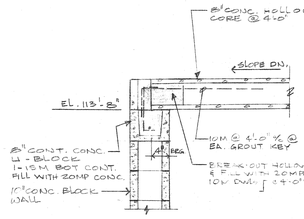
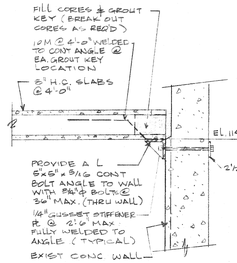


SECTION 1 / S2



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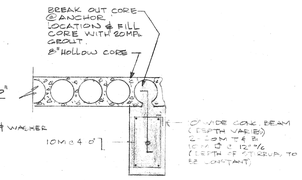

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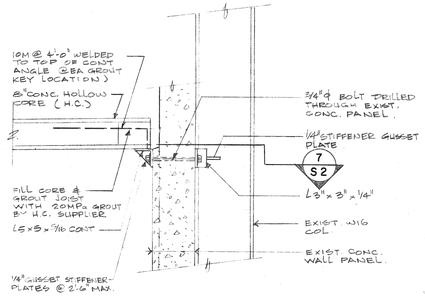

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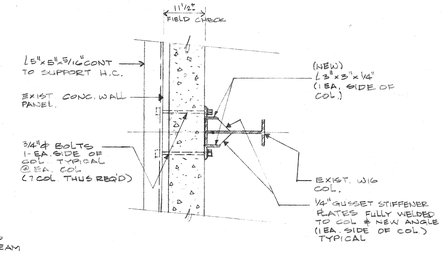

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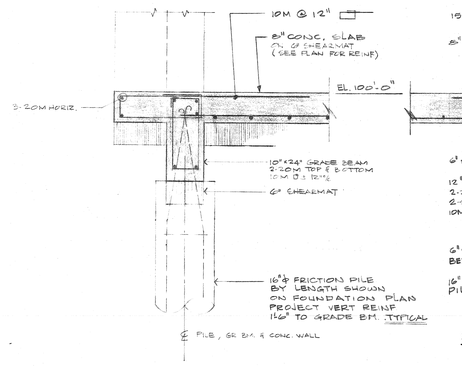

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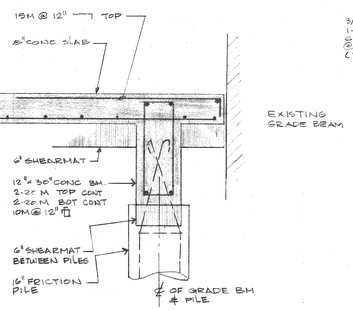

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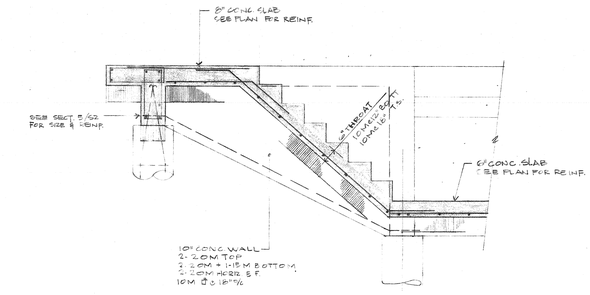

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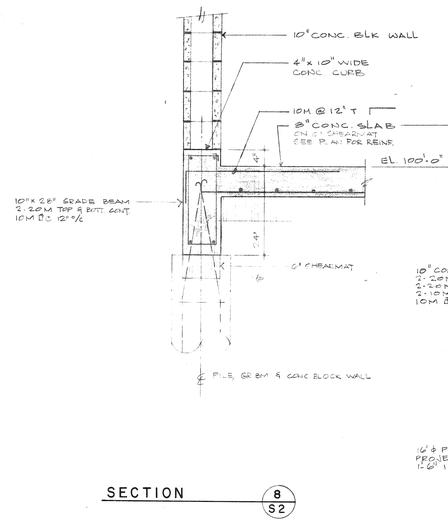
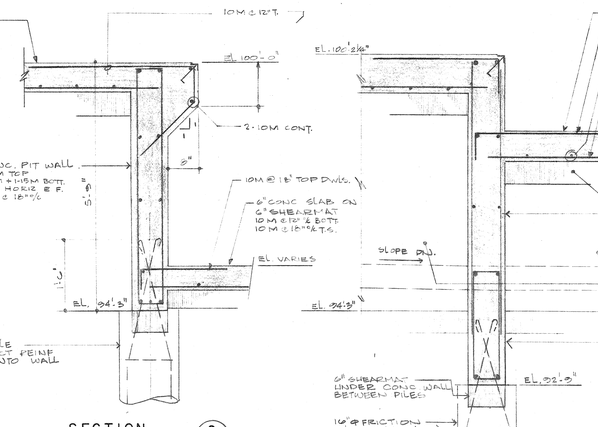


SECTION 8 / S2



SECTION 9 / S2

SECTION 11 / S2

A. GENERAL NOTES

1. Do not scale drawings.
2. All dimensions are to be verified with architectural drawings prior to construction.
3. The contractor is to verify the location and weights of all mechanical equipment located in the structure, and note and report any errors and omissions to the engineer prior to construction.
4. All friction piles are designed on a skin friction of 300 p.s.f.
5. Holes for 3/4" ø bolts shall be drilled with appropriate bits so as not to spall concrete on existing wall. Any spalling shall be patched so as to provide good bearing for washers.

B. CONCRETE

1. All concrete is to be manufactured and installed in accordance with the latest edition of CSA A23.1 and CSA A23.2.
2. Concrete strengths at 28 days shall be as follows unless noted otherwise on the drawings:
   a). Friction piles — Type 50 cement w/c ratio 0.45 Air 4-7%
   b). Walls, slabs and grade beams & footings — 20 MPa, Air 4% min.
   c). Masonry fill — 18 MPa
3. Maximum aggregate size is to be:
   a). Piles — 40 mm
   b). Walls, structural slabs & grade beams — 20 mm
   c). Slabs on grade — 20 mm
4. Maximum slump is to be 100 mm except for slabs which shall be 75 mm and piles and masonry fill which shall be 125 mm.
5. All construction joint keys are to be a minimum of 1½" deep.
6. 6" shearmat is to be placed under all structural members in contact with soil. All reinforcing supports and accessories shall be supported on plywood or tempered hardboard.
7. All openings in concrete members are to be trimmed with 1-15M all around both faces unless noted on drawings.

C. REINFORCING STEEL

1. All 10M bars and larger to be 400 MPa grade except for 10M temperature steel, ties and stirrups, and support rods which may be 300 MPa grade.
2. All reinforcing steel is to be detailed in accordance with the latest edition of the RSIO Detailing Manual and CSA A23.3 "Code for the Design of Concrete Structures for Buildings" unless noted otherwise.
3. All reinforcing is to be held in place by proper accessories and securely tied.
4. Reinforcing steel cover is to conform to the latest edition of CSA A23.3.
5. All reinforcing steel is to conform to the latest edition of CSA G30.12.

D. MASONRY

1. Concrete blocks to conform to CSA A165-1969 "Concrete Masonry Units."
2. a). Standard hollow masonry units shall be H/1000/A/O.
3. Exterior and load bearing masonry walls are to be built with type "S" mortar having a minimum strength of 1,800 p.s.i. at 28 days. Mortar shall conform to the latest edition of CSA A179.
4. Use Durawall or equal every second course. Every course for stack bond.
5. All masonry walls to be properly braced until structure is closed in.
6. Bond beams and lintels shall be as indicated on drawings.
7. Any inserts required by other trades in masonry shall be built in by this trade.

E. STRUCTURAL STEEL

1. Structural steel to comform to the latest edition of CSA G40.21, "Structural Quality Steels" and CSA G40.20 "General Requirements for Rolled or Welded Structural Quality Steel."
2. All rolled steel structure sections to be grade 40.21-44W.
3. Fabrication and erection of structural steel shall be performed in accordance with CSA S16, Steel Structures for Buildings.
4. All welding shall conform to the latest edition of CSA W59.1, General specifications for welding of steel structures. Fabricator shall be properly certified in accordance with CSA W47.1, Certification of Companies for Fusion Welding of Steel Structures. Joists which are resistance welded shall conform to W55.2, Resistance Welding Practice and W55.3, Resistance Welding Qualification Code for Fabrication of Structural Members used in Buildings.
5. All bolted connections to use A325 high strength bolts.
6. Fabricator to notify engineer of any member substitution and changed connection detail.

F. PRECAST CONCRETE

1. The general contractor is to supply a true and level bearing surface for the precast concrete slab.
2. All angles, anchor bolts and miscellaneous metals necessary to support precast shall be designed, detailed and supplied by the precast supplier. Where applicable the general contractor is to install any cast in place metals.
3. Precast concrete slab supplier to check with the mechanical and electrical drawings for any floor openings. All holes larger than 6" in diameter to be formed in the shop.
4. Location of point loads over 100# to be forwarded to the precast concrete slab supplier prior to fabrication.
5. All miscellaneous inserts required by other trades in slabs shall be the responsibility of that trade.
6. The precast concrete slab supplier is to install, align and level all precast concrete slab before grouting any joints.
7. The precast concrete slab supplier shall submit engineering drawing bearing the seal of a registered engineer to the project design engineer for the review prior to fabrication.
8. Precast concrete is to be designed in accordance with the latest edition of CSA A23.3.

AS BUILT DRAWINGS

DIRECTOR OF TRANSIT

DIRECTOR OF CIVIC PROPERTIES

DATE	DR	REVISION

THIS DRAWING MUST NOT BE SCALED.

- THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS, DATUMS AND LEVELS PRIOR TO COMMENCEMENT OF WORK. ALL ERRORS AND OMISSIONS TO BE REPORTED IMMEDIATELY TO THE ARCHITECT.
- VARIATIONS & MODIFICATIONS TO WORK SHOWN ON THESE DRAWINGS SHALL NOT BE CARRIED OUT WITHOUT WRITTEN PERMISSION FROM THE ARCHITECT.
- THIS DRAWING IS THE EXCLUSIVE PROPERTY OF THE ARCHITECTS AND CAN BE REPRODUCED ONLY WITH THE PERMISSION OF THE ARCHITECTS, IN WHICH CASE THE REPRODUCTION MUST BEAR THEIR NAME AS ARCHITECTS.

NUMBER TEN ARCHITECTURAL GROUP
ARCHITECTS AND PLANNERS
210 - 175 HARGRAVE ST., WINNIPEG, CANADA R3C 3R9 (204) 943-0981

ASSOCIATE ARCHITECT

CONSULTING ENGINEER
CROSIER KILGOUR & PARTNERS LTD.
Consulting Structural Engineers / Winnipeg - Calgary - Saskatoon - Edmonton
1100-213 Notre Dame Avenue • Winnipeg, Manitoba R3B 1N3 • Ph: (204) 943-7501

ARCH. SEAL

ENG. SEAL

PROVINCE OF MANITOBA — 30/4/81 — T. C. GIBBS — REGISTERED ENGINEER

PROJECT

DYNAMOMETER FACILITY ADDITION TO THE OVERHAUL & REPAIR SHOP

CITY OF WINNIPEG TRANSIT

WINNIPEG MANITOBA

SHEET TITLE

SECTIONS

DRAWN BY	DATE	SHEET NO.
S.H.	APRIL 30/81	S-2
CHECKED BY	PROJECT NO.	FILE NO.
	7742	

ADDRESS 421 OSBORNE ST.
PROJECT NO. 80115
SHEET NO. S-2
DYNAMOMETER FACILITY
DESCRIPTION SECTIONS