143	.0197	.0024	.0000	.0000	.0062	.0250	.0032	.0329	.0000	.0000	.0410	.2370	.2811	.1309	
045' 00.00"	3E1	468	.81	55009	68300	24.58	.0560	.0180	.0060	.0024	.0000	.0000	.0000	.0062	.0250	.0032	.0329	.0000	.0000	.0410	.2370	.2811	.1309	
W310X38.7	373	470	.81	55009	68300	24.58	.0560	.0180	.0060	.0024	.0000	.0000	.0000	.0062	.0250	.0032	.0329	.0000	.0000	.0410	.2370	.2811	.1309	
013.7160m																								
W12x30	1311456	A992-02	.80	53200	68700	24.34	.0710	.0410	.0118	.0202	.0017	.0006	.0006	.0197	.0033	.0054	.0314	.0000	.0000	.0350	.2326	.2716	.1322	
045' 00.00"	3A1	474	.80	53100	69300	23.63	.0360	.0170	.0048	.0017	.0006	.0001	.0006	.0017	.0033	.0054	.0314	.0000	.0000	.0350	.2326	.2716	.1322	
W310X44.5	383	478	.80	55500	69300	23.63	.0087	.0021	.0001	.0006	.0001	.0001	.0006	.0006	.0054	.0000	.0000	.0000	.0000	.0350	.2326	.2716	.1322	
013.7160m																								
W12x35	2311412	A992-02	.78	54000	69100	22.60	.0740	.0640	.0077	.0123	.0027	.0005	.0004	.0027	.0024	.0061	.0288	.0000	.0000	.0360	.2363	.2724	.1335	
045' 00.00"	372	476	.78	53400	68600	23.20	.0290	.0150	.0077	.0027	.0005	.0005	.0004	.0027	.0024	.0061	.0288	.0000	.0000	.0360	.2363	.2724	.1335	
W310X52	368	473	.78	53400	68600	23.20	.0023	.0018	.0005	.0004	.0005	.0005	.0004	.0027	.0024	.0061	.0288	.0000	.0000	.0360	.2363	.2724	.1335	
013.7160m																								
W14x22	2311318	A992-02	.81	53100	65900	28.50	.0650	.0710	.0076	.0216	.0010	.0000	.0004	.0019	.0230	.0027	.0091	.0000	.0000	.0340	.2091	.2424	.1194	
045' 00.00"	366	454	.81	51200	66000	29.28	.0210	.0170	.0059	.0010	.0005	.0000	.0004	.0019	.0026	.0053	.0091	.0000	.0000	.0340	.2091	.2424	.1194	
W360X32.9	353	455	.78	51200	66000	29.28	.0066	.0016	.0000	.0004	.0000	.0000	.0004	.0019	.0026	.0053	.0091	.0000	.0000	.0340	.2091	.2424	.1194	
013.7160m																								
W6x20	2304938	A992-02	.81	56300	69400	24.41	.0740	.0880	.0099	.0219	.0010	.0000	.0007	.0029	.0230	.0027	.0091	.0000	.0000	.0410	.2448	.2924	.1396	
045' 00.00"	388	479	.81	56800	70200	27.16	.0510	.0140	.0057	.0010	.0005	.0000	.0007	.0029	.0027	.0091	.0000	.0000	.0410	.2448	.2924	.1396		
W150X29.8	392	434	.81	56800	70200	27.16	.0004	.0012	.0000	.0007	.0005	.0000	.0007	.0029	.0027	.0091	.0000	.0000	.0410	.2448	.2924	.1396		
013.7160m																								
W6x9	2310315	A992-02	.81	56200	69700	28.83	.0700	.0820	.0061	.0236	.0005	.0000	.0015	.0029	.0250	.0030	.0109	.0000	.0000	.0410	.2295	.2733	.1369	
045' 00.00"	387	481	.81	54700	68500	27.94	.0360	.0180	.0069	.0005	.0000	.0000	.0015	.0029	.0030	.0109	.0000	.0000	.0410	.2295	.2733	.1369		
W150X13.5	377	472	.80	54700	68500	27.94	.0003	.0014	.0000	.0015	.0000	.0000	.0015	.0029	.0030	.0109	.0000	.0000	.0410	.2295	.2733	.1369		
013.7160m																								

METALS USA-SECONK TEST REPORT
 Customer: Precision Welding
 Date: 4-8-04
 Your P.O. #: 10981
 Our Charge #: 875710

NUCOR STEEL - BERKELEY
 P.O. Box 2259
 Mt. Pleasant, S.C. 29464
 Phone: (843) 336-6000

CERTIFIED MILL TEST REPORT

100% MELTED AND MANUFACTURED IN THE USA
 All beams produced by Nucor-Berkeley are cast and rolled to a fully killed and fine grain practice.

Sold To: METALS USA-AMBRIDGE
 ATTN: DEBBIE TAYLOR - A/P
 2025 GRANTREE ROAD, 2ND. FLOOR
 PITTSBURGH, PA 15220

Ship To: METALS USA-AMBRIDGE
 10 TOWER ROAD
 SEEKONK, MA 02771

Customer #: 1852 - 6
 Customer PO: SKO-135
 B.O.I. #: 325226
 Invoice #: 451683

SPECIFICATIONS: Tested in accordance with ASTM specification A6/A6M and A370.
 AASHTO: M270-36-00/M270-50-00
 ASME: SA-36
 ASTM: A992-02/A36-01A/A572-01-50/A709-01-36/A709-01-50
 CSA: CSA-44W/G40.21-50W

Description	Heat#	Grade (s)	Yield Tensile Ratio	Yield (PSI) (MPa)	Tensile (PSI) (MPa)	Elong %	C	Cr	Mn	P	S	Si	Cu	Ni	CE1
	Test			(MPa)	(MPa)		Pb	Ti	Mo	Sn	Al	V	Nb	CI	CE2
W12x16	2311896	A992-02	.79	51500	65400	29.19	.0700	.8330	.0090	.0090	.0214	.1660	.1230	.0390	.2299
045' 00.00"				51500	451		.0220	.0170	.0055	.0007	.0027	.0027	.0110	.0390	.2598
W310X23.8	2311896	A992-02	.78	50600	65100	28.99	.0045	.0011	.0002	.0002	.0002	.0058	.0000	3.2309	.1278
010.6680m				349	449		1 Piece(s)								
W12x16	2311902	A992-02	.80	52300	65000	27.93	.0700	.8560	.0067	.0163	.2100	.1220	.0410	.2353	
045' 00.00"				361	448		.0340	.0200	.0056	.0026	.0047	.0047	.0171	.2737	
W310X23.8	2311902	A992-02	.78	51000	65500	28.54	.0121	.0020	.0004	.0019	.0054	.0054	.0000	3.2658	.1394
013.7160m				352	452		31 Piece(s)								
W12x16	2311900	A992-02	.80	53300	67000	26.89	.0720	.8210	.0089	.0191	.1910	.1180	.0400	.2305	
045' 00.00"				368	462		.0360	.0170	.0052	.0008	.0028	.0131	.0131	.2650	
W310X23.8	2311900	A992-02	.80	53700	67200	28.40	.0048	.0012	.0000	.0001	.0068	.0068	.0000	3.2034	.1296
013.7160m				370	463		1 Piece(s)								
W12x16	2311894	A992-02	.79	51600	65700	29.89	.0710	.8140	.0083	.0193	.1820	.1260	.0400	.2285	
060' 00.00"				356	453		.0340	.0170	.0057	.0007	.0027	.0131	.0131	.2614	
W310X23.8	2311894	A992-02	.80	52700	66200	28.50	.0048	.0011	.0000	.0002	.0058	.0058	.0000	3.3180	.1287
018.2880m				363	456		11 Piece(s)								
W12x16	2311886	A992-02	.79	51500	65000	28.19	.0680	.8340	.0087	.0173	.1690	.1220	.0400	.2295	
060' 00.00"				355	448		.0370	.0180	.0051	.0015	.0033	.0137	.0137	.2604	
W310X23.8	2311886	A992-02	.80	51800	65100	28.79	.0073	.0013	.0001	.0002	.0053	.0053	.0000	3.2392	.1264
018.2880m				357	449		13 Piece(s)								
W12x19	1311877	A992-02	.79	51800	65300	27.60	.0670	.8370	.0134	.0266	.2000	.1150	.0390	.2279	
045' 00.00"				357	450		.0360	.0170	.0050	.0008	.0029	.0135	.0135	.2640	
W310X28.3	1311877	A992-02	.76	50100	65500	28.21	.0049	.0011	.0000	.0001	.0063	.0063	.0000	3.2362	.1255
013.7160m				345	452		18 Piece(s)								

METALS USA - SEEKONK - TEST REPORT
 Customer: Precision bldg
 Date: 4-8-04
 Your P.O. #: 10981
 Our Charge #: 87570

DATE 8/15/03
 INVOICE NO. 807161
 BILL OF LADING 639610
 CUSTOMER NO. 0001
 CUSTOMER P.O. SKO-121 PORT

NUCOR-YAMATO STEEL CO.
 P.O. BOX 1228 • BLYTHEVILLE, AR 72316

CERTIFIED MILL TEST REPORT

100% MELTED AND MANUFACTURED IN U.S.A.
 All shapes produced by Nucor-Yamato Steel are cast and rolled to a fully killed and fine grain practice.

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 METALS USA PLATES & SHAPES SEEKONK
 CONGDON & CARPENTER DIV.
 10 TOWER RD.
 SEEKONK, MASS 02771-0000

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 GRADE: ASTM A992-01; ASTM A572GR50-01
 ASTM A709/A709M-01a GR50 (345)
 ASTM A709/A709M-01a GR50S (345S)
 GRADE: AASHTO M270-50 (345)
 ASTM A6/A6M-01b

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 METALS USA PLATES & SHAPES
 NORTHEAST OFFICE
 2025 GREENTREE ROAD, 2ND FL
 PITTSBURGH, PA 15220-0000

ITEM #	ITEM DESCRIPTION	QTY	HEAT #	MECHANICAL PROPERTIES						CHEMICAL PROPERTIES												
				YIELD TO TENSILE RATIO	YIELD STRENGTH	TENSILE STRENGTH	ELONG	CHARPY IMPACT		C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb	CE	
					PSI	PSI		TEMP	IMPACT ENERGY													
					MPa	MPa		°F	FT-LBS													
1	W21 - 62.0 50' 530 x 92.0 5.240 M	3	214060	.79	56000	71000	27				.06	1.17	.026	.024	.30	.39	.12	.12	.02	.01	.025	.32
				.80	57000	71000	26												.01	.16		
					386	490	27															
					393	490	26															

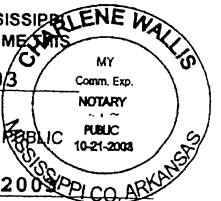
METALS USA - SEEKONK - TEST REPORT
 Customer: Precision Wldg
 Date: 4-5-04
 Your P.O. #: 10981
 Our Charge #: 87615

30 20 20 09 20 16 10 CARBON EQUIVALENT: CE = CE(IW) = C + Mn/6 + (Cr+Mo+V)/5 + (Ni+Cu)/15 Corrosion Index: C=26.01(%Cu)+3.88(%Ni)+1.20(%Cr)+1.48(%Si)+17.28(%P)+7.28(%Cu)(%Ni)+6.10(%Ni)(%P)-33.38(%Cu)²

ELONGATION BASED ON 8.00 INCH GAUGE LENGTH
 I hereby certify that the contents of this report are accurate and correct. All test results and operations performed by this material manufacturer are in compliance with the requirements of the material specifications, and when designated by the purchaser, meet the applicable specifications.

Doug Linnell
 QUALITY ASSURANCE
 CUSTOMER COPY

STATE OF ARKANSAS COUNTY OF MISSISSIPPI
 SWORN TO AND SUBSCRIBED BEFORE ME THIS
 15 Day of 08/03
 Charlene Wallis NOTARY PUBLIC
 MY COMMISSION EXPIRES 10/21/2005



30Mar04 10:47

SHIPPING ORDER

No:SKO W-87615

Sold By:

Metals USA

Plates & Shapes Northeast

Plates & Shapes - Seekonk

10 Tower Road

Seekonk, MA 02771

Tel: 508 399-8500 Fax: 508 399-6120

Ship From:

Metals USA

Plates & Shapes Northeast

Plates & Shapes - Seekonk

10 Tower Road

Seekonk, MA 02771

Sold To: (805613)

PRECISION WELDING & FABRICATION

P.O. BOX 880

WESTBROOK, ME. 04098

Ship To: (001)

PRECISION WELDING & FABRICATION

690 A STROUDWATER STREET

WESTBROOK, ME. 04098

Tel: 207-854-9330 Fax: 207-854-9694

Term NET 60 DAYS

Art PREPAID

Slp BILL HYDE

RON MORIN

Ord 29Mar04 Due 06Apr04

Via OUR TRUCK

PO/Rel 10981

FOB DELVED

SHIPPING ORDER

SO No

SKO W-87615

Test Certs: Chem Y Phys Y 1 Original copies with Shipment, 0 with Invoice

1 Carbon Wide Flange Beam A 992
21 x 62 X 30

1 PCS

1860 LBS
30 FT

Heat No: 214060

Shipped:

1 PCS

LBS

SIGNATURE:

Ron Morin

DATE:

LOADER'S INITIALS:

JM

DRIVER'S INITIALS:

H-5-04

Order Totals:

1 Items

1860 LBS

①
30W

30Mar04 10:47

SHIPPING ORDER

No:SKO W-87615

Sold By:

Ship From:

Metals USA

Metals USA

Plates & Shapes Northeast

Plates & Shapes Northeast

Plates & Shapes - Seekonk

Plates & Shapes - Seekonk

10 Tower Road

10 Tower Road

Seekonk, MA 02771

Seekonk, MA 02771

Tel: 508 399-8500 Fax: 508 399-6120

Sold To: (805613)

Ship To: (001)

PRECISION WELDING & FABRICATION

PRECISION WELDING & FABRICATION

P.O. BOX 880

690 A STROUDWATER STREET

WESTBROOK, ME. 04098

WESTBROOK, ME. 04098

Tel: 207-854-9330 Fax: 207-854-9694

Term NET 60 DAYS

Ord 29Mar04 Due 06Apr04

rt PREPAID

Via OUR TRUCK

FOB DELVED

Slp BILL HYDE

PO/Rel 10981

RON MORIN

SHIPPING ORDER

SO No

SKO W-87615

Test Certs: Chem Y Phys Y 1 Original copies with Shipment, 0 with Invoice

1 Carbon Wide Flange Beam A 992
21 x 62 X 30

1 PCS

1860 LBS
30 FT

Heat No: 214060

Shipped: 1 PCS

LBS

SIGNATURE:

Paul Wood

DATE:

LOADER'S INITIALS:

JW

DRIVER'S INITIALS:

H-5-04

Order Totals:

1 Items

1860 LBS

①
3CW



The New Columbia Joist Company
 2093 Old Highway 15
 New Columbia, PA 17856
 PHONE (570) 568-6761
 FAX (570) 568-1001

June 15, 2004

*MAT CERTS
 Steel Joist*

Mr. Steve Kelley
 Precision Welding & Fabrication, Inc.
 P.O. Box 880
 690A Stroudwater Street
 Westbrook, ME 04098-0880

RE: Product Certification
 Maine Mall Motors
 Portland, Maine

PR: 04JD-B182

Dear Mr. Kelley:

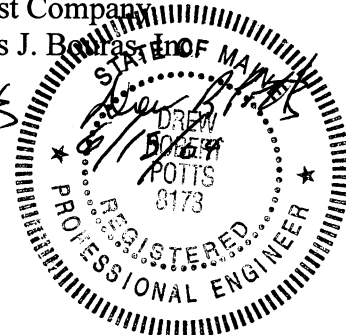
This letter is to notify you that the steel joists and accessories for the above referenced contract number were designed and fabricated by The New Columbia Joist Company, a Steel Joist Institute (SJI) member company located in New Columbia, Pennsylvania. Design information such as designations and lengths was developed from joist placement drawings produced by Nicholas J. Bouras, Inc., and approved by the specifying professional on the project. These joists were designed and fabricated according to the latest SJI Specifications. Joists specified with standard designation were designed to support the loading shown in the SJI load tables for the given designations and spans. Joists designated as "special" were designed for the loading shown on the approved placement drawings. In order to develop the full design strength of the joist lateral support must be provided to the joists by the bridging and decking as outlined in the SJI Specifications.

Angle shapes and round bar material meets ASTM A529 with a minimum yield of 50 ksi. Flat stock material meets ASTM A36 with a minimum yield of 36 ksi. The material was purchased and handled according to the AISC Code of Standard Practice, Section 5.2. Please feel free to contact us with any questions that you may have regarding this information.

The seal on this letter certifies that the components of the joists have been designed under the supervision of a registered engineer in the commonwealth of Pennsylvania. The seal does not certify that the selection or specified loads that the joists were designed for meet or exceed any local, state or national building codes.

Very truly yours,
 The New Columbia Joist Company
 a subsidiary of Nicholas J. Bouras, Inc.

Drew R. Potts
 Drew R. Potts, P.E.
 Engineering Manager



Encl.

cc: file

KEVIN SMITH



QUALITY ASSURANCE
DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 5/29/01
 Welder or welding operator's name KEVIN BILGER I.D. No. 802
 Welding process GMAW Manual Semiautomatic
 Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification ASTM-A36
 Test plate thickness 3/8" PLATE
 Thickness range this qualifies 1/8" TO 3/4"

*AWS Shop
CERT-2001*

FILLER METAL (TABLE 4.10)

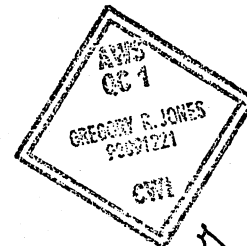
Specification no. SFA 5.18 Class ER70S-3 F-No. 6
 Is backing strip used? Yes
 Filler metal diameter and trade name .052 LINCOLN L50
 Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable YES

GUIDED BEND TEST RESULTS (4.30.5)

Type	Results
Face Bend	<u>PASS</u>
Root Bend	<u>PASS</u>



Gregory R. Jones

Inspected by GREG JONES Test No. 802
 Organization NEW COLUMBIA JOIST Inspection Date 5/31/01

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
 Authorized by SAM MOYER
 Date 5/23/01



QUALITY ASSURANCE
DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 12/12/01
 Welder or welding operator's name JASON BIRD I.D. No. 766
 Welding process GMAW Manual X Semiautomatic
 Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification ASTM-A36
 Test plate thickness 3/8" PLATE
 Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

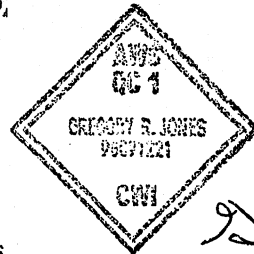
Specification no. SFA 5.18 Class ER70S-3 F-No. 6
 Is backing strip used? Yes
 Filler metal diameter and trade name .052 LINCOLN L50
 Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable YES

GUIDED BEND TEST RESULTS (4.30.5)

Type	Results
Face Bend	PASS
Root Bend	PASS



Inspected by GREG JONES Test No. 766
 Organization NEW COLUMBIA JOIST Inspection Date 12/13/01

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
 Authorized by SAM MOYER
 Date 12/11/01



QUALITY ASSURANCE DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 4/10/01
Welder or welding operator's name LARRY BITTNER I.D. No. 150
Welding process GMAW Manual X Semiautomatic
Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
In accordance with procedure specification no. NCJ-GMAW-1
Material specification ASTM-A36
Test plate thickness 3/8" PLATE
Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

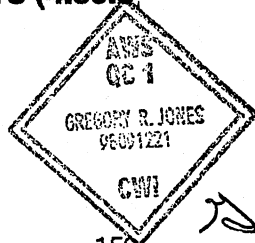
Specification no. SFA 5.18 Class ER70S-3 F-No. 6
Is backing strip used? Yes
Filler metal diameter and trade name .052 LINCOLN L50
Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable YES

GUIDED BEND TEST RESULTS (4.30.5)

Table with 2 columns: Type, Results. Rows: Face Bend PASS, Root Bend PASS



Handwritten signature of Gregory R. Jones

Inspected by GREG JONES Test No. 150
Organization NEW COLUMBIA JOIST Inspection Date 4/23/01

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
Authorized by SAM MOYER
Date 4/23/01

NDT Non-Destructive Testing Group

108 PARKWAY VIEW DRIVE • PITTSBURGH, PA 15205 • (412) 788-1207 • FAX (412) 494-9792

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name Greg Boop S.S. No. 211-58-1354
 Welding process GMAW Manual _____ Semiautomatic X Machine _____
 Position(s) tested Horizontal - 2G Position(s) Qualified Flat, Horizontal Fillet & Groove (G-2G-1F-2F)
 In accordance with procedure specification no. AWS D1.1 - 96
 Material specification A36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness 3/8" plate
 Thickness range this qualifies 1/8" to 3/4"

FILLER METAL

Specification no. SFA 5.18 Classification ER70S-3 F no. 6
 Describe filler metal (if not covered by AWS specification) _____

Is backing strip used? Yes
 Filler Metal Diameter and trade name .052 Lincoln Flux for submerged arc or gas for metal arc or flux cored arc welding 85/15 Ar/CO2

VISUAL INSPECTION (QW 302.4)

Appearance Acceptable Undercut None Piping porosity None

GUIDED BEND TEST RESULTS (QW 462.a)

Type	Results	Type	Results
Face Bend	No Defects PASS		
Root Bend	No Defects PASS		

FILLET TEST RESULTS

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Macroetch _____

RADIOGRAPHIC TEST RESULTS

Film I.D.	Results	Remarks	Film I.D.	Results	Remarks
NA					

Test conducted by NDTG Laboratory test no. _____
 Per Inspector Gary Gallagher Process date November 19, 1997
 Name of Inspector _____
 Test witnessed by Frank M. Adragna CWI Witness date November 3, 1997
 Per Company NDTG Work Order No: 97A-6612 Report #3

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of section 4 of ANSI/AWS D1.1 (96) Structural Welding Code Steel
 Year _____

Manufacturer or contractor New Columbia Joist Co.
 Authorized by Sam Moyer
 Date November 3, 1997





SCHOOL OF WELDING

Phone: (570) 743-5500

100 Pennsylvania Ave.
Hummels Wharf - Selinsgrove, PA 17870-9339

Telefax: (570) 743-4353

WELDER, WELDING OPERATOR OR TACK WELDER QUALIFICATION TEST RECORD

Type of Welder Welder
Name Reginal Brewer Identification No. 483
Welding Procedure Specification No. NCJ-GMAW-1 Rev 0 Date 09/22/99

Table with columns: Variables, Record Actual Values Used in Qualification, Qualification Range. Rows include Process/Type, Electrode, Current/Polarity, Position, Weld Progression, Backing, Material/Spec, Base Metal (Thickness, Groove, Fillet), Diameter, Filler Metal, Gas/Flux Type, and Other.

VISUAL INSPECTION (4.8.1)
Acceptable YES or NO YES
Guided Bend Test Results (4.30.5)
Type Result Type Result
Face Bend per 4.12 Passed Root Bend per 4.12 Passed
Fillet Test Results (4.30.2.3 and 4.30.4.1)
Appearance Fillet size
Fracture Test Root Penetration Macroetch
(Describe the location, nature and size of any crack or tearing of the specimen.)

Inspected by Wayne P. Line, CWI/ICT Test Number 020015
Organization ICT- School of Welding Test Date Feb. 21, 2000

Radiographic Test Results (4.30.3.1)
Table with columns: Film Identification Number, Results, Remarks. Two rows for data entry.

Interpreted by Organization Test Number Date

The undersigned certify that the statements in this record are correct and that the test welds were prepared welded and tested in accordance with the requirements of section 4 of AWS D1.1 (2000) Structural Welding Code-Steel. (year)

Manufacturer or Contractor New Columbia Joist Co. Authorized By

Date

NDT Non-Destructive Testing Group

Quality by Integrity and Knowledge

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name Michael Carson S.S. No. 160-56-4084
 Welding process GMAW Manual _____ Semiautomatic X Machine _____
 Position(s) tested 2G Position(s) Qualified 1G, 2G, 1F & 2F
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification A36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness 3/8" plate
 Thickness range this qualifies 1/8" to 3/4"

FILLER METAL

Specification no. SFA 5.18 Classification ER70S-3 F no. 6
 Describe filler metal (if not covered by AWS specification) _____

Is backing strip used? Yes

Filler Metal Diameter and trade name .052 Lincoln L50 Flux for submerged arc or gas for metal arc or flux cored arc welding 85/15 Ar/CO2

VISUAL INSPECTION (QW 302.4)

Appearance Acceptable Undercut None Piping porosity None

GUIDED BEND TEST RESULTS (QW 462.a)

Type	Results	Type	Results
Face Bend	No Defects PASS		
Root Bend	Defects < 1/8" PASS		

FILLET TEST RESULTS

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Macroetch _____

RADIOGRAPHIC TEST RESULTS

Film I.D.	Results	Remarks	Film I.D.	Results	Remarks
NA					

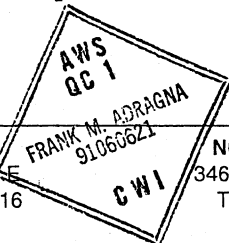
Test conducted by NDTG Laboratory test no. _____
 Per Inspector Gary Gallagher Process date November 10, 1997
 Name of Inspector _____
 Test witnessed by Frank M. Adragna CWI Witness date November 3, 1997
 Per Company NDTG Work Order No: 97A-6612 Report #2

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of section 4 of ANSI/AWS D1.1 (96) Structural Welding Code Steel

Year _____

Manufacturer or contractor New Columbia Joist Co.
 Authorized by Sam Moyer
 Date November 3, 1997

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 FAX 412-494-9792

NDT WEST
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 Eau Claire, WI 54701
 715-832-4551

NDT Non-Destructive Testing Group

Quality by Integrity and Knowledge

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name Clyde A Chappell II S.S. No. 173-48-9390
 Welding process GMAW Manual _____ Semiautomatic X Machine _____
 Position(s) tested 2G Position(s) Qualified 1G, 2G, 1F & 2F
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification A36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness 3/8" plate
 Thickness range this qualifies 1/8" to 3/4"

FILLER METAL

Specification no. SFA 5.18 Classification ER70S-3 F no. 6
 Describe filler metal (if not covered by AWS specification) _____

Is backing strip used? Yes
 Filler Metal Diameter and trade name .052 Lincoln L50 Flux for submerged arc or gas for metal arc or flux cored arc welding 85/15 Ar/CO2

VISUAL INSPECTION (QW 302.4)

Appearance Acceptable Undercut None Piping porosity None

GUIDED BEND TEST RESULTS (QW 462.a)

Type	Results	Type	Results
Face Bend	Defects < 1/8" PASS		
Root Bend	Defects < 1/8" PASS		

FILLET TEST RESULTS

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Macroetch _____

RADIOGRAPHIC TEST RESULTS

Film I.D.	Results	Remarks	Film I.D.	Results	Remarks
NA					

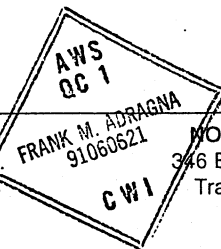
Test conducted by NDTG Laboratory test no. _____
 Per Inspector Gary Gallagher Process date November 10, 1997
 Name of Inspector _____
 Test witnessed by Frank M. Adragna CWI Witness date November 3, 1997
 Per Company NDTG Work Order No: 97A-6612 Report #2

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of section 4 of ANSI/AWS D1.1 (96) Structural Welding Code Steel

Year _____

Manufacturer or contractor New Columbia Joist Co.
 Authorized by Sam Moyer
 Date November 3, 1997

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QUALITY ASSURANCE
DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 10/14/02
 Welder or welding operator's name Tyson Chappell I.D. No. 787
 Welding process GMAW Manual X Semiautomatic
 Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification ASTM-36
 Test plate thickness 3/8" PLATE
 Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

Specification no. SFA5.18 Class ER70S-3 F-No. 6
 Is backing strip used? Yes
 Filler metal diameter and trade name .052 LINCOLN L50
 Gas or flux type 1590 CO2 / 8590 ARGON

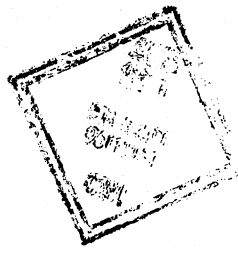
VISUAL INSPECTION (4.8.1)

Acceptable yes

GUIDED BEND TEST RESULTS (4.30.5)

Type	Results
Face Bend	<u>passed</u>
Root Bend	<u>passed</u>

Inspected by Gib Gratti, MWhitt Test No. 787
 Organization CWI, #9611161 Inspection Date 10/17/02



We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor THE NEW COLUMBIA JOIST CO
 Authorized by Terry Snoddy
 Date 10/14/02



QUALITY ASSURANCE DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 4/10/01
Welder or welding operator's name RANDY COBLE I.D. No. 792
Welding process GMAW Manual X Semiautomatic
Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
In accordance with procedure specification no. NCJ-GMAW-1
Material specification ASTM-A36
Test plate thickness 3/8" PLATE
Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

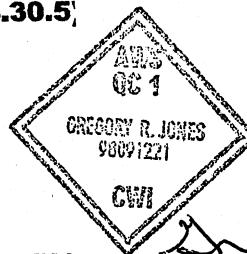
Specification no. SFA 5.18 Class ER70S-3 F-No. 6
Is backing strip used? Yes
Filler metal diameter and trade name .052 LINCOLN L50
Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable YES

GUIDED BEND TEST RESULTS (4.30.5)

Table with 2 columns: Type, Results. Rows: Face Bend PASS, Root Bend PASS



Inspected by GREG JONES Test No. 792
Organization NEW COLUMBIA JOIST Inspection Date 4/23/01

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
Authorized by SAM MOYER
Date 4/23/01



QUALITY ASSURANCE
DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 4/10/01
 Welder or welding operator's name RICHARD CONRAD I.D. No. 19
 Welding process GMAW Manual Semiautomatic
 Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification ASTM-A36
 Test plate thickness 3/8" PLATE
 Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

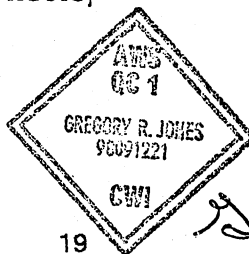
Specification no. SFA 5.18 Class ER70S-3 F-No. 6
 Is backing strip used? Yes
 Filler metal diameter and trade name .052 LINCOLN L50
 Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable YES

GUIDED BEND TEST RESULTS (4.30.5)

Type	Results
Face Bend	<u>PASS</u>
Root Bend	<u>PASS</u>



Inspected by GREG JONES Test No. 19
 Organization NEW COLUMBIA JOIST Inspection Date 4/23/01

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
 Authorized by SAM MOYER
 Date 4/23/01

NDT Non-Destructive Testing Group

Quality by Integrity and Knowledge

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name Rick Davenport S.S. No. 201-52-9220
 Welding process GMAW Manual _____ Semiautomatic X Machine _____
 Position(s) tested 2G Position(s) Qualified 1G, 2G, 1F & 2F
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification A36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness 3/8" plate
 Thickness range this qualifies 1/8" to 3/4"

FILLER METAL

Specification no. SFA 5.18 Classification ER70S-3 F no. 6
 Describe filler metal (if not covered by AWS specification) _____

Is backing strip used? Yes
 Filler Metal Diameter and trade name .052 Lincoln L50 Flux for submerged arc or gas for metal arc or flux cored arc welding 85/15 Ar/CO2

VISUAL INSPECTION (QW 302.4)

Appearance Acceptable Undercut None Piping porosity None

GUIDED BEND TEST RESULTS (QW 462.a)

Type	Results	Type	Results
Face Bend	Defects < 1/8" PASS		
Root Bend	Defects < 1/8" PASS		

FILLET TEST RESULTS

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Macroetch _____

RADIOGRAPHIC TEST RESULTS

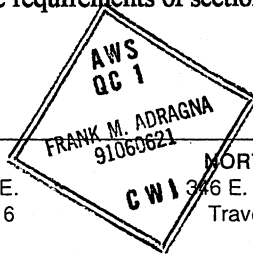
Film I.D.	Results	Remarks	Film I.D.	Results	Remarks
NA					

Test conducted by NDTG Laboratory test no. _____
 Per Inspector Gary Gallagher Process date November 10, 1997
 Name of Inspector _____
 Test witnessed by Frank M. Adragna CWI Witness date November 3, 1997
 Per Company NDTG Work Order No: 97A-6612 Report #2

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of section 4 of ANSI/AWS D1.1 (96) Structural Welding Code Steel

Year _____

Manufacturer or contractor New Columbia Joist Co.
 Authorized by Sam Moyer
 Date November 3, 1997



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 633 Putnam Drive
 Eau Claire, WI 54701
 715-832-4551



QUALITY ASSURANCE
DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 4/10/01
 Welder or welding operator's name TY ENGLE I.D. No. 827
 Welding process GMAW Manual Semiautomatic
 Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification ASTM-A36
 Test plate thickness 3/8" PLATE
 Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

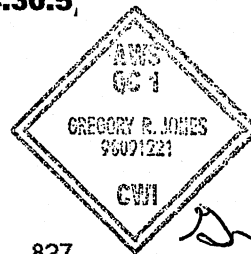
Specification no. SFA 5.18 Class ER70S-3 F-No. 6
 Is backing strip used? Yes
 Filler metal diameter and trade name .052 LINCOLN L50
 Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable YES

GUIDED BEND TEST RESULTS (4.30.5)

Type	Results
Face Bend	<u>PASS</u>
Root Bend	<u>PASS</u>



Inspected by GREG JONES Test No. 827
 Organization NEW COLUMBIA JOIST Inspection Date 4/23/01

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
 Authorized by SAM MOYER
 Date 4/23/01



QUALITY ASSURANCE
DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 5/9/01
 Welder or welding operator's name MICHAEL ENGLEMAN I.D. No. 342
 Welding process GMAW Manual X Semiautomatic _____
 Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification ASTM-A36
 Test plate thickness 3/8" PLATE
 Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

Specification no. SFA 5.18 Class ER70S-3 F-No. 6
 Is backing strip used? Yes
 Filler metal diameter and trade name .052 LINCOLN L50
 Gas or flux type 15%CO2 / 85% ARGON

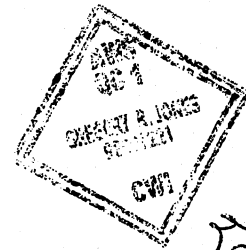
VISUAL INSPECTION (4.8.1)

Acceptable YES

GUIDED BEND TEST RESULTS (4.30.5)

Type	Results
Face Bend	PASS
Root Bend	PASS

Inspected by GREG JONES Test No. 342
 Organization NEW COLUMBIA JOIST Inspection Date 4/23/01



Gregory Jones

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
 Authorized by SAM MOYER
 Date 4/23/01

NDT Non-Destructive Testing Group

Quality by Integrity and Knowledge

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name Louis Fagnano S.S. No. 186-20-4556
 Welding process GMAW Manual _____ Semiautomatic X Machine _____
 Position(s) tested 2G Position(s) Qualified 1G, 2G, 1F & 2F
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification A36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness 3/8" plate
 Thickness range this qualifies 1/8" to 3/4"

FILLER METAL

Specification no. SFA 5.18 Classification ER70S-3 F no. 6
 Describe filler metal (if not covered by AWS specification) _____

Is backing strip used? Yes
 Filler Metal Diameter and trade name .052 Lincoln L50 Flux for submerged arc or gas for metal arc or flux cored arc welding 85/15 Ar/CO2

VISUAL INSPECTION (QW 302.4)

Appearance Acceptable Undercut None Piping porosity None

GUIDED BEND TEST RESULTS (QW 462.a)

Type	Results	Type	Results
Face Bend	No Defects PASS		
Root Bend	Defects < 1/8" PASS		

FILLET TEST RESULTS

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Macroetch _____

RADIOGRAPHIC TEST RESULTS

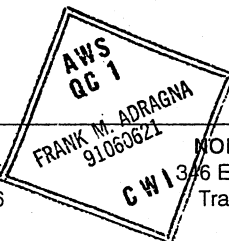
Film I.D.	Results	Remarks	Film I.D.	Results	Remarks
NA					

Test conducted by NDTG Laboratory test no. _____
 Per Inspector Gary Gallagher Process date November 19, 1997
 Name of Inspector _____
 Test witnessed by Frank M. Adragna CWI Witness date November 3, 1997
 Per Company NDTG Work Order No: 97A-6612 Report #3

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of section 4 of ANSI/AWS D1.1 (96) Structural Welding Code Steel

Year _____

Manufacturer or contractor New Columbia Joist Co.
 Authorized by Sam Moyer
 Date November 3, 1997



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Quality by Integrity and Knowledge

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name Gregory Fair S.S. No. 197-54-2701
 Welding process GMAW Manual _____ Semiautomatic X Machine _____
 Position(s) tested 2G Position(s) Qualified 1G, 2G, 1F & 2F
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification A36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness 3/8" plate
 Thickness range this qualifies 1/8" to 3/4"

FILLER METAL

Specification no. SFA 5.18 Classification ER70S-3 F no. 6
 Describe filler metal (if not covered by AWS specification) _____

Is backing strip used? Yes
 Filler Metal Diameter and trade name .052 Lincoln L50 Flux for submerged arc or gas for metal arc or flux cored arc welding 85/15 Ar/CO2

VISUAL INSPECTION (QW 302.4)

Appearance Acceptable Undercut None Piping porosity None

GUIDED BEND TEST RESULTS (QW 462.a)

Type	Results	Type	Results
Face Bend	No Defects PASS		
Root Bend	Defects < 1/8" PASS		

FILLET TEST RESULTS

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Macroetch _____

RADIOGRAPHIC TEST RESULTS

Film I.D.	Results	Remarks	Film I.D.	Results	Remarks
NA					

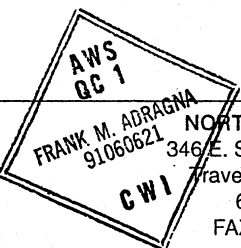
Test conducted by NDTG Laboratory test no. _____
 Per Inspector Gary Gallagher Process date November 10, 1997
 Name of Inspector _____
 Test witnessed by Frank M. Adragna CWI Witness date November 3, 1997
 Per Company NDTG Work Order No: 97A-6612 Report #2

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of section 4 of ANSI/AWS D1.1 (96) Structural Welding Code Steel

Year _____

Manufacturer or contractor New Columbia Joist Co.
 Authorized by Sam Moyer
 Date November 3, 1997

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NDT Non-Destructive Testing Group

Quality by Integrity and Knowledge

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name Steven Fantaski S.S. No. 198-50-6871
 Welding process GMAW Manual _____ Semiautomatic X Machine _____
 Position(s) tested 2G Position(s) Qualified 1G, 2G, 1F & 2F
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification A36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness 3/8" plate
 Thickness range this qualifies 1/8" to 3/4"

FILLER METAL

Specification no. SFA 5.18 Classification ER70S-3 F no. 6
 Describe filler metal (if not covered by AWS specification) _____

Is backing strip used? Yes
 Filler Metal Diameter and trade name .052 Lincoln L50 Flux for submerged arc or gas for metal arc or flux cored arc welding 85/15 Ar/CO2

VISUAL INSPECTION (QW 302.4)

Appearance Acceptable Undercut None Piping porosity None

GUIDED BEND TEST RESULTS (QW 462.a)

Type	Results	Type	Results
Face Bend	No Defects PASS		
Root Bend	Defects < 1/8" PASS		

FILLET TEST RESULTS

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Macroetch _____

RADIOGRAPHIC TEST RESULTS

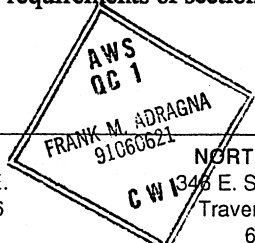
Film I.D.	Results	Remarks	Film I.D.	Results	Remarks
NA					

Test conducted by NDTG Laboratory test no. _____
 Per Inspector Gary Gallagher Process date November 10, 1997
 Name of Inspector _____
 Test witnessed by Frank M. Adragna CWI Witness date November 3, 1997
 Per Company NDTG Work Order No: 97A-6612 Report #2

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of section 4 of ANSI/AWS D1.1 (96) Structural Welding Code Steel

Year

Manufacturer or contractor New Columbia Joist Co.
 Authorized by Sam Moyer
 Date November 3, 1997



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QUALITY ASSURANCE
DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 5/9/01
Welder or welding operator's name HAROLD FETTERMAN I.D. No. 161
Welding process GMAW Manual X Semiautomatic
Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
In accordance with procedure specification no. NCJ-GMAW-1
Material specification ASTM-A36
Test plate thickness 3/8" PLATE
Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

Specification no. SFA 5.18 Class ER70S-3 F.No. 6
Is backing strip used? Yes
Filler metal diameter and trade name .052 LINCOLN L50
Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable YES

GUIDED BEND TEST RESULTS (4.30.5)

Type	Results
Face Bend	PASS
Root Bend	PASS

Inspected by GREG JONES Test No. 161
Organization NEW COLUMBIA JOIST Inspection Date 5/11/01

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
Authorized by SAM MOYER
Date 4/23/01



QUALITY ASSURANCE
DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 5/29/01
Welder or welding operator's name ROBERT FISHER I.D. No. 45
Welding process GMAW Manual X Semiautomatic
Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
In accordance with procedure specification no. NCJ-GMAW-1
Material specification ASTM-A36
Test plate thickness 3/8" PLATE
Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

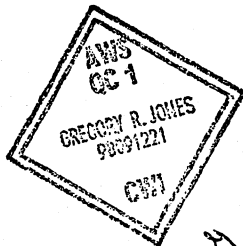
Specification no. SFA 5.18 Class ER70S-3 F-No. 6
Is backing strip used? Yes
Filler metal diameter and trade name .052 LINCOLN L50
Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable YES

GUIDED BEND TEST RESULTS (4.30.5)

Type	Results
Face Bend	PASS
Root Bend	PASS



Gregory R. Jones

Inspected by GREG JONES Test No. 45
Organization NEW COLUMBIA JOIST Inspection Date 5/31/01

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
Authorized by SAM MOYER
Date 5/23/01



QUALITY ASSURANCE
DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 4/10/01
Welder or welding operator's name WILLIAM FOWLER I.D. No. 773
Welding process GMAW Manual X Semiautomatic
Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
In accordance with procedure specification no. NCJ-GMAW-1
Material specification ASTM-A36
Test plate thickness 3/8" PLATE
Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

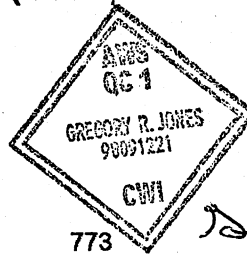
Specification no. SFA 5.18 Class ER70S-3 F-No. 6
Is backing strip used? Yes
Filler metal diameter and trade name .052 LINCOLN L50
Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable YES

GUIDED BEND TEST RESULTS (4.30.5)

Type	Results
Face Bend	<u>PASS</u>
Root Bend	<u>PASS</u>



Gregory R. Jones

Inspected by GREG JONES Test No. 773
Organization NEW COLUMBIA JOIST Inspection Date 4/23/01

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
Authorized by SAM MOYER
Date 4/23/01



QUALITY ASSURANCE
DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 5/29/01
Welder or welding operator's name RICHARD FRY I.D. No. 741
Welding process GMAW Manual X Semiautomatic
Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
In accordance with procedure specification no. NCJ-GMAW-1
Material specification ASTM-A36
Test plate thickness 3/8" PLATE
Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

Specification no. SFA 5.18 Class ER70S-3 F-No. 6
Is backing strip used? Yes
Filler metal diameter and trade name .052 LINCOLN L50
Gas or flux type 15%CO2 / 85% ARGON

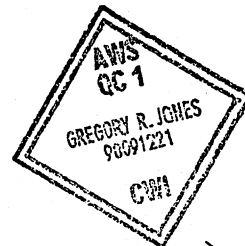
VISUAL INSPECTION (4.8.1)

Acceptable YES

GUIDED BEND TEST RESULTS (4.30.5)

Type	Results
Face Bend	<u>PASS</u>
Root Bend	<u>PASS</u>

Inspected by GREG JONES Test No. 741
Organization NEW COLUMBIA JOIST Inspection Date 5/31/01



We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
Authorized by SAM MOYER
Date 5/23/01

NDT Non-Destructive Testing Group

Quality by Integrity and Knowledge

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name Robert H. Funk S.S. No. 181-32-8912
 Welding process GMAW Manual _____ Semiautomatic X Machine _____
 Position(s) tested 2G Position(s) Qualified 1G, 2G, 1F & 2F
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification A36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness 3/8" plate
 Thickness range this qualifies 1/8" to 3/4"

FILLER METAL

Specification no. SFA 5.18 Classification ER70S-3 F no. 6
 Describe filler metal (if not covered by AWS specification) _____

Is backing strip used? Yes
 Filler Metal Diameter and trade name .052 Lincoln L50 Flux for submerged arc or gas for metal arc or flux cored arc welding 85/15 Ar/CO2

VISUAL INSPECTION (QW 302.4)

Appearance Acceptable Undercut None Piping porosity None

GUIDED BEND TEST RESULTS (QW 462.a)

Type	Results	Type	Results
Face Bend	Defects < 1/8" PASS		
Root Bend	No Defects PASS		

FILLET TEST RESULTS

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Macroetch _____

RADIOGRAPHIC TEST RESULTS

Film I.D.	Results	Remarks	Film I.D.	Results	Remarks
NA					

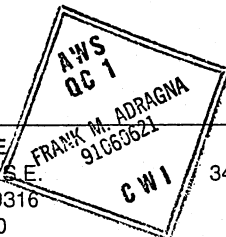
Test conducted by NDTG Laboratory test no. _____
 Per Inspector Gary Gallagher Process date November 10, 1997
 Name of Inspector _____
 Test witnessed by Frank M. Adragna CWI Witness date November 3, 1997
 Per Company NDTG Work Order No: 97A-6612 Report #1

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of section 4 of ANSI/AWS D1.1 (96) Structural Welding Code Steel

Year _____

Manufacturer or contractor New Columbia Joist Co.
 Authorized by Sam Moyer
 Date November 3, 1997

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NDT Non-Destructive Testing Group

Quality by Integrity and Knowledge

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name David Gemberling S.S. No. 168-42-2132
 Welding process GMAW Manual _____ Semiautomatic X Machine _____
 Position(s) tested 2G Position(s) Qualified 1G, 2G, 1F & 2F
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification A36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness 3/8" plate
 Thickness range this qualifies 1/8" to 3/4"

FILLER METAL

Specification no. SFA 5.18 Classification ER70S-3 F no. 6
 Describe filler metal (if not covered by AWS specification) _____

Is backing strip used? Yes
 Filler Metal Diameter and trade name .052 Lincoln L50 Flux for submerged arc or gas for metal arc or flux cored arc welding 85/15 Ar/CO2

VISUAL INSPECTION (QW 302.4)

Appearance Acceptable Undercut None Piping porosity None

GUIDED BEND TEST RESULTS (QW 462.a)

Type	Results	Type	Results
Face Bend	Defects < 1/8" PASS		
Root Bend	Defects < 1/8" PASS		

FILLET TEST RESULTS

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Macroetch _____

RADIOGRAPHIC TEST RESULTS

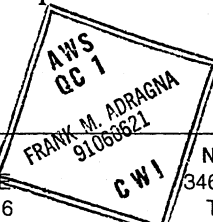
Film I.D.	Results	Remarks	Film I.D.	Results	Remarks
NA					

Test conducted by NDTG Laboratory test no. _____
 Per Inspector Gary Gallagher Process date November 10, 1997
 Name of Inspector _____
 Test witnessed by Frank M. Adragna CWI Witness date November 3, 1997
 Per Company NDTG Work Order No: 97A-6612 Report #2

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of section 4 of ANSI/AWS D1.1 (96) Structural Welding Code Steel

Year _____

Manufacturer or contractor New Columbia Joist Co.
 Authorized by Sam Moyer
 Date November 3, 1997



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NDT Non-Destructive Testing Group

Quality by Integrity and Knowledge

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name Eric Glace S.S. No. 187-64-2560
 Welding process GMAW Manual _____ Semiautomatic X Machine _____
 Position(s) tested 2G Position(s) Qualified 1G, 2G, 1F & 2F
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification A36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness 3/8" plate
 Thickness range this qualifies 1/8" to 3/4"

FILLER METAL

Specification no. SFA 5.18 Classification ER70S-3 F no. 6
 Describe filler metal (if not covered by AWS specification) _____

Is backing strip used? Yes
 Filler Metal Diameter and trade name .052 Lincoln L50 Flux for submerged arc or gas for metal arc or flux cored arc welding 85/15 Ar/CO2

VISUAL INSPECTION (QW 302.4)

Appearance Acceptable Undercut None Piping porosity None

GUIDED BEND TEST RESULTS (QW 462.a)

Type	Results	Type	Results
Face Bend	No Defects PASS		
Root Bend	Defects < 1/8" PASS		

FILLET TEST RESULTS

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Macroetch _____

RADIOGRAPHIC TEST RESULTS

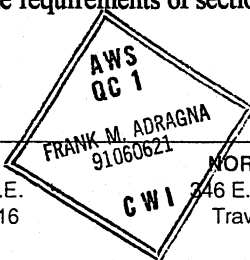
Film I.D.	Results	Remarks	Film I.D.	Results	Remarks
NA					

Test conducted by NDTG Laboratory test no. _____
 Per Inspector Gary Gallagher Process date November 10, 1997
 Name of Inspector _____
 Test witnessed by Frank M. Adragna CWI Witness date November 3, 1997
 Per Company NDTG Work Order No: 97A-6612 Report #2

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of section 4 of ANSI/AWS D1.1 (96) Structural Welding Code Steel

Year _____

Manufacturer or contractor New Columbia Joist Co.
 Authorized by Sam Moyer
 Date November 3, 1997



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QUALITY ASSURANCE
DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 1/22/01
Welder or welding operator's name DANIEL GRIFFITH I.D. No. 348
Welding process GMAW Manual X Semiautomatic
Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
In accordance with procedure specification no. NCJ-GMAW-1
Material specification ASTM-A36
Test plate thickness 3/8" PLATE
Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

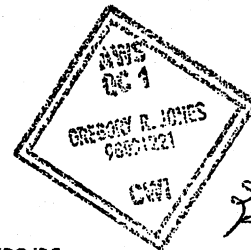
Specification no. SFA 5.18 Class ER70S-3 F-No. 6
Is backing strip used? Yes
Filler metal diameter and trade name .052 LINCOLN L50
Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable YES

GUIDED BEND TEST RESULTS (4.30.5)

Type	Results
Face Bend	PASS
Root Bend	PASS



Gregory R. Jones

Inspected by GREG JONES Test No. 348
Organization NEW COLUMBIA JOIST Inspection Date 1/23/02

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
Authorized by SAM MOYER
Date 1/23/02



QUALITY ASSURANCE
DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 5/9/01
 Welder or welding operator's name JESSE GUFFEY I.D. No. 51
 Welding process GMAW Manual Semiautomatic
 Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification ASTM-A36
 Test plate thickness 3/8" PLATE
 Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

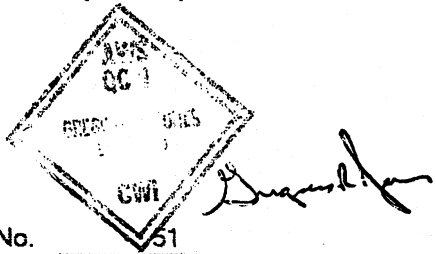
Specification no. SFA 5.18 Class ER70S-3 F-No. 6
 Is backing strip used? Yes
 Filler metal diameter and trade name .052 LINCOLN L50
 Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable YES

GUIDED BEND TEST RESULTS (4.30.5)

Type	Results
Face Bend	PASS
Root Bend	PASS



Inspected by GREG JONES Test No. 51
 Organization NEW COLUMBIA JOIST Inspection Date 5/10/01

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
 Authorized by SAM MOYER
 Date 5/8/01

NDT Non-Destructive Testing Group

Quality by Integrity and Knowledge

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name Steve Guay S.S. No. 033-54-8427
Welding process GMAW Manual Semiautomatic X Machine
Position(s) tested 2G Position(s) Qualified 1G, 2G, 1F & 2F
In accordance with procedure specification no. NCJ-GMAW-1
Material specification A36
Diameter and wall thickness (if pipe) - otherwise, joint thickness 3/8" plate
Thickness range this qualifies 1/8" to 3/4"

FILLER METAL

Specification no. SFA 5.18 Classification ER70S-3 F no. 6
Describe filler metal (if not covered by AWS specification)

Is backing strip used? Yes
Filler Metal Diameter and trade name .052 Lincoln L50 Flux for submerged arc or gas for metal arc or flux cored arc welding 85/15 Ar/CO2

VISUAL INSPECTION (QW 302.4)

Appearance Acceptable Undercut None Piping porosity None

GUIDED BEND TEST RESULTS (QW 462.a)

Type	Results	Type	Results
Face Bend	No Defects PASS		
Root Bend	No Defects PASS		

FILLET TEST RESULTS

Appearance Fillet size
Fracture test root penetration Macroetch

RADIOGRAPHIC TEST RESULTS

Film I.D.	Results	Remarks	Film I.D.	Results	Remarks
NA					

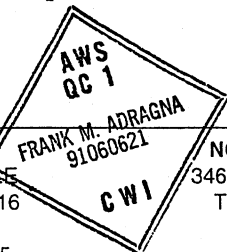
Test conducted by NDTG Laboratory test no.
Per Inspector Gary Gallagher Process date November 10, 1997
Name of Inspector
Test witnessed by Frank M. Adragna CWI Witness date November 3, 1997
Per Company NDTG Work Order No: 97A-6612 Report #2

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of section 4 of ANSI/AWS D1.1 (96) Structural Welding Code Steel

Year

Manufacturer or contractor New Columbia Joist Co.
Authorized by Sam Moyer
Date November 3, 1997

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633 Putnam Drive
Eau Claire, WI 54701
715-832-4551

NDT Non-Destructive Testing Group

Quality by Integrity and Knowledge

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name Richard Hans S.S. No. 207-32-6571
 Welding process GMAW Manual _____ Semiautomatic X Machine _____
 Position(s) tested 2G Position(s) Qualified 1G, 2G, 1F & 2F
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification A36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness 3/8" plate
 Thickness range this qualifies 1/8" to 3/4"

FILLER METAL

Specification no. SFA 5.18 Classification ER70S-3 F no. 6
 Describe filler metal (if not covered by AWS specification) _____

Is backing strip used? Yes

Filler Metal Diameter and trade name .052 Lincoln L50

Flux for submerged arc or gas for metal arc or flux cored arc welding 85/15 Ar/CO2

VISUAL INSPECTION (QW 302.4)

Appearance Acceptable Undercut None Piping porosity None

GUIDED BEND TEST RESULTS (QW 462.a)

Type	Results	Type	Results
Face Bend	Defects < 1/8" PASS		
Root Bend	Defects < 1/8" PASS		

FILLET TEST RESULTS

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Macroetch _____

RADIOGRAPHIC TEST RESULTS

Film I.D.	Results	Remarks	Film I.D.	Results	Remarks
NA					

Test conducted by NDTG Laboratory test no. _____
 Per Inspector Gary Gallagher Process date November 10, 1997
 Name of Inspector _____
 Test witnessed by Frank M. Adragna CWI Witness date November 3, 1997
 Per Company NDTG Work Order No: 97A-6612 Report #1

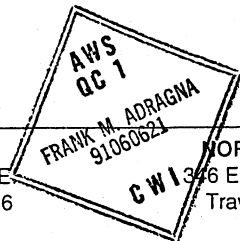
We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of section 4 of ANSI/AWS D1.1 (96) Structural Welding Code Steel

Year _____

Manufacturer or contractor New Columbia Joist Co.

Authorized by Sam Moyer

Date November 3, 1997



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NDT Non-Destructive Testing Group

Quality by Integrity and Knowledge

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name Bill Hans S.S. No. 198-38-5176
 Welding process GMAW Manual _____ Semiautomatic X Machine _____
 Position(s) tested 2G Position(s) Qualified 1G, 2G, 1F & 2F
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification A36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness 3/8" plate
 Thickness range this qualifies 1/8" to 3/4"

FILLER METAL

Specification no. SFA 5.18 Classification ER70S-3 F no. 6
 Describe filler metal (if not covered by AWS specification) _____

Is backing strip used? Yes
 Filler Metal Diameter and trade name .052 Lincoln L50 Flux for submerged arc or gas for metal arc or flux cored arc welding 85/15 Ar/CO2

VISUAL INSPECTION (QW 302.4)

Appearance Acceptable Undercut None Piping porosity None

GUIDED BEND TEST RESULTS (QW 462.a)

Type	Results	Type	Results
Face Bend	Defects < 1/8" PASS		
Root Bend	Defects < 1/8" PASS		

FILLET TEST RESULTS

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Macroetch _____

RADIOGRAPHIC TEST RESULTS

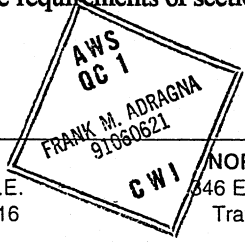
Film I.D.	Results	Remarks	Film I.D.	Results	Remarks
NA					

Test conducted by NDTG Laboratory test no. _____
 Per Inspector Gary Gallagher Process date November 10, 1997
 Name of Inspector _____
 Test witnessed by Frank M. Adragna CWI Witness date November 3, 1997
 Per Company NDTG Work Order No: 97A-6612 Report #2

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of section 4 of ANSI/AWS D1.1 (96) Structural Welding Code Steel

Year _____

Manufacturer or contractor New Columbia Joist Co.
 Authorized by Sam Moyer
 Date November 3, 1997



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NDT Non-Destructive Testing Group

Quality by Integrity and Knowledge

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name James Harber S.S. No. 164-52-9685
 Welding process GMAW Manual _____ Semiautomatic X Machine _____
 Position(s) tested 2G Position(s) Qualified 1G, 2G, 1F & 2F
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification A36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness 3/8" plate
 Thickness range this qualifies 1/8" to 3/4"

FILLER METAL

Specification no. SFA 5.18 Classification ER70S-3 F no. 6
 Describe filler metal (if not covered by AWS specification) _____

Is backing strip used? Yes
 Filler Metal Diameter and trade name .052 Lincoln L50 Flux for submerged arc or gas for metal arc or flux cored arc welding 85/15 Ar/CO2

VISUAL INSPECTION (QW 302.4)

Appearance Acceptable Undercut None Piping porosity None

GUIDED BEND TEST RESULTS (QW 462.a)

Type	Results	Type	Results
Face Bend	Defects < 1/8" PASS		
Root Bend	No Defects PASS		

FILLET TEST RESULTS

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Macroetch _____

RADIOGRAPHIC TEST RESULTS

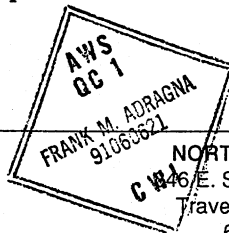
Film I.D.	Results	Remarks	Film I.D.	Results	Remarks
NA					

Test conducted by NDTG Laboratory test no. _____
 Per Inspector Gary Gallagher Process date November 10, 1997
 Name of Inspector _____
 Test witnessed by Frank M. Adragna CWI Witness date November 3, 1997
 Per Company NDTG Work Order No: 97A-6612 Report #1

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Year _____

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 Date November 3, 1997



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NDT Non-Destructive Testing Group

Quality by Integrity and Knowledge

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name Steven Hare S.S. No. 173-52-1255
 Welding process GMAW Manual _____ Semiautomatic X Machine _____
 Position(s) tested 2G Position(s) Qualified 1G, 2G, 1F & 2F
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification A36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness 3/8" plate
 Thickness range this qualifies 1/8" to 3/4"

FILLER METAL

Specification no. SFA 5.18 Classification ER70S-3 F no. 6
 Describe filler metal (if not covered by AWS specification) _____

Is backing strip used? Yes
 Filler Metal Diameter and trade name .052 Lincoln L50 Flux for submerged arc or gas for metal arc or flux cored arc welding 85/15 Ar/CO2

VISUAL INSPECTION (QW 302.4)

Appearance Acceptable Undercut None Piping porosity None

GUIDED BEND TEST RESULTS (QW 462.a)

Type	Results	Type	Results
Face Bend	Defects < 1/8" PASS		
Root Bend	Defects < 1/8" PASS		

FILLET TEST RESULTS

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Macroetch _____

RADIOGRAPHIC TEST RESULTS

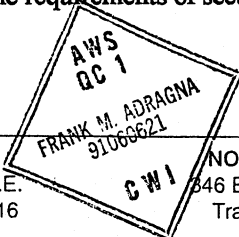
Film I.D.	Results	Remarks	Film I.D.	Results	Remarks
NA					

Test conducted by NDTG Laboratory test no. _____
 Per Inspector Gary Gallagher Process date November 10, 1997
 Name of Inspector _____
 Test witnessed by Frank M. Adragna CWI Witness date November 3, 1997
 Per Company NDTG Work Order No: 97A-6612 Report #2

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of section 4 of ANSI/AWS D1.1 (96) Structural Welding Code Steel

Year _____

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 Authorized by Sam Moyer
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QUALITY ASSURANCE
DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 3/14/01
Welder or welding operator's name ROBERT HARVEY I.D. No. 782
Welding process GMAW Manual X Semiautomatic _____
Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
In accordance with procedure specification no. NCJ-GMAW-1
Material specification ASTM-A36
Test plate thickness 3/8" PLATE
Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

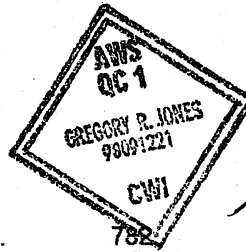
Specification no. SFA 5.18 Class ER70S-3 F-No. 6
Is backing strip used? Yes
Filler metal diameter and trade name .052 LINCOLN L50
Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable YES

GUIDED BEND TEST RESULTS (4.30.5)

Type	Results
Face Bend	PASS
Root Bend	PASS



Gregory R. Jones

Inspected by GREG JONES Test No. 782
Organization NEW COLUMBIA JOIST Inspection Date 3/14/01

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
Authorized by SAM MOYER
Date 3/13/01



QUALITY ASSURANCE DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 4/10/01
Welder or welding operator's name MATT HERB I.D. No. 801
Welding process GMAW Manual X Semiautomatic
Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
In accordance with procedure specification no. NCJ-GMAW-1
Material specification ASTM-A36
Test plate thickness 3/8" PLATE
Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

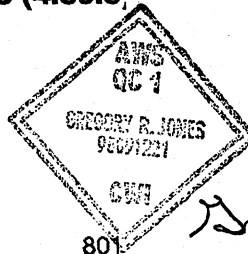
Specification no. SFA 5.18 Class ER70S-3 F-No. 6
Is backing strip used? Yes
Filler metal diameter and trade name .052 LINCOLN L50
Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable YES

GUIDED BEND TEST RESULTS (4.30.5)

Table with 2 columns: Type, Results. Rows: Face Bend PASS, Root Bend PASS



Inspected by GREG JONES Test No. 801
Organization NEW COLUMBIA JOIST Inspection Date 4/23/01

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
Authorized by SAM MOYER
Date 4/23/01



QUALITY ASSURANCE
DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 4/10/01
Welder or welding operator's name RALP HERB JR. I.D. No. 800
Welding process GMAW Manual X Semiautomatic
Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
In accordance with procedure specification no. NCJ-GMAW-1
Material specification ASTM-A36
Test plate thickness 3/8" PLATE
Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

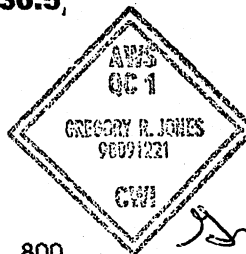
Specification no. SFA 5.18 Class ER70S-3 F-No. 6
Is backing strip used? Yes
Filler metal diameter and trade name .052 LINCOLN L50
Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable YES

GUIDED BEND TEST RESULTS (4.30.5)

Type	Results
Face Bend	<u>PASS</u>
Root Bend	<u>PASS</u>



Inspected by GREG JONES Test No. 800
Organization NEW COLUMBIA JOIST Inspection Date 4/23/01

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
Authorized by SAM MOYER
Date 4/23/01



QUALITY ASSURANCE DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 5/9/01
Welder or welding operator's name MICHAEL HILLER I.D. No. 770
Welding process GMAW Manual X Semiautomatic
Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
In accordance with procedure specification no. NCJ-GMAW-1
Material specification ASTM-A36
Test plate thickness 3/8" PLATE
Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

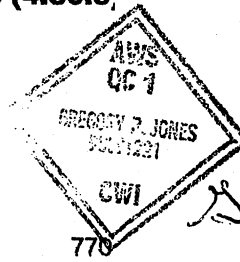
Specification no. SFA 5.18 Class ER70S-3 F-No. 6
Is backing strip used? Yes
Filler metal diameter and trade name .052 LINCOLN L50
Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable YES

GUIDED BEND TEST RESULTS (4.30.5)

Table with 2 columns: Type, Results. Rows: Face Bend PASS, Root Bend PASS



Handwritten signature of Gregory J. Jones

Inspected by GREG JONES Test No. 770
Organization NEW COLUMBIA JOIST Inspection Date 5/10/01

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
Authorized by SAM MOYER
Date 5/8/01



QUALITY ASSURANCE DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 3/24/03
Welder or welding operator's name MICHAEL R. HOFFMAN I.D. No. 468
Welding process GMAW Manual X Semiautomatic
Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
In accordance with procedure specification no. NCJ-GMAW-1
Material specification ASTM-A36
Test plate thickness 3/8" PLATE
Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

Specification no. SFA 5.18 Class ER70S-3 F-No. 6
Is backing strip used? Yes
Filler metal diameter and trade name .052 LINCOLN L50
Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable yes

GUIDED BEND TEST RESULTS (4.30.5)

Table with 2 columns: Type, Results. Rows: Face Bend (Acceptable), Root Bend (Acceptable)



Inspected by M. Hoffs, CWI Test No. 468
Organization NCJ Inspection Date 3/27/03

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
Authorized by TERRY SNODDY
Date 3/25/03



QUALITY ASSURANCE
DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 1/22/01
Welder or welding operator's name STEVEN HOFFMASTER I.D. No. 760
Welding process GMAW Manual X Semiautomatic _____
Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
In accordance with procedure specification no. NCJ-GMAW-1
Material specification ASTM-A36
Test plate thickness 3/8" PLATE
Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

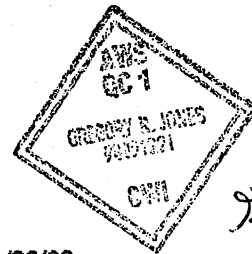
Specification no. SFA 5.18 Class ER70S-3 F.No. 6
Is backing strip used? Yes
Filler metal diameter and trade name .052 LINCOLN L50
Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable YES

GUIDED BEND TEST RESULTS (4.30.5)

Type	Results
Face Bend	PASS
Root Bend	PASS



Inspected by GREG JONES Test No. 760
Organization NEW COLUMBIA JOIST Inspection Date 1/23/02

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
Authorized by SAM MOYER
Date 1/23/02

NDT Non-Destructive Testing Group

Quality by Integrity and Knowledge

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name Terry Hummel S.S. No. 178-36-2342
 Welding process GMAW Manual _____ Semiautomatic X Machine _____
 Position(s) tested 2G Position(s) Qualified 1G, 2G, 1F & 2F
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification A36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness 3/8" plate
 Thickness range this qualifies 1/8" to 3/4"

FILLER METAL

Specification no. SFA 5.18 Classification ER70S-3 F no. 6
 Describe filler metal (if not covered by AWS specification) _____

Is backing strip used? Yes

Filler Metal Diameter and trade name .052 Lincoln L50 Flux for submerged arc or gas for metal arc or flux cored arc welding 85/15 Ar/CO2

VISUAL INSPECTION (QW 302.4)

Appearance Acceptable Undercut None Piping porosity None

GUIDED BEND TEST RESULTS (QW 462.a)

Type	Results	Type	Results
Face Bend	Defects < 1/8" PASS		
Root Bend	Defects < 1/8" PASS		

FILLET TEST RESULTS

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Macroetch _____

RADIOGRAPHIC TEST RESULTS

Film I.D.	Results	Remarks	Film I.D.	Results	Remarks
NA					

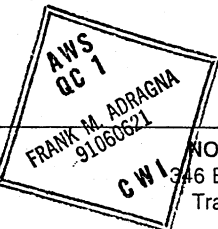
Test conducted by NDTG Laboratory test no. _____
 Per Inspector Gary Gallagher Process date November 10, 1997
 Name of Inspector _____
 Test witnessed by Frank M. Adragna CWI Witness date November 3, 1997
 Per Company NDTG Work Order No: 97A-6612 Report #2

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of section 4 of ANSI/AWS D1.1 (96) Structural Welding Code Steel

Year _____

Manufacturer or contractor New Columbia Joist Co.
 Authorized by Sam Moyer
 Date November 3, 1997

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QUALITY ASSURANCE
DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 3/24/03
 Welder or welding operator's name STEPHEN R. HURD I.D. No. 709
 Welding process GMAW Manual X Semiautomatic
 Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification ASTM-A36
 Test plate thickness 3/8" PLATE
 Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

Specification no. SFA 5.18 Class ER70S-3 F-No. 6
 Is backing strip used? Yes
 Filler metal diameter and trade name .052 LINCOLN L50
 Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable yes

GUIDED BEND TEST RESULTS (4.30.5)

Type	Results
Face Bend	<u>Acceptable</u>
Root Bend	<u>Acceptable</u>

Inspected by M. H. Curtis, CWI Test No. 709
 Organization NCJ Inspection Date 3/27/03



We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
 Authorized by TERRY SNODDY
 Date 3/25/03



QUALITY ASSURANCE
DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 1/22/01
Welder or welding operator's name JAMES KATHERMAN I.D. No. 505
Welding process GMAW Manual X Semiautomatic _____
Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
In accordance with procedure specification no. NCJ-GMAW-1
Material specification ASTM-A36
Test plate thickness 3/8" PLATE
Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

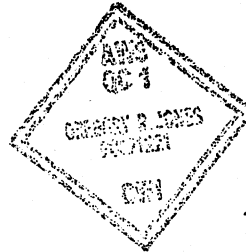
Specification no. SFA 5.18 Class ER70S-3 F-No. 6
Is backing strip used? Yes
Filler metal diameter and trade name .052 LINCOLN L50
Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable YES

GUIDED BEND TEST RESULTS (4.30.5)

Type	Results
Face Bend	PASS
Root Bend	PASS



Gregory Jones

Inspected by GREG JONES Test No. 505
Organization NEW COLUMBIA JOIST Inspection Date 1/23/02

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
Authorized by SAM MOYER
Date 1/23/02



QUALITY ASSURANCE DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 11/6/01
Welder or welding operator's name CHARLES KLINEFELTER I.D. No. 256
Welding process GMAW Manual X Semiautomatic
Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
In accordance with procedure specification no. NCJ-GMAW-1
Material specification ASTM-A36
Test plate thickness 3/8" PLATE
Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

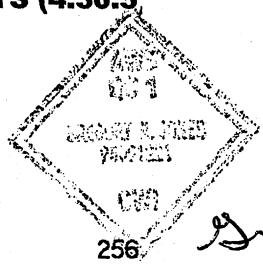
Specification no. SFA 5.18 Class ER70S-3 F-No. 6
Is backing strip used? Yes
Filler metal diameter and trade name .052 LINCOLN L50
Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable YES

GUIDED BEND TEST RESULTS (4.30.5)

Table with 2 columns: Type, Results. Rows: Face Bend PASS, Root Bend PASS



Handwritten signature of Charles Klinefelter

Inspected by GREG JONES Test No. 256
Organization NEW COLUMBIA JOIST Inspection Date 11/7/01

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
Authorized by SAM MOYER
Date 11/7/01



QUALITY ASSURANCE DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 1/22/01
Welder or welding operator's name STEVEN KNOUSE I.D. No. 710
Welding process GMAW Manual X Semiautomatic
Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
In accordance with procedure specification no. NCJ-GMAW-1
Material specification ASTM-A36
Test plate thickness 3/8" PLATE
Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

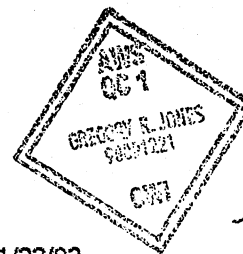
Specification no. SFA 5.18 Class ER70S-3 F-No. 6
Is backing strip used? Yes
Filler metal diameter and trade name .052 LINCOLN L50
Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable YES

GUIDED BEND TEST RESULTS (4.30.5)

Table with 2 columns: Type, Results. Rows: Face Bend PASS, Root Bend PASS



Handwritten signature of Gregory E. Jones

Inspected by GREG JONES Test No. 710
Organization NEW COLUMBIA JOIST Inspection Date 1/23/02

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
Authorized by SAM MOYER
Date 1/23/02



QUALITY ASSURANCE
DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 8/15/01
Welder or welding operator's name JAMES KONYAR I.D. No. 655
Welding process GMAW Manual X Semiautomatic
Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
In accordance with procedure specification no. NCJ-GMAW-1
Material specification ASTM-A36
Test plate thickness 3/8" PLATE
Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

Specification no. SFA 5.18 Class ER70S-3 F-No. 6
Is backing strip used? Yes
Filler metal diameter and trade name .052 LINCOLN L50
Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable YES

GUIDED BEND TEST RESULTS (4.30.5)

Type	Results
Face Bend	PASS
Root Bend	PASS



Inspected by GREG JONES Test No. 655
Organization NEW COLUMBIA JOIST Inspection Date 8/15/01

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
Authorized by SAM MOYER
Date 8/14/01



QUALITY ASSURANCE DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 5/9/01
Welder or welding operator's name RON KOONSMAN I.D. No. 762
Welding process GMAW Manual X Semiautomatic
Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
In accordance with procedure specification no. NCJ-GMAW-1
Material specification ASTM-A36
Test plate thickness 3/8" PLATE
Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

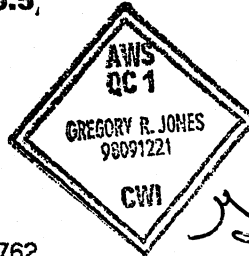
Specification no. SFA 5.18 Class ER70S-3 F-No. 6
Is backing strip used? Yes
Filler metal diameter and trade name .052 LINCOLN L50
Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable YES

GUIDED BEND TEST RESULTS (4.30.5)

Table with 2 columns: Type, Results. Rows: Face Bend PASS, Root Bend PASS



Handwritten signature of Gregory R. Jones

Inspected by GREG JONES Test No. 762
Organization NEW COLUMBIA JOIST Inspection Date 5/10/01

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
Authorized by SAM MOYER
Date 5/8/01



QUALITY ASSURANCE
DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 4/10/01
 Welder or welding operator's name JAMES KOHARSKI I.D. No. 119
 Welding process GMAW Manual X Semiautomatic _____
 Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification ASTM-A36
 Test plate thickness 3/8" PLATE
 Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

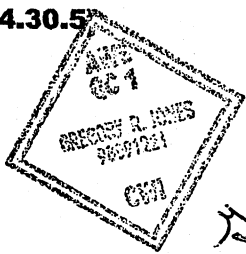
Specification no. SFA 5.18 Class ER70S-3 F-No. 6
 Is backing strip used? Yes
 Filler metal diameter and trade name .052 LINCOLN L50
 Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable YES

GUIDED BEND TEST RESULTS (4.30.5)

Type	Results
Face Bend	PASS
Root Bend	PASS



Gregory R. Jones

Inspected by GREG JONES Test No. 119
 Organization NEW COLUMBIA JOIST Inspection Date 4/23/01

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
 Authorized by SAM MOYER
 Date 4/23/01



QUALITY ASSURANCE
DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 4/10/01
Welder or welding operator's name PAUL KURTZ I.D. No. 382
Welding process GMAW Manual X Semiautomatic
Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
In accordance with procedure specification no. NCJ-GMAW-1
Material specification ASTM-A36
Test plate thickness 3/8" PLATE
Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

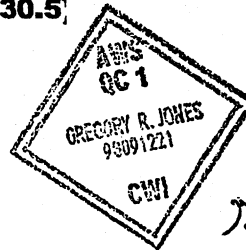
Specification no. SFA 5.18 Class ER70S-3 F-No. 6
Is backing strip used? Yes
Filler metal diameter and trade name .052 LINCOLN L50
Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable YES

GUIDED BEND TEST RESULTS (4.30.5)

Type	Results
Face Bend	<u>PASS</u>
Root Bend	<u>PASS</u>



Gregory R. Jones

Inspected by GREG JONES Test No. 382
Organization NEW COLUMBIA JOIST Inspection Date 4/23/01

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
Authorized by SAM MOYER
Date 4/23/01



QUALITY ASSURANCE DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 4/10/01
Welder or welding operator's name RANDY LEHMAN I.D. No. 686
Welding process GMAW Manual X Semiautomatic
Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
In accordance with procedure specification no. NCJ-GMAW-1
Material specification ASTM-A36
Test plate thickness 3/8" PLATE
Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

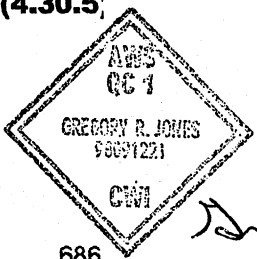
Specification no. SFA 5.18 Class ER70S-3 F-No. 6
Is backing strip used? Yes
Filler metal diameter and trade name .052 LINCOLN L50
Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable YES

GUIDED BEND TEST RESULTS (4.30.5)

Table with 2 columns: Type, Results. Rows: Face Bend PASS, Root Bend PASS



Inspected by GREG JONES Test No. 686
Organization NEW COLUMBIA JOIST Inspection Date 4/23/01

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
Authorized by SAM MOYER
Date 4/23/01

NDT Non-Destructive Testing Group

Quality by Integrity and Knowledge

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name Robert LeVan S.S. No. 173-32-3414
 Welding process GMAW Manual _____ Semiautomatic X Machine _____
 Position(s) tested 2G Position(s) Qualified 1G, 2G, 1F & 2F
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification A36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness 3/8" plate
 Thickness range this qualifies 1/8" to 3/4"

FILLER METAL

Specification no. SFA 5.18 Classification ER70S-3 F no. 6
 Describe filler metal (if not covered by AWS specification) _____

Is backing strip used? Yes
 Filler Metal Diameter and trade name .052 Lincoln L50 Flux for submerged arc or gas for metal arc or flux cored arc welding 85/15 Ar/CO2

VISUAL INSPECTION (QW 302.4)

Appearance Acceptable Undercut None Piping porosity None

GUIDED BEND TEST RESULTS (QW 462.a)

Type	Results	Type	Results
Face Bend	Defects < 1/8" PASS		
Root Bend	Defects < 1/8" PASS		

FILLET TEST RESULTS

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Macroetch _____

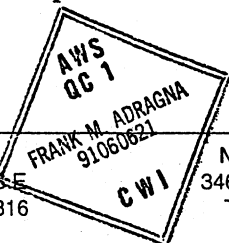
RADIOGRAPHIC TEST RESULTS

Film I.D.	Results	Remarks	Film I.D.	Results	Remarks
NA					

Test conducted by NDTG Laboratory test no. _____
 Per Inspector Gary Gallagher Process date November 10, 1997
 Name of Inspector _____
 Test witnessed by Frank M. Adragna CWI Witness date November 3, 1997
 Per Company NDTG Work Order No: 97A-6612 Report #1

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of section 4 of ANSI/AWS D1.1 (96) Structural Welding Code Steel
 Year _____

Manufacturer or contractor New Columbia Joist Co.
 Authorized by Sam Moyer
 Date November 3, 1997



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NDT Non-Destructive Testing Group

Quality by Integrity and Knowledge

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name Jeffrey Lovett S.S. No. 162-48-8921
 Welding process GMAW Manual _____ Semiautomatic X Machine _____
 Position(s) tested 2G Position(s) Qualified 1G, 2G, 1F & 2F
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification A36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness 3/8" plate
 Thickness range this qualifies 1/8" to 3/4"

FILLER METAL

Specification no. SFA 5.18 Classification ER70S-3 F no. 6
 Describe filler metal (if not covered by AWS specification) _____

Is backing strip used? Yes
 Filler Metal Diameter and trade name .052 Lincoln L50 Flux for submerged arc or gas for metal arc or flux cored arc welding 85/15 Ar/CO2

VISUAL INSPECTION (QW 302.4)

Appearance Acceptable Undercut None Piping porosity None

GUIDED BEND TEST RESULTS (QW 462.a)

Type	Results	Type	Results
Face Bend	Defects < 1/8" PASS		
Root Bend	Defects < 1/8" PASS		

FILLET TEST RESULTS

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Macroetch _____

RADIOGRAPHIC TEST RESULTS

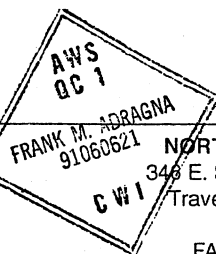
Film I.D.	Results	Remarks	Film I.D.	Results	Remarks
NA					

Test conducted by NDTG Laboratory test no. _____
 Per Inspector Gary Gallagher Process date November 10, 1997
 Name of Inspector _____
 Test witnessed by Frank M. Adragna CWI Witness date November 3, 1997
 Per Company NDTG Work Order No: 97A-6612 Report #2

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of section 4 of ANSI/AWS D1.1 (96) Structural Welding Code Steel

Year _____

Manufacturer or contractor New Columbia Joist Co.
 Authorized by Sam Moyer
 Date November 3, 1997



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QUALITY ASSURANCE
DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 4/10/01
 Welder or welding operator's name BRIAN LYNCH I.D. No. 490
 Welding process GMAW Manual Semiautomatic
 Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification ASTM-A36
 Test plate thickness 3/8" PLATE
 Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

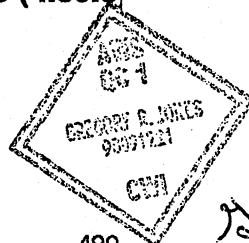
Specification no. SFA 5.18 Class ER70S-3 F-No. 6
 Is backing strip used? Yes
 Filler metal diameter and trade name .052 LINCOLN L50
 Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable YES

GUIDED BEND TEST RESULTS (4.30.5)

Type	Results
Face Bend	<u>PASS</u>
Root Bend	<u>PASS</u>



Inspected by GREG JONES Test No. 490
 Organization NEW COLUMBIA JOIST Inspection Date 4/23/01

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
 Authorized by SAM MOYER
 Date 4/23/01



QUALITY ASSURANCE
DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 5/2/01
Welder or welding operator's name KENNETH LYNCH I.D. No. 59
Welding process GMAW Manual Semiautomatic
Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
In accordance with procedure specification no. NCJ-GMAW-1
Material specification ASTM-A36
Test plate thickness 3/8" PLATE
Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

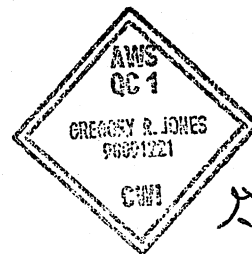
Specification no. SFA 5.18 Class ER70S-3 F-No. 6
Is backing strip used? Yes
Filler metal diameter and trade name .052 LINCOLN L50
Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable YES

GUIDED BEND TEST RESULTS (4.30.5)

Type	Results
Face Bend	PASS
Root Bend	PASS



Gregory R. Jones

Inspected by GREG JONES Test No. 59
Organization NEW COLUMBIA JOIST Inspection Date 5/3/01

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
Authorized by SAM MOYER
Date 4/23/01



QUALITY ASSURANCE DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 3/24/03
Welder or welding operator's name KENNETH L. LYONS I.D. No. 231
Welding process GMAW Manual X Semiautomatic
Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
In accordance with procedure specification no. NCJ-GMAW-1
Material specification ASTM-A36
Test plate thickness 3/8" PLATE
Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

Specification no. SFA 5.18 Class ER70S-3 F-No. 6
Is backing strip used? Yes
Filler metal diameter and trade name .052 LINCOLN L50
Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable yes

GUIDED BEND TEST RESULTS (4.30.5)

Table with 2 columns: Type, Results. Rows: Face Bend (Acceptable), Root Bend (Acceptable)



Inspected by [Signature] CWI Test No. 231
Organization NCJ Inspection Date 3/27/03

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
Authorized by TERRY SNODDY
Date 3/25/03

NDT Non-Destructive Testing Group

Quality by Integrity and Knowledge

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name William Maingoth S.S. No. 183-40-6759
 Welding process GMAW Manual _____ Semiautomatic X Machine _____
 Position(s) tested 2G Position(s) Qualified 1G, 2G, 1F & 2F
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification A36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness 3/8" plate
 Thickness range this qualifies 1/8" to 3/4"

FILLER METAL

Specification no. SFA 5.18 Classification ER70S-3 F no. 6
 Describe filler metal (if not covered by AWS specification) _____

Is backing strip used? Yes
 Filler Metal Diameter and trade name .052 Lincoln L50 Flux for submerged arc or gas for metal arc or flux cored arc welding 85/15 Ar/CO2

VISUAL INSPECTION (QW 302.4)

Appearance Acceptable Undercut None Piping porosity None

GUIDED BEND TEST RESULTS (QW 462.a)

Type	Results	Type	Results
Face Bend	No Defects PASS		
Root Bend	No Defects PASS		

FILLET TEST RESULTS

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Macroetch _____

RADIOGRAPHIC TEST RESULTS

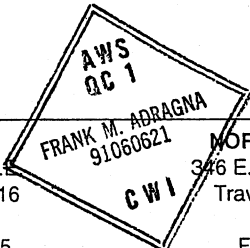
Film I.D.	Results	Remarks	Film I.D.	Results	Remarks
NA					

Test conducted by NDTG Laboratory test no. _____
 Per Inspector Gary Gallagher Process date November 10, 1997
 Name of Inspector _____
 Test witnessed by Frank M. Adragna CWI Witness date November 3, 1997
 Per Company NDTG Work Order No: 97A-6612 Report #2

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of section 4 of ANSI/AWS D1.1 (96) Structural Welding Code Steel

Year _____

Manufacturer or contractor New Columbia Joist Co.
 Authorized by Sam Moyer
 Date November 3, 1997



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QUALITY ASSURANCE DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 3/24/03
Welder or welding operator's name DANIEL J. MALOY I.D. No. 721
Welding process GMAW Manual X Semiautomatic
Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
In accordance with procedure specification no. NCJ-GMAW-1
Material specification ASTM-A36
Test plate thickness 3/8" PLATE
Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

Specification no. SFA 5.18 Class ER70S-3 F-No. 6
Is backing strip used? Yes
Filler metal diameter and trade name .052 LINCOLN L50
Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable yes

GUIDED BEND TEST RESULTS (4.30.5)

Table with 2 columns: Type, Results. Rows: Face Bend (Acceptable), Root Bend (Acceptable)



Inspected by M. H. ... CWI Test No. 721
Organization NCS Inspection Date 3/27/03

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
Authorized by TERRY SNODDY
Date 3/25/03



QUALITY ASSURANCE
DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 5/9/01
Welder or welding operator's name PETE MCGEE I.D. No. 781
Welding process GMAW Manual X Semiautomatic
Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
In accordance with procedure specification no. NCJ-GMAW-1
Material specification ASTM-A36
Test plate thickness 3/8" PLATE
Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

Specification no. SFA 5.18 Class ER70S-3 F-No. 6
Is backing strip used? Yes
Filler metal diameter and trade name .052 LINCOLN L50
Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable YES

GUIDED BEND TEST RESULTS (4.30.5)

Type	Results
Face Bend	<u>PASS</u>
Root Bend	<u>PASS</u>

Inspected by GREG JONES Test No. 781
Organization NEW COLUMBIA JOIST Inspection Date 5/10/01

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
Authorized by SAM MOYER
Date 5/8/01

NDT Non-Destructive Testing Group

Quality by Integrity and Knowledge

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name Dan McMillen S.S. No. 163-52-6781
 Welding process GMAW Manual _____ Semiautomatic X Machine _____
 Position(s) tested 2G Position(s) Qualified 1G, 2G, 1F & 2F
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification A36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness 3/8" plate
 Thickness range this qualifies 1/8" to 3/4"

FILLER METAL

Specification no. SFA 5.18 Classification ER70S-3 F no. 6
 Describe filler metal (if not covered by AWS specification) _____

Is backing strip used? Yes
 Filler Metal Diameter and trade name .052 Lincoln L50 Flux for submerged arc or gas for metal arc or flux cored arc welding 85/15 Ar/CO2

VISUAL INSPECTION (QW 302.4)

Appearance Acceptable Undercut None Piping porosity None

GUIDED BEND TEST RESULTS (QW 462.a)

Type	Results	Type	Results
Face Bend	Defects < 1/8" PASS		
Root Bend	Defects < 1/8" PASS		

FILLET TEST RESULTS

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Macroetch _____

RADIOGRAPHIC TEST RESULTS

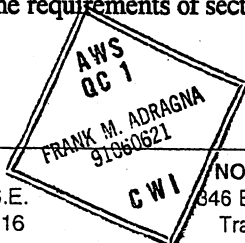
Film I.D.	Results	Remarks	Film I.D.	Results	Remarks
NA					

Test conducted by NDTG Laboratory test no. _____
 Per Inspector Gary Gallagher Process date November 10, 1997
 Name of Inspector _____
 Test witnessed by Frank M. Adragna CWI Witness date November 3, 1997
 Per Company NDTG Work Order No: 97A-6612 Report #2

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of section 4 of ANSI/AWS D1.1 (96) Structural Welding Code Steel

Year _____

Manufacturer or contractor New Columbia Joist Co.
 Authorized by Sam Moyer
 Date November 3, 1997



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QUALITY ASSURANCE
DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 4/10/01
 Welder or welding operator's name TIM MCMILLEN I.D. No. 664
 Welding process GMAW Manual X Semiautomatic
 Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification ASTM-A36
 Test plate thickness 3/8" PLATE
 Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

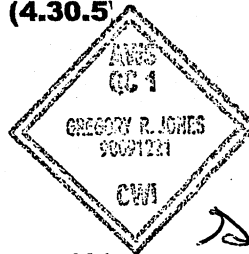
Specification no. SFA 5.18 Class ER70S-3 F-No. 6
 Is backing strip used? Yes
 Filler metal diameter and trade name .052 LINCOLN L50
 Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable YES

GUIDED BEND TEST RESULTS (4.30.5)

Type	Results
Face Bend	PASS
Root Bend	PASS



Inspected by GREG JONES Test No. 664
 Organization NEW COLUMBIA JOIST Inspection Date 4/23/01

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
 Authorized by SAM MOYER
 Date 4/23/01

NDT Non-Destructive Testing Group

Quality by Integrity and Knowledge

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name Luther Metzger S.S. No. 200-54-1769
 Welding process GMAW Manual _____ Semiautomatic X Machine _____
 Position(s) tested 2G Position(s) Qualified 1G, 2G, 1F & 2F
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification A36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness 3/8" plate
 Thickness range this qualifies 1/8" to 3/4"

FILLER METAL

Specification no. SFA 5.18 Classification ER70S-3 F no. 6
 Describe filler metal (if not covered by AWS specification) _____

Is backing strip used? Yes
 Filler Metal Diameter and trade name .052 Lincoln L50 Flux for submerged arc or gas for metal arc or flux cored arc welding 85/15 Ar/CO2

VISUAL INSPECTION (QW 302.4)

Appearance Acceptable Undercut None Piping porosity None

GUIDED BEND TEST RESULTS (QW 462.a)

Type	Results	Type	Results
Face Bend	Defects < 1/8" PASS		
Root Bend	Defects < 1/8" PASS		

FILLET TEST RESULTS

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Macroetch _____

RADIOGRAPHIC TEST RESULTS

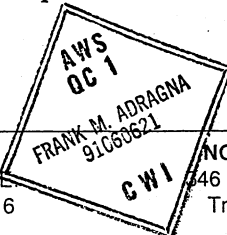
Film I.D.	Results	Remarks	Film I.D.	Results	Remarks
NA					

Test conducted by NDTG Laboratory test no. _____
 Per Inspector Gary Gallagher Process date November 10, 1997
 Name of Inspector _____
 Test witnessed by Frank M. Adragna CWI Witness date November 3, 1997
 Per Company NDTG Work Order No: 97A-6612 Report #1

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of section 4 of ANSI/AWS D1.1 (96) Structural Welding Code Steel

Year _____

Manufacturer or contractor New Columbia Joist Co.
 Authorized by Sam Moyer
 Date November 3, 1997



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NDT Non-Destructive Testing Group

Quality by Integrity and Knowledge

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name Charles T. Miller S.S. No. 164-36-0408
 Welding process GMAW Manual _____ Semiautomatic X Machine _____
 Position(s) tested 2G Position(s) Qualified 1G, 2G, 1F & 2F
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification A36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness 3/8" plate
 Thickness range this qualifies 1/8" to 3/4"

FILLER METAL

Specification no. SFA 5.18 Classification ER70S-3 F no. 6
 Describe filler metal (if not covered by AWS specification) _____

Is backing strip used? Yes
 Filler Metal Diameter and trade name .052 Lincoln L50 Flux for submerged arc or gas for metal arc or flux cored arc welding 85/15 Ar/CO2

VISUAL INSPECTION (QW 302.4)

Appearance Acceptable Undercut None Piping porosity None

GUIDED BEND TEST RESULTS (QW 462.a)

Type	Results	Type	Results
Face Bend	No Defects PASS		
Root Bend	No Defects PASS		

FILLET TEST RESULTS

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Macroetch _____

RADIOGRAPHIC TEST RESULTS

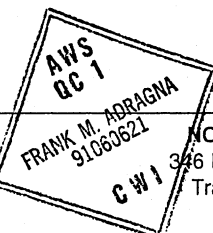
Film I.D.	Results	Remarks	Film I.D.	Results	Remarks
NA					

Test conducted by NDTG Laboratory test no. _____
 Per Inspector Gary Gallagher Process date November 10, 1997
 Name of Inspector _____
 Test witnessed by Frank M. Adragna CWI Witness date November 3, 1997
 Per Company NDTG Work Order No: 97A-6612 Report #1

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of section 4 of ANSI/AWS D1.1 (96) Structural Welding Code Steel

Year _____

Manufacturer or contractor New Columbia Joist Co.
 Authorized by Sam Moyer
 Date November 3, 1997



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Quality by Integrity and Knowledge

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name Carl Minnier S.S. No. 185-34-3831
 Welding process GMAW Manual _____ Semiautomatic X Machine _____
 Position(s) tested 2G Position(s) Qualified 1G, 2G, 1F & 2F
 In accordance with procedure specification no. NCI-GMAW-1
 Material specification A36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness 3/8" plate
 Thickness range this qualifies 1/8" to 3/4"

FILLER METAL

Specification no. SFA 5.18 Classification ER70S-3 F no. 6
 Describe filler metal (if not covered by AWS specification) _____

Is backing strip used? Yes
 Filler Metal Diameter and trade name .052 Lincoln L50 Flux for submerged arc or gas for metal arc or flux cored arc welding 85/15 Ar/CO2

VISUAL INSPECTION (QW 302.4)

Appearance Acceptable Undercut None Piping porosity None

GUIDED BEND TEST RESULTS (QW 462.a)

Type	Results	Type	Results
Face Bend	Defects < 1/8" PASS		
Root Bend	Defects < 1/8" PASS		

FILLET TEST RESULTS

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Macroetch _____

RADIOGRAPHIC TEST RESULTS

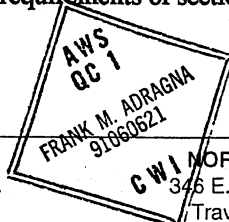
Film I.D.	Results	Remarks	Film I.D.	Results	Remarks
NA					

Test conducted by NDTG Laboratory test no. _____
 Per Inspector Gary Gallagher Process date November 10, 1997
 Name of Inspector _____
 Test witnessed by Frank M. Adragna CWI Witness date November 3, 1997
 Per Company NDTG Work Order No: 97A-6612 Report #2

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of section 4 of ANSI/AWS D1.1 (96) Structural Welding Code Steel

Year _____

Manufacturer or contractor New Columbia Joist Co.
 Authorized by Sam Moyer
 Date November 3, 1997



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QUALITY ASSURANCE
DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 4/10/01
 Welder or welding operator's name SCOTT MONTGOMERY I.D. No. 453
 Welding process GMAW Manual X Semiautomatic _____
 Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification ASTM-A36
 Test plate thickness 3/8" PLATE
 Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

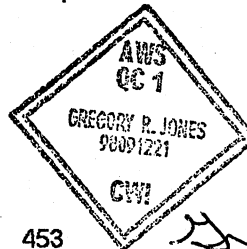
Specification no. SFA 5.18 Class ER70S-3 F-No. 6
 Is backing strip used? Yes
 Filler metal diameter and trade name .052 LINCOLN L50
 Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable YES

GUIDED BEND TEST RESULTS (4.30.5)

Type	Results
Face Bend	PASS
Root Bend	PASS



Inspected by GREG JONES Test No. 453
 Organization NEW COLUMBIA JOIST Inspection Date 4/23/01

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
 Authorized by SAM MOYER
 Date 4/23/01



QUALITY ASSURANCE
DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 7/20/01
 Welder or welding operator's name FRANK MURPHY I.D. No. 232
 Welding process GMAW Manual X Semiautomatic _____
 Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification ASTM-A36
 Test plate thickness 3/8" PLATE
 Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

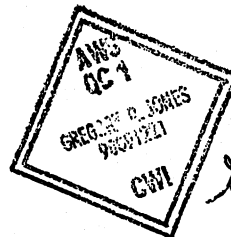
Specification no. SFA 5.18 Class ER70S-3 F.No. 6
 Is backing strip used? Yes
 Filler metal diameter and trade name .052 LINCOLN L50
 Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable YES

GUIDED BEND TEST RESULTS (4.30.5)

Type	Results
Face Bend	<u>PASS</u>
Root Bend	<u>PASS</u>



Inspected by GREG JONES Test No. 232
 Organization NEW COLUMBIA JOIST Inspection Date 7/23/01

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
 Authorized by SAM MOYER
 Date 7/19/01

NDT Non-Destructive Testing Group

Quality by Integrity and Knowledge

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name Dave Orwig S.S. No. 168-42-4275
 Welding process GMAW Manual Semiautomatic X Machine
 Position(s) tested 2G Position(s) Qualified 1G, 2G, 1F & 2F
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification A36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness 3/8" plate
 Thickness range this qualifies 1/8" to 3/4"

FILLER METAL

Specification no. SFA 5.18 Classification ER70S-3 F no. 6
 Describe filler metal (if not covered by AWS specification)

Is backing strip used? Yes
 Filler Metal Diameter and trade name .052 Lincoln L50 Flux for submerged arc or gas for metal arc or flux cored arc welding 85/15 Ar/CO2

VISUAL INSPECTION (QW 302.4)

Appearance Acceptable Undercut None Piping porosity None

GUIDED BEND TEST RESULTS (QW 462.a)

Type	Results	Type	Results
Face Bend	No Defects PASS		
Root Bend	Defects < 1/8" PASS		

FILLET TEST RESULTS

Appearance Fillet size
 Fracture test root penetration Macroetch

RADIOGRAPHIC TEST RESULTS

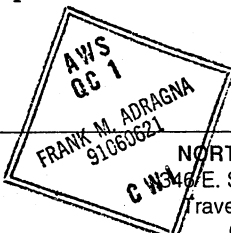
Film I.D.	Results	Remarks	Film I.D.	Results	Remarks
NA					

Test conducted by NDTG Laboratory test no.
 Per Inspector Gary Gallagher Process date November 10, 1997
 Name of Inspector
 Test witnessed by Frank M. Adragna CWI Witness date November 3, 1997
 Per Company NDTG Work Order No: 97A-6612 Report #2

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of section 4 of ANSI/AWS D1.1 (96) Structural Welding Code Steel

Year

Manufacturer or contractor New Columbia Joist Co.
 Authorized by Sam Moyer
 Date November 3, 1997



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NDT Non-Destructive Testing Group

Quality by Integrity and Knowledge

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name Terry Perry S.S. No. 165-44-8801
 Welding process GMAW Manual _____ Semiautomatic X Machine _____
 Position(s) tested 2G Position(s) Qualified 1G, 2G, 1F & 2F
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification A36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness 3/8" plate
 Thickness range this qualifies 1/8" to 3/4"

FILLER METAL

Specification no. SFA 5.18 Classification ER70S-3 F no. 6
 Describe filler metal (if not covered by AWS specification) _____

Is backing strip used? Yes
 Filler Metal Diameter and trade name .052 Lincoln L50 Flux for submerged arc or gas for metal arc or flux cored arc welding 85/15 Ar/CO2

VISUAL INSPECTION (QW 302.4)

Appearance Acceptable Undercut None Piping porosity None

GUIDED BEND TEST RESULTS (QW 462.a)

Type	Results	Type	Results
Face Bend	Defects < 1/8" PASS		
Root Bend	Defects < 1/8" PASS		

FILLET TEST RESULTS

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Macroetch _____

RADIOGRAPHIC TEST RESULTS

Film I.D.	Results	Remarks	Film I.D.	Results	Remarks
NA					

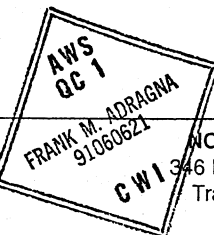
Test conducted by NDTG Laboratory test no. _____
 Per Inspector Gary Gallagher Process date November 19, 1997
 Name of Inspector _____
 Test witnessed by Frank M. Adragna CWI Witness date November 3, 1997
 Per Company NDTG Work Order No: 97A-6612 Report #4

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of section 4 of ANSI/AWS D1.1 (96) Structural Welding Code Steel

Year _____

Manufacturer or contractor New Columbia Joist Co.
 Authorized by Sam Moyer
 Date November 3, 1997

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NDT Non-Destructive Testing Group

Quality by Integrity and Knowledge

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name James Plotts S.S. No. 182-62-4133
 Welding process GMAW Manual Semiautomatic X Machine
 Position(s) tested 2G Position(s) Qualified 1G, 2G, 1F & 2F
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification A36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness 3/8" plate
 Thickness range this qualifies 1/8" to 3/4"

FILLER METAL

Specification no. SFA 5.18 Classification ER70S-3 F no. 6
 Describe filler metal (if not covered by AWS specification)

Is backing strip used? Yes
 Filler Metal Diameter and trade name .052 Lincoln L50 Flux for submerged arc or gas for metal arc or flux cored arc welding 85/15 Ar/CO2

VISUAL INSPECTION (QW 302.4)

Appearance Acceptable Undercut None Piping porosity None

GUIDED BEND TEST RESULTS (QW 462.a)

Type	Results	Type	Results
Face Bend	Defects < 1/8" PASS		
Root Bend	Defects < 1/8" PASS		

FILLET TEST RESULTS

Appearance Fillet size
 Fracture test root penetration Macroetch

RADIOGRAPHIC TEST RESULTS

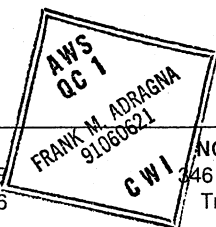
Film I.D.	Results	Remarks	Film I.D.	Results	Remarks
NA					

Test conducted by NDTG Laboratory test no.
 Per Inspector Gary Gallagher Process date November 19, 1997
 Name of Inspector
 Test witnessed by Frank M. Adragna CWI Witness date November 3, 1997
 Per Company NDTG Work Order No: 97A-6612 Report #4

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of section 4 of ANSI/AWS D1.1 (96) Structural Welding Code Steel

Year

Manufacturer or contractor New Columbia Joist Co.
 Authorized by Sam Moyer
 Date November 3, 1997



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NDT Non-Destructive Testing Group

Quality by Integrity and Knowledge

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name Chris Ptaszynski S.S. No. 201-62-5128
 Welding process GMAW Manual _____ Semiautomatic X Machine _____
 Position(s) tested 2G Position(s) Qualified 1G, 2G, 1F & 2F
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification A36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness 3/8" plate
 Thickness range this qualifies 1/8" to 3/4"

FILLER METAL

Specification no. SFA 5.18 Classification ER70S-3 F no. 6
 Describe filler metal (if not covered by AWS specification) _____

Is backing strip used? Yes
 Filler Metal Diameter and trade name .052 Lincoln L50 Flux for submerged arc or gas for metal arc or flux cored arc welding 85/15 Ar/CO2

VISUAL INSPECTION (QW 302.4)

Appearance Acceptable Undercut None Piping porosity None

GUIDED BEND TEST RESULTS (QW 462.a)

Type	Results	Type	Results
Face Bend	No Defects PASS		
Root Bend	No Defects PASS		

FILLET TEST RESULTS

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Macroetch _____

RADIOGRAPHIC TEST RESULTS

Film I.D.	Results	Remarks	Film I.D.	Results	Remarks
NA					

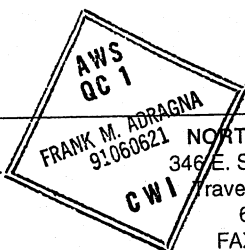
Test conducted by NDTG Laboratory test no. _____
 Per Inspector Gary Gallagher Process date November 10, 1997
 Name of Inspector _____
 Test witnessed by Frank M. Adragna CWI Witness date November 3, 1997
 Per Company NDTG Work Order No: 97A-6612 Report #2

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of section 4 of ANSI/AWS D1.1 (96) Structural Welding Code Steel

Year _____

Manufacturer or contractor New Columbia Joist Co.
 Authorized by Sam Moyer
 Date November 3, 1997

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NDT Non-Destructive Testing Group

Quality by Integrity and Knowledge

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name Robert Radel S.S. No. 181-44-7831
 Welding process GMAW Manual _____ Semiautomatic X Machine _____
 Position(s) tested 2G Position(s) Qualified 1G, 2G, 1F & 2F
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification A36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness 3/8" plate
 Thickness range this qualifies 1/8" to 3/4"

FILLER METAL

Specification no. SFA 5.18 Classification ER70S-3 F no. 6
 Describe filler metal (if not covered by AWS specification) _____

Is backing strip used? Yes
 Filler Metal Diameter and trade name .052 Lincoln L50 Flux for submerged arc or gas for metal arc or flux cored arc welding 85/15 Ar/CO2

VISUAL INSPECTION (QW 302.4)

Appearance Acceptable Undercut None Piping porosity None

GUIDED BEND TEST RESULTS (QW 462.a)

Type	Results	Type	Results
Face Bend	Defects < 1/8" PASS		
Root Bend	No Defects PASS		

FILLET TEST RESULTS

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Macroetch _____

RADIOGRAPHIC TEST RESULTS

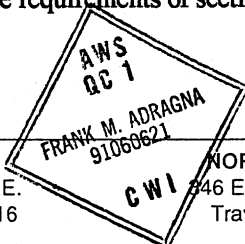
Film I.D.	Results	Remarks	Film I.D.	Results	Remarks
NA					

Test conducted by NDTG Laboratory test no. _____
 Per Inspector Gary Gallagher Process date November 10, 1997
 Name of Inspector _____
 Test witnessed by Frank M. Adragna CWI Witness date November 3, 1997
 Per Company NDTG Work Order No: 97A-6612 Report #2

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of section 4 of ANSI/AWS D1.1 (96) Structural Welding Code Steel

Year _____

Manufacturer or contractor New Columbia Joist Co.
 Authorized by Sam Moyer
 Date November 3, 1997



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QUALITY ASSURANCE DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 3/14/01
Welder or welding operator's name TERRY RAGER JR. I.D. No. 788
Welding process GMAW Manual X Semiautomatic
Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
In accordance with procedure specification no. NCJ-GMAW-1
Material specification ASTM-A36
Test plate thickness 3/8" PLATE
Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

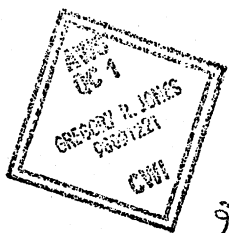
Specification no. SFA 5.18 Class ER70S-3 F-No. 6
Is backing strip used? Yes
Filler metal diameter and trade name .052 LINCOLN L50
Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable YES

GUIDED BEND TEST RESULTS (4.30.5)

Table with 2 columns: Type, Results. Rows: Face Bend PASS, Root Bend PASS



Handwritten signature of Gregory R. Jones

Inspected by GREG JONES Test No. 788
Organization NEW COLUMBIA JOIST Inspection Date 3/14/01

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
Authorized by SAM MOYER
Date 3/13/01



QUALITY ASSURANCE DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 4/10/01
Welder or welding operator's name TERRY RAGEER SR. I.D. No. 250
Welding process GMAW Manual X Semiautomatic
Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
In accordance with procedure specification no. NCJ-GMAW-1
Material specification ASTM-A36
Test plate thickness 3/8" PLATE
Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

Specification no. SFA 5.18 Class ER70S-3 F-No. 6
Is backing strip used? Yes
Filler metal diameter and trade name .052 LINCOLN L50
Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable YES

GUIDED BEND TEST RESULTS (4.30.5)

Table with 2 columns: Type, Results. Rows: Face Bend PASS, Root Bend PASS



Inspected by GREG JONES Test No. 250
Organization NEW COLUMBIA JOIST Inspection Date 4/23/01

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
Authorized by SAM MOYER
Date 4/23/01



QUALITY ASSURANCE
DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 3/14/01
Welder or welding operator's name JASON RANCK I.D. No. 713
Welding process GMAW Manual X Semiautomatic
Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
In accordance with procedure specification no. NCJ-GMAW-1
Material specification ASTM-A36
Test plate thickness 3/8" PLATE
Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

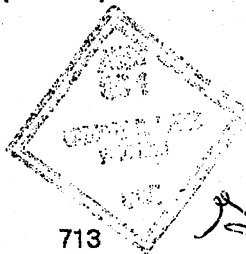
Specification no. SFA 5.18 Class ER70S-3 F-No. 6
Is backing strip used? Yes
Filler metal diameter and trade name .052 LINCOLN L50
Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable YES

GUIDED BEND TEST RESULTS (4.30.5)

Type	Results
Face Bend	<u>PASS</u>
Root Bend	<u>PASS</u>



Inspected by GREG JONES Test No. 713
Organization NEW COLUMBIA JOIST Inspection Date 3/14/01

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
Authorized by SAM MOYER
Date 3/13/01

NDT Non-Destructive Testing Group

Quality by Integrity and Knowledge

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name Ken Rider S.S. No. 199-32-8476
 Welding process GMAW Manual Semiautomatic X Machine
 Position(s) tested 2G Position(s) Qualified 1G, 2G, 1F & 2F
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification A36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness 3/8" plate
 Thickness range this qualifies 1/8" to 3/4"

FILLER METAL

Specification no. SFA 5.18 Classification ER70S-3 F no. 6
 Describe filler metal (if not covered by AWS specification)

Is backing strip used? Yes
 Filler Metal Diameter and trade name .052 Lincoln L50 Flux for submerged arc or gas for metal arc or flux cored arc welding 85/15 Ar/CO2

VISUAL INSPECTION (QW 302.4)

Appearance Acceptable Undercut None Piping porosity None

GUIDED BEND TEST RESULTS (QW 462.a)

Type	Results	Type	Results
Face Bend	Defects < 1/8" PASS		
Root Bend	Defects < 1/8" PASS		

FILLET TEST RESULTS

Appearance Fillet size
 Fracture test root penetration Macroetch

RADIOGRAPHIC TEST RESULTS

Film I.D.	Results	Remarks	Film I.D.	Results	Remarks
NA					

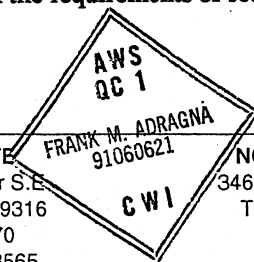
Test conducted by NDTG Laboratory test no.
 Per Inspector Gary Gallagher Process date November 10, 1997
 Name of Inspector
 Test witnessed by Frank M. Adragna CWI Witness date November 3, 1997
 Per Company NDTG Work Order No: 97A-6612 Report #2

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of section 4 of ANSI/AWS D1.1 (96) Structural Welding Code Steel

Year

Manufacturer or contractor New Columbia Joist Co.
 Authorized by Sam Moyer
 Date November 3, 1997

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NDT Non-Destructive Testing Group

Quality by Integrity and Knowledge

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name Steve Rowe S.S. No. 546-94-8419
 Welding process GMAW Manual _____ Semiautomatic X Machine _____
 Position(s) tested 2G Position(s) Qualified 1G, 2G, 1F & 2F
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification A36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness 3/8" plate
 Thickness range this qualifies 1/8" to 3/4"

FILLER METAL

Specification no. SFA 5.18 Classification ER70S-3 F no. 6
 Describe filler metal (if not covered by AWS specification) _____

Is backing strip used? Yes
 Filler Metal Diameter and trade name .052 Lincoln L50 Flux for submerged arc or gas for metal arc or flux cored arc welding 85/15 Ar/CO2

VISUAL INSPECTION (QW 302.4)

Appearance Acceptable Undercut None Piping porosity None

GUIDED BEND TEST RESULTS (QW 462.a)

Type	Results	Type	Results
Face Bend	Defects < 1/8" PASS		
Root Bend	Defects < 1/8" PASS		

FILLET TEST RESULTS

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Macroetch _____

RADIOGRAPHIC TEST RESULTS

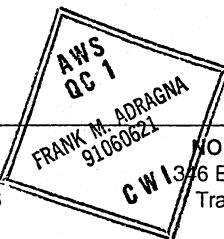
Film I.D.	Results	Remarks	Film I.D.	Results	Remarks
NA					

Test conducted by NDTG Laboratory test no. _____
 Per Inspector Gary Gallagher Process date November 19, 1997
 Name of Inspector _____
 Test witnessed by Frank M. Adragna CWI Witness date November 3, 1997
 Per Company NDTG Work Order No: 97A-6612 Report #4

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of section 4 of ANSI/AWS D1.1 (96) Structural Welding Code Steel

Year _____

Manufacturer or contractor New Columbia Joist Co.
 Authorized by Sam Moyer
 Date November 3, 1997



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QUALITY ASSURANCE
DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 5/9/01
Welder or welding operator's name ROY RUSSEL I.D. No. 109
Welding process GMAW Manual X Semiautomatic
Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
In accordance with procedure specification no. NCJ-GMAW-1
Material specification ASTM-A36
Test plate thickness 3/8" PLATE
Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

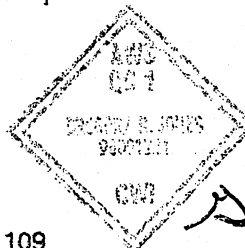
Specification no. SFA 5.18 Class ER70S-3 F-No. 6
Is backing strip used? Yes
Filler metal diameter and trade name .052 LINCOLN L50
Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable YES

GUIDED BEND TEST RESULTS (4.30.5)

Type	Results
Face Bend	<u>PASS</u>
Root Bend	<u>PASS</u>



Inspected by GREG JONES Test No. 109
Organization NEW COLUMBIA JOIST Inspection Date 5/10/01

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
Authorized by SAM MOYER
Date 5/8/01

NDT Non-Destructive Testing Group

Quality by Integrity and Knowledge

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name Al Shady S.S. No. 171-48-9229
 Welding process GMAW Manual Semiautomatic X Machine
 Position(s) tested 2G Position(s) Qualified 1G, 2G, 1F & 2F
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification A36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness 3/8" plate
 Thickness range this qualifies 1/8" to 3/4"

FILLER METAL

Specification no. SFA 5.18 Classification ER70S-3 F no. 6
 Describe filler metal (if not covered by AWS specification)

Is backing strip used? Yes
 Filler Metal Diameter and trade name .052 Lincoln L50 Flux for submerged arc or gas for metal arc or flux cored arc welding 85/15 Ar/CO2

VISUAL INSPECTION (QW 302.4)

Appearance Acceptable Undercut None Piping porosity None

GUIDED BEND TEST RESULTS (QW 462.a)

Type	Results	Type	Results
Face Bend	Defects < 1/8" PASS		
Root Bend	Defects < 1/8" PASS		

FILLET TEST RESULTS

Appearance Fillet size
 Fracture test root penetration Macroetch

RADIOGRAPHIC TEST RESULTS

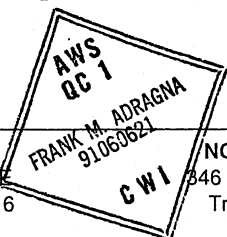
Film I.D.	Results	Remarks	Film I.D.	Results	Remarks
NA					

Test conducted by NDTG Laboratory test no.
 Per Inspector Gary Gallagher Process date November 19, 1997
 Name of Inspector
 Test witnessed by Frank M. Adragna CWI Witness date November 3, 1997
 Per Company NDTG Work Order No: 97A-6612 Report #4

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of section 4 of ANSI/AWS D1.1 (96) Structural Welding Code Steel

Year

Manufacturer or contractor New Columbia Joist Co.
 Authorized by Sam Moyer
 Date November 3, 1997



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 715-832-4551

NDT Non-Destructive Testing Group

Quality by Integrity and Knowledge

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name Larry Sheets S.S. No. 168-42-4566
 Welding process GMAW Manual Semiautomatic X Machine
 Position(s) tested 1G Position(s) Qualified 1G, 1F & 2F
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification ASTM A36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness 3/8" plate
 Thickness range this qualifies 1/8" to 3/4"

FILLER METAL

Specification no. SFA 5.18 Classification ER70S-3 F no. 6
 Describe filler metal (if not covered by AWS specification)
 Is backing strip used? Yes
 Filler Metal Diameter and trade name .052 Lincoln L50 Flux for submerged arc or gas for metal arc or flux cored arc welding 15% CO2 / 85% Ar

VISUAL INSPECTION (9.25.1)

Appearance Acceptable Undercut None Piping porosity None

GUIDED BEND TEST RESULTS (QW 462.a)

Type	Results	Type	Results
Face Bend	No Defects PASS		
Root Bend	No Defects PASS		

FILLET TEST RESULTS

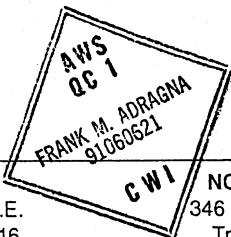
Appearance Fillet size
 Fracture test root penetration Macroetch

RADIOGRAPHIC TEST RESULTS

Film I.D.	Results	Remarks	Film I.D.	Results	Remarks
NA					

Test conducted by Non-Destructive Testing Group Laboratory test no.
 Per Inspector Earl A. Gallagher Process date March 16, 1998
 Name of Inspector
 Test witnessed by Frank M. Adragna CWI Witness date January 26, 1998
 Per Company Non-Destructive Testing Group Work Order No: 98A-6929 Report #1

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of ANSI/ AWS D1.1 (96) Structural Welding Code - Steel.
 Year



Manufacturer or contractor New Columbiana Joist Co.
 Authorized by Sam Moyer
 Date January 26, 1998

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QUALITY ASSURANCE DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 4/10/01
Welder or welding operator's name BOYD SHEMORY I.D. No. 105
Welding process GMAW Manual X Semiautomatic
Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
In accordance with procedure specification no. NCJ-GMAW-1
Material specification ASTM-A36
Test plate thickness 3/8" PLATE
Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

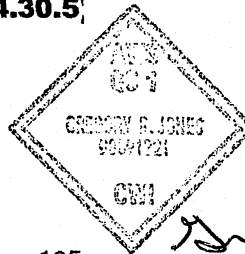
Specification no. SFA 5.18 Class ER70S-3 F-No. 6
Is backing strip used? Yes
Filler metal diameter and trade name .052 LINCOLN L50
Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable YES

GUIDED BEND TEST RESULTS (4.30.5)

Table with 2 columns: Type, Results. Rows: Face Bend PASS, Root Bend PASS



Handwritten signature of Gregory B. Jones

Inspected by GREG JONES Test No. 105
Organization NEW COLUMBIA JOIST Inspection Date 4/23/01

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
Authorized by SAM MOYER
Date 4/23/01



QUALITY ASSURANCE DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 11/6/01
Welder or welding operator's name AUDIE SHIFFER I.D. No. 789
Welding process GMAW Manual X Semiautomatic
Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
In accordance with procedure specification no. NCJ-GMAW-1
Material specification ASTM-A36
Test plate thickness 3/8" PLATE
Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

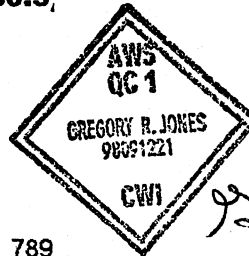
Specification no. SFA 5.18 Class ER70S-3 F-No. 6
Is backing strip used? Yes
Filler metal diameter and trade name .052 LINCOLN L50
Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable YES

GUIDED BEND TEST RESULTS (4.30.5)

Table with 2 columns: Type, Results. Rows: Face Bend PASS, Root Bend PASS



Handwritten signature of Gregory R. Jones

Inspected by GREG JONES Test No. 789
Organization NEW COLUMBIA JOIST Inspection Date 11/7/01

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
Authorized by SAM MOYER
Date 11/7/01



QUALITY ASSURANCE
DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 3/14/01
 Welder or welding operator's name SCOTT SHIFFER I.D. No. 672
 Welding process GMAW Manual X Semiautomatic
 Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification ASTM-A36
 Test plate thickness 3/8" PLATE
 Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

Specification no. SFA 5.18 Class ER70S-3 F-No. 6
 Is backing strip used? Yes
 Filler metal diameter and trade name .052 LINCOLN L50
 Gas or flux type 15%CO2 / 85% ARGON

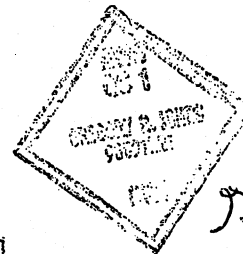
VISUAL INSPECTION (4.8.1)

Acceptable YES

GUIDED BEND TEST RESULTS (4.30.5)

Type	Results
Face Bend	<u>PASS</u>
Root Bend	<u>PASS</u>

Inspected by GREG JONES Test No. 672
 Organization NEW COLUMBIA JOIST Inspection Date 3/14/01



Greg Jones

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
 Authorized by SAM MOYER
 Date 3/13/01

NDT Non-Destructive Testing Group

Quality by Integrity and Knowledge

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name John Shultz S.S. No. 164-54-7671
 Welding process GMAW Manual _____ Semiautomatic X Machine _____
 Position(s) tested 2G Position(s) Qualified 1G, 2G, 1F & 2F
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification A36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness 3/8" plate
 Thickness range this qualifies 1/8" to 3/4"

FILLER METAL

Specification no. SFA 5.18 Classification ER70S-3 F no. 6
 Describe filler metal (if not covered by AWS specification) _____

Is backing strip used? Yes
 Filler Metal Diameter and trade name .052 Lincoln L50 Flux for submerged arc or gas for metal arc or flux cored arc welding 85/15 Ar/CO2

VISUAL INSPECTION (QW 302.4)

Appearance Acceptable Undercut None Piping porosity None

GUIDED BEND TEST RESULTS (QW 462.a)

Type	Results	Type	Results
Face Bend	Defects < 1/8" PASS		
Root Bend	Defects < 1/8" PASS		

FILLET TEST RESULTS

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Macroetch _____

RADIOGRAPHIC TEST RESULTS

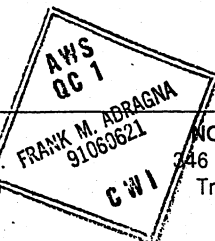
Film I.D.	Results	Remarks	Film I.D.	Results	Remarks
NA					

Test conducted by NDTG Laboratory test no. _____
 Per Inspector Gary Gallagher Process date November 10, 1997
 Name of Inspector _____
 Test witnessed by Frank M. Adragna CWI Witness date November 3, 1997
 Per Company NDTG Work Order No: 97A-6612 Report #1

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of section 4 of ANSI/AWS D1.1 (96) Structural Welding Code Steel
 Year _____

Manufacturer or contractor New Columbia Joist Co.
 Authorized by Sam Moyer
 Date November 3, 1997

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QUALITY ASSURANCE
DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 5/9/01
Welder or welding operator's name FRANK SHUMAN I.D. No. 70
Welding process GMAW Manual X Semiautomatic
Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
In accordance with procedure specification no. NCJ-GMAW-1
Material specification ASTM-A36
Test plate thickness 3/8" PLATE
Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

Specification no. SFA 5.18 Class ER70S-3 F-No. 6
Is backing strip used? Yes
Filler metal diameter and trade name .052 LINCOLN L50
Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable YES

GUIDED BEND TEST RESULTS (4.30.5)

Type	Results
Face Bend	<u>PASS</u>
Root Bend	<u>PASS</u>

Inspected by GREG JONES Test No. 70
Organization NEW COLUMBIA JOIST Inspection Date 5/11/01

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
Authorized by SAM MOYER
Date 4/23/01



QUALITY ASSURANCE
DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 4/10/01
 Welder or welding operator's name WILLIAM STAGGERT I.D. No. 94
 Welding process GMAW Manual X Semiautomatic _____
 Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification ASTM-A36
 Test plate thickness 3/8" PLATE
 Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

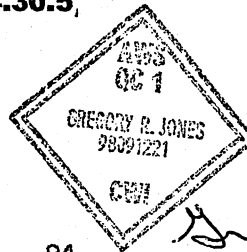
Specification no. SFA 5.18 Class ER70S-3 F-No. 6
 Is backing strip used? Yes
 Filler metal diameter and trade name .052 LINCOLN L50
 Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable YES

GUIDED BEND TEST RESULTS (4.30.5)

Type	Results
Face Bend	PASS
Root Bend	PASS



Gregory R. Jones

Inspected by GREG JONES Test No. 94
 Organization NEW COLUMBIA JOIST Inspection Date 4/23/01

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
 Authorized by SAM MOYER
 Date 4/23/01

NDT Non-Destructive Testing Group

Quality by Integrity and Knowledge

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name James Starks S.S. No. 192-60-9560
 Welding process GMAW Manual _____ Semiautomatic X Machine _____
 Position(s) tested 2G Position(s) Qualified 1G, 2G, 1F & 2F
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification A36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness 3/8" plate
 Thickness range this qualifies 1/8" to 3/4"

FILLER METAL

Specification no. SFA 5.18 Classification ER70S-3 F no. 6
 Describe filler metal (if not covered by AWS specification) _____

Is backing strip used? Yes
 Filler Metal Diameter and trade name .052 Lincoln L50 Flux for submerged arc or gas for metal arc or flux cored arc welding 85/15 Ar/CO2

VISUAL INSPECTION (QW 302.4)

Appearance Acceptable Undercut None Piping porosity None

GUIDED BEND TEST RESULTS (QW 462.a)

Type	Results	Type	Results
Face Bend	Defects < 1/8" PASS		
Root Bend	No Defects PASS		

FILLET TEST RESULTS

Appearance _____ Fillet size _____
 Fracture test root penetration _____ Macroetch _____

RADIOGRAPHIC TEST RESULTS

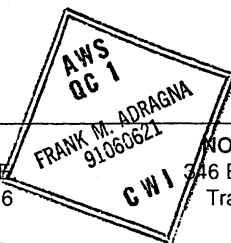
Film I.D.	Results	Remarks	Film I.D.	Results	Remarks
NA					

Test conducted by NDTG Laboratory test no. _____
 Per Inspector Gary Gallagher Process date November 10, 1997
 Name of Inspector _____
 Test witnessed by Frank M. Adragna CWI Witness date November 3, 1997
 Per Company NDTG Work Order No: 97A-6612 Report #1

We, the undersigned, certify that the statements in this record are correct and that the welds were prepared and tested in accordance with the requirements of section 4 of ANSI/AWS D1.1 (96) Structural Welding Code Steel
 Year _____

Manufacturer or contractor New Columbia Joist Co.
 Authorized by Sam Moyer
 Date November 3, 1997

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 715-832-4551

NDT Non-Destructive Testing Group

Quality by Integrity and Knowledge

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name Grant Steers S.S. No. 182-32-0915
 Welding process GMAW Manual Semiautomatic X Machine
 Position(s) tested 2G Position(s) Qualified 1G, 2G, 1F & 2F
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification A36
 Diameter and wall thickness (if pipe) - otherwise, joint thickness 3/8" plate
 Thickness range this qualifies 1/8" to 3/4"

FILLER METAL

Specification no. SFA 5.18 Classification ER70S-3 F no. 6
 Describe filler metal (if not covered by AWS specification)

Is backing strip used? Yes
 Filler Metal Diameter and trade name .052 Lincoln L50 Flux for submerged arc or gas for metal arc or flux cored arc welding 85/15 Ar/CO2

VISUAL INSPECTION (QW 302.4)

Appearance Acceptable Undercut None Piping porosity None

GUIDED BEND TEST RESULTS (QW 462.a)

Type	Results	Type	Results
Face Bend	No Defects PASS		
Root Bend	No Defects PASS		

FILLET TEST RESULTS

Appearance Fillet size
 Fracture test root penetration Macroetch

RADIOGRAPHIC TEST RESULTS

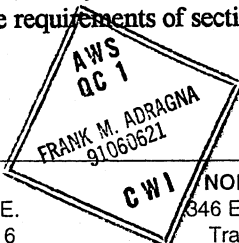
Film I.D.	Results	Remarks	Film I.D.	Results	Remarks
NA					

Test conducted by NDTG Laboratory test no.
 Per Inspector Gary Gallagher Process date November 10, 1997
 Name of Inspector
 Test witnessed by Frank M. Adragna CWI Witness date November 3, 1997
 Per Company NDTG Work Order No: 97A-6612 Report #1

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Year

Manufacturer or contractor New Columbia Joist Co.
 Authorized by Sam Moyer
 Date November 3, 1997



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QUALITY ASSURANCE
DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 4/10/01
 Welder or welding operator's name GARRY ULRICH I.D. No. 125
 Welding process GMAW Manual Semiautomatic
 Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification ASTM-A36
 Test plate thickness 3/8" PLATE
 Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

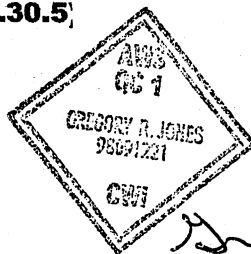
Specification no. SFA 5.18 Class ER70S-3 F-No. 6
 Is backing strip used? Yes
 Filler metal diameter and trade name .052 LINCOLN L50
 Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable YES

GUIDED BEND TEST RESULTS (4.30.5)

Type	Results
Face Bend	PASS
Root Bend	PASS



Gregory R. Jones

Inspected by GREG JONES Test No. 125
 Organization NEW COLUMBIA JOIST Inspection Date 4/23/01

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Manufacturer or contractor NEW COLUMBIA JOIST CO.
 Authorized by SAM MOYER
 Date 4/23/01



QUALITY ASSURANCE
DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 4/10/01
 Welder or welding operator's name JEFF VANHOUTE I.D. No. 648
 Welding process GMAW Manual X Semiautomatic
 Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
 In accordance with procedure specification no. NCJ-GMAW-1
 Material specification ASTM-A36
 Test plate thickness 3/8" PLATE
 Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

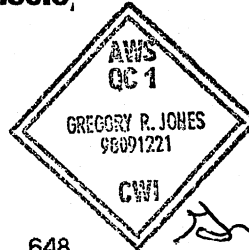
Specification no. SFA 5.18 Class ER70S-3 F-No. 6
 Is backing strip used? Yes
 Filler metal diameter and trade name .052 LINCOLN L50
 Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable YES

GUIDED BEND TEST RESULTS (4.30.5)

Type	Results
Face Bend	PASS
Root Bend	PASS



Gregory R. Jones

Inspected by GREG JONES Test No. 648
 Organization NEW COLUMBIA JOIST Inspection Date 4/23/01

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Manufacturer or contractor NEW COLUMBIA JOIST CO.
 Authorized by SAM MOYER
 Date 4/23/01

NDT Non-Destructive Testing Group

Quality by Integrity and Knowledge

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Welder or welding operator's name Mark Walker S.S. No. 007-68-8406
Welding process GMAW Manual Semiautomatic X Machine
Position(s) tested 2G Position(s) Qualified 1G, 2G, 1F & 2F
In accordance with procedure specification no. NCJ-GMAW-1
Material specification A36
Diameter and wall thickness (if pipe) - otherwise, joint thickness 3/8" plate
Thickness range this qualifies 1/8" to 3/4"

FILLER METAL

Specification no. SFA 5.18 Classification ER70S-3 F no. 6
Describe filler metal (if not covered by AWS specification)

Is backing strip used? Yes
Filler Metal Diameter and trade name .052 Lincoln L50 Flux for submerged arc or gas for metal arc or flux cored arc welding 85/15 Ar/CO2

VISUAL INSPECTION (QW 302.4)

Appearance Acceptable Undercut None Piping porosity None

GUIDED BEND TEST RESULTS (QW 462.a)

Type	Results	Type	Results
Face Bend	No Defects PASS		
Root Bend	No Defects PASS		

FILLET TEST RESULTS

Appearance Fillet size
Fracture test root penetration Macroetch

RADIOGRAPHIC TEST RESULTS

Film I.D.	Results	Remarks	Film I.D.	Results	Remarks
NA					

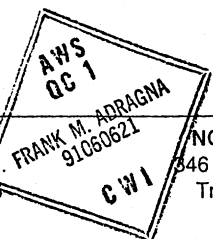
Test conducted by NDTG Laboratory test no.
Per Inspector Gary Gallagher Process date November 10, 1997
Name of Inspector
Test witnessed by Frank M. Adragna CWI Witness date November 3, 1997
Per Company NDTG Work Order No: 97A-6612 Report #1

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Year

Manufacturer or contractor New Columbia Joist Co.
Authorized by Sam Moyer
Date November 3, 1997

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QUALITY ASSURANCE DEPARTMENT

WELDER AND WELDING OPERATOR QUALIFICATION TEST RECORD

Test Date 3/24/03
Welder or welding operator's name KURT R. WANDS I.D. No. 477
Welding process GMAW Manual X Semiautomatic
Position(s) tested 2G Position(s) Qualified 1F-2F-1G-2G
In accordance with procedure specification no. NCJ-GMAW-1
Material specification ASTM-A36
Test plate thickness 3/8" PLATE
Thickness range this qualifies 1/8" TO 3/4"

FILLER METAL (TABLE 4.10)

Specification no. SFA 5.18 Class ER70S-3 F-No. 6
Is backing strip used? Yes
Filler metal diameter and trade name .052 LINCOLN L50
Gas or flux type 15%CO2 / 85% ARGON

VISUAL INSPECTION (4.8.1)

Acceptable yes

GUIDED BEND TEST RESULTS (4.30.5)

Table with 2 columns: Type, Results. Rows: Face Bend (Acceptable), Root Bend (Acceptable)



Inspected by M. Gratti, CWI Test No. 477
Organization NCJ Inspection Date 3/27/03

We the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Section 4 of AWS D1.1 (2000) Structural Welding Code-Steel

Manufacturer or contractor NEW COLUMBIA JOIST CO.
Authorized by TERRY SNODDY
Date 3/25/03

End of Report