

Optima

E=MC²

E=MC²

PRESENTATION CENTER
SURREY, BC CANADA





VIEW OF THE PROPOSED OPTIMA 3 TOWERS (AFTER OBTAINING THE HIGH DENSITY THAT IS UNDER STUDY)
ALONG WEST WHALLEY RING ROAD

Optima

STATE-OF-THE-ART PRESENTATION CENTER



IHI WILL BUILD THE OPTIMA PRESENTATION CENTER AT THE CORNER OF WEST WHALLEY RING ROAD AND 105 AVENUE, SITE OF THE FUTURE PROJECT TO SHOWCASE A TYPICAL CORNER SUITE AND OFFICES. IT WILL BE BUILT USING IHI'S ADVANCED AND UNIQUE BUILDING TECHNOLOGY. THE TYPICAL CORNER SUITE ATTACHED TO THE OFFICES OF THE PRESENTATION CENTER, WILL LATER BE USED AS PART OF THE CONSTRUCTION OF TOWER 1. THE DRY RUN ASSEMBLY HAS BEEN SUCCESSFULLY COMPLETED. IHI EXPECTS ON-GOING WORLD-WIDE DELEGATIONS TO WITNESS FIRST HAND THE UNIQUE ADVANTAGES OF THIS INTERNATIONALLY PATENTED TECHNOLOGY.

IMPORTANT DISCLAIMER: *The optima project was never built and contrary to the false claims of Fanuc/GE that were successfully advanced unfortunately in Court, that IHI built the Optima Project in 2005 – 2006 USING Fanuc/ GE Defaulted System that they installed at IHI's R&D Manufacturing Facility in 2000 – 2001. Again, currently the site is still empty.*

This document can not be construed by any means as any type of offering, and strictly a technical case study in a very new and vibrant downtown.

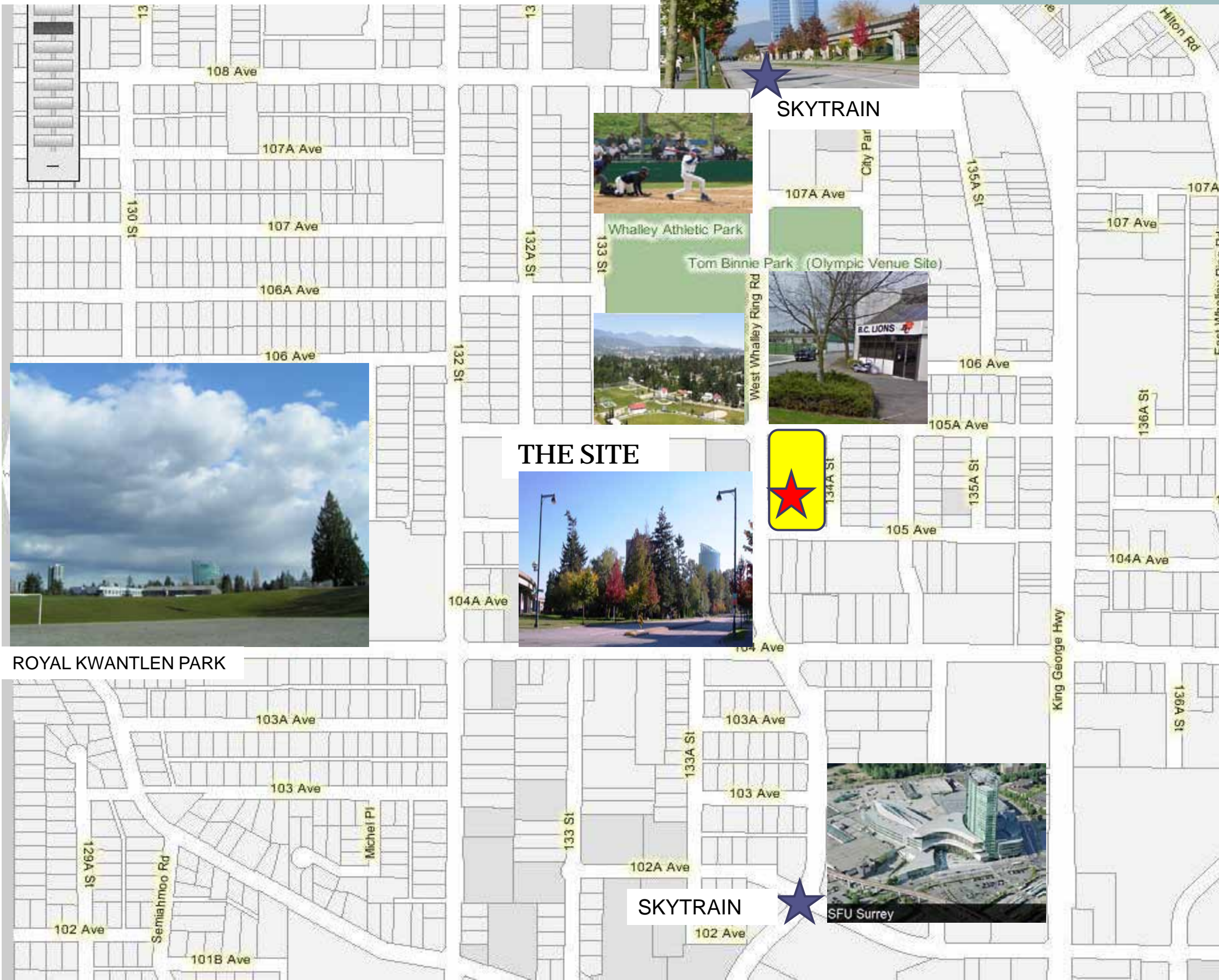
The Development Company of the Optima Towers owned/controlled by the President's Mother, has entered into an agreement with IHI to build the Center and feature some of the advanced details for the Optima high-rises to allow International first class advanced equipment suppliers to bid for the solution to automate the cutting and welding process at the IHI R&D and Manufacturing Facility in Delta, BC., after the above mentioned Fanuc/GE default.

SITE LOCATION

SURREY IS THE 12TH LARGEST CITY IN CANADA AND THE SECOND LARGEST IN BRITISH COLUMBIA. THE CITY OF SURREY AND THE VANCOUVER ORGANIZING COMMITTEE FOR THE 2010 OLYMPIC AND PARALYMPICS WINTER GAMES (VANOC) HAVE SIGNED A JOINT AGREEMENT TO ENABLE THE CITY OF SURREY TO BECOME A VENUE CITY FOR THE 2010 WINTER GAMES

- APPROX. 19 KM. FROM VANCOUVER CITY CENTER.
- TWO BLOCKS FROM SKY TRAIN STATION.
- ONE BLOCK FROM THE REGIONAL BUS TERMINAL.
- SITUATED IN THE CORE OF THE NEW SURREY CITY CENTER AND ADJACENT TO RECREATIONAL CENTERS.
- 8KM FROM IHI'S MANUFACTURING FACILITY IN DELTA, BC.
- A NEW LIBRARY (\$30 MILLION) WILL BE BUILT IN WEST WHALLEY SOON.





SKYTRAIN



Whalley Athletic Park

Tom Binnie Park (Olympic Venue Site)



THE SITE



ROYAL KWANTLEN PARK

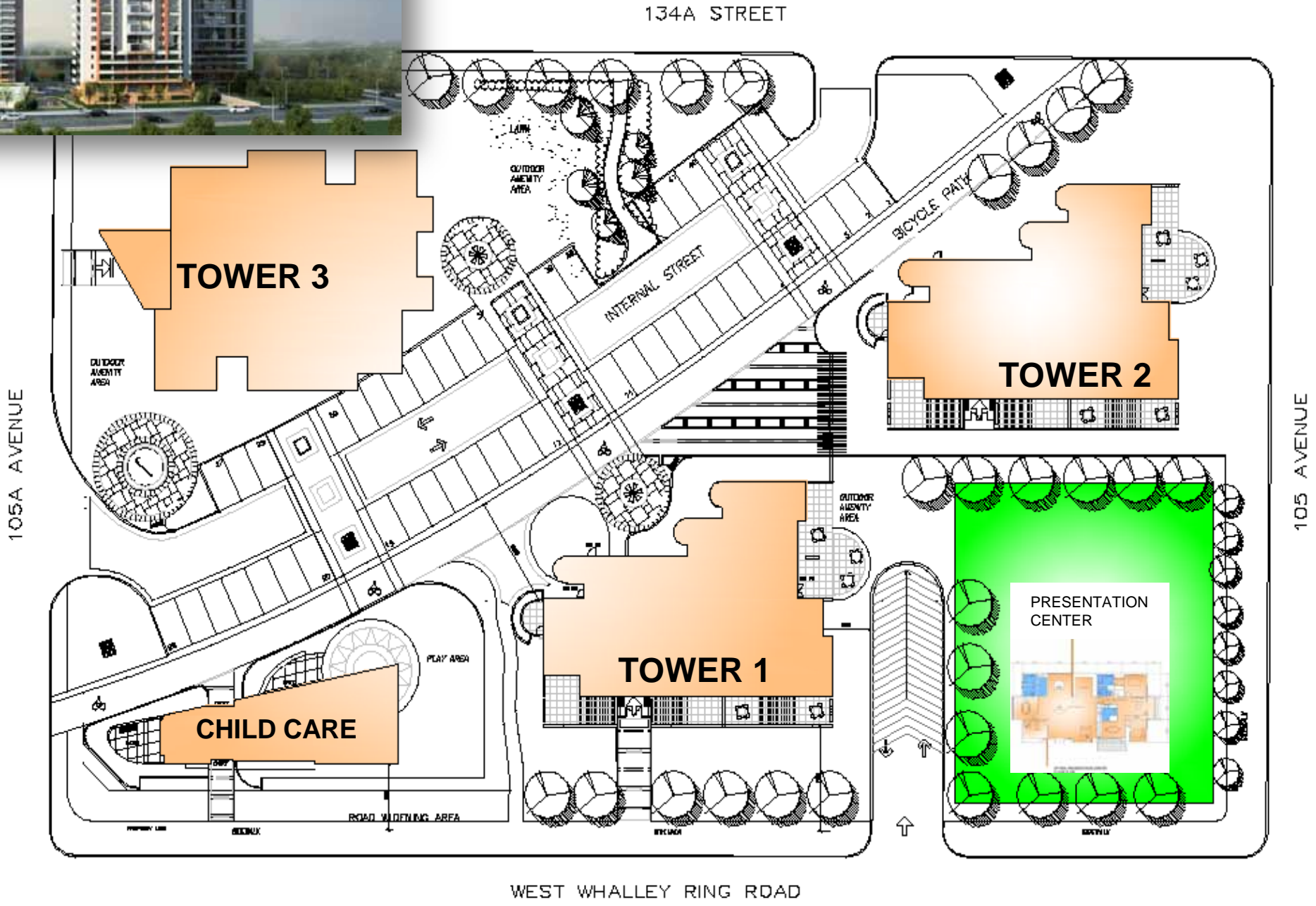


SKYTRAIN

SFU Surrey

RECENT PHOTO OF THE SITE



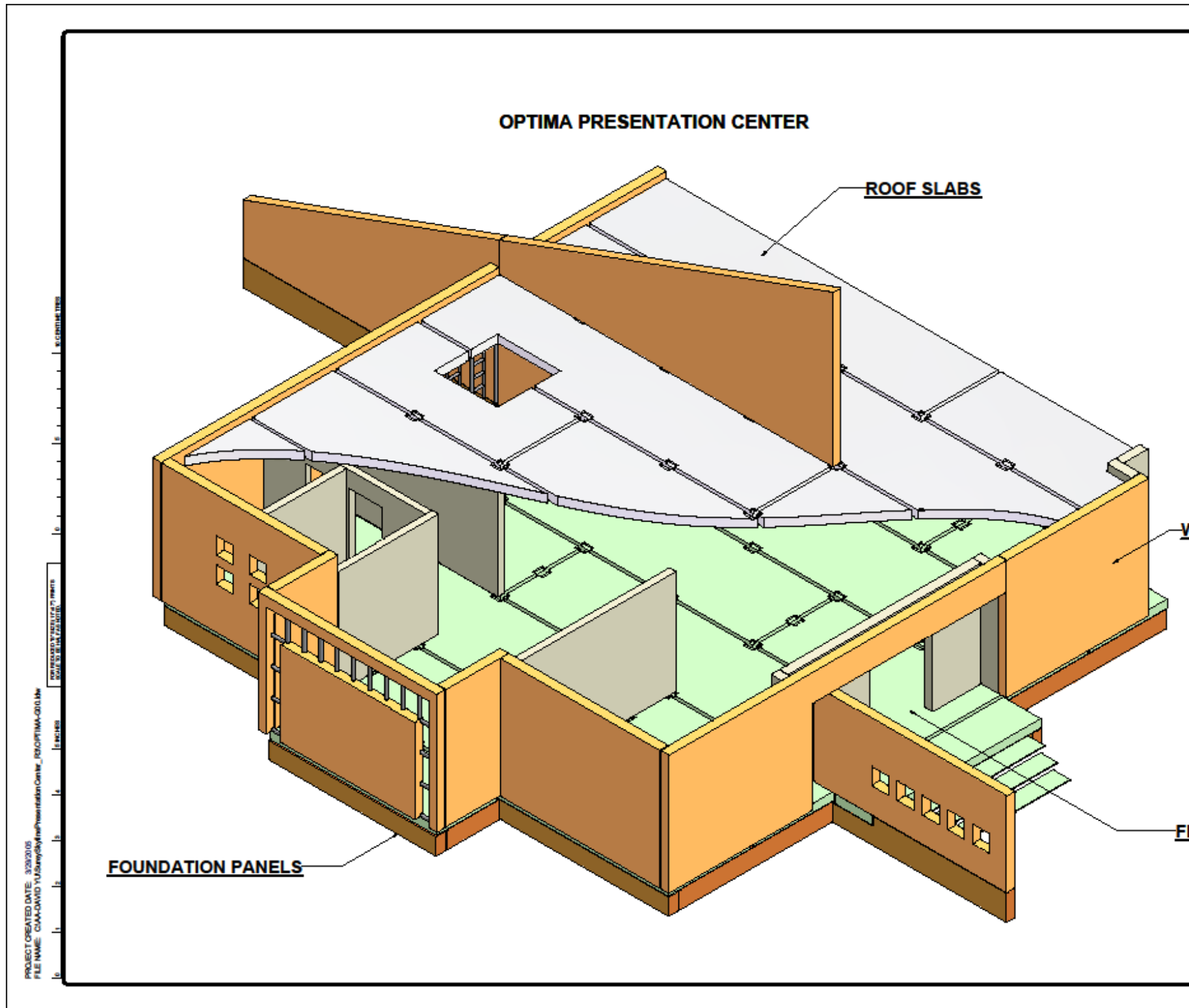


SITE PLAN

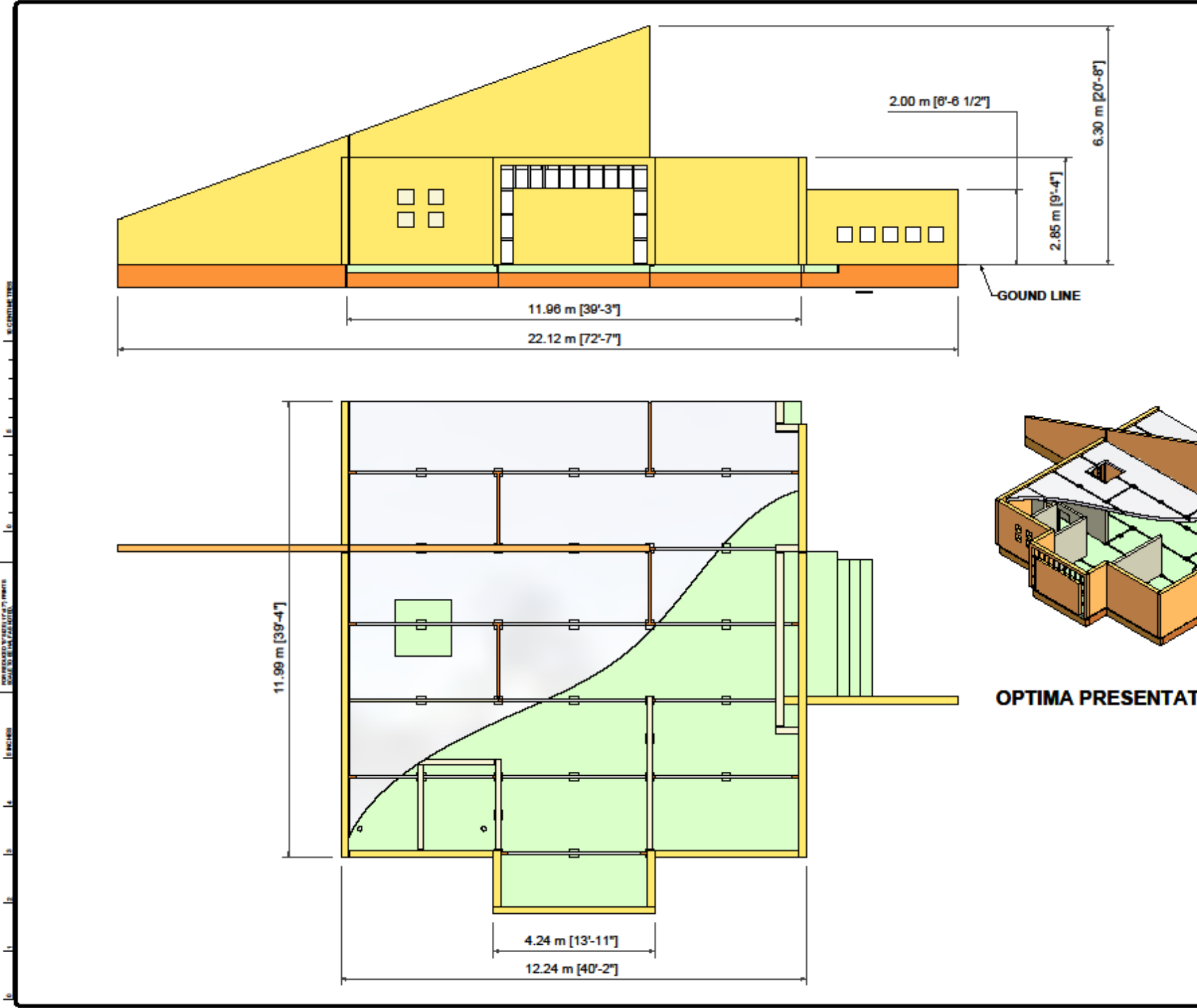


**OPTIMA PRESENTATION CENTER
FLOOR PLAN**

ISOMETRIC VIEW OF OFFICE SPACE SECTION OF THE PRESENTATION CENTER



PROJECT CREATED DATE: 3/20/2015
FILE NAME: C:\A-DAVID\Y\Bany\Style\Presentation\Center_R3\OPTIMA-DIMENSIONS FOR CHAIRLIFT
DWG FILE: OPTIMA-DIMENSIONS FOR CHAIRLIFT



PLAN AND ELEVATION



TOWER 1 TYPICAL 2BR APARTMENT SELECTED FOR THE PRESENTATION CENTER

Plan 1
301 - 2001
Two bedroom
1,095 sq. ft.



In the interest of continuing
Actual dimensions and floor

IHI25026
Floorplan Inserts - Two colour printing (Warm Gray 11
size: 10.5" x 10.5
filename: IHI25026_Optima_FP6.ai
June 9/05 - studio02/marlis

Typical



Optima Presentation Center

INTERIOR DESIGN BY CHRISTINA OBERTI



TYPICAL 2 BEDROOM CORNER SUITE

**MANUFACTURING PROCESS
PRESENTATION CENTER
OFFICE SPACE &
TYPICAL CORNER SUITE
AT
IHI'S R&D AND MANUFACTURING FACILITY**

PREPARATION OF PANEL COMPONENTS – HSS, STAINLESS STEEL PLATES AND ANGLES, WIRE MESH, ETC

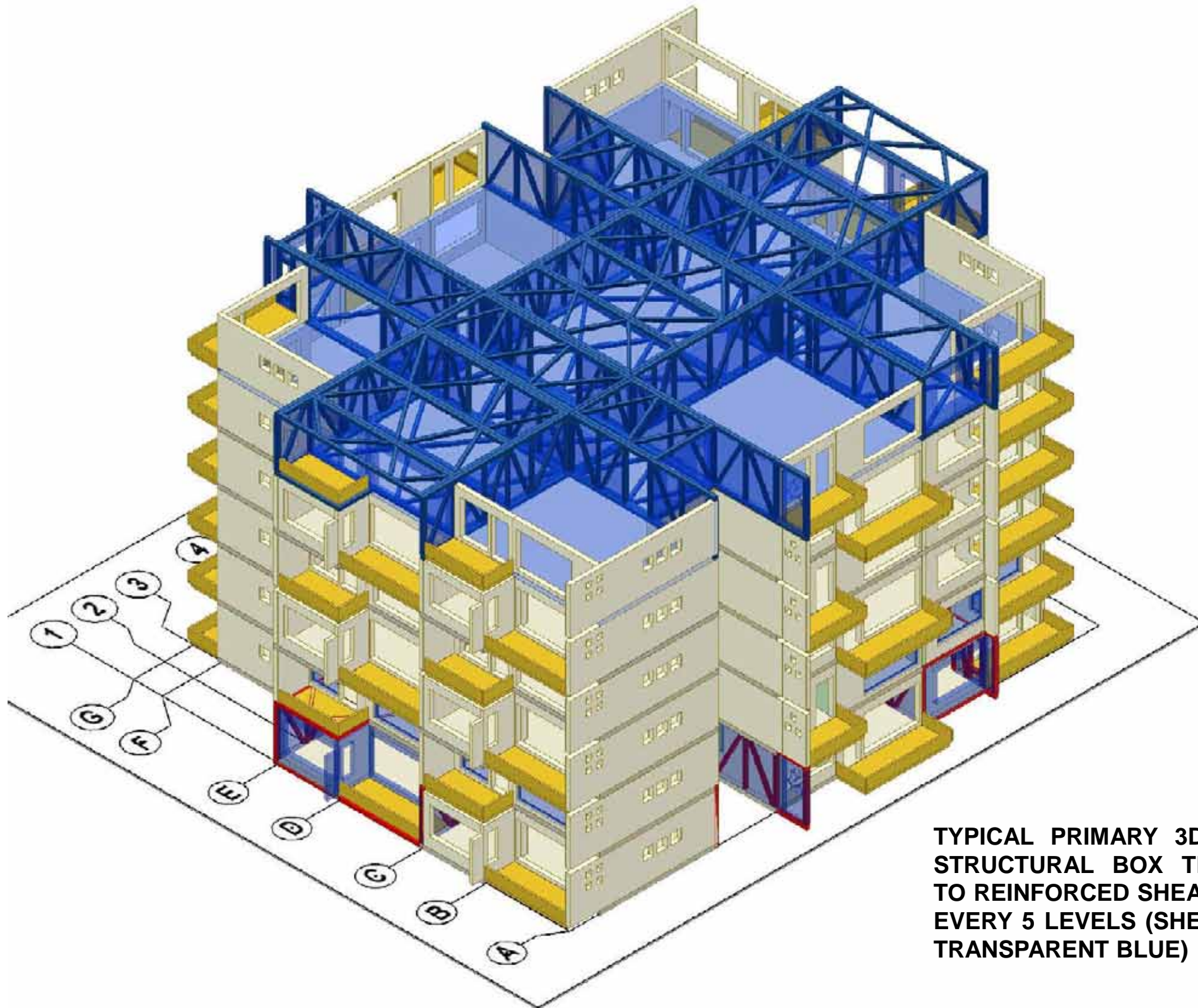


FRAMING THE PANELS FOR THE TYPICAL UNIT WITH TOTALLY CONCEALED STRUCTURAL STEEL TRUSSES FOR THE HIGH-RISE BUILDINGS THAT ARE REPEATED EVERY 5 LEVELS & CONNECTED TO THE CONTINUOUS IHI SHEAR WALLS AS SHOWN IN THE NEXT SLIDE.





INTERNATIONAL HI-TECH INDUSTRIES INC.



TYPICAL PRIMARY 3D FULLY CONCEALED STRUCTURAL BOX TRUSSES CONNECTED TO REINFORCED SHEAR WALLS & SLABS AT EVERY 5 LEVELS (SHEAR WALLS SHOWN IN TRANSPARENT BLUE)



AT CORNERS WHERE THE STRUCTURAL TRUSSES MEET, SPECIAL PLATES ARE WELDED TOGETHER TO FORM A VERY CONTINUOUS 3-D STRUCTURE.



WINDOW FRAMES ARE STRUCTURALLY INTEGRATED WITHIN THE 3-D CONCEALED STRUCTURAL TRUSSES.



STRUCTURAL STEEL TRUSS FRAME FOR THE PRESENTATION CENTER FOUNDATION PANELS

PHOTOS SHOW MITERED EDGE OF THE PANEL AT CORNERS FOR A PERFECT FIT AND OBTAIN SEAMLESS CORNERS



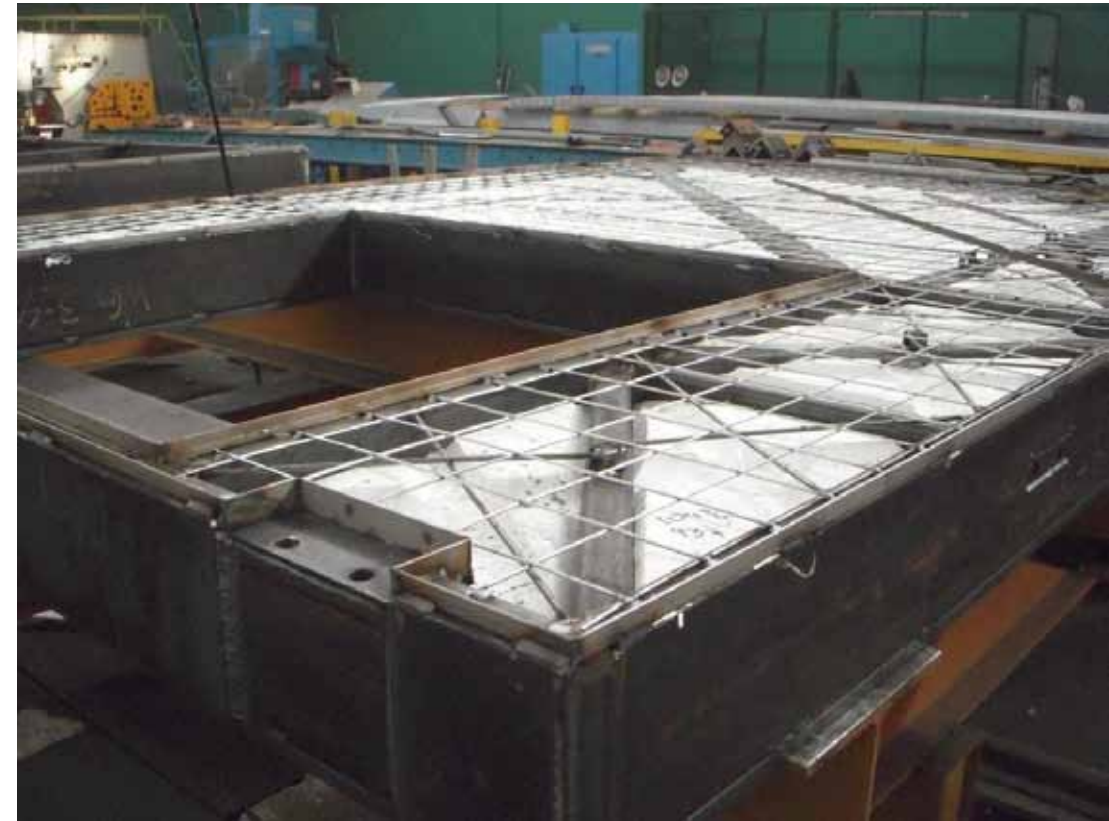
IMPORTANT DISCLAIMER: Due to the defaulted *Fanuc/GE Robotics Welding & Cutting System*, currently, all steel frames are manually fabricated and welded, however, prior to manufacturing the Optima Towers, the process will be fully automated and the above defaulted *Fanuc/ GE System* will be physically eliminated from the Factory since it never performed as per IHI's requirement.



STRUCTURAL ANGLE TO NOT ONLY CREATE A CONTINUOUS PERFECT FLEXIBLE MECHANICAL SEAL (WATER, SOUND, FIRE) BETWEEN FLOORS, BUT ALSO A CONCEALED FUTURE MEP CONDUIT/RACEWAY.

INSULATION

INSERTING THE EPS RIGID INSULATION INTO
THE STRUCTURAL STEEL PANEL FRAMES



THE IHI SLAB PANELS ARE BEING PREPARED FOR CONCRETING AFTER HAVING BEEN FRAMED AND INSULATED



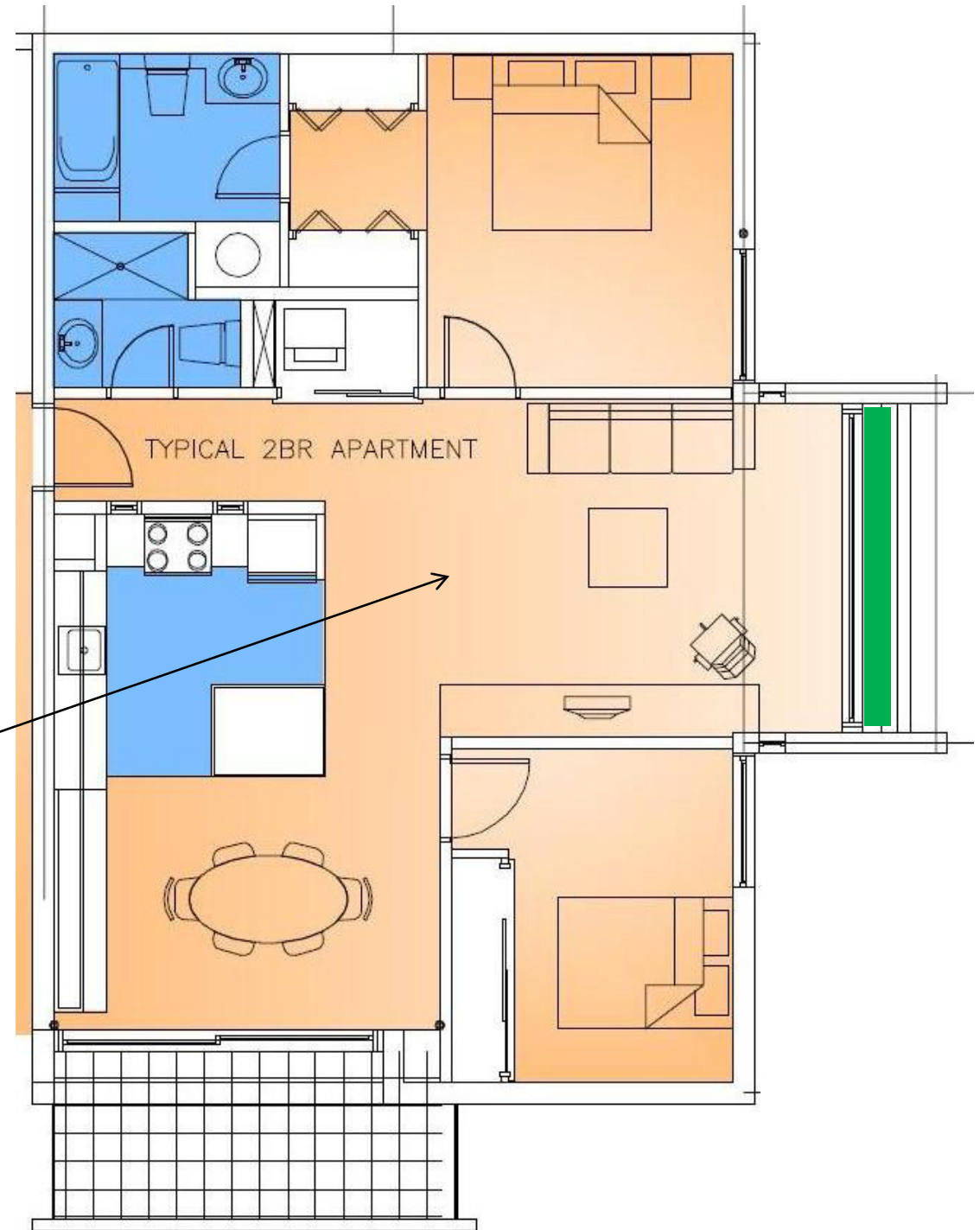
**RIGID INSULATION
PIECES ARE CUT AND
READY TO BE INSERTED
IN THE CORE OF THE
PANELS**



PART 1: DRY RUN OF WALL PANELS FOR TYPICAL CORNER SUITE



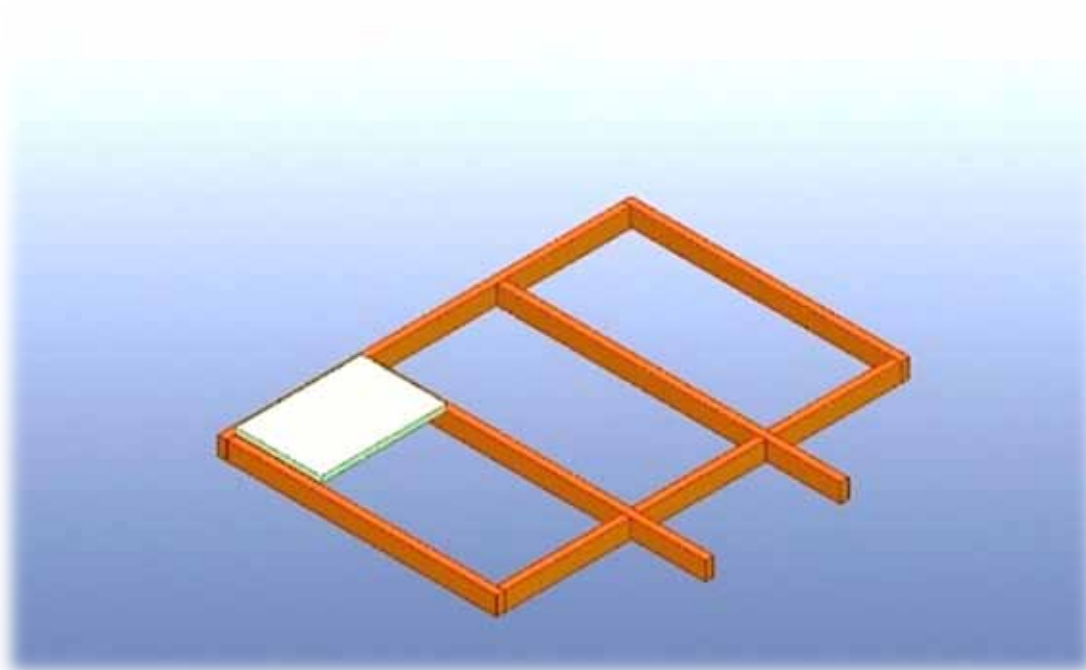
RENDERING OF OPTIMA TOWER 1 SHOWING THE CORNER SUITE WITH ITS PLANTER; THIS UNIT WILL BE SHOWCASED IN THE PRESENTATION CENTER.



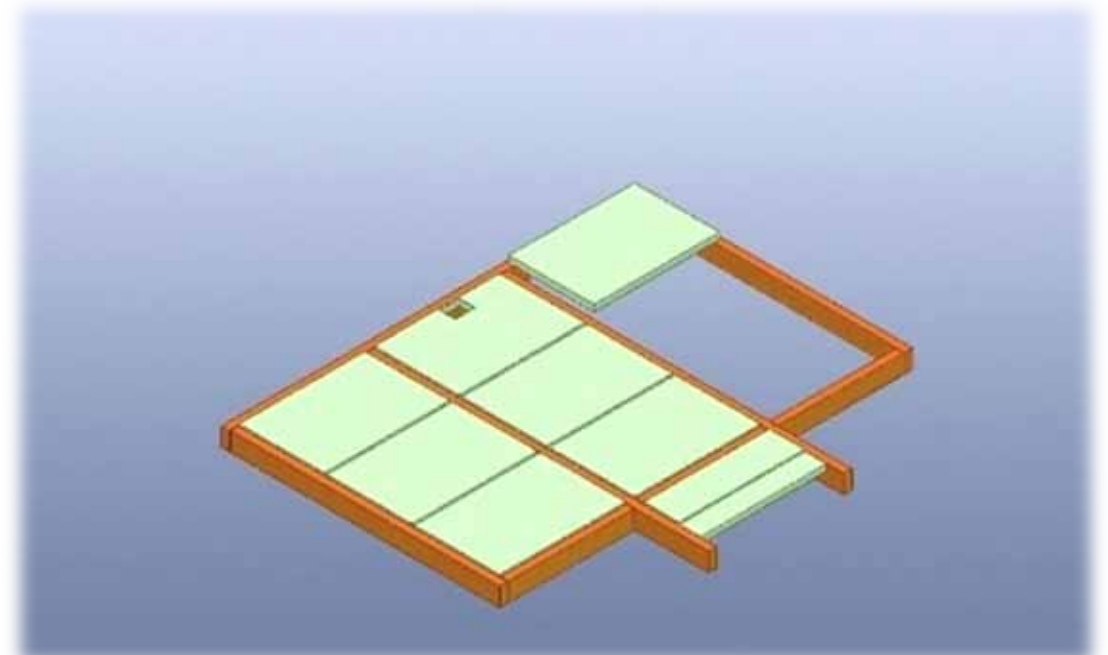
FLOOR PLAN OF TYPICAL CORNER SUITE

DRY RUN OF IHI PANELS FOR TYPICAL CORNER SUITE SEQUENCE OF IHI PANEL ASSEMBLY

LAYING DOWN OF FOUNDATIONS

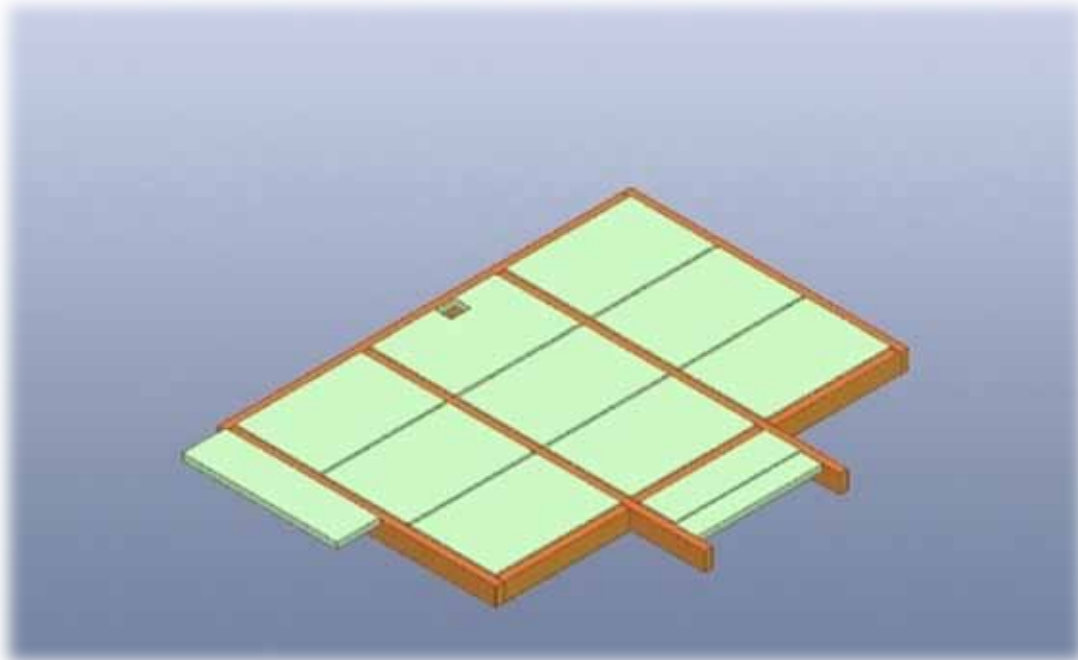


LAYING DOWN IHI FLOOR SLABS

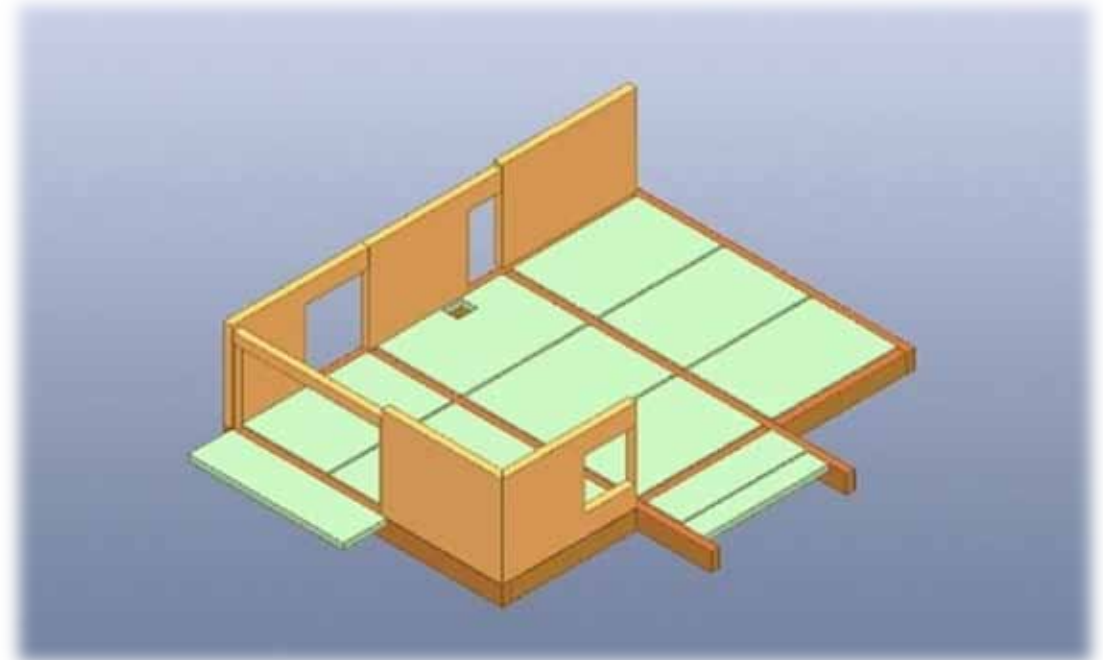


DRY RUN OF IHI PANELS FOR TYPICAL CORNER SUITE SEQUENCE OF IHI PANEL ASSEMBLY

IHI FLOOR SLABS INSTALLED

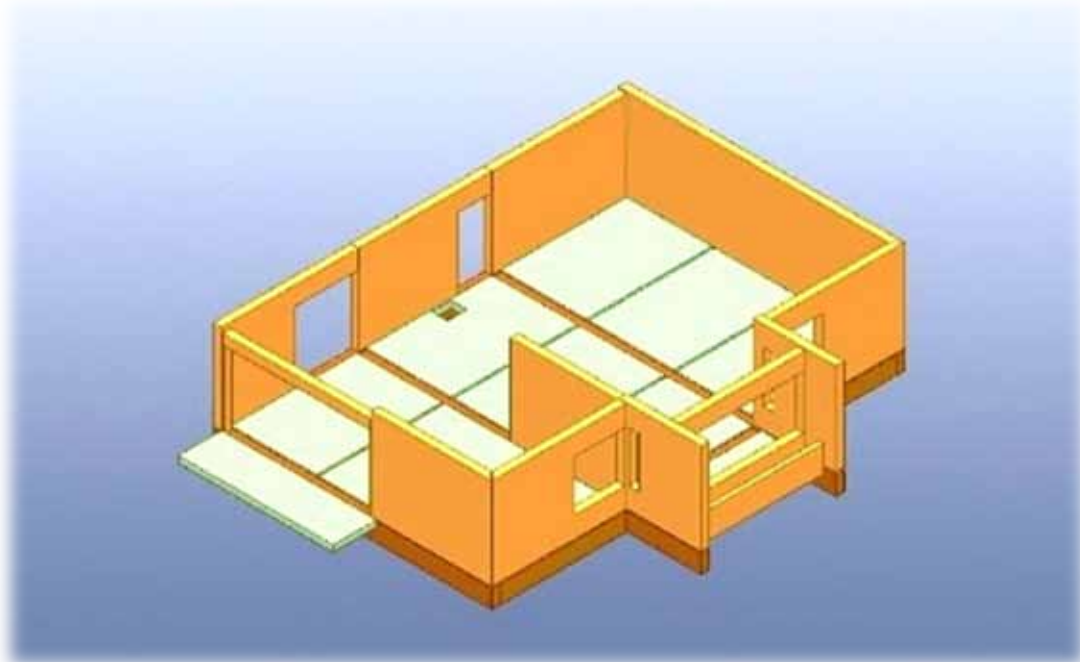


INSTALLING EXTERIOR WALL PANELS

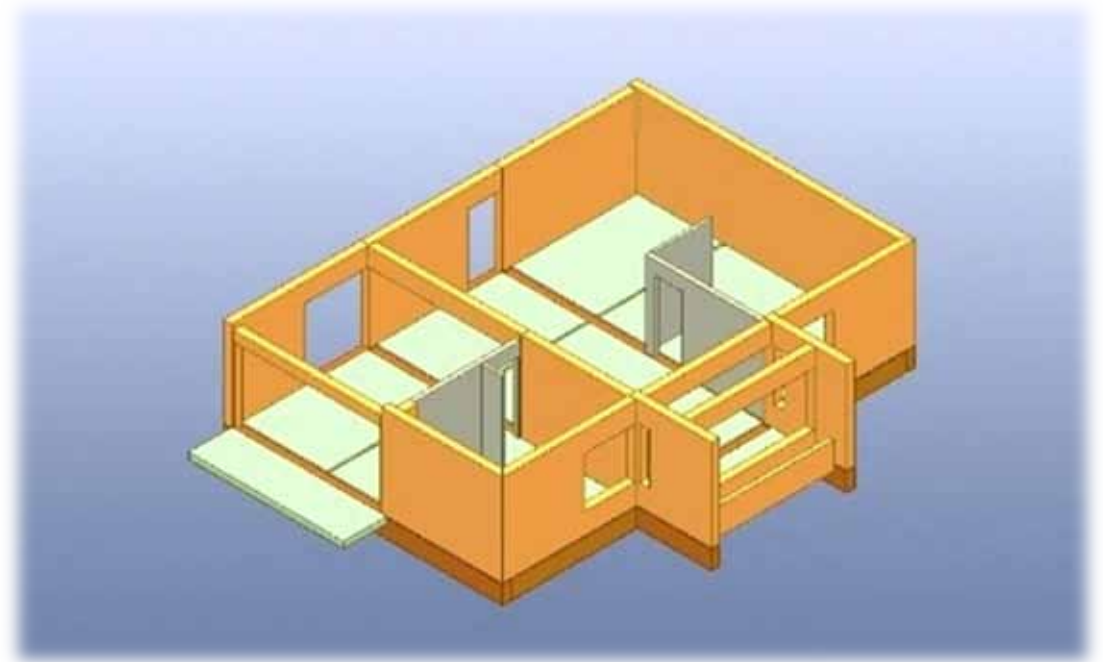


DRY RUN OF IHI PANELS FOR TYPICAL CORNER SUITE SEQUENCE OF IHI PANEL ASSEMBLY

INSTALLING EXTERIOR WALL PANELS

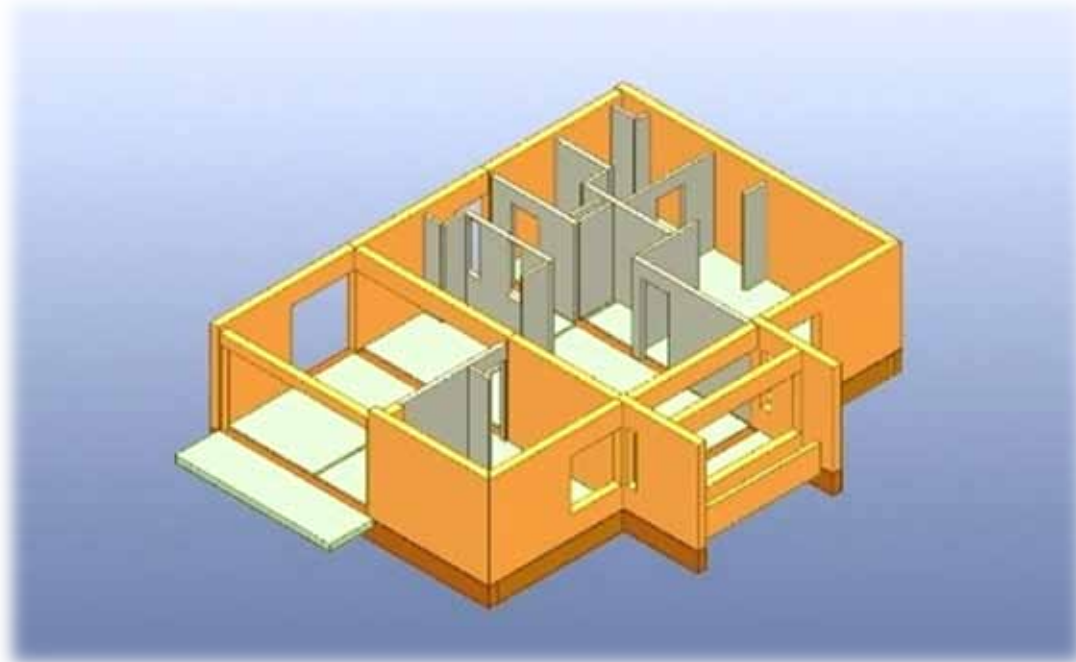


INSTALLING INTERNAL PANELS AND SHEAR WALLS

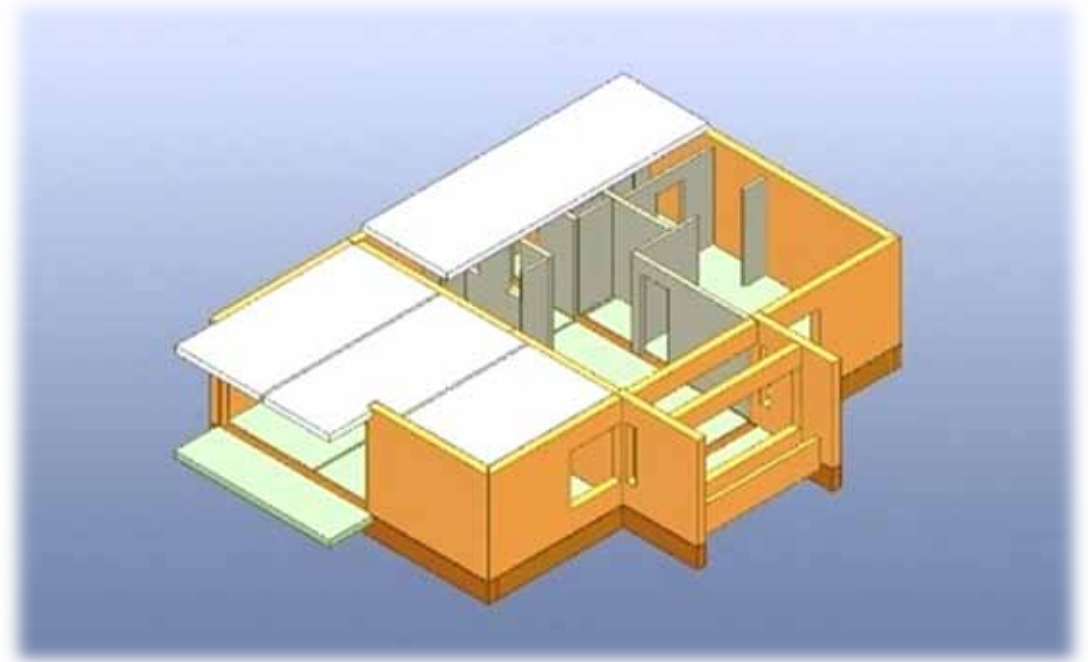


DRY RUN OF IHI PANELS FOR TYPICAL CORNER SUITE SEQUENCE OF IHI PANEL ASSEMBLY

INSTALLING INTERNAL WALLS

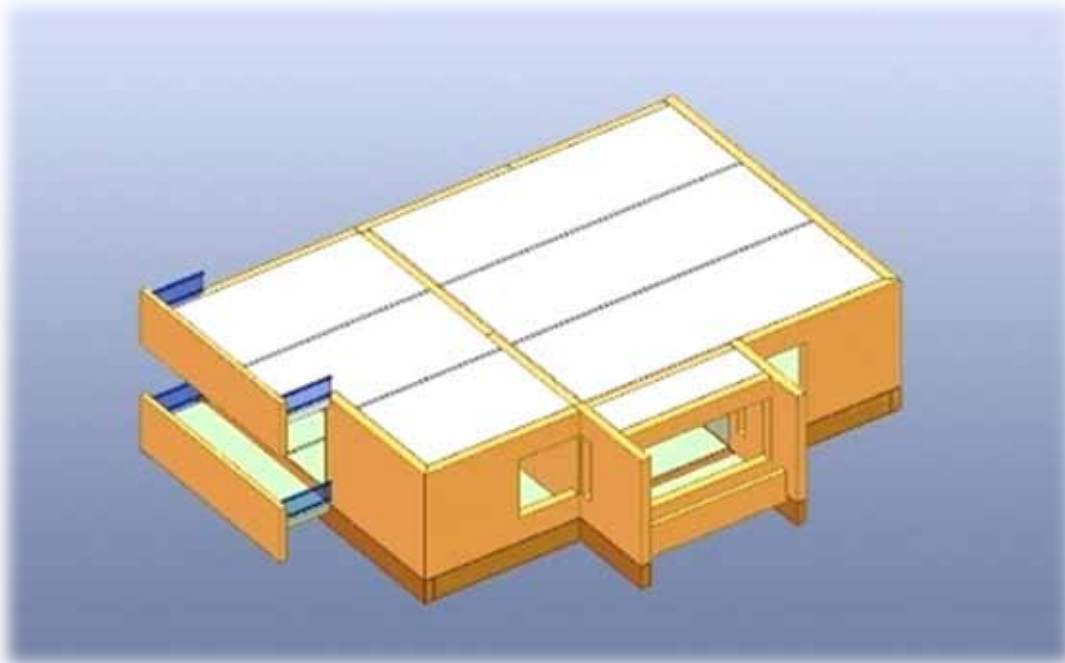


INSTALLING IHI ROOF SLABS

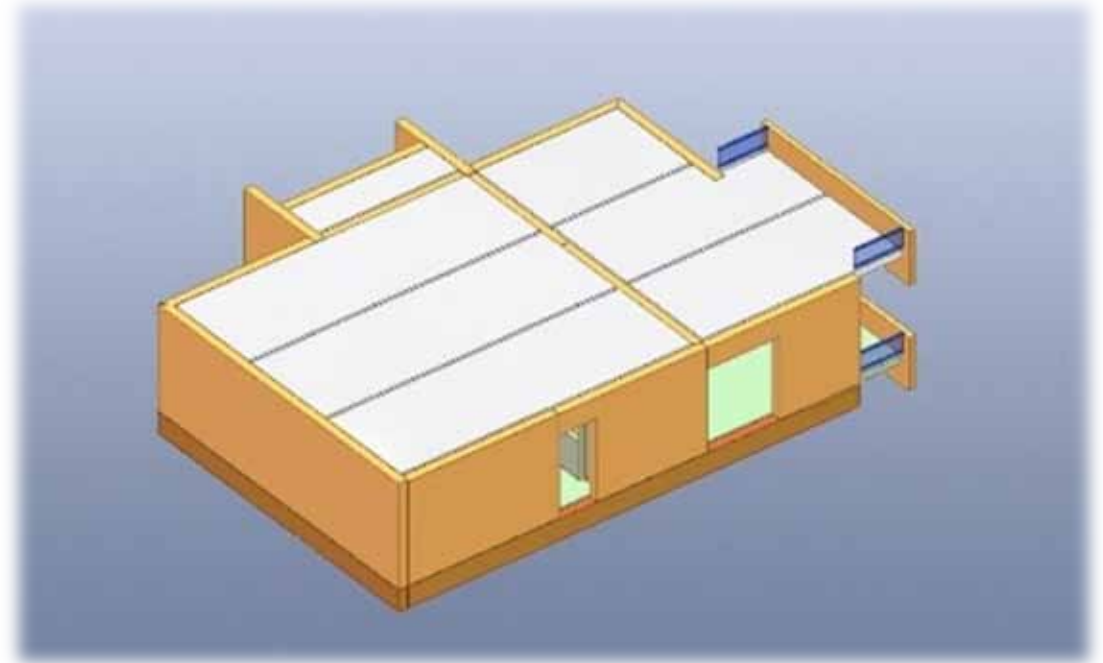


DRY RUN OF IHI PANELS FOR TYPICAL CORNER SUITE SEQUENCE OF IHI PANEL ASSEMBLY

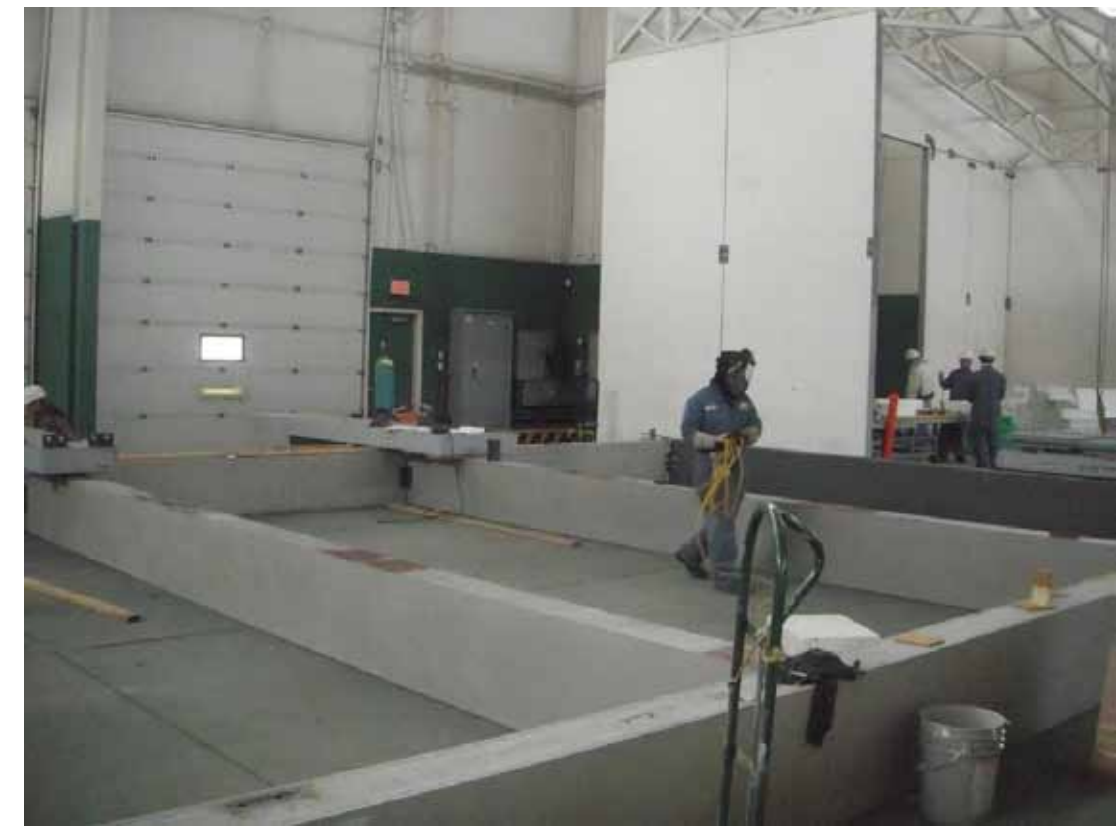
COMPLETION OF PANEL ASSEMBLY



VIEW FROM MAIN ENTRANCE



LAYING DOWN THE FOUNDATIONS OF THE TYPICAL CORNER UNIT



BATHROOM FLOOR PANEL WITH OPENINGS FOR MEP



DRY RUN OF WALL PANELS FOR THE TYPICAL CORNER SUITE



BEGINNING OF THE DRY RUN OF WALL PANELS OVER IHI CONCRETED BEAM FOUNDATIONS AND FLOOR PANELS .

TOTALLY CONCEALED STRUCTURAL STEEL TRUSSES FOR THE HIGH-RISE BUILDINGS THAT ARE REPEATED EVERY 5 LEVELS & CONNECTED TO THE CONTINUOUS IHI SHEAR WALLS ARE VERY VISIBLE.





SAME AS ABOVE



SAME AS ABOVE



SAME AS ABOVE





THIS PHOTO SHOWS THE MAIN ENTRANCE TO THE TYPICAL UNIT. THE DOOR HSS SUB-FRAME IS PAINTED IN YELLOW (THE TEMPORARY BRACING WILL BE REMOVED AFTER THE UNIT IS BUILT ON SITE). ON THE LEFT OF THE PHOTO ONE CAN SEE THE GUEST TOILET WITH ITS DOOR, A CONCEALED HSS SUB-FRAME IS ALSO PAINTED IN YELLOW.

STANDARD STRUCTURAL WINDOW/DOOR FRAMES ARE NOT REQUIRED SINCE THE CONCEALED HSS FRAMES WITHIN THE PANEL CREATE PERMANENT AND STRONGLY INTEGRATED FRAMES, HENCE, ADVANCING FURTHER SAVINGS TO THE PROJECT WHILE INCREASING THE STRENGTH OF THE 3-D STRUCTURE AND CREATING A THERMAL AND ACOUSTICAL CONTINUOUS SEAL. . WE BELIEVE THAT THE PRESENCE OF THE SUB-FRAMES CAN RESULT IN SAVINGS IN AS MUCH AS 20% OF THE TOTAL DOORS/WINDOWS BUDGET



VIEW FROM THE ENTRANCE TOWARDS THE RELATIVELY SPACIOUS LIVING AREA



VIEW OF THE "SECOND BEDROOM" INTERNAL IHI PANELS WITH THE HSS SUB-FRAME OF THE DOOR PAINTED IN YELLOW. THE SHEAR WALL BETWEEN THE BEDROOM AND THE LIVING ROOM HAS IMBEDDED STRUCTURAL STEEL TRUSSES AND AN ELECTRICAL RACEWAY AT THE BOTTOM. AS MENTIONED BEFORE, THE TRUSSES WILL BE TOTALLY CONCEALED AFTER CONCRETING THE PANELS. IMAGINE IN THIS CASE, EVEN THE INTERIOR WALLS ARE ALL FINISHED WITH HIGH STRENGTH AND EXTREMELY SMOOTH FINISHED CONCRETE (BETTER THAN ANY DRYWALL).



VIEW OF THE CORNER OF THE TYPICAL UNIT SHOWING THE WINDOW OF THE MASTER BEDROOM PAINTED IN YELLOW. THE PHOTO SHOWS ALSO THE CONTINUOUS TOTALLY CONCEALED TRUSSES WITHIN THE PANELS AND THE CONNECTION BETWEEN EXTERIOR PANELS AND THE IHI FOUNDATION BEAMS. PLEASE NOTE THE TYPICAL SMOOTH STRESS TRANSITION FOR THE 3-D TRUSSES WHENEVER THERE IS A CORNER, WINDOW OR DOOR.



THIS PHOTO SHOWS THE MASTER BATHROOM AREA THROUGH THE EXTERNAL IHI WALL PANELS WITH THE CONTINUOUS STRUCTURAL STEEL TRUSSES THAT WILL BE TOTALLY CONCEALED AFTER CONCRETING THE PANELS. AGAIN, DOOR AND WINDOW HSS SUB-FRAMES ARE SHOWN IN YELLOW.



VIEW FROM THE MASTER BEDROOM TOWARD THE RECEPTION AREA WITH THE INTERNAL IHI PANELS IN THE BATHROOM AREA (UPPER RIGHT CORNER). THE PICTURE SHOWS THE PERFECTLY LEVELED SMOOTH FLOOR PANELS (NO NEED FOR ANY FURTHER LEVELING OR GROUTING) PAINTED SEALED IN GREEN AND READY FOR ANY TYPE OF FLOOR FINISHING.



VIEW OF THE FRAME FOR THE VERY LARGE SLIDING DOOR/WINDOW GIVING ACCESS FROM THE DINING ROOM TO THE TERRACE. THE WINDOW HSS CONCEALED SUB FRAME IS PAINTED IN YELLOW AND THE FLOOR PANELS ARE SEALED IN GREEN. THE LONGITUDINAL BRACING WITHIN THE WINDOW SUB-FRAME ARE TEMPORARY (TO MAINTAIN PERFECT ALIGNMENT DURING THE TRANSPORTATION AND ASSEMBLY) AND WILL BE REMOVED ONCE THE BUILDING IS ERECTED ON SITE.



TYPICAL SECONDARY CONTINUOUS TRUSSES ARE FULLY INTEGRATED WITH THE PRIMARY 3-D TRUSSES TO TRANSFER SMOOTHLY THE STRESSES AROUND THE CUSTOM OPENINGS FROM WINDOWS/DOORS, ETC.



AGAIN, THE VERY LARGE FRAME FOR THE SLIDING DOOR/WINDOW VIEWED FROM INSIDE THE DINING ROOM AREA, TEMPORARY LONGITUDINAL BRACING WILL BE REMOVED AFTER THE ASSEMBLY OF THE BUILDING ON SITE. WINDOW SUB-FRAMES AND BRACING ARE PAINTED IN YELLOW.



VIEW OF THE TYPICAL UNIT THROUGH THE DINING ROOM VERY LARGE WINDOW SHOWING THE SECOND BEDROOM ON THE RIGHT, THE WINDOW AND DOOR OPENINGS ARE PAINTED IN YELLOW AND THE FLOOR PANELS SEALED IN GREEN.



CLOSER VIEW OF THE PREVIOUS SLIDE SHOWING THE KITCHEN/DINING AREA AND SECOND BEDROOM INTERNAL IHI STEEL WALL FRAMES

INSTALLATION OF THE PLANTER FEATURE ACCESSIBLE FROM THE LIVING ROOM OF THE APARTMENT



PHOTO SHOWS FLOOR PANELS OF THE LIVING ROOM AREA IN THE TYPICAL APARTMENT UNIT AND RECESSED PANEL FOR THE FEATURED PLANTER SITTING ON THE STRUCTURAL BEAMS ACTING AS FOUNDATIONS FOR THE TEMPORARY DISPLAY OF THE TYPICAL UNIT TO BE BUILT ON THE SITE OF THE OPTIMA PROJECT. IHI FLOOR PANELS WITHIN THE SAME SPACE, CAN VARY IN THICKNESS TO CREATE SUNKEN/RAISED/, ETC... SLABS TO ACCOMMODATE ANY MEP OR ARCHITECTURAL/STRUCTURAL REQUIREMENTS.



- IN OPTIMA TOWERS THE STEEL TO BE USED WILL BE REDUCED BY 50% THAN A PROPERLY DESIGNED REINFORCED CONCRETE HIGH-RISE BUILDING WHILE THE DYNAMIC STRENGTH WILL INCREASE SIGNIFICANTLY.
- IN OPTIMA TOWERS THE CONCRETE TO BE USED WILL BE REDUCED BY 35% THAN A PROPERLY DESIGNED REINFORCED CONCRETE HIGH-RISE BUILDING WHILE THE DYNAMIC STRENGTH WILL INCREASE SIGNIFICANTLY.
- THE EPS TO BE USED IN OPTIMA TOWERS WILL BE EQUIVALENT TO DOUBLE THE TOTAL VOLUME OF CONCRETE USED, HENCE INCREASING THE THERMAL AND ACOUSTICAL RATINGS SIGNIFICANTLY AT VIRTUALLY NO ADDITIONAL COST. THIS IS MAINLY DUE TO THE FACT THAT IHI OPTIMIZED THE ELIMINATION OF THE REDUNDANT VOLUME OF CONCRETE THAT IS VERY COMMON IN CONVENTIONAL CONSTRUCTION WHILE INCREASING ALSO THE DYNAMIC STRENGTH OF THE BUILDING SIGNIFICANTLY.



VIEW OF THE EXTERIOR IHI SIDE WALL PANEL WITH A SLIT WINDOW OVERLOOKING THE LIVING AREA. THE PHOTO SHOWS THE CONTINUOUS STEEL TRUSSES THAT WILL BE TOTALLY CONCEALED AFTER CONCRETING THE PANELS.

THE CORNER OF THE LIVING AREA WILL CREATE A SEMI-OUTDOOR ENVIRONMENT WHILE IT IS AN INTEGRAL PART OF THE OPEN LIVING/DINING SPACE.



THIS PICTURE SHOWS THE FEATURE PLANTER INSTALLED WITH THE HSS SUB-FRAME WINDOW OF THE LIVING ROOM AREA ABOVE THE PLANTER, AS WELL AS THE HSS SUB-FRAME OF THE MASTER BEDROOM WINDOW (ON THE RIGHT) BOTH PAINTED IN YELLOW.



VIEW OF THE LIVING ROOM AREA FROM THE MASTER BEDROOM SHOWING THE WINDOWS (YELLOW) AND THE FLOOR PANELS (SEALED IN GREEN). THE SECOND BEDROOM INTERNAL IHI PANELS AREA SHOWN IN THE BACKGROUND WITH ELECTRICAL CONDUITS/RACEWAYS PLACED AT THE BOTTOM OF THE PANELS.



SAME AS ABOVE



CLOSER VIEW OF CORNER SHOWING DETAIL OF THE TRUSS FOR A PERFECT FIT AND TO OBTAIN SEAMLESS CORNERS AND THE ELECTRICAL CONDUIT CHANNEL RUNNING ALL ALONG THE LOWER END OF THE WALL PANEL.



DETAIL OF THE CONTINUOUS TRUSS BEAM CONNECTION

DETAIL OF CONNECTIONS BETWEEN FLOOR PANELS WITH A RECESS TO ALLOW FOR ANY FUTURE MEP UPGRADE



THIS PICTURE SHOWS AGAIN THE CONNECTIONS BETWEEN THE EXTERIOR IHI WALL PANELS AND THE IHI FOUNDATION BEAMS AS WELL AS VARIOUS OTHER CONNECTIONS BETWEEN THE PANELS

CONCRETED IHI PANEL SLABS READY FOR DRY RUN INSTALLATION. AGAIN, THE SMOOTH CONCRETE IS OBVIOUS



ELECTRICAL

ELECTRICAL CONDUITS/BOXES AND ELECTRICAL PANEL BOARD ARE FULLY INTEGRATED WITHIN THE PANELS.



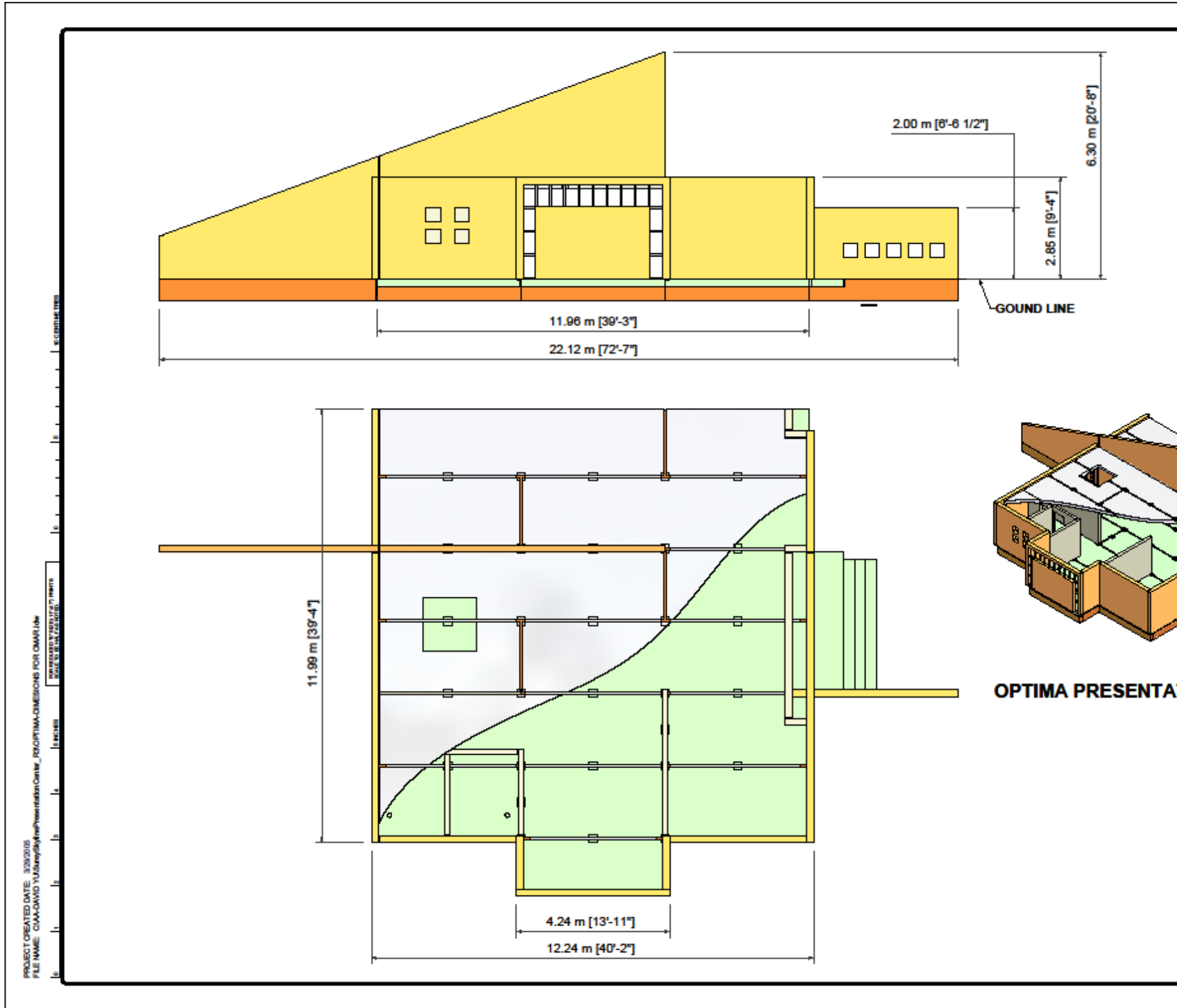


A SECTION OF THE IHI ELECTRICAL CONDUIT CHANNEL RUNNING ALONG THE LOWER END OF PANELS WHERE APPLICABLE, SHOWING THE INDEPENDENT LOW & MEDIUM VOLTAGE COMPARTMENTS.



IHI MEP CONDUIT CHANNELS RUNNING VERTICALLY AND HORIZONTALLY WITHIN THE PANELS WITHIN BATHROOMS, KITCHENS, ETC... WE BELIEVE THAT THIS CAN RESULT IN SAVINGS IN AS MUCH AS 15% OF THE TOTAL MECHANICAL AND PLUMBING BUDGET AND 25% OF THE ELECTRICAL BUDGET.



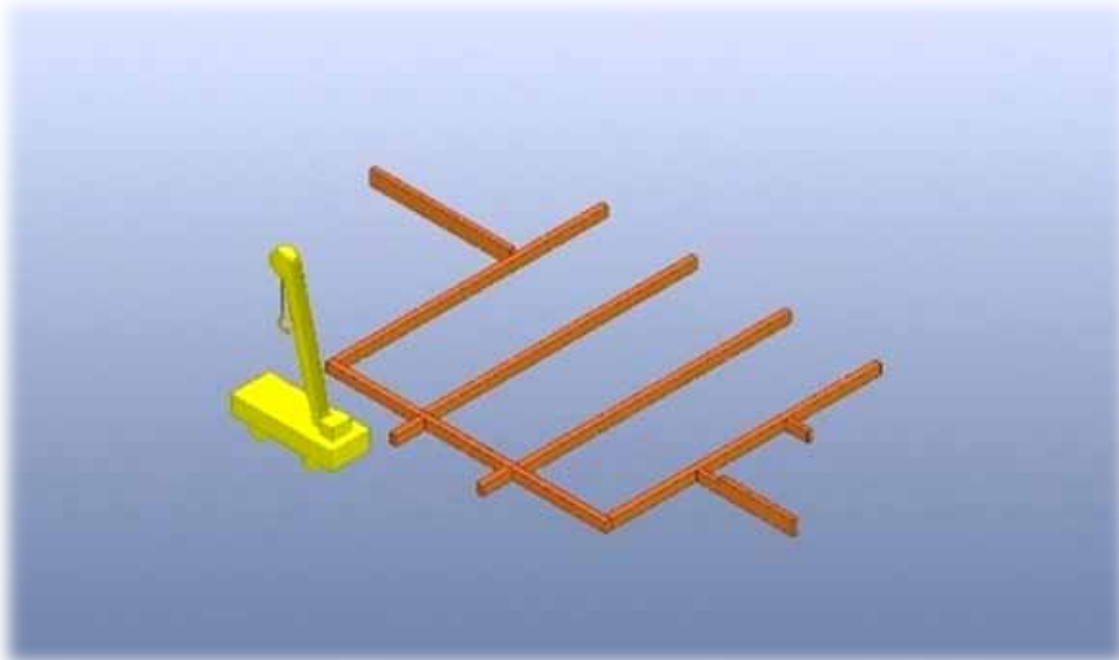


PLAN AND ELEVATION

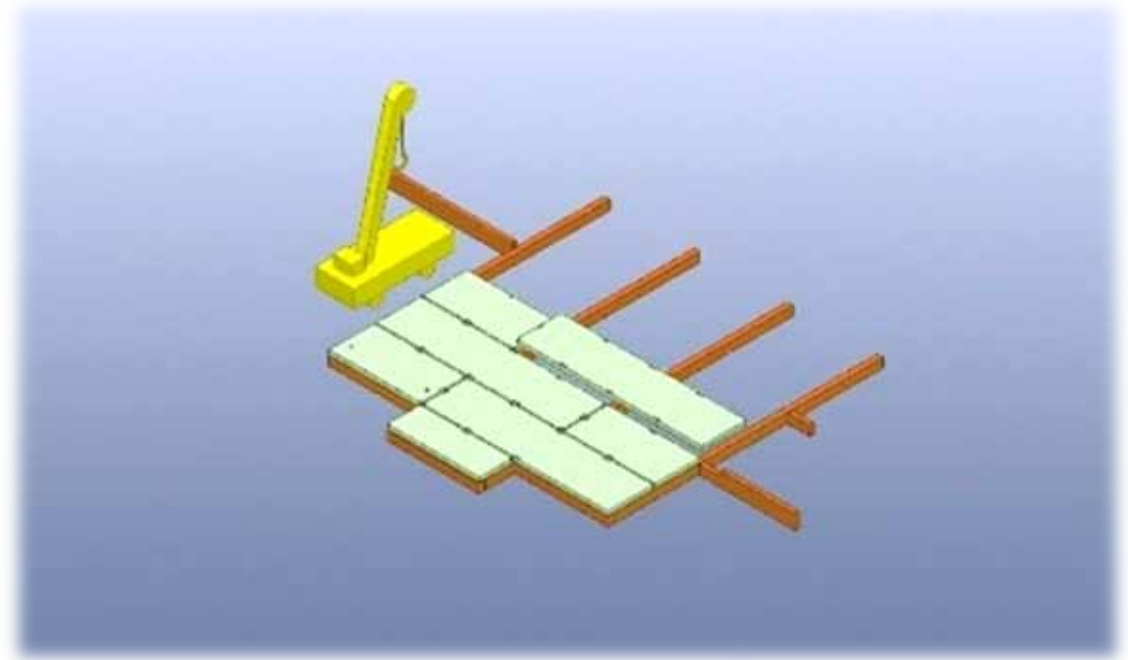
DRY RUN OF IHI PANELS FOR PRESENTATION CENTER OFFICES

SEQUENCE OF IHI PANEL ASSEMBLY

INSTALLING THE IHI FOUNDATIONS



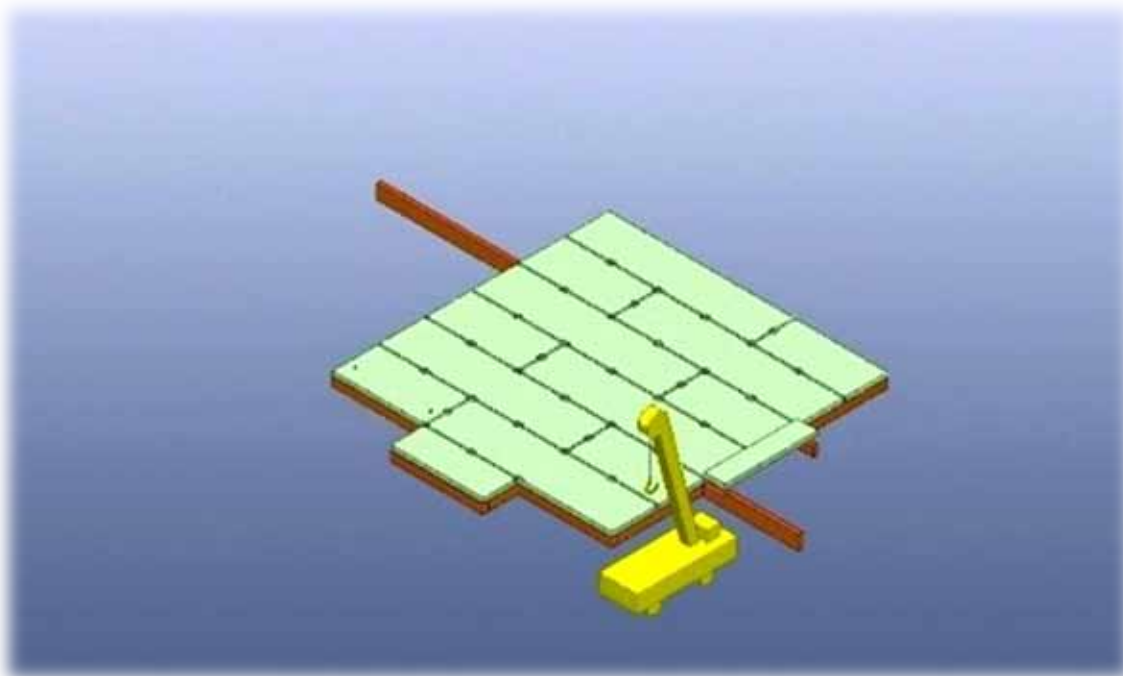
INSTALLING IHI FLOOR SLABS



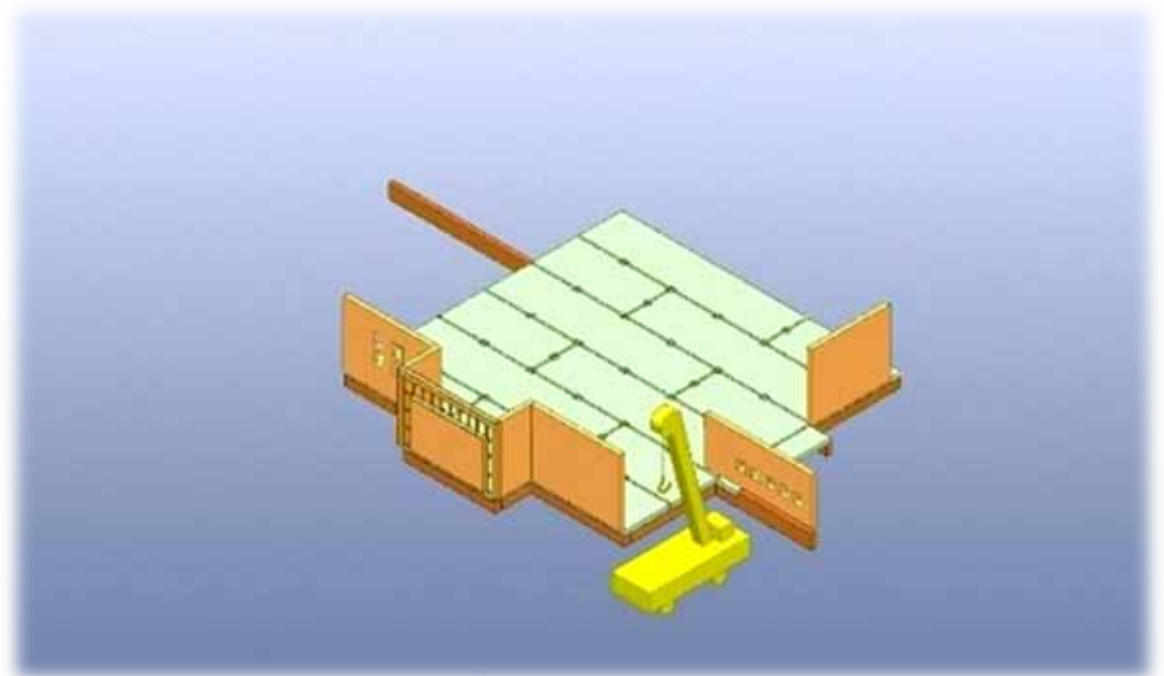
DRY RUN OF IHI PANELS FOR PRESENTATION CENTER OFFICES

SEQUENCE OF IHI PANEL ASSEMBLY

IHI FLOOR SLABS INSTALLED



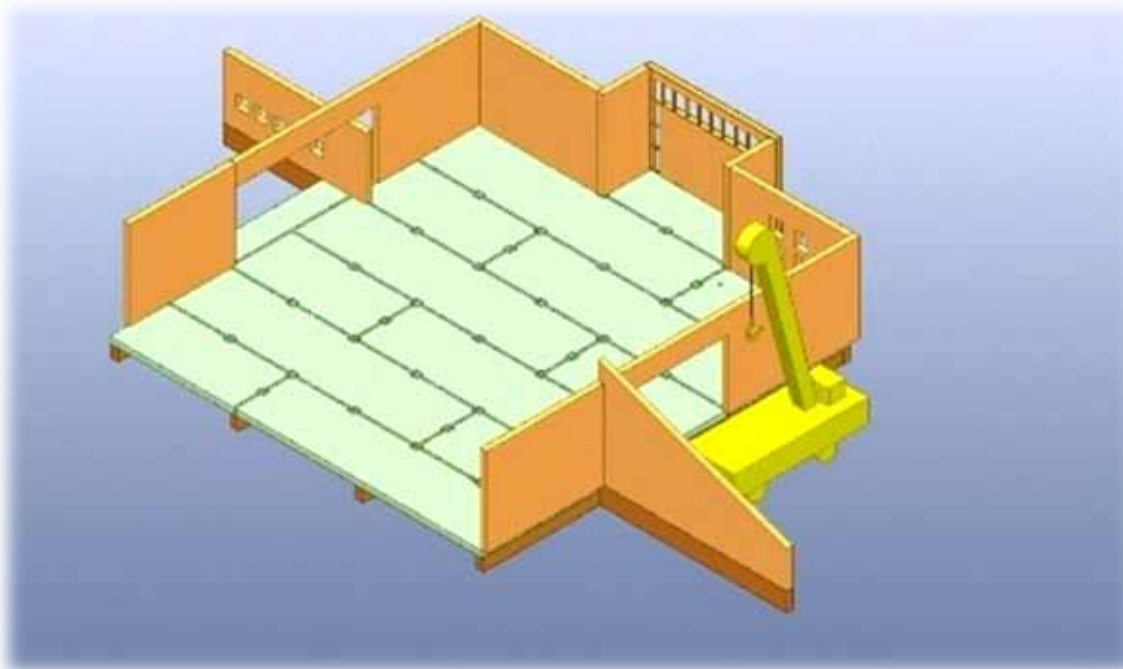
INSTALLING EXTERNAL WALL PANELS



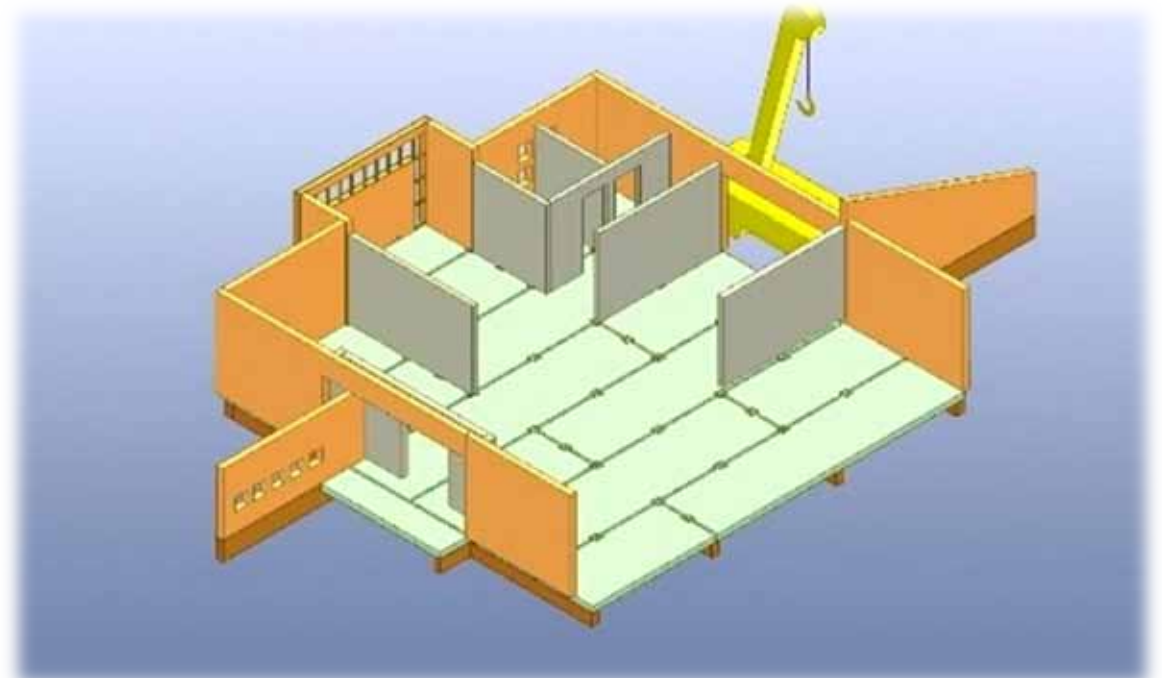
DRY RUN OF IHI PANELS FOR PRESENTATION CENTER OFFICES

SEQUENCE OF IHI PANEL ASSEMBLY

INSTALLING EXTERNAL WALL PANELS



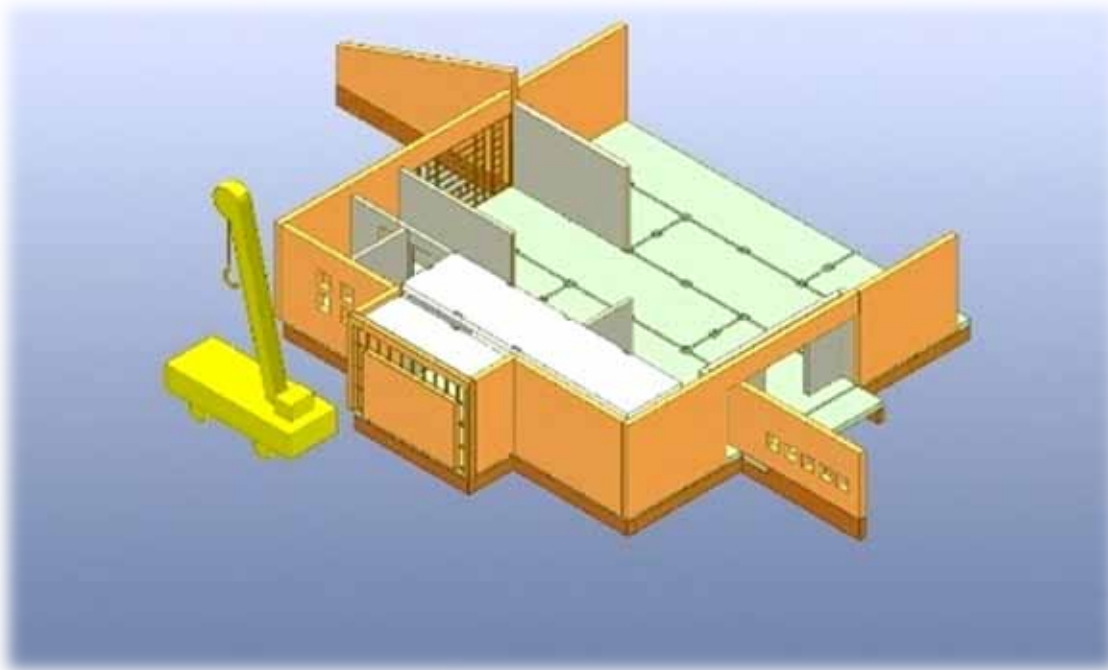
INSTALLING INTERNAL WALL PANELS



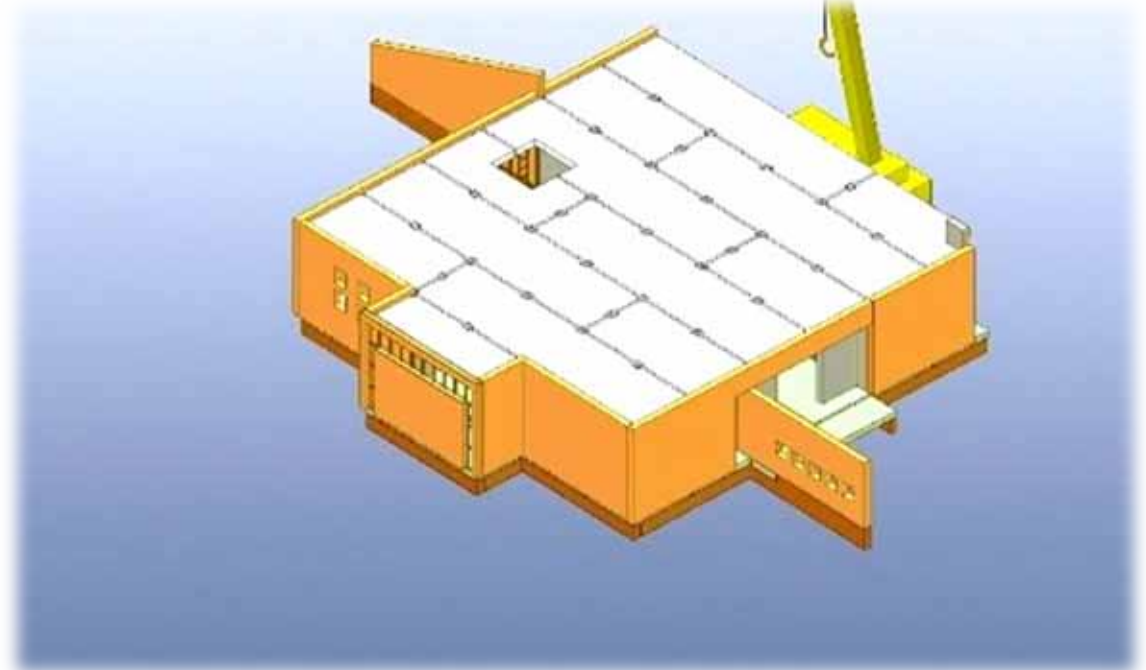
DRY RUN OF IHI PANELS FOR PRESENTATION CENTER OFFICES

SEQUENCE OF IHI PANEL ASSEMBLY

INSTALLING IHI ROOF SLABS

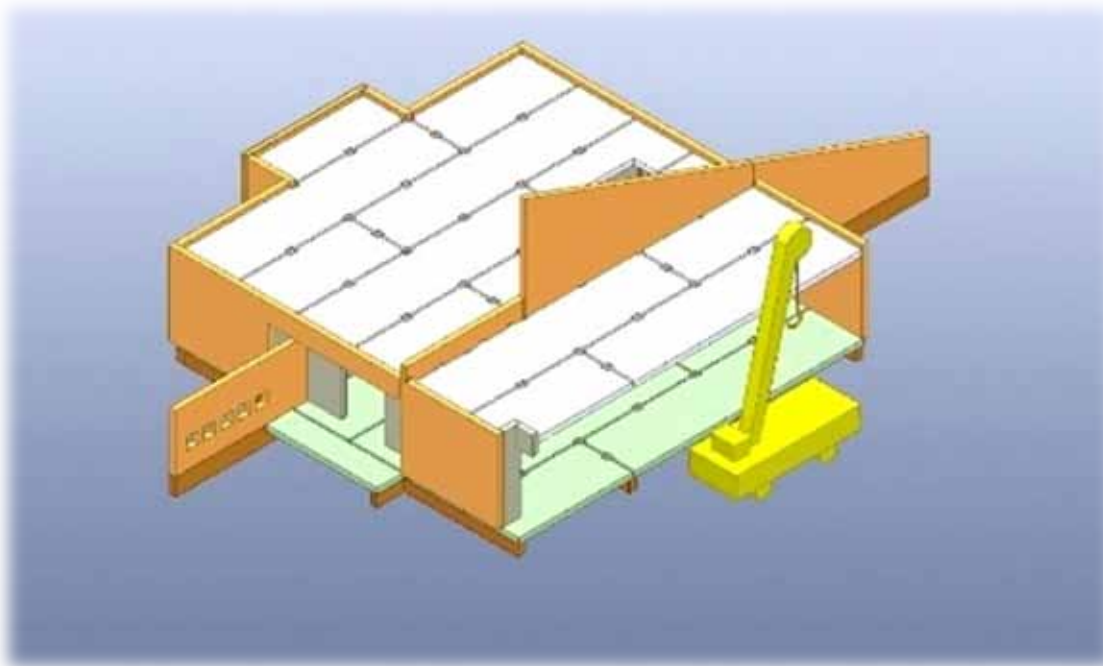


COMPLETION OF IHI ROOF SLABS

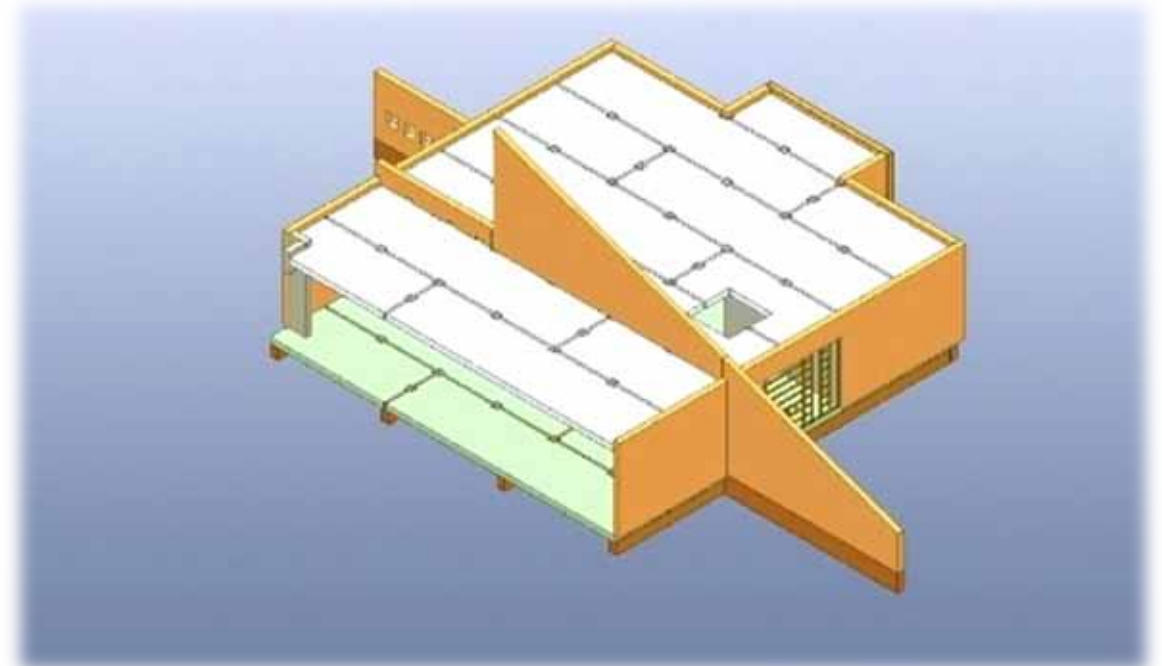


DRY RUN OF IHI PANELS FOR PRESENTATION CENTER OFFICES SEQUENCE OF IHI PANEL ASSEMBLY

INSTALLING TRIANGULAR ROOF PANEL



REAR VIEW SHOWING THE SIDE THAT
WILL BE CONNECTED TO THE TYPICAL
SUITE



PRESENTATION CENTER

INTERIOR VIEW OF THE PRESENTATION CENTER OFFICES – SOME OF THE VERTICAL SUPPORTS ARE TEMPORARY, INSULATED CEILING PANELS ARE READY FOR CONCRETING.



DRY RUN OF THE PANEL FRAME ASSEMBLY OF THE PRESENTATION CENTER OFFICES



OVERALL VIEW OF THE PRESENTATION CENTER OFFICE SPACE INSIDE THE IHI R&D AND MANUFACTURING FACILITY



OVERALL VIEW OF THE PRESENTATION CENTER OFFICE SPACE INSIDE THE IHI R&D AND MANUFACTURING FACILITY





INTERNAL VIEW OF PRESENTATION CENTER OFFICE SPACE SHOWING THE PERFECTLY SMOOTH FLOOR PANELS SEALED IN GREEN. THE 3 YELLOW VERTICAL SUPPORTS (*SHOWN ABOVE*) ARE TEMPORARY AND WILL BE REMOVED ONCE THE PANEL FRAME DRY RUN ASSEMBLY IS DISMANTLED FOR CONCRETING THE PANELS.



INTERNAL VIEW OF THE PRESENTATION CENTER OFFICE SPACE SHOWING THE MAIN ENTRANCE. THE EXTERIOR FEATURES ARE NOT ASSEMBLED DUE TO SPACE LIMITATIONS.



VIEW OF A LARGE WINDOW SUB-FRAME WITH TEMPORARY BRACING PAINTED IN YELLOW. THE SKYLIGHT SHOWN INSIDE WILL CREATE A NICE FEATURE ABOVE THE 3-D MODEL OF THE OPTIMA TOWERS.

OVERALL VIEW OF THE OFFICES OF THE PRESENTATION CENTER INSIDE THE IHI R&D AND MANUFACTURING FACILITY. THE TEMPORARY YELLOW FRAME WILL BE REPLACED WITH THE COMMON PARTITION BETWEEN THE OFFICE SPACE AND THE TYPICAL CORNER UNIT DURING THE FINAL ASSEMBLY ON SITE. THE BRACKETS FROM BOTH SECTIONS WILL HAVE A PERFECT MATCH.

