

**IN THE UNITED STATES DISTRICT COURT  
FOR THE CENTRAL DISTRICT OF ILLINOIS**

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UNITED STATES OF AMERICA,	)	
	)	
	)	
Plaintiff,	)	
	)	
v.	)	Civil Action No. 16-1057
	)	
KEYSTONE CONSOLIDATED INDUSTRIES, INC.	)	
d/b/a KEYSTONE STEEL AND WIRE COMPANY,	)	
	)	
Defendant.	)	
	)	
	)	

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**CONSENT DECREE**

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## I. BACKGROUND

WHEREAS, Plaintiff, the United States of America (“United States”), on behalf of the United States Environmental Protection Agency (“EPA”), has filed a complaint in this action pursuant to 42 U.S.C. § 7413(b) concurrently with the lodging of this Consent Decree alleging that Defendant Keystone Consolidated Industries (“Keystone”) violated: (1) the Prevention of Significant Deterioration of Air Quality (“PSD”) provisions of the Clean Air Act (“CAA” or “Act”), 42 U.S.C. §§ 7470–7492; (2) the Illinois State Implementation Plan (“Illinois SIP”), which incorporates by reference the federal PSD implementing regulations set forth at 40 C.F.R. § 52.21; (3) CAA Title V, 42 U.S.C. §§ 7661–7661f; (4) the implementing regulations for CAA Title V set forth at 40 C.F.R. Part 70; and (5) the Illinois Environmental Protection Act, 415 Ill. Comp. Stat. 5/39.5, through which the State of Illinois administers its Clean Air Act Program Permit (“CAAPP”) pursuant to 42 U.S.C. §§ 7661–7661c;

WHEREAS, the Complaint alleges that the violations described in the preceding Paragraph occurred at a steel mini-mill (the “Facility”) located at 7000 Southwest Adams Street in Peoria, Peoria County, Illinois, which at all times relevant to this Complaint has been owned and operated by Defendant;

WHEREAS, on June 1, 2000, Illinois Environmental Protection Agency (“IEPA”) issued to Keystone a “Construction Permit-PSD Approval” that, among other things, limited the maximum “steel production” in the Defendant’s Arc Shop to “115,000 hot metal tons per month and 1,200,000 hot metal tons per year.” On February 14, 2008, Keystone submitted an application for the renewal of its Title V Permit issued on November 23, 2003, that, among other things, requested a limit of 820,000 hot metal tons of steel per year produced in the Arc Shop. For purposes of this Decree, Keystone represents that the limit of 820,000 hot metal tons per year

is the limit applicable to steel production in the Arc Shop and/or that it has submitted all applicable applications to ensure that such limit is applicable to production in its Arc Shop;

WHEREAS, the Parties recognize, and the Court by entering this Decree finds, that the Parties negotiated this Consent Decree in good faith, that the Consent Decree will avoid prolonged and complex litigation among the parties, and that this Consent Decree is fair, reasonable, and in the public interest;

NOW, THEREFORE, before the taking of any testimony, without the adjudication or admission of any issue of fact or law except as provided in Section I, and with the consent of the Parties,

IT IS HEREBY ADJUDGED, ORDERED, AND DECREED as follows:

## **II. OBJECTIVES**

1. The objective of this Consent Decree is to further the intent of the CAA, as well as federal and State statutes, regulations and permits issued or promulgated pursuant to the Act. All obligations in this Decree shall have the objective of causing the Defendant to be, and remain, in full compliance with the CAA, the regulations issued pursuant to that Act, as well as State and local laws, regulations, and permits authorized pursuant to that Act.

## **III. JURISDICTION AND VENUE**

2. This Court has jurisdiction over the subject matter of this action pursuant to 28 U.S.C. §§ 1331, 1345, and 1355, and 42 U.S.C. § 7413(b), and over the Parties. Venue lies in this judicial district pursuant to 28 U.S.C. § 1391(b) and (c) and 28 U.S.C. § 1395 because the violations alleged in the Complaint are alleged to have occurred in this district and Defendant conducts business in this district. For purposes of this Decree, or any action to enforce this

Decree, Defendant consents to the Court's jurisdiction to enter and enforce this Decree and Defendant also consents to venue in this judicial district.

3. For purposes of this Consent Decree, the Defendant agrees that the Complaint states cognizable claims under Section 113 of the CAA, 42 U.S.C. § 7413.

#### **IV. APPLICABILITY**

4. The obligations of this Consent Decree apply to and are binding upon the United States and upon Defendant, and any successors, assigns, or other entities or persons otherwise bound by law. Any change in ownership, corporate status, or other legal status of Defendant shall in no way alter the Defendant's responsibilities under this Consent Decree.

5. No transfer of ownership or operation of the Facility shall relieve the Defendant of its obligation to ensure that the terms of the Decree are implemented. At least 30 Days prior to such transfer of ownership or operation, the Defendant shall provide a copy of this Consent Decree to the transferee and shall simultaneously provide a written notice of the prospective transfer to EPA Region 5 and the United States Department of Justice, in accordance with Section XVII (Notices and Submissions) of this Decree.

6. Defendant shall provide a copy of this Decree to all officers, employees, and agents whose duties might reasonably include compliance with any provision of this Consent Decree, as well as the relevant portions to any contractor(s) retained to take any actions necessary to comply with the provisions of this Decree.

#### **V. DEFINITIONS**

7. Terms used in this Consent Decree that are defined in the Act or in regulations promulgated pursuant to, or authorized by, the Act shall have the meanings assigned to them in

the Act or such regulations unless otherwise provided in this Decree. Terms that are defined in the Defendant's Title V Permit shall have the meanings assigned to them in that permit unless otherwise provided in the Decree. Whenever the terms set forth below are used in this Consent Decree, the following definitions shall apply:

- a. "Arc Shop" means a unit or a portion of the Defendant's Facility that is described in Section 7.0 of Defendant's Title V Permit and that contains, among other equipment and facilities, the electric arc furnace and the ladle metallurgical furnace.
- b. "Baghouse" or "Baghouses" means air pollution control equipment in the Arc Shop that utilizes fabric filter bags to which emissions from the EAF are captured and ducted.
- c. "Baghouse Inlet" means the upstream, pre-filtered air side of the fabric filter bags of a Baghouse.
- d. "Baghouse Outlet" means the downstream, clean air side of the fabric filter bags of a Baghouse.
- e. "CEMS" or "Continuous Emissions Monitoring System" means the total equipment and software required to sample, analyze, and record concentrations and/or quantities of SO<sub>2</sub> in gases emitted from each Baghouse.
- f. "Complaint" means the complaint filed by the United States in this action.
- g. "Consent Decree" or "Decree" means this Consent Decree, and any attachments or appendices to it, and any modifications of it.
- h. "Date of Lodging" means the date on which this Consent Decree is filed for lodging with the Clerk of the Court for the Central District of Illinois.

i. “Day” means a calendar day unless expressly stated to be a business day.

In computing any period of time under this Consent Decree, where the last day would fall on a Saturday, Sunday, or federal holiday, the period shall run until the close of business of the next business day.

j. “Defendant” means Keystone Consolidated Industries, Inc. d/b/a Keystone Steel and Wire Company.

k. “EAF” or “Electric Arc Furnace” means the electric arc furnace in the Arc Shop.

l. “Effective Date” means the date of entry of this Consent Decree by the Court, after satisfaction of the public notice and comment procedures set forth in Section XXI (Public Notice and Comment) of this Consent Decree and 28 C.F.R. § 50.7: (1) as recorded on the Court docket or; (2) if the Court instead issues an order approving this Consent Decree, the date such order is recorded on the Court docket.

m. “EPA” means the United States Environmental Protection Agency and any successor agency.

n. “Extended Duration Heat” means any Heat of which the total duration is longer than one hundred and fifty (150) minutes.

o. “Facility” means the Defendant’s steel mini-mill located at 7000 Southwest Adams Street in Peoria, Peoria County, Illinois.

p. “Flowmeter” means a device used to measure flow in the duct work prior to the baghouses, in actual cubic feet per minute.

q. “Heat” means a steel production cycle that begins with the charging of materials into the EAF and ends with the tapping/transfer of molten steel to the EAF to the ladle.



- r. "IEPA" means Illinois Environmental Protection Agency and any successor agency.
- s. "Paragraph" means a portion of this Consent Decree identified by an Arabic numeral.
- t. "Parties" means the United States of America and the Defendant.
- u. "Plaintiff" means the United States of America.
- v. "PSD Permit" means Construction Permit-PSD Approval No. 99020046 issued to the Defendant by IEPA on June 1, 2000 and incorporated into the Title V Permit as Attachment 7.
- w. "Root Cause Failure Analysis" or "RCFA" means an assessment described in, and conducted pursuant to, Paragraph 12 (Root Cause Failure Analysis) of this Consent Decree which is triggered upon the conclusion of any Extended Duration Heat.
- x. "Section" means a portion of this Consent Decree identified by a Roman numeral.
- y. "SEP" means the Supplemental Environmental Project described in Section VIII of this Decree.
- z. "State" means the State of Illinois.
- aa. "SO<sub>2</sub>" means sulfur-dioxide.
- bb. "Title V Permit" means the Title V Clean Air Act Permit Program (CAAPP) Permit and Title I Permit, Application No. 95120288, issued to the Defendant on November 26, 2003, by the Illinois Environmental Protection Agency, Division of Air Pollution, and any subsequent permit issued to Defendant by IEPA under Subchapter V of CAA, 42 U.S.C. §§ 7661-7661f.

cc. “United States” means the United States of America, acting on behalf of EPA.

## VI. COMPLIANCE REQUIREMENTS

8. Use of Sulfur Dioxide (“SO<sub>2</sub>”) Continuous Emissions Monitoring System (“CEMS”).

a. Beginning on the Effective Date, Defendant shall install and calibrate a SO<sub>2</sub> CEMS and a flowmeter capable of measuring the SO<sub>2</sub> concentration at each Baghouse Outlet and gas flowrate at each Baghouse Inlet in a manner that complies with 40 C.F.R. Part 60, Appendix B, Performance Specification 2, and the quality assurance/quality control requirements specified in 40 C.F.R. Part 60, Appendix F. Except as provided in Paragraph 8.b, Defendant shall operate the CEMS and flowmeter at all times during the Arc Shop’s operation and shall continuously monitor, record, and analyze waste gas to determine gas flowrate, concentrations and/or quantities of SO<sub>2</sub> in gases emitted from the EAF and other process units connected to the Baghouses. In addition to the requirements listed in Section X (Reporting Requirements) of this Decree, Defendant shall maintain all records generated in the course of such monitoring, recording and analysis in accordance with Section XIV (Information Collection and Retention) of this Decree.

b. The SO<sub>2</sub> CEMS and the flowmeter shall be in continuous operation, except during CEMS breakdowns, SO<sub>2</sub> analyzer and flowmeter malfunctions, repairs, and required quality assurance or quality control activities (including calibration checks, and required zero and span adjustments), to demonstrate compliance with the applicable SO<sub>2</sub> emission limits established in Paragraph 9 of this Decree. Defendant shall operate and maintain the CEMS in

accordance with best practices and maintain an adequate on-site inventory of manufacturer's recommended spare parts or other supplies necessary to make rapid repairs to the equipment.

c. If for any reason, including those specified in Paragraph 8.b, at any time, the CEMS is inoperable or data from the CEMS do not conform with requirements specified in 40 C.F.R. Part 60, Appendix B, Performance Specification 2 or 40 C.F.R. Part 60, Appendix F ("CEMS Outage"), then the unquantified SO<sub>2</sub> emissions shall be calculated using the average concentration and flowrate data from the most recent 30-day period, as defined below in Paragraph 9, directly preceding the CEMS Outage. Defendant shall report any such CEMS Outage and estimated SO<sub>2</sub> emissions as part of the semi-annual reports required by Section X (Reporting Requirements).

9. Compliance with SO<sub>2</sub> Emissions Limit. Beginning on the Effective Date, at all times during the operation of the Arc Shop, concentrations of SO<sub>2</sub> in the gases emitted from the Arc Shop shall at no time exceed the following limits as monitored, recorded, and analyzed by the SO<sub>2</sub> CEMS in accordance with Paragraph 8. Defendant shall at all times achieve and maintain a rolling average emission rate of no greater than 0.2 pounds of SO<sub>2</sub> per ton of hot metal produced in the Arc Shop (lbs/ton), averaged over a period no greater than 30 days. The rolling average emission rate shall be calculated as follows: (i) calculate either the total pounds of SO<sub>2</sub> emitted from each baghouse outlet on each day on which the Arc Shop is operating and the previous 30 days, or the total pounds of SO<sub>2</sub> emitted from each baghouse outlet during the hours of operation of the Arc Shop when in operation less than a full day; (ii) add the total pounds of SO<sub>2</sub> emitted from each baghouse outlet on those 30 days; and (iii) divide the total number of pounds of SO<sub>2</sub> calculated for all 30 days by the total tons of hot metal produced in the

Arc Shop during the same 30-day period, adjusted for any hours during which the Arc Shop was not in operation.

$$SO_2 \frac{lbs}{ton HM} = \frac{\sum_i^X \left[ SO_2 \frac{lbs}{day} \right]_i}{\sum_i^X \left[ Hot Metal \frac{tons}{day} \right]_i}$$

A new 30-day rolling average emission rate shall be calculated for each day on which the Arc Shop is operating. Each 30-day rolling average emission rate calculation shall include all emissions of SO<sub>2</sub> from the Arc Shop during all days on which the Arc Shop is operating, including emissions during startups, shutdowns, and malfunctions, as these terms are defined in 40 C.F.R § 60.2.

10. Fan Modification. Defendant shall modify each baghouse fan motor in accordance with the recommendations of Process Baron, Inc. that resulted from the April 2014 Induced Draft Fan Field Performance Test performed by Cimtec, Inc., in order to ensure that each fan has the potential to achieve 220,000 actual cubic feet per minute (acfm) at each Baghouse Fan Inlet at any time during Arc Shop operation.

a. By no later than 60 days after the Effective Date and in accordance with Section IX (EPA's Review and Approval of Deliverables), Defendant shall submit to EPA for approval a work plan and associated timeline outlining the engineering, fabrication, and installation schedule for each such fan motor modification, including all related estimates and calculations detailing the increased efficiency and airflow in acfm per fan.

b. By no later than December 31, 2016, Defendant shall have completed construction, testing, and commencing operation of the modified baghouse fan motors.

c. By no later than 90 days after the completion of construction, Defendant shall perform a flow review to measure flow, in acfm, over the course of three consecutive heats, at the inlet of each baghouse (“Flow Study”).

d. By no later than 90 days after the completion of the Flow Study, Defendant shall submit to EPA for approval, in accordance with Section IX (EPA’s Review and Approval of Deliverables) of this Consent Decree, the results of the Flow Study and any recommendations for improvement, where relevant.

11. Preventative Maintenance and Operations (“PMO”) Plans. By no later than six (6) months after the Effective Date and in accordance with Section IX (EPA’s Review and Approval of Deliverables) of this Consent Decree, Defendant shall submit to EPA for approval a plan to implement enhanced maintenance and operation of the EAF, LMF, ancillary Arc Shop process units, and all associated pollution control equipment. This plan shall be termed the Preventive Maintenance and Operation Plan (“PMO Plan”), incorporate specific plans related to each emission unit and monitoring system within the Arc Shop, and include a CEMS quality assurance and quality control plan (“CEMS QA/QC Plan”), Scrap Management Plan, Low Sulfur Charge Carbon Plan, Malfunction and Breakdown Plan, and Compliance Assurance Monitoring Plan (“CAM Plan”). Each PMO Plan shall be a compilation of the Defendant’s approaches for exercising good air pollution control practices and for minimizing emissions from each emission unit in the Arc Shop. Keystone will train each Arc Shop operator on PMO Plan requirements and post the PMO Plan publicly within the Arc Shop so that each operator may be able to refer to the PMO Plan at any time.

a. The PMO Plan shall provide for continuous operation of the CEMS and each Baghouse, and shall include fan motor amperage requirements and parameters governing acceptable ranges of operation of the CEMS and Baghouse fan motor variable frequency drives, an emissions minimization plan for all periods of operation, including malfunctions and breakdowns, and a protocol detailing selective use of scrap, excluding the use of certain types of scrap by visible identification, and a protocol for selecting and charging low sulfur charge coke in order to minimize SO<sub>2</sub> emissions from the furnaces.

b. The PMO Plan shall have the goal of minimizing, to the extent practicable, SO<sub>2</sub> emissions from the Arc Shop, eliminating CEMS downtime, and minimizing Baghouse downtime to ensure compliance with Paragraphs 8, 9, and 10. Defendant shall comply with the PMO Plan at all times, including periods of startup, shutdown and malfunction. If Defendant makes changes to the PMO Plan, such changes shall be summarized and reported to EPA pursuant to Section X (Reporting Requirements) of the Consent Decree. Such changes may be implemented immediately, but nonetheless shall be subject to approval under Section IX (EPA's Review and Approval of Deliverables) of this Consent Decree.

12. Root Cause Failure Analysis ("RCFA").

a. Requirements Regarding the Contents and Timing of Root Cause Analyses Applicable to the Period of One Year Following the Effective Date. Beginning after the Effective Date, Defendant shall perform and complete an RCFA within 30 Days of the conclusion of any Extended Duration Heat. Defendants shall gather during the RCFA(s) the information required below, as detailed in Attachment A ("RCFA Template") to this Decree, and submit such information in the semi-annual report required by Section X (Reporting

Requirements). Each RCFA shall set forth the following information concerning the Extended Duration Heat:

(1) A narrative summary of the Extended Duration Heat, including the date and time that the Extended Duration Heat started and ended;

(2) Records of CEMS measurements over the period of the Extended Duration Heat, an estimate of the quantity of SO<sub>2</sub> emissions that were emitted during that period, and the calculations that were used to estimate such emissions;

(3) Identification of the steps taken to minimize SO<sub>2</sub> emissions during the Extended Duration Heat, along with an estimate of the sulfur content of the coke charged into the furnace, a general description of the scrap metal charged into the EAF, and an estimate of the corresponding charge carbon/coke weights associated with each such charge;

(4) A detailed analysis that sets forth the root cause(s) and all contributing causes of that Extended Duration Heat, to the extent determinable, and the steps, if any, that Defendant took to limit the duration and/or quantity of emissions associated with the Extended Duration Heat;

(5) An analysis of the measures, if any, that are reasonably available to prevent or reduce the likelihood of a recurrence of the Extended Duration Heat from the same root cause(s) and contributing causes in the future. The analysis shall evaluate: design, operational, and maintenance changes, if any; the probable effectiveness of each such measure; the likely cost of each measure; and whether or not an outside consultant should be retained to assist in the analysis;

(6) Either a description of corrective action(s) implemented under this Section or, if not already implemented, a schedule for its (their) implementation, including proposed commencement and completion dates, or an explanation that corrective action(s) is (are) not required;

(7) If investigations of the causes and/or possible corrective actions regarding any Extended Duration Heat are still ongoing on the due date of the report specified in Paragraph 12.a, Defendant shall provide in the report an identification of the anticipated date within 60 Days (or such additional time as EPA allows) of the due date identified in Paragraph 12.a on which Defendant will submit a supplemental RCFA fully conforming to the requirements of this Paragraph 12 and containing all the requirements listed in Paragraph 12.a(1)-(6). Nothing in this Paragraph 12.a(7) shall excuse Defendant from its investigation, reporting, and corrective action obligations under Paragraph 12 for any Extended Duration Heat which occurs after the Extended Duration Heat for which Defendant requests an extension of time under this Paragraph 12.a(7); and

(8) To the extent that completion of the implementation of corrective action(s) required by Paragraph 12.a(7), if any, is not finalized at the time of the submission of a semi-annual report, Defendant shall supplement such semi-annual report and identify the corrective action(s) taken and the dates of commencement and completion of the implementation by no later than 30 Days after completion of the implementation of corrective action(s).

b. Requirements Regarding the Contents and Timing of RCFA Summary

Applicable to the Period Beyond One Year Following the Effective Date. Beginning one year



after the Effective Date, Defendant shall complete an RCFA Summary, as detailed in Attachment B (“RCFA Summary Template”) to this Decree within 30 Days of the conclusion of any Extended Duration Heat. Defendants shall include the completed RCFA Summaries in the semi-annual report required by Section X (Reporting Requirements).

c. Corrective Actions Required by Extended Duration Heats. In response to any Extended Duration Heat other than those referenced in Paragraph 12.a(4), Defendant shall, as expeditiously as possible, implement such interim and/or long-term corrective actions, if any, as are reasonable and consistent with good engineering practices to minimize the likelihood of a recurrence of the root causes and any contributing causes of that Extended Duration Heat.

13. If EPA does not notify Defendant in writing within 60 Days of its receipt of a semi-annual report that contains an RCFA, as required by Paragraph 12, that it objects to one or more aspects of Defendant’s proposed corrective action(s), if any, and schedule(s) of implementation, if any, then that (those) action(s) and schedule(s) shall be deemed acceptable for purposes of compliance with Paragraphs 12.a and 12.b of this Consent Decree.

14. EPA does not, by its agreement to the entry of this Consent Decree or by its failure to object to any corrective action that Defendant may take in the future, warrant or aver in any manner that any of Defendant’s corrective actions in the future will result in compliance with the provisions of the CAA, the Illinois Environmental Protection Act, or their implementing regulations. Notwithstanding EPA’s review of any plans, reports, corrective actions, or procedures under this Section, Defendant shall remain solely responsible for compliance with the CAA, the Illinois Environmental Protection Act, and their implementing regulations. Nothing in this Paragraph shall be construed as a waiver of EPA’s rights under the CAA, the Illinois

Environmental Protection Act, or their regulations for future violations of the CAA or its regulations.

15. If EPA does object, in whole or in part, to Defendant's proposed corrective action(s) and/or its schedule(s) of implementation, or, where applicable, to the absence of such proposal(s) and/or schedule(s), it shall notify Defendant of that fact within 60 Days following receipt of a semi-annual report containing an RCFA required by Paragraph 12. If EPA and Defendant cannot agree on the appropriate corrective action(s), if any, to be taken in response to a particular Extended Duration Heat, any Party may invoke the Dispute Resolution provisions of Section XIII of the Consent Decree (Dispute Resolution).

16. Permits. Within 90 Days of the Effective Date, Defendant shall submit an application to IEPA to include into the Defendant's Title V Permit all requirements set forth in Paragraphs 8 through 11 of this Decree.

## VII. CIVIL PENALTY

17. Defendant shall pay five-hundred-sixty-five-thousand dollars (\$565,000) to the United States as a civil penalty, in two equal payments, together with interest accruing from the Date of Lodging at the rate specified in 28 U.S.C. § 1961. Defendant shall make the first payment of two-hundred-eighty-two-thousand-five-hundred dollars (\$282,500) 30 days after the Effective Date. Defendant shall make the second payment of two-hundred-eighty-two-thousand-five-hundred dollars (\$282,500) 90 days after the Effective Date. Both payments shall be made to the U.S. Department of Justice in accordance with the instructions to be provided to Defendant following the Date of Lodging by the Financial Management Unit of the U.S. Attorney's Office for the Central District of Illinois.

18. At the time of each payment described in Paragraph 17, Defendant shall send to EPA a proof of payment, together with a transmittal letter, which shall state that the payment is for the civil penalty owed pursuant to the Decree in *United States v. Keystone Consolidated Industries, Inc. d/b/a Keystone Steel and Wire Co.* and reference civil action number and DOJ case number 90-5-2-1-09880 by email to [cinwd\\_acctsreceivable@epa.gov](mailto:cinwd_acctsreceivable@epa.gov) and by mail to:

EPA Cincinnati Finance Office  
26 West Martin Luther King Drive  
Cincinnati, OH 45268

19. Defendant shall not deduct any penalties paid under this Consent Decree pursuant to this Section or Section XI (Stipulated Penalties) in calculating its federal or state or local income tax.

#### **VIII. SUPPLEMENTAL ENVIRONMENTAL PROJECT**

20. Defendant shall complete a supplemental environmental project (“SEP”) that is designed to protect the environment and public health by closing the Arc Shop roof monitor, thereby reducing particulate matter (“PM”), PM10, opacity, and lead (“Pb”) emissions.

21. Defendant shall complete the SEP as follows:

a. No later than December 31, 2016, Keystone will permanently close the existing roof monitor located at the Arc Shop roof centerline at the north end of the Arc Shop building. Closure of the roof monitor will result in estimated emissions reductions of up to 57 tons of PM and 1.23 tons of lead per year.

b. Keystone will construct alternative means to release the heat from the Arc Shop building, in accordance with design and construction drawings #23114001.08 and 23114001.16 prepared on the Defendant’s behalf and attached to this Decree as Attachment C.

22. Defendant shall submit all necessary permit applications regarding the SEP to IEPA.

23. Defendant shall spend at least \$320,000 to complete all activities described in Paragraph 21. Defendant shall include documentation of expenditures made in connection with the SEP as part of the SEP Completion Testing Report described in Paragraph 28.

24. Upon the completion of the SEP, Defendant shall continuously operate the Arc Shop with a permanently closed roof monitor and comply with any conditions stemming from the project, as specified in the Facility's amended Title V Permit.

25. Defendant hereby certifies as follows:

I certify that Keystone is not required to perform or develop the SEP by any law, regulation, order, or agreement or as injunctive relief as of the date that I am signing this Consent Decree. I further certify that Keystone has not received, and is not negotiating to receive, credit for the SEP in any other enforcement action.

I certify that Keystone is not a party to any open federal financial assistance transaction that is funding or could be used to fund the same activity as the SEP. I further certify that, to the best of my knowledge and belief after reasonable inquiry, there is no such open federal financial transaction that is funding or could be used to fund the same activity as the SEP, nor has the same activity been described in an unsuccessful federal financial assistance transaction proposal submitted to EPA within two years of the date that I am signing this Consent Decree (unless the project was barred from funding as statutorily ineligible). For purposes of this certification, the term "open federal financial assistance transaction" refers to a grant, cooperative agreement, loan, federally-guaranteed loan guarantee or other mechanism for providing federal financial assistance whose performance period has not expired.

26. By no later than March 31, 2017, Defendant shall evaluate visible emissions at both the roof monitor and the newly constructed caster runout heat release stack in accordance with EPA Method 22 over the course of three consecutive heats, for a minimum of three hours (SEP Completion Testing). Without prejudice, Defendant shall have the right to conduct preliminary testing prior to the satisfactory completion of SEP Completion Testing.

27. EPA may inspect the facility at any time to monitor Defendant's compliance with the SEP requirements outlined in this Section.

28. Defendant shall submit a SEP Completion Report to EPA by July 31, 2017. This report must contain the following information:

- a. A detailed description of the SEP as completed and implemented;
- b. A description of any operating problems and the actions taken to correct the problems;
- c. Itemized cost of goods and services used to complete the SEP documented by copies of invoices, purchase orders or cancelled checks that specifically identify and itemize the individual cost of the goods and services;
- d. A certification that Defendant has completed and fully implemented the SEP in compliance with this Consent Decree;
- e. A description of the environmental and public health benefits resulting from the SEP (quantify the benefits and pollution reductions, if feasible); and
- f. A SEP Testing Report, including operating conditions at the Arc Shop and caster during the EPA Method 22 evaluations, and a description of how all parameters required by EPA Method 22 were satisfied.

29. Defendant must submit all notices and reports as required by Section XVII of this Consent Decree (Notices and Submissions).

30. In each report that Defendant submits, it must certify that the report is true and complete by including the following statement signed by one of its officers:

I certify that I am familiar with the information in this document and that, based on my inquiry of those individuals responsible for obtaining the information, it is true and complete to the best of my knowledge. I know that there are significant penalties for

submitting false information, including the possibility of fines and imprisonment for knowing violations.

31. Following receipt of the SEP Completion Report described in Paragraph 28, above, the United States shall notify Defendant in writing that:

- a. The Defendant has satisfactorily completed the SEP and the SEP Completion Report; or
- b. There are deficiencies in the SEP as completed or in the SEP Report and provide the Defendant with a grant of 30 days to correct the deficiencies; or
- c. The Defendant has not satisfactorily completed the SEP or submitted the SEP Completion Report, and EPA will seek stipulated penalties under Section XI.

32. If the United States exercises option 30.b above, any dispute will be subject to the provisions of Section XIII of this Consent Decree (Dispute Resolution).

33. If Defendant violates any requirement outlined in this Section, Defendant must pay stipulated penalties as follows, in addition to any stipulated penalties outlined in Section XI:

- a. Except as provided in subparagraph b, below, if Defendant does not complete the SEP according to the requirements of this Section, Defendant must pay a penalty of \$250,000.
- b. If Defendant does not complete the SEP satisfactorily, but EPA determines that Defendant made good faith and timely efforts to complete the SEP and certified, with supporting documents, that it spent at least 90 percent of the amount set forth in Paragraph 23, Defendant will not be liable for any stipulated penalty under subparagraph a, above.
- c. If Defendant completes the SEP satisfactorily, but spends less than 90 percent of the amount set forth in Paragraph 23, Defendant must pay a penalty of \$32,000.

d. If Defendant completes the SEP, but visible emissions from the roof monitor or caster runout heat release stack are identified during the SEP Completion Testing described in Paragraph 26, Defendant shall pay \$250,000.

e. If Defendant does not submit timely the SEP Completion Report, Defendant must pay penalties in the following amounts for each day after the report was due until it submits the report:

Penalty per violation per day	Period of violation
\$100	1st through 14th day
\$250	15th through 30th day
\$500	31st day and beyond

34. The United States' determinations of whether Defendant completed the SEP satisfactorily and whether Defendant made good faith and timely efforts to complete the SEP will bind Defendant.

35. Any public statement that Defendant makes referring to the SEP must include the following language: "Keystone Steel & Wire Co./Keystone Consolidated Industries, Inc. undertook this project under the settlement of the United States' enforcement action against it for violations of the Clean Air Act."

36. If an event occurs which causes or may cause a delay in completing the SEP as required by this Consent Decree, Defendant will follow the procedures outlined in Section XII of this Consent Decree (Force Majeure).

37. For federal income tax purposes, Defendant will neither capitalize into inventory or basis, nor deduct any costs or expenditures incurred in performing the SEP.

**IX. EPA'S REVIEW AND APPROVAL OF DELIVERABLES**

38. Initial Submissions.

a. After review of any plan, report, or other deliverable that is required to be submitted for approval pursuant to this Consent Decree, EPA shall: (1) approve, in whole or in part, the submission; (2) approve the submission upon specified conditions; (3) disapprove, in whole or in part, the submission due to material defects or deficiencies in the Defendant's submissions; or (4) any combination of the foregoing. Unless EPA approves upon specified conditions or disapproves the submission within 60 days of EPA's receipt of such submission, the submission shall be deemed approved.

b. EPA also may modify the initial submission to cure material deficiencies in the submission if: (1) EPA determines that disapproving the submission and awaiting a resubmission would cause substantial disruption to the work; or (2) previous submissions have been disapproved due to material defects and the deficiencies in the initial submission under consideration indicate a bad faith lack of effort to submit an acceptable plan, report, or deliverable.

39. Resubmissions. Upon receipt of a notice of disapproval under Paragraph 38.a(3) or (4), or if required by a notice of approval upon specified conditions under Paragraph 38.a(4), Defendant shall, within 15 days or such longer time as specified by EPA in such notice, correct the deficiencies and resubmit the plan, report, or other deliverable for approval. After review of the resubmitted plan, report, or other deliverable, EPA may: (a) approve, in whole or in part, the resubmission; (b) approve the resubmission upon specified conditions; (c) modify the resubmission; (d) disapprove, in whole or in part, the resubmission, requiring Defendant to correct the deficiencies; or (e) any combination of the foregoing. Unless EPA approves upon



specified conditions, modifies, and/or disapproves the resubmission within 60 days of EPA's receipt of such resubmission, the resubmission shall be deemed approved.

40. Material Defects. If an initially submitted or resubmitted plan, report, or other deliverable contains a material defect, and the plan, report, or other deliverable is disapproved or modified by EPA under Paragraphs 38.b (2) or 39 due to such material defect, then the material defect shall constitute a lack of compliance for purposes of Section XI (Stipulated Penalties) of this Decree. The provisions of Section XIII (Dispute Resolution) and Section XI (Stipulated Penalties) shall govern the accrual and payment of any stipulated penalties regarding the Defendant's submissions under this Section.

41. Implementation. Upon approval, approval upon conditions, or modification by EPA under Paragraph 38 (Initial Submissions) or Paragraph 39 (Resubmissions), of any plan, report, or other deliverable, or any portion thereof: (a) such plan, report, or other deliverable, or portion thereof, shall be incorporated into and enforceable under this Consent Decree; and (b) Defendant shall take any action required by such plan, report, or other deliverable, or portion thereof, subject only to their right to invoke the Dispute Resolution procedures set forth in Section XIII (Dispute Resolution) with respect to the modifications or conditions made by EPA. The implementation of any non-deficient portion of a plan, report, or other deliverable submitted or resubmitted under Paragraphs 38 or 39 shall not relieve Defendant of any liability for stipulated penalties under Section XI (Stipulated Penalties).

## **X. REPORTING REQUIREMENTS**

42. In addition to any other requirement of this Consent Decree, Defendant shall submit to EPA a semi-annual progress report that: (a) describes the actions that have been taken toward achieving compliance with this Consent Decree during the previous six months;

(b) includes a summary of all results of sampling and tests and all other data received or generated by the Defendant or its contractors or agents in the previous six-month period; (c) identifies all plans, reports, and other deliverables required by this Consent Decree completed and submitted during the previous six-month period; (d) describes all actions, including, but not limited to, data collection and implementation of work plans, that are scheduled for the next six-month period and provide other information relating to the progress of construction; (e) include information regarding percentage of completion, unresolved delays encountered or anticipated that may affect the future schedule for implementation of any work required by this Section VI (Compliance Requirements) of this Decree, and a description of efforts made to mitigate those delays or anticipated delays; (f) includes any modifications to any relevant work plans.

Defendant shall submit these progress reports to EPA, beginning on the Date of Lodging, by January 31 of each calendar year for the period between July 1 through December 31 of the previous year, and by July 31 of each calendar year for the period between January 1 and June 30 of that year.

43. The reporting requirements of this Decree do not relieve the Defendant of any reporting obligations under the CAA or implementing regulations, or by any other federal, State, or local law, regulation, permit, or other requirement.

44. Any information provided pursuant to this Consent Decree may be used by the United States in any proceeding to enforce the provisions of this Consent Decree or as otherwise provided by law.

## **XI. STIPULATED PENALTIES**

45. Defendant shall be liable to pay to the United States, automatically and without notice or demand, for stipulated penalties in the amounts set forth below, unless excused under

Section XII (Force Majeure). "Compliance" by Defendant shall include completion of all payments and activities required under this Decree, or any plan, report, or other deliverable approved under this Decree, in accordance with all applicable requirements of law, this Decree, and any plan report, or other deliverable approved under this Decree, and within the specified time schedules established and approved under this Decree.

46. Late Payment of Civil Penalty. If Defendant fails to pay the civil penalty required to be paid under Section VII (Civil Penalty) when due, the Defendant shall pay a stipulated penalty of \$5,000 per day for each day that the civil payment is late.

47. Compliance Requirements. For each day that the Defendant fails to complete the work specified in accordance with the applicable schedules developed pursuant to Section VI (Compliance Requirements), and for each day that Defendant fails to submit a report or plan as required by this Consent Decree and the Appendices hereto, Defendant shall be liable for stipulated penalties as follows, per day and per violation:

<b>Violation/Failure to Comply with the Decree</b>	<b>Penalty (per day)</b>
Failure to operate CEMS in accordance with Paragraph 8 a. and b.	\$5,000
Failure to calculate unquantified emissions in accordance with Paragraph 8.c.	\$5,000
Failure to report CEMS outages and estimated unquantified SO <sub>2</sub> emissions in accordance with Paragraph 8.c.	\$1,000
Failure to comply with SO <sub>2</sub> limit in accordance with Paragraph 9.	\$5,000

Failure to submit a work plan in accordance with Paragraph 10.a.	\$1,000
Failure to complete construction, perform testing and/or commence operation of modified baghouse fan motors in accordance with Paragraph 10.b	\$5,000
Failure to perform flow review in accordance with Paragraph 10.c.	\$1,000
Failure to submit flow study and recommendations, if any, in accordance with Paragraph 10.d.	\$1,000
Failure to submit a PMO Plan in accordance with Paragraph 11.	\$1,000
Failure to submit a Root Cause Failure Analysis or a supplemental Root Cause Failure Analysis by the deadlines specified in Paragraph 12.a or 12.a(7)	\$1,000
Failure to implement corrective action in accordance with Paragraph 12.c.	\$1,000
Occurrence of any Extended Duration Heat in excess of twenty (20) Extended Duration Heats during any 60-day rolling average period (calculated in accordance with the formula set forth in Paragraph 9) and where all such Extended Duration Heats have the same root cause based on the RCFA performed in accordance with Paragraph 12.	\$1,000
Failure to submit Title V permit application(s) in accordance with Paragraph 16.	\$1,000

Failure to submit a semi-annual progress report in accordance with Section X.	\$1,000
Failure to comply with information collection and retention requirements in accordance with Section XIV	\$1,000

48. All stipulated penalties shall begin to accrue on the day after performance is due or a violation occurs, whichever is applicable, and shall continue to accrue until performance is satisfactorily completed or until the violation ceases. However, stipulated penalties shall not accrue: (a) with respect to a deficient submission under Section IX (EPA's Review and Approval of Deliverables), during the period, if any, beginning on the 31st day after EPA's receipt of such submission until the date that EPA notifies Defendant of any deficiency; (b) during the period of Dispute Resolution as provided in Section XIII (Dispute Resolution) of this Decree and Paragraph 52 below. Nothing in this Consent Decree shall prevent the simultaneous accrual of separate penalties for separate violations of this Consent Decree. Stipulated penalties shall accrue simultaneously for separate violations of this Consent Decree.

49. Violations of the SO<sub>2</sub> limit set forth in Paragraph 9 based on 30-day average constitutes 1 Day of violation for each 30-Day rolling average.

50. Following EPA's determination that the Defendant has failed to comply with a requirement of this Consent Decree, EPA may give the Defendant written notification of the same and describe the noncompliance. EPA may send the Defendant a written demand for the payment of the penalties. However, penalties shall accrue as provided in the preceding Paragraph regardless of whether EPA has notified the Defendant of a violation.

51. Defendant shall pay stipulated penalties to the United States within 30 days of a written demand by either EPA or the United States Department of Justice. All payments due under this Section shall indicate that the payment is for stipulated penalties, reference the specific violation(s), and be made in accordance with Paragraph 17.

52. Stipulated penalties shall continue to accrue as provided in Paragraph 48, during any dispute resolution period, but need not be paid until the following:

a. If the dispute is resolved by agreement of the Parties or by a decision of EPA that is not appealed to the Court, the Defendant shall pay accrued penalties determined to be owing, together with interest, to the United States within 15 Days of the effective date of the agreement or the receipt of EPA's decision or order;

b. If the dispute is appealed to the Court and the United States prevails in whole or in part, the Defendant shall pay all accrued penalties determined by the Court to be owing, together with interest, within 60 days of receiving the Court's decision or order, except as provided in subparagraph c, below; or

c. If any party appeals the District Court's decision, the Defendant shall pay all accrued penalties determined to be owing, together with interest, within 15 days of receiving the final appellate court decision.

53. If Defendant fails to pay stipulated penalties according to the terms of this Consent Decree, Defendants shall be liable for interest on such penalties, as provided for in 28 U.S.C. § 1961 accruing as of the date payment became due. Nothing in this Section shall be construed as prohibiting, altering, or in any way limiting the rights of the United States to seek additional remedies or sanctions, pursuant to other provisions of this Consent Decree or of any applicable statutes and regulations, including seeking injunctive or other relief for Defendant's

failure to implement the injunctive relief provisions of this Consent Decree. Where a violation of this Consent Decree is also a violation of the Act, Defendant shall be allowed a credit, for any stipulated penalties paid, against any statutory penalties imposed for such violation.

## **XII. FORCE MAJEURE**

54. “Force Majeure,” for purposes of this Consent Decree, is defined as any event arising from the causes beyond the control of Defendant, its contractors, or any entity controlled by Defendant that delays or prevents the performance of any obligation under this Consent Decree despite Defendant’s best efforts to fulfill the obligation. “Best Efforts” include using best efforts to anticipate any potential force majeure event and to address the effects of any such event (a) as it is occurring and (b) after it has occurred, such that the delay is minimized to the greatest extent possible. “Force Majeure” does not include Defendant’s financial inability to perform any obligation under this Decree.

55. If any event occurs or has occurred that may delay the performance of any obligation under this Consent Decree, Defendant shall provide notice in writing, as provided in Section XVII of this Consent Decree (Notices and Submissions), within 10 Days of the time Defendant first knew of, or by the exercise of due diligence should have known of, the event. Such notification shall include an explanation and description of the reasons for the delay; the anticipated duration of the delay; a description of all actions taken or to be taken to prevent or minimize the delay; a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; and Defendant’s rationale for attributing such delay to a force majeure event. Failure to comply with the above requirements shall preclude Defendant from asserting any claim of force majeure. Defendant shall be deemed to know of

any circumstance of which Defendant, its contractors, or any entity controlled by Defendant knew or should have known.

56. Defendant shall have the burden of proving that each event described in the preceding paragraph was a force majeure event; that Defendant gave the notice required by the preceding Paragraph; that Defendant used best efforts to prevent or minimize any delay caused by the event; and that any period of delay it claims was attributable to the force majeure event was caused by that event.

57. If the United States agrees that Defendant could not have prevented or mitigated any delay, or anticipated delay, attributable to a force majeure event by the exercise of its best efforts, the Parties shall stipulate to an extension of time for Defendant's performance of the affected compliance requirement by a period not exceeding the delay actually caused by such event. In such circumstances, the appropriate modification shall be made pursuant to Section XIX of this Consent Decree (Modification), where the modification is to a term of this Consent Decree. In the event that the Parties cannot agree, the matter shall be resolved in accordance with Section XIII of this Consent Decree (Dispute Resolution). An extension of time for performance of the obligations affected by a force majeure event shall not, of itself, extend the time for performance of any other obligation.

### **XIII. DISPUTE RESOLUTION**

58. Unless otherwise expressly provided for in this Decree, the dispute resolution procedures of this Section shall be the exclusive mechanism to resolve disputes arising under or with respect to this Consent Decree. Defendant's failure to seek resolution of a dispute under this Section shall preclude Defendant from raising any such issue as a defense to an action by the United States to enforce any obligation of Defendant arising under this Decree.



59. Informal Negotiations Period. Any dispute subject to Dispute Resolution under this Consent Decree shall first be the subject of informal negotiations. The dispute shall be considered to have arisen when one Party sends the other Party a written Notice of Dispute. The period of informal negotiations shall not exceed 20 Days from the date the dispute arises, unless that period is modified by written agreement. If the Parties cannot resolve a dispute by informal negotiations, then the position advanced by the United States shall be considered binding unless, within 30 Days after the conclusion of the informal negotiation period, Defendant invokes formal dispute resolution procedures as set forth below.

60. Formal Dispute Resolution.

a. Defendant shall invoke formal dispute resolution procedures, within the time period provided in the preceding Paragraph, by serving on the United States a written Statement of Position regarding the matter in dispute. The Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting Defendant's position and any supporting documentation relied upon by Defendant.

b. The United States shall serve its Statement of Position within 60 Days of receipt of Defendant's Statement of Position. The United States' Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting that position and any supporting documentation relied upon by the United States. The United States' Statement of Position shall be binding on Defendant, unless Defendant files a motion for judicial review of the dispute in accordance with the following Paragraph.

c. Defendant may seek judicial review of the dispute by filing with the Court and serving on the United States, in accordance with Section XVII (Notices and Submissions) of this Consent Decree, a motion requesting judicial resolution of the dispute. The motion must be

filed within 30 Days of receipt of the United States' Statement of Position pursuant to the preceding Paragraph. The motion shall contain a written statement of Defendant's position on the matter in dispute, including any supporting factual data, analysis, opinion, or documentation, and shall set forth the relief requested and any schedule within which the dispute must be resolved for orderly implementation of the Consent Decree.

d. The United States shall respond to Defendant's motion within the time period allowed by the Local Rules of this Court. Defendant may file a reply memorandum, to the extent permitted by the Local Rules.

61. Standard of Review.

a. Disputes Concerning Matters Accorded Record Review. Except as otherwise provided in this Consent Decree, in any dispute brought under Paragraph 60 pertaining to the adequacy, appropriateness, or implementation procedures of schedules, performance, or any other items requiring approval by EPA under this Consent Decree, and all other disputes that are accorded review on the administrative record under applicable principles of administrative law, the final position of the United States shall be upheld by the Court if supported by substantial evidence in the administrative record.

b. Other Disputes. Except as otherwise provided in this Consent Decree, in any other dispute brought under Paragraph 60 Defendant shall bear the burden of demonstrating that its position complies with this Consent Decree and better furthers the Objectives of the Consent Decree.

62. The invocation of dispute resolution procedures under this Section shall not, by itself, extend, postpone, or affect in any way any obligation of Defendant under this Consent Decree, unless and until final resolution of the dispute so provides. Stipulated penalties with

respect to the disputed matter shall continue to accrue from the first day of noncompliance, but payment shall be stayed pending resolution of the dispute as provided in Paragraph 52. If Defendant does not prevail on the disputed issue, stipulated penalties shall be assessed and paid as provided in Section XI (Stipulated Penalties).

#### **XIV. INFORMATION COLLECTION AND RETENTION**

63. The United States and its representatives, including attorneys, contractors, and consultants, shall have the right of entry into the Facility at all reasonable times, upon presentation of credentials, to:

- a. monitor the progress of activities required under this Consent Decree;
- b. verify any data or information submitted to the United States in accordance with the terms of this Consent Decree;
- c. obtain samples taken by Defendant or its representatives, contractors, or consultants;
- d. obtain documentary evidence, including photographs and similar data; and
- e. assess Defendant's compliance with this Consent Decree.

64. Until five years after the termination of this Consent Decree, Defendant shall retain, and shall instruct its contractors and agents to preserve, all non-identical copies of all documents, records, or other information (including documents, records, or other information in electronic form) in its or its contractors' or agents' possession or control, or that come into its or its contractors' or agents' possession or control, and that relate in any manner to Defendant's performance of its obligations under this Consent Decree. This information retention requirement shall apply regardless of any contrary corporate or institutional policies or procedures. At any time during this information retention period, upon request by the United

States or State, Defendant shall provide copies of any documents, records, or other information required to be maintained under this Paragraph.

65. This Consent Decree in no way limits or affects any right of entry and inspection, or any right to obtain information, held by the United States pursuant to applicable federal or state laws, regulations, or permits, nor does it limit or affect any duty or obligation of Defendant to maintain documents, records, or other information imposed by applicable federal or state laws, regulations, or permits.

66. At the conclusion of the document-retention period provided in the preceding Paragraph, Defendant must notify the United States at least ninety days prior to the destruction of any records or documents subject to the requirements of the preceding Paragraph. Upon request by the United States, Defendant must deliver any such records or documents to EPA. Defendant may assert that certain documents, records, or other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If Defendant asserts such a privilege, they must provide the following: (1) the title of the document, record, or information; (2) the date of the document, record, or information; (3) the name and title of the author of the document, record, or information; (4) the name and title of each addressee and recipient; (5) a description of the subject of the document, record, or information; and (6) the privilege claimed by Defendant. No documents, reports, or other information created or generated pursuant to the requirements of this Consent Decree may be withheld on the grounds that they are privileged.

#### **XV. EFFECT OF SETTLEMENT/RESERVATION OF RIGHTS**

67. This Consent Decree resolves the civil claims of the United States for the violations alleged in the Complaint filed in this action through the Date of Lodging.

68. United States reserves all legal and equitable remedies available to enforce the provisions of this Consent Decree, except as expressly stated in Paragraph 67. This Consent Decree shall not be construed to limit the rights of the United States to obtain penalties or injunctive relief under the Act, its implementing regulations, or regulations authorized by the Act, or under other federal or state laws, regulations, or permit conditions except as specifically stated in Paragraph 67.

69. In any subsequent administrative or judicial proceeding initiated by the United States for injunctive relief, civil penalties, or other appropriate relief relating to the Facility or Defendant's violations, Defendant shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, res judicata, collateral estoppel, issue preclusion, claim preclusion, claim-splitting, or other defenses based upon any contention that the claims raised by the United States in the subsequent proceeding were or should have been brought in the instant case.

70. This Consent Decree is not a permit, or a modification of any permit, under any federal, State, or local laws or regulations. Defendant is responsible for achieving and maintaining complete compliance with all applicable federal, State, and local laws, regulations, and permits; and Defendant's compliance with this Consent Decree shall be no defense to any action commenced pursuant to any such laws, regulations, or permits, except as set forth herein. The United States does not, by its consent to the entry of this Consent Decree, warrant or aver in any manner that Defendant's compliance with any aspect of this Consent Decree will result in compliance with the provisions of the Act, 42 U.S.C. § 7401 *et seq.*, or with any other provisions of federal, State, or local laws, regulations, or permits.

71. This Decree does not limit or affect the rights of the United States against any third parties not party to this Consent Decree, nor does it limit the rights of third parties not party to this Consent Decree against Defendants, except as otherwise provided by law.

72. This Decree shall not be construed to create any rights in, or grant any cause of action to, any third party not party to this Consent Decree.

#### **XVI. COSTS**

73. The Parties shall bear their own costs of this action, including attorneys' fees, except that the United States shall be entitled to collect the costs (including attorneys' fees) incurred in any action necessary to collect any portion of the civil penalty or any stipulated penalties due but not paid by Defendant.

#### **XVII. NOTICES AND SUBMISSIONS**

74. Whenever, under the terms of this Decree, written notice, report or document is required to be sent from one Party to another, it shall be directed to the individuals at the address specified below. All notices and submissions shall be considered effective upon receipt, unless otherwise provided:

To the United States:

Chief, Environmental Enforcement Section  
Environment and Natural Resources Division  
U.S. Department of Justice  
P.O. Box 7611  
Washington, D.C. 20044-7611  
DJ# 90-5-2-1-09880

To EPA:

**Compliance Tracker**  
U.S. Environmental Protection Agency  
Region 5

AE-17J  
US EPA, Region 5  
77 West Jackson Blvd.  
Chicago, IL 60604

And

Kathleen Schnieders  
Office of Regional Counsel, C-14J  
US EPA, Region 5  
77 West Jackson Blvd.  
Chicago, IL 60604

To Defendant:

General Counsel  
Keystone Consolidated Industries, Inc.  
5430 LBJ Freeway, Suite 1700  
Dallas, TX 75240-2697

And

Andrew R. Running  
Kirkland & Ellis LLP  
300 North LaSalle  
Chicago, IL 60654

75. Any Party may, by written notice to the other Party, change its designated notice recipient or notice address provided above.

#### **XVIII. RETENTION OF JURISDICTION**

76. The Court shall retain jurisdiction over both the subject matter of this Decree and the Defendant for the duration of the performance of the terms and provisions of this Consent Decree for the purpose of enabling either of the Parties to apply to the Court at any time for such further order, direction, and relief as may be appropriate for the construction or modifications of this Decree, or to effectuate or enforce compliance with its terms, or to resolve disputes in accordance with Section XIII (Dispute Resolution).

**XIX. MODIFICATION**

77. The terms of this Consent Decree may be modified only by a subsequent written agreement signed by all of the parties.

78. Material modifications to this Decree shall be in writing, signed by the United States and the Defendant, and effective only upon approval by the Court. Non-material modifications to this Consent Decree shall be in writing and shall be effective when signed by the United States and the Defendant.

79. Nothing in this Consent Decree shall be deemed to alter the Court's power to enforce, supervise, or approve modifications to this Consent Decree.

**XX. TERMINATION**

80. This Consent Decree may be terminated when the United States determines that the Defendant has satisfactorily completed performance of its obligations of this Decree, defined as: 1) payment of the civil penalty under Section VII (Civil Penalty) of this Decree; 2) any outstanding stipulated penalties under Section XI (Stipulated Penalties) of this Decree and; 3) any performance required under Section VI (Compliance Requirements) or Section X (Reporting Requirements) of this Decree. The Parties shall file with the Court an appropriate stipulation reciting that the requirements of the Consent Decree have been met and requesting termination of the Decree.

**XXI. PUBLIC NOTICE AND COMMENT**

81. This Consent Decree shall be lodged with the Court for a period of not less than 30 Days for public notice and comment in accordance with 28 C.F.R. § 50.7. The United States reserves the right to withdraw or withhold its consent if the comments regarding the Consent



Decree disclose facts or considerations indicating that the Consent Decree is inappropriate, improper, or inadequate. Defendant consents to entry of this Consent Decree without further notice.

**XXII. SIGNATORIES / SERVICE**

82. Each undersigned representative of Defendant, EPA, and the Environment and Natural Resources Division of the Department of Justice certifies that he or she is fully authorized to enter into the terms and conditions of this Consent Decree and to execute and legally bind the Party he or she represents to this document.

83. Defendant agrees not to oppose entry of this Consent Decree by the Court or to challenge any provisions of the Decree unless the United States has notified the Defendant in writing that it no longer supports the entry of the Decree.

84. This Decree may be signed in parts, and its validity shall not be challenged on that basis. Defendant agrees to accept service of process by mail with respect to all matters arising under or relating to this Consent Decree and to waive the formal service requirements set forth in Rules 4 and 5 of the Federal Rules of Civil Procedure and any applicable Local Rules of this Court including, but not limited to, service of a summons.

**XXIII. APPENDICES/ATTACHMENTS**

Attachment A: RCFA Template.

Attachment B: RCFA Summary Template.

Attachment C: Construction Drawings for Caster Run Out Ventilation Project  
#23114001.08 and 23114001.16.

**XXIV. FINAL JUDGMENT**

85. This Consent Decree constitutes the final, complete and exclusive agreement and understanding among the Parties regarding the settlement embodied in this Consent Decree. Other than deliverables that are approved pursuant to this Decree, the Parties acknowledge that there are no representations, agreements, or understandings relating to the settlement other than those expressly contained in this Consent Decree.

86. Upon entry of this Consent Decree by the Court, this Consent Decree shall constitute a final judgment between and among the United States and the Defendant.


SO ORDERED THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_  
United States District Judge

Signature Page for the Consent Decree in *United States v. Keystone Consolidated Industries, Inc. d/b/a Keystone Steel and Wire Co.* (C.D. Ill.)

**FOR THE UNITED STATES OF AMERICA**

DATE: \_\_\_\_\_



THOMAS A. MARIANI, JR.  
Deputy Section Chief  
Environment and Natural Resources Division  
U.S. Department of Justice

DATE: 2/12/2016

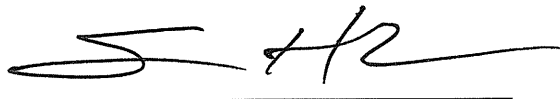


IVA ZIZA  
Trial Attorney  
Environment and Natural Resources Division  
U.S. Department of Justice  
P.O. Box 7611  
Washington D.C. 20044-7611  
(202) 514-3211  
iva.ziza@usdoj.gov

Signature Page for the Consent Decree in United States v. Keystone Consolidated Industries, Inc.  
d/b/a Keystone Steel and Wire Co. (C.D. Il.)

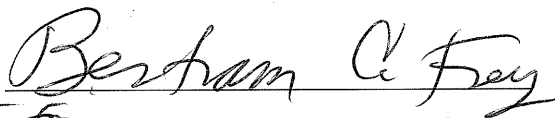
**FOR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

DATE: 12/17/15



SUSAN HEDMAN  
Regional Administrator  
United States Environmental Protection Agency  
Region 5 (R-19J)  
77 West Jackson Boulevard  
Chicago, IL 60604-3590

DATE: 12-11-2015

  
*Acting for*

T. LEVERETT NELSON  
Regional Counsel  
United States Environmental Protection Agency  
Region 5 (R-19J)  
77 West Jackson Boulevard  
Chicago, IL 60604-3590

DATE: 11.18.15

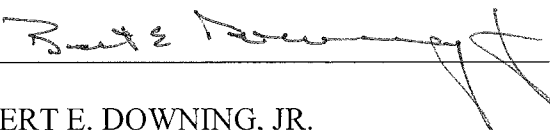


KATHLEEN KELLY SCHNIEDERS  
Associate Regional Counsel  
United States Environmental Protection Agency  
Region 5 (R-19J)  
77 West Jackson Boulevard  
Chicago, IL 60604-3590

Signature Page for the Consent Decree in United States v. Keystone Consolidated Industries, Inc.  
d/b/a Keystone Steel and Wire Co. (C.D. IL.)

**FOR KEYSTONE CONSOLIDATED INDUSTRIES, INC.:**

DATE: 11/2/15

  
\_\_\_\_\_

BERT E. DOWNING, JR.  
Vice President and Chief Financial Officer  
Keystone Consolidated Industries, Inc.

**ATTACHMENT A**  
RCFA Template

ATTACHMENT A-RCFA TEMPLATE				
[A] HEAT DETAILS		[B] CHARGE DETAILS		[D] FORM DETAILS
Heat #		Scrap Type		Filled By:
Start of Extended Heat Date/Time		Charge Carbon Qty. (lbs)		Date Completed:
End of Extended Heat Date/Time		Charge Carbon Sulfur (%)		<b>[E] NOTES</b>
Extended Heat Duration (min)		[C] SO <sub>2</sub> DATA		
		SO <sub>2</sub> Emissions for Heat (lbs)		
Hot Metal Tons (HMT)		SO <sub>2</sub> Emissions Rate (lbs/HMT)		
		30-d SO <sub>2</sub> Rate on Prior Day		
[F] NARRATIVE OF EVENT				
[G] SO <sub>2</sub> MINIMIZATION STEPS				
a. Were there any safety issues precluding reasonable actions to minimize Heat duration? If Yes, discuss.				
b. Was energy input to bath minimized, consistent with maintaining liquidity?				
c. Were only the necessary repairs needed (to resume operations) made?				
d. Were all non-essential repairs deferred to a later scheduled downtime period?				
e. Narrative Summary				

<b>[H] ROOT (AND CONTRIBUTING) CAUSE IDENTIFICATION</b>				
<i>Root Cause</i>				
<i>Key Location of Failure</i>				
<i>Contributing Cause(s)</i>				
<b>[I] PREVENTION/REDUCTION ANALYSIS</b>				
<i>Change Type (D/O/M)* Des.</i>	<i>Outside Consultant Req'd.?</i>	<i>Expected Capital Cost (\$)</i>	<i>Expected Annual Cost (\$/yr)</i>	<i>Expected Effectiveness</i>
<b>[J] CORRECTIVE ACTIONS TAKEN OR SCHEDULED</b>				
If NONE, Explain --> If TAKEN, fill-in below.				
<i>Action Description</i>	<i>Responsibility</i>	<i>(Expected) Completion Date</i>		
<i>How to Prevent Recurrence</i>				
<b>ATTACHMENTS?</b>	Yes/No (Describe, if Yes):	<b>FOLLOW-UP REPORT?</b>	Yes/No	

\* D=Design; O=Operational; M=Maintenance



**ATTACHMENT B**  
RCFA Summary Template



**ATTACHMENT C**

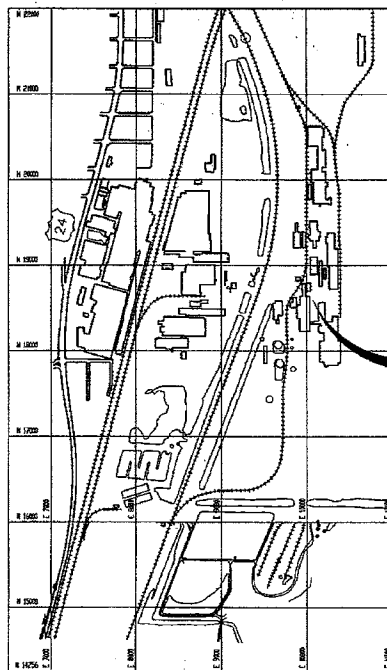
Construction Drawings for Caster Run Out Ventilation Project  
Project ID #23114001.08 and #23114001.16

# CONSTRUCTION DRAWINGS FOR KEYSTONE STEEL AND WIRE COMPANY CASTER RUN OUT VENTILATION PROJECT PLAN SET A: VENTILATION ENCLOSURE WITH HEAT SHIELD BARTONVILLE, ILLINOIS MAY 2015

Prepared By



PROJECT I.D. 23114001.08



PEORIA COUNTY  
PROJECT LOCATION



**NOT FOR  
CONSTRUCTION**

*PREFINAL May 27, 2015*

JAMES F. SCHMUDE DATE  
ILLINOIS STRUCTURAL ENGINEER  
4422 EXPIRES 11-30-16

INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
GA001	COVER SHEET
GA002	GENERAL NOTES
GA003	GENERAL NOTES
GA100	PROJECT PLAN VIEW
GA500	ELEVATION
DA100	DEMOLITION
SA100	PLAN VIEWS
SA300	SECTIONS
SA301	SECTIONS
SA500	FRAMING DETAILS
SA501	FRAMING DETAILS
SA502	FRAMING DETAILS
SA503	CONNECTION & CLOSURE DETAILS
SA504	CLOSURE DETAILS
SA510	HATCH DETAILS
SA511	HATCH DETAILS

**DO NOT  
SCALE  
DIMENSIONS**

**Keystone** **VENDOR BLOCK INSERT**

KEYSTONE STEEL AND WIRE COMPANY  
7000 204TH STREET NORTH  
PEORIA, IL 61611 (309) 697-7020

DEPT. CASTER  
EQUIP. VENTILATION ENCL. W/ HEAT SHIELD  
NAME COVER SHEET  
MANUFACTURER NAME: MAURER - STUTZ  
DATE FEB. 2, 2015 SCALE NONE FILE 311 SHT 1 OF 18  
MANUFACTURER DRAWING NUMBER KEYSTONE ASSIGNED DRAWING NUMBER

23114001.08GA001 D-25631 REV. 0

MSI PROJECT 23114001.08

**MAURER-STUTZ**  
ENGINEERS SURVEYORS

ILLINOIS PROFESSIONAL DESIGN FIRM LICENSE #254-00754  
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REV.	DATE	BY	DESCRIPTION OF CHANGE

AutoCAD administrative changes only

REVISION RECORD

ENGINEER OF RECORD FOR MECHANICAL ASPECTS: BENDER CORPORATION

C:\3114001\3114001.08.dwg (Project: 23114001.08) - Contains: Cover Sheet, Section, Elevation, Demolition, Plan View, Section, Framing Details, Connection & Closure Details, Closure Details, Hatch Details, Hatch Details, 3/28/2015 1:41 PM

**STRUCTURAL GENERAL NOTES (PLAN SETS A, B AND C UNLESS OTHERWISE NOTED)**

**1. SPECIFICATIONS**

- 1.1 FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE FOLLOWING CODES AND STANDARDS. IN CASE OF CONFLICT BETWEEN THE APPLICABLE CODES, THE MORE STRINGENT OF THESE CODES SHALL GOVERN:
  - 1.1.1 AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL BUILDINGS.
  - 1.1.2 GUIDE FOR THE DESIGN AND CONSTRUCTION OF MILL BUILDINGS - ASSOCIATION OF IRON AND STEEL ENGINEERS (AISE) TECHNICAL REPORT #13 - INCLUDING LATEST REVISIONS.
  - 1.1.3 AISC SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR ASTM A490 BOLTS. EXPANSION ANCHORS SHALL BE GALVANIZED STEEL, HILTI "KWIK-BOLT", OR EQUAL.
  - 1.1.4 WELDING AS PER AWS "STRUCTURAL WELDING CODE" D1.1.
  - 1.1.5 DESIGN LOADS (PLAN SET A ONLY):  
Surfaces That Are Horizontal or Slope Less than 1 ft. per 4 ft.  
HEAT SHIELD  

Dust Load	- 10 Pounds/SF
Process & Utility Load	- 5 Pounds/SF
Live Load	- 20 Pounds/SF

  
 HATCHES  

Dust Load	- 10 Pounds/SF
Process & Utility Load	- 0 Pounds/SF
Live Load	- 20 Pounds/SF
  - 1.1.5 DESIGN LOADS (PLAN SET B ONLY):
    - 1.1.5.1 Roof Sloping Deck Snow Load UNO - 30 Lbs/Sq Ft
    - 1.1.5.2 Wind Loads
 

Basic Wind Speed	- 90 MPH
Wind Importance Factor	- 1.0
Wind Exposure	- C
Internal Pressure Coeff.	- +/-0.55
Design Wind Pressure	- Per ASCE 7-05
    - 1.1.5.3 Earthquake Design Data
 

Seismic Use Group	} Seismic forces do not govern
Spectral Response Coeff.	
Site Class	
Analysis Procedure	
  - 1.1.5 DESIGN LOADS (PLAN SET C ONLY):  
MATCH EXISTING BUILDING DESIGN LOADS
- 1.2 THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING DIMENSIONS, MATERIALS AND CONDITIONS BEFORE FABRICATING OR ORDERING ANY OF THE MATERIALS REQUIRED FOR THIS PROJECT. ADDITIONALLY, THERE ARE ABOVE AND BELOW GROUND UTILITIES THAT ARE IDENTIFIED/UNIDENTIFIED IN THE PLANS THAT MUST BE VERIFIED.
- 1.3 THE CONTRACTOR IS RESPONSIBLE TO COMPLETE ALL LAYOUT WORK REQUIRED FOR THIS PROJECT.
- 1.4 ALL PROPOSED DIMENSIONS SHOWN ARE TO THE CENTER LINE OF MEMBERS, EXCEPT CHANNELS WHICH ARE DIMENSIONED TO THE FLAT OUTSIDE FACE OF THE WEB, AND ANGLES, WHICH ARE DIMENSIONED TO THE FLAT OUTSIDE FACE OF THE VERTICAL LEG, UNLESS OTHERWISE NOTED ON THE PLANS.

**2. MATERIALS**

- 2.1 CONCRETE (PLAN SET B ONLY):  
CONCRETE WORK FOR THE FOUNDATION MODIFICATIONS SHALL BE PERFORMED IN ACCORDANCE WITH ACI 301 (LATEST EDITION). THE CONCRETE SHALL ACHIEVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI IN 7 DAYS. ALL CONCRETE SHALL HAVE A MIX DESIGN WITH A MINIMUM CONTENT OF SIX (6) BAGS OF CEMENT PER CUBIC YARD, AND A SLUMP BETWEEN 3 AND 4 INCHES. IN ADDITION, THE CONCRETE FLOOR AND FOUNDATION SHALL HAVE AN ENTRAINED AIR CONTENT BETWEEN 4.5 AND 7.5 PERCENT. THE MIX DESIGNS AND CONCRETE PLACEMENT SHALL ALSO MEET THE REQUIREMENTS OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION.
  - 2.1.1 REINFORCEMENT BARS SHALL CONFORM TO ASTM 615 OR ASTM 706, GRADE 60.
- 2.2 STRUCTURAL STEEL:
  - 2.2.1 WIDE FLANGE SHAPES - ASTM A572 GR. 50 WITH SPECIAL REQUIREMENTS PER AISC TECHNICAL BULLETIN #3, NEW SHAPE MATERIAL, DATED 3/3/97 (LATEST SPEC.).
  - 2.2.2 MISCELLANEOUS SHAPES AND PLATES - ASTM A572 GR. 50 (LATEST SPEC.) OR A36.
- 2.3 DECKING:
  - 2.3.1 CONFORM TO THE FOLLOWING:
    - 2.3.1.1 SDI DESIGN MANUAL.
    - 2.3.1.2 AISC SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS.
    - 2.3.1.3 CORNER TRIM AND FLASHING SHALL BE MADE OF 24 GAGE COIL STOCK AND THE FINISH SHALL MATCH THE DECKING FINISH UNLESS OTHERWISE NOTED.
  - 2.3.2 CONTRACTOR SHALL:
    - 2.3.2.1 SUBMIT SHOP DRAWINGS TO KEYSTONE FOR APPROVAL. SHOP DRAWINGS SHALL INCLUDE MEMBER DETAIL AND ERECTION PLANS.
    - 2.3.2.2 FABRICATE DECK TO BE CONTINUOUS OVER 2 OR MORE SPANS - WHEN APPLICABLE.

**2. MATERIALS (CONTINUED)**

- 2.3.3 WALL DECK (PLAN SET A & B)  
TYPE: 1.5 B, GA: 24 VULCRAFT  
FINISH: GALVANIZED G90  
36 INCHES NET LAY. (INVERTED)  
ENDS AND END LAPS SCREW TO SUPPORTS WITH TEK SCREWS IN EVERY FLUTE, SCREW TO INTERMEDIATE SUPPORTS IN EVERY OTHER FLUTE. PARTIAL SHEETS SHOULD BE ATTACHED TO THE SUPPORTS IN EVERY FLUTE.  
END LAPS OCCUR AT SUPPORTS ONLY. MINIMUM LAP = 4". SIDE LAPS MUST BE FASTENED TOGETHER BETWEEN SUPPORTS NOT EXCEEDING 24" C/C USING TEK SCREWS. ALL SCREWS N. I. V. C. WITH EPDM 300 "F" MIN RATING OR SERRATED FLG. WASHERS.
- 2.3.3 ROOF DECK (PLAN SET C ONLY)  
TYPE: AMERICAN BUILDINGS LONG SPAN III, 26 GA - VERIFY - SEE IMPORTANT NOTE BELOW.  
FINISH: G-90 COATING  
ENDS AND END LAPS SCREW TO SUPPORTS WITH TEK SCREWS IN EVERY FLUTE, SCREW TO INTERMEDIATE SUPPORTS IN EVERY OTHER FLUTE. PARTIAL SHEETS SHOULD BE ATTACHED TO THE SUPPORTS IN EVERY FLUTE.  
END LAPS OCCUR AT SUPPORTS ONLY. MINIMUM LAP = 4". SIDE LAPS MUST BE FASTENED TOGETHER BETWEEN SUPPORTS NOT EXCEEDING 24" C/C USING TEK SCREWS. ALL SCREWS N. I. V. C. WITH EPDM 300 "F" MIN RATING OR SERRATED FLG. WASHERS.  
  
IMPORTANT NOTE:  
CONTRACTOR MUST VERIFY THE TYPE LISTED MATCHES THE PROFILE AND GAGE OF THE EXISTING ROOF DECK PRIOR TO ORDERING THE MATERIAL.
- 2.3.4 ROOF DECK (PLAN SET A & B)  
TYPE: 1.5 B, GA: 20 VULCRAFT  
FINISH: GALVANIZED G90  
SCREW TO SUPPORTS WITH TEK SCREWS IN EVERY FLUTE, SCREW TO SUPPORTS IN EVERY OTHER FLUTE. PARTIAL SHEETS SHOULD BE ATTACHED TO THE SUPPORTS IN EVERY FLUTE.  
END LAPS OCCUR AT SUPPORTS ONLY. MINIMUM LAP = 6". SIDE LAPS MUST BE FASTENED TOGETHER BETWEEN SUPPORTS NOT EXCEEDING 12" C/C USING TEK SCREWS. LAP SIDES ONE FULL RIB.
- 2.3.5 SKIRT SIDING (PLAN SET A ONLY)  
TYPE: AMERICAN BUILDINGS LONG SPAN III, 26 GA  
FINISH: G-90 COATING  
ENDS AND END LAPS SCREW TO SUPPORTS WITH TEK SCREWS IN EVERY FLUTE, SCREW TO INTERMEDIATE SUPPORTS IN EVERY OTHER FLUTE. PARTIAL SHEETS SHOULD BE ATTACHED TO THE SUPPORTS IN EVERY FLUTE.  
END LAPS OCCUR AT SUPPORTS ONLY. MINIMUM LAP = 4". SIDE LAPS MUST BE FASTENED TOGETHER BETWEEN SUPPORTS NOT EXCEEDING 24" C/C USING TEK SCREWS. ALL SCREWS N. I. V. C. WITH EPDM 300 "F" MIN RATING OR SERRATED FLG. WASHERS.
- 2.4 CHECKERED PLATE  
RAISED PATTERN FLOOR PLATE SHALL MEET THE REQUIREMENTS OF ASTM A786, WITH REGULAR QUALITY CARBON STEEL (C=0.15% MAX.) OR ASTM A36. FLOOR PLATE LUGS SHALL BE LARGE PATTERN (0.095 HIGH, 1.25" LONG), WELD FLOOR PLATE TO SUPPORTING BEAMS AND ANGLE STIFFENER WITH TWO INCH (2") LONG FILLET WELDS AT EIGHTEEN INCH (18") SPACING. ALL JOINTS NOT OVER A SUPPORTING BEAM SHALL HAVE BE FULLY SEAM WELDED WITH A 1/2 INCH BACKING BAR OR ANGLE.
- 2.5 HANDRAIL (PLAN SET A ONLY)  
ALL HANDRAIL SHALL BE CAPABLE OF RESISTING A 200 LB. LOAD APPLIED IN ANY DIRECTION. ALL RAILS AND POSTS SHALL BE 1 1/2" DIAMETER EXTRA STRONG (SCH. 80) PIPE (fy = 35 KSI MINIMUM). MAXIMUM POST SPACING SHALL BE EIGHT FEET (8'). KICK PLATES ARE REQUIRED ON FULL HEIGHT RAILS. THREE SWING GATES ARE REQUIRED AT LOCATIONS SELECTED BY KEYSTONE.

**3. NOT APPLICABLE**

**4. COATING SYSTEM**

- 4.1 STRUCTURAL STEEL - UNLESS OTHERWISE AUTHORIZED BY KEYSTONE, ALL STEEL SHALL BE PREPARED AND THE COATING SYSTEM APPLIED IN THE SHOP. THE STEEL SHALL BE FREE OF OILS, GREASE AND CHEMICAL CONTAMINANTS, THEN THE SURFACE PREPARED WITH SSPC-SP5 WHITE METAL STANDARD WITH AN ANGULAR ANCHOR PROFILE OF 2 TO 3 MILS. THERE SHALL BE A STRIPE COAT OF PROPOLYMER COATINGS PRO TUFF 225 HIGH PERFORMANCE ALUMINUM EPOXY MASTIC TO ALL SHARP EDGES AND WELDS AT 3 TO 5 MILS DFT. THE BASE COAT OF PROPOLYMER PRO TUFF 2225 HIGH PERFORMANCE ALUMINUM EPOXY MASTIC SHALL BE APPLIED TO ALL PROPERLY PREPARED SUBSTRATES TO YIELD 6 TO 8 MILS DFT. THE FINISH COAT OF PROPOLYMER PRO TUFF 2225 HIGH PERFORMANCE ALUMINUM EPOXY MASTIC SHALL BE APPLIED TO ALL PROPERLY PREPARED SUBSTRATES TO YIELD 6 TO 8 MILS DFT. TOTAL DRY FILM THICKNESS SHALL BE 12 TO 16 MILS EXCLUSIVE OF STRIPE COATED AREAS AND 15 TO 21 MILS INCLUSIVE OF STRIPE COATED AREAS. WHEN TOUCHING UP FIELD CONNECTIONS, THREE COATS MAY BE REQUIRED TO OBTAIN SPECIFIED MILEAGE. FIELD PREPARATION WILL NEED TO BE POWER WIRE BRUSH OR GRIND TO SMOOTH WELDS, CLEAN FLASH RUSTING AND ENSURE AN ANGULAR ANCHOR PROFILE IS STILL PRESENT. SCHEDULING OF THE PROJECT MUST INCLUDE 72 HOURS OF CURE TIME AT 75 DEGREES. (SUPPLIER REPRESENTATIVE JAMES MCCADDEN AT 314-550-2801.)  
  
ALTERNATE COATING SYSTEMS USING VINYL ESTER AT A RATE OF 24 TO 30 MILS EXCLUSIVE OF STRIPE COATED AREAS (29 TO 40 MILS INCLUSIVE) WITH SIMILAR PREPARATION ARE ACCEPTABLE. SPECIFIC PRODUCTS INCLUDE PROPOLYMER COATINGS PROLINE 4844S UHT VINYL ESTER (REP. JAMES MCCADDEN) AND TMEC SERIES 120 VINYL ESTER (REP. KEITH KENNETT 809-845-2084). PLASITE 4300 BY CARBOLINE AT A HIGHER APPLICATION RATE IS ALSO ACCEPTABLE (REP: 1-888-227-2654).
- 4.2 SURFACE PREPARATION, THICKNESS OF COATING, AND APPLICATION OF ALL PAINT SHALL BE IN ACCORDANCE WITH PAINT MANUFACTURER'S RECOMMENDATIONS.

**5. GROUT**

- 5.1 ALL GROUT SHALL BE "MASTER BUILDERS CO." OR APPROVED EQUAL AND INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
- 5.2 USE "MASTERFLOW 928 GROUT," OR APPROVED EQUAL, FOR MAIN COLUMNS, EQUIPMENT SUPPORT COLUMNS, AND MISCELLANEOUS STRUCTURAL SUPPORTS.
- 5.3 TEMPORARY SHIMS SHALL BE REMOVED, AND VOIDS FILLED WITH GROUT.

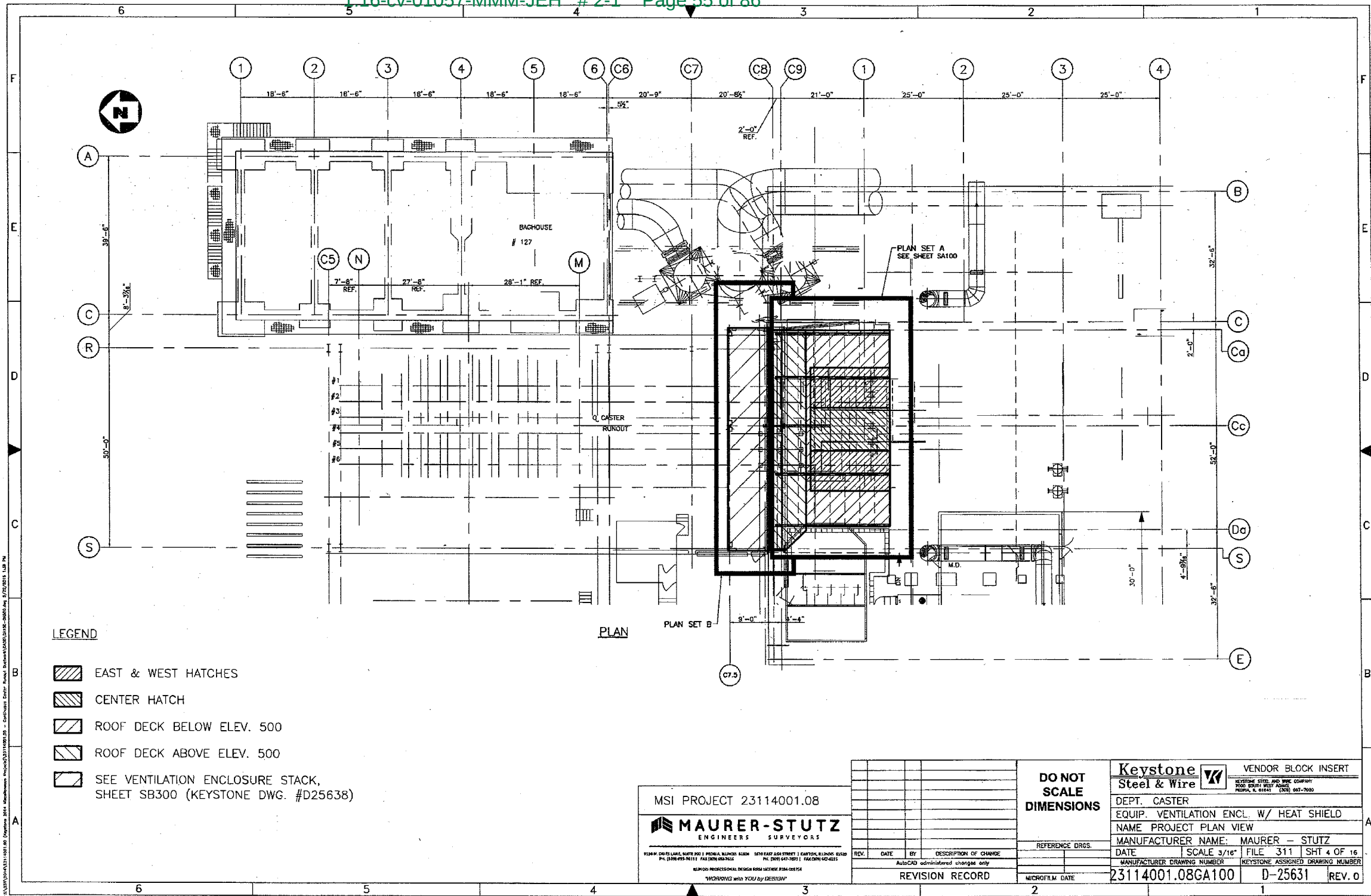
**6. CONNECTIONS**

- 6.1 THE STRUCTURAL STEEL DETAILER IS RESPONSIBLE FOR THE DESIGN OF ALL CONNECTIONS, EXCEPT THOSE SPECIFICALLY SHOWN ON THE DESIGN DRAWINGS. CALCULATIONS OF CONNECTIONS DESIGNED MUST BE SUBMITTED TO THE ENGINEER FOR REVIEW.
- 6.2 BRACING FORCES ON DESIGN DRAWINGS (+) INDICATES COMPRESSION FORCE AND (-) INDICATES TENSILE FORCE. ALLOWANCE SHALL BE MADE FOR "DRAW" AS PER AISC "DETAILING FOR STEEL CONSTRUCTION" - LATEST EDITION. SHOW LOADS ON MEMBERS THAT CONNECTION DESIGN IS REQUIRED.
- 6.3 BEAM CONNECTIONS UNLESS SPECIFICALLY NOTED ON THE DESIGN DRAWINGS, SHALL BE SELECTED TO SUPPORT THE BEAM CAPACITIES GIVEN IN THE ALLOWABLE LOADS ON BEAM TABLES, PART 2 OF THE AISC "MANUAL OF STEEL CONSTRUCTION", FOR THE GIVEN SHAPE AND STEEL SPECIFIED.
- 6.4 NO FIELD BURNING IS PERMITTED WITHOUT SPECIFIC OWNER AUTHORIZATION PERMIT.
- 6.5 ALL BEAMS TO BE INSTALLED WITH CAMBERS UP. ALL GIRTS TO BE INSTALLED WITH SWEEPS (Y-AXIS CAMBERS) UP.
- 6.6 3/4" SAG RODS TO BE SPACED ON GIRTS & PURLINS WHERE SHOWN ON FRAMING ELEVATIONS NOT GREATER THAN 8'-0" C/C. FOUR (4) NUTS & WASHERS TO BE PROVIDED FOR EACH SAG ROD.

**NOT FOR CONSTRUCTION**

MSI PROJECT 23114001.08  <small>1518 N. DEER LANE, SUITE 100   PEORIA, ILLINOIS 61614   309-685-1400   FAX 309-685-1401                  1400 N. DEER LANE, SUITE 100   PEORIA, ILLINOIS 61614   309-685-1400   FAX 309-685-1401                  ILLINOIS PROFESSIONAL DESIGN FROM URSVA 0184-00074                  *WORKING WITH YOU BY DESIGN*</small>		DO NOT SCALE DIMENSIONS REFERENCE DRGS. REVISION RECORD MICROFILM DATE	Vendor BLOCK INSERT  DEPT. CASTER EQUIP. VENTILATION ENCL. W/ HEAT SHIELD NAME GENERAL NOTES MANUFACTURER NAME: MAURER - STUTZ DATE SCALE FILE SHT 2 OF MANUFACTURER DRAWING NUMBER KEYSTONE ASSIGNED DRAWING NUMBER 23114001.08GA002 D-25631 REV. 0
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**LEGEND**

- EAST & WEST HATCHES
- CENTER HATCH
- ROOF DECK BELOW ELEV. 500
- ROOF DECK ABOVE ELEV. 500
- SEE VENTILATION ENCLOSURE STACK, SHEET SB300 (KEYSTONE DWG. #D25638)

**PLAN**

MSI PROJECT 23114001.08

**MAURER-STUTZ**  
ENGINEERS SURVEYORS

1024 W. DRIS LANE, SUITE 201 • FREDERICK, ALABAMA 36038-5011 • (205) 894-7911 FAX (205) 894-1111  
8600 PROFESSIONAL DESIGN BLDG. MOBILE, ALABAMA 36688-0955 • (205) 647-7971 FAX (205) 642-4111

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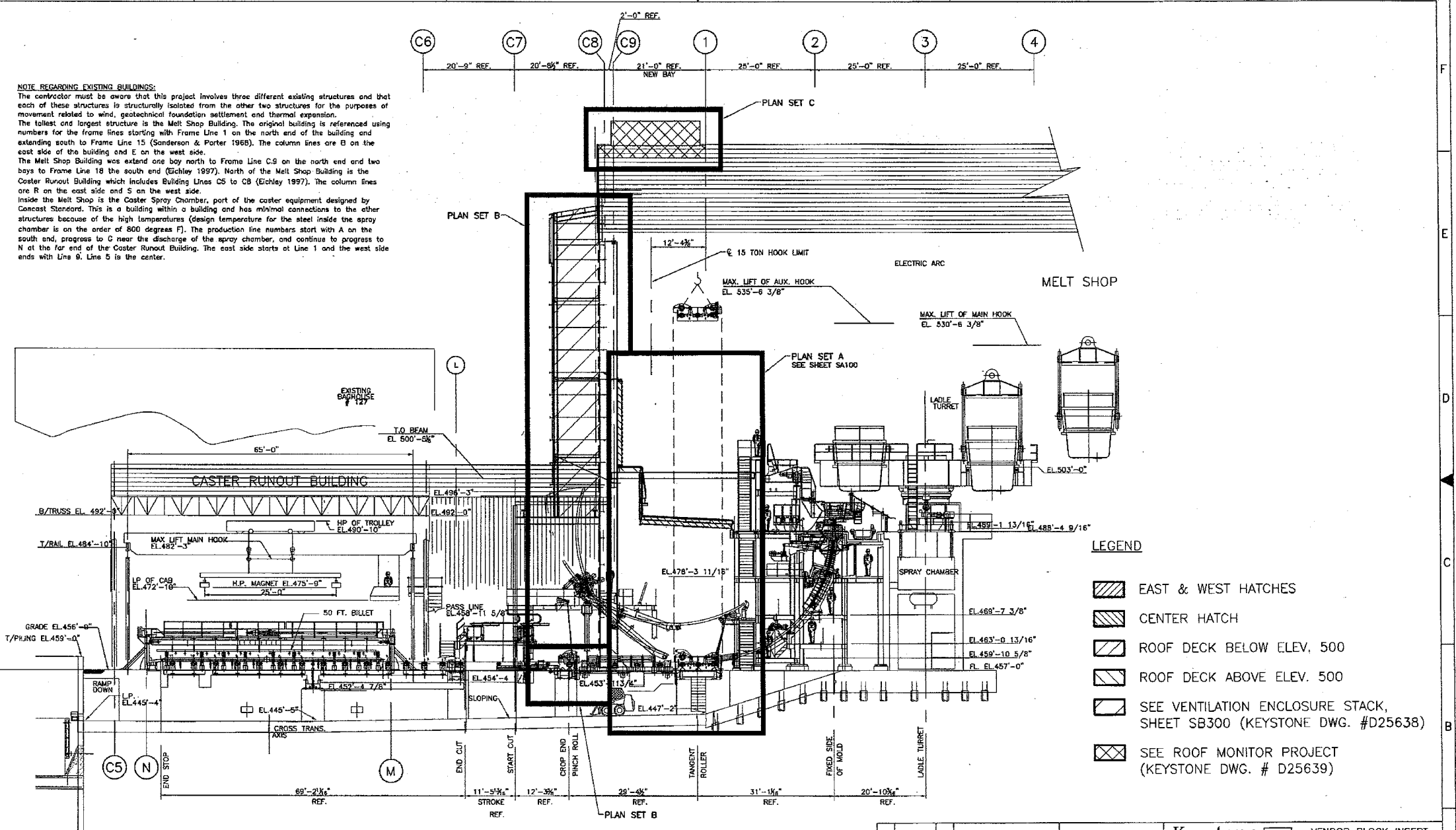
REVISION RECORD

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DIMENSIONS**

<b>Keystone Steel &amp; Wire</b>		VENDOR BLOCK INSERT
<small>KEYSTONE STEEL AND WIRE COMPANY PO BOX 10271 WREST BROS FREDERICK, ALABAMA (205) 897-7030</small>		
DEPT. CASTER		
EQUIP. VENTILATION ENCL. W/ HEAT SHIELD		
NAME PROJECT PLAN VIEW		
MANUFACTURER NAME: MAURER - STUTZ		
DATE	SCALE 3/16"	FILE 311 SHT 4 OF 16
MANUFACTURER DRAWING NUMBER		KEYSTONE ASSIGNED DRAWING NUMBER
23114001.08GA100	D-25631	REV. 0

**NOTE REGARDING EXISTING BUILDINGS:**

The contractor must be aware that this project involves three different existing structures and that each of these structures is structurally isolated from the other two structures for the purposes of movement related to wind, geotechnical foundation settlement and thermal expansion. The tallest and largest structure is the Melt Shop Building. The original building is referenced using numbers for the frame lines starting with Frame Line 1 on the north end of the building and extending south to Frame Line 15 (Sanderson & Porter 1968). The column lines are B on the east side of the building and E on the west side. The Melt Shop Building was extended one bay north to Frame Line C9 on the north end and two bays to Frame Line 18 the south end (Eichley 1997). North of the Melt Shop Building is the Caster Runout Building which includes Building Lines CS to CB (Eichley 1997). The column lines are R on the east side and S on the west side. Inside the Melt Shop is the Caster Spray Chamber, part of the caster equipment designed by Concast Stearnord. This is a building within a building and has minimal connections to the other structures because of the high temperatures (design temperature for the steel inside the spray chamber is on the order of 800 degrees F). The production line numbers start with A on the south end, progress to C near the discharge of the spray chamber, and continue to progress to N at the far end of the Caster Runout Building. The east side starts at Line 1 and the west side ends with Line 9. Line 5 is the center.



- LEGEND**
- EAST & WEST HATCHES
  - CENTER HATCH
  - ROOF DECK BELOW ELEV. 500
  - ROOF DECK ABOVE ELEV. 500
  - SEE VENTILATION ENCLOSURE STACK, SHEET SB300 (KEYSTONE DWG. #D25638)
  - SEE ROOF MONITOR PROJECT (KEYSTONE DWG. # D25639)

ELEVATION LOOKING EAST

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**MAURER-STUTZ**  
ENGINEERS SURVEYORS

1525 N. GILES LANE, SUITE 208 | PEORIA, ILLINOIS 61654 | 3077 EAST ASH STREET | CAIRO, ILLINOIS 62609  
 PH. (309) 699-7633 | FAX (309) 699-7616 | PH. (309) 847-2833 | FAX (309) 847-4535

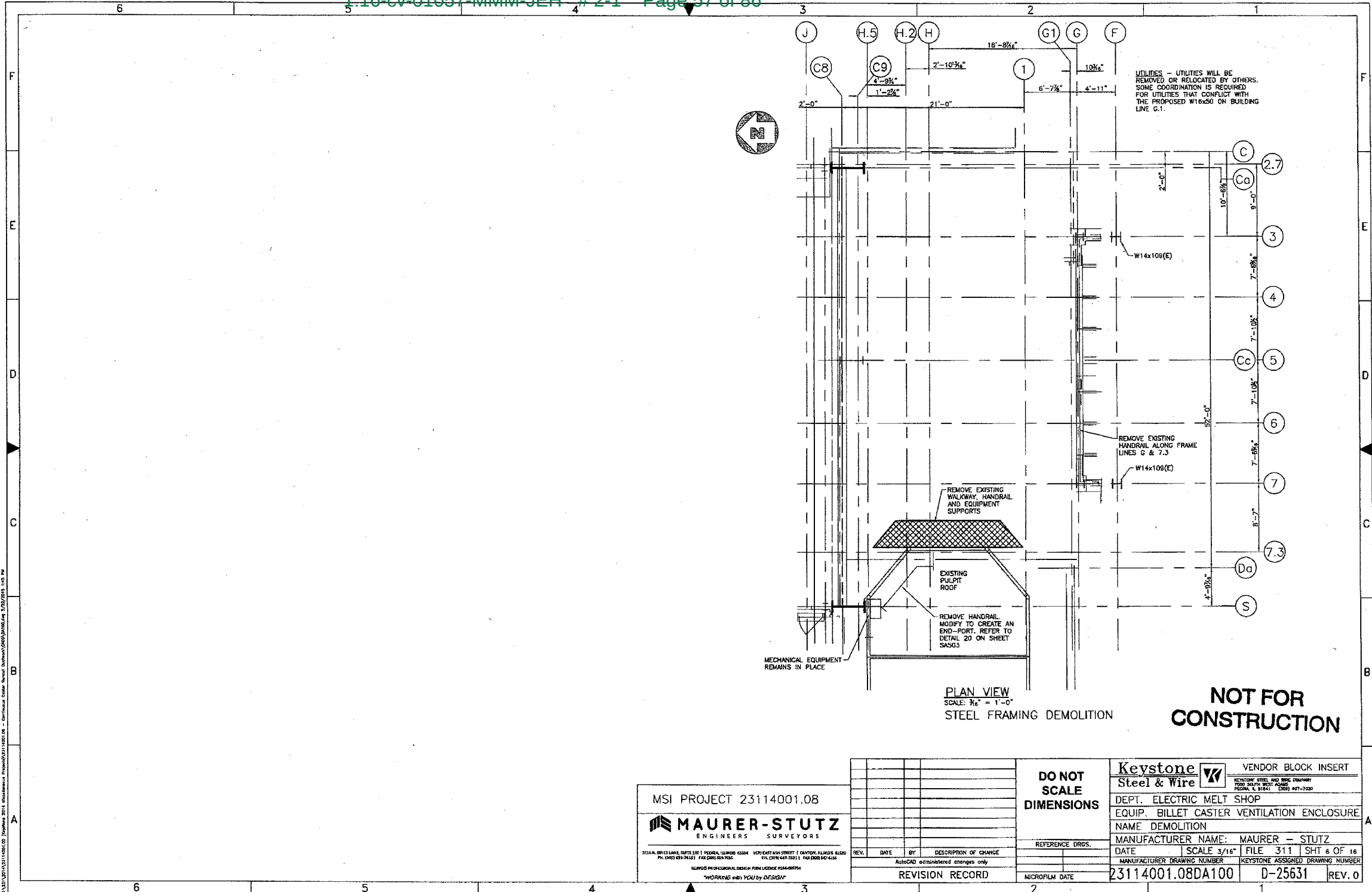
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REV.	DATE	DESCRIPTION OF CHANGE

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DEPT. CASTER		EQUIP. VENTILATION ENCL. W/ HEAT SHIELD	
NAME ELEVATION		MANUFACTURER NAME: MAURER - STUTZ	
DATE	SCALE 3/16"	FILE 311	SHT 5 OF 16
MANUFACTURER DRAWING NUMBER	KEYSTONE ASSIGNED DRAWING NUMBER		
23114001.08GA500	D-25631		
			REV. 0

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 Plotter: HP DesignJet 2450





PLAN VIEW  
SCALE: 3/8" = 1'-0"

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**MAURER-STUTZ**  
ENGINEERS SURVEYORS

3110 N. BRIGGS LANE, SUITE 100 | PEORIA, ILLINOIS 61604 | 400 EAST ASH STREET | GANTON, ILLINOIS 62520  
PH: (309) 697-7615 | FAX: (309) 694-7636 | E-MAIL: (309) 697-7631 | FAX: (309) 697-4135

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REV.	DATE	BY	DESCRIPTION OF CHANGE

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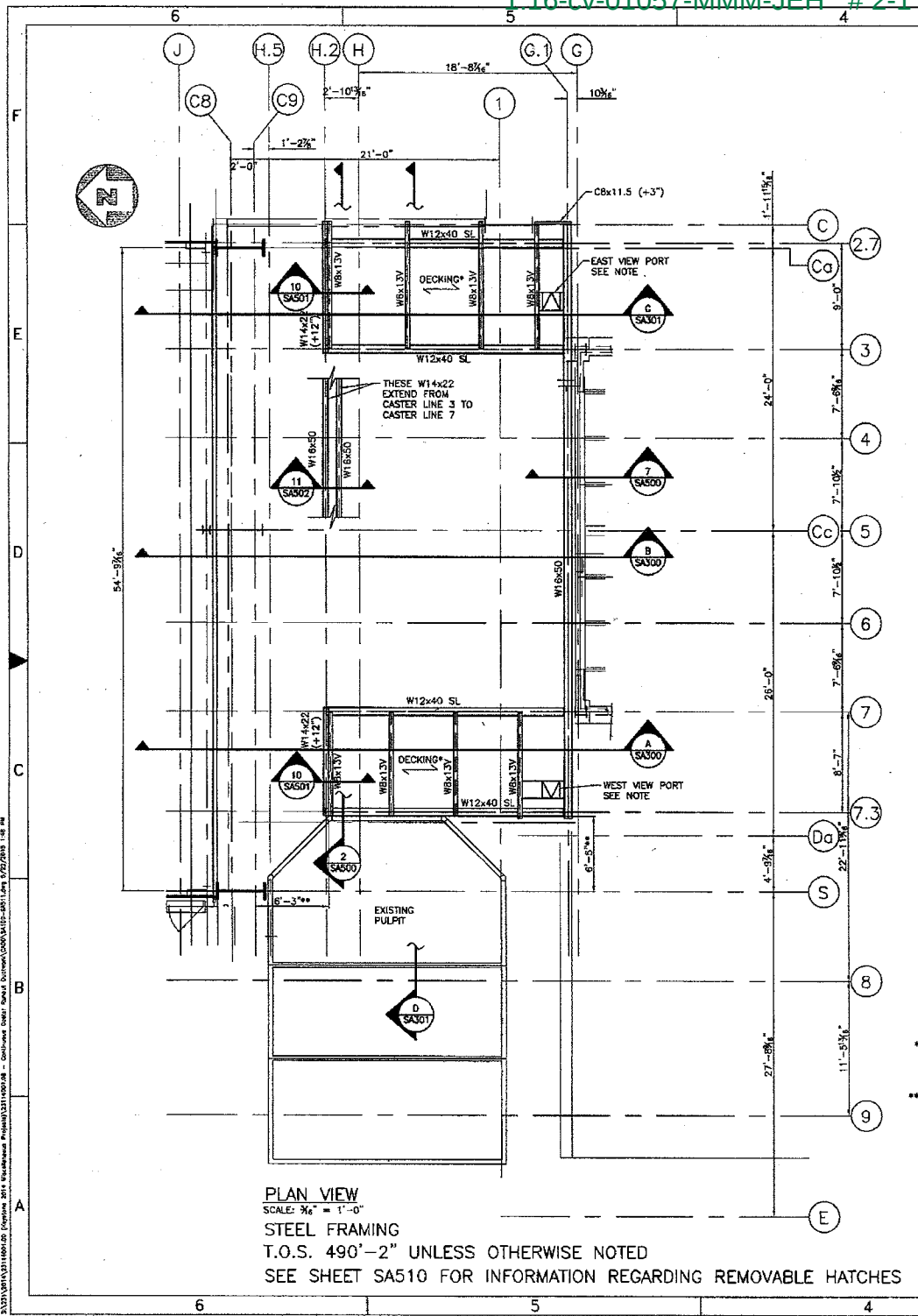
**Keystone Steel & Wire** VENDOR BLOCK INSERT

DEPT. ELECTRIC MELT SHOP  
EQUIP. BILLET CASTER VENTILATION ENCLOSURE  
NAME DEMOLITION

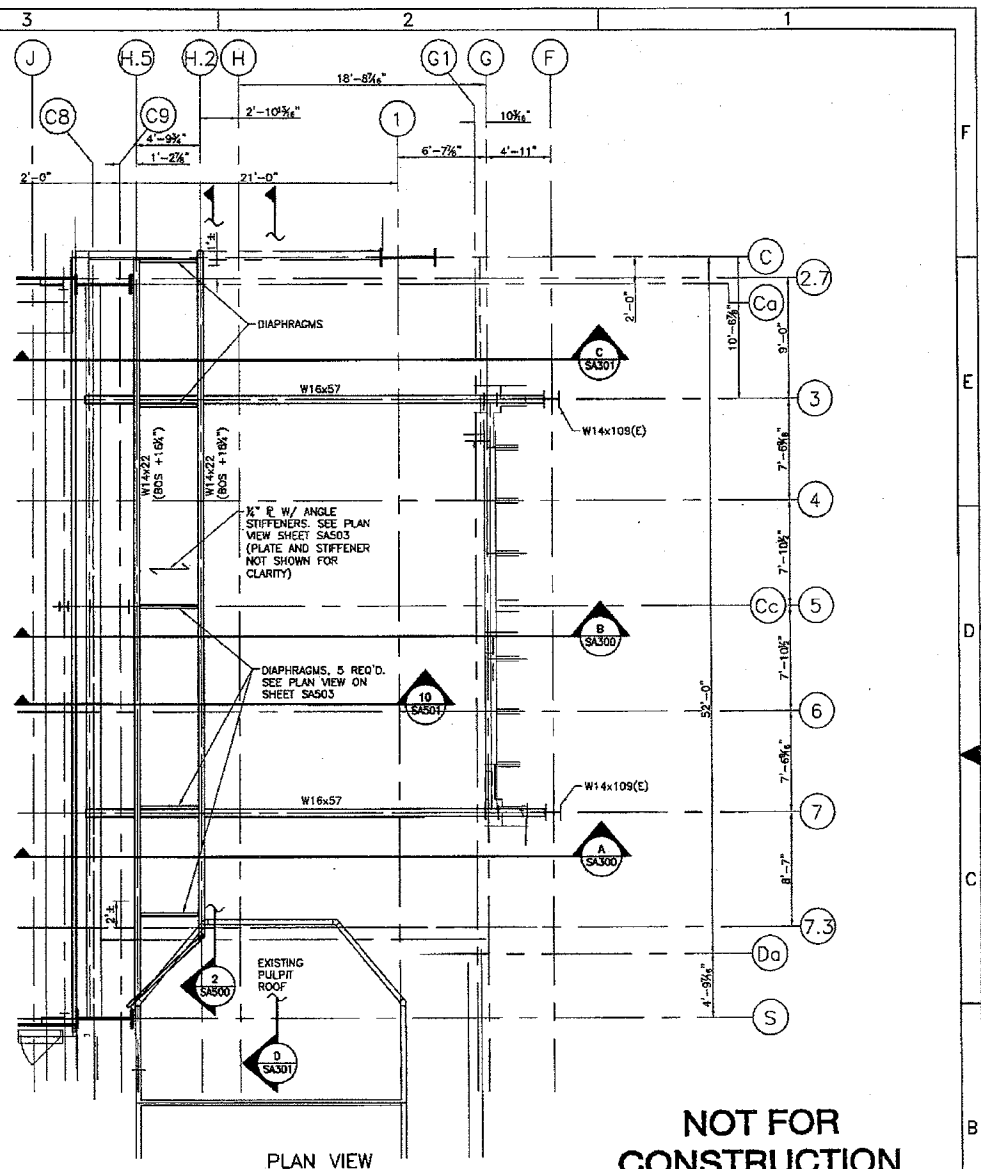
MANUFACTURER NAME: MAURER - STUTZ

DATE: SCALE 3/16" FILE 311 SHIT 6 OF 16  
MANUFACTURER DRAWING NUMBER KEYSTONE ASSIGNED DRAWING NUMBER  
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**PLAN VIEW**  
 SCALE:  $\frac{3}{8}'' = 1'-0''$   
**STEEL FRAMING**  
 T.O.S. 490'-2" UNLESS OTHERWISE NOTED  
 SEE SHEET SA510 FOR INFORMATION REGARDING REMOVABLE HATCHES



**PLAN VIEW**  
 SCALE:  $\frac{3}{8}'' = 1'-0''$   
**STEEL FRAMING**  
 B.O.S. 500'-5 1/2" UNLESS OTHERWISE NOTED

**VIEW PORT NOTE:**  
 THE CONTRACTOR SHALL INSTALL TWO VIEW PORTS (EACH 18"x18" CLEAR OPENING) AT LOCATIONS TO BE SET BY KEYSTONE. THE OPENINGS SHALL BE FRAMED USING THREE C8x11.5 CHANNELS WITH THE FOURTH SIDE THE HSS 8x2x $\frac{3}{8}$  (SEE DETAIL 7 ON SHEET SA500). A HATCH SHALL BE INSTALLED WITH 3x3x $\frac{3}{8}$  ANGLE FRAMING THREE SIDES FOR A 20"x20" -  $\frac{1}{8}$ " CHECKERED PLATE DOOR. DOOR SHALL INCLUDE A PAIR OF HINGES ON THE WEST EDGE OF THE EAST VIEW PORT AND THE EAST EDGE OF THE WEST VIEW PORT AND A HANDLE. HANDRAIL ON LINE G.1 SHALL BE GAPPED AT THE HATCH AND BE CONTINUOUS ON THREE SIDES OF EACH HATCH.

- W8x13V ARE MEMBERS ON TOP OF A SLOPING MEMBER.
- W12x40 SL IS A SLOPING MEMBER W/ TOP OF STEEL AT G.1 AT ELEV. 490'-2".
- DECKING NOT SHOWN FOR CLARITY.
- LOCATION OF CASTER PULPIT IS APPROXIMATE. FIELD ADJUSTMENTS TO SOME FRAMING MEMBERS ARE ANTICIPATED.
- FIELD LOCATE FRAME LINE 7.3 SO IT IS BETWEEN 6" AND 7" FROM FACE OF PULPIT.

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MSI PROJECT 23114001.08

**MAURER-STUTZ**  
 ENGINEERS SURVEYORS

2311 W. BAYLAND, SUITE 101 | FERRIS HILTON BLDG. | 1625 EAST 45TH STREET | GAITHERSBURG, MD 20878  
 TEL: (301) 533-7441 | FAX: (301) 533-7442 | TEL: (410) 647-2641 | FAX: (410) 647-2645

ILLINOIS PROFESSIONAL DESIGN FIRM LICENSE #136-00034  
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REV.	DATE	BY	DESCRIPTION OF CHANGE

AutoCAD administered changes only

REVISION RECORD

**DO NOT SCALE DIMENSIONS**

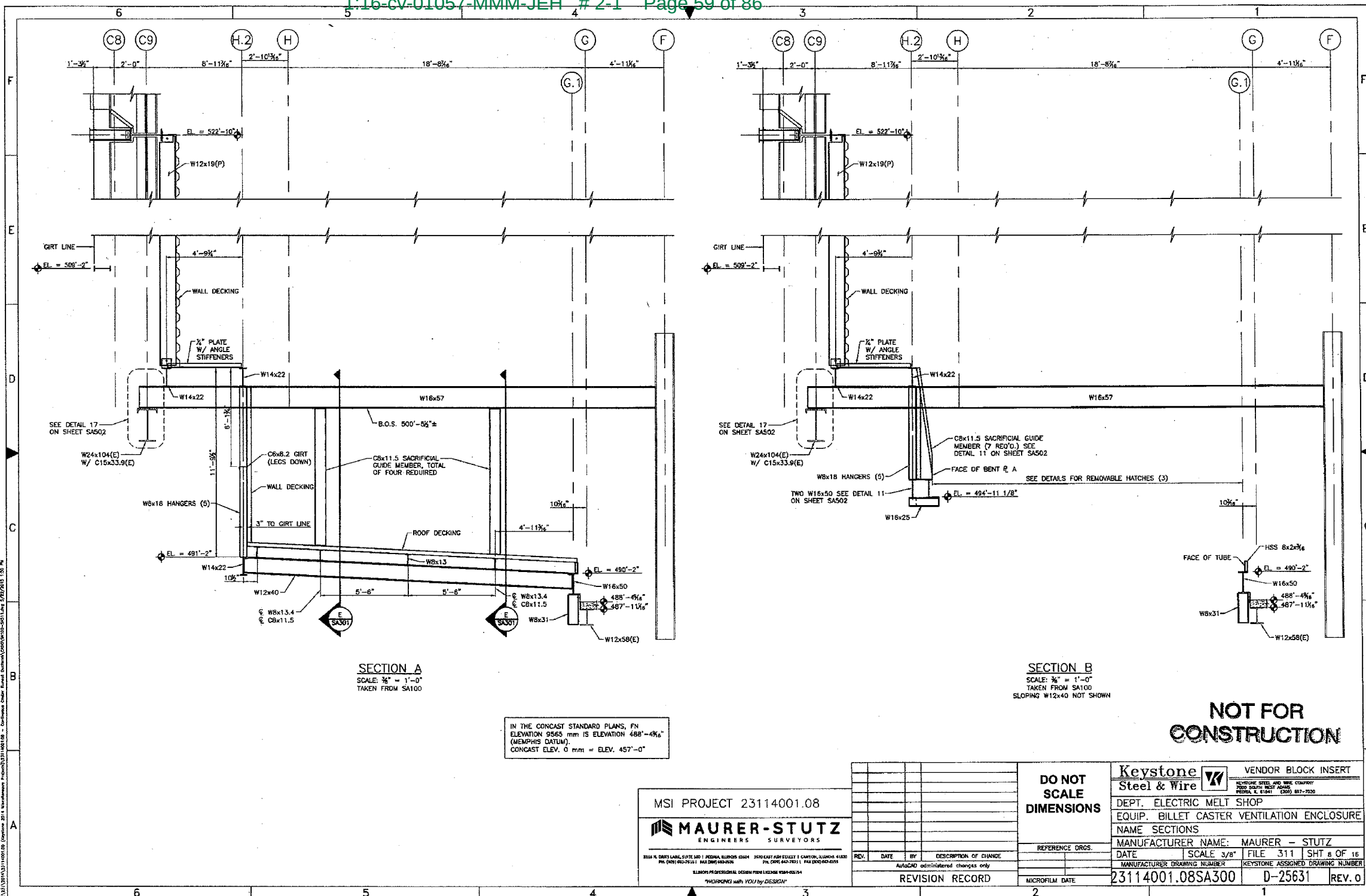
REFERENCE DRGS.

MICROFILM DATE

**Keystone Steel & Wire** VENDOR BLOCK INSERT  
OPERATING STEEL AND WIRE COMPANY  
 7000 SOUTH WEST AVENUE  
 P.O. BOX 218481 | DALLAS, TX 75221-8481

DEPT. ELECTRIC MELT SHOP  
 EQUIP. BILLET CASTER VENTILATION ENCLOSURE  
 NAME PLAN VIEWS  
 MANUFACTURER NAME: MAURER - STUTZ  
 DATE SCALE 3/16" FILE 311 SHT 7 OF 18  
 MANUFACTURER DRAWING NUMBER KEYSTONE ASSIGNED DRAWING NUMBER  
 23114001.08SA100 D-25631 REV. 0

3/27/2015 11:00:00 (Exported 2015) (Regeneration Path) 23114001.08 - Customer Order: Manual Drawing (DWG) 23114001.08 (SHEET) 1:16-cv-01057-MMM-JEH # 2-1 Page 58 of 86



SECTION A  
SCALE: 3/8" = 1'-0"  
TAKEN FROM SA100

SECTION B  
SCALE: 3/8" = 1'-0"  
TAKEN FROM SA100  
SLOPING W12x40 NOT SHOWN

IN THE CONCAST STANDARD PLANS, FN ELEVATION 9565 mm IS ELEVATION 488'-4 3/8" (MEMPHIS DATUM). CONCAST ELEV. 0 mm = ELEV. 457'-0"

**NOT FOR CONSTRUCTION**

MSI PROJECT 23114001.08

**MAURER-STUTZ**  
ENGINEERS SURVEYORS

2316 N. DRIS LANE, SUITE 200 | PEORIA, ILLINOIS 61604 | 350 EAST FARM EDDY | CANTON, ILLINOIS 61822  
PH: (309) 682-7933 | FAX: (309) 682-7939 | PH: (309) 647-7811 | FAX: (309) 682-4255  
ILLINOIS PROFESSIONAL DESIGN FIRM LICENSE #1989-02174  
"WORKING WITH YOU by DESIGN"

REV.	DATE	BY	DESCRIPTION OF CHANGE
AutocAD administered changes only			
REVISION RECORD			

**Keystone Steel & Wire** VENDOR BLOCK INSERT

KEystone STEEL AND WIRE COMPANY  
2000 SOUTH WEST AVENUE  
PEORIA, IL 61601 (309) 697-7020

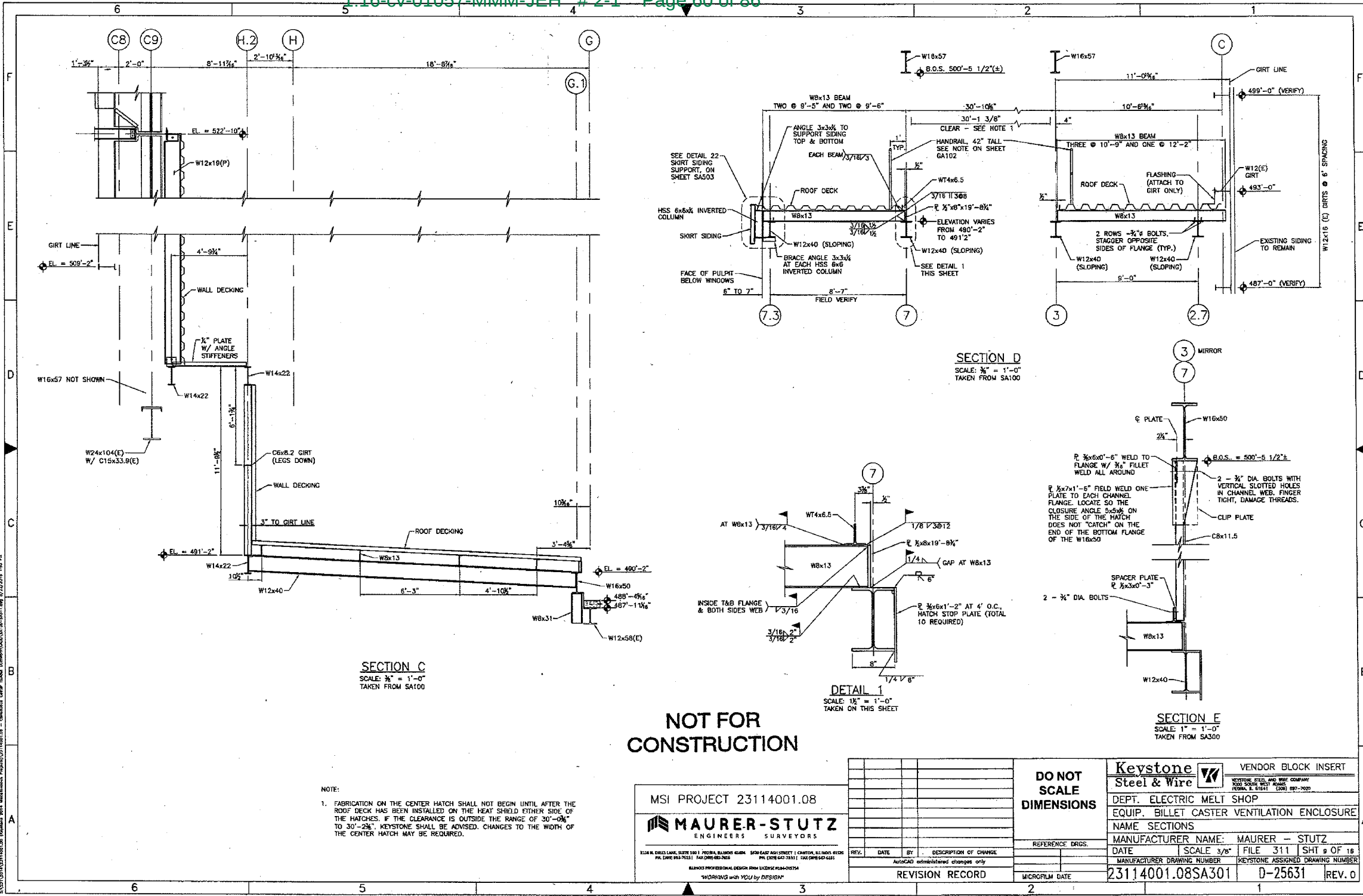
DEPT. ELECTRIC MELT SHOP  
EQUIP. BILLET CASTER VENTILATION ENCLOSURE

NAME SECTIONS  
MANUFACTURER NAME: MAURER - STUTZ

DATE	SCALE 3/8"	FILE 311	SHT 8 OF 16

MANUFACTURER DRAWING NUMBER: 23114001.08SA300  
KEYSTONE ASSIGNED DRAWING NUMBER: D-25631  
REV. 0

1:16-cv-01057-MMM-JEH # 2-1 Page 59 of 86



**NOT FOR CONSTRUCTION**

NOTE:  
 1. FABRICATION ON THE CENTER HATCH SHALL NOT BEGIN UNTIL AFTER THE ROOF DECK HAS BEEN INSTALLED ON THE HEAT SHIELD EITHER SIDE OF THE HATCHES. IF THE CLEARANCE IS OUTSIDE THE RANGE OF 30"-0 3/4" TO 30'-2 3/8", KEYSTONE SHALL BE ADVISED. CHANGES TO THE WIDTH OF THE CENTER HATCH MAY BE REQUIRED.

MSI PROJECT 23114001.08

**MAURER-STUTZ**  
 ENGINEERS SURVEYORS

1314 N. ORIEL LANE, SUITE 300 | FORTA, BAINBRIDGE 45404 5030 EAST 74TH STREET | CANTON, OHIO 44705  
 PH: (419) 943-7033 FAX: (419) 943-3035 PH: (330) 642-7811 FAX: (330) 642-4455  
 LICENSED PROFESSIONAL DESIGN FROM LICENSE #184-003784  
 \*WORKING WITH YOU BY DESIGN\*

REV.	DATE	BY	DESCRIPTION OF CHANGE

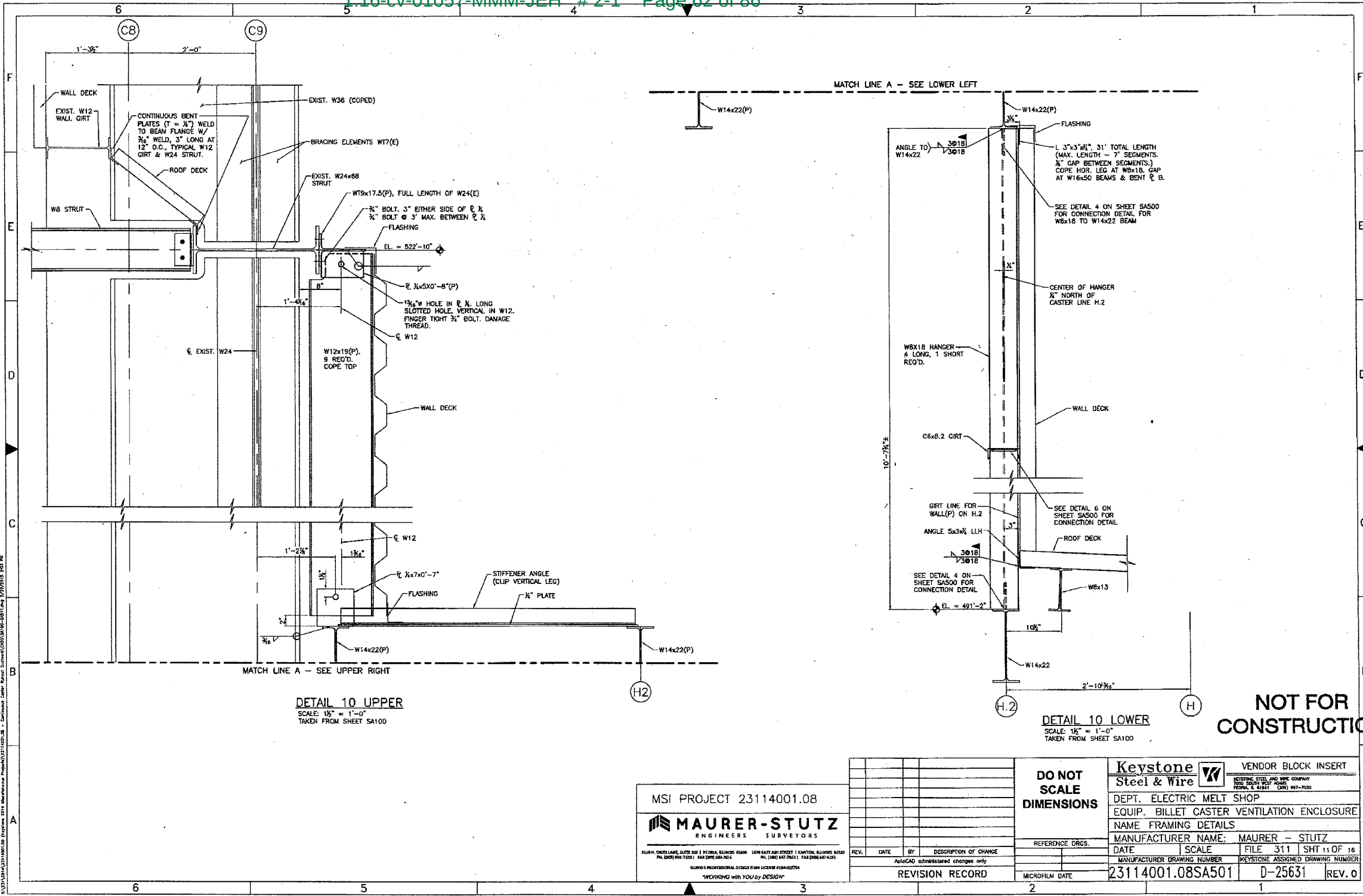
AutocAD administered changes only

REFERENCE DRGS.

<b>Keystone Steel &amp; Wire</b>	VENDOR BLOCK INSERT
DEPT. ELECTRIC MELT SHOP	EQUIP. BILLET CASTER VENTILATION ENCLOSURE
NAME SECTIONS	
MANUFACTURER NAME: MAURER - STUTZ	FILE 311 SHT 9 OF 16
DATE:	SCALE 3/8"
MANUFACTURER DRAWING NUMBER: 23114001.08SA301	KEYSTONE ASSIGNED DRAWING NUMBER: D-25631
	REV. 0

23114001.08 (Rev. 0) 1/21/16 1:16-cv-01057-MMM-JEH # 2-1 Page 60 of 86





**DETAIL 10 UPPER**  
SCALE: 1/2" = 1'-0"  
TAKEN FROM SHEET SA100

**DETAIL 10 LOWER**  
SCALE: 1/2" = 1'-0"  
TAKEN FROM SHEET SA100

**NOT FOR CONSTRUCTION**

MSI PROJECT 23114001.08

**MAURER-STUTZ**  
ENGINEERS SURVEYORS

1315 N. OWENS LANE, SUITE 200 | PERRIS, CALIFORNIA 92468 1800 EAST 84TH STREET | CANTON, MASSACHUSETTS 01920  
 PH: (951) 949-7433 FAX: (951) 949-7615 PH: (419) 442-7633 FAX: (419) 442-4335

ILLINOIS PROFESSIONAL DESIGN FIRM LICENSE #184-02574  
 "WORKING WITH YOU BY DESIGN"

**DO NOT SCALE DIMENSIONS**

REV.	DATE	BY	DESCRIPTION OF CHANGE

REFERENCE DRGS. \_\_\_\_\_

AutocAD administered changes only

REVISION RECORD

MICROFILM DATE \_\_\_\_\_

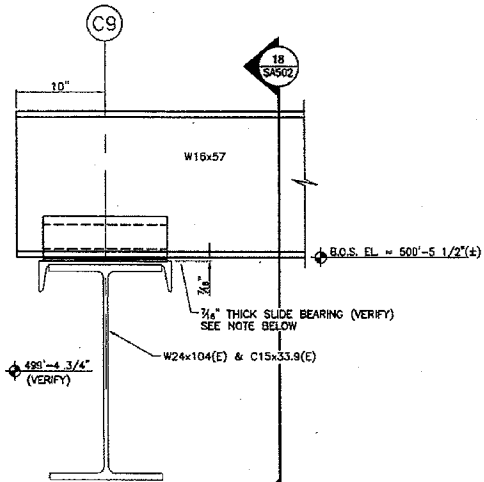
**Keystone Steel & Wire** VENDOR BLOCK INSERT

DEPT. ELECTRIC MELT SHOP  
 EQUIP. BILLET CASTER VENTILATION ENCLOSURE  
 NAME FRAMING DETAILS

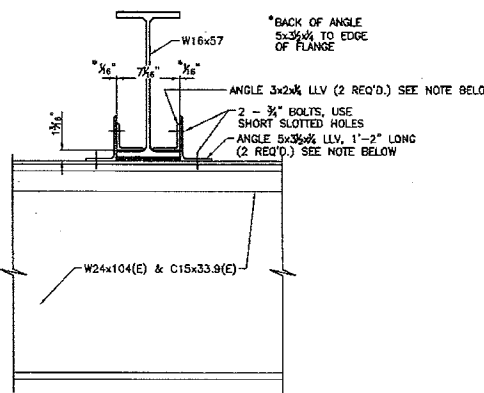
MANUFACTURER NAME: MAURER - STUTZ

DATE	SCALE	FILE 311	SHT 11 OF 16
MANUFACTURER DRAWING NUMBER	KEYSTONE ASSIGNED DRAWING NUMBER		
23114001.08SA501	D-25631		
REV. 0			

S:\311\4001\08\Project\3111001.08 - Equipment Caster Detail\3111001.08-04811.dwg 2/27/2018 3:03 PM  
 23114001.08 Equipment 3114 Manufacturer Project\3111001.08 - Equipment Caster Detail\3111001.08-04811.dwg 2/27/2018 3:03 PM



DETAIL 17  
SCALE: 1/2" = 1'-0"  
TAKEN FROM SA300  
TWO LOCATIONS

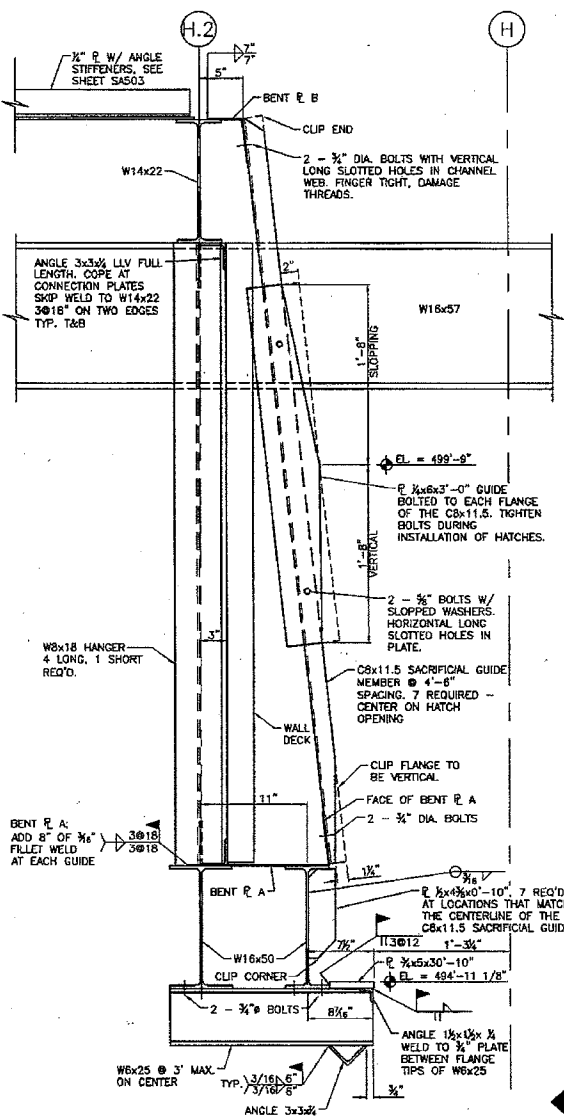


DETAIL 18  
SCALE: 1/2" = 1'-0"  
TAKEN FROM THIS SHEET

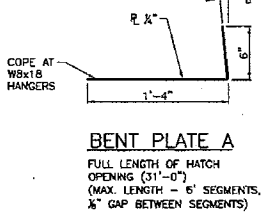
**NOTES REGARDING SLIDE BEARINGS**

Slide bearings shall be sized and provided by Con-Serv (contact information: 843-546-1044). Design temperature 300 degrees F. Design load 12 kips (unfactored load). Maximum movement 4 inches to the north and 3 inches to the south. Preliminary bearing selections: upper element OCSA 13CS 50L and lower element OCSA 13SC 50L.

Angle brackets shall be installed either side of each of the two W16x50 beams. Brackets shall limit beam movement east and west and limit movement up. Approximately one eighth inch clearance to brackets shall be provided so beam can move north and south relative to Caster Run-Out column line C9.



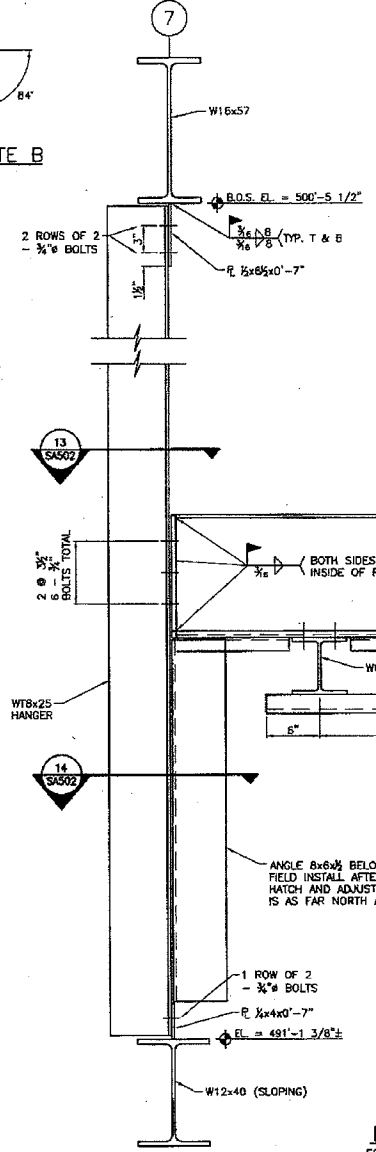
DETAIL 11  
SCALE: 1/2" = 1'-0"  
TAKEN FROM SA100



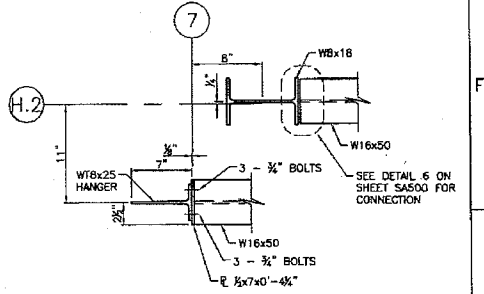
**BENT PLATE A**  
FULL LENGTH OF HATCH OPENING (31'-0") (MAX. LENGTH = 6' SEGMENTS, 1/2" GAP BETWEEN SEGMENTS)

**BENT PLATE B**

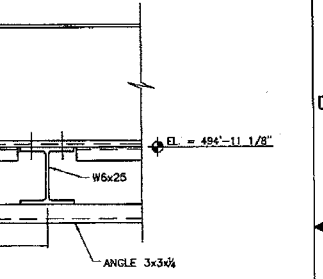
8" LONG  
7 REQUIRED



DETAIL 12  
SCALE: 1/2" = 1'-0"  
SIMILAR DETAIL ON CASTER LINE (C)  
TAKEN FROM THIS SHEET



DETAIL 13  
SCALE: 1/2" = 1'-0"  
TAKEN FROM THIS SHEET



DETAIL 14  
SCALE: 1/2" = 1'-0"  
TAKEN FROM THIS SHEET

**NOT FOR CONSTRUCTION**

MSI PROJECT 23114001.08

**MAURER-STUTZ**  
ENGINEERS SURVEYORS

225 N. DAVIS BLVD., SUITE 200 | PEORIA, ILLINOIS 61604 | 309.697.8800 | FAX 309.697.8800  
110000 PROFESSIONAL DESIGN FIRM LICENSE #384-000744  
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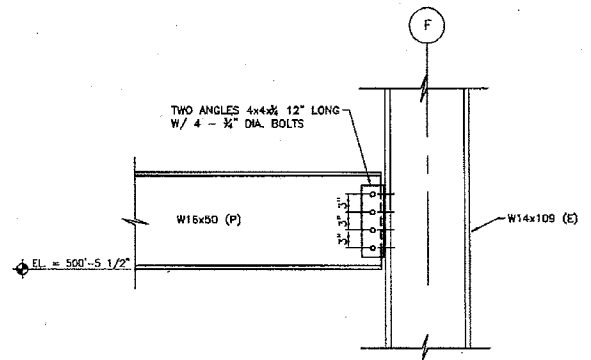
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**DO NOT SCALE DIMENSIONS**

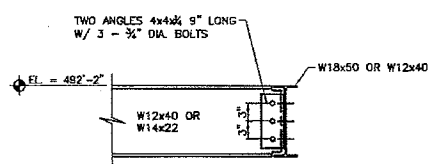
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MICROFILM DATE

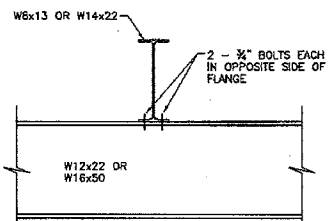
<b>Keystone Steel &amp; Wire</b>	VENDOR BLOCK INSERT
DEPT. ELECTRIC MELT SHOP	EQUIP. BILLET CASTER VENTILATION ENCLOSURE
NAME FRAMING DETAILS	MANUFACTURER NAME: MAURER - STUTZ
DATE	SCALE FILE 311 SHT 12 OF 16
MANUFACTURER DRAWING NUMBER	KEYSTONE ASSIGNED DRAWING NUMBER
23114001.08SA502	D-25631
REV. 0	



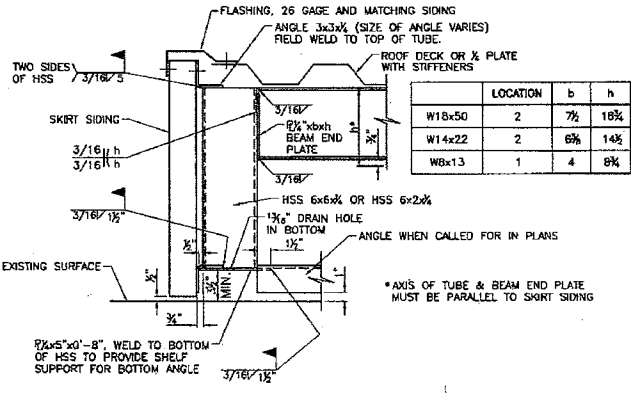
DETAIL - BEAM TO COLUMN CONNECTION  
SCALE: 1" = 1'-0"



DETAIL - BEAM TO BEAM CONNECTION  
SCALE: 1" = 1'-0"



DETAIL - BEAM TO BEAM CONNECTION  
SCALE: 1" = 1'-0"



DETAIL 22 SHOWN - SKIRT SIDING SUPPORT  
DETAIL 23 SIMILAR  
SCALE: 1/2" = 1'-0"  
DETAIL 22 TAKEN FROM SHEET SA301,  
DETAIL 23 TAKEN FROM SHEET SA504

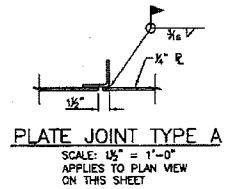


PLATE JOINT TYPE A  
SCALE: 1/2" = 1'-0"  
APPLIES TO PLAN VIEW  
ON THIS SHEET

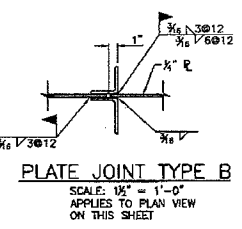
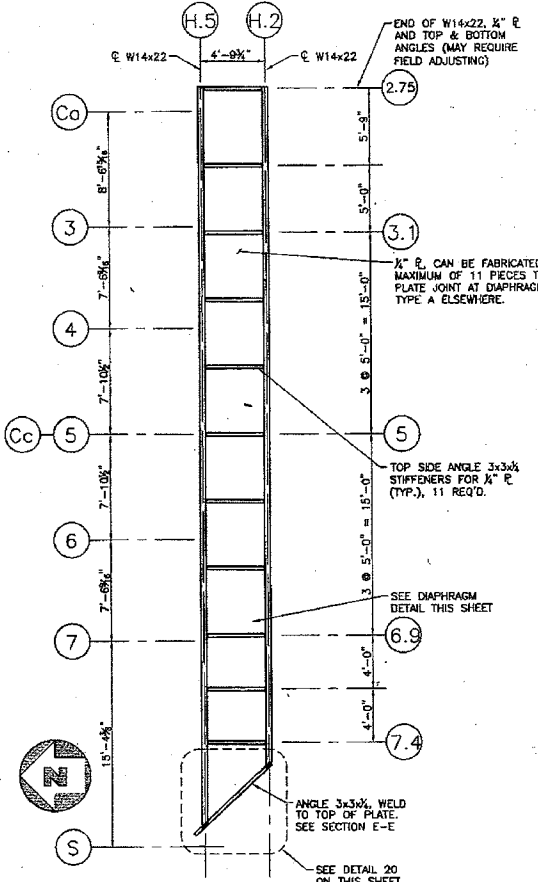
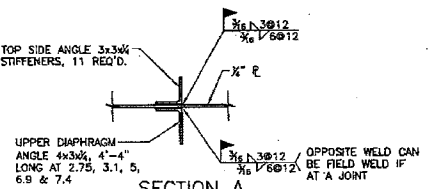


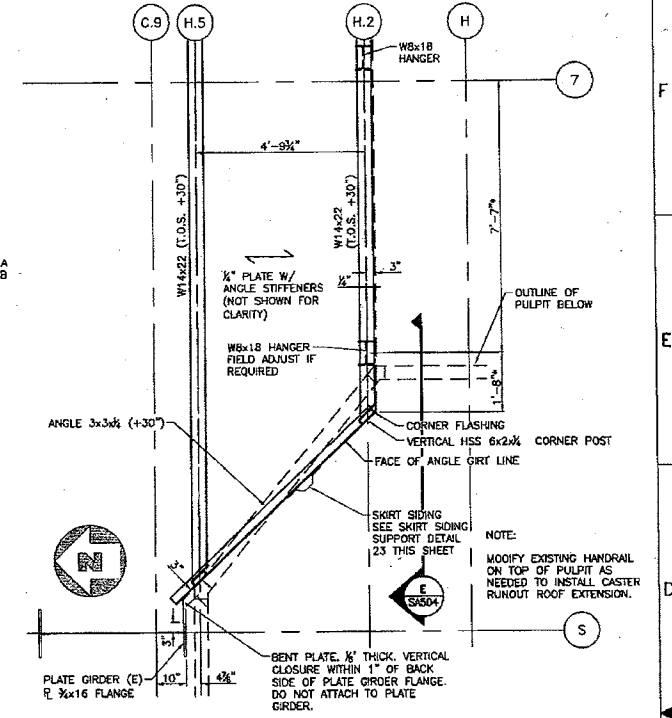
PLATE JOINT TYPE B  
SCALE: 1/2" = 1'-0"  
APPLIES TO PLAN VIEW  
ON THIS SHEET



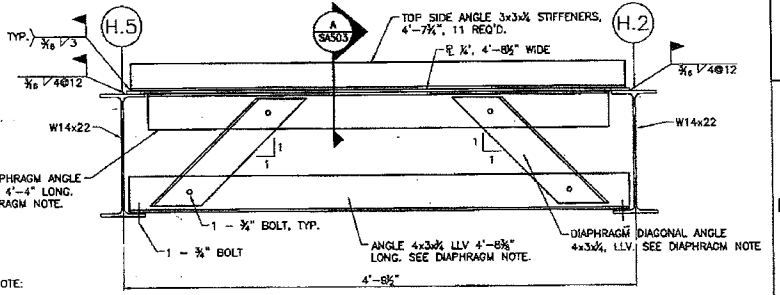
PLAN VIEW  
SCALE: 3/8" = 1'-0"  
TAKEN FROM THIS SHEET



SECTION A  
SCALE: 1/2" = 1'-0"  
TAKEN FROM THIS SHEET



DETAIL 20  
SCALE: 1/2" = 1'-0"  
TAKEN FROM THIS SHEET



DIAPHRAGM DETAIL  
SCALE: 1/2" = 1'-0"  
TAKEN FROM THIS SHEET

- NOTES REGARDING PULPIT:
- IT IS ANTICIPATED THAT THE PULPIT IS NOT IN THE EXACT LOCATIONS AS INDICATED ON THE EICHLEAY PLANS. FIELD MODIFICATIONS MAY BE NECESSARY TO ACCOUNT FOR THE AS-BUILT CONDITION.
  - DIMENSIONS IDENTIFIED BY AN \* REQUIRE THE CONTRACTOR TO FIELD VERIFY.

**NOT FOR CONSTRUCTION**

MSI PROJECT 23114001.08

**MAURER-STUTZ**  
ENGINEERS SURVEYORS

1116 FL. OREES LANE, SUITE 100 | PISCATAWAY, NJ 08854 | 1800 EAST ASH STREET | CANTON, MASSACHUSETTS  
PH: (978) 999-3411 FAX: (978) 999-7624 PH: (508) 442-0012 FAX: (508) 442-4138

ILLUMINATED PROFESSIONAL DESIGN FIRM LICENSE #A48-02974  
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REV.	DATE	BY	DESCRIPTION OF CHANGE

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REFERENCE DRGS.

REVISION RECORD

MICROFILM DATE

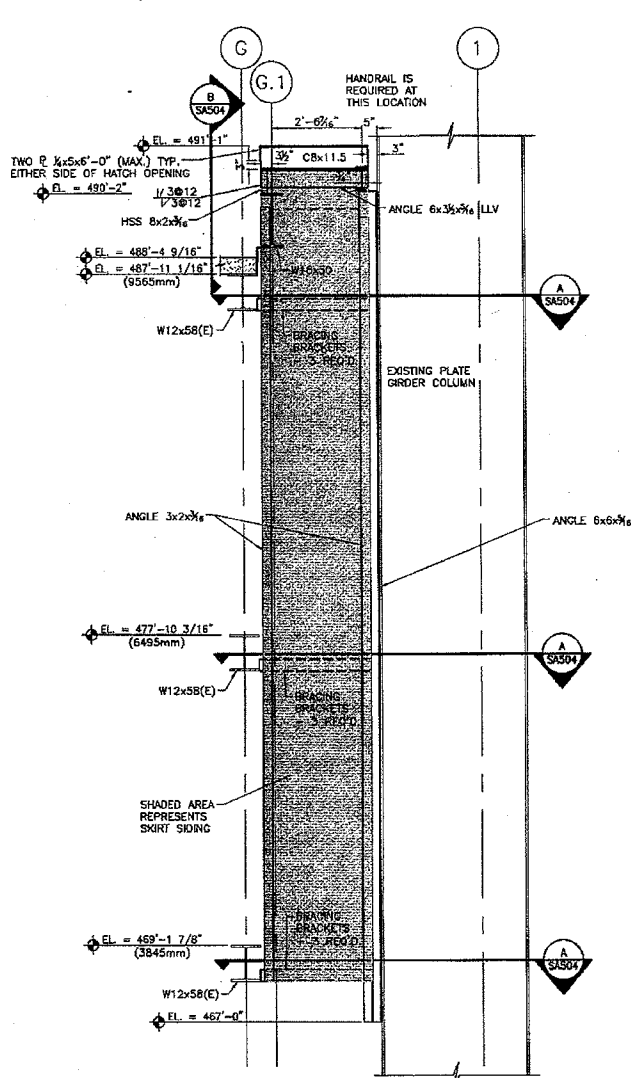
**Keystone Steel & Wire** VENDOR BLOCK INSERT

DEPT. ELECTRIC MELT SHOP  
EQUIP. BILLET CASTER VENTILATION ENCLOSURE  
NAME CONNECTION & CLOSURE DETAILS  
MANUFACTURER NAME: MAURER - STUTZ

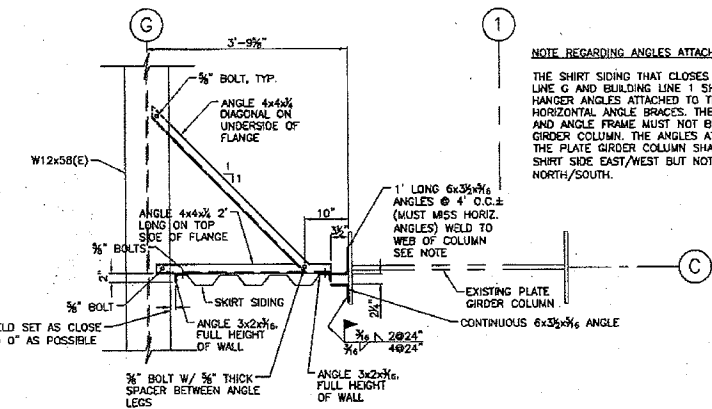
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MANUFACTURER DRAWING NUMBER  
23114001.08SA503 D-25631 REV. 0

1:16-cv-01057-MMM-JEH # 2-1 Page 64 of 86

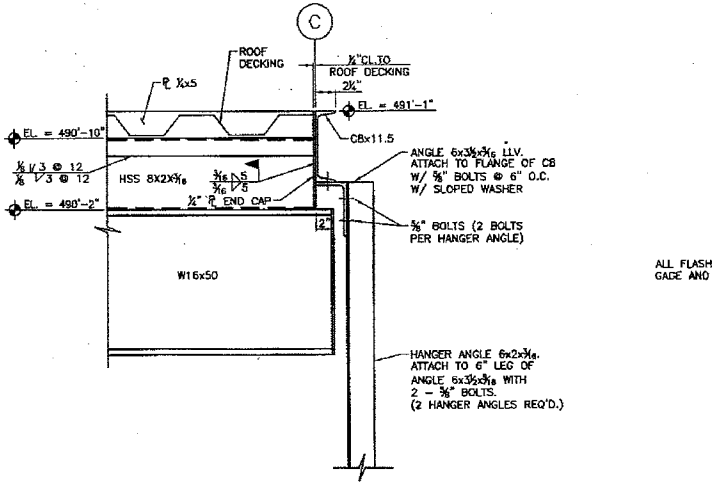




**PROFILE-LOOKING WEST  
ALONG BUILDING LINE C**  
SCALE: 1/2" = 1'-0"



**SECTION A**  
SCALE: 3/4" = 1'-0"  
TYPICAL 3 LOCATIONS

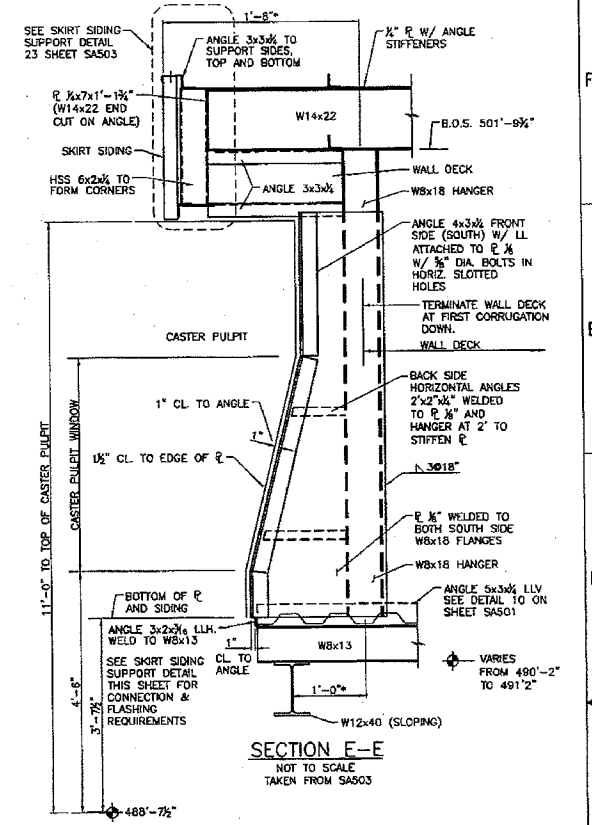


**SECTION B**  
SCALE: 1 1/2" = 1'-0"

**NOTE REGARDING ANGLES ATTACHED TO PLATE GIRDER COLUMN**  
THE SKIRT SIDING THAT CLOSSES THE GAP BETWEEN CASTER LINE G AND BUILDING LINE 1 SHALL BE SUPPORTED BY HANGER ANGLES ATTACHED TO THE HEAT SHIELD AND HORIZONTAL ANGLE BRACES. THE SKIRT SIDING, HANGER ANGLES AND ANGLE FRAME MUST NOT BE ATTACHED TO THE PLATE GIRDER COLUMN. THE ANGLES ATTACHED TO THE FLANGE OF THE PLATE GIRDER COLUMN SHALL PREVENT MOVEMENT OF THE SKIRT SIDE EAST/WEST BUT NOT RESTRAIN MOVEMENT NORTH/SOUTH.

ALL FLASHING SHALL BE 26 GAUGE AND MATCHING SIDING

NOT INCLUDED IN THIS CONTRACT



**SECTION E-E**  
NOT TO SCALE  
TAKEN FROM SA503

NOT FOR  
CONSTRUCTION

23114001.08 (REV. 08/11) - E:\Projects\23114001\Drawings\23114001.dwg 12/27/11 3:39 PM

MSI PROJECT 23114001.08

**MAURER-STUTZ**  
ENGINEERS SURVEYORS

1344 N. DRUM LANE, SUITE 100 | PEORIA, ILLINOIS 61614 | 3071 EAST ASH STREET | CARLETON, ILLINOIS 60108  
PH: (312) 688-7451 | FAX: (312) 688-7400 | P.O. BOX 647088 | PEORIA, ILLINOIS 61664-0788

ILLINOIS PROFESSIONAL DESIGN FIRM LICENSE #0834-000734  
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REV.	DATE	BY	DESCRIPTION OF CHANGE

**DO NOT SCALE DIMENSIONS**

**Keystone Steel & Wire** VENDOR BLOCK INSERT

KEYSTONE STEEL AND WIRE COMPANY  
7000 SOUTH MOUNT HORN  
PEORIA, IL 61611 (312) 687-7000

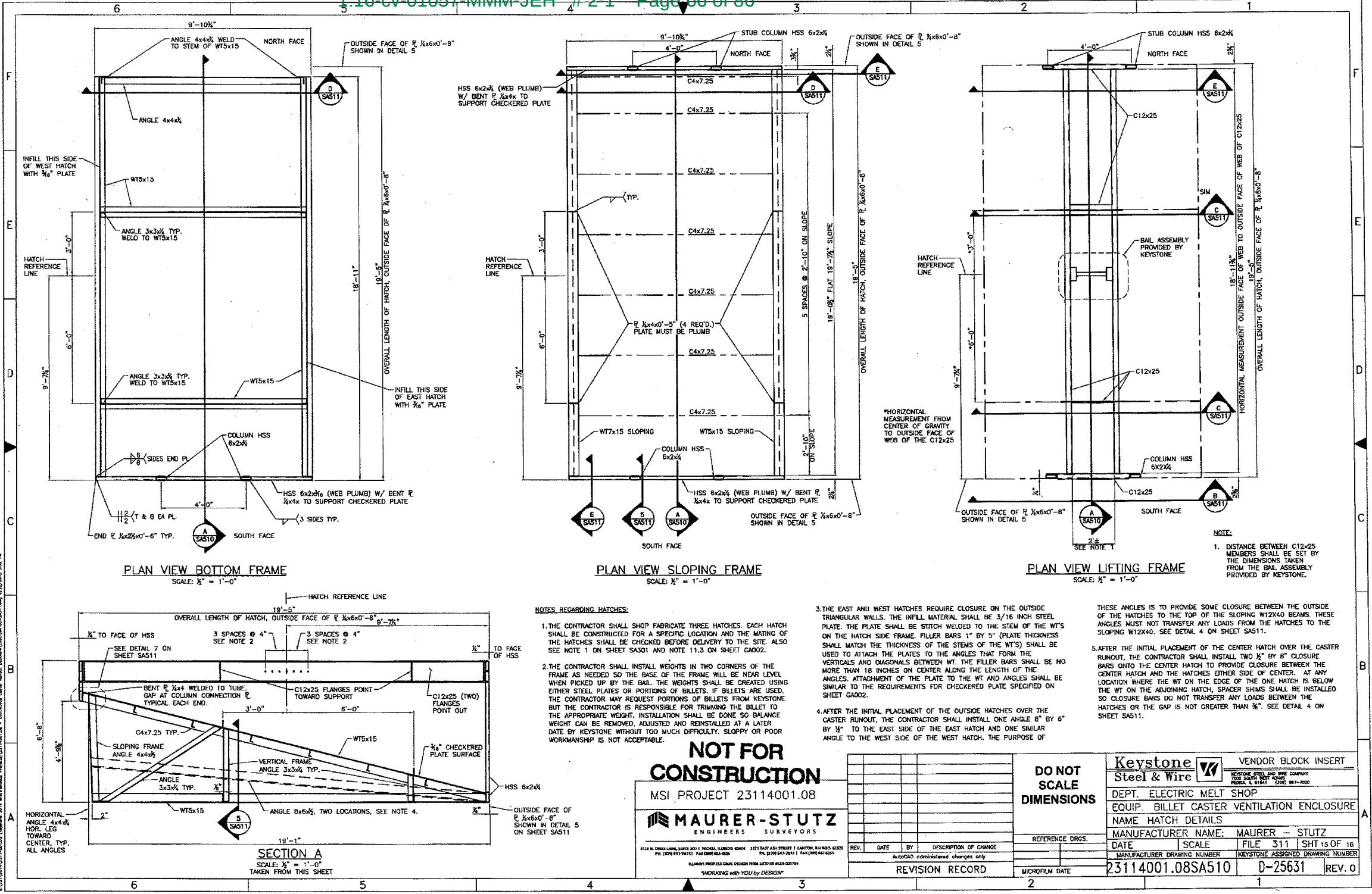
DEPT. ELECTRIC MELT SHOP  
EQUIP. BILLET CASTER VENTILATION ENCLOSURE  
NAME CLOSURE DETAILS

MANUFACTURER NAME: MAURER - STUTZ  
DATE: FILE 311 SHT 14 OF 16  
MANUFACTURER DRAWING NUMBER: KEYSTONE ASSIGNED DRAWING NUMBER

23114001.08SA504 D-25631 REV. 0

REVISION RECORD

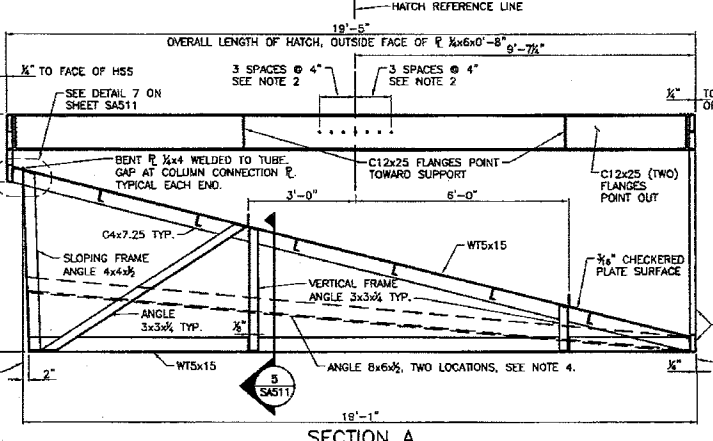
MICROFILM DATE



**PLAN VIEW BOTTOM FRAME**  
SCALE: 1/2" = 1'-0"

**PLAN VIEW SLOPING FRAME**  
SCALE: 1/2" = 1'-0"

**PLAN VIEW LIFTING FRAME**  
SCALE: 1/2" = 1'-0"



**SECTION A**  
SCALE: 1/2" = 1'-0"  
TAKEN FROM THIS SHEET

**NOTES REGARDING HATCHES:**

1. THE CONTRACTOR SHALL SHOP FABRICATE THREE HATCHES. EACH HATCH SHALL BE CONSTRUCTED FOR A SPECIFIC LOCATION AND THE MATING OF THE HATCHES SHALL BE CHECKED BEFORE DELIVERY TO THE SITE. ALSO SEE NOTE 1 ON SHEET SAS01 AND NOTE 11.3 ON SHEET CA002.
2. THE CONTRACTOR SHALL INSTALL WEIGHTS IN TWO CORNERS OF THE FRAME AS NEEDED SO THE BASE OF THE FRAME WILL BE NEAR LEVEL WHEN PICKED UP BY THE BAIL. THE WEIGHTS SHALL BE CREATED USING EITHER STEEL PLATES OR PORTIONS OF BILLETS. IF BILLETS ARE USED THE CONTRACTOR MAY REQUEST PORTIONS OF BILLETS FROM KEYSTONE BUT THE CONTRACTOR IS RESPONSIBLE FOR TRIMMING THE BILLET TO THE APPROPRIATE WEIGHT. INSTALLATION SHALL BE DONE SO BALANCE WEIGHT CAN BE REMOVED, ADJUSTED AND REINSTALLED AT A LATER DATE BY KEYSTONE WITHOUT TOO MUCH DIFFICULTY. SLOPPY OR POOR WORKMANSHIP IS NOT ACCEPTABLE.

3. THE EAST AND WEST HATCHES REQUIRE CLOSURE ON THE OUTSIDE TRIANGULAR WALLS. THE INFILL MATERIAL SHALL BE 3/16 INCH STEEL PLATE. THE PLATE SHALL BE STITCH WELDED TO THE STEM OF THE WT'S ON THE HATCH SIDE FRAME. FILLER BARS 1" BY 5" (PLATE THICKNESS SHALL MATCH THE THICKNESS OF THE STEMS OF THE WT'S) SHALL BE USED TO ATTACH THE PLATES TO THE ANGLES THAT FORM THE VERTICALS AND DIAGONALS BETWEEN WT. THE FILLER BARS SHALL BE NO MORE THAN 18 INCHES ON CENTER ALONG THE LENGTH OF THE ANGLES. ATTACHMENT OF THE PLATE TO THE WT AND ANGLES SHALL BE SIMILAR TO THE REQUIREMENTS FOR CHECKERED PLATE SPECIFIED ON SHEET GA002.
4. AFTER THE INITIAL PLACEMENT OF THE OUTSIDE HATCHES OVER THE CASTER RUNOUT, THE CONTRACTOR SHALL INSTALL ONE ANGLE 8" BY 6" BY 1/2" TO THE EAST SIDE OF THE EAST HATCH AND ONE SIMILAR ANGLE TO THE WEST SIDE OF THE WEST HATCH. THE PURPOSE OF

- THESE ANGLES IS TO PROVIDE SOME CLOSURE BETWEEN THE OUTSIDE OF THE HATCHES TO THE TOP OF THE SLOPING W12X40 BEAMS. THESE ANGLES MUST NOT TRANSFER ANY LOADS FROM THE HATCHES TO THE SLOPING W12X40. SEE DETAIL 4 ON SHEET SAS11.
5. AFTER THE INITIAL PLACEMENT OF THE CENTER HATCH OVER THE CASTER RUNOUT, THE CONTRACTOR SHALL INSTALL TWO 1/2" BY 8" CLOSURE BARS ONTO THE CENTER HATCH TO PROVIDE CLOSURE BETWEEN THE CENTER HATCH AND THE HATCHES EITHER SIDE OF CENTER. AT ANY LOCATION WHERE THE WT ON THE EDGE OF THE ONE HATCH IS BELOW THE WT ON THE ADJOINING HATCH, SPACER SHIMS SHALL BE INSTALLED SO CLOSURE BARS DO NOT TRANSFER ANY LOADS BETWEEN THE HATCHES OR THE GAP IS NOT GREATER THAN 3/8". SEE DETAIL 4 ON SHEET SAS11.

**NOT FOR CONSTRUCTION**

MSI PROJECT 23114001.08

**MAURER-STUTZ**  
ENGINEERS SURVEYORS

1515 N. DREWS LANE, SUITE 300 | PEORIA, ILLINOIS 61604 309.687.4511 STREET 1, CANTON, OHIO 44705  
PH: (309) 693-7311 FAX: (309) 693-7311 PH: (330) 677-7343 FAX: (330) 677-4333

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REV.	DATE	BY	DESCRIPTION OF CHANGE

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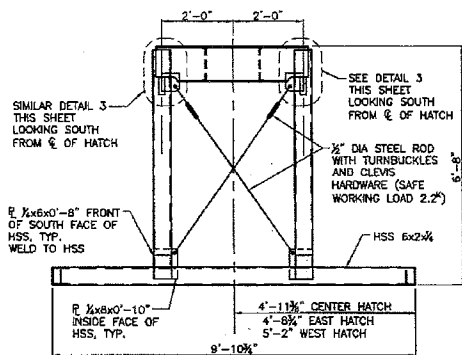
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**DO NOT SCALE DIMENSIONS**

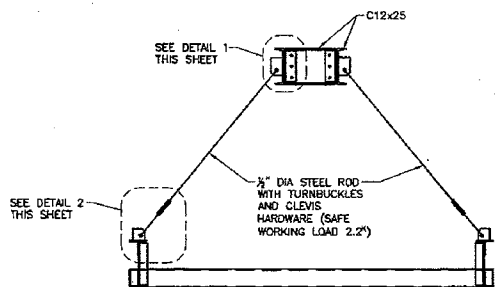
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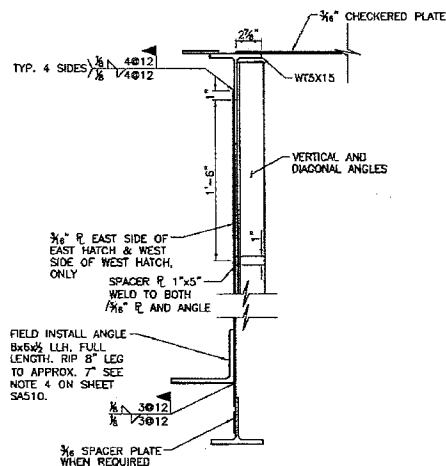
<b>Keystone Steel &amp; Wire</b>		VENDOR BLOCK INSERT	
<small>KEYSTONE STEEL AND WIRE COMPANY 7000 SOUTH WEST AVENUE PEORIA, IL 61611 (309) 693-7311</small>			
DEPT. ELECTRIC MELT SHOP			
EQUIP. BILLET CASTER VENTILATION ENCLOSURE			
NAME HATCH DETAILS			
MANUFACTURER NAME: MAURER - STUTZ			
DATE	SCALE	FILE	SHIT
		311	15 OF 16
MANUFACTURER DRAWING NUMBER		KEYSTONE ASSIGNED DRAWING NUMBER	
23114001.08SA510		D-25631	
		REV. 0	



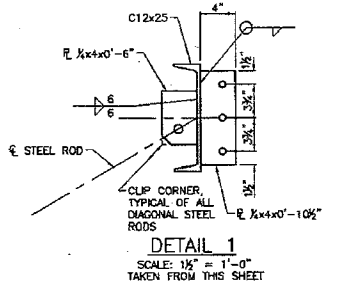
**SECTION B**  
SCALE: 1/2" = 1'-0"



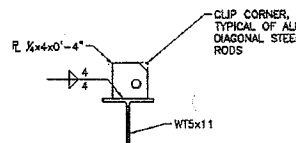
**SECTION C**  
SCALE: 1/2" = 1'-0"



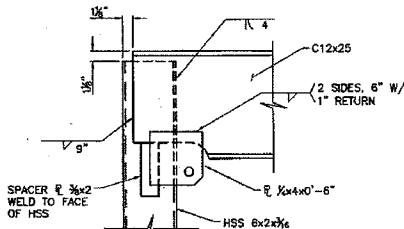
**DETAIL 4 EAST SIDE EAST HATCH & WEST SIDE WEST HATCH**  
SHOWING 3/16" PLATE (2 LOCATIONS)  
SCALE: 1/2" = 1'-0"  
SEE NOTES 3, 4 & 5 ON SHEET SAS10



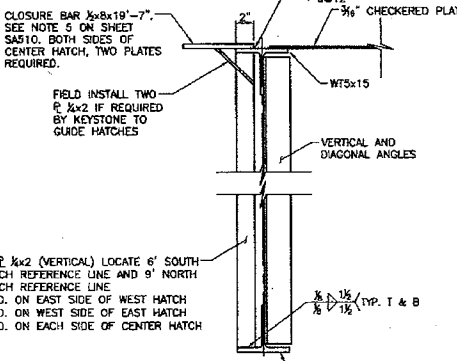
**DETAIL 1**  
SCALE: 1/2" = 1'-0"  
TAKEN FROM THIS SHEET



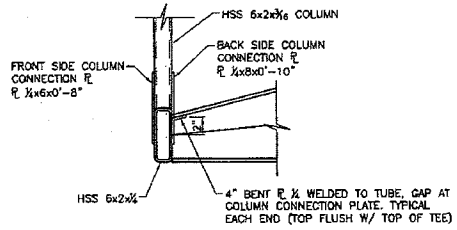
**DETAIL 2**  
SCALE: 1/2" = 1'-0"  
TAKEN FROM THIS SHEET



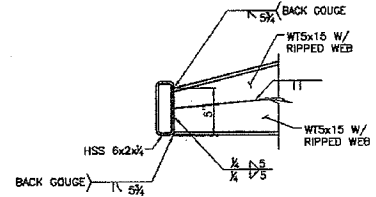
**DETAIL 3**  
SCALE: 1/2" = 1'-0"  
SHOWING INSIDE FACE LOOKING SOUTH TAKEN FROM THIS SHEET



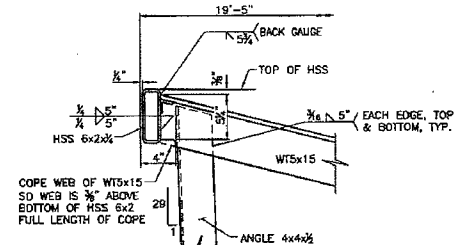
**DETAIL 4 CENTER HATCH AND ADJOINING SIDES OF EAST/WEST HATCH**  
SHOWING GUIDE PLATE (4 LOCATIONS) AND CLOSURE BAR (2 LOCATIONS)  
SCALE: 1/2" = 1'-0"



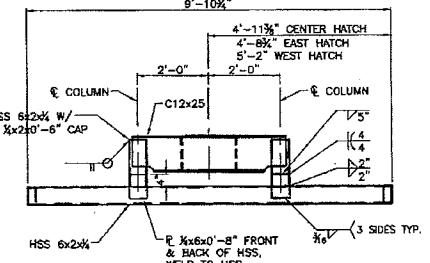
**DETAIL 5**  
SCALE: 1/2" = 1'-0"



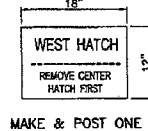
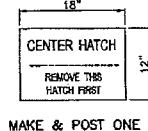
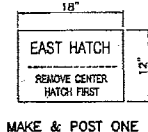
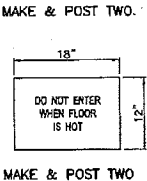
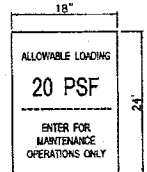
**DETAIL 6**  
SCALE: 1/2" = 1'-0"



**DETAIL 7**  
SCALE: 1/2" = 1'-0"

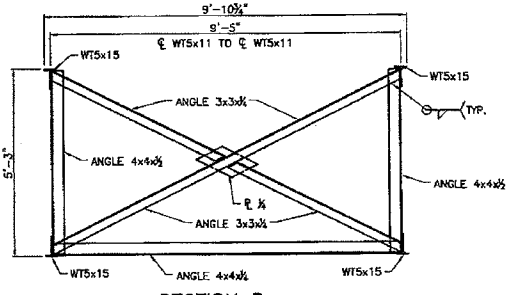


**SECTION E**  
SCALE: 1/2" = 1'-0"



**HATCH SIGN DETAILS**

**NOTES REGARDING SIGNS:**  
MAKE NUMBER AND SIZE INDICATED. SIGNS SHALL BE DONE ON ALUMINUM PLATES USING STANDARD IDOT MATERIALS. SIGNS SHALL BE POSTED AS DIRECTED BY KEYSTONE'S SAFETY DEPARTMENT USING A MOUNTING/POST SYSTEM CONSISTENT WITH THE LOCATION, HEIGHT AND ORIENTATION REQUIRED.



**SECTION D**  
SCALE: 1/2" = 1'-0"  
LOOKING NORTH

UNLESS OTHERWISE NOTED, ALL SECTIONS AND DETAILS ON THIS SHEET TAKEN FROM SHEET SAS1D.

**NOT FOR CONSTRUCTION**

MSI PROJECT 23114001.08

**MAURER-STUTZ**  
ENGINEERS SURVEYORS

4815 N. DUNES LANE, SUITE 100 | P.O. BOX 185090 | CHICAGO, ILLINOIS 60618  
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REV.	DATE	BY	DESCRIPTION OF CHANGE

**DO NOT SCALE DIMENSIONS**

REFERENCE ORGS.

MICROFILM DATE

<b>Keystone Steel &amp; Wire</b>	VENDOR BLOCK INSERT
DEPT. ELECTRIC MELT SHOP	EQUIP. BILLET CASTER VENTILATION ENCLOSURE
NAME HATCH DETAILS	MANUFACTURER NAME: MAURER - STUTZ
DATE	SCALE FILE 311 SHT 16 OF 16
MANUFACTURER DRAWING NUMBER	KEYSTONE ASSIGNED DRAWING NUMBER
23114001.08SA511	D-25631 REV. 0

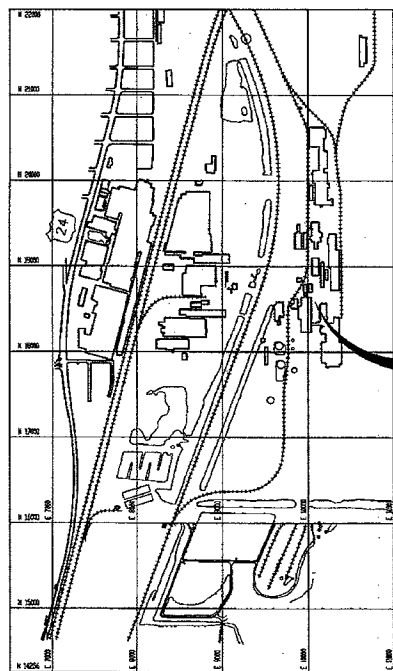
# CONSTRUCTION DRAWINGS FOR KEYSTONE STEEL AND WIRE COMPANY CASTER RUN OUT VENTILATION PROJECT PLAN SET B: VENTILATION ENCLOSURE STACK BARTONVILLE, ILLINOIS

MAY 2015

Prepared By

**MAURER-STUTZ**

PROJECT I.D. 23114001.16



PEORIA COUNTY

PROJECT LOCATION



**NOT FOR  
CONSTRUCTION**

*PRELIMINARY* MAY 27, 2015

BRYAN A. SWANSON DATE  
ILLINOIS STRUCTURAL ENGINEER  
081-006716 EXPIRES 11-30-16

INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
GB001	COVER SHEET
GB002	GENERAL NOTES
GB003	GENERAL NOTES
GB100	PROJECT PLAN VIEW
GB500	ELEVATION
DB100	DEMOLITION PLAN AND ELEVATION
SB100	FOUNDATION MODIFICATIONS
SB101	FOUNDATION DETAILS
SB200	STACK FRAMING ELEVATIONS
SB201	STACK FRAMING ELEVATIONS
SB300	STACK FRAMING ELEVATIONS
SB305	STACK FRAMING SECTIONS
SB310	STACK FRAMING PLANS
SB312	STACK FRAMING PLANS
SB500	FRAMING DETAILS
SB501	FRAMING DETAILS
SB502	FRAMING DETAILS
SB503	FRAMING DETAILS
SB505	STACK CEILING DETAILS

MSI PROJECT 23114001.16

**MAURER-STUTZ**  
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1316 N. DIXIE LANE, SUITE 100 | PEORIA, ILLINOIS 61604 | 3150 EAST ASH STREET | CARLETON, ILLINOIS 62520  
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**Keystone Steel & Wire** VENDOR BLOCK INSERT

KEYSTONE STEEL AND WIRE COMPANY  
7001 SOUTH WEST ROAD  
PEORIA, IL 61614 (309) 687-7000

DEPT. CASTER  
EQUIP. VENTILATION ENCLOSURE STACK  
NAME COVER SHEET

MANUFACTURER NAME: MAURER - STUTZ  
DATE FEB. 2, 2015 | SCALE NONE | FILE 311 | SHT 1 OF 19  
MANUFACTURER DRAWING NUMBER | KEYSTONE ASSIGNED DRAWING NUMBER  
23114001.16GB001 | D-25638 | REV. 0

REV.	DATE	BY	DESCRIPTION OF CHANGE

AutoCAD administered changes only

**REVISION RECORD**

ENGINEER OF RECORD FOR MECHANICAL ASPECTS: BENDER CORPORATION

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STRUCTURAL GENERAL NOTES (PLAN SETS A, B AND C UNLESS OTHERWISE NOTED)

1. SPECIFICATIONS

- 1.1 FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE FOLLOWING CODES AND STANDARDS. IN CASE OF CONFLICT BETWEEN THE APPLICABLE CODES, THE MORE STRINGENT OF THESE CODES SHALL GOVERN.
1.1.1 AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL BUILDINGS.
1.1.2 GUIDE FOR THE DESIGN AND CONSTRUCTION OF MILL BUILDINGS - ASSOCIATION OF IRON AND STEEL ENGINEERS (AISE) TECHNICAL REPORT #13 - INCLUDING LATEST REVISIONS.
1.1.3 AISC SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR ASTM A490 BOLTS. EXPANSION ANCHORS SHALL BE GALVANIZED STEEL, NUTS, WASHERS, OR EQUAL.
1.1.4 WELDING AS PER AWS "STRUCTURAL WELDING CODE" D1.1.
1.1.5 DESIGN LOADS (PLAN SET A ONLY):
Surfaces That Are Horizontal or Slope Less than 1 ft. per 4 ft.
HEAT SHIELD
Dust Load - 10 Pounds/SF
Process & Utility Load - 5 Pounds/SF
Live Load - 20 Pounds/SF
HATCHES
Dust Load - 10 Pounds/SF
Process & Utility Load - 0 Pounds/SF
Live Load - 20 Pounds/SF
1.1.5.1 Roof Sloping Deck Snow Load UNO - 30 Lbs/Sq Ft
1.1.5.2 Wind Loads
Basic Wind Speed - 90 MPH
Wind Importance Factor - 1.0
Wind Exposure - C
Internal Pressure Coeff. - +/-0.55
Design Wind Pressure - Per ASCE 7-05
1.1.5.3 Earthquake Design Data
Seismic Use Group } Seismic forces do not govern
Spectral Response Coeff.
Site Class
Analysis Procedure
1.1.5 DESIGN LOADS (PLAN SET C ONLY):
MATCH EXISTING BUILDING DESIGN LOADS
1.2 THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING DIMENSIONS, MATERIALS AND CONDITIONS BEFORE FABRICATING OR ORDERING ANY OF THE MATERIALS REQUIRED FOR THIS PROJECT. ADDITIONALLY, THERE ARE ABOVE AND BELOW GROUND UTILITIES THAT ARE IDENTIFIED/UNIDENTIFIED IN THE PLANS THAT MUST BE VERIFIED.
1.3 THE CONTRACTOR IS RESPONSIBLE TO COMPLETE ALL LAYOUT WORK REQUIRED FOR THIS PROJECT.
1.4 ALL PROPOSED DIMENSIONS SHOWN ARE TO THE CENTER LINE OF MEMBERS, EXCEPT CHANNELS WHICH ARE DIMENSIONED TO THE FLAT OUTSIDE FACE OF THE WEB, AND ANGLES, WHICH ARE DIMENSIONED TO THE FLAT OUTSIDE FACE OF THE VERTICAL LEG, UNLESS OTHERWISE NOTED ON THE PLANS.

2. MATERIALS

- 2.1 CONCRETE (PLAN SET B ONLY):
CONCRETE WORK FOR THE FOUNDATION MODIFICATIONS SHALL BE PERFORMED IN ACCORDANCE WITH ACI 301 (LATEST EDITION). THE CONCRETE SHALL ACHIEVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI IN 7 DAYS. ALL CONCRETE SHALL HAVE A MIX DESIGN WITH A MINIMUM CONTENT OF SIX (6) BAGS OF CEMENT PER CUBIC YARD, AND A SLUMP BETWEEN 3 AND 4 INCHES. IN ADDITION, THE CONCRETE FLOOR AND FOUNDATION SHALL HAVE AN ENTRAINED AIR CONTENT BETWEEN 4.5 AND 7.5 PERCENT. THE MIX DESIGNS AND CONCRETE PLACEMENT SHALL ALSO MEET THE REQUIREMENTS OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION.
2.1.1 REINFORCEMENT BARS SHALL CONFORM TO ASTM 615 OR ASTM 706, GRADE 60.
2.2 STRUCTURAL STEEL:
2.2.1 WIDE FLANGE SHAPES - ASTM A572 GR. 50 WITH SPECIAL REQUIREMENTS PER AISI TECHNICAL BULLETIN #3, NEW SHAPE MATERIAL, DATED 3/3/97 (LATEST SPEC.).
2.2.2 MISCELLANEOUS SHAPES AND PLATES - ASTM A572 GR. 50 (LATEST SPEC.) OR A36.
2.3 DECKING:
2.3.1 CONFORM TO THE FOLLOWING:
2.3.1.1 SDI DESIGN MANUAL
2.3.1.2 AISI SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS.
2.3.1.3 CORNER TRIM AND FLASHING SHALL BE MADE OF 24 GAGE COIL STOCK AND THE FINISH SHALL MATCH THE DECKING FINISH UNLESS OTHERWISE NOTED.
2.3.2 CONTRACTOR SHALL:
2.3.2.1 SUBMIT SHOP DRAWINGS TO KEYSTONE FOR APPROVAL. SHOP DRAWINGS SHALL INCLUDE MEMBER DETAIL AND ERECTION PLANS.
2.3.2.2 FABRICATE DECK TO BE CONTINUOUS OVER 2 OR MORE SPANS - WHEN APPLICABLE.

2. MATERIALS (CONTINUED)

- 2.3.3 WALL DECK (PLAN SET A & B)
TYPE: 1.5 B, GA: 24 VULCRAFT
FINISH: GALVANIZED G90
36 INCHES NET LAY. (INVERTED)
ENDS AND END LAPS SCREW TO SUPPORTS WITH TEK SCREWS IN EVERY FLUTE, SCREW TO INTERMEDIATE SUPPORTS IN EVERY OTHER FLUTE. PARTIAL SHEETS SHOULD BE ATTACHED TO THE SUPPORTS IN EVERY FLUTE.
END LAPS OCCUR AT SUPPORTS ONLY. MINIMUM LAP = 4". SIDE LAPS MUST BE FASTENED TOGETHER BETWEEN SUPPORTS NOT EXCEEDING 24" C/C USING TEK SCREWS. ALL SCREWS N. I. V. C. WITH EPDM 300 "F MIN RATING OR SERRATED FLG. WASHERS.
2.3.3 ROOF DECK (PLAN SET C ONLY)
TYPE: AMERICAN BUILDINGS LONG SPAN III, 26 GA - VERIFY - SEE IMPORTANT NOTE BELOW.
FINISH: G-90 COATING
ENDS AND END LAPS SCREW TO SUPPORTS WITH TEK SCREWS IN EVERY FLUTE, SCREW TO INTERMEDIATE SUPPORTS IN EVERY OTHER FLUTE. PARTIAL SHEETS SHOULD BE ATTACHED TO THE SUPPORTS IN EVERY FLUTE.
END LAPS OCCUR AT SUPPORTS ONLY. MINIMUM LAP = 4". SIDE LAPS MUST BE FASTENED TOGETHER BETWEEN SUPPORTS NOT EXCEEDING 24" C/C USING TEK SCREWS. ALL SCREWS N. I. V. C. WITH EPDM 300 "F MIN RATING OR SERRATED FLG. WASHERS.
IMPORTANT NOTE:
CONTRACTOR MUST VERIFY THE TYPE LISTED MATCHES THE PROFILE AND GAGE OF THE EXISTING ROOF DECK PRIOR TO ORDERING THE MATERIAL.
2.3.4 ROOF DECK (PLAN SET A & B)
TYPE: 1.5 B, GA: 20 VULCRAFT
FINISH: GALVANIZED G90
SCREW TO SUPPORTS WITH TEK SCREWS IN EVERY FLUTE, SCREW TO SUPPORTS IN EVERY OTHER FLUTE. PARTIAL SHEETS SHOULD BE ATTACHED TO THE SUPPORTS IN EVERY FLUTE.
END LAPS OCCUR AT SUPPORTS ONLY. MINIMUM LAP = 6". SIDE LAPS MUST BE FASTENED TOGETHER BETWEEN SUPPORTS NOT EXCEEDING 12" C/C USING TEK SCREWS. LAP SIDES ONE FULL RIB.
2.3.5 SKIRT SIDING (PLAN SET A ONLY)
TYPE: AMERICAN BUILDINGS LONG SPAN III, 26 GA
FINISH: G-90 COATING
ENDS AND END LAPS SCREW TO SUPPORTS WITH TEK SCREWS IN EVERY FLUTE, SCREW TO INTERMEDIATE SUPPORTS IN EVERY OTHER FLUTE. PARTIAL SHEETS SHOULD BE ATTACHED TO THE SUPPORTS IN EVERY FLUTE.
END LAPS OCCUR AT SUPPORTS ONLY. MINIMUM LAP = 4". SIDE LAPS MUST BE FASTENED TOGETHER BETWEEN SUPPORTS NOT EXCEEDING 24" C/C USING TEK SCREWS. ALL SCREWS N. I. V. C. WITH EPDM 300 "F MIN RATING OR SERRATED FLG. WASHERS.
2.4 CHECKERED PLATE
RAISED PATTERN FLOOR PLATE SHALL MEET THE REQUIREMENTS OF ASTM A786, WITH REGULAR QUALITY CARBON STEEL (A578 MAX.) OR ASTM A36. FLOOR PLATE LUGS SHALL BE LARGE PATTERN (0.095 HIGH, 1.25" LONG). WELD FLOOR PLATE TO SUPPORTING BEAMS AND ANGLE STIFFENER WITH TWO INCH (2") LONG FILLET WELDS AT EIGHTEEN INCH (18") SPACING. ALL JOINTS NOT OVER A SUPPORTING BEAM SHALL HAVE BE FULLY SEAM WELDED WITH A 1/2 INCH BACKING BAR OR ANGLE.
2.5 HANDRAIL (PLAN SET A ONLY)
ALL HANDRAIL SHALL BE CAPABLE OF RESISTING A 200 LB. LOAD APPLIED IN ANY DIRECTION. ALL RAILS AND POSTS SHALL BE 1 1/2" DIAMETER EXTRA STRONG (SCH. 80) PIPE (Fy = 35 KSI MINIMUM). MAXIMUM POST SPACING SHALL BE EIGHT FEET (8'). KICK PLATES ARE REQUIRED ON FULL HEIGHT RAILS. THREE SWING GATES ARE REQUIRED AT LOCATIONS SELECTED BY KEYSTONE.

3. NOT APPLICABLE

4. COATING SYSTEM

- 4.1 STRUCTURAL STEEL - UNLESS OTHERWISE AUTHORIZED BY KEYSTONE, ALL STEEL SHALL BE PREPARED AND THE COATING SYSTEM APPLIED IN THE SHOP. THE STEEL SHALL BE FREE OF OILS, GREASE AND CHEMICAL CONTAMINANTS, THEN THE SURFACE PREPARED WITH SSPC-SP5 WHITE METAL STANDARD WITH AN ANGULAR ANCHOR PROFILE OF 2 TO 3 MILS. THERE SHALL BE A STRIPE COAT OF PROPOLYMER COATINGS PRO TUFF 225 HIGH PERFORMANCE ALUMINUM EPOXY MASTIC TO ALL SHARP EDGES AND WELDS AT 3 TO 5 MILS DFT. THE BASE COAT OF PROPOLYMER PRO TUFF 2225 HIGH PERFORMANCE ALUMINUM EPOXY MASTIC SHALL BE APPLIED TO ALL PROPERLY PREPARED SUBSTRATES TO YIELD 6 TO 8 MILS DFT. THE FINISH COAT OF PROPOLYMER PRO TUFF 2225 HIGH PERFORMANCE ALUMINUM EPOXY MASTIC SHALL BE APPLIED TO ALL PROPERLY PREPARED SUBSTRATES TO YIELD 6 TO 8 MILS DFT. TOTAL DRY FILM THICKNESS SHALL BE 12 TO 16 MILS EXCLUSIVE OF STRIPE COATED AREAS AND 15 TO 21 MILS INCLUSIVE OF STRIPE COATED AREAS. WHEN TOUCHING UP FIELD CONNECTIONS, THREE COATS MAY BE REQUIRED TO OBTAIN SPECIFIED MILEAGE. FIELD PREPARATION WILL NEED TO BE POWER WIRE BRUSH OR GRIND TO SMOOTH WELDS, CLEAN FLASH RUSTING AND ENSURE AN ANGULAR ANCHOR PROFILE IS STILL PRESENT. SCHEDULING OF THE PROJECT MUST INCLUDE 72 HOURS OF CURE TIME AT 75 DEGREES. (SUPPLIER REPRESENTATIVE JAMES MCCADDEN AT 314-550-2801.)
ALTERNATE COATING SYSTEMS USING VINYL ESTER AT A RATE OF 24 TO 30 MILS EXCLUSIVE OF STRIPE COATED AREAS (20 TO 40 MILS INCLUSIVE) WITH SIMILAR PREPARATION ARE ACCEPTABLE. SPECIFIC PRODUCTS INCLUDE PROPOLYMER COATINGS PROLINE 4844S UHT VINYL ESTER (REP: JAMES MCCADDEN) AND TNEMEC SERIES 120 VINYL ESTER (REP: KEITH KENNETT 309-945-2084), PLASITE 4300 BY CARBOLINE AT A HIGHER APPLICATION RATE IS ALSO ACCEPTABLE (REP: 1-888-227-2654).
4.2 SURFACE PREPARATION, THICKNESS OF COATING, AND APPLICATION OF ALL PAINT SHALL BE IN ACCORDANCE WITH PAINT MANUFACTURER'S RECOMMENDATIONS.
5. GROUT
5.1 ALL GROUT SHALL BE "MASTER BUILDERS CO." OR APPROVED EQUAL AND INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
5.2 USE "MASTERFLOW 928 GROUT," OR APPROVED EQUAL FOR MAIN COLUMNS, EQUIPMENT SUPPORT COLUMNS, AND MISCELLANEOUS STRUCTURAL SUPPORTS.
5.3 TEMPORARY SHIMS SHALL BE REMOVED, AND VOIDS FILLED WITH GROUT.
6. CONNECTIONS
6.1 THE STRUCTURAL STEEL DETAILER IS RESPONSIBLE FOR THE DESIGN OF ALL CONNECTIONS, EXCEPT THOSE SPECIFICALLY SHOWN ON THE DESIGN DRAWINGS. CALCULATIONS OF CONNECTIONS DESIGNED MUST BE SUBMITTED TO THE ENGINEER FOR REVIEW.
6.2 BRACING FORCES ON DESIGN DRAWINGS (+) INDICATES COMPRESSION FORCE AND (-) INDICATES TENSION FORCE. ALLOWANCE SHALL BE MADE FOR DRAW AS PER AISI ("DETAILING FOR STEEL CONSTRUCTION" - LATEST EDITION. SHOW LOADS ON MEMBERS THAT CONNECTION DESIGN IS REQUIRED.
6.3 BEAM CONNECTIONS UNLESS SPECIFICALLY NOTED ON THE DESIGN DRAWINGS, SHALL BE SELECTED TO SUPPORT THE BEAM CAPACITIES GIVEN IN THE ALLOWABLE LOADS ON BEAM TABLES, PART 2 OF THE AISC "MANUAL OF STEEL CONSTRUCTION", FOR THE GIVEN SHAPE AND STEEL SPECIFIED.
6.4 NO FIELD BURNING IS PERMITTED WITHOUT SPECIFIC OWNER AUTHORIZATION PERMIT.
6.5 ALL BEAMS TO BE INSTALLED WITH CAMBERS UP. ALL GIRTS TO BE INSTALLED WITH SWEEPS (Y- AXIS CAMBERS) UP.
6.6 3/4" SAG RODS TO BE SPACED ON GIRTS & PURLINS WHERE SHOWN ON FRAMING ELEVATIONS NOT GREATER THAN 8'-0" C/C. FOUR (4) NUTS & WASHERS TO BE PROVIDED FOR EACH SAG ROD.

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MAURER-STUTZ ENGINEERS SURVEYORS
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Table with columns: REV., DATE, BY, DESCRIPTION OF CHANGE, REFERENCE DRGS. Includes a REVISION RECORD section.

DO NOT SCALE DIMENSIONS
Keystone Steel & Wire VENDOR BLOCK INSERT
DEPT. CASTER
EQUIP. VENTILATION ENCLOSURE STACK
NAME GENERAL NOTES
MANUFACTURER NAME: MAURER - STUTZ
DATE SCALE FILE SH1 2 OF 19
MANUFACTURER DRAWING NUMBER KEYSTONE ASSIGNED DRAWING NUMBER
23114001.16GB002 D-25631 REV. 0

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**STRUCTURAL GENERAL NOTES - CONTINUED (PLAN SETS A, B AND C UNLESS OTHERWISE NOTED)**

**7. BOLTED CONNECTIONS**

- 7.1 ALL HIGH-STRENGTH BOLTED CONNECTIONS SHALL BE BEARING-TYPE, SNUG-TIGHTENED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AISC SPECIFICATION FOR STRUCTURAL JOINTS. STANDARD HOLES SHALL BE PROVIDED FOR THE BOLTED CONNECTIONS U.N.O.
- 7.2 PRIMARY CONNECTIONS FOR ALL STEEL, UNLESS NOTED ON THE DESIGN DRAWINGS, SHALL BE 3/4" (19 mm) DIAMETER BOLTS ASTM A325 GALVANIZED. HEAVY-HEX NUTS SHALL MEET THE REQUIREMENTS OF ASTM A563. HARDENED WASHERS ARE REQUIRED UNDER ANY TURNED ELEMENT. HARDENED WASHERS SHALL MEET THE REQUIREMENTS OF ASTM F436. NUTS AND WASHERS TO BE GALVANIZED PER SAME TYPE AS BOLTS.
- 7.3 BOLTED CONNECTIONS SHALL HAVE A MINIMUM OF 2 BOLTS.
- 7.4 THE FABRICATOR SHALL FURNISH ALL FIELD BOLTS, NUTS, AND WASHERS NECESSARY, PLUS 2% EXTRA FOR ERECTION.
- 7.5 HAND TIGHTEN AND TACK WELD NUTS FOR ALL BOLTS IN SLOTTED HOLES PROVIDED FOR EXPANSION OR UNI-DIRECTIONAL FORCE APPLICATIONS.

**8. WELDED CONNECTIONS**

- 8.1 WELDS SHALL BE IN ACCORDANCE WITH THE STRUCTURAL WELDING CODE AWS D1.1, LATEST EDITION. WELD RODS E70-XX OR E70-ET MINIMUM (U.N.O.).
- 8.2 WHERE FIELD WELD IS SPECIFIED THE FABRICATOR SHALL DETAIL, FABRICATE AND FURNISH NECESSARY ERECTION CLIPS AND BOLTS.
- 8.3 ALL GUSSET PLATES AND CLIP ANGLES SHALL HAVE A MINIMUM THICKNESS OF 3/8" (9 mm) UNO.
- 8.4 PRE & POST HEAT PRACTICE FOR JUMBO SECTION WELDS TO BE PER ASW CODE.

**9. INSPECTION AND TESTING (SHOP)**

- 9.1 THE ENGINEER RESERVES THE RIGHT TO INSPECT THE MATERIALS AND FABRICATION AT ANY TIME TO ASSURE THAT THE MATERIALS AND WORKMANSHIP ARE IN ACCORDANCE WITH APPLICABLE CODES AND SPECIFICATIONS.
- 9.2 ALL WELDS SHALL BE SUBJECT TO VISUAL INSPECTION ACCORDING TO THE PROCEDURES AND ACCEPTANCE CRITERIA OUTLINED IN AWS D1.1.
- 9.3 A WRITTEN REPORT SUMMARIZING THE RESULTS OF THE VISUAL INSPECTIONS SHALL BE SUBMITTED TO THE OWNER WITHIN SEVEN (7) DAYS OF THE DATE OF THE INSPECTION.
- 9.4 WELDS WHICH SHOW DEFECTS OR INDICATE FLAWS IN THE WORKMANSHIP WILL BE REJECTED. REJECTION OF A PARTICULAR WELD OR PART OF A WELD WILL NOT NECESSARILY CONSTITUTE REJECTION OF THE ENTIRE MEMBER BUT SUCH REJECTION WILL BE CAUSE FOR REWORK IN ACCORDANCE WITH THE STANDARDS OF AWS D1.1. REPAIR AND CORRECTION OF REJECTED WELDS WILL BE DONE AT THE EXPENSE OF THE FABRICATOR.

**10. INSPECTION AND TESTING (FIELD)**

- 10.1 THE OWNER RESERVES THE RIGHT TO INSPECT THE ERECTION OF THE STRUCTURAL STEEL AT ANY TIME TO ASSURE THAT THE MATERIALS AND WORKMANSHIP ARE IN ACCORDANCE WITH APPLICABLE SPECIFICATIONS AND CODES.
- 10.2 ALL FIELD WELDS WILL BE SUBJECT TO VISUAL INSPECTION ACCORDING TO THE PROCEDURES AND ACCEPTANCE CRITERIA OUTLINED IN AWS D1.1.
- 10.3 A WRITTEN REPORT SUMMARIZING THE RESULTS OF THE VISUAL INSPECTIONS SHALL BE SUBMITTED TO THE OWNER AND ENGINEER WITHIN THREE (3) DAYS OF THE DATE OF THE INSPECTION.
- 10.4 WELDS WHICH SHOW DEFECTS OR INDICATE FLAWS IN THE WORKMANSHIP WILL BE REJECTED. REJECTION OF A PARTICULAR WELD OR PART OF A WELD WILL NOT NECESSARILY CONSTITUTE REJECTION OF THE ENTIRE MEMBER BUT SUCH REJECTION WILL BE CAUSE FOR REWORK IN ACCORDANCE WITH THE STANDARDS OF AWS D1.1. REPAIR AND CORRECTION OF REJECTED WELDS WILL BE DONE AT THE EXPENSE OF THE CONTRACTOR.
- 10.5 THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS RELATED TO CONCRETE TESTING. A MINIMUM OF SIX (6) CYLINDERS FROM EACH TRUCK IS REQUIRED. PAIRS OF CYLINDERS SHALL BE TESTED ON DAY 3 AND 7. FIELD AIR ENTRAINMENT AND SLUMP TESTS ARE NOT REQUIRED AS LONG AS TICKETS INDICATE AN AIR ENTRAINMENT ADMIXTURE IS INCLUDED IN THE MIX. NO WATER CAN BE ADDED TO THE CONCRETE MIXING DRUM ONSITE.

**11. STAGING AND MATERIAL STORAGE**

- 11.1 THE BRIDGE CRANE IN THE MELT SHOP CAN BE USED TO MOVE MATERIALS TO THE SITE. ADDITIONALLY, THE CONTRACTOR IS REQUIRED TO USE THIS CRANE TO PLACE THE ROOF HATCHES. THE 7.5 TON HOOK CAN BE USED BY THE CONTRACTOR, BUT WITH THE FOLLOWING RESTRICTIONS:
  - ONLY KEYSTONE PERSONNEL MAY OPERATE THE CRANE.
  - USE OF THE CRANE MUST BE REQUESTED IN WRITING TO KEYSTONE A MINIMUM OF 8 HOURS IN ADVANCE FOR USE BETWEEN 7 AM AND 4 PM ON WEEK DAYS; WRITTEN NOTICE IS REQUIRED 30 HOURS IN ADVANCE FOR USE OF CRANE BETWEEN 4 PM AND 7 AM ON WEEK DAYS OR ANYTIME SATURDAY; WRITTEN NOTICE IS REQUIRED 48 HOURS IN ADVANCE FOR USE ON SUNDAY.
 DELAYS RELATED TO SCHEDULED CRANE USAGE OF UP TO TWO HOURS ARE ROUTINE DUE TO THE DEMANDS ON THE CRANE. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGE (EXCLUSIVE TO THE CRANE ITSELF) INCIDENTAL TO ITS USE THAT OCCURS WHILE THE BRIDGE CRANE IS UNDER HIS DIRECTION EVEN IF THE PROBLEM IS RELATED TO OPERATOR ERROR.
- 11.2 THERE ARE OTHER PROJECTS SCHEDULED FOR THE SAME SHUT DOWN THAT WILL BE IN THE VICINITY OF THIS PROJECT. THE OTHER PROJECT(S) SHALL NOT BE ALLOWED TO LOCATE A CRANE OR STORE MATERIAL ON THE WEST SIDE OF THE CASTER RUNOUT BUILDING. FOR THIS PROJECT, THE CRANE OR CONSTRUCTION MATERIAL MAY NOT BE LOCATED ON THE EAST SIDE OF THE CASTER RUNOUT BUILDING.
- 11.3 THE MAJORITY OF THE WORK ON THIS PROJECT SHALL BE DONE DURING THE SHUT DOWN AS OUTLINED IN THE BID DOCUMENTS. ANY WORK DONE BEFORE OR AFTER THE SHUT DOWN MUST BE APPROVED BY KEYSTONE PRIOR TO THE START OF ANY ON-SITE ACTIVITY. IT IS ANTICIPATED THAT THE HATCHES WILL NOT BE DELIVERED DURING THE SHUT DOWN. THE FINAL INSTALL OF THE HATCHES SHALL BE WITHIN AN EIGHT (8) WEEK PERIOD AFTER THE SHUT DOWN.

**12. WALL LOUVER**

- 12.1 FURNISH AND INSTALL STATIONARY FABRICATED WALL LOUVERS IN THE OPENING, AS INDICATED ON THE DRAWINGS. LOUVERS SHALL BE MODEL SERIES #1030 18 GAUGE GALVANIZED STEEL.
- 12.2 LOUVERS ARE TO BE 4" DEEP, WITH "J" STYLE BLADES TO FIT INTO THE OPENING. LOUVERS SHALL BE OF THE CHANNEL TYPE WITH FLAT SURFACES AT INSIDE FACES FOR EASE OF INSTALLATION AT JAMBS, HEAD, AND SILL.
- 12.3 THE OVERALL LOUVER SIZE SHALL BE 55'-11" x 10'-0" (MANUFACTURER TO VERIFY DIMENSIONS SATISFY TOLERANCES TO FIT WITHIN PROVIDED FRAMING OPENING).
- 12.4 WHEN MULTIPLE LOUVER SECTIONS ARE USED TO FIT THE OPENING, FURNISH MULLION COVERS TO PROVIDE WEATHERTIGHT JOINTS.

**13. BRIDGE CRANE**

- 13.1 KEYSTONE WILL FURNISH A HARRINGTON TWO-TON CAPACITY, UNDERHUNG BRIDGE CRANE, WHICH THE CONTRACTOR WILL BE RESPONSIBLE TO INSTALL IN PLACE ON THE CRANE RAILS BELOW THE VENTILATION STACK.
- 13.2 THE POWER SYSTEM FOR THE CRANE WILL BE INSTALLED BY KEYSTONE OR A SEPARATE ELECTRICAL CONTRACTOR.

3/21/2016 10:00:00 AM (Monday, 3/21/2016) 1:16 - Westlake Structures 2016/03/21/2016 10:00:00 AM 3/21/2016 10:00:00 AM

MSI PROJECT 23114001.16

**MAURER-STUTZ**  
ENGINEERS SURVEYORS


3434 N. BRID LANE, SUITE 200 | P.O. BOX 183008 | DENVER, COLORADO 80218 | PHONE: (303) 755-1000 | FAX: (303) 755-1001  
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REFERENCE DRGS.

MICROFILM DATE.

**Keystone Steel & Wire**  VENDOR BLOCK INSERT

DEPT. CASTER

EQUIP. VENTILATION ENCLOSURE STACK

NAME GENERAL NOTES

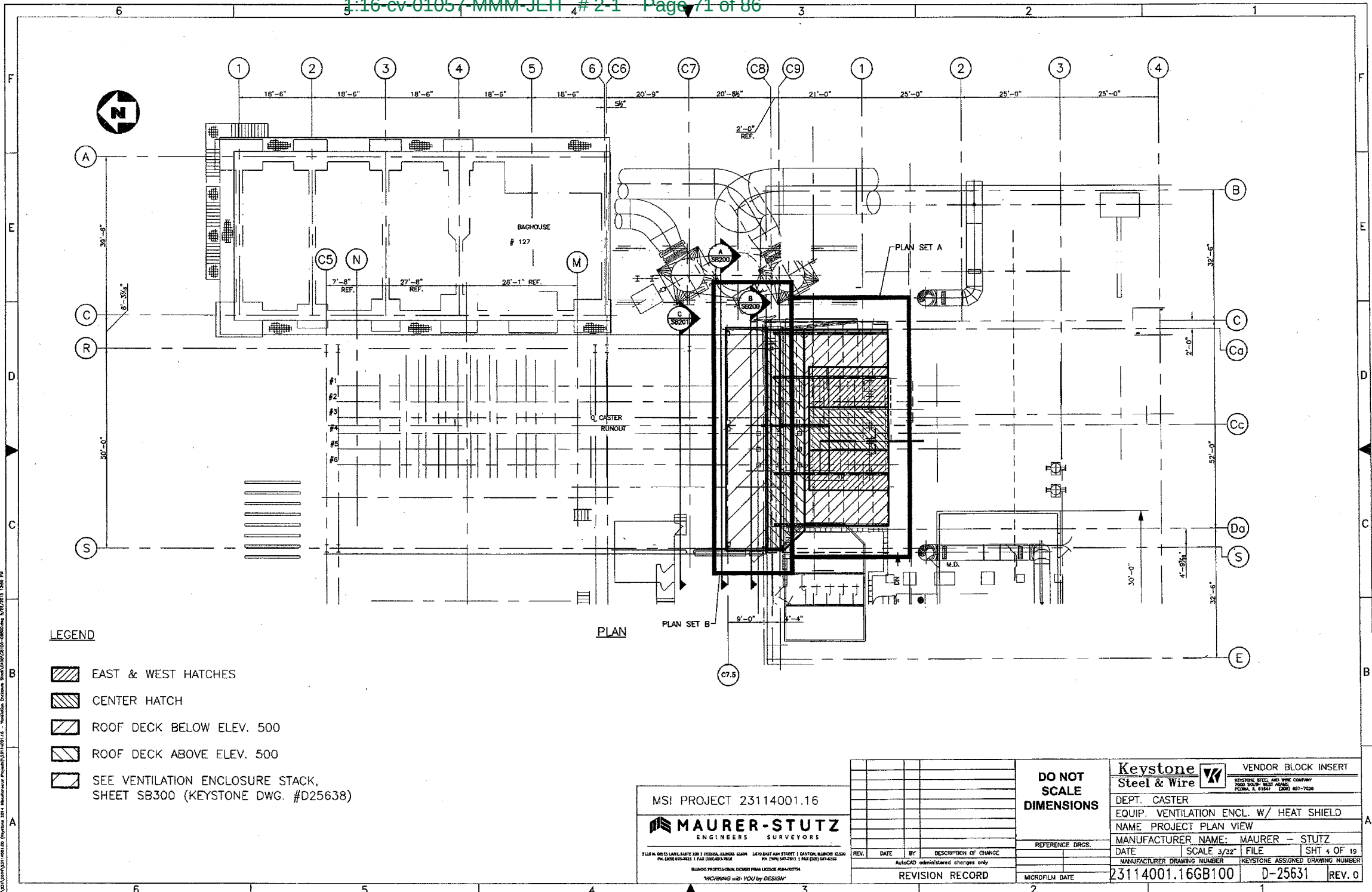
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DATE	SCALE	FILE	SHT 3 OF 19






MANUFACTURER DRAWING NUMBER: 23114001.16GB003

KEYSTONE ASSIGNED DRAWING NUMBER: D-25631

REV. 0



**LEGEND**

-  EAST & WEST HATCHES
-  CENTER HATCH
-  ROOF DECK BELOW ELEV. 500
-  ROOF DECK ABOVE ELEV. 500
-  SEE VENTILATION ENCLOSURE STACK, SHEET SB300 (KEYSTONE DWG. #D25638)

MSI PROJECT 23114001.16

**MAURER-STUTZ**  
ENGINEERS SURVEYORS

5116 N. OGDEN LANE, SUITE 100 | FARMINGTON, ILLINOIS 62509 | TEL: 618-453-1111 | FAX: 618-453-1112  
1470 EAST ASH STREET | CANTON, ILLINOIS 62501 | TEL: 618-453-1111 | FAX: 618-453-1112

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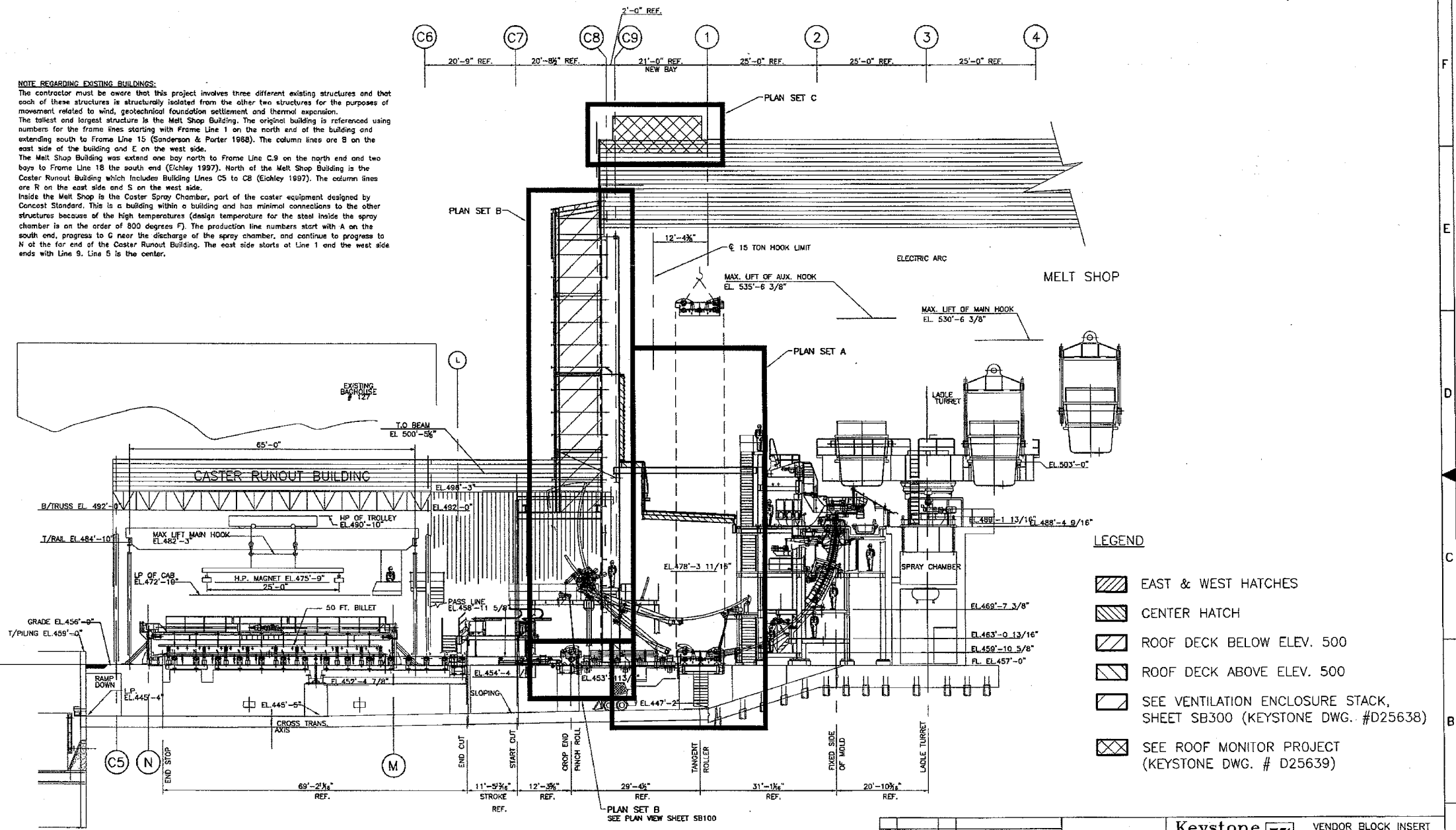
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REV.	DATE	DESCRIPTION OF CHANGE
<small>AutoCAD administered changes only</small>		
MICROFILM DATE		

<b>Keystone Steel &amp; Wire</b>		VENDOR BLOCK INSERT	
<small>KEYSTONE STEEL AND WIRE COMPANY 7000 SOUTH WEST PLAZA PEORIA, IL 61614 (309) 697-7000</small>			
DEPT. CASTER		EQUIP. VENTILATION ENCL. W/ HEAT SHIELD	
NAME PROJECT PLAN VIEW			
MANUFACTURER NAME: MAURER - STUTZ		DATE	
SCALE 3/32"	FILE	SHT 4 OF 19	
MANUFACTURER DRAWING NUMBER		KEYSTONE ASSIGNED DRAWING NUMBER	
23114001.16GB100	D-25631	REV. 0	

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 2/27/2013 1:58 PM

**NOTE REGARDING EXISTING BUILDINGS:**

The contractor must be aware that this project involves three different existing structures and that each of these structures is structurally isolated from the other two structures for the purposes of movement related to wind, geotechnical foundation settlement and thermal expansion. The tallest and largest structure is the Melt Shop Building. The original building is referenced using numbers for the frame lines starting with Frame Line 1 on the north end of the building and extending south to Frame Line 15 (Sanderson & Porter 1968). The column lines are B on the east side of the building and E on the west side. The Melt Shop Building was extended one bay north to Frame Line C9 on the north end and two bays to Frame Line 18 the south end (Eichley 1997). North of the Melt Shop Building is the Caster Runout Building which includes Building Lines C5 to C8 (Eichley 1997). The column lines are R on the east side and S on the west side. Inside the Melt Shop is the Caster Spray Chamber, part of the caster equipment designed by Concast Standard. This is a building within a building and has minimal connections to the other structures because of the high temperatures (design temperature for the steel inside the spray chamber is on the order of 800 degrees F). The production line numbers start with A on the south end, progress to C near the discharge of the spray chamber, and continue to progress to N at the far end of the Caster Runout Building. The east side starts at Line 1 and the west side ends with Line 9. Line 5 is the center.



**LEGEND**

- EAST & WEST HATCHES
- CENTER HATCH
- ROOF DECK BELOW ELEV. 500
- ROOF DECK ABOVE ELEV. 500
- SEE VENTILATION ENCLOSURE STACK, SHEET SB300 (KEYSTONE DWG. #D25638)
- SEE ROOF MONITOR PROJECT (KEYSTONE DWG. # D25639)

ELEVATION LOOKING EAST

MSI PROJECT 23114001.16

**MAURER-STUTZ**  
ENGINEERS SURVEYORS

5110 N. DIXIE LANE, SUITE 100 | FORT WORTH, TEXAS 76104 | 817-342-4300 | FAX 817-342-4301  
P.O. BOX 900 | FORT WORTH, TEXAS 76101 | 817-342-4300 | FAX 817-342-4301

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**DO NOT SCALE DIMENSIONS**

**Keystone Steel & Wire**

VENDOR BLOCK INSERT

DEPT. CASTER  
EQUIP. VENTILATION ENCL. W/ HEAT SHIELD  
NAME ELEVATION

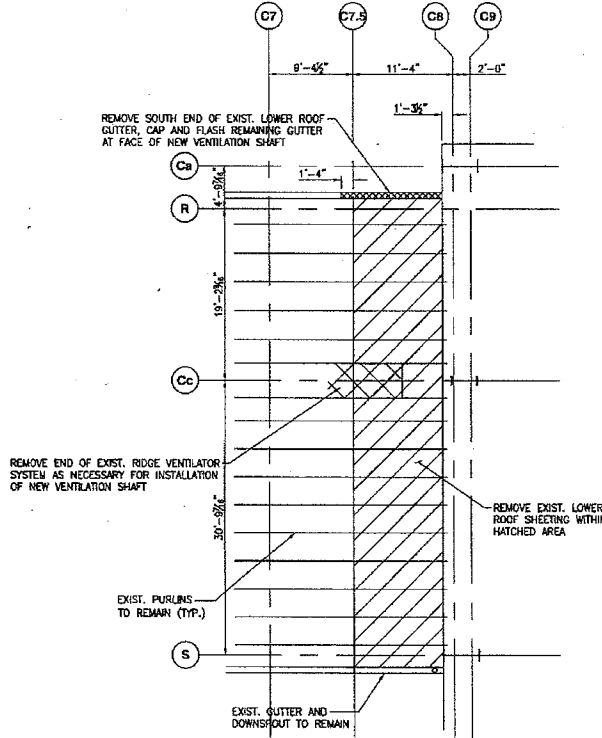
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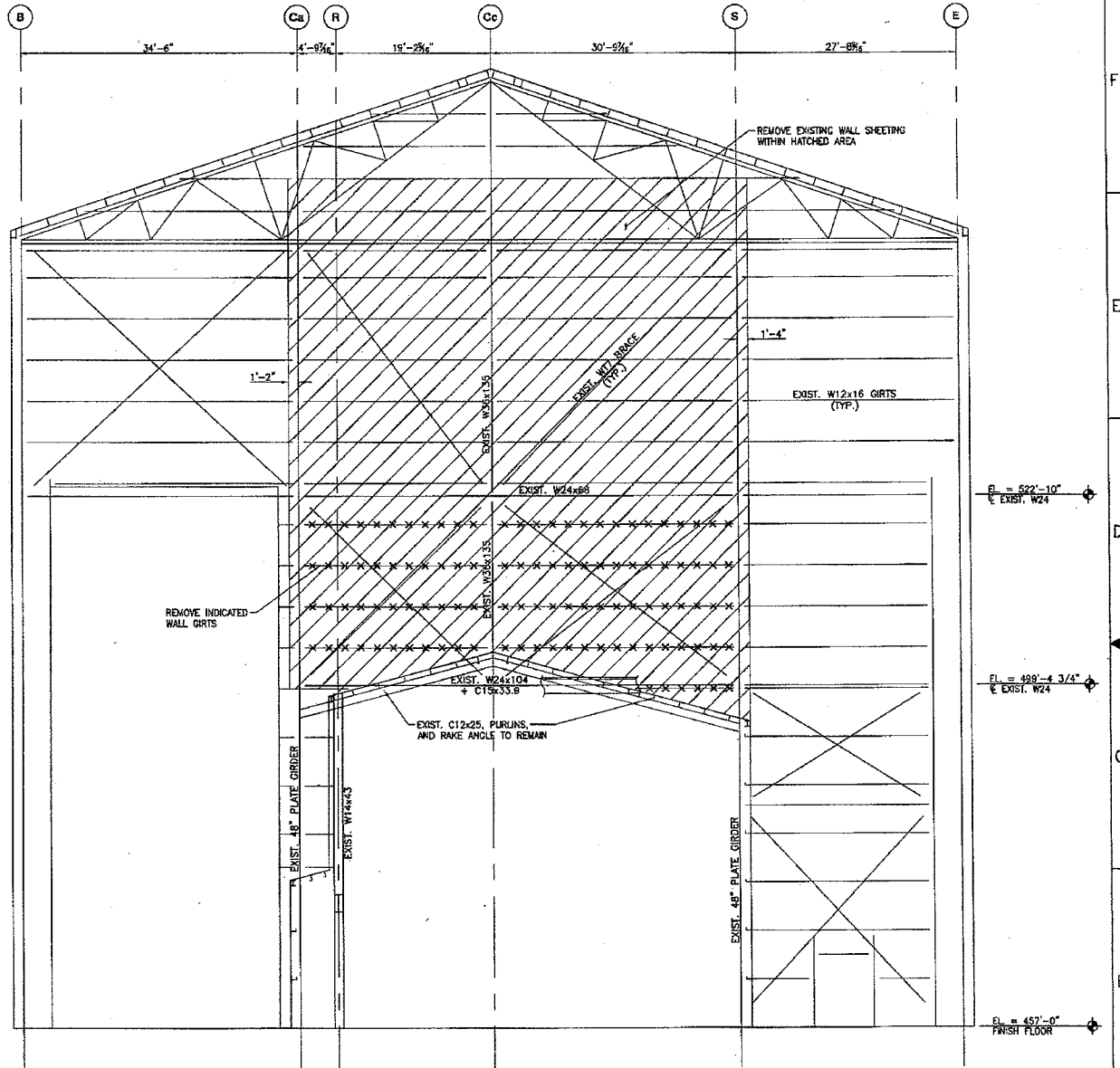


**SHEET NOTES:**

1. FOR GENERAL NOTES, SEE DWG. C8002.
2. MODIFY ALL DISTURBED DOWNSPOUTS AND GUTTERS TO RESTORE PROPER DRAINAGE FROM EXISTING ROOFS.
3. MODIFY THE REMAINING ROOF VENTILATOR OVER THE CASTER RUNOUT BUILDING TO ACHIEVE CLOSURE AT THE END OF THE VENTILATOR, AND PATCH THE ROOF BETWEEN THE VENTILATOR AND THE NEW VENTILATION SHAFT.



**LOWER ROOF DEMOLITION PLAN**  
SCALE: 1/8" = 1'-0"



**MELT SHOP WALL DEMOLITION**  
SCALE: 1/8" = 1'-0"

**NOT FOR CONSTRUCTION**  
MSI PROJECT 23114001.16

**MAURER-STUTZ**  
ENGINEERS SURVEYORS

SMALLER: DRES LAMB, STATE RD 1, PLYMOUTH, FLORIDA 32909-1000  
PHONE: (904) 455-1111 FAX: (904) 455-1112  
ALUMBA PROFESSIONAL DESIGN FIRM LICENSE #24488284  
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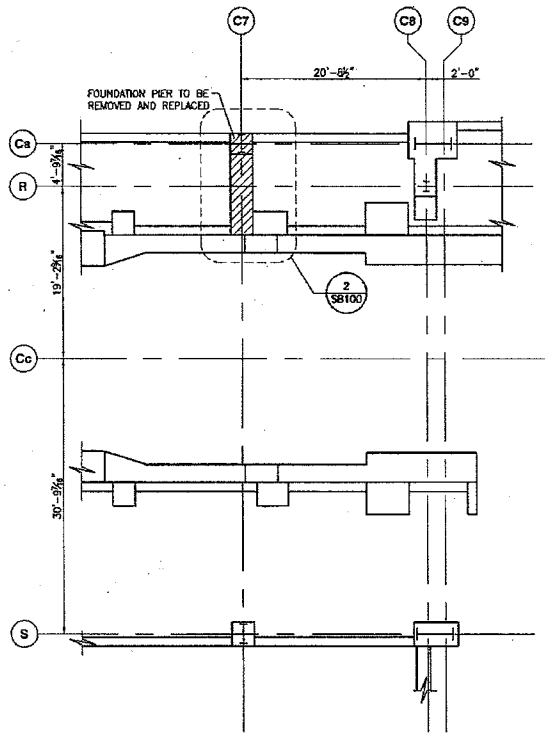
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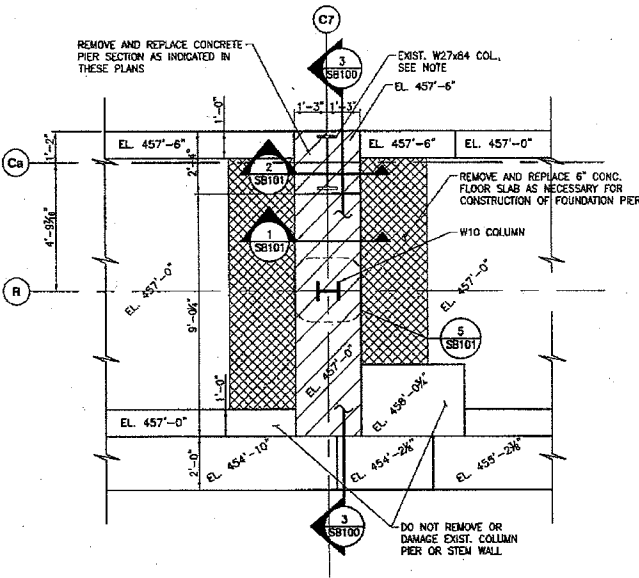
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DEPT. CASTER	
EQUIP. VENTILATION ENCLOSURE STACK	
NAME DEMOLITION PLAN AND ELEVATION	
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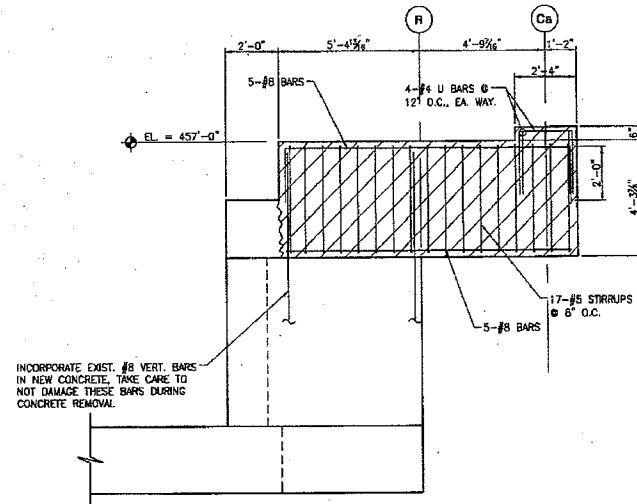
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1 FOUNDATION PLAN-PARTIAL  
SCALE: 1/8" = 1'-0"



2 C7 FOUNDATION MODIFICATION PLAN  
SCALE: 3/8" = 1'-0"



3 C7 FOUNDATION SECTION  
SCALE: 3/8" = 1'-0"

**SHEET NOTES:**

- FOR GENERAL NOTES, SEE DWG. G8002.
- THE INTENT OF THIS FOUNDATION MODIFICATION IS TO STRENGTHEN THE CONCRETE PIER SUPPORTING COLUMN Cc-C7. CARE SHALL BE TAKEN TO AVOID DAMAGING THE CONCRETE BEYOND THE INDICATED REMOVAL AREA AND THE REINFORCEMENT BARS EXTENDING FROM THE CONCRETE TO REMAIN INTO THE REMOVAL AREA.
- PRIOR TO REMOVING THE CONCRETE, INSTALL TEMPORARY SHORING BELOW THE BEAM ALONG GRID R ON EACH SIDE OF C7. THIS SHORING SHALL REMAIN UNTIL TESTING CONFIRMS THE NEW CONCRETE HAS ATTAINED A COMPRESSIVE STRENGTH OF 3500 PSI.
- CAST ANCHOR RODS INTO THE NEW CONCRETE USING THE BASE PLATE AS THE TEMPLATE. TIGHTEN THE NUTS AFTER THE CONCRETE AND GROUT HAVE ACHIEVED A STRENGTH OF 3500 PSI.
- REMOVE ANY EXISTING CONCRETE FROM EXISTING REINFORCEMENT BARS TO BE INCORPORATED IN THE NEW CONSTRUCTION.
- IF ANY OF THE EXISTING VERTICAL #8 BARS EXTENDING INTO THE FOUNDATION REPAIR AREA ARE DAMAGED, THE CONTRACTOR SHALL INSTALL A MECHANICAL SPLICE TO PROVIDE FULL TENSILE CAPACITY OF THE #8 BAR. ADDITIONAL REMOVAL OF THE EXISTING CONCRETE MAY BE REQUIRED TO PROPERLY INSTALL THE COUPLER. DUE TO THE TIGHT SCHEDULE, THE CONTRACTOR SHALL HAVE FOUR MECHANICAL COUPLERS ON SITE AT THE START OF THE PROJECT.
- WHEN REPAIRING ANY SIDING OR CRTS REMOVED AS PART OF THE EFFORT TO REMOVE AND REPLACE THE CONCRETE, THE CONTRACTOR SHALL ALSO REPLACE THE DOOR THAT OPENS TO THE EXTERIOR OF THE BUILDING NEXT TO COLUMN Cc-C7. WORK SHALL INCLUDE PROVIDING A NEW DOOR AND FRAME WITH ALL HARDWARE TO MATCH THE ORIGINAL CONFIGURATION OF THE EXISTING DOOR. ANY SIDING REMOVED SHALL BE REPLACED WITH NEW SIDING OF THE SAME GAGE AND PROFILE.

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**MAURER-STUTZ**  
ENGINEERS SURVEYORS

1110 N. ORPHEUS LANE, SUITE 200 | PERRIS, CALIFORNIA 91769 | 951-794-1111  
P.O. BOX 6000 | PERRIS, CALIFORNIA 91769 | 951-794-1111

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**Keystone Steel & Wire** **VENDOR BLOCK INSERT**

KEYSTONE STEEL AND WIRE COMPANY  
7000 SOUTH WEST HIGHWAY  
PERDRA, K. 61841 (CORP) 801-7020

DEPT. CASTER

EQUIP. VENTILATION ENCLOSURE STACK

NAME FOUNDATION MODIFICATIONS

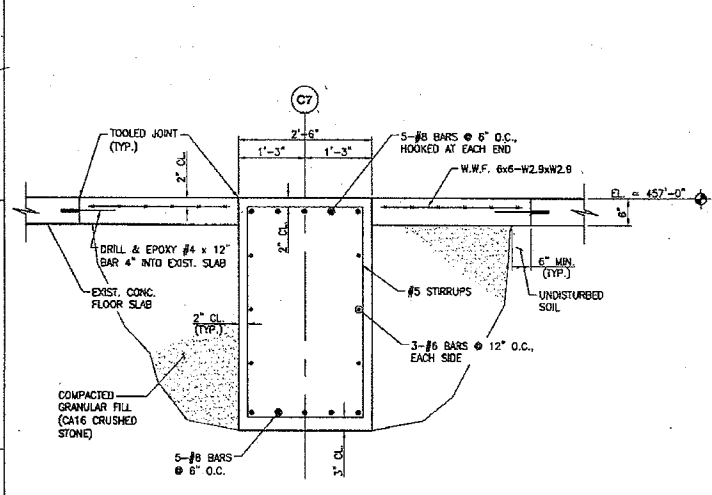
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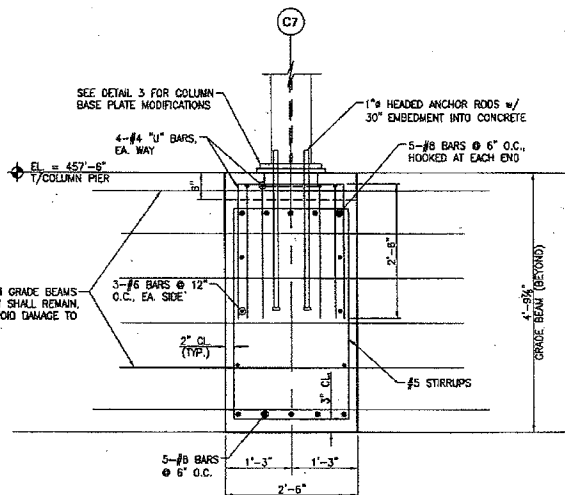
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23114001.16SB100 D-25638 REV. 0

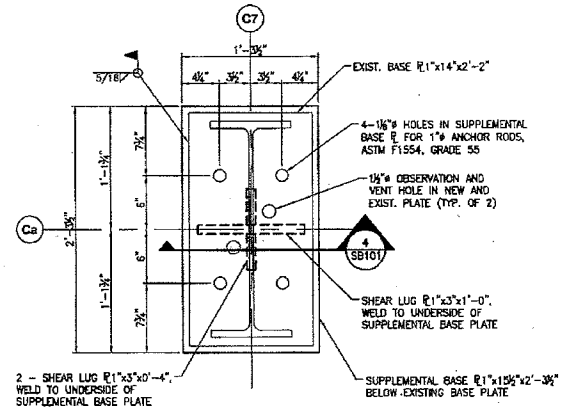
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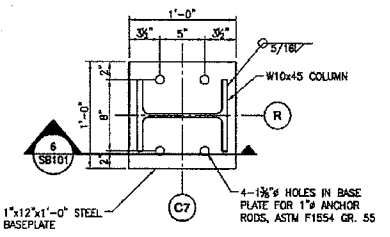
**1 FOUNDATION BEAM DETAIL**  
SCALE: 3/4" = 1'-0"



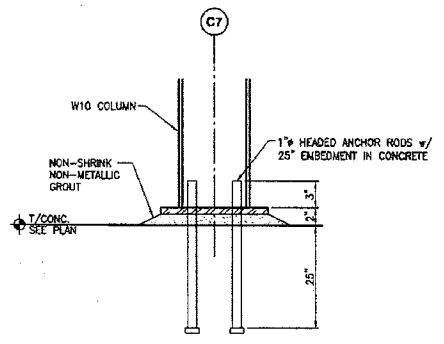
**2 Ca-C7 COLUMN PIER DETAIL**  
SCALE: 3/4" = 1'-0"



**3 Ca-C7 BASE PLATE DETAIL**  
SCALE: 1 1/2" = 1'-0"

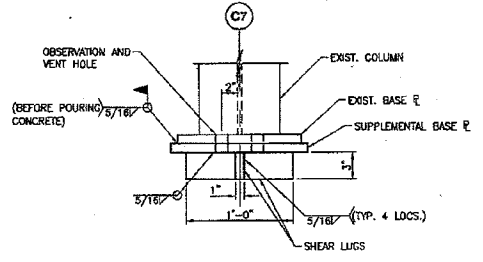


**5 COLUMN BASEPLATE DETAIL**  
SCALE: 1 1/2" = 1'-0"



**6 COLUMN BASEPLATE DETAIL**  
SCALE: 1 1/2" = 1'-0"

- SHEET NOTES:**
- FOR GENERAL NOTES, SEE OWG. 6B002.
  - WORK THIS SHEET WITH SB100 AND SB300.
  - THE CONCRETE FOUNDATION SHALL BE CAST WITH EXIST. COLUMN C6-C7 IN PLACE AT ITS ORIGINAL LOCATION WITH THE SUPPLEMENTAL BASE PLATE ALREADY WELDED TO THE EXISTING BASE PLATE. ANCHOR RODS SHALL BE IN PLACE THROUGH THE BASE PLATES PRIOR TO PLACING CONCRETE.
  - CAST CONCRETE UP TO THE BOTTOM OF THE SUPPLEMENTAL BASE PLATE. THE OBSERVATION/VENT HOLES SHALL BE USED TO ENSURE THAT NO AIR SPACE REMAINS BELOW THE STEEL. GROUTING ANY VOIDS IS NOT AN ACCEPTABLE ALTERNATIVE TO POURING THE CONCRETE AGAINST THE BOTTOM OF THE BASE PLATES.



**4 Ca-C7 BASE PLATE DETAIL**  
SCALE: 1 1/2" = 1'-0" NOTE: ANCHOR ROD HOLES NOT SHOWN.

**NOT FOR CONSTRUCTION**

MSI PROJECT 23114001.16

**MAURER-STUTZ**  
ENGINEERS SURVEYORS

2415 N. DIXIE LANE, SUITE 200 | P.O. BOX 10000 | TAMPA, FLORIDA 33610 | TEL: (813) 847-7200 | FAX: (813) 847-7201

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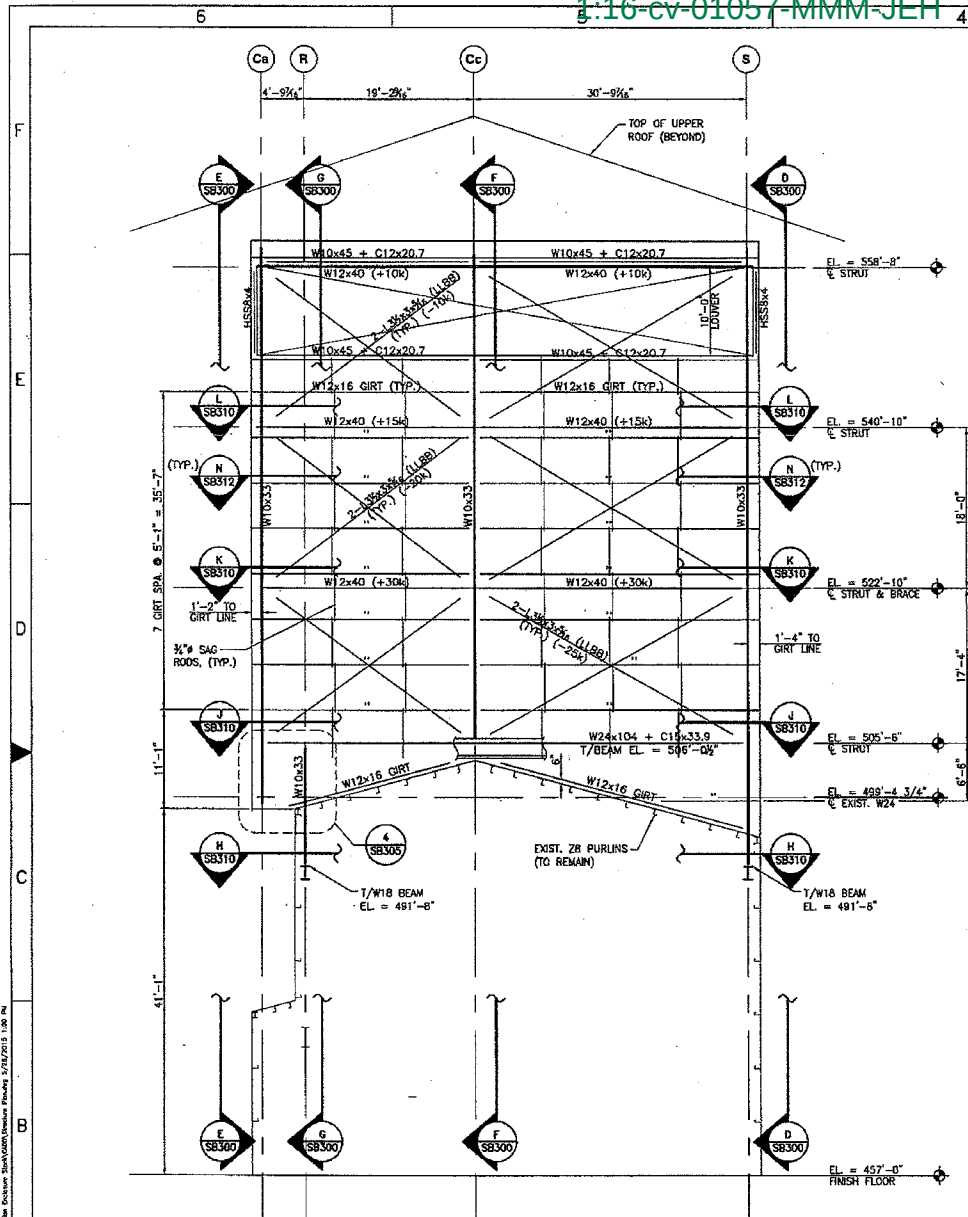
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REFERENCE DRGS.

REVISION RECORD

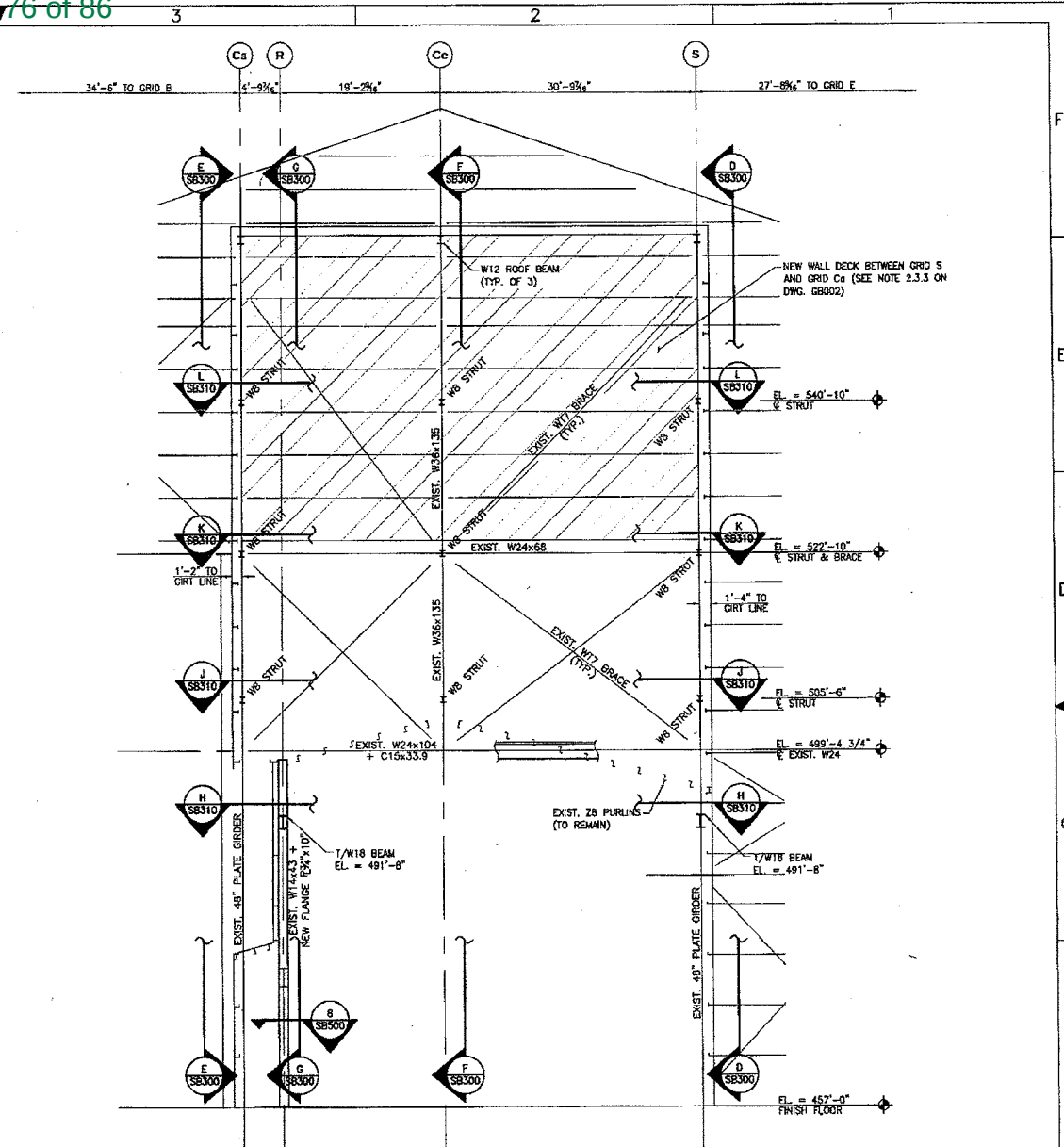
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<b>Keystone Steel &amp; Wire</b>	VENDOR BLOCK INSERT		
DEPT. CASTER	KEYSTONE STEEL AND WIRE COMPANY 7000 SOUTH WEST ROAD P.O. BOX 21841 DENVER, CO 80221		
EQUIP. VENTILATION ENCLOSURE STACK			
NAME FOUNDATION DETAILS			
MANUFACTURER NAME: MAURER - STUTZ			
DATE	SCALE	FILE	SHT # OF 19
MANUFACTURER DRAWING NUMBER	KEYSTONE ASSIGNED DRAWING NUMBER		
23114001.16SB101	D-25638		REV. 0



**A** FRAMING ELEVATION - C7.5  
SCALE: 1/8" = 1'-0"  
(LOOKING SOUTH)

- SHEET NOTES:**
1. FOR GENERAL NOTES, SEE DWG. GB002.
  2. ELEVATIONS TAKEN FROM DWG. GB100.
  3. SEE DWG. SB201 FOR EXIST. ROOF PURLIN ELEVATIONS.
  4. LOCATE SAG RODS THRU GIRT WEB APPROX. 6" FROM THE INSIDE FLANGE. SECURE TOP ROD TO BOTTOM FLANGE OF W10 BEAM BELOW WALL LOUVER.



**B** FRAMING ELEVATION - C8/C9  
SCALE: 1/8" = 1'-0"  
(LOOKING SOUTH)

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**MAURER-STUTZ**  
ENGINEERS SURVEYORS

2124 N. PARK LANE, SUITE 100 | P.O. BOX 624040 | 1070 EAST 40TH STREET | CHICAGO, ILLINOIS 60640  
PH: (773) 622-1242 | FAX: (773) 622-1243 | WWW.MSI-USA.COM

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REFERENCE DRGS.

MICROFILM DATE

**Keystone Steel & Wire** **VENDOR BLOCK INSERT**

DEPT. CASTER

EQUIP. VENTILATION ENCLOSURE STACK

NAME STACK FRAMING ELEVATIONS

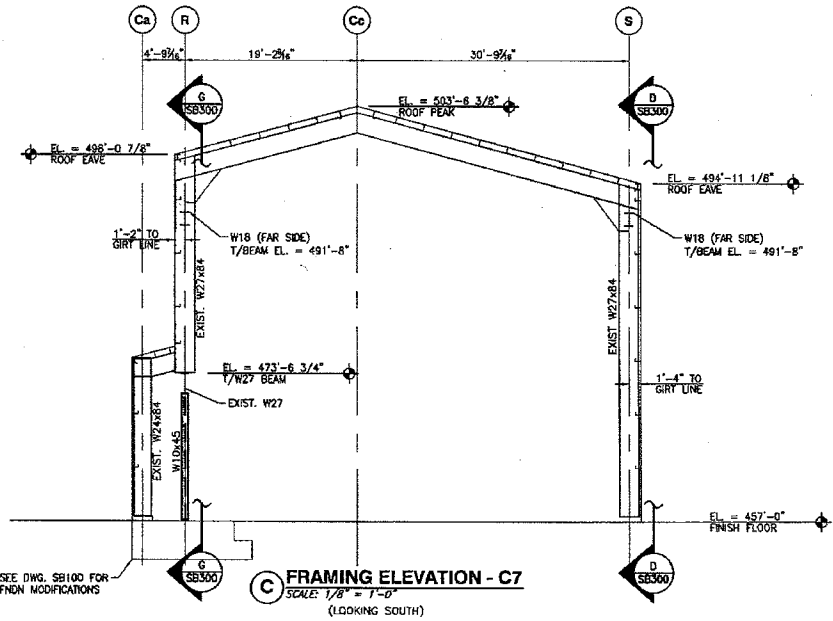
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DATE: \_\_\_\_\_ SCALE: FILE 311 SHT 9 OF 19

MANUFACTURER DRAWING NUMBER: 23114001.16SB200

KEYSTONE ASSIGNED DRAWING NUMBER: D-25638

REV. 0



**FRAMING ELEVATION - C7**  
 SCALE: 1/8" = 1'-0"  
 (LOOKING SOUTH)

SEE DWG. SB100 FOR FOUNDATION MODIFICATIONS

**SHEET NOTES:**

- FOR GENERAL NOTES, SEE DWG. GB002.
- ELEVATION VIEW IS TAKEN FROM DWG. GB100.

**NOT FOR CONSTRUCTION**

MSI PROJECT 23114001.16

**MAURER-STUTZ**  
 ENGINEERS SURVEYORS

2325 N. DAVIS LANE, SUITE 200 | PEORIA, ILLINOIS 61604 | 3070 EAST 40th STREET | CARROLL, ILLINOIS 61810  
 PH. 309.693-9100 | FAX 309.693-9101 | PH. 309.644-7101 | FAX 309.644-7102

ILLINOIS PROFESSIONAL ENGINEER LICENSE #028-027524

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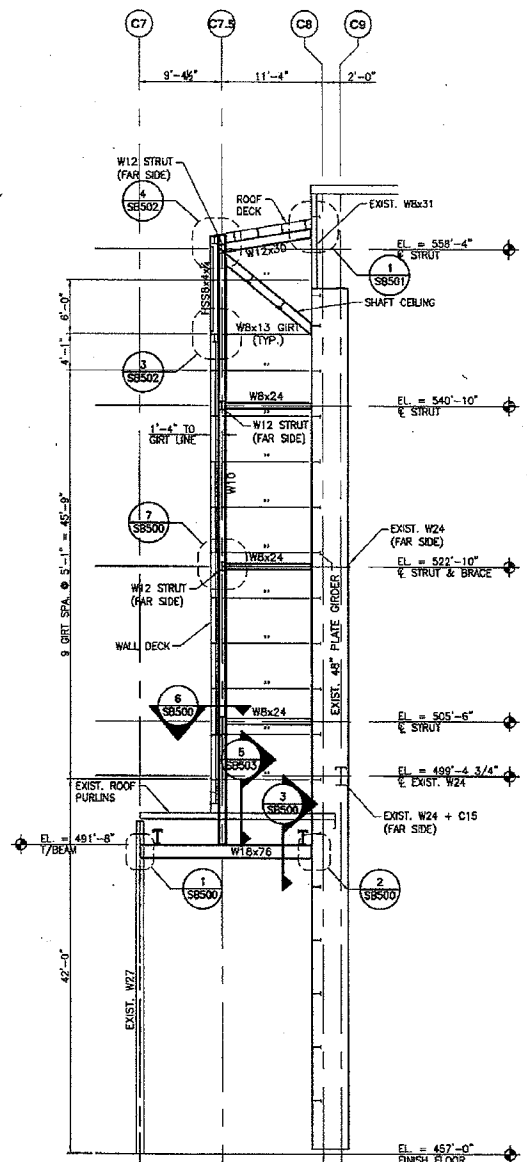
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**REVISION RECORD**

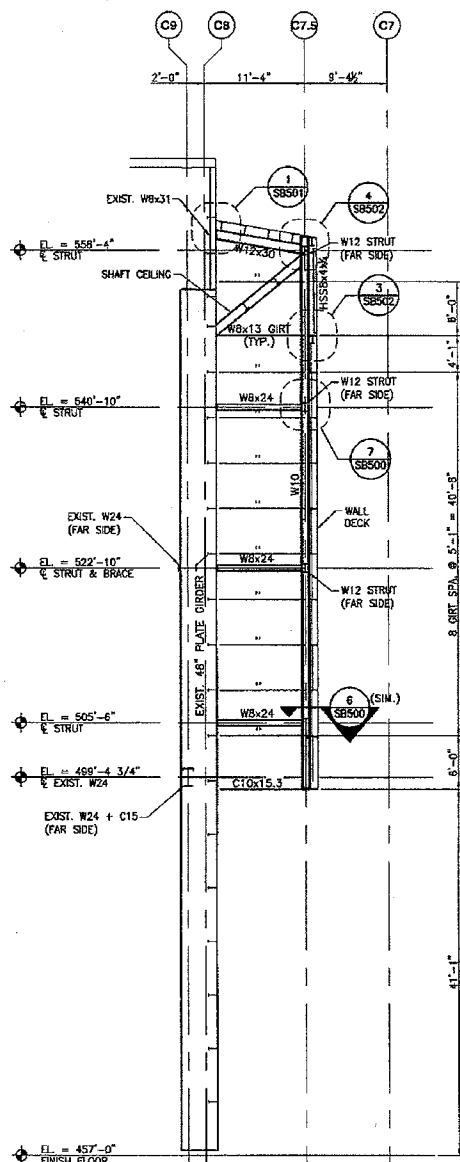
**DO NOT SCALE DIMENSIONS**

<b>Keystone Steel &amp; Wire</b>		VENDOR BLOCK INSERT	
DEPT. CASTER		KEYSTONE STEEL AND WIRE COMPANY 7000 DEER HUNT ROAD PEORIA, IL 61611 (309) 697-7000	
EQUIP. VENTILATION ENCLOSURE STACK		NAME STACK FRAMING ELEVATIONS	
MANUFACTURER NAME: MAURER - STUTZ		REFERENCE ORGS.	
DATE	SCALE	FILE	SHT 10 OF 19
MANUFACTURER DRAWING NUMBER	KEYSTONE ASSIGNED DRAWING NUMBER		
23114001.16SB201	D-25638	REV. 0	

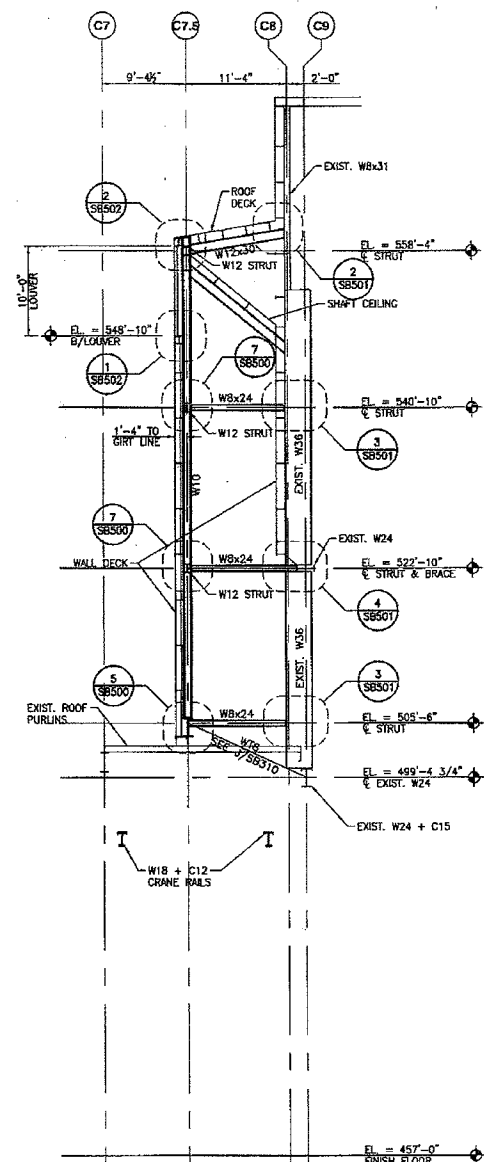
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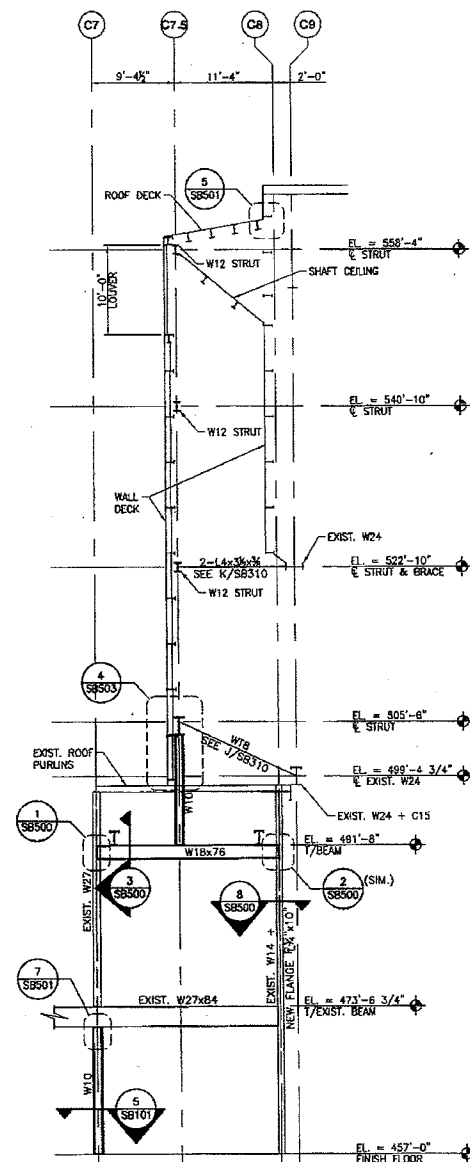
**D FRAMING ELEVATION - GRID S**  
SCALE: 1/8" = 1'-0"



**E FRAMING ELEVATION - GRID Ca**  
SCALE: 1/8" = 1'-0"



**F FRAMING ELEVATION - GRID Cc**  
SCALE: 1/8" = 1'-0"



**G FRAMING ELEVATION - GRID R**  
SCALE: 1/8" = 1'-0"

**SHEET NOTES:**

1. FOR GENERAL NOTES, SEE DWG. G8002.
2. ALL SECTIONS ARE TAKEN FROM DWG. SB200 AND SB201.
3. SHAFT CEILING DETAIL NOT SHOWN. SEE DWG. SB305 FOR CEILING DETAILS.

**NOT FOR CONSTRUCTION**

MSI PROJECT 23114001.16

**MAURER-STUTZ**  
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3116 N. DREXEL AVE. SUITE 101 | P.O. BOX 11800 | GAITHERSBURG, MD 20878  
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REV.	DATE	BY	DESCRIPTION OF CHANGE

AutocAD administered changes only

**DO NOT SCALE DIMENSIONS**

REFERENCE DRGS.

REVISION RECORD

MICROFILM DATE

**Keystone Steel & Wire** VENDOR BLOCK INSERT

DEPT. CASTER

EQUIP. VENTILATION ENCLOSURE STACK

NAME STACK FRAMING ELEVATIONS

MANUFACTURER NAME: MAURER - STUTZ

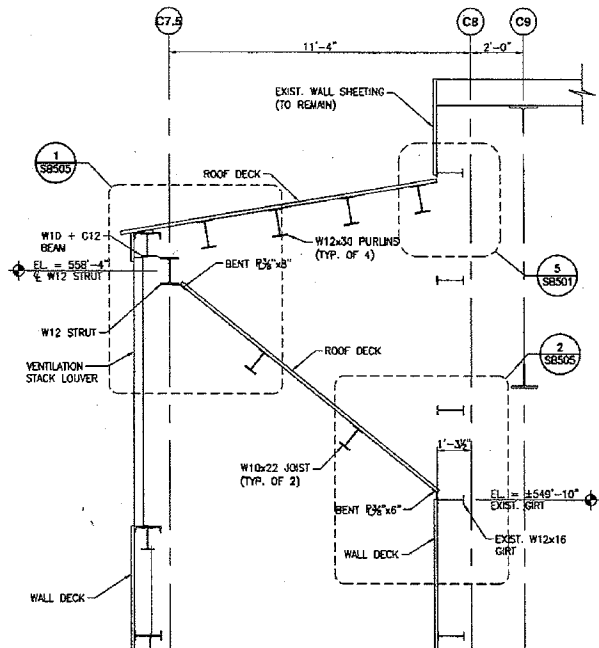
DATE: [ ] / [ ] / [ ] SCALE: 1/8" = 1'-0"

MANUFACTURER DRAWING NUMBER: 23114001.16SB300

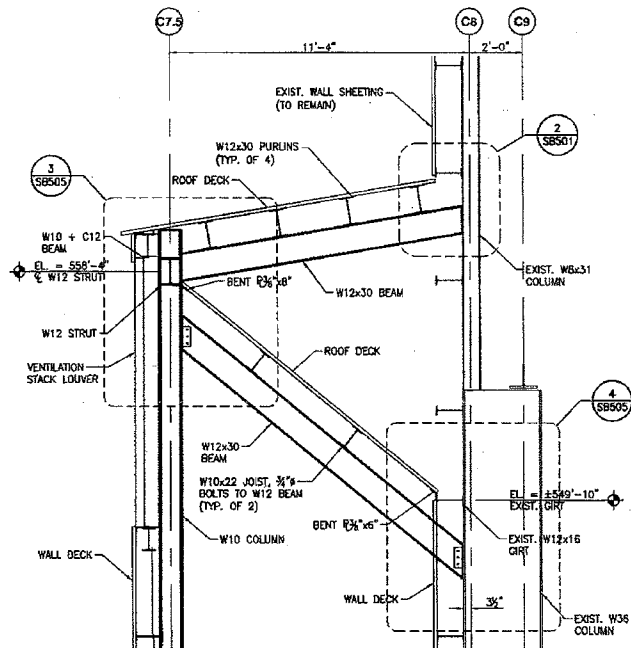
KEYSTONE ASSIGNED DRAWING NUMBER: D-25638

REV. 0

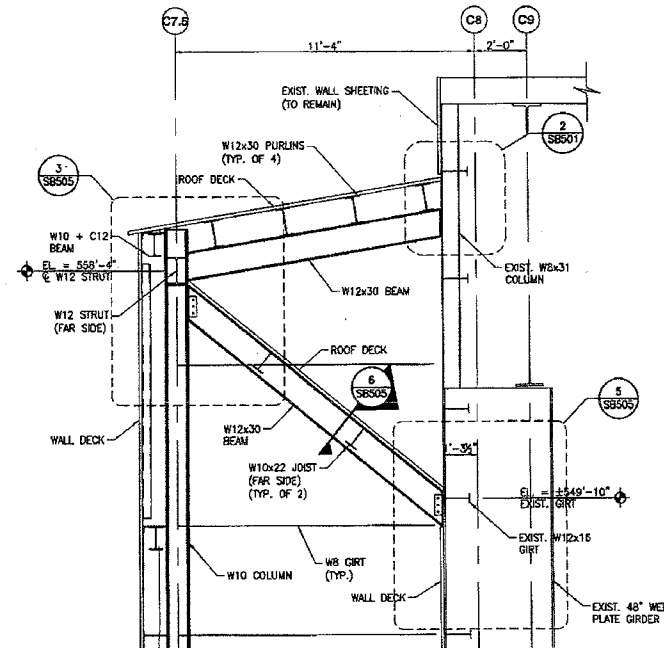
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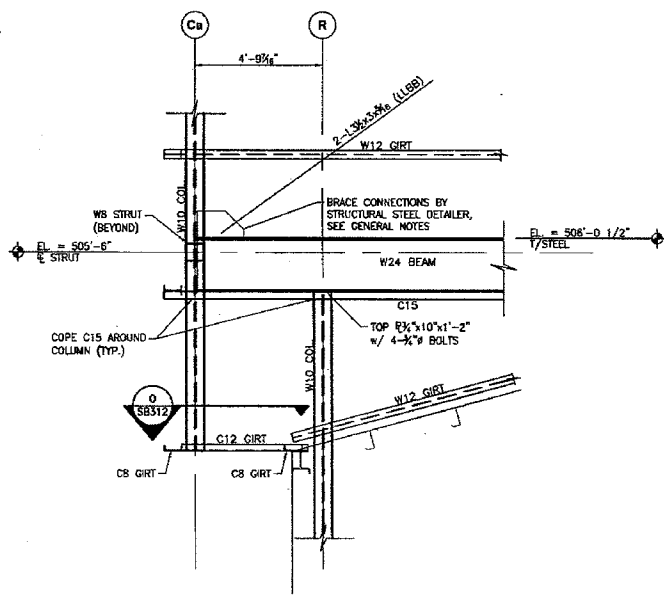
1 TYP. SHAFT CEILING SECTION  
SCALE: 3/8" = 1'-0"



2 SHAFT CEILING SECTION AT GRID Cc  
SCALE: 3/8" = 1'-0"



3 SHAFT CEILING SECTION AT SIDES  
SCALE: 3/8" = 1'-0"



4 FRAMING DETAIL  
SCALE: 3/8" = 1'-0"

SHEET NOTES:

1. FOR GENERAL NOTES, SEE DWG. G8002.
2. WORK THIS SHEET WITH DWG. SB200 AND SB300.

**NOT FOR  
CONSTRUCTION**

MSI PROJECT 23114001.16

**MAURER-STUTZ**  
ENGINEERS SURVEYORS

510 N. DREXEL AVE., SUITE 100 | PHILADELPHIA, PA 19106-3590 | 215-596-3100 | FAX 215-596-3101  
1870 EAST ASH STREET | CANTON, OHIO 44705 | 330-251-7323 | FAX 330-251-4332  
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REV.	DATE	BY	DESCRIPTION OF CHANGE

**DO NOT SCALE DIMENSIONS**

REFERENCE DRGS.

**Keystone Steel & Wire** VENDOR BLOCK INSERT

KEYSTONE STEEL AND WIRE COMPANY  
7000 SOUTH WEST AVENUE  
P.O. BOX 1116161  
DENVER, CO 80201

DEPT. CASTER

EQUIP. VENTILATION ENCLOSURE STACK

NAME STACK FRAMING SECTIONS

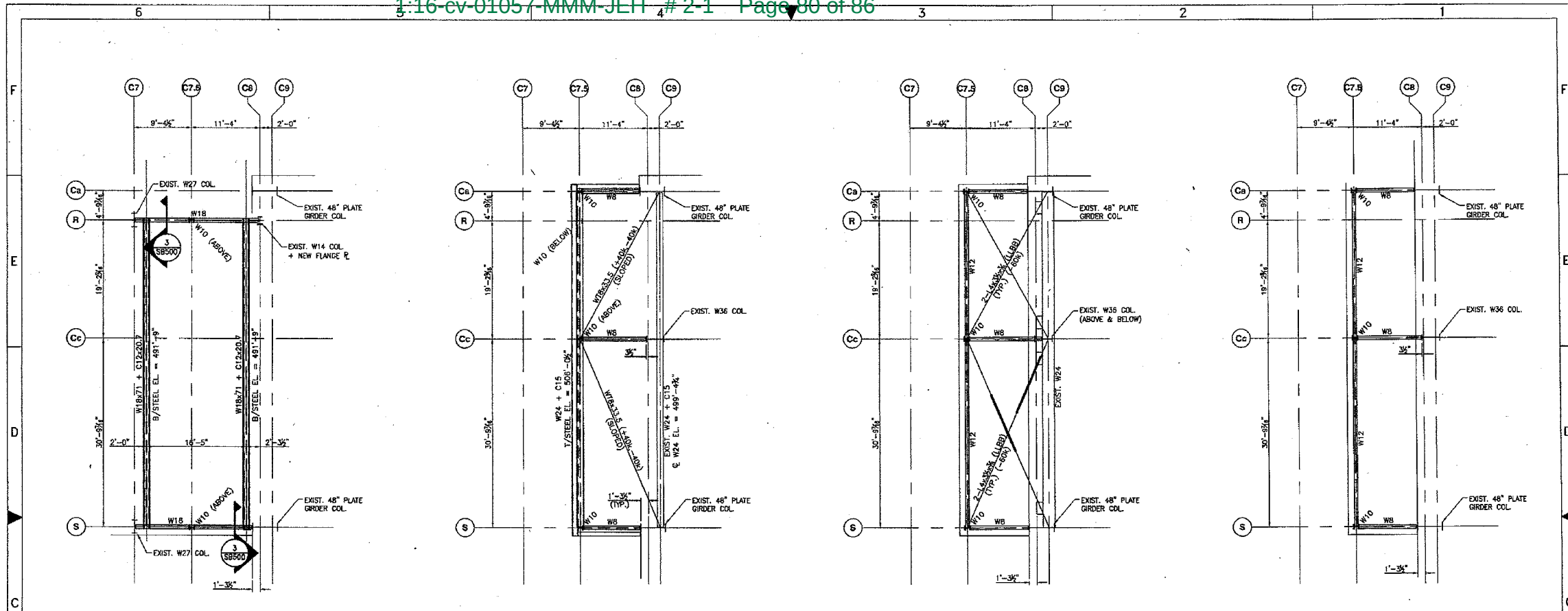
MANUFACTURER NAME: MAURER - STUTZ

DATE SCALE FILE 311 SHT 12 OF 18

MANUFACTURER DRAWING NUMBER KEYSTONE ASSIGNED DRAWING NUMBER

23114001.16SB305 D-25638 REV. 0

REVISION RECORD MICROFILM DATE



**H** FRAMING PLAN - ELEV. 491'-8"  
SCALE: 1/8" = 1'-0"

**J** FRAMING PLAN - ELEV. 505'-6"  
SCALE: 1/8" = 1'-0"

**K** FRAMING PLAN - ELEV. 522'-10"  
SCALE: 1/8" = 1'-0"

**L** FRAMING PLAN - ELEV. 540'-10"  
SCALE: 1/8" = 1'-0"

NOTE: T/STEEL EL. = 491'-8" U.N.O.

- SHEET NOTES:**
- FOR GENERAL NOTES, SEE DWG. G8002.
  - PLAN VIEW LOCATIONS ARE SHOWN ON DWG. SB200.
  - AN UNDERHUNG BRIDGE CRANE SHALL BE HUNG FROM THE W18+C12 BEAMS SHOWN IN FRAMING PLAN "H". FOR INFORMATION ON THIS BRIDGE CRANE, SEE SECTION 13 ON DWG. G8003.
  - THE FABRICATOR SHALL LIMIT AND COORDINATE THE SWAY ON THESE CRANE RAIL BEAMS SUCH THAT THE VARIATION IN DISTANCE BETWEEN THE TWO BEAMS ACROSS THE SPAN REMAINS WITHIN TOLERANCES PERMITTED BY THE CRANE MANUFACTURER.
  - ELEVATIONS FOR EACH FRAMING PLAN REPRESENT CENTERLINE OF EACH FRAMING MEMBER UNLESS NOTED OTHERWISE.

**NOT FOR CONSTRUCTION**

MSI PROJECT 23114001.16

**MAURER-STUTZ**  
ENGINEERS SURVEYORS

1114 N. GARDEN LANE, SUITE 100 | PEORIA, ILLINOIS 61654 | 3070 EAST 45TH STREET | GAITHERSBURG, MARYLAND 20878  
PH: (309) 693-7165 | FAX: (309) 693-7166 | PH: (301) 542-7111 | FAX: (301) 542-7112

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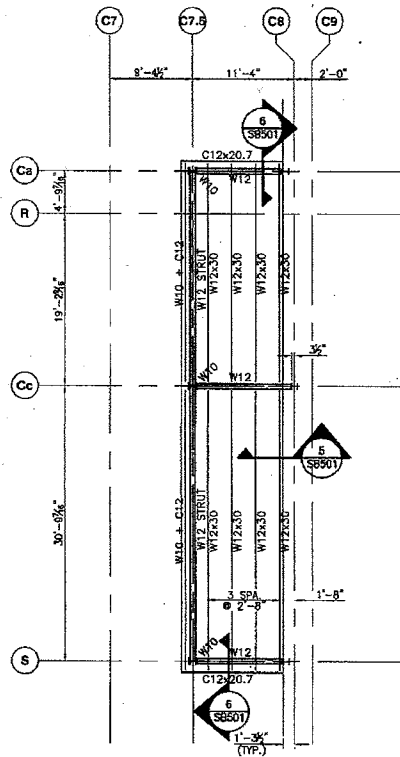
AutoCAD administered changes only

**REVISION RECORD**

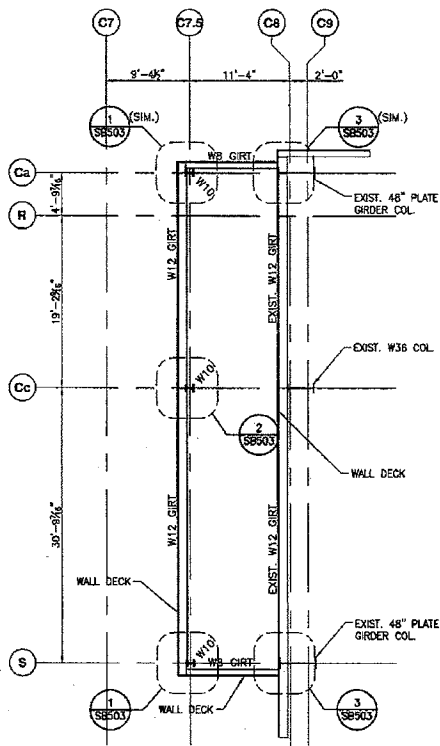
<b>DO NOT SCALE DIMENSIONS</b>	<b>Keystone Steel &amp; Wire</b>		
	DEPT. CASTER		
	EQUIP. VENTILATION ENCLOSURE STACK		
	NAME STACK FRAMING PLANS		
MANUFACTURER NAME: MAURER - STUTZ		REFERENCE DRGS.	
DATE	SCALE	FILE 311   SHT 13 OF 19	
MANUFACTURER DRAWING NUMBER		KEYSTONE ASSIGNED DRAWING NUMBER	
23114001.16SB310		D-25638   REV. 0	

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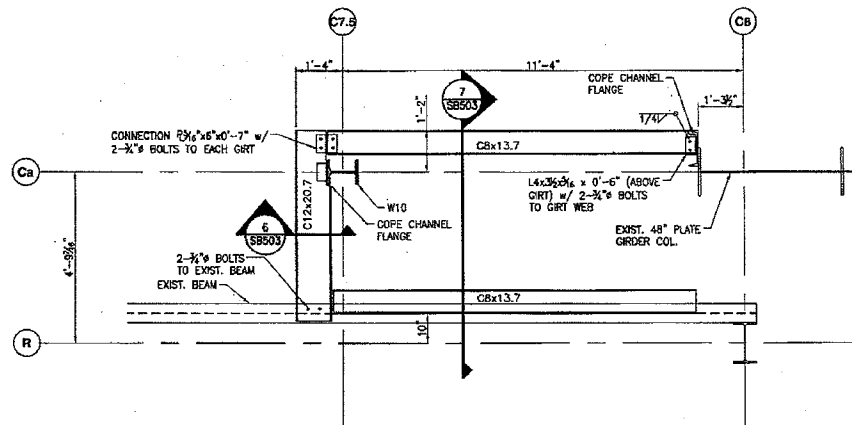




M FRAMING PLAN - VENTILATION STACK ROOF  
SCALE: 1/8" = 1'-0"



N TYP. SECTION THRU VENTILATION STACK  
SCALE: 1/8" = 1'-0"



O STACK FLOOR PLAN  
SCALE: 1/2" = 1'-0"

SHEET NOTES:

- FOR GENERAL NOTES, SEE DWG. GB002.
- WORK THIS SHEET WITH DWG. SB200 AND SB305.
- FOR ROOF FRAMING ELEVATIONS, SEE DWG. SB502.

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MSI PROJECT 23114001.16

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3115 AL DREYFUS BLVD. SUITE 100 | BOCA RATON, FL 33433 | TEL: 561-993-8000 | FAX: 561-993-8001  
2851 S.W. 107th Ave., Suite 100 | Coral Gables, FL 33134 | TEL: 305-441-2277 | FAX: 305-441-2278

BLINQ PROFESSIONAL DESIGN SERVICES, INC.

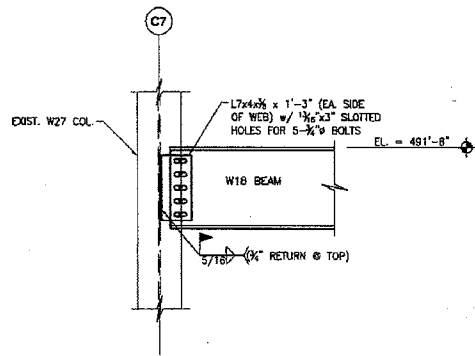
"WORKING WITH YOU BY DESIGN"

REV.	DATE	BY	DESCRIPTION OF CHANGE

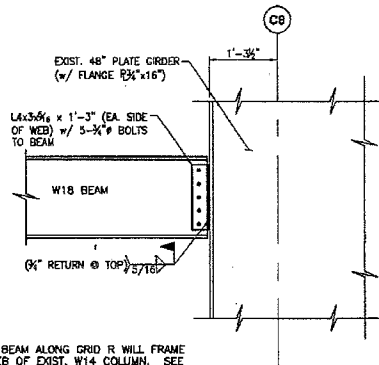
**DO NOT SCALE DIMENSIONS**

<p><b>Keystone Steel &amp; Wire</b></p> <p>DEPT. CASTER</p> <p>EQUIP. VENTILATION ENCLOSURE STACK</p> <p>NAME STACK FRAMING PLANS</p> <p>MANUFACTURER NAME: MAURER - STUTZ</p> <p>DATE   SCALE   FILE 311   SHT 14 OF 19</p> <p>MANUFACTURER DRAWING NUMBER   KEYSTONE ASSIGNED DRAWING NUMBER</p>	<p>VENDOR BLOCK INSERT</p> <p><small>KEYSTONE STEEL AND WIRE COMPANY 7000 SOUTH WEST PALM AVENUE, S. MIAMI, FL 33157</small></p>	
	<p>REFERENCE DRGS.</p>	<p>23114001.16SB312</p>
	<p>REVISION RECORD</p> <p>MICROFILM DATE</p>	<p>D-25638</p>
	<p>REV. O</p>	<p>REV. O</p>

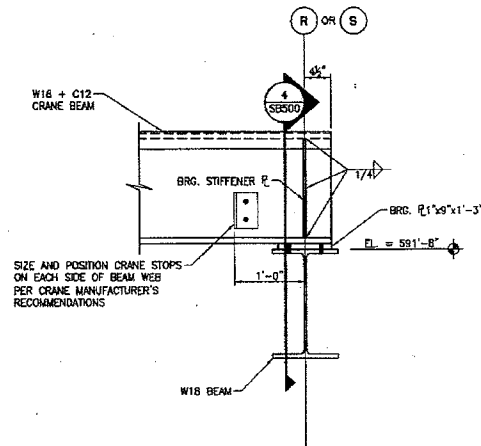
EX321(2)114001.16.dwg (14) - Equipment 30" x 30" x 20" Ventilation Enclosure 3/25/2015 1:01 PM  
 Author: Mason, Michael  
 Project: 23114001.16 - West Palm Beach  
 Sheet: 14 of 19



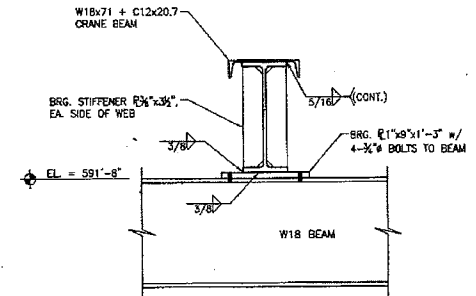
1 BEAM CONNECTION DETAIL  
SCALE: 3/4" = 1'-0"



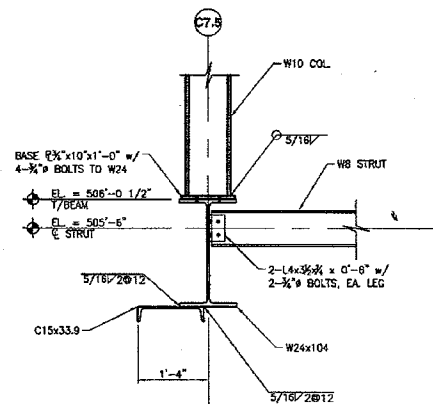
2 BEAM CONNECTION DETAIL  
SCALE: 3/4" = 1'-0"



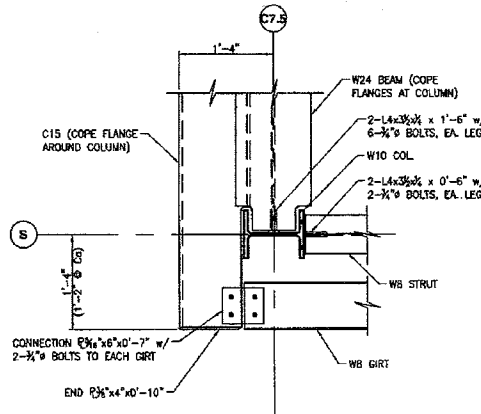
3 CRANE BEAM DETAIL  
SCALE: 1" = 1'-0"



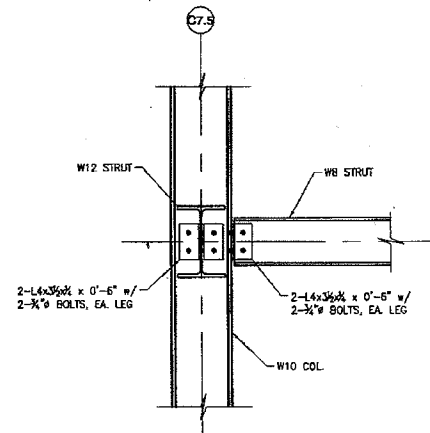
4 CRANE BEAM DETAIL  
SCALE: 1" = 1'-0"



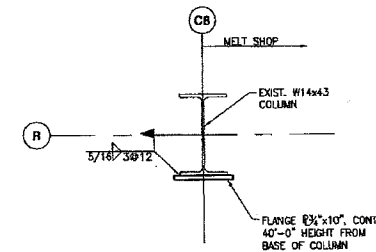
5 HEADER BEAM DETAIL AT GRID Cc  
SCALE: 3/4" = 1'-0"



6 HEADER BEAM END DETAIL  
SCALE: 1" = 1'-0"  
(DETAIL AT GRID Ca SIMILAR, BUT REVERSED)



7 TYP. STRUT CONNECTION DETAIL  
SCALE: 1" = 1'-0"



8 W14 COLUMN REINFORCEMENT  
SCALE: 1" = 1'-0"

SHEET NOTES:

- FOR GENERAL NOTES, SEE DWG. G9002.
- DETAILS ARE TAKEN FROM DWG. SB300 OR SB310.
- STEEL FABRICATOR SHALL DETAIL COMPONENTS WITH A SLOTTED CONNECTION SUCH THAT THE BOLTS WILL SET IN THE MIDDLE OF THE SLOT UNDER NORMAL CONDITIONS.
- DIAGONAL BRACES ARE NOT SHOWN IN THE APPLICABLE DETAILS. THE STEEL DETAILER SHALL MODIFY THESE CONNECTIONS AS NECESSARY TO INCORPORATE THE BRACE CONNECTIONS AS INDICATED IN THE GENERAL NOTES.

NOT FOR CONSTRUCTION

MSI PROJECT 23114001.16

**MAURER-STUTZ**  
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1500 N. D. WISLAMP, SUITE 300 | P.O. BOX 10000 | 1875 EAST 18TH STREET | CHICAGO, ILLINOIS 60616  
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REV.	DATE	BY	DESCRIPTION OF CHANGE

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REFERENCE DRGS.

MICROFILM DATE

**Keystone Steel & Wire** VENDOR BLOCK INSERT

DEPT. CASTER

EQUIP. VENTILATION ENCLOSURE STACK

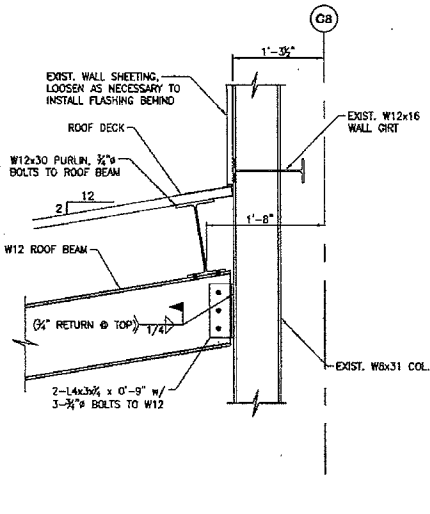
NAME FRAMING DETAILS

MANUFACTURER NAME: MAURER - STUTZ

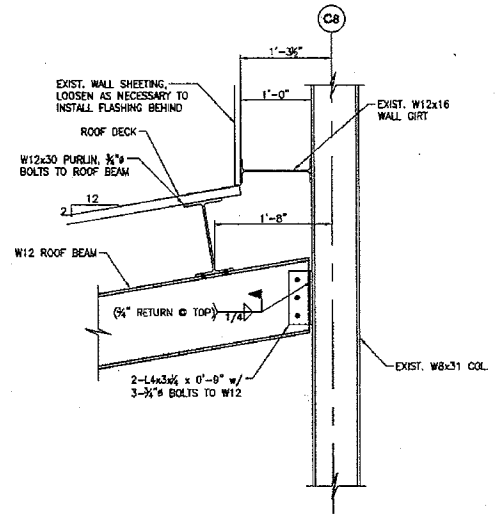
DATE SCALE FILE 311 SHT 15 OF 19

MANUFACTURER DRAWING NUMBER KEYSTONE ASSIGNED DRAWING NUMBER

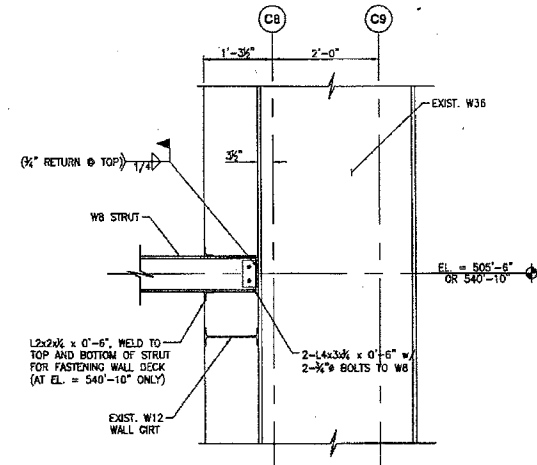
23114001.16SB500 D-25638 REV. 0



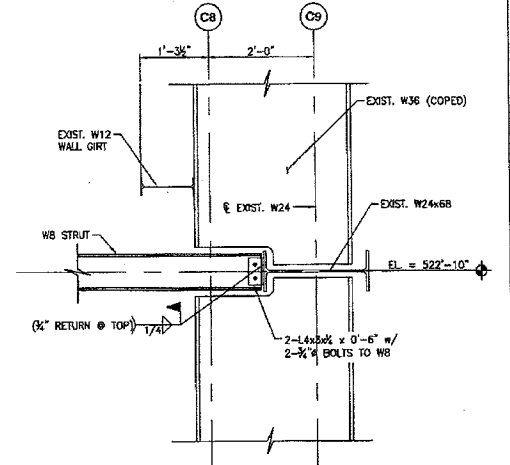
1 STACK ROOF BEAM DETAIL  
SCALE: 1" = 1'-0"



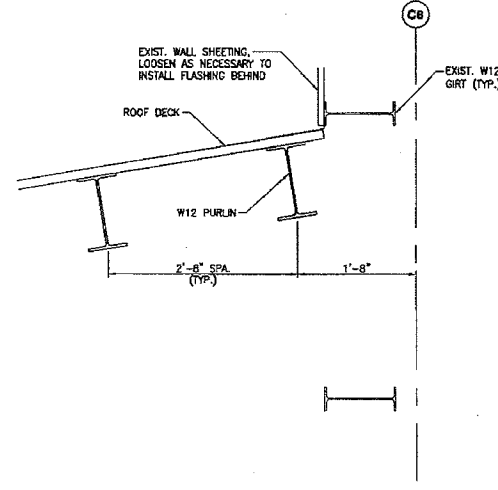
2 STACK ROOF BEAM DETAIL  
SCALE: 1" = 1'-0"



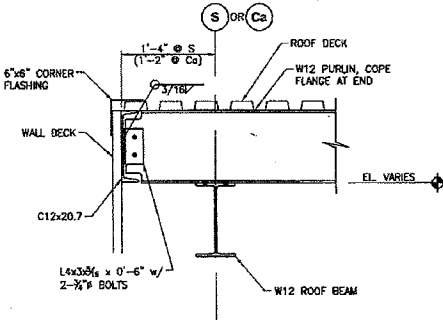
3 STRUT END DETAIL @ GRID Cc  
SCALE: 3/4" = 1'-0"



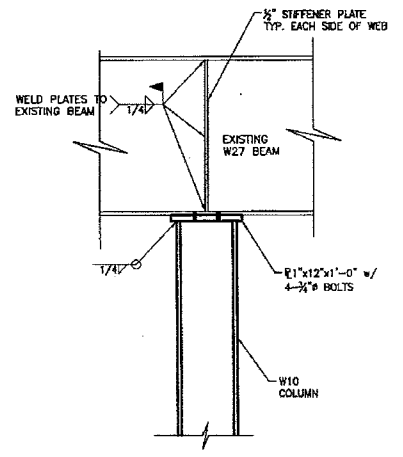
4 STRUT END DETAIL @ GRID Cc  
SCALE: 3/4" = 1'-0"



5 STACK ROOF DETAIL  
SCALE: 1" = 1'-0"



6 STACK ROOF EDGE DETAIL  
SCALE: 1" = 1'-0"



7 C7 COLUMN CONNECTION DETAIL  
SCALE: 1" = 1'-0"

- SHEET NOTES:
- FOR GENERAL NOTES, SEE DWG. C8002.
  - DETAILS TAKEN FROM DWG. SB300, SB305, OR S9312.

**NOT FOR CONSTRUCTION**

MSI PROJECT 23114001.16

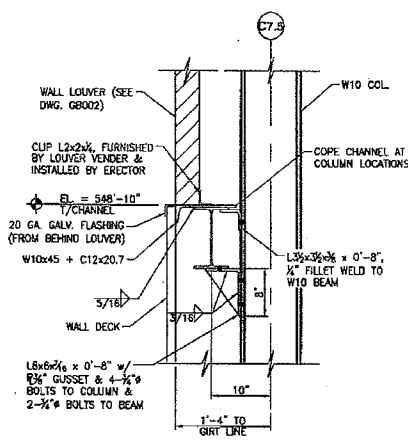
**MAURER-STUTZ**  
ENGINEERS SURVEYORS

1515 N. BRIDLE LANE, SUITE 100 | P.O. BOX 41000 | 1470 EAST AUSTIN STREET | CANTON, MISSISSIPPI 39046  
PH: 601.885.2910 | FAX: 601.885.2915

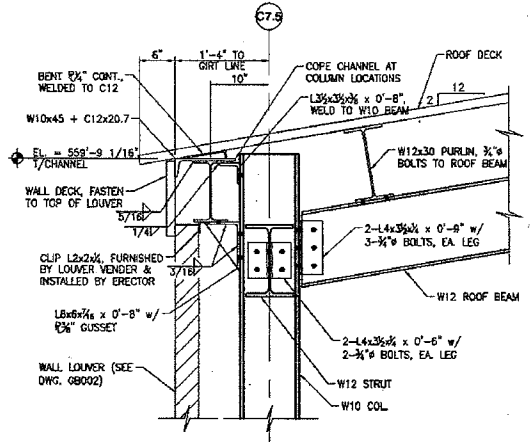
ALL OUR PROFESSIONAL DESIGN FROM LICENSED PROFESSIONALS  
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REV.	DATE	BY	DESCRIPTION OF CHANGE

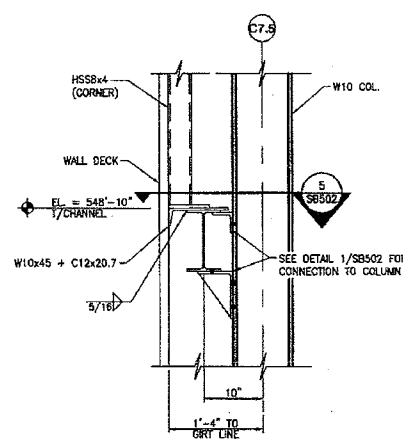
<b>DO NOT SCALE DIMENSIONS</b>	KeyStone Steel & Wire		VENDOR BLOCK INSERT
	<small>KEYSTONE STEEL AND WIRE COMPANY 7000 SOUTH WEST AVENUE P.O. BOX 81581   (303) 987-7000</small>		
REFERENCE DRGS.	DEPT. CASTER		
	EQUIP. VENTILATION ENCLOSURE STACK		
	NAME FRAMING DETAILS		
	MANUFACTURER NAME: MAURER - STUTZ		
	DATE	SCALE	FILE 311   SH1 16 OF 19
	MANUFACTURER DRAWING NUMBER		KEYSTONE ASSIGNED DRAWING NUMBER
	23114001.16SB501	D-25638	REV. 0
	MICROFILM DATE		



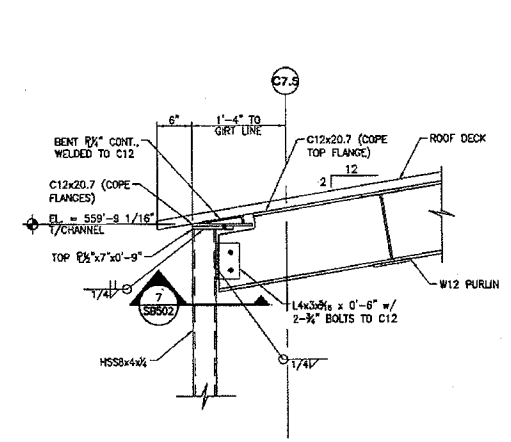
1 STACK LOUVER DETAIL  
SCALE: 1" = 1'-0"



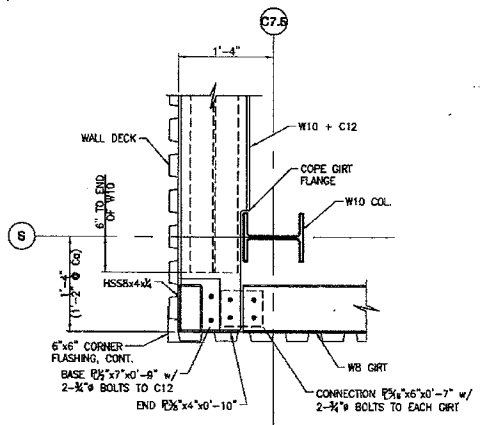
2 STACK LOUVER DETAIL  
SCALE: 1" = 1'-0"



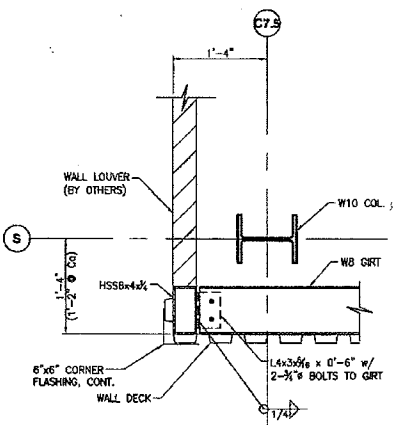
3 STACK LOUVER DETAIL  
SCALE: 1" = 1'-0"



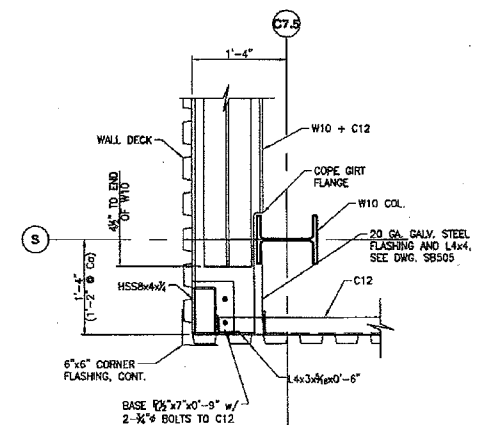
4 ROOF CORNER DETAIL  
SCALE: 1" = 1'-0"  
(WALL DECK, COLUMN, AND W10 BEAM NOT SHOWN FOR CLARITY)



5 CORNER DETAIL BELOW LOUVER  
SCALE: 1" = 1'-0"  
(DETAIL AT GRID Cg SIMILAR, BUT REVERSED)



6 CORNER DETAIL AT LOUVER  
SCALE: 1" = 1'-0"  
(DETAIL AT GRID Cg SIMILAR, BUT REVERSED)



7 CORNER DETAIL ABOVE LOUVER  
SCALE: 1" = 1'-0"  
(DETAIL AT GRID Cg SIMILAR, BUT REVERSED)

- SHEET NOTES:
- FOR GENERAL NOTES, SEE DWG. G8002.
  - DETAILS 1-4 ARE TAKEN FROM DWG. S6300.

**NOT FOR CONSTRUCTION**

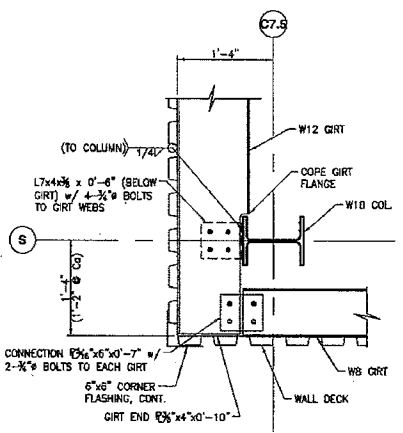
MSI PROJECT 23114001.16

**MAURER-STUTZ**  
ENGINEERS SURVEYORS

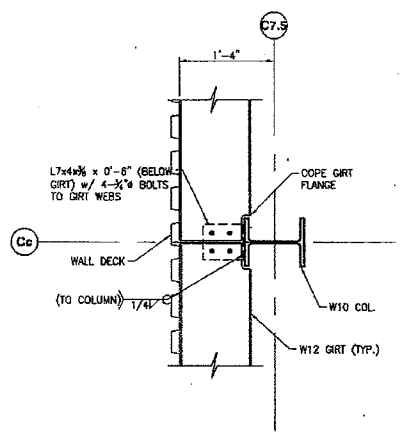
ILLINOIS PROFESSIONAL DESIGN FIRM LICENSE 0384-023784  
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REV.	DATE	BY	DESCRIPTION OF CHANGE

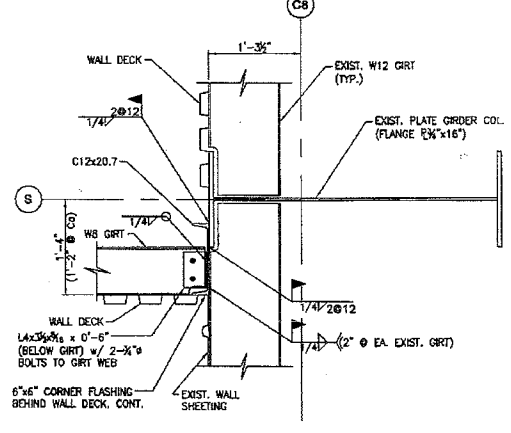
<b>DO NOT SCALE DIMENSIONS</b>	Keystone Steel & Wire		VENDOR BLOCK INSERT
	<small>KEYSTONE STEEL AND WIRE COMPANY 7035 SOUTH WEST AVENUE PEORIA, IL 61611 (309) 697-7000</small>		
REFERENCE DRGS.	DEPT. CASTER		
	EQUIP. VENTILATION ENCLOSURE STACK		
	NAME FRAMING DETAILS		
	MANUFACTURER NAME: MAURER - STUTZ		
	DATE	SCALE	FILE 311   SHT 19 OF 19
	MANUFACTURER DRAWING NUMBER		KEYSTONE ASSIGNED DRAWING NUMBER
	23114001.16S8502		D-25638
	MICROFILM DATE		REV. 0



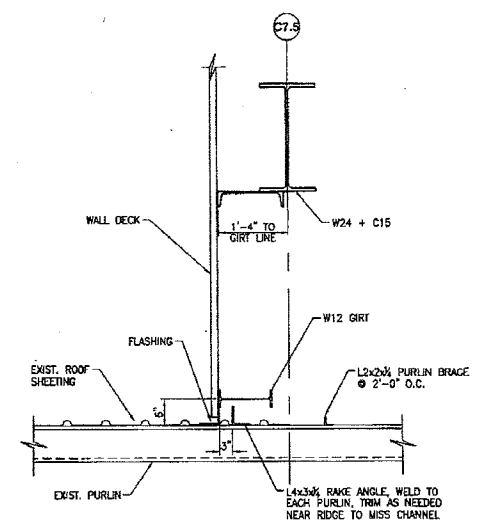
**1 GIRT CONNECTION DETAIL**  
SCALE: 1" = 1'-0"  
(DETAIL AT GRID C<sub>0</sub> SIMILAR, BUT REVERSED)



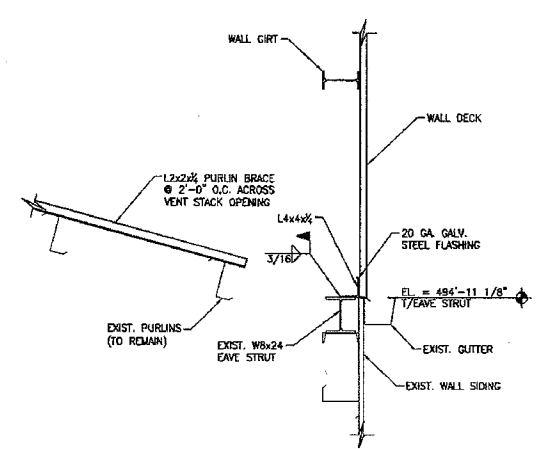
**2 GIRT CONNECTION DETAIL**  
SCALE: 1" = 1'-0"



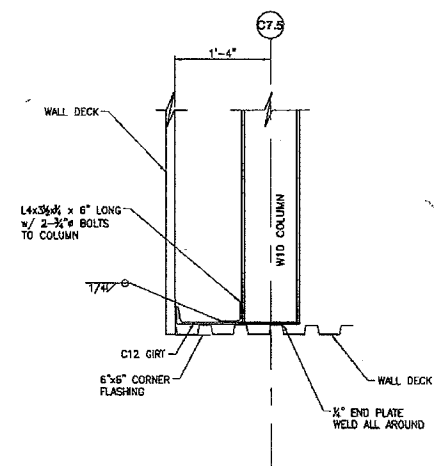
**3 GIRT CONNECTION DETAIL**  
SCALE: 1" = 1'-0"  
(DETAIL AT GRID C<sub>0</sub> SIMILAR, BUT REVERSED)



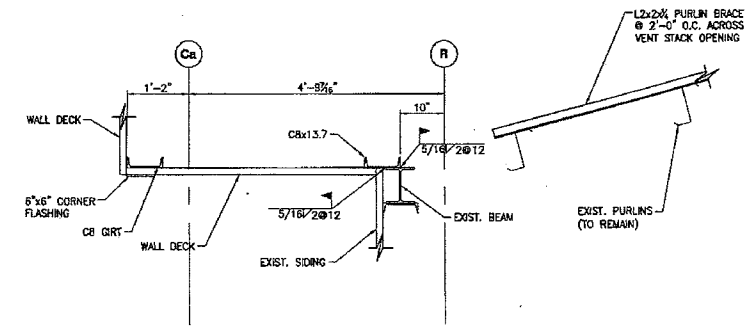
**4 SIDING DETAIL OVER EXIST. ROOF**  
SCALE: 3/4" = 1'-0"



**5 SIDING DETAIL ALONG GRID S**  
SCALE: 3/4" = 1'-0"



**6 GIRT CONNECTION DETAIL**  
SCALE: 1" = 1'-0"



**7 GIRT CONNECTION DETAIL**  
SCALE: 3/4" = 1'-0"

**NOT FOR CONSTRUCTION**

- SHEET NOTES:**
- FOR GENERAL NOTES, SEE DWG. G8002.
  - DETAILS TAKEN FROM DWG. SB300 OR SB312.

MSI PROJECT 23114001.16

**MAURER-STUTZ**  
ENGINEERS SURVEYORS

3516 N. DAVIS ROAD, SUITE 100 | PEORIA, ILLINOIS 61614 | 309.687.8300 | FAX 309.687.8301  
P.O. BOX 600000 | ST. LOUIS, MISSOURI 63160 | 314.993.8700 | FAX 314.993.8701

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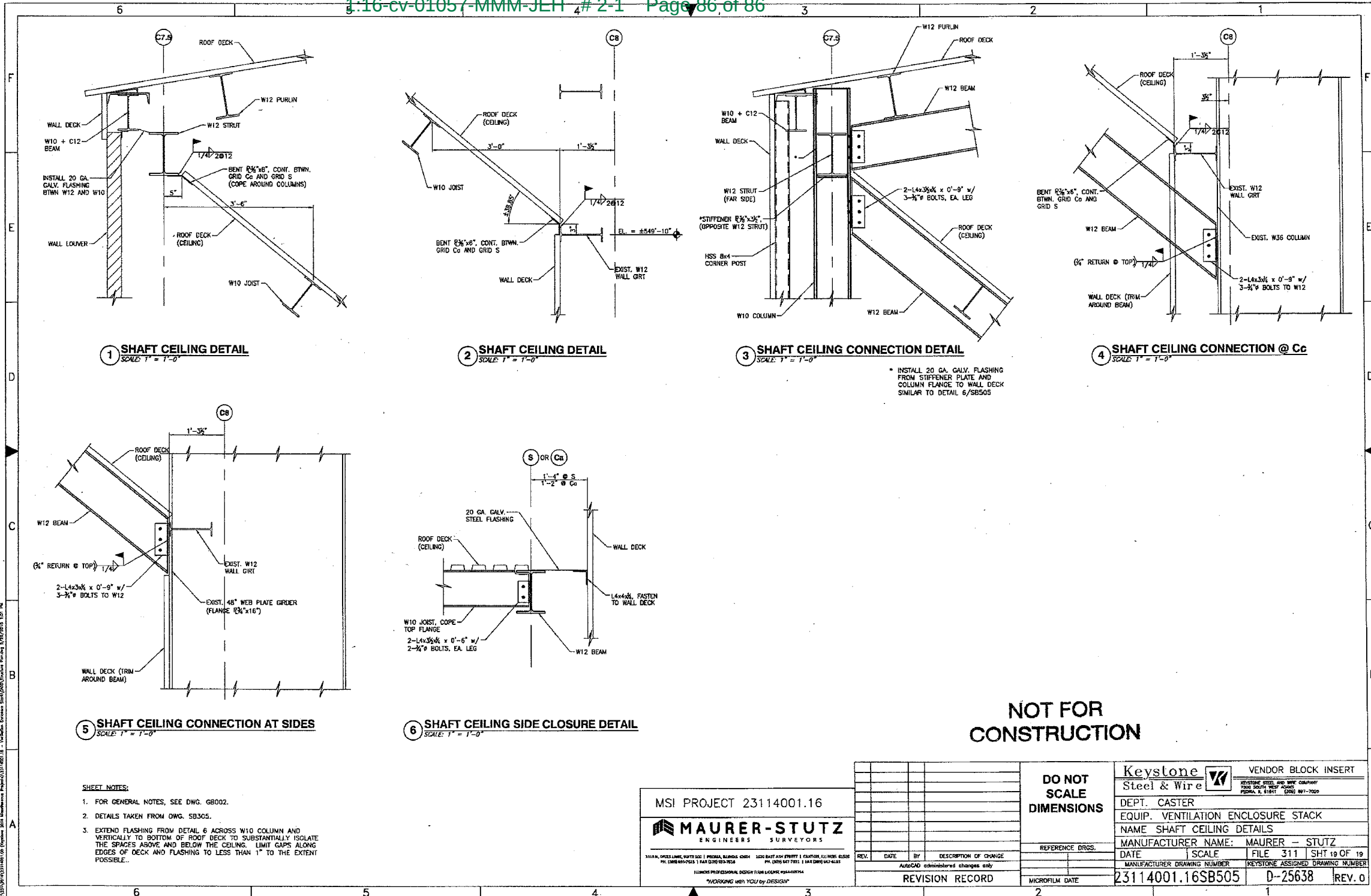
REV.	DATE	BY	DESCRIPTION OF CHANGE
AutOCAD administered changes only			
REVISION RECORD			

**DO NOT SCALE DIMENSIONS**

REFERENCE DRGS.

MICROFILM DATE

<b>Keystone Steel &amp; Wire</b>		VENDOR BLOCK INSERT	
DEPT. CASTER		KEYSTONE, STEEL AND WIRE COMPANY 7025 SOUTH WEST AVENUE PEORIA, IL 61654 (309) 697-7000	
EQUIP. VENTILATION ENCLOSURE STACK		NAME FRAMING DETAILS	
MANUFACTURER NAME: MAURER - STUTZ		MANUFACTURER DRAWING NUMBER	
DATE	SCALE	FILE	SHT 18 OF 18
23114001.16SB503		D-25638	
REV. 0		REV. 0	



1 SHAFT CEILING DETAIL  
SCALE: 1" = 1'-0"

2 SHAFT CEILING DETAIL  
SCALE: 1" = 1'-0"

3 SHAFT CEILING CONNECTION DETAIL  
SCALE: 1" = 1'-0"

4 SHAFT CEILING CONNECTION @ Cc  
SCALE: 1" = 1'-0"

5 SHAFT CEILING CONNECTION AT SIDES  
SCALE: 1" = 1'-0"

6 SHAFT CEILING SIDE CLOSURE DETAIL  
SCALE: 1" = 1'-0"

\* INSTALL 20 GA. GALV. FLASHING FROM STIFFENER PLATE AND COLUMN FLANGE TO WALL DECK SIMILAR TO DETAIL 6/SB505

**NOT FOR CONSTRUCTION**

- SHEET NOTES:**
- FOR GENERAL NOTES, SEE DWG. GB002.
  - DETAILS TAKEN FROM DWG. SB305.
  - EXTEND FLASHING FROM DETAIL 6 ACROSS W10 COLUMN AND VERTICALLY TO BOTTOM OF ROOF DECK TO SUBSTANTIALLY ISOLATE THE SPACES ABOVE AND BELOW THE CEILING. LIMIT CAPS ALONG EDGES OF DECK AND FLASHING TO LESS THAN 1" TO THE EXTENT POSSIBLE.

MSI PROJECT 23114001.16

**MAURER-STUTZ**  
ENGINEERS SURVEYORS

3111 N. DELAWARE, SUITE 202 | PEORIA, ILLINOIS 61654 | 309.697.9777 | CLAYTON, ILLINOIS 62526 | 314.390.9777 | FAX: 314.390.9778

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REV.	DATE	BY	DESCRIPTION OF CHANGE

<b>DO NOT SCALE DIMENSIONS</b>	<b>KeyStone Steel &amp; Wire</b>	VENDOR BLOCK INSERT
	<small>KEYSTONE STEEL AND WIRE COMPANY 7035 SOUTH WESS AVENUE PEORIA, IL 61614 (309) 697-7000</small>	
REFERENCE DRGS.	DEPT. CASTER	EQUIP. VENTILATION ENCLOSURE STACK
	NAME SHAFT CEILING DETAILS	
	MANUFACTURER NAME: MAURER - STUTZ	
	DATE	SCALE
		FILE 311   SHT 19 OF 19
	MANUFACTURER DRAWING NUMBER	KEYSTONE ASSIGNED DRAWING NUMBER
	23114001.16SB505	D-25638 REV. 0
	MICROFILM DATE	

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