

HILLEN NURSERY

NEW 250' x 100' PRE-ENG BUILDING w/ 23'-0" EAVE HEIGHT AND NEW 100'x62' PRE-ENG BUILDING w/ 14'-0" EAVE HEIGHT

23079 ADELAIDE RD,
MOUNT BRYDGES, ONTARIO N0L 1W0

Ontario Building Code Data Matrix

PART 2 - New Farm Building

Building Code Data Matrix					Building Code Reference	
0. REG. 203/24: BUILDING CODE under Building Code Act, 1992, S.O. 1992, c. 23						
2.00	BUILDING CODE VERSION: LATEST AMENDMENT: MAY 29, 2024	2.01	PROJECT TYPE: <input checked="" type="checkbox"/> NEW <input type="checkbox"/> ADDITION <input type="checkbox"/> RENOVATION <input type="checkbox"/> CHANGE OF USE <input type="checkbox"/> ADDITION AND RENOVATION	DESCRIPTION: FARM WAREHOUSE WITH ACCESSORY FARM OFFICE	[A]1.3.3.1a	
2.02	MAJOR OCCUPANCY GROUP G DIVISION 2	USE WAREHOUSE/OFFICE			2.1.2.2. & 2.1.4.	
2.03	BUILDING AREA: BUILDING AREA FT ² (m ²)	EXISTING	NEW	DEMO	TOTAL	[A]1.4.1.2.
	WAREHOUSE	25,000 (2,322)		25,000 (2,322)		
	OFFICE	6,112 (568)		6,112 (568)		
	TOTALS	31,112 (2,890)		31,112 (2,890)		
2.04	GROSS AREA FT ² (m ²):	EXISTING	NEW	DEMO	TOTAL	[A]1.4.1.2.
	WAREHOUSE	25,000 (2,322)		25,000 (2,322)		
	OFFICE	6,112 (568)		6,112 (568)		
	TOTALS	31,112 (2,890)		31,112 (2,890)		
2.05	MEZZANINE AREA:					2.2.2.2. & 3.2.1.1.
2.06	BUILDING HEIGHT: 1 STOREYS ABOVE GRADE 23'-0" (7.0m) HEIGHT ABOVE GRADE N/A STOREYS BELOW GRADE					2.2.2.2. & 3.2.1.1.
2.07	BUILDING CLASSIFICATION: 2.2.2.6. Group G, Division 2, up to 3 storeys					2.2.2.3. & -8.
2.08	SPRINKLER SYSTEM: <input type="checkbox"/> REQUIRED <input checked="" type="checkbox"/> NOT REQUIRED PROPOSED: <input type="checkbox"/> ENTIRE BUILDING (3.2.2.20.-83.) <input type="checkbox"/> SELECTED COMPARTMENTS <input type="checkbox"/> BASEMENT (3.2.1.5. & 3.2.2.15.) <input type="checkbox"/> SELECTED FLOOR AREAS <input type="checkbox"/> NONE					2.2.2.3. & 2.2.2.5. & 2.2.4.
2.09	FIRE ALARM SYSTEM: <input type="checkbox"/> REQUIRED <input checked="" type="checkbox"/> NOT REQUIRED PROPOSED: <input type="checkbox"/> SINGLE STAGE <input type="checkbox"/> TWO STAGE <input type="checkbox"/> NONE					2.2.3.
2.10	WATER SERVICE/SUPPLY IS ADEQUATE: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF NO, EXPLAIN:					2.2.4.
2.11	CONSTRUCTION TYPE: RESTRICTION: <input checked="" type="checkbox"/> COMBUSTIBLE PERMITTED <input type="checkbox"/> NONCOMBUSTIBLE REQUIRED ACTUAL: <input type="checkbox"/> COMBUSTIBLE <input checked="" type="checkbox"/> NONCOMBUSTIBLE <input type="checkbox"/> COMBINATION HEAVY TIMBER CONSTRUCTION: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO					2.2.2.3. & -8.
2.12	OCCUPANT LOAD: OCCUPANT LOAD BASED ON: <input checked="" type="checkbox"/> FT ² /PERSON <input type="checkbox"/> DESIGN OF BUILDING FLOOR LEVEL/AREA OCCUPANCY TYPE BASED ON (PER PERSON) OCC. LOAD (PERSONS) POSTED LIMIT REQUIRED					2.1.2.2. & 2.2.1.17.
	WAREHOUSE/25,000 AGRICULTURAL 430.6(40.0 m ²)	58	34			
	OFFICE/6,112 AGRICULTURAL 430.6(40.0 m ²)	14	14			
	TOTAL	72	48			
2.13	HAZARD/DUS SUBSTANCES: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, EXPLAIN:					2.2.8., 3.3.6.1. TO 3.3.6.7.
2.14	REQUIRED FIRE RESISTANCE RATINGS: HORIZONTAL ASSEMBLIES RATING SUPPORTED ASSEMBLY FLOORS - -					2.2.1.
2.15	PLUMBING FIXTURE REQUIREMENTS: RATIO: MALE/FEMALE = 50:50 EXCEPT AS OTHERWISE NOTED FLOOR LEVEL/AREA OCCUPANT LOAD M/F OBC REFERENCE FIXTURES REQUIRED M/F FIXTURES PROVIDED M/F					9.31. & 3.7.4.
2.16	NOTES: ...					

GENERAL NOTES

0.0 GENERAL

0.1 PRIOR TO THE COMMENCEMENT OF CONSTRUCTION OR FABRICATION, THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND FIELD CONDITIONS. SHOULD FIELD CONDITIONS OR DIMENSIONS VARY FROM DESIGN DRAWINGS, THE CONSULTANT SHALL BE NOTIFIED. FAILURE TO DO SO SHALL RENDER THE CONTRACTOR RESPONSIBLE TO REPAIR ANY IMPROPER WORK.

0.2 READ ARCHITECTURAL/STRUCTURAL DRAWINGS IN CONJUNCTION WITH ALL OTHER CONTRACT DRAWINGS AND DOCUMENTS.

0.3 THE LOCATION OF UTILITIES IS NOT SHOWN ON THESE DRAWINGS ARE NOT CERTIFIED TO BE ACCURATE. THE ONUS LIES UPON THE CONTRACTOR TO ASCERTAIN, AT THEIR OWN EXPENSE, THE EXACT LOCATION OF EACH UTILITY.

0.4 ALL WORK SHALL BE DONE BY SKILLED AND EXPERIENCED TRADESMEN. ALL WORK SHALL BE CARRIED OUT IN A SUBSTANTIAL MANNER TO ENSURE A RIGID, STRAIGHT, SQUARE, PLUMB AND HORIZONTAL LINES LEVEL STRUCTURES.

0.5 DO NOT INSTALL OPENINGS, SET INSERTS, DRILL OR ATTACH TO STRUCTURAL FRAME WITHOUT AUTHORIZATION OF THE ENGINEER EXCEPT AS INDICATED ON THE DRAWINGS.

0.6 ALL STRUCTURAL ITEMS MUST BE INSPECTED BY THE STRUCTURAL ENGINEER OR BY ANOTHER SUITABLE QUALIFIED PERSON.

0.7 NOTIFY THE ENGINEER 48 HOURS IN ADVANCE FOR INSPECTIONS OF THE FOLLOWING;

- EXCAVATION
- PRIOR TO POURING FOOTINGS
- REINFORCING STEEL
- BEFORE EACH CONCRETE POUR
- STEEL FRAMING
- BEFORE COVER UP
- BOLTS IN CONCRETE
- BEFORE EACH CONCRETE POUR
- STRUCTURAL WELDING
- BEFORE COVER UP
- HIGH STRENGTH BOLTING
- BEFORE COVER UP
- EXPANSION AND EPOXY ANCHORS
- BEFORE COVER UP

- PRIOR TO POURING FOOTINGS
- BEFORE EACH CONCRETE POUR
- BEFORE COVER UP
- BEFORE EACH CONCRETE POUR
- BEFORE COVER UP

CHECK THAT WORK IS COMPLETED PRIOR TO CALLING FOR INSPECTION.

INSPECTION BY THE LOCAL MUNICIPAL BUILDING DEPT THAT HAS JURISDICTION ARE NOT A SUBSTITUTE FOR THE ENGINEERS INSPECTION AND VICE VERSA.

0.8 BRACE THE STRUCTURE UNTIL ALL THE COMPONENTS ARE PERMANENTLY FASTENED IN PLACE. TEMPORARY SHORING AND BRACING ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ANY BRACING SHOWN IS FOR COMPLETED STRUCTURE ONLY. ALL WORK IS TO MEET WCER REQUIREMENTS.

0.9 ONLY STRUCTURAL COMPONENTS DETAILED ON OUR DRAWINGS HAVE BEEN DESIGNED BY US; OTHER STRUCTURAL COMPONENTS AND ANY OTHER BUILDING COMPONENTS ARE THE RESPONSIBILITY OF THEIR RESPECTIVE DESIGNER.

0.10 DO NOT BUILD FROM THESE DRAWINGS UNLESS THEY ARE MARKED "ISSUED FOR CONSTRUCTION". DO NOT SCALE DRAWINGS. AVOID SCALING DIRECTLY FROM THE DRAWINGS. IF THERE IS AMBIGUITY OR LACK OF INFORMATION, INFORM THE CONSULTANT. ANY CHANGE THROUGH THE DISREGARDING OF THIS NOTICE TO BE RESPONSIBILITY OF THE CONTRACTOR.

1.0 CODES

1.1 THE NATIONAL BUILDING CODE OF CANADA. 2020 EDITION, LATEST REVISIONS, AND THE BUILDING CODE OF ONTARIO 2012, ONT. REG. 332/12, LATEST REVISIONS, SHALL BE THE BASIS FOR DESIGN AND CONSTRUCTION OF ALL WORK.

1.2 ALL WORK TO BE PERFORMED INCOMPLIANT WITH THE ONTARIO OCCUPATIONAL HEALTH AND SAFETY ACT ONT. REG. 213/91, LATEST REVISIONS.

2.0 FOUNDATIONS AND BACKFILL

2.1 ALL FOOTINGS SHALL BE PLACED ON NATURAL UNDISTURBED SOIL AT ELEVATIONS SHOWN ON THE DRAWINGS UNLESS OTHERWISE NOTED. THIS CONTRACTOR SHALL INSPECT AND ENSURE THE EXPOSED BEARING CAN ATTAIN THE DESIRED ALLOWABLE CONTACT BEARING PRESSURE OF 3000 PSF.

2.2 BACKFILL AGAINST WALLS IN SUCH A MANNER THAT THE LEVEL NEVER HAS MORE THAN A 18" DIFFERENCE IN ELEVATION ON EACH SIDE OF THE FOUNDATION UNLESS SPECIFIED ELSEWHERE.

2.3 EXCAVATION FOR FOOTINGS SHALL BE CLEAN AND FREE OF STANDING WATER. THE FOUNDATION CONCRETE SHALL BE PLACED WITHOUT DELAY AFTER EXCAVATION OR PROTECT THE UNDISTURBED SOIL WITH A LAYER OF 2" THICK LEAN CONCRETE (MUD MAT) PRIOR TO PLACEMENT OF REINFORCING STEEL.

3.0 CONCRETE

3.1 ALL CONCRETE WORK SHALL CONFORM TO THE CSA STANDARD CAN3-23.1 "CONCRETE MATERIALS AND METHODS OF CONSTRUCTION".

3.2 ALL REINFORCED CONCRETE DESIGN SHALL CONFORM TO THE CSA STANDARD CAN3-23.3 "DESIGN OF CONCRETE STRUCTURES".

3.3 UNLESS OTHERWISE NOTED, COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS SHALL BE AS FOLLOWS AS PER CAN/CAS A23.1 STANDARD:

TYPE	EXPOSURE CLASS	WATER/CEMENTING RATIO	COMPRESSIVE STRENGTH	AIR CONTENT CATEGORY
MUDMATS & FILL CONCRETE	N	0.65	15 MPa (2175 psi)	-
FOOTINGS	N	0.65	20 MPa (2900 psi)	-
PIERS/WALLS	F-2	0.55	25 MPa (3625 psi)	1
INTERIOR SLABS ON-GRADE	N	0.55	25 MPa (3625 psi)	-
EXTERIOR SLABS	C-2	0.45	32 MPa (4640 psi)	1

3.4 ALL EXTERIOR CONCRETE SHALL HAVE 5% TO 7% AIR ENTRAINMENT.

3.5 REINFORCING STEEL SHALL BE HARD GRADE NEW BILLET STEEL, Fy = 400 MPa (58 k.s.i.) IN ACCORDANCE WITH THE LATEST CSA STANDARD G30.18-M92.

3.6 LAP REINFORCING BARS A MINIMUM OF 36 BAR DIAMETERS OR A MINIMUM OF 12", WHICHEVER IS GREATER GOVERNS, AND/OR AS STIPULATED IN CSA-A23.3-94. UNLESS OTHERWISE NOTED.

3.7 FOOTING SHALL BE PLACED IN FORMS WHICH ARE FREE OF LOOSE SOIL AND STANDING WATER. ALL PRECAUTIONS SHALL BE TAKEN FOR CONCRETE WHICH IS PLACED DURING COLD OR HOT WEATHER.

3.8 DOWELS TO MATCH VERTICAL REINFORCEMENT.

3.9 GROUT SHALL BE NON-SHRINK GROUT MEADOWS V-3 CONSTRUCTION TYPE OR APPROVED EQUAL.

3.10 ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFER.

3.11 SAW CUTS SHALL BE MAXIMUM 10'-0" x 10'-0"

5.0 STRUCTURAL STEEL

5.1 ALL STRUCTURAL STEEL TO CONFORM WITH THE REQUIREMENTS OF CAN/CSA-G40.21-92, GRADE 300W (Fy = 50 k.s.i.) UNLESS OTHERWISE NOTED. HSS TO BE CLASS H-350W.

5.2 WELDING WHERE CALLED FOR SHALL CONFORM TO CSA STANDARD W 47.1-92, W59-M1989 AND W186-M1990, AND SHALL DEVELOP THE FULL STRENGTH OF MEMBER WHERE LOADS ARE NOT SHOWN. USE E70XX ELECTRODES. ALL WELDS MUST HAVE END RETURNS IN ACCORDANCE WITH CAN/CSA-S16.1-94.

5.3 ALL STRUCTURAL STEEL SHALL HAVE A PRIME COAT OF RUST INHIBITIVE METAL PAINT. DO NOT PAINT SURFACES IN CONTACT WITH CONCRETE. ALL SURFACES TO BE PAINTED SHALL BE THOROUGHLY CLEANED OF ALL RUST, SCALE, GREASE OR OIL AND BE DRY PRIOR TO PAINTING.

5.4 STRUCTURAL STEEL ERECTOR MUST PROVIDE ALL THE NECESSARY TEMPORARY BRACING AS REQUIRED FOR ALIGNMENT, WIND, DEAD LOAD AND ERECTION STRESSES.

5.5 ALL FIELD BOLTED CONNECTIONS SHALL CONFORM TO ASTM STANDARD A325-94 FOR HIGH TENSILE BOLTS. MINIMUM 2 BOLT CONNECTIONS, 3/4" DIAMETER BOLTS UNLESS NOTED OR APPROVED.

5.6 ALL COLD FORMED STEEL TO CONFORM WITH THE REQUIREMENTS OF CAN/CSA-S136-M84.

6.0 CARPENTRY WORK

6.1 CARPENTRY WORK SHALL INCLUDE ALL LABOUR, EQUIPMENT AND MATERIALS REQUIRED TO INSTALL ALL NAILERS, BLOCKING, INSTALLATION OF DOORS, FRAMES AND HARDWARE, PLYWOOD SHEATHING, EXHAUST FAN CURB BLOCKING, ALL NAILERS, FASTENERS, BOLTS, WASHERS, NUTS AND SCREWS.

6.2 ALL FRAMING LUMBER TO BE S-P-F No. 2 OR BETTER TO SIZES AND SPACINGS SHOWN ON THE DRAWINGS. PRESSURE TREATED LUMBER TO BE IN ACCORDANCE TO CSA 080-M89 AND 080.1-M89. INTERIOR PLYWOOD TO BE G.I.S. GRADE B FIR PLYWOOD IN ACCORDANCE WITH CSA 0121-M78, TO THICKNESS AS SHOWN ON DRAWINGS.

6.3 SUPPLY ALL ROUGH HARDWARE WHERE REQUIRED. NAILS, SPIKES, SCREWS, BOLTS, MECHANICAL FASTENERS, EXPANSION BOLTS, ETC., TO BE OF SUFFICIENT SIZE AND TYPE TO RIGIDLY SECURE ALL MEMBERS IN PLACE.

7.0 THERMAL AND MOISTURE PROTECTION

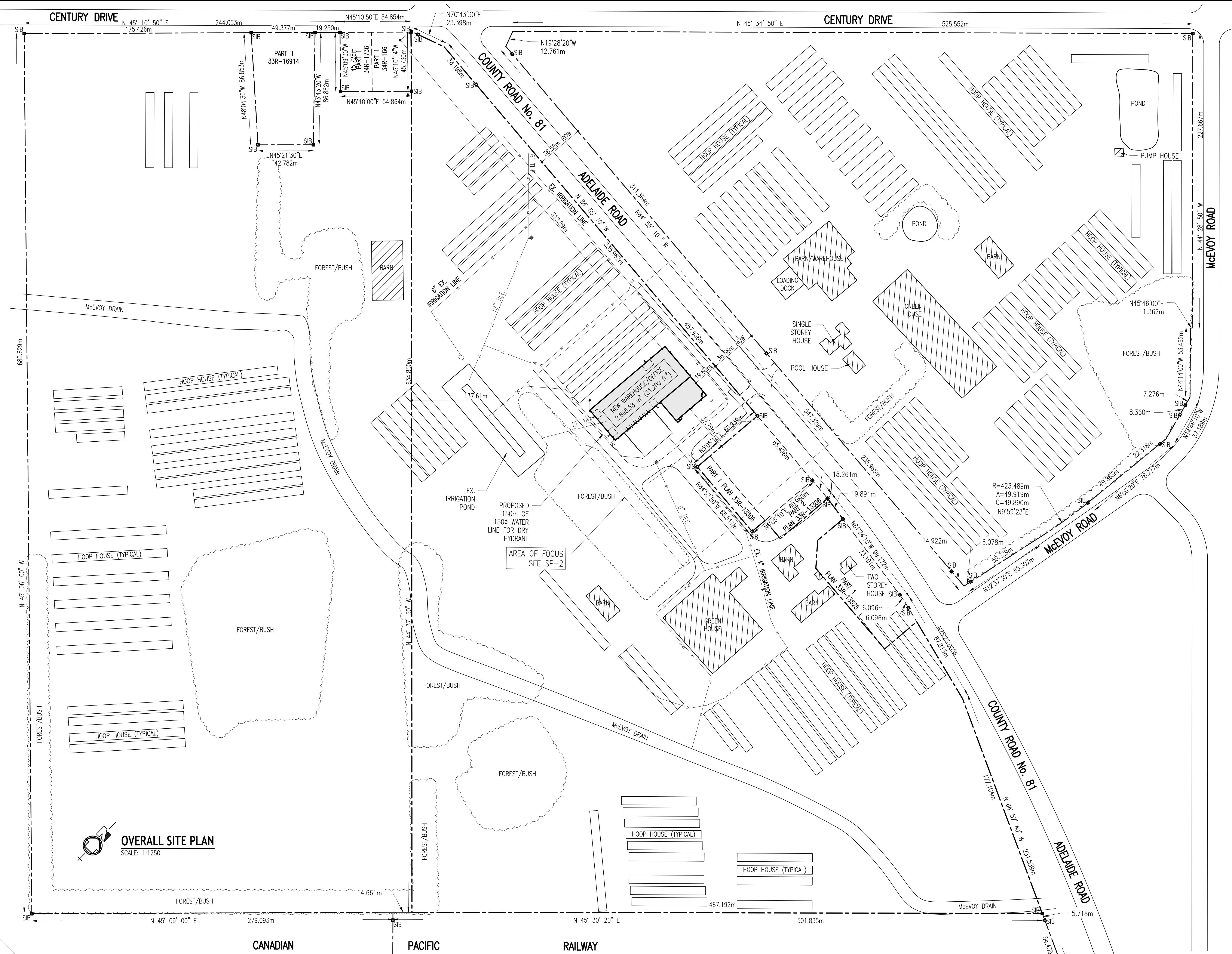
7.1 WALL AND CEILING INSULATION TO BE PROTECTED BY 6 MIL TYPE I VAPOUR RETARDANT INSTALLED IN SUCH A MANNER THAT ALL JOINTS OCCUR OVER FRAMING MEMBERS AND ARE LAPPED MINIMUM 4". ALL PERFORATIONS THROUGH THE VAPOUR RETARDANT CAUSED BY THE INSTALLATION OF ELECTRICAL OR MECHANICAL ITEMS TO BE TIGHTLY SEALED USING CAULKING, TAPE OR OTHER APPROVED METHODS OF SEALING IN ORDER TO MAINTAIN THE INTEGRITY AND CONTINUITY OF THE VAPOUR RETARDANT IN THE BUILDING ENVELOPE.

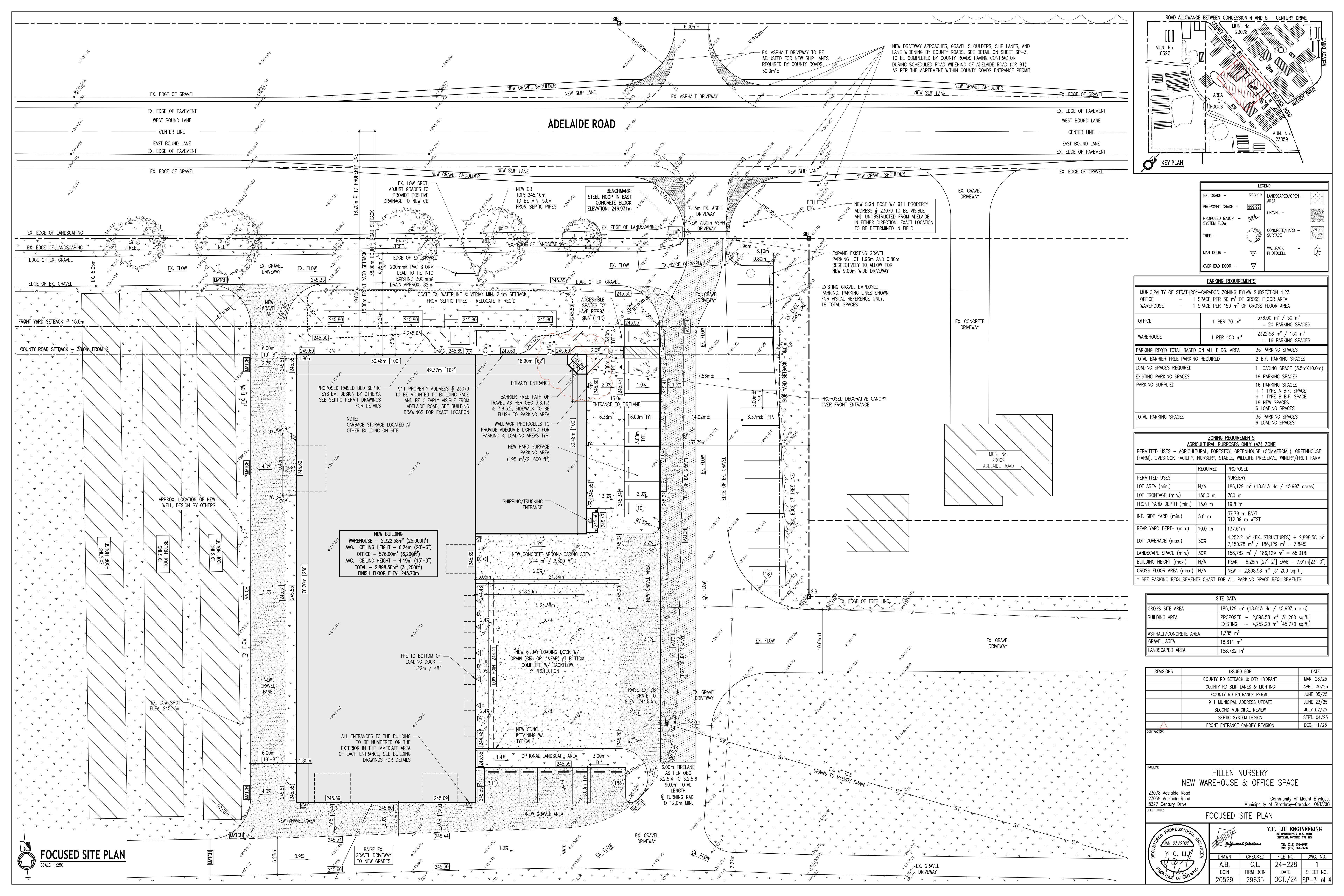
7.5 EXPOSED FLASHING TO BE 0.013" GALVANIZED STEEL, 0.014" COPPER, 0.008" ZINC OR 0.019" ALUMINIUM. CONCEALED FLASHING TO F-20 BY LEXUSCO CANADA LTD. OR TYPE 'S' ROLL ROOFING. FLASHING TO BE INSTALLED AT THE FOLLOWING LOCATIONS:

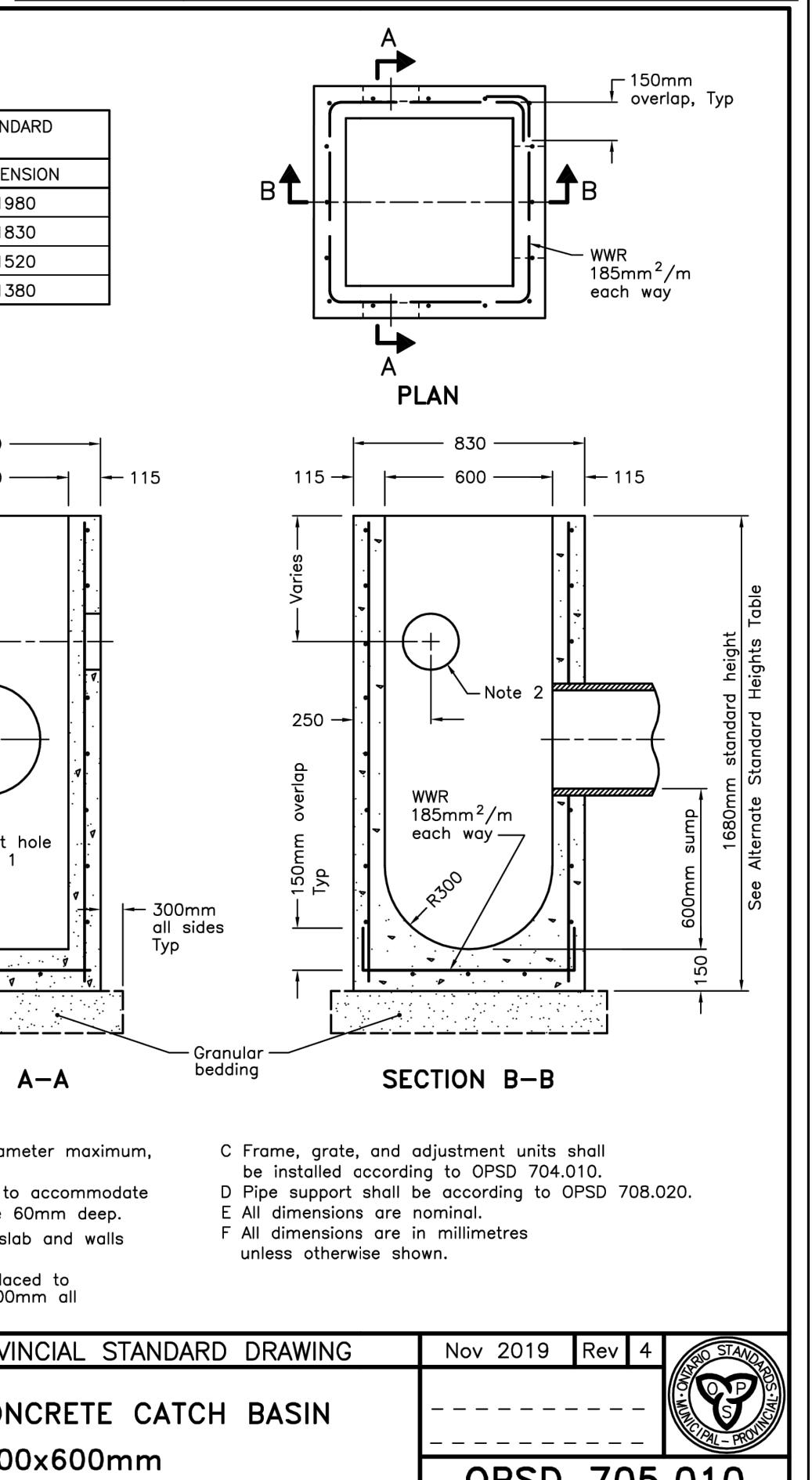
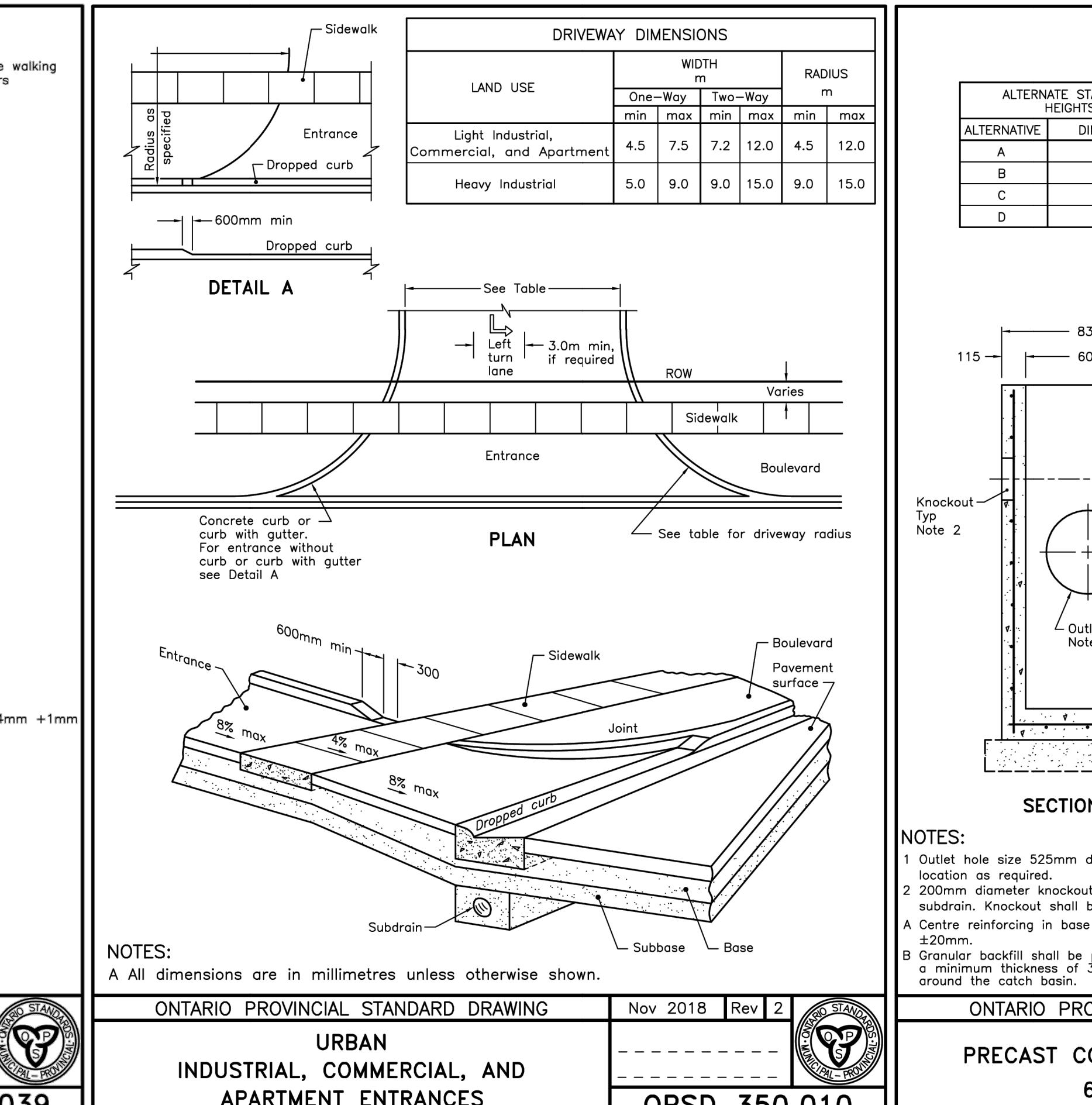
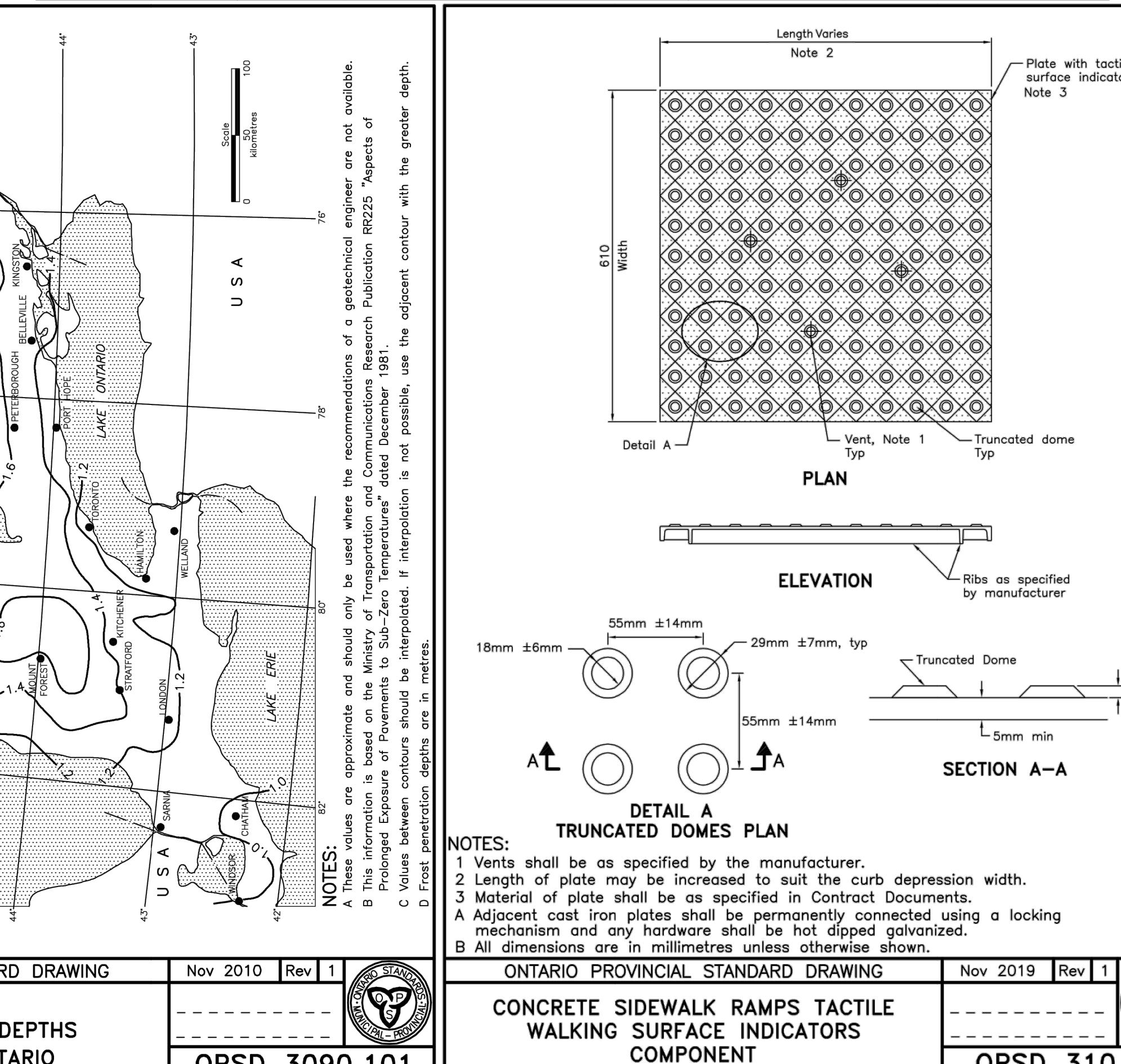
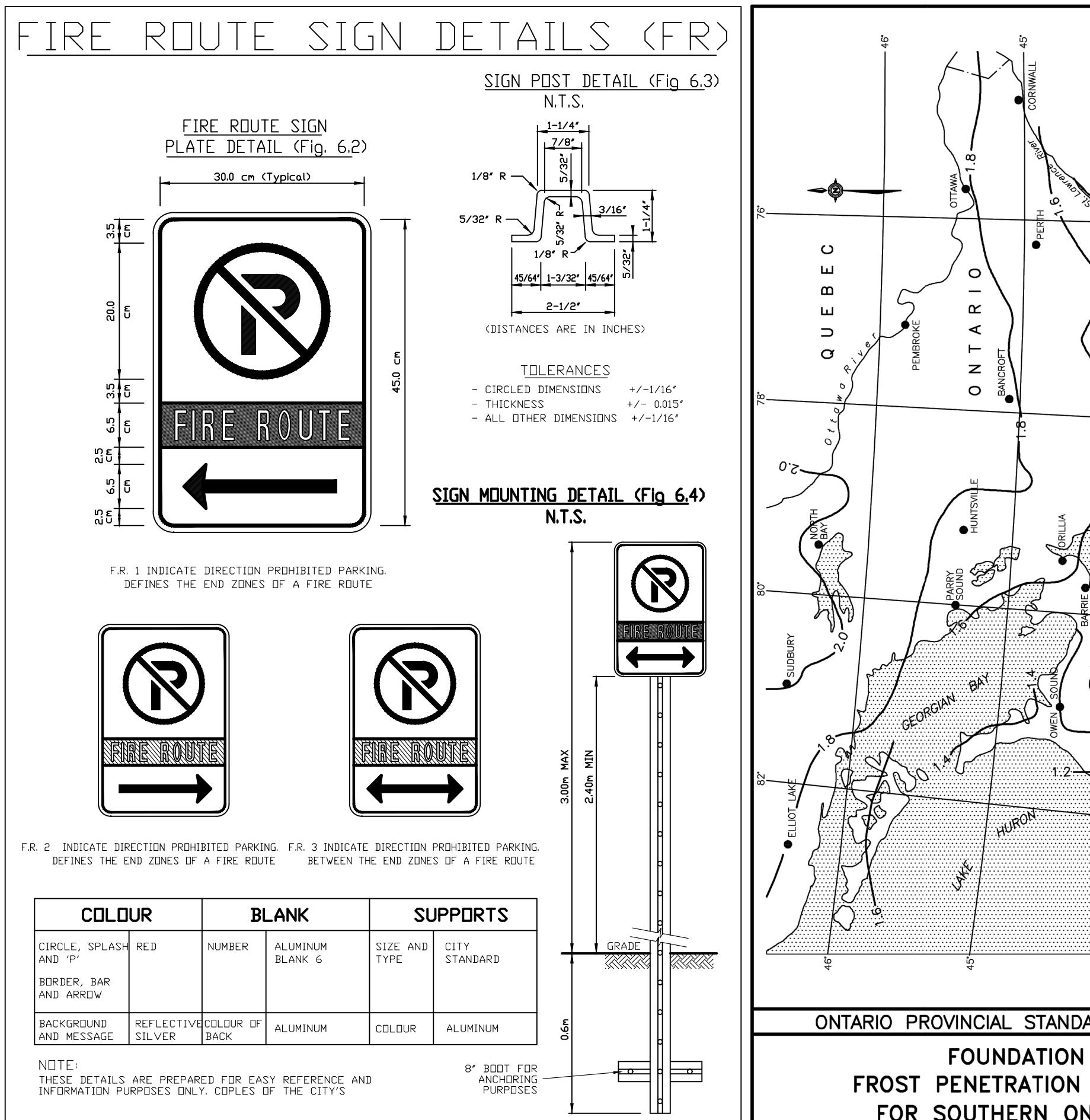
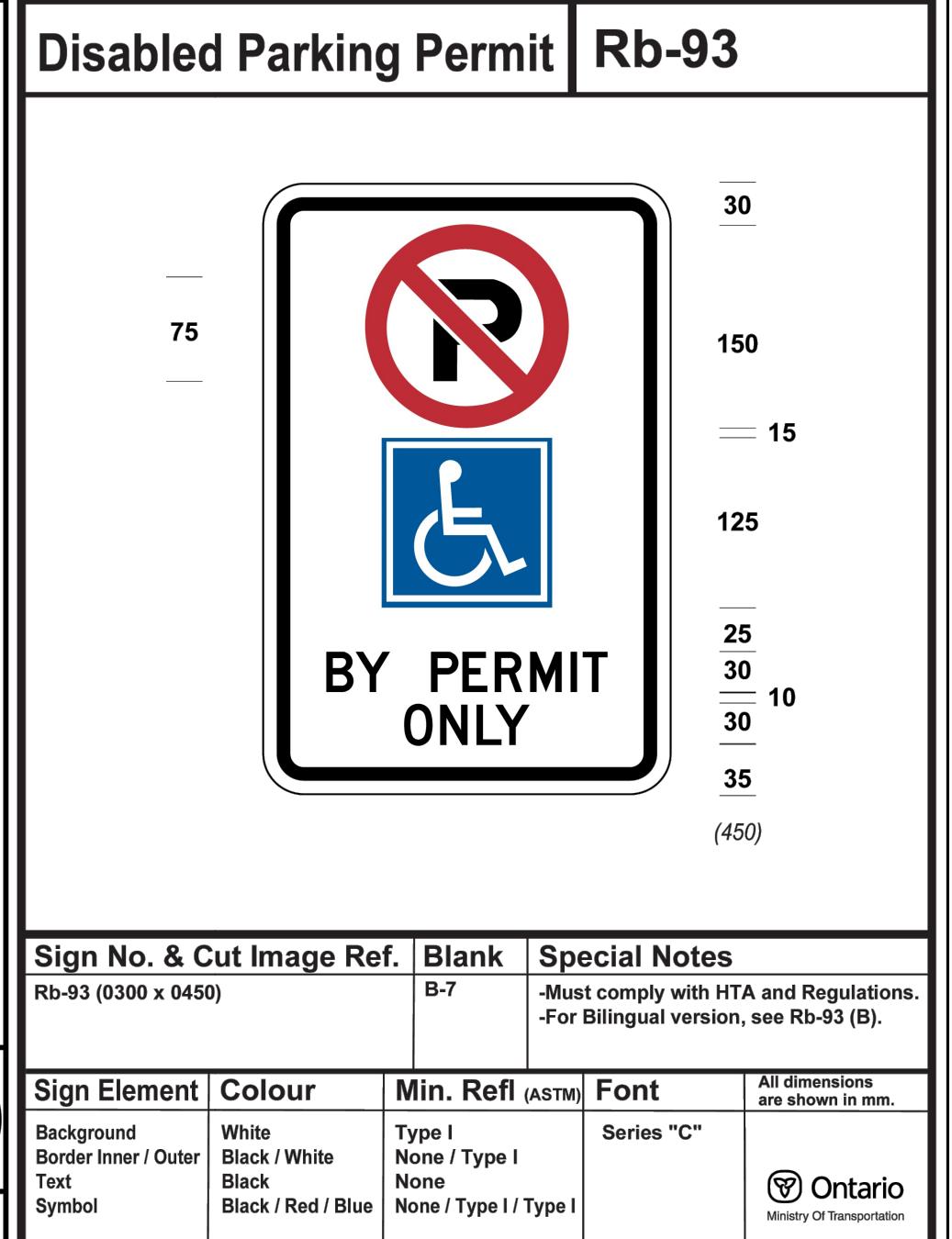
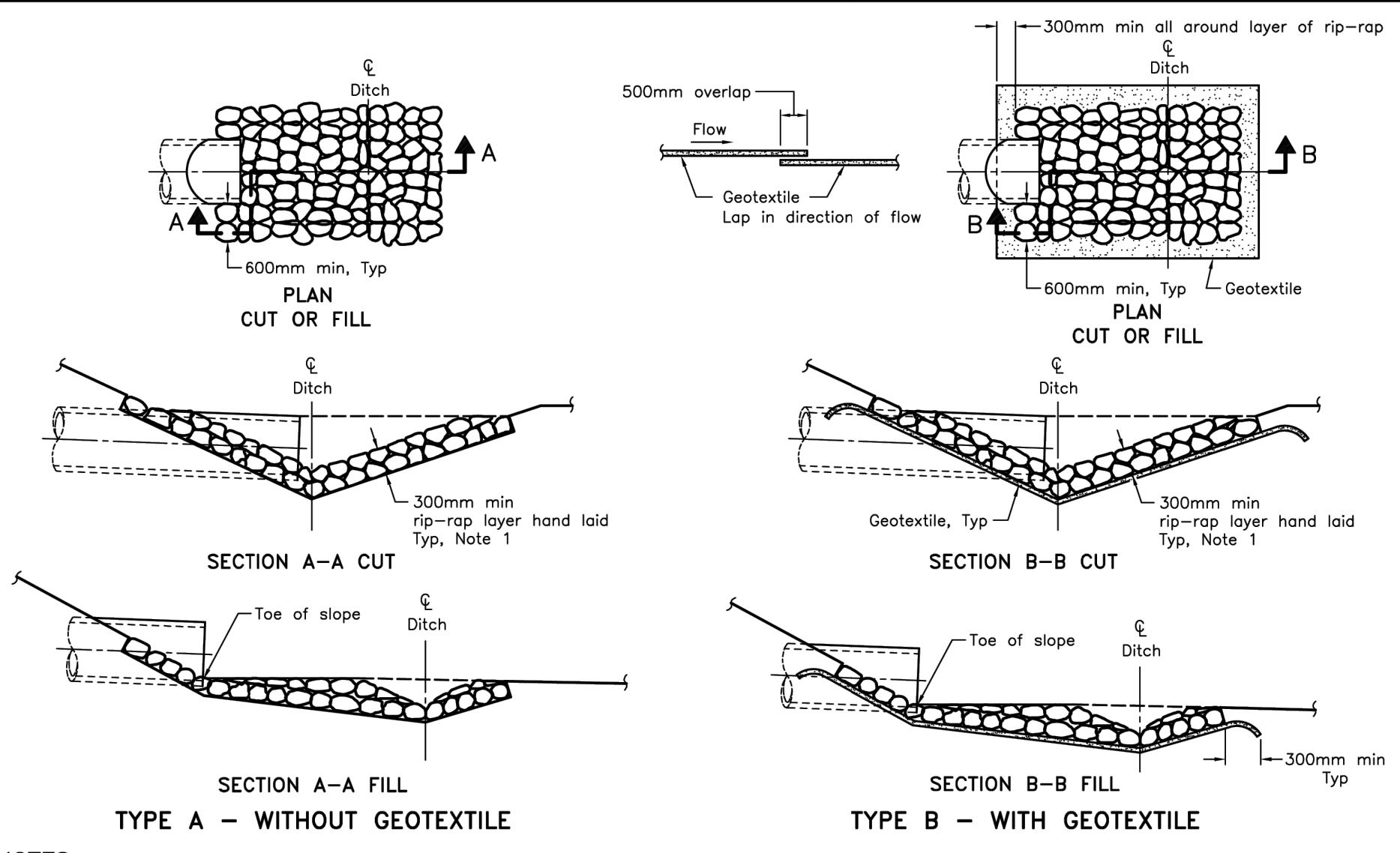
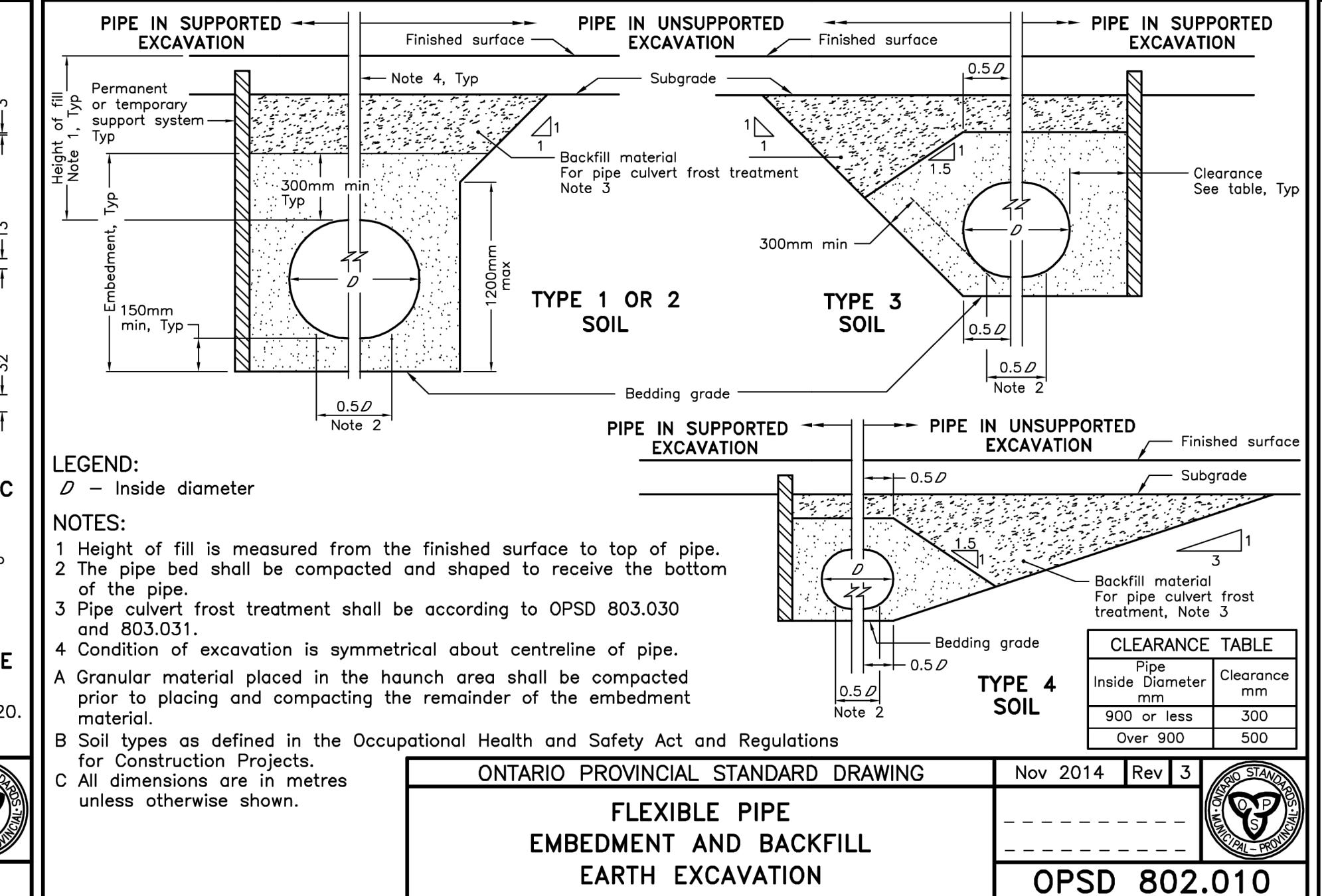
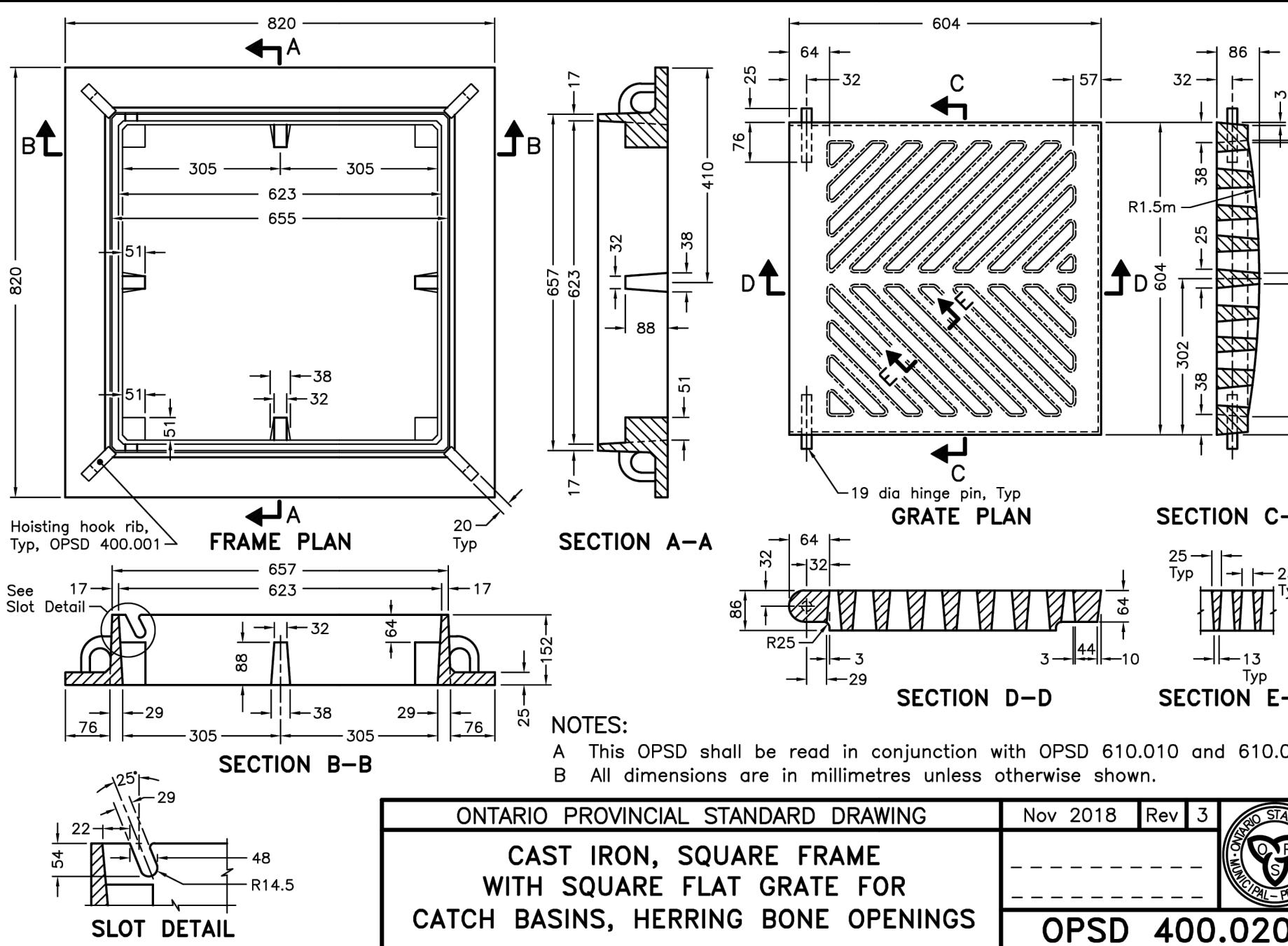
- AT EVERY HORIZONTAL JUNCTION BETWEEN DIFFERENT EXTERIOR FINISHES EXCEPT WHERE THE UPPER FINISH OVERLAPS THE LOWER FINISH
- OPENINGS IN EXTERIOR WALLS WHEN VERTICAL DISTANCE BETWEEN TOP OF OPENING AND BOTTOM OF EAVES EXCEEDS 1/4 OF HORIZONTAL EAVE OVERHANG

7.6 LOW ROOF EAVE TO BE FINISHED WITH PRE-FINISHED METAL EAVES TROUGH. PROVIDE ONE PRE-FINISHED ALUMINIUM DOWNSPOUT FOR EACH 50' RUN OF EAVES TROUGH OR PART THEREOF AROUND THE PERIMETER OF THE BUILDING. CONNECT DOWN SPOUTS TO THE STORM SEWER SYSTEM OR ONTO GRADE WITH PRECAST CONCRETE SPLASH PADS TO PREVENT ERO

HILLEN NURSERY OVERALL OPERATIONS







CONSTRUCTION NOTES:

1. GENERAL
 - SITE PLAN PROVIDED BY Y.C. LIU ENGINEERING
 - TOPOGRAPHIC SURVEY PROVIDED BY Y.C. LIU ENGINEERING.
 - ALL WORKS TO BE COMPLETED IN ACCORDANCE WITH STANDARDS AND SPECIFICATIONS, AND THE MINISTRY OF THE ENVIRONMENT AND ENERGY GUIDELINES (LATEST EDITION)
 - THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING ALL EXISTING UTILITIES PRIOR TO AND DURING CONSTRUCTION
 - CONTRACTOR RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS PRIOR TO THE START OF CONSTRUCTION
2. FIRE ROUTES (O.B.C SUBSECTION 3.2.5.)
 - LOCATED NOT LESS THAN 3m (9'-10") AND NOT MORE THAN 15m (49'-3") FROM THE BUILDING
 - FIRE HYDRANT TO BE MAX. 45m (147'-8") TO THE FIRE DEPARTMENT CONNECTION AND 90m (295'-3") TO PRINCIPLE ENTRANCE WHEN NO FIRE CONNECTIONS ARE REQUIRED
 - OVERHEAD CLEARANCE NOT LESS THAN 5m (16'-5")
 - CHANGE IN GRADIENT NOT MORE THAN 1 IN 12.5m OVER A MINIMUM DISTANCE OF 15m
 - MUST BE DESIGNED TO SUPPORT THE EXPECTED LOADS IMPOSED BY FIRE FIGHTING EQUIPMENT AND BE SURFACED WITH CONCRETE, ASPHALT, OR OTHER MATERIAL DESIGNED TO PERMIT ACCESSIBILITY UNDER ALL CLIMATIC CONDITIONS
 - HAVE TURNAROUND FACILITIES FOR ANY DEAD-END PORTION OF THE ACCESS ROUTE MORE THAN 90m (295'-3") LONG
 - HAVE ACCESS OPENINGS EVERY 15m (49'-3") ON WALLS REQUIRED TO FACE A FIRE ROUTE UNLESS BUILDING IS SPRINKLERED
 - FIRE ROUTE SIGNS TO BE MOUNTED 3m IN HEIGHT MEASURED FROM THE TOP LIMIT OF THE SIGN TO THE GRADE OF THE FIRE ROUTE SURFACE ADJACENT TO THE FIRE ROUTE SIGN
 - SIGNS TO BE SPACED NOT MORE THAN 30m (100ft.) BETWEEN SIGNS LOCATED ON THE SAME SIDE OF THE FIRE ROUTE AND SPACED SUCH THAT AT LEAST TWO SIGNS ARE CLEARLY VISIBLE AND LETTERING IS LEGIBLE FROM ALL LOCATIONS WITHIN THE FIRE ROUTE
 - THE PROPERTY OWNER IS RESPONSIBLE TO ENSURE THAT PHYSICAL OBSTRUCTIONS ARE NOT PLACED OR CONSTRUCTED IN LOCATIONS THAT INTERFERE WITH THE VISIBILITY

AND/OR LEGIBILITY OF ANY FIRE ROUTE SIGN AND TO ENSURE SUFFICIENT MAINTENANCE OF VEGETATION SUCH THAT UNOBSTRUCTED VIEWS FROM ALL FIRE ROUTE SIGNS ARE MAINTAINED AT ALL TIMES AND UNDER ALL CIRCUMSTANCES

RECOMMENDED MINIMUM PAVEMENT STRUCTURE FOR ASPHALT SURFACES:

T DUTY (PARKING STALLS):

150mm GRANULAR 'A' COMPACTED TO 100% S.P.M.D.D.
300mm GRANULAR 'B' COMPACTED TO 100% S.P.M.D.D.
40mm HL3 SURFACE ASPHALT COMPACTED TO 92-97% M.R.D.
50mm HL4 BINDER ASPHALT COMPACTED TO 92-97% M.R.D.

Y DUTY (DRIVING AISLES):

200mm GRANULAR 'A' COMPACTED TO 100% S.P.M.D.D.
400mm GRANULAR 'B' COMPACTED TO 100% S.P.M.D.D.
50mm HL3 SURFACE ASPHALT COMPACTED TO 92-97% M.R.D.
75mm HL8 BINDER ASPHALT COMPACTED TO 92-97% M.R.D.

RECOMMENDED MINIMUM STRUCTURE FOR GRAVEL SURFACES:

T DUTY (PARKING STALLS):

150mm GRANULAR 'A' COMPACTED TO 100% S.P.M.D.D.
300mm GRANULAR 'B' COMPACTED TO 100% S.P.M.D.D.

Y DUTY (DRIVING AISLES):

200mm GRANULAR 'A' COMPACTED TO 100% S.P.M.D.D.
400mm GRANULAR 'B' COMPACTED TO 100% S.P.M.D.D.

