BUILDER / CONTRACTOR RESPONSIBILITIES

It is the responsibility of the builder/contractor to insure that all project plans and specifications comply with the applicable requirements of any governing building authorities. The supplying of sealed engineering data and drawings for the metal building system does not imply or constitute an agreement that the building manufacturer or its design engineer is acting as the engineer of record or design professional for a construction project.
The contractor must secure all required approvals and permits from the appropriate agency as required.
Approval of the manufacturer's drawings and calculations indicate that the building manufacturer correctly interpreted and applied the requirements of the contract drawings and specifications. (Sect. 4.2.1 AISC Code of Standard Practices, 9th Ed.)
Where discrepancies exist between the manufacturer's structural steel plans and the plans for other trades, the structural steel plans shall govern. (Sect. 3.3 AISC Code of Standard Practice 9th Ed.)
Design considerations of any materials in the structure which are not furnished by the building manufacturer are the responsibility of the contractors and engineers other than the building manufacturer's engineers unless specifically indicated.
The contractor is responsible for all erection of steel and associated work in compliance with the building manufacturer's "for erector installation" drawings.
Products shipped to builder or his customer shall be inspected by builder immediately upon arrival.
Claims for shortages or defective material if not packaged must be mailed to the manufacturer in writing within five (5) days after receipt of the shipment. However, if a defect is of such a nature that reasonable visual inspection would fail to disclose it, then the claim must be made within five (5) days after the builder learns of the defect. The manufacturer will not be liable for any defect unless claim is made within one (1) year after date of the original shipment by the manufacturer to builder or his customer. The manufacturer will be given a reasonable opportunity to inspect defective materials upon receipt of claim by builder.
If a defect is of such nature that it can be remedied by a field operation at the job site without the necessity of returning the material to the manufacturer, then upon written authorization of the manufacturer the builder may repair or cause the material to be repaired and the manufacturer will reimburse the builder for the cost of the repair in accordance with the written authorization.
Unless noted otherwise, all bracing as shown and provided by the manufacturer for this building is required and shall be installed by the erector as a permanent part of the structure. Temporary supports, such as temporary guys, braces, false work, cribbing or other elements required for the erection operation will be determined and furnished and installed by the erector. These temporary supports will secure the steel framing, or any partly assembled steel framing, against loads comparable in intensity to those for which the structure was designed, resulting from wind, seismic forces and erection operations, but not the loads resulting from the performance of work by or the acts of others, nor such unpredictable loads as those due to tornado, explosion or collision. (Sect. 7.9.1 AISC Code of Standard Practice, 9th Ed.)
Design of gutter and downspout is a function of the rainfall intensity and area to be drained. Design parameters utilized are in accordance with the 2002 low rise building systems manual and/or the 9th Edition of the architectural graphic standards, as applicable. Proper owner maintenance dictates that the drainage system be kept free and clear of debris and/or ice at all times to ensure proper function of the gutter and downspout. In those cases where the owner/tenant of a property is unwilling or unable to provide proper maintenance, elimination of gutter should be considered as an alternative.

PRODUCT CERTIFICATIONS

The building manufacturer is a member of the Metal Building Manufacturers Association.

The building manufacturer's fabrication and products are covered by one or more of the following certifications:

1. Approved fabricator of prefabricated buildings and components. Reference IAS (FA-337).
2. SBCCI compliance report no. 9461a
3. AISC category MB.
4. City of Houston approved fabricator (registration no. 164)
5. Wisconsin product approval number 200231-M
6. Clark County, Nevada approved fabricator
7. City of Los Angeles, California approved type 1 fabricator (LA#1604)
8. Canadian Welding Bureau certification to CSA standard W47.1 in division 1 (Houston, TX)
9. Texas Dept. of Insurance product evaluation RC-15

APPROVAL NOTES

The following conditions apply in the event that these drawings are used as approval drawings:

A) It is imperative that any changes to these drawings:

1) Be made in contrasting ink.
2) Have all instances of change clearly indicated.
3) Be legible and unambiguous.

B) Dated signature is required on all pages.

C) Manufacturer reserves the right to re-submit drawings with extensive or complex changes required to avoid misfabrication. This may impact the delivery schedule.

D) Approval of these drawings indicates conclusively that the manufacturer has correctly interpreted the contract requirements, and further constitutes agreement that the building as drawn, or as drawn with indicated changes represents the total of the materials to be supplied by manufacturer.

E) Any changes noted on the drawings not in conformance with the terms and requirements of the contract between manufacturer and its customer are not binding on manufacturer unless subsequently specifically acknowledged and agreed to in writing by change order or separate documentation. Manufacturer recognizes that rubber stamps are routinely used for indicating approval, disapproval, rejection, or mere review of the drawings submitted. However, manufacturer does not accept changes or additions to contractual terms and conditions that may appear with use of a stamp or similar indication of approval, disapproval, etc. Such language applied to manufacturer's drawings by the customer, architect, engineer, or any other party will be considered as unacceptable alterations to these drawing notes, and will not alter the contractual rights and obligations existing between manufacturer and its customer.

BOLT TIGHTENING

The proper tightening and inspection of all fasteners is the responsibility of the Erector. All high strength (A325, A490) bolts and nuts must be tightened by the "Turn-of the nut" method unless otherwise specified by the End Customer in the Contract Documents, or as allowed by the provisions below. Inspection of high strength bolt and nut installation by other than the Erector must also be specified in the Contract Documents and the Erector is responsible for ensuring that the installation and inspection procedures are compatible prior to the start of erection. (MBMA '96 IV 6.9)

According to AISC and RCSC, as long as the bolt holes are not oversized or slotted, snug-tightened bolts, (A325 only), are permitted except in buildings supporting cranes exceeding a 5 ton capacity or in buildings located in Seismic Design Categories D and greater. It is important to check with the local building authority on the use of "snug-tightened" bolts since the model code groups (BOCA,SBCCI, and ICBO), have not yet formally adopted this change.

SAFETY COMMITMENT

The building manufacturer has a commitment to manufacture quality building components that can be safely erected. However, the safety commitment and job site practices of the erector are beyond the control of the building manufacturer.
It is strongly recommended that safe working conditions and accident prevention practices be the top priority of any job site.
Local, state and federal safety and health standards, whether standard statutory or customary, should always be followed to help insure worker safety.
Make certain all employees know the safest and most productive way of erecting a building.
Emergency procedures should be known to all employees.
Daily meetings highlighting safety procedures are also recommended. The use of hard hats, rubber sole shoes for roof work, proper equipment for handling material, and safety nets where applicable, are recommended.
For purposes of determining lift requirements, no bundle supplied by NCI will exceed 4,000 pounds. For further information also reference the bill of materials for individual member weights of other structural members. If additional information is required contact the customer service department at 800-777-9378.

GENERAL NOTES

The structure under this contract has been designed and detailed for the loads and conditions stipulated in the contract and shown on these drawings. Any alterations to the structural system or removal of any component parts, or the addition of other construction materials or loads must be done under the advice and direction of a registered architect, civil or structural engineer. The building manufacturer will assume no responsibility for any loads not indicated.
This metal building is designed with the building manufacturer's standard practices which are based on pertinent procedures and recommendations of the following organizations and codes.

1. American Institute of Steel Construction: "Specification for the Design, Fabrication and Erection of Structural Steel for Buildings"
2. American Iron and Steel Institute: "Specification for the Design of Cold Formed Steel Structural Members"
3. American Welding Society: "Structural Welding Code" AWS D1.1.
4. American Welding Society: "Structural Welding Code" AWS D1.3
5. Metal Building Manufacturer's Association: "Low Rise Building Systems Manual"
6. International Conference of Building Officials: "Uniform Building Code"
7. Southern Building Code Congress International: "Standard Building Code"
8. Building Official and Code Administrators International: "Boca National Building Code"
9. National Building Code of Canada.
10. International Building Code (IBC)

Material properties of steel plate used in the fabrication of primary rigid frames, and other primary structural exclusive of cold-formed sections, conform to ASTM-A529 or A-572. Flanges with thickness of 1" inch or less and width of 12" or less conform to A-529 with a minimum yield point of 55,000 PSI. Flanges greater than 3/8" in thickness and 12" in width conform to A-572 with a minimum yield point of 50,000 PSI. Flanges with a thickness greater than 1" thick and a width less than 12" conform to A-572 with a minimum yield point of 50,000 PSI. Web material less than 1/4" thick conforms to ASTM-A1011 with a minimum yield point of 50,000 PSI. Web material 1/4" thick and greater conform to A-572 with a minimum yield point of 50,000 PSI. Material properties of pipe sections conform to ASTM-A53 type E, Grade B with a minimum yield point of 35,000 PSI.
Material properties of hot rolled steel members conform to the requirements of ASTM-A992 or A-572 with a minimum yield point of 50,000 PSI.
Material properties of cold formed light gage steel members conform to ASTM-A1011
Grade 55 modified with a minimum yield point of 57,000 PSI.
Material properties of roof/wall sheeting, base metal conform to ASTM-A792 Grades 50 or 80 with minimum yield points of 50,000 PSI and 80,000 PSI respectively, as required by design. Coating of base material is 55% aluminum-zinc alloy in accordance with AZ55 for unpainted or AZ50 for painted specifications.
Cable utilized for bracing conforms to ASTM A475. Cable bracing is to be installed to a taut condition with all slack removed.
Rod and angle utilized for bracing members conform to ASTM A36.
Structural joints with ASTM A-325 high strength bolts, where indicated on the drawings, shall be assembled and the fasteners tightened in accordance with the bolt tightening procedure indicated below. All joints will be assembled without washers unless otherwise noted.
All steel members except bolts, fasteners and cable shall receive one shop coat of iron oxide corrosion inhibitive primer, meeting the performance requirements of SSPC Paint Specification #15.
Shop and field inspections and associated fees are the responsibility of the contractor, unless stipulated otherwise in the contract.

ROOF MAINTENANCE GUIDELINES

* Walk in the flat of the panels near the structural supports.
* Keep roof , gutters and downspouts free of debris.
* Inspect roof for damage after heavy storms.
* Remove excessive ice and snow accumulations as necessary.
* Inspect and reseal as necessary all roof curbs and other penetrations with urethane sealant.
* Always get manufacturer approval before making any modifications to the roof.
* Repaint any areas that are susceptible to rust as required.

When performing roof maintenance, always take the following precautions:

* Use fall protection and other safety equipment as required.
* Do not walk on roof flashings such as gutter, rake, hip or ridge flash.
* Do not walk on Light Transmitting Panels (LTPs). They will not support a person's weight.
* Guard all LTPs and roof openings.
* Step only in the panel flat directly on or in close proximity to a supporting roof structural.
* After a fire, vandalism or known damage to an adjacent roof area.
* Exposure to severe weather conditions, including high winds, hail or abnormally heavy rains or ice and snow.
* After other trades have been on the roof for any reason. Inspect the roof for damage caused by workers including chemical or solvent spills, scratches in the paint or Galvalume® coating, excessive foot traffic and punctures. Make sure that any debris or scrap left behind by the workers is removed from the roof immediately. Avoid using cutoff saws and welding equipment over the roof. In cases where this is not possible, the roof must adequately protected.

FOOT TRAFFIC

Keep foot traffic to a minimum. Heavy foot traffic can cause ponding on low pitched roofs. This is particularly true just upslope from the eave and at endlaps. Always walk in the flat of the panel near a supporting roof structural. Do not walk on trim or in gutters. On bare Galvalume® roofs, excessive foot traffic may cause black burnish marks. If regular foot traffic is planned for a roof, provisions should be made for a properly designed and installed roof walkway system.
In order to limit access to the roof, roof hatches or access ladders should be locked at all times. A sign should be posted at the point of access, stating that only authorized personnel are allowed onto the roof. In addition, a log book should be kept of all visits to the roof and the reason for such visits.

DRAINAGE

* Keep roof free of debris and keep debris out of gutter to allow water to quickly drain from roof.
* Do not use wood blocking to hold equipment off of panel seams. This blocks the flow of water and holds moisture.
* Do not allow rooftop AC units or evaporative coolers to drain onto the roof.
* Anything that traps or holds moisture on a roof will cause premature corrosion.

POST-ERECTION ROOF CLEANING

After roof installation is complete, all filings, shavings, etc. from fastener installation etc. shall be swept completely clear of the roof panels. If this does not happen, the manufacturer will not be held responsible for any resulting corrosion.

DISSIMILAR METALS

Never allow your roof to come in contact with, or water runoff from, any dissimilar metal including but not limited to: copper, lead or graphite. This includes Copper and Arsenic salts used in treated lumber, Calcium used in concrete, mortar and grout.

PAINT AND COATING INFORMATION

Remove smudge marks from bare Galvalume®. Formula 409 has proven to be somewhat effective. Lightly rub with a clean cloth and rinse with water. Do not rub more than required to remove smudge. No product will remove all smudge marks. Remove rust stains. Soft Scrub has proven to be somewhat effective. Lightly rub with a soft cloth and rinse with water. Do not rub more than required to remove stain. No product will completely remove rust stains.
To touch-up scratches in paint (not to bare metal), clean area to be painted with mineral spirits. Rinse thoroughly and dry. Using a small artist's brush, lightly apply the absolute minimum amount of touch-up paint required to fill the scratch. Use only touch-up paint supplied by manufacturer.

PERIODIC INSPECTION

All high-strength bolts shall be periodically inspected for tightness, particularly in crane buildings and after any seismic activity or wind activity. The crane manufacturer will specify a minimum period; but it should not exceed 2 years.

DEBRIS REMOVAL

Any foreign debris such as sawdust, dirt, leaves, animal droppings, etc. Will cause corrosion of the roof, gutters, trim, etc. if left on building surface for a long enough time. The roof should be periodically inspected for such conditions and if found, they should be rectified in a manner consistent with these roof maintenance guidelines. NEVER ALLOW TREATED LUMBER OR CONCRETE/MORTAR/GROUT TO COME IN CONTACT WITH ROOF PANELS, ESPECIALLY GALVALUME®, FOR EXTENDED PERIODS OF TIME.

ICE AND SNOW REMOVAL

Excessive ice and snow should be removed from roof immediately to prevent damage to roof and possible collapse. Do not use metal tools to remove the ice or snow as this can damage the paint and/or Galvalume coatings. Also, be careful around plumbing pipes and flashings.
Be extremely careful if your roof has Light Transmitting Panels. THESE PANELS WILL NOT SUPPORT A PERSON'S WEIGHT AND WILL BE DIFFICULT OR IMPOSSIBLE TO SEE IF THEY ARE COVERED WITH ICE AND SNOW. See 2002 MBMA low-Rise Building Systems Manual appendix a8 for details snow removal procedures. THESE PROCEDURES SHOULD COMMENCE WHEN HALF OF THE DESIGN ROOF SNOW LOAD SHOWN ON THIS SHEET IS REALIZED.

BUILDING DESCRIPTION:

Building ID	Width	Length	Height	Roof Pitch	Endwall Frame Type Left	Endwall Frame Type Right
BLDG. A	CST 70'-0	150'-0	21'-0	1: 12	EXP-MAIN FRAME	NON EXP-MAIN FRAME
					-	-

WARNING: In no case should Galvalume steel panels be used in conjunction with lead, copper, Portland Cement, or treated lumber. These materials have harmful corrosive effects on the aluminum zinc alloy coating when they are used in contact with Galvalume steel panels. Even run-off from these materials including flashing, wiring, or tubing onto Galvalume should be avoided.

Base Condition		Sheeting			Blanket Type Insulation		
NO SHEETING RECESS W/		26 Ga.	PBR/ GALVALUME	Roof	None [ ] By Manufacturer [ ] By Others [X] Roof [4"] Wall [4"] UL-25 [ ]		
FORMED BASE TRIM		26 Ga.	PBR/ TBD	Wall	Screws: SELF DRILLING		
Tape Seal		Trim (1/8" Pop rivets at splices)			Member Roof **12-14 x 1 1/4 SDS	Stitch Roof **# 14 x 7/8 Laptek	Anchor Bolts
3/8" [X]		26 Ga.	TBD	Rake	Member Wall **12-14 x 1 1/4 SDS	Stitch Wall **# 14 x 7/8 Laptek	By Others [X]
1" [ ]		26 Ga.	TBD	Eave	Rake to Roof STITCH	Rake to Wall STITCH	
Warranties		26 Ga.	TBD	Gutter	Gutter to Roof STITCH	Gutter Straps STITCH	By Building Manufacturer
U.L. 90	YES	26 Ga.	TBD	Downspouts	Corner Trim STITCH	Rake Angle MEMBER	[ ]
20 Yr Roof	YES	26 Ga.	TBD	Corner	Primary [X] Red [ ] Gray [ ] Galv.		
20 Yr Wall	YES	26 Ga.	TBD	Accessories	Secondary [X] Red [ ] Gray [ ] Galv.		

Additional Features - **DENOTES LONG LIFE FASTENERS. SILL, WALL EAVE CLOSURES REQUIRED

BUILDING LOADS

Applicable Interior Zone FM Rating I-__
Perimeter & Corner Zones per FM Data Sheet I-28, Table 6.

This is to certify that this structure is designed utilizing the loads indicated and applied as required by the building code shown below.
This certification is limited to the structural design of the framing and covering parts manufactured by the building manufacturer and as specified in the contract. Accessory items such as doors, windows, louvers, translucent panels, and ventilators are not included. Also excluded are other parts of the project not provided by the building manufacturer such as foundations, masonry walls, mechanical equipment and the erection of the building. The building should be erected on a properly designed foundation in accordance with the building manufacturer's design manual, the attached drawings, and good erection practices.

Design Code IBC 2003 — 2nd Code ASCE7-02

Roof Dead Load
- Superimposed: 2 psf
- Collateral: 5 psf

Roof Live Load: 20 psf

Roof Live Loads reduced in accordance w/ IBC 1607.11.2.1 [X] YES [-] NO

Snow Load
- Ground Snow Load (P_g): 0 psf
- Snow Load Importance Factor (I): -
- Flat-Roof Snow Load (P_f): - psf
- Snow Exposure Factor (C_e): -
- Thermal Factor (C_t): -

Wind Load
- Basic Wind Speed: 90 mph
- Wind Importance Factor (I): 1.0
- Wind Exposure Category: C
- Internal Pressure Coefficient (GC_{pi}): .18
- Component Wind Load ≤ 10FT², Zone 4 +: 17.4 psf pressure, 18.8 psf suction
- Component Wind Load ≤ 10FT², Zone 5 +: 17.4 psf pressure, 23.2 psf suction

+ Zones per ASCE 7-98, Figure 6-5A

Seismic Load
- Seismic Use Group: I
- Seismic Importance Factor (I_E): 1.0
- S_s: 22.6 — S_{Ds} .241
- S_1: 6.5 — S_{Ds1} .104
- Site Class: D
- Design Category: B
- Analysis Procedure: Equivalent Lateral Force

	Transverse**	Longitudinal**
Basic Force Resisting System *	1	1
Response Modification Coefficient (R)	3	3
Deflection Amplification Factor (C_d)	3	3
System Over-strength Factor (Ω_0)	3	3
Entire BLDG Design Base Shear (V)	11.0K	11.0K

**- The transverse direction is parallel to the rigid frames; the longitudinal direction is perpendicular to rigid frames.

Rainfall Intensity
- 5-minute duration, 5-year recurrence (I_1): 4 in/hour
- 5-minute duration, 25 year recurrence (I_2): 7 in/hour

Floor Loads
- Superimposed Dead Load: N/A psf
- Collateral Dead Load: N/A psf
- Partition Load: N/A psf
- Total Dead Load: N/A psf
- Live Load: N/A psf

Crane Loads
- Capacity & Type: N/A
- Max. Wheel Load: N/A
- Wheelbase: N/A
- Bridge Weight: N/A
- Hoist & Trolly Weight: N/A
- Crane Class: N/A

Special Loads: N/A, N/A, N/A

* Basic Force Resisting System

A: 1. Steel Ordinary Moment Frames
2. Steel Ordinary Concentric Braced Frames
3. Bearing Wall System w/ Sheet Steel Shearwalls (Diaphragm)

DRAWING INDEX

ISSUE	PAGE	DESCRIPTION
D	C1 of 1	COVER SHEET
D	ES-1	INSTALLATION PROCEDURES
3	F1 of 2	ANCHOR BOLT PLAN
3	F2 of 2	BASE PLATE DETAILS AND REACTIONS
D	E1 of 8	ROOF FRAMING PLAN
D	E2 of 8	SIDEWALL ELEVATIONS
D	E3 of 8	SIDEWALL ELEVATIONS
D	E4 of 8	ENDWALL ELEVATIONS
D	E5 of 8	FRAME CROSS SECTION
D	E6 of 8	FRAME CROSS SECTION
D	E7 of 8	FRAME CROSS SECTION
D	E8 of 8	PORTAL FRAME
D	NS-1	STANDARD DETAILS
D	NS-2	STANDARD DETAILS
D	NS-3	STANDARD DETAILS
D	NS-4	STANDARD DETAILS
D	W-1	STANDARD WELD DETAILS

CITY OF PHOENIX
Development Services Department
BY: (KUSH BINAZAN)
JUN 19 2007
This set of plans has been reviewed for STRUCTURAL and ARCHITECTURAL requirements prior to issuance of Building Permit and shall be kept at the construction site. Such review shall not prevent the Building Official from requiring correction of errors in the plans where such errors are subsequently found to be in violation of any law or ordinance.

DRAWING STATUS

[ ] For Approval:
These drawings, being For Approval, are by definition not final, and are for conceptual representation only. Their purpose is to confirm proper interpretation of the project documents. Only drawings issued "For Erector Installation" can be considered as complete.

[ ] For Construction Permit:

[ ] For Erector Installation:

ISSUE	DATE	DESCRIPTION	BY	CK'D
A	1/23/07		JAC	BB
B	3/5/07		JAC	BB
C			DGW	BH
D			DGW	BB

METALLIC
metallic building company
7301 FAIRVIEW, HOUSTON, TEXAS, P.O. BOX 40338
ZIP 77041 (713) 466-7788 ZIP 77240

Project: COVER SHEET
Customer: YELLOWNIFE BUILDING SYSTEMS — Owner: NATIONAL WATER WORK
Location: PHOENIX, AZ

CAD	Date	Scale	Phase	Building ID	Job Number	Sheet Number	Issue
		DO NOT SCALE	-	A	3505-233887	C1 OF 1	D

The engineer whose seal appears hereon is not the engineer of record for the overall project

REGISTERED PROFESSIONAL ENGINEER — ARIZONA U.S.A. — Date Signed 06-01-07