

BIM PORTFOLIO

DURGA PRASAD KALVAKOLANU

BIM Engineer | Revit – Structural & Precast | Tilt-Up
International Projects: USA | UK | Canada | Australia

3 Years Experience
Industrial | Infrastructure | Commercial Precast

Revit | Navisworks | AutoCAD
Open to Remote (Global)

ABOUT ME

CORE BIM CAPABILITIES

Civil & BIM Engineer with hands-on experience in Revit-based structural and industrial precast modeling. Skilled in model-driven quantity extraction, shop drawings, and coordinated BIM deliverables for USA, UK, Canada, and Australia projects.

Currently working as a BIM Engineer at Track3D with focus on precast, structural, and QTO workflows.

CORE STRENGTHS

- Precast structure modeling across **Industrial, Residential, Commercial, Transport & Airport projects**
- **LOD 300–350** BIM modeling for structural and precast systems
- **Rebar detailing** for precast and cast-in-situ elements
- **Quantity take-off (QTO) automation** using Revit and BIM workflows
- **Navisworks model coordination & clash review**
- **Experience in international BIM projects** (multi-region standards & deliverables)

SKILLS & TOOLS

BIM & STRUCTURAL EXPERTISE

- Industrial & infrastructure precast modeling
- RCC & cast-in-place structural systems
- LOD 300–350 BIM development
- Shop drawings & GA documentation
- Rebar modeling & schedule generation
- Model-driven quantity take-offs (QTO)

SOFTWARE, TOOLS & WORKFLOWS

- **Autodesk Revit** – Structure & Precast (Primary Tool)
- **Navisworks Manage** – NWD Review & Coordination
- **AutoCAD** – Construction & Support Drawings
- **MS Excel** – Quantity Schedules, BOQs & Reports
- **International BIM Standards** – USA | UK | Canada | Australia

PROJECT 1 – INDUSTRIAL PRECAST FACILITY

Project Type : Industrial Precast

Role : BIM Engineer

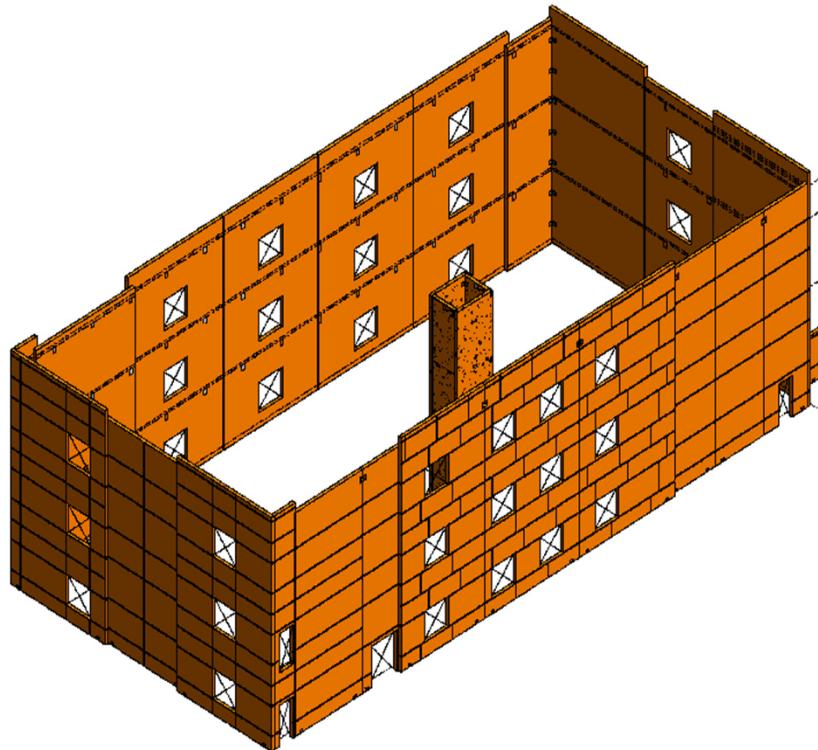
LOD : 350

Software : Autodesk Revit

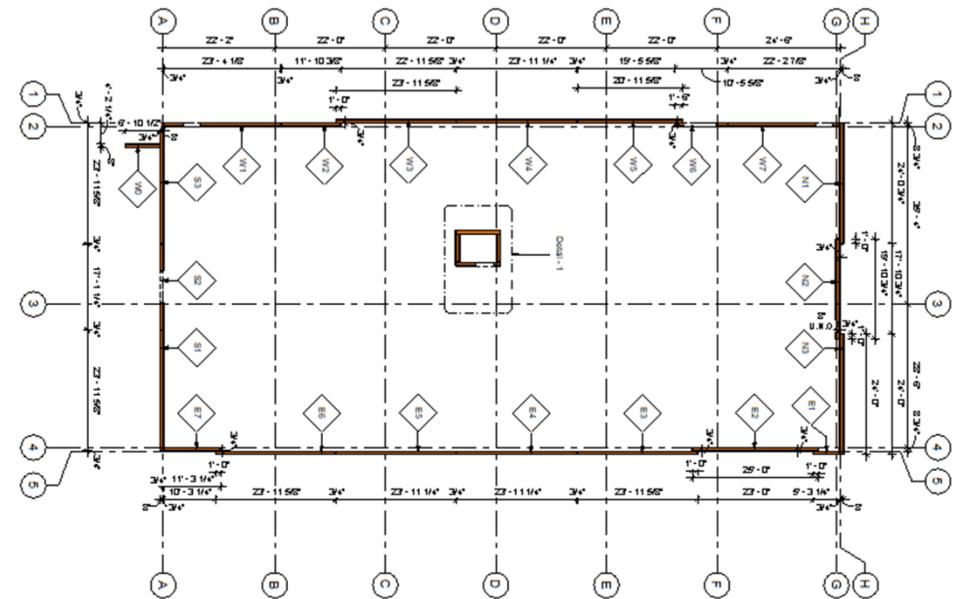
- Development of **detailed precast BIM models** aligned with project standards and LOD requirements
- **Precast panel layout, numbering, and model coordination** across disciplines
- **Embed, insert, connection hardware, and lifting anchor detailing** within Revit models
- Preparation of precast GA drawings, shop drawings, and erection-ready views for construction use
- **BIM support for coordination, documentation, and issue resolution** during design and construction stages

PRECAST MODEL & PANEL LAYOUT

Coordinated 3D precast BIM model,
supporting accurate panel placement and fabrication-ready outputs.



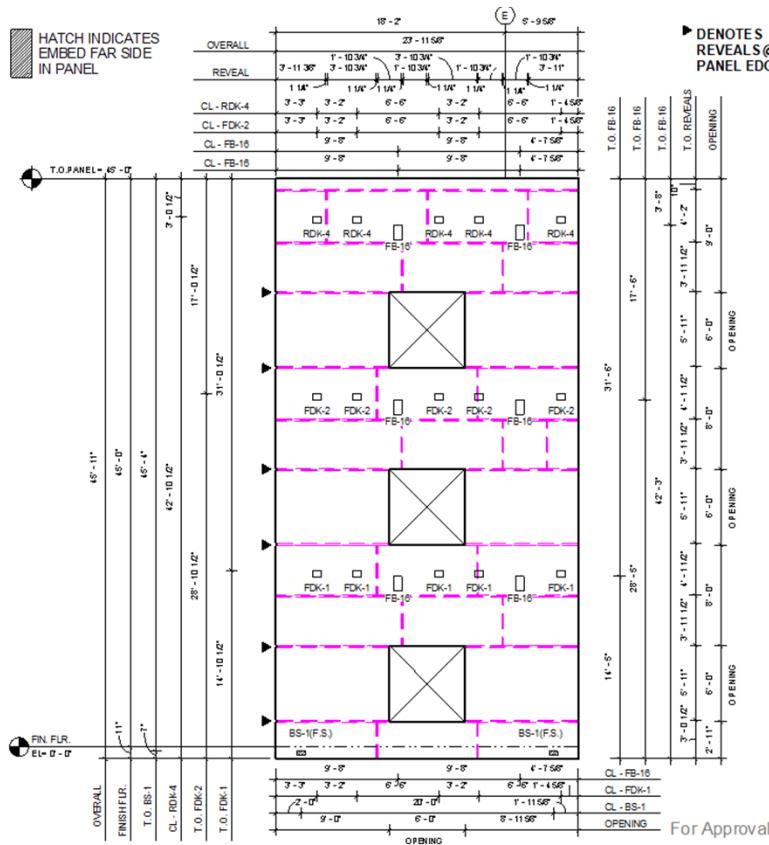
3D Precast Model



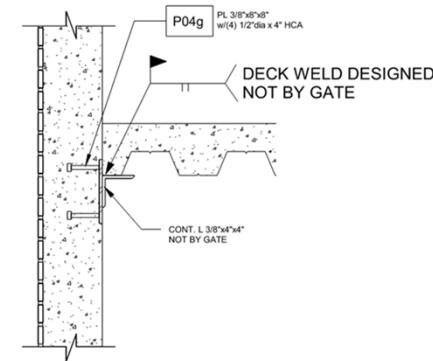
Overall Panel Layout

PRECAST SHOP DRAWINGS & DETAILS

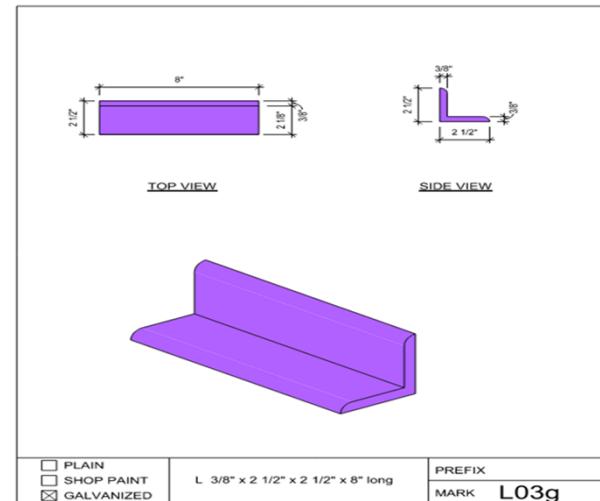
Precast shop drawings prepared with accurate dimensions, connection details, embeds, and lifting points to support fabrication and site installation.



Panel Detailing



Connection Detail



Embed Plate Detail

PROJECT 2 – URBAN TRANSPORT – PRECAST METRO PLANK SYSTEM

Project Type : Urban Transport

Role : BIM Engineer

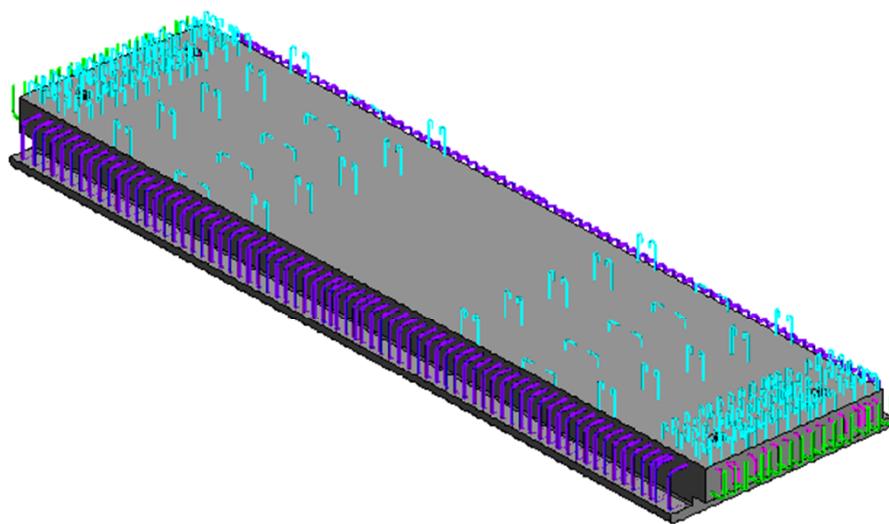
LOD : 350

Software : Autodesk Revit

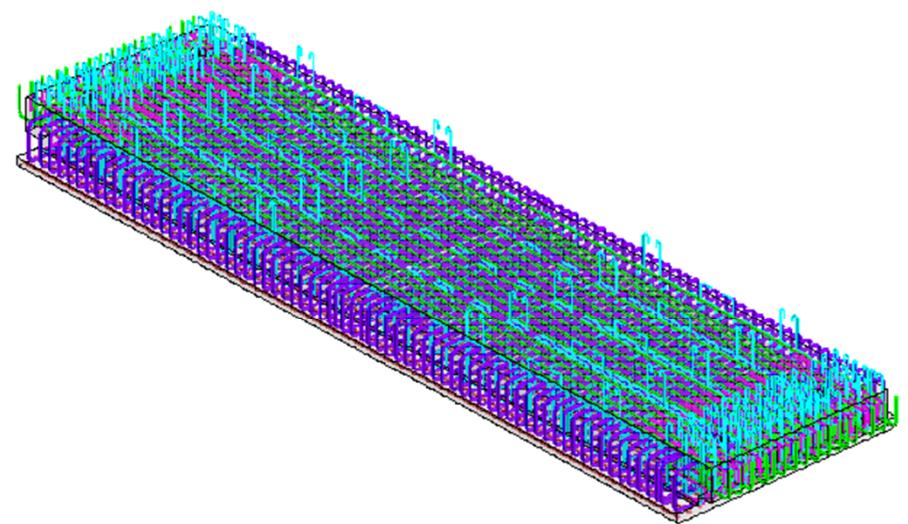
- **Precast metro plank modeling** including planks, supporting beams, and bearing details
- **Plank layout, span coordination, and numbering** aligned with architectural and structural grids
- **Detailing of plank bearings, joints, and connection interfaces**
- Preparation of **precast GA drawings** and **plank layout drawings**
- **Revit-based documentation** developed in compliance with **project and international standards**

PRECAST MODEL & REBAR MODEL

3D Concrete Model &
3D Reinforcement Model



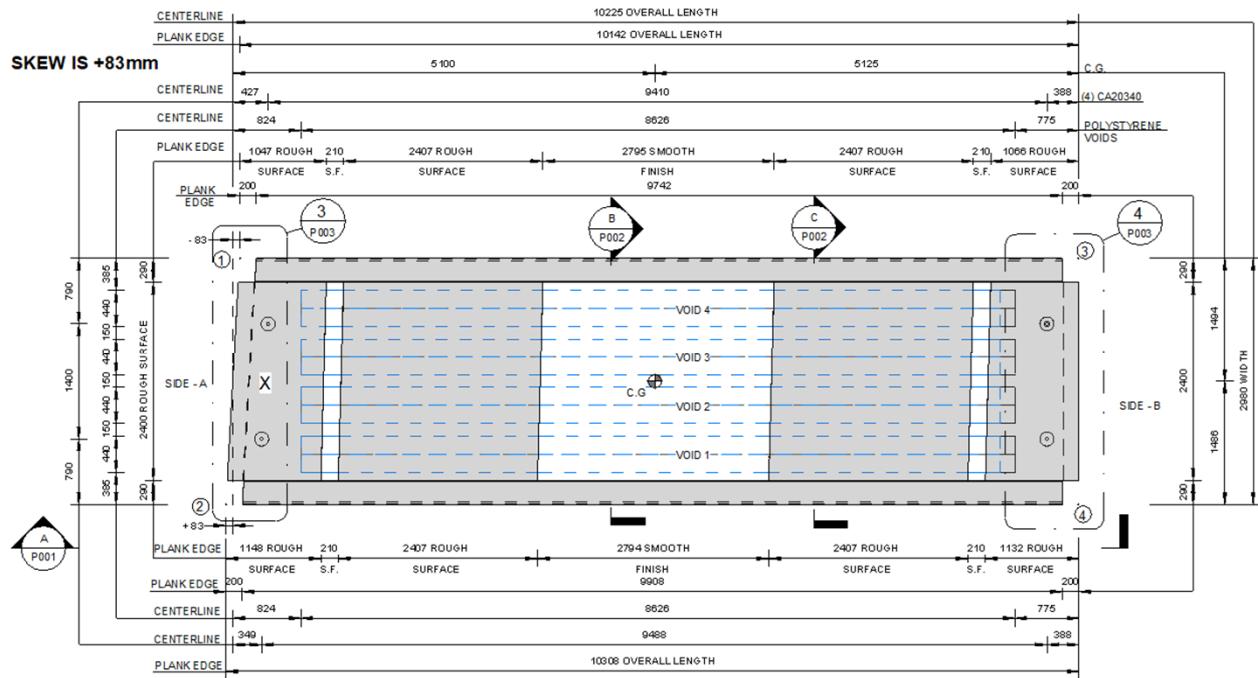
3D VIEW
GEOMETRY



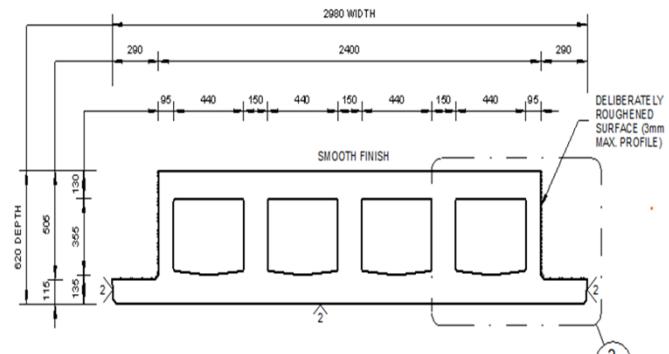
3D VIEW
REINFORCEMENT

MODEL VIEWS - CONCRETE

Plan & Section Views (Concrete)



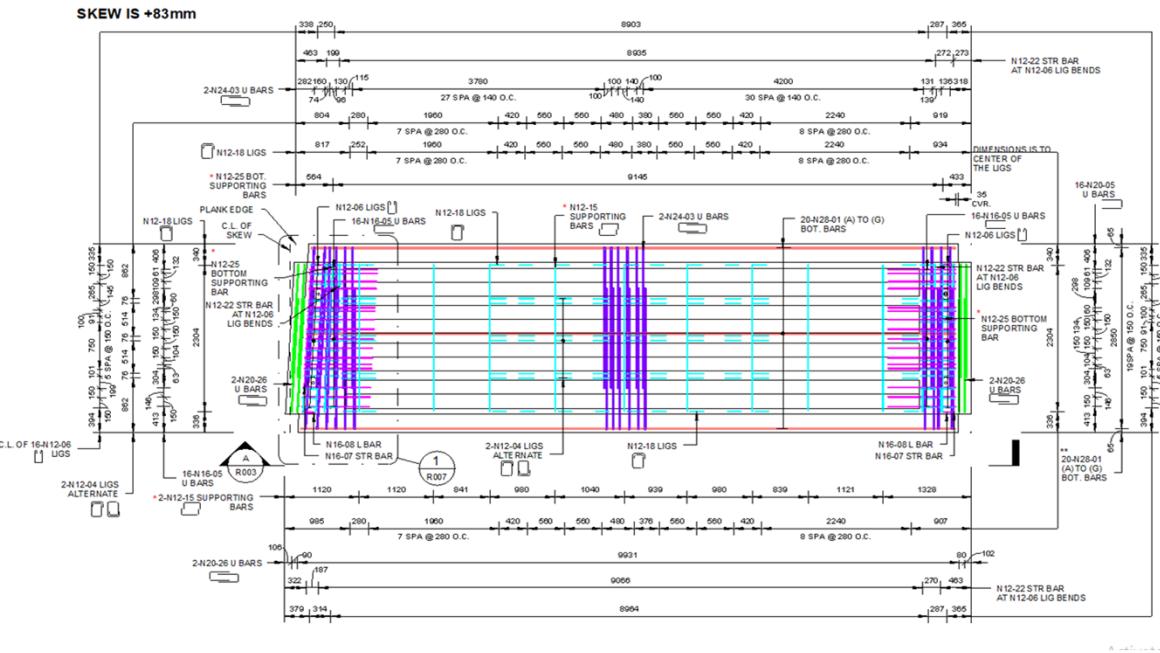
Plan View (Concrete)



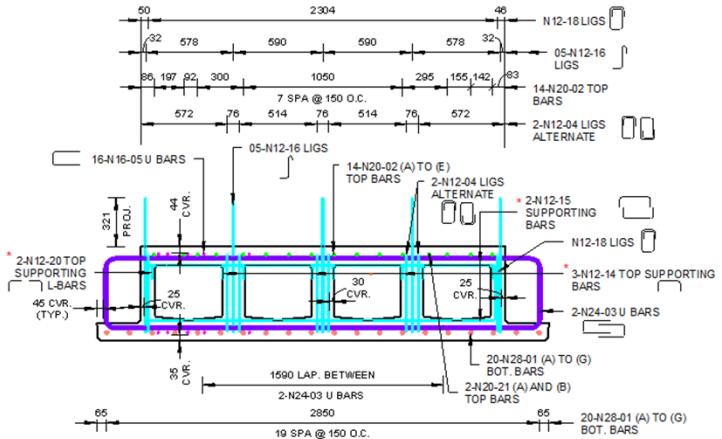
Section View (Concrete)

MODEL VIEWS - REINFORCEMENT

Plan & Section Views (Concrete)



Plan View (Reinforcement)



Section View (Reinforcement)

SECTION DETAILS

S27E-POS REBAR SCHEDULE													
MARK	BAR DIAMETER	COUNT	BAR LENGTH [mm]	SHAPE IMAGE	A [mm]	B [mm]	C [mm]	D [mm]	E	F	G	H	WEIGHT [KGS]
N28-01 (A) S27E-P05	28	3	9675		9675								143.96
N28-02 (B) S27E-P05	28	3	9700		9700								144.34
N28-03 (C) S27E-P05	28	3	9725		9725								144.71
N28-04 (D) S27E-P05	28	3	9750		9750								145.08
N28-05 (E) S27E-P05	28	3	9775		9775								145.45
N28-06 (F) S27E-P05	28	3	9800		9800								145.82
N28-07 (G) S27E-P05	28	2	9825		9825								97.46
N29-02 (A) S27I-P05	20	3	9692		9692								23.56
N29-02 (B) S27E-P05	20	3	9725		9725								23.81
N29-02 (C) S27I-P05	20	3	9750		9750								24.00
N29-02 (D) S27E-P05	20	2	9775		9775								49.46
N29-02 (E) S27E-P05	20	3	9800		9800								24.38
N24-03 S27E-P05	24	142	4935		2240	486	2240						2571.3935
N12-04	12	150	2075		245	516	245	516	245	355	155		283.2375
N16-05 S27E-P05	16	32	2535		1020	535	1020						131.84
N12-06	12	64	1970		758	215	758	110	110				114.7328
N16-07	16	2	2350		2350								7.52
N16-08	16	4	905		185	720							5.79
N16-10	16	32	1495		185	1310							76.54
N20-11 S27E-P05	20	32	1590		345	925	320						128.7264
N16-13	16	32	800		185	615							40.96
N12-14	12	27	350		100	150	100						8.60
N12-15	12	18	2700		390	2320	190						44.226
N12-16	12	40	1205		110	895	200						43.812
N12-18 S27E-P05	12	50	1985		215	516	215	516	215	355	155		90.3175
N12-19	12	20	1040		355	685	200						18.928
N12-20	12	18	200		100	100							3.28
N20-21 (A) S27E-P05	20	1	9540		9540								23.12
N20-23 (B) S27E-P05	20	1	9218		9218								23.32
N20-26	20	8	3340		1800	240	1800						77.7216
N12-27	12	32	1405		502	180	502	110	110				40.9136
N12 - STOCK BAR	12	8	12100		12000								87.36

Rebar Schedule

PROJECT 3 - DOCUMENTATION & QTO

Project Type : Industrial / Commercial Precast Building

Role : BIM Engineer

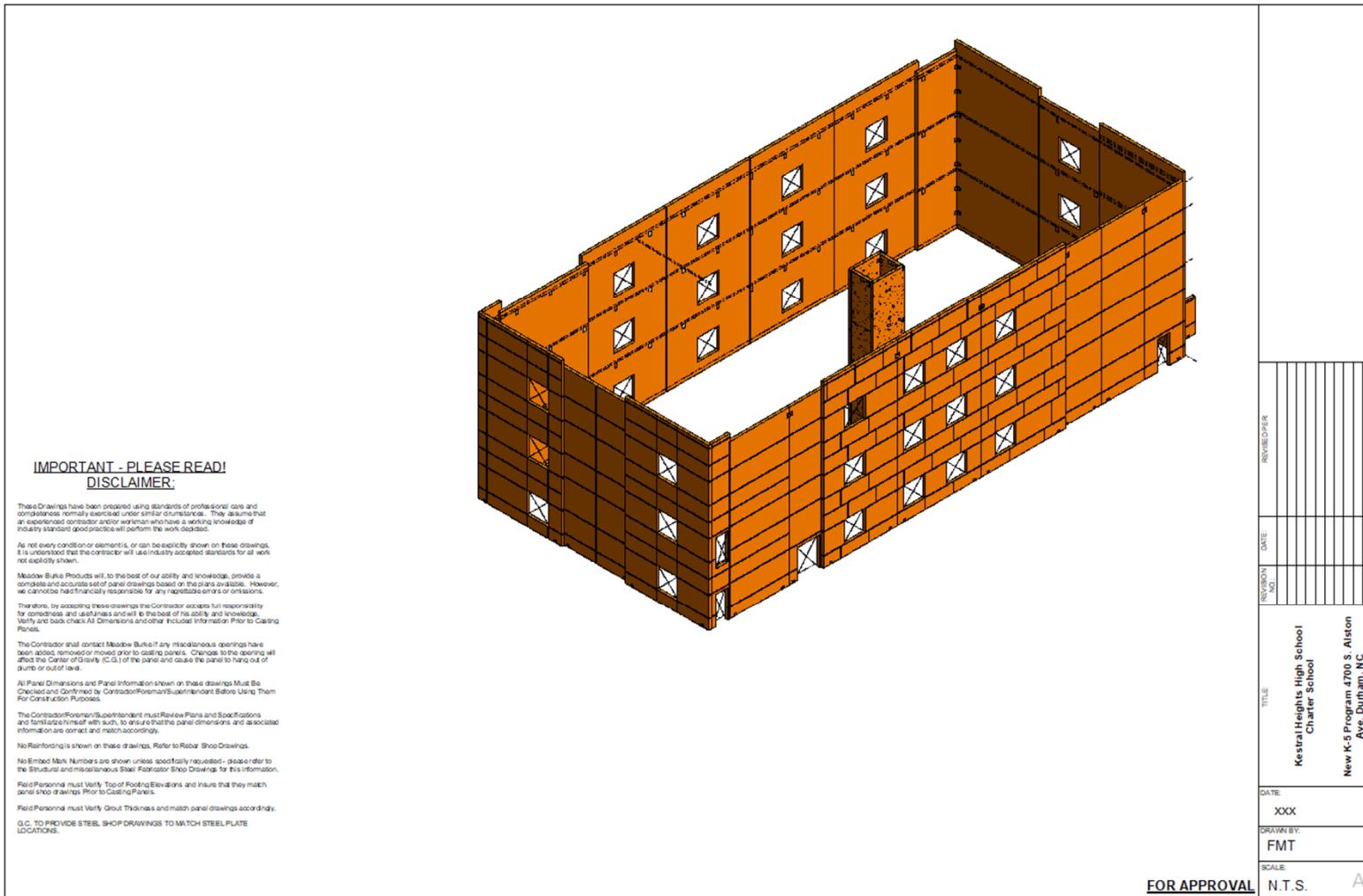
LOD : 350

Software : Autodesk Revit

- Preparation of **fully coordinated structural and precast drawing sheet sets**, developed in compliance with **project-specific and international standards**
- **BIM-based quantity extraction (QTO)** for concrete, reinforcement, and precast components to support accurate material take-offs
- Development and validation of **model-driven schedules**, including **precast panels, embeds, inserts, and reinforcement**, for construction and procurement use
- Active **BIM model support for multidisciplinary coordination**, including clash detection, design revisions, and issue resolution during project execution

ISOMETRIC VIEW

Isometric View Cover Sheet



IMPORTANT - PLEASE READ!

These Drawings have been prepared using standards of professional care and completeness normally exercised under similar circumstances. They assume that experienced contractor and/or workman who have a working knowledge of industry standard good practice will perform the work depicted.

not every condition or element is, or can be explicitly shown on these drawings.

Shadow Burke Products will, to the best of our ability and knowledge, provide a

Therefore, by accepting these drawings the Contractor accepts full responsibility for correctness and usefulness and will to the best of his ability and knowledge, verify and back check All Dimensions and other Included Information Prior to Casting shells.

The Contractor shall contact Meadow Burke if any miscellaneous openings have been added, removed or moved prior to casting panels. Changes to the opening will affect the Center of Gravity (C.G.) of the panel and cause the panel to hang out of plumb or out of level.

Panel Dimensions and Panel Information shown on these drawings Must Be Checked and Confirmed by Contractor/Foreman/Superintendent Before Using Them for Construction Purposes.

The Contractor/Foreman/Superintendent must Review Plans and Specifications and familiarize himself with such, to ensure that the panel dimensions and associated information are correct and match accordingly.

Reinforcing is shown on these drawings. Refer to Rebar Shop Drawings.

o Embed Mark Numbers are shown unless specifically requested - please refer to Structural and miscellaneous Steel Fabricator Shop Drawings for this information.

Field Personnel must Verify Top of Footing Elevations and Insure that they match
Shop drawings Prior to Casting Panels.

Field Personnel must Verify Grout Thickness and match panel drawings accordingly.

C. TO PROVIDE STEEL SHOP DRAWINGS TO MATCH STEEL PLATE

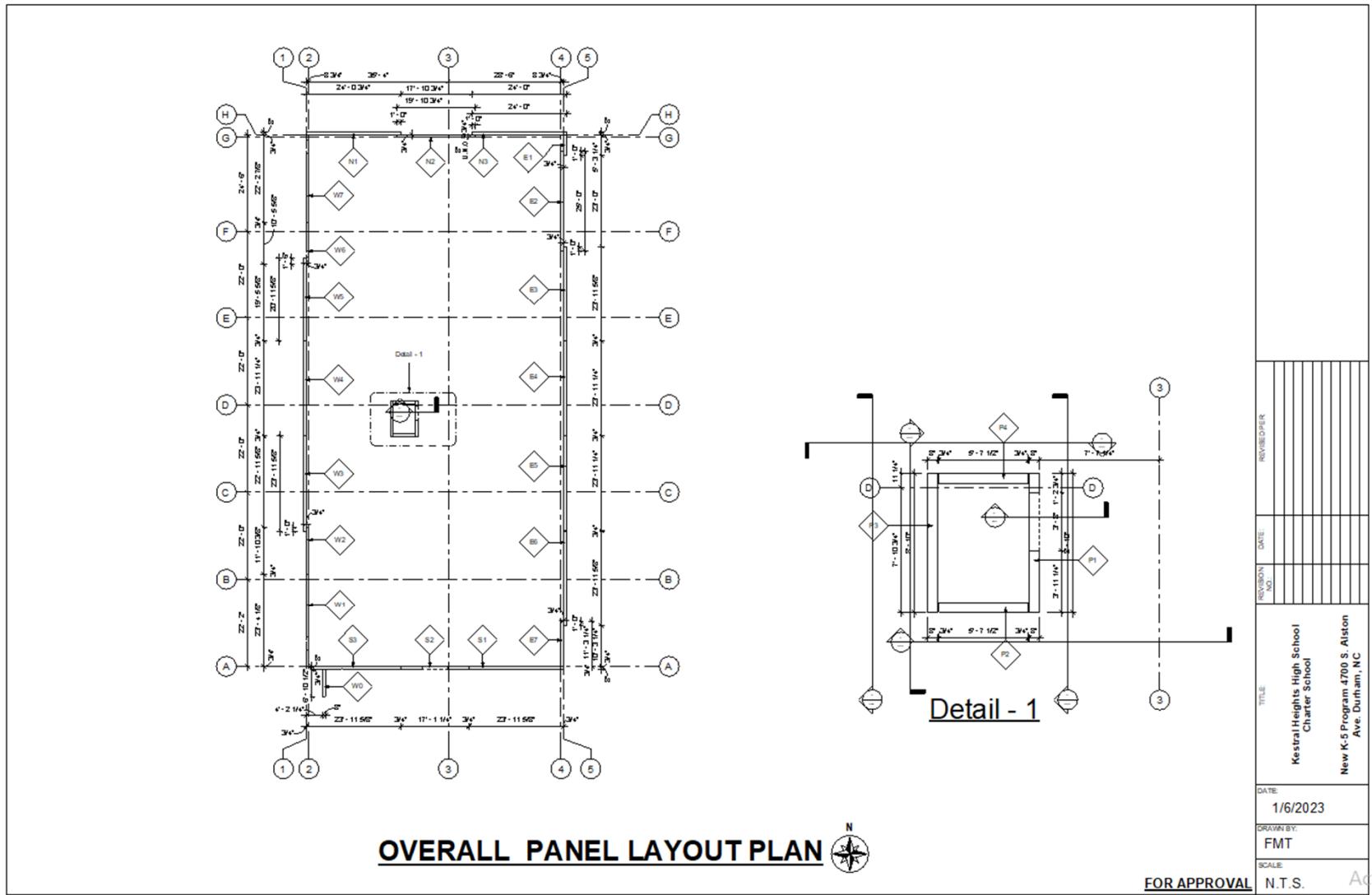
C. TO PROVIDE STEEL SHOP DRAWINGS TO MATCH STEEL PLATE SPECIFICATIONS.

FOR APPROVAL

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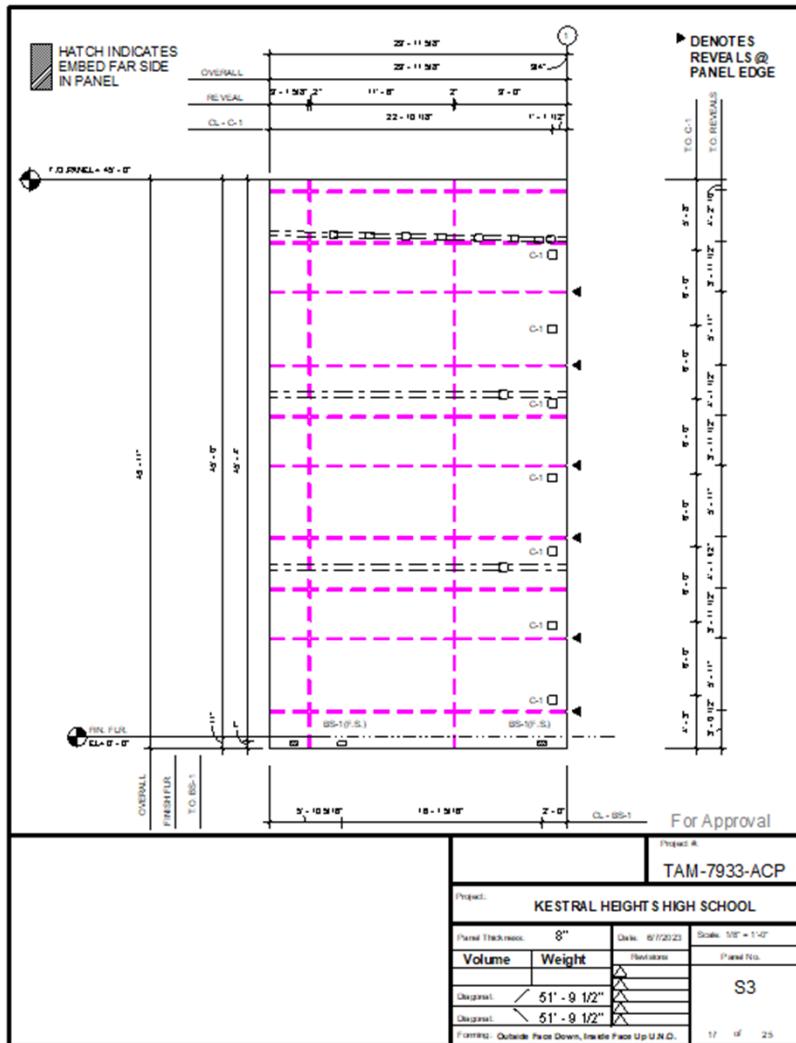
OVERALL PANEL LAYOUT

Overall Panel Layout



PANEL SHOP DRAWINGS & SCHEDULES

Panel Shop Drawing



Embed Plate Schedule

EMBED PLATE SCHEDULE

Mat#P	Description	Qty.	Unit	Count
P-1	PL 9478P1-A' V11(2) 1/2"X1/2"X4" LG HEADED STUDS	2	54.00	5
P-2	PL 9478P1-A' V11(4) 1/2"X1/2"X4" LG HEADED STUDS	2	54.00	1
P-3	PL 9478P1-A' V11(2) 1/2"X1/2"X4" LG HEADED STUDS	2	54.00	10
P-4	PL 1278P1-A' V11(4) 1/2"X1/2"X4" LG HEADED STUDS	2	54.00	2
P-11-V1	PL 9478P1-A' V11(2) 1/2"X1/2"X4" LG HEADED STUDS	2	54.00	12
P-12	PL 9478P1-A' V11(2) 1/2"X1/2"X4" LG HEADED STUDS	2	54.00	1
P-13	PL 9478P1-A' V11(2) 1/2"X1/2"X4" LG HEADED STUDS	2	54.00	3
P-18	PL 9478P1-A' V11(2) 1/2"X1/2"X4" LG HEADED STUDS	2	54.00	5
P-20	PL 9478P1-A' V11(2) 1/2"X1/2"X4" LG HEADED STUDS	2	54.00	8
P-21	PL 9478P1-A' V11(2) 1/2"X1/2"X4" LG HEADED STUDS	2	54.00	120
P-22	PL 9478P1-A' V11(4) 1/2"X1/2"X4" LG HEADED STUDS	2	54.00	91
P-23	PL 9478P1-A' V11(4) 1/2"X1/2"X4" LG HEADED STUDS	2	54.00	4
P-12	PL 9478P1-A' V11(2) 1/2"X1/2"X4" LG HEADED STUDS	2	54.00	2
P-24	PL 9478P1-A' V11(2) 1/2"X1/2"X4" LG HEADED STUDS	2	54.00	12
P-25	PL 9478P1-A' V11(2) 1/2"X1/2"X4" LG HEADED STUDS	2	54.00	25
P-26	PL 9478P1-A' V11(2) 1/2"X1/2"X4" LG HEADED STUDS	2	54.00	1
P-27	PL 9478P1-A' V11(2) 1/2"X1/2"X4" LG HEADED STUDS	2	54.00	3150
P-28	PL 9478P1-A' V11(2) 1/2"X1/2"X4" LG HEADED STUDS	2	54.00	1
P-29	PL 9478P1-A' V11(2) 1/2"X1/2"X4" LG HEADED STUDS	2	54.00	3150
P-30	PL 9478P1-A' V11(2) 1/2"X1/2"X4" LG HEADED STUDS	2	54.00	22
P-31	PL 9478P1-A' V11(2) 1/2"X1/2"X4" LG HEADED STUDS	2	54.00	28

For Approval

Project: Kestral Heights High School Charter School

XXX

EMBED PLATE SCHEDULE

Turning: Outside Face Down, Inside Face Up U.N.D.

PROFESSIONAL EXPERIENCE

BIM Engineer — Track3D

Jan 2025 – Present

- Delivered structural and precast BIM modeling for industrial, commercial, and data-center projects
- Develop LOD 300–350 BIM models aligned with client standards and BIM execution plans
- Produce coordinated GA drawings, precast panel layouts, and shop drawings
- Extract and validate model-driven quantities for concrete, rebar, and precast components
- Support multidisciplinary coordination and issue resolution in Navisworks
- Ensure model QA/QC, drawing accuracy, and standards compliance

PROFESSIONAL EXPERIENCE

Junior Engineer / Revit Structural Modeler — Formonic Technologies Pvt. Ltd.
Dec 2022 – Dec 2024

- Performed Revit-based structural modeling and drafting for RCC and precast building projects
- Prepared plans, sections, elevations, and reinforcement drawings under senior engineer guidance
- Assisted in **BIM documentation, quantity extraction, and drawing coordination**
- Implemented revisions based on consultant comments and coordination feedback
- Gained hands-on experience with international project standards and BIM workflows

EDUCATION & CERTIFICATIONS

Education

- B.Tech - Civil Engineering
- Diploma - Civil Engineering

Certifications & Training

- Revit Workshop Certification (Structural BIM Modeling)
- STAAD.Pro Workshop (Structural Analysis Fundamentals)

CONTACT

CONTACT

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Phone : +91 9010256522

Location : Hyderabad, India (Open to Remote)

LinkedIn : [linkedin.com/in/durga-prasad-kalvakolanu9010](https://www.linkedin.com/in/durga-prasad-kalvakolanu9010)

Availability: Immediate | Full-time | Remote