COMMERCIAL METALS COMPANY
MESA, AZ

CITY OF MESA, ARIZONA

NARRATIVE FOR THE

DESIGN REVIEW FORMAL
AND
PLANNING & ZONING SUBMITTALS

FOR THE PROPOSED MERCHANT MICRO MILL EXPANSION
EAST GERMANN ROAD

February 3, 2021

PRE-SUBMITTAL CONFERENCE APPLICATION FOR THE PROPOSED MICRO MILL PLANT

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1. INTRODUCTION

Commercial Metals Company (CMC) is proposing to expand our current operation with construction of a new innovative designed steel merchant micro mill with an annual output of 600,000 tons per year. The proposed new merchant micro mill will be located on the same property and within the fence line of the existing rebar micro mill built in 2009 (Zoning case # Z07-67)

The following report describes the Pre-Submittal Site Plan accompanied by drawings and photographs of our existing site installations. The 'Existing' facilities in the Site plan are facilities that are currently in operation and will be referred to as "AZ1" buildings. The 'proposed' facilities are those facilities in which CMC is submitting to the City of Mesa for the initial construction phase. The 'future' facilities are those in which CMC has been previous approved for and anticipates will be constructed and operated sometime in the future.

Existing Facilities:

Buildings:

- AZ1 Melt/Mill Building with adjoining Power Control Rooms
- AZ1 Slag Handling Building
- AZ1 Plant Entrance/Scale Building
- AZ1 Administration Office Building
- AZ1 Rebar Finished Goods Building
- AZ1 Spooler Building
- AZ1 Storeroom Building
- Fabrication Shop
- Fabrication Administration Building

Developed Areas:

- AZ1 Scrap Handling Pad
- AZ1 Fume Treatment plant
- AZ1 Process Water Retention Pond
- AZ1 Cooling Towers
- AZ1 Substation
- Outdoor Product Storage

Proposed Facilities:

Buildings:

- AZ2 Melt/Mill Building with adjoining Power Control Rooms
- Slag Handling Building
- Slag Facility
- Scale Building
- Office / Locker Room Building
- Storeroom Building
- Dry Storage Building

Fume Treatment plant

Developed Areas:
- Scrap Handling Pad
- Cooling Towers
- Process Water Retention Pond
- Outdoor Product storage
- Truck waiting Lot
- Pre-load Lot
- Plant Entrance / Scale House Lot
- Solar Panel Area

Future Facilities:
- Shredder – Previously approved through initial zoning case.

2. PLANT DESCRIPTION

The Merchant Micro Mill is a low-cost and efficient mill that will produce 480,000 tons per year of concrete reinforcing bar (rebar) and 120,000 tons per year of Merchant products.

Similar to our existing operations in Mesa, which has the lowest carbon emissions of all domestic steel mills, the proposed mill utilizes innovative technology that will allow it to be even more environmentally friendly. In addition, the proposed Merchant Micro Mill has the potential to be the first steel mill to be partially powered through solar energy.

The process starts with scrap recycled metal (used cars, appliances, machine turnings and assorted scrap). The scrap metal is melted in a 105-ton Electric Arc Furnace (EAF) in a batch process.

The liquid steel is poured from the EAF into refractory lined ladles and transferred to a Ladle Metallurgy Station (LMS) where it is refined to obtain exact chemistries and temperatures.

The treated steel is then transferred to a Continuous Caster where the steel is poured into a water chilled copper mold. The steel is pulled through the mold with a withdrawal stand and allowed to solidify in the process, producing a continuous octagon shaped billet with an equivalent cross section of 7.25” x 7.25”.

The billet is conveyed on rollers through an Electric Induction Heater where the correct rolling temperature of the steel billet is obtained.

The billet is then fed into a 20 stand Rolling Mill where the billet is reduced in size until the final product shape and size is obtained.

The finished products are then cut to customer lengths and deposited onto a Cooling Bed. The products are cooled and then bundled or stacked per customer specifications and shipped to the end user.

3. PLANT STAFFING

The existing AZ1 mill currently employs 242 full time employees. The proposed Merchant Micro Mill will create an additional 186 high tech positions with an average salary of $70K per year plus benefits.

4. SITE PLAN DESCRIPTION

The proposed Merchant Micro Mill will be located on the existing CMC Steel AZ site bound by East Pecos Road to the north, South Meridian Road to the east, East Germann Road to the south and ZF property to the west. South Meridian Road separates Maricopa and Pinal Counties. CMC plans to construct the new mill on 84 acres, west of the existing CMC Steel AZ1 Mill.

Neighbors to the north of East Pecos Road include CRM of America and Matheson Gas plant. The existing chain link fence line along East Pecos will remain as a barrier.

The City of Mesa currently operates two water well sites adjacent to the ZF / current facility property line. These well sites are unmanned and fenced. The property to the east of South Meridian Road is undeveloped ranchettes within Pinal County. The property to the south of East Germann is zoned for commercial use.

CMC's improvement plans are to construct a new AZ2 Melt/Mill building with adjoining power control buildings, Slag Handling Building, Slag Facility, Scale Building, Office / Locker Room, Storeroom, Dry Storage Building, Scrap Handling Pad, Fume Treatment Plant, Cooling Towers, Process Water Retention, Outdoor Product Storage, Truck Waiting Lot, Pre-load Lot, Plant Entrance / Scale House Lot and Solar Panel Area. The total square footage of the proposed buildings is approximately 460,927 square feet with another 2,462,150 square feet being developed areas (includes a 1,742,400 solar panel area).

A new plant entrance will be constructed on East Germann Road, west of the existing mill entrance. The new plant entrance will be used as the construction entrance while building and will be a truck entrance once construction is completed.

A new rail system will enter the site in the Northwest corner. Inbound rail will be used to bring scrap material onto the site and outbound rail will be used to ship finished goods material.

The existing electrical substation located adjacent to the east property boundary will be upgraded to support the new Merchant Micro Mill. The substation accepts a primary

voltage feed at 69kV and is stepped down to 34.5kV and 13.8 kV for operations. A picture of an existing substation is included in the Appendix.

The landscaping on site is not anticipated to change from the original landscape plan (Zoning case # Z07-67). Interior landscaping at the Office/Locker Room Building will match the existing landscaping at the current Administration Office Building. A picture of the existing Administration Office Building is included in the appendix.

5. BUILDINGS

The CMC Steel AZ2 facility will be composed of a AZ2 Melt/Mill building with adjoining power control buildings, Slag Handling Building, Slag Facility, Scale Building, Office / Locker Room, Storeroom, Fume Treatment Plant, and Dry Storage Building.

AZ2 Melt/Mill Building

AZ2 Melt/Mill Building is a single-story building which houses the scrap handling, process manufacturing equipment, and finished goods storage. The building is approximately 421,777 square feet with a maximum height of 120 feet. The new AZ2 Melt/Mill Building will match the existing mill structures visually and structurally with steel columns and girders enclosed by metal siding and roofing. Work areas included within the Melt/Mill building include the Scrap Handling, Melting/Casting, Rolling and Finishing areas. Brief descriptions and building features of each area are included below:

Scrap Handling – Scrap, alloys, charge carbon and lime loading performed in a covered crane way with an overhead crane and scrap conveyor loading materials onto a scrap charging conveyor.

- Approximately 27,667 square foot enclosed area
- Approximately 108,000 square foot outside pad area
- Interior and exterior concrete pad to reduce dirt infiltration
- Scrap placed on the exterior concrete pad will be moved into scrap bay with front end loaders.
- Rail Track will enter the building to allow for overhead crane to unload scrap under covered crane way.

Melting/Casting – Scrap steel and alloys continuously feed into an Electric Arc Furnace (EAF) and melted to liquid steel. Liquid steel is transferred in a refractory lined ladle to the Ladle Metallurgy Furnace (LMF) for final processing and sent to the Caster for shaping into steel billets.

- Approximately 32,670 square feet enclosed area
- Tallest section of the Melt/Mill building at approximately 120 feet high
- Two overhead cranes contained within the Melting/Casting area
- The work area includes a single pulpit control room. The pulpit is a prefabricated, pre-wired enclosure with large soundproof glass windows, air conditioning, restrooms, kitchenette and an independent FM200 fire suppression system

- 4,200 square foot concrete mezzanine around the EAF, 2,300 square foot concrete mezzanine around the LMS, and a 3,900 square foot concrete mezzanine around the Caster.
- EAF and LMF transformer vaults constructed of CMU block walls and metal roof

Rolling Mill – The rolling mill building houses induction heaters and rolling mill equipment that shapes billets into finished products, and a cooling bed, straightener, and staker. The equipment rests on concrete slab foundations, plinths, and a flume to collect process cooling water. Utilities, such as hydraulic units and lubrication units, supporting the mill equipment will be installed on the concrete floor slab.

- Approximately 148,841 square foot enclosed area
- Building height in the rolling mill area is approximately 73 feet high
- Building includes a single pulpit control room. The pulpit is a prefabricated, pre-wired enclosure with large soundproof glass windows, air conditioning, restrooms, kitchenette and an independent FM200 fire suppression system
- Lean-tos structurally integrated with the rolling mill section of the Melt/Mill building include rooms for equipment set-up, product testing/measuring and an electrical drives room. The lean-tos are constructed from steel beams, girders, and are enclosed with metal siding and roofing. The square footage is included in the enclosed area stated above.

Utilities Serving the Melt/Mill Building – Nitrogen, Oxygen, and Argon will be piped on site from the Matheson Gas Plant to the North. Natural Gas and city water will be supplied from main underground supply lines along East Germann Road. Process contact and non-contact water will be closed loop systems with pumps and heat exchangers located at the Cooling Tower Area.

Rebar Finished Goods Storage Area

Rebar Finished Goods Storage Area (approximately 63,034 square feet) is used to store finished rebar products. This section of the building will be a prefabricated steel building with steel columns and rafters with a covered crane way and two overhead cranes and will be open with no siding with lanes to load trucks and railcars.

Merchant Finished Goods Storage Area

The Merchant Finished Goods Storage Area (approximately 84,780 square feet) is a climate-controlled building used to store finished merchant products. This building section will be a prefabricated steel building with steel columns and rafters with covered crane ways and two overhead cranes with siding and lanes for loading trucks and railcars.

Fume Treatment Plant

A dust collection Fume Treatment plant, approximately 10,292 square feet, will be constructed east of the AZ2 Melt/Mill Building. The Fume Treatment Plant will collect EAF & LMF dust and load railcars for treatment. The Fume Treatment Plant will be

supported on concrete spread footer foundations. The Fume Treatment Plant will include a 165' high stack.

The Fume Treatment Plant is a Pulse Jet System and will operate at approximately 640,000 ACFM. Approximately 9,320 Tons of Fume Treatment Plant Dust KO61 will be collected per year from the new proposed Mill. The Fume Treatment Plant Dust KO61 will be transported in closed containers and shipped off-site for disposal. See Appendix for Fume Treatment Plant Dust KO61 MSDS sheet.

Slag Handling Building

A Slag Handling Building, approximately 3,600 square feet, will be installed south of the AZ2 Melt/Mill building for slag cooling and processing. The building will be a prefabricated steel building with steel columns and rafters, metal siding, and decking. The Slag Handling Building will be open on one side to permit movement of slag in/out with a front-end loader.

Slag Facility

The Slag Facility Building (Approximately 3,200 square feet) will be an office building used by our slag processing contractors on site and will be complete with HVAC and restroom facilities.

Office / Locker Room

Located East of the AZ2 Melt/Mill Building and West of the existing Scale Building, the Administration Office / Locker Room Building (approximately 12,500 square feet) will be complete with HVAC and restroom facilities.

Scale Building

The Scale Building (approximately 1,770 square feet) will be located north of Germann between the two entrances and will be complete with HVAC and restroom facilities. The Scale Building will have 4 scales, two for inbound truck traffic and two for outbound truck traffic.

Storeroom Building

The Storeroom Building (approximately 11,780 square feet) will be located East of the AZ2 Melt/Mill Building and will be a prefabricated steel building with steel columns and rafters. The Storeroom Building will be used to store spare equipment for repairs.

Dry Storage Building

The Dry Storage Building (approximately 11,780 square feet) will be located South of the AZ2 Melt/Mill Building and will be a prefabricated steel building with steel columns and rafters. The Dry Storage Building will be used to store melt consumable material.

6. DEVELOPED AREAS

Several new developed areas will be located throughout the plant. The areas include a Scrap Handling Pad, Process Water Retention, Cooling Towers, Outdoor Product

Storage, Truck Waiting Lot, Pre-load Lot, and Plant Entrance / Scale House Lot. The Scrap Handling Pad is described above.

Process Water Retention

The Process Water Retention is pit used for cooling and scale removal from the process water system. The Process Water Retention Pond will be located east of the AZ2 Melt/Mill Building and will be approximately 32,000 square feet. The pond will be a concrete pit with divider walls separating the chambers of the pits. A dirt berm will be constructed around the pond to separate the pond from the storm water retention pond. A concrete pump slab will be located with the retention pond area.

One of the process water systems is the "contact" water system. This water cools the hot steel as it is shaped and is also used to cool the exposed surfaces of the process equipment which come in contact with the hot steel. The contact water will be used for landscaping, slag quenching, and dust control on plant roads.

Cooling Towers

Cooling Towers are used in the process to cool process contact water and non-contact water. Contact water is water which directly contacts the hot steel during shaping operations. Non-contact water is water used to cool equipment supporting the manufacturing process and is a closed loop system.

The Cooling Tower area equipment includes cooling towers, pumps, heat exchangers and a chemical treatment unit for contact and non-contact water systems. The equipment is installed on a concrete pad approximately 8,500 square feet. A picture of our existing cooling towers on site is included in the appendix.

Outdoor Product Storage

The Outdoor Product Storage Lot is approximately 115,000 square feet of outdoor space used for finished goods rebar storage. A picture of the existing sites outdoor rebar storage is included in the appendix.

Truck Cell Lot

The Truck Waiting Lot is approximately 87,500 square feet for a truck queuing system to allow us to control truck traffic onsite.

Pre-Load Lot

The Pre-Load Lot is approximately 60,000 square feet of trailer parking used to preload finished goods shipments a day in advance.

Plant Entrance / Scale Lot

As stated above, a new plant entrance will be constructed on East Germann Road, west of the existing mill entrance. The new plant entrance will be used as the construction entrance while building and will be a truck entrance once construction is completed. The scale lot at the entrance will be approximately 308,750 square feet for truck and trailer parking for finished goods shipments to be tied down and secured for road travel.

Solar Panel Area

To continue our commitment to reducing our carbon footprint further through the use of renewable energy and being an industry leader in the sustainability steelmaking process, the AZ2 project will include an approximately 40-acre solar panel area. The solar panels are anticipated to deliver 6-8 megawatt of power to the new facility and will be built at the northeast corner of the property.

7. FUTURE FACILITIES

The original zoning plan (Zoning case # Z07-67) established approval for a Shredder to be constructed and operated on site in the future.

Shredder

The shredder operation consists of an in-feed conveyor loaded by a hydraulic crane, a rotary wheel and grate that "shred" materials into small pieces, an out-feed conveyor that transports shredded products and several separators that remove the metals from the shredded products.

8. FIRE DETECTION AND SUPPRESSION PLAN

A complete Fire Detection and Suppression Plan is being developed and will be submitted under a separate cover to the City of Mesa's Deputy Building Safety Director. The plan will include a description of processes within each area of the AZ2 melt/mill building, justification for eliminating sprinklers from the AZ2 melt/mill building, plan for smoke and heat detection at locations of flammable material, drawings showing location of hydraulic and lubrication units (units containing flammable materials), MSDS sheets for typical flammable materials used with each process area, description of the most likely credible fire event that may occur in each area, review of the IBC 2018 and IFC 2018 and supporting documentation from CMC's insurance company.

9. PERMITTING

Permits will be submitted as we have done in the past, applications for each building and by trade.

10. SCHEDULE

A preliminary project schedule has been developed and is included in the Appendix.

Assuming building and environmental permits are received, construction of the proposed facility will begin in January 2021 with and anticipated start-up in September 2022.

Andrew C. Sarat

Andrew C. Sarat
Director of Operations
CMC Steel Arizona

CMC Steel Arizona
Mesa, Arizona

Appendix A – Aerial Photograph

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Appendix B – Photographs of Current Buildings and Installations

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Appendix B (Continued) – Photographs of Current Buildings and Installations

Above: Pictures of a current Power Control Room (PCR).

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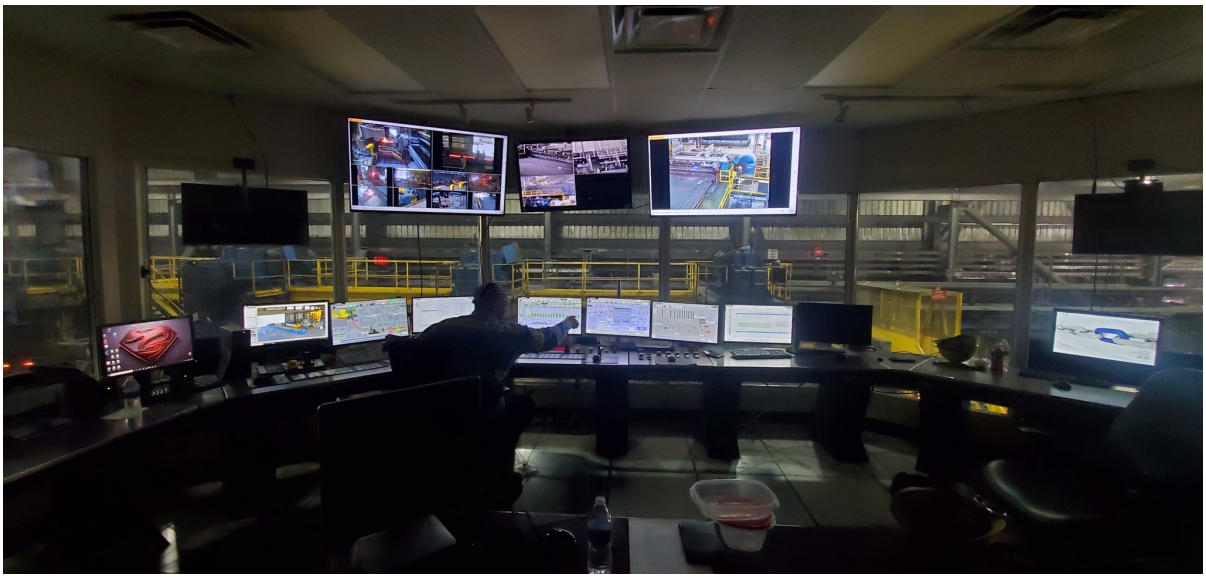
Appendix B (Continued) – Photographs of Current Buildings and Installations

Above: Exterior view of a pulpit control room.
Below: Interior view of a pulpit control room – operator's station.



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Appendix B (Continued) – Photographs of Current Buildings and Installations

Above: Current cooling tower area
Below: Current electrical substation

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Appendix B (Continued) – Photographs of Current Buildings and Installations

Above: Current Fume Treatment Plant

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Appendix B (Continued) – Photographs of Current Buildings and Installations

Above: Current Administration Building.

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Appendix B (Continued) – Photographs of Current Buildings and Installations

Above: Current Rebar Finished Goods Building

Above: Current Storeroom Building

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Appendix B (Continued) – Photographs of Current Buildings and Installations

Above: Current Outdoor Product Storage Lot

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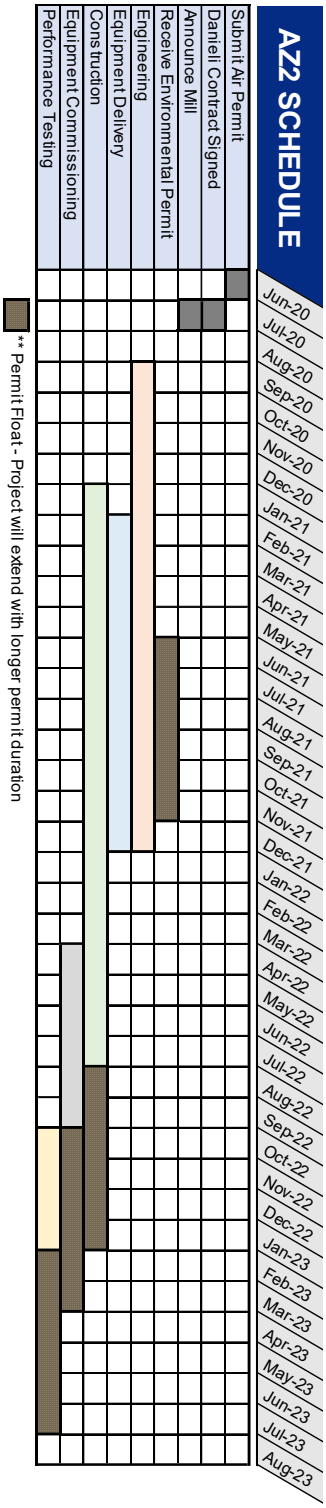
Mesa, Arizona
Appendix C – Preliminary Project Schedule


AZ2 SCHEDULE
Submit Air Permit
Daniell Contract Signed
Announce Mill
Receive Environmental Permit
Engineering
Equipment Delivery
Construction
Equipment Commissioning
Performance Testing
Jun-20
Jul-20
Aug-20
Sep-20
Oct-20
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** Permit Float - Project will extend with longer permit duration

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Mesa, Arizona

Appendix D – Parking Calculations

Parking Requirements (AZ2) Based on City of Mesa Code Book Title 11-32-3

Description	Use	Approximate Area (sq. ft.)	1 Space per unit of area (sq. ft.)	Total Spaces
AZ2 Melt Shop/Mill	Industrial	421,777	600	703
Office/Locker Room	General Office	12,500	375	33
Slag Handling Building	Shell Building	3,600	75% at 1 / 500 + 25% at 1 / 375	8
Slag Facility	General Office	3,200	375	9
Scale House Office	General Office	1,680	375	4
Storeroom	Storage/Warehouse	11,780	900	13
Dry Storage Building	Storage/Warehouse	6,300	900	7
Electrical Rooms	Industrial	2,725	600	5
Total		**460,837**		**757**

Existing Parking Requirements (AZ1) Based on City of Mesa Code Book Title 11-32-3

Description	Use	Approximate Area (sq. ft.)	1 Space per unit of area (sq. ft.)	Total Spaces
AZ1 Melt Shop/Mill	Industrial	124,500	600	208
Baghouse & Dust Loading Complex	Industrial	3,035	600	5
Fabrication Shop	Industrial	71,800	600	120
Locker Room	General Office	1,350	375	4
Slag Handling Building	Shell Building	3,600	75% at 1 / 500 + 25% at 1 / 375	8
R.O. Systems Building	Industrial	1,342	600	2
Bundle Marking Building	General Office	96	375	1
Oil and Gas Storage Building	Storage/Warehouse	1,220	900	1
Transformer Storage Building	Storage/Warehouse	2,980	900	3
Bearing Storage Building	Storage/Warehouse	170	900	1
Finished Goods Building	Storage/Warehouse	62,162	900	69
Storage Building	Storage/Warehouse	13,256	900	15
Refractory Crew Room and Office	General Office	2,002	375	5
Scale House Office	General Office	1,680	375	4
Fabrication Shop Office	General Office	4,389	375	12
Mill Office	General Office	18,424	375	49
Dry Storage Building	Storage/Warehouse	4,442	600	7
Spooler Building	Industrial	60,274	600	100
Fab Pay Call Building	General Office	2,500	375	7
Electrical Rooms	Industrial	16,560	600	28
Total		**379,222**		**649**

Proposed Number of Parking Spaces Based on Employees for buildings listed in the previous chart (calculations include handicap parking – handicap parking per code)

Number of additional employees for proposed site – on site at the same time.

Category	Number of Employees	Work Hours
Days	112	7:00 AM – 7:00 PM
Nights	32	7:00 AM – 7:00 PM
	112 Required	
	130 Provided	

Total Parking Spaces onsite:

	COM Required	Provided
AZ1 (Existing)	649	256
AZ2 (Proposed)	757	130
Total	1406	386

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Appendix E – Fume Treatment Plant Dust KO61 MSDS Sheet

Material Safety Data Sheet

MANUFACTURER: Structural Metals, Inc. dba (CMC Steel Texas)
ADDRESS: P.O. Box 911
Seguin, TX 78156-0911
PHONE: (830) 372-8200
DATE: January 2007

I. Material Identification

CHEMICAL NAME: Steel Mill Electric Arc Furnace Dust
SYNONYMS: K061, Baghouse Dust
CHEMICAL FAMILY: Inorganic Compounds

II. Ingredients and Hazards

Constituent[a]	CAS[b] #	%	OSHA PEL[c] (mg/m^3)	ACGIH TLV-TWA[d] (mg/mg^3)
Antimony	7440-36-0	<0.05	0.5	0.5
Arsenic	7440-38-2	<0.01	0.010	0.01
Barium (soluble compounds)	7440-39-3	0.02-<0.05	0.5	0.5
Beryllium	7440-41-7	<0.005	0.002	0.002
Cadmium	7440-43-9	0.03-<0.1	5	0.01 (elemental) 0.002 (as compounds)
Carbon (in solution with Iron)	7440-44-0	<1	3.5	3.5
Chromium	7440-47-3	0.2-<0.5	0.5 (Chromium II and III) 1 (metal)	0.5 (metal and Cr III) 0.05 (water-soluble Cr VI) 0.01 (insoluble Cr VI)
Copper	7440-50-8	0.2-<0.5	0.1 (dust and mist)	0.2 (fume) 1 (dusts and mists)
Iron (oxidized forms)	1309-37-1	11-25	10 (oxide dust and fume)	5 (oxide dust and fume)
Lead	7439-92-1	1.5-<5	0.050	0.05
Manganese	7439-96-5	1.5<2.5	5	0.2
Mercury	7439-97-6	<0.001	0.1	0.025
Nickel	7440-02-0	0.02-<0.05	1	1.5 (metal) 0.1 (soluble compounds) 0.2 (insoluble compounds)
Phosphorous (yellow)	7723-14-0	<1	0.1	0.05
Selenium	7782-49-2	<0.01	0.2	0.2
Silica	7440-21-3	?	15	10
Silver	7440-22-4	<0.05	0.01	0.1 (metal) 0.01 (soluble compounds)
Sulfur	7446-04-95	?	13	5.24
Thallium	7440-28-0	<0.05	0.1	0.1
Vanadium	1314-62-1	<0.05	0.1 (pentoxide fume) 0.5 (pentoxide dust)	0.05 (pentoxide dust or fume)
Zinc	1314-13-2	14-24	5 (fume) 15 (dust)	5 (fume) 10 (dust)

Notes:

(a) This listing is a summary of elements used in producing electric arc furnace dust as a byproduct of steel alloying. Since various grades of steel contain different combinations of these elements, electric arc furnace dust will also contain different combinations. Trace elements may be present in minute amounts. No permissible exposure limits (PELs) or threshold limit values (TLVs) exist for electric arc furnace dust. Values shown are applicable to component elements.

(b) Chemical Abstract Number

(c) Occupational Safety and Health Administration, Permissible Exposure Limit

(d) American Conference of Governmental Industrial Hygienists, Threshold Limit Value, Time-Weighted Average - the time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, to which it is believed that nearly all workers may be repeatedly exposed, day after day, without adverse effect.

III. Physical Data

Boiling pt. At 1 atm., deg. F:	5000
Melting Pt., deg F:	2800
Vapor Pressure at (mm Hg):	NA
Vapor Density (Air=1):	NA
Water Solubility:	Insoluble
Specific Gravity (H2O=1):	0.8-5.5
Evap. Rate (NA=1):	NA
Volatiles, % Volume:	NA
Molecular Wt.:	NA
Appearance and Odor:	Odorless brown solid, powder or granules.

IV. Fire and Explosion Data

Extinguishing Media:	NA
Special Fire Fighting Procedures:	NA
Unusual Fire or Explosion Hazards:	NA

Note: Electric Arc Furnace Dust in the solid state presents no fire or explosion hazard.

V. Health Hazard Information

Route of Entry - Skin:	No
Route of Entry - Inhalation:	Yes (as dust)
Route of Entry - Ingestion:	Yes

Health Hazards Acute and Chronic/ Effects of overexposure: Inhalation of fumes may result in metal fume fever, irritation to eyes, mucous membranes and respiratory system, pneumonia, bronchitis, sinusitis, laryngitis, chest pain, conjunctivitis, gingivitis, cardiopulmonary arrest. Skin exposure may result in dermatitis and skin lesions. Exposure to nickel, manganese and lead may lead to metabolic, reproductive, gastrointestinal, blood, kidney and central nervous system disorders. Exposure to manganese fumes may adversely affect the reproductive or central nervous system ("manganism") with symptoms such as weakness in lower extremities, sleepiness, salivation, nervousness and apathy. Exposure to silver may cause argyria of the skin, eyes or mucous membranes. Chronic effects may include bronchitis, chronic atrophic nasopharyngitis, pulmonary fibrosis, silicosis, insomnia, irritability, speech disorders, muscle incoordination, mucosal ulcerations, anemia, metallic taste in mouth, vomiting, weakness, headache, pallor, lead line on gums, chromitosis, anorexia, duodenal ulcer, colitis. Effects of overexposure may include nausea, tightness of chest, fever, cough, irritation of eyes, nose and throat, metallic taste in mouth, photophobia, elevated blood lead level.

Medical Conditions Aggravated: Chronic diseases or disorders of the respiratory system may be aggravated by dust or fumes.

Carcinogenicity - NTP: Yes (constituents)

Explanation of Carcinogenicity:

IARC 1987: Iron and steel founding entails exposures that are carcinogenic to humans. Elevated risk of cancers of the lung, stomach and genito-urinary system have been observed among iron and steel industry workers.

NTP 8th Annual Report on Carcinogens, 1998: Crystalline silica, beryllium, arsenic, nickel, lead acetate and cadmium reasonably anticipated to be human carcinogens. Hexavalent chromium known to be a human carcinogen. Inadequate data available to evaluate the carcinogenicity of chromium and trivalent chromium compounds.

First Aid:

Eye Contact:	Flush well with running water to remove particles; obtain medical attention.
Skin Contact:	Brush off excess dust; wash area well with soap and water.
Inhalation:	Remove to fresh air; obtain medical attention.
Ingestion:	Seek medical attention if large quantities of material have been ingested.

VI. Reactivity Data

Stability:	Stable
Incompatibility (Materials to Avoid):	Calcium hypochlorite, performic acid, finely divided aluminum, ethylene oxide and bromine pentafluoride.
Hazardous decomposition products:	Lead, cadmium and zinc boil off at high temperatures.
Hazardous Polymerization:	Will not occur.
Conditions to Avoid:	Exposure to incompatible materials.

VII. Spill, Leak and Disposal Procedures

SPILLS, LEAKS (Steps to be taken): Dust should be swept up and placed in suitable containers. Prevent release to air, sinks, drains, sewers or environment.

WASTE DISPOSAL METHOD: Material is a hazardous waste; material must be manifested and containerized for shipment via a registered transporter to an authorized disposal facility.

VIII. Special Protection Information

RESPIRATORY PROTECTION: Dust/fume respirator of type approved by NIOSH/MSHA.

VENTILATION:

Local Exhaust: May be necessary; exhaust should be filtered to prevent release to air.

Mechanical (General): NA

PROTECTIVE GLOVES: Disposables recommended to protect against skin abrasion.

EYE PROTECTION: Full protection, goggle-type approved by OSHA/MSHA.

OTHER PROTECTIVE EQUIPMENT AND PRECAUTIONS: Disposable coveralls and disposable boot covers.

IX. Special Precautions and Comments

STORAGE AND HANDLING INFORMATION: Wear appropriate protective equipment. Use good housekeeping to prevent release to the environment.

OTHER PRECAUTIONS: None

DOT CLASS: Hazardous

CMC Steel Arizona
Mesa, Arizona

Appendix F – BIZ Overlay Existing & New Requests

Existing Modifications/Deviations			
Item	**Requirements and/or Zoning Ordinance Standards for M-2 Zoning**	**Agreed Upon or Status**	**Reference Document (Case No.)**
Building height	Section 11-6-6 40' and 2 stories	120'	Z08-039 & Z07-67
Storage and service area screening	Section 11-15-4 Storage areas visible from public streets and are not separated from the street by intervening building shall be screened	Significant setback from the public right-of-way with mature perimeter landscaping and beming shall be provided	Z08-039 & Z07-67
Foundation base landscaping	Section 11-15-3 All building shall provide a foundation base of plant materials and hardscape adjacent to the exterior walls	Plants or hardscape adjacent to buildings only provided for buildings utilized for retail purposes	Z08-039 & Z07-67
Screening of ground mounted equipment	Section 11-15-4 All ground mounted equipment must be screened from view	Significant setback from the public right-of-way with mature perimeter landscaping and berming shall be provided	Z08-039
Screening of roof mounted equipment	Section 11-15-4 All roof mounted equipment must be screened from view	The nature of the operation and types of buildings limit the possibility of roof screening	Z08-039
Parking requirements	Section 11-16-3 250,065 sf manufacturing facility requires 417 parking spaces	Number of spaces for the total number of employees for all shifts to be provided 193	Z08-039 & Z07-67
Metal building architectural elements	Section 11-14 Consistent with the Design Guidelines	Variations in paint colors and accent locations to be utilized instead of masonry or concrete due to intensity of use	Z08-039

Landscape setbacks from adjacent property limes	Section 11-15-2 15' landscape setback is required adjacent to adjacent M-2 zoned properties	Due to intensity of adjacent TRW industrial use and size of TRW property, only public street perimeter landscaping around single-residence proposed	Z08-039 & Z07-67
Building separation for development on same lot	11-15-2 building separation of 25' to 35' is required for most of the buildings on site	Due to the operation of the micro mill facility, the buildings will be closer than the 25-foot minimum	Z08-039 & Z07-67
Retention basin landscaping	11-15-3 Provide landscaping in all areas of the retention basin (slope, top, and bottom)	Significant setback from the public right-of-way with mature perimeter landscaping and berning shall be provided	Z08-039 & Z07-67
Half Street Improvements for Germann Road	Develop 1/2 street improvements	Completed	
Half Street Improvements for Meridian and Pecos Roads	Develop 1/2 street improvements	See Development Agreement dated July 9, 2008 in Instrument No 2008-0602876, First Amendment dated December 28, 2010, and Second Amendment dated July 6,2018.	Development Agreement dated July 9, 2008 in Instrument No 2008-0602876, First Amendment dated December 28, 2010, and Second Amendment dated July 6,2018.
Landscaping along Meridian and Pecos Roads		Deferred until Meridian and Pecos Roads are developed	Z10-02
Landscaping along Germann Road and 1400' of turf along interior roadway		Completed	Z10-02
Placement of Steel Maker Statue		Completed	Z10-02

AZ2 Project Requests (additions to those included on the site through BIZ)		
Item	**Requirements and/or Zoning Ordinance Standards for M-2 Zoning**	**Requested Modification/Deviation**
Building height	Section 11-7-3 50'	165' high stack. The existing t/stack elevation is 1556.33’ and the new stack will have an t/stack elevation of 1594.68”, thus a 38’-6” delta.
Parking requirements	Section 11-32-3 460,927sf manufacturing facility requires 1406 parking spaces	Number of spaces for the total number of employees for all shifts to be provided 386