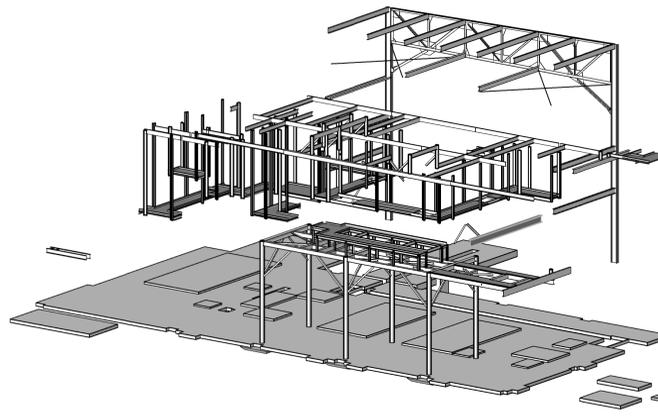


GENERAL NOTES

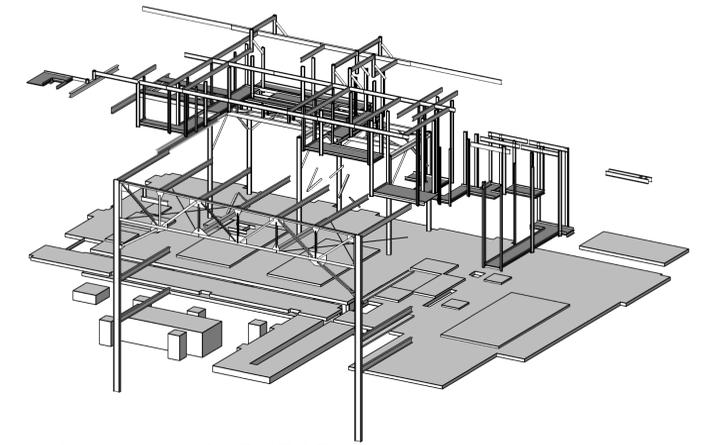
- Design Standards:
 - International Building Code 2006 Edition
 - ASCE 7-05 Minimum Design Loads for Buildings and Other Structures
 - ACI 318-05 Building Code Requirements for Structural Concrete
 - AISC Manual of Steel Construction 13th Edition (2005 Specifications ASD)
 - ACI 530-05 Building Code Requirements for Masonry Structures
 - Veterans Administration A/E Design Submission Requirements (PG-18-15)
 - Gravity Loads Used in Design:
 - Roof Snow Load (non-reducible)..... 30 psf
 - Superimposed Roof Dead Load..... 2 psf
 - Floor Live Load..... 100 psf
 - Catwalks..... 40 psf
 - Existing Mezzanine and Exterior Stack Fan Platform..... 100 psf
 - Snow Load Design Criteria
 - Ground Snow Load, $P_g = 30$ psf
 - Roof Snow Load, $P_f = 30$ psf + drifting requirements
 - Snow Exposure Factor, $C_e = 1.0$
 - Thermal Factor, $C_t = 1.0$
 - Snow Importance Factor, $I_s = 1.2$
 - Wind Load Design Criteria
 - Basic Wind Speed (3-second gust) = 90 mph
 - Exposure Category C
 - Building Category IV
 - Building Enclosure Classification: Enclosed
 - Wind Importance Factor, $I_w = 1.15$
 - Seismic Load Design Criteria
 - Seismic Design Category B
 - Building Occupancy Category IV
 - Soil Site Class D
 - Seismic Importance Factor, $I_E = 1.5$
 - $S_s = 0.271$
 - $S_1 = 0.060$
 - Foundations:
 - The 1984 remodel drawings used a total allowable soil bearing pressure of 4000 psf. Design for this project has used 1500 psf, the default value dictated by the City of Sheridan. The bearing value is to be confirmed during construction by a geotechnical engineer. Geotechnical Consultant to provide soil preparation recommendation for new footings and slab-on-grade.
 - Concrete:
 - All concrete shall be made with stone aggregate and shall develop the following 28 day compressive strength:

Footings	.....	3000 psi
Interior slabs on grade and trenches	.....	4000 psi
Exterior suspended slab and wall	.....	4000 psi
Other concrete	.....	3000 psi
 - All reinforcing bars shall be ASTM A615, Grade 60, unless otherwise noted. Welded wire fabric shall conform to ASTM A185 or ASTM A997. Headed studs shall conform to ASTM A108 with 60 ksi minimum tensile strength and shall be automatically machine welded, providing complete fusion.
 - Concrete Protection for Reinforcement (unless otherwise noted):
 - Concrete poured against earth..... "3"
 - Concrete poured in forms but exposed to weather or earth:
 - #5 bars or smaller..... 1-1/2"
 - Bars larger than #5..... 2"
 - Slabs and walls not exposed to weather or earth..... 3/4"
 - No splices of reinforcement shall be made and no welding to reinforcement shall be permitted except as detailed or authorized by the Engineer. Reinforcing lap splices are to be a minimum of 48 bar diameters unless noted otherwise on drawings. Wire fabric reinforcement must lap one full mesh plus 2" at side and end laps, but not less than 6", and shall be wired together. Make all bars continuous at corners or provide corner bars of equal size and spacing.
 - Detail bars in accordance with the ACI Detailing Manual and ACI Building Code Requirements for Reinforced Concrete.
 - Provide all accessories necessary to support reinforcing at positions shown on the plans.
 - Place 2-#5 bars (1 ea. face) with 2'-0" projection around all openings and re-entrant corners in concrete slabs and walls, unless noted otherwise.
 - Footings and slabs shall not have joints in a horizontal plane. Any stop in concrete work must have vertical bulkheads and tapered 2nd horizontal keyways spaced 12" on center, unless otherwise shown. All construction joints shall be as detailed or as approved by the Engineer.
 - No chloride admixtures shall be added to concrete without Engineer's approval.
 - Provide 6 x 6 - W1.4 x W1.4 WAF as minimum reinforcing in mechanical housekeeping pads.
 - Include pricing for providing an allowance for additional reinforcing, fabrication and placing of 100 feet of #5 (Grade 60) reinforcing bar. Reinforcing shall be added on the shop drawing or placed in the field at the discretion of the Engineer.
 - Concrete wall tolerances shall be as follows:

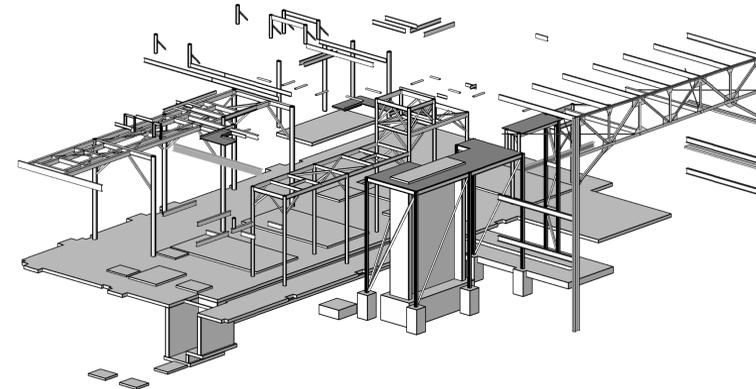
Plumbness - entire height of wall	.....	-1/2" to +1/2"
Plan Alignment	.....	-1/2" to +1/2"
Wall thickness	.....	-1/4" to + 1/2"
Variation in size & location of sleeve & block outs	.....	-1/2" to +1/2"
 - Allow for additional concrete thickness to compensate for structural member and formwork deflections.
- Steel:
 - The steel connections have been designed.
 - All structural steel shall conform to ASTM A36 except wide flange shapes which shall conform to ASTM A992 (Grade 50), pipe sections which shall conform to ASTM A53 (Grade B), and HSS sections which shall conform to ASTM A500 (Grade B).
- Existing Building:
 - 1987 Base Building is most likely A7.
 - 1973 and 1984 Additions are A36.
- Structural steel shall be detailed, fabricated and erected in accordance with the AISC "Manual of Steel Construction."
 - Provide connections as detailed. Alternate connection details of equal capacity may be considered, provided they are submitted along with calculations. Alternate connection detail drawings and calculations which are submitted must be stamped and signed by a Wyoming Registered Professional Engineer.
 - All welders shall have evidence of passing the AWS standard qualification tests, and have a current certification.
 - Minimum weld size shall not be less than 3/16" continuous fillet weld with 70 ksi electrodes, unless noted otherwise on the plans. See details for steel designated as 1948, which is A7. Do Not weld to A7 Steel.
 - Connections made with high strength steel bolts shall conform in all respects to the AISC "Specifications for Structural Joints."
 - All high strength steel bolts shall conform to ASTM A325 and shall be installed to a "snug tight" condition, unless noted otherwise.
 - All high strength bolts indicated as "TC" (tension control) bolts shall conform to ASTM F1552 A325-TC. Note that "tension control" bolts shall be used only at specific locations indicated on the drawings.
 - Anchor rods are to be ASTM F1554 36 ksi, unless noted otherwise.
- Masonry:
 - All masonry block units shall conform to ASTM C90. Masonry block units below grade and all having exterior exposure shall be medium weight or normal weight, unless noted otherwise. Interior masonry block walls not exposed to weather or earth may be lightweight, unless noted otherwise.
 - All mortar for exterior walls and interior bearing walls shall conform to ASTM C270, Type S, 1800 psi compressive strength, mixed in proportions of 1:1/2: 4-1/2. Grout for masonry bond beams, walls, and pilasters shall be made with pea gravel stone aggregate and shall develop 3000 psi compressive strength in 28 days, mixed in proportions of 1:3:2 (Portland Cement: Sand: Pea gravel). Alternate mix proportions may be considered, provided they are submitted for review.
 - All masonry assemblies shall develop 1500 psi ultimate compressive strength (f'_m) in 28 days.
 - Horizontal reinforcing in all masonry walls shall be standard Dur-O-Wal or equal spaced at 16" on center, unless otherwise noted. Terminate joint reinforcing at control joints and expansion joints.
 - Fill all voids and block cells solidly with grout for a distance of 24" beneath and 16" each side of all beam reactions or other concentrated loads unless otherwise noted.
 - Cells of portions of exterior masonry walls extending below grade shall be grouted solid.
 - Engineer's approval must be secured for all substitutions.
- Verify all openings through floor, roof and walls with mechanical and electrical contractors.
- All dimensions and existing conditions shown shall be field verified by the contractor. It is the contractor's responsibility to immediately notify the Engineer should any existing condition not be shown, or if any existing condition differs from those shown on the drawings.
- During erection of the structures, the contractor shall be responsible for temporary bracing to withstand all loads to which the structure may be subjected, including lateral loads, stockpiles of materials and equipment. Such bracing shall be left in place as long as may be required for safety and until all structural framing are in place with connections completed.
- Do not reproduce contract documents, copy standard printed information, or use electronic CAD files as the basis for shop drawings.
- The Engineer does not provide inspections of construction. The Engineer may make periodic observations of the construction. Such observations shall not replace required inspections by the governing authorities or serve as "Special Inspections" as may be required by the Building Code.
- Special Inspections shall be performed by the Owner's Agent in accordance with Chapter 17 of the Building Code for the following:
 - Structural steel construction, Table 1704.3.
 - All shop and field welding.
 - Structural steel details.
 - High-strength steel bolted connections.
 - Structural concrete construction, Table 1704.4.
 - Soils, Table 1704.7.
- Significant permanent equipment sizes, weights, and locations are indicated on the drawings as provided to the Engineer during design. Changes in sizes, weights, or locations must be submitted in writing for review by the Structural Engineer. Required supports or braces not shown on the drawings are the responsibility of the equipment supplier.
- All steel or steel connections permanently exposed below grade shall be coated with a zinc rich paint or Asphalt mastic.
- All expansion anchors indicated in the drawings shall be A307-8017-12 carbon steel expansion anchors for concrete and masonry with standard embedment or approved equal, unless noted otherwise. Anchors are to be installed and inspected in accordance with the supplier's recommendations and specifications.
- All epoxy anchors indicated in the drawings shall be HIT-RE500-SO adhesive with HAS standard threaded rods for concrete anchor system with standard embedment or approved equal, unless noted otherwise. Anchors are to be installed and inspected in accordance with the suppliers' recommendations and specifications.
- Existing Building:
 - 1947: Original construction.
 - 1973 Remodel: South masonry-enclosed gas-fired boiler enclosure, auxiliary generator room and equipment mezzanine.
 - 1984 Remodel: Replacement of Equipment Mezzanine with steel framing, steel deck and concrete slab; addition of Multi-level Metal Building Enclosure at southwest corner; addition of Control Room and Offices.
- Explanation of section designated used:



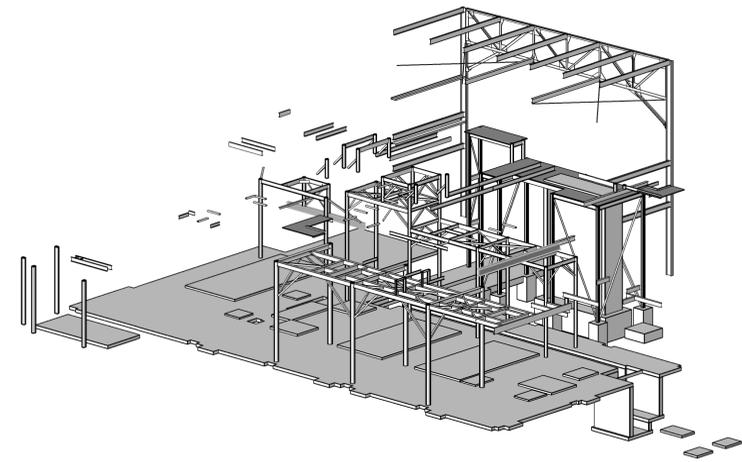
(A) CATWALKS PERSPECTIVE VIEWING SOUTHWEST



(B) CATWALKS PERSPECTIVE VIEWING NORTHEAST



(C) EQUIPMENT SUPPORTS PERSPECTIVE VIEWING SOUTHWEST



(D) EQUIPMENT SUPPORTS PERSPECTIVE VIEWING SOUTHWEST

SECTION IDENTIFICATION X
S-X SHEET LOCATION OF DETAILS

CONSULTANTS:

MKK Consulting Engineers, Inc. 7600 East Orchard Road Suite 250S Greenwood Village, CO 80111 Phone: 303.796.6000 Fax: 303.796.6099	Calibre 9090 S Ridgeline Blvd. Suite 105 Highlands Ranch, CO 80129 Phone: 303.796.6000 Fax: 303.730.1130	Structural Consultants Inc. 3400 E Bayaud Ave # 300 DENVER, CO 80237 PHONE: 303.939.5154 Fax: 303.333.9501
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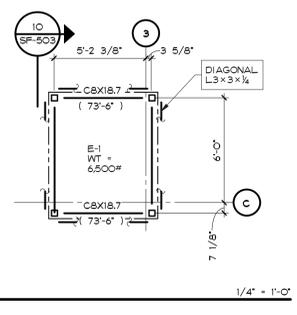
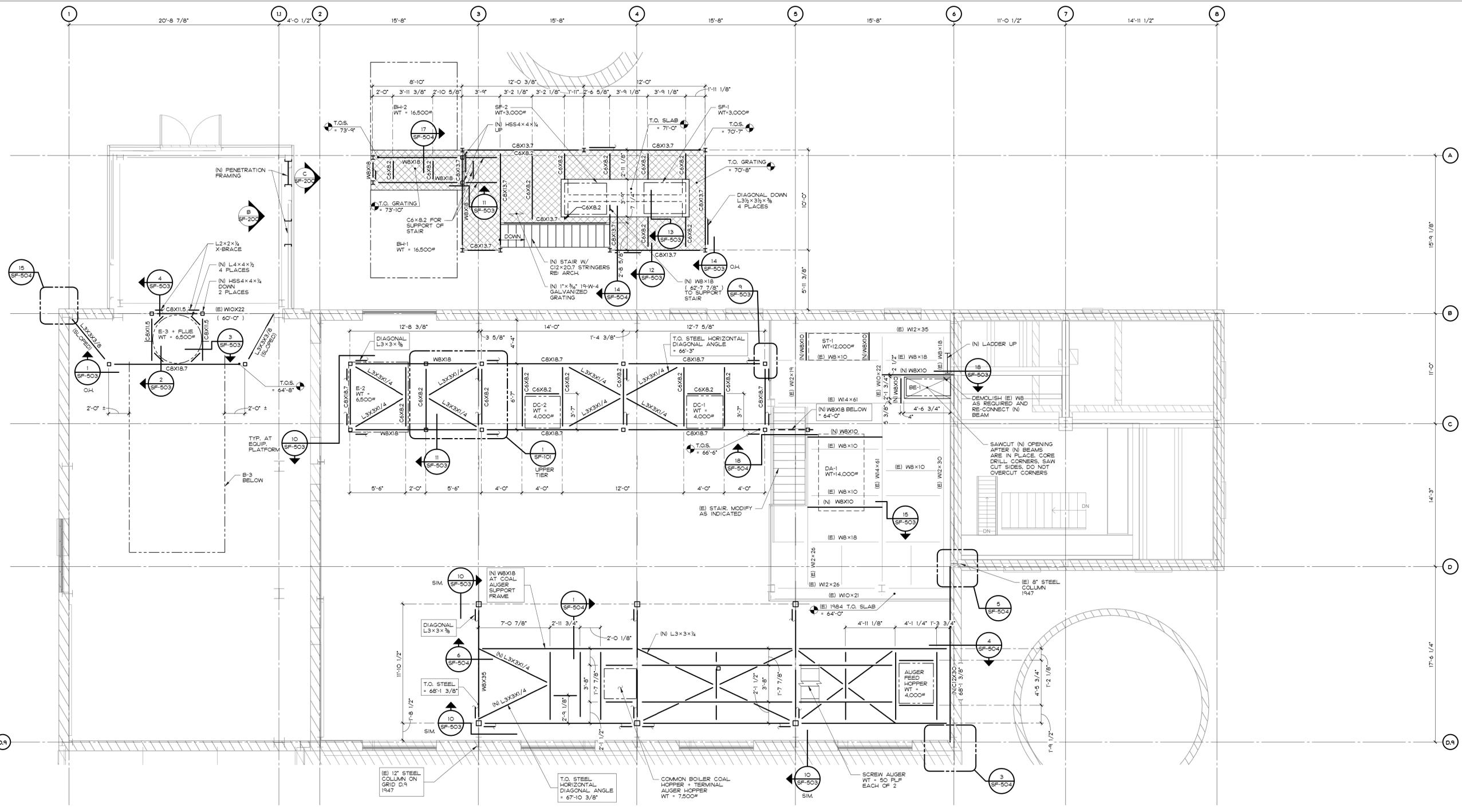
ARCHITECT/ENGINEERS:

GREENFIELD ARCHITECTS
3650 S YOSEMITE ST, STE 402
DENVER, CO 80237
PHONE: 303-770-1020
FAX: 303-770-0922

GA Project Number 10-435

CONSTRUCTION DOCUMENTATION SUBMISSION - BIDDING AND CONSTRUCTION

Drawing Title GENERAL NOTES & PERSPECTIVES		Project Title -BOILER PLANT -REPLACEMENT-		Project Number - 666-11-101	
Approved: Project Director JASON BROWN		Location - SHERIDAN, WY		Building Number - 90	
Date 12/15/2011 BIDDING & CNSTN		Checked BRW		Drawing Number SI-001	
Drawn APC		Dwg. of -		Office of Construction and Facilities Management Department of Veterans Affairs	

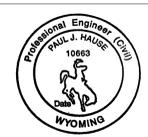


MEZZANINE LEVEL AND EQUIPMENT SUPPORT FRAMING PLANS

- NOTES:
1. BOXED NOTES INDICATE A TYPICAL CONDITION UNLESS NOTED OTHERWISE.
 2. RE: ARCHITECTURAL DRAWINGS FOR HANDRAILS.
 3. COORDINATE LAYOUT OF (N) PLATFORM FRAMING WITH (N) EQUIPMENT, RE: MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS.
 4. TOP OF STRUCTURE ELEVATION NOTED THIS: $\text{---} \times \text{---} \times \text{---}$
 5. (N) INDICATES NEW CONSTRUCTION.
 6. (E) INDICATES EXISTING CONSTRUCTION.
 7. ALL ABANDONED MASONRY WALL OPENINGS ARE TO BE INFILLED WITH LIKE MATERIAL.
 8. AT (N) WALL PENETRATIONS INSTALL 2-L6x6x $\frac{1}{2}$ AT 12\"/>

CONSULTANTS:

MKK Consulting Engineers, Inc. 7600 East Orchard Road Suite 250S Greenwood Village, CO 80111 Phone: 303.796.6000 Fax: 303.796.6099	Calibre 9090 S Ridgeline Blvd. Suite 105 Highlands Ranch, CO 80129 Phone: 303.796.6000 Fax: 303.730.1130	Structural Consultants Inc. 3400 E Bayaud Ave # 300 Denver, CO 80209-2929 Phone: 303.399.5154 Fax: 303.333.9501
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ARCHITECT/ENGINEERS:

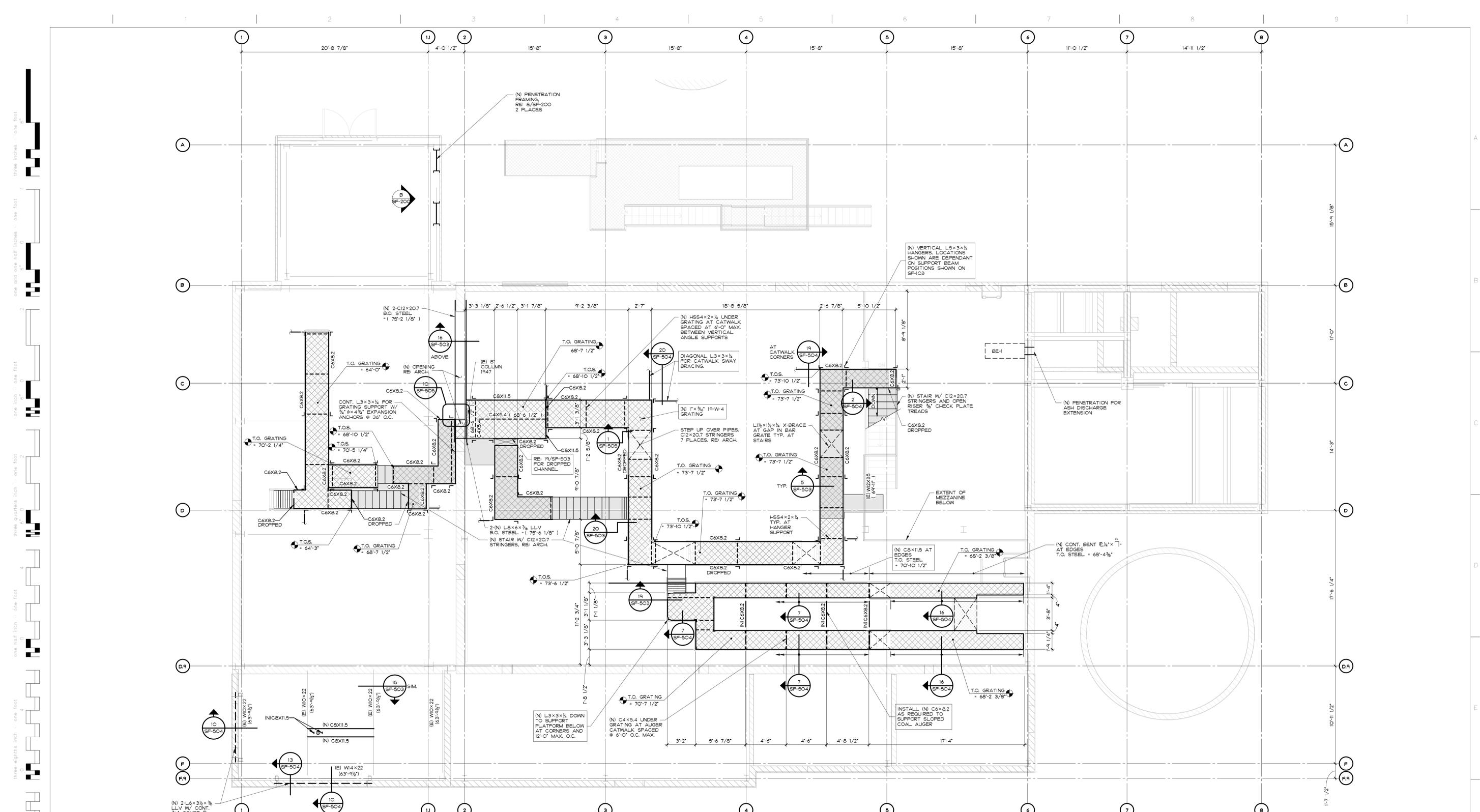
GREENFIELD ARCHITECTS
3650 S YOSEMITE ST, STE 402
DENVER, CO 80237
PHONE: 303-770-1020
FAX: 303-770-0922

GA Project Number 10-435

Drawing Title EQUIPMENT SUPPORT FRAMING PLANS		Project Title -BOILER PLANT -REPLACEMENT	Project Number - 666-11-101
Approved: Project Director JASON BROWN		Location - SHERIDAN, WY	Building Number - 90
Date 12/15/2011 BIDDING & CNSTN	Checked BRW	Drawn APC	Drawing Number SF-101
Revisions:		Dwg. of -	

Office of Construction and Facilities Management
Department of Veterans Affairs

three eighths inch = one foot
 one eighth inch = one foot
 one quarter inch = one foot
 three quarters inch = one foot
 one half inch = one foot
 one inch = one foot
 one and one half inches = one foot
 three inches = one foot

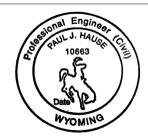


CATWALK FRAMING PLAN

- NOTES:
1. BOXED NOTES INDICATE A TYPICAL CONDITION UNLESS NOTED OTHERWISE.
 2. TOP OF STEEL BEAM ELEVATION NOTED THUS:
 3. (N) INDICATES NEW CONSTRUCTION.
 4. (E) INDICATES EXISTING CONSTRUCTION.
 5. COORDINATE SIZE AND LOCATION OF EQUIPMENT AND CATWALK WITH ARCHITECT, MECHANICAL ENGINEER AND SUPPLIER.
 6. AT (N) WALL PENETRATIONS, INSTALL 2-L6x6x9/16 AT 12\"/>

CONSULTANTS:

MKK Consulting Engineers, Inc. 7600 East Orchard Road Suite 250S Greenwood Village, CO 80111 Phone: 303.796.6000 Fax: 303.796.6099	Calibre 9090 S Ridgeline Blvd. Suite 105 Highlands Ranch, CO 80129 Phone: 303.730.0434 Fax: 303.730.1130	Structural Consultants Inc. 3400 E Bayaud Ave # 300 Denver, CO 80209-2929 Phone: 303.399.5154 Fax: 303.333.9501
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ARCHITECT/ENGINEERS:

GREENFIELD ARCHITECTS
3650 S YOSEMITE ST., STE 402
DENVER, CO 80237
PHONE: 303-770-1020
FAX: 303-770-0922

GA Project Number 10-435

Drawing Title CATWALK FRAMING PLAN		Project Title -BOILER PLANT -REPLACEMENT		Project Number - 666-11-101	
Approved: Project Director JASON BROWN		Location - SHERIDAN, WY		Building Number - 90	
Date 12/15/2011 BIDDING & CNSTN	Checked BRW	Drawn APC	Drawing Number SF-102		
Revisions:			Dwg. of -		



VASD:\FB\Projects\2011\11-1011_Catwalk_Framing_Announcement
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 one eighth inch = one foot
 one quarter inch = one foot
 one half inch = one foot
 three eighths inch = one foot
 three quarters inch = one foot
 one inch = one foot
 one and one eighth inch = one foot
 one and one quarter inch = one foot
 one and one half inch = one foot
 one and three quarters inch = one foot
 two inches = one foot
 three inches = one foot
 four inches = one foot
 five inches = one foot
 six inches = one foot
 seven inches = one foot
 eight inches = one foot
 nine inches = one foot
 ten inches = one foot
 eleven inches = one foot
 twelve inches = one foot

