- ALL DIMENSIONS ARE IN METRIC UNITS UNLESS NOTED. THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS SHOWN ON THE STRUCTURAL DRAWINGS AGAINST THE BUILDING, PROCESS, MECHANICAL, AND ELECTRICAL DRAWINGS THE EXISTING SITE CONDITIONS BEFORE BEGINNING CONSTRUCTION AND REPORT DISCREPANCIES TO THE CONTRACT ADMINISTRATOR BEFORE PROCEEDING WITH THE WORK. DO NOT SCALE DRAWINGS
- THE DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE MANITOBA BUILDING CODE 2010, IT'S SUPPLEMENTS AND THE LATEST EDITIONS OF REFERENCED CODES AND STANDARDS THEREIN, UNLESS NOTED OTHERWISE. BUILDING IMPORTANCE CATEGORY: NORMAL.
- REFER TO THE BUILDING, PROCESS, MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATIONS AND DIMENSIONS OF OPENINGS, SLEEVES AND OTHER BUILDING COMPONENTS NOT SHOWN ON THE STRUCTURAL DRAWINGS. REPORT DISCREPANCIES AND OBTAIN CONTRACT ADMINISTRATOR'S PRIOR APPROVAL BEFORE INSTALLING SLEEVES AND OPENINGS THAT ARE NOT INDICATED ON THE STRUCTURAL DRAWINGS BEFORE PROCEEDING WITH CONSTRUCTION.
- REFER TO BUILDING, PROCESS, MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATION OF PITS, BASES, DRAINS, TRENCHES, SUMPS, HOUSEKEEPING PADS, DEPRESSIONS, GROOVES, CURBS, CHAMFERS AND SLOPES NOT SHOWN ON THE STRUCTURAL DRAWINGS.
- CONTRACTOR TO CONFIRM WITH EQUIPMENT SUPPLIERS DIMENSIONS AND ALL OTHER CRITICAL DETAILS PRIOR TO CONSTRUCTION AND INSTALLATION. REPORT DISCREPANCIES AND OBTAIN APPROVAL PRIOR TO
- NOTIFY THE CONTRACT ADMINISTRATOR 48 HOURS IN ADVANCE FOR SITE REVIEW.
- DRAWINGS SHOW COMPLETED STRUCTURES ONLY. PROVIDE TEMPORARY BRACING FOR CONSTRUCTION LOADING CONDITIONS AND STABILITY OF THE STRUCTURE DURING CONSTRUCTION. CONSTRUCTION LOADS SHALL NOT EXCEED THE DESIGN LOADS SHOWN ON DRAWINGS.
- CONSTRUCTION METHODS REQUIRING TEMPORARY SHORING, OR BRACING, SHALL BE SUBMITTED TO THE CONTRACT ADMINISTRATOR FOR REVIEW. THE CONTRACTOR SHALL RETAIN A PROFESSIONAL ENGINEER, REGISTERED IN THE PROVINCE OF MANITOBA. TO PROVIDE ENGINEERING DESIGN AND TAKE RESPONSIBILITY FOR ANY SHORING AND BRACING OR OTHER WORK REQUIRING ENGINEERING DESIGNS TO COMPLETE THE CONSTRUCTION.
- VERIFY LOCATION OF UNDERGROUND SERVICES AND BE RESPONSIBLE FOR DISRUPTIONS.
- ALL SHOP DRAWING SUBMITTALS TO BE METRIC (MILLIMETERS) UNLESS NOTED.

EXCAVATION & BACKFILL

- EXCAVATE TO LINES AND LEVELS NECESSARY TO PROPERLY COMPLETE THE WORK. CONTROL EXCAVATION TO ENSURE BOTTOM OF EXCAVATION DOES NOT SOFTEN DUE TO EXCESS MOISTURE. REFERENCE THE GEOTECHNICAL REPORT FOR FURTHER INFORMATION.
- ALL BACKFILL SHALL BE COMPACTED USING MECHANICAL EQUIPMENT. ON THE EXTERIOR OF THE STRUCTURES, THE BACKFILLING SHALL BE PLACED WITH SUFFICIENT ALLOWANCE FOR SETTLEMENT AND IN GENERAL, ITS TOP SURFACE SHALL BE NEATLY GRADED.
- MAINTAIN OPTIMUM MOISTURE CONTENT TO PERMIT COMPACTION TO ATTAIN SPECIFIED DENSITIES. PROTECT BACKFILLED GRADE, DURING AND AFTER COMPLETION OF BACKFILL OPERATION, FROM SOFTENING DUE TO EXCESS MOISTURE.
- BACKFILL TO GRADES INDICATED IN LAYERS NOT EXCEEDING 300mm UNCOMPACTED, UNLESS NOTED

FOUNDATION

- GEOTECHNICAL REPORT IS AVAILABLE AS REFERENCED IN THE CONTRACT SPECIFICATIONS.
- ALLOWABLE BEARING CAPACITY FOR RAFT FOUNDATION IS AVAILABLE IN GEOTECHNICAL REPORT.
- MODULUS OF SUBGRADE REACTION AT FOUNDATION LEVEL IS AVAILABLE IN GEOTECHNICAL REPORT.
- BEARING SURFACES FOR RAFT FOUNDATIONS SHALL BE REVIEWED AND ACCEPTED BY THE CONTRACT ADMINISTRATOR PRIOR TO CASTING OF CONCRETE. PROTECT BEARING SURFACES. DO NOT PLACE CONCRETE
- PREVENT SUBGRADE FROM FREEZING AFTER CASTING CONCRETE WORKS UNTIL CONSTRUCTION IS COMPLETE AND STRUCTURES ARE IN SERVICE.

DESIGN LOADS

THE STRUCTURE IS DESIGNED TO MEET THE REQUIREMENTS OF THE 2010 MATIONAL BUILDING CODE. WIND LOADS - THE BUILDING STRUCTURE IS DESIGNED TO RESIST THE HORIZONTAL LOADS RESULTING FROM A 1/50 AVERAGE HOURLY WIND PRESSURE BASED ON A q=0.45 kPa WITH AN IMPORTANCE CATEGORY OF"NORMAL". SNOW LOADS: THE ROOF AREA ARE DESIGNED BASED ON: GROUND SNOW LOAD = 1.9kPa

FLOOR LOADS - REFER TO STRUCTURAL DRAWINGS

RAIN LOAD = 0.20 kPa

CONCRETE

- PROVIDE CONCRETE AND PERFORM WORK TO CSA A23.1. SUPPLY CONCRETE TO ALTERNATIVE (1) PERFORMANCE. THE CONTRACTOR SHALL HAVE A COPY OF THIS STANDARD ON SITE AT ALL TIMES.
- TEST CONCRETE IN ACCORDANCE WITH CSA A23.2.

CONCRETE ACCESSORIES

- GROUT: NON-SHRINK, NON-METALLIC GROUT WITH MINIMUM STRENGTH AT THREE DAYS OF 20 MPA AND MINIMUM STRENGTH AT 28 DAYS OF 50 MPA.
- EXPANSION ANCHORS: OF DIAMETER & PENETRATION SHOWN. CAPACITIES ARE BASED ON HILTI CANADA ANCHOR SYSTEMS. SUBMIT ANCHOR LOAD RESISTANCE DATA FROM INDEPENDENT TESTING FIRM FOR REVIEW BY CONTRACT ADMINISTRATOR MINIMUM 2 WEEKS PRIOR TO INTENDED USE.
- EPOXY ANCHORS: OF DIAMETER & PENETRATION SHOWN. SHEAR AND TENSION CAPACITIES ARE BASED ON HILTI HY-200 + HIT-HAS SUPER HARDWARE. SUBMIT ANCHOR LOAD RESISTANCE DATA FROM INDEPENDENT TESTING FIRM FOR REVIEW BY CONTRACT ADMINISTRATOR MINIMUM 2 WEEKS PRIOR TO INTENDED USE.

MASONRY

- ALL MASONRY WORK SHALL CONFORM TO CSA S304.1, A371 AND TO DETAILS SHOWN ON DRAWINGS.
- MASONRY BLOCK UNITS SHALL CONFORM TO CSA A165, CLASSIFICATION H/15/A/M WITH A MINIMUM UNIT STRENGTH OF 15 MPa, UNLESS NOTED OTHERWISE.
- ALL MORTAR SHALL CONFORM TO CSA A179 AND SHALL BE TYPE 'S'.
- LINTELS, BOND BEAMS, AND REINFORCED CORES SHALL BE FILLED WITH CONCRETE HAVING A MINIMUM COMPRESSIVE STRENGTH OF 20 MPA.
- PROVIDE DOWELS FROM CONCRETE BEAMS, WALL AND FLOORS TO MATCH MASONRY WALL REINFORCING UNLESS NOTED OTHERWISE.

CONCRETE REINFORCEMENT

- DEFORMED BARS CONFORMING TO CSA G30.18 GRADE 400. LAP SPLICES SHALL BE CLASS B TENSION LAP TYPE AS NOTED IN THE BELOW TABLE, UNLESS NOTED OTHERWISE.
- WELDABLE REINFORCING BARS SHALL CONFORM TO CSA G30.18 GRADE 400W. WELDING OF REINFORCING SHALL CONFORM TO CSA W186.
- REINFORCING WORK SHALL BE IN ACCORDANCE WITH CSA A23.1 AND CSA A23.3.
- REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE LATEST EDITION OF THE REINFORCING STEEL INSTITUTE OF CANADA DETAILING MANUAL.
- 90° HOOKS AND 180° HOOKS WHERE SHOWN SHALL BE DETAILED AS STANDARD HOOKS UNLESS NOTED OTHERWISE.
- CONCRETE COVER TO REINFORCING STEEL SHALL CONFORM TO THE MOST STRINGENT REQUIREMENT LISTED BELOW UNLESS NOTED OTHERWISE:

PUMP STATION - ITEM	COVERAGE (mm)
LOWER LEVEL BASE SLABS (BOTTOM)	75
WALLS (BOTH FACES)	50
MAIN FLOOR, INTERMEDIATE LEVEL, AND LOWER LEVEL SLABS TOP	50
MAIN FLOOR, INTERMEDIATE LEVEL, AND LOWER LEVEL SLABS SIDES	50
MAIN FLOOR AND INTERMEDIATE LEVEL SLABS BOTTOM	50
CONCRETE BEAMS: SIDE (TO OUTSIDE FACE OF STIRRUP)	50
CONCRETE BEAMS: TOP AND BOTTOM (TO OUTSIDE FACE OF STIRRUP)	50
CURBS	50
FORMED SURFACES NOT EXPOSED TO GROUND, WATER, OR WEATHER NOT LISTED ABOVE	50
HOUSEKEEPING PADS	50

REINFORCING BAR DEVELOPMENT PER ACI 350				
f'c = 35 MPa			fy = 400 MPa	
BAR SIZE	BAR DEVELOPMENT	COMPRESSION DEVELOPMENT	STANDARD HOOK DEVELOPMENT	
10M	420mm	200mm	180mm	
15M	630mm	280mm	270mm	
20M	840mm	355mm	360mm	
25M	1295mm	460mm	450mm	

REINFORCING BAR SPLICES PER ACI 350				
f'c = 35 MPa	fy = 400 MPa			
BAR SIZE	CLASS 'B' SPLICE			
10M	545mm			
15M	820mm			
20M	1090mm			
25M	1685mm			

MIX TYPE	INTENDED APPLICATION	MINIMUM COMPRESIVE STRENGTH (MPa)	CLASS OF EXPOSURE
1	STRUCTURAL CONCRETE	35 (28-DAY)	S-1 & C-1
2	CONCRETE TOPPING SLAB	20 (28-DAY)	C-1
3	NON-STRUCTURAL INTERIOR HOUSEKEEPING PADS	30 (28-DAY)	N
4	CONCRETE UNIT MASONRY INFILL	20 (28-DAY)	N

WATERSTOPS

- WATER STOPS ARE SHOWN ON PLANS AND SECTIONS FOR INFORMATION ONLY, IN GENERAL ALL CONSTRUCTION JOINTS IN LIQUID RETAINING STRUCTURES AND ALL JOINTS BELOW GRADE ARE TO BE WATERSTOPPED.
- CONSTRUCTION JOINTS ARE SHOWN FOR INFORMATION ONLY AND THE CONTRACTOR ENCOURAGED TO REVIEW CONSTRUCTION PROCEDURES AND PROPOSE ALTERNATIVE CONSTRUCTION JOINT LOCATION TO EXPEDITE THE WORK. THE CONTRACT ADMINISTRATOR MUST APPROVE ALL REVISED JOINT LOCATION.
- WATERSTOPS TO BE 150 PVC AS PER CW2160. SUBSTITUTIONS WILL NOT BE ALLOWED WITHOUT WRITTEN APPROVAL FROM THE CONTRACT ADMINISTRATOR.

MISCELLANEOUS METALS

- THE STEEL ERECTOR SHALL BE RESPONSIBLE FOR SUPPLING AND ERECTING ALL TEMPORARY WORKS REQUIRED FOR THE STRUCTURE DURING ERECTION.
- WELD TO CSA W59 BY FABRICATORS QUALIFIED TO CSA W47.1, IN DIVISION 2.
- ISOLATE MISC. METALS FROM FOLLOWING COMPONENTS BY MEANS OF 2 COATS OF AKALI RESISTANT .1 DISSIMILAR METALS EXCEPT STAINLESS STEEL, GALVANIZED STEEL, ZINC, OR WHITE BRONZE OF SMALL AREA.
- STEEL PLATES: CONFORMING TO CAN/CSA G40.21; TYPE W WITH A MINIMUM YIELD STRENGTH OF 300 MPa.
- ANCHOR RODS: CONFORMING TO ASTM F1554.

.2 CONCRETE, MORTAR AND MASONRY.

- WELDING MATERIALS: CONFORMING TO CSA W59.
- WELDING OF ALL LOAD CARRYING ASSEMBLIES IS TO BE PERFORMED BY A FIRM CERTIFIED BY THE CANADIAN WELDING BUREAU TO THE REQUIREMENTS OF CSA W47.1 IN DIVISION 2.
- SUPPLY ALL COMPONENTS REQUIRED FOR PROPER ANCHORAGE OF STEEL FABRICATIONS. FABRICATE ANCHORAGE AND RELATED COMPONENTS OF SAME MATERIAL AND FINISH AS STEEL FABRICATIONS, OTHERWISE SPECIFIED OR SHOWN.
- NELSON STUDS: H4L HEADED STUDS BY NELSON STUD, A DONCASTERS GROUP LIMITED COMPANY.

PLASTIC FABRICATIONS

- INSTALLATION IN ACCORDANCE WITH MANUFACTURER'S SHOP DRAWINGS.
- FRP ANGLES BY FIBERGRATE. REFER TO DRAWINGS AND SPECIFICATIONS FOR LOCATIONS AND DETAILS.

ALUMINUM FABRICATIONS

- DESIGN, FABRICATION AND INSTALLATION IN ACCORDANCE WITH CSA S157.
- PERFORM WELDING OF ALUMINUM IN ACCORDANCE WITH REQUIREMENTS OF CSA W59.2 AND CSA S244.
- ALUMINUM TO CSA/CAN 3-S157, 6061-T6 OR 6063-T6 ALUMINUM ALLOY.
- BOLTS AND ANCHOR BOLTS: STAINLESS STEEL.
- ISOLATE ALUMINUM FROM FOLLOWING COMPONENTS. BY MEANS OF BITUMINOUS PAINT:
- DISSIMILR METALS EXCEPT STAINLESS STEEL AND GALVANIZED STEEL.
- CONCRETE, MORTAR AND MASONRY.

WOOD

- WOOD CONSTUCTION SHALL CONFORM TO CSA 086-09 AND PART 9 OF NBC 2010.
- ROOF SHEATHING: DOUGLAS FIR PLYWOOD TO CSA-0121, OR CANADIAN SOFTWOOD PLYWOOD TO CSA-015.
- WOOD FRAMING MATERIAL (UNLESS NOTED OTHERWISE SPECIFIED): S-P-F OR D.FIR.L NO.1/NO.2 (S-DRY)
- ROOF TRUSSES: KILN DRIED
- ALL TRUSSES AND FRAMING DELIVERED TO THE SITE SHALL BE KEPT DRY. NO WARPED MATERIAL SHALL BE USED.
- PREFABRICATE WOOD TRUSSES TO PROFILES, DIMENSIONS AND LOADS SHOWN ON DRAWINGS. SUPPLIER TO DESIGN TRUSSES WITH CONSIDERATION OF TRANSPORTATION, FABRICATION, AND ERECTION, UNDER PART 4 OF NBC 2010 AND IN ACCORDANCE WITH CSA 086-09.
- SUBMIT SHOP DRAWINGS TO THE ENGINEER OR REVIEW PRIOR TO FABRICATION. SHOP DRAWINGS SHALL BE SEALED BY A PROFFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF MANITOBA. SHOP DRAWINGS SHALL INDICATE DESIGN LOADS, LUMBER SPECIES AND GRADES, SPACING OF TRUSSES, JOINT DETAILS AND CONNECTOR CAPACITIES, MEMBER FORCES, REACTIONS, AND CAMBER.

NGINEER'S SEAL

J.A.

[HOMPSON]

Member

30632

PROFESSIONAL

ONSULTANT PROJECT NUMBER

60321148

- INSTALL SHEATHING TO PRIMARY FRAMING BEFORE INSTALLING VALLEY JACK RAFTERS AND SECONDARY FRAMING.
- INSTALL ALL NECESSARY BRIDGING, BRACING AND BLOCKS.

METRIC WHOLE NUMBERS INDICATE MILLIMETRES DECIMALIZED NUMBERS INDICATE METRES



UNDERGROUND STRUCTURES	B.W ELE				AECOM			
SUPV. U/G STRUCTURES DATE						AS		ı
					DESIGNED BY	KK/JT	CHECKED BY	SBB
LOCATION OF UNDERGROUND STRUCTURES AS					DRAWN BY	KK	APPROVED BY	AN
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	1	ISSUED FOR ADDENDUM 4	17/02/22	KK	HOR. SCALE	AS SHOWN	RELEASED FOR CONSTRUCTION	
OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.	O NO.	ISSUED FOR TENDER REVISIONS	17/01/09 DATE	KK BY	DATE	06/01/2016	DATE	09/06/2016



THE CITY OF WINNIPEG PUBLIC WORKS DEPARTMENT

WAVERLEY STREET UNDERPASS AT CN MILE 3.89 RIVERS SUB CITY DRAWING NUMBER CONTRACT 2: UNDERPASS STRUCTURE, RAILWORKS, ROADWORKS, LAND DRAINAGE SEWER, PUMPING STATION

STRUCTURAL STANDARD ABBREVIATIONS:

HANGER

HEXAGON

HORIZONTAL

INSIDE FACE

INTERIOR

JUNCTION

LIVE LOAD

LOUVER

MATERIAL

MAXIMUM

METER

MECHANICAL

MILLIMETER

NEAR FACE

NEAR SIDE

NORTH

NUMBER

OPENING

OPPOSITE

ORIGINAL

ON CENTER

MISCELLANEOUS

NOT APPLICABLE

NOT TO SCALE

NOT IN CONTRACT

OPEN WEB STEEL JOIST

POUNDS PER LINEAR FOOT

POUNDS PER SQUARE FOOT

OUTSIDE DIAMETER

OUTSIDE FACE

PERPENDICULAR

PREFABRICATED

PREFINISHED

PRELIMINARY

PROJECTION

QUANTITY

REFERENCE

REQUIRED

REVISION

ROOF DRAIN

SCHEDULE

SHEATHING

SELF ADHESIVE

SPECIFICATION

STAINLESS STEEL

SQUARE FEET

STANDARD

STIFFENER

STRUCTURAL

TEMPORARY

TO MATCH EXISTING

TOP LOWER LEVEL

TOP UPPER LEVEL

SYMMETRICAL

STIRRUP

TANGENT

TOP OF

TYPICAL

UNDERCUT

VERTICAL

WIND LOAD

WITH OUT

WEIGHT

WITH

WOOD

UNLESS NOTED

WROUGHT IRON

SECTION

SHEET

SIMILAR

SKETCH

SOUTH

REINFORCE WITH

RETAINING WALL

ROUGH OPENING

REINFORCING

RADIUS

OUT TO OUT

OVERHEAD

PLYWOOD

PRE-CAST

MINIMUM

KILONEWTON

KNOCK DOWN

INSIDE DIAMETER

INVERT ELEVATION

LONG LEG HORIZONTAL

LONG LEG VERTICAL

MAKE UP AIR UNIT

MASONRY OPENING

MANUFACTURE

INCLUSIVE

HOLLOW STRUCTURAL STEEL

HEIGHT

HGR

HSS

HORIZ

INCL

INVT EL

LD.

JCT

kΝ

K.D.

L.L.H.

L.L.V.

MAU

MFG

M.O.

MATI

MAX

MECH

MISC

N.F.

N.S.

N/A

N.I.C.

N.T.S.

O.W.S.J.

OPP

O.D.

O.F.

 Ω/Ω

O/H

PSF

PLYWD

PREFAB

PREFIN

PRELIM

PROJ

QTY

REF

R/W

REINE

R.W.

REV

R.D.

R.O.

SCHED

SECT

SHTG

SPEC

SQ. FT.

S.S.

STD

STIRR

SYM

TAN

TEMP

T.M.E.

T.O.

TLL

TUL

U. CUT

VERT

U/N

WT

W.L.

W/O

WD

W.I.

STRUCT

S.A.

SHT

SIM

REQ`D

PERP

ORIG

m (lower case)

mm (lower case)

o/c (lower case)

LVR

LF.

ACST

ADD'L

ADH

ADJ

AGGR

A.H.U.

A.V.B.

ALUM

ALTER

A. BOLT

APPROX

BUILDING

BRG

BET

BD

B.S.

BLL

BUL

BLDG

C.I.P.

C B

C.BD.

CIRC

CL. SPAN

C.O.

COL

CONC

CMU

C.M.P.

CSK

D.L

DIA

DIM

DWL

E.F.

E.W.

ELECT

EQ SP

EXC

EXIST

EXP

E.J.

EXT

F/F

F.S.

FIN

F.D.

FDN

FTG

GALV

GRAN

GBFL

G.L.

G.R.

G.I.

F.O.C.

FBRBD

DWG

CONSTR

x (lower case)

ACOUSTIC

ADHESIVE

ADDITIONAL

ADJUSTABLE

AGGREGATE

ALTERNATE

ALUMINUM

APARTMENT

BUILDING

AVERAGE

REARING

BETWEEN

BOTH SIDES

BOTH WAYS BOTTOM

BUILDING

BOTTOM LOWER LAYER

BOTTOM UPPER LAYER

BY (BETWEEN DIMS)

CENTER TO CENTER

CAST IN PLACE

CEMENT BOARD

CAST IRON

CATCH BASIN

CENTERLINE

CIRCUL AR

COLUMN

CONCRETE

CLEAN OUT

CLEAR SPAN

COMPLETE WITH

CONCRETE PIPE

CONSTRUCTION

CONTINUOUS

COUNTERSUNK

DEAD LOAD

DEGREE

DOWN DOWEL

EAST

FOUAL

DIAMETER

DRAWING

EACH FACE

EACH WAY

ELECTRICAL

ELEVATION

ELEVATOR

EQUAL SPACE

EXCAVATION

EXPANSION JOINT

FACE OF CONCRETE

EXISTING

EXPANSION

EXTERIOR

FAR SIDE

FINISH

FACE TO FACE

FIBREBOARD

FLOOR DRAIN

FOUNDATION

GALVANIZED IRON

GRANULAR BASE

GRANULAR BACK FILL

FOOTING

GAUGE

GALVANIZE

GRANULAR

GRID LINE

GUARD RAIL

DIMENSION

CONSTRUCTION JOINT

CONCRETE MASONRY UNIT

CORRUGATED METAL PIPE

BOARD

BENCH MARK

ANCHOR BOLT

APPROXIMATE

AIR HANDLING UNIT

AIR VAPOUR BARRIER

U-239-2016-C2-BS-00 SHEET AND LANDSCAPING WORKS

CONSULTANT DRAWING NUMBER PUMPING STATION C2-BS-001 **GENERAL NOTES**