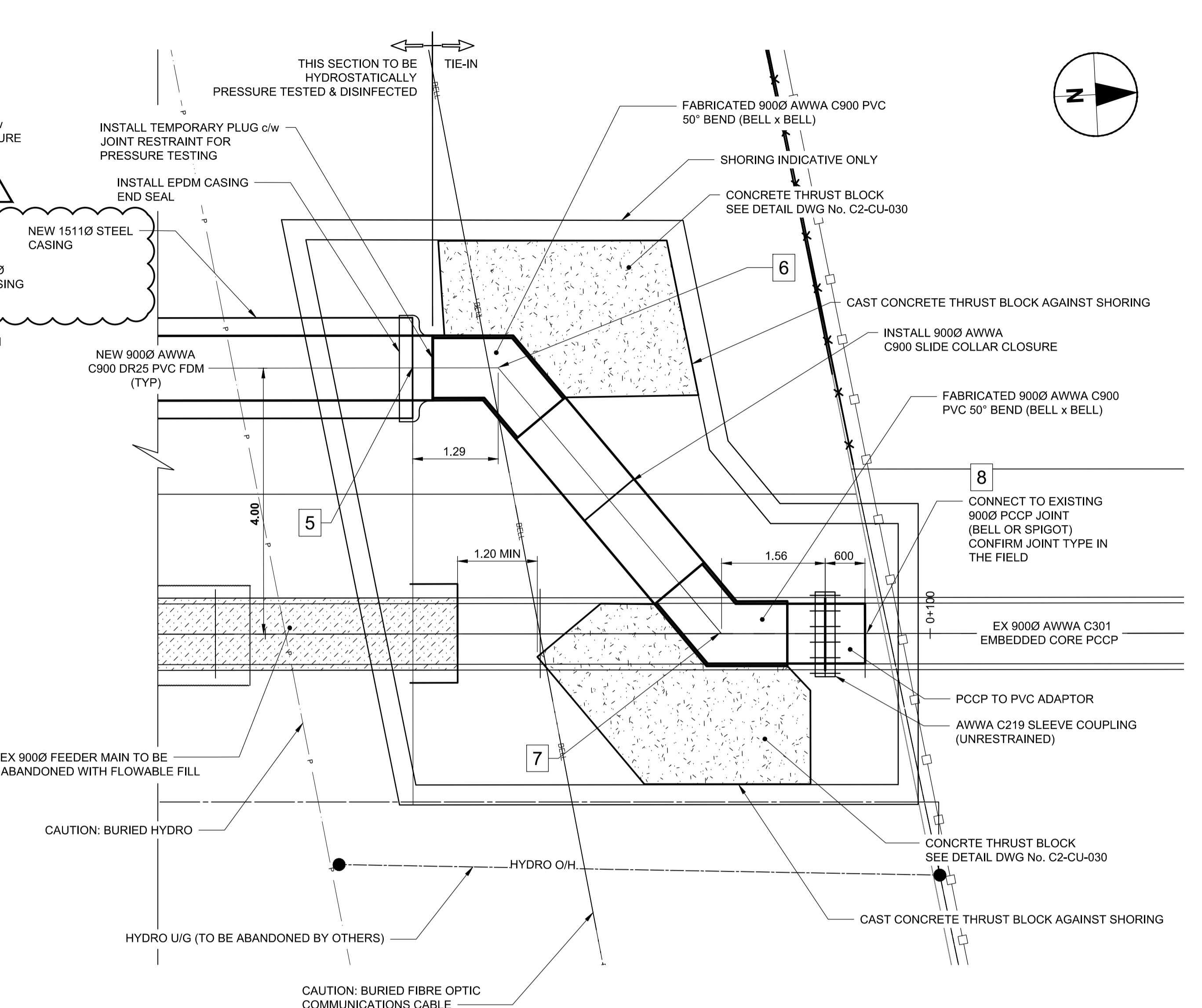


NEW FEEDER MAIN CONNECTION - SOUTH END
Scale 1:50



NEW FEEDER MAIN CONNECTION - NORTH END
Scale 1:50

SHORING NOTES:

- THE CONTRACTOR IS RESPONSIBLE FOR DESIGN & LAYOUT OF SHORING SYSTEMS
- THE CONTRACTOR SHALL CONSTRUCT A TIGHT SHORING SYSTEM TO A MINIMUM OF 150 ABOVE THE TOP OF THE EXISTING FEEDER MAIN TO PROTECT THE EX FEEDER MAIN AND EMBEDMENT SOILS FROM MOVEMENT & UNDERMINING UNTIL COMMENCEMENT OF EXCAVATION FOR THE FINAL TIE-INS
- SHAFTS SHALL BE BACKFILLED WITH CW2030 TYPE 2 MATERIAL, COMPACTED TO 95% SPMDD TO A MINIMUM OF 300 ABOVE THE TOP OF THE THRUST BLOCKS
- SHORING REMOVAL AND BACKFILLING SHALL BE STAGED TO PROCLUDE VOIDS BEHIND AND ADJACENT TO THE THRUST BLOCKS EXCEPT WHERE NOTED
- SHORING TO BE LEFT IN PLACE WHERE THRUST BLOCKS ARE CAST AGAINST THE SHORING WALL. SHORING TO BE CUT-OFF WITHIN 0.3 OF THE TOP OF THE THRUST BLOCK. ALL OTHER SHORING TO BE REMOVED
- IF TIMBER LAGGING IS USED, IT SHALL BE REMOVED (WHERE SHORING LEFT-IN-PLACE) PRIOR TO CASTING CONCRETE THRUST BLOCKS. TIMBER LAGGING MAY REMAIN ELSEWHERE

FEEDER MAIN CONNECTION NOTES:

- ALL PVC PIPE JOINTS TO BE RESTRAINED
- THRUST BLOCKS SHALL ACHIEVE A MINIMUM COMPRESSIVE STRENGTH OF 20MPa PRIOR TO PUTTING THE FEEDER MAIN INTO SERVICE
- CONTRACTOR TO CONFIRM GEOMETRY & LAYOUT OF TIE-IN PIPING & FITTINGS PRIOR TO ASSEMBLY/INSTALLATION & CONSTRUCTION OF THE CONCRETE THRUST BLOCKS

COORDINATE TABLE

POINT NUMBER	NORTHING	EASTING
1 - SOUTH END CONNECTION	5523566.705	631069.184
2 - 45° BEND	5523570.642	631069.304
3 - 45° BEND	5523574.761	631065.429
4 - BEGIN CASING	5523576.177	631065.472
5 - END CASING	5523618.679	631066.768
6 - 50° BEND	5523619.966	631066.808
7 - 50° BEND	5523623.199	631070.908
8 - NORTH END CONNECTION	5523625.355	631070.974
9 - 6" AIR RELEASE CHAMBER	5523566.405	631069.175
10 - 500 BLOW-OFF VALVE	5523567.004	631069.194

WARNING

IF POWER EQUIPMENT OR EXPLOSIVES ARE TO BE USED FOR EXCAVATION ON THIS PROJECT THE CONTRACTOR MUST:

1. NOTIFY THE GAS COMPANY OF THE PROPOSED LOCATION OF EXCAVATION.
2. TAKE PRECAUTION TO AVOID DAMAGE TO GAS COMPANY INSTALLATIONS SEE PROVINCIAL REGULATION 210/72 FOR DETAILS.
3. OBTAIN EXCAVATION PERMITS PRIOR TO CONSTRUCTION.

150 WM	150 WM	PIPE ABANDONMENTS	150 WM	150 WM	150 WM	150 WM	150 WM
HYDRANT	HYDRANT	SURVEY BAR	HYDRANT	LAND DRAINAGE SEWER	LAND DRAINAGE SEWER	WATER MAIN	WATER MAIN
VALVE	VALVE	CURB STOP	VALVE	WASTE WATER SEWER	WASTE WATER SEWER	HYDRANT	HYDRANT
LAND DRAINAGE SEWER	LAND DRAINAGE SEWER	REDUCER	LAND DRAINAGE SEWER	WASTE WATER SEWER	WASTE WATER SEWER	VALVE	VALVE
WASTE WATER SEWER	WASTE WATER SEWER	COUPLING	WASTE WATER SEWER	PAVEMENT CROWN	PAVEMENT CROWN	LAND DRAINAGE SEWER	LAND DRAINAGE SEWER
SEWER SERVICE PIPE	SEWER SERVICE PIPE	ANODE	SEWER SERVICE PIPE	N/W PROPERTY LINE	N/W PROPERTY LINE	WASTE WATER SEWER	WASTE WATER SEWER
DRAINAGE CONNECTION PIPE	DRAINAGE CONNECTION PIPE	HYDRO	DRAINAGE CONNECTION PIPE	S/E PROPERTY LINE	S/E PROPERTY LINE	PAVEMENT CROWN	PAVEMENT CROWN
MANHOLE	MANHOLE	MTS	MANHOLE	N/W GUTTER	N/W GUTTER	N/W PROPERTY LINE	N/W PROPERTY LINE
CATCH BASIN	CATCH BASIN	GAS	CATCH BASIN	S/E GUTTER	S/E GUTTER	S/E PROPERTY LINE	S/E PROPERTY LINE
CURB INLET	CURB INLET	TESTHOLE	CURB INLET			N/W GUTTER	N/W GUTTER
CULVERT	CULVERT	LAMP STANDARD	CULVERT			S/E GUTTER	S/E GUTTER
EXISTING	NEW	EXISTING	NEW				

UNDERGROUND STRUCTURES

SUPV. U/G STRUCTURES DATE

LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE. BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

AECOM

DESIGNED BY: ADB
CHECKED BY: WJd

DRAWN BY: WJd
APPROVED BY: WJd

HOR. SCALE: AS NOTED
VERTICAL: AS NOTED

CONSULTANT PROJECT NUMBER: 60321148

ENGINEER'S SEAL

PROVINCE OF MANITOBA

A. D. BRAUN
Member
24453

REGISTERED PROFESSIONAL ENGINEER

THE CITY OF WINNIPEG
PUBLIC WORKS DEPARTMENT

Waverley Street Underpass at CN Mile 3.89 Rivers Sub
Contract 2: Underpass Structure, Railworks, Roadworks, Land Drainage Sewer, Pumping Station and Landscaping Works

EXISTING MIDTOWN FEEDER MAIN RAIL CROSSING FM OFF-LINE REPLACEMENT DETAILS 1

CITY DRAWING NUMBER: U239-2016-C2-CU-029
SHEET 29 OF 41
CONSULTANT DRAWING NUMBER: C2-CU-029

APEGM
Certificate of Authorization
AECOM Canada Ltd.
No. 4671 Date: _____

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

BID OPPORTUNITY NO. 473-2016

PA:60321148-900-Work\9100-DD CAD-200-SHEETS\Municipal\63353-C2-CU-Midtown FM Off-line Replacement.dwg