



## **Woodbury County Law Enforcement Center Authority**

620 Douglas St., Room 104

Sioux City, Iowa 51101

712 – 279-6525

Ron Wieck - Chair

Dan Moore - Secretary

Rocky De Witt - Treasurer

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### **Agenda**

November 8, 2022 3:00 p.m.

First Floor Boardroom, County Courthouse

#### **3:00 p.m. Call Meeting to Order**

1. Approval of the agenda
2. Approval of the minutes of the October 25, 2022 meeting
3. Approval of claims
4. Financial Update
5. Authority Visitation Policy Discussion
6. Report and discussion on incident from October 14, 2022
7. Update on Woodbury County LEC Main Project
8. Update on 28E Road Project
9. Commissioners concerns
10. Adjourn

**ADJOURNMENT**

# *Woodbury County Law Enforcement Center Authority*

## **Minutes**

October 25, 2022 3:00 p.m.

First Floor Boardroom, County Courthouse

Attendance:

Members: Ron Wieck, Rocky De Witt, Dan Moore

Staff: Karen James, Shane Albrecht, Baker Group, Kenny Schmitz, Building Services,  
Kevin Rost, Goldberg Group Architect

1. Motion by De Witt, second by Moore to approve the agenda. Carried 3-0
2. Motion by De Witt, second by Moore, to approve the minutes of October 11, 2022 meeting. Carried 3-0
3. Motion by De Witt, second by Wieck to approve claims totaling \$1,749,637.80. Carried 3-0
4. Dennis Butler presented a financial update.
5. Shane Albrecht, Baker Group gave an update on the Furniture Procurement Policy. Shane Albrecht recommend holding the process with Workspace until more information is received. Motion by De Witt, second by Wieck to hold the process with Workspace until more information is received. Carried 2-1
6. Motion by De Witt, second by Wieck to table approval of Workspace Design proposal until the LEC Authority receives more information. Carried 3-0
7. Shane Albrecht, Baker Group, gave an update on the 28E Road Project.
7. Shane Albrecht, Baker Group gave an update on Woodbury County LEC Main Project.
9. No Commissioners concerns.
10. Motion by Wieck, second by De Witt to adjourn. Carried 3-0

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Dan Moore, Secretary



Woodbury County

# Expense Approval Report

By Segment (Select Below)

Post Dates 11/8/2022 - 11/8/2022

Vendor Name	Account Number	Payable Number	Description (Item)	Post Date	Amount
<b>Office: 45 - Law Enforcement Authority</b>					
Hausmann Construction, Inc.	4750-45-9111-000-61003	021-068-017	4750 - Jail project construction	11/08/2022	2,959,178.75
Hausmann Construction, Inc.	4750-45-9111-000-61013	021-068-017	4750 - Jail project change orders	11/08/2022	16,786.50
Hausmann Construction, Inc.	4750-45-9111-000-61023	021-068-017	4750 - Jail project alternates	11/08/2022	92,752.30
Baker Group	4750-45-9111-000-61002	232267	4750 - Jail project project mana...	11/08/2022	30,000.00
Ahlers & Cooney PC	4750-45-9111-000-61004	831944	4750 - Jail project professional ...	11/08/2022	51.00
<b>Office 45 - Law Enforcement Authority Total:</b>					<b>3,098,768.55</b>
<b>Grand Total:</b>					<b>3,098,768.55</b>

**Report Summary****Fund Summary**

<b>Fund</b>	<b>Expense Amount</b>	<b>Payment Amount</b>
4750 - Justice Center Taxable Bonds	3,098,768.55	0.00
<b>Grand Total:</b>	<b>3,098,768.55</b>	<b>0.00</b>

**Account Summary**

<b>Account Number</b>	<b>Account Name</b>	<b>Expense Amount</b>	<b>Payment Amount</b>
4750-45-9111-000-61002	Project Management	30,000.00	0.00
4750-45-9111-000-61003	Construction	2,959,178.75	0.00
4750-45-9111-000-61004	Misc/Administration	51.00	0.00
4750-45-9111-000-61013	Contingency/Change Orde..	16,786.50	0.00
4750-45-9111-000-61023	Construction Alternates	92,752.30	0.00
<b>Grand Total:</b>		<b>3,098,768.55</b>	<b>0.00</b>

**Project Account Summary**

<b>Project Account Key</b>	<b>Expense Amount</b>	<b>Payment Amount</b>
4750-9111-ALTERNATES	92,752.30	0.00
4750-9111-CONSTRUCTION	2,959,178.75	0.00
4750-9111-CONTINGENCY	16,786.50	0.00
4750-9111-MISC/ADMINISTRATION	51.00	0.00
4750-9111-PROJECT MANAGEMENT	30,000.00	0.00
<b>Grand Total:</b>	<b>3,098,768.55</b>	<b>0.00</b>



# Woodbury County Law Enforcement Center Authority

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Ron Wieck, Chair  
Dan Moore, Secretary  
Rocky DeWitt, Treasurer

Woodbury County Courthouse  
620 Douglas Street, Room #104  
Sioux City, Iowa 51101  
712.279.6525

## Woodbury County LEC Authority

### Visitation Policy

The Authority Visitation Policy is the procedure that must be followed in order to visit the Woodbury County Law Enforcement Center site at 3701 28<sup>th</sup> St., Sioux City, IA 51104.

No visitors will be allowed without having completed the following:

1. All visitors are required to have OSHA 10-hour training.
2. All visitors are required to have Hausmann Construction site training.
3. All visitors are required to check in at the Hausmann trailer.
4. All visitors are required to be approved to visit by both the Authority and Hausmann Construction.

## Incident Report

***This report is required to be submitted within 24 hours to the Safety Department and HR Department for ALL Incidents.***

<b>Injury/Incident Period:</b>	October	<b>Project Address:</b>	3701 28 <sup>th</sup> Street	
<b>Town:</b>	Sioux City	<b>Project Phone Number:</b>		
<b>Job Name:</b>	Woodbury County LEC	<b>Project Mgr./ Superintendent</b>		
<b>Job Number:</b>	21-068	<b>Foreman</b>		
<b>Incident Type:</b>	Auto/Equipment/Property			
<b>Incident Date:</b>	10/14/2022	<b>Incident Time (hh:mm )</b>	3:15	P.M.

**Safety Basis (Please attach the incident photos at the bottom of the form prior to submitting)**

**Give a detailed Description :**

On 10.14.2022 employees with Hausmann construction and Alliant building group were working on the ground floor in the control room and elevator shaft. Around 3:15 pm, employees with both companies heard a loud pop that came from Area A, employees observed a 44' x 10' x 8" uninsulated precast panel falling to the North. The precast panel then collided with the next row of panels and the following row. In total, 6 panels fell to the ground and 1 more panel was removed that was partially attached to the building due to safety concerns of it falling as well. Once the panels were on the ground, employees from Hausmann and Alliant did a roll call to make sure nobody was trapped under the debris. After everyone was accounted for, HCI site supervision informed the appropriate parties of the incident that took place. The area was danger taped off immediately.

The 1<sup>st</sup> panel that fell located on the Southwest corner of area A was secured using a Burke super 32 brace that was connected to the panel 25' from the ground and tied back to the footing 19' to the south of where panel was placed. The brace was secured at both ends using a ¾" 4.5" long DeWalt / Hilti anchor bolt. The predrilled ¾" hole in the panel was 4" deep. The bracing plan calls for a "¾" screw anchor Dayton Superior Bearcat bolt 5" or 7". Alliant building group admitted to not using the Dayton Superior Bearcat bolts while installing bracing for the panels.

Upon investigation, the 4.5" ¾" inch bolt was still in the precast panel with roughly 1 1/8" of the bolt out of the panel while on the ground. The bracket holding it to the panel measures 1" so it is assumed there was an 1/8" gap between the bolt and bracket at the time the panel tipped over. This means that 3" of the bolt was in the panel before it tipped over. Additionally, there was fresh metallic scrapes on the open-end keepers of the brace bracket indicating that the anchor had slowly worked its way loose inside of the panel until the brace bracket keepers could no longer secure the anchor bolt.

On 10.13 and 10.14.2022 wind gusts were reported over 35 mph from the North/Northwest. It was observed that panels were swaying in the wind but not enough to where it raised concern of tightening the anchor bolts.

On 10.18.2022 Hausmann Construction requested to meet the structural engineer who designed the bracing plan for Alliant Building Group to obtain answers as to why this set up failed. It was determined that contributing factors were the re-use and improper selection of anchor bolts. Additionally, the engineer was unaware that there were panels standing for extended durations, and verbally stated that there should have been additional bracing/inspection for such panels. Also, noted was that the braces and anchors used required additional inspections whenever there was a wind event greater than 35 mph.

## Incident Report

*This report is required to be submitted within 24 hours to the Safety Department and HR Department for ALL Incidents.*

<b>Physical Location of the Incident:</b>	Area A	<b>Incident Occur On-Site or Off-Site?</b>	On-site
<b>Contributing Factors: Causal Factors</b>			
	<b>Primary (Mandatory)</b>	<b>Secondary (Optional)</b>	<b>Tertiary (Optional)</b>
<b>Following Procedures (Planning)</b>	Failure to Identify Change	Choose an item.	Choose an item.
<b>Tools, Equipment &amp; Vehicles</b>	Choose an item.	Choose an item.	Wrong slection of equipment
<b>Inattention/Lack of Awareness/Training</b>	Choose an item.	Choose an item.	Choose an item.
<b>Use of Protective Methods and Systems</b>	Choose an item.	Choose an item.	Choose an item.
<b>Work Exposure to</b>	Choose an item.	High winds	Choose an item.
<b>Work Place Environment / Layout</b>	Choose an item.	Choose an item.	Choose an item.
<b>Operational Task</b>			
<b>(What was the operation being performed?)</b>		No Specific Activity/ Job Task	Bracing precast panels.
<b>Corrective Measures (How can the incident be prevented in the future):</b>			
If changes occur, ensure proper channels are updated (engineer) to assure appropriate revisions are made and followed. Inspect bracing systems daily and any time winds reach over 35mph to ensure proper install. Follow engineered plan and manufacture recommendations Fill out daily inspection log			
<b>Causative agent involved (object, substance, equipment, conditions etc...):</b>			
Duration of freestanding panel w/o inspection/revisions Improper anchor use.			
<b>Equipment Type Involved (if applicable):</b>			
Burke Super 32 bracing			
<b>Is the involved party Internal (HCI) or External (Subcontractor)</b>		External	<b>Company Name:</b> Alliant
<b>Employee Details (Name Mandatory for all Incidents and Near Misses)</b>			
<b>Name of Injured/involved:</b>		<b>Title/ Occupation:</b>	
<b>Employee ID (HCI Only)</b>		<b>Length of Service</b>	<b>YRS</b>   <b>Mths</b>   <b>Days</b>
<b>Gender</b>	Choose an item.	<b>Time present on Job</b>	<b>Yrs</b>   <b>Mths</b>   <b>Days</b>
<b>Home Address:</b>		<b>Date of Hire:</b>	Click here to enter a date.
<b>(HCI Only)Phone Number:</b>		<b>Time work began?</b>	
<b>(HCI Only)Birthdate:</b>			
<b>Witnesses</b>			

## Incident Report

*This report is required to be submitted within 24 hours to the Safety Department and HR Department for ALL Incidents.*

Name:		Employee?	Yes	
Address		Ph. Number		
Name:		Employee?	Choose an item.	
Address		Ph. Number		
<b>Incident/Injury Details</b>				
Did the employee require medical attention?	Choose an item.	Est. Days Away:		
Did employee return to work?	Choose an item.	Est. Days Restricted:		
Cause of Injury:	Choose an item.	If other please explain:		
Type of Injury:	Choose an item.	If other please explain:		
Body Part Injured:		Section of Body Affected:	Choose an item.	
If Arm:	Choose an item.	If Leg:	Choose an item.	
If Foot:	Choose an item.	If Torso:	Choose an item.	Back / Spine <input type="checkbox"/>
If Head:	Choose an item.	If Hand:	Choose an item.	Respiratory <input type="checkbox"/>
What was the employee doing just before the incident occurred?				
<b>Injury Questions</b>				
Was weather a factor?	Choose an item.	If <b>Yes</b> , Explain		
Was this a Quality related issue?		If <b>Yes</b> , Explain		
Was this a Maintenance related issue?		If <b>Yes</b> , Explain		
<b>Medical Attention Information</b>				
Did the employee require medical attention?	No			
Was first aid given?		If Given by whom?		
What type of first aid was given?				
Did the employee see a healthcare provider?		When did the employee see physician?	Click here to enter a date.	
Who accompanied the employee to the Physician?				
Name of the Physician or Healthcare provider?				
Did the employee return to work?		Date the employee return to work	Click here to enter a date.	
Treated in ER?		Hospitalized as in-patient?		
If treatment was given away from the worksite, Where was it given?				
<b>Submit Photos Here (Attach Photos of Incident or Near Miss)</b>				



**Incident Report**

*This report is required to be submitted within 24 hours to the Safety Department and HR Department for ALL Incidents.*

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## Incident Report

*This report is required to be submitted within 24 hours to the Safety Department and HR Department for ALL Incidents.*



**Incident Report**

*This report is required to be submitted within 24 hours to the Safety Department and HR Department for ALL Incidents.*

10/14/22, 5:46 PM  
Sioux City, IA 51105



**Incident Report**

*This report is required to be submitted within 24 hours to the Safety Department and HR Department for ALL Incidents.*

10/14/22, 6:18 PM  
Sioux City, IA 51105



**Incident Report**

*This report is required to be submitted within 24 hours to the Safety Department and HR Department for ALL Incidents.*



**Incident Report**

*This report is required to be submitted within 24 hours to the Safety Department and HR Department for ALL Incidents.*



**Incident Report**

*This report is required to be submitted within 24 hours to the Safety Department and HR Department for ALL Incidents.*



**Incident Report**

*This report is required to be submitted within 24 hours to the Safety Department and HR Department for ALL Incidents.*





**Incident Report**

*This report is required to be submitted within 24 hours to the Safety Department and HR Department for ALL Incidents.*

10/17/22, 2:03 PM  
Sioux City, IA 51105



**Incident Report**

*This report is required to be submitted within 24 hours to the Safety Department and HR Department for ALL Incidents.*



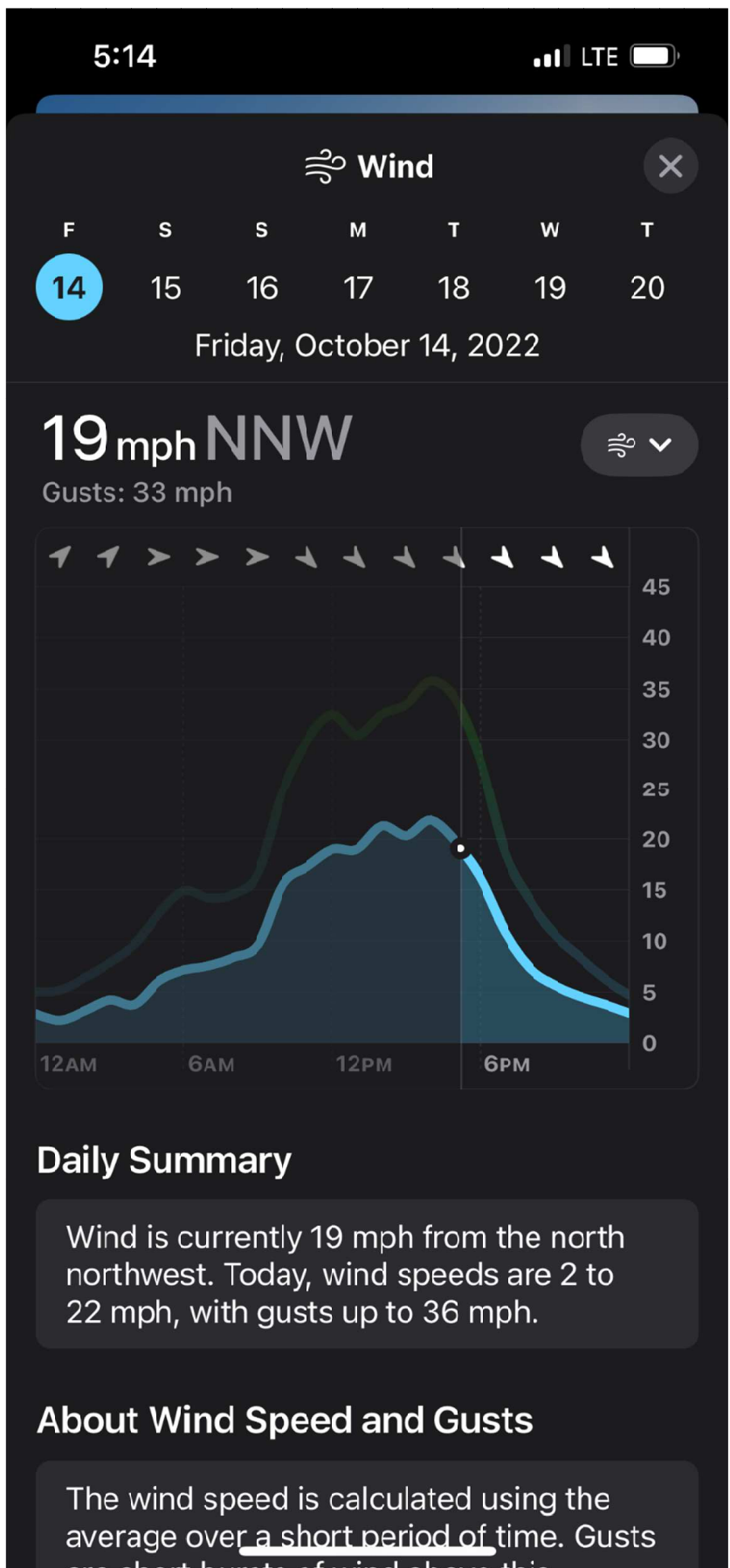
**Incident Report**

*This report is required to be submitted within 24 hours to the Safety Department and HR Department for ALL Incidents.*



### Incident Report

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# Safety Stand Down – Topics of Discussion

10.17.2022

- Precast panel incident
- Do not go into the incident area until advised by Hausmann construction
- Steps going forward in precast areas to fix damages
- Importance of routine inspections by all trades
- Communication between trades
- Remind subs to be aware of all hazards while working on site

# Safety Stand Down Sign-in Sheet

Training Title: *PreCast Panels*

Project: *Woodbury LEC*

Date: *10/17/2022*

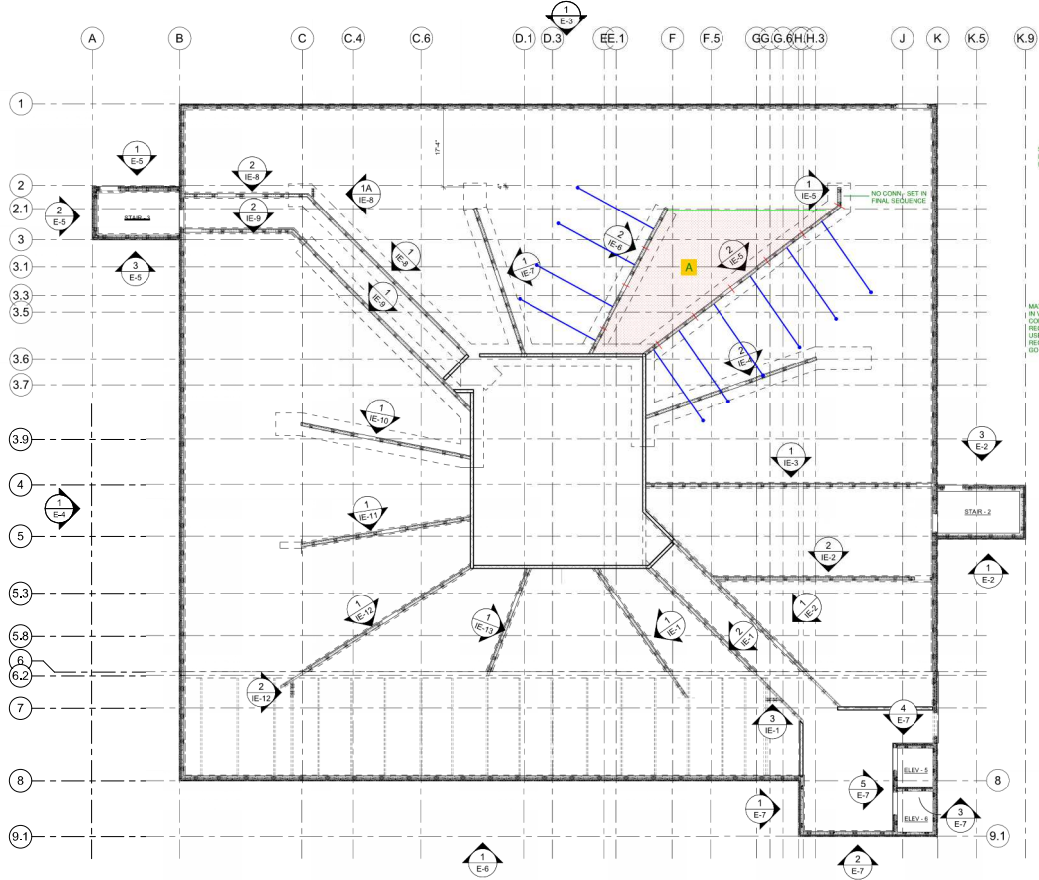
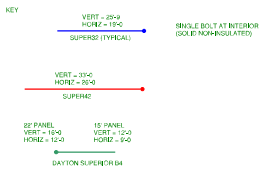
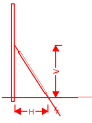


	Company	Name (Printed)	Signature	
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32				

**BRACING DESIGN DATA**

ASCE 31-14  
 ASCE 7-10  
 WIND  
 BASE SPEED 100MPH (ULT) CONSTRUCTION WIND  
 ADJUSTED TO WMPH FOR 6 WK - 1 YR PERIOD  
 EXPOSURE C

- NOTES:
- BRACE CONNECTION TO PANEL - 3M" SCREW ANCHOR DAYTON SUPERIOR BEARCAT BOLT (5 OR 7 INCH) BOLT EXTENSION 7 INCH BOLT THROUGH WYTHE INTO INSULATED CORE IS ACCEPTABLE
  - MAINTAIN 1'-0" CLEAR TO ALL EDGES AND OPENINGS FOR PANEL CONNECTIONS
  - INSTALL BRACES NOT MORE THAN 5' FROM PERPENDICULAR TO WALL PANEL
  - HELICAL ANCHORS (M150) 7" EMBEDMENT MIN TORQUE = 2000 FT-LB (28 KIP ULTIMATE CAPACITY)



FINAL FOR CONSTRUCTION  
 2-8-22

KEYPLAN AREA-A & B  
 1" = 10'-0"



DESIGNED BY: DMY/OK CHECKED BY: MCDON DATE: 07/20/22	DRAWN BY: DMY/OK CHECKED BY: MCDON DATE: 07/20/22	PROJECT: WOODBURY COUNTY L.E.C. LOCATION: SIOUX CITY, IOWA	ARCHITECT: GOLDBERG GROUP ARCHITECTS CONTRACTOR: HAUSMANN CONSTRUCTION	CLIENT: GAGE BROS. CONCRETE PRODUCTS INC. SIOUX FALLS, S. DAK.	SCALE: 1" = 10'-0" JOB NO: 21-11471 SHEET: K-1
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2/20/2022 10:28:47 AM C:\Users\mcdon\OneDrive\1471 WOODBURY COUNTY L.E.C. EMPLOYMENT (REV) 11\mcdon.k1

**GENERAL NOTES:**

**MATERIALS**

- Concrete for precast - 5000 psi compressive strength at 28 days.
- Reinforcing steel - ASTM A615 - Grade 60
- Welded wire fabric - ASTM A186 Fy = 45 ksi
- Concrete bed-blocks:
  - Steel - ASTM A36
  - Flange angle - ASTM A 108, ASTM A106-70
  - Diagonal bar anchors - ASTM A496-70
  - Rebar - ASTM A618, ASTM A615
  - Washers - Steel plate - of same yield strength
  - Welded reinforcement steel - ASTM A615
  - Pinches on hardware -
    - Electrolytic Galvanized
    - 8/16in. Nut, Washers and Threaded inserts - Electroplated
    - All other - Shop primer paint UNO
- Stairs - Reinforced by manufacturer or provide E-detail.
- Welding Electrodes - E70XX
- Shoring/Pier - Manufacturer's literature

**NOTES**

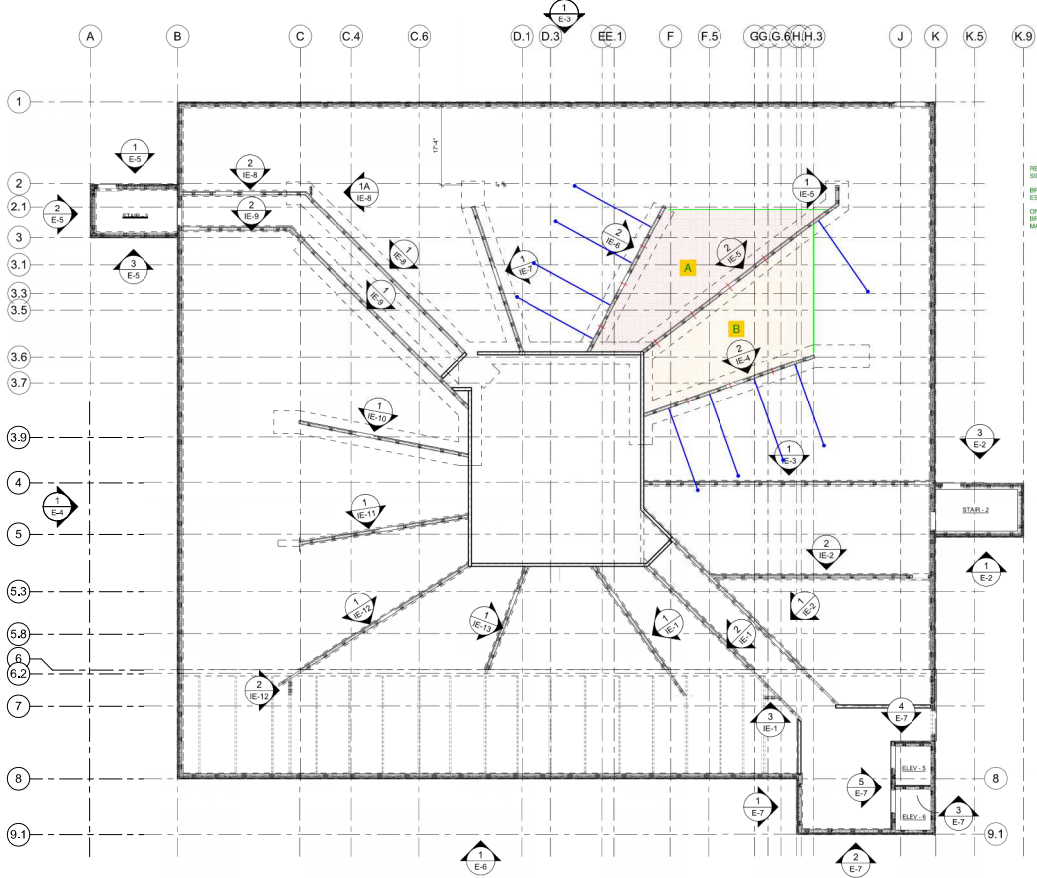
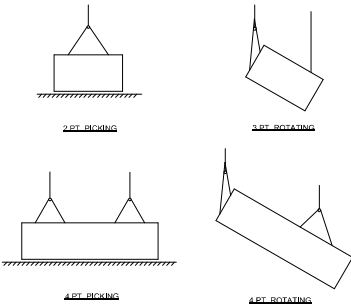
- All welds shall be made by certified welders in accordance with AWS standards.
- Rebar ends and all connections are complete.
- Remove steel between panels used for erection unless drawings indicate otherwise are permanent.
- Where strap type or nut inserts are cast into panel or structure, position the bracket end so that it is parallel to the center of the rebar, 1/8" on face.
- On two direction inserts, locate threaded rod in center of insert in both directions and back of all inserts. Before making the nut off, cover the nut or nut bearing to the back of the body of the insert to all inserts any 3/8" dia.
- All electrical devices in exposure to be surface mounted unless specified otherwise.

**WARNING**

For protection and safety of persons and/or property, precast concrete elements may require special bracing and/or shoring during and until the element has become an integral part of the building as per architectural plans. Proper tying, shoring and/or bracing shall be the duty of the contractor under the direction of the architect or his designee. Refer always to the plans.

**SHED DRAWING SYMBOLS AND EXPLANATION**

- PANEL: MAIN NUMBER (TOP)
- PANEL: CONTROL NUMBER (BOTTOM NUMBER WILL BE STABLE THROUGHOUT THE PROJECT)
- 10 - CONNECTION NUMBER (E-DETAILS 1/2" x 11")
- SHEET REFERENCE**
  - K - KEY PLAN
  - IE - EMBEDDED HARDWARE PLAN LAYOUTS
  - E - ELEVATION
  - S - SECTION
  - D - DETAIL
  - L - LAYOUTS
  - PC - CONNECTIONS 1/2" x 11" SHEETS
- ABBREVIATIONS**
  - NS - REAR SIDE (OR FACE OF PANEL SHOWN IN ELEVATION)
  - FS - FACE SIDE (OR BACK OF PANEL SHOWN IN ELEVATION)



REMOVE BRACES FROM SOUTH SIDE OF AREA A.  
BRACE AND SET AREA TO ESTABLISH SELF-STABLE CORNER.  
ONCE BRACE IS INSTALLED, ALL BRACES EXCEPT TWO AT FAR EAST MAY BE REMOVED.

FINAL FOR CONSTRUCTION  
2-8-22

KEYPLAN AREA-A & B  
1 K-1 1" = 10'-0"



DESIGNED BY: DMY/OK CHECKED BY: M/STW DATE: 07/20/21	DESIGNED BY: DMY/OK CHECKED BY: M/STW DATE: 07/20/21	ARCHITECT: GOLDBERG GROUP ARCHITECTS CONTRACTOR: HAUSMAN CONSTRUCTION	READY FOR CONSTRUCTION: 07/20/21 SHEET: 21-11471-K-1	SCALE: 1" = 10'-0" JOB NO: 21-11471
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WOODBURY COUNTY L.E.C.  
SIOUX CITY, IOWA



**GENERAL NOTES:**

**MATERIALS**

- Concrete for precast - 5000 psi compressive strength at 28 days.
- Reinforcing steel - ASTM A615 - Grade 60
- Welded wire fabric - ASTM A186 Fy = 45 ksi
- Concrete bed-blocks:
  - Steel - ASTM A36
  - Flange nuts - ASTM A 108, ASTM A108-07a
  - Diamond bar anchors - ASTM A496-78
  - Flats - AISC 158 - ASTM A36
  - Washers - Standard - of AISC equal thickness
  - Welded reinforcement steel - ASTM A615
  - Pinches on hardware -
    - Electrolytic - Galvanized
    - 8/16, 9/16, Washers and Threaded inserts - Electroplated
    - All other - Shop primer paint UNO
- Stairs - Reinforced by manufacturer or provide E-detail.
- Welding Electrodes - E70XX
- Shoring Posts - Manufacture to tolerance

**NOTES:**

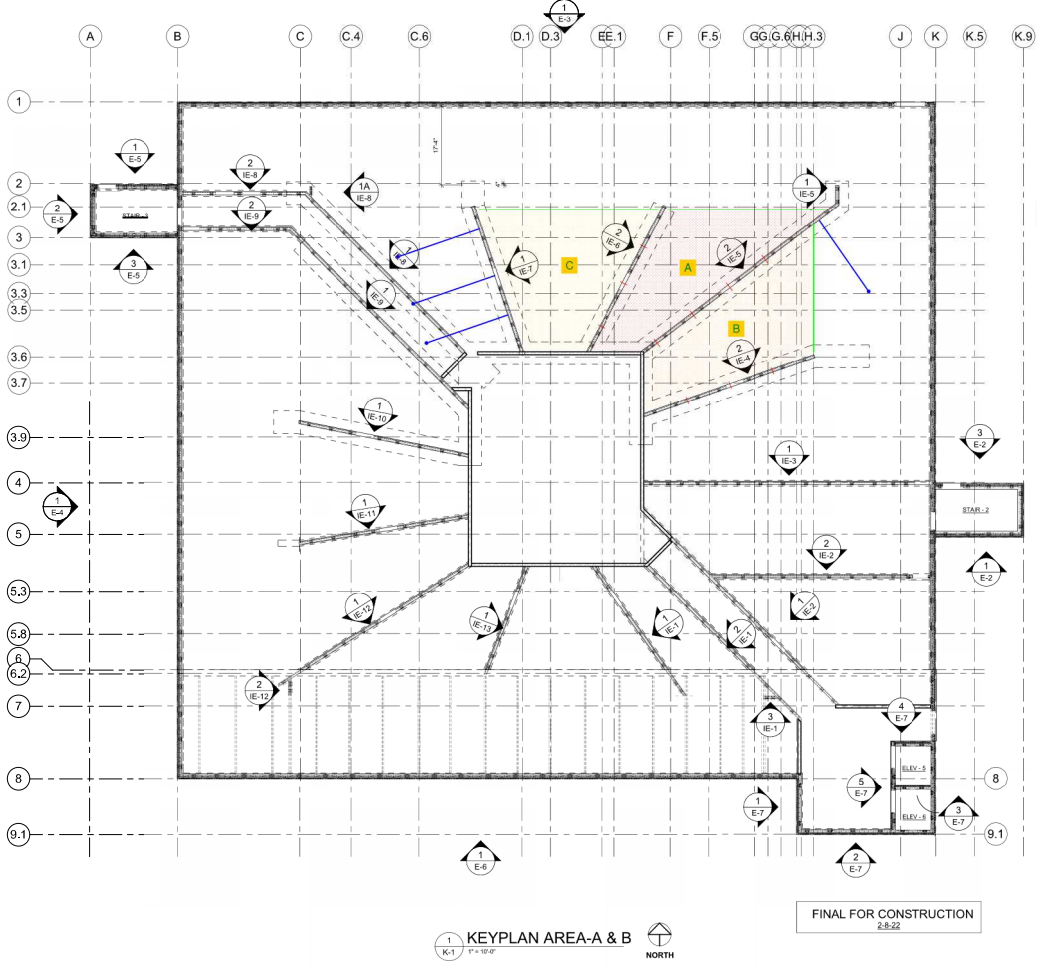
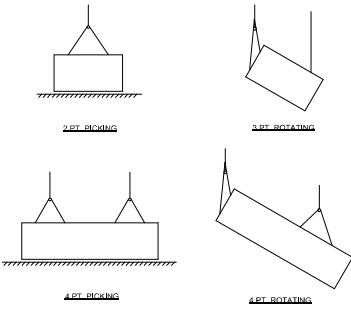
- All welds shall be made by certified welders in accordance with AWS standards.
- Hold panels until all connections are complete.
- Remove shoring between panels used for erection of slab drawings indicate shoring are permanent part of connection, all shoring shown on connection drawings are permanent.
- Where strap type or nut inserts are cast into panel or structure, position the insert to ensure that it is parallel to the center of the panel, L-locks on face.
- On two direction inserts, locate threaded rod in center of insert in both directions and back of slab shown. Before making the rod off, cover the rod or nut bearing to the back of the body of the insert to all dimensions shown (1/2" dia).
- All electrical devices in exposure to be surface mounted unless specified otherwise.

**WARNING**

For protection and safety of persons and/or property, precast concrete elements may require special bracing and/or shoring during and until the element has become an integral part of the building as per architectural plans. Proper tying, shoring and/or bracing shall be in place at the time of erection and the contractor at his discretion, after allow way to the jobsite.

**SHED DRAWING SYMBOLS AND EXPLANATION**

- PANEL, MAIN NUMBER (TOP)
- PANEL, CONTROL NUMBER (BOTTOM NUMBER WILL BE STATIC THROUGHOUT THE PROJECT)
- CONNECTION NUMBER (E-OR-BETW 1/2" x 1/2" x 1/2")
- SHEET REFERENCE:**
  - K-KEY PLAN
  - IE-EMBEDDED HARDWARE PLAN LAYOUTS
  - E-ELEVATION
  - SI-SICTION
  - LA-LAYOUTS
  - PC-CONNECTIONS 8 1/2" x 11" SHEETS
- ABBREVIATIONS:**
  - NS-NEAR SIDE (OR FACE OF PANEL SHOWN IN ELEVATION)
  - FS-FAR SIDE (OR BACK OF PANEL SHOWN IN ELEVATION)



CONTINUE BRACING SETTING STEEL, AND OCCASION IN A COUNTER CLOCKWISE DIRECTION AROUND THE CORE.

KEYPLAN AREA-A & B  
1 K-1 1" = 10'-0"

FINAL FOR CONSTRUCTION  
2-8-22



DESIGNED BY: DMYK CHECKED BY: MASON	DATE: 08/20/22	DESIGNED BY: DMYK CHECKED BY: MASON	DATE: 08/20/22	ARCHITECT: GOLDBERG GROUP ARCHITECTS CONTRACTOR: HAUSMAN CONSTRUCTION	GAGE BROS. CONCRETE PRODUCTS INC. SIGA PAULS & SONS	SCALE: 1" = 10'-0" JOB NO: 21-11471 SHEET: K-1
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WOODBURY COUNTY L.E.C.  
SIOUX CITY, IOWA

2103075 10/23/22 4P AM © Owners/Architect/Engineer/1471 WOODBURY COUNTY L.E.C. (EMPHASIS ADDED) (REVISED) (REVISED)

**GENERAL NOTES:**

**MATERIALS**

1. Concrete for precast - 5000 psi compressive strength at 28 days.
2. Reinforcing steel - ASTM A615 - Grade 60
3. Welded wire fabric - ASTM A186 Fy = 65 ksi
4. Corrosion Inhibitor -
  - A. Sika - ASTM A308
  - B. Resin - ASTM A 108, ASTM A108-07a
  - C. Deformed bar anchors - ASTM A496-70
  - D. Bolted Anchor Nuts - ASTM A307 -
  - E. Washers - Steel - 1/4" Area coated otherwise
  - F. Washers - Reinforcement Steel - ASTM A307
  - G. Pinches on Hardware -
    1. Epoxy with Galvanized
    2. Bolt, Nut, Washers and Threaded Inserts - Electroplated
    3. All other - Shop primer paint UNO
5. Stairs - Reinforced by manufacturer or provide E-detail.
6. Working Electrodes - E70XX
7. Stairing Pins - Reinforced by manufacturer

**NOTES**

1. All welds shall be made by certified welders in accordance with AWS standards.
2. All panels and all connections are complete.
3. Remove area between panels used for erection of false drawings indicates areas are permanent part of connection, all others shown on connection drawings are permanent.
4. Where strap type or nut inserts are cast into panel or structure, position the bracket between supports to a position to the center of the bracket, L/200, on face.
5. On two direction inserts, locate threaded rod in center of insert in both directions and back of each insert. Before making the nut off, cover the nut or nut bearing to the back of the body of the insert to all inserts any 3/64" dia.
6. All electrical devices in exposure to be surfaces mounted unless specified otherwise.

**WARNING**

For protection and safety of persons and/or property, precast concrete elements may require special bracing and/or shoring during and until the element has become an integral part of the building as per architectural plans. Proper tying, bracing and/or shoring shall be the duty of the contractor under the contractor's sole discretion. Refer always to the plans.

**SHIP DRAWING SYMBOLS AND EXPLANATION**

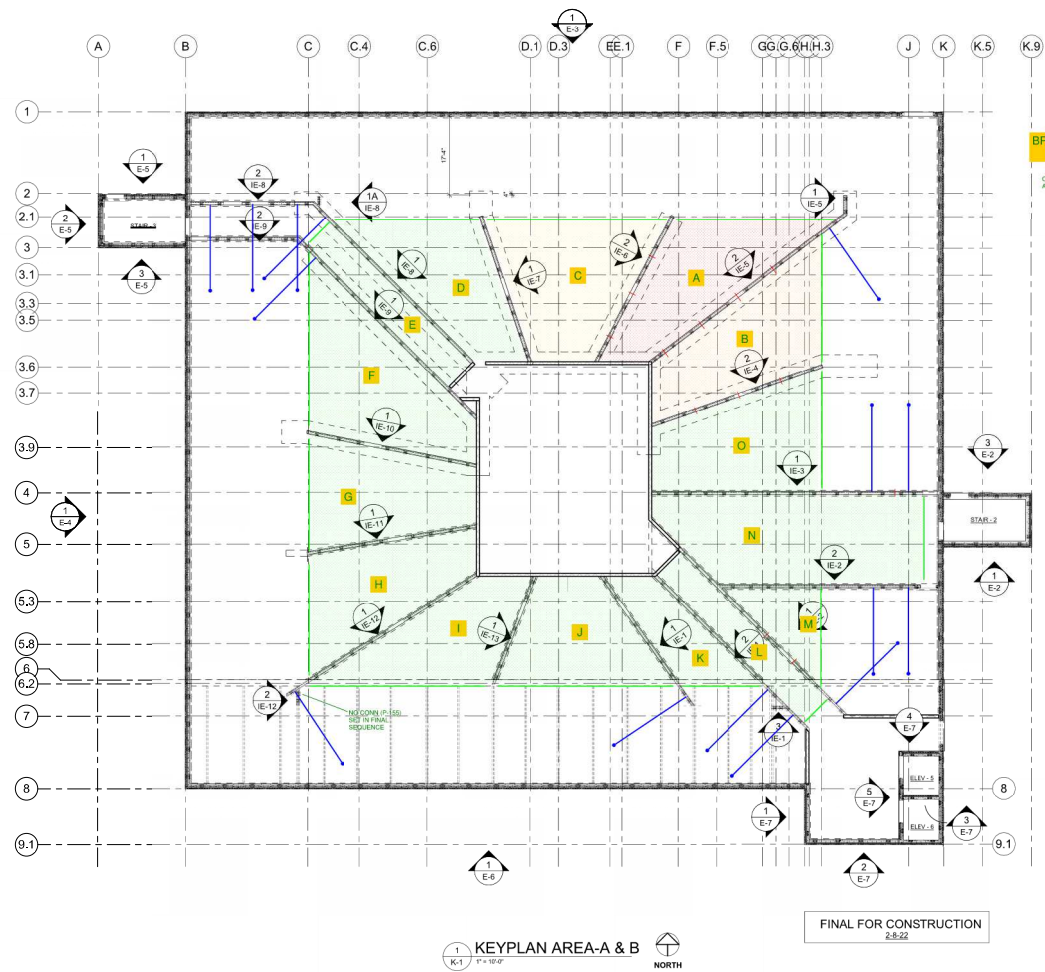
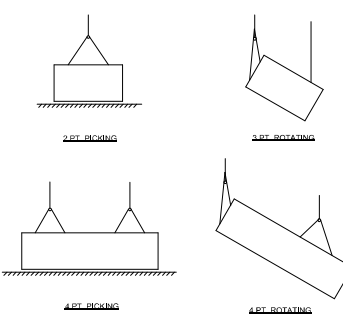
- PANEL MAIN NUMBER (TOP)
- PANEL CONTROL NUMBER (BOTTOM NUMBER WILL BE STATIC THROUGHOUT THE PROJECT)
- CONNECTION NUMBER (E-DETAILS 1/2" x 1/2" x 1/2")

**SHEET REFERENCE**

- K-KEY PLAN
- IE-EMBEDDED HARDWARE PLAN LAYOUTS
- E-ELEVATION
- SI-SICTION
- D-DIMENSION
- L-LAYOUTS
- PC-CONNECTORS 1/2" x 1/2" SHEETS

**ABBREVIATIONS**

- NS-NEAR SIDE (OR FACE OF PANEL SHOWN IN ELEVATION)
- FS-FAR SIDE (OR BACK OF PANEL SHOWN IN ELEVATION)



**BRACE CONDITION WITH CORE COMPLETED**  
CONTINUE SETTING PANELS AND STEEL AROUND CORE

FINAL FOR CONSTRUCTION  
2-8-22

KEYPLAN AREA-A & B  
1" = 10'-0"



DESIGNED BY: [Name] DRAWN BY: [Name]	DATE: [Date] DRAWN BY: [Name]	PROJECT NO.: [Number] SHEET NO.: [Number]	ARCHITECT: GOLDBERG GROUP ARCHITECTS CONTRACTOR: HAUSMAN CONSTRUCTION	CLIENT: GAGE BROS. CONCRETE PRODUCTS INC. SIOUX FALLS, S. DAK.	SCALE: 1" = 10'-0" JOB NO.: 21-11471 SHEET: K-1
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WOODBURY COUNTY L.E.C.  
SIOUX CITY, IOWA

21-11471-10-23-22-01-AM © 2022 Woodbury County L.E.C. All rights reserved. PCI CERTIFIED PLANS

**GENERAL NOTES:**

**MATERIALS**

- Concrete for precast - 4000 psi compressive strength at 28 days.
- Reinforcing steel - ASTM A615 - Grade 60
- Welded wire fabric - ASTM A186 Fy = 65 ksi
- Concrete bed/substrate
  - Shed - ASTM A36
  - Flashed metal - ASTM A 108, ASTM A108-07a
  - Diaphragm bar anchors - ASTM A490-70
  - Flashed Metal Nuts - ASTM A307 - 7
  - Washers - Stainless - of Area equal otherwise
  - Welded Reinforcement Steel - ASTM A615
  - Flashes on Fasteners
    - Exposed ends - Galvanized
    - Ends, Nuts, Washers and Threaded Inserts - Electroplated
    - All other - Shop primer grade UNF
- Stairs - Reinforced/Braced by manufacturer or provide E-Details
- Welding Electrodes - E70XX
- Shoring/Props - Manufacture's literature

**NOTES**

- All welds shall be made by certified welders in accordance with AWS standards.
- Field panels and all connections are complete.
- Remove forms between panels used for erection of false drawings indicates where a permanent part of connection, all others shown on connection drawings are permanent.
- Where strap type or nut inserts are cast into panel or structure, provide the formwork and insert to be placed in the center of the panel, L-locks on top.
- On two direction inserts, locate threaded rod in center of insert in both directions and back of the insert. Before making the rod off, cover the rod or nut bearing to the back of the body of the insert to minimize any voids.
- All electrical devices in exposure to the surface mounted unless specified otherwise.

**WARNING**

For protection and safety of persons and/or property, precast concrete elements shall require appropriate and/or shoring during and until the element has become an integral part of the building as per architectural plans. Proper tying, shoring and/or bracing shall be in the day of the manufacturer or the contractor, at his discretion, after delivery to the jobsite.

**SHED DRAWING SYMBOLS AND EXPLANATION**

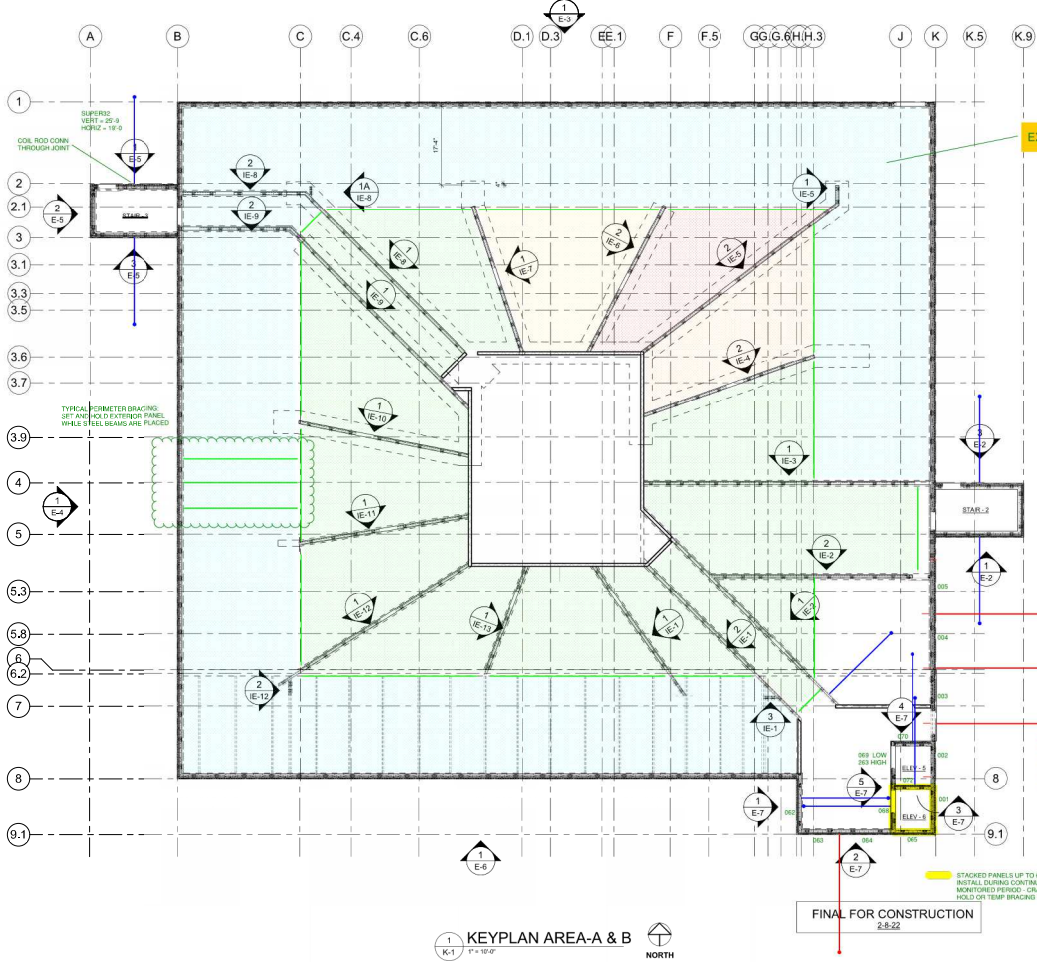
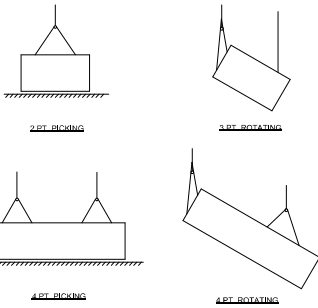
- PANEL MAIN NUMBER (O.P.)
- PANEL CONTROL NUMBER (BOTTOM NUMBER WILL BE STAIR THROUGH THE PROJECT)
- CONNECTION NUMBER (E-1 TO E-11)
- CONNECTION NUMBER (E-12 TO E-17)

**SHEET REFERENCE**

- R - KEY PLAN
- IE - EMBEDDED HARDWARE PLAN LAYOUTS
- E - ELEVATION
- S - SECTION
- D - DETAIL
- L - LAYOUTS
- PC - CONNECTIONS 1/2" x 1/2" SHEETS

**ABBREVIATIONS**

- NS - NEAR SIDE (OR FACE OF PANEL SHOWN IN ELEVATION)
- FS - FAR SIDE (OR BACK OF PANEL SHOWN IN ELEVATION)



EXTERIOR PANELS SET

VERT = 55.0  
HORIZ = 264.0  
SURFACE

SUGGESTED CORNER CLEARANCE  
068 (88), 072 (88), 001, 065  
070 (88), 069, 263, 002  
005, 003, 004    SHC INDICATES  
SHC7    SHEET TO BE  
062 (88), 063, 064    BRACE REMOVE  
AFTER SEQUENCE

FINAL FOR CONSTRUCTION  
2-8-22

KEYPLAN AREA-A & B  
1 K-1 1" = 10'-0"



DATE	REV.	REVISION	DATE	REV.	REVISION	DATE
DESIGNED BY	01/16/24	DESIGNED BY	01/16/24	DESIGNED BY	01/16/24	
DRAWN BY	WJW	DRAWN BY	WJW	DRAWN BY	WJW	
CHECKED BY		CHECKED BY		CHECKED BY		

WOODBURY COUNTY L.E.C.  
SIOUX CITY, IOWA

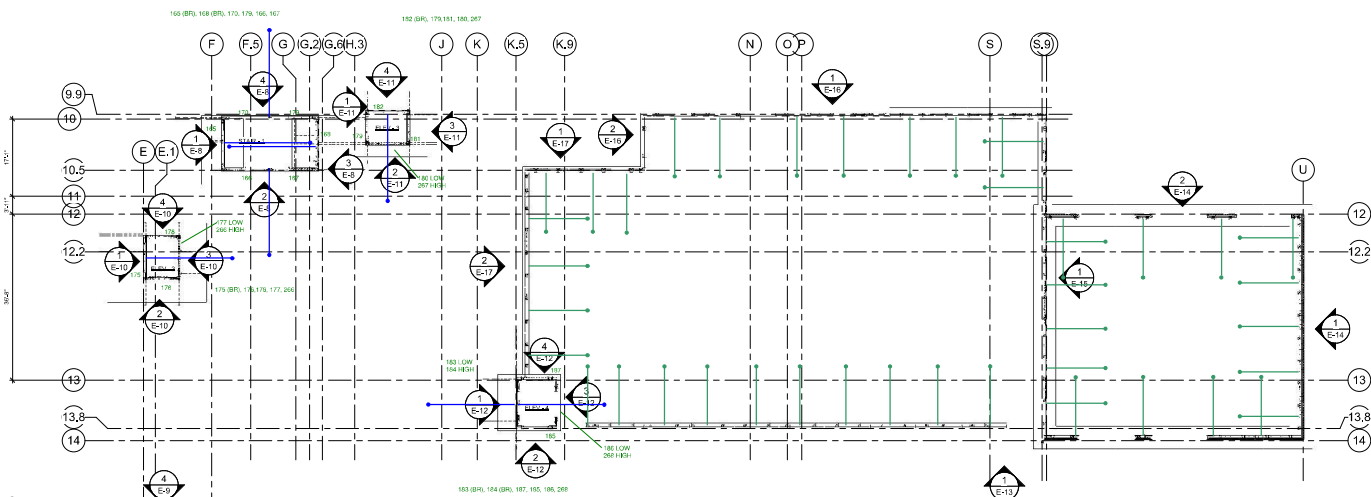
ARCHITECT: GOLDBERG GROUP ARCHITECTS  
CONTRACTOR: HAUSMAN CONSTRUCTION

GAGE BROS. CONCRETE PRODUCTS INC.  
SIOUX FALLS, S. DAK.

SCALE: 1" = 10'-0"  
JOB NO: 21-11471  
SHEET: K-1



210000710121471 K-1 WOODBURY COUNTY L.E.C. IMPROVEMENT PROJECT (R712) WJW



**GENERAL NOTES:**

- MATERIALS**
- Concrete for precast - 5000 psi compressive strength at 28 days.
  - Reinforcing steel - ASTM A615 - Grade 60
  - Welded wire fabric - ASTM A185 Fy = 65 ksi
  - Connection hardware -
    - Steel - ASTM A36
    - Welded nuts - ASTM A 193, ASTM A194
    - Galvanized bar anchors - ASTM A193
    - Welds and nuts - ASTM A193
    - Washers - Standard or other tested alternate
    - Welded flat reinforcement steel - ASTM A36
    - Washers on hardware -
      - Expanded metal - Galvalume
      - Galv. Nuc. Washers and Threaded inserts - Extruded
      - Aluminum - Shop primer paint LIND
  - Steel - Standard (field) to manufacturer or cold roll - 304SS
  - Welding Electrodes - E70XX
  - Sealing Paste - Mastcoat 70 hardness

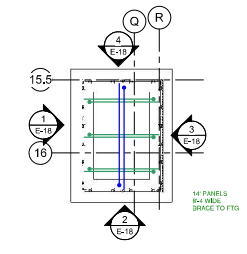
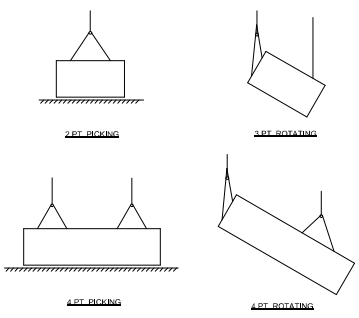
- NOTES**
- All fields shall be made by certified welders in accordance with AWS standards.
  - Field joints shall be made in accordance with AWS standards.
  - Sealing paste shall be applied to all connections unless otherwise indicated where it is a permanent part of connection. Weld joints shown on connection drawings are permanent.
  - When strap type of nut inserts are cast into panel or structure, location the base between each pair shall be in the center of the panel, L/3 from the edge.
  - On bus ducter inserts, locate threaded rod in center of insert in both directions and weld it as shown, leaving the rod off. Show the rod or nut finger tight to the back of the body of the insert to eliminate any movement.
  - All electrical conduits & raceways to be surface mounted unless specified otherwise.

**WARNING**  
 For protection and safety of persons and property, precast concrete elements may require special lifting and/or shoring during and until the element has become an integral part of the building or other structure. Proper lifting, shoring and/or strapping shall be the duty of the erector and/or the contractor, at his discretion, after delivery to the jobsite.

**SHOP DRAWING SYMBOLS AND EXPLANATION**

- PANEL MARK NUMBER (TOP)  
 ○ PANEL CONTROL NUMBER (BOTTOM NUMBER WILL BE STATE THROUGH INTER-PRODUCT)  
 IS - CONNECTION NUMBER PG-601 REET (8" 1/2" x 1")
- SAFE LIFTING**
- KEY PLAN  
 ○ EMBEDDED UNDERWARE PLAN LAYOUTS  
 ○ ELEVATION  
 ○ SECTION  
 ○ DETAILS  
 ○ LAYOUTS  
 FC - CONNECTIONS 8" 1/2" x 11" STRIPS

**ABBREVIATIONS**  
 NS - NEAR SIDE (OR FACE OF PANEL SHOWN IN ELEVATION)  
 FS - FAR SIDE (OR BACK OF PANEL SHOWN IN ELEVATION)



**KEYPLAN AREA-C & D**

**FINAL FOR CONSTRUCTION**  
 2-8-22



DATE	REV.	BY	CHKD.	DATE	REV.	BY	CHKD.
09/22/21	01	DW/OK	MD/OK	09/22/21	01	DW/OK	MD/OK

**WOODBURY COUNTY L.E.C.**  
 SIOUX CITY, IOWA

ARCHITECT: GOLDBERG GROUP ARCHITECTS  
 CONTRACTOR: WALSHMAN CONSTRUCTION  
 GAGE BROS. CONCRETE PRODUCTS INC.  
 SIOUX FALLS, S.D.A.C.  
 PLAN 17" = 10'-0"  
 JOB NO. 21-11471  
 SHEET 52

## TECHNICAL DATA SHEET

### DESCRIPTION

The Dayton Superior Single-Use Bearcat Bolt is a high strength drill-in screw anchor. This anchor utilizes a pre-drilled hole and self-taps into the concrete, creating a mechanical connection between the concrete and the anchor threads. This screw anchor, unlike other competitor screw anchors, was designed specifically for use in tilt-up construction applications. The high strength carbon steel allows for quick and easy installation. This one-time-use bolt is available in a blue electro galvanized zinc finish to prevent rust and corrosion.

### APPLICATION

The primary use of the Single-Use Bearcat Bolt is for anchoring tilt-up wall braces to floor slabs during panel erection. Additional uses include lift brackets/plates as well as permanent or temporary fixation of racking, rails, guards, etc. Reuse of this bolt is not recommended or supported.



### FEATURES

- High capacity to maximize brace system
- 5" and 7" bolt lengths
- Compatible with 3/4" drilled holes
- Integrated cut-washer for anti-rotation

### BENEFITS

- Quick and clear installation
- Works in a wide variety of applications
- Better bite into concrete
- No spinning or slipping in hole
- One-time-use eliminates the need to restock used bolts

### TECHNICAL DATA

Bearcat Bolt Setting Detail	5" Bearcat Bolt	7" Bearcat Bolt
Maximum Mounting Plate Thickness <sup>1</sup>	1"	
Minimum Mounting Plate Hole Diameter	15/16"	
Total Shank Length	5.25	7.25"
Nominal Full Embedment <sup>1</sup>	4.25"	6.25"
Minimum Edge Distance	10"	15"
Over-drill Depth <sup>2</sup>	0.50"	
Nominal Drill Bit Diameter	3/4"	
Socket/Hex-head Size	1-1/8"	
Setting Torque <sup>3</sup>	200 ft.-lbs.	

<sup>1</sup>Ultimate capacities were obtained using a 1" plate thickness. Thicker plates will reduce the capacity.

<sup>2</sup>Over-drill depth is assuming full anchor embedment in the panel. With panels thinner than the nominal full embedment, the anchor will protrude through the back of the panel. Reference the loading chart for thin panel capacities.

<sup>3</sup>Over torquing can damage the anchor and/or reduce the capacities.

### TECHNICAL DATA

Ultimate In-Concrete Single-Use Capacity <sup>1,2,3</sup>							
Screw Anchor Size	Concrete Thickness	Minimum Concrete Compressive Strength (psi)					
		2,500		4,000		6,000	
		Tension <sup>4</sup> (lbs.)	Shear <sup>5</sup> (lbs.)	Tension <sup>4</sup> (lbs.)	Shear <sup>5</sup> (lbs.)	Tension <sup>4</sup> (lbs.)	Shear <sup>5</sup> (lbs.)
5" Bearcat Bolt	4"	8,317	7,327	10,520	9,268	12,884	11,351
	5"	10,376	10,872	13,125	13,752	16,074	16,843
	6"	12,012	11,909	15,194	15,064	18,609	18,449
	7"	12,012	12,863	15,194	16,271	18,609	19,927
	8"	12,012	13,752	15,194	17,395	18,609	21,305
	9"	12,012	14,586	15,194	18,450	18,609	22,597
7" Bearcat Bolt	10"	12,012	15,375	15,194	19,448	18,609	23,819
	6"	13,298	16,621	16,821	21,024	20,601	25,749
	7"	18,363	20,414	23,228	25,822	28,448	31,625
	8"	20,374	21,823	25,772	27,604	31,564	33,808
	9"	20,374	23,147	25,772	29,279	31,564	35,859
	10"	20,374	24,399	25,772	30,863	31,564	37,799
	11"	20,374	25,590	25,772	32,369	31,564	39,644
	12"	20,374	26,728	25,772	33,809	31,564	41,407

<sup>1</sup>A safety factor of 2:1 should be applied to ultimate capacities for the tilt-up industry standard SWL.

<sup>2</sup>Linear interpolation of embedment depths and concrete strengths are not permitted.

<sup>3</sup>Ultimate capacities were obtained using a 1" mounting plate thickness.

<sup>4</sup>Tension testing was conducted in 4900 psi concrete.

<sup>5</sup>Shear values were obtained through ACI 318-14 Chapter 17 calculations and validated with in-concrete testing

## TECHNICAL DATA SHEET

### INSTALLATION

1. Drill a 3/4" hole per the setting chart. These screw anchors can work in bottomless holes when it is necessary to drill through the thickness of the concrete. Caution must be taken when drilling through slabs to minimize blowout at the bottom of the hole. Blowout of the concrete at the back of the slab can reduce the SWL of the anchor.
2. Thoroughly clean the drilled hole with compressed air or suction to rid the hole of debris.
3. Insert the Bearcat Bolt through the foot plate of the brace (or plate of the object to be anchored) and guide the tip of the bolt into the pre-drilled hole. Drive the anchor down until the integrated washer contacts the base plate.
4. Torque to 200 ft. lbs. to complete the install and ensure a secure connection. The base plate should be firmly in place. Be sure not to over-torque the bolt during installation once contact with the base plate is made, excessive torque could damage the threads cut into the concrete.

To Remove: Simply back the Single-Use Bearcat Bolt out with a wrench or impact drive.

### ORDERING INFORMATION

#### BEARCAT™ BOLT - SINGLE-USE

Product Code	Description	Weight
101165	5" SINGLE-USE BEARCAT BOLT	0.91 LB
101166	7" SINGLE- USE BEARCAT BOLT	1.14 LB

### MANUFACTURER

Dayton Superior Corporation  
 1125 Byers Road  
 Miamisburg, OH 45342  
 Customer Service: 888-977-9600  
 Technical Services: 877-266-7732  
 Website: www.daytonsuperior.com

### WARRANTY (ACCESSORIES)

Limited Warranty. Dayton warrants, for a period of 60 days from the date of shipment (three years from the date of shipment in the case of formwork, excluding any consumable Products included with such formwork), that Products and any associated application drawings and engineering services provided by Dayton ("Ancillary Services") will be free from defects in material and workmanship and, in the case of custom designed formwork, that the formwork will meet the specifications set forth in the design drawings approved by Dayton and Customer. Any claim under this warranty must be made in writing within such warranty period. If any Product and/or Ancillary Service covered by a timely claim are found to be defective, Dayton will, within a reasonable time, make any necessary repairs or corrections or, at Dayton's option, replace the Product. Unless pre-authorized by Dayton in writing, Dayton will not accept any charges for correcting defects or accept the return of any Product. This warranty will not apply to any Products that have been subjected to misuse, neglect, storage damage, misapplication, accident or any other damage caused by any person other than Dayton, or that have not been maintained in accordance with Dayton's specifications. THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES AS TO THE PRODUCTS AND ANCILLARY SERVICES. DAYTON MAKES NO OTHER WARRANTIES OR GUARANTEES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE. THE REMEDIES SET FORTH IN THIS SECTION ARE CUSTOMER'S EXCLUSIVE REMEDY FOR BREACH OF WARRANTY.

It was brought to our attention that a precast panel collapsed last Friday (10/14/22) which in turn caused 3 other panels to fall. Site safety, the inspection of bracing, and the verifying the proper installation of the bracing is not in our scope of services. However, out of curiosity to the condition, we visited the site Tuesday (10/18/22). While on site, we noted several potentially unsafe conditions and wanted to alert you to these. We mentioned these conditions while on site and this email serves as written documentation.

- The screw anchor used to attach the wall panel to the brace was not that specified and does not have proper embedment in the panel.
- At the insulated wall panels, the connector is installed into the face panels. The erection bracing drawings we provided indicates for through panel connections at the joints.
- The erection sequence on site does not follow that provided in the bracing drawings. This can subject the braces and connectors to loads for which they were not designed.
- It was also noted that Dayton Superior, the brace supplier, recommends inspecting the anchors to the footing and wall panels after any wind event in excess of 35 mph. Based on conversations, it sounds like the site has indeed experienced such winds.

Company: ALLIANT

Foreman:



Job Hazard Analysis

Project: WOODBURY

Date: 10/25/2022

Job Task Description: STEEL / PRECAST ERECTION

Certification Needed? (Aerial/Scissor Lift, Forklift, NCCCO, Rigger/Signaler, etc)

Special Permits Required? (Critical Lift, Hot work, Trench Log, Confined Space, etc)

Special PPE Required? (Respiratory Protection, Face Shield, Kevlar Sleeves, etc)

YES  NO  Submitted to HCI? YES  NO   
 YES  NO  Forms filled out? YES  NO   
 YES  NO  What is needed? FRESHFIELD

Job Steps (List steps in order that task will be completed with brief description of activities)	Potential Hazards (Excavation Trenching, Hot work, Live Electrical)	Hazard Controls (Benching, Fall Protection, Face Shield)
<b>STEEL ERECTION</b> - SORT STEEL - ANCHOR BOLTS/ELEVATIONS - SET STEEL	- PINCH POINTS - OVERHEAD LOADS - RIGGING - ELEVATED WORK - WEATHER	- STAY CLEAR OF SWINGING STEEL - INSPECT RIGGING, USE PROPER SIGNALS.
	- STAY OUT FROM UNDER LOADS - KEEP OTHER TRADES CLEAR OF SWING RADIUS.	- USE PROPER LADDERS, LIFTS - 100% TIE OFF - TAG LINE ON ALL LOADS
<b>PRECAST ERECTION</b> - LAYOUT - PLG PANELS - SET PANELS / BRACE	- PINCH POINTS - RIGGING - WEATHER - OTHER TRADES	- STAY OUT FROM UNDER LOADS - INSPECT RIGGING - USE TAG LINES AS NEEDED.
	- WELDING	- KEEP OTHER TRADES CLEAR OF WORK AREA - USE PROPER LADDERS / LIFTS
		- 100% TIE OFF IN BASKETS AND ABOVE W.
<b>DECKING</b> - LAMP BUNDLES - PUSH OUT DECKING - WELD / SCREW	- WIND - OVERHEAD LOADS - OTHER TRADES - WELDING / CUTTING	- BE MINDFUL OF WEATHER - KEEP OTHER TRADES OUT OF WORK AREA - MAKE SURE COMBUSTIBLES ARE CLEAR OF WORK AREA
	- ELEVATED WORK - SHARP EDGES	- 100% TIE OFF TO PROPER ANCHORS.
		- WEAR <del>GOOD</del> WEATHER GLOVES WHEN HANDLING DECKING.

If work exposes employees to a fall of 6 feet or greater, Fall Protection Plan on next page must be filled out.



# FALL PROTECTION WORK PLAN

Operation: STEEL / PRECAST ERECTION

Date: \_\_\_\_\_

Identify hazards in work area:

- WEATHER
- LEADING EDGES
- SLIP / TRIP HAZARDS
- SHARP EDGES
- PINCH POINTS
- PLACING
- WELDING / CUTTING SPARKS
- BOOM LIFTS / SCISSORLIFTS
- LADDERS
- ~~USE~~ PROPER POWER TOOLS
- OTHER TRADES

Check method of fall prevention/protection to be used:

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Standard Guardrail (top, mid and toeboard) | <input type="checkbox"/> Horizontal lifeline    |
| <input checked="" type="checkbox"/> Anchorage point of 5000lb load/person      | <input type="checkbox"/> Vertical lifeline      |
| <input checked="" type="checkbox"/> Boom lift (designated operator required)   | <input checked="" type="checkbox"/> Retractable |
| <input type="checkbox"/> Other (Specify) _____                                 |   |

Check equipment to be used:

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Full body harness | <input checked="" type="checkbox"/> Rope/Cable grab |
| <input type="checkbox"/> Positioning lanyard          | <input checked="" type="checkbox"/> Lanyard         |

Describe procedure for assembly, maintenance, inspection and disassembly of system:

- USE PROPER FALL PROTECTION FOR EACH TASK. = BEAMERS, ROOF ANCHOR, RETRACTABLES

Describe procedure for handling and securing tools, equipment and overhead protection for work areas below:  
(ex: toe boards, tool lanyards, etc.)

- PROPER TOOLS FOR EACH TASK. KEEP TOOLS AWAY FROM LEADING EDGES. DO NOT LEAVE TOOLS ON BEAMS, OR TOP OF WALLS WHEN NOT IN USE.

Describe method for prompt, safe retrieval:



## Tilt-up and Precast Concrete Panel Checklist

Project:	Site Superintendent:
Sub-Contractor:	Sub-Contractor Supervisor:
Engineering Company:	Engineer:
Date:	Panel Number(s):

It is the sub-contractor’s responsibility to have all sections fully completed before task is completed. This checklist is to be completed **each day** when tilt-up or precast panels have been installed, or significant weather event has occurred.

This completed form(s) and all other items must be given to site supervision once completed.

Identify who is responsible for each item. The responsible party initials the appropriate section, or submits documentation, as evidence that each item has been inspected or actioned.

DESCRIPTION	ACCEPTANCE CRITERIA	INSPECTED BY: Name/Role
<b>Drawings Required</b>	Drawings certified by a qualified person exist for the following: <ul style="list-style-type: none"> <li>- panel design: location of lifting anchors and bracing points, steel content, panel weight, panel dimensions, panel number, location of strongbacks (where applicable), concrete strength, rigging arrangement, required to suit lifting anchors</li> <li>- erection and temporary bracing drawings: types of braces required (primary, knee, lateral, end), brace angles, levelling pads</li> <li>- deadman (or floor slab) design: dimensions/depth, soil type, bearing capacity, terrain (wind) category, concrete strength, anchors required</li> <li>- permanent supporting structure</li> <li>- panel layout and erection sequence</li> </ul>	

DESCRIPTION	ACCEPTANCE CRITERIA	INSPECTED BY: Name/Role
<b>Sub-contractors' documentation</b>	<p>The following documentation has been provided before work begins:</p> <ul style="list-style-type: none"> <li>- Tilt-up/precast panel Erection Contractor's Job Hazard Analysis (JHA)</li> <li>- Crane/Rigging Contractor's Lift Plan/JHA showing:               <ol style="list-style-type: none"> <li>1. Crane set-up locations</li> <li>2. Location of obstacles, hazards, and existing structures in proximity to the crane (especially temporary braces)</li> <li>3. Rigging procedures and equipment</li> <li>4. Spotters' duties</li> <li>5. Method of communication between operator and rigger</li> <li>6. References to erection sequence</li> <li>7. Release of panels after braces installed</li> <li>8. Other:</li> </ol> </li> </ul>	
<b>Other documentation</b>	<p>Other documentation providing evidence of the following:</p> <ul style="list-style-type: none"> <li>- Concrete strength tests</li> <li>- Casting dates</li> <li>- Anchor specifications for braces (panel, floor, deadman)</li> <li>- Brace type and specifications</li> <li>- Lifting anchor and clutch design</li> <li>- Pre-pour inspection of panels by competent person in accordance with design specifications.</li> </ul>	
<b>Qualifications</b>	Crane operator and rigger have appropriate training and qualifications	
<b>Pre-erection checks</b>	<ul style="list-style-type: none"> <li>- Concrete panels have achieved the correct strength for lifting as specified in the shop drawings. (Verification has been obtained from the builder or supplier)</li> <li>- Deadmen and/or floor slab have achieved required concrete strength as specified in drawings.</li> <li>- Panels have been identified and marked with casting date and panel numbers</li> <li>- Spreader bar and/or rigging configuration used meets load requirements for type of panel.</li> <li>- All lifting slings have working load limit and current inspection tags displayed</li> <li>- Lifting anchors and clutches are compatible</li> <li>- Ground conditions adequate for supporting crane (level and compacted surface, outriggers used)</li> <li>- Site access is adequate</li> <li>- Proximity of power lines considered, and appropriate action taken</li> <li>- Controlled access zone is properly marked, and signage posted to keep non-essential personnel away</li> <li>- Wind conditions are suitable for lifting</li> </ul>	

DESCRIPTION	ACCEPTANCE CRITERIA	INSPECTED BY: Name/Role
<b>Panel Lifting and erection</b>	<ul style="list-style-type: none"> <li>- <b>Include approved drawings, relevant standards, engineer's instructions, client specifications and manufacturer's instructions.</b></li> <li>- <b>Attach any item-specific checklists to this form.</b></li> </ul>	
<b>Temporary bracing for panels and supporting structure</b>	<ul style="list-style-type: none"> <li>- Temporary bracing for the panels is in accordance with relevant drawings and specifications.</li> <li>- Temporary bracing for the structure is in accordance with relevant drawings and specifications (knee, lateral and end braces and strongbacks installed where specified by designer/engineer</li> <li>- Anchors used for fixing braces to the slab or deadman are an approved type.</li> <li>- Minimum of two braces per panel or as otherwise specified in drawings.</li> <li>- Only specified or calculated number of braces fitted to each deadman (where applicable)</li> <li>- No mix and match braces (all braces must be of same type unless otherwise specified by a competent person).</li> <li>- Brace angle does not exceed 5 deg. from perpendicular and is approximately 50-60 deg. From horizontal (or as otherwise specified in drawings).</li> <li>- Panels released from crane only after temporary bracing has been properly installed</li> <li>- Controlled access zones have been barricaded and signage posted to keep vehicles, equipment, personnel away from bracing and supporting structures.</li> <li>- People, equipment and braces are kept clear/or at a safe distance when lifting, slewing and traveling with panels.</li> </ul>	
<b>Permanent structure capable of supporting panels prior to removing support system</b>	<ul style="list-style-type: none"> <li>- All bracing or supporting structure fixing points have been installed and fixed as per shop drawings and engineering requirements</li> <li>- The supporting structure is adequately braced or structurally sound.</li> <li>- A competent person inspects and confirms that the structure can adequately support panel prior to release of temporary propping or support system.</li> </ul>	

<b>DESCRIPTION</b>	<b>ACCEPTANCE CRITERIA</b>	<b>INSPECTED BY: Name/Role</b>
<b>Ongoing monitoring of panels and support systems</b>	<ul style="list-style-type: none"> <li>- Include approved drawings, relevant standards, engineer's instructions, client specifications and manufacturer's instructions.</li> <li>- Attach any item-specific checklists to this form.</li> </ul>	
<b>Grouting</b>	<ul style="list-style-type: none"> <li>- Grouting undertaken using specified product and within required timeframe.</li> </ul>	
<b>Training, communication, and worker engagement</b>	<ul style="list-style-type: none"> <li>- Workers are adequately trained to work with tilt-up and precast concrete panels.</li> <li>- Toolbox talk carried out with all relevant workers each day before work starts</li> </ul>	
<b>Specify any additional requirements</b>	<ul style="list-style-type: none"> <li>- There are also other ways in place to engage with workers, share information, and support their participation in health and safety</li> <li>- Workers identify health and safety risks and help manage them.</li> <li>- Workers know how and when to report health and safety concerns.</li> </ul>	



### Daily Bracing Inspection

Daily temporary bracing plan must be filled out **each day**. If there is a significant weather event during work hours, there must be an additional inspection after the event.

ITEM:	Yes	No	Comment
Temporary bracing for the panels is in accordance with relevant drawings and specifications.			
Temporary bracing for the structure is in accordance with relevant drawings and specifications (knee, lateral and end braces and strongbacks installed where specified by designer/engineer			
Anchors used for fixing braces to the slab or deadman are an approved type.			
Anchors used for fixing braces to the panel are installed per engineer plan and manufacture specification.			
Minimum of two braces per panel or as otherwise specified in drawings.			
Only specified or calculated number of braces fitted to each deadman (where applicable)			
No mix and match braces (all braces must be of same type unless otherwise specified by a competent person).			
Brace angle does not exceed 5 deg. from perpendicular and is approximately 50-60 deg. From horizontal (or as otherwise specified in drawings).			
Panels released from crane only after temporary bracing has been properly installed			
Controlled access zones have been barricaded and signage posted to keep vehicles, equipment, personnel away from bracing and supporting structures.			
People, equipment, and braces are kept clear/or at a safe distance when lifting, slewing and traveling with panels.			
Panels do not exceed manufacture/engineer deflection requirements.			
Erection sequence followed per engineer drawing (if changes are made, drawings must be updated)			
Deadman, footing, floor slab, and helical anchoring system is installed per manufacture/engineer design.			