

# IHI /GARMECO GROUP OF COMPANIES



IHI is Building Tomorrow's World.....**Today..!**



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# IHI PRESENTATION – October 2018



*Roger A. Rached is a civil/structural engineer with a Masters degree from Stanford University who pioneered computerized construction design after wide-ranging managerial, marketing and engineering experience in international construction.*

## **A MESSAGE FROM IHI's PRESIDENT & CEO**

Never in history has the demand for quality construction been greater than it is today. Where the spirit of humanity goes, so does our need for shelter. Yet as the new century dawns, quality is as much in demand as quantity. IHI has dedicated itself to providing both at economies of scale attractive to the world market.

With RAR's customized software, the completion of our three show homes, our R&D facility and Office Building as well as 40 other different products, (including installation of state-of-the-art electrical and mechanical systems) completed on our 80,000 square foot R&D and Manufacturing Facility in North Delta, British Columbia, the company moves forward to bring the IHI System directly to world markets.

Most manufactured structures are restricted in physical layouts and aesthetic features. IHI's System is neither restricted by panel size nor in its ability to be extremely flexible in aesthetic qualities. Unlike those of its competitors, the IHI System easily allows features like vaulted ceilings, cantilevered structures, and cutouts.

Whether for single or multiple-residential units, industrial or commercial structures, IHI's approach provides Architectural diversity as boundless as the designer's imagination. RAR's integrated customized software substantially lowers housing affordability levels.

Whether you are an Architect, an Engineer, a Developer or a potential Joint Venture Partner, I invite you to join the IHI revolution with IHI's construction system, supported by a technology beyond state-of-the-art. Supplying flexibility, precision, and economy, IHI is the bellwether for 21st Century construction solutions.

**IHI Comprehensive Presentation Illustrating IHI's  
Unique Technology and The Multitude of Different  
Products Produced by IHI**

Please double click the link below to see more details of some projects designed by IHI Planning Ltd. by activating the corresponding links therein.

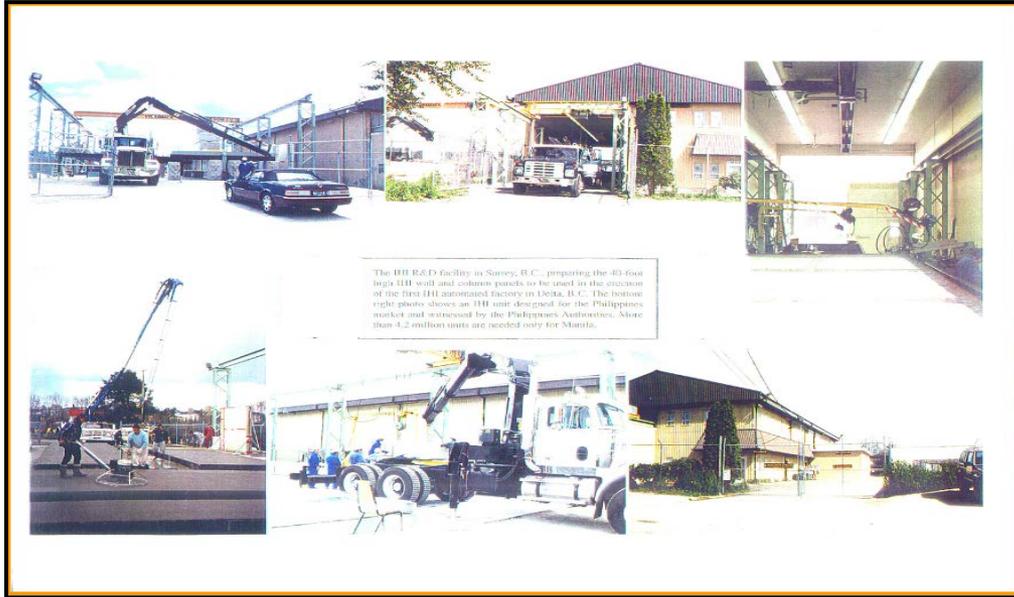
<http://www.ihl.ca/i/pptnew/slide1.HTM>

# Advancing Construction Industry Unique Technology



- **PATENTS ISSUED WORLD-WIDE**
- **STRENGTH**
- **DURABILITY**
- **AVAILABILITY OF INERT MATERIAL WORLD-WIDE**
- **ACCURACY**
- **COST SAVING**
- **SPEED**
- **FLEXIBILITY IN DESIGN**

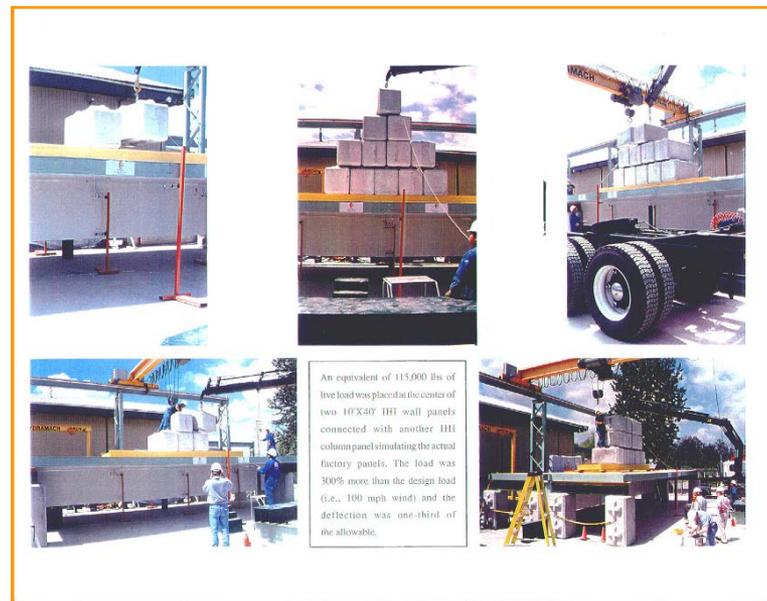
# Full Scale Tests



## EXTENSIVE FULL SCALE LIVE LOAD TESTS FOR IHI R&D FACILITY PANELS PRIOR TO ASSEMBLY



**FIRE TESTS**



# LIVE LOAD TEST ON IHI THIN STRESSED CONCRETE INSULATED ENVIROMAT MOBILE ROAD PANELS (RIG PANELS)

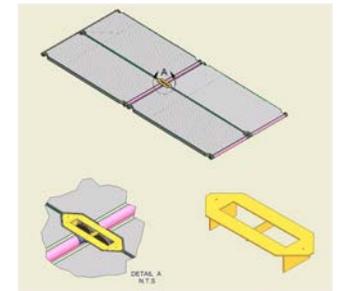
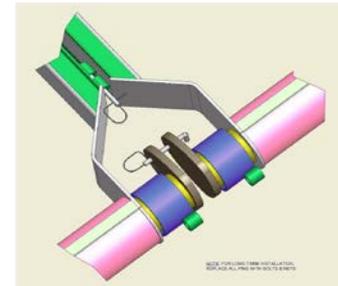
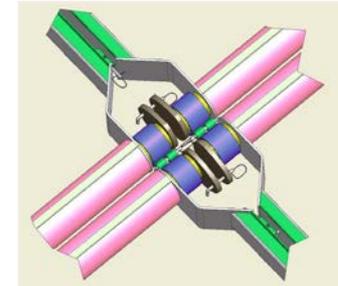
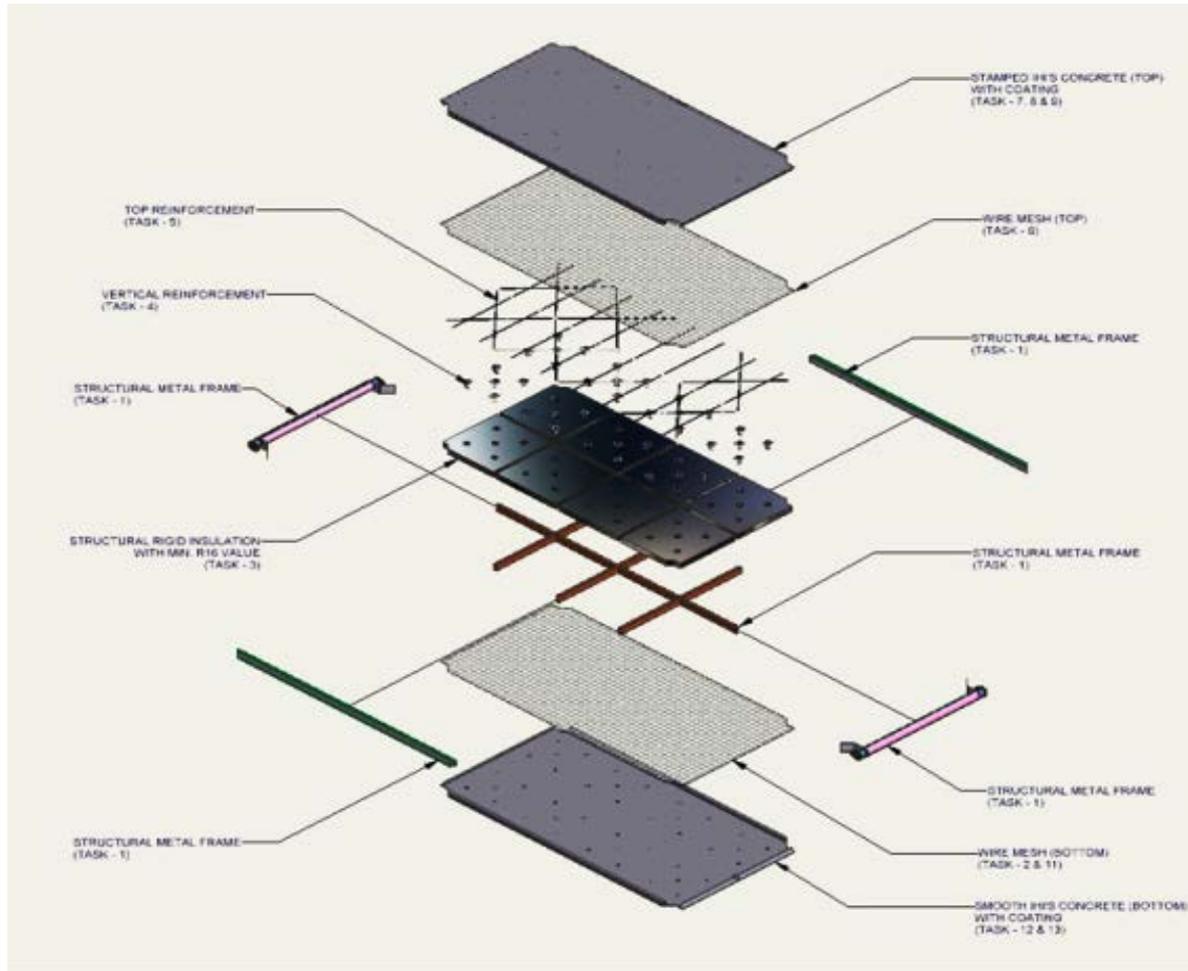


PANELS ARE ABLE TO EASILY WITHSTAND HEAVY EQUIPMENT DYNAMIC LOADING



AN ADVANCED VERSION OF THE ENVIROMAT CAN WITHSTAND 40 TONS OF DYNAMIC LOADING!

# LIVE LOAD TEST ON IHI THIN STRESSED CONCRETE INSULATED ENVIROMAT MOBILE ROAD PANELS (RIG PANELS)

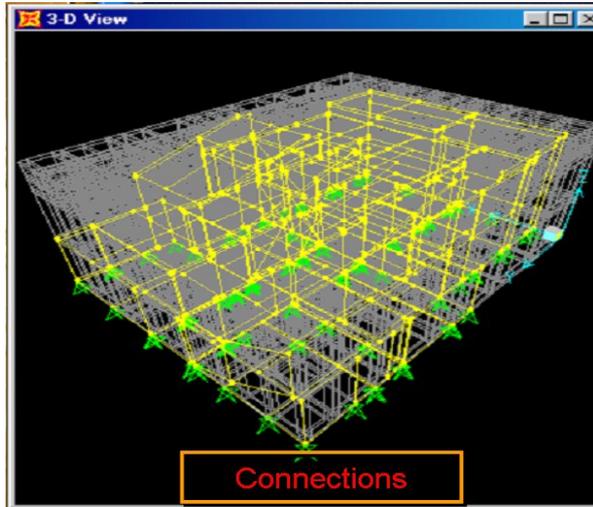


# Extensive Structural Analysis Prior to Manufacturing

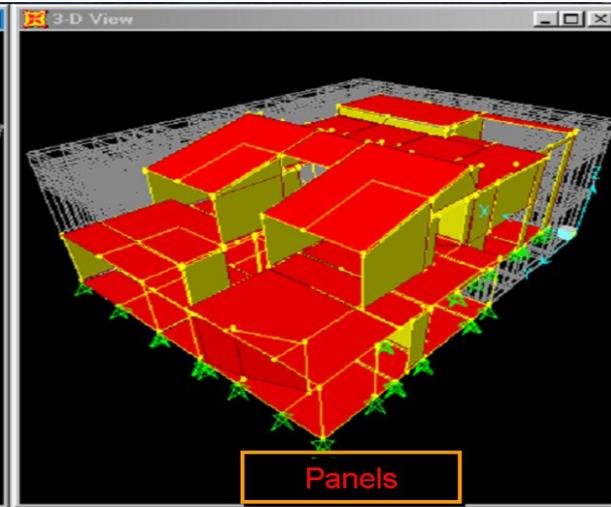
RAR Consultants Ltd.



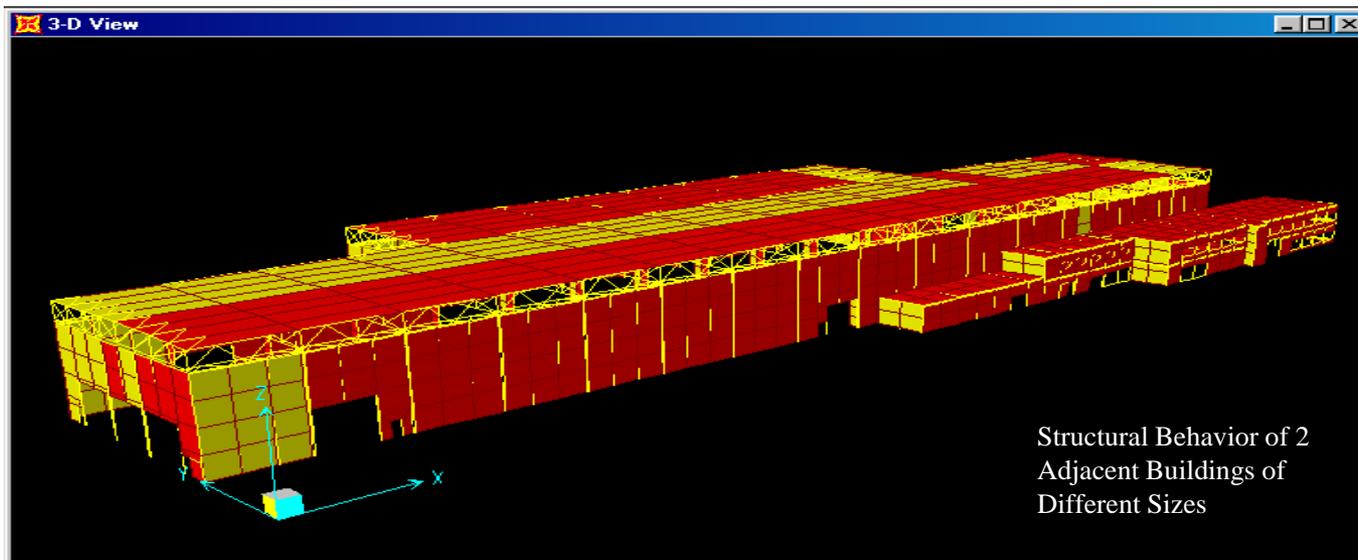
## IHI VANCOUVER SHOW HOME



Connections



Panels

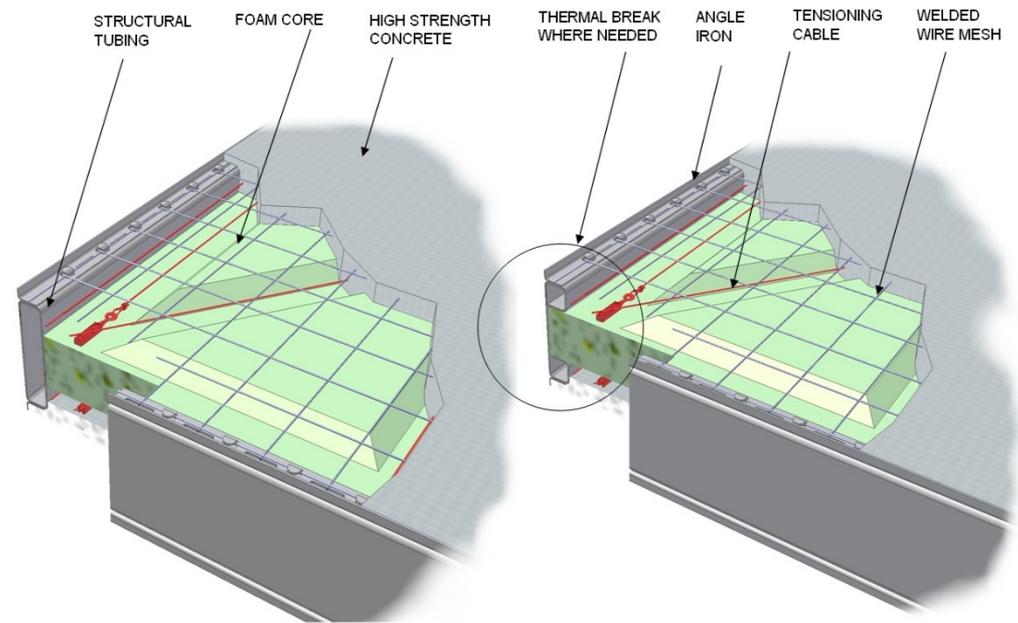


Structural Behavior of 2 Adjacent Buildings of Different Sizes

# Building Design & Construction Panel Assembly System



- ❖ **COST SAVINGS ON MAJOR RAW MATERIALS**
- ❖ **UP TO 65% OF REDUNDANT CONCRETE REPLACED WITH RIGID FOAM**
- ❖ **BOOSTS THERMAL & SOUND INSULATION**
- ❖ **COMPETITIVE ADVANTAGE**
- ❖ **GUARANTEED PRECISION, COST SAVINGS & SPEED**



TYPICAL EXTENSION WALL AND FLOOR SLAB SECTION

# Range of Diverse Applications Building Design and Panelized Construction



VIEW OF THE FOUNDATION BEAMS

# IHI-Panelized Building – Advantages:



**STRENGTH**

- ❖ **WITHSTANDS NATURE'S TOUGHEST CONDITIONS**
- ❖ **MINIMUM CRITERIA:**
- ❖ **1-2 HR. FIRE RATING**
- ❖ **300 MPH WINDS**
- ❖ **EARTHQUAKES: 8 ON RICHTER SCALE**



**COST SAVINGS**

- ❖ **LOWER LABOR COSTS**
- ❖ **LOWER OVERHEAD COSTS**
- ❖ **LOWER SHIPPING COSTS**
- ❖ **LOWER SUPERVISION COSTS**
- ❖ **LOWER FINANCIAL COSTS**
- ❖ **VIRTUALLY NO WASTE**
- ❖ **RAW MATERIAL IS AVAILABLE AND RECYCLABLE**



**SPEED**

- ❖ **FASTER THAN CONVENTIONAL METHODS**
- ❖ **APPEALING TO DEVELOPERS AND ARCHITECTS**



**VALUE ADDED PRODUCT**

- ❖ **EXTRA DESIGN, FINISHING AND SERVICE FEATURES**
- ❖ **SUPERIOR INSULATION & CLIMATE CONTROL**
- ❖ **LIGHTING & SECURITY**

Traditional Construction Buildings	IHI System Buildings
<p><b>1</b> HIGHER COST</p>	<p><b>1</b> LESS EXPENSIVE</p>
<p><b>2</b> UNPREDICTABLE QUALITY</p>	<p><b>2</b> HIGHEST QUALITY</p>
<p><b>3</b> SLOW CONSTRUCTION</p>	<p><b>3</b> FAST CONSTRUCTION</p>
<p><b>4</b> 41 TREES NEEDED TO BUILD A 1200 Sq.ft HOME AND IS NOT DURABLE &amp; SUBJECT TO MOLD/BACTERIA EXPOSURE.</p>	<p><b>4</b> ENVIRONMENTALLY FRIENDLY. EXTREMELY DURABLE. SUBJECT TO MOULD AND BACTERIA RESISTANCE.</p>

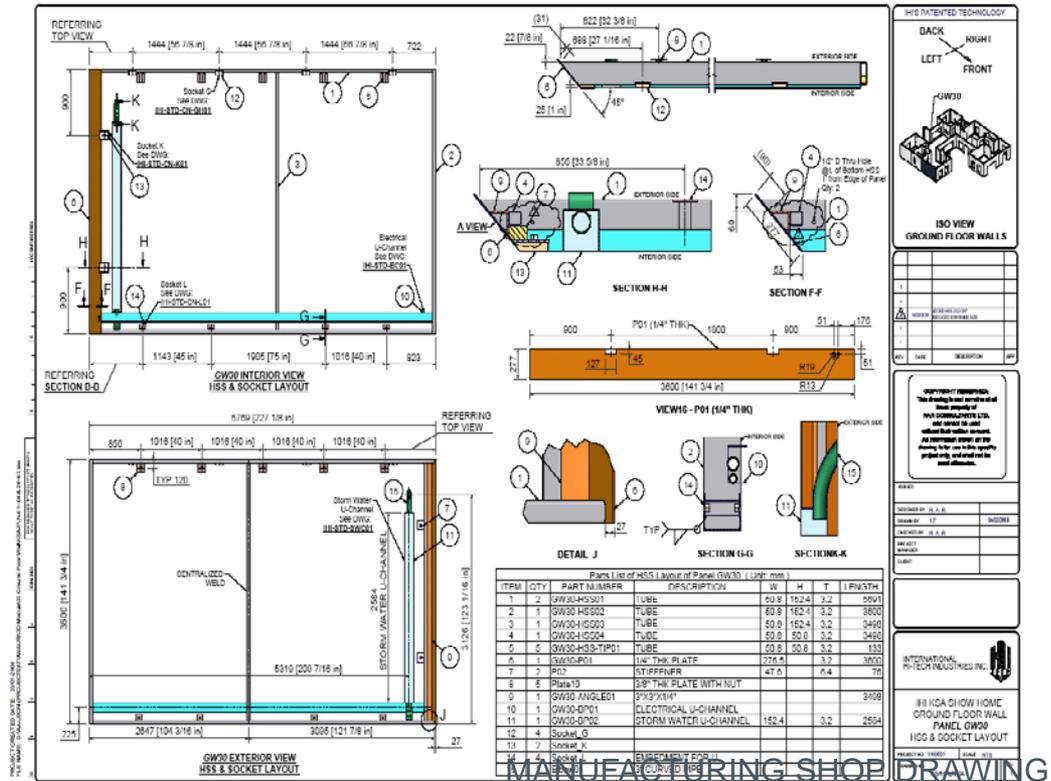


DEVELOPED IN-HOUSE

ELIMINATES DESIGN CONSTRAINTS

ANALYSIS OF ARCHITECTURAL DRAWINGS

TRANSLATES INTO BUILDING STRUCTURAL PANELS AT THE FACTORY





## DISCOVERY CHANEL SEGMENT ON IHI

TO WATCH THE VIDEO PLEASE DOUBLE CLICK ON THE LINK BELOW:

<https://www.youtube.com/watch?v=F6yFX-8UkGs>

# Range of Diverse Applications



**MARINAS**

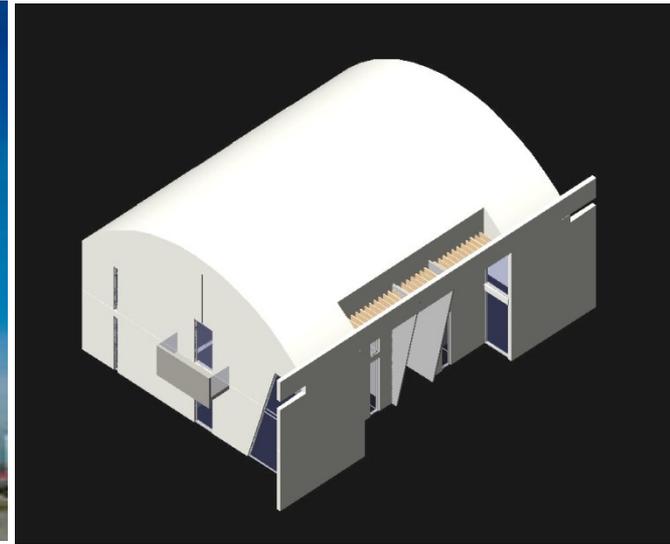


**RESIDENTIAL**



**COMMERCIAL**

# Range of Diverse Applications



**INDUSTRIAL**



**MOBILE STORAGE WITH TEMPERATURE AND HUMIDITY CONTROL.**



**LOW AND HIGH RISE BUILDINGS**

# Range of Diverse Applications Sculptural & Demountable Staircase

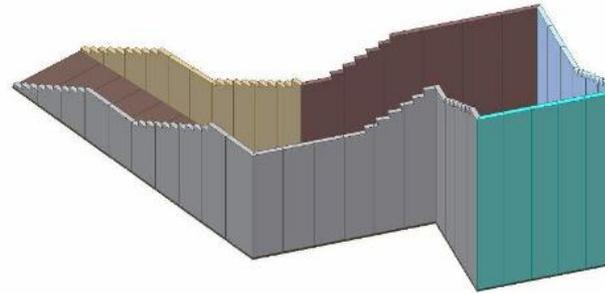


## NEW HYACK SQUARE – NEW WESTMINSTER BC

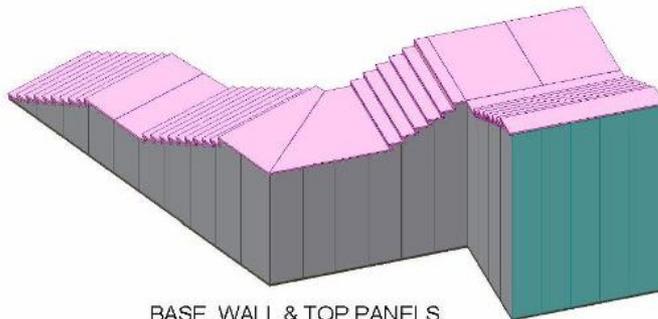
**ISOMETRICS SHOWING THE ONLY 2" (5 cm) FOUNDATION PANELS INTEGRATED WITH SERIES OF IHI PANELS ( WITH ONLY 2" THICK HIGH STRENGTH CONCRETE LAYER ON AVERAGE) FORMING A 3-D PLATE DESIGN STRUCTURE.**



BASE PANELS



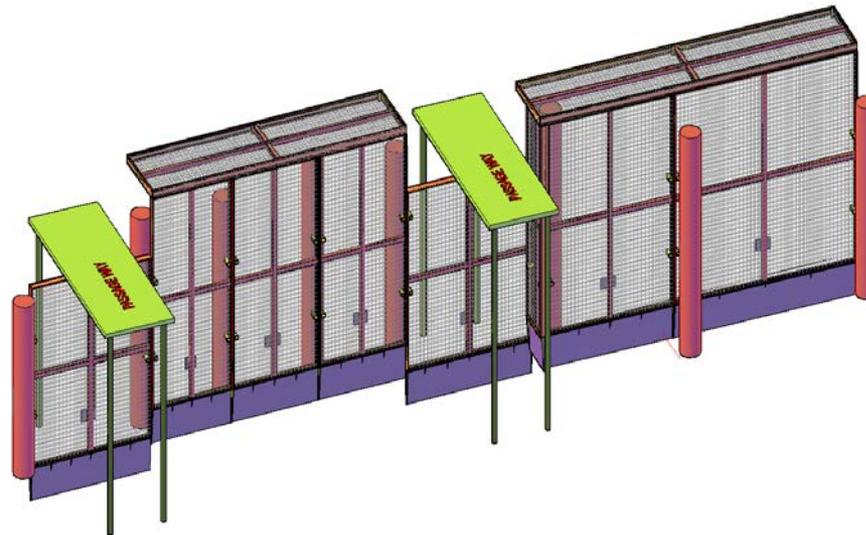
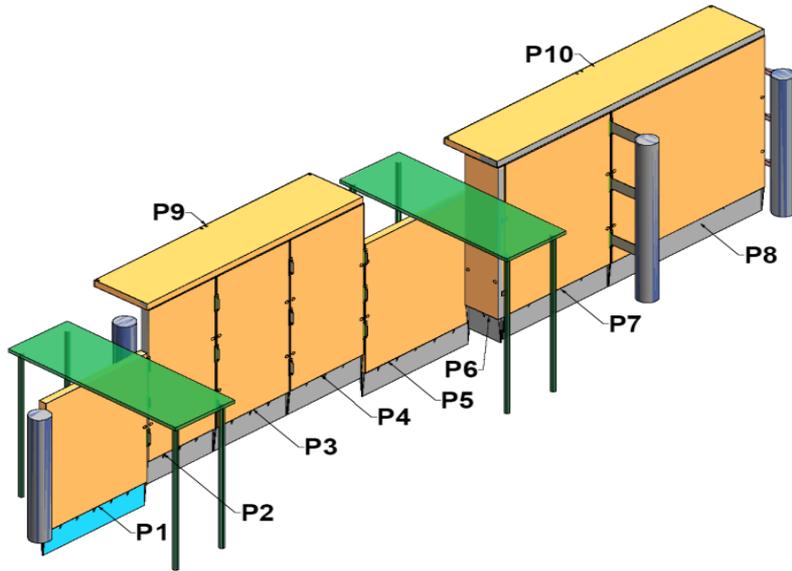
BASE & WALL PANELS



BASE, WALL & TOP PANELS



# Range of Diverse Applications Retaining Sea Wall



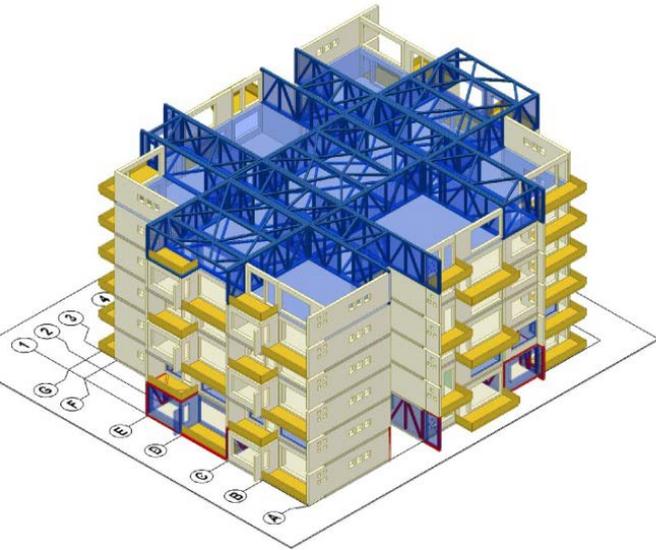
# Range of Diverse Applications

## OPTIMA Residential Complex Option 1 – Surrey BC

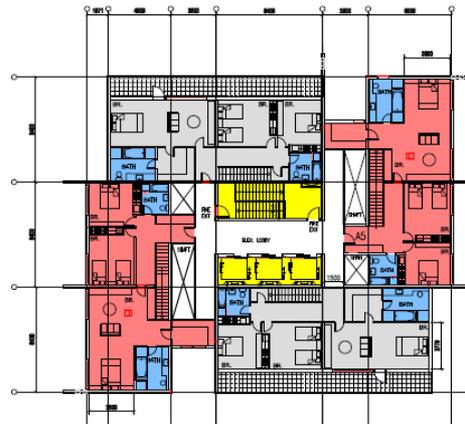


**3 TOWERS COMPLEX AND CHILD CARE CENTER - PROJECT IN PROGRESS NOT YET EXECUTED**

# Range of Diverse Applications OPTIMA Residential Complex – Surrey BC



Advanced IHI  
Structural Design for  
High-Rise Buildings



Floor Plan – Tower 3



Floor Plan Tower 1



**OPTION 2**  
**OPTIMA Twin Towers**  
**With Commercial Center**  
**and Office space.**



# OPTIMA Twin Towers – Option 2 view from the South-East corner



OPTIMA LIVING TWIN TOWERS  
IHI PLANNING LTD.

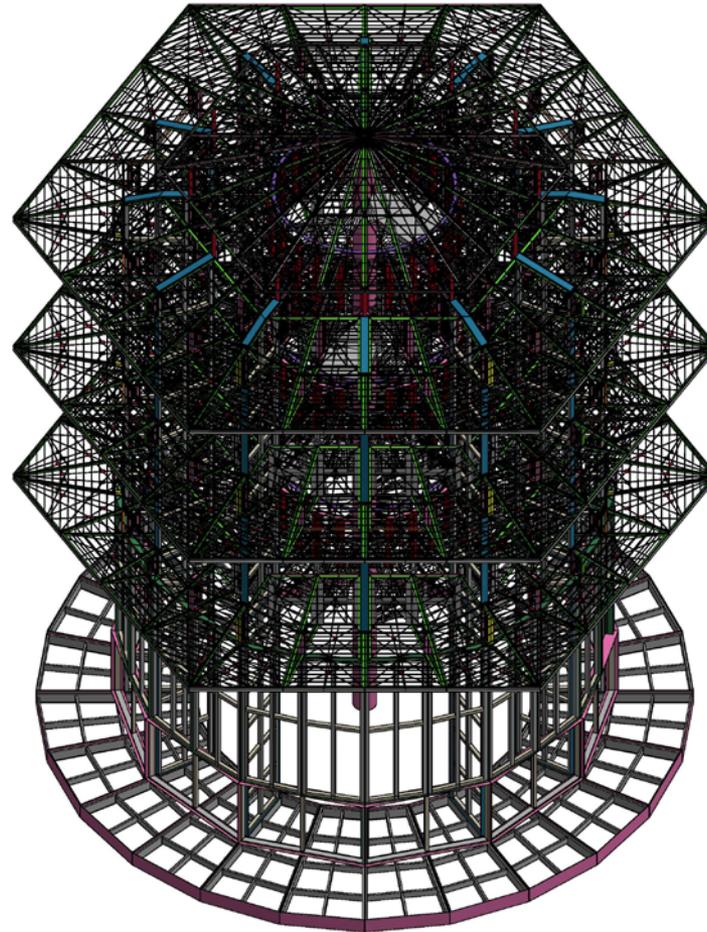
# OPTIMA Twin Towers with wind energy generating turbine at roof level –Under research, design and development - 2018

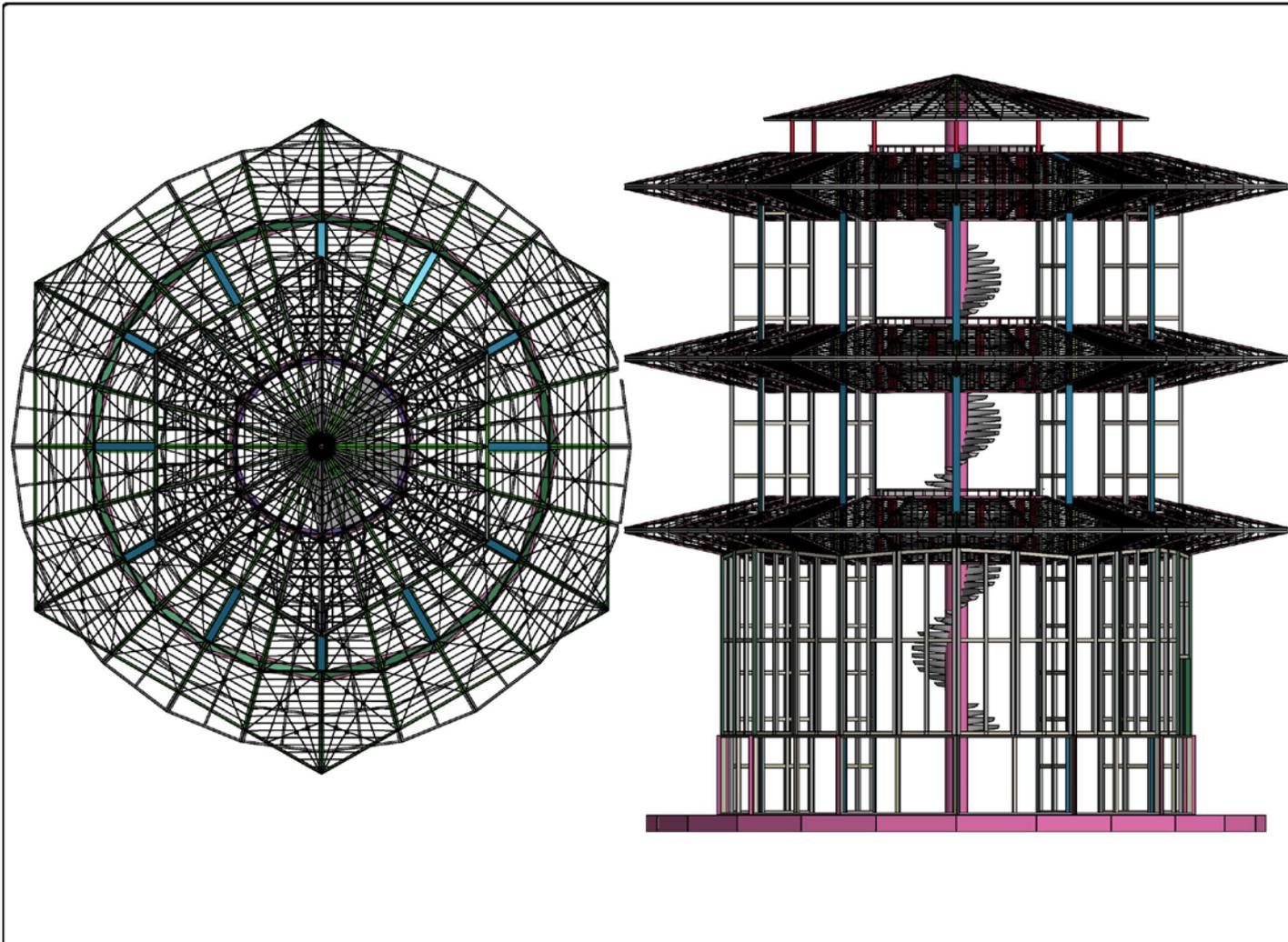


# OPTIMA Twin Towers with wind energy generating turbine – Under study



OPTIMA Twin Towers with wind energy generating turbine – Under study





## **CITY TV SEGMENT ON IHI**

**PLEASE DOUBLE CLICK ON THE LINK BELOW TO WATCH THE VIDEO ON YOUTUBE**

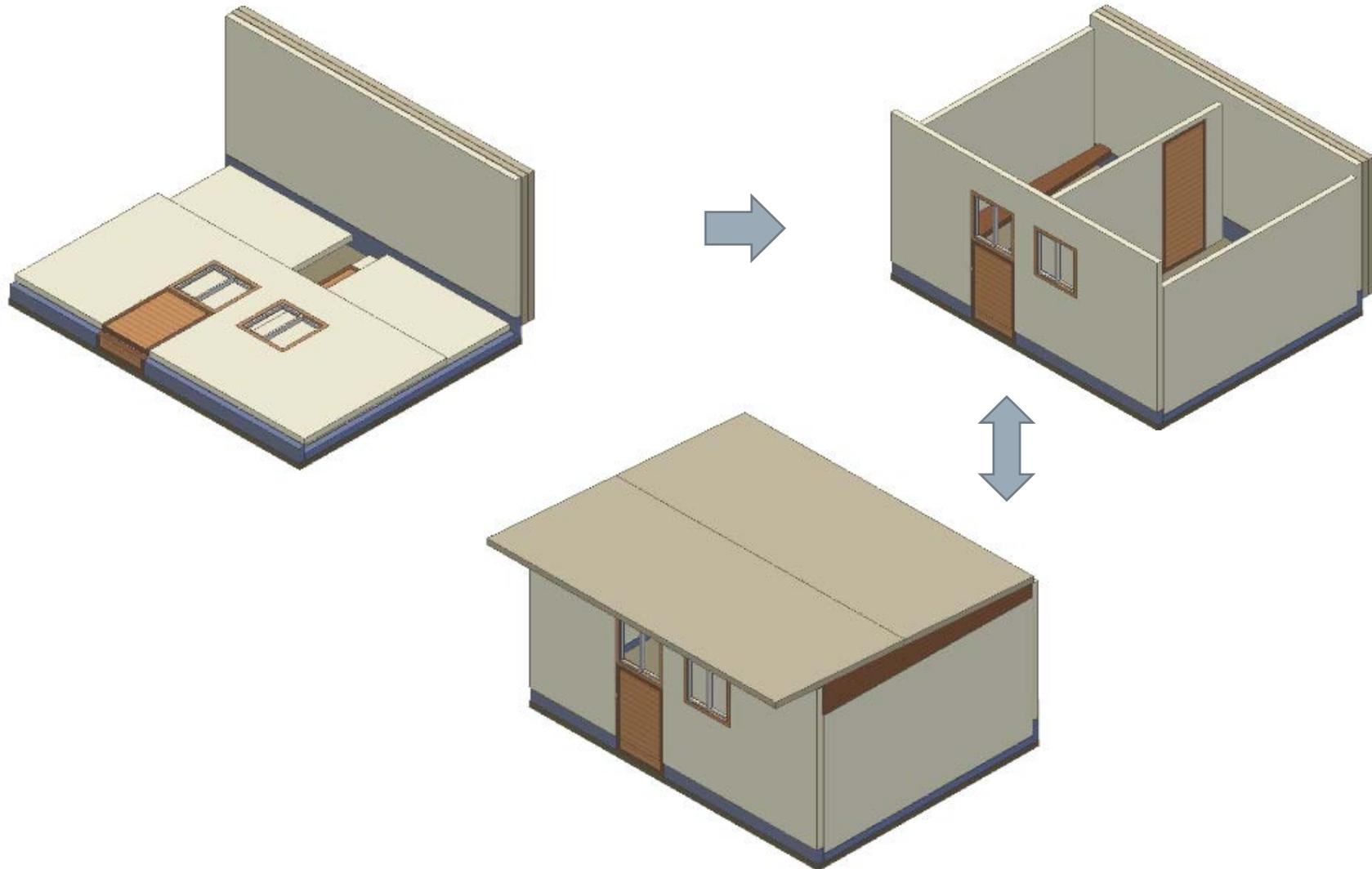
<https://www.youtube.com/watch?v=ogIWJ8VYFPI>

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# Mobile Low Cost Shelter



IHI CONTINUES TO RESEARCH AND DEVELOP AFFORDABLE SHELTER  
FOR THE BENEFIT OF ALL HUMANITY



# Building Design & Construction Panel Assembly System



**ELIMINATES DESIGN**

**CONSTRAINTS THAT PREVENTS  
COMMERCIAL LIABILITY**

**CAN COMPETE WITH  
CONVENTIONAL CONSTRUCTION  
METHODS**

**READY TO ACCEPT  
COMMERCIAL ORDERS**





## **BUSINESS TV SEGMENT ON IHI**

- › PLEASE DOUBLE CLICK ON THE YOUTUBE LINK BELOW TO WATCH THE VIDEO.

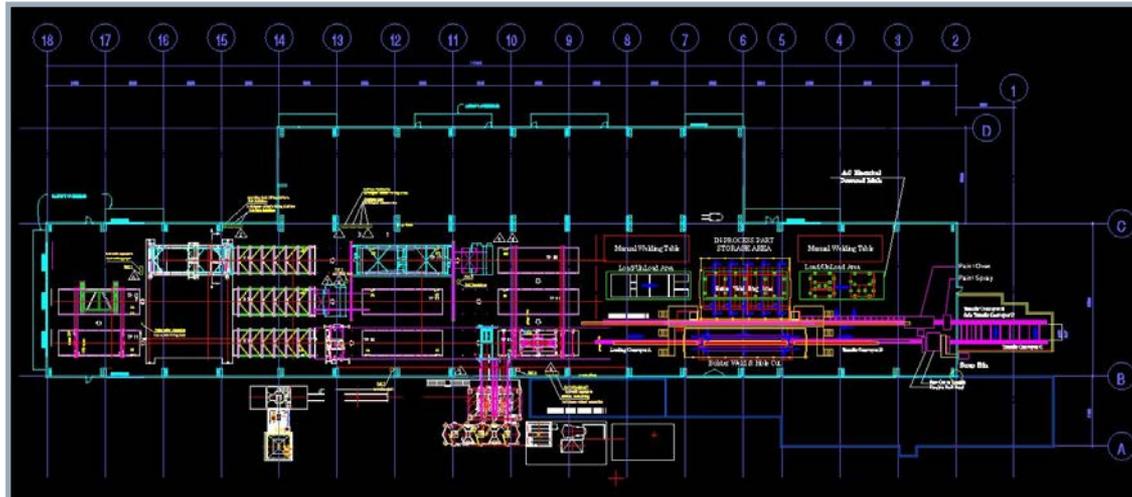
<https://www.youtube.com/watch?v=uwoTaxM99N0>

# Range of Diverse Applications

## IHI R&D & MANUFACTURING FACILITY IN DELTA, BC



**BUILT ENTIRELY WITH THE IHI SYSTEM, 80% EQUIPPED AND 80,000 SF**





## Fully Automated Concrete Placing & Finishing Equipment





## **AUTOMATIC CONCRETE PLACING/FINISHING**

› PLEASE DOUBLE CLICK ON THE YOUTUBE LINK BELOW TO WATCH THE VIDEO.

[https://www.youtube.com/watch?v=PIKMeC\\_DQeU](https://www.youtube.com/watch?v=PIKMeC_DQeU)

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# Durability LUXEMBOURG SHOW HOME



## LUXEMBOURG SHOW HOME AFTER 10 YEARS – BUILT OVER SOFT FOUNDATION



**EXTERIOR VIEWS – SHOW NO CRACKS  
OR ANY DIFFERENTIAL SETTLEMENT**

# Durability

## Show Home #1 in Luxembourg



**LUXEMBOURG SHOW HOME INTERIORS**



## IHI's FIRST SHOW HOME IN LUXEMBOURG

› PLEASE DOUBLE CLICK ON THE YOUTUBE LINK BELOW TO WATCH THE VIDEO.

<https://www.youtube.com/watch?v=7bkju1HljeU>

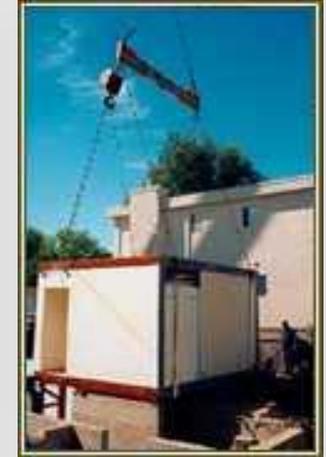
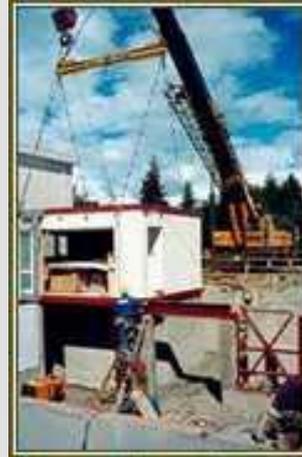
# Durability VANCOUVER SHOW HOME



# Durability VANCOUVER SHOW HOME



# Assembly of Vancouver Show Home Load Design Flexibility

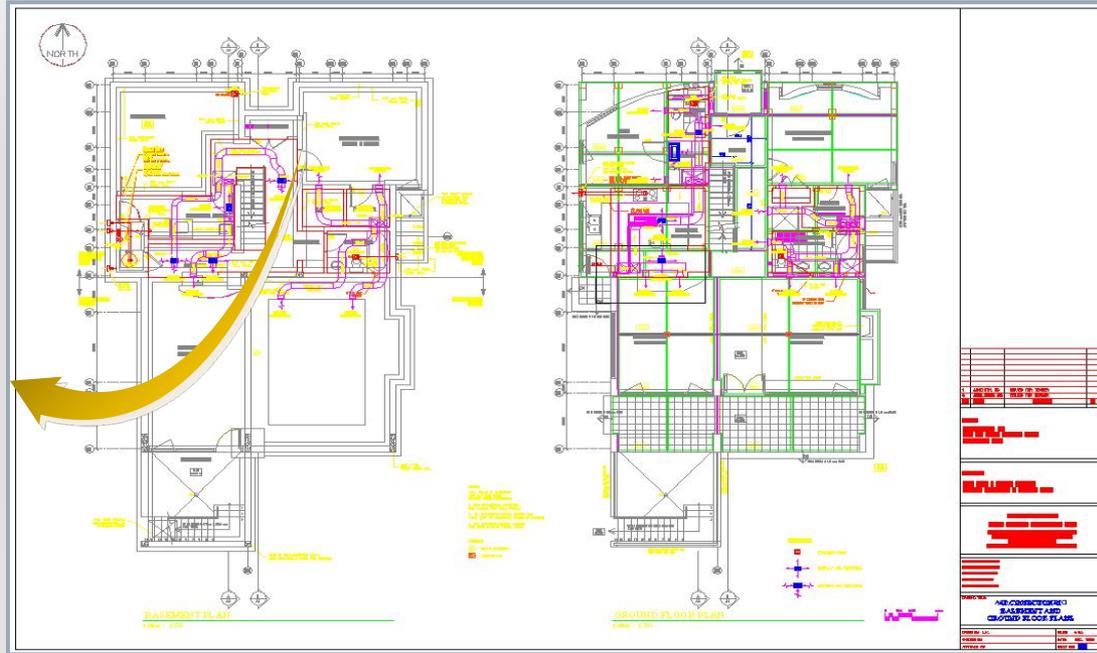
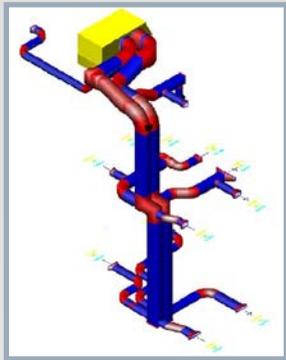


**ERECTION OF LARGE KITCHEN 3-D MODULE USING  
2 MOBILE CRANES.**



**ASSEMBLY OF A 600 SQ. FT. GARAGE IN 4.5 HOURS**

# Assembly of Vancouver Show Home MEP Integrated in the IHI Panels



HVAC Design



**INTEGRATED WATER/DRAINAGE PIPES INTEGRATED IN THE PANELS  
ACCESSIBLE FOR MAINTENANCE (EXPOSED FOR VIEWING).**

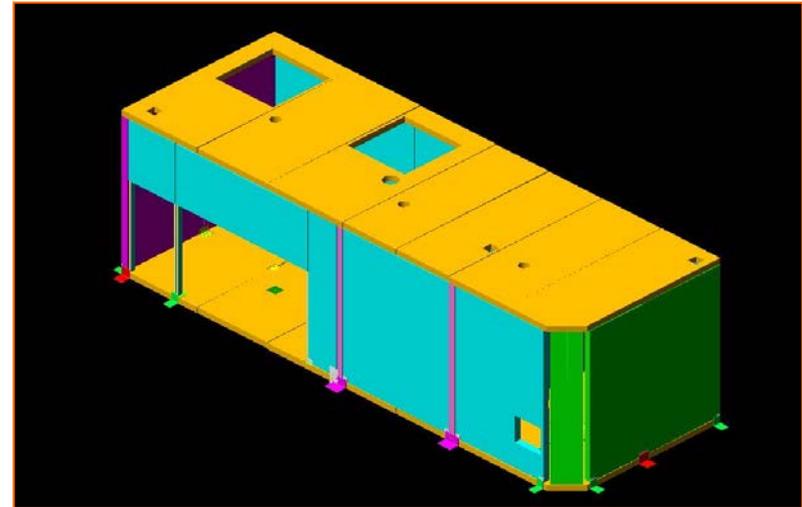


**IHI VANCOUVER SHOW HOME  
ASSEMBLED, FINISHED & DISMANTLED  
AT BC STADIUM IN VANCOUVER IN RECORD TIME**

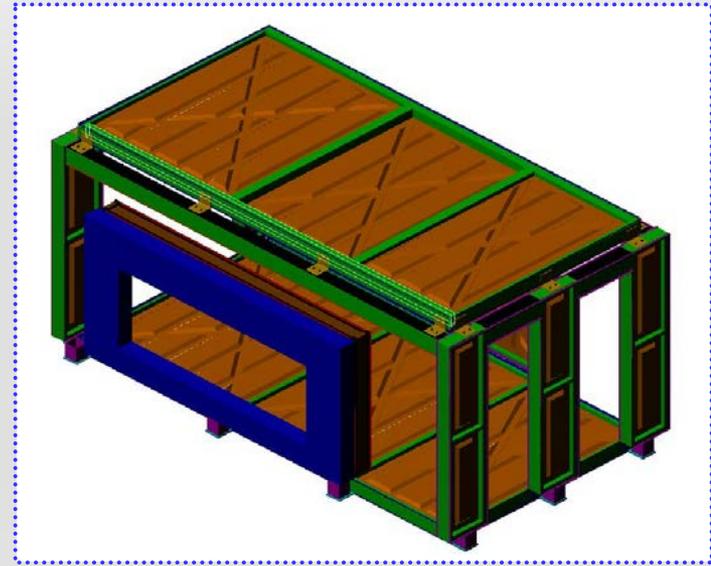
[https://www.youtube.com/watch?v=cTOvrncN4\\_I](https://www.youtube.com/watch?v=cTOvrncN4_I)

# Special Research Projects

## Acoustic Module for AT & T Power Generator



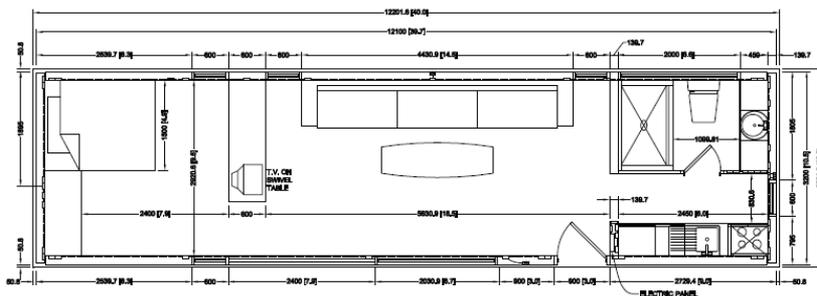
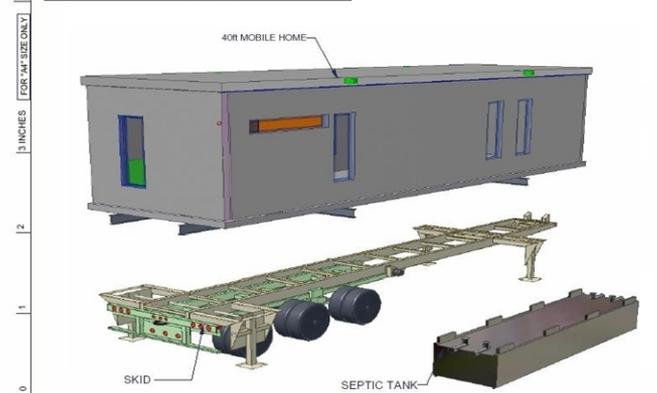
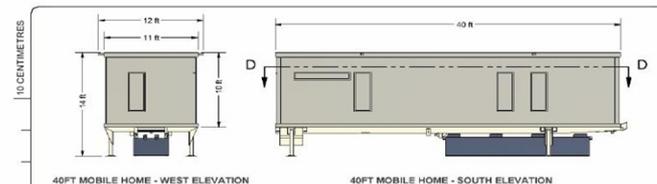
# From Concept-Final Product Extensive Analysis & Dynamic Live Loads Have Been Applied. Globe 2000 Module



**MODULAR UNIT SHOWS NO CRACKS IN SPITE OF ROUGH TRANSPORTATION AND TESTING**



# 40 FT. MOBILE HOME/OFFICE UNIT .



<b>PROJECT:</b> 40' RAR DESIGNED RES./COMM. MOBILE UNIT ON STRUCTURAL SKID	<b>REMARKS:</b> _____ _____	<b>PRIVATE &amp; CONFIDENTIAL</b> COPYRIGHT RESERVED: The drawings and designs are the property of RAR CONSULTANTS LTD. and cannot be used without their written consent. All information on this page is for your use only, and shall not be used otherwise.	
	<b>INVENTOR:</b> ROGER GEORGES ABOU-RAHED		

# DESIGN OF PROTOTYPE HOMES BY IHI PLANNING LTD.



**800 SF HOME**



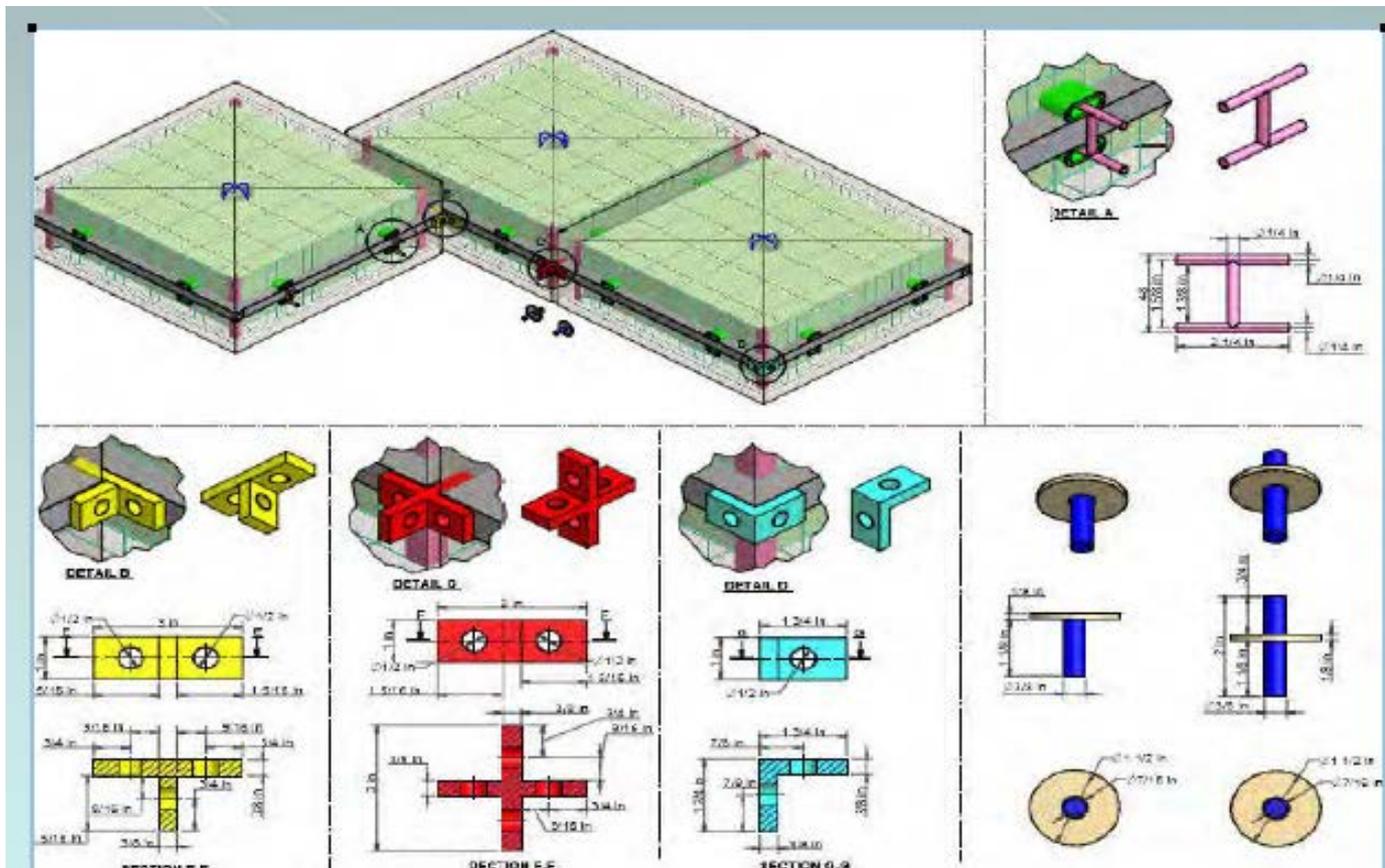
**1200 SF HOME**



# Design of Prototype Homes

## MODULAR PANELS – 2010E

These panels were developed to be small/textured/modular to be carried/handled by 2 persons without the need for a crane. The application can replace block work for interior and exterior conventional walls. IHI will create a small independent fully automated production line for this purpose alone.



# Prototype Homes under design and budgeting



**Design of a prototype minimalist design home on a 32' x 120' typical lot in Vancouver, BC**  
**IHI Planning Ltd.**

# Projects under Research, Design and Budgeting



**SIDE VIEW**

Project under Development  
KING EDWARD HOME IN VANCOUVER – 2000 SF



Facade on King Edward Avenue - 2018





# Project under Development

## KING EDWARD HOME IN VANCOUVER – 2000 SF



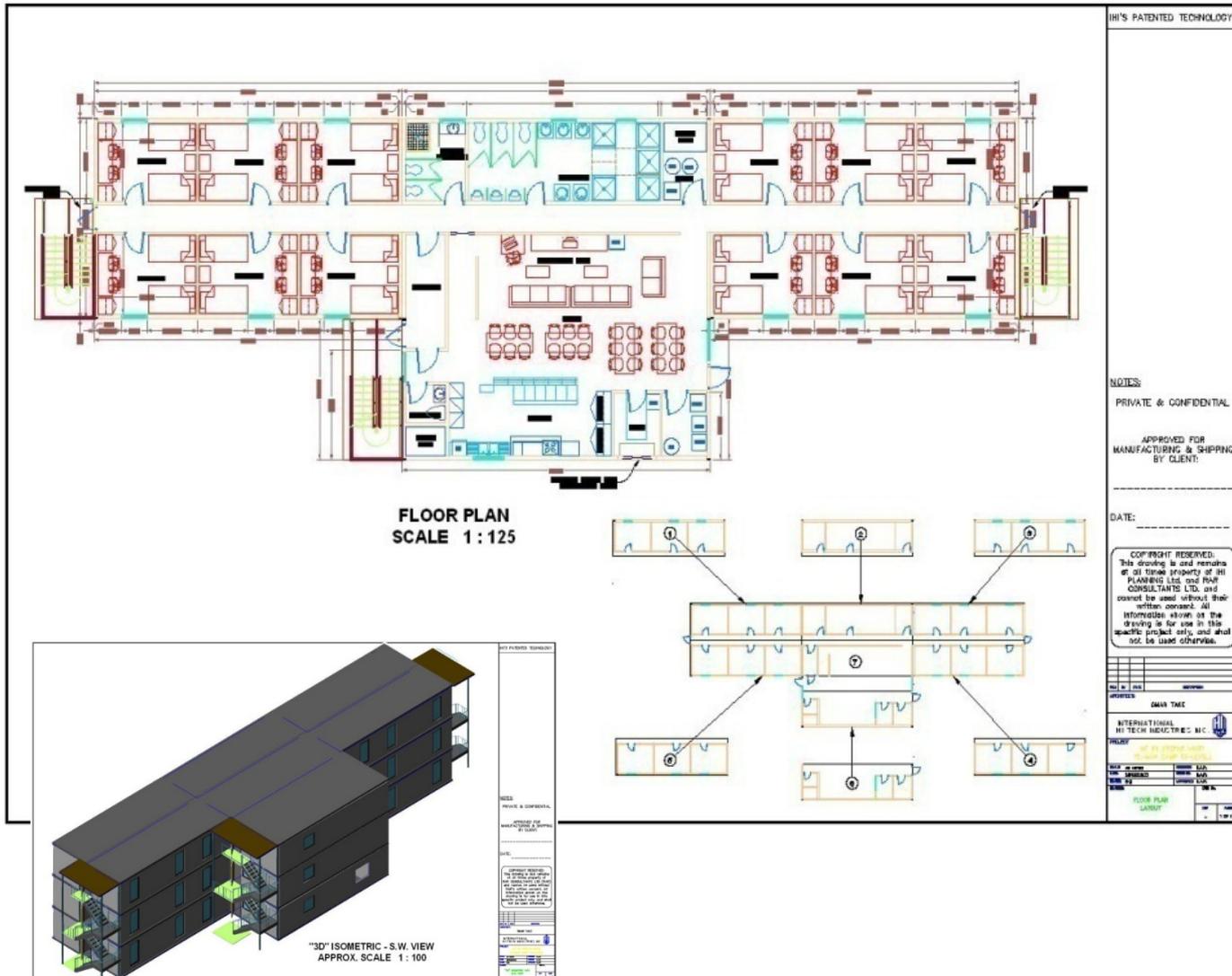
Project under Development  
KING EDWARD HOME IN VANCOUVER – 2000 SF



VIEW OF THE PATIO

# Projects under Research, Design and Budgeting

## MULTI-LEVEL MOBILE 72 MAN WORK CAMP BUILDING

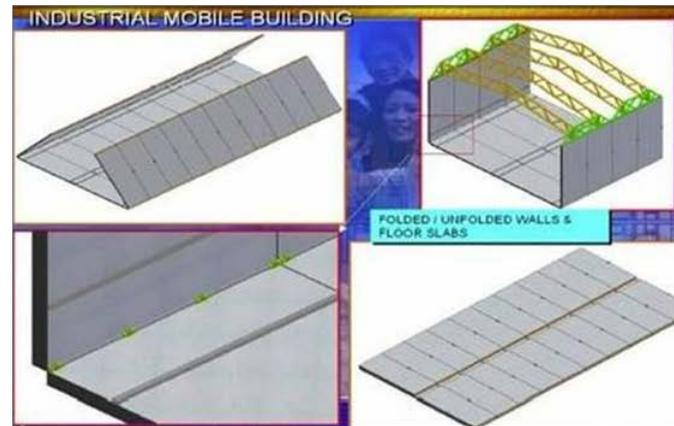
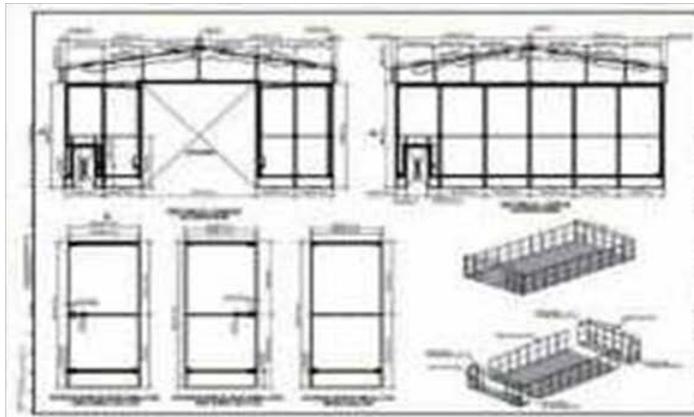
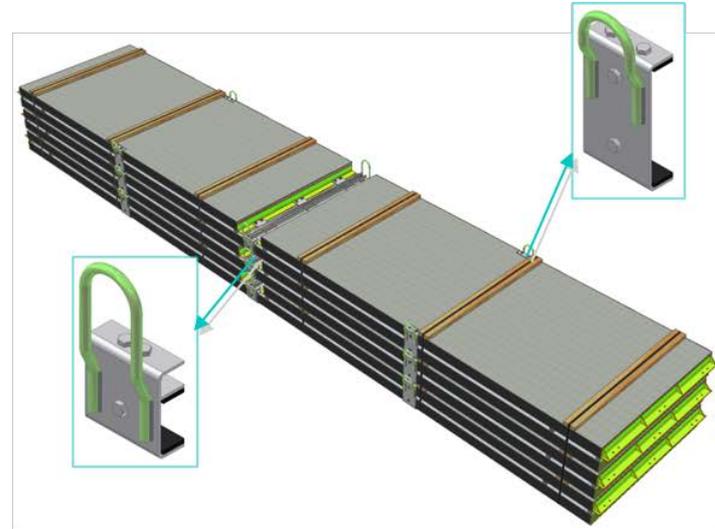
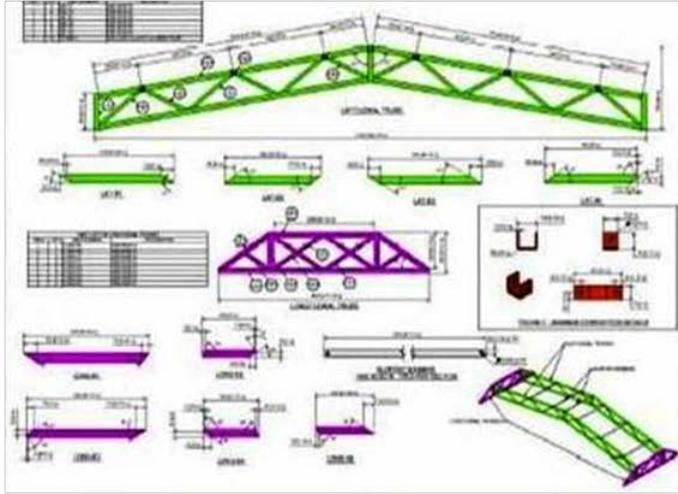




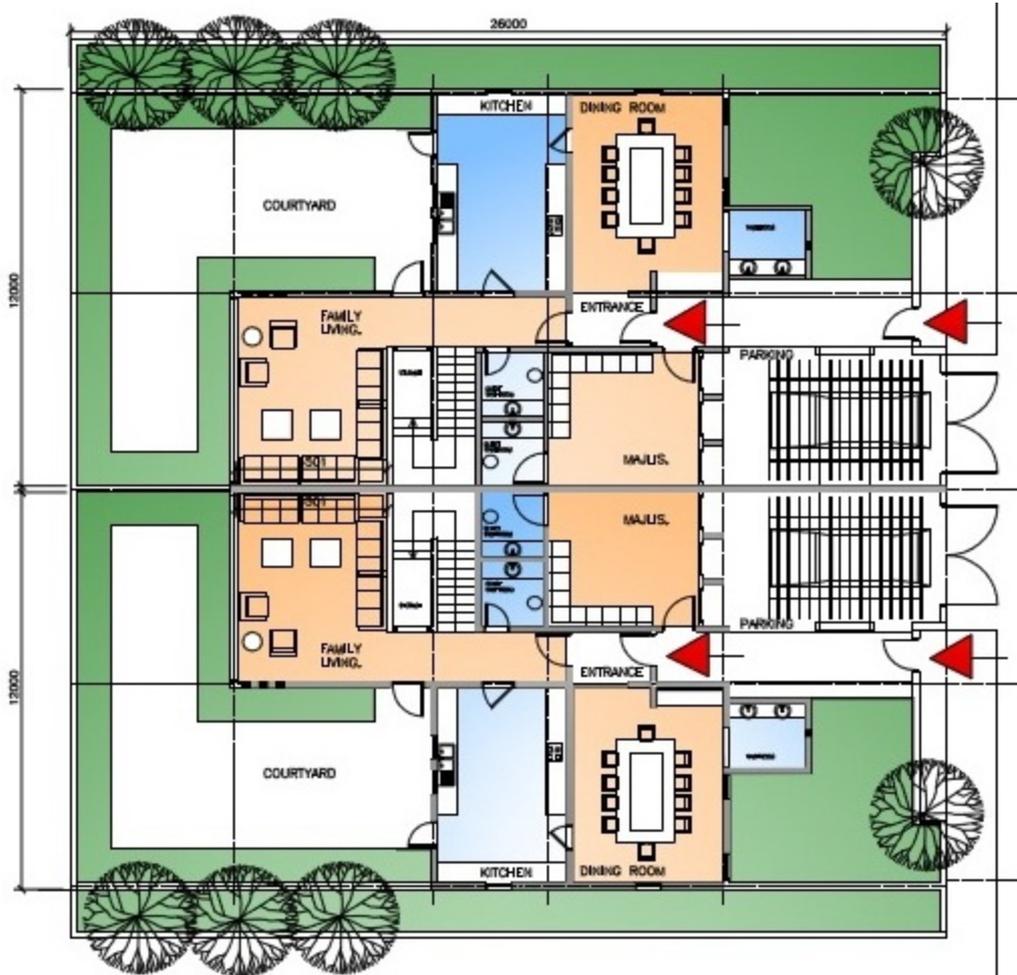




# EXECUTED PROJECTS INDUSTRIAL MOBILE BUILDING



## VALUE ENGINEERING - MEDITERRANEAN STYLE HOME

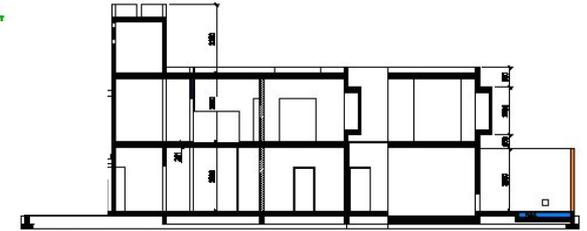


NORTH ELEVATION SC:1/100



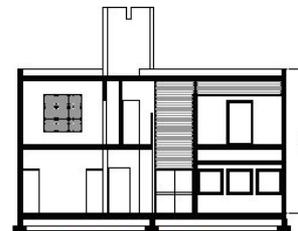
SOUTH ELEVATION SC:1/100

PROPOSED EXPANSION  
- 100% OF EXISTING

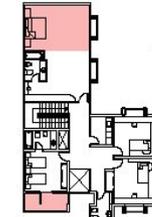


LONGITUDINAL SECTION AA SC:1/100

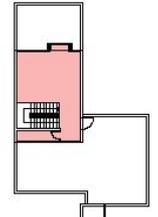
FUTURE EXPANSION SC:1/200



CROSS SECTION BB SC:1/100



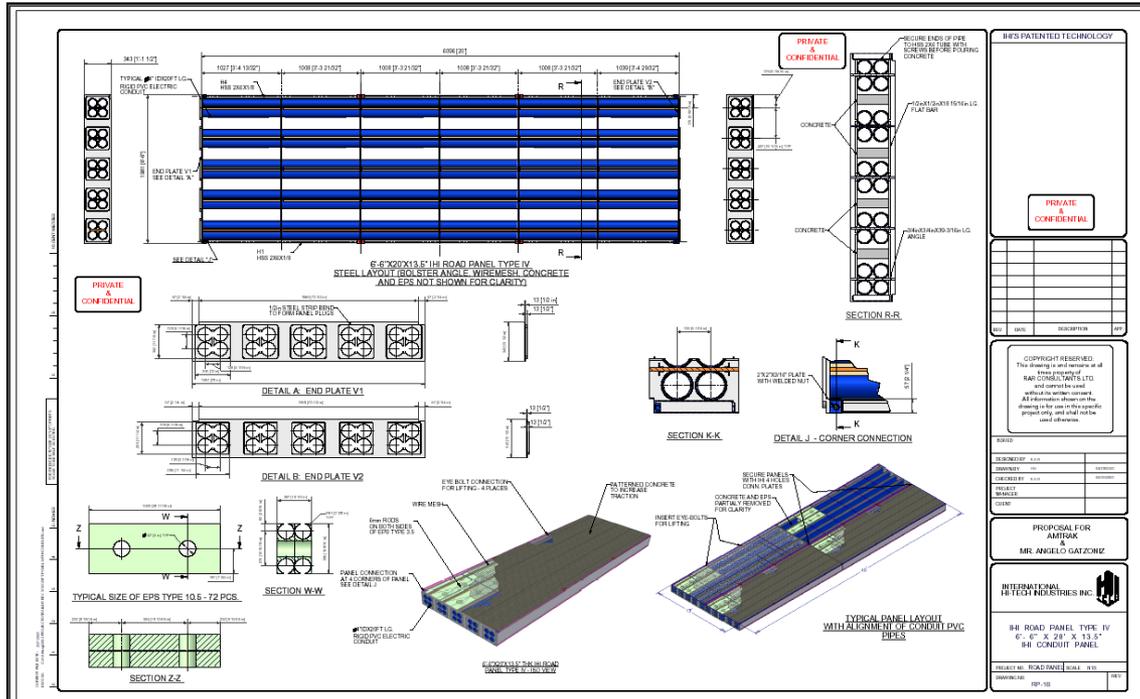
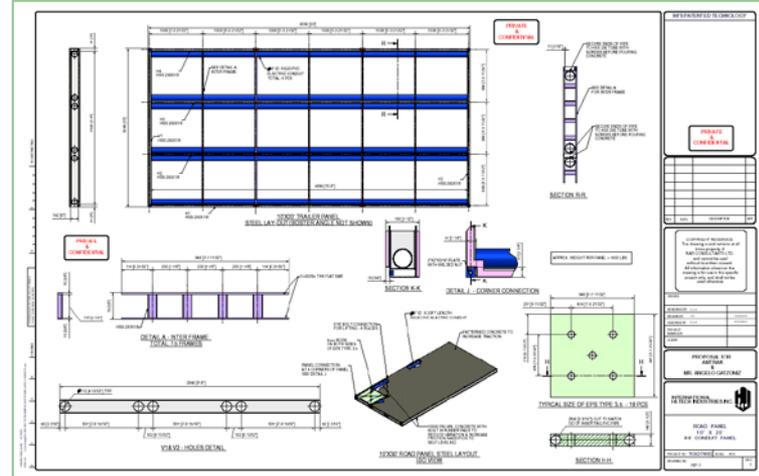
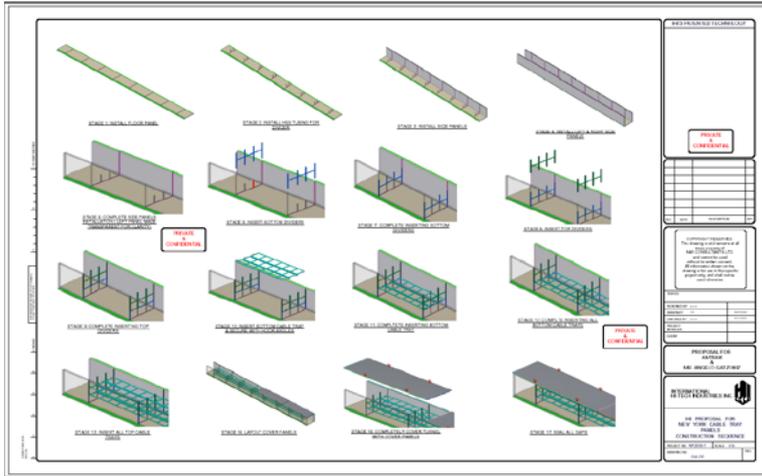
1ST FLOOR BY AM PROPOSED



2ND FLOOR BY AM PROPOSED

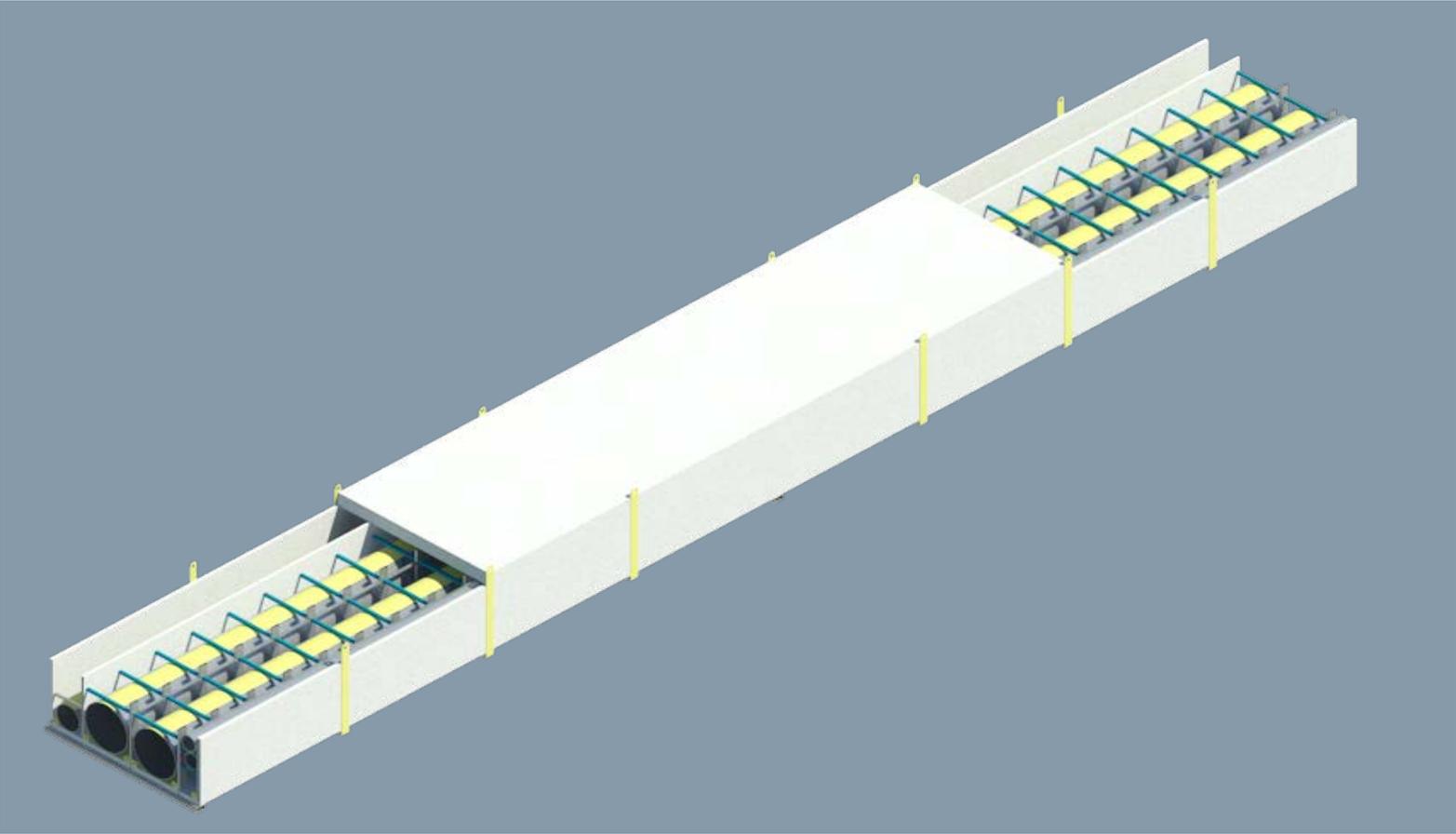
# Projects Currently under Research, Design & Development

## CABLE TRAY PANEL TRENCHES



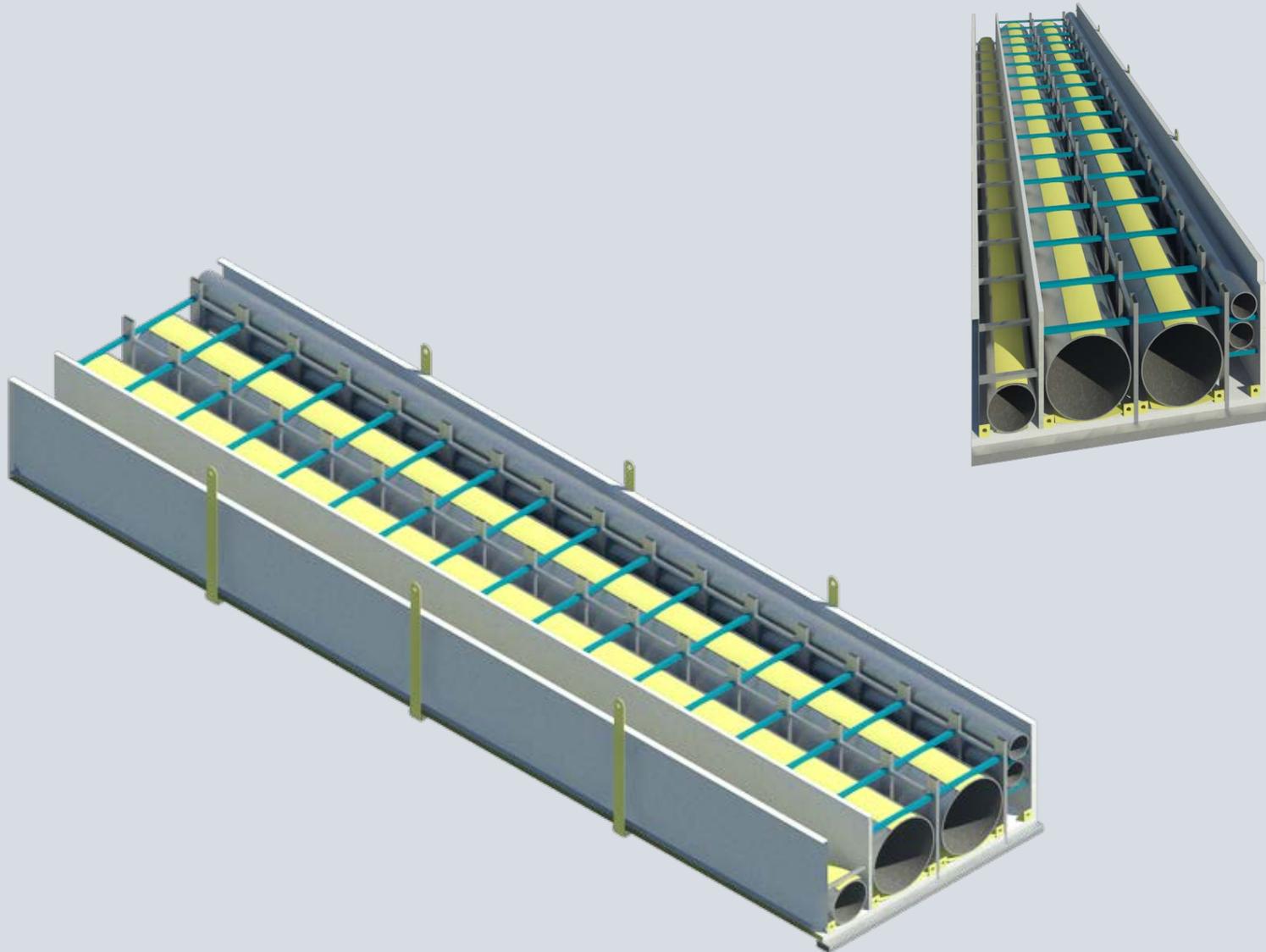
# Projects Currently under Research, Design & Development

## Safe Pipe Structural Trenches



# Projects Currently under Research, Design & Development

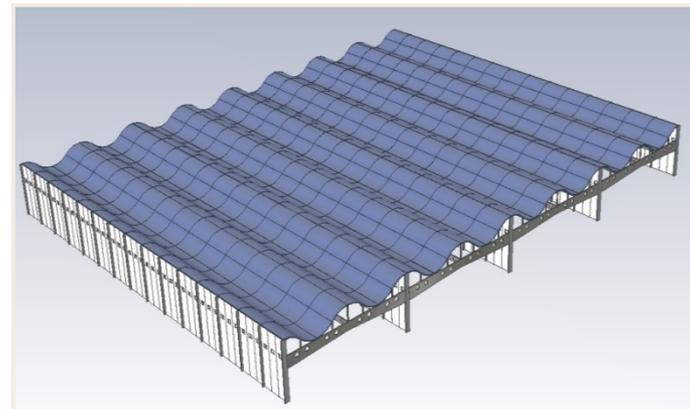
## Safe Pipe Structural Trenches



# Projects Currently under Research, Design & Development

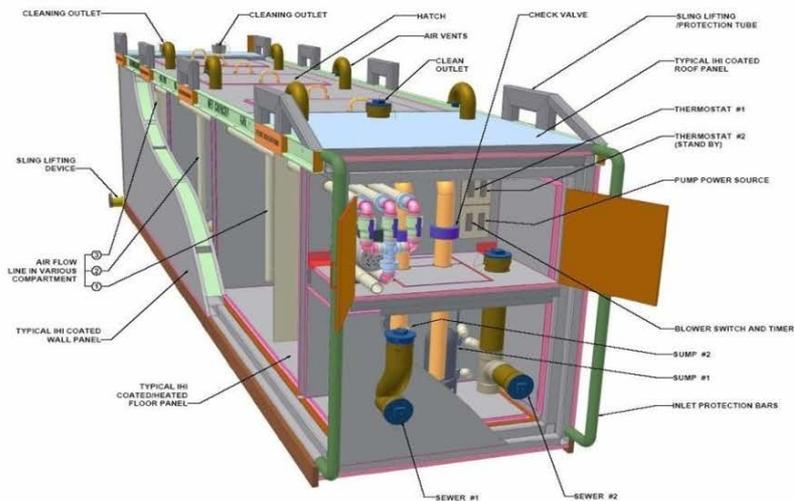


**PROPOSAL OF IHI STRUCTURE FOR A WASTE-TO-ENERGY BUILDING IN SICILY**



# Projects Currently under Research, Design & Development

## Mobile Insulated Septic Tanks

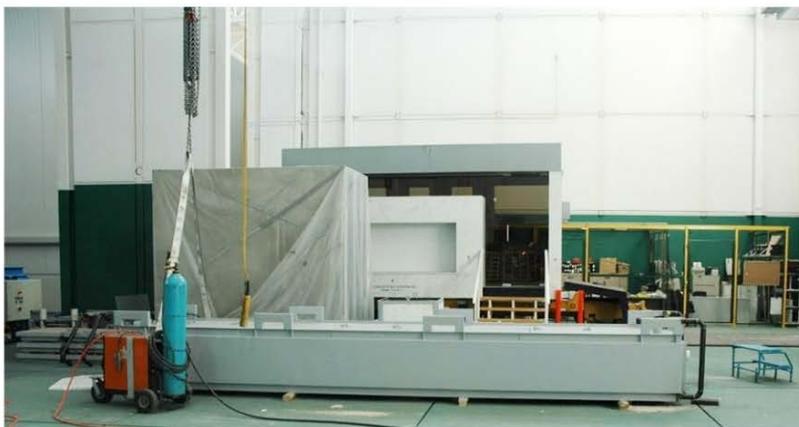


MOBILE INSULATED SEPTIC TANK (1500 GAL FULL CAPACITY)

MOBILE INSULATED SEPTIC TANK (1500 FULL CAPACITY)



MOBILE INSULATED SEPTIC TANK (PIPING SYSTEM)



MODEL #2: MOBILE INSULATED SEPTIC TANK ( 268 X 72 X25.125 CAPACITY)



MODEL #1: MOBILE INSULATED SEPTIC TANK

# Projects Currently under Research, Design & Development

## APARTMENT BUILDING IN HARRISON HOT SPRINGS, BRITISH COLUMBIA, CANADA



# Projects Currently under Research, Design & Budgeting



URBAN DEVELOPMENT AND DESIGN OF A MARINA AT  
SOUTH BRITANNIA BEACH, BC

# Projects Currently under Research, Design & Budgeting

## IHI PLANNING'S DESIGN OF THE MARINA AT SOUTH BRITANNIA BEACH BRITISH COLUMBIA, CANADA



# Projects Currently Design & Budgeting



VIEW OF THE MAIN ACCESS TO THE MARINA , THE BREAKWATER DOCKS, THE IHI FLOATING HOMES (WITH BOAT STORAGE AT SEA LEVEL) AND THE SEAPLANE LOCATION WITH BRITANNIA BEACH HILLS IN THE BACKGROUND



# Projects Currently under Research, Design & Budgeting



## **IHI PLANNING LTD. DESIGN PROPOSAL FOR 8 CONTEMPORARY FLOATING HOMES IN A MARINA**

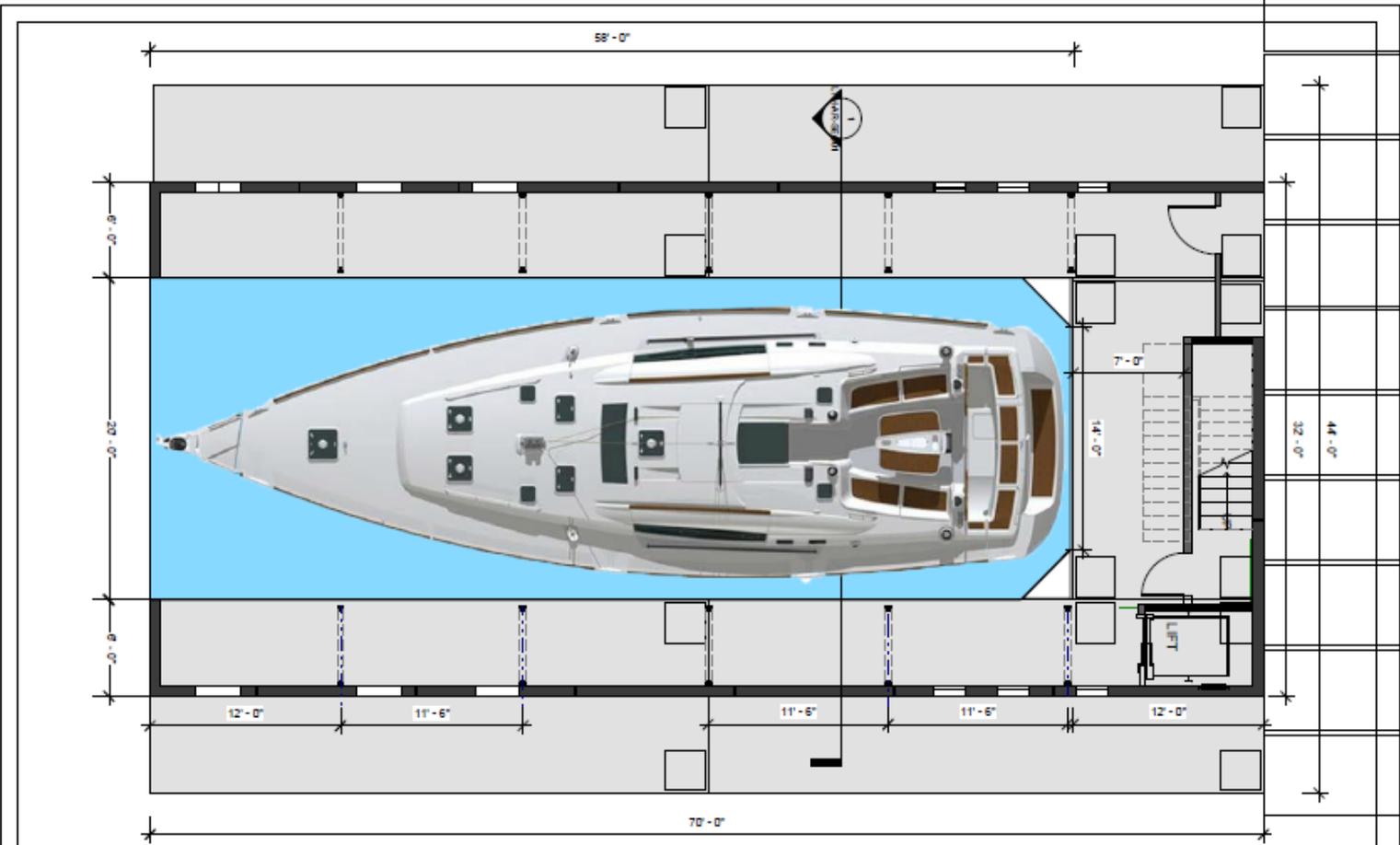
INTRODUCTION OF MARITIME SIGNALS (FLAGS) TO THESE 8 HOMES  
THAT WILL READ "MOSQUITO" (THE NAME OF THE MARINA)  
THIS WILL GIVE PERSONAL IDENTITY TO THE FUTURE RESIDENTS

# *Spirit Trail Ocean Luxury Homes*



**70' x 32' VERSION WITH A LUXURY HOME ABOVE  
AND A ROOF GARDEN**





IHI PLANNING LTD.

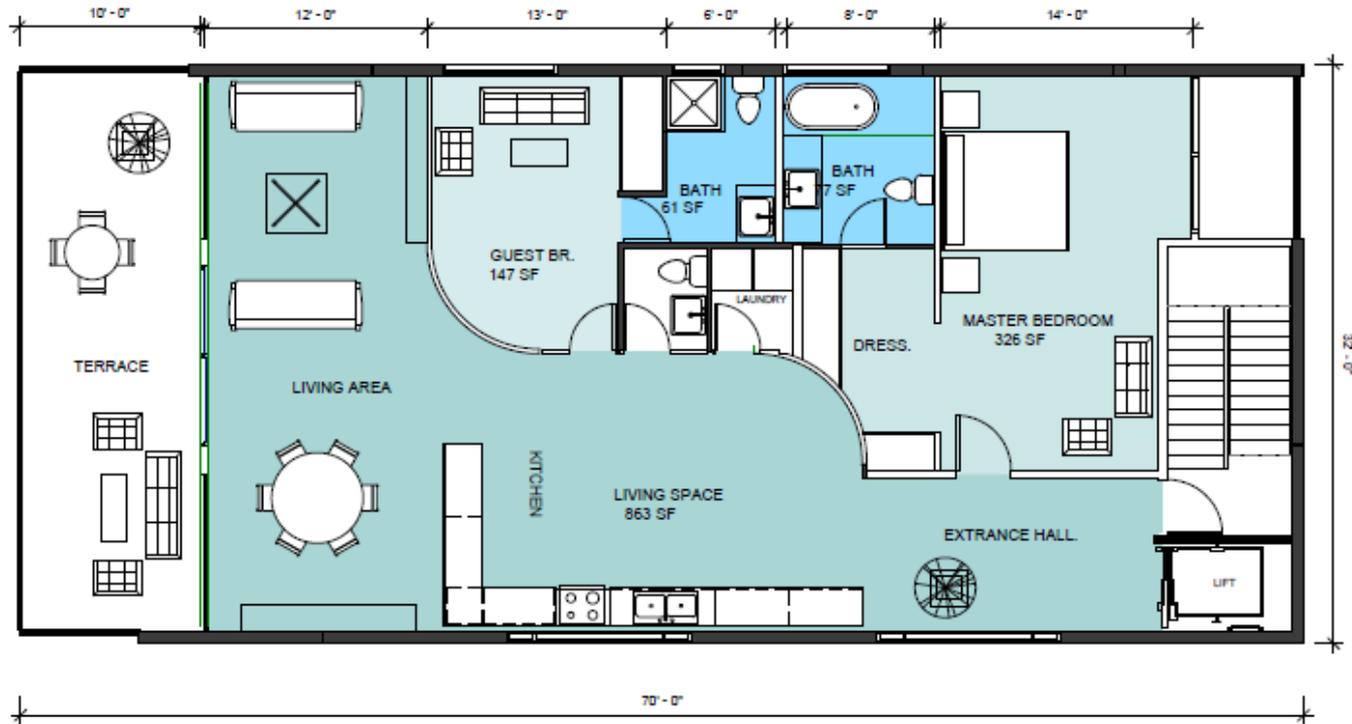


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 IHI PLANNING LTD. and shall not be used without their written consent. All information shown on this drawing is for use in this specific project only and shall not be used otherwise.

**70' X 44' SPIRIT TRAIL OCEAN LUXURY HOMES**

GROUND FLOOR PLAN	
Project number	Project Number
Date	JULY 14 2014
Drawn by	G.T.
Checked by	R.A.R. Scale 3/16" = 1'-0"
<b>A101</b>	

7/14/2014 7:56:01 PM



NOTE: THIS PROPOSED PLAN SHOWS INTERIOR PARTITIONS FIXTURES AND FURNISHINGS (BY OTHERS)

IHI PLANNING LTD.



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without their written consent.  
All information shown on this  
drawing is for use in this  
specific project only  
and shall not be used otherwise.

70' X 44' SPIRIT TRAIL  
OCEAN LUXURY  
HOMES

PENTHOUSE PLAN

Project number	Project Number	LYH-AR-PLN04
Date	JULY 14, 2014	
Drawn by	O.T.	
Checked by	R.A.R.	Scale 3/16" = 1'-0"

7/16/2014 12:29:51 PM



FRONT VIEW



SIDE VIEW



THE ROOF GARDEN



LOWER LEVEL WITH A CATWALK



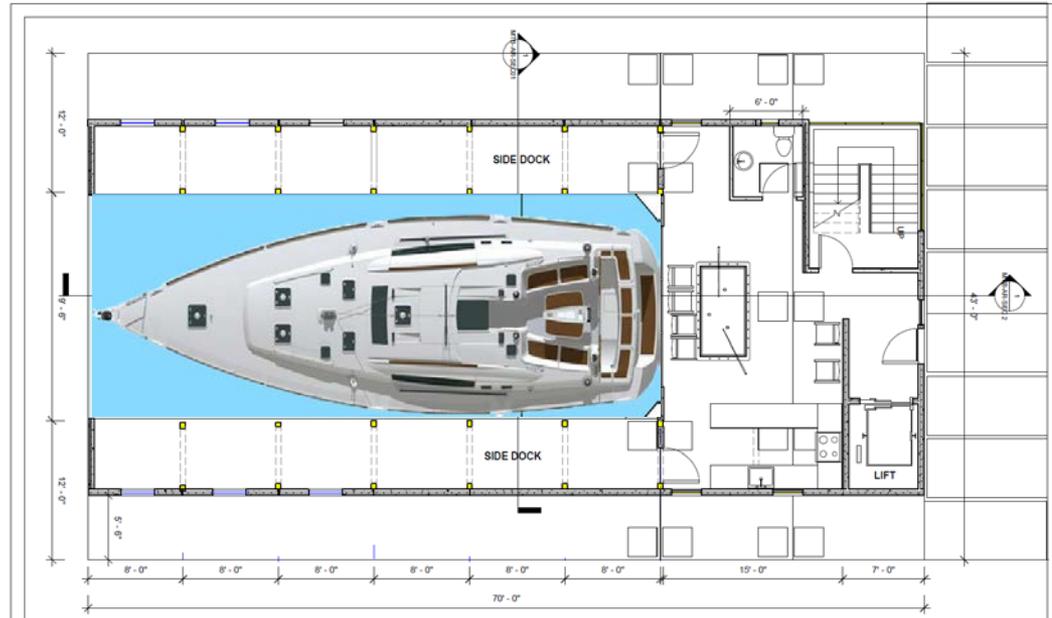
VIEW OF THE FLOATING HOME LAYOUT ABOVE AND THE INTERIOR



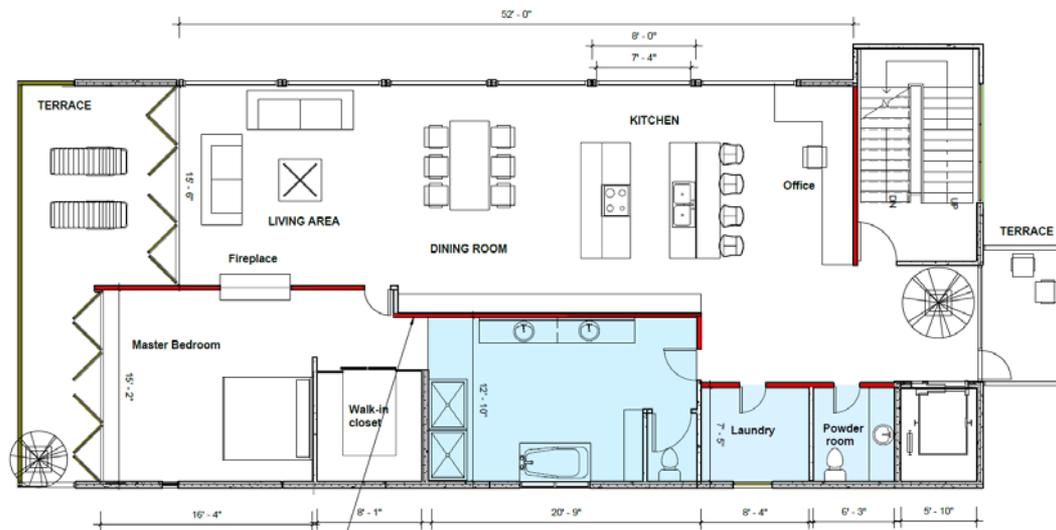
*This is an 81' long version for larger Yachts*



*This is another version of a 70' X 32' Yacht Home  
with Penthouse and Roof Garden*



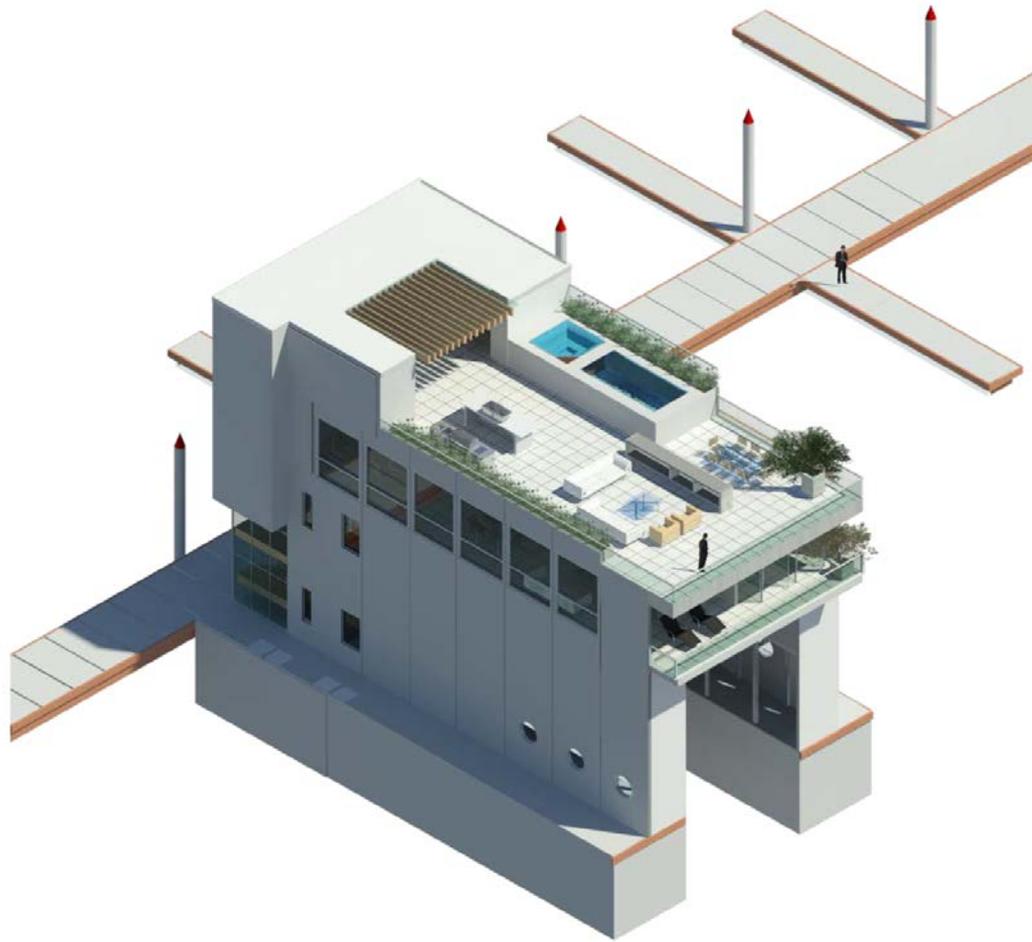
MAIN FLOOR PLAN



UPPER FL. PLAN

IHI SHEAR WALLS MARKED IN RED

*This is an 70' X 32' Yacht Home with Penthouse and Roof Garden - with a minimalistic design*



ISOMETRIC VIEW

*This is another 70' X 32' Yacht Home with Penthouse and Roof Garden - with a minimalistic design*



THUNDERBIRD FLOATING YACHT HOME  
IHI PLANNING LTD. MARCH 2017

PERSPECTIVE

*This is an 70' X 32' Yacht Home with Penthouse  
& Roof Garden - with a minimalistic design*

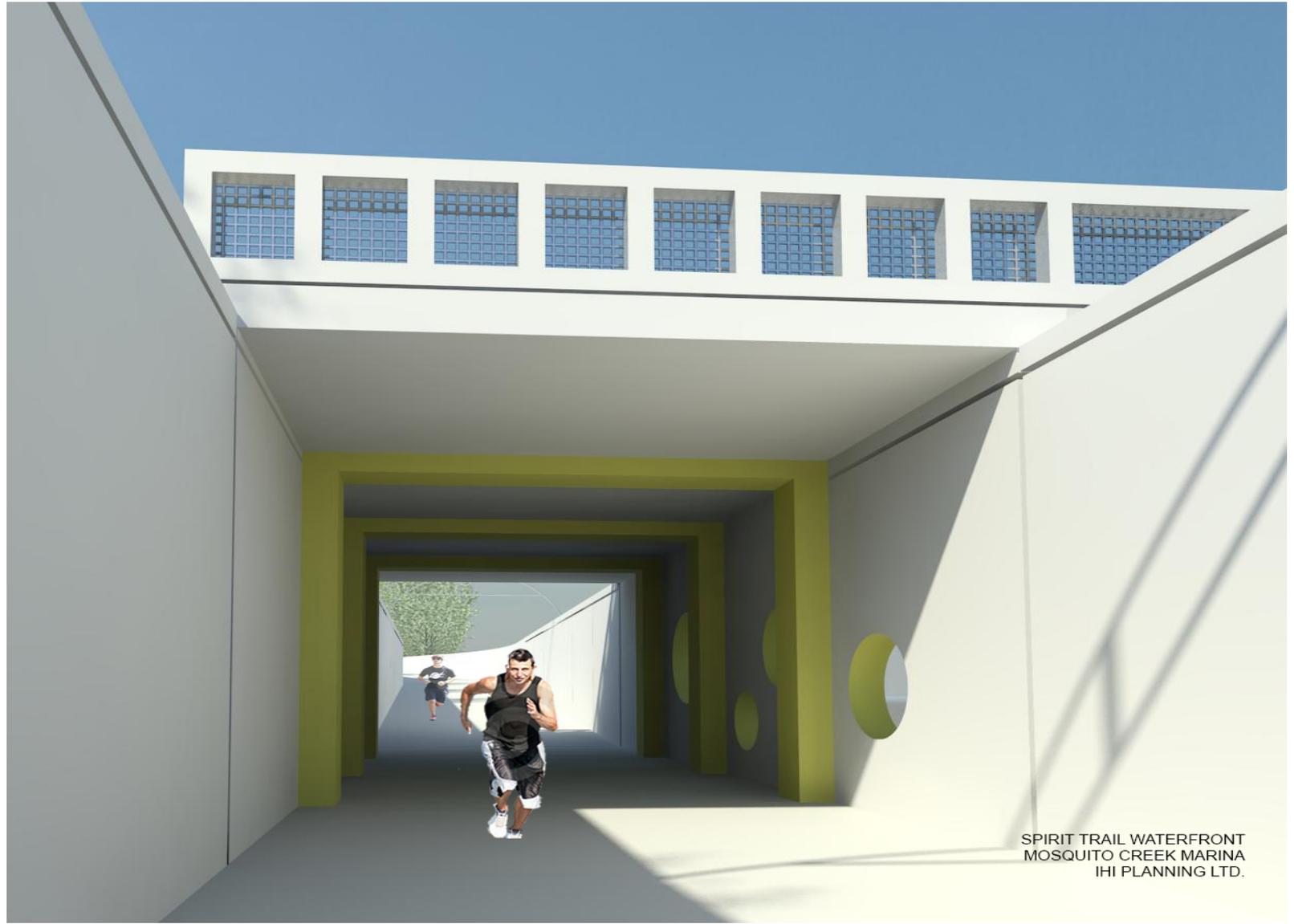


PERSPECTIVE

# Projects Currently under Research, Design & Budgeting



# Projects Currently under Research, Design & Budgeting



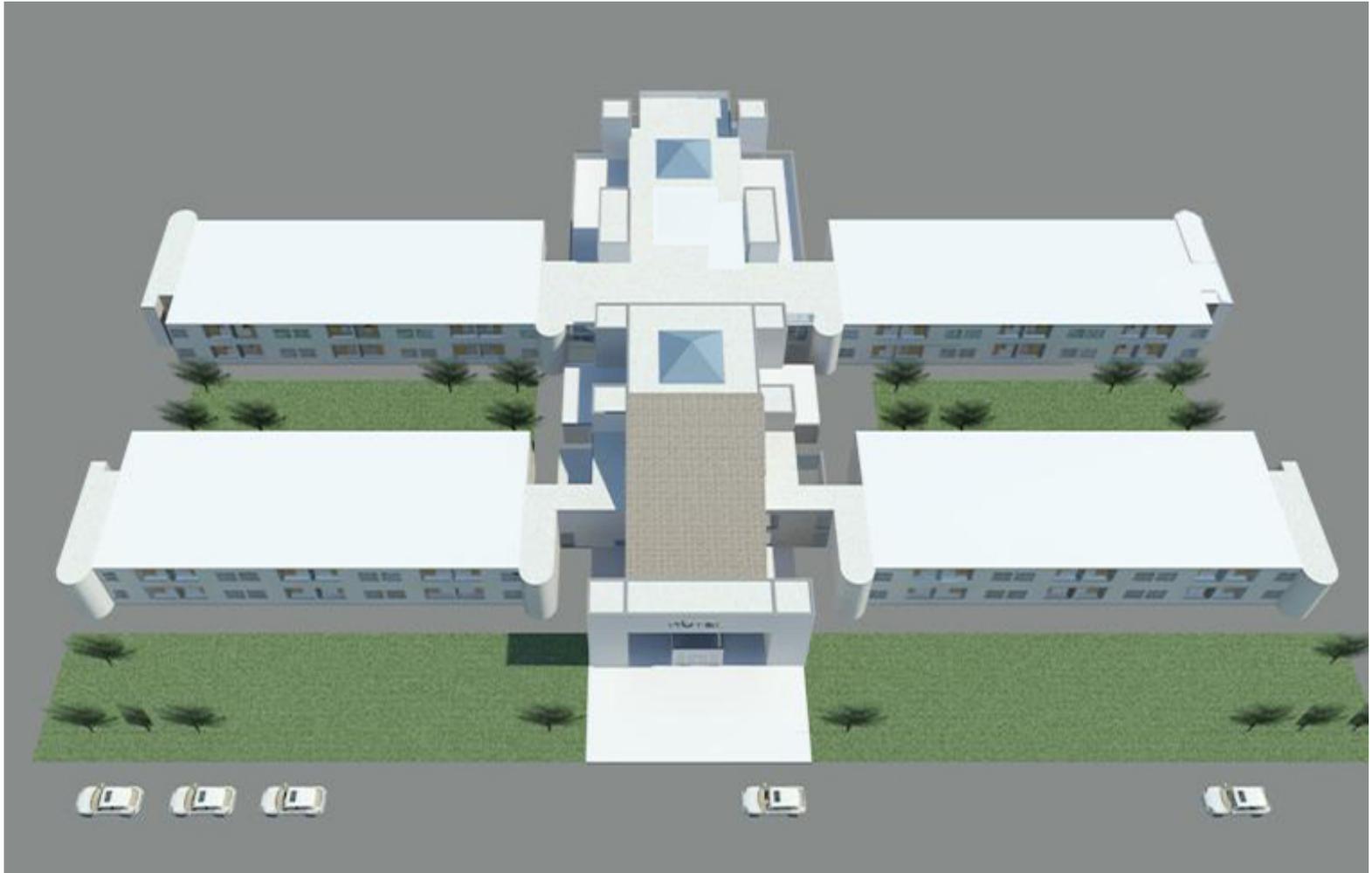
SPIRIT TRAIL WATERFRONT  
MOSQUITO CREEK MARINA  
IHI PLANNING LTD.

# Projects Currently under Research, Design & Budgeting



ISLAND MARINA HOTEL  
IHI PLANNING LTD.

# Projects Currently under Research, Design & Budgeting



PROPOSED DESIGN FOR A HOTEL IN NORTHERN ALBERTA

# Projects Currently under Research, Design & Budgeting



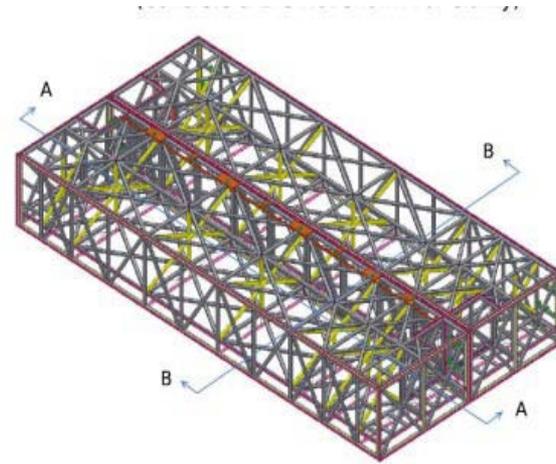
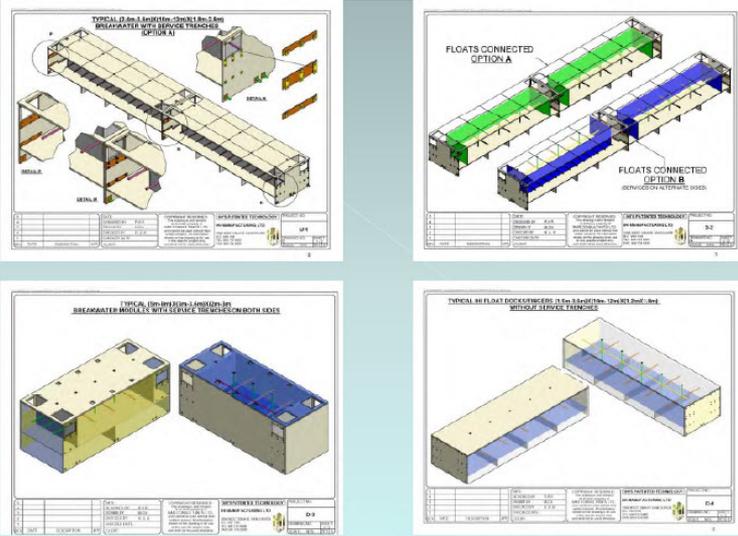
# Projects Currently under Research, Design & Budgeting



PROPOSED DESIGN FOR A FLOATING HOTEL– NORTH VANCOUVER, BC



# IHI MARINE PRODUCTS



IHI BREAKWATER STEEL STRUCTURE

## IHI MARINE PRODUCTS - 2010

FULLY EQUIPPED & PROPERLY COATED (INSIDE AND OUT) FLOATING DOCKS



OFFICE BUILDING AND BOAT STORAGE



Office Building consisting of 2 units, each 83' x 93' W x 53' H with shops for small and medium size boats in the ground level and 3 floors of office space above.





# IHI MARINE PRODUCTS

FLOATING VILLAGE – Design proposal for a Marina in North Vancouver, BC



# IHI MARINE PRODUCTS

Design proposal of a Marina in BC with Yacht Homes on dry soil





# IHI MARINE PRODUCTS

## PROPOSED DESIGN FOR A BREAKWATER AT A MARINA IN BC



# IHI MARINE PRODUCTS



PROPOSED DESIGN FOR A BREAKWATER AT A MARINA IN NORTH VANCOUVER  
SERVING ALSO AS PEDESTRIAN ACCESS TO FLOATING YACHT HOMES

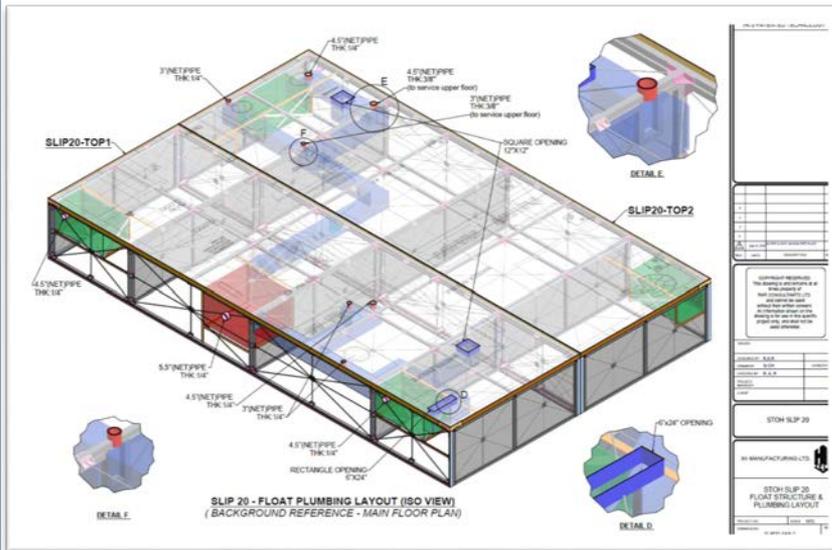


# EXECUTED PROJECTS

## PEDESTRIAN BRIDGE AT A MARINA IN NORTH VANCOUVER



# EXECUTED PROJECTS, FLOATING DECKS



WITH IHI'S SYSTEM, ANY DESIGN /SIZE/SHAPE CAN BE ACCOMMODATED TO ACHIEVE THE CLIENT'S REQUIREMENTS IN ALL ASPECTS INCLUDING FLOATATION HEIGHTS FACTORING IN THE DEAD AND LIVE LOADS.

# Projects Currently under Research, Design & Budgeting



IHI MARINE STRUCTURES  
IHI PLANNING LTD.

# Executed Projects

## Special IHI Pads over Wooden Marina Floating Decks



# Projects Currently under Research, Design & Budgeting



## DESIGN OF A BRIDGE TO CARRY A 30 TON TRAVEL LIFT



# Projects Currently under Research, Design & Budgeting



## DESIGN OF A BRIDGE TO CARRY A 30 TON BOAT TRAVEL LIFT



LYNNWOOD MARINA  
300 TON TRAVEL BOAT LIFT BRIDGE  
IHI PLANNING LTD.

# Projects Currently under Research, Design & Budgeting



## Design proposal - Longhouses for the people of the First Nations



FIRST NATION LONGHOUSE - TYPE 16  
IHI PLANNING LTD. FEB, 2016



FIRST NATIONS LONGHOUSE TYPE 16  
IHI PLANNING LTD. FEB 2016



# Projects Currently under Research, Design & Budgeting



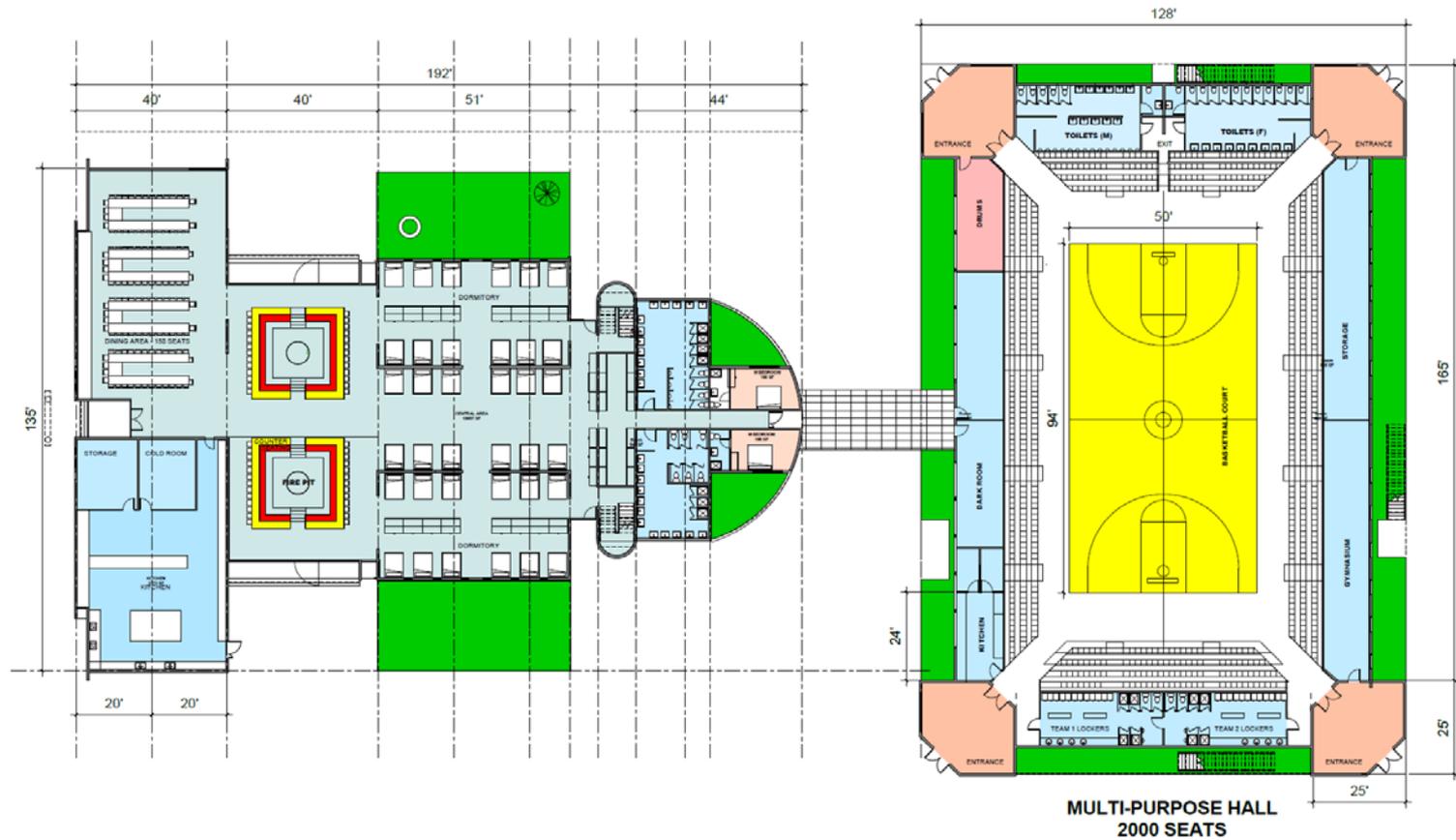
## Design proposal of Longhouses for the people of the First Nations



# Projects Currently under Research, Design & Budgeting



Design proposal of Longhouses for the people of the First Nations  
For 64 residents with Multi-purpose hall.



# Projects Currently under Research, Design & Budgeting



Design proposal - Longhouses for the people of the First Nations



# Projects Currently under Research, Design & Budgeting



Design proposal - Longhouses for the people of the First Nations - 64 residents version



# Projects Currently under Research, Design & Budgeting



Design proposal - Longhouses for the people of the First Nations - 150 residents version





# Projects Currently under Research, Design & Budgeting



Design proposal for a Marina Development in Northern BC - Condominium



Main entrance from parking area



# Projects Currently under Research, Design & Budgeting



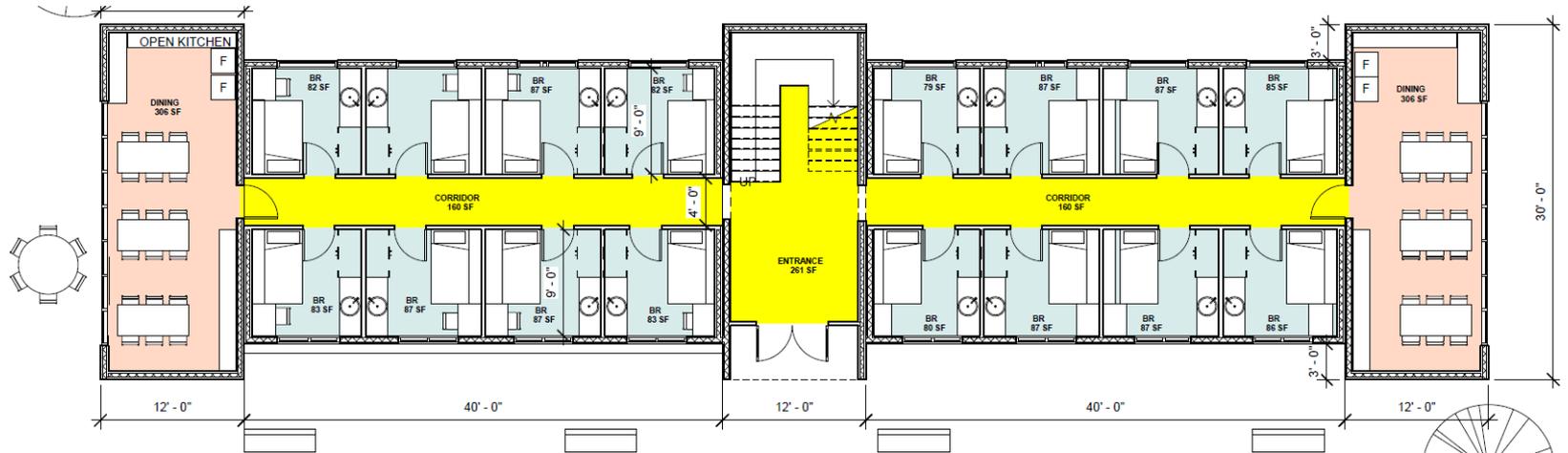
Design proposal for a Marina Development in Northern BC – Condominium rear side overlooking the marina.



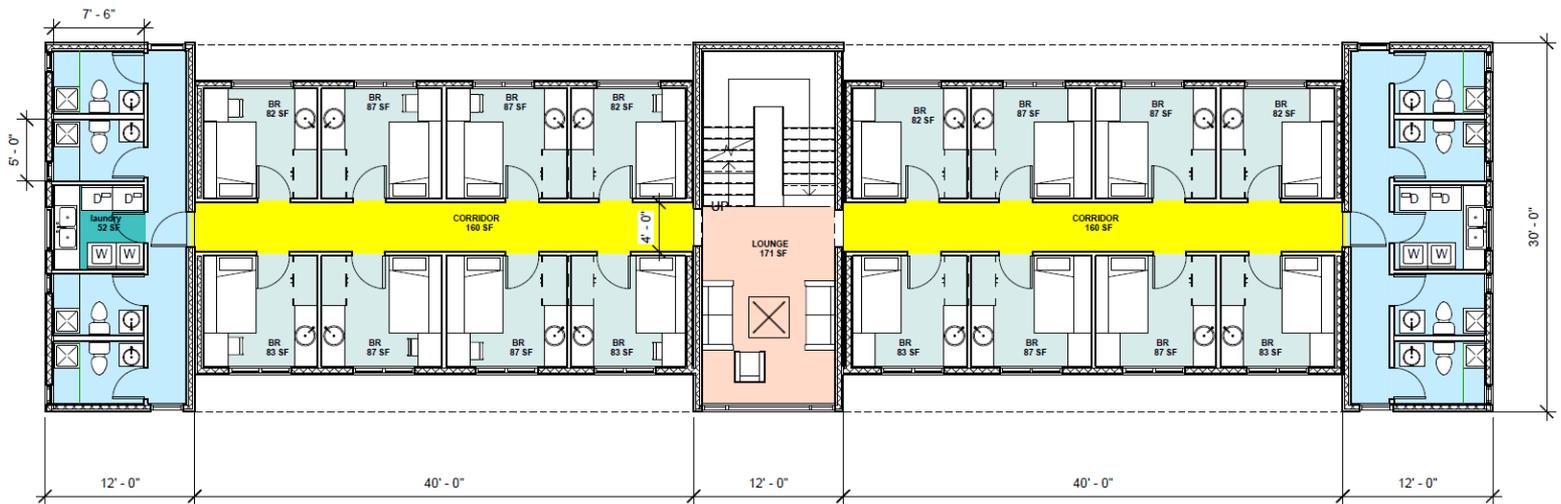
# Projects Currently under Research, Design & Budgeting



## Design proposal for a Marina Development in Northern BC – Staff Housing



MAIN FLOOR PLAN



UPPER FLOOR PLAN

# Projects Currently under Research, Design & Budgeting



## Design proposal for a Marina Development in Northern BC – Staff Housing



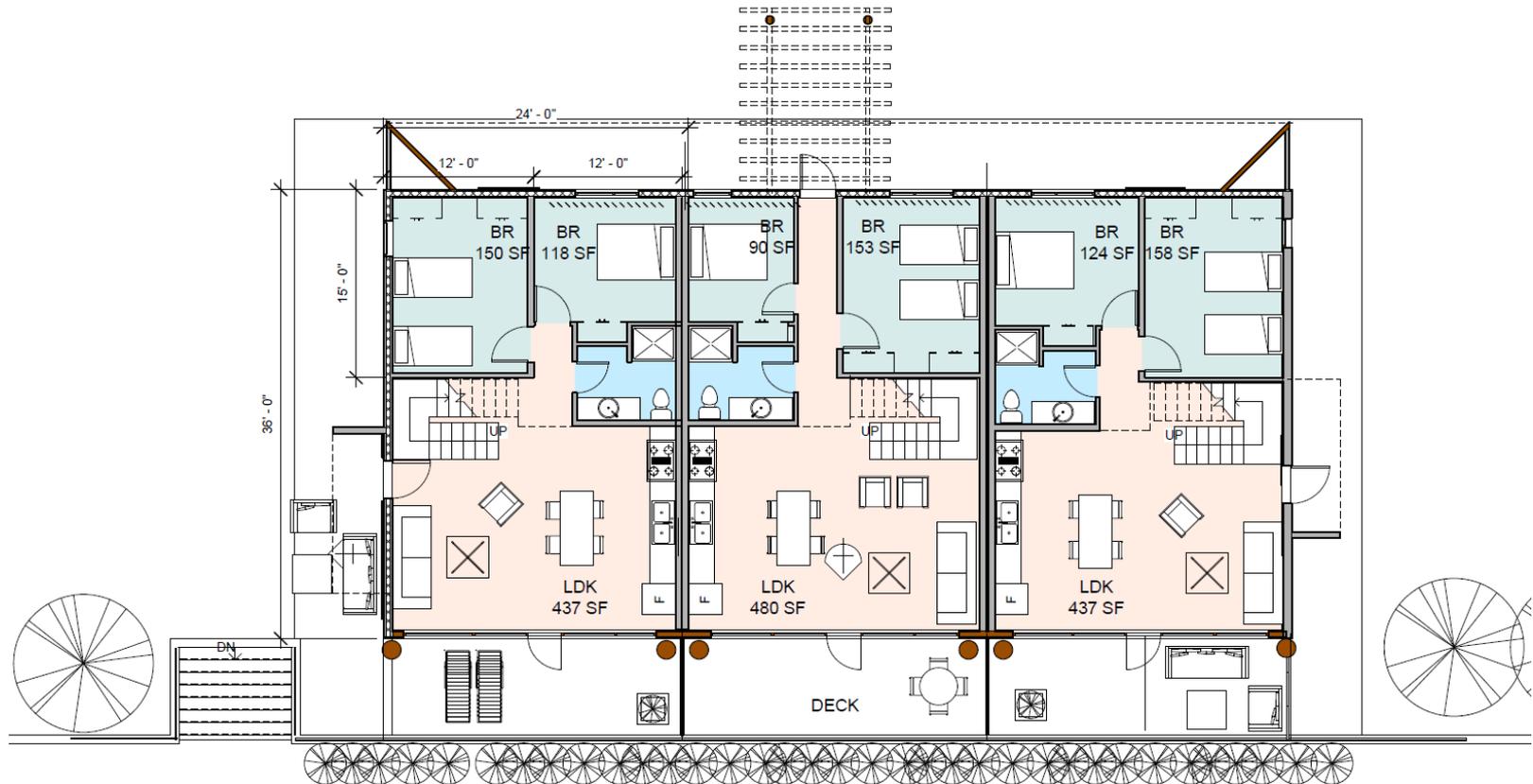
Main entrance from parking area



# Projects Currently under Research, Design & Budgeting



Design proposal for a Marina Development in Northern BC – Triplex Design Townhouses



MAIN FLOOR PLAN

# Projects Currently under Research, Design & Budgeting



Design proposal for a Marina Development in Northern BC – Triplex Design Townhouses



MAIN ENTRANCE TO CENTRAL TOWNHOUSE

# Projects Currently under Research, Design & Budgeting



Design proposal for a Marina Development in Northern BC – Triplex Design Townhouses



REAR VIEW FAÇADE WITH CIRCULAR TIMBER COLUMNS.

# Projects Currently under Research, Design & Budgeting



Design proposal for a Marina Development in Northern BC – Triplex Design Townhouses



REAR VIEW OVERLOOKING THE MARINA

# Projects Currently under Research, Design & Budgeting



HIGH STANDARD RESIDENCE IN ALBERTA



TOWNHOUSES IN WHITE ROCK, BC



RETAIL BUILDING IN ALBERTA

# Projects Currently under Research, Design & Budgeting



IHI PRODUCTION FACILITY  
VIEW OF WESTERN LOT PROPOSED BUILDINGS  
IHI PLANNING LTD



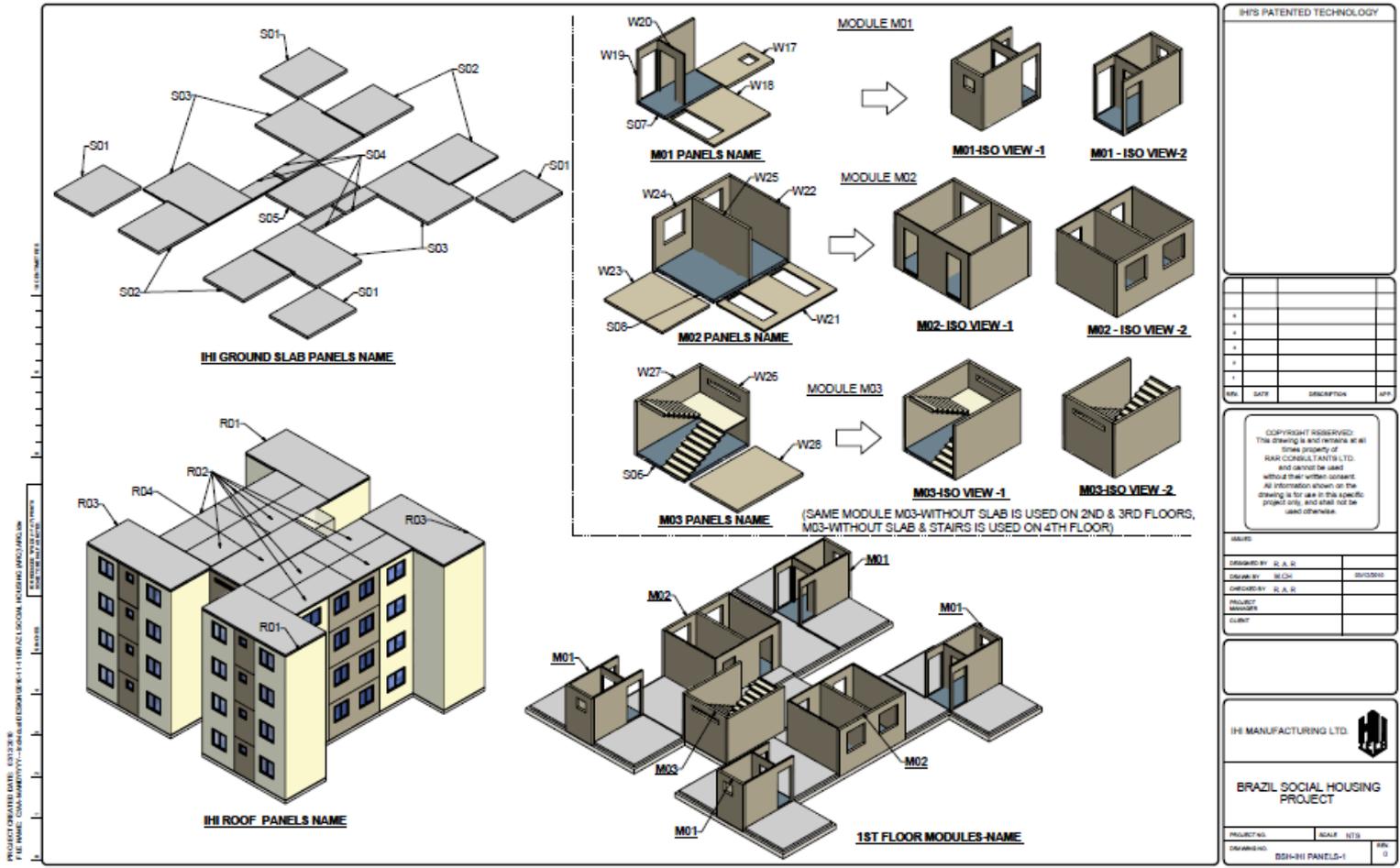
FUTURE EXPANSION OF IHI'S R&D MANUFACTURING FACILITY IN DELTA, BC

# IHI Proposal for Social Housing Projects in Africa



IHI PLANNING LTD.  
TYPICAL APARTMENT BUILDING  
MARCH 2013

# PROJECTS CURRENTLY UNDER RESEARCH, STUDY AND BUDGETING



## SOCIAL HOUSING PROJECT IN BRAZIL

# Social Housing Project for the DRC - Kinshasa



# DESIGN OF A CLUSTERED SOCIAL HOUSING PROJECT IN SOUTH SUDAN

## TYPICAL CLUSTER



OPTIMIZING THE LAND  
SUBDIVISION AND PRIVATE  
PROPERTY

### ADVANTAGES:

- MAXIMISE PRIVATE PROPERTY
- INCREASE SECURITY
- MINIMIZE INFRASTRUCTURE COST
- SAFE CHILDREN PLAYGROUNDS
- MINIMISE PUBLIC MAINTENANCE
- CREATE A SENSE OF COMMUNITY

- PRIVATE LAND: 63%
- SEMI-PUBLIC LAND 23%
- PUBLIC LAND 14%

- 14 ROW HOUSES
- 70 RESIDENTS

- DENSITY : 233 P/HA
- LOT AREA: 3000 M2

# Design Proposal for a Social Housing Project in South Sudan

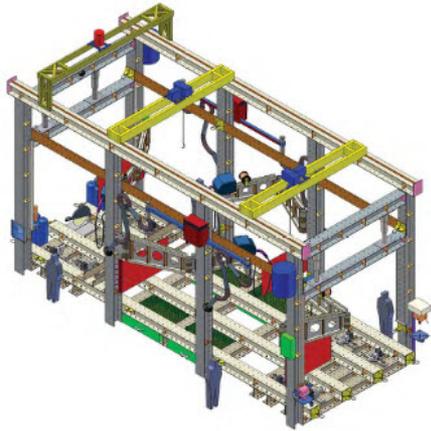


# Social Housing Project in South Sudan

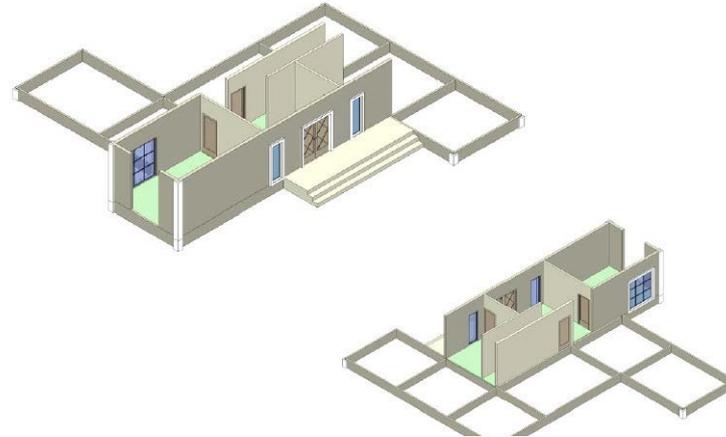


# FAST, SUSTAINABLE AND STRONG HOUSING UNITS

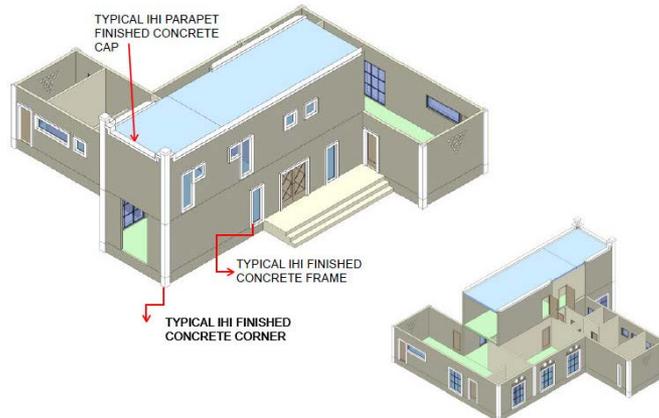
**STEP 2 – ASSEMBLY OF (1<sup>ST</sup>) GROUND FLOOR 3-D MODULE  
FAMILY ENTRANCE & DINING ROOM**



**PERSPECTIVE VIEW OF THE 3D IHI CALIBRATED JIG  
WITH MOBILE LASER GUIDED MOUNTED INSTRUMENT ON TOP OF THE JIG  
FRONT VIEW**



**STEP 5 – ASSEMBLY OF FIRST FLOOR (4<sup>TH</sup>) MODULE  
2<sup>ND</sup> BEDROOM & KITCHEN AREA**



**STEP 13 – FRONT VIEW OF A COMPLETED 4 BEDROOM HOUSING UNIT  
WITH ALL IHI ARCHITECTURAL ELEMENTS.**



## **OVERSEAS GOVERNMENT FAST, SUSTAINABLE AND STRONG HOUSING PROJECT**

› PLEASE CLICK ON THE YOUTUBE LINK BELOW TO WATCH THE VIDEO.

[http://www.youtube.com/watch?v=GypV5lhZBcg&feature=em-share\\_video\\_user](http://www.youtube.com/watch?v=GypV5lhZBcg&feature=em-share_video_user)

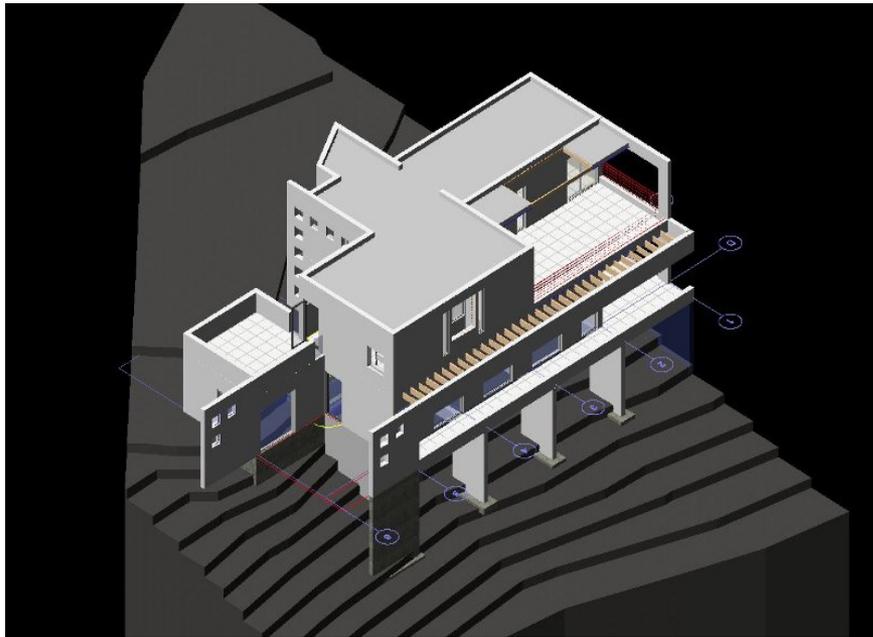
# Executed Projects

## Warehouse in Northern Alberta, Canada



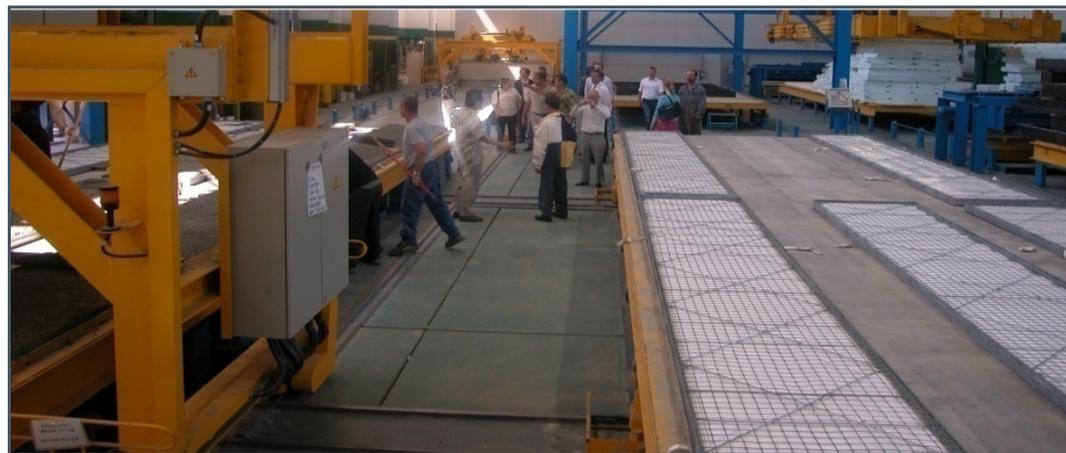
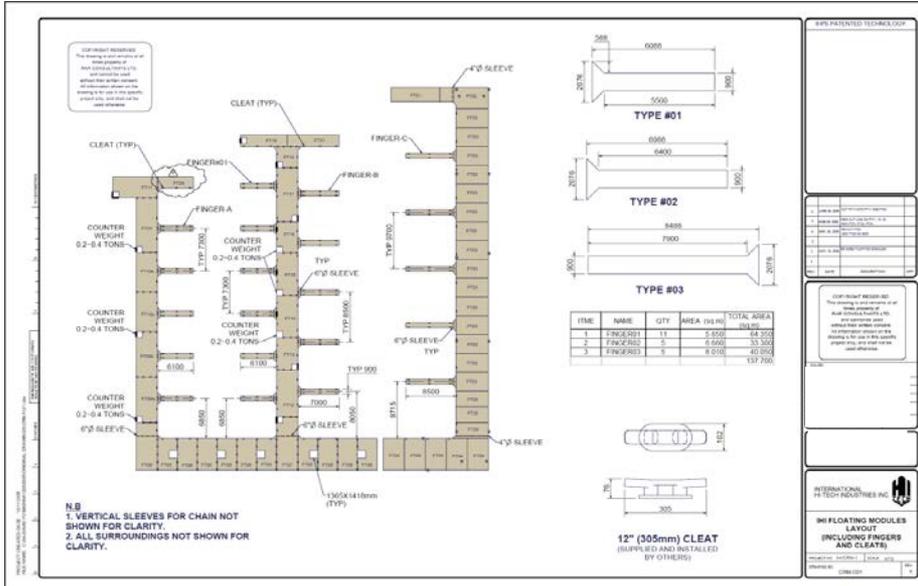
# Executed Projects

## Home on a Hill Central BC, CA



# Executed Projects

## Floating Marina in British Columbia, Canada

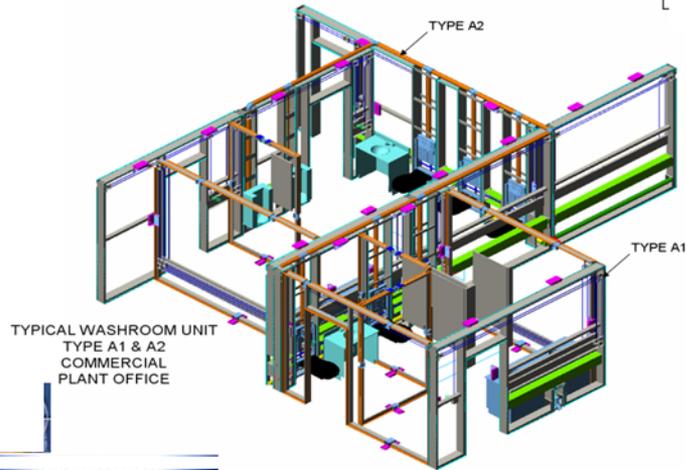


# Typical Flexible Finished Presentation Unit

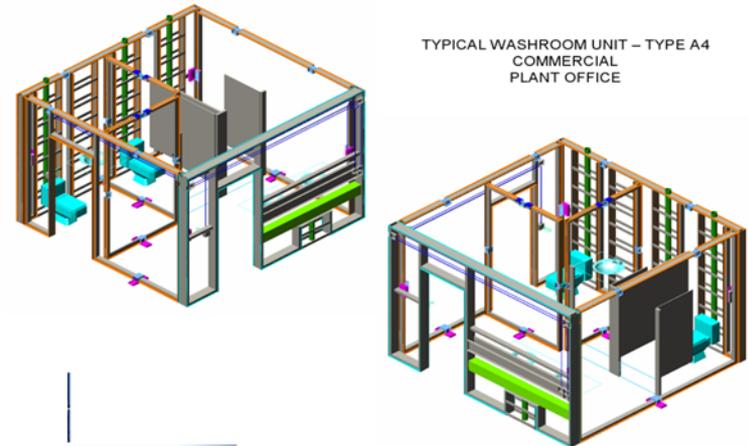


# Flexible Finished Washroom Unit - Details

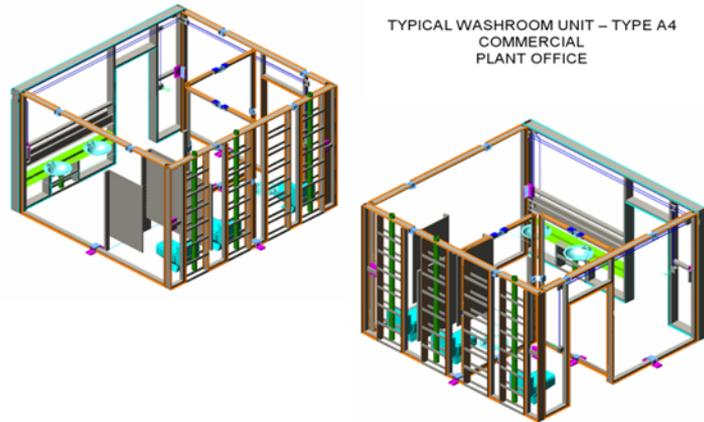
Typical flexible finished washroom unit – Technical Details



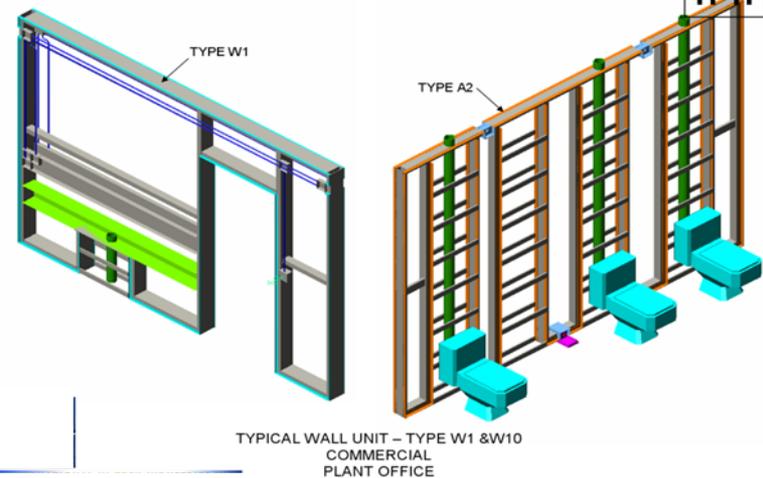
Typical flexible finished washroom unit – Technical Details



Typical flexible finished washroom unit – Technical Details



Typical flexible finished washroom unit – Technical Details



# Executed Projects

## HCD Technology Center, Alberta, BC



**PERSPECTIVE OF THE BUILDING MAIN ENTRANCE WITH UNIQUE SEAMLESS JOINTS AND CONNECTIONS UNLIKE ANY PRE-MANUFACTURED PANELIZED ELEMENTS WHETHER MODULAR OR NOT.**



**IHI STRUCTURE COMPLETED**



H.C.D Technology Centre  
Ponoka - Alberta  
Sept. 2007

**RENDERING SHOWS HOW THE BUILDING WILL LOOK AFTER FINISHING IS APPLIED**

# Projects Currently under Research, Design and Budgeting

## AGRICULTURAL R&D PROJECT IN SUNSHINE COAST, BC



**AGRICULTURAL R&D PROJECT IN SUNSHINE COAST, BC**



**CENTRAL BUILDING**

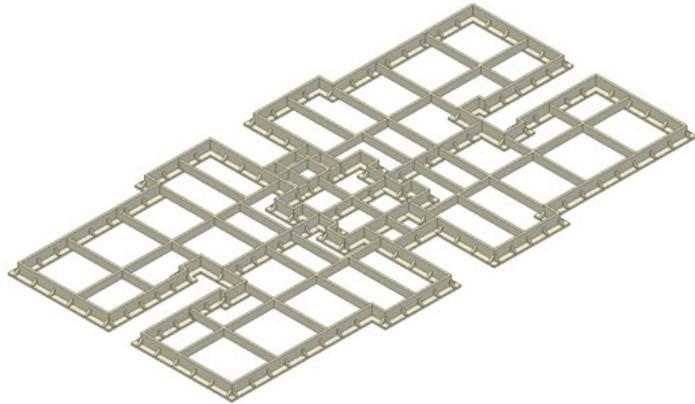
# Housing Project in Saudi Arabia



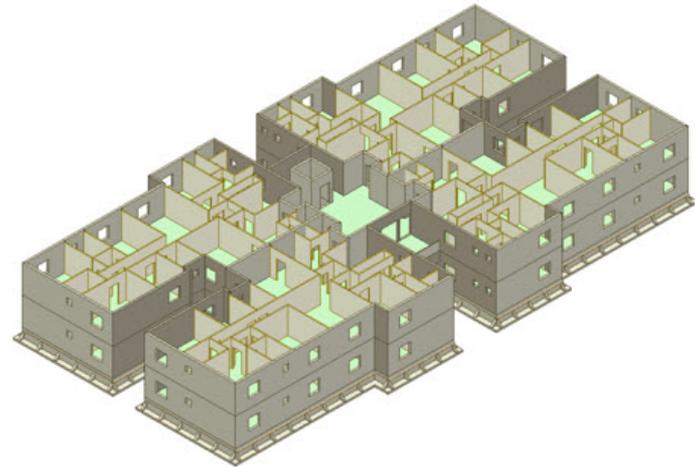
# PROPOSAL FOR THE ROYAL SAUDI AIR FORCE OFFICER'S BUILDING



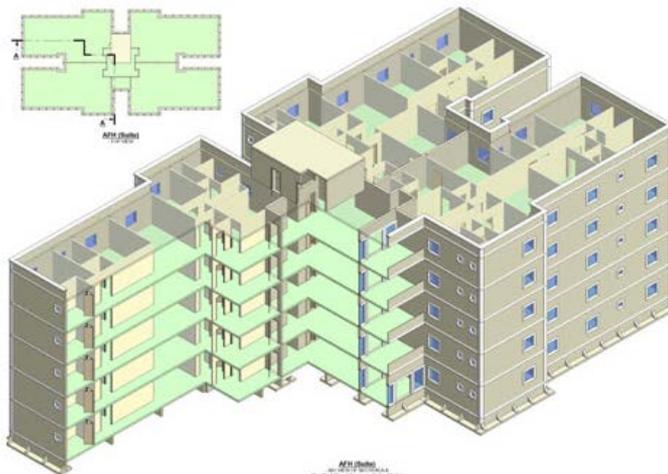
**STAGE 1 – ASSEMBLY OF IHI FOUNDATIONS AND BEAMS TO BECOME AN INTEGRAL PART OF A 3-D FLOATING IHI FOUNDATION**



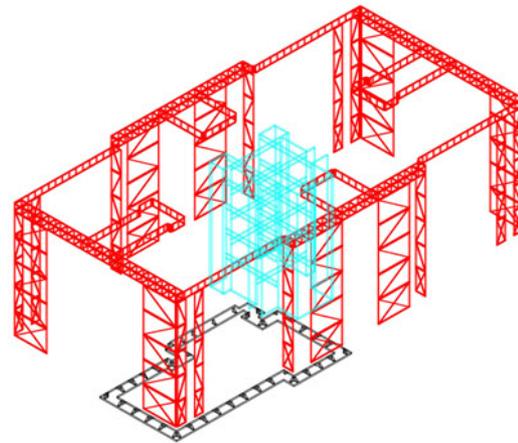
**STAGE 8 – ASSEMBLY OF THE 2<sup>ND</sup> FLOOR IHI INTERIOR WALL PANELS**



**SECTION VIEW OF A COMPLETED BUILDING UNIT**



**5 STORY FULLY INTEGRATED AND CONCEALED 3-D PRIMARY IHI SHEAR WALL PANELS FOR EXTRA DYNAMIC LOADING INCLUDING WAVE BLAST**



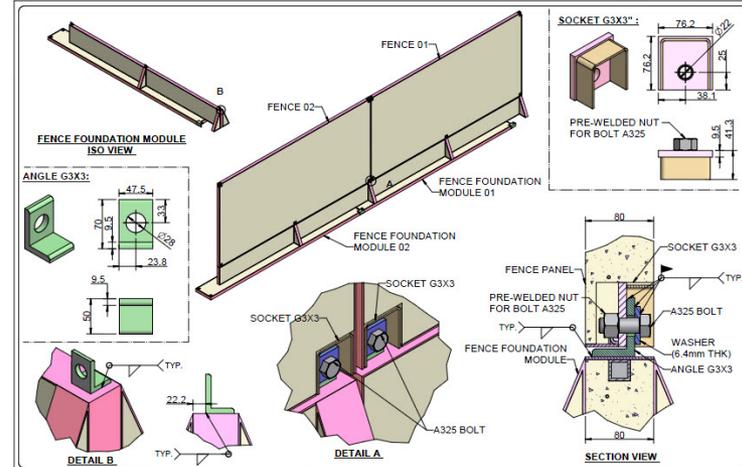
# PROPOSAL FOR A HOUSING PROJECT IN KSA



## ISKAN PROTOTYPE HOME

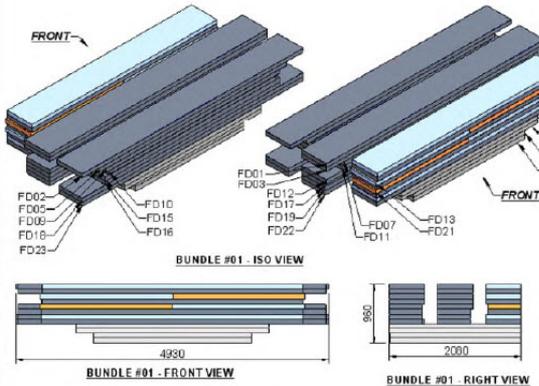
ANNEX # 3: A sample of Packaging to fit into a 20 foot Open Container as one bundle!"

Each Bundle Will Fit in One Container 20 Ft Open Top and Each Will Weigh Approximately 18 Tons!



### NOTE:

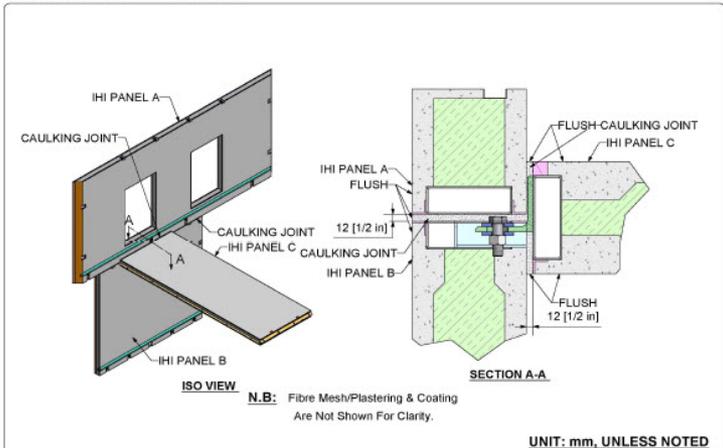
1. Mark "MADE IN CANADA" On Every Panel.
2. Each Panel to be Separated With 1/2" Thick High Density Rigid EPS (Type 3).
3. Use EPS (Type 3) Blocks To Fill Where Applicable. (Colors Are Shown Only As An Example).
4. Tack-weld Between Panels With Strip Plates (2"x1/8").
5. Use Only Rated Slings For Lifting From Bottom. (1 Panel / Bundle) When Lifting By Crane.
6. When Lifting By Forks, Only Lift From Bottom. Of Pallet / Bundle.
7. Never Use Any Panel Bracket To Lift The Pallet / Bundle.



### Bundle # 01

Installation Sequence	PANEL NAME	THK (mm)	Width (mm)	Height (mm)	Length (mm)	Weight (kg)	Ref.
1	FD 01	00	590	4900	600	600	
2	FD 02	00	590	4900	615	615	
3	FD 03	00	590	4900	600	600	
4	FD 04	00	590	4113	513	513	
5	FD 05	00	590	4100	522	522	
6	FD 06	00	590	4113	513	513	
7	FD 07	00	590	4090	600	600	
8	FD 08	00	590	2070	259	259	
9	FD 09	00	590	3870	383	383	
10	FD 10	00	590	3700	465	465	
11	FD 11	00	590	4122	514	514	
12	FD 12	00	590	4900	606	606	
13	FD 13	00	590	2057	262	262	
14	FD 14	00	590	4113	513	513	
15	FD 15	00	530	3065	456	456	
16	FD 16	00	530	3065	455	455	
17	FD 17	00	530	4000	563	563	
18	FD 18	00	530	4500	671	671	
19	FD 19	00	530	4886	563	563	
20	FD 20	00	530	2005	242	242	
21	FD 21	00	530	2086	242	242	
22	FD 22	00	530	4890	563	563	
23	FD 23	00	590	4500	595	595	
24	FD 24	00	530	4122	478	478	
25	FD 25	00	590	4122	514	514	
26	FD 26	00	590	4122	514	514	
27	GS16	00	3050	2000	1384	1384	
28	GS17	00	3050	2000	1384	1384	
29a	GS17a	00	2490	2000	1103	1103	
29b	GS17b	00	2490	2000	1103	1103	
Total Weight (Tons): 17.562							
Total Envelope Volume (m³): 8.844							
Description (m³): 4.904200000000000							

Total Envelope Volume (Including Brackets & Voids)



# Housing Project in Saudi Arabia



## SHOW MANSION IN KSA



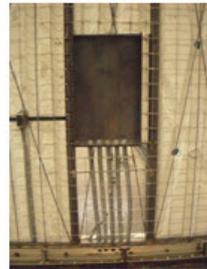
ENGINEERED & MANUFACTURED BY :  
**IHI /GARMECO GROUP OF COMPANIES**

# EXECUTED PROJECTS

## IHI SHOW MANSION IN KSA



View of the DRY RUN at IHI's Factory and shipping the panels in bundles by sea to Riyadh.



A close view of the built-in electric panel board casing connected to the lower electric raceway system



LOADING THE IHI BUNDLES INSIDE THE IHI MANUFACTURING FACILITY



STRAPPING THE BUNDLES TO THE FLAT BEDS OF THE TRUCKS



# EXECUTED PROJECTS IHI SHOW MANSION IN KSA



## ASSEMBLY PROCESS



# EXECUTED PROJECTS IHI SHOW MANSION IN KSA



## EXTERIOR AND INTERIOR VIEWS



# EXECUTED PROJECTS IHI SHOW MANSION IN KSA



AFTER COMPLETION WITH VERY HIGH QUALITY FINISHING MATERIALS



# Projects Currently under Research, Design & Budgeting



## TYPICAL DESIGN FOR AN IHI JV FACTORY



# Projects Currently under Research, Design & Budgeting



## DESIGN FOR AN IHI JV FACTORY IN GERMANY





## Investment Highlights

### International Market Expansion will be Achieved Through:

- ❑ **STRONG RELATIONSHIPS WITH REGIONAL KEY DEVELOPERS & ARCHITECTS**
- ❑ **PUBLIC & GOVERNMENT AWARENESS OF IHI BUILDING SYSTEM**
- ❑ **SHOWCASE PROJECTS WORLD-WIDE**
- ❑ **PARTICIPATION IN FINDING SOLUTIONS FOR DISASTER AREAS**
- ❑ **DISTRIBUTION THROUGH WEBSITE OF ALL IHI'S ADVANTAGES IN SEVERAL LANGUAGES**
- ❑ **LEARNING FROM THE EXPERIENCE OF IHI'S 1<sup>ST</sup> R&D FACILITY IN ORDER TO OPTIMIZE THE DESIGN/PRODUCTION/LAYOUT/SIZE OF A NEW HIGHER VOLUME IHI AUTOMATED FACTORY.**