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Consultants

Legend

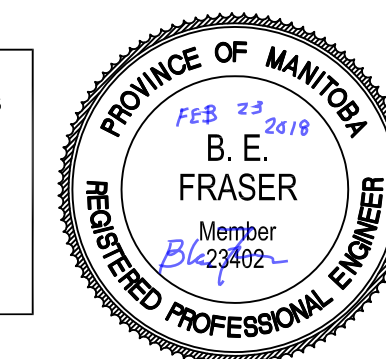
Notes

Revision	By	Appd.	YY.MM.DD
5			
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A	ISSUED FOR CONSTRUCTION	IR	2018.02.23
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C			
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File Name: 18010\_s-101  
 Issued: 2018.02.23  
 Dwn. Chkd. Dgn. YY.MM.DD

Permit Seal

**ENGINEERS  
 GEOSCIENTISTS  
 MANITOBA**  
 Certificate of Authorization  
 Stantec Consulting Ltd.  
 No. 1301



Client/Project  
**CITY OF WINNIPEG  
 PLANNING, PROPERTY AND DEVELOPMENT**  
**GORD DONG PARK  
 REDEVELOPMENT**  
 Winnipeg, Manitoba

Title  
**GENERAL NOTES, PLANS AND DETAILS**

Project No. 115418010	Scale
Drawing No.	Sheet of
	Revision 0

- A GENERAL NOTES**
- THIS STRUCTURE IS DESIGNED IN ACCORDANCE WITH, AND SHALL BE CONSTRUCTED IN COMPLIANCE WITH, THE NATIONAL BUILDING CODE OF CANADA 2015 (NBCC 2015) AND THE MANITOBA BUILDING CODE 2011 (MBC 2011).
  - DESIGN LOADS ARE INDICATED ON THE DRAWINGS.
  - DESIGN LIVE LOADS SHALL NOT BE EXCEEDED AT ANY TIME DURING CONSTRUCTION.
  - DO NOT SCALE DRAWINGS.
  - VERIFY ALL DIMENSIONS, ELEVATIONS, SLOPES, DETAILS, CONDITIONS, ETC., SHOWN ON THE DRAWINGS AND VERIFIED WITH SITE CONDITIONS, PRIOR TO CONSTRUCTION OR PREFABRICATION OF ANY BUILDING COMPONENT.
  - MODIFICATIONS, ALTERNATIONS OR SUBSTITUTIONS MUST BE AUTHORIZED IN WRITING BY THE ENGINEER.
  - LOCATE ALL EXISTING SUBGRADE SERVICES PRIOR TO CONSTRUCTION.
  - DESIGN AND INSTALL ALL NECESSARY SHORING, BRACING AND FORMWORK. FORMWORK FOR CONSTRUCTION SHALL BE BRIDGED OVER EXISTING SERVICES. PROCEDURE MUST BE APPROVED BY THE ENGINEER.
  - REVIEW LOCATION OF INTENDED AND PROPOSED CONSTRUCTION JOINTS WITH ENGINEER PRIOR TO PROCEEDING.
  - CONSTRUCTION SAFETY REQUIREMENTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
  - DEFECTIVE OR UNACCEPTABLE WORK SHALL BE REPAIRED TO THE SATISFACTION OF THE CONSULTANT AT NO ADDITIONAL COST TO THE PROJECT.
  - NOTIFY THE DESIGN ENGINEER AT LEAST 48 HOURS PRIOR TO ALL CONCRETE PLACEMENT TO ALLOW FOR SITE INSPECTIONS.
  - WHERE THERE IS A DISCREPANCY BETWEEN DRAWINGS, SUBMIT A FORMAL RFI TO ENGINEER OF RECORD PRIOR TO MANUFACTURING OR INSTALLATION.
  - ALL SHOP DRAWINGS SHALL BE REVIEWED AND STAMPED BY THE GENERAL CONTRACTOR PRIOR TO SUBMITTAL TO ENGINEER OF RECORD.

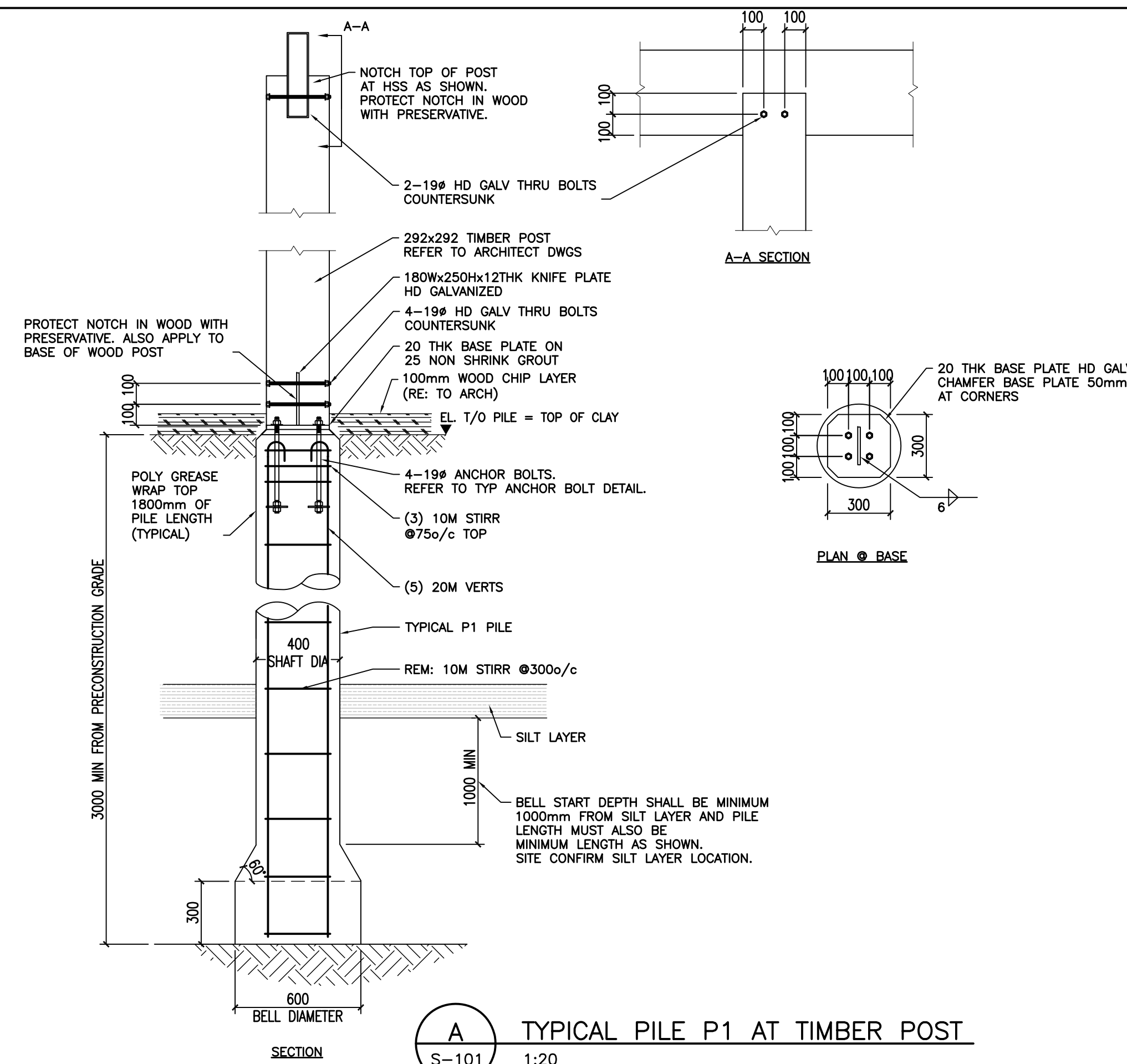
- B CAST-IN-PLACE CONCRETE**
- ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH CSA A23.1-14 CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION / METHODS OF TEST AND STANDARD PRACTICES FOR CONCRETE.
  - SUPPLEMENTARY CEMENTITIOUS MATERIAL TO CAN/CSA-A3000-13 CEMENTITIOUS MATERIALS COMPENDIUM.
  - CHEMICAL ADMIXTURES TO ASTM C494/C494M-16 AND ASTM C10171017M-13e1.
  - GENERAL CONTRACTOR TO PROVIDE PROPRIETARY MIX DESIGN PERFORMANCE RECORD AS REQUIRED BY CONCRETE MANITOBA.
  - SUBMIT CONCRETE MIX DESIGN STATEMENTS, SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF MANITOBA WHO HOLDS A CERTIFICATE OF AUTHORIZATION OF "EGM", TO THE ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION.
  - CONCRETE SPECIFICATIONS:  
 - 20mm AGG; 32MPa; EXP CLASS S-2; 4-7% AIR; HS/HSb CEMENT
  - CONSTRUCT FORMWORK, SHORING AND BRACING TO MEET DESIGN, CODE AND CSA A23.1-14 REQUIREMENTS. CONSTRUCT ACCURATELY, SO THAT RESULTING FINISHED CONCRETE CONFORMS TO SHAPES, LINES, AND DIMENSIONS INDICATED ON THE DRAWINGS.
  - VIBRATE ALL CONCRETE WORK WITH APPROPRIATE INTERNAL VIBRATORS.
  - CONCRETE WORKING TIME, FROM BATCHING TO PLACEMENT AND CONSOLIDATION, SHALL NOT EXCEED 1-1/2 HOURS.
  - CONTRACTOR SHALL ACCURATELY PLACE AND SECURE ALL COMPONENTS TO BE EMBEDDED IN THE CONCRETE (i.e. DOWELS FOR CONCRETE, ANCHOR BOLTS, ETC.). SEE STRUCTURAL, ARCHITECTURAL, AND ANY OTHER PERTINENT DRAWINGS.
  - CLEAR CONCRETE COVER TO REINFORCING STEEL SHALL BE 75mm UNLESS NOTED OTHERWISE.
  - SEE ARCHITECTURAL DRAWINGS FOR SURFACE FINISHES, EDGE TREATMENTS, ETC.
  - CONCRETE TESTING SHALL BE PERFORMED BY AN INDEPENDENT CSA APPROVED TESTING COMPANY. A MINIMUM OF THREE (3) CONCRETE TEST CYLINDERS AND ONE (1) SLUMP TEST SHALL BE TAKEN FOR EVERY 75 (OR LESS) CUBIC METERS OF EACH CLASS OF CONCRETE PLACED, OR FOR EACH DAY CONCRETE IS PLACED, WHICHEVER IS GREATER. TESTING SHALL BE PERFORMED IN ACCORDANCE WITH CSA A23.2-14, AND THE RESULTS SHALL BE FORWARDED TO THE ENGINEER.
  - VOID FORMS UNDER PILE CAPS SHALL BE HONEYCOMB TYPE BIODEGRADABLE CARDBOARD, 200mm THICKNESS, CAPABLE OF PROVIDING SUFFICIENT STRUCTURAL SUPPORT FOR CONCRETE UNTIL CONCRETE IS CURED.
  - AS AN ALTERNATE VOID FORM, CONTRACTOR MAY USE STYROFOAM TYPE VOID FILLER WHICH MUST MAINTAIN VOID SPACE NOTED ABOVE WHEN COLLAPSED / COMPRESSED. STYROFOAM VOID FILLER SHALL BE SELECTED AND DESIGNED BY MANUFACTURER. VOID FORM SELECTED TO BE FORWARDED TO ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION.
  - ALL FORMWORK INCLUDING CARDBOARD "SONO-TUBES" TO BE REMOVED UPON COMPLETION.
  - ALL HOLES NOT SHOWN ON THE DRAWINGS TO BE CORED THROUGH REINFORCED CONCRETE TO BE REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO CORING.
  - CONCRETE PLACEMENT SCHEDULING, AND WORK PROCEDURES SHALL BE DISCUSSED WITH THE ENGINEER PRIOR TO COMMENCING CONSTRUCTION.
  - FOR COLD WEATHER CONCRETE WORK, ALL ICE, SNOW, AND FROST SHALL BE REMOVED FROM FORMWORK AND THE TEMPERATURE OF ALL CONTACT SURFACES SHALL BE RAISED ABOVE 10C FOR 24 HOURS PRIOR TO PLACING CONCRETE. CONCRETE SHALL BE NOT LESS THAN 20 DEGREES CELSIUS NOR MORE THAN 30 DEGREES CELSIUS WHEN DEPOSITED. CONCRETE SHALL BE ENCLOSED AND THE SPACE SHALL HAVE A TEMPERATURE OF NOT LESS THAN 20 DEGREES CELSIUS FOR THREE (3) DAYS AND NOT LESS THAN 5C FOR AN ADDITIONAL FOUR (4) DAYS.
  - NOTIFY THE ENGINEER AT LEAST 48 HOURS PRIOR TO ALL CONCRETE PLACEMENT TO ALLOW FOR SITE INSPECTIONS.
  - A WOOD TEMPLATE FOR ANCHOR BOLT PLACEMENT IS TO BE USED TO ACCURATELY PLACE ANCHOR BOLTS IN CONCRETE.

- C CAST-IN-PLACE CONCRETE PILES**
- SHAFT AND BELL DIAMETERS ARE AS INDICATED ON THE DRAWINGS.
  - PIILING CONTRACTOR WILL BE REQUIRED TO SLEEVE HOLES DURING INSTALLATION OF CONCRETE FOR PILES, AS REQUIRED.
  - INSTALL PILES VERTICALLY, NOT OUT OF PLUMB BY MORE THAN 2%; NOR OUT OF POSITION AS SHOWN IN THE FOUNDATION PLAN BY MORE THAN 50mm (2").
  - REFER TO "CONCRETE" AND "REINFORCING STEEL" NOTES FOR MATERIAL SPECIFICATIONS AND REQUIREMENTS.
  - REFER TO TYPICAL PILE DETAIL FOR ADDITIONAL INFORMATION.
  - VIBRATE THE TOP 3000mm (10'-0") OF CONCRETE OF ALL CAST-IN-PLACE PILES.
  - EXTEND VERTICAL PILE DOWELS MIN. 450mm (18") INTO THE STRUCTURAL CONCRETE MEMBERS SUPPORTED UNLESS NOTED OTHERWISE.

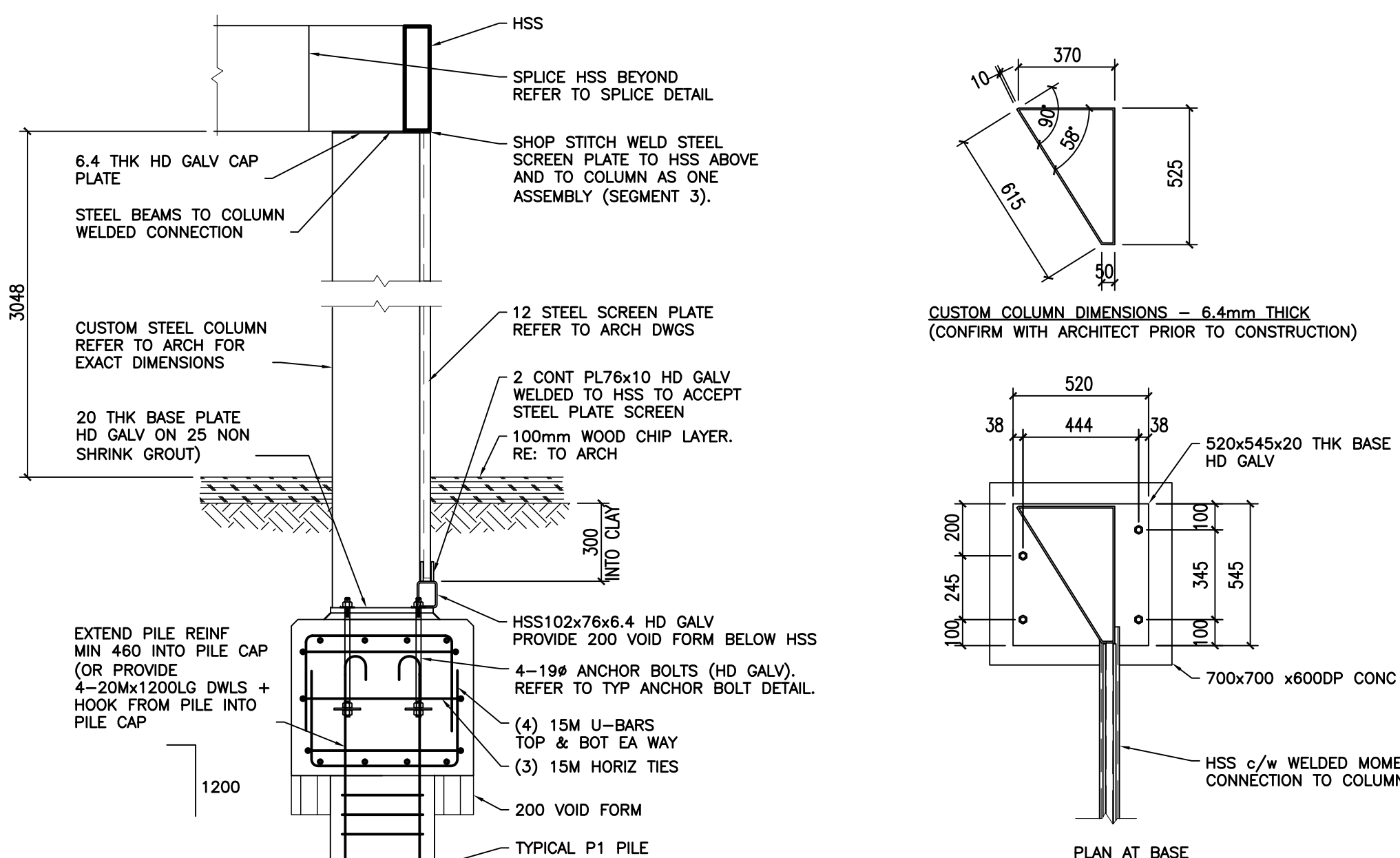
- D REINFORCING STEEL**
- REINFORCING STEEL SHALL BE NEW BILLET, DEFORMED BARS WITH A MINIMUM SPECIFIED YIELD STRENGTH OF 400MPa IN ACCORDANCE WITH CSA G30.18-09 (R2014).
  - REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE LATEST RSIC REINFORCING STEEL MANUAL OF STANDARD PRACTICE.
  - ALL REINFORCING TO BE HELD IN PLACE AND TIED BY THE USE OF PROPER ACCESSORIES SUCH AS HI-CHAIRS, SPACERS, ETC.
  - SUBMIT SHOP DRAWINGS WHICH CLEARLY INDICATE BAR SIZES, GRADE, SPACING, HOOKS, BENDS, SUPPORTING/SPACE DEVICES, ETC. FOR REVIEW TO ENGINEER PRIOR TO FABRICATION.
  - PRIOR TO PLACING CONCRETE, ENSURE THAT ALL REINFORCING STEEL IS CLEAN, FREE OF LOOSE SCALE, RUST, MUD, OIL, OR OTHER FOREIGN MATERIAL THAT WOULD REDUCE BOND. HEATING, QUENCHING, AND BENDING OF REINFORCING STEEL ON THE SITE IS NOT ALLOWED.

- E STRUCTURAL STEEL**
- STRUCTURAL STEEL SHALL CONFORM TO CSA G40.20-13/G40.21-13.
  - HOLLOW STRUCTURAL SECTIONS TO BE TO CSA G40.21-13, 350MPa CLASS C.
  - ALL OTHER ROLLED OR WELDED STRUCTURAL SECTIONS AND PLATES TO BE TO CSA G40.21-13, 300MPa.
  - FABRICATION AND ERECTION SHALL CONFORM TO CSA S16-14.
  - ALL WELDING SHALL BE PERFORMED BY QUALIFIED WELDERS FULLY APPROVED FOR STRUCTURAL WELDING BY THE CANADIAN WELDING BUREAU IN ACCORDANCE WITH CSA W47.1-09 (R2014), CSA 47.2-11 (R2015), AND CSA W59-13.
  - SPlicing OF MEMBERS NOT PERMITTED UNLESS OTHERWISE NOTED, WHERE BEAMS ARE CONTINUOUS OVER SUPPORTS, NO HOLES PERMITTED IN TOP FLANGE.
  - COLUMN BASE AND CAP PLATES SHALL BE WELDED TO COLUMNS. PROVIDE MINIMUM 20mm (3/4") BASE PLATE c/w MINIMUM (4) 20mm (3/4") DIA. BOLTS FOR ALL COLUMNS UNLESS NOTED OTHERWISE.
  - STRUCTURAL STEEL ERECTOR SHALL SUPPLY AND INSTALL ALL TEMPORARY GUYING AND BRACING NECESSARY TO PROVIDE STABILITY FOR THE STRUCTURE AS A WHOLE.
  - STRUCTURAL STEEL SUPPLIER SHALL SUBMIT SHOP DRAWINGS, SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF MANITOBA WHO HOLDS A CERTIFICATE OF AUTHORIZATION OF "EGM", SHOWING ALL DESIGN AND FABRICATION DETAILS OF CONNECTIONS, TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION.
  - GALVANIZING AS INDICATED SHALL BE HOT DIPPED GALVANIZED TO ASTM A123/A123M-15 FOR SHAPES AND ASTM A153/A153M-16 FOR HARDWARE.
  - PROVIDE MINIMUM 6.4mm (1/4") WELD UNLESS NOTED OTHERWISE.
  - DESIGN FOR MINIMUM 50% OF SHEAR CAPACITY UNLESS NOTED OTHERWISE.

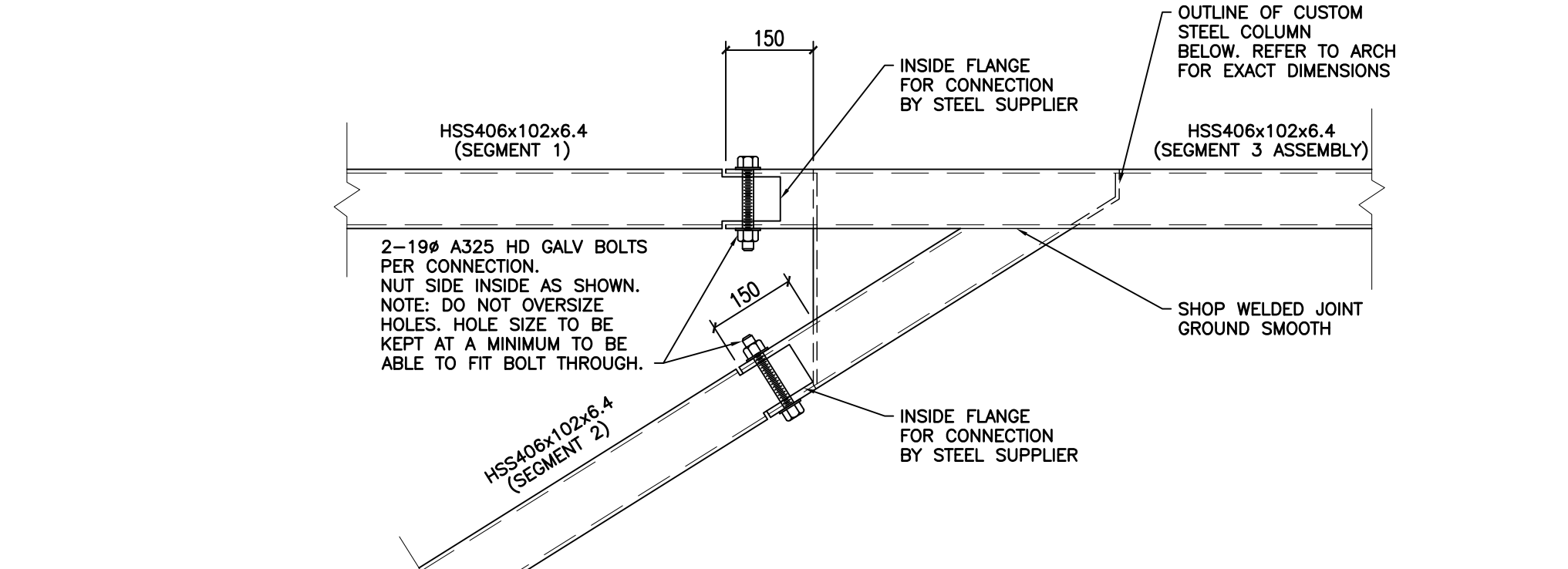
- F TIMBER POSTS**
- ALL SAWN LUMBER AND TIMBER SHALL CONFORM TO "NHLA - NATIONAL HARDWOOD LUMBER ASSOCIATION FOR AMERICAN LUMBER".
  - DESIGN, FABRICATION, ERECTION, AND OTHER CONSTRUCTION PRACTICES TO CONFORM TO CSA-086-14 AND THE NATIONAL BUILDING CODE 2015, WHICHEVER IS MORE STRINGENT, EXCEPT AS NOTED ON THE DRAWINGS.
  - TIMBER POSTS TO BE WHITE OAK, FREE OF VISIBLE KNOTS OR DEFECTS.
  - CUT ALL COMPONENTS NEAT AND SQUARE, PROVIDING FULL CONTACT WITH ADJACENT MEMBERS.
  - ALL CONNECTION HARDWARE TO BE HD GALVANIZED.



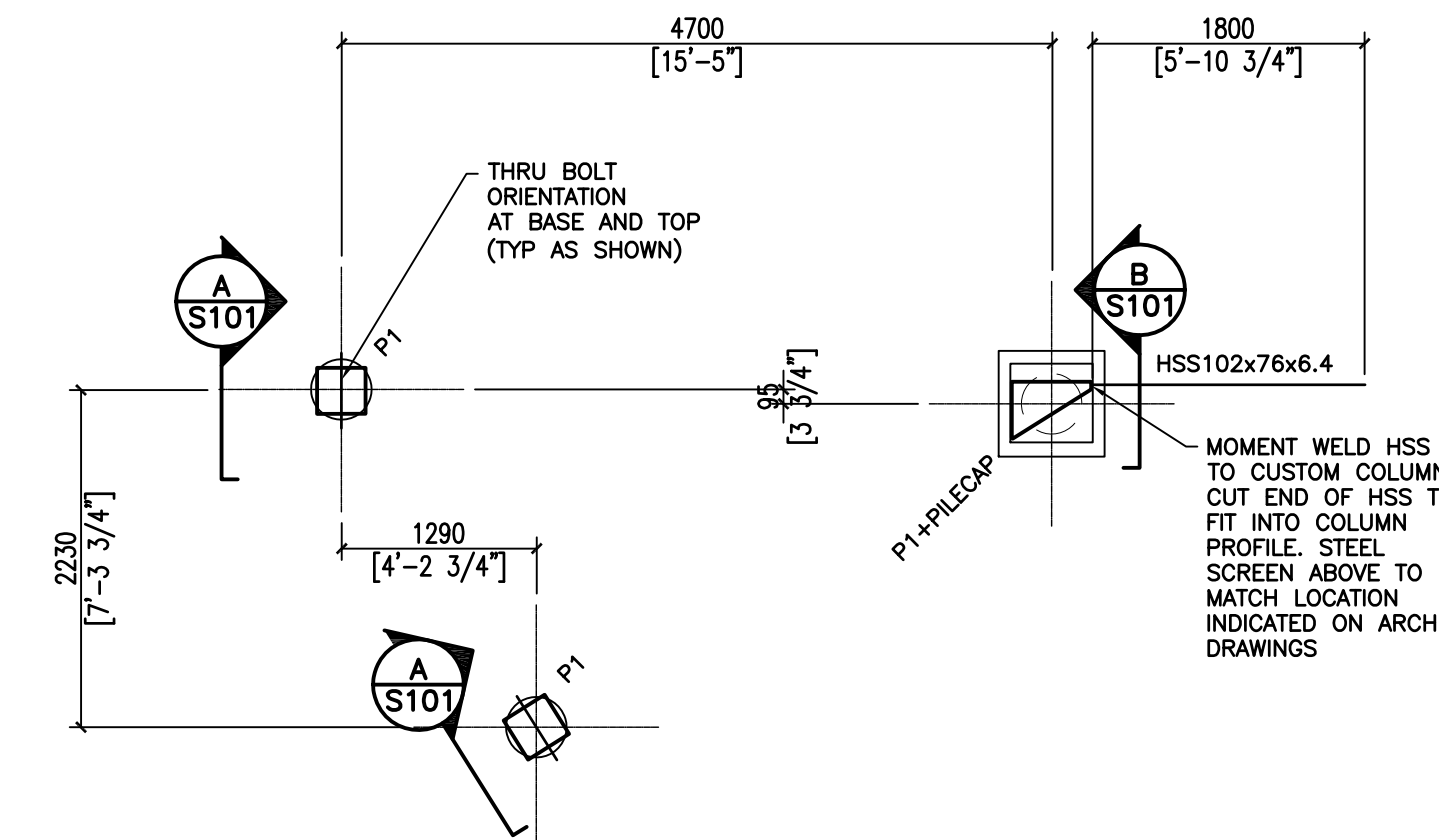
**A TYPICAL PILE P1 AT TIMBER POST**  
 S-101 1:20



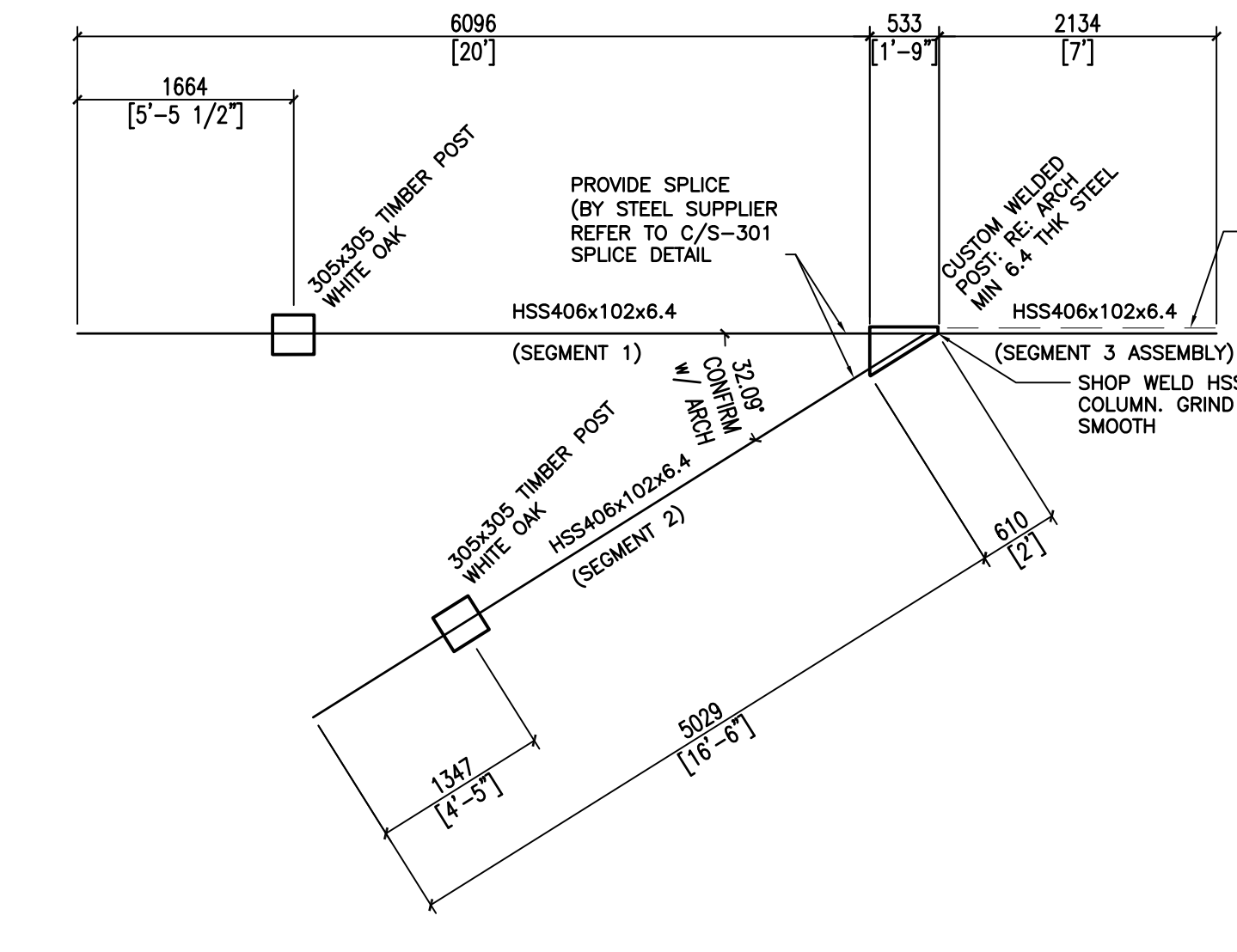
**B DETAILS AT CUSTOM STEEL COLUMN**  
 S-101 1:20



**C HSS SPLICE PLAN DETAIL**  
 S-101 1:10

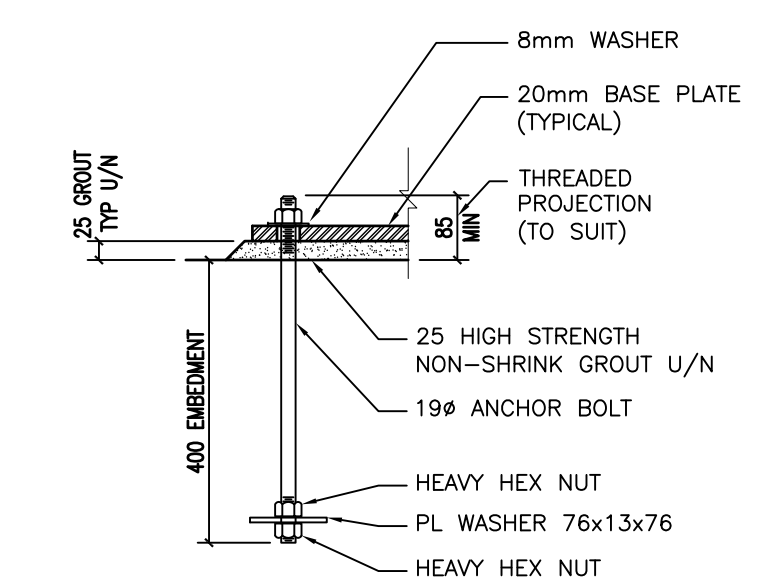


**1 FOUNDATION PLAN**  
 S-101 1:50



**2 TOP OF STRUCTURE FRAMING PLAN**  
 S-101 1:50

DESIGN LOADS:  
 DEAD LOAD = SELF WEIGHT OF STRUCTURE  
 WIND LOAD q(1/50) = 0.45kPa



**TYPICAL ANCHOR BOLT DETAIL (F1554 OR 36ksi)**