DIXIE STATE COLLEGE

BURNS ARENA - EAST ENTRANCE ADDITION & REMODEL

FINAL BID SET

(INCLUDES CLOUDED STRUCTURAL UPDATES, MINOR CIVIL & MASONRY UNCLOUDED MODIFICATIONS)

CODE ANALYSIS

APPLICABLE CODES

	Year		Year
International Building Code	2003	National Electrical Code	
International Mechanical Code	2003	Uniform Code for Building Conservation	
International Plumbing Code	2003	ADA Accessibility Guidelines	1998
International Fire Code	2001		1985
International Energy Conservation Code	2003		

A. Occupancy and Group: _____

Change in Use: Yes _____ No _____ Mixed Occupancy: Yes _____ No _____

Special Use and Occupancy (e.g. High Rise, Covered Mall): _____

B. Seismic Design Category: D Design Wind Speed: 90 mph

C. Type of Construction (circle one):

I/A I/B II/A II/B III/A III/B IV/HT V/A V/B

D. Fire Resistance Rating Requirements for the Exterior Walls based on the fire separation distance (in hours):

North: NR South: NR East: NR West: NR

E. Mixed Occupancies: _____ Nonseparated Uses: NA

F: Sprinklers:

Required: Yes Provided: Yes Type of Sprinkler System: IBC Section 903.3.1

G: Number of Stories: 1 Building Height: 34'-4"

H: Actual Area per Floor (square feet): 71,348 Sq. Ft.

I: Tabular Area: Unlimited

J: Area Modifications: NA To IB

a) $A_a = A_t + \left[\frac{A_t I_f}{100}\right] + \left[\frac{A_t I_s}{100}\right]$ $I_f = 100\left[\frac{F}{P} - 0.25\right]\frac{W}{30}$

b) Sum of the Ratio Calculations for Mixed Occupancies:

$\frac{\text{Actual Area}}{\text{Allowable Area}} \leq 1$

c) Total Allowable Area for:

1) One Story: X
2) Two Story: A_a(2)_____
3) Three Story: A_a(3)_____

d) Unlimited Area Building: Yes X No _____ Code Section: X

K. Fire Resistance Rating Requirements for Building Elements (hours).

Element	Hours	Assembly Listing	Element	Hours	Assembly Listing
Exterior Bearing Walls	2	U905	Floors - Ceiling Floors	NA	
Interior Bearing Walls	1	U905	Roofs - Ceiling Roofs	1	UL P214
Exterior Non-Bearing Walls	1	U905	Exterior Doors and Windows	0	
Structural Frame	1	UL P214	Shaft Enclosures	NA	
Partitions - Permanent	0		Fire Walls	NA	
Fire Barriers	NA		Fire Partitions	NA	
			Smoke Partitions	NA	

L. Design Occupant Load: See Attached Exit width Calculations

Exit Width Required: 1,138" Exit Width Provided: 1,888"

M. Minimum Number of Required Plumbing Facilities: No Changes - NA

a) Water Closets - Required (m) NA (f) NA Provided (m) NA (f) NA
b) Lavatories - Required (m) NA (f) NA Provided (m) NA (f) NA
c) Bath Tubs or Showers: NA
d) Drinking Fountains: NA Service Sinks: NA

FOOTNOTES:

1) In case of conflict with the U.S. Department of Justice Federal Registers Parts I through V - ADA Guidelines and specific reference to the International Building Code Accessibility Chapters, the more restrictive requirement shall govern.

2) Additional Code Information shall be provided at the discretion of the Building Official for Complex Buildings. Including, but not limited to:
   a) High Rise Requirements.
   b) Atriums.
   c) Performance Based Criteria.
   d) Means or Egress Analysis.
   e) Fire Assembly Locator Sheet.
   f) Exterior and Interior Accessibility Route.
   g) Fire Stopping, Including Tested Design Number.

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7. AEDT02 ANSI - UL P214
8. FP00 STRUCTURAL NOTES
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10. FP02 ROOF FRAMING PLAN
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APPROVALS

EXECUTIVE DIRECTOR OF CAMPUS SERVICES - NED CARNAHAN DATE

DEPUTY STATE FIRE MARSHALL - TODD HOHBEIN DATE

DIVISION OF FACILITIES CONSTRUCTION & MANAGEMENT DATE

ARCHITECT:
CAMPBELL & ASSOCIATES
46 NORTH 200 EAST
ST. GEORGE UT 84770
435/628-5969
435/628-5975 fax
ATTN: KIM O. CAMPBELL

STRUCTURAL
HANSEN ENGINEERING
254 EAST 100 SOUTH
SALT LAKE CITY UT 84111
801/519-2111
801/519-2112 fax
ATTN: GEORGE HANSEN

MECHANICAL:
VAN BOERUM & FRANK ASSOCIATES
1070 WEST 1600 SOUTH
SUITE #104
ST. GEORGE UT 84770
435/674-4800
435/674-2708 fax
ATTN: LADD BIRCH

ELECTRICAL:
BNA CONSULTING
1070 WEST 1600 SOUTH
SUITE A #104
ST. GEORGE UT 84770
435/628-3670
435/628-3680 fax
ATTN: LAWRENCE REMBER

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BUILDING NAME:

BURNS ARENA
DIXIE STATE COLLAGE
390 SOUTH 800 EAST
ST. GEORGE, UTAH

PROJECT TITLE:

ST. GEORGE, UTAH
NEW EAST ENTRY

STATE OF UTAH
KIM O. CAMPBELL
0112002016
REGISTERED ARCHITECT

MARK	DATE	DESCRIPTION

ISSUE TYPE:

ISSUE DATE: AUGUST 02, 2006

DFCM PROJECT NO: 06118640
CAD PROJECT NO: 06022
CAD DWG FILE: 06022 - BURNS ARENA
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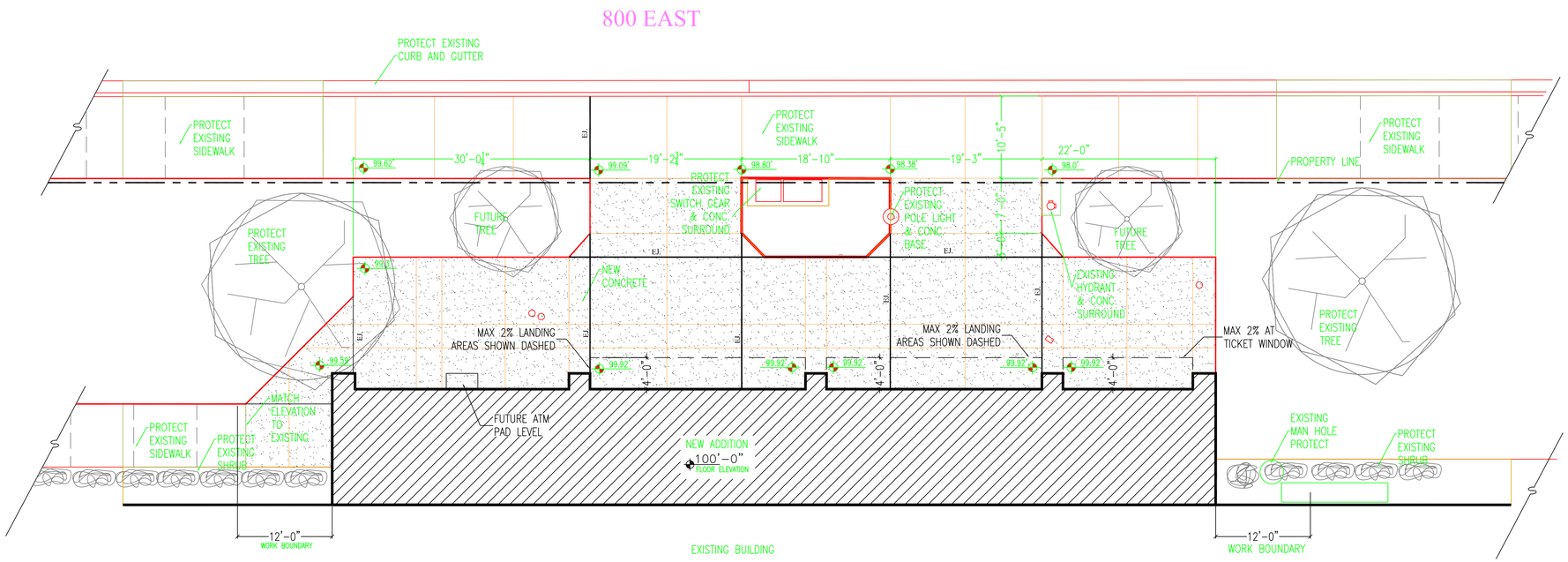
SHEET TITLE

COVER SHEET
SHEET INDEX

SHEET NUMBER

G-100



N

SITE /GRADING PLAN

1/8" = 1'-0"

GENERAL NOTES:

1. CAPPING OFF EXISTING SPRINKLER SYSTEM IN CONSTRUCTION ZONE BY DIXIE STATE COLLEGE PERSONNEL INCLUDING ZONE BOXES AND VALVE REMOVAL.
2. GRUB OUT EXISTING TREES, CONCRETE AND GRASS.
3. REASSEMBLY OF SPRINKLER SYSTEM BY DIXIE STATE COLLEGE PERSONNEL.
4. ADJUST AND SMOOTH OUT GRADES ADJACENT TO NEW WALKS TO RECEIVE SOD. SOD BY DIXIE STATE COLLEGE PERSONNEL.
5. SCORE NEW CONCRETE WITH CONTROL JOINTS AS SHOWN AND EXPANSION JOINTS AS CALLED OUT.
6. INSTALL NEW 4" CONCRETE SLABS ON 4" OF COMPACTED TYPE II ROAD BASE ON COMPACTED AND TESTED GRANULAR SUBGRADE. (NEW CONCRETE IS SHADED)
7. COMPLY TO ALL CITY ENCROACHMENT PROCEDURES AND PERMITS WHEN WORKING IN STREET RIGHT OF WAY
8. PROVIDE A 10' WIDE TEMPORARILY COVERED RIGHT OF WAY THROUGH THE ADDITION OUT TO THE PUBLIC STREET DURING CONSTRUCTION AT ALL MAJOR SPORTING EVENTS. PROVIDE SECURITY FROM ENTRY AFTER HOURS DURING CONSTRUCTION DURATION. COMPLY TO FIRE MARSHALL SITE VISIT REQUIREMENTS DURING CONSTRUCTION ALSO.
9. MEDIUM BROOM FINISH ON EXTERIOR CONCRETE TYP.
10. DON'T DAMAGE EXISTING TREE CANOPIES. IF DAMAGED REPLACE W/ SAME SIZE TREE.
11. COMPLY WITH UTAH DEPT. OF ENVIRONMENTAL QUALITY. DIV. OF WATER QUALITY. (NOTICE OF INTENT)
12. PROVIDE BLUE STAKING ON SITE PRIOR TO DIGGING.

LEGEND

C.J. = CONTROL JOINT

E.J. = EXPANSION JOINT W/ FIBER BOARD & SILCA SELF LEVELING CAULK

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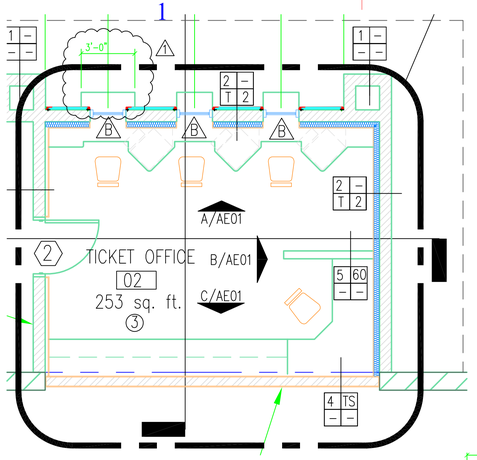
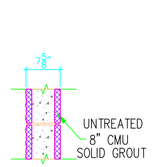
SITE PLAN

SHEET NUMBER

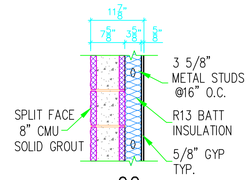
18640-AS01



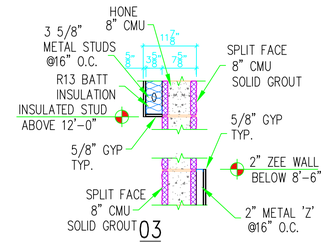
1 TICKET OFFICE ¼"
1/4" = 1'-0"



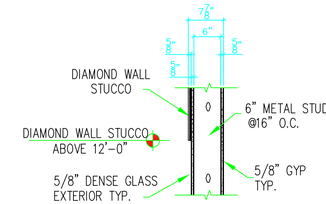
01
CMU EXTERIOR WALLS
SCALE: 1/2" = 1'-0"
1 HR FIRE RATING U905



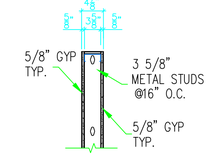
02
NEW INSULATED WALL TYP.
SCALE: 1/2" = 1'-0"
2 HR FIRE RATING U905



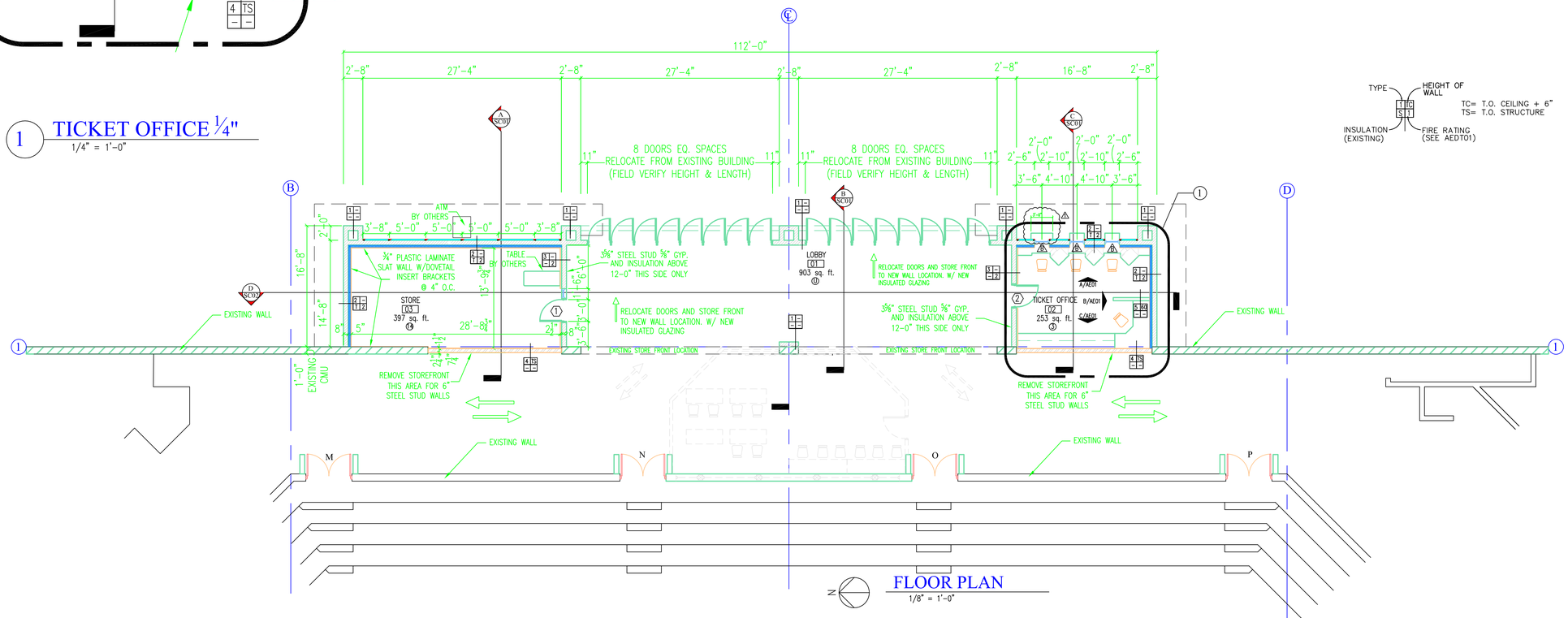
03
NEW INSULATED WALL TYP.
SCALE: 1/2" = 1'-0"
2 HR FIRE RATING U905



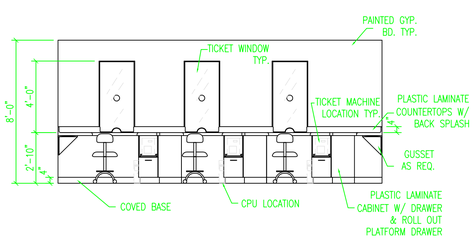
04
6" STOREFRONT WALL TYP.
SCALE: 1/2" = 1'-0"



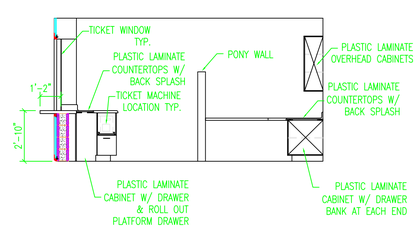
05
NEW PONY WALL
SCALE: 1/2" = 1'-0"



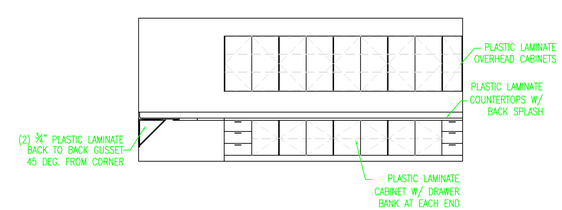
FLOOR PLAN
1/8" = 1'-0"



A OFFICE ELEVATION
1/4" = 1'-0"



B OFFICE ELEVATION
1/4" = 1'-0"



C OFFICE ELEVATION
1/4" = 1'-0"

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NEW EAST ENTRY

STATE OF UTAH
KIM O. CAMPBELL
0112002016
REGISTERED ARCHITECT

MARK	DATE	DESCRIPTION
1	11/07/06	ADA TICKET WINDOW

ISSUE TYPE:

ISSUE DATE: AUGUST 02, 2006

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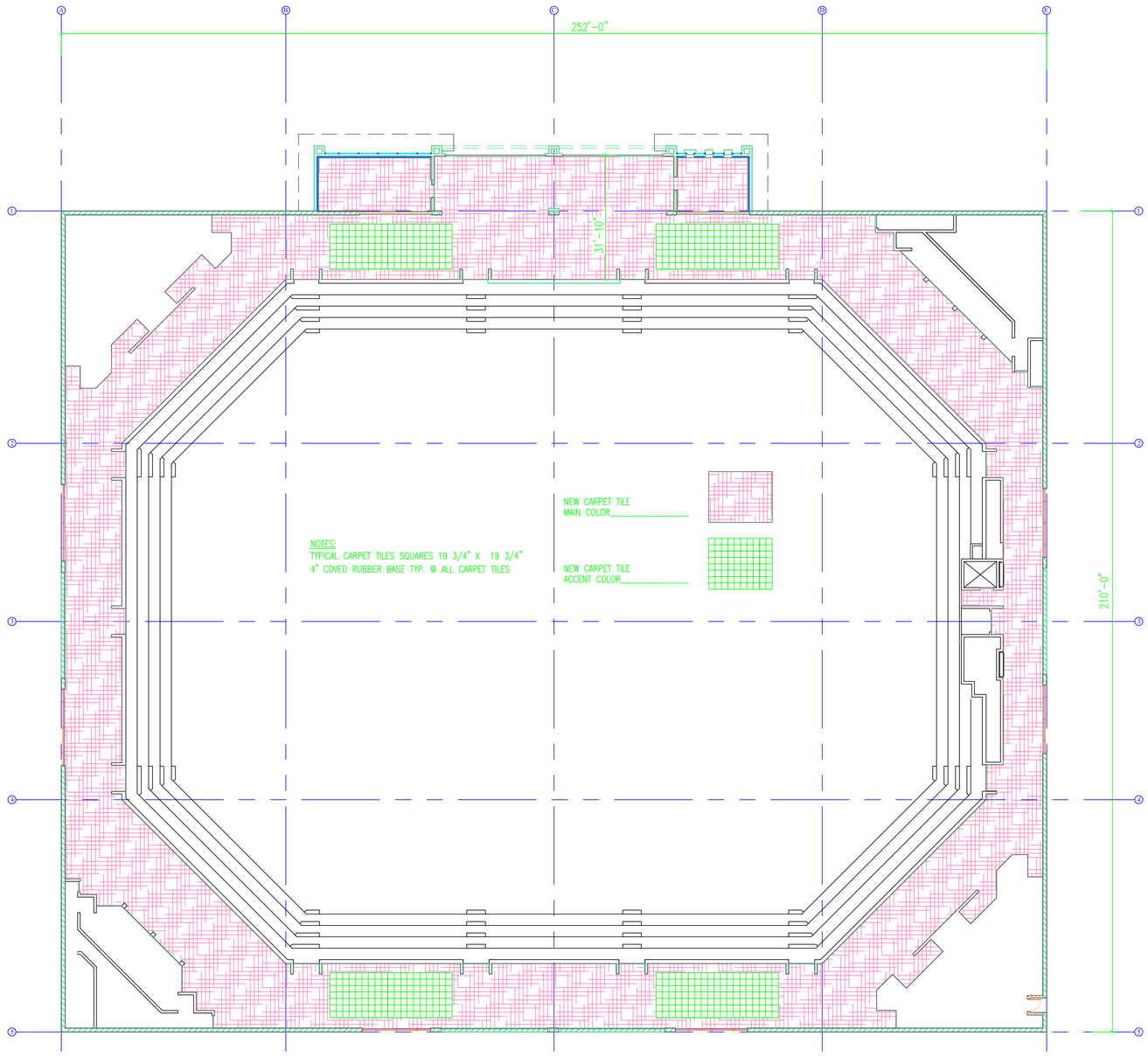
FLOOR PLAN

SHEET NUMBER

18640-AE01



N CARPET PLAN
1/16" = 1'-0"

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FLOOR COVERING PLAN

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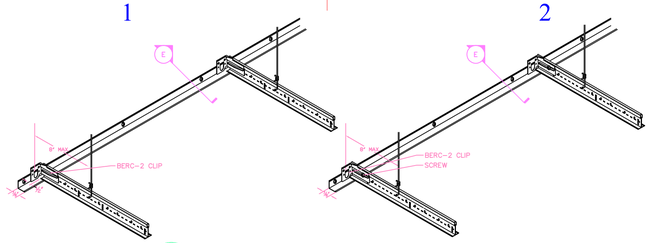


E PERIMETER DETAIL
1 1/2" =1'-0" (SEE ATTACHED ICC ESR-1308)

DOOR SCHEDULE

MARK	DOOR SIZE WIDTH	DOOR SIZE HGT.	DOOR SIZE THK.	DOOR PAIR	DOOR MATL. TYPE	DOOR FINISH	DOOR TYPE	FRAME MATL. TYPE	FRAME FINISH	FRAME SIZE HEAD	FRAME SIZE JAMB	FRAME SIZE SILL	FRAME TYPE	FIRE RATEING	HDWR. FUNCTION	HDWR. GROUP	NOTES:
01	3'-0"	7'-0"	1 3/4"		S.C.	STAINED	A	H.M.	PAINTED	A	A	–	2	20 MIN	F-84	A	WIRE MESH GLASS
02	3'-0"	7'-0"	1 3/4"		S.C.	STAINED	A	H.M.	PAINTED	A	A	–	1	20 MIN	F-81	A	

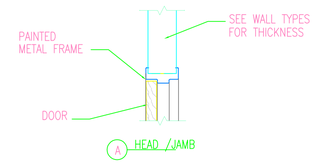
GENERAL NOTES:

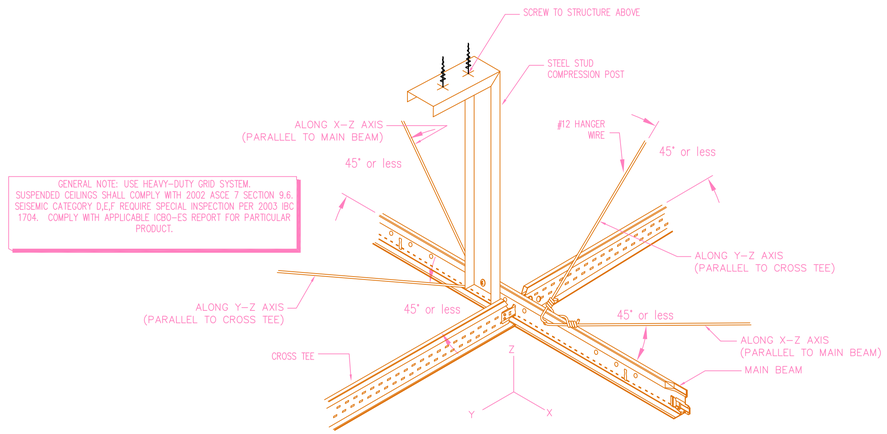
TICKET OFFICE B- WINDOW 24 X 48 TICKET WINDOW W/ ACCESS & SPEAKER HOLE.

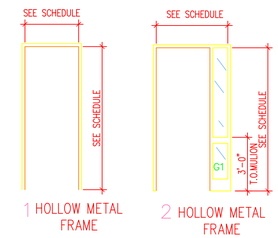
ALL EXISTING STOREFRONT GLAZING & DOORS ON NORTH , WEST & SOUTH ELEVATIONS SHALL BE REPLACED WITH INSULATED LOW-E GLASS.

HARDWARE GROUPS:

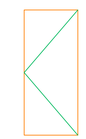
GROUP A-
- a 3 EACH HINGES.
- b 1 EACH LOCKSET
- c 1 EACH STOP
- d 1 SET SMOKE GASKETS.
- e 1 EACH CLOSER.







FRAME TYPES
1/4" = 1'-0"

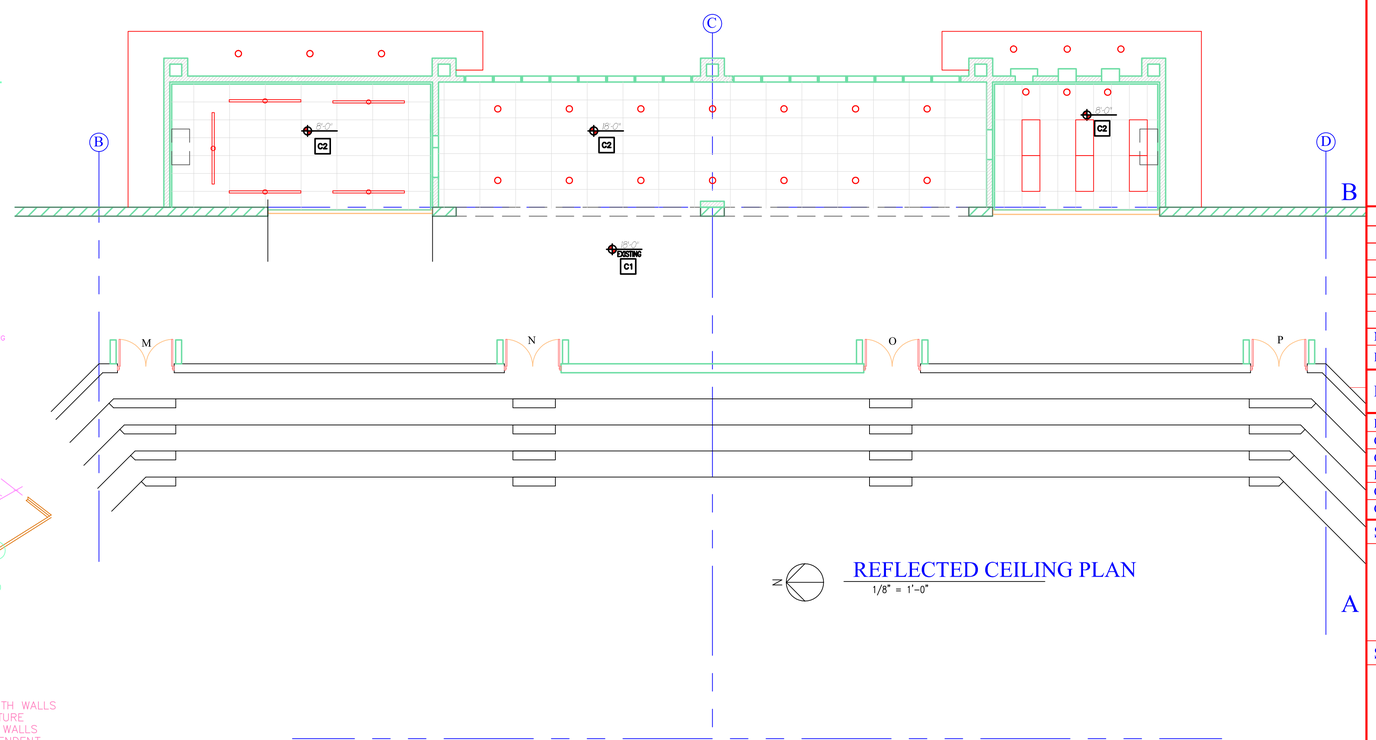


A OAK FLUSH PANEL

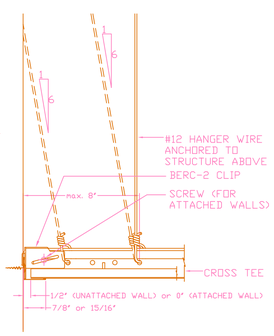
DOOR TYPES
1/4" = 1'-0"

SIESEMIC CATEGORY D,E,F DETAILS

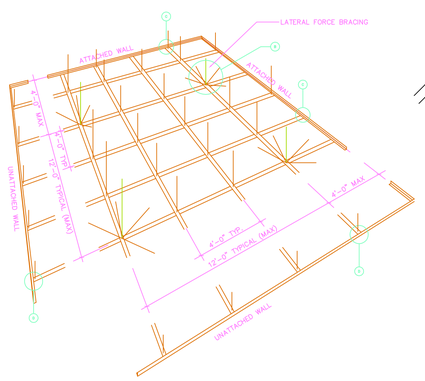
B LATERAL FORCE BRACING
3" = 1'-0" (SEE ATTACHED ICC ESR-1308)



REFLECTED CEILING PLAN
1/8" = 1'-0"



E PERIMETER DETAIL
3" =1'-0" (SEE ATTACHED ICC ESR-1308)



AREAS SMALLER THAN 144 SQ. FT. AND WITH WALLS ON FOUR SIDES EXTENDING TO THE STRUCTURE NEED NOT BE BRACED. NOTE: BOUNDARY WALLS MUST BE BRACED TOP AND BOTTOM INDEPENDENT OF CEILING TO QUALIFY.

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SHEET TITLE

REFLECTED CEILING

SHEET NUMBER

18640-AE03

Underwriters Laboratories Inc.®

BXUV.U419

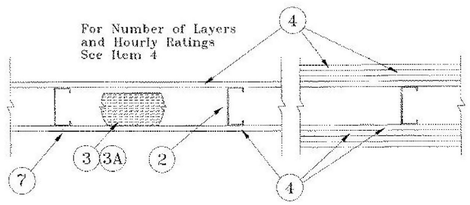
Fire Resistance Ratings - ANSI/UL 263

See General Information for Fire Resistance Ratings - ANSI/UL 263

Design No. U419

October 27, 2005

Nonbearing Wall Ratings — 1, 2, 3 or 4 Hr (See Items 3 & 4)



1. **Floor and Ceiling Runners —** (Not shown) — Channel shaped, fabricated from min 25 MSG corrosion-protected steel, min width to accommodate stud size, with min 1 in. long legs, attached to floor and ceiling with fasteners 24 in. OC max.

2. **Steel Studs —** Channel shaped, fabricated from min 25 MSG corrosion-protected steel, min width as indicated under Item 4, min 1-1/4 in. flanges and 1/4 in. return, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height.

3. **Batts and Blankets* —** (Required as indicated under Item 4) — Mineral wool batts, friction fitted between studs and runners. Min nom thickness as indicated under Item 4. See **Batts and Blankets (BKNV or BZJZ) Categories** for names of Classified companies.

3A. **Batts and Blankets* —** (Optional) — Placed in stud cavities, any glass fiber or mineral wool insulation bearing the UL Classification Marking as to Surface Burning

Characteristics and/or Fire Resistance. See **Batts and Blankets (BKNV or BZJZ) Categories** for names of Classified companies.

4. **Gypsum Board* —** Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers (multilayer systems) staggered one stud cavity. Horizontal joints need not be backed by steel framing. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) staggered a min of 12 in. The thickness and number of layers for the 1 hr, 2 hr, 3 hr and 4 hr ratings are as follows:

Wallboard Protection on Each Side of Wall

Rating	Min Stud Depth	No. of Layers & Thkns of Panel	Min Thkns of Insulation (Item 3)
1	3-1/2	1 layer, 5/8 in. thick	Optional
1	2-1/2	1 layer, 1/2 in. thick	1-1/2 in.
1	1-5/8	1 layer, 3/4 in. thick	Optional
2	1-5/8	2 layers, 1/2 in. thick	Optional
2	1-5/8	2 layers, 5/8 in. thick	Optional
2	3-1/2	1 layer, 3/4 in. thick	3 in.
3	1-5/8	3 layers, 1/2 in. thick	Optional
3	1-5/8	2 layers, 3/4 in. thick	Optional
3	1-5/8	3 layers, 5/8 in. thick	Optional
4	1-5/8	4 layers, 5/8 in. thick	Optional
4	1-5/8	4 layers, 1/2 in. thick	Optional
4	2-1/2	2 layers, 3/4 in. thick	2 in.

CANADIAN GYPSUM COMPANY — 1/2 in. thick Type C, IP-X2 or IPC-AR; WRC, 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRX or WRC; 3/4 in. thick Types IP-X3 or ULTRACODE

UNITED STATES GYPSUM CO — 1/2 in. thick Type C, IP-X2, IPC-AR or WRC; 5/8 in. thick Type SCX, SHX, WRX, IP-X1, AR, C, WRC, FRX-G, IP-AR, IP-X2, IPC-AR ; 3/4 in. thick Types IP-X3 or ULTRACODE

USG MEXICO S A DE C V — 1/2 in. thick Type C, IP-X2, IPC-AR or WRC; 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRX, WRC or;

3/4 in. thick Types IP-X3 or ULTRACODE

When Item 6B, Steel Framing Members*, is used, Nonbearing Wall Rating is limited to 1 Hr. Min. stud depth is 3-1/2 in., min. thickness of insulation (Item 3) is 3 in., and two layers of gypsum board panels (1/2 in. or 5/8 in. thick) shall be attached to furring channels as described in Item 5. One layer of gypsum board panels (1/2 in. or 5/8 in. thick) attached to opposite side of stud without furring channels as described in Item 5.

4A. **Gypsum Board* —** (As an alternate to Item 4) — 5/8 in. thick, 2 ft. wide, tongue and groove edge, applied horizontally as the outer layer to one side of the assembly. Secured as described in Item 5. Joint covering (Item 7) not required.

CANADIAN GYPSUM COMPANY — Type SHX.

UNITED STATES GYPSUM CO — Type SHX.

USG MEXICO S A DE C V — Type SHX.

5. **Fasteners —** (Not shown) — Type S or S-12 steel screws used to attach panels to studs (Item 2) or furring channels (Item 6). **Single layer systems:** 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 8 in. OC when panels are applied horizontally, or 8 in. OC along vertical and bottom edges and 12 in. OC in the field when panels are applied vertically. Two layer systems: First layer- 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels or 2-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC with screws offset 8 in. from first layer. **Three-layer systems:** First layer- 1 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Third layer- 2-1/4 in. long for 1/2 in., 5/8 in. thick panels or 2-5/8 in. long for 5/8 in. thick panels, spaced 12 in. OC. Screws offset min 6 in. from layer below. **Four-layer systems:** First layer- 1 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Third layer- 2-1/4 in. long for 1/2 in. thick panels or 2-5/8 in. long for 5/8 in. thick panels, spaced 24 in. OC. Fourth layer- 2-5/8 in. long for 1/2 in. thick panels or 3 in. long for 5/8 in. thick panels, spaced 12 in. OC. Screws offset min 6 in. from layer below.

6. **Furring Channels —** (Optional, not shown, for single or double layer systems) — Resilient furring channels fabricated from min 25 MSG corrosion-protected steel, spaced vertically a max of 24 in. OC. Flange portion attached to each intersecting stud with 1/2 in. long Type S-12 steel screws. Not for use with Item 4A.

6A. **Steel Framing Members (Not Shown)* —** (Optional on one or both sides, not shown, for single or double layer systems) — As an alternate to Item 6, furring channels and Steel Framing Members as described below:

a. **Furring Channels —** Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board attached to furring channels as described in Item 5. Not for use with Item 4A.

b. **Steel Framing Members* —** Used to attach furring channels (Item 6Aa) to studs (Item 2). Clips spaced max. 48 in. OC., and secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips.

PAC INTERNATIONAL INC — Type RSIC-1.

6B. **Steel Framing Members (Optional, Not Shown)* —** As an alternate to Item 6, furring channels and Steel Framing Members on only one side of studs as described below:

a. **Furring Channels —** Formed of No. 25 MSG galv steel, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Batts and Blankets placed in stud cavity as described in Item 4. Two layers of gypsum board attached to furring channels as described in Item 4. Not for use with Item 4A.

b. **Steel Framing Members* —** Used to attach furring channels (Item 6Ba) to one side of studs (Item 2) only. Clips spaced 48 in. OC., and secured to studs with two No. 8 x 2-1/2 in. coarse drywall screws, one through the hole at each end of the clip. Furring channels are friction fitted into clips.

KINETICS NOISE CONTROL INC — Type Isomax

7. **Joint Tape and Compound —** Vinyl or casein, dry or premixed joint compound applied in two coats to joints and screw heads of outer layers. Paper tape, nom 2 in. wide, embedded in first layer of compound over all joints of outer layer panels. Paper tape and joint compound may be omitted when gypsum panels are supplied with a square edge.

8. **Siding, Brick or Stucco —** (Optional, not shown) — Aluminum, vinyl or steel siding, brick veneer or stucco, meeting the requirements of local code agencies, installed over gypsum panels. Brick veneer attached to studs with corrugated metal wall ties attached to each stud with steel screws, not more than each sixth course of brick.

9. **Caulking and Sealants* —** (Optional, not shown) — A bead of acoustical sealant applied around the partition perimeter for sound control.

UNITED STATES GYPSUM CO — Type AS

Underwriters Laboratories Inc.®

BXUV.U905

Fire Resistance Ratings - ANSI/UL 263

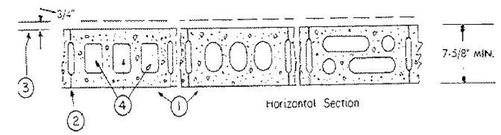
See General Information for Fire Resistance Ratings - ANSI/UL 263

Design No. U905

March 17, 2004

Bearing Wall Rating — 2 HR.

Nonbearing Wall Rating — 2 HR



1. **Concrete Blocks* —** Various designs. Classification D-2 (2 hr).

See **Concrete Blocks** category for list of eligible manufacturers.

2. **Mortar —** Blocks laid in full bed of mortar, nom. 3/8 in. thick, of not less than 2-1/4 and not more than 3-1/2 parts of clean sharp sand to 1 part Portland cement (proportioned by volume) and not more than 50 percent hydrated lime (by cement volume). Vertical joints staggered.

3. **Portland Cement Stucco or Gypsum Plaster —** Add 1/2 hr to classification if used. Where combustible members are framed in wall, plaster or stucco must be applied on the face opposite framing to achieve a max. Classification of 1-1/2 hr. Attached to concrete blocks (Item 1).

4. **Loose Masonry Fill —** If all core spaces are filled with loose dry expanded slag, expanded clay or shale (Rotary Kiln Process), water repellant vermiculite masonry fill insulation, or silicone treated perlite loose fill insulation add 2 hr to classification.

5. **Foamed Plastic* —** (Optional-Not Shown) — 1-1/2 in. thick max, 4 ft wide sheathing attached to concrete blocks (Item 1).

THE DOW CHEMICAL CO — Type Thermax

*Bearing the UL Classification Mark

Last Updated on 2004-03-17

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ANSI / UL 263 - U905

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Division of Facilities Construction & Management
4110 State Office Building
Salt Lake City, Utah 84114
Phone: (801) 538 - 3018
Fax: (801) 538 - 3267
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CREATED BY: DFCM

CAD SERVICES
COMPUTER AIDED DESIGN SERVICES
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4110 STATE OFFICE BUILDING
SALT LAKE CITY, UTAH 84114
PHONE: (801) 537-9132
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BUILDING NAME:

BURNS ARENA
DIXIE STATE COLLAGE
390 SOUTH 800 EAST
ST. GEORGE, UTAH

PROJECT TITLE:

ST. GEORGE, UTAH
NEW EAST ENTRY

STATE OF UTAH
KIM O. CAMPBELL
0112002016
REGISTERED ARCHITECT

MARK	DATE	DESCRIPTION

ISSUE TYPE:

ISSUE DATE: AUGUST 02, 2006

DFCM PROJECT NO: 06118640
CAD PROJECT NO: 06022
CAD DWG FILE: 06022 - BURNS ARENA
DRAWN BY: DSB
CHK'D BY: KOC
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SHEET TITLE

UL RATINGS
UL U905 / U419

SHEET NUMBER

18640-AEDT01

ONLINE CERTIFICATIONS DIRECTORY

ONLINE CERTIFICATIONS DIRECTORY

BXUV.P214
Fire Resistance Ratings - ANSI/UL 263

Page Bottom

Fire Resistance Ratings - ANSI/UL 263

See General Information for Fire Resistance Ratings - ANSI/UL 263

Design No. P214

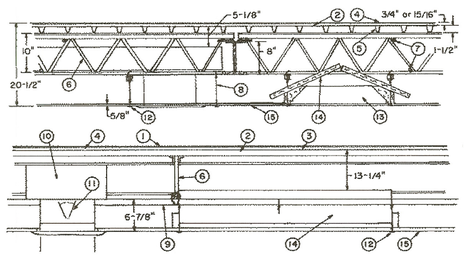
September 13, 2006

Restrained Assembly Rating — 1 Hr.

Unrestrained Assembly Rating — 1 Hr.

Unrestrained Beam Rating — 1 Hr.

Load Restricted for Canadian Applications — See Guide BXUV7



Beam — W8 x 17, min size. Joist girders-(Not shown)-20 in. min depth and 13 lb/lin ft min weight.

1. **Roof Covering*** — Consisting of hot mopped or cold application materials compatible with insulation(s) described herein which provide Class A, B or C coverings. See Roofing Materials and Systems Directory-Roof Covering Materials(TEVT).

1A. **In lieu of item 1, roof covering consisting of single-ply Roofing Membrane* —** that is either ballasted, adhered or mechanically attached as permitted under the respective manufacturer's Classification. See Fire Resistance Directory-Roofing Membranes (CHCI).

2. **Sheathing Material* —** Optional. Vinyl-film or paper scrim vapor barrier, applied with adhesive to steel roof deck, overlapped 6 in. on sides.

BMCA INSULATION PRODUCTS INC

3. **Adhesive* —** To be used beneath vapor barrier and roof insulation. Applied at 0.4 gal/100 sq ft in 1/2 in. wide ribbons, approx 6 in. OC.

BMCA INSULATION PRODUCTS INC

4. **Mineral and Fiber Boards* —** Nominal thickness of 3/4, 15/16, 1, 1-1/2 or 2 in., min size 3 by 4 ft, max size 4 by 8 ft. Applied in one layer.

FIBREX INSULATIONS INC — FBX Baseboard and FBX Capboard.

OWENS CORNING HT INC, DIV OF OWENS

CORNING

SIPLAST INC

In lieu of Item 4, various types of insulating concrete prepared and applied in the thickness indicated below:

4A. **Vermiculite Concrete** — Thickness to be 2 in. min from the top plane of steel roof deck. Mix consists of 6 cu ft of Vermiculite Aggregate*, 94 lbs. of Portland cement and 9 oz. of air entraining agent.

SIPLAST INC

VERMICULITE PRODUCTS INC

4B. **Cellular Concrete — Roof Topping Mixture* —** Foam concentrate mixed with water and Portland cement per manufacturer's specifications. Cast dry density and 28-day min compressive strength of 190 psi as determined in accordance with ASTM C495-66. Thickness of cellular concrete topping to be 2 in. min from the top plane of steel roof deck.

CELCORE INC — Type Celcore with cast dry density of 31 (+ or - 3.0) pcf or Type Celcore MF with cast dry density of 29 (+ or - 3.0) pcf.

CELLULAR CONCRETE L L C — Cast dry density 37 (+ or -) 3.0 pcf.

ELASTIZELL CORP OF AMERICA — Type II. Mix #1 of cast dry density 39 (+ or -) 3.0 pcf, Mix #2 of cast dry density 40 (+ or -) 3.0 pcf, Mix #3 of cast dry density 47 (+ or -) 3.0 pcf.

SIPLAST INC — Mix #2. Cast dry density of 36 (+ or -) 3.0 pcf.

4C. **Perlite Concrete —** Mix consists of 6 cu ft of Perlite Aggregate* to 94 lb of Portland cement and 1-1/2 pints of air entraining agent. Thickness of perlite concrete topping to be 2 in. min from the top plane of steel roof deck.

4D. **Cellular Concrete — Roof Topping Mixture* —** Foam Concentrate mixed with water, Portland Cement and UL Classified Vermiculite Aggregate per manufacturer's application instructions. Cast dry density of 33 (+ or -) 3.0 pcf and 28-day compressive strength of min 250 psi as determined in accordance with ASTM C495-86. Thickness of cellular concrete topping to be 2 in. min from the top plane of steel roof deck.

CELLULAR CONCRETE L L C — Mix #3.

SIPLAST INC — Mix #3.

See **Perlite Aggregate** (CFFX) category in Fire Resistance Directory for names of Classified companies.

5. **Steel Roof Deck —** (Unclassified) — Min 1-1/2 in. deep and 31-3/4 in. wide, galv, fluted steel deck. Min gauge is 22 MSG. Flutes approx 6 in. O.C., crests approx 5-1/4 in. wide, valleys approx 3/4 in. wide. Welded to each joist 10 in. O.C. or,

5A. **Corrugated Steel Deck —** (Unclassified) — Min 9/16 in. deep and 31-3/4 in. wide, galv steel deck. Min gauge is 28 MSG. Corrugations 2-3/8 in. O.C. Attached to each joist with welds 14 in. O.C. Adjacent units overlapped one corrugation at sides and 2 in. at ends or,

5B. **Classified Steel Floor and Form Units* —** Noncomposite 1-1/2 in. deep, 30 or 36 in. wide, galv units. Min gauge is 22 MSG. Spacing of welds attaching units to supports shall not exceed 12 in. O.C. Adjacent units button-punched or welded together 36 in. O.C. along side joints.

CANAM STEEL CORP — 36 in. wide Type P-3606 or P-3615

CONSOLIDATED SYSTEMS INC — Types A, B, BI, F

LOADMASTER SYSTEMS INC — Type PS.

MARLYN STEEL DECKS INC — Types B, F.

ROOF DECK INC — Types A, B-1, B-2 or F.

VULCRAFT, DIV OF NUCOR CORP — 1.5A, 1.5B, 1.5BI, 1.5F.

WHEELING-PITTSBURGH STEEL CORP, DIV

OF WHEELING CORRUGATING CO — Types A, F, BW, High Strength B, High Strength BW.

6. **Steel Joists** — Type 10J4 or 12K3 min size, welded to end supports. For steel roof deck and steel floor and form units (Items 5 and 5B), joists are spaced 72 in. O.C. For corrugated steel deck (Item 5A), joists are spaced 48 in. O.C.

7. **Bridging —** Steel bars, 1/2 in. diam welded to top and bottom chords of each joist.

8. **Hanger Wire —** No. 12 SWG galv steel wire spaced 4 ft O.C. along main runners and to occur additionally at splices of main runners, at all four corners of light fixtures, at centers of cross tees immediately adjacent to the long dimension of the light fixtures and at centers of cross tees adjacent to air duct outlets. The hanger wires are attached to the lower chord of bar joists or to the cold-rolled channels attached to the bar joists.

9. **Cold Rolled Channels —** No. 18 MSG cold-rolled steel, 1 1/2 in. deep channels placed under air duct and supported by hanger wires at each end, spaced not over 48 in. OC and at air outlets. To provide attachment for hanger wire between steel joists, two cold-rolled channels placed back to back and tied together.

10. **Air-Duct —** No. 25 MSG min, galv steel. Total area of duct openings not to exceed 57 sq in. per each 100 sq ft of ceiling area. Area of individual duct opening not to exceed 113 sq in. Max dimension of opening 12 in. As an alternate to the galv steel duct, air ducts fabricated from rigid **Air Duct Materials*** may be used in lieu of steel ducts. The total area of duct openings not to exceed 57 sq in. per each 100 sq ft of ceiling area. Area of individual duct opening not to exceed 113 sq in. Max dimension of opening 12 in. The

sheet steel duct drop or outlet is positioned at the center of a 24 in. long, min 0.029 in. thick (22 gauge) sheet steel duct liner. The sheet steel duct drop is insulated with a nom 1 in. thick, 5 pcf density rigid round glass fiber material. The ducts are supported by min 0.053 in. thick (16 gauge) 1-1/2 in. cold-rolled steel channels, suspended from the joists with 12 SWG galv hanger wire. Channels are located directly below the sheet steel duct liner, one on each side of the duct drop, and are spaced between duct drops at 72 in. OC for ducts up to 36 in. wide and 48 in. OC for ducts between 36 and 60 in. wide.

CERTAINTEED CORP — Rigid, Class I.

JOHNS MANVILLE INTERNATIONAL INC — Rigid, Class I.

KNAUF INSULATION GMBH — Rigid, Class I.

OWENS CORNING — Rigid, Class I.

10A. **Air Terminal Units* —** (Not shown)-As an alternate to the air duct openings in the ceiling (Item 10), nom 4 ft long **Air Terminal Units*** may be used. A max of 8 lin ft of diffuser slot is allowed for each 100 sq ft of ceiling area. The lin ft of diffuser slot is determined by multiplying the number of diffuser slots by the nom length of the unit. The units must be installed in accordance with the accompanying installation instructions.

TEMPMASTER CORP — Types FRD, FRD-CD, -CDR, -CDS, -CDX, -HK.

11. **Damper —** Min 0.053 in. thick (16 gauge) painted steel, 12 in. diam, 6-3/4 in. high with two 11-1/2 in. diam semicircular flaps. The flaps are held open by a **Fusible Link.**

In lieu of the dampers described above, Duct Outlet Protection System A as described in the Design Information Section may be used with steel ducts.

11A. **Damper —** (Not Shown)-Alternate to Item 11.-No. 14 or 16 MSG galv steel. Sized to overlap duct opening 1 in. min. Protected on both surfaces with 1/16 in. thick ceramic fiber paper laminated to the metal and held open with a Fusible Link (Bearing the UL Listing Mark).

12. **Steel Framing Members* —** Main runners, 10 or 12 ft long, spaced 4 ft OC. Cross tees, nom 4 ft long, installed perpendicular to main runners, spaced 2 ft OC. Cross tees nom 2 ft long, installed perpendicular to 4 ft cross tee at midspan, spaced 4 ft OC.

CGC INC — Types DXL, DXLZ, SDXL.

USG INTERIORS INC — Types DXL, DXLZ, SDXL.

12A. **Steel Framing Members* —** Main runners 12 ft long, spaced 48 in. OC. Cross tees, nom 48 in. long, installed perpendicular to main runners, spaced 24 in. OC. Cross tees, nom 2 ft long, installed perpendicular to 4 ft cross tee and spaced 4 ft OC.

ARMSTRONG WORLD INDUSTRIES INC — Types AFG, AFG A. Type GLBP (consisting of main runners, 4 ft cross tees and steel straps) for use with 24 by 48 in. Type FR-83 lay-in panels.

BPB AMERICA INC — Types PAC, PCH, PCS.

CHICAGO METALLIC CORP — Types 250, 260, 1250, 1260, 1850, 1860.

13. **Fixtures, Recessed Light —** (Bearing the UL Listing Mark)- Fluorescent lamp type, steel housing, 2 by 4 ft size. Fixtures spaced so their area does not exceed 16 sq ft per 100 sq ft of ceiling area. Wired in conformance with the National Electrical Code.

13A. **Fixtures, Recessed Light —** (Bearing the UL Listing Mark) — (Not Shown) — As an alternate to Item 13, incandescent lamp type, steel housing, nom 6-1/2 in. diam by 7-1/2 in. high. Each fixture provided with a nom 7-3/4 in. by 12-1/2 in. base plate screw-attached to the "high hat" fixture with three steel screws. Base plate to be provided with steel bar hangers designed to span across nom 24 in. spacing of cross tees for fixture support. Fixture secured to cross tees with steel clips provided at the end of the steel bar hangers. A max of two "high hat" fixtures may be substituted for each nom 24 in. by 48 in. fixture permitted in the ceiling (max four "high hat" fixtures per 100 sq ft of ceiling area). For use with USG Interiors, Inc. steel framing members and acoustical materials only. Wired in accordance with National Electrical Code.

14. **Fixture Protection — Batts and Blankets* —** 1-1/4 in. thick cut into pieces to form a four sided enclosure, triangular in cross-section, approx 1/2 in. longer and wider than the fixture with sufficient depth to provide at last 1/2 in. clearance between the fixture and the enclosure. The pieces are held together by 18 SWG galv steel wire at corners. Gap at top of enclosure is 1/2 in. Overlap on adjacent lay-in panels is 4 in.

THERMAFIBER INC — Type FR.

14A. **Alternate Fixture Protection Acoustical Materials* —** Cut from same material as Item 15, cut to form a five sided enclosure, trapezoidal in cross-section. Top panel whose width and length are equal to the width and length of the fixture is centered over and spaced 1-1/2 in. from the fixture housing by scrap pieces of steel framing members (Item 12). Pieces of the acoustical material, sized to equal the length and height of the fixture, are placed at each side of the fixture. Ends of fixture are protected by acoustical material cut to protect the height and width of the fixture at its ends and attached to side pieces with 8d nails. End pieces are omitted when fixtures and top panels are butted end to end.

14B. **Fixture Protection — Acoustical Material* —** For use with "high hat" light fixtures (Item 13A). Five sided enclosure, rectangular in cross section, cut from the same acoustical material used in the ceiling assembly. Two side pieces measuring 8 in. high by 23-3/4 in. long resting upon ceiling tile, two end pieces measuring 6-3/4 in. high by 16 in. long resting upon steel bar hangers and one top piece measuring 14 in. by 18 in. resting upon side and end pieces with 18 in. dimension parallel with end pieces. Enclosure secured with four 8d nails installed through side pieces into end pieces near the top of the assembly.

15. **Acoustical Material* —** Nom 24 by 48 by 3/4 or 24 by 24 by 3/4 in. lay-in panels. Border panels supported by min 0.016 in. thick painted steel angle with 7/8 in. legs; or min 0.016 in. thick painted steel channel with a 1 by 1-9/16 by ½ in. profile.

EMCO LTD — Type FR-81 or Type FR-83 . See **Acoustical Materials** (BYIT), EMCO Ltd., for specific tile details.

USG INTERIORS INC — Type FR-81 or Type FR-83. See Acoustical Materials (BYIT), USG Interiors, Inc., for specific tile details.

16. **Hold-Down Clips —** (Not Illustrated) — No. 24 MSG spring steel, 1-7/16 in. deep, 7/8 in. wide, placed over cross tees, symmetrically, 2 ft OC.

17. **Speaker Assemblies* —** (Not Shown) Optional. The speaker assemblies consist of speakers, speaker enclosures and their accessories. The ceiling penetration for the speaker enclosure shall not exceed 11-7/8 by 11-7/8 in. for the square speaker enclosures and 12 in. in diam for the round speaker enclosures. The speaker assemblies are installed in accordance with the installation instructions provided. A maximum of two 144 sq. in. speaker assemblies per 100 sq ft of ceiling area is allowed.

ATLAS SOUND L P

See **Speaker Assemblies For Fire Resistance (CHML)** for specific Types.

*Bearing the UL Classification Mark

Last Updated on 2006-09-13

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ANSI / UL 263 - P214

State of Utah
Department of Administrative Services

Division of Facilities Construction & Management
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4110 STATE OFFICE BUILDING
SALT LAKE CITY, UTAH 84114
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BUILDING NAME:

BURNS ARENA
DIXIE STATE COLLAGE
390 SOUTH 800 EAST
ST. GEORGE, UTAH

PROJECT TITLE:

ST. GEORGE, UTAH
NEW EAST ENTRY

STATE OF UTAH
KIM O. CAMPBELL
0112002016
REGISTERED ARCHITECT

MARK	DATE	DESCRIPTION

ISSUE TYPE:

ISSUE DATE: AUGUST 02, 2006

DFCM PROJECT NO: 06118640
CAD PROJECT NO: 06022
CAD DWG FILE: 06022 - BURNS ARENA
DRAWN BY: DSB
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SHEET TITLE

UL RATINGS
UL P214

SHEET NUMBER

18640-AEDT02

GENERAL

1. VISITS TO THE JOB SITE BY REPRESENTATIVES OF THE ENGINEER DO NOT CONSTITUTE APPROVAL OF THE WORK PERFORMED BY THE CONTRACTOR OR HIS SUBCONTRACTORS AND ARE MERELY FOR THE PURPOSE OF OBSERVING THE WORK PERFORMED.
2. CONTRACTOR SHALL NOTIFY ENGINEER/ARCHITECT OF ANY DISCREPANCIES, OMISSIONS OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS BEFORE PROCEEDING WITH ANY WORK INVOLVED. IN ALL CASES, UNLESS OTHERWISE DIRECTED, THE MOST STRINGENT REQUIREMENTS SHALL GOVERN AND BE PERFORMED.
3. CONTRACTOR SHALL VERIFY ALL CONDITIONS, DIMENSIONS AND ELEVATIONS, ETC., AT THE SITE AND SHALL COORDINATE WORK PERFORMED BY ALL TRADES. DO NOT SCALE DRAWINGS.
4. SHOP DRAWINGS SHALL BE REVIEWED BY THE ENGINEER/ARCHITECT PRIOR TO FABRICATION OR ERECTION FOR ANY PREFABRICATED OR MANUFACTURER-DESIGNED COMPONENTS AND SHALL BE STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THIS STRUCTURE RESIDES.
5. SIZES, LOCATIONS, LOADS, AND ANCHORAGES OF EQUIPMENT SHALL BE VERIFIED IN THE FIELD WITH EQUIPMENT MANUFACTURERS (SUPPLIERS) PRIOR TO FABRICATION OR INSTALLATION OF SUPPORTING STRUCTURES.
6. TEMPORARY BRACING SHALL BE PROVIDED WHEREVER NECESSARY TO TAKE CARE OF ALL LOADS TO WHICH THE STRUCTURE MAY BE SUBJECTED, INCLUDING WIND. SUCH BRACING SHALL BE LEFT IN PLACE AS LONG AS MAY BE REQUIRED FOR SAFETY, OR UNTIL ALL THE STRUCTURAL ELEMENTS ARE COMPLETE.
7. DURING AND AFTER CONSTRUCTION THE CONTRACTOR AND/OR OWNER SHALL KEEP LOADS ON THE STRUCTURE WITHIN THE LIMITS OF THE DESIGN LOAD.
8. CONTRACTOR AND ALL SUBCONTRACTORS SHALL PERFORM THEIR TRADES AND DUTIES IN A MANNER CONFORMING TO THE PROCEDURES AND REQUIREMENTS AS STATED IN THE 2003 INTERNATIONAL BUILDING CODE, (OR LATEST ACCEPTED CODE ADOPTED BY THE LOCAL BUILDING OFFICIALS.
9. ANY SPECIAL INSPECTION REQUIRED BY THE BUILDING OFFICIAL OR THE INTERNATIONAL BUILDING CODE ARE THE RESPONSIBILITY OF THE OWNER OR CONTRACTOR.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR SAFETY AND PROTECTION WITHIN AND ADJACENT TO THE JOB SITE.

CONCRETE

1. ALL EXTERIOR FLAT WORK, CURBS, GUTTERS, ETC SHALL BE NORMAL WEIGHT CONCRETE WITH A COMPRESSIVE STRENGTH EQUAL TO AT LEAST 4,500 PSI WITHIN 28 DAYS AFTER POURING. THE WATER CEMENT RATIO SHALL BE NO GREATER THAN 0.50 AND SLUMP SHALL BE 3" OR LESS. MIN CEMENT CONTENT SHALL BE 575 LBS PER CUBIC YARD. USE TYPE V CEMENT.
2. ALL FOOTINGS, FOUNDATIONS AND INTERIOR SLABS SHALL BE NORMAL WT CONCRETE WITH A COMPRESSIVE STRENGTH EQUAL TO AT LEAST 4,500 PSI WITHIN 28 DAYS AFTER POURING. 2,500 PSI WAS USED IN DESIGN AND SPECIAL INSPECTION IS NOT REQUIRED ALTHOUGH A 4,000 PSI COMPRESSIVE STRENGTH IS REQUIRED. THE WATER/CEMENT RATIO SHALL BE NO GREATER 0.50 AND SLUMP SHALL BE 3 IN. OR LESS. MIN. CEMENT CONTENT SHALL BE 575 LBS. PER CU. YARD. USE TYPE V CEMENT (SULFATE RESISTANT).
3. UNLESS OTHERWISE NOTED, ALL CONSTRUCTION JOINTS SHALL BE KEYED WITH A KEY 1-1/2 IN. DEEP, A LENGTH 2 IN. LESS THAN THE MEMBER, AND A WIDTH 1/2 OF THE MEMBER. REINFORCING SHALL BE CONTINUOUS THRU JOINT.
4. ALL CONCRETE WORK SHALL BE PLACED, CURED, STRIPPED, AND PROTECTED AS DIRECTED BY THE SPECIFICATIONS AND ACI STANDARDS AND PRACTICES.
5. BEFORE CONCRETE IS POURED CHECK WITH ALL TRADES TO INSURE PROPER PLACEMENT OF ALL OPENINGS, SLEEVES, CURBS, CONDUITS, BOLTS, INSERTS, ETC. RELATIVE TO WORK.
6. CONTRACTOR IS RESPONSIBLE FOR ALL SHORING AND FORMWORK.
7. REFER TO ARCHITECTURAL DRAWINGS FOR MOLDS, GROOVES, ORNAMENT, CLIPS OR GROUNDS, REQUIRED TO BE ENCASED IN CONCRETE AND FLOOR LOCATION OF FLOOR FINISHES AND SLAB DEPRESSIONS.

CONCRETE REINFORCING

1. ALL METAL REINFORCEMENT SHALL BE DEFORMED TYPE BARS (EXCEPT #2 BARS) AND SHALL CONFORM TO THE REQUIREMENTS OF THE "STANDARD SPECIFICATIONS A.S.T.M. A615 GRADE 60.
2. ALL SPLICES IN CONTINUOUS CONCRETE REINFORCING BARS SHALL LAP 36 BAR DIA. ALL SUCH SPLICES SHALL BE MADE IN A REGION OF COMPRESSION UNLESS OTHERWISE SHOWN. ALL CONTINUOUS REINFORCEMENT SHALL TERMINATE WITH A 90 DEGREE TURN OR A SEPARATE CORNER BAR.
3. ALL REINFORCEMENT BARS SHALL BE SECURELY ANCHORED AND HELD IN PLACE AND SHALL BE SPACED FROM ADJACENT SURFACES (UNLESS SHOWN OTHERWISE) AS FOLLOWS;

   C. FORMED SURFACES IN CONTACT WITH THE GROUND OR EXPOSED TO WEATHER (GRADE BEAMS WALLS, ETC.), AND SLABS ON GRADE..... 2 IN.
   D. UNFORMED SURFACES CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH (BOTTOM AND SIDES OF FOOTINGS)..... 3 IN.

   IN ALL CASES MINIMUM COVER SHALL NOT BE LESS THAN THE DIAMETER OF ADJACENT BARS.
4. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 AND SHALL HAVE A MINIMUM SIDE LAP OF 8 IN.
5. ALL REINFORCEMENT SHALL BE DETAILED AND PLACED IN ACCORDANCE WITH ACI DETAILING MANUAL 315 AND ACI STANDARD 318.

SPECIAL INSPECTIONS

1. FIELD WELDING AND FIELD BOLTING OF STRUCTURAL STEEL.
2. STRUCTURAL MASONRY

DEFERRED SUBMITTAL ITEMS

1. ROOF TRUSSES
   MANUFACTURER SHALL SUBMIT STAMPED CALCS AND SHOP DRAWINGS FOR REVIEW BY ENGINEER. APPROVED PACKAGE SHALL BE SUBMITTED TO CITY.

REQUIRED TESTING

1. CONCRETE. (3) SAMPLES EVERY 50 CUBIC YARDS.

FOOTING, FOUNDATION, AND SLABS ON GRADE

1. ALL FOOTINGS ARE BASED ON AN ALLOWABLE SOIL BEARING PRESSURE OF 1500 PSF. ANY SOIL CONDITION ENCOUNTERED DURING EXCAVATION THAT IS CONTRARY TO THOSE USED FOR DESIGN OF FOOTINGS AS OUTLINED IN WORKING DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING. REFERENCE THE REQUIREMENTS IN THE GEOTECHNICAL REPORT.
2. ALL FOOTINGS SHALL BEAR ON TWO FEET MINIMUM OF ENGINEERED GRANULAR FILL COMPACTED TO 95% OF MAX DENSITY, BASED ON ASTM D1557 METHOD OF COMPACTION. FILL SHALL BE PLACED IN LAYERS NOT TO EXCEED EIGHT INCHES IN DEPTH AFTER COMPACTION AND SHALL EXTEND DOWN TO IN-SITU COHESIVE SOILS. FILL SHALL BE COMPACTED UNDER ALL CONCRETE WORK ON THE SITE. BEARING MATERIAL FOUND TO BE COLLAPSIBLE OR EXPANSIVE SHALL BE REMOVED. REFERENCE REQUIREMENTS IN THE GEOTECHNICAL REPORT.
3. NO FOOTINGS SHALL BE PLACED IN WATER OR ON FROZEN GROUND.
4. ALL EXCAVATIONS ADJACENT TO AND BELOW FOOTING ELEVATION FOR OTHER TRADES SHALL BE ACCOMPLISHED PRIOR TO POURING ANY FOOTINGS.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR LATERALLY SUPPORTING ALL RETAINING TYPE FOUNDATION WALLS WHILE COMPACTING BEHIND WALLS AND UNTIL ALL SUPPORTING MEMBERS HAVE BEEN PLACED (SUCH AS FLOOR SLABS). ALL OPEN EXCAVATIONS AND TRENCHES SHALL BE SUPPORTED AND BARRICADED BY CONTRACTOR TO CONFORM WITH OSHA SAFETY STANDARDS.
6. ALL REINFORCEMENT SHALL BE SECURELY TIED IN PLACE PRIOR TO POURING CONCRETE.
7. ALL SLABS ON GRADE SHALL BE OVER 4 INCHES OF 3/4" FREE-DRAINING GRANULAR FILL. TYPICAL SLABS SHALL BE REINFORCED WITH #4 BARS AT 18"o.c. SEE PLANS AND DETAILS FOR SPECIAL REINFORCING ETC. RERFERENCE REQUIREMENTS IN THE GEOTECHNICAL REPORT.

STRUCTURAL STEEL

1. ALL STRUCTURAL STEEL SHALL BE ASTM A-36 (EXCEPT FOR TUBE COLUMNS WHICH SHALL BE ASTM A-500-B, Fy = 46 KSI) AND SHALL COMPLY WITH THE "STANDARD SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS" OF THE A.I.S.C. AND WITH THE A.I.S.C. CODE OF STANDARD PRACTICE.
2. ALL BOLTS FOR STEEL TO STEEL, SHALL BE A325, TIGHTEN TO SPECIFIED TORQUE AS PER AISC REQUIREMENTS. BOLTS FOR CONCRETE AND STEEL TO WOOD, SHALL BE ASTM A307, U.N.O.
3. ALL WELDING SHALL CONFORM TO AWS D1.1-85 REQUIREMENTS AND SHALL BE MADE WITH E70XX ELECTRODES BY WELDERS CERTIFIED FOR THE WELD TO BE DONE.
4. ALL BEARING PLATES FOR BEAMS AND COLUMNS RESTING ON MASONRY OR CONCRETE SHALL BE UNDERLAIN FULLY WITH A HIGH COMPRESSION, NON-SHRINK GROUT.
5. PRIOR TO FABRICATION AND ERECTION, SHOP DRAWINGS FOR ALL STEEL ITEMS SHALL BE REVIEWED BY THE STRUCTURAL ENGINEER.

MASONRY

1. *ALL MASONRY SHALL BE REINFORCED AS FOLLOWS UNLESS NOTED OTHERWISE IN DETAILS AND SCHEDULES;*

   PROVIDE VERTICAL BAR AT CORNERS AND END OF WALLS, JAMBS OF OPENINGS, AND 32" o.c. ELSEWHERE, U.N.O.

   8 IN. WALLS.....USE #5 VERTICAL

   ALL VERTICAL BARS SHALL BE DOWELED TO FOUNDATION.

   PROVIDE HORIZONTAL BOND BEAMS COMPOSED OF TWO BRICK UNITS OR A SINGLE H-BLOCK AND REINFORCED AT 48 IN. O.C.(U.N.O.), TOP OF WALLS AND DOUBLED AT FLOOR AND ROOF LEVEL.

   8 IN. WALLS.....USE 2-#4 HORIZ

2. *THE FOLLOWING STRENGTHS ARE REQUIRED:*
   A. MORTAR: TYPE "S" IN. COMPRESSION STRENGTH..... 2,000 PSI
   B. GROUT: MIN 6 BAG MIX
   C. CONCRETE BLOCK (CMU)..... f'm = 1,500 PSI
3. *ALL REINFORCING SHALL CONFORM TO THE REQUIREMENTS OF STANDARD SPECIFICATIONS A.S.T.M. A615 GRADE 60 AND SHALL LAP 40 BAR DIAMETERS IN ALL CASES. ALL BARS SHALL CONTINUE AROUND CORNERS AND INTERSECTIONS. TWO TO THREE PARTS PEA GRAVEL (BY VOLUME) MIN..... 2,500 PSI*
4. *PROVIDE A MIN OF 2.45 BAR, IN GROUTED SPACE, ON ALL SIDES AND ADJACENT TO EVERY OPENING WHICH EXCEEDS 24 IN. IN EITHER DIRECTION. BARS SHALL EXTEND 24 IN. MIN BEYOND THE CORNERS OF THE OPENING.*
5. *CLEAN VERTICAL GROUT CELLS AS MASONRY IS LAID AND BEFORE GROUTING.*
6. *ALL CELLS WITH REINFORCING AND ANCHOR BOLTS SHALL BE GROUTED. ALL REINFORCING SHALL BE SUPPORTED OR INSTALLED TO ENSURE A MIN GROUT COVER OF 1-1/4 IN.*
7. *IN ALL CASES, MASONRY OVER OPENINGS SHALL BE SUPPORTED WITH A STEEL LINTEL OR BEAM OR REINFORCED MASONRY BEAM. SEE DRAWINGS AND SCHEDULE FOR SIZE. LINTELS AND BEAMS SHALL BE SHORED UNTIL MASONRY SUPPORTED ABOVE THE LINTEL IS COMPLETED.*
8. *PROVIDE CRACK CONTROL JOINTS IN MASONRY AT A MAX OF 50 FT O.C..*
9. *MASON SHALL COORDINATE LOCATION OF ALL OPENINGS WITH MECHANICAL AND ELECTRICAL DRAWINGS. REINFORCE ALL OPENINGS AS PER NOTE NUMBER 4. MASON/CONTRACTOR SHALL PROVIDE SUPPORT FOR ALL MASONRY UNTIL ALL FRAMING CONNECTIONS (TO ROOF DIAPHRAGM ETC.) ARE COMPLETE.*

DESIGN CRITERIA

GOVERNING CODE	2003 IBC
SEISMIC CATEGORY	I = 1.00 R = 5 Ss = 57.4% S1 = 18.7%
BASIC WIND SPEED	70 MPH FASTEST MILE 90 MPH 3 SEC GUST EXPOSURE C I = 1.00
ROOF DEAD LOAD	20 PSF
LIVE LOAD	20 PSF
SOIL BEARING PRESSURE	1500 PSF

STEEL OPEN WEB JOISTS AND GIRDERS

1. *JOISTS SHALL BE OF STRUCTURAL STEEL ASTM A-36 MINIMUM AND CONFORM TO STANDARD SPECIFICATIONS FOR OPEN WEB JOISTS BY STEEL JOIST INSTITUTE.*
2. *ALL WELDING SHALL CONFORM TO AWS D1.1-85 REQUIREMENTS AND SHALL BE PERFORMED BY WELDERS CERTIFIED FOR THE WELD TO BE DONE. CERTIFICATION SHALL BE FOR TYPE OF WELDING BEING PERFORMED, AND SHALL BE CURRENT WITHIN THE PAST TWELVE MONTHS.*
3. *SPECIAL INSPECTIONS AND TESTING OF WELDS REQUIRED BY IBC 2003 SHALL BE PROVIDED AND PAID FOR BY THE OWNER.*
4. *JOISTS SHALL BE DESIGNED FOR DESIGN LOADS AS SHOWN IN CRITERIA PLUS THE WEIGHT OF ANY MECHANICAL UNITS PLACED ON THE ROOF. COORDINATE WEIGHTS AND LOCATION WITH CONTRACTOR.*
5. *LIMIT DEFLECTION OF JOISTS TO L/240 FOR TOTAL LOAD CONDITIONS.*
6. *FABRICATOR SHALL PROVIDE AND CONTRACTOR SHALL INSTALL ALL BRACING AND BRIDGING REQUIRED BY DESIGN AND SHOP DRAWINGS OF JOISTS AND GIRDERS.*

STEEL ROOF DECKING

1. *ROOF DECKING SHALL BE 1-1/2" TYPE B, 20 GAUGE DECK. STEEL FOR DECKING SHALL HAVE A MINIMUM Fy = 33 KSI.. ROOF DECKING SHALL HAVE A PAINTED FINISH.*
2. *ALL DECKING SHALL BE CONTINUOUS FOR AT LEAST 2 SPANS.*
3. *ALL LAPS IN DECKING SHALL BE LOCATED OVER STEEL BEAMS AND SHALL HAVE A MINIMUM OF 3" LAP. WELDS AT LAPS SHALL PENETRATE BOTH LAYERS.*
4. *EACH STEEL DECKING PANEL SHALL BE WELDED AS FOLLOWS:*

   SUPPORT MEMBERS AND PANEL ENDS:
   ROOF DECKING.....5/8" DIA. PUDDLE WELD AT 12" o.c.
   SIDELAP CONNECTIONS.....1-1/2" SIDE SEAM WELD AT 12" o.c.
   OR CRIMP (BUTTON PUNCH) @ 12" o.c.

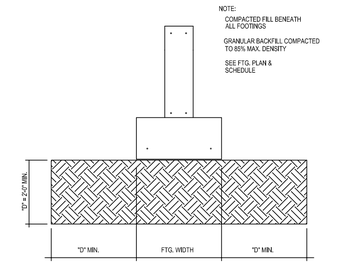
   EDGE CONNECTIONS AT PERIMETER:
   ROOF DECKING.....5/8" DIA. PUDDLE WELD AT 12" o.c.

5. *IN ALL CASES, EDGES OF ROOF, DECK SHALL BE WELDED TO A CONTINUOUS MEMBER SUCH AS AN ANGLE, OR STEEL BEAM OR GIRDER.*
6. *STEEL DECK SHALL BE SUPPORTED AT ALL OPENINGS GREATER THAN 12" EITHER DIRECTION WITH STEEL SUPPORT ANGLES, 4 x 4 x 5/16 MINIMUM, UNLESS OTHERWISE SHOWN ON DRAWINGS. EXTEND ANGLES FULL LENGTH BETWEEN BEAMS AND WELD TO BEAMS.*
7. *CONTRACTOR SHALL WELD DECK IN SUCH A MANNER AS TO PREVENT ANY BURN-THRU OF PUDDLE WELDS.*

MASONRY REINFORCING BAR LAP SCHEDULE

F'm = 1500 PSI

WALL THICKNESS (IN.)	BAR SIZE	LAP (IN.)
SINGLE BARS IN GROUTED SPACES (GRADE 60)		
8	4	26
	5	32
	6	58
12	4	26
	5	32
	6	54
	7	62
DOUBLE BARS IN GROUTED SPACES (GRADE 60)		
8	4	30
	5	46
12	4	26
	5	32
	6	58



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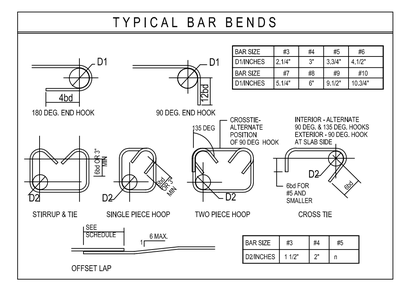
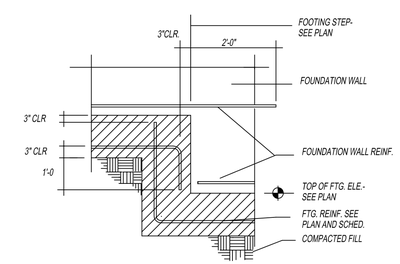
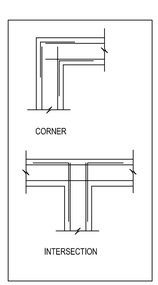


5 CONCRETE REINFORCING DETAILS

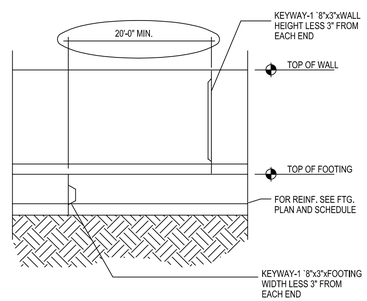


7 FOOTING STEP DETAIL

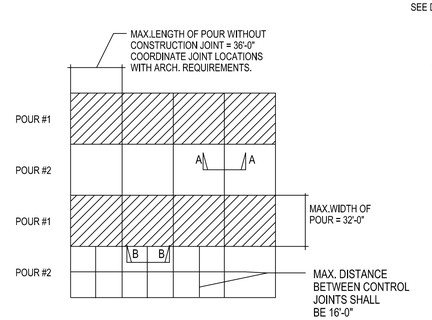


CONCRETE

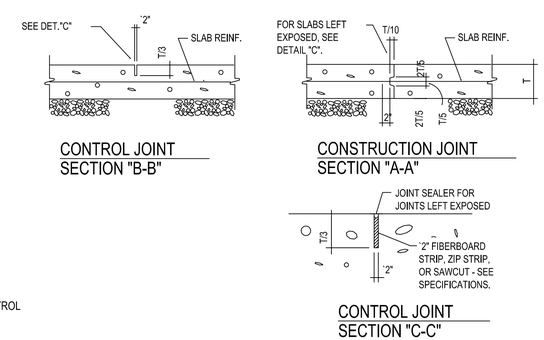
4 CORNER BARS



3 CONTROL JOINTS IN FOOTINGS AND WALLS



2 SCHEMATIC PLAN OF SLAB JOINTS



1 SLAB ON GRADE CONTROL JOINTS

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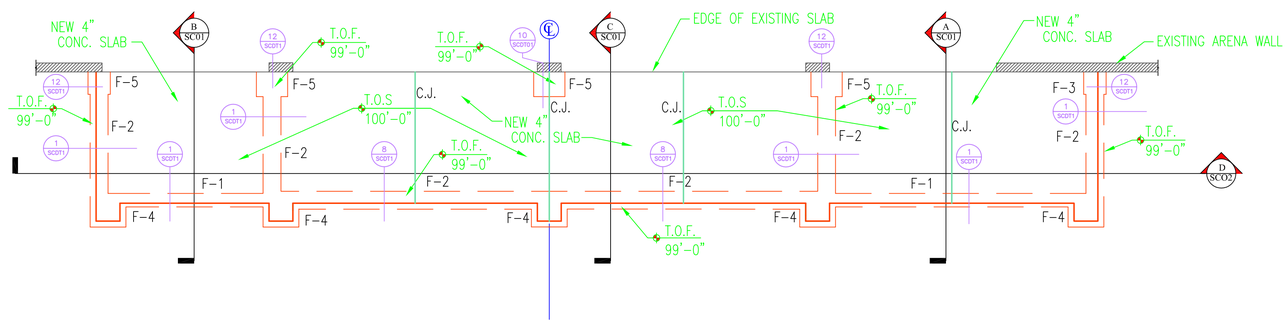

i'c = 3000 psi
ry = 60,000 psi

FOOTING SCHEDULE

Design Soil Bearing Pressure per

MARK	WIDTH	HEIGHT	DEPTH	REINFORCING CROSSWISE NO.	SIZE	LENGTH	SPACING	REINFORCING CROSSWISE NO.	SIZE	LENGTH	SPACING	REMARKS
F-1	1'-6"	CONT.	12"					2	#4	CONT.	12"	
F-2	2'-0"	CONT.	12"					2	#4	CONT.	12"	
F-3	2'-6"	2'-6"	12"	3	#4	2'-0"	12"	3	#4	2'-0"	12"	
F-4	4'-0"	4'-0"	12"	5	#4	3'-6"	10"	5	#4	3'-6"	10"	
F-5	2'-9"	3'-6"	12"	4	#4	2'-3"	12"	4	#4	3'-0"	9"	
F-6												

FOOTING / FOUNDATION PLAN

1/8" = 1'-0"

LEGEND

T.O.F. = TOP OF FOOTING
T.O.S. = TOP OF SLAB
C.J. = CONTROL JOINT

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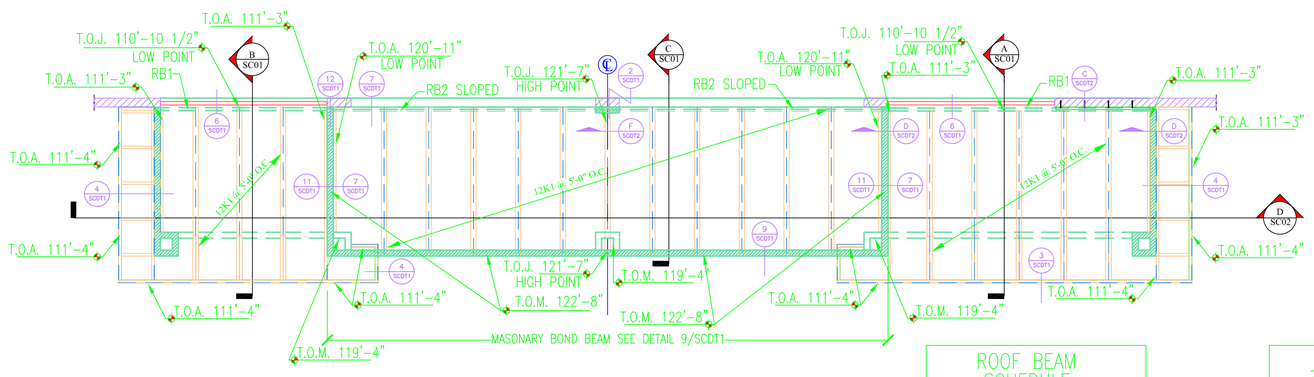

ROOF FRAMING PLAN

1/8" = 1'-0"

ROOF BEAM SCHEDULE

MARK	TYPE
1	∠ 3½X3½X¼" LEDGER CONTINUOUS (SEE DETAIL)
2	∠ 3½X3½X¼" LEDGER CONTINUOUS (SEE DETAIL)
RB-1	4 X 12 X 3/8" T.S.
RB-2	W12X22

LEGEND

T.O.J. = TOP OF JOIST

T.O.M. = TOP OF MASSONARY

T.O.A. = TOP OF ANGLE

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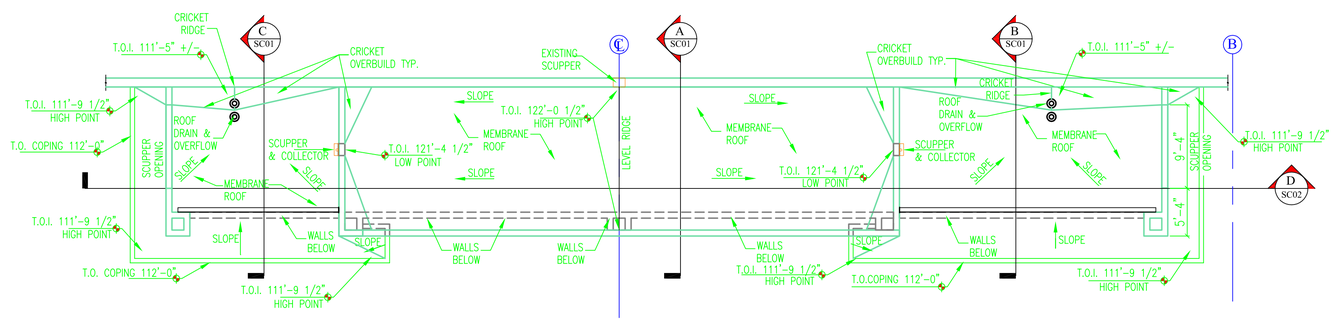
SHEET NUMBER

18640-FP02



ROOF PLAN

1/8" = 1'-0"

LEGEND

T.O.I. = TOP OF ROOF INSULATION

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BUILDING NAME:

BURNS ARENA
DIXIE STATE COLLAGE
390 SOUTH 800 EAST
ST. GEORGE, UTAH

PROJECT TITLE:

ST. GEORGE, UTAH
NEW EAST ENTRY

STATE OF UTAH
KIM O. CAMPBELL
0112002016
REGISTERED ARCHITECT

MARK	DATE	DESCRIPTION

ISSUE TYPE:

ISSUE DATE: AUGUST 02, 2006

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CAD PROJECT NO: 06022
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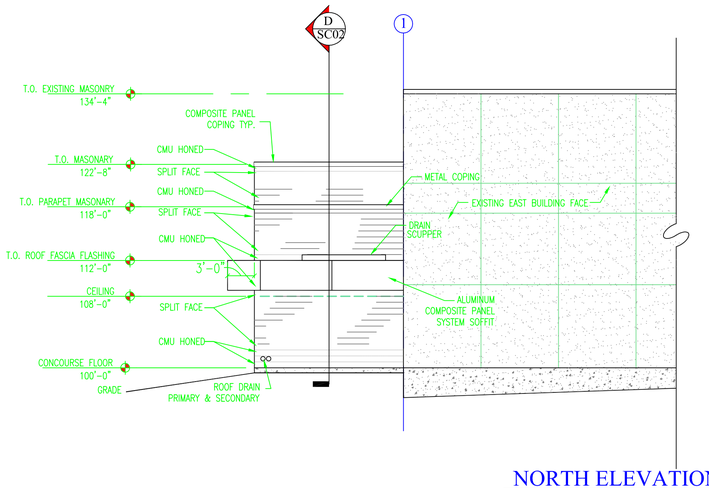
SHEET TITLE

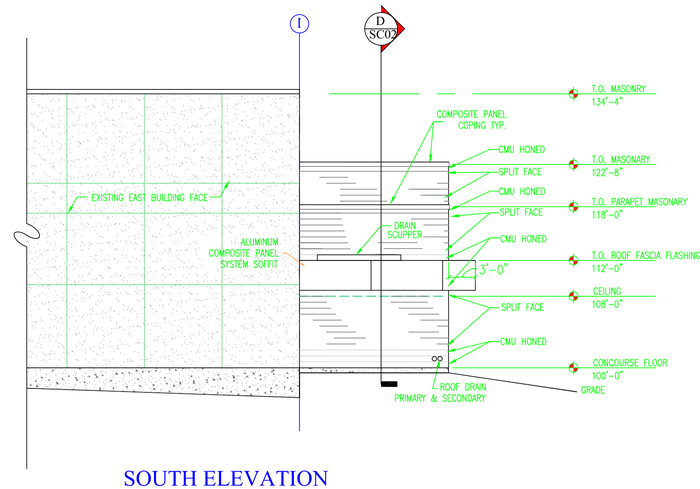
ROOF PLAN

SHEET NUMBER

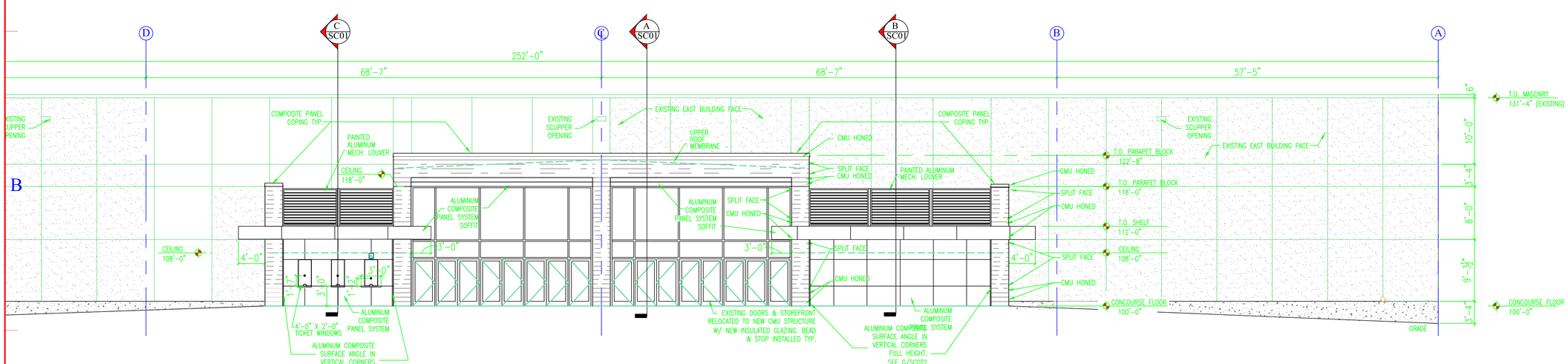
18640-FP03



NORTH ELEVATION
1/8" = 1'-0"



SOUTH ELEVATION
1/8" = 1'-0"



EAST ELEVATION
1/8" = 1'-0"

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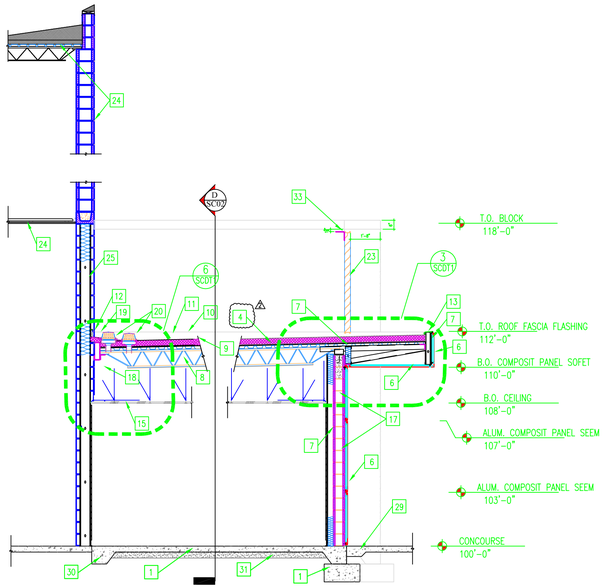
SHEET TITLE

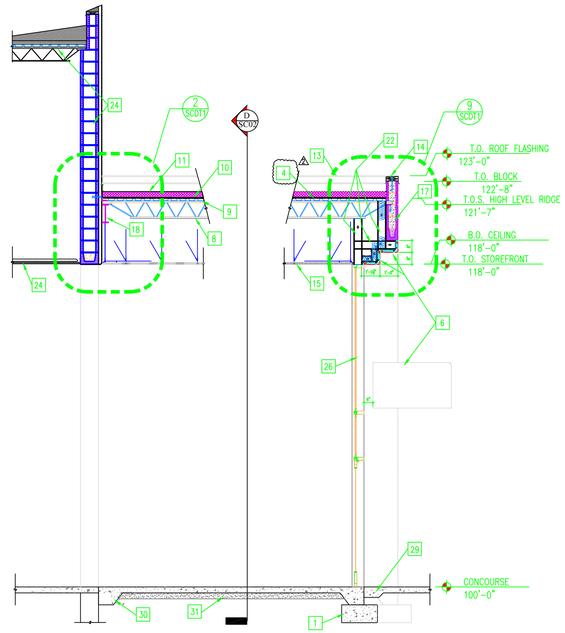
EXTERIOR ELEVATIONS

SHEET NUMBER

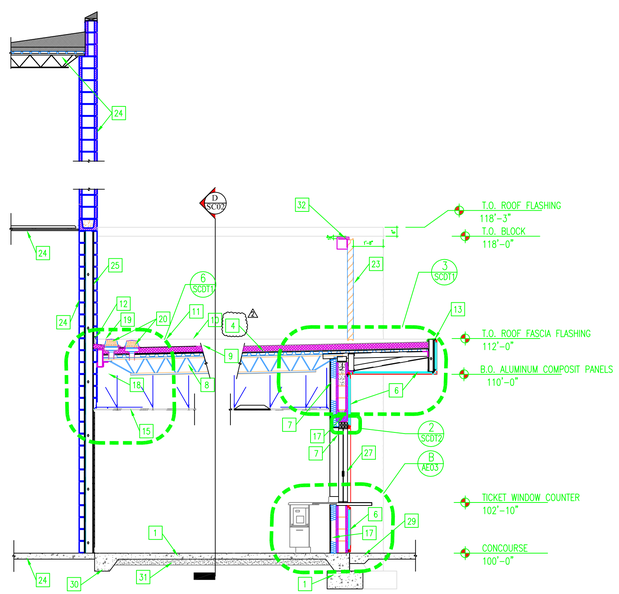
18640-EL01



A BUILDING SECTION
1/4"=1'-0"



B BUILDING SECTION
1/4"=1'-0"



C BUILDING SECTION
1/4"=1'-0"

1 SLAB & INTIGRATED FOOTING (SEE STRUCTURAL FP01)

2 8" CMU 'HONED' PRE COLORED TYP. (SOLID GROUTED)
2 HR. FIRE RESISTANCE (SEE AEDT01)

3 8" CMU 'SPLIT FACE' PRE COLORED TYP. (SOLID GROUTED)
2 HR. FIRE RESISTANCE (SEE AEDT01)

4 EXTERIOR 5/8" GYP. BD. 4X12' PERPENDICULAR TO METAL DECK.
(UL LISTING P214)

5 2" STEEL FURRING CHANNEL @ 16" O.C. W/ 5/8" GYP. BD. TYP.

6 ALUMINUM COMPOSITE PANEL SYSTEM

7 24 GA. 3 5/8" METAL STUD @ 16" O.C. W/ 5/8" G.B. & R13 BATT INSULATION.

8 STEEL JOISTS (SEE STRUCTURAL)

9 1 1/2" A TYPE 20 GA. METAL DECKING

10 2- LAYERS OF RIGID ROOF INSULATION

11 ROOF MEMBRANE CONTINUE UP UNDER
COPING & REGLETS TYP.

12 REGLET

13 PERFORMED COPING ALUMINUM COMPOSITE PANEL SYSTEM

14 2- 2X TOP PLATE

15 SUSPENDED CEILING

16 DRAIN OPENING THROUGH PARAPET WALLS W/ MEMBRANE IN SIDES OF OPENING (COORDINATE HEIGHT)

17 MASONRY BOND BEAM ALSO PROVIDE @ 4'-0" O.C. HORIZONTALLY TYP.

18 STEEL BEAM (SEE STRUCTURAL)

19 FOAM CRICKETT

20 ROOF DRAIN & OVERFLOW

21 COLLECTOR & 6" DOWN SPOUT PRE FINISHED

22 6" 24 GA. STEEL STUDS

23 PAINTED ALUMINUM SCREEN

24 EXISTING BUILDING (BEYOND)

25 24 GA. 6" STEEL STUD W/ 5/8" GYP. BD. INSIDE & 5/8" DENSEGLASS EXTERIOR W/ DIAMOND WALL STUCCO FINISH TO MATCH EXISTING EXTERIOR. W/ R19 BATT INSULATION

26 ALUMINUM STORE FRONT (RELOCATE FROM EXISTING LOCATION) W/ NEW INSULATED GLAZING, BEAD & STOP.

27 TICKET WINDOW SCW 102

28 R13 BATT INSULATION

29 EXTEND SIDEWALK W/ THICKENED EDGE TYP.

30 THICKEN EDGE

31 4" GRANULAR FILL (PEA GRAVEL) OVER TEST COMPACT GRANULAR SUB GRADE.

32 6X6 ANGLE SUPPORT ALUMINUM SCREEN (SEE H/SCDT2)

33 6X6 ANGLE SUPPORT ALUMINUM SCREEN W/ PLATE ATTACHMENT (SEE J/SCDT2)

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KIM O. CAMPBELL
0112002016
REGISTERED ARCHITECT

MARK	DATE	DESCRIPTION
2	11/07/06	ROOF STRUCTURE

ISSUE TYPE:

ISSUE DATE: AUGUST 02, 2006

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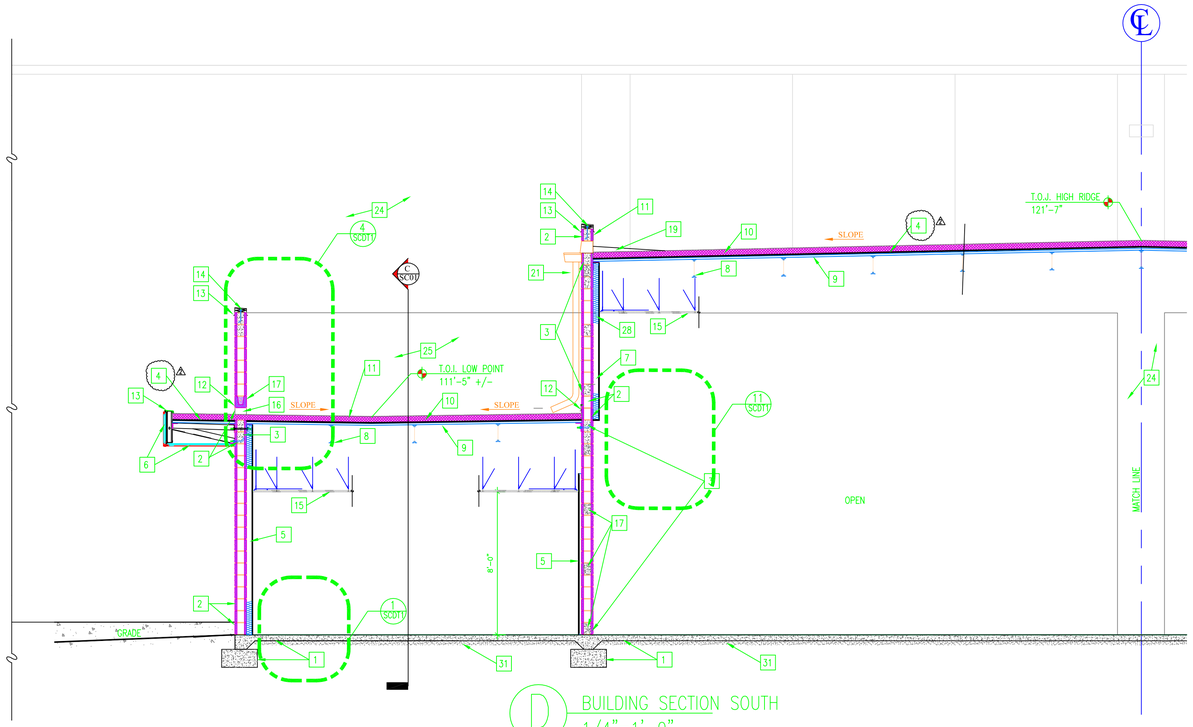
SHEET TITLE

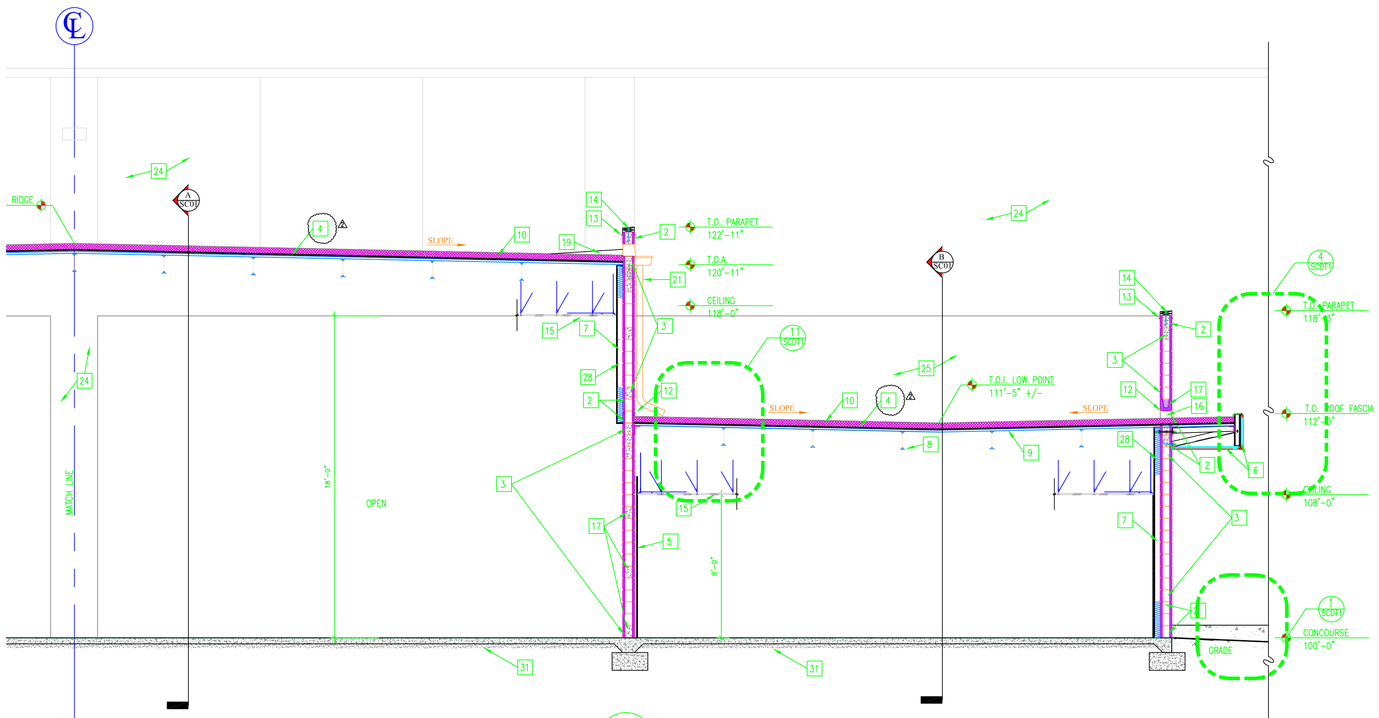
BUILDING SECTION

SHEET NUMBER

18640-SC01



D BUILDING SECTION SOUTH
1/4"=1'-0"



D BUILDING SECTION NORTH
1/4"=1'-0"

1 SLAB & INTIGRATED FOOTING (SEE STRUCTURAL FP01)

2 8" CMU 'HONED' PRE COLORED TYP. (SOLID GROUTED) 2 HR. FIRE RESISTANCE (SEE AEDT01)

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STATE OF UTAH
KIM O. CAMPBELL
0112002016
REGISTERED ARCHITECT

MARK	DATE	DESCRIPTION
2	11/07/06	ROOF STRUCTURE

ISSUE TYPE:

ISSUE DATE: AUGUST 02, 2006

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BUILDING SECTION

SHEET NUMBER

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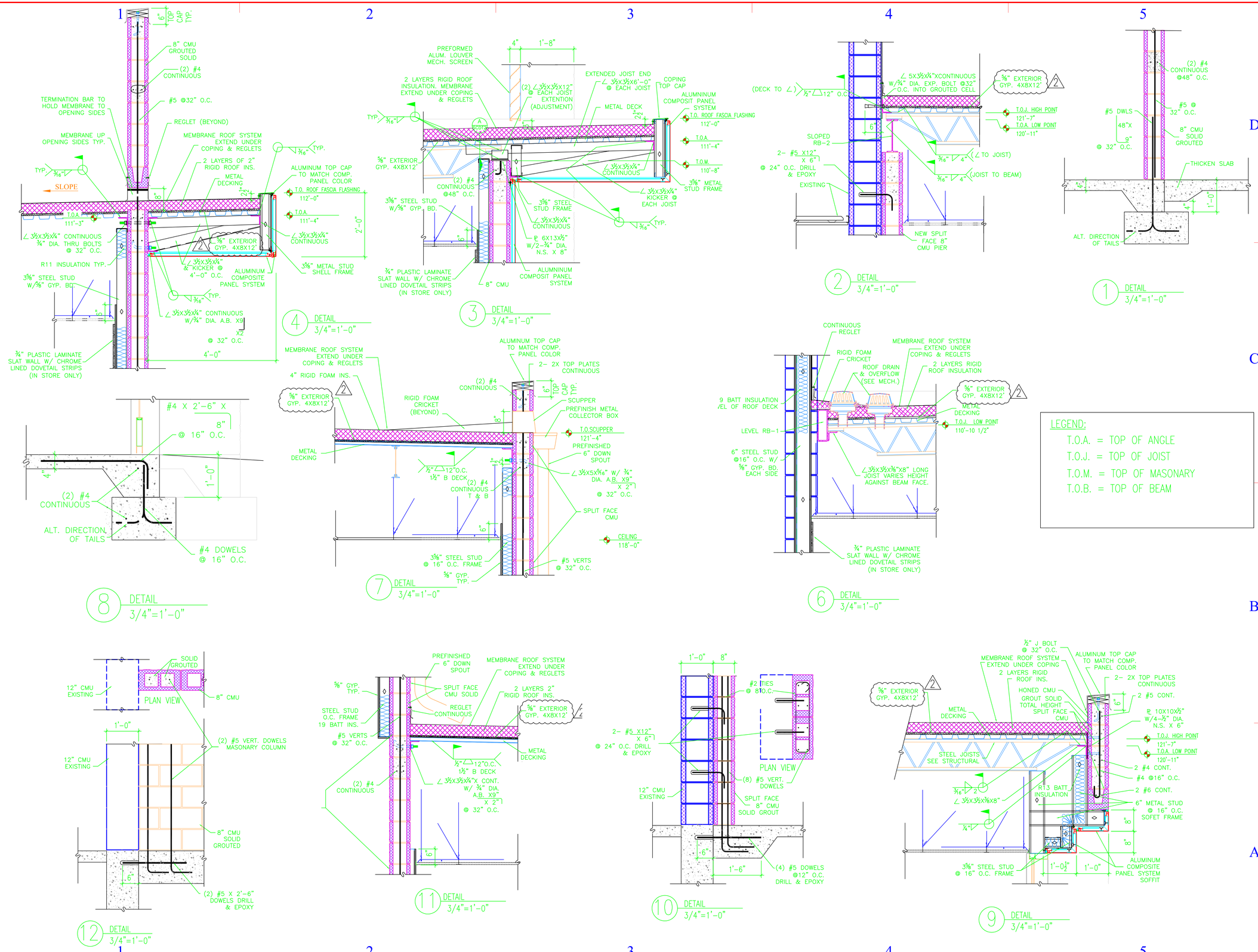

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MARK	DATE	DESCRIPTION
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ISSUE TYPE:

ISSUE DATE: AUGUST 02, 2006

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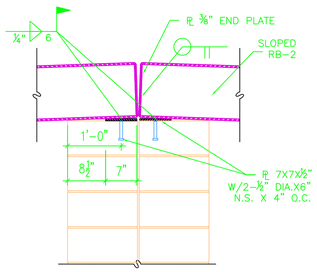
SHEET TITLE

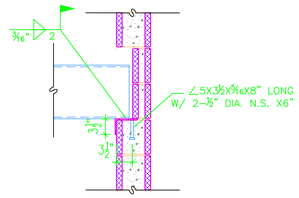
DETAILS

SHEET NUMBER

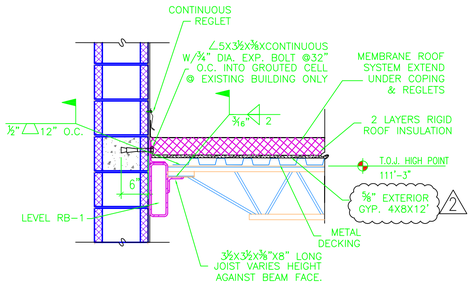
18640-SCDT1



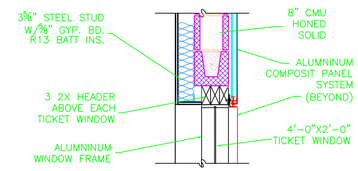
F DETAIL 3/4"=1'-0"



D DETAIL 3/4"=1'-0"



C DETAIL 3/4"=1'-0"



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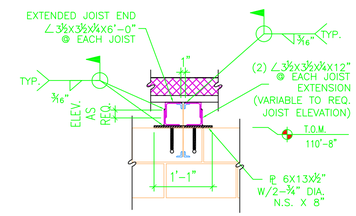

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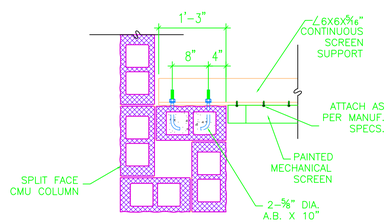
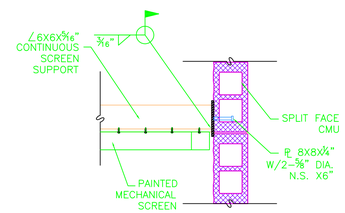


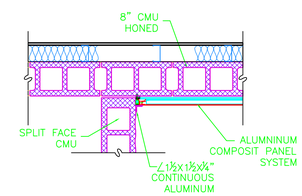
PLAN VIEW

H DETAIL 3/4"=1'-0"



PLAN VIEW

J DETAIL 3/4"=1'-0"



PLAN VIEW

G DETAIL 3/4"=1'-0"

LEGEND:

T.O.A. = TOP OF ANGLE
T.O.J. = TOP OF JOIST
T.O.M. = TOP OF MASONARY
T.O.B. = TOP OF BEAM

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KIM O. CAMPBELL
0112002016
REGISTERED ARCHITECT

MARK	DATE	DESCRIPTION
2	11/07/06	ROOF STRUCTURE

ISSUE TYPE:

ISSUE DATE: AUGUST 02, 2006

DFCM PROJECT NO: 06118640
CAD PROJECT NO: 06022
CAD DWG FILE: 06022 - BURNS ARENA
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SHEET TITLE

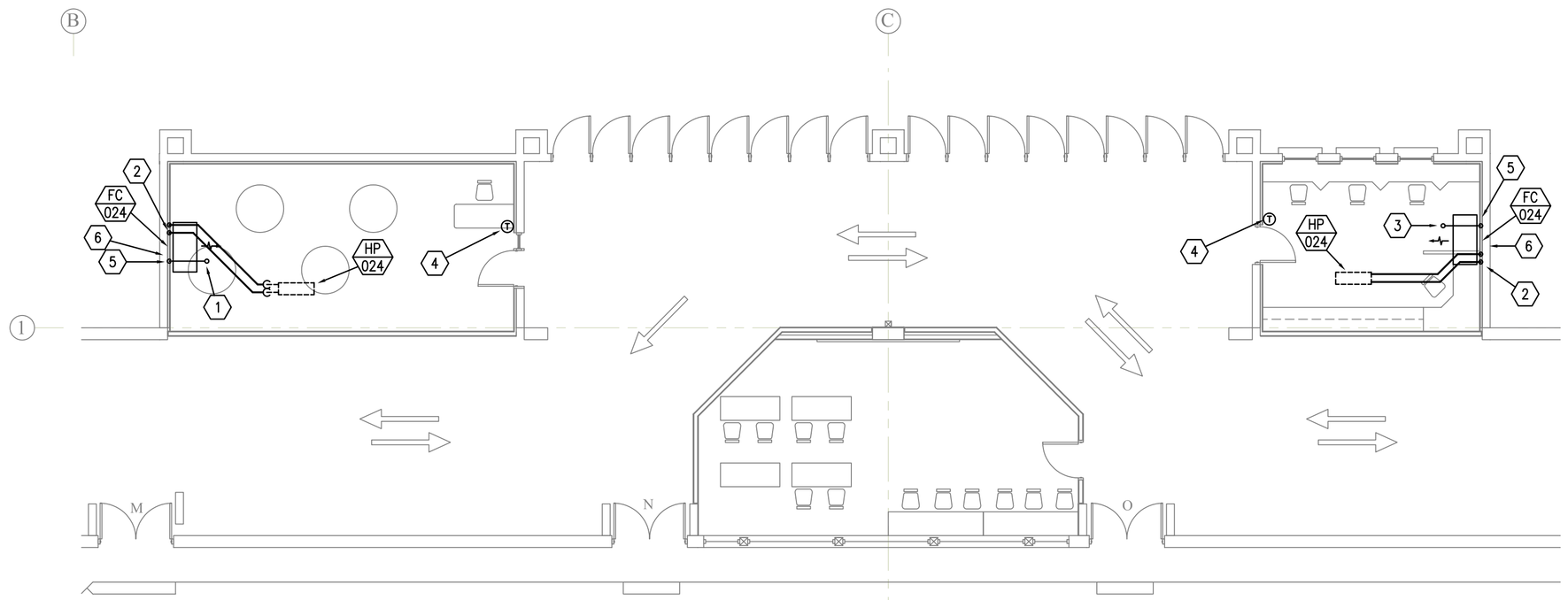
DETAILS

SHEET NUMBER

18640-SCDT2

KEYED NOTES

1. INSTALL A 4" ROOF CAP AND DUCT FROM CAP TO O/A INLET ON FAN COIL UNIT. BALANCE TO 20 CFM. PROVIDE MANUAL VOLUME DAMPER.
2. MOUNT FAN COIL BELOW CEILING.
3. INSTALL A 4" ROOF CAP AND DUCT FROM CAP TO O/A INLET ON FAN COIL UNIT. BALANCE TO 60 CFM. PROVIDE MANUAL VOLUME DAMPER.
4. PROVIDE REMOTE CONTROL TO CONTROL FAN COIL UNIT.
5. PROVIDE FAN COIL UNIT WITH FRESH AIR KIT.
6. INSTALL CONDENSATE PIPING PER THE MANUFACTURER'S REQUIRMENTS AND DISCHARGE 18" ABOVE FINISHED GRADE AT THE EXTERIOR WALL.



MECHANICAL PLAN

SCALE: 1/8" = 1'-0"

DUCTLESS SPLIT SYSTEM - OUTDOOR HEAT PUMP SCHEDULE

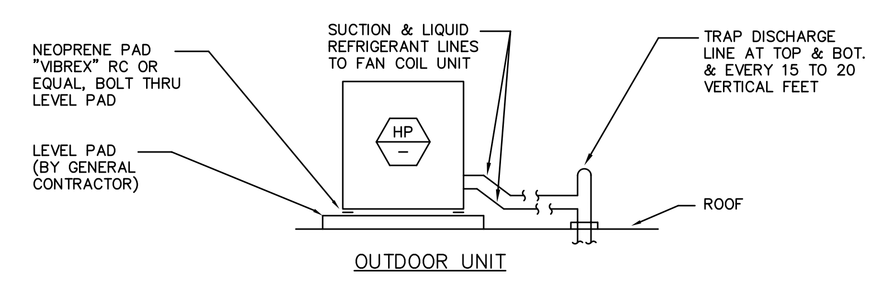
NAME	MANUF. AND MODEL NO.	SEER	COOLING TOTAL COOLING (MBH)	COOLING SENSIBLE COOLING (MBH)	HEATING HIGH HEATING (MBH)	HEATING LOW HEATING (MBH)	LIQUID LINE (IN)	VAPOR LINE (IN)	ELECTRICAL VOLT/PH	MCA	RLA	LRA	REMARKS
HP-024	BRYANT 538D024	11.5	21.7	14.9	21.4	12.7	3/8	5/8	208/1	15.3	11.7	61	1,2,3,4

1. STARTER AND DISCONNECT TO BE PROVIDED BY ELECTRICAL.
2. SELECTION BASED ON 115°F SUMMER OUTSIDE AIR, 80°F/67°F INDOOR AIR.
3. SELECTION BASED ON 17°F WINTER OUTDOOR AIR.
4. MCA ARE FOR BOTH INDOOR AND OUTDOOR UNITS AND SEPARATE HEATER AND UNIT CIRCUITS REQUIRED.

DUCTLESS SPLIT SYSTEM - INDOOR FAN COIL UNIT SCHEDULE

NAME	MANUF. AND MODEL NO.	TOTAL AIR FLOW RATE (CFM)	OUTDOOR AIRFLOW RATE (CFM)	ENTERING AIR TEMP. DB/WB (DEG. F)	ELECTRICAL VOLT/PH	ELECTRICAL FLA	ELECTRICAL MCA	LBS	REMARKS
FC-024	BRYANT 619C024	552	40	80/67	208/1	0.5	0.63	108	1,2,3

1. STARTER AND DISCONNECT TO BE PROVIDED BY ELECTRICAL.
2. MCA ARE FOR BOTH INDOOR AND OUTDOOR UNITS AND SEPARATE HEATER AND UNIT CIRCUITS REQUIRED.
3. PROVIDE WITH FRESH AIR INTAKE KIT.



1 / MH101 SPLIT SYSTEM HEAT PUMP
NO SCALE

VAN BOERUM & FRANK ASSOCIATES INC.
1070 West 1600 South Ste #104
St. George, Utah 84770
Off: 435.674.4800 - Fax: 435.674.2708
SALT LAKE ST.GEORGE PHOENIX LOGAN

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BUILDING NAME:

RM# DCFM
BURNS ARENA
DIXIE STATE COLLEGE
390 SOUTH 800 EAST
ST. GEORGE, UTAH

PROJECT TITLE:

MARK	DATE	DESCRIPTION

ISSUE TYPE:

ISSUE DATE:

DFCM PROJECT NO:
CAD PROJECT NO:
CAD DWG FILE: VBFA - 6397
DRAWN BY: DSB KB
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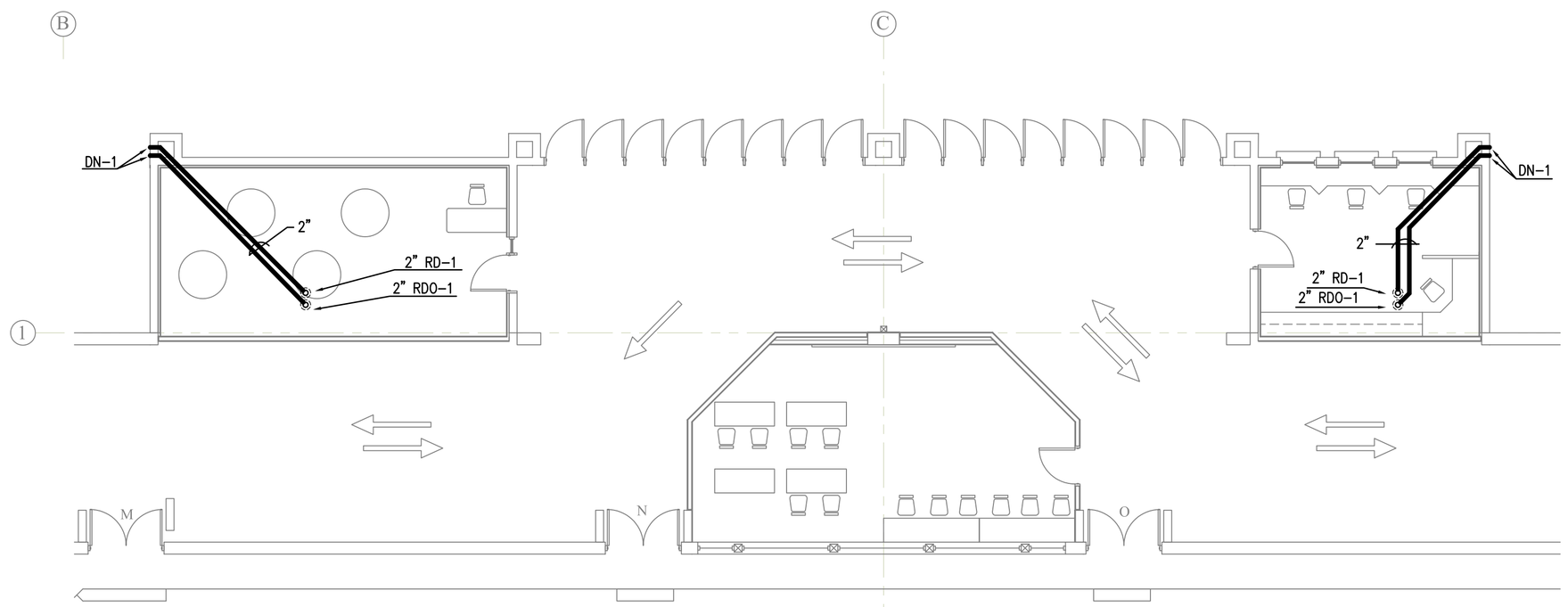
SHEET TITLE

MECHANICAL FLOOR PLAN

SHEET NUMBER

MH101



PLUMBING PLAN

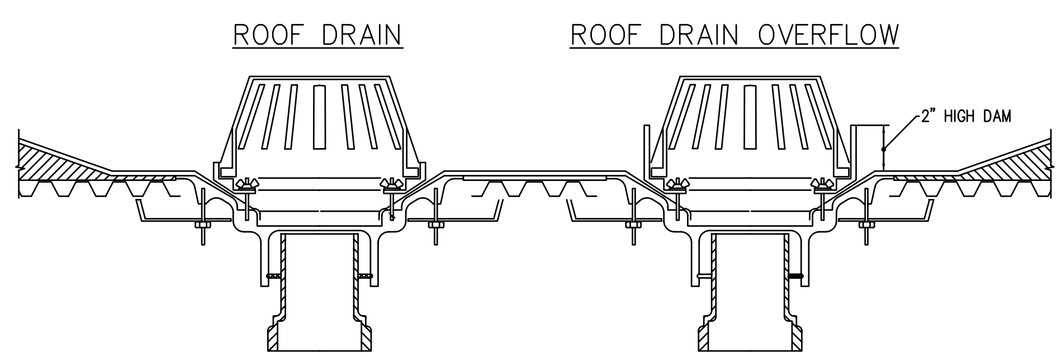
SCALE: 1/8" = 1'-0"

PIPE SEISMIC BRACING SCHEDULE								
PIPE SIZE	HANGER ROD SIZE	MAX. ROD LENGTH	HANGER TYPE	BOLTS TO ANGLE	ANGLE CLIP	ANGLE BRACE	ANCHOR CONN. TYPE	ANCHOR BOLT OR INSERT
1-1/2"	1/2"	25"	CLEVIS	3/8"	3x3x1/4	2x2x16GA	I	3/8"
2"	1/2"	25"	CLEVIS	3/8"	3x3x1/4	2x2x16GA	I	3/8"

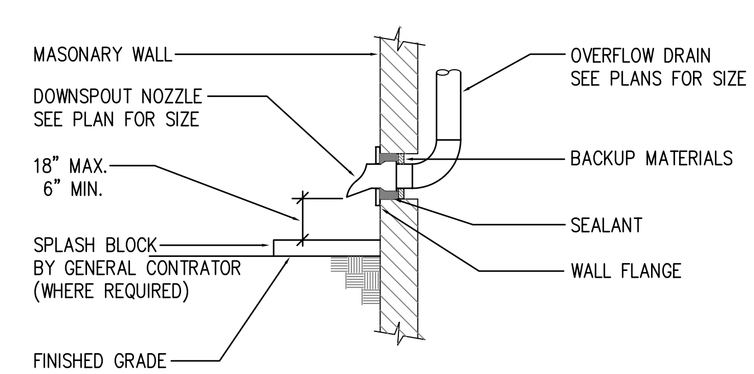
FOR ANCHOR CONNECTIONS SEE LIST.

SEE PIPE BRACING DETAIL

*1-5/8"x1-5/8"x12 GA CHANNEL MAY BE USED



2 / PL101 ROOF DRAIN DETAIL
NO SCALE



1 / PL101 DOWNSPOUT NOZZLE DETAIL
NO SCALE

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RM# DCFM
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DIXIE STATE COLLEGE
390 SOUTH 800 EAST
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PROJECT TITLE:

MARK	DATE	DESCRIPTION

ISSUE TYPE:

ISSUE DATE:

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SHEET TITLE

PLUMBING FLOOR PLAN

SHEET NUMBER

PL101

SHEET 18 OF 23

EQUIPMENT SCHEDULE

UNIT #	FUNCTION	LOAD	VOLT	PHASE	FULL LOAD AMPS	CONDUIT SIZE	WIRES NO. SETS	WIRES NO.	WIRES SIZE	WIRES EQUIP. GND (1)	OCPD TYPE	OCPD AMPS	REF. NOTES STARTER	REF. NOTES DISCONNECT	REF. NOTES OTHER	REMARKS
FC-24	FAN COIL UNIT	.63 MCA	208	1	0.50	3/4"	1	2	12	12	CB	20		4A		
HP-24	HEAT PUMP	15.3 MCA	208	1	12.25	3/4"	1	2	12	10	CB	25		2A		

NOTES:
1. NON-FUSED DISCONNECT SWITCH
2. FUSED DISCONNECT SWITCH
3. BREAKER IN ENCLOSURE
4. MANUAL STARTER W/THERMAL OVERLOAD
5. MAGNETIC STARTER
6. MAGNETIC STARTER/NON-FUSED DISCONNECT COMBINATION
7. MAGNETIC STARTER/FUSED DISCONNECT COMBINATION
8. MAGNETIC STARTER/BREAKER COMBINATION
9. VARIABLE FREQUENCY DRIVE
10. REDUCED VOLTAGE STARTER
11. DIRECT CONNECTION
12. RECEPTACLE/SPECIAL PURPOSE OUTLET/ETC.
13. TWO-SPEED STARTER, COORDINATE W/MOTOR TYPE

A. FURNISHED, INSTALLED, AND CONNECTED UNDER DIVISION 16
B. FURNISHED AND INSTALLED UNDER ANOTHER DIVISION REQUIRING CONNECTION UNDER DIVISION 16.
C. FURNISHED UNDER ANOTHER DIVISION BUT INSTALLED AND CONNECTED UNDER DIVISION 16.
D. FURNISHED, INSTALLED AND CONNECTED UNDER ANOTHER DIVISION.

CB = CIRCUIT BREAKER - THERMAL MAGNETIC
CKW = CHILLER KILOWATTS

NOTE 1: PER 250.122(A), EQUIPMENT GROUND IS NOT REQUIRED TO BE LARGER THAN PHASE CONDUCTOR.

FIXTURE SCHEDULE

TYPE	DESCRIPTION	CATALOG NUMBER	VOLTS	LAMPS
A	2X4 LAY IN WITH 18 CELL ANODIZIED ALUM PARABOLIC LOUVER	COLUMBIA: P4D24-332G-MA36-S-3EB8UNV	120	(3) F032.835
B	8" RECESSED DOWNLIGHT WITH CLEAR REFLECTOR	PRESCOLITE: CFTD832HEB/STFD802H	120	(2) CF32/835
C	SINGLE CIRCUIT MONORAIL TRACK WITH 6" STAND OFF BRACKETS AND ADJUSTABLE HEADS	TECH: 700MOBHSC60S 700MOSS612S	120	50MR16FL
D	4" LOW VOLTAGE DOWNLIGHT WITH SATIN ALUMINUM TRIM	EUREKA: 1121B-SC-1600C-035	120	(1) 50MR16FL
E	8" RECESSED DOWNLIGHT WITH CLEAR ALZAK REFLECTOR	PRESCOLITE: RHD802-150MHFE-STH802	120	(1) M150/C/U
X1	DOUBLE FACE DIE CAST ALUMINUM AC ONLY EXIT WITH BLACK HOUSING, BRUSHED ALUM FACE AND GREEN LETTERS	DUAL LITE: LEDS2ACGBA	120/277	INCLUDED

PANELBOARD SCHEDULE

PANEL A TYPE NQOD 120/208 VOLTS 3 PH 4 W

MOUNTING: X FLUSH / SURFACE

DIMENSIONS: 20 W, 5.75 D (in.), H

LOCATION: TICKET BOOTH

AMP: 100

MAINS: LUGS / X BREAKER / SUBFEED LUGS / ISO GROUND / 200% NEUTRAL

BRANCH BREAKERS

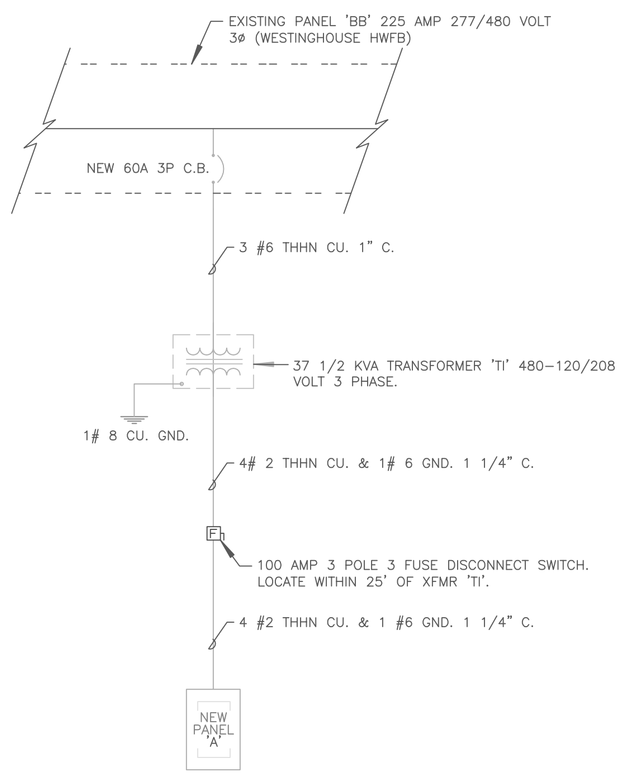
ITEM	AMPS	POLE	WIRE SIZE	CIR. NO.	LEFT PHASE LOAD A	LEFT PHASE LOAD B	LEFT PHASE LOAD C	RIGHT PHASE LOAD A	RIGHT PHASE LOAD B	RIGHT PHASE LOAD C	CIR. NO.	AMPS	POLE	WIRE SIZE	ITEM
TICKET OFFICE LIGHTING	20	1	12	1	805			1080			2	20	1	12	TICKET COUNTER POWER
ENTRY LIGHTING	20	1	12	3		980			360		4	20	1	12	OFFICE POWER
STORE LIGHTING	20	1	12	5			1600			180	6	20	1	12	FIBER SWITCH POWER
EXTERIOR LIGHTING	20	1	12	7	990			900			8	20	1	12	RECEPTACLES
SPARE	20	1	12	9					720		10	20	1	12	STORE RECEPTACLES
SPARE	20	1	12	11						1000	12	20	1	12	ATM POWER
FC-24 FAN COIL UNIT	20	1	12	13	50			50			14	20	2	12	FC-24 FAN COIL UNIT
–	–	–	–	15		50			50		16	–	–	–	–
HP-24 HEAT PUMP	25	2	10	17			1275			1275	18	25	2	10	HP-24 HEAT PUMP
–	–	–	–	19	1275			1275			20	–	–	–	–
SPARE	20	1		21							22	20	1		SPARE
SPARE	20	1		23							24	20	1		SPARE
SPARE	20	1		25							26	20	1		SPARE
SPARE	20	1		27							28	20	1		SPARE
SPARE	20	1		29							30	20	1		SPARE
SPACE ONLY				31							32				SPACE ONLY
SPACE ONLY				33							34				SPACE ONLY
SPACE ONLY				35							36				SPACE ONLY
SPACE ONLY				37							38				SPACE ONLY
SPACE ONLY				39							40				SPACE ONLY
SPACE ONLY				41							42				SPACE ONLY
					3120	1030	2875	3305	1130	2455					
					6425	2160	5330	TOTAL							
					53.54	18.00	44.42	AMPS/PHASE							

CONNECTED LOAD TOTAL: 13915 VA

EQUIP RATING: 10000 AMPS RMS SYM.

GENERAL NOTES

1. CONSULT ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF ALL LIGHTING FIXTURES.
2. VERIFY ALL EQUIPMENT DIMENSIONS AND LOCATIONS BEFORE BEGINNING ROUGH IN. CONSULT ALL APPLICABLE CONTRACT DRAWINGS AND SHOP DRAWINGS TO INSURE NEC CODE CLEARANCES REQUIRED AROUND ALL ELECTRICAL EQUIPMENT.
3. CONTRACTOR SHALL VERIFY ALL ELECTRICAL LOADS (VOLTAGE, PHASE, CONNECTION REQUIREMENTS, ETC.) OF EQUIPMENT FURNISHED UNDER DIVISION 15 WITH APPROVED MECHANICAL SHOP DRAWINGS BEFORE BEGINNING ROUGH IN.
4. SEE SPECIFICATIONS FOR REQUIRED COORDINATION MEETINGS WITH MECHANICAL AND CEILING CONTRACTORS.
5. SEE APPLICABLE SHOP DRAWINGS FOR ROUGH IN LOCATION OF ALL EQUIPMENT, WIRING DEVICES, ETC. WHERE APPLICABLE MOUNT ALL WIRING DEVICES ABOVE BACK SPLASH EXCEPT THOSE SERVING UNDER COUNTER EQUIPMENT.
6. SEE SPECIFICATION FOR ENERGY SAVING LAMP AND BALLAST REQUIREMENTS.
7. FINISHES OF ALL LIGHT FIXTURES SHALL BE AS SELECTED BY ARCHITECT.
8. THE ELECTRICAL CONTRACTOR SHALL NOTIFY AND COOPERATE WITH THE MECHANICAL CONTRACTOR SUCH THAT NO PIPING, DUCTS, OR EQUIPMENT FOREIGN TO THE OPERATION OF THE ELECTRICAL EQUIPMENT SHALL BE PERMITTED TO BE INSTALLED IN, ENTER OR PASS THRU ELECTRICAL ROOMS OR SPACES, OR ABOVE OR BELOW ELECTRICAL EQUIPMENT IN OTHER AREAS.
9. ELECTRICAL BOXES SHALL NOT BE LOCATED IN MASONRY COLUMNS IN BRICK WALLS OR IN GROUTED CELLS ADJACENT TO OPENINGS. COORDINATE LOCATION OF BOXES WITH MASONRY CONTRACTOR.
10. ALL PENETRATIONS OF FIRE RATED FLOORS, WALLS, AND CEILINGS SHALL BE SEALED WITH APPROVED MATERIAL TO MAINTAIN FIRE RATING OF SURFACE PENETRATED.
11. CIRCUITS EXTENDING OVER 70' FOR 120 VOLT AND 165' FOR 277 VOLT 20 AMP CIRCUITS SHALL BE RUN WITH MINIMUM #10 CONDUCTORS.



1 PARTIAL ONE-LINE DIAGRAM
NO SCALE

ELECTRICAL SYMBOL SCHEDULE

1. SEE FIXTURE SCHEDULE FOR TYPE, MOUNTING AND WATTAGE.
2. HEIGHT MEASURED TO TOP LINE OF THE BOX FROM THE FINISH FLOOR.
3. REFER TO DRAWINGS FOR DIRECTIONAL ARROWS.
4. SUBSCRIPT KEYS SWITCH TO FIXTURES CONTROLLED.
5. NEMA TYPE 'ND' NON-FUSED UNLESS NOTED 'F' (FUSED). USE 'HD' 480 V.
6. HEIGHT TO BE THE LOWER OF EITHER 80" A.F.F. OR 6" BELOW CEILING.
7. PROVIDE H.O.A. AND S.S. PUSHBUTTONS AS REQUIRED.
8. DOUBLE ARROWS DENOTE A DOUBLE FACE UNIT.
9. COORDINATE WITH MILLWORK SHOP DRAWINGS AND ELEVATIONS FOR HEIGHT.
10. SUBSCRIPT DENOTES NEMA CONFIGURATION.
11. HEIGHT MEASURED TO BOTTOM OF THE BOX FROM FINISH FLOOR.

STANDARD MOUNTING HEIGHT UNLESS OTHERWISE NOTED ON PLANS

SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES
	ONE CIRCUIT, TWO WIRE HOME RUN TO PANEL		
	2 CIRCUIT, 3 WIRE, COMMON NEUTRAL HOME RUN		
	3 CIRCUIT, 4 WIRE, COMMON NEUTRAL HOME RUN		
	CONDUIT RUN CONCEALED IN WALL OR CEILING		
	CONDUIT RUN CONCEALED IN FLOOR OR GROUND		
	CONDUIT UP		
	CONDUIT DOWN		
	CONDUIT STUB LOCATION	CAP CONDUIT	
	CEILING LIGHT FIXTURE	CEILING	1.
	WALL LIGHT FIXTURE	AS NOTED	1.
	RECESSED DOWNLIGHT FIXTURE	CEILING	1.
	FLUORESCENT LIGHT FIXTURE	AS NOTED	1
	FLUORESCENT EGRESS LIGHT FIXTURE	AS NOTED	UNSWITCHED
	FLOOD OR TRACK FIXTURE	AS NOTED	
	CEILING MOUNTED EXIT LIGHT	CEILING	1.3.8.
	WALL MOUNTED EXIT LIGHT	AS NOTED	1.3.8.
$	SINGLE POLE SWITCH	+4'-0"	2.
$a	SINGLE POLE SWITCH	+4'-0"	4. 2.
$3	THREE-WAY SWITCH	+4'-0"	2.
$4	FOUR-WAY SWITCH	+4'-0"	2.
	DUPLEX RECEPTACLE	+16" OR AS NOTED	9. 11.
A	DUPLEX RECEPTACLE		9.
W	ELECTRIC WATER COOLER RECEPTACLE		SEE DIAGRAM
WP	WEATHERPROOF RECEPTACLE	+24" OR AS NOTED	2. 9.
	GROUND FAULT INTERRUPTER DUPLEX RECEPTACLE	+16" OR AS NOTED	9. 11.
	FOURPLEX RECEPTACLE	+16" OR AS NOTED	9. 11.
	SPECIAL PURPOSE OUTLET	+16" OR AS NOTED	10. WITH CAP. 11.
	TELEVISION OUTLET	+16" OR AS NOTED	11.
	DATA OUTLET	+16" OR AS NOTED	9. 11.
	TELEPHONE OUTLET	+16" OR AS NOTED	9. 11.
	TELEPHONE/DATA OUTLET	+16" OR AS NOTED	9. 11.
J	JUNCTION BOX ('F' IN FLOOR)	AS NOTED	
	MOTOR OUTLET	TO SUIT EQUIP.	
P	PHOTO-ELECTRIC CONTROL	AS NOTED	TORK 2000A
F J	FUSED DISCONNECT SWITCH	+5'-0"	5.
$T	MANUAL STARTER THERMAL OVERLOAD SWITCH WITH PILOT LIGHT	+4'-0"	2.
J	MAGNETIC STARTER / DISCONNECT COMBINATION	+5'-0"	
	PANEL BOARD	TOP AT +6'-0"	
	MAIN DISTRIBUTION PANEL		
	TELEPHONE TERMINAL BOARD		
#	SOUND SYSTEM SPEAKER	+8'-0" OR AS NOTED	
842	ARCHITECTURAL ROOM NUMBER		
A	LIGHT FIXTURE (LETTER DESIGNATES TYPE)		
EQ 34	EQUIPMENT NUMBER		
F	FIRE ALARM MANUAL STATION	+4'-0"	2.
H	FIRE ALARM SIGNAL HORN/STROBE	+6'-8"	6.
S	SMOKE DETECTOR	CEILING	

INDEX OF ELECTRICAL DRAWINGS

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EG102	ELECTRICAL SPECIFICATIONS
ES101	OVERALL BUILDING PLAN.
EE101	ELECTRICAL PLAN
EX101	ELECTRICAL DIAGRAMS

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BUILDING NAME:
BURNS ARENA
ENTRY PLAZA
DIXIE STATE COLLAGE
390 SOUTH 800 EAST
ST. GEORGE, UTAH

PROJECT TITLE:
ST. GEORGE, UTAH
NEW EAST ENTRY

LICENSED PROFESSIONAL ENGINEER No. 4816 GARY W. MESKER STATE OF UTAH

MARK	DATE	DESCRIPTION

ISSUE TYPE:

ISSUE DATE: OCTOBER 25, 2006

DFCM PROJECT NO: 06118640
CAD PROJECT NO: 06022
CAD DWG FILE: 06022 - BURNS ARENA
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SHEET TITLE
SYMBOLS, NOTES AND SCHEDULES

SHEET NUMBER
EG101

ELECTRICAL SPECIFICATIONS

GENERAL PROVISIONS

A. REFERENCE

1. THE GENERAL CONDITIONS AND OTHER CONTRACT DRAWINGS AS SET FORTH IN THE FOREGOING PAGES ARE HEREBY INCORPORATED INTO AND BECOME A PART OF THE SPECIFICATIONS FOR WORK UNDER THIS TITLE, INSOFAR AS THEY APPLY HERETO.

2. ALL SPECIFICATIONS UNDER THIS DIVISION TITLE ARE DIRECTED TO AND ARE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. UNLESS OTHER TRADES OR PERSONS ARE SPECIFICALLY MENTIONED, "ELECTRICAL CONTRACTOR" IS INFERRED AND INTENDED.

B. CONTRACT DRAWINGS

1. THE DRAWINGS ACCOMPANYING THESE SPECIFICATIONS ARE COMPLEMENTARY EACH TO THE OTHER AND WHAT IS CALLED FOR BY ONE SHALL BE AS IF CALLED FOR BY BOTH.

2. CONSULT ALL CONTRACT DRAWINGS WHICH MAY AFFECT THE LOCATION OF EQUIPMENT, CONDUIT AND WIRING AND MAKE MINOR ADJUSTMENTS IN LOCATION TO SECURE COORDINATION.

3. WIRING LAYOUT IS SCHEMATIC AND EXACT LOCATIONS SHALL BE DETERMINED BY FIELD CONDITIONS.

4. OTHER THAN MINOR ADJUSTMENTS SHALL BE SUBMITTED TO THE OWNER'S REPRESENTATIVE FOR APPROVAL BEFORE PROCEEDING WITH THE WORK.

C. JOB-SITE COPY OF DOCUMENTS

1. MAINTAIN AT THE SITE, ONE COPY OF ALL DRAWINGS, SPECIFICATIONS, ADDENDA APPROVED SHOP DRAWINGS, CHANGE ORDERS AND OTHER MODIFICATIONS, IN GOOD ORDER AND MARKED TO RECORD ALL CHANGES MADE DURING CONSTRUCTION. THESE SHALL BE AVAILABLE TO THE OWNER'S REPRESENTATIVE. THE DRAWINGS MARKED TO RECORD ALL CHANGES MADE DURING CONSTRUCTION SHALL BE DELIVERED TO THE OWNER'S REPRESENTATIVE FOR THE OWNER UPON COMPLETION OF THE WORK. AN ADDITIONAL SET OF DRAWINGS WILL BE FURNISHED BY THE OWNER'S REPRESENTATIVE FOR THIS PURPOSE UPON REQUEST.

D. MANUFACTURER'S DRAWINGS

1. THE CONTRACTOR SHALL SUBMIT TO THE ARCHITECT FOR REVIEW, (6) COPIES OF MANUFACTURER'S DRAWINGS AND WIRING DIAGRAMS. THE ENGINEER WILL REVIEW CONTRACTOR'S SHOP DRAWINGS AND RELATED SUBMITTALS (AS INDICATED BELOW) WITH RESPECT TO THE ABILITY OF THE DETAILED WORK, WHEN COMPLETE, TO BE A PROPERLY FUNCTIONING INTEGRAL ELEMENT OF THE OVERALL SYSTEM DESIGNED BY THE ENGINEER. BEFORE SUBMITTING A SHOP DRAWING OR ANY RELATED MATERIAL TO THE ENGINEER, CONTRACTOR SHALL: REVIEW EACH SUCH SUBMISSION FOR CONFORMANCE WITH THE MEANS, METHODS, TECHNIQUES, SEQUENCES, AND OPERATIONS OF CONSTRUCTION, AND SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO, ALL OF WHICH ARE THE SOLE RESPONSIBILITY OF CONTRACTOR; APPROVE EACH SUCH SUBMISSION BEFORE SUBMITTING IT; AND SO STAMP EACH SUCH SUBMISSION BEFORE SUBMITTING IT. THE ENGINEER SHALL ASSUME THAT NO SHOP DRAWING OR RELATED SUBMITTAL COMPRISES A VARIATION UNLESS CONTRACTOR ADVISES ENGINEER OTHERWISE VIA A WRITTEN INSTRUMENT WHICH IS ACKNOWLEDGED BY ENGINEER IN WRITING. THE ITEMS, TYPES OF SUBMITTALS AND RELATED MATERIAL (IF ANY) CALLED FOR ARE INDICATED BELOW:

ITEMS	TYPE SUBMITTALS REQUIRED
LIGHTING AND POWER PANELS	SHOP DRAWINGS
LIGHTING FIXTURES	CATALOG CUTS
LIGHTING CONTROL EQUIPMENT	CATALOG CUTS
EMERGENCY LIGHTING EQUIPMENT	CATALOG CUTS

E. GUARANTEES

1. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEFECTS, REPAIRS AND REPLACEMENTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR AFTER DATE OF SUBSTANTIAL COMPLETION AS DETERMINED BY THE OWNER'S REPRESENTATIVE. PRODUCT GUARANTEES GREATER THAN ONE (1) YEAR SHALL BE PASSED ALONG TO THE OWNER FOR FULL BENEFIT OF THE MANUFACTURER'S WARRANTY.

WORK INCLUDED

A. INSTALLATION, MATERIALS, AND WORKMANSHIP

1. FURNISH AND INSTALL ALL NECESSARY ANCHORS, SUPPORTS, STRAPS, BOXES, FITTINGS AND OTHER SIMILAR APPURTENANCES NOT INDICATED ON THE DRAWINGS BUT WHICH ARE REQUIRED FOR A COMPLETE AND PROPERLY INSTALLED SYSTEM CONSISTENT WITH THE ARCHITECTURAL TREATMENT OF THE BUILDING.

2. THE ELECTRICAL CONTRACTOR, INSOFAR AS THE WORK IS CONCERNED, SHALL AT ALL TIMES KEEP THE PREMISES IN A NEAT AND ORDERLY CONDITION, AND AT THE COMPLETION OF THE WORK, SHALL PROPERLY CLEAN UP AND CART AWAY DEBRIS AND EXCESS MATERIALS. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF DUMPSTER & REFUSE DISPOSAL AS REQUIRED FOR ELECTRICAL WORK.

3. ALL MATERIALS SHALL BE NEW AND UNDETERIORATED AND OF A QUALITY NOT LESS THAN THE MINIMUM SPECIFIED.

B. COORDINATION OF PLANS AND SPECIFICATIONS

1. CONTACT THE OWNER'S REPRESENTATIVE IMMEDIATELY IF THERE IS ANY QUESTIONS REGARDING THE MEANING OR INTENT OF EITHER PLANS OR SPECIFICATIONS, OR UPON NOTICING ANY DISCREPANCIES OR OMISSIONS IN EITHER PLANS OR SPECIFICATIONS.

C. CUTTING AND PATCHING

1. PATCHING SHALL MATCH EXISTING SURFACES IN KIND AND FINISH AND SHALL BE DONE BY THE GENERAL CONTRACTOR AT THE ELECTRICAL CONTRACTOR'S EXPENSE.

2. REPAIR OF DAMAGES, BY THE ELECTRICAL CONTRACTOR, TO NEWLY PATCHED AND REFINISHED AREAS SHALL BE DONE BY THE GENERAL CONTRACTOR AT THE ELECTRICAL CONTRACTOR'S EXPENSE, TO MATCH EXISTING CONDITION.

3. WHERE REQUIRED TO MAINTAIN FIRE RATING, OPENINGS SHALL BE SEALED UTILIZING 3M BRAND FIRE BARRIER PENETRATION SEALING SYSTEMS. FIRE BARRIER OR FIRE STOP SYSTEMS FROM CROUSE-HINDS, THOMAS & BETTS OR DOW CORNING MAY BE USED AT CONTRACTOR'S OPTION. THIS INCLUDES HOLES LEFT DUE TO REMOVAL OF EXISTING CONDUITS, BUS DUCT,ETC. OPENINGS SHALL BE TEMPORARILY FIRE STOPPED UNTIL PERMANENT FIRE STOPPING IS DONE.

D. CLEANING AND PAINTING

1. ALL ELECTRICAL EQUIPMENT SHALL BE KEPT DRY AND CLEAN DURING THE CONSTRUCTION PERIOD. INTERIOR OF ALL ENCLOSURES SHALL BE CLEANED OF DIRT AND DEBRIS BEFORE INSTALLING TRIM OR COVERS.

2. ALL FINISHED SURFACES OF EQUIPMENT FURNISHED UNDER THIS CONTRACT SHALL BE THOROUGHLY CLEANED OF DIRT AND ALL SCRATCHED OR DAMAGED SURFACES SHALL BE TOUCHED UP WITH MATCHING MATERIALS BEFORE FINAL ACCEPTANCE OF THE WORK.

3. WHEN ALL WORK IS COMPLETED AND ALL WORK HAS BEEN SATISFACTORILY TESTED AND ACCEPTED BY THE OWNER'S REPRESENTATIVE, ALL CONDUIT AND OTHER EXPOSED SURFACES SHALL BE THOROUGHLY CLEANED.

CODES AND FEES

A. CODES:

1. ALL WORK PERFORMED UNDER THIS SPECIFICATION SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE AS PREPARED AND PUBLISHED BY THE NATIONAL FIRE PROTECTION ASSOCIATION AND ANY APPLICABLE STATE OR LOCAL CODES.

B. FEES:

1. OBTAIN AND PAY FOR ANY AND ALL PERMITS REQUIRED BY ALL LAWS AND REGULATIONS AND PUBLIC AUTHORITY HAVING SUCH JURISDICTION.

TESTS AND INSPECTIONS

A. OBTAIN ALL INSPECTIONS REQUIRED BY ALL LAWS, ORDINANCES, RULES, REGULATIONS OR PUBLIC AUTHORITY HAVING JURISDICTION AND OBTAIN CERTIFICATES OF SUCH INSPECTIONS AND SUBMIT SAME TO THE OWNER'S REPRESENTATIVE. PAY ALL FEES, CHARGES AND OTHER EXPENSES IN CONNECTION THEREIN. OBTAIN OCCUPANCY PERMIT AS REQUIRED BY OWNER. FINAL PAYMENT SHALL NOT BE MADE UNTIL OCCUPANCY PERMIT IS OBTAINED.

B. WORK SHALL BE UNACCEPTABLE WHEN FOUND TO BE DEFECTIVE OR CONTRARY TO THE PLANS SPECIFICATIONS, CODES SPECIFIED OR ACCEPTED STANDARDS OF GOOD WORKMANSHIP.

C. THE CONTRACTOR SHALL PROMPTLY CORRECT ALL WORK FOUND UNACCEPTABLE BY THE BY THE OWNER'S REPRESENTATIVE WHETHER OBSERVED BEFORE OR AFTER SUBSTANTIAL COMPLETION AND WHETHER OR NOT FABRICATED, INSTALLED OR COMPLETED. THE CONTRACTOR SHALL BEAR ALL COSTS OF CORRECTING SUCH UNACCEPTABLE WORK, INCLUDING COMPENSATION FOR THE OWNERS REPRESENTATIVE ADDITIONAL SERVICES MADE NECESSARY THEREBY.

CONDUIT

A. FURNISH AND INSTALL ALL CONDUITS, BOXES, FITTINGS, ETC., FOR A COMPLETE RACEWAY SYSTEM.

B. ALL WIRING SHALL BE RUN IN EMT CONDUIT OR MC WITH GROUND CONDUCTOR UNLESS OTHERWISE NOTED.

C. ALL CONDUIT SIZES STATED HEREIN OR MARKED ON THE DRAWINGS ARE MINIMUM SIZE AND SHALL BE NO LESS THAN 1/2" UNLESS OTHERWISE NOTED.

D. ALL CONDUIT SHALL BE SUBSTANTIALLY SUPPORTED BY PIPE STRAPS OR SUITABLE CLAMPS OR HANGERS ATTACHED TO THE ELEMENTS OF THE BUILDING STRUCTURE TO PROVIDE RIGID INSTALLATION; IN NO CASE SHALL CONDUIT BE ATTACHED OR SUPPORTED FROM ADJOINING PIPE OR INSTALLED IN SUCH A MANNER AS TO PREVENT THE READY REMOVAL OF OTHER PIPE FOR REPAIRS.

WIRE AND CABLE

A. ALL CONDUCTORS SHALL BE COPPER AND OF THE AWG SIZE AND TYPE SHOWN ON THE DRAWINGS. WHERE NO SIZE OR TYPE IS SHOWN, CONDUCTORS SHALL NOT BE LESS THAN #12 TYPE XHHW, THHN, OR THWN. CONDUCTORS #8 AWG AND LARGER SHALL BE STRANDED COPPER AND HAVE 600 VOLT INSULATION; BE UL LABELED AND OF AMERICAN MANUFACTURER.

B. ALL CONNECTIONS ARE TO BE MADE USING PRESSURE TYPE TERMINALS.

C. THE FOLLOWING COLOR CODE SHALL BE USED:

	120/208 VOLT
PHASE A	BLACK
PHASE B	RED
PHASE C	BLUE
NEUTRAL	WHITE
GROUND	GREEN

D. CONDUCTORS NO. 10 AWG OR SMALLER SHALL HAVE INSULATION COLORED AS NOTED ABOVE.

E. CONDUCTORS NO. 8 AWG OR LARGER SHALL HAVE INSULATION COLORED AS NOTED ABOVE OR COLORED TAPE, MINIMUM SIZE 1/2", WRAPPED TWICE AROUND AT THE FOLLOWING POINTS:

1) AT EACH TERMINAL
2) AT EACH CONDUIT ENTRANCE
3) AT INTERVALS NOT MORE THAN 12 INCHES APART IN ALL BOXES, PANEL TUBS, SWITCHBOARDS, ETC.

F. ALL BRANCH CIRCUITS SHALL BE MARKED IN THE PANELBOARD GUTTERS. MARKERS SHALL INDICATE CORRESPONDING BRANCH-CIRCUIT NUMBERS.

G. EACH BRANCH CIRCUIT REQUIRING A NEUTRAL SHALL BE FURNISHED WITH A SEPARATE INDIVIDUAL NEUTRAL CONDUCTOR.

BOXES AND PLATES

A. FURNISH AND INSTALL ALL OUTLET, JUNCTION, AND PULLBOXES AS INDICATED ON THE DRAWINGS AND AS NECESSARY TO INSTALL THE REQUIRED CONDUIT AND WIRING IN A NEAT AND WORKMANLIKE MANNER.

B. PULLBOXES AND JUNCTION BOXES SHALL BE GALVANIZED AND OF THE CORRECT SIZE AND GAUGE, SIZED IN ACCORDANCE WITH CODE REQUIREMENTS AND SHALL BE U.L. LABELED.

C. FLUSH OUTLET, JUNCTION AND PULLBOXES SHALL BE PRESSED STEEL GALVANIZED OR SHERARDIZED AND SHALL BE A MINIMUM OF 4" SQUARE OR OCTAGONAL SIMILAR TO APPLETON #40. STEEL BOXES CAST IN CONCRETE SHALL BE DESIGNED FOR CONCRETE INSTALLATION.

D. FLUSH WALL BOXES IN TILE, MARBLE, BRICK OR OTHER FINISHED MASONRY WALLS SHALL BE STEEL CITY GW-135-C SERIES OR RACO 695 SERIES.

E. BOXES AT EXTERIOR AREAS TO BE WATERTIGHT AND DUST-TIGHT WITH GASKETED COVERS.

F. ALL BOXES FOR EXPOSED WORK IN FINISHED SPACES SHALL BE "FS" TYPE WITH THREADED HUBS WITH RIGID CONDUIT RISER (DEEP WIREMOLD BOXES).

G. SWITCH PLATES ON FLUSH AND CAST BOXES SHALL BE SIERRA NOS. S-IN, (P-1), S-2N (P-2), S-3N (P-3) ETC., AS REQUIRED, AND SHALL BE MADE OF SATIN FINISH #302 STAINLESS STEEL.

H. DUPLEX RECEPTACLE PLATES ON FLUSH AND CAST BOXES SHALL BE SIERRA NO. S-8N (P-8) SATIN FINISH #302 STAINLESS STEEL.

I. ALL BOXES SHALL BE RIGIDLY SUPPORTED FROM BUILDING STRUCTURE INDEPENDENT OF THE CONDUIT SYSTEM. BOXES CAST INTO MASONRY OR CONCRETE ARE CONSIDERED TO BE RIGIDLY SUPPORTED.

WIRING DEVICES

A. WIRING DEVICES SHALL BE SIMILAR TO THOSE LISTED BELOW AND OF SPECIFIED AMPERAGE. OTHER SPECIAL PURPOSE DEVICES SHALL BE AS SPECIFIED ON THE DRAWINGS.

B. DUPLEX GROUNDING TYPE RECEPTACLE – 20 AMP, 125 VOLT – NEMA 5-20R

HUBBELL – 5352
ARROW HART – 5352

C. SINGLE POLE SWITCHES – 20 AMP, 120 VOLT

HUBBELL – 1221
ARROW HART – 1221

D. 3-WAY SWITCHES – 20 AMP, 120 VOLT

HUBBELL – 1223
ARROW HART – 1273

E. WEATHERPROOF RECEPTACLES – 20 AMP, 125 VOLT – NEMA 5-20R

HUBBELL – 5352 WITH 5205 COVER INTERMATIC GUARDIAN I SERIES, NEMA 3R COVER
ARROW HART – 5352 WITH 4500 COVER

F. G.F.I. RECEPTACLE – 20 AMP, 125 VOLT – NEMA 5-20R

HUBBELL – GF 5262 WITH MATCHING NYLON COVER PLATE OR WP-26 W.P. COVER

G. GROUND ALL RECEPTACLES IN ACCORDANCE WITH ARTICLE 250-146 OF NEC AND AS INDICATED IN THE GROUNDING SECTION OF THIS SPECIFICATION.

IDENTIFICATION

A. EACH PIECE OF SERVICE EQUIPMENT AND INDIVIDUAL SWITCHES, ALL DISCONNECTS, STARTERS, ALL EXHAUST FAN MANUAL STARTING SWITCHES.

B. IDENTIFICATION SHALL BE IN THE FORM OF LAMINATED PLASTIC NAMEPLATES, BLACK FACE, WITH THE LETTERS ENGRAVED INTO THE WHITE BACKGROUND, MINIMUM 1/4" HIGH. PLATES SHALL BE DRILLED ON EACH END FOR SHEET METAL SCREW ATTACHMENT. NO "DYMO" OR SIMILAR TYPE LABELS WILL BE ALLOWED.

C. PANELBOARD DIRECTORY: A TYPED CIRCUIT DIRECTORY SHALL BE PROVIDED INDICATING LOCAL AREA SERVED AND LOCATION FOR EACH BRANCH CIRCUIT.

GROUNDING

A. ALL FEEDERS AND BRANCH CIRCUITS OVER 100 VOLTS SHALL INCLUDE A GROUNDING CONDUCTOR SIZED IN ACCORDANCE WITH NEC TABLE 250-122, EXCEPT NOT BE SMALLER THAN #12 FOR POWER AND LIGHTING CIRCUITS AND #14 FOR CONTROL CIRCUITS. ALL GROUND CONDUCTORS SHALL BE GREEN, OR AS SPECIFIED UNDER SECTION 16120, "WIRE AND CABLE".

B. ALL GROUND CLAMPS SHALL BE PENN-UNION "GPL" TYPE OR SIMILAR BY O.Z. OR BURNDY.

C. CONDUIT FOR SOLITARY GROUND CONDUCTORS SHALL BE RIGID SCHEDULE 40PVC NON-METALLIC ELECTRICAL CONDUIT WITH U.L. LABEL. SOLITARY GROUND CONDUCTORS SHALL NOT BE PLACED THROUGH METALLIC SLEEVES OR CONDUITS AND SHALL NOT BE COMPLETELY ENCIRCLED BY METALLIC HANGERS OR SUPPORTS.

D. THE GROUND CONDUCTOR SHALL BE CONNECTED TO THE NEUTRAL IN ONLY TWO LOCATIONS – ON THE SUPPLY SIDE OF THE SERVICE DISCONNECT MEANS PER NEC-250-24 AND ON SEPARATELY DERIVED SYSTEMS PER NEC 250-30.

E. AT EACH RECEPTACLE BOX, THE GROUND CONDUCTOR SHALL ENTER AND CONNECT, WITH NORMAL WIRING CONNECTOR, TO: 1) THE GROUND PIGTAIL TO RECEPTACLE; 2) THE GROUND PIGTAIL TO BOX GROUND SCREW; AND 3) THE OUTGOING GROUND CONDUCTOR TO NEXT DEVICE, IF NOT AT END OF RUN. METAL TO METAL CONTACT BETWEEN THE DEVICE YOKE AND THE OUTLET BOX IS NOT ACCEPTABLE AS A BOND FOR EITHER SURFACE MOUNTED BOXES OR FLUSH TYPE BOXES.

F. CONDUIT SYSTEM SHALL BE ELECTRICALLY CONTINUOUS. ALL LOCK NUTS SHALL CUT THROUGH ENAMELED OR PAINTED SURFACES ON ENCLOSURES. WHERE ENCLOSURES AND NON-CURRENT CARRYING METALS ARE ISOLATED FROM THE CONDUIT SYSTEM, USE BONDING JUMPERS WITH APPROVED CLAMPS. WHERE REDUCING WASHERS ARE USED AND WHERE CONCENTRIC OR ECCENTRIC KNOCKOUTS ARE NOT COMPLETELY REMOVED BONDING BUSHINGS SHALL BE REQUIRED.

INTERRUPTION OF SERVICE AND OWNER'S OPERATION

A. THE ELECTRICAL CONTRACTOR SHALL ORGANIZE HIS WORK SO THAT THESE ALTERATIONS AND ADDITIONS SHALL CAUSE A MINIMUM OF INTERFERENCE AND DISTURBANCE TO THE OWNER. ARRANGEMENTS SHALL BE MADE WITH THE OWNER AND ENGINEER BEFORE INTERRUPTING SERVICE IN ANY AREA. A WRITTEN DETAILED METHOD OF INTERRUPTION PROCEDURE INDICATING ELAPSED TIME REQUIRED AND TIME OF INTERRUPTION SHALL BE PREPARED BY THE ELECTRICAL CONTRACTOR AND SUBMITTED TO THE OWNER FOR APPROVAL.

B. ALL INTERRUPTIONS OF SERVICE SHALL BE MADE WHEN THE LOAD IS AT A MINIMUM AND SHALL BE SCHEDULED AT THE OWNER'S CONVENIENCE. (SERVICE INTERRUPTIONS WILL BE SCHEDULED FOR OTHER THAN NORMAL DAYTIME WORKING HOURS. THE ELECTRICAL CONTRACTOR SHALL INCLUDE NECESSARY COST FOR OVERTIME LABOR IN ALL BIDS.)

C. AT NO TIME SHALL THE ELECTRICAL CONTRACTOR OR HIS EMPLOYEES NORMALLY WORKING ON THE PROJECT LEAVE THE FACILITY DURING A TIME WHEN ANY NORMALLY LIVE CIRCUITS OR FEEDERS ARE DISCONNECTED, WITHOUT PERMISSION OF THE ENGINEER.

D. ALL MATERIALS, CONNECTIONS AND EQUIPMENT FOR TEMPORARY CONTROL OR POWER WIRING TO MAINTAIN CONTINUITY OF SERVICE DURING CONSTRUCTION SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.

POWER AND LIGHTING PANELS

A. FURNISH AND INSTALL, AS SCHEDULED AND SHOWN ON THE DRAWINGS, POWER PANELS FOR OPERATION ON VOLTAGES INDICATED.

B. THE PANELS SHALL BE SQUARE D, TYPE NQOD, NEHB OR I-LINE OR EQUAL, WITH BRANCH BREAKERS AS SCHEDULED ON THE DRAWINGS.

C. ALL TERMINATIONS SHALL BE MARKED "75°C ONLY", "60/75°C" OR LISTED FOR USE OF 75°C INSULATED CONDUCTORS AT FULL 75°C AMPACITY.

D. ALL BUS BARS SHALL BE SILVER OR TIN PLATED COPPER.

E. CABINETS SHALL BE OF COMMERCIAL GALVANIZED SHEET STEEL, CODE GAUGE AND SIZE, SURFACE OR FLUSH MOUNTED AS CALLED FOR IN THE DRAWINGS. FLUSH PANELS SHALL BE FINISHED WITH PRIME COAT ONLY. DOORS SHALL BE FITTED WITH CHROME PLATED COMBINATION LOCK AND CATCH, AND ALL KEYED ALIKE.

F. NEUTRAL ASSEMBLY SHALL HAVE INDIVIDUAL ANTI-TURN SOLDERLESS TERMINALS, SIMILAR TO SQUARE D TYPE PK, FOR CONNECTION OF ULTIMATE NUMBER OF NEUTRAL WIRES. SHEET METAL TERMINAL STRIPS AND CONNECTIONS WILL BE REJECTED.

G. PANEL SHALL HAVE A COPPER GROUND BAR SIMILAR TO NEUTRAL BAR IN NUMBER, SIZE, AND TYPE OF ANTI-TURN SOLDERLESS LUGS. THIS GROUND BAR SHALL BE FACTORY BONDED TO THE PANEL TUB IN THE GUTTER SPACE OPPOSITE THE MAINS AND THE NEUTRAL ASSEMBLY AND SHALL HAVE THE SCREWDRIVER SLOTS FACING THE FRONT OF THE PANEL.

H. THE MAIN AND BRANCH BREAKERS SHALL BE TYPE QOB OR QOB-H RATED 10,000 A.I.C. MINIMUM, MOLDED CASE, TEMPERATURE COMPENSATED, QUICK-MAKE, QUICK-BREAK, WITH THERMAL-MAGNETIC TRIP AND PERMANENTLY BOLTED TO BUS BARS.

I. PANELS SHALL BE MOUNTED WITH TOP OF PANEL AT 6'-0" ABOVE FLOOR.

LIGHTING FIXTURES

A. CONTRACTOR SHALL FURNISH AND INSTALL LIGHTING FIXTURES AND LAMPS AS INDICATED IN FIXTURE SCHEDULE SHOWN ON DRAWINGS, AND SPECIFIED HEREIN.

B. LENS THICKNESS FOR FLUORESCENT FIXTURES SHALL BE 0.125 INCHES, MINIMUM (NOT NOMINAL) AND HAVE A MINIMUM WEIGHT OF 8.0 OUNCES PER SQUARE FOOT.

C. LAMP SOCKETS FOR BARE TUBE FLUORESCENT FIXTURES SHALL BE SPRING LOADED TURRET TYPE.

D. FLUSH FIXTURES MAY BE FURNISHED WITH PRE-WIRED FEATURE PROVIDED THEY ARE U.L. APPROVED FOR 75°C WIRING AND THE JUNCTION BOX CAPACITY IS SUFFICIENT FOR THE CIRCUIT WIRING REQUIREMENTS.

E. CLEARANCES FOR RECESSED PORTIONS OF FIXTURES FROM COMBUSTIBLE MATERIAL AND THERMAL INSULATION, SHALL BE IN ACCORDANCE WITH NEC ARTICLE 410-66.

F. ALL FLUORESCENT LAMP BALLAST SHALL BE ELECTRONIC WITH LESS THAN 20% HARMONIC DISTORTION. BALLAST SOUND LEVELS SHALL NOT EXCEED CLASS "A", AMBIENT NOISE LEVELS, HPF TYPE, WITH PARALLELING WIRING CONNECTION, BE CBM AND U.L. APPROVED. BALLAST MAY BE MANUFACTURED BY ADVANCE, TYPE MARK V; ETTA INDUSTRIES TYPE E2P; OR MAGNETEK-TRIAD, B SERIES; OR MOTOROLA TYPE MOTRN.

G. NEUTRAL ASSEMBLY SHALL HAVE INDIVIDUAL ANTI-TURN SOLDERLESS TERMINALS, SIMILAR TO SQUARE D TYPE PK, FOR CONNECTION OF ULTIMATE NUMBER OF NEUTRAL WIRES. SHEET METAL TERMINAL STRIPS AND CONNECTIONS WILL BE REJECTED.

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I. ALL LAMP HOLDERS INSTALLED BY THE ELECTRICAL CONTRACTOR SHALL BE FURNISHED COMPLETE WITH NEW LAMPS OF THE SIZE INDICATING ON THE FIXTURE SCHEDULE.

J. FLUORESCENT LAMPS SHALL BE 32 WATT, T8 RAPID START LAMPS WITH A COLOR TEMPERATURE OF 3500°K AND A MINIMUM CRI OF 74. UNLESS NOTED OTHERWISE.

K. LAMP CURRENT CREST FACTOR SHALL NOT EXCEED 1.8 AND SHALL BE COMPATIBLE WITH BALLAST BEING UTILIZED.

L. ANY FIXTURES SCRATCHED, BENT, CRACKED OR IN ANY WAY DAMAGED BEFORE ACCEPTANCE BY OWNER SHALL BE REPLACED AT THIS CONTRACTOR'S EXPENSE.

M. ALL LAMPS SHALL BE IN WORKING ORDER AT THE TIME OF FINAL ACCEPTANCE OF THE WORK BY THE OWNER.

N. ALL LIGHTING FIXTURES ARE TO BE GROUNDED ON THE INTERIOR OF THE FIXTURE HOUSING, ON CLEAN BARE METAL (FREE OF PAINT), BY USE OF A PIGTAIL AND FASTENED BY A SCREW USED FOR NO OTHER PURPOSE.

O. WHEREVER LIGHTING SYSTEMS ARE SUPPORTED AND FASTENED TO A CEILING SUSPENSION SYSTEM OF THE GRID TYPE, EACH FIXTURE SHALL HAVE A SUPPORT WIRE AT OPPOSITE CORNER OF EACH RECESSED FIXTURE. EACH FIXTURE SHALL BE FASTENED TO THE GRID SYSTEM IN ACCORDANCE WITH NEC ARTICLE 410-16(C) USING SUITABLE CLIPS. THE T-BAR SHALL NOT BE CUT OUT TO PROVIDE ROOM FOR THE JUNCTION BOX.

MOTOR STARTERS AND CIRCUIT DISCONNECTS

A. GENERAL: EXCEPT AS OTHERWISE INDICATED, PROVIDE MOTOR STARTERS, DISCONNECT SWITCHES,

WHICH COMPLY WITH MANUFACTURER'S STANDARD MATERIALS, DESIGN AND CONSTRUCTION IN ACCORDANCE WITH PUBLISHED INFORMATION AND AS REQUIRED FOR COMPLETE INSTALLATIONS.

B. GENERAL DUTY SWITCHES: PROVIDE GENERAL-DUTY TYPE, SHEET-STEEL ENCLOSED SWITCHES, FUSIBLE OR NON-FUSIBLE AS INDICATED OF TYPES, SIZES AN ELECTRICAL CHARACTERISTICS INDICATED; RATED 240 VOLTS, 60 HERTZ; INCORPORATING SPRING ASSISTED, QUICK-MAKE, QUICK-BREAK MECHANISMS. PROVIDE SINGLE PHASE OR THREE PHASE AND WITH SOLID NEUTRAL AS REQUIRED BY APPLICATION. EQUIP WITH OPERATING HANDLE WHICH IS CAPABLE OF BEING PADLOCKED IN 'OFF' POSITION. PROVIDE NEMA 1 OR NEMA 3R AS REQUIRED BY APPLICATION, UNLESS NOTED. PROVIDE FUSIBLE SWITCHES WITH CLASS R REJECTION FUSE CLIP KITS.

C. THERMAL OVERLOAD UNITS: PROVIDE THERMAL OVERLOAD UNITS, SIZED TO ACTUAL RUNNING FULL LOAD CURRENT, NOT TO MOTOR PLATE CURRENT. SIZE HEATERS FOR MECHANICAL EQUIPMENT AFTER AIR AND WATER BALANCING HAVE BEEN COMPLETED.

D. AC FRACTIONAL HP MANUAL STARTERS (EQUAL TO SQUARE D CLASS 2510): PROVIDE MANUAL, SINGLE-PHASE, 1 AND 2 POLE, 300 VOLT AC MAX, FRACTIONAL HP MOTOR STARTERS, OF TYPES, RATINGS AND ELECTRICAL CHARACTERISTICS INDICATED; EQUIP WITH ONE PIECE THERMAL OVERLOAD RELAY WITH FIELD ADJUSTMENT CAPACITY OF PLUS OR MINUS 10 PERCENT OF NOMINAL OVERLOAD HEATER RATING; FOR PROTECTION OF AC MOTORS OF 1 HP AND LESS. (FOR MANUALLY SPECIFIED HEREIN). PROVIDE STARTER WITH QUICK-MAKE, QUICK-BREAK TRIP FREE TOGGLE MECHANISMS, GREEN PILOT LIGHTS, AND WITH LOCK-OFF TOGGLE OPERATED HANDLE. MOUNT SURFACE UNITS IN NEMA 1 ENCLOSURES, UNLESS NOTED OTHERWISE. PROVIDE NEMA 3R ENCLOSURE IN EXTERIOR OR DAMP LOCATION UNLESS NOTED OTHERWISE. PROVIDE FLUSH MOUNTED UNITS WITH COVERPLATE TO MATCH WIRING DEVICE COVERPLATES.

E. AC LINE VOLTAGE MANUAL STARTERS (EQUAL TO SQUARE D CLASS 2510): PROVIDE LINE VOLTAGE MANUAL STARTERS, OF TYPES, RATINGS AND ELECTRICAL CHARACTERISTICS INDICATED; 2 OR 3 POLE, 600 VOLT AC MAX; EQUIP WITH PUSHBUTTON OPERATOR, LOW VOLTAGE PROTECTION FEATURE, AND GREEN PILOT LIGHT. PROVIDE STARTERS WITH TRIP FREE MECHANISM SUCH THAT CONTACTS WILL TRIP UNDER LOAD AND REMAIN OPEN UNTIL THERMAL ELEMENT HAS COOLED, AND UNIT IS RESET. MOUNT SURFACE UNITS IN NEMA 1 ENCLOSURE, UNLESS NOTED OTHERWISE. PROVIDE NEMA 3R ENCLOSURE IN EXTERIOR OR DAMP LOCATION, UNLESS NOTED OTHERWISE. PROVIDE OVERLAPPING TRIM FOR FLUSH MOUNTED UNITS.

F. AC COMBINATION NON-REVERSING MAGNETIC STARTERS (EQUAL TO SQUARE D CLASS 8538) : PROVIDE LINE VOLTAGE COMBINATION STARTERS, OF TYPES, RATINGS, AND ELECTRICAL CHARACTERISTICS; 2 OR 3 POLE, 600 VOLT MAXIMUM WITH NON-REVERSING MAGNETIC STARTERS AS SPECIFIED HEREIN; IN COMMON CUBICLE OR ENCLOSURE WITH FUSIBLE DISCONNECT SWITCH. PROVIDE QUICK-MAKE, QUICK-BREAK, DISCONNECT FOR NEMA SIZES 1, 2, 3, AND 4; AND VISIBLE BLADE, AUTOMATIC CIRCUIT INTERRUPTERS WITH PUSH-TO-TRIP FEATURE AND SEPARATE FUSE CLIPS FOR LARGER NEMA SIZES. FUSE ALL STARTERS WITH DUAL-ELEMENT (TIME-DELAY) FUSES EQUAL TO BUSSMAN FRN/FRS-R. EQUIP DISCONNECT SWITCH WITH CLASS R REJECTION FUSE KITS. PROVIDE COMBINATION STARTERS FOR INDIVIDUAL MOUNTING, OR FOR GROUP MOUNTING IN MOTOR CONTROL CENTERS AS INDICATED. PROVIDE NEMA 1 ENCLOSURES UNLESS OTHERWISE INDICATED. PROVIDE NEMA 3R ENCLOSURE IN EXTERIOR OR DAMP LOCATIONS, UNLESS NOTED OTHERWISE.

MOTOR AND EQUIPMENT WIRING

A. PROVIDE POWER AND CONNECT ALL MOTORS AND MOTOR DRIVEN EQUIPMENT SHOWN ON THE PLANS.

B. FURNISH, INSTALL AND CONNECT ALL OVER CURRENT AND DISCONNECT MEANS AS REQUIRED BY THE NATIONAL ELECTRICAL CODE.

C. MOTORS AND MOTOR DRIVEN EQUIPMENT SHALL BE FURNISHED AND INSTALLED BY OTHERS. MOTOR STARTERS, CONTROLLERS AND CONTROL DEVICES SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR EXCEPT AS OTHERWISE NOTED. THE ELECTRICAL CONTRACTOR EXCEPT AS OTHERWISE NOTED.

D. INSTALL AND WIRE ALL MOTOR EQUIPMENT PER WIRING DIAGRAMS AND INSTRUCTIONS FURNISHED TO HIM, INCLUDING INTERLOCK WIRING BETWEEN EQUIPMENT.

COMMUNICATIONS CONDUIT SYSTEM

A. FURNISH AND INSTALL COMPLETE COMMUNICATIONS CONDUIT SYSTEM, INCLUDING RISER, COMMUNICATIONS CABINETS, JUNCTION BOXES AND COMMUNICATIONS OUTLETS AS REQUIRED.

B. CONDUIT FOR COMMUNICATIONS WALL OUTLET SHALL BE MINIMUM OF 3/4" UNLESS SHOWN OTHERWISE.

C. COMMUNICATIONS OUTLET BOXES SHALL BE MINIMUM OF 4" SQUARE AND PLATES SHALL MATCH RECEPTACLE PLATES. PROVIDE FLOOR OUTLET WHERE SHOWN ON THE PLANS.

D. BENDS IN CONDUITS SHALL BE LONG SWEEP BENDS.

E. NO WIRING SHALL BE INCLUDED IN THE COMMUNICATIONS CONDUIT SYSTEM, EXCEPT #14 NYLON PULL CORDS TO BE INSTALLED THROUGHOUT.

F. CONDUIT SYSTEM SHALL BE CONTINUOUS FROM ALL OUTLETS TO COMMUNICATIONS CABINET REAM AND BUSH CONDUITS.

FIRE PENETRATION SEALS:

SEAL ALL PENETRATIONS FOR WORK OF THIS DIVISION THROUGH FIRE RATED FLOORS, WALLS AND CEILINGS TO PREVENT THE SPREAD OF SMOKE, FIRE, TOXIC GAS OR WATER THROUGH THE PENETRATION EITHER BEFORE, DURING, OR AFTER A FIRE. THE FIRE RATING OF THE PENETRATION SEAL SHALL BE AT LEAST THAT OF THE FLOOR, WALL OR CEILING INTO WHICH IT IS INSTALLED, SO THAT THE ORIGINAL FIRE RATING OF THE FLOOR OR WALL IS MAINTAINED AS REQUIRED BY ARTICLE 300-21 OF THE NATIONAL ELECTRICAL CODE. WHERE APPLICABLE, PROVIDE OZ TYPE CFSF/I AND CAFSF/I FIRE SEAL FITTINGS FOR CONDUIT AND CABLE PENETRATION SYSTEM, AND/OR IPC FLAME SAFE FIRE STOP SYSTEM, AND/OR CHASE FOAM FIRE STOP SYSTEM, INCLUDING WALL WRAP, PARTITIONS, CAPS, AND OTHER ACCESSORIES AS REQUIRED. ALL MATERIALS TO COMPLY WITH UL 1479 (ASTM E-814). COMPLY WITH MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS FOR INSTALLATION OF SEALING FITTINGS AND BARRIER SEALING SYSTEMS.

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DIXIE STATE COLLAGE
390 SOUTH 800 EAST
ST. GEORGE, UTAH

PROJECT TITLE:
ST. GEORGE, UTAH
NEW EAST ENTRY

LICENSED PROFESSIONAL ENGINEER
No. 4816
GARY W. MESKER
STATE OF UTAH

MARK	DATE	DESCRIPTION

ISSUE TYPE:

ISSUE DATE: OCTOBER 25, 2006

DFCM PROJECT NO: 06118640
CAD PROJECT NO: 06022
CAD DWG FILE: 06022 - BURNS ARENA
DRAWN BY: S. REMBER
CHK'D BY: L. REMBER

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SHEET TITLE
ELECTRICAL SPECIFICATIONS

SHEET NUMBER
EG102

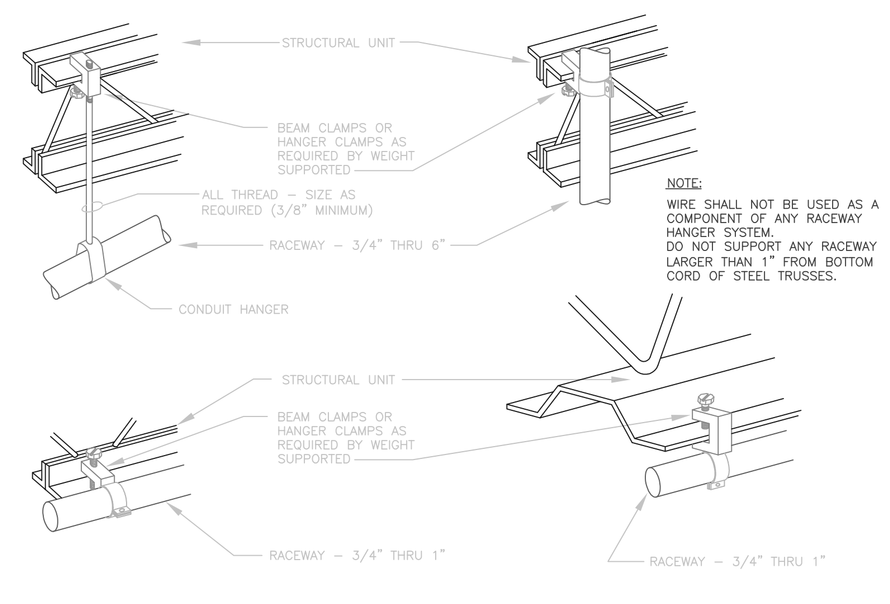

DIAGRAM H003 TYPICAL RACEWAY SUPPORT METHODS
NTS

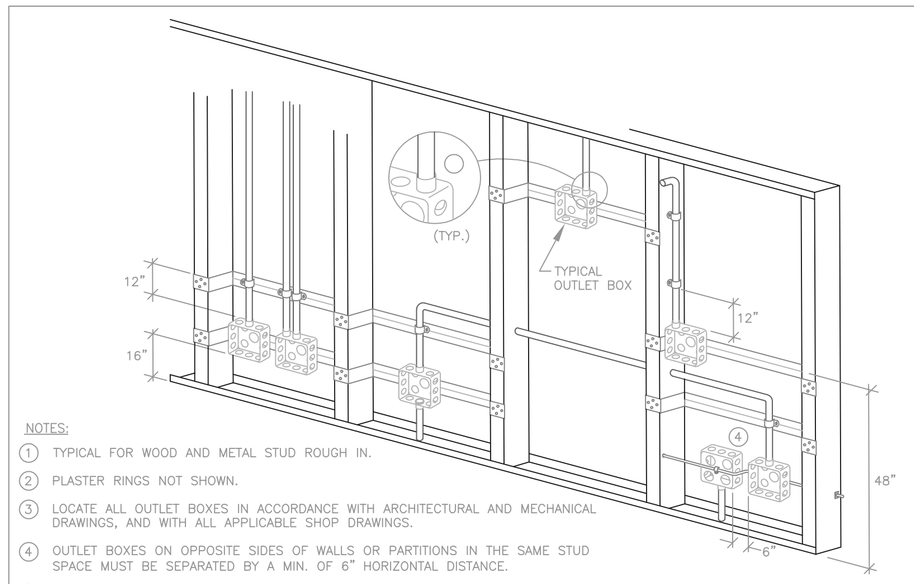

DIAGRAM H004 TYPICAL ROUGH IN REQUIREMENTS
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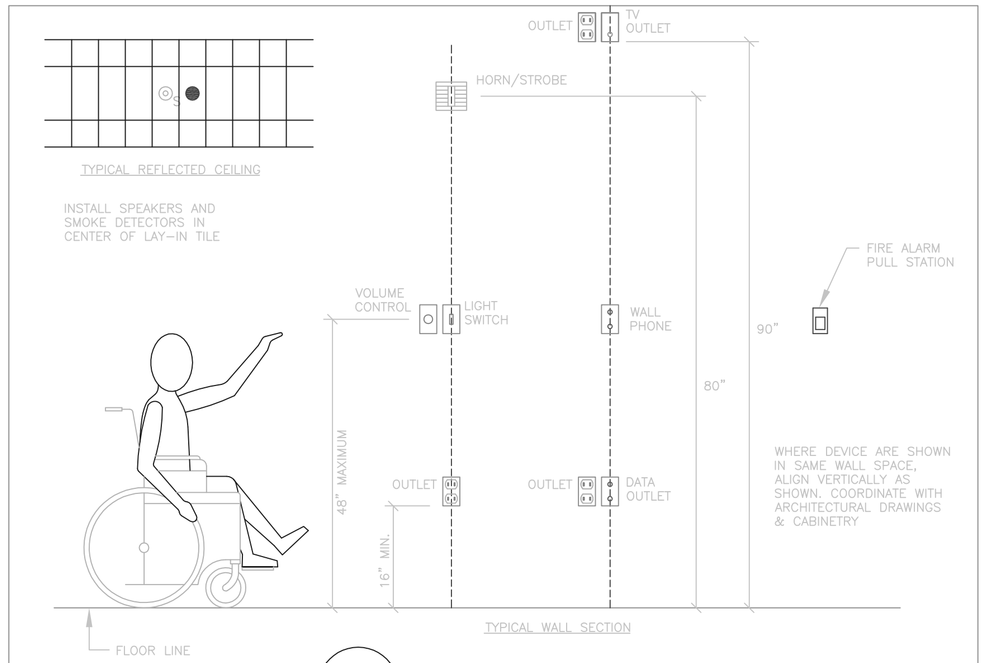

DIAGRAM R001 DEVICE MOUNTING HEIGHTS
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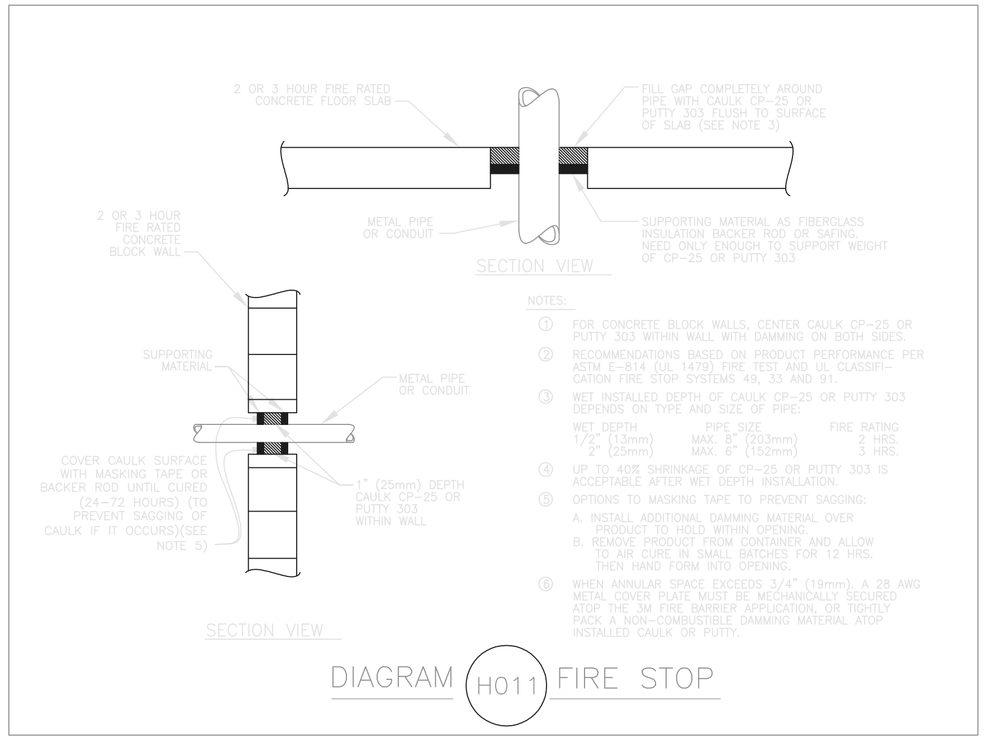

DIAGRAM H011 FIRE STOP

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PROJECT TITLE:

ST. GEORGE, UTAH
NEW EAST ENTRY

LICENSED PROFESSIONAL ENGINEER
No. 4816
GARY W. MESKER
STATE OF UTAH

MARK	DATE	DESCRIPTION

ISSUE TYPE:

ISSUE DATE: OCTOBER 25, 2006

DFCM PROJECT NO: 06118640
CAD PROJECT NO: 06022
CAD DWG FILE: 06022 - BURNS ARENA
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CHK'D BY: L. REMBER
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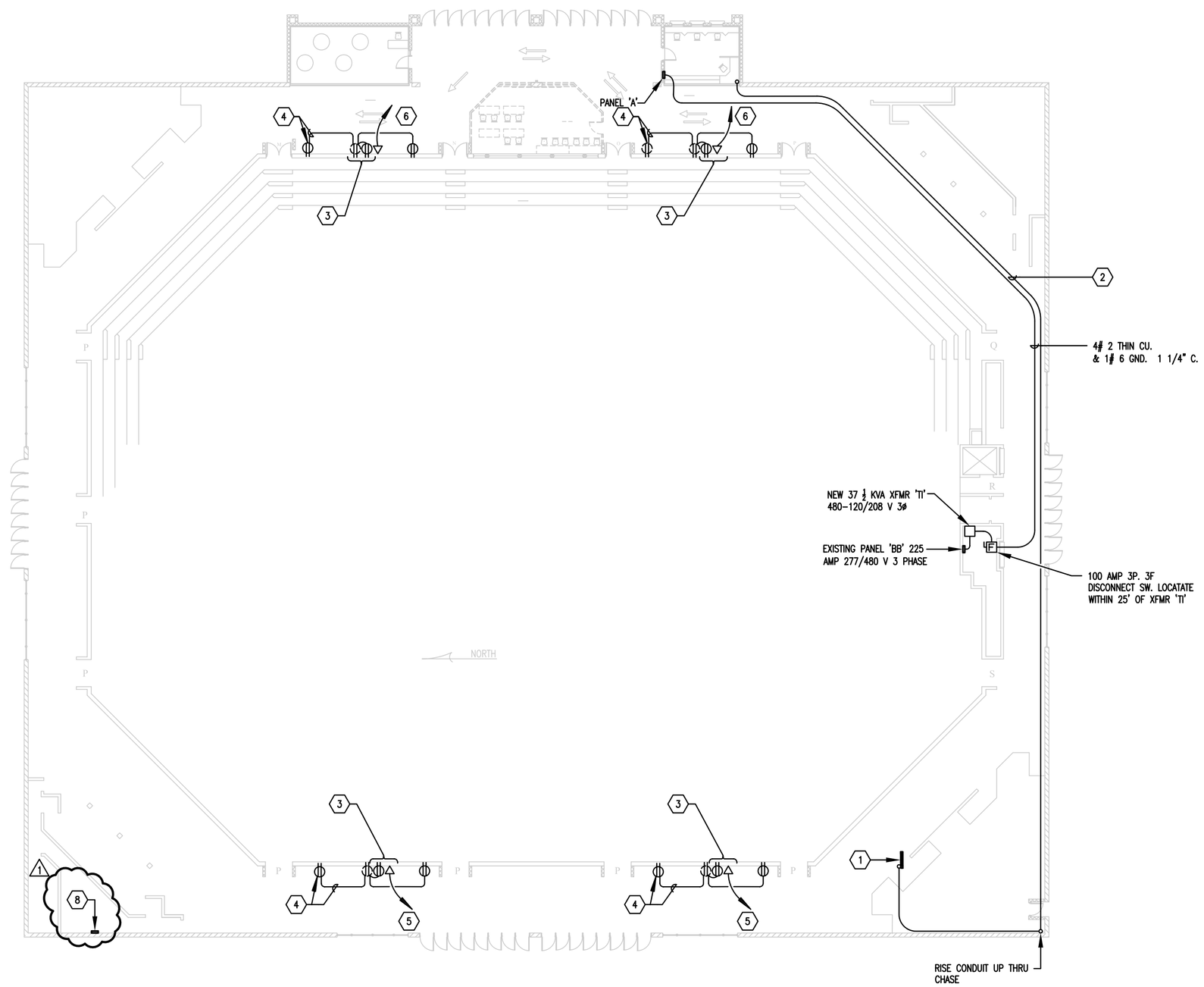
SHEET TITLE
ELECTRICAL DIAGRAMS

SHEET NUMBER
EG103

SHEET KEYNOTES

1. APPROXIMATE LOCATION OF MAIN TELEPHONE TERMINAL BOARD IN BASEMENT.
2. PROVIDE 1" CONDUIT WITH PULL CORD FROM DATE/TELE BD. IN BASEMENT TO FIBER SWITCH LOCATION IN TICKET OFFICE.
3. LOCATE RECEPTACLE AND DATA OUTLET AT +14'-0" A.F.F.
4. SURFACE MOUNT CONDUIT AND OUTLET BOX TO EXISTING CMU WALL. PAINT ALL EXPOSED CONDUITS.
5. EXTEND 3/4" CONDUIT WITH PULL CORD TO TELE/DATA BOARD IN BASEMENT.
6. EXTEND 3/4" CONDUIT WITH PULL CORD TO FIBER SWITCH LOCATION IN TICKET OFFICE.
7. EXISTING RECEPTACLE TO REMAIN PROVIDE SURFACE MOUNTING BOX EXTENSION AS REQUIRED.
8. APPROXIMATE LOCATION OF EXISTING FIRE ALARM CONTROL PANEL IN SNACK BAR STORAGE AREA.



PLAN NORTH

OVERALL BUILDING PLAN
1"=20'-0"
0 10' 20' 40'

NOTE:
1. PAINT ALL EXPOSED CONDUITS PER CAMPUS REQUIREMENTS.

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LICENSED PROFESSIONAL ENGINEER
No. 4816
GARY W. MESKER
STATE OF UTAH

MARK	DATE	DESCRIPTION
1	12-4-06	REVIEW COMMENTS

ISSUE TYPE:

ISSUE DATE: OCTOBER 25, 2006

DFCM PROJECT NO: 06118640
CAD PROJECT NO: 06022
CAD DWG FILE: 06022 - BURNS ARENA
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CHK'D BY: L. REMBER
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SHEET TITLE

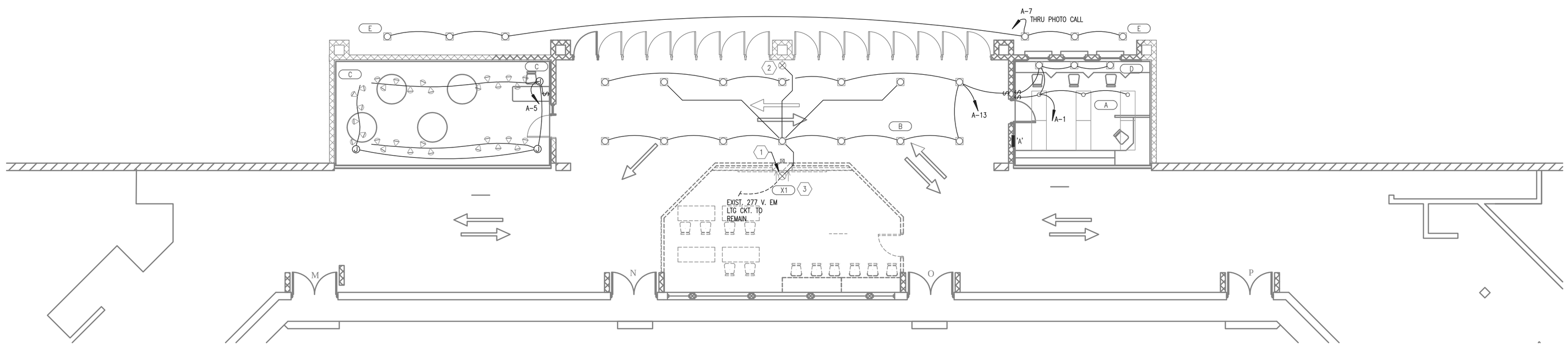
OVERALL BUILDING PLAN

SHEET NUMBER

ES101

SHEET KEYNOTES

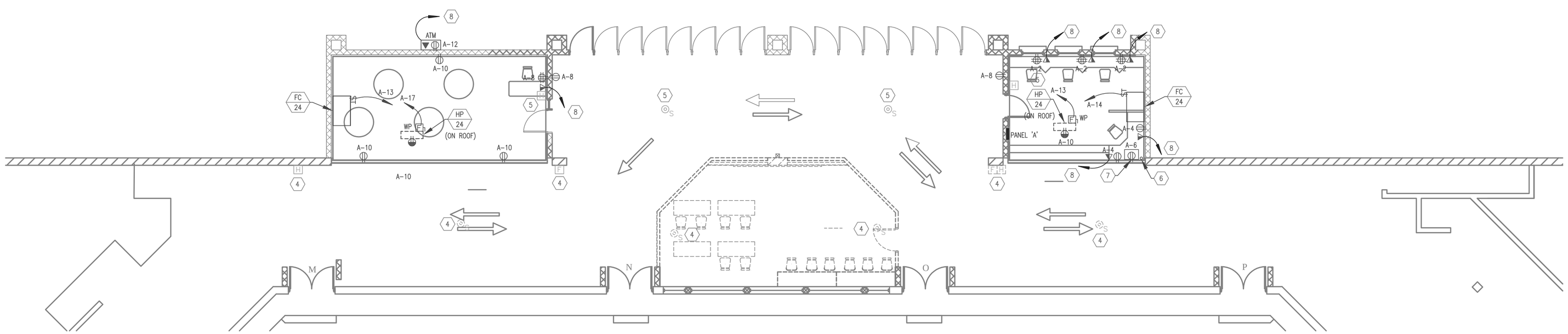
1. EXISTING 277V AC ONLY EXIT SIGN TO BE DISCONNECTED REMOVED AND RELOCATED.
2. NEW LOCATION OF EXISTING 277 VOLT AC ONLY EXIT SIGN. EXTEND CONDUIT AND CONDUCTORS AS REQUIRED TO CONNECT INTO EXISTING EMERGENCY CIRCUIT.
3. PROVIDE SURFACE MOUNTED CONDUIT FROM EXISTING EXIST SIGN LOCATION AT +10'-0" TO NEW EXIT SIGN LOCATION AT +13'-0"
4. EXISTING FIRE ALARM DEVICE TO REMAIN. MAINTAIN CIRCUITING.
5. NEW FIRE ALARM DEVICE, SMOKE DETECTOR, HORN/STROBE ETC TO MATCH EXISTING. EXTEND CONDUIT AND WIRE AS REQUIRED TO CONNECT INTO NEAREST ADDRESSABLE FIRE ALARM LOOP.
6. 1" CONDUIT TO PHONE/DATA BOARD IN BASEMENT SEE SHEET ES101 FOR EXACT ROUTING OF CONDUIT AND LOCATION OF PHONE BOARD.
7. APPROXIMATE LOCATION OF FIBER SWITCH. SWITCH, FIBER CABLE AND COPPER VOICE DATA CABLE PROVIDED AND INSTALLED BY CAMPUS I.T. PERSONAL.
8. PROVIDE 3/4" CONDUIT TO FIXTURE SWITCH LOCATION. PHONE/DATA CABLING, DEVICE PLATES AND FINAL CONNECTION PROVIDED BY CAMPUS I.T. PERSONNEL.



PLAN NORTH

LIGHITNG PLAN

1/8"=1'-0"



PLAN NORTH

POWER PLAN

1/8"=1'-0"

State of Utah
Department of Administrative Services

Division of Facilities Construction & Management
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Salt Lake City, Utah 84114
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CREATED BY: DFCM

CAD SERVICES

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4110 STATE OFFICE BUILDING
SALT LAKE CITY, UTAH 84114
PHONE: (801) 537-9132
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BUILDING NAME:

BURNS ARENA
ENTRY PLAZA
DIXIE STATE COLLAGE
390 SOUTH 800 EAST
ST. GEORGE, UTAH

PROJECT TITLE:

ST. GEORGE, UTAH
NEW EAST ENTRY

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SHEET TITLE

ELECTRICAL PLAN

SHEET NUMBER

EE101