

GENERAL NOTES AND DETAILS

GENERAL NOTES
 Contractor to verify all dimensions prior to fabric
 All dimensions on this drawing are to be compared
 to Architectural
 Do not scale these drawings.

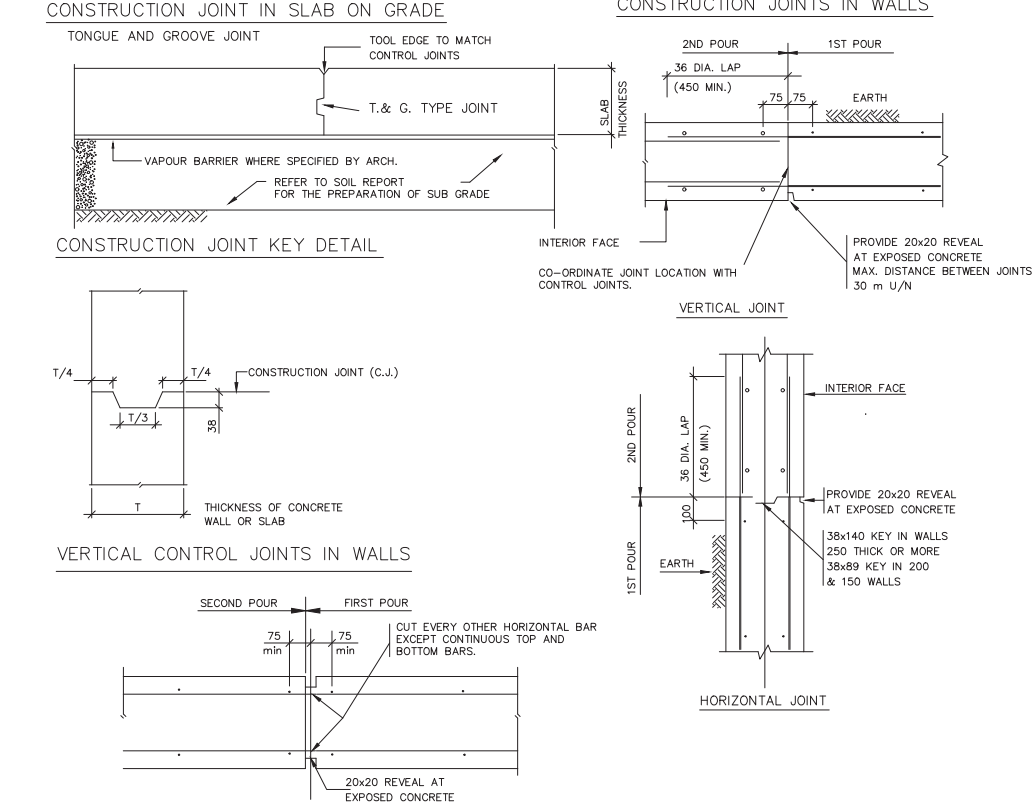
GENERAL INFORMATION

ALL THE DRAWINGS AND DESIGN IS BASED ON THE ONTARIO BUILDING CODE 2012.
 THE CONTRACTOR IS TO BE FAMILIAR WITH ALL SECTIONS OF THE SPECIFICATIONS BEFORE COMMENCING ANY PART OF THE WORK. THESE DRAWINGS AND SPECIFICATIONS ARE TO BE READ IN CONJUNCTION WITH THE SPECIFICATIONS OF ALL OTHER DISCIPLINES.
 THE CONTRACTOR SHALL CHECK ALL DIMENSIONS WITH THE LATEST ISSUE OF THE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS. REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
 PROVIDE DETAILED SHOP DRAWINGS OF CONCRETE REINFORCEMENT.
 PROVIDE DETAILED SHOP DRAWINGS STAMPED BY A PROFESSIONAL STRUCTURAL ENGINEER REGISTERED IN THE PROVINCE OF ONTARIO TO THE ENGINEER FOURTEEN DAYS PRIOR TO FABRICATION OF STRUCTURAL STEEL.
 PROVIDE DETAILED SHOP DRAWINGS OF CONCRETE REINFORCEMENT.
 SHOP DRAWING REVIEW BY THE ENGINEER IS SOLELY TO ASCERTAIN CONFORMANCE TO THE GENERAL DESIGN CONCEPT. RESPONSIBILITY FOR APPROVAL OF DETAIL DESIGN INHERENT IN SHOP DRAWINGS RESTS WITH THE CONTRACTOR AND REVIEW BY THE ENGINEER SHALL NOT IMPLY SUCH APPROVAL. REVIEW SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY FOR ERRORS OR OMISSIONS IN SHOP DRAWINGS OR FOR PROPER COMPLETION OF THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

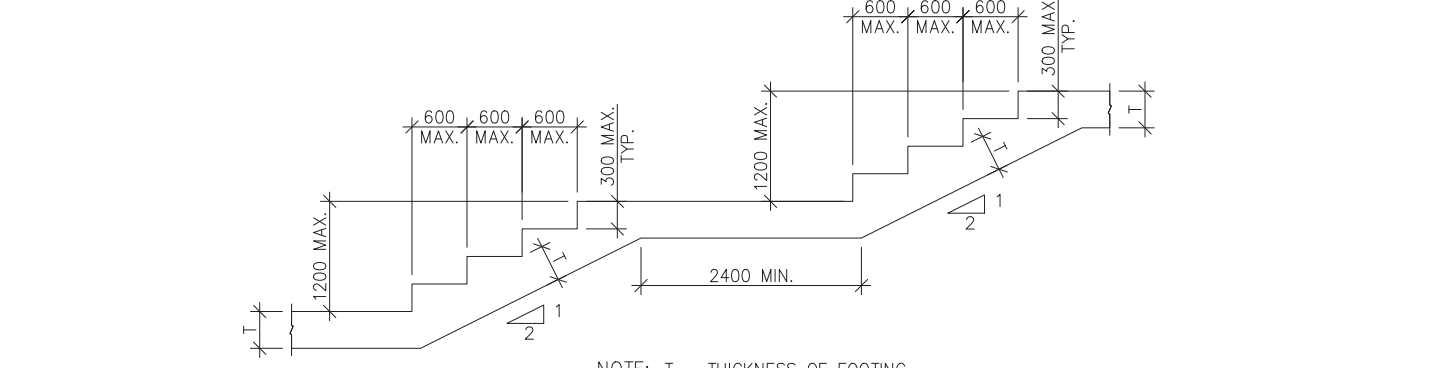
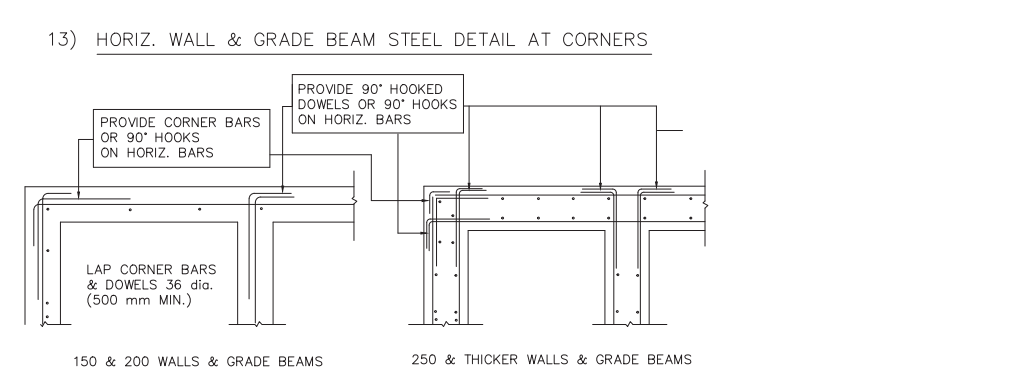
FOUNDATION

BEARING: ALL FOOTINGS TO BEAR ON UNDISTURBED SOIL WITH DESIGN BEARING CAPACITY.
 FOOTING PADS: 500 kPa(ULS) ; 1000 kPa(ULS)
 STRIP FOOTING: 500 kPa(SLS) ; 1000 kPa(ULS)
 ACCORDING TO SOIL REPORT NO. 09-251 DATED APRIL 12, 2010 BY MOJIB CHEWER ENGINEERING LIMITED.
 BEARING CAPACITY MUST BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO POURING THE FOOTING PADS.
 FROST COVER: (FINISHED GRADE TO U/S FOOTING) PROVIDE 1500mm MIN. FROST COVER U/N OR PROVIDE EQUIVALENT PROTECTION USING POLYSTYRENE INSULATION APPROVED BY GEOTECHNICAL ENGINEER.
 COMPLY WITH ALL PROVINCIAL AND MUNICIPAL TRENCHING AND EXCAVATION SAFETY REGULATIONS, CONFORM TO ONTARIO BUILDING CODE AND CANADIAN CONSTRUCTION SAFETY CODE.
 REFER TO THE SOIL REPORT FOR THE BACK FILLING AND PREPARATION OF THE SUB GRADE FOR THE SLAB ON GRADE.
 UNLESS OTHERWISE OUTLINED IN SOIL REPORT DO NOT EXCAVATE BELOW A LINE EXTENDING DOWNWARD FROM ANY BEARING STRATA AT A SLOPE OF 1 VERTICAL TO 2 HORIZONTAL. ADJUST FOOTINGS AND TRENCH ELEVATIONS TO MEET THIS REQUIREMENT.

CONSTRUCTION JOINTS



NOTES:
 1. PROVIDE CONTROL JOINTS AT 1000mm MAXIMUM UNLESS SHOWN OTHERWISE ON ARCHITECTURAL AND/OR STRUCTURAL DRAWINGS.
 2. PROVIDE 2000 REINFORCING BARS AT EXPANDED CORNERS.



STEPPED FOOTING DETAIL

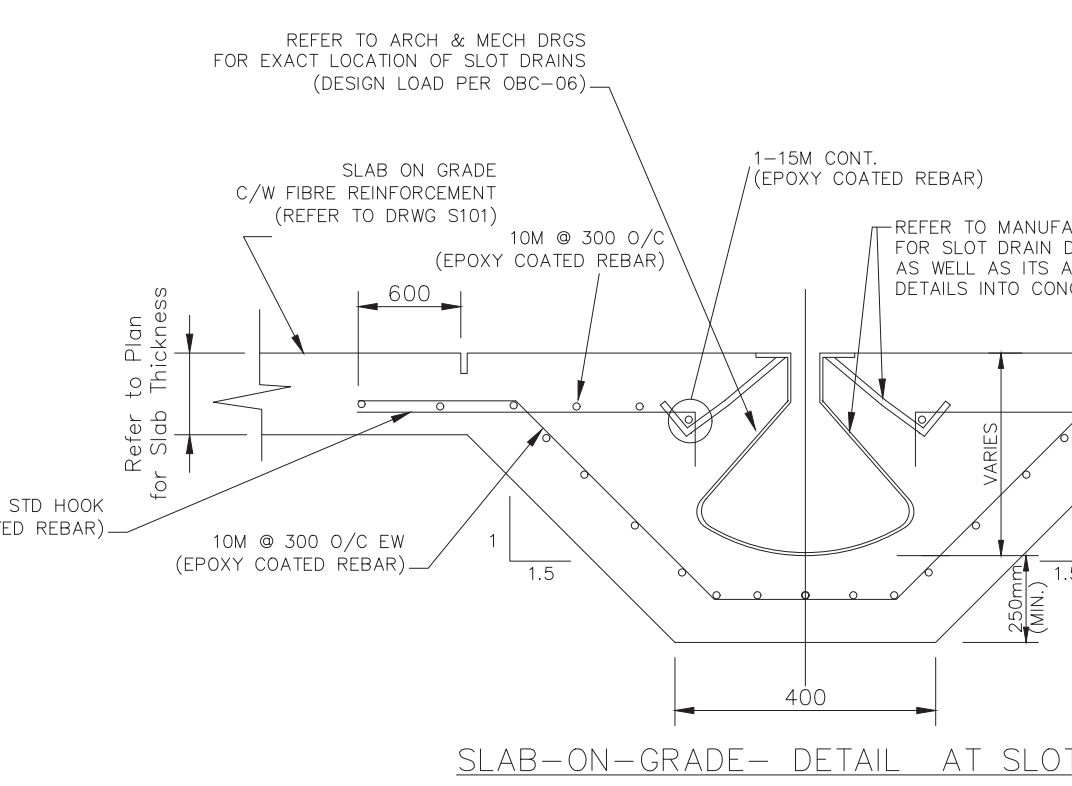
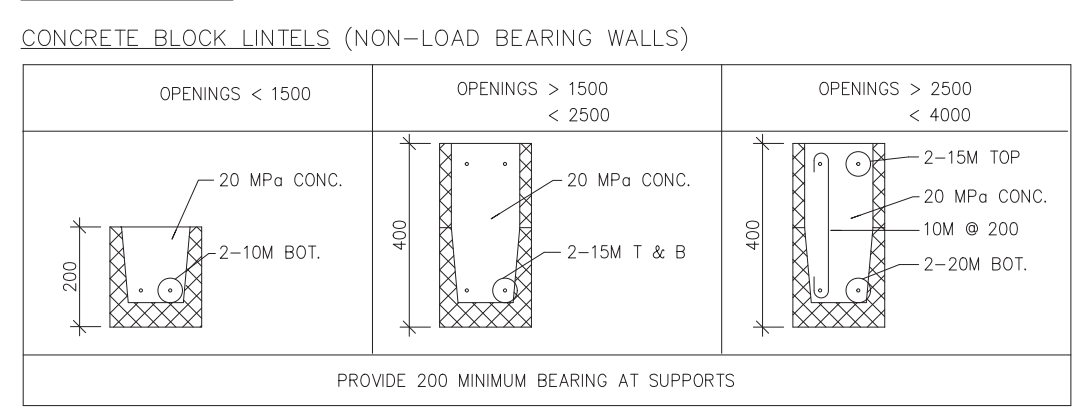
STRUCTURAL STEEL

STRUCTURAL STEEL DESIGN, FABRICATION AND ERECTION IS TO CONFORM TO THE REQUIREMENTS OF CSA-S16, CSA-S136, THE CANADIAN INSTITUTE OF STEEL CONSTRUCTION (CISC) "CODE OF STANDARD PRACTICE FOR BUILDINGS" AND "STEEL JOIST FACTS".
 STRUCTURAL STEEL SHALL COMPLY WITH CAN3-S16.1 UNLESS OTHERWISE NOTED.
 ITEM APPLICABLE SPECIFICATIONS
 ROLLED SECTIONS G40.21 - 350W
 HSS (TUBE) SECTIONS ASTM A500-CLASS C - Fy=50 ksi
 CONNECTION BOLTS A325 (BEARING TYPE)
 ANCHOR BOLTS A307
 STEEL TO BE FABRICATED AND ERECTED BY A SHOP CERTIFIED BY THE CANADIAN WELDING BUREAU TO THE REQUIREMENTS OF CSA W47.1. DO NOT SPUR CONTINUOUS MEMBERS WITHOUT THE SPECIFIED APPROVAL OF THE ENGINEER.
 WELDING TO CONFORM TO CSA W59-13. WELDERS TO BE QUALIFIED TO CSA W47.1.
 PREPARE SURFACES OF ALL STRUCTURAL STEEL AND JOISTS ACCORDING TO SSPC SP 3. APPLY ONE COAT OF PRIMER CONFORMING TO CISC 1-73A.

MASONRY

ALL MASONRY WORK SHALL COMPLY WITH CAN/CSA-A370 AND A371 UNLESS NOTED.
 MINIMUM CONCRETE BLOCK UNIT STRENGTH (NET AREA) 15.0 MPa
 MORTAR TYPE "S" Fc = 12.4 MPa
 GROUT STRENGTH Fc = 20.0 MPa
 MINIMUM MASONRY REINFORCEMENT (UNLESS OTHERWISE NOTED)
 WALL THICKNESS LOAD BEARING NON-LOADBEARING
 140mm HORIZ. SMR @ 200 OR HDMR @ 300 (ALTERNATE 200 & 400) 1-10M @ 1000
 190mm HDMR @ 400 OR SMR @ 300 * 1-15M @ 1200
 240mm HORIZ. HDMR @ 200 HDMR @ 400 1-15M @ 1200
 290mm HORIZ. HDMR @ 200 HDMR @ 300 (ALTERNATE 200 & 400) 1-15M @ 1000
 SMR IS GALVANIZED STANDARD LADDER TYPE MASONRY REINFORCEMENT WITH 2-#3 Cs (3.6mm) SIDE RODS (TOTAL AREA 23mm²)
 HDMR IS GALVANIZED LADDER TYPE HEAVY DUTY MASONRY REINFORCEMENT WITH 2-#6 Cs (4.76mm) SIDE RODS (TOTAL AREA 35.6mm²)
 PROVIDE ENGINEERED LATERAL BRACING FOR TEMPORARY SUPPORT OF ALL LOAD BEARING MASONRY WALLS UNTIL ROOF STEEL FRAMING IS WELDED IN PLACE.
 VERTICAL BARS SHALL BE CONTINUOUS, LAPPED ONLY AT FLOORS OR HIGH-LIFT CLEANOUT PORTS, DOWELED INTO SUPPORTS AND GROUTED INTO CLEAR VERTICAL BLOCK CORES SEALED ALL AROUND WITH MORTAR. PROVIDE CLEANOUT PORT AT BOTTOM OF EACH GROUTED CORE.
 DO NOT CLOSE PORT OR PLACE GROUT UNTIL CORE AND STEEL HAVE BEEN INSPECTED.
 PROVIDE 2-10M (MIN.) GROUTED LOW WEB BEAM AT TOP OF REINFORCED WALLS. EXTEND VERTICAL BARS TO TOP OF BOND BEAM. PROVIDE METAL LATH STRIP UNDER BOND BEAMS BETWEEN GROUTED CORES TO RETAIN BOND BEAM GROUT.
 PROVIDE APPROVED LATERAL SUPPORT TOP AND BOTTOM OF MASONRY PANELS AT GROUTED CORE LOCATIONS OR AT 2000mm MAXIMUM SPACING WHERE NO VERTICAL REINFORCEMENT IS REQUIRED. ALSO AT SIDES OF MASONRY PANELS AT 4 TIMES THE WALL THICKNESS.
 PROVIDE VERTICAL REINFORCEMENT BARS IN GROUTED CORES AT SIDES OF ALL OPENINGS AND ENDS OF WALLS/ CONSTRUCTION JOINTS.

MASONRY LINTELS
CONCRETE BLOCK LINTELS (NON-LOAD BEARING WALLS)



SLAB-ON-GRADE- DETAIL AT SLOT DRAIN

CONCRETE

CONCRETE WORK SHALL COMPLY WITH CLAUSE 14 -CAN3-A23.1 UNLESS OTHERWISE NOTED.
 SUBMIT FOR REVIEW THE PROPOSED MIX DESIGN FOR EACH CLASS OF CONCRETE TO BE USED.
 CONCRETE STRENGTHS f'c MAX W/C CLASS OF EXPOSURE
 EXTERIOR FOOTINGS & WALLS 25 0.55 F2
 CONCRETE EXPOSED TO CHLORIDES, FREEZING & THAWING (I.G.: SIDEWALKS) 32 0.45 C2
 INTERIOR FOOTINGS, WALLS, SLABS 25 0.55 N
 SLABS ON GRADE 25 0.50 N
 CONCRETE EXPOSED TO FREEZE AND THAWING SHOULD BE AIR-ENTRAINED ACCORDING TO CSA A23.1
 CONCRETE COVER CLEAR TO REINFORCEMENT
 U/S FOOTINGS (AGAINST SOIL) 75mm
 U/S FOOTINGS (NOT AGAINST SOIL) 50mm
 FOOTINGS (SIDES & TOP) 40mm
 WALLS AGAINST SOIL 50mm
 WALLS 40mm
 PIERS (TO TIES) 40mm

REINFORCING STEEL

DETAIL AND PLACE REINFORCING STEEL IN ACCORDANCE WITH REINFORCING STEEL MANUAL OF STANDARD PRACTICE - RSI09 - LATEST EDITION AND CAN3-A23.1 UNLESS OTHERWISE NOTED.
 REINFORCING STEEL TO CONFORM TO CSA-G30.18-M92, GRADE 400.
 WELDED WIRE MESH TO CONFORM TO CSA-G30.5.
 FORMWORK MATERIALS TO BE SPRUCE SHEATHING TO CSA-0151-M FOR UNEXPOSED WORK, HIGH DENSITY OVERLAP ONE SIDE TO CSA 0121 FOR EXPOSED WORK, LUMBER TO CSA 0141-M, NAILS, SPIKES AND STAPLES TO CSA-B111.
 CURE AND PROTECT FRESHLY PLACED CONCRETE IN ACCORDANCE WITH CLAUSE 21 OF CSA/CAN3-A23.1-M. ALL SLABS ON GRADE TO RECEIVE A MACHINE TROWELLED FINISH.
 CONCRETE TESTING TO BE PERFORMED IN ACCORDANCE WITH CSA/CAN3-A23.1-M.
 NON-FERROUS GROUT: PRE-MIXED, NON-SHRINK, MASTER BUILDERS 713 OR APPROVED EQUIVALENT, MINIMUM 35 MPa COMPRESSIVE STRENGTH.
 WELDING OF REINFORCING STEEL TO CONFORM TO CSA W186.

DESIGN LOAD DATA

DEAD LOAD

ROOFING	= 0.5 kPa
DECK	= 0.1 kPa
JOIST	= 0.2 kPa
BEAMS	= 0.2 kPa
TOTAL	= 1.0 kPa

LIVE LOAD = 1.0 kPa

SPECIFIED GROSS UPLIFT ON ROOF = 1.4 kPa

SPECIFIED SNOW LOADING ON ROOF

S_s = 2.40 kPa
 S_r = 0.40 kPa
 I_s = 1.0 (ULS) ; 0.9 (SLS)
 C_s = 0.8 ; C_w = 1.0 ; C_e = 1.0 ; C_o = 1.0
 S = I_s [S_s (C_s C_w C_e C_o) + S_r] = 2.32 kPa + SNOW DRIFTING AS INDICATED ON PLAN

WIND LOAD (PHASE 2)

P = I_w q_o C_f C_p
 WHERE:
 q₁₀ = REFERENCE VELOCITY PRESSURE (0.30 kPa)
 q₃₀ = REFERENCE VELOCITY PRESSURE (0.41 kPa)
 C_e = EXPOSURE FACTOR (1.1)
 C_f = GUST FACTOR (2.5)
 C_p = EXTERNAL PRESSURE COEFFICIENT } C_p C_g = 2.0
 I_s = 1.0 (ULS) ; 0.75 (SLS)

	DIRECTION ALONG NORTH/SOUTH	DIRECTION ALONG EAST/WEST
WIND MOMENT	KN.m	839
WIND BASE SHEAR	KN	152

WIND LOAD (PHASE 4)

P = I_w q_o C_f C_p
 WHERE:
 q₁₀ = REFERENCE VELOCITY PRESSURE (0.30 kPa)
 q₃₀ = REFERENCE VELOCITY PRESSURE (0.41 kPa)
 C_e = EXPOSURE FACTOR (1.1)
 C_f = GUST FACTOR (2.5)
 C_p = EXTERNAL PRESSURE COEFFICIENT } C_p C_g = 2.0
 I_s = 1.0 (ULS) ; 0.75 (SLS)

	DIRECTION ALONG NORTH/SOUTH	DIRECTION ALONG EAST/WEST
WIND MOMENT	KN.m	238
WIND BASE SHEAR	KN	46

SEISMIC LOADING

SFRS:
 CONVENTIONAL CONSTRUCTION OF MOMENT AND BRACED FRAMES
 M_d = 1.0 S_d(0.2) = 0.62
 R_d = DUCTILITY FACTOR (1.5) S_d(0.5) = 0.30
 R_o = OVERSTRENGTH FACTOR (1.3) S_d(1.0) = 0.13
 I_e = IMPORTANCE FACTOR (1.0) S_d(2.0) = 0.045
 W = BUILDING WEIGHT (2253 kN) PGA = 0.32
 F_o = 1.0
 F_v = 1.0
 SITE CLASS = "C"
 REFER TO 'FOUNDATION' NOTES FOR SLS AND ULS CAPACITIES OF SOIL

STRUCTURAL IRREGULARITIES - Table 4.1.8.6

TYPE	IRREGULARITY TYPE	YES	NO
1	VERTICAL STIFFNESS IRREGULARITY		●
2	MASS IRREGULARITY		●
3	VERTICAL GEOM IRREGULARITY		●
4	INPLANE DISCONTINUITY IN VERT LATERAL FORCE RESISTING ELEMENT		●
5	OUT OF PLANE OFFSET		●
6	WEAK STOREY		●
7	TORSIONAL SENSITIVITY (Bx = 1.2 (N-S) & 1.5 (E-W))		●
8	NON-ORTHOGONAL SYSTEMS		●

SEISMIC LOADING (PHASE 2)

USE EQUIVALENT STATIC FORCE METHOD (PASE 2)
 T_o(N-S) = 0.085x(11.12)^{0.5} = 0.51 (MOMENT FRAME) W = (DL + 0.25xSL) = 2253 kN
 T_o(E-W) = 0.025x11.12 = 0.278 (BRACED FRAME)
 S(T)_{o-s} = 0.3
 S(T)_{e-w} = 0.54
 S(0.2) = 0.62
 V = S(T)_o M_o v_o W / (R_d R_o) = (0.75)(1.0)(1.0)(W) / (1.5x1.3) = 0.385W
 V = (2/3)(0.62)(1.0)(W) / (1.5x1.3) = 0.212W ← GOVERNS
 = 478 kN ← 100% E.O. LOAD

East West Direction		North South Direction	
BASE SHEAR	OVERTURNING MOMENT	BASE SHEAR	OVERTURNING MOMENT
KN	KN.M	KN	KN.M
478	5317	478	5317

SEISMIC LOADING (PHASE 4)

USE EQUIVALENT STATIC FORCE METHOD (PHASE 4)
 T_o(N-S) = 0.085x(11.12)^{0.5} = 0.51 (MOMENT FRAME) W = (DL + 0.25xSL) = 989 kN
 T_o(E-W) = 0.025x11.12 = 0.278 (BRACED FRAME)
 S(T)_{o-s} = 0.3
 S(T)_{e-w} = 0.54
 S(0.2) = 0.62
 V = S(T)_o M_o v_o W / (R_d R_o) = (0.75)(1.0)(1.0)(W) / (1.5x1.3) = 0.385W
 V = (2/3)(0.62)(1.0)(W) / (1.5x1.3) = 0.212W ← GOVERNS
 = 210 kN ← 100% E.O. LOAD

East West Direction		North South Direction	
BASE SHEAR	OVERTURNING MOMENT	BASE SHEAR	OVERTURNING MOMENT
KN	KN.M	KN	KN.M
240	2240	240	2240

SFRS (DIAPHRAGMS AND THEIR CONNECTIONS)

SFRS DIAPHRAGMS AND THEIR CONNECTIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH ARTICLE 4.1.8.15 OF OBC 2012 BY MULTIPLYING DESIGN FORCES BY R_dR_o (1.5*1.3).

SFRS (FOUNDATIONS)

SFRS FOUNDATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH ARTICLE 4.1.8.16-0BC BY MULTIPLYING THE DESIGN FORCES BY R_dR_o (1.5*1.3).

SFRS (Connections)

THE CONNECTIONS FOR THE MOMENT FRAMES AND BRACED FRAMES ARE TO BE DESIGNED BY THE STEEL FABRICATOR ACCORDING TO SECTION 27.10 - CSA S16 FOR THE CONVENTIONAL CONSTRUCTION (R_d=1.5, R_d=1.3)

STRUCTURAL SEPARATION

STRUCTURAL SEPARATION BETWEEN THE EXISTING AND NEW CONSTRUCTION HAS BEEN PROVIDED PER ARTICLE 4.1.8.14



1	For Tender	06/25/2017	D.B.	B.K.-E.J.
0	For Permit	09/17/2017	D.B.	E.J.
Revision Number	Revision Description	Date	By	CHK

DESIGN & SYSTEMS
 STRUCTURAL & WELDING ENGINEERS

SUITE 251, 2378 HOLLY LANE,
 OTTAWA, ON K1V 7P1
 +1 (613) 738-7462
Project Architect:
KWC Architects Inc.
 383 Parkdale Ave, Suite 201
 Ottawa, Ontario, K1J 4R4

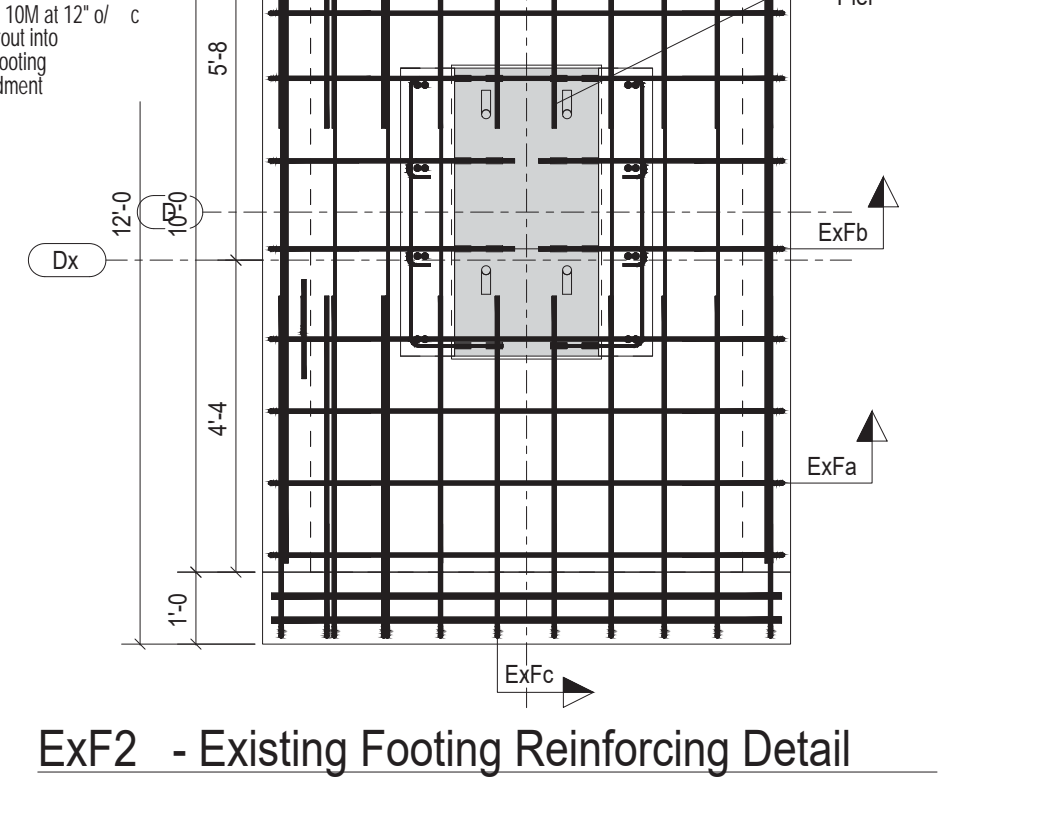
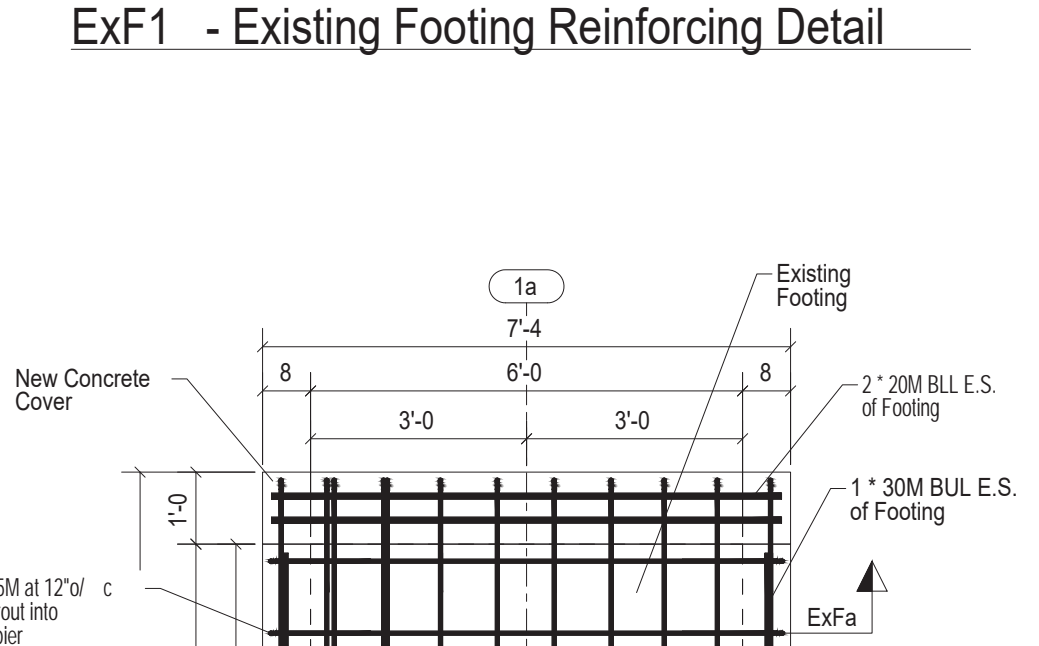
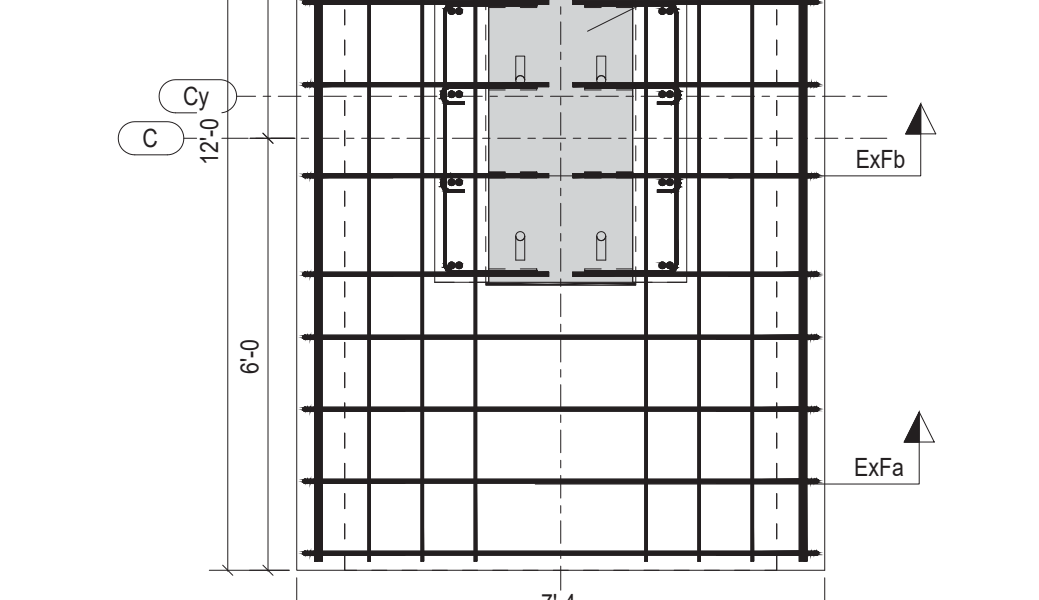
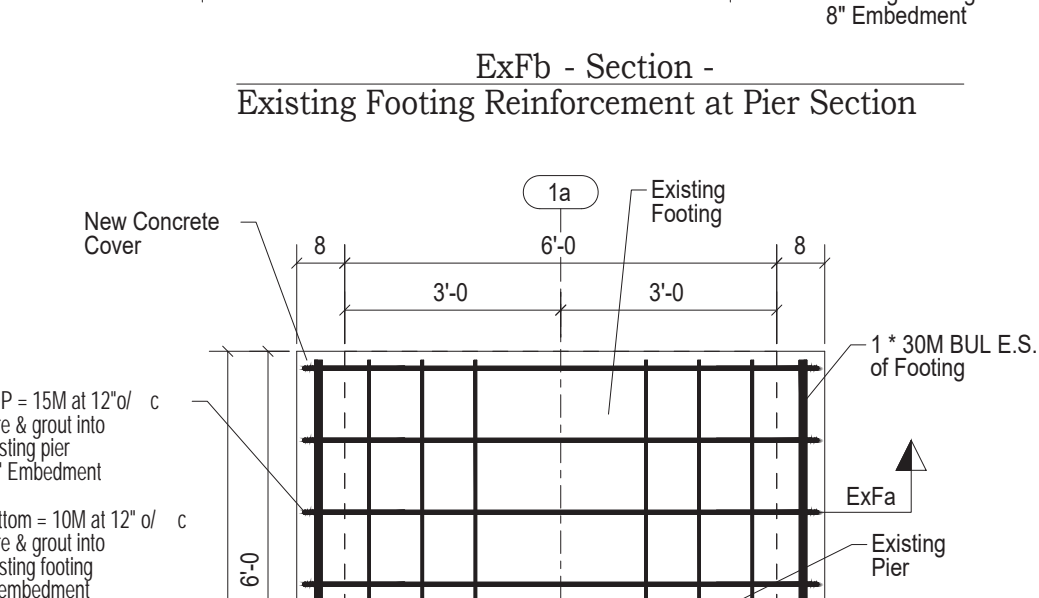
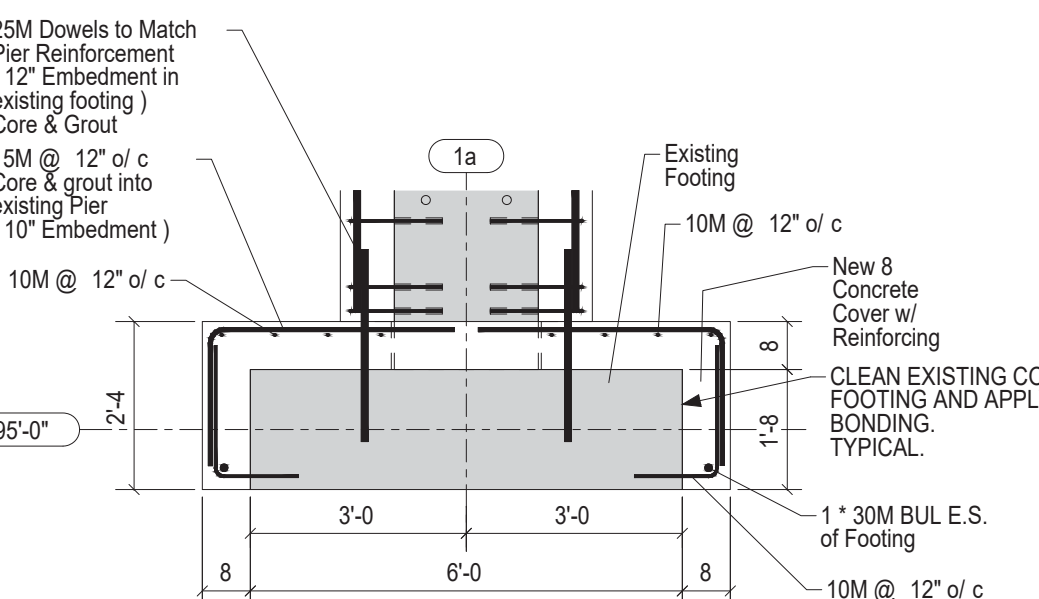
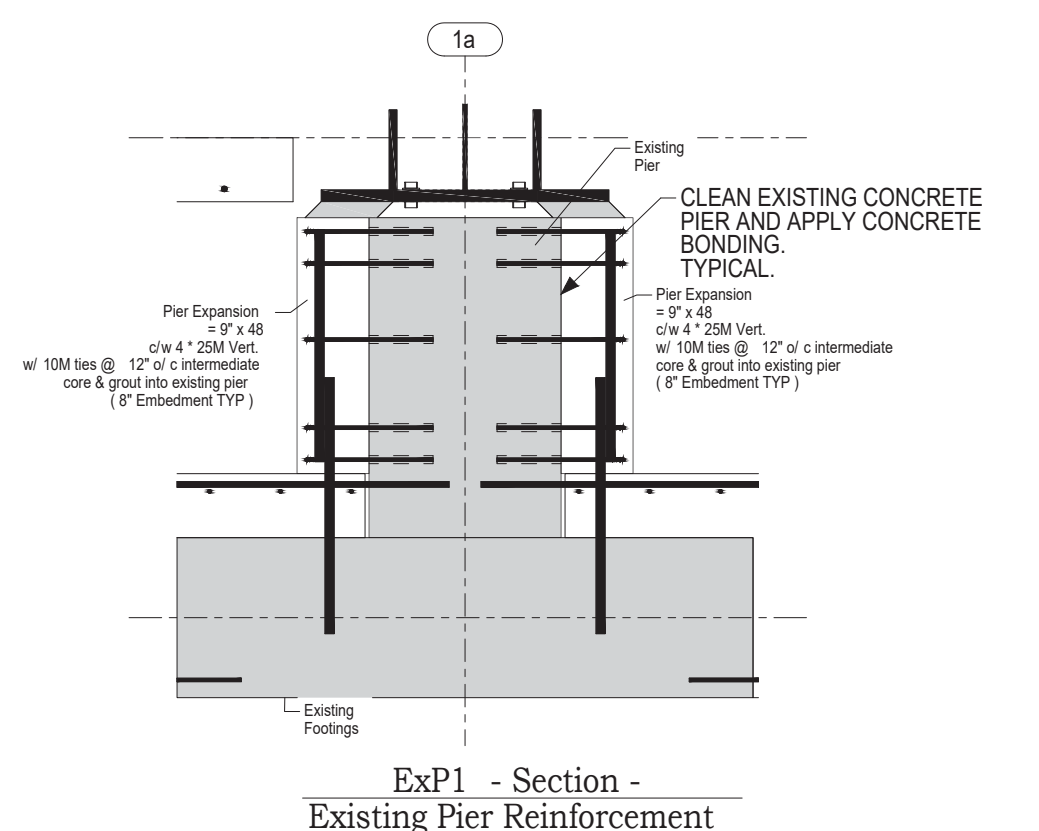
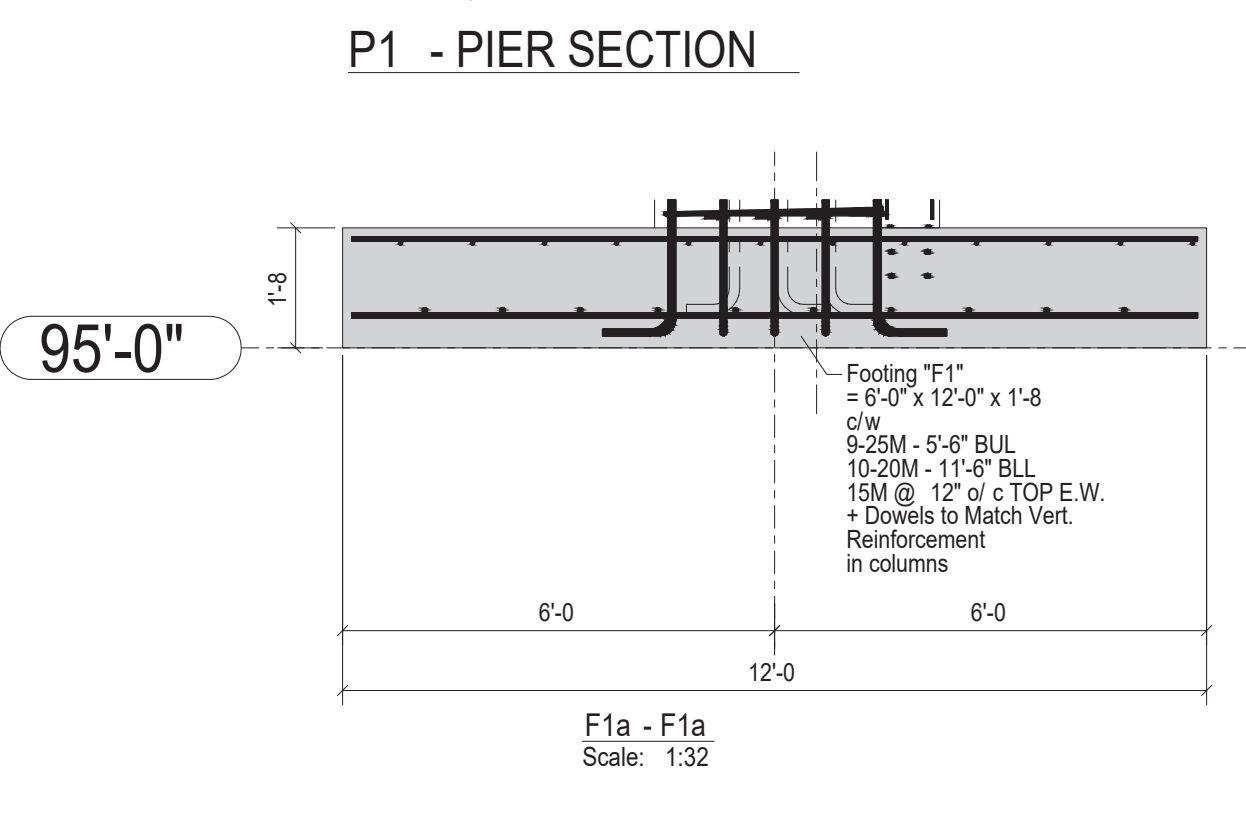
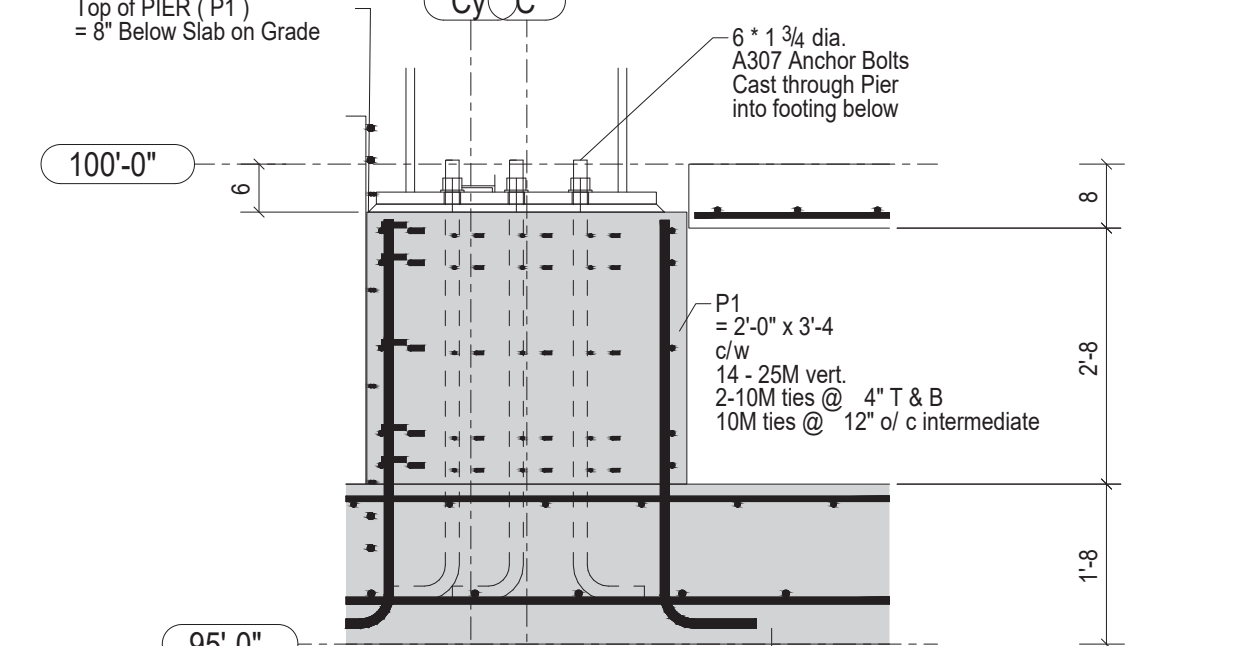
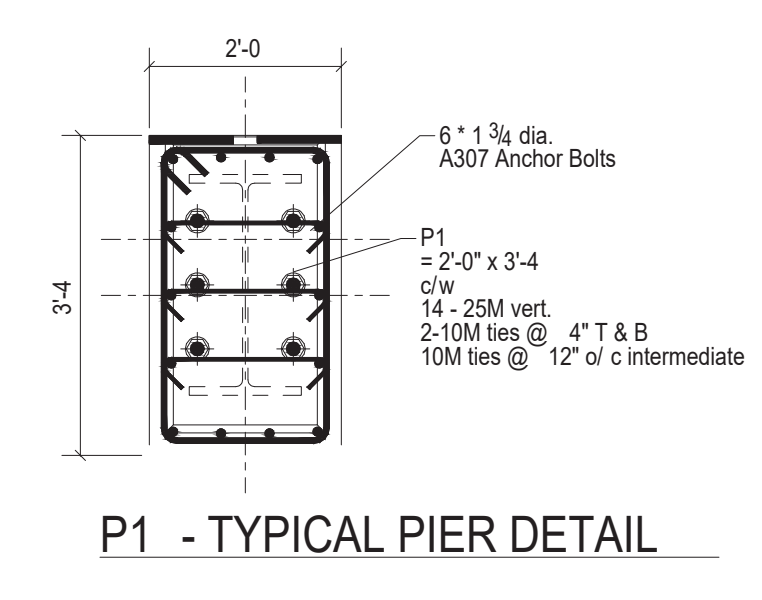
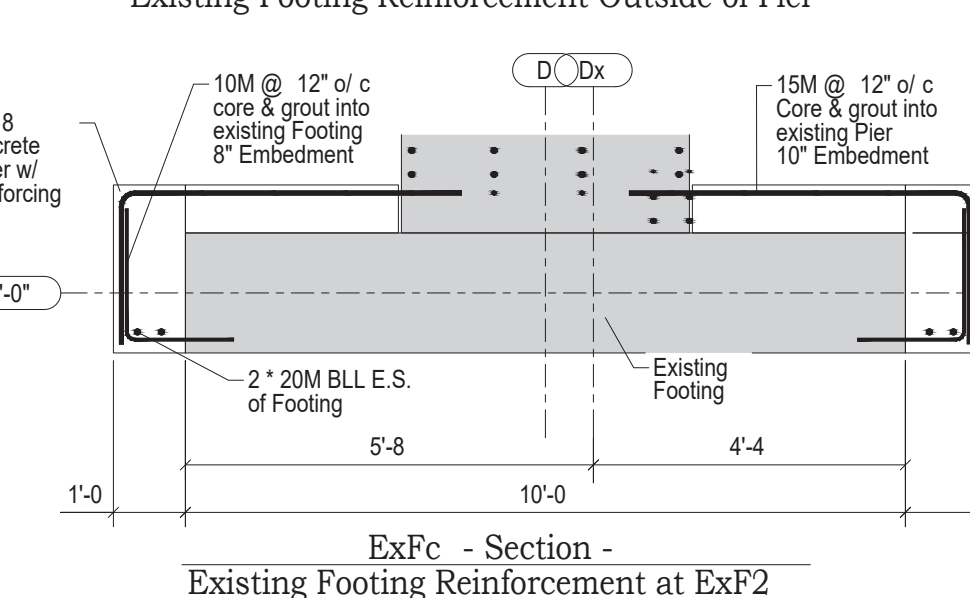
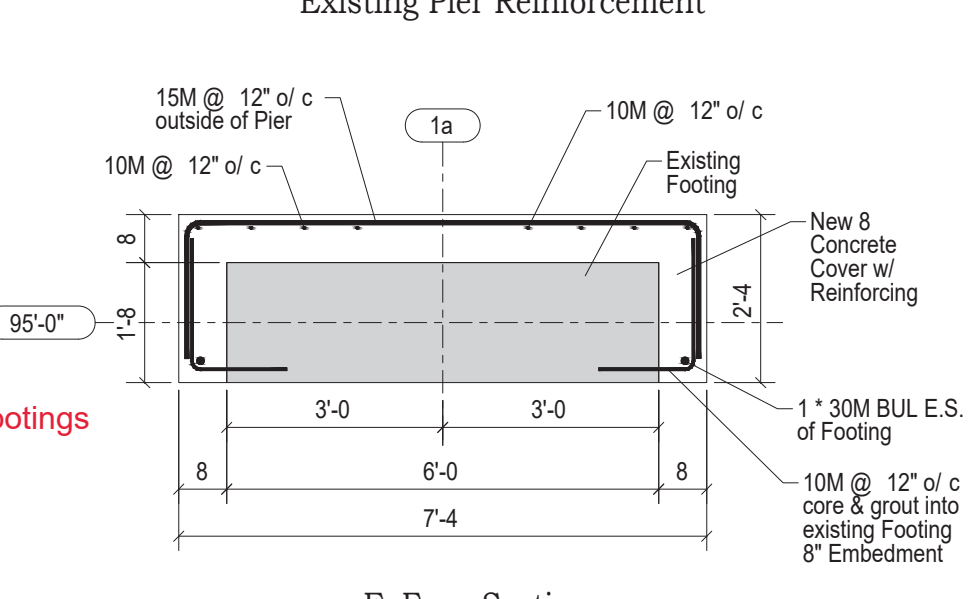
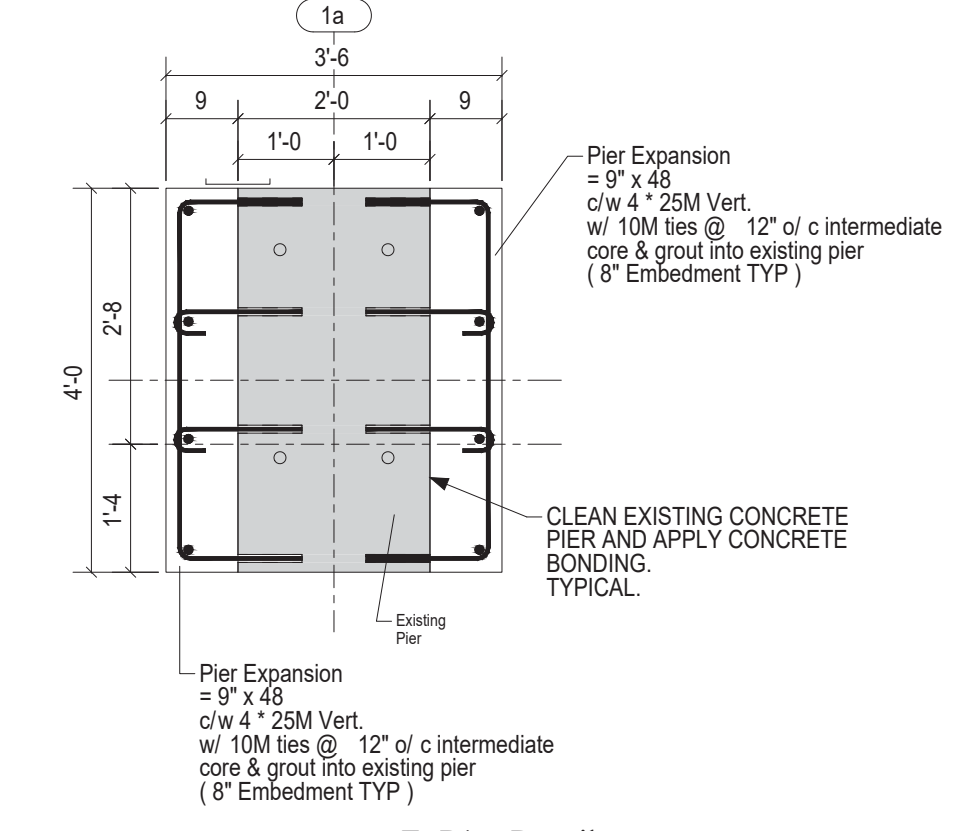
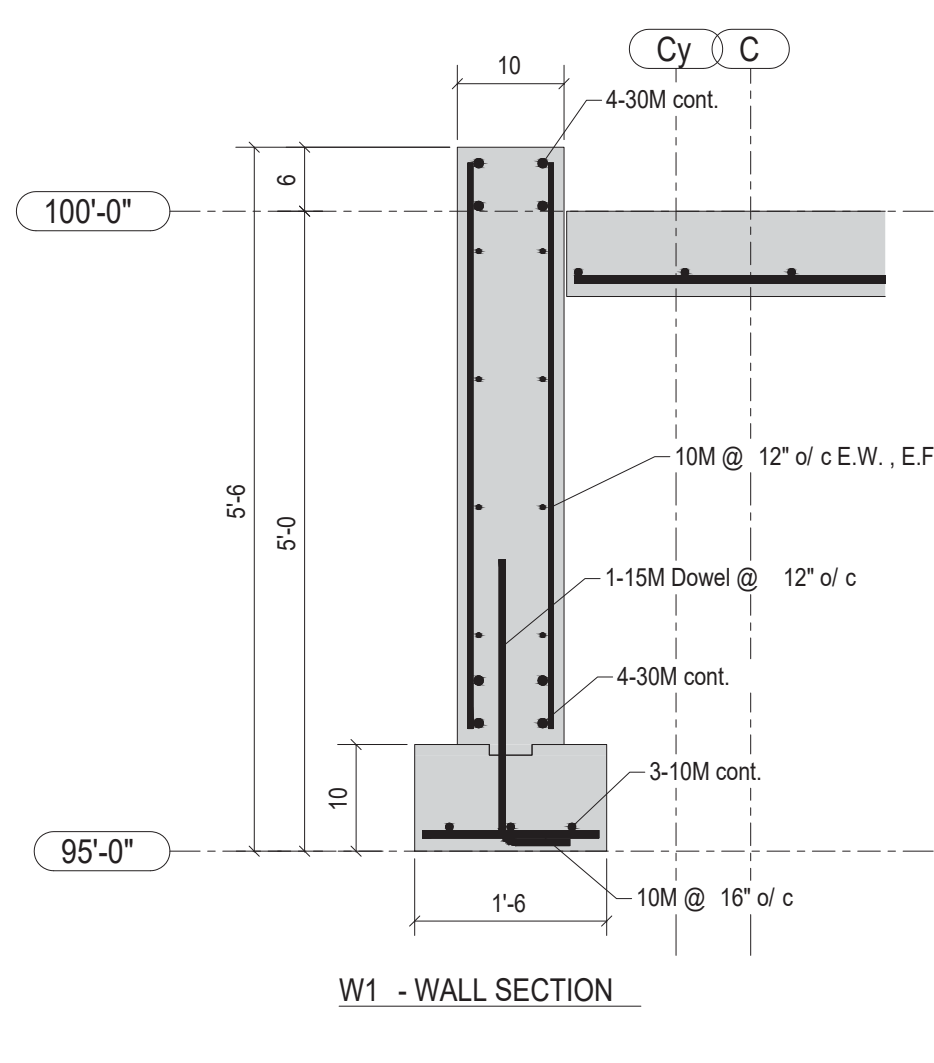
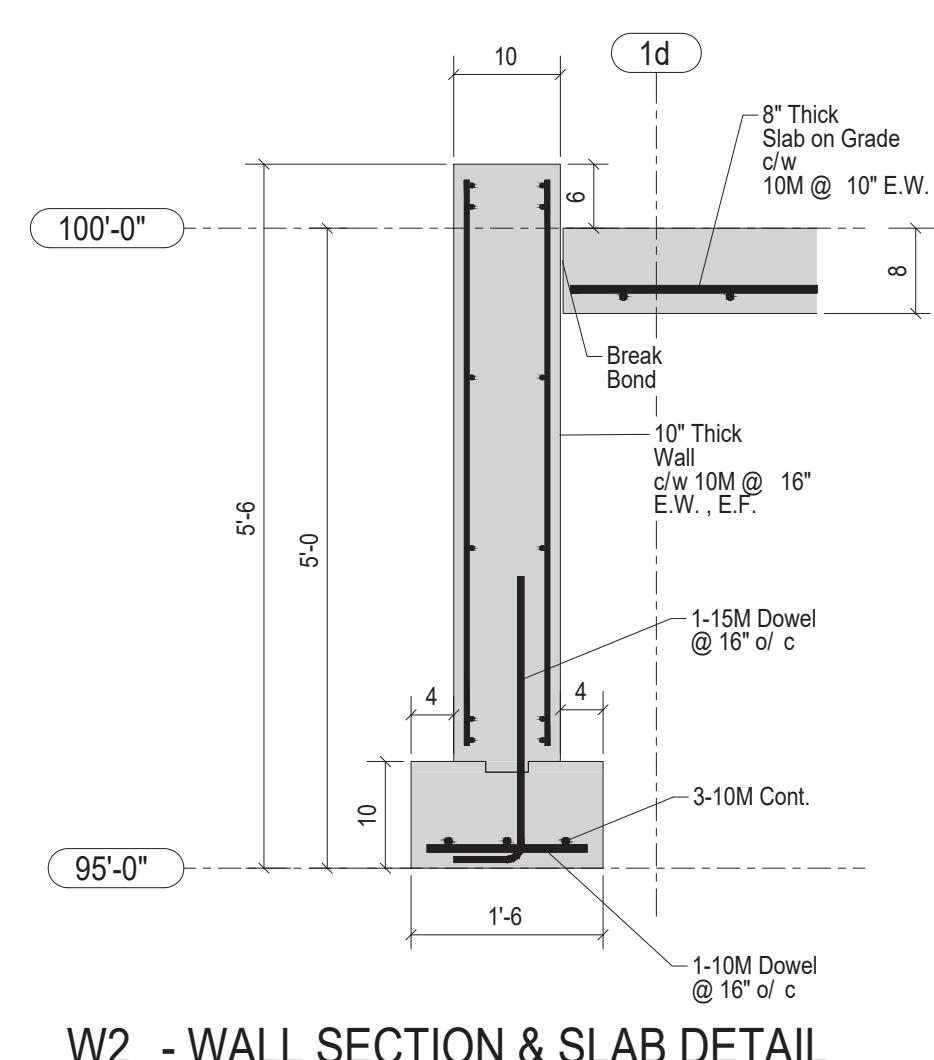
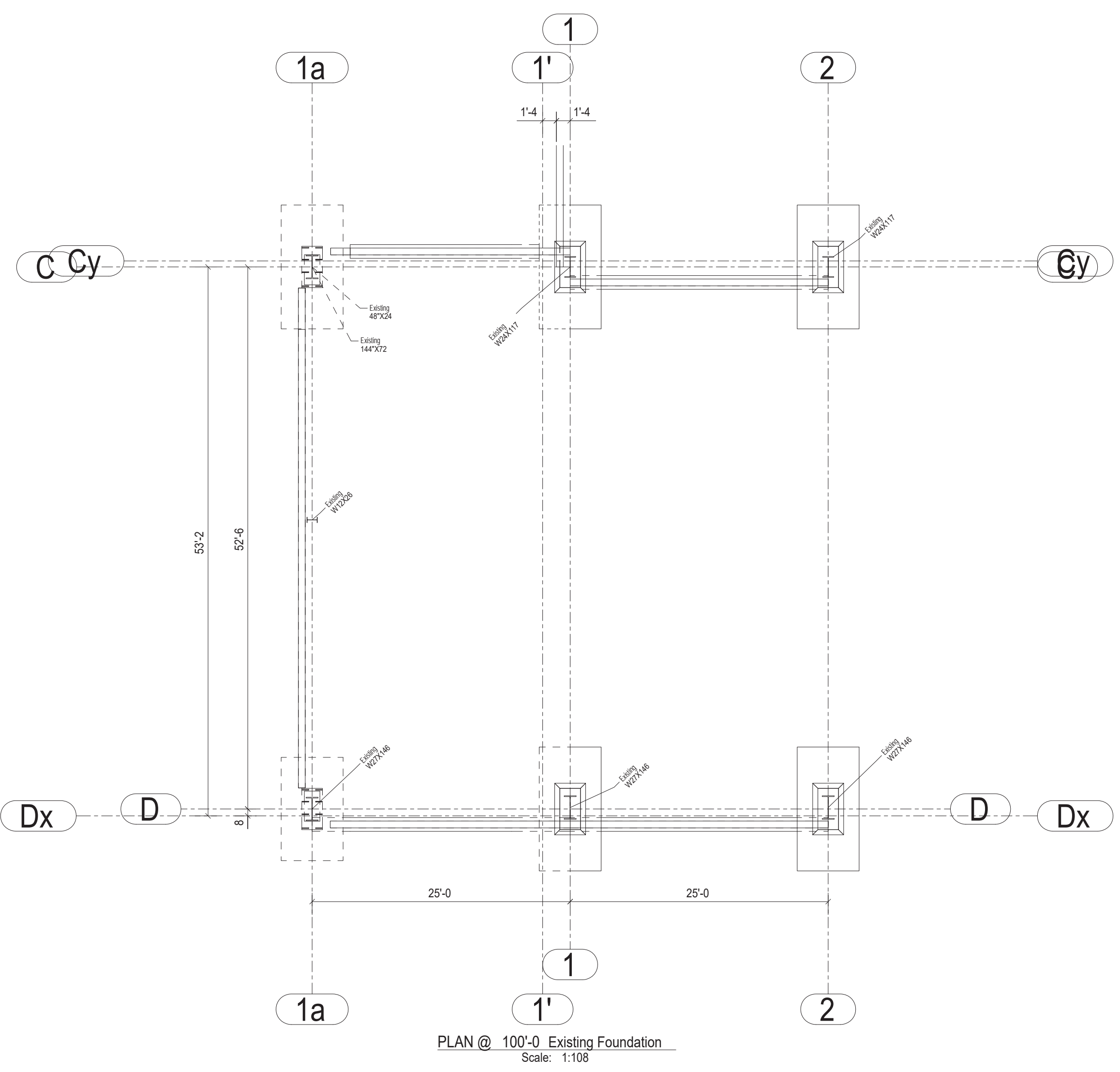
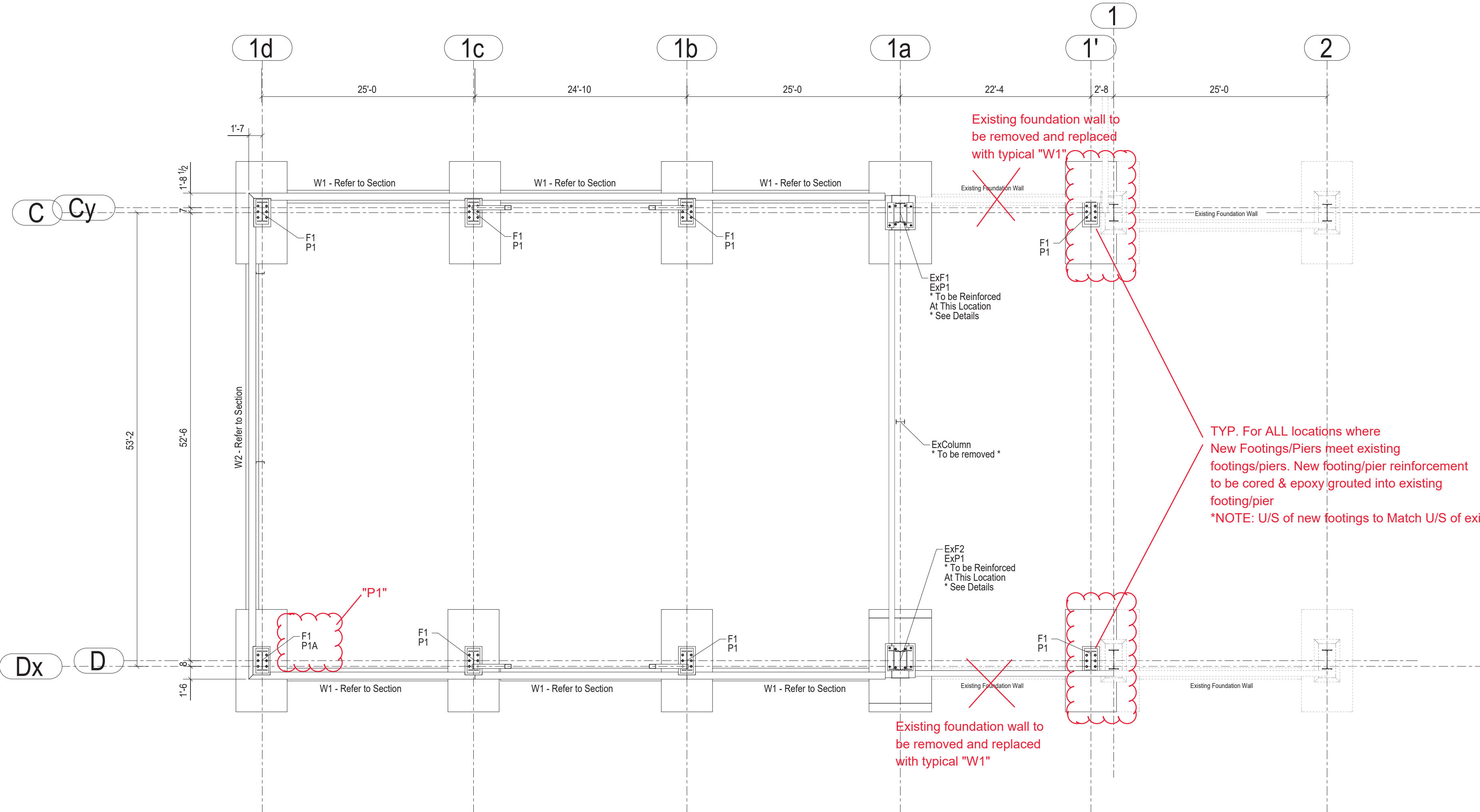
Client Name:
M CON Products Inc.
 2150 Richardson Side Rd
 Carp, ON, K0A 1J0

Project Name:
M CON Shop Expansion
 2150 Richardson Side Rd

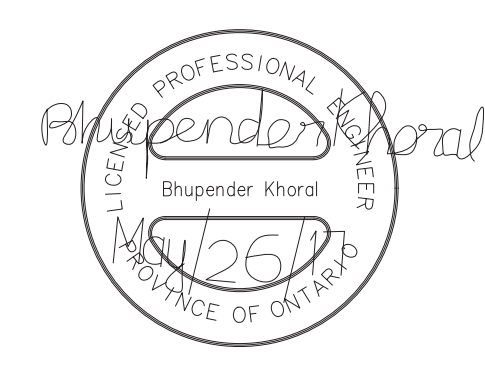
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Drawn By:	D.B.
Checked By:	B.K. - E.J.
Date Created:	14/03/17
Issued For:	TENDER
Date Modified:	17/05/17
Drawing Scale:	N. T. S

GENERAL NOTES

Revision No:	1	Drawing No:	5000
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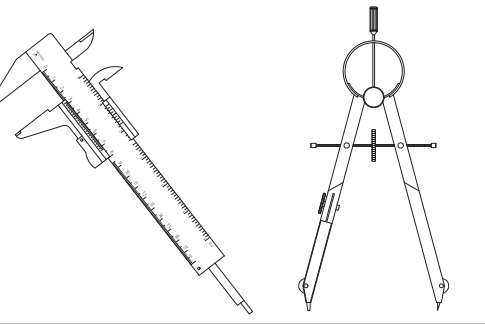


GENERAL NOTES
 Contractor to verify all dimensions prior to fabricate
 All dimensions on this drawing are to be compared to Architectural
 Do not scale these drawings.



Revision Number	Description	Date	By	Check
1	For Tender	06/25/2017	D.B.	B.K.-E.J.
0	For Permit	09/17/2017	D.B.	E.J.

DESIGN & SYSTEMS
 STRUCTURAL & WELDING ENGINEERS



SUITE 251, 2378 HOLLY LANE,
 OTTAWA, ON K1V 7P1
 +1 (613) 738-7462

Project Architect: **KWC Architects Inc.**
 383 Parkdale Ave. Suite 201
 Ottawa, Ontario, K1J 4R4

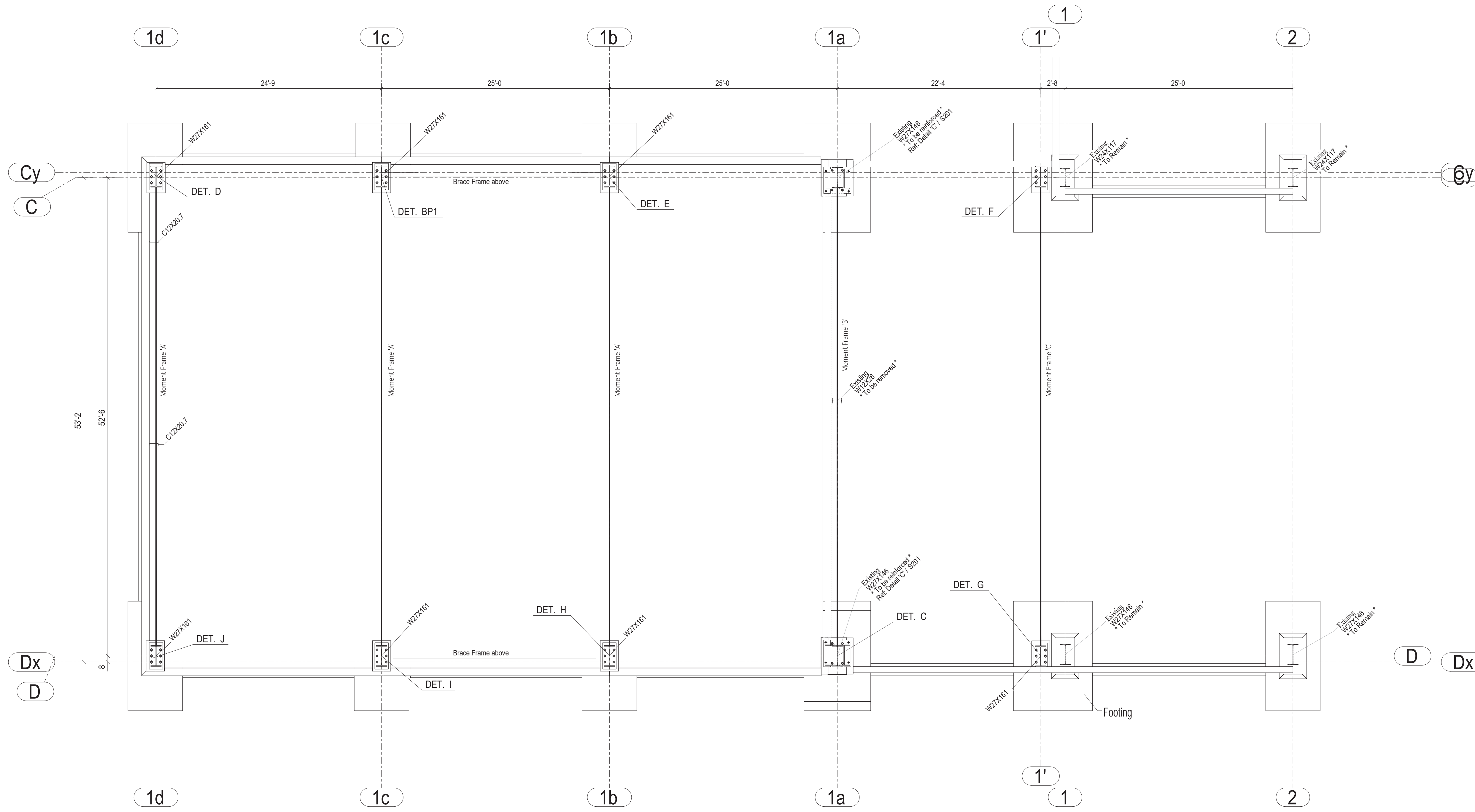
Client Name: **M CON Products Inc.**
 2150 Richardson Side Rd
 Carp, ON, K0A 1L0

Project Name: **M CON Shop Expansion**
 2150 Richardson Side Rd

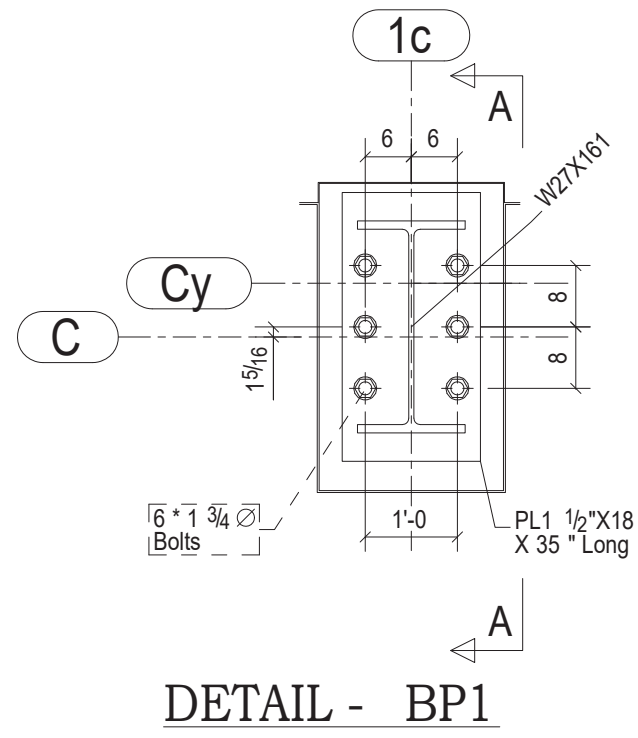
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Drawn By:	D.B.
Checked By:	B.K. - E.J.
Date Created:	28/02/17
Issued For:	TENDER
Date Modified:	24/05/17
Drawing Scale:	N. T. S

Phase 2 Expansion
 Foundation Plan

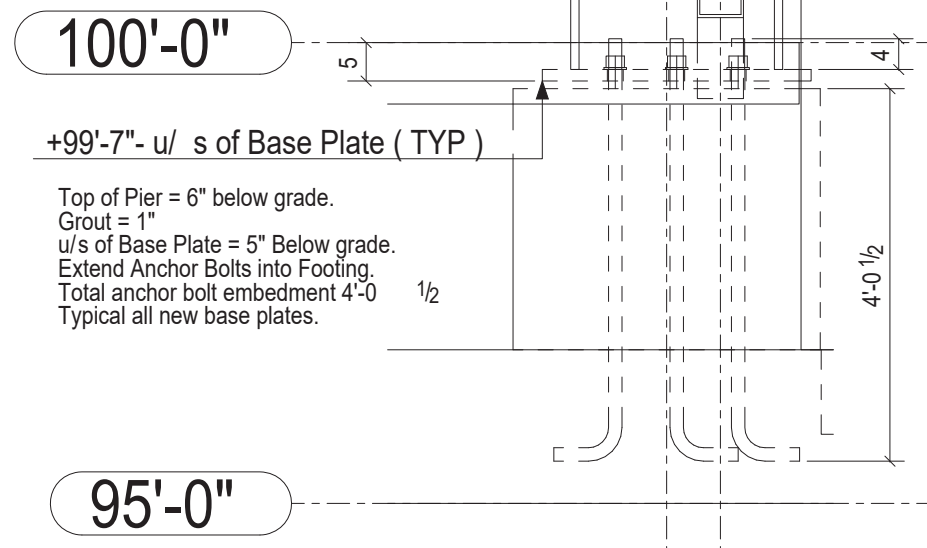
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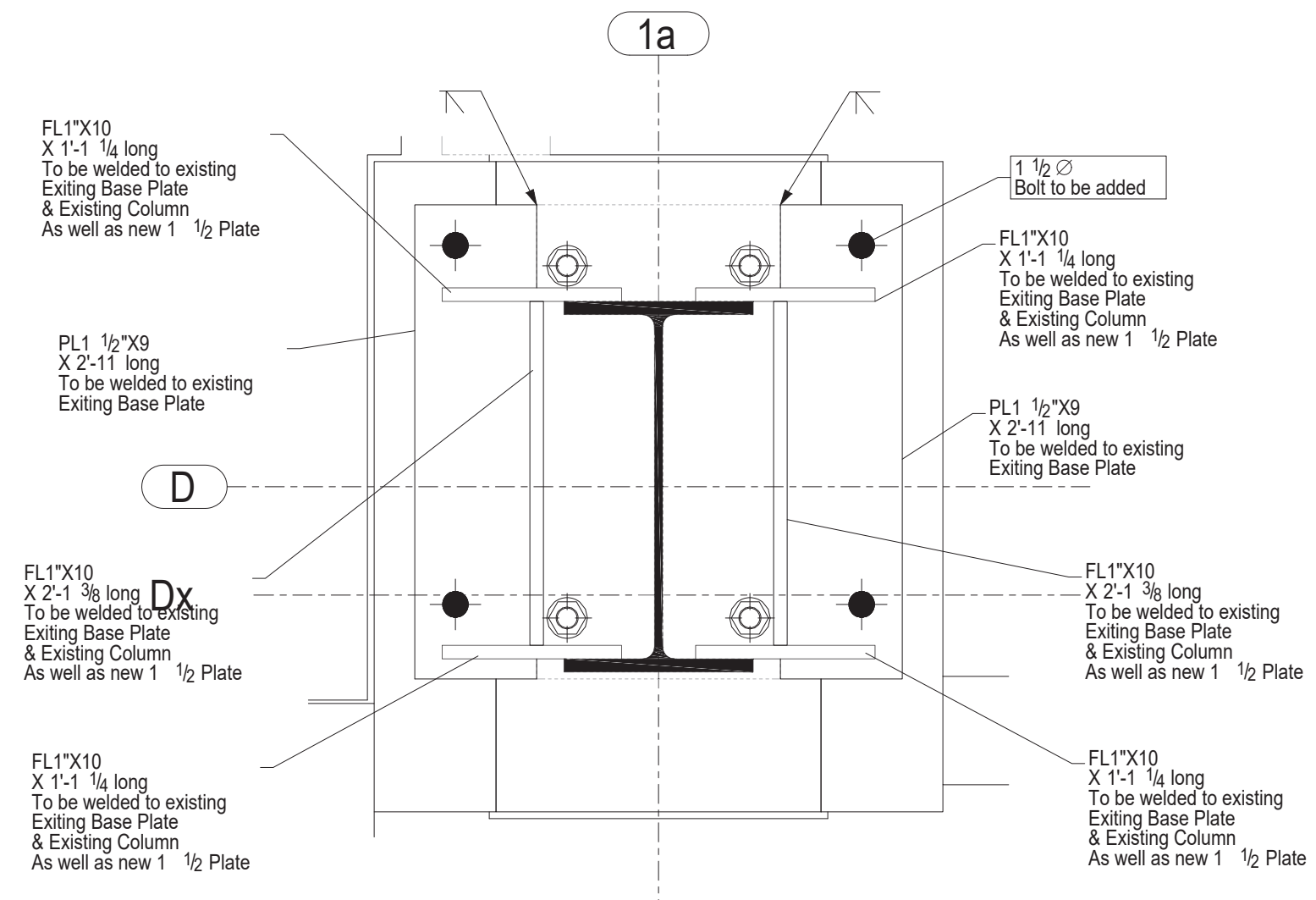
PLAN @ 100'-0"



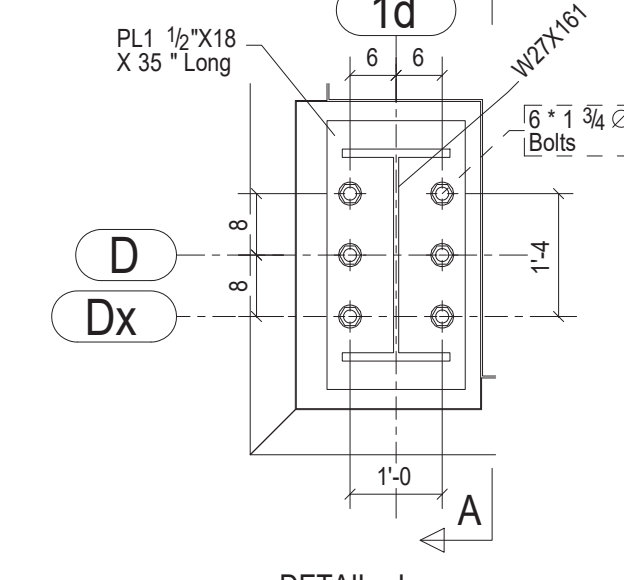
DETAIL - BP1



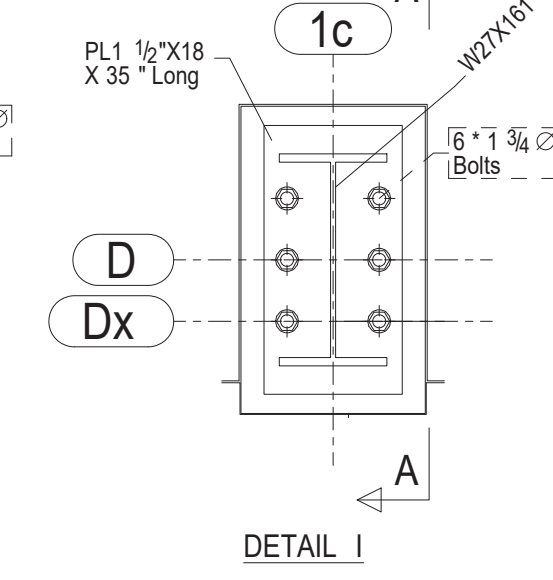
A - A



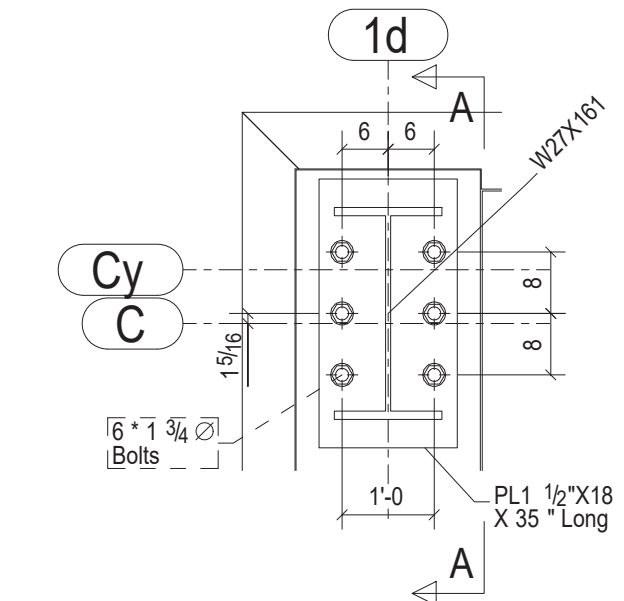
DETAIL C - TYPICAL BASE PLATE DETAIL



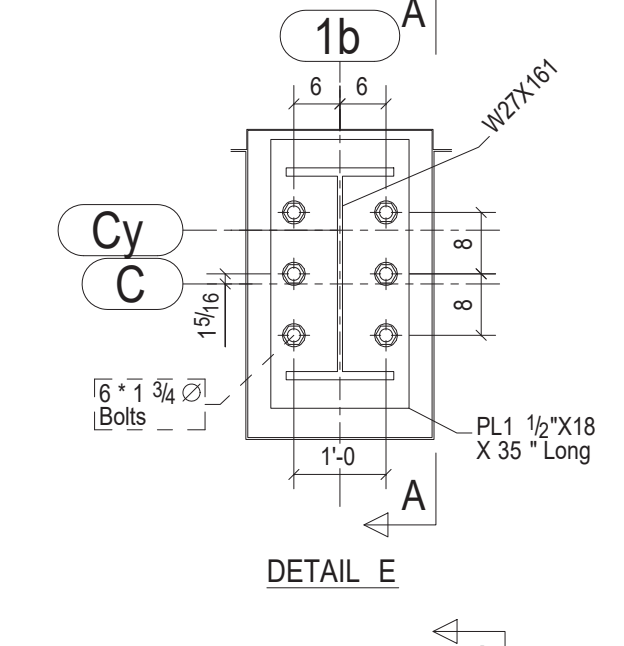
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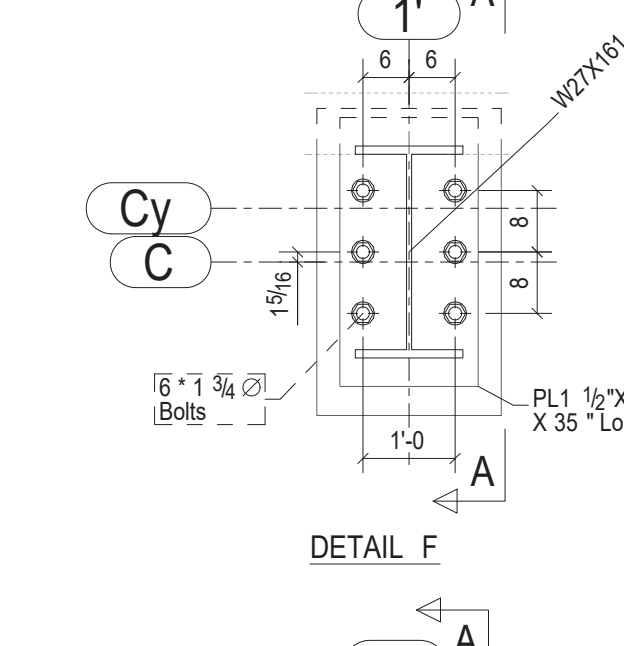
DETAIL I



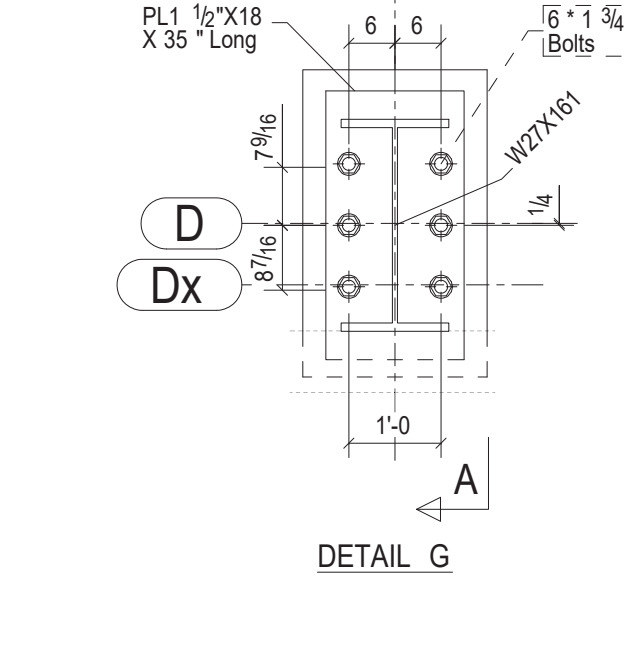
DETAIL D



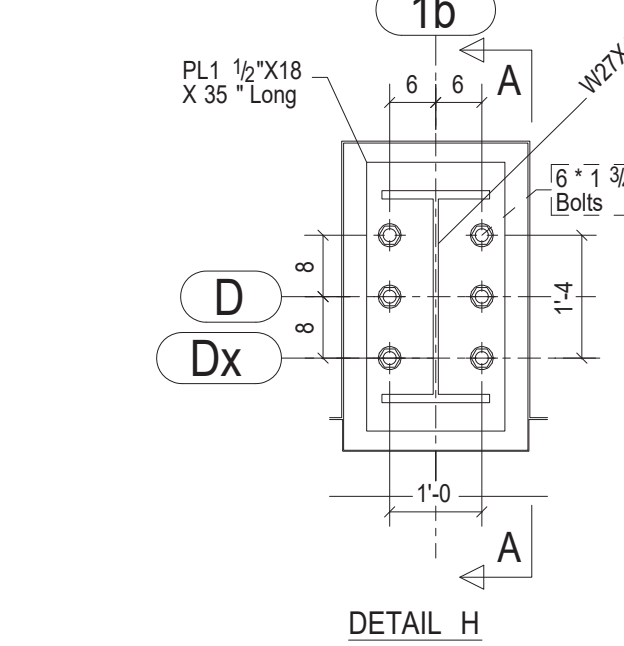
DETAIL E



DETAIL F

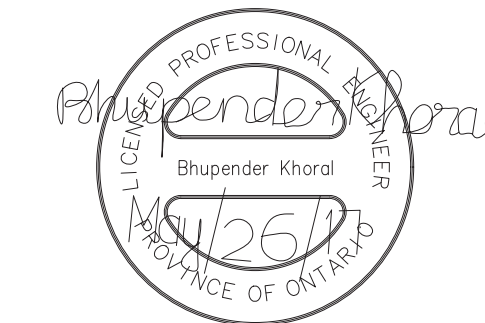


DETAIL G



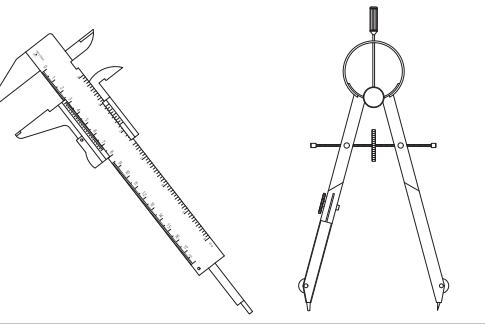
DETAIL H

GENERAL NOTES
 Contractor to verify all dimensions prior to fabricate.
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 Do not scale these drawings.



1	For Tender	05/25/2017	D.B.	B.K.-E.J.
0	For Permit	03/17/2017	D.B.	E.J.
Revision Number	Revision Description	Date	By	CHK. BY

DESIGN & SYSTEMS
 STRUCTURAL & WELDING ENGINEERS



SUITE 251, 2378 HOLLY LANE,
 OTTAWA, ON K1V 7P1
 +1 (613) 738-7482

Project Architect: **KWC Architects Inc.**
 383 Parkdale Ave., Suite 201
 Ottawa, Ontario, K1Y 4R4

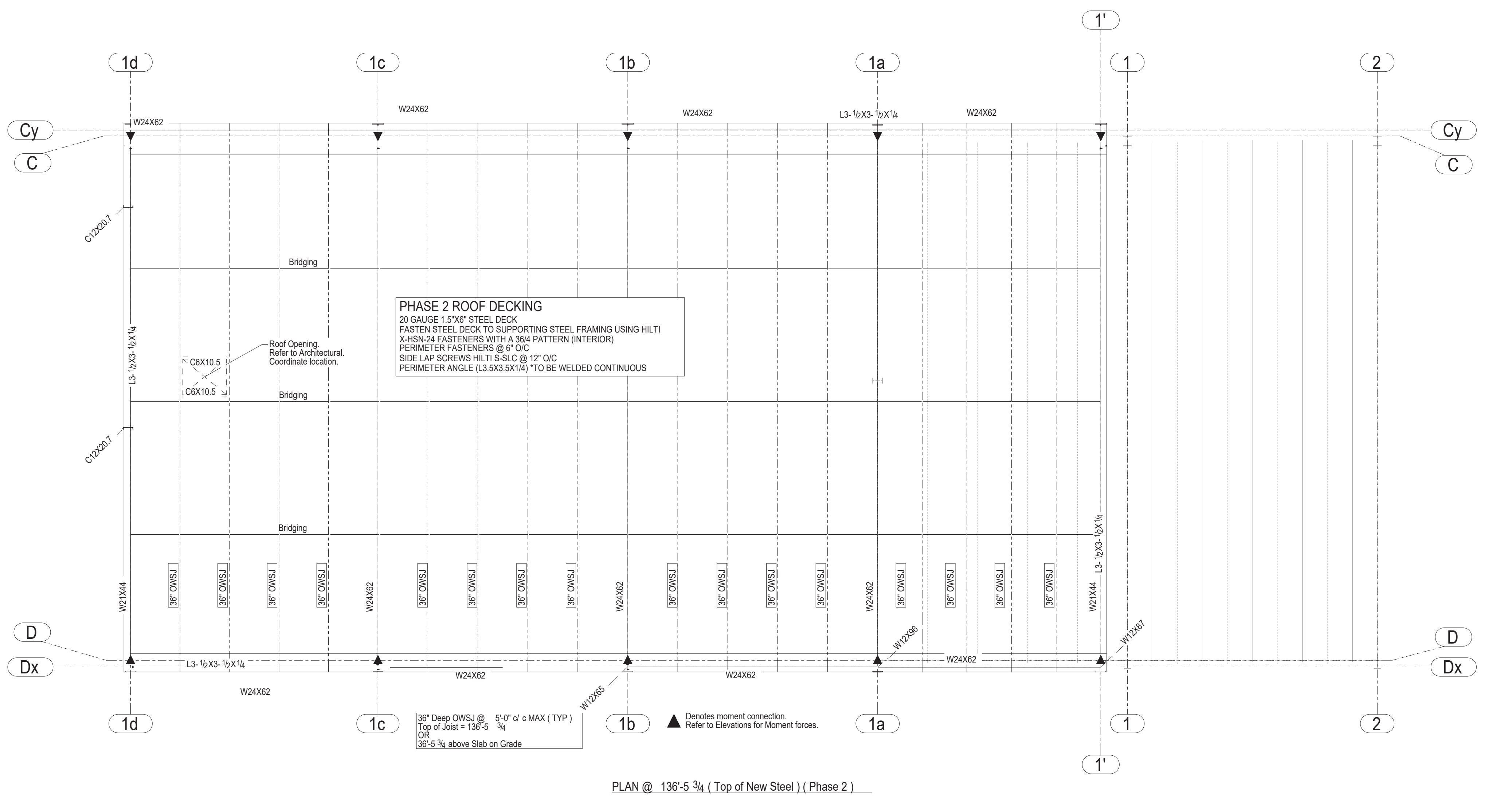
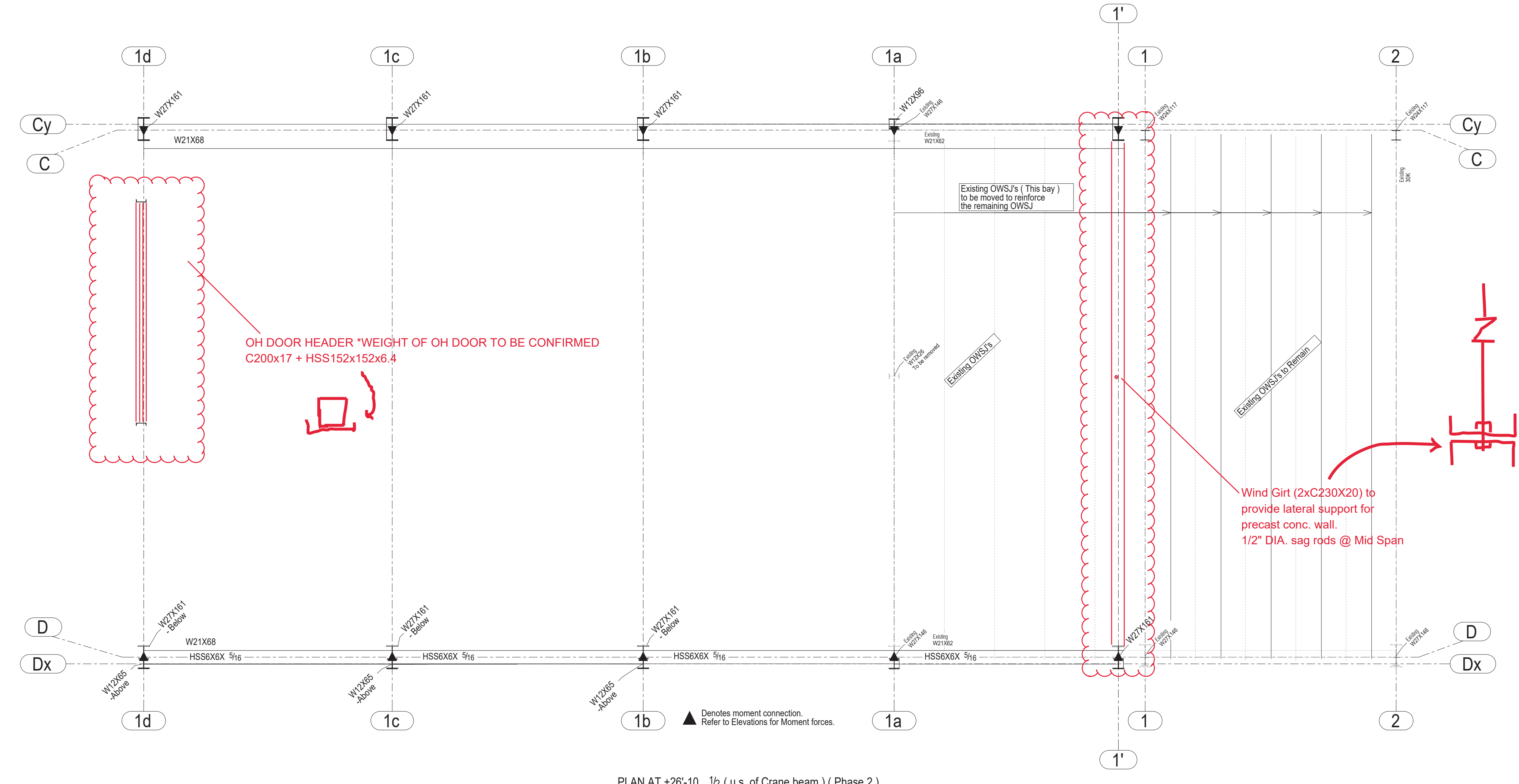
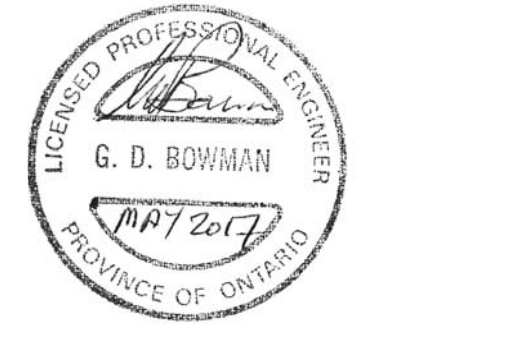
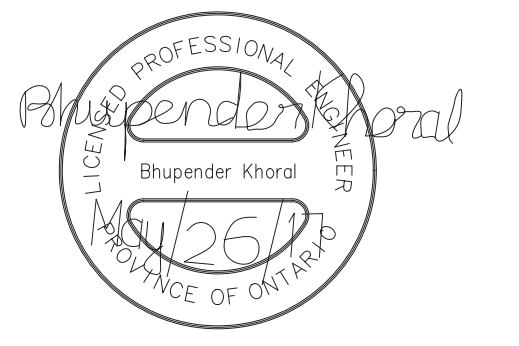
Client Name: **M CON Products Inc.**
 2150 Richardson Side Rd
 Carp, ON, K0A 1L0

Project Name: **M CON Shop Expansion**
 2150 Richardson Side Rd

Project Number:	170224-01
Drawn By:	D.B.
Checked By:	B.K. - E.J.
Date Created:	14/03/17
Issued For:	TENDER
Date Modified:	25/05/17
Drawing Scale:	N. T. S

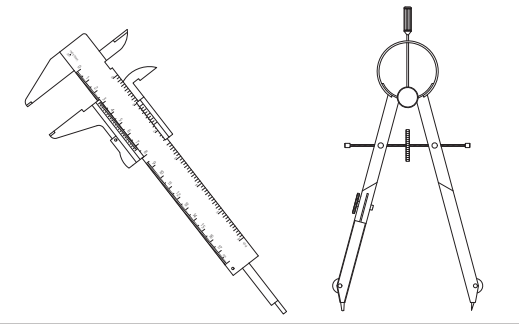
Drawing Name: **Phase 2 Expansion**
 Anchor Bolt Layout

GENERAL NOTES
 Contractor to verify all dimensions prior to fabricate
 All dimensions on this drawing are to be compared to Architectural
 Do not scale these drawings.



1	For Tender	05/25/2017	D.B.	B.K.-E.J.
0	For Permit	03/17/2017	D.B.	E.J.
Revision Number	Revision Description	Date	By	CHK. BY

DESIGN & SYSTEMS
 STRUCTURAL & WELDING ENGINEERS



SUITE 251, 2378 HOLLY LANE,
 OTTAWA, ON K1V 7P1
 +1 (613) 738-7482

Project Architect:
KWC Architects Inc.
 383 Parkdale Ave. Suite 201
 Ottawa, Ontario, K1Y 4R4

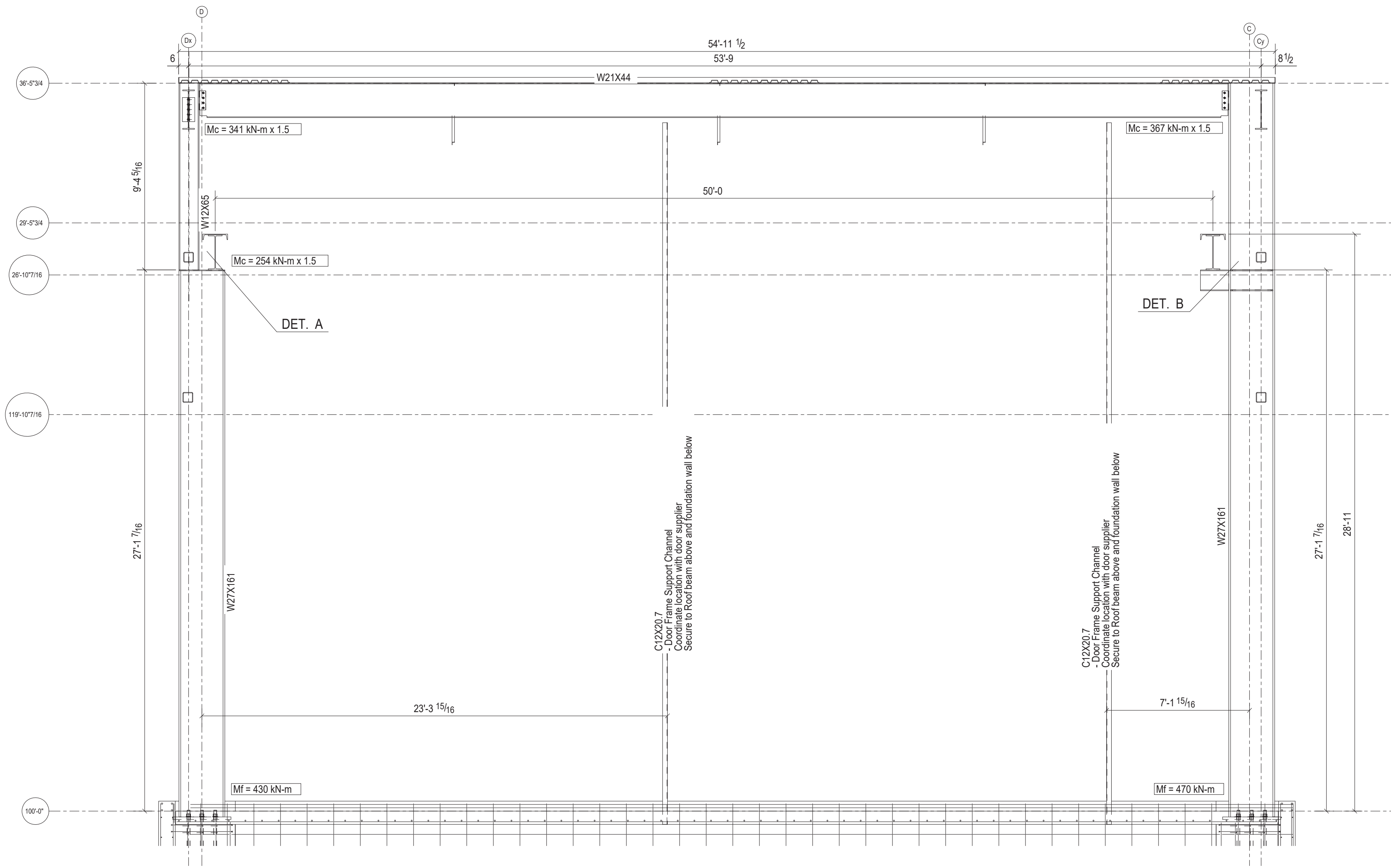
Client Name:
M CON Products Inc.
 2150 Richardson Side Rd
 Carp, ON, K0A 1J0

Project Name:
M CON Shop Expansion
 2150 Richardson Side Rd

Project Number:
 170224-01

Drawn By:	D.B.	Checked By:	B.K. - E.J.
Date Created:	14/03/17	Issued For:	TENDER
Date Modified:	25/05/17	Drawing Scale:	N. T. S

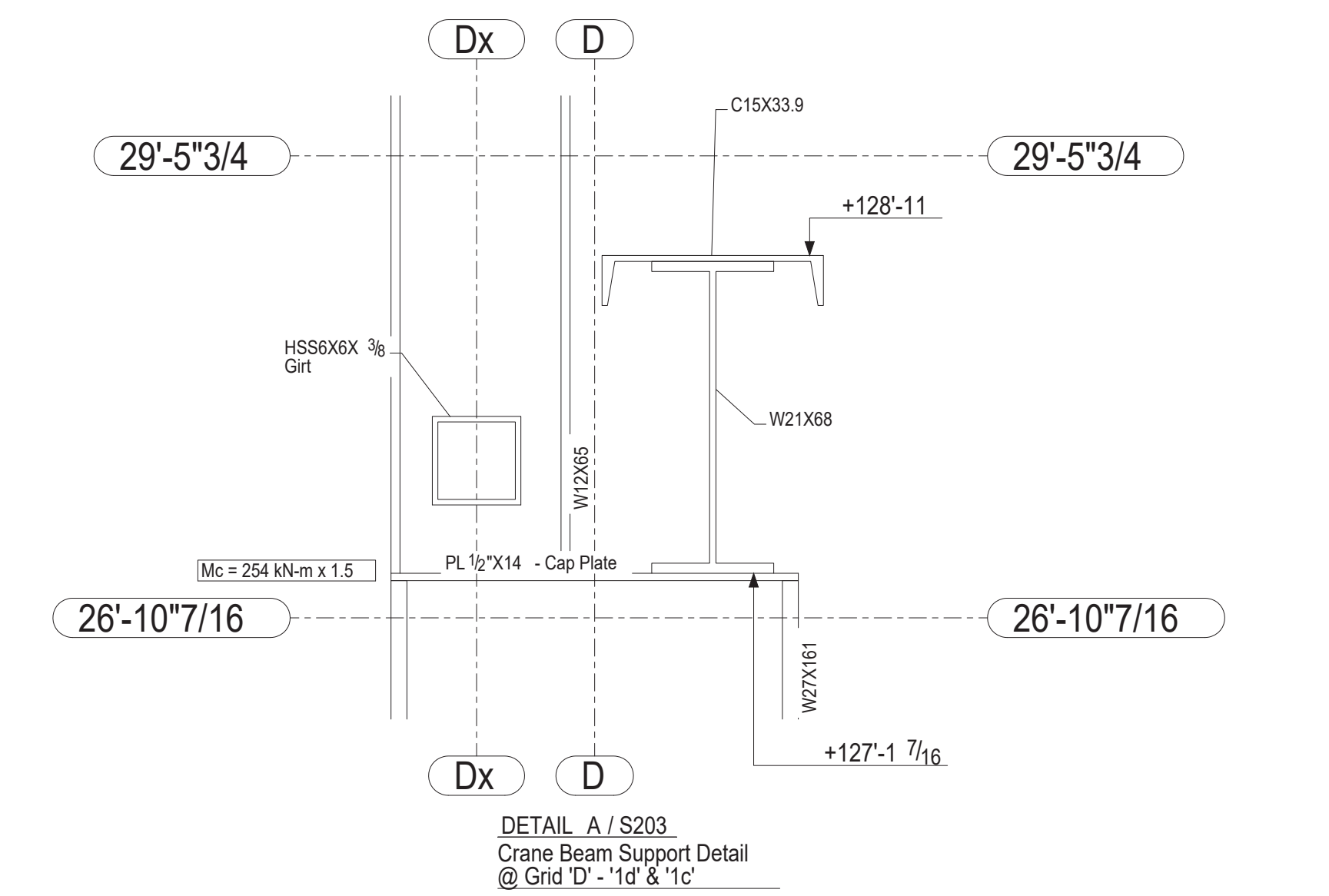
Drawing Name:
 Phase 2 Expansion
 Plan at Crane beam
 & Roof Steel Layout



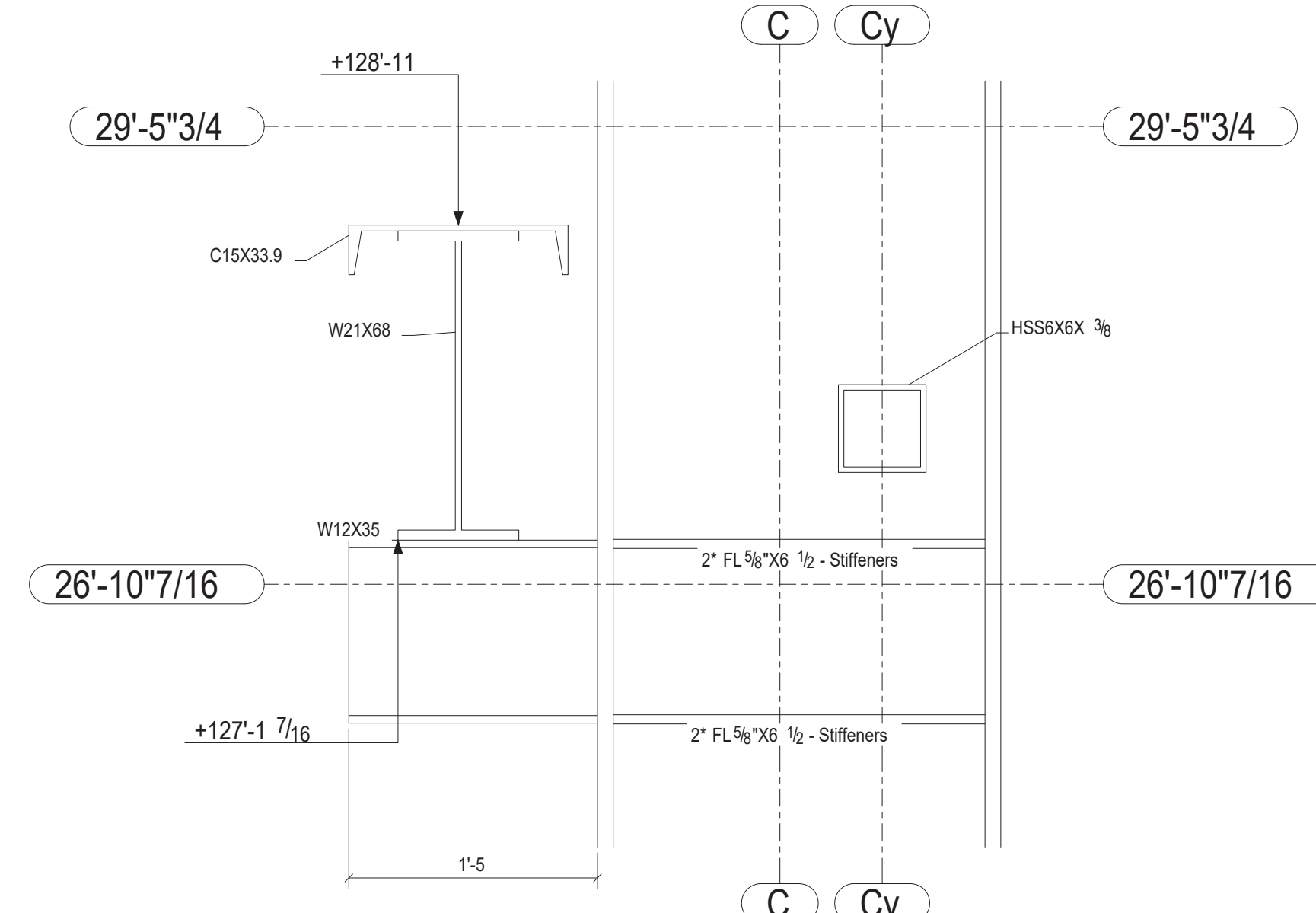
ELEVATION ON GRID 1d



ELEVATION ON GRID 1c



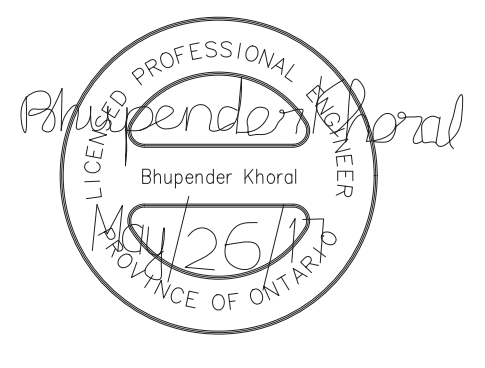
DETAIL A / S203
Crane Beam Support Detail
@ Grid 'D' - '1d' & '1c'



DETAIL B / S203
Crane Beam Support Detail
@ Grid 'C' - '1d' & '1c'

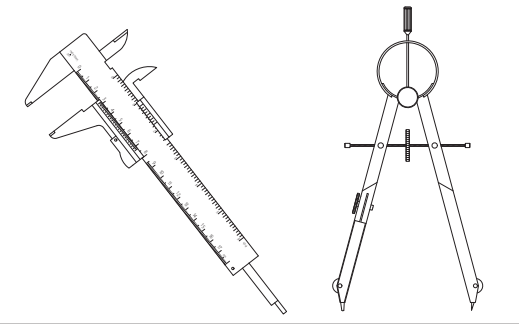
GENERAL NOTES
Contractor to verify all dimensions prior to fabricate.
All dimensions on this drawing are to be compared to Architectural.

Do not scale these drawings.



1	For Tender	05/25/2017	D.B.	B.K.-E.J.
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Revision Number	Description	Date	By	CHK By

DESIGN & SYSTEMS
STRUCTURAL & WELDING ENGINEERS



SUITE 251, 2378 HOLLY LANE,
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Project Architect: **KWC Architects Inc.**
383 Parkdale Ave. Suite 201
Ottawa, Ontario, K1J 4R4

Client Name: **M CON Products Inc.**
2150 Richardson Side Rd
Carp, ON, K0A 1J0

Project Name:
M CON Shop Expansion
2150 Richardson Side Rd

Project Number: 170224-01

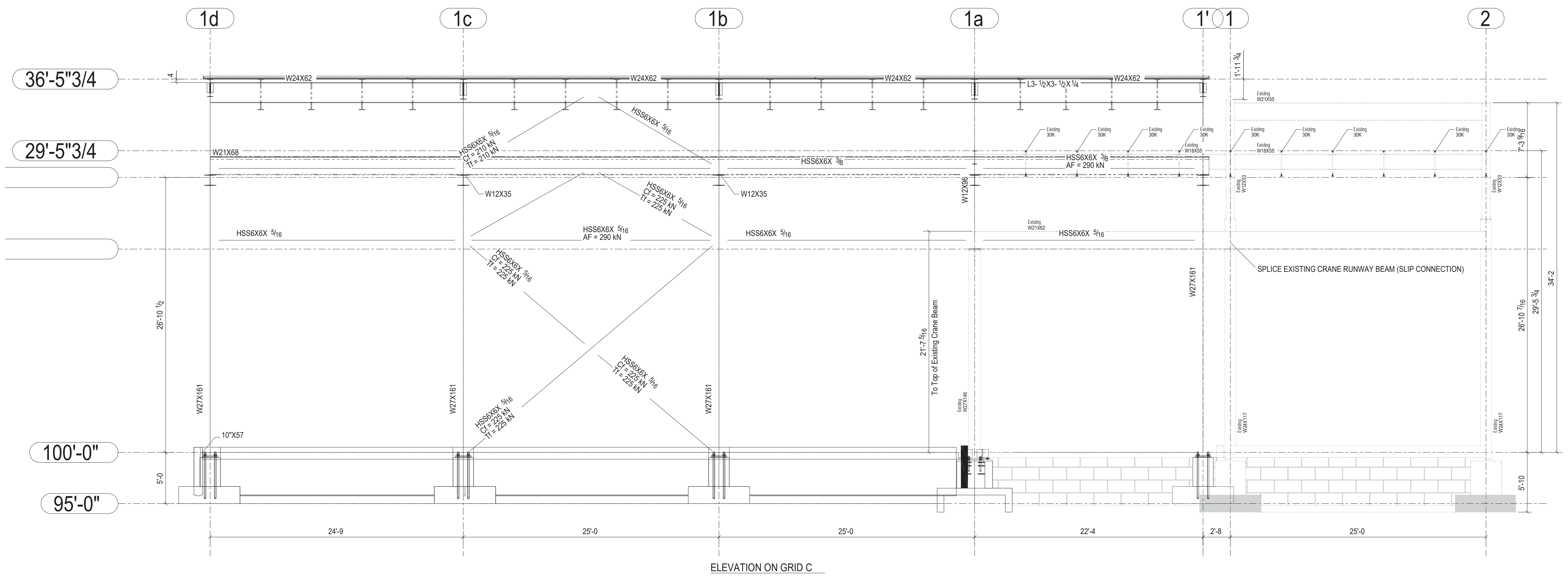
Drawn By: D.B. Checked By: B.K. - E.J.

Date Created: 14/03/17 Issued For: TENDER

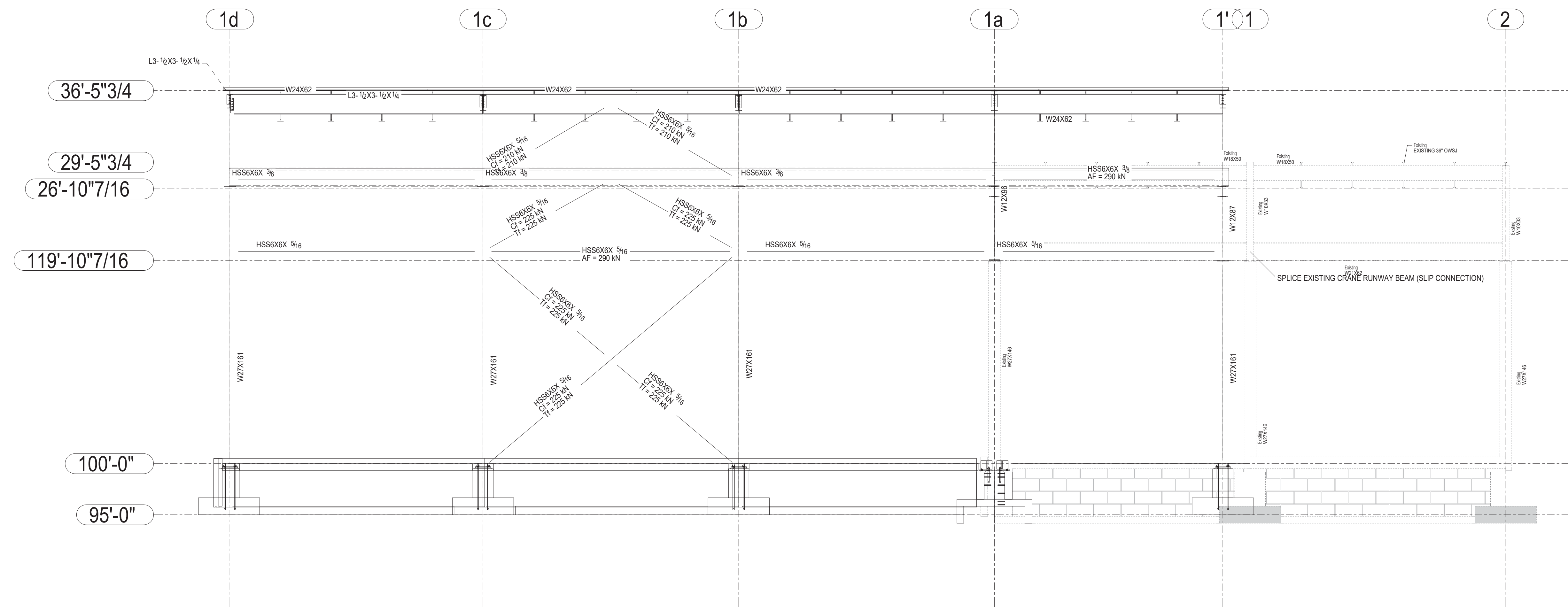
Date Modified: 25/05/17 Drawing Scale: N. T. S

Drawing Name:
Phase 2 Expansion
Elevation at Grid '1d'
Elevation at Grid '1c'

GENERAL NOTES
 Contractor to verify all dimensions prior to fabri
 All dimensions on this drawing are to be compared to Architectural
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ELEVATION ON GRID C

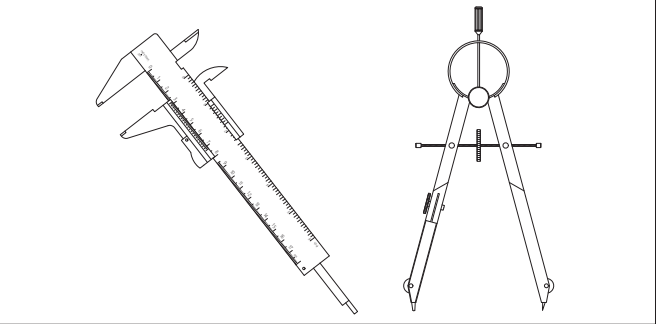


ELEVATION ON GRID D



1	For Tender	05/25/2017	D.B.	B.K. - E.J.
0	For Permit	03/17/2017	D.B.	E.J.
Revision Number	Revision Description	Date	By	CHK

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 STRUCTURAL & WELDING ENGINEERS



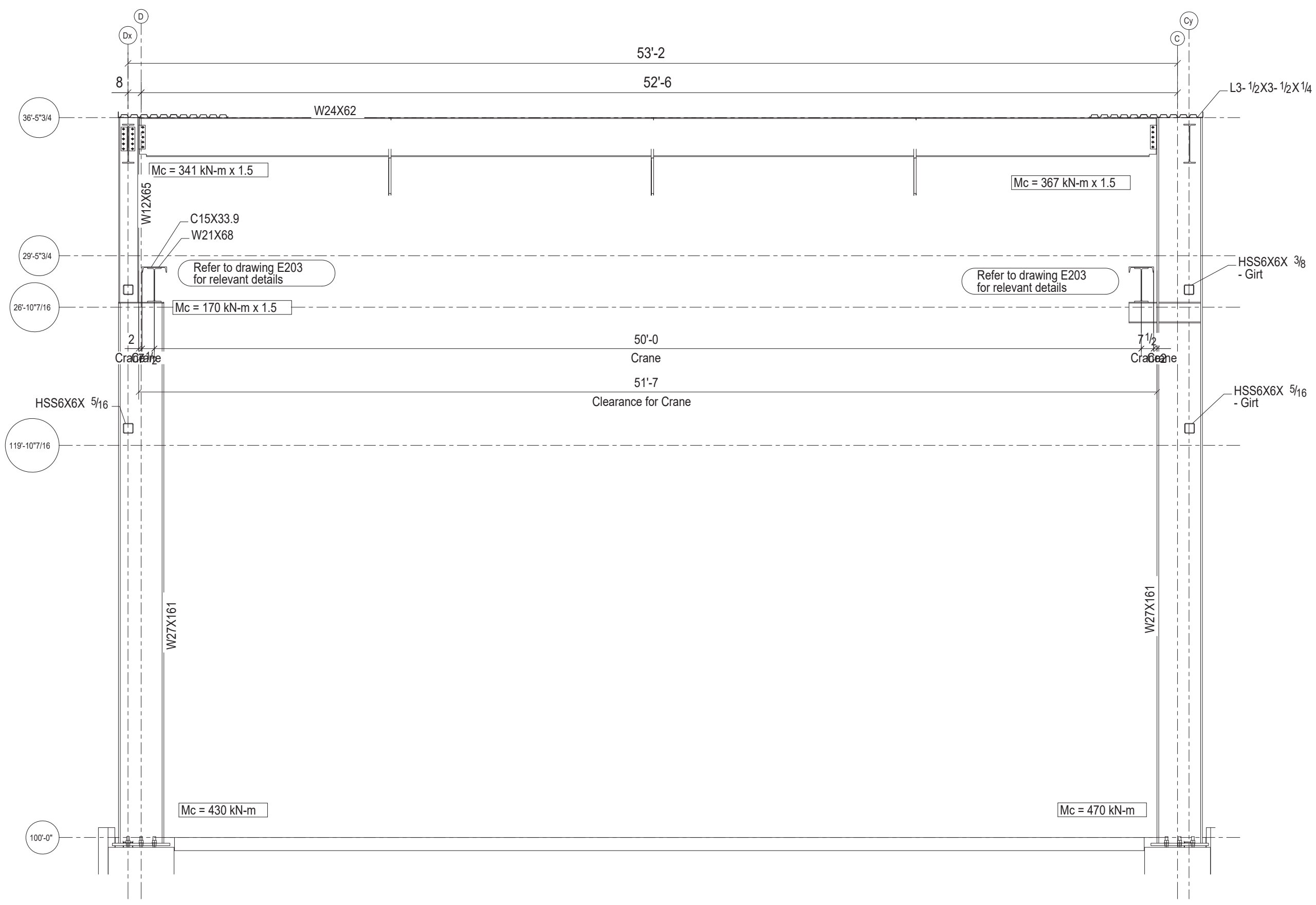
SUITE 251, 2378 HOLLY LANE,
 OTTAWA, ON K1V 7P1
 +1 (613) 738-7482

Project Architect: **KWC Architects Inc.**
 383 Parkdale Ave. Suite 201
 Ottawa, Ontario, K1Y 4R4

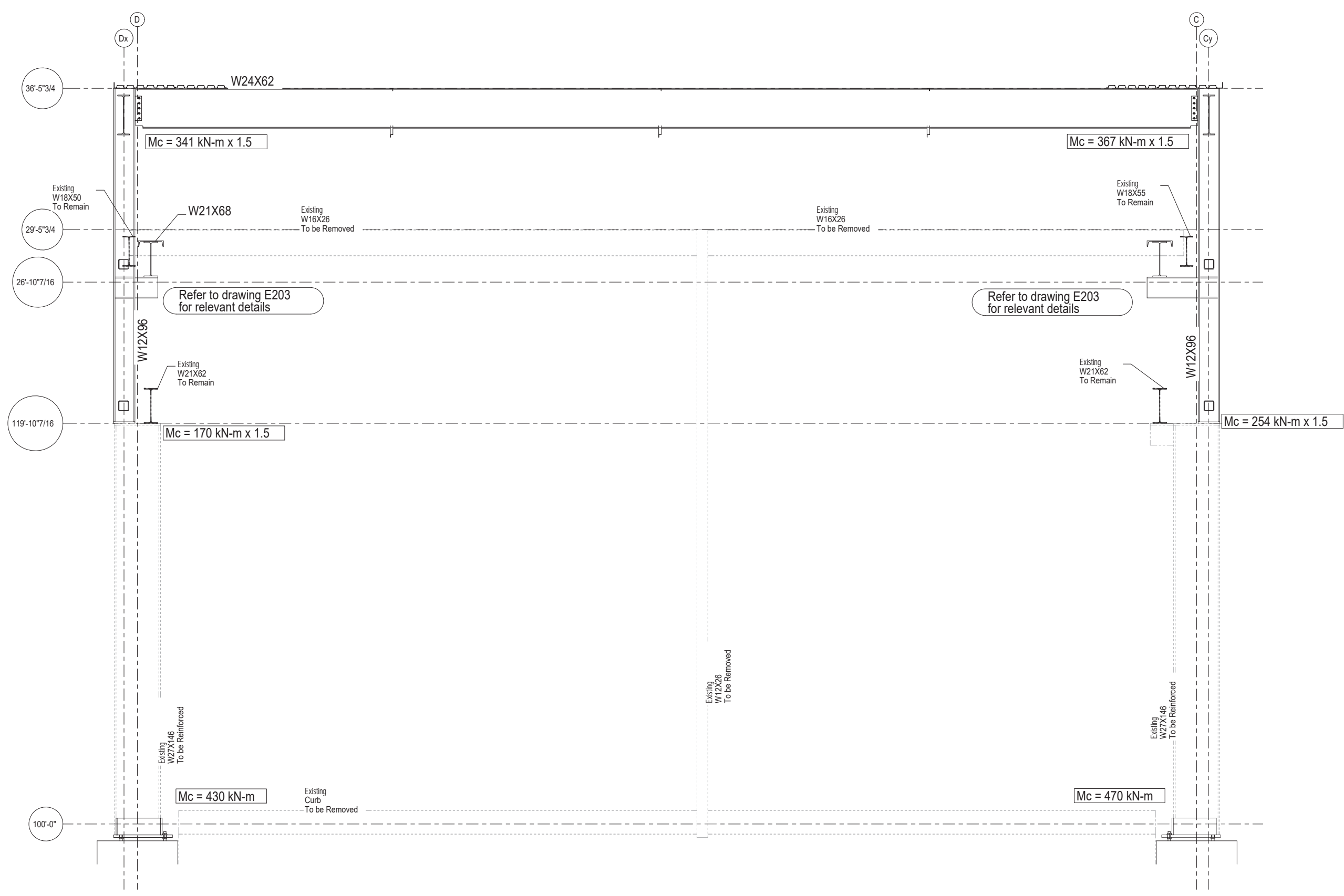
Client Name: **M CON Products Inc.**
 2150 Richardson Side Rd
 Carp, ON, K0A 1J0

Project Name:
M CON Shop Expansion
 2150 Richardson Side Rd

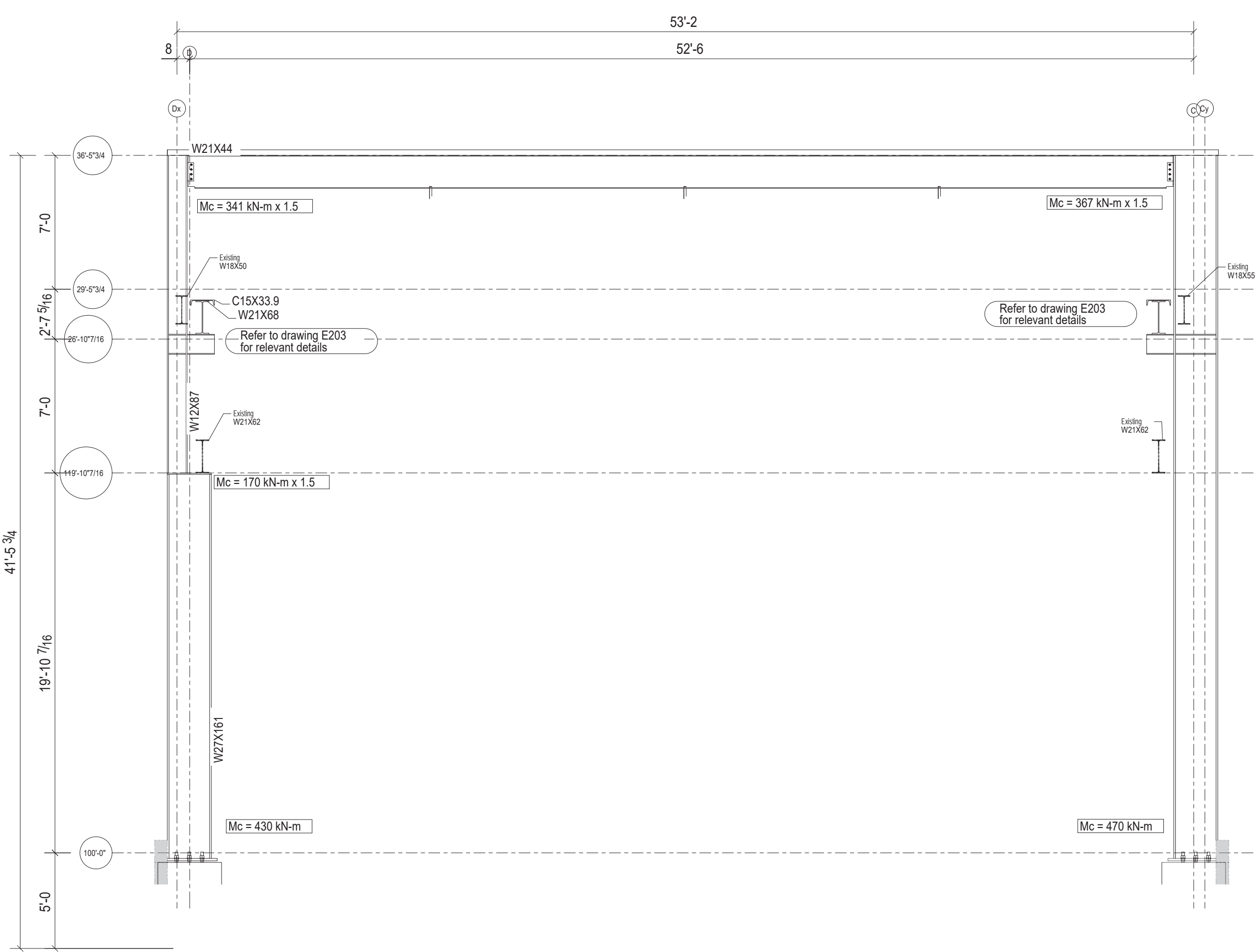
Project Number:	170224-01		
Drawn By:	D.B.	Checked By:	B.K. - E.J.
Date Created:	14/03/17	Issued For:	TENDER
Date Modified:	25/05/17	Drawing Scale:	N. T. S
Drawing Name:	Phase 2 Expansion Elevation at Grid 'C' Elevation at Grid 'D'		



ELEVATION ON GRID 1b

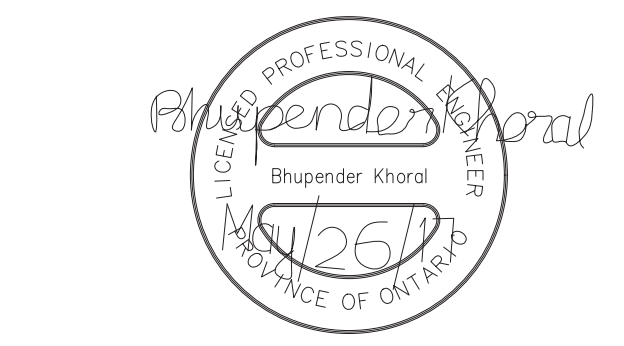


ELEVATION ON GRID 1a



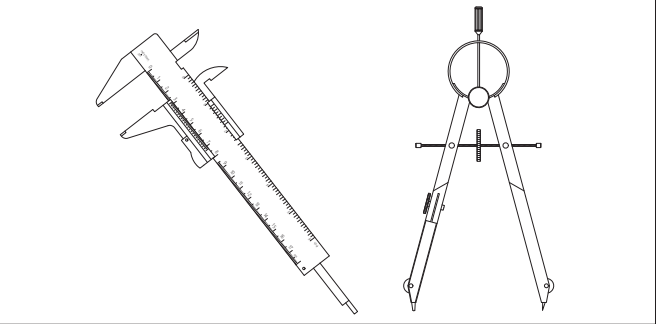
ELEVATION ON GRID 1'

GENERAL NOTES
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1	For Tender	05/25/2017	D.B.	B.K. - E.J.
0	For Permit	03/17/2017	D.B.	E.J.
Revision Number	Description	Date	By	CHK By

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SUITE 251, 2378 HOLLY LANE,
 OTTAWA, ON K1V 7P1
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Project Architect: **KWC Architects Inc.**
 383 Parkdale Ave. Suite 201
 Ottawa, Ontario, K1Y 4R4

Client Name: **M CON Products Inc.**
 2150 Richardson Side Rd
 Carp, ON, K0A 1J0

Project Name:
M CON Shop Expansion
 2150 Richardson Side Rd

Project Number: 170224-01

Drawn By: D.B. Checked By: B.K. - E.J.

Date Created: 14/03/17 Issued For: TENDER

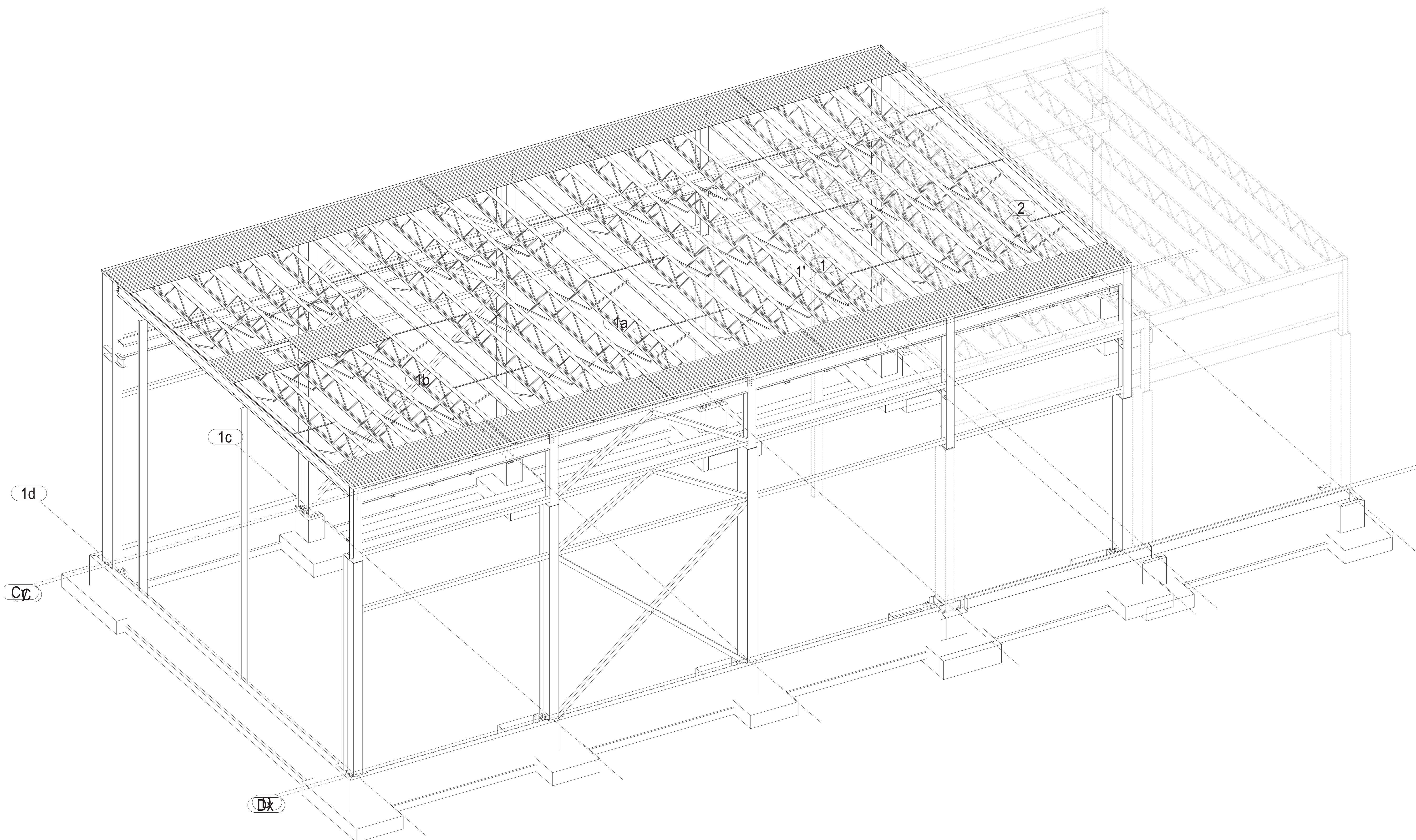
Date Modified: 25/05/17 Drawing Scale: N. T. S

Drawing Name:
 Phase 2 Expansion
 Elevation at Grid '1b' & '1c'
 Elevation at Grid '1'

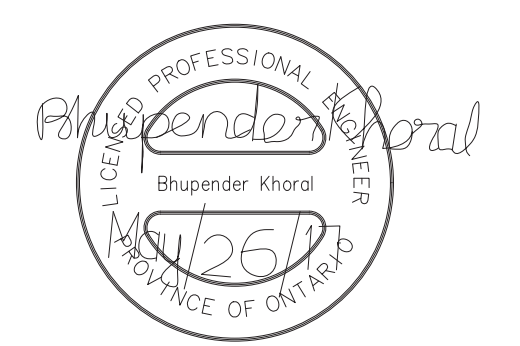
GENERAL NOTES

Contractor to verify all dimensions prior to fabri
All dimensions on this drawing are to be compared
to Architectural

Do not scale these drawings.

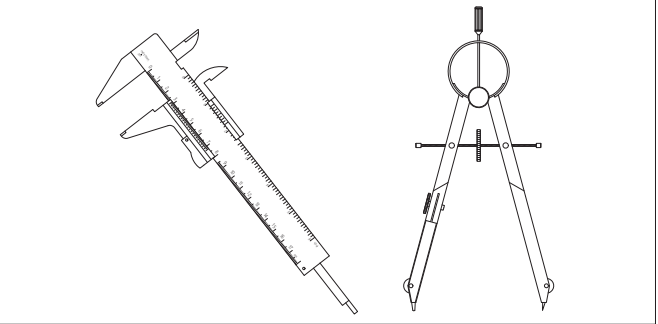


3D View @ 100'-0" - Top of Slab on Grade
Scale: 1:60



1	For Tender	05/25/2017	D.B.	B.K. - E.J.
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DESIGN & SYSTEMS
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SUITE 251, 2378 HOLLY LANE,
OTTAWA, ON K1V 7P1
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Project Architect: **KWC Architects Inc.**
383 Parkdale Ave. Suite 201
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Client Name: **M CON Products Inc.**
2150 Richardson Side Rd
Carp, ON, K0A 1L0

Project Name:
M CON Shop Expansion
2150 Richardson Side Rd

Project Number: 170224-01

Drawn By: D.B. Checked By: B.K. - E.J.

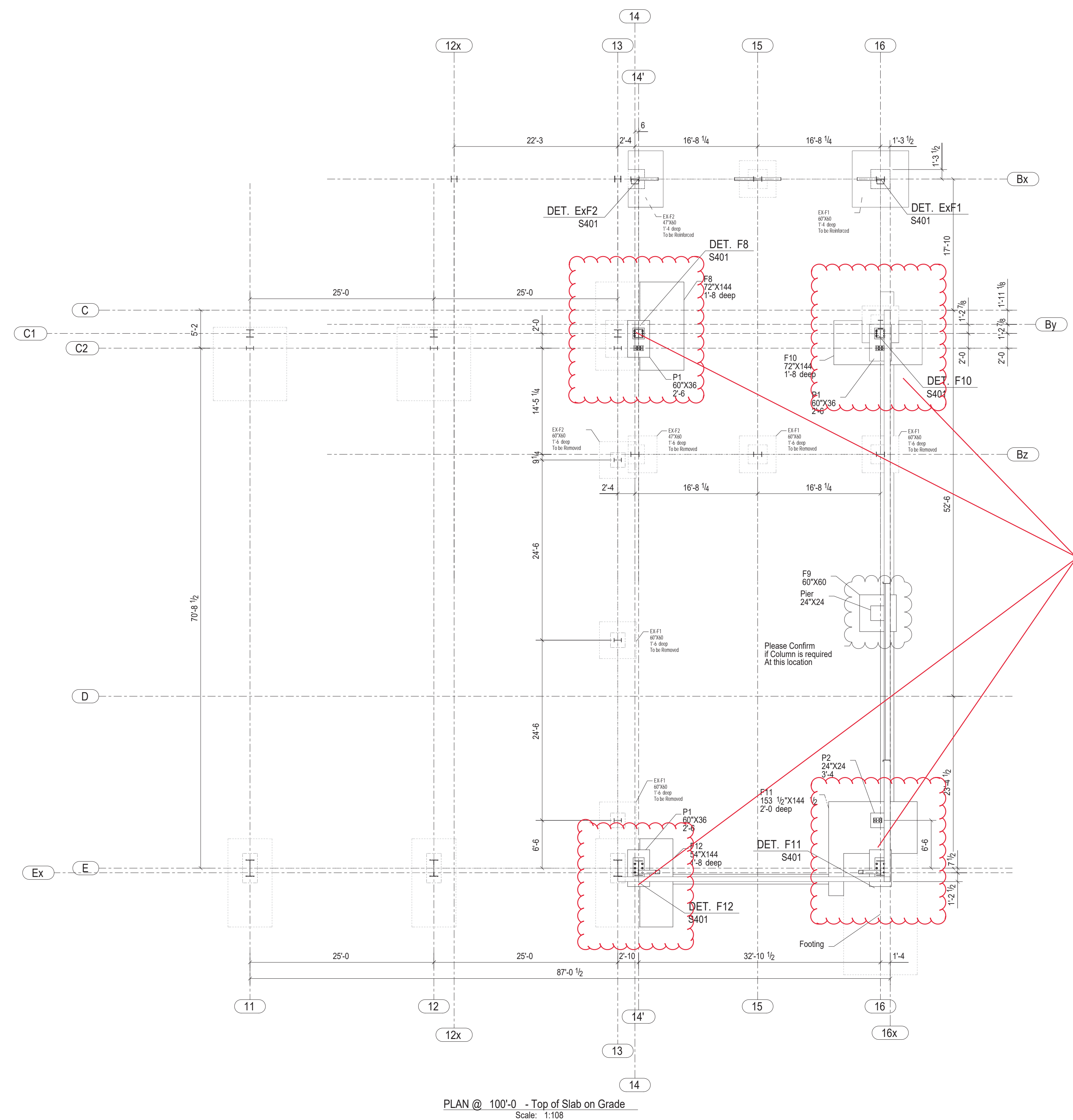
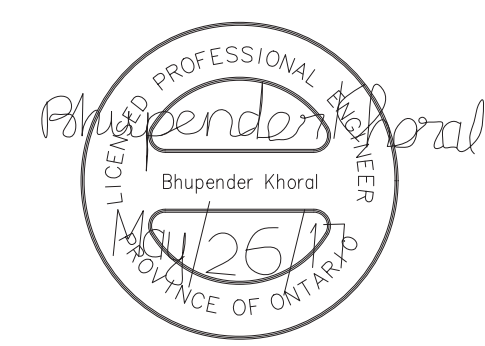
Date Created: 23/05/17 Issued For: TENDER

Date Modified: 25/05/17 Drawing Scale: N. T. S

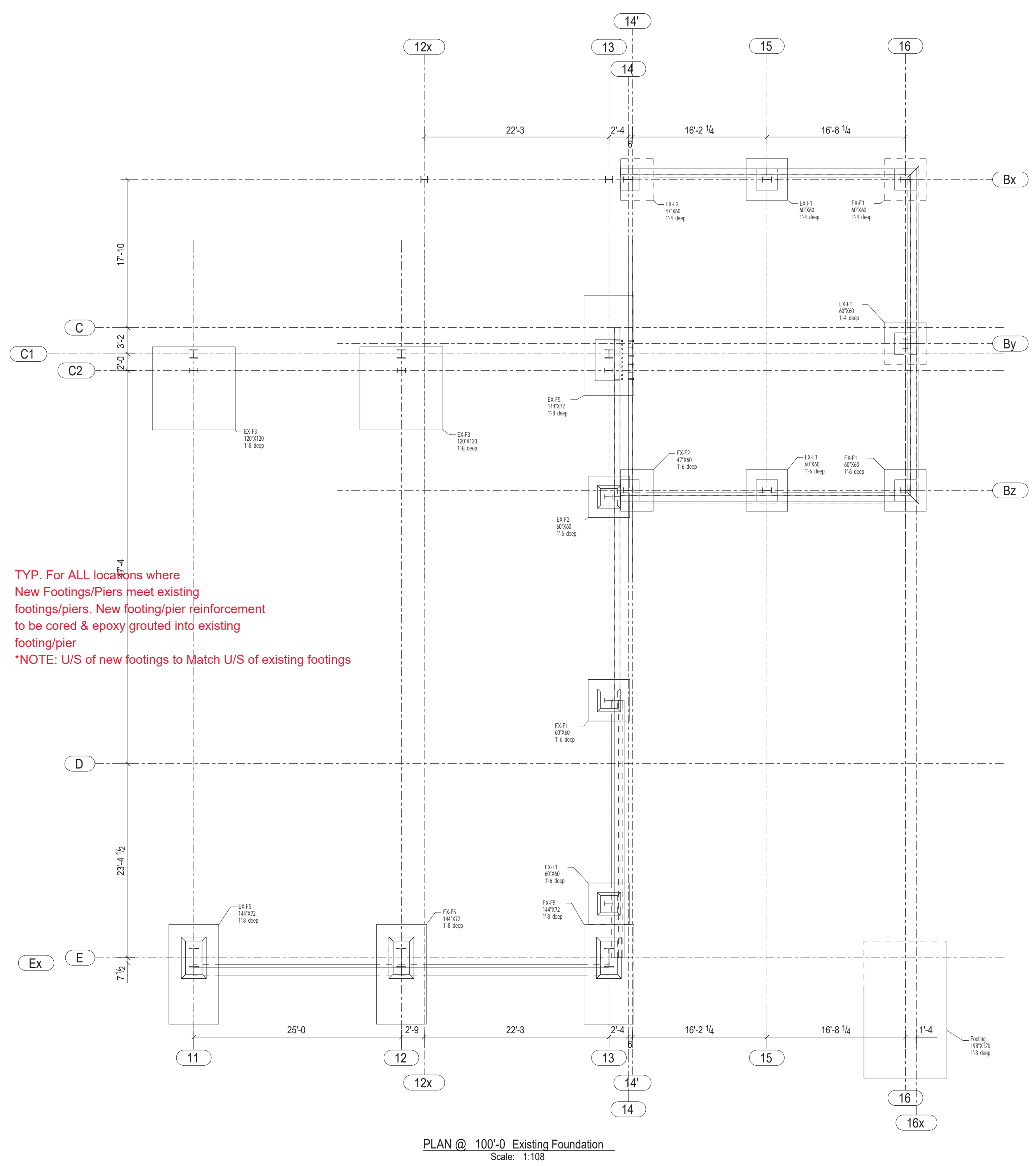
Drawing Name:
Phase 2 Expansion
3D View

Revision No: **1** Drawing No: **S206**

GENERAL NOTES
 Contractor to verify all dimensions prior to fabricate
 All dimensions on this drawing are to be compared to Architectural
 Do not scale these drawings.

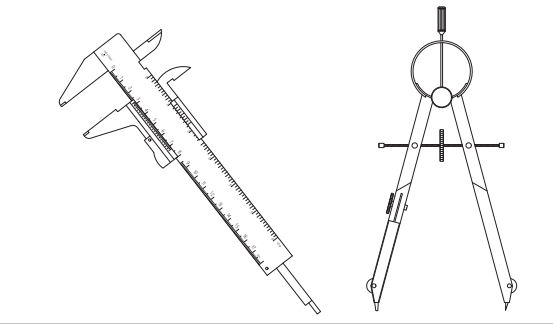


TYP. For ALL locations where New Footings/Piers meet existing footings/piers. New footing/pier reinforcement to be cored & epoxy grouted into existing footing/pier
 *NOTE: U/S of new footings to Match U/S of existing footings



1	For Tender	05/25/2017	D.B.	B.K. - E.J.
0	For Permit	03/17/2017	D.B.	E.J.
Revision Number	Description	Date	By	CHK By

DESIGN & SYSTEMS
 STRUCTURAL & WELDING ENGINEERS



SUITE 251, 2378 HOLLY LANE,
 OTTAWA, ON K1V 7P1
 +1 (613) 738-7482

Project Architect: **KWC Architects Inc.**
 383 Parkdale Ave, Suite 201
 Ottawa, Ontario, K1Y 4R4

Client Name: **M CON Products Inc.**
 2150 Richardson Side Rd
 Carp, ON, K0A 1J0

Project Name:
M CON Shop Expansion
 2150 Richardson Side Rd

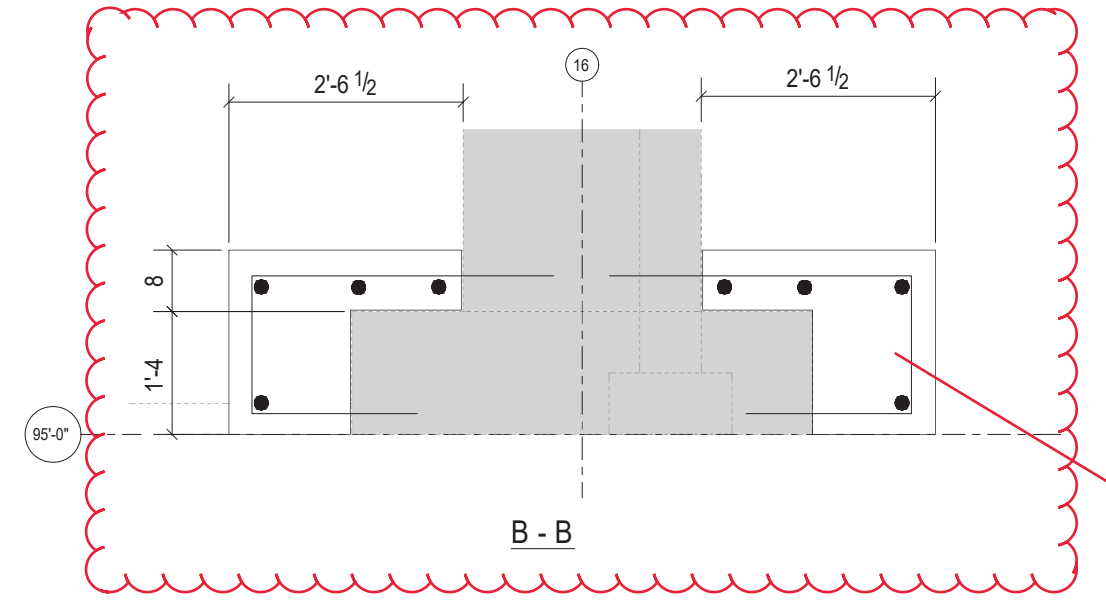
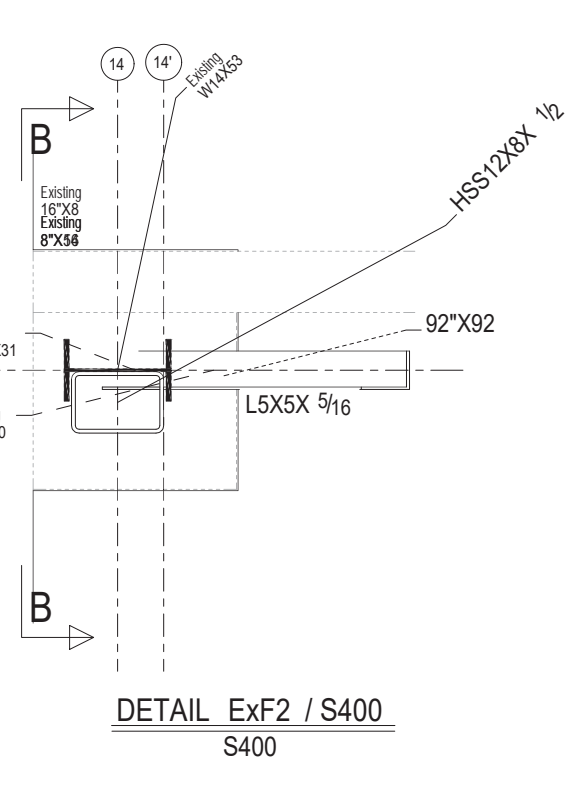
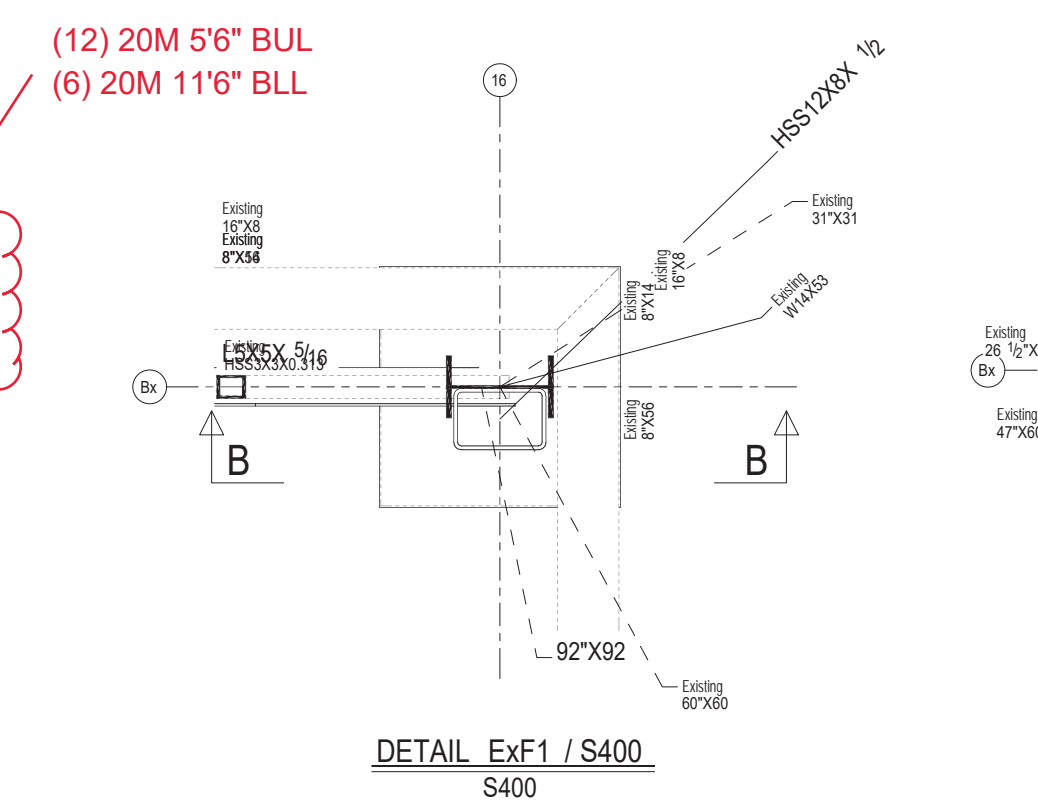
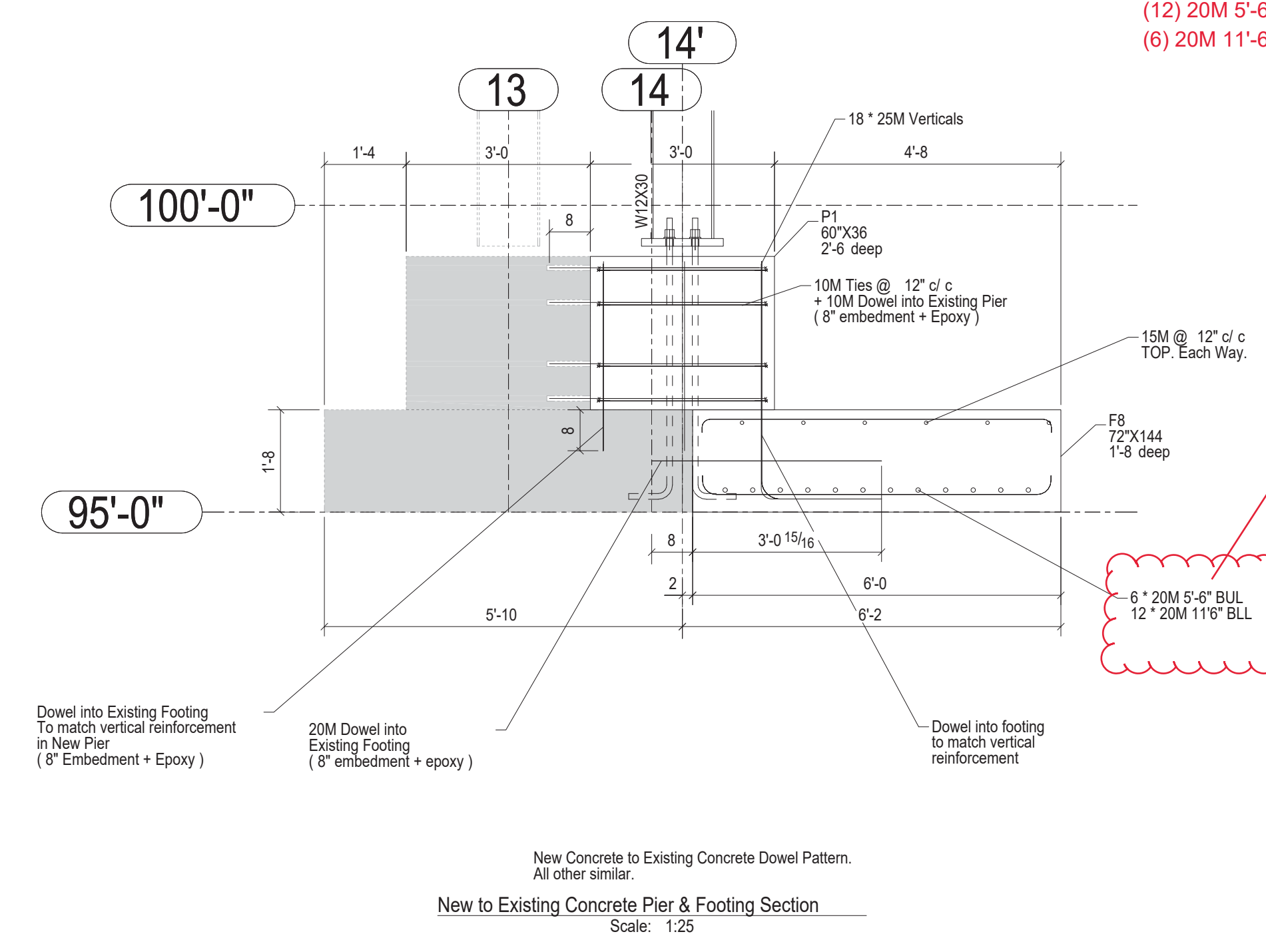
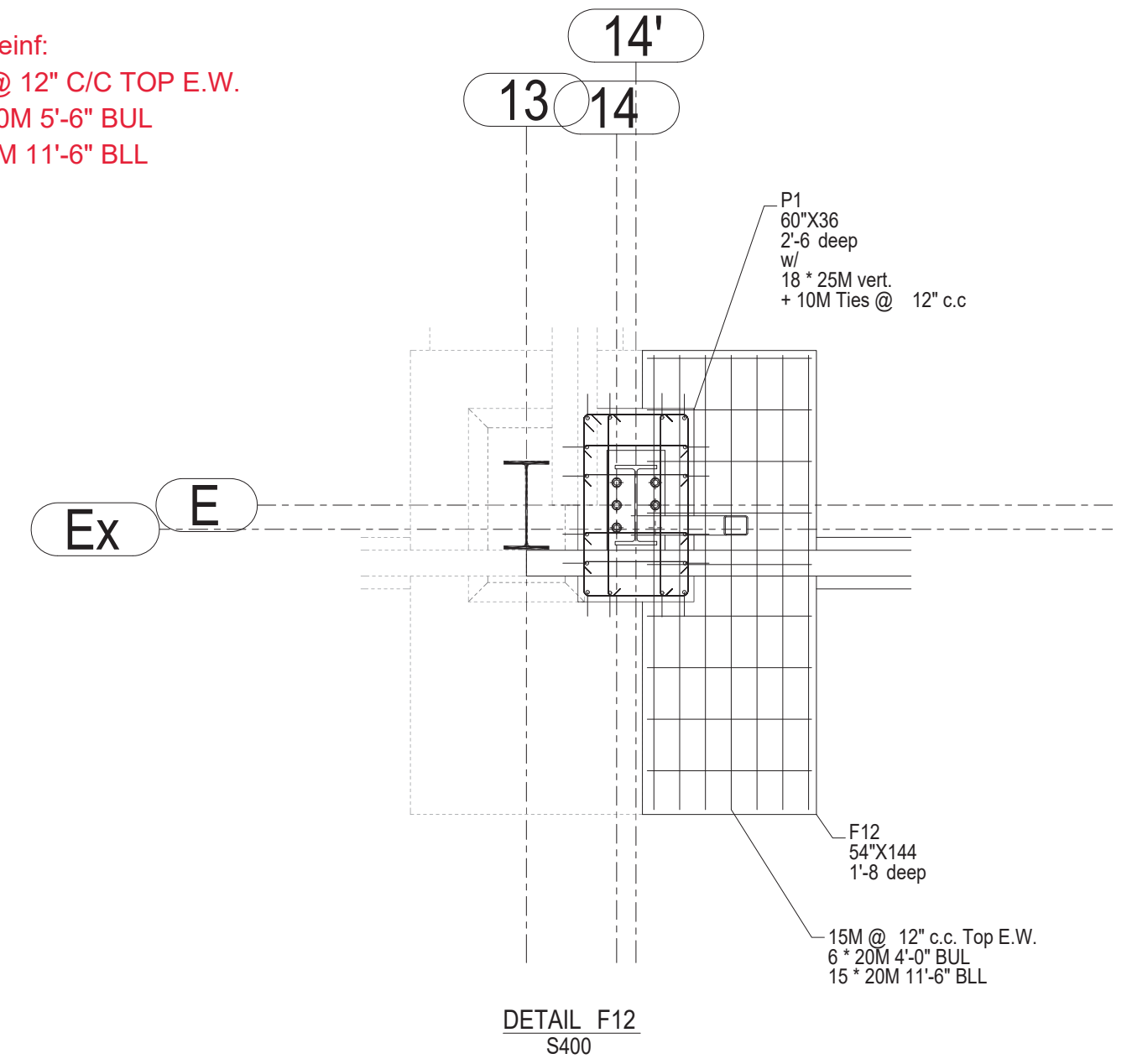
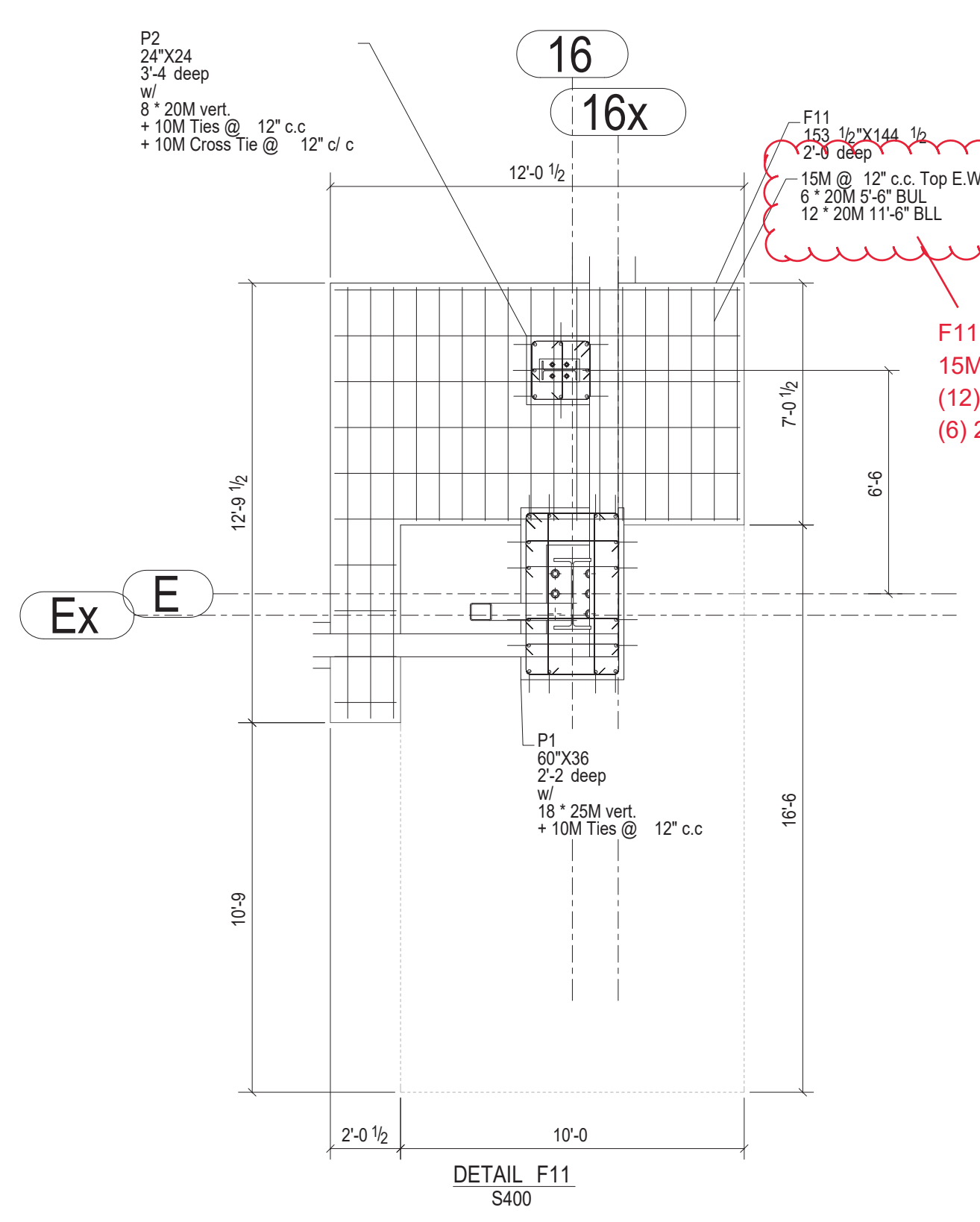
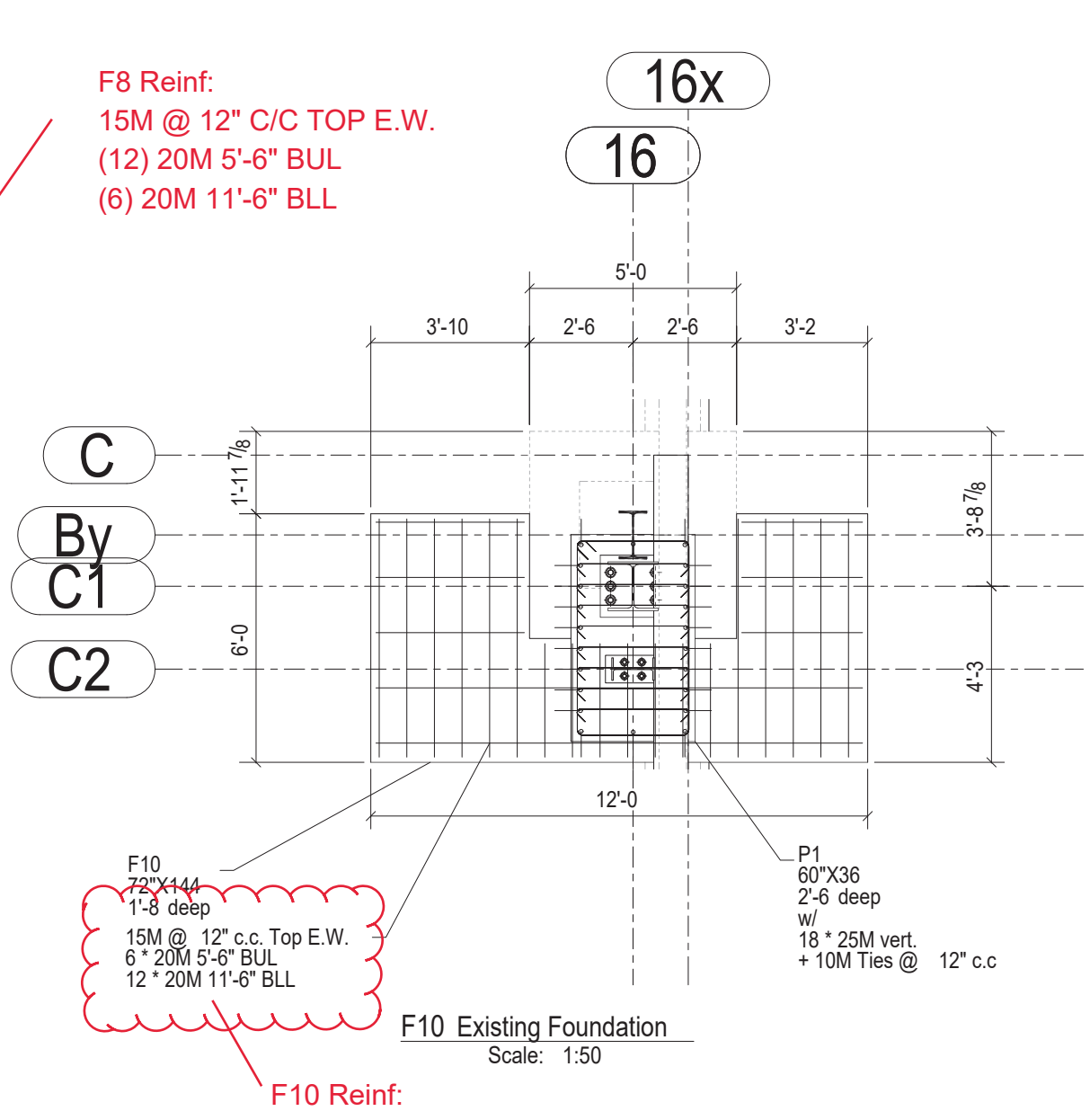
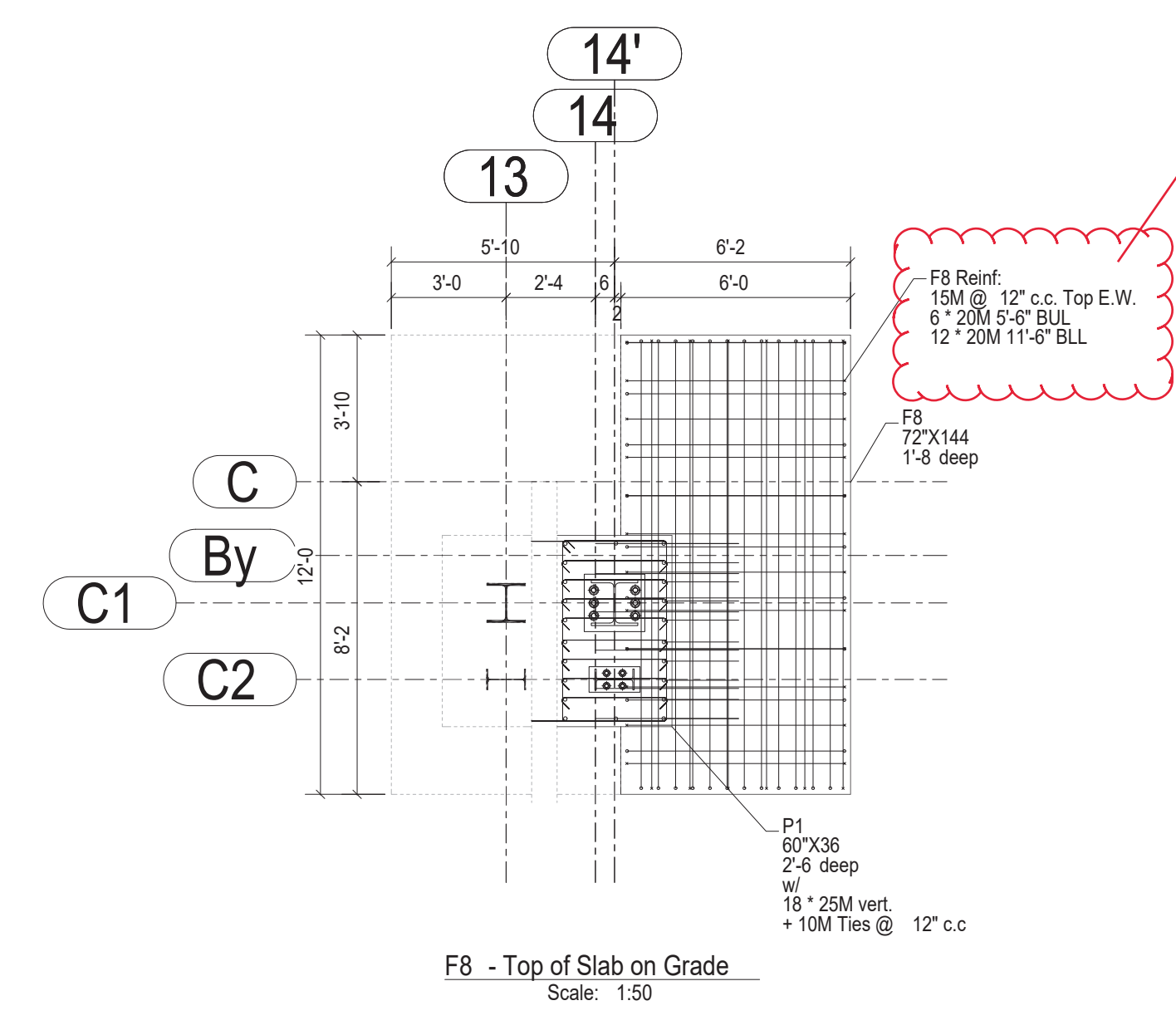
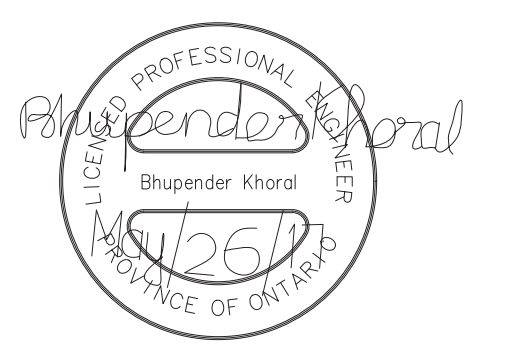
Project Number:	170224-01		
Drawn By:	D.B.	Checked By:	B.K. - E.J.
Date Created:	28/02/17	Issued For:	TENDER
Date Modified:	25/05/17	Drawing Scale:	N. T. S

Drawing Name:
 Phase 4 Expansion
 Foundation Plan
 New & Existing

GENERAL NOTES

Contractor to verify all dimensions prior to fabricate
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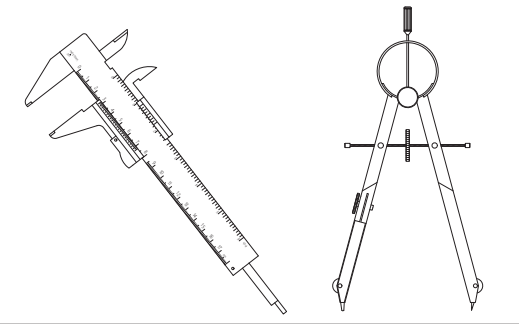
Do not scale these drawings.



15M @ 12" C/C T&B E.W.
Core & Epoxy Grout Into Existing As Required
(10" Embedment)

1	For Tender	05/25/2017	D.B.	B.K.-E.J.
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Revision Number	Revision Description	Date	By	CHK. BY

DESIGN & SYSTEMS
STRUCTURAL & WELDING ENGINEERS



SUITE 251, 2378 HOLLY LANE,
OTTAWA, ON K1V 7P1
+1 (613) 738-7482

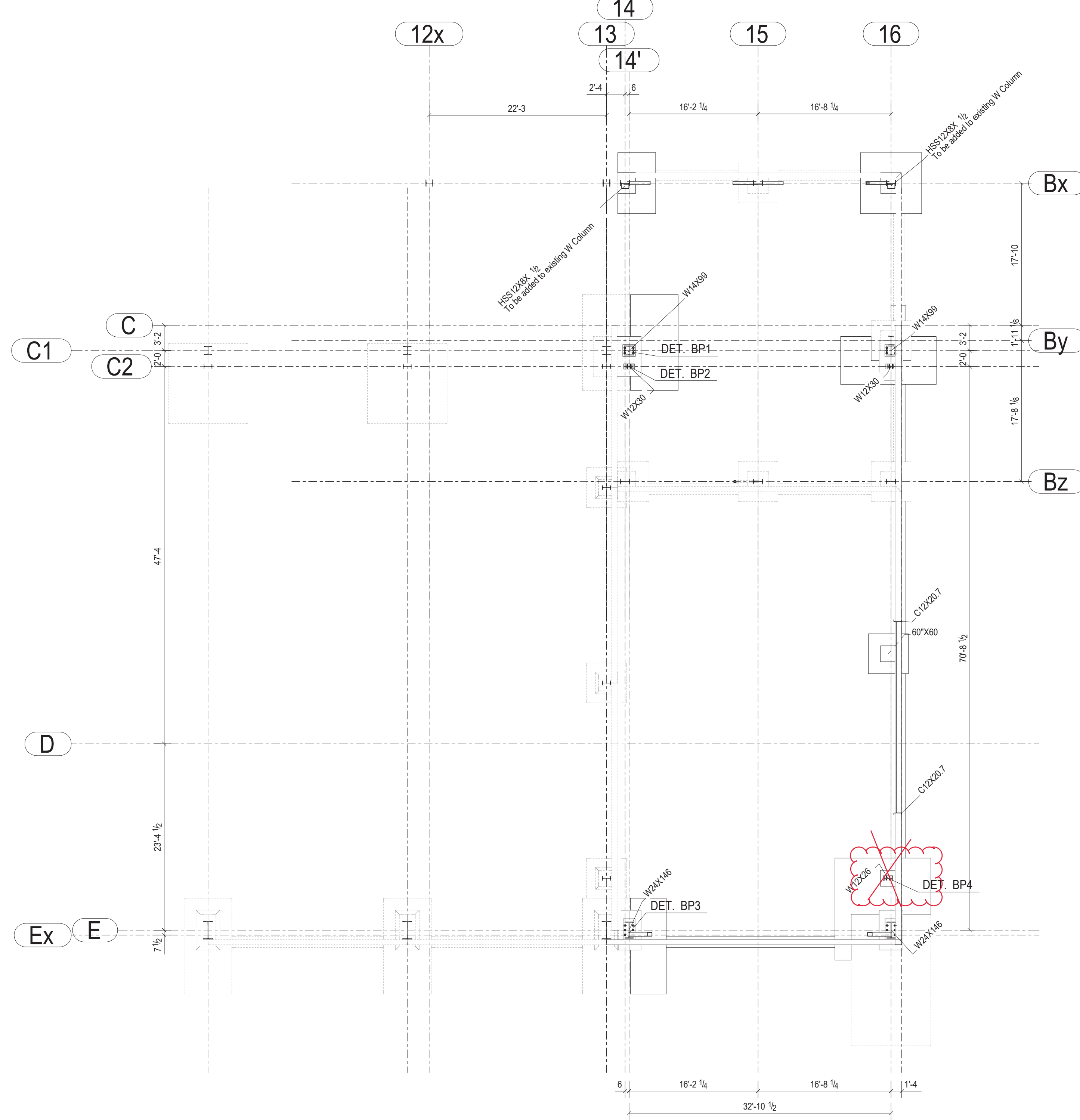
Project Architect: **KWC Architects Inc.**
383 Parkdale Ave. Suite 201
Ottawa, Ontario, K1Y 4R4

Client Name: **M CON Products Inc.**
2150 Richardson Side Rd
Carp, ON, K0A 1J0

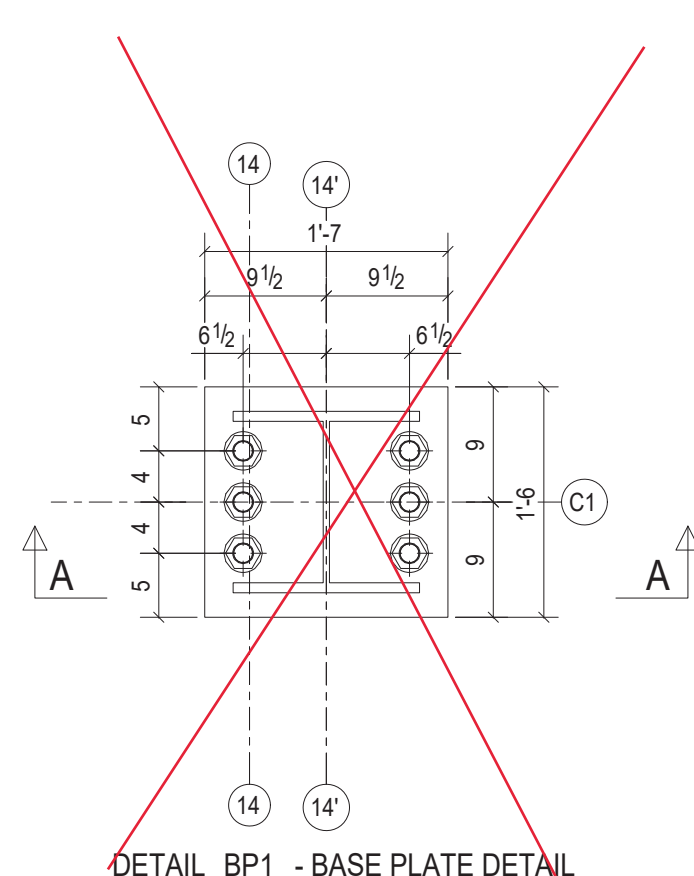
Project Name:
M CON Shop Expansion
2150 Richardson Side Rd

Project Number:	170224-01
Drawn By:	D.B.
Checked By:	B.K. - E.J.
Date Created:	16/03/17
Issued For:	TENDER
Date Modified:	25/05/17
Drawing Scale:	N. T. S

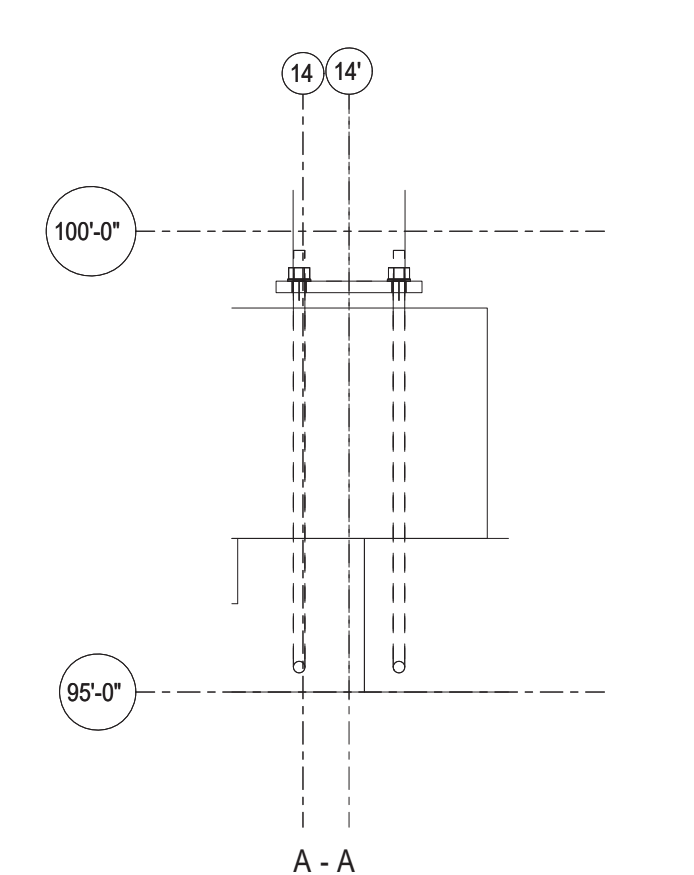
Drawing Name:
Phase 4 Expansion
Foundation Details



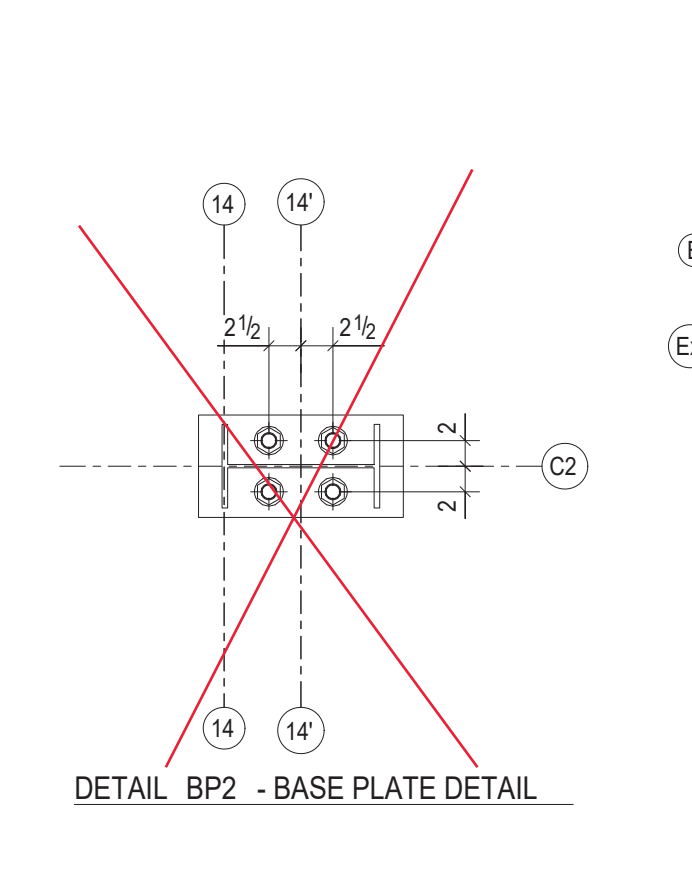
PLAN @ 100'-0"



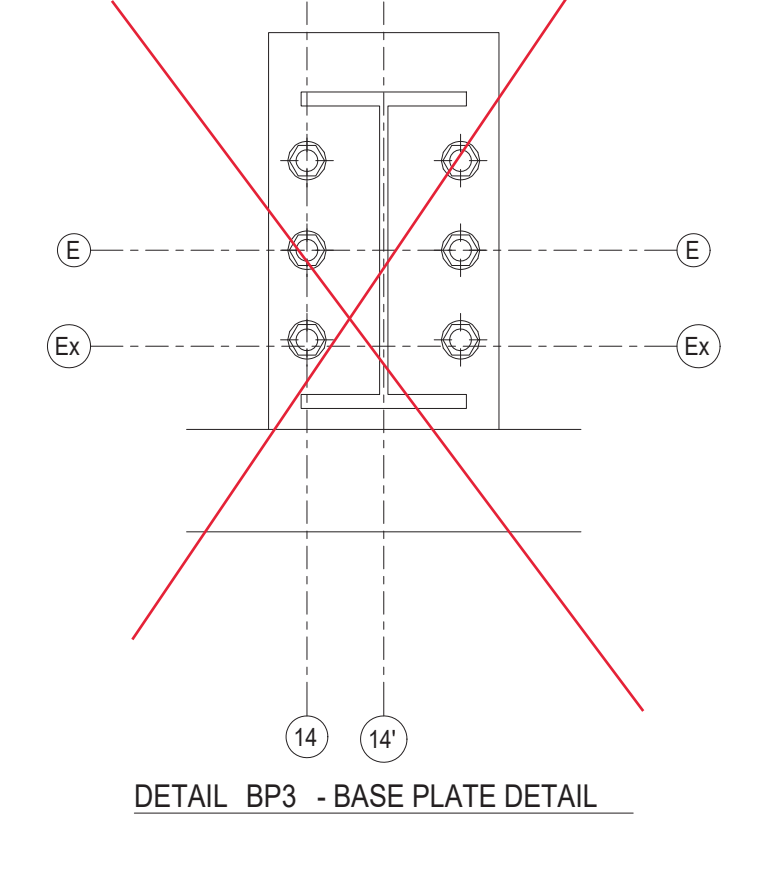
DETAIL BP1 - BASE PLATE DETAIL



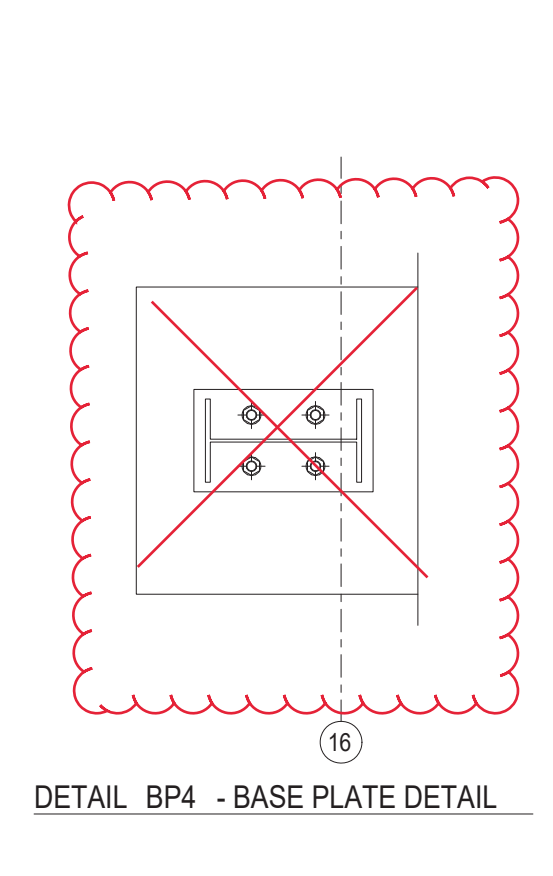
DETAIL BP3 - BASE PLATE DETAIL



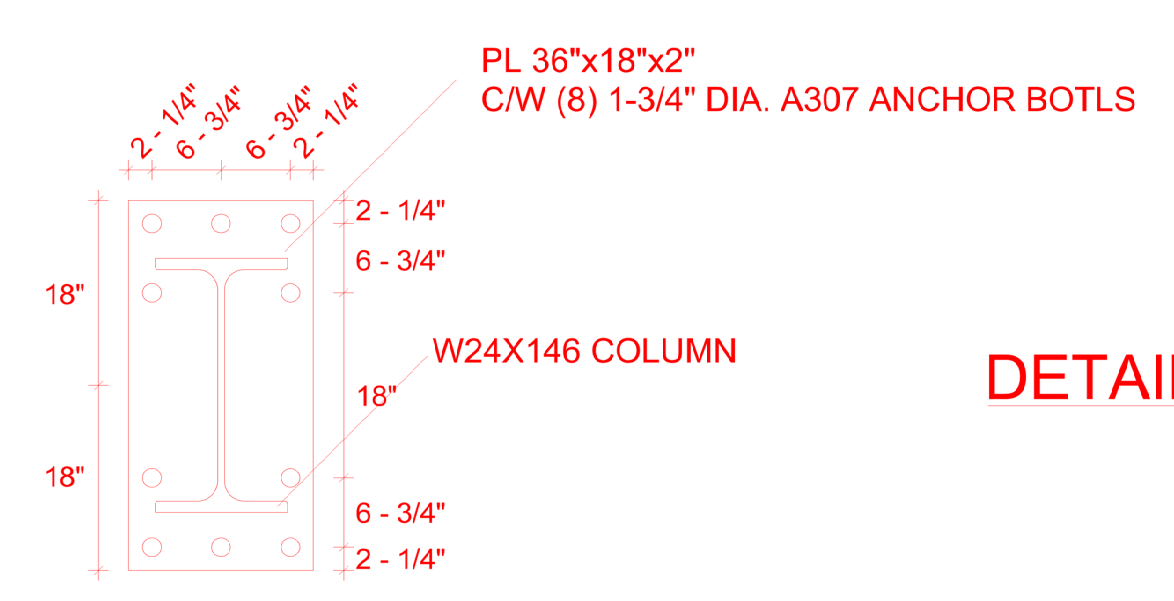
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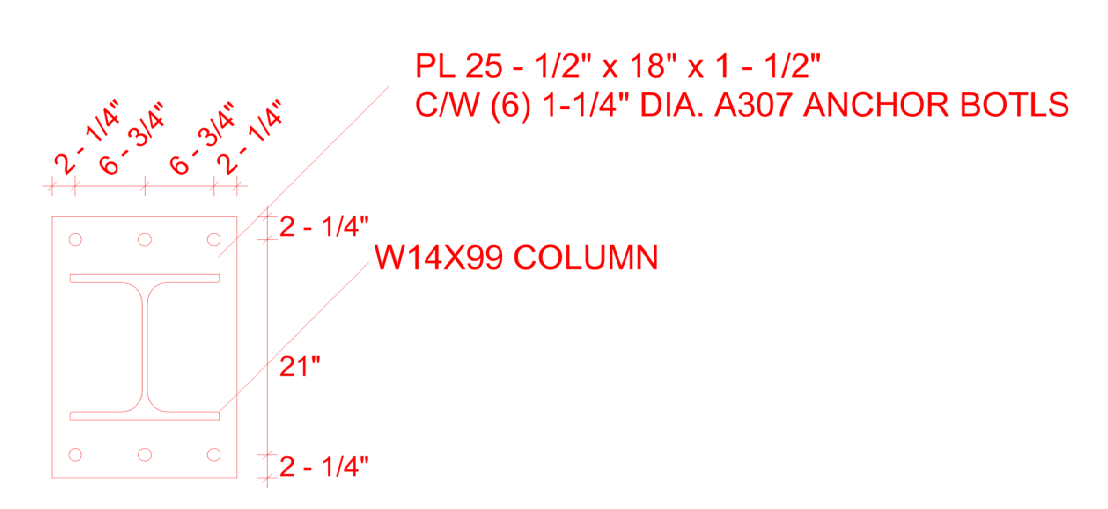
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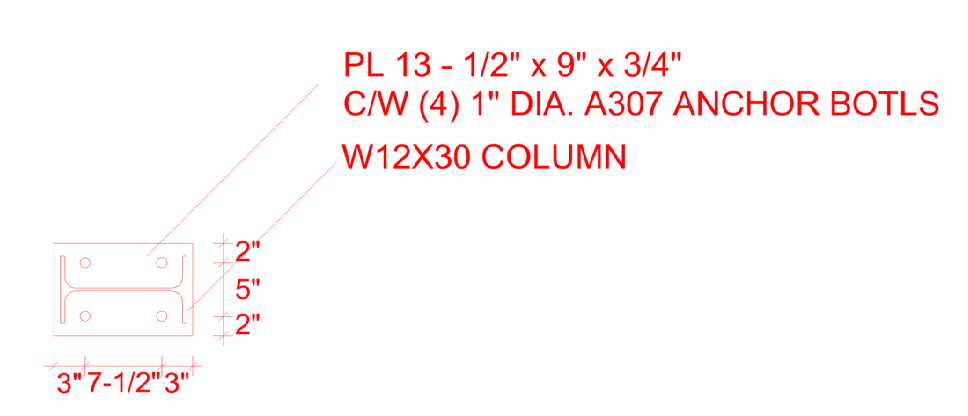
DETAIL BP4 - BASE PLATE DETAIL



DETAIL BP1 - BASE PLATE DETAIL



DETAIL BP3 - BASE PLATE DETAIL



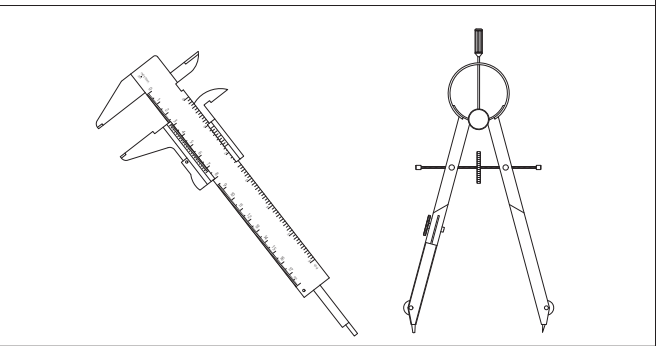
DETAIL BP2 - BASE PLATE DETAIL

GENERAL NOTES
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 All dimensions on this drawing are to be compared
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0	For Permit	03/17/2017	D.B.	E.J.
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DESIGN & SYSTEMS
 STRUCTURAL & WELDING ENGINEERS



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 +1 (613) 738-7482

Project Architect: **KWC Architects Inc.**
 383 Parkdale Ave, Suite 201
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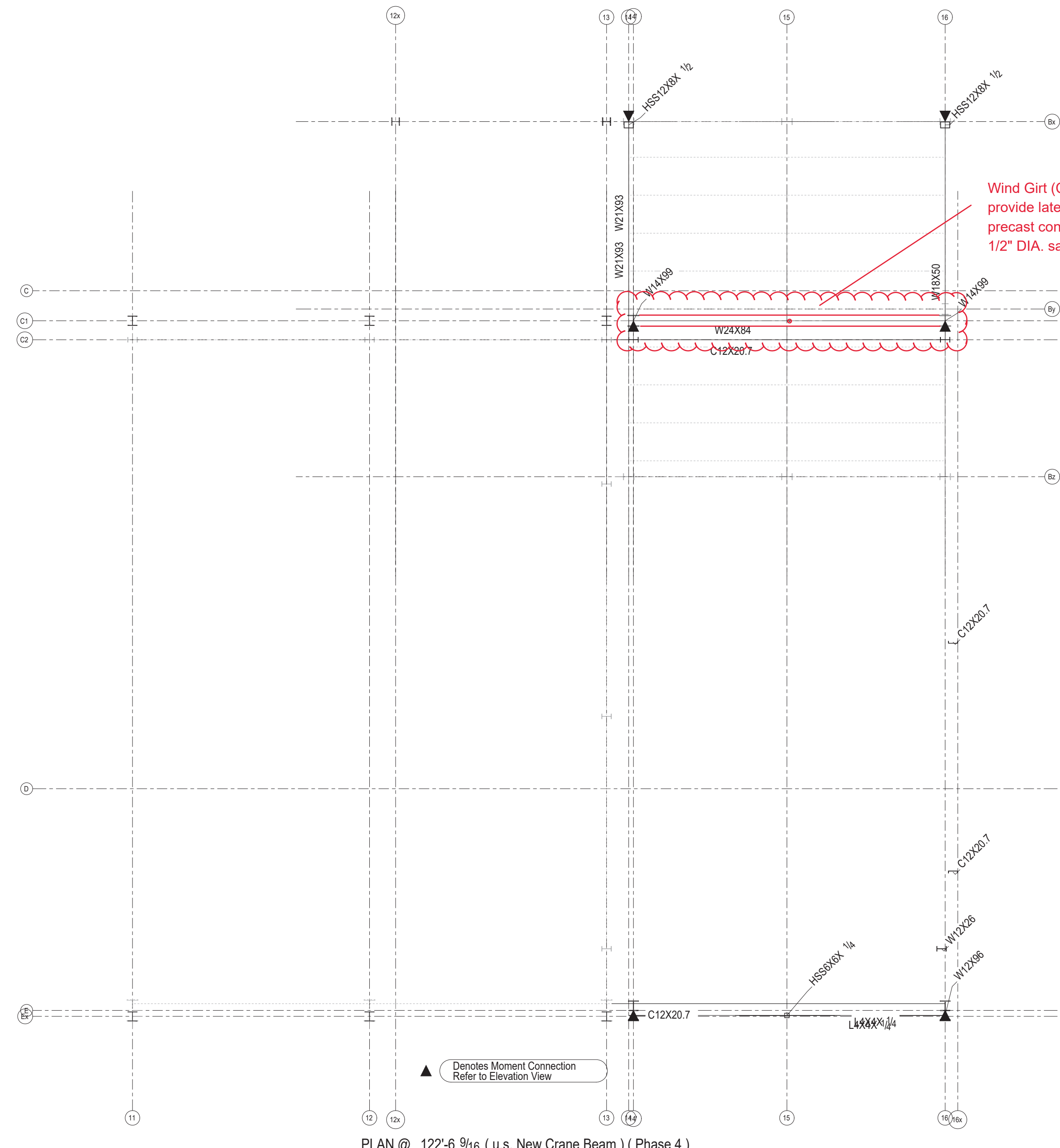
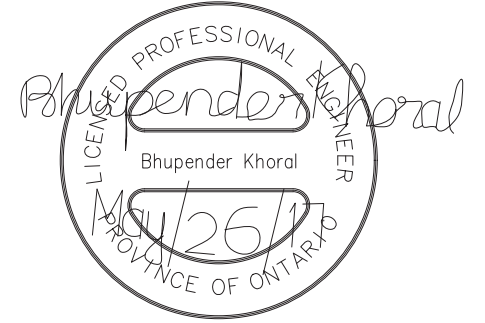
Client Name: **M CON Products Inc.**
 2150 Richardson Side Rd
 Carp, ON, K0A 1J0

Project Name:
M CON Shop Expansion
 2150 Richardson Side Rd

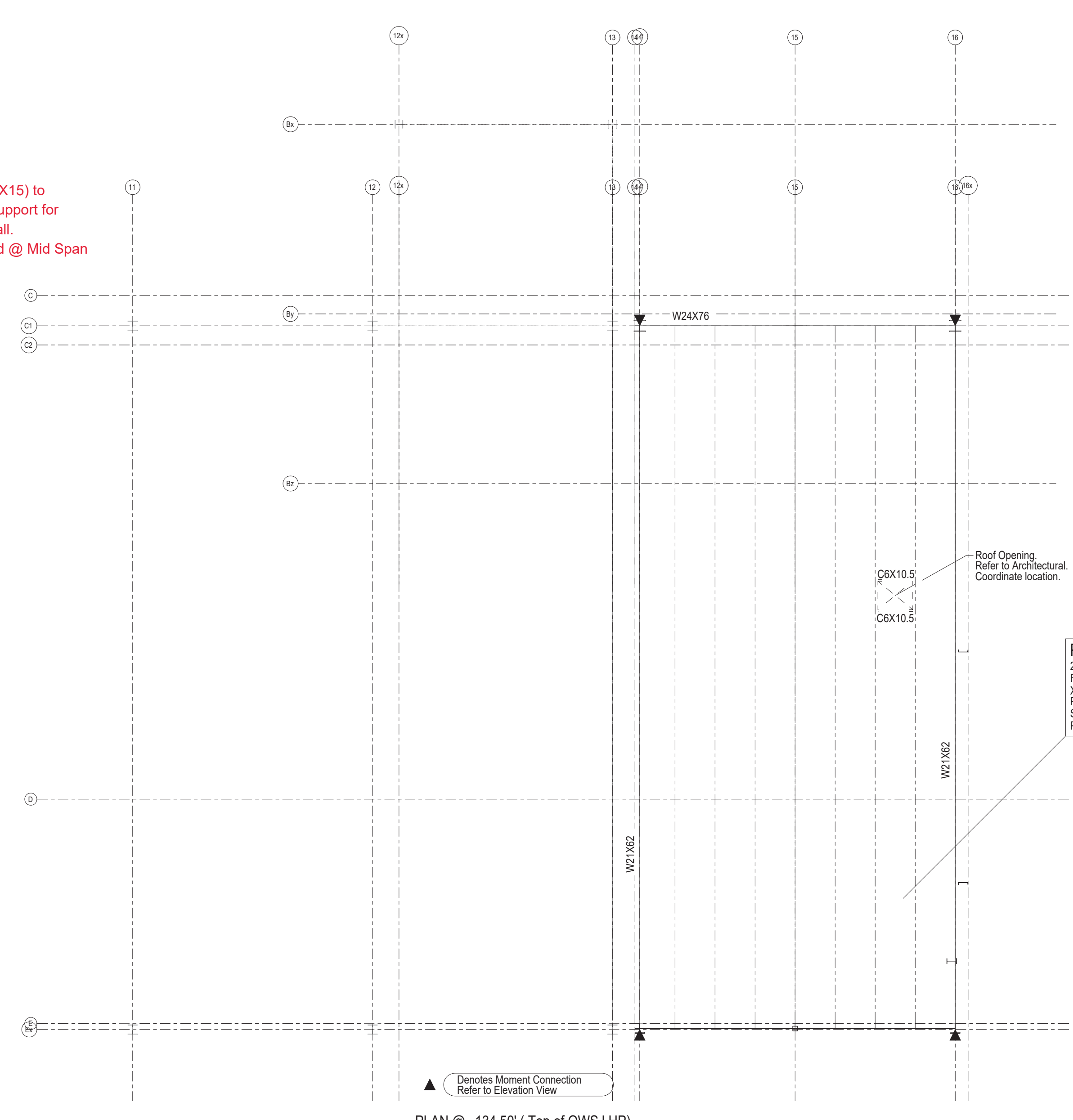
Project Number:	170224-01		
Drawn By:	D.B.	Checked By:	B.K. - E.J.
Date Created:	16/03/17	Issued For:	TENDER
Date Modified:	25/05/17	Drawing Scale:	N. T. S

Drawing Name:
Phase 4 Expansion
Anchor Bolt Layout
And Details

GENERAL NOTES
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PLAN @ 122'-6 9/16 (u.s. New Crane Beam) (Phase 4)

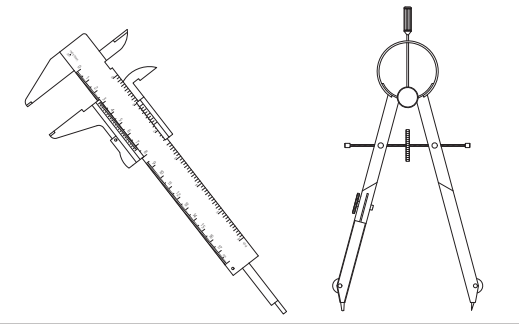


PLAN @ 134.50' (Top of OWSJ HP)

PHASE 4 ROOF DECKING
 20 GAUGE 1.5\"/>

1	For Tender	05/25/2017	D.B.	B.K.-E.J.
0	For Permit	03/17/2017	D.B.	E.J.
Revision Number	Revision Description	Date	By	CHK

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 2150 Richardson Side Rd
 Carp, ON, K0A 1J0

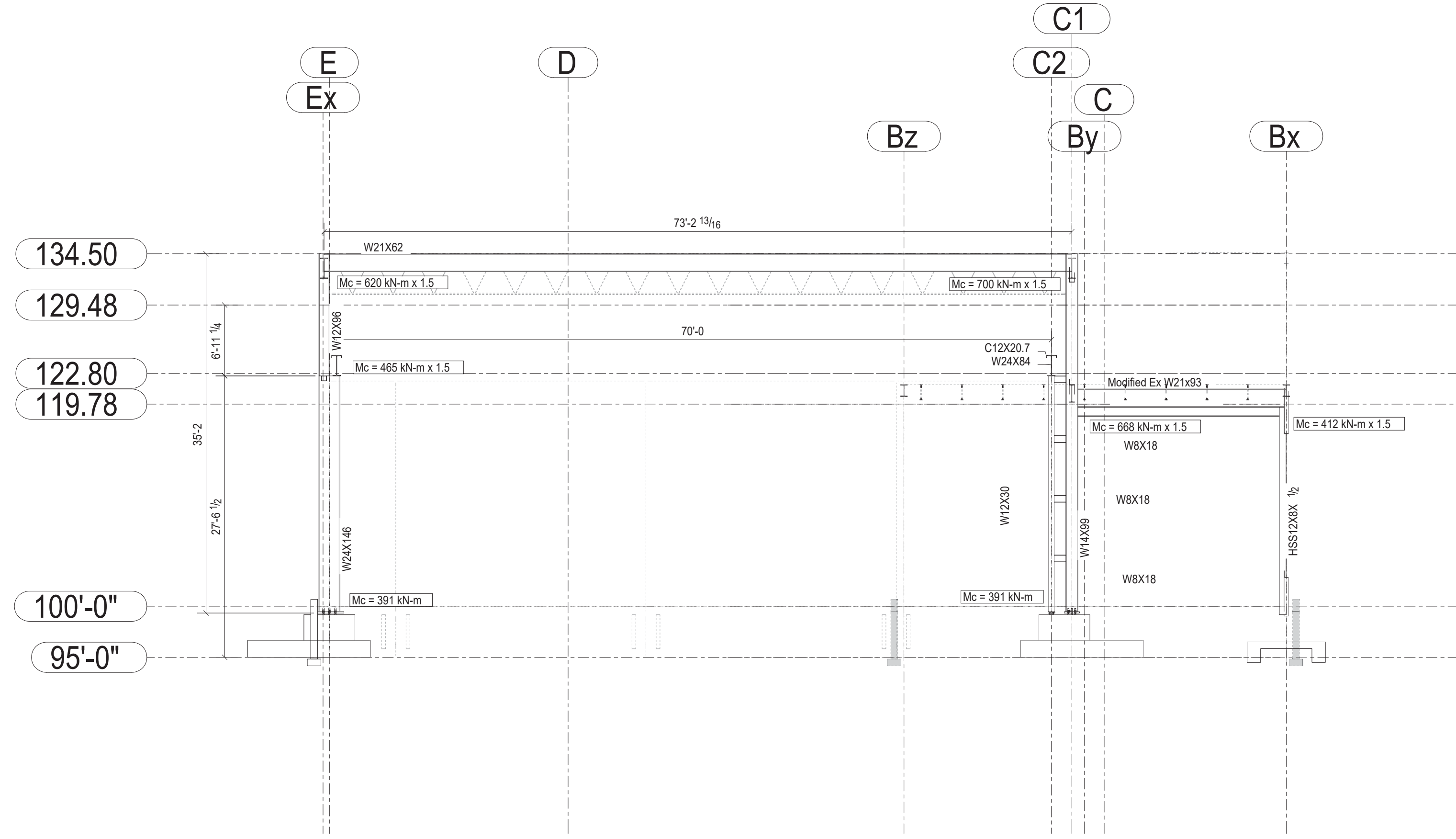
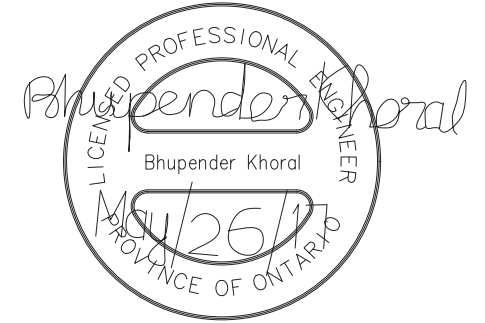
Project Name:
M CON Shop Expansion
 2150 Richardson Side Rd

Project Number: 170224-01

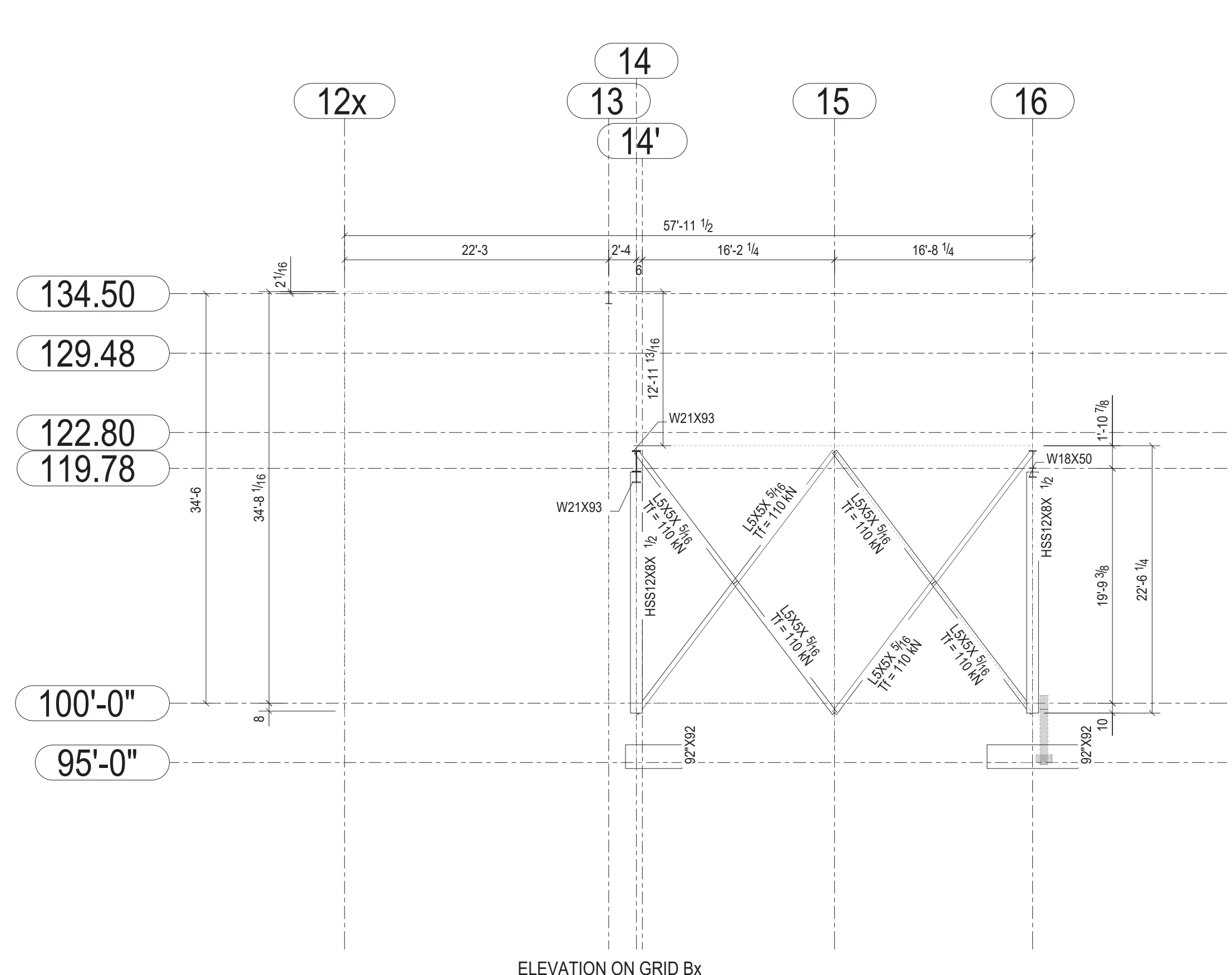
Drawn By: D.B.	Checked By: B.K. - E.J.
Date Created: 16/03/17	Issued For: TENDER
Date Modified: 25/05/17	Drawing Scale: N. T. S

Drawing Name:
 Phase 4 Expansion
 Low Roof Plan
 High Roof Plan

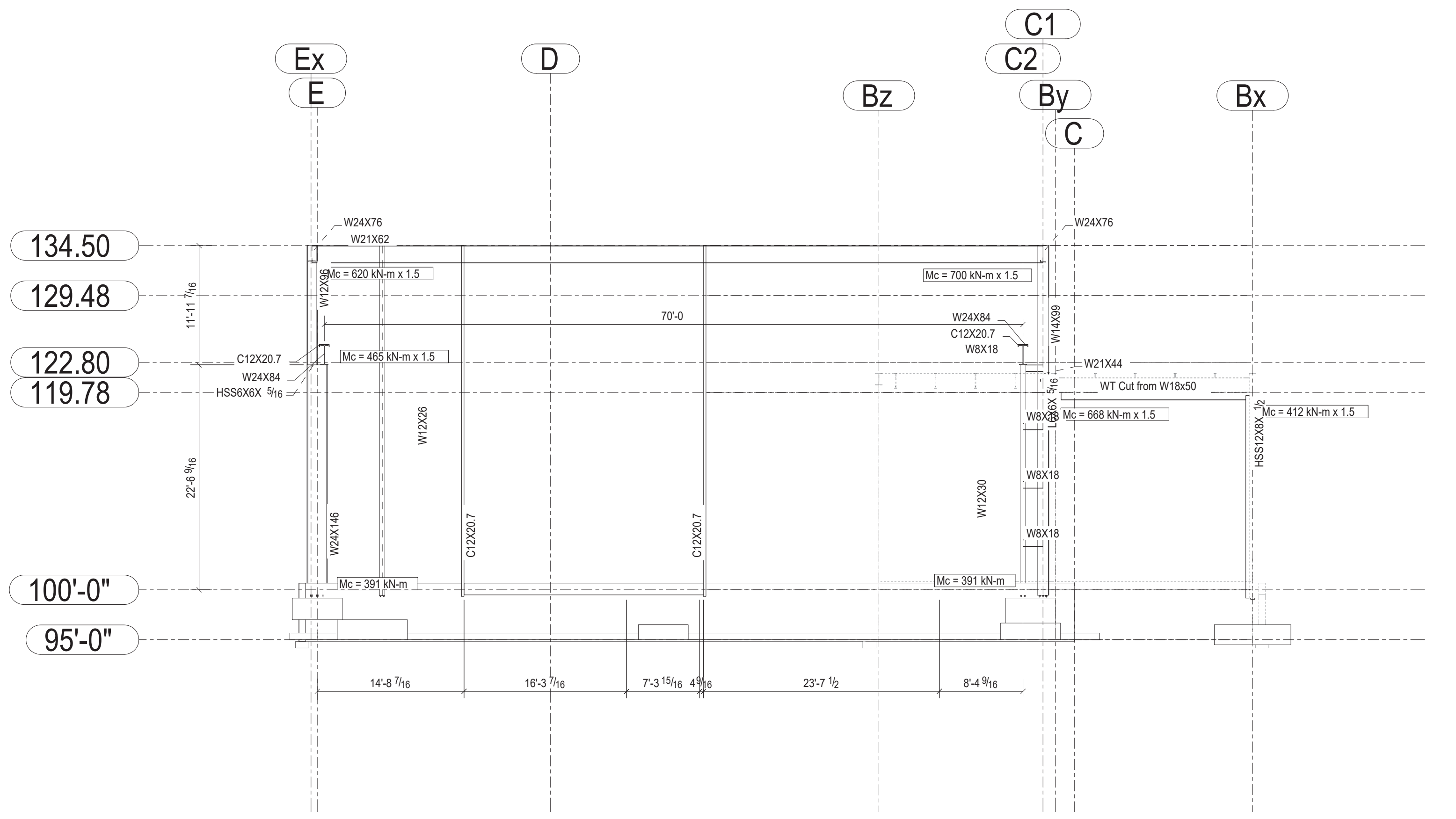
GENERAL NOTES
 Contractor to verify all dimensions prior to fabricate
 All dimensions on this drawing are to be compared to Architectural
 Do not scale these drawings.



ELEVATION ON GRID 14



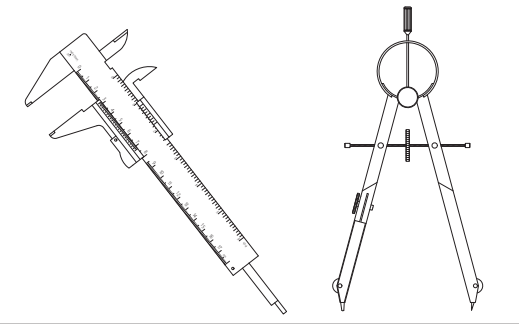
ELEVATION ON GRID Bx



ELEVATION ON GRID 16

Revision Number	Description	Date	By	Checked	Scale
1	For Tender	05/25/2017	D.B.	B.K. - E.J.	
0	For Permit	03/17/2017	D.B.	E.J.	

DESIGN & SYSTEMS
 STRUCTURAL & WELDING ENGINEERS



SUITE 251, 2378 HOLLY LANE,
 OTTAWA, ON K1V 7P1
 +1 (613) 738-7482

Project Architect: **KWC Architects Inc.**
 383 Parkdale Ave., Suite 201
 Ottawa, Ontario, K1Y 4R4

Client Name: **M CON Products Inc.**
 2150 Richardson Side Rd
 Carp, ON, K0A 1L0

Project Name:
M CON Shop Expansion
 2150 Richardson Side Rd

Project Number: 170224-01

Drawn By: D.B. Checked By: B.K. - E.J.

Date Created: 16/03/17 Issued For: TENDER

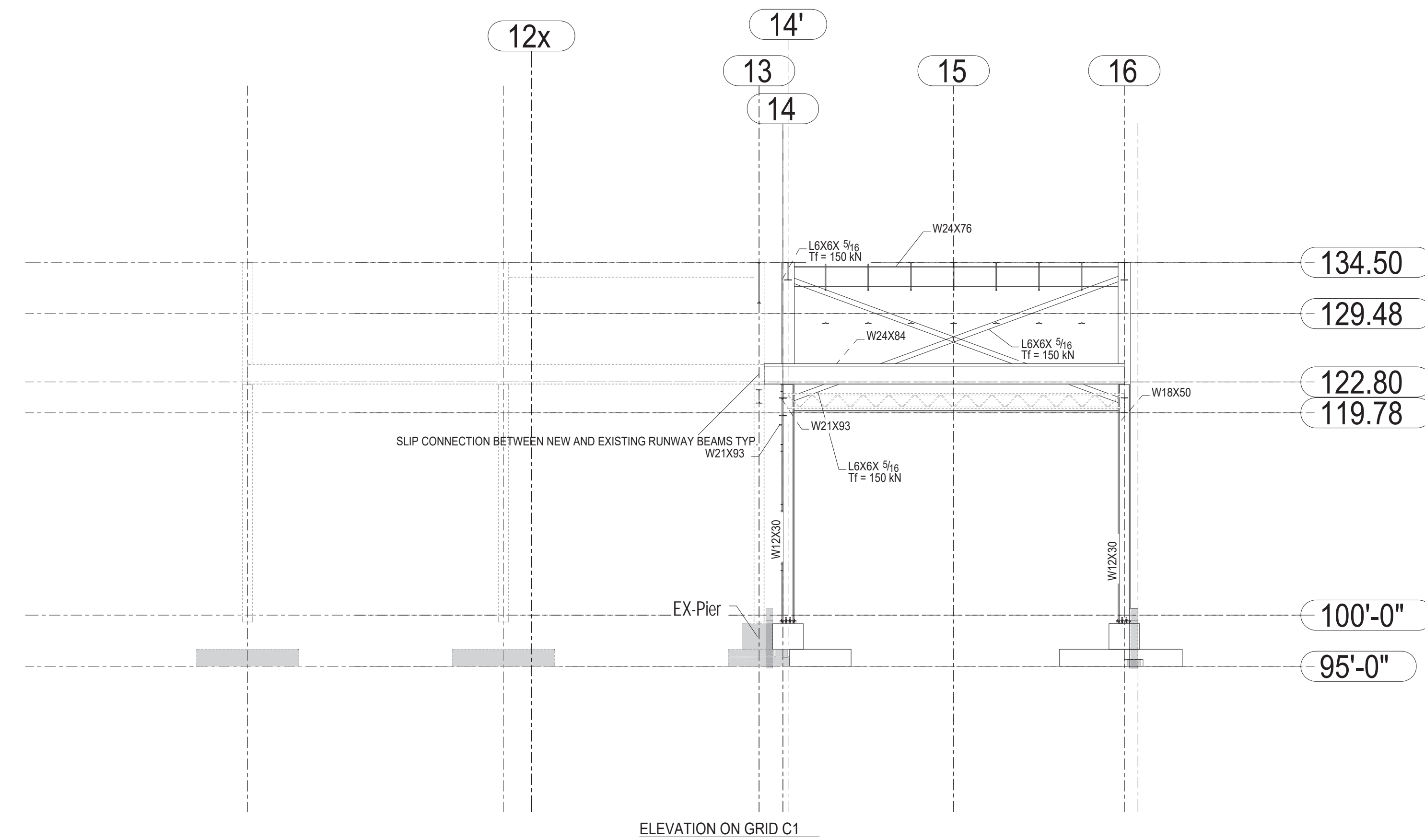
Date Modified: 25/05/17 Drawing Scale: N. T. S

Drawing Name:
 Phase 4 Expansion
 Elevation Along Grid 14 & 16
 Elevation Along Bx

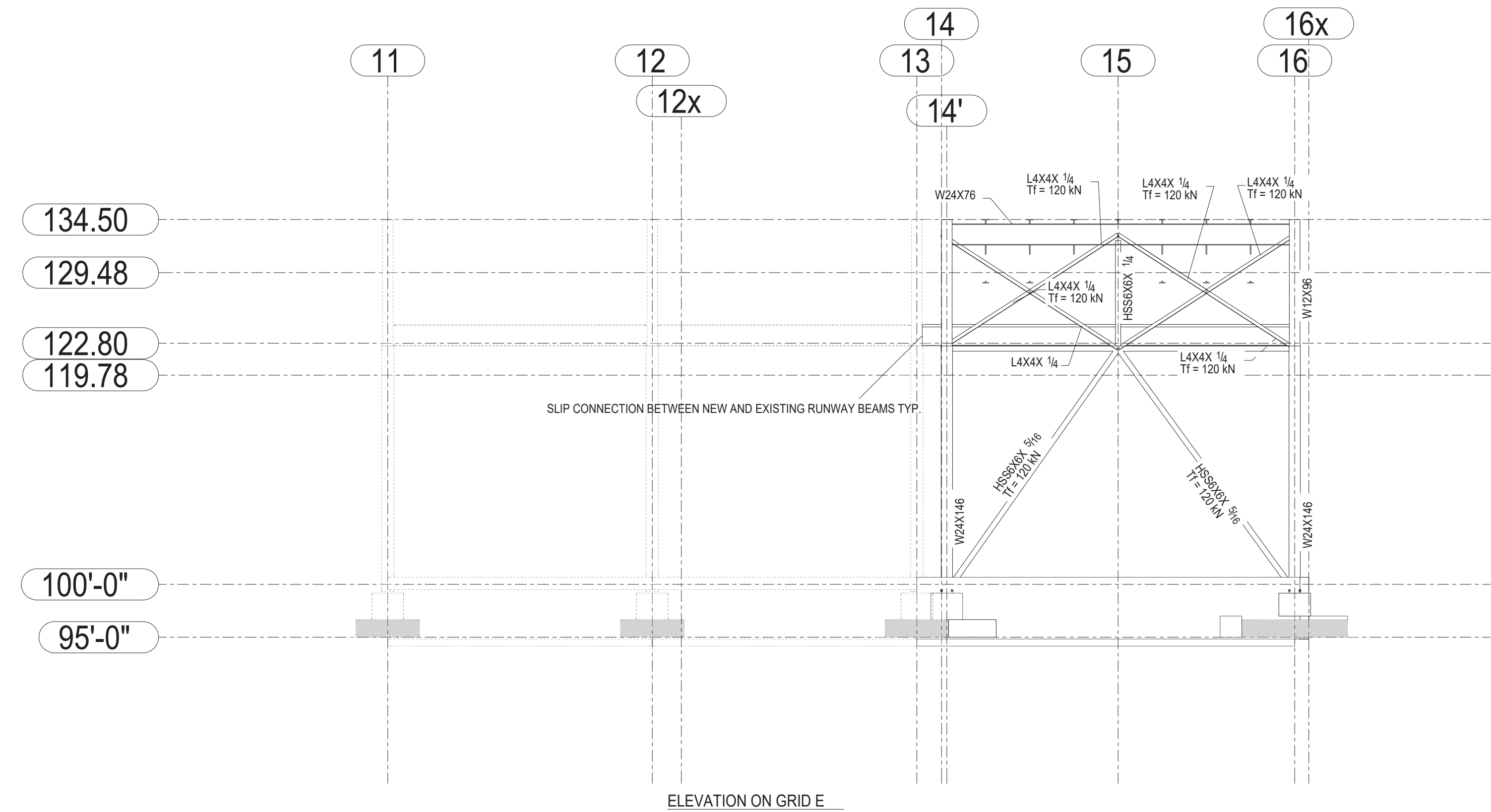
GENERAL NOTES

Contractor to verify all dimensions prior to fabri
All dimensions on this drawing are to be compared
to Architectural

Do not scale these drawings.



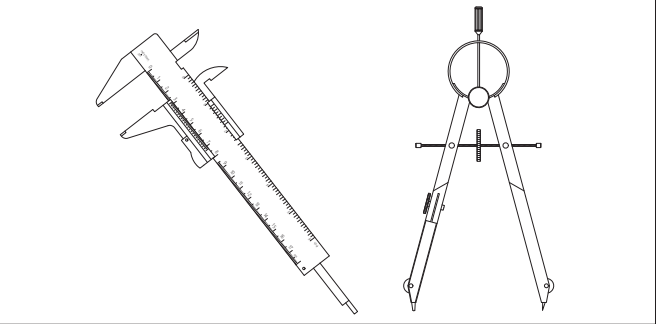
ELEVATION ON GRID C1



ELEVATION ON GRID E

1	For Tender	05/25/2017	D.B.	B.K. - E.J.
0	For Permit	03/17/2017	D.B.	E.J.
Revision Number	Description	Date	By	CHK By

DESIGN & SYSTEMS
STRUCTURAL & WELDING ENGINEERS



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Project Architect:
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Client Name:
M CON Products Inc.
2150 Richardson Side Rd
Carp, ON, K0A 1L0

Project Name:
M CON Shop Expansion
2150 Richardson Side Rd

Project Number: 170224-01

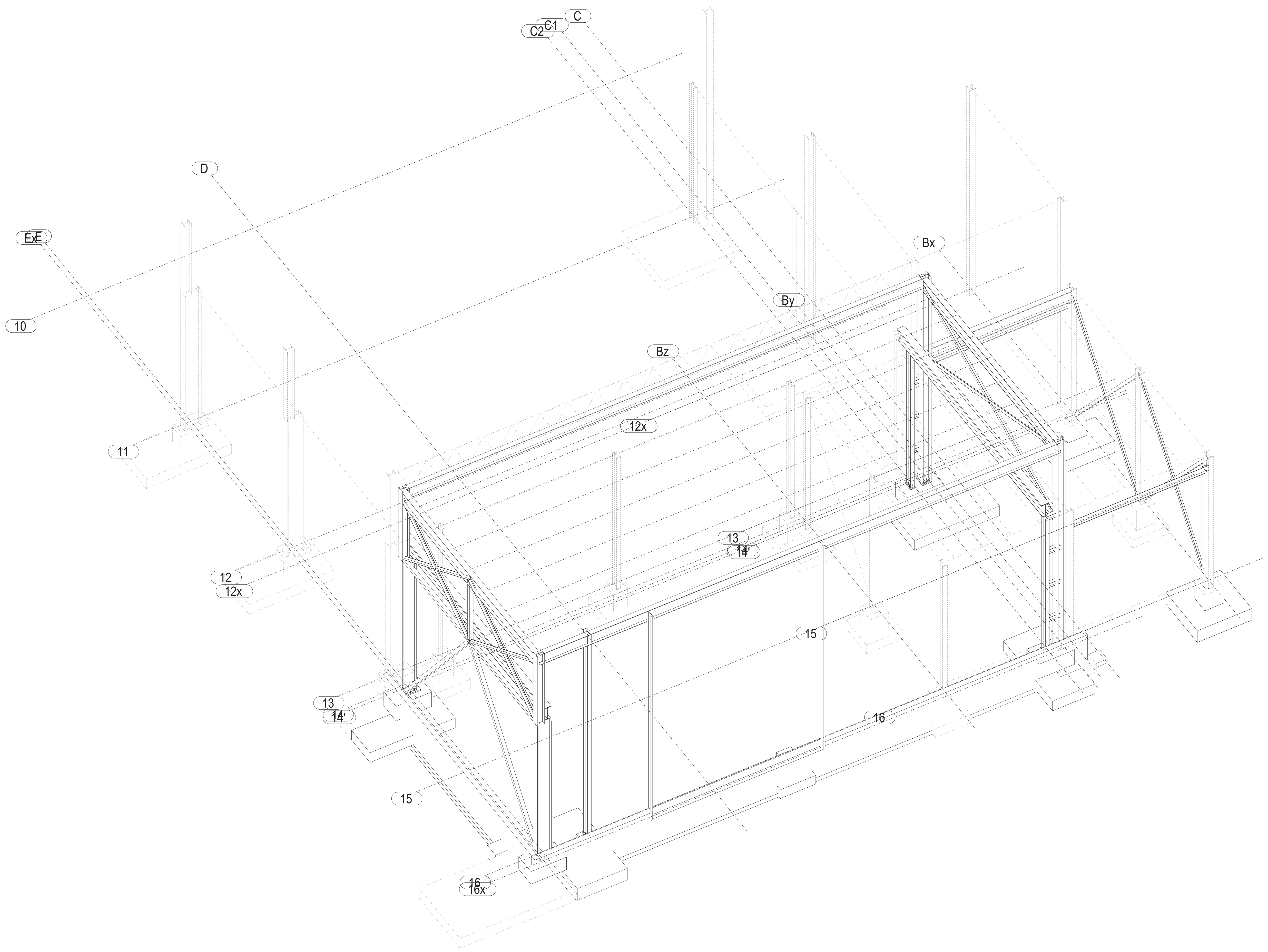
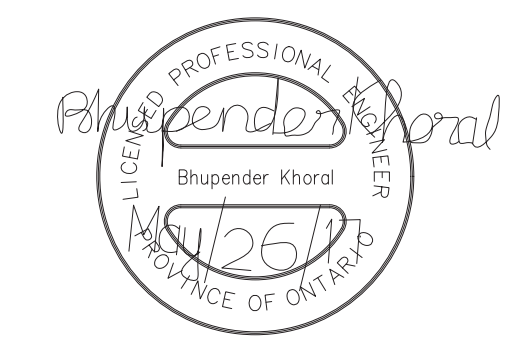
Drawn By: D.B. **Checked By:** B.K. - E.J.

Date Created: 16/03/17 **Issued For:** TENDER

Date Modified: 25/05/17 **Drawing Scale:** N. T. S

Drawing Name:
Phase 4 Expansion
Elevation Along Grid 'C1'
Elevation Along Grid 'E'

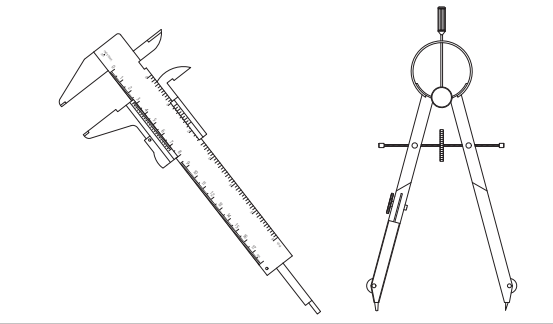
GENERAL NOTES
 Contractor to verify all dimensions prior to fabri
 All dimensions on this drawing are to be compared
 to Architectural
 Do not scale these drawings.



3D View @ 100'-0

1	For Tender	05/25/2017	D.B.	B.K. - E.J.
0	For Permit	03/17/2017	D.B.	E.J.
Revision Number	Description	Date	By	CHK Br.

DESIGN & SYSTEMS
 STRUCTURAL & WELDING ENGINEERS



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Project Architect: **KWC Architects Inc.**
 383 Parkdale Ave. Suite 201
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Client Name: **M CON Products Inc.**
 2150 Richardson Side Rd
 Carp, ON, K0A 1L0

Project Name:
M CON Shop Expansion
 2150 Richardson Side Rd

Project Number: 170224-01

Drawn By: D.B. Checked By: B.K. - E.J.

Date Created: 25/05/17 Issued For: TENDER

Date Modified: 25/05/17 Drawing Scale: N. T. S

Drawing Name:
 Phase 4 Expansion
 3D View

Revision No: **1** Drawing No: **S406**