

**1. GENERAL**

- 1.1 DRAWINGS ARE TO READ AS A WHOLE, AND IN CONJUNCTION WITH ALL OTHER DRAWINGS PROVIDED, INCLUDING BUT NOT LIMITED TO: ARCHITECTURAL, MECHANICAL, ELECTRICAL AND SURVEY DRAWINGS.
- 1.2 DRAWINGS ARE NOT INTENDED TO BE PICTORIALY ACCURATE. THEY ARE PROVIDED TO SUPPLY ALL THE RELEVANT SPECIFICATIONS AND DETAILS REQUIRED TO CONVEY THE INTENT OF THE CONSTRUCTION. THE INTENT OF ALL THE DESIGN DRAWINGS SHALL BE UNDERSTOOD AND THE CONSTRUCTION CARRIED OUT TO MEET THAT INTENT.
- 1.3 PRIOR TO THE COMMENCEMENT OF WORK THE CONTRACTOR SHALL COMPARE ALL DIMENSIONS AND OUTLINES BETWEEN THE RELEVANT ARCHITECTURAL AND STRUCTURAL DRAWINGS. ANY DISCREPANCIES OR OMISSIONS MUST BE BROUGHT TO THE ATTENTION OF ALL RELEVANT PARTIES. ANY VARIATIONS NOT REPORTED PRIOR TO COMMENCEMENT OF WORK ARE THE CONTRACTOR'S RESPONSIBILITY.
- 1.4 THE CONTRACTOR IS RESPONSIBLE FOR THE SITE MEASURING AND CONTROLLING THE PRODUCTION OF ALL WORK ON SITE TO ENSURE THEY MEET THE INTENT OF THE DRAWINGS. ANY DIMENSIONAL DEVIATIONS FROM THE PLAN MUST BE REPORTED TO THE ENGINEER.
- 1.5 ANY CONDITIONS ON SITE THAT MAY IMPACT UPON THE FULFILLMENT OF THE DESIGNS INTENT, INCLUDING BUT NOT LIMITED TO: SOIL CONDITIONS, BUILDINGS, BUILDING COMPONENTS, OR PROPERTY LINES, MUST BE RECORDED AND REPORTED.
- 1.6 ANY ALTERATIONS THAT MAY RESULT IN EXTRA CHARGES BEING APPLIED TO THE CONTRACT MUST BE BROUGHT TO THE ENGINEER'S ATTENTION WITH ADEQUATE TIME FOR THE CHARGES TO BE REVIEWED AND APPROVAL SOUGHT FROM THE RELEVANT PARTIES BEFORE ANY OF THE WORK IS CARRIED OUT.
- 1.7 APPROVAL FROM THE ENGINEER MUST BE OBTAINED BEFORE ANY STRUCTURAL MEMBERS ARE CUT OR DRILLED INTO WHERE IT HAS NOT BEEN SPECIFIED ON THE PLAN.
- 1.8 WORK FOUND DEFECTIVE AFTER COMPLETION OF THE PROJECT SHALL REMAIN THE RESPONSIBILITY OF THE CONTRACTOR TO AMEND. THIS REQUIREMENT REMAINS ALIVE BEYOND SUBSTANTIAL COMPLETION OF THE PROJECT REGARDLESS OF PRIOR ACCEPTANCE OR APPROVAL.

**2. DESIGN PARAMETERS**

2.0 GOVERNING CODE: 2024 B.C.B.C.

2.1 DESIGN LOADS:

2.1.1 LIVE LOADS:

SNOW LOAD: S<sub>s</sub> = 2.0 KPa, S<sub>r</sub> = 0.4 KPa

WIND LOAD: Q1-10 = 0.4 KPa, Q1-50 = 0.48KPa

2.1.2 EQUIPMENT LOAD: NEW DEHUMIDIFIER: 54 KN (12200 LBS)  
NEW EQUIP. PLATFORM LIVE LOAD: 4.8 KPa

2.1.3 SEISMIC DATA:

S<sub>a</sub> (0.2) = 0.925

S<sub>a</sub> (0.5) = 0.633

S<sub>a</sub> (1.0) = 0.373

S<sub>a</sub> (2.0) = 0.247

PGA = 0.401

**3. SITE CONDITIONS**

- 3.1 FOUNDATION DESIGN VALUES AS PER HERLOD ENGINEERING LTD EXISTING BUILDING DRWGS DATED, NOV. 2002:  
- PAD FOOTINGS 150 KPA  
- STRIP FOOTINGS (18" WIDE) 75 KPA  
- STRIP FOOTINGS (GREATER THAN 36" WIDE) 150 KPA
- 3.2 BEARING CAPACITY OF ALL BEARING SOIL AND SLAB/ASPHALT SUB-SOIL TO BE INSPECTED AND CONFIRMED ON SITE PRIOR TO CASTING CONCRETE BY A GEOTECHNICAL PROFESSIONAL ENGINEER RESPONSIBLE FOR THE SOIL RECOMMENDATIONS.
- 3.3 ALL BACKFILL SHALL BE CLEAN GRANULAR MATERIAL AND SHALL BE PLACED IN LAYERS AS INDICATED BY THE GEOTECHNICAL ENGINEER.
- 3.4 PREPARE ALL FOOTING BASES IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE SOIL ENGINEER.

**4. CONCRETE**

- 4.1 ALL CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST CSA SPECS. CAN/CSA-A23.1 AND CAN/CSA-23.2 AND SHALL BE MADE WITH TYPE 10 PORTLAND CEMENT, EXCEPT WHERE TYPE 30 HIGH EARLY STRENGTH IS APPROVED. ALL CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS:

LOCATION	28 DAYS STRENGTH	AGGREGATE SIZE	SLUMP	AIR %	EXPOSURE CLASS	CEMENT CONTENT
FOOTINGS	25 MPa	20 mm	70 mm	4 - 7%	N	GU
WALLS	30 MPa	20 mm	70 mm	4 - 7%	F-2	GU
PEDESTALS	30 MPa	20 mm	70 mm	4 - 7%	F-2	GU
SLAB & GRADE BEAM (INTERIOR)	30 MPa	20 mm	80 mm	N/A	N	GU
EXTERIOR CONCRETE	32 MPa	20 mm	80 mm	5 - 8%	C-2	GU
TILT UP PANELS COMPRESSIVE	30 MPa	20 mm	70 mm	4 - 7%	F-2	GU
STEEL DECK TOPPING	25 MPa	14 mm	80 mm	N/A	N	GU
SLAB ON GRADE (INTERIOR)	25 MPa	20 mm	80 ±20mm	N/A	N	N/A
PARKING SLAB ON GRADE	25 MPa	20 mm	70 ±20 mm	4 - 7%	C-4	0.55
SIDEWALKS & DRIVES	32 MPa	20 mm	70 ±20 mm	5 - 8%	C-2	0.45
MASONRY GROUT	20 MPa	10 mm	200 ±20mm	N/A	N/A	N/A
MASONRY CONCRETE FILL	25 MPa	14 mm	150 ±20mm	N/A	N/A	N/A
COLUMNS (INTERIOR)	25 MPa	20 mm	80 ±20mm	N/A	N/A	N/A
COLUMNS (EXTERIOR)	25 MPa	20 mm	80 ±20mm	4 - 7%	F-2	0.55
EXTERIOR BASEMENT WALL	25 MPa	20 mm	80 ±20mm	4 - 7%	F-2	0.55

- 4.2 THE CONTRACTOR SHALL BE RESPONSIBLE AND PAY FOR TAKING AND TESTING OF CONCRETE CYLINDERS BY AN INDEPENDENT TESTING LABORATORY TO THE APPROVAL OF THE ENGINEER AS FOLLOWS:  
  
3 CYLINDERS AT UNIFORM INTERVALS FOR EACH CLASS OF CONCRETE POURED PER DAY AND/OR FOR EACH 75 CU. METERS OF CONCRETE PLUS ONE CYLINDER FOR EACH ADDITIONAL 25 CU. METERS AFTER MAXIMUM POUR.
- 4.3 PLACE GROUT UNDER WHOLE BASE PLATE AREA IN ACCORDANCE WITH GROUT MANUFACTURERS' INSTRUCTIONS AFTER THOROUGH CLEANOUT. DRY PACKING OF BASE PLATES IS PERMITTED ONLY FOR PLATES LESS THAN 250 mm (10") IN WIDTH.
- 4.4 SEE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR HOLES, NAILERS, INSERTS, ETC. TO BE CAST IN CONCRETE.
- 4.5 THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT CONCRETE PLACEMENT CAUSES NO DISPLACEMENT OF REINFORCING MATERIALS FROM THEIR SPECIFIED LOCATIONS. CONCRETE MUST BE PROPERLY CONSOLIDATED IN ALL AREAS.
- 4.6 CONCRETE FOR COLUMNS MUST HAVE REACHED A MINIMUM STRENGTH OF 10 MPA BEFORE FORMWORK IS REMOVED. CONCRETE SLABS MUST REACH 18 MPA PRIOR TO REMOVAL OF FORMWORK AND THEN IMMEDIATELY RESHORE UNTIL CONCRETE HAS REACHED FULL STRENGTH.
- 4.7 FORMWORK AND RESHORE MUST NOT IMPART UPON ANY STRUCTURAL MEMBER A LOAD IN EXCESS OF THE SUPERIMPOSED LIVE LOADS LIMITS SPECIFIED.
- 4.8 NO CALCIUM CHLORIDE SHALL BE ADDED TO THE CONCRETE WITHOUT THE EXPRESS CONSENT OF THE ENGINEER
- 4.9 FOR TOLERANCES FOR THE CONCRETE REFER TO APPLICABLE CODES, EXCEPT MAX DEVIATION FROM LEVEL OR VERTICAL SHALL BE 1/4" AND THE MAX VARIATION IN THICKNESS SHALL BE FROM 1/4" TO -1/8".

**5. REINFORCEMENT**

- 5.1 REINFORCEMENT OF BAR SIZED 10M AND LARGER SHALL CONFORM TO THE LATEST CAN/CSA-G30.18, GRADE 400 NEW DEFORMED BILLET-STEEL BARS.
- 5.2 REINFORCING STEEL COVER SHALL BE AS SPECIFIED IN THE TABLE BELOW, U.N.O.:

STRUCTURAL ELEMENT	FIRE RESISTANCE RATING (SEE ARCH'L DWG'S)		
	1 HR	2 HR	3 HR
CAST & PERMANENTLY CAST AGAINST EARTH	3"	N/A	N/A
COLUMNS (VERTICAL TO REBAR)	1 1/2"	2"	2"
BEAMS TO SLABBANDS: -TO REBAR -PRESTRESSING TENDONS -EXPOSED	1 1/2" 1 1/2" 2"	1 1/2" 2" 2"	1 1/2" 3" 3"
SLABS: -TO REBAR -PRESTRESSING TENDONS -EXPOSED	3/4" 1" 1 1/2"	1" 1 1/2" 1 1/2"	1 1/4" 2" 2"
WALLS: -TO REBAR -EXPOSED TO WEATHER -EXPOSED TO FIRE, 2 SIDES -ZONE REINFORCING	3/4" 1 1/4" 2" 1 1/4"	3/4" 1 1/4" 2" 1 1/4"	3/4" 1 1/4" 2" 1 1/4"

- 5.3 SPLICES TO REINFORCEMENT TO BE (UNLESS NOTED OTHERWISE): VERTICAL AND HORIZONTAL WALL STEEL - 36 BAR DIAMETERS.
- 5.4 PROVIDE CORNER REBARS TO MATCH HORIZONTAL REINFORCEMENT AT WALL CORNERS FOR CAST IN PLACE WALL, U.N.O.
- 5.5 ALL REINFORCEMENT SHALL BE FREE FROM GREASE, SCALE AND OTHER COATINGS, ACCURATELY PLACED AND ADEQUATELY SUPPORTED BY PLASTIC PROTECTED METAL OR OTHER APPROVED CHAIRS, SPACERS OR TIES, AND FULLY SECURED AGAINST DISPLACEMENT.
- 5.6 NO CONCRETE SHALL BE POURED PRIOR TO THE ENGINEER INSPECTING THE CONDITIONS OF THE POUR AND PLACEMENT OF REINFORCING STEEL.
- 5.7 MINIMUM SPLICE LENGTHS TO BE AS FOLLOWS, U.N.O.:

	TENSION SPLICE					COMPRESSION SPLICE
	25 MPa	30 MPa	35 MPa	40 MPa	45 MPa	
10M	1'-4"	1'-2"	1'-2"	1'-2"	1'-2"	1'-0"
15M	1'-10"	1'-10"	1'-8"	1'-7"	1'-5"	1'-6"
20M	2'-6"	2'-4"	2'-2"	2'-1"	2'-0"	2'-0"
25M	3'-11"	3'-8"	3'-6"	3'-3"	3'-0"	2'-6"
30M	4'-10"	4'-4"	4'-0"	3'-10"	3'-7"	3'-0"
35M	5'-7"	5'-3"	4'-10"	4'-7"	4'-0"	3'-5"

**ADDITIONAL NOTES FOR REBAR SPLICES:**

ALL SPLICES SHALL BE TENSION SPLICES, EXCEPT SPLICES FOR COLUMNS WHICH SHALL BE COMPRESSION SPLICES UNLESS NOTED ON DRAWINGS.

INCREASE LENGTH BY 30% FOR BEAMS WITHOUT STIRRUPS.  
INCREASE LENGTH BY 30% FOR REINFORCEMENT PLACED IN TOP OF BEAM AND SLABS.

INCREASE LENGTHS BY 50% FOR EPOXY COATED BARS.

INCREASE LENGTHS BY 70% FOR EPOXY COATED TOP BARS.

FOR MINIMUM TENSION EMBEDMENT LENGTHS DIVIDE SPLICE LENGTHS IN THE TABLE ABOVE BY 1.3, WHILE ENSURING A MINIMUM OF 12".

- 5.8 MINIMUM DEVELOPMENT LENGTHS FOR HOOKED BARS TO BE AS FOLLOWS, U.N.O.:

	MINIMUM HOOK DEVELOPMENT LENGTHS FOR TENSION BARS				
	25 MPa	30 MPa	35 MPa	40 MPa	45 MPa
10M	9"	9"	8"	8"	8"
15M	1'-1"	1'-0"	11"	11"	11"
20M	1'-4"	1'-3"	1'-2"	1'-1"	1'-0"
25M	1'-8"	1'-7"	1'-5"	1'-4"	1'-3"
30M	2'-0"	1'-10"	1'-9"	1'-7"	1'-6"
35M	2'-4"	2'-2"	2'-0"	1'-11"	1'-9"

**REINFORCEMENT (CONT'D)**

5.9 TEMPERATURE REINFORCEMENT

UNLESS OTHERWISE SHOWN, THE TABLE BELOW REPRESENTS THE MINIMUM REINFORCEMENT REQUIRED IN BOTH DIRECTIONS, AS BOTTOM STEEL. FOR ALL NON - POST-TENSIONED SLABS:

SLAB THICKNESS	TEMPERATURE REINFORCEMENT
6" OR LESS	10M @ 14"
UP TO 7"	10M @ 12"
UP TO 8"	10M @ 10"
UP TO 9"	15M @ 17"
UP TO 10"	15M @ 15"
UP TO 11"	15M @ 14"
UP TO 12"	15M @ 12"

5.10 MINIMUM WALL REINFORCEMENT

UNLESS OTHERWISE SHOWN, THE TABLE BELOW REPRESENTS THE MINIMUM REINFORCEMENT FOR ALL CAST-IN-PLACE CONCRETE WALLS:

WALL THICKNESS	REBAR LAYERS	TEMPERATURE REINFORCEMENT
UP TO 6"	ONE LAYER	10M @ 13" O.C. EACH WAY AT MIDDLE OF WALL
UP TO 8"	ONE LAYER	15M @ 18" O.C. EACH WAY AT MIDDLE OF WALL
UP TO 10"	TWO LAYERS	10M @ 16" O.C. EACH WAY EACH FACE
UP TO 12"	TWO LAYERS	10M @ 13" O.C. EACH WAY EACH FACE

**COPYRIGHT RESTRICTION**

THIS DESIGN & DRAWING IS AND AT ALL TIMES REMAIN THE EXCLUSIVE PROPERTY OF INNODES CONSULTING INC. AND CANNOT BE USED WITHOUT THE CONSENT OF INNODES CONSULTING INC.

REVISION:	SUBJECT:	DATE:	REVISION:	SUBJECT:	DATE:
-	SUBJECT	YYYY.MM.DD			
			ISSUED		DATE
			ISSUED FOR REVIEW		2024.09.11
			ISSUED FOR TENDER		2025.01.30



**INNODES**  
CONSULTING INC. INNOVATIVE DESIGNS  
# 900 - 1200 West 73rd Ave. Vancouver, B.C. Canada V6P 6G5  
Ph: 604 - 264 - 1450 Fax: 604 - 264 - 1462 Email: info@innodes.ca  
PERMIT TO PRACTICE NO. 1005040

SEAL

TITLE: **GENERAL NOTES**

PROJECT: OCEANSIDE ARENA  
NEW DEHUMIDIFIER STEEL SUPPORT FRAME & EQUIPMENT PLATFORM  
826 WEST ISLAND HIGHWAY, PARKSVILLE, BC

CONSULTANT:	DRAWN BY: RG	SCALE: AS SHOWN
	CHECKED BY: DT	PROJECT No.
	DATE: JUNE 2024	224-169-S

SHEET No.

**S01**

**6. STEEL STRUCTURE**

- 6.1 ALL STRUCTURAL STEEL TO BE IN ACCORDANCE WITH THE LATEST CSA S16 AND THE C.I.S.C. CODE OF STANDARD PRACTICE.
- 6.2 ALL WELDING TO BE IN ACCORDANCE WITH CSA W59-03, BY WELDERS CERTIFIED IN ACCORDANCE WITH CSA W47.1-03. ALL WELDS TO BE CONTINUOUS UNLESS NOTED AND GROUND SMOOTH. REMOVE ALL BLEMISHES, WELD SPATTER, SHOP MARKS ETC.
- 6.3 INTERIOR STEEL WORK, SITUATED IN NORMALLY DRY CONDITIONS OR STEEL ENCASED IN CONCRETE SHALL BE CLEANED TO SP2 WITHOUT PRIMER. STEEL EXPOSED TO A POTENTIALLY MOIST ENVIRONMENT SHALL BE CLEANED TO SP3 AND PRIMED IN ACCORDANCE CISC GUIDELINES. STEEL EXPOSED TO VIEW, OR POTENTIALLY WET CONDITIONS, SHALL BE CLEANED TO SP6, PRIMED IN ACCORDANCE TO CISC GUIDELINES AND COATED AS REQUIRED BY THE ARCHITECT. STEEL THAT IS PERMANENTLY EXPOSED TO THE ELEMENTS, INCLUDING BRICK VENEER OR STONE ANGLE SUPPORTS AND EMBEDS IN EXPOSED CONCRETE, SHALL BE HOT DIPPED GALVANIZED.
- 6.4 THE CONTRACTOR SHALL SUBMIT DETAILED FABRICATION DRAWINGS OF ALL STEEL MEMBERS TO THE ENGINEER FOR REVIEW AT LEAST TWO WEEKS PRIOR TO THE COMMENCEMENT OF ANY FABRICATION PROCESS.
- 6.5 U.N.O. , ALL STEEL MEMBERS TO BE AS FOLLOWS:
  - WIDE FLANGE SECTIONS: CSA-CAN3-G40.21, TYPE 350W
  - HOLLOW STEEL SECTIONS (HSS): CSA-CAN3-G40.21, TYPE 350W; CLASS C
  - CHANNEL SECTIONS: CSA-CAN3-G40.21, TYPE 300W
  - ANGLE SECTIONS: CSA-CAN3-G40.21, TYPE 300W
  - PLATES, RODS & MISCELLANEOUS STEEL MEMBERS: CSA-CAN3-G40.21, TYPE 300W
- 6.6 ALL BOLTS USED FOR STEEL-TO-STEEL CONNECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-325, MINIMUM SIZE 3/4" DIAMETER, U.N.O. ALL BOLTS USED FOR ANCHORAGE TO CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-307.
- 6.7 THE CONTRACTOR IS RESPONSIBLE FOR DIMENSIONS IN THE FIELD TO SUIT. HE SHALL SITE MEASURE AND CONTROL THE PRODUCTION OF WORK ON SITE AND ELSEWHERE TO FULFILL THE INTENT OF THE DRAWINGS.
- 6.8 ALL CONNECTORS SHALL BE DESIGNED BY FABRICATOR U.N.O. , ALL BEAM CONNECTIONS SHALL BE STANDARD FRAME BEAM CONNECTIONS OR EQUIVALENT. THE FABRICATOR SHALL SUBMIT SHOP DRAWINGS SHOWING IN DETAILS AND THEIR CAPACITY. CONNECTIONS AND SPLICES NOT SHOWN ON THE STRUCTURAL DRAWINGS BUT REQUESTED BY FABRICATOR SHALL BE DETAILED ON SHOP DRAWINGS, AND SUBMITTED TO THE ENGINEER FOR REVIEW.
- 6.9 BOLTED CONNECTIONS SHALL HAVE A MINIMUM OF TWO BOLTS IN EACH CONNECTED PLATE AND BE DESIGNED AS BEARING CONNECTIONS, U.N.O.
- 6.10 ALL WELDED HEADED STUDS AND WELDED DEFORMED BAR ANCHORS SHALL BE INSTALLED AS PER MANUFACTURERS' SPECIFICATIONS AND RECOMMENDATIONS. FILLET WELDED STUDS AND DEFORMED BARS ARE CONSIDERED UNACCEPTABLE.
- 6.11 THE SHOP DRAWINGS SHALL BE SEALED BY A B.C. REGISTERED PROFESSIONAL STRUCTURAL ENGINEER, WHO WILL BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF CONNECTIONS AND ASSOCIATED COMPONENTS SHOWN IN THE SHOP DRAWINGS.
- 6.12 BEAM CONNECTIONS TO EMBEDDED PLATES SHALL BE DOUBLE ANGLE FRAMING CONNECTIONS, U.N.O.
- 6.13 WHERE BEAMS SIT OVER COLUMNS, PROVIDE FULL HEIGHT WEB STIFFENER PLATES AT EACH SIDE OF BEAM WEB EXTENDING OUTWARD TO FLANGE EDGES, CENTERED ON COLUMN AND WITH MINIMUM THICKNESS OF 3/8 INCH, U.N.O.
- 6.14 EBF BRACING ELEMENTS ARE TO BE FABRICATED IN STRICT CONFORMANCE WITH STRUCTURAL DRAWING DETAILS.
- 6.15 REFER TO ARCHITECTURAL DRAWINGS FOR MISCELLANEOUS STEEL AND SIZE VERIFICATION OF ALL MEMBERS.
- 6.16 HSS MEMBERS SHALL BE SEAL WELDED IN DRY CONDITIONS SHOP. FOR ANY HSS MEMBER IN EXTERIOR CONDITIONS, OR POTENTIALLY SUBJECTED TO FREEZING, A WEEP HOLE SHALL BE PROVIDED AT THE LOWER END OF THE MEMBER.
- 6.17 PROVIDE GUYING OF INCOMPLETE STRUCTURE TO PLUMB AND MAINTAIN SAFETY STANDARDS UNTIL COMPLETION.
- 6.18 IF MASONRY WALLS ARE EXPECTED TO ALIGN WITH STEEL COLUMNS THE STEEL CONTRACTOR SHALL PROVIDE MASONRY ANCHOR STRAPS WITH DIMENSIONS OF 1 1/2" WIDE X 6" LONG AND 1/8" THICK, WITH A 1" LEG, @ 32" O.C VERTICALLY.

**STEEL STRUCTURE (CONT'D)**

- 6.19 THE CONTRACTOR SHALL PROVIDE FRAMING FOR MECHANICAL WEIGHTS, AND IN ADDITION, FRAME ANY OPENINGS THROUGH ROOFS OR FLOORS IN EXCESS OF 18" IN ANY DIMENSION.  
THE MINIMUM FRAMING AROUND OPENINGS SHALL BE AS FOLLOWS, U.N.O.:  
  
L3x3x 1/4" ANGLES FOR ROOFS IN AREAS WITHOUT SNOW BUILD-UP.  
  
L4x4x 1/4" ANGLES FOR ROOFS IN AREAS WITH SNOW BUILD-UP.  
  
PROVIDE CLIPS TO BEAMS AND JOISTS TO SUIT  
  
FOR OPENINGS OVER 2'-0 IN ANY DIMENSION, OR FOR OPENINGS WHICH CARRY MECHANICAL DEVICES IN EXCESS OF 500LBS, THAT ARE NOT SHOWN ON STRUCTURAL DRAWINGS SHOULD BE REPORTED TO THE STRUCTURAL ENGINEER WITH A MARKED LOCATION FOR AN ASSESSMENT.
- 6.20 GROUT UNDER BASE PLATES OF COLUMNS WITH A NON-SHRINK FLOWABLE GROUT, TARGET MACHINE BASE OR SIMILAR CAST UNDER HYDRAULIC HEAD. PROVIDE MIN OF 1" U.N.O.
- 6.21 PROVIDE SUPPORT FOR STEEL DECK EDGES ALL AROUND AS REQUIRED. PROVIDE STEEL ANGLES OF SIZE TO SUIT (MIN 3 X 3 X 1/4) AROUND THE PERIMETER OF THE STEEL DECK, IF STEEL DECK EDGES ARE NOT ALREADY SUPPORTED, INCLUDING PARALLEL TO EDGES OF DECK SPAN. WELD DECK ANGLE TO ADJACENT STEEL SUPPORTS OR BOLT TO ADJACENT CONCRETE AS REQUIRED SUITABLE TO THE TRIBUTARY DESIGN FLOOR LOADING.

**7. STEEL STUDS**

- 7.1 STEEL STUDS SHALL REFER TO ALL COLD FORMED STEEL CHANNEL CONSTRUCTION ON WALL, VALENCE, OR OTHER APPLICATIONS AS INDICATED ON THE STRUCTURAL OR ARCHITECTURAL DRAWINGS.
- 7.2 STEEL STUDS SHALL BE ERECTED IN ACCORDANCE WITH THE LATEST CAN/CSA S136 "COLD FORMED STEEL STRUCTURAL MEMBERS" AND "CSSBI-LIGHTWEIGHT STEEL FRAMING MANUAL".
- 7.3 STUD SPLICING ON LOAD BEARING STEEL STUD WALLS IS NOT PERMITTED UNLESS COMPLETE DETAILS ARE PROVIDED BY A B.C. REGISTERED SPECIALIST PROFESSIONAL STRUCTURAL ENGINEER.
- 7.4 STEEL STUD SHOP DRAWINGS SHALL BE PREPARED, SIGNED AND SEALED BY A PROFESSIONAL STRUCTURAL ENGINEER REGISTERED IN B.C., SPECIALIZING IN STEEL STUD CONSTRUCTION, WHO WILL BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF STEEL STUDS AND CONNECTIONS SHOWN IN THE SHOP DRAWINGS FOR THIS PROJECT.
- 7.5 THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL STEEL STUD MEMBERS TO THE ENGINEER FOR REVIEW AT LEAST TWO WEEKS PRIOR TO COMMENCEMENT OF ANY FABRICATION PROCESS.

**8. STRUCTURAL STEEL DECK**

- 8.1 ALL STRUCTURAL STEEL DECK AND RELATED WORK SHALL CONFORM TO CSA CAN 3-5316 M COLD-FORMED STEEL MEMBERS CANADIAN SHEET STEEL BUILDING INSTITUTE STANDARDS.
- 8.2 THE THICKNESS AND PROFILE OF THE STEEL DECK SHALL BE SELECTED TO SUPPORT THE APPLICABLE LIVE LOADS PROVIDED BY THE CODES OR THOSE SPECIFIED ON THE DRAWINGS DEFLECTION SHALL NOT EXCEED 1/360 OF THE SPAN LENGTH UNDER THE LIVE LOAD.
- 8.3 THE STEEL DECK AND ALL RELATED MATERIALS SHALL BE DELIVERED IN GOOD CONDITION. COMPLETE WITH MANUFACTURERS STAMPS AND SEAL INTACT. ANY DECK SHOWING SIGNS OF VISUAL DAMAGE WILL NOT BE USED, INCLUDING DECKS THAT ARE DAMAGED DURING INSTALLATION. ALL DECKS SHOULD BE MOVED AND STORED CAREFULLY TO MINIMIZE THE RISK OF DAMAGE.
- 8.4 DECK CLOSURE STRIPS ARE TO BE PROVIDED AT EDGES OF THE DECK AS REQUIRED.
- 8.5 WELDERS MUST BE CWB CERTIFIED FOR THIN GAUGE MATERIALS
- 8.6 THE DECKING AND CLADDING SHALL BE UNIFORMLY FORMED TO ENSURE THAT LEVELS AND TRUE ALIGNMENTS ARE CONSISTENT.
- 8.7 FOR ALL HOLES REQUIRED, THE DECK SHALL BE CUT OR FITTED ACCORDINGLY BY THE DECK ERECTORS. THE ERECTORS SHALL ENSURE THAT ANY HOLES EXCEEDING 18" IN ANY DIRECTION HAS ADEQUATE STEEL SUPPORT PROVIDED BY THE RELEVANT PARTIES. ANY HOLE THAT CUTS A SUPPORT LEG OF THE DECK MUST BE PROVIDED WITH ADEQUATE REINFORCEMENT AND BRACING.

**9. TEMPORARY WORKS AND SITE SAFETY**

- 9.1 ALL TEMPORARY WORKS REQUIRED FOR COMPLETION OF THE CONSTRUCTION IS NOT THE RESPONSIBILITY OF INNODES CONSULTING INC.
- 9.2 ALL METHODS OF CONSTRUCTION SHALL BE CONSTRUCTED IN A PROPER AND SAFE MANNER, AND SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THESE METHODS INCLUDE BUT ARE NOT LIMITED TO: SHORING, RESHORING, FORMWORK, SCAFFOLDING, BARRIERS, WALKWAYS AND GUARD RAILS.
- 9.3 THE CONTRACTOR IS RESPONSIBLE TO COMPLY WITH ALL REQUIREMENTS RELATED TO THE JURISDICTION OF THE WORKERS COMPENSATION BOARD, AND WHERE NECESSARY, PROVIDE ENGINEERING EXPERTISE TO CONFIRM SUCH COMPLIANCE.

**10. CONTRACTOR REQUESTED CHANGES**

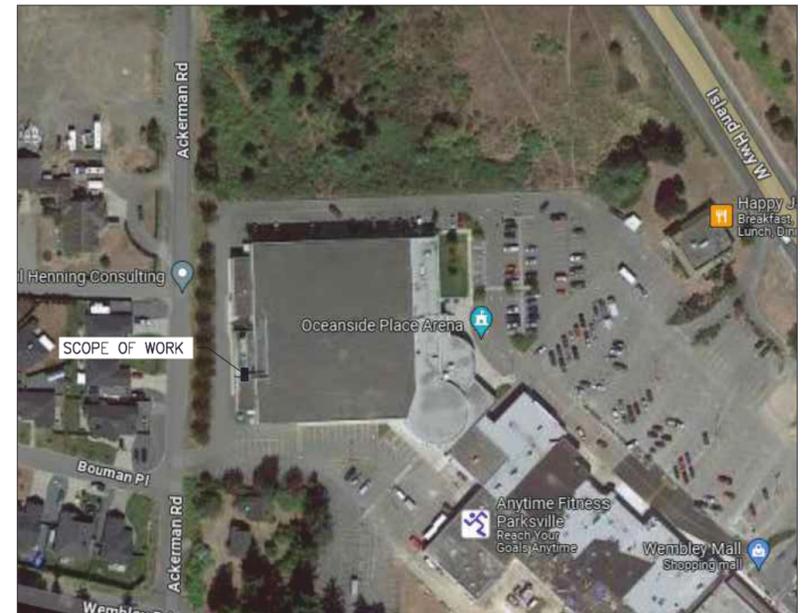
- 10.1 ALL ALTERATIONS MADE AS A RESULT OF UNFORESEEN SITE CONDITIONS OR DIFFERING CONSTRUCTION PROCEDURES SHALL BE MARKED UPON A SET OF STRUCTURAL DRAWINGS, INCLUDING ALL APPLICABLE DIMENSIONS.
- 10.2 IF A CONTRACTOR PERCEIVES THAT A CHANGE IN THE PLANS WILL RESULT IN A BETTER, OR MORE EFFICIENT CONSTRUCTION THEY CAN SUBMIT THESE REQUESTS. IT IS PREFERABLE THAT EACH SUBMISSION BE CLEARLY DETAILED AND ACCOMPANIED BY A SKETCH OF THE CHANGES. ACCEPTANCE, REJECTION OR MODIFICATION OF THE SUBMISSION IS ENTIRELY AT THE DISCRETION OF THE STRUCTURAL ENGINEER.

**11. CONDITIONS OF FIELD REVIEW**

- 11.1 A MINIMUM OF 48 HRS NOTICE SHALL BE GIVEN TO THE ENGINEER PRIOR TO ANY FIELD REVIEW THAT NEED BE CONDUCTED.
- 11.2 IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE FIELD REVIEWS WITH THE COMPLETION OF APPROPRIATE LEVELS OF WORK TO BE INSPECTED.
- 11.3 AT THE DISCRETION OF THE ENGINEER, WORK THAT HAS BEEN COVERED BY FINISHES PRIOR TO THE FIELD REVIEW MAY NEED TO BE REMOVED, THE CONTRACTOR SHALL INCUR THE COST OF THIS WORK.

**12. PRE-DRILLED ANCHORS**

- 12.1 ALL DRILLED HOLES INTENDED FOR PREDRILLED ANCHORS SHALL CONFORM TO THE MANUFACTURER'S SPECIFICATIONS FOR THE REQUIRED ANCHOR UNLESS INDICATED ON THE STRUCTURAL PLANS.
- 12.2 ALL DRILLED HOLES SHALL BE CLEANED AND DRIED BEFORE ANCHORS ARE SET.
- 12.3 ALL ANCHORS INDICATED ON THE DRAWINGS ARE TO BE HILTI HAS-E WITH HY-200 U.N.O.



GOOGLE MAP

**SITE LOCATION**

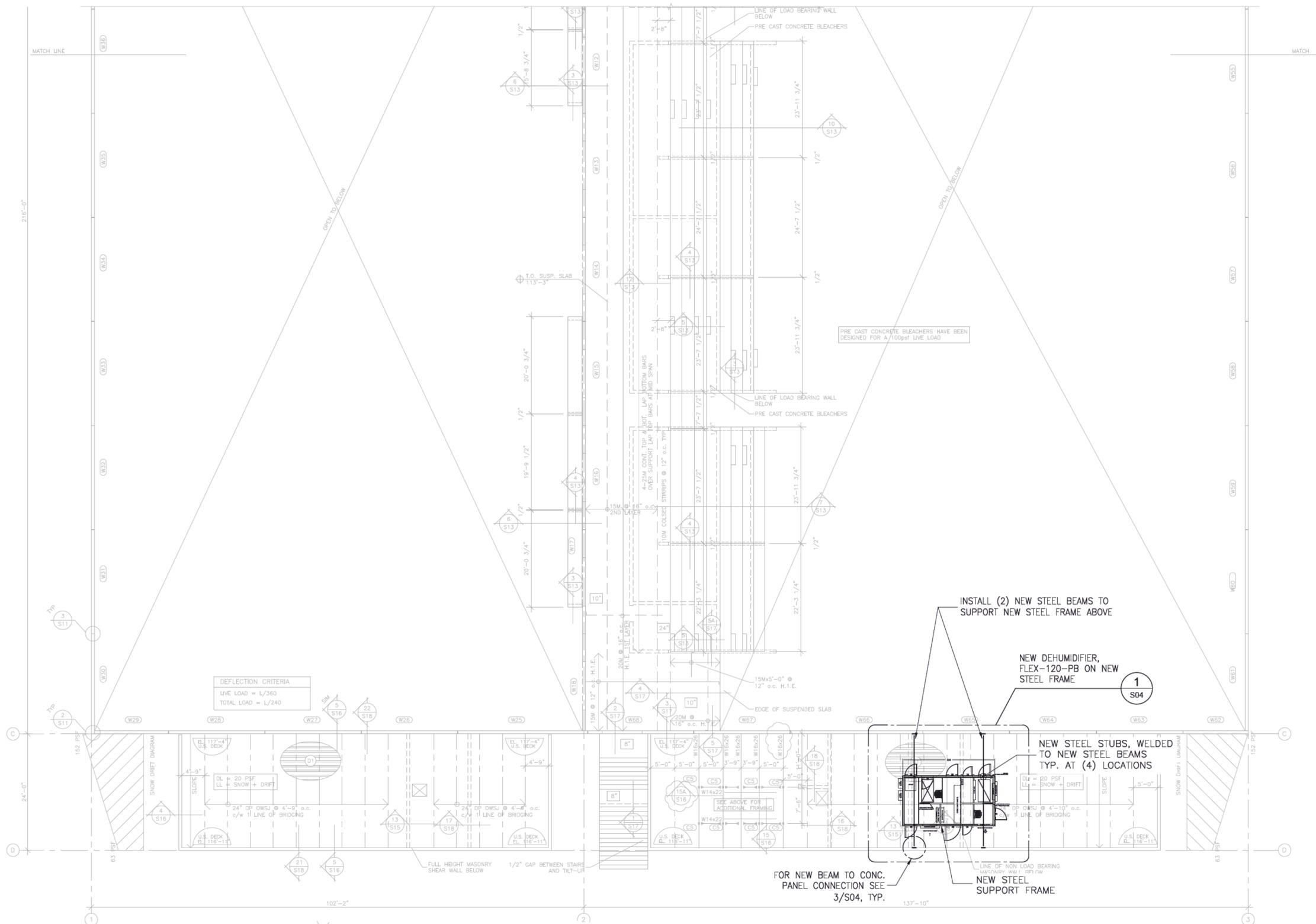
**COPYRIGHT RESTRICTION**  
THIS DESIGN & DRAWING IS AND AT ALL TIMES REMAIN THE EXCLUSIVE PROPERTY OF INNODES CONSULTING INC. AND CANNOT BE USED WITHOUT THE CONSENT OF INNODES CONSULTING INC.

REVISION:	SUBJECT:	DATE:	REVISION:	SUBJECT:	DATE:
-	SUBJECT	YYYY.MM.DD			
				ISSUED	DATE
			-	ISSUED FOR REVIEW	2024.09.11
				ISSUED FOR TENDER	2025.01.30

# 900 - 1200 West 73rd Ave. Vancouver, B.C. Canada V6P 6G5  
Ph: 604 - 264 - 1450 Fax: 604 - 264 - 1462 Email: info@innodes.ca  
PERMIT TO PRACTICE NO. 1005040

SEAL

<b>TITLE: GENERAL NOTES &amp; SITE LOCATION MAP</b>		<b>SHEET No.</b>  <b>S02</b>
<b>PROJECT: OCEANSIDE ARENA NEW DEHUMIDIFIER STEEL SUPPORT FRAME &amp; EQUIPMENT PLATFORM 826 WEST ISLAND HIGHWAY, PARKSVILLE, BC</b>		
<b>CONSULTANT:</b>	<b>DRAWN BY: RG</b> <b>CHECKED BY: DT</b> <b>DATE: JUNE 2024</b>	
	<b>SCALE: AS SHOWN</b> <b>PROJECT No.</b> <b>224-169-S</b>	



**1**  
S03 LOWER ROOF PLAN SHOWING NEW DEHUMIDIFIER STEEL SUPPORT FRAME LAYOUT

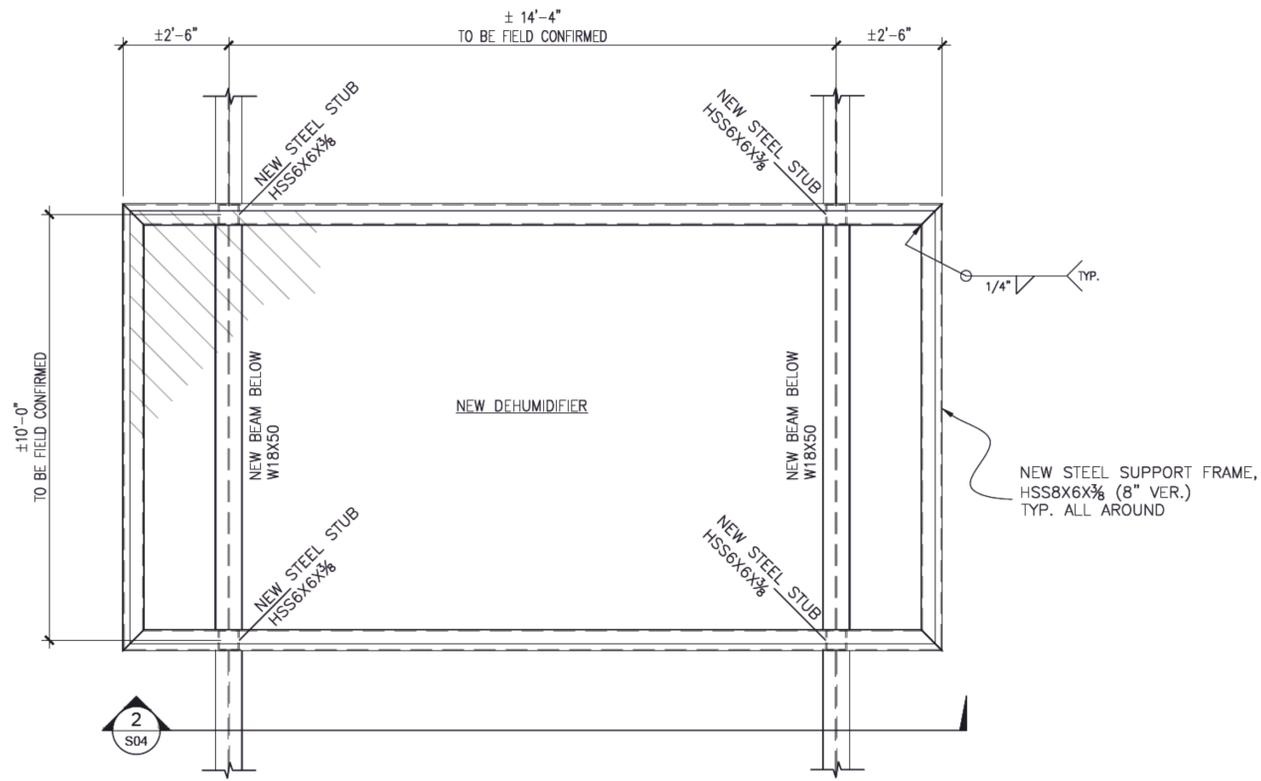
**COPYRIGHT RESTRICTION**  
THIS DESIGN & DRAWING IS AND AT ALL TIMES REMAIN THE EXCLUSIVE PROPERTY OF INNODES CONSULTING INC. AND CANNOT BE USED WITHOUT THE CONSENT OF INNODES CONSULTING INC.

REVISION:	SUBJECT:	DATE:	REVISION:	SUBJECT:	DATE:
-	SUBJECT	YYYY.MM.DD			
			ISSUED		DATE
			ISSUED FOR REVIEW		2024.09.11
			ISSUED FOR TENDER		2025.01.30

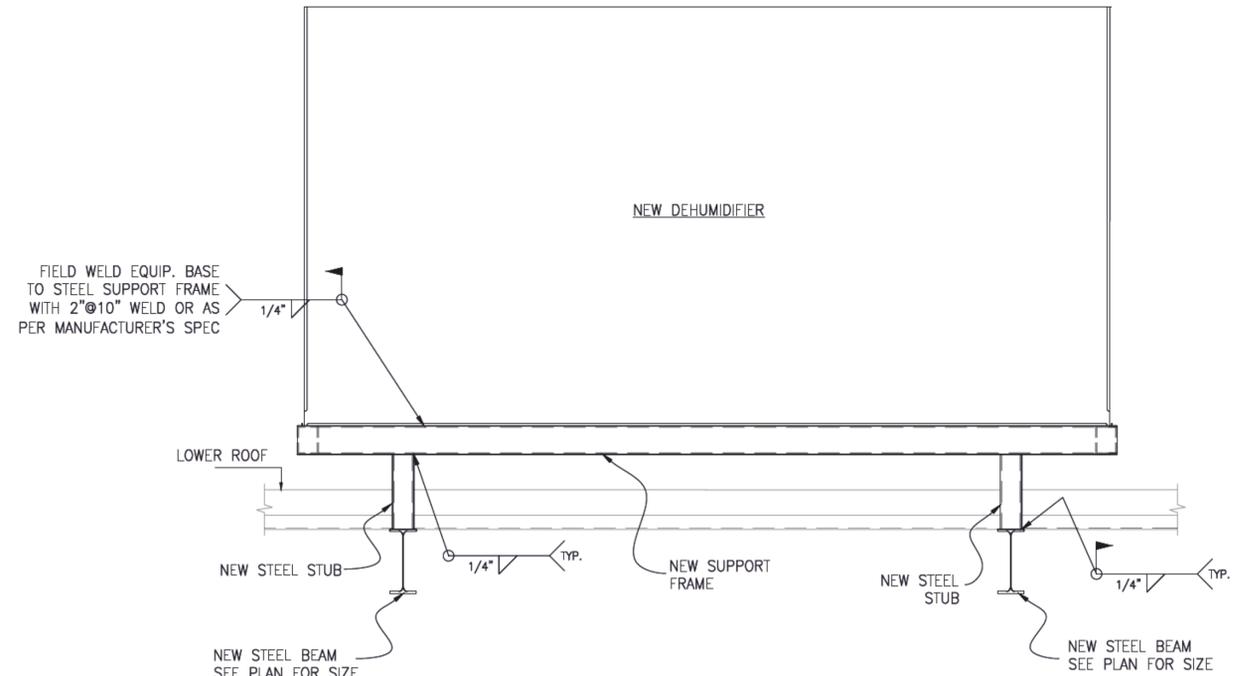
  
**INNODES CONSULTING INC.**  
 INNOVATIVE DESIGNS  
 # 900 - 1200 West 73rd Ave. Vancouver, B.C. Canada V6P 6G5  
 Ph. 604-264-1450 Fax. 604-264-1462 Email info@innodes.ca  
 PERMIT TO PRACTICE NO. 1005040

SEAL

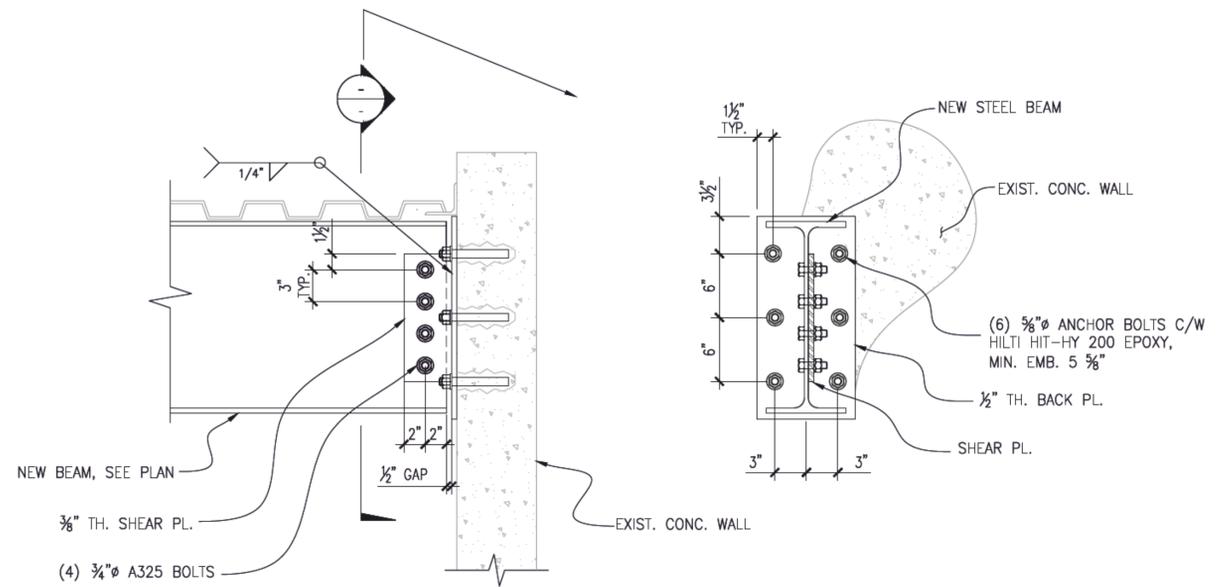
TITLE: LOWER ROOF PLAN SHOWING NEW DEHUMIDIFIER STEEL SUPPORT FRAME LAYOUT		SHEET No.
PROJECT: OCEANSIDE ARENA NEW DEHUMIDIFIER STEEL SUPPORT FRAME & EQUIPMENT PLATFORM 826 WEST ISLAND HIGHWAY, PARKSVILLE, BC		<b>S03</b>
CONSULTANT:	DRAWN BY: RG SCALE: AS SHOWN	
	CHECKED BY: DT PROJECT No. DATE: JUNE 2024 224-169-S	



1 NEW DEHUMIDIFIER STEEL SUPPORT FRAME LAYOUT  
S04



2 NEW DEHUMIDIFIER STEEL SUPPORT FRAME SECTION  
S04



3 NEW STEEL BEAM END CONNECTION DETAIL  
S04

**COPYRIGHT RESTRICTION**  
THIS DESIGN & DRAWING IS AND AT ALL TIMES REMAIN THE EXCLUSIVE PROPERTY OF INNODES CONSULTING INC. AND CANNOT BE USED WITHOUT THE CONSENT OF INNODES CONSULTING INC.

REVISION:	SUBJECT:	DATE:	REVISION:	SUBJECT:	DATE:
-	SUBJECT	YYYY.MM.DD			
			ISSUED		DATE
			ISSUED FOR REVIEW		2024.09.11
			ISSUED FOR TENDER		2025.01.30

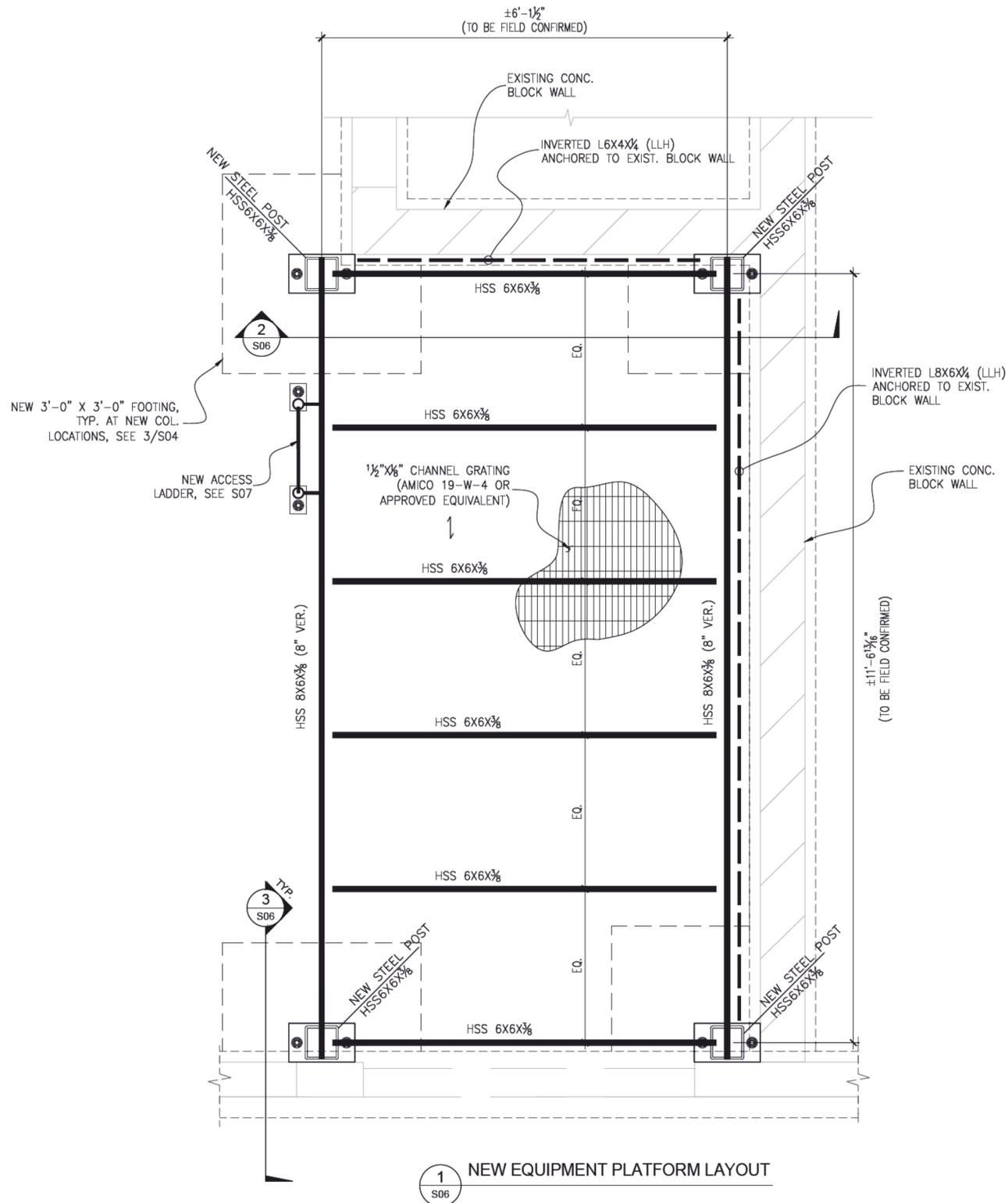
**INNODES**  
CONSULTING INC. INNOVATIVE DESIGNS

# 900 - 1200 West 73rd Ave. Vancouver, B.C. Canada V6P 6G5  
Ph: 604 - 264 - 1450 Fax: 604 - 264 - 1462 Email: info@innodes.ca  
PERMIT TO PRACTICE NO. 1005040

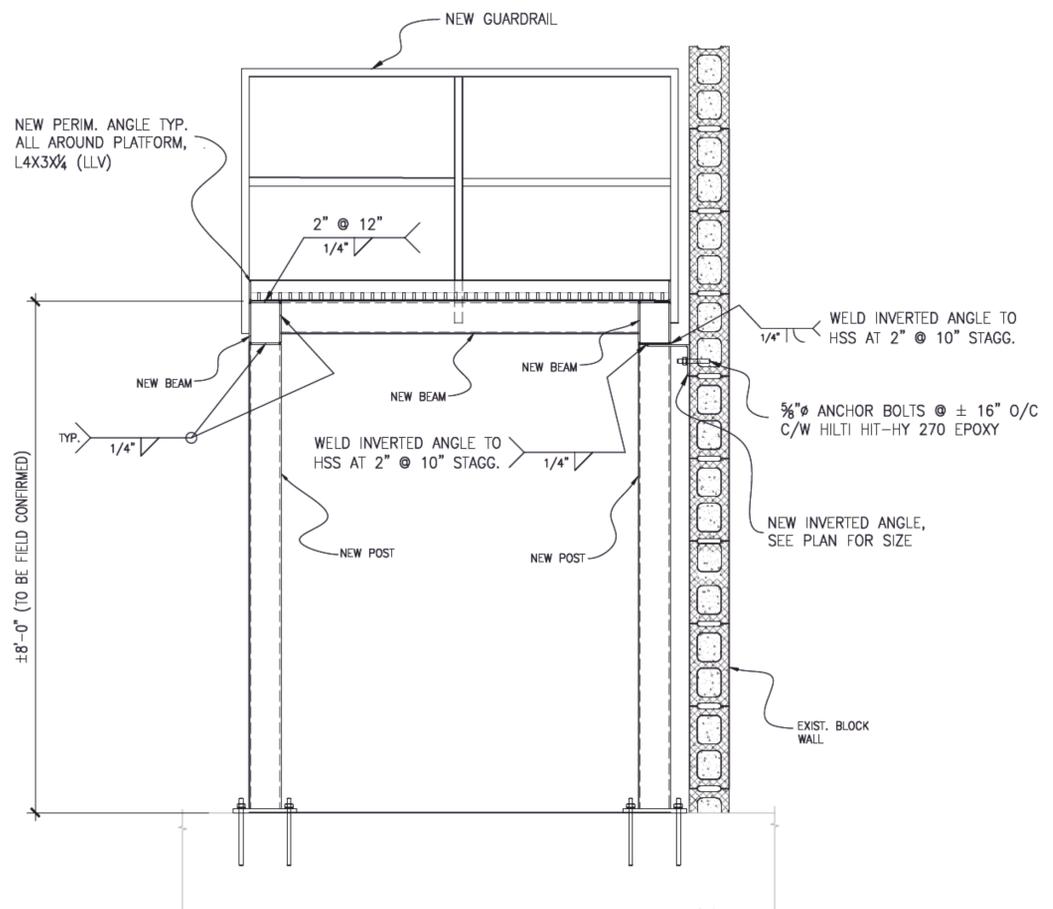
SEAL

TITLE: NEW DEHUMIDIFIER STEEL SUPPORT FRAME LAYOUT		SHEET No. <b>S04</b>
PROJECT: OCEANSIDE ARENA NEW DEHUMIDIFIER STEEL SUPPORT FRAME & EQUIPMENT PLATFORM 826 WEST ISLAND HIGHWAY, PARKSVILLE, BC		
CONSULTANT:	DRAWN BY: RG CHECKED BY: DT DATE: JUNE 2024	
	SCALE: AS SHOWN PROJECT No. 224-169-S	

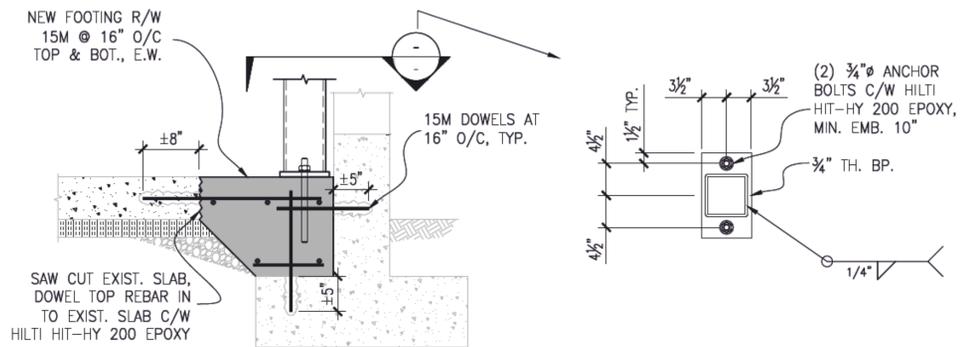




1  
S06  
NEW EQUIPMENT PLATFORM LAYOUT



2  
S06  
NEW EQUIPMENT PLATFORM SECTION



3  
S06  
SECTION

**COPYRIGHT RESTRICTION**  
THIS DESIGN & DRAWING IS AND AT ALL TIMES REMAIN THE EXCLUSIVE PROPERTY OF INNODES CONSULTING INC. AND CANNOT BE USED WITHOUT THE CONSENT OF INNODES CONSULTING INC.

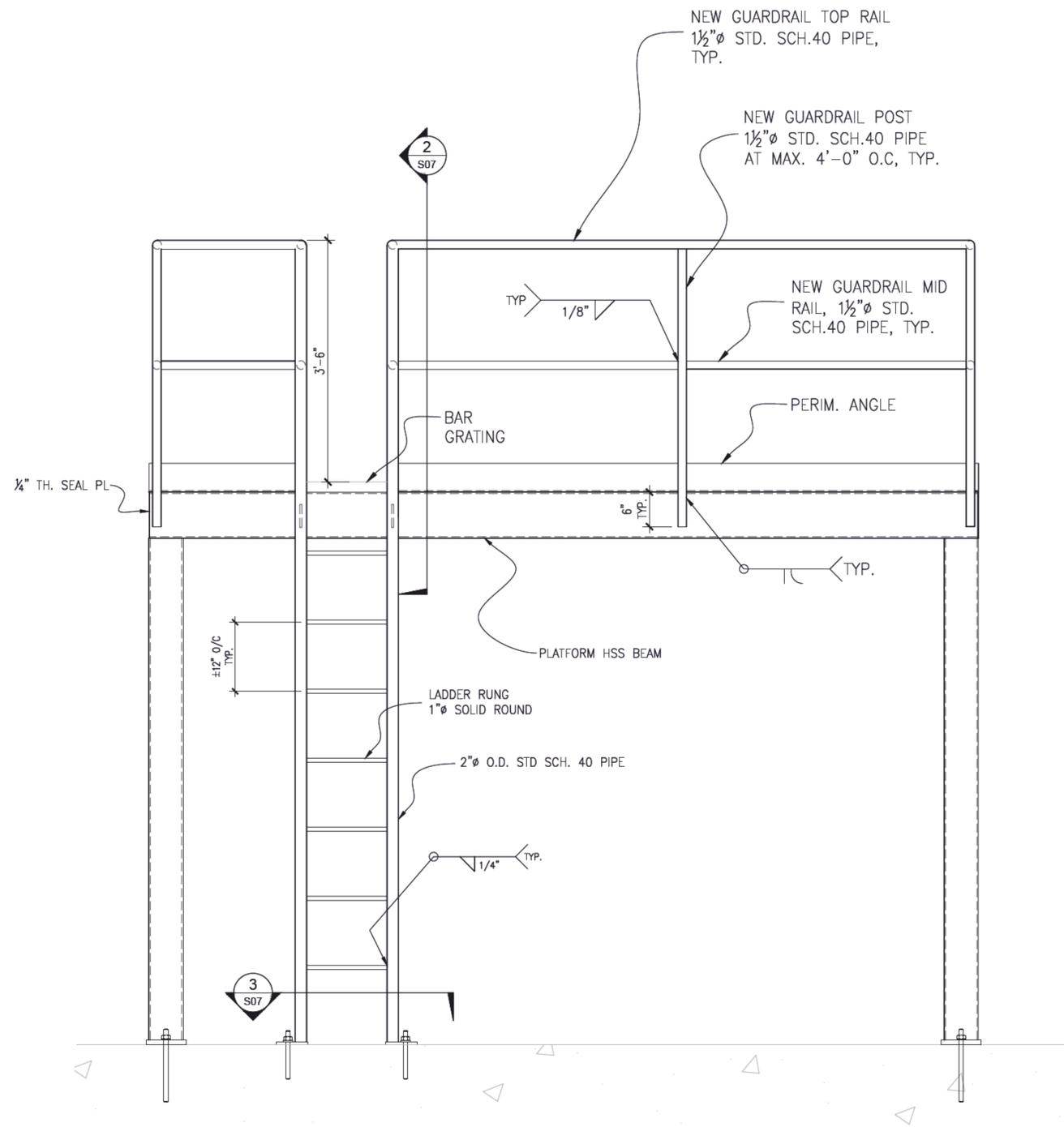
REVISION:	SUBJECT:	DATE:	REVISION:	SUBJECT:	DATE:
-	SUBJECT	YYYY.MM.DD			
			ISSUED		DATE
			ISSUED FOR REVIEW		2024.09.11
			ISSUED FOR TENDER		2025.01.30

**INNODES**  
CONSULTING INC. INNOVATIVE DESIGNS

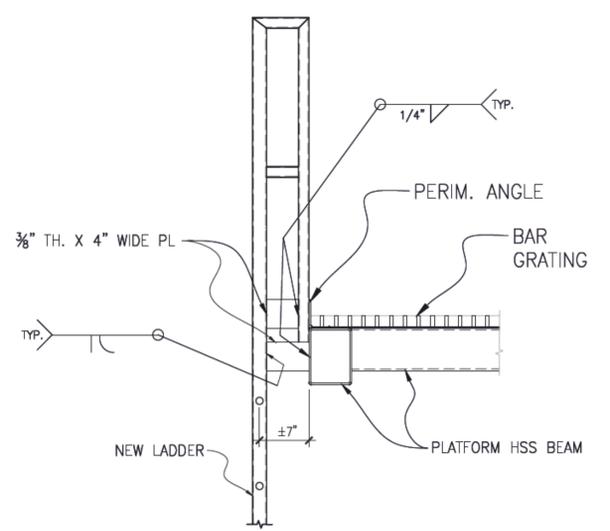
# 900 - 1200 West 73rd Ave. Vancouver, B.C. Canada V6P 6G5  
Ph. 604 - 264 - 1450 Fax. 604 - 264 - 1462 Email info@innodes.ca  
PERMIT TO PRACTICE NO. 1005040

SEAL

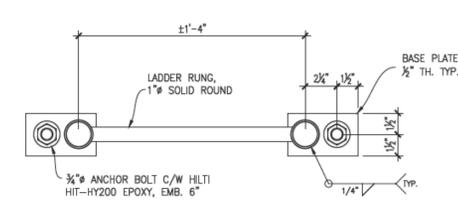
TITLE: NEW EQUIPMENT PLATFORM LAYOUT & SECTION		SHEET No. <b>S06</b>
PROJECT: OCEANSIDE ARENA NEW DEHUMIDIFIER STEEL SUPPORT FRAME & EQUIPMENT PLATFORM 826 WEST ISLAND HIGHWAY, PARKSVILLE, BC		
CONSULTANT:	DRAWN BY: RG CHECKED BY: DT DATE: JUNE 2024	
	SCALE: AS SHOWN PROJECT No. 224-169-S	



**1**  
S07  
NEW LADDER LAYOUT



**2**  
S07  
NEW LADDER SECTION



**3**  
S07  
LADDER BASE CONNECTION DETAIL

**COPYRIGHT RESTRICTION**  
THIS DESIGN & DRAWING IS AND AT ALL TIMES REMAIN THE EXCLUSIVE PROPERTY OF INNODES CONSULTING INC. AND CANNOT BE USED WITHOUT THE CONSENT OF INNODES CONSULTING INC.

REVISION:	SUBJECT:	DATE:	REVISION:	SUBJECT:	DATE:
-	SUBJECT	YYYY.MM.DD			
			ISSUED		DATE
			ISSUED FOR REVIEW		2024.09.11
			ISSUED FOR TENDER		2025.01.30

**INNODES**  
CONSULTING INC  
INNOVATIVE DESIGNS

# 900 - 1200 West 73rd Ave. Vancouver, B.C. Canada V6P 6G5  
Ph: 604 - 264 - 1450 Fax: 604 - 264 - 1462 Email: info@innodes.ca  
PERMIT TO PRACTICE NO. 1005040

SEAL

TITLE: NEW LADDER LAYOUT & DETAILS		SHEET No. <b>S07</b>
PROJECT: OCEANSIDE ARENA NEW DEHUMIDIFIER STEEL SUPPORT FRAME & EQUIPMENT PLATFORM 826 WEST ISLAND HIGHWAY, PARKSVILLE, BC		
CONSULTANT:	DRAWN BY: RG CHECKED BY: DT DATE: JUNE 2024	
	SCALE: AS SHOWN PROJECT No. 224-169-S	



EAST ARENA UPPER ROOF FRAMING PLAN  
3/32" = 1'-0"

DRAWING CONTINUED ON SHEET S08

**1**  
S08 UPPER ROOF PLAN SHOWING NEW AIR HANDLER UNIT & HEAT PUMP ON NEW SLEEPERS

**COPYRIGHT RESTRICTION**  
THIS DESIGN & DRAWING IS AND AT ALL TIMES REMAIN THE EXCLUSIVE PROPERTY OF INNODES CONSULTING INC. AND CANNOT BE USED WITHOUT THE CONSENT OF INNODES CONSULTING INC.

REVISION:	SUBJECT:	DATE:	REVISION:	SUBJECT:	DATE:
-	SUBJECT	YYYY.MM.DD			
			ISSUED		DATE
			ISSUED FOR REVIEW		2024.09.11
			ISSUED FOR TENDER		2025.01.30

**INNODES**  
CONSULTING INC. INNOVATIVE DESIGNS

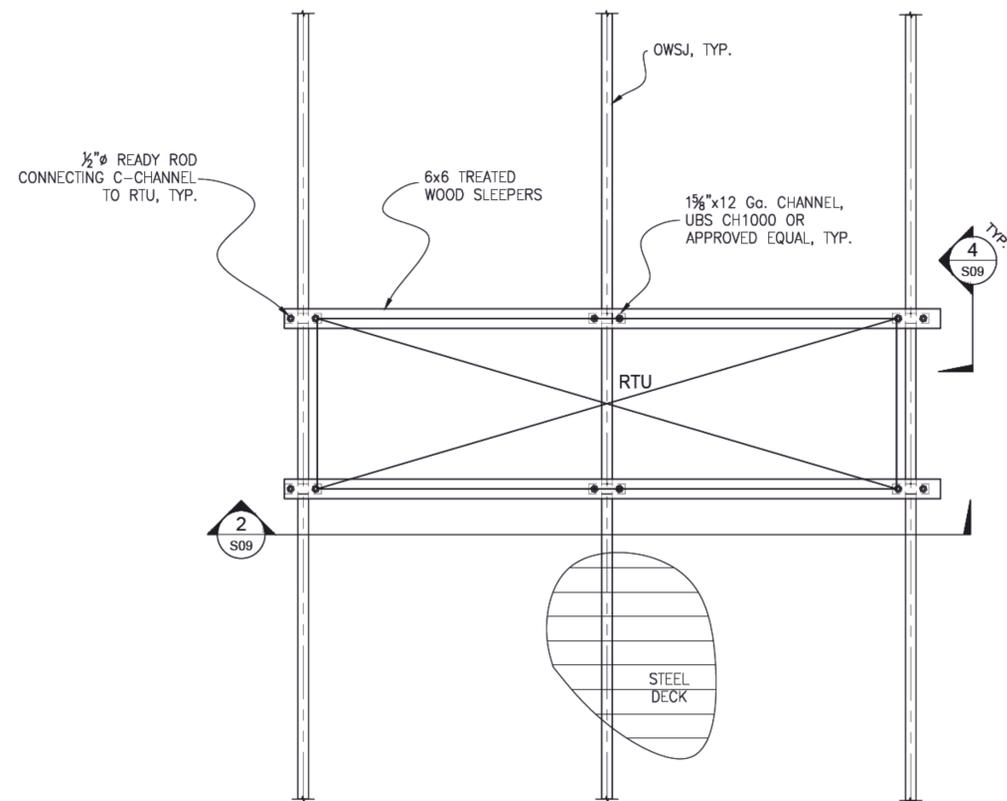
# 900 - 1200 West 73rd Ave. Vancouver, B.C. Canada V6P 6G5  
Ph. 604-264-1450 Fax. 604-264-1462 Email info@innodes.ca  
PERMIT TO PRACTICE NO. 1005040

SEAL

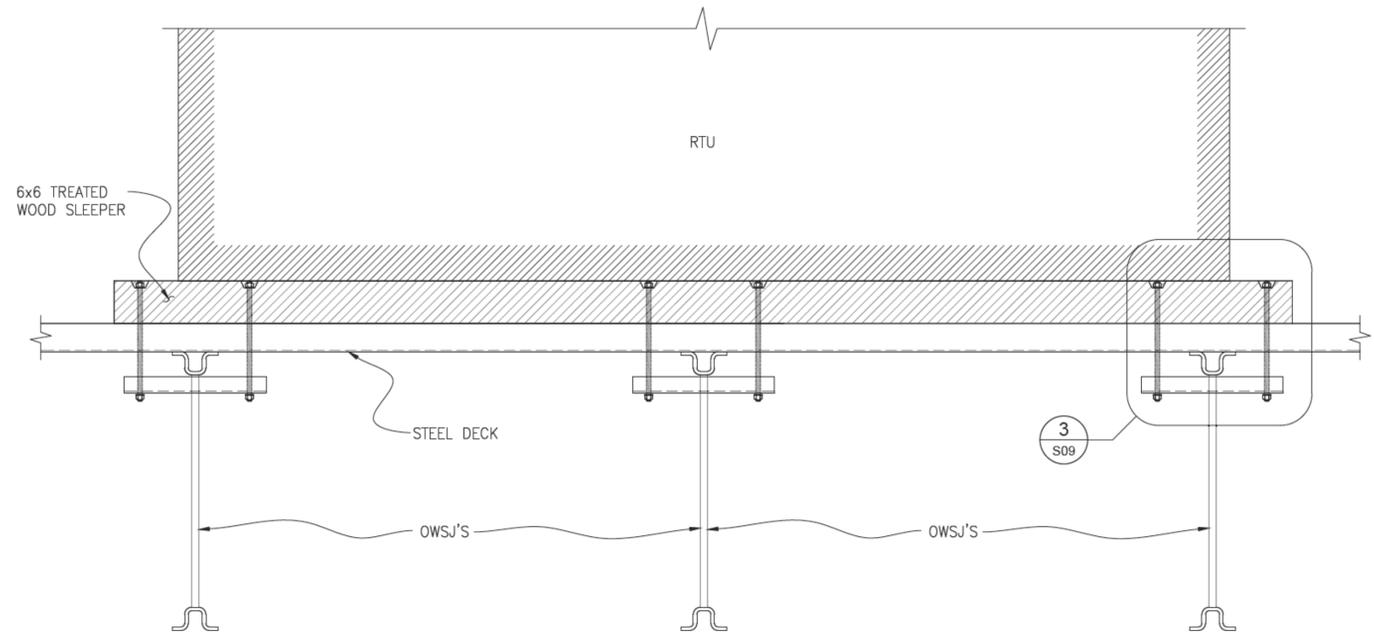
TITLE:	UPPER ROOF PLAN SHOWING NEW AIR HANDLER UNIT & HEAT PUMP ON NEW SLEEPERS	
PROJECT:	OCEANSIDE ARENA NEW DEHUMIDIFIER STEEL SUPPORT FRAME & EQUIPMENT PLATFORM 826 WEST ISLAND HIGHWAY, PARKSVILLE, BC	
CONSULTANT:	DRAWN BY: RG	SCALE: AS SHOWN
	CHECKED BY: DT	PROJECT No.
	DATE: JUNE 2024	224-169-S

SHEET No.

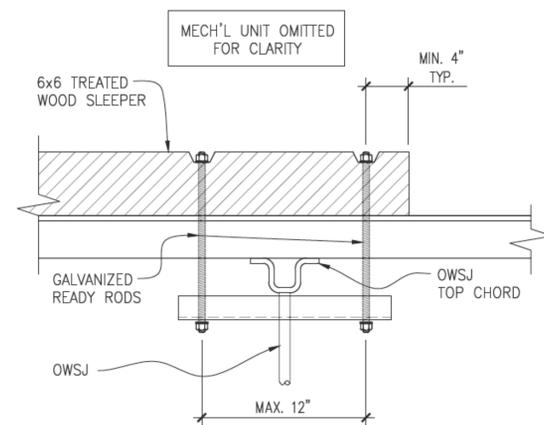
**S08**



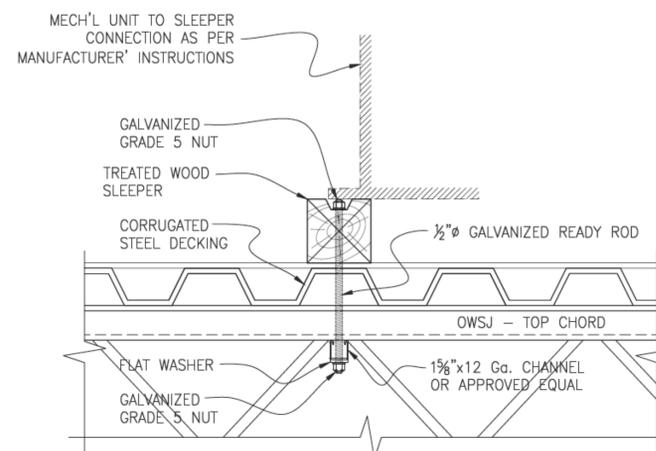
1 ROOFTOP UNIT ON NEW SLEEPERS LAYOUT  
S09



2 ELEVATION OF ROOFTOP UNIT ON NEW SLEEPERS  
S09



3 SLEEPER DETAIL SECTION PERPENDICULAR TO OWSJ  
S09



4 SLEEPER DETAIL - SECTION PARALLEL TO OWSJ  
S09

**COPYRIGHT RESTRICTION**  
THIS DESIGN & DRAWING IS AND AT ALL TIMES REMAIN THE EXCLUSIVE PROPERTY OF INNODES CONSULTING INC. AND CANNOT BE USED WITHOUT THE CONSENT OF INNODES CONSULTING INC.

REVISION:	SUBJECT:	DATE:	REVISION:	SUBJECT:	DATE:
-	SUBJECT	YYYY.MM.DD			
			ISSUED		DATE
			ISSUED FOR REVIEW		2024.09.11
			ISSUED FOR TENDER		2025.01.30

**INNODES**  
CONSULTING INC. INNOVATIVE DESIGNS

# 900 - 1200 West 73rd Ave. Vancouver, B.C. Canada V6P 6G5  
Ph: 604 - 264 - 1450 Fax: 604 - 264 - 1462 Email: info@innodes.ca  
PERMIT TO PRACTICE NO. 1005040

SEAL

TITLE: ROOFTOP UNIT ON NEW SLEEPERS LAYOUT, ELEVATION & DETAILS		SHEET No. <b>S09</b>
PROJECT: OCEANSIDE ARENA NEW DEHUMIDIFIER STEEL SUPPORT FRAME & EQUIPMENT PLATFORM 826 WEST ISLAND HIGHWAY, PARKSVILLE, BC		
CONSULTANT:	DRAWN BY: RG CHECKED BY: DT DATE: JUNE 2024	
	SCALE: AS SHOWN PROJECT No. 224-169-S	