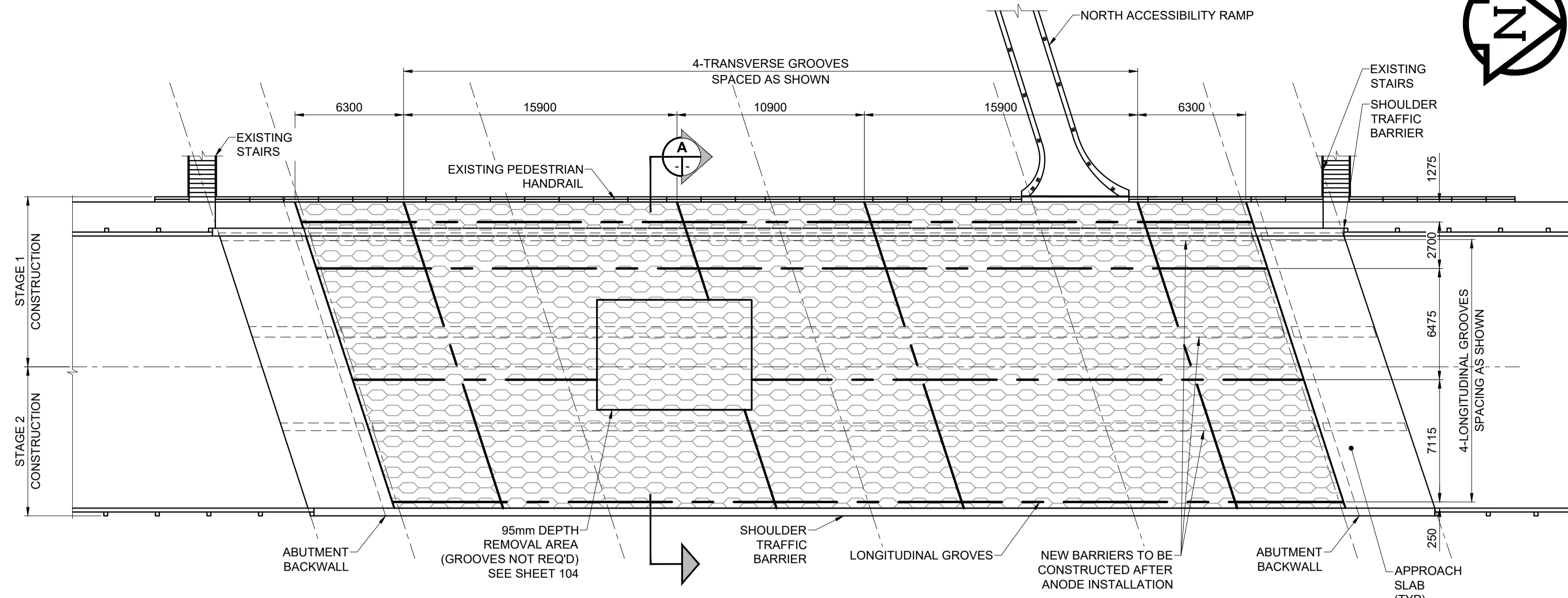


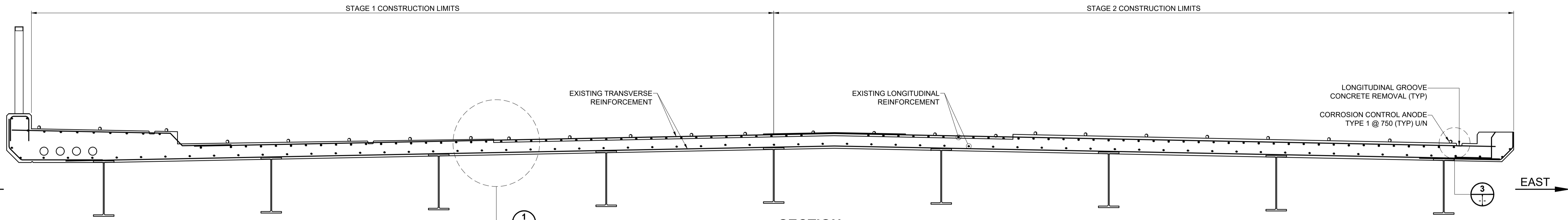
B50.A1 - 594mm x 841mm

O:\Winnipeg\Proj\160034\Drawings\06 Sheets\Detailed Design\Structural\W160034 - DD SS.dwg Last Saved: 9/6/2018 9:59 PM by: A.Heggen Plot: 9/6/2018 10:07 PM by: Alex Heggen

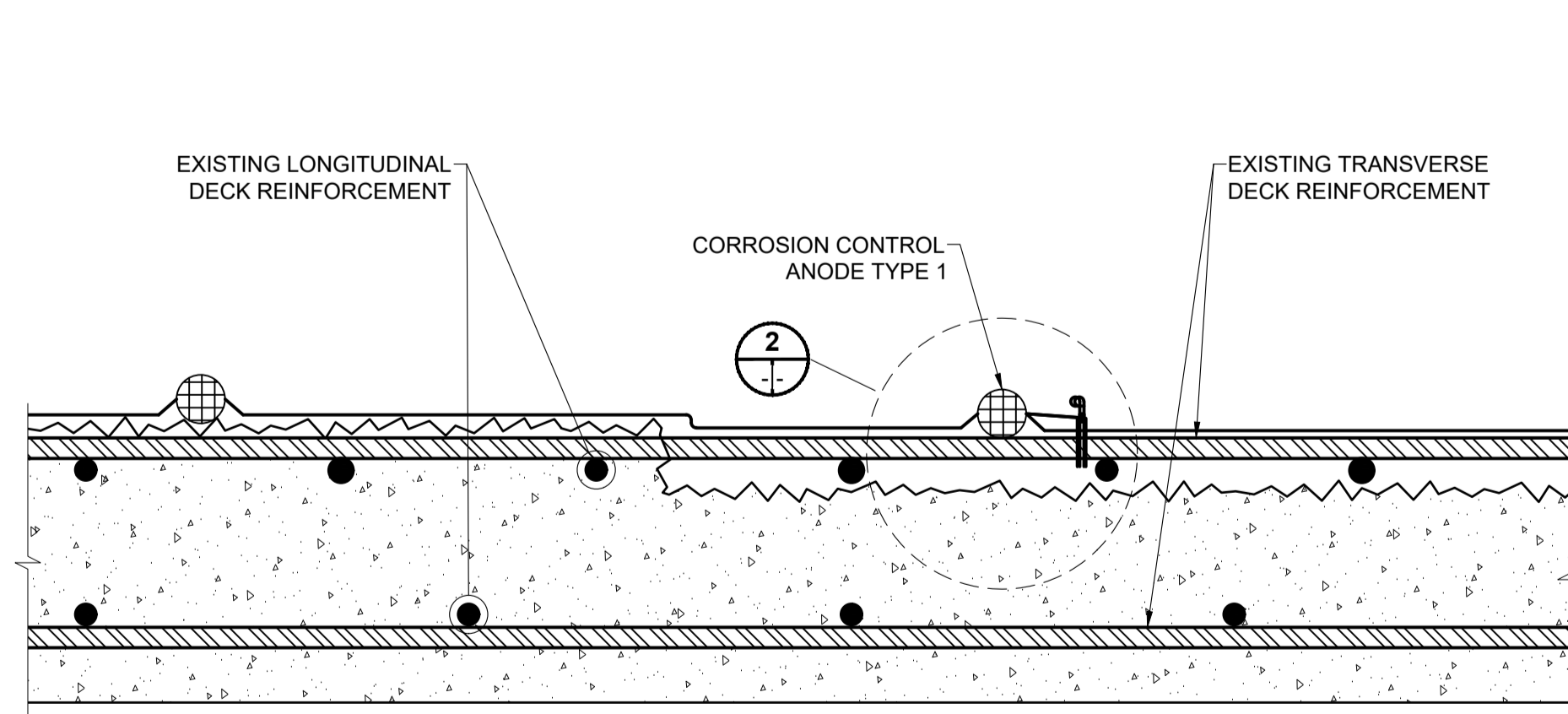


PLAN OF CATHODIC PROTECTION INSTALLED
SCALE 1:200

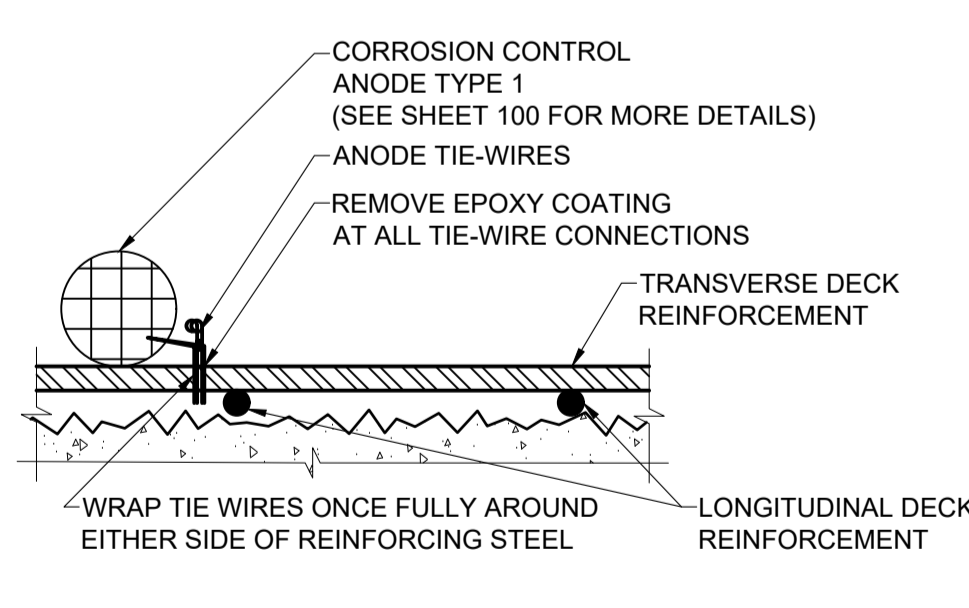
- CATHODIC PROTECTION NOTES:**
1. SUBSTRUCTURE NOT SHOWN FOR CLARITY.
 2. TYPE 1 CATHODIC PROTECTION TO BE INSTALLED ACROSS DECK AREA AT 750MM O/C MAXIMUM.
 3. ENSURE THE LONGITUDINAL AND TRANSVERSE GROOVES OF CONCRETE REMOVALS SHALL REACH ALL TOP LAYER REINFORCEMENT THAT ARE NOT EXPOSED AFTER HYDRODEMOLITION.
 4. WIDTH OF GROOVE CONCRETE REMOVAL SHALL BE KEPT TO MINIMUM AS REQUIRED TO INSTALL INTER-CONDUCTIVITY CONNECTIONS.
 5. MINIMUM DEPTHS OF LONGITUDINAL GROOVES SHALL BE TO MID DEPTH OF TRANSVERSE REINFORCEMENT.
 6. MINIMUM DEPTHS OF TRANSVERSE GROOVES SHALL BE TO MID DEPTH OF LONGITUDINAL REINFORCEMENT.
 7. ENSURE ELECTRICAL INTER-CONDUCTIVITY BETWEEN ALL TOP MAT REINFORCEMENT AT THE LONGITUDINAL AND TRANSVERSE GROOVES OF CONCRETE REMOVAL BY CONNECTING HEADER WIRES AT ALL GROOVE INTERSECTIONS.
 8. ENSURE ELECTRICAL CONDUCTIVITY BETWEEN ANODES AND REINFORCING BARS BY REMOVING ALL EPOXY COATING AT WIRE TO REINFORCING BAR CONNECTION LOCATIONS.
 9. FOR ANODE TO REINFORCING CONNECTION AND REINFORCING TO REINFORCING CONNECTION SEE DETAIL 3 AND TYPICAL GROOVE DETAIL.
 10. CORROSION CONTROL ANODES TYPE 1 ARE NOT TO BE INSTALLED UNDER NEW CONCRETE BARRIERS.



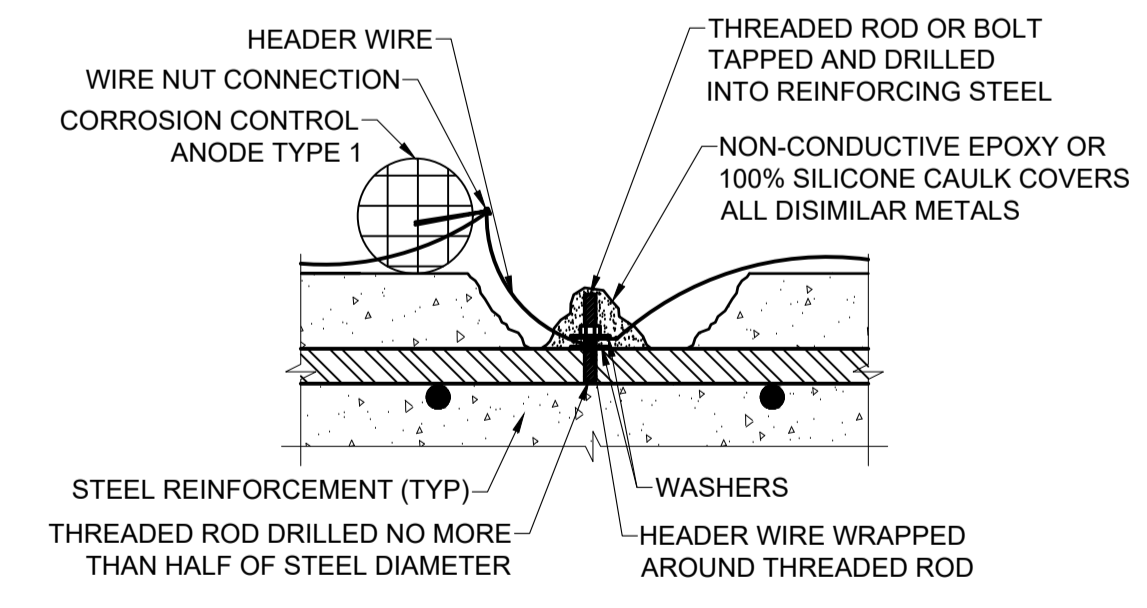
SECTION
ZONES OF CATHODIC PROTECTION
SCALE: 1:25



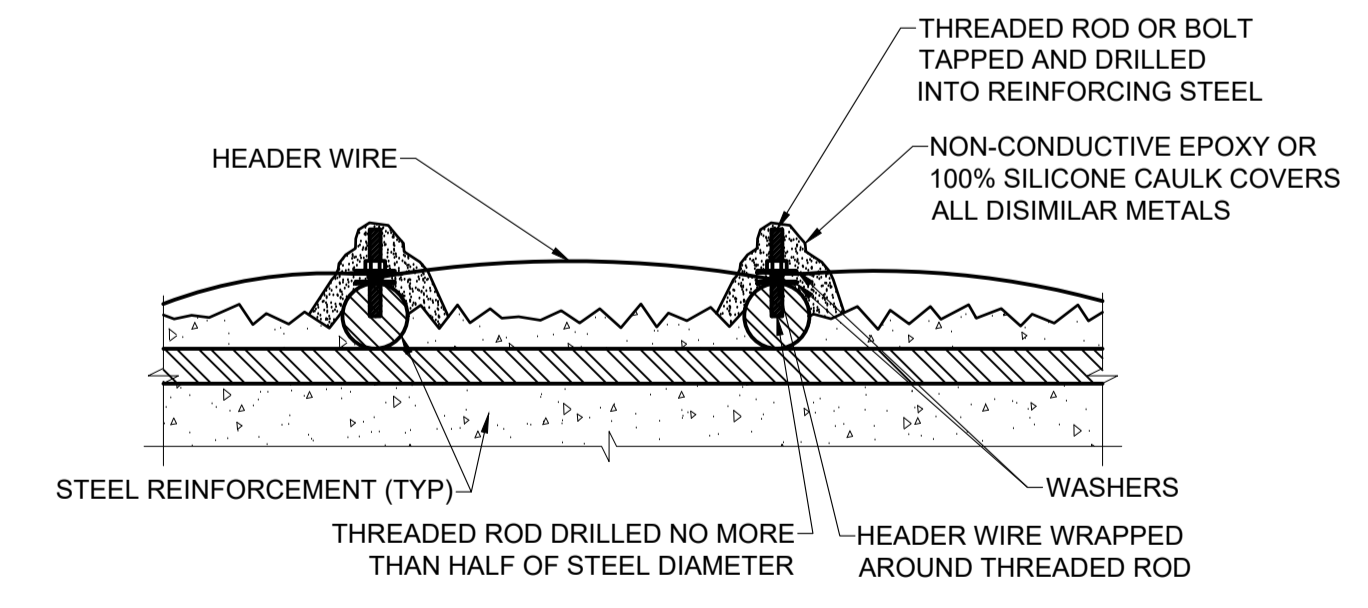
DETAIL OF CATHODIC PROTECTION
SCALE: 1:5



DETAIL
TYPE 1 ANODE INSTALLATION
SCALE: NTS



TYPICAL GROOVE CROSS SECTION
NUT & WASHER CINCH INSTALLATION DETAIL
SCALE: NTS



TYPICAL GROOVE LONGITUDINAL SECTION
REINFORCING TO REINFORCING CONNECTION DETAIL
SCALE: NTS

LEGEND:
DAS CATHODIC PROTECTION SYSTEM

ENGINEERS & GEOSCIENTISTS
Certificate of Authorization
MORRISON HERSHFELD
No. 1736

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

LOCATION APPROVED UNDERGROUND STRUCTURES

NO.	REVISIONS	DATE	BY
D	ISSUED FOR TENDER	18/09/04	BAP
C	ISSUED FOR 95% DESIGN REVIEW	18/08/07	BAP
B	ISSUED FOR 50% DESIGN REVIEW REV 1	18/06/28	AF
A	ISSUED FOR 50% DESIGN REVIEW	18/04/03	AF

NOTE: 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.

NO.	REVISIONS	DATE	BY
D	ISSUED FOR TENDER	18/09/04	BAP
C	ISSUED FOR 95% DESIGN REVIEW	18/08/07	BAP
B	ISSUED FOR 50% DESIGN REVIEW REV 1	18/06/28	AF
A	ISSUED FOR 50% DESIGN REVIEW	18/04/03	AF

MORRISON HERSHFELD

DESIGNED BY	AF	CHECKED BY	YM
DRAWN BY	ALP	APPROVED BY	BE
HOR SCALE	AS SHOWN	RELEASED FOR CONSTRUCTION	N/A
VERT SCALE	AS SHOWN	DATE	

PROFESSIONAL'S SEAL
PROVINCE OF MANITOBA
A. FATHI
Member
41159
REGISTERED PROFESSIONAL ENGINEER
CONSULTANT FILE NAME
W160034 - DD SS.DWG

THE CITY OF WINNIPEG PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION

EMPRESS STREET PROJECT OVERPASS REHABILITATION WORKS SUPERSTRUCTURE DECK CORROSION PROTECTION PLAN AND DETAILS

CITY DRAWING NUMBER	P-3494-105
SHEET	105 OF 168
DRAWING No.	105
REV	D

BID OPPORTUNITY No. 602-2018