GENERAL:

.1 DO NOT SCALE DRAWINGS.
.2 VERIFY ALL DIMENSIONS PRIOR TO COMMENCING CONSTRUCTION.
.3 VERIFY ALL MECHANICAL AND ELECTRICAL REQUIREMENTS WITH RESPECTIVE DISCIPLINES. VERIFY ALL MAJOR OPENINGS WHICH ARE REQUIRED BUT ARE NOT SHOWN ON THE DRAWINGS WITH THE CONTRACT ADMINISTRATOR.
.4 SHOP DRAWINGS AND PRODUCT DATA: SUBMIT OR REVIEW PRIOR TO FABRICATION. SHOP DRAWINGS AND PRODUCT DATA REQUIRED FOR THIS PROJECT INCLUDE:
- INSULATED CONCRETE PANELS
- ROOFING
- STEEL DOORS AND FRAMES
- OVERHEAD DOORS
- PAINT

.5 UNLESS NOTED OTHERWISE, INSTALL PRODUCTS IN ACCORDANCE WITH MANUFACTURES WRITTEN INSTRUCTIONS.

PRESSURE TREATED LUMBER AND PLYWOOD:

- WOOD STUDS AND PLATES TO BE GROUP D, #2 OR BETTER, (SPF).
- ALL WOOD TO BE KILN DRIED.
- PLYWOOD THICKNESS AS SHOWN ON DRAWINGS.
- PRESSURE PRESERVATIVE: CHROMATED COPPER ARSENATE TO CSA 080-74.
- SURFACE-APPLIED WOOD PRESERVATIVE: CLEAR SOLUTION, WATER REPELLENT PRESERVATIVE.
- ALL FASTENERS TO BE GALVANIZED TO CAN/CSA-G164.

INSULATED CONCRETE PANELS

.1 MANUFACTURER QUALIFICATIONS:
- MANUFACTURER OF PRECAST CONCRETE ELEMENTS SHALL BE CERTIFIED BY THE CANADIAN STANDARDS ASSOCIATION (CSA) ACCORDING TO CSA-A23.4 "PRECAST CONCRETE - MATERIALS AND CONSTRUCTION.
- MANUFACTURER SHALL BE A MEMBER IN GOOD STANDING WITH THE CANADIAN PRECAST/PRESTESSED CONCRETE INSTITUTE (CPCI).

.2 FIELD VERIFICATION:
- CONTRACTOR SHALL FIELD VERIFY ALL DETAILS AND DIMENSIONS RELATED TO THE MANUFACTURING AND INSTALLATION OF NEW PANELS.
- ENSURE PROFILES AND DIMENSIONS OF EXISTING CONCRETE WALLS AND SOFFITS/OVERHANGS ARE ACCOMMODATED.

.3 SAMPLES:
- PROVIDE 300x200x25mm SAMPLES OF PANELS FOR APPROVAL.
- PROVIDE FINISHES AS DESCRIBED BELOW.

.4 MATERIALS:
- OVERALL PANEL THICKNESS: 254mm (10")
  - 76mm (3") EXTERIOR CONCRETE
  - 102mm (4") INSULATION - RSI 3.52 (R-20)
  - 76mm (3") INTERIOR CONCRETE
- CONCRETE MIXES;
  - 28 DAY COMPRESSIVE STRENGTH: 35 MPa (CSA-A23.4)
  - EXPOSURE CLASS: C-2 (CSA-A23.1)
  - CEMENT, AGGREGATES WATER AND ADMIXTURES: TO CSA-A23.4 AND CSA-A23.1
  - AIR ENTRAINMENT ADMIXTURE: TO ASTM C260 (CSA-A23.1)
  - USE OF CALCIUM CHLORIDE IS NOT PERMITTED
- INSULATION: EXTRUDED POLYSTYRENE TO CAN/CGSB-51.20-M87 TYPE 2
- COLOUR AND EXTERIOR FINISH: TO MATCH EXISTING CONCRETE PANELS
  - LOWER PORTION - SMOOTH
  - UPPER PORTION - SANDBLASTED
- ANCHORS AND SUPPORTS: TO CSA-G40.21, TYPE 400W.

.4 INSTALLATION:
- INSTALL IN ACCORDANCE WITH ACCEPTED SHOP DRAWINGS AND MANUFACTURER'S WRITTEN INSTRUCTIONS.

MODIFIED BITUMINOUS ROOFING:

- ACCEPTABLE SYSTEMS: SOPREMA, IKO.

.1 GYPSUM BOARD SHEATHING:
- TO CSA A82.27, EXTERIOR GRADE, 1/2" THICKNESS.
- FASTEN TO STEEL DECK USING No. 10 FLAT HEAD, SELF-TAPPING, TYPE A OR TYPE AB, CADMIUM PLATED SCREWS TO CSA B35.3.

.2 VAPOUR BARRIER:
- TO CGSB 37-GP-56M, STYRENE-BUTADIENE-STYRENE (SBS) ELASTOMERIC POLYMER, PREFABRICATED SHEET, GLASS REINFORCEMENT, WEIGHING 95 g/m2.
- TOP SANDED, BOTTOM POLYPROPYLENE.

.3 ROOF MEMBRANE:

BASE SHEET:
- TO CGSB 37-GP-56M, STYRENE-BUTADIENE-STYRENE (SBS) ELASTOMERIC POLYMER, PREFABRICATED SHEET, POLYESTER REINFORCEMENT, WEIGHING 180 g/m2.
- TOP POLYETHYLENE, BOTTOM SANDED.

CAP SHEET:
- TO CGSB 37-GP-56M, STYRENE-BUTADIENE-STYRENE (SBS) ELASTOMERIC POLYMER, PREFABRICATED SHEET, POLYESTER REINFORCEMENT, WEIGHING 250 g/m2.
- TOP GRANULE SURFACE, BOTTOM POLYETHYLENE.

.4 PRIMER:
- AS RECOMMENDED BY ROOFING SYSTEM MANUFACTURER.

.5 BITUMEN:
- ASPHALT TO CSA A123.4, TYPE 2.

.6 INSULATION BOARD:
- POLYISOCYANURATE BOARD INSULATION TO CAN/CGSB-51.26, THICKNESS AS INDICATED ON THE DRAWINGS, SHIPLAPPED EDGES, FELT FACERS.
- ADHERED TO ROOF IN FULL BED OF ASPHALT.
- ACCEPTABLE PRODUCT: FIRESTONE ISO 95+, "E'NRG'Y 2" BY NRG BARRIERS, EXELTHERM Rx ISO, JOHNS MANVEL.

.7 FIBREBOARD:
- HIGH DENSITY WOOD FIBREBOARD, 1/2" THICKNESS.

.8 INSTALLATION:
- INSTALL FIBREBOARD AND INSULATION IN FULL BED OF ASPHALT.
- DO ALL ROOF WORK IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND CRCA STANDARDS.

OVERHEAD DOORS:

.1 MATERIALS:
- GALVANIZED STEEL SHEET WITH Z275 ZINC COATING.
- 0.41mm (0.016") SKINS AND 1.52mm (16 GA) END CAPS.
- 2 COAT BAKED ON POLYESTER FINISH.
- INSULATION TO PROVIDE (MINIMUM R-16) VALUE. 01
- 3" 14 ga. GALVANIZED STEEL TRACKS, HEAVY DUTY HARDWARE.
- GLAZING: 610x305 (24"x12") INSULATED PANELS, 3 PER DOOR.
- INTERIOR MOUNTED SLIDE LOCK AND WEATHERSTRIPPED.
- AUTO-REVERSING BOTTOM SAFETY EDGE.
- MOTORIZED OPERATION W/ MANUAL CHAIN HOIST OVERRIDE.
  - MIN. 3/4 HP, 208V/3 PH MOTOR
- INDUCTION LOOP "SWITCHES" (2 PER DOOR) CUT INTO CONCRETE FLOOR AND APPROACH SLABS ON INTERIOR AND EXTERIOR OF DOOR.
  - ALL LOOPS INTENDED TO ACTIVATE (OPEN) DOOR AS WELL AS HOLD DOOR IN OPEN POSITION WHILE VEHICLE IS PRESENT.
- INTERIOR SURFACE MOUNTED 3-BUTTON DOOR CONTROL STATION IN NEMA 1 ENCLOSURE - "OPEN-CLOSE-STOP" 01
- TRAFFIC LIGHT INDICATORS MOUNTED ON APPROACH SIDE OF DOOR.
  - "GREEN" TO INCIDATE DOOR IS OPEN
  - "RED" TO INDICATE DOOR IN MOTION
  - BOTH LIGHTS OFF WHEN DOOR IS CLOSED
- ACCEPTABLE PRODUCTS: THERMO-DOR TD-134 BY RELIABLE OVERHEAD DOORS, OR CLOPLAY #3720 BY WALLACE & WALLACE

.2 INSTALLATION:
- DOOR INSTALLER TO ENSURE COMPLETION OF ALL ELECTRICAL AND CONTROL WIRING TO PROVIDE A COMPLETE, FUNCTIONAL INSTALLATION. 01

STEEL DOORS AND FRAMES

- HOT DIPPED GALVANIZED STEEL SHEET: TO ASTM A653M, Z275 COATING.
- REINFORCEMENT CHANNEL: TO CSA G40.20/G40.21, TYPE 44W, COATING DESIGNATION TO ASTM A653M, Z275 COATING.

1. DOORS:
   - FACE SHEETS: 1.2mm (18 GA) BASE METAL THICKNESS.
2. FABRICATION:
   - FABRICATE DOORS WITH POLYURETHANE INSULATED CORE
   - FABRICATE DOORS WITH LONGITUDINAL EDGES CONTINUOUSLY WELDED.
   - SEAMS: GRIND WELDED JOINTS TO A FLAT PLANE, FILL WITH METALLIC PASTE FILLER AND SAND TO A UNIFORM SMOOTH FINISH
   - BLANK, REINFORCE, DRILL DOORS AND TAP FOR TEMPLATED HARDWARE
   - PROVIDE FLUSH STEEL TOP CAP
3. FRAMES:
   - 16 GA FULLY WELDED CONSTRUCTION.
   - EXTERIOR DOOR FRAME THERMALLY BROKEN
4. FABRICATION:
   - BLANK, REINFORCE, DRILL AND TAP FRAMES FOR HARDWARE USING TEMPLATES PROVIDED BY FINISH HARDWARE SUPPLIER.
   - REINFORCE FRAMES FOR SURFACE MOUNTED HARDWARE
   - PREPARE FRAME FOR DOOR SILENCERS, 3 PER DOOR
   - WELDING IN ACCORDANCE WITH CSA W59
   - GRIND WELDED JOINTS AND CORNERS TO A FLAT PLANE, FILL WITH METALLIC PASTE AND SAND TO UNIFORM SMOOTH FINISH

DOOR HARDWARE:

- ALL LOCKS TO BE KEYED TO MATCH EXISTING DOORS AND THE CITY'S REQUIREMENTS.

.1 CODE 1

HINGES	CB191 NRP	630	STANLEY
ELECTRIC STRIKE	SUPPLY AND INSTALLATION BY CITY PREP DOOR FRAME TO RECEIVE STRIKE		
EXIT DEVICE	88TP	629	VON DUPRIN
CLOSER	4111	689	LCN
OH STOP	100S SERIES	630	GLYNN JOHNSON
WEATHERSTRIP	W13	AL	K.N. CROWDER
BOTTOM SWEEP	W13S	AL	K.N. CROWDER
THRESHOLD	CT45	AL	K.N. CROWDER

.1 CODE 2

HINGES	CB179 114x101	26D	STANLEY
PASSAGE SET	D10S	626	SCHLAGE
CLOSER	4111	26D	LCN
SURFACE BOLTS	1631/1632	26D	GLYNN JOHNSON
WEATHERSTRIP	W21	AL	K.N. CROWDER
THRESHOLD	6mm CHECKERPLATE		

SEALANTS:

.1 MULTICOMPONENT URETHANES (FOR CONCRETE AND MASONRY)
- TO CAN/CGSB-19.24.

.2 ONE-PART SILICONES (FOR METAL)
- TO CAN/CGSB-19.18.

.3 BUTYL SEALANT (SETTING ALUMINUM THRESHOLDS).
- TO CGSB 19-GP-14M.

PAINTING:

- COLOURS TO BE SELECTED

INTERIOR:
.1 CONCRETE (PRECAST & CAST-IN-PLACE):
- MPI SYSTEM INT 3.1A, PREMIUM GRADE, GLOSS LEVEL 3.

.2 STRUCTURAL STEEL AND METAL FABRICATIONS:
- MPI SYSTEM INT 5.1Q, PREMIUM GRADE, GLOSS LEVEL 3.

.3 GALVANIZED AND ZINC COATED METAL:
- MPI SYSTEM INT 5.3M, PREMIUM GRADE, GLOSS LEVEL 3.

EXTERIOR:
.1 GALVANIZED AND ZINC COATED METAL:
- MPI SYSTEM EXT 5.1C, PREMIUM GRADE, GLOSS LEVEL 3.

ROOM / AREA FINISHING SCHEDULE

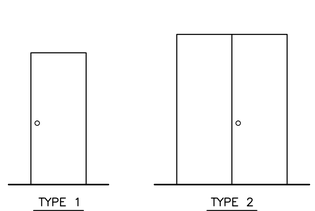
ROOM / AREA		FLOOR			NORTH WALL		EAST WALL		SOUTH WALL		WEST WALL		CEILING		
ROOM #	ROOM / AREA NAME	MAT	FIN	BASE	MAT	FIN	MAT	FIN	MAT	FIN	MAT	FIN	MAT	FIN	HT
101	MAINTENACE BAY	C	–	–	C(e)	P	C	P	C	P	C	P	STR	P	7925±

- PAINTING TO INCLUDE ALL CONCRETE WALLS, STEEL BEAMS, COLUMNS, JOISTS AND STEEL ROOF DECK.
- NORTH WALL INCLUDES BOTH NEW AND EXISTING CONCRETE. EXISTING WALL TO BE CLEANED AND PATCHED ("BUG HOLES", CRACKS, ETC.) PRIOR TO PAINTING. 01

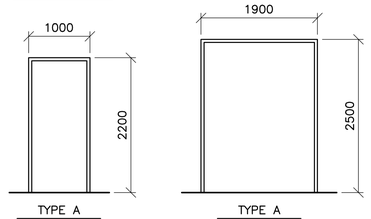
DOOR / WINDOW SCHEDULE

DOOR / WINDOW				FRAME			DOOR SIZE	HARDWARE CODE	F.R. RATING (HOURS)	REMARKS
NUMBER	TYPE	MAT	FIN	TYPE	MAT	FIN				
D101A	INSULATED OVERHEAD DOOR						4270 x 4270 (14'x14')	–	–	
D101B	INSULATED OVERHEAD DOOR						4270 x 4270 (14'x14')	–	–	
D101C	1	HM	P	A	PS	P	900 x 2150 x 45	1	–	INSUL DOOR AND FRAME
D101D	1	HM	P	A	PS	P	900 x 2150 x 45	1	–	INSUL DOOR AND FRAME
D101E	2	HM	P	A	PS	P	2 – 1050 x 2450 x 45	2	1.5	

DOOR TYPES:



FRAME TYPES:



ABBREVIATIONS:

C	– CONCRETE
CB	– CONCRETE BLOCK
(e)	– EXISTING
FIN	– FINISH
GALV	– GALVANIZED
GB	– GYPSUM BOARD
HM	– HOLLOW METAL
HT	– HEIGHT
INSUL	– INSULATED
LAT	– LAY-IN ACOUSTIC TILE
MAT	– MATERIAL
P	– PAINT
PS	– PRESSED STEEL
RB	– RUBBER BASE
RSF	– RESILIENT SHEET FLOORING
STR	– STRUCTURE
TB	– THERMALLY BROKEN

REFERENCE DRAWINGS

NO.	DESCRIPTION

NO.	DATE	DESCRIPTION	PREPARED	REVIEW	DESIGN	AUTHORIZE
01	14.02.05	ISSUED W/ ADDENDUM No. 01	EV	CM	DLP	DLP
00	14.01.17	ISSUED FOR CONSTRUCTION	EV	CM	DLP	DLP

REVISIONS/ISSUE | DRAFTING | ENGINEERING

SEAL:

ORIGINAL DRAWING
REVISION "00" SEALED BY
C.P. MOTA
14.01.17

PERMIT STAMP

APEGM
Certificate of Authorization
TETRA TECH WEI Inc.
No. 5313 Date: April 30, 2014

DESIGNED BY:	PREPARED BY:	REVIEWED BY:
DLP	EV	DLP
AUTHORIZED BY:	DATE:	SCALE:
DLP	13.11.06	AS NOTED

SUB-CONSULTANT(S):

CLIENT:
Winnipeg
CITY OF WINNIPEG
TRANSIT DEPARTMENT

TETRA TECH

PROJECT NAME:
CITY OF WINNIPEG TRANSIT - FORT ROUGE GARAGE
BUS MAINTENANCE ADDITION

DRAWING DESCRIPTION:
BUILDING SPECIFICATIONS

DRAWING NO: 1329720500-DWG-B0007
REV: 01

3D MODEL REF No:

A1 (841 x 594)